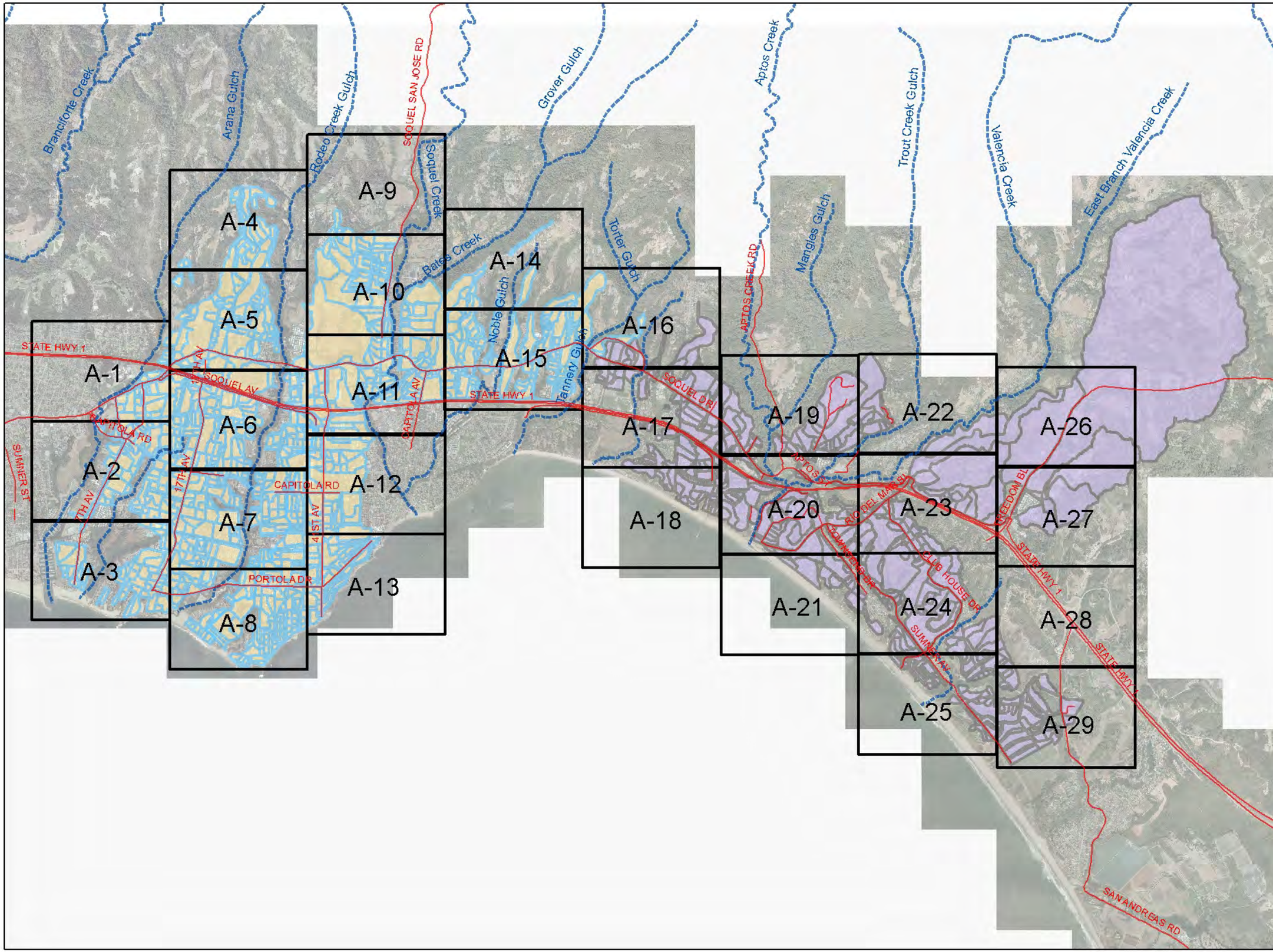
APPENDIX A

CATCHMENT MAPS

Appendix A
Map Index



Legend

- Map Grid
- Zone 5
- Zone 6

0 1,375 2,750 5,500 Feet

Schaaf & Wheeler

Figure A-1

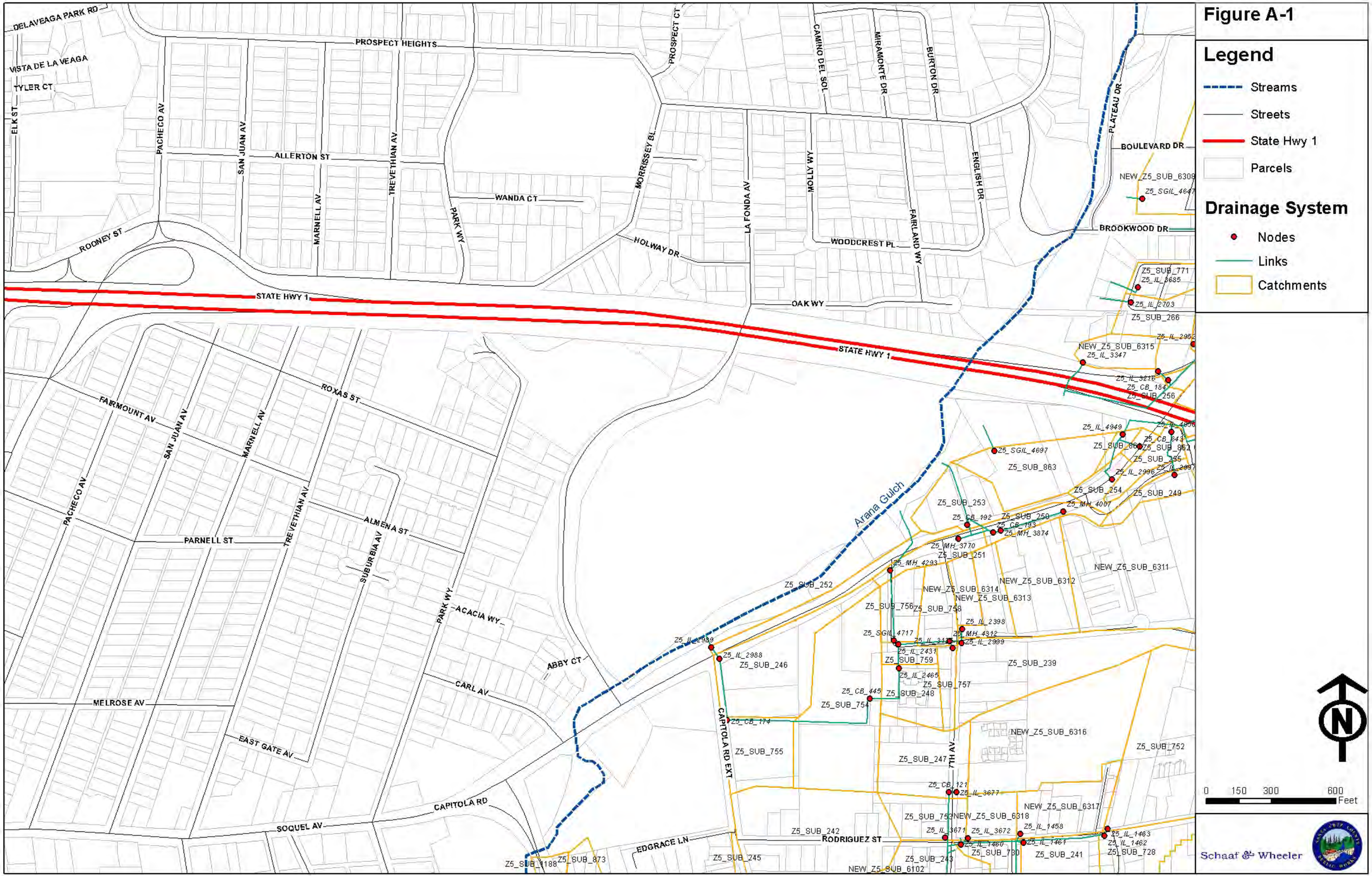

Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
N
Schaaf & Wheeler
DELAVEAGA PARK RD
VISTA DE LA VEAGA
TYLER CT
ELK ST
PACHECO AV
SAN JUAN AV
ALLERTON ST
MARNELL AV
TREVETHIAN AV
PROSPECT HEIGHTS
PROSPECT CT
WANDA CT
PARK WY
MORRISSEY BL
HOLWAY DR
ROONEY ST
LA FONDA AV
CAMINO DEL SOL
MIRAMONTE DR
BURTON DR
MOLLY WY
WOODCREST PL
FAIRLAND WY
ENGLISH DR
PLATEAU DR
BOULEVARD DR
BROOKWOOD DR
OAK WY
STATE HWY 1
ROXAS ST
FAIRMOUNT AV
PARNELL ST
ALMENA ST
SUBURBIA AV
ACACIA WY
ABBY CT
CARL AV
MELROSE AV
EAST GATE AV
CAPITOLA RD
SOQUEL AV
EDGRACE LN
RODRIGUEZ ST
CAPITOLA RD EXT
7TH AV
Arana Gulch
NEW_Z5_SUB_6309
Z5_SGIL_4647
Z5_SUB_771
Z5_IL_3685
Z5_IL_2703
Z5_SUB_266
Z5_IL_2952
NEW_Z5_SUB_6315
Z5_IL_3347
Z5_IL_3216
Z5_CB_184
Z5_SUB_256
Z5_IL_4949
Z5_IL_4856
Z5_CB_643
Z5_SUB_862
Z5_SUB_861
Z5_SUB_235
Z5_IL_2996
Z5_IL_2997
Z5_SGIL_4697
Z5_SUB_863
Z5_SUB_254
Z5_SUB_249
Z5_SUB_253
Z5_MH_4007
Z5_CB_192
Z5_SUB_250
Z5_CB_193
Z5_MH_3874
Z5_MH_3770
Z5_SUB_251
Z5_MH_4293
NEW_Z5_SUB_6311
Z5_SUB_252
NEW_Z5_SUB_6312
NEW_Z5_SUB_6314
NEW_Z5_SUB_6313
Z5_SUB_756
Z5_SUB_758
Z5_IL_2398
Z5_SGIL_4717
Z5_MH_4312
Z5_IL_2999
Z5_IL_2989
Z5_IL_2988
Z5_SUB_246
Z5_IL_2431
Z5_SUB_759
Z5_SUB_239
Z5_IL_2465
Z5_SUB_757
Z5_CB_445
Z5_SUB_248
Z5_SUB_754
Z5_CB_174
NEW_Z5_SUB_6316
Z5_SUB_755
Z5_SUB_752
Z5_SUB_247
Z5_CB_121
Z5_IL_3677
NEW_Z5_SUB_6317
Z5_SUB_750
NEW_Z5_SUB_6318
Z5_IL_1458
Z5_IL_3671
Z5_IL_3672
Z5_IL_1463
Z5_IL_1460
Z5_IL_1461
Z5_IL_1462
Z5_SUB_242
Z5_SUB_730
Z5_SUB_241
Z5_SUB_728
Z5_SUB_243
Z5_SUB_245
NEW_Z5_SUB_6102
Z5_SUB_4188
Z5_SUB_873

Figure A-2
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
CAPITOLA RD
CAPITOLA RD EXT
GLENADA LN
WEBSTER ST
DORA AV
KATRINA CT
KOOPMANS AV
TAYLOR LN
SCHOONER CT
MARIANA CT
ADELAIDA CT
CAMBRIA LN
HARBOR OAKS CI
GERARD CT
7TH AV
EDDY LN
EL DORADO AV
FREYA PL
HARPER CT
PESCE WY
HARPER ST
IRIS LN
DOUGMAR DR
DIANA DR
SUSAN LN
BROMMER WY
BROMMER ST
HOPE WY
LIVE OAK AV
STAGG LN
SPINNAKER CT
Leona Creek
Arana Gulch
HANOVER ST
HANOVER CT
HAGEMANN AV
HAGEMANN CT
FOREST AV
MENTEL AV
PARK WY SOUTH
AGNES ST
BROADWAY
HARBOR DR
WINDSOR ST
FRANCES CT
WINDHAM ST
FREDERICK ST
GLENVIEW ST
ANNIE LN
SOUTHAMPTON LN

Figure A-3
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
HERITAGE LN
MURRAY ST
EATON ST
DOLORES ST
CARMEL ST
PARK PL
BONNIE ST
ALPINE ST
ATLANTIC AV
LAKE AV
LAGO LN
ALTA LOMA LN
5TH AV
6TH AV
ASSEMBLY AV
7TH AV
8TH AV
9TH AV
10TH AV
12TH AV
13TH AV
14TH AV
15TH AV
16TH AV
17TH AV
18TH AV
19TH AV
20TH AV
CRYSTAL LN
LIVE OAK AV
EDMAR LN
HEATH COVE
MERRILL ST
SCHOLL LN
JADE LN
TREMONT DR
KILLDEER PL
PORTOLA DR
MAGUIRE DR
EAST CLIFF DR
SUNNY COVE
GEOFFROY DR
BLACK POINT LN
PROSPECT ST
Arana Gulch
Leona Creek

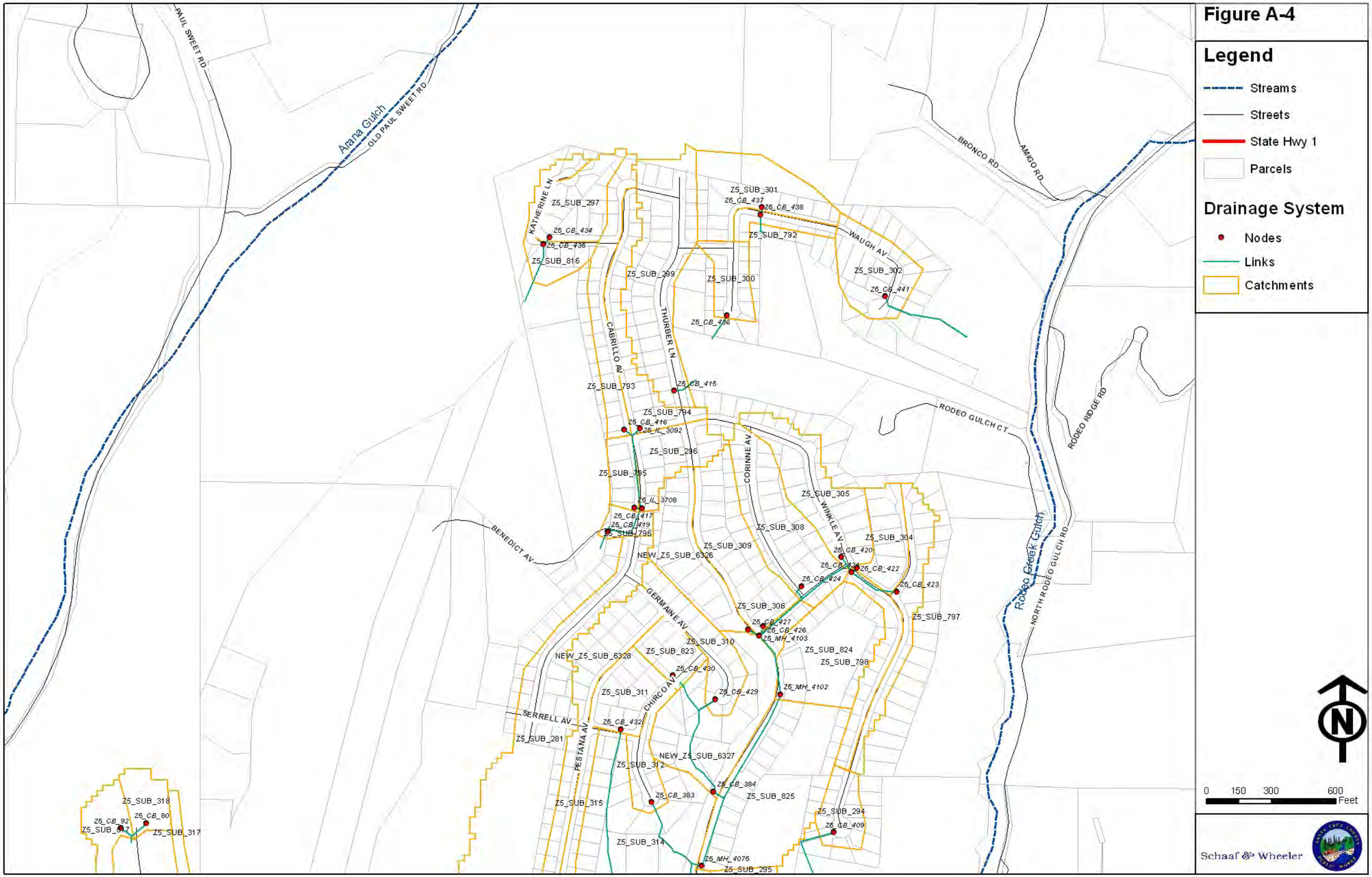


Figure A-4
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
PAUL SWEET RD
OLD PAUL SWEET RD
Arana Gulch
BRONCO RD
AMIGO RD
KATHERINE LN
Z5_SUB_297
Z5_CB_434
Z5_CB_436
Z5_SUB_816
Z5_SUB_301
Z5_CB_437
Z5_CB_438
Z5_SUB_792
WAUGH AV
Z5_SUB_302
Z5_CB_441
Z5_SUB_299
Z5_SUB_300
Z5_CB_436
CABRILLO AV
THURBER LN
Z5_SUB_793
Z5_CB_415
Z5_SUB_794
Z5_CB_416
Z5_IL_3092
Z5_SUB_296
Z5_SUB_795
CORINNE AV
RODEO GULCH CT
RODEO RIDGE RD
Z5_SUB_305
Z5_IL_3708
Z5_CB_417
Z5_CB_419
Z5_SUB_796
BENEDICT AV
Z5_SUB_308
WINKLE AV
Z5_SUB_304
Z5_CB_420
Z5_CB_422
Z5_CB_424
Z5_CB_423
Z5_SUB_309
NEW_Z5_SUB_6326
Rodeo Creek Gulch
NORTH RODEO GULCH RD
GERMAINE AV
Z5_SUB_306
Z5_CB_427
Z5_CB_426
Z5_MH_4103
Z5_SUB_797
Z5_SUB_310
Z5_SUB_823
Z5_SUB_824
Z5_SUB_798
NEW_Z5_SUB_6328
Z5_CB_430
Z5_SUB_311
CHIRCO AV
Z5_CB_429
Z5_MH_4102
SERRELL AV
Z5_CB_432
Z5_SUB_281
PESTANA AV
NEW_Z5_SUB_6327
Z5_SUB_312
Z5_CB_384
Z5_CB_383
Z5_SUB_825
Z5_SUB_315
Z5_SUB_294
Z5_CB_409
Z5_SUB_314
Z5_MH_4075
Z5_SUB_295
Z5_SUB_318
Z5_CB_92
Z5_CB_80
Z5_SUB_317

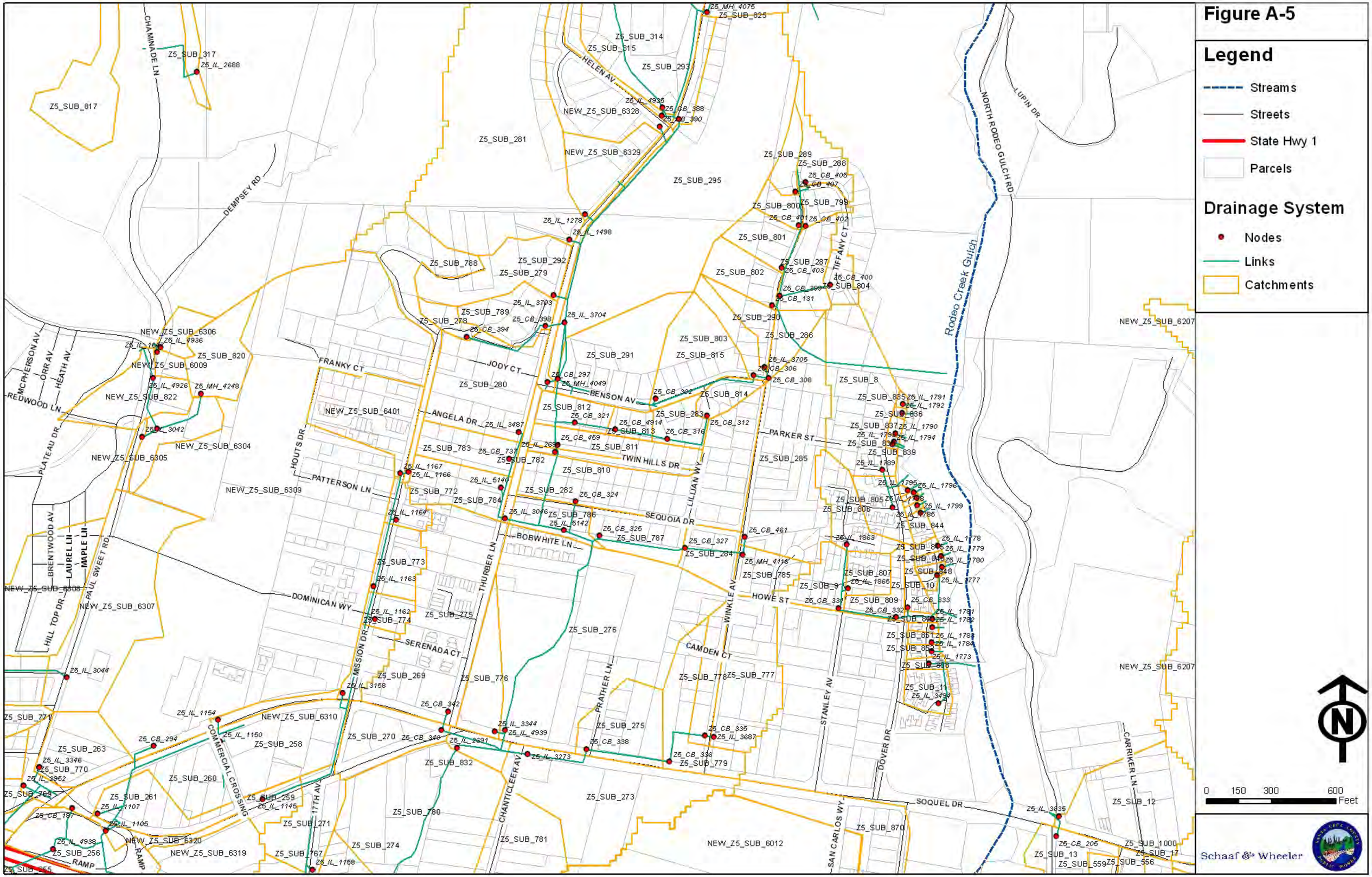


Figure A-5
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
Rodeo Creek Gulch
NORTH RODEO GULCH RD
LUPIN DR
CHAMINADE LN
DEMPSEY RD
HELEN AV
TIFFANY CT
FRANKY CT
JODY CT
BENSON AV
ANGELA DR
PARKER ST
TWIN HILLS DR
LILLIAN WY
HOUTS DR
PATTERSON LN
SEQUOIA DR
BOBWHITE LN
THURBER LN
WINKLE AV
HOWE ST
DOMINICAN WY
MISSION DR
SERENADA CT
CAMDEN CT
PRATHER LN
STANLEY AV
DOVER DR
SOQUEL DR
SAN CARLOS WY
CHANTICLEER AV
COMMERCIAL CROSSING
17TH AV
RAMP
CARRIKER LN
MCPHERSON AV
ORR AV
HEATH AV
REDWOOD LN
PLATEAU DR
BRENTWOOD AV
LAUREL LN
MAPLE LN
HILL TOP DR
PAUL SWEET RD
NEW_Z5_SUB_6207
NEW_Z5_SUB_6012
NEW_Z5_SUB_6401
NEW_Z5_SUB_6309
NEW_Z5_SUB_6310
NEW_Z5_SUB_6320
NEW_Z5_SUB_6319
NEW_Z5_SUB_6305
NEW_Z5_SUB_6304
NEW_Z5_SUB_6306
NEW_Z5_SUB_6307
NEW_Z5_SUB_6009
NEW_Z5_SUB_822
Z5_SUB_817
Z5_SUB_317
Z5_SUB_281
Z5_SUB_295
Z5_SUB_289
Z5_SUB_288
Z5_SUB_800
Z5_SUB_801
Z5_SUB_802
Z5_SUB_803
Z5_SUB_815
Z5_SUB_814
Z5_SUB_812
Z5_SUB_811
Z5_SUB_810
Z5_SUB_783
Z5_SUB_782
Z5_SUB_772
Z5_SUB_784
Z5_SUB_786
Z5_SUB_787
Z5_SUB_773
Z5_SUB_774
Z5_SUB_775
Z5_SUB_776
Z5_SUB_777
Z5_SUB_778
Z5_SUB_779
Z5_SUB_780
Z5_SUB_781
Z5_SUB_832
Z5_SUB_870
Z5_SUB_285
Z5_SUB_286
Z5_SUB_290
Z5_SUB_291
Z5_SUB_280
Z5_SUB_788
Z5_SUB_292
Z5_SUB_279
Z5_SUB_789
Z5_SUB_278
Z5_SUB_820
Z5_SUB_269
Z5_SUB_270
Z5_SUB_258
Z5_SUB_260
Z5_SUB_261
Z5_SUB_259
Z5_SUB_271
Z5_SUB_274
Z5_SUB_275
Z5_SUB_276
Z5_SUB_263
Z5_SUB_770
Z5_SUB_256
Z5_SUB_12
Z5_SUB_13
Z5_SUB_17
Z5_SUB_1000
Z5_SUB_556
Z5_SUB_559
Z5_SUB_8
Z5_SUB_9
Z5_SUB_10
Z5_SUB_11

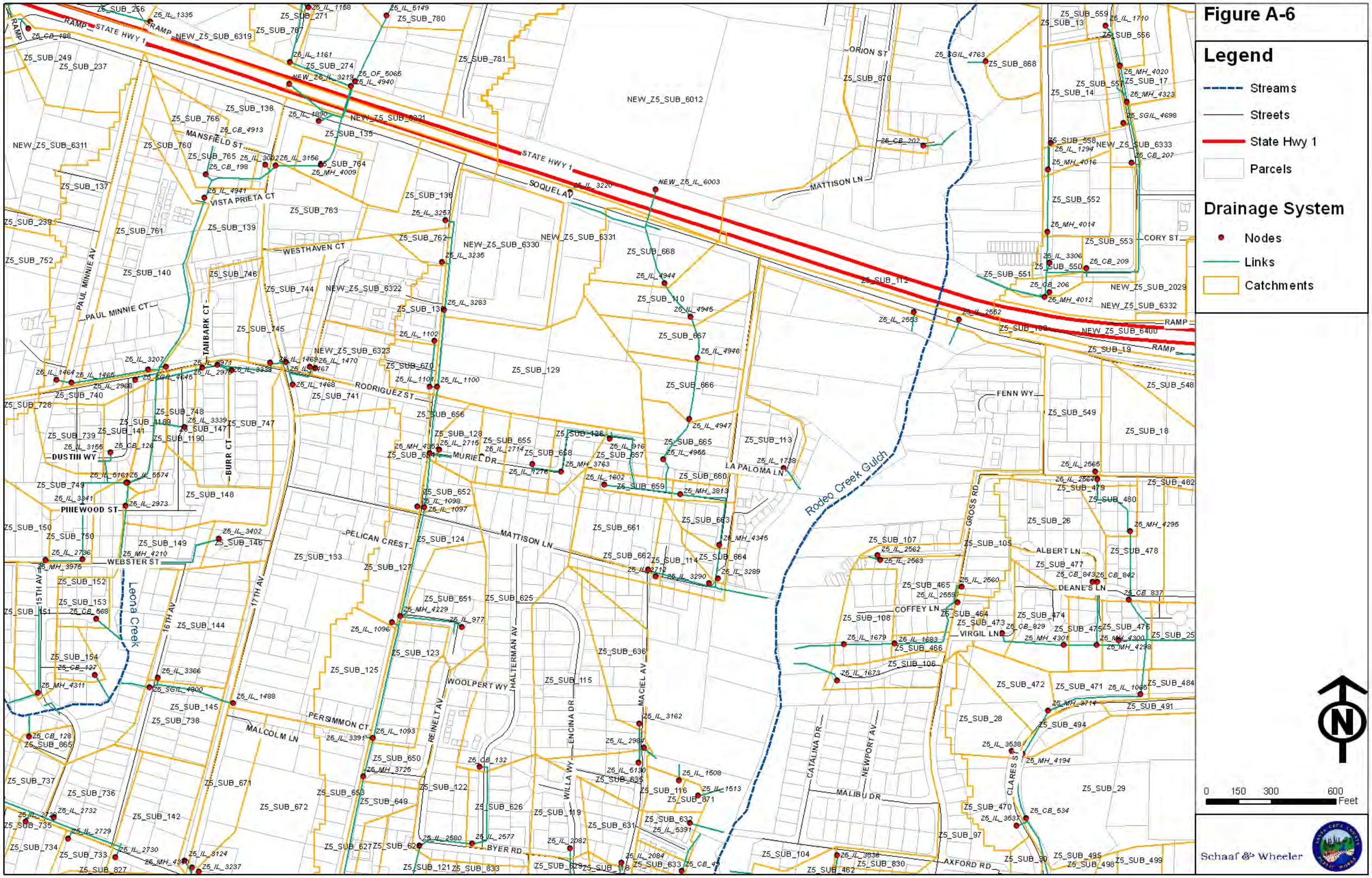


Figure A-6
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
STATE HWY 1
SOQUEL AV
MATTISON LN
MANSFIELD ST
VISTA PRIETA CT
WESTHAVEN CT
PAUL MINNIE AV
PAUL MINNIE CT
TAIBARK CT
BURR CT
DUSTIN WY
PINEWOOD ST
WEBSTER ST
RODRIGUEZ ST
MURIEL DR
PELICAN CREST
WOOLPERT WY
PERSIMMON CT
MALCOLM LN
BYER RD
HALTERMAN AV
REINELT AV
ENCINA DR
WILLA WY
MACIEL AV
15TH AV
16TH AV
17TH AV
Leona Creek
Rodeo Creek Gulch
ORION ST
LA PALOMA LN
FENN WY
GROSS RD
ALBERT LN
DEANE'S LN
COFFEY LN
VIRGIL LN
CORY ST
CATALINA DR
NEWPORT AV
MALIBU DR
CLARES ST
AXFORD RD
RAMP
0 150 300 600 Feet
Schaaf & Wheeler

Figure A-7
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
AXFORD RD
LOTMAN DR
SOMMERFELD AV
LEO TAR CI
BEGONIA PL
LINNEA CT
WILLOW CT
HARPER ST
PAMI LN
SILVANA LN
POUND LN
VENICE DR
ANDREW LN
CHANTICLEER AV
CISCO LN
KINSLEY ST
DARLENE DR
LISA LN
TOWER PL
CORCORAN AV
LAGOON CT
FELT ST
PAGET AV
17TH AV
24TH AV
32ND AV
34TH AV
35TH AV
36TH AV
38TH AV
30TH AV
THOMPSON AV
BULB AV
HERITAGE LN
CAPITOLA RD
ELDA LN
DEE ST
ARTIMUS AV
GARDEN ST EXT.
GARDEN ST
SANDY LN
BUCKINGHAM LN
LEWIS CI
ROLAND DR
MARILYN ST
Rodeo Creek Gulch

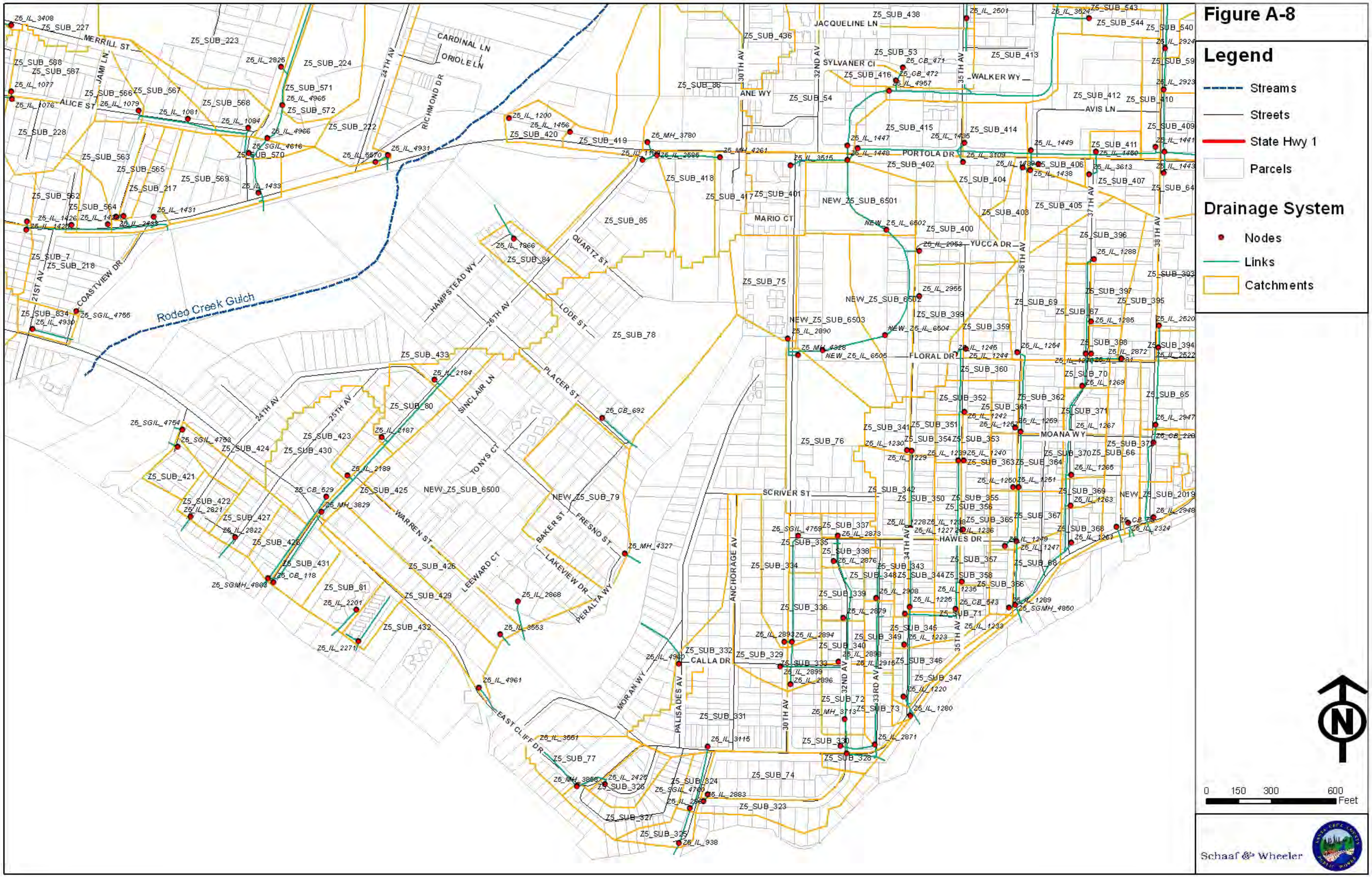


Figure A-8
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
Rodeo Creek Gulch
MERRILL ST
ALICE ST
JAMI LN
CARDINAL LN
ORIOLE LN
RICHMOND DR
24TH AV
JACQUELINE LN
SYLVANER CI
WALKER WY
AVIS LN
PORTOLA DR
MARIO CT
YUCCA DR
FLORAL DR
MOANA WY
HAWES DR
CALLA DR
SCRIVER ST
COASTVIEW DR
21ST AV
HAMPSTEAD WY
QUARTZ ST
LODE ST
26TH AV
PLACER ST
SINCLAIR LN
25TH AV
TONYS CT
WARREN ST
LEEWARD CT
BAKER ST
FRESNO ST
LAKEVIEW DR
PERALTA WY
MORAN WY
EAST CLIFF DR
PALISADES AV
ANCHORAGE AV
30TH AV
32ND AV
33RD AV
34TH AV
35TH AV
36TH AV
37TH AV
38TH AV
0 150 300 600 Feet
Schaaf & Wheeler

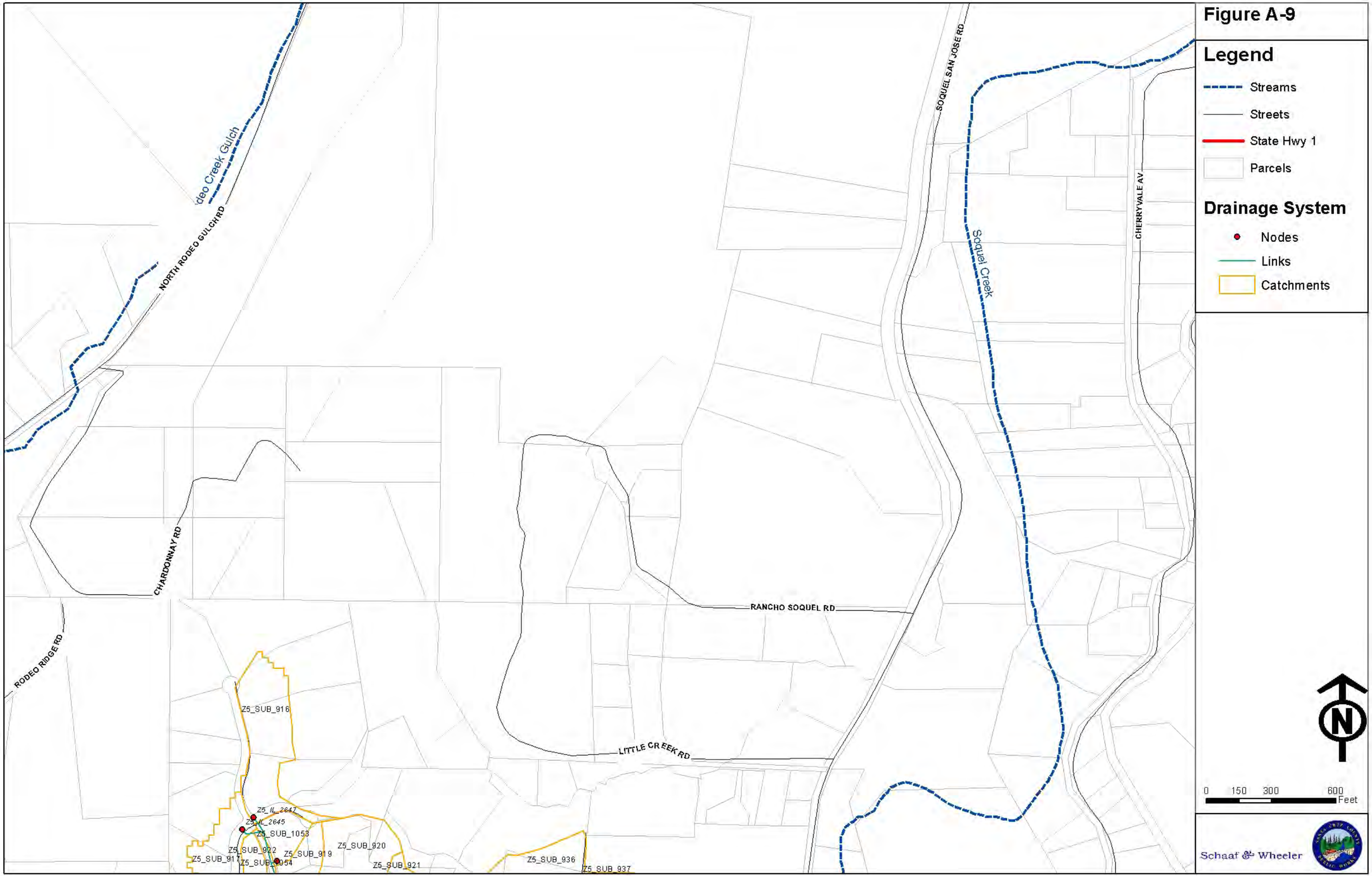


Figure A-9
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
deo Creek Gulch
NORTH RODEO GULCH RD
SOQUEL SAN JOSE RD
Soquel Creek
CHERRYVALE AV
CHARDONNAY RD
RODEO RIDGE RD
RANCHO SOQUEL RD
LITTLE CREEK RD
Z5_SUB_916
Z5_IL_2647
Z5_IL_2645
Z5_SUB_1053
Z5_SUB_922
Z5_SUB_919
Z5_SUB_920
Z5_SUB_917
Z5_SUB_1054
Z5_SUB_921
Z5_SUB_936
Z5_SUB_937
N
0 150 300 600
Feet
Schaaf & Wheeler

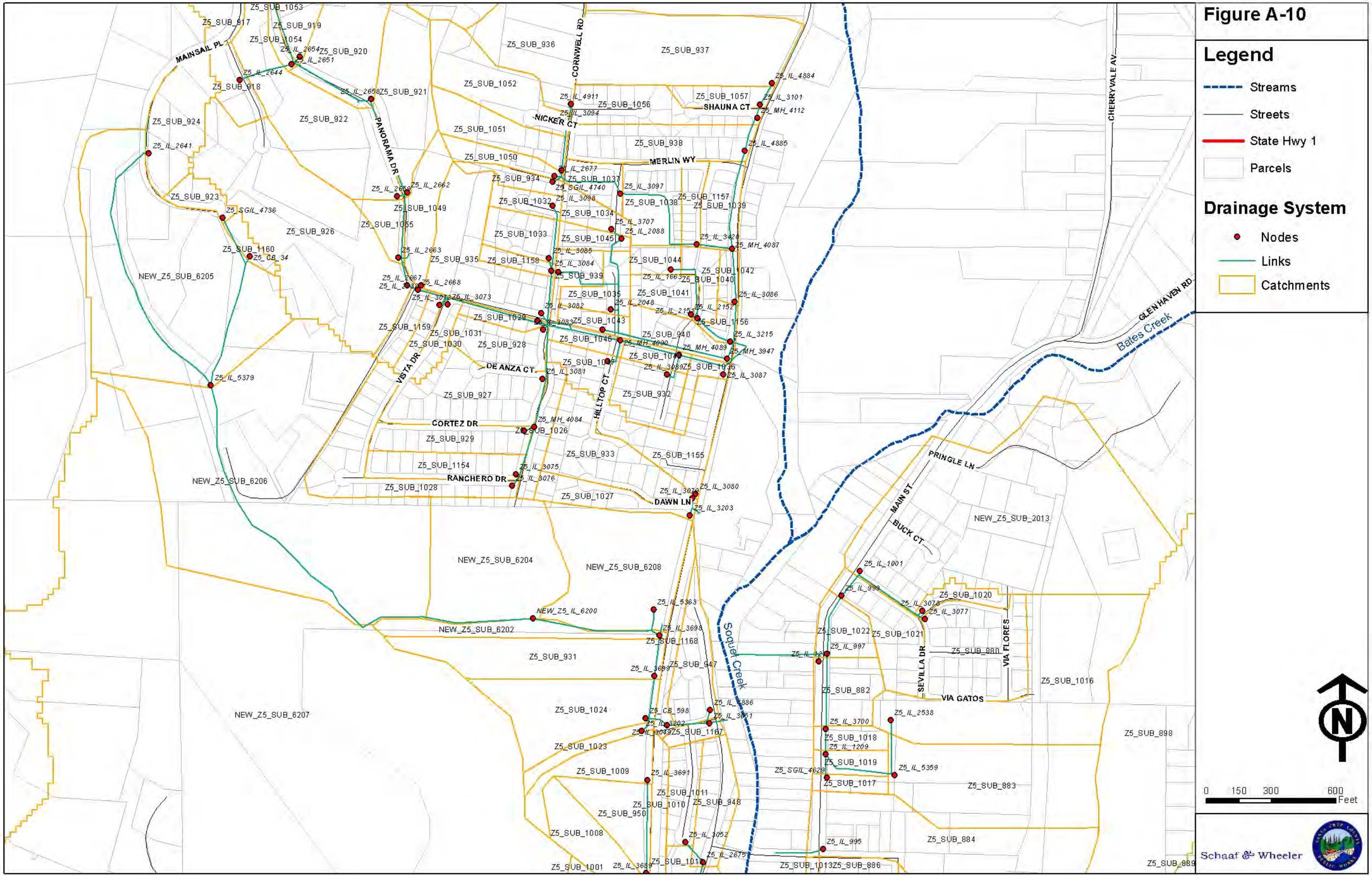


Figure A-10
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
MAINSAIL PL
PANORAMA DR
CORNWELL RD
NICKER CT
SHAUNA CT
MERLIN WY
CHERRYVALE AV
GLENHAVEN RD
Bates Creek
Soquel Creek
VISTA DR
DE ANZA CT
HILLTOP CT
CORTEZ DR
RANCHERO DR
DAWN LN
PRINGLE LN
MAIN ST
BUCK CT
SEVILLA DR
VIA FLORES
VIA GATOS
NEW_Z5_SUB_6205
NEW_Z5_SUB_6206
NEW_Z5_SUB_6204
NEW_Z5_SUB_6208
NEW_Z5_SUB_6202
NEW_Z5_SUB_6207
NEW_Z5_SUB_2013
NEW_Z5_IL_6200

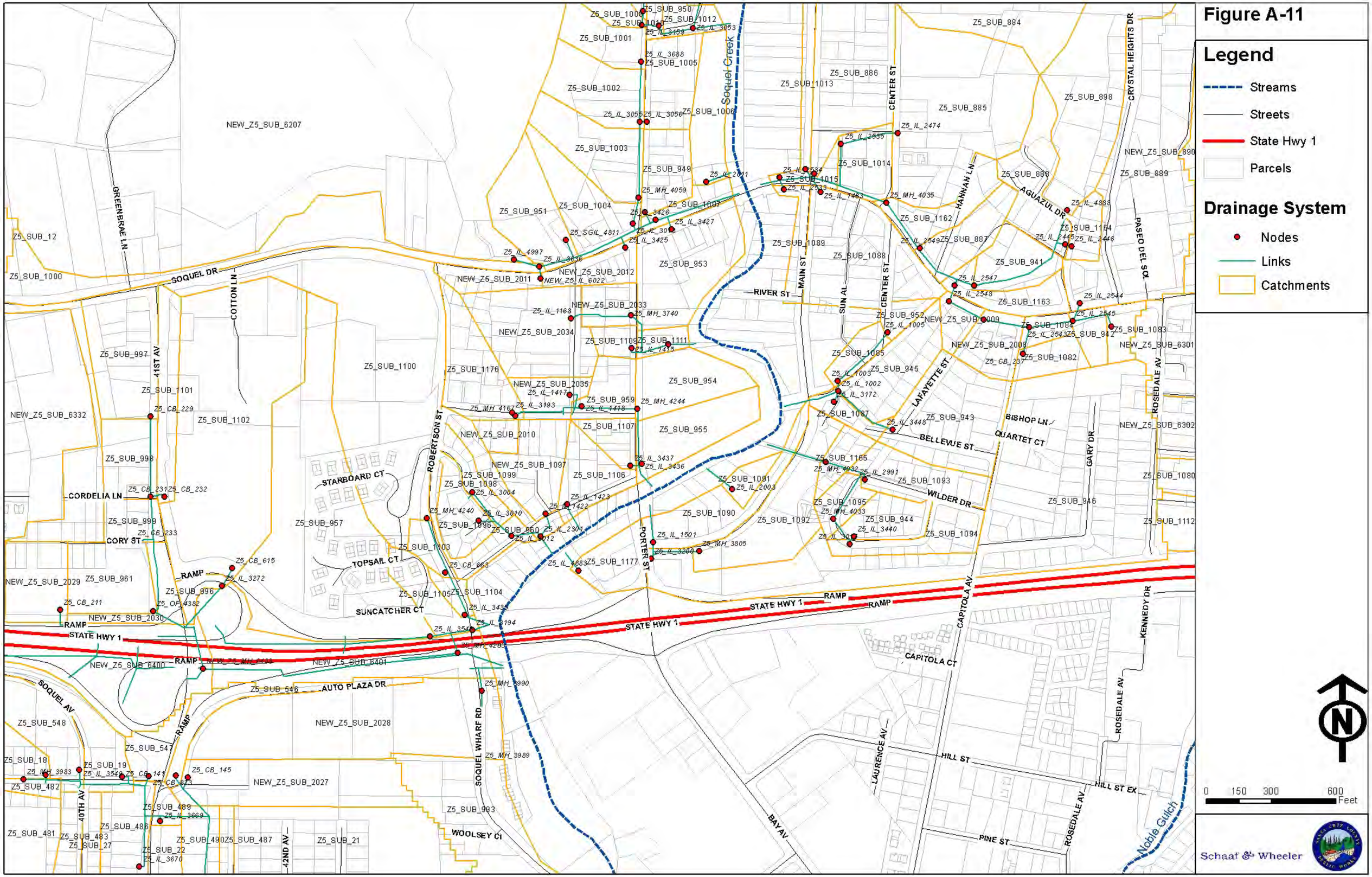


Figure A-11
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
Soquel Creek
Noble Gulch
SOQUEL DR
GREENBRAE LN
COTTON LN
41ST AV
CORDELIA LN
CORY ST
STARBOARD CT
TOPSAIL CT
SUNCATCHER CT
ROBERTSON ST
RIVER ST
MAIN ST
SUN AL
CENTER ST
HAHNAN LN
AGUAZUL DR
CRYSTAL HEIGHTS DR
PASEO DEL SOL
LAFAYETTE ST
BISHOP LN
QUARTET CT
BELLEVUE ST
WILDER DR
GARY DR
ROSEDALE AV
PORTER ST
STATE HWY 1
RAMP
CAPITOLA AV
CAPITOLA CT
KENNEDY DR
AUTO PLAZA DR
SOQUEL AV
SOQUEL WHARF RD
LAURENCE AV
HILL ST
HILL ST EX
PINE ST
BAY AV
WOOLSEY CI
40TH AV
42ND AV
NEW_Z5_SUB_6207
NEW_Z5_SUB_6332
NEW_Z5_SUB_2029
NEW_Z5_SUB_2030
NEW_Z5_SUB_6400
NEW_Z5_SUB_6401
NEW_Z5_SUB_2028
NEW_Z5_SUB_2027
NEW_Z5_SUB_6302
NEW_Z5_SUB_6301
NEW_Z5_SUB_890
Z5_SUB_884
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Z5_SUB_1104
Z5_SUB_1105
Z5_SUB_1106
Z5_SUB_1107
Z5_SUB_1109
Z5_SUB_1111
Z5_SUB_1112
Z5_SUB_1162
Z5_SUB_1163
Z5_SUB_1164
Z5_SUB_1165
Z5_SUB_1176
Z5_SUB_1177
Z5_SUB_481
Z5_SUB_482
Z5_SUB_483
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Z5_SUB_489
Z5_SUB_490
Z5_SUB_546
Z5_SUB_547
Z5_SUB_548
Z5_SUB_903
Z5_SUB_12
Z5_SUB_18
Z5_SUB_19
Z5_SUB_21
Z5_SUB_22
Z5_SUB_27
NEW_Z5_SUB_2009
NEW_Z5_SUB_2008
NEW_Z5_SUB_2011
NEW_Z5_SUB_2012
NEW_Z5_SUB_2033
NEW_Z5_SUB_2034
NEW_Z5_SUB_2035
NEW_Z5_SUB_2010
NEW_Z5_SUB_1097
Z5_IL_2474
Z5_IL_2555
Z5_IL_2534
Z5_IL_2533
Z5_IL_1483
Z5_IL_2549
Z5_IL_2547
Z5_IL_2548
Z5_IL_2544
Z5_IL_2545
Z5_IL_2543
Z5_IL_2446
Z5_IL_2445
Z5_IL_4888
Z5_IL_1005
Z5_IL_1003
Z5_IL_1002
Z5_IL_3172
Z5_IL_3448
Z5_IL_2991
Z5_IL_2003
Z5_IL_3440
Z5_IL_1501
Z5_IL_3200
Z5_IL_4883
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Z5_IL_3436
Z5_IL_1423
Z5_IL_1422
Z5_IL_2304
Z5_IL_1012
Z5_IL_3010
Z5_IL_3004
Z5_IL_1415
Z5_IL_1418
Z5_IL_3193
Z5_IL_1417
Z5_IL_1168
Z5_IL_4997
Z5_IL_3426
Z5_IL_3427
Z5_IL_3425
Z5_IL_2011
Z5_IL_3688
Z5_IL_3053
Z5_IL_3055
Z5_IL_3056
Z5_IL_3272
Z5_IL_3670
Z5_IL_3669
Z5_IL_3549
Z5_IL_3540
Z5_IL_3194
Z5_IL_3436
Z5_IL_3437
Z5_IL_4811
Z5_IL_6022
Z5_MH_4059
Z5_MH_4035
Z5_MH_3740
Z5_MH_4244
Z5_MH_4167
Z5_MH_4240
Z5_MH_4032
Z5_MH_4033
Z5_MH_3805
Z5_MH_3990
Z5_MH_3989
Z5_MH_3983
Z5_CB_229
Z5_CB_231
Z5_CB_232
Z5_CB_233
Z5_CB_615
Z5_CB_663
Z5_CB_211
Z5_CB_145
Z5_CB_141
Z5_CB_287
Z5_OF_4382

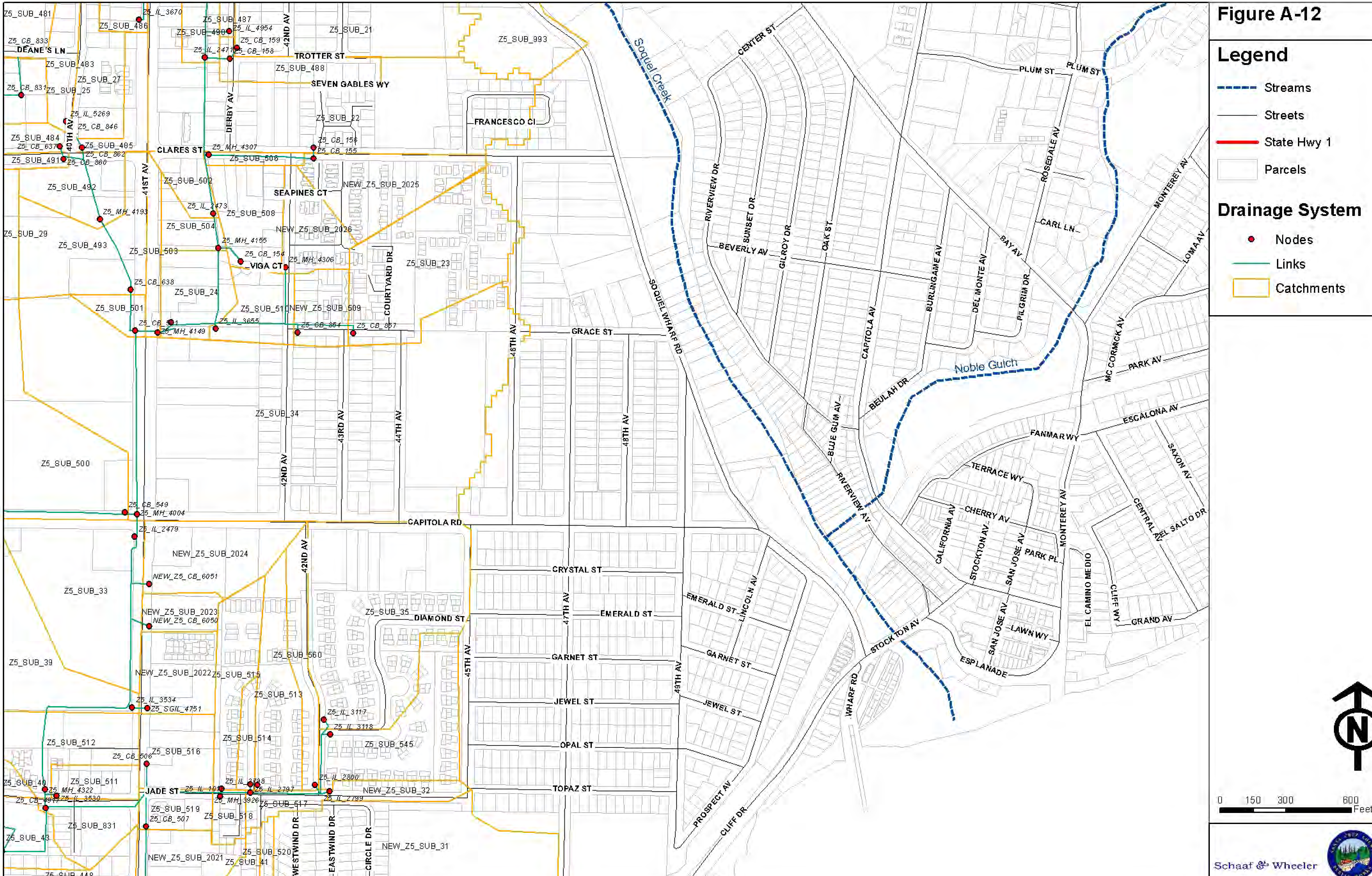
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
Soquel Creek
Noble Gulch
DEANE'S LN
TROTTER ST
SEVEN GABLES WY
FRANCESCO CI
CLARES ST
SEAPINES CT
VIGA CT
GRACE ST
CAPITOLA RD
CRYSTAL ST
DIAMOND ST
EMERALD ST
GARNET ST
JEWEL ST
OPAL ST
TOPAZ ST
JADE ST
40TH AV
41ST AV
42ND AV
43RD AV
44TH AV
45TH AV
46TH AV
47TH AV
48TH AV
49TH AV
DERBY AV
COURTYARD DR
WESTWIND DR
EASTWIND DR
CIRCLE DR
SOQUEL WHARF RD
WHARF RD
CLIFF DR
PROSPECT AV
LINCOLN AV
CENTER ST
RIVERVIEW DR
SUNSET DR
GILROY DR
OAK ST
BEVERLY AV
CAPITOLA AV
BEULAH DR
BLUE GUM AV
RIVERVIEW AV
BURLINGAME AV
DEL MONTE AV
PILGRIM DR
BAY AV
CARL LN
ROSEDALE AV
PLUM ST
MONTEREY AV
LOMA AV
MC CORMICK AV
PARK AV
ESCALONA AV
FANMAR WY
TERRACE WY
CHERRY AV
CALIFORNIA AV
STOCKTON AV
SAN JOSE AV
PARK PL
LAWN WY
ESPLANADE
EL CAMINO MEDIO
CLIFF WY
GRAND AV
CENTRAL AV
EL SALTO DR
SAXON AV
Z5_SUB_993
Z5_SUB_34
Z5_SUB_500
Z5_SUB_33
Z5_SUB_39
NEW_Z5_SUB_2024
NEW_Z5_SUB_32
NEW_Z5_SUB_31
0 150 300 600 Feet
N
Schaaf & Wheeler

Figure A-12

Figure A-13

Legend

- Streams
- Streets
- State Hwy 1
- Parcels

Drainage System

- Nodes
- Links
- Catchments

0 150 300 600 Feet

Schaaf & Wheeler

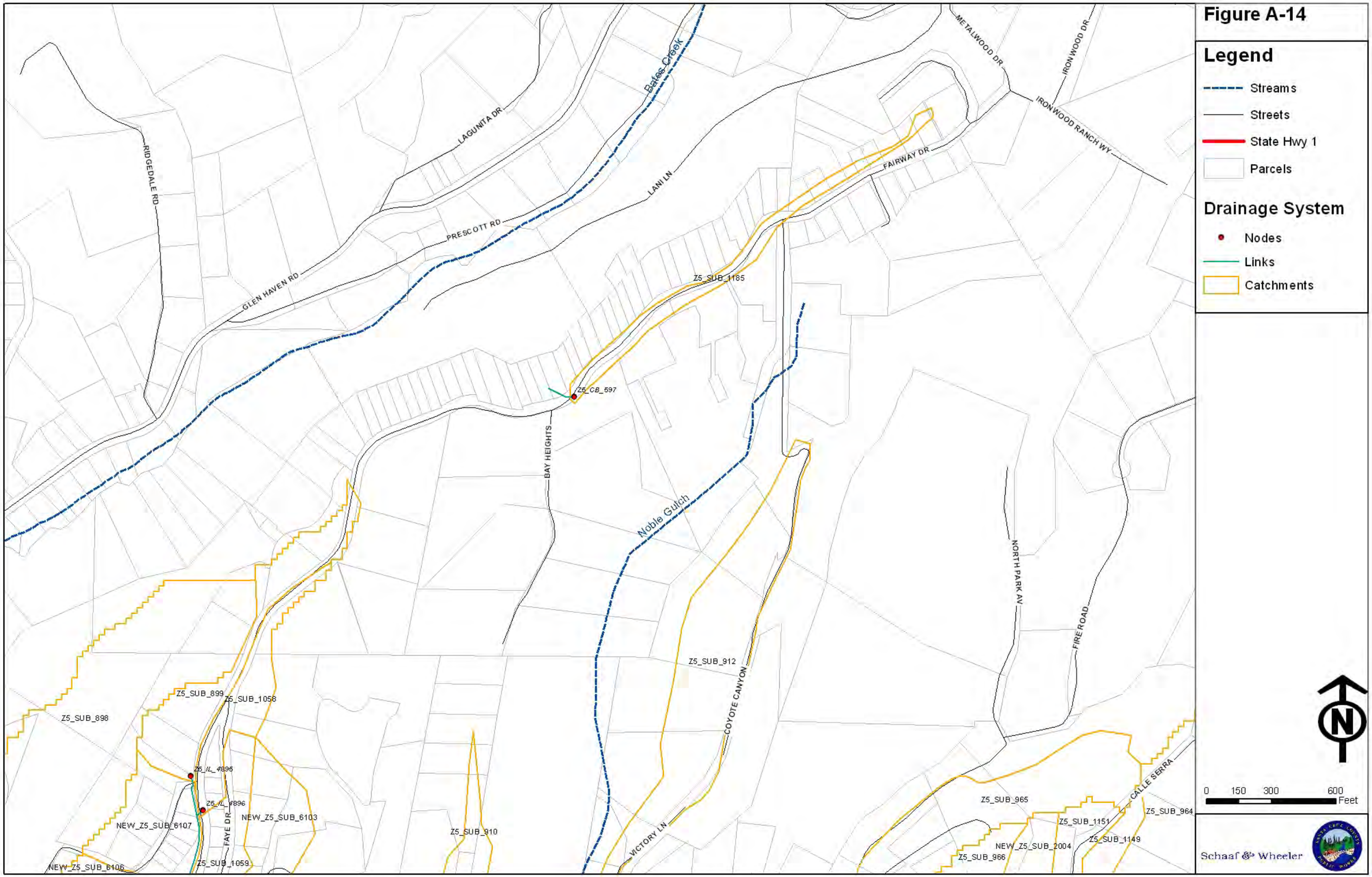
Figure A-14
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
Bates Creek
Noble Gulch
LAGUNITA DR
RIDGEDALE RD
PRESCOTT RD
GLEN HAVEN RD
LANI LN
METALWOOD DR
IRON WOOD DR
IRONWOOD RANCH WY
FAIRWAY DR
BAY HEIGHTS
COYOTE CANYON
NORTH PARK AV
FIRE ROAD
CALLE SERRA
FAYE DR
VICTORY LN
Z5_SUB_1185
Z5_CB_597
Z5_SUB_912
Z5_SUB_899
Z5_SUB_1058
Z5_SUB_898
Z5_IL_4895
Z5_IL_4896
NEW_Z5_SUB_6107
NEW_Z5_SUB_6103
NEW_Z5_SUB_6106
Z5_SUB_1059
Z5_SUB_910
Z5_SUB_965
Z5_SUB_964
Z5_SUB_1151
Z5_SUB_1149
NEW_Z5_SUB_2004
Z5_SUB_966

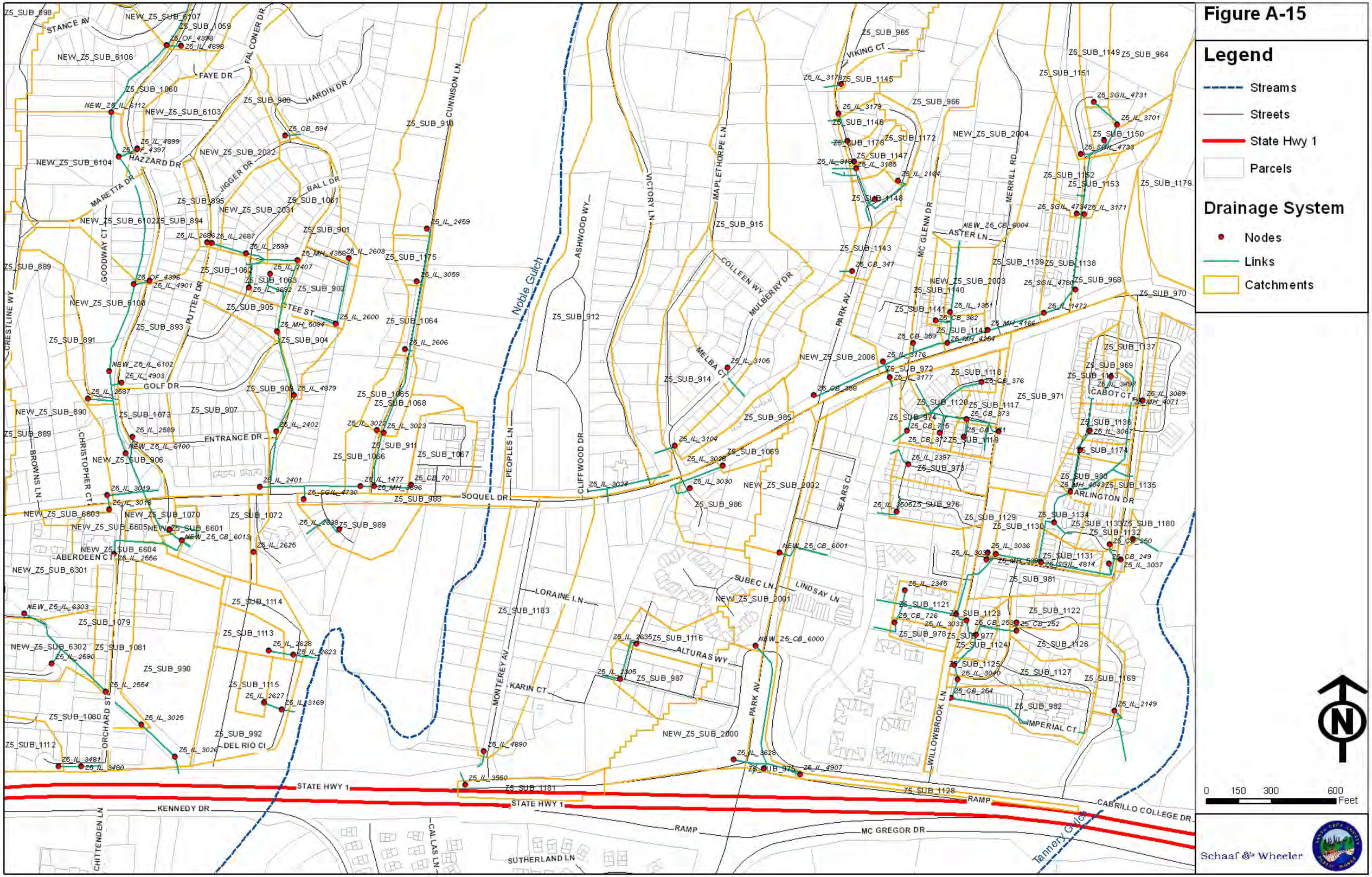
Figure A-15
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
Noble Gulch
Tannery Gulch
STATE HWY 1
SOQUEL DR
ENTRANCE DR
GOLF DR
HARDIN DR
HAZZARD DR
JIGGER DR
BALL DR
MARETTA DR
FAYE DR
FALCONER DR
STANCE AV
CUNNISON LN
VICTORY LN
MAPLETHORPE LN
ASHWOOD WY
PEOPLES LN
CLIFFWOOD DR
VIKING CT
MC GLENN DR
MERRILL RD
ASTER LN
COLLEEN WY
MULBERRY DR
PARK AV
MELBA CT
CABOT CT
ARLINGTON DR
IMPERIAL CT
WILLOWBROOK LN
SEARS CI
SUBEC LN
LINDSAY LN
LORAINE LN
ALTURAS WY
KARIN CT
MONTEREY AV
DEL RIO CI
ABERDEEN CT
CRESTLINE WY
GOODWAY CT
PUTTER DR
TEE ST
CHRISTOPHER CT
BROWNS LN
ORCHARD ST
CHITTENDEN LN
KENNEDY DR
CALLAS LN
SUTHERLAND LN
MC GREGOR DR
RAMP
CABRILLO COLLEGE DR

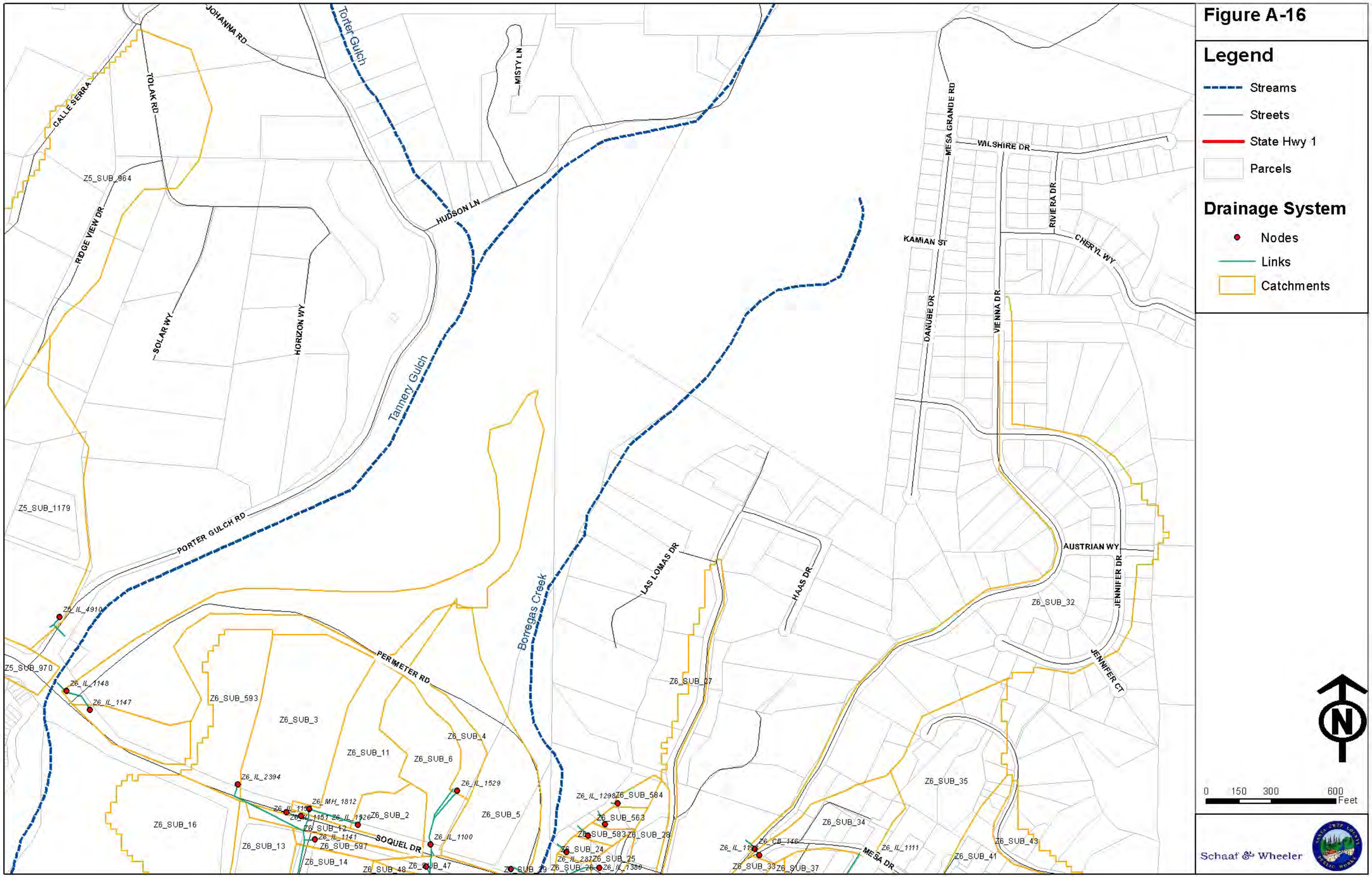
Figure A-16
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
JOHANNA RD
Porter Gulch
MISTY LN
CALLE SERRA
TOLAK RD
Z5_SUB_964
RIDGE VIEW DR
HUDSON LN
SOLAR WY
HORIZON WY
Tannery Gulch
Z5_SUB_1179
PORTER GULCH RD
Z5_IL_4910
Z5_SUB_970
Z6_IL_1148
Z6_IL_1147
PERIMETER RD
Z6_SUB_593
Z6_SUB_3
Z6_SUB_11
Z6_SUB_4
Z6_SUB_6
Z6_IL_2394
Z6_IL_1529
Z6_MH_1812
Z6_SUB_2
Z6_SUB_5
Z6_SUB_16
Z6_SUB_12
Z6_IL_1141
Z6_SUB_597
SOQUEL DR
Z6_IL_1100
Z6_SUB_13
Z6_SUB_14
Z6_SUB_48
Z6_SUB_47
Z6_SUB_29
Borregas Creek
Z6_IL_1298
Z6_SUB_584
Z6_SUB_563
Z6_SUB_583
Z6_SUB_28
Z6_SUB_24
Z6_IL_287
Z6_SUB_25
Z6_SUB_26
Z6_IL_1380
LAS LOMAS DR
HAAS DR
Z6_SUB_27
MESA GRANDE RD
WILSHIRE DR
RIVIERA DR
KAMIAN ST
CHERYL WY
DANUBE DR
VIENNA DR
AUSTRIAN WY
JENNIFER DR
JENNIFER CT
Z6_SUB_32
Z6_SUB_35
Z6_SUB_34
Z6_CB_146
Z6_IL_1111
MESA DR
Z6_SUB_33
Z6_SUB_37
Z6_SUB_41
Z6_SUB_43
N

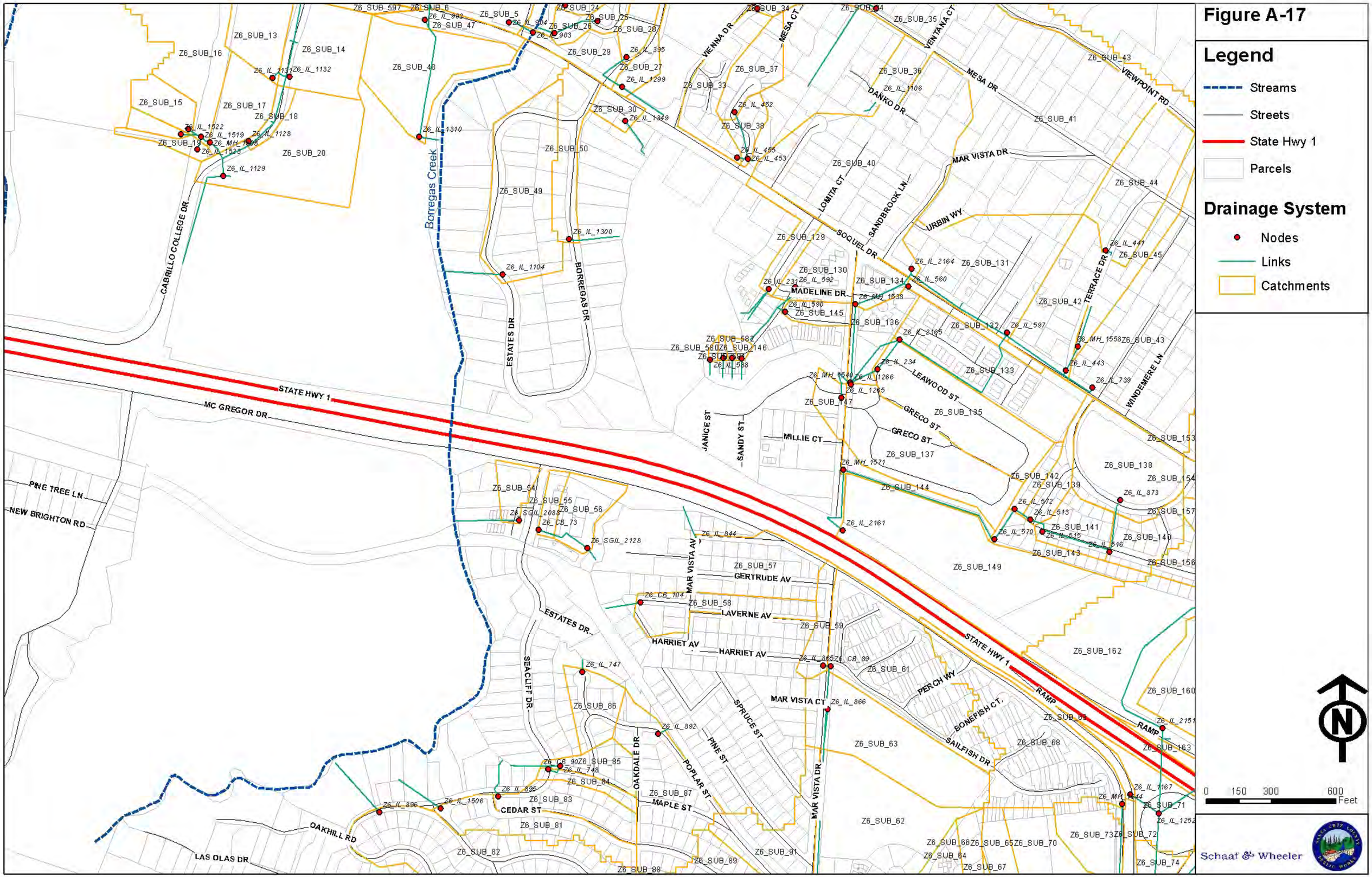
Figure A-17
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
Borregas Creek
STATE HWY 1
MC GREGOR DR
CABRILLO COLLEGE DR
BORREGAS DR
ESTATES DR
VIENNA DR
MESA CT
VENTANA CT
MESA DR
VIEWPOINT RD
DANKO DR
MAR VISTA DR
LOMITA CT
SANDBROOK LN
URBIN WY
SOQUEL DR
MADELINE DR
TERRACE DR
WINDEMERE LN
LEAWOOD ST
GRECO ST
JANICE ST
SANDY ST
MILLIE CT
PINE TREE LN
NEW BRIGHTON RD
GERTRUDE AV
LAVERNE AV
HARRIET AV
SEACLIFF DR
SPRUCE ST
PINE ST
POPLAR ST
MAPLE ST
CEDAR ST
OAKDALE DR
MAR VISTA CT
PERCH WY
BONEFISH CT
SAILFISH DR
RAMP
OAKHILL RD
LAS OLAS DR

Figure A-18

Legend

- Streams
- Streets
- State Hwy 1
- Parcels

Drainage System

- Nodes
- Links
- Catchments

0 150 300 600 Feet

Schaaf & Wheeler

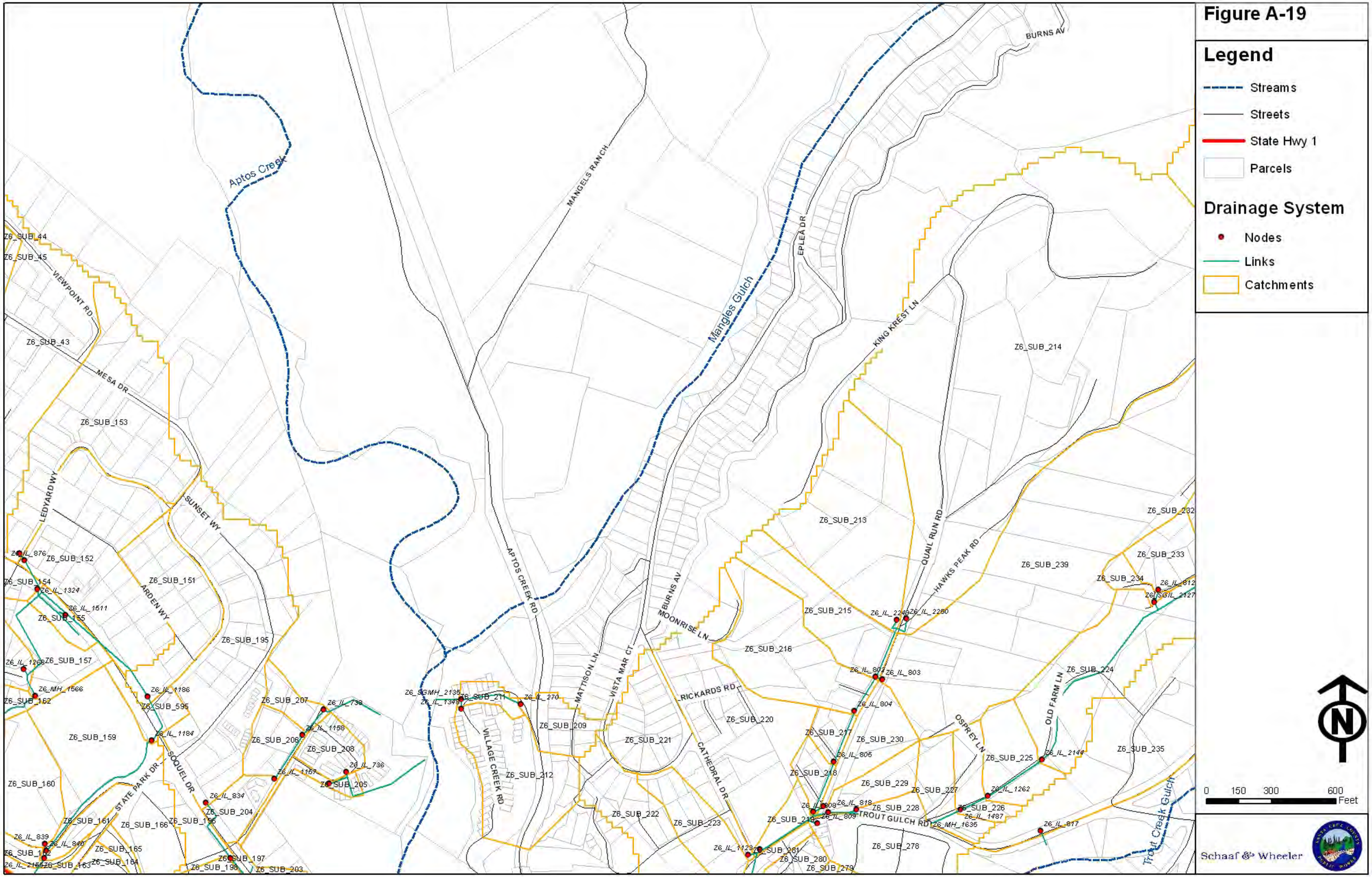
Figure A-19
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
Aptos Creek
Mangles Gulch
Trout Creek Gulch
MANGELS RANCH
BURNS AV
EPLEA DR
KING KREST LN
VIEWPOINT RD
MESA DR
LEDYARD WY
SUNSET WY
ARDEN WY
STATE PARK DR
SOQUEL DR
APTOS CREEK RD
MATTISON LN
VISTA MAR CT
MOONRISE LN
RICKARDS RD
CATHEDRAL DR
VILLAGE CREEK RD
QUAIL RUN RD
HAWKS PEAK RD
OSPREY LN
OLD FARM LN
TROUT GULCH RD
Z6_SUB_44
Z6_SUB_45
Z6_SUB_43
Z6_SUB_153
Z6_SUB_152
Z6_SUB_154
Z6_SUB_151
Z6_SUB_155
Z6_SUB_195
Z6_SUB_157
Z6_SUB_162
Z6_SUB_595
Z6_SUB_159
Z6_SUB_207
Z6_SUB_206
Z6_SUB_208
Z6_SUB_205
Z6_SUB_160
Z6_SUB_161
Z6_SUB_166
Z6_SUB_196
Z6_SUB_204
Z6_SUB_165
Z6_SUB_164
Z6_SUB_163
Z6_SUB_197
Z6_SUB_198
Z6_SUB_203
Z6_SUB_211
Z6_SUB_209
Z6_SUB_212
Z6_SUB_221
Z6_SUB_220
Z6_SUB_222
Z6_SUB_223
Z6_SUB_213
Z6_SUB_216
Z6_SUB_215
Z6_SUB_217
Z6_SUB_218
Z6_SUB_230
Z6_SUB_229
Z6_SUB_228
Z6_SUB_227
Z6_SUB_226
Z6_SUB_225
Z6_SUB_214
Z6_SUB_239
Z6_SUB_232
Z6_SUB_233
Z6_SUB_234
Z6_SUB_224
Z6_SUB_235
Z6_SUB_261
Z6_SUB_280
Z6_SUB_279
Z6_SUB_278

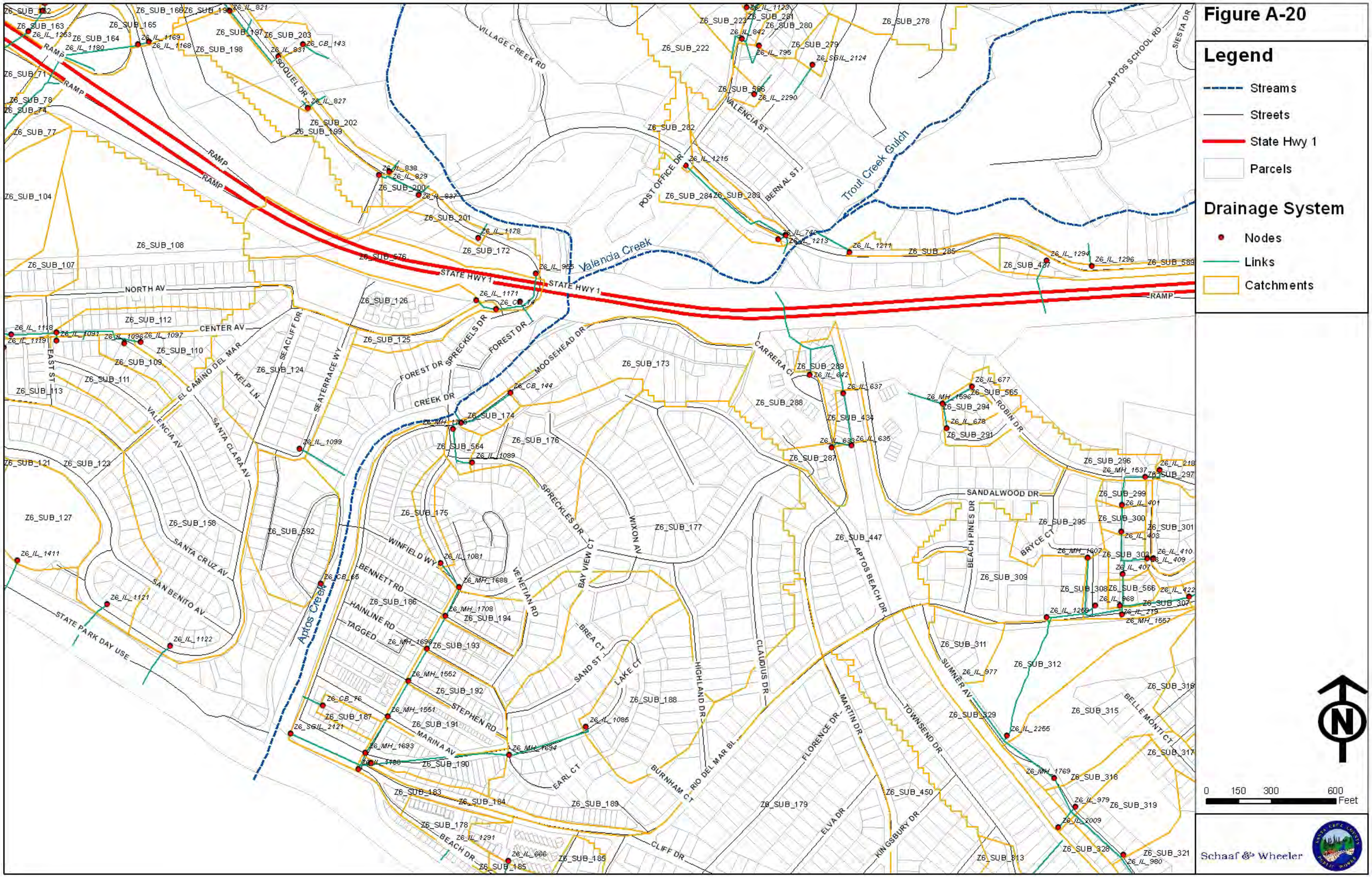
Figure A-20
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
Valencia Creek
Trout Creek Gulch
Aptos Creek
STATE HWY 1
RAMP
VILLAGE CREEK RD
SOQUEL DR
VALENCIA ST
POST OFFICE DR
BERNAL ST
APTOS SCHOOL RD
SIESTA DR
NORTH AV
CENTER AV
EAST ST
EL CAMINO DEL MAR
KELP LN
SEACLIFF DR
SEATERRACE WY
VALENCIA AV
SANTA CLARA AV
SANTA CRUZ AV
SAN BENITO AV
STATE PARK DAY USE
FOREST DR
SPRECKELS DR
MOOSEHEAD DR
CREEK DR
CARRERA CT
ROBIN DR
SANDALWOOD DR
BEACH PINES DR
BRYCE CT
APTOS BEACH DR
WINFIELD WY
BENNETT RD
HAINLINE RD
TAGGED
VENETIAN RD
BAY VIEW CT
WIXON AV
BREA CT
SAND ST
LAKE CT
HIGHLAND DR
CLAUDIUS DR
MARTIN DR
FLORENCE DR
TOWNSEND DR
SUMNER AV
BELLE MONTI CT
STEPHEN RD
MARINA AV
EARL CT
BURNHAM CT
RIO DEL MAR BL
ELVA DR
KINGSBURY DR
CLIFF DR
BEACH DR

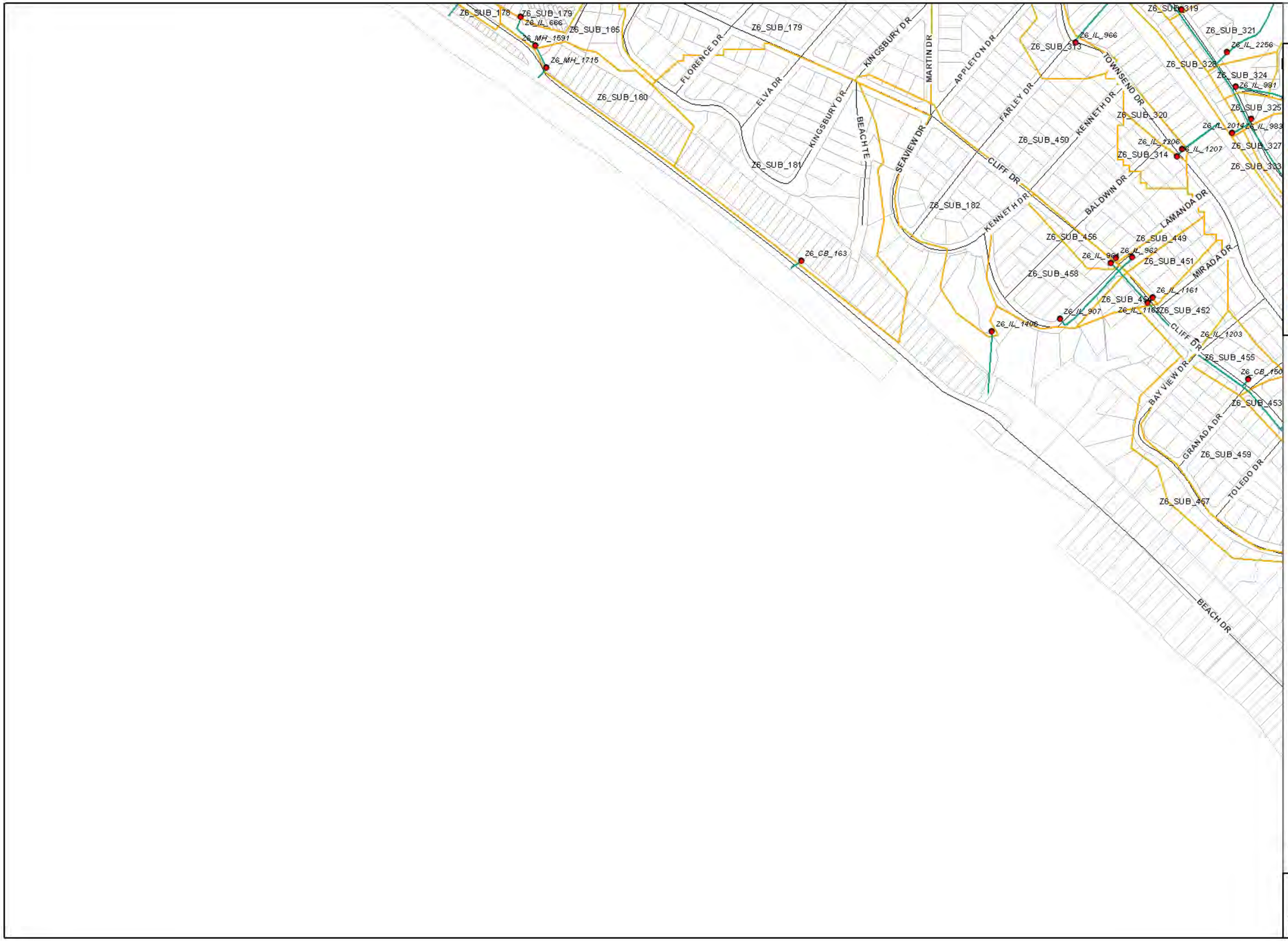

Figure A-21

Legend

- Streams
- Streets
- State Hwy 1
- Parcels

Drainage System

- Nodes
- Links
- Catchments

N

0 150 300 600 Feet

Schaaf & Wheeler

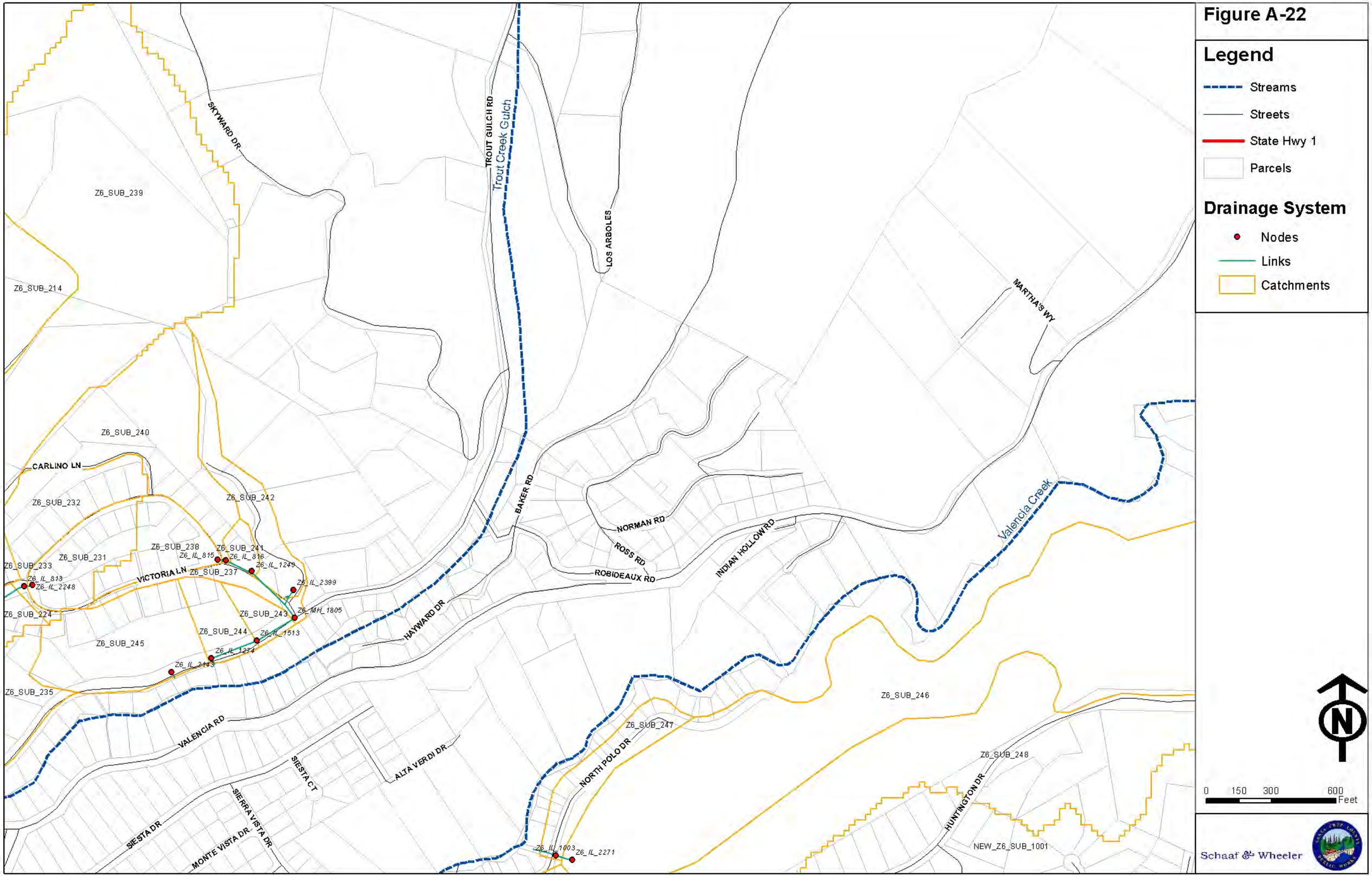
Figure A-22
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
SKYWARD DR
TROUT GULCH RD
Trout Creek Gulch
LOS ARBOLES
MARTHA'S WY
Z6_SUB_239
Z6_SUB_214
Z6_SUB_240
CARLINO LN
Z6_SUB_232
Z6_SUB_242
Z6_SUB_238
Z6_SUB_241
Z6_SUB_231
Z6_SUB_233
Z6_IL_815
Z6_IL_816
Z6_IL_1249
Z6_IL_2399
Z6_IL_813
Z6_IL_2248
VICTORIA LN
Z6_SUB_237
Z6_SUB_224
Z6_SUB_243
Z6_MH_1805
Z6_SUB_244
Z6_IL_1513
Z6_SUB_245
Z6_IL_1274
Z6_IL_2143
Z6_SUB_235
BAKER RD
NORMAN RD
ROSS RD
ROBIDEAUX RD
INDIAN HOLLOW RD
Valencia Creek
HAYWARD DR
Z6_SUB_246
VALENCIA RD
Z6_SUB_247
NORTH POLO DR
ALTA VERDI DR
SIESTA CT
Z6_SUB_248
HUNTINGTON DR
SIERRA VISTA DR
SIESTA DR
MONTE VISTA DR
Z6_IL_1003
Z6_IL_2271
NEW_Z6_SUB_1001

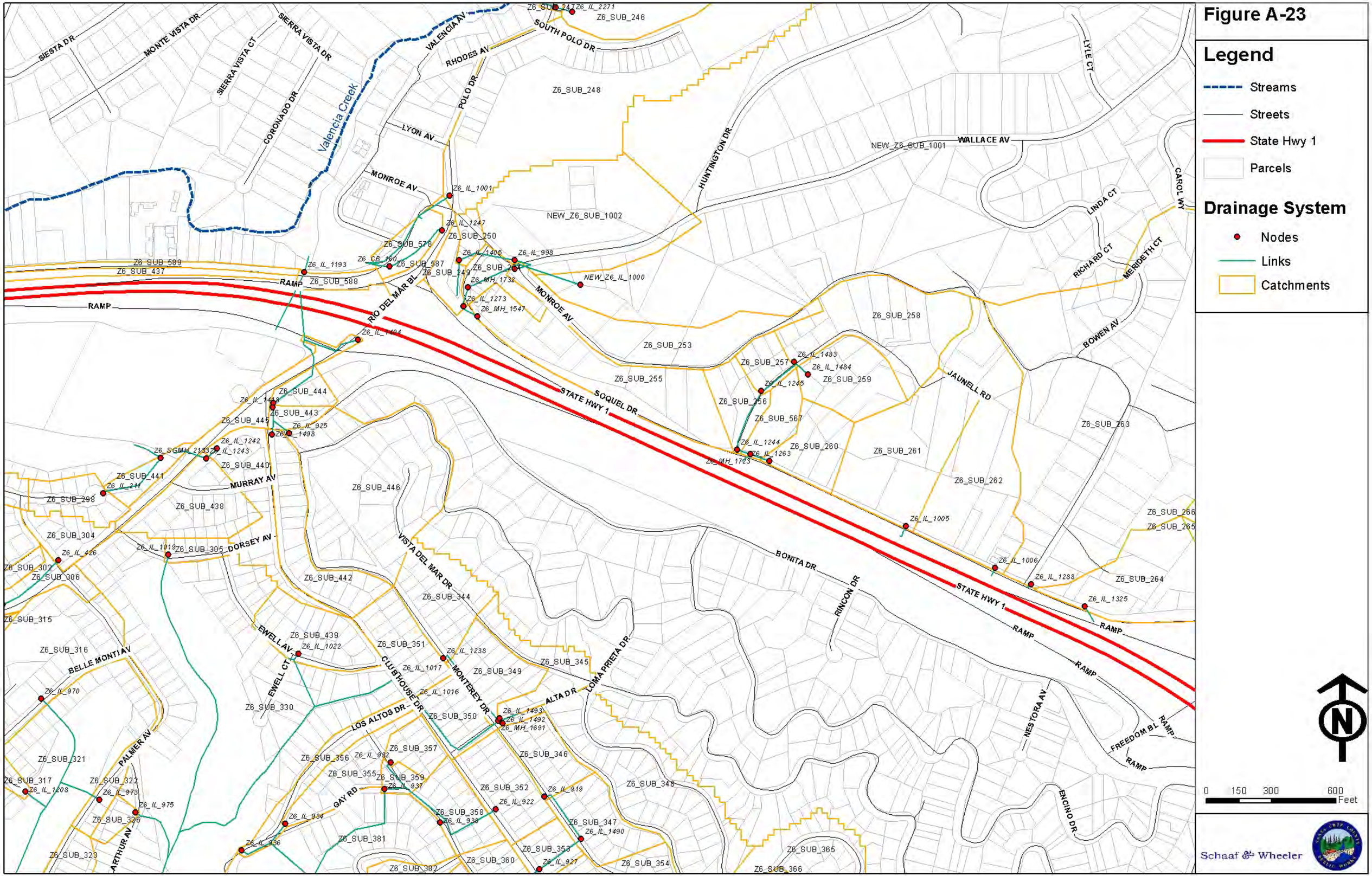
Figure A-23
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600 Feet
Schaaf & Wheeler
SIESTA DR
MONTE VISTA DR
SIERRA VISTA CT
SIERRA VISTA DR
CORONADO DR
Valencia Creek
VALENCIA AV
RHODES AV
SOUTH POLO DR
POLO DR
LYON AV
MONROE AV
HUNTINGTON DR
WALLACE AV
LYLE CT
CAROL WY
LINDA CT
RICHARD CT
MERIDETH CT
BOWEN AV
JAUNELL RD
RIO DEL MAR BL
RAMP
STATE HWY 1
SOQUEL DR
MURRAY AV
DORSEY AV
VISTA DEL MAR DR
BONITA DR
RINCON DR
EWELL AV
EWELL CT
BELLE MONTI AV
CLUBHOUSE DR
MONTEREY DR
ALTA DR
LOMA PRIETA DR
LOS ALTOS DR
GAY RD
PALMER AV
ARTHUR AV
NESTORA AV
FREEDOM BL
ENCINO DR
Z6_SUB_246
Z6_IL_2271
Z6_SUB_248
NEW_Z6_SUB_1001
NEW_Z6_SUB_1002
Z6_IL_1001
Z6_IL_1247
Z6_SUB_250
Z6_SUB_578
Z6_IL_1405
Z6_IL_998
Z6_SUB_589
Z6_SUB_437
Z6_IL_1193
Z6_SUB_587
Z6_SUB_588
Z6_SUB_249
Z6_MH_1732
NEW_Z6_IL_1000
Z6_IL_1273
Z6_MH_1547
Z6_IL_1404
Z6_SUB_253
Z6_SUB_258
Z6_SUB_257
Z6_IL_1483
Z6_IL_1484
Z6_SUB_259
Z6_IL_1245
Z6_SUB_255
Z6_SUB_256
Z6_SUB_567
Z6_IL_1244
Z6_IL_1263
Z6_SUB_260
Z6_MH_1723
Z6_SUB_261
Z6_SUB_263
Z6_SUB_262
Z6_IL_1005
Z6_SUB_266
Z6_SUB_265
Z6_IL_1006
Z6_IL_1288
Z6_SUB_264
Z6_IL_1325
Z6_SUB_444
Z6_IL_1448
Z6_SUB_443
Z6_SUB_445
Z6_IL_925
Z6_IL_1498
Z6_IL_1242
Z6_IL_1243
Z6_SGMH_2133
Z6_SUB_440
Z6_SUB_441
Z6_IL_241
Z6_SUB_298
Z6_SUB_438
Z6_SUB_446
Z6_SUB_304
Z6_IL_1019
Z6_SUB_305
Z6_IL_426
Z6_SUB_302
Z6_SUB_306
Z6_SUB_442
Z6_SUB_315
Z6_SUB_316
Z6_SUB_439
Z6_IL_1022
Z6_SUB_344
Z6_SUB_351
Z6_IL_1238
Z6_IL_1017
Z6_SUB_345
Z6_SUB_349
Z6_IL_1016
Z6_IL_970
Z6_SUB_330
Z6_SUB_350
Z6_IL_1493
Z6_IL_1492
Z6_MH_1691
Z6_SUB_357
Z6_SUB_346
Z6_SUB_321
Z6_SUB_356
Z6_IL_932
Z6_SUB_355
Z6_SUB_359
Z6_IL_937
Z6_SUB_317
Z6_IL_1208
Z6_SUB_322
Z6_IL_973
Z6_IL_975
Z6_SUB_326
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Z6_IL_919
Z6_SUB_348
Z6_IL_934
Z6_SUB_358
Z6_IL_938
Z6_IL_922
Z6_SUB_347
Z6_IL_1490
Z6_IL_936
Z6_SUB_381
Z6_SUB_353
Z6_SUB_323
Z6_SUB_360
Z6_IL_927
Z6_SUB_354
Z6_SUB_382
Z6_SUB_365
Z6_SUB_366

Figure A-24

Legend

- Streams
- Streets
- State Hwy 1
- Parcels

Drainage System

- Nodes
- Links
- Catchments

0 150 300 600 Feet

Schaaf & Wheeler

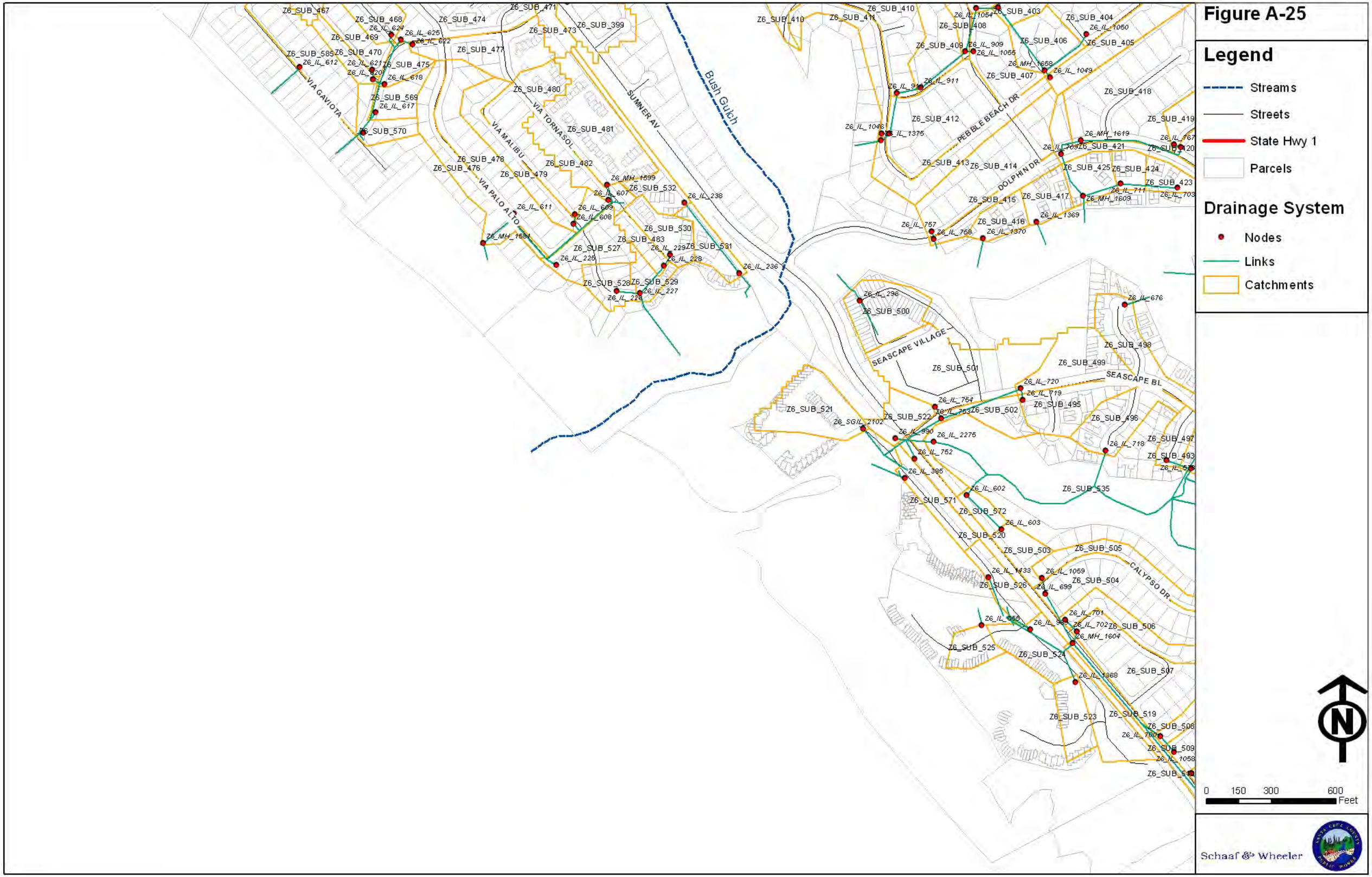
Figure A-25
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
Bush Gulch
VIA GAVIOTA
VIA TORNASOL
VIA MALIBU
VIA PALO ALTO
SUMNER AV
PEBBLE BEACH DR
DOLPHIN DR
SEASCAPE VILLAGE
SEASCAPE BL
CALYPSO DR
0 150 300 600 Feet
Schaaf & Wheeler

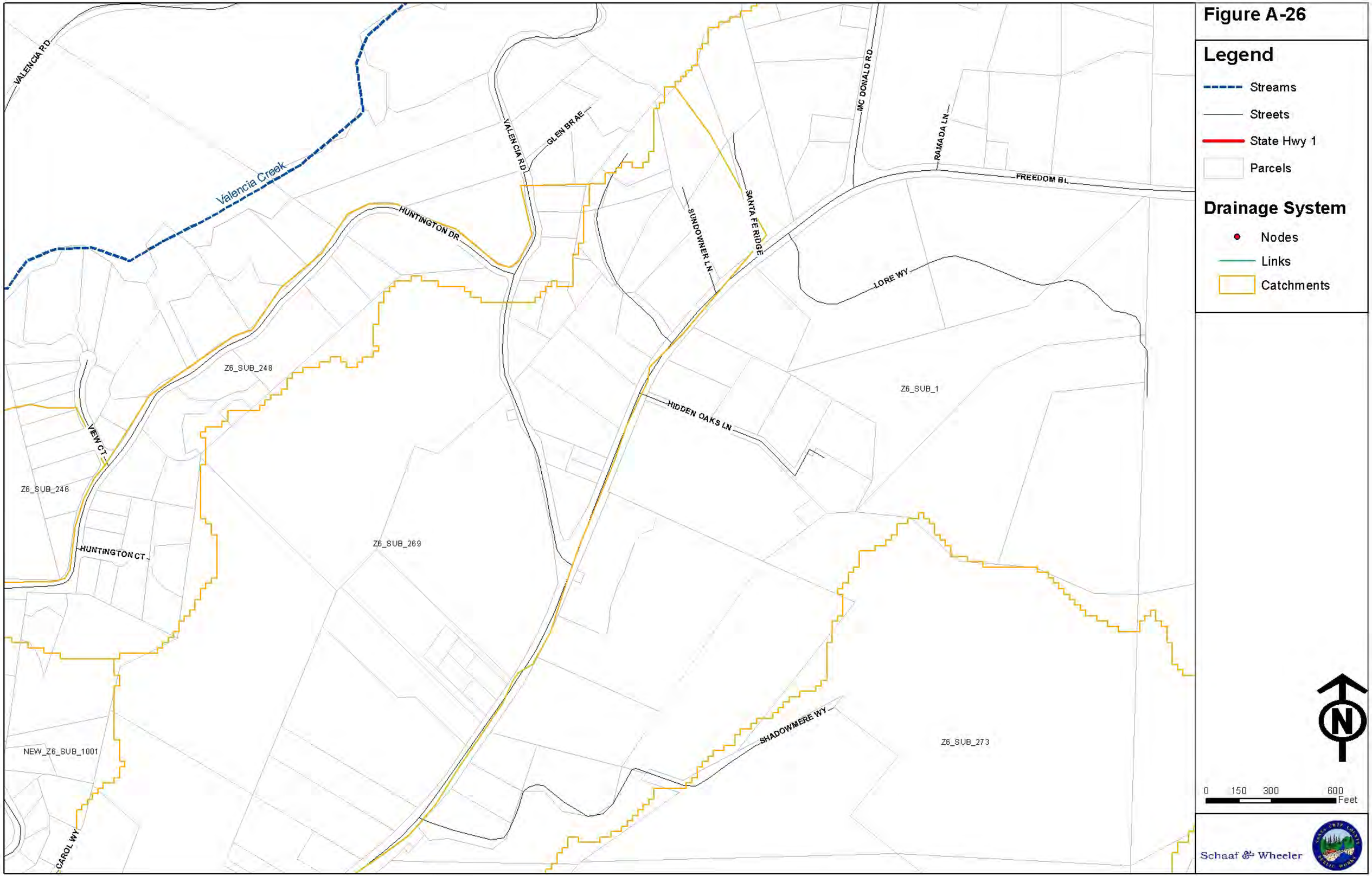
Figure A-26
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
VALENCIA RD
Valencia Creek
GLEN BRAE
HUNTINGTON DR
MC DONALD RD
RAMADA LN
FREEDOM BL
SUNDOWNER LN
SANTA FE RIDGE
LORE WY
HIDDEN OAKS LN
VIEW CT
HUNTINGTON CT
SHADOWMERE WY
CAROL WY
Z6_SUB_248
Z6_SUB_246
Z6_SUB_269
Z6_SUB_1
Z6_SUB_273
NEW_Z6_SUB_1001
0 150 300 600
Feet
Schaaf & Wheeler

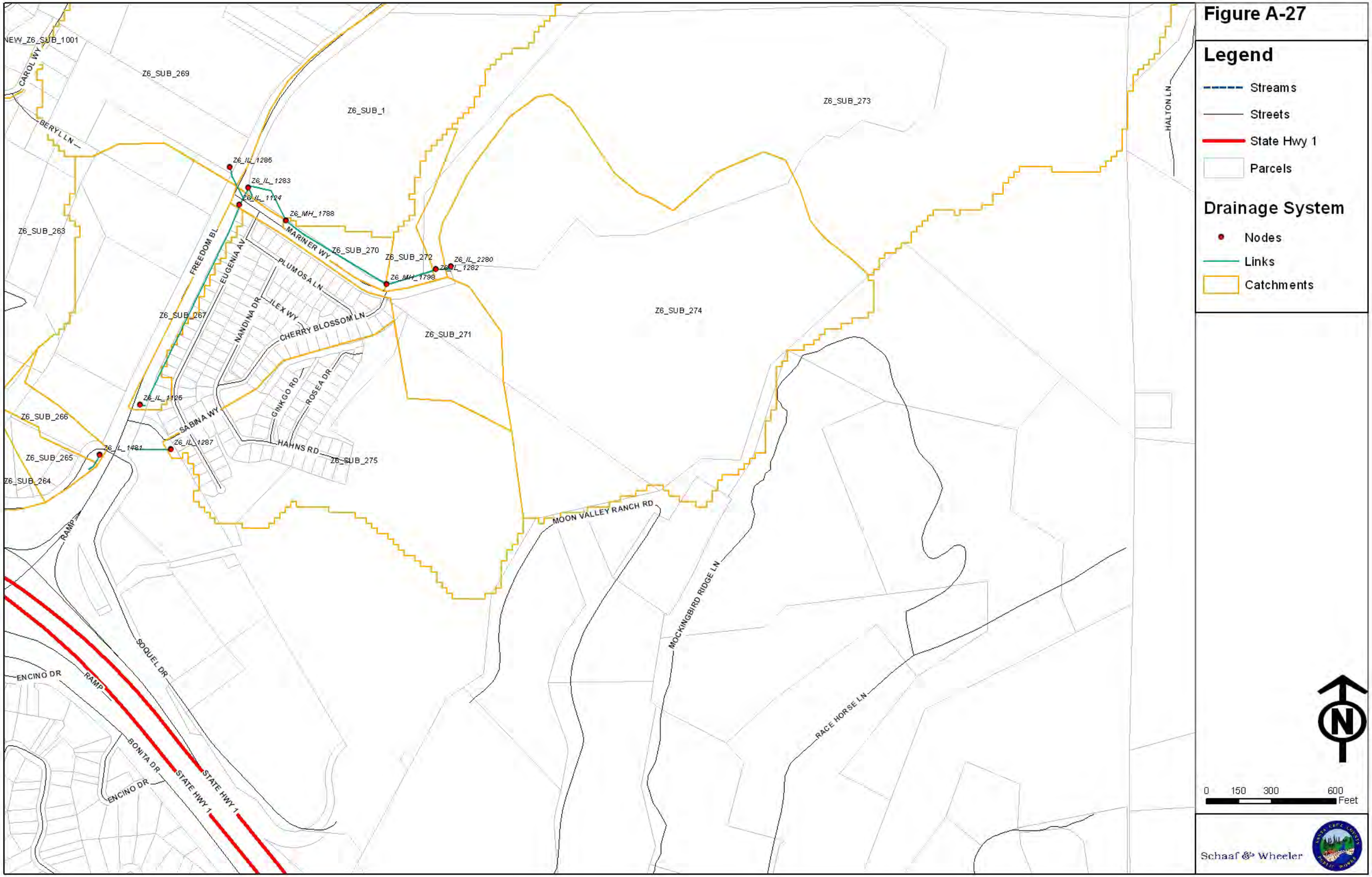
Figure A-27
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
NEW_Z6_SUB_1001
CAROL WY
BERYL LN
Z6_SUB_269
Z6_SUB_1
Z6_SUB_273
HALTON LN
Z6_IL_1285
Z6_IL_1283
Z6_IL_1124
Z6_MH_1788
MARINER WY
Z6_SUB_263
FREEDOM BL
EUGENIA AV
PLUMOSA LN
Z6_SUB_270
Z6_SUB_272
Z6_IL_2280
Z6_IL_1282
Z6_MH_1798
Z6_SUB_267
NANDINA DR
ILEX WY
CHERRY BLOSSOM LN
Z6_SUB_274
Z6_SUB_271
GINKGO RD
ROSEA DR
Z6_IL_1126
Z6_SUB_266
SABINA WY
Z6_IL_1287
Z6_IL_1481
HAHNS RD
Z6_SUB_275
Z6_SUB_265
Z6_SUB_264
RAMP
MOON VALLEY RANCH RD
MOCKINGBIRD RIDGE LN
SOQUEL DR
ENCINO DR
RAMP
RACE HORSE LN
BONITA DR
ENCINO DR
STATE HWY 1
STATE HWY 1
N
0 150 300 600
Feet
Schaaf & Wheeler

Figure A-28
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600
Feet
Schaaf & Wheeler
EL SERENO CT
SONATA LN
Bush Gulch
STATE HWY 1
RAMP
MOON VALLEY RANCH RD
MOCKINGBIRD RIDGE LN
RACE HORSE LN
APTOS RIDGE CT
VISTA GRANDE DR
ZANZIBAR DR
LARKIN VALLEY RD
Z6_SUB_401
Z6_SUB_402
Z6_SUB_403
Z6_SUB_405
Z6_SUB_418
Z6_SUB_419
Z6_SUB_420
Z6_SUB_431
BONITA DR
SAN ANDREAS RD
XANTHUS DR
BYERS LN
VENTANA WY

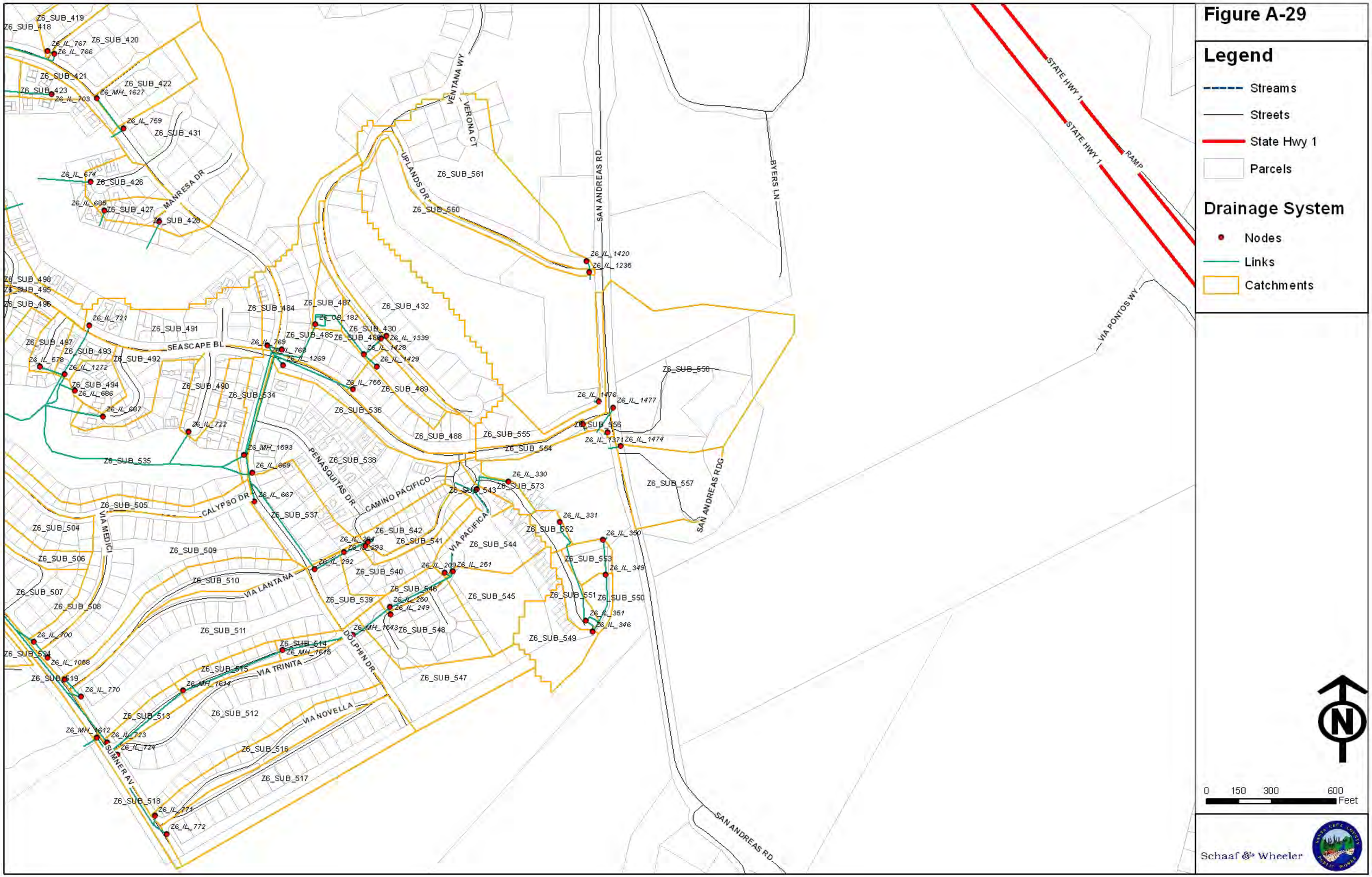
Figure A-29
Legend
Streams
Streets
State Hwy 1
Parcels
Drainage System
Nodes
Links
Catchments
0 150 300 600
Feet
Schaaf & Wheeler
SEASCAPE BL
MANRESA DR
UPLANDS DR
VENTANA WY
VERONA CT
SAN ANDREAS RD
BYERS LN
STATE HWY 1
RAMP
VIA PONTOS WY
PENASQUITAS DR
CAMINO PACIFICO
VIA PACIFICA
CALYPSO DR
VIA MEDICI
VIA LANTANA
DOLPHIN DR
VIA TRINITA
VIA NOVELLA
SUMNER AV
SAN ANDREAS RDG
Z6_SUB_419
Z6_SUB_418
Z6_SUB_420
Z6_SUB_421
Z6_SUB_422
Z6_SUB_423
Z6_SUB_431
Z6_SUB_426
Z6_SUB_427
Z6_SUB_428
Z6_SUB_561
Z6_SUB_560
Z6_SUB_498
Z6_SUB_495
Z6_SUB_496
Z6_SUB_484
Z6_SUB_487
Z6_SUB_432
Z6_SUB_491
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Z6_SUB_430
Z6_SUB_497
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Z6_SUB_509
Z6_SUB_542
Z6_SUB_541
Z6_SUB_543
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Z6_SUB_553
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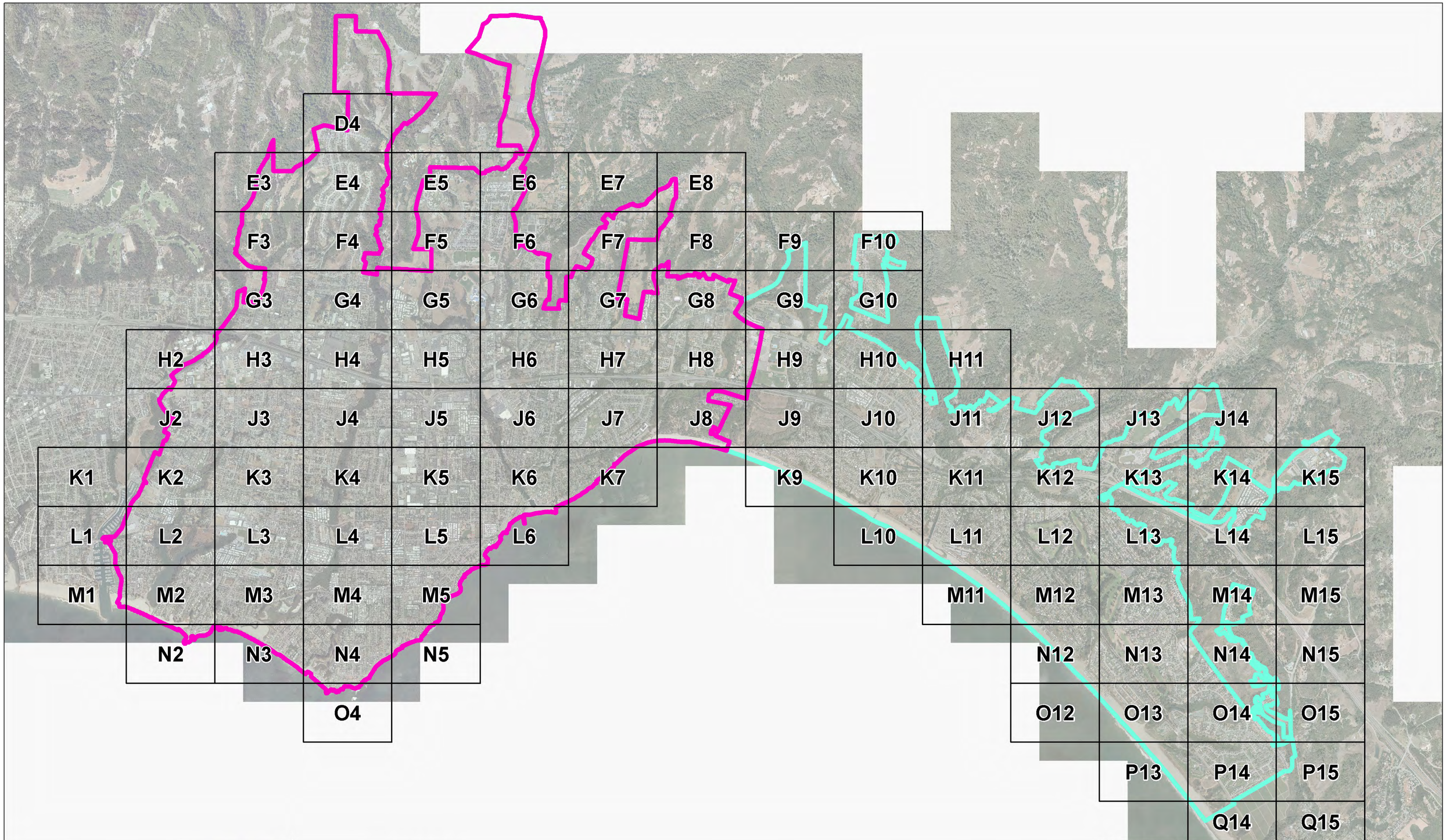
Z6_SUB_549
Z6_SUB_511
Z6_SUB_548
Z6_SUB_514
Z6_SUB_515
Z6_SUB_519
Z6_SUB_547
Z6_SUB_513
Z6_SUB_512
Z6_SUB_516
Z6_SUB_517
Z6_SUB_518

APPENDIX B

NODE MAPS



0 1,000 2,000 4,000 Feet

Schaaf & Wheeler

SANTA CRUZ COUNTY PUBLIC WORKS

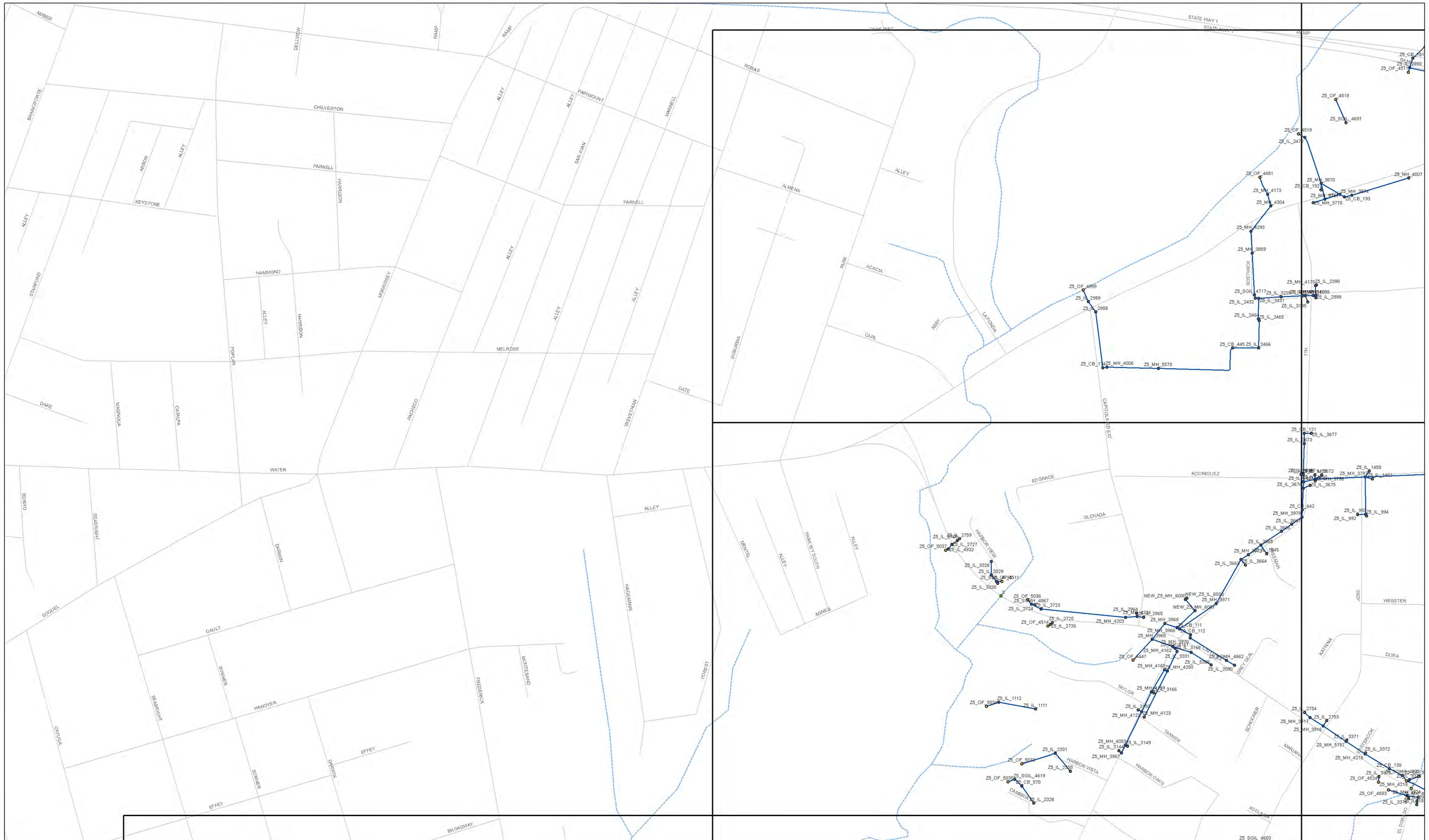
N

Legend

Zone 5 Boundary

Zone 6 Boundary

Modeled System - Map Grid Index
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

Schaaf & Wheeler

Modeled System - Map Grids H2, J2
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan

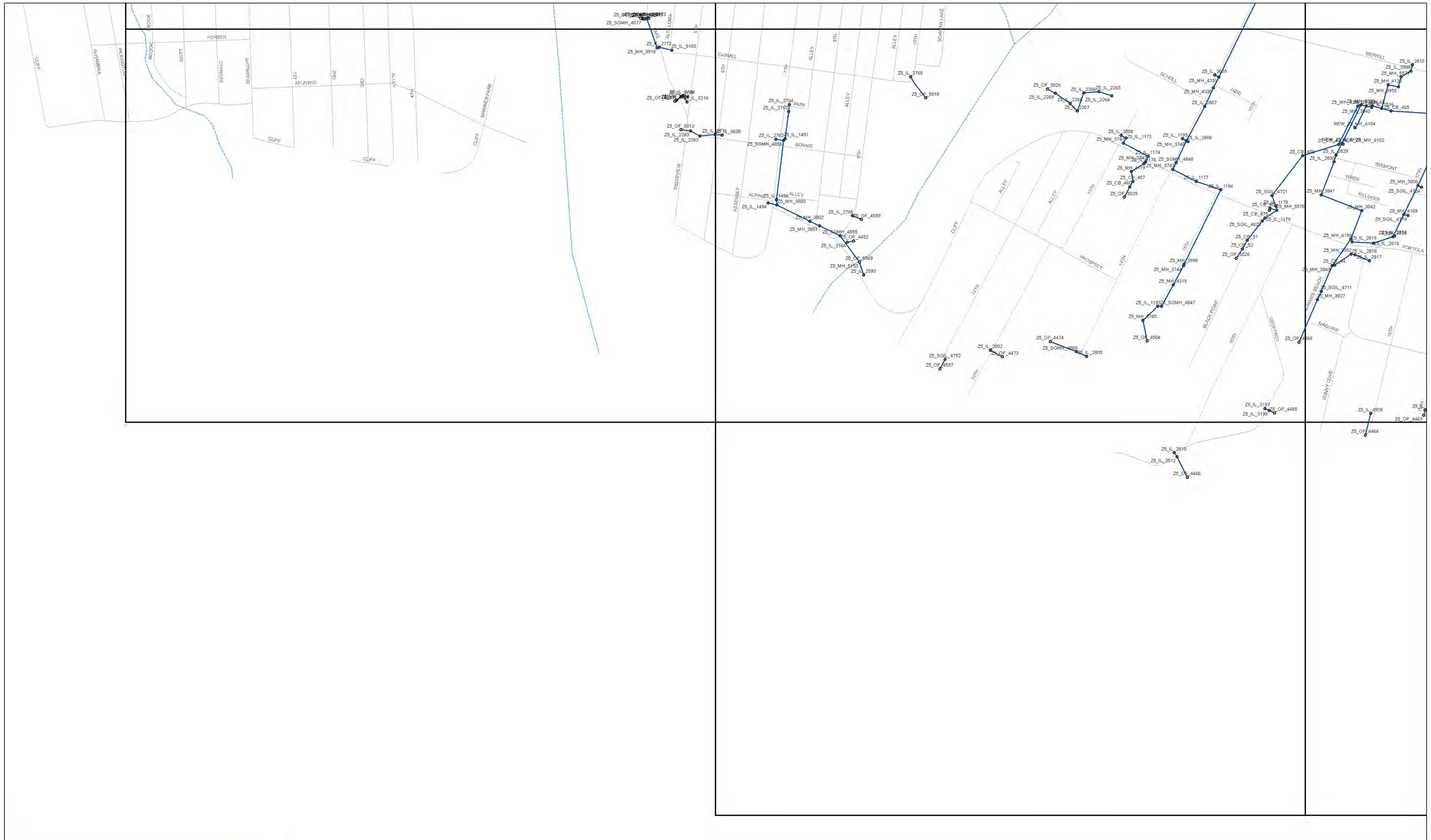
0 200 400 800 Feet

Schaaf & Wheeler

SANTA CRUZ COUNTY PUBLIC WORKS

N

Modeled System - Map Grids K1, K2, L1, L2
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



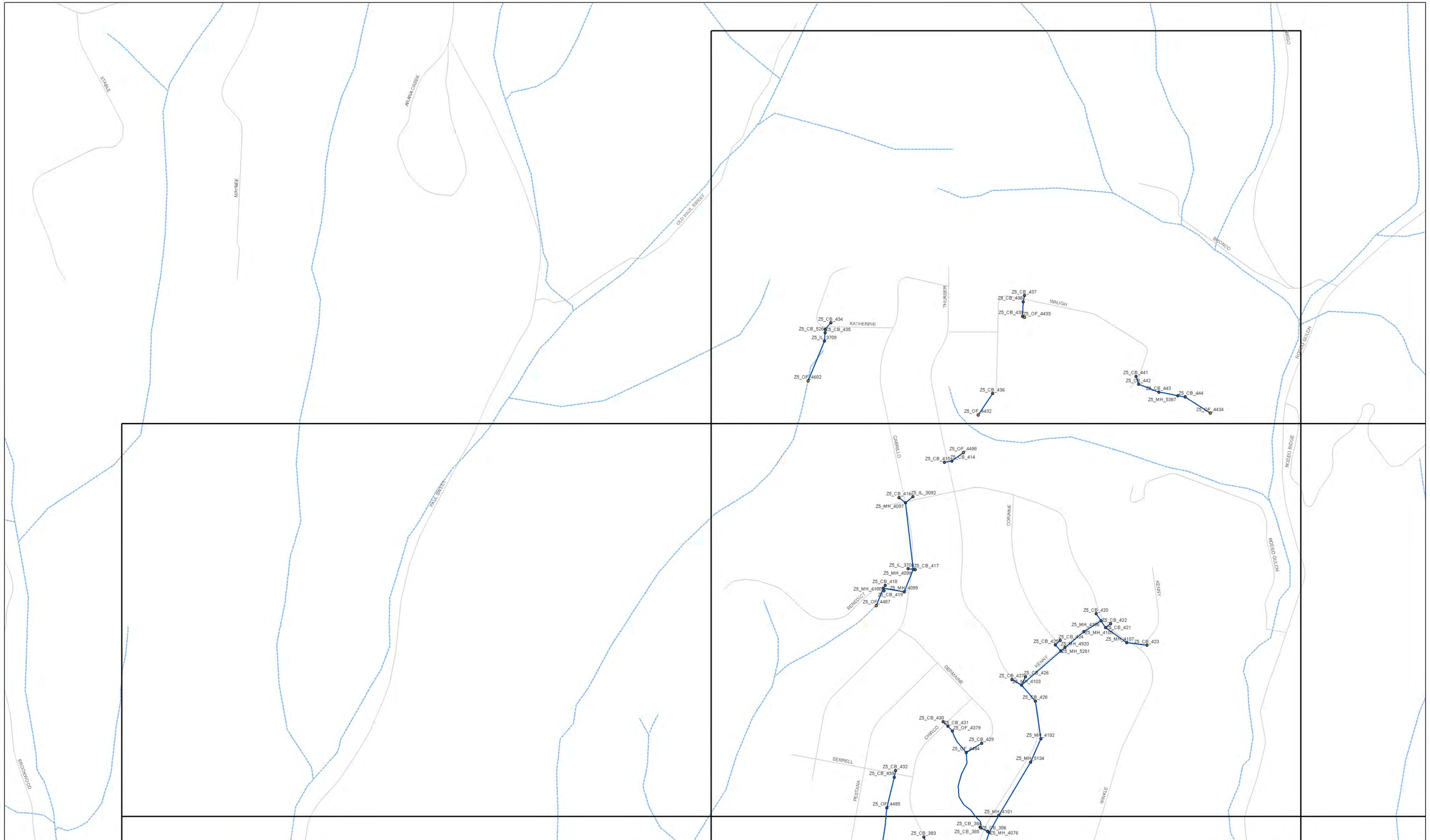
0 200 400 800 Feet

Schaaf & Wheeler

SANTA CRUZ COUNTY PUBLIC WORKS

N

Modeled System - Map Grids M1, M2, N2
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



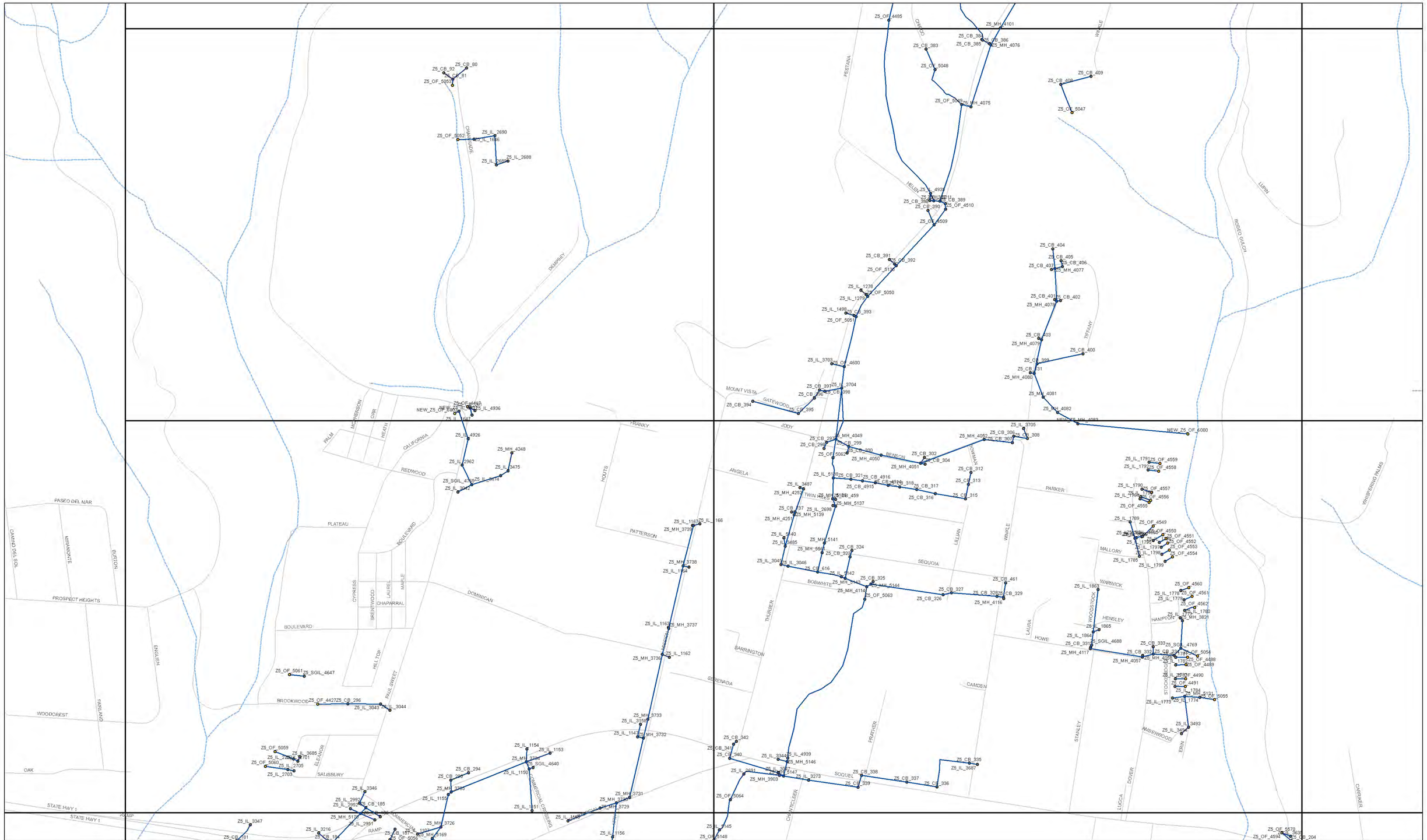
0 200 400 800 Feet

Schaaf & Wheeler

SANTA CRUZ COUNTY PUBLIC WORKS

N

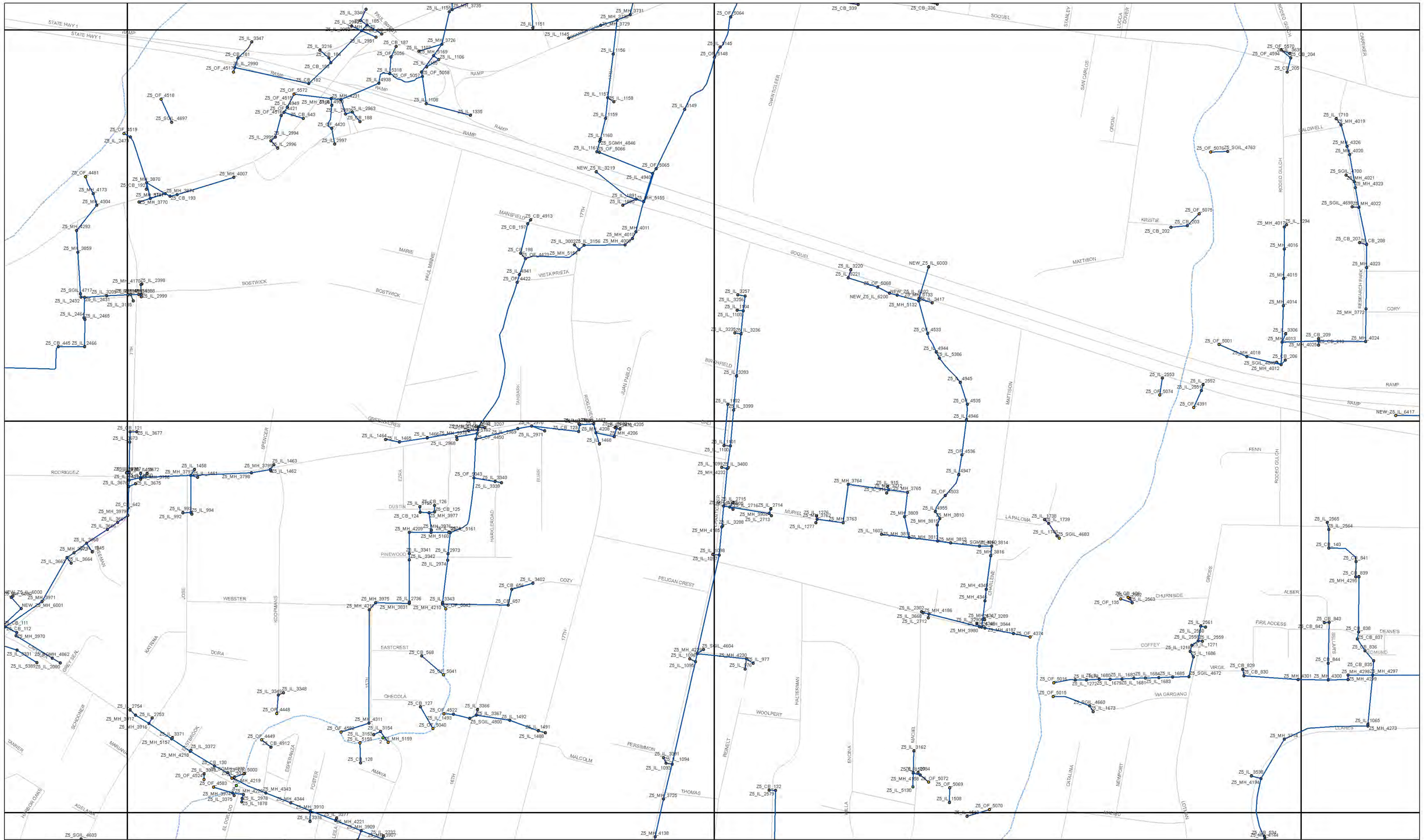
Modeled System - Map Grids D4, E3, E4
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

Schaaf & Wheeler

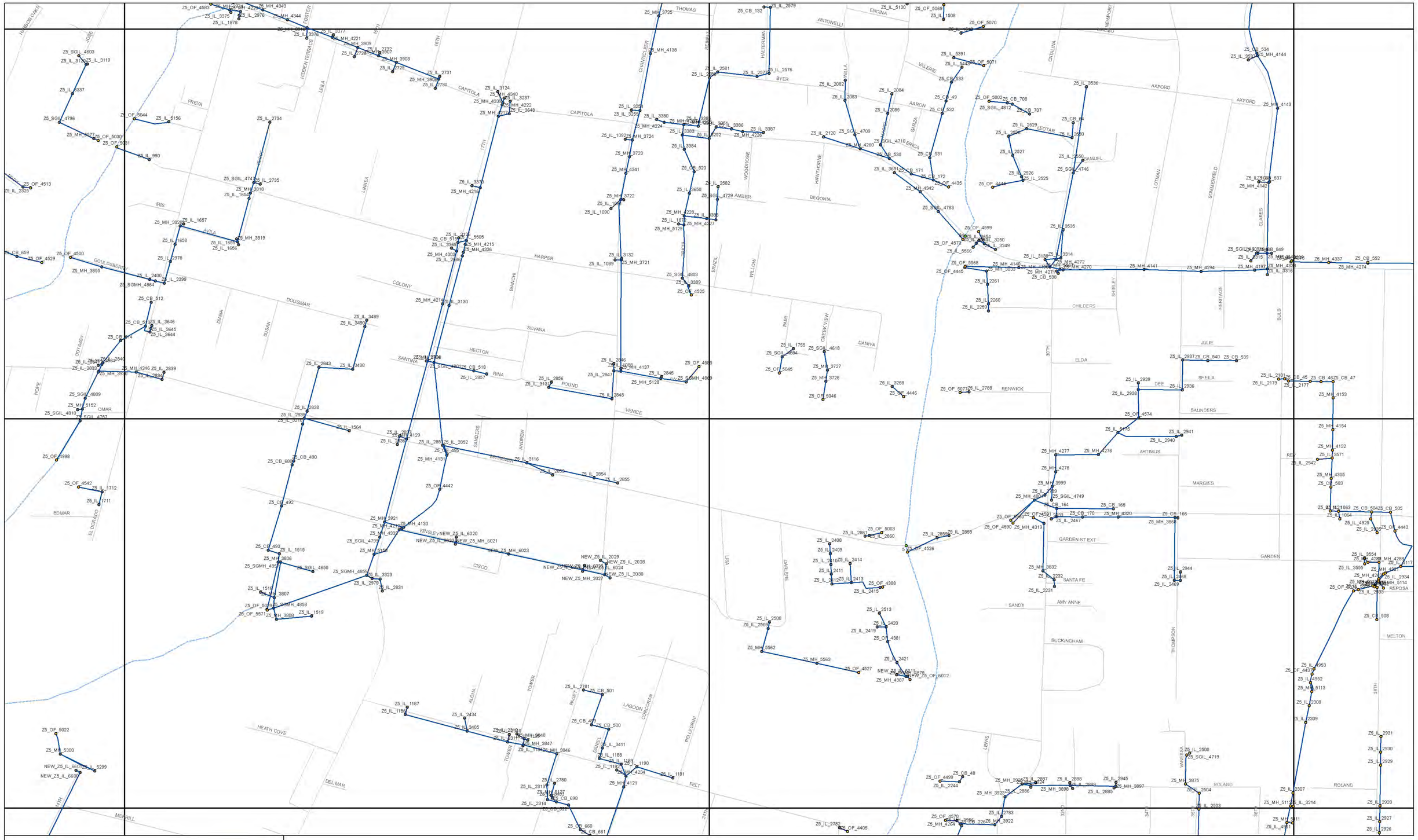
Modeled System - Map Grids F3, F4, G3, G4
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

Schaaf & Wheeler

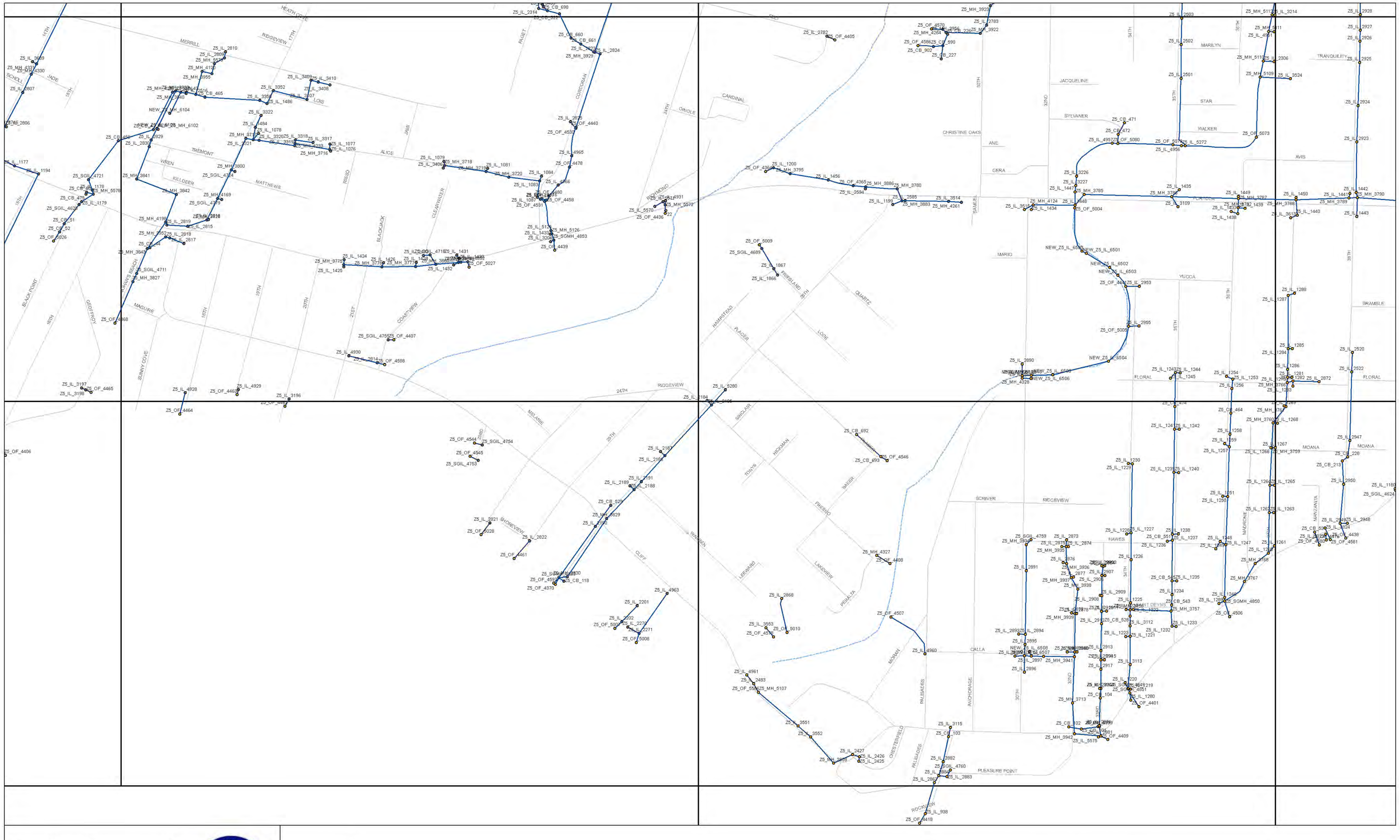
Modeled System - Map Grids H3, H4, J3, J4
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

Schaaf & Wheeler

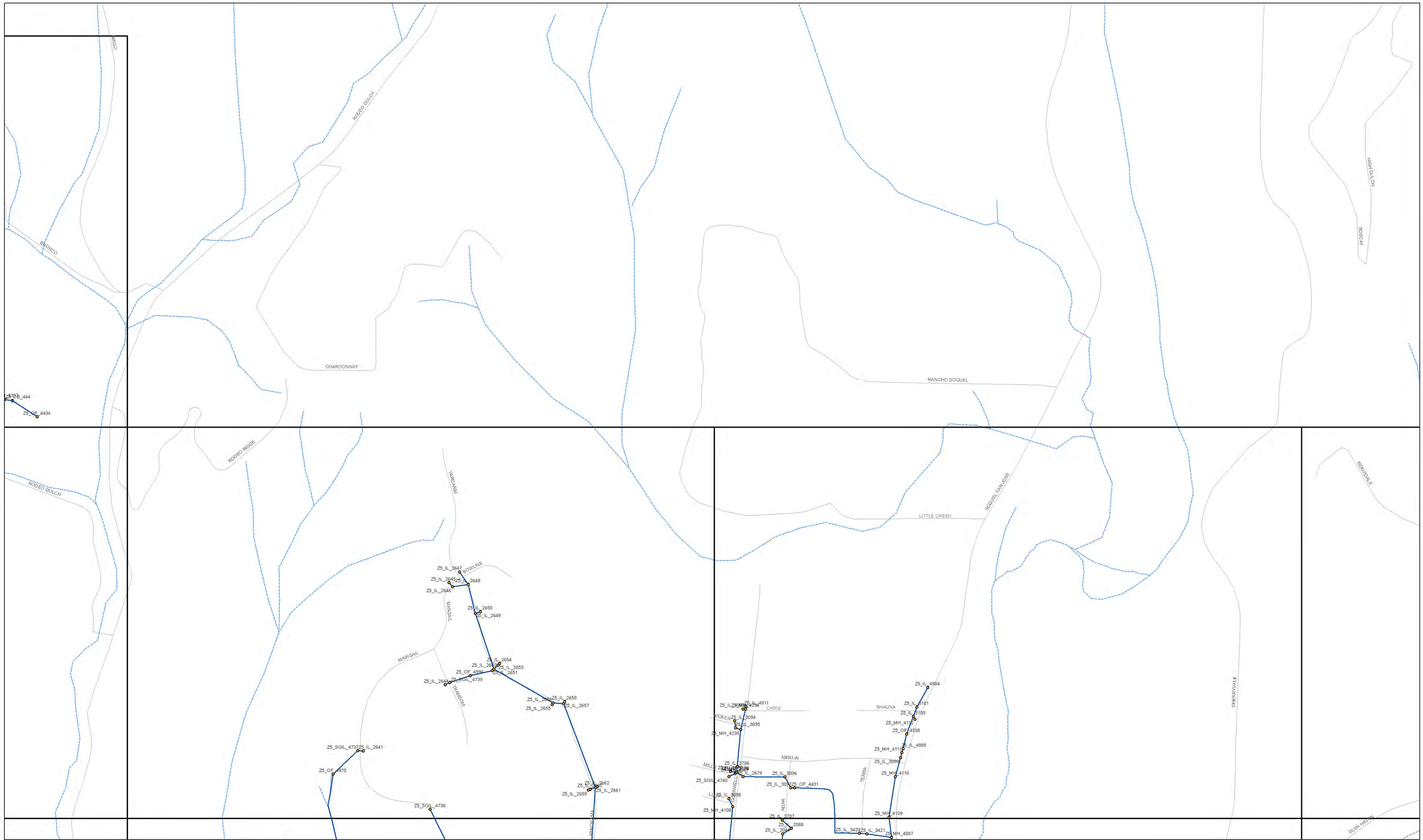
Modeled System - Map Grids K3, K4, L3, L4
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

Schaaf & Wheeler

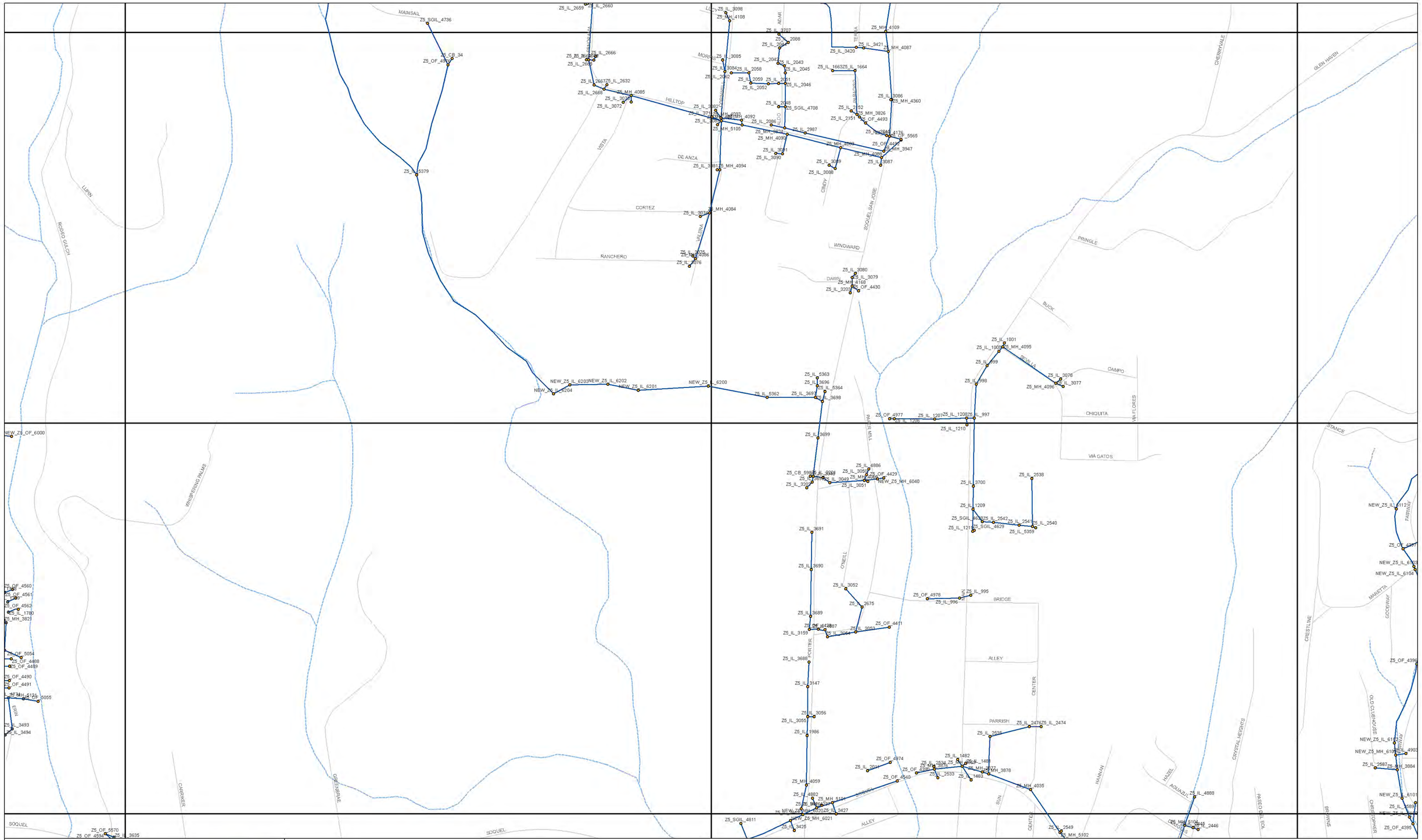
Modeled System - Map Grids M3, M4, N3, N4
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

Schaaf & Wheeler

Modeled System - Map Grids E5, E6
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

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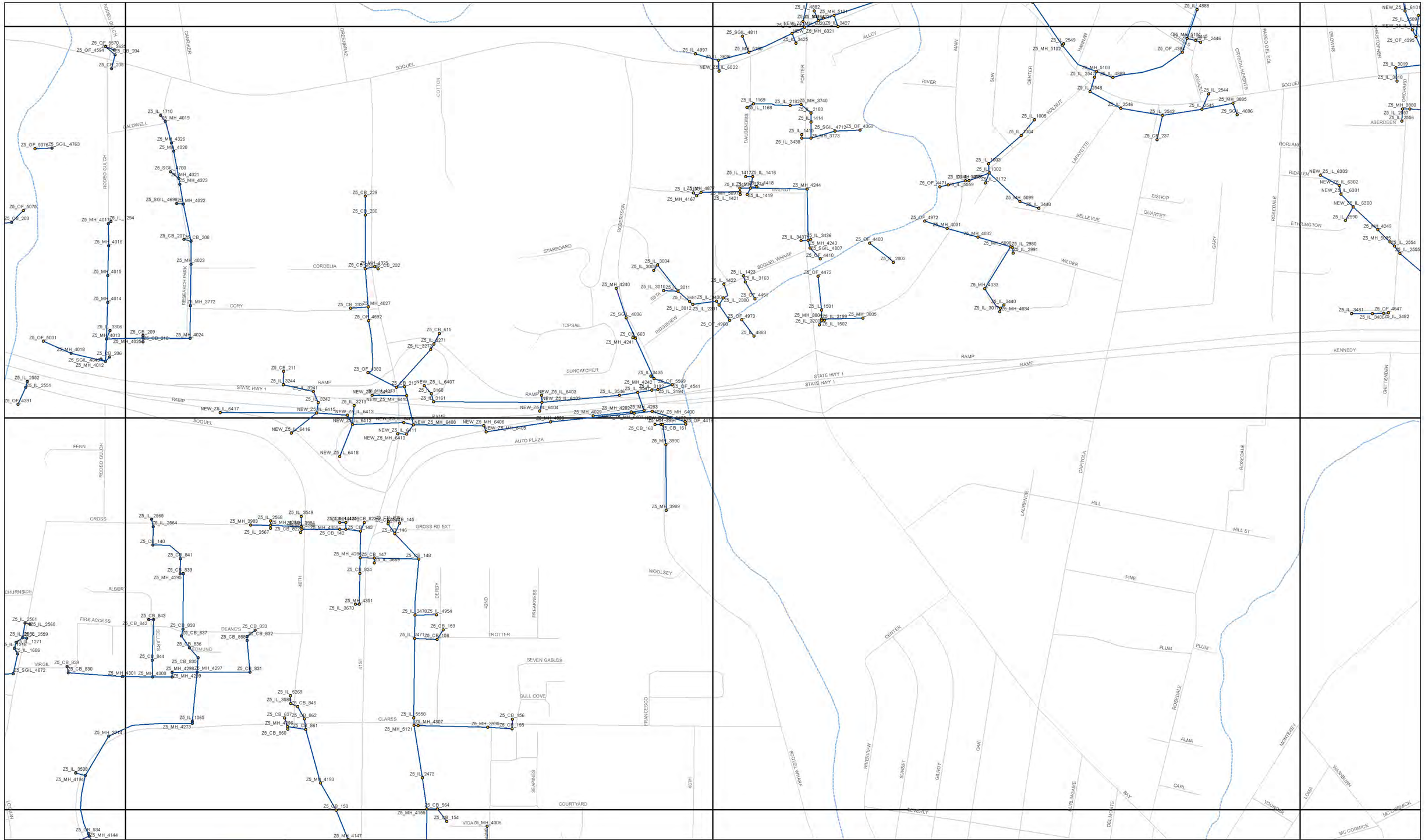
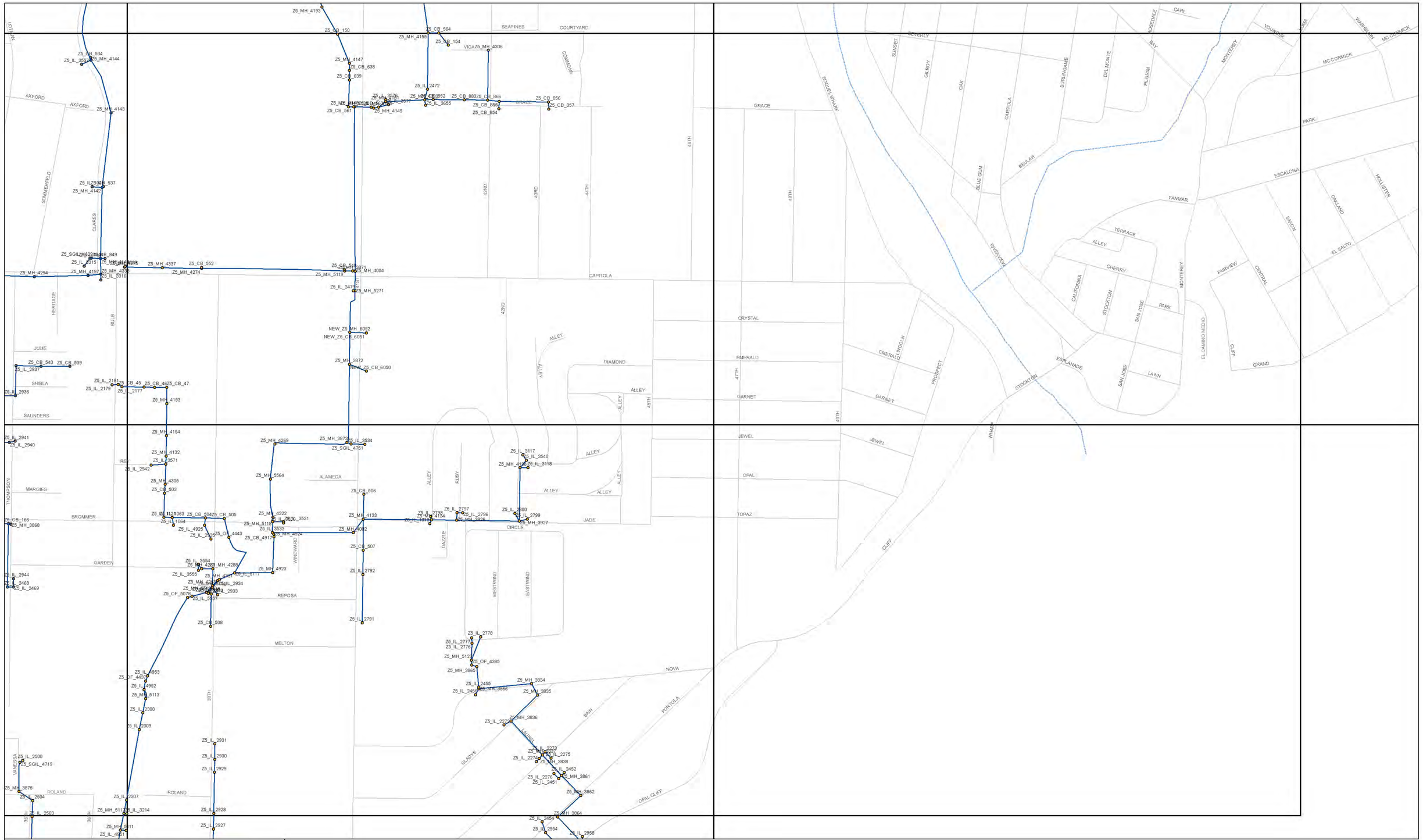
Modeled System - Map Grids F5, F6, G5, G6
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

Schaaf & Wheeler

Modeled System - Map Grids H5, H6, J5, J6
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



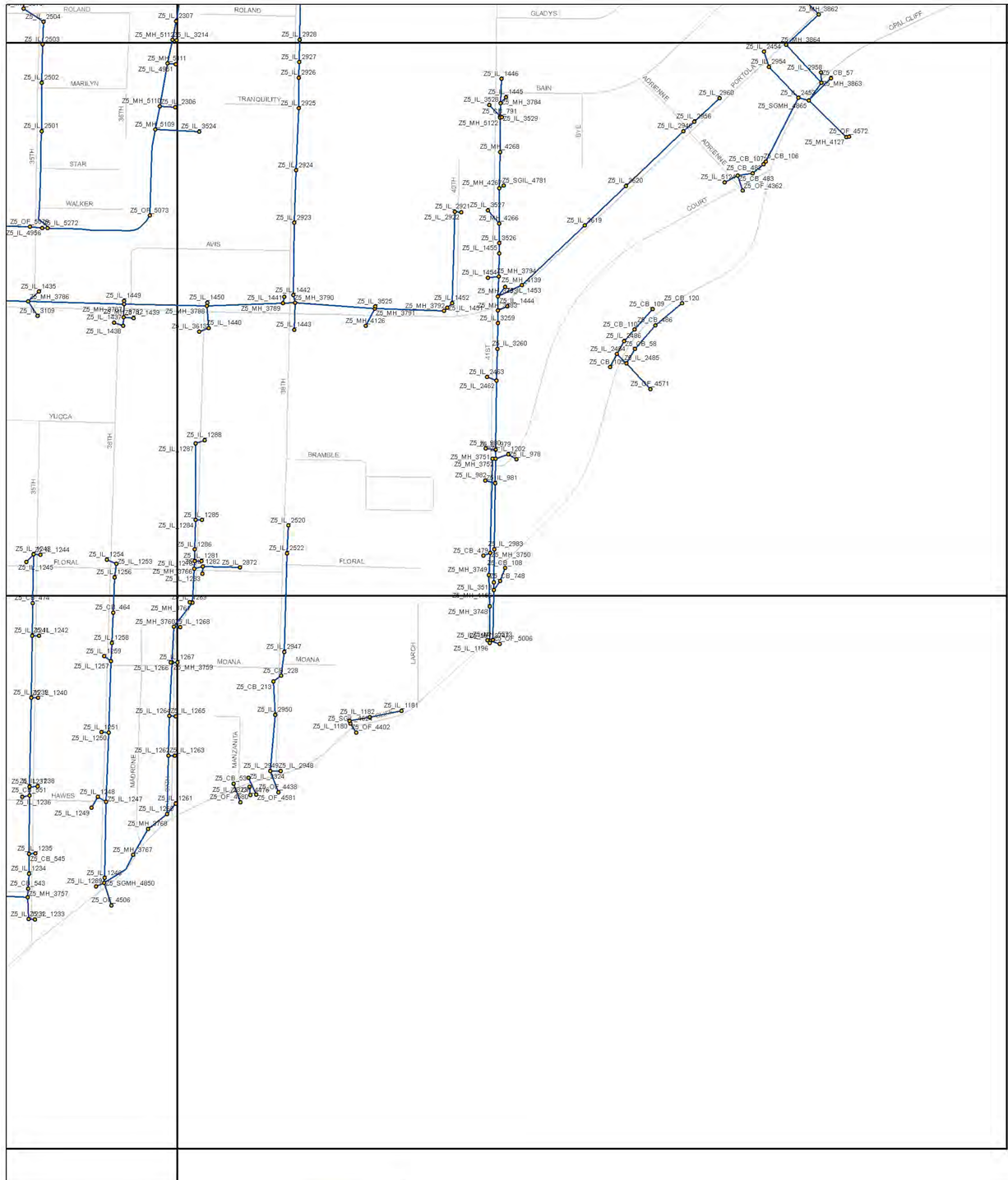
0 200 400 800 Feet

Schaaf & Wheeler

SANTA CRUZ COUNTY PUBLIC WORKS

N

Modeled System - Map Grids K5, K6, L5, L6
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



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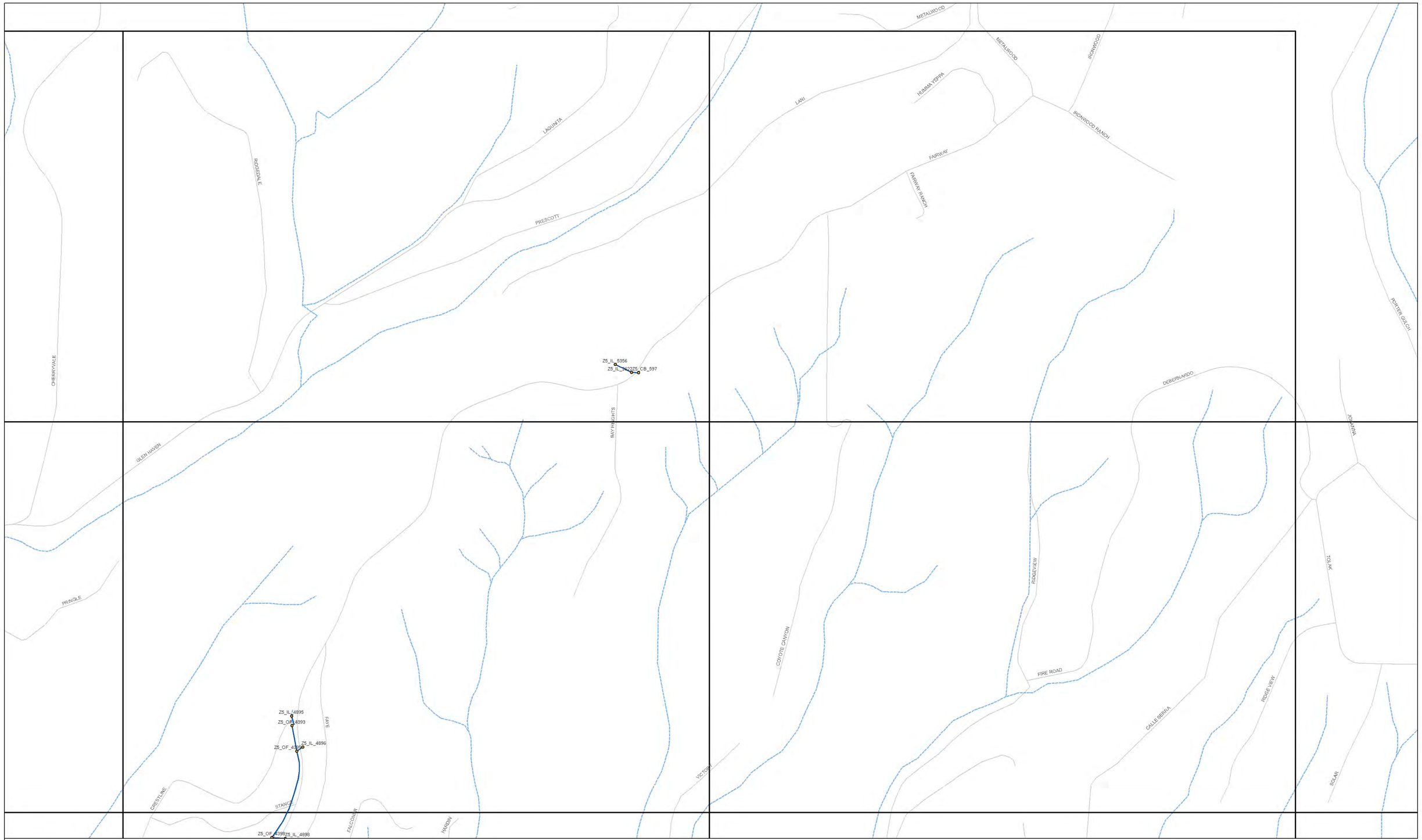
Schaaf & Wheeler

Modeled System - Map Grids M5, N5
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



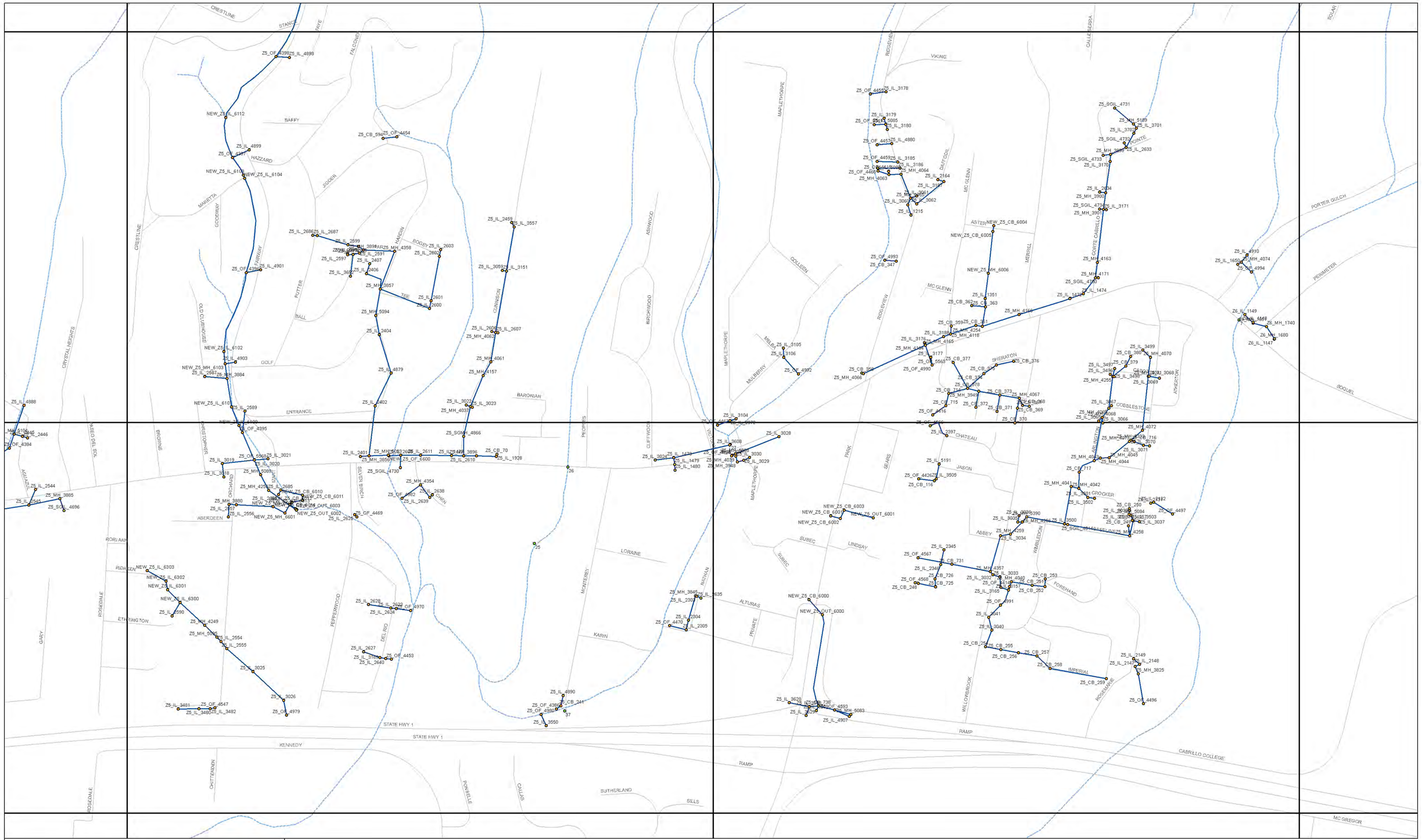
0 200 400 800 Feet

Schaaf & Wheeler

SANTA CRUZ COUNTY PUBLIC WORKS

N

Modeled System - Map Grids E7, E8, F7, F8
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



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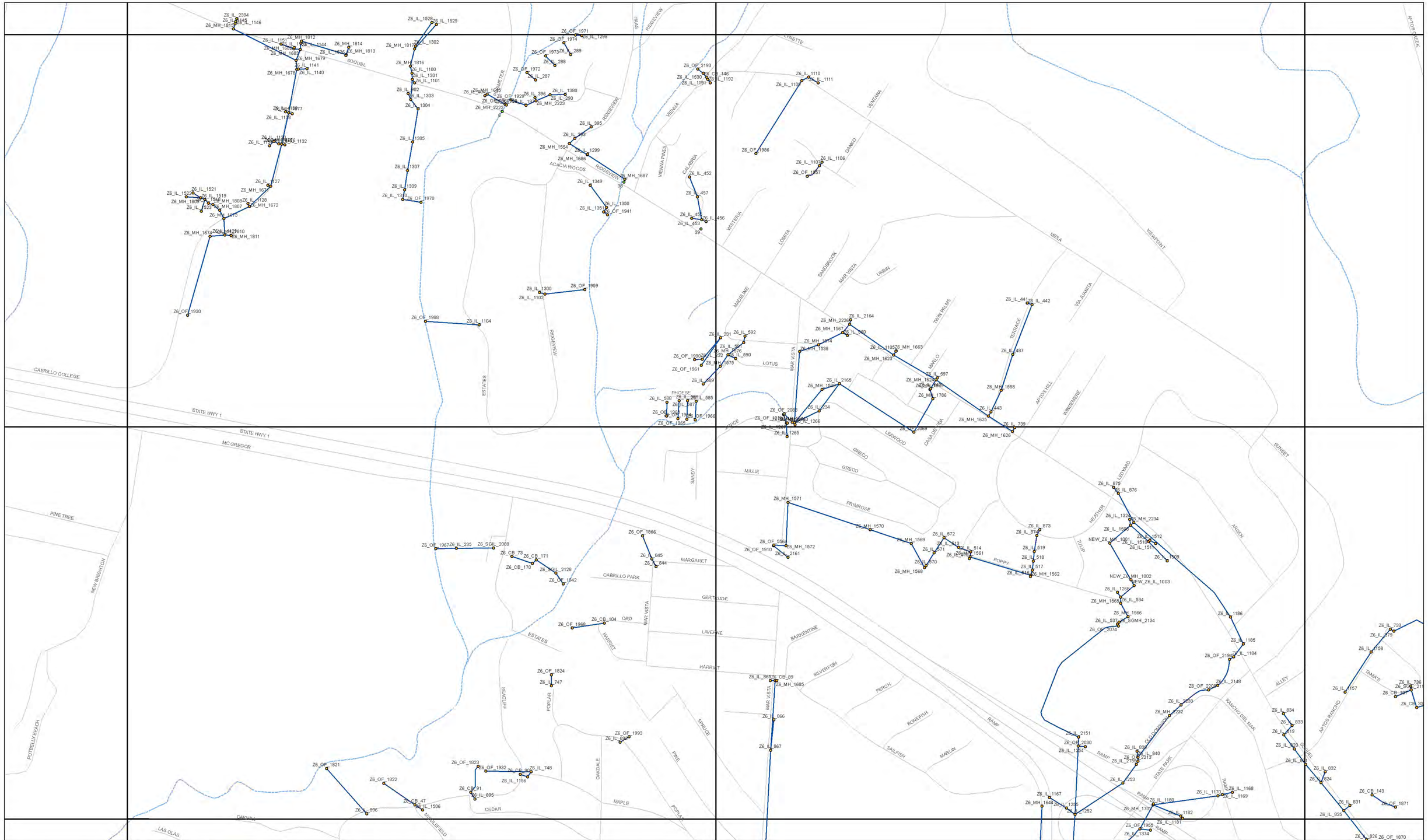
Schaaf & Wheeler

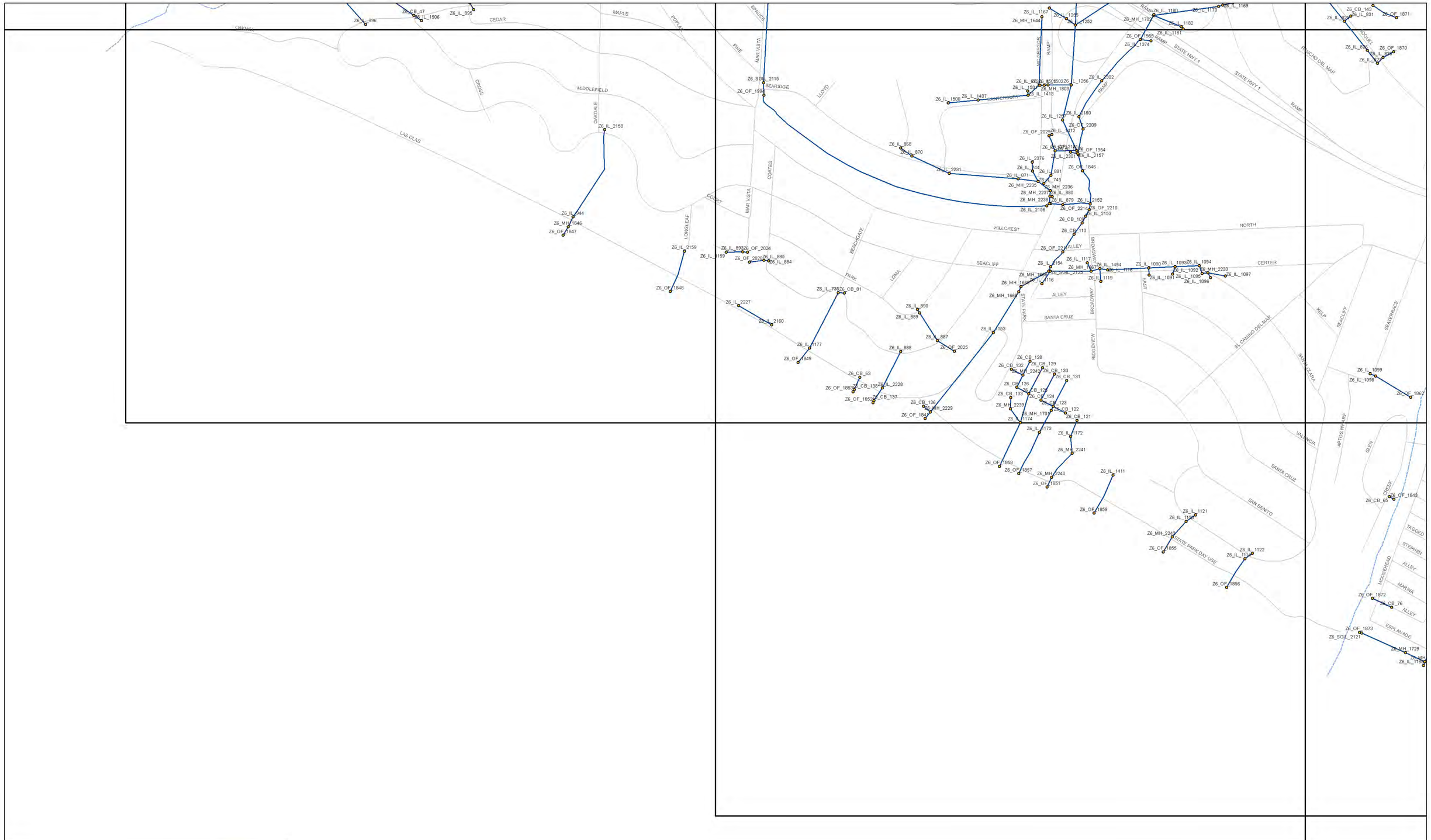
Modeled System - Map Grids G7, G8, H7, H8
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

Schaaf & Wheeler

Modeled System - Map Grids H9, H10, J9, J10
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



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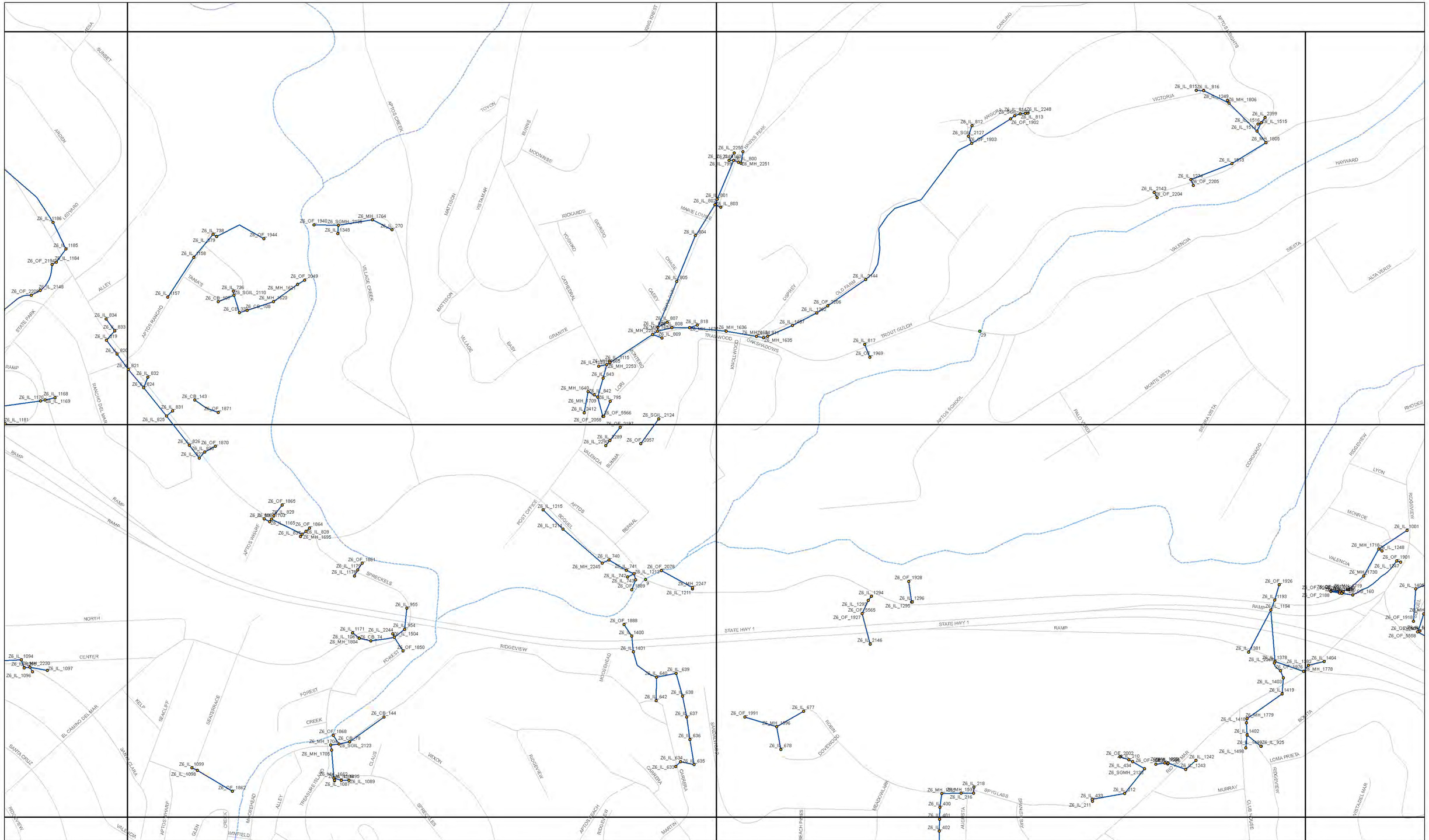
Schaaf & Wheeler

Modeled System - Map Grids K9, K10, L10
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



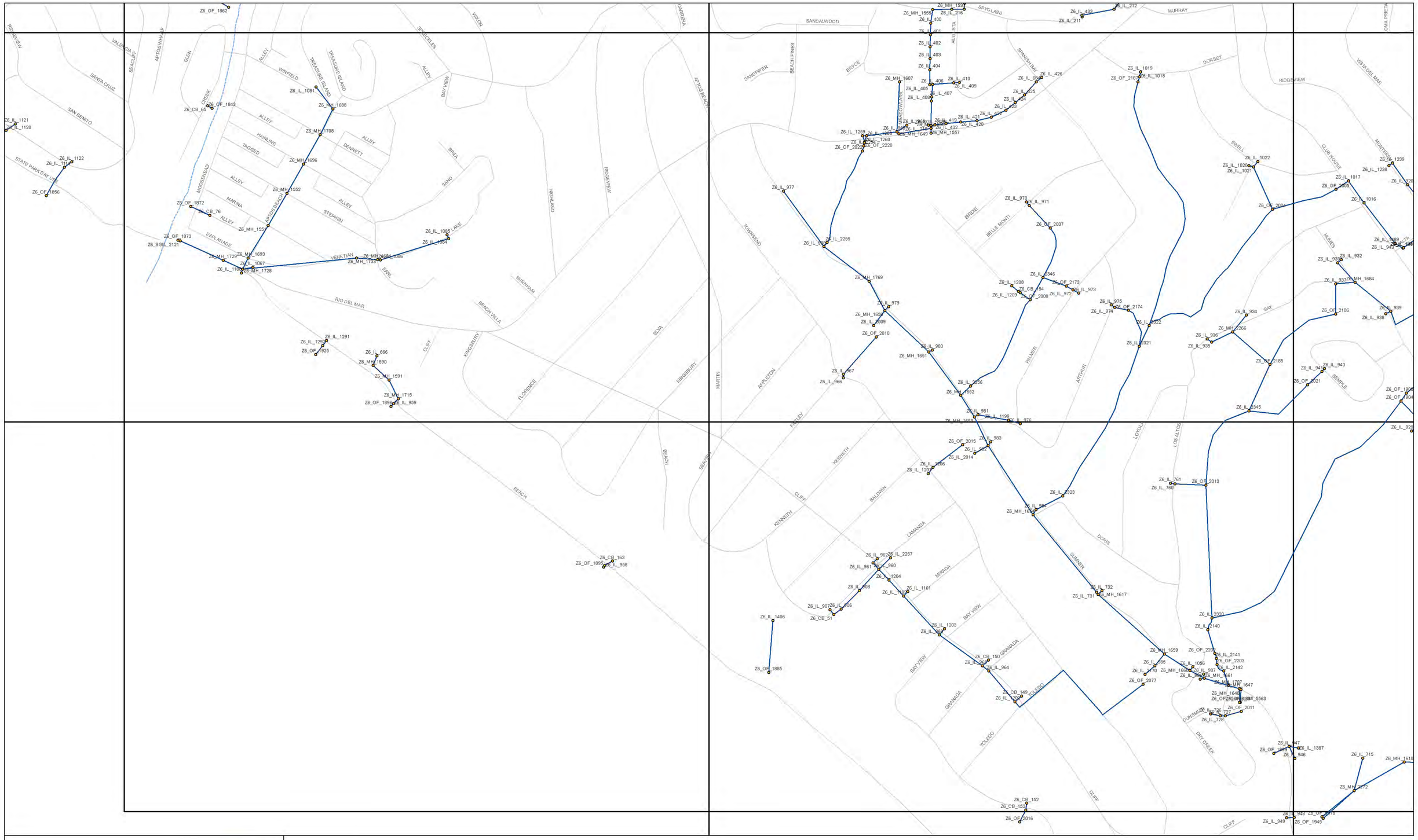
0 200 400 800 Feet

Schaaf & Wheeler

SANTA CRUZ COUNTY PUBLIC WORKS

N

Modeled System - Map Grids J11, J12, K11, K12
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



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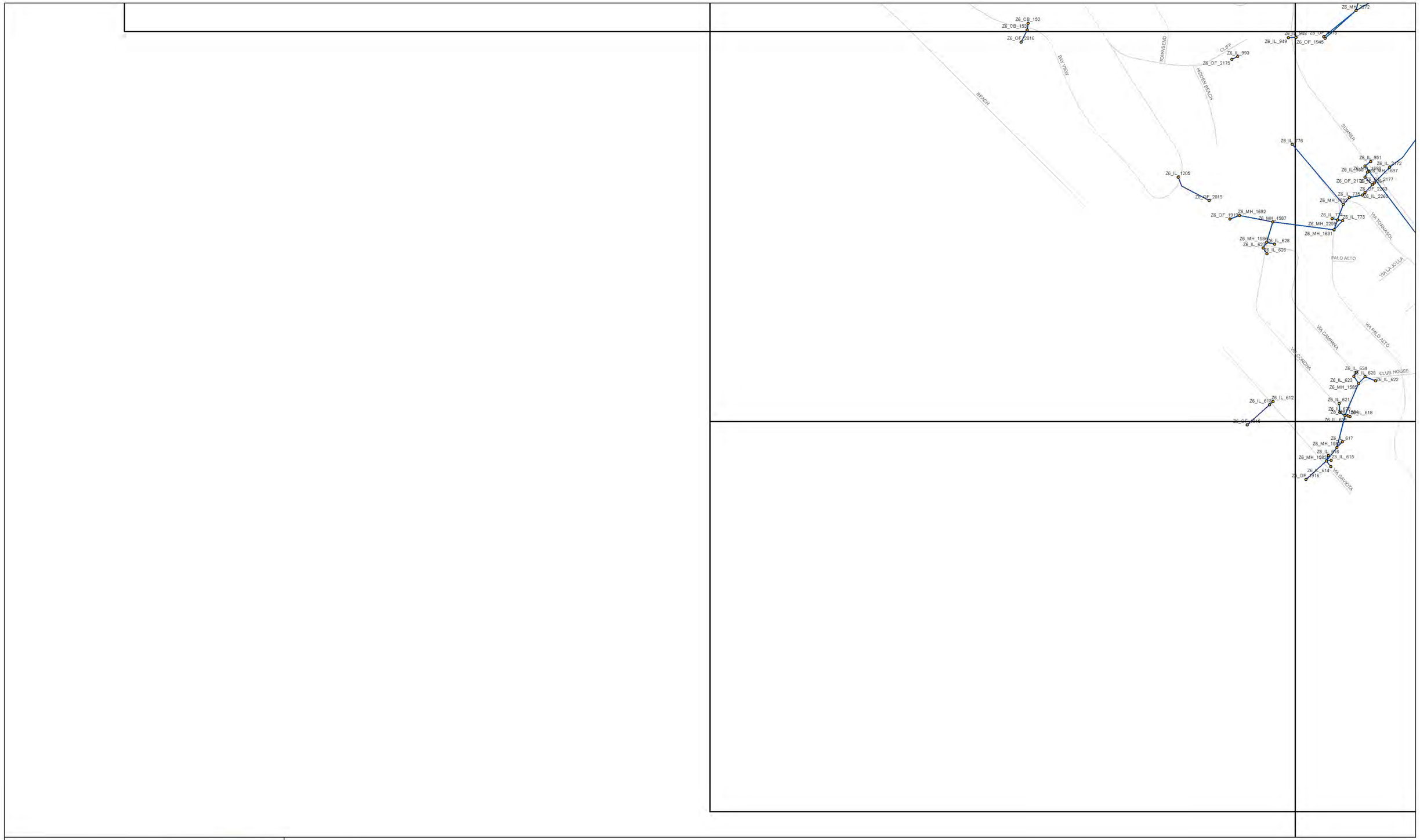
Schaaf & Wheeler

Modeled System - Map Grids L11, L12, M11, M12
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



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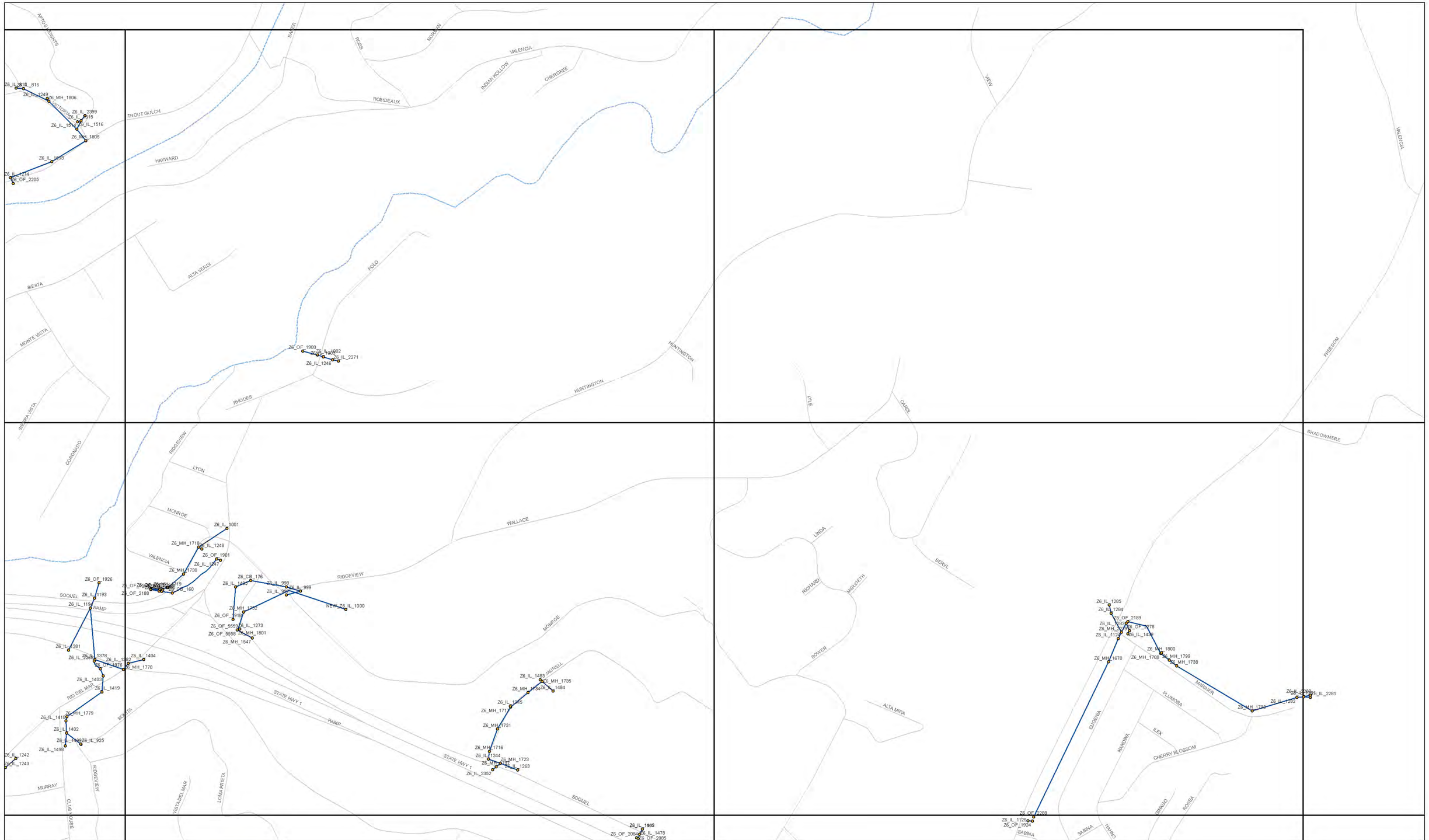
Schaaf & Wheeler

Modeled System - Map Grids N12, O12
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



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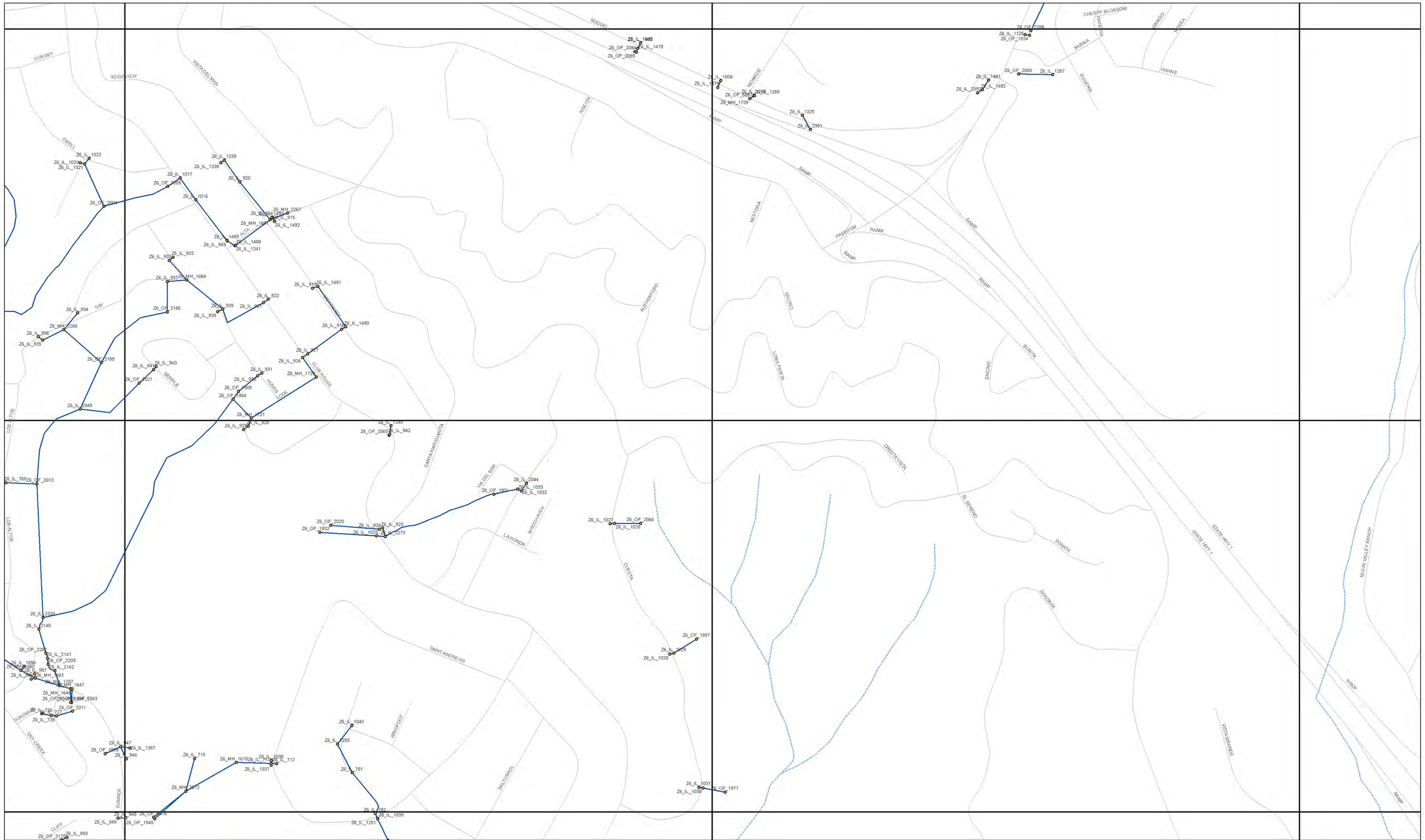
Schaaf & Wheeler

Modeled System - Map Grids J13, J14, K13, K14
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



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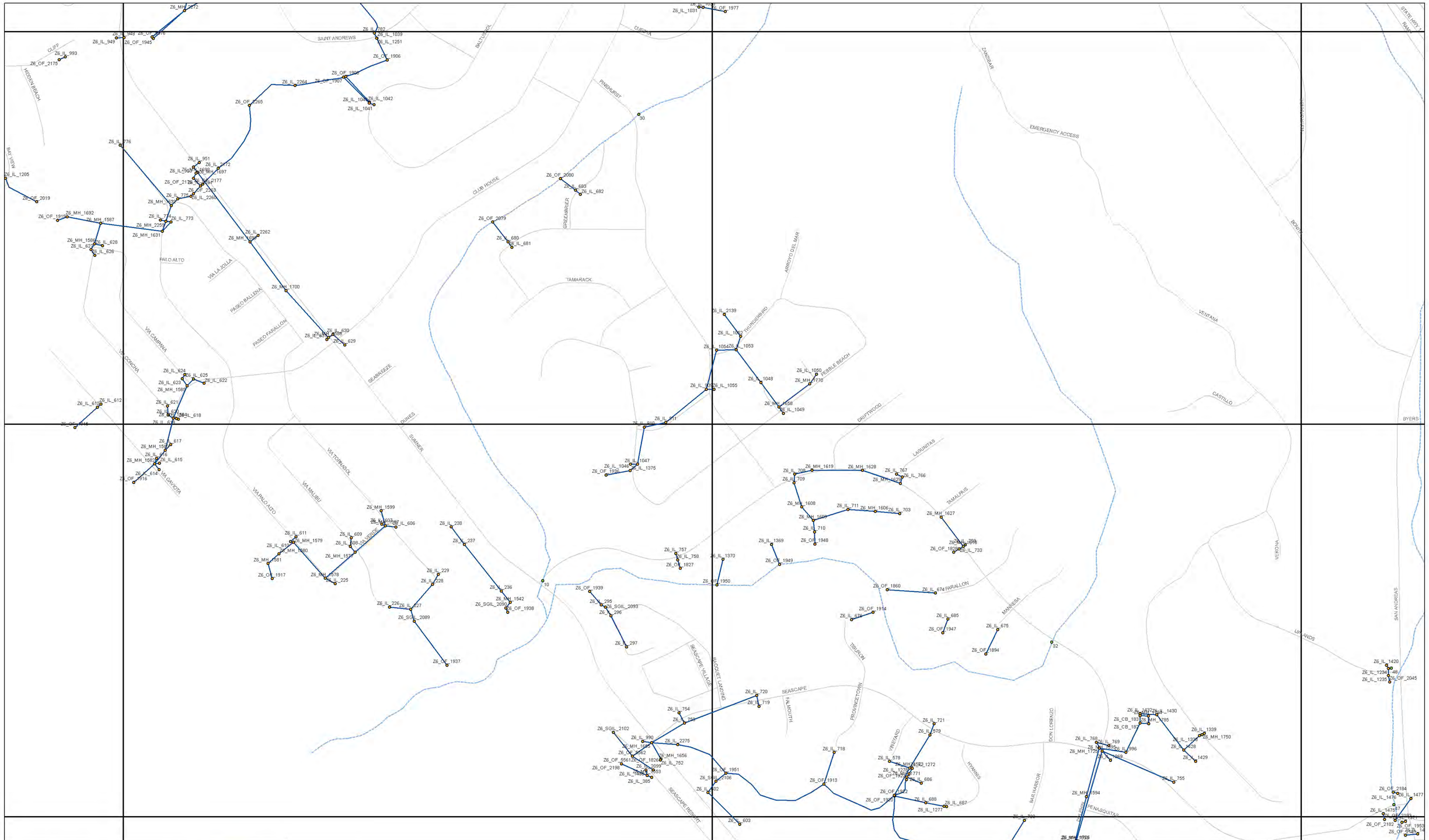
Schaaf & Wheeler

SANTA CRUZ COUNTY PUBLIC WORKS

N

Modeled System - Map Grids L13, L14, M13, M14
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



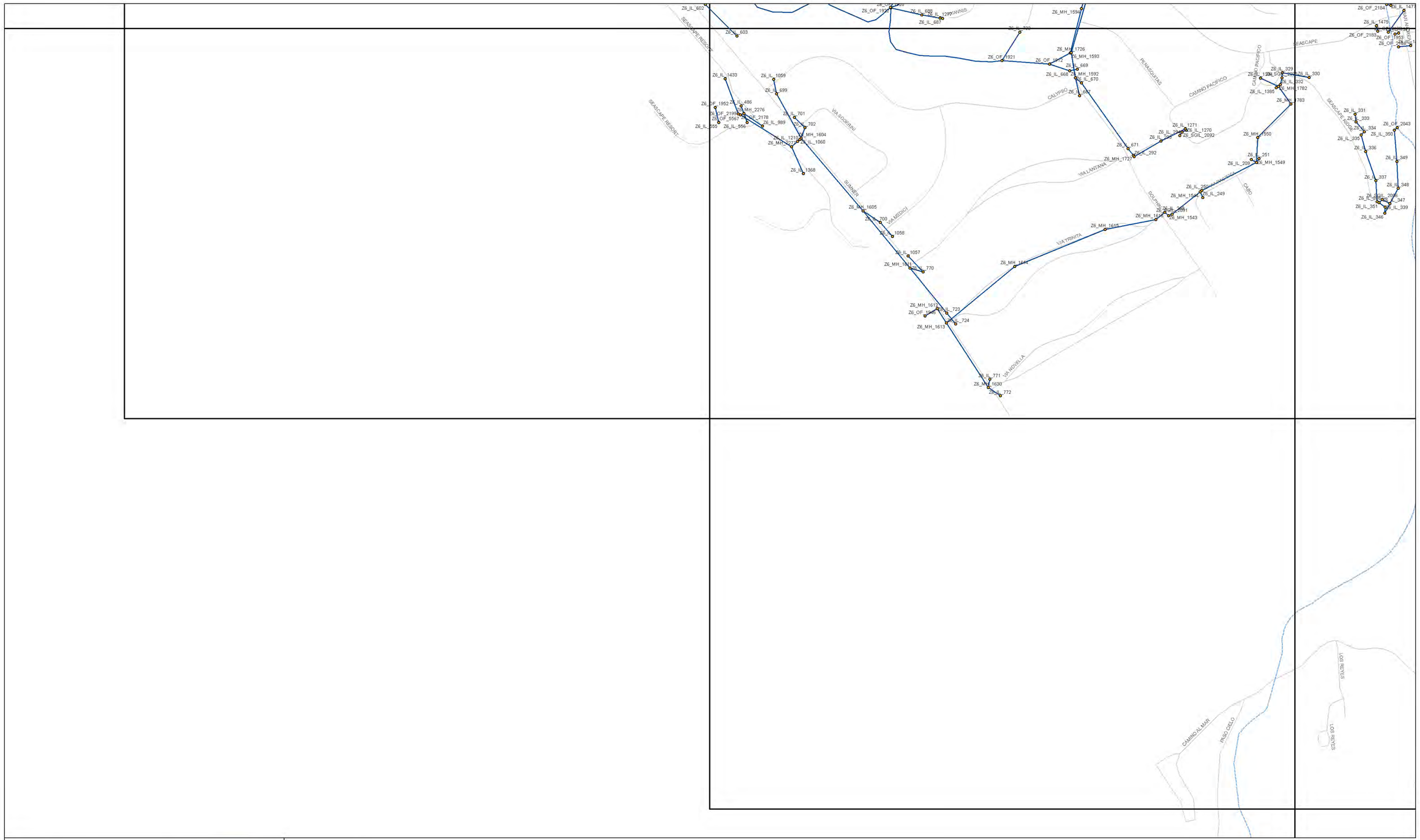
0 200 400 800 Feet

Schaaf & Wheeler

SANTA CRUZ COUNTY PUBLIC WORKS

N

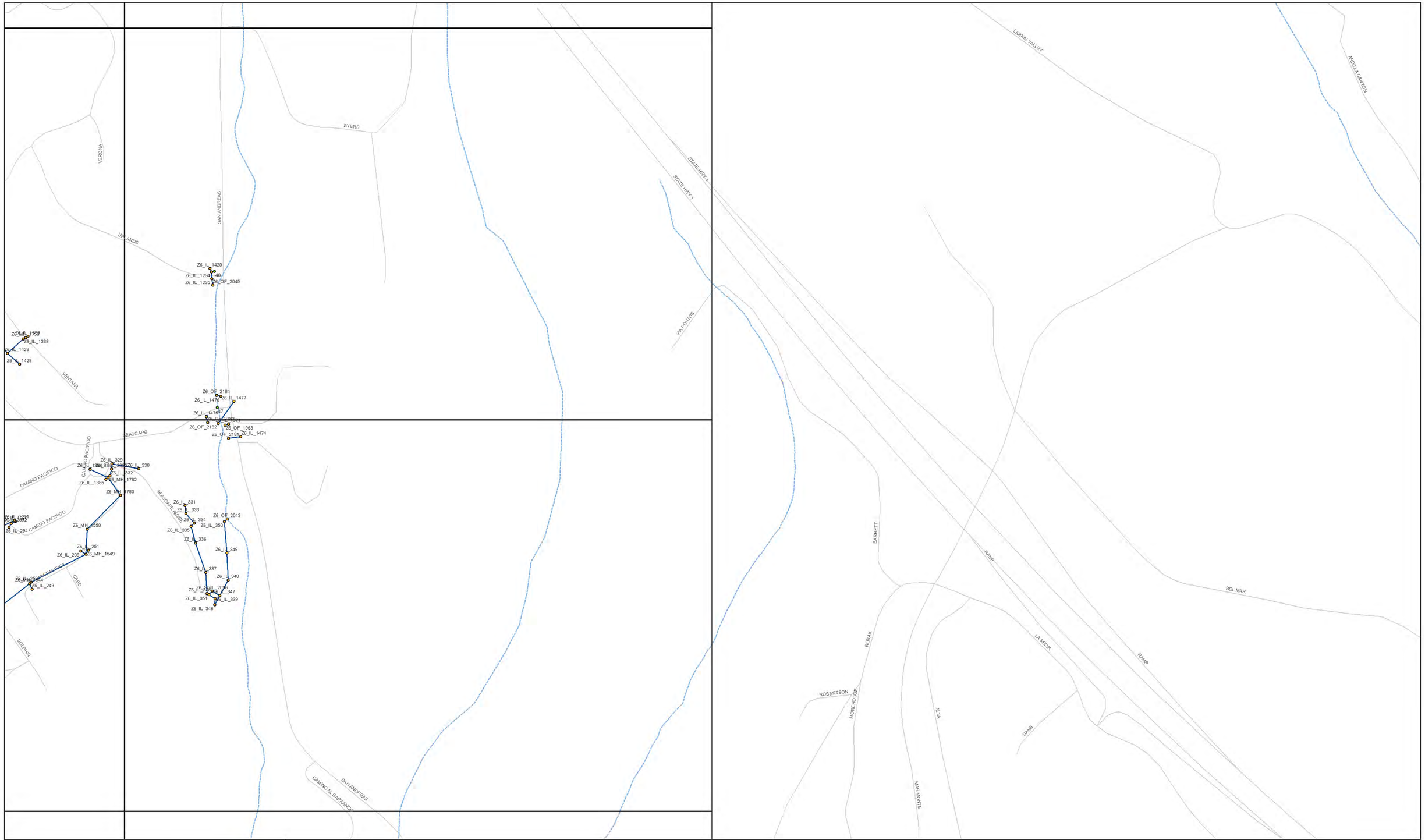
Modeled System - Map Grids N13, N14, O13, O14
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

Schaaf & Wheeler

Modeled System - Map Grids P13, P14, Q14
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan



0 200 400 800 Feet

Schaaf & Wheeler

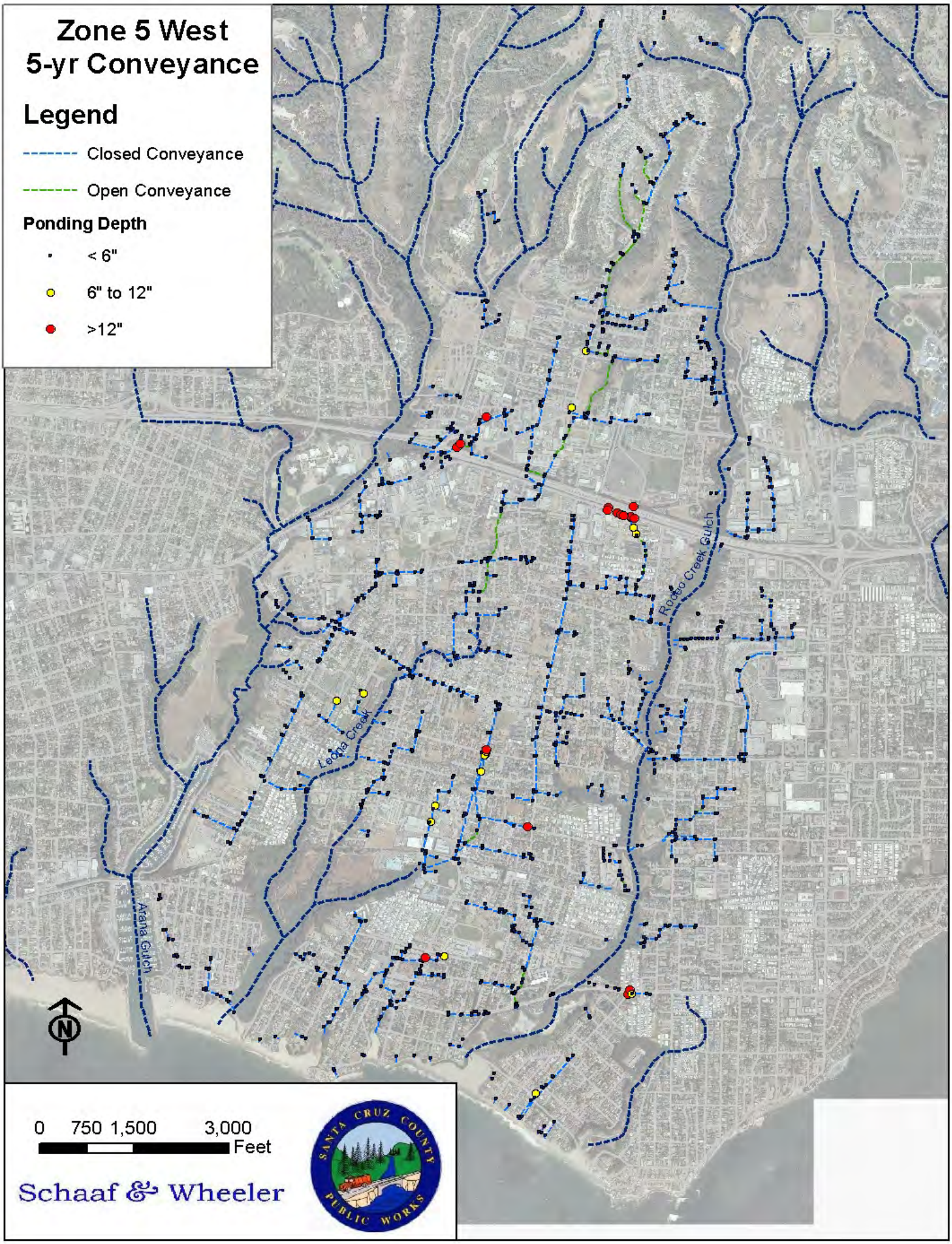
SANTA CRUZ COUNTY PUBLIC WORKS

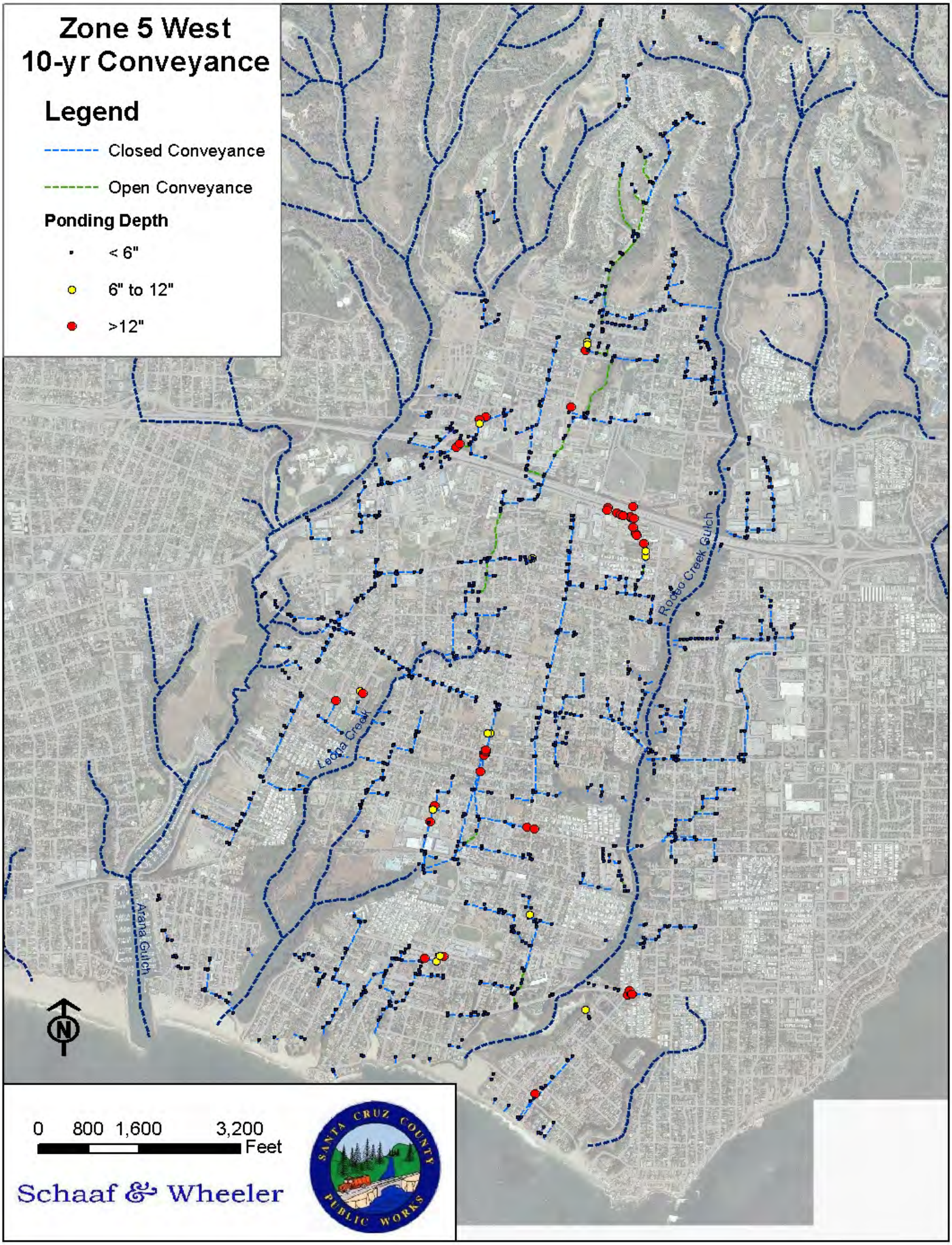
N

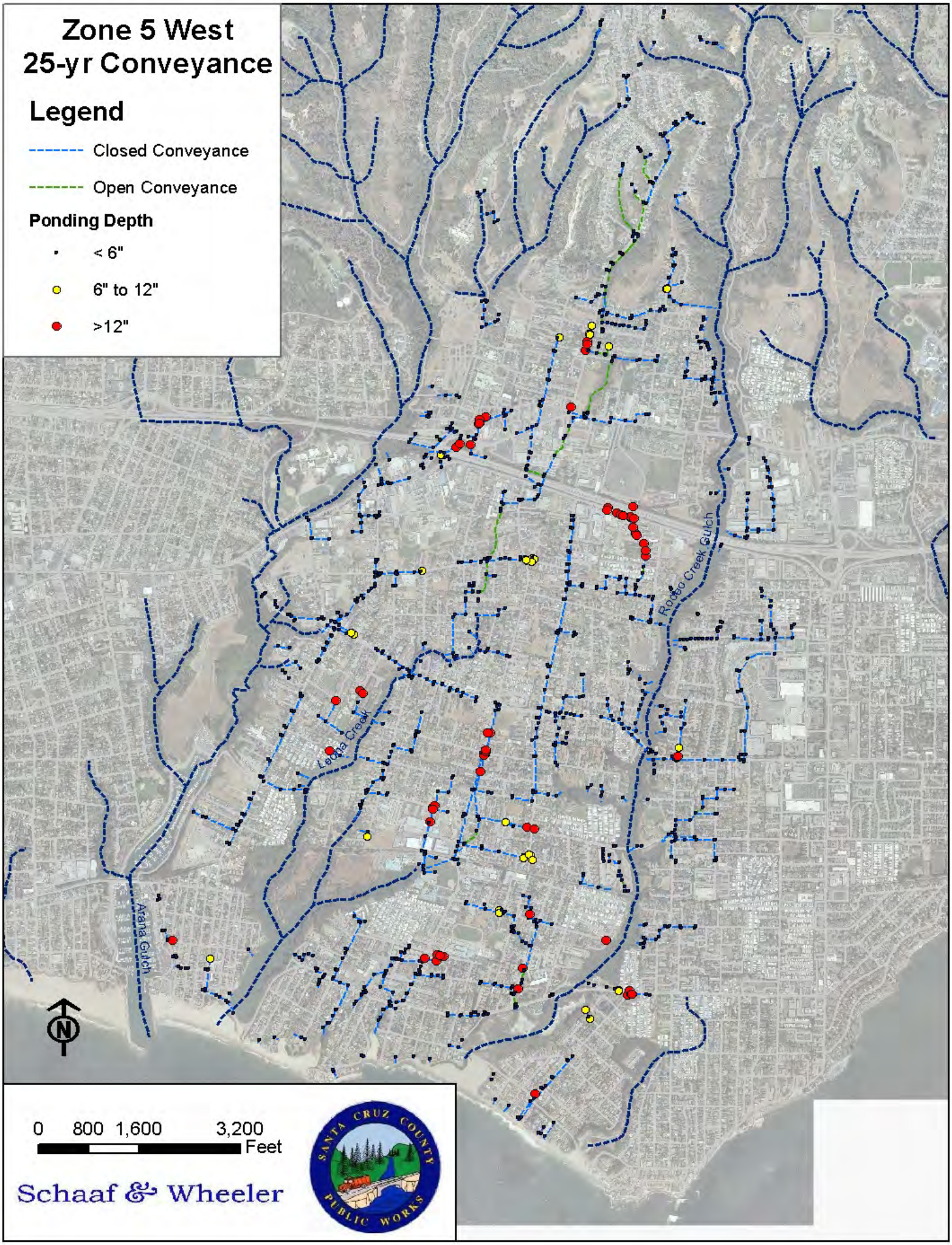
Modeled System - Map Grids O15, P15
Santa Cruz County Flood Control and Water Conservation District
Storm Drain Master Plan

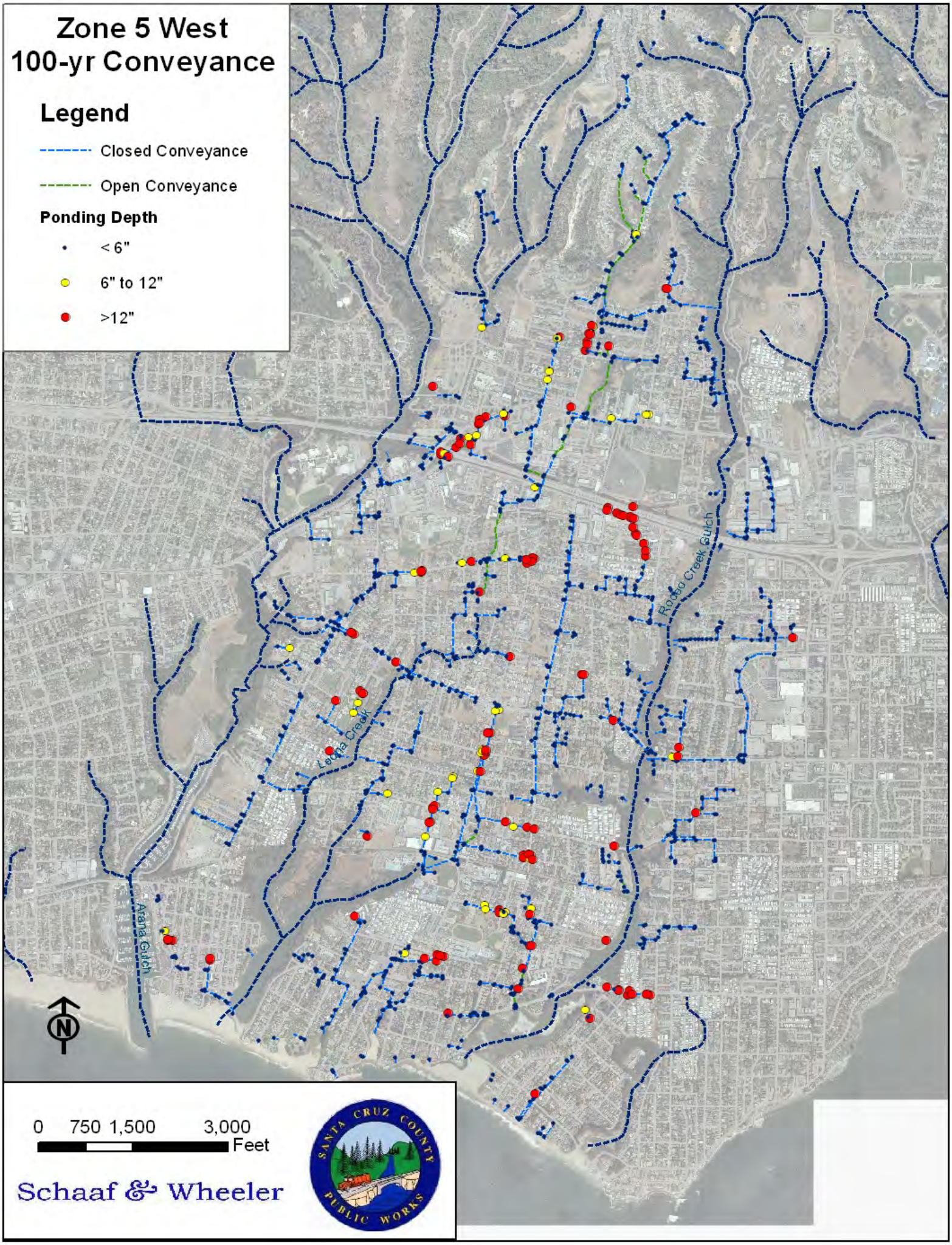
APPENDIX C

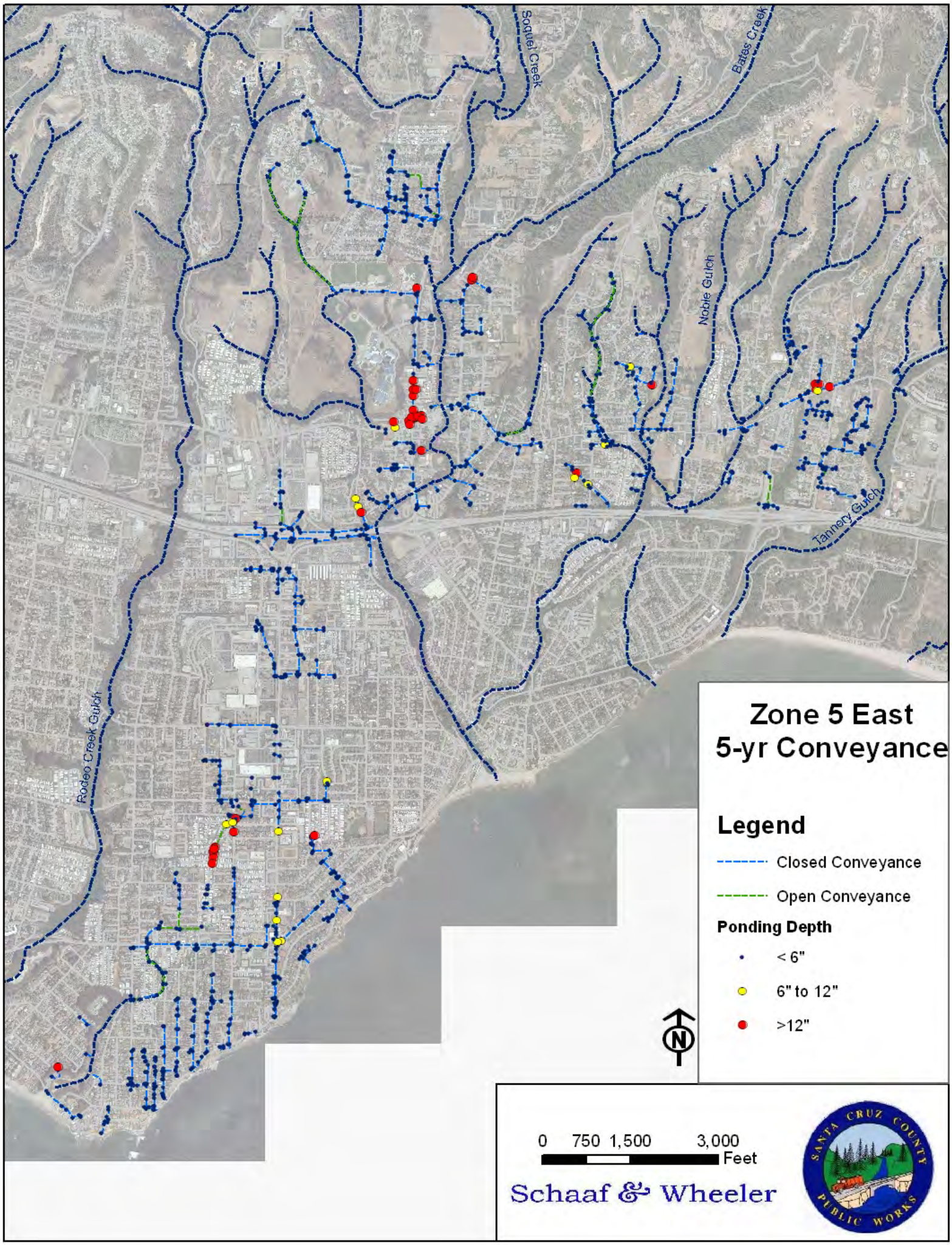
SYSTEM CONVEYANCE

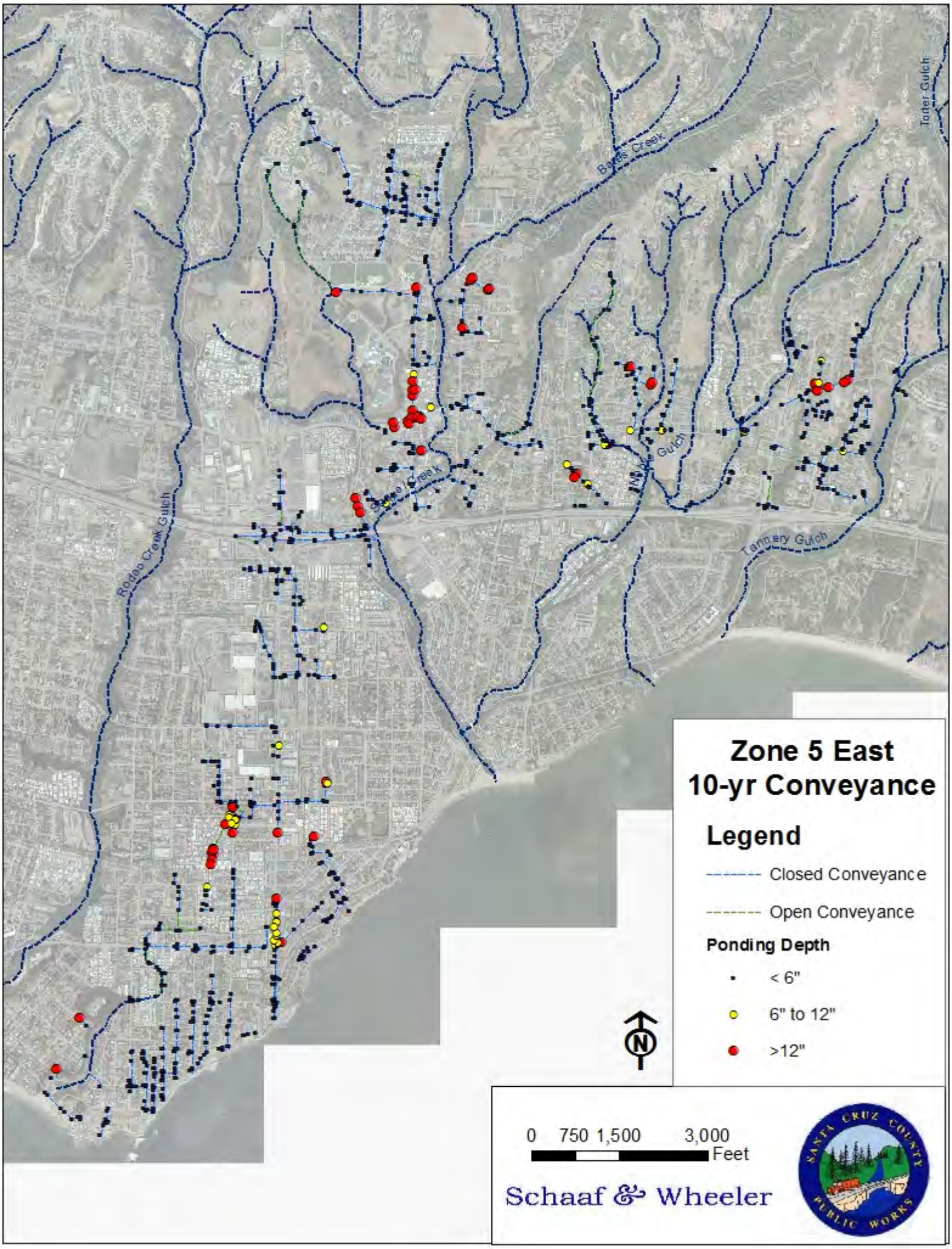

Zone 5 West
5-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
Rodeo Creek Gulch
Leona Creek
Arana Gulch
N
0 750 1,500 3,000
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY
PUBLIC WORKS

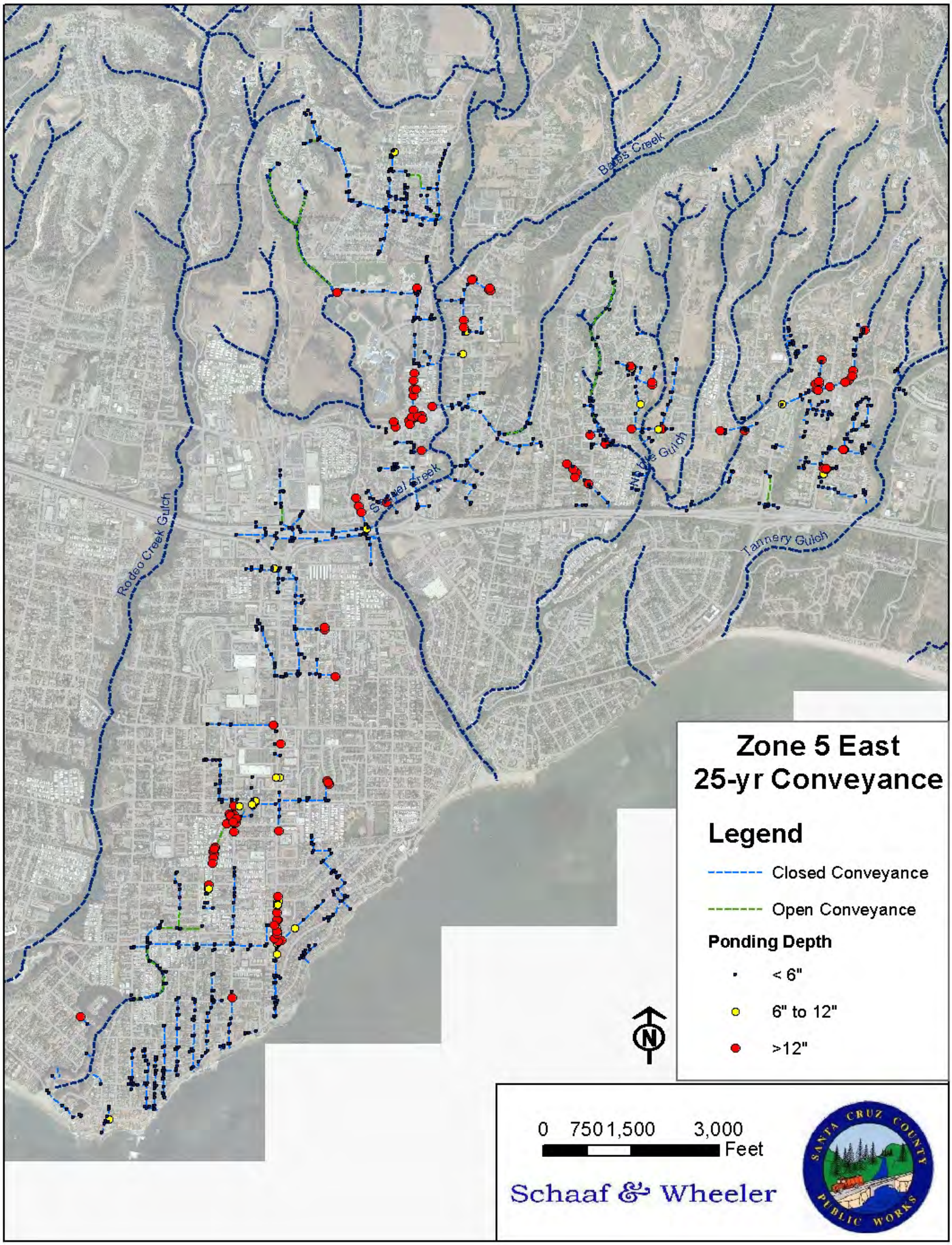

Zone 5 West
10-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
Rodeo Creek Gulch
Leona Creek
Arana Gulch
N
0 800 1,600 3,200
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY
PUBLIC WORKS

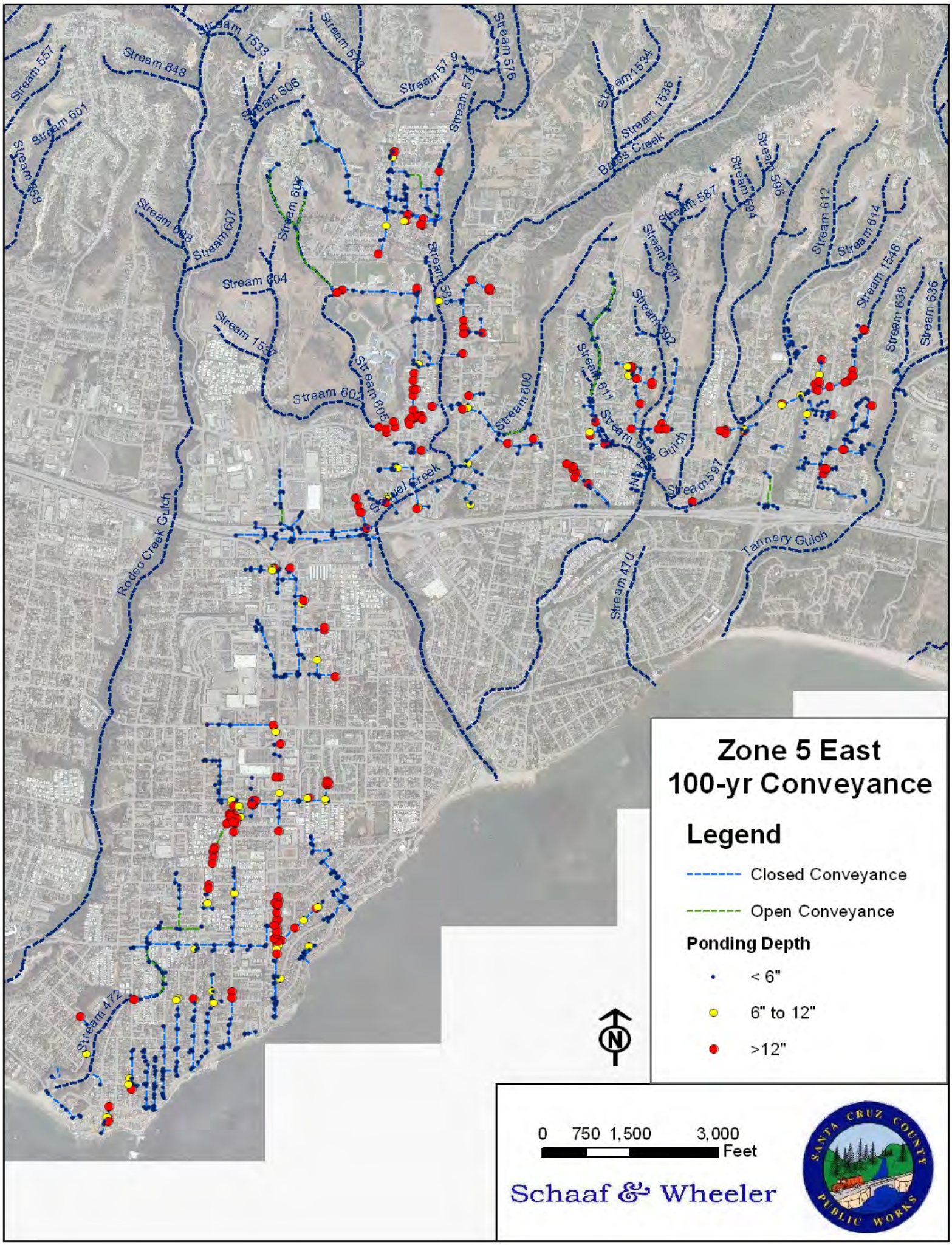

Zone 5 West
25-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
Rodeo Creek Gulch
Leona Creek
Arana Gulch
N
0 800 1,600 3,200
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY
PUBLIC WORKS

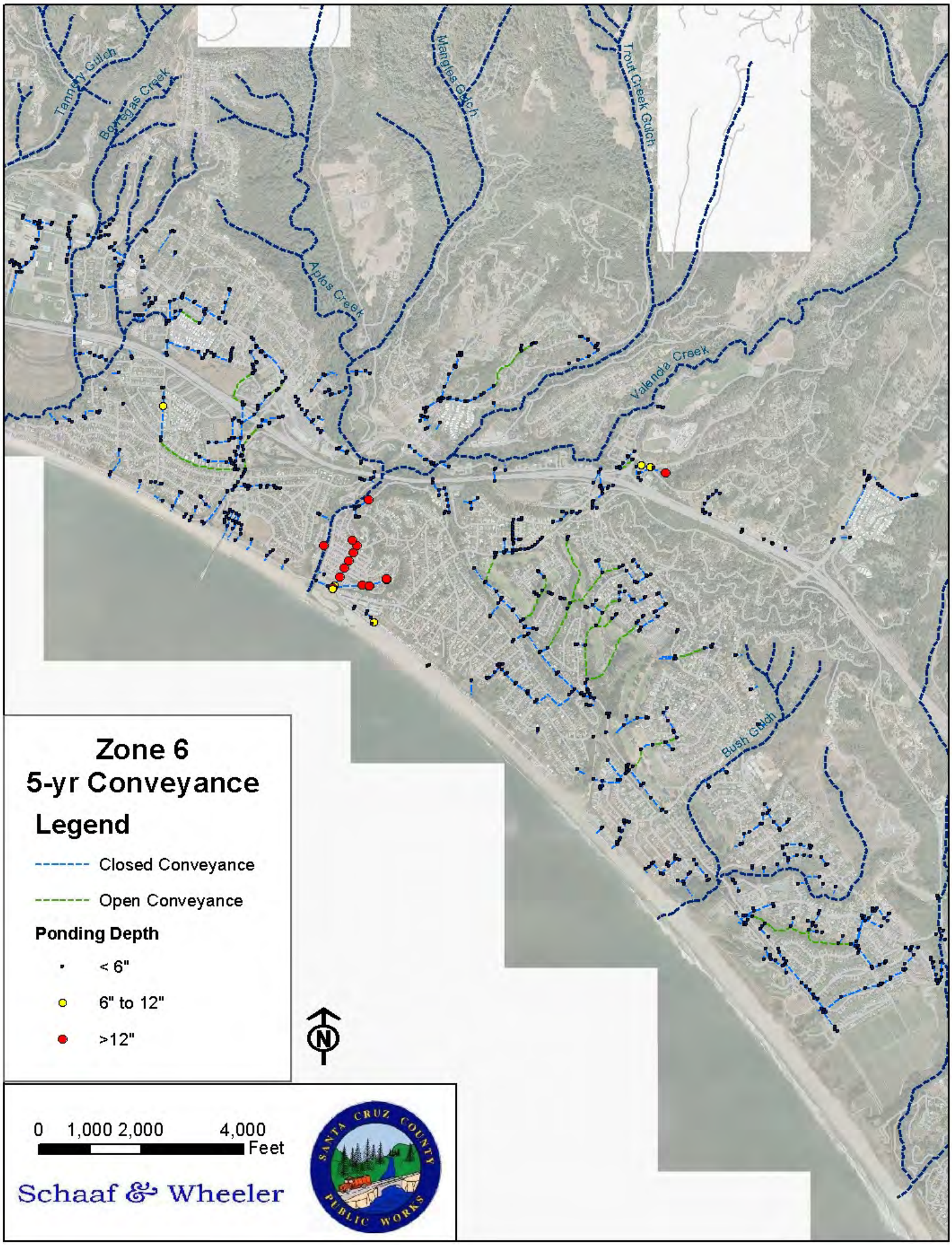

Zone 5 West
100-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
Rodeo Creek Gulch
Leona Creek
Arana Gulch
N
0 750 1,500 3,000
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY
PUBLIC WORKS

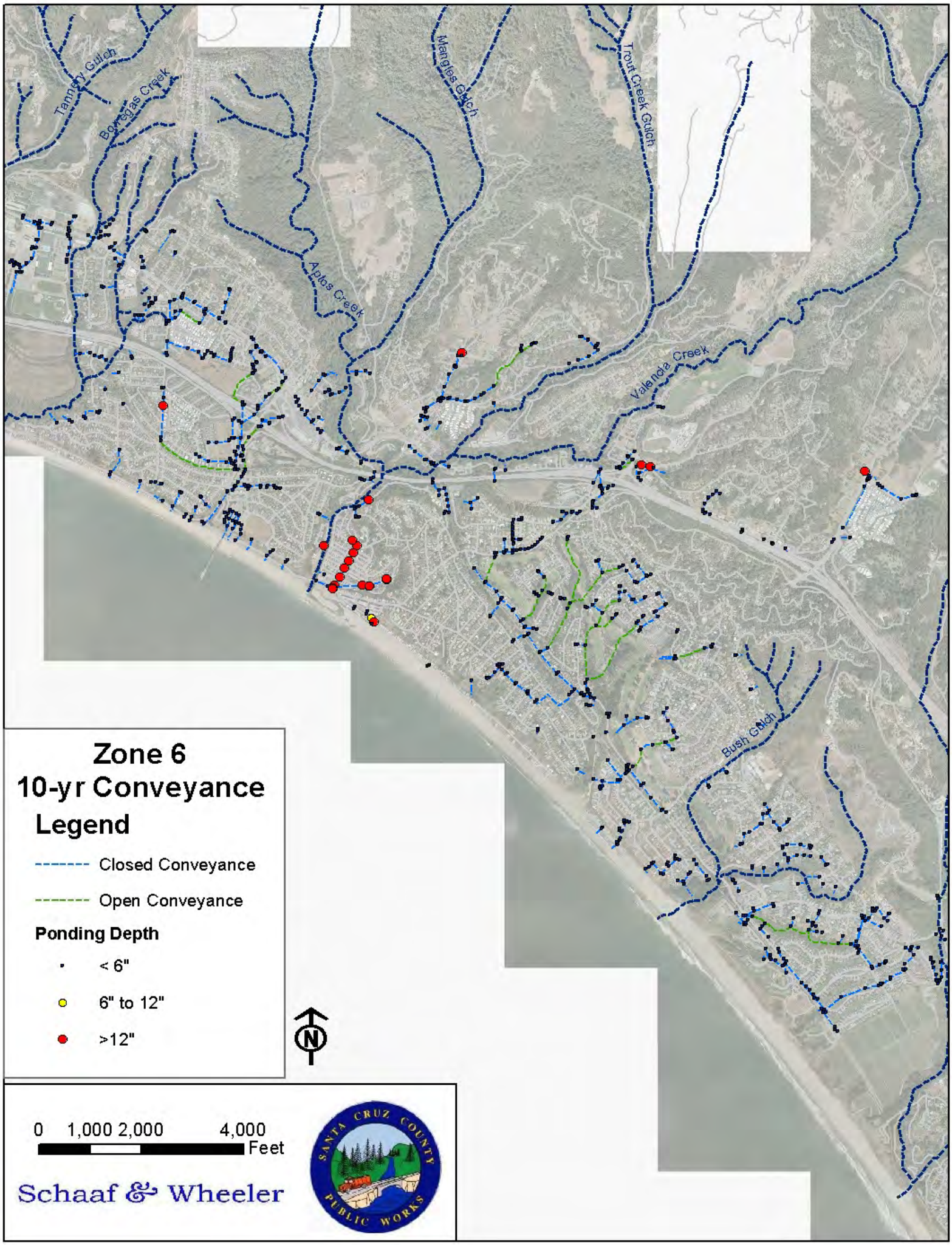

Soquel Creek
Bates Creek
Noble Gulch
Tannery Gulch
Rodeo Creek Gulch
Zone 5 East
5-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
N
0 750 1,500 3,000
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY
PUBLIC WORKS

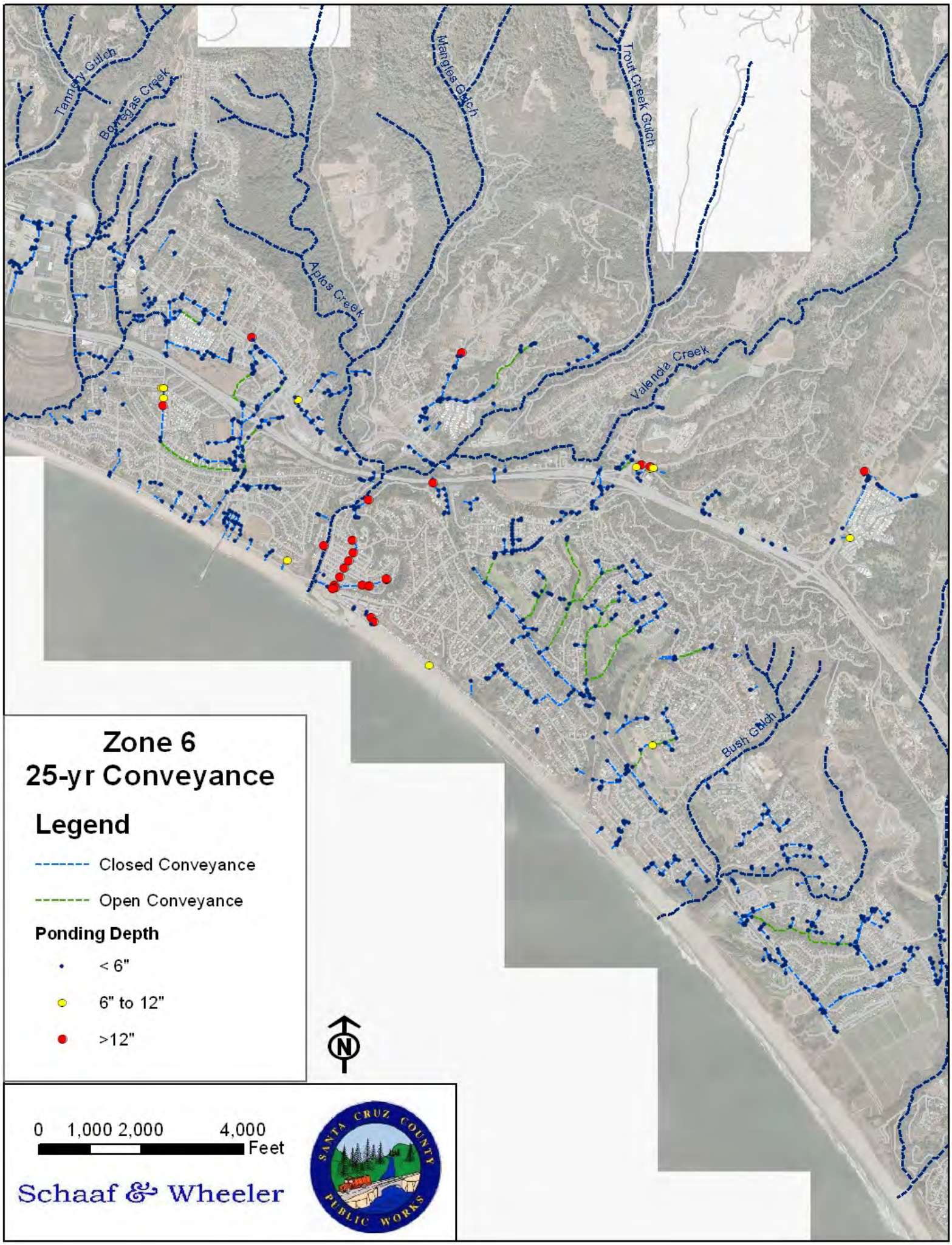

Zone 5 East
10-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
N
0 750 1,500 3,000
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY
PUBLIC WORKS
Rodeo Creek Gulch
Tannery Gulch
Tarter Gulch

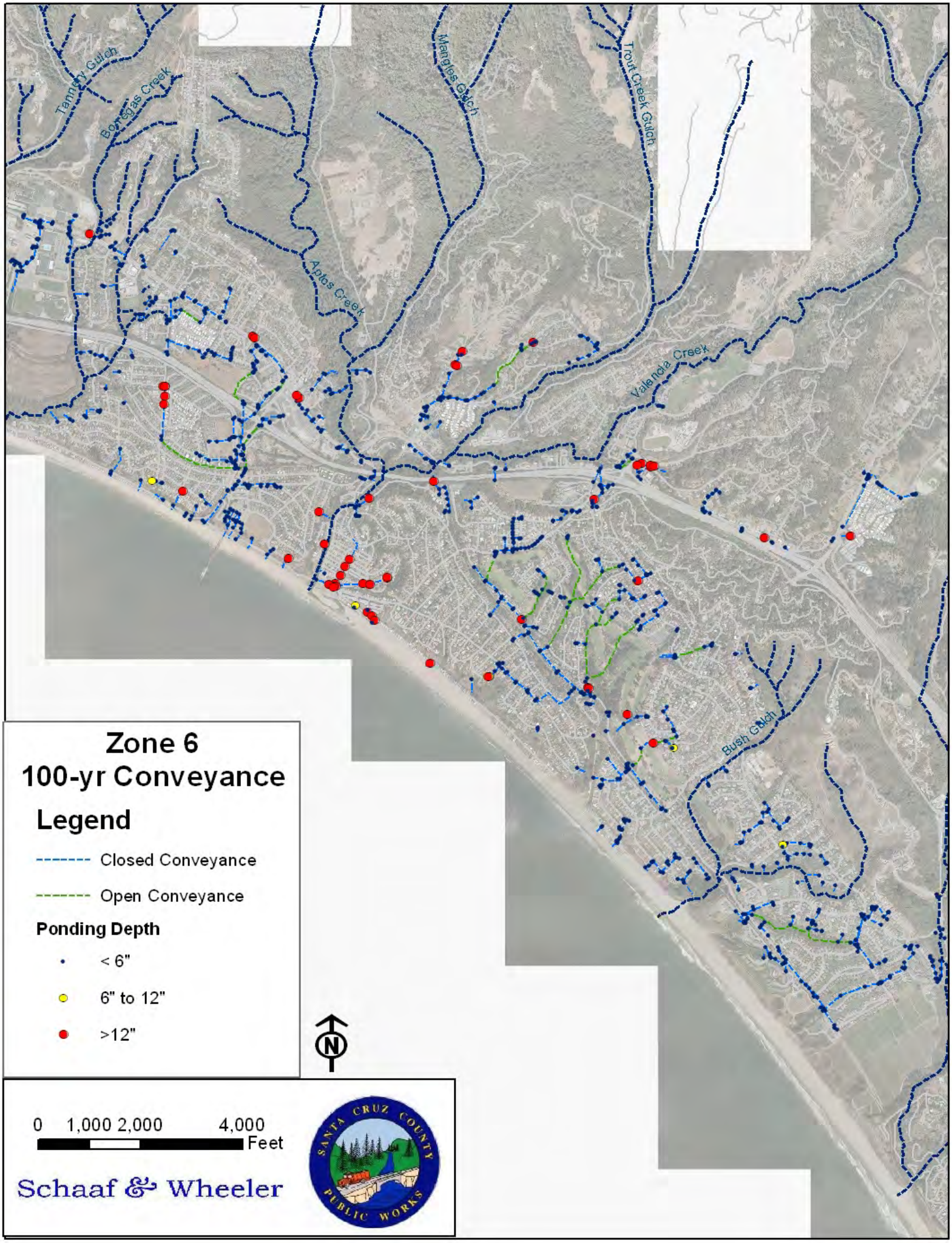

Zone 5 East
25-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
N
0 750 1,500 3,000
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY PUBLIC WORKS
Rodeo Creek Gulch
Tannery Gulch


Zone 5 East
100-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
N
0 750 1,500 3,000
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY PUBLIC WORKS
Stream 557
Stream 848
Stream 1533
Stream 601
Stream 606
Stream 572
Stream 579
Stream 578
Stream 576
Stream 1534
Stream 1536
Stream 558
Stream 608
Stream 607
Stream 604
Stream 1537
Stream 603
Stream 605
Stream 601
Stream 58
Stream 600
Stream 611
Stream 609
Stream 587
Stream 591
Stream 592
Stream 594
Stream 596
Stream 612
Stream 614
Stream 1546
Stream 638
Stream 636
Stream 597
Stream 470
Stream 472
Bates Creek
Sawmel Creek
Rodeo Creek Gulch
Tannery Gulch


Tannery Gulch
Borregas Creek
Mangles Gulch
Trout Creek Gulch
Aptos Creek
Valencia Creek
Bush Gulch
Zone 6
5-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
N
0 1,000 2,000 4,000
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY
PUBLIC WORKS


Tannery Gulch
Borregas Creek
Mangles Gulch
Trout Creek Gulch
Aptos Creek
Valencia Creek
Bush Gulch
Zone 6
10-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
N
0 1,000 2,000 4,000
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY
PUBLIC WORKS


Tannery Gulch
Borregas Creek
Mangles Gulch
Trout Creek Gulch
Aptos Creek
Valencia Creek
Bush Gulch
Zone 6
25-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
N
0 1,000 2,000 4,000
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY
PUBLIC WORKS


Tannery Gulch
Borregas Creek
Mangles Gulch
Trout Creek Gulch
Aptos Creek
Valencia Creek
Bush Gulch
Zone 6
100-yr Conveyance
Legend
Closed Conveyance
Open Conveyance
Ponding Depth
< 6"
6" to 12"
>12"
N
0 1,000 2,000 4,000
Feet
Schaaf & Wheeler
SANTA CRUZ COUNTY
PUBLIC WORKS

Santa Cruz County Department of Public Works
Storm Water Facilities Master Plan – Condition Assessment

Prepared for: Dan Schaaf, P.E., Schaaf & Wheeler

Prepared by: Andrew Campbell, V&A
Michael Johannessen, P.E., V&A
Derek Wurst, P.E., V&A

Reviewed by: Noy Phannavong, P.E., V&A
Mike Oriol, P.E., V&A

Date: July 15, 2013

INTRODUCTION

The County of Santa Cruz (County) is updating the storm water facility master plan in Zone 5 of the Santa Cruz County Flood Control and Water Conservation District (Zone 5), developing a new storm water facility master plan in Zone 6 of the Santa Cruz County Flood Control and Water Conservation District (Zone 6), and assessing culverts in these two zones. The results of these activities will serve as a guide for future improvements, rehabilitation, and expansion of the County's storm water infrastructure. A component of the storm water master plan is to determine the condition of the existing storm water infrastructure. V&A was retained by Schaaf & Wheeler to assist with condition assessment services for storm water facilities for the project. The information from the condition assessment will be utilized to determine needs for improvements to the existing infrastructure, if any, and to guide decisions for activities to ensure the reliability of these facilities.

V&A was given a list of high-priority pipes and culverts in Zones 5 and 6 to be assessed during the condition assessment. In order to use the available field time as efficiently as possible, V&A primarily evaluated the accessible high-priority pipes and culverts. There were, however, some lower-priority pipes that were also documented due to their close proximity to the higher-priority storm water facilities. Figures 1 through 9 show the storm water facilities that were visited as part of this condition assessment. These figures also show the page numbers in Appendix A where the detailed information for each condition assessment may be found.

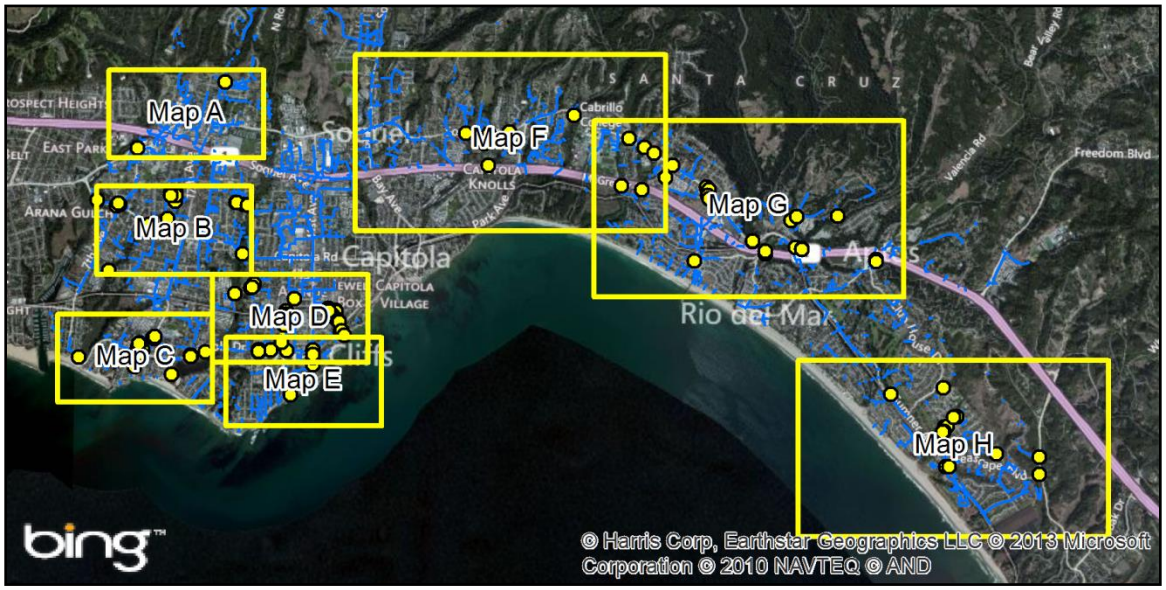


Figure 1. Key Map of Assessment Locations

The piping and culverts were entered and assessed through the use of a pole-mounted camera and by performing a confined space entry on the pipe runs and culverts were applicable. The purpose of this report is to provide Schaaf & Wheeler with the data retrieved from the condition assessment and to provide recommendations. Appendix A provides detailed photographic documentation of the observations from the assessment.

Figure 2. Condition Assessment Locations: Map Sheet A

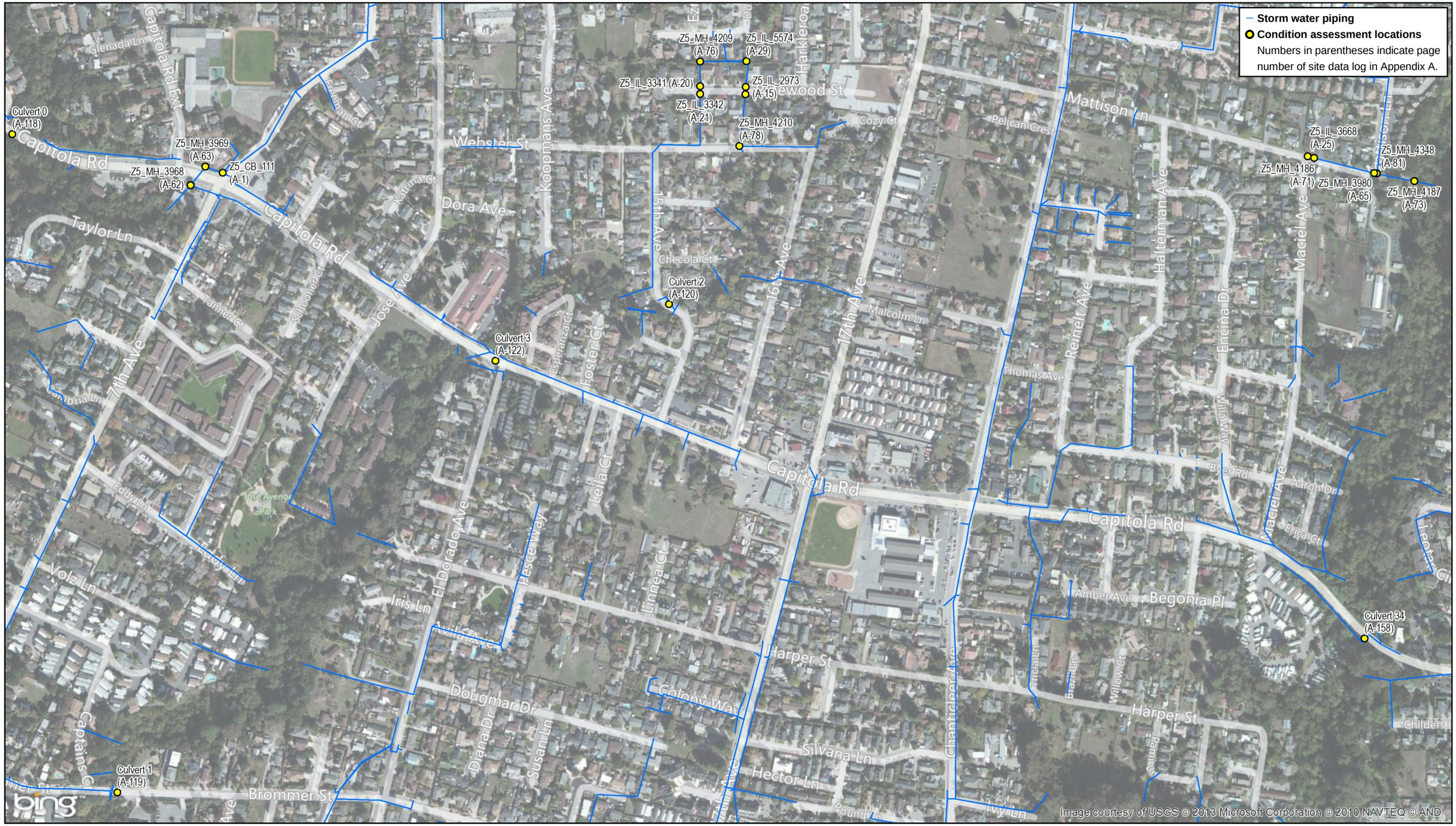


Figure 3. Condition Assessment Locations: Map Sheet B

Figure 4. Condition Assessment Locations: Map Sheet C

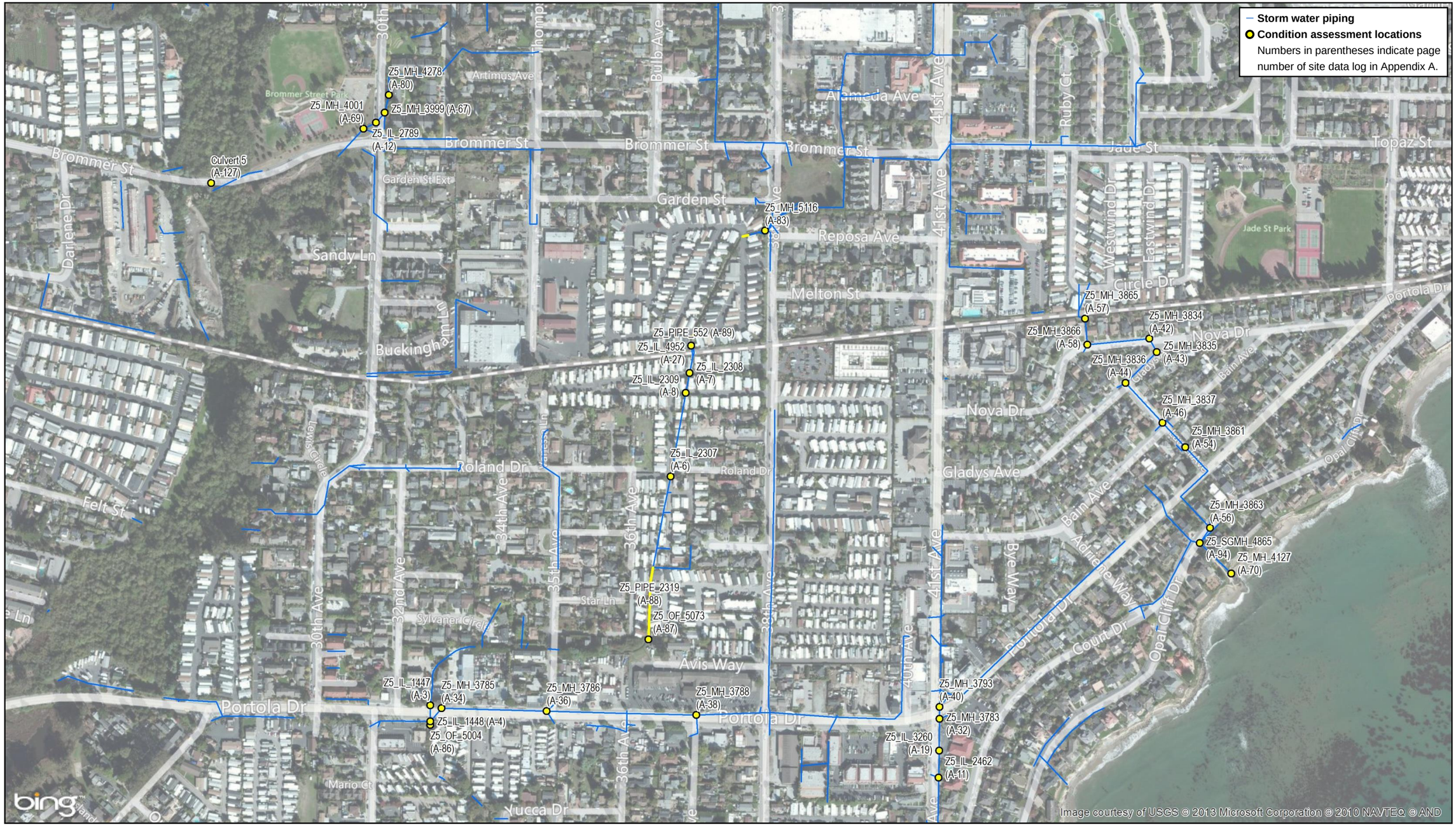


Figure 5. Condition Assessment Locations: Map Sheet D

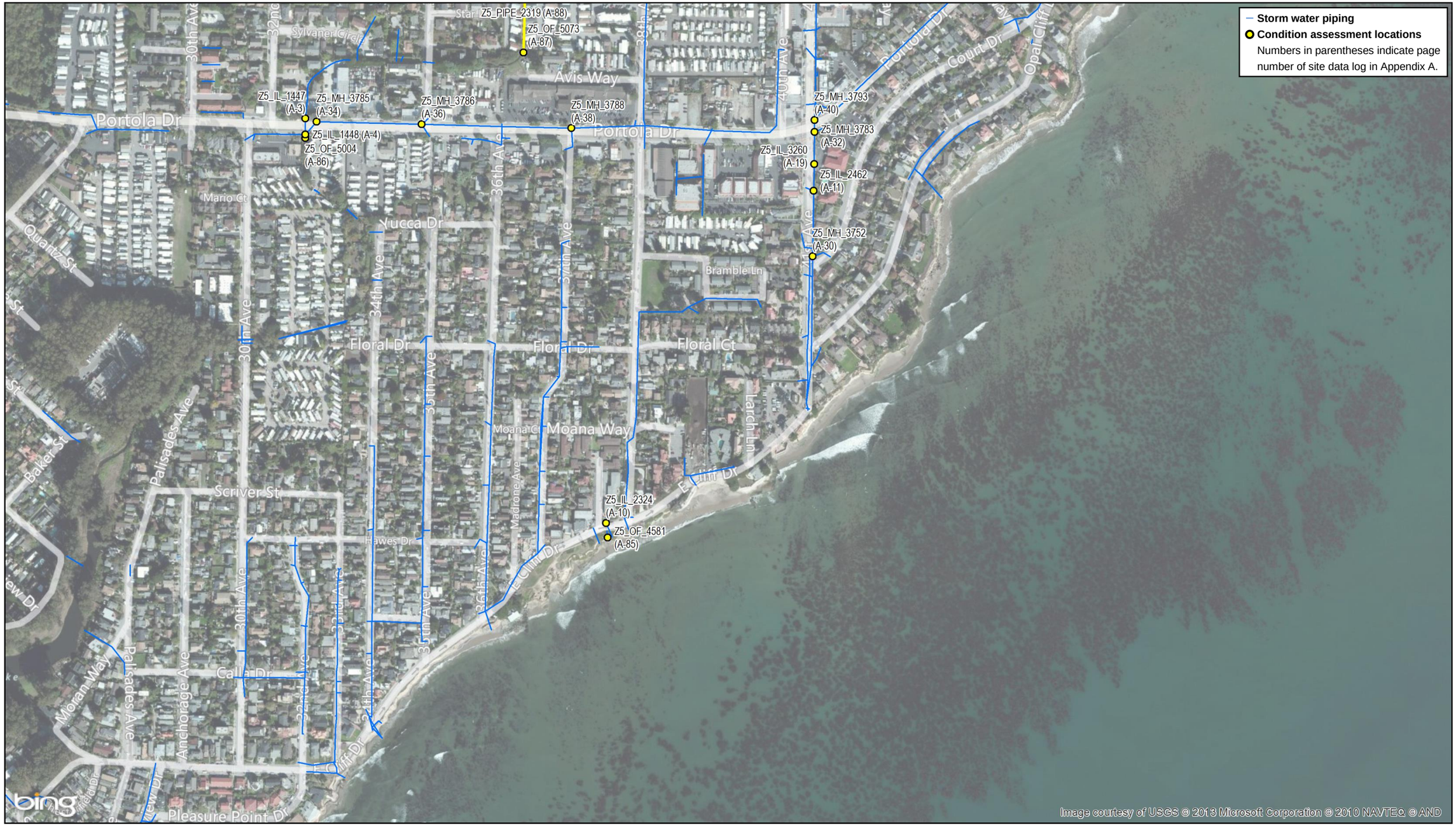


Figure 6. Condition Assessment Locations: Map Sheet E

Figure 7. Condition Assessment Locations: Map Sheet F

Figure 8. Condition Assessment Locations: Map Sheet G

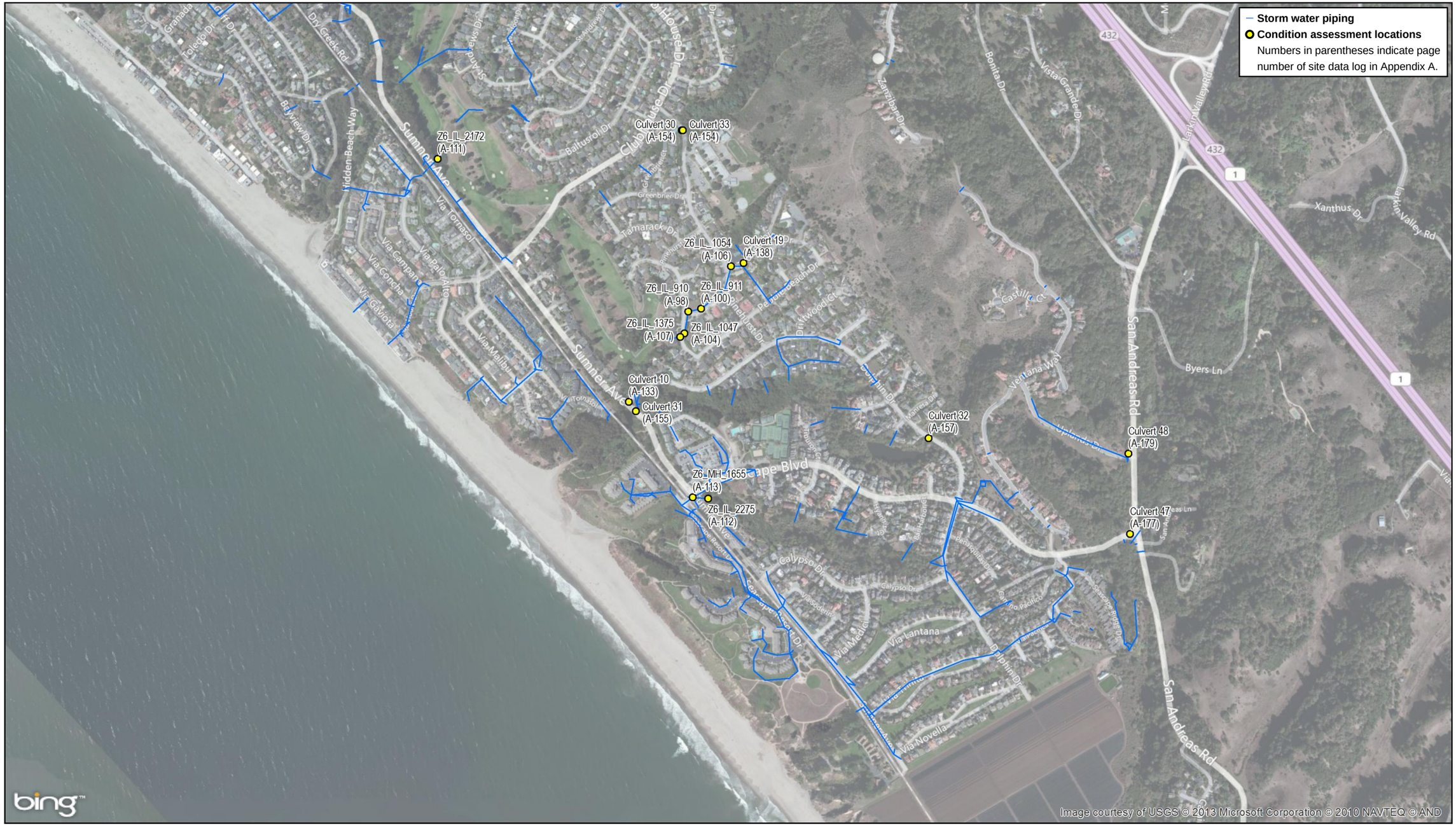


Figure 9. Condition Assessment Locations: Map Sheet H

CONFINED SPACE ENTRY

The storm drain pipelines are considered permit-required confined spaces. The two-person V&A assessment team members were trained in confined space entry procedures per OSHA guidelines. One entrant entered into the storm drain system through the manhole entrance. The entrant maintained voice communication with the confined space attendant throughout the entry. The entrant wore personal protective equipment, and utilized a ladder and safety harness, while entering the storm water lines. The full body harness was secured to a climbing rope with associated climbing equipment to aid in the descent into the manholes. The confined space safety concerns were atmospheric gases and engulfment. The entrant wore a four-gas monitor that continuously samples the air for oxygen, the lower explosive limit (LEL), hydrogen sulfide (H_2S), and carbon monoxide (CO). The monitor was set at appropriate OSHA threshold limits for each gas and alarms when these limits are exceeded.

METHODS AND PROCEDURES

Evaluation methods consisted of visual examinations and documentation with handheld video or a pole-mounted zoom inspection camera. It is noted that qualitative condition assessment observations were based on the evaluator's expertise. The methods of condition assessment involved making confined space entries into some of the structures. Various evaluation methods used during the assessment are listed below:

- VANDA™ Concrete and Metallic Condition Index condition ratings were used as appropriate (Table 1 and Table 2).
- Storm drain pipes from the manholes were documented with respect to corrosion. Locations of visually identified defective areas were noted by circumferential clock position in the pipe.
- Pipe deflections, visible concrete cracks, concrete spalls, offset or displaced pipe joints, and other associated defects within the storm water pipe were documented.
- Photographs and handheld video of pipelines and culverts were obtained.
- V&A used a prioritization rating scale of 1 to 5 to classify the storm water facilities needing attention. The rating is in the order of increasing priority from 1 to 5, with facilities rated 5 needing immediate attention. Table 3 summarizes the methods used to prioritize the facilities and some example defects associated with each priority level.
- V&A used an access rating scale of 1 to 3 to classify ease of access to the storm water facilities. Table 4 summarizes the access rating scale. This access rating scale describes access to the access points, such as inlets, manholes, and outfalls, rather than the pipe segments themselves.

It is strongly emphasized that the condition assessment data gathered for this project was limited. Condition assessment of the pipe segments is limited to what was visible from the available access points, such as inlets, manholes, and outfalls. Defects may exist in portions of the pipe segments not visible to the evaluator. In addition, in many cases, a view into the pipe was not possible due to access limitations or obstructions. In some cases, the condition assessment data did not provide enough useful information to apply ratings to the storm water facilities, so those facilities may be missing ratings in Table 5 through Table 10 and in Appendix A.

VANDA™ Concrete Condition Rating System

The VANDA™ Concrete Condition Index was created by V&A to provide consistent reporting of corrosion damage based on qualitative, objective criteria. Condition of corrosion can vary from Level 1 to Level 4 based upon visual observations and field measurements, with Level 1 indicating the best condition and Level 4 indicating severe damage.

Table 1. VANDA™ Concrete Condition Index Rating System

Condition Rating	Description	Representative Photograph
Level 1	**None/Minimal Damage to Concrete** Hardness: No Loss Surface Profile: No Loss Cracking: Shrinkage Cracks Spalling: None Reinforcing Steel (Rebar): Not Exposed or Damaged	
Level 2	**Damage to Concrete Mortar** Hardness: Damage to Concrete Mortar Surface Profile: Some Loss Cracking: Thumbnail Sized Cracks of Minimal Frequency Spalling: Shallow Spalling of Minimal Frequency, Related Rebar Damage Reinforcing Steel (Rebar): May Be Exposed but Not Damaged	
Level 3	**Loss of Concrete Mortar/Damage to Rebar** Hardness: Complete Loss Surface Profile: Large Diameter Exposed Aggregate Cracking: ¼-inch to ½-inch long Cracks, Moderate Frequency Spalling: Deep Spalling of Moderate Frequency, Related Rebar Damage Reinforcing Steel (Rebar): Exposed and Damaged, Can Be Rehabilitated	
Level 4	**Rebar Severely Corroded/Significant Damage to Structure** Hardness: Complete Loss Surface Profile: Large Diameter Exposed Aggregate Cracking: ½-inch Cracks or Longer, High Frequency Spalling: Deep Spalling at High Frequency, Related Rebar Damage Reinforcing Steel (Rebar): Damaged or Consumed, Loss of Structural Integrity	

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VANDA™ Metal Condition Rating System

The VANDA™ Metal Condition Index was created by V&A to provide consistent reporting of corrosion damage based on qualitative, objective criteria. Condition of corrosion can vary from Level 1 to Level 4 based upon visual observations and field measurements, with Level 1 indicating the best condition and Level 4 indicating severe damage.

Table 2. VANDA™ Metal Condition Index Rating System

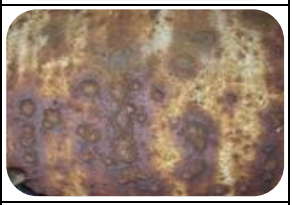
Condition Rating	Description	Representative Photograph
Level 1	**Little or No Corrosion** Loss of Wall Thickness %: None Pitting Depth (as % of Wall Thickness): None to Minimal Extent (Area) of Corrosion: None	
Level 2	**Minor Surface Corrosion** Loss of Wall Thickness %: < 25% Pitting Depth (as % of Wall Thickness): < 25% Extent (Area) of Corrosion: Localized	
Level 3	**Moderate to Significant Corrosion** Loss of Wall Thickness %: 25%-75% Pitting Depth (as % of Wall Thickness): 25%-75% Extent (Area) of Corrosion: 25%-75%	
Level 4	**Severe Corrosion; Immediate Repair/Replacement Needed** Loss of Wall Thickness %: > 75% Pitting Depth (as % of Wall Thickness): 75% or More Extent (Area) of Corrosion: Affects Most or All of Surface	

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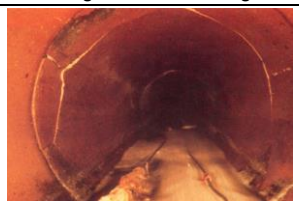
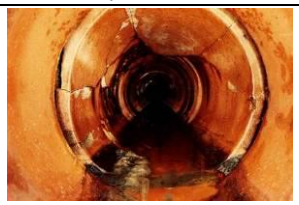
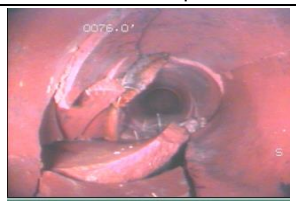
Table 3. Storm Water Facility Prioritization Scale

Rating	Reassessment or Repair Priority	Structural Rating Example*	
1 Excellent	Failure unlikely in the foreseeable future. Reassess on a 15-year interval.		Minor or no defects
2 Good	Reassess on a 10-year interval.	Longitudinal Cracking	Defects that have not begun to deteriorate
3 Fair	Reassess on a 5-year interval and consider conducting repairs.	 Multiple Fractures	Moderate defects that will continue to deteriorate
4 Poor	Prioritize for rehabilitation within 5 years.	 Broken Pipe	Severe defects
5 Immediate Attention	Repair or replace immediately.	 Collapsed Pipe	Defect requires immediate action

* Example photos are for illustrative purposes taken from sewer system evaluations but are representative of similar defects in storm water systems. Also, note that this scale is used for reporting the priority ratings of the storm water facilities, not the condition. The condition is reported using the VANDA ratings.

Table 4. Inlet, Manhole, and Outfall Access Rating Scale

Access Rating	Description	Example
1	Good access	In street or sidewalk
2	Fair access	Vehicular access may be difficult, or access may be limited due to private property, parked cars, etc.
3	Poor access	Overgrown, located in difficult terrain, inaccessible, or could not be found

FINDINGS

Zone 5

Table 5 summarizes the ratings applied to each access point and the pipe segments that could be evaluated from it. Ratings other than Level 1, which indicates the best case for each of the scales in Tables 1 through 4, are highlighted in yellow. See Appendix A for photographs and more information on each feature. Table 6 shows the pipe segments that were not rated due to access constraints or other limitations.

Table 5. Condition Assessment Ratings for Features in Zone 5

Pipe ID	Assessed From	VANDA Rating	Storm Water Priority Rating	Inlet/ Manhole/ Outfall Access Rating	Page (App. A)	County GIS Map Grid	V&A Map Sheet
Z5_PIPE_324	Z5_MH_3863	1	**	1	A-56	M5	D
Z5_PIPE_372	Z5_MH_3861	1	1	1	A-54	L5	D
Z5_PIPE_373	Z5_MH_3861	1	1	1	A-54	L5	D
Z5_PIPE_374	Z5_MH_3861	1	1	1	A-54	L5	D
Z5_PIPE_379	Z5_MH_3863	1	**	1	A-56	M5	D
	Z5_SGMH_4865	1	1	1	A-94	M5	D
Z5_PIPE_380	Z5_SGMH_4865	1	1	1	A-94	M5	D
Z5_PIPE_381	Z5_MH_3863	1	**	1	A-56	M5	D
Z5_PIPE_386	Z5_MH_3866	1	1	1	A-58	L5	D
Z5_PIPE_387	Z5_MH_3834	1	1	1	A-42	L5	D
	Z5_MH_3866	1	1	1	A-58	L5	D
Z5_PIPE_388	Z5_MH_3834	1	1	1	A-42	L5	D
	Z5_MH_3835	1	1	1	A-43	L5	D
Z5_PIPE_389	Z5_MH_3835	1	1	1	A-43	L5	D
	Z5_MH_3836	1	1	1	A-44	L5	D
Z5_PIPE_390	Z5_MH_3837	1	1	1	A-45	L5	D
Z5_PIPE_391	Z5_MH_3837	1	1	1	A-45	L5	D
Z5_PIPE_392	Z5_MH_3837	1	1	1	A-45	L5	D
	Z5_MH_3861	1	1	1	A-54	L5	D
Z5_PIPE_393	Z5_MH_3836	1	1	1	A-44	L5	D
	Z5_MH_3837	1	1	1	A-45	L5	D
Z5_PIPE_395	Z5_MH_3843	1	1	1	A-52	M3	C
Z5_PIPE_416	Z5_MH_3783	1	1	1	A-32	M5	D, E
Z5_PIPE_418	Z5_MH_3786	1	1	1	A-36	M4	D, E
Z5_PIPE_419	Z5_MH_3786	1	1	1	A-36	M4	D, E
Z5_PIPE_421	Z5_MH_3788	1	1	1	A-38	M5	E
Z5_PIPE_424	Z5_MH_3793	1	1	1	A-40	M5	D, E
Z5_PIPE_425	Z5_MH_3793	1	1	1	A-40	M5	D, E
Z5_PIPE_539	Z5_SGMH_4865	1	1	1	A-94	M5	D
Z5_PIPE_552	Z5_PIPE_552	1	1	2	A-89	L5	D
Z5_PIPE_567	Z5_MH_3783	2	2	1	A-32	M5	D, E
	Z5_MH_3793	1	1	1	A-40	M5	D, E
Z5_PIPE_568	Z5_MH_3783	1	1	1	A-32	M5	D, E
Z5_PIPE_580	Z5_OF_4581	1	1	**	A-85	N5	E
Z5_PIPE_865	Z5_IL_5125	1	**	**	A-28	M3	C
Z5_PIPE_867	Z5_SGMH_4853	1	1	1	A-92	M3	C
Z5_PIPE_1187	Z5_IL_2829	1	**	1	A-13	M3	C
Z5_PIPE_1188	Z5_MH_3841	1	1	2	A-48	M3	C
	Z5_MH_3842	1	1	1	A-50	M3	C
Z5_PIPE_1189	Z5_MH_3843	1	1	1	A-52	M3	C
	Z5_MH_4198	1	1	1	A-74	M3	C
Z5_PIPE_1190	Z5_MH_3843	1	1	1	A-52	M3	C
Z5_PIPE_1192	Z5 Unidentified Outfall 2	1	2	1	A-96	M2	C

Pipe ID	Assessed From	VANDA Rating	Storm Water Priority Rating	Inlet/ Manhole/ Outfall Access Rating	Page (App. A)	County GIS Map Grid	V&A Map Sheet
Z5_PIPE_1218	Z5_MH_3980	1	1	1	A-65	J4	B
	Z5_MH_4186	1	1	1	A-71	J4	B
	Z5_MH_4348	1	1	1	A-81	J4	B
Z5_PIPE_1227	Z5_MH_3870	1	1	1	A-60	H3	A
Z5_PIPE_1228	Z5_MH_3870	1	1	1	A-60	H3	A
Z5_PIPE_1229	Z5_MH_3870	1	1	1	A-60	H3	A
Z5_PIPE_1565	Z5_MH_3841	1	1	2	A-48	M3	C
Z5_PIPE_1566	Z5_MH_4198	1	3	1	A-74	M3	C
Z5_PIPE_1743	Z5_MH_3980	1	1	1	A-65	J4	B
Z5_PIPE_1812	Z5_MH_3969	1	1	1	A-63	J2	B
Z5_PIPE_1814	Z5_MH_3969	2	3	1	A-63	J2	B
Z5_PIPE_1838	Z5_IL_5574	1	1	1	A-29	J3	B
Z5_PIPE_1840	Z5_MH_4210	1	1	2	A-78	J3	B
Z5_PIPE_1841	Z5_MH_4210	1	1	2	A-78	J3	B
Z5_PIPE_1878	Z5_IL_3350	1	1	1	A-22	M3	C
Z5_PIPE_1879	Z5_IL_3350	2	2	1	A-22	M3	C
Z5_PIPE_2056	Z5_MH_3842	1	1	1	A-50	M3	C
	Z5_MH_4198	1	1	1	A-74	M3	C
Z5_PIPE_2263	Z5_MH_3752	1	1	1	A-30	M5	E
Z5_PIPE_2266	Z5_MH_3752	1	1	1	A-30	M5	E
Z5_PIPE_2269	Z5_MH_3752	1	1	1	A-30	M5	E
Z5_PIPE_2293	Z5_MH_3785	1	1	1	A-34	M4	D, E
Z5_PIPE_2306	Z5_MH_3788	1	1	1	A-38	M5	E
Z5_PIPE_2307	Z5_MH_3788	1	1	1	A-38	M5	E
Z5_PIPE_2308	Z5_MH_3786	1	1	1	A-36	M4	D, E
Z5_PIPE_2312	Z5_MH_3785	1	1	1	A-34	M4	D, E
	Z5_MH_3786	1	1	1	A-36	M4	D, E
Z5_PIPE_2319	Z5_OF_5073	1	**	2	A-87	M4	D, E
	Z5_PIPE_2319	1	**	**	A-88	M4	D, E
Z5_PIPE_2363	Z5_MH_3836	1	1	1	A-44	L5	D
Z5_PIPE_2364	Z5_MH_3866	1	1	1	A-58	L5	D
Z5_PIPE_2436	Z5_MH_3999	1	1	1	A-67	L4	D
Z5_PIPE_2437	Z5_MH_3999	1	1	1	A-67	L4	D
Z5_PIPE_2439	Z5_MH_3999	1	1	1	A-67	L4	D
Z5_PIPE_2518	Z5_OF_5004	1	2	2	A-86	M4	D, E
Z5_PIPE_2591	Z5_IL_3341	1	1	2	A-20	J3	B
Z5_PIPE_2687	Z5_IL_3341	1	1	2	A-20	J3	B
	Z5_MH_4209	1	1	3	A-76	J3	B
Z5_PIPE_3106	Z5_IL_4952	1	1	2	A-27	L5	D
Z5_PIPE_3107	Z5_IL_2309	2	3	**	A-8	L5	D
Z5_PIPE_5557	Z5_IL_2308	1	**	**	A-7	L5	D
Z5_PIPE_5558	Z5_IL_2308	1	**	**	A-7	L5	D
	Z5_IL_2309	2	3	**	A-8	L5	D
Z5_PIPE_5563	Z5_MH_5116	1	**	2	A-83	L5	D
Z5_PIPE_5621	Z5_MH_4348	1	1	1	A-81	J4	B
Z5_PIPE_5622	Z5_MH_4186	1	1	1	A-71	J4	B
Z5_PIPE_5656	Z5_IL_2973	3	4	**	A-15	J3	B
	Z5_IL_2974	3	4	**	A-17	J3	B
Z5_PIPE_5657	Z5_MH_4209	1	1	3	A-76	J3	B
Z5_PIPE_5693	Z5_PIPE_5693	1	**	2	A-90	M5	D
Z5_PIPE_5694	Z5_IL_4952	1	1	2	A-27	L5	D
Z5_PIPE_5709	Z5_IL_2973	3	4	**	A-15	J3	B
	Z5_IL_5574	3	4	1	A-29	J3	B
NEW_Z5_PIPE_6102	Z5_IL_2829	1	**	1	A-13	M3	C

** The condition assessment did not provide enough information to make a conclusive determination.

Table 6. Pipes Not Rated in Zone 5

Pipe ID	Assessed From	Page (App. A)	County GIS Map Grid	V&A Map Sheet
Z5_PIPE_316	Z5_MH_4127	A-70	M5	D
Z5_PIPE_382	Z5_SGMH_4865	A-94	M5	D
Z5_PIPE_384	Z5_MH_3865	A-57	L5	D
Z5_PIPE_385	Z5_MH_3865	A-57	L5	D
Z5_PIPE_417	Z5_IL_1447	A-3	M4	D, E
	Z5_IL_1448	A-4	M4	D, E
Z5_PIPE_420	Z5_MH_3788	A-38	M5	E
Z5_PIPE_499	Z5_IL_2462	A-11	M5	D, E
Z5_PIPE_569	Z5_IL_3260	A-19	M5	D, E
Z5_PIPE_681	Z5_CB_111	A-1	J2	B
Z5_PIPE_866	Z5_IL_3206	A-18	M3	C
	Z5_SGMH_4853	A-92	M3	C
Z5_PIPE_1387	Z5_IL_1433	A-2	M3	C
Z5_PIPE_1420	Z5_IL_3352	A-24	M3	C
Z5_PIPE_1741	Z5_IL_3668	A-25	J4	B
Z5_PIPE_1745	Z5_MH_4187	A-73	J4	B
Z5_PIPE_1811	Z5_CB_111	A-1	J2	B
Z5_PIPE_1813	Z5_MH_3968	A-62	J2	B
Z5_PIPE_1815	Z5_CB_111	A-1	J2	B
Z5_PIPE_1816	Z5_CB_111	A-1	J2	B
Z5_PIPE_1839	Z5_IL_2974	A-17	J3	B
Z5_PIPE_1881	Z5_IL_1486	A-5	M3	C
	Z5_IL_3352	A-24	M3	C
Z5_PIPE_2062	Z5_IL_2829	A-13	M3	C
Z5_PIPE_2267	Z5_IL_2462	A-11	M5	D, E
	Z5_IL_3260	A-19	M5	D, E
Z5_PIPE_2268	Z5_IL_2462	A-11	M5	D, E
Z5_PIPE_2270	Z5_MH_3752	A-30	M5	E
Z5_PIPE_2292	Z5_IL_1448	A-4	M4	D, E
Z5_PIPE_2423	Z5_MH_4001	A-69	L4	D
Z5_PIPE_2424	Z5_MH_4001	A-69	L4	D
Z5_PIPE_2435	Z5_MH_4278	A-80	L4	D
Z5_PIPE_2438	Z5_IL_2789	A-12	L4	D
	Z5_MH_4001	A-69	L4	D
Z5_PIPE_2592	Z5_IL_3342	A-21	J3	B
Z5_PIPE_2917	Z5_MH_3968	A-62	J2	B
Z5_PIPE_3060	Z5_MH_5116	A-83	L5	D
Z5_PIPE_4203	Z5_MH_4187	A-73	J4	B
Z5_PIPE_5550	Z5_IL_1447	A-3	M4	D
Z5_PIPE_5554	Z5_IL_2307	A-6	L4	D
Z5_PIPE_5561	Z5_MH_5116	A-83	L5	D
Z5_3104*	Z5_MH_3870	A-60	H3	A
Unidentified pipe (Z5_IL_2324)	Z5_IL_2324	A-10	N5	E

* These feature IDs refer to a secondary numbering system found in shapefile "z5_links_forModel.shp."

Zone 6

Table 7 summarizes the ratings applied to each access point and the pipe segments that could be evaluated from it. Ratings other than Level 1, which indicates the best case for each of the scales in Tables 1 through 4, are highlighted in yellow. See Appendix A for photographs and more information on each feature. Table 8 shows the pipe segments that were not rated due to access constraints or other limitations.

Table 7. Condition Assessment Ratings for Features in Zone 6

Pipe ID	Assessed From	VANDA Rating	Storm Water Priority Rating	Inlet/ Manhole/ Outfall Access Rating	Page (App. A)	County GIS Map Grid	V&A Map Sheet
Z6_PIPE_404	Z6_IL_955	1	1	1	A-103	K11	G
Z6_PIPE_562	Z6_IL_2275	1	2	**	A-112	O13	H
Z6_PIPE_598	Z6_IL_910	1	1	1	A-98	O13	H
	Z6_IL_911	1	1	1	A-100	N13	H
Z6_PIPE_599	Z6_IL_1047	1	1	**	A-104	O13	H
	Z6_IL_910	1	1	1	A-98	O13	H
Z6_PIPE_600	Z6_IL_1047	1	1	**	A-104	O13	H
Z6_PIPE_601	Z6_IL_911	1	1	1	A-100	N13	H
Z6_PIPE_732	Z6_MH_2252	1	1	1	A-116	J11	G
Z6_PIPE_998	Z6_IL_1403	1	**	1	A-109	K12	G
Z6_PIPE_1201	Z6_IL_2172	1	1	3	A-111	N13	H
Z6_PIPE_1347	Z6_MH_2252	1	1	1	A-116	J11	G
Z6_PIPE_1366	Z6_IL_1047	1	1	**	A-104	O13	H
	Z6_IL_1375	1	1	**	A-107	O13	H
Z6_PIPE_1388	Z6_MH_2252	1	1	1	A-116	J11	G
Z6_PIPE_1959	Z6_MH_2252	1	1	1	A-116	J11	G
Unidentified inlet (Z6_IL_955)	Z6_IL_955	1	1	1	A-103	K11	G

** The condition assessment did not provide enough information to make a conclusive determination.

Table 8. Pipes Not Rated in Zone 6

Pipe ID	Assessed From	Page (App. A)	County GIS Map Grid	V&A Map Sheet
Z6_PIPE_98	Z6_IL_1054	A-106	N14	H
Z6_PIPE_100	Z6_IL_1054	A-106	N14	H
Z6_PIPE_125	Z6_IL_954	A-102	K11	G
Z6_PIPE_284	Z6_IL_828	A-97	K11	G
Z6_PIPE_561	Z6_MH_1655	A-113	O13	H
Z6_PIPE_997	Z6_IL_1403	A-109	K12	G
Z6_PIPE_1008	Z6_IL_1419	A-110	K12	G
Z6_PIPE_1216	Z6_MH_1655	A-113	O13	H
Z6_PIPE_1217	Z6_MH_1655	A-113	O13	H
Z6_PIPE_1238	Z6_MH_1695	A-115	K11	G
Z6_PIPE_1239	Z6_MH_1695	A-115	K11	G
Z6_PIPE_1240	Z6_IL_828	A-97	K11	G
	Z6_MH_1695	A-115	K11	G
Z6_PIPE_1353	Z6_MH_1655	A-113	O13	H
Z6_PIPE_1358	Z6_MH_1665	A-114	J11	G
Z6_PIPE_1365	Z6_IL_1375	A-107	O13	H
Z6_PIPE_1368	Z6_MH_1665	A-114	J11	G
Z6_PIPE_1389	Z6_MH_1665	A-114	J11	G
Z6_PIPE_1391	Z6_MH_1665	A-114	J11	G

Culverts

Table 9 summarizes the ratings applied to each culvert. Ratings other than Level 1, which indicates the best case for each of the scales in Tables 1 through 4, are highlighted in yellow. See Appendix A for photographs and more information on each feature. Table 10 shows the culverts that were not rated due to access constraints or other limitations.

Table 9. Condition Assessment Ratings for Culverts

Culvert ID	VANDA Rating	Storm Water Priority Rating	Access Rating	Page (App. A)	County GIS Map Grid	V&A Map Sheet
Culvert 0	2	2	2	A-118	J2	B
Culvert 2	2	2	2	A-120	J3	B
Culvert 3	1	2	2	A-122	J3	B
Culvert 4	1	2	2	A-124	G4	B
Culvert 5	1	2	2	A-127	L4	D
Culvert 6	1	2	2	A-129	H9	F, G
Culvert 7	1	2	2	A-130	G8	F
Culvert 9	1	2	2	A-131	K11	G
Culvert 10	2	2	2	A-133	O13	H
Culvert 11	1	2	1	A-135	H10	G
Culvert 13	1	2	1	A-137	K10	G
Culvert 19	1	**	1	A-138	N14	H
Culvert 25	1	2	2	A-145	H7	F
Culvert 26	1	2	2	A-146	H7	F
Culvert 27	1	2	2	A-148	H8	F
Culvert 28	1	1	1	A-150	H7	F
Culvert 29	4	4	2	A-152	J12	G
Culvert 31	1	2	2	A-155	O13	H
Culvert 32	2	3	2	A-157	O14	H
Culvert 34	1	**	3	A-158	K4	B
Culvert 37	1	2	2	A-160	H7	F
Culvert 38	1	2	2	A-163	H9	F, G
Culvert 41	1	**	1	A-168	J10	G
Culvert 43	1	2	1	A-172	J10	G
Culvert 44	1	2	2	A-174	J10	G
Culvert 46	1	2	1	A-176	K11	G
Culvert 47	1	2	2	A-177	O15	H
Culvert 48	1	2	2	A-179	O15	H
Culvert 49	1	2	2	A-181	J9	F, G
Culvert 50	1	2	2	A-183	J9	F, G

** The condition assessment did not provide enough information to make a conclusive determination.

Table 10. Culverts Not Rated

Culvert ID	Page (App. A)	County GIS Map Grid	V&A Map Sheet
Culvert 1	A-119	K2	B
Culvert 20	A-140	M3	C
Culvert 21	A-141	M2	C
Culvert 22	A-143	M3	C
Culverts 30 and 33	A-154	N13	H
Culvert 39	A-165	H9	F, G
Culvert 40	A-167	H10	G
Culvert 42	A-170	J10	G
Culvert 45	A-175	K11	G

Other Observations

In some locations, inadequate drainage was observed in relation to other condition assessment activities. In some cases, the inlets intended for condition assessment were plugged, causing drainage problems. In other cases, the inlets intended for assessment could not be found, potentially due to being covered by soil or debris, which also caused drainage problems. In other cases, there simply were not any storm drainage features in the area. To a lesser extent, some of the drainage issues were determined to be caused by poor initial construction or design. The condition assessment crew did not keep detailed notes on the locations of these observations, and this is not a comprehensive list of drainage problems.

Inlet, Manhole, and Outfall Observations

Appendix A contains details and photographic documentation of the point features of the storm drain system, such as inlets, manholes, and outfalls, that were evaluated. Although the point features were not the focus of the condition assessment, some of them exhibited obvious defects that should be addressed. Table 11 shows the point features that were identified with priority ratings higher than 1. The other point features evaluated were rated 1 or were not assigned a rating due to lack of full access, etc.

Table 11. Condition Assessment Ratings for Point Features

Feature ID	Storm Water Priority Rating	Inlet/ Manhole/ Outfall Access Rating	Page (App. A)	County GIS Map Grid	V&A Map Sheet
Z5_IL_3668	2	1	A-25	J4	B
Z5_MH_3968	2	**	A-62	J2	B
Z5_MH_3969	3	1	A-63	J2	B
Z5_MH_4001	4	2	A-69	L4	D
Z5_MH_4198	3	1	A-74	M3	C
Z5_OF_5004	2	2	A-86	M4	D, E
Z5_SGMH_4853	2	1	A-92	M3	C
Z6_IL_2172	2	3	A-111	N13	H
Z6_IL_2275	2	**	A-112	O13	H

** The condition assessment did not provide enough information to make a conclusive determination.

CONCLUSIONS

It is strongly emphasized that the condition assessment data gathered for this project was limited. Condition assessment of the pipe segments is limited to what was visible from the available access points, such as inlets, manholes, and outfalls. Defects may exist in portions of the pipe segments not visible to the evaluator. In addition, in many cases, a view into the pipe was not possible due to access limitations or obstructions. In some cases, the condition assessment data did not provide enough useful information to apply ratings to the storm water facilities, so those facilities may be missing ratings in Table 5 through Table 10 and in Appendix A.

V&A presents the following conclusions based on the results of the condition assessments:

- The majority of the storm water infrastructure evaluated was in satisfactory condition. Many of the features, such as catch basins, manholes, culverts, and associated pipelines, were not structurally compromised.
  - Many of the features evaluated were assigned a VANDA Level 1 rating, indicating only minimal damage to concrete surfaces.
  - There were a few cases of bowed inverts in some of the metallic pipes.
  - Deterioration due to corrosion was determined not to be a prevalent issue. There were observations of a few corrugated metal pipes used in the storm water system. These pipes are more susceptible to corrosion. Based on the condition assessment, most of the pipes evaluated appear to be in good condition, with some exceptions. However, this observation is limited by the vantage point and visibility of the zoom camera.
  - Earth erosion and debris was a factor for some catch basins, causing the basins to be plugged and the pipe connections inaccessible.
  - Documentation of unwarranted access to storm water facilities was noted.
- In many locations, areas were found to have inadequate drainage. Supplemental observations noted that some of the pipelines had debris and sediment buildup causing the drainage issues. Some areas did not have storm drainage facilities. To a lesser extent, some of the drainage issues were determined to be caused by poor initial construction or design.
- Access limitations for some of the culverts that were evaluated would make routine maintenance of these facilities challenging to impossible.

RECOMMENDATIONS

Based on the condition assessments, V&A presents the following recommendations for the County's consideration:

- Reassess, repair, or rehabilitate storm water system assets within the timeframes given by the storm water facility ratings (Table 3).
- Perform a condition assessment on storm water facilities not completed or included in this report.
- Appendix A contains additional minor defect observations and recommendations from the features evaluated. When other rehabilitation activities are planned, Appendix A should be

consulted for the features involved and these minor observations should be addressed at that time to improve serviceability and reliability of these assets.

- Conduct additional CCTV inspection in the corrugated metal pipes to assess potential corrosion damage.
- The County should consider contracting with a company to provide as-needed cleaning and CCTV inspection services. The contractor would supplement the existing County staff and provide additional capabilities to clean pipelines, remove obstructions, and document conditions with CCTV inspection. Regardless of whether the services are contracted or performed by County staff, consider performing or continuing to perform the following operations and maintenance activities:
  - Locate and restore access to features which have become buried, paved over or otherwise made inaccessible for maintenance activities.
  - A routine cleaning schedule should be followed.
  - Culvert inlets and outlets need to be clear of obstructions with ease of access to allow efficient assessment and maintenance of facilities.
  - A good practice to help reduce pollution in the storm runoff would be to conduct a periodic cleaning of culverts and catch basins. This would also help monitor unwarranted access.
  - “No trespassing” and “no dumping” signs should be posted around storm water facilities to help limit the County’s liability.
  - Bar screens or trashracks are recommended to help limit access to storm water facilities to decrease the risk of clogging or damage and vandalism due to debris and unauthorized access. This will also reduce risks to the public from entering these areas.
- It is recommended that the County expand the condition assessment of storm water infrastructure using the information in this report as a guide to categorize structural and O&M defects with grade ratings of 1 to 5. Results from development of the storm water model may offer guidance to identify pipelines which have insufficient capacity to convey projected peak storm water flows. Such pipelines would be more critical assets and would represent the next group of areas targeted for condition assessment activities.
  - Ultimately, prioritization of additional areas for condition assessment should include a subjective evaluation of the criticality of the assets. Critical assets can be classified as those where potential external impacts (public, traffic, environmental) of failure are likely to be high. The County should investigate the criticality of the storm water infrastructure in order to evaluate costs associated with construction and potential impacts.
- Results of condition assessment documentation should be linked to the assets in the County’s GIS system for benchmarking and future reference. The asset inventory can be updated based on actual field conditions.
- Where possible, efforts should be made to standardize design and construction of the drainage catch basins, culverts, manholes and associated piping to reduce maintenance efforts.
- Storm water collection infrastructure is a dynamic system. Conditions may be subject to change over time, resulting in greater deterioration of the infrastructure. It is recommended to monitor these systems and structures periodically to update any changes in condition. Considering the generally good condition of the assets evaluated, is it suggested that the frequency of re-evaluation be a 10- to 15-year cycle. Should conditions indicate that deterioration has advanced dramatically during this timeframe, the re-evaluation interval can be adjusted to a more frequent 5-year cycle.

APPENDIX A
FIELD OBSERVATIONS

Zone 5

Z5_CB_111

Map sheet: J2

Date: October 2012

VANDA rating (pipes): –

Priority ratings: 1 (Z5_CB_111)

Pipes not assessed: Z5_PIPE_681, Z5_PIPE_1811, Z5_PIPE_1815, and Z5_PIPE_1816

Inlet, manhole, or outfall access rating: 1

Notes:

Pipes not assessed; could not view inside.

Area view of catch basin Z5_CB_111 to Z5_MH_3969.

Area view, looking north towards 7th Street.

View of catch basin interior and inlet pipes.

View of catch basin interior and outlet to pipe Z5_PIPE_681.

Zone 5

Z5_IL_1433

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	–
Pipes not assessed:	Z5_PIPE_1387
Inlet, manhole, or outfall access rating:	1

Notes:

Could not open grating; pipes not visible.

Area view.

Zone 5

Z5_IL_1447

Map sheet: M4

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_417 and Z5_PIPE_5550

Inlet, manhole, or outfall access rating: 2

Notes:

Access may be hindered by cars parked on inlet.

Area view. This catch basin was unable to be opened because the parked vehicle was obstructing access.

Zone 5

Z5_IL_1448

Map sheet: M4

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_417, Z5_PIPE_2292, Z5_PIPE_2293, and Z5_PIPE_2518

Inlet, manhole, or outfall access rating: 1

Notes:

Could not open grating; pipes not visible.

Area view. This catch basin overhead drains directly to the outlet pipe.

Zone 5

Z5_IL_1486

Map sheet: M3

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_1879 and Z5_PIPE_1881

Inlet, manhole, or outfall access rating: –

Notes:

Pipes not assessed due to limited visibility.

Area view.

Inside view of catch basin and downstream pipe.

Zone 5

Z5_IL_2307

Map sheet: L4

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_3107 and Z5_PIPE_5554

Inlet, manhole, or outfall access rating: 1

Notes:

Pipes not assessed due to limited visibility.

Area view.

View inside catch basin.

View inside upstream pipe Z5_PIPE_3107.

View inside downstream pipe Z5_PIPE_5554.

Zone 5

Z5_IL_2308

Map sheet:	L5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_5557 and Z5_PIPE_5558)
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	–
Notes:	

View inside pipe Z5_PIPE_5557 from Z5_IL_2308.

View inside downstream pipe Z5_PIPE_5558 from Z5_IL_2308.

Zone 5

Z5_IL_2309

Map sheet:	L5
Date:	October 2012
VANDA rating (pipes):	2 (Z5_PIPE_3107 and Z5_PIPE_5558)
Priority ratings:	1 (Z5_IL_2309); 3 (Z5_PIPE_3107 and Z5_PIPE_5558)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	–
Notes:	

View inside catch basin.

Area view of alignment upstream from Z5_IL_2309. The next access point was unable to be located.

View inside upstream pipe Z5_PIPE_5558 from Z5_IL_2309. CMP in fair condition, but sheet metal liner is corroded at invert.

View inside downstream pipe Z5_PIPE_3107 from Z5_IL_2309. CMP in fair condition, but sheet metal liner is corroded at invert.

Zone 5

Z5_IL_2309

View inside downstream pipe Z5_PIPE_3107 from Z5_IL_2309. CMP in fair condition, but sheet metal liner is corroded at invert.

View inside upstream pipe Z5_PIPE_5558 from Z5_IL_2309. CMP in fair condition, but sheet metal liner is corroded at invert.

Zone 5

Z5_IL_2324

Map sheet: N5

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_580 and unidentified pipe

Inlet, manhole, or outfall access rating: 1

Notes:

Pipes not assessed due to limited visibility.

Area view. The manhole in the foreground is new and drains water from the catch basin in the background to the outfall. This area was reconstructed and does not match the GIS maps.

Area view, looking upstream towards Z5_IL_2949. This catch basin drains towards the outfall. This area was reconstructed and does not match the GIS maps.

View inside catch basin towards upstream pipe.

Zone 5

Z5_IL_2462

Map sheet: M5

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_499, Z5_PIPE_2267, and Z5_PIPE_2268

Inlet, manhole, or outfall access rating: 1

Notes:

Pipes not assessed due to limited visibility.

Area view.

View inside catch basin Z5_IL_2462, looking towards upstream inlet Z5_PIPE_2267.

Zone 5

Z5_IL_2789

Map sheet: L4

Date: October 2012

VANDA rating (pipes): –

Priority ratings: 1 (Z5_IL_2789)

Pipes not assessed: Z5_PIPE_2437 and Z5_PIPE_2438

Inlet, manhole, or outfall access rating: 2

Notes:

Pipes not assessed due to limited visibility. Access may be hindered by cars parked on inlet.

Area view of inlet on west side of 30th Ave.

View inside structure.

Zone 5

Z5_IL_2829

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1187 and NEW_Z5_PIPE_6102)
Priority ratings:	–
Pipes not assessed:	Z5_PIPE_2062
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View of upstream pipe NEW_Z5_PIPE_6102.

View of downstream pipe outlet Z5_PIPE_1187.

Zone 5

Z5_IL_2830

Map sheet: M3

Date: October 2012

VANDA rating (pipes): –

Priority ratings: 1 (Z5_IL_2830)

Pipes not assessed: Z5_PIPE_1187 and Z5_PIPE_1565

Inlet, manhole, or outfall access rating: 2

Notes:

Pipes not assessed due to limited visibility. Access may be hindered by cars parked on inlet.

Area view. This catch basin was unable to be opened because the parked car restricted access.

View inside structure showing Z5_PIPE_1187.

Zone 5

Z5_IL_2973

Map sheet:	J3
Date:	October 2012
VANDA rating (pipes):	3 (Z5_PIPE_5656 and Z5_PIPE_5709)
Priority ratings:	4 (Z5_PIPE_5656 and Z5_PIPE_5709)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	–
Notes:	

View inside Z5_IL_2973 structure. Corrosion visible at invert of pipe (Z5_PIPE_5709). Sheet metal was used inside of pipe, covering corrugated pipe.

View inside structure up towards Z5_PIPE_5709. Some debris noted.

View inside structure towards downstream pipe Z5_PIPE_5656.

View inside structure.

Zone 5

Z5_IL_2973

View inside upstream pipe Z5_PIPE_5709. Note pipe ovality and steel sheet metal attached to inside of CMP. CMP is bowed up at invert.

View inside downstream pipe Z5_PIPE_5656. Large pile of debris is caught up on protruding edge of sheet metal.

Zone 5

Z5_IL_2974

Map sheet:	J3
Date:	October 2012
VANDA rating (pipes):	3 (Z5_PIPE_5656)
Priority ratings:	4 (Z5_PIPE_5656)
Pipes not assessed:	Z5_PIPE_1839
Inlet, manhole, or outfall access rating:	–

Notes:

Pipes not assessed due to limited visibility.

View inside Z5_IL_2974 structure. Corrosion visible at invert of pipe (Z5_PIPE_5656). Sheet metal was used inside of pipe, covering corrugated pipe.

Zone 5

Z5_IL_3206

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	–
Pipes not assessed:	Z5_PIPE_866
Inlet, manhole, or outfall access rating:	1

Notes:

Could not open grating; pipes not visible.

Area view. This catch basin drains to the culvert.

Zone 5

Z5_IL_3260

Map sheet:	M5
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	1 (Z5_IL_3260)
Pipes not assessed:	Z5_PIPE_569 and Z5_PIPE_2267
Inlet, manhole, or outfall access rating:	2

Notes:

Grating could not be opened, preventing view inside pipe. Access may be hindered by cars parked on inlet.

Area view.

View inside catch basin, looking downstream towards Z5_PIPE_2267.

Zone 5

Z5_IL_3341

Map sheet:	J3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_2591 and Z5_PIPE_2687)
Priority ratings:	1 (Z5_IL_3341, Z5_PIPE_2591, and Z5_PIPE_2687)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Access may be hindered by cars parked on inlet.

Area view of inlet Z5_IL_3341 on Pinewood Street.

View inside Z5_IL_3341 inlet structure.

View inside upstream pipe Z5_PIPE_2687. Good condition.

View inside downstream pipe Z5_PIPE_2591.

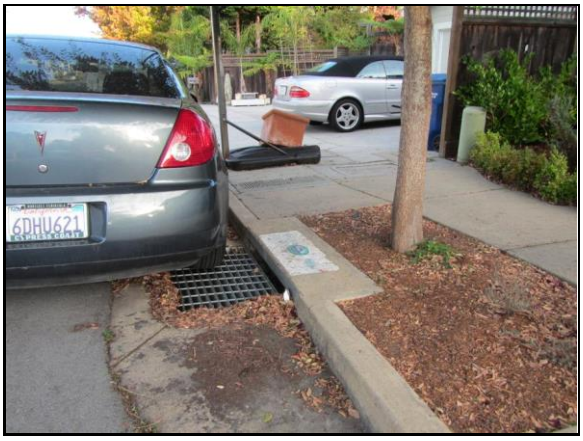
Zone 5

Z5_IL_3342

Map sheet:	J3
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	1 (Z5_IL_3342)
Pipes not assessed:	Z5_PIPE_2591 and Z5_PIPE_2592
Inlet, manhole, or outfall access rating:	2

Notes:

Pipes not assessed due to limited visibility. Access may be hindered by cars parked on inlet.



Area view on Pinewood Street. Car parked on top of grating, prohibiting the grating from being opened.

View inside inlet structure Z5_IL_3342.

Zone 5

Z5_IL_3350

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1878); 2 (Z5_PIPE_1879)
Priority ratings:	1 (Z5_PIPE_1878); 2 (Z5_PIPE_1879)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside catch basin towards upstream pipe segment Z5_PIPE_1879. CMP pipe shows some minor surface corrosion at invert.

Detailed view inside catch basin towards upstream pipe segment Z5_PIPE_1879. CMP pipe shows some minor surface corrosion at invert. Note pipe ovality in horizontal direction.

View inside catch basin of downstream outlet pipe Z5_PIPE_1879. Note CMP pipe's horizontal ovality. Some debris within the pipe.

Zone 5

Z5_IL_3350

Detailed view inside catch basin of downstream outlet pipe Z5_PIPE_1879. Note CMP pipe's horizontal ovality. Pipe appears to have some corrosion.

View inside catch basin of upstream pipe Z5_PIPE_1878. PVC pipe in good condition.

Zone 5

Z5_IL_3352

Map sheet: M3

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_1420 and Z5_PIPE_1881

Inlet, manhole, or outfall access rating: 1

Notes:

Could not open inlet.

Area view of Z5_IL_3352 at Lois Ln.

Area view of Z5_IL_3352 at Lois Ln.

Zone 5

Z5_IL_3668

Map sheet: J4

Date: October 2012

VANDA rating (pipes): –

Priority ratings: 2 (Z5_IL_3668)

Pipes not assessed: Z5_PIPE_1218 and Z5_PIPE_1741

Inlet, manhole, or outfall access rating: 1

Notes:

Could not open inlet.

Area view.

Area view near 2341 Mattison Ln. Drainage channel to Z5_IL_2302 shown as inlet on side of road.

Inlet view of drainage channel with bar screen (Z5_IL_2302). Z5_IL_3668 is the catch basin inlet at the side of the road. Manhole in intersection is a sanitary sewer.

Area view of Z5_IL_3668, looking downstream towards the east.

Zone 5

Z5_IL_3668

View inside structure. Good condition.

Zone 5

Z5_IL_4952

Map sheet:	L5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_3106 and Z5_PIPE_5694)
Priority ratings:	1 (Z5_IL_4952, Z5_PIPE_3106, and Z5_PIPE_5694)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2
Notes:	

Area view of inlet to Z5_PIPE_3106 (right) and Z5_PIPE_5694 (left) from Z5_IL_4952.

Right-hand (west) parallel pipe (Z5_PIPE_3106) from Z5_IL_4952.

Left-hand (east) parallel pipe (Z5_PIPE_5694) from Z5_IL_4952.

View inside right-hand (west) parallel pipe (Z5_PIPE_3106).

Zone 5

Z5_IL_5125

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_865)
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	–
Notes:	

Inlet view of Z5_IL_5125.

View inside downstream pipe outlet Z5_PIPE_865. Good condition.

Detail view inside downstream pipe outlet Z5_PIPE_865. Good condition.

Zone 5

Z5_IL_5574

Map sheet: J3

Date: October 2012

VANDA rating (pipes): 1 (Z5_PIPE_1838); 3 (Z5_PIPE_5709)

Priority ratings: 1 (Z5_IL_5574 and Z5_PIPE_1838); 4 (Z5_PIPE_5709)

Pipes not assessed: –

Inlet, manhole, or outfall access rating: 1

Notes:

Inlet lacks barriers to unauthorized entry.

View inside upstream pipe Z5_PIPE_1838. Good condition.

View out towards Z5_IL_5574 inlet from Z5_PIPE_1838.

View of inlet Z5_IL_5574 (Z5_PIPE_1838 on right and Z5_PIPE_5709 on left). The creek flows can split at this location. The pipe on the right is RCP and the left appears to be older CMP.

View inside downstream pipe Z5_PIPE_5709. Sheet metal liner installed over corrugated metal pipe. Note pipe ovality and some corrosion of the metal at the invert.

Zone 5

Z5_MH_3752

Map sheet:	M5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_2263, Z5_PIPE_2266, and Z5_PIPE_2269)
Priority ratings:	1 (Z5_MH_3752, Z5_PIPE_2263, Z5_PIPE_2266, and Z5_PIPE_2269)
Pipes not assessed:	Z5_PIPE_2270
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

View inside upstream pipe Z5_PIPE_2269.
Good condition.

View inside pipe Z5_PIPE_2266.

Zone 5

Z5_MH_3752

View inside pipe Z5_PIPE_2263.

Zone 5

Z5_MH_3783

Map sheet:	M5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_416 and Z5_PIPE_568); 2 (Z5_PIPE_567)
Priority ratings:	1 (Z5_MH_3783, Z5_PIPE_416, and Z5_PIPE_568); 2 (Z5_PIPE_567)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

View inside upstream pipe Z5_PIPE_567. Longitudinal cracking observed at the 12:00 and 6:00 pipe positions in two segments.

View inside downstream pipe Z5_PIPE_568.

Zone 5

Z5_MH_3783

View inside pipe Z5_PIPE_416.

Zone 5

Z5_MH_3785

Map sheet:	M4
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_2293 and Z5_PIPE_2312)
Priority ratings:	1 (Z5_MH_3785, Z5_PIPE_2293, and Z5_PIPE_2312)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

View inside upstream pipe Z5_PIPE_2312.

View inside downstream pipe Z5_PIPE_2293. Good condition.

Zone 5

Z5_MH_3785

Zoomed view of downstream pipe Z5_PIPE_2293. CMP segment Z5_PIPE_2518 is just visible in distance.

View of ceiling inside Z5_MH_3785.

Zone 5

Z5_MH_3786

Map sheet:	M4
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_418, Z5_PIPE_419, Z5_PIPE_2308, and Z5_PIPE_2312)
Priority ratings:	1 (Z5_MH_3786, Z5_PIPE_418, Z5_PIPE_419, Z5_PIPE_2308, and Z5_PIPE_2312)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

View inside manhole. Good condition.

View inside upstream pipe Z5_PIPE_2308. Good condition.

Zone 5

Z5_MH_3786

View inside pipe Z5_PIPE_419.

View inside pipe Z5_PIPE_418.

View inside downstream pipe Z5_PIPE_2312.

Zone 5

Z5_MH_3788

Map sheet:	M5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_421, Z5_PIPE_2306, and Z5_PIPE_2307)
Priority ratings:	1 (Z5_MH_3788, Z5_PIPE_421, Z5_PIPE_2306, and Z5_PIPE_2307)
Pipes not assessed:	Z5_PIPE_420
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

View inside upstream pipe Z5_PIPE_2306. Good condition.

View inside pipe Z5_PIPE_421.

Zone 5

Z5_MH_3788

View inside downstream pipe Z5_PIPE_2307.
Good condition.

Zone 5

Z5_MH_3793

Map sheet:	M5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_424, Z5_PIPE_425, and Z5_PIPE_567)
Priority ratings:	1 (Z5_MH_3793, Z5_PIPE_424, Z5_PIPE_425, and Z5_PIPE_567)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

View of upstream segment Z5_PIPE_425.

View inside upstream pipe Z5_PIPE_425.

Zone 5

Z5_MH_3793

View inside pipe Z5_PIPE_424.

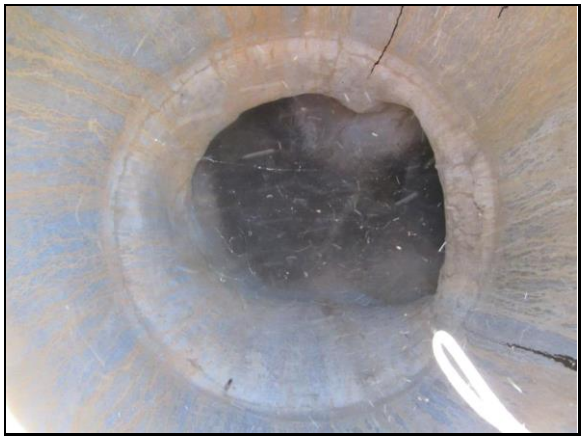
View inside downstream pipe Z5_PIPE_567. Good condition.

Zone 5

Z5_MH_3834

Map sheet:	L5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_387 and Z5_PIPE_388)
Priority ratings:	1 (Z5_MH_3834, Z5_PIPE_387, and Z5_PIPE_388)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.



View inside manhole. Good condition.

View inside upstream pipe Z5_PIPE_387.
Good condition.

View inside downstream pipe Z5_PIPE_388.
Good condition.

Zone 5

Z5_MH_3835

Map sheet:	L5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_388 and Z5_PIPE_389)
Priority ratings:	1 (Z5_MH_3835, Z5_PIPE_388, and Z5_PIPE_389)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

View inside upstream pipe Z5_PIPE_388.

View inside downstream pipe Z5_PIPE_389. Good condition.

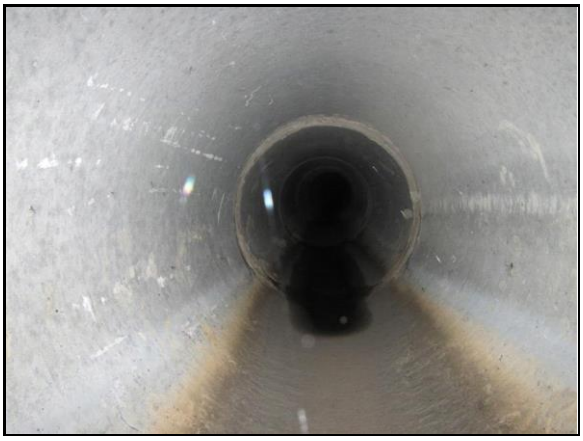
Zone 5

Z5_MH_3836

Map sheet:	L5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_389, Z5_PIPE_393, and Z5_PIPE_2363)
Priority ratings:	1 (Z5_MH_3836, Z5_PIPE_389, Z5_PIPE_393, and Z5_PIPE_2363)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view of manhole located at intersection of Gladys Ave. and Laurel Ave.

View inside manhole. Good condition.



View inside upstream pipe connection to Z5_PIPE_389. Good condition.

View inside upstream pipe connection Z5_PIPE_2363. Good condition.

Zone 5

Z5_MH_3836

View inside downstream pipe Z5_PIPE_393.
Good condition.

Zone 5

Z5_MH_3837

Map sheet:	L5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_390, Z5_PIPE_391, Z5_PIPE_392, and Z5_PIPE_393)
Priority ratings:	1 (Z5_MH_3837, Z5_PIPE_390, Z5_PIPE_391, Z5_PIPE_392, and Z5_PIPE_393)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view at intersection of Bain Ave. and Laurel Ave.

View inside manhole. Good condition.

View inside pipe Z5_PIPE_391.

View inside pipe Z5_PIPE_390.

Zone 5

Z5_MH_3837

View inside upstream pipe Z5_PIPE_393.
Good condition.

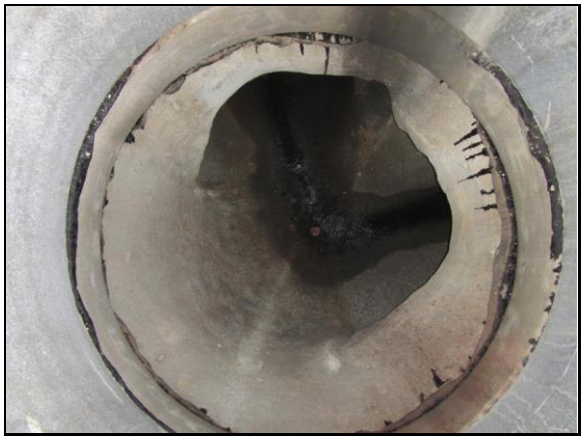
View inside downstream pipe Z5_PIPE_392.
Good condition.

Zone 5

Z5_MH_3841

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1188 and Z5_PIPE_1565)
Priority ratings:	1 (Z5_MH_3841, Z5_PIPE_1188, and Z5_PIPE_1565)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2
Notes:	

Area view.



View inside manhole. Good condition.

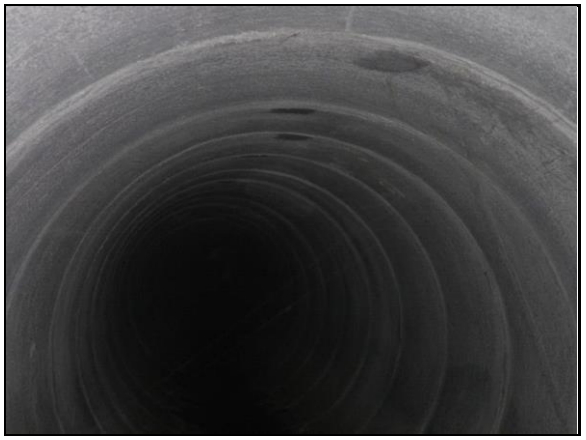
View inside upstream pipe Z5_PIPE_1565. Good condition.

View inside downstream pipe Z5_PIPE_1188. Good condition.

Zone 5

Z5_MH_3841

Zoomed view inside upstream pipe Z5_PIPE_1565. Good condition.



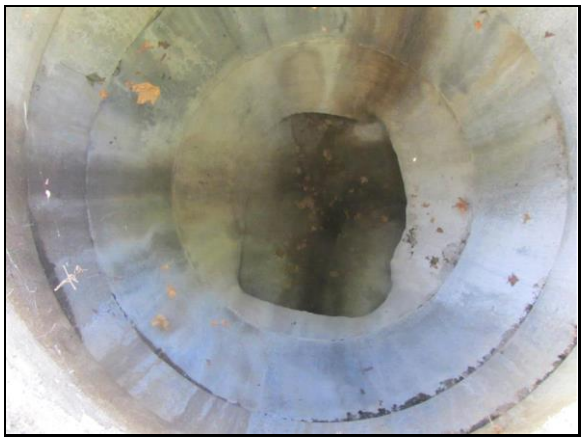
Zoomed view inside downstream pipe Z5_PIPE_1188. Good condition.

Zone 5

Z5_MH_3842

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1188 and Z5_PIPE_2056)
Priority ratings:	1 (Z5_MH_3842, Z5_PIPE_1188, and Z5_PIPE_2056)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.



View inside manhole. Good condition.

View inside upstream pipe Z5_PIPE_1188. Good condition.

View of an abandoned inlet pipe to Z5_MH_3842 (filled with concrete).

Zone 5

Z5_MH_3842

View of downstream pipe Z5_PIPE_2056.
Good condition.

Zone 5

Z5_MH_3843

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_395, Z5_PIPE_1189, and Z5_PIPE_1190)
Priority ratings:	1 (Z5_MH_3843, Z5_PIPE_395, Z5_PIPE_1189, and Z5_PIPE_1190)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view. This manhole drains towards the outfall. The GIS maps indicate a manhole between this one and the outfall but none was found.

View inside manhole.

View inside pipe Z5_PIPE_1189.

View inside pipe Z5_PIPE_395.

Zone 5

Z5_MH_3843

View inside pipe Z5_PIPE_1190.

Zoomed view inside pipe Z5_PIPE_1190.

Zone 5

Z5_MH_3861

Map sheet:	L5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_372, Z5_PIPE_373, Z5_PIPE_374, and Z5_PIPE_392)
Priority ratings:	1 (Z5_MH_3861, Z5_PIPE_372, Z5_PIPE_373, Z5_PIPE_374, and Z5_PIPE_392)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

View inside upstream pipe Z5_PIPE_392. Good condition.

View inside pipe Z5_PIPE_373.

Zone 5

Z5_MH_3861

View inside pipe Z5_PIPE_372.

View inside downstream pipe Z5_PIPE_374.

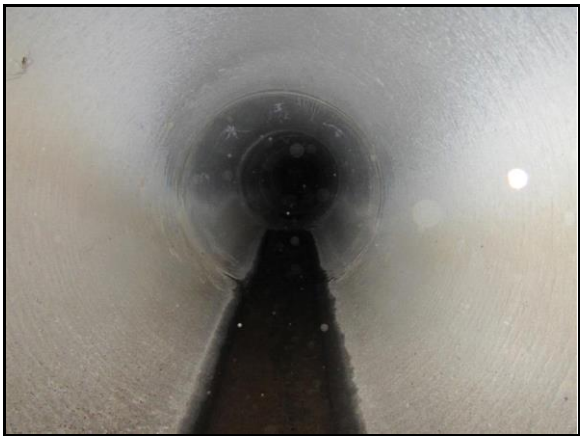
Zone 5

Z5_MH_3863

Map sheet:	M5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_324, Z5_PIPE_379, and Z5_PIPE_381)
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside upstream pipe Z5_PIPE_381.
Good condition.



View inside downstream pipe Z5_PIPE_379.
Good condition.

View inside pipe Z5_PIPE_324.

Zone 5

Z5_MH_3865

Map sheet: L5

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_384 and Z5_PIPE_385

Inlet, manhole, or outfall access rating: 2

Notes:

Manhole not opened.

Area view. This manhole was not opened because it is on private property and damage to the landscaping would have resulted. The home owner was not present at the time.

View of cover. This manhole was not opened because it is on private property and damage to the landscaping would have resulted. The homeowner was not present at the time.

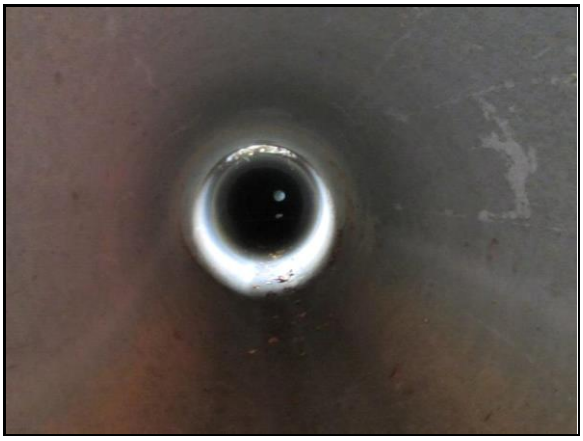
Zone 5

Z5_MH_3866

Map sheet:	L5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_386, Z5_PIPE_387, and Z5_PIPE_2364)
Priority ratings:	1 (Z5_MH_3866, Z5_PIPE_386, Z5_PIPE_387, and Z5_PIPE_2364)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view of Z5_MH_3866, looking west down Nova Dr.

View inside manhole.



View inside pipe Z5_PIPE_386. Good condition.

View inside upstream pipe Z5_PIPE_2364. Good condition.

Zone 5

Z5_MH_3866

View inside downstream pipe Z5_PIPE_387.
Good condition.

Zone 5

Z5_MH_3870

Map sheet:	H3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1227, Z5_PIPE_1228, and Z5_PIPE_1229)
Priority ratings:	1 (Z5_MH_3870, Z5_PIPE_1227, Z5_PIPE_1228, and Z5_PIPE_1229)
Pipes not assessed:	Z5_3104*
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole Z5_MH_3870.

Upstream inlet pipes (Z5_PIPE_1227 on left, Z5_PIPE_1229 on right).

View inside downstream pipe Z5_PIPE_1228. Good condition.

Zone 5

Z5_MH_3870

View inside manhole Z5_MH_3870, looking upstream.

View inside pipe Z5_PIPE_1227. Good condition.

View inside pipe Z5_PIPE_1229. Good condition.

View inside downstream pipe Z5_PIPE_1228. Good condition.

Zone 5

Z5_MH_3968

Map sheet:	J2
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	2 (Z5_MH_3968)
Pipes not assessed:	Z5_PIPE_1813, Z5_PIPE_1814, and Z5_PIPE_2917
Inlet, manhole, or outfall access rating:	–

Notes:

Pipes not assessed. Penetration for upper CMP inlet appears irregular.

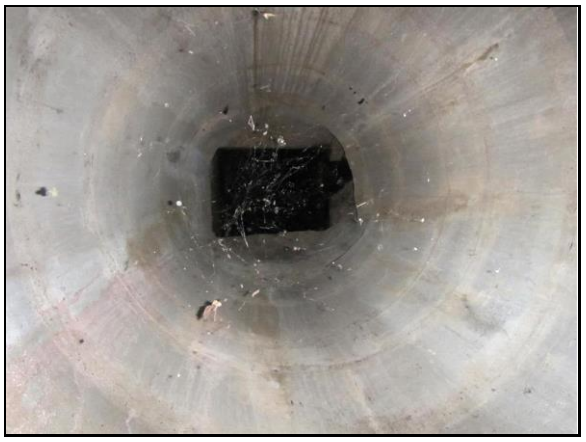
View inside manhole. Good condition.

Zone 5

Z5_MH_3969

Map sheet:	J2
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1812); 2 (Z5_PIPE_1814)
Priority ratings:	1 (Z5_PIPE_1812); 3 (Z5_MH_3969 and Z5_PIPE_1814)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view. Manhole located in landscaped area.



View inside manhole. Good condition. Manhole exhibited a petroleum odor, although no gases were detected with the air monitor (as used for confined space entry).

View inside upstream pipe Z5_PIPE_1812. Good condition.

Upstream pipe is abandoned, but water is seeping around the brick wall.

Zone 5

Z5_MH_3969

View inside downstream pipe Z5_PIPE_1814. Cast-in-place concrete box channel. Fair condition with some infiltration deposits noted at cold joints between concrete sections.

Detail of downstream pipe Z5_PIPE_1814 with infiltration deposits visible.

View of floor of concrete box channel Z5_PIPE_1814. Rough surface suggests channel is on bedrock. No poured concrete floor.

Zone 5

Z5_MH_3980

Map sheet:	J4
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1218 and Z5_PIPE_1743)
Priority ratings:	1 (Z5_MH_3980, Z5_PIPE_1218, and Z5_PIPE_1743)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view of Z5_MH_4348 in foreground and Z5_MH_3980 in background.

View inside manhole.

View inside upstream segment (Z5_PIPE_1218).

View of inlet pipe Z5_PIPE_1743.

Zone 5

Z5_MH_3980

View inside downstream pipe going east towards Z5_MH_4348 (Z5_PIPE_1218).

Zone 5

Z5_MH_3999

Map sheet:	L4
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_2436, Z5_PIPE_2437, and Z5_PIPE_2439)
Priority ratings:	1 (Z5_MH_3999, Z5_PIPE_2436, Z5_PIPE_2437, and Z5_PIPE_2439)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view of Z5_MH_3999 located in sidewalk on east side of 30th Avenue. This is the upstream manhole on the pipe indicated for evaluation.

View inside manhole. Good condition.

View inside pipe connection (inlet to Z5_MH_3999).

View inside downstream pipe Z5_PIPE_2437. Good condition.

Zone 5

Z5_MH_3999

View inside upstream HDPE pipe Z5_PIPE_2436.

Zone 5

Z5_MH_4001

Map sheet:	L4
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	4 (Z5_MH_4001)
Pipes not assessed:	Z5_PIPE_2423, Z5_PIPE_2424, and Z5_PIPE_2438
Inlet, manhole, or outfall access rating:	2

Notes:

Manhole too deep to assess pipes from topside.

Area view. The lid and frame have separated from the chimney.

View inside manhole. Frame has separated from grade rings and manhole chimney.

View inside manhole.

Zone 5

Z5_MH_4127

Map sheet: M5

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_316 and Z5_PIPE_539

Inlet, manhole, or outfall access rating: 1

Notes:

Pipes not assessed.

Area view. This manhole/inlet drains to the outfall pipe.

Area view of outfall (HDPE pipe) Z5_PIPE_316.

Zone 5

Z5_MH_4186

Map sheet:	J4
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1218 and Z5_PIPE_5622)
Priority ratings:	1 (Z5_MH_4186, Z5_PIPE_1218, and Z5_PIPE_5622)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view, looking east.

View inside manhole. Good condition.

View inside pipe connection, looking upstream to Z5_IL_3668. Good conditon.

View inside manhole of HDPE pipe upstream to catch basin.

Zone 5

Z5_MH_4186

View inside downstream pipe Z5_PIPE_1218 to Z5_MH_3980. Good condition.

Zone 5

Z5_MH_4187

Map sheet: J4

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_1745 and Z5_PIPE_4203

Inlet, manhole, or outfall access rating: 3

Notes:

No access due to overgrowth. Also on private property.

Outfall viewed from surface. CMP manhole Z5_MH_4187 located in easement.

Detail of outfall viewed from surface. CMP manhole Z5_MH_4187 located in easement.

Zone 5

Z5_MH_4198

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1189, Z5_PIPE_1566, and Z5_PIPE_2056)
Priority ratings:	1 (Z5_PIPE_1189 and Z5_PIPE_2056); 3 (Z5_MH_4198 and Z5_PIPE_1566)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

View inside pipe Z5_PIPE_1566. Note break at manhole penetration.

View inside upstream pipe Z5_PIPE_2056. Good condition.

Zone 5

Z5_MH_4198

View inside downstream pipe Z5_PIPE_1189.

Zone 5

Z5_MH_4209

Map sheet:	J3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_2687 and Z5_PIPE_5657)
Priority ratings:	1 (Z5_MH_4209, Z5_PIPE_2687, and Z5_PIPE_5657)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	3
Notes:	

Area view of manhole Z5_MH_4209. Manhole had been buried. Resident unearthed prior to assessment.

Area view of manhole Z5_MH_4209. Manhole had been buried. Resident unearthed prior to assessment. The pipe alignment traverses the backyards of multiple single-family, detached homes.

View inside manhole Z5_MH_4209. Good condition. Graffiti suggests unauthorized access.

View inside upstream pipe Z5_PIPE_5657. Some light debris inside of pipe.

Zone 5

Z5_MH_4209

View inside downstream pipe Z5_PIPE_2687.
Good condition.

Zone 5

Z5_MH_4210

Map sheet:	J3
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1840 and Z5_PIPE_1841)
Priority ratings:	1 (Z5_MH_4210, Z5_PIPE_1840, and Z5_PIPE_1841)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

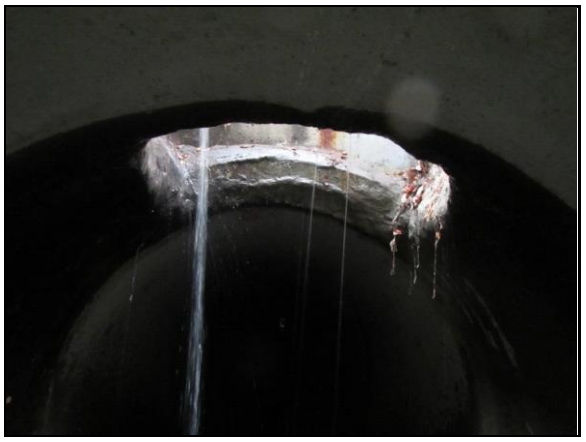
Notes:

Access may be hindered by cars parked on manhole.

Area view.

View inside manhole. Construction lumber (2- by 4-inch) was found and removed from manhole.

View inside upstream pipe Z5_PIPE_1841.



View of underside of inlet Z5_IL_3343.

Zone 5

Z5_MH_4210

View inside manhole looking towards downstream pipe Z5_PIPE_1840, going due west on Webster, not shown on maps.

View inside downstream pipe Z5_PIPE_1840. Good condition.

Zone 5

Z5_MH_4278

Map sheet: L4

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z5_PIPE_2435 and Z5_PIPE_2436

Inlet, manhole, or outfall access rating: 1

Notes:

Not evaluated.

Area view of manhole Z5_MH_4278. This photo was taken when attempting to locate the high-priority pipe for evaluation. These manholes were not included in the priority areas for assessment.

Zone 5

Z5_MH_4348

Map sheet:	J4
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1218 and Z5_PIPE_5621)
Priority ratings:	1 (Z5_MH_4348, Z5_PIPE_1218, and Z5_PIPE_5621)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

View inside upstream pipe Z5_PIPE_1218 towards the west.

View inside upstream pipe Z5_PIPE_5621. HDPE pipe.

Zone 5

Z5_MH_4348

View inside downstream pipe Z5_PIPE_1218.
Concrete in good condition.

Zone 5

Z5_MH_5116

Map sheet: L5

Date: October 2012

VANDA rating (pipes): 1 (Z5_PIPE_5563)

Priority ratings: –

Pipes not assessed: Z5_PIPE_3060 and Z5_PIPE_5561

Inlet, manhole, or outfall access rating: 2

Notes:

Pipes not assessed due to limited visibility.

Area view.

Area view of Z5_MH_5116.

Outfall view of Z5_MH_5116, looking upstream towards segment Z5_PIPE_5563.

View inside pipe upstream (segment Z5_PIPE_5563).

Zone 5

Z5_MH_5116

View looking downstream into segment Z5_PIPE_5561. Pipe inlet is covered with debris.

Zone 5

Z5_OF_4581

Map sheet:	N5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_580)
Priority ratings:	1 (Z5_OF_4581 and Z5_PIPE_580)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	–
Notes:	

View of outfall. This outfall is of recent construction.

View inside pipe Z5_PIPE_580.

Zone 5

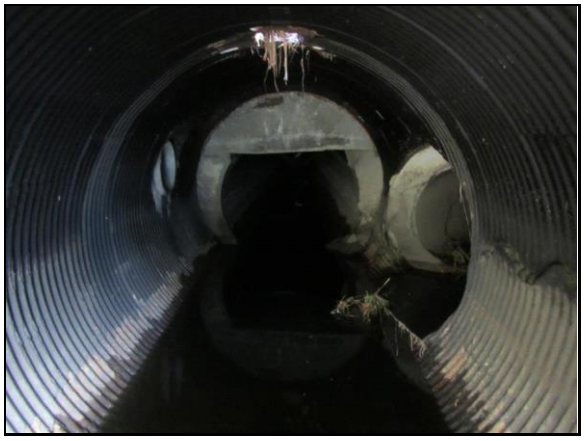
Z5_OF_5004

Map sheet:	M4
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_2518)
Priority ratings:	2 (Z5_OF_5004 and Z5_PIPE_2518)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Surface corrosion at invert. Fair condition.

Area view.



View inside pipe Z5_PIPE_2518. CMP pipe is in good condition. Upstream pipe segment Z5_PIPE_417 is visible in distance to the north. Pipe segment Z5_PIPE_2293 enters on right side from the northeast.

Zone 5

Z5_OF_5073

Map sheet:	M4
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_2319)
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2
Notes:	

View of outfall Z5_OF_5073.

View inside culvert Z5_PIPE_2319. Boardwalk constructed over the top of the drainage way.

Zone 5

Z5_PIPE_2319

Map sheet:	M4
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_2319)
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	–
Notes:	

View of inlet to Z5_PIPE_2319, looking downstream (south) with boardwalk over drainage channel.

View inside Z5_PIPE_2319, looking downstream.

Zoomed view inside Z5_PIPE_2319, looking downstream.

Zone 5

Z5_PIPE_552

Map sheet:	L5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_552)
Priority ratings:	1 (Z5_PIPE_552)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2
Notes:	

Downstream channel Z5_PIPE_552.

View inside culvert Z5_PIPE_552.

Area view of culvert, looking upstream.

Zone 5

Z5_PIPE_5693

Map sheet:	M5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_5693)
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2
Notes:	

Area view of Z5_PIPE_5693.

View inside Z5_PIPE_5693.

Cleanout into Z5_PIPE_5693.

Downstream channel (project zone WA066).

Zone 5

Z5_PIPE_5693

View inside pipe Z5_PIPE_5693.

View inside pipe Z5_PIPE_5693.

Outlet of pipe Z5_PIPE_5693.

Zone 5

Z5_SGMH_4853

Map sheet: M3

Date: October 2012

VANDA rating (pipes): 1 (Z5_PIPE_867)

Priority ratings: 1 (Z5_PIPE_867); 2 (Z5_SGMH_4853)

Pipes not assessed: Z5_PIPE_865 and Z5_PIPE_866

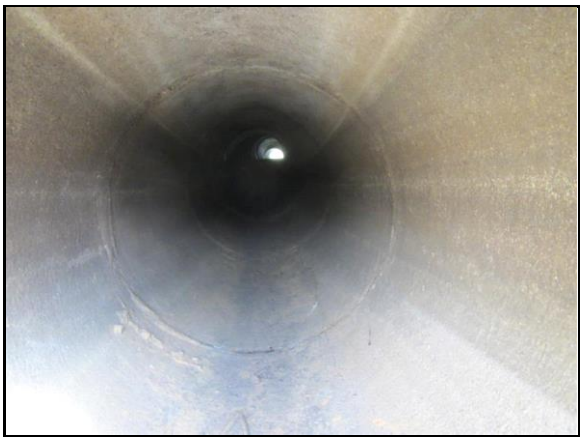
Inlet, manhole, or outfall access rating: 1

Notes:

Pipes not assessed due to limited visibility.

Area view (Z5_IL_3206 in background, Z5_SGMH_4853 in foreground). Catch basin drains to the culvert.

Area view of outlet pipe Z5_PIPE_867 from Z5_SGMH_4853.



View inside upstream pipe Z5_PIPE_867. Good condition.

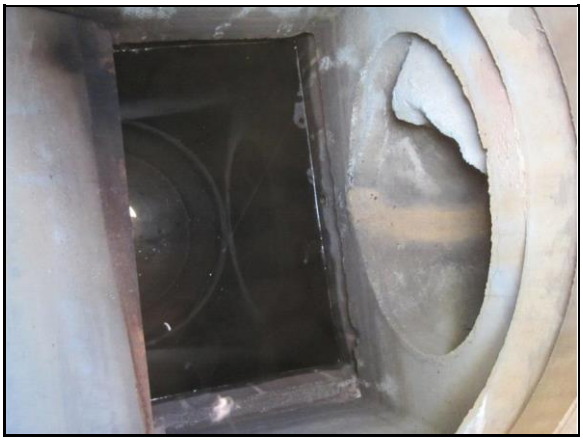
View inside manhole. Note baffle wall inside of manhole. Good condition.

Zone 5

Z5_SGMH_4853

View of Z5_IL_3206 connection inside manhole.

View of outlet pipe Z5_PIPE_867 inside manhole.



View of upstream pipe Z5_PIPE_865 inside manhole.

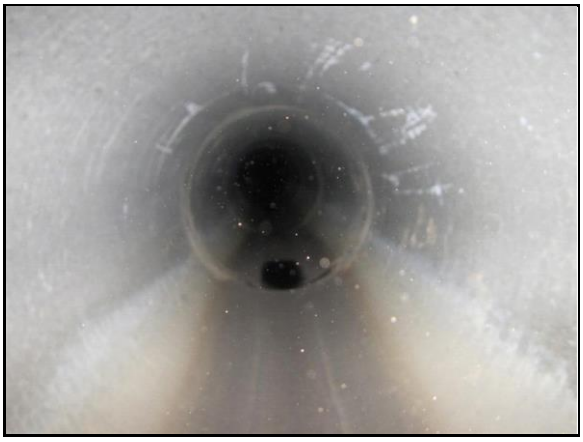
Zone 5

Z5_SGMH_4865

Map sheet:	M5
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_379, Z5_PIPE_380, and Z5_PIPE_539)
Priority ratings:	1 (Z5_SGMH_4865, Z5_PIPE_379, Z5_PIPE_380, and Z5_PIPE_539)
Pipes not assessed:	Z5_PIPE_382
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside manhole. Good condition.

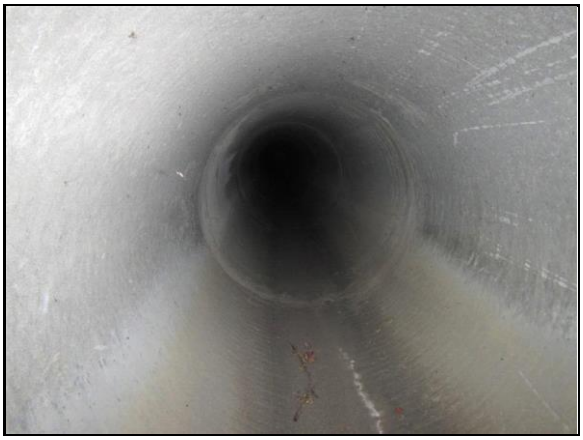


View inside upstream pipe Z5_PIPE_379 (connection from manhole Z5_MH_3863). Good condition.

View inside upstream pipe Z5_PIPE_380.

Zone 5

Z5_SGMH_4865



View inside downstream pipe Z5_PIPE_539 (outlet to manhole Z5_MH_4127). Good condition.

View inside manhole of inlet from Z5_CB_57.

Zone 5

Z5 Unidentified Outfall 2

Map sheet:	M2
Date:	October 2012
VANDA rating (pipes):	1 (Z5_PIPE_1192)
Priority ratings:	1 (Z5 Unidentified Outfall 2); 2 (Z5_PIPE_1192)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1

Notes:

Structure is the outfall for segment Z5_PIPE_1192. Some debris inside chamber and upstream pipe.

Area view looking downstream. The upstream manhole was not able to be found.

Cover securely bolted on manhole at outfall. The upstream manhole was not located and this one was secured.

View inside upstream. This was the only vantage point from which to observe the condition of Z5_MH_3827.

Zone 6

Z6_IL_828

Map sheet:	K11
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	–
Pipes not assessed:	Z6_PIPE_284 and Z6_PIPE_1240
Inlet, manhole, or outfall access rating:	1

Notes:

Completely full of debris; could not open.

Inlet view of Z6_IL_828. Completely full of debris. This catch basin grating was unable to be opened due to the volume of debris.

Zone 6

Z6_IL_910

Map sheet:	O13
Date:	October 2012
VANDA rating (pipes):	1 (Z6_PIPE_598 and Z6_PIPE_599)
Priority ratings:	1 (Z6_IL_910, Z6_PIPE_598, and Z6_PIPE_599)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

View inside catch basin Z6_IL_910.

View inside catch basin Z6_IL_910, looking towards outlet Z6_PIPE_599.

View inside upstream pipe connection (Z6_PIPE_598).

Zone 6

Z6_IL_910

View inside downstream pipe connection (Z6_PIPE_598).

View inside catch basin.

View inside pipe connection (Z6_PIPE_599).

Zone 6

Z6_IL_911

Map sheet:	N13
Date:	October 2012
VANDA rating (pipes):	1 (Z6_PIPE_598 and Z6_PIPE_601)
Priority ratings:	1 (Z6_IL_911, Z6_PIPE_598, and Z6_PIPE_601)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

View inside catch basin Z6_IL_911.

View inside pipe connection (upstream Z6_PIPE_601).

View inside pipe connection (downstream Z6_PIPE_598).

View inside catch basin Z6_IL_911.

Zone 6

Z6_IL_911

View inside catch basin Z6_IL_911.

Area view of Z6_IL_911.

Zone 6

Z6_IL_954

Map sheet: K11

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z6_PIPE_125 and Z6_PIPE_404

Inlet, manhole, or outfall access rating: 1

Notes:

Could not open inlet.

Area view of Z6_IL_954.

Zone 6

Z6_IL_955

Map sheet:	K11
Date:	October 2012
VANDA rating (pipes):	1 (Z6_PIPE_404 and unidentified inlet)
Priority ratings:	1 (Z6_IL_955, Z6_PIPE_404, and unidentified inlet)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view of Z6_IL_955.

View inside structure Z6_IL_955. Good condition.

View inside pipe connection (downstream, Z6_PIPE_404).

View inside pipe connection (upstream CMP).

Zone 6

Z6_IL_1047

Map sheet:	O13
Date:	October 2012
VANDA rating (pipes):	1 (Z6_PIPE_599, Z6_PIPE_600, and Z6_PIPE_1366)
Priority ratings:	1 (Z6_IL_1047, Z6_PIPE_599, Z6_PIPE_600, and Z6_PIPE_1366)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	–
Notes:	

View of inlet Z6_IL_1047.

View inside catch basin Z6_IL_1047.

View inside catch basin.

View inside catch basin towards upstream pipe Z6_PIPE_599.

Zone 6

Z6_IL_1047

View inside pipe connection (Z6_PIPE_1366).

View inside catch basin.

View inside pipe connection (Z6_PIPE_599).

View inside catch basin.

View inside pipe connection Z6_PIPE_600.

Zone 6

Z6_IL_1054

Map sheet: N14

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z6_PIPE_98 and Z6_PIPE_100

Inlet, manhole, or outfall access rating: 1

Notes:

Pipes not assessed due to limited visibility.

Area view of Z6_IL_1054.

View inside catch basin Z6_IL_1054 (Z6_PIPE_100 downstream).

View inside catch basin towards upstream pipe Z6_PIPE_98.

Zone 6

Z6_IL_1375

Map sheet:	O13
Date:	October 2012
VANDA rating (pipes):	1 (Z6_PIPE_1366)
Priority ratings:	1 (Z6_IL_1375 and Z6_PIPE_1366)
Pipes not assessed:	Z6_PIPE_1365
Inlet, manhole, or outfall access rating:	–
Notes:	

Inlet view.

View inside catch basin Z6_IL_1375.

View inside catch basin Z6_IL_1375.

View inside pipe connection (downstream Z6_PIPE_1366).

Zone 6

Z6_IL_1375

View inside catch basin.

Zone 6

Z6_IL_1403

Map sheet:	K12
Date:	October 2012
VANDA rating (pipes):	1 (Z6_PIPE_998)
Priority ratings:	–
Pipes not assessed:	Z6_PIPE_997
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view of Z6_IL_1403.

Outlet view looking upstream towards Z6_IL_1403.

View inside pipe connection. Z6_PIPE_998 is up to half full with debris.

Zone 6

Z6_IL_1419

Map sheet: K12

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: Z6_PIPE_998 and Z6_PIPE_1008

Inlet, manhole, or outfall access rating: 1

Notes:

Could not open inlet.

Inlet view of Z6_IL_1419. This catch basin grate was unable to be opened.

Zone 6

Z6_IL_2172

Map sheet:	N13
Date:	October 2012
VANDA rating (pipes):	1 (Z6_PIPE_1201)
Priority ratings:	1 (Z6_PIPE_1201); 2 (Z6_IL_2172)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	3
Notes:	

Area view of Z6_IL_2172.

Inlet view of Z6_IL_2172.

View inside pipe connection (Z6_PIPE_1201), looking downstream.

Zone 6

Z6_IL_2275

Map sheet:	O13
Date:	October 2012
VANDA rating (pipes):	1 (Z6_PIPE_562)
Priority ratings:	2 (Z6_IL_2275 and Z6_PIPE_562)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	–
Notes:	

Inlet view.

Inlet view (Z6_PIPE_562 with surface corrosion at invert).

View inside pipe connection (Z6_PIPE_562).

View inside pipe connection (Z6_PIPE_562).

Zone 6

Z6_MH_1655

Map sheet:	O13
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	1 (Z6_MH_1655)
Pipes not assessed:	Z6_PIPE_561, Z6_PIPE_562, Z6_PIPE_1216, Z6_PIPE_1217, and Z6_PIPE_1353

Inlet, manhole, or outfall access rating: 1

Notes:

Pipes not assessed due to limited visibility.

Area view.

View inside manhole.

View inside manhole.

Zone 6

Z6_MH_1665

Map sheet:	J11
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	–
Pipes not assessed:	Z6_PIPE_1358, Z6_PIPE_1368, Z6_PIPE_1389, and Z6_PIPE_1391
Inlet, manhole, or outfall access rating:	1

Notes:

Pipes not assessed due to limited visibility.

Area view of manhole Z6_MH_1665.

View inside manhole Z6_MH_1665. Good condition.

Zone 6

Z6_MH_1695

Map sheet:	K11
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	–
Pipes not assessed:	Z6_PIPE_1238, Z6_PIPE_1239, and Z6_PIPE_1240
Inlet, manhole, or outfall access rating:	–

Notes:

Could not be opened due to high traffic volume.

Area view of Z6_MH_1695. This manhole was unable to be opened due to the high volume of traffic.

Zone 6

Z6_MH_2252

Map sheet:	J11
Date:	October 2012
VANDA rating (pipes):	1 (Z6_PIPE_732, Z6_PIPE_1347, Z6_PIPE_1388, and Z6_PIPE_1959)
Priority ratings:	1 (Z6_MH_2252, Z6_PIPE_732, Z6_PIPE_1347, Z6_PIPE_1388, and Z6_PIPE_1959)
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view of manhole Z6_MH_2252.

View inside manhole Z6_MH_2252. Good condition.

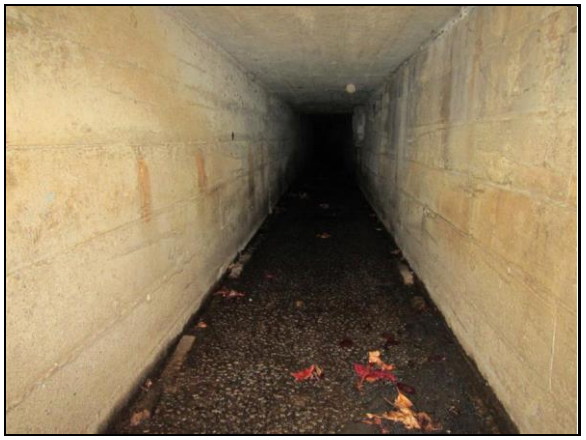
View inside pipe connection (Z6_PIPE_1388 towards Z6_IL_809).

View inside pipe connection Z6_PIPE_732 (upstream towards Z6_IL_806).

Zone 6

Z6_MH_2252

View inside pipe connection (Z6_PIPE_1347 upstream towards Z6_IL_808).



View inside box channel (looking downstream, Z6_PIPE_1959). Concrete cast in place. Good condition. Some errosion scour at invert.

Culverts

Culvert 0

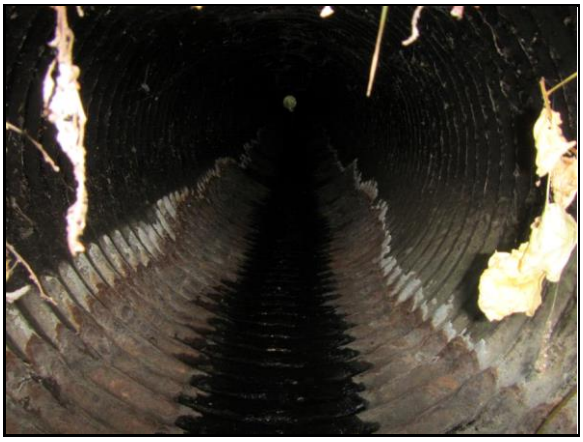
Map sheet:	J2
Date:	October 2012
VANDA rating (pipes):	2
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Inlet overgrown. Coating failure and surface corrosion at invert of CMP.

Area view.

Inlet view. Inlet is obscured with brush.



View inside culvert. Surface corrosion and staining only at invert.

Culverts

Culvert 1

Map sheet: K2

Date: October 2012

VANDA rating (pipes): –

Priority ratings: –

Pipes not assessed: –

Inlet, manhole, or outfall access rating: –

Notes:

No access.

Area view.

Culverts

Culvert 2

Map sheet:	J3
Date:	October 2012
VANDA rating (pipes):	2
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Surface corrosion at invert of CMP.

Area view of upstream side of culvert. Brush cleared.

Inlet view.

View inside culvert, looking downstream.

Connection view. CMP break-in tap connection to culvert.

Culverts

Culvert 2

Outlet view.

Inlet view of pipe just downstream of Culvert 2.

View inside CMP just downstream of Culvert 2. Corrosion staining at invert. Fair condition.

View inside culvert continuing downstream. Corrosion at invert.

Culverts

Culvert 3

Map sheet:	J3
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Surface corrosion at invert of CMP. End of culvert susceptible to overgrowth.

Area view.

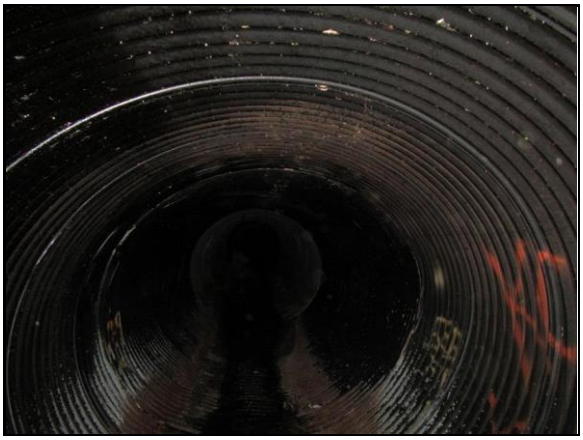
Inlet view.

Inlet view.

View inside CMP culvert.

Culverts

Culvert 3



View inside culvert. Graffiti indicates unwarranted access. Slight horizontal deflection (ovality) of CMP.

Outlet view.

View upstream into outlet.

Culverts

Culvert 4

Map sheet:	G4
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2
Notes:	

Area view of outlet.

View of outlet.

Detail view of outlet.

View inside culvert.

Culverts

Culvert 4

Area view.

Area view of upstream side of culvert.

Inlet with grating to prevent access.

View inside culvert.

Area view upstream of Culvert 4.

Inlet of pipe upstream of Culvert 4.

Culverts

Culvert 4

Inlet view.

Inlet view.

View inside culvert, looking downstream. Concrete form marks indicate cast-in-place box channel.

Culverts

Culvert 5

Map sheet:	L4
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Ends of culvert susceptible to overgrowth.

Area view.

Outlet view. Graffiti indicates unwarranted access.

Outlet view.

View upstream into culvert.

Culverts

Culvert 5

View upstream into culvert.

View inside culvert, looking downstream. Graffiti indicates unwarranted access.

View inside culvert.

Culverts

Culvert 6

Map sheet:	H9
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Ends of culvert susceptible to overgrowth.

Inlet view.

View inside culvert.

Area view of outlet (inaccessible). Completely overgrown in a thicket of vegitation

Culverts

Culvert 7

Map sheet:	G8
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Ends of culvert susceptible to overgrowth.

Inlet view.

View inside culvert.

Outlet view.

View inside culvert, looking upstream.

Culverts

Culvert 9

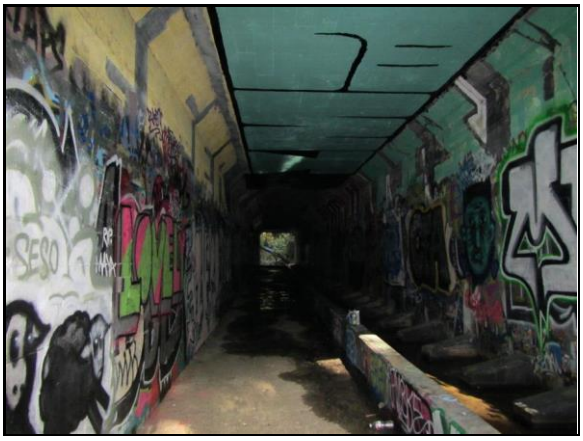
Map sheet:	K11
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Ends of culvert susceptible to overgrowth.

Area view.

Area view, looking upstream towards fish ladder.



View inside culvert, looking upstream. Fish ladder on right-hand side.

View inside culvert.

Culverts

Culvert 9

Upstream end of culvert.

View looking downstream into culvert.

Culverts

Culvert 10

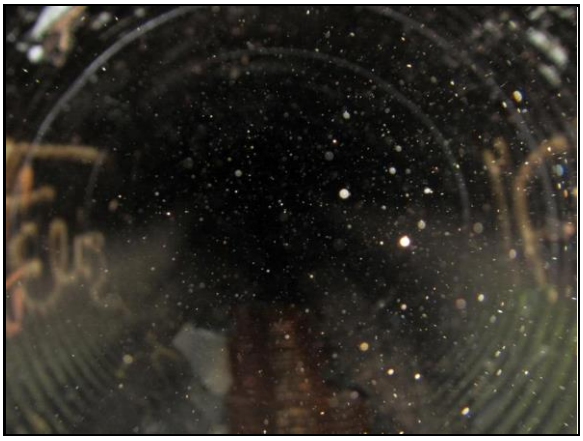
Map sheet:	O13
Date:	October 2012
VANDA rating (pipes):	2
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

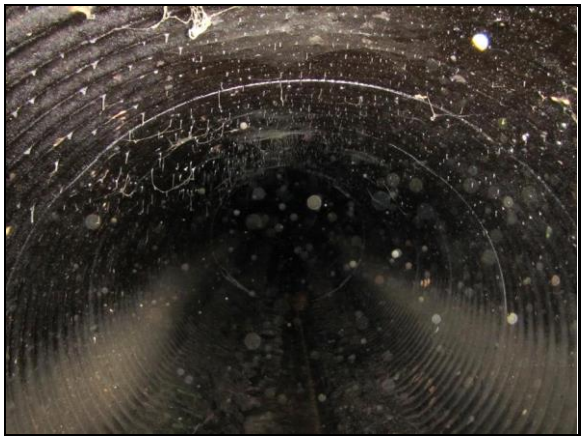
Coating failure and surface corrosion at invert of CMP.

Area view of upstream end of culvert. Access to the culvert is limited due to a steep embankment

Inlet view. Corrugated metal pipe with coal tar coating, which is brittle and delaminating. Concrete wall is sound.



View inside culvert. Graffiti indicates unwarranted access. Corrosion staining of the invert and damage of the coal tar lining is evident



View inside culvert. Very slight ovalitiy to pipe.

Culverts

Culvert 10

View inside culvert, looking downstream. Invert of culvert has corrosion staining and loss of coal tar lining

Area view of culvert on downstream side of alignment. Catch basin drains into culvert from above. Outlet is in the background down the hilside/embankment

Culverts

Culvert 11

Map sheet:	H10
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1

Notes:

End of culvert overgrown.

Area view.

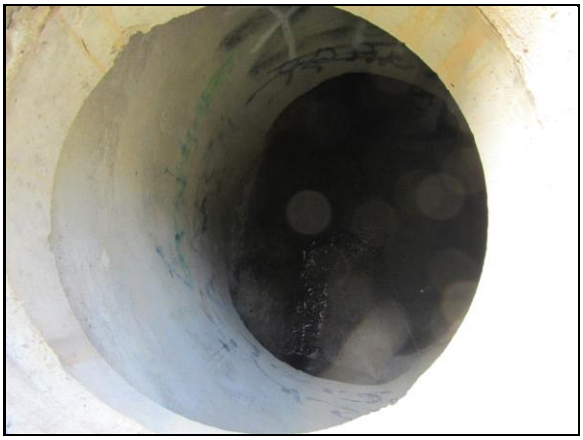
Area view.

View inside culvert. Graffiti indicates unwarranted access.

View inside culvert, looking downstream.

Culverts

Culvert 11



Manhole access in roadway to culvert.

Area view of manhole access into culvert.

Culverts

Culvert 13

Map sheet:	K10
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1

Notes:

Coating failure and surface corrosion at invert of CMP.

Area view of manhole access into culvert.

Manhole plan view.

View inside culvert, looking upstream.

View inside culvert, looking downstream. Downstream pipe transitions to a smaller-diameter CMP line with greater slope. Cement poured at transition continues in the downstream invert of the pipe.

Culverts

Culvert 19

Map sheet:	N14
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view of upstream inlets to culvert.

View of outlet pipe and downstream culvert.

Area view.

Detail view inside culvert, looking downstream.

Culverts

Culvert 19

Area view of downstream culvert catch basin.

View inside culvert, looking upstream.

View inside culvert, looking upstream. Wetted surface indicates some groundwater infiltration or seepage at pipe joint.

View inside downstream catch basin.

Culverts

Culvert 20

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1

Notes:

Not on assessment list but included for reference.

Area view.

View under bridge.

Inlet view.

Inlet view.

Culverts

Culvert 21

Map sheet:	M2
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	1
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Not on assessment list but included for reference. Culvert up to three quarters full with sediment.

Area view.

Inlet view.

Inlet view.

Inlet view.

Culverts

Culvert 21

Outlet view.

Outlet end of culvert.

Outlet view of culvert. Concrete cracking at top of wall. Left-hand side has sediment buildup.

Outlet view (right-hand side looking upstream). Concrete in good condition.

View inside middle culvert (half full of debris).

View inside left-hand side of culvert pipe (nearly full of debris).

Culverts

Culvert 22

Map sheet:	M3
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Not rated due to limited visibility.

Area view.

Area view.

Area view looking from upstream to downstream.

Inlet view.

Culverts

Culvert 22

View inside culvert.

Area view of downstream side.

Outlet view.

Looking upstream into culvert. Some slight concrete degradation, with aggregate exposed near waterline.

Culverts

Culvert 25

Map sheet:	H7
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Ends of culvert susceptible to overgrowth.

Inlet view.

View inside Culvert 25, looking downstream.

Outlet view of Culvert 25.

View inside Culvert 25, looking upstream.

Culverts

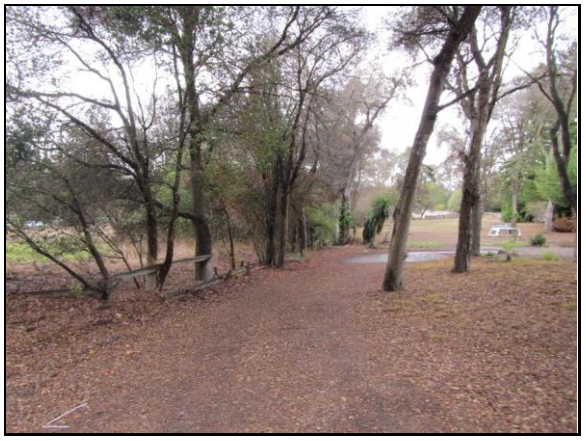
Culvert 26

Map sheet:	H7
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Ends of culvert susceptible to overgrowth.

Area view.



Area view, looking downstream.

View of outlet of culvert.

Outlet view.

Culverts

Culvert 26

View inside culvert, looking upstream. Good condition.

Area view of upstream side of culvert.

Inlet view.

View inside culvert. Good condition. Graffiti indicates unwarranted access.

Culverts

Culvert 27

Map sheet:	H8
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Ends of culvert susceptible to accumulation of debris.

Inlet view.

Inlet view.

Inlet view. Graffiti indicates unwarranted access.

View inside culvert.

Culverts

Culvert 27

View inside culvert.

View inside culvert. Graffiti indicates unwarranted access.

Area view.

Inlet view. Debris surrounding inlet.

View inside culvert, looking downstream. Graffiti indicates unwarranted access.

Culverts

Culvert 28

Map sheet:	H7
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	1
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view towards downstream end of culvert. Downsteam end of the culvert was inaccessible.

Area view of downstream end (inaccessible). The steep embankment coupled with the dense vegitation prohibited safe access to the culvert.

Area view of upstream side of culvert.

Inlet view with bar screens.

Culverts

Culvert 28

View inside culvert, looking downstream.

Culverts

Culvert 29

Map sheet:	J12
Date:	October 2012
VANDA rating (pipes):	4
Priority ratings:	4
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Invert of CMP corroded or eroded through in some locations. Ends of culvert susceptible to overgrowth.

Area view.

Inlet view of upstream end.

View inside CMP culvert.

Severe corrosion of the invert of the CMP culvert.

Culverts

Culvert 29

Detail photo of void in invert of CMP culvert.

View inside culvert, looking downstream.

View inside culvert towards downstream outlet.

View inside culvert, looking upstream.

View inside culvert, looking upstream.

Culverts

Culverts 30 and 33

Map sheet:	N13
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Ends of culvert susceptible to blockage or overgrowth.

Area view of upstream side. The culvert here could not be located due to the dense vegitation.

Area view of inlet drain adjacent to culvert.

View of outlet.

Area view from outlet side.

Culverts

Culvert 31

Map sheet:	O13
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Surface corrosion at invert of CMP. Ends of culvert susceptible to overgrowth.

Inlet view.

View inside culvert. Slight horizontal deflection (ovality) of CMP. Good condition; light surface corrosion at invert.

Area view.

Area view of soil void around the pipe just prior to the pipe outlet end. Soil void indicates loss of support for pipe.

Culverts

Culvert 31

Area view of outlet area (inaccessible).

Culverts

Culvert 32

Map sheet:	O14
Date:	October 2012
VANDA rating (pipes):	2
Priority ratings:	3
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Surface corrosion on interior of CMP with possibility of worse corrosion at invert. Culvert up to half full with debris and susceptible to overgrowth at ends.

Inlet view.

View inside culvert. Corrosion staining. Culvert impacted with sediment buildup upstream.

Inlet view. Approximately a third full of sediment.

Inlet view obstructed by brush and overgrowth.

Culverts

Culvert 34

Map sheet:	K4
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	3
Notes:	

Inlet view.

Inlet view. Pipe appears to be in good condition.

Inlet view. Pipes appear to be in good condition.

Outlet view.

Culverts

Culvert 34

Inlet view.

Area view of outlet.

Culverts

Culvert 37

Map sheet:	H7
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Culvert up to half full with debris.

Area view of outlet.

Outlet view with multiple pipes and buildup of sediment at outlets.

Inlet view.

View inside culvert, looking upstream. Impacted with debris.

Culverts

Culvert 37

Outlet view.

View inside culvert, looking upstream.

Outlet view.

View inside upper pipe culvert, looking upstream.

Area view of inlet to culvert.

Inlet view. Culvert has bar screen upstream.

Culverts

Culvert 37

Inlet view.

Inlet view (right-hand side facing downstream).

View inside culvert (right-hand side). Good condition; clear of debris upstream.

Inlet view of CMP on left-hand side facing downstream.

View inside culvert, looking downstream. Good condition.

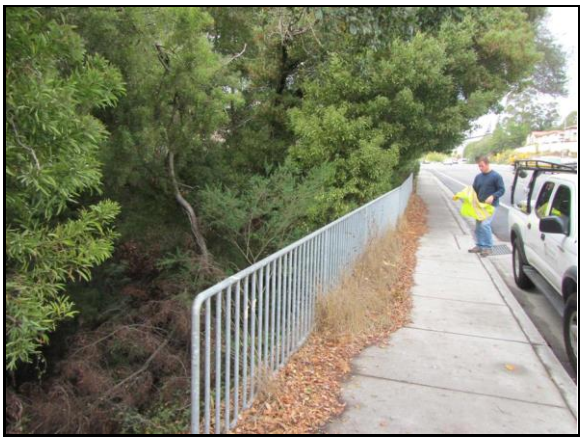
Culverts

Culvert 38

Map sheet:	H9
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Ends of culvert susceptible to overgrowth.



Area view of outlet end.

Outlet end of culvert.

Outlet view.

View inside culvert, looking upstream. Graffiti indicates unwarranted access.

Culverts

Culvert 38

Area view.

Inlet view.

View inside culvert, looking downstream. Good condition.

Culverts

Culvert 39

Map sheet:	H9
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	3

Notes:

Pipes not assessed due to limited visibility. Ends of culvert overgrown.

Area view of downstream outlet end (inaccessible). Completely overgrown in a thicket of vegitation.

Area view of upstream end.

Area view of upstream inlet covered with brush.

View of inlet (debris removed).

Culverts

Culvert 39

Inlet to culvert (curbside).

View inside catch basin.

Area view of downstream catch basin.

View inside catch basin at downstream end of culvert alignment.

Culverts

Culvert 40

Map sheet:	H10
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1

Notes:

Pipes not assessed due to limited access.

Area view. Tree removal has branches blocking the inlet.

Inlet blocked by branches from tree removal.

Area view, looking towards downstream end of culvert.

Culverts

Culvert 41

Map sheet:	J10
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view.

Inlet view.

Inlet view.

View inside catch basin.

Culverts

Culvert 41

View inside culvert, looking downstream. Slight sediment. Good condition.

View inside culvert, looking upstream from inlet drain into culvert.

Culverts

Culvert 42

Map sheet:	J10
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	–
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1

Notes:

Pipes not assessed due to limited access.

Area view.

View inside catch basin.

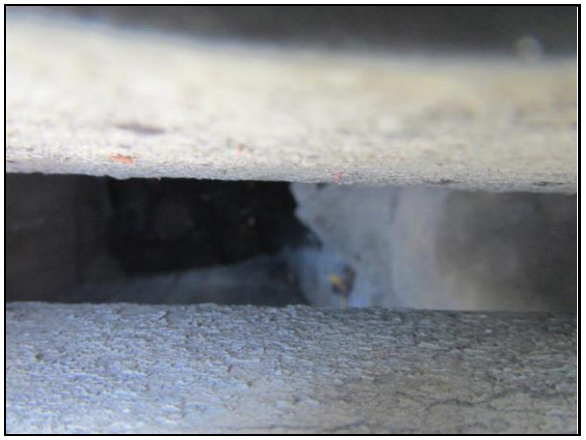
Area view of downstream end of culvert. This catch basin grating was unable to be opened. It was stuck shut.

View inside catch basin on downstream end of culvert.

Culverts

Culvert 42

Inlet catch basin in middle of shopping center parking lot. This grate was unable to be opened and was stuck. There is a pipe that drains through the shopping center but no other access points were located except for this drainage inlet.



View inside catch basin. Because the grating was unable to be opened the only photograph able to be taken was between the grating slots.

Culverts

Culvert 43

Map sheet:	J10
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1

Notes:

Culvert inaccessible. Pipe downstream of culvert was the only accessible location.

Area view of manhole access to culvert.

Area view of inlet drain to culvert. Culvert proceeds into easement between homes. This is downstream from the shopping center. This was the next available inlet found for evaluation.

View inside catch basin.

View inside pipe downstream of culvert, looking downstream. Some sedimentation inside pipe.

Culverts

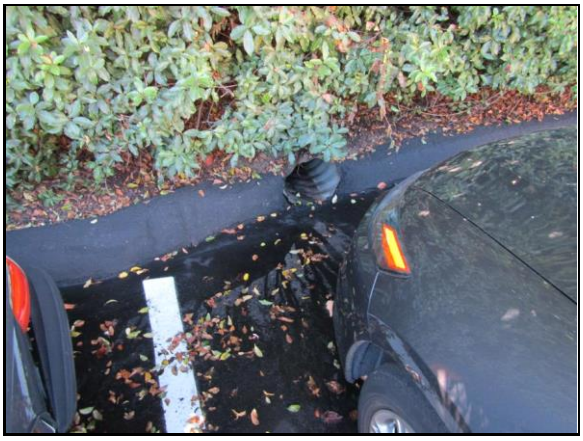
Culvert 43

View inside culvert towards upstream catch basin.

Culverts

Culvert 44

Map sheet:	J10
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2
Notes:	



One small CMP drain pipe to culvert from shopping center parking lot. This was the only other access point found but was too small to observe the condition of the main pipe which it connects to.

View inside CMP drain into culvert.

Culverts

Culvert 45

Map sheet:	K11
Date:	October 2012
VANDA rating (pipes):	–
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1

Notes:

Pipes not assessed due to limited visibility.

Area view of upstream side of culvert.

Area view of downstream side with catch basin into culvert. The downstream drain inlet grating was unable to be opened.

View inside upstream catch basin.

Outlet view, looking downstream into culvert.

Culverts

Culvert 46

Map sheet:	K11
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	1
Notes:	

Area view of downstream side of culvert. This grating was unable to be opened.

Detail of catch basin on downstream end of culvert with organic debris buildup. This grating couldn't be opened

View inside catch basin, looking upstream at HDPE pipe crossing roadway.

View inside catch basin at downstream pipe outlet.

Culverts

Culvert 47

Map sheet:	O15
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

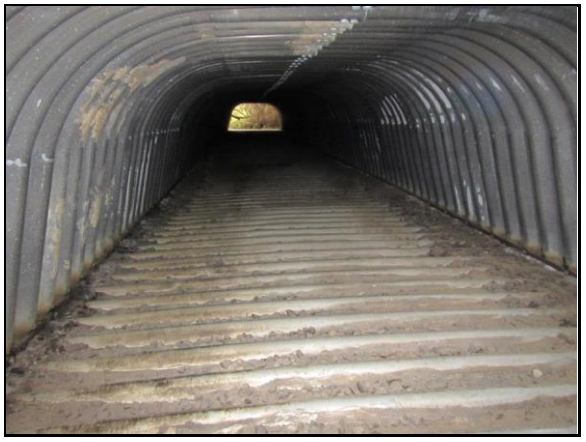
Notes:

Minor debris accumulation at invert of CMP. Ends of culvert susceptible to overgrowth.

Inlet view.

View inside culvert, looking downstream.

View inside culvert (detail of invert).



View inside culvert proceeding downstream.

Culverts

Culvert 47

Sedimentation of inside of culvert.

Outlet view from culvert.

Outlet retaining wall view.

Weeping PVC drainage pipe at bottom edge of invert outside culvert.

Similar PVC weeping pipe on left-hand side of culvert (facing upstream).

Culverts

Culvert 48

Map sheet:	O15
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

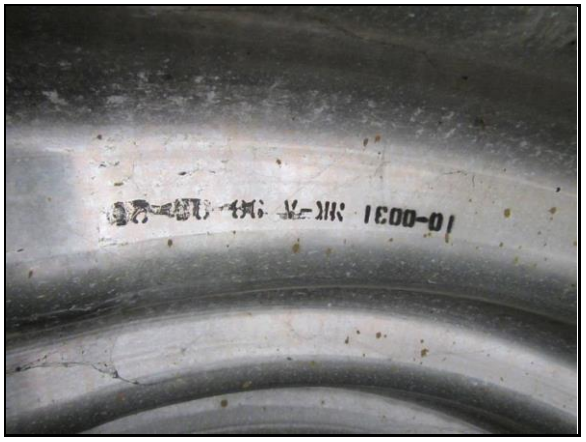
Notes:

Minor debris accumulation at invert of CMP. Ends of culvert susceptible to overgrowth.

Inlet view.

Inlet view.

View inside culvert. New condition.



View inside culvert. Galvanization and original manufacture data still visible.

Culverts

Culvert 48

View inside culvert (detail of invert condition).

View inside culvert, looking towards outlet.

Outlet view.

Outlet view (right-hand side facing upstream).

View of top of culvert at outlet.

Culverts

Culvert 49

Map sheet:	J9
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Ends of culvert susceptible to overgrowth.

Inlet view.

Inlet view.

Inlet view.

View inside culvert. Concrete in good condition.

Culverts

Culvert 49

Inlet view.

Inlet view.

Inlet view.

View inside culvert.

Culverts

Culvert 50

Map sheet:	J9
Date:	October 2012
VANDA rating (pipes):	1
Priority ratings:	2
Pipes not assessed:	–
Inlet, manhole, or outfall access rating:	2

Notes:

Culvert up to half full with debris. Ends of culvert susceptible to overgrowth.

Inlet view.

Inlet view. CMP in good condition with surface corrosion at invert.

View inside culvert. CMP in good condition.

Inlet view. RCP half full with debris.

Culverts

Culvert 50

View inside culvert. Pipe is half full with sediment.

CREEK STABILITY ASSESSMENT
APPENDIX 1

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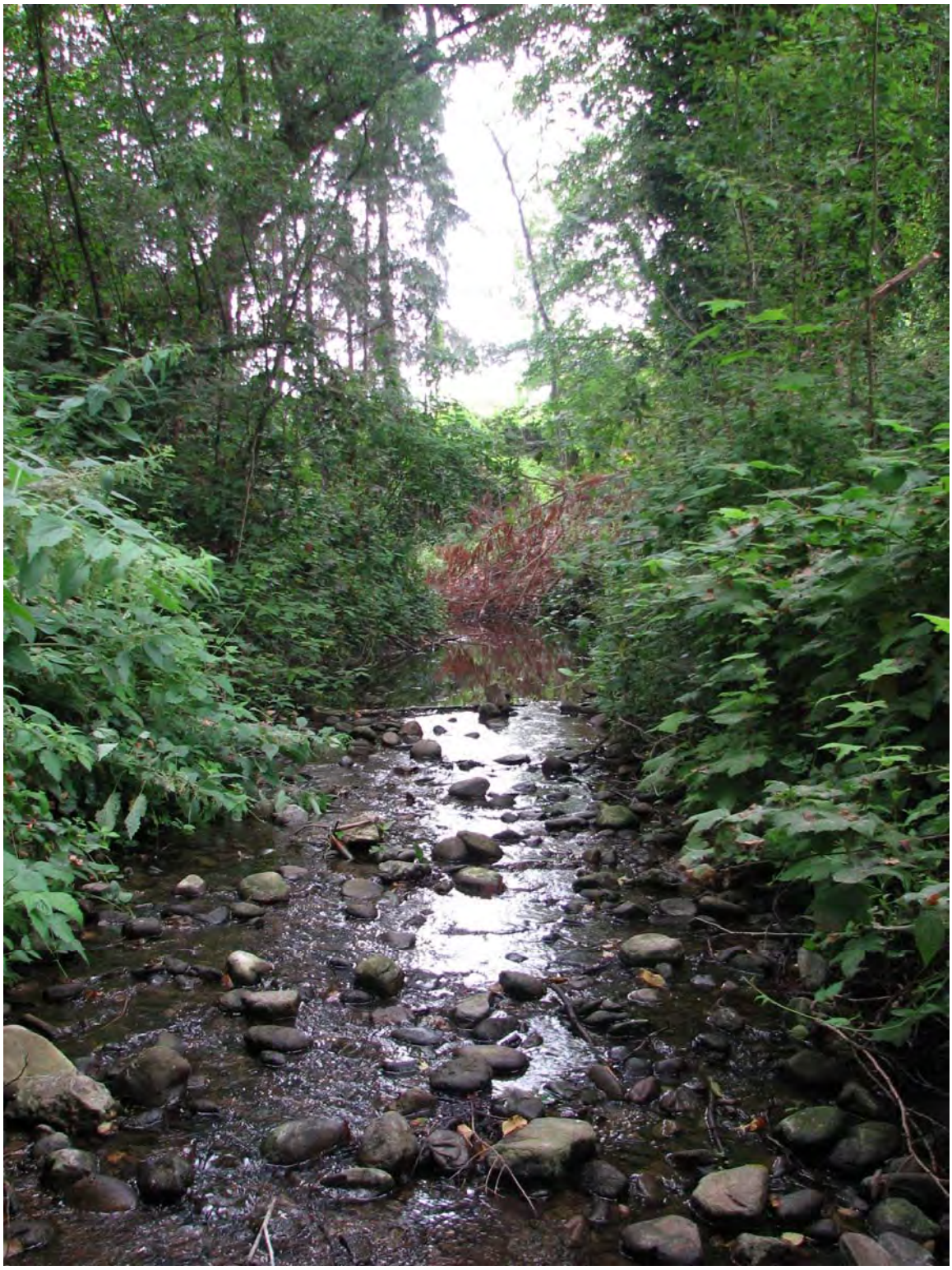
Soquel Creek P46

Soquel Creek P47



Soquel Creek P44

Soquel Creek P41

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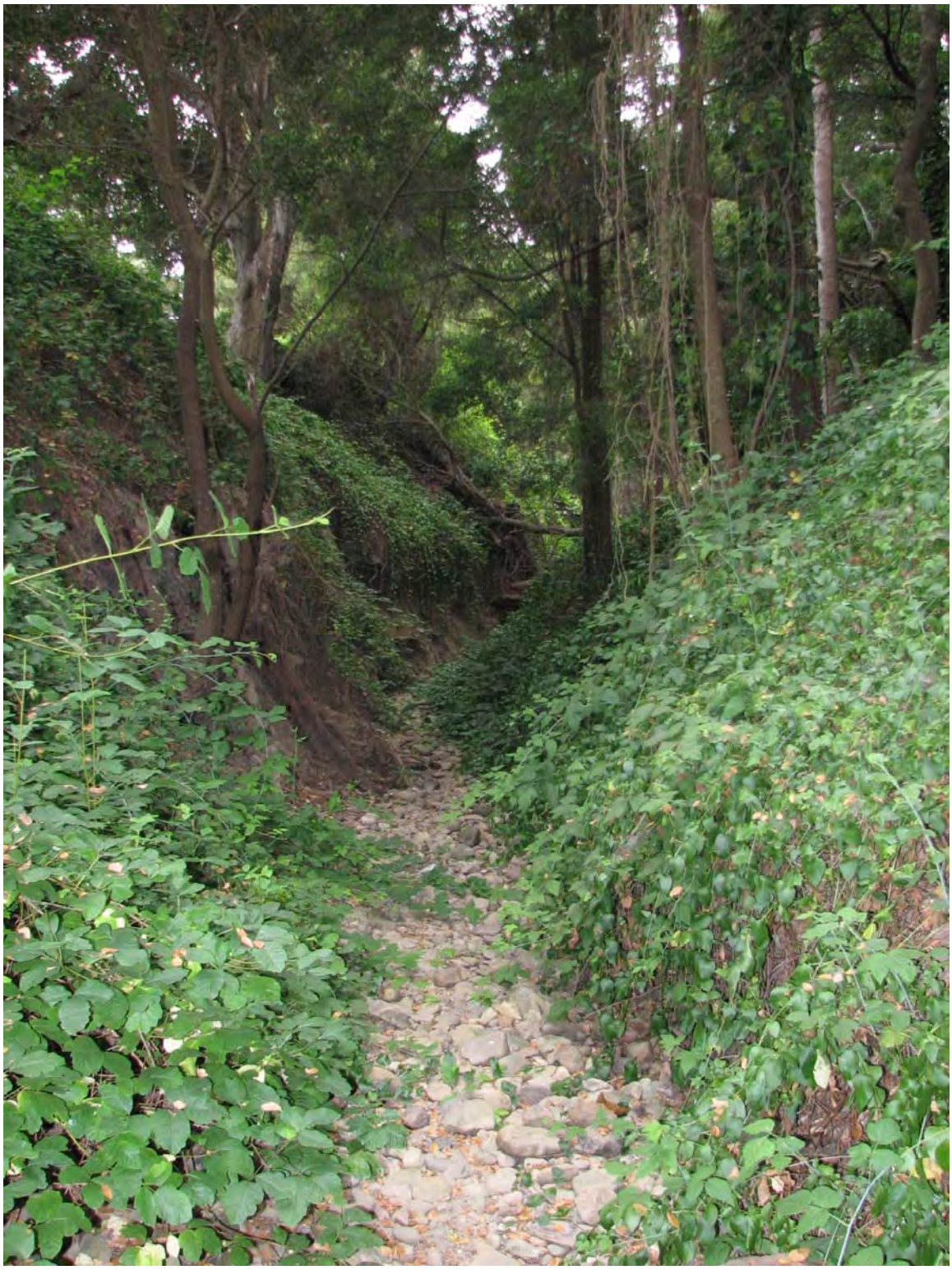
Stream 663

Stream 663 P89



Stream 663 P90

Stream 663 P91

Stream 663 P96

Mangles Gulch

Mangles Gulch P123

Mangles Gulch P124

Mangles Gulch P125

Mangles Gulch P127

Mangles Gulch P128

Mangles Gulch P129

Mangles Gulch P130

Aptos Creek

Aptos Creek P135

Aptos Creek P134

Aptos Creek P133

Aptos Creek P136

Aptos Creek P137

Aptos Creek P139

Aptos Creek P119

Aptos Creek P120

Aptos Creek P118

Aptos Creek P117

Aptos Creek P116

Aptos Creek P115

Aptos Creek P114

Aptos Creek P113

Aptos Creek P111

Aptos Creek P110

Aptos Creek P109

Aptos Creek P107

Aptos Creek P108

Aptos Creek P106

Aptos Creek P105

Aptos Creek P104

Aptos Creek P140

Aptos Creek P142

Valencia Creek

Valencia Creek P176

Valencia Creek P175

Valencia Creek P174

Valencia Creek P170

Valencia Creek P168

Valencia Creek P171

Valencia Creek P173

Valencia Creek P172

Valencia Creek P167

Valencia Creek P166

Valencia Creek P180

Valencia Creek P181

Valencia Creek P182

Valencia Creek P183

Bush Gulch

Bush Gulch P183

Bush Gulch P184

Bush Gulch P185

Bush Gulch P189

Bush Gulch P190

Bush Gulch P192

Bush Gulch P187

CREEK STABILITY ASSESSMENT
APPENDIX 2

Photos (Georeferenced Plot)

APPENDIX E

CREEK STABILITY ASSESSMENT

NOTE: Creek areas assessed are not assumed to be owned or maintained by the District or County and that the act of assessment does not presume to take over any such functions from the actual legal landowners.

CREEK STABILITY ASSESSMENT

INTRODUCTION

There are a total of twelve (12) formally named creeks within Zones 5 and 6 of Santa Cruz County. In Zone 5, this includes Leona Creek, Rodeo Gulch, Soquel Creek, Noble Gulch, Tannery Gulch, and Moran Creek. Moran Creek was not assessed under this study but has been assessed in depth in another recent study in conjunction with Moran Lagoon, see: Santa Cruz County Redevelopment Agency, *Technical Report Moran Lake Water Quality Study & Conceptual Restoration Plan, March 2005*. The Zone 6 creeks include Borregas Creek, Aptos Creek, Mangles Gulch, Valencia Creek, Trout Gulch, and Bush Gulch. In addition to these named creeks, there are several tributary creeks or swales which are unnamed in Zones 5 and 6. Unnamed creeks have been assigned stream ID numbers in the County provided GIS database. Figure 1 and Figure 2 show the creeks in Zones 5 and 6.

Although storm drain master planning generally focuses on stormwater infrastructure such as pipes, storage and pumping facilities, the County desired to include in its master planning efforts a creek stability analysis. There are various methods to determine creek stability, both quantitative and qualitative. The assessment conducted by Schaaf & Wheeler is qualitative, and represents a 'snap shot' of existing channel and bank stability conditions at the time of the analysis.

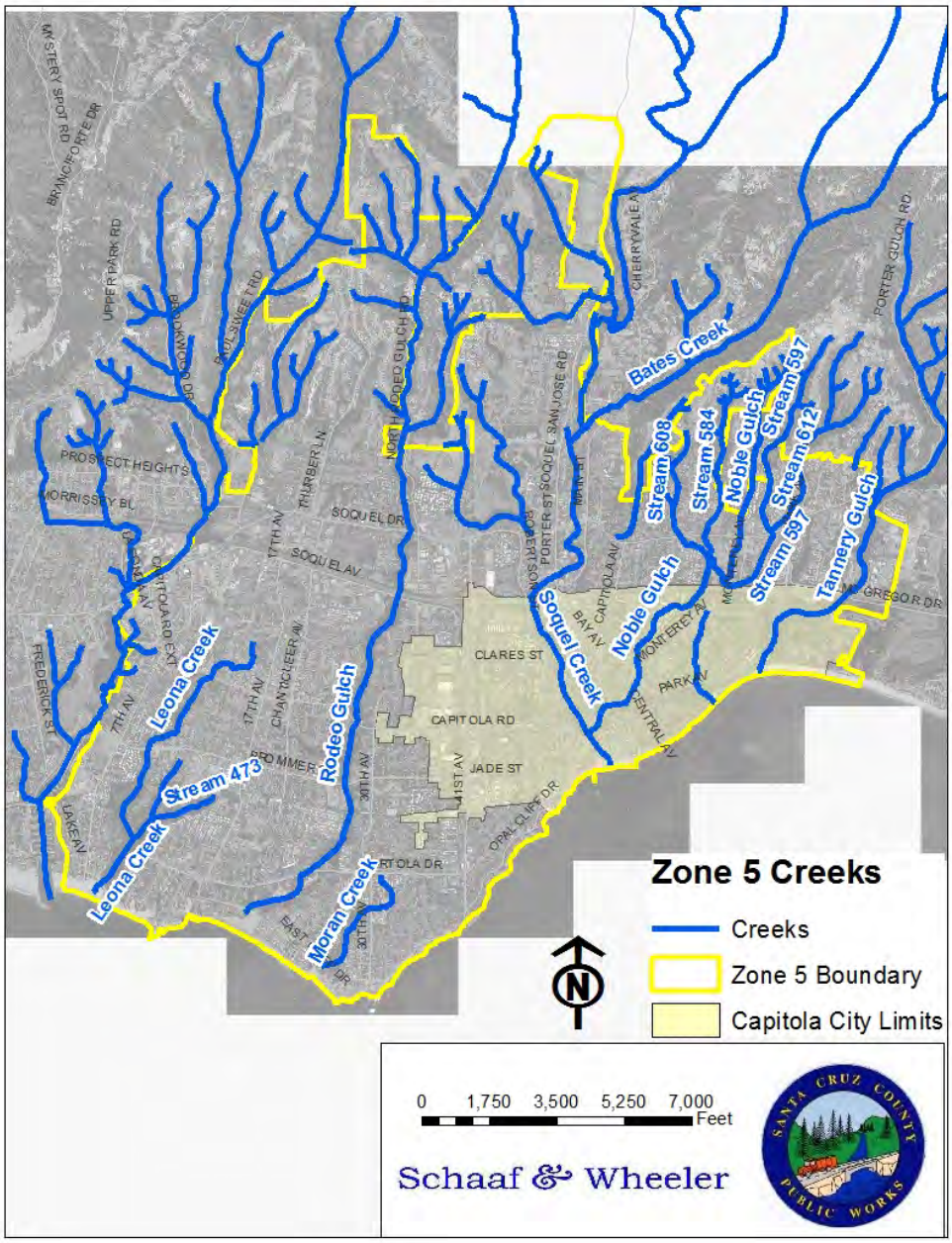


Figure 1 - Zone 5 Creeks

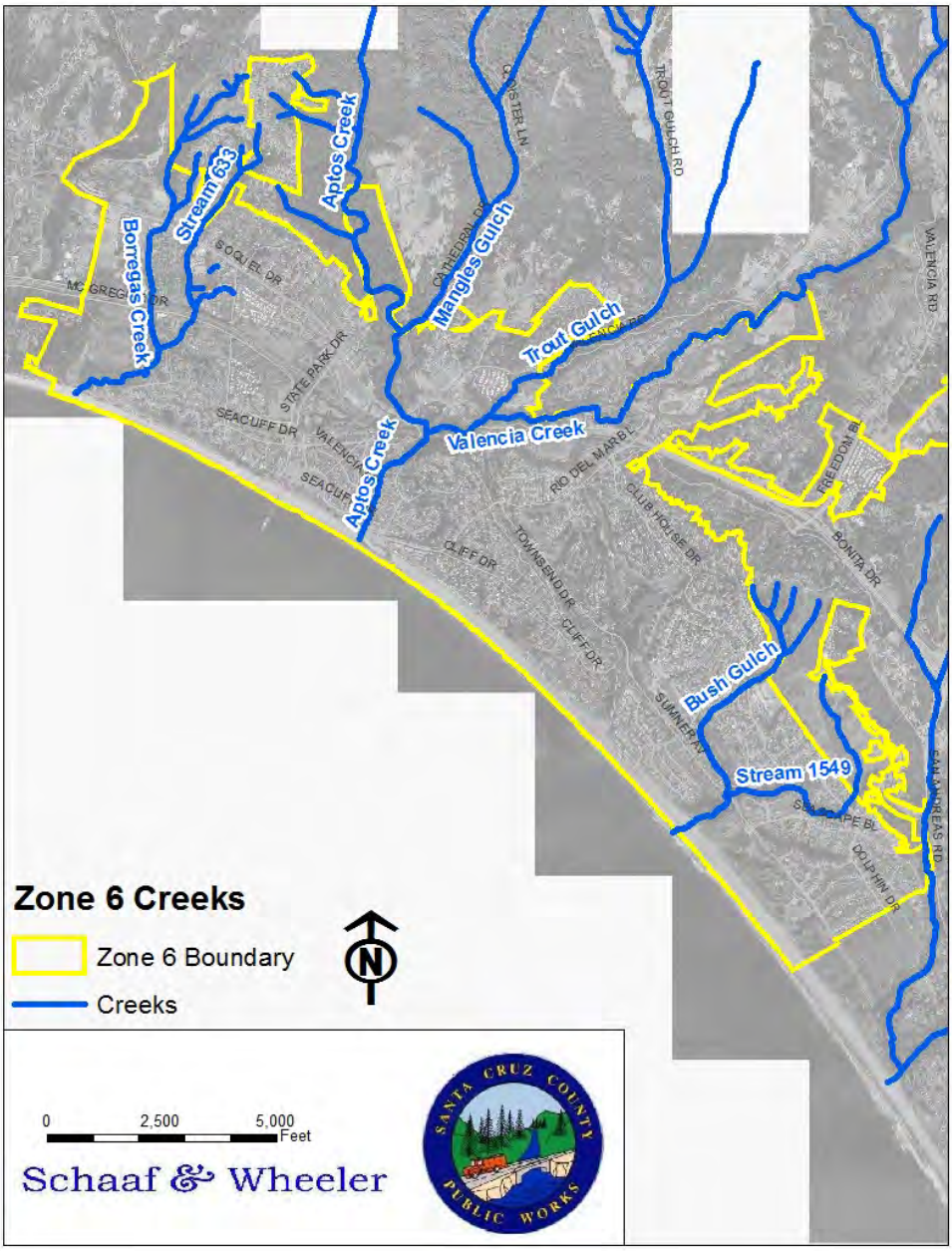


Figure 2 - Zone 6 Creeks

METHODOLOGY

Schaaf & Wheeler engineers conducted the channel stability field investigations during the week of July 20th, 2009. Engineers walked as much of each creek bed as possible, with named creeks prioritized for field inspection. Bank and bed conditions were catalogued, including vegetation location and density, bank steepness, bank and bed material, and evidence of scour, incisement, bank instability or failure, debris (both natural and trash), and potential encroachment issues noted. The location and condition of existing bank stabilization measures were also identified. The vast majority of these measures are non-engineered (i.e. projects undertaken by adjacent homeowners with little to no design planning, such as broken concrete or pavement slabs, landscaping, etc.). Examples of engineered bank stabilization measures include retaining walls or significant placement of rock rip-rap.

In those locations where thick channel vegetation or private property encroachments did not allow access to the creek bed, investigation at bridges and channel crossings were conducted to the maximum extent possible. Photographs representing the relevant parameters were taken, and those referenced in this report were then mapped based on their approximate location (see Appendix 2). Photos are referenced within this report as "P" followed by an identifying number (i.e. P#). A list-style presentation of the photographs referenced in this report is also provided in Appendix 1.

The purpose of this assessment is to provide a qualitative description of existing and potential scour or instability locations in creeks within Zone 5 and 6. Where applicable, other findings are noted (such as the existence of trash or significant human activity in the channels), however the focus of the field investigation was to examine and document the stability and local scour conditions of channel bed and banks. Ongoing monitoring of significant scour locations noted in this report is recommended. Findings from this report may also be useful in future classification of streams susceptible to scour or sediment production.

For the purposes of this document, minor scour refers to small, localized scour holes which do not appear to threaten vegetation or bank stability. This type of scour occurs naturally in virtually all non-armored creeks and streams. Moderate scour refers to larger or more persistent scour locations which, if left unchecked, may worsen to a point that threatens vegetation or bank stability. Significant scour refers to scour which, in its current state, has undermined vegetation or bank stability such that failure of the vegetation or bank appears imminent. Both moderate and significant scour may occur naturally in creeks, and is not necessarily a problem that can, or should, be addressed. However due to the urbanized setting of the creeks in Zones 5 and 6 of Santa Cruz County, there are some locations where bank failure may undermine structures or private property at the top of creek banks. Ongoing monitoring and/or engineered solutions may be necessary at these locations.

Appendix 1 contains the photographs referenced in this report (ordered based on the order in which they are mentioned in this report). Appendix 2 contains plot sized maps with these same photographs geo-referenced for their location.

CREEK STABILITY ASSESSMENT

Each creek is described in detail below. This Report organizes creeks in a northwest to southeast order, and individual creeks are generally described in an up- to down-stream order, beginning where they enter Zone 5 or 6, and ending when they enter Monterey Bay, other creeks or lagoons, or when they enter the City of Capitola, in the case of Soquel Creek, Noble Gulch and Tannery Gulch. Left and right bank descriptions assume a 'facing downstream' orientation.

ZONE 5

Leona Creek

Leona Creek is the northern most creek in Zone 5. It is approximately 3 miles long, and discharges to Schwan Lagoon. Although some sources consider Leona Creek part of the Arana Gulch-Rodeo watershed, it is an intermittent creek that does not discharge to Arana Gulch or the Santa Cruz Harbor. As such, it was not included in the February, 2002 *Arana Gulch Watershed Enhancement Plan Phase 1* Report.

Summary of Field Investigation

In general, the creek bed is trapezoidal, and although banks do not appear overly steep, several signs of moderate scour are in evidence in the upstream reaches of the creek, including shotgun culverts, toe scour, non-engineered bank hardening measures, and undercutting of structures in or adjacent to the channel. In the downstream reaches of the channel, banks appear more stable both due to natural rock features and heavy vegetation in the channel bed and banks.

Detailed Field Description

Leona Creek emerges from Webster Street via a 6-foot by 6-foot reinforced concrete box (RCB) culvert (P14 – see Appendices F and G). Under Webster Street, just upstream of this outlet, is the convergence of at least two culverts: one 4.5 foot diameter corrugated metal pipe (CMP) that enters the junction from the west, and a 4 foot wide by 5 foot tall concrete box (RCB) culvert from the north.

Downstream of Webster Street, Leona Creek quickly transitions to a relatively small, generally trapezoidal channel (P2). Traveling downstream from Webster Street, a vertical retaining wall begins running along the right bank. After a small foot bridge crosses the creek (P10) this wall terminates, and a vertical retaining wall on the left bank begins. Continuing downstream, the left bank wall ends, and soon thereafter, a retaining wall along the right bank begins. Moderate local toe scour is visible just before, and along this vertical right wall (P7), and the wall has begun to tilt towards the creek centerline.

Continuing downstream, local scour is also visible at an outfall (i.e. a 'shotgun' outfall) along the right bank (P5), while a small floodplain bench develops on the left bank. Non-engineered measures to reduce channel scour are visible, including outfall armoring (P12) and loose concrete and non-engineered armoring in the channel (P4). Private yards extend to the top of channel bank of both sides of the channel, and although in general structures are set back from the top of bank, occasional non-essential structures (such as sheds or patios) do extend to the top of bank. In one location, a private concrete patio is in danger of failure, although it is unclear if this is due to local bank scour or the original patio construction (P13).

Leona Creek passes under 15th Street via a five foot diameter reinforced concrete pipe (RCP). Downstream of 15th Street, Leona Creek continues as a concrete lined channel (P1) for a short reach before entering a 5 foot RCP. It appears this culvert runs through/under private property before again day-lighting a short distance downstream. Schaaf & Wheeler was unable to access the downstream side of this culvert due to heavy vegetation (blackberry) in the channel and avoidance of private property intrusions.

Upstream of Capitola Road, the right bank of Leona Creek is notable higher than the left bank (P15), and the right toe of the creek is protected from scour via a natural rock outcrop. Minor local toe scour is visible along the left toe. About 200 feet upstream of Capitola Road there is a concrete wall drop structure in the creek about 5.5 feet tall. Upstream of this location the creek is very heavily vegetated with blackberry and ivy, and was not accessible at the time of the field investigation.

Leona Creek remains heavily vegetated (P19) and access is limited downstream of Capitola Road and continuing to its terminus at Schwan Lagoon.

Rodeo Gulch

Rodeo Gulch is located near the center of Zone 5, flowing just north of the City of Capitola border. Rodeo Gulch is about 5.7 miles long. Like Leona Creek, Rodeo Gulch is often listed as being part of the Arana Gulch-Rodeo watershed; however it drains directly to the Corcoran Lagoon just south of Portola Drive, and does not enter the Santa Cruz Harbor. As such, it was not included in the February, 2002 *Arana Gulch Watershed Enhancement Plan Phase 1* Report.

Summary of Field Investigation

Rodeo Gulch generally appears stable, and only sporadic minor local scour issues are in evidence. The creek was mostly dry during the investigation, and the bed material is primarily sand. Thus, although no signs of significant scour were discovered, it is expected that bed material in the creek is mobilized during storm events, and the potential for scour due to the loose, sandy bed material is high. The creek is relatively large, with heavy vegetation and pronounced floodplain benches. These features, combined with the dry creek bed, result in a high number of transient camps in the creek bed, which results in significant trash loading in the creek.

Detailed Field Description

Rodeo Gulch enters Zone 5 about 2,000 feet north of Soquel Drive. This reach of Rodeo Gulch is wide, with a sand-bottomed low flow channel adjacent to floodplain benches on either side. The low flow channel is relatively open and free of vegetation, while the low flow channel banks, floodplain benches and banks are heavily vegetated with trees, brush, blackberry and ivy (P25). In this reach, and most of Rodeo Gulch, several campsites of homeless/transients were discovered, generally set back onto the floodplain benches, although at times camps were placed in the channel bed itself. These camps consist of tents, mattresses, and even furniture such as tables and chairs.

Soquel Drive over Rodeo Gulch is a bridge with piers that appears to have been widened or retrofitted relatively recently. Rodeo Gulch continues to maintain a sandy low flow channel with floodplain benches downstream of Soquel Drive. Moving downstream, trash is increasingly evident in the channel (P26), most of which appears to be a direct result of the camping taking place within the creek. Old tents, presumably from previous years of camps, are visible semi-buried in the channel bed and banks.

Rodeo Gulch becomes increasingly heavily vegetated (P28) approaching Highway 1. Schaaf & Wheeler was able to approach within about 500 feet of the upstream face of Highway 1 before heavy vegetation blocked further access. Only minor scour was found throughout this reach, and no indication of bank or structure undercutting was visible. The sandy channel bed, however, has a highly erosive potential, and as such scour conditions in the creek could change significantly in a relatively short time given sustained high flows in the creek.

Downstream of Highway 1 / Soquel Avenue, the channel transitions to a more trapezoidal form with no floodplain benches and with significantly less trash in the channel. At the downstream face of Soquel Avenue only one culvert, a partially blocked 5 foot diameter RCP, was found (P29). Given the size of the creek and its watershed, it is expected that there are additional culvert openings which could not be located due to the heavy vegetation. The channel continues

as an open, sandy bottomed channel for a short distance downstream of Highway 1 / Soquel Avenue, before heavy vegetation blocks the channel from foot access.

Approaching Capitola Road, the channel maintains heavy, dense vegetation, and the low flow channel becomes a wide, braided channel within trapezoidal banks. Again, transient camp sites were found within the channel bed. Rodeo Gulch passes under Capitola Road via two 5 foot diameter RCP culverts (P23), and the channel becomes heavily vegetated and/or blocked with woody debris (P24). Similar to the Highway 1 / Soquel crossing, the culverts under Capitola Road seem undersized given the creek size and watershed.

Rodeo Gulch passes through a 12-foot by 12-foot box culvert (P20) at Brommer Street. Immediately upstream of the Brommer Street culvert is a moderate scour hole (P22). The location of this hole just upstream of the face of the culvert is of concern. In either its current location, or if it were to migrate downstream, the culvert may be undercut and structurally threatened. Both up and down stream of Brommer Street Rodeo Gulch is heavily vegetated, blocked with downed plant debris and un-passable (P21).

Soquel Creek

Soquel Creek has a watershed of about 42 square miles, and enters Zone 5 about 3,700 feet north of Soquel Drive. Soquel Creek flows through the City of Capitola before discharging to the Soquel Lagoon. Soquel Lagoon is listed on the Clean Water Act Section 303(d) List of Water Quality Limited Segments for nutrients, pathogens, and sedimentation / siltation. Several reports have been published in recent years regarding Soquel Creek, including *Soquel Creek Watershed Assessment: Geomorphology and Baseflow Hydrology Report* (Balance Hydrologics, 2003) and the *Soquel Creek Watershed Assessment and Enhancement Plan* (Santa Cruz County Resource Conservation District, 2003). These reports focus on those issues relevant to future creek restoration, particularly for steelhead and/or coho salmon, and may provide a more detailed analysis of channel geomorphology.

Summary of Field Investigation

Soquel Creek is a relatively large creek, and is generally a trapezoidal channel with a wide toe-to-toe width, and at times a meandering low flow channel within this wide bottom. The creek bed is generally made up of gravel and cobble, with locations of minor to moderate channel scour. Very steep banks in some locations have undercut existing vegetation, and may threaten structures.

Detailed Field Description

The most upstream reach of Soquel Creek within Zone 5 (~3,700 feet upstream of Soquel Drive) is a relatively large channel, with a very steep right bank (P46) and a floodplain bench along the left bank, transitioning to a gentle sloping bank (P47). In general the steep right bank is scarcely vegetated with grasses, although the top of bank has more heavy brush and tree vegetation. The left floodplain bench and bank is more heavily vegetated with a mix of brush, grasses, and trees of varying height / age.

Bates Creek enters Soquel Creek about 2,500 feet upstream of Soquel Drive. The reach of Bates Creek within Zone 5 is about 400 feet in length, and is a relatively small, gravel and cobble bed

channel with a low right bank and higher left bank (P44). Both banks of Bates Creek are well vegetated. It appears that the exact location where Bates Creek confluences with Soquel Creek may change somewhat year-to-year, as a remnant channel between Bates and Soquel Creeks is found upstream of the existing confluence location.

Downstream of the Bates Creek confluence, the left bank of Soquel Creek steepens considerably, becoming practically vertical immediately downstream of the confluence. Buildings located at the top of bank (which appear to be non-residential) in this location could be threatened by bank failure in this vicinity (P41). Continuing downstream, both banks remain near vertical. The banks have intermittent stands of vegetation interspersed with bare ground, and are composed of both rock outcroppings and soil. Although no significant scour holes (i.e. in the channel or at the toes) are found; generally vertical soil banks increase the likelihood of bank failure, and at least one home is perched at the top of existing bank (P39). Additionally, trees at the top of bank have exposed roots (P37), and may be subject to failure. Both banks in this reach continue as a mix of fine soil material with natural rock outcroppings (P34). While the natural rock will offer protection from bank failure, it does not appear to be contiguous, and generally does not extend to the top of bank elevation (P37).

Continuing downstream, the banks of Soquel Creek become more vegetated, but continue to have generally steep banks and a wide toe-to-toe width, with occasional rock outcroppings (P31). The creek crosses beneath a footbridge at Bridge Street. Downstream of Bridge Street, the banks of Soquel Creek become gradually less steep. Residential homes are located at or near the top of bank throughout this reach (P49). Non engineered concrete slabs have been placed in the channel in this reach, particularly along the right toe, and moderate toe scour is seen at these locations. This scour appears to be due largely to the haphazard placement of armoring material in the channel, which can worsen scour particularly at the toe of the armoring (P51). In general it appears that this concrete was purposefully placed in the channel, but it is possible that some of the concrete is debris from some previous unknown bank failure.

Soquel Drive crosses Soquel Creek via a clear span bridge. Downstream of Soquel Drive, the steepened bank trend continues, with a vertical engineered retaining wall on the left bank (P53). The creek bed transitions from mostly gravel/cobble to mostly fine silt and sand with gravel and boulder bars and islands (P56 / P57). Moderate scour holes are observed at the right toe (P54). Continuing downstream, Soquel Creek turns sharply left to circle around the baseball diamond of Soquel Elementary School. The outer (right) bank of this abrupt bend is protected by significant rock rip rap (P55).

Throughout Soquel Creek, evidence of natural woody debris (P58, P54, P36) is seen, which may provide natural channel reinforcement. Almost no trash or man-made debris was witnessed in the Creek.

Downstream of the elementary school, Porter Street crosses Soquel Creek via a clear span bridge (P60). Creek banks in this reach continue to become less steep compared to the upstream reaches, while the right toe has non-engineered concrete hardening (P61). Several homes are at or near the top of bank in this reach, and although this could pose an issue if bank failure were to occur, only minor toe scour was found in this reach. The channel bed continues to be mostly fine sand/silt material, with gravel bars and islands, and a fair amount of woody debris in the channel (P63).

Noble Gulch

Noble Gulch is a tributary to Soquel Creek located in the eastern portion of Zone 5. It is about 2.6 miles long, and the upper reaches of the creek itself are almost entirely within Zone 5. Noble Gulch enters the City of Capitola just downstream of Highway 1.

Summary of Field Investigation

Noble Gulch is a relatively small channel for most of its length. Just upstream of Highway 1, the creek confluences with three un-named channels (Streams 608, 584 and 597) and increases in size. Noble Gulch is heavily vegetated in most reaches, and crosses several culverts under what appear to be private roads or driveways. Access to the creek is difficult, restricted by both vegetation and private property. In general the creek has a sandy bed, and no significant scour was witnessed.

Although the channel bed is comprised primarily of soft sands or other fine material, there are many concrete culverts in the creek which effectively provide grade control at regular intervals. For this reason, Noble Gulch is considered stable despite the erode-able bed material.

Detailed Field Description

Upstream of Soquel Drive Noble Gulch is inaccessible due to heavy vegetation in the channel bed and banks, and continuous private property along both banks. Noble Gulch passes under Soquel Drive via a 4 foot diameter RCP (P54). Downstream, the channel is generally trapezoidal, with a soft sand bottom and side slopes of grass and brush (P55). There was no water in the channel at the time of the field investigation. About 420 feet downstream of Soquel Drive Noble Gulch passes through a 4 foot diameter RCP under a private driveway with non-engineered sac-rete and rock headwalls (P57-58). Immediately downstream of this crossing a 3.5 foot drop with a concrete sill is noted.

Continuing downstream of this drop structure, the channel banks become vegetated with heavy brush and tree branches effectively blocking the channel (P60). The right bank through this reach is quite steep, while the left bank is both more gently sloped and has a lower top of bank elevation. The bed remains soft sand and fines through this reach. Continuing downstream, the channel bends sharply to the right and becomes too heavily vegetated to pass. Based on aerial photography at least one additional driveway culvert exists in this bend and Noble Gulch confluences with Stream 597 at the apex of this bend.

After completing essentially a U-turn, the creek enters yet another 4 foot diameter RCP. Just upstream of this culvert a 15-inch tall I-beam crosses the channel about three feet above the channel bed (P62), decreasing channel capacity. The creek bed was dry during the field investigation upstream of this culvert. It is believed that the creek again daylights downstream of this culvert before turning sharply left and entering another four foot RCP culvert. This day-lighted section was inaccessible due to fencing and private property, however, so it is possible that the culvert itself completes this left turn. The downstream face of the RCP is the confluence of Noble Gulch with Stream 584 (P70). Just downstream of this double-culvert outlet is Noble Gulch's confluence with Stream 608. Downstream of this confluence standing water was observed during the field investigation (P69).

Downstream of the confluence with Stream 608, Noble Gulch increases in size. A low-flow channel exists within the larger trapezoidal channel. The left overbank above this low-flow channel is open and gently sloping with Eucalyptus trees, grasses, and ivy. The right overbank is steeper, with houses placed at the top of bank (P64). There are signs of minor to moderate toe scour (P65), as well as non-engineered channel rip rap (i.e. broken concrete and asphalt). A visible sheen of oil was observed in the standing water of the creek, perhaps due to the materials which have been placed in the channel bed (P63). Excluding the man-made materials, the channel bed remains primarily fine material through this reach.

Noble Gulch passes under Highway 1 through a 6 foot by 6 foot concrete box culvert, downstream of which it enters the City of Capitola.

Stream 597

Stream 597 is a tributary to Noble Gulch, and is about 1.5 miles in length. Schaaf & Wheeler primarily focused field condition assessment efforts on the 'named' creeks within Zone 5; however access restrictions due to both heavy vegetation and private property limited the field investigation. Stream 597 was investigated because it lies adjacent (300-400 feet eastward) and parallel to Noble Gulch, but was accessible upstream of Soquel Drive, whereas Noble Gulch was not accessible upstream of Soquel Drive. Given the proximity of Stream 597 to Noble Gulch, it is reasonable to assume that the overall characteristics are similar between the two creeks.

Summary of Field Investigation

Creek 597 is generally a small, incised channel with a sandy bed and steep banks. Although the banks are well vegetated and do not appear to be in immediate danger of failure, private homes are constructed on or near the channel banks and may be threatened in the event of bank failure. Evidence of non-engineered retaining walls along the toe of the channel supports the conclusion that this channel is subject to a relatively high scour risk. Channel banks should be monitored for ongoing stability.

Detailed Field Description

Stream 597 enters Zone 5 immediately west of the northern terminus of Maplethorpe Lane. The channel is generally trapezoidal with steep left and right banks. Channel bed and banks are heavily vegetated with trees and brush (Ivy, Blackberries, and Nasturtium) and this reach of the creek is not passable (P159). Continuing downstream, two private driveways cross the creek via 4.5 foot RCPs (P157 and P153). Between these, a non-engineered retaining wall is visible through vegetation on the lower left bank (P155). Throughout this reach and continuing downstream to Soquel Drive, channel banks remain steep and vegetated, although less densely than the more upstream reach. Pieces of broken concrete are occasionally found in the channel bed (P156). Tree roots are exposed in both the channel banks and bed (P151).

Just upstream of Soquel Drive, a tributary creek from the east (Stream 612) merges with Stream 597 immediately after passing under Maplethorpe Lane. The access to this tributary was chained and marked 'Private' at the time of the field investigation (P152). From the private property sign, a steep right bank with over-hanging apartment balconies is visible. This steepened right bank has been overlain with erosion control fabric. The left upper bank has been protected with rock rip-rap just upstream of the Maplethorpe culvert, and several trees have been cut down in this

reach. Just upstream, it appears that Stream 612 regains a more natural condition, with a trapezoidal shape and somewhat less steepened banks.

Immediately downstream of its confluence with Stream 612, Stream 597 passes under Soquel Drive via two 4 foot diameter RCPs. Stream 597 is a trapezoidal channel with a sand and gravel bed downstream of Soquel Drive. In general, fences and/or homes are placed at the top of bank on both sides of the channel. The right bank is generally steeper than the left bank (P146). Vegetation includes Eucalyptus trees, Ivy, and Blackberry. During the field inspection the creek bed was generally dry, with small areas of standing water. Moving downstream along the channel, exposed roots are visible in the channel bed.

Downstream of Soquel Drive, an old metal pipe discharges into the (right bank) creek, with significant scour under this shot-gun outlet (P147). The pipe is in poor condition, with deteriorating metal, but the scour beneath the pipe does not appear to threaten overall bank stability. Just downstream of this pipe, a concrete wall is in place at the left toe of the channel. The wall varies in height between two and three feet tall, and is undercut by local scour in some locations by 3 to 6 inches (P149). Exposed rebar beams extend from the top bending toward the centerline of the channel.

Downstream of this location, the trend of steep, vegetated banks, exposed roots and sandy channel bed continues (P150) until the channel becomes impassable due to heavy vegetation just upstream of where Loraine Lane dead ends east of the channel.

Tannery Gulch

Tannery Gulch is the eastern-most creek in Zone 5. Tannery Gulch has a length of about 2.6 miles. The creek enters Zone 5 just after being joined by Porter Gulch and traverses the boundary between Zones 5 and 6 before entering Zone 5 immediately downstream of Soquel Drive. Tannery Creek enters the City of Capitola just downstream of Highway 1 and discharges to Monterey Bay at New Brighton Beach State Park.

Summary of Field Investigation

Tannery Gulch upstream of the City of Capitola is almost entirely inaccessible due to private property and heavy vegetation. It is a large channel which discharges directly to Monterey Bay. In general, private homes are more set back from the channel banks compared to other creeks in Zones 5 and 6, and Cabrillo College owns the property east (left looking downstream) of the creek upstream of Highway 1. No scour was witnessed during the field investigation, however, it must be noted that very limited channel access was possible.

Detailed Field Description

Tannery Gulch enters Zone 5 immediately upstream of Soquel Drive, and passes under Soquel via a four foot RCP at the invert of the channel and a 2 foot HDPE pipe which extends above the headwall of the RCP. Rock rip rap is placed in the channel bed at the downstream face of the crossing (P162). The channel is heavily vegetated downstream of Soquel Drive, with tree trunks and branches blocking much of the channel. The creek bed is a mix of sand, gravel, and cohesive soils, and water was present in the channel during the site investigation (P160). The creek becomes impassable shortly downstream of Soquel Drive due to thick vegetation.

Several alternative access points were attempted, but thick vegetation, including poison oak, prohibited the ability to enter the channel. It is expected that the channel remains heavily vegetated on the banks and bed, with woody debris throughout the reach due to this vegetation.

ZONE 6

Borregas Creek

Borregas Creek is the western most creek in Zone 6, and is about 1.8 miles long. The creek enters Zone 6 north of Soquel Drive, just north of Cabrillo College campus, and discharges directly to Monterey Bay on the western end of Seacliff State Beach. The only two adjacent landowners along the west bank of the creek (right looking downstream) within Zone 6 are Cabrillo College and New Brighton Beach State Park.

Summary of Field Investigation

Borregas Creek is heavily vegetated and largely inaccessible due to either private property or dense vegetation. Generally, the right bank is either undeveloped or has no residential structures, while the left bank is lined with private homes. Borregas Creek is relatively large and generally trapezoidal in shape. The channel banks are generally steep, gaining steepness downstream. Scour and incising of the channel has undercut the bank stability in some locations. Moderate to significant scour is observed in several locations.

Detailed Field Description

Upstream of Soquel Drive Borregas Creek is heavily vegetated with grasses, brush and trees (P87), with a steep right bank. The creek passes under Soquel Drive via a three foot RCP. Borregas Creek remains also heavily vegetated and inaccessible between Soquel Drive and Highway 1. In this reach, the left overbank area is occupied by the Cabrillo College athletics center, while the right bank is lined with private homes along Estates Drive. While in-channel inspection was not feasible due to lack of access, based on aerial photographs homes along Estates drive are generally toward the front of the lot (i.e. set back from the creek bank).

Downstream of Highway 1, Borregas Creek remains heavily vegetated. The left bank is generally steeper than the right (P93). The creek becomes impassable due to heave vegetation (P95) within about 400 feet downstream of Highway 1. Stream 633 joins Borregas Creek about 900 feet downstream of Highway 1. Stream 633 is described in more detail below.

Borregas Creek discharges directly to Monterey Bay. At the time of the field investigation, water was not flowing in Borregas Creek, however the general path of the outfall channel could be seen (P102). The creek immediately upstream of the beach is actively eroding, with near vertical banks and undercut toes in several locations (P99 and P101). There is a significant amount of large woody debris in the channel bed in this reach, much of which effectively forms small debris dams and drop structures. This woody debris appears to be a mixture of driftwood from the beach and debris delivered from upstream.

Trees at the top of the bank, particularly along the left bank, are undercut and appear in immediate danger of failure (P98). A man-made concrete drop structure, about five feet tall and topped by a concrete slab is observed in the channel (P100) about 200 feet upstream of the

beach. Upstream of this location the bank vegetation becomes denser and a significant decrease in the amount of woody debris is noted.

Stream 633

Schaaf & Wheeler primarily focused field condition assessment on the 'named' creeks within Zone 6; however access restrictions due to both heavy vegetation and private property limited the field investigation. Stream 633 was investigated because it contributes a significant portion of the Borregas Creek watershed, which was largely inaccessible. Stream 633 is roughly parallel with Borregas Creek, about 800 feet eastward, and is about 1.1 miles in length.

Summary of Field Investigation

Although somewhat more accessible than Borregas Creek; access to Stream 633 is limited due to private property or heavy vegetation. In general the creek is trapezoidal, with steep vegetated banks and rock or cobble bed material. Moderate scour was observed in several locations along Stream 633.

Detailed Field Description

Stream 633 enters Zone 6 just north of Soquel Drive. The creek passes under Soquel Drive via a, RCP, and a corrugated metal pipe (approximately 18-inch diameter) outlets to the creek at the downstream face of the Bridge. There is an immediate three to four foot drop at the downstream face of the culvert, lined with sac-rete and rock rip rap (P89). Downstream of this drop, the creek continues with steep banks vegetated with brush and trees. The channel bed in this reach is made up of large cobbles, gravel, and occasional small boulders (P90). Both banks are relatively steep, with minor scour noted along the right toe and moderate scour, undercutting vegetation in several locations, noted along the left toe. Continuing downstream, occasional downed trees cross the channel and dense blackberries soon block access to the channel bed (P91).

The Stream 633 crossing under Highway 1 is inaccessible. Stream 633 crosses under SPRR about 550 feet downstream of Highway 1, and the creek flows under Estates Drive, a private road in this location, another 200 feet downstream. Stream 633 is heavily vegetated with trees and brush in this reach, with occasional private residences located at or near the top of bank (P96).

Mangles Gulch

Although outside of the study area defined by Zone 6, the lower reach of Mangles Gulch was walked for this assessment because it provided access to the upper reach of Aptos Creek. Mangles Gulch is a tributary to Aptos Creek, and is about 2 miles in length.

Summary of Field Investigation

In the reach upstream of its confluence with Aptos Creek, Mangles Gulch is generally trapezoidal in shape with a loose sandy bottom. The channel banks are generally well vegetated with brush and redwood trees. Several large woody debris dams are in the creek, creating natural step-pools and barriers. Vegetation becomes dense in the channel bed and banks just upstream of its confluence with Aptos Creek. The exact location of the confluence is variable. Minor scour is noted at some toe locations. The loose, sandy bed material is expected to be mobile during most

storm events; however the debris jams likely create back-water conditions, limiting scour and sediment transport through this reach of Mangles Gulch.

Detailed Field Description

Mangles Gulch passes under Aptos Creek Road about 450 feet upstream of its confluence with Aptos Creek, immediately north of the Zone 6 boundary. This crossing consists of two old plugged CMPs underneath a newer concrete double box culvert (P123). Downstream of this crossing, Mangles Gulch is generally trapezoidal, with steep vegetated banks and a sandy bed (P124). Redwood trees are common along both bank and over bank areas many of which lean towards the channel centerline (P125). Minor scour was noted at the base of trees along the left toe.

Shortly downstream, there are a series of large debris dams caused by tree trunks which have fallen into the creek. These dams are significant, reaching over ten feet tall in some locations (P127, P128). Immediately downstream of the lowest dam, the channel bed and banks are choked with vegetation. This vegetation in the channel bed is probably due to a slow release of water from the debris dams both limiting channel scour and providing ample irrigation.

Continuing downstream, the channel narrows and the banks become vertical rock to form a small canyon. The channel bed in this reach remains loose sandy material, with occasional boulders from the rock banks (P129). The rock outcropping forming the banks soon recedes, and the channel outlets from the canyon into a wide, undefined channel to confluence with Aptos Creek (P130). Due to the wide nature of the channel at the confluence, the low flow channel is undefined, and the exact junction between Mangles Gulch and Aptos Creeks is presumed to migrate over time.

Aptos Creek

Aptos Creek is in the approximate middle of Zone 6, and has a watershed of about 24.5 square miles, which includes Valencia, Trout Gulch, Mangles Gulch, and several un-named streams or swales. Aptos Creek has been the subject of several recent studies including the *Aptos Creek Fisheries Habitat Assessment* (Technical Memo by Hagar Environmental Science, March 2003) and the *Geomorphology & Sediment Source Assessment* (Technical Memorandum by Swanson Hydrology, March 2003), all of which were conducted as part of the larger *Aptos Creek Watershed Assessment and Enhancement Plan* (Coastal Watershed Council, April 2003). Aptos Creek is listed on the Clean Water Act Section 303(d) List of Water Quality Segments for sedimentation.

The field work conducted by Schaaf & Wheeler focused on the in-stream channel scour and stability of Aptos Creek within the Zone 6 boundary. Mangles Gulch, one of the main tributaries to Aptos Creek, was investigated briefly as described above, although it is outside of the Zone 6 Boundary. Valencia and Trout Creeks were also visited during these field investigations, and are described in more detail below.

Summary of Field Investigation

Aptos Creek was flowing at the time of the Schaaf & Wheeler field investigation, and generally contains flowing water year round. Aptos Creek is diverse, with the upper reach of the creek

within Zone 6 consisting of heavily vegetated banks, and a cobble/gravel bed. The banks of lower reaches are in many locations terraced or landscaped, with concrete banks in some locations. The bed becomes finer material moving downstream until its outlet to Monterey Bay where the banks are entirely engineered concrete and the bed is entirely sand. County staff has observed this location for a number of years and has noted that there is a cobble layer under the sand, and in places the lower side banks are of sandstone bedrock. At times much of the sand will scour out and the cobbles can be seen upon creek drawdown during low tides. There are several man-made stability features in the creek, including concrete banks and at least two grade control structures (concrete encased sewer pipes according to County staff) in the channel bed (at Spreckels Drive and near the next downstream private bridge). There is evidence of minor to moderate scour in various locations of the creek, most notably the undercutting of concrete banks where they have been installed.

Detailed Field Description

Upstream of Mangles Gulch, Aptos Creek is a natural channel with heavily vegetated banks and primarily coarse bed material of small boulders, cobbles and gravel with some finer sands in evidence (P135). Downed woody debris from fallen branches and trees is common (P134). Floodplain benches on both sides of the creek are visible in this reach. Just upstream of the confluence with Mangles Gulch, the right bank steepens considerably for a short reach (P133) before returning to multi-staged channel geometry. A scour hole in the channel bed is seen at this location. The confluence with Mangles Gulch is undefined. Both Aptos Creek and Mangles Gulch likely meander at this confluence, and the result is a wide, uneven bed forming a moving junction between these creeks.

Downstream of the Mangles Gulch confluence, the floodplain banks continue on the right side of channel, however for a short reach (~500-feet) the left bank steepens somewhat, and private buildings are located near the top of left bank. A short reach of non-engineered rock rip-rap is placed on the left bank behind a private home in this reach. Moving downstream the left bank softens and re-forms a multi-staged channel just upstream of the Aptos Village Park. Moderate and significant local toe scour is visible in this reach (P136), however much of this local scour occurs along natural rock outcroppings and no structures appear to be threatened. The bed in this reach consists of boulders and gravel, although there is an increasing amount of fine material compared to upstream reaches. Downed woody debris continues along this stretch of Aptos Creek (P137). A free span railroad bridge crosses over Aptos Creek (P139) just upstream of the free span Soquel Drive crossing (P119).

The scour in the reach of Aptos Creek upstream of Soquel Drive is at times significant, threatening existing vegetation, however this is a wide, relatively natural reach of the creek, and the failing vegetation is a natural process that creates beneficial woody debris in the channel. The scour through this reach does not appear to threaten homes or private property.

Aptos Creek between Soquel Drive and Highway 1 is relatively large channel, with signs of significant local scour. From Soquel Drive continuing downstream, man-made influences on the channel are more present compared to upstream of Soquel Drive. Just downstream of Soquel Drive, a concrete slab on the top of right bank is undercut and at risk of failure (P120), although subsequent investigations along the top of bank show that this appears to be a remnant slab not currently tied into any structures. Continuing downstream, trash is evident in the channel in

several locations (P118), and debris jams composed of both woody debris and trash can be seen (P117). Throughout this reach, small 'shotgun' culvert outfalls that appear to be privately installed (i.e. not County stormdrain outfalls) are contributing to local scour (P116, P115). There is also a small intake pipe (assumed privately installed) located on the right side of the channel about 300 feet upstream of Highway 1 (P114). In general, where channel banks are well vegetated through this reach there is little evidence of scour (P113), however where man-made bank hardening has occurred, such as along the right bank about 200 feet upstream of Highway 1, there is local toe scour at the limit of the hardened bank (P111). Aptos Creek passes under Highway 1 via a large, multi-span bridge with piers in the channel bed/banks (P110).

Just downstream of Highway 1 is the confluence with Valencia Creek (note that GIS shapefiles provided show this confluence upstream of Highway 1, in fact it is downstream). A concrete shelf (stretching about five feet from the channel toe towards the centerline) runs along about thirty feet of the left toe of Aptos Creek upstream of the Valencia Creek confluence. Valencia Creek enters Aptos Creek via a large concrete arch culvert, and the concrete shelf in Aptos Creek appears to tie into the Valencia Creek culvert. A wooden fish passage structure is installed at the Valencia Creek culvert (P109).

Downstream of the Valencia Creek culvert, Aptos Creek becomes wider, toe to toe, with lower banks. The banks are well vegetated with a mix of private landscaping and native and non-native riparian species. The bed continues to include boulders and cobbles, however moving downstream the bed material quickly shifts to primarily sands and fine material (P107, P108). Continuing downstream, the channel becomes increasingly shallow, and homes are located near to the channel bank, with significant landscaping and hardening of the channel, and/or decks which overhang the channel (P106).

Aptos Creek passes under Spreckels Drive via a free span bridge. Immediately upstream of Spreckels Drive is a ~5 foot tall cut-off wall (concrete encased sewer pipe according to County staff) spanning the creek (P105). At the time of Schaaf & Wheelers inspection, there was a small amount of flow over a notch in this cutoff wall. Upstream of the cutoff wall is entirely sediment filled (P104). It may be assumed that this cutoff wall represents the most upstream limit of tidal influence in Aptos Creek. Downstream of Spreckels Drive, the channel continues to have heavily vegetated banks, and becomes increasingly shallow and tidally influenced (P140). About 300 feet downstream of Winfield Way, Aptos Creek banks become almost entirely concrete lined with little to no vegetation (P142). Within another 900 feet, Aptos Creek discharges to Monterey Bay, after passing under a pedestrian bridge. Aptos Creek forms a seasonal Lagoon during years when low flows combined with wave action create a sandbar separating the creek outlet from the Bay.

Valencia Creek

Valencia Creek is a tributary to Aptos Creek. From its confluence with Aptos Creek just downstream of Highway 1, it continues upstream in a generally north-easterly direction, forming the boundary of Zone 6 for some 7,500 feet of its length. The total length of Valencia Creek is about 6.5 miles. The field investigation focused on that reach of Valencia Creek that is entirely within (as opposed to forming the boundary of) Zone 6. Trout Gulch is a major tributary to Valencia Creek, and is about 4 miles in length. Valencia Creek is listed on the Clean Water Act Section 303(d) List of Water Quality Segments for sedimentation.

Summary of Field Investigation

Valencia Creek is a generally natural channel with well vegetated banks and little evidence of significant scour, although some non-engineered channel protection is found. The channel is generally trapezoidal, with a wide bed and a migrating low flow channel within the bed. Natural rock outcropping create stable channel banks in several locations.

Detailed Field Description

Valencia Creek fully enters Zone 6 about 1,100 feet upstream of its confluence with Trout Gulch. This reach of Valencia Creek was dry during the field investigation. The channel bed is wide, and generally composed of mud/fine material, with occasional large boulders. The banks are well vegetated and woody debris is seen in the creek (P176). Just downstream of the Zone 6 boundary, broken concrete slabs have been placed along the right toe of the creek (the outside of a bend) for an approximately 50 foot long stretch. Continuing downstream, the creek remains fairly uniform, although woody debris in the channel increases (P175). Some trash is visible in the channel, including a mattress which, together with a large tree trunk, forms a small debris dam in the creek bed (P174). During the time of the field investigation, water was present in the channel downstream of this point. Some local scour is visible where the low flow channel has migrated to the right toe of the channel (P170), however natural rock outcroppings along the right bank are expected to keep any local scour issues along the right toe in check.

Continuing downstream, Valencia Creek reaches a confluence with Trout Gulch. Trout Gulch is heavily vegetated and only a short reach of it is within Zone 6. For these reasons, it is described here instead of in a separate section of this report. The confluence between Trout Gulch and Valencia Creek is formed by a natural rock outcropping / bank (forming the left bank of Trout Gulch and the right bank of Valencia Creek immediately upstream of the confluence) (P168). Trout Gulch has a similar morphology as Valencia Creek, with a low flow channel set in a wider channel bed, and generally trapezoidal with vegetated banks (P171). Moving upstream along Trout Gulch, the channel narrows and quickly becomes impassable due to narrow, steep channel banks and thick vegetation in the creek bed (P173, P172).

Downstream of the Trout Gulch confluence, the banks of Valencia Creek steepen as the creek approaches Soquel Drive (P167). Valencia Creek passes under Soquel Drive via a concrete box culvert (P166). The culvert drops about five feet at the downstream face of Soquel Drive. A fish ladder has been constructed to allow fish to pass this obstruction (P180). Fish were observed using the ladder during the field investigation, although the species of fish is unknown. Downstream of Soquel Drive, the left bank of Valencia Creek is effectively formed by the Highway 1 embankment. As such, the left bank is steep, quickly becoming concrete in stretches (P181). Although the creek continues its low flow channel migration in the wider bed through this reach, it hits the concrete wall of the Highway 1 culvert / embankment and is forced right (P182) before passing under Highway 1 via a concrete box culvert (P183). It appears this culvert has also been fitted with a fish ladder device. Immediately downstream of Highway 1 is the confluence between Valencia Creek and Aptos Creek.

Bush Gulch

Bush Gulch is the southernmost named creek in Zone 6, although it has a sizable unnamed tributary (Stream 1549) from the south. Bush Gulch is located entirely west of Highway 1, and despite its location low in the watershed, drains large portions of open space, including Seascape Golf Course. Much of Bush Gulch within Zone 6 is either culverted or un-defined through the Seascape Golf Course. Both Bush Gulch and Stream 1549 are relatively large, with well vegetated banks and limited access to the Channel bed. The creek was dry during the field investigation. Bush Gulch is about 1.4 miles long, and Stream 1549 is about 1.2 miles long.

Summary of Field Investigation

Where it enters Zone 6, east of Pinehurst Drive, Bush Gulch is heavily vegetated, and Schaaf & Wheeler engineers were unable to access the creek. Downstream of Pinehurst Drive, the creek enters a culvert, and remains culverted until just upstream of the Seascape Golf Course. The exact location of the culvert outlet is unknown since the creek was fenced and inaccessible upstream of the golf course (P183). It appears that the creek runs overland through the golf course (P184, P185) until again becoming channelized, but there may be an underground culvert through this reach that was not visible or accessible during the site visit.

Downstream of the Seascape Golf Course, the creek is heavily vegetated and deepens quickly. After passing under Sumner Avenue, Bush Gulch confluences with Stream 1549 then passes under the SPRR. Between the SPRR and the beach, Bush Gulch is a large channel with relatively steep banks which are heavily vegetated with a mixture of trees, brush, and grass. The channel bed appears sandy. No significant scour was located along Bush Gulch, however it must be noted that the majority of the creek bed was not accessible due to private property or heavy vegetation.

Stream 1549 enters Zone 6 just upstream of Dolphin Drive. Immediately downstream of Dolphin Drive, the creek widens into a large detention pond fringed with trees, cattails, and other wetland riparian vegetation (P 189, 190). Access to Stream 1549 downstream of the basin is limited, but in general it appears to be well vegetated (P192) and stable. It appears the Stream 1549 is the largest un-named creek in Zone 6.

SUMMARY

Each creek in Zones 5 and 6 is unique, with significant variations in bed material, vegetation, size, and stability. Some generalities can be drawn, however. All of the creeks included in this effort are in urbanized areas, and some amount of trash was present in virtually every creek. In general, creek beds nearer the coast are sandy, with bed material becoming increasingly course moving upstream. There are relatively few engineered channel bank stability projects within Zones 5 & 6 – the vast majority of bank stabilization measures appear to have been put in place by adjacent homeowners, and are common locations for local scour development. Overall, despite some locations with moderate to significant localized scour, channel banks appears relatively stable, with little evidence of active channel incisement or immediate bank failure risk found.

Ongoing monitoring of significant scour locations noted in this report is recommended. Findings from this report may also be useful in future classification of streams susceptible to scour or sediment production.

APPENDIX F

REVIEW OF COUNTY DESIGN STANDARDS, LID/ BMP SPECIFICATIONS/STANDARDS

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

100 N. Winchester Blvd., Suite 200
Santa Clara, CA 95050
(408) 246-4848
FAX (408) 246-5624
s&w@swsv.com

FINAL TECHNICAL MEMORANDUM

TO: Santa Cruz County Public Works
Rachel Fatoohi

DATE: April 12, 2012
Revised May 3, 2013

FROM: Stephanie Conran, PE
M. Eliza McNulty, PE

JOB #: CRUZ.04.09

SUBJECT: Review of County Design Standards, LID/BMP Specifications/Standards
(Deliverable for Stormwater Facilities Master Planning Tasks A2/B2 and A3/B3)

Schaaf & Wheeler has reviewed the County of Santa Cruz (County) stormwater management design criteria as set forth in Part 3 of the County of Santa Cruz Design Criteria Manual (June 2006). Part 3 of the County Design Criteria (CDC) is reviewed on the basis of technical merit (age, adequacy, and accuracy of background data, technical methodology, etc), ease of use, consistency with existing and expected requirements, and consistency with other municipal criteria, adequacy and effectiveness. In addition to the stormwater management section of the County design standards, Schaaf & Wheeler has reviewed those sections of the street design (Part 2) and driveways (Part 6) which relate directly to stormwater runoff. Existing County impervious area mitigation requirements, which do not have a stand alone section in the CDC but are generally covered within the Stormwater Management retention/detention sections, are also reviewed. This memo outlines the findings of this review.

This memorandum was submitted to the County in Draft format in March, 2011 and finalized based on comments received from the County in April, 2012. Concurrent with Schaaf & Wheeler's finalization of this memorandum, the County updated their design standards in March, 2012, incorporating many of the recommendations made by Schaaf & Wheeler herein. Similarly, the County updated its Stormwater Management Plan after development of the Draft of this memorandum, rendering some of the comments herein pertaining to the Stormwater Management Plan out of date. The County transmitted additional comments to Schaaf & Wheeler in April, 2013, and this memorandum has been revised to address those comments.

The review is broken into eight sections: Hydrology (CDC Section 3C), Hydraulics (CDC Section 3D), Storm Drainage Facilities (CDC Section 3E), Detention (CDC Section 3G), Retention (CDC Section 3H), Streets (CDC Part 2), Driveways (CDC Part 6), and Impervious Area Mitigation. This document notes aspects of the Design Criteria that are unique to the County (compared to other municipal criteria) and provides recommendations for sections of the County Design Criteria to be updated in future revisions. In general, stormwater criteria and

methodology found in the County Design Criteria that is standard and acceptable is not specifically noted in this document. This document is not intended to serve as an update to the County Design Criteria.

Hydrology (County Design Criteria, Section 3C)

Most of the hydrology section is generally congruent with requirements in neighboring municipalities.

The County Design Criteria (CDC) provide rainfall intensity data via Figures SWM-2 and -3 (isopleths and IDF curves). The data is known to be approximately 30 years old. In recent years, County staff has conducted analyses which indicate that utilizing updated rainfall statistics does not create significant changes to the resulting figures. Schaaf & Wheeler has not completed an independent review of these analyses.

Schaaf & Wheeler recommends that future updates to the CDC include revisions to the time of concentration calculation methodology. The design standards provide a nomograph for calculation which only applies to natural watersheds. Since land use throughout the county is varied, guidance for the calculation of time of concentration for various land uses should be provided. Many municipalities provide an equation, instead of or in addition to nomographs, to allow for variables to be altered as deemed appropriate for specific watersheds or varying land uses. Example methods commonly used in other municipalities include the Kirpich formula (for natural or rural land uses), or for application in urban or rural watersheds, a specified roof-to-gutter time (usually between 5-15 minutes) added to a calculated overland time of concentration based flow length and average velocity. Nomographs may be provided for average velocities for various slopes/land uses.

A variety of hydrologic methodologies are allowed for watersheds greater than 200 acres. Though a 25% safety factor is prescribed (to account for variance between methods), most municipalities prefer proscribing a specific method (commonly SCS for large basins) to provide uniformity, confidence in calculation, and ease in review.

Hydraulics (County Design Criteria, Section 3D)

Overall, the requirements found in the Hydraulics section are fairly typical of municipal design standards with a few exceptions.

The CDC state that in providing for design flood overflow protection, roadway overflow is not permitted (with some exceptions). The 'design flood' is defined in the Hydrology section 3C1, and ranges from the 25-year event to the 100-year event, based on site size. This requirement seems to suggest that during storm events greater than the design flood, flows in the roadway are not permitted, which is an unusual and likely infeasible standard which also conflicts with later standards regarding gutter flow. Based on feedback from County staff, we understand that this language may be meant to refer to the overtopping of streets at stream culverts, which is more

standard, however we recommend that the language be revised to clarify the allowable overflow from the storm drain system in streets / culverts / streams. Many municipalities encourage flow in excess of the 10-year event to be carried within street right-of-way with the exception of major emergency access roads, where a minimum travel lane width is specified. This standard is generally feasible to accomplish while still preventing structure damage. The CDC requires finished floor elevations to be set one foot above the design flood level. It is typical for municipalities to require finished floor elevations for properties inside of special flood hazard area, as defined on a Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) be set at least one foot above the FEMA 100-year base flood elevation, regardless of site size.

Many of the detailed calculation methodologies and assumptions are 'buried' within exhibits SWM-6 and SWM-7. For ease of use, Schaaf & Wheeler recommends these standards, methodologies, and assumptions be explicitly stated within the text of the document in addition (or alternatively to) the exhibits. SWM-7 provides direction for calculations to be completed "for pipe flowing full" and "if flow is subcritical", however there is no direction for methodology to be applied if these conditions are not the case, nor does the figure direct designers whether these are required assumptions. In general, other municipalities require hydraulic calculations to determine if a pipe being analyzed is in fact flowing full and in sub or super critical flow conditions, and the appropriate application of various loss equations based on that finding. If the downstream limit of an analysis is a continuing storm drain system (as opposed to an outlet), then a full pipe at that downstream limit is a common assumption.

No Manning's 'n' values are provided for natural channels or ditches. While the reference documents referred to in the CDC do include this information, it may be helpful to include design values for different types of rock-lined, blanket-lined, or vegetative-lined channels, as well as specific values (instead of the range provided) for different types of plastic pipe (PVC, ABS, HDPE) and cast iron pipes within the CDC. Recommended values can be found in water resource manuals, including the McGraw-Hill series in *Water Resources and Environmental Engineering* (1979) or *Open-Channel Hydraulics* by Ven te Chow (1959).

Open channels are forbidden within residential areas, a restriction which is not typical and not found in other municipalities. This limitation restricts the use of many LID/BMP stormwater treatment options. Unless this restriction is meant to refer only to high density residential, this is not typical or even recommended in other municipalities.

Storm Drainage Facilities (County Design Criteria, Section 3E)

Overall, the requirements found in the Storm Drainage Facilities section are typical. One exception is that the manual requires a bridge structure when flows necessitate a culvert greater than 6 feet in diameter, effectively limiting culvert sizes in the County to 6 feet. Other municipality's manuals reviewed for this analysis do not specify a maximum culvert size.

The second exception is the standards regarding 'Water Quality Treatment Units', which the CDC state may be required at manholes or storm drain inlets. Figures SWM 11 and 12 show

example water quality treatment units, which effectively create a standing volume of water which then seeps into the surrounding ground. The figures call for impermeable materials to be used for projects that have the potential to cause groundwater contamination; Schaaf & Wheeler recommends that such units not be allowed at all for projects which may cause groundwater contamination. A minimum emptying time of 72 hours for units should also be specified for consistency with typical vector control measures.

Detention (County Design Criteria, Section 3G)

The County endeavors to keep 'policy' direction out of the CDC document, instead including policy information (such as downstream impacts analysis and detention criteria requirements) in the Santa Cruz County General Plan. This is atypical, and most municipalities include this information directly in their design criteria (as well as their General Plans). While the CDC does reference the relevant General Plan sections, it is recommended that the County explicitly state that criteria (or 'policy') for onsite stormwater detention requirements may be found in those sections.

The County General Plan (7.23.1) states that new development must "provide both on and off site improvements to alleviate flooding problems before consideration of on-site detention of stormwater" as well as "require runoff levels be maintained at predevelopment rates for a minimum design storm...to reduce downstream flood hazards and analyze potential flood overflow problems, where applicable."

Regarding on-site stormwater detention, the General Plan states (7.23.3) that "where it is not possible to alleviate drainage problems through on and off-site improvements...require on-site stormwater detention sufficient to maintain, at a minimum, post-development peak flows at pre-development levels for the selected design rainstorm for all development projects greater than one acres in area, and to alleviate current drainage problems, if feasible." Based on these statements, our understanding is that the goal of on-site detention is to address flooding concerns, not for water quality treatment, which is addressed via the retention requirements, discussed below.

The phrasing of these sections of the General Plan is confusing. Based on comments from City staff, there is inconsistency in when detention is required (comments received from different reviewers use different criteria - parcels exceeding one acre vs. 500 square feet of new impervious surfaces, for example). Based on communication with County staff, Schaaf & Wheeler understands the practiced standard is that all new development is required to hold runoff levels to predevelopment rates for the 10-year event; however section 7.23.3 seems to suggest that for projects greater than one acre; if drainage problems can be alleviated through off-site improvements, on-site detention may not be required. It is our understanding that this is not the intent of the section, and rather it is to discourage detention on projects less than one acre in size. Schaaf & Wheeler recommends the language in the General Plan be clarified in future General Plan updates, and that specific criteria for when detention is required be developed.

Neither the "minimum design storm" referenced in section 7.23.1 nor the "selected design rainstorm" referenced in Section 7.23.3 are clearly defined in the CDC. The CDC states that the "minimum criteria for providing on-site detention is that the maximum rate of runoff leaving the developed site shall not exceed the runoff rate from the pre-development site based on a 10-year storm, 15-minute time of concentration, including a 25% safety factor.". Based on this statement, we conclude that the standard 'peak matching' required by the CDC and General Plan is that the post-project 10-year peak runoff rate must not exceed the pre-project 10-year peak runoff rate, regardless of development size, or on or off site system capacities or improvements. We recommend that the phrasing used in the general plan to explicitly define the "minimum design storm" and the "selected design rainstorm", particularly if the interpretation stated above is incorrect.

The minimum criteria, as quoted above, calls for detention to be required based on a 10-year strom and 15-minute time of concentration (Tc). Schaaf & Wheeler recommends removing the reference to 15-minute Tc, and instead requiring detention to be based on actual calculated time of concentration for existing and post project conditions. A smaller Tc leads to a higher peak runoff. Therefore, particularly for large, undeveloped sites, specifying a Tc of 15 minutes, when the actual existing Tc may be much larger, could lead to over-estimating the existing peak runoff, thereby under-designing the detention required to actually mitigate impacts to the 10-year peak runoff. Schaaf & Wheeler notes that the intention of this criteria as written may be to specify that regardless of calculated Tc, a minimum Tc of 15-minutes should be applied. If this is the case, Schaaf & Wheeler recommends that the language be modified to clarify this and clearly convey that the actual time of concentration should be calculated, with a minimum Tc of 15-minutes applied to detention design.

The requirement that post project runoff be mitigated to pre-project peak rates is standard and typical of other municipalities, although the exact 'peak matching' event varies considerably across municipalities. For flood control purposes, some municipalities require detention of the difference between the 10-year and 100-year peaks while others require detention only to mitigate the impact of the 100-year storm. Virtually all other municipalities require some mitigation of increases to the 100-year peak runoff rate. The General Plan states (7.23.1) that new projects are required "to provide both on and off-site improvements to alleviate drainage problems before considering on-site detention of storm water". This suggests that off-site improvements must be provided <u>in addition</u> to mitigation of peak runoff, which is not typical. Generally, if off-site drainage improvements are to be made it is treated as a mitigation measure for an increase in peak site runoff. If our review has misinterpreted the intent of this policy, we recommend that it be revised to more clearly define when off-site improvements are required. Schaaf & Wheeler recommends that site developers be given the option to show how they will achieve no drainage impacts (which may be achieved via off-site improvement or on-site detention). Additionally, the use of the word "considering" is vague, and does not clearly convey under what conditions a project can (or must) include on site detention.

Utilizing the modified rational method for detention design is typical. The drainage standards state that detention should be designed for “a broad range of storms”. While it is typical for detention to be designed for a range of storms, generally, municipalities are very specific as to the upper and lower limits of the range of storms that must be detained. As described above, our

interpretation of the CDC is that the minimum upper bound that detention must be designed for is to mitigate for increases to the 10-year storm event, a typical and feasible requirement.

In the design standards, there are several available nomographs for calculating the required detention volume for a variety of storms yet there is little guidance as to when each should be used. Based on communication with County staff, we understand that more stringent detention requirements/nomographs may be required in areas of the County that are known to be particularly impacted by increased peak runoff. Schaaf & Wheeler recommends that a map or other guidance be provided to clarify where and when the various nomographs should be applied.

The time of concentration methodology in this section is problematic. Time of concentration is very site specific, based on size and shape of watershed, soil type, land use, topography, etc. The manual requires a pre-development time of concentration of 15 minutes and the detention basin size calculation nomograph is based on that. This is a time of concentration more typical of a fully developed, small watershed. Detention basins sized with this method may be under-sized.

Finally, the design standards require that for underground structural detention systems, the predevelopment flows bypass the detention facility so that the storage volume is used only for the additional runoff generated by the new development. Based on feedback from County staff, we understand that the intent and practice of this requirement is to allow predevelopment flows to be diverted at the inlet to the facility, or, where sediment loading is not a concern, to pass through the facility and outlet works, not utilizing any of the storage volume. This phrasing is confusing, and suggests that predevelopment flows must bypass the facility entirely (i.e. be directed away from the facility via site grading or design instead of being diverted or bypassed within the facility itself); a requirement that is atypical, difficult to construct, and not the intended criteria. Schaaf & Wheeler recommends that this criterion be eliminated from the CDC.

Retention (County Design Criteria, Section 3H)

Similar to detention, the requirements for which developments must include retention are stated in the General Plan, not the CDC. This is atypical, and as such, we recommend that the County explicitly state that the information (or 'policy') regarding when projects are required to provide retention is located in the General Plan. The General Plan states that on-site retention of increased runoff is required in Water Supply Watersheds and Primary Groundwater Recharge Areas (as well as other areas as feasible). We recommend this statement in the General Plan include a reference to the CDC. Based on where retention in the County is required (Water Supply Watersheds and Primary Groundwater Recharge Areas) we assume that the primary purpose of retention in the County is to achieve water quality treatment and/or groundwater supply related goals, not flood control mitigation. This review applies that assumption throughout. Schaaf & Wheeler recommends that a map showing Water Supply Watershed and Primary Groundwater Recharge areas be added either to the General Plan or CDC.

Overall, the requirements found in the Retention section are unique to the County of Santa Cruz. The design standards allow two methods for the design of retention: the Slope Infiltration

Method and the Storage Percolation Method. Though the Storage Percolation Method is typical (in general, though not as set forth in the design standards), there are no other municipalities that we are aware of that allow the Slope Infiltration Method. With the difficulty of implementation of retention in moderate/steep sloped development areas, this method provides an option where otherwise the County may have to declare a project exempt due to over-constrained project conditions. Based on comments from County staff, we understand that the criteria regarding the Slope Infiltration Method have been developed with consultation from geotechnical and civil engineers.

It is common for volume based water quality treatment methods to be designed for a 'treatment volume'. For the Storage Percolation Method, the design standards require retention of the 2-year 2-hour storm, which serves as the 'treatment volume' for retention requirements, although that specific phrase is not used in the CDC. Depending on location within the County, this equates to a 0.6 - 1.5 inch rainfall event. Most municipalities have adopted one of the two methods recommended by the California BMP Handbook: Either the maximum stormwater quality capture volume for the area based on historical rainfall records and formula and volume capture coefficients set forth in *Urban Runoff Quality Management WEF Manual of Practice No. 23 and ASCE Manual of Practice No. 87 (1998)* or the volume of annual runoff required to achieve eighty percent or more capture, determined in accordance with the methodology found in the California BMP Handbook. It should be noted that in the CountyStormwater Management Plan (2009) reviewed for this effort, the County states its intention to adopt the methodologies outlined in Attachment 4 of the General Permit, which in turn references the California BMP handbook methodology for volume based water quality treatment design. Schaaf & Wheeler recommends that the CDC be updated to clarify the purpose of required retention, and to be consistent with the County Stormwater Management Plan regarding water treatment volume calculation methodology. Note that the Regional Water Quality Control Board has issued a Draft Phase II General Permit which, when adopted, will supersede the General Permit Attachment 4 requirements. The Draft Phase II General Permit defines the water treatment volume as the runoff produced from the 85th percentile storm.

The CDC requires an iterative process such that rainfall onto the retention area is accounted for in the sizing criteria. If the primary goal of the retention is groundwater recharge, this is logical. However; if the primary goal is water quality treatment, then there is no need to treat rainfall that has not runoff from an impervious surface, and thus this iterative process is needlessly complex. The primary goal of retention requirements is unclear.

It should be noted, however, that current trends in hydromodification mitigation required by nearby regional RWQCBs requires analysis and demonstrated mitigation of impacts to runoff *duration and frequency* for events up to the 10-year storm event. The Draft Statewide Phase II Permit hydromodification criteria requires, for the Coast Range area, that post-project runoff not exceed pre-project volume and rate for the 2-year, 24-hour storm. As such, it is unlikely that the existing retention criteria, as written, will meet anticipated RWQCB hydromodification mitigation requirements.

The CDC does not provide a lower bound for the range of storm that must be mitigated for. As such, currently the CDC does not mitigate for increases to runoff from more common storm events (although retention, discussed later, may provide some mitigation in areas where it is required). For comparison, in the San Francisco Bay area for HMP (hydromodification) purposes, the basis for detention design is 10% of the 2-yr (lower bound) through the 10-year. Other municipalities use 50% or the full 2-year, instead of 10% as the lower bound. As hydromodification mitigation becomes more prevalent in Central Coast NPDES permitting, runoff frequency, duration, and volume instead of peaks are often being considered in establishing these bounds. The bounds should be chosen based on the needs of the County, the condition of streams, creek capacity, and local NPDES and regional water board requirements.

Retention sizing methodologies in the design standards state that requirements are based on new impervious surfaces. The majority of regional water quality control board (RWQCB) requirements are based on both new and re-developed impervious surfaces. Based on comments from County staff, our understanding is that in practice, all impervious surfaces (new and existing) are subject to the detention requirements unless the applicant can prove that the existing impervious surfaces predate the creation of the flood zone district in which the project is located. If the County intends to continue applying this requirement, it should be included in the CDC and/or General Plan (along with delineation and dates of creation of the flood zones).

Other detention requirements regarding screening and structural requirements are not unusual, though most manuals do not provide such specifics.

The threshold for requiring retention is also unique. The design standards state that projects creating less than 500 square feet of new impervious surfaces are exempt from specific quantitative retention requirements. Most municipalities, and recent NPDES permits, do not require quantitative retention analysis unless the project is creating or replacing 5,000 - 10,000 square feet (depending on land use type) of impervious surface.. Retention for hydromodification or flood control purposes is generally not required unless 1 acre of impervious surface is being produced. The County's current Stormwater Management Plan (May, 2009), uses 5,000 square feet of new/replaced impervious surface for the hydromodificaion 'trigger'. Most new development within the County's jurisdiction are small projects that are well below these larger, more common thresholds. Thus, in order to encourage retention for water quality or supply goals, this lower threshold is appropriate, however the County may with to consider updating this criteria to be consistent with the Draft Regional Water Quality Control Board NPDES permit and the County's Stormwater Management Program.

Streets (County Design Criteria, Part 2)

Schaaf & Wheeler reviewed the streets sections that relate directly to stormwater runoff. Specifically, Sections A, C, F, and J.

The requirements found in the Streets section, as relating to stormwater, are adequate and typical. Our understanding is that the County is interested in revising the CDC to incorporate LID/BMP techniques. Several of the specifications should be updated to encourage greater impervious area mitigation and LID techniques. The minimum street widths provided are typical, however also providing maximum street widths to encourage decreased impervious area is recommended. Open channels, a common feature of alternative street sections, are currently prohibited by the CDC in residential areas. Schaaf & Wheeler recommends that this prohibition be removed. Concrete grass pavers are the only pervious-surface mentioned, and are prohibited from County maintained right-of-way. This may discourage the use of concrete grass pavers and other pervious-surface techniques on or adjacent to County roads.

Curbs, gutters, and sidewalks are required for all development projects unless a variance is approved through an exception process. Although from a stormwater management perspective curb and gutter is preferable, this requirement may discourage LID street design, which often utilizes curb-less streets with un-paved walking and/or parking areas. Permeable pavement / pavers are not mentioned in the design standards, with the exception of concrete grass pavers. A more general section specifying the applicability, standards, and limitation of permeable surfaces for road and sidewalk design should be added.

Low Impact Street Cross Sections

The current Geometric Street Sections provided in the County Design Criteria (Figure ST-1a) do not include a low impact street standard. If the County wishes to encourage the use of street design as a LID measure, a new figure showing Low Impact street section alternatives should be added to the CDC. Note that these changes may require updates to other sections of the CDC for consistency. Specific modifications to the typical sections may include:

- Specifying the use of pervious materials for sidewalk surfaces.
- Specifying the use of pervious materials for rural / low use street surfaces.
- Where sufficient right of way exists:
    - If a low pedestrian use area, include sidewalk on only one side of street, install vegetated drainage swale on other side. Slope entire roadway to drain towards swale. Install cuts in curb to allow roadway runoff to enter swale. Swale should include overflow into local stormdrain system. Guardrail may be required.
    - If sidewalk is required on both sides of street:
        - Shift sidewalks to limit of right of way and convert landscape strip between sidewalk and curb to vegetated swale. Install cuts in curb to allow roadway runoff to enter swale. Swale should include overflow into local stormdrain system. Guardrail may be required.
        - Alternatively, depending on site constraints, allow use of "Alternate Sidewalk Location" and construct vegetated swale between sidewalk and limit of right of way. Install cuts in curb and pipes under sidewalk to

allow roadway runoff to enter swale. Swale should include overflow into local stormdrain system. Guardrail may be required.

- Decrease minimum street widths, and/or add maximum allowable street widths. Where on-street parking is not a high priority, further narrowing of street widths may be possible.

Driveways (County Design Criteria, Part 6)

The requirements found in the Driveways section, as relating to stormwater, are typical and appropriate. Similar to the Street section, however, changes can be made to increase impervious area mitigation techniques. Concrete grass pavers are only allowed "when warranted by significant environmental conditions". This restrictive language discourages the use of concrete grass pavers and other permeable surfaces for driveways. Base rock or gravel is also included as an alternative surface to improve infiltration with appropriate limitations and specifications, with the exception that an asphalt or concrete tie-in apron of 15-feet is required. This distance could be reduced to promote decreased impervious surfaces. Specific impervious area mitigation techniques appropriate to be incorporated into the Driveway Design Standards are presented at the end of this technical memo, see the Street and Driveway Impervious Area Mitigation Techniques section.

Impervious Area Mitigation

Schaaf & Wheeler is tasked with reviewing the CDC impervious area mitigation specifications that relate directly to stormwater. As stated above, the existing CDC do not contain a stand alone section for impervious area mitigation. The County currently does charge a drainage impact fee for new impervious surfaces; Schaaf & Wheeler recommends that the CDC note this fee requirement and provide a resource to where current fee schedules can be found.

Schaaf & Wheeler recommends that future revisions to the CDC include a new section regarding Impervious Area Mitigation. The purpose of this section of this Memorandum is to provide general recommendations for the scope, standards, level of detail, and specifications to be considered by the County in the development of an Impervious Area Mitigation (IAM) section for future revisions to the CDC.

The new section should provide the requirements for the mitigation of new impervious surfaces including site design and the use of post construction BMP/LID measures. The County may opt to include specific BMP/LID design criteria, or may reference readily available resources for BMP/LID design. The IAM section should be consistent with the County's existing Stormwater Management Program, and updated on a regular basis to reflect Stormwater Management Program updates. Specific criteria for the percentage of new and/or existing impervious surfaces to be treated should be provided. It is likely that the through this revision process, the County

will find that the existing Retention section can be incorporated into the new Impervious Area Mitigation section.

Site design techniques to mitigate impervious surfaces include maximizing the amount of open space, and utilizing permeable materials wherever possible (such as decomposed granite for pathways instead of concrete, green roofs, or permeable pavement, concrete or pavers). Alternative / Low impact street design, described in more detail in the attached LID information sheet (see Appendix A) may be used to decrease total imperviousness compared with traditional street layout.

Currently, the County does not require any application or permit for removing vegetation and paving of an existing lot. As such, limiting impervious areas via site design does not offer long-term assurance that the impervious surface will be limited on a given lot. Regulations that do offer this assurance (via permit requirements, percent lot coverage limits, etc.) should be considered.

In general, techniques to decrease impervious area are flexible and not highly dependant on site-specific conditions, although site design considerations such as budget, land use, and density must be considered and balanced with decreasing impervious surfaces. For those techniques which utilize replacement of impervious surface with pervious surfaces (i.e. pervious pavement) the underlying function of the technique is infiltration into the underlying soil. As such, impervious area reduction techniques that depend on infiltration into underlying soil must consider and assess the underlying infiltration capacity of that soil, and its bearing on the appropriateness of the technique in that location. Additional details specific to impervious area reduction techniques are provided in Appendix A.

When an increase in impervious area is unavoidable, it may be mitigated by on-site infiltration of runoff via post project BMP/LID techniques. It should be noted that for new development, it is unlikely that any BMP/LID technique, or combination of techniques, will achieve full mitigation (i.e. pre-development conditions) of the increase in peak runoff rate due to the development. For this reason, Schaaf & Wheeler recommends that the Detention section of the CDC be maintained as a separate section from the Impervious Area Mitigation section.

An important consideration in the design and construction of infiltration systems is to understand that the primary cause of failure is clogging of the infiltrating soil interface. On development sites where construction will continue over an extended period of time, the final implementation of the infiltration BMP/LID should be completed after the site is fully developed and the entire catchment area is stabilized for control of sediment from construction activity. Any structural infiltration practices should be provided with upstream pre-treatment BMP/LIDs for removal of sediment (i.e. grass buffer strip, vegetated swale, sediment forebay or screen). While an infiltration trench or basin may provide removal of suspended solids, its primary functions will

be removal of very small particulates and soluble pollutants in the soil profile, reduction of the volume and peak rate of runoff to the storm sewer system and local streams, and increasing the volume of recharge to the local water table.

Currently, the County provides guidance for the use of retention basins within the CDC (Section H3, General Site Selection) such as required set backs from septic systems, minimum permeability, etc. The CDC also notes that water treatment units should be made impermeable for sites with a risk of groundwater contamination. Additional criteria the County may want to consider for future CDC revisions include:

- A minimum separation between infiltration device invert and groundwater. If available, seasonal high groundwater levels should be used in this determination. (Schaaf & Wheeler research yielded a minimum of 10 feet as a common criterion).
- A minimum separation between infiltration device invert and Bedrock or impervious soils. (Schaaf & Wheeler research yielded a minimum of 10 feet as a common criterion.)
- A minimum separation between infiltration devices and private and/or municipal wells.
- Limitations on the use of infiltration devices on sites that are constructed of fill.
- Reduction of drainage impact fees with incorporation of impervious surface mitigation.

The use of impervious area mitigation techniques should not preclude a development site from the stormwater management requirements as detailed in the effective County of Santa Cruz Design Criteria.

Bibliography

Alameda County Clean Water Program, *C.3 Design Guidance Manual*, 2006.

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Santa Cruz County, Planning Department, *General Plan and Local Coastal Program for the County of Santa Cruz, California.* Effective Date 12/19/94.

Santa Cruz County, Public Works, *Design Criteria Containing Standards for the Construction of Streets, Stormwater Systems, Sanitary Sewers, Water Systems, Driveways, within the Unincorporated Portion of Santa Cruz County*. June, 2006.

Santa Cruz County, City of Capitola, *Stormwater Management Program, Stormwater Pollution Prevention Program.* May, 2009.

Appendix A

LID Information Sheets

These Low Impact Design Standards and Best Management Practices have been gathered and modified to suit County of Santa Cruz applications. The source material is provided as footnotes in each BMP/LID summary sheet.

Bioretention Area/Swales

Purpose/Definition

Bioretention areas function as soil and plant-based filtration devices that remove pollutants through a variety of physical, biological, and chemical treatment processes. These facilities normally consist of a grass buffer strip, sand bed, underdrain, ponding area, overflow inlet, organic layer or mulch layer, planting soil, and plants. The runoff's velocity is reduced by passing over or through the buffer strip and is subsequently distributed evenly along a ponding area. Percolation of stored water in the bioretention area's planting soil enters the underdrain such that the bioretention area empties within two days.

Application

Bioretention can be utilized in any type of development. It can be implemented as a function landscape design element

Limitations

Bioretention is not appropriate for slopes greater than 20%, where water tables are within six feet of the ground surface, or where soil is unstable. As a landscape design element, irrigation may be required. Also, the underdrain is susceptible to clogging, particularly if installed prior to construction site soil stabilization.

Maintenance

Bioretention areas shall be inspected monthly for:

- Obstructions and trash.
- Ponded water. If ponded water is observed after 72 hours after a rainfall event and inspection of the underdrain, cleanouts, outfalls, etc do not show evidence of cloggling, the surface soils shall be aerated. If this does not remedy the problem, surface soils should be removed and replaced.

Other maintenance considerations include:

- The use of pesticides and quick-release synthetic fertilizers shall be minimized, and the principles of integrated pest management (IPM) followed. Check with the local jurisdiction for any local policies regarding the use of pesticides and fertilizers.
- Soils and plantings must be maintained, including routine pruning, replenishment of mulch, and weeding.
- Erosion at inflow points must be repaired.

Design Specifications

The bioretention footprint area shall be sized based on the contributing impervious area, and the ratio between rainfall inflow to infiltration rate. For example, with 0.2 inches of rainfall per hour inflow versus 5 inches/hour infiltration rate, the bioretention area would be 4% of the contributing impervious surfaces on the project site. The rainfall inflow shall be determined utilizing methodology presented in the most recent California Stormwater BMP Handbook.

Bioretention area's planting soil shall have a minimum percolation rate of 0.5 inches/hour and a maximum percolation rate of 10 inches/hour. Native soils rarely meet this percolation requirement even with admixtures, so specific planting soil mixtures capable of and certified to percolate at least 0.5-inch/hour should be utilized. Planting soils should be sandy loam, loamy sand, or laom texture with a clay content ranging from 10 to 25 percent. The pH of the soil should range between 5.5 and 6.5. The planting soil shall be a 1.5 to 3 perfect organic content, and a maximum 500 ppm concentration of soluble salts. Soil test should be performed for every 500 cubic yards of planting soil, with the exception of pH and organic content tests, which are required only once per biorentention area. If it is believed that native soils may be able to meet these conditions, in-situ testing shall be conducted to verify that the material meets the percolation requirements.

Bioretention areas shall have a vegetation layer with a 3-inch layer of non-pine mulch or grasses provided in areas between plantings. Shrubs and small trees shall be placed to anchor the bioretention area cover. Irrigation shall be provided to maintain plant life in the bioretention area.

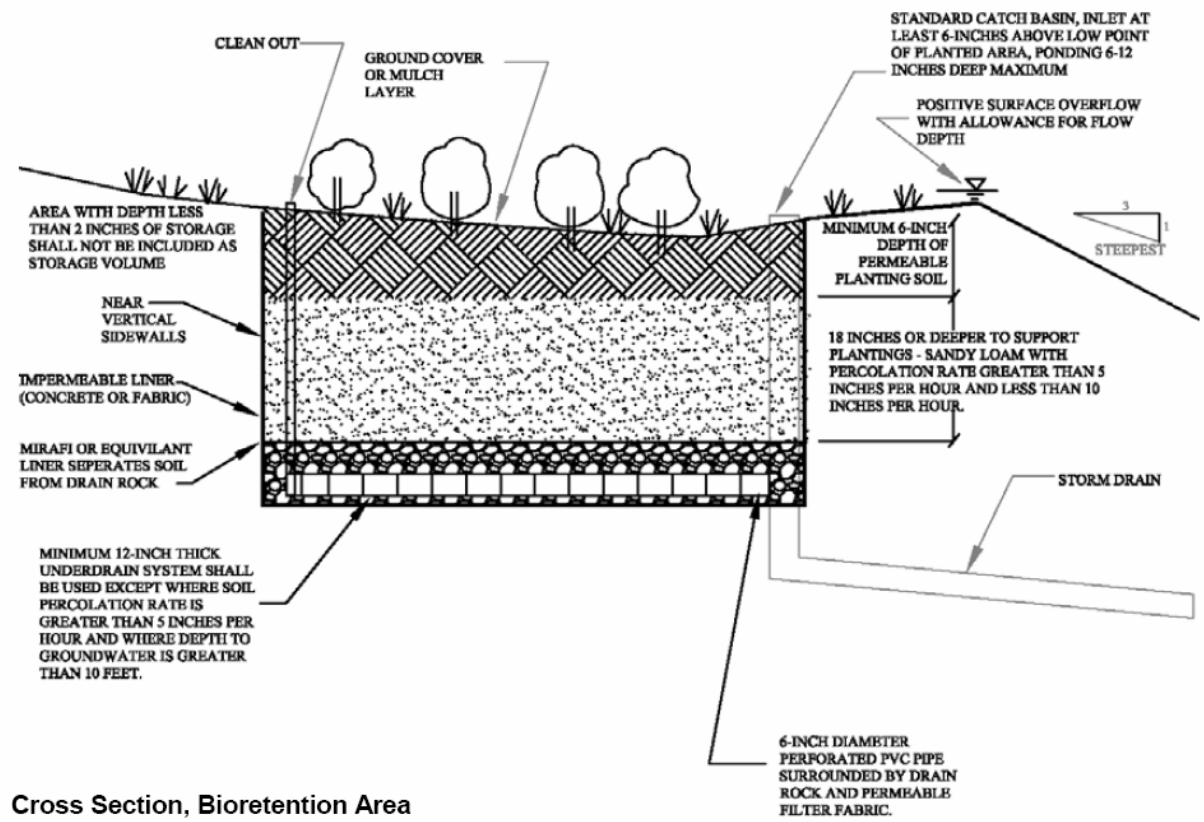
Beneath the planting soil, a layer of sand/loam, between 2' and 4' deep (depending on plant species), shall be provided to store treated runoff before seepage into native soil or underdrain. Design surface ponding depths should vary, with a maximum depth of 6 inches. Plant species should be suitable to well-drained soil and occasional inundation.

The inlet to the overflow catch basin shall be at least 6-inches above the low point of the bioretention planting area. The bioretention area shall have a minimum surface slope of 1 percent to local low points. Only areas at least 2 inches below the overflow catch basin elevation shall be considered in the surface area of the bioretention basin. An underdrain system shall be provided for the bioretention area except when percolation tests show that the native percolation rate is greater than 0.5 inches per hour and the depth to groundwater is greater than 6 feet from the surface of the bioretention area. Trees and shrubs shall be planted (at a 2:1 or 3:1 shrub:tree ratio) to provide a total of 1,000 plantings per acre.

Set back from structures shall be at least 10'. Side slopes shall not exceed 2:1; safe conveyance of overflow shall be required. Inlets must be protected with rocks, cobbles or splash blocks. Curb cuts shall have 12" minimum width. An overflow path must be designed to safely convey design flood flows to a downstream storm drain or discharge point. If required per these specifications, the underdrain shall provide a clean-out

consisting of a vertical, rigid, non-perforated PVC pipe, with a minimum diameter of 6 inches and a watertight cap fit flush with the ground. The underdrain shall tie into the overflow catch basin.

Bioretention swales follow all of the above design specifications for biorention areas, but are shaped long and narrowly with perforated underdrain pipe(s) provided regardless of native soil infiltration rates. .



Cross Section, Bioretention Area

Source: Alameda County Clean Water Program, C.3 Design Guidance Manual

Permeable Asphalt

Purpose/Definition

Permeable asphalt consists of a porous surface course supported by a uniformly graded stone bed which provides stormwater management. The permeable asphalt consists of standard bituminous asphalt in which the fines content has been screened and reduced in order to increase permeability. Permeable asphalt is placed directly on the stone bed in lightly compacted lifts of 2.5 – 3 inches.

Permeable asphalts have benefits including but not limited to the reduction of stormwater runoff rate and volume, reduction of loads of some pollutants in surface runoff by reducing the volume of stormwater leaving a site, and saving site area by using parking and driving areas as a treatment facility. Permeable asphalt is similar in application, limitations and maintenance to pervious concrete, however differs significantly in the product specifications, construction, and finished appearance. When properly designed, permeable asphalt systems provide an effective tool for the control of stormwater volume and peak flow rates.

Application

Permeable asphalt is similar in appearance to standard asphalt and has benefitting in recent years due to research regarding the use of additives and higher-grade binders to improve performance. Permeable asphalt is suitable in any climate where regular asphalt is appropriate.

Permeable asphalt is ideal for parking lots, sidewalks, walking paths, playgrounds, tennis courts, plazas and other comparable use areas. Permeable asphalt can be used in low-traffic roadways, but should be avoided on roadways carrying more than 25,000 vehicles per day. It should be noted that permeable asphalt is used in some highway settings to reduce standing water on the road. This use is specifically for safety reasons, does not provide water quality benefits, and is not relevant to the use of permeable asphalt as a BMP/LID measure.

Permeable asphalt can be used in residential, commercial, and institutional applications in both rural and urban environments. Permeable asphalt should be limited in industrial use where materials may be stockpiled or stored.

Limitations

Limitations of permeable asphalt include site selection and underlying soil permeability. Parking lots and light use residential streets are ideal for permeable asphalt. Roadways with more traffic will need a thicker section resulting in higher cost.

Grading and infiltration need to be considered early in the design process to assure effectiveness. Permeable asphalt with infiltration beds should be placed as level as possible but mild slopes (<3%) are acceptable. Soil permeability of at least 0.6 in/hr is required for infiltration. Permeable asphalt may be applied on sites with less permeable soils when combined with underdrains, however many of the flood control and water quality benefits may be reduced.

Maintenance

Typical maintenance activities and frequencies include:

- Biannual vacuuming of asphalt, at minimum
- Biannual inspection and cleaning of any inlets draining towards infiltration bed
- Maintain any planted areas adjacent to permeable asphalt to prevent soil washout and clogging of asphalt pores. Planted areas should be inspected semiannually to ensure that there are no bare or unstable spots in the landscape.
- Do not allow construction staging, soil/mulch stockpiling on unprotected asphalt

Periodic maintenance of permeable asphalt will aid in keeping the asphalt surface and/or underlying infiltration bed from being clogged with fine sediments. Compressed air units and other washing systems are not recommended. Inlet structures draining to infiltration bed should also be inspected and/or cleaned out on a biannual basis.

General Design Guidelines

A pervious asphalt system consists of a pervious surface course underlain by a storage reservoir placed upon uncompacted subgrade to aid assist stormwater infiltration or upon a filter layer with subdrains. The storage reservoir consists of a stone bed of uniformly graded and clean-washed coarse aggregate, typical 1/2 to 2 inches in size. A layer of nonwoven geotextile filter fabric can be used to separate the aggregate from the underlying soil, prohibiting the movement fines into the bed.

The permeable asphalt surface should be as level as possible and should not have a slope greater than 3 percent. Bed bottoms should be level and uncompacted to allow for an even flow of the infiltrated stormwater. On sloped sites, beds should be constructed using a terraced design.

Permeable asphalts are flexible to various soil conditions. In sites with low soil permeability, the system should include underdrains placed in a filter bed under the storage reservoir to discharge the infiltrated runoff into the storm drainage system. All systems shall be designed with an overflow system which prevents water within the subsurface storage bed to pond above the level of the asphalt surface. The design should

include consideration of stormwater runoff from the pervious asphalt in the event that its performance is compromised or for extreme storm events.

General Design and Sizing Specifications

Surface area depends on storage volume requirements and permeability of the underlying native soil. Runoff volume is based on local regulatory requirements such as a specific design storm (e.g. 2-year, 24 hour) or total runoff (85th percentile).

The permeable asphalt area necessary to capture the design volume (V_{BMP}) is determined by calculating the area needed to store the design volume at the maximum depth (b_{TH}), taking into account the accessible storage area within the gravel pore space. The depth of the gravel storage reservoir should not exceed 12 inches for either infiltration or filtration designs. The area can be calculated by using the following formula:

$$A(ft^2) = \frac{V_{BMP}(ft^3)}{b_{TH}(in) x \frac{R_g}{12\frac{in}{ft}}}$$

where A = BMP surface area (ft^2)
V_{BMP} = BMP design volume (ft^3)
b_{TH} = reservoir depth (in), and
R_g = gravel void ratio (usually 0.4)

The area calculation assumes a level (slopes less than 3%) surface.

The underlying infiltration bed is typically 12 – 36 inches deep and comprised of clean, uniformly graded aggregate with approximately 40% void space. AASHTO No. 57 gravel is often used. Depending on local aggregate sources, both smaller and larger aggregate may be used as long as the aggregate is uniformly graded, clean and contains 40% void space.

Minimum Pervious Asphalt Pavement Thickness Required to Bear Structural Load on Poor Subgrade with CBR* 2 (Ferguson, 2005)

Traffic Category	Avg. ESAL* per day	Porous Asphalt Surface Course Thickness (in)	Aggregate Base Course Thickness (in)	Total Thickness (in)
Light (parking lots, residential streets)	1	4	6	10
	10	4	12	16
Medium Light (city business streets)	20	4.5	13	17.5
	50	5	14	19
	5000	7	22	29

*CBR is California Bearing Ratio; ESAL is Equivalent Single Axle Load = 18,000 pounds

Minimum Total Pervious Asphalt Pavement Thickness (aggregate base course + pervious asphalt surface course) Required to Bear Structural Load on Various Subgrades (Ferguson, 2005)

Traffic Load	Min. Total Pavement Thickness (in)		
	Subgrade CBR* 6 to 9	Subgrade CBR* 10 to 14	Subgrade CBR* 15 or more
Light (ESAL* 5 less per day)	9	7	5
Medium Light (1,000vpd max., ESAP 6 to 20 per day)	11	8	6
Medium (3,000 vpd max., ESAL* 21 to 75 per day)	12	9	7

*CBR is California Bearing Ratio; ESAL is Equivalent Single Axle Load = 18,000 pounds

Permeable Hot-Mix Asphalt Pavement Sample Project Specifications

The language below is a sample of the specifications for permeable asphalt. These specifications should be modified to reflect specific project objectives and constraints, and should be confirmed by a structural engineer as suitable for the anticipated loads on the concrete.

A. Open graded asphalt shall be used [as indicated on the Drawings].

B. Bituminous Asphalt Cement.

1. 5.75% to 6% by weight dry aggregate.
2. Drain down of asphalt binder shall be no greater than 0.3% in accordance with ASTM D6390.
3. Use a neat asphalt binder modified with an elastomeric polymer to produce a binder meeting the requirements of PG 64-10.
   a. Elastomeric polymer shall be a styrene-butadine-styrene or equal applied at a rate of 3% by total weight of the binder.
      Polymer and binder shall be thoroughly blended at the asphalt refinery prior to loading and transportation.
      The polymer modified asphalt binder shall be heat and storage stable.
4. Add hydrated lime at a rate of 1% by weight of the total dry aggregate to mixes with granite stone to prevent separation of the asphalt from the aggregate.
   a. Tensile strength ratio shall be at least 80%.
   b. Hydrated lime shall meet the requirements of ASTM C977.

5. Test asphalt mix for resistance to stripping by water per ASTM D3625. Add anti-stripping agents to asphalt if the estimated coating area is not above 95%.

C. Asphalt Aggregate:

U.S. Standard Sieve	Percent Passing
1/2	100
3/8	92-98
4	32-38
8	12-18
16	7-13
30	0-5
200	0-3

D. Aggregate Base

1. Coarse aggregate shall be ½- to 2-inch uniformly graded stone with a wash loss of no more than 0.5% (AASHTO size number 3).

2. Aggregate Grading:

U.S. Standard Sieve	Percent Passing
2 ½”	100
2”	90-100
1 ½”	35-70
1”	0-15
½”	0-5

3. Choker Course: 3/8- to ¾- inch uniformly graded stone with a wash loss of no more than 0.5% (AASHTO size number 57).

   a. Choker aggregate grading:

U.S. Standard Sieve	Percent Passing
1 ½”	100
1”	95-100
½”	25-60
4	0-10
8	0-5

E. Special Requirements for Permeable Asphalt

1. Laying temperature of the mix shall be between 240 and 250 degrees F and ambient temperatures shall not be below 40 degrees F during the duration of paving activities.

2. Compaction of the surface course shall occur when the surface is cool enough to resist a ten ton roller.

a. No more than two passes shall be made for compaction to preserve surface course porosity.

3. Install one inch thick choker course evenly over the surface of coarse aggregate base.

References

California Stormwater Quality Association, *Stormwater Best Management Practice Handbook, New and Redevelopment*, 2003.

Ferguson, B., Porous Pavements. Boca Raton, Florida: CRC Press. 2005

Low Impact Development Center, *Low Impact Development Manual for Southern California: Technical Guidance and Site Planning Strategies*, 2010.

Pervious Concrete

Purpose/Definition

Pervious concrete was developed by the Florida Concrete Association and is most widely found in the southern states. Similar to permeable asphalt, pervious concrete is produced by reducing the amount of fines in the concrete mix in order to create voids for drainage. Pervious concrete should be underlain with a stone infiltration bed designed for stormwater management and should not be placed directly on a soil bed.

While permeable asphalt is similar in appearance and applicability to pervious concrete, pervious concrete has a coarser texture and a clean-swept finish can not be attained. A potential advantage to pervious concrete is the ability to introduce color to the mix. This allows the concrete surface to integrate aesthetically to the surrounding landscape.

Pervious concrete has benefits including but not limited to reduction of stormwater runoff peak rate and volume, reduction of loads of some pollutants in surface runoff by reducing the volume of stormwater leaving a site, and saving site area by using parking and driving areas as a treatment facility. When properly designed, pervious concrete systems provide an effective tool for the control of stormwater volume and peak flow rates.

Application

Pervious concrete is ideal for parking lots, sidewalks, walking paths, playgrounds, tennis courts, plazas and other comparable use areas. Pervious concrete can be used in low-traffic roadways, but should be avoided on roadways carrying more than 25,000 vehicles per day.

Pervious concrete can be used in residential, commercial, and institutional applications in both rural and urban environments. Pervious concrete should be limited in industrial use where materials may be stockpiled or stored as well as high traffic roadways such as highways.

Limitations

Limitations of pervious concrete include site selection and underlying soil permeability. Parking lots and light use residential streets are ideal for pervious concrete. Roadways with more traffic will need a thicker section resulting in higher cost.

Grading and infiltration need to be considered early in the design process to assure effectiveness. Pervious concrete with infiltration beds should be placed as level as possible but mild slopes (<3%) are acceptable. Soil permeability of at least 0.5 in/hr is

required for infiltration. Less permeable soils can be combined with underdrains, however some of the water quality and flood control benefits may be lost.

Maintenance

Typical maintenance limitations, activities and frequencies include:

- At least biannual vacuuming of concrete
- Biannual inspection and cleaning of any inlets draining towards infiltration bed
- Maintain any planted areas adjacent to pervious concrete to prevent soil washout and clogging of pores. Planted areas should be inspected semiannually to ensure that there are no bare or unstable spots in the landscape.
- Do not allow construction staging, soil/mulch stockpiling on unprotected concrete

Periodic maintenance of pervious concrete will aid in keeping the surface and/or underlying infiltration bed from being clogged with fine sediments. The concrete surface should be vacuumed biannually with a commercial cleaning unit. Compressed air units and other washing systems are not recommended. Inlet structures draining to the pervious concrete infiltration bed should also be inspected and/or cleaned out on a biannual basis.

General Design Guidelines

A pervious concrete system consists of a pervious surface course of concrete underlain by an infiltration bed (i.e. storage reservoir) placed upon uncompacted subgrade or upon a filter layer with subdrains. The storage reservoir consists of a stone bed of uniformly graded and clean-washed coarse aggregate, 1-1/2 to 2-1/2 inches in size. A layer of nonwoven geotextile filter fabric should be used to separate the aggregate from the underlying soil, prohibiting the movement fines into the bed.

The pervious concrete surface should be as level as possible and should not have a slope greater than 3 percent. Storage bed bottoms should be level and uncompacted to allow for an even flow of the infiltrated stormwater. On sloped sites, beds should be constructed using a terraced design.

Pervious concrete is flexible to various soil conditions. In sites with low soil permeability, the system should include underdrains placed in a filter bed under the storage reservoir to discharge the infiltrated runoff into the storm drainage system. All systems shall be designed with an overflow system which prevents water within the subsurface storage bed to pond above the level of the concrete surface. The design should include consideration of stormwater runoff from the pervious concrete in the event that its performance is compromised or for extreme storm events.

Design and Sizing Specifications

Pervious concrete shall be Portland cement Type II or V conforming to ASTM C150 or Portland cement Type IP or IS conforming to ASTM C595. The concrete should have a surface-void content of 15-25%. Detailed specifications for Pervious Concrete have been developed by the American Concrete Institute. Specific project specifications for pervious concrete should call for all work to conform to all requirements of ACI 522.1, 'Specification for Pervious Concrete Pavement,' published by the American Concrete Institute, Farmington Hills, Michigan [except as modified by Contract Documents].

Surface area depends on storage volume requirements and permeability of the underlying native soil. Runoff volume is based on local regulatory requirements defining the water quality volume such as a specific design storm (e.g. 2-year, 24 hour) or total runoff (85th percentile).

The pervious concrete area necessary to capture the design volume (V_{BMP}) is determined by calculating the area needed to store the design volume at the maximum depth (b_{TH}), taking into account the accessible storage area within the gravel pore space. The depth of the gravel storage reservoir should not exceed 12 inches. The area can be calculated by using the following formula:

$$A(ft^2) = \frac{V_{BMP}(ft^3)}{b_{TH}(in)x\dfrac{R_g}{12\dfrac{in}{ft}}}$$

where A = BMP surface area (ft^2)
V_{BMP} = BMP design volume (ft^3)
b_{TH} = reservoir depth (in), and
R_g = gravel void ratio (usually 0.4)

The area calculation assumes a level (slopes less than 3%) surface.

The underlying infiltration bed should be 12 – 36 inches deep and comprised of clean, uniformly graded aggregate with approximately 40% void space. AASHTO No. 57 gravel is appropriate. Depending on local aggregate sources, both smaller and larger aggregate may be used, as long as the aggregate is uniformly graded, clean and contains 40% void space.

Pervious Concrete Mixture Sample Specification Language

The language below is a sample of the specifications for concrete mixture proportions. This specifications below do include some superfluous information, which is intended for informational purposes for the use and applicability of these specifications. These specifications should be modified to reflect project objectives and constraints, and should be confirmed by a structural engineer as suitable for the anticipated loads on the concrete.

The Contractor shall furnish a proposed mixture design, with proportions of materials, or if mixture proportions are proprietary, a written submittal from the concrete supplier, prior to commencement of work. The data shall include densities determined in accordance with ASTM C 29 section 11, Jigging Procedure. The composition of the proposed concrete mixture shall be submitted to the Architect/Engineer for review and/or approval and shall comply with the following provisions unless an alternative composition is demonstrated to comply with the project requirements. Mixture performance will be affected by the properties of the particular materials used. Trial mixtures must be tested to establish proper proportions and determine expected behavior. Concrete producers may have mixture proportions for pervious concrete optimized for performance with local materials. General mixture recommendations are as follows:

1) Concrete mixture density: range of 105 lb/ft3 to 130 lb/ft3 (1682 kg/m3 to 2082 kg/m3) per ASTM C 29, section 11, Jigging Procedure.
2) Concrete mixture void content: range of 15% to 25%, per ASTM C 138, Gravimetric Air Determination.
3) Cementitious content: range of 450 lbs/yd3 to 550 lb/yd3 (267kg/m3 to 326kg/m3)
4) Supplementary cementitious content: Fly ash: 20% maximum; combined supplementary cementitious content: 20% maximum.
5) Water-to-cement (cementitious) ratio: range from 0.26 to 0.35.
6) Aggregate content: The bulk volume of aggregate per cubic yard (cubic meter) shall be equal to 27ft3 (1000L) when calculated from the density (unit weight) determined in accordance with ASTM C 29 Jigging Procedure.
7) Admixtures: Admixtures shall be used in accordance with the manufacturers' instructions and recommendations.
8) Mixture Water: The quantity of mixing water shall be established to produce a pervious concrete mixture of the desirable workability to facilitate placement, compaction, and finishing to the desired surface characteristics. Mixture water shall be such that the cement paste displays a wet metallic sheen without causing the paste to flow from the aggregate. (A cement paste with a dull-dry appearance has insufficient mixture water for hydration.) Insufficient mix water results in inconsistency in the mix and poor bond strength. High water content may result in the

paste sealing the void system primarily at the bottom and poor bond at the upper surface.

9) Air Entrainment: has been shown to increase freeze thaw durability of pervious concrete.

10) Fiber Reinforcement: may help prevent raveling but may decrease workability.

References

American Concrete Institute, 'Specification for Pervious Concrete Pavement,' ACI 522.1, Farmington Hills, Michigan, March, 2008.

California Stormwater Quality Association, *Stormwater Best Management Practice Handbook, New and Redevelopment*, 2003.

Colorado Redy Mixed Concrete Association, *Specifier's Guide for Pervious Concrete Pavement Design,* Version 1.2.

Ferguson, B., Porous Pavements. Boca Raton, Florida: CRC Press. 2005

Low Impact Development Center, *Low Impact Development Manual for Southern California: Technical Guidance and Site Planning Strategies,* 2010.

Rooftop Disconnection

Purpose/Definition

Rooftop disconnection involves directing runoff from downspouts to pervious areas (vegetated open space, a mulched bed, pervious pavement or other BMP) where flow can soak into or filter over the ground. This disconnects the rooftop from the storm drain system and reduces both runoff volume and pollutants delivered to receiving waters. To function well, rooftop disconnection is dependent on well suited site conditions (sufficient flow path length, soils, slopes, etc). Where site conditions are not ideal, however, rooftop disconnection may be used in combination with other BMPs (soil amendment, biofiltration, etc.) to achieve water quality treatment or runoff volume goals.

It should be noted that this BMP/LID refers specifically to the qualitative approach of directing roof runoff to pervious surfaces. This practice, as described herein, does not meet the retention requirements of the slope infiltration method described in the Santa Cruz County Design Criteria.

Application

There are many opportunities for disconnecting rooftops in both new and redevelopment designs. Simply extending existing downspouts to existing pervious surfaces may be a low cost retrofit available to many existing structures. For new or redeveloped areas, runoff may be directed to undisturbed natural areas or landscaped areas in commercial, industrial, and residential settings if design specifications can be met.

Limitations

The following constraints are critical when considering the use of rooftop disconnection to capture and treat stormwater runoff for new developments:

- *Space:* As a general rule, the treatment area should be 10% of the roof areas draining to the downspout (Portland BES, 2010); however for low permeability soils, a larger discharge area may be required.
- *Topography:* Runoff must be conveyed as sheetflow from the downspout across open areas to maintain proper disconnection. See design specifications.
- *Soils:* Downspout disconnections work best in undisturbed, sandy soils that allow runoff to infiltrate. Clay-ey soils or soils that have been compacted by construction equipment greatly reduce the effectiveness of this practice and soil amendments may be needed. Depending on detailed design of downspout outlets, splash blocks, rocks, or stone at the end of downspouts to direct runoff and control erosion may be required.

Maintenance

Maintenance of areas receiving disconnected runoff is generally no different than that required for other lawn or landscaped areas. The areas receiving runoff should be protected from future compaction (e.g., by planting trees or shrubs along the perimeter). Large amounts of foot traffic should be discouraged in areas receiving runoff.

Design Specifications

The following specifications should be applied for the design of rooftop disconnection to capture and treat stormwater runoff for new developments:

- Runoff must be conveyed as sheetflow from the downspout across open areas to maintain proper disconnection. Level spreaders may be needed at the downspout to dissipate flow. Additionally, disconnected downspouts should be located on gradual slopes (≤ 5%) and directed away from buildings to both maintain sheetflow and prevent water damage to basements and foundations. If slopes are too steep (> 5%), a series of terraces or berms, spreaders, or surface protection may be required.
- Disconnection must ensure no basement seepage. Downspouts and any extensions should extend a minimum of six feet from a basement and two feet from a crawl space or concrete slab. Longer extensions are recommended where feasible. Extensions can also be accomplished though the use of pop-up drain emitters, if desired, installed per manufacturer's specifications.
- Downspout outlets must be at least 10 feet away from the nearest downslope impervious surface to discourage 're-connections'.
- The rooftop contributing area shall be no more than 1,000 sq. feet per disconnected downspout.
- The disconnections should drain continuously through a vegetated area or filter strip to the property line or structural stormwater control with a recommended minimum treatment area of 10% of the tributary area.
- If smaller treatment areas are anticipated, then a secondary BMP should be designed to receive flows and enhance treatment (i.e., bioretention/rain garden), see Figure 2.
- Disconnections are acceptable on relatively permeable soils (hydrologic soil groups A and B) without soil testing.
- In less permeable soils (hydrologic soil groups C and D, permeability less than 0.6 in/hr), secondary BMPs (spreading device, soil amendment, bioretention, etc) are required to achieve treatment objectives.

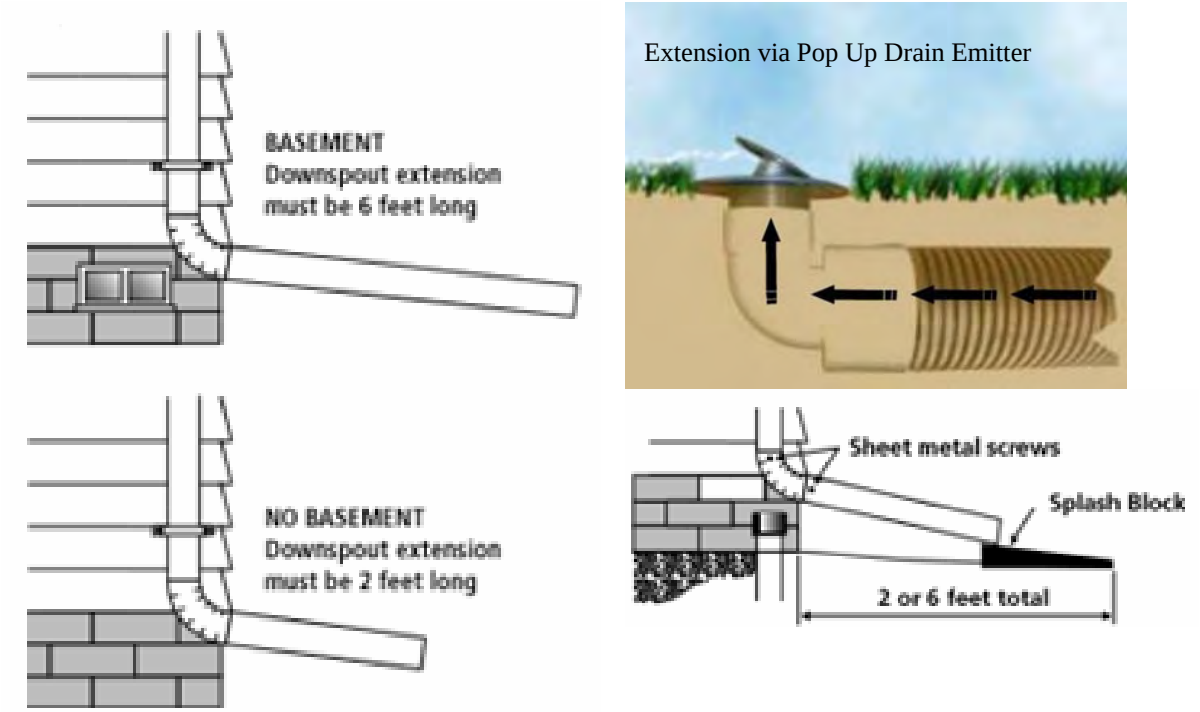


Figure 1: Methods For Disconnecting Downspouts and Spreading Flow

Sources:

City of Portland Environmental Services, *Downspout Disconnections (splashblock disconnection).* http://www.portlandonline.com/bes/index.cfm?c=31870&a=127466

Low Impact Development Center, Inc. *Low Impact Development Manual for Southern California: Technical Guidance and Site Planning Strategies.* Southern California Stormwater Monitoring Coalition, April 2010.

Center for Waterhsed Protection, Maryland Department of the Environmental Water Management Administration, *2000 Maryland Stormwater Design Manual*, 2009. http://www.mde.state.md.us/assets/document/Design%20Manual%20Chapter%205%2003%2024%202009.pdf

Sidewalk Storage

Purpose/Definition

Sidewalk storage is the practice of increasing the ability for sidewalks to store, treat, and/or infiltrate stormwater runoff. This may be achieved via the selection of sidewalk material (i.e. using pervious concrete or pavers for sidewalk surface), by integrating vegetation with sidewalks via planter boxes/areas, and/or by underlaying sidewalks with a material able that encourages plant growth (i.e. structural soil). Pervious concrete and pavers are considered BMP/LID measures in their own right, and are not explored further herein.

Integrating planting areas for trees and shrubs adjacent to (or within) sidewalks is a common BMP practice. A variety of methods for this integration exist, and the Santa Cruz County Design Criteria includes specifications for tree planting in tree wells or planting strips (see Figure ST-9a). Other potential types of vegetated sidewalk storage BMPs include integrated planting areas, and flow through planters.

Generally, the foundation material for pavements and sidewalks must be compacted to a degree that no longer supports root growth. Structural soil was developed at Cornell University, and is a patented mixture of material which can withstand the compaction necessary to provide pavement stability for sidewalks and pavements, while providing amble rooting area for street tree roots to grow. Correctly applied, structural soil can decrease tree mortality and sidewalk failure.

Application

The intent of this BMP is to manage stormwater from the immediate vicinity. Sidewalk storage techniques are appropriate for the majority of new sidewalk projects. Sidewalk storage can be used in residential, commercial, and business applications in both rural and urban environments. The use of structural soil under sidewalks creates a reservoir which both allows for storage, detention, and infiltration of surface runoff, as well as the establishment of tree and shrub roots, which aids in vegetations stability and water quality treatment.

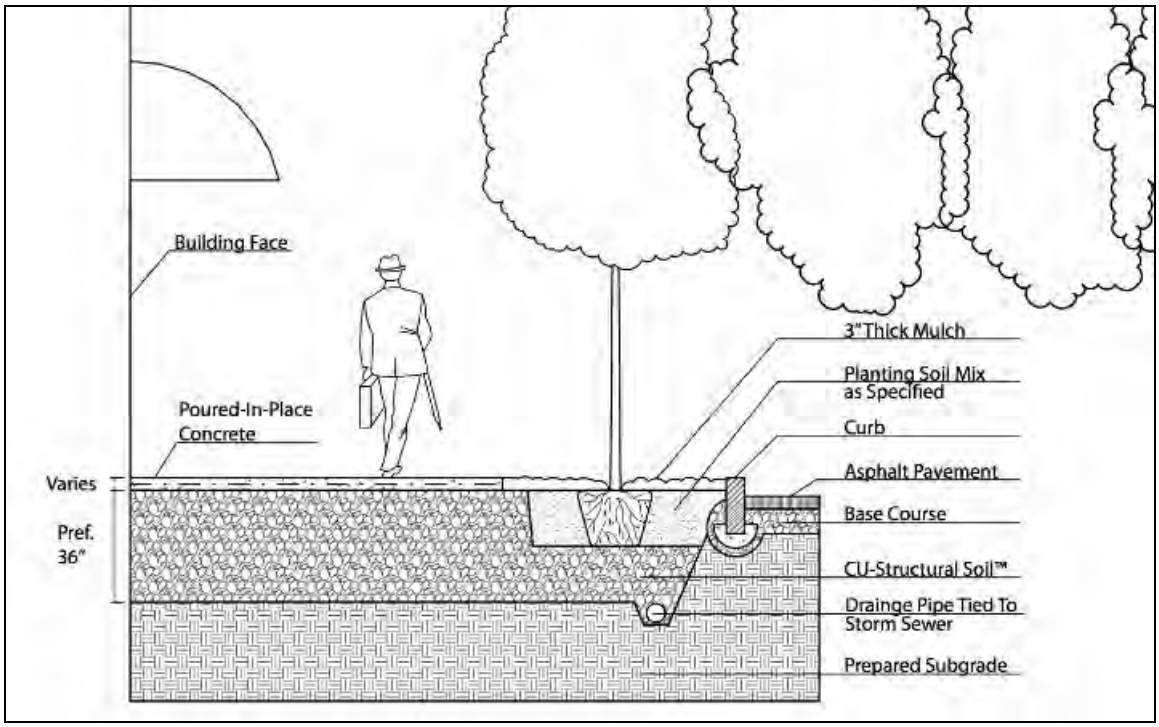


Figure 1: Example Sidewalk Storage Techniques (Courtesy Nina Bassuk)

Limitations

Limitations of sidewalk storage include site selection and underlying soil permeability. Soil permeability of at least 0.6 in/hr is required for infiltration. For sites with low soil permeability, the system should include underdrains placed in the structural soil to discharge the infiltrated runoff into the storm drainage system. Alternatively, the structural soil reservoir basin may be designed to capture runoff for a severe (i.e. 100-year) design storm. All systems shall be designed with an overflow system which prevents water within the subsurface storage bed to pond above the level of the anticipated root zone. The design should include consideration of stormwater runoff from the sidewalk in the event that its performance is compromised or for extreme storm events.

A level reservoir bed for the structural soil is recommended, and the bed should not have a slope greater than 3 percent. Bed bottoms should be level and uncompacted to allow for an even flow of the infiltrated stormwater. On sloped sites, beds should be constructed using a terraced design.

Maintenance

Structural soil itself is very low maintenance. When overlain by a pervious surface, that surface must undergo required maintenance to ensure the ongoing benefit of the structural soil. Vegetation must be maintained per general landscaping specifications; which may include soil specifications, irrigation needs, pest control and pruning.

Design Specifications

A minimum 24" depth of structural soil is recommended for optimum healthy tree root development.

These structural soil specifications are provided for informational purposes and are presented “as is” from resources provided by the manufacturers. CU-Soil is a patented material and must be purchased from a licensed supplier. Amereq (http://www.amereq.com/) licenses the manufacturing of CU-Soil to ensure quality control of installations. Carolina Stalite is composed primarily of a manufactured component available from Carolina Stalite Company (Salisbury, NC). It is available through the horticultural division of Carolina Stalite (www.permatill.com).

1.01 SAMPLES AND SUBMITTALS

A. At least 30 days prior to ordering materials, the Contractor shall submit to the Engineers representative samples, certificates, manufacturers literature and certified tests for materials specified below. No materials shall be ordered until the required samples, certificates, manufacturers literature and test results have been reviewed and approved by the Engineer. Delivered materials shall closely match the approved samples. Approval shall not constitute final acceptance. The Engineer reserves the right to reject, on or after delivery, any material that does not meet these specifications.

B. Submit two - one half cubic foot representative samples of Clay Loam and two - two cubic foot representative samples Structural Soil mixes in this section for testing, analysis and approval. Submit one set of samples for every 500 CY of material to be delivered. In the event of multiple source fields for Clay Loam, submit a minimum of one set of samples per source field or stockpile. Samples shall be taken randomly throughout the field or stockpile at locations as directed by the Engineer and packaged in the presence of the Engineer. Contractor shall deliver all samples to testing laboratories and shall have the test results sent directly to the Engineer. Samples shall be labeled to include the location of the source of the material, the date of the sample and the Contractors name. One of the two samples is to be used by the testing laboratory for testing purposes. The second sample of all Clay Loam and Structural Soil shall be submitted to the Engineer at the same time as test analysis as a record of the soil color and texture.

1. Submit the locations of all source fields for Clay Loam.
2. Submit a list of all chemicals and herbicides applied to the Clay Loam for the last five years and a list of all crops grown in the Clay Loam source fields for the last three years.

C. Submit soil test analysis reports for each sample of Clay Loam and Structural Soil from an approved soil-testing laboratory. The test results shall report the following:

1. The soil testing laboratory shall be approved by the Engineer. The testing laboratory for particle size and chemical analysis may be a public agricultural extension service agency or agricultural experiment station.

2. Submit a particle size analysis including the following gradient of mineral content:

USDA Designation	Size in mm.
Gravel	+2mm
Sand	0.05 -2 mm
Silt	0.002-0.05 mm
Clay	minus 0.002 mm

Sieve analysis shall be performed and compared to USDA Soil Classification System.

D. Submit a chemical analysis, performed in accordance with current AOAC Standards, including the following:

a. pH and Buffer pH.

b. Percent organic matter as determined by the loss of ignition of oven dried samples.

c Analysis for nutrient levels by parts per million including nitrate nitrogen, ammonium nitrogen, phosphorus, potassium, magnesium, manganese, iron, zinc, calcium and extractable aluminum. Nutrient test shall include the testing laboratory recommendations for supplemental additions to the soil as calculated by the amount of material to be added per volume of soil for the type of plants to be grown in the soil.

d. Analysis for levels of toxic elements and compounds including arsenic, boron, cadmium, chromium, copper, lead mercury, molybdenum, nickel, zinc and PCB. Test results shall be cited in milligrams per kilogram.

e. Soluble salt by electrical conductivity of a 1:2 soil/water sample measured in Millimho per cm.

f. Cation Exchange Capacity (CEC).

1 Submit 5-point minimum moisture density curve AASHTO T 99 test results for each Structural Soil sample without removing oversized aggregate.

2. Submit California Bearing Ratio test results for each Structural Soil sample compacted to peak standard density. The soaked CBR shall equal or exceed a value of 50.

3. Submit measured dry-weight percentage of stone in the mixture.

4. The approved Structural Soil samples shall be the standard for each lot of 500 cubic yards of material.

5. All testing and analysis shall be at the expense of the Contractor.

1.02 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver or place soils in frozen, wet, or muddy conditions. Material shall be delivered at or near optimum compaction moisture content as determined by AASHTO T 99 (ASTM D 698). Do not deliver or place materials in an excessively moist condition (beyond 2 percent above optimum compaction moisture content as determined by AASHTO T 99 (ASTM D 698).

B. Protect soils and mixes from absorbing excess water and from erosion at all times. Do not store materials unprotected from large rainfall events. Do not allow excess water to enter site prior to compaction. If water is introduced into the material after grading, allow material to drain or aerate to optimum compaction moisture content.

MATERIALS

2.01 CLAY LOAM

A. Clay Loam / Loam shall be a " loam to clay loam" based on the "USDA classification system" as determined by mechanical analysis (ASTM D-422) and it shall be of uniform composition, without admixture of subsoil. It shall be free of stones greater than one-half inch, lumps, plants and their roots, debris and other extraneous matter over one inch in diameter or excess of smaller pieces of the same materials as determined by the Engineer. It shall not contain toxic substances harmful to plant growth. It shall be obtained from areas which have never been stripped of top soil before and have a history of satisfactory vegetative growth. Clay Loam shall contain not less than 2% nor more than 5% organic matter as determined by the loss on ignition of oven-dried samples.

B. Mechanical analysis for a Loam / Clay Loam shall be as follows:

Textural Class	% of total weight
Gravel	less than 5%
Sand	20 - 45%
Silt	20 - 50%
Clay	20- 40%

C. Chemical analysis: Meet or be amended to meet the following criteria.

1. pH between 6.0 to 7.6
2. Percent organic matter 2 -5% by dry weight.
3. Nutrient levels as required by the testing laboratory recommendations for the type of plants to be grown in the soil.
4. Toxic elements and compounds below the United States Environmental Protection Agency Standards for Exceptional

Quality sludge or local standard; whichever is more stringent.

5. Soluble salt less than 1.0 Millimho per cm.
6. Cation Exchange Capacity (CEC) greater than 10
7. Carbon/Nitrogen Ratio less than 33:1.

2.02 CRUSHED STONE

A. Crushed Stone shall be a DOT certified crushed stone. Granite and limestone have been successfully used in this application. Ninety-100 percent of the stone should pass the 1.5 inch sieve, 20-55 percent should pass the 1.0 inch sieve and 10 percent should pass the 0.75 inch sieve. A ratio of nominal maximum to nominal minimum particle size of 2 is required

B. Acceptable aggregate dimensions will not exceed 2.5:1.0 for any two dimensions chosen.

C. Minimum 90 percent with one fractured face, minimum 75 percent with two or more fractured faces.

D. Results of Aggregate Soundness Loss test shall not exceed 18 percent. Losses from LA Abrasion tests shall not exceed 40%.

2.03 HYDROGEL

A Hydrogel shall be a potassium propenoate-propenamide copolymer Hydrogel or equivalent such as that which is manufactured under the name Gelscape by Amereq Corporation. (800) 832-8788

2.04 WATER

A. The Contractor shall be responsible to furnish his own supply of water to the site at no extra cost. All work injured or damaged due to the lack of water, or the use of too much water, shall be the Contractor's responsibility to correct. Water shall be free from impurities injurious to vegetation.

2.05 STRUCTURAL SOIL

A. A uniformly blended mixture of Crushed Stone, Clay Loam and Hydrogel, mixed to the following proportion:

MATERIAL	UNIT OF WEIGHT
Crushed Stone	80 units dry weight
Loam (screened)	as determined by the test of the mix. (Approx. 20 units dry weight)
Hydrogel	0.03 units dry weight/100units stone
Total moisture	(AASHTO T-99 optimum moisture)

B. The initial mix design for testing shall be determined by adjusting the ratio between the Crushed Stone and the Clay loam. Adjust final mix

dry weight mixing proportion to decrease soil in mixture if CBR test results fail to meet acceptance (CBR > 50).

CONSTRUCTION METHODS

3.01 SOIL MIXING AND QUALITY CONTROL TESTING

A. All Structural Soil mixing shall be performed at the Contractor's yard using appropriate soil measuring, mixing and shredding equipment of sufficient capacity and capability to assure proper quality control and consistent mix ratios. No mixing of Structural Soil at the project site shall be permitted. **Portable pugging may be used**

1. Maintain adequate moisture content during the mixing process. Soils and mix components shall easily shred and break down without clumping. Soil clods shall easily break down into a fine crumbly texture. Soils shall not be overly wet or dry. The contractor shall measure and monitor the amount of soil moisture at the mixing site periodically during the mixing process.

2. A Mixing procedure for front-end loader shall be as follows:

    a. On a flat asphalt or concrete paved surface, spread an 8 inch to 12 inch layer of crushed stone.
    b. Spread evenly over the stone the specified amount of dry hydrogel. Water the hydrogel on the stone before adding the soil.
    c. Spread over the hydrogel and crushed stone a proportional amount of clay loam according to the mix design.
    d. Blend the entire amount by turning, using a front-end loader or other suitable equipment until a consistent blend is produced.
    e. Add moisture gradually and evenly during the blending and turning operation as required to achieve the required moisture content. Delay applications of moisture for 10 minutes prior to successive applications. Once established, mixing should produce a material within 1% of the optimum moisture level for compaction.

3. A pugging operation mixing procedure may be as follows:

    a. Feed a known weight of crushed stone into the mixing trough.
    b. Add hydrogel as a slurry into trough and mix slurry and stone into a uniform blend.
    c. Meter in soil in proper proportion of Clay loam soil

While stone-slurry mixture is in motion.

d. Add water to bring mixture to target moisture content after factoring in water from the slurry and the Clay-loam moisture.

e. Auger out to stock pile or transport vehicle (or into pit if using a portable pugging operation).

B. The Contractor shall mix sufficient material in advance of the time needed at the job site to allow adequate time for final quality control testing as required by the progress of the work. Structural Soil shall be stored in piles of approximately 500 cubic yards and each pile shall be numbered for identification and quality control purposes. Storage piles shall be protected from rain and erosion by covering with plastic sheeting.

C. During the mixing process, the Contractor shall take two - one cubic foot quality control samples per 500 cubic yards of production from the final Structural Soil. The samples shall be taken from random locations in the numbered stockpiles as required by paragraph 1.03.B of this specification. Each sample shall be tested for particle size analysis and chemical analysis as described in Paragraph 1.03. C.2 and 3 above. Submit the results directly to the Engineer for review and approval.

D. The quality control sample Clay Loam-Crushed Stone ratio's shall be no greater or less than 2% of the approved test sample as determined by splitting a known weight of oven dried material on a #4 sieve. In the event that the quality control samples vary significantly from the approved Structural Soil sample, as determined by the Engineer, remix and retest any lot of soil that fails to meet the correct analysis making adjustments to the mixing ratios and procedures to achieve the approved consistency.

3.02 INSTALLATION OF STRUCTURAL SOIL MATERIAL

A. Install Structural Soil in 8 inch lifts and compact each lift. (Minimum of 24" total structural soil depth, preferably 36" recommended).

B. Compact all materials to peak dry density from a standard AASHTO compaction curve (AASHTO T 99). No compaction shall occur when moisture content exceeds maximum as listed herein. Delay compaction 24 hours if moisture content exceeds maximum allowable and protect Structural Soil during delays in compaction with plastic or plywood as directed by the Engineer.

C. Bring Structural Soils to finished grades as shown on the Drawings. Immediately protect the Structural Soil material from contamination by toxic materials, trash, debris, water containing cement, clay, silt or

materials that will alter the particle size distribution of the mix with plastic or plywood as directed by the Engineer.

D. The Engineer may periodically check the material being delivered and installed at the site for color and texture consistency with the approved sample provided by the Contractor as part of the submittal for Structural Soil. In the event that the installed material varies significantly from the approved sample, the Engineer may request that the Contractor test the installed Structural Soil. Any soil which varies significantly from the approved testing results, as determined by the Engineer, shall be removed and new Structural Soil installed that meets these specifications.

Carolina Stalite Structural Soil Specification

Section 02911 INSTALLATION GUIDELINES – STALITE STRUCTURAL SOIL MIX FOR TREES

PART 1 – GENERAL

PART 2 - PRODUCTS

2.1 MATERIALS

A. STRUCTURAL SOIL MIX

1. The Structural Soil Mix shall be Stalite Structural Soil Mix (a special pre-mixed blend of 80% 3/4" graded "**STALITE**" Expanded Slate Aggregate and 20% approved sandy clay loam).

B. TREE PIT BACKFILL PLANTING MIX

1. The tree pit backfill planting mix shall be high quality topsoil PermaTill mix.

PART 3 - EXECUTION

3.1 PREPARATION

A. GENERAL

1. The paving contractor shall obtain necessary approvals before placing each SSM layer.

2. The paving contractor shall use adequate numbers of skilled workmen who are thoroughly trained in the necessary crafts and are completely familiar with the specified requirements and methods needed for proper performance of the work in this section.

3. The contractor must provide access for and cooperate with the testing laboratory.

4. Adequacy of the final compaction of all elements requiring compaction shall be determined in the field by the engineer to achieve the minimum specified compaction level.

B. PREPARING SUBGRADE

1. The subgrade shall be prepared according to the following procedure:
   a. Remove all organic matter, debris, loose material and large rocks.
   b. Dig out soft and mucky spots and replace with suitable material.
   c. Loosen hard spots and uniformly compact the subgrade to 95% of its maximum dry density.

C. PERFORATED UNDERDRAIN SYSTEM

1. The underdrain system shall be Installed, including sock or soil separator fabric, according to drawing and specifications, and connected to the storm drain.

3.2 PLACING STRUCTURAL SOIL MIX BY PAVING CONTRACTOR

A. GENERAL

1. Adequacy of the final compaction shall be determined in the field by the engineer by proof roll.

2. The soil vents and drains shall be installed as specified and structural soil compacted under and around each pipe.

3. **Optional – If wooden tree pit forms are used, they shall be installed as directed by the Landscape Architect.**

4 The SSM shall be placed in approximately uniform lifts over the entire area of project and each lift compacted, including the open tree pit areas. Construction equipment, other than for compaction, shall not operate on the exposed structural soil mix. Over-compaction should be avoided. No foot or equipment traffic should be allowed on the compacted material until the paving is placed.

5. The drip irrigation system is to be installed and tested during the installation to avoid disturbing the compaction of the mix.

B. COMPACTING

1. Use of portable vibratory plate compacting machine (Recommended)

a. Place structural soil mix in horizontal lifts not exceeding 12 inches of compacted depth. Use a minimum of two passes, of not less than 10 seconds per pass, before moving the vibratory plate to the next adjacent location. Additional passes may be required and should be determined in the field by the engineer to insure stability of the layer. Continue placing and compacting 12" lifts until the specified depth is reached.

2. Use of vibratory steel roller (Recommended)

a. For large spaces, a vibratory steel roller weighing no more than 12 tons static weight can be used. Horizontal lifts should not exceed 12" compacted. The minimum number of passes is two and maximum number is four. Additional passes may be required and should be determined in the field by the engineer to insure stability of the layer.

3.3 PLACING PLANTING MIX

A. GENERAL

1. All necessary approvals shall be obtained from the contractor before placing the Surface planting mix.
2. Place panting mix directly on the structural soil.
3. Do not place planting mix against the trunks of existing trees

3.4 MULCH PLACEMENT

A. Mulch can be placed as specified directly on the compacted structural soil.

PART 4 - TREE PLANTING

4.1 PLANTING PIT PREPARATION BY LANDSCAPE CONTRACTOR

A. PLANTING PIT EXCAVATION

1. The Landscape Contractor shall excavate the tree pit using these procedures:

a. Excavate the structural soil mix to a depth equal to the height of the root ball of the tree to be planted. Remove the SSM to within two feet of the edge of the paved area.

b. Place the tree in the pit and backfill as soon as possible, as recommended in section "B". No tree pit shall remain excavated for more than 2 hours unless forms are used.

B. TREE PIT BACKFILL PLANTING MIX

1. The landscape contractor shall backfill the tree pit by using these procedures:

a. Remove any optional wooden forms. Immediately place the tree in the pit as detailed and mix the excavated structural soil 50:50 with the specified topsoil backfill planting mix in one foot lifts and tamp until firm.

b. Tamp the planting mix in one foot lifts until the pit is filled to the specified grade above the planting.

c. Dispose of the excavated structural soil mix (do not re-use as structural soil).

d. Attach drip irrigation as specified.

PART 2 - PRODUCTS

2.1 STRUCTURAL SOIL

A. Provide a Structural Soil mix using the two components listed below that will meet the ASTM standards as follows:

¾" Stalite Expanded Slate	80%
Sandy Clay Loam *	20%

*Percentages of sand and clay may vary to meet testing requirements

1. Air Filled Porosity: 10% - 15% by volume

2. Water Retention (ASTM D2325) at 0.1 bar: minimum of 10% - 12% by volume, up to 30%

3. Permeability (Hydraulic Conductivity) (ASTMD2434 or D5084): Minimum 1/4" - 1/2" per hour

2.2 Structural Soil Components

A. 3/4" Stalite Rotary Kiln Expanded Slate

1. ASTM C29 Unit Dry Weight loose (48 lbs/cf to 55 lbs/cf) Saturated Surface Loose (55 lbs/cf to 60 lbs/cf)

2. ASTM C127 Specific Gravity to meet 1.45 to 1.60 Dry Bulk

3. ASTM C330 to meet the ASTM Gradation 3/4" - #4 size

3/4" to #4

Sieve Size	% Passing
1"	100
3/4"	90 - 100
3/8"	10-50
#4	0 - 10

4. Test for degradation loss using Los Angeles Abrasion testing in accordance with **ASTM C-131 modified method FM 1-T096.** No more than 28% of the weight of the aggregate must be lost to degradation.

1. Texture

   40%-65% sand

   15%-25% silt

   20%-35% clay

   2%-5% 0rganic matter

2.2 MIXING OFFSITE

A. Structural Soil

1. Mechanically mix the sand and loam thoroughly if mixing is necessary to meet the specifications.

2. Saturate the 3/4" Expanded Slate with water and mechanically mix the sandy clay loam until the slate particles are completely coated.

4. When stockpiling the finished mix, cover the pile with a plastic tarp to prevent drying out or soil separation from rain.

5. Install the mix within 48 hours of mixing.

Section 02911 INSTALLATION GUIDELINES – STALITE STRUCTURAL SOIL MIX FOR TREES

PART 1 – GENERAL

PART 2 - PRODUCTS

2.1 MATERIALS

A. STRUCTURAL SOIL MIX

1. The Structural Soil Mix shall be Stalite Structural Soil Mix (a special pre-mixed blend of 80% 3/4" graded "**STALITE**" Expanded Slate Aggregate and 20% approved sandy clay loam).

B. TREE PIT BACKFILL PLANTING MIX

1. The tree pit backfill planting mix shall be high quality topsoil PermaTill mix.

PART 3 - EXECUTION

3.1 PREPARATION

A. GENERAL

1. The paving contractor shall obtain necessary approvals before placing each SSM layer.

2. The paving contractor shall use adequate numbers of skilled workmen who are thoroughly trained in the necessary crafts and are completely familiar with the specified requirements and methods needed for proper performance of the work in this section.

3. The contractor must provide access for and cooperate with the testing laboratory.

4. Adequacy of the final compaction of all elements requiring compaction shall be determined in the field by the engineer to achieve the minimum specified compaction level.

B. PREPARING SUBGRADE

1. The subgrade shall be prepared according to the following procedure:
   a. Remove all organic matter, debris, loose material and large rocks.
   b. Dig out soft and mucky spots and replace with suitable material.
   c. Loosen hard spots and uniformly compact the subgrade to 95% of its maximum dry density.

References

City of Santa Rosa and County of Sonoma, August 2011. Storm Water Low Impact Development Technical Design Manual.

Day, S.D, and S.B. Dickinson (Eds.) 2008. Managing Stormwater for Urban Sustainability using Trees and Structural Soils. Virginia Polytechnic Institute and State University, Blacksburg, VA.

Street Design

Purpose/Definition

Street design offers numerous opportunities to reduce impervious surfaces and thus decrease runoff and associated stormwater management requirements. Areas of opportunity include the layout of streets, street width and drainage design.

Thoughtful site layout and design of streets helps achieve stormwater control 'at the source' which creates less runoff requiring management, less stormwater infrastructure, and less impact on downstream waterbodies. Reducing paving lowers development and maintenance costs. Forgoing curb-and-gutter in favor of a rural residential section results in major cost savings, while allowing for infiltration and attractive landscaping and bioretention.

Application

Street design can be used whenever new streets or significant street improvements are proposed.

Limitations

Narrowed or curbless stress design may not be desirable for various reason (ex. desired traffic speed), and for re-design project, existing resident preferences should be weighed. Good drainage for road subgrade must be provided when using roadside infiltration methods. Soil and topography may limit street siting opportunities. Roadside swales can be difficult to accommodate in single family residential developments with net densities above 8 units per acre. Incorporating LID techniques into the re-design of existing streets may require acquisition of additional property, right of way, or easements.

Maintenance

Swales require periodic sediment removal to maintain volume and infiltration ability. If swales are landscaped, maintenance of that landscape, including removal of downed vegetation, is required. If swales are to function as bioretention swales, follow maintenance guidelines found in the LID information sheet for bioretention.

General Design Guidelines

Site Layout of Streets for New Developments

In new developments, road siting and street network layout are important considerations. To maximize stormwater filtration and infiltration, developers should aim to preserve natural drainage patterns whenever possible and avoid locating streets (and other impervious surfaces) in low areas or on highly permeable soils. For example, locate roads on ridge lines, allowing water to drain naturally downhill. Whenever possible, choose sites with the least permeable soils for roads in order to minimize the impact of the impervious surface of the road. While designers must consider development character and context when designing a street system, they also should be aware that the type of network selected affects the total amount of pavement. For example, a typical grid system of streets results in more total impervious area than a system with cul-de-sacs and loops.

Design Width

New streets should be designed with the minimum pavement width that will support the area's traffic volume, on-street parking needs, and emergency and maintenance access.

A simple way to narrow a suburban residential street is to provide one parking lane rather than two. In especially low traffic areas, sidewalks may be restricted to one side of the street or, in certain situations, eliminated.

Street Drainage

While curb-and-gutter is often considered the "standard" in road design, it tends to amplify stormwater volume and velocity while discouraging infiltration and groundwater recharge. Curbless road design, such as the so-called "rural residential section", encourages infiltration via roadside swales. Appropriate protection (such as guardrails) between the road and swale may be provided where necessary. On low-traffic streets without curbs, grass shoulders can serve as an occasional parking lane, allowing a narrower paved area. Subgrade drainage below grass shoulders may be a viable option with permeable soils (see Bioretention).

Runoff from street surfaces may also be decreased by using permeable pavement, described in detail in a separate LID information sheet.

Design Specifications

Design residential streets with the minimum pavement width necessary to support the traffic volume, parking needs, and emergency and maintenance access. Use shallow, grassed roadside swales instead of curb and gutter when net densities are 8 units per acre

or less. Swales to catch road runoff should be sloped no more than 3:1. Limit sidewalks to one side on roads with less than 400 Average Daily Traffic (ADT) (or 200 ADT for cul-de-sacs). Take care not to compact adjacent, permeable soils during construction and protect swales from construction sediment or remove sediment after construction is complete. Additional specifications will be as designed by the project engineer.

Underground Retention
(Dry Wells/Infiltration Trenches/Arch Trenches)

Purpose/Definition

A ‘dry well’, sometimes called a ‘seepage pit’, is a subsurface storage facility that temporarily stores and infiltrates stormwater runoff from impervious surfaces. Impervious surfaces connect directly into the dry well, which may be either an excavated pit filled with uniformly graded aggregate wrapped in geotextile (dry well, infiltration trench) or a prefabricated storage chamber or perforated pipe segment (arch trench, wet vault). Underground retention facilities discharge the stored runoff via infiltration into the surrounding soils. By capturing runoff at the source, underground retention can dramatically reduce the increased volume of stormwater generated by impervious surfaces. By decreasing the volume of stormwater runoff, underground retention can also reduce runoff rate and improve water quality.

Application

Underground retention may be utilized at any roof or impervious area with relatively low sediment loading. With proper design considerations to capture or trap sediment, underground retention may be feasible in higher sediment load scenarios.

Limitations

The use of underground retention is applicable only where subgrade soils have the appropriate permeability rates to achieve complete draining of the retention volume within 48 hours. Like other BMPs that rely on infiltration, without additional design provisions underground retention methods are not appropriate for areas where high pollutant or sediment loading is anticipated, in groundwater supply locations, or where there is high groundwater due to the potential for groundwater contamination. Also, underground retention must not be used where their installation would create a significant risk for basement seepage or flooding, or interfere with the operation of subsurface sewage disposal systems.

Maintenance

Underground retention facilities should be inspected at least four times annually as well as after every storm exceeding 1 inch of rainfall. The water level in the test well should be the primary means of measuring infiltration rates and drain times. Removing stored runoff from an impaired or failed dry well can also be accomplished through the test well. Adequate inspection and maintenance access to the test well must be provided.

An underground retention maintenance plan must indicate the approximate time it would normally take to drain the maximum design storm runoff volume from the dry well. This normal drain time should then be used to evaluate the dry well’s actual performance. If significant increases in the normal drain time are observed or if it exceeds the 48 hour

design limit, appropriate measures must be taken to comply with the drain time requirements and maintain the proper functioning of the underground retention facility.

Design Guidelines

- Dry wells should drain-down within 48 hours.
- Dry wells typically consist of 18 to 48 inches of clean washed, uniformly graded aggregate with a maximum 40% void capacity (AASHTO No. 3, or similar). Dry well aggregate is wrapped in a nonwoven geotextile, which provides separation between the aggregate and the surrounding soil. At least 12 inches of soil is then placed over the dry well. An alternative form of dry well is a subsurface, prefabricated chamber. A variety of prefabricated dry wells are currently available on the market.
- Dry wells are not recommended when their installation would create a significant risk for basement seepage or flooding. In general, a minimum of 10 feet of separation is required between dry wells and building foundations. Shorter separation distances may require an impermeable liner to be installed on the building side of the dry well.
- All dry wells must be able to safely convey system overflows to downstream drainage systems. System overflows can be incorporated either as surcharge (or overflow) pipes extending from roof leaders or via connections to more substantial infiltration areas.
- A removable filter with a screened bottom should be installed in the roof leader below the surcharge pipe in order to screen out leaves and other debris.
- Adequate inspection and maintenance access to the well should be provided. Observation wells not only provide the necessary access to the well, but they also provide a conduit through which removal of stored runoff can be accomplished in a failed system.
- Though roofs are generally not a significant source of runoff pollution, they can still be a source of particulates and organic matter, as well as sediment and debris during construction. Measures such as roof gutter guards, roof leader clean-out with sump, or an intermediate sump box can provide pretreatment for dry wells by minimizing the amount of sediment and other particulates that may enter it. The need for dry well pretreatment must be determined based on site specific conditions.

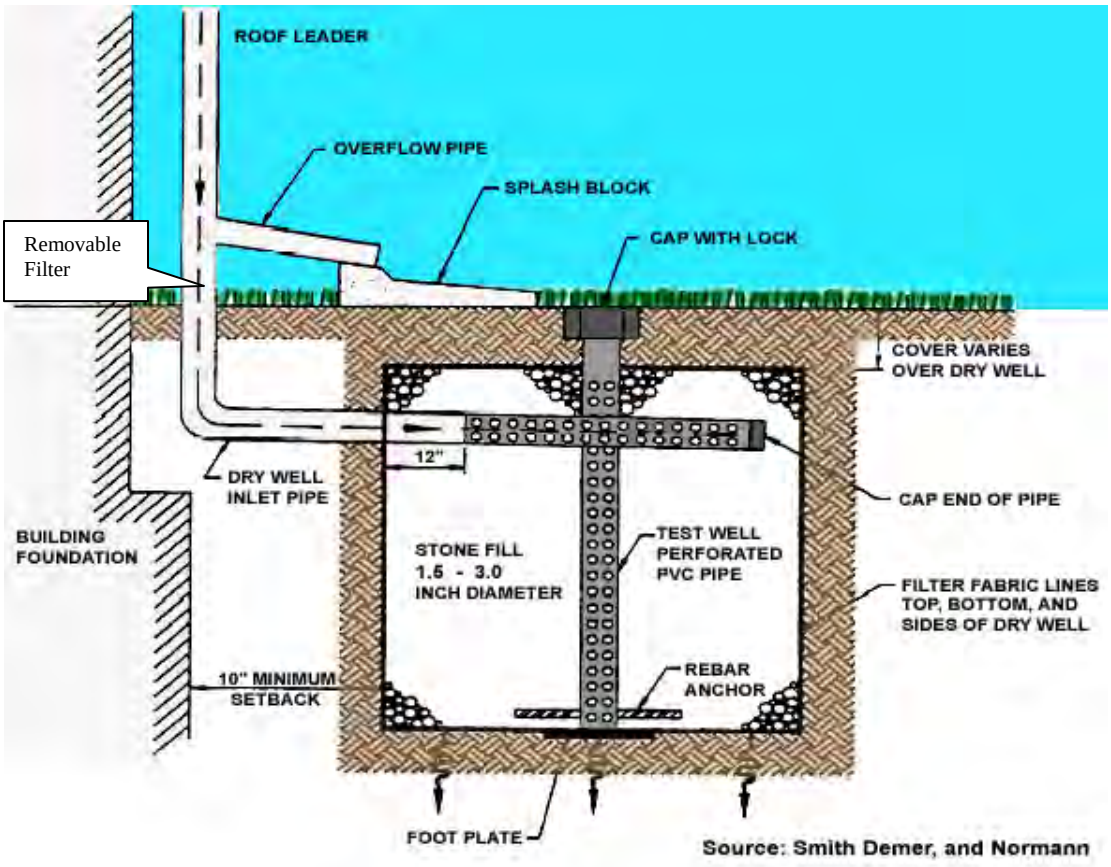


Figure 1: Typical Schematic of a Dry Well[1]

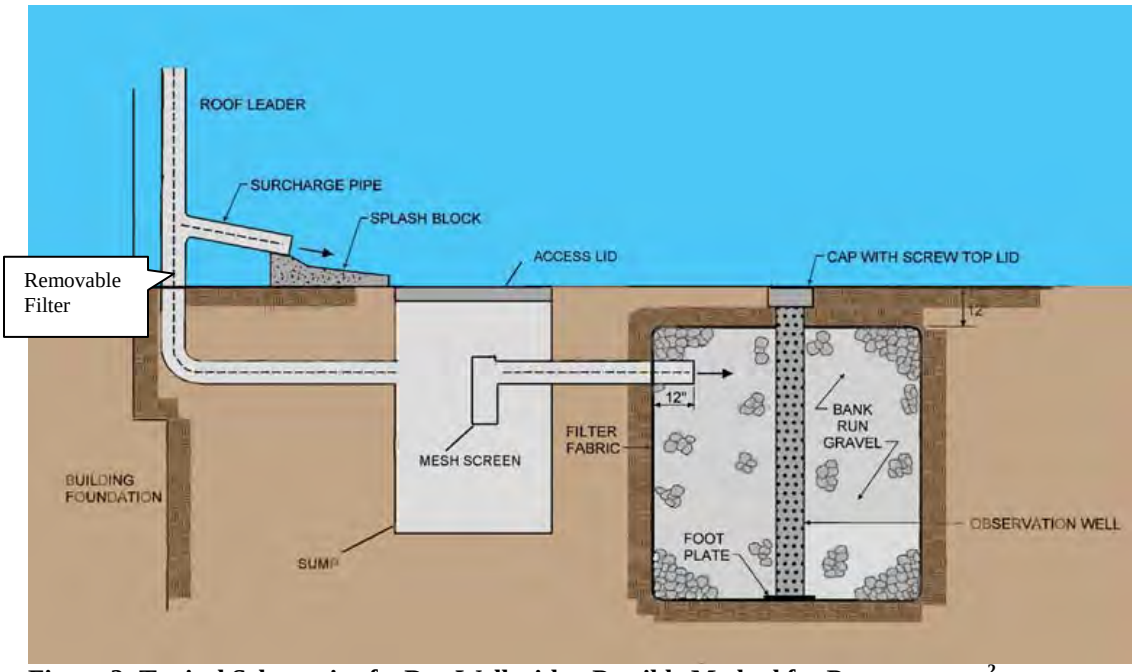


Figure 2: Typical Schematic of a Dry Well with a Possible Method for Pretreatment [2]

[1] Pennsylvania Stormwater BMP Manual, December 2006
[2] New Jersey Stormwater BMP Manual, February 2004

Appendix B

Recommendation for Infiltration Testing Procedures

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

100 N. Winchester Blvd., Suite 200
Santa Clara, CA 95050
(408) 246-4848
FAX (408) 246-5624
s&w@swsv.com

TECHNICAL MEMORANDUM

TO: Santa Cruz County Public Works
Rachel Fatoohi

DATE: June 3, 2013

FROM: M. Eliza McNulty, PE
Dan Schaaf, PE

JOB #: CRUZ.04.09

SUBJECT: Recommendation for Infiltration Testing Procedures

For development sites where stormwater infiltration devices are proposed, soil testing is required. The purpose of the testing is to determine the potential for infiltration on the site, optimal locations for infiltration devices, and to inform final design of the infiltration devices. As one of the subtasks of the Zone 5 and 6 Storm Drain Master Planning effort, Schaaf & Wheeler is tasked to provide the County of Santa Cruz with recommendations for Infiltration Testing Procedures. All infiltration testing should be performed in saturated soil conditions, at the location of proposed BMP/LID facility. The typical infilration tests for the design of wastewater soil adsorption fields, which are generally conducted in the dry, are not recommended for design of stormwater infiltration systems.

The County has specifically requested that Schaaf & Wheeler provide infiltration test recommendations for six scenarios: (1) bottom surface testing, (2) side wall testing, (3) falling head, (4) constant head, and for (5) shallow vs. (6) deep test locations. The recommended testing procedures for these scenarios are provided below.

Scenario	Testing Procedure Recommended
Bottom Surface Testing	See below
Side Wall Testing	Not Recommended
Falling Head, Shallow	Pilot Infiltration Test or Borehole Test
Falling Head, Deep	Pilot Infiltration Test or Borehole Test
Constant Head, Shallow	Pilot Infiltration Test or Double Ring Infiltrometer
Constant Head, Deep	Pilot Infiltration Test*

* Schaaf & Wheeler has not identified an established alternative testing procedure for constant head testing at deep elevations, however an experienced geotechnical engineer may provide modifications to a borehole test procedure to conduct constant head testing if necessary.

Each of these scenarios is discussed, with references to specific procedures, below.

General Recommendations

Testing should be conducted or observed by a qualified professional. A Qualified professional includes registered professional engineers, soil scientist, geologist, architect, landscape architect, professional testing service with specific training and/or experience in determining the permeability of soils, or others as approved by the County. The County should consider including reference to ASTM D3740-12a, which provides standard practice minimum requirements for agencies engaged in testing and/or inspection of soil used in engineering design and construction, when providing infiltration testing procedures.

Side Wall / Bottom Surface Percolation Testing

Based on comments received from County staff, our understanding is that the County wishes to develop a separate test procedure to account for lateral flow in the side slopes or walls of infiltrations devices. Schaaf & Wheeler does not recommend this approach. Often, side slopes of large retention or detention facilities are maintained differently than the bottom surface (usually to account for vegetation). As such, it may not always be appropriate to allow for 'credit' of infiltration along side slopes or walls. For cases where the County desires to allow credit for infiltration along the side walls or slopes of a facility, we recommend utilizing the testing procedures recommended herein based on the depth and anticipated material of the testing site, and that the vertical percolation rate found based on these tests be applied at the sides walls for which credit is allowed. The pilot infiltration test procedures (described below) recommended by Schaaf & Wheeler account for side wall infiltration in addition to bottom surface infiltration.

For those infiltration tests which only measure vertical infiltration, utilizing the vertical percolation rates to account for percolation along side slopes or walls (assuming those side surfaces are maintained appropriately) is a reasonable approach, and requiring two different tests for a single infiltration device (one to establish bottom vertical percolation rate and a different test to determine lateral percolation rates) is in our opinion needlessly complex and expensive.

To allow credit for side wall percolation, Schaaf & Wheeler recommends that the appropriate test (based on depth of test and anticipated material, as recommended elsewhere in this report) be conducted at intervals along the side wall. Interval recommendations are below:

- For depths less than 10 vertical feet, one test should be performed at the mid-way elevation of the proposed side wall or slope.

- For depths greater than 10 feet, tests should be conducted at multiple elevations such that there is no more than 5 vertical feet between test locations.

The side wall should then be divided into zones of infiltration rates based on the test locations, and the total infiltration rate for the wide wall calculated based on the anticipated water surface elevation and these zones, not on averaging all tests for the entire side wall. If dramatically different infiltration rates (+/- 50%) are found at different locations along the side slope or wall, additional tests should be conducted to confirm the finding, and an unsteady analysis may be required to accurately capture the operation of the infiltration device.

Pilot Infiltration Test

The Pilot Infiltration Test (PIT) method is fully described in the Washington State Department of Ecology Stormwater Management Manuel, V5, February, 2005, Appendix V-B, attached. Independent review of in-situ infiltration testing and correlation of hydraulic conductivity in California concludes that the PIT is currently the most rigorous method for performing in-situ infiltration tests (Philips, 2011). The PIT procedure involves excavating a large test pit with the bottom located at the proposed elevation of the infiltration facility (or a minimum of 5 feet below proposed finished grade for permeable pavements), and conducting both constant head and falling head measurements over the course of 1-2 days. The PIT provides the most accurate infiltration estimates for a given site, includes both constant and falling head analysis and can be conducted for shallow or deep infiltration facilities. As such, Schaaf & Wheeler recommends this as a general test that fulfills all of the scenario criteria requested by the County.

However, conducting a PIT may be expensive, particularly for deep infiltration facilities. Even relatively shallow elevations likely require the use of a backhoe. As such, Schaaf & Wheeler has provided alternative recommendations herein; however note that the PIT procedure is recommended for any large infiltration facilities, particularly those that rely on infiltration for flood flow management / mitigation.

Borehole Infiltration Test

The borehole infiltration test is a falling head test that can be performed in shallow or deep scenarios. Schaaf & Wheeler recommends use of borehole infiltration testing procedures provided by Caltrans, California Test 750, 1986, attached, although other borehole testing methodology (i.e. EPA, 1980, County of San Bernadino, 1992) is comparable and would also be appropriate for use. All borehole infiltration testing procedures call for utilizing a 6-inch to 12-

inch auger (hand or drill rig may be used), a base layer (i.e. pea gravel or similar), pre-soaking of the soil and measurement of the decreased water level over a period of time.

While not as accurate as the PIT procedure due to the limited soil saturated and tested the borehole test is straightforward to perform, can be performed at a variety of depths, and can be inexpensive and efficient to perform. For infiltration testing in locations where PIT is infeasible, Schaaf & Wheeler recommends the borehole infiltration testing procedures outlined in Caltrans California Test 750 be utilized.

Double Ring Infiltrometer Test (ASTM D3385-3)

The double ring infiltrometer test as outlined in ASMT D3385-3, attached, is a falling head test that is only feasible to conduct at relatively shallow elevations. While a very common test for establishing infiltration rates, the double ring infiltrometer test was originally developed for fine-grained soils with relatively low infiltration rates. This is often the case in Santa Cruz County, and as such the test is recommended as an alternative to PIT and borehole infiltration testing, however it should be noted that rigorous attention to detail and a high level of experience with the test are required for accurate results in coarse-grained soils.

REFERENCES

California Department of Transportation (Caltrans), 1986 *"Method for Determining the Percoloation Rate of Soils Using a 6-inch Diameter Test Hole"*.

County of San Bernadino, 1992, *Suitability of Lots and Soils for Use of Leachlines or Seepage Pits, Soil Percolation (PERC) Test Report Standards, On-Site Waste Water Disposal System*, August 1992.

Philips, C.E. and Kitch, W.A., 2011, "A Review of Methods for Characterization of Site Infiltration with Design Recommendations", *Journal of the Nevada Water Resources Association*, Summer 2011, Vol. 6, No. 1, pp. 29-46

United States Environmental Protection Agency (US EPA), 1980. *Onsite Wastewater Treatment and Disposal Systems, Design Manual*, Office of Water Program Operations, Office of Research and Development Municipal Environmental Research Laboratory, October 1980.

Washington State Department of Ecology, 2005. *Stormwater Management Manual for Western Washington Volume III, Hydrologic Analysis and Flow Control Design/BMPs*, Publication No. 05-10-31, (A revision of Publications No. 99-13).

APPENDIX G

CATCHMENT DATA

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	0.85	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
NEW_Z5_SUB_235	Z5_MH_3998	1.38	79	1.27	1.54	2.05	2.41	2.89	3.25	3.61
NEW_Z5_SUB_236	Z5_IL_2805	2.71	75	1.95	2.36	3.13	3.68	4.42	4.97	5.52
NEW_Z5_SUB_6007	Z5_SGIL_4796	1.90	71	1.79	2.17	2.88	3.40	4.07	4.58	5.09
NEW_Z5_SUB_6009	Z5_IL_1647	0.37	74	0.39	0.47	0.62	0.73	0.88	0.99	1.10
NEW_Z5_SUB_6012	NEW_Z5_IL_6003	38.56	68	19.36	24.55	32.93	38.81	46.55	52.36	58.18
NEW_Z5_SUB_6100	NEW_Z5_IL_6000	2.63	77	2.50	3.03	4.02	4.74	5.68	6.39	7.10
NEW_Z5_SUB_6101	Z5_CB_111	1.04	77	1.04	1.26	1.67	1.96	2.36	2.65	2.94
NEW_Z5_SUB_6102	Z5_IL_3666	1.75	73	1.66	2.01	2.67	3.14	3.76	4.23	4.70
NEW_Z5_SUB_6103	Z5_IL_1845	2.34	73	2.35	2.85	3.78	4.45	5.34	6.00	6.67
NEW_Z5_SUB_6104	Z5_IL_2326	7.49	71	5.53	6.69	8.89	10.47	12.55	14.12	15.69
NEW_Z5_SUB_6105	Z5_SGIL_4603	4.66	73	3.85	4.66	6.19	7.29	8.74	9.83	10.92
NEW_Z5_SUB_6106	Z5_MH_3882	2.28	72	1.67	2.02	2.68	3.15	3.78	4.25	4.72
NEW_Z5_SUB_6107	Z5_MH_3950	0.61	73	0.63	0.76	1.01	1.19	1.43	1.61	1.79
NEW_Z5_SUB_6108	Z5_IL_1711	4.77	80	3.92	4.75	6.31	7.43	8.91	10.02	11.13
NEW_Z5_SUB_6109	Z5_IL_2834	4.00	80	2.81	3.40	4.51	5.31	6.37	7.17	7.96
NEW_Z5_SUB_6200	Z5_IL_2508	10.51	59	0.23	0.43	0.85	1.20	1.69	2.06	2.44
NEW_Z5_SUB_6202	NEW_Z5_MH_2027	9.83	59	3.35	6.28	9.96	11.81	14.17	15.94	17.72
NEW_Z5_SUB_6203	NEW_Z5_MH_6021	3.21	73	2.98	3.61	4.80	5.65	6.77	7.62	8.47
NEW_Z5_SUB_6204	Z5_MH_4130	4.51	74	4.41	5.33	7.08	8.34	10.00	11.25	12.50
NEW_Z5_SUB_6205	Z5_IL_2979	0.89	75	0.93	1.12	1.49	1.76	2.11	2.37	2.64
NEW_Z5_SUB_6300	Z5_IL_1177	0.74	86	0.67	0.81	1.08	1.27	1.52	1.71	1.90
NEW_Z5_SUB_6301	Z5_IL_1177	0.76	86	0.68	0.82	1.09	1.29	1.54	1.73	1.93
NEW_Z5_SUB_6304	Z5_SGIL_4765	1.61	81	1.68	2.03	2.70	3.18	3.81	4.28	4.76
NEW_Z5_SUB_6305	Z5_IL_3042	0.34	81	0.35	0.42	0.56	0.66	0.79	0.89	0.98
NEW_Z5_SUB_6306	Z5_IL_4936	0.76	74	0.79	0.96	1.27	1.50	1.79	2.02	2.24
NEW_Z5_SUB_6307	Z5_IL_3044	7.66	80	6.28	7.60	10.10	11.89	14.25	16.03	17.81
NEW_Z5_SUB_6308	Z5_SGIL_4647	5.57	72	5.33	6.45	8.57	10.09	12.10	13.61	15.12
NEW_Z5_SUB_6309	Z5_CB_294	42.26	78	35.67	43.19	57.37	67.56	80.99	91.11	101.24
NEW_Z5_SUB_6310	Z5_IL_1154	0.58	85	0.58	0.70	0.93	1.10	1.31	1.48	1.64
NEW_Z5_SUB_6311	Z5_MH_4007	11.26	85	7.73	9.36	12.43	14.64	17.55	19.74	21.94
NEW_Z5_SUB_6312	Z5_MH_3874	3.46	85	2.73	3.31	4.40	5.18	6.21	6.98	7.76
NEW_Z5_SUB_6313	Z5_IL_2398	1.43	85	1.36	1.65	2.19	2.58	3.09	3.47	3.86
NEW_Z5_SUB_6314	Z5_MH_3770	0.85	85	0.68	0.82	1.09	1.28	1.54	1.73	1.92
NEW_Z5_SUB_6315	Z5_IL_3347	1.22	78	1.23	1.49	1.98	2.34	2.80	3.15	3.50
NEW_Z5_SUB_6316	Z5_IL_3677	7.81	75	5.44	6.59	8.75	10.30	12.35	13.89	15.44
NEW_Z5_SUB_6317	Z5_IL_1458	2.50	78	1.96	2.38	3.16	3.72	4.45	5.01	5.57
NEW_Z5_SUB_6318	Z5_IL_3672	1.17	78	1.12	1.36	1.81	2.13	2.55	2.87	3.19
NEW_Z5_SUB_6319	Z5_IL_1335	5.63	86	4.20	5.09	6.76	7.96	9.54	10.74	11.93
NEW_Z5_SUB_6320	Z5_IL_1105	0.78	86	0.77	0.93	1.24	1.46	1.75	1.97	2.19
NEW_Z5_SUB_6321	NEW_Z5_IL_3219	0.99	86	0.86	1.04	1.38	1.63	1.95	2.19	2.44
NEW_Z5_SUB_6322	Z5_IL_1469	4.38	73	3.48	4.22	5.60	6.60	7.91	8.90	9.89
NEW_Z5_SUB_6323	Z5_IL_1470	2.03	73	1.85	2.23	2.97	3.50	4.19	4.71	5.24
NEW_Z5_SUB_6324	Z5_IL_2774	2.42	72	2.26	2.73	3.63	4.27	5.12	5.76	6.40
NEW_Z5_SUB_6325	Z5_IL_3488	2.32	72	1.71	2.07	2.74	3.23	3.87	4.36	4.84
NEW_Z5_SUB_6326	Z5_CB_427	3.33	65	3.08	3.77	5.01	5.90	7.07	7.95	8.83
NEW_Z5_SUB_6327	Z5_CB_384	0.56	65	0.53	0.65	0.86	1.01	1.22	1.37	1.52
NEW_Z5_SUB_6328	Z5_CB_390	7.17	73	5.84	7.07	9.39	11.06	13.26	14.91	16.57
NEW_Z5_SUB_6329	Z5_IL_1278	2.30	54	0.65	1.41	3.50	4.13	4.96	5.57	6.19
NEW_Z5_SUB_6330	Z5_IL_3283	7.38	79	5.57	6.74	8.95	10.54	12.64	14.22	15.80
NEW_Z5_SUB_6331	Z5_IL_3220	3.29	79	1.43	1.73	2.31	2.72	3.26	3.67	4.07
NEW_Z5_SUB_6332	Z5_MH_4012	15.31	79	8.82	10.68	14.19	16.70	20.03	22.53	25.03
NEW_Z5_SUB_6333	Z5_CB_207	0.60	80	0.52	0.63	0.83	0.98	1.18	1.32	1.47
NEW_Z5_SUB_6401	Z5_IL_1167	3.64	74	3.76	4.55	6.04	7.12	8.53	9.60	10.66
NEW_Z5_SUB_6600	NEW_Z5_IL_6601	0.56	79	0.50	0.60	0.80	0.94	1.12	1.27	1.41
NEW_Z5_SUB_6601	Z5_IL_3144	0.31	82	0.33	0.40	0.53	0.62	0.75	0.84	0.93
NEW_Z5_SUB_6602	Z5_IL_3143	2.04	82	2.04	2.47	3.28	3.86	4.62	5.20	5.78
NEW_Z5_SUB_822	Z5_IL_4926	2.57	74	2.11	2.56	3.39	4.00	4.79	5.39	5.99
Z5_SUB_10	Z5_CB_333	0.59	78	0.22	0.33	0.55	0.72	0.95	1.13	1.31
Z5_SUB_100	Z5_IL_2259	0.97	69	0.19	0.34	0.65	0.89	1.22	1.48	1.74

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	0.85	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z5_SUB_101	Z5_MH_3833	1.39	64	0.37	0.74	1.44	1.93	2.55	3.01	3.46
Z5_SUB_102	Z5_IL_3249	1.85	75	0.91	1.33	2.14	2.72	3.48	4.05	4.62
Z5_SUB_103	Z5_IL_2525	1.25	82	0.55	0.78	1.26	1.63	2.12	2.50	2.88
Z5_SUB_104	Z5_CB_707	1.23	75	0.40	0.61	1.06	1.41	1.88	2.24	2.61
Z5_SUB_105	Z5_IL_2560	2.16	57	0.17	0.29	0.81	1.32	2.02	2.55	3.08
Z5_SUB_106	Z5_IL_1673	1.66	73	0.39	0.63	1.12	1.50	2.03	2.43	2.84
Z5_SUB_107	Z5_IL_2562	0.95	66	0.11	0.22	0.47	0.67	0.94	1.15	1.36
Z5_SUB_108	Z5_IL_1679	2.43	72	0.72	1.10	1.83	2.35	3.04	3.55	4.05
Z5_SUB_109	Z5_IL_2552	0.72	77	0.38	0.55	0.86	1.09	1.38	1.61	1.83
Z5_SUB_11	Z5_IL_3494	0.92	77	0.57	0.80	1.22	1.52	1.91	2.21	2.50
Z5_SUB_110	Z5_IL_4945	3.75	73	1.50	2.27	3.76	4.84	6.27	7.33	8.39
Z5_SUB_112	Z5_IL_2553	1.12	73	0.31	0.50	0.88	1.17	1.56	1.86	2.16
Z5_SUB_113	Z5_IL_1738	2.73	70	0.48	0.83	1.58	2.16	2.95	3.57	4.18
Z5_SUB_114	Z5_IL_3290	1.53	64	0.22	0.50	1.08	1.52	2.11	2.55	3.00
Z5_SUB_115	Z5_IL_2984	6.18	65	1.23	2.43	4.72	6.34	8.44	9.99	11.51
Z5_SUB_116	Z5_IL_1508	0.66	82	0.41	0.56	0.85	1.06	1.33	1.54	1.75
Z5_SUB_117	Z5_CB_531	0.91	82	0.41	0.59	0.95	1.22	1.59	1.87	2.15
Z5_SUB_118	Z5_CB_530	1.56	75	0.70	1.04	1.69	2.17	2.80	3.27	3.73
Z5_SUB_1185	Z5_IL_5566	0.20	57	0.01	0.03	0.05	0.08	0.12	0.14	0.17
Z5_SUB_1186	Z5_IL_5570	1.26	77	0.07	0.11	0.20	0.27	0.37	0.44	0.52
Z5_SUB_1188	Z5_IL_2759	1.96	75	0.66	1.02	1.75	2.31	3.08	3.67	4.27
Z5_SUB_1189	Z5_IL_5574	0.67	73	0.05	0.08	0.15	0.20	0.27	0.32	0.38
Z5_SUB_119	Z5_IL_2082	2.30	73	0.59	0.94	1.67	2.24	3.01	3.61	4.22
Z5_SUB_1190	Z5_IL_5161	0.82	73	0.15	0.21	0.32	0.40	0.50	0.58	0.66
Z5_SUB_12	Z5_IL_3635	5.40	87	2.49	3.45	5.39	6.84	8.80	10.30	11.80
Z5_SUB_120	Z5_IL_2120	0.98	77	0.42	0.61	0.97	1.23	1.58	1.84	2.09
Z5_SUB_121	Z5_IL_3251	0.77	82	0.44	0.61	0.93	1.17	1.49	1.73	1.96
Z5_SUB_122	Z5_IL_2580	4.38	72	0.87	1.43	2.59	3.48	4.69	5.62	6.55
Z5_SUB_123	Z5_IL_1093	2.86	74	0.67	1.05	1.87	2.50	3.37	4.04	4.72
Z5_SUB_124	Z5_MH_4229	1.67	68	0.24	0.45	0.90	1.24	1.72	2.09	2.46
Z5_SUB_125	Z5_IL_3391	3.43	73	1.20	1.82	3.01	3.88	5.01	5.85	6.69
Z5_SUB_126	Z5_MH_3763	1.28	70	0.26	0.44	0.84	1.14	1.55	1.87	2.20
Z5_SUB_127	Z5_IL_1096	1.98	73	0.54	0.85	1.49	1.97	2.63	3.13	3.63
Z5_SUB_128	Z5_IL_2715	1.20	63	0.18	0.42	0.89	1.23	1.67	1.99	2.30
Z5_SUB_129	Z5_IL_1100	9.25	70	2.87	4.47	7.38	9.39	11.98	13.89	15.77
Z5_SUB_13	Z5_CB_205	2.17	85	0.93	1.32	2.13	2.74	3.58	4.22	4.87
Z5_SUB_130	Z5_IL_1102	1.33	73	0.66	0.97	1.55	1.96	2.50	2.90	3.30
Z5_SUB_133	Z5_IL_1488	14.78	74	2.52	4.00	7.13	9.56	12.90	15.48	18.10
Z5_SUB_135	Z5_IL_1890	3.68	84	2.17	2.93	4.38	5.43	6.81	7.84	8.86
Z5_SUB_136	Z5_IL_3257	2.61	81	1.04	1.50	2.43	3.13	4.08	4.80	5.53
Z5_SUB_137	Z5_IL_1464	4.34	75	1.61	2.29	3.57	4.47	5.64	6.51	7.37
Z5_SUB_138	Z5_IL_3002	2.99	85	1.12	1.57	2.49	3.18	4.12	4.83	5.55
Z5_SUB_139	Z5_IL_3207	3.49	77	1.39	1.97	3.06	3.84	4.85	5.60	6.35
Z5_SUB_14	Z5_IL_1294	3.11	84	1.25	1.78	2.88	3.71	4.84	5.71	6.59
Z5_SUB_140	Z5_SGIL_4645	8.83	74	1.86	2.93	5.18	6.92	9.31	11.16	13.03
Z5_SUB_141	Z5_CB_126	1.37	73	0.54	0.83	1.37	1.77	2.29	2.68	3.06
Z5_SUB_142	Z5_IL_2730	3.89	80	1.45	2.08	3.35	4.29	5.55	6.51	7.48
Z5_SUB_143	Z5_MH_4343	2.89	73	0.48	0.77	1.39	1.87	2.54	3.05	3.57
Z5_SUB_144	Z5_IL_3366	4.48	73	1.35	2.12	3.70	4.90	6.51	7.75	8.99
Z5_SUB_145	Z5_IL_3124	1.37	75	0.26	0.41	0.72	0.96	1.29	1.54	1.80
Z5_SUB_146	Z5_IL_3402	2.48	73	0.46	0.74	1.33	1.79	2.42	2.91	3.40
Z5_SUB_147	Z5_IL_2969	2.10	73	0.37	0.60	1.08	1.44	1.95	2.35	2.75
Z5_SUB_148	Z5_IL_2973	3.11	73	0.82	1.31	2.33	3.11	4.19	5.02	5.86
Z5_SUB_149	Z5_MH_4210	1.79	73	0.75	1.14	1.88	2.42	3.13	3.66	4.19
Z5_SUB_150	Z5_MH_3975	4.57	73	0.95	1.53	2.74	3.68	4.97	5.97	6.97
Z5_SUB_151	Z5_IL_3348	4.56	71	0.95	1.60	2.99	4.06	5.53	6.66	7.81
Z5_SUB_152	Z5_MH_4311	5.65	72	0.86	1.40	2.56	3.45	4.68	5.63	6.60
Z5_SUB_153	Z5_CB_568	1.27	73	0.38	0.61	1.07	1.43	1.92	2.30	2.68
Z5_SUB_154	Z5_CB_127	0.96	72	0.27	0.43	0.78	1.04	1.40	1.68	1.96

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	0.85	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z5_SUB_155	Z5_IL_2753	2.98	72	0.68	1.11	1.99	2.67	3.59	4.30	5.01
Z5_SUB_156	Z5_IL_3372	9.41	70	2.21	3.58	6.23	8.14	10.64	12.51	14.36
Z5_SUB_157	Z5_IL_3373	1.36	71	0.39	0.64	1.13	1.49	1.97	2.33	2.69
Z5_SUB_159	Z5_IL_2325	4.02	63	0.44	0.93	2.23	3.21	4.54	5.54	6.54
Z5_SUB_160	Z5_IL_5389	2.37	80	1.47	1.94	2.82	3.43	4.23	4.82	5.41
Z5_SUB_161	Z5_IL_2725	1.50	87	0.95	1.28	1.91	2.38	2.99	3.45	3.91
Z5_SUB_162	Z5_IL_2330	1.12	82	0.69	0.95	1.44	1.80	2.27	2.62	2.98
Z5_SUB_164	Z5_IL_2328	3.07	81	1.69	2.36	3.66	4.60	5.85	6.79	7.73
Z5_SUB_165	Z5_IL_3134	0.82	78	0.35	0.51	0.82	1.06	1.37	1.61	1.84
Z5_SUB_166	Z5_CB_658	9.92	70	3.13	5.05	8.72	11.35	14.78	17.34	19.87
Z5_SUB_167	Z5_IL_2288	3.73	70	1.27	2.05	3.53	4.59	5.98	7.01	8.03
Z5_SUB_168	Z5_IL_3114	0.66	70	0.18	0.29	0.50	0.65	0.85	1.00	1.15
Z5_SUB_169	Z5_MH_4921	2.00	74	1.05	1.51	2.35	2.94	3.70	4.27	4.83
Z5_SUB_17	Z5_MH_4323	1.90	84	1.02	1.39	2.11	2.63	3.33	3.85	4.37
Z5_SUB_170	Z5_MH_3913	1.00	78	0.35	0.52	0.86	1.12	1.47	1.74	2.00
Z5_SUB_172	Z5_IL_2737	1.70	73	0.40	0.64	1.15	1.55	2.09	2.51	2.93
Z5_SUB_173	Z5_IL_2773	7.99	68	1.18	2.20	4.37	6.05	8.37	10.15	11.95
Z5_SUB_174	Z5_IL_5165	7.69	67	1.16	2.16	4.26	5.86	8.03	9.68	11.34
Z5_SUB_175	Z5_IL_5216	1.30	70	0.39	0.65	1.17	1.55	2.07	2.47	2.87
Z5_SUB_176	Z5_MH_3802	1.31	73	0.47	0.73	1.25	1.64	2.17	2.57	2.97
Z5_SUB_177	Z5_IL_2764	5.50	72	1.25	1.95	3.33	4.33	5.66	6.65	7.64
Z5_SUB_178	Z5_MH_3801	2.73	79	0.87	1.29	2.16	2.84	3.76	4.47	5.19
Z5_SUB_179	Z5_IL_2766	2.94	73	1.07	1.65	2.80	3.66	4.80	5.66	6.52
Z5_SUB_181	Z5_IL_1494	1.24	73	0.39	0.62	1.09	1.45	1.94	2.31	2.69
Z5_SUB_182	Z5_IL_3638	2.63	68	0.58	1.03	1.90	2.53	3.36	3.97	4.58
Z5_SUB_183	Z5_IL_1878	3.60	77	1.10	1.64	2.73	3.55	4.66	5.50	6.35
Z5_SUB_184	Z5_MH_4215	7.27	76	1.84	2.81	4.86	6.44	8.61	10.28	11.97
Z5_SUB_185	Z5_MH_4214	5.40	73	1.23	1.96	3.49	4.65	6.23	7.44	8.67
Z5_SUB_186	Z5_IL_2735	3.75	75	1.16	1.79	3.07	4.04	5.35	6.35	7.36
Z5_SUB_187	Z5_IL_5156	2.71	75	0.71	1.07	1.76	2.28	2.96	3.48	3.99
Z5_SUB_188	Z5_MH_4228	1.92	80	1.01	1.42	2.21	2.79	3.56	4.13	4.71
Z5_SUB_189	Z5_IL_3651	1.08	81	0.45	0.64	1.04	1.34	1.75	2.06	2.38
Z5_SUB_190	Z5_MH_3723	0.64	68	0.13	0.24	0.46	0.64	0.88	1.06	1.25
Z5_SUB_191	Z5_IL_2856	4.50	73	0.83	1.32	2.36	3.16	4.26	5.10	5.96
Z5_SUB_192	Z5_SGIL_4801	2.78	62	0.28	0.55	1.37	2.01	2.87	3.54	4.20
Z5_SUB_193	Z5_IL_2855	5.89	71	0.78	1.30	2.42	3.30	4.51	5.44	6.38
Z5_SUB_194	Z5_IL_2845	1.37	73	0.37	0.59	1.06	1.41	1.90	2.28	2.66
Z5_SUB_195	Z5_IL_1755	4.14	73	1.06	1.68	3.00	4.02	5.41	6.48	7.57
Z5_SUB_196	Z5_SGIL_4618	2.35	71	0.51	0.85	1.58	2.13	2.90	3.49	4.08
Z5_SUB_197	Z5_IL_3258	2.91	69	0.87	1.46	2.62	3.44	4.53	5.34	6.14
Z5_SUB_198	Z5_IL_2852	5.56	72	1.87	2.92	4.99	6.49	8.48	9.97	11.46
Z5_SUB_199	Z5_CB_495	4.90	68	1.23	2.09	3.71	4.83	6.29	7.36	8.42
Z5_SUB_201	Z5_IL_2399	4.91	73	1.18	1.86	3.26	4.32	5.74	6.82	7.91
Z5_SUB_202	Z5_IL_2838	5.55	72	1.27	2.09	3.82	5.15	6.97	8.38	9.80
Z5_SUB_203	Z5_IL_2840	5.37	73	1.62	2.50	4.23	5.49	7.17	8.43	9.68
Z5_SUB_207	Z5_CB_680	3.74	86	2.82	3.64	5.17	6.25	7.66	8.72	9.77
Z5_SUB_208	Z5_MH_3921	1.38	82	0.55	0.79	1.29	1.67	2.19	2.59	2.99
Z5_SUB_209	Z5_IL_1518	2.33	74	0.79	1.21	2.08	2.72	3.60	4.26	4.93
Z5_SUB_210	Z5_IL_1519	5.84	66	0.96	1.85	3.66	4.98	6.74	8.05	9.36
Z5_SUB_211	Z5_IL_2861	11.91	67	1.51	2.79	5.58	7.74	10.71	12.99	15.30
Z5_SUB_213	Z5_IL_2412	1.32	60	0.14	0.30	0.81	1.20	1.73	2.12	2.51
Z5_SUB_214	Z5_IL_2419	2.41	72	0.60	0.98	1.79	2.41	3.26	3.91	4.57
Z5_SUB_215	Z5_IL_1191	3.78	57	0.40	0.65	1.58	2.44	3.56	4.38	5.17
Z5_SUB_216	Z5_IL_2782	14.90	74	4.52	6.90	11.59	15.02	19.58	23.00	26.42
Z5_SUB_217	Z5_IL_1431	1.35	76	0.48	0.73	1.24	1.63	2.16	2.57	2.98
Z5_SUB_218	Z5_SGIL_4755	3.26	67	0.49	0.92	1.84	2.53	3.47	4.19	4.91
Z5_SUB_219	Z5_IL_1188	1.78	71	0.48	0.79	1.44	1.93	2.59	3.10	3.60
Z5_SUB_220	Z5_IL_2314	1.95	76	0.72	1.07	1.75	2.25	2.91	3.41	3.91
Z5_SUB_221	Z5_IL_2823	1.69	71	0.68	1.07	1.82	2.36	3.07	3.60	4.12

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	0.85	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z5_SUB_222	Z5_IL_4931	5.30	79	1.76	2.58	4.28	5.57	7.33	8.68	10.04
Z5_SUB_223	Z5_IL_2825	9.49	74	3.58	5.42	9.00	11.59	15.01	17.57	20.11
Z5_SUB_224	Z5_IL_4965	4.42	77	2.11	3.00	4.71	5.94	7.55	8.75	9.95
Z5_SUB_226	Z5_IL_2312	3.21	80	1.16	1.68	2.72	3.49	4.54	5.34	6.13
Z5_SUB_227	Z5_IL_3408	7.35	78	1.79	2.71	4.62	6.10	8.13	9.70	11.28
Z5_SUB_228	Z5_IL_1076	2.64	73	0.50	0.80	1.44	1.94	2.62	3.15	3.68
Z5_SUB_229	Z5_IL_3321	1.34	74	0.63	0.94	1.51	1.92	2.46	2.86	3.25
Z5_SUB_230	Z5_IL_1174	2.15	82	1.17	1.61	2.45	3.05	3.85	4.45	5.05
Z5_SUB_231	Z5_IL_2806	2.63	82	1.05	1.45	2.24	2.82	3.58	4.15	4.72
Z5_SUB_232	Z5_IL_2810	5.98	80	2.99	4.13	6.31	7.88	9.93	11.47	13.00
Z5_SUB_233	Z5_IL_2817	2.21	83	1.42	1.91	2.83	3.50	4.37	5.02	5.67
Z5_SUB_234	Z5_IL_2829	4.66	84	2.31	3.20	4.96	6.26	8.00	9.32	10.64
Z5_SUB_237	Z5_CB_188	3.91	85	2.62	3.44	4.98	6.09	7.53	8.61	9.68
Z5_SUB_239	Z5_IL_2999	5.76	75	1.35	2.09	3.62	4.78	6.36	7.56	8.78
Z5_SUB_241	Z5_IL_1461	2.81	73	0.72	1.13	1.97	2.60	3.46	4.11	4.77
Z5_SUB_242	Z5_IL_2965	9.95	77	2.39	3.64	6.21	8.18	10.86	12.91	14.98
Z5_SUB_243	Z5_IL_3667	2.88	75	0.92	1.41	2.43	3.22	4.30	5.13	5.98
Z5_SUB_244	Z5_IL_2090	4.12	73	1.69	2.54	4.18	5.36	6.90	8.06	9.21
Z5_SUB_245	Z5_IL_2964	2.09	82	1.13	1.55	2.37	2.95	3.73	4.31	4.89
Z5_SUB_246	Z5_IL_2988	4.44	82	1.98	2.82	4.51	5.78	7.49	8.79	10.10
Z5_SUB_247	Z5_CB_121	3.22	76	0.66	1.01	1.75	2.33	3.12	3.72	4.34
Z5_SUB_248	Z5_IL_2465	1.68	73	1.14	1.57	2.35	2.88	3.57	4.08	4.58
Z5_SUB_249	Z5_IL_2997	0.87	86	0.41	0.56	0.85	1.06	1.34	1.55	1.75
Z5_SUB_25	Z5_CB_831	2.51	81	1.85	2.42	3.48	4.22	5.19	5.91	6.63
Z5_SUB_250	Z5_CB_193	1.00	87	0.66	0.85	1.21	1.46	1.79	2.04	2.28
Z5_SUB_251	Z5_MH_4293	1.11	87	0.63	0.84	1.24	1.53	1.92	2.21	2.50
Z5_SUB_252	Z5_IL_2989	1.48	83	0.91	1.21	1.77	2.17	2.69	3.07	3.46
Z5_SUB_253	Z5_CB_192	2.26	85	1.49	1.98	2.89	3.54	4.39	5.03	5.66
Z5_SUB_254	Z5_IL_2996	1.15	85	0.43	0.59	0.92	1.16	1.49	1.73	1.98
Z5_SUB_255	Z5_IL_4950	0.97	79	0.41	0.60	0.97	1.25	1.63	1.92	2.21
Z5_SUB_256	Z5_IL_4938	3.28	77	2.15	2.93	4.35	5.34	6.62	7.57	8.52
Z5_SUB_258	Z5_IL_1150	4.36	87	3.57	4.58	6.46	7.79	9.54	10.84	12.14
Z5_SUB_259	Z5_IL_1145	0.97	87	0.40	0.56	0.89	1.15	1.50	1.77	2.04
Z5_SUB_26	Z5_CB_843	3.30	68	1.22	1.96	3.23	4.08	5.16	5.95	6.73
Z5_SUB_260	Z5_CB_187	3.21	87	2.08	2.69	3.81	4.61	5.66	6.44	7.21
Z5_SUB_261	Z5_IL_1107	2.34	87	1.11	1.54	2.41	3.05	3.93	4.60	5.27
Z5_SUB_263	Z5_IL_3346	2.50	84	0.86	1.22	1.94	2.49	3.23	3.79	4.36
Z5_SUB_265	Z5_CB_184	0.37	76	0.19	0.27	0.43	0.55	0.70	0.82	0.94
Z5_SUB_266	Z5_IL_2703	1.55	80	0.76	1.08	1.73	2.20	2.83	3.32	3.80
Z5_SUB_269	Z5_IL_3158	1.15	86	0.90	1.16	1.64	1.98	2.43	2.76	3.09
Z5_SUB_270	Z5_CB_340	2.51	87	1.65	2.13	3.02	3.65	4.48	5.10	5.71
Z5_SUB_271	Z5_IL_1158	2.54	87	1.51	2.04	3.05	3.79	4.78	5.52	6.26
Z5_SUB_273	Z5_IL_3273	7.17	70	3.06	4.60	7.30	9.14	11.49	13.22	14.92
Z5_SUB_274	Z5_IL_4940	6.27	84	4.98	6.46	9.18	11.11	13.62	15.50	17.36
Z5_SUB_275	Z5_CB_338	2.83	82	1.43	2.00	3.12	3.94	5.03	5.86	6.68
Z5_SUB_276	Z5_IL_4939	15.98	71	2.90	4.83	8.90	12.03	16.33	19.63	22.96
Z5_SUB_278	Z5_CB_394	0.59	73	0.20	0.31	0.54	0.72	0.96	1.14	1.33
Z5_SUB_279	Z5_IL_3703	3.07	68	1.37	2.20	3.66	4.66	5.95	6.89	7.82
Z5_SUB_28	Z5_IL_3538	2.58	79	0.82	1.21	2.02	2.64	3.50	4.17	4.84
Z5_SUB_280	Z5_IL_3487	4.79	73	1.38	2.20	3.92	5.24	7.06	8.47	9.89
Z5_SUB_281	Z5_IL_1498	22.75	67	2.98	5.62	11.35	15.80	21.93	26.66	31.44
Z5_SUB_282	Z5_CB_324	7.00	67	1.02	1.96	3.99	5.56	7.72	9.38	11.06
Z5_SUB_283	Z5_CB_316	1.08	73	0.31	0.48	0.87	1.17	1.59	1.91	2.24
Z5_SUB_284	Z5_CB_327	1.46	53	0.08	0.16	0.47	0.91	1.52	1.98	2.44
Z5_SUB_285	Z5_CB_461	7.25	66	1.01	2.04	4.32	6.14	8.70	10.70	12.75
Z5_SUB_286	Z5_CB_308	1.02	69	0.25	0.42	0.80	1.09	1.49	1.80	2.12
Z5_SUB_287	Z5_CB_399	1.86	71	0.48	0.80	1.48	2.01	2.74	3.30	3.88
Z5_SUB_288	Z5_CB_405	1.45	71	0.32	0.53	1.01	1.38	1.91	2.32	2.73
Z5_SUB_289	Z5_CB_407	0.78	69	0.47	0.70	1.08	1.34	1.66	1.91	2.14

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	0.85	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z5_SUB_29	Z5_CB_534	11.28	86	2.56	3.64	5.92	7.68	10.13	12.02	13.95
Z5_SUB_290	Z5_IL_3705	0.97	72	0.26	0.43	0.78	1.05	1.43	1.72	2.02
Z5_SUB_291	Z5_MH_4049	4.55	69	0.92	1.62	3.15	4.36	6.05	7.37	8.72
Z5_SUB_292	Z5_CB_297	1.02	56	0.07	0.12	0.30	0.51	0.81	1.04	1.27
Z5_SUB_293	Z5_CB_389	0.79	57	0.06	0.11	0.34	0.55	0.84	1.06	1.28
Z5_SUB_294	Z5_CB_409	1.48	72	0.30	0.50	0.94	1.28	1.77	2.15	2.54
Z5_SUB_295	Z5_IL_3704	17.17	54	1.07	2.03	4.92	8.92	14.50	18.75	23.01
Z5_SUB_296	Z5_CB_417	2.23	73	0.56	0.89	1.60	2.14	2.88	3.45	4.03
Z5_SUB_297	Z5_CB_434	2.40	73	0.69	1.09	1.94	2.60	3.49	4.18	4.87
Z5_SUB_299	Z5_CB_415	6.29	73	2.09	3.22	5.43	7.03	9.14	10.71	12.28
Z5_SUB_30	Z5_IL_1045	1.58	77	0.45	0.68	1.16	1.54	2.05	2.44	2.84
Z5_SUB_300	Z5_CB_436	1.52	73	0.42	0.67	1.20	1.60	2.15	2.58	3.01
Z5_SUB_301	Z5_CB_437	3.85	73	1.14	1.82	3.24	4.34	5.83	6.98	8.15
Z5_SUB_302	Z5_CB_441	2.91	73	0.81	1.30	2.31	3.09	4.15	4.97	5.80
Z5_SUB_304	Z5_CB_422	1.86	73	0.54	0.86	1.52	2.03	2.73	3.26	3.81
Z5_SUB_305	Z5_CB_420	3.97	73	1.07	1.71	3.04	4.07	5.48	6.56	7.65
Z5_SUB_306	Z5_MH_4103	0.56	57	0.05	0.08	0.31	0.49	0.73	0.92	1.10
Z5_SUB_308	Z5_CB_424	4.57	72	1.22	2.00	3.63	4.88	6.59	7.91	9.24
Z5_SUB_309	Z5_CB_426	4.20	72	1.16	1.87	3.37	4.51	6.08	7.29	8.51
Z5_SUB_310	Z5_CB_429	2.40	73	0.56	0.91	1.63	2.19	2.96	3.55	4.15
Z5_SUB_311	Z5_CB_432	2.15	73	0.60	0.96	1.71	2.28	3.07	3.68	4.29
Z5_SUB_312	Z5_CB_383	1.33	67	0.20	0.39	0.79	1.11	1.55	1.88	2.22
Z5_SUB_314	Z5_IL_4935	9.96	60	0.92	1.90	5.36	8.06	11.74	14.57	17.42
Z5_SUB_315	Z5_CB_388	1.51	62	0.15	0.31	0.81	1.20	1.73	2.13	2.54
Z5_SUB_317	Z5_IL_2688	0.99	62	0.08	0.14	0.37	0.56	0.83	1.04	1.26
Z5_SUB_318	Z5_CB_80	1.26	68	0.49	0.81	1.41	1.84	2.39	2.80	3.21
Z5_SUB_417	Z5_MH_4261	1.42	82	0.61	0.84	1.29	1.61	2.04	2.36	2.68
Z5_SUB_418	Z5_IL_2585	2.46	82	1.06	1.45	2.22	2.78	3.51	4.06	4.61
Z5_SUB_419	Z5_IL_1456	2.96	82	1.66	2.24	3.35	4.14	5.19	5.97	6.74
Z5_SUB_420	Z5_IL_1200	1.09	81	0.43	0.63	1.03	1.34	1.76	2.09	2.42
Z5_SUB_421	Z5_SGIL_4753	0.93	67	0.20	0.36	0.71	0.97	1.34	1.62	1.90
Z5_SUB_422	Z5_IL_2821	0.99	71	0.24	0.40	0.74	1.00	1.36	1.64	1.91
Z5_SUB_423	Z5_IL_2189	0.71	73	0.18	0.28	0.50	0.68	0.91	1.09	1.27
Z5_SUB_424	Z5_SGIL_4754	0.89	70	0.28	0.46	0.83	1.10	1.46	1.73	2.00
Z5_SUB_425	Z5_MH_3829	0.64	78	0.16	0.23	0.40	0.53	0.70	0.84	0.98
Z5_SUB_427	Z5_IL_2822	1.43	71	0.34	0.56	1.02	1.38	1.87	2.24	2.62
Z5_SUB_428	Z5_SGMH_4863	1.09	71	0.28	0.47	0.86	1.15	1.56	1.87	2.18
Z5_SUB_430	Z5_CB_529	4.04	74	1.15	1.72	2.80	3.58	4.60	5.36	6.12
Z5_SUB_431	Z5_CB_118	1.48	79	0.76	1.07	1.67	2.11	2.69	3.12	3.55
Z5_SUB_432	Z5_IL_2271	0.87	78	0.31	0.45	0.73	0.95	1.24	1.45	1.67
Z5_SUB_433	Z5_IL_2184	0.98	77	0.29	0.43	0.73	0.95	1.26	1.50	1.74
Z5_SUB_434	Z5_MH_3922	0.75	60	0.10	0.25	0.63	0.89	1.22	1.46	1.70
Z5_SUB_435	Z5_MH_3956	0.61	70	0.24	0.39	0.66	0.86	1.13	1.33	1.52
Z5_SUB_436	Z5_CB_227	2.86	68	0.60	1.06	1.97	2.63	3.51	4.16	4.81
Z5_SUB_437	Z5_CB_590	0.81	68	0.17	0.30	0.59	0.82	1.12	1.36	1.59
Z5_SUB_440	Z5_IL_2945	1.64	57	0.12	0.21	0.52	0.84	1.29	1.63	1.98
Z5_SUB_441	Z5_IL_2888	1.85	57	0.13	0.23	0.49	0.78	1.19	1.51	1.83
Z5_SUB_442	Z5_MH_3923	0.74	58	0.07	0.11	0.25	0.39	0.57	0.71	0.85
Z5_SUB_443	Z5_IL_2231	1.43	75	0.37	0.57	0.97	1.27	1.67	1.98	2.29
Z5_SUB_444	Z5_IL_2944	1.18	65	0.23	0.48	0.99	1.35	1.83	2.18	2.53
Z5_SUB_455	Z5_IL_3316	0.78	67	0.12	0.23	0.47	0.65	0.89	1.08	1.26
Z5_SUB_458	Z5_CB_539	0.89	61	0.11	0.22	0.55	0.80	1.12	1.36	1.59
Z5_SUB_459	Z5_IL_2937	2.82	64	0.30	0.66	1.48	2.11	2.98	3.65	4.32
Z5_SUB_460	Z5_IL_2936	1.10	57	0.10	0.17	0.49	0.77	1.15	1.44	1.72
Z5_SUB_461	Z5_IL_2550	3.45	75	1.52	2.24	3.65	4.66	6.01	7.02	8.02
Z5_SUB_462	Z5_IL_2530	0.62	80	0.38	0.52	0.79	0.99	1.26	1.45	1.65
Z5_SUB_463	Z5_IL_2528	1.22	82	0.48	0.69	1.13	1.47	1.92	2.28	2.64
Z5_SUB_464	Z5_IL_2559	0.78	67	0.15	0.29	0.57	0.80	1.10	1.33	1.57
Z5_SUB_465	Z5_IL_2563	2.59	72	0.74	1.19	2.12	2.84	3.83	4.58	5.35

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	0.85	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z5_SUB_466	Z5_IL_1683	0.53	73	0.18	0.28	0.46	0.59	0.77	0.90	1.02
Z5_SUB_467	Z5_IL_3535	1.76	79	0.93	1.32	2.07	2.61	3.33	3.87	4.41
Z5_SUB_468	Z5_IL_3315	1.25	70	0.41	0.67	1.17	1.53	2.00	2.35	2.70
Z5_SUB_469	Z5_SGIL_4609	1.11	73	0.70	0.98	1.48	1.82	2.26	2.58	2.90
Z5_SUB_470	Z5_IL_3537	2.12	81	1.59	2.09	3.00	3.64	4.48	5.10	5.72
Z5_SUB_471	Z5_IL_1065	1.55	87	1.15	1.48	2.12	2.57	3.16	3.60	4.03
Z5_SUB_472	Z5_MH_3714	1.88	83	0.74	1.06	1.72	2.22	2.91	3.44	3.97
Z5_SUB_473	Z5_CB_829	1.12	61	0.13	0.28	0.71	1.03	1.45	1.77	2.08
Z5_SUB_474	Z5_MH_4301	2.44	76	0.88	1.30	2.17	2.80	3.66	4.30	4.95
Z5_SUB_475	Z5_MH_4300	1.19	78	0.55	0.80	1.29	1.65	2.13	2.50	2.87
Z5_SUB_476	Z5_MH_4298	1.66	78	0.48	0.71	1.21	1.58	2.11	2.51	2.91
Z5_SUB_477	Z5_CB_842	1.37	73	0.40	0.63	1.09	1.44	1.91	2.26	2.62
Z5_SUB_478	Z5_CB_837	2.69	76	0.80	1.22	2.09	2.76	3.68	4.39	5.11
Z5_SUB_479	Z5_IL_2564	0.57	67	0.09	0.18	0.36	0.51	0.70	0.85	1.00
Z5_SUB_480	Z5_MH_4295	1.13	71	0.38	0.62	1.08	1.41	1.85	2.17	2.50
Z5_SUB_481	Z5_CB_833	4.07	80	2.77	3.67	5.31	6.46	7.96	9.08	10.18
Z5_SUB_494	Z5_MH_4194	1.08	87	0.71	0.92	1.30	1.58	1.93	2.20	2.47
Z5_SUB_495	Z5_CB_537	2.12	85	1.30	1.69	2.40	2.91	3.57	4.06	4.56
Z5_SUB_496	Z5_CB_849	0.75	85	0.32	0.46	0.73	0.95	1.23	1.45	1.68
Z5_SUB_5	Z5_SGIL_4752	0.80	67	0.21	0.37	0.68	0.90	1.18	1.39	1.60
Z5_SUB_549	Z5_IL_2565	3.51	77	1.64	2.29	3.51	4.37	5.49	6.32	7.14
Z5_SUB_550	Z5_IL_3306	0.87	84	0.58	0.77	1.13	1.39	1.73	1.98	2.23
Z5_SUB_551	Z5_CB_206	0.58	82	0.34	0.46	0.69	0.85	1.06	1.22	1.38
Z5_SUB_552	Z5_MH_4014	2.42	84	1.49	2.00	2.96	3.66	4.57	5.25	5.92
Z5_SUB_553	Z5_CB_209	2.07	83	1.14	1.56	2.35	2.93	3.69	4.26	4.83
Z5_SUB_556	Z5_MH_4020	1.10	87	0.68	0.90	1.32	1.62	2.02	2.32	2.61
Z5_SUB_557	Z5_SGIL_4698	0.69	83	0.45	0.60	0.89	1.10	1.37	1.58	1.78
Z5_SUB_558	Z5_MH_4016	0.78	84	0.63	0.81	1.15	1.40	1.71	1.95	2.18
Z5_SUB_559	Z5_IL_1710	0.62	87	0.36	0.49	0.75	0.94	1.19	1.39	1.58
Z5_SUB_561	Z5_IL_1424	3.15	78	1.30	1.89	3.06	3.93	5.09	5.98	6.86
Z5_SUB_562	Z5_IL_1426	1.46	78	0.71	1.02	1.63	2.09	2.69	3.15	3.61
Z5_SUB_563	Z5_IL_2433	1.97	78	1.04	1.47	2.33	2.95	3.77	4.38	4.99
Z5_SUB_564	Z5_IL_1428	0.81	78	0.46	0.65	1.01	1.26	1.61	1.86	2.12
Z5_SUB_565	Z5_SGIL_4718	0.74	79	0.29	0.43	0.72	0.93	1.22	1.45	1.68
Z5_SUB_566	Z5_IL_1079	1.11	74	0.31	0.49	0.84	1.12	1.49	1.77	2.06
Z5_SUB_567	Z5_IL_1081	2.05	74	0.63	0.98	1.70	2.26	3.02	3.61	4.20
Z5_SUB_568	Z5_IL_1084	1.67	70	0.64	1.02	1.74	2.26	2.93	3.43	3.93
Z5_SUB_569	Z5_IL_1433	3.72	78	1.91	2.71	4.25	5.37	6.83	7.93	9.03
Z5_SUB_570	Z5_SGIL_4616	0.58	78	0.32	0.45	0.70	0.88	1.12	1.30	1.48
Z5_SUB_571	Z5_IL_4966	0.65	77	0.30	0.43	0.69	0.87	1.12	1.30	1.48
Z5_SUB_572	Z5_IL_4966	0.61	78	0.30	0.43	0.69	0.88	1.13	1.32	1.52
Z5_SUB_573	Z5_IL_2824	1.86	68	0.51	0.90	1.67	2.24	3.00	3.57	4.13
Z5_SUB_574	Z5_CB_660	0.99	78	0.38	0.57	0.95	1.24	1.63	1.93	2.24
Z5_SUB_575	Z5_IL_1192	0.59	62	0.05	0.15	0.36	0.52	0.75	0.93	1.11
Z5_SUB_576	Z5_IL_3405	1.90	71	0.30	0.50	0.94	1.28	1.75	2.12	2.49
Z5_SUB_577	Z5_IL_1184	2.78	72	0.55	0.88	1.59	2.12	2.86	3.42	3.99
Z5_SUB_578	Z5_IL_2780	1.46	75	0.76	1.10	1.76	2.22	2.83	3.29	3.74
Z5_SUB_579	Z5_IL_1187	1.29	76	0.45	0.68	1.15	1.50	1.98	2.34	2.71
Z5_SUB_580	Z5_IL_2434	3.15	70	0.74	1.23	2.25	3.01	4.04	4.82	5.60
Z5_SUB_581	Z5_IL_2310	1.46	77	0.67	0.96	1.54	1.95	2.49	2.90	3.30
Z5_SUB_582	Z5_IL_1185	0.72	81	0.36	0.50	0.77	0.96	1.23	1.42	1.62
Z5_SUB_583	Z5_IL_2781	1.41	70	0.39	0.65	1.19	1.59	2.13	2.54	2.95
Z5_SUB_584	Z5_CB_501	0.66	62	0.07	0.17	0.40	0.59	0.84	1.03	1.22
Z5_SUB_585	Z5_IL_1189	2.52	57	0.24	0.40	1.05	1.67	2.49	3.09	3.68
Z5_SUB_586	Z5_CB_499	1.40	75	0.41	0.63	1.10	1.47	1.96	2.34	2.73
Z5_SUB_587	Z5_IL_1077	2.53	73	0.57	0.91	1.62	2.17	2.92	3.49	4.07
Z5_SUB_588	Z5_IL_3317	1.42	74	0.58	0.86	1.42	1.81	2.34	2.73	3.11
Z5_SUB_589	Z5_IL_2516	2.38	82	0.87	1.22	1.88	2.37	3.01	3.50	3.98
Z5_SUB_590	Z5_MH_3840	2.33	82	0.82	1.12	1.70	2.12	2.68	3.09	3.51

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	0.85	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z5_SUB_591	Z5_IL_2816	1.45	83	0.58	0.83	1.35	1.75	2.30	2.71	3.14
Z5_SUB_592	Z5_SGIL_4724	1.02	74	0.43	0.65	1.08	1.39	1.80	2.11	2.42
Z5_SUB_593	Z5_IL_3322	0.97	80	0.60	0.81	1.20	1.48	1.84	2.10	2.37
Z5_SUB_594	Z5_MH_4198	1.26	86	0.99	1.28	1.83	2.22	2.73	3.11	3.49
Z5_SUB_595	Z5_MH_5578	4.80	87	3.73	4.84	6.90	8.37	10.29	11.73	13.16
Z5_SUB_597	Z5_IL_1195	1.63	76	0.45	0.69	1.20	1.60	2.15	2.57	3.01
Z5_SUB_598	Z5_IL_3639	0.99	72	0.29	0.46	0.81	1.08	1.44	1.71	1.98
Z5_SUB_599	Z5_MH_4331	2.34	76	0.68	1.03	1.77	2.34	3.12	3.72	4.33
Z5_SUB_6	Z5_IL_2802	2.28	67	0.59	1.06	1.94	2.56	3.37	3.97	4.57
Z5_SUB_600	Z5_IL_3350	3.21	81	1.43	1.99	3.08	3.87	4.92	5.71	6.49
Z5_SUB_601	Z5_MH_4120	2.28	82	1.17	1.60	2.45	3.06	3.87	4.47	5.07
Z5_SUB_602	Z5_IL_3352	4.18	82	1.48	2.11	3.37	4.32	5.60	6.57	7.54
Z5_SUB_603	Z5_CB_52	2.72	78	0.87	1.30	2.21	2.91	3.87	4.60	5.35
Z5_SUB_604	Z5_MH_3745	1.58	73	0.71	1.07	1.76	2.27	2.94	3.44	3.94
Z5_SUB_605	Z5_CB_460	1.59	80	0.78	1.11	1.76	2.25	2.90	3.39	3.88
Z5_SUB_606	Z5_IL_2762	0.85	74	0.23	0.37	0.65	0.87	1.17	1.41	1.64
Z5_SUB_607	Z5_IL_3164	0.87	73	0.29	0.45	0.80	1.06	1.41	1.68	1.95
Z5_SUB_608	Z5_IL_2263	1.16	70	0.28	0.48	0.90	1.22	1.66	2.00	2.34
Z5_SUB_609	Z5_IL_2765	1.96	72	0.86	1.30	2.13	2.72	3.49	4.06	4.63
Z5_SUB_610	Z5_IL_2264	0.62	82	0.40	0.53	0.78	0.96	1.20	1.37	1.55
Z5_SUB_611	Z5_IL_3558	0.78	85	0.51	0.68	1.01	1.25	1.56	1.80	2.03
Z5_SUB_612	Z5_IL_2268	0.96	83	0.45	0.63	1.01	1.29	1.67	1.96	2.25
Z5_SUB_614	Z5_IL_2981	1.18	78	0.66	0.92	1.41	1.76	2.23	2.57	2.91
Z5_SUB_615	Z5_IL_2977	1.10	81	0.62	0.86	1.33	1.66	2.11	2.45	2.78
Z5_SUB_616	Z5_IL_2595	0.80	78	0.28	0.41	0.67	0.87	1.13	1.33	1.53
Z5_SUB_617	Z5_IL_3621	0.71	73	0.33	0.49	0.81	1.03	1.32	1.54	1.76
Z5_SUB_618	Z5_IL_2747	1.56	74	0.79	1.15	1.84	2.33	2.97	3.45	3.93
Z5_SUB_619	Z5_IL_2743	0.78	72	0.32	0.49	0.81	1.04	1.35	1.57	1.80
Z5_SUB_620	Z5_IL_3136	0.88	81	0.39	0.55	0.87	1.11	1.43	1.67	1.92
Z5_SUB_621	Z5_IL_3137	0.76	78	0.32	0.47	0.75	0.95	1.23	1.44	1.64
Z5_SUB_622	Z5_MH_3849	1.99	80	0.92	1.31	2.07	2.63	3.37	3.93	4.49
Z5_SUB_625	Z5_CB_132	9.55	66	1.27	2.32	4.54	6.21	8.44	10.12	11.79
Z5_SUB_626	Z5_IL_2577	2.72	74	0.82	1.26	2.16	2.84	3.76	4.45	5.15
Z5_SUB_627	Z5_IL_3380	0.89	63	0.12	0.27	0.60	0.84	1.16	1.40	1.63
Z5_SUB_628	Z5_MH_4223	1.73	71	0.38	0.64	1.18	1.60	2.18	2.62	3.07
Z5_SUB_629	Z5_SGIL_4709	1.65	73	0.51	0.80	1.39	1.83	2.43	2.89	3.34
Z5_SUB_630	Z5_IL_3654	1.06	74	0.34	0.53	0.92	1.22	1.62	1.94	2.25
Z5_SUB_631	Z5_IL_2084	1.75	74	0.73	1.09	1.78	2.28	2.94	3.43	3.91
Z5_SUB_632	Z5_IL_5391	1.10	82	0.67	0.92	1.41	1.76	2.22	2.57	2.91
Z5_SUB_633	Z5_CB_49	0.51	82	0.31	0.43	0.65	0.82	1.03	1.19	1.35
Z5_SUB_634	Z5_CB_532	0.55	82	0.24	0.35	0.56	0.72	0.94	1.11	1.28
Z5_SUB_635	Z5_IL_5130	1.60	74	0.52	0.80	1.40	1.85	2.47	2.94	3.42
Z5_SUB_636	Z5_IL_3162	2.78	67	0.75	1.33	2.45	3.25	4.30	5.08	5.85
Z5_SUB_637	Z5_SGIL_4783	0.58	78	0.23	0.34	0.56	0.73	0.96	1.14	1.32
Z5_SUB_638	Z5_SGIL_4803	5.05	74	2.16	3.21	5.24	6.69	8.61	10.03	11.45
Z5_SUB_639	Z5_SGIL_4729	1.20	82	0.61	0.85	1.31	1.64	2.08	2.41	2.74
Z5_SUB_640	Z5_IL_2582	1.03	82	0.52	0.73	1.14	1.44	1.84	2.14	2.44
Z5_SUB_641	Z5_MH_4227	0.66	80	0.33	0.46	0.73	0.92	1.18	1.37	1.57
Z5_SUB_642	Z5_IL_3384	2.09	79	1.06	1.50	2.35	2.97	3.80	4.42	5.03
Z5_SUB_643	Z5_IL_3388	0.51	81	0.27	0.38	0.59	0.74	0.95	1.11	1.26
Z5_SUB_644	Z5_IL_1672	0.61	80	0.24	0.35	0.58	0.75	0.99	1.18	1.36
Z5_SUB_645	Z5_IL_1088	0.93	73	0.22	0.36	0.64	0.86	1.15	1.38	1.62
Z5_SUB_646	Z5_SGMH_4869	0.67	70	0.15	0.26	0.48	0.65	0.89	1.07	1.25
Z5_SUB_647	Z5_IL_2848	2.17	73	0.65	1.02	1.79	2.38	3.18	3.79	4.40
Z5_SUB_648	Z5_IL_3132	1.71	75	0.54	0.83	1.42	1.87	2.48	2.94	3.41
Z5_SUB_649	Z5_IL_3255	1.47	61	0.17	0.27	0.65	0.94	1.32	1.60	1.88
Z5_SUB_650	Z5_MH_3725	2.03	70	0.35	0.59	1.11	1.52	2.07	2.50	2.94
Z5_SUB_651	Z5_IL_977	3.25	63	0.33	0.76	1.80	2.60	3.70	4.54	5.39
Z5_SUB_652	Z5_IL_1097	0.96	67	0.19	0.36	0.72	0.99	1.37	1.65	1.94

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	0.85	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z5_SUB_653	Z5_IL_3254	2.75	67	0.33	0.63	1.28	1.80	2.50	3.04	3.58
Z5_SUB_654	Z5_IL_1098	1.94	74	0.54	0.84	1.44	1.90	2.52	2.99	3.46
Z5_SUB_655	Z5_IL_2714	0.99	62	0.13	0.32	0.73	1.02	1.41	1.69	1.98
Z5_SUB_656	Z5_MH_4352	0.63	77	0.27	0.39	0.62	0.78	1.00	1.16	1.33
Z5_SUB_657	Z5_IL_916	1.01	70	0.24	0.40	0.72	0.96	1.28	1.52	1.76
Z5_SUB_658	Z5_IL_1276	1.66	65	0.35	0.70	1.37	1.85	2.47	2.93	3.38
Z5_SUB_659	Z5_IL_1602	0.84	68	0.16	0.29	0.56	0.77	1.05	1.27	1.50
Z5_SUB_660	Z5_MH_3813	0.61	58	0.05	0.09	0.21	0.33	0.50	0.63	0.76
Z5_SUB_661	Z5_IL_2302	2.88	61	0.27	0.48	1.34	2.01	2.93	3.63	4.33
Z5_SUB_662	Z5_IL_2712	0.57	60	0.05	0.10	0.29	0.44	0.65	0.80	0.96
Z5_SUB_663	Z5_MH_4345	1.12	65	0.18	0.38	0.81	1.14	1.59	1.93	2.28
Z5_SUB_664	Z5_IL_3289	0.61	67	0.21	0.37	0.66	0.87	1.14	1.34	1.54
Z5_SUB_665	Z5_IL_4955	3.02	68	1.08	1.78	3.11	4.05	5.25	6.15	7.03
Z5_SUB_666	Z5_IL_4947	2.54	71	1.01	1.55	2.55	3.24	4.14	4.81	5.46
Z5_SUB_667	Z5_IL_4946	2.94	74	0.99	1.47	2.39	3.05	3.91	4.56	5.20
Z5_SUB_668	Z5_IL_4944	3.06	71	0.87	1.36	2.28	2.93	3.77	4.40	5.02
Z5_SUB_670	Z5_IL_1101	1.18	73	0.47	0.72	1.19	1.54	2.01	2.35	2.70
Z5_SUB_671	Z5_MH_4340	2.83	79	0.96	1.40	2.28	2.93	3.80	4.46	5.13
Z5_SUB_672	Z5_IL_3237	6.72	72	1.42	2.27	4.01	5.31	7.06	8.39	9.73
Z5_SUB_673	Z5_MH_4336	0.88	77	0.31	0.46	0.76	0.99	1.29	1.52	1.75
Z5_SUB_674	Z5_IL_3648	1.12	63	0.13	0.28	0.64	0.90	1.26	1.53	1.81
Z5_SUB_675	Z5_MH_4216	2.90	75	0.85	1.32	2.30	3.05	4.09	4.88	5.69
Z5_SUB_676	Z5_IL_2857	0.83	65	0.17	0.35	0.70	0.96	1.30	1.56	1.81
Z5_SUB_677	Z5_IL_3130	2.33	77	0.72	1.09	1.87	2.46	3.28	3.91	4.55
Z5_SUB_678	Z5_IL_2854	3.58	69	1.05	1.72	2.96	3.81	4.91	5.72	6.51
Z5_SUB_680	Z5_IL_2831	2.92	70	0.69	1.18	2.19	2.94	3.95	4.72	5.49
Z5_SUB_681	Z5_IL_2415	0.92	62	0.10	0.28	0.66	0.95	1.33	1.62	1.91
Z5_SUB_682	Z5_IL_2513	0.80	61	0.09	0.22	0.56	0.80	1.13	1.38	1.62
Z5_SUB_683	Z5_IL_2421	0.62	62	0.14	0.34	0.68	0.90	1.19	1.40	1.60
Z5_SUB_686	Z5_SGMH_4859	1.02	73	0.31	0.48	0.84	1.11	1.48	1.76	2.04
Z5_SUB_687	Z5_IL_3489	1.83	75	0.67	0.99	1.62	2.07	2.67	3.11	3.56
Z5_SUB_690	Z5_IL_2836	0.84	73	0.52	0.73	1.09	1.35	1.67	1.91	2.15
Z5_SUB_691	Z5_IL_1564	1.22	82	0.54	0.75	1.17	1.48	1.88	2.19	2.49
Z5_SUB_692	Z5_SGIL_4650	1.35	76	0.84	1.16	1.75	2.16	2.69	3.09	3.48
Z5_SUB_693	Z5_CB_492	2.64	84	1.76	2.36	3.48	4.29	5.35	6.15	6.94
Z5_SUB_694	Z5_CB_493	3.09	83	1.76	2.39	3.59	4.45	5.58	6.43	7.28
Z5_SUB_695	Z5_IL_1515	1.37	81	0.46	0.66	1.07	1.38	1.80	2.11	2.43
Z5_SUB_696	Z5_MH_3808	2.03	71	0.38	0.63	1.17	1.58	2.14	2.57	3.01
Z5_SUB_697	Z5_SGIL_4810	2.14	74	0.61	0.95	1.67	2.22	2.97	3.55	4.14
Z5_SUB_698	Z5_SGIL_4809	1.71	73	0.50	0.79	1.40	1.87	2.51	3.00	3.50
Z5_SUB_699	Z5_IL_2841	1.82	73	0.57	0.89	1.57	2.10	2.81	3.36	3.92
Z5_SUB_7	Z5_IL_1425	1.94	72	0.54	0.86	1.54	2.06	2.76	3.29	3.83
Z5_SUB_700	Z5_IL_2839	3.38	75	0.90	1.40	2.45	3.26	4.37	5.22	6.09
Z5_SUB_701	Z5_CB_512	1.39	73	0.65	0.97	1.59	2.04	2.63	3.07	3.50
Z5_SUB_702	Z5_CB_659	1.48	69	0.44	0.76	1.38	1.84	2.46	2.93	3.39
Z5_SUB_703	Z5_IL_2734	0.83	77	0.30	0.45	0.76	1.00	1.32	1.57	1.82
Z5_SUB_704	Z5_SGMH_4864	0.93	73	0.23	0.37	0.66	0.89	1.21	1.46	1.71
Z5_SUB_705	Z5_IL_1657	2.12	72	0.62	1.01	1.81	2.42	3.26	3.91	4.56
Z5_SUB_706	Z5_IL_1656	2.14	73	0.64	1.01	1.79	2.38	3.20	3.83	4.46
Z5_SUB_707	Z5_IL_1658	1.70	73	0.57	0.86	1.43	1.84	2.38	2.78	3.18
Z5_SUB_710	Z5_SGIL_4749	0.83	82	0.50	0.69	1.05	1.32	1.66	1.92	2.18
Z5_SUB_711	Z5_MH_3999	1.12	76	0.39	0.59	1.01	1.33	1.77	2.11	2.45
Z5_SUB_712	Z5_IL_2941	1.98	57	0.17	0.28	0.83	1.34	2.03	2.55	3.07
Z5_SUB_713	Z5_CB_538	0.98	71	0.23	0.39	0.73	0.99	1.36	1.64	1.93
Z5_SUB_714	Z5_IL_2789	1.91	59	0.26	0.60	1.60	2.28	3.14	3.76	4.37
Z5_SUB_715	Z5_IL_3138	0.72	81	0.41	0.56	0.87	1.08	1.37	1.59	1.81
Z5_SUB_716	Z5_IL_3119	1.17	70	0.35	0.57	0.99	1.29	1.69	1.98	2.27
Z5_SUB_718	Z5_MH_4123	1.04	82	0.63	0.87	1.33	1.66	2.10	2.42	2.75
Z5_SUB_719	Z5_IL_3166	0.87	82	0.56	0.76	1.14	1.41	1.77	2.04	2.31

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	0.85	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z5_SUB_720	Z5_MH_4200	1.36	83	1.01	1.32	1.88	2.28	2.80	3.19	3.57
Z5_SUB_721	Z5_IL_3168	0.78	87	0.51	0.69	1.02	1.27	1.60	1.84	2.08
Z5_SUB_722	Z5_IL_2724	1.79	82	0.91	1.28	2.02	2.56	3.29	3.85	4.40
Z5_SUB_723	Z5_MH_3970	1.93	78	1.08	1.51	2.32	2.90	3.66	4.23	4.79
Z5_SUB_728	Z5_IL_1462	2.31	73	0.62	0.99	1.77	2.37	3.18	3.81	4.45
Z5_SUB_729	Z5_IL_994	0.86	73	0.23	0.37	0.66	0.88	1.19	1.42	1.66
Z5_SUB_730	Z5_IL_1460	0.90	73	0.17	0.28	0.50	0.68	0.91	1.10	1.28
Z5_SUB_731	Z5_IL_2754	0.68	70	0.21	0.34	0.62	0.83	1.11	1.32	1.53
Z5_SUB_732	Z5_IL_3374	1.22	62	0.22	0.41	0.82	1.08	1.40	1.63	1.85
Z5_SUB_733	Z5_IL_2729	0.88	87	0.57	0.75	1.11	1.37	1.71	1.97	2.22
Z5_SUB_734	Z5_IL_2728	1.67	83	0.74	1.05	1.66	2.11	2.73	3.19	3.66
Z5_SUB_735	Z5_IL_3376	2.24	77	0.81	1.18	1.93	2.48	3.21	3.77	4.32
Z5_SUB_736	Z5_IL_2732	3.11	77	1.15	1.67	2.67	3.40	4.35	5.07	5.79
Z5_SUB_737	Z5_IL_3377	1.57	79	0.49	0.73	1.23	1.61	2.13	2.54	2.95
Z5_SUB_738	Z5_SGIL_4800	3.02	73	0.78	1.25	2.24	3.00	4.04	4.85	5.66
Z5_SUB_739	Z5_IL_3155	2.09	73	0.63	1.00	1.77	2.37	3.18	3.81	4.44
Z5_SUB_740	Z5_IL_2968	1.00	73	0.28	0.45	0.79	1.06	1.42	1.70	1.99
Z5_SUB_741	Z5_IL_1468	1.53	73	0.39	0.63	1.12	1.49	2.01	2.41	2.82
Z5_SUB_744	Z5_IL_1467	2.55	75	0.76	1.17	2.00	2.63	3.47	4.12	4.76
Z5_SUB_745	Z5_IL_3338	0.93	77	0.33	0.49	0.82	1.07	1.40	1.66	1.91
Z5_SUB_746	Z5_IL_2970	2.09	76	0.63	0.97	1.67	2.20	2.94	3.50	4.07
Z5_SUB_747	Z5_IL_2971	2.76	73	0.60	0.96	1.72	2.31	3.12	3.75	4.38
Z5_SUB_748	Z5_IL_3339	1.20	73	0.35	0.55	0.97	1.30	1.74	2.09	2.43
Z5_SUB_749	Z5_IL_3341	2.98	73	0.84	1.33	2.36	3.15	4.24	5.07	5.92
Z5_SUB_750	Z5_IL_2736	1.11	73	0.38	0.59	1.01	1.33	1.75	2.07	2.39
Z5_SUB_752	Z5_IL_1463	8.23	76	2.08	3.17	5.45	7.19	9.58	11.42	13.28
Z5_SUB_753	Z5_IL_3671	1.67	74	0.58	0.88	1.49	1.94	2.55	3.00	3.45
Z5_SUB_754	Z5_CB_445	6.71	78	2.03	2.98	4.90	6.34	8.28	9.75	11.23
Z5_SUB_755	Z5_CB_174	2.40	77	1.45	2.01	3.04	3.78	4.73	5.44	6.14
Z5_SUB_756	Z5_SGIL_4717	1.35	84	0.57	0.80	1.30	1.67	2.19	2.58	2.99
Z5_SUB_757	Z5_IL_3135	0.65	73	0.28	0.42	0.69	0.88	1.13	1.32	1.51
Z5_SUB_758	Z5_MH_4312	1.36	81	0.58	0.84	1.36	1.75	2.29	2.70	3.11
Z5_SUB_759	Z5_IL_2431	0.58	75	0.27	0.40	0.64	0.81	1.04	1.20	1.37
Z5_SUB_760	Z5_IL_4941	1.23	82	0.54	0.77	1.24	1.59	2.07	2.43	2.80
Z5_SUB_761	Z5_IL_1465	2.56	75	0.56	0.85	1.44	1.89	2.50	2.97	3.44
Z5_SUB_762	Z5_IL_3235	0.69	76	0.38	0.53	0.82	1.02	1.29	1.49	1.69
Z5_SUB_763	Z5_IL_3156	3.13	84	2.32	3.02	4.30	5.21	6.40	7.28	8.16
Z5_SUB_764	Z5_MH_4009	1.23	87	1.01	1.31	1.85	2.24	2.75	3.14	3.51
Z5_SUB_765	Z5_CB_198	1.60	86	1.33	1.71	2.41	2.91	3.56	4.05	4.54
Z5_SUB_766	Z5_CB_4913	1.10	87	0.92	1.18	1.66	2.00	2.45	2.79	3.12
Z5_SUB_767	Z5_IL_1161	1.47	87	0.79	1.09	1.69	2.13	2.73	3.18	3.64
Z5_SUB_769	Z5_IL_3216	0.63	78	0.29	0.42	0.67	0.86	1.11	1.29	1.48
Z5_SUB_770	Z5_IL_2952	0.90	79	0.32	0.47	0.79	1.04	1.38	1.63	1.90
Z5_SUB_771	Z5_IL_3685	1.24	73	0.53	0.80	1.33	1.71	2.21	2.58	2.95
Z5_SUB_772	Z5_IL_1164	0.73	80	0.44	0.61	0.92	1.15	1.45	1.68	1.90
Z5_SUB_773	Z5_IL_1163	1.58	83	0.97	1.31	1.99	2.48	3.12	3.60	4.08
Z5_SUB_774	Z5_IL_1162	0.79	83	0.28	0.38	0.57	0.71	0.90	1.04	1.18
Z5_SUB_775	Z5_CB_342	8.16	83	5.08	6.64	9.51	11.55	14.20	16.17	18.14
Z5_SUB_776	Z5_IL_3344	2.00	87	1.06	1.44	2.20	2.76	3.50	4.06	4.62
Z5_SUB_777	Z5_IL_3687	4.16	69	0.93	1.60	2.96	3.97	5.33	6.36	7.39
Z5_SUB_778	Z5_CB_335	1.41	65	0.31	0.63	1.21	1.60	2.10	2.46	2.82
Z5_SUB_779	Z5_CB_336	2.74	75	1.54	2.13	3.20	3.95	4.92	5.63	6.34
Z5_SUB_780	Z5_IL_5149	9.06	84	5.50	7.38	10.95	13.52	16.89	19.41	21.92
Z5_SUB_781	Z5_OF_5065	5.74	76	1.32	2.03	3.51	4.66	6.23	7.45	8.68
Z5_SUB_782	Z5_IL_3046	0.55	74	0.16	0.25	0.44	0.58	0.78	0.93	1.08
Z5_SUB_783	Z5_CB_737	1.74	74	0.51	0.81	1.42	1.89	2.54	3.03	3.53
Z5_SUB_784	Z5_IL_5140	2.14	73	0.62	0.98	1.74	2.32	3.12	3.73	4.35
Z5_SUB_785	Z5_MH_4116	1.37	57	0.12	0.20	0.68	1.09	1.64	2.05	2.46
Z5_SUB_786	Z5_IL_5142	1.35	72	0.37	0.59	1.07	1.44	1.95	2.35	2.75

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	0.85	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z5_SUB_787	Z5_CB_325	1.87	55	0.12	0.23	0.59	1.05	1.69	2.18	2.67
Z5_SUB_788	Z5_IL_1166	3.37	73	0.97	1.54	2.73	3.64	4.90	5.86	6.84
Z5_SUB_789	Z5_CB_398	1.91	70	0.55	0.91	1.66	2.23	3.01	3.61	4.22
Z5_SUB_792	Z5_CB_438	0.80	70	0.18	0.30	0.58	0.79	1.07	1.29	1.52
Z5_SUB_793	Z5_CB_416	2.62	73	0.59	0.94	1.68	2.26	3.05	3.66	4.27
Z5_SUB_794	Z5_IL_3092	2.96	73	0.68	1.09	1.96	2.63	3.54	4.25	4.96
Z5_SUB_795	Z5_IL_3708	0.99	73	0.30	0.48	0.84	1.12	1.50	1.79	2.09
Z5_SUB_796	Z5_CB_419	0.67	73	0.19	0.30	0.54	0.71	0.96	1.15	1.34
Z5_SUB_797	Z5_CB_423	2.49	73	0.72	1.16	2.07	2.77	3.72	4.46	5.20
Z5_SUB_798	Z5_CB_421	1.79	73	0.52	0.82	1.47	1.97	2.66	3.19	3.74
Z5_SUB_799	Z5_CB_402	0.75	71	0.23	0.37	0.66	0.88	1.18	1.41	1.64
Z5_SUB_8	Z5_IL_1789	3.79	73	1.14	1.79	3.17	4.23	5.69	6.80	7.93
Z5_SUB_80	Z5_IL_2187	1.83	73	0.38	0.62	1.11	1.50	2.03	2.44	2.85
Z5_SUB_800	Z5_CB_401	0.68	72	0.19	0.31	0.56	0.75	1.02	1.23	1.43
Z5_SUB_801	Z5_CB_403	1.35	71	0.35	0.58	1.06	1.43	1.95	2.36	2.77
Z5_SUB_802	Z5_CB_131	1.51	70	0.39	0.65	1.20	1.63	2.23	2.69	3.16
Z5_SUB_803	Z5_CB_306	1.01	71	0.30	0.49	0.89	1.19	1.60	1.92	2.24
Z5_SUB_804	Z5_CB_400	0.71	73	0.34	0.51	0.83	1.06	1.36	1.59	1.81
Z5_SUB_805	Z5_IL_1785	1.31	74	0.61	0.90	1.47	1.88	2.43	2.83	3.24
Z5_SUB_806	Z5_IL_1863	1.83	70	0.74	1.17	1.98	2.57	3.33	3.90	4.46
Z5_SUB_807	Z5_IL_1865	0.92	70	0.38	0.60	1.02	1.31	1.70	1.99	2.28
Z5_SUB_808	Z5_IL_1773	0.24	78	0.14	0.19	0.30	0.37	0.47	0.55	0.62
Z5_SUB_809	Z5_CB_332	0.95	74	0.44	0.66	1.07	1.37	1.76	2.05	2.34
Z5_SUB_81	Z5_IL_2201	1.90	78	0.63	0.93	1.57	2.06	2.74	3.26	3.78
Z5_SUB_810	Z5_IL_2698	0.64	69	0.13	0.22	0.42	0.57	0.78	0.95	1.11
Z5_SUB_811	Z5_CB_459	1.85	72	0.46	0.75	1.36	1.82	2.46	2.96	3.45
Z5_SUB_812	Z5_CB_321	1.12	73	0.35	0.56	0.98	1.31	1.75	2.09	2.44
Z5_SUB_813	Z5_CB_4914	0.60	73	0.20	0.32	0.55	0.73	0.97	1.16	1.35
Z5_SUB_814	Z5_CB_312	0.80	73	0.22	0.35	0.63	0.84	1.15	1.38	1.62
Z5_SUB_815	Z5_CB_302	3.06	71	0.77	1.28	2.37	3.22	4.39	5.30	6.22
Z5_SUB_816	Z5_CB_435	1.83	71	0.37	0.63	1.20	1.65	2.29	2.79	3.30
Z5_SUB_817	Z5_CB_92	1.23	67	0.36	0.63	1.17	1.54	2.04	2.41	2.77
Z5_SUB_820	Z5_MH_4248	2.32	78	1.31	1.84	2.87	3.62	4.60	5.33	6.06
Z5_SUB_823	Z5_CB_430	1.42	73	0.35	0.56	1.01	1.36	1.85	2.23	2.61
Z5_SUB_824	Z5_MH_4102	4.65	56	0.30	0.54	1.90	3.21	5.03	6.44	7.86
Z5_SUB_825	Z5_MH_4075	7.77	58	1.31	2.87	7.66	10.48	13.82	16.17	18.44
Z5_SUB_827	Z5_IL_3370	5.50	86	2.02	2.84	4.52	5.80	7.54	8.87	10.22
Z5_SUB_828	Z5_IL_3126	5.94	75	1.28	1.99	3.51	4.68	6.29	7.53	8.78
Z5_SUB_829	Z5_IL_3369	1.20	73	0.27	0.43	0.77	1.03	1.39	1.67	1.95
Z5_SUB_830	Z5_IL_3536	0.86	73	0.36	0.52	0.79	0.97	1.21	1.38	1.56
Z5_SUB_832	Z5_IL_2691	0.76	85	0.47	0.64	0.96	1.19	1.50	1.74	1.97
Z5_SUB_833	Z5_IL_3387	0.91	82	0.31	0.45	0.74	0.97	1.28	1.52	1.77
Z5_SUB_834	Z5_IL_4930	0.88	67	0.31	0.53	0.96	1.27	1.66	1.95	2.24
Z5_SUB_835	Z5_IL_1791	0.08	80	0.04	0.06	0.09	0.12	0.15	0.18	0.20
Z5_SUB_836	Z5_IL_1792	0.07	78	0.03	0.04	0.07	0.09	0.12	0.14	0.16
Z5_SUB_837	Z5_IL_1790	0.13	75	0.05	0.08	0.14	0.18	0.23	0.27	0.31
Z5_SUB_838	Z5_IL_1793	0.05	73	0.02	0.03	0.05	0.07	0.09	0.10	0.12
Z5_SUB_839	Z5_IL_1794	0.04	72	0.02	0.02	0.04	0.05	0.07	0.08	0.09
Z5_SUB_84	Z5_IL_1866	1.58	78	0.89	1.25	1.95	2.46	3.12	3.62	4.11
Z5_SUB_840	Z5_IL_1795	0.05	78	0.03	0.04	0.06	0.07	0.09	0.11	0.12
Z5_SUB_841	Z5_IL_1796	0.04	78	0.03	0.04	0.06	0.07	0.09	0.10	0.11
Z5_SUB_842	Z5_IL_1797	0.06	78	0.03	0.05	0.07	0.09	0.11	0.13	0.15
Z5_SUB_843	Z5_IL_1798	0.08	78	0.05	0.07	0.10	0.13	0.16	0.19	0.21
Z5_SUB_844	Z5_IL_1799	0.31	78	0.18	0.26	0.40	0.50	0.63	0.73	0.83
Z5_SUB_845	Z5_IL_1778	0.16	78	0.10	0.13	0.21	0.26	0.33	0.38	0.43
Z5_SUB_846	Z5_IL_1779	0.15	78	0.09	0.13	0.19	0.24	0.31	0.36	0.41
Z5_SUB_847	Z5_IL_1780	0.12	78	0.07	0.10	0.15	0.19	0.24	0.27	0.31
Z5_SUB_848	Z5_IL_1777	0.16	78	0.10	0.13	0.21	0.26	0.33	0.38	0.43
Z5_SUB_849	Z5_IL_1781	0.17	78	0.09	0.13	0.21	0.26	0.33	0.38	0.44

Zone 5 West Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**0.85**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
Z5_SUB_85	Z5_IL_1199	4.42	80	1.92	2.68	4.17	5.25	6.68	7.76	8.83
Z5_SUB_850	Z5_IL_1782	0.13	78	0.08	0.11	0.16	0.20	0.26	0.30	0.34
Z5_SUB_851	Z5_IL_1783	0.20	78	0.12	0.16	0.25	0.32	0.40	0.47	0.53
Z5_SUB_852	Z5_IL_1784	0.22	78	0.09	0.13	0.22	0.28	0.37	0.44	0.51
Z5_SUB_853	Z5_IL_4929	1.47	69	0.39	0.66	1.23	1.67	2.26	2.72	3.18
Z5_SUB_854	Z5_IL_4928	4.61	71	1.07	1.77	3.25	4.39	5.96	7.17	8.39
Z5_SUB_855	Z5_IL_3196	5.73	71	2.40	3.69	6.06	7.71	9.85	11.42	12.98
Z5_SUB_856	Z5_MH_3827	2.05	84	0.91	1.29	2.07	2.66	3.47	4.10	4.72
Z5_SUB_857	Z5_IL_2813	3.01	70	0.44	0.75	1.43	1.95	2.68	3.23	3.80
Z5_SUB_858	Z5_IL_3197	4.39	70	1.57	2.53	4.35	5.65	7.35	8.62	9.87
Z5_SUB_86	Z5_MH_3780	6.10	74	2.68	3.86	6.03	7.55	9.53	11.00	12.45
Z5_SUB_861	Z5_IL_4949	0.31	82	0.15	0.21	0.34	0.43	0.56	0.65	0.75
Z5_SUB_862	Z5_CB_643	0.29	77	0.21	0.28	0.41	0.50	0.62	0.70	0.79
Z5_SUB_863	Z5_SGIL_4697	3.36	86	1.18	1.65	2.59	3.30	4.26	4.99	5.73
Z5_SUB_865	Z5_CB_128	0.58	57	0.07	0.11	0.39	0.59	0.84	1.02	1.20
Z5_SUB_866	Z5_CB_4912	0.58	70	0.16	0.27	0.49	0.67	0.90	1.08	1.26
Z5_SUB_867	Z5_IL_990	2.51	74	1.00	1.40	2.11	2.60	3.23	3.70	4.16
Z5_SUB_868	Z5_SGIL_4763	1.57	87	0.73	1.02	1.62	2.07	2.69	3.16	3.64
Z5_SUB_87	Z5_IL_2887	1.70	57	0.15	0.25	0.57	0.89	1.32	1.65	1.97
Z5_SUB_870	Z5_CB_202	6.44	67	1.26	2.26	4.21	5.61	7.42	8.77	10.10
Z5_SUB_871	Z5_IL_1513	0.37	82	0.23	0.31	0.47	0.59	0.74	0.86	0.97
Z5_SUB_872	Z5_IL_1111	4.12	82	1.83	2.53	3.91	4.91	6.24	7.24	8.23
Z5_SUB_873	Z5_IL_3328	1.31	79	0.75	1.05	1.63	2.05	2.60	3.01	3.42
Z5_SUB_875	Z5_IL_2278	0.18	70	0.09	0.13	0.22	0.28	0.35	0.41	0.47
Z5_SUB_876	Z5_IL_5299	8.33	79	2.20	3.17	5.13	6.58	8.53	10.00	11.47
Z5_SUB_88	Z5_CB_48	0.97	67	0.19	0.36	0.71	0.99	1.36	1.65	1.94
Z5_SUB_89	Z5_MH_3868	2.82	57	0.29	0.47	1.35	2.12	3.13	3.86	4.58
Z5_SUB_9	Z5_CB_331	1.42	66	0.32	0.60	1.17	1.58	2.13	2.55	2.96
Z5_SUB_90	Z5_MH_4319	4.00	76	1.17	1.75	2.92	3.80	4.99	5.89	6.79
Z5_SUB_91	Z5_IL_2233	1.23	75	0.52	0.78	1.26	1.62	2.09	2.44	2.79
Z5_SUB_92	Z5_MH_4277	4.56	76	1.37	2.10	3.64	4.82	6.45	7.70	8.96
Z5_SUB_93	Z5_CB_165	4.69	61	0.46	0.73	1.88	2.79	4.03	4.97	5.92
Z5_SUB_94	Z5_IL_5175	2.86	63	0.46	1.08	2.31	3.18	4.33	5.17	6.00
Z5_SUB_95	Z5_IL_2939	4.15	69	0.77	1.35	2.60	3.56	4.88	5.90	6.93
Z5_SUB_96	Z5_MH_4270	2.66	68	0.52	0.95	1.85	2.54	3.46	4.16	4.86
Z5_SUB_97	Z5_IL_3314	14.32	67	1.27	2.35	4.91	6.98	9.92	12.22	14.58
Z5_SUB_98	Z5_IL_2858	4.58	58	0.38	0.64	2.08	3.26	4.88	6.12	7.37
Z5_SUB_99	Z5_IL_2788	1.38	65	0.90	1.16	1.54	1.82	2.18	2.45	2.72

Zone 5 East Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
NEW_Z5_SUB_1070	Z5_IL_2684	0.42	79	0.44	0.53	0.70	0.83	0.99	1.12	1.24
NEW_Z5_SUB_1097	Z5_IL_1422	2.50	70	2.35	2.85	3.78	4.45	5.34	6.01	6.67
NEW_Z5_SUB_2000	Z5_IL_3628	5.36	79	5.04	6.11	8.11	9.54	11.45	12.88	14.31
NEW_Z5_SUB_2001	NEW_Z5_CB_6000	1.71	79	1.61	1.95	2.60	3.05	3.66	4.12	4.58
NEW_Z5_SUB_2002	NEW_Z5_CB_6001	2.46	79	2.31	2.80	3.71	4.37	5.24	5.90	6.55
NEW_Z5_SUB_2003	Z5_IL_1351	1.39	74	1.44	1.75	2.32	2.73	3.27	3.68	4.09
NEW_Z5_SUB_2004	NEW_Z5_CB_6004	10.58	74	9.98	12.09	16.06	18.89	22.67	25.50	28.33
NEW_Z5_SUB_2006	Z5_CB_358	3.70	81	3.73	4.51	6.00	7.05	8.46	9.52	10.58
NEW_Z5_SUB_2008	Z5_IL_2546	1.63	57	1.30	1.93	2.57	3.02	3.63	4.08	4.53
NEW_Z5_SUB_2009	Z5_IL_2548	0.84	57	0.79	1.05	1.39	1.63	1.96	2.21	2.45
NEW_Z5_SUB_2010	Z5_MH_4167	0.62	70	0.63	0.76	1.01	1.19	1.43	1.61	1.79
NEW_Z5_SUB_2011	NEW_Z5_IL_6022	1.09	81	1.14	1.38	1.83	2.15	2.58	2.90	3.22
NEW_Z5_SUB_2012	Z5_IL_3425	1.36	81	1.36	1.64	2.18	2.56	3.08	3.46	3.85
NEW_Z5_SUB_2013	Z5_IL_1001	21.45	61	18.41	22.60	30.01	35.31	42.37	47.66	52.96
NEW_Z5_SUB_2015	Z5_IL_1197	0.69	77	0.58	0.70	0.93	1.09	1.31	1.47	1.64
NEW_Z5_SUB_2016	Z5_MH_3748	0.24	77	0.21	0.26	0.34	0.41	0.49	0.55	0.61
NEW_Z5_SUB_2017	Z5_IL_1180	0.88	82	0.87	1.05	1.39	1.64	1.96	2.21	2.45
NEW_Z5_SUB_2018	Z5_CB_228	0.97	82	0.96	1.17	1.55	1.83	2.19	2.46	2.74
NEW_Z5_SUB_2019	Z5_IL_2948	1.03	81	1.03	1.25	1.66	1.96	2.35	2.64	2.93
NEW_Z5_SUB_2021	Z5_IL_2791	4.53	79	3.43	4.15	5.51	6.48	7.78	8.75	9.72
NEW_Z5_SUB_2022	Z5_SGIL_4751	2.97	81	2.67	3.24	4.30	5.06	6.07	6.82	7.58
NEW_Z5_SUB_2023	NEW_Z5_CB_6050	1.43	82	1.45	1.76	2.33	2.75	3.30	3.71	4.12
NEW_Z5_SUB_2024	NEW_Z5_CB_6051	4.66	82	4.03	4.88	6.49	7.63	9.16	10.30	11.44
NEW_Z5_SUB_2025	Z5_CB_155	4.65	79	4.00	4.85	6.44	7.57	9.09	10.22	11.36
NEW_Z5_SUB_2026	Z5_MH_4306	2.55	79	2.37	2.87	3.81	4.49	5.38	6.06	6.73
NEW_Z5_SUB_2027	Z5_CB_145	5.27	86	4.30	5.21	6.92	8.14	9.77	10.99	12.21
NEW_Z5_SUB_2028	Z5_MH_3990	10.31	85	8.06	9.76	12.97	15.26	18.31	20.60	22.88
NEW_Z5_SUB_2029	Z5_CB_211	2.53	77	2.56	3.10	4.11	4.84	5.80	6.53	7.25
NEW_Z5_SUB_2030	Z5_OF_4382	1.36	77	1.31	1.59	2.11	2.48	2.97	3.34	3.72
NEW_Z5_SUB_2031	Z5_IL_2599	2.49	73	2.59	3.13	4.16	4.89	5.87	6.61	7.34
NEW_Z5_SUB_2032	Z5_IL_2687	3.13	73	3.11	3.76	5.00	5.88	7.06	7.94	8.82
NEW_Z5_SUB_2033	Z5_MH_3740	1.15	81	1.18	1.42	1.89	2.23	2.67	3.00	3.34
NEW_Z5_SUB_2034	Z5_IL_1168	4.66	65	4.44	5.38	7.14	8.40	10.08	11.34	12.60
NEW_Z5_SUB_2035	Z5_IL_1417	1.32	65	1.37	1.66	2.20	2.59	3.11	3.50	3.88
NEW_Z5_SUB_31	Z5_IL_2778	15.91	71	8.51	10.33	13.72	16.14	19.36	21.79	24.21
NEW_Z5_SUB_32	Z5_IL_2799	1.33	61	0.77	1.04	1.39	1.64	1.97	2.21	2.46
NEW_Z5_SUB_376	Z5_CB_479	1.32	82	1.13	1.37	1.82	2.14	2.57	2.89	3.21
NEW_Z5_SUB_509	Z5_CB_854	1.97	67	1.77	2.15	2.85	3.36	4.03	4.53	5.03
NEW_Z5_SUB_6100	NEW_Z5_IL_6102	4.54	68	4.61	5.58	7.41	8.72	10.46	11.77	13.08
NEW_Z5_SUB_6102	Z5_OF_4396	2.62	72	2.69	3.25	4.32	5.08	6.10	6.86	7.62
NEW_Z5_SUB_6103	NEW_Z5_SUB_6103	7.64	72	6.82	8.26	10.96	12.90	15.48	17.41	19.35
NEW_Z5_SUB_6104	Z5_OF_4397	5.25	69	5.51	6.67	8.85	10.41	12.50	14.06	15.62
NEW_Z5_SUB_6106	NEW_Z5_IL_6112	6.09	52	1.78	5.87	9.95	11.70	14.04	15.80	17.55
NEW_Z5_SUB_6107	Z5_OF_4398	4.96	70	4.91	5.94	7.89	9.28	11.14	12.53	13.92
NEW_Z5_SUB_6202	Z5_IL_3698	1.99	53	0.55	1.19	2.29	2.71	3.25	3.66	4.06
NEW_Z5_SUB_6204	NEW_Z5_IL_6200	7.70	52	2.03	4.46	10.02	11.84	14.21	15.99	17.76
NEW_Z5_SUB_6205	Z5_IL_5379	16.85	62	14.83	18.00	23.91	28.13	33.76	37.98	42.20
NEW_Z5_SUB_6206	NEW_Z5_IL_6205	26.78	56	12.17	25.84	35.66	41.95	50.34	56.64	62.93
NEW_Z5_SUB_6207	Z5_IL_4997	134.42	62	64.85	85.39	114.99	135.37	162.45	182.75	203.06
NEW_Z5_SUB_6208	Z5_IL_5363	7.27	51	2.13	7.97	12.28	14.44	17.33	19.50	21.67
NEW_Z5_SUB_6301	NEW_Z5_IL_6303	6.06	64	4.27	5.21	6.92	8.14	9.77	10.99	12.22
NEW_Z5_SUB_6302	Z5_IL_2590	3.67	64	2.68	3.27	4.34	5.10	6.12	6.89	7.66
NEW_Z5_SUB_6400	NEW_Z5_MH_6408	10.56	76	7.16	8.66	11.51	13.54	16.25	18.28	20.31
NEW_Z5_SUB_6401	Z5_MH_4283	7.21	76	5.49	6.65	8.83	10.39	12.47	14.03	15.59
NEW_Z5_SUB_6500	Z5_IL_2868	15.55	79	12.31	14.91	19.80	23.29	27.95	31.45	34.94
NEW_Z5_SUB_6501	NEW_Z5_IL_6502	3.62	79	2.93	3.55	4.71	5.55	6.65	7.49	8.32
NEW_Z5_SUB_6502	NEW_Z5_IL_6504	3.81	79	3.19	3.86	5.13	6.04	7.24	8.15	9.06
NEW_Z5_SUB_6503	NEW_Z5_IL_6505	4.97	79	4.66	5.64	7.49	8.82	10.58	11.90	13.23
NEW_Z5_SUB_6601	NEW_Z5_CB_6013	0.50	75	0.52	0.63	0.84	0.98	1.18	1.33	1.48

Zone 5 East Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
NEW_Z5_SUB_6603	Z5_IL_3018	0.43	79	0.44	0.53	0.70	0.82	0.99	1.11	1.24
NEW_Z5_SUB_6604	Z5_IL_2556	2.22	75	1.47	1.78	2.36	2.78	3.33	3.75	4.16
NEW_Z5_SUB_6605	NEW_Z5_MH_6600	0.48	75	0.49	0.60	0.79	0.93	1.12	1.26	1.39
NEW_Z5_SUB_79	Z5_MH_4327	6.41	78	5.46	6.62	8.79	10.34	12.41	13.96	15.51
NEW_Z5_SUB_890	Z5_IL_3019	8.82	76	8.71	10.54	14.00	16.47	19.76	22.23	24.70
NEW_Z5_SUB_906	NEW_Z5_IL_6100	1.81	77	1.89	2.29	3.05	3.58	4.30	4.84	5.37
Z5_SUB_1000	Z5_IL_3636	6.13	80	2.61	3.59	5.46	6.81	8.60	9.94	11.27
Z5_SUB_1001	Z5_IL_3688	1.80	71	1.06	1.52	2.37	2.96	3.74	4.31	4.88
Z5_SUB_1002	Z5_IL_3055	2.87	74	1.80	2.50	3.81	4.74	5.95	6.85	7.74
Z5_SUB_1003	Z5_MH_4059	3.24	73	1.95	2.73	4.20	5.23	6.58	7.59	8.58
Z5_SUB_1004	Z5_IL_3013	2.98	74	2.14	2.87	4.19	5.11	6.31	7.19	8.07
Z5_SUB_1005	Z5_IL_3056	2.34	79	1.95	2.36	3.13	3.68	4.42	4.97	5.52
Z5_SUB_1006	Z5_IL_2011	2.40	72	1.06	1.51	2.32	2.89	3.63	4.17	4.70
Z5_SUB_1007	Z5_IL_3426	0.89	77	0.34	0.49	0.79	1.01	1.31	1.53	1.76
Z5_SUB_1008	Z5_IL_3159	2.36	62	0.49	1.00	2.02	2.76	3.74	4.48	5.21
Z5_SUB_1009	Z5_IL_3691	2.16	62	0.30	0.64	1.37	1.91	2.64	3.19	3.75
Z5_SUB_1010	Z5_IL_4887	1.29	59	0.12	0.32	0.79	1.15	1.63	2.00	2.36
Z5_SUB_1011	Z5_IL_3052	1.53	57	0.14	0.35	0.96	1.41	2.01	2.46	2.90
Z5_SUB_1012	Z5_IL_3053	1.10	60	0.21	0.48	1.00	1.37	1.86	2.22	2.58
Z5_SUB_1013	Z5_IL_1482	1.03	65	0.18	0.34	0.64	0.87	1.18	1.40	1.63
Z5_SUB_1014	Z5_IL_2535	1.81	63	0.77	1.32	2.21	2.78	3.50	4.02	4.54
Z5_SUB_1015	Z5_IL_2534	0.62	79	0.27	0.38	0.61	0.79	1.03	1.21	1.39
Z5_SUB_1016	Z5_IL_2538	10.26	62	1.65	3.48	7.29	10.12	13.97	16.88	19.78
Z5_SUB_1017	Z5_SGIL_4629	0.66	59	0.07	0.21	0.50	0.71	0.99	1.20	1.41
Z5_SUB_1018	Z5_IL_3700	0.87	61	0.16	0.36	0.75	1.03	1.40	1.68	1.96
Z5_SUB_1019	Z5_IL_1209	0.91	61	0.15	0.32	0.67	0.94	1.31	1.58	1.86
Z5_SUB_1020	Z5_IL_3078	0.73	57	0.07	0.17	0.46	0.67	0.96	1.18	1.39
Z5_SUB_1021	Z5_IL_999	2.68	58	0.23	0.54	1.40	2.06	2.95	3.62	4.29
Z5_SUB_1022	Z5_IL_997	1.50	57	0.15	0.39	1.03	1.50	2.11	2.56	3.01
Z5_SUB_1023	Z5_IL_3202	0.81	62	0.15	0.31	0.64	0.87	1.19	1.42	1.66
Z5_SUB_1024	Z5_CB_598	4.84	62	0.56	1.24	2.71	3.85	5.42	6.63	7.85
Z5_SUB_1026	Z5_MH_4084	1.27	57	0.10	0.23	0.66	0.99	1.44	1.78	2.12
Z5_SUB_1027	Z5_IL_3203	1.61	56	0.13	0.32	0.95	1.43	2.07	2.55	3.03
Z5_SUB_1028	Z5_IL_3076	4.17	57	0.33	0.69	1.96	2.93	4.26	5.26	6.26
Z5_SUB_1029	Z5_IL_3711	0.61	57	0.06	0.16	0.42	0.61	0.88	1.08	1.27
Z5_SUB_1030	Z5_IL_3073	0.88	57	0.08	0.20	0.56	0.82	1.18	1.45	1.72
Z5_SUB_1031	Z5_IL_3072	0.67	57	0.06	0.16	0.42	0.63	0.90	1.10	1.31
Z5_SUB_1032	Z5_IL_3098	0.83	57	0.08	0.23	0.60	0.87	1.23	1.51	1.79
Z5_SUB_1033	Z5_IL_3085	1.52	57	0.13	0.38	1.01	1.49	2.14	2.63	3.12
Z5_SUB_1034	Z5_IL_3707	0.95	56	0.08	0.19	0.58	0.87	1.26	1.56	1.85
Z5_SUB_1035	Z5_IL_2048	1.31	57	0.12	0.33	0.89	1.30	1.86	2.28	2.70
Z5_SUB_1036	Z5_IL_3087	0.70	57	0.05	0.09	0.24	0.35	0.51	0.63	0.75
Z5_SUB_1037	Z5_IL_3097	1.08	57	0.08	0.22	0.62	0.94	1.37	1.70	2.03
Z5_SUB_1038	Z5_IL_3422	2.32	53	0.13	0.25	0.82	1.37	2.11	2.67	3.23
Z5_SUB_1039	Z5_MH_4087	1.63	57	0.13	0.29	0.82	1.23	1.78	2.20	2.61
Z5_SUB_1040	Z5_IL_2151	0.99	57	0.08	0.21	0.58	0.86	1.25	1.53	1.82
Z5_SUB_1041	Z5_IL_2152	1.22	57	0.11	0.29	0.78	1.15	1.65	2.03	2.41
Z5_SUB_1042	Z5_IL_3086	0.53	57	0.05	0.13	0.35	0.51	0.73	0.90	1.07
Z5_SUB_1043	Z5_IL_2086	0.71	57	0.06	0.19	0.50	0.73	1.04	1.27	1.50
Z5_SUB_1044	Z5_IL_1663	0.71	57	0.06	0.18	0.48	0.70	1.01	1.24	1.48
Z5_SUB_1045	Z5_IL_2088	0.77	56	0.07	0.18	0.51	0.75	1.08	1.33	1.58
Z5_SUB_1046	Z5_MH_4090	0.74	57	0.07	0.18	0.49	0.72	1.03	1.26	1.50
Z5_SUB_1047	Z5_IL_3091	1.28	57	0.12	0.34	0.89	1.30	1.86	2.28	2.70
Z5_SUB_1048	Z5_MH_4089	0.68	57	0.06	0.16	0.44	0.65	0.93	1.14	1.36
Z5_SUB_1049	Z5_IL_2632	2.04	57	0.18	0.48	1.33	1.96	2.81	3.45	4.09
Z5_SUB_1050	Z5_IL_2677	1.01	57	0.09	0.27	0.71	1.04	1.49	1.82	2.16
Z5_SUB_1051	Z5_IL_3706	2.32	60	0.30	0.75	1.70	2.42	3.40	4.14	4.89
Z5_SUB_1052	Z5_IL_3094	3.55	64	0.83	1.51	2.93	4.00	5.46	6.57	7.68
Z5_SUB_1053	Z5_IL_2650	0.88	56	0.07	0.16	0.51	0.77	1.13	1.40	1.67

Zone 5 East Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	85%	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z5_SUB_1054	Z5_IL_2651	0.54	56	0.04	0.11	0.34	0.51	0.74	0.91	1.09
Z5_SUB_1055	Z5_IL_2663	0.95	56	0.08	0.23	0.65	0.96	1.39	1.70	2.02
Z5_SUB_1056	Z5_MH_4112	2.70	57	0.21	0.45	1.28	1.92	2.79	3.44	4.09
Z5_SUB_1057	Z5_IL_3101	1.04	57	0.08	0.18	0.50	0.76	1.10	1.36	1.62
Z5_SUB_1058	Z5_IL_4896	3.40	72	0.97	1.50	2.59	3.42	4.55	5.41	6.27
Z5_SUB_1059	Z5_IL_4898	3.60	72	1.21	1.86	3.20	4.20	5.58	6.63	7.68
Z5_SUB_1060	Z5_IL_4899	1.52	70	0.50	0.80	1.40	1.85	2.47	2.94	3.41
Z5_SUB_1061	Z5_MH_4358	2.29	73	0.83	1.26	2.14	2.80	3.70	4.38	5.07
Z5_SUB_1062	Z5_IL_3692	0.78	73	0.31	0.47	0.78	1.02	1.34	1.58	1.83
Z5_SUB_1063	Z5_IL_2407	0.81	73	0.34	0.51	0.84	1.09	1.42	1.68	1.93
Z5_SUB_1064	Z5_IL_2606	0.51	74	0.16	0.25	0.43	0.57	0.77	0.92	1.07
Z5_SUB_1065	Z5_IL_3022	0.77	69	0.20	0.32	0.59	0.80	1.09	1.31	1.54
Z5_SUB_1066	Z5_IL_1477	0.93	69	0.46	0.70	1.14	1.44	1.85	2.15	2.44
Z5_SUB_1067	Z5_CB_70	2.38	82	1.29	1.79	2.76	3.46	4.41	5.13	5.84
Z5_SUB_1068	Z5_IL_3023	0.56	79	0.43	0.56	0.82	0.99	1.23	1.40	1.57
Z5_SUB_1069	Z5_IL_3028	0.66	85	0.45	0.60	0.89	1.09	1.36	1.57	1.77
Z5_SUB_1072	Z5_IL_2625	0.50	80	0.22	0.32	0.52	0.66	0.86	1.02	1.17
Z5_SUB_1073	Z5_IL_2589	1.31	73	0.50	0.75	1.26	1.65	2.18	2.59	3.00
Z5_SUB_1079	Z5_IL_2554	1.15	66	0.26	0.45	0.84	1.13	1.51	1.80	2.09
Z5_SUB_1080	Z5_IL_3480	3.74	62	0.63	1.25	2.44	3.26	4.32	5.10	5.86
Z5_SUB_1081	Z5_IL_3025	1.68	70	0.41	0.67	1.18	1.58	2.12	2.53	2.94
Z5_SUB_1082	Z5_CB_237	1.11	57	0.11	0.30	0.77	1.11	1.57	1.90	2.23
Z5_SUB_1083	Z5_SGIL_4696	0.85	62	0.13	0.27	0.58	0.81	1.12	1.35	1.59
Z5_SUB_1084	Z5_IL_2543	0.66	57	0.09	0.30	0.68	0.93	1.24	1.47	1.69
Z5_SUB_1085	Z5_IL_1003	0.90	78	0.39	0.56	0.92	1.18	1.55	1.83	2.10
Z5_SUB_1087	Z5_IL_3172	0.77	58	0.16	0.44	0.89	1.18	1.54	1.80	2.05
Z5_SUB_1088	Z5_IL_1483	5.71	79	3.63	4.90	7.31	9.02	11.28	12.95	14.62
Z5_SUB_1089	Z5_IL_2533	0.99	73	0.38	0.53	0.80	1.00	1.25	1.43	1.62
Z5_SUB_1090	Z5_IL_1501	2.77	78	1.70	2.23	3.19	3.87	4.75	5.40	6.05
Z5_SUB_1091	Z5_IL_2003	0.66	81	0.40	0.55	0.83	1.04	1.31	1.52	1.72
Z5_SUB_1092	Z5_MH_3805	4.26	69	1.60	2.48	4.17	5.38	6.97	8.16	9.33
Z5_SUB_1093	Z5_IL_2991	2.48	67	0.84	1.35	2.30	2.96	3.83	4.47	5.10
Z5_SUB_1094	Z5_IL_3017	2.07	70	0.82	1.23	2.01	2.56	3.28	3.81	4.34
Z5_SUB_1095	Z5_MH_4033	1.01	70	0.34	0.53	0.93	1.23	1.63	1.94	2.26
Z5_SUB_1096	Z5_IL_3010	1.74	57	0.23	0.73	1.70	2.33	3.14	3.73	4.29
Z5_SUB_1098	Z5_IL_3004	1.11	57	0.11	0.33	0.84	1.21	1.71	2.07	2.44
Z5_SUB_1099	Z5_IL_2301	1.37	61	0.30	0.66	1.31	1.75	2.32	2.73	3.13
Z5_SUB_1100	Z5_MH_4240	15.53	77	8.10	10.67	15.34	18.59	22.86	26.02	29.16
Z5_SUB_1101	Z5_CB_232	2.08	87	1.48	1.90	2.68	3.23	3.96	4.50	5.04
Z5_SUB_1102	Z5_CB_615	15.27	86	7.67	10.29	15.38	19.05	23.97	27.65	31.32
Z5_SUB_1103	Z5_CB_663	0.74	68	0.35	0.53	0.88	1.12	1.45	1.69	1.92
Z5_SUB_1104	Z5_IL_3435	0.51	67	0.23	0.36	0.59	0.76	0.99	1.15	1.32
Z5_SUB_1105	Z5_IL_3194	1.56	72	0.75	1.10	1.79	2.28	2.94	3.43	3.92
Z5_SUB_1106	Z5_IL_1423	1.99	67	1.09	1.62	2.52	3.12	3.90	4.47	5.03
Z5_SUB_1107	Z5_IL_3437	0.99	80	0.60	0.77	1.10	1.33	1.63	1.85	2.07
Z5_SUB_1109	Z5_IL_1415	0.66	81	0.48	0.64	0.92	1.13	1.40	1.59	1.79
Z5_SUB_1111	Z5_SGIL_4712	0.63	69	0.14	0.23	0.41	0.55	0.74	0.88	1.03
Z5_SUB_1112	Z5_IL_3481	1.99	57	0.24	0.55	1.40	1.96	2.68	3.19	3.69
Z5_SUB_1113	Z5_IL_2628	1.24	70	0.61	0.91	1.47	1.87	2.38	2.77	3.15
Z5_SUB_1114	Z5_IL_2623	1.44	70	0.73	1.08	1.74	2.21	2.82	3.27	3.72
Z5_SUB_1115	Z5_IL_2627	0.84	70	0.31	0.49	0.84	1.10	1.45	1.71	1.98
Z5_SUB_1116	Z5_IL_2635	1.96	74	1.12	1.58	2.46	3.08	3.90	4.51	5.12
Z5_SUB_1117	Z5_CB_373	0.74	82	0.49	0.65	0.98	1.21	1.52	1.75	1.98
Z5_SUB_1118	Z5_CB_376	0.71	82	0.48	0.64	0.95	1.17	1.47	1.69	1.91
Z5_SUB_1119	Z5_CB_371	0.64	82	0.43	0.57	0.86	1.06	1.33	1.53	1.73
Z5_SUB_1120	Z5_CB_372	1.42	82	0.91	1.24	1.85	2.29	2.87	3.31	3.75
Z5_SUB_1121	Z5_IL_2345	1.10	82	0.71	0.96	1.43	1.77	2.23	2.56	2.90
Z5_SUB_1122	Z5_CB_253	1.41	80	0.85	1.17	1.76	2.19	2.76	3.18	3.60
Z5_SUB_1123	Z5_IL_3033	0.53	77	0.34	0.47	0.71	0.88	1.10	1.27	1.44

Zone 5 East Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
Z5_SUB_1124	Z5_IL_3157	0.53	70	0.29	0.43	0.67	0.85	1.08	1.25	1.42
Z5_SUB_1125	Z5_IL_3041	0.83	72	0.41	0.59	0.94	1.18	1.51	1.75	1.98
Z5_SUB_1126	Z5_CB_252	1.32	82	0.82	1.11	1.66	2.06	2.58	2.98	3.37
Z5_SUB_1127	Z5_IL_3040	1.79	80	0.79	1.12	1.78	2.27	2.93	3.44	3.94
Z5_SUB_1128	Z5_IL_4907	0.71	70	0.12	0.20	0.36	0.49	0.68	0.82	0.96
Z5_SUB_1129	Z5_IL_3036	0.56	69	0.14	0.23	0.43	0.59	0.80	0.97	1.13
Z5_SUB_1130	Z5_MH_5390	1.39	69	0.64	0.98	1.62	2.07	2.66	3.10	3.54
Z5_SUB_1131	Z5_SGIL_4814	0.91	77	0.56	0.77	1.18	1.46	1.85	2.13	2.41
Z5_SUB_1132	Z5_CB_249	0.53	75	0.31	0.43	0.67	0.83	1.06	1.22	1.39
Z5_SUB_1133	Z5_CB_250	0.84	73	0.44	0.64	1.01	1.28	1.63	1.89	2.15
Z5_SUB_1134	Z5_MH_4042	0.95	81	0.64	0.86	1.28	1.58	1.97	2.27	2.57
Z5_SUB_1135	Z5_IL_3037	0.80	73	0.40	0.57	0.90	1.13	1.44	1.67	1.90
Z5_SUB_1136	Z5_IL_3067	1.03	76	0.63	0.87	1.33	1.66	2.09	2.41	2.73
Z5_SUB_1137	Z5_MH_4071	1.01	81	0.59	0.80	1.20	1.49	1.87	2.16	2.44
Z5_SUB_1138	Z5_IL_1472	1.58	82	0.92	1.26	1.94	2.43	3.09	3.59	4.09
Z5_SUB_1139	Z5_MH_4166	4.16	78	2.40	3.31	5.05	6.29	7.94	9.17	10.39
Z5_SUB_1140	Z5_CB_362	0.65	82	0.43	0.58	0.86	1.07	1.34	1.54	1.74
Z5_SUB_1141	Z5_CB_359	1.14	82	0.75	1.01	1.51	1.87	2.34	2.70	3.05
Z5_SUB_1142	Z5_MH_4254	0.66	82	0.32	0.44	0.71	0.90	1.17	1.37	1.58
Z5_SUB_1143	Z5_CB_347	0.79	73	0.45	0.64	1.00	1.25	1.59	1.84	2.09
Z5_SUB_1145	Z5_IL_3179	1.16	73	0.46	0.69	1.16	1.51	1.99	2.35	2.72
Z5_SUB_1146	Z5_IL_4880	0.66	73	0.27	0.40	0.66	0.86	1.13	1.34	1.55
Z5_SUB_1147	Z5_IL_3186	0.64	73	0.26	0.38	0.64	0.83	1.10	1.30	1.50
Z5_SUB_1148	Z5_IL_3061	0.98	73	0.38	0.57	0.96	1.26	1.66	1.96	2.27
Z5_SUB_1149	Z5_SGIL_4731	2.45	72	0.87	1.33	2.27	2.98	3.95	4.69	5.44
Z5_SUB_1150	Z5_SGIL_4732	1.27	73	0.48	0.73	1.23	1.61	2.12	2.52	2.92
Z5_SUB_1151	Z5_SGIL_4733	3.61	72	1.54	2.31	3.81	4.90	6.38	7.48	8.58
Z5_SUB_1152	Z5_SGIL_4734	0.91	77	0.47	0.67	1.06	1.35	1.73	2.02	2.31
Z5_SUB_1153	Z5_IL_3171	0.65	77	0.29	0.41	0.68	0.87	1.14	1.34	1.55
Z5_SUB_1154	Z5_IL_3075	2.03	57	0.17	0.37	1.06	1.58	2.28	2.81	3.34
Z5_SUB_1155	Z5_IL_3080	2.98	57	0.24	0.54	1.53	2.28	3.30	4.07	4.84
Z5_SUB_1156	Z5_IL_3215	0.52	57	0.05	0.14	0.36	0.52	0.75	0.91	1.08
Z5_SUB_1157	Z5_IL_3420	0.91	57	0.07	0.15	0.43	0.65	0.95	1.17	1.39
Z5_SUB_1158	Z5_IL_3084	0.55	57	0.05	0.15	0.39	0.57	0.81	0.99	1.17
Z5_SUB_1159	Z5_IL_2668	0.90	57	0.08	0.21	0.59	0.87	1.25	1.54	1.83
Z5_SUB_1160	Z5_CB_34	0.59	56	0.04	0.11	0.32	0.50	0.74	0.92	1.11
Z5_SUB_1162	Z5_MH_4035	1.98	78	0.78	1.13	1.87	2.43	3.21	3.80	4.41
Z5_SUB_1163	Z5_IL_2547	1.67	55	0.12	0.24	0.86	1.32	1.95	2.43	2.90
Z5_SUB_1164	Z5_IL_2446	1.02	64	0.28	0.50	0.94	1.27	1.71	2.05	2.38
Z5_SUB_1165	Z5_MH_4032	0.95	60	0.40	0.76	1.30	1.63	2.05	2.35	2.65
Z5_SUB_1167	Z5_IL_3051	0.51	57	0.05	0.12	0.33	0.48	0.69	0.85	1.00
Z5_SUB_1168	Z5_IL_3049	1.24	57	0.12	0.24	0.59	0.84	1.16	1.39	1.61
Z5_SUB_1169	Z5_IL_2149	0.91	82	0.54	0.74	1.13	1.42	1.79	2.08	2.36
Z5_SUB_1172	Z5_IL_2164	0.92	73	0.51	0.73	1.14	1.44	1.82	2.11	2.40
Z5_SUB_1173	Z5_IL_3497	0.73	82	0.48	0.65	0.97	1.20	1.51	1.74	1.96
Z5_SUB_1174	Z5_IL_3066	0.56	77	0.24	0.35	0.58	0.74	0.97	1.14	1.32
Z5_SUB_1175	Z5_IL_3059	0.77	73	0.34	0.51	0.83	1.07	1.40	1.64	1.89
Z5_SUB_1176	Z5_IL_3193	3.08	62	1.03	1.91	3.30	4.18	5.29	6.09	6.88
Z5_SUB_1177	Z5_IL_4883	1.71	80	0.70	0.99	1.60	2.06	2.69	3.17	3.66
Z5_SUB_1178	Z5_IL_3185	0.43	73	0.18	0.26	0.44	0.57	0.74	0.88	1.01
Z5_SUB_1179	Z5_IL_4910	12.82	74	6.92	9.82	15.35	19.28	24.47	28.32	32.15
Z5_SUB_1180	Z5_IL_2131	0.12	81	0.07	0.09	0.14	0.18	0.23	0.27	0.31
Z5_SUB_1181	Z5_IL_3550	1.47	76	0.61	0.89	1.45	1.87	2.45	2.88	3.31
Z5_SUB_1183	Z5_IL_4890	8.37	69	1.77	2.87	5.13	6.84	9.16	10.93	12.71
Z5_SUB_1185	Z5_CB_597	2.86	71	0.67	1.06	1.83	2.41	3.19	3.78	4.37
Z5_SUB_1187	Z6_IL_1148	12.04	74	1.13	1.74	3.03	4.01	5.36	6.39	7.44
Z5_SUB_1188	Z6_IL_1147	1.82	62	0.23	0.41	0.79	1.05	1.41	1.67	1.93
Z5_SUB_18	Z5_IL_2568	4.57	78	3.26	3.95	5.25	6.18	7.41	8.34	9.26
Z5_SUB_19	Z5_CB_141	3.44	81	1.60	2.09	3.01	3.65	4.50	5.13	5.76

Zone 5 East Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
Z5_SUB_21	Z5_CB_159	10.42	76	4.16	5.87	9.14	11.47	14.57	16.87	19.16
Z5_SUB_22	Z5_CB_156	16.17	80	6.94	9.57	14.67	18.35	23.25	26.91	30.56
Z5_SUB_23	Z5_CB_857	8.74	73	4.44	6.07	9.00	11.02	13.66	15.60	17.53
Z5_SUB_24	Z5_IL_3576	2.84	86	1.68	2.22	3.24	3.96	4.93	5.65	6.37
Z5_SUB_27	Z5_CB_846	3.35	83	1.65	2.27	3.49	4.39	5.60	6.51	7.42
Z5_SUB_323	Z5_IL_2883	1.73	73	0.41	0.62	1.07	1.41	1.87	2.23	2.58
Z5_SUB_324	Z5_IL_2862	0.59	73	0.13	0.21	0.37	0.50	0.69	0.84	0.99
Z5_SUB_325	Z5_IL_938	0.81	73	0.26	0.40	0.68	0.90	1.19	1.41	1.63
Z5_SUB_326	Z5_IL_2425	1.31	73	0.40	0.61	1.04	1.37	1.82	2.16	2.50
Z5_SUB_327	Z5_MH_3858	2.05	73	0.45	0.69	1.17	1.54	2.04	2.42	2.80
Z5_SUB_328	Z5_MH_3942	0.53	74	0.17	0.26	0.44	0.58	0.76	0.90	1.05
Z5_SUB_329	Z5_IL_2899	2.96	73	1.12	1.52	2.24	2.73	3.37	3.85	4.32
Z5_SUB_33	Z5_IL_2479	8.55	85	2.63	3.69	5.84	7.47	9.70	11.40	13.13
Z5_SUB_330	Z5_CB_102	1.61	73	0.37	0.56	0.96	1.27	1.68	2.00	2.32
Z5_SUB_331	Z5_IL_3115	4.89	73	1.15	1.75	3.01	3.96	5.27	6.26	7.26
Z5_SUB_332	Z5_IL_4960	1.90	73	0.36	0.54	0.93	1.22	1.63	1.93	2.24
Z5_SUB_333	Z5_IL_2896	0.75	73	0.23	0.35	0.60	0.78	1.04	1.23	1.43
Z5_SUB_334	Z5_IL_2893	1.89	73	0.39	0.59	1.01	1.33	1.77	2.10	2.44
Z5_SUB_335	Z5_SGIL_4759	0.96	73	0.26	0.39	0.67	0.88	1.18	1.40	1.62
Z5_SUB_336	Z5_IL_2894	1.14	73	0.30	0.46	0.79	1.04	1.39	1.65	1.91
Z5_SUB_337	Z5_IL_2873	0.63	73	0.22	0.34	0.58	0.75	1.00	1.18	1.37
Z5_SUB_338	Z5_IL_2876	0.71	73	0.24	0.37	0.62	0.82	1.08	1.28	1.48
Z5_SUB_339	Z5_IL_2879	1.12	73	1.10	1.33	1.77	2.08	2.49	2.80	3.12
Z5_SUB_34	Z5_MH_4004	38.83	76	8.16	12.11	20.28	26.46	34.96	41.45	48.00
Z5_SUB_340	Z5_IL_2898	0.90	73	0.32	0.48	0.79	1.02	1.34	1.57	1.81
Z5_SUB_341	Z5_IL_1230	1.00	76	0.37	0.55	0.91	1.18	1.55	1.83	2.11
Z5_SUB_342	Z5_IL_1228	1.67	73	0.36	0.55	0.95	1.24	1.66	1.97	2.29
Z5_SUB_343	Z5_IL_1224	0.64	73	0.19	0.29	0.49	0.64	0.86	1.02	1.18
Z5_SUB_344	Z5_IL_1225	0.94	73	0.28	0.43	0.74	0.97	1.29	1.53	1.77
Z5_SUB_345	Z5_IL_1223	0.65	73	0.21	0.31	0.54	0.70	0.93	1.11	1.28
Z5_SUB_346	Z5_IL_1220	1.61	73	0.35	0.53	0.93	1.23	1.64	1.96	2.28
Z5_SUB_347	Z5_IL_1280	0.59	71	0.12	0.20	0.34	0.45	0.61	0.72	0.84
Z5_SUB_348	Z5_IL_2908	0.76	73	0.27	0.41	0.69	0.90	1.20	1.42	1.64
Z5_SUB_349	Z5_IL_2915	1.03	73	0.56	0.79	1.20	1.50	1.88	2.16	2.44
Z5_SUB_35	Z5_IL_3117	13.28	74	2.75	4.14	7.03	9.21	12.22	14.51	16.82
Z5_SUB_350	Z5_IL_1227	1.07	73	0.28	0.43	0.74	0.98	1.30	1.54	1.79
Z5_SUB_351	Z5_IL_1229	0.75	73	0.24	0.36	0.62	0.81	1.07	1.27	1.47
Z5_SUB_352	Z5_IL_1242	0.93	73	0.29	0.44	0.75	0.98	1.30	1.54	1.78
Z5_SUB_353	Z5_IL_1240	0.69	73	0.19	0.29	0.50	0.66	0.88	1.04	1.21
Z5_SUB_354	Z5_IL_1239	0.63	73	0.17	0.26	0.44	0.58	0.77	0.92	1.07
Z5_SUB_355	Z5_IL_1238	1.03	73	0.29	0.44	0.76	1.00	1.32	1.57	1.82
Z5_SUB_356	Z5_IL_1236	0.98	73	0.30	0.45	0.77	1.01	1.35	1.60	1.85
Z5_SUB_357	Z5_IL_1235	0.77	73	0.25	0.38	0.65	0.85	1.12	1.34	1.55
Z5_SUB_358	Z5_CB_543	0.89	73	0.26	0.40	0.68	0.90	1.19	1.42	1.64
Z5_SUB_359	Z5_IL_1244	1.37	73	0.82	1.11	1.62	1.97	2.43	2.77	3.11
Z5_SUB_360	Z5_IL_1245	1.00	73	0.29	0.44	0.76	1.00	1.32	1.57	1.82
Z5_SUB_361	Z5_IL_1259	0.71	73	0.19	0.29	0.50	0.65	0.86	1.03	1.19
Z5_SUB_362	Z5_IL_1257	1.63	73	0.39	0.59	1.02	1.34	1.78	2.11	2.45
Z5_SUB_363	Z5_IL_1251	0.75	73	0.20	0.30	0.51	0.67	0.89	1.06	1.23
Z5_SUB_364	Z5_IL_1250	1.28	73	0.35	0.53	0.90	1.19	1.58	1.87	2.17
Z5_SUB_365	Z5_IL_1249	0.72	73	0.24	0.36	0.61	0.80	1.06	1.26	1.46
Z5_SUB_366	Z5_IL_1289	0.75	73	0.24	0.36	0.61	0.80	1.07	1.26	1.47
Z5_SUB_367	Z5_IL_1247	1.10	73	0.43	0.63	1.04	1.33	1.72	2.02	2.31
Z5_SUB_368	Z5_IL_1261	0.96	78	0.39	0.56	0.91	1.17	1.53	1.81	2.08
Z5_SUB_369	Z5_IL_1263	0.56	74	0.17	0.26	0.43	0.56	0.74	0.87	1.01
Z5_SUB_37	Z5_IL_2179	3.10	61	0.42	0.96	2.05	2.85	3.91	4.70	5.49
Z5_SUB_370	Z5_IL_1265	0.91	77	0.31	0.46	0.76	0.99	1.30	1.54	1.78
Z5_SUB_371	Z5_IL_1267	1.01	73	0.36	0.53	0.86	1.09	1.41	1.64	1.87
Z5_SUB_372	Z5_IL_2324	1.43	80	0.69	0.94	1.42	1.77	2.23	2.58	2.92

Zone 5 East Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
Z5_SUB_377	Z5_IL_982	0.79	82	0.30	0.43	0.68	0.88	1.14	1.35	1.55
Z5_SUB_378	Z5_CB_108	1.44	73	0.50	0.70	1.07	1.33	1.67	1.92	2.17
Z5_SUB_379	Z5_IL_980	2.08	85	1.15	1.50	2.14	2.60	3.21	3.66	4.11
Z5_SUB_38	Z5_CB_504	3.03	84	1.07	1.49	2.32	2.93	3.76	4.40	5.03
Z5_SUB_380	Z5_IL_1202	2.51	76	1.11	1.48	2.15	2.61	3.22	3.67	4.11
Z5_SUB_381	Z5_IL_1444	0.59	87	0.28	0.39	0.60	0.77	0.99	1.15	1.32
Z5_SUB_382	Z5_IL_981	0.84	74	0.22	0.34	0.58	0.76	1.01	1.20	1.39
Z5_SUB_383	Z5_CB_105	0.52	73	0.17	0.26	0.44	0.58	0.77	0.92	1.06
Z5_SUB_384	Z5_IL_2485	0.62	62	0.08	0.16	0.35	0.49	0.69	0.83	0.98
Z5_SUB_385	Z5_CB_120	0.85	57	0.06	0.12	0.32	0.49	0.71	0.88	1.04
Z5_SUB_386	Z5_IL_2960	1.40	57	0.11	0.23	0.66	0.99	1.44	1.77	2.11
Z5_SUB_387	Z5_IL_2956	2.58	57	0.20	0.40	1.13	1.69	2.46	3.04	3.63
Z5_SUB_388	Z5_IL_2946	1.14	57	0.09	0.19	0.54	0.81	1.18	1.46	1.74
Z5_SUB_389	Z5_IL_3620	2.38	65	1.00	1.56	2.47	3.07	3.83	4.39	4.93
Z5_SUB_39	Z5_IL_3534	5.40	85	3.23	4.14	5.82	7.01	8.58	9.74	10.90
Z5_SUB_390	Z5_IL_1452	1.10	87	0.89	1.13	1.58	1.90	2.32	2.63	2.94
Z5_SUB_391	Z5_IL_1454	0.95	86	0.61	0.82	1.21	1.49	1.86	2.14	2.42
Z5_SUB_392	Z5_IL_3529	0.72	71	0.23	0.35	0.58	0.75	0.96	1.13	1.29
Z5_SUB_393	Z5_IL_2520	6.44	80	2.58	3.54	5.39	6.71	8.47	9.79	11.10
Z5_SUB_394	Z5_IL_2522	1.76	82	0.62	0.89	1.43	1.84	2.40	2.82	3.25
Z5_SUB_395	Z5_IL_2872	1.91	73	0.43	0.66	1.14	1.49	1.99	2.36	2.74
Z5_SUB_396	Z5_IL_1288	2.03	73	0.57	0.88	1.50	1.97	2.61	3.11	3.60
Z5_SUB_397	Z5_IL_1285	1.16	73	0.31	0.48	0.81	1.07	1.42	1.69	1.96
Z5_SUB_398	Z5_IL_1281	0.51	73	0.17	0.26	0.45	0.59	0.78	0.92	1.07
Z5_SUB_399	Z5_IL_2955	3.51	73	2.19	3.03	4.56	5.63	7.03	8.06	9.08
Z5_SUB_40	Z5_CB_505	1.82	84	0.78	1.06	1.64	2.05	2.62	3.04	3.47
Z5_SUB_400	Z5_IL_2953	2.79	78	2.75	3.32	4.42	5.19	6.23	7.01	7.79
Z5_SUB_401	Z5_IL_3515	2.44	82	1.65	2.18	3.16	3.85	4.77	5.45	6.13
Z5_SUB_402	Z5_IL_1448	1.21	85	0.74	0.99	1.47	1.82	2.28	2.62	2.96
Z5_SUB_403	Z5_IL_1437	1.22	82	0.76	1.00	1.46	1.78	2.20	2.52	2.83
Z5_SUB_404	Z5_IL_3109	1.36	85	0.63	0.87	1.35	1.71	2.20	2.57	2.94
Z5_SUB_405	Z5_IL_1438	1.93	76	1.33	1.75	2.52	3.06	3.76	4.28	4.79
Z5_SUB_406	Z5_IL_1439	0.55	87	0.54	0.66	0.87	1.03	1.23	1.38	1.54
Z5_SUB_407	Z5_IL_3613	1.57	82	1.00	1.29	1.83	2.21	2.70	3.07	3.44
Z5_SUB_408	Z5_IL_3525	1.23	87	0.93	1.20	1.71	2.07	2.54	2.89	3.25
Z5_SUB_409	Z5_MH_3790	2.82	85	1.19	1.63	2.52	3.18	4.08	4.75	5.43
Z5_SUB_41	Z5_MH_5123	6.85	74	2.46	3.46	5.31	6.61	8.31	9.57	10.82
Z5_SUB_410	Z5_IL_1441	1.10	84	0.76	0.98	1.38	1.66	2.03	2.30	2.58
Z5_SUB_411	Z5_IL_1450	0.67	87	0.51	0.66	0.96	1.16	1.44	1.65	1.85
Z5_SUB_412	Z5_IL_1449	5.29	84	2.26	3.10	4.77	5.99	7.64	8.88	10.12
Z5_SUB_413	Z5_IL_4957	8.14	76	3.93	5.23	7.59	9.23	11.36	12.94	14.51
Z5_SUB_414	Z5_IL_1435	1.72	82	1.27	1.65	2.34	2.84	3.48	3.96	4.44
Z5_SUB_415	Z5_MH_3785	2.69	84	0.83	1.17	1.86	2.38	3.10	3.64	4.19
Z5_SUB_416	Z5_CB_472	0.67	57	0.07	0.18	0.49	0.70	0.98	1.18	1.39
Z5_SUB_42	Z5_IL_1064	1.02	63	0.29	0.52	0.97	1.28	1.69	1.99	2.29
Z5_SUB_426	Z5_IL_3553	3.14	80	1.52	2.12	3.29	4.14	5.28	6.14	6.99
Z5_SUB_429	Z5_IL_4961	3.39	79	1.29	1.84	2.95	3.78	4.91	5.76	6.61
Z5_SUB_43	Z5_IL_5117	2.28	75	0.93	1.36	2.25	2.90	3.80	4.48	5.16
Z5_SUB_438	Z5_IL_2501	4.86	59	0.38	0.79	1.88	2.73	3.90	4.78	5.67
Z5_SUB_439	Z5_IL_2502	2.29	57	0.17	0.36	0.99	1.49	2.17	2.67	3.18
Z5_SUB_44	Z5_IL_2958	5.49	58	0.58	1.17	2.56	3.54	4.81	5.73	6.63
Z5_SUB_445	Z5_IL_3555	0.89	73	0.41	0.59	0.94	1.20	1.53	1.78	2.02
Z5_SUB_446	Z5_IL_3623	1.13	73	0.44	0.65	1.06	1.36	1.76	2.06	2.36
Z5_SUB_447	Z5_IL_3554	1.47	67	0.46	0.75	1.32	1.73	2.27	2.68	3.08
Z5_SUB_448	Z5_IL_2933	1.45	71	0.46	0.69	1.16	1.49	1.94	2.27	2.60
Z5_SUB_449	Z5_IL_2934	0.65	79	0.24	0.34	0.56	0.72	0.95	1.12	1.29
Z5_SUB_45	Z5_CB_109	2.22	59	0.27	0.61	1.33	1.83	2.47	2.94	3.41
Z5_SUB_450	Z5_IL_2935	0.57	79	0.25	0.36	0.58	0.74	0.97	1.14	1.32
Z5_SUB_451	Z5_IL_1121	3.58	58	0.28	0.59	1.58	2.34	3.38	4.17	4.96

Zone 5 East Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
Z5_SUB_452	Z5_IL_2942	1.35	57	0.19	0.47	1.09	1.47	1.94	2.27	2.59
Z5_SUB_453	Z5_IL_3571	4.09	82	1.96	2.66	4.00	4.97	6.25	7.21	8.17
Z5_SUB_454	Z5_IL_1063	1.08	76	0.50	0.72	1.16	1.48	1.91	2.24	2.57
Z5_SUB_456	Z5_MH_4153	1.37	72	0.47	0.72	1.22	1.59	2.10	2.48	2.86
Z5_SUB_457	Z5_IL_2181	2.53	68	0.59	0.98	1.80	2.42	3.26	3.90	4.55
Z5_SUB_46	Z5_IL_978	3.39	72	0.62	0.97	1.70	2.25	3.01	3.59	4.17
Z5_SUB_47	Z5_IL_2983	2.63	73	0.73	1.07	1.73	2.21	2.85	3.33	3.80
Z5_SUB_48	Z5_IL_1446	8.95	68	1.55	2.59	4.75	6.38	8.61	10.31	12.01
Z5_SUB_482	Z5_MH_3983	0.57	74	0.30	0.43	0.67	0.85	1.09	1.27	1.44
Z5_SUB_483	Z5_IL_5269	2.32	80	1.65	2.14	3.04	3.67	4.50	5.12	5.73
Z5_SUB_484	Z5_CB_637	1.42	87	1.16	1.48	2.07	2.48	3.03	3.44	3.84
Z5_SUB_485	Z5_CB_862	1.72	87	1.07	1.40	2.00	2.43	3.00	3.43	3.85
Z5_SUB_486	Z5_IL_3670	2.21	84	1.03	1.42	2.22	2.81	3.61	4.22	4.83
Z5_SUB_487	Z5_IL_4954	0.56	76	0.22	0.33	0.54	0.71	0.93	1.10	1.27
Z5_SUB_488	Z5_CB_158	2.16	72	1.29	1.75	2.58	3.14	3.88	4.42	4.95
Z5_SUB_489	Z5_IL_3669	0.52	87	0.46	0.58	0.81	0.97	1.18	1.34	1.49
Z5_SUB_490	Z5_IL_2471	1.92	78	1.32	1.73	2.47	2.99	3.67	4.17	4.67
Z5_SUB_491	Z5_CB_860	1.10	87	0.83	1.06	1.48	1.78	2.17	2.47	2.76
Z5_SUB_492	Z5_MH_4193	2.83	87	2.35	2.98	4.16	5.00	6.10	6.92	7.74
Z5_SUB_493	Z5_CB_638	5.65	87	4.71	5.98	8.35	10.02	12.23	13.88	15.52
Z5_SUB_497	Z5_IL_3539	1.01	85	0.84	1.07	1.50	1.80	2.20	2.50	2.80
Z5_SUB_498	Z5_MH_4337	3.65	86	2.65	3.38	4.74	5.70	6.97	7.91	8.85
Z5_SUB_499	Z5_CB_552	4.61	87	2.19	2.99	4.59	5.77	7.37	8.59	9.80
Z5_SUB_50	Z5_CB_508	7.50	71	3.70	5.12	7.61	9.31	11.52	13.14	14.75
Z5_SUB_500	Z5_CB_549	9.93	87	6.24	7.95	11.14	13.39	16.37	18.58	20.79
Z5_SUB_501	Z5_CB_561	0.93	87	0.81	1.02	1.43	1.71	2.09	2.37	2.65
Z5_SUB_502	Z5_IL_2473	1.31	87	1.13	1.44	2.01	2.41	2.94	3.33	3.72
Z5_SUB_503	Z5_MH_4149	1.20	87	0.93	1.19	1.68	2.03	2.48	2.82	3.16
Z5_SUB_504	Z5_MH_4155	1.30	87	0.89	1.18	1.74	2.14	2.68	3.08	3.48
Z5_SUB_506	Z5_MH_4307	0.65	82	0.41	0.55	0.83	1.02	1.29	1.48	1.68
Z5_SUB_508	Z5_CB_154	3.22	82	1.83	2.52	3.86	4.83	6.13	7.11	8.09
Z5_SUB_51	Z5_IL_4953	7.66	74	3.16	4.51	7.09	8.92	11.35	13.15	14.95
Z5_SUB_510	Z5_IL_3655	2.34	79	1.63	2.14	3.08	3.74	4.61	5.25	5.89
Z5_SUB_511	Z5_IL_3530	1.44	79	1.02	1.35	1.95	2.37	2.93	3.34	3.75
Z5_SUB_512	Z5_MH_4322	4.18	81	2.03	2.76	4.17	5.19	6.54	7.54	8.55
Z5_SUB_513	Z5_IL_2796	3.95	71	1.25	1.86	3.04	3.87	4.96	5.77	6.58
Z5_SUB_514	Z5_IL_2797	0.82	70	0.36	0.54	0.88	1.12	1.43	1.67	1.90
Z5_SUB_515	Z5_IL_2798	3.26	70	1.56	2.18	3.25	3.98	4.93	5.63	6.32
Z5_SUB_516	Z5_CB_506	2.68	81	1.57	2.12	3.19	3.96	4.98	5.74	6.50
Z5_SUB_517	Z5_MH_3926	1.01	70	0.39	0.58	0.96	1.22	1.56	1.81	2.07
Z5_SUB_518	Z5_IL_1018	0.86	70	0.47	0.66	0.99	1.21	1.49	1.70	1.91
Z5_SUB_519	Z5_CB_507	1.45	81	0.57	0.79	1.23	1.55	1.99	2.31	2.64
Z5_SUB_52	Z5_IL_2307	6.88	76	3.21	4.51	6.99	8.76	11.10	12.84	14.58
Z5_SUB_520	Z5_IL_2777	0.68	70	0.30	0.43	0.66	0.82	1.03	1.18	1.33
Z5_SUB_522	Z5_MH_3834	1.70	66	0.25	0.44	0.85	1.16	1.58	1.91	2.23
Z5_SUB_523	Z5_IL_2455	0.93	57	0.09	0.20	0.56	0.82	1.17	1.43	1.68
Z5_SUB_524	Z5_IL_2456	2.71	62	0.27	0.57	1.23	1.73	2.42	2.95	3.48
Z5_SUB_525	Z5_IL_2272	2.26	59	0.18	0.41	1.02	1.49	2.13	2.61	3.10
Z5_SUB_526	Z5_IL_2274	1.32	57	0.11	0.26	0.74	1.11	1.60	1.97	2.34
Z5_SUB_527	Z5_IL_2273	1.93	62	0.27	0.57	1.18	1.65	2.29	2.77	3.26
Z5_SUB_528	Z5_IL_2275	1.40	65	0.24	0.44	0.86	1.18	1.61	1.94	2.27
Z5_SUB_529	Z5_IL_2452	1.84	63	0.29	0.57	1.15	1.57	2.12	2.54	2.95
Z5_SUB_53	Z5_CB_471	3.77	63	0.66	1.31	2.65	3.66	5.04	6.08	7.13
Z5_SUB_530	Z5_MH_3862	3.14	60	0.25	0.56	1.32	1.90	2.70	3.30	3.91
Z5_SUB_531	Z5_IL_2276	1.06	57	0.08	0.15	0.42	0.63	0.91	1.13	1.35
Z5_SUB_532	Z5_IL_2454	1.05	57	0.09	0.22	0.62	0.92	1.32	1.63	1.94
Z5_SUB_533	Z5_IL_5124	0.65	57	0.06	0.14	0.39	0.58	0.83	1.03	1.22
Z5_SUB_534	Z5_CB_482	1.85	57	0.15	0.34	0.98	1.47	2.13	2.63	3.13
Z5_SUB_535	Z5_CB_57	2.38	57	0.23	0.44	1.02	1.43	1.98	2.37	2.76

Zone 5 East Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
Z5_SUB_536	Z5_IL_2308	3.10	75	0.96	1.43	2.40	3.13	4.14	4.90	5.67
Z5_SUB_537	Z5_MH_3875	1.66	57	0.18	0.39	0.97	1.37	1.88	2.24	2.60
Z5_SUB_538	Z5_IL_2309	1.65	79	1.49	1.81	2.40	2.83	3.39	3.82	4.24
Z5_SUB_539	Z5_IL_2929	2.24	76	1.01	1.45	2.30	2.91	3.74	4.36	4.97
Z5_SUB_54	Z5_IL_1447	6.75	70	4.78	5.79	7.69	9.05	10.86	12.22	13.58
Z5_SUB_540	Z5_IL_2924	2.33	80	1.06	1.45	2.21	2.75	3.47	4.01	4.55
Z5_SUB_541	Z5_IL_3214	0.84	82	0.49	0.67	1.01	1.25	1.57	1.81	2.04
Z5_SUB_542	Z5_IL_4951	1.30	82	0.77	1.05	1.57	1.95	2.45	2.83	3.20
Z5_SUB_543	Z5_IL_2306	1.53	82	0.95	1.29	1.93	2.39	3.00	3.46	3.91
Z5_SUB_544	Z5_IL_3524	1.07	82	0.68	0.91	1.37	1.69	2.13	2.45	2.78
Z5_SUB_545	Z5_IL_3118	5.60	71	2.02	2.86	4.35	5.37	6.69	7.66	8.62
Z5_SUB_546	Z5_CB_805	1.76	86	1.44	1.74	2.31	2.72	3.26	3.67	4.08
Z5_SUB_547	Z5_CB_823	1.31	82	0.97	1.28	1.86	2.28	2.82	3.23	3.63
Z5_SUB_548	Z5_IL_3549	3.38	83	1.55	2.12	3.22	4.01	5.08	5.88	6.68
Z5_SUB_55	Z5_IL_1453	3.66	80	2.31	3.01	4.29	5.18	6.35	7.22	8.08
Z5_SUB_56	Z5_IL_3528	2.75	81	1.26	1.69	2.51	3.10	3.88	4.46	5.03
Z5_SUB_560	Z5_IL_2800	2.32	73	1.54	1.87	2.48	2.92	3.50	3.94	4.38
Z5_SUB_57	Z5_IL_2931	4.37	76	3.53	4.28	5.68	6.68	8.02	9.02	10.02
Z5_SUB_58	Z5_IL_2927	4.25	77	2.10	2.92	4.50	5.63	7.12	8.24	9.34
Z5_SUB_59	Z5_IL_2923	5.05	81	2.97	3.86	5.48	6.62	8.12	9.23	10.33
Z5_SUB_60	Z5_IL_2922	1.25	82	0.96	1.25	1.78	2.15	2.64	3.00	3.37
Z5_SUB_61	Z5_SGIL_4781	1.66	80	1.30	1.69	2.39	2.88	3.53	4.01	4.49
Z5_SUB_62	Z5_IL_2463	1.44	87	0.72	0.96	1.43	1.77	2.23	2.57	2.91
Z5_SUB_63	Z5_IL_1181	3.74	81	2.22	2.87	4.08	4.92	6.03	6.86	7.68
Z5_SUB_64	Z5_IL_1443	2.16	87	1.25	1.67	2.48	3.07	3.85	4.44	5.03
Z5_SUB_65	Z5_IL_2947	2.53	81	1.06	1.47	2.29	2.89	3.69	4.30	4.91
Z5_SUB_66	Z5_CB_53	1.52	79	0.48	0.69	1.13	1.47	1.93	2.28	2.63
Z5_SUB_67	Z5_IL_1270	1.17	73	0.34	0.52	0.89	1.16	1.54	1.83	2.13
Z5_SUB_68	Z5_SGMH_4850	1.22	73	0.31	0.47	0.81	1.06	1.42	1.68	1.95
Z5_SUB_69	Z5_IL_1254	3.12	73	0.71	1.09	1.88	2.47	3.28	3.90	4.53
Z5_SUB_70	Z5_IL_1269	0.60	73	0.20	0.30	0.51	0.66	0.87	1.04	1.20
Z5_SUB_708	Z5_IL_2500	1.27	58	0.55	0.90	1.27	1.49	1.79	2.02	2.24
Z5_SUB_709	Z5_IL_4952	3.40	75	1.14	1.69	2.84	3.70	4.88	5.78	6.68
Z5_SUB_71	Z5_IL_1233	0.96	73	0.32	0.48	0.81	1.07	1.41	1.68	1.94
Z5_SUB_72	Z5_MH_3713	1.49	73	0.46	0.70	1.20	1.57	2.09	2.48	2.87
Z5_SUB_73	Z5_IL_2871	0.98	73	0.31	0.47	0.80	1.05	1.39	1.65	1.91
Z5_SUB_74	Z5_SGIL_4760	2.87	73	1.04	1.51	2.39	3.02	3.85	4.47	5.09
Z5_SUB_75	Z5_IL_2890	2.94	82	1.49	2.08	3.23	4.07	5.22	6.08	6.94
Z5_SUB_76	Z5_MH_4328	5.67	77	1.64	2.41	3.99	5.19	6.84	8.09	9.35
Z5_SUB_77	Z5_IL_3551	2.14	73	0.68	1.03	1.71	2.21	2.90	3.41	3.92
Z5_SUB_78	Z5_CB_692	12.27	76	3.61	5.32	8.82	11.46	15.06	17.80	20.55
Z5_SUB_831	Z5_CB_4917	2.28	79	0.92	1.32	2.15	2.78	3.65	4.31	4.97
Z5_SUB_880	Z5_IL_3077	4.90	57	0.40	0.88	2.52	3.76	5.45	6.72	7.99
Z5_SUB_882	Z5_IL_1210	2.17	57	0.20	0.53	1.42	2.08	2.96	3.62	4.28
Z5_SUB_883	Z5_IL_5359	8.25	62	1.31	2.84	6.01	8.39	11.64	14.10	16.57
Z5_SUB_884	Z5_IL_995	9.92	60	1.49	3.63	7.89	10.97	15.06	18.10	21.12
Z5_SUB_885	Z5_IL_2474	10.05	67	3.04	5.05	9.17	12.24	16.40	19.55	22.71
Z5_SUB_886	Z5_IL_1481	5.71	58	0.64	1.42	3.32	4.64	6.34	7.57	8.78
Z5_SUB_887	Z5_IL_2549	2.01	76	0.83	1.21	2.00	2.58	3.39	4.01	4.62
Z5_SUB_888	Z5_IL_2445	3.00	67	0.85	1.43	2.62	3.51	4.72	5.64	6.55
Z5_SUB_889	Z5_IL_2544	12.42	71	3.74	5.81	9.96	13.02	17.13	20.23	23.32
Z5_SUB_891	Z5_IL_2587	0.85	73	0.32	0.48	0.82	1.07	1.41	1.67	1.94
Z5_SUB_893	Z5_IL_4903	3.19	72	1.07	1.65	2.83	3.72	4.94	5.87	6.80
Z5_SUB_894	Z5_IL_4901	2.27	73	0.84	1.28	2.17	2.83	3.75	4.44	5.14
Z5_SUB_895	Z5_IL_2686	0.58	73	0.23	0.34	0.57	0.75	0.98	1.17	1.35
Z5_SUB_898	Z5_IL_4888	36.21	69	6.31	10.38	18.93	25.46	34.47	41.36	48.31
Z5_SUB_899	Z5_IL_4895	5.27	72	1.30	2.03	3.54	4.68	6.25	7.44	8.64
Z5_SUB_900	Z5_CB_594	0.53	73	0.21	0.31	0.53	0.69	0.90	1.07	1.24
Z5_SUB_901	Z5_IL_2603	0.98	73	0.35	0.53	0.91	1.19	1.58	1.88	2.18

Zone 5 East Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
Z5_SUB_902	Z5_IL_2600	2.00	73	0.73	1.11	1.88	2.46	3.26	3.86	4.47
Z5_SUB_904	Z5_IL_4879	1.35	73	0.51	0.77	1.30	1.70	2.24	2.66	3.07
Z5_SUB_905	Z5_MH_5094	1.05	73	0.54	0.78	1.25	1.59	2.04	2.37	2.71
Z5_SUB_907	Z5_IL_2401	8.49	75	3.15	4.69	7.85	10.24	13.51	15.99	18.49
Z5_SUB_908	Z5_IL_2402	1.17	73	0.42	0.64	1.09	1.43	1.90	2.26	2.62
Z5_SUB_910	Z5_IL_2459	5.54	73	2.58	3.75	5.98	7.57	9.69	11.26	12.83
Z5_SUB_911	Z5_MH_3896	1.72	81	0.80	1.12	1.77	2.25	2.90	3.40	3.89
Z5_SUB_912	Z5_IL_3024	30.09	74	6.68	10.08	17.10	22.43	29.74	35.33	40.96
Z5_SUB_914	Z5_IL_3104	3.59	63	0.57	1.14	2.32	3.21	4.43	5.36	6.28
Z5_SUB_915	Z5_IL_3105	10.45	69	2.49	4.06	7.35	9.84	13.27	15.89	18.53
Z5_SUB_916	Z5_IL_2647	3.49	68	0.84	1.40	2.57	3.46	4.68	5.61	6.55
Z5_SUB_917	Z5_IL_2645	2.06	58	0.18	0.48	1.21	1.76	2.52	3.09	3.67
Z5_SUB_918	Z5_IL_2644	1.26	56	0.10	0.26	0.79	1.18	1.72	2.12	2.53
Z5_SUB_919	Z5_IL_2654	1.35	56	0.11	0.28	0.85	1.27	1.85	2.29	2.72
Z5_SUB_920	Z5_IL_2658	5.08	60	0.56	1.46	3.38	4.83	6.81	8.31	9.82
Z5_SUB_921	Z5_IL_2662	4.15	62	0.65	1.40	2.98	4.18	5.81	7.05	8.30
Z5_SUB_922	Z5_IL_2659	6.70	56	0.49	1.02	3.30	5.06	7.45	9.26	11.08
Z5_SUB_923	Z5_SGIL_4736	0.83	56	0.07	0.17	0.50	0.76	1.11	1.37	1.63
Z5_SUB_924	Z5_IL_2641	3.25	57	0.26	0.60	1.75	2.61	3.78	4.66	5.55
Z5_SUB_926	Z5_IL_2667	12.17	56	0.95	2.06	6.57	9.98	14.59	18.08	21.55
Z5_SUB_927	Z5_IL_3081	4.30	57	0.35	0.77	2.19	3.27	4.73	5.84	6.94
Z5_SUB_928	Z5_IL_3083	1.91	57	0.17	0.44	1.20	1.78	2.55	3.13	3.72
Z5_SUB_929	Z5_IL_3074	2.19	57	0.16	0.36	1.06	1.60	2.36	2.94	3.53
Z5_SUB_931	Z5_IL_3699	4.84	62	0.59	1.28	2.75	3.86	5.38	6.54	7.69
Z5_SUB_932	Z5_IL_3089	1.92	57	0.17	0.42	1.16	1.72	2.47	3.04	3.61
Z5_SUB_933	Z5_IL_3079	3.79	57	0.31	0.69	1.97	2.94	4.26	5.25	6.24
Z5_SUB_934	Z5_SGIL_4740	0.75	57	0.07	0.21	0.54	0.78	1.12	1.37	1.61
Z5_SUB_935	Z5_IL_3082	4.78	57	0.40	0.99	2.78	4.12	5.95	7.32	8.69
Z5_SUB_936	Z5_IL_4911	4.73	57	0.64	2.06	4.73	6.49	8.71	10.31	11.87
Z5_SUB_937	Z5_IL_4884	7.37	70	1.83	2.94	5.23	6.96	9.34	11.14	12.96
Z5_SUB_938	Z5_IL_4885	3.40	57	0.27	0.57	1.62	2.43	3.52	4.35	5.18
Z5_SUB_939	Z5_IL_2062	1.00	57	0.09	0.23	0.62	0.92	1.32	1.63	1.93
Z5_SUB_940	Z5_MH_3947	1.58	57	0.19	0.49	1.25	1.75	2.39	2.86	3.31
Z5_SUB_941	Z5_IL_4889	1.97	73	0.82	1.22	2.03	2.63	3.44	4.05	4.66
Z5_SUB_942	Z5_IL_2545	0.81	61	0.12	0.28	0.60	0.84	1.17	1.42	1.67
Z5_SUB_943	Z5_IL_3448	5.05	57	0.58	1.27	3.19	4.49	6.14	7.32	8.48
Z5_SUB_944	Z5_IL_3440	1.65	70	0.48	0.77	1.35	1.79	2.40	2.86	3.32
Z5_SUB_945	Z5_IL_1002	2.93	60	0.40	0.99	2.20	3.09	4.27	5.15	6.02
Z5_SUB_946	Z5_IL_3200	21.89	61	1.98	4.05	8.76	12.39	17.37	21.16	24.96
Z5_SUB_947	Z5_IL_4886	2.28	57	0.17	0.33	0.91	1.36	1.98	2.45	2.92
Z5_SUB_948	Z5_IL_2675	2.11	57	0.31	0.86	2.01	2.72	3.60	4.23	4.84
Z5_SUB_949	Z5_IL_4882	1.86	76	0.64	0.93	1.52	1.95	2.54	2.99	3.43
Z5_SUB_950	Z5_IL_3689	2.33	62	0.61	1.20	2.28	3.02	3.97	4.66	5.35
Z5_SUB_951	Z5_SGIL_4811	3.20	71	1.69	2.46	3.93	4.96	6.32	7.32	8.32
Z5_SUB_952	Z5_IL_1005	0.60	77	0.41	0.56	0.83	1.03	1.28	1.47	1.66
Z5_SUB_953	Z5_IL_3427	4.71	74	1.05	1.57	2.60	3.36	4.39	5.17	5.95
Z5_SUB_954	Z5_MH_4244	2.74	62	0.32	0.62	1.27	1.75	2.40	2.88	3.37
Z5_SUB_955	Z5_IL_3436	2.95	62	0.65	1.12	1.95	2.47	3.13	3.60	4.06
Z5_SUB_957	Z5_IL_3546	14.87	82	5.71	7.92	12.29	15.48	19.79	23.03	26.28
Z5_SUB_959	Z5_IL_1418	1.53	81	0.44	0.63	1.02	1.31	1.71	2.02	2.33
Z5_SUB_960	Z5_IL_3012	1.29	57	0.10	0.24	0.68	1.01	1.47	1.82	2.16
Z5_SUB_961	Z5_OF_4382	2.96	73	1.14	1.69	2.78	3.57	4.63	5.43	6.22
Z5_SUB_964	Z5_IL_3701	24.09	73	6.32	9.74	16.87	22.28	29.73	35.42	41.16
Z5_SUB_965	Z5_IL_3178	10.14	72	2.96	4.57	7.85	10.30	13.62	16.15	18.67
Z5_SUB_966	Z5_IL_3176	9.75	75	3.31	4.93	8.27	10.77	14.18	16.78	19.38
Z5_SUB_968	Z5_SGIL_4780	3.15	82	2.03	2.74	4.10	5.08	6.38	7.34	8.31
Z5_SUB_969	Z5_CB_380	0.58	82	0.36	0.49	0.75	0.93	1.17	1.36	1.54
Z5_SUB_970	Z5_IL_3069	3.41	80	1.59	2.24	3.54	4.51	5.81	6.79	7.77
Z5_SUB_971	Z5_CB_367	7.01	77	4.02	5.52	8.32	10.31	12.92	14.86	16.79

Zone 5 East Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
Z5_SUB_972	Z5_IL_3177	1.33	83	0.86	1.16	1.73	2.14	2.68	3.08	3.49
Z5_SUB_973	Z5_IL_2397	1.70	82	1.12	1.51	2.26	2.79	3.50	4.03	4.55
Z5_SUB_974	Z5_CB_715	0.80	82	0.49	0.66	1.01	1.26	1.60	1.85	2.10
Z5_SUB_975	Z5_IL_3509	2.25	79	1.05	1.45	2.23	2.79	3.53	4.09	4.65
Z5_SUB_976	Z5_IL_3505	1.78	81	1.00	1.38	2.13	2.68	3.42	3.97	4.52
Z5_SUB_977	Z5_MH_4357	1.17	73	0.43	0.62	1.00	1.26	1.61	1.87	2.12
Z5_SUB_978	Z5_CB_726	0.62	78	0.34	0.47	0.74	0.93	1.19	1.38	1.58
Z5_SUB_980	Z5_MH_4043	1.08	79	0.69	0.94	1.42	1.76	2.21	2.55	2.88
Z5_SUB_981	Z5_IL_3035	2.01	79	1.15	1.59	2.44	3.05	3.85	4.46	5.06
Z5_SUB_982	Z5_CB_254	2.61	79	1.21	1.70	2.65	3.34	4.27	4.96	5.66
Z5_SUB_985	Z5_IL_3608	1.80	85	1.05	1.42	2.15	2.69	3.40	3.94	4.47
Z5_SUB_986	Z5_IL_3030	3.10	79	1.17	1.69	2.75	3.54	4.64	5.47	6.31
Z5_SUB_987	Z5_IL_2305	2.25	73	0.87	1.31	2.20	2.86	3.76	4.44	5.13
Z5_SUB_988	Z5_SGIL_4730	1.19	75	0.31	0.46	0.78	1.02	1.35	1.61	1.86
Z5_SUB_989	Z5_IL_2638	2.16	73	1.19	1.69	2.65	3.34	4.24	4.91	5.57
Z5_SUB_990	Z5_IL_3026	7.73	70	1.82	2.89	5.05	6.65	8.83	10.46	12.10
Z5_SUB_992	Z5_IL_3169	3.63	70	1.38	2.11	3.51	4.50	5.82	6.81	7.78
Z5_SUB_993	Z5_MH_3989	7.67	72	2.68	4.03	6.71	8.67	11.31	13.28	15.26
Z5_SUB_996	Z5_IL_3272	0.56	76	0.46	0.60	0.86	1.04	1.27	1.44	1.61
Z5_SUB_997	Z5_CB_229	4.28	87	3.24	4.12	5.76	6.92	8.45	9.59	10.73
Z5_SUB_998	Z5_CB_231	2.16	87	1.77	2.26	3.18	3.84	4.70	5.34	5.98
Z5_SUB_999	Z5_CB_233	1.23	87	1.01	1.30	1.83	2.20	2.70	3.06	3.43

Zone 6 Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
NEW_Z6_SUB_1001	NEW_Z6_IL_1000	93.58	57	17.36	22.47	47.64	71.26	94.15	107.72	120.29
NEW_Z6_SUB_1002	Z6_IL_998	9.17	61	1.97	4.97	11.64	13.76	16.51	18.58	20.64
Z6_SUB_1	Z6_IL_1283	1157.35	42	0.00	0.00	0.32	6.69	37.73	76.84	126.17
Z6_SUB_101	Z6_IL_890	2.83	67	0.18	0.35	1.02	1.58	2.38	3.02	3.67
Z6_SUB_102	Z6_IL_887	1.81	68	0.12	0.28	0.74	1.12	1.66	2.09	2.53
Z6_SUB_104	Z6_IL_2152	4.68	55	0.07	0.23	0.61	0.90	1.89	2.76	3.67
Z6_SUB_105	Z6_IL_2154	1.34	85	0.68	0.94	1.46	1.84	2.35	2.73	3.11
Z6_SUB_106	Z6_MH_1669	5.50	73	0.83	1.56	3.14	4.37	6.08	7.40	8.74
Z6_SUB_107	Z6_IL_1117	2.49	65	0.20	0.32	1.01	1.56	2.31	2.89	3.46
Z6_SUB_108	Z6_IL_1118	13.21	61	0.73	1.35	2.78	4.97	8.11	10.52	12.96
Z6_SUB_109	Z6_IL_1096	1.05	57	0.08	0.17	0.30	0.61	1.00	1.26	1.50
Z6_SUB_11	Z6_MH_1812	3.87	76	0.76	1.27	2.39	3.28	4.53	5.52	6.52
Z6_SUB_110	Z6_IL_1097	1.36	57	0.11	0.22	0.43	0.90	1.47	1.83	2.17
Z6_SUB_111	Z6_IL_1091	2.81	57	0.19	0.41	0.74	1.21	1.97	2.50	2.98
Z6_SUB_112	Z6_IL_1090	1.96	70	0.32	0.64	1.23	1.62	2.11	2.46	2.81
Z6_SUB_113	Z6_IL_1119	3.11	64	0.33	0.50	1.05	1.55	2.20	2.66	3.12
Z6_SUB_114	Z6_IL_1116	0.98	83	0.55	0.75	1.12	1.37	1.71	1.96	2.21
Z6_SUB_115	Z6_IL_1153	2.10	54	0.02	0.09	0.25	0.38	0.71	1.06	1.44
Z6_SUB_116	Z6_CB_132	1.56	67	0.14	0.24	0.65	0.97	1.40	1.72	2.05
Z6_SUB_117	Z6_CB_128	0.30	50	0.00	0.01	0.03	0.05	0.09	0.16	0.24
Z6_SUB_118	Z6_CB_130	0.39	50	0.00	0.01	0.04	0.06	0.10	0.17	0.25
Z6_SUB_119	Z6_CB_131	0.42	50	0.00	0.01	0.04	0.07	0.10	0.18	0.27
Z6_SUB_12	Z6_IL_1152	1.22	76	0.21	0.35	0.68	0.93	1.30	1.58	1.87
Z6_SUB_120	Z6_CB_133	0.91	50	0.00	0.02	0.09	0.15	0.27	0.48	0.70
Z6_SUB_121	Z6_CB_121	1.37	50	0.00	0.03	0.13	0.22	0.37	0.68	1.00
Z6_SUB_122	Z6_IL_1173	1.05	50	0.00	0.02	0.10	0.17	0.28	0.50	0.75
Z6_SUB_123	Z6_IL_1121	7.50	56	0.24	0.78	1.65	2.25	3.98	5.28	6.55
Z6_SUB_124	Z6_IL_1099	8.06	58	0.72	1.33	2.56	4.64	7.24	8.98	10.58
Z6_SUB_125	Z6_CB_74	0.89	58	0.09	0.16	0.47	0.89	1.34	1.64	1.91
Z6_SUB_126	Z6_IL_1171	4.88	69	0.83	1.92	3.90	5.23	6.91	8.14	9.34
Z6_SUB_127	Z6_IL_1411	4.54	50	0.00	0.08	0.43	0.71	1.11	1.81	2.70
Z6_SUB_129	Z6_IL_231	1.16	82	0.33	0.49	0.84	1.11	1.49	1.78	2.08
Z6_SUB_13	Z6_IL_1131	2.74	71	0.26	0.57	1.27	1.83	2.63	3.26	3.91
Z6_SUB_130	Z6_IL_592	2.13	79	0.58	0.90	1.57	2.08	2.79	3.33	3.88
Z6_SUB_131	Z6_IL_597	6.59	77	1.91	3.05	5.41	7.18	9.63	11.49	13.36
Z6_SUB_132	Z6_IL_560	0.69	75	0.08	0.14	0.28	0.38	0.52	0.63	0.75
Z6_SUB_133	Z6_IL_2165	5.05	72	0.57	1.16	2.43	3.42	4.79	5.84	6.91
Z6_SUB_134	Z6_MH_1538	1.10	82	0.33	0.49	0.84	1.11	1.48	1.76	2.04
Z6_SUB_135	Z6_IL_234	5.05	70	0.42	0.79	1.84	2.67	3.83	4.74	5.66
Z6_SUB_136	Z6_MH_1540	1.75	74	0.33	0.59	1.14	1.57	2.16	2.62	3.09
Z6_SUB_137	Z6_IL_1266	5.36	70	0.42	0.69	1.56	2.27	3.26	4.04	4.83
Z6_SUB_138	Z6_IL_873	4.59	80	1.37	2.07	3.47	4.52	5.93	7.00	8.07
Z6_SUB_139	Z6_IL_513	1.12	71	0.11	0.24	0.52	0.74	1.05	1.30	1.55
Z6_SUB_14	Z6_IL_1132	3.50	76	0.70	1.17	2.19	3.00	4.15	5.05	5.96
Z6_SUB_140	Z6_IL_516	1.80	70	0.15	0.35	0.82	1.18	1.71	2.11	2.53
Z6_SUB_141	Z6_IL_515	1.67	70	0.13	0.24	0.57	0.83	1.20	1.50	1.80
Z6_SUB_142	Z6_IL_572	0.58	70	0.05	0.13	0.28	0.41	0.59	0.73	0.87
Z6_SUB_143	Z6_IL_570	1.44	68	0.11	0.19	0.49	0.73	1.07	1.33	1.60
Z6_SUB_144	Z6_MH_1571	0.87	64	0.07	0.11	0.26	0.41	0.62	0.78	0.93
Z6_SUB_145	Z6_IL_590	0.72	80	0.18	0.29	0.51	0.68	0.92	1.11	1.30
Z6_SUB_146	Z6_IL_585	0.15	79	0.05	0.07	0.13	0.17	0.22	0.26	0.31
Z6_SUB_147	Z6_IL_1265	0.75	70	0.15	0.31	0.62	0.84	1.14	1.36	1.58
Z6_SUB_149	Z6_IL_2161	10.79	52	0.00	0.68	2.18	3.06	4.72	6.74	8.73
Z6_SUB_15	Z6_IL_1521	1.14	63	0.05	0.10	0.33	0.56	0.90	1.16	1.44
Z6_SUB_151	Z6_IL_1186	4.66	72	0.47	0.94	2.01	2.89	4.16	5.17	6.22
Z6_SUB_152	Z6_IL_876	9.08	76	1.47	2.53	4.90	6.81	9.55	11.72	13.95
Z6_SUB_153	Z6_IL_875	10.09	73	1.40	2.69	5.54	7.79	10.95	13.40	15.90
Z6_SUB_154	Z6_IL_1324	0.57	76	0.14	0.24	0.43	0.58	0.79	0.95	1.10
Z6_SUB_155	Z6_IL_1511	0.86	82	0.36	0.53	0.85	1.09	1.41	1.65	1.89

Zone 6 Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	85%	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z6_SUB_156	Z6_IL_1268	1.16	70	0.14	0.30	0.66	0.94	1.34	1.65	1.96
Z6_SUB_157	Z6_MH_1566	2.44	76	0.70	1.13	2.00	2.65	3.52	4.19	4.85
Z6_SUB_158	Z6_IL_1122	13.47	57	0.85	1.90	3.50	6.82	11.71	15.01	18.07
Z6_SUB_159	Z6_IL_840	5.45	65	0.42	0.68	2.09	3.25	4.85	6.07	7.31
Z6_SUB_16	Z6_IL_1519	7.83	63	0.33	0.60	1.36	2.36	3.88	5.10	6.38
Z6_SUB_160	Z6_IL_839	4.31	87	1.26	1.83	3.03	3.97	5.29	6.31	7.35
Z6_SUB_161	Z6_IL_2155	0.92	71	0.11	0.22	0.47	0.67	0.96	1.18	1.40
Z6_SUB_162	Z6_IL_2151	7.97	61	0.59	1.04	2.46	4.28	6.70	8.47	10.22
Z6_SUB_163	Z6_IL_1253	1.30	75	0.19	0.33	0.66	0.92	1.29	1.58	1.87
Z6_SUB_164	Z6_IL_1180	2.02	76	0.43	0.71	1.32	1.80	2.48	3.01	3.56
Z6_SUB_165	Z6_IL_1169	0.54	63	0.03	0.05	0.19	0.32	0.49	0.63	0.78
Z6_SUB_166	Z6_IL_1168	2.70	79	0.75	1.16	2.01	2.65	3.52	4.18	4.85
Z6_SUB_17	Z6_MH_1808	2.02	69	0.15	0.27	0.69	1.03	1.51	1.89	2.29
Z6_SUB_172	Z6_IL_955	2.46	68	0.20	0.48	1.24	1.83	2.66	3.31	3.96
Z6_SUB_173	Z6_CB_144	6.88	73	2.01	3.45	6.15	8.06	10.57	12.43	14.26
Z6_SUB_174	Z6_SGIL_2123	0.63	70	0.23	0.42	0.73	0.94	1.20	1.38	1.57
Z6_SUB_175	Z6_IL_1081	1.03	59	0.04	0.09	0.22	0.44	0.76	1.01	1.26
Z6_SUB_176	Z6_IL_1089	4.97	72	1.26	2.29	4.31	5.75	7.67	9.10	10.51
Z6_SUB_177	Z6_MH_1688	29.19	66	2.96	5.49	15.11	22.20	31.63	38.67	45.64
Z6_SUB_178	Z6_IL_1291	1.57	70	0.36	0.70	1.37	1.85	2.48	2.95	3.42
Z6_SUB_179	Z6_IL_666	23.60	58	0.55	1.36	3.12	4.48	7.49	10.28	13.20
Z6_SUB_18	Z6_IL_1128	0.50	76	0.10	0.16	0.30	0.42	0.58	0.70	0.83
Z6_SUB_180	Z6_MH_1715	3.34	56	0.07	0.21	0.50	1.06	2.12	2.95	3.82
Z6_SUB_181	Z6_CB_163	16.82	57	0.33	0.93	2.26	4.11	8.35	11.81	15.43
Z6_SUB_182	Z6_IL_1406	6.70	57	0.14	0.36	0.86	1.25	2.41	3.40	4.44
Z6_SUB_183	Z6_IL_1188	0.90	67	0.09	0.24	0.59	0.86	1.20	1.47	1.72
Z6_SUB_184	Z6_IL_1067	1.27	68	0.14	0.34	0.79	1.12	1.56	1.89	2.21
Z6_SUB_185	Z6_MH_1591	1.90	60	0.09	0.17	0.59	1.07	1.74	2.27	2.81
Z6_SUB_186	Z6_SGIL_2121	12.48	62	0.51	0.99	1.99	2.85	4.55	5.91	7.31
Z6_SUB_187	Z6_CB_76	0.62	79	0.21	0.32	0.52	0.66	0.85	0.99	1.12
Z6_SUB_188	Z6_IL_1085	6.70	57	0.34	0.79	1.84	4.24	7.31	9.51	11.62
Z6_SUB_189	Z6_MH_1694	16.42	59	0.98	1.98	3.75	7.36	12.35	15.97	19.48
Z6_SUB_19	Z6_IL_1523	0.55	63	0.03	0.05	0.15	0.25	0.41	0.53	0.66
Z6_SUB_190	Z6_MH_1693	2.44	74	0.68	1.17	2.10	2.77	3.66	4.31	4.96
Z6_SUB_191	Z6_MH_1551	2.15	71	0.17	0.33	0.74	1.07	1.54	1.90	2.27
Z6_SUB_192	Z6_MH_1552	1.98	70	0.15	0.28	0.65	0.95	1.38	1.71	2.05
Z6_SUB_193	Z6_MH_1696	3.90	63	0.30	0.50	1.51	2.43	3.69	4.64	5.59
Z6_SUB_194	Z6_MH_1708	1.68	63	0.10	0.17	0.59	0.97	1.51	1.94	2.37
Z6_SUB_195	Z6_IL_834	11.32	76	1.54	2.68	5.21	7.25	10.15	12.43	14.78
Z6_SUB_196	Z6_IL_821	1.57	84	0.57	0.82	1.35	1.75	2.29	2.70	3.11
Z6_SUB_197	Z6_IL_831	0.58	82	0.31	0.43	0.67	0.84	1.07	1.23	1.40
Z6_SUB_198	Z6_IL_827	2.39	81	0.95	1.39	2.26	2.91	3.77	4.42	5.07
Z6_SUB_199	Z6_IL_838	2.42	81	0.96	1.41	2.29	2.94	3.82	4.48	5.14
Z6_SUB_2	Z6_IL_1526	1.66	76	0.36	0.59	1.09	1.49	2.05	2.49	2.94
Z6_SUB_20	Z6_IL_1129	5.69	76	0.80	1.39	2.68	3.72	5.19	6.34	7.53
Z6_SUB_200	Z6_IL_837	0.69	79	0.30	0.44	0.71	0.91	1.18	1.37	1.57
Z6_SUB_201	Z6_IL_1178	0.69	68	0.07	0.18	0.41	0.60	0.85	1.04	1.24
Z6_SUB_202	Z6_IL_829	0.77	82	0.43	0.60	0.91	1.13	1.42	1.63	1.84
Z6_SUB_203	Z6_CB_143	0.60	82	0.38	0.52	0.77	0.94	1.17	1.34	1.51
Z6_SUB_204	Z6_IL_1157	1.36	85	0.80	1.08	1.63	2.01	2.52	2.91	3.29
Z6_SUB_205	Z6_CB_107	0.66	72	0.12	0.23	0.46	0.64	0.87	1.05	1.23
Z6_SUB_206	Z6_IL_1158	1.48	69	0.20	0.45	0.99	1.40	1.96	2.38	2.81
Z6_SUB_207	Z6_IL_738	0.99	64	0.07	0.16	0.49	0.76	1.13	1.42	1.71
Z6_SUB_208	Z6_IL_736	1.43	70	0.16	0.36	0.82	1.17	1.65	2.02	2.40
Z6_SUB_209	Z6_IL_270	1.76	59	0.07	0.15	0.46	0.90	1.53	2.02	2.52
Z6_SUB_211	Z6_SGMH_2135	0.65	66	0.05	0.12	0.33	0.49	0.73	0.91	1.09
Z6_SUB_212	Z6_IL_1348	5.52	68	0.42	0.97	2.50	3.73	5.47	6.83	8.23
Z6_SUB_213	Z6_IL_2249	9.20	70	0.89	2.04	4.63	6.72	9.68	12.01	14.38
Z6_SUB_214	Z6_IL_2250	48.48	62	2.32	4.34	10.22	18.52	30.58	40.06	49.82

Zone 6 Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	85%	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z6_SUB_215	Z6_IL_802	3.73	68	0.29	0.75	1.84	2.70	3.92	4.88	5.86
Z6_SUB_216	Z6_IL_804	6.02	69	0.50	1.21	2.84	4.16	6.05	7.53	9.06
Z6_SUB_217	Z6_IL_805	0.84	64	0.05	0.09	0.33	0.53	0.81	1.03	1.25
Z6_SUB_218	Z6_IL_806	0.89	64	0.06	0.10	0.34	0.55	0.84	1.07	1.31
Z6_SUB_219	Z6_IL_1115	0.82	61	0.08	0.14	0.46	0.75	1.09	1.33	1.56
Z6_SUB_220	Z6_IL_1115	8.63	70	0.74	1.79	4.16	6.03	8.64	10.67	12.74
Z6_SUB_221	Z6_IL_1123	4.47	65	0.29	0.47	1.53	2.42	3.68	4.67	5.69
Z6_SUB_222	Z6_OF_2058	5.78	78	1.24	2.00	3.63	4.92	6.73	8.13	9.56
Z6_SUB_223	Z6_IL_842	2.71	80	0.70	1.09	1.91	2.56	3.47	4.17	4.90
Z6_SUB_224	Z6_IL_2144	7.74	67	0.50	0.83	2.44	3.78	5.70	7.22	8.78
Z6_SUB_225	Z6_IL_1262	2.66	71	0.28	0.58	1.26	1.82	2.62	3.26	3.93
Z6_SUB_226	Z6_IL_1487	1.60	70	0.16	0.34	0.76	1.10	1.60	1.99	2.40
Z6_SUB_227	Z6_MH_1635	1.98	68	0.12	0.33	0.84	1.26	1.87	2.36	2.87
Z6_SUB_228	Z6_IL_818	0.67	67	0.04	0.11	0.29	0.43	0.64	0.81	0.98
Z6_SUB_229	Z6_IL_808	1.53	70	0.13	0.29	0.68	1.00	1.47	1.84	2.23
Z6_SUB_230	Z6_IL_807	2.33	72	0.23	0.47	1.02	1.47	2.14	2.66	3.21
Z6_SUB_231	Z6_IL_2248	3.49	55	0.07	0.22	0.55	1.00	2.14	3.03	3.94
Z6_SUB_232	Z6_IL_813	4.61	55	0.10	0.32	0.78	1.41	2.98	4.19	5.42
Z6_SUB_233	Z6_IL_812	1.99	55	0.04	0.13	0.34	0.74	1.55	2.16	2.78
Z6_SUB_234	Z6_SGIL_2127	0.61	57	0.02	0.05	0.15	0.32	0.56	0.74	0.92
Z6_SUB_235	Z6_IL_817	10.42	62	0.41	0.79	1.95	3.58	6.01	7.98	10.03
Z6_SUB_237	Z6_MH_1805	1.28	62	0.06	0.12	0.33	0.58	0.94	1.23	1.52
Z6_SUB_238	Z6_IL_815	3.05	56	0.07	0.20	0.48	0.83	1.73	2.44	3.17
Z6_SUB_239	Z6_IL_803	55.41	60	1.94	4.07	8.55	13.81	24.13	32.42	41.01
Z6_SUB_24	Z6_IL_287	0.41	67	0.10	0.24	0.46	0.59	0.76	0.89	1.00
Z6_SUB_240	Z6_IL_816	9.31	54	0.15	0.58	1.53	2.21	4.98	7.24	9.51
Z6_SUB_241	Z6_IL_1249	0.64	63	0.04	0.07	0.25	0.40	0.62	0.79	0.96
Z6_SUB_242	Z6_IL_2399	3.29	61	0.17	0.32	0.97	1.74	2.84	3.69	4.55
Z6_SUB_243	Z6_IL_1513	1.03	64	0.05	0.10	0.36	0.58	0.90	1.16	1.43
Z6_SUB_244	Z6_IL_1274	1.92	65	0.11	0.26	0.76	1.18	1.80	2.28	2.79
Z6_SUB_245	Z6_IL_2143	6.81	68	0.47	1.23	3.09	4.62	6.82	8.55	10.33
Z6_SUB_246	Z6_IL_2271	42.70	47	0.00	0.00	3.12	6.49	10.82	13.94	16.98
Z6_SUB_247	Z6_IL_1003	3.22	59	0.16	0.34	0.66	1.08	1.82	2.38	2.94
Z6_SUB_248	Z6_IL_1001	70.59	51	0.00	0.27	4.00	8.20	14.67	19.90	25.28
Z6_SUB_249	Z6_IL_1273	0.98	72	0.10	0.20	0.43	0.61	0.88	1.08	1.30
Z6_SUB_25	Z6_IL_1380	0.58	67	0.13	0.33	0.64	0.84	1.08	1.26	1.43
Z6_SUB_250	Z6_IL_1405	0.58	80	0.15	0.23	0.40	0.53	0.73	0.88	1.03
Z6_SUB_253	Z6_IL_997	4.81	58	0.25	0.54	1.06	2.13	3.71	4.87	5.99
Z6_SUB_254	Z6_MH_1732	1.22	82	0.27	0.42	0.74	1.00	1.38	1.67	1.98
Z6_SUB_255	Z6_MH_1547	6.42	63	0.33	0.59	1.49	2.57	4.13	5.37	6.64
Z6_SUB_256	Z6_IL_1244	1.62	60	0.10	0.19	0.70	1.23	1.92	2.44	2.95
Z6_SUB_257	Z6_IL_1245	1.07	59	0.11	0.19	0.75	1.23	1.77	2.14	2.49
Z6_SUB_258	Z6_IL_1483	5.99	57	0.31	0.71	1.53	3.51	6.10	7.96	9.73
Z6_SUB_259	Z6_IL_1484	3.04	58	0.12	0.27	0.78	1.62	2.78	3.68	4.59
Z6_SUB_26	Z6_IL_197	0.50	67	0.14	0.30	0.57	0.73	0.94	1.09	1.24
Z6_SUB_260	Z6_IL_1263	2.25	67	0.19	0.52	1.32	1.94	2.79	3.44	4.09
Z6_SUB_261	Z6_IL_1005	6.23	63	0.46	0.77	2.88	4.62	7.01	8.81	10.61
Z6_SUB_262	Z6_IL_1006	8.30	63	0.67	1.12	3.22	5.24	7.93	9.94	11.93
Z6_SUB_263	Z6_IL_1288	34.13	61	1.77	3.39	7.40	13.78	22.88	29.86	36.93
Z6_SUB_264	Z6_IL_1325	5.57	62	0.36	0.63	2.32	3.82	5.89	7.48	9.09
Z6_SUB_265	Z6_IL_2350	1.81	46	0.00	0.00	0.13	0.27	0.46	0.68	1.22
Z6_SUB_266	Z6_IL_1481	1.87	50	0.00	0.05	0.24	0.38	0.88	1.46	2.05
Z6_SUB_267	Z6_IL_1125	2.08	59	0.08	0.16	0.34	0.58	1.02	1.37	1.73
Z6_SUB_269	Z6_IL_1285	131.65	46	0.00	0.00	5.69	14.73	27.28	36.67	45.98
Z6_SUB_27	Z6_IL_1299	3.15	71	0.23	0.49	1.12	1.63	2.40	3.00	3.64
Z6_SUB_270	Z6_MH_1788	1.80	42	0.00	0.00	0.06	0.24	0.49	0.65	0.80
Z6_SUB_271	Z6_IL_1124	6.81	50	0.00	0.16	0.88	1.42	2.13	3.85	5.66
Z6_SUB_272	Z6_MH_1798	1.89	46	0.00	0.00	0.23	0.42	0.64	1.14	1.90
Z6_SUB_273	Z6_IL_1282	120.07	49	0.00	0.63	11.86	20.44	31.74	40.06	53.40

Zone 6 Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	85%	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z6_SUB_274	Z6_IL_2280	54.08	50	0.00	1.19	6.74	10.96	16.37	26.18	38.56
Z6_SUB_275	Z6_IL_1287	25.65	57	0.74	1.97	4.44	8.14	15.84	21.84	27.87
Z6_SUB_278	Z6_IL_809	4.31	70	0.36	0.78	1.82	2.64	3.80	4.71	5.63
Z6_SUB_279	Z6_SGIL_2124	0.66	70	0.13	0.27	0.54	0.73	1.00	1.19	1.39
Z6_SUB_28	Z6_IL_395	1.55	68	0.31	0.80	1.59	2.09	2.72	3.17	3.61
Z6_SUB_280	Z6_IL_795	1.39	70	0.40	0.76	1.41	1.85	2.41	2.82	3.23
Z6_SUB_281	Z6_IL_842	0.71	70	0.10	0.22	0.46	0.64	0.88	1.06	1.24
Z6_SUB_282	Z6_IL_1215	0.99	76	0.23	0.39	0.71	0.96	1.30	1.56	1.82
Z6_SUB_283	Z6_IL_1213	0.83	63	0.05	0.09	0.27	0.45	0.71	0.91	1.11
Z6_SUB_284	Z6_IL_742	1.60	81	0.88	1.23	1.88	2.33	2.93	3.37	3.81
Z6_SUB_285	Z6_IL_1211	0.91	80	0.21	0.33	0.59	0.79	1.08	1.31	1.54
Z6_SUB_287	Z6_IL_633	1.05	76	0.23	0.38	0.71	0.97	1.33	1.60	1.89
Z6_SUB_288	Z6_IL_642	3.27	74	0.68	1.17	2.23	3.05	4.21	5.10	6.01
Z6_SUB_289	Z6_IL_641	1.27	68	0.10	0.26	0.62	0.92	1.34	1.66	2.00
Z6_SUB_29	Z6_IL_903	1.41	65	0.19	0.44	1.16	1.62	2.20	2.61	3.01
Z6_SUB_291	Z6_IL_678	0.74	67	0.15	0.39	0.78	1.03	1.33	1.55	1.77
Z6_SUB_294	Z6_MH_1596	0.74	67	0.16	0.41	0.80	1.05	1.36	1.59	1.80
Z6_SUB_295	Z6_MH_1607	2.94	70	0.93	1.75	3.12	4.02	5.15	5.98	6.79
Z6_SUB_296	Z6_MH_1537	2.09	65	0.28	0.47	1.33	1.88	2.56	3.04	3.50
Z6_SUB_297	Z6_IL_218	0.78	57	0.04	0.09	0.22	0.50	0.86	1.12	1.36
Z6_SUB_298	Z6_IL_211	1.73	57	0.09	0.20	0.42	0.98	1.73	2.26	2.77
Z6_SUB_299	Z6_IL_401	0.58	70	0.16	0.31	0.57	0.75	0.99	1.16	1.33
Z6_SUB_3	Z6_IL_1151	7.58	75	1.39	2.38	4.55	6.27	8.72	10.64	12.60
Z6_SUB_30	Z6_IL_1349	0.68	58	0.06	0.11	0.38	0.69	1.04	1.28	1.51
Z6_SUB_300	Z6_IL_403	0.63	73	0.23	0.38	0.66	0.85	1.11	1.30	1.48
Z6_SUB_301	Z6_IL_410	2.36	70	0.37	0.81	1.71	2.36	3.22	3.87	4.50
Z6_SUB_302	Z6_IL_409	0.92	72	0.21	0.39	0.76	1.02	1.37	1.63	1.89
Z6_SUB_303	Z6_IL_407	0.88	73	0.31	0.51	0.89	1.16	1.51	1.77	2.03
Z6_SUB_304	Z6_IL_426	1.45	57	0.07	0.17	0.34	0.82	1.44	1.88	2.31
Z6_SUB_305	Z6_IL_1019	0.73	57	0.04	0.10	0.26	0.56	0.92	1.17	1.41
Z6_SUB_306	Z6_IL_422	1.23	66	0.14	0.31	0.84	1.21	1.69	2.04	2.38
Z6_SUB_307	Z6_MH_1557	0.58	72	0.11	0.21	0.42	0.58	0.79	0.96	1.13
Z6_SUB_308	Z6_IL_968	0.83	73	0.27	0.47	0.82	1.06	1.37	1.60	1.83
Z6_SUB_309	Z6_IL_1259	5.89	70	1.39	2.82	5.24	6.82	8.81	10.25	11.65
Z6_SUB_311	Z6_IL_977	1.86	64	0.11	0.18	0.68	1.10	1.71	2.18	2.67
Z6_SUB_312	Z6_IL_2255	5.52	55	0.07	0.25	0.68	1.01	2.04	3.01	4.03
Z6_SUB_313	Z6_IL_966	1.93	57	0.04	0.12	0.27	0.62	1.19	1.65	2.12
Z6_SUB_314	Z6_IL_1207	1.29	57	0.03	0.08	0.18	0.38	0.73	1.02	1.32
Z6_SUB_315	Z6_MH_1769	7.32	58	0.24	0.56	1.23	2.41	4.47	6.09	7.75
Z6_SUB_316	Z6_IL_970	6.70	62	0.62	1.02	3.54	5.66	8.39	10.36	12.27
Z6_SUB_317	Z6_IL_1208	0.80	57	0.06	0.13	0.34	0.72	1.15	1.42	1.68
Z6_SUB_318	Z6_IL_979	1.19	53	0.01	0.05	0.16	0.24	0.64	0.96	1.29
Z6_SUB_319	Z6_IL_980	3.76	53	0.03	0.17	0.52	0.79	1.87	2.85	3.85
Z6_SUB_32	Z6_CB_146	23.51	68	1.71	2.67	6.12	9.11	13.35	16.65	20.01
Z6_SUB_320	Z6_IL_1206	0.81	57	0.02	0.05	0.11	0.20	0.40	0.56	0.73
Z6_SUB_321	Z6_IL_2256	11.53	53	0.05	0.49	1.62	2.44	4.44	6.89	9.40
Z6_SUB_322	Z6_IL_973	1.14	56	0.03	0.09	0.20	0.37	0.73	1.01	1.29
Z6_SUB_323	Z6_IL_976	2.65	56	0.07	0.19	0.43	0.87	1.72	2.38	3.05
Z6_SUB_324	Z6_IL_981	0.91	54	0.01	0.05	0.14	0.32	0.65	0.92	1.19
Z6_SUB_325	Z6_IL_983	0.88	57	0.03	0.07	0.17	0.39	0.72	0.97	1.23
Z6_SUB_326	Z6_IL_975	0.55	57	0.02	0.04	0.09	0.22	0.41	0.56	0.71
Z6_SUB_327	Z6_IL_984	2.34	57	0.07	0.18	0.39	0.94	1.77	2.41	3.06
Z6_SUB_328	Z6_IL_2014	1.37	58	0.04	0.10	0.22	0.35	0.64	0.87	1.11
Z6_SUB_329	Z6_IL_2009	1.82	67	0.12	0.20	0.56	0.87	1.30	1.64	1.99
Z6_SUB_33	Z6_IL_455	2.49	79	0.60	0.95	1.71	2.29	3.11	3.74	4.39
Z6_SUB_330	Z6_IL_2323	40.50	55	0.50	2.34	6.14	8.89	14.61	20.82	27.26
Z6_SUB_331	Z6_IL_731	0.63	54	0.01	0.03	0.08	0.12	0.23	0.35	0.47
Z6_SUB_332	Z6_IL_732	1.79	57	0.05	0.13	0.29	0.48	0.94	1.30	1.67
Z6_SUB_333	Z6_IL_2170	1.33	59	0.04	0.09	0.20	0.28	0.47	0.63	0.80

Zone 6 Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	85%	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z6_SUB_336	Z6_IL_1056	2.11	57	0.06	0.16	0.35	0.77	1.45	1.99	2.53
Z6_SUB_337	Z6_IL_987	0.77	56	0.02	0.06	0.13	0.30	0.57	0.79	1.01
Z6_SUB_338	Z6_MH_1659	1.19	59	0.05	0.10	0.22	0.45	0.79	1.06	1.33
Z6_SUB_34	Z6_IL_1192	3.33	73	0.58	1.07	2.12	2.94	4.09	4.98	5.89
Z6_SUB_340	Z6_IL_726	0.70	57	0.02	0.05	0.12	0.23	0.45	0.62	0.79
Z6_SUB_341	Z6_IL_728	1.33	57	0.04	0.10	0.22	0.43	0.83	1.14	1.46
Z6_SUB_342	Z6_IL_986	1.08	57	0.03	0.08	0.22	0.50	0.89	1.20	1.52
Z6_SUB_343	Z6_MH_1707	0.67	56	0.02	0.05	0.12	0.29	0.55	0.74	0.94
Z6_SUB_344	Z6_IL_1238	3.26	57	0.14	0.34	0.70	1.57	2.85	3.78	4.68
Z6_SUB_345	Z6_IL_1493	2.27	57	0.12	0.29	0.55	1.26	2.21	2.86	3.49
Z6_SUB_346	Z6_IL_919	1.95	57	0.09	0.21	0.47	1.11	1.95	2.57	3.17
Z6_SUB_347	Z6_IL_1490	2.57	57	0.13	0.29	0.78	1.72	2.93	3.80	4.65
Z6_SUB_348	Z6_IL_1492	8.07	57	0.53	1.17	2.13	4.49	7.64	9.75	11.70
Z6_SUB_349	Z6_MH_1691	2.46	57	0.12	0.28	0.67	1.54	2.66	3.47	4.25
Z6_SUB_35	Z6_IL_1111	7.85	73	1.31	2.41	4.79	6.65	9.25	11.27	13.33
Z6_SUB_350	Z6_IL_1016	1.83	57	0.05	0.14	0.31	0.69	1.30	1.78	2.27
Z6_SUB_351	Z6_IL_1017	2.50	57	0.07	0.19	0.42	1.02	1.90	2.58	3.27
Z6_SUB_352	Z6_IL_922	2.86	57	0.09	0.22	0.48	1.18	2.19	2.97	3.77
Z6_SUB_353	Z6_IL_927	1.26	57	0.04	0.10	0.24	0.57	1.03	1.40	1.77
Z6_SUB_354	Z6_IL_1240	5.93	57	0.36	0.81	2.24	4.85	7.94	10.07	12.07
Z6_SUB_355	Z6_IL_934	2.28	57	0.15	0.32	0.67	1.52	2.57	3.27	3.93
Z6_SUB_356	Z6_IL_936	1.74	56	0.06	0.16	0.36	0.63	1.28	1.75	2.21
Z6_SUB_357	Z6_IL_932	1.16	57	0.04	0.09	0.20	0.49	0.91	1.23	1.56
Z6_SUB_358	Z6_IL_938	2.15	57	0.09	0.21	0.51	1.18	2.09	2.78	3.44
Z6_SUB_359	Z6_IL_937	0.51	57	0.03	0.07	0.23	0.46	0.73	0.91	1.08
Z6_SUB_36	Z6_IL_1106	1.08	73	0.21	0.38	0.73	1.01	1.40	1.69	2.00
Z6_SUB_360	Z6_IL_931	1.70	57	0.11	0.24	0.71	1.46	2.34	2.95	3.52
Z6_SUB_361	Z6_MH_1721	0.82	57	0.07	0.14	0.36	0.76	1.18	1.45	1.71
Z6_SUB_362	Z6_IL_929	2.13	56	0.11	0.28	0.54	1.17	2.13	2.77	3.37
Z6_SUB_363	Z6_IL_924	1.81	57	0.07	0.17	0.39	0.92	1.65	2.20	2.74
Z6_SUB_364	Z6_IL_923	0.62	57	0.02	0.05	0.11	0.26	0.48	0.65	0.82
Z6_SUB_365	Z6_IL_2344	9.26	59	0.32	0.69	1.46	2.93	5.22	7.06	8.94
Z6_SUB_366	Z6_IL_2273	28.14	58	0.77	1.80	4.02	7.06	13.20	18.18	23.37
Z6_SUB_367	Z6_IL_1027	0.69	72	0.08	0.15	0.32	0.46	0.67	0.83	1.00
Z6_SUB_368	Z6_IL_1028	0.72	71	0.07	0.15	0.32	0.46	0.67	0.83	1.00
Z6_SUB_369	Z6_IL_1031	1.54	46	0.00	0.00	0.09	0.20	0.34	0.45	0.82
Z6_SUB_37	Z6_IL_452	1.75	74	0.45	0.77	1.42	1.91	2.57	3.07	3.57
Z6_SUB_372	Z6_IL_682	3.33	62	0.15	0.27	0.75	1.32	2.16	2.83	3.53
Z6_SUB_373	Z6_IL_681	3.47	67	0.20	0.43	1.20	1.85	2.80	3.56	4.35
Z6_SUB_374	Z6_IL_1023	2.74	57	0.06	0.16	0.37	0.68	1.35	1.89	2.46
Z6_SUB_375	Z6_IL_761	1.87	57	0.05	0.14	0.31	0.63	1.21	1.66	2.12
Z6_SUB_376	Z6_IL_2141	1.07	55	0.02	0.07	0.16	0.37	0.76	1.06	1.38
Z6_SUB_377	Z6_IL_1387	1.38	50	0.00	0.03	0.15	0.25	0.48	0.84	1.22
Z6_SUB_378	Z6_IL_946	1.61	50	0.00	0.04	0.18	0.29	0.64	1.10	1.58
Z6_SUB_379	Z6_IL_2142	1.98	50	0.00	0.05	0.22	0.36	0.81	1.37	1.95
Z6_SUB_38	Z6_IL_453	0.79	77	0.24	0.38	0.67	0.89	1.19	1.41	1.64
Z6_SUB_380	Z6_MH_1648	2.04	50	0.00	0.04	0.22	0.37	0.67	1.20	1.75
Z6_SUB_381	Z6_IL_2140	44.10	52	0.01	1.54	5.58	8.63	12.67	19.46	26.89
Z6_SUB_382	Z6_IL_940	1.81	57	0.16	0.31	0.81	1.69	2.62	3.23	3.79
Z6_SUB_383	Z6_IL_2261	1.23	62	0.06	0.11	0.26	0.46	0.76	1.00	1.24
Z6_SUB_384	Z6_IL_949	0.66	56	0.01	0.04	0.10	0.15	0.31	0.44	0.58
Z6_SUB_385	Z6_MH_1697	0.79	59	0.03	0.06	0.13	0.21	0.37	0.50	0.63
Z6_SUB_388	Z6_IL_951	0.60	50	0.00	0.01	0.06	0.10	0.16	0.27	0.40
Z6_SUB_389	Z6_IL_715	24.91	51	0.00	0.55	2.55	4.14	6.31	8.78	12.49
Z6_SUB_390	Z6_IL_1038	8.87	57	0.18	0.48	1.15	1.68	3.35	4.72	6.18
Z6_SUB_391	Z6_IL_1040	2.79	57	0.06	0.17	0.39	0.85	1.64	2.28	2.94
Z6_SUB_392	Z6_IL_1250	0.74	57	0.02	0.04	0.10	0.23	0.44	0.61	0.78
Z6_SUB_393	Z6_IL_782	8.82	57	0.19	0.50	1.19	2.04	4.06	5.71	7.44
Z6_SUB_394	Z6_IL_1039	9.73	57	0.25	0.65	1.51	2.41	4.71	6.55	8.44

Zone 6 Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	85%	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z6_SUB_395	Z6_IL_1041	10.21	57	0.21	0.56	1.34	2.02	4.03	5.69	7.44
Z6_SUB_396	Z6_IL_2172	33.43	53	0.02	0.94	3.49	5.48	8.23	11.13	15.23
Z6_SUB_397	Z6_IL_1042	6.35	57	0.13	0.33	0.80	1.17	2.12	2.98	3.90
Z6_SUB_398	Z6_IL_630	0.73	50	0.00	0.02	0.08	0.13	0.19	0.32	0.47
Z6_SUB_399	Z6_IL_629	2.32	57	0.07	0.17	0.38	0.73	1.38	1.89	2.42
Z6_SUB_4	Z6_IL_1529	1.34	76	0.26	0.44	0.83	1.13	1.57	1.91	2.26
Z6_SUB_40	Z6_IL_2164	11.63	76	2.36	3.98	7.42	10.06	13.72	16.54	19.40
Z6_SUB_400	Z6_IL_1054	8.18	66	0.43	0.73	2.16	3.46	5.39	6.93	8.54
Z6_SUB_401	Z6_IL_2139	13.98	62	0.57	1.06	2.85	5.11	8.47	11.21	14.07
Z6_SUB_402	Z6_IL_1052	8.84	53	0.04	0.28	0.94	1.46	2.71	4.25	5.90
Z6_SUB_403	Z6_IL_1053	7.72	54	0.08	0.32	0.92	1.39	3.13	4.69	6.34
Z6_SUB_404	Z6_IL_1050	1.89	57	0.04	0.11	0.28	0.68	1.26	1.73	2.23
Z6_SUB_405	Z6_IL_1049	4.91	53	0.01	0.14	0.51	0.80	1.41	2.24	3.14
Z6_SUB_406	Z6_MH_1658	1.57	57	0.04	0.09	0.22	0.51	0.97	1.34	1.73
Z6_SUB_407	Z6_IL_1055	1.83	57	0.04	0.11	0.25	0.48	0.95	1.33	1.72
Z6_SUB_408	Z6_IL_909	0.99	65	0.05	0.10	0.32	0.51	0.78	1.01	1.24
Z6_SUB_409	Z6_IL_911	1.77	65	0.10	0.18	0.58	0.91	1.41	1.80	2.22
Z6_SUB_41	Z6_IL_2164	16.83	73	2.60	4.84	9.67	13.42	18.65	22.69	26.77
Z6_SUB_410	Z6_IL_910	8.50	67	0.47	0.78	2.33	3.66	5.61	7.17	8.80
Z6_SUB_411	Z6_IL_1046	1.59	65	0.08	0.14	0.39	0.64	1.01	1.30	1.61
Z6_SUB_412	Z6_IL_1047	3.73	57	0.08	0.21	0.50	0.86	1.72	2.42	3.15
Z6_SUB_413	Z6_IL_1375	2.02	59	0.05	0.13	0.28	0.50	0.93	1.28	1.64
Z6_SUB_414	Z6_IL_757	3.73	64	0.18	0.31	0.84	1.41	2.25	2.93	3.64
Z6_SUB_415	Z6_IL_758	0.87	77	0.16	0.26	0.48	0.66	0.91	1.11	1.31
Z6_SUB_416	Z6_IL_1370	0.87	78	0.20	0.33	0.59	0.80	1.09	1.31	1.54
Z6_SUB_417	Z6_IL_1369	0.99	78	0.23	0.37	0.68	0.92	1.25	1.51	1.78
Z6_SUB_418	Z6_MH_1619	6.95	57	0.16	0.41	0.96	2.02	3.92	5.46	7.06
Z6_SUB_419	Z6_IL_767	1.79	55	0.03	0.09	0.23	0.49	1.02	1.45	1.91
Z6_SUB_42	Z6_IL_443	3.68	76	0.83	1.39	2.60	3.53	4.82	5.81	6.82
Z6_SUB_420	Z6_IL_766	4.39	55	0.06	0.21	0.56	1.07	2.31	3.33	4.39
Z6_SUB_421	Z6_IL_709	1.51	72	0.15	0.30	0.64	0.92	1.31	1.62	1.93
Z6_SUB_422	Z6_MH_1627	2.08	57	0.05	0.12	0.28	0.67	1.27	1.75	2.26
Z6_SUB_423	Z6_IL_703	0.70	78	0.17	0.27	0.48	0.65	0.88	1.07	1.25
Z6_SUB_424	Z6_IL_711	0.61	78	0.16	0.25	0.44	0.59	0.79	0.96	1.12
Z6_SUB_425	Z6_MH_1609	1.05	78	0.25	0.39	0.71	0.96	1.32	1.59	1.87
Z6_SUB_426	Z6_IL_674	1.34	78	0.29	0.47	0.86	1.17	1.60	1.93	2.28
Z6_SUB_427	Z6_IL_685	0.75	78	0.17	0.28	0.51	0.68	0.93	1.13	1.33
Z6_SUB_428	Z6_IL_675	0.51	77	0.11	0.19	0.34	0.46	0.63	0.76	0.90
Z6_SUB_43	Z6_IL_739	17.87	73	1.71	3.30	6.84	9.64	13.57	16.62	19.74
Z6_SUB_430	Z6_IL_1338	1.03	56	0.03	0.09	0.20	0.41	0.80	1.10	1.39
Z6_SUB_431	Z6_IL_759	6.64	56	0.12	0.35	0.86	1.44	2.97	4.23	5.55
Z6_SUB_432	Z6_IL_1339	7.90	53	0.06	0.37	1.13	1.69	3.78	5.75	7.74
Z6_SUB_434	Z6_IL_637	0.79	67	0.06	0.17	0.43	0.63	0.92	1.14	1.36
Z6_SUB_437	Z6_IL_1294	2.44	74	0.18	0.33	0.68	0.96	1.36	1.68	2.01
Z6_SUB_438	Z6_IL_1243	3.31	57	0.13	0.31	0.71	1.67	3.00	4.00	4.99
Z6_SUB_439	Z6_IL_1022	3.09	57	0.10	0.25	0.55	1.32	2.45	3.31	4.19
Z6_SUB_44	Z6_IL_441	4.31	73	0.80	1.44	2.83	3.91	5.41	6.58	7.76
Z6_SUB_440	Z6_IL_1242	3.06	57	0.09	0.22	0.50	0.85	1.65	2.28	2.92
Z6_SUB_441	Z6_SGMH_2133	0.88	60	0.06	0.11	0.38	0.67	1.04	1.32	1.60
Z6_SUB_442	Z6_IL_1498	3.59	57	0.10	0.26	0.59	1.08	2.10	2.90	3.71
Z6_SUB_443	Z6_IL_1418	0.57	81	0.15	0.24	0.41	0.55	0.75	0.90	1.05
Z6_SUB_444	Z6_MH_1779	0.83	82	0.23	0.35	0.60	0.80	1.08	1.30	1.52
Z6_SUB_445	Z6_IL_1404	2.06	71	0.26	0.54	1.11	1.55	2.13	2.57	3.01
Z6_SUB_446	Z6_IL_925	10.14	57	0.43	1.03	2.11	4.51	8.16	10.87	13.53
Z6_SUB_447	Z6_IL_635	9.24	70	0.98	2.10	4.63	6.51	9.07	10.99	12.91
Z6_SUB_449	Z6_IL_2257	0.59	57	0.01	0.03	0.08	0.16	0.31	0.43	0.56
Z6_SUB_45	Z6_MH_1558	2.22	73	0.34	0.62	1.24	1.74	2.44	2.99	3.56
Z6_SUB_450	Z6_IL_962	18.29	57	0.25	0.82	2.10	3.10	4.58	6.35	8.23
Z6_SUB_451	Z6_IL_1161	1.33	57	0.03	0.08	0.18	0.34	0.68	0.95	1.23

Zone 6 Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	85%	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z6_SUB_452	Z6_IL_1203	2.30	57	0.05	0.13	0.31	0.48	0.95	1.35	1.76
Z6_SUB_453	Z6_CB_149	1.50	57	0.03	0.09	0.21	0.45	0.87	1.22	1.57
Z6_SUB_454	Z6_IL_1162	0.65	57	0.01	0.03	0.08	0.12	0.21	0.29	0.38
Z6_SUB_455	Z6_CB_150	1.71	57	0.04	0.10	0.23	0.37	0.73	1.04	1.35
Z6_SUB_456	Z6_IL_961	0.76	57	0.02	0.04	0.10	0.14	0.29	0.40	0.53
Z6_SUB_457	Z6_CB_153	2.06	57	0.04	0.10	0.25	0.36	0.58	0.81	1.06
Z6_SUB_458	Z6_IL_907	4.29	57	0.09	0.22	0.54	0.79	1.41	1.99	2.60
Z6_SUB_459	Z6_CB_152	7.59	57	0.13	0.37	0.91	1.33	2.14	2.98	3.88
Z6_SUB_462	Z6_IL_993	1.13	59	0.04	0.09	0.19	0.40	0.71	0.96	1.22
Z6_SUB_463	Z6_IL_776	1.59	58	0.06	0.15	0.30	0.64	1.15	1.53	1.92
Z6_SUB_464	Z6_MH_1692	0.86	55	0.02	0.06	0.15	0.35	0.71	0.98	1.26
Z6_SUB_465	Z6_MH_1587	1.42	57	0.05	0.13	0.38	0.83	1.43	1.88	2.34
Z6_SUB_466	Z6_IL_628	2.99	57	0.11	0.27	0.57	1.33	2.45	3.30	4.15
Z6_SUB_467	Z6_IL_626	2.34	57	0.08	0.20	0.44	0.94	1.76	2.38	3.00
Z6_SUB_468	Z6_IL_624	1.07	57	0.04	0.10	0.27	0.59	1.04	1.38	1.71
Z6_SUB_469	Z6_IL_621	1.02	57	0.04	0.09	0.22	0.52	0.93	1.24	1.55
Z6_SUB_47	Z6_IL_902	1.15	76	0.22	0.36	0.69	0.94	1.30	1.59	1.88
Z6_SUB_470	Z6_IL_620	0.64	57	0.02	0.06	0.14	0.32	0.58	0.77	0.96
Z6_SUB_471	Z6_IL_2260	4.03	68	0.29	0.48	1.30	1.96	2.90	3.64	4.40
Z6_SUB_472	Z6_IL_774	3.42	66	0.23	0.38	1.05	1.64	2.49	3.14	3.81
Z6_SUB_473	Z6_IL_631	0.68	64	0.04	0.07	0.26	0.41	0.63	0.81	0.99
Z6_SUB_474	Z6_IL_625	4.01	67	0.30	0.61	1.66	2.51	3.70	4.63	5.57
Z6_SUB_475	Z6_IL_618	0.68	57	0.03	0.06	0.18	0.39	0.67	0.89	1.10
Z6_SUB_476	Z6_MH_1581	2.15	57	0.07	0.18	0.40	0.81	1.53	2.08	2.63
Z6_SUB_477	Z6_IL_622	2.29	63	0.14	0.25	0.78	1.30	2.03	2.60	3.17
Z6_SUB_478	Z6_IL_611	3.33	57	0.11	0.28	0.62	1.16	2.20	2.99	3.78
Z6_SUB_479	Z6_IL_608	2.08	57	0.07	0.17	0.38	0.67	1.28	1.74	2.20
Z6_SUB_48	Z6_IL_1310	4.58	76	0.80	1.35	2.56	3.52	4.88	5.94	7.04
Z6_SUB_480	Z6_IL_609	2.82	61	0.15	0.28	0.60	1.11	1.85	2.41	2.98
Z6_SUB_481	Z6_MH_1599	3.43	70	0.26	0.47	1.12	1.65	2.40	2.99	3.59
Z6_SUB_482	Z6_IL_607	1.30	59	0.06	0.12	0.26	0.53	0.93	1.23	1.53
Z6_SUB_483	Z6_IL_228	0.59	58	0.03	0.06	0.14	0.30	0.53	0.70	0.87
Z6_SUB_484	Z6_IL_768	0.70	70	0.12	0.27	0.55	0.76	1.03	1.23	1.43
Z6_SUB_485	Z6_IL_769	3.90	55	0.06	0.22	0.56	0.92	2.07	2.99	3.94
Z6_SUB_486	Z6_IL_1428	0.58	55	0.01	0.04	0.11	0.24	0.49	0.68	0.86
Z6_SUB_487	Z6_CB_182	0.72	53	0.01	0.04	0.10	0.19	0.47	0.68	0.90
Z6_SUB_488	Z6_IL_755	2.24	56	0.06	0.16	0.38	0.80	1.58	2.19	2.80
Z6_SUB_489	Z6_IL_1429	0.96	54	0.02	0.06	0.16	0.25	0.58	0.84	1.09
Z6_SUB_49	Z6_IL_1104	5.78	68	0.89	2.18	4.61	6.16	8.07	9.43	10.77
Z6_SUB_490	Z6_IL_722	1.52	70	0.19	0.44	0.95	1.33	1.85	2.25	2.64
Z6_SUB_491	Z6_IL_721	3.95	72	0.54	1.08	2.23	3.09	4.27	5.15	6.05
Z6_SUB_492	Z6_IL_687	2.02	76	0.39	0.66	1.23	1.67	2.28	2.76	3.24
Z6_SUB_493	Z6_IL_1272	0.83	82	0.25	0.38	0.65	0.86	1.14	1.37	1.59
Z6_SUB_494	Z6_IL_686	1.03	82	0.32	0.48	0.82	1.08	1.44	1.71	1.99
Z6_SUB_495	Z6_IL_719	1.86	82	0.54	0.82	1.41	1.86	2.49	2.98	3.48
Z6_SUB_496	Z6_IL_718	1.82	82	0.53	0.80	1.38	1.82	2.44	2.92	3.41
Z6_SUB_497	Z6_IL_578	0.77	82	0.24	0.36	0.61	0.81	1.08	1.29	1.50
Z6_SUB_498	Z6_IL_676	2.03	82	0.46	0.71	1.23	1.63	2.20	2.64	3.09
Z6_SUB_499	Z6_IL_720	2.08	74	0.32	0.59	1.17	1.64	2.30	2.82	3.35
Z6_SUB_5	Z6_IL_904	7.88	76	1.44	2.44	4.61	6.33	8.77	10.67	12.63
Z6_SUB_50	Z6_IL_1300	2.22	65	0.24	0.40	1.26	1.87	2.65	3.21	3.77
Z6_SUB_500	Z6_IL_296	2.04	61	0.29	0.43	1.63	2.42	3.28	3.86	4.41
Z6_SUB_501	Z6_IL_754	4.63	71	0.48	1.04	2.28	3.27	4.68	5.78	6.90
Z6_SUB_502	Z6_IL_753	1.50	70	0.14	0.32	0.73	1.06	1.53	1.90	2.29
Z6_SUB_503	Z6_IL_603	0.88	66	0.05	0.11	0.32	0.50	0.75	0.96	1.17
Z6_SUB_504	Z6_IL_699	3.66	57	0.10	0.25	0.57	0.85	1.64	2.27	2.92
Z6_SUB_505	Z6_IL_1059	2.54	58	0.07	0.18	0.41	0.57	1.01	1.37	1.74
Z6_SUB_506	Z6_IL_701	1.51	57	0.04	0.11	0.24	0.38	0.74	1.03	1.32
Z6_SUB_507	Z6_IL_702	3.62	57	0.10	0.25	0.57	0.89	1.72	2.39	3.08

Zone 6 Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	85%	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z6_SUB_508	Z6_IL_700	1.10	57	0.03	0.07	0.17	0.25	0.47	0.65	0.84
Z6_SUB_509	Z6_IL_1058	7.17	54	0.07	0.37	1.00	1.47	2.33	3.35	4.41
Z6_SUB_510	Z6_IL_1057	2.67	53	0.01	0.11	0.36	0.54	0.82	1.23	1.66
Z6_SUB_511	Z6_IL_770	8.46	54	0.04	0.33	0.99	1.50	2.21	3.22	4.30
Z6_SUB_512	Z6_IL_724	8.37	54	0.04	0.33	0.99	1.50	2.26	3.33	4.48
Z6_SUB_513	Z6_IL_723	0.90	54	0.01	0.05	0.13	0.19	0.44	0.65	0.87
Z6_SUB_514	Z6_MH_1615	0.54	54	0.01	0.03	0.07	0.11	0.25	0.37	0.50
Z6_SUB_515	Z6_MH_1614	1.08	54	0.01	0.05	0.15	0.22	0.48	0.72	0.96
Z6_SUB_516	Z6_IL_771	2.59	54	0.02	0.12	0.35	0.52	0.86	1.26	1.69
Z6_SUB_517	Z6_IL_772	6.39	54	0.05	0.29	0.83	1.24	1.96	2.87	3.83
Z6_SUB_518	Z6_MH_1612	0.58	60	0.02	0.04	0.09	0.16	0.27	0.36	0.46
Z6_SUB_519	Z6_MH_1604	0.90	61	0.04	0.07	0.15	0.24	0.41	0.54	0.68
Z6_SUB_520	Z6_IL_752	1.21	62	0.06	0.10	0.20	0.35	0.58	0.75	0.93
Z6_SUB_521	Z6_SGIL_2102	2.36	75	0.18	0.34	0.69	0.98	1.41	1.75	2.10
Z6_SUB_522	Z6_IL_990	0.98	69	0.11	0.25	0.55	0.80	1.15	1.41	1.69
Z6_SUB_523	Z6_IL_1368	1.13	81	0.61	0.85	1.30	1.62	2.03	2.34	2.65
Z6_SUB_524	Z6_IL_989	3.18	69	0.37	0.83	1.86	2.61	3.61	4.35	5.08
Z6_SUB_525	Z6_IL_555	0.83	82	0.52	0.71	1.05	1.30	1.61	1.85	2.08
Z6_SUB_526	Z6_IL_1433	1.12	75	0.35	0.57	1.00	1.31	1.72	2.03	2.33
Z6_SUB_527	Z6_IL_225	1.63	57	0.06	0.15	0.38	0.87	1.54	2.05	2.55
Z6_SUB_528	Z6_IL_226	0.93	57	0.04	0.09	0.21	0.47	0.83	1.11	1.38
Z6_SUB_529	Z6_IL_227	0.61	64	0.04	0.08	0.29	0.45	0.67	0.84	1.02
Z6_SUB_530	Z6_IL_229	1.22	70	0.14	0.30	0.67	0.97	1.39	1.71	2.04
Z6_SUB_531	Z6_IL_236	0.97	68	0.08	0.21	0.50	0.73	1.07	1.32	1.59
Z6_SUB_532	Z6_IL_238	1.20	67	0.08	0.12	0.28	0.43	0.65	0.81	0.99
Z6_SUB_534	Z6_MH_1593	0.83	67	0.08	0.18	0.46	0.68	0.96	1.18	1.40
Z6_SUB_535	Z6_IL_2275	20.90	69	1.41	2.21	5.23	7.81	11.52	14.45	17.46
Z6_SUB_536	Z6_IL_1269	1.35	68	0.14	0.29	0.70	1.01	1.41	1.71	2.01
Z6_SUB_537	Z6_IL_667	3.01	60	0.18	0.35	0.78	1.46	2.38	3.06	3.74
Z6_SUB_538	Z6_IL_669	8.04	70	0.82	1.71	3.79	5.37	7.51	9.14	10.76
Z6_SUB_539	Z6_IL_292	1.18	57	0.05	0.12	0.24	0.43	0.79	1.06	1.33
Z6_SUB_54	Z6_SGIL_2088	0.89	85	0.31	0.46	0.75	0.98	1.29	1.54	1.78
Z6_SUB_540	Z6_IL_293	1.91	66	0.16	0.27	0.79	1.20	1.76	2.20	2.63
Z6_SUB_541	Z6_IL_294	0.63	69	0.06	0.15	0.35	0.50	0.71	0.87	1.04
Z6_SUB_542	Z6_SGIL_2092	1.33	68	0.11	0.27	0.68	1.00	1.45	1.80	2.14
Z6_SUB_543	Z6_IL_332	0.68	69	0.13	0.28	0.57	0.78	1.06	1.26	1.46
Z6_SUB_544	Z6_IL_209	2.48	70	0.41	0.88	1.84	2.55	3.51	4.24	4.95
Z6_SUB_545	Z6_IL_251	2.89	68	0.30	0.78	1.81	2.61	3.69	4.52	5.34
Z6_SUB_546	Z6_IL_250	0.61	57	0.01	0.04	0.08	0.17	0.33	0.46	0.60
Z6_SUB_547	Z6_MH_1543	3.75	53	0.01	0.13	0.41	0.64	0.95	1.38	1.87
Z6_SUB_548	Z6_IL_249	3.32	56	0.06	0.17	0.43	0.66	1.37	1.96	2.58
Z6_SUB_549	Z6_IL_346	2.25	64	0.18	0.32	1.16	1.79	2.66	3.31	3.96
Z6_SUB_55	Z6_CB_73	0.56	87	0.27	0.38	0.59	0.74	0.95	1.10	1.26
Z6_SUB_550	Z6_IL_349	0.59	78	0.27	0.40	0.64	0.82	1.05	1.22	1.39
Z6_SUB_551	Z6_IL_351	0.76	81	0.48	0.65	0.97	1.19	1.49	1.70	1.92
Z6_SUB_552	Z6_IL_331	0.55	81	0.35	0.47	0.70	0.86	1.06	1.22	1.37
Z6_SUB_553	Z6_IL_350	0.77	77	0.41	0.60	0.93	1.16	1.46	1.68	1.90
Z6_SUB_554	Z6_IL_1475	0.65	67	0.08	0.24	0.54	0.75	1.02	1.21	1.41
Z6_SUB_555	Z6_IL_1476	1.69	53	0.01	0.07	0.23	0.35	0.93	1.39	1.86
Z6_SUB_556	Z6_IL_1371	0.20	63	0.03	0.07	0.20	0.27	0.36	0.43	0.49
Z6_SUB_557	Z6_IL_1474	3.32	47	0.00	0.01	0.37	0.66	1.02	1.75	2.85
Z6_SUB_558	Z6_IL_1477	11.24	46	0.00	0.00	1.14	2.18	3.45	4.85	8.41
Z6_SUB_56	Z6_SGIL_2128	1.64	86	0.77	1.07	1.69	2.14	2.75	3.22	3.68
Z6_SUB_560	Z6_IL_1235	0.95	51	0.00	0.02	0.10	0.16	0.24	0.42	0.61
Z6_SUB_561	Z6_IL_1420	7.32	47	0.00	0.01	0.58	1.10	1.80	2.32	3.72
Z6_SUB_563	Z6_IL_289	0.44	69	0.14	0.27	0.50	0.64	0.82	0.95	1.08
Z6_SUB_564	Z6_MH_1705	0.61	65	0.07	0.19	0.51	0.72	0.98	1.17	1.36
Z6_SUB_565	Z6_IL_677	0.56	71	0.23	0.38	0.65	0.82	1.05	1.21	1.37
Z6_SUB_566	Z6_IL_219	0.67	73	0.23	0.38	0.66	0.87	1.14	1.34	1.54

Zone 6 Catchments										
			AMC 1.25	Max Q (cfs)						
ID	Outlet	Area (acres)	CN	85%	2Yr	5Yr	10Yr	25Yr	50Yr	100Yr
Z6_SUB_567	Z6_MH_1723	1.35	70	0.20	0.42	0.89	1.25	1.75	2.13	2.51
Z6_SUB_568	Z6_IL_1037	1.98	57	0.04	0.11	0.27	0.44	0.88	1.23	1.61
Z6_SUB_569	Z6_IL_617	0.90	57	0.03	0.08	0.23	0.51	0.89	1.17	1.46
Z6_SUB_57	Z6_IL_844	3.61	70	0.44	1.01	2.17	3.02	4.15	4.99	5.82
Z6_SUB_570	Z6_IL_615	0.91	57	0.04	0.08	0.26	0.54	0.93	1.22	1.51
Z6_SUB_571	Z6_IL_385	1.15	70	0.14	0.33	0.72	1.01	1.41	1.71	2.02
Z6_SUB_572	Z6_IL_602	0.53	70	0.04	0.10	0.22	0.33	0.48	0.60	0.73
Z6_SUB_573	Z6_IL_330	0.64	72	0.24	0.40	0.69	0.89	1.15	1.34	1.52
Z6_SUB_576	Z6_IL_2244	5.39	62	0.27	0.49	1.19	2.10	3.43	4.47	5.54
Z6_SUB_578	Z6_CB_160	1.21	73	0.18	0.34	0.68	0.95	1.33	1.63	1.93
Z6_SUB_58	Z6_CB_104	2.27	64	0.25	0.38	1.08	1.64	2.34	2.85	3.34
Z6_SUB_580	Z6_IL_588	0.08	66	0.01	0.02	0.05	0.08	0.11	0.14	0.16
Z6_SUB_581	Z6_IL_587	0.10	66	0.01	0.03	0.06	0.09	0.13	0.16	0.19
Z6_SUB_582	Z6_IL_586	0.09	70	0.02	0.03	0.07	0.10	0.13	0.16	0.19
Z6_SUB_583	Z6_IL_288	0.33	67	0.08	0.19	0.37	0.48	0.62	0.72	0.82
Z6_SUB_584	Z6_IL_1298	0.43	73	0.19	0.30	0.49	0.63	0.80	0.92	1.04
Z6_SUB_585	Z6_IL_612	2.68	57	0.10	0.24	0.63	1.43	2.53	3.37	4.20
Z6_SUB_586	Z6_IL_2290	0.39	82	0.12	0.18	0.31	0.41	0.55	0.65	0.76
Z6_SUB_587	Z6_IL_1247	0.84	67	0.06	0.15	0.39	0.59	0.86	1.08	1.31
Z6_SUB_588	Z6_IL_1193	0.71	65	0.05	0.11	0.34	0.52	0.78	0.97	1.17
Z6_SUB_589	Z6_IL_1296	1.34	77	0.31	0.48	0.81	1.04	1.34	1.57	1.79
Z6_SUB_59	Z6_IL_865	1.07	70	0.12	0.24	0.52	0.73	1.01	1.23	1.44
Z6_SUB_590	Z6_IL_1412	0.18	76	0.04	0.06	0.12	0.16	0.22	0.27	0.32
Z6_SUB_591	Z6_CB_129	0.34	50	0.00	0.01	0.03	0.06	0.09	0.17	0.25
Z6_SUB_592	Z6_CB_65	5.18	57	0.44	0.88	2.18	4.60	7.22	8.92	10.47
Z6_SUB_593	Z6_IL_2394	4.07	71	0.46	0.97	2.10	3.00	4.28	5.29	6.32
Z6_SUB_594	Z6_IL_1205	6.06	57	0.12	0.32	0.78	1.13	2.17	3.06	3.99
Z6_SUB_595	Z6_IL_1184	1.11	73	0.43	0.70	1.19	1.53	1.97	2.29	2.61
Z6_SUB_596	Z6_IL_1522	0.45	64	0.02	0.04	0.15	0.24	0.38	0.49	0.60
Z6_SUB_597	Z6_IL_1141	0.61	76	0.11	0.19	0.35	0.49	0.67	0.82	0.97
Z6_SUB_6	Z6_IL_1100	3.70	76	0.75	1.24	2.33	3.19	4.40	5.35	6.32
Z6_SUB_61	Z6_CB_89	7.36	70	0.57	1.12	2.64	3.86	5.59	6.95	8.34
Z6_SUB_62	Z6_SGIL_2115	7.08	71	0.57	1.23	2.77	4.00	5.76	7.13	8.54
Z6_SUB_63	Z6_IL_866	5.77	70	0.47	0.90	2.08	3.03	4.36	5.40	6.46
Z6_SUB_64	Z6_IL_868	3.01	70	0.24	0.56	1.29	1.87	2.71	3.36	4.03
Z6_SUB_65	Z6_IL_1500	1.26	70	0.31	0.62	1.18	1.56	2.04	2.40	2.74
Z6_SUB_66	Z6_IL_870	1.35	70	0.11	0.26	0.60	0.87	1.25	1.55	1.86
Z6_SUB_67	Z6_IL_744	5.08	74	0.80	1.46	2.88	3.97	5.48	6.65	7.83
Z6_SUB_68	Z6_MH_1644	6.83	71	0.54	1.00	2.21	3.18	4.57	5.65	6.77
Z6_SUB_69	Z6_IL_1167	0.95	65	0.05	0.09	0.20	0.33	0.51	0.65	0.79
Z6_SUB_70	Z6_IL_1501	2.87	76	1.24	1.88	3.05	3.86	4.90	5.67	6.44
Z6_SUB_71	Z6_IL_1252	2.81	76	0.47	0.82	1.57	2.16	3.02	3.68	4.36
Z6_SUB_72	Z6_IL_1503	0.61	77	0.14	0.22	0.41	0.55	0.75	0.91	1.07
Z6_SUB_73	Z6_IL_872	2.07	81	1.05	1.48	2.31	2.90	3.68	4.26	4.83
Z6_SUB_74	Z6_IL_1256	0.73	76	0.16	0.26	0.48	0.66	0.90	1.10	1.29
Z6_SUB_75	Z6_IL_881	0.72	75	0.12	0.20	0.39	0.55	0.77	0.95	1.13
Z6_SUB_76	Z6_IL_1257	0.64	76	0.14	0.23	0.43	0.58	0.80	0.97	1.14
Z6_SUB_77	Z6_IL_1372	1.36	69	0.09	0.21	0.51	0.75	1.11	1.40	1.69
Z6_SUB_78	Z6_IL_2150	1.23	76	0.19	0.33	0.62	0.86	1.20	1.46	1.73
Z6_SUB_81	Z6_IL_1506	2.64	73	0.21	0.41	0.87	1.24	1.77	2.20	2.63
Z6_SUB_82	Z6_IL_896	10.46	72	0.74	1.32	2.93	4.26	6.18	7.70	9.27
Z6_SUB_83	Z6_IL_895	2.12	73	0.21	0.40	0.83	1.17	1.67	2.06	2.46
Z6_SUB_84	Z6_CB_90	0.61	73	0.07	0.13	0.27	0.38	0.53	0.65	0.78
Z6_SUB_85	Z6_IL_748	1.24	73	0.14	0.27	0.54	0.75	1.05	1.28	1.52
Z6_SUB_86	Z6_IL_747	1.69	73	0.56	0.94	1.67	2.17	2.84	3.33	3.82
Z6_SUB_87	Z6_IL_892	4.97	73	0.40	0.76	1.57	2.23	3.17	3.91	4.67
Z6_SUB_88	Z6_IL_2158	2.17	68	0.14	0.22	0.52	0.79	1.18	1.49	1.81
Z6_SUB_89	Z6_IL_1159	6.13	68	0.40	0.68	1.81	2.75	4.12	5.20	6.31
Z6_SUB_90	Z6_IL_2159	0.59	67	0.04	0.09	0.23	0.36	0.54	0.68	0.82

Zone 6 Catchments										
			AMC 1.25	Max Q (cfs)						
ID	**Outlet**	**Area (acres)**	**CN**	**85%**	**2Yr**	**5Yr**	**10Yr**	**25Yr**	**50Yr**	**100Yr**
Z6_SUB_91	Z6_IL_893	7.41	68	0.60	1.02	2.63	3.91	5.70	7.08	8.48
Z6_SUB_92	Z6_IL_871	2.87	76	0.46	0.78	1.46	1.98	2.69	3.24	3.78
Z6_SUB_93	Z6_IL_2156	4.23	72	0.42	0.81	1.67	2.35	3.29	4.01	4.74
Z6_SUB_94	Z6_IL_884	2.46	66	0.15	0.31	0.96	1.49	2.26	2.87	3.50
Z6_SUB_95	Z6_IL_2160	0.70	64	0.04	0.08	0.27	0.43	0.66	0.84	1.02
Z6_SUB_96	Z6_CB_81	8.50	61	0.33	0.66	1.34	2.44	4.18	5.57	7.02
Z6_SUB_97	Z6_IL_1177	1.83	64	0.10	0.19	0.69	1.10	1.69	2.16	2.65
Z6_SUB_98	Z6_CB_63	1.95	63	0.10	0.17	0.68	1.10	1.72	2.21	2.71
Z6_SUB_99	Z6_IL_888	1.41	67	0.09	0.23	0.61	0.92	1.37	1.72	2.09

*The term "NEW" in a Node ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
NEW_Z5_IL_2028	L3	65.34	60.43	65.29	65.59	66.09	66.87
NEW_Z5_IL_2029	L3	65.20	60.93	65.21	65.59	66.09	66.87
NEW_Z5_IL_2030	L3	65.50	62.50	65.30	65.59	66.09	66.87
NEW_Z5_IL_3219	H3	106.82	100.50	100.87	100.90	100.94	101.00
NEW_Z5_IL_6000	J2	70.46	61.90	62.37	62.42	62.48	62.61
NEW_Z5_IL_6001	F3	108.00	104.14	104.86	104.95	105.07	105.14
NEW_Z5_IL_6003	H4	0.00	113.13	118.47	119.84	121.96	125.39
NEW_Z5_IL_6011	L4	37.50	34.22	34.22	34.22	34.22	34.22
NEW_Z5_IL_6020	L3	61.06	59.06	59.06	59.06	59.35	60.95
NEW_Z5_IL_6022	L3	61.58	59.08	59.08	59.08	59.35	60.95
NEW_Z5_IL_6024	L3	64.03	62.03	63.85	64.11	64.51	65.18
NEW_Z5_IL_6026	L3	63.79	61.79	63.81	64.11	64.51	65.18
NEW_Z5_IL_6100	M3	46.19	41.62	42.84	42.97	43.12	43.23
NEW_Z5_IL_6200	H4	115.20	111.40	117.51	118.55	120.17	122.79
NEW_Z5_IL_6202	H4	115.20	111.20	117.66	118.87	120.73	123.55
NEW_Z5_IL_6600	L2	54.00	50.36	50.72	50.75	50.79	50.84
NEW_Z5_IL_6601	L2	54.00	51.22	51.55	51.58	51.62	51.67
NEW_Z5_MH_2027	L3	65.90	60.19	65.29	65.73	66.09	66.87
NEW_Z5_MH_4083	G4	0.00	221.13	221.67	221.67	221.68	221.71
NEW_Z5_MH_6000	J2	73.30	61.36	62.28	62.37	62.52	62.70
NEW_Z5_MH_6001	J2	72.30	61.36	62.00	62.10	62.30	62.50
NEW_Z5_MH_6015	L1	18.80	10.30	11.05	11.66	12.43	12.81
NEW_Z5_MH_6021	L3	61.90	52.13	56.15	57.95	59.35	60.95
NEW_Z5_MH_6023	L3	66.40	53.08	59.35	60.46	61.31	62.32
NEW_Z5_MH_6025	L3	64.21	57.00	63.84	64.12	64.51	65.18
NEW_Z5_MH_6102	M3	47.43	43.33	43.33	43.33	43.33	43.33
NEW_Z5_MH_6104	M3	54.40	44.40	44.40	44.40	44.40	44.40
NEW_Z5_OF_6000	G4	-	101.64	102.17	102.18	102.19	102.21
NEW_Z5_OF_6002	F3	-	103.24	103.86	103.93	104.02	104.07
NEW_Z5_OF_6012	L4	-	27.64	28.28	28.40	28.53	28.70
STOR-10	G4	137.50	130.80	131.84	134.50	134.80	134.80
TREMONT_STORE	M3	54.40	44.43	44.43	44.43	44.43	44.43
Z5_CB_111	J2	72.00	67.70	68.33	68.41	68.49	68.56
Z5_CB_112	J2	72.00	69.25	69.94	70.00	70.05	70.12
Z5_CB_118	N3	36.00	34.75	35.02	35.05	35.10	35.15
Z5_CB_121	J3	86.13	81.71	82.66	82.76	82.88	84.68
Z5_CB_123	J3	98.00	94.38	95.48	95.64	97.12	97.72
Z5_CB_124	J3	84.33	81.02	81.50	81.61	81.76	82.50
Z5_CB_125	J3	84.00	81.30	81.63	81.68	81.73	81.88
Z5_CB_126	J3	84.00	81.62	82.09	82.16	82.25	82.39
Z5_CB_127	J3	72.94	67.39	67.66	67.71	67.76	67.84
Z5_CB_128	J3	74.03	71.03	71.18	71.22	71.25	71.30
Z5_CB_130	J3	66.00	61.83	62.50	62.61	62.76	62.87
Z5_CB_131	F4	228.08	223.12	228.15	228.48	229.03	230.23
Z5_CB_132	J4	90.00	85.50	87.32	88.87	90.42	92.03
Z5_CB_136	J4	-	86.78	87.06	87.11	87.17	87.25
Z5_CB_140	J5	105.08	102.65	103.25	103.33	103.44	103.59
Z5_CB_164	L4	54.03	47.36	48.26	48.56	49.32	51.38
Z5_CB_165	L4	63.53	58.79	59.22	59.33	59.47	63.53
Z5_CB_166	L4	62.04	54.71	55.59	55.80	56.05	56.41
Z5_CB_170	L4	60.56	47.42	53.01	53.08	53.17	53.27
Z5_CB_171	K4	71.10	67.18	67.79	67.89	67.99	71.10
Z5_CB_172	K4	63.78	58.28	59.26	59.50	62.82	63.78
Z5_CB_174	H2	76.19	70.19	70.92	71.02	71.15	71.27
Z5_CB_181	H3	75.73	70.73	71.05	71.07	71.11	71.15
Z5_CB_182	H3	86.00	80.50	80.98	81.05	81.14	81.26
Z5_CB_183	H3	103.83	86.40	86.84	86.91	86.98	87.09
Z5_CB_184	H3	98.76	93.76	93.93	93.95	93.98	94.02

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_CB_185	G3	102.00	96.50	96.84	96.89	96.94	97.02
Z5_CB_186	H3	106.59	101.59	101.59	101.59	101.59	101.59
Z5_CB_187	H3	104.20	99.20	99.70	99.76	99.91	103.90
Z5_CB_188	H3	99.07	94.07	94.61	96.50	98.07	99.31
Z5_CB_192	H3	93.40	89.86	90.14	90.17	90.21	90.26
Z5_CB_193	H3	94.02	87.05	88.45	88.59	88.79	89.10
Z5_CB_197	H3	96.81	93.81	94.25	94.30	94.35	94.43
Z5_CB_198	H3	94.00	92.37	93.17	93.29	93.44	93.66
Z5_CB_202	H4	95.51	92.80	93.27	93.36	93.48	95.51
Z5_CB_203	H4	87.51	84.51	84.98	85.06	85.16	85.31
Z5_CB_204	H4	118.00	114.83	115.12	115.16	115.21	115.28
Z5_CB_205	H4	118.00	115.04	115.63	115.70	115.79	115.91
Z5_CB_206	H4	116.00	112.44	112.58	112.59	112.61	112.63
Z5_CB_207	H5	124.00	121.09	121.30	121.32	121.34	121.37
Z5_CB_208	H5	124.00	118.38	119.08	119.18	119.26	119.30
Z5_CB_209	H5	116.00	110.13	110.43	110.47	110.54	111.90
Z5_CB_210	H5	116.00	110.17	110.17	110.17	110.17	111.32
Z5_CB_226	M4	49.06	45.48	45.48	45.48	45.48	46.41
Z5_CB_227	M4	48.00	44.50	44.99	45.17	46.44	48.10
Z5_CB_261	F3	108.49	103.49	103.78	103.81	103.85	103.90
Z5_CB_294	G3	102.00	98.33	105.87	108.46	111.93	117.59
Z5_CB_295	G3	102.00	97.63	102.42	104.22	106.41	110.04
Z5_CB_296	G3	85.28	81.28	81.86	81.92	81.99	82.09
Z5_CB_297	G4	140.71	137.00	137.13	137.17	137.21	137.26
Z5_CB_298	G4	141.01	138.93	138.93	138.93	138.93	138.93
Z5_CB_299	G4	143.29	139.33	139.76	139.83	139.92	140.04
Z5_CB_300	G4	142.75	139.29	139.76	139.83	139.92	140.04
Z5_CB_302	G4	175.22	170.93	171.34	171.43	171.54	171.73
Z5_CB_304	G4	174.53	171.11	171.11	171.11	171.11	171.11
Z5_CB_306	G4	184.00	180.71	181.21	181.31	181.43	181.61
Z5_CB_307	G4	183.80	180.22	180.77	180.87	180.99	181.17
Z5_CB_308	G4	186.92	182.59	182.97	183.04	183.13	183.29
Z5_CB_312	G4	173.89	168.89	169.07	169.10	169.13	169.18
Z5_CB_313	G4	166.40	162.63	162.77	162.79	162.82	162.85
Z5_CB_315	G4	163.62	143.46	143.74	143.79	143.85	144.62
Z5_CB_316	G4	157.89	141.46	141.95	142.05	142.19	144.59
Z5_CB_317	G4	157.55	140.46	140.96	141.05	141.19	143.36
Z5_CB_318	G4	154.47	139.58	139.99	140.07	140.17	142.40
Z5_CB_321	G4	136.17	127.24	129.75	130.23	131.97	135.58
Z5_CB_323	G4	127.14	124.60	125.07	125.12	125.16	125.22
Z5_CB_324	G4	127.66	125.41	126.94	127.82	128.61	130.24
Z5_CB_325	G4	125.39	121.44	121.56	121.60	121.64	121.69
Z5_CB_326	G4	130.00	125.17	125.81	125.96	126.15	126.42
Z5_CB_327	G4	131.11	127.11	127.63	127.76	127.93	128.18
Z5_CB_328	G4	136.00	129.46	130.22	130.39	130.63	132.32
Z5_CB_329	G4	136.00	130.29	130.94	131.12	131.36	133.57
Z5_CB_331	G4	142.00	138.25	140.36	141.18	142.13	142.34
Z5_CB_332	G4	143.26	137.68	137.98	138.04	138.11	138.18
Z5_CB_333	G4	143.44	139.69	139.83	139.85	139.88	139.91
Z5_CB_334	G4	136.57	132.07	132.44	132.49	132.53	132.56
Z5_CB_335	G4	130.00	128.50	129.42	129.66	130.01	130.53
Z5_CB_336	G4	128.00	125.00	125.85	125.99	126.14	126.27
Z5_CB_337	G4	126.00	122.92	123.70	123.83	124.00	124.43
Z5_CB_338	G4	122.00	119.21	120.44	121.12	122.02	122.56
Z5_CB_339	G4	122.00	118.58	119.36	119.48	119.60	119.65
Z5_CB_340	G4	114.67	111.92	113.14	113.24	113.37	113.57
Z5_CB_341	G4	115.77	113.69	114.53	114.62	114.74	114.95
Z5_CB_342	G4	115.82	114.19	116.36	116.94	117.83	119.38

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_CB_383	F4	305.32	303.82	303.99	304.02	304.05	304.10
Z5_CB_384	F4	216.99	213.24	213.47	213.51	213.56	213.63
Z5_CB_385	F4	216.07	211.57	211.98	212.04	212.11	212.21
Z5_CB_386	F4	216.00	209.96	210.20	210.24	210.28	210.33
Z5_CB_387	F4	191.53	185.03	185.53	185.63	186.06	188.94
Z5_CB_388	F4	194.45	191.53	191.79	191.84	191.91	192.07
Z5_CB_389	F4	188.00	181.17	182.91	183.34	184.32	185.70
Z5_CB_390	F4	191.53	190.41	190.98	191.04	191.13	191.95
Z5_CB_391	F4	170.00	168.50	168.50	168.50	168.50	168.50
Z5_CB_392	F4	168.49	165.99	165.99	165.99	165.99	165.99
Z5_CB_393	F4	158.24	151.20	151.79	151.95	152.18	152.51
Z5_CB_394	F4	201.56	196.08	196.22	196.25	196.27	196.30
Z5_CB_395	F4	163.58	159.50	159.67	159.69	159.72	159.76
Z5_CB_396	F4	154.60	150.68	151.03	151.09	151.15	151.25
Z5_CB_397	F4	154.66	148.58	150.62	150.65	150.68	150.72
Z5_CB_398	F4	150.00	148.33	148.55	148.58	148.62	148.67
Z5_CB_399	F4	234.66	230.45	230.76	230.85	230.98	231.37
Z5_CB_400	F4	308.00	300.00	300.19	300.21	300.24	300.28
Z5_CB_401	F4	280.00	275.40	275.56	275.58	275.61	275.65
Z5_CB_402	F4	280.06	276.53	276.70	276.72	276.75	276.79
Z5_CB_403	F4	252.32	249.14	249.34	249.37	249.41	249.47
Z5_CB_404	F4	315.28	311.16	311.15	311.15	311.15	311.15
Z5_CB_405	F4	304.00	298.81	299.08	299.13	299.20	299.29
Z5_CB_406	F4	303.26	297.59	297.87	297.92	297.99	298.08
Z5_CB_407	F4	300.82	298.28	298.49	298.52	298.55	298.58
Z5_CB_408	F4	326.76	321.51	321.72	321.75	321.79	321.85
Z5_CB_409	F4	330.00	324.75	325.06	325.11	325.18	325.27
Z5_CB_414	E4	336.40	331.28	331.73	331.80	331.88	331.95
Z5_CB_415	E4	337.56	335.73	336.27	336.37	336.53	337.91
Z5_CB_416	E4	331.25	327.42	327.69	327.73	327.79	327.86
Z5_CB_417	E4	320.00	318.92	319.12	319.15	319.18	319.23
Z5_CB_418	E4	320.00	314.83	314.83	314.83	314.83	314.83
Z5_CB_419	E4	320.00	315.58	315.69	315.71	315.73	315.76
Z5_CB_42	M3	47.04	43.10	43.94	44.02	44.12	44.19
Z5_CB_420	E4	304.45	301.41	301.79	301.85	301.94	304.45
Z5_CB_421	E4	302.87	298.95	299.46	299.55	299.68	302.87
Z5_CB_422	E4	303.82	301.40	301.69	301.73	301.79	303.82
Z5_CB_423	E4	314.00	310.92	311.25	311.30	311.37	311.51
Z5_CB_424	E4	280.00	277.17	277.64	277.74	277.87	280.31
Z5_CB_425	E4	278.05	274.55	274.98	275.06	275.17	278.11
Z5_CB_426	E4	256.00	253.92	254.29	254.35	254.42	254.82
Z5_CB_427	E4	258.28	252.78	253.26	253.30	253.36	253.91
Z5_CB_428	E4	250.56	244.98	245.75	245.86	246.00	246.14
Z5_CB_429	E4	314.00	311.33	311.73	311.80	311.88	312.02
Z5_CB_43	M3	50.00	44.60	46.00	46.21	46.63	46.86
Z5_CB_430	E4	314.00	311.83	312.20	312.26	312.34	312.46
Z5_CB_431	E4	313.24	310.37	310.61	310.65	310.69	310.76
Z5_CB_432	E4	312.00	310.29	310.80	310.90	311.04	311.88
Z5_CB_433	E4	311.96	309.17	309.58	309.65	309.75	309.89
Z5_CB_434	D4	350.00	347.50	348.05	348.16	348.32	349.03
Z5_CB_435	D4	349.61	346.99	347.39	347.47	347.57	347.75
Z5_CB_436	D4	348.00	344.96	345.21	345.25	345.30	345.37
Z5_CB_437	D4	350.00	344.83	345.37	346.52	349.76	350.49
Z5_CB_438	D4	350.00	343.54	344.30	345.77	348.42	349.14
Z5_CB_439	D4	348.94	342.03	343.17	343.65	344.55	345.25
Z5_CB_44	M3	34.67	29.17	29.43	29.46	29.49	29.53
Z5_CB_441	D4	341.58	339.83	340.25	340.32	340.43	341.61
Z5_CB_442	D4	340.77	337.94	338.41	338.51	338.63	340.28

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				5Yr	10Yr	25Yr	100Yr
Z5_CB_443	D4	333.17	328.17	328.46	328.51	328.57	328.64
Z5_CB_444	D4	265.11	259.86	260.09	260.12	260.16	260.21
Z5_CB_445	H2	82.00	79.30	80.40	80.50	80.61	80.72
Z5_CB_450	M2	46.05	42.08	42.76	42.83	42.90	42.95
Z5_CB_457	M2	44.60	36.88	37.28	37.34	37.40	37.48
Z5_CB_459	G4	133.32	131.40	131.57	131.60	131.63	131.71
Z5_CB_460	M2	42.00	36.00	36.91	37.04	37.20	37.43
Z5_CB_461	G4	136.00	130.75	131.57	131.77	132.18	135.21
Z5_CB_465	M3	50.26	46.92	47.98	48.13	50.02	50.26
Z5_CB_475	M2	43.62	41.20	41.20	41.20	41.20	41.20
Z5_CB_48	L4	48.00	45.38	45.54	45.56	45.60	45.64
Z5_CB_49	K4	76.00	70.74	71.12	71.17	71.23	71.31
Z5_CB_490	L3	60.00	56.03	60.95	61.50	62.23	63.38
Z5_CB_4912	J3	71.16	65.88	66.04	66.07	66.10	66.14
Z5_CB_4913	H3	97.56	94.74	95.05	95.09	95.13	95.18
Z5_CB_4914	G4	150.15	138.44	138.86	138.93	139.04	141.35
Z5_CB_4915	G4	146.54	136.30	136.75	136.84	136.95	139.59
Z5_CB_4916	G4	141.86	133.50	133.80	133.85	134.02	137.50
Z5_CB_492	L3	60.00	54.14	58.79	59.93	60.13	60.74
Z5_CB_493	L3	58.00	52.28	54.92	55.33	58.00	58.00
Z5_CB_495	L3	62.00	58.00	58.82	58.93	59.09	59.31
Z5_CB_499	L3	54.50	51.90	52.29	52.37	52.54	54.50
Z5_CB_50	M2	43.94	37.19	38.13	38.29	38.43	38.69
Z5_CB_500	L3	50.89	48.89	50.89	50.62	51.11	51.83
Z5_CB_501	L3	56.09	52.79	53.28	53.39	53.53	56.09
Z5_CB_51	M2	36.42	32.75	33.53	33.63	33.74	33.90
Z5_CB_512	K3	64.00	62.00	62.52	62.61	62.73	64.00
Z5_CB_513	K3	62.00	60.75	61.18	61.24	61.33	61.45
Z5_CB_514	K2	60.00	57.95	58.38	58.44	58.52	58.64
Z5_CB_515	K3	70.00	66.09	68.67	69.11	69.97	70.85
Z5_CB_518	K3	70.38	67.91	68.19	68.23	68.29	68.37
Z5_CB_52	M2	36.00	30.75	31.52	31.62	31.73	31.89
Z5_CB_520	K3	80.00	76.96	77.77	77.91	78.11	78.33
Z5_CB_522	L3	45.25	41.36	42.19	42.30	42.36	42.51
Z5_CB_526	D4	349.60	341.80	342.16	342.22	342.29	342.38
Z5_CB_529	N3	40.17	39.02	40.88	41.51	42.45	44.03
Z5_CB_530	K4	76.63	71.53	72.39	72.62	76.63	76.64
Z5_CB_531	K4	70.63	67.29	67.55	67.58	67.62	67.67
Z5_CB_532	K4	74.00	70.60	70.93	70.98	71.04	71.11
Z5_CB_533	K4	76.00	70.95	71.12	71.17	71.23	71.31
Z5_CB_534	K4	88.35	82.56	82.96	83.06	83.23	86.63
Z5_CB_537	K4	83.12	80.20	80.39	80.41	80.43	80.60
Z5_CB_538	K4	66.00	63.96	64.11	64.14	64.17	66.02
Z5_CB_539	K4	72.18	68.88	69.18	69.25	69.32	69.43
Z5_CB_540	K4	72.00	68.36	68.84	68.95	69.07	69.24
Z5_CB_568	J3	76.28	70.52	70.87	70.93	71.01	71.12
Z5_CB_570	J2	56.41	52.33	52.64	52.68	52.73	52.79
Z5_CB_590	M4	48.45	43.62	44.25	44.58	45.29	48.22
Z5_CB_616	G4	126.00	123.00	125.25	125.40	125.44	125.49
Z5_CB_64	K4	82.00	80.67	80.67	80.67	80.67	80.67
Z5_CB_642	J3	82.65	74.57	77.59	78.13	78.94	82.56
Z5_CB_643	H3	102.96	97.46	97.59	97.60	97.61	97.63
Z5_CB_656	J3	89.26	86.64	86.94	86.99	87.05	87.14
Z5_CB_657	J3	88.85	84.68	84.99	85.04	85.10	85.19
Z5_CB_658	K2	55.66	51.49	55.66	55.79	56.84	59.09
Z5_CB_659	K2	50.50	46.79	47.39	47.48	47.51	47.57
Z5_CB_660	M3	38.55	35.22	36.24	36.41	36.59	38.55
Z5_CB_661	M3	36.90	33.63	34.64	34.83	35.16	36.97

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Zone 5 West Existing Nodes

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				5Yr	10Yr	25Yr	100Yr
Z5_CB_680	L3	62.00	55.86	61.19	61.41	62.11	63.16
Z5_CB_698	L3	48.02	44.19	44.99	45.09	45.15	45.21
Z5_CB_707	K4	80.31	74.14	74.40	74.44	74.49	74.56
Z5_CB_708	K4	75.85	70.02	70.17	70.19	70.22	70.25
Z5_CB_737	G4	131.46	130.46	131.47	131.64	132.04	133.15
Z5_CB_80	F3	292.95	288.12	288.37	288.41	288.46	288.52
Z5_CB_81	F3	283.41	276.16	276.54	276.61	276.70	276.87
Z5_CB_829	J4	100.00	95.00	95.51	95.62	95.74	98.53
Z5_CB_830	J4	100.00	95.00	95.35	95.43	95.53	98.32
Z5_CB_831	J5	92.00	89.69	90.79	90.96	92.00	93.41
Z5_CB_832	J5	96.00	91.13	91.99	92.09	92.51	94.15
Z5_CB_833	J5	96.00	91.54	92.45	92.58	92.92	94.72
Z5_CB_835	J5	94.00	88.88	89.55	89.64	89.75	92.59
Z5_CB_836	J5	94.00	90.08	90.80	90.91	91.04	93.17
Z5_CB_837	J5	96.00	90.25	91.33	91.49	91.72	94.24
Z5_CB_838	J5	96.00	94.00	94.37	94.41	94.47	94.54
Z5_CB_839	J5	102.00	98.66	99.34	99.44	99.57	99.75
Z5_CB_841	J5	102.00	99.88	100.49	100.58	100.69	100.86
Z5_CB_842	J5	100.00	97.13	97.43	97.48	97.54	100.20
Z5_CB_843	J5	100.00	96.42	97.10	97.21	97.44	100.09
Z5_CB_844	J5	96.00	92.67	93.34	93.54	95.41	96.00
Z5_CB_849	K4	76.00	71.36	72.54	73.12	74.61	76.17
Z5_CB_858	J5	96.00	90.97	91.78	91.88	92.42	94.03
Z5_CB_902	M4	46.60	43.27	43.61	43.67	43.75	43.84
Z5_CB_92	F3	292.14	287.31	287.52	287.55	287.59	287.64
Z5_IL_1045	K4	82.80	78.50	78.76	78.80	78.85	82.80
Z5_IL_1046	K4	76.00	71.00	72.56	73.14	74.71	76.19
Z5_IL_1065	J5	94.00	85.33	86.13	86.31	86.66	90.80
Z5_IL_1076	M3	54.00	52.00	52.59	52.85	53.42	54.05
Z5_IL_1077	M3	54.00	52.21	52.57	52.91	53.62	54.27
Z5_IL_1078	M3	53.26	50.17	50.17	50.17	50.17	50.17
Z5_IL_1079	M3	54.00	52.00	52.26	52.30	52.35	52.42
Z5_IL_1081	M3	43.97	40.58	40.80	40.84	40.88	40.93
Z5_IL_1083	M3	25.83	21.06	21.51	21.58	21.67	21.79
Z5_IL_1084	M3	26.00	21.67	22.04	22.10	22.17	22.26
Z5_IL_1087	M3	21.38	16.35	16.97	17.19	17.83	18.82
Z5_IL_1088	K3	74.00	68.00	68.10	68.12	68.13	68.16
Z5_IL_1089	K3	78.00	73.08	73.08	73.08	73.68	78.00
Z5_IL_1090	K3	82.00	78.62	78.62	78.62	78.62	82.00
Z5_IL_1091	K3	82.00	77.76	77.76	77.76	77.76	82.00
Z5_IL_1092	K3	85.18	77.95	77.95	77.95	78.40	85.18
Z5_IL_1093	J3	90.00	83.56	85.42	85.71	86.10	90.26
Z5_IL_1094	J3	90.00	84.39	85.46	85.81	86.27	90.39
Z5_IL_1095	J3	96.00	87.92	89.17	89.35	89.62	96.00
Z5_IL_1096	J3	96.00	88.38	89.20	89.43	89.76	96.00
Z5_IL_1097	J4	100.00	91.52	92.89	93.08	93.32	99.46
Z5_IL_1098	J3	100.00	96.31	96.50	96.53	96.56	96.70
Z5_IL_1099	J4	104.00	99.31	99.31	99.31	99.31	99.76
Z5_IL_1100	J4	104.00	97.00	98.29	98.48	98.74	100.10
Z5_IL_1101	J4	104.00	100.92	101.20	101.24	101.28	101.43
Z5_IL_1102	H4	105.89	102.59	103.04	103.11	103.19	103.31
Z5_IL_1103	H4	112.00	104.08	104.58	104.65	104.74	104.85
Z5_IL_1104	H4	112.00	104.80	104.80	104.80	104.80	104.85
Z5_IL_1105	H3	99.91	97.24	97.51	97.53	98.54	100.57
Z5_IL_1106	H3	102.00	92.42	95.88	97.50	98.52	100.61
Z5_IL_1107	H3	102.00	99.42	99.81	99.92	100.62	102.79
Z5_IL_1108	H3	98.00	92.25	93.46	95.30	97.24	98.06
Z5_IL_1111	J2	66.18	63.68	64.35	64.49	66.32	67.09

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_IL_1112	J2	70.61	58.71	59.67	59.83	59.98	60.03
Z5_IL_1145	H3	113.74	108.36	109.93	110.37	111.05	111.76
Z5_IL_1147	G3	120.00	117.40	117.63	117.65	117.68	117.72
Z5_IL_1150	G3	107.60	104.50	106.51	107.21	107.85	108.79
Z5_IL_1151	G3	112.00	108.76	108.76	108.76	108.76	108.80
Z5_IL_1153	G3	110.15	108.15	108.15	108.15	108.15	108.38
Z5_IL_1154	G3	108.00	106.44	106.76	106.79	106.82	108.39
Z5_IL_1155	G3	102.00	96.17	100.53	102.14	104.15	107.10
Z5_IL_1156	H3	115.35	107.20	108.67	108.84	108.94	109.19
Z5_IL_1157	H3	111.62	105.79	107.01	107.13	107.22	107.40
Z5_IL_1158	H3	111.09	108.85	109.26	109.31	109.39	109.55
Z5_IL_1159	H3	108.56	103.90	105.17	105.31	105.42	105.66
Z5_IL_1160	H3	106.00	102.14	103.63	103.79	103.94	104.20
Z5_IL_1161	H3	104.37	101.36	102.57	102.68	102.77	102.90
Z5_IL_1162	G3	124.74	123.07	123.38	124.18	124.18	124.60
Z5_IL_1163	G3	126.30	124.46	125.59	126.48	126.64	126.96
Z5_IL_1164	G3	132.00	130.90	131.08	131.10	131.32	131.84
Z5_IL_1166	G3	133.71	131.17	131.82	133.84	134.27	134.94
Z5_IL_1167	G3	133.95	132.66	133.08	133.96	134.26	134.76
Z5_IL_1173	M2	51.04	46.24	46.51	46.54	46.57	46.63
Z5_IL_1174	M2	48.00	43.20	43.67	43.74	43.83	43.99
Z5_IL_1176	M2	48.00	40.30	40.67	40.71	40.77	40.84
Z5_IL_1177	M2	50.00	42.10	43.51	43.75	44.13	45.55
Z5_IL_1178	M2	44.00	38.00	38.59	38.66	38.74	38.80
Z5_IL_1179	M2	42.40	35.23	36.28	36.43	36.62	37.07
Z5_IL_1184	L3	55.33	52.93	53.66	55.15	55.61	56.14
Z5_IL_1185	L3	55.68	54.23	54.66	55.29	55.77	56.20
Z5_IL_1186	L3	62.00	58.31	58.70	58.76	59.33	60.87
Z5_IL_1187	L3	62.00	58.81	59.21	59.28	59.40	61.25
Z5_IL_1188	L3	50.11	47.05	47.68	47.74	47.83	47.96
Z5_IL_1189	L3	48.00	45.26	45.73	45.80	45.89	46.03
Z5_IL_1190	L3	50.00	46.25	46.60	46.69	46.79	46.92
Z5_IL_1191	L3	53.51	49.59	50.05	50.18	50.36	53.51
Z5_IL_1192	L3	47.91	44.55	44.82	44.92	45.06	45.25
Z5_IL_1193	M2	36.00	26.35	27.01	27.09	27.20	27.30
Z5_IL_1194	M2	47.52	41.81	42.91	43.09	43.33	44.86
Z5_IL_1195	M2	47.31	46.06	46.29	46.33	46.37	47.55
Z5_IL_1199	M4	42.00	40.50	44.28	45.21	46.51	48.61
Z5_IL_1200	M4	18.00	15.83	16.59	16.64	16.70	16.72
Z5_IL_1218	J4	97.60	94.27	94.57	94.66	94.76	94.89
Z5_IL_1271	J4	97.50	94.50	94.89	94.99	95.11	95.26
Z5_IL_1272	J4	72.63	65.63	65.92	65.96	66.02	66.10
Z5_IL_1276	J4	104.15	99.00	99.45	99.54	102.07	104.15
Z5_IL_1277	J4	104.06	98.91	99.22	99.30	101.94	104.06
Z5_IL_1278	F4	162.86	157.86	158.26	158.30	158.35	158.44
Z5_IL_1279	F4	162.00	154.09	154.70	154.85	155.14	155.57
Z5_IL_1294	H4	120.00	118.17	118.39	118.42	118.46	118.81
Z5_IL_1335	H3	100.00	96.50	97.26	97.30	97.39	100.00
Z5_IL_1424	M3	44.00	39.84	40.57	43.22	44.21	45.12
Z5_IL_1425	M3	45.06	42.19	42.41	42.46	43.81	44.78
Z5_IL_1426	M3	36.91	34.45	34.75	34.79	34.84	34.91
Z5_IL_1428	M3	31.46	29.41	29.61	29.64	29.66	29.70
Z5_IL_1430	M3	24.00	21.17	21.41	21.44	21.49	21.55
Z5_IL_1431	M3	24.00	21.60	21.98	22.03	22.11	22.21
Z5_IL_1432	M3	25.31	23.64	23.64	23.64	23.64	23.64
Z5_IL_1433	M3	18.76	16.43	16.84	16.98	17.27	18.16
Z5_IL_1456	M4	27.40	25.40	26.31	26.48	27.38	28.69
Z5_IL_1457	J3	84.00	76.49	78.13	78.84	80.03	83.56

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_IL_1458	J3	87.35	85.02	85.34	85.44	85.73	87.47
Z5_IL_1459	J3	85.69	84.36	84.36	84.36	84.36	84.36
Z5_IL_1460	J3	85.66	83.31	83.39	83.41	83.42	84.10
Z5_IL_1461	J3	88.00	85.66	85.90	85.96	86.14	88.00
Z5_IL_1462	J3	88.00	85.62	85.84	87.47	88.23	89.72
Z5_IL_1463	J3	88.00	85.43	86.00	88.00	88.99	90.51
Z5_IL_1464	J3	95.80	88.75	89.74	92.38	93.78	95.80
Z5_IL_1465	J3	93.78	88.38	89.07	91.85	92.98	94.75
Z5_IL_1466	J3	89.50	85.04	86.76	89.50	89.97	91.22
Z5_IL_1467	J3	99.66	95.25	98.35	99.66	99.66	100.11
Z5_IL_1468	J3	100.00	96.19	99.56	100.00	100.28	101.10
Z5_IL_1469	J3	102.00	98.50	102.27	102.54	102.95	103.66
Z5_IL_1470	J3	102.00	98.50	102.05	102.22	102.58	103.28
Z5_IL_1484	M3	54.00	51.06	51.31	51.34	51.37	51.41
Z5_IL_1486	M3	54.00	52.33	53.06	53.11	53.19	53.47
Z5_IL_1488	J3	91.06	86.45	87.91	88.54	89.89	92.74
Z5_IL_1491	J3	90.00	85.40	86.28	86.48	87.52	89.23
Z5_IL_1492	J3	88.31	82.77	83.39	83.50	83.64	83.76
Z5_IL_1493	J3	73.00	69.25	69.99	70.13	70.31	70.59
Z5_IL_1494	M2	32.00	28.40	28.79	28.86	28.95	29.09
Z5_IL_1496	M2	33.85	28.39	28.90	28.96	28.99	29.05
Z5_IL_1497	M2	48.00	44.92	45.13	45.15	45.16	45.17
Z5_IL_1498	F4	159.49	156.78	157.51	157.65	157.83	158.09
Z5_IL_1507	J4	71.29	68.46	68.77	68.82	68.88	68.95
Z5_IL_1508	J4	73.04	67.46	67.62	67.63	67.65	67.68
Z5_IL_1513	K4	72.61	67.22	67.34	67.35	67.37	67.39
Z5_IL_1515	L3	58.00	51.80	52.61	52.66	52.72	52.79
Z5_IL_1518	L3	52.18	39.60	40.09	40.21	40.49	40.91
Z5_IL_1519	L3	56.00	48.49	49.09	49.26	55.99	56.00
Z5_IL_1564	L3	66.00	62.01	62.49	63.06	66.00	66.00
Z5_IL_1602	J4	102.00	95.28	97.45	97.87	98.76	99.67
Z5_IL_1646	F3	272.08	246.10	246.27	246.31	246.36	246.42
Z5_IL_1647	F3	110.00	105.00	105.21	105.23	105.25	105.28
Z5_IL_1654	K3	69.94	65.21	65.75	65.83	65.94	66.11
Z5_IL_1655	K3	68.00	64.03	64.03	64.03	64.03	64.03
Z5_IL_1656	K3	68.00	64.67	64.90	64.93	64.98	65.08
Z5_IL_1657	K3	68.00	62.21	62.48	62.54	62.65	62.83
Z5_IL_1658	K3	66.00	60.25	61.06	61.19	61.35	61.57
Z5_IL_1672	K3	75.38	69.38	70.41	70.64	71.04	72.93
Z5_IL_1673	J4	97.26	89.83	90.20	90.26	90.34	90.45
Z5_IL_1678	J4	84.80	76.30	76.60	76.65	76.72	76.80
Z5_IL_1679	J4	92.66	88.66	88.96	89.01	89.07	89.15
Z5_IL_1680	J4	98.00	89.55	89.95	90.05	90.15	90.30
Z5_IL_1681	J4	99.15	90.50	90.89	90.98	91.09	91.24
Z5_IL_1682	J4	100.00	91.30	91.71	91.80	91.92	92.07
Z5_IL_1683	J4	100.00	91.30	91.97	92.10	92.26	92.50
Z5_IL_1684	J4	100.00	91.26	92.04	92.20	92.39	92.68
Z5_IL_1685	J4	100.00	91.31	92.09	92.26	92.48	92.83
Z5_IL_1686	J4	98.38	93.54	93.94	94.04	94.16	94.32
Z5_IL_1710	H5	132.00	127.93	128.29	128.33	132.00	132.00
Z5_IL_1711	L2	60.89	56.35	60.90	61.18	61.77	62.92
Z5_IL_1712	L2	60.00	55.51	58.36	58.25	58.63	59.36
Z5_IL_1738	J4	92.00	88.00	88.28	88.33	88.39	88.48
Z5_IL_1739	J4	91.26	86.76	86.95	86.98	87.02	87.07
Z5_IL_1740	J4	79.68	76.18	76.40	76.44	76.48	76.55
Z5_IL_1755	K4	69.20	64.32	64.68	64.75	64.83	64.95
Z5_IL_1773	G4	132.00	123.92	124.03	124.04	124.06	124.08
Z5_IL_1774	G4	125.48	115.67	115.96	115.99	116.03	116.09

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_IL_1777	G4	139.14	132.52	132.61	132.62	132.63	132.64
Z5_IL_1778	G4	142.99	137.99	138.12	138.14	138.15	138.18
Z5_IL_1779	G4	142.00	137.00	137.08	137.09	137.10	137.12
Z5_IL_1780	G4	137.84	132.84	132.93	132.94	132.95	132.97
Z5_IL_1781	G4	136.08	131.08	131.16	131.17	131.18	131.19
Z5_IL_1782	G4	133.50	128.50	128.57	128.58	128.59	128.60
Z5_IL_1783	G4	130.98	125.98	126.07	126.08	126.09	126.10
Z5_IL_1784	G4	133.83	128.83	128.92	128.93	128.94	128.96
Z5_IL_1785	G4	147.00	143.33	143.69	143.74	143.80	145.19
Z5_IL_1786	G4	145.83	140.43	141.14	141.33	142.64	143.57
Z5_IL_1787	G4	145.42	140.06	140.71	140.86	141.83	142.53
Z5_IL_1788	G4	144.00	138.63	139.08	139.18	139.31	139.39
Z5_IL_1789	G4	146.70	142.68	143.26	143.40	146.70	147.06
Z5_IL_1790	G4	155.97	150.97	151.04	151.05	151.07	151.08
Z5_IL_1791	G4	165.98	160.98	161.03	161.04	161.05	161.06
Z5_IL_1792	G4	164.93	159.93	159.98	159.98	159.99	160.00
Z5_IL_1793	G4	152.41	147.41	147.46	147.46	147.47	147.48
Z5_IL_1794	G4	151.95	146.95	147.00	147.00	147.01	147.02
Z5_IL_1795	G4	145.34	140.34	140.39	140.40	140.40	140.41
Z5_IL_1796	G4	143.64	138.64	138.69	138.70	138.70	138.71
Z5_IL_1797	G4	143.80	138.80	138.86	138.87	138.88	138.89
Z5_IL_1798	G4	146.70	141.70	141.77	141.78	141.79	141.80
Z5_IL_1799	G4	147.26	142.26	142.40	142.41	142.43	142.46
Z5_IL_1845	J2	82.00	76.75	77.23	77.30	78.88	82.00
Z5_IL_1863	G4	146.00	141.92	142.56	146.00	146.01	146.30
Z5_IL_1864	G4	144.00	140.30	140.95	142.48	144.00	144.00
Z5_IL_1865	G4	144.00	141.40	141.68	142.23	144.00	144.07
Z5_IL_1866	M4	32.00	29.79	32.14	32.30	32.60	33.11
Z5_IL_1867	M4	30.57	28.35	28.66	28.66	28.67	28.69
Z5_IL_1878	J3	70.41	68.37	68.85	68.93	69.04	69.19
Z5_IL_1890	H3	102.00	99.60	100.32	102.00	102.16	102.81
Z5_IL_1891	H3	102.00	97.40	98.65	99.04	99.39	99.74
Z5_IL_2082	K4	87.12	81.75	82.17	82.25	87.12	87.12
Z5_IL_2083	K4	85.95	80.67	81.06	81.12	85.95	85.95
Z5_IL_2084	K4	85.06	80.60	80.92	80.96	81.02	81.12
Z5_IL_2085	K4	83.69	77.44	77.80	77.85	77.91	82.43
Z5_IL_2090	J2	74.00	70.50	74.08	74.46	74.75	75.33
Z5_IL_2120	K4	86.00	78.00	78.32	78.36	86.00	86.00
Z5_IL_2176	M3	49.93	43.63	45.67	45.73	45.74	45.86
Z5_IL_2184	M4	41.64	37.89	38.08	38.11	38.14	38.19
Z5_IL_2185	N4	41.41	35.16	35.55	35.60	35.67	35.76
Z5_IL_2186	N3	40.00	34.28	34.90	35.00	35.15	35.36
Z5_IL_2187	N3	40.00	35.65	35.93	35.98	36.03	36.13
Z5_IL_2188	N3	40.00	33.83	34.39	34.48	34.60	34.76
Z5_IL_2189	N3	40.00	35.75	35.92	35.95	35.98	36.02
Z5_IL_2190	N3	40.00	38.33	38.86	38.91	38.99	39.09
Z5_IL_2191	N3	40.00	33.83	34.57	34.67	34.80	34.99
Z5_IL_2201	N3	33.28	31.07	32.55	33.22	33.40	33.74
Z5_IL_2202	N3	32.92	30.85	31.18	31.24	31.25	31.27
Z5_IL_2231	L4	60.00	55.64	56.05	56.11	56.19	56.31
Z5_IL_2232	L4	60.00	55.38	55.68	55.73	55.79	55.87
Z5_IL_2233	L4	53.77	51.40	51.62	51.65	51.69	52.07
Z5_IL_2244	L4	45.27	40.27	40.43	40.46	40.50	40.54
Z5_IL_2259	K4	58.00	53.75	54.00	54.04	54.10	54.17
Z5_IL_2260	K4	58.16	52.74	52.90	52.92	52.95	52.99
Z5_IL_2261	K4	40.06	36.24	36.49	36.53	36.58	36.64
Z5_IL_2262	M1	33.57	30.57	30.84	30.88	30.93	31.00
Z5_IL_2263	M1	25.87	22.41	22.74	22.80	22.87	22.97

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_IL_2264	M2	54.00	52.00	52.40	52.45	52.51	52.58
Z5_IL_2265	M2	54.00	51.63	51.90	51.93	51.97	52.02
Z5_IL_2266	M2	52.00	49.68	50.10	50.15	50.22	50.33
Z5_IL_2267	M2	52.70	49.23	49.70	49.76	49.85	49.98
Z5_IL_2268	M2	52.00	49.05	49.52	49.59	49.67	49.81
Z5_IL_2269	M2	50.83	46.93	47.14	47.16	47.19	47.24
Z5_IL_2270	N3	32.00	27.00	27.00	27.00	27.00	27.00
Z5_IL_2271	N3	31.58	26.58	26.73	26.75	26.78	26.81
Z5_IL_2278	K2	48.37	44.87	44.95	44.96	44.97	44.99
Z5_IL_2288	K2	60.00	55.71	56.06	56.11	56.18	56.27
Z5_IL_2302	J4	95.54	90.84	91.08	91.13	91.20	91.28
Z5_IL_2310	L3	56.00	54.40	55.02	56.12	56.70	57.35
Z5_IL_2311	L3	56.00	54.20	54.95	56.10	56.68	57.34
Z5_IL_2312	L3	56.00	54.20	54.95	55.46	56.03	56.41
Z5_IL_2313	L3	50.00	47.30	48.30	48.42	48.44	48.47
Z5_IL_2314	L3	50.00	46.10	46.96	47.06	47.10	47.15
Z5_IL_2325	K2	62.00	56.50	57.65	57.76	58.18	58.61
Z5_IL_2326	K2	70.00	64.82	70.70	71.67	73.42	76.32
Z5_IL_2328	J2	62.00	57.57	57.97	58.02	58.09	58.18
Z5_IL_2330	J2	65.47	60.64	60.97	61.01	61.06	61.13
Z5_IL_2331	J2	60.00	57.00	57.28	57.31	57.35	57.41
Z5_IL_2398	H3	88.00	86.17	86.75	86.81	86.89	87.02
Z5_IL_2399	K3	64.00	56.81	57.83	57.99	58.19	58.48
Z5_IL_2400	K3	64.00	55.39	56.10	56.21	56.35	56.55
Z5_IL_2408	L4	64.00	59.00	59.00	59.00	59.00	63.37
Z5_IL_2409	L4	63.72	58.72	58.78	58.87	59.00	63.24
Z5_IL_2410	L4	63.31	58.31	58.78	58.87	59.00	63.08
Z5_IL_2411	L4	63.17	58.17	58.78	58.87	59.00	62.94
Z5_IL_2412	L4	63.13	58.46	58.78	58.87	58.99	62.80
Z5_IL_2413	L4	60.41	55.16	55.40	55.45	55.51	55.58
Z5_IL_2414	L4	61.72	56.89	56.89	56.89	56.89	56.89
Z5_IL_2415	L4	52.72	47.47	47.61	47.64	47.67	47.72
Z5_IL_2419	L4	52.00	46.75	47.13	47.19	47.27	47.38
Z5_IL_2420	L4	49.28	43.78	44.21	44.28	44.37	44.49
Z5_IL_2421	L4	39.69	34.19	34.54	34.60	34.67	34.77
Z5_IL_2431	H2	85.18	82.68	83.30	83.39	83.51	83.89
Z5_IL_2432	H2	85.05	82.38	83.02	83.13	83.26	83.67
Z5_IL_2433	M3	30.00	26.17	26.49	26.53	26.78	29.96
Z5_IL_2434	L3	59.70	57.90	58.32	58.67	59.91	60.70
Z5_IL_2464	H2	84.00	81.62	82.19	82.30	83.34	83.97
Z5_IL_2465	H2	84.00	81.23	82.14	82.31	83.28	83.89
Z5_IL_2466	H2	84.00	80.11	81.12	81.33	81.94	83.59
Z5_IL_2467	L4	54.00	47.46	48.40	48.70	49.56	51.90
Z5_IL_2468	L4	60.00	57.22	57.56	57.61	57.68	57.76
Z5_IL_2469	L4	60.05	57.51	57.86	57.92	57.99	58.08
Z5_IL_2478	H3	70.90	65.48	66.03	66.09	66.15	66.24
Z5_IL_2508	L4	66.90	61.74	62.18	62.35	63.65	65.45
Z5_IL_2509	L4	66.00	61.36	62.04	62.21	63.38	64.90
Z5_IL_2513	L4	52.96	47.71	47.93	47.98	48.03	48.10
Z5_IL_2516	M3	50.00	46.50	47.63	47.84	49.26	49.80
Z5_IL_2525	K4	73.10	67.61	67.92	67.96	68.01	68.05
Z5_IL_2526	K4	73.26	67.76	68.42	68.52	68.68	68.97
Z5_IL_2527	K4	75.22	69.56	70.26	70.46	71.57	72.98
Z5_IL_2528	K4	76.00	70.21	71.28	71.90	76.00	76.13
Z5_IL_2529	K4	78.00	72.08	72.45	72.50	77.57	78.00
Z5_IL_2530	K4	80.77	77.69	78.04	78.08	78.14	78.37
Z5_IL_2550	K4	80.00	74.67	75.08	75.14	75.21	75.30
Z5_IL_2551	H4	96.87	91.62	91.73	91.74	91.76	91.78

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_IL_2552	H4	99.56	94.31	94.53	94.55	94.59	94.63
Z5_IL_2553	H4	98.65	93.65	93.77	93.78	93.80	93.83
Z5_IL_2558	J4	98.04	95.92	96.15	96.20	96.27	96.37
Z5_IL_2559	J4	98.93	96.60	96.82	96.86	96.91	96.97
Z5_IL_2560	J4	99.17	97.17	97.36	97.41	97.48	97.58
Z5_IL_2561	J4	98.35	96.27	96.59	96.68	96.78	96.91
Z5_IL_2562	J4	90.62	87.08	87.37	87.43	87.50	87.59
Z5_IL_2563	J4	91.97	88.30	88.50	88.53	88.57	88.62
Z5_IL_2564	J5	106.00	104.13	104.74	104.82	104.93	105.09
Z5_IL_2565	J5	106.00	103.83	104.99	105.10	105.23	105.41
Z5_IL_2575	L2	54.94	49.44	50.12	50.21	50.32	50.47
Z5_IL_2576	K4	88.00	84.92	86.39	87.06	88.00	88.47
Z5_IL_2577	K4	88.00	84.82	85.96	86.18	86.49	88.00
Z5_IL_2579	J4	90.00	85.45	87.22	88.67	90.13	91.64
Z5_IL_2580	K4	86.79	82.54	83.47	83.63	83.83	83.98
Z5_IL_2581	K4	87.42	84.50	84.99	85.07	85.14	85.20
Z5_IL_2582	K4	82.00	77.00	77.41	77.46	77.54	77.65
Z5_IL_2585	M4	43.74	41.24	44.22	45.16	46.43	48.49
Z5_IL_2593	M2	12.00	10.42	10.42	10.42	10.42	10.42
Z5_IL_2594	M4	36.00	33.96	36.05	36.27	36.77	37.43
Z5_IL_2595	L2	57.97	56.39	56.52	56.53	56.55	58.05
Z5_IL_2596	L2	58.00	53.33	54.14	54.31	55.07	58.02
Z5_IL_2688	F3	300.24	293.40	293.84	293.94	294.06	294.23
Z5_IL_2689	F3	300.00	293.20	293.45	293.51	293.58	293.67
Z5_IL_2690	F3	302.27	288.00	288.08	288.09	288.11	288.14
Z5_IL_2691	G4	111.87	104.29	106.11	106.31	106.51	106.68
Z5_IL_2698	G4	132.35	128.89	128.99	129.01	129.03	129.05
Z5_IL_2701	G3	93.89	92.56	92.91	92.97	93.05	93.54
Z5_IL_2702	G3	91.90	90.82	91.06	91.09	91.14	91.19
Z5_IL_2703	G3	93.58	92.54	92.82	92.86	92.90	92.96
Z5_IL_2705	G3	90.93	88.93	89.20	89.24	89.29	89.37
Z5_IL_2712	J4	93.43	89.68	89.86	89.90	89.96	90.03
Z5_IL_2713	J4	104.00	101.58	101.58	101.58	101.58	101.58
Z5_IL_2714	J4	104.00	102.08	102.23	102.25	102.29	102.33
Z5_IL_2715	J4	104.00	102.17	102.36	102.40	102.43	102.48
Z5_IL_2716	J4	104.00	101.83	101.83	101.83	101.83	101.83
Z5_IL_2723	J2	42.00	39.33	39.81	39.88	39.97	40.09
Z5_IL_2724	J2	40.00	36.92	37.14	37.17	37.20	37.25
Z5_IL_2725	J2	48.56	46.81	47.28	47.34	47.42	47.53
Z5_IL_2726	J2	48.00	45.83	46.07	46.10	46.13	46.18
Z5_IL_2727	J2	24.12	20.07	20.46	20.53	20.60	20.70
Z5_IL_2728	K3	78.00	73.08	74.11	74.42	75.28	77.83
Z5_IL_2729	K3	81.07	75.36	75.75	75.88	76.15	78.99
Z5_IL_2730	K3	82.99	80.82	81.33	81.42	81.55	83.40
Z5_IL_2731	K3	83.78	79.11	79.11	79.19	79.33	81.31
Z5_IL_2732	K3	80.00	75.00	75.50	75.60	75.87	78.77
Z5_IL_2734	K3	72.00	66.50	67.08	67.16	67.26	67.42
Z5_IL_2735	K3	72.00	66.75	67.32	67.42	67.54	67.74
Z5_IL_2736	J3	80.00	72.25	72.59	72.65	72.74	72.86
Z5_IL_2737	L1	26.55	24.09	24.46	24.53	24.61	24.73
Z5_IL_2738	L1	26.00	22.92	23.20	23.24	23.30	23.38
Z5_IL_2739	L1	25.61	20.65	20.80	20.82	20.85	20.89
Z5_IL_2740	L2	59.38	58.05	58.05	58.05	58.05	58.78
Z5_IL_2741	L2	60.00	58.00	58.00	58.00	58.00	59.46
Z5_IL_2743	K2	65.69	59.02	59.21	59.24	59.26	59.37
Z5_IL_2746	K2	44.09	43.31	43.31	43.31	43.31	43.31
Z5_IL_2747	K2	44.00	39.05	39.37	39.41	39.46	39.53
Z5_IL_2753	J3	75.12	71.41	71.66	71.70	71.75	71.88

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_IL_2754	J3	76.00	72.58	72.80	72.83	72.87	72.93
Z5_IL_2759	J2	22.70	20.70	21.10	21.16	21.24	21.35
Z5_IL_2760	J2	22.51	20.51	20.90	20.96	21.04	21.14
Z5_IL_2762	M2	48.00	45.08	45.22	45.24	45.26	45.30
Z5_IL_2763	M2	49.88	48.46	49.17	49.32	49.96	50.92
Z5_IL_2764	M2	50.00	49.00	49.77	50.08	50.87	52.10
Z5_IL_2765	M2	37.88	36.46	36.74	36.78	36.82	36.89
Z5_IL_2766	M2	24.00	23.00	23.27	23.31	23.36	23.43
Z5_IL_2771	M1	41.38	37.26	37.58	37.63	37.69	37.78
Z5_IL_2772	M1	21.90	20.23	20.75	21.90	22.20	23.25
Z5_IL_2773	L1	19.88	16.96	17.44	17.56	19.06	20.67
Z5_IL_2774	K3	66.00	63.67	64.92	65.07	65.05	65.11
Z5_IL_2780	L3	49.77	48.77	49.12	49.17	49.23	49.31
Z5_IL_2781	L3	56.06	53.33	53.85	53.96	54.12	56.06
Z5_IL_2782	M4	29.87	24.87	25.55	29.87	30.89	34.26
Z5_IL_2783	M4	54.00	48.38	48.72	48.81	48.92	49.06
Z5_IL_2788	K4	72.53	68.78	68.97	68.99	69.01	69.03
Z5_IL_2789	L4	52.00	43.43	45.27	46.32	47.15	50.00
Z5_IL_2802	M2	33.61	32.74	33.01	33.05	33.10	33.17
Z5_IL_2805	M2	37.75	35.25	35.77	35.82	35.89	36.00
Z5_IL_2806	M2	48.00	46.46	46.69	46.72	46.75	47.58
Z5_IL_2807	M2	51.04	46.41	47.02	47.11	47.23	50.45
Z5_IL_2809	M3	54.40	51.40	52.01	52.10	54.16	54.70
Z5_IL_2810	M3	55.35	52.51	53.19	53.29	54.59	55.38
Z5_IL_2812	N2	36.00	33.83	34.13	34.19	34.25	34.35
Z5_IL_2813	N2	36.00	34.75	35.07	35.13	35.20	35.30
Z5_IL_2814	M3	22.49	20.12	20.29	20.32	20.35	20.38
Z5_IL_2815	M3	47.77	41.45	42.28	42.40	42.56	42.80
Z5_IL_2816	M3	50.00	46.49	46.66	46.68	46.71	46.75
Z5_IL_2817	M3	47.55	44.15	44.68	44.75	44.84	44.98
Z5_IL_2818	M3	46.00	42.67	43.50	43.58	43.68	43.82
Z5_IL_2819	M3	46.00	38.89	39.21	39.25	39.30	39.37
Z5_IL_2821	N3	39.13	38.13	38.31	38.34	38.37	38.43
Z5_IL_2822	N3	39.96	38.96	39.18	39.22	39.26	39.32
Z5_IL_2823	M3	33.80	31.50	32.82	33.11	33.90	35.66
Z5_IL_2824	M3	33.22	30.59	31.80	32.06	32.92	34.58
Z5_IL_2825	M3	22.90	20.50	22.88	23.29	24.28	25.68
Z5_IL_2829	M3	46.00	41.42	42.24	42.35	42.48	42.59
Z5_IL_2830	M3	46.00	39.90	40.92	41.04	41.20	41.32
Z5_IL_2831	L3	60.00	57.17	58.01	58.14	58.31	58.57
Z5_IL_2833	K2	58.00	53.75	54.58	54.70	54.82	55.03
Z5_IL_2834	K3	64.00	62.50	63.41	63.54	63.70	64.20
Z5_IL_2835	K3	62.00	57.80	62.27	62.88	63.93	65.24
Z5_IL_2836	L3	66.00	63.71	64.05	64.09	64.13	64.20
Z5_IL_2837	L3	66.00	62.50	62.70	62.72	62.75	62.78
Z5_IL_2838	K3	62.00	58.33	62.50	63.13	64.23	65.55
Z5_IL_2839	K3	64.00	62.65	63.65	64.00	64.23	64.85
Z5_IL_2840	K2	58.87	55.20	55.80	55.92	56.10	56.62
Z5_IL_2841	K2	58.54	54.75	55.28	55.44	55.76	56.19
Z5_IL_2843	K3	66.00	61.94	63.79	65.76	66.00	66.74
Z5_IL_2845	K3	72.00	67.25	67.38	67.40	67.42	67.45
Z5_IL_2846	K3	74.38	70.46	70.46	70.46	70.46	70.46
Z5_IL_2847	K3	74.00	67.25	67.56	67.60	67.71	68.04
Z5_IL_2848	K3	72.00	67.07	68.14	68.28	68.46	68.85
Z5_IL_2851	L3	62.00	60.04	60.12	60.12	60.15	60.40
Z5_IL_2852	L3	62.00	59.33	60.11	60.19	60.32	60.57
Z5_IL_2853	L3	67.15	62.13	66.56	66.04	66.83	67.72
Z5_IL_2854	L3	68.01	65.43	69.35	70.42	72.37	75.66

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Zone 5 West Existing Nodes

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				5Yr	10Yr	25Yr	100Yr
Z5_IL_2855	L3	69.65	67.15	69.89	71.07	73.08	76.75
Z5_IL_2856	K3	71.90	69.36	69.79	69.87	69.97	70.11
Z5_IL_2857	K3	71.25	70.25	70.49	70.53	70.57	70.64
Z5_IL_2858	L4	34.00	32.50	32.99	33.12	33.27	33.49
Z5_IL_2859	L4	34.00	31.83	32.19	32.28	32.39	32.54
Z5_IL_2860	L4	52.50	49.83	50.22	50.29	50.36	50.44
Z5_IL_2861	L4	53.63	51.38	52.06	52.29	53.83	55.68
Z5_IL_2885	L4	58.00	56.13	56.13	56.13	56.13	56.13
Z5_IL_2886	L4	55.59	52.76	52.76	52.76	52.76	52.76
Z5_IL_2887	L4	55.55	53.72	53.87	53.91	53.95	54.00
Z5_IL_2888	L4	56.00	54.17	54.27	54.30	54.33	54.37
Z5_IL_2889	L4	56.00	54.25	54.25	54.25	54.25	54.25
Z5_IL_2936	K4	70.00	66.54	67.01	67.12	67.24	67.40
Z5_IL_2937	K4	70.72	68.30	68.72	68.81	68.91	69.06
Z5_IL_2938	K4	68.00	65.43	65.95	66.05	66.17	66.27
Z5_IL_2939	K4	69.21	67.46	67.91	68.00	68.13	68.44
Z5_IL_2940	L4	68.00	66.17	66.44	66.51	66.60	67.00
Z5_IL_2941	L4	68.00	66.33	66.72	66.83	66.96	67.33
Z5_IL_2944	L4	60.06	59.23	59.45	59.49	59.54	59.61
Z5_IL_2945	L4	58.00	56.33	56.45	56.48	56.52	56.56
Z5_IL_2951	H3	107.30	102.30	102.30	102.30	102.30	102.30
Z5_IL_2952	G3	100.00	97.29	97.50	97.53	97.57	97.62
Z5_IL_2962	G3	118.16	113.16	113.79	113.86	113.94	113.95
Z5_IL_2963	H3	94.00	89.00	90.64	93.67	94.22	95.07
Z5_IL_2964	J2	68.00	65.04	65.37	65.41	65.49	66.11
Z5_IL_2965	J2	67.65	65.23	65.79	65.89	66.03	66.86
Z5_IL_2967	J3	85.11	78.61	79.32	79.42	80.22	84.04
Z5_IL_2968	J3	88.00	86.25	86.44	86.47	86.51	86.55
Z5_IL_2969	J3	92.00	86.17	90.56	90.92	91.45	92.41
Z5_IL_2970	J3	93.98	89.61	90.68	93.19	93.90	94.63
Z5_IL_2971	J3	95.46	91.38	91.79	93.15	94.63	95.65
Z5_IL_2973	J3	82.00	76.08	78.78	79.27	79.86	80.89
Z5_IL_2974	J3	82.00	75.42	77.65	78.05	78.50	79.18
Z5_IL_2976	J3	69.71	67.84	68.30	68.38	68.47	68.60
Z5_IL_2977	L2	60.00	55.21	55.76	55.85	55.99	60.00
Z5_IL_2978	K3	65.48	59.15	59.83	59.94	60.08	60.28
Z5_IL_2979	L3	60.00	57.13	57.86	57.96	58.09	58.29
Z5_IL_2981	K2	62.00	57.29	59.47	59.57	59.69	62.00
Z5_IL_2982	K2	64.00	60.71	60.71	60.71	60.71	61.64
Z5_IL_2984	J4	70.43	67.51	67.83	67.88	67.93	68.01
Z5_IL_2986	K3	70.00	68.25	70.54	71.50	72.68	74.85
Z5_IL_2988	H2	62.00	55.58	56.29	56.38	56.50	56.62
Z5_IL_2989	H2	61.70	50.62	51.11	51.17	51.25	51.33
Z5_IL_2990	H3	74.50	65.86	66.17	66.20	66.25	66.31
Z5_IL_2992	G3	100.00	97.29	97.70	97.75	97.82	97.92
Z5_IL_2993	H3	93.73	88.73	89.56	92.00	93.73	93.73
Z5_IL_2994	H3	96.67	93.77	94.00	94.03	94.06	94.10
Z5_IL_2995	H3	97.34	94.01	94.35	94.39	94.44	94.50
Z5_IL_2996	H3	97.79	94.29	94.66	94.71	94.77	94.84
Z5_IL_2997	H3	97.42	92.67	92.98	93.02	93.06	93.12
Z5_IL_2999	H3	88.00	86.17	86.48	86.53	86.60	86.70
Z5_IL_3002	H3	98.00	96.08	96.44	96.56	96.73	97.41
Z5_IL_3042	G3	124.19	121.49	121.64	121.65	124.21	124.76
Z5_IL_3043	G3	100.54	97.33	97.97	98.03	98.11	98.23
Z5_IL_3044	G3	103.49	98.32	99.41	99.55	100.16	101.19
Z5_IL_3045	G4	127.06	125.23	128.00	128.46	129.27	130.47
Z5_IL_3046	G4	126.61	124.28	125.42	125.61	125.61	125.65
Z5_IL_3047	G4	114.00	109.90	110.42	110.46	110.64	110.97

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				5Yr	10Yr	25Yr	100Yr
Z5_IL_3092	E4	332.00	328.08	328.38	328.43	328.48	328.56
Z5_IL_3107	M3	55.58	53.00	55.73	56.10	56.72	57.85
Z5_IL_3110	K2	66.00	60.25	60.25	60.25	60.25	60.25
Z5_IL_3111	K2	68.00	63.00	63.00	63.00	63.00	63.00
Z5_IL_3114	K2	68.00	65.46	65.60	65.61	65.64	65.66
Z5_IL_3116	L3	66.07	61.10	65.91	66.04	66.82	67.74
Z5_IL_3119	K2	68.00	65.25	68.74	69.17	69.77	70.78
Z5_IL_3120	K2	68.00	65.08	68.74	69.17	69.76	70.78
Z5_IL_3124	K3	84.00	82.67	82.90	82.94	82.98	83.04
Z5_IL_3126	K3	70.00	66.29	68.71	69.18	70.09	70.97
Z5_IL_3130	K3	67.87	66.45	68.47	69.05	69.84	71.42
Z5_IL_3131	K3	71.37	68.67	69.18	69.26	69.37	69.53
Z5_IL_3132	K3	78.00	73.88	74.01	74.03	74.17	78.00
Z5_IL_3133	K2	68.00	63.50	63.50	63.50	63.50	63.50
Z5_IL_3134	K2	68.00	66.00	66.13	66.15	66.17	66.20
Z5_IL_3135	H3	87.45	84.66	84.85	84.88	84.91	85.36
Z5_IL_3136	K2	68.00	62.75	63.60	63.76	64.03	64.70
Z5_IL_3137	K2	67.74	66.24	66.37	66.39	66.41	66.43
Z5_IL_3138	K4	62.00	58.33	58.86	59.14	61.50	62.88
Z5_IL_3139	K2	70.00	64.50	65.06	65.13	65.22	65.47
Z5_IL_3140	K2	69.94	68.15	68.15	68.15	68.15	68.15
Z5_IL_3141	K2	71.26	69.09	69.09	69.09	69.09	69.09
Z5_IL_3143	K2	70.05	64.88	66.32	66.62	67.07	67.99
Z5_IL_3144	J2	72.31	67.98	68.26	68.29	71.23	72.31
Z5_IL_3149	J2	73.52	70.94	70.94	70.94	70.94	71.04
Z5_IL_3150	J2	70.38	65.21	65.84	69.18	70.44	70.83
Z5_IL_3153	J3	70.47	64.50	64.50	64.50	64.50	64.50
Z5_IL_3154	J3	71.73	64.00	64.00	64.00	64.00	64.00
Z5_IL_3155	J3	84.01	81.55	82.02	82.12	82.26	83.17
Z5_IL_3156	H3	98.16	92.58	95.34	95.71	96.10	96.56
Z5_IL_3158	G3	120.84	119.22	119.57	119.61	119.65	119.71
Z5_IL_3162	J4	76.63	74.67	75.05	75.11	75.19	75.29
Z5_IL_3164	M2	18.66	16.45	16.59	16.61	16.63	16.67
Z5_IL_3166	J2	71.32	69.15	69.32	69.33	71.32	71.32
Z5_IL_3168	J2	70.00	61.58	63.37	64.37	65.30	65.59
Z5_IL_3173	L1	18.80	11.80	12.57	13.71	15.19	15.98
Z5_IL_3174	M1	24.32	17.49	17.72	17.75	17.80	17.86
Z5_IL_3175	M1	25.39	19.72	19.98	20.03	20.08	20.14
Z5_IL_3184	M1	25.69	21.65	21.84	21.87	21.91	21.96
Z5_IL_3195	H3	86.90	83.00	84.27	84.46	84.71	85.21
Z5_IL_3196	M3	27.29	23.87	24.27	24.32	24.40	24.50
Z5_IL_3197	M2	31.69	28.27	28.72	28.79	28.88	29.01
Z5_IL_3198	M2	30.29	25.46	25.73	25.77	25.82	25.88
Z5_IL_3205	H2	86.00	82.87	83.80	83.93	84.08	84.40
Z5_IL_3206	M3	18.90	17.57	17.57	17.57	17.57	17.57
Z5_IL_3207	J3	88.00	86.17	86.67	86.77	87.15	88.07
Z5_IL_3210	L3	62.00	57.57	62.05	62.64	63.65	64.94
Z5_IL_3211	F4	188.00	183.04	184.46	184.87	186.28	188.78
Z5_IL_3216	H3	98.13	93.13	94.11	94.22	94.36	94.53
Z5_IL_3220	H4	116.00	113.00	118.09	119.21	120.94	123.49
Z5_IL_3221	H4	115.40	112.94	118.04	119.15	120.87	123.41
Z5_IL_3235	H4	110.00	106.83	106.99	107.01	107.03	107.06
Z5_IL_3236	H4	110.00	103.50	103.94	104.00	104.07	104.16
Z5_IL_3237	K3	83.37	81.70	82.17	82.24	82.34	83.39
Z5_IL_3249	K4	55.81	52.89	53.20	53.24	53.29	53.35
Z5_IL_3250	K4	54.07	47.89	48.25	48.29	48.35	48.43
Z5_IL_3251	K4	84.76	80.64	81.09	81.17	81.31	83.49
Z5_IL_3252	K3	84.00	79.58	80.14	80.23	81.57	82.49

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_IL_3254	K3	86.00	82.67	82.89	82.93	82.98	86.00
Z5_IL_3255	K3	86.00	76.54	77.69	77.89	79.17	86.00
Z5_IL_3256	H4	112.00	104.75	105.18	105.25	105.33	105.44
Z5_IL_3257	H4	112.00	104.83	105.43	105.52	105.63	105.78
Z5_IL_3258	K4	46.63	41.63	41.97	42.02	42.08	42.17
Z5_IL_3273	G4	116.00	112.00	112.78	112.89	113.01	113.27
Z5_IL_3283	H4	108.00	101.20	102.30	102.43	102.61	102.93
Z5_IL_3288	J4	102.00	98.18	98.18	98.18	98.18	98.18
Z5_IL_3289	J4	86.00	82.42	82.56	82.58	82.60	82.64
Z5_IL_3290	J4	86.00	84.17	84.35	84.38	84.42	84.47
Z5_IL_3306	H4	118.00	114.04	114.25	114.27	114.30	114.33
Z5_IL_3314	K4	64.00	62.38	63.11	64.28	66.53	70.44
Z5_IL_3315	K4	76.00	73.17	73.47	73.51	74.89	76.34
Z5_IL_3316	K4	76.00	73.33	73.46	73.49	73.91	76.00
Z5_IL_3317	M3	54.00	51.92	52.94	53.14	53.38	54.00
Z5_IL_3318	M3	54.00	52.08	52.37	52.44	52.68	53.11
Z5_IL_3319	M3	54.00	51.33	52.07	52.20	52.38	52.60
Z5_IL_3320	M3	52.06	49.39	49.97	50.06	50.19	50.30
Z5_IL_3321	M3	52.00	48.56	48.97	49.03	49.11	49.29
Z5_IL_3322	M3	53.86	51.42	51.80	51.85	51.90	51.96
Z5_IL_3323	L3	60.00	56.42	56.66	56.69	56.72	56.77
Z5_IL_3328	J2	45.19	41.98	42.19	42.21	42.24	42.28
Z5_IL_3329	J2	27.34	25.59	26.83	26.95	27.07	27.20
Z5_IL_3330	J2	28.00	26.25	26.56	26.59	26.63	26.69
Z5_IL_3331	J2	72.00	68.15	68.52	68.56	68.61	68.67
Z5_IL_3337	K2	66.00	61.10	66.01	66.11	66.32	66.96
Z5_IL_3338	J3	98.00	94.92	96.12	96.33	97.66	98.13
Z5_IL_3339	J3	86.00	83.33	84.56	84.69	84.82	84.97
Z5_IL_3340	J3	86.00	84.08	84.34	84.38	84.43	84.53
Z5_IL_3341	J3	82.00	73.58	74.70	74.81	74.94	75.10
Z5_IL_3342	J3	82.19	73.86	74.49	74.58	74.68	74.81
Z5_IL_3343	J3	77.19	70.02	72.47	72.92	73.32	73.65
Z5_IL_3344	G4	114.00	110.21	110.54	110.65	110.86	112.12
Z5_IL_3346	G3	101.58	98.62	99.10	99.18	99.28	99.47
Z5_IL_3347	H3	89.28	86.74	87.01	87.04	87.07	87.11
Z5_IL_3348	J3	68.00	66.54	66.99	67.08	67.21	68.26
Z5_IL_3349	J3	67.55	64.76	65.24	65.34	65.49	67.18
Z5_IL_3350	M3	53.52	51.66	52.45	52.52	52.61	52.76
Z5_IL_3352	M3	54.00	52.63	55.21	55.53	56.00	56.87
Z5_IL_3366	J3	79.97	77.04	77.75	77.89	78.14	78.71
Z5_IL_3367	J3	79.89	73.72	74.63	74.81	75.07	75.82
Z5_IL_3369	K3	70.00	66.83	68.50	68.88	69.70	70.51
Z5_IL_3370	K3	74.00	71.92	73.35	74.73	76.55	79.78
Z5_IL_3371	J3	71.21	65.84	66.01	66.07	67.22	68.60
Z5_IL_3372	J3	68.00	63.00	64.58	65.85	67.83	69.56
Z5_IL_3373	J3	66.00	63.38	63.54	63.57	63.59	63.63
Z5_IL_3374	J3	66.41	62.91	63.08	63.11	63.14	63.17
Z5_IL_3375	J3	68.38	66.09	66.09	66.09	66.09	66.09
Z5_IL_3376	K3	76.42	71.71	72.14	72.29	73.76	74.54
Z5_IL_3377	K3	78.00	73.67	73.90	73.93	73.97	75.06
Z5_IL_3380	K3	84.00	80.00	80.54	80.69	80.90	81.20
Z5_IL_3383	K3	83.82	78.49	79.39	79.59	79.83	80.10
Z5_IL_3384	K3	81.18	77.51	78.68	78.89	79.18	79.53
Z5_IL_3385	K3	84.00	81.08	81.65	81.78	81.94	82.08
Z5_IL_3386	K4	86.00	82.67	82.93	82.97	83.02	83.19
Z5_IL_3387	K4	88.00	84.58	84.84	84.88	84.92	84.99
Z5_IL_3388	K3	78.14	74.53	75.04	75.11	75.20	75.49
Z5_IL_3389	K3	70.63	67.96	68.85	69.00	69.20	69.47

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_IL_3391	J3	90.43	85.18	85.68	85.89	86.57	90.71
Z5_IL_3399	H4	104.79	99.16	99.93	100.02	100.14	100.37
Z5_IL_3400	J4	104.00	99.96	99.96	99.96	99.96	99.96
Z5_IL_3402	J3	91.88	89.34	89.63	89.68	89.75	89.84
Z5_IL_3405	L3	59.06	55.27	56.35	58.77	59.09	59.91
Z5_IL_3406	M3	53.46	51.50	51.50	51.50	51.50	51.50
Z5_IL_3408	M3	56.00	54.38	56.55	57.10	58.01	59.68
Z5_IL_3409	M3	56.00	53.24	56.04	56.46	57.18	58.47
Z5_IL_3410	M3	56.00	53.75	56.18	56.62	57.37	58.73
Z5_IL_3411	L3	50.00	48.27	50.20	50.57	51.05	51.76
Z5_IL_3417	H4	116.00	113.00	118.08	119.36	121.33	124.40
Z5_IL_3474	G3	135.02	128.20	128.52	128.56	128.68	128.83
Z5_IL_3475	G3	136.82	128.80	129.36	129.44	129.56	129.98
Z5_IL_3483	L3	49.50	45.09	45.41	45.44	45.49	45.55
Z5_IL_3485	G4	128.00	125.83	128.36	128.90	129.74	131.03
Z5_IL_3487	G4	134.24	131.94	134.24	134.42	134.89	135.66
Z5_IL_3488	K3	68.00	62.69	64.86	66.51	68.00	68.05
Z5_IL_3489	K3	68.00	62.75	65.59	67.68	68.25	68.76
Z5_IL_3490	K3	68.00	62.50	65.48	67.51	68.10	68.63
Z5_IL_3493	G4	127.79	117.85	118.27	118.33	118.40	118.50
Z5_IL_3494	G4	129.00	120.30	120.58	120.62	120.66	120.71
Z5_IL_3514	M4	46.05	42.22	46.05	45.22	46.46	48.52
Z5_IL_3535	K4	66.00	64.67	65.19	65.27	66.60	70.51
Z5_IL_3536	K4	88.00	82.75	82.99	83.01	83.04	83.08
Z5_IL_3537	K4	89.13	83.51	83.82	83.85	83.89	83.97
Z5_IL_3538	J4	93.77	86.69	86.95	86.99	87.04	87.22
Z5_IL_3558	M2	51.91	49.40	49.61	49.63	49.66	49.70
Z5_IL_3621	L2	59.06	54.06	54.52	54.66	55.27	58.69
Z5_IL_3635	H4	117.12	113.91	114.26	114.30	114.36	114.44
Z5_IL_3638	M2	43.67	42.09	42.37	42.41	42.46	42.54
Z5_IL_3639	M2	51.87	50.41	50.61	50.64	50.67	50.77
Z5_IL_3643	K2	66.00	64.50	64.50	64.50	64.50	64.50
Z5_IL_3644	K3	61.84	59.59	61.18	61.24	61.33	61.46
Z5_IL_3645	K3	62.00	60.75	61.18	61.24	61.33	61.46
Z5_IL_3646	K3	62.00	61.00	61.18	61.24	61.33	61.46
Z5_IL_3648	K3	82.00	78.92	79.47	79.57	79.72	82.79
Z5_IL_3650	K3	78.24	74.32	75.04	75.16	75.32	75.52
Z5_IL_3651	K4	72.30	70.30	70.55	70.59	70.63	70.69
Z5_IL_3654	K4	53.95	49.34	49.56	49.59	49.63	49.68
Z5_IL_3663	J2	79.59	71.76	73.61	73.94	74.81	78.42
Z5_IL_3664	J2	80.00	75.50	75.50	75.50	75.50	80.00
Z5_IL_3665	J2	81.31	73.06	74.57	75.08	76.49	80.37
Z5_IL_3666	J2	82.00	75.00	76.46	76.70	77.52	81.35
Z5_IL_3667	J2	82.00	74.25	77.17	77.47	78.13	81.86
Z5_IL_3668	J4	94.74	90.32	90.59	90.64	90.71	90.80
Z5_IL_3671	J2	85.10	82.64	82.81	82.84	82.86	84.09
Z5_IL_3672	J3	86.00	81.00	81.30	81.32	81.41	85.16
Z5_IL_3673	J3	86.00	81.17	82.01	82.10	82.18	84.49
Z5_IL_3675	J3	84.00	79.25	79.25	79.25	79.70	83.27
Z5_IL_3676	J3	84.00	76.08	77.77	78.67	79.72	83.26
Z5_IL_3677	J3	86.23	81.31	82.97	83.09	83.23	84.75
Z5_IL_3685	G3	94.11	93.28	93.66	93.72	93.80	94.13
Z5_IL_3687	G4	130.00	127.75	129.53	129.78	130.15	130.69
Z5_IL_3703	F4	153.01	150.43	150.77	150.82	150.87	150.94
Z5_IL_3704	F4	138.00	126.60	133.15	135.53	135.78	135.90
Z5_IL_3705	G4	191.83	189.08	189.26	189.29	189.33	189.38
Z5_IL_3708	E4	320.00	318.46	318.65	318.68	318.72	318.77
Z5_IL_3709	D4	345.50	340.80	341.17	341.24	341.33	341.46

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				5Yr	10Yr	25Yr	100Yr
Z5_IL_4926	G3	113.96	108.46	109.31	109.42	109.58	109.71
Z5_IL_4928	M3	37.22	32.22	32.55	32.60	32.68	32.78
Z5_IL_4929	M3	31.48	26.23	26.35	26.37	26.40	26.43
Z5_IL_4930	M3	30.25	25.25	25.55	25.60	25.65	25.73
Z5_IL_4931	M3	16.00	9.00	9.11	9.13	9.16	9.19
Z5_IL_4932	J2	25.51	19.68	20.08	20.14	20.21	20.31
Z5_IL_4935	F4	194.79	191.79	192.14	192.21	192.29	192.40
Z5_IL_4936	F3	110.54	105.54	105.89	105.92	105.96	106.02
Z5_IL_4938	H3	90.44	86.00	93.33	94.69	96.06	97.92
Z5_IL_4939	G4	114.00	108.00	109.97	110.39	110.72	112.03
Z5_IL_4940	H3	105.22	98.00	100.08	100.37	100.67	100.98
Z5_IL_4941	H3	94.00	87.00	89.61	89.90	90.18	90.46
Z5_IL_4944	H4	114.30	112.30	115.17	116.08	117.45	119.26
Z5_IL_4945	H4	114.15	112.15	114.38	115.27	116.55	118.22
Z5_IL_4946	H4	112.00	109.00	112.29	112.89	113.77	114.93
Z5_IL_4947	J4	108.33	105.33	106.81	106.91	107.05	108.23
Z5_IL_4949	H3	87.77	82.27	82.48	82.51	82.54	82.58
Z5_IL_4950	H3	88.00	82.75	87.00	87.88	88.71	89.90
Z5_IL_4955	J4	106.00	101.64	102.80	102.88	102.96	103.05
Z5_IL_4963	N3	34.00	29.00	29.00	29.00	29.00	29.00
Z5_IL_4965	M3	24.30	20.30	21.74	22.21	23.34	24.31
Z5_IL_4966	M3	22.00	18.00	20.53	21.94	23.04	23.95
Z5_IL_5125	M3	18.00	14.00	16.36	16.83	17.42	17.90
Z5_IL_5130	J4	74.41	68.91	69.47	69.55	69.66	69.80
Z5_IL_5138	G4	134.00	125.02	128.49	129.38	129.65	129.95
Z5_IL_5140	G4	128.00	126.00	128.38	128.92	129.77	131.08
Z5_IL_5142	G4	126.00	122.00	123.34	123.46	123.49	123.54
Z5_IL_5145	H4	106.13	102.00	104.24	104.45	104.66	104.84
Z5_IL_5149	H3	105.76	100.00	102.38	102.63	102.91	103.16
Z5_IL_5156	K3	74.00	69.50	69.76	69.81	69.87	74.21
Z5_IL_5158	J3	-	54.50	54.65	54.69	54.72	54.76
Z5_IL_5161	J3	82.40	78.00	80.63	81.19	82.30	83.99
Z5_IL_5163	J3	90.00	84.00	85.91	86.26	86.63	87.03
Z5_IL_5165	M1	26.24	24.57	25.36	26.48	27.75	30.38
Z5_IL_5175	L4	64.00	57.65	58.39	58.61	61.10	65.04
Z5_IL_5216	M1	25.85	21.85	22.33	22.40	22.49	22.63
Z5_IL_5280	M4	41.74	36.49	36.49	36.49	36.49	36.49
Z5_IL_5299	L2	54.00	49.00	53.72	53.98	54.04	54.09
Z5_IL_5318	H3	92.02	86.67	93.34	94.70	96.07	97.93
Z5_IL_5386	H4	114.20	112.20	114.48	115.30	116.55	118.22
Z5_IL_5389	J2	74.00	69.00	69.88	71.65	72.07	73.41
Z5_IL_5391	K4	73.36	67.82	68.03	68.06	68.09	68.13
Z5_IL_5443	K4	73.44	71.44	71.44	71.44	71.44	71.44
Z5_IL_5505	K3	70.00	67.58	71.10	72.12	73.40	75.80
Z5_IL_5565	K4	55.93	51.34	51.39	51.40	51.42	51.43
Z5_IL_5566	K4	54.19	52.31	52.36	52.38	52.39	52.41
Z5_IL_5570	M3	16.00	12.32	12.54	12.57	12.61	12.65
Z5_IL_5571	M3	16.00	12.19	12.26	12.27	12.28	12.30
Z5_IL_5574	J3	84.17	78.00	78.09	78.11	78.12	78.14
Z5_IL_915	J4	107.49	102.82	102.82	102.82	102.82	102.82
Z5_IL_916	J4	106.54	101.77	101.91	101.94	101.96	102.03
Z5_IL_976	J4	96.00	92.32	92.32	92.32	92.32	93.86
Z5_IL_977	J4	96.00	92.97	93.21	93.25	93.31	93.78
Z5_IL_990	K3	72.00	66.75	66.98	67.01	67.04	67.08
Z5_IL_992	J3	86.00	81.68	81.68	83.54	85.12	86.43
Z5_IL_993	J3	86.00	81.38	81.61	83.48	84.79	86.43
Z5_IL_994	J3	86.00	83.00	83.15	83.19	84.80	86.44
Z5_MH_3712	J4	107.08	96.57	97.78	98.49	100.46	101.96

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_MH_3714	J4	95.47	81.14	83.00	83.35	83.95	87.97
Z5_MH_3716	M3	54.00	51.25	52.50	52.82	53.34	53.87
Z5_MH_3717	M3	52.29	46.24	46.89	46.99	47.11	48.36
Z5_MH_3718	M3	53.80	51.10	51.32	51.36	51.40	51.45
Z5_MH_3719	M3	43.42	37.30	37.86	37.96	38.08	38.29
Z5_MH_3720	M3	39.60	35.50	35.83	35.88	35.94	36.02
Z5_MH_3721	K3	78.00	67.52	69.75	71.01	74.76	78.00
Z5_MH_3722	K3	82.00	70.00	71.54	71.97	75.52	81.57
Z5_MH_3723	K3	84.00	72.68	74.32	74.63	77.80	84.00
Z5_MH_3724	K3	84.71	73.38	75.02	75.34	78.42	84.71
Z5_MH_3725	J3	89.48	83.29	84.52	84.72	84.97	89.50
Z5_MH_3726	H3	102.00	92.61	97.29	98.86	100.37	102.57
Z5_MH_3727	K4	72.00	64.50	64.79	64.84	64.90	64.98
Z5_MH_3728	K4	65.47	58.47	58.68	58.72	58.76	58.81
Z5_MH_3729	G3	115.19	107.58	109.78	110.13	110.34	111.00
Z5_MH_3730	G3	116.00	107.20	109.72	110.00	110.15	110.62
Z5_MH_3731	G3	116.01	107.29	110.10	110.45	110.63	111.14
Z5_MH_3732	G3	120.14	110.99	112.11	112.23	112.33	112.74
Z5_MH_3733	G3	121.78	115.49	116.25	116.28	116.29	116.30
Z5_MH_3734	G3	107.65	102.80	103.73	104.19	105.98	108.38
Z5_MH_3735	G3	102.00	96.31	101.15	102.82	104.88	108.01
Z5_MH_3736	G3	124.00	119.71	124.00	124.05	124.15	124.54
Z5_MH_3737	G3	126.32	124.48	125.55	126.44	126.61	126.94
Z5_MH_3738	G3	132.00	125.84	132.00	131.05	131.35	131.74
Z5_MH_3739	G3	133.89	128.61	131.59	133.54	133.81	134.28
Z5_MH_3741	M2	50.74	44.94	45.31	45.36	45.42	45.50
Z5_MH_3742	M2	48.00	41.15	41.66	41.74	41.84	42.00
Z5_MH_3743	M2	48.96	42.40	43.74	44.02	44.58	46.05
Z5_MH_3744	M2	45.01	38.91	39.68	39.79	39.91	40.05
Z5_MH_3745	M2	32.29	19.98	20.53	20.59	20.68	20.78
Z5_MH_3746	M2	47.92	44.20	45.05	45.17	45.57	47.51
Z5_MH_3762	J4	104.16	98.72	99.22	99.30	101.93	104.07
Z5_MH_3763	J4	105.11	98.19	98.84	98.95	101.70	103.74
Z5_MH_3764	J4	107.38	97.40	98.04	98.66	101.10	102.90
Z5_MH_3765	J4	107.33	96.18	97.70	98.32	99.97	101.25
Z5_MH_3770	H3	94.00	87.06	87.69	87.80	87.98	88.30
Z5_MH_3771	H3	94.00	87.02	87.98	88.10	88.27	88.51
Z5_MH_3772	H5	119.22	113.55	114.36	114.48	114.58	114.83
Z5_MH_3775	M3	44.62	39.45	40.16	42.63	43.69	44.60
Z5_MH_3776	M3	38.00	32.83	33.45	33.54	33.62	33.67
Z5_MH_3777	M3	31.98	26.52	27.12	27.21	27.36	27.84
Z5_MH_3778	M3	24.15	18.92	19.64	19.77	19.92	20.09
Z5_MH_3779	M3	24.00	17.37	17.98	18.08	18.18	18.29
Z5_MH_3780	M4	42.00	37.83	43.37	44.23	45.49	47.27
Z5_MH_3795	M4	20.64	17.56	20.64	20.64	20.64	20.75
Z5_MH_3796	J3	85.69	77.27	78.61	79.46	80.75	84.08
Z5_MH_3797	J3	86.53	77.30	80.86	83.20	84.75	86.53
Z5_MH_3798	J3	88.00	83.25	84.04	87.27	88.00	88.63
Z5_MH_3799	J3	88.00	83.65	84.84	87.41	88.20	89.69
Z5_MH_3800	M3	51.65	44.58	45.79	46.05	46.58	47.84
Z5_MH_3801	M2	25.39	19.29	19.78	19.86	19.95	20.07
Z5_MH_3802	M2	27.44	23.57	23.97	24.03	24.10	24.18
Z5_MH_3803	M2	31.00	27.80	28.33	28.39	28.46	28.56
Z5_MH_3806	L3	56.00	46.45	47.18	47.22	47.27	47.32
Z5_MH_3807	L3	54.49	38.87	40.03	40.20	40.43	40.72
Z5_MH_3808	L3	55.72	46.00	46.78	46.94	47.15	47.46
Z5_MH_3809	J4	103.72	95.68	97.56	98.08	99.32	100.39
Z5_MH_3810	J4	104.00	100.20	100.94	100.99	101.04	101.11

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_MH_3811	J4	102.90	95.26	97.44	97.87	98.74	99.64
Z5_MH_3812	J4	103.17	95.24	97.23	97.46	97.74	98.19
Z5_MH_3813	J4	103.85	94.86	96.75	96.95	97.19	97.56
Z5_MH_3814	J4	101.07	93.68	94.94	95.06	95.18	95.32
Z5_MH_3815	J4	104.00	95.70	97.65	97.86	98.12	98.63
Z5_MH_3816	J4	99.19	92.30	93.30	93.38	93.47	93.57
Z5_MH_3818	K3	70.00	65.39	66.02	66.12	66.25	66.45
Z5_MH_3819	K3	68.00	62.92	63.57	63.67	63.81	64.02
Z5_MH_3820	K3	68.00	60.90	61.76	61.90	62.08	62.33
Z5_MH_3821	G4	135.52	125.02	125.18	125.20	125.22	125.25
Z5_MH_3827	M3	22.25	16.25	17.55	17.73	17.97	18.28
Z5_MH_3829	N3	40.00	32.67	33.38	33.50	33.65	33.88
Z5_MH_3830	N3	36.82	31.40	31.85	31.93	32.01	32.13
Z5_MH_3831	J3	80.00	71.21	71.92	72.02	72.15	72.33
Z5_MH_3832	L4	58.00	53.71	54.06	54.11	54.18	54.28
Z5_MH_3833	K4	41.85	34.74	35.18	35.26	35.35	35.48
Z5_MH_3839	M3	50.75	44.14	45.20	45.30	45.42	45.51
Z5_MH_3840	M3	50.00	44.35	45.61	45.76	45.94	46.08
Z5_MH_3841	M3	46.25	37.25	38.37	38.50	38.67	38.79
Z5_MH_3842	M3	47.75	34.75	35.59	35.69	35.81	35.90
Z5_MH_3843	M3	32.50	26.05	27.10	27.24	27.43	27.64
Z5_MH_3844	J4	85.93	79.23	80.61	80.75	80.93	81.16
Z5_MH_3846	L3	55.39	49.29	50.60	51.80	53.80	55.05
Z5_MH_3847	L3	55.41	52.41	53.50	55.11	55.53	56.05
Z5_MH_3848	L3	55.93	54.13	54.56	55.27	55.93	56.19
Z5_MH_3849	K2	70.00	64.81	65.66	66.87	68.69	70.12
Z5_MH_3850	K2	67.90	62.84	67.90	67.90	67.90	68.21
Z5_MH_3855	K2	68.00	46.28	47.00	47.12	47.26	47.46
Z5_MH_3859	H2	90.98	81.57	82.28	82.38	82.52	82.85
Z5_MH_3860	M3	28.23	21.23	22.28	22.53	25.36	26.01
Z5_MH_3868	L4	62.00	57.67	57.93	58.00	58.08	58.22
Z5_MH_3870	H3	91.61	84.70	85.58	85.66	85.77	85.92
Z5_MH_3874	H3	94.60	87.62	88.93	89.08	89.29	89.67
Z5_MH_3882	L2	56.00	49.83	50.93	51.10	51.60	52.51
Z5_MH_3883	M4	43.38	40.13	44.19	45.12	46.39	48.45
Z5_MH_3886	M4	36.00	32.50	36.05	36.27	36.77	37.43
Z5_MH_3887	L2	58.00	53.20	54.14	54.31	55.06	58.02
Z5_MH_3888	L2	58.61	52.89	53.79	53.95	54.65	57.85
Z5_MH_3889	L2	58.44	53.77	54.52	54.64	55.23	58.50
Z5_MH_3890	L2	59.31	54.21	54.87	54.96	55.31	58.90
Z5_MH_3897	L4	58.00	51.63	51.88	51.94	52.02	52.21
Z5_MH_3898	L4	56.00	49.63	51.11	51.29	51.60	52.11
Z5_MH_3903	G4	114.00	104.75	108.04	108.42	108.86	109.74
Z5_MH_3904	J4	104.00	99.42	99.90	99.98	100.06	100.17
Z5_MH_3905	J4	104.00	99.09	99.32	99.36	99.41	99.46
Z5_MH_3906	K3	83.48	78.48	79.09	79.19	79.33	81.32
Z5_MH_3907	K3	80.00	74.25	75.07	75.20	75.56	78.18
Z5_MH_3908	K3	80.41	74.91	75.74	75.88	76.13	78.93
Z5_MH_3909	K3	78.00	72.80	73.96	74.18	74.90	77.08
Z5_MH_3910	J3	76.23	70.23	71.65	71.90	72.61	73.41
Z5_MH_3911	L1	24.87	16.37	16.68	16.72	16.75	16.81
Z5_MH_3912	L1	25.00	16.50	16.68	16.72	16.75	16.81
Z5_MH_3913	L2	58.20	53.17	54.11	54.29	54.98	58.20
Z5_MH_3914	K2	44.00	39.28	40.08	40.18	40.30	40.46
Z5_MH_3916	J3	74.54	66.29	67.00	67.13	68.40	70.25
Z5_MH_3917	J3	75.69	70.86	71.05	71.08	71.12	71.16
Z5_MH_3918	M1	21.48	18.48	19.96	21.47	21.73	22.68
Z5_MH_3919	L1	19.35	15.60	16.11	16.31	17.95	19.13

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_MH_3920	K3	66.00	63.00	64.52	64.70	64.90	65.02
Z5_MH_3921	L3	58.00	50.50	51.56	51.92	52.31	53.00
Z5_MH_3922	M4	54.00	47.08	47.46	47.56	47.67	47.82
Z5_MH_3923	L4	54.00	48.46	49.09	49.23	49.40	49.62
Z5_MH_3924	L4	55.45	50.78	51.00	51.05	51.11	51.19
Z5_MH_3925	L4	54.68	48.56	49.26	49.43	49.65	49.93
Z5_MH_3928	M3	50.00	44.00	44.74	44.85	45.01	45.23
Z5_MH_3929	M3	33.35	31.35	32.62	32.90	33.75	35.51
Z5_MH_3930	K2	58.00	53.85	54.89	55.04	55.20	55.46
Z5_MH_3931	K2	58.71	54.46	55.26	55.40	55.58	55.84
Z5_MH_3945	L2	60.00	55.00	55.64	55.73	55.84	59.85
Z5_MH_3946	K2	62.40	58.82	59.25	59.31	59.38	62.40
Z5_MH_3950	L2	48.19	42.69	43.19	43.25	43.32	43.41
Z5_MH_3951	M1	24.08	16.37	16.53	16.55	16.58	16.63
Z5_MH_3952	M3	45.88	42.78	43.08	43.12	43.16	43.21
Z5_MH_3953	K2	65.93	57.93	58.90	59.03	59.19	59.44
Z5_MH_3954	K2	68.00	59.48	60.38	60.50	60.65	60.87
Z5_MH_3955	M3	52.40	48.56	49.54	50.27	52.44	53.08
Z5_MH_3956	M4	48.72	42.82	43.09	43.16	43.24	43.35
Z5_MH_3959	K2	68.00	61.87	62.74	62.85	62.99	63.18
Z5_MH_3960	K2	68.00	62.61	63.58	63.72	63.96	64.57
Z5_MH_3964	K2	69.98	64.36	65.06	65.13	65.22	65.47
Z5_MH_3965	K2	70.64	64.71	65.88	66.01	66.18	66.61
Z5_MH_3966	J2	72.00	60.55	61.92	62.10	62.28	62.50
Z5_MH_3967	J2	73.11	67.80	68.05	68.16	71.17	72.25
Z5_MH_3968	J2	66.62	53.50	54.73	54.86	55.00	55.13
Z5_MH_3969	J2	71.98	58.02	59.47	59.63	59.80	59.97
Z5_MH_3970	J2	72.00	69.29	70.79	71.08	71.35	71.77
Z5_MH_3971	J2	73.57	69.60	71.49	71.76	72.14	73.58
Z5_MH_3973	J2	80.00	70.58	74.18	74.54	75.46	79.51
Z5_MH_3974	J3	68.38	63.80	64.24	64.31	64.39	64.50
Z5_MH_3975	J3	82.00	70.34	71.24	71.36	71.51	71.71
Z5_MH_3976	J3	85.12	79.80	80.06	80.10	80.15	80.22
Z5_MH_3977	J3	84.00	80.30	81.01	81.11	81.25	81.45
Z5_MH_3978	J3	88.00	84.33	84.68	84.74	84.81	85.27
Z5_MH_3979	J3	82.25	74.45	77.42	77.87	78.63	82.25
Z5_MH_3980	J4	86.00	79.50	81.16	81.35	81.57	81.89
Z5_MH_3998	M2	45.49	39.24	40.09	40.21	40.36	40.52
Z5_MH_3999	L4	53.61	45.65	46.68	47.29	48.98	52.22
Z5_MH_4001	L4	58.59	41.92	44.99	45.64	46.05	48.59
Z5_MH_4003	K3	70.00	66.07	68.49	68.89	69.71	70.50
Z5_MH_4006	H2	78.16	70.30	71.25	71.39	71.56	71.73
Z5_MH_4007	H3	99.69	92.64	93.58	93.67	93.78	93.95
Z5_MH_4008	H3	88.00	85.41	85.96	86.02	86.10	86.21
Z5_MH_4009	H3	100.71	93.79	96.44	96.81	97.23	97.77
Z5_MH_4010	H3	100.88	94.11	96.84	97.24	97.68	98.25
Z5_MH_4011	H3	102.00	94.46	97.17	97.58	98.04	98.63
Z5_MH_4012	H4	116.00	105.33	106.73	106.90	107.12	107.40
Z5_MH_4013	H4	116.87	106.98	108.25	108.47	108.87	110.36
Z5_MH_4014	H4	118.00	109.38	110.28	110.43	114.90	115.34
Z5_MH_4015	H4	119.75	110.97	111.63	111.73	112.17	117.07
Z5_MH_4016	H4	120.38	112.71	113.39	113.49	113.62	118.08
Z5_MH_4017	H4	119.06	111.64	113.65	113.85	114.12	118.67
Z5_MH_4018	H4	116.00	102.75	103.93	104.06	104.23	104.43
Z5_MH_4019	H5	132.00	127.58	127.91	127.95	131.98	132.00
Z5_MH_4020	H5	130.00	125.83	126.35	126.42	130.00	130.01
Z5_MH_4021	H5	128.00	123.67	124.20	126.28	128.04	128.28
Z5_MH_4022	H5	126.00	121.50	122.22	122.43	124.63	126.00

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Zone 5 West Existing Nodes

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				5Yr	10Yr	25Yr	100Yr
Z5_MH_4023	H5	122.00	116.04	116.87	116.99	117.10	117.16
Z5_MH_4024	H5	117.04	111.37	112.17	112.28	112.38	116.13
Z5_MH_4025	H5	116.00	108.25	109.25	109.38	109.54	111.37
Z5_MH_4049	G4	137.34	125.60	132.22	134.49	134.82	134.88
Z5_MH_4050	G4	157.89	141.59	142.34	142.49	142.73	144.19
Z5_MH_4051	G4	173.44	169.19	169.63	169.71	169.80	169.93
Z5_MH_4052	G4	188.00	178.79	179.20	179.27	179.36	179.48
Z5_MH_4053	J2	72.96	67.37	67.60	68.15	71.05	71.67
Z5_MH_4057	G4	142.92	137.25	137.78	137.86	137.92	137.96
Z5_MH_4058	G4	142.51	133.68	134.50	134.63	134.75	134.84
Z5_MH_4075	F4	200.00	191.96	193.48	193.76	194.12	194.59
Z5_MH_4076	F4	216.29	207.33	208.25	208.40	208.59	208.80
Z5_MH_4077	F4	301.57	295.99	296.26	296.30	296.34	296.41
Z5_MH_4078	F4	279.55	273.94	274.26	274.31	274.37	274.44
Z5_MH_4079	F4	252.61	247.00	247.36	247.42	247.48	247.58
Z5_MH_4080	F4	228.22	222.87	228.22	228.46	229.02	230.20
Z5_MH_4081	F4	227.24	222.62	226.06	227.24	226.98	227.36
Z5_MH_4082	F4	227.84	222.42	224.34	224.48	225.16	227.02
Z5_MH_4097	E4	330.71	324.04	324.56	324.65	324.76	324.93
Z5_MH_4098	E4	320.00	315.67	316.21	316.29	316.40	316.55
Z5_MH_4099	E4	320.74	311.49	312.24	312.37	312.52	312.75
Z5_MH_4100	E4	320.00	310.17	310.52	310.57	310.64	310.73
Z5_MH_4101	E4	221.31	213.10	213.92	214.06	214.23	214.42
Z5_MH_4102	E4	242.00	233.67	234.71	234.90	235.15	235.46
Z5_MH_4103	E4	255.27	249.27	250.37	250.57	250.89	255.27
Z5_MH_4105	E4	296.21	292.00	292.57	292.67	292.82	296.21
Z5_MH_4106	E4	303.11	296.90	297.60	297.73	297.91	301.89
Z5_MH_4107	E4	307.52	302.60	303.04	303.12	303.23	307.52
Z5_MH_4114	G4	123.95	118.27	119.77	119.91	120.01	120.14
Z5_MH_4116	G4	136.00	131.00	131.18	131.23	131.28	133.68
Z5_MH_4117	G4	142.00	138.22	140.28	141.05	141.97	142.16
Z5_MH_4119	M2	47.20	38.25	38.62	38.67	38.72	38.80
Z5_MH_4120	M3	52.09	47.87	49.05	49.71	52.09	52.22
Z5_MH_4121	L3	46.00	42.27	42.78	42.87	42.97	43.11
Z5_MH_4122	J2	70.94	65.00	65.82	69.13	70.94	70.94
Z5_MH_4123	J2	71.56	68.81	69.17	69.21	71.56	71.73
Z5_MH_4129	L3	65.40	58.90	60.18	60.27	60.40	60.49
Z5_MH_4130	L3	54.14	49.64	51.56	51.96	52.55	53.51
Z5_MH_4131	L3	62.00	57.54	58.43	58.53	58.68	58.91
Z5_MH_4137	K3	73.76	64.59	66.36	66.67	67.08	67.58
Z5_MH_4138	K3	87.35	80.35	81.63	81.83	82.08	87.45
Z5_MH_4140	K4	58.43	50.93	54.26	55.22	56.42	58.43
Z5_MH_4141	K4	78.28	64.91	66.55	66.80	67.14	78.28
Z5_MH_4142	K4	82.87	75.28	76.78	77.00	77.36	79.50
Z5_MH_4143	K4	86.56	76.86	78.93	79.25	79.74	86.06
Z5_MH_4144	K4	88.09	78.38	80.39	80.74	81.28	85.13
Z5_MH_4145	K4	76.00	69.80	72.54	73.12	74.62	76.16
Z5_MH_4158	J4	70.03	61.86	62.42	62.52	62.64	62.82
Z5_MH_4159	J2	70.88	63.88	65.98	68.55	70.88	70.88
Z5_MH_4160	J2	71.28	62.56	65.83	68.81	70.82	70.87
Z5_MH_4161	J2	70.00	61.44	62.63	63.10	63.55	63.72
Z5_MH_4162	J2	70.00	61.34	61.99	62.09	62.19	62.29
Z5_MH_4169	M3	50.00	44.00	45.32	45.53	45.90	46.52
Z5_MH_4170	H3	88.00	86.09	86.60	86.65	86.72	86.82
Z5_MH_4173	H2	93.80	79.57	79.85	79.88	79.92	80.01
Z5_MH_4185	J4	102.00	94.58	95.43	95.55	95.70	96.16
Z5_MH_4186	J4	93.72	89.47	89.73	89.79	89.85	89.94
Z5_MH_4187	J4	80.69	73.69	74.24	74.29	74.35	74.41

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_MH_4194	J4	92.51	79.97	81.77	82.06	82.49	88.50
Z5_MH_4196	K4	64.48	51.25	55.02	56.55	58.49	62.24
Z5_MH_4197	K4	76.00	69.40	71.78	72.21	73.32	74.60
Z5_MH_4198	M3	45.20	30.20	31.46	31.64	31.88	32.16
Z5_MH_4199	M3	48.96	44.11	45.06	45.15	45.29	45.38
Z5_MH_4200	J2	71.82	62.40	65.82	68.79	70.81	70.85
Z5_MH_4201	K2	64.78	57.53	58.42	58.53	58.67	58.87
Z5_MH_4203	J2	64.57	61.74	62.41	62.53	62.68	62.94
Z5_MH_4204	J2	66.96	63.29	64.10	64.25	64.47	65.75
Z5_MH_4205	J3	102.00	97.60	101.93	102.13	102.50	103.20
Z5_MH_4206	J3	101.07	96.57	101.07	101.27	101.69	102.44
Z5_MH_4207	J3	98.00	94.80	96.11	96.32	97.65	98.13
Z5_MH_4208	J3	99.56	95.80	99.49	99.69	100.20	101.04
Z5_MH_4209	J3	85.02	74.58	75.01	75.07	75.14	75.23
Z5_MH_4210	J3	76.94	69.07	71.62	72.02	72.39	72.70
Z5_MH_4211	J3	82.00	70.26	70.99	71.10	71.23	71.40
Z5_MH_4212	L3	54.53	49.42	51.43	51.91	52.52	53.49
Z5_MH_4214	K3	68.00	65.96	67.30	67.50	68.02	68.68
Z5_MH_4215	K3	70.00	67.61	70.90	71.91	73.16	75.44
Z5_MH_4216	K3	74.00	71.70	73.06	74.58	76.38	79.61
Z5_MH_4217	K3	82.00	77.50	78.30	78.44	78.80	82.51
Z5_MH_4218	J3	68.00	61.17	64.16	65.13	66.56	67.70
Z5_MH_4219	J3	-	40.20	40.56	40.61	40.67	40.71
Z5_MH_4220	J3	69.76	67.18	67.53	67.58	67.64	67.72
Z5_MH_4221	K3	78.00	72.00	72.92	73.06	73.42	74.90
Z5_MH_4222	K3	83.21	80.33	80.73	80.79	80.86	82.55
Z5_MH_4223	K3	84.00	79.75	80.46	80.62	80.80	81.00
Z5_MH_4224	K3	84.00	79.93	80.50	80.65	80.85	81.08
Z5_MH_4225	K3	84.00	80.00	80.96	81.14	81.34	81.52
Z5_MH_4226	K4	86.00	81.58	83.08	83.19	83.35	83.55
Z5_MH_4227	K4	82.23	75.08	75.73	75.82	75.95	76.25
Z5_MH_4228	K3	76.05	70.47	71.39	71.56	71.83	73.06
Z5_MH_4229	J3	96.00	89.00	90.06	90.24	90.48	96.00
Z5_MH_4230	J4	96.00	90.50	90.92	91.01	91.11	96.00
Z5_MH_4231	H3	90.93	85.43	88.55	89.55	90.51	91.84
Z5_MH_4232	J4	104.00	96.38	97.72	97.94	98.22	99.75
Z5_MH_4233	M3	54.00	50.92	52.31	52.46	52.65	52.86
Z5_MH_4234	L3	47.84	44.26	44.81	44.92	45.04	45.21
Z5_MH_4246	K3	62.54	60.68	61.33	61.41	61.49	61.56
Z5_MH_4248	G3	139.47	129.45	130.11	130.23	130.93	132.13
Z5_MH_4251	G4	130.83	128.10	131.06	131.27	131.72	132.92
Z5_MH_4252	G4	134.23	131.73	133.93	134.01	134.34	134.97
Z5_MH_4260	K4	80.76	73.93	74.83	78.92	80.83	81.89
Z5_MH_4261	M4	46.36	42.69	44.28	45.23	46.48	48.53
Z5_MH_4264	M4	47.98	40.48	40.78	40.85	40.93	41.04
Z5_MH_4270	K4	66.18	59.61	61.79	62.12	62.76	66.19
Z5_MH_4271	K4	66.00	61.00	61.80	62.14	62.78	66.01
Z5_MH_4272	K4	63.86	58.36	58.67	58.71	58.94	63.86
Z5_MH_4273	J5	94.00	83.34	85.11	85.42	86.06	90.61
Z5_MH_4276	L4	62.29	52.96	53.85	58.10	60.60	61.34
Z5_MH_4277	L4	61.24	49.15	50.33	53.66	53.91	57.57
Z5_MH_4278	L4	56.26	47.63	48.48	48.69	49.71	53.09
Z5_MH_4293	H2	92.31	80.91	81.68	81.79	81.93	82.25
Z5_MH_4294	K4	78.00	68.63	70.31	70.57	70.90	72.09
Z5_MH_4295	J5	102.00	98.41	99.10	99.20	99.31	99.48
Z5_MH_4297	J5	94.07	87.57	89.04	89.25	89.51	92.24
Z5_MH_4298	J5	96.00	91.00	91.72	91.83	91.97	94.14
Z5_MH_4299	J5	96.00	91.00	92.00	92.14	92.32	94.17

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_MH_4300	J5	96.10	91.10	92.48	92.70	93.03	95.94
Z5_MH_4301	J4	98.00	93.00	93.55	93.64	93.75	98.00
Z5_MH_4304	H2	94.00	79.93	80.70	80.80	80.92	81.18
Z5_MH_4311	J3	71.44	64.30	64.78	64.86	64.95	65.07
Z5_MH_4312	H3	87.19	83.10	84.33	84.53	84.80	85.37
Z5_MH_4315	M2	41.25	35.17	35.80	35.88	35.97	36.07
Z5_MH_4317	M3	19.88	14.39	16.46	16.99	17.85	18.47
Z5_MH_4319	L4	53.72	50.39	50.82	50.89	50.99	51.15
Z5_MH_4320	L4	62.00	54.42	55.01	55.16	55.33	55.57
Z5_MH_4323	H5	128.00	123.17	124.05	125.84	128.00	128.11
Z5_MH_4326	H5	132.00	126.32	126.65	126.69	131.92	132.00
Z5_MH_4329	M1	24.09	16.38	16.53	16.55	16.58	16.63
Z5_MH_4330	M2	51.23	47.56	48.19	48.29	48.41	51.08
Z5_MH_4331	M2	51.55	48.03	48.72	48.83	48.97	51.55
Z5_MH_4333	L3	55.26	49.17	51.33	51.84	52.48	53.46
Z5_MH_4336	K3	70.00	67.67	70.75	71.75	72.96	75.21
Z5_MH_4338	K4	76.00	69.58	72.17	72.67	73.91	75.32
Z5_MH_4339	K3	82.96	79.86	80.24	80.29	80.35	82.54
Z5_MH_4340	K3	83.74	81.23	81.68	81.76	81.85	82.79
Z5_MH_4341	K3	84.00	72.00	73.60	73.91	77.16	83.53
Z5_MH_4342	K4	66.00	61.00	61.44	61.51	61.60	61.73
Z5_MH_4343	J3	72.97	66.97	67.53	67.61	67.71	67.81
Z5_MH_4344	J3	76.00	70.00	70.94	71.08	71.26	71.48
Z5_MH_4345	J4	90.40	83.40	84.53	84.65	84.79	84.97
Z5_MH_4346	J4	87.93	80.93	82.62	82.80	83.03	83.35
Z5_MH_4347	J4	86.00	79.93	81.66	81.85	82.08	82.43
Z5_MH_4348	J4	86.00	79.50	81.16	81.34	81.56	81.88
Z5_MH_4352	J4	104.00	95.22	96.78	97.01	97.31	98.46
Z5_MH_4387	L4	31.50	28.22	28.63	28.74	28.89	29.11
Z5_MH_4918	K2	50.00	43.42	44.17	44.27	44.39	44.56
Z5_MH_4920	E4	279.96	275.50	276.00	276.10	276.23	279.96
Z5_MH_4921	K2	60.27	54.86	55.47	55.54	55.63	55.75
Z5_MH_5126	M3	18.49	13.89	15.90	16.21	16.70	17.09
Z5_MH_5127	L3	49.48	45.50	45.84	45.88	45.93	46.01
Z5_MH_5128	K3	72.00	62.58	64.33	64.60	64.95	65.34
Z5_MH_5129	K3	74.86	69.17	70.40	70.61	71.00	72.83
Z5_MH_5131	G4	113.51	108.84	109.08	109.11	109.15	109.20
Z5_MH_5132	H4	115.00	112.50	117.66	118.87	120.73	123.55
Z5_MH_5133	H4	115.88	112.63	118.07	119.36	121.33	124.41
Z5_MH_5134	E4	236.00	229.00	229.85	229.99	230.16	230.35
Z5_MH_5136	G4	133.40	124.83	128.19	128.98	129.27	129.54
Z5_MH_5137	G4	132.35	124.76	127.91	128.60	128.85	129.09
Z5_MH_5139	G4	131.41	128.29	131.43	131.63	132.03	133.13
Z5_MH_5141	G4	128.00	125.00	127.20	127.95	128.09	128.25
Z5_MH_5143	G4	126.00	121.80	122.87	122.96	122.99	123.04
Z5_MH_5144	G4	124.42	118.70	119.74	119.90	120.06	120.35
Z5_MH_5146	G4	114.00	106.00	109.19	109.72	110.26	111.51
Z5_MH_5147	G4	114.00	105.50	108.51	108.90	109.33	110.36
Z5_MH_5150	L3	58.00	45.69	49.69	50.29	51.14	52.16
Z5_MH_5152	K2	54.51	47.43	48.72	48.91	49.11	49.43
Z5_MH_5153	M2	-	2.50	2.50	2.50	2.50	2.50
Z5_MH_5154	H3	98.00	92.11	95.10	95.43	95.78	96.19
Z5_MH_5155	H3	102.26	96.26	98.61	98.89	99.18	99.50
Z5_MH_5157	J3	71.22	65.61	66.01	66.07	67.21	68.60
Z5_MH_5159	J3	-	63.00	63.00	63.00	63.00	63.00
Z5_MH_5160	J3	84.52	76.63	76.99	77.04	77.10	77.18
Z5_MH_5162	J3	87.02	82.18	83.92	84.21	84.51	85.15
Z5_MH_5164	J3	87.69	83.16	85.03	85.37	85.71	86.17

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Zone 5 West Existing Nodes

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				5Yr	10Yr	25Yr	100Yr
Z5_MH_5166	H3	88.00	85.23	85.68	85.74	85.81	85.91
Z5_MH_5167	H3	94.00	86.05	87.68	87.78	87.95	88.23
Z5_MH_5168	H3	88.21	82.71	86.99	87.87	88.70	89.89
Z5_MH_5169	H3	101.85	91.08	95.71	97.31	98.49	100.55
Z5_MH_5170	H3	105.55	94.98	95.36	95.41	95.48	95.56
Z5_MH_5281	E4	276.31	270.81	271.51	271.65	271.83	276.31
Z5_MH_5300	L2	52.00	47.00	47.74	49.11	52.11	53.35
Z5_MH_5387	D4	289.18	283.93	284.18	284.22	284.27	284.32
Z5_MH_5561	G4	127.20	124.70	125.88	126.05	126.10	126.16
Z5_MH_5562	L4	63.05	59.55	59.80	59.85	59.91	60.00
Z5_MH_5563	L4	56.14	49.39	49.67	49.72	49.80	49.90
Z5_MH_5567	K4	66.00	56.32	57.31	57.74	58.88	64.33
Z5_MH_5572	M3	16.00	8.54	8.85	8.85	8.85	8.85
Z5_MH_5573	H2	80.00	76.10	76.75	76.85	76.96	77.08
Z5_MH_5577	K2	54.48	51.50	52.00	52.00	52.00	52.01
Z5_MH_5578	M2	44.00	37.25	38.12	38.24	38.39	38.68
Z5_MH_5579	M3	53.37	49.11	50.07	50.71	53.37	53.77
Z5_OF_135	J4	-	80.41	80.60	80.63	80.66	80.71
Z5_OF_4364	M4	-	12.00	12.72	12.76	12.81	12.83
Z5_OF_4365	M4	33.90	30.41	30.59	30.59	30.59	30.60
Z5_OF_4368	M2	-	11.00	12.27	12.44	12.67	12.95
Z5_OF_4370	N3	-	14.56	14.78	14.81	14.84	14.88
Z5_OF_4374	J4	-	46.34	52.73	52.73	52.73	52.73
Z5_OF_4379	E4	309.93	303.93	304.12	304.16	304.21	304.26
Z5_OF_4381	L4	47.35	41.35	41.56	41.60	41.65	41.71
Z5_OF_4388	L4	-	39.66	39.79	39.81	39.84	39.88
Z5_OF_4391	H4	-	54.01	66.33	66.33	66.33	66.33
Z5_OF_4405	M4	-	14.93	16.33	16.33	16.33	16.33
Z5_OF_4406	N2	-	27.07	27.37	27.42	27.48	27.58
Z5_OF_4407	M3	-	9.65	9.89	9.93	9.98	10.05
Z5_OF_4417	F3	-	101.63	101.91	101.93	101.96	102.01
Z5_OF_4420	H3	94.43	88.43	88.56	88.58	88.71	89.91
Z5_OF_4421	H3	91.65	86.15	86.26	86.28	86.30	86.32
Z5_OF_4422	H3	93.80	86.80	89.16	89.39	89.60	89.80
Z5_OF_4423	H3	94.16	92.03	93.06	93.18	93.30	93.42
Z5_OF_4427	G3	-	62.00	62.58	62.63	62.70	62.79
Z5_OF_4432	D4	-	318.91	319.16	319.20	319.25	319.32
Z5_OF_4433	D4	-	341.78	342.61	342.70	342.78	342.78
Z5_OF_4434	D4	-	208.37	208.59	208.63	208.67	208.71
Z5_OF_4435	K4	-	54.35	55.31	55.54	55.74	55.79
Z5_OF_4436	M3	-	7.58	8.73	8.73	8.73	8.73
Z5_OF_4439	M3	-	3.40	7.93	7.93	7.93	7.93
Z5_OF_4440	M3	24.50	20.50	22.37	22.61	23.42	24.34
Z5_OF_4442	L3	59.90	53.90	54.68	54.76	54.87	55.01
Z5_OF_4444	K4	-	38.30	45.63	45.63	45.63	45.63
Z5_OF_4445	K4	-	32.74	33.17	33.25	33.34	33.47
Z5_OF_4446	K4	-	31.41	31.74	31.79	31.85	31.94
Z5_OF_4447	J2	-	38.00	39.21	39.34	39.47	39.59
Z5_OF_4448	J3	-	54.56	55.04	55.14	55.28	55.56
Z5_OF_4449	J3	-	55.07	55.24	55.26	55.29	55.33
Z5_OF_4450	J3	86.55	80.55	82.41	82.62	82.84	84.06
Z5_OF_4452	M2	-	6.00	6.14	6.15	6.18	6.21
Z5_OF_4458	M3	19.00	15.00	16.46	17.33	18.11	18.74
Z5_OF_4461	N3	-	27.01	27.23	27.26	27.31	27.37
Z5_OF_4462	N3	-	6.51	6.88	6.93	7.00	7.08
Z5_OF_4463	M3	-	6.00	6.75	6.75	6.75	6.75
Z5_OF_4464	N3	-	7.85	8.17	8.23	8.30	8.40
Z5_OF_4465	M2	-	6.15	6.40	6.44	6.48	6.53

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Z5_OF_4473	M2	-	18.04	18.31	18.35	18.40	18.47
Z5_OF_4474	M2	-	12.00	12.28	12.30	12.34	12.38
Z5_OF_4478	M3	24.00	20.00	21.23	21.89	23.02	23.95
Z5_OF_4480	M3	20.00	16.00	17.14	17.28	17.54	17.93
Z5_OF_4481	H2	-	47.13	47.40	47.43	47.47	47.55
Z5_OF_4484	E4	307.10	301.10	301.25	301.28	301.31	301.36
Z5_OF_4485	E4	298.67	292.67	292.82	292.85	292.88	292.92
Z5_OF_4487	E4	-	288.00	288.35	288.40	288.46	288.55
Z5_OF_4488	G4	-	111.63	111.71	111.71	111.73	111.74
Z5_OF_4489	G4	-	112.08	112.15	112.16	112.16	112.18
Z5_OF_4490	G4	-	111.53	111.62	111.63	111.64	111.65
Z5_OF_4491	G4	-	117.67	117.76	117.77	117.79	117.80
Z5_OF_4498	E4	-	308.11	308.55	308.62	308.70	308.76
Z5_OF_4499	L4	-	24.67	24.83	24.86	24.90	24.94
Z5_OF_4500	K2	-	40.31	41.01	41.12	41.26	41.45
Z5_OF_4503	J4	108.00	102.00	103.51	103.56	103.62	103.70
Z5_OF_4504	M2	-	4.72	5.25	5.32	5.39	5.49
Z5_OF_4509	F4	177.55	171.55	172.67	172.83	172.99	173.13
Z5_OF_4510	F4	186.57	180.57	181.54	181.70	181.84	181.99
Z5_OF_4511	J2	-	24.61	25.63	25.63	25.63	25.63
Z5_OF_4512	K2	-	21.16	21.46	21.49	21.53	21.58
Z5_OF_4513	K2	-	55.74	56.81	56.90	57.11	57.16
Z5_OF_4514	J2	-	38.66	38.89	38.91	38.94	38.98
Z5_OF_4515	H3	-	72.96	73.17	73.20	73.23	73.27
Z5_OF_4516	H3	92.89	87.39	87.52	87.54	87.56	87.59
Z5_OF_4517	H3	-	53.63	53.91	53.94	53.98	54.04
Z5_OF_4518	H3	-	34.00	34.20	34.23	34.26	34.30
Z5_OF_4519	H2	-	49.54	50.05	50.09	50.15	50.23
Z5_OF_4522	J3	-	67.35	68.06	68.18	68.34	68.57
Z5_OF_4524	J3	-	52.04	52.20	52.22	52.25	52.29
Z5_OF_4525	K3	-	64.03	64.87	65.00	65.17	65.39
Z5_OF_4526	L4	-	26.03	26.39	26.48	26.58	26.72
Z5_OF_4527	L4	-	44.30	44.58	44.63	44.71	44.81
Z5_OF_4529	K2	-	27.91	28.49	28.58	28.61	28.66
Z5_OF_4530	M3	24.40	20.40	22.36	22.60	23.41	24.34
Z5_OF_4531	M3	18.42	14.42	16.59	17.04	17.60	18.08
Z5_OF_4533	H4	114.40	112.40	115.19	116.09	117.45	119.26
Z5_OF_4535	H4	112.11	109.11	112.30	112.90	113.77	114.93
Z5_OF_4536	J4	110.00	107.00	107.87	107.90	107.91	107.95
Z5_OF_4542	L2	-	52.10	53.06	53.10	53.10	53.10
Z5_OF_4544	N3	-	9.98	10.12	10.14	10.16	10.19
Z5_OF_4545	N3	-	11.05	11.18	11.20	11.23	11.26
Z5_OF_4549	G4	-	121.87	122.38	122.48	122.62	122.87
Z5_OF_4550	G4	-	132.00	132.05	132.06	132.06	132.07
Z5_OF_4551	G4	-	134.00	134.05	134.06	134.06	134.07
Z5_OF_4552	G4	-	134.60	134.66	134.67	134.67	134.69
Z5_OF_4553	G4	-	137.60	137.67	137.68	137.69	137.71
Z5_OF_4554	G4	-	137.60	137.74	137.75	137.77	137.79
Z5_OF_4555	G4	-	142.00	142.05	142.05	142.06	142.07
Z5_OF_4556	G4	-	140.20	140.25	140.25	140.26	140.27
Z5_OF_4557	G4	-	143.00	143.07	143.08	143.10	143.12
Z5_OF_4558	G4	-	142.96	143.01	143.01	143.02	143.03
Z5_OF_4559	G4	-	144.83	144.88	144.89	144.90	144.91
Z5_OF_4560	G4	-	136.50	136.63	136.64	136.66	136.68
Z5_OF_4561	G4	-	128.68	128.76	128.77	128.79	128.80
Z5_OF_4562	G4	-	128.00	128.09	128.10	128.12	128.13
Z5_OF_4570	M4	-	36.25	36.54	36.61	36.69	36.79
Z5_OF_4573	K4	-	49.22	49.53	49.58	49.64	49.72

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_OF_4574	K4	68.00	61.79	61.96	62.00	62.05	65.06
Z5_OF_4582	J3	-	55.30	55.81	55.85	55.94	56.06
Z5_OF_4583	J3	-	57.34	57.78	57.85	57.93	58.04
Z5_OF_4585	K3	-	56.42	57.54	57.70	57.90	58.10
Z5_OF_4586	M4	-	25.27	25.61	25.67	25.74	25.83
Z5_OF_4587	M2	-	12.92	13.05	13.07	13.09	13.11
Z5_OF_4588	M3	-	13.29	13.46	13.49	13.52	13.55
Z5_OF_4589	M2	-	6.00	6.26	6.30	6.35	6.41
Z5_OF_4590	L4	-	37.12	38.62	38.62	38.62	38.62
Z5_OF_4591	L4	-	43.71	44.13	44.20	44.29	44.44
Z5_OF_4594	H4	-	109.36	109.69	109.73	109.78	109.84
Z5_OF_4597	N3	-	17.14	17.37	17.39	17.43	17.48
Z5_OF_4599	K4	-	42.90	45.43	45.43	45.43	45.43
Z5_OF_4600	F4	146.29	140.29	141.33	141.48	141.64	141.80
Z5_OF_4602	D4	-	314.11	314.48	314.55	314.63	314.76
Z5_OF_4998	L2	-	40.00	40.85	40.98	41.11	41.30
Z5_OF_4999	H2	-	30.04	30.51	30.58	30.64	30.72
Z5_OF_5000	J3	-	54.35	54.52	54.55	54.57	54.61
Z5_OF_5001	H4	-	99.32	100.46	100.59	100.74	100.92
Z5_OF_5002	K4	-	49.47	49.62	49.64	49.67	49.70
Z5_OF_5003	L4	-	32.62	32.99	33.06	33.13	33.20
Z5_OF_5007	N3	-	25.38	25.72	25.77	25.78	25.80
Z5_OF_5008	N3	-	14.69	14.84	14.86	14.88	14.91
Z5_OF_5009	M4	-	4.09	11.13	11.13	11.13	11.13
Z5_OF_5012	M1	-	16.07	16.39	16.45	16.51	16.61
Z5_OF_5013	M1	-	11.97	12.11	12.13	12.15	12.18
Z5_OF_5014	L1	-	8.80	9.42	9.56	9.80	9.80
Z5_OF_5015	J4	-	42.52	50.53	50.53	50.53	50.53
Z5_OF_5016	J4	-	41.96	51.03	51.03	51.03	51.03
Z5_OF_5017	L1	-	14.00	14.17	14.20	14.23	14.27
Z5_OF_5018	M2	-	6.00	6.27	6.31	6.35	6.42
Z5_OF_5019	L2	-	33.85	34.34	34.40	34.46	34.54
Z5_OF_5020	K2	-	20.97	21.32	21.37	21.43	21.52
Z5_OF_5021	K2	-	20.00	20.08	20.09	20.11	20.12
Z5_OF_5022	L2	-	43.12	43.84	44.12	44.12	44.12
Z5_OF_5024	M2	-	29.21	29.41	29.43	29.46	29.50
Z5_OF_5025	M2	-	35.40	36.20	36.30	36.42	36.57
Z5_OF_5026	M2	-	28.00	28.73	28.82	28.92	29.06
Z5_OF_5027	M3	-	10.10	10.68	10.77	10.86	10.95
Z5_OF_5028	N3	-	21.88	22.06	22.08	22.12	22.17
Z5_OF_5029	L3	-	41.15	41.88	41.92	41.96	42.01
Z5_OF_5030	K2	-	40.90	41.38	41.38	41.39	41.39
Z5_OF_5031	K2	-	46.74	46.97	47.00	47.03	47.07
Z5_OF_5033	J2	-	46.99	47.27	47.30	47.34	47.39
Z5_OF_5034	J2	-	58.59	59.39	59.49	59.55	59.57
Z5_OF_5035	J2	-	44.55	44.96	45.01	45.07	45.16
Z5_OF_5036	J2	-	30.09	30.85	30.98	31.17	31.59
Z5_OF_5037	J2	-	19.49	19.87	19.92	19.99	20.08
Z5_OF_5040	J3	-	60.00	60.28	60.32	60.38	60.45
Z5_OF_5041	J3	-	64.00	64.35	64.41	64.48	64.59
Z5_OF_5042	J3	-	68.00	70.28	70.63	70.95	71.22
Z5_OF_5043	J3	84.66	78.66	81.52	81.88	82.61	84.08
Z5_OF_5044	K3	-	31.20	31.46	31.50	31.56	31.70
Z5_OF_5045	K4	-	55.71	56.23	56.32	56.44	56.64
Z5_OF_5046	K4	-	31.74	31.95	31.98	32.02	32.08
Z5_OF_5047	F4	-	289.19	289.39	289.43	289.47	289.53
Z5_OF_5048	F4	277.85	271.85	271.92	271.93	271.95	271.98
Z5_OF_5049	F4	203.15	191.26	192.49	192.67	192.88	193.10

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_OF_5050	F4	159.06	153.06	154.37	154.56	154.73	154.90
Z5_OF_5051	F4	155.49	149.49	150.95	151.16	151.37	151.59
Z5_OF_5052	F3	-	239.13	239.30	239.34	239.39	239.45
Z5_OF_5053	F3	-	272.80	273.17	273.23	273.31	273.44
Z5_OF_5054	G4	-	92.66	93.06	93.11	93.16	93.19
Z5_OF_5055	G4	-	86.85	87.08	87.11	87.15	87.20
Z5_OF_5056	H3	95.72	89.72	93.35	94.70	96.07	97.93
Z5_OF_5057	H3	98.12	88.85	93.35	94.73	96.09	97.94
Z5_OF_5058	H3	94.38	88.11	93.35	94.71	96.09	97.94
Z5_OF_5059	G3	-	69.49	69.73	69.76	69.81	69.85
Z5_OF_5060	G3	-	61.79	62.06	62.09	62.14	62.22
Z5_OF_5061	G3	-	53.69	54.47	54.69	54.69	54.69
Z5_OF_5062	G4	136.00	125.21	128.51	129.39	129.67	129.96
Z5_OF_5063	G4	123.00	117.63	118.78	118.88	118.95	119.04
Z5_OF_5064	G4	108.14	102.30	104.60	104.82	105.03	105.21
Z5_OF_5065	H3	103.74	98.53	100.52	100.77	101.01	101.24
Z5_OF_5066	H3	104.00	101.00	102.02	102.10	102.15	102.23
Z5_OF_5068	H4	115.22	111.70	117.51	118.55	120.17	122.79
Z5_OF_5069	J4	-	48.00	48.16	48.17	48.19	48.22
Z5_OF_5070	J4	-	39.52	46.13	46.13	46.13	46.13
Z5_OF_5071	K4	-	36.29	46.03	46.03	46.03	46.03
Z5_OF_5072	J4	-	56.14	56.68	56.77	56.88	57.04
Z5_OF_5074	H4	-	57.84	66.33	66.33	66.33	66.33
Z5_OF_5075	H4	-	78.76	79.22	79.30	79.39	79.53
Z5_OF_5076	H4	-	66.27	72.93	72.93	72.93	72.93
Z5_OF_5077	K4	-	48.94	49.12	49.14	49.16	49.18
Z5_OF_5135	F4	162.87	156.87	158.36	158.57	158.77	158.96
Z5_OF_5148	H3	106.00	101.40	103.19	103.37	103.53	103.69
Z5_OF_5560	L4	-	40.42	40.49	41.12	41.52	41.92
Z5_OF_5568	K4	-	50.44	52.76	53.07	53.35	53.51
Z5_OF_5569	M2	-	2.50	3.03	3.11	3.21	3.33
Z5_OF_5570	H4	-	109.36	109.65	109.68	109.73	109.79
Z5_OF_5571	L3	-	37.25	38.80	38.96	39.14	39.35
Z5_OF_5572	H3	-	72.96	75.30	75.32	75.34	75.36
Z5_SGIL_4603	K2	69.34	64.17	70.29	70.70	71.34	72.53
Z5_SGIL_4604	J3	96.00	92.65	92.65	92.65	92.65	93.52
Z5_SGIL_4609	K4	76.48	71.28	72.57	73.16	74.74	76.21
Z5_SGIL_4616	M3	19.15	17.11	17.30	17.32	17.49	17.99
Z5_SGIL_4618	K4	72.00	64.42	65.47	65.76	66.21	67.22
Z5_SGIL_4619	J2	51.44	47.52	47.95	48.00	48.07	48.17
Z5_SGIL_4623	M2	41.72	27.05	35.88	36.02	36.18	36.48
Z5_SGIL_4640	G3	110.00	107.59	107.59	107.59	107.85	108.79
Z5_SGIL_4645	J3	88.00	79.00	85.29	86.09	86.58	87.49
Z5_SGIL_4647	G3	75.53	69.70	70.50	75.53	75.88	76.80
Z5_SGIL_4650	L3	56.00	47.75	48.29	48.37	48.48	50.11
Z5_SGIL_4660	J4	96.55	89.16	89.34	89.37	89.40	89.45
Z5_SGIL_4672	J4	100.40	92.73	93.05	93.13	93.22	93.35
Z5_SGIL_4683	J4	-	72.69	72.90	72.94	72.98	73.03
Z5_SGIL_4684	K4	65.48	60.64	61.16	61.25	61.38	61.58
Z5_SGIL_4685	G4	144.00	137.31	137.83	137.93	138.08	138.17
Z5_SGIL_4688	G4	142.50	138.57	140.48	141.35	142.50	142.60
Z5_SGIL_4689	M4	11.22	9.15	11.66	11.83	11.98	12.15
Z5_SGIL_4697	H3	86.51	79.78	79.99	80.02	80.05	80.10
Z5_SGIL_4698	H5	126.50	122.19	122.50	122.53	124.81	126.50
Z5_SGIL_4700	H5	129.69	125.09	125.09	125.09	125.09	128.30
Z5_SGIL_4709	K4	84.00	78.24	78.60	78.77	84.00	84.00
Z5_SGIL_4710	K4	79.97	74.30	74.69	74.74	78.59	79.97
Z5_SGIL_4711	M3	24.25	18.83	19.96	20.12	20.34	20.61

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Zone 5 West Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z5_SGIL_4717	H2	85.54	82.00	82.88	83.00	83.16	83.61
Z5_SGIL_4718	M3	29.58	22.37	23.00	23.86	26.02	28.96
Z5_SGIL_4721	M2	44.47	34.22	39.69	39.74	39.81	39.85
Z5_SGIL_4724	M3	51.83	47.08	47.29	47.32	47.36	47.95
Z5_SGIL_4729	K4	82.00	76.27	76.83	76.92	77.03	77.19
Z5_SGIL_4746	K4	79.47	68.39	69.03	69.12	69.21	69.29
Z5_SGIL_4747	K3	71.95	66.45	66.92	67.01	67.11	67.28
Z5_SGIL_4749	L4	53.34	49.17	49.44	49.47	49.51	52.45
Z5_SGIL_4752	M2	34.82	33.45	33.58	33.60	33.62	33.64
Z5_SGIL_4753	N3	33.12	28.12	28.25	28.28	28.30	28.34
Z5_SGIL_4754	N3	31.00	26.00	26.14	26.16	26.19	26.22
Z5_SGIL_4755	M3	17.35	16.18	16.43	16.47	16.53	16.60
Z5_SGIL_4757	L2	54.00	47.17	48.03	48.16	48.30	48.50
Z5_SGIL_4763	H4	90.13	83.17	83.47	83.51	83.56	83.63
Z5_SGIL_4765	G3	125.96	116.13	122.78	123.54	124.20	124.75
Z5_SGIL_4769	G4	129.14	123.00	123.41	123.47	123.51	123.55
Z5_SGIL_4779	M3	50.28	45.53	45.53	45.53	45.90	46.52
Z5_SGIL_4783	K4	61.93	59.93	60.25	60.29	60.35	60.43
Z5_SGIL_4795	J2	28.00	26.27	26.56	26.59	26.63	26.69
Z5_SGIL_4796	K2	64.00	61.00	64.00	64.07	64.24	64.58
Z5_SGIL_4799	L3	58.00	49.29	50.09	50.34	51.17	52.70
Z5_SGIL_4800	J3	78.47	68.02	73.77	73.92	74.11	74.47
Z5_SGIL_4801	K3	66.00	64.00	64.58	64.62	64.82	65.00
Z5_SGIL_4803	K3	72.00	67.17	69.48	69.78	70.37	71.27
Z5_SGIL_4809	K2	54.00	48.96	49.95	50.13	50.35	50.76
Z5_SGIL_4810	K2	54.00	47.54	48.81	49.07	49.39	49.97
Z5_SGIL_4812	K4	77.34	71.42	71.66	71.70	71.74	71.81
Z5_SGIL_4845	H4	116.00	112.00	112.00	112.00	112.00	112.00
Z5_SGMH_4846	H3	106.00	102.00	103.38	103.52	103.63	103.82
Z5_SGMH_4847	M2	36.00	27.59	28.28	28.37	28.49	28.62
Z5_SGMH_4848	M2	48.86	42.81	43.84	44.13	44.88	46.41
Z5_SGMH_4852	M3	24.00	13.22	13.85	13.95	14.05	14.17
Z5_SGMH_4853	M3	18.66	13.66	14.56	14.66	14.75	14.83
Z5_SGMH_4855	M2	22.00	11.20	11.73	11.82	11.92	12.05
Z5_SGMH_4856	M2	48.00	36.58	37.06	37.11	37.14	37.19
Z5_SGMH_4857	L3	56.00	45.10	45.98	46.04	46.11	46.19
Z5_SGMH_4858	L3	54.73	38.25	40.03	40.23	40.46	40.72
Z5_SGMH_4859	L3	59.24	45.15	49.14	49.52	50.05	50.69
Z5_SGMH_4860	J4	103.98	94.03	95.73	95.89	96.05	96.26
Z5_SGMH_4862	J2	74.00	69.75	74.00	74.46	74.75	75.32
Z5_SGMH_4863	N3	35.49	30.24	30.48	30.50	30.54	30.59
Z5_SGMH_4864	K3	64.00	56.50	57.26	57.38	57.55	57.77
Z5_SGMH_4867	J2	38.47	31.14	31.96	32.11	32.35	33.47
Z5_SGMH_4868	M2	38.00	33.92	34.20	34.23	34.26	34.30
Z5_SGMH_4869	K3	70.00	61.31	62.48	62.67	62.89	63.12
Z5_SGMH_4872	J3	66.00	56.63	57.00	57.06	57.13	57.18
Z5_SGMH_4875	L4	31.00	27.72	28.42	28.55	28.71	28.94
Z5_SGMH_4876	L1	18.80	10.50	11.05	11.66	12.42	12.81
Z5_SGMH_4877	L1	18.80	10.50	11.05	11.66	12.42	12.81

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
NEW_Z5_CB_6000	H8	137.00	132.50	132.97	133.01	133.06	133.13
NEW_Z5_CB_6001	H8	142.50	139.60	140.17	140.28	141.54	142.51
NEW_Z5_CB_6002	H8	142.00	137.70	138.53	138.90	139.68	140.88
NEW_Z5_CB_6003	H8	140.00	137.05	137.61	137.67	137.75	137.89
NEW_Z5_CB_6004	G8	181.50	178.80	181.70	182.20	183.00	184.88
NEW_Z5_CB_6005	G8	181.50	178.15	179.04	179.12	179.38	181.10
NEW_Z5_CB_6010	H7	122.50	116.75	116.89	116.90	116.92	116.94
NEW_Z5_CB_6011	H7	122.00	115.70	116.01	116.04	116.07	116.12
NEW_Z5_CB_6012	H7	122.50	115.55	115.88	115.90	115.93	115.97
NEW_Z5_CB_6013	H7	122.00	115.48	115.82	115.84	115.86	115.90
NEW_Z5_CB_6014	H7	118.00	114.70	115.15	115.19	115.24	115.34
NEW_Z5_CB_6050	K5	65.30	61.30	62.86	63.44	64.21	65.29
NEW_Z5_CB_6051	K5	65.50	61.50	65.79	66.28	67.03	68.31
NEW_Z5_IL_6022	H6	53.00	50.00	50.41	50.45	50.95	55.97
NEW_Z5_IL_6100	H7	141.00	131.18	132.87	133.10	134.98	137.68
NEW_Z5_IL_6101	G7	146.00	137.28	138.74	138.83	138.94	139.09
NEW_Z5_IL_6102	G7	164.00	154.00	155.10	155.19	155.30	155.44
NEW_Z5_IL_6103	G7	214.00	196.00	200.76	201.75	203.20	205.45
NEW_Z5_IL_6104	G7	214.00	195.00	195.44	195.47	195.50	195.55
NEW_Z5_IL_6112	G7	234.00	210.00	210.44	210.50	210.57	210.67
NEW_Z5_IL_6200	F5	127.00	118.00	119.02	119.05	119.09	119.15
NEW_Z5_IL_6201	F5	135.50	128.50	129.91	129.94	130.00	130.08
NEW_Z5_IL_6202	F5	138.00	132.00	136.38	135.65	136.69	137.36
NEW_Z5_IL_6203	F5	143.00	137.00	141.41	142.17	143.37	145.70
NEW_Z5_IL_6204	F5	144.00	139.00	144.08	145.25	147.06	150.07
NEW_Z5_IL_6205	F5	0.00	143.00	148.74	150.38	152.95	157.20
NEW_Z5_IL_6300	H7	124.00	122.43	126.06	126.46	127.02	127.90
NEW_Z5_IL_6301	H7	126.00	124.80	126.09	126.50	127.05	127.94
NEW_Z5_IL_6302	H7	127.00	125.34	126.39	126.97	127.38	128.32
NEW_Z5_IL_6303	H7	127.00	125.50	127.32	127.84	128.63	129.86
NEW_Z5_IL_6402	H5	88.50	82.00	82.00	82.00	82.00	82.00
NEW_Z5_IL_6403	H5	88.00	82.50	82.50	82.50	82.50	82.50
NEW_Z5_IL_6404	H5	90.00	84.50	84.50	84.50	84.50	84.50
NEW_Z5_IL_6407	H5	97.00	91.50	91.50	91.50	91.50	91.50
NEW_Z5_IL_6409	J5	96.00	88.00	88.36	88.39	88.42	88.47
NEW_Z5_IL_6411	J5	115.00	109.50	109.50	109.50	109.50	109.50
NEW_Z5_IL_6412	J5	95.50	89.50	90.26	90.33	90.41	90.53
NEW_Z5_IL_6413	H5	96.00	90.50	91.11	91.18	91.26	91.38
NEW_Z5_IL_6414	H5	96.00	90.50	90.50	90.50	90.50	90.50
NEW_Z5_IL_6415	H5	97.50	92.00	92.73	92.81	92.90	93.05
NEW_Z5_IL_6416	J5	97.50	93.00	93.00	93.00	93.00	93.05
NEW_Z5_IL_6417	H5	100.00	94.50	94.50	94.50	94.50	94.50
NEW_Z5_IL_6418	J5	95.50	90.00	90.26	90.33	90.41	90.53
NEW_Z5_IL_6500	M4	35.50	28.53	32.08	32.34	32.66	32.97
NEW_Z5_IL_6501	M4	35.50	27.63	31.53	31.75	32.02	32.29
NEW_Z5_IL_6502	M4	38.00	26.83	30.73	31.03	31.39	31.76
NEW_Z5_IL_6503	M4	38.00	25.75	30.21	30.42	30.67	30.93
NEW_Z5_IL_6504	M4	31.00	24.39	27.14	27.35	27.61	27.89
NEW_Z5_IL_6505	M4	32.00	14.50	17.29	17.43	17.61	17.79
NEW_Z5_IL_6506	M4	30.00	12.98	16.07	16.32	16.63	16.98
NEW_Z5_IL_6507	N4	34.50	28.70	29.85	31.88	34.50	34.64
NEW_Z5_IL_6508	N4	34.55	30.03	30.03	31.87	34.56	34.64
NEW_Z5_MH_6006	G8	171.20	165.20	171.20	171.20	171.20	172.04
NEW_Z5_MH_6020	H6	38.00	34.66	41.20	42.43	44.25	46.91
NEW_Z5_MH_6021	H6	38.00	34.82	41.81	43.25	45.38	48.47
NEW_Z5_MH_6040	G6	74.00	50.11	51.99	53.48	54.77	57.00
NEW_Z5_MH_6052	K5	66.00	60.83	63.25	63.63	64.03	64.46
NEW_Z5_MH_6103	G7	158.00	150.13	151.14	151.21	151.34	151.75
NEW_Z5_MH_6400	H5	70.00	61.00	61.75	61.82	61.92	62.06

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
NEW_Z5_MH_6401	H5	78.00	69.00	69.96	70.06	70.18	70.35
NEW_Z5_MH_6405	J5	100.00	83.00	84.79	84.98	85.21	85.53
NEW_Z5_MH_6406	J5	96.00	83.50	85.20	85.40	85.64	85.99
NEW_Z5_MH_6408	J5	96.00	86.00	87.72	87.91	88.15	88.49
NEW_Z5_MH_6410	J5	116.00	109.00	109.00	109.00	109.00	109.00
NEW_Z5_MH_6415	H5	94.00	87.00	88.66	88.86	89.12	89.50
NEW_Z5_MH_6600	H7	127.00	124.10	127.64	127.95	128.43	129.27
NEW_Z5_MH_6601	H7	124.00	120.50	122.08	122.05	122.47	122.61
NEW_Z5_OF_6402	J5	-	50.83	51.52	51.59	51.68	51.78
NEW_Z5_OF_6510	M4	-	11.61	14.41	14.62	14.88	15.18
NEW_Z5_OF_6600	H7	-	115.10	116.48	116.48	116.50	116.52
NEW_Z5_OUT_6000	H8	137.00	130.00	130.30	130.32	130.36	130.40
NEW_Z5_OUT_6001	H8	-	131.00	131.55	131.61	131.69	131.82
NEW_Z5_OUT_6002	H7	-	112.10	113.26	113.34	113.41	113.47
NEW_Z5_OUT_6003	H7	-	113.40	113.66	113.67	113.69	113.71
ORCHARGE_STORAGE	H7	127.00	126.11	127.64	127.96	128.43	129.27
STOR-1	L5	57.92	44.60	53.47	57.50	58.00	58.00
Z5_CB_101	N4	34.00	23.19	30.09	30.52	31.21	32.56
Z5_CB_102	N4	34.00	31.55	31.81	31.84	31.91	33.50
Z5_CB_103	N4	31.73	28.90	29.43	29.98	31.73	31.78
Z5_CB_104	N4	35.68	30.93	31.44	31.53	31.82	33.19
Z5_CB_105	M5	50.00	48.92	49.23	49.28	49.34	49.44
Z5_CB_106	M5	54.00	51.67	52.17	52.31	52.53	54.00
Z5_CB_107	M5	54.00	51.75	52.29	52.44	52.70	54.00
Z5_CB_108	M5	49.11	45.42	45.94	45.99	46.06	46.16
Z5_CB_109	M5	50.29	49.29	49.97	50.16	50.41	50.88
Z5_CB_110	M5	50.00	49.00	49.61	49.77	49.93	50.16
Z5_CB_116	H8	133.39	128.39	128.70	128.74	128.80	128.87
Z5_CB_120	M5	51.26	49.68	49.92	49.97	50.04	50.13
Z5_CB_141	J5	96.56	94.85	95.23	95.27	96.23	97.19
Z5_CB_142	J5	95.67	91.67	92.84	94.78	95.76	96.62
Z5_CB_143	J5	94.00	89.41	91.61	92.89	94.00	94.10
Z5_CB_144	J5	91.95	88.12	88.52	88.56	88.60	88.66
Z5_CB_145	J5	91.96	87.54	90.81	91.97	92.32	93.18
Z5_CB_146	J5	91.05	86.55	87.27	87.34	87.37	87.42
Z5_CB_147	J5	90.00	86.42	87.34	87.45	87.55	87.59
Z5_CB_148	J5	88.15	80.23	81.82	81.99	82.09	82.17
Z5_CB_150	K5	80.75	75.00	76.08	76.22	76.35	78.54
Z5_CB_154	K5	74.00	69.69	71.00	71.98	73.51	74.37
Z5_CB_155	J5	87.54	82.53	84.09	87.62	88.89	91.67
Z5_CB_156	J5	88.00	86.22	86.97	88.55	90.00	92.97
Z5_CB_158	J5	84.85	82.10	83.02	83.22	84.85	85.35
Z5_CB_159	J5	85.87	83.45	84.39	84.57	85.97	87.47
Z5_CB_160	J5	61.68	55.13	55.85	55.97	56.12	56.37
Z5_CB_161	J5	59.15	54.98	55.85	55.97	56.12	56.37
Z5_CB_211	H5	106.56	101.56	102.41	103.73	104.10	105.54
Z5_CB_212	H5	120.81	95.46	96.12	96.19	96.28	96.39
Z5_CB_213	N5	42.00	38.97	40.30	40.47	40.64	41.10
Z5_CB_228	N5	42.38	39.30	40.74	41.02	41.37	41.90
Z5_CB_229	H5	120.00	115.21	115.93	116.02	116.13	116.31
Z5_CB_230	H5	118.00	113.33	114.10	114.19	114.31	114.52
Z5_CB_231	H5	114.00	109.25	110.29	110.42	110.60	110.93
Z5_CB_232	H5	113.53	111.28	111.82	111.89	112.00	113.02
Z5_CB_233	H5	112.00	109.88	110.27	110.31	110.36	110.47
Z5_CB_237	H6	123.38	120.05	120.26	120.30	120.35	120.41
Z5_CB_241	H7	105.08	100.08	100.51	100.59	100.67	100.74
Z5_CB_248	H8	123.69	114.34	114.76	114.81	114.89	115.00
Z5_CB_249	H8	159.23	154.56	154.78	155.05	157.48	157.89
Z5_CB_250	H8	160.33	156.12	156.37	156.40	158.24	158.47

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_CB_251	H8	149.70	145.28	145.74	145.80	145.87	146.08
Z5_CB_252	H8	150.28	146.95	147.60	147.71	148.61	149.93
Z5_CB_253	H8	151.54	147.92	148.34	148.41	148.65	150.51
Z5_CB_254	H8	146.00	141.10	141.64	141.71	141.81	142.54
Z5_CB_255	H8	146.00	142.07	142.07	142.07	142.07	142.54
Z5_CB_256	H8	146.00	143.18	143.18	143.18	143.18	143.18
Z5_CB_257	H8	147.65	144.35	144.35	144.35	144.35	144.35
Z5_CB_258	H8	149.54	145.34	145.34	145.34	145.34	145.34
Z5_CB_259	H8	149.67	147.12	147.12	147.12	147.12	147.12
Z5_CB_34	F5	313.76	311.68	311.77	311.79	311.81	311.84
Z5_CB_347	G8	176.61	174.57	174.74	174.76	174.79	174.82
Z5_CB_358	G8	157.76	155.84	157.92	158.13	158.41	158.95
Z5_CB_359	G8	156.00	152.25	152.56	152.60	152.64	152.77
Z5_CB_361	G8	160.00	156.38	161.44	162.32	163.14	164.45
Z5_CB_362	G8	161.78	159.66	163.17	163.99	164.96	166.73
Z5_CB_363	G8	162.00	159.83	163.31	163.99	164.95	166.72
Z5_CB_367	G8	154.00	146.60	147.64	148.28	154.07	155.29
Z5_CB_368	G8	154.00	145.74	146.66	146.92	152.84	153.47
Z5_CB_369	G8	154.00	145.95	145.95	146.31	152.51	153.15
Z5_CB_370	H8	155.28	146.72	146.72	146.72	154.46	155.14
Z5_CB_371	G8	151.73	145.90	146.14	146.17	151.73	151.73
Z5_CB_372	G8	148.00	140.52	141.08	144.88	148.00	148.15
Z5_CB_373	G8	152.00	141.89	142.90	146.07	150.73	150.73
Z5_CB_374	G8	152.00	147.90	148.10	148.12	148.14	148.18
Z5_CB_375	G8	157.44	154.00	154.23	154.26	154.29	154.33
Z5_CB_376	G8	158.11	155.50	155.85	155.89	155.94	156.01
Z5_CB_377	G8	150.37	146.62	146.62	146.62	146.62	146.62
Z5_CB_378	G8	146.32	136.92	139.47	141.90	144.90	145.18
Z5_CB_379	G8	180.06	178.00	178.21	178.23	178.26	178.30
Z5_CB_380	G8	183.55	181.55	181.76	181.78	181.81	181.85
Z5_CB_45	K4	68.00	63.69	64.37	64.51	64.68	66.37
Z5_CB_46	K5	66.00	62.34	63.04	63.22	63.60	65.31
Z5_CB_464	N4	43.94	38.02	38.65	40.62	42.57	43.94
Z5_CB_47	K5	66.57	61.84	62.84	63.08	63.48	64.87
Z5_CB_471	M4	42.00	37.21	42.00	42.00	42.00	42.00
Z5_CB_472	M4	42.00	37.10	42.00	42.00	42.00	42.00
Z5_CB_474	N4	42.00	37.55	39.01	40.90	41.87	42.35
Z5_CB_479	M5	48.00	45.20	45.47	45.49	45.52	45.56
Z5_CB_482	M5	54.00	51.92	52.56	52.76	53.16	54.05
Z5_CB_483	M5	54.00	52.09	52.57	52.78	53.20	54.07
Z5_CB_486	M5	50.00	48.83	49.09	49.14	49.21	49.31
Z5_CB_4917	L5	58.00	52.03	58.46	58.47	58.99	59.70
Z5_CB_503	L5	61.43	57.06	57.68	57.78	58.48	60.33
Z5_CB_504	L5	58.00	49.71	53.53	57.56	58.18	58.74
Z5_CB_505	L5	57.93	49.85	53.52	57.53	58.10	58.41
Z5_CB_506	L5	66.00	62.42	63.05	66.00	66.01	66.58
Z5_CB_507	L5	66.00	61.18	62.02	62.41	63.60	65.20
Z5_CB_508	L5	56.00	54.58	59.27	60.78	63.08	66.80
Z5_CB_519	N4	34.00	32.00	32.00	32.00	32.00	32.00
Z5_CB_528	N4	36.02	29.94	31.88	32.31	33.84	34.86
Z5_CB_53	N5	38.91	36.16	36.44	36.48	36.53	36.60
Z5_CB_543	N4	37.79	32.29	33.24	33.91	36.03	37.16
Z5_CB_545	N4	38.00	32.63	34.00	34.85	37.86	38.16
Z5_CB_549	K5	68.00	65.42	67.48	68.21	69.11	70.76
Z5_CB_551	N4	40.00	34.00	34.97	36.03	38.65	39.65
Z5_CB_552	K5	73.21	70.34	70.82	70.90	71.01	71.20
Z5_CB_561	K5	72.00	66.17	67.89	68.31	68.77	69.19
Z5_CB_563	K5	72.00	65.17	68.48	68.83	69.16	69.44
Z5_CB_564	J5	75.30	69.59	70.30	71.11	71.97	75.30

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_CB_57	M5	59.30	58.05	58.26	58.29	58.34	58.39
Z5_CB_58	M5	50.00	48.17	48.41	48.46	48.53	48.61
Z5_CB_594	G7	232.97	227.97	228.11	228.13	228.15	228.19
Z5_CB_597	E7	391.31	386.31	386.71	386.78	386.86	386.99
Z5_CB_598	G6	84.18	81.31	82.25	82.37	82.41	82.76
Z5_CB_615	H5	102.71	98.02	99.25	99.50	100.07	101.45
Z5_CB_637	J5	88.00	84.27	84.79	84.86	84.94	86.50
Z5_CB_638	K5	75.15	66.17	69.17	70.04	71.40	73.59
Z5_CB_639	K5	74.58	65.50	68.88	69.62	70.76	72.58
Z5_CB_663	H5	56.42	54.34	55.21	56.02	56.91	58.41
Z5_CB_692	N4	36.00	35.00	36.48	37.67	39.69	43.53
Z5_CB_693	N4	34.44	30.57	31.20	31.25	31.34	33.62
Z5_CB_70	H7	129.60	123.35	124.86	125.69	126.42	127.83
Z5_CB_714	G8	146.04	136.00	138.58	140.55	142.30	142.87
Z5_CB_715	G8	138.76	135.00	137.25	138.53	139.08	139.55
Z5_CB_716	H8	171.84	165.88	165.98	166.06	166.08	166.11
Z5_CB_717	H8	156.23	148.83	151.72	152.77	153.95	156.43
Z5_CB_725	H8	130.51	118.67	119.05	119.11	119.17	119.26
Z5_CB_726	H8	130.00	120.61	121.01	121.06	121.13	121.23
Z5_CB_731	H8	131.61	123.19	124.16	124.22	124.29	124.39
Z5_CB_738	H8	104.00	96.50	99.70	99.79	99.81	100.30
Z5_CB_748	M5	48.41	45.34	45.53	45.56	45.58	45.62
Z5_CB_791	M5	57.26	55.43	57.27	57.68	58.24	59.31
Z5_CB_805	J5	92.00	88.42	88.85	88.89	88.94	89.01
Z5_CB_822	J5	103.90	101.36	101.36	101.36	101.36	101.36
Z5_CB_823	J5	94.00	90.00	91.62	92.89	94.01	94.10
Z5_CB_824	J5	91.41	88.62	89.23	89.50	89.88	90.47
Z5_CB_846	J5	88.00	83.90	84.82	84.93	85.06	85.73
Z5_CB_852	K5	74.00	67.90	72.83	73.03	73.15	73.41
Z5_CB_854	K5	82.00	75.76	76.74	77.05	77.34	77.82
Z5_CB_855	K5	82.00	75.46	76.44	76.56	76.61	76.68
Z5_CB_856	K5	84.00	77.58	80.03	81.13	81.31	81.50
Z5_CB_857	K5	84.67	78.22	83.62	84.80	85.76	87.77
Z5_CB_860	J5	88.00	83.75	84.18	84.23	84.30	85.29
Z5_CB_861	J5	86.71	81.42	82.49	82.63	82.84	85.58
Z5_CB_862	J5	87.34	83.59	84.18	84.25	84.36	85.39
Z5_CB_866	K5	80.55	74.40	75.48	75.62	75.67	75.75
Z5_CB_883	K5	76.18	70.48	72.84	73.03	73.16	73.42
Z5_IL_1000	F6	60.00	57.42	66.00	67.66	69.77	73.37
Z5_IL_1001	F6	60.00	58.79	72.93	77.13	82.92	92.12
Z5_IL_1002	H6	60.88	54.76	55.37	55.55	60.36	61.68
Z5_IL_1003	H6	63.95	56.10	56.42	56.46	59.53	61.82
Z5_IL_1004	H6	75.13	70.63	70.87	70.89	70.92	70.97
Z5_IL_1005	H6	78.86	76.25	76.49	76.52	76.55	76.60
Z5_IL_1018	L5	68.00	65.92	66.10	66.16	66.79	68.00
Z5_IL_1063	L5	59.30	51.01	53.54	57.60	58.36	59.30
Z5_IL_1064	L5	59.63	55.61	55.80	57.59	58.35	59.34
Z5_IL_1121	L5	60.00	51.21	53.55	57.62	58.42	59.60
Z5_IL_1168	H6	39.07	36.65	37.52	37.61	37.74	38.00
Z5_IL_1169	H6	38.00	35.98	36.70	36.77	36.85	37.14
Z5_IL_1180	N5	44.00	41.01	41.87	41.95	42.05	42.18
Z5_IL_1181	N5	46.00	42.80	43.68	43.79	43.93	44.37
Z5_IL_1182	N5	45.41	42.33	42.94	43.01	43.11	43.25
Z5_IL_1196	N5	48.00	39.86	39.86	39.86	39.86	39.86
Z5_IL_1197	N5	48.00	43.18	43.31	43.32	43.33	43.35
Z5_IL_1202	M5	48.00	44.92	46.36	46.98	47.98	48.43
Z5_IL_1206	F6	47.17	40.67	47.45	47.50	47.57	47.70
Z5_IL_1207	F6	55.60	50.23	51.21	51.42	51.57	51.76
Z5_IL_1208	F6	56.00	51.63	53.24	53.42	53.60	53.94

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_IL_1209	G6	56.00	53.08	56.07	57.04	58.06	59.57
Z5_IL_1210	G6	56.00	54.71	54.97	55.03	55.11	55.28
Z5_IL_1211	G6	57.74	55.24	56.10	57.07	57.98	59.14
Z5_IL_1215	G8	188.43	186.51	186.51	186.51	186.51	186.51
Z5_IL_1219	N4	36.00	30.60	30.60	30.60	30.60	30.60
Z5_IL_1220	N4	36.00	32.30	32.73	32.81	32.91	33.05
Z5_IL_1221	N4	36.00	29.92	31.29	31.58	32.84	33.67
Z5_IL_1222	N4	36.80	30.71	32.05	32.67	34.37	35.46
Z5_IL_1223	N4	36.00	32.94	33.10	33.12	33.15	33.66
Z5_IL_1224	N4	36.61	33.66	33.79	33.80	34.18	35.30
Z5_IL_1225	N4	37.39	31.44	32.31	32.84	34.67	35.98
Z5_IL_1226	N4	38.02	32.02	33.05	33.88	36.66	38.11
Z5_IL_1227	N4	40.00	34.10	34.67	34.77	37.68	39.72
Z5_IL_1228	N4	40.00	38.15	38.34	38.36	38.40	39.76
Z5_IL_1229	N4	40.00	35.80	36.34	36.43	37.81	40.14
Z5_IL_1230	N4	40.00	37.90	38.18	38.23	38.28	40.15
Z5_IL_1232	N4	36.77	32.57	32.92	33.80	35.92	36.87
Z5_IL_1233	N4	36.94	33.11	33.40	33.64	36.33	36.94
Z5_IL_1234	N4	38.00	32.34	33.67	34.32	36.51	37.64
Z5_IL_1235	N4	38.00	33.95	34.39	34.86	38.00	38.19
Z5_IL_1236	N4	39.65	36.15	36.35	36.38	39.13	39.66
Z5_IL_1237	N4	40.00	34.50	35.36	36.44	38.95	40.00
Z5_IL_1238	N4	40.00	37.90	38.10	38.12	38.95	40.06
Z5_IL_1239	N4	41.71	36.56	37.52	39.05	40.98	41.74
Z5_IL_1240	N4	41.77	37.32	37.53	39.18	41.00	41.77
Z5_IL_1241	N4	42.00	37.21	38.28	40.09	41.57	42.08
Z5_IL_1242	N4	42.00	40.25	40.43	40.45	41.61	42.11
Z5_IL_1243	M4	42.31	38.06	40.08	42.06	42.45	42.96
Z5_IL_1244	M4	42.55	38.90	40.17	42.19	42.56	43.02
Z5_IL_1245	M4	42.00	40.00	40.22	42.03	42.49	42.99
Z5_IL_1246	N4	39.82	29.96	30.78	30.92	31.08	31.20
Z5_IL_1247	N4	40.00	33.25	34.09	34.26	34.53	37.95
Z5_IL_1248	N4	40.00	36.65	36.82	36.84	36.87	36.91
Z5_IL_1249	N4	40.00	37.70	37.96	38.00	38.04	38.11
Z5_IL_1250	N4	41.56	35.91	36.77	37.12	39.19	41.56
Z5_IL_1251	N4	41.48	38.38	38.54	38.56	39.19	41.04
Z5_IL_1253	M4	44.00	40.45	40.83	40.99	43.93	44.63
Z5_IL_1254	M4	44.00	41.05	41.55	41.64	44.21	45.06
Z5_IL_1256	M4	44.00	38.55	39.34	40.75	43.54	44.14
Z5_IL_1257	N4	42.61	36.72	37.84	39.16	41.38	42.73
Z5_IL_1258	N4	43.20	37.25	38.04	39.54	41.85	43.20
Z5_IL_1259	N4	42.68	40.08	40.23	40.25	41.40	42.76
Z5_IL_1260	N4	39.40	35.2	36.10	36.27	36.37	36.47
Z5_IL_1261	N4	39.88	37.83	38.07	38.10	38.14	38.20
Z5_IL_1262	N4	41.49	36.24	37.56	38.52	38.88	39.30
Z5_IL_1263	N4	41.47	39.32	39.45	39.47	39.49	39.52
Z5_IL_1264	N4	42.00	36.60	38.24	39.80	40.33	40.95
Z5_IL_1265	N4	42.00	39.73	39.91	39.93	40.34	41.03
Z5_IL_1266	N4	43.32	37.87	39.04	41.15	41.86	42.41
Z5_IL_1267	N4	43.44	41.59	41.75	41.77	41.80	42.45
Z5_IL_1268	N5	44.00	41.80	41.80	41.80	42.42	42.98
Z5_IL_1269	N5	44.00	41.65	41.77	42.38	43.15	43.51
Z5_IL_1270	M5	44.53	39.85	40.79	44.00	44.53	44.72
Z5_IL_1280	N4	36.00	34.08	34.21	34.23	34.26	34.29
Z5_IL_1281	M5	44.62	42.62	42.76	44.00	44.63	44.73
Z5_IL_1282	M5	44.43	40.93	41.19	44.26	44.43	44.69
Z5_IL_1283	M5	44.16	41.96	41.96	43.84	44.36	44.69
Z5_IL_1284	M5	45.49	44.32	44.79	45.28	45.72	46.03
Z5_IL_1285	M5	45.65	44.48	44.90	45.31	45.74	46.05

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_IL_1286	M5	45.00	41.20	41.65	44.42	45.00	45.09
Z5_IL_1287	M5	46.75	45.03	45.90	46.24	46.86	47.15
Z5_IL_1288	M5	46.97	45.12	45.98	46.39	47.04	47.33
Z5_IL_1289	N4	38.87	36.32	36.46	36.48	36.50	36.54
Z5_IL_1351	G8	164.44	160.43	164.53	165.15	166.22	168.01
Z5_IL_1414	H6	35.96	29.69	35.96	35.96	36.00	36.01
Z5_IL_1415	H6	36.00	33.83	35.44	35.48	36.01	36.01
Z5_IL_1416	H6	40.00	37.15	37.54	38.67	40.01	40.13
Z5_IL_1417	H6	40.00	38.17	38.65	38.71	40.12	40.37
Z5_IL_1418	H6	39.60	36.52	36.76	38.50	39.68	40.16
Z5_IL_1419	H6	39.60	37.36	37.36	38.49	39.61	40.06
Z5_IL_1420	H6	39.90	36.48	37.00	38.97	40.06	40.40
Z5_IL_1421	H6	40.00	37.36	37.50	39.06	40.14	40.46
Z5_IL_1422	H6	34.00	32.50	33.41	33.52	34.00	34.60
Z5_IL_1423	H6	33.78	31.45	31.98	32.08	32.79	33.80
Z5_IL_1434	M4	41.77	39.77	39.77	39.77	39.77	39.77
Z5_IL_1435	M4	42.00	37.63	38.20	38.30	39.48	42.00
Z5_IL_1437	M4	44.00	39.20	40.87	42.17	44.03	44.86
Z5_IL_1438	M4	44.53	38.37	40.78	42.04	44.53	44.73
Z5_IL_1439	M4	44.81	42.14	42.33	42.35	42.86	44.63
Z5_IL_1440	M5	46.00	40.38	40.77	40.83	42.53	44.90
Z5_IL_1441	M5	48.00	44.92	45.11	45.13	45.16	46.36
Z5_IL_1442	M5	48.00	42.99	43.60	43.66	43.86	46.80
Z5_IL_1443	M5	48.00	41.92	42.39	42.59	45.18	48.20
Z5_IL_1444	M5	52.00	48.25	51.60	52.00	52.36	52.91
Z5_IL_1445	M5	58.00	56.33	57.44	57.94	58.53	59.66
Z5_IL_1446	M5	58.00	56.67	58.85	59.99	61.62	64.48
Z5_IL_1447	M4	40.61	32.90	35.71	35.87	36.07	36.27
Z5_IL_1448	M4	39.55	30.67	34.13	34.37	34.66	34.92
Z5_IL_1449	M4	44.00	39.88	40.32	40.47	41.91	44.08
Z5_IL_1450	M5	46.00	41.88	42.03	42.04	42.06	43.93
Z5_IL_1451	M5	50.00	44.04	44.93	45.12	47.16	49.92
Z5_IL_1452	M5	50.42	44.67	45.37	45.55	47.95	50.45
Z5_IL_1453	M5	52.00	49.00	52.54	52.97	53.51	54.36
Z5_IL_1454	M5	52.00	47.92	52.34	52.76	53.16	53.83
Z5_IL_1455	M5	52.62	48.62	53.02	53.36	53.81	54.47
Z5_IL_1472	G8	181.02	175.23	181.04	182.41	184.56	187.40
Z5_IL_1474	G8	183.68	179.68	183.52	184.96	187.12	190.13
Z5_IL_1477	H7	123.82	120.32	123.82	123.99	124.69	125.72
Z5_IL_1478	H7	130.00	125.20	126.63	127.62	129.49	131.33
Z5_IL_1479	H7	130.00	125.26	126.63	127.60	129.50	131.33
Z5_IL_1480	H7	130.00	126.19	126.63	127.60	129.48	131.33
Z5_IL_1481	G6	48.00	45.67	45.99	46.05	46.09	48.23
Z5_IL_1482	G6	48.00	45.04	45.24	45.28	45.46	48.00
Z5_IL_1483	G6	48.00	42.50	43.85	44.25	46.86	49.04
Z5_IL_1501	H6	36.00	31.09	32.14	32.57	33.95	35.36
Z5_IL_1502	H6	36.00	31.38	32.76	33.33	34.75	36.69
Z5_IL_1650	G8	172.78	167.78	167.78	167.78	167.78	167.78
Z5_IL_1663	F6	100.89	96.89	97.06	97.10	97.14	97.19
Z5_IL_1664	F6	99.58	94.08	94.28	94.32	94.37	94.43
Z5_IL_1928	H7	128.00	123.83	124.78	125.64	126.37	127.66
Z5_IL_1986	G6	40.00	38.33	43.23	44.25	45.67	48.05
Z5_IL_2003	H6	36.91	34.30	34.60	34.69	34.82	36.91
Z5_IL_2011	G6	40.00	38.00	40.41	40.83	41.47	42.58
Z5_IL_2042	F6	113.55	108.55	108.73	108.77	108.82	108.88
Z5_IL_2043	F6	112.25	105.15	105.40	105.46	105.52	105.61
Z5_IL_2044	F6	113.45	108.45	109.11	109.23	109.38	109.77
Z5_IL_2045	F6	111.55	104.45	104.70	104.76	104.83	104.93
Z5_IL_2046	F6	111.36	103.56	103.96	104.06	104.19	104.35

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_IL_2048	F6	111.75	108.10	108.23	108.26	108.29	108.33
Z5_IL_2051	F6	113.00	109.20	109.45	109.50	109.56	109.64
Z5_IL_2052	F6	114.59	111.09	111.27	111.31	111.35	111.41
Z5_IL_2058	F6	122.56	119.56	119.73	119.77	119.81	119.87
Z5_IL_2059	F6	122.03	116.83	116.98	117.01	117.04	117.08
Z5_IL_2062	F6	126.89	121.77	121.98	122.02	122.07	122.14
Z5_IL_2086	F6	115.02	111.06	111.20	111.22	111.26	111.30
Z5_IL_2088	F6	113.11	109.70	109.96	110.02	110.09	110.30
Z5_IL_2131	H8	159.01	154.01	154.10	154.11	154.12	154.14
Z5_IL_2132	H8	158.25	153.25	153.31	153.32	153.32	153.33
Z5_IL_2147	H8	134.47	127.42	127.57	127.59	127.61	127.63
Z5_IL_2148	H8	133.92	127.92	128.30	128.35	128.40	128.48
Z5_IL_2149	H8	140.59	135.09	135.25	135.27	135.30	135.33
Z5_IL_2151	F6	96.71	91.25	91.53	91.60	91.67	91.77
Z5_IL_2152	F6	97.37	92.20	92.45	92.50	92.56	92.65
Z5_IL_2164	G8	208.00	205.25	205.60	205.64	205.70	205.77
Z5_IL_2177	K5	66.00	62.78	63.48	63.63	63.86	65.68
Z5_IL_2179	K4	68.00	64.12	64.69	64.82	65.00	66.68
Z5_IL_2181	K4	68.00	63.87	64.58	64.72	64.90	66.55
Z5_IL_2182	H6	36.00	32.66	36.00	36.00	36.14	36.41
Z5_IL_2183	H6	35.83	30.50	35.83	35.83	35.88	35.98
Z5_IL_2272	L5	62.00	57.54	57.75	57.79	57.85	57.91
Z5_IL_2273	L5	59.30	57.63	57.84	57.87	57.91	57.96
Z5_IL_2274	L5	58.00	56.63	56.93	57.00	57.08	57.19
Z5_IL_2275	L5	58.00	56.53	58.02	58.12	58.26	58.45
Z5_IL_2276	L5	58.00	56.33	56.54	56.59	56.64	56.71
Z5_IL_2300	H6	34.00	32.15	32.56	32.71	33.26	34.10
Z5_IL_2301	H6	31.61	25.19	31.71	32.19	33.03	33.87
Z5_IL_2303	H7	125.02	121.40	121.89	121.96	122.04	122.16
Z5_IL_2304	H7	120.00	117.75	118.50	118.60	118.72	119.07
Z5_IL_2305	H7	120.47	117.72	118.18	118.24	118.32	118.43
Z5_IL_2306	M4	46.00	43.83	46.01	46.12	46.35	46.74
Z5_IL_2307	L4	48.97	43.64	49.45	49.65	49.99	50.48
Z5_IL_2308	L5	52.00	46.42	54.42	54.74	55.38	56.08
Z5_IL_2309	L5	52.00	46.50	53.39	53.69	54.25	54.92
Z5_IL_2323	N5	37.74	32.74	32.74	32.74	32.74	32.74
Z5_IL_2324	N5	39.15	36.34	36.62	36.65	36.69	36.75
Z5_IL_2345	H8	130.00	126.13	126.53	126.58	126.64	126.73
Z5_IL_2346	H8	130.00	124.46	124.77	124.81	124.85	124.91
Z5_IL_2397	H8	137.94	132.94	133.41	133.48	133.56	133.70
Z5_IL_2401	H7	123.33	117.00	123.37	123.91	125.00	127.12
Z5_IL_2402	G7	137.82	134.83	135.60	135.62	135.69	135.83
Z5_IL_2404	G7	153.07	147.50	148.34	148.42	148.55	153.07
Z5_IL_2406	G7	173.40	167.30	167.50	167.53	167.56	167.61
Z5_IL_2407	G7	175.51	167.80	168.18	168.23	168.30	168.39
Z5_IL_2425	N4	30.00	27.92	28.71	28.82	28.97	29.24
Z5_IL_2426	N4	30.00	27.94	28.67	28.76	28.88	29.06
Z5_IL_2427	N4	30.00	27.97	28.61	28.69	28.79	28.92
Z5_IL_2445	H6	118.00	113.55	114.02	114.11	114.24	115.46
Z5_IL_2446	H6	118.28	114.23	114.54	114.60	114.67	115.64
Z5_IL_2451	L5	58.00	53.72	53.83	53.86	53.88	53.92
Z5_IL_2452	L5	58.35	53.96	54.13	54.16	54.19	54.24
Z5_IL_2453	M5	58.09	48.92	49.14	49.18	49.23	49.26
Z5_IL_2454	M5	58.00	53.25	53.47	53.51	53.56	53.62
Z5_IL_2455	L5	62.00	57.90	58.55	58.64	58.75	58.91
Z5_IL_2456	L5	62.00	57.29	57.98	58.16	58.44	58.90
Z5_IL_2459	G7	177.10	171.80	172.53	172.70	173.51	174.84
Z5_IL_2462	M5	49.92	45.59	49.01	49.22	49.55	49.92
Z5_IL_2463	M5	50.00	48.25	49.20	49.53	50.00	50.28

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_IL_2470	J5	85.30	79.37	80.67	80.82	80.92	80.99
Z5_IL_2471	J5	86.21	78.31	79.82	79.98	80.10	80.18
Z5_IL_2472	K5	74.00	66.06	69.28	69.82	70.42	70.99
Z5_IL_2473	J5	76.00	69.00	71.06	71.27	71.48	72.01
Z5_IL_2474	G6	57.10	54.68	55.38	55.51	55.68	57.10
Z5_IL_2476	G6	56.00	52.63	53.55	53.73	53.97	56.24
Z5_IL_2479	K5	66.37	64.30	64.94	65.24	66.20	67.32
Z5_IL_2483	N4	15.65	13.07	13.41	13.46	13.52	13.60
Z5_IL_2484	M5	50.00	48.67	49.07	49.14	49.20	49.25
Z5_IL_2485	M5	50.00	47.75	47.99	48.04	48.08	48.12
Z5_IL_2486	M5	50.00	48.75	49.39	49.52	49.64	49.77
Z5_IL_2500	L4	60.00	55.68	56.02	56.05	56.09	56.15
Z5_IL_2501	M4	48.99	43.00	43.46	43.55	43.65	43.77
Z5_IL_2502	M4	53.28	45.86	46.30	46.38	46.47	46.59
Z5_IL_2503	M4	54.00	49.33	49.73	49.79	49.85	49.93
Z5_IL_2504	L4	55.43	50.43	50.91	50.98	51.06	51.17
Z5_IL_2520	M5	45.05	42.30	43.15	44.48	45.44	46.88
Z5_IL_2522	M5	44.00	40.75	43.15	44.36	45.30	46.70
Z5_IL_2533	G6	44.00	42.00	42.18	42.20	42.22	42.25
Z5_IL_2534	G6	44.71	36.71	38.74	39.35	40.74	41.82
Z5_IL_2535	G6	52.89	50.14	51.05	51.22	51.47	54.52
Z5_IL_2538	G6	72.23	66.73	67.29	67.40	67.68	72.23
Z5_IL_2540	G6	67.87	58.83	59.95	60.28	63.66	66.88
Z5_IL_2541	G6	66.37	57.70	59.01	59.43	62.31	65.03
Z5_IL_2542	G6	62.69	56.73	57.48	58.16	59.97	61.96
Z5_IL_2543	H6	115.51	111.76	112.57	112.73	115.51	115.58
Z5_IL_2544	H6	124.00	120.08	120.97	121.16	124.25	127.01
Z5_IL_2545	H6	124.00	117.75	118.71	118.95	122.78	124.09
Z5_IL_2546	H6	103.61	100.03	100.92	101.11	103.90	104.70
Z5_IL_2547	H6	90.00	86.75	87.57	87.74	87.88	87.94
Z5_IL_2548	H6	93.60	90.35	91.41	91.74	93.62	93.78
Z5_IL_2549	H6	76.17	71.25	71.58	71.63	71.69	71.77
Z5_IL_2554	H7	122.00	120.25	120.91	120.93	120.95	120.99
Z5_IL_2555	H7	121.21	118.63	119.21	119.23	119.25	119.28
Z5_IL_2556	H7	130.00	128.56	129.28	129.35	129.44	130.00
Z5_IL_2557	H7	130.00	127.51	127.99	128.11	128.57	129.48
Z5_IL_2567	J5	104.00	101.88	101.88	101.88	101.88	101.88
Z5_IL_2568	J5	104.00	101.54	101.92	101.96	102.02	102.12
Z5_IL_2587	G7	157.12	151.58	151.77	151.79	151.82	151.87
Z5_IL_2589	G7	144.14	138.97	139.17	139.20	139.23	139.28
Z5_IL_2590	H7	126.00	124.62	126.57	127.05	127.72	128.80
Z5_IL_2591	G7	186.00	183.17	186.00	186.12	186.68	187.44
Z5_IL_2592	G7	188.33	186.20	186.20	186.20	186.73	187.44
Z5_IL_2597	G7	188.00	185.90	185.90	186.12	186.71	187.44
Z5_IL_2598	G7	186.64	184.22	187.35	187.94	188.81	189.93
Z5_IL_2599	G7	191.50	189.33	190.10	190.30	191.58	192.42
Z5_IL_2600	G7	159.17	155.25	161.83	162.80	164.07	165.71
Z5_IL_2601	G7	161.36	159.19	161.83	162.81	164.08	165.71
Z5_IL_2602	G7	169.71	166.21	166.49	166.53	166.58	166.65
Z5_IL_2603	G7	172.26	169.68	169.88	169.91	169.95	170.00
Z5_IL_2606	G7	154.01	149.47	149.61	149.64	149.66	149.70
Z5_IL_2607	G7	154.45	149.08	149.07	149.07	149.07	149.07
Z5_IL_2608	H7	121.34	115.80	118.09	119.01	119.39	119.52
Z5_IL_2610	H7	126.00	122.21	126.00	126.00	126.36	127.45
Z5_IL_2611	H7	121.85	117.39	120.36	120.53	121.40	121.85
Z5_IL_2613	M4	30.00	25.54	25.79	25.83	25.87	25.89
Z5_IL_2622	E7	389.80	384.80	385.05	385.09	385.13	385.19
Z5_IL_2623	H7	96.00	90.75	91.38	91.47	91.58	91.74
Z5_IL_2624	H7	95.66	90.41	90.73	90.77	90.82	90.89

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_IL_2625	H7	114.33	109.33	109.49	109.51	109.53	109.57
Z5_IL_2627	H7	110.30	105.47	105.64	105.66	105.69	105.73
Z5_IL_2628	H7	114.00	109.00	109.23	109.26	109.30	109.34
Z5_IL_2632	F5	174.00	170.00	170.25	170.30	170.58	173.40
Z5_IL_2633	G8	228.38	223.30	224.12	224.24	224.31	224.41
Z5_IL_2634	G8	215.36	212.53	212.53	212.53	212.53	212.53
Z5_IL_2635	H7	124.00	121.46	122.18	122.30	122.55	122.98
Z5_IL_2638	H7	115.65	113.36	113.79	113.86	113.94	114.10
Z5_IL_2639	H7	114.88	112.30	112.82	112.89	113.00	113.22
Z5_IL_2640	H7	90.58	85.75	86.13	86.20	86.28	86.32
Z5_IL_2641	E5	334.00	329.00	329.24	329.29	329.36	329.44
Z5_IL_2644	E5	343.73	340.05	340.20	340.23	340.27	340.32
Z5_IL_2645	E5	338.00	336.50	336.82	336.90	336.99	337.11
Z5_IL_2646	E5	338.00	336.00	336.21	336.25	336.30	336.37
Z5_IL_2647	E5	339.38	334.38	334.71	334.76	334.84	334.94
Z5_IL_2648	E5	336.00	330.00	330.40	330.48	330.58	330.76
Z5_IL_2649	E5	326.00	319.00	319.32	319.38	319.45	319.54
Z5_IL_2650	E5	326.00	321.00	321.14	321.17	321.20	321.25
Z5_IL_2651	E5	285.16	281.16	281.40	281.46	281.54	281.66
Z5_IL_2652	E5	285.54	280.54	280.91	280.98	281.07	281.19
Z5_IL_2653	E5	285.50	281.30	281.52	281.58	281.65	281.76
Z5_IL_2654	E5	286.49	282.49	282.66	282.70	282.74	282.81
Z5_IL_2655	E5	248.97	244.97	244.97	244.97	244.97	244.97
Z5_IL_2656	E5	248.53	241.53	242.09	242.22	242.39	242.65
Z5_IL_2657	E5	244.95	239.95	240.42	240.51	240.63	240.78
Z5_IL_2658	E5	246.46	241.46	241.79	241.87	241.99	242.17
Z5_IL_2659	E5	207.94	202.94	203.41	203.57	203.80	205.49
Z5_IL_2660	E5	207.14	202.44	202.84	202.97	203.16	204.27
Z5_IL_2661	E5	207.02	201.02	201.61	201.74	201.89	202.10
Z5_IL_2662	E5	207.54	203.54	203.79	203.84	203.92	204.04
Z5_IL_2663	F5	184.00	181.00	181.11	181.14	181.17	181.20
Z5_IL_2664	F5	184.21	178.21	178.96	179.14	179.37	179.70
Z5_IL_2665	F5	184.06	180.36	180.36	180.36	180.36	180.36
Z5_IL_2666	F5	185.60	181.60	181.60	181.60	181.60	181.60
Z5_IL_2667	F5	177.41	172.95	173.62	173.79	174.01	174.86
Z5_IL_2668	F5	174.25	168.75	169.84	170.12	170.49	173.11
Z5_IL_2675	G6	54.00	51.08	51.47	51.55	51.63	51.74
Z5_IL_2677	E6	126.99	122.16	122.36	122.40	122.45	123.05
Z5_IL_2678	E6	125.69	120.94	121.98	122.16	122.36	123.05
Z5_IL_2679	E6	124.62	119.87	120.69	120.84	120.93	121.05
Z5_IL_2684	H7	124.00	117.28	118.36	118.39	118.43	118.48
Z5_IL_2685	H7	124.00	118.09	118.32	118.34	118.36	118.39
Z5_IL_2686	G7	216.02	214.23	214.45	214.48	214.53	214.59
Z5_IL_2687	G7	215.61	213.53	213.96	214.00	214.05	214.13
Z5_IL_2776	L5	66.00	62.81	63.14	63.18	63.23	63.29
Z5_IL_2777	L5	66.00	63.20	63.58	63.62	63.68	63.76
Z5_IL_2778	L5	66.00	63.49	80.40	85.15	92.10	103.37
Z5_IL_2791	L5	65.62	60.66	66.49	67.12	68.38	70.55
Z5_IL_2792	L5	66.00	61.11	62.71	62.97	66.00	65.91
Z5_IL_2796	L5	68.00	64.13	64.80	68.00	68.37	69.65
Z5_IL_2797	L5	68.00	63.54	64.26	68.00	68.00	68.78
Z5_IL_2798	L5	68.00	64.08	64.50	68.00	68.00	68.25
Z5_IL_2799	L5	69.85	65.09	65.67	69.85	69.85	70.09
Z5_IL_2800	L5	69.42	64.28	65.94	69.42	69.50	70.40
Z5_IL_2862	N4	29.88	25.63	26.64	28.09	28.51	29.01
Z5_IL_2868	N4	17.29	15.29	29.14	33.05	38.71	47.99
Z5_IL_2871	N4	34.00	31.17	31.29	31.31	31.33	31.41
Z5_IL_2872	M5	44.72	43.55	43.85	43.89	44.62	45.01
Z5_IL_2873	N4	38.00	33.25	33.49	34.90	37.47	38.05

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_IL_2874	N4	38.00	33.79	33.79	34.89	37.42	38.01
Z5_IL_2875	N4	38.00	33.83	33.83	34.88	37.42	38.01
Z5_IL_2876	N4	38.00	33.88	34.06	34.84	37.35	37.98
Z5_IL_2877	N4	37.98	33.77	33.77	34.63	36.96	37.46
Z5_IL_2878	N4	36.00	31.58	32.87	34.14	36.00	36.34
Z5_IL_2879	N4	36.00	31.58	32.95	34.24	36.09	36.39
Z5_IL_2880	N4	36.00	31.92	31.92	31.92	36.00	36.00
Z5_IL_2881	N4	34.00	21.84	23.65	24.17	24.83	25.33
Z5_IL_2882	N4	30.00	26.29	27.59	29.44	30.11	30.79
Z5_IL_2883	N4	30.00	28.46	28.95	29.80	30.38	31.12
Z5_IL_2884	N4	30.00	25.96	27.35	29.04	30.00	30.22
Z5_IL_2890	M4	30.54	28.79	29.16	29.21	29.27	29.36
Z5_IL_2891	N4	36.00	32.25	32.89	33.11	36.00	36.44
Z5_IL_2893	N4	35.65	31.57	32.65	32.93	35.66	36.42
Z5_IL_2894	N4	35.93	31.97	32.59	32.88	35.93	36.28
Z5_IL_2895	N4	35.50	31.29	31.67	32.41	35.50	35.57
Z5_IL_2896	N4	34.00	30.54	30.79	33.25	34.24	35.36
Z5_IL_2897	N4	34.43	28.35	29.39	31.23	34.43	34.43
Z5_IL_2898	N4	36.00	31.92	32.16	32.19	36.00	36.00
Z5_IL_2899	N4	35.40	31.32	31.69	32.47	35.41	36.05
Z5_IL_2903	N4	38.00	35.63	35.63	35.63	35.63	36.53
Z5_IL_2904	N4	38.10	33.98	34.35	34.41	34.48	36.53
Z5_IL_2905	N4	38.40	34.82	34.82	34.82	34.82	36.53
Z5_IL_2906	N4	38.00	36.21	36.21	36.21	36.21	36.52
Z5_IL_2907	N4	38.00	33.92	34.35	34.41	34.48	36.51
Z5_IL_2908	N4	37.93	34.85	35.02	35.04	35.07	36.60
Z5_IL_2909	N4	37.97	33.97	34.35	34.40	34.48	36.54
Z5_IL_2910	N4	36.92	33.50	33.75	33.79	34.08	36.53
Z5_IL_2911	N4	37.00	34.92	34.92	34.92	34.92	36.87
Z5_IL_2912	N4	36.00	31.71	33.04	33.22	34.04	36.06
Z5_IL_2913	N4	36.00	32.08	32.98	33.10	33.85	35.91
Z5_IL_2914	N4	36.00	32.33	32.93	33.05	33.77	35.86
Z5_IL_2915	N4	36.00	34.00	34.24	34.27	34.30	35.99
Z5_IL_2917	N4	36.00	31.88	32.52	32.65	33.36	35.19
Z5_IL_2920	N4	35.66	32.66	32.66	32.66	32.66	33.88
Z5_IL_2921	M5	52.00	48.83	49.34	49.40	49.49	52.02
Z5_IL_2922	M5	52.00	49.25	49.74	49.80	49.89	52.18
Z5_IL_2923	M5	50.00	46.08	47.47	47.64	47.86	49.17
Z5_IL_2924	M5	50.89	46.84	48.45	48.73	49.26	50.56
Z5_IL_2925	M5	52.00	48.78	49.90	50.04	50.27	51.59
Z5_IL_2926	M5	52.00	49.38	50.66	50.82	51.09	52.19
Z5_IL_2927	M5	52.00	49.58	51.01	51.21	51.52	52.56
Z5_IL_2928	L5	52.42	49.98	51.15	51.34	51.66	52.76
Z5_IL_2929	L5	53.50	50.68	51.93	52.11	52.41	53.66
Z5_IL_2930	L5	53.94	50.90	52.11	52.29	52.66	54.00
Z5_IL_2931	L5	55.05	51.18	52.47	52.73	53.34	55.06
Z5_IL_2932	L5	56.00	53.58	56.46	56.94	57.84	58.83
Z5_IL_2933	L5	56.00	54.08	56.33	56.75	57.45	58.20
Z5_IL_2934	L5	54.87	50.20	56.44	56.87	57.54	58.24
Z5_IL_2935	L5	56.00	53.04	53.52	57.57	58.18	58.56
Z5_IL_2942	L5	66.00	61.05	61.36	61.41	61.47	61.89
Z5_IL_2946	M5	56.00	54.46	55.09	55.40	56.42	57.14
Z5_IL_2947	N5	43.19	40.13	41.47	42.07	42.63	43.28
Z5_IL_2948	N5	40.00	37.11	37.95	38.04	38.16	38.33
Z5_IL_2949	N5	40.00	37.11	37.75	37.81	37.86	37.92
Z5_IL_2950	N5	42.00	38.29	39.45	39.55	39.62	39.73
Z5_IL_2953	M4	35.76	34.26	34.78	34.84	34.92	35.05
Z5_IL_2954	M5	58.00	52.42	52.61	52.64	52.69	52.74
Z5_IL_2955	M4	34.44	29.44	31.14	31.72	32.72	34.41

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_IL_2956	M5	56.49	54.72	55.28	55.49	56.50	57.22
Z5_IL_2958	M5	59.29	55.04	55.26	55.30	55.34	55.39
Z5_IL_2960	M5	56.91	55.33	55.65	55.73	56.51	57.24
Z5_IL_2972	G8	134.87	130.62	130.89	130.93	130.99	131.06
Z5_IL_2980	H6	108.00	103.25	103.73	103.81	103.92	104.09
Z5_IL_2983	M5	48.00	40.72	44.11	44.36	44.68	45.11
Z5_IL_2987	F6	106.00	98.58	99.01	99.11	99.23	99.39
Z5_IL_2991	H6	108.00	104.29	104.74	104.82	104.92	105.09
Z5_IL_3003	H5	47.01	42.47	42.47	42.47	42.51	42.61
Z5_IL_3004	H5	47.53	42.06	42.37	42.44	42.51	42.61
Z5_IL_3010	H5	44.00	41.42	41.88	41.97	42.09	42.28
Z5_IL_3011	H5	44.00	40.00	40.32	40.38	40.45	40.62
Z5_IL_3012	H5	37.09	31.09	32.08	32.97	34.53	37.09
Z5_IL_3013	G6	38.00	35.96	41.88	43.06	44.72	47.25
Z5_IL_3017	H6	104.00	99.42	99.74	103.94	104.22	104.61
Z5_IL_3018	H7	132.00	129.18	132.00	132.30	133.23	134.46
Z5_IL_3019	H7	133.79	129.04	133.79	133.79	133.79	134.45
Z5_IL_3020	H7	130.50	124.47	127.15	127.47	128.73	130.50
Z5_IL_3021	H7	130.00	127.58	127.58	127.58	127.58	127.58
Z5_IL_3022	G7	138.00	133.25	133.46	133.49	133.53	136.48
Z5_IL_3023	G7	137.85	132.93	133.15	133.17	133.19	136.36
Z5_IL_3024	H7	130.00	126.25	127.72	129.02	131.55	134.71
Z5_IL_3025	H7	116.61	110.61	111.40	111.44	111.50	111.59
Z5_IL_3026	H7	113.21	107.21	107.91	107.99	108.08	108.21
Z5_IL_3027	H8	134.56	129.98	130.23	130.24	130.26	130.28
Z5_IL_3028	H8	146.00	142.83	143.05	143.07	143.10	143.13
Z5_IL_3029	H8	138.48	135.98	136.40	136.50	136.70	138.24
Z5_IL_3030	H8	139.51	137.55	138.02	138.09	138.19	139.52
Z5_IL_3032	H8	134.00	129.71	130.54	130.62	130.70	130.89
Z5_IL_3033	H8	134.00	131.38	132.22	132.26	132.31	132.41
Z5_IL_3034	H8	137.68	135.68	136.50	136.56	136.63	136.72
Z5_IL_3035	H8	142.12	139.66	139.98	140.06	140.19	140.53
Z5_IL_3036	H8	144.00	140.50	140.70	140.73	140.77	140.82
Z5_IL_3037	H8	158.00	152.42	153.95	155.56	158.06	158.23
Z5_IL_3038	H8	159.19	154.19	154.51	155.56	158.13	158.30
Z5_IL_3039	H8	159.83	155.41	155.66	155.69	158.20	158.40
Z5_IL_3040	H8	143.74	140.03	140.59	140.68	140.79	142.68
Z5_IL_3041	H8	141.26	138.26	139.15	139.28	140.15	141.49
Z5_IL_3048	G6	83.06	77.73	80.52	80.82	81.17	81.67
Z5_IL_3049	G6	81.08	77.78	78.94	78.99	79.06	79.16
Z5_IL_3050	G6	78.00	73.04	73.18	73.21	73.24	73.28
Z5_IL_3051	G6	78.00	73.54	73.61	73.62	73.64	73.65
Z5_IL_3052	G6	64.00	58.75	58.97	59.02	59.07	59.14
Z5_IL_3053	G6	47.87	42.70	43.49	43.66	43.86	44.31
Z5_IL_3054	G6	45.93	43.18	44.29	44.57	45.15	46.05
Z5_IL_3055	G6	42.00	39.75	43.61	44.60	45.99	48.33
Z5_IL_3056	G6	42.00	40.42	43.63	44.62	46.02	48.35
Z5_IL_3059	G7	164.21	159.88	160.07	160.10	160.13	160.17
Z5_IL_3060	G8	189.45	186.03	186.03	186.03	186.03	186.03
Z5_IL_3061	G8	194.00	190.21	190.39	190.41	190.44	190.48
Z5_IL_3062	G8	192.00	187.25	187.51	187.54	187.58	187.63
Z5_IL_3065	G8	160.00	156.97	156.97	156.97	156.97	158.95
Z5_IL_3066	H8	160.00	156.58	156.78	156.81	156.84	159.00
Z5_IL_3067	G8	165.14	159.49	159.70	159.72	159.75	161.65
Z5_IL_3068	G8	180.96	177.04	177.46	180.08	180.60	181.10
Z5_IL_3069	G8	181.01	176.93	178.56	181.06	181.47	182.30
Z5_IL_3070	H8	172.00	167.50	167.50	167.50	167.50	167.50
Z5_IL_3071	H8	171.75	167.96	167.96	167.96	167.96	167.96
Z5_IL_3072	F5	169.44	165.11	165.29	165.33	165.38	165.44

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				5Yr	10yr	25Yr	100Yr
Z5_IL_3073	F5	168.00	164.38	164.58	164.62	164.67	165.04
Z5_IL_3074	F5	143.71	140.59	140.78	140.82	140.88	141.56
Z5_IL_3075	F5	144.00	141.38	141.58	141.63	141.68	144.18
Z5_IL_3076	F5	144.00	141.04	141.43	141.53	141.66	145.16
Z5_IL_3077	F6	71.29	70.29	70.61	71.93	74.59	78.44
Z5_IL_3078	F6	70.00	67.13	69.70	71.85	74.49	78.33
Z5_IL_3079	F6	87.72	80.99	81.87	82.84	84.49	87.74
Z5_IL_3080	F6	88.00	81.24	81.87	82.86	84.53	87.84
Z5_IL_3081	F6	132.00	128.71	129.29	129.48	129.94	132.69
Z5_IL_3082	F6	133.21	131.92	132.22	132.28	132.37	132.59
Z5_IL_3083	F6	131.50	127.58	127.79	127.84	127.89	131.50
Z5_IL_3084	F6	127.85	125.10	125.53	125.63	125.74	127.85
Z5_IL_3085	F6	128.00	125.58	126.01	126.12	126.26	128.04
Z5_IL_3086	F6	94.00	92.21	92.24	92.25	92.27	92.28
Z5_IL_3087	F6	92.00	89.92	90.01	90.03	90.17	90.26
Z5_IL_3088	F6	98.00	93.63	93.90	93.96	98.00	99.24
Z5_IL_3089	F6	98.00	94.92	95.23	95.30	98.05	99.30
Z5_IL_3090	F6	108.42	104.17	104.41	104.47	108.42	110.52
Z5_IL_3091	F6	109.73	106.48	106.71	106.76	107.45	110.55
Z5_IL_3093	E6	133.71	129.96	130.32	133.09	133.56	134.08
Z5_IL_3094	E6	133.92	129.92	130.43	130.67	132.48	134.04
Z5_IL_3095	E6	132.00	128.42	128.79	129.99	131.20	132.10
Z5_IL_3096	E6	113.52	110.40	111.14	111.30	111.40	111.56
Z5_IL_3097	E6	112.52	107.85	109.29	109.50	109.66	109.89
Z5_IL_3098	E6	130.00	128.67	128.90	128.95	129.01	129.09
Z5_IL_3099	E6	105.56	101.06	101.97	102.16	103.15	105.91
Z5_IL_3100	E6	109.33	102.25	103.28	103.49	103.91	107.14
Z5_IL_3101	E6	109.69	107.02	107.21	107.25	107.30	107.41
Z5_IL_3104	G8	135.66	132.74	133.11	133.18	133.26	133.38
Z5_IL_3105	G8	147.82	142.65	143.34	143.47	143.65	143.98
Z5_IL_3106	G8	146.00	140.58	141.15	141.25	141.38	141.58
Z5_IL_3109	M4	42.90	40.20	40.48	40.51	40.55	40.83
Z5_IL_3112	N4	36.00	29.92	31.66	31.98	33.36	34.28
Z5_IL_3113	N4	36.00	29.00	30.36	30.65	31.46	32.15
Z5_IL_3115	N4	32.00	30.08	30.68	30.84	32.22	33.27
Z5_IL_3117	L5	72.00	67.00	72.66	74.68	77.47	81.75
Z5_IL_3118	L5	72.00	67.00	71.03	72.01	73.44	75.69
Z5_IL_3147	G6	42.59	40.47	43.62	44.61	46.00	48.32
Z5_IL_3151	G7	164.97	157.72	158.25	158.33	158.42	158.55
Z5_IL_3157	H8	138.00	135.00	137.49	138.33	139.42	140.54
Z5_IL_3159	G6	48.04	44.92	45.63	45.76	46.02	47.24
Z5_IL_3160	H5	94.00	88.64	88.64	88.64	88.64	88.64
Z5_IL_3161	H5	94.00	87.18	87.18	87.18	87.18	87.18
Z5_IL_3163	H6	32.89	30.60	31.23	31.43	32.20	32.91
Z5_IL_3165	H8	136.43	133.76	136.43	136.84	137.57	138.64
Z5_IL_3169	H7	91.76	86.93	88.68	89.45	91.42	92.22
Z5_IL_3170	G8	226.93	219.60	220.48	220.61	220.74	220.84
Z5_IL_3171	G8	208.00	199.92	202.67	202.84	203.13	208.00
Z5_IL_3172	H6	64.30	57.51	57.71	57.74	59.43	64.30
Z5_IL_3176	G8	154.00	150.67	151.25	151.43	153.34	154.79
Z5_IL_3177	G8	152.20	148.70	148.94	148.97	149.00	149.05
Z5_IL_3178	G8	207.56	204.89	205.30	205.36	205.44	205.56
Z5_IL_3179	G8	196.83	191.83	192.60	192.65	192.75	192.96
Z5_IL_3180	G8	197.36	192.36	192.36	192.36	192.36	192.36
Z5_IL_3185	G8	194.00	191.00	191.11	191.12	191.14	191.16
Z5_IL_3186	G8	193.58	191.79	191.93	191.95	191.97	192.00
Z5_IL_3187	G8	208.20	204.41	204.64	204.67	204.70	204.75
Z5_IL_3188	G8	154.00	149.42	150.89	150.93	150.97	151.02
Z5_IL_3192	H5	52.35	47.35	50.67	52.05	53.29	55.72

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_IL_3193	H5	51.38	47.88	48.25	48.31	48.37	48.45
Z5_IL_3194	H5	52.00	47.00	47.54	47.59	47.64	47.72
Z5_IL_3199	H6	36.00	33.42	33.42	33.42	34.72	36.69
Z5_IL_3200	H6	36.00	31.67	32.73	33.17	35.01	37.20
Z5_IL_3201	G6	84.00	80.50	82.01	82.15	82.30	82.62
Z5_IL_3202	G6	84.00	81.54	82.01	82.17	82.39	82.81
Z5_IL_3203	F6	87.50	80.78	81.27	81.43	81.67	82.15
Z5_IL_3213	H5	96.00	93.10	93.10	93.10	93.10	93.10
Z5_IL_3214	L4	48.28	45.61	48.55	48.71	49.01	49.44
Z5_IL_3215	F6	91.00	88.13	88.21	88.23	88.26	88.29
Z5_IL_3226	M4	41.53	33.37	36.70	36.84	37.04	37.27
Z5_IL_3227	M4	40.99	33.09	36.18	36.32	36.52	36.73
Z5_IL_3241	H5	100.00	94.50	95.01	95.06	95.12	95.21
Z5_IL_3242	H5	98.00	92.50	93.25	93.33	93.43	93.59
Z5_IL_3244	H5	106.00	100.33	100.83	100.88	100.93	101.01
Z5_IL_3259	M5	51.45	46.95	51.45	51.45	51.75	52.23
Z5_IL_3260	M5	50.09	46.09	50.12	50.42	50.66	51.11
Z5_IL_3271	H5	110.07	97.53	98.55	98.97	99.78	100.87
Z5_IL_3272	H5	104.94	96.41	98.73	99.06	99.61	100.50
Z5_IL_3420	F6	103.13	99.17	100.49	100.83	101.46	102.63
Z5_IL_3421	F6	102.20	98.08	99.95	100.12	100.70	101.87
Z5_IL_3422	F6	0.00	102.42	105.20	105.70	106.57	107.22
Z5_IL_3425	H6	38.00	35.79	41.40	42.57	44.22	46.93
Z5_IL_3426	G6	38.00	33.33	40.53	41.56	43.07	45.27
Z5_IL_3427	G6	37.56	35.48	40.10	41.03	42.41	44.49
Z5_IL_3430	H6	34.00	26.19	34.00	34.00	34.00	34.17
Z5_IL_3435	H5	50.00	46.45	46.56	46.57	46.59	46.61
Z5_IL_3436	H6	40.00	36.08	36.30	36.32	36.38	36.52
Z5_IL_3437	H6	40.00	37.33	37.53	37.55	37.57	37.60
Z5_IL_3438	H6	36.00	32.92	35.41	35.45	36.02	36.03
Z5_IL_3439	H6	52.00	47.67	48.33	48.61	48.86	48.96
Z5_IL_3440	H6	104.00	100.13	100.38	103.89	104.12	104.46
Z5_IL_3448	H6	113.75	112.25	112.59	112.67	112.75	112.86
Z5_IL_3480	H7	123.30	117.86	118.77	119.78	121.17	123.43
Z5_IL_3481	H7	124.00	119.00	119.46	120.18	121.94	124.26
Z5_IL_3482	H7	122.24	117.24	117.79	117.92	118.13	121.83
Z5_IL_3496	G8	176.66	173.48	173.48	173.48	173.48	173.48
Z5_IL_3497	G8	178.00	173.59	173.87	173.90	173.94	174.00
Z5_IL_3498	G8	178.20	173.20	173.20	173.20	173.20	173.20
Z5_IL_3499	G8	186.00	181.50	181.50	181.50	181.50	181.50
Z5_IL_3500	H8	152.00	141.63	152.08	152.21	153.95	156.43
Z5_IL_3501	H8	161.14	155.31	155.31	155.31	155.31	156.43
Z5_IL_3502	H8	162.00	156.06	156.06	156.06	156.06	156.43
Z5_IL_3503	H8	158.00	155.37	155.37	155.50	158.00	158.16
Z5_IL_3505	H8	134.26	129.26	129.59	129.64	129.70	129.78
Z5_IL_3508	H8	106.00	97.25	99.76	99.87	99.93	100.48
Z5_IL_3509	H8	104.67	99.59	99.84	99.87	99.90	100.20
Z5_IL_3513	M5	48.05	39.98	43.27	43.48	43.75	44.13
Z5_IL_3515	M4	42.00	40.50	40.95	41.00	41.08	41.19
Z5_IL_3524	M5	47.85	44.15	44.64	44.70	44.77	44.87
Z5_IL_3525	M5	50.00	46.92	47.08	47.09	47.13	48.87
Z5_IL_3526	M5	53.09	49.09	53.37	53.70	54.17	54.79
Z5_IL_3527	M5	53.66	49.66	54.03	54.36	54.84	55.42
Z5_IL_3528	M5	57.92	56.00	57.92	57.94	58.34	59.44
Z5_IL_3529	M5	57.21	56.21	57.23	57.60	58.16	59.20
Z5_IL_3530	L5	58.00	56.42	58.00	58.28	58.81	59.72
Z5_IL_3531	L5	58.20	54.30	57.99	58.27	58.80	59.70
Z5_IL_3533	L5	57.93	53.84	57.84	58.15	58.76	59.50
Z5_IL_3534	L5	64.45	63.03	63.80	64.54	65.13	66.25

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_IL_3539	K4	74.74	73.32	73.57	73.60	73.63	73.67
Z5_IL_3540	L5	72.00	66.62	71.44	72.65	75.02	78.63
Z5_IL_3546	H5	79.01	74.01	74.89	75.05	75.30	79.02
Z5_IL_3547	H5	75.50	69.00	69.68	69.76	69.90	70.30
Z5_IL_3549	J5	104.00	102.63	103.04	103.10	103.17	103.28
Z5_IL_3550	H7	108.27	101.77	101.95	101.98	102.00	102.04
Z5_IL_3551	N4	28.00	20.79	21.25	21.32	21.41	21.53
Z5_IL_3552	N4	30.00	24.79	25.11	25.16	25.21	25.29
Z5_IL_3553	N4	16.00	11.00	11.44	11.50	11.58	11.71
Z5_IL_3554	L5	56.00	53.23	56.30	56.71	57.42	58.18
Z5_IL_3555	L5	56.00	53.89	56.30	56.71	57.43	58.20
Z5_IL_3557	G7	175.97	170.97	171.40	171.46	171.53	171.62
Z5_IL_3571	L5	65.05	58.84	59.56	59.67	59.80	61.50
Z5_IL_3576	K5	72.00	65.50	69.16	69.69	70.26	70.87
Z5_IL_3577	K5	72.00	66.27	68.90	69.30	69.65	69.94
Z5_IL_3585	J5	88.42	84.38	84.89	84.97	85.08	85.74
Z5_IL_3608	H8	-	122.00	123.40	123.69	123.81	123.87
Z5_IL_3613	M5	46.00	41.29	41.73	41.78	42.85	45.76
Z5_IL_3619	M5	54.00	51.17	54.00	54.10	54.92	55.66
Z5_IL_3620	M5	55.82	53.07	53.88	55.82	55.85	56.55
Z5_IL_3623	L5	55.50	54.50	56.08	56.49	57.18	57.91
Z5_IL_3628	H8	104.00	98.75	100.66	101.12	101.73	103.30
Z5_IL_3629	H8	105.04	102.83	102.83	102.83	102.83	102.83
Z5_IL_3636	H6	51.53	46.28	47.65	48.22	51.53	56.01
Z5_IL_3655	K5	74.00	71.79	72.10	72.17	72.28	72.45
Z5_IL_3669	J5	90.00	87.42	87.63	87.65	87.67	87.70
Z5_IL_3670	J5	91.80	90.55	91.19	91.32	91.77	92.01
Z5_IL_3681	H5	38.64	32.06	32.46	33.01	34.73	37.53
Z5_IL_3688	G6	44.00	41.83	43.64	44.62	46.00	48.33
Z5_IL_3689	G6	52.31	49.06	49.46	49.53	49.60	49.72
Z5_IL_3690	G6	66.00	63.33	63.59	63.63	63.68	63.75
Z5_IL_3691	G6	76.00	73.42	73.68	73.73	73.78	73.85
Z5_IL_3692	G7	186.70	184.87	185.81	186.14	186.70	187.47
Z5_IL_3693	G6	83.94	80.52	82.01	82.16	82.35	82.70
Z5_IL_3696	F6	88.00	84.67	87.77	88.16	88.73	89.90
Z5_IL_3697	F6	88.00	82.25	84.76	85.00	85.36	87.76
Z5_IL_3698	F6	87.92	82.17	84.21	84.39	84.69	85.30
Z5_IL_3699	G6	87.26	80.26	83.60	83.82	84.04	84.42
Z5_IL_3700	G6	56.00	53.21	55.43	56.14	57.02	58.23
Z5_IL_3701	G8	233.08	228.08	230.04	232.78	234.62	237.53
Z5_IL_3702	G8	233.50	224.96	225.86	226.01	226.09	226.20
Z5_IL_3706	E6	125.71	121.63	122.98	123.70	124.91	125.71
Z5_IL_3707	F6	114.00	111.21	111.44	111.50	111.56	111.64
Z5_IL_3711	F6	133.82	128.82	128.96	128.99	129.02	129.61
Z5_IL_4879	G7	141.82	137.19	141.89	142.13	142.56	143.26
Z5_IL_4880	G8	195.54	194.04	194.17	194.18	194.20	194.23
Z5_IL_4882	G6	38.00	35.03	40.55	41.58	43.10	45.32
Z5_IL_4883	H6	30.00	21.83	30.31	30.31	30.31	30.31
Z5_IL_4884	E6	110.07	108.07	108.87	108.99	109.15	109.36
Z5_IL_4885	E6	106.39	101.73	102.65	102.84	103.29	106.39
Z5_IL_4886	G6	77.74	73.74	74.07	74.15	74.24	74.37
Z5_IL_4887	G6	46.00	43.74	44.59	44.81	45.49	46.68
Z5_IL_4888	G6	122.85	115.85	116.77	116.93	117.12	117.39
Z5_IL_4889	H6	84.50	77.41	78.60	78.82	79.12	79.55
Z5_IL_4890	H7	105.78	100.78	102.67	104.18	105.94	107.48
Z5_IL_4895	F7	330.00	329.00	329.39	329.46	329.54	329.71
Z5_IL_4896	F7	315.41	314.41	314.70	314.74	314.80	314.87
Z5_IL_4898	G7	274.00	272.50	272.84	272.90	272.97	273.07
Z5_IL_4899	G7	224.00	222.50	222.70	222.73	222.77	222.81

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_IL_4901	G7	189.60	188.60	188.81	188.84	188.87	188.92
Z5_IL_4903	G7	161.34	156.17	156.50	156.55	156.62	156.71
Z5_IL_4907	H8	112.35	106.85	106.97	106.98	107.01	107.04
Z5_IL_4910	G8	172.00	168.00	168.59	168.67	168.76	168.88
Z5_IL_4911	E6	133.47	130.00	130.71	133.32	133.77	134.40
Z5_IL_4925	L5	58.00	50.80	53.54	57.60	58.17	58.57
Z5_IL_4951	M4	48.00	45.33	47.46	47.67	48.03	48.33
Z5_IL_4952	L5	52.12	47.20	55.50	55.87	56.56	57.28
Z5_IL_4953	L5	52.00	47.17	55.71	56.09	56.79	57.51
Z5_IL_4954	J5	86.00	81.00	81.26	81.29	81.34	81.40
Z5_IL_4956	M4	42.00	37.00	38.85	38.97	39.16	39.37
Z5_IL_4957	M4	42.00	35.00	40.37	40.52	40.75	40.99
Z5_IL_4960	N4	32.65	27.65	27.87	27.91	27.95	28.00
Z5_IL_4961	N4	16.00	13.75	14.38	14.48	14.60	14.80
Z5_IL_4997	H5	56.00	48.00	49.96	50.24	56.00	58.62
Z5_IL_5085	G8	197.07	192.07	192.24	192.26	192.29	192.32
Z5_IL_5086	G8	187.55	182.55	182.55	182.55	182.55	182.55
Z5_IL_5117	L5	57.92	50.47	56.85	57.30	57.96	58.63
Z5_IL_5124	M5	54.00	52.27	52.62	52.81	53.24	54.11
Z5_IL_5191	H8	136.00	131.00	131.00	131.00	131.00	131.00
Z5_IL_5269	J5	89.59	84.66	85.31	85.38	85.48	85.89
Z5_IL_5272	M4	42.00	37.00	38.86	38.99	39.17	39.38
Z5_IL_5356	E7	-	366.63	366.88	366.91	366.96	367.02
Z5_IL_5359	G6	68.19	63.19	63.62	63.74	66.74	69.53
Z5_IL_5362	F6	91.00	83.11	91.00	89.14	90.02	91.29
Z5_IL_5363	F6	88.00	85.00	89.95	90.84	91.98	94.03
Z5_IL_5364	F6	87.94	82.71	84.25	84.39	84.69	85.30
Z5_IL_5379	F5	218.00	213.00	213.79	213.87	213.97	214.09
Z5_IL_5557	L5	55.70	50.00	56.05	56.46	57.15	57.86
Z5_IL_5558	J5	80.22	72.72	73.15	73.20	73.25	73.28
Z5_IL_5559	H6	41.02	37.90	38.23	38.32	38.42	38.46
Z5_IL_5575	N4	34.00	27.93	27.93	27.93	27.93	27.93
Z5_IL_938	O4	28.00	22.58	23.08	23.15	23.18	23.20
Z5_IL_978	M5	48.00	44.87	46.48	47.20	48.10	48.95
Z5_IL_979	M5	48.00	42.92	46.22	46.36	46.61	46.91
Z5_IL_980	M5	48.00	44.52	46.29	46.50	46.83	47.28
Z5_IL_981	M5	48.01	42.22	45.21	45.38	45.62	45.94
Z5_IL_982	M5	48.00	44.96	45.19	45.37	45.62	46.02
Z5_IL_995	G6	57.59	55.51	56.34	56.64	58.12	59.89
Z5_IL_996	G6	55.39	53.22	53.99	54.21	55.39	55.89
Z5_IL_997	F6	56.00	52.00	53.67	53.87	54.07	54.48
Z5_IL_998	F6	56.00	51.91	53.97	54.28	54.70	55.43
Z5_IL_999	F6	58.00	55.33	56.07	56.11	56.16	56.34
Z5_MH_3713	N4	34.00	18.98	25.96	28.16	29.71	31.96
Z5_MH_3740	H6	36.00	31.67	36.00	36.00	36.03	36.18
Z5_MH_3747	N5	48.00	37.83	38.46	38.50	38.56	38.61
Z5_MH_3748	N5	48.00	39.99	40.87	40.96	41.06	41.17
Z5_MH_3749	M5	48.03	40.83	41.94	42.05	42.18	42.32
Z5_MH_3750	M5	48.00	41.42	42.68	42.83	43.03	43.39
Z5_MH_3751	M5	48.00	43.94	45.12	45.27	45.48	46.00
Z5_MH_3752	M5	48.00	42.72	45.55	45.67	45.85	46.08
Z5_MH_3754	N4	34.80	28.88	30.12	32.28	34.80	35.34
Z5_MH_3756	N4	36.69	30.02	32.04	32.56	34.21	35.30
Z5_MH_3757	N4	37.45	31.75	32.89	33.58	35.60	36.71
Z5_MH_3759	N4	43.34	37.44	39.04	41.16	41.83	42.41
Z5_MH_3760	N4	44.00	38.35	39.33	41.82	42.53	43.00
Z5_MH_3761	N5	44.00	38.90	39.91	42.38	43.13	43.50
Z5_MH_3766	M5	44.21	38.96	40.72	43.79	44.23	44.53
Z5_MH_3767	N4	40.00	32.85	33.62	33.76	33.82	33.89

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_MH_3768	N4	40.00	34.15	35.04	35.22	35.30	35.40
Z5_MH_3773	H6	36.00	28.25	35.72	35.72	36.04	36.04
Z5_MH_3774	H6	39.60	34.25	35.75	38.46	39.62	40.06
Z5_MH_3782	M4	44.21	37.66	40.17	41.14	43.11	44.21
Z5_MH_3783	M5	52.00	46.98	52.00	52.00	52.35	52.91
Z5_MH_3784	M5	58.00	55.80	57.93	57.94	58.53	59.66
Z5_MH_3785	M4	40.72	33.54	34.78	35.06	35.48	35.85
Z5_MH_3786	M4	42.00	35.27	37.62	37.96	39.04	42.00
Z5_MH_3787	M4	44.00	36.59	38.97	39.39	40.90	43.03
Z5_MH_3788	M5	46.00	37.72	39.77	40.13	41.87	43.89
Z5_MH_3789	M5	48.00	38.68	40.91	41.37	43.60	46.17
Z5_MH_3790	M5	48.00	38.84	41.14	41.62	43.95	46.64
Z5_MH_3791	M5	50.00	41.71	42.63	42.75	46.68	48.74
Z5_MH_3792	M5	50.00	43.34	44.05	44.14	46.60	49.43
Z5_MH_3793	M5	52.00	46.75	52.15	52.58	52.99	53.63
Z5_MH_3794	M5	52.00	47.33	52.33	52.75	53.16	53.83
Z5_MH_3804	H6	36.00	31.00	32.58	33.03	34.59	36.40
Z5_MH_3805	H6	36.00	33.68	34.16	34.22	34.56	36.43
Z5_MH_3824	F6	111.58	102.28	102.72	102.82	102.94	103.11
Z5_MH_3825	H8	126.21	107.46	107.68	107.71	107.74	107.79
Z5_MH_3826	F6	96.35	90.51	90.88	90.96	91.05	91.15
Z5_MH_3834	L5	64.00	54.80	55.92	56.05	56.21	56.44
Z5_MH_3835	L5	64.00	54.30	55.36	55.48	55.63	55.85
Z5_MH_3836	L5	61.43	52.63	53.96	54.11	54.30	54.57
Z5_MH_3837	L5	58.58	49.66	50.71	50.84	51.02	51.29
Z5_MH_3838	L5	58.00	55.42	55.57	55.60	55.64	55.68
Z5_MH_3845	H7	125.17	121.22	121.66	121.72	121.79	121.89
Z5_MH_3856	H7	121.99	116.30	120.50	120.79	121.32	122.15
Z5_MH_3857	G7	163.77	154.60	163.57	163.77	164.01	165.50
Z5_MH_3858	N4	30.00	28.04	28.46	28.53	28.61	28.72
Z5_MH_3861	L5	58.00	48.07	49.33	49.51	49.74	50.08
Z5_MH_3862	L5	60.51	47.12	48.47	48.66	48.91	49.27
Z5_MH_3863	M5	58.95	45.20	46.28	46.42	46.61	46.85
Z5_MH_3864	M5	59.25	46.22	47.55	47.73	47.95	48.27
Z5_MH_3865	L5	64.00	59.20	60.16	60.25	60.35	60.50
Z5_MH_3866	L5	62.00	56.90	57.95	58.06	58.20	58.40
Z5_MH_3869	G6	47.92	40.61	42.17	42.73	45.47	47.95
Z5_MH_3871	K5	68.00	63.75	65.50	65.83	66.17	66.55
Z5_MH_3872	K5	65.30	60.05	62.53	62.91	63.29	63.73
Z5_MH_3873	L5	64.07	58.60	60.98	61.33	61.68	62.17
Z5_MH_3875	L4	58.00	52.66	52.85	52.87	52.90	52.93
Z5_MH_3876	G6	44.51	35.21	38.77	39.35	40.74	41.78
Z5_MH_3877	G6	51.00	45.23	46.58	46.83	47.81	51.35
Z5_MH_3878	G6	52.10	46.68	48.17	48.47	49.05	52.80
Z5_MH_3880	H7	131.67	128.42	128.88	128.92	129.00	129.68
Z5_MH_3884	G7	153.43	139.58	141.69	145.00	145.13	146.25
Z5_MH_3885	H6	128.87	122.70	122.92	122.96	123.00	125.59
Z5_MH_3891	G7	185.70	179.95	185.78	186.11	186.67	187.44
Z5_MH_3896	H7	124.74	120.27	124.75	125.40	126.27	127.34
Z5_MH_3899	G8	230.18	221.68	222.49	222.60	222.70	222.80
Z5_MH_3900	G8	214.53	207.20	208.15	208.30	208.43	211.98
Z5_MH_3901	G8	208.33	201.66	202.66	202.83	203.11	207.85
Z5_MH_3926	L5	68.00	62.35	64.19	67.95	68.00	68.36
Z5_MH_3927	L5	69.27	63.94	65.62	69.27	69.27	69.99
Z5_MH_3934	N4	37.14	32.81	33.21	33.28	37.14	37.14
Z5_MH_3935	N4	38.49	32.57	33.24	34.88	37.42	38.06
Z5_MH_3936	N4	38.00	32.23	33.21	34.82	37.33	37.94
Z5_MH_3937	N4	37.77	31.90	33.11	34.63	36.96	37.45
Z5_MH_3938	N4	37.36	31.76	33.04	34.47	36.63	37.08

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_MH_3939	N4	37.20	31.29	32.88	34.15	36.07	36.35
Z5_MH_3940	N4	36.00	30.26	31.34	31.63	35.82	36.00
Z5_MH_3941	N4	36.00	27.75	28.63	30.62	36.00	36.00
Z5_MH_3942	N4	34.00	23.42	24.77	26.19	27.26	28.67
Z5_MH_3944	N4	35.76	31.18	31.84	31.98	32.29	33.87
Z5_MH_3947	F6	92.00	84.50	85.44	86.04	86.77	88.11
Z5_MH_3948	H8	134.72	128.72	134.92	135.25	135.86	136.55
Z5_MH_3949	G8	149.41	139.69	140.76	143.21	147.43	147.60
Z5_MH_3983	J5	104.00	99.83	100.21	100.31	100.45	100.68
Z5_MH_3984	J5	104.00	98.37	99.24	99.33	99.45	99.67
Z5_MH_3989	J5	71.40	65.90	66.57	66.67	66.79	66.96
Z5_MH_3990	J5	64.00	59.30	60.33	60.47	60.65	60.98
Z5_MH_3991	J5	58.97	54.93	55.85	55.97	56.12	56.37
Z5_MH_3995	J5	87.27	79.79	81.25	87.27	87.27	87.27
Z5_MH_4002	L5	65.70	56.59	60.46	61.40	62.49	63.73
Z5_MH_4004	K5	68.00	63.69	65.27	65.59	65.92	66.27
Z5_MH_4027	H5	114.28	106.85	108.00	108.13	108.30	108.58
Z5_MH_4028	J5	90.00	81.00	82.24	82.37	82.53	82.74
Z5_MH_4029	H5	84.41	88.91	88.91	88.91	88.91	88.91
Z5_MH_4031	H6	47.56	35.39	36.21	36.50	42.70	42.70
Z5_MH_4032	H6	99.88	67.31	67.83	67.93	67.99	68.12
Z5_MH_4033	H6	104.00	95.79	101.07	101.25	101.76	102.29
Z5_MH_4034	H6	104.00	97.92	99.42	103.80	104.02	104.38
Z5_MH_4035	G6	62.99	59.74	60.79	60.97	61.18	61.50
Z5_MH_4037	G7	137.75	132.32	132.94	133.03	133.30	136.22
Z5_MH_4039	H8	135.95	130.45	134.92	135.25	135.86	136.55
Z5_MH_4040	H8	141.28	137.74	138.23	138.34	140.29	140.72
Z5_MH_4041	H8	156.00	147.11	151.66	152.53	153.95	156.43
Z5_MH_4042	H8	157.12	147.66	151.69	152.52	153.95	156.43
Z5_MH_4043	H8	162.43	153.96	154.70	154.84	155.12	157.40
Z5_MH_4044	H8	163.74	155.66	156.29	156.37	156.43	158.74
Z5_MH_4045	H8	167.22	157.97	158.60	158.68	158.69	160.80
Z5_MH_4059	G6	38.00	35.78	42.51	43.65	45.18	47.71
Z5_MH_4060	G6	78.00	57.13	58.40	58.56	58.90	61.85
Z5_MH_4061	G7	148.79	143.25	143.90	143.99	144.12	144.32
Z5_MH_4062	G7	154.46	147.63	148.36	148.47	148.63	148.92
Z5_MH_4063	G8	186.78	177.20	177.44	177.47	177.50	177.55
Z5_MH_4064	G8	193.16	179.77	180.16	180.22	180.29	180.38
Z5_MH_4065	G8	191.66	185.24	185.61	185.66	185.72	185.80
Z5_MH_4066	G8	157.61	155.63	157.61	157.72	157.95	158.43
Z5_MH_4067	G8	154.42	144.95	145.72	146.30	152.01	152.77
Z5_MH_4068	G8	160.10	155.34	156.11	156.22	156.36	158.95
Z5_MH_4069	G8	164.05	155.72	156.76	157.13	157.86	161.47
Z5_MH_4070	G8	184.47	178.63	178.63	179.92	180.35	182.28
Z5_MH_4071	G8	181.02	176.05	176.92	179.92	180.43	180.92
Z5_MH_4072	H8	173.23	169.23	169.84	169.91	169.92	169.93
Z5_MH_4073	H8	170.88	164.71	165.32	165.39	165.40	165.46
Z5_MH_4074	G8	174.00	160.46	161.32	161.43	161.58	161.78
Z5_MH_4084	F5	142.09	134.17	134.81	135.00	137.18	141.54
Z5_MH_4085	F5	167.38	163.42	164.26	164.46	164.70	165.04
Z5_MH_4086	F5	144.00	139.04	139.57	139.71	140.09	144.00
Z5_MH_4087	F6	100.05	94.30	95.76	96.08	98.39	99.55
Z5_MH_4088	F6	92.00	85.05	86.80	87.39	92.00	92.00
Z5_MH_4089	F6	98.11	87.91	89.76	96.29	98.12	99.36
Z5_MH_4090	F6	110.34	99.24	100.48	100.80	110.35	111.96
Z5_MH_4091	F6	130.90	123.15	124.28	124.58	124.96	130.90
Z5_MH_4092	F6	124.46	119.31	119.78	119.92	120.16	124.64
Z5_MH_4093	F6	131.32	121.70	122.33	122.48	122.68	131.32
Z5_MH_4094	F6	132.00	128.40	129.10	129.29	129.52	132.12

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_MH_4095	F6	60.00	56.75	69.39	71.53	74.56	79.63
Z5_MH_4096	F6	69.21	64.79	69.70	71.85	74.49	78.38
Z5_MH_4108	E6	129.62	127.54	127.84	127.91	127.99	128.23
Z5_MH_4109	E6	102.21	96.24	97.09	97.25	101.02	101.51
Z5_MH_4110	E6	104.00	100.10	100.94	101.14	102.81	105.36
Z5_MH_4111	E6	106.13	101.67	102.46	102.64	103.15	106.13
Z5_MH_4112	E6	108.97	107.47	107.64	107.67	107.71	107.87
Z5_MH_4113	H5	120.27	96.45	97.49	97.60	97.73	97.89
Z5_MH_4118	G8	154.94	150.11	151.76	151.80	151.85	151.91
Z5_MH_4124	M4	41.82	37.24	37.76	37.82	37.89	37.99
Z5_MH_4126	M5	50.00	45.00	45.00	45.00	45.01	50.00
Z5_MH_4127	M5	38.56	23.24	24.06	24.20	24.38	24.63
Z5_MH_4132	L5	65.38	60.88	61.32	61.39	61.48	61.63
Z5_MH_4133	L5	66.00	59.29	61.57	62.86	63.42	64.74
Z5_MH_4134	L5	68.00	61.69	63.56	67.20	68.00	68.00
Z5_MH_4136	L5	72.00	66.71	70.17	72.00	72.03	74.71
Z5_MH_4139	M5	52.00	48.19	52.51	53.19	53.80	54.47
Z5_MH_4147	K5	76.34	70.63	71.23	71.30	71.69	73.98
Z5_MH_4148	K5	74.00	62.97	68.19	68.59	69.19	69.92
Z5_MH_4149	K5	72.00	64.42	68.80	69.17	69.49	69.74
Z5_MH_4150	K5	72.00	64.55	68.89	69.29	69.65	69.94
Z5_MH_4151	K5	72.00	64.78	68.99	69.43	69.87	70.20
Z5_MH_4153	K5	66.00	61.61	62.68	62.91	63.25	64.27
Z5_MH_4154	L5	66.00	61.17	62.04	62.18	62.35	62.59
Z5_MH_4155	J5	74.00	67.50	69.95	70.37	70.99	71.83
Z5_MH_4156	M5	48.00	39.01	42.97	43.17	43.84	43.88
Z5_MH_4157	G7	145.55	139.78	140.42	140.52	140.62	140.88
Z5_MH_4163	G8	191.86	186.86	188.21	191.86	193.57	197.33
Z5_MH_4164	G8	154.00	148.40	149.16	149.58	150.54	151.20
Z5_MH_4165	G8	154.00	147.00	148.31	148.36	148.43	148.49
Z5_MH_4166	G8	169.03	163.30	170.07	171.67	173.23	175.29
Z5_MH_4167	H5	49.68	46.90	47.31	47.36	47.43	47.52
Z5_MH_4168	F6	87.28	80.58	81.19	81.34	81.52	81.76
Z5_MH_4171	G8	188.14	183.14	185.64	187.78	189.51	192.70
Z5_MH_4176	F6	91.85	83.75	85.34	85.63	85.97	86.35
Z5_MH_4193	J5	83.80	77.97	79.11	79.27	79.50	83.80
Z5_MH_4235	E6	130.10	125.68	126.64	129.58	130.23	130.89
Z5_MH_4236	E6	132.98	129.65	130.32	133.09	133.55	134.08
Z5_MH_4237	G6	38.00	34.49	40.53	41.55	43.06	45.27
Z5_MH_4240	H5	70.00	63.83	70.59	72.23	74.99	79.97
Z5_MH_4241	H5	53.58	50.08	55.21	56.02	56.91	58.40
Z5_MH_4242	H5	50.90	40.55	41.02	41.02	41.03	41.05
Z5_MH_4243	H6	38.10	30.80	32.84	33.68	34.67	35.34
Z5_MH_4244	H6	39.40	31.73	34.39	36.14	38.42	38.53
Z5_MH_4249	H7	124.00	121.77	123.38	123.59	123.86	124.24
Z5_MH_4250	H7	125.23	119.23	120.46	120.57	120.64	120.71
Z5_MH_4254	G8	161.00	158.10	161.93	162.85	163.73	165.09
Z5_MH_4255	G8	177.06	172.09	172.37	172.41	172.45	172.50
Z5_MH_4256	H8	143.34	134.84	137.94	138.28	138.78	139.54
Z5_MH_4257	H8	158.00	153.33	153.88	155.51	158.00	158.16
Z5_MH_4258	H8	159.72	152.39	153.07	156.81	157.42	157.88
Z5_MH_4259	H8	138.16	134.54	137.18	137.33	137.56	137.89
Z5_MH_4263	L5	55.70	50.15	56.26	56.68	57.36	58.07
Z5_MH_4266	M5	54.00	48.85	54.02	54.36	54.84	55.43
Z5_MH_4267	M5	54.59	48.42	55.18	55.54	56.07	56.74
Z5_MH_4268	M5	56.00	52.42	56.20	56.56	57.12	57.95
Z5_MH_4269	L5	64.00	57.10	59.02	59.35	59.77	60.47
Z5_MH_4274	K5	73.11	66.74	67.96	68.11	68.33	69.43
Z5_MH_4275	K4	74.73	68.26	68.90	69.36	70.43	72.41

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_MH_4282	H5	78.00	72.50	72.50	72.50	72.50	73.51
Z5_MH_4283	H5	74.96	69.46	70.87	71.60	72.27	73.51
Z5_MH_4284	J5	104.00	99.28	100.21	100.31	100.44	100.68
Z5_MH_4285	J5	104.00	98.17	98.86	98.94	99.03	99.28
Z5_MH_4286	J5	92.00	87.75	88.81	88.95	89.05	89.09
Z5_MH_4287	L5	56.00	52.61	56.27	56.69	57.38	58.10
Z5_MH_4288	L5	56.00	51.18	56.27	56.69	57.38	58.08
Z5_MH_4296	J5	88.00	83.47	83.95	83.99	84.05	85.16
Z5_MH_4303	K5	73.69	65.77	69.19	69.72	70.30	70.84
Z5_MH_4305	L5	62.76	55.84	58.28	58.45	58.64	60.65
Z5_MH_4306	K5	81.34	77.09	81.34	81.34	81.47	81.88
Z5_MH_4307	J5	79.04	71.34	73.79	74.46	74.48	74.92
Z5_MH_4321	L5	56.35	50.22	56.54	56.98	57.65	58.34
Z5_MH_4322	L5	59.93	55.20	57.92	58.28	58.87	59.74
Z5_MH_4325	H5	113.82	110.66	111.16	111.26	111.43	112.34
Z5_MH_4327	N4	21.62	12.95	13.80	19.14	21.26	22.25
Z5_MH_4328	M4	28.90	26.90	27.64	27.86	29.02	29.93
Z5_MH_4337	K5	74.00	67.51	68.86	69.31	70.34	72.31
Z5_MH_4349	J5	95.18	92.47	93.02	94.91	95.99	96.90
Z5_MH_4350	J5	96.62	92.59	93.51	95.30	96.62	97.41
Z5_MH_4351	J5	91.39	90.34	90.96	91.07	91.48	91.71
Z5_MH_4354	H7	115.64	109.72	110.08	110.13	110.18	110.26
Z5_MH_4357	H8	134.00	128.40	129.66	129.76	129.87	130.06
Z5_MH_4358	G7	180.83	174.16	180.83	180.83	180.86	181.26
Z5_MH_4359	G7	187.24	184.70	185.79	186.12	186.70	187.44
Z5_MH_4360	F6	94.18	90.54	91.59	91.73	91.88	92.04
Z5_MH_4361	E6	125.85	120.93	121.97	122.16	122.37	123.09
Z5_MH_4877	H5	48.03	45.65	46.12	46.17	46.24	46.34
Z5_MH_4919	N4	34.00	23.98	29.94	30.25	30.66	31.32
Z5_MH_4923	L5	59.10	50.78	57.54	57.75	59.10	59.16
Z5_MH_4924	L5	58.00	51.80	58.04	58.06	58.69	59.43
Z5_MH_5083	H8	-	89.00	89.59	89.64	89.71	89.81
Z5_MH_5084	H8	158.59	153.96	154.29	155.56	158.12	158.27
Z5_MH_5088	H8	135.68	130.82	131.24	131.25	131.28	131.31
Z5_MH_5089	H7	128.84	121.44	122.96	123.09	123.19	123.29
Z5_MH_5093	H7	-	115.10	116.60	116.60	116.60	116.60
Z5_MH_5094	G7	158.00	152.58	153.34	153.38	153.42	155.22
Z5_MH_5095	H7	122.18	120.72	122.85	123.02	123.23	123.53
Z5_MH_5097	H6	40.00	36.92	37.50	39.06	40.14	40.46
Z5_MH_5098	H6	108.81	91.77	92.31	92.40	92.47	92.56
Z5_MH_5099	H6	110.30	93.64	93.95	94.00	94.07	94.15
Z5_MH_5100	H6	42.71	35.36	43.51	45.54	48.55	52.83
Z5_MH_5101	G6	38.00	31.30	39.81	40.61	41.78	43.50
Z5_MH_5102	H6	76.54	69.32	70.53	70.74	71.03	71.32
Z5_MH_5103	H6	92.08	76.09	77.32	77.54	77.87	78.19
Z5_MH_5104	H6	122.00	110.49	111.09	111.18	111.30	111.47
Z5_MH_5105	F6	123.65	117.81	118.82	119.07	119.47	124.15
Z5_MH_5106	E6	125.83	121.12	122.01	122.16	122.36	123.08
Z5_MH_5107	N4	-	10.32	10.78	10.85	10.93	11.05
Z5_MH_5108	M4	-	11.61	11.85	11.88	11.91	11.94
Z5_MH_5109	M4	46.44	42.44	44.27	44.32	44.36	44.41
Z5_MH_5110	M4	47.00	42.70	45.62	45.69	45.81	46.00
Z5_MH_5111	M4	48.00	43.17	47.44	47.55	47.80	48.08
Z5_MH_5112	L4	48.43	43.43	48.54	48.70	48.99	49.40
Z5_MH_5113	L5	53.87	47.39	55.30	55.66	56.34	57.05
Z5_MH_5114	L5	56.00	50.53	56.31	56.73	57.41	58.12
Z5_MH_5115	L5	56.00	50.24	56.14	56.55	57.24	57.95
Z5_MH_5116	L5	56.00	50.10	56.08	56.49	57.17	57.89
Z5_MH_5118	L5	58.35	54.13	58.03	58.35	58.81	59.63

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_MH_5119	K5	68.00	63.91	65.82	66.15	66.51	67.08
Z5_MH_5120	K5	72.00	65.74	67.88	68.22	68.54	68.82
Z5_MH_5121	J5	79.42	71.04	73.07	73.27	73.42	73.57
Z5_MH_5122	M5	57.17	55.33	57.20	57.60	58.16	59.20
Z5_MH_5123	L5	66.00	60.91	61.84	61.93	62.05	62.22
Z5_MH_5189	G8	236.00	231.00	231.17	232.78	234.70	237.53
Z5_MH_5271	K5	66.38	61.90	64.21	64.59	64.98	65.40
Z5_MH_5333	H8	171.23	165.29	165.98	166.06	166.08	166.11
Z5_MH_5390	H8	144.27	137.38	138.39	138.69	139.36	140.23
Z5_MH_5564	L5	61.09	56.20	57.99	58.39	59.03	60.21
Z5_MH_5573	N5	48.00	39.86	40.35	40.36	40.37	40.39
Z5_OF_4362	M5	54.00	52.27	52.57	52.78	53.20	54.08
Z5_OF_4369	H6	-	20.00	35.11	35.11	35.11	35.11
Z5_OF_4382	H5	104.67	99.57	100.55	100.66	100.79	100.98
Z5_OF_4384	H6	105.07	98.07	98.78	98.90	99.03	99.21
Z5_OF_4385	L5	65.07	60.34	61.08	61.15	61.25	61.38
Z5_OF_4386	H7	-	94.11	94.52	94.59	94.66	94.72
Z5_OF_4390	G6	-	31.21	37.33	37.33	37.33	37.33
Z5_OF_4393	F7	328.00	322.00	323.32	323.52	323.76	324.07
Z5_OF_4395	H7	134.15	129.08	130.92	131.24	133.37	135.59
Z5_OF_4396	G7	186.00	160.00	160.78	160.83	160.90	160.99
Z5_OF_4397	G7	220.00	200.00	200.75	201.72	203.15	205.37
Z5_OF_4398	G7	270.00	252.00	252.27	252.31	252.35	252.42
Z5_OF_4399	F7	312.00	306.00	306.32	306.38	306.45	306.55
Z5_OF_4400	H6	-	10.34	32.53	32.53	32.53	32.53
Z5_OF_4401	N4	-	15.78	16.38	16.46	16.55	16.61
Z5_OF_4402	N5	-	35.00	35.38	35.41	35.46	35.52
Z5_OF_4408	N4	-	6.00	6.81	7.00	7.00	7.00
Z5_OF_4409	N4	-	21.45	22.78	22.86	22.95	22.95
Z5_OF_4410	H6	-	30.30	31.46	31.59	31.67	31.70
Z5_OF_4411	G6	-	37.42	39.03	39.03	39.03	39.09
Z5_OF_4414	H8	138.34	136.34	137.78	138.47	139.48	140.56
Z5_OF_4415	G8	-	163.59	163.82	163.85	163.89	163.94
Z5_OF_4416	G8	-	134.00	135.36	135.43	135.50	135.50
Z5_OF_4418	O4	-	13.56	14.04	14.10	14.13	14.16
Z5_OF_4419	J5	-	50.83	51.71	51.81	51.95	52.15
Z5_OF_4426	H8	-	124.22	124.52	124.56	124.61	124.68
Z5_OF_4428	G6	47.13	44.24	44.75	44.84	45.48	46.68
Z5_OF_4429	G6	-	46.29	47.78	48.29	48.29	48.29
Z5_OF_4430	F6	-	80.00	80.58	80.72	80.88	81.10
Z5_OF_4431	E6	110.07	108.07	108.88	109.00	109.07	109.15
Z5_OF_4437	L5	52.00	47.17	55.54	55.91	56.60	57.32
Z5_OF_4438	N5	-	24.63	25.26	25.32	25.37	25.43
Z5_OF_4441	M4	34.00	25.55	29.92	30.13	30.38	30.63
Z5_OF_4443	L5	57.30	48.78	53.47	57.50	58.00	58.00
Z5_OF_4451	H6	-	10.51	30.53	30.53	30.53	30.53
Z5_OF_4453	H7	-	77.48	77.85	77.90	77.98	78.01
Z5_OF_4454	G7	-	216.50	216.64	216.66	216.68	216.71
Z5_OF_4455	G8	-	171.39	171.78	171.84	171.91	172.01
Z5_OF_4457	G8	-	161.33	161.45	161.47	161.49	161.51
Z5_OF_4459	G8	-	162.19	162.30	162.31	162.33	162.35
Z5_OF_4460	G8	-	163.44	163.58	163.60	163.62	163.65
Z5_OF_4467	H8	-	122.37	122.63	122.68	122.73	122.80
Z5_OF_4469	H7	-	107.62	107.77	107.79	107.82	107.85
Z5_OF_4470	H7	-	111.79	112.24	112.30	112.38	112.48
Z5_OF_4471	H6	-	24.46	33.73	33.73	33.73	33.73
Z5_OF_4472	H6	-	14.56	31.33	31.33	31.33	31.33
Z5_OF_4476	N5	-	22.36	22.36	22.36	22.36	22.36
Z5_OF_4492	F6	-	83.27	84.94	85.48	86.10	86.12

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_OF_4493	F6	93.39	90.31	90.55	90.61	90.67	90.76
Z5_OF_4496	H8	-	99.60	99.82	99.85	99.88	99.92
Z5_OF_4497	H8	-	128.51	128.57	128.57	128.58	128.59
Z5_OF_4506	N4	-	11.90	12.51	12.61	12.70	12.78
Z5_OF_4507	N4	-	6.00	6.22	6.25	6.29	6.35
Z5_OF_4538	E6	107.60	101.96	102.67	102.86	103.30	106.42
Z5_OF_4540	G6	-	21.60	37.33	37.33	37.33	37.33
Z5_OF_4541	H5	-	11.68	27.93	27.93	27.93	27.93
Z5_OF_4546	N4	-	25.44	26.04	26.08	26.16	26.44
Z5_OF_4547	H7	-	116.00	116.52	116.63	116.79	117.00
Z5_OF_4566	H8	-	129.46	129.93	129.99	130.07	130.20
Z5_OF_4567	H8	-	113.29	114.24	114.30	114.36	114.45
Z5_OF_4568	H8	-	113.58	113.97	114.02	114.08	114.17
Z5_OF_4571	M5	-	19.91	20.15	20.19	20.23	20.27
Z5_OF_4572	M5	-	22.22	22.80	22.88	22.98	23.11
Z5_OF_4578	N4	-	6.00	6.43	6.49	6.56	6.68
Z5_OF_4580	N5	-	27.08	27.35	27.39	27.44	27.51
Z5_OF_4581	N5	-	24.04	24.32	24.35	24.39	24.45
Z5_OF_4592	H5	113.59	106.00	106.54	106.60	106.66	106.75
Z5_OF_4593	H8	109.97	98.21	98.81	98.87	98.95	99.05
Z5_OF_4968	H6	-	9.59	29.93	29.93	29.93	29.93
Z5_OF_4970	H7	-	78.04	78.36	78.40	78.44	78.51
Z5_OF_4972	H6	-	12.00	33.33	33.33	33.33	33.33
Z5_OF_4973	H6	-	8.00	30.13	30.13	30.13	30.13
Z5_OF_4974	G6	-	29.45	37.63	37.63	37.63	37.63
Z5_OF_4975	E5	311.51	306.26	306.42	306.46	306.51	306.57
Z5_OF_4976	F5	309.41	304.41	304.50	304.52	304.55	304.59
Z5_OF_4977	F6	-	37.00	47.23	47.23	47.23	47.23
Z5_OF_4978	G6	-	46.00	46.75	46.96	47.25	47.25
Z5_OF_4979	H7	-	102.00	102.68	102.75	102.83	102.95
Z5_OF_4980	H7	-	92.00	92.18	92.20	92.23	92.28
Z5_OF_4982	H7	-	97.44	97.79	97.84	97.89	97.97
Z5_OF_4988	H8	-	128.00	128.22	128.23	128.24	128.26
Z5_OF_4990	G8	-	140.18	141.42	141.47	141.54	141.59
Z5_OF_4991	H8	138.60	137.60	138.01	138.30	139.42	140.54
Z5_OF_4992	G8	-	132.00	132.56	132.65	132.78	132.96
Z5_OF_4993	G8	-	160.36	160.53	160.55	160.58	160.61
Z5_OF_4994	G8	-	158.00	158.82	158.93	159.06	159.24
Z5_OF_4996	E5	317.34	312.34	312.41	312.43	312.45	312.48
Z5_OF_5004	M4	39.00	29.67	33.62	33.82	34.05	34.27
Z5_OF_5005	M4	30.00	24.98	28.90	29.12	29.38	29.65
Z5_OF_5006	N5	-	27.00	27.59	27.62	27.66	27.71
Z5_OF_5010	N4	-	13.27	14.27	14.27	14.27	14.27
Z5_OF_5073	M4	44.88	40.88	41.61	41.63	41.64	41.66
Z5_OF_5078	L5	55.12	49.80	55.84	56.23	56.92	57.64
Z5_OF_5079	M4	42.00	37.00	38.82	38.95	39.14	39.35
Z5_OF_5080	M4	42.00	36.27	38.99	39.13	39.32	39.54
Z5_OF_5541	G8	-	167.49	167.65	167.67	167.70	167.73
Z5_OF_5563	G8	-	140.18	140.42	140.44	140.47	140.52
Z5_OF_5565	F6	-	83.27	84.75	85.00	85.29	85.61
Z5_OF_5566	N4	-	10.32	10.65	10.69	10.75	10.82
Z5_OF_5567	M4	-	20.00	20.36	20.41	20.47	20.55
Z5_OF_5568	H7	-	125.43	125.43	125.43	125.43	125.43
Z5_OF_5569	H5	-	11.68	27.93	27.93	27.93	27.93
Z5_SGIL_4624	N5	44.00	41.06	41.45	41.49	41.54	41.61
Z5_SGIL_4628	G6	58.29	53.33	57.16	57.70	59.00	60.79
Z5_SGIL_4629	G6	57.61	54.28	56.10	57.09	57.98	59.14
Z5_SGIL_4696	H6	130.00	126.30	126.49	126.52	126.56	126.62
Z5_SGIL_4708	F6	110.56	102.76	103.31	103.44	103.60	103.82

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Z5 East Existing Nodes

Node ID	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10yr	25Yr	100Yr
Z5_SGIL_4712	H6	34.00	24.14	35.23	35.27	35.32	35.37
Z5_SGIL_4719	L4	59.75	52.12	55.70	55.73	55.76	55.82
Z5_SGIL_4730	H7	120.04	116.40	118.01	119.85	120.04	120.04
Z5_SGIL_4731	G8	260.79	250.71	250.94	250.97	251.00	251.05
Z5_SGIL_4732	G8	229.56	221.56	224.12	224.24	224.34	224.44
Z5_SGIL_4733	G8	230.83	224.58	225.05	225.12	225.24	227.19
Z5_SGIL_4734	G8	208.53	201.53	202.67	202.84	203.13	208.04
Z5_SGIL_4736	E5	329.40	322.40	322.55	322.58	322.61	322.66
Z5_SGIL_4737	E5	334.00	326.56	326.78	326.83	326.88	326.95
Z5_SGIL_4739	E5	342.84	335.84	335.99	336.02	336.05	336.10
Z5_SGIL_4740	E6	128.00	122.67	122.84	122.87	122.91	123.02
Z5_SGIL_4751	L5	65.71	64.34	65.21	65.83	66.22	67.17
Z5_SGIL_4759	N4	37.89	34.22	34.45	34.48	37.89	37.89
Z5_SGIL_4760	N4	30.00	28.88	29.52	30.11	30.71	31.52
Z5_SGIL_4780	G8	189.17	182.00	185.71	188.18	189.52	192.71
Z5_SGIL_4781	M5	54.99	48.07	55.18	55.55	56.07	56.74
Z5_SGIL_4806	H5	60.66	56.74	61.16	62.07	63.49	65.87
Z5_SGIL_4807	H6	38.50	30.50	32.37	32.92	33.66	34.01
Z5_SGIL_4811	H6	40.16	34.16	43.57	45.61	48.64	52.93
Z5_SGIL_4814	H8	152.00	147.42	151.56	152.29	154.05	156.55
Z5_SGMH_4849	N4	36.00	28.15	29.66	29.91	30.26	30.49
Z5_SGMH_4850	N4	39.35	29.75	30.38	30.49	30.58	30.67
Z5_SGMH_4851	N4	36.00	27.00	27.63	27.72	27.81	27.89
Z5_SGMH_4865	M5	58.17	43.74	44.42	44.51	44.62	44.78
Z5_SGMH_4866	H7	128.19	122.32	128.19	128.19	128.21	129.30
Z5_SGMH_4873	H6	52.00	41.18	48.30	48.40	48.51	48.55
Z6_IL_1147	G8	174.00	172.67	172.81	172.84	172.87	172.92
Z6_IL_1148	G8	171.85	169.93	170.09	170.12	170.16	170.20
Z6_IL_1149	G8	-	163.81	164.36	164.45	164.57	164.73
Z6_MH_1680	G8	174.00	171.79	171.96	171.98	172.01	172.05
Z6_MH_1681	G8	171.84	164.97	165.53	165.63	165.75	165.93
Z6_MH_1740	G8	173.42	165.67	165.91	165.95	166.00	166.05

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Zone 6 Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
NEW_Z6_IL_1000	K13	138.00	132.00	164.12	164.12	184.12	211.34
NEW_Z6_IL_1003	J10	171.00	165.00	165.76	165.76	166.06	166.54
NEW_Z6_MH_1001	J10	173.00	167.00	168.36	168.36	168.41	168.53
NEW_Z6_MH_1002	J10	171.50	165.50	166.56	166.56	166.65	166.88
NEW_Z6_STORE_01	K14	172.00	169.50	170.35	170.35	170.57	171.21
Z6_CB_104	J9	145.54	140.87	141.23	141.23	141.33	145.54
Z6_CB_107	J11	124.37	121.41	121.59	121.59	121.62	121.65
Z6_CB_108	J11	119.72	114.72	115.04	115.04	115.11	115.20
Z6_CB_109	K10	109.36	100.36	102.92	102.92	103.36	103.93
Z6_CB_110	K10	109.08	100.08	102.05	102.05	102.41	102.86
Z6_CB_121	K10	99.88	95.80	95.91	95.91	95.94	96.03
Z6_CB_122	K10	101.14	98.14	98.14	98.14	98.14	98.14
Z6_CB_123	K10	101.97	97.18	97.23	97.23	97.24	97.27
Z6_CB_124	K10	102.00	98.50	98.57	98.57	98.59	98.65
Z6_CB_125	K10	102.84	98.92	99.20	99.20	99.27	99.35
Z6_CB_126	K10	102.74	99.16	99.65	99.65	99.76	99.93
Z6_CB_128	K10	105.79	105.12	105.19	105.19	105.22	105.28
Z6_CB_129	K10	105.94	102.11	102.18	102.18	102.21	102.27
Z6_CB_130	K10	105.81	102.14	102.25	102.25	102.27	102.35
Z6_CB_131	K10	105.27	101.60	101.67	101.67	101.69	101.74
Z6_CB_132	K10	103.63	101.38	101.72	101.72	101.79	101.89
Z6_CB_133	K10	101.66	98.58	98.71	98.71	98.75	98.86
Z6_CB_136	K10	25.75	23.75	23.75	23.75	23.75	23.75
Z6_CB_137	K10	16.60	12.52	12.96	12.96	13.05	13.18
Z6_CB_138	K10	16.29	11.79	12.60	12.60	13.18	14.66
Z6_CB_143	J11	133.15	128.15	128.37	128.37	128.39	128.42
Z6_CB_144	K11	21.89	19.89	26.96	26.96	29.99	35.00
Z6_CB_146	H9	237.67	232.75	233.51	233.51	233.71	234.09
Z6_CB_149	M12	135.74	132.91	133.09	133.09	133.16	133.25
Z6_CB_150	M12	136.31	133.48	133.66	133.66	133.74	133.84
Z6_CB_152	M12	128.00	126.33	126.70	126.70	126.81	127.03
Z6_CB_153	M12	127.47	125.35	125.57	125.57	125.64	125.75
Z6_CB_154	L12	141.20	136.20	136.39	136.39	136.43	136.48
Z6_CB_160	K13	131.65	128.90	129.21	129.21	129.27	129.35
Z6_CB_163	M11	17.60	12.77	15.12	15.12	18.18	21.10
Z6_CB_170	J9	138.59	127.81	128.05	128.05	128.08	128.12
Z6_CB_171	J9	138.95	126.66	126.89	126.89	126.92	126.96
Z6_CB_176	K13	132.00	130.00	133.23	133.23	133.67	134.46
Z6_CB_182	O14	172.46	166.46	166.74	166.74	166.88	167.05
Z6_CB_183	O14	174.38	168.63	168.96	168.96	169.14	169.37
Z6_CB_33	J11	122.07	117.07	117.53	117.53	117.63	117.79
Z6_CB_47	J9	135.66	134.24	134.46	134.46	134.50	134.56
Z6_CB_51	M12	138.00	136.67	137.46	137.46	138.02	139.08
Z6_CB_63	K10	18.92	14.25	14.53	14.53	14.65	16.91
Z6_CB_65	L11	14.46	9.63	15.93	15.93	16.53	17.45
Z6_CB_73	J9	138.23	133.23	133.45	133.45	133.48	133.52
Z6_CB_74	K11	41.42	38.59	39.27	39.27	39.39	39.54
Z6_CB_76	L11	14.00	11.92	12.14	12.14	12.17	12.21
Z6_CB_79	K11	20.97	18.97	19.98	19.98	20.63	21.40
Z6_CB_81	K10	114.00	112.75	113.36	113.36	114.00	115.02
Z6_CB_89	J10	154.00	151.67	154.16	154.16	154.71	156.33
Z6_CB_90	J9	141.19	140.83	141.26	141.26	141.32	141.39
Z6_CB_91	J9	138.75	133.75	133.97	133.97	134.01	134.07
Z6_IL_1001	K13	136.00	131.88	132.50	132.50	132.76	136.00
Z6_IL_1002	J13	144.00	135.75	136.03	136.03	136.10	136.19
Z6_IL_1003	J13	144.00	136.38	137.04	137.04	137.24	137.48
Z6_IL_1005	L13	136.12	132.41	132.70	132.70	132.77	132.86
Z6_IL_1006	L14	133.85	133.02	133.82	133.82	134.49	135.72
Z6_IL_1016	L13	226.00	220.75	221.72	221.72	225.02	226.00

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Zone 6 Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z6_IL_1017	L13	223.67	219.67	220.20	220.20	220.39	220.45
Z6_IL_1018	L12	200.38	197.01	197.14	197.14	197.17	197.21
Z6_IL_1019	L12	201.68	198.22	198.43	198.43	198.49	198.56
Z6_IL_1020	L12	202.48	198.23	198.50	198.50	198.59	198.71
Z6_IL_1021	L12	203.04	198.25	198.50	198.50	198.59	198.71
Z6_IL_1022	L12	205.56	202.14	202.39	202.39	202.49	202.61
Z6_IL_1023	M13	168.85	161.43	162.07	162.07	162.32	162.66
Z6_IL_1026	M13	355.36	350.99	351.12	351.12	351.15	351.19
Z6_IL_1027	M13	356.00	352.75	352.92	352.92	352.95	352.99
Z6_IL_1028	M13	342.00	340.92	341.13	341.13	341.17	341.23
Z6_IL_1029	M13	342.00	340.08	340.17	340.17	340.19	340.21
Z6_IL_1030	M13	260.28	257.36	257.45	257.45	257.47	257.53
Z6_IL_1031	M13	259.76	257.93	258.07	258.07	258.12	258.22
Z6_IL_1032	M13	232.00	229.33	229.76	229.76	229.94	230.93
Z6_IL_1033	M13	231.09	227.51	227.86	227.86	227.99	228.18
Z6_IL_1037	M13	126.00	123.67	123.82	123.82	123.89	123.96
Z6_IL_1038	M13	126.00	124.25	124.57	124.57	124.73	124.97
Z6_IL_1039	N13	126.83	124.33	124.95	124.95	125.24	125.63
Z6_IL_1040	M13	149.65	148.40	148.69	148.69	148.81	148.98
Z6_IL_1041	N13	134.00	131.17	131.56	131.56	131.76	134.71
Z6_IL_1042	N13	134.00	128.67	128.89	128.89	128.96	129.06
Z6_IL_1043	N13	134.00	128.42	128.86	128.86	129.10	132.40
Z6_IL_1046	O13	106.00	102.96	103.13	103.13	103.17	103.22
Z6_IL_1047	O13	106.00	98.92	99.76	99.76	100.08	100.56
Z6_IL_1048	N14	138.00	134.75	135.10	135.10	135.25	135.48
Z6_IL_1049	N14	144.00	141.75	141.96	141.96	142.02	142.16
Z6_IL_1050	N14	167.56	164.10	164.26	164.26	164.32	164.39
Z6_IL_1052	N14	139.92	133.59	134.19	134.19	134.47	137.44
Z6_IL_1053	N14	136.00	131.58	132.40	132.40	132.84	135.38
Z6_IL_1054	N14	133.81	130.02	130.76	130.76	131.06	131.51
Z6_IL_1055	N14	129.54	125.96	126.12	126.12	126.19	126.27
Z6_IL_1056	M12	76.00	73.17	73.31	73.31	73.36	73.41
Z6_IL_1057	P14	128.00	125.46	125.66	125.66	125.70	125.81
Z6_IL_1058	P14	126.13	123.38	124.03	124.03	124.26	126.13
Z6_IL_1059	P14	118.74	115.87	116.11	116.11	116.19	116.30
Z6_IL_1060	P14	118.13	116.55	116.55	116.55	116.55	116.55
Z6_IL_1061	K11	51.09	47.74	48.09	48.09	48.16	48.27
Z6_IL_1067	L11	15.31	11.89	15.49	15.49	16.60	18.34
Z6_IL_1081	L11	14.00	10.00	26.53	26.53	32.26	41.49
Z6_IL_1084	L11	16.00	14.17	20.13	20.13	22.89	27.39
Z6_IL_1085	L11	16.00	14.08	20.15	20.15	22.92	27.44
Z6_IL_1086	L11	16.00	13.58	20.13	20.13	22.88	27.39
Z6_IL_1087	K11	32.66	30.20	30.20	30.20	30.20	30.20
Z6_IL_1088	K11	35.25	32.00	32.37	32.37	32.43	32.51
Z6_IL_1089	K11	37.99	34.62	35.01	35.01	35.08	35.17
Z6_IL_1090	K10	112.49	106.91	107.62	107.62	107.84	108.33
Z6_IL_1091	K10	112.00	109.42	109.62	109.62	109.67	109.73
Z6_IL_1092	K10	112.00	110.58	110.58	110.58	110.58	110.58
Z6_IL_1093	K10	112.96	108.46	108.85	108.85	108.97	109.09
Z6_IL_1094	K10	112.73	108.98	109.49	109.49	109.64	109.81
Z6_IL_1095	K10	112.25	109.08	109.85	109.85	110.08	110.40
Z6_IL_1096	K10	112.64	110.97	111.14	111.14	111.18	111.23
Z6_IL_1097	K10	113.08	110.91	111.30	111.30	111.42	111.54
Z6_IL_1098	K11	106.00	103.08	103.40	103.40	103.48	103.53
Z6_IL_1099	K11	106.00	103.58	104.53	104.53	106.04	107.24
Z6_IL_1100	H9	187.11	182.82	183.11	183.11	183.16	183.23
Z6_IL_1101	H9	188.00	185.21	185.21	185.21	185.21	185.21
Z6_IL_1102	H9	170.00	165.92	166.15	166.15	166.20	166.25
Z6_IL_1104	H9	161.57	159.90	160.41	160.41	160.49	160.59

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Zone 6 Existing Nodes

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				5Yr	10Yr	25Yr	100Yr
Z6_IL_1105	H10	180.00	176.25	176.25	176.25	176.25	176.25
Z6_IL_1106	H10	249.54	245.83	246.07	246.07	246.12	246.18
Z6_IL_1107	H10	248.61	244.07	244.28	244.28	244.31	244.36
Z6_IL_1109	H10	268.93	263.43	263.78	263.78	263.84	263.93
Z6_IL_1110	H10	270.48	264.86	265.48	265.48	265.60	265.76
Z6_IL_1111	H10	272.88	269.88	270.39	270.39	270.49	270.64
Z6_IL_1114	L10	96.41	93.87	94.17	94.17	94.23	94.29
Z6_IL_1115	J11	110.19	107.40	107.81	107.81	107.91	108.04
Z6_IL_1116	K10	104.00	102.25	102.47	102.47	102.49	102.53
Z6_IL_1117	K10	106.51	104.26	104.60	104.60	104.68	104.79
Z6_IL_1118	K10	109.36	105.11	105.89	105.89	106.16	106.61
Z6_IL_1119	K10	108.00	105.88	106.15	106.15	106.20	106.27
Z6_IL_1120	L10	97.83	95.00	95.21	95.21	95.28	95.36
Z6_IL_1121	L10	98.48	97.23	97.61	97.61	97.76	97.97
Z6_IL_1122	L10	97.74	96.41	97.11	97.11	98.32	100.84
Z6_IL_1123	J11	110.00	105.63	105.98	105.98	106.06	106.18
Z6_IL_1124	K14	172.00	162.57	164.41	164.41	165.34	167.34
Z6_IL_1125	L14	156.00	154.08	154.27	154.27	154.33	154.40
Z6_IL_1127	H9	158.70	156.20	156.20	156.20	156.20	156.20
Z6_IL_1128	H9	156.66	153.83	153.91	153.91	153.93	153.95
Z6_IL_1129	H9	147.00	137.75	139.38	139.38	139.82	141.36
Z6_IL_1130	H9	162.41	159.49	159.84	159.84	159.92	160.02
Z6_IL_1131	H9	162.41	159.58	160.21	160.21	160.35	160.79
Z6_IL_1132	H9	162.55	159.97	160.24	160.24	160.28	160.35
Z6_IL_1138	H9	165.87	162.87	162.87	162.87	162.87	162.87
Z6_IL_1139	H9	166.00	162.75	162.75	162.75	162.75	162.75
Z6_IL_1140	H9	170.00	165.67	165.67	165.67	165.67	165.67
Z6_IL_1141	H9	170.56	166.48	166.63	166.63	166.65	166.69
Z6_IL_1144	H9	172.61	168.69	169.10	169.10	169.18	169.27
Z6_IL_1145	G9	177.49	172.91	173.32	173.32	173.40	173.52
Z6_IL_1146	G9	177.86	173.07	173.57	173.57	173.67	173.81
Z6_IL_1151	H9	173.16	170.41	171.02	171.02	171.22	173.30
Z6_IL_1152	H9	172.59	169.09	169.26	169.26	169.29	169.33
Z6_IL_1153	K10	72.00	62.92	64.28	64.28	64.53	64.85
Z6_IL_1156	J9	142.00	140.83	140.99	140.99	141.02	141.06
Z6_IL_1157	J11	137.95	134.37	134.78	134.78	134.83	134.90
Z6_IL_1158	J11	133.73	129.23	129.54	129.54	129.59	129.65
Z6_IL_1159	K10	116.01	113.76	114.44	114.44	116.01	116.69
Z6_IL_1160	J12	152.49	147.71	148.33	148.33	148.47	148.59
Z6_IL_1161	M12	139.82	136.90	137.06	137.06	137.12	137.62
Z6_IL_1162	M12	139.55	135.43	136.51	136.51	136.82	137.61
Z6_IL_1165	K11	100.96	97.21	97.60	97.60	97.66	97.75
Z6_IL_1167	J10	148.00	143.00	143.17	143.17	143.21	143.26
Z6_IL_1168	J10	154.00	148.50	148.94	148.94	149.01	149.10
Z6_IL_1169	J10	152.62	146.79	147.06	147.06	147.11	147.17
Z6_IL_1170	J10	149.31	143.48	143.87	143.87	143.94	144.03
Z6_IL_1171	K11	53.94	49.11	49.68	49.68	49.78	49.92
Z6_IL_1172	L10	97.17	93.42	93.52	93.52	93.55	93.63
Z6_IL_1173	L10	97.78	92.45	92.51	92.51	92.52	92.57
Z6_IL_1174	K10	100.00	95.83	95.95	95.95	95.98	96.02
Z6_IL_1177	K10	17.98	14.90	15.52	15.52	15.75	15.97
Z6_IL_1178	K11	72.41	69.24	69.53	69.53	69.59	69.66
Z6_IL_1179	K11	71.69	68.69	68.80	68.80	68.82	68.84
Z6_IL_1180	J10	142.00	137.00	137.14	137.14	137.16	137.20
Z6_IL_1181	J10	138.00	133.00	133.00	133.00	133.00	133.13
Z6_IL_1182	J10	138.00	132.92	132.92	132.92	132.96	133.13
Z6_IL_1184	J10	169.13	164.05	164.48	164.48	164.55	164.65
Z6_IL_1185	J10	170.03	165.03	165.70	165.70	165.83	166.01
Z6_IL_1186	J10	176.00	172.54	172.98	172.98	173.06	173.17

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Zone 6 Existing Nodes

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				5Yr	10Yr	25Yr	100Yr
Z6_IL_1188	L11	14.00	10.25	15.49	15.49	16.60	18.35
Z6_IL_1191	H9	239.47	236.05	236.32	236.32	236.37	236.44
Z6_IL_1192	H9	240.32	238.32	238.74	238.74	238.83	238.96
Z6_IL_1193	K12	124.13	115.55	115.84	115.84	115.93	115.98
Z6_IL_1194	K12	132.92	126.42	126.82	126.82	126.94	127.01
Z6_IL_1199	L12	123.00	116.79	116.95	116.95	117.02	117.09
Z6_IL_1202	M12	135.22	131.01	131.50	131.50	131.61	131.76
Z6_IL_1203	M12	138.00	135.75	135.97	135.97	136.06	136.18
Z6_IL_1204	M12	140.00	136.08	136.83	136.83	137.08	138.15
Z6_IL_1205	N12	86.00	84.00	84.15	84.15	84.21	84.28
Z6_IL_1206	M12	143.52	138.40	138.54	138.54	138.59	138.66
Z6_IL_1207	M12	144.27	140.85	141.01	141.01	141.07	141.14
Z6_IL_1208	L12	150.56	150.14	150.26	150.26	150.29	150.32
Z6_IL_1209	L12	142.24	137.24	137.40	137.40	137.45	137.50
Z6_IL_1210	P14	114.08	108.71	109.21	109.21	109.35	109.64
Z6_IL_1211	K11	84.00	80.83	80.96	80.96	80.98	81.01
Z6_IL_1213	K11	79.06	75.56	75.96	75.96	76.02	76.10
Z6_IL_1214	K11	98.97	91.29	92.01	92.01	92.11	92.24
Z6_IL_1215	K11	104.29	95.79	95.99	95.99	96.02	96.07
Z6_IL_1217	K13	128.00	124.08	124.08	124.08	124.08	124.08
Z6_IL_1234	O15	142.00	137.00	137.32	137.32	137.42	137.65
Z6_IL_1235	O15	140.85	135.85	136.05	136.05	136.11	136.23
Z6_IL_1238	L13	248.69	245.73	246.08	246.08	246.22	246.42
Z6_IL_1239	L13	248.69	245.14	245.62	245.62	245.81	246.06
Z6_IL_1240	M13	197.35	194.27	194.77	194.77	194.93	195.11
Z6_IL_1241	L13	228.83	224.41	225.50	225.50	227.79	229.58
Z6_IL_1242	K12	162.66	160.41	160.63	160.63	160.72	160.82
Z6_IL_1243	K12	164.29	157.71	158.04	158.04	158.17	158.33
Z6_IL_1244	K13	134.00	132.29	133.11	133.11	133.44	134.21
Z6_IL_1245	K13	169.17	166.05	166.18	166.18	166.21	166.25
Z6_IL_1246	J13	142.00	136.83	137.53	137.53	137.77	138.07
Z6_IL_1247	K13	138.50	136.83	137.00	137.00	137.04	137.09
Z6_IL_1248	K13	133.64	130.39	130.39	130.39	130.39	130.39
Z6_IL_1249	J12	179.37	177.04	177.14	177.14	177.16	177.19
Z6_IL_1250	M13	148.00	145.50	145.78	145.78	145.90	146.06
Z6_IL_1251	N13	126.82	124.32	124.90	124.90	125.15	125.50
Z6_IL_1252	J10	140.00	129.63	131.27	131.27	131.58	131.99
Z6_IL_1253	J10	145.43	139.43	140.28	140.28	140.46	140.72
Z6_IL_1254	J10	150.00	145.00	145.00	145.00	145.00	145.00
Z6_IL_1255	J10	144.01	139.01	139.12	139.12	139.15	139.18
Z6_IL_1256	K10	137.49	126.59	128.51	128.51	128.87	129.36
Z6_IL_1257	K10	132.00	124.75	126.08	126.08	126.29	126.55
Z6_IL_1258	L12	148.00	145.17	145.75	145.75	145.89	146.18
Z6_IL_1259	L12	148.18	143.85	144.91	144.91	145.20	146.27
Z6_IL_1260	L12	146.72	142.47	143.24	143.24	143.39	143.58
Z6_IL_1261	K12	164.84	156.28	156.28	156.28	156.28	156.28
Z6_IL_1262	J12	132.00	128.58	129.04	129.04	129.19	129.43
Z6_IL_1263	K13	135.94	134.61	135.15	135.15	135.30	135.97
Z6_IL_1265	J10	160.00	159.42	159.66	159.66	159.70	159.75
Z6_IL_1266	H10	160.00	156.71	156.93	156.93	156.97	157.03
Z6_IL_1267	H10	160.00	157.58	157.58	157.58	157.58	157.58
Z6_IL_1268	J10	170.00	167.17	167.29	167.29	167.31	167.34
Z6_IL_1269	O14	156.37	152.37	152.58	152.58	152.61	152.66
Z6_IL_1270	P14	154.00	151.18	151.69	151.69	151.78	151.91
Z6_IL_1271	P14	154.00	151.17	151.54	151.54	151.62	151.72
Z6_IL_1272	O14	127.73	122.73	122.91	122.91	122.94	122.98
Z6_IL_1273	K13	131.43	128.22	128.37	128.37	128.40	128.44
Z6_IL_1274	J12	112.36	106.86	107.34	107.34	107.58	107.94
Z6_IL_1277	O14	130.12	125.12	125.41	125.41	125.47	125.54

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				5Yr	10Yr	25Yr	100Yr
Z6_IL_1278	O14	126.35	117.86	118.04	118.04	118.07	118.11
Z6_IL_1281	K15	208.76	198.84	199.54	199.54	199.75	200.27
Z6_IL_1282	K14	207.52	197.81	198.89	198.89	199.20	199.71
Z6_IL_1283	K14	172.00	163.03	164.93	164.93	166.06	168.83
Z6_IL_1284	K14	172.00	168.75	169.33	169.33	169.52	169.77
Z6_IL_1285	K14	173.66	169.16	176.37	176.37	189.69	224.98
Z6_IL_1287	L14	157.42	152.42	153.07	153.07	157.98	163.08
Z6_IL_1288	L14	135.44	131.86	132.62	132.62	132.94	135.58
Z6_IL_1289	L14	135.46	132.04	132.04	132.04	132.04	132.04
Z6_IL_1291	L11	18.00	16.69	18.26	18.26	18.50	18.90
Z6_IL_1292	L11	18.00	16.67	17.02	17.02	17.04	17.07
Z6_IL_1293	K12	104.00	96.50	96.70	96.70	96.74	96.79
Z6_IL_1294	K12	104.00	100.17	100.38	100.38	100.42	100.47
Z6_IL_1295	K12	102.96	96.46	96.60	96.60	96.61	96.64
Z6_IL_1296	K12	102.97	98.85	98.98	98.98	99.00	99.03
Z6_IL_1298	H9	239.55	235.05	235.23	235.23	235.26	235.29
Z6_IL_1299	H9	195.69	183.49	183.90	183.90	183.98	184.09
Z6_IL_1300	H9	170.73	168.52	168.76	168.76	168.81	168.87
Z6_IL_1301	H9	187.61	178.44	179.01	179.01	179.12	179.29
Z6_IL_1302	H9	213.90	209.57	209.57	209.57	209.57	209.57
Z6_IL_1303	H9	180.00	176.38	176.89	176.89	176.99	177.15
Z6_IL_1304	H9	180.29	174.71	175.27	175.27	175.38	175.55
Z6_IL_1305	H9	174.00	168.50	169.12	169.12	169.24	169.43
Z6_IL_1307	H9	170.00	164.50	165.13	165.13	165.26	165.48
Z6_IL_1309	H9	167.53	162.03	162.77	162.77	162.92	163.16
Z6_IL_1310	H9	166.76	161.26	161.73	161.73	161.81	161.94
Z6_IL_1324	J10	181.85	176.85	177.00	177.00	177.02	177.05
Z6_IL_1325	L14	138.00	134.25	135.09	135.09	137.01	138.39
Z6_IL_1338	O14	194.97	189.47	189.71	189.71	189.83	189.98
Z6_IL_1339	O14	195.72	190.47	190.81	190.81	191.00	191.32
Z6_IL_1348	J11	60.64	55.64	56.78	56.78	57.82	59.97
Z6_IL_1349	H9	186.00	181.33	181.55	181.55	181.60	181.66
Z6_IL_1350	H9	179.94	175.27	175.45	175.45	175.49	175.54
Z6_IL_1351	H9	177.82	172.82	173.00	173.00	173.04	173.09
Z6_IL_1368	P14	117.07	111.07	111.35	111.35	111.38	111.42
Z6_IL_1369	O14	116.85	107.60	107.83	107.83	107.87	107.92
Z6_IL_1370	O14	116.21	107.04	107.25	107.25	107.28	107.33
Z6_IL_1371	P15	128.52	118.40	118.66	118.66	118.70	118.74
Z6_IL_1372	K10	128.00	124.50	124.62	124.62	124.65	124.68
Z6_IL_1373	K10	128.00	120.50	120.69	120.69	120.72	120.76
Z6_IL_1374	K10	140.08	135.08	135.08	135.08	135.08	135.08
Z6_IL_1375	O13	106.00	96.30	96.96	96.96	97.20	97.54
Z6_IL_1378	K12	149.26	143.93	144.39	144.39	144.54	144.63
Z6_IL_1380	H9	226.46	222.63	222.84	222.84	222.87	222.91
Z6_IL_1381	K12	146.32	142.15	142.15	142.15	142.15	142.15
Z6_IL_1382	K13	152.40	147.86	148.19	148.19	148.25	148.32
Z6_IL_1384	P14	175.46	172.38	172.38	172.38	172.38	172.38
Z6_IL_1385	P14	180.21	174.21	174.21	174.21	174.21	174.21
Z6_IL_1387	M13	83.24	78.24	78.36	78.36	78.40	78.50
Z6_IL_1400	K11	70.04	65.04	65.60	65.60	65.64	65.71
Z6_IL_1401	K11	73.00	68.00	73.21	73.21	74.98	77.91
Z6_IL_1402	K12	162.07	158.15	158.81	158.81	159.05	162.08
Z6_IL_1403	K12	152.00	147.67	148.16	148.16	148.32	148.40
Z6_IL_1404	K13	152.00	147.58	148.54	148.54	148.66	148.81
Z6_IL_1405	K13	132.00	129.74	132.42	132.42	132.80	133.45
Z6_IL_1406	M12	92.99	86.99	87.12	87.12	87.17	87.24
Z6_IL_1411	L10	98.00	92.75	92.88	92.88	92.91	92.99
Z6_IL_1412	K10	130.68	125.68	125.79	125.79	125.80	125.83
Z6_IL_1413	K10	144.92	143.42	144.50	144.50	144.77	144.99

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Zone 6 Existing Nodes

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				5Yr	10Yr	25Yr	100Yr
Z6_IL_1418	K12	159.51	156.18	156.57	156.57	157.28	159.83
Z6_IL_1419	K12	155.26	152.09	152.67	152.67	152.91	153.05
Z6_IL_1420	O15	142.00	137.00	137.49	137.49	137.63	138.05
Z6_IL_1428	O14	178.64	171.96	172.45	172.45	172.72	173.13
Z6_IL_1429	O14	177.94	172.94	173.13	173.13	173.22	173.33
Z6_IL_1430	O14	178.51	169.54	170.05	170.05	170.34	170.75
Z6_IL_1432	O14	175.02	168.73	169.20	169.20	169.45	169.76
Z6_IL_1433	P14	110.32	105.32	105.60	105.60	105.65	105.71
Z6_IL_1436	O13	106.62	101.62	101.62	101.62	101.62	101.62
Z6_IL_1437	K10	149.44	144.94	145.42	145.42	145.49	145.59
Z6_IL_1439	K14	172.00	168.63	168.63	168.63	168.63	168.83
Z6_IL_1442	L13	136.15	132.44	132.70	132.70	132.77	132.86
Z6_IL_1474	P15	128.00	126.21	126.39	126.39	126.43	126.59
Z6_IL_1475	O15	135.00	130.00	130.16	130.16	130.19	130.22
Z6_IL_1476	O15	130.00	126.38	126.50	126.50	126.58	126.66
Z6_IL_1477	O15	131.32	127.99	128.34	128.34	128.44	128.83
Z6_IL_1478	L13	136.00	127.75	128.02	128.02	128.08	128.16
Z6_IL_1479	L14	-	131.73	132.48	132.48	132.73	132.73
Z6_IL_1481	L14	152.00	147.08	148.05	148.05	148.20	148.47
Z6_IL_1482	L14	152.00	147.88	148.01	148.01	148.08	148.18
Z6_IL_1483	K13	191.31	188.06	188.27	188.27	188.34	188.43
Z6_IL_1484	K13	186.83	181.83	182.23	182.23	182.38	182.64
Z6_IL_1487	J12	124.03	118.78	119.47	119.47	119.83	124.14
Z6_IL_1488	L13	229.22	224.64	226.03	226.03	229.30	231.76
Z6_IL_1489	L13	227.99	223.62	224.41	224.41	225.21	226.31
Z6_IL_1490	L13	242.38	234.96	235.71	235.71	236.34	242.48
Z6_IL_1491	L13	244.24	239.66	240.01	240.01	240.14	244.32
Z6_IL_1492	L13	254.45	251.20	252.31	252.31	253.13	254.55
Z6_IL_1493	L13	255.58	251.21	251.58	251.58	251.71	251.86
Z6_IL_1494	K10	108.21	103.92	104.74	104.74	105.00	105.41
Z6_IL_1495	K11	32.73	30.27	30.27	30.27	30.27	30.27
Z6_IL_1496	K12	166.04	152.96	153.47	153.47	153.66	153.92
Z6_IL_1498	K12	166.98	164.11	164.31	164.31	164.38	164.48
Z6_IL_1499	K12	168.30	161.76	162.27	162.27	162.46	164.27
Z6_IL_1500	K10	153.05	146.80	147.20	147.20	147.26	147.34
Z6_IL_1501	K10	144.99	143.65	144.60	144.60	144.97	145.24
Z6_IL_1502	K10	143.77	138.02	138.61	138.61	138.71	138.79
Z6_IL_1503	K10	145.73	140.06	140.71	140.71	140.83	140.94
Z6_IL_1504	K11	38.00	31.50	31.80	31.80	31.85	31.92
Z6_IL_1506	J9	137.13	134.63	135.10	135.10	135.20	135.35
Z6_IL_1508	J10	181.07	172.07	172.88	172.88	172.91	172.95
Z6_IL_1509	J10	180.00	178.25	178.25	178.25	178.25	178.25
Z6_IL_1510	J10	180.04	174.37	174.72	174.72	174.77	174.84
Z6_IL_1511	J10	180.00	177.17	177.41	177.41	177.44	177.48
Z6_IL_1512	J10	180.00	174.50	174.89	174.89	174.95	175.03
Z6_IL_1513	J12	120.56	115.73	116.29	116.29	116.58	117.03
Z6_IL_1514	J12	144.63	139.71	140.08	140.08	140.25	140.43
Z6_IL_1515	J12	149.55	146.13	146.33	146.33	146.39	146.46
Z6_IL_1516	J12	149.59	146.05	146.33	146.33	146.39	146.46
Z6_IL_1518	H9	154.18	147.80	148.05	148.05	148.12	148.21
Z6_IL_1519	H9	154.58	148.00	148.59	148.59	148.75	148.97
Z6_IL_1521	H9	157.43	152.35	152.50	152.50	152.54	152.60
Z6_IL_1522	H9	158.15	154.82	154.92	154.92	154.95	154.98
Z6_IL_1523	H9	155.55	152.22	152.33	152.33	152.35	152.39
Z6_IL_1526	H9	175.81	174.23	174.40	174.40	174.43	174.47
Z6_IL_1528	G9	229.00	225.33	225.33	225.33	225.33	225.33
Z6_IL_1529	G9	228.71	224.25	224.55	224.55	224.61	224.68
Z6_IL_1530	H9	236.06	230.23	230.54	230.54	230.62	230.71
Z6_IL_197	H9	200.53	195.53	195.78	195.78	195.81	195.86

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Zone 6 Existing Nodes

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				5Yr	10Yr	25Yr	100Yr
Z6_IL_2009	L12	115.57	110.07	110.93	110.93	111.12	111.33
Z6_IL_2014	M12	106.39	100.89	101.01	101.01	101.05	101.09
Z6_IL_209	P14	160.00	157.40	157.81	157.81	157.91	160.01
Z6_IL_2099	O13	108.00	102.50	102.50	102.50	102.50	102.50
Z6_IL_210	K12	157.88	152.10	152.32	152.32	152.39	152.48
Z6_IL_211	K12	197.79	193.79	194.06	194.06	194.16	194.29
Z6_IL_212	K12	194.00	190.00	190.15	190.15	190.20	190.25
Z6_IL_2139	N14	142.00	136.50	137.17	137.17	137.40	142.00
Z6_IL_2140	M12	84.00	77.00	77.79	77.79	77.99	80.16
Z6_IL_2141	M12	76.89	71.06	72.61	72.61	75.79	79.34
Z6_IL_2142	M12	76.38	69.38	70.34	70.34	70.67	71.09
Z6_IL_2143	J12	110.62	105.62	106.15	106.15	106.31	109.69
Z6_IL_2144	J12	146.00	140.50	141.10	141.10	141.34	141.56
Z6_IL_2146	K12	102.00	96.00	96.00	96.00	96.00	96.00
Z6_IL_2148	J10	162.00	157.00	157.56	157.56	157.66	157.80
Z6_IL_2150	K10	135.73	123.27	124.02	124.02	124.15	124.34
Z6_IL_2151	J10	146.00	138.75	139.74	139.74	139.85	140.00
Z6_IL_2152	K10	117.90	108.90	110.37	110.37	110.61	110.91
Z6_IL_2153	K10	110.00	101.00	103.43	103.43	103.90	104.53
Z6_IL_2154	K10	104.15	95.16	96.29	96.29	96.59	96.97
Z6_IL_2155	J10	149.99	141.36	142.40	142.40	142.64	143.05
Z6_IL_2156	K10	122.00	119.04	120.26	120.26	120.48	120.80
Z6_IL_2157	K10	118.00	111.00	113.18	113.18	113.66	115.73
Z6_IL_2158	K9	139.09	134.09	134.22	134.22	134.24	134.28
Z6_IL_2159	K9	127.23	122.23	122.34	122.34	122.37	122.40
Z6_IL_216	K12	196.20	189.77	189.92	189.92	189.97	190.03
Z6_IL_2160	K10	18.00	12.50	13.06	13.06	13.18	13.33
Z6_IL_2161	J10	156.05	150.55	151.07	151.07	151.22	151.53
Z6_IL_2164	H10	178.44	171.44	172.22	172.22	172.41	172.71
Z6_IL_2165	H10	160.36	153.86	154.73	154.73	154.92	155.96
Z6_IL_2170	M12	91.71	85.71	85.80	85.80	85.82	85.85
Z6_IL_2172	N13	108.21	84.63	85.38	85.38	85.56	85.94
Z6_IL_218	K12	196.00	191.00	191.16	191.16	191.22	191.27
Z6_IL_219	L12	168.52	163.52	163.64	163.64	163.65	163.67
Z6_IL_2227	K10	-	12.34	12.58	12.58	12.64	12.71
Z6_IL_2228	K10	19.92	14.92	15.15	15.15	15.20	15.26
Z6_IL_2231	K10	144.48	139.48	139.94	139.94	140.05	140.24
Z6_IL_2233	J10	156.00	150.00	150.59	150.59	150.69	150.83
Z6_IL_2244	K11	42.84	36.84	37.09	37.09	37.16	37.25
Z6_IL_2248	J12	206.00	202.19	202.54	202.54	203.68	204.93
Z6_IL_2249	J12	154.27	149.02	150.91	150.91	152.72	154.67
Z6_IL_225	O13	85.31	79.00	79.30	79.30	79.40	83.44
Z6_IL_2250	J12	154.73	149.73	156.02	156.02	161.09	171.60
Z6_IL_2254	L12	144.15	138.40	139.57	139.57	139.89	141.86
Z6_IL_2255	L12	120.88	115.38	116.48	116.48	117.32	119.03
Z6_IL_2256	L12	108.00	102.50	103.17	103.17	104.85	107.52
Z6_IL_2257	M12	141.80	136.20	137.27	137.27	137.56	138.74
Z6_IL_226	O13	108.00	103.00	103.20	103.20	103.27	103.35
Z6_IL_2260	N13	107.01	77.73	78.62	78.62	78.88	79.37
Z6_IL_2261	N13	107.44	80.63	81.37	81.37	81.54	81.89
Z6_IL_2262	N13	112.16	106.66	107.50	107.50	107.61	107.76
Z6_IL_2264	N13	110.00	108.00	109.30	109.30	110.57	113.60
Z6_IL_2268	K12	150.00	144.00	144.71	144.71	144.96	145.08
Z6_IL_227	O13	108.00	99.80	100.46	100.46	100.64	100.92
Z6_IL_2271	J13	142.00	137.11	137.93	137.93	138.20	138.56
Z6_IL_2273	M13	168.03	162.03	162.97	162.97	163.37	164.34
Z6_IL_2275	O13	88.01	81.01	82.04	82.04	82.34	82.77
Z6_IL_228	O13	111.30	102.65	103.04	103.04	103.14	103.28
Z6_IL_2280	K15	216.05	209.05	209.43	209.43	209.52	209.76

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				5Yr	10Yr	25Yr	100Yr
Z6_IL_2281	K15	215.04	209.54	209.54	209.54	209.54	209.54
Z6_IL_2289	K11	104.48	99.81	99.95	99.95	99.97	99.99
Z6_IL_229	O13	112.00	103.41	103.77	103.77	103.86	103.98
Z6_IL_2290	K11	105.18	100.18	100.43	100.43	100.47	100.52
Z6_IL_2301	K10	118.00	112.00	113.10	113.10	113.50	115.19
Z6_IL_2302	K10	138.33	126.10	126.39	126.39	126.45	126.53
Z6_IL_231	H10	165.35	157.31	157.49	157.49	157.52	157.55
Z6_IL_232	H9	149.94	142.11	142.55	142.55	142.62	142.73
Z6_IL_2320	M12	86.00	80.00	80.49	80.49	80.68	80.84
Z6_IL_2321	L12	128.00	122.00	122.35	122.35	122.50	122.58
Z6_IL_2322	L12	130.53	124.53	124.95	124.95	125.12	125.22
Z6_IL_2323	M12	97.30	90.80	91.81	91.81	92.18	92.74
Z6_IL_234	H10	160.00	153.05	154.19	154.19	154.59	155.29
Z6_IL_2344	M13	234.68	229.68	230.47	230.47	231.72	234.71
Z6_IL_2345	L12	133.35	127.35	127.73	127.73	127.87	127.98
Z6_IL_2346	L12	141.57	135.57	135.70	135.70	135.73	135.77
Z6_IL_235	J9	130.85	119.28	119.45	119.45	119.48	119.52
Z6_IL_2350	L14	-	146.00	146.13	146.13	146.20	146.30
Z6_IL_2351	L14	-	132.96	133.77	133.77	133.91	133.96
Z6_IL_2352	K13	-	126.88	127.45	127.45	127.62	127.77
Z6_IL_236	O13	110.00	101.47	101.73	101.73	101.80	101.88
Z6_IL_237	O13	116.00	107.05	107.27	107.27	107.31	107.38
Z6_IL_2376	K10	144.75	139.75	139.75	139.75	139.75	139.75
Z6_IL_238	O13	120.49	111.12	111.30	111.30	111.34	111.39
Z6_IL_2394	G9	179.55	174.30	174.68	174.68	174.77	174.90
Z6_IL_2399	J12	151.76	146.51	146.98	146.98	147.12	147.29
Z6_IL_2412	J11	107.57	105.32	105.32	105.32	105.32	105.32
Z6_IL_248	P14	152.30	148.90	149.58	149.58	149.75	150.14
Z6_IL_249	P14	156.00	154.00	154.18	154.18	154.26	156.20
Z6_IL_250	P14	156.00	153.50	154.06	154.06	154.36	156.32
Z6_IL_251	P14	160.00	156.41	156.97	156.97	157.17	160.01
Z6_IL_270	J11	88.11	82.24	82.42	82.42	82.48	82.55
Z6_IL_287	H9	208.95	203.95	204.12	204.12	204.15	204.18
Z6_IL_288	H9	223.29	218.29	218.43	218.43	218.45	218.48
Z6_IL_289	H9	233.96	228.96	229.13	229.13	229.15	229.18
Z6_IL_290	H9	219.90	215.65	215.79	215.79	215.81	215.83
Z6_IL_292	P14	152.00	146.96	147.59	147.59	147.78	148.10
Z6_IL_293	P14	155.80	149.20	149.70	149.70	149.81	149.97
Z6_IL_294	P14	154.00	151.27	151.94	151.94	152.08	152.29
Z6_IL_295	O13	115.19	106.40	106.64	106.64	106.68	106.72
Z6_IL_296	O13	118.00	108.91	109.36	109.36	109.45	109.56
Z6_IL_297	O13	122.00	112.62	112.62	112.62	112.62	112.62
Z6_IL_329	P14	181.63	177.85	178.18	178.18	178.23	178.29
Z6_IL_330	P15	198.83	191.83	192.03	192.03	192.06	192.10
Z6_IL_331	P15	192.24	187.24	187.44	187.44	187.46	187.49
Z6_IL_332	P14	180.20	175.20	175.40	175.40	175.43	175.47
Z6_IL_333	P15	195.08	182.66	182.85	182.85	182.88	182.90
Z6_IL_334	P15	180.08	175.08	175.34	175.34	175.37	175.42
Z6_IL_335	P15	186.01	174.23	174.48	174.48	174.51	174.56
Z6_IL_336	P15	180.81	170.88	171.14	171.14	171.17	171.21
Z6_IL_337	P15	180.96	164.87	165.18	165.18	165.22	165.27
Z6_IL_338	P15	167.11	162.99	163.31	163.31	163.34	163.40
Z6_IL_339	P15	160.81	156.81	157.15	157.15	157.19	157.24
Z6_IL_346	P15	155.00	152.96	153.29	153.29	153.35	153.44
Z6_IL_347	P15	150.17	146.17	146.46	146.46	146.51	146.57
Z6_IL_348	P15	132.36	128.36	128.88	128.88	129.00	132.36
Z6_IL_349	P15	129.22	125.22	125.86	125.86	126.04	129.22
Z6_IL_350	P15	125.87	121.87	122.40	122.40	122.51	122.71
Z6_IL_351	P15	165.53	162.80	163.04	163.04	163.07	163.11

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				5Yr	10Yr	25Yr	100Yr
Z6_IL_379	J11	127.18	112.83	113.23	113.23	113.29	113.38
Z6_IL_385	O13	109.55	101.33	101.65	101.65	101.70	101.77
Z6_IL_393	H9	205.56	198.68	198.89	198.89	198.92	198.96
Z6_IL_395	H9	216.14	211.14	211.39	211.39	211.43	211.48
Z6_IL_396	H9	206.95	201.95	202.02	202.02	202.04	202.06
Z6_IL_400	K12	184.70	179.70	179.94	179.94	179.99	180.06
Z6_IL_401	L12	174.36	169.36	169.69	169.69	169.77	172.43
Z6_IL_402	L12	170.19	165.19	165.73	165.73	165.91	169.37
Z6_IL_403	L12	168.67	164.48	165.12	165.12	165.35	168.38
Z6_IL_404	L12	168.18	163.82	164.45	164.45	164.67	166.73
Z6_IL_405	L12	167.92	162.92	163.60	163.60	163.78	164.36
Z6_IL_406	L12	174.71	162.84	163.34	163.34	163.44	163.58
Z6_IL_407	L12	172.21	160.01	160.64	160.64	160.78	160.99
Z6_IL_408	L12	171.92	159.14	159.72	159.72	159.83	160.05
Z6_IL_409	L12	182.00	173.64	174.04	174.04	174.12	174.22
Z6_IL_410	L12	182.00	177.00	177.26	177.26	177.31	177.37
Z6_IL_419	L12	177.36	169.92	170.23	170.23	170.32	170.42
Z6_IL_420	L12	181.45	174.71	174.99	174.99	175.06	175.15
Z6_IL_421	L12	184.91	179.91	180.20	180.20	180.27	180.37
Z6_IL_422	L12	187.30	181.92	182.30	182.30	182.40	182.54
Z6_IL_423	L12	189.27	184.08	184.31	184.31	184.38	184.46
Z6_IL_424	L12	190.55	185.67	185.89	185.89	185.97	186.06
Z6_IL_425	L12	192.25	187.25	187.48	187.48	187.56	187.65
Z6_IL_426	L12	196.00	192.84	193.24	193.24	193.37	193.53
Z6_IL_432	L12	172.30	166.30	166.49	166.49	166.54	166.59
Z6_IL_433	K12	197.34	193.34	193.63	193.63	193.73	193.85
Z6_IL_434	K12	158.38	154.38	154.60	154.60	154.68	154.77
Z6_IL_441	H10	230.63	225.98	226.68	226.68	226.81	226.99
Z6_IL_442	H10	230.77	225.85	226.21	226.21	226.27	226.36
Z6_IL_443	H10	181.77	178.40	178.83	178.83	178.91	179.02
Z6_IL_452	H9	208.69	203.69	203.89	203.89	203.93	203.97
Z6_IL_453	H9	186.00	180.74	181.01	181.01	181.06	181.13
Z6_IL_455	H9	186.00	181.00	181.49	181.49	181.57	181.68
Z6_IL_456	H9	-	172.13	172.38	172.38	172.42	172.47
Z6_IL_457	H9	195.29	190.29	190.52	190.52	190.55	190.60
Z6_IL_486	P14	102.71	97.71	97.71	97.71	97.71	97.71
Z6_IL_487	H10	204.43	199.43	199.81	199.81	199.88	199.97
Z6_IL_513	J10	170.88	160.45	161.34	161.34	161.51	161.76
Z6_IL_514	J10	171.70	160.94	161.71	161.71	161.88	162.12
Z6_IL_515	J10	171.54	166.54	166.66	166.66	166.68	166.71
Z6_IL_516	J10	170.00	165.00	165.16	165.16	165.20	165.27
Z6_IL_517	J10	170.00	164.00	164.61	164.61	164.72	164.86
Z6_IL_518	J10	172.00	165.29	165.87	165.87	165.97	166.11
Z6_IL_519	J10	172.38	166.66	167.13	167.13	167.21	167.33
Z6_IL_534	J10	168.69	159.70	164.47	164.47	165.50	166.11
Z6_IL_537	J10	165.12	159.12	159.51	159.51	159.52	159.53
Z6_IL_555	P14	112.82	104.12	104.34	104.34	104.37	104.40
Z6_IL_556	P14	109.14	100.43	100.43	100.43	100.43	100.43
Z6_IL_560	H10	178.00	171.50	171.61	171.61	171.62	171.65
Z6_IL_570	J10	165.99	158.75	159.55	159.55	159.71	159.92
Z6_IL_571	J10	167.87	159.43	160.20	160.20	160.36	160.58
Z6_IL_572	J10	169.18	160.11	160.90	160.90	161.06	161.29
Z6_IL_578	O14	130.00	119.83	120.14	120.14	120.19	123.89
Z6_IL_579	O14	144.00	132.82	133.24	133.24	133.32	133.45
Z6_IL_585	H9	150.35	138.27	138.36	138.36	138.38	138.39
Z6_IL_586	H9	152.15	140.03	140.10	140.10	140.11	140.12
Z6_IL_587	H9	151.58	139.46	139.52	139.52	139.54	139.55
Z6_IL_588	H9	149.62	137.73	137.78	137.78	137.79	137.80
Z6_IL_589	H9	-	135.72	136.11	136.11	136.18	136.28

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Zone 6 Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z6_IL_590	H10	159.87	154.87	155.09	155.09	155.13	155.18
Z6_IL_591	H10	166.00	161.00	161.33	161.33	161.39	161.47
Z6_IL_592	H10	166.00	161.00	161.71	161.71	161.84	162.27
Z6_IL_597	H10	180.00	176.00	176.35	176.35	176.41	176.48
Z6_IL_602	O13	114.66	109.66	109.98	109.98	110.05	110.16
Z6_IL_603	P14	119.10	114.10	114.33	114.33	114.38	114.46
Z6_IL_606	O13	122.09	117.09	117.09	117.09	117.09	117.09
Z6_IL_607	O13	123.61	118.61	118.74	118.74	118.78	118.82
Z6_IL_608	O13	102.00	94.13	94.59	94.59	94.79	102.08
Z6_IL_609	O13	105.83	97.79	98.03	98.03	98.10	102.63
Z6_IL_610	O13	82.00	76.41	76.80	76.80	76.97	77.19
Z6_IL_611	O13	82.00	77.00	77.38	77.38	77.56	77.84
Z6_IL_612	N12	22.00	17.00	17.51	17.51	17.69	18.08
Z6_IL_613	N12	22.00	16.87	17.16	17.16	17.26	17.38
Z6_IL_614	O13	23.83	22.66	22.66	22.66	22.66	22.66
Z6_IL_615	O13	24.00	22.75	22.88	22.88	22.92	22.97
Z6_IL_616	O13	24.00	22.75	22.75	22.75	22.75	22.75
Z6_IL_617	O13	34.00	29.00	29.15	29.15	29.19	29.25
Z6_IL_618	N13	57.16	52.99	53.14	53.14	53.19	56.41
Z6_IL_619	N13	56.23	52.26	52.43	52.43	52.48	56.23
Z6_IL_620	N13	58.00	54.08	54.29	54.29	54.36	56.95
Z6_IL_621	N13	63.63	59.25	59.40	59.40	59.45	59.51
Z6_IL_622	N13	94.87	87.70	87.94	87.94	88.00	88.08
Z6_IL_623	N13	83.46	77.29	77.53	77.53	77.61	77.71
Z6_IL_624	N13	85.51	79.26	79.44	79.44	79.50	79.56
Z6_IL_625	N13	88.00	81.33	81.77	81.77	81.90	82.10
Z6_IL_626	N12	74.00	70.16	70.58	70.58	70.74	70.95
Z6_IL_627	N12	74.00	69.95	70.18	70.18	70.26	70.37
Z6_IL_628	N12	74.00	69.57	69.87	69.87	69.99	70.15
Z6_IL_629	N13	126.00	121.25	121.53	121.53	121.64	121.79
Z6_IL_630	N13	125.20	119.74	120.03	120.03	120.18	120.42
Z6_IL_631	N13	124.00	121.25	121.37	121.37	121.40	121.44
Z6_IL_633	K11	119.78	114.78	115.06	115.06	115.11	115.18
Z6_IL_634	K11	116.00	111.00	111.19	111.19	111.23	111.27
Z6_IL_635	K11	106.00	100.75	101.41	101.41	101.57	106.48
Z6_IL_636	K11	102.00	94.27	95.07	95.07	98.26	101.25
Z6_IL_637	K11	98.31	90.85	91.65	91.65	94.23	96.80
Z6_IL_638	K11	96.00	88.67	90.62	90.62	92.05	94.48
Z6_IL_639	K11	96.00	88.75	89.49	89.49	89.66	92.10
Z6_IL_640	K11	92.89	85.72	86.34	86.34	86.46	89.48
Z6_IL_641	K11	92.89	82.09	82.77	82.77	83.07	87.09
Z6_IL_642	K11	96.00	88.63	89.21	89.21	89.37	94.22
Z6_IL_647	H10	179.38	169.60	169.98	169.98	170.07	170.18
Z6_IL_666	L11	74.09	69.09	69.34	69.34	69.42	69.54
Z6_IL_667	P14	146.00	141.00	141.38	141.38	141.50	141.68
Z6_IL_668	P14	144.67	133.22	133.66	133.66	133.74	133.85
Z6_IL_669	P14	145.65	134.15	134.91	134.91	135.10	136.01
Z6_IL_670	P14	145.73	139.38	139.98	139.98	140.16	140.45
Z6_IL_671	P14	151.64	146.14	146.69	146.69	146.85	147.10
Z6_IL_674	O14	152.00	139.92	140.13	140.13	140.17	140.22
Z6_IL_675	O14	158.00	145.42	145.58	145.58	145.61	145.64
Z6_IL_676	O14	136.00	125.17	125.60	125.60	125.68	125.80
Z6_IL_677	K12	193.83	178.41	178.68	178.68	178.72	178.76
Z6_IL_678	K12	182.96	168.54	169.06	169.06	169.15	169.30
Z6_IL_680	N13	136.46	125.61	125.95	125.95	126.03	126.16
Z6_IL_681	N13	137.75	126.93	127.32	127.32	127.43	127.59
Z6_IL_682	N13	145.73	134.24	134.55	134.55	134.65	134.78
Z6_IL_683	N13	144.07	132.61	132.89	132.89	132.98	133.09
Z6_IL_684	L12	196.00	192.67	192.89	192.89	192.96	193.05

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Zone 6 Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z6_IL_685	O14	152.18	147.18	147.41	147.41	147.45	147.50
Z6_IL_686	O14	120.44	115.44	115.83	115.83	115.90	116.01
Z6_IL_687	O14	130.51	125.51	125.92	125.92	126.00	126.11
Z6_IL_688	O14	122.98	116.88	117.17	117.17	117.22	117.30
Z6_IL_699	P14	119.30	114.80	115.14	115.14	115.26	115.43
Z6_IL_700	P14	126.00	123.13	123.45	123.45	123.54	123.74
Z6_IL_701	P14	119.88	114.88	115.04	115.04	115.10	115.18
Z6_IL_702	P14	119.92	111.33	111.60	111.60	111.71	111.85
Z6_IL_703	O14	151.08	146.28	146.47	146.47	146.51	146.55
Z6_IL_708	O14	128.00	122.50	123.38	123.38	124.92	128.58
Z6_IL_709	O14	128.00	122.28	123.22	123.22	124.59	128.00
Z6_IL_710	O14	127.92	120.92	121.27	121.27	121.40	121.51
Z6_IL_711	O14	138.47	135.22	135.46	135.46	135.50	135.55
Z6_IL_712	M13	126.00	123.83	123.83	123.83	123.83	123.83
Z6_IL_713	M13	126.00	121.83	122.18	122.18	122.34	122.60
Z6_IL_715	M13	103.48	89.29	94.57	94.57	100.71	107.62
Z6_IL_718	O14	119.33	110.08	110.49	110.49	110.57	110.68
Z6_IL_719	O14	114.00	110.17	110.53	110.53	110.59	110.67
Z6_IL_720	O14	114.00	108.75	109.23	109.23	109.32	109.44
Z6_IL_721	O14	144.00	139.71	140.08	140.08	140.15	140.26
Z6_IL_722	P14	137.23	126.36	126.73	126.73	126.81	126.91
Z6_IL_723	P14	130.00	126.54	126.88	126.88	126.95	127.13
Z6_IL_724	P14	130.00	126.90	127.48	127.48	127.65	129.05
Z6_IL_726	M12	99.86	92.25	92.33	92.33	92.36	92.40
Z6_IL_727	M12	81.37	78.29	78.39	78.39	78.43	78.48
Z6_IL_728	M12	80.62	75.79	75.94	75.94	76.00	76.08
Z6_IL_731	M12	86.00	79.43	81.43	81.43	81.88	82.34
Z6_IL_732	M12	86.26	83.47	83.59	83.59	83.64	83.70
Z6_IL_733	O14	155.04	147.21	147.41	147.41	147.49	147.60
Z6_IL_735	K10	114.00	111.50	111.82	111.82	111.93	111.99
Z6_IL_736	J11	122.00	118.25	118.55	118.55	118.63	118.76
Z6_IL_738	J11	124.04	118.54	118.86	118.86	118.92	118.99
Z6_IL_739	J10	182.00	176.75	177.81	177.81	178.81	180.98
Z6_IL_740	K11	94.62	91.37	91.53	91.53	91.55	91.59
Z6_IL_741	K11	80.57	77.57	77.83	77.83	77.87	77.92
Z6_IL_742	K11	78.78	75.95	76.76	76.76	77.15	77.91
Z6_IL_743	K11	77.35	73.27	73.47	73.47	73.50	73.54
Z6_IL_744	K10	129.63	126.49	126.97	126.97	127.06	127.27
Z6_IL_745	K10	125.80	124.01	124.01	124.01	124.01	124.01
Z6_IL_747	J9	132.00	121.48	121.87	121.87	121.96	128.84
Z6_IL_748	J9	142.00	140.00	140.19	140.19	140.22	140.26
Z6_IL_752	O13	108.00	103.18	103.31	103.31	103.35	103.40
Z6_IL_753	O13	104.42	96.50	96.97	96.97	97.06	97.18
Z6_IL_754	O13	105.92	100.42	100.83	100.83	100.92	101.05
Z6_IL_755	O14	158.00	145.51	145.96	145.96	146.17	146.52
Z6_IL_757	O13	115.23	106.31	106.77	106.77	106.91	107.13
Z6_IL_758	O13	114.80	105.93	106.18	106.18	106.25	106.33
Z6_IL_759	O14	156.00	151.00	151.21	151.21	151.31	151.44
Z6_IL_760	M12	140.64	132.52	132.66	132.66	132.71	132.77
Z6_IL_761	M12	141.69	136.90	137.03	137.03	137.08	137.14
Z6_IL_766	O14	157.90	150.01	150.42	150.42	150.65	151.68
Z6_IL_767	O14	156.88	151.88	152.05	152.05	152.13	152.23
Z6_IL_768	O14	156.00	148.13	148.38	148.38	148.47	148.58
Z6_IL_769	O14	157.67	152.67	152.87	152.87	152.97	153.09
Z6_IL_770	P14	130.86	120.89	121.25	121.25	121.33	121.56
Z6_IL_771	P14	132.00	129.16	129.36	129.36	129.41	129.52
Z6_IL_772	P14	132.00	129.16	129.51	129.51	129.61	129.87
Z6_IL_773	N13	116.00	112.80	112.96	112.96	112.99	113.04
Z6_IL_774	N13	116.00	113.38	113.92	113.92	114.07	114.58

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				5Yr	10Yr	25Yr	100Yr
Z6_IL_775	N13	116.00	76.22	77.14	77.14	77.41	77.94
Z6_IL_776	N12	110.00	107.80	107.98	107.98	108.04	108.12
Z6_IL_781	M13	145.05	139.05	139.38	139.38	139.52	139.74
Z6_IL_782	N13	127.80	124.88	125.28	125.28	125.50	125.81
Z6_IL_795	J11	106.00	100.92	101.16	101.16	101.19	101.23
Z6_IL_799	J12	152.00	147.08	147.96	147.96	148.04	148.22
Z6_IL_800	J12	151.65	147.28	148.41	148.41	148.57	148.80
Z6_IL_801	J12	140.22	136.89	137.78	137.78	137.91	140.70
Z6_IL_802	J11	138.98	135.15	136.49	136.49	136.92	140.39
Z6_IL_803	J12	139.78	136.86	137.86	137.86	139.78	146.00
Z6_IL_804	J11	134.00	129.92	131.27	131.27	131.70	134.00
Z6_IL_805	J11	126.00	122.13	123.34	123.34	123.68	124.03
Z6_IL_806	J11	115.73	110.98	112.14	112.14	112.51	112.93
Z6_IL_807	J11	116.43	112.01	112.36	112.36	112.51	112.97
Z6_IL_808	J11	115.16	111.74	112.44	112.44	112.74	113.10
Z6_IL_809	J11	112.00	109.67	110.19	110.19	110.30	110.45
Z6_IL_811	J12	119.59	115.13	115.83	115.83	116.13	116.46
Z6_IL_812	J12	200.00	195.29	195.58	195.58	195.72	195.88
Z6_IL_813	J12	206.00	201.08	201.96	201.96	203.64	204.89
Z6_IL_814	J12	206.00	202.13	202.36	202.36	203.66	204.92
Z6_IL_815	J12	197.60	192.77	192.95	192.95	193.03	193.64
Z6_IL_816	J12	193.01	187.97	188.35	188.35	188.60	193.42
Z6_IL_817	J12	122.22	117.72	117.98	117.98	118.06	118.16
Z6_IL_818	J11	118.03	114.53	114.66	114.66	114.69	114.72
Z6_IL_819	J10	158.00	153.83	155.37	155.37	155.99	157.09
Z6_IL_820	J10	155.99	151.91	153.31	153.31	153.65	154.73
Z6_IL_821	J11	152.92	150.05	150.66	150.66	150.69	150.74
Z6_IL_824	J11	148.00	144.13	144.68	144.68	144.71	144.75
Z6_IL_825	J11	139.46	134.88	135.34	135.34	135.38	135.41
Z6_IL_826	K11	129.41	123.08	123.59	123.59	123.62	123.66
Z6_IL_827	K11	125.00	119.42	120.07	120.07	120.13	120.21
Z6_IL_828	K11	92.08	90.21	90.53	90.53	90.58	90.64
Z6_IL_829	K11	99.77	97.10	97.36	97.36	97.39	97.44
Z6_IL_830	K11	124.67	115.75	116.27	116.27	116.32	116.38
Z6_IL_831	J11	137.87	136.00	136.27	136.27	136.31	136.35
Z6_IL_832	J11	147.41	145.74	145.74	145.74	145.74	145.74
Z6_IL_833	J10	156.87	155.12	156.94	156.94	157.76	158.94
Z6_IL_834	J10	158.76	156.51	157.51	157.51	158.73	159.87
Z6_IL_837	K11	93.94	91.36	91.64	91.64	91.69	91.76
Z6_IL_838	K11	102.62	99.95	100.19	100.19	100.23	100.27
Z6_IL_839	J10	148.00	143.00	143.71	143.71	144.32	145.66
Z6_IL_840	J10	148.00	142.00	143.00	143.00	143.23	143.63
Z6_IL_842	J11	106.00	104.08	104.37	104.37	104.42	104.48
Z6_IL_843	J11	108.00	97.33	98.52	98.52	98.83	99.21
Z6_IL_844	J9	145.83	141.04	141.34	141.34	141.39	141.46
Z6_IL_845	J9	142.77	136.77	137.15	137.15	137.22	137.30
Z6_IL_865	J10	154.00	152.46	154.15	154.15	154.69	156.31
Z6_IL_866	J10	154.00	152.63	154.06	154.06	154.74	156.13
Z6_IL_867	J10	152.00	149.88	153.34	153.34	153.89	155.18
Z6_IL_868	K10	149.78	146.70	147.13	147.13	147.23	149.78
Z6_IL_870	K10	148.17	144.92	145.47	145.47	145.62	148.18
Z6_IL_871	K10	129.18	124.60	125.58	125.58	125.88	129.18
Z6_IL_872	K10	146.00	143.25	143.99	143.99	144.12	144.24
Z6_IL_873	J10	172.00	169.08	169.97	169.97	170.15	170.70
Z6_IL_874	J10	172.00	168.92	169.51	169.51	169.60	169.74
Z6_IL_875	J10	184.00	182.00	184.30	184.30	185.31	187.11
Z6_IL_876	J10	184.00	178.75	184.00	184.00	184.49	186.05
Z6_IL_879	K10	123.34	118.92	119.93	119.93	120.11	120.37
Z6_IL_880	K10	123.55	121.05	121.23	121.23	121.45	122.32

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Zone 6 Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z6_IL_881	K10	125.90	122.90	123.12	123.12	123.16	123.21
Z6_IL_884	K10	111.35	110.14	110.49	110.49	110.59	110.74
Z6_IL_885	K10	110.74	108.70	108.95	108.95	109.02	109.10
Z6_IL_887	K10	102.00	98.63	99.06	99.06	99.18	99.37
Z6_IL_888	K10	101.11	99.90	100.05	100.05	100.08	100.12
Z6_IL_889	K10	109.43	104.97	105.32	105.32	105.41	105.54
Z6_IL_890	K10	110.14	106.52	106.81	106.81	106.89	107.00
Z6_IL_892	J9	143.33	141.83	142.11	142.11	142.17	142.25
Z6_IL_893	K10	113.11	110.65	111.09	111.09	111.22	111.35
Z6_IL_895	J9	140.00	139.00	139.32	139.32	139.39	139.49
Z6_IL_896	J9	130.78	129.61	129.91	129.91	129.98	130.07
Z6_IL_902	H9	180.00	176.79	177.11	177.11	177.18	177.28
Z6_IL_903	H9	198.00	196.58	196.77	196.77	196.80	196.84
Z6_IL_904	H9	198.02	195.73	197.17	197.17	198.31	199.37
Z6_IL_906	M12	138.14	136.56	137.43	137.43	137.98	138.96
Z6_IL_907	M12	138.50	137.00	137.46	137.46	138.08	139.16
Z6_IL_908	M12	140.00	136.13	137.36	137.36	137.78	138.82
Z6_IL_909	N13	128.00	123.21	123.88	123.88	124.15	124.53
Z6_IL_910	O13	111.61	105.15	105.98	105.98	106.28	106.72
Z6_IL_911	N13	116.00	110.17	110.88	110.88	111.18	111.62
Z6_IL_914	L13	255.65	251.15	251.46	251.46	251.55	251.65
Z6_IL_915	L13	254.45	251.12	252.17	252.17	252.70	253.67
Z6_IL_918	L13	241.09	234.84	235.32	235.32	235.53	241.20
Z6_IL_919	L13	244.69	239.82	240.28	240.28	240.45	244.69
Z6_IL_920	L13	249.93	244.35	244.88	244.88	245.10	245.38
Z6_IL_921	L13	218.57	212.57	212.90	212.90	213.03	213.19
Z6_IL_922	L13	219.95	214.62	214.85	214.85	214.94	215.04
Z6_IL_923	M13	168.00	164.67	164.79	164.79	164.84	164.89
Z6_IL_924	M13	168.00	166.21	166.43	166.43	166.51	166.61
Z6_IL_925	K12	168.42	163.20	163.48	163.48	163.63	164.48
Z6_IL_926	L13	219.50	214.08	214.66	214.66	214.88	215.03
Z6_IL_927	L13	220.34	214.92	215.78	215.78	218.17	220.35
Z6_IL_928	M13	202.70	199.33	199.99	199.99	200.27	200.74
Z6_IL_929	M13	202.66	199.62	200.08	200.08	200.39	201.15
Z6_IL_930	L13	200.11	195.74	196.13	196.13	196.23	196.34
Z6_IL_931	L13	201.53	198.16	198.42	198.42	198.49	198.58
Z6_IL_932	L13	205.91	204.58	204.72	204.72	204.77	204.83
Z6_IL_933	L13	204.52	201.52	201.69	201.69	201.75	201.82
Z6_IL_934	L12	176.94	171.02	171.22	171.22	171.28	171.34
Z6_IL_935	L12	155.54	150.29	150.63	150.63	150.81	151.15
Z6_IL_936	L12	155.75	151.21	151.44	151.44	151.54	151.67
Z6_IL_937	L13	197.78	194.53	194.92	194.92	195.05	195.12
Z6_IL_938	L13	201.60	199.52	200.14	200.14	200.45	201.96
Z6_IL_939	L13	202.96	199.46	199.99	199.99	200.27	202.96
Z6_IL_940	L13	181.13	179.05	179.32	179.32	179.39	179.46
Z6_IL_941	L13	180.13	176.63	177.02	177.02	177.12	177.23
Z6_IL_942	M13	194.23	191.31	191.63	191.63	191.73	191.85
Z6_IL_943	L13	227.98	223.81	224.96	224.96	226.63	228.10
Z6_IL_944	K9	18.00	14.92	15.16	15.16	15.21	15.28
Z6_IL_946	M13	79.07	77.24	77.38	77.38	77.46	77.58
Z6_IL_947	M12	78.00	74.67	74.78	74.78	74.83	74.92
Z6_IL_948	N13	-	77.37	77.48	77.48	77.52	77.57
Z6_IL_949	N12	82.25	79.21	79.31	79.31	79.36	79.41
Z6_IL_950	N13	106.00	102.96	103.04	103.04	103.06	103.11
Z6_IL_951	N13	106.00	103.33	103.46	103.46	103.49	103.57
Z6_IL_954	K11	38.00	35.08	35.31	35.31	35.35	35.41
Z6_IL_955	K11	40.00	36.42	36.84	36.84	36.92	37.03
Z6_IL_958	M11	16.05	11.63	12.06	12.06	12.19	12.31
Z6_IL_959	L11	16.00	12.75	14.00	14.00	14.29	14.67

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Zone 6 Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z6_IL_960	M12	141.00	136.15	137.27	137.27	137.56	138.73
Z6_IL_961	M12	141.24	137.57	138.00	138.00	138.09	138.80
Z6_IL_962	M12	141.18	138.35	138.96	138.96	139.15	141.22
Z6_IL_963	M12	138.00	134.83	135.54	135.54	135.70	135.94
Z6_IL_964	M12	136.00	131.75	132.66	132.66	132.85	133.16
Z6_IL_965	M12	136.00	132.46	133.12	133.12	133.29	133.55
Z6_IL_966	L12	144.51	141.22	141.38	141.38	141.44	141.52
Z6_IL_967	L12	143.11	138.78	138.95	138.95	139.01	139.09
Z6_IL_968	L12	157.97	150.10	150.33	150.33	150.36	151.28
Z6_IL_969	L12	154.37	147.66	148.93	148.93	149.24	151.31
Z6_IL_970	L12	157.84	155.51	155.98	155.98	156.10	156.26
Z6_IL_971	L12	156.94	153.36	153.99	153.99	154.15	154.36
Z6_IL_972	L12	157.20	151.53	151.69	151.69	151.75	151.82
Z6_IL_973	L12	158.30	153.93	154.07	154.07	154.13	154.19
Z6_IL_974	L12	154.00	148.67	148.79	148.79	148.83	148.89
Z6_IL_975	L12	154.29	150.08	150.20	150.20	150.24	150.29
Z6_IL_976	M12	129.95	122.53	122.71	122.71	122.77	122.85
Z6_IL_977	L12	130.99	126.28	126.47	126.47	126.51	126.57
Z6_IL_979	L12	115.89	111.81	111.91	111.91	111.96	112.03
Z6_IL_980	L12	108.44	104.61	106.14	106.14	106.32	107.59
Z6_IL_981	L12	104.00	99.67	99.85	99.85	99.94	100.03
Z6_IL_982	M12	100.00	93.33	94.58	94.58	94.71	94.89
Z6_IL_983	M12	100.00	97.08	97.20	97.20	97.24	97.28
Z6_IL_984	M12	92.00	87.33	87.95	87.95	88.17	88.61
Z6_IL_985	M12	79.69	75.02	75.12	75.12	75.15	75.19
Z6_IL_986	M12	76.00	71.79	71.91	71.91	71.95	71.99
Z6_IL_987	M12	76.00	72.92	73.00	73.00	73.04	73.07
Z6_IL_988	L12	120.00	111.42	114.43	114.43	114.89	115.57
Z6_IL_989	P14	108.00	103.00	103.40	103.40	103.48	103.59
Z6_IL_990	O13	108.00	104.17	104.26	104.26	104.28	104.30
Z6_IL_993	N12	68.00	62.50	62.57	62.57	62.59	62.62
Z6_IL_996	O14	157.84	151.42	151.79	151.79	151.99	152.24
Z6_IL_997	K13	135.66	134.41	135.71	135.71	136.52	138.02
Z6_IL_998	K13	134.00	132.17	135.35	135.35	135.95	136.96
Z6_IL_999	K13	135.21	133.54	135.42	135.42	136.03	137.17
Z6_MH_1537	K12	192.28	187.28	187.60	187.60	187.67	187.76
Z6_MH_1538	H10	170.70	160.85	161.99	161.99	162.20	162.49
Z6_MH_1539	H10	165.74	152.55	154.43	154.43	154.90	155.70
Z6_MH_1540	H10	160.00	152.39	154.09	154.09	154.46	154.93
Z6_MH_1541	H10	160.00	152.06	153.52	153.52	153.82	154.22
Z6_MH_1542	O13	106.96	98.71	98.97	98.97	99.03	99.11
Z6_MH_1543	P14	153.23	149.03	150.20	150.20	151.03	151.81
Z6_MH_1544	P14	156.00	152.65	153.51	153.51	154.07	156.12
Z6_MH_1547	K13	130.42	125.42	126.10	126.10	126.91	129.68
Z6_MH_1549	P14	160.00	155.72	156.60	156.60	156.80	160.00
Z6_MH_1550	P14	162.00	155.80	156.77	156.77	157.11	161.74
Z6_MH_1551	L11	14.00	7.17	17.49	17.49	19.21	21.88
Z6_MH_1552	L11	14.00	7.75	19.16	19.16	21.51	25.18
Z6_MH_1553	O13	108.18	101.18	101.30	101.30	101.32	101.35
Z6_MH_1554	H9	197.58	194.16	194.44	194.44	194.47	194.52
Z6_MH_1555	K12	190.00	182.90	183.29	183.29	183.38	183.51
Z6_MH_1556	L12	168.00	154.80	155.57	155.57	155.72	155.90
Z6_MH_1557	L12	167.52	162.52	162.61	162.61	162.63	162.64
Z6_MH_1558	H10	190.00	185.00	185.51	185.51	185.61	185.75
Z6_MH_1561	J10	171.60	160.90	161.87	161.87	162.04	162.33
Z6_MH_1562	J10	170.00	163.74	164.36	164.36	164.46	164.60
Z6_MH_1565	J10	169.57	159.91	164.50	164.50	165.54	166.15
Z6_MH_1566	J10	166.12	159.42	164.44	164.44	165.46	166.06
Z6_MH_1567	H10	178.00	168.75	169.82	169.82	170.03	170.33

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Zone 6 Existing Nodes

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				5Yr	10Yr	25Yr	100Yr
Z6_MH_1568	J10	165.12	158.62	159.28	159.28	159.40	159.57
Z6_MH_1569	J10	165.43	157.00	157.64	157.64	157.75	157.91
Z6_MH_1570	J10	163.18	154.50	155.35	155.35	155.51	155.73
Z6_MH_1571	J10	160.00	150.79	151.73	151.73	151.91	152.16
Z6_MH_1572	J10	158.00	149.30	150.09	150.09	150.25	150.46
Z6_MH_1573	O14	127.49	118.10	118.63	118.63	118.75	123.37
Z6_MH_1574	H10	174.00	163.89	165.13	165.13	165.39	165.79
Z6_MH_1575	H10	150.13	145.13	145.52	145.52	145.59	145.70
Z6_MH_1576	H10	157.96	152.96	153.31	153.31	153.37	153.46
Z6_MH_1577	O13	101.15	93.40	93.87	93.87	94.04	101.10
Z6_MH_1578	O13	84.00	77.75	78.61	78.61	78.94	82.25
Z6_MH_1579	O13	82.00	76.17	76.64	76.64	76.80	77.00
Z6_MH_1580	O13	72.98	67.73	68.12	68.12	68.24	68.39
Z6_MH_1581	O13	41.73	39.48	39.97	39.97	40.13	40.36
Z6_MH_1582	O13	22.96	17.46	18.33	18.33	18.76	21.66
Z6_MH_1583	O13	29.66	24.16	24.65	24.65	24.79	25.14
Z6_MH_1584	N13	56.51	51.51	51.97	51.97	52.12	56.25
Z6_MH_1585	N13	81.22	76.22	76.64	76.64	76.76	76.96
Z6_MH_1586	N12	74.00	67.47	67.78	67.78	67.90	68.04
Z6_MH_1587	N12	78.40	57.63	58.43	58.43	58.66	59.02
Z6_MH_1588	N13	124.22	119.20	119.66	119.66	119.86	120.16
Z6_MH_1589	H10	179.07	165.07	165.70	165.70	165.82	165.98
Z6_MH_1590	L11	31.85	30.35	30.83	30.83	31.22	39.50
Z6_MH_1591	L11	21.45	19.45	22.08	22.08	27.14	32.87
Z6_MH_1592	P14	145.21	138.81	139.42	139.42	139.57	139.76
Z6_MH_1593	P14	145.28	134.11	134.76	134.76	135.03	135.40
Z6_MH_1594	O14	148.49	137.28	137.73	137.73	137.96	138.28
Z6_MH_1595	O14	156.60	144.48	145.03	145.03	145.23	145.49
Z6_MH_1596	K12	181.31	167.14	167.51	167.51	167.57	167.65
Z6_MH_1597	O13	123.08	113.74	114.06	114.06	114.13	114.24
Z6_MH_1599	O13	124.00	116.21	116.60	116.60	116.69	116.83
Z6_MH_1604	P14	118.50	108.67	109.77	109.77	110.02	110.55
Z6_MH_1605	P14	124.00	117.05	117.67	117.67	117.82	118.19
Z6_MH_1606	O14	144.67	138.27	138.51	138.51	138.55	138.60
Z6_MH_1607	L12	160.00	155.00	155.52	155.52	155.60	155.70
Z6_MH_1608	O14	129.43	121.64	122.60	122.60	123.38	129.43
Z6_MH_1609	O14	130.79	121.22	122.16	122.16	122.64	124.32
Z6_MH_1610	M13	111.37	103.53	103.91	103.91	104.08	104.34
Z6_MH_1611	P14	128.00	118.14	119.00	119.00	119.21	119.84
Z6_MH_1612	P14	130.00	121.58	121.94	121.94	122.03	122.15
Z6_MH_1613	P14	130.00	122.17	123.13	123.13	123.39	123.74
Z6_MH_1614	P14	138.00	130.95	131.71	131.71	131.91	132.07
Z6_MH_1615	P14	148.00	142.21	143.00	143.00	143.22	143.42
Z6_MH_1616	P14	152.00	146.64	147.52	147.52	147.77	149.06
Z6_MH_1617	M12	86.00	79.75	81.04	81.04	81.38	81.73
Z6_MH_1618	O14	156.00	147.97	148.33	148.33	148.49	148.69
Z6_MH_1619	O14	130.00	124.50	125.02	125.02	125.43	130.11
Z6_MH_1620	J11	96.00	89.34	89.64	89.64	89.70	89.78
Z6_MH_1621	J11	55.51	51.65	51.91	51.91	51.96	52.03
Z6_MH_1623	H10	180.00	170.74	171.61	171.61	171.77	172.00
Z6_MH_1624	H10	180.00	172.50	173.34	173.34	173.50	173.73
Z6_MH_1625	H10	181.32	173.82	175.09	175.09	175.33	175.67
Z6_MH_1626	J10	182.00	176.00	176.89	176.89	177.10	177.45
Z6_MH_1627	O14	159.86	153.86	154.05	154.05	154.12	154.20
Z6_MH_1628	O14	143.84	138.34	138.61	138.61	138.74	138.90
Z6_MH_1629	O14	158.00	149.18	149.48	149.48	149.63	149.82
Z6_MH_1630	P14	132.00	127.40	127.82	127.82	127.93	128.17
Z6_MH_1631	N13	116.00	73.00	73.73	73.73	73.93	74.24
Z6_MH_1632	N13	116.00	75.23	76.21	76.21	76.49	77.01

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				5Yr	10Yr	25Yr	100Yr
Z6_MH_1633	J11	114.97	109.30	110.56	110.56	110.86	111.23
Z6_MH_1634	J12	119.22	114.52	115.31	115.31	115.61	115.95
Z6_MH_1635	J12	119.11	114.73	115.56	115.56	115.89	116.24
Z6_MH_1636	J12	118.93	113.62	114.45	114.45	114.75	115.17
Z6_MH_1637	J11	117.42	111.87	113.03	113.03	113.51	114.59
Z6_MH_1640	J11	108.04	104.71	104.71	104.71	104.71	104.71
Z6_MH_1644	J10	150.00	145.54	146.34	146.34	146.63	150.00
Z6_MH_1645	H9	198.95	194.28	196.70	196.70	197.73	198.69
Z6_MH_1646	K9	16.93	11.43	11.87	11.87	11.97	12.10
Z6_MH_1647	M12	76.00	61.00	62.71	62.71	63.31	64.11
Z6_MH_1648	M12	76.00	67.38	67.47	67.47	67.50	67.56
Z6_MH_1649	L12	154.85	148.85	149.50	149.50	149.72	151.54
Z6_MH_1650	L12	115.16	109.66	110.92	110.92	111.10	111.29
Z6_MH_1651	L12	108.83	105.06	106.14	106.14	106.30	107.58
Z6_MH_1652	L12	104.00	98.25	104.00	104.00	104.35	106.68
Z6_MH_1653	L12	104.00	98.00	99.19	99.19	99.31	99.48
Z6_MH_1654	M12	92.00	83.58	85.31	85.31	85.84	86.47
Z6_MH_1655	O13	108.00	75.27	76.27	76.27	76.55	76.92
Z6_MH_1656	O13	108.00	102.74	102.84	102.84	102.87	102.90
Z6_MH_1658	N14	143.64	139.44	139.75	139.75	139.89	140.09
Z6_MH_1659	M12	78.00	68.67	70.62	70.62	71.14	71.73
Z6_MH_1660	M12	76.00	68.00	69.32	69.32	69.68	70.07
Z6_MH_1661	M12	76.00	65.50	66.56	66.56	66.87	67.28
Z6_MH_1662	K11	32.85	28.56	28.95	28.95	29.01	29.07
Z6_MH_1663	H10	180.00	176.25	176.25	176.25	176.25	176.25
Z6_MH_1665	J11	110.00	100.00	101.49	101.49	101.89	102.42
Z6_MH_1666	K10	103.50	94.08	95.41	95.41	95.67	96.00
Z6_MH_1667	K10	107.19	102.33	102.92	102.92	103.08	103.27
Z6_MH_1668	K10	103.32	80.74	82.12	82.12	82.38	82.73
Z6_MH_1669	K10	103.29	82.77	84.37	84.37	84.72	85.18
Z6_MH_1670	K14	171.63	161.92	163.39	163.39	164.14	165.61
Z6_MH_1671	H9	159.47	152.14	153.29	153.29	153.55	153.90
Z6_MH_1672	H9	157.20	149.12	149.94	149.94	150.10	150.31
Z6_MH_1673	H9	155.20	140.37	141.46	141.46	141.78	143.30
Z6_MH_1674	H9	152.15	137.07	138.16	138.16	138.41	138.79
Z6_MH_1675	H9	162.41	158.58	158.83	158.83	158.89	159.02
Z6_MH_1676	H9	162.41	156.16	157.31	157.31	157.57	157.95
Z6_MH_1677	H9	166.00	160.08	160.92	160.92	161.08	161.28
Z6_MH_1678	H9	170.00	163.38	164.36	164.36	164.55	164.79
Z6_MH_1679	H9	170.70	165.09	165.79	165.79	165.94	166.12
Z6_MH_1682	H9	172.52	167.35	168.04	168.04	168.21	168.40
Z6_MH_1683	H9	172.28	166.41	167.35	167.35	167.55	167.80
Z6_MH_1684	L13	207.80	194.97	195.67	195.67	195.93	196.06
Z6_MH_1685	J10	154.00	151.17	154.14	154.14	154.69	156.30
Z6_MH_1686	H9	195.44	183.47	183.82	183.82	183.88	183.96
Z6_MH_1687	H9	-	171.91	172.26	172.26	172.32	172.40
Z6_MH_1688	L11	14.00	9.29	27.37	27.37	33.93	45.19
Z6_MH_1689	K13	128.00	119.50	120.00	120.00	120.16	120.39
Z6_MH_1690	K13	128.00	123.33	123.55	123.55	123.60	123.65
Z6_MH_1691	L13	253.62	243.37	243.93	243.93	244.14	244.52
Z6_MH_1692	N12	57.53	50.59	51.44	51.44	51.70	52.11
Z6_MH_1693	L11	14.00	6.33	16.05	16.05	17.31	19.28
Z6_MH_1694	L11	16.00	11.42	20.13	20.13	22.88	27.39
Z6_MH_1695	K11	93.11	91.06	91.59	91.59	91.67	91.77
Z6_MH_1696	L11	14.00	8.58	21.31	21.31	24.63	29.98
Z6_MH_1697	N13	106.48	100.65	100.81	100.81	100.87	100.96
Z6_MH_1698	N13	106.27	99.03	99.32	99.32	99.43	99.58
Z6_MH_1699	N13	114.69	107.19	107.50	107.50	107.61	107.76
Z6_MH_1700	N13	128.00	117.59	117.84	117.84	117.94	118.06

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Zone 6 Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z6_MH_1701	K10	101.10	90.68	92.89	92.89	93.89	94.04
Z6_MH_1702	J10	142.00	132.16	132.84	132.84	132.96	133.12
Z6_MH_1703	K11	100.01	96.67	97.10	97.10	97.16	97.25
Z6_MH_1704	K11	22.00	15.50	22.00	22.00	22.00	22.00
Z6_MH_1705	K11	23.31	18.89	19.28	19.28	19.28	19.40
Z6_MH_1707	M12	75.92	61.92	63.56	63.56	64.19	65.05
Z6_MH_1708	L11	14.00	8.83	23.85	23.85	28.45	36.09
Z6_MH_1709	J11	105.86	90.19	91.55	91.55	91.90	92.37
Z6_MH_1715	L11	16.23	12.93	20.02	20.02	23.62	27.90
Z6_MH_1716	K13	136.07	130.99	133.43	133.43	133.83	134.98
Z6_MH_1717	K13	168.35	163.98	164.34	164.34	164.46	164.61
Z6_MH_1718	K13	133.11	127.11	127.92	127.92	128.24	128.85
Z6_MH_1719	K13	128.88	122.13	123.12	123.12	123.47	124.18
Z6_MH_1720	L13	220.00	212.20	212.65	212.65	212.82	212.92
Z6_MH_1721	L13	204.89	199.29	199.82	199.82	200.02	200.20
Z6_MH_1722	K12	161.26	152.84	153.27	153.27	153.44	153.67
Z6_MH_1723	K13	135.96	131.71	132.28	132.28	132.46	132.64
Z6_MH_1724	H10	160.00	156.08	156.32	156.32	156.36	156.41
Z6_MH_1725	O14	156.29	146.75	147.03	147.03	147.18	147.35
Z6_MH_1726	P14	145.45	136.72	137.05	137.05	137.17	137.34
Z6_MH_1727	P14	152.00	146.86	147.44	147.44	147.61	147.89
Z6_MH_1728	L11	13.33	6.20	15.50	15.50	16.61	18.36
Z6_MH_1729	L11	13.48	6.02	12.92	12.92	13.65	14.98
Z6_MH_1730	K13	130.54	124.54	125.26	125.26	125.56	126.11
Z6_MH_1731	K13	152.85	148.30	148.64	148.64	148.75	148.87
Z6_MH_1732	K13	130.00	124.75	127.32	127.32	127.71	128.27
Z6_MH_1733	L11	16.00	10.53	18.94	18.94	21.16	24.70
Z6_MH_1734	K13	181.81	177.10	177.43	177.43	177.55	177.68
Z6_MH_1735	K13	191.77	180.94	181.40	181.40	181.56	181.77
Z6_MH_1738	K14	178.03	172.95	174.02	174.02	174.55	177.78
Z6_MH_1739	L14	-	128.67	128.67	128.67	128.67	128.67
Z6_MH_1750	O14	195.36	189.86	190.22	190.22	190.41	190.68
Z6_MH_1764	J11	71.93	66.93	67.16	67.16	67.23	67.32
Z6_MH_1769	L12	118.00	111.50	112.99	112.99	113.22	113.57
Z6_MH_1770	N14	162.04	156.79	156.96	156.96	157.02	157.10
Z6_MH_1771	O14	119.51	114.51	114.94	114.94	115.02	115.13
Z6_MH_1778	K12	152.74	146.74	147.07	147.07	147.12	147.20
Z6_MH_1779	K12	158.00	152.50	155.23	155.23	156.95	159.12
Z6_MH_1782	P14	180.59	170.55	171.25	171.25	171.39	172.07
Z6_MH_1783	P14	183.04	170.21	170.53	170.53	170.58	170.65
Z6_MH_1784	O14	176.15	170.40	170.40	170.40	170.40	170.40
Z6_MH_1785	O14	174.65	168.57	168.57	168.57	168.57	168.57
Z6_MH_1786	H10	174.00	160.29	161.33	161.33	161.56	162.00
Z6_MH_1788	K14	176.00	170.79	172.80	172.80	173.60	175.67
Z6_MH_1797	K13	134.89	128.89	129.51	129.51	129.71	129.90
Z6_MH_1798	K14	196.00	189.00	190.09	190.09	190.38	190.86
Z6_MH_1799	K14	178.00	171.00	173.16	173.16	174.10	177.03
Z6_MH_1800	K14	176.00	171.00	172.80	172.80	173.60	175.67
Z6_MH_1801	K13	-	124.44	126.65	126.65	126.90	127.15
Z6_MH_1803	K10	146.00	142.75	143.31	143.31	143.41	143.49
Z6_MH_1804	K11	50.55	46.31	46.62	46.62	46.66	46.72
Z6_MH_1805	J12	135.29	129.79	130.25	130.25	130.47	130.73
Z6_MH_1806	J12	177.78	172.36	172.67	172.67	172.83	172.98
Z6_MH_1807	H9	154.65	141.32	141.81	141.81	141.96	143.26
Z6_MH_1808	H9	154.14	141.81	142.36	142.36	142.52	143.27
Z6_MH_1809	H9	155.61	148.15	148.59	148.59	148.75	148.98
Z6_MH_1810	H9	145.00	138.00	139.38	139.38	139.82	141.41
Z6_MH_1811	H9	145.00	140.00	140.00	140.00	140.00	141.41
Z6_MH_1812	H9	172.71	168.29	169.29	169.29	169.41	169.57

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Zone 6 Existing Nodes

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				5Yr	10Yr	25Yr	100Yr
Z6_MH_1813	H9	175.92	171.50	171.85	171.85	171.91	171.99
Z6_MH_1814	H9	192.69	186.19	186.19	186.19	186.19	186.19
Z6_MH_1815	G9	176.94	172.02	172.47	172.47	172.56	172.68
Z6_MH_1816	H9	192.63	187.63	187.80	187.80	187.83	187.88
Z6_MH_1817	H9	212.38	207.38	207.64	207.64	207.68	207.74
Z6_MH_2222	H9	-	191.00	192.00	192.00	192.00	192.00
Z6_MH_2223	H9	207.74	201.86	202.02	202.02	202.04	202.06
Z6_MH_2226	H10	178.00	169.11	170.65	170.65	170.94	171.36
Z6_MH_2229	K10	27.71	21.21	22.37	22.37	22.61	22.91
Z6_MH_2230	K10	112.77	109.54	110.04	110.04	110.25	110.69
Z6_MH_2232	J10	153.31	148.31	148.87	148.87	148.96	149.09
Z6_MH_2234	J10	180.51	173.23	173.98	173.98	174.00	174.04
Z6_MH_2235	K10	126.72	124.19	124.98	124.98	125.17	126.72
Z6_MH_2236	K10	124.00	121.65	122.42	122.42	122.62	123.56
Z6_MH_2237	K10	123.87	120.46	121.23	121.23	121.45	122.22
Z6_MH_2238	K10	123.53	118.95	120.19	120.19	120.40	120.72
Z6_MH_2239	K10	100.60	97.49	97.59	97.59	97.62	97.70
Z6_MH_2240	L10	19.17	13.67	13.83	13.83	13.87	14.00
Z6_MH_2241	L10	73.68	67.68	67.73	67.73	67.75	67.79
Z6_MH_2242	K10	104.00	100.30	100.74	100.74	100.85	101.04
Z6_MH_2243	L10	22.47	16.97	17.43	17.43	17.59	17.80
Z6_MH_2245	K11	94.95	91.36	91.89	91.89	91.96	92.05
Z6_MH_2247	K11	84.19	78.69	78.87	78.87	78.90	78.94
Z6_MH_2251	J12	151.42	147.71	148.82	148.82	149.02	149.33
Z6_MH_2252	J11	114.00	108.65	109.81	109.81	110.05	110.36
Z6_MH_2253	J11	110.00	103.03	104.43	104.43	104.77	105.21
Z6_MH_2259	N13	116.00	73.87	74.85	74.85	75.12	75.59
Z6_MH_2266	L12	164.98	149.83	150.50	150.50	150.75	151.08
Z6_MH_2267	L13	262.00	256.50	256.50	256.50	256.50	256.50
Z6_MH_2269	K13	128.00	122.00	122.26	122.26	122.36	122.49
Z6_MH_2272	M13	95.00	85.83	89.55	89.55	93.28	93.80
Z6_MH_2276	P14	104.00	95.64	96.09	96.09	96.19	96.34
Z6_MH_2277	P14	112.00	105.00	105.57	105.57	105.72	106.00
Z6_MH_2279	K14	172.00	162.76	164.72	164.72	165.75	168.14
Z6_OF_1821	J9	-	59.53	59.83	59.83	59.89	59.98
Z6_OF_1822	J9	-	116.20	116.41	116.41	116.46	116.51
Z6_OF_1823	J9	-	113.43	113.64	113.64	113.69	113.74
Z6_OF_1824	J9	-	106.77	107.16	107.16	107.23	107.44
Z6_OF_1826	O13	-	70.11	71.08	71.08	71.33	71.66
Z6_OF_1827	O13	-	95.48	95.73	95.73	95.79	95.87
Z6_OF_1828	O14	-	139.55	139.75	139.75	139.82	139.92
Z6_OF_1831	M13	211.91	206.91	207.14	207.14	207.22	207.32
Z6_OF_1832	M13	-	142.87	143.50	143.50	143.75	144.07
Z6_OF_1841	K10	-	12.85	13.89	13.89	14.08	14.30
Z6_OF_1843	L11	-	5.92	15.40	15.40	15.40	15.40
Z6_OF_1846	K10	122.00	110.31	111.67	111.67	111.89	112.11
Z6_OF_1847	K9	-	11.12	11.45	11.45	11.52	11.63
Z6_OF_1848	K9	-	13.73	13.84	13.84	13.86	13.89
Z6_OF_1849	K10	-	13.10	13.72	13.72	13.94	14.10
Z6_OF_1850	K11	-	4.48	19.60	19.60	19.60	19.60
Z6_OF_1851	L10	-	13.39	13.55	13.55	13.59	13.71
Z6_OF_1852	K10	-	12.45	12.81	12.81	12.89	12.99
Z6_OF_1853	K10	-	11.69	12.19	12.19	12.19	12.19
Z6_OF_1855	L10	-	13.48	13.93	13.93	14.09	14.30
Z6_OF_1856	L10	-	13.65	13.93	13.93	14.00	14.05
Z6_OF_1857	L10	-	13.89	13.95	13.95	13.97	14.01
Z6_OF_1858	L10	-	12.53	12.64	12.64	12.68	12.73
Z6_OF_1859	L10	-	13.15	13.28	13.28	13.30	13.38
Z6_OF_1860	O14	-	106.94	107.16	107.16	107.19	107.24

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				5Yr	10Yr	25Yr	100Yr
Z6_OF_1861	K11	-	47.94	48.05	48.05	48.07	48.09
Z6_OF_1862	K11	-	13.30	17.20	17.20	17.20	17.20
Z6_OF_1864	K11	-	84.83	85.14	85.14	85.18	85.24
Z6_OF_1865	K11	-	85.48	85.74	85.74	85.77	85.81
Z6_OF_1866	J9	-	131.87	132.25	132.25	132.31	132.40
Z6_OF_1868	K11	-	3.20	18.10	18.10	18.10	18.10
Z6_OF_1870	K11	-	104.72	105.22	105.22	105.27	105.32
Z6_OF_1871	J11	-	97.26	97.47	97.47	97.50	97.53
Z6_OF_1872	L11	-	2.00	2.23	2.23	2.26	2.30
Z6_OF_1873	L11	-	4.21	5.21	5.21	5.21	5.21
Z6_OF_1884	M12	-	59.65	61.24	61.24	61.75	62.42
Z6_OF_1885	M12	-	25.56	25.69	25.69	25.74	25.80
Z6_OF_1888	K11	-	23.87	24.38	24.38	24.42	24.48
Z6_OF_1889	K11	-	23.11	23.27	23.27	23.29	23.33
Z6_OF_1894	O14	-	136.00	136.16	136.16	136.19	136.23
Z6_OF_1895	M11	-	10.08	10.42	10.42	10.50	10.57
Z6_OF_1896	L11	-	12.65	13.52	13.52	13.58	13.65
Z6_OF_1897	M13	-	280.86	280.94	280.94	280.96	280.98
Z6_OF_1899	M12	-	52.57	52.68	52.68	52.73	52.82
Z6_OF_1900	J13	-	104.18	104.44	104.44	104.51	104.59
Z6_OF_1901	K13	136.63	130.63	130.74	130.74	130.77	130.81
Z6_OF_1902	J12	205.07	200.07	200.21	200.21	200.28	200.30
Z6_OF_1903	J12	196.00	190.00	190.15	190.15	190.24	190.28
Z6_OF_1904	L13	197.00	192.00	192.35	192.35	192.48	192.58
Z6_OF_1905	L13	199.11	194.11	194.29	194.29	194.34	194.40
Z6_OF_1906	N13	124.00	120.89	121.20	121.20	121.34	121.51
Z6_OF_1907	N13	118.10	114.61	115.01	115.01	115.18	115.37
Z6_OF_1908	N13	118.13	114.89	115.27	115.27	115.47	115.69
Z6_OF_1910	J10	-	148.88	149.39	149.39	149.53	149.82
Z6_OF_1911	H10	-	150.12	150.36	150.36	150.40	150.45
Z6_OF_1912	P14	131.00	126.00	126.46	126.46	126.63	126.83
Z6_OF_1913	O14	103.48	98.48	99.11	99.11	99.31	99.54
Z6_OF_1914	O14	-	119.56	119.99	119.99	120.07	120.19
Z6_OF_1915	O12	-	9.30	9.59	9.59	9.68	9.80
Z6_OF_1916	O13	-	15.79	16.65	16.65	17.01	17.21
Z6_OF_1917	O13	-	20.90	21.38	21.38	21.54	21.75
Z6_OF_1918	K13	-	127.57	128.70	128.70	128.73	128.77
Z6_OF_1919	N12	-	48.53	49.33	49.33	49.56	49.90
Z6_OF_1920	O14	107.76	102.76	103.29	103.29	103.52	103.80
Z6_OF_1921	P14	122.40	117.40	117.95	117.95	118.14	118.37
Z6_OF_1922	O14	107.35	102.35	103.09	103.09	103.32	103.60
Z6_OF_1923	O14	122.49	113.20	113.37	113.37	113.40	113.44
Z6_OF_1924	L14	-	150.00	150.18	150.18	150.24	150.31
Z6_OF_1925	L11	-	15.97	16.32	16.32	16.34	16.36
Z6_OF_1926	K12	-	82.00	82.28	82.28	82.38	82.41
Z6_OF_1927	K12	-	92.00	92.20	92.20	92.24	92.29
Z6_OF_1928	K12	-	47.64	47.77	47.77	47.79	47.81
Z6_OF_1929	H9	-	190.00	190.24	190.24	190.28	190.32
Z6_OF_1930	H9	-	120.69	121.77	121.77	122.01	122.37
Z6_OF_1932	J9	-	116.00	116.18	116.18	116.22	116.26
Z6_OF_1936	O13	-	82.00	82.65	82.65	82.87	83.18
Z6_OF_1937	O13	-	33.23	33.53	33.53	33.60	33.70
Z6_OF_1938	O13	-	91.54	91.71	91.71	91.74	91.79
Z6_OF_1939	O13	-	68.99	69.22	69.22	69.26	69.30
Z6_OF_1940	J11	-	42.30	42.70	42.70	42.79	42.91
Z6_OF_1941	H9	-	166.23	166.41	166.41	166.45	166.49
Z6_OF_1942	J9	-	102.06	102.39	102.39	102.43	102.49
Z6_OF_1944	J11	-	48.30	48.69	48.69	48.75	48.84
Z6_OF_1945	N13	-	80.33	81.29	81.29	81.33	81.33

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				5Yr	10Yr	25Yr	100Yr
Z6_OF_1946	P14	-	111.49	111.83	111.83	111.92	112.02
Z6_OF_1947	O14	-	144.18	144.40	144.40	144.44	144.49
Z6_OF_1948	O14	-	102.35	102.69	102.69	102.81	102.91
Z6_OF_1949	O14	-	88.64	88.87	88.87	88.91	88.96
Z6_OF_1950	O14	-	80.00	80.20	80.20	80.24	80.28
Z6_OF_1951	O14	91.00	86.00	86.66	86.66	86.86	87.10
Z6_OF_1952	P14	-	91.62	91.84	91.84	91.86	91.90
Z6_OF_1953	P15	-	118.30	118.49	118.49	118.52	118.56
Z6_OF_1954	K10	118.00	112.00	112.90	112.90	113.37	115.65
Z6_OF_1955	K10	140.73	130.13	130.42	130.42	130.48	130.55
Z6_OF_1957	H10	-	236.19	236.40	236.40	236.43	236.48
Z6_OF_1959	H9	-	148.20	148.43	148.43	148.48	148.53
Z6_OF_1961	H9	-	142.00	142.18	142.18	142.21	142.24
Z6_OF_1963	H9	-	123.47	123.51	123.51	123.52	123.53
Z6_OF_1964	H9	-	130.13	130.20	130.20	130.21	130.23
Z6_OF_1965	H9	-	131.32	131.39	131.39	131.40	131.42
Z6_OF_1966	H9	-	130.00	130.09	130.09	130.11	130.13
Z6_OF_1967	J9	-	96.67	96.85	96.85	96.87	96.91
Z6_OF_1968	J9	-	128.00	128.36	128.36	128.45	128.67
Z6_OF_1969	J12	-	101.34	101.59	101.59	101.66	101.76
Z6_OF_1970	H9	-	140.00	140.45	140.45	140.54	140.66
Z6_OF_1971	H9	-	227.52	227.70	227.70	227.72	227.75
Z6_OF_1972	H9	-	197.76	197.93	197.93	197.95	197.99
Z6_OF_1973	H9	-	208.20	208.34	208.34	208.36	208.38
Z6_OF_1974	H9	-	219.05	219.21	219.21	219.24	219.27
Z6_OF_1976	K12	151.00	144.44	144.73	144.73	144.91	145.04
Z6_OF_1977	M14	-	233.01	233.09	233.09	233.12	233.17
Z6_OF_1986	H10	-	203.35	203.70	203.70	203.76	203.84
Z6_OF_1988	H9	-	138.66	139.16	139.16	139.24	139.34
Z6_OF_1990	H9	-	142.00	142.35	142.35	142.41	142.49
Z6_OF_1991	K12	-	122.41	122.78	122.78	122.83	122.90
Z6_OF_1993	J9	-	132.00	132.28	132.28	132.33	132.41
Z6_OF_1994	K10	149.88	143.88	144.48	144.48	144.56	144.65
Z6_OF_2002	K12	-	147.13	147.34	147.34	147.41	147.49
Z6_OF_2003	K12	-	151.82	152.23	152.23	152.39	152.60
Z6_OF_2004	L12	180.85	174.85	175.16	175.16	175.29	175.35
Z6_OF_2005	L13	213.91	207.91	208.15	208.15	208.26	208.29
Z6_OF_2007	L12	149.51	143.51	143.63	143.63	143.66	143.70
Z6_OF_2008	L12	138.00	132.00	132.11	132.11	132.14	132.17
Z6_OF_2010	L12	-	113.14	113.31	113.31	113.38	113.46
Z6_OF_2011	M12	-	61.58	61.74	61.74	61.79	61.87
Z6_OF_2013	M12	117.00	112.00	112.35	112.35	112.48	112.59
Z6_OF_2015	M12	-	102.00	102.14	102.14	102.19	102.26
Z6_OF_2016	N12	-	109.05	109.28	109.28	109.34	109.44
Z6_OF_2019	N12	-	15.82	15.98	15.98	16.03	16.10
Z6_OF_2020	M13	-	148.02	148.24	148.24	148.32	148.42
Z6_OF_2021	L13	178.21	173.21	173.35	173.35	173.39	173.44
Z6_OF_2022	L12	141.85	135.85	136.09	136.09	136.14	136.19
Z6_OF_2024	K10	-	105.91	106.30	106.30	106.40	106.49
Z6_OF_2025	K10	-	93.34	93.77	93.77	93.88	94.07
Z6_OF_2028	K10	-	99.98	100.23	100.23	100.29	100.38
Z6_OF_2029	K10	130.15	124.15	124.18	124.18	124.18	124.19
Z6_OF_2030	J10	150.00	137.68	138.60	138.60	138.70	138.83
Z6_OF_2043	P15	-	115.19	115.70	115.70	115.79	115.95
Z6_OF_2045	O15	-	128.00	128.19	128.19	128.25	128.36
Z6_OF_2049	J11	-	36.20	37.20	37.20	37.20	37.20
Z6_OF_2057	K11	-	74.00	74.15	74.15	74.17	74.20
Z6_OF_2058	J11	-	84.76	86.04	86.04	86.36	86.75
Z6_OF_2060	L14	-	142.00	142.63	142.63	143.00	143.00

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Zone 6 Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z6_OF_2065	M13	-	188.16	188.43	188.43	188.50	188.58
Z6_OF_2066	M13	-	307.64	307.78	307.78	307.80	307.84
Z6_OF_2069	J10	162.00	156.00	156.54	156.54	156.65	156.79
Z6_OF_2074	J10	161.10	154.14	154.71	154.71	154.75	154.77
Z6_OF_2077	M12	-	94.00	94.49	94.49	94.60	94.74
Z6_OF_2078	K11	-	42.27	42.45	42.45	42.48	42.52
Z6_OF_2079	N13	-	117.88	118.22	118.22	118.30	118.42
Z6_OF_2080	N13	-	126.65	126.93	126.93	127.01	127.12
Z6_OF_2083	H10	-	150.14	151.48	151.48	151.74	152.07
Z6_OF_2084	L13	-	124.00	124.40	124.40	124.50	124.61
Z6_OF_2085	L13	130.33	124.33	124.81	124.81	124.94	125.10
Z6_OF_2173	L12	151.38	145.38	145.40	145.40	145.41	145.42
Z6_OF_2174	L12	145.41	139.41	139.42	139.42	139.43	139.43
Z6_OF_2175	N12	-	45.73	45.80	45.80	45.82	45.84
Z6_OF_2176	N13	99.01	98.01	98.09	98.09	98.14	98.20
Z6_OF_2177	N13	107.53	81.08	81.69	81.69	81.86	82.21
Z6_OF_2178	P14	-	94.74	95.17	95.17	95.25	95.38
Z6_OF_2181	P15	-	122.00	122.18	122.18	122.22	122.37
Z6_OF_2182	P15	-	117.61	117.96	117.96	118.05	118.42
Z6_OF_2183	P15	-	126.64	126.81	126.81	126.83	126.86
Z6_OF_2184	O15	-	123.46	123.58	123.58	123.66	123.74
Z6_OF_2185	L12	154.84	148.84	149.08	149.08	149.18	149.25
Z6_OF_2186	L13	185.89	180.89	181.08	181.08	181.16	181.20
Z6_OF_2187	L12	196.57	190.57	190.62	190.62	190.64	190.67
Z6_OF_2188	K13	-	111.88	111.88	111.88	111.88	111.88
Z6_OF_2189	K14	172.00	163.09	164.94	164.94	166.06	168.83
Z6_OF_2191	K10	120.63	114.63	115.12	115.12	115.22	115.35
Z6_OF_2193	H9	-	203.64	203.90	203.90	203.96	204.03
Z6_OF_2194	J10	166.22	160.22	160.49	160.49	160.55	160.62
Z6_OF_2197	K11	-	81.94	82.07	82.07	82.09	82.12
Z6_OF_2198	O13	-	52.01	52.13	52.13	52.15	52.17
Z6_OF_2199	P14	-	94.00	94.28	94.28	94.33	94.38
Z6_OF_2202	M12	78.00	72.00	72.59	72.59	75.39	79.35
Z6_OF_2203	M12	76.65	70.65	71.31	71.31	71.58	71.81
Z6_OF_2204	J12	-	99.50	100.02	100.02	100.16	100.50
Z6_OF_2205	J12	-	104.01	104.47	104.47	104.68	104.97
Z6_OF_2206	J12	135.06	129.06	129.64	129.64	129.82	129.98
Z6_OF_2208	J10	160.00	154.00	154.26	154.26	154.31	154.38
Z6_OF_2209	K10	128.35	122.35	122.53	122.53	122.57	122.63
Z6_OF_2210	K10	115.90	105.67	106.42	106.42	106.56	106.71
Z6_OF_2211	K10	108.00	96.54	97.89	97.89	98.12	98.39
Z6_OF_2213	J10	148.62	141.67	142.40	142.40	142.63	143.05
Z6_OF_2214	K10	120.01	114.01	114.48	114.48	114.57	114.69
Z6_OF_2220	L12	146.26	140.26	140.66	140.66	140.73	141.93
Z6_OF_2263	N13	107.12	78.13	78.67	78.67	78.89	79.35
Z6_OF_2265	N13	110.50	107.50	107.84	107.84	107.99	108.11
Z6_OF_2270	K13	-	112.40	112.65	112.65	112.75	112.87
Z6_OF_2278	K14	172.16	168.25	168.25	168.25	168.25	168.83
Z6_OF_2288	L14	-	150.00	151.46	151.46	152.19	153.59
Z6_OF_5557	L14	-	128.67	129.36	129.36	129.62	130.17
Z6_OF_5558	K13	-	124.44	124.59	124.59	124.61	124.65
Z6_OF_5559	K13	-	124.44	125.11	125.11	125.30	125.44
Z6_OF_5560	H9	-	191.00	191.16	191.16	191.18	191.21
Z6_OF_5561	O13	-	70.11	70.29	70.29	70.32	70.37
Z6_OF_5562	O13	-	70.11	70.11	70.11	70.11	70.11
Z6_OF_5563	M12	-	59.65	59.74	59.74	59.77	59.83
Z6_OF_5564	J10	-	148.88	149.62	149.62	149.76	149.95
Z6_OF_5565	K12	-	94.00	94.00	94.00	94.00	94.00
Z6_OF_5566	J11	-	86.00	86.24	86.24	86.27	86.31

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Zone 6 Existing Nodes

Node ID*	County Grid #	Ground El. (ft)	Invert El. (ft)	Max HGL (ft)			
				5Yr	10Yr	25Yr	100Yr
Z6_OF_5567	P14	-	94.74	95.31	95.31	95.45	95.72
Z6_OF_5568	K13	-	111.88	112.37	112.37	112.53	112.74
Z6_OF_5569	M12	-	60.00	60.00	60.00	60.00	60.00
Z6_OF_5576	N13	-	90.35	90.35	90.35	90.79	91.30
Z6_SGIL_2088	J9	142.25	130.90	131.16	131.16	131.20	131.25
Z6_SGIL_2089	O13	107.78	99.63	99.93	99.93	100.01	100.11
Z6_SGIL_2090	O13	104.76	96.76	96.93	96.93	96.97	97.02
Z6_SGIL_2091	P14	154.03	149.67	150.67	150.67	151.93	152.96
Z6_SGIL_2092	P14	154.00	151.22	151.93	151.93	152.07	152.28
Z6_SGIL_2093	O13	116.81	107.87	108.22	108.22	108.29	108.37
Z6_SGIL_2095	P14	181.33	177.39	177.63	177.63	177.66	177.71
Z6_SGIL_2096	P15	165.39	162.39	162.48	162.48	162.49	162.50
Z6_SGIL_2098	L12	170.02	155.10	156.14	156.14	156.43	157.25
Z6_SGIL_2102	O13	111.50	102.85	103.03	103.03	103.06	103.11
Z6_SGIL_2106	O14	115.30	108.27	108.45	108.45	108.49	108.54
Z6_SGIL_2110	J11	122.48	117.73	118.22	118.22	118.34	118.52
Z6_SGIL_2114	J12	203.50	201.17	201.75	201.75	203.53	204.70
Z6_SGIL_2115	K10	149.89	148.64	149.60	149.60	149.72	149.86
Z6_SGIL_2121	L11	12.47	4.30	7.37	7.37	8.26	10.06
Z6_SGIL_2123	K11	21.55	12.88	21.56	21.56	21.56	21.56
Z6_SGIL_2124	J11	114.00	110.67	110.82	110.82	110.84	110.87
Z6_SGIL_2125	K10	104.00	94.17	95.49	95.49	95.82	96.31
Z6_SGIL_2127	J12	196.98	193.98	194.18	194.18	194.25	194.35
Z6_SGIL_2128	J9	126.79	121.54	121.87	121.87	121.92	121.98
Z6_SGMH_2133	K12	162.39	158.39	158.65	158.65	158.74	158.84
Z6_SGMH_2134	J10	165.62	159.22	164.41	164.41	165.42	166.00
Z6_SGMH_2135	J11	61.84	55.42	55.82	55.82	55.91	56.04

APPENDIX I

PIPE DATA

*The term "NEW" in a Link ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
NEW_Z5_CHANNEL_6201	NEW_Z5_IL_6202	Z5_MH_5132	H4	113	0.025	Trapezoidal	4.00	1.00	9.8	6.1	8.1	10.7
NEW_Z5_PIPE_1425	Z5_IL_2313	Z5_IL_2314	L3	75	0.015	Circular	1.75	-	10.2	12.1	12.5	13.0
NEW_Z5_PIPE_1861	NEW_Z5_IL_3219	Z5_IL_1891	H3	247	0.015	Circular	1.50	-	1.4	1.6	1.9	2.4
NEW_Z5_PIPE_2027	NEW_Z5_MH_2027	NEW_Z5_MH_6025	L3	112	0.015	Circular	1.50	-	9.9	10.3	10.7	11.5
NEW_Z5_PIPE_2028	NEW_Z5_IL_2028	NEW_Z5_MH_2027	L3	52	0.015	Circular	1.50	-	1.1	7.2	7.3	6.6
NEW_Z5_PIPE_2029	NEW_Z5_IL_2029	NEW_Z5_IL_2028	L3	34	0.015	Circular	1.00	-	1.1	6.4	6.7	5.9
NEW_Z5_PIPE_2030	NEW_Z5_IL_2030	NEW_Z5_MH_2027	L3	28	0.015	Circular	1.00	-	0.2	4.5	5.6	4.7
NEW_Z5_PIPE_2117	Z5_MH_4082	NEW_Z5_MH_4083	F4	119	0.024	Circular	1.50	-	7.1	7.3	7.6	8.1
NEW_Z5_PIPE_2695	Z5_IL_4926	NEW_Z5_IL_6001	F3	147	0.015	Circular	1.50	-	9.0	10.9	13.3	14.9
NEW_Z5_PIPE_5674	Z5_IL_2962	Z5_IL_4926	F3	139	0.015	Circular	1.50	-	6.1	7.4	8.9	9.1
NEW_Z5_PIPE_6000	NEW_Z5_IL_6000	NEW_Z5_MH_6000	J2	11	0.015	Circular	2.50	-	4.0	4.7	5.7	7.1
NEW_Z5_PIPE_6001	NEW_Z5_MH_6000	NEW_Z5_MH_6001	J2	76	0.015	Circular	2.50	-	4.0	4.7	5.7	7.3
NEW_Z5_PIPE_6002	NEW_Z5_MH_6001	Z5_MH_3966	J2	127	0.015	Circular	2.50	-	4.0	4.7	5.6	7.9
NEW_Z5_PIPE_6003	Z5_MH_3971	Z5_CB_111	J2	227	0.015	Circular	2.75	-	31.9	39.1	46.8	53.3
NEW_Z5_PIPE_6004	NEW_Z5_MH_4083	NEW_Z5_OF_6000	F4	566	0.024	Circular	1.50	-	7.1	7.3	7.6	8.1
NEW_Z5_PIPE_6005	NEW_Z5_IL_6003	Z5_MH_5133	H4	169	0.015	Circular	3.00	-	31.2	36.1	42.8	52.8
NEW_Z5_PIPE_6006	NEW_Z5_IL_6001	NEW_Z5_OF_6002	F3	12	0.015	Circular	1.50	-	9.0	10.9	13.3	14.9
NEW_Z5_PIPE_6010	NEW_Z5_IL_6011	Z5_MH_4387	L4	36	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6011	Z5_MH_4387	Z5_SGMH_4875	L4	3	0.015	Circular	1.50	-	2.9	4.0	5.4	7.6
NEW_Z5_PIPE_6012	Z5_SGMH_4875	NEW_Z5_OF_6012	M4	16	0.015	Circular	1.50	-	2.9	4.0	5.4	7.6
NEW_Z5_PIPE_6013	Z5_SGMH_4877	NEW_Z5_MH_6015	L1	5	0.015	Circular	1.00	-	0.0	0.2	0.2	0.2
NEW_Z5_PIPE_6014	Z5_SGMH_4876	NEW_Z5_MH_6015	L1	5	0.015	Circular	1.00	-	0.0	0.2	0.2	0.2
NEW_Z5_PIPE_6015	NEW_Z5_MH_6015	Z5_OF_5014	L1	10	0.015	Circular	1.00	-	8.5	11.1	13.0	13.9
NEW_Z5_PIPE_6020	NEW_Z5_MH_6021	Z5_MH_4333	K3	280	0.015	Circular	1.50	-	12.0	13.3	14.1	14.8
NEW_Z5_PIPE_6021	NEW_Z5_IL_6020	NEW_Z5_MH_6021	K3	23	0.015	Circular	1.00	-	0.0	0.0	0.1	0.3
NEW_Z5_PIPE_6022	NEW_Z5_IL_6022	NEW_Z5_MH_6021	K3	6	0.015	Circular	1.00	-	0.0	0.0	0.1	0.3
NEW_Z5_PIPE_6023	NEW_Z5_MH_6023	NEW_Z5_MH_6021	K3	273	0.015	Circular	1.50	-	9.8	10.1	10.3	10.3
NEW_Z5_PIPE_6024	NEW_Z5_MH_6025	NEW_Z5_MH_6023	L3	387	0.015	Circular	1.50	-	9.8	10.1	10.3	10.3
NEW_Z5_PIPE_6025	NEW_Z5_IL_6024	NEW_Z5_MH_6025	L3	23	0.015	Circular	1.00	-	0.2	4.9	3.3	4.1
NEW_Z5_PIPE_6026	NEW_Z5_IL_6026	NEW_Z5_MH_6025	L3	3	0.010	Circular	1.00	-	0.8	7.7	8.3	10.0
NEW_Z5_PIPE_6100	TREMONT_STORE	Z5_IL_2176	M2	10	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6101	NEW_Z5_MH_6102	NEW_Z5_IL_6100	M2	3	0.015	Circular	2.00	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6102	NEW_Z5_IL_6100	Z5_IL_2829	M2	66	0.015	Circular	3.00	-	14.9	18.3	22.6	25.6
NEW_Z5_PIPE_6103	NEW_Z5_MH_6104	TREMONT_STORE	M2	5	0.010	Rectangular	10.00	10.00	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6104	Z5_IL_3704	STOR-10	F4	10	0.015	Trapezoidal	2.50	7.00	0.0	1.1	57.7	94.6
NEW_Z5_PIPE_6200	NEW_Z5_IL_6200	NEW_Z5_IL_6202	H4	41	0.025	Circular	1.00	-	2.6	3.3	4.3	5.4
NEW_Z5_PIPE_6600	NEW_Z5_IL_6601	NEW_Z5_IL_6600	L2	18	0.015	Circular	1.00	-	0.8	0.9	1.1	1.4
NEW_Z5_PIPE_6601	NEW_Z5_IL_6600	Z5_MH_4331	L2	475	0.015	Circular	1.50	-	0.8	0.9	1.1	1.4
Z5_CHANNEL_10	Z5_CB_445	Z5_MH_5573	H2	481	0.025	Triangular	1.70	10.00	9.5	12.1	15.8	19.6
Z5_CHANNEL_109	Z5_OF_4516	Z5_OF_4421	G3	22	0.025	Trapezoidal	5.00	2.00	0.9	1.2	1.5	2.0
Z5_CHANNEL_110	Z5_OF_4421	Z5_IL_4949	G3	31	0.025	Trapezoidal	5.00	2.00	1.1	1.4	1.8	2.3
Z5_CHANNEL_111	Z5_OF_4536	Z5_IL_4947	H4	102	0.015	Trapezoidal	5.00	2.00	25.8	27.6	29.9	32.9
Z5_CHANNEL_135	Z5_OF_5058	Z5_IL_5318	G3	175	0.025	Trapezoidal	5.00	2.00	56.4	60.6	63.2	64.1
Z5_CHANNEL_137	Z5_OF_4531	Z5_IL_5125	M3	152	0.025	Trapezoidal	5.00	2.00	39.9	48.9	55.1	59.1
Z5_CHANNEL_139	Z5_OF_5043	Z5_IL_5161	H3	337	0.025	Trapezoidal	6.00	10.00	186.3	226.4	264.6	296.9
Z5_CHANNEL_142	Z5_OF_4484	Z5_CB_384	E4	381	0.025	Trapezoidal	5.00	2.00	2.6	3.5	4.7	6.7
Z5_CHANNEL_143	Z5_OF_4485	Z5_IL_4935	E4	953	0.025	Trapezoidal	5.00	2.00	1.7	2.3	3.1	4.3
Z5_CHANNEL_149	Z5_OF_4533	Z5_IL_4944	H4	106	0.025	Trapezoidal	5.00	2.00	22.7	24.1	26.2	30.1
Z5_CHANNEL_151	Z5_OF_5048	Z5_OF_5049	E4	257	0.025	Trapezoidal	5.00	2.00	0.8	1.1	1.5	2.2
Z5_CHANNEL_152	Z5_OF_5062	Z5_IL_5138	F4	104	0.025	Trapezoidal	6.00	6.00	64.3	75.9	76.8	76.8
Z5_CHANNEL_155	Z5_IL_5386	Z5_IL_4945	H4	164	0.025	Trapezoidal	5.00	2.00	23.8	25.3	27.2	30.2
Z5_CHANNEL_156	Z5_OF_4535	Z5_IL_4946	H4	80	0.025	Trapezoidal	5.00	2.00	24.8	26.5	28.7	31.2
Z5_CHANNEL_228	Z5_OF_5049	Z5_IL_3211	E4	507	0.025	Trapezoidal	5.00	2.00	33.7	45.2	60.6	80.5
Z5_CHANNEL_238	Z5_OF_4423	Z5_IL_4941	H3	89	0.025	Trapezoidal	6.00	10.00	158.2	192.5	228.4	266.0
Z5_CHANNEL_239	Z5_OF_5066	Z5_IL_4940	H3	292	0.025	Trapezoidal	5.00	2.00	18.2	21.1	23.4	26.7
Z5_CHANNEL_249	Z5_OF_4420	Z5_IL_4950	G3	131	0.025	Trapezoidal	5.00	2.00	0.8	1.1	1.3	1.8
Z5_CHANNEL_266	Z5_OF_4381	Z5_IL_2421	L4	117	0.025	Trapezoidal	5.00	2.00	2.3	3.2	4.4	6.2
Z5_CHANNEL_272	Z5_OF_4478	Z5_IL_4966	M3	116	0.025	Trapezoidal	5.00	2.00	34.9	42.0	46.9	50.8
Z5_CHANNEL_273	Z5_OF_4530	Z5_IL_4965	L3	147	0.025	Trapezoidal	5.00	2.00	30.2	37.1	41.5	44.7
Z5_CHANNEL_295	Z5_OF_4422	Z5_IL_5163	H3	793	0.025	Trapezoidal	6.00	10.00	158.8	193.6	230.1	269.0
Z5_CHANNEL_3	Z5_OF_4365	Z5_IL_1456	M3	134	0.025	Trapezoidal	6.00	10.00	6.3	6.5	6.8	7.2
Z5_CHANNEL_302	Z5_OF_5051	Z5_OF_4600	F4	259	0.025	Trapezoidal	5.00	2.00	63.5	84.8	109.9	140.6
Z5_CHANNEL_303	Z5_OF_5063	Z5_IL_4939	G4	955	0.025	Trapezoidal	6.00	10.00	81.2	93.3	103.3	116.0
Z5_CHANNEL_306	Z5_OF_5064	Z5_IL_5145	G4	169	0.025	Trapezoidal	8.00	10.00	116.9	138.5	159.9	178.3
Z5_CHANNEL_311	Z5_OF_4442	Z5_MH_4130	K3	276	0.025	Trapezoidal	5.00	2.00	12.9	15.8	20.2	26.7
Z5_CHANNEL_312	Z5_OF_4503	Z5_IL_4955	H4	99	0.025	Trapezoidal	5.00	2.00	26.8	28.7	31.1	34.5
Z5_CHANNEL_385	Z5_CB_616	Z5_IL_5142	G3	124	0.025	Trapezoidal	5.00	2.50	71.3	82.0	84.8	88.3
Z5_CHANNEL_421	Z5_OF_4574	Z5_IL_5175	K4	132	0.025	Trapezoidal	5.00	9.00	5.1	7.2	10.1	67.3
Z5_CHANNEL_487	Z5_OF_5068	NEW_Z5_IL_6200	H4	68	0.025	Trapezoidal	3.50	1.00	2.1	1.9	2.3	2.8
Z5_CHANNEL_542	Z5_OF_4450	Z5_OF_5043	J3	198	0.025	Trapezoidal	6.00	10.00	186.0	226.0	267.8	305.4

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_CHANNEL_548	Z5_OF_4440	Z5_OF_4530	L3	7	0.025	Trapezoidal	5.00	2.00	21.3	27.6	32.3	33.9
Z5_CHANNEL_549	Z5_OF_4480	Z5_OF_4458	M3	28	0.025	Trapezoidal	5.00	2.00	35.6	45.3	61.6	80.2
Z5_CHANNEL_551	Z5_OF_4458	Z5_OF_4531	M3	8	0.025	Trapezoidal	5.00	2.00	36.0	82.6	131.6	181.2
Z5_CHANNEL_552	Z5_OF_4510	Z5_OF_4509	E4	137	0.025	Trapezoidal	5.00	2.00	41.7	56.9	72.8	91.6
Z5_CHANNEL_553	Z5_OF_4509	Z5_OF_5135	F4	267	0.025	Trapezoidal	5.00	2.00	51.0	67.8	86.1	106.1
Z5_CHANNEL_554	Z5_OF_5135	Z5_OF_5050	F4	213	0.025	Trapezoidal	5.00	2.00	51.0	67.8	86.0	106.0
Z5_CHANNEL_555	Z5_OF_5050	Z5_OF_5051	G4	109	0.025	Trapezoidal	5.00	2.00	54.2	71.5	90.2	110.5
Z5_CHANNEL_556	Z5_OF_4379	Z5_OF_4484	E4	165	0.025	Trapezoidal	5.00	2.00	1.0	1.4	1.8	2.6
Z5_CHANNEL_557	Z5_OF_5057	Z5_OF_5058	G3	21	0.025	Trapezoidal	5.00	2.00	53.0	53.4	76.1	70.7
Z5_CHANNEL_706	Z5_OF_5056	Z5_IL_5318	G3	86	0.025	Trapezoidal	5.00	2.00	6.5	6.7	6.4	9.3
Z5_CHANNEL_74	Z5_OF_5065	Z5_IL_4940	H3	29	0.025	Trapezoidal	5.00	5.00	128.4	152.2	179.1	202.1
Z5_CHANNEL_75	Z5_OF_5148	Z5_IL_5149	H3	320	0.025	Trapezoidal	8.00	10.00	116.9	138.4	159.7	178.4
Z5_CHANNEL_800	Z5_IL_5318	Z5_IL_4938	G3	96	0.025	Trapezoidal	5.00	2.00	56.5	56.4	56.1	58.3
Z5_CHANNEL_801	Z5_IL_4935	Z5_CB_388	E4	37	0.025	Trapezoidal	5.00	2.00	1.8	2.7	3.8	5.4
Z5_CHANNEL_807	Z5_OF_4600	Z5_IL_3704	F4	109	0.025	Trapezoidal	5.00	2.00	66.4	88.5	114.0	144.9
Z5_PIPE_1000	Z5_SGMH_4852	Z5_OF_5027	M3	27	0.015	Circular	1.75	-	11.2	14.4	18.0	22.1
Z5_PIPE_1001	Z5_MH_3796	Z5_IL_1457	J2	61	0.015	Circular	2.00	-	14.4	18.4	19.8	20.9
Z5_PIPE_1002	Z5_IL_1458	Z5_MH_3797	H3	35	0.015	Circular	1.00	-	3.2	3.8	4.5	5.3
Z5_PIPE_1003	Z5_IL_1461	Z5_MH_3797	H3	36	0.015	Circular	1.00	-	2.0	2.6	3.5	4.8
Z5_PIPE_1004	Z5_MH_3799	Z5_MH_3798	H3	97	0.015	Circular	1.50	-	6.9	9.2	10.8	14.3
Z5_PIPE_1005	Z5_IL_1465	Z5_IL_1466	H3	145	0.015	Circular	1.25	-	5.0	6.3	8.1	9.0
Z5_PIPE_1006	Z5_IL_1466	Z5_SGIL_4645	H3	214	0.015	Circular	1.25	-	5.0	6.3	7.5	8.6
Z5_PIPE_1007	Z5_IL_1491	Z5_IL_1492	J3	154	0.015	Circular	1.50	-	7.1	9.5	12.9	15.7
Z5_PIPE_1008	Z5_IL_1493	Z5_OF_4522	J3	48	0.015	Circular	2.00	-	10.4	14.1	19.1	26.9
Z5_PIPE_1016	Z5_MH_3955	Z5_MH_4120	L3	68	0.015	Circular	1.50	-	6.3	7.9	11.9	11.4
Z5_PIPE_1017	Z5_MH_3771	Z5_MH_5167	H2	81	0.015	Circular	1.25	-	3.9	3.9	4.0	4.0
Z5_PIPE_1030	Z5_IL_1890	Z5_IL_1891	H3	73	0.015	Circular	1.00	-	4.4	5.7	5.9	6.2
Z5_PIPE_1031	Z5_IL_3158	Z5_IL_1147	G3	65	0.015	Circular	1.50	-	1.6	2.0	2.4	3.1
Z5_PIPE_1058	Z5_IL_1710	Z5_MH_4019	H4	40	0.015	Circular	1.00	-	0.7	0.9	1.6	3.6
Z5_PIPE_1059	Z5_IL_1711	Z5_IL_1712	L2	68	0.015	Circular	1.00	-	6.2	6.2	6.4	6.8
Z5_PIPE_106	Z5_SGIL_4845	Z5_MH_4012	H4	25	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1062	Z5_IL_2090	Z5_SGMH_4862	J2	48	0.015	Circular	1.00	-	3.6	3.6	3.5	3.5
Z5_PIPE_1078	Z5_MH_3818	Z5_IL_1654	K2	29	0.010	Circular	1.50	-	3.7	4.9	6.5	8.9
Z5_PIPE_1079	Z5_IL_1654	Z5_MH_3819	K2	230	0.010	Circular	1.50	-	3.7	4.9	6.5	8.9
Z5_PIPE_1080	Z5_IL_1655	Z5_MH_3819	K2	16	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1081	Z5_IL_1656	Z5_MH_3819	K2	15	0.010	Circular	1.00	-	1.8	2.4	3.2	4.5
Z5_PIPE_1082	Z5_MH_3819	Z5_MH_3820	K2	307	0.010	Circular	2.00	-	5.4	7.2	9.6	13.3
Z5_PIPE_1083	Z5_IL_1657	Z5_MH_3820	K2	21	0.010	Circular	1.00	-	1.8	2.4	3.3	4.6
Z5_PIPE_1084	Z5_MH_3820	Z5_IL_1658	K2	98	0.015	Circular	2.50	-	7.1	9.4	12.6	17.5
Z5_PIPE_1112	Z5_IL_1111	Z5_IL_1112	J2	191	0.015	Circular	1.00	-	3.9	4.9	5.6	5.9
Z5_PIPE_1113	Z5_IL_1112	Z5_OF_5034	J2	67	0.010	Circular	1.25	-	3.9	4.9	5.6	5.9
Z5_PIPE_1124	Z5_IL_1738	Z5_IL_1739	H4	29	0.010	Circular	1.25	-	1.6	2.2	3.0	4.2
Z5_PIPE_1125	Z5_IL_1739	Z5_IL_1740	H4	76	0.010	Circular	1.25	-	1.6	2.2	3.0	4.2
Z5_PIPE_1126	Z5_IL_1740	Z5_SGIL_4683	H4	17	0.015	Circular	1.25	-	1.6	2.2	3.0	4.2
Z5_PIPE_1128	Z5_IL_1845	Z5_IL_3665	J2	52	0.015	Circular	1.00	-	3.8	4.4	5.4	6.7
Z5_PIPE_1130	Z5_MH_4116	Z5_CB_329	F4	8	0.015	Circular	1.00	-	0.7	1.1	1.6	2.5
Z5_PIPE_1131	Z5_CB_331	Z5_MH_4117	G4	7	0.015	Circular	1.25	-	4.2	5.4	6.1	6.9
Z5_PIPE_1132	Z5_MH_4117	Z5_MH_4057	G4	269	0.015	Circular	1.25	-	4.2	5.4	6.1	6.3
Z5_PIPE_1133	Z5_CB_332	Z5_MH_4057	G4	7	0.015	Circular	1.00	-	1.1	1.4	1.8	2.3
Z5_PIPE_1134	Z5_MH_4057	Z5_MH_4058	G4	58	0.015	Circular	1.25	-	5.2	6.7	7.9	8.6
Z5_PIPE_1135	Z5_IL_1774	Z5_MH_5131	G4	77	0.015	Circular	1.00	-	1.5	1.9	2.4	3.1
Z5_PIPE_1136	Z5_IL_1773	Z5_IL_1774	G4	62	0.015	Circular	1.00	-	0.3	0.4	0.5	0.6
Z5_PIPE_1137	Z5_IL_1777	Z5_MH_3821	G4	18	0.024	Circular	1.00	-	0.2	0.3	0.3	0.4
Z5_PIPE_1138	Z5_MH_3821	Z5_SGIL_4769	G4	141	0.015	Circular	1.00	-	0.2	0.3	0.3	0.4
Z5_PIPE_1139	Z5_IL_1778	Z5_OF_4560	G4	44	0.015	Circular	1.00	-	0.2	0.3	0.3	0.4
Z5_PIPE_1140	Z5_IL_1779	Z5_OF_4561	G4	44	0.015	Circular	1.00	-	0.2	0.2	0.3	0.4
Z5_PIPE_1141	Z5_IL_1780	Z5_OF_4562	G4	55	0.015	Circular	1.00	-	0.1	0.2	0.2	0.3
Z5_PIPE_1142	Z5_IL_1781	Z5_OF_4488	G4	60	0.015	Circular	1.00	-	0.2	0.3	0.3	0.4
Z5_PIPE_1143	Z5_IL_1782	Z5_OF_4489	G4	53	0.015	Circular	1.00	-	0.2	0.2	0.3	0.3
Z5_PIPE_1144	Z5_IL_1783	Z5_OF_4490	G4	52	0.015	Circular	1.00	-	0.3	0.3	0.4	0.5
Z5_PIPE_1145	Z5_IL_1784	Z5_OF_4491	G4	53	0.015	Circular	1.00	-	0.2	0.3	0.4	0.5
Z5_PIPE_1146	Z5_IL_1785	Z5_IL_1786	F4	95	0.015	Circular	1.00	-	1.5	1.9	2.4	3.2
Z5_PIPE_1147	Z5_IL_1786	Z5_IL_1787	F4	7	0.015	Circular	1.00	-	4.6	6.1	8.1	9.2
Z5_PIPE_1148	Z5_IL_1787	Z5_IL_1788	G4	28	0.015	Circular	1.00	-	4.6	6.1	8.1	9.2
Z5_PIPE_1149	Z5_IL_1789	Z5_IL_1786	G4	87	0.015	Circular	1.00	-	3.2	4.2	5.7	6.6
Z5_PIPE_1150	Z5_SGIL_4685	Z5_OF_4549	F4	75	0.024	Circular	1.00	-	4.6	6.1	8.1	9.2
Z5_PIPE_1151	Z5_IL_1791	Z5_OF_4559	F4	55	0.015	Circular	1.00	-	0.1	0.1	0.2	0.2
Z5_PIPE_1152	Z5_IL_1792	Z5_OF_4558	F4	55	0.015	Circular	1.00	-	0.1	0.1	0.1	0.2
Z5_PIPE_1153	Z5_IL_1790	Z5_OF_4557	F4	52	0.015	Circular	1.00	-	0.1	0.2	0.2	0.3
Z5_PIPE_1154	Z5_IL_1793	Z5_OF_4556	F4	53	0.015	Circular	1.00	-	0.1	0.1	0.1	0.1

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_1155	Z5_IL_1794	Z5_OF_4555	F4	49	0.015	Circular	1.00	-	0.0	0.1	0.1	0.1
Z5_PIPE_1156	Z5_IL_1795	Z5_OF_4550	F4	59	0.015	Circular	1.00	-	0.1	0.1	0.1	0.1
Z5_PIPE_1157	Z5_IL_1796	Z5_OF_4551	F4	40	0.015	Circular	1.00	-	0.1	0.1	0.1	0.1
Z5_PIPE_1158	Z5_IL_1797	Z5_OF_4552	F4	40	0.015	Circular	1.00	-	0.1	0.1	0.1	0.2
Z5_PIPE_1159	Z5_IL_1798	Z5_OF_4553	G4	43	0.015	Circular	1.00	-	0.1	0.1	0.2	0.2
Z5_PIPE_1160	Z5_IL_1799	Z5_OF_4554	G4	44	0.015	Circular	1.00	-	0.4	0.5	0.6	0.8
Z5_PIPE_1161	Z5_IL_1863	Z5_IL_1864	F4	216	0.015	Circular	1.00	-	2.0	2.6	3.7	3.9
Z5_PIPE_1162	Z5_IL_1864	Z5_SGIL_4688	G4	68	0.024	Circular	1.25	-	3.0	3.8	5.1	5.2
Z5_PIPE_1163	Z5_SGIL_4688	Z5_CB_331	G4	13	0.024	Circular	1.25	-	3.0	3.8	5.1	5.3
Z5_PIPE_117	Z5_IL_2688	Z5_IL_2689	E3	62	0.024	Circular	1.00	-	0.4	0.6	0.8	1.3
Z5_PIPE_1176	Z5_IL_2278	Z5_OF_5021	K2	97	0.015	Circular	1.00	-	0.2	0.3	0.4	0.5
Z5_PIPE_1177	Z5_IL_2288	Z5_OF_5020	K2	179	0.015	Circular	1.00	-	3.5	4.6	6.0	8.0
Z5_PIPE_1179	Z5_MH_3930	Z5_IL_2833	K2	6	0.015	Circular	2.00	-	12.6	16.0	19.8	25.8
Z5_PIPE_118	Z5_IL_2689	Z5_IL_2690	E3	148	0.024	Circular	1.00	-	0.4	0.6	0.8	1.3
Z5_PIPE_1180	Z5_IL_2833	Z5_SGIL_4809	K2	150	0.015	Circular	2.00	-	12.6	16.0	19.7	25.8
Z5_PIPE_1181	Z5_IL_2978	Z5_IL_2399	K2	115	0.015	Circular	2.50	-	8.3	11.0	14.7	20.3
Z5_PIPE_1182	Z5_MH_3855	Z5_OF_4500	K2	167	0.015	Circular	2.50	-	11.6	15.4	20.6	28.5
Z5_PIPE_1183	Z5_IL_2400	Z5_MH_3855	K2	254	0.015	Circular	2.50	-	11.6	15.4	20.6	28.5
Z5_PIPE_1184	Z5_SGMH_4864	Z5_IL_2400	K2	31	0.015	Circular	2.50	-	11.6	15.4	20.6	28.5
Z5_PIPE_1185	Z5_IL_2399	Z5_SGMH_4864	K2	46	0.015	Circular	2.50	-	11.0	14.5	19.4	26.8
Z5_PIPE_1186	Z5_MH_4199	Z5_CB_42	M2	227	0.015	Circular	1.50	-	4.2	4.8	5.6	6.1
Z5_PIPE_1187	Z5_IL_2829	Z5_IL_2830	M2	36	0.015	Circular	3.50	-	19.1	23.6	29.6	34.8
Z5_PIPE_1188	Z5_MH_3841	Z5_MH_3842	M2	222	0.015	Circular	3.50	-	18.9	23.6	29.7	34.8
Z5_PIPE_1189	Z5_MH_4198	Z5_MH_3843	M2	166	0.015	Circular	2.75	-	28.6	35.9	45.9	57.5
Z5_PIPE_119	Z5_IL_2690	Z5_IL_1646	E3	108	0.010	Circular	1.00	-	0.4	0.6	0.8	1.3
Z5_PIPE_1190	Z5_MH_3843	Z5_SGIL_4711	M2	141	0.015	Circular	2.75	-	31.2	39.1	49.8	63.0
Z5_PIPE_1191	Z5_SGIL_4711	Z5_MH_3827	M2	47	0.015	Circular	2.75	-	31.2	39.1	49.8	63.0
Z5_PIPE_1192	Z5_MH_3827	Z5_OF_4368	M2	235	0.015	Circular	3.00	-	32.1	40.3	51.4	65.5
Z5_PIPE_1193	Z5_MH_3952	Z5_CB_44	M2	100	0.015	Circular	1.50	-	2.8	3.5	4.4	5.7
Z5_PIPE_1200	Z5_IL_2190	Z5_SGMH_4863	N3	327	0.015	Circular	1.00	-	2.1	2.5	2.9	3.6
Z5_PIPE_1218	Z5_MH_4186	Z5_MH_3980	J4	267	0.015	Circular	2.50	-	1.6	2.4	3.5	5.2
Z5_PIPE_1219	Z5_MH_3844	Z5_MH_4187	J4	148	0.015	Circular	2.75	-	34.8	41.1	48.9	59.3
Z5_PIPE_1220	Z5_IL_2310	Z5_IL_2311	L3	39	0.015	Circular	1.25	-	1.5	5.1	4.5	4.7
Z5_PIPE_1221	Z5_IL_2311	Z5_MH_3847	L3	81	0.015	Circular	1.25	-	5.4	7.0	7.8	9.3
Z5_PIPE_1222	Z5_MH_3847	Z5_MH_3846	L3	178	0.015	Circular	1.50	-	10.3	12.1	12.5	13.0
Z5_PIPE_1223	Z5_MH_3846	Z5_IL_2313	L3	168	0.015	Circular	1.50	-	10.2	12.1	12.5	13.0
Z5_PIPE_1227	Z5_MH_3771	Z5_MH_3870	H2	111	0.015	Circular	2.25	-	13.8	16.9	21.4	27.9
Z5_PIPE_1228	Z5_MH_3870	Z5_IL_2478	H2	250	0.015	Circular	2.25	-	20.5	24.2	29.2	36.7
Z5_PIPE_1229	Z5_MH_5167	Z5_MH_3870	H2	82	0.015	Circular	1.00	-	4.8	5.0	5.0	5.0
Z5_PIPE_1233	Z5_MH_3874	Z5_CB_193	H2	38	0.015	Circular	2.25	-	16.5	19.4	23.3	29.1
Z5_PIPE_1235	Z5_IL_2813	Z5_IL_2812	M2	26	0.015	Circular	1.25	-	1.4	1.9	2.7	3.8
Z5_PIPE_1236	Z5_CB_261	Z5_OF_4417	F3	14	0.015	Circular	1.00	-	1.9	2.2	2.7	3.3
Z5_PIPE_1237	Z5_CB_417	Z5_MH_4098	D4	10	0.015	Circular	1.00	-	1.6	2.1	2.9	4.0
Z5_PIPE_1239	Z5_IL_2508	Z5_IL_2509	L3	34	0.024	Circular	1.00	-	0.8	1.2	1.8	2.4
Z5_PIPE_1240	Z5_IL_2509	Z5_MH_5562	L3	630	0.015	Circular	1.00	-	0.8	1.1	1.7	2.4
Z5_PIPE_1242	Z5_IL_2433	Z5_SGIL_4718	M3	34	0.015	Circular	1.00	-	2.3	2.9	3.8	5.0
Z5_PIPE_1243	Z5_SGIL_4718	Z5_MH_3860	M3	58	0.015	Circular	1.00	-	3.0	3.9	5.0	6.7
Z5_PIPE_1265	Z5_CB_184	Z5_CB_183	G3	26	0.015	Circular	1.00	-	1.1	1.4	1.8	2.4
Z5_PIPE_1266	Z5_CB_183	Z5_CB_182	G3	155	0.015	Circular	1.50	-	3.4	4.4	5.8	7.8
Z5_PIPE_1267	Z5_CB_182	Z5_IL_2990	G3	386	0.015	Circular	1.50	-	3.4	4.4	5.8	7.8
Z5_PIPE_1268	Z5_CB_181	Z5_IL_2990	H3	51	0.015	Circular	1.00	-	2.0	2.3	2.8	3.5
Z5_PIPE_1269	Z5_CB_123	Z5_IL_2970	H3	242	0.015	Circular	1.50	-	10.9	11.3	11.4	13.1
Z5_PIPE_1270	Z5_MH_4129	Z5_MH_3921	K3	442	0.015	Circular	2.50	-	23.8	28.1	32.8	35.8
Z5_PIPE_1271	Z5_MH_4130	Z5_MH_3921	K3	102	0.015	Circular	2.50	-	8.4	8.7	13.7	23.5
Z5_PIPE_1279	Z5_IL_3254	Z5_IL_3255	K3	44	0.015	Circular	1.00	-	1.3	1.8	2.5	6.8
Z5_PIPE_1280	Z5_MH_4138	Z5_IL_3255	J3	297	0.010	Circular	3.00	-	34.3	44.0	56.9	70.5
Z5_PIPE_1281	Z5_IL_2856	Z5_IL_3131	K3	30	0.015	Circular	1.50	-	2.4	3.2	4.3	6.0
Z5_PIPE_1282	Z5_IL_3131	Z5_IL_2848	K3	330	0.010	Circular	1.50	-	2.4	3.2	4.3	6.0
Z5_PIPE_1283	Z5_IL_2848	Z5_IL_2847	K3	144	0.010	Circular	1.50	-	3.4	4.5	6.2	8.7
Z5_PIPE_1284	Z5_IL_3255	Z5_MH_3724	K3	157	0.010	Circular	3.00	-	35.8	46.1	59.6	73.6
Z5_PIPE_1285	Z5_MH_3725	Z5_MH_4138	J3	198	0.010	Circular	3.00	-	34.3	44.0	56.9	80.2
Z5_PIPE_1286	Z5_IL_3257	Z5_IL_3256	H3	38	0.010	Circular	1.25	-	2.4	3.1	4.1	5.5
Z5_PIPE_1287	Z5_IL_3256	Z5_IL_1103	H3	76	0.010	Circular	1.75	-	2.4	3.1	4.1	5.5
Z5_PIPE_1294	Z5_IL_2764	Z5_IL_2763	M1	36	0.015	Circular	1.00	-	3.3	4.2	4.7	5.9
Z5_PIPE_1295	Z5_IL_2763	Z5_IL_1497	M1	139	0.015	Circular	1.00	-	3.3	4.2	4.5	4.9
Z5_PIPE_1297	Z5_CB_492	Z5_CB_493	K3	237	0.015	Circular	1.50	-	11.4	11.9	12.6	13.5
Z5_PIPE_1298	Z5_CB_493	Z5_IL_1515	K3	61	0.015	Circular	1.50	-	15.0	16.3	17.7	19.3
Z5_PIPE_1299	Z5_IL_1155	Z5_MH_3726	G3	169	0.015	Circular	2.50	-	48.9	50.0	51.4	57.2
Z5_PIPE_1300	Z5_CB_294	Z5_CB_295	G3	98	0.015	Circular	2.25	-	48.1	54.5	63.7	77.1
Z5_PIPE_1301	Z5_CB_295	Z5_MH_3735	G3	62	0.015	Circular	2.50	-	45.6	50.2	56.8	65.8

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_1303	Z5_MH_4076	Z5_MH_4075	E4	333	0.015	Circular	3.00	-	25.5	33.9	45.6	60.2
Z5_PIPE_1305	Z5_CB_333	Z5_MH_4058	G4	38	0.015	Circular	1.00	-	0.5	0.7	0.9	1.3
Z5_PIPE_1306	Z5_MH_4058	Z5_CB_334	G4	105	0.015	Circular	1.50	-	5.7	7.3	8.8	9.8
Z5_PIPE_1307	Z5_CB_334	Z5_SGIL_4769	G4	49	0.015	Circular	1.75	-	5.7	7.3	8.8	9.8
Z5_PIPE_1308	Z5_MH_4019	Z5_MH_4326	H4	114	0.015	Circular	1.00	-	0.7	0.9	2.5	2.8
Z5_PIPE_1309	Z5_MH_4020	Z5_MH_4021	H4	141	0.015	Circular	1.00	-	2.0	2.4	4.2	3.6
Z5_PIPE_131	Z5_SGIL_4763	Z5_OF_5076	H4	87	0.024	Circular	1.00	-	1.6	2.1	2.7	3.6
Z5_PIPE_1310	Z5_MH_4022	Z5_CB_208	H4	193	0.010	Circular	1.00	-	4.9	6.1	7.1	7.4
Z5_PIPE_1311	Z5_CB_208	Z5_MH_4023	H4	118	0.015	Circular	1.50	-	5.7	7.0	8.2	8.8
Z5_PIPE_1312	Z5_CB_207	Z5_CB_208	H4	37	0.015	Circular	1.00	-	0.8	1.0	1.2	1.5
Z5_PIPE_1313	Z5_MH_4023	Z5_MH_3772	H4	211	0.015	Circular	1.50	-	5.7	7.0	8.2	8.8
Z5_PIPE_1314	Z5_MH_3772	Z5_MH_4024	H4	168	0.015	Circular	1.50	-	5.7	7.0	8.2	8.9
Z5_PIPE_1315	Z5_MH_4024	Z5_MH_4025	H4	241	0.015	Circular	1.50	-	5.7	7.0	8.2	9.2
Z5_PIPE_1316	Z5_MH_4025	Z5_MH_4013	H4	187	0.015	Circular	2.00	-	8.1	9.9	11.9	13.6
Z5_PIPE_1317	Z5_CB_209	Z5_MH_4025	H4	12	0.015	Circular	1.00	-	2.4	2.9	3.7	4.9
Z5_PIPE_1318	Z5_CB_210	Z5_MH_4025	H4	21	0.015	Circular	1.00	-	0.0	0.0	0.0	0.5
Z5_PIPE_1319	Z5_MH_4017	Z5_MH_4016	H4	113	0.015	Circular	1.50	-	2.9	3.7	4.8	6.6
Z5_PIPE_1321	Z5_MH_4013	Z5_MH_4012	H4	114	0.015	Circular	2.00	-	16.0	19.9	24.3	29.9
Z5_PIPE_1322	Z5_CB_202	Z5_CB_203	H4	84	0.015	Circular	1.00	-	4.2	5.6	7.4	10.1
Z5_PIPE_1323	Z5_CB_203	Z5_OF_5075	H4	86	0.015	Circular	1.25	-	4.2	5.6	7.4	10.1
Z5_PIPE_1325	Z5_MH_4215	Z5_MH_4336	K3	41	0.015	Circular	1.50	-	10.3	8.8	9.0	10.7
Z5_PIPE_1326	Z5_CB_515	Z5_MH_4003	K3	43	0.015	Circular	2.00	-	11.0	12.5	14.9	21.4
Z5_PIPE_1327	Z5_IL_2986	Z5_IL_3130	K3	263	0.015	Circular	1.25	-	4.9	5.4	5.8	6.6
Z5_PIPE_1329	Z5_IL_3130	Z5_SGIL_4801	K3	304	0.015	Circular	1.25	-	5.5	5.9	6.5	7.5
Z5_PIPE_1339	Z5_IL_2851	Z5_IL_2852	K3	2	0.015	Rectangular	2.00	2.00	1.6	1.8	2.8	5.9
Z5_PIPE_134	Z5_SGIL_4647	Z5_OF_5061	G3	75	0.024	Circular	1.00	-	8.6	10.0	10.1	10.3
Z5_PIPE_1340	Z5_CB_457	Z5_CB_460	L2	32	0.010	Circular	2.00	-	3.4	4.3	5.4	7.0
Z5_PIPE_1352	Z5_SGIL_4640	Z5_IL_1150	G3	20	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1355	Z5_CB_188	Z5_IL_2963	G3	62	0.015	Circular	1.00	-	5.0	6.1	7.5	8.4
Z5_PIPE_1356	Z5_IL_2963	Z5_IL_2993	G3	36	0.015	Circular	1.00	-	5.0	6.1	6.6	6.4
Z5_PIPE_1357	Z5_MH_4075	Z5_OF_5049	E4	49	0.015	Circular	3.00	-	33.1	44.3	59.3	78.6
Z5_PIPE_1358	Z5_CB_409	Z5_CB_408	E4	158	0.015	Circular	1.25	-	0.9	1.3	1.8	2.5
Z5_PIPE_1359	Z5_CB_387	Z5_IL_3211	E4	31	0.015	Circular	2.50	-	7.8	11.5	16.4	24.1
Z5_PIPE_1360	Z5_CB_388	Z5_CB_387	E4	20	0.015	Circular	1.00	-	2.6	3.8	5.6	7.9
Z5_PIPE_1361	Z5_IL_4935	Z5_CB_387	E4	42	0.015	Circular	2.00	-	5.2	7.6	10.9	16.2
Z5_PIPE_1362	Z5_CB_389	Z5_OF_4510	E4	28	0.015	Circular	2.50	-	41.7	56.9	72.8	91.6
Z5_PIPE_1363	Z5_CB_390	Z5_OF_4509	E4	81	0.015	Circular	1.00	-	9.4	11.0	13.3	15.4
Z5_PIPE_1364	Z5_IL_1498	Z5_CB_393	F4	43	0.024	Circular	2.00	-	11.3	15.8	21.9	31.4
Z5_PIPE_1366	Z5_IL_3210	Z5_CB_490	K3	196	0.015	Circular	1.50	-	8.0	7.8	7.8	8.3
Z5_PIPE_1367	Z5_IL_2838	Z5_IL_2835	K3	40	0.015	Circular	1.50	-	11.4	8.4	12.4	10.4
Z5_PIPE_1371	Z5_MH_3903	Z5_IL_2691	G3	190	0.015	Circular	4.50	-	116.5	138.0	159.3	177.5
Z5_PIPE_1372	Z5_IL_4949	Z5_OF_4515	G3	75	0.015	Circular	1.50	-	1.4	1.7	2.2	3.0
Z5_PIPE_1374	Z5_MH_3849	Z5_MH_3850	J2	146	0.015	Circular	1.00	-	2.3	2.6	3.4	4.0
Z5_PIPE_1375	Z5_CB_659	Z5_OF_4529	K2	130	0.015	Circular	1.25	-	9.6	12.2	13.0	14.5
Z5_PIPE_1378	Z5_IL_5165	Z5_IL_2772	L1	65	0.024	Circular	1.00	-	4.3	5.1	5.6	6.4
Z5_PIPE_138	Z5_IL_3221	Z5_OF_5068	H3	157	0.024	Circular	1.00	-	1.6	1.5	1.4	1.2
Z5_PIPE_1380	Z5_IL_1187	Z5_IL_1186	L3	39	0.015	Circular	1.00	-	1.1	1.5	2.0	2.7
Z5_PIPE_1381	Z5_IL_3405	Z5_IL_2311	L3	215	0.015	Circular	1.25	-	4.0	5.4	6.2	6.3
Z5_PIPE_1382	Z5_IL_2434	Z5_IL_3405	L3	68	0.015	Circular	1.00	-	2.2	3.0	3.6	3.7
Z5_PIPE_1383	Z5_IL_2312	Z5_MH_3848	L3	46	0.015	Circular	1.25	-	2.7	3.5	4.4	5.0
Z5_PIPE_1384	Z5_IL_1185	Z5_MH_3848	L3	19	0.015	Circular	1.00	-	0.8	1.0	2.9	3.4
Z5_PIPE_1385	Z5_IL_1184	Z5_MH_3847	L3	6	0.015	Circular	1.00	-	2.6	2.6	4.0	6.6
Z5_PIPE_1386	Z5_MH_3848	Z5_MH_3847	L3	31	0.015	Circular	1.25	-	3.5	4.4	5.3	6.9
Z5_PIPE_1387	Z5_IL_1433	Z5_MH_5126	M3	8	0.015	Circular	1.00	-	4.3	5.4	6.8	9.0
Z5_PIPE_1388	Z5_IL_1079	Z5_MH_3718	L3	22	0.015	Circular	1.00	-	0.8	1.1	1.5	2.1
Z5_PIPE_1390	Z5_IL_1081	Z5_MH_3719	L3	18	0.015	Circular	1.25	-	1.7	2.3	3.0	4.2
Z5_PIPE_1391	Z5_MH_3720	Z5_IL_1083	M3	162	0.015	Circular	1.25	-	2.5	3.3	4.4	6.1
Z5_PIPE_1392	Z5_MH_3719	Z5_MH_3720	L3	121	0.015	Circular	1.25	-	2.5	3.3	4.4	6.1
Z5_PIPE_1398	Z5_SGIL_4754	Z5_OF_4544	M3	42	0.015	Circular	1.00	-	0.8	1.1	1.5	2.0
Z5_PIPE_1399	Z5_SGIL_4753	Z5_OF_4545	M3	47	0.015	Circular	1.00	-	0.7	1.0	1.3	1.9
Z5_PIPE_1405	Z5_IL_5280	Z5_IL_2185	M4	106	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_1416	Z5_IL_3408	Z5_IL_3410	L3	63	0.010	Circular	1.00	-	5.4	5.4	5.7	7.3
Z5_PIPE_1417	Z5_IL_3410	Z5_IL_3409	L3	38	0.015	Circular	1.25	-	7.6	8.1	4.3	5.3
Z5_PIPE_1419	Z5_IL_3409	Z5_IL_3107	L3	101	0.015	Circular	1.25	-	3.8	4.3	3.6	4.3
Z5_PIPE_1420	Z5_IL_3107	Z5_IL_3352	L3	180	0.015	Circular	1.25	-	3.4	3.4	3.8	4.2
Z5_PIPE_1422	Z5_IL_1190	Z5_MH_4234	L3	73	0.015	Circular	1.25	-	1.6	2.4	3.6	5.2
Z5_PIPE_1423	Z5_IL_1192	Z5_MH_4234	L3	58	0.015	Circular	1.00	-	0.4	0.5	0.7	1.1
Z5_PIPE_1424	Z5_IL_1189	Z5_MH_4234	L3	65	0.015	Circular	1.25	-	4.0	5.1	6.7	8.9
Z5_PIPE_1426	Z5_IL_2780	Z5_MH_5127	L3	64	0.015	Circular	1.00	-	1.8	2.2	2.8	3.7
Z5_PIPE_1427	Z5_IL_2314	Z5_CB_698	L3	48	0.015	Circular	1.75	-	11.9	14.3	15.3	16.4

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_1428	Z5_IL_2843	Z5_IL_2838	K3	234	0.024	Circular	1.50	-	4.4	5.3	5.5	5.5
Z5_PIPE_1429	Z5_IL_3116	Z5_IL_2852	K3	434	0.015	Circular	1.00	-	3.2	3.4	3.7	4.0
Z5_PIPE_1430	Z5_IL_2852	Z5_CB_495	K3	46	0.015	Circular	2.00	-	9.6	11.4	14.4	18.8
Z5_PIPE_1431	Z5_CB_495	Z5_MH_4131	K3	6	0.015	Circular	2.50	-	12.8	15.7	20.0	26.3
Z5_PIPE_1435	Z5_CB_385	Z5_CB_386	E4	38	0.015	Circular	2.25	-	3.4	4.4	5.8	8.1
Z5_PIPE_1442	Z5_IL_3288	Z5_MH_4185	J3	8	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1443	Z5_MH_4185	Z5_IL_1097	J3	144	0.010	Circular	3.00	-	22.3	27.8	35.1	45.7
Z5_PIPE_1445	Z5_IL_1276	Z5_MH_3762	H4	16	0.015	Circular	1.00	-	1.4	1.8	2.5	3.4
Z5_PIPE_1446	Z5_IL_1277	Z5_MH_3762	H4	20	0.015	Circular	1.00	-	0.0	0.0	0.1	0.4
Z5_PIPE_1467	Z5_IL_1712	Z5_OF_4542	L2	123	0.015	Circular	1.00	-	6.2	6.2	6.4	6.8
Z5_PIPE_1468	Z5_CB_680	Z5_CB_492	K3	218	0.015	Circular	1.50	-	9.9	10.1	10.7	14.0
Z5_PIPE_1469	Z5_CB_490	Z5_CB_680	K3	21	0.015	Circular	1.50	-	8.1	8.7	8.9	8.8
Z5_PIPE_1470	Z5_IL_1673	Z5_SGIL_4660	J4	34	0.015	Circular	1.00	-	1.1	1.5	2.0	2.8
Z5_PIPE_1471	Z5_IL_2560	Z5_IL_2561	J4	26	0.010	Circular	1.25	-	0.8	1.3	2.0	3.1
Z5_PIPE_1472	Z5_IL_1271	Z5_IL_1218	J4	32	0.015	Circular	1.50	-	1.2	1.9	2.8	4.2
Z5_PIPE_1473	Z5_IL_1218	Z5_IL_1686	J4	33	0.015	Circular	1.50	-	1.2	1.9	2.8	4.2
Z5_PIPE_1474	Z5_IL_1686	Z5_SGIL_4672	J4	104	0.015	Circular	1.50	-	1.2	1.9	2.8	4.2
Z5_PIPE_1475	Z5_SGIL_4672	Z5_IL_1685	J4	83	0.015	Circular	1.50	-	1.2	1.9	2.8	4.2
Z5_PIPE_1477	Z5_IL_5149	Z5_OF_5065	H3	337	0.015	Circular	4.50	-	124.9	147.5	172.9	193.4
Z5_PIPE_1478	Z5_IL_5145	Z5_OF_5148	H3	60	0.024	Circular	4.50	-	116.9	138.4	159.8	178.3
Z5_PIPE_1480	Z5_CB_342	Z5_CB_341	G3	21	0.015	Circular	1.00	-	8.0	9.2	10.7	12.8
Z5_PIPE_1482	Z5_CB_338	Z5_CB_339	G4	63	0.015	Circular	1.50	-	9.9	12.7	15.8	17.5
Z5_PIPE_1484	Z5_SGMH_4862	Z5_MH_3970	J2	217	0.015	Circular	1.00	-	3.8	4.0	4.1	4.4
Z5_PIPE_1485	Z5_IL_3371	Z5_MH_5157	J2	6	0.015	Circular	1.00	-	0.0	0.0	0.0	0.5
Z5_PIPE_150	Z5_MH_4304	Z5_MH_4173	H2	61	0.010	Circular	2.00	-	6.7	8.5	10.9	16.8
Z5_PIPE_1515	Z5_CB_393	Z5_OF_5051	G4	12	0.015	Circular	2.00	-	11.3	15.8	21.9	31.4
Z5_PIPE_1516	Z5_IL_1279	Z5_OF_5050	F4	13	0.015	Circular	1.00	-	3.5	4.1	5.0	6.2
Z5_PIPE_1519	Z5_IL_3047	Z5_MH_5147	G4	32	0.015	Circular	2.00	-	10.7	12.3	14.4	17.3
Z5_PIPE_1520	Z5_CB_339	Z5_IL_3273	G4	255	0.015	Circular	2.00	-	9.9	12.7	15.8	17.5
Z5_PIPE_1521	Z5_IL_3273	Z5_MH_5147	G4	129	0.015	Circular	2.50	-	17.0	21.6	27.2	32.4
Z5_PIPE_1526	Z5_IL_3235	Z5_IL_3236	H3	32	0.010	Circular	1.00	-	0.8	1.0	1.3	1.7
Z5_PIPE_1527	Z5_IL_1103	Z5_IL_3236	H3	119	0.010	Circular	1.75	-	2.4	3.1	4.1	5.5
Z5_PIPE_1546	Z5_MH_4014	Z5_MH_4013	H4	188	0.015	Circular	1.50	-	6.9	8.7	10.8	14.6
Z5_PIPE_1547	Z5_MH_4016	Z5_MH_4015	H4	151	0.015	Circular	1.50	-	4.0	5.0	6.5	8.7
Z5_PIPE_1548	Z5_MH_4015	Z5_MH_4014	H4	138	0.015	Circular	1.50	-	4.0	5.0	6.4	8.7
Z5_PIPE_1554	Z5_IL_3306	Z5_MH_4013	H4	47	0.015	Circular	1.25	-	1.1	1.4	1.7	2.2
Z5_PIPE_1559	Z5_SGIL_4698	Z5_MH_4022	H4	36	0.015	Circular	1.00	-	0.9	1.1	2.0	3.5
Z5_PIPE_156	Z5_MH_4173	Z5_OF_4481	H2	96	0.010	Circular	2.00	-	6.7	8.5	10.9	16.8
Z5_PIPE_1560	Z5_MH_4323	Z5_MH_4022	H4	103	0.015	Circular	1.00	-	4.0	5.0	6.3	6.3
Z5_PIPE_1561	Z5_MH_3918	Z5_MH_3919	L1	158	0.015	Circular	1.00	-	4.3	5.1	5.5	6.0
Z5_PIPE_1562	Z5_IL_2773	Z5_MH_3919	L1	10	0.015	Circular	1.00	-	4.4	6.0	8.4	9.8
Z5_PIPE_1563	Z5_MH_3919	Z5_IL_3173	L1	11	0.015	Circular	1.00	-	8.5	11.1	13.0	13.9
Z5_PIPE_1564	Z5_MH_3840	Z5_IL_2176	M2	28	0.015	Circular	3.00	-	19.4	23.2	28.2	31.7
Z5_PIPE_1565	Z5_IL_2830	Z5_MH_3841	M2	180	0.015	Circular	3.50	-	19.0	23.6	29.7	34.8
Z5_PIPE_1566	Z5_IL_2819	Z5_MH_4198	M2	16	0.015	Circular	2.00	-	8.6	11.2	14.7	19.9
Z5_PIPE_1568	Z5_IL_1077	Z5_MH_3716	L3	28	0.015	Circular	1.00	-	1.6	2.2	2.9	3.8
Z5_PIPE_1571	Z5_IL_3380	Z5_MH_4224	K3	42	0.015	Circular	1.00	-	0.6	0.8	1.2	1.6
Z5_PIPE_1572	Z5_MH_4224	Z5_MH_4223	K4	102	0.015	Circular	1.25	-	0.6	0.8	1.2	1.6
Z5_PIPE_1576	Z5_MH_4225	Z5_MH_4223	K3	74	0.015	Circular	2.50	-	7.7	10.6	14.4	17.4
Z5_PIPE_1577	Z5_MH_4223	Z5_IL_3383	K4	54	0.015	Circular	2.50	-	8.9	12.5	17.1	21.8
Z5_PIPE_1578	Z5_IL_3383	Z5_IL_3384	K3	75	0.015	Circular	2.50	-	9.9	13.7	18.8	24.4
Z5_PIPE_1580	Z5_IL_3387	Z5_MH_4226	K3	108	0.015	Circular	1.00	-	0.7	1.0	1.3	1.8
Z5_PIPE_1581	Z5_MH_4226	Z5_IL_3386	K3	57	0.015	Circular	1.00	-	0.7	1.0	1.3	1.8
Z5_PIPE_1582	Z5_IL_3386	Z5_IL_3251	K3	80	0.015	Circular	1.00	-	0.7	1.0	1.3	1.9
Z5_PIPE_1583	Z5_IL_3251	Z5_IL_3252	K3	68	0.015	Circular	1.00	-	1.6	2.1	2.7	3.6
Z5_PIPE_1584	Z5_IL_3252	Z5_IL_3383	K3	138	0.015	Circular	1.00	-	1.6	2.1	2.7	3.6
Z5_PIPE_1585	Z5_SGIL_4729	Z5_MH_4227	K3	106	0.015	Circular	1.25	-	2.4	3.1	3.9	5.2
Z5_PIPE_1586	Z5_MH_4227	Z5_IL_3388	K3	47	0.015	Circular	1.25	-	3.2	4.0	5.1	6.7
Z5_PIPE_1587	Z5_IL_3388	Z5_MH_4228	K3	115	0.015	Circular	1.25	-	3.7	4.7	6.0	7.9
Z5_PIPE_1588	Z5_IL_3384	Z5_CB_520	K3	124	0.015	Circular	2.50	-	11.5	15.6	21.6	29.0
Z5_PIPE_1589	Z5_CB_520	Z5_IL_3650	K3	114	0.015	Circular	2.50	-	11.5	15.6	21.6	29.0
Z5_PIPE_1590	Z5_IL_3650	Z5_MH_4228	K3	119	0.015	Circular	2.50	-	11.5	15.6	21.6	29.0
Z5_PIPE_1591	Z5_SGIL_4803	Z5_IL_3389	K3	52	0.015	Circular	2.50	-	22.7	29.8	39.6	53.6
Z5_PIPE_1592	Z5_MH_5129	Z5_SGIL_4803	K3	274	0.015	Circular	3.00	-	17.4	23.1	31.0	42.2
Z5_PIPE_1593	Z5_IL_3389	Z5_OF_4525	K3	58	0.015	Circular	2.50	-	22.7	29.8	39.6	53.6
Z5_PIPE_1594	Z5_MH_3722	Z5_MH_3721	K3	312	0.010	Circular	3.00	-	36.1	46.5	60.1	73.8
Z5_PIPE_1595	Z5_MH_3723	Z5_MH_4341	K3	86	0.010	Circular	3.00	-	36.1	46.6	60.2	74.1
Z5_PIPE_1596	Z5_MH_3724	Z5_MH_3723	K3	87	0.010	Circular	3.00	-	35.8	46.1	59.6	73.6
Z5_PIPE_1597	Z5_IL_3391	Z5_IL_1094	J3	31	0.015	Circular	1.25	-	3.0	3.9	5.0	15.2
Z5_PIPE_1598	Z5_IL_1095	Z5_IL_1093	J3	538	0.010	Circular	3.00	-	28.4	36.2	46.6	62.5

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_1599	Z5_IL_1097	Z5_MH_4229	J3	517	0.010	Circular	3.00	-	24.3	30.5	38.6	50.7
Z5_PIPE_1600	Z5_MH_4229	Z5_IL_1095	J3	41	0.010	Circular	3.00	-	26.9	34.2	44.0	60.7
Z5_PIPE_1607	Z5_MH_4007	Z5_MH_3874	H2	303	0.015	Circular	2.25	-	12.4	14.6	17.5	21.9
Z5_PIPE_1622	Z5_MH_3762	Z5_MH_3763	H4	133	0.015	Circular	1.50	-	1.4	1.8	2.6	3.4
Z5_PIPE_1623	Z5_MH_3763	Z5_MH_3764	H4	197	0.015	Circular	1.50	-	2.2	3.0	4.2	5.6
Z5_PIPE_1624	Z5_MH_3764	Z5_MH_3712	H4	208	0.015	Circular	1.50	-	2.2	2.9	4.2	5.6
Z5_PIPE_1628	Z5_IL_1294	Z5_MH_4017	H4	17	0.015	Circular	1.50	-	2.9	3.7	4.8	6.6
Z5_PIPE_168	Z5_IL_1045	Z5_MH_4142	K4	50	0.015	Circular	1.00	-	1.2	1.5	2.0	3.7
Z5_PIPE_169	Z5_IL_1046	Z5_MH_4145	K4	47	0.015	Circular	1.75	-	3.0	3.3	4.3	6.4
Z5_PIPE_1694	Z5_IL_3314	Z5_IL_3138	K4	78	0.015	Circular	1.00	-	5.6	7.3	9.1	11.2
Z5_PIPE_1728	Z5_IL_916	Z5_MH_3712	H4	20	0.015	Circular	1.00	-	0.7	1.0	1.3	1.8
Z5_PIPE_1729	Z5_IL_915	Z5_MH_3712	H4	17	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1730	Z5_MH_3815	Z5_MH_3812	J4	82	0.015	Circular	3.00	-	28.0	31.6	35.4	39.6
Z5_PIPE_1731	Z5_MH_3811	Z5_MH_3812	J4	147	0.015	Circular	1.50	-	3.4	4.5	6.5	8.8
Z5_PIPE_1732	Z5_IL_1602	Z5_MH_3811	H4	141	0.015	Circular	1.50	-	0.6	0.8	1.1	1.5
Z5_PIPE_1733	Z5_MH_3809	Z5_MH_3811	H4	109	0.015	Circular	1.50	-	2.9	3.9	5.5	7.3
Z5_PIPE_1734	Z5_MH_3765	Z5_MH_3809	H4	127	0.015	Circular	1.50	-	2.9	3.9	5.4	7.3
Z5_PIPE_1735	Z5_MH_3812	Z5_MH_3813	H4	67	0.015	Circular	3.00	-	31.1	36.2	41.7	48.3
Z5_PIPE_1736	Z5_MH_3813	Z5_SGMH_4860	H4	148	0.015	Circular	3.00	-	31.2	36.4	42.0	48.9
Z5_PIPE_1739	Z5_SGMH_4860	Z5_MH_3814	H4	63	0.015	Circular	3.00	-	31.2	36.4	42.0	48.9
Z5_PIPE_1741	Z5_IL_2302	Z5_IL_3668	H4	10	0.015	Circular	2.50	-	1.3	2.0	2.9	4.3
Z5_PIPE_1742	Z5_IL_3289	Z5_MH_4347	J4	11	0.015	Circular	1.00	-	0.7	0.9	1.1	1.5
Z5_PIPE_1743	Z5_IL_3290	Z5_MH_3980	J4	21	0.015	Circular	1.00	-	1.1	1.5	2.1	3.0
Z5_PIPE_1744	Z5_MH_3816	Z5_MH_4345	H4	173	0.015	Circular	3.00	-	31.3	36.4	42.0	48.9
Z5_PIPE_1745	Z5_MH_4187	Z5_OF_4374	J4	50	0.015	Circular	3.00	-	34.8	41.1	48.9	59.3
Z5_PIPE_1746	Z5_MH_4012	Z5_MH_4018	H4	179	0.015	Circular	2.75	-	26.4	32.2	39.4	48.2
Z5_PIPE_1748	Z5_MH_4018	Z5_OF_5001	H4	155	0.015	Circular	3.00	-	26.4	32.2	39.4	48.2
Z5_PIPE_1761	Z5_CB_206	Z5_MH_4012	H4	31	0.015	Circular	1.25	-	0.7	0.8	1.1	1.4
Z5_PIPE_1764	Z5_IL_3317	Z5_IL_3318	L3	91	0.015	Circular	1.00	-	1.4	1.8	2.3	3.3
Z5_PIPE_1765	Z5_MH_3716	Z5_MH_4233	L3	182	0.015	Circular	1.50	-	3.0	4.0	5.4	6.9
Z5_PIPE_1766	Z5_IL_1078	Z5_IL_3321	L3	42	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_1767	Z5_IL_3320	Z5_IL_3321	L3	30	0.015	Circular	1.50	-	4.2	5.6	7.4	9.3
Z5_PIPE_1768	Z5_MH_3808	Z5_SGMH_4858	L2	58	0.015	Circular	1.75	-	4.8	6.6	8.9	12.4
Z5_PIPE_1769	Z5_IL_1518	Z5_MH_3807	L2	76	0.015	Circular	1.50	-	2.1	2.7	3.6	4.9
Z5_PIPE_1770	Z5_IL_2979	Z5_IL_3323	K3	41	0.024	Circular	1.50	-	3.4	4.3	5.6	7.5
Z5_PIPE_1771	Z5_IL_3323	Z5_SGMH_4859	K3	33	0.015	Circular	1.75	-	3.4	4.3	5.6	7.5
Z5_PIPE_1772	Z5_CB_42	Z5_CB_450	M2	174	0.015	Circular	1.50	-	4.1	4.8	5.6	6.1
Z5_PIPE_1773	Z5_CB_450	Z5_SGIL_4721	M2	256	0.015	Circular	1.50	-	4.1	4.8	5.6	6.1
Z5_PIPE_1775	Z5_MH_3839	NEW_Z5_IL_6100	M2	219	0.015	Circular	3.00	-	15.6	18.5	22.6	25.6
Z5_PIPE_1776	Z5_CB_43	Z5_MH_3840	M2	8	0.015	Circular	1.75	-	17.8	21.5	26.1	28.7
Z5_PIPE_1777	Z5_IL_2810	Z5_IL_2809	L3	32	0.015	Circular	1.50	-	6.3	7.9	10.8	13.2
Z5_PIPE_1778	Z5_IL_2809	Z5_MH_5579	L3	58	0.015	Circular	1.50	-	6.3	7.9	13.5	12.8
Z5_PIPE_1779	Z5_MH_4120	Z5_IL_2516	L3	128	0.015	Circular	1.50	-	8.7	10.9	13.6	13.9
Z5_PIPE_1780	Z5_CB_465	Z5_IL_2516	M2	49	0.015	Circular	1.75	-	7.4	8.7	11.3	12.2
Z5_PIPE_1782	Z5_IL_2328	Z5_CB_570	J2	107	0.010	Circular	1.25	-	3.7	4.6	5.9	7.7
Z5_PIPE_1785	Z5_IL_2330	Z5_IL_2331	J2	119	0.015	Circular	1.25	-	1.4	1.8	2.3	3.0
Z5_PIPE_1789	Z5_IL_2331	Z5_OF_5033	J2	178	0.015	Circular	1.25	-	1.4	1.8	2.3	3.0
Z5_PIPE_1795	Z5_IL_3328	Z5_IL_3329	H2	69	0.015	Circular	1.25	-	1.6	2.0	2.6	3.4
Z5_PIPE_1796	Z5_IL_3329	Z5_SGIL_4795	H2	42	0.015	Circular	1.25	-	1.6	2.0	2.6	3.4
Z5_PIPE_1797	Z5_SGIL_4795	Z5_OF_4511	H2	28	0.015	Circular	1.25	-	1.6	2.0	2.6	3.4
Z5_PIPE_1798	Z5_IL_3330	Z5_SGIL_4795	H2	11	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_1799	Z5_IL_2759	Z5_IL_2760	J2	14	0.015	Circular	2.00	-	1.8	2.3	3.1	4.3
Z5_PIPE_1800	Z5_SGIL_4603	Z5_IL_3120	J2	60	0.015	Circular	1.00	-	5.3	5.6	5.7	6.4
Z5_PIPE_1801	Z5_IL_3120	Z5_IL_3337	J2	165	0.015	Circular	1.00	-	5.2	5.3	5.7	4.9
Z5_PIPE_1802	Z5_IL_3337	Z5_SGIL_4796	K2	162	0.015	Circular	1.00	-	4.6	4.7	4.9	5.1
Z5_PIPE_1804	Z5_SGIL_4796	Z5_MH_5577	K2	228	0.015	Circular	1.00	-	6.3	6.3	6.3	6.4
Z5_PIPE_1807	Z5_IL_2725	Z5_IL_2726	J2	15	0.024	Circular	1.00	-	1.9	2.4	3.0	3.9
Z5_PIPE_1808	Z5_IL_2726	Z5_OF_4514	J2	14	0.024	Circular	1.25	-	1.9	2.4	3.0	3.9
Z5_PIPE_1809	Z5_IL_2965	Z5_MH_4204	J2	34	0.015	Circular	1.50	-	6.2	8.2	10.9	15.1
Z5_PIPE_1810	Z5_MH_3970	Z5_CB_112	J2	17	0.015	Circular	1.00	-	5.8	6.6	7.3	8.4
Z5_PIPE_1811	Z5_CB_112	Z5_CB_111	J2	64	0.015	Circular	1.50	-	5.8	6.6	7.3	8.4
Z5_PIPE_1812	Z5_MH_3966	Z5_MH_3969	J2	66	0.015	Circular	3.00	-	42.7	51.8	61.6	72.0
Z5_PIPE_1813	Z5_MH_3968	Z5_OF_4447	J2	145	0.024	Circular	4.00	-	50.5	61.3	73.4	85.4
Z5_PIPE_1814	Z5_MH_3969	Z5_MH_3968	J2	103	0.024	Circular	4.00	-	42.7	51.7	61.6	72.2
Z5_PIPE_1818	Z5_CB_642	Z5_MH_3979	J2	37	0.015	Circular	2.75	-	25.5	31.7	36.6	40.7
Z5_PIPE_1819	Z5_IL_3666	Z5_IL_3665	J2	127	0.015	Circular	2.75	-	29.2	35.9	42.7	47.9
Z5_PIPE_1820	Z5_IL_3663	Z5_MH_3971	J2	257	0.015	Circular	2.75	-	31.9	39.1	46.8	54.8
Z5_PIPE_1822	Z5_IL_1459	Z5_MH_3796	J2	22	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1823	Z5_IL_1460	Z5_MH_3796	J2	8	0.015	Circular	1.00	-	0.5	0.7	0.9	1.5
Z5_PIPE_1824	Z5_MH_3797	Z5_MH_3796	J2	256	0.015	Circular	1.75	-	12.6	16.2	17.0	19.0

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_1825	Z5_MH_3798	Z5_MH_3797	H3	310	0.015	Circular	1.50	-	6.9	9.2	10.7	12.0
Z5_PIPE_1826	Z5_IL_1463	Z5_MH_3799	H3	32	0.015	Circular	1.25	-	5.4	7.5	11.4	11.5
Z5_PIPE_1827	Z5_IL_1462	Z5_MH_3799	H3	8	0.015	Circular	1.00	-	1.8	2.4	5.4	6.3
Z5_PIPE_1828	Z5_IL_994	Z5_IL_993	J2	9	0.015	Circular	1.00	-	0.7	0.9	1.4	4.3
Z5_PIPE_1829	Z5_IL_992	Z5_IL_993	J2	41	0.015	Circular	1.00	-	0.0	0.2	0.5	4.8
Z5_PIPE_1830	Z5_IL_993	Z5_MH_3797	H3	189	0.015	Circular	1.50	-	0.7	1.4	1.4	4.6
Z5_PIPE_1831	Z5_IL_1469	Z5_MH_4205	H3	8	0.015	Circular	1.00	-	5.8	8.0	6.2	7.2
Z5_PIPE_1832	Z5_IL_1470	Z5_MH_4205	H3	18	0.015	Circular	1.00	-	2.9	2.9	9.5	3.2
Z5_PIPE_1833	Z5_MH_4205	Z5_MH_4206	H3	46	0.015	Circular	1.25	-	7.4	9.1	8.6	8.6
Z5_PIPE_1834	Z5_IL_3338	Z5_MH_4207	H3	3	0.015	Circular	1.00	-	1.0	1.1	1.4	3.1
Z5_PIPE_1835	Z5_MH_4206	Z5_MH_4208	H3	96	0.015	Circular	1.25	-	7.4	8.1	9.3	7.1
Z5_PIPE_1836	Z5_IL_1468	Z5_MH_4208	H3	60	0.015	Circular	1.00	-	1.1	1.8	3.1	2.0
Z5_PIPE_1837	Z5_MH_4208	Z5_IL_1467	H3	48	0.015	Circular	1.25	-	8.1	9.2	9.0	14.5
Z5_PIPE_1838	Z5_IL_5574	Z5_MH_5160	H3	98	0.015	Circular	4.50	-	0.1	0.2	0.3	0.4
Z5_PIPE_1839	Z5_IL_2974	Z5_IL_3343	H3	225	0.015	Arch	4.00	5.50	187.9	228.7	266.7	298.4
Z5_PIPE_1840	Z5_MH_4210	Z5_OF_5042	H3	30	0.024	Rectangular	6.00	6.00	190.2	231.8	270.7	304.0
Z5_PIPE_1841	Z5_IL_3343	Z5_MH_4210	H3	7	0.015	Rectangular	4.00	5.00	187.9	228.7	266.7	298.4
Z5_PIPE_1842	Z5_IL_2736	Z5_MH_3831	H3	6	0.015	Circular	4.50	-	6.5	8.6	11.4	15.8
Z5_PIPE_1843	Z5_MH_3975	Z5_MH_4211	H3	48	0.015	Circular	4.50	-	8.8	11.7	15.7	21.7
Z5_PIPE_1844	Z5_IL_3344	Z5_MH_5146	G4	46	0.015	Circular	1.00	-	2.2	2.7	3.5	4.6
Z5_PIPE_1846	Z5_IL_3220	Z5_IL_3221	H3	43	0.010	Circular	1.00	-	1.6	1.6	1.6	1.9
Z5_PIPE_1849	Z5_IL_2997	Z5_OF_4420	G3	82	0.024	Circular	1.25	-	0.8	1.1	1.3	1.8
Z5_PIPE_1851	Z5_IL_2951	Z5_MH_5170	G3	81	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1852	Z5_IL_2952	Z5_MH_5170	G3	56	0.015	Circular	1.50	-	0.8	1.0	1.4	1.9
Z5_PIPE_1855	Z5_IL_3216	Z5_CB_184	G3	61	0.015	Circular	1.00	-	0.7	0.9	1.1	1.5
Z5_PIPE_1856	Z5_IL_2990	Z5_OF_4517	G3	24	0.015	Circular	1.50	-	5.3	6.7	8.5	11.2
Z5_PIPE_1857	Z5_SGIL_4697	Z5_OF_4518	H3	129	0.010	Circular	1.00	-	2.6	3.3	4.3	5.7
Z5_PIPE_1858	Z5_IL_2478	Z5_OF_4519	H2	38	0.015	Circular	2.25	-	20.5	24.2	29.2	36.7
Z5_PIPE_1859	Z5_MH_5155	Z5_MH_4011	H3	158	0.024	Circular	6.00	-	150.6	182.1	214.6	246.5
Z5_PIPE_1860	Z5_IL_1891	Z5_MH_5155	H3	42	0.015	Circular	1.67	-	6.2	6.8	7.7	8.5
Z5_PIPE_1863	Z5_IL_3348	Z5_IL_3349	J3	29	0.015	Circular	1.00	-	3.0	4.1	5.5	6.9
Z5_PIPE_1864	Z5_MH_3721	Z5_MH_4137	K3	559	0.015	Circular	3.00	-	37.3	48.0	62.0	76.1
Z5_PIPE_1865	Z5_IL_1088	Z5_MH_4137	K3	12	0.015	Circular	3.00	-	0.6	0.9	1.2	1.6
Z5_PIPE_1866	Z5_MH_4137	Z5_MH_5128	K3	208	0.015	Circular	3.50	-	41.1	53.1	69.1	85.3
Z5_PIPE_1867	Z5_IL_2847	Z5_MH_4137	K3	36	0.010	Circular	1.50	-	3.4	4.5	6.2	8.6
Z5_PIPE_1868	Z5_IL_2845	Z5_MH_5128	K3	10	0.015	Circular	1.75	-	1.1	1.4	1.9	2.7
Z5_PIPE_1869	Z5_IL_2846	Z5_IL_2847	K3	36	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1870	Z5_MH_3728	Z5_OF_5046	K4	95	0.015	Circular	1.00	-	1.6	2.1	2.9	4.1
Z5_PIPE_1871	Z5_IL_3258	Z5_OF_4446	K4	79	0.015	Circular	1.00	-	2.6	3.4	4.5	6.1
Z5_PIPE_1872	Z5_IL_3132	Z5_MH_3721	K3	8	0.015	Circular	1.00	-	1.4	1.9	2.6	4.7
Z5_PIPE_1874	Z5_MH_4131	Z5_OF_4442	K3	180	0.015	Circular	2.50	-	12.9	15.8	20.3	26.9
Z5_PIPE_1875	Z5_IL_1076	Z5_MH_3716	L3	9	0.015	Circular	1.00	-	2.2	2.3	2.6	3.6
Z5_PIPE_1876	Z5_IL_1484	Z5_IL_3321	L3	66	0.015	Circular	1.75	-	1.2	1.5	1.8	2.4
Z5_PIPE_1877	Z5_IL_3322	Z5_IL_1484	L3	68	0.010	Circular	1.25	-	1.2	1.5	1.8	2.4
Z5_PIPE_1878	Z5_IL_3350	Z5_CB_465	L3	287	0.015	Circular	1.75	-	7.4	8.7	10.2	12.2
Z5_PIPE_1879	Z5_IL_1486	Z5_IL_3350	L3	41	0.024	Arch	1.08	1.83	4.9	5.3	5.7	6.5
Z5_PIPE_1881	Z5_IL_3352	Z5_IL_1486	L3	74	0.015	Circular	1.00	-	4.9	5.3	5.7	6.5
Z5_PIPE_1883	Z5_IL_2831	Z5_IL_2979	K3	62	0.015	Circular	1.50	-	2.2	2.9	4.0	5.5
Z5_PIPE_1885	Z5_MH_3921	Z5_SGIL_4799	K3	80	0.015	Circular	3.50	-	19.7	33.9	48.2	61.4
Z5_PIPE_1886	Z5_IL_1488	Z5_IL_1491	J3	38	0.015	Circular	1.25	-	7.1	9.5	12.9	15.7
Z5_PIPE_1887	Z5_SGIL_4800	Z5_IL_1493	J3	86	0.015	Circular	1.75	-	10.4	14.1	19.1	26.9
Z5_PIPE_1888	Z5_IL_3366	Z5_IL_3367	J3	29	0.015	Circular	1.25	-	3.7	4.9	6.5	9.0
Z5_PIPE_1889	Z5_IL_1492	Z5_IL_3367	J3	174	0.015	Circular	1.50	-	7.1	9.5	12.9	15.7
Z5_PIPE_189	Z5_IL_3197	Z5_IL_3198	M2	23	0.015	Circular	1.25	-	4.4	5.6	7.4	9.9
Z5_PIPE_1890	Z5_IL_3367	Z5_SGIL_4800	J3	37	0.015	Circular	1.75	-	9.0	11.9	16.0	21.7
Z5_PIPE_1891	Z5_MH_4333	Z5_MH_5150	K3	192	0.015	Circular	2.50	-	34.8	34.9	35.0	34.9
Z5_PIPE_1892	Z5_SGIL_4801	Z5_IL_2851	K3	427	0.015	Circular	1.25	-	1.7	1.9	3.0	4.5
Z5_PIPE_1893	Z5_MH_3920	Z5_MH_4129	K3	415	0.015	Circular	2.50	-	23.0	27.1	31.5	33.8
Z5_PIPE_1894	Z5_IL_2774	Z5_MH_3920	K3	7	0.015	Circular	1.50	-	7.3	7.1	7.3	7.4
Z5_PIPE_1896	Z5_MH_4003	Z5_MH_4214	K3	281	0.015	Circular	2.00	-	11.7	13.4	15.8	17.8
Z5_PIPE_1897	Z5_MH_4214	Z5_MH_3920	K3	304	0.015	Circular	2.00	-	15.1	17.9	20.6	22.1
Z5_PIPE_1898	Z5_IL_3369	Z5_MH_4003	K3	30	0.015	Circular	1.50	-	0.8	1.0	1.4	4.7
Z5_PIPE_1899	Z5_IL_5505	Z5_MH_4215	K3	20	0.015	Circular	1.00	-	4.1	3.7	4.2	4.5
Z5_PIPE_190	Z5_IL_3198	Z5_OF_4465	M2	31	0.015	Circular	1.25	-	4.4	5.6	7.4	9.9
Z5_PIPE_1900	Z5_MH_4216	Z5_IL_5505	J3	282	0.015	Circular	1.75	-	12.9	14.3	14.4	16.3
Z5_PIPE_1901	Z5_IL_3370	Z5_MH_4216	J3	44	0.015	Circular	1.25	-	4.5	6.2	5.7	5.4
Z5_PIPE_1902	Z5_IL_3237	Z5_IL_3648	J3	63	0.015	Circular	1.50	-	4.0	5.3	7.1	9.8
Z5_PIPE_1903	Z5_MH_4217	Z5_MH_4216	J3	377	0.015	Circular	1.75	-	7.3	9.6	12.7	16.0
Z5_PIPE_191	Z5_IL_2812	Z5_OF_4406	M2	116	0.015	Circular	1.00	-	1.4	1.9	2.7	3.8
Z5_PIPE_1926	Z5_IL_3373	Z5_OF_4524	J3	28	0.015	Circular	1.00	-	1.1	1.5	2.0	2.7

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_1927	Z5_IL_1878	Z5_IL_2976	J3	18	0.015	Circular	1.25	-	2.7	3.5	4.7	6.4
Z5_PIPE_1928	Z5_IL_2976	Z5_MH_4220	J3	19	0.015	Circular	1.25	-	2.7	3.5	4.7	6.4
Z5_PIPE_1929	Z5_MH_4220	Z5_MH_3974	J3	56	0.015	Circular	1.50	-	2.7	3.5	4.7	6.4
Z5_PIPE_1930	Z5_IL_3375	Z5_MH_3974	J3	15	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1931	Z5_MH_4221	Z5_MH_3910	J3	139	0.015	Circular	2.00	-	9.5	12.1	15.6	19.5
Z5_PIPE_1932	Z5_MH_4339	Z5_MH_4217	J3	62	0.015	Circular	2.00	-	2.9	3.7	4.9	6.9
Z5_PIPE_1933	Z5_IL_3124	Z5_MH_4222	J3	62	0.015	Circular	1.00	-	0.7	1.0	1.3	1.8
Z5_PIPE_1935	Z5_IL_2993	Z5_MH_4231	G3	77	0.015	Circular	1.00	-	5.0	6.1	6.6	6.4
Z5_PIPE_1936	Z5_MH_5168	Z5_OF_5572	H3	192	0.024	Circular	2.50	-	54.8	56.8	58.6	61.1
Z5_PIPE_1937	Z5_IL_4950	Z5_MH_5168	G3	36	0.015	Circular	1.25	-	4.0	4.3	4.4	3.3
Z5_PIPE_1938	Z5_IL_3347	Z5_CB_181	G3	109	0.015	Circular	1.00	-	2.0	2.3	2.8	3.5
Z5_PIPE_1952	Z5_IL_3236	Z5_IL_3283	H3	217	0.010	Circular	2.00	-	3.2	4.1	5.4	7.2
Z5_PIPE_1953	Z5_IL_3399	Z5_IL_1100	H4	184	0.010	Circular	2.50	-	11.7	14.0	17.2	21.8
Z5_PIPE_1954	Z5_IL_4955	Z5_MH_3810	J4	43	0.015	Circular	3.00	-	28.0	31.6	35.3	39.6
Z5_PIPE_1955	Z5_IL_1099	Z5_MH_4232	J3	27	0.010	Circular	1.00	-	0.0	0.0	0.0	0.1
Z5_PIPE_1956	Z5_IL_1100	Z5_MH_4232	J3	117	0.010	Circular	3.00	-	20.1	24.8	31.1	40.3
Z5_PIPE_1957	Z5_MH_4232	Z5_MH_4352	J3	192	0.010	Circular	2.50	-	20.1	24.8	31.1	40.3
Z5_PIPE_1958	Z5_IL_3400	Z5_MH_4232	J3	7	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1959	Z5_MH_3905	Z5_MH_4352	J3	32	0.015	Circular	1.50	-	1.6	2.2	3.1	4.3
Z5_PIPE_1961	Z5_IL_2420	Z5_OF_4381	L4	76	0.015	Circular	1.50	-	2.3	3.2	4.4	6.2
Z5_PIPE_1962	Z5_IL_1431	Z5_IL_1430	M3	20	0.015	Circular	1.00	-	1.2	1.6	2.2	3.0
Z5_PIPE_1963	Z5_IL_1430	Z5_MH_3778	M3	22	0.015	Circular	1.00	-	1.2	1.6	2.2	3.0
Z5_PIPE_1964	Z5_IL_1432	Z5_MH_3778	M3	27	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1965	Z5_IL_1428	Z5_MH_3777	M3	22	0.015	Circular	1.00	-	1.0	1.3	1.6	2.1
Z5_PIPE_1968	Z5_IL_1426	Z5_MH_3776	M3	21	0.015	Circular	1.00	-	1.6	2.1	2.7	3.6
Z5_PIPE_1970	Z5_IL_1425	Z5_MH_3775	M3	12	0.015	Circular	1.00	-	1.5	2.1	4.7	5.3
Z5_PIPE_1971	Z5_IL_1424	Z5_MH_3775	M3	26	0.015	Circular	1.00	-	3.1	3.9	4.8	5.0
Z5_PIPE_1974	Z5_CB_658	Z5_CB_659	K2	188	0.015	Circular	1.25	-	8.7	10.5	11.2	12.6
Z5_PIPE_1975	Z5_IL_3483	Z5_CB_698	L3	29	0.015	Circular	1.75	-	1.8	2.2	2.8	3.7
Z5_PIPE_1976	Z5_CB_698	Z5_CB_522	M3	64	0.015	Circular	2.00	-	13.0	16.0	17.8	19.7
Z5_PIPE_1977	Z5_IL_1788	Z5_SGIL_4685	F4	6	0.015	Circular	1.00	-	4.6	6.1	8.1	9.2
Z5_PIPE_1978	Z5_IL_2734	Z5_SGIL_4747	J3	320	0.010	Circular	1.50	-	0.7	1.0	1.3	1.8
Z5_PIPE_1979	Z5_SGIL_4747	Z5_MH_3818	K2	57	0.010	Circular	1.50	-	3.7	4.9	6.5	8.9
Z5_PIPE_1980	Z5_IL_2735	Z5_SGIL_4747	K2	34	0.010	Circular	1.25	-	3.1	4.0	5.4	7.4
Z5_PIPE_1981	Z5_IL_2698	Z5_MH_5137	F4	13	0.015	Circular	1.25	-	0.4	0.6	0.8	1.1
Z5_PIPE_1982	Z5_IL_3488	Z5_IL_2843	K3	174	0.015	Circular	1.25	-	4.3	5.3	5.5	5.8
Z5_PIPE_1983	Z5_IL_3489	Z5_IL_3490	K3	34	0.015	Circular	1.00	-	1.6	2.1	2.9	4.5
Z5_PIPE_1984	Z5_IL_3490	Z5_IL_3488	K3	227	0.015	Circular	1.00	-	1.6	2.1	2.3	2.8
Z5_PIPE_1985	Z5_CB_51	Z5_CB_52	M2	50	0.015	Circular	1.75	-	10.2	12.5	15.2	18.8
Z5_PIPE_1987	Z5_SGIL_4710	Z5_CB_530	J4	82	0.015	Circular	1.00	-	1.8	2.3	3.8	4.0
Z5_PIPE_1989	Z5_IL_5443	Z5_CB_533	J4	93	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1990	Z5_CB_533	Z5_CB_49	J4	101	0.010	Circular	1.00	-	0.0	0.0	0.1	0.1
Z5_PIPE_1991	Z5_CB_49	Z5_CB_532	J4	66	0.010	Circular	1.00	-	0.7	0.8	1.0	1.3
Z5_PIPE_1992	Z5_CB_532	Z5_CB_531	J4	236	0.010	Circular	1.00	-	1.2	1.5	2.0	2.6
Z5_PIPE_1993	Z5_CB_531	Z5_CB_172	K4	117	0.010	Circular	1.25	-	2.2	2.7	3.5	4.8
Z5_PIPE_1994	Z5_CB_530	Z5_CB_171	J4	140	0.015	Circular	1.25	-	7.3	9.5	11.8	13.0
Z5_PIPE_1995	Z5_CB_171	Z5_CB_172	J4	116	0.015	Circular	1.25	-	7.3	9.5	11.3	13.5
Z5_PIPE_1996	Z5_CB_172	Z5_OF_4435	J4	87	0.024	Circular	1.50	-	8.9	11.7	14.4	17.0
Z5_PIPE_1997	Z5_IL_1508	Z5_OF_5069	J4	74	0.015	Circular	1.00	-	0.8	1.1	1.3	1.7
Z5_PIPE_1999	Z5_IL_2530	Z5_IL_2529	J4	237	0.024	Circular	1.00	-	0.8	1.0	1.3	1.6
Z5_PIPE_2	Z5_IL_1564	Z5_IL_2835	K3	241	0.015	Circular	1.00	-	1.1	1.4	2.4	2.9
Z5_PIPE_2000	Z5_IL_2529	Z5_IL_2528	J4	102	0.024	Circular	1.00	-	0.8	1.0	1.4	1.7
Z5_PIPE_2001	Z5_IL_2528	Z5_IL_2527	J4	100	0.024	Circular	1.00	-	1.9	2.4	3.4	3.6
Z5_PIPE_2002	Z5_IL_2527	Z5_IL_2526	J4	120	0.024	Circular	1.00	-	1.9	2.4	3.4	3.6
Z5_PIPE_2004	Z5_CB_707	Z5_SGIL_4812	J4	101	0.010	Circular	1.00	-	1.1	1.4	1.9	2.6
Z5_PIPE_2005	Z5_SGIL_4812	Z5_CB_708	J4	27	0.010	Circular	1.00	-	1.1	1.4	1.9	2.6
Z5_PIPE_2006	Z5_CB_708	Z5_OF_5002	J4	93	0.010	Circular	1.00	-	1.1	1.4	1.9	2.6
Z5_PIPE_2009	Z5_IL_1865	Z5_IL_1864	G4	31	0.015	Circular	1.00	-	1.0	1.4	3.4	3.0
Z5_PIPE_2011	Z5_IL_1084	Z5_IL_1083	M3	26	0.015	Circular	1.50	-	1.7	2.3	2.9	3.9
Z5_PIPE_2012	Z5_SGIL_4616	Z5_OF_4458	M3	24	0.015	Circular	1.00	-	0.7	0.9	1.8	2.7
Z5_PIPE_2013	Z5_IL_4966	Z5_OF_4480	M3	74	0.015	Circular	1.50	-	35.6	42.5	47.5	51.1
Z5_PIPE_2014	Z5_MH_3929	Z5_IL_2824	L3	28	0.015	Circular	2.00	-	19.7	25.5	30.4	34.0
Z5_PIPE_2016	Z5_CB_660	Z5_CB_661	L3	59	0.015	Circular	1.75	-	13.4	16.6	19.1	21.6
Z5_PIPE_2017	Z5_CB_661	Z5_IL_2823	L3	79	0.015	Circular	1.75	-	13.4	16.6	19.1	21.6
Z5_PIPE_2018	Z5_IL_1188	Z5_IL_1189	L3	115	0.015	Circular	1.25	-	3.3	3.8	4.7	5.9
Z5_PIPE_2019	Z5_IL_3318	Z5_MH_4233	L3	18	0.015	Circular	1.00	-	1.4	1.8	2.3	3.1
Z5_PIPE_2020	Z5_MH_4233	Z5_IL_3319	L3	11	0.015	Circular	1.50	-	4.2	5.6	7.4	9.6
Z5_PIPE_2021	Z5_IL_3319	Z5_IL_3320	L3	188	0.015	Circular	1.50	-	4.2	5.6	7.4	9.3
Z5_PIPE_2022	Z5_IL_3406	Z5_MH_3718	L3	15	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2023	Z5_IL_1087	Z5_MH_4317	M3	18	0.015	Circular	1.50	-	4.2	5.6	7.8	10.1

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_2024	Z5_MH_4317	Z5_OF_4531	M3	25	0.015	Circular	1.50	-	4.2	5.8	7.5	10.1
Z5_PIPE_2025	Z5_MH_4234	Z5_MH_4121	L3	56	0.015	Circular	1.75	-	5.2	7.2	9.7	13.4
Z5_PIPE_2026	Z5_MH_4121	Z5_MH_3929	L3	310	0.015	Circular	2.00	-	5.2	7.2	9.7	13.4
Z5_PIPE_2027	Z5_IL_1191	Z5_IL_1190	L3	193	0.015	Circular	1.00	-	1.6	2.4	3.6	5.2
Z5_PIPE_2031	Z5_IL_3417	Z5_MH_5133	H4	70	0.015	Circular	1.00	-	1.9	2.5	3.4	4.6
Z5_PIPE_2039	Z5_MH_3742	Z5_IL_1176	L2	13	0.015	Circular	1.00	-	3.4	4.3	5.4	7.0
Z5_PIPE_2041	Z5_MH_3746	Z5_SGMH_4848	L2	124	0.015	Circular	1.75	-	6.6	8.4	11.0	13.8
Z5_PIPE_2042	Z5_IL_2806	Z5_MH_3746	L2	8	0.015	Circular	1.25	-	2.2	2.8	3.6	4.9
Z5_PIPE_2043	Z5_SGMH_4848	Z5_MH_3743	M2	37	0.015	Circular	1.75	-	6.6	8.4	11.0	13.8
Z5_PIPE_2044	Z5_IL_2738	Z5_IL_2739	L1	31	0.015	Circular	1.00	-	1.2	1.5	2.1	2.9
Z5_PIPE_2045	Z5_MH_4329	Z5_MH_3951	M1	2	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2046	Z5_IL_3184	Z5_IL_3175	M1	8	0.015	Circular	1.00	-	1.2	1.6	2.1	2.9
Z5_PIPE_2047	Z5_IL_3175	Z5_IL_3174	M1	30	0.015	Circular	1.00	-	1.2	1.6	2.1	2.9
Z5_PIPE_2049	Z5_IL_2772	Z5_MH_3918	L1	12	0.015	Circular	1.00	-	4.3	5.1	8.1	6.1
Z5_PIPE_2050	Z5_IL_1193	Z5_MH_3745	M2	104	0.015	Circular	2.00	-	10.5	13.1	16.5	20.2
Z5_PIPE_2051	Z5_SGMH_4847	Z5_IL_1193	M2	20	0.015	Circular	2.00	-	10.5	13.1	16.5	20.2
Z5_PIPE_2052	Z5_MH_3744	Z5_MH_4315	M2	111	0.015	Circular	2.00	-	10.5	13.1	16.5	20.2
Z5_PIPE_2053	Z5_IL_1194	Z5_MH_3998	M2	422	0.015	Circular	2.00	-	8.6	10.9	13.9	16.8
Z5_PIPE_2054	Z5_MH_5578	Z5_IL_1179	M2	81	0.015	Circular	1.75	-	10.2	12.5	15.2	18.8
Z5_PIPE_2056	Z5_MH_3842	Z5_MH_4198	M2	155	0.015	Circular	3.50	-	18.9	23.6	29.7	34.8
Z5_PIPE_2057	Z5_IL_2816	Z5_MH_3928	M2	7	0.015	Circular	1.25	-	1.4	1.7	2.3	3.1
Z5_PIPE_2058	Z5_SGIL_4724	Z5_MH_3800	M2	20	0.015	Circular	1.00	-	1.1	1.4	1.8	2.4
Z5_PIPE_2059	Z5_MH_4169	Z5_MH_3928	M2	125	0.015	Circular	2.00	-	7.5	9.7	12.7	16.9
Z5_PIPE_2060	Z5_IL_3321	Z5_MH_3717	L3	39	0.010	Circular	2.00	-	6.5	8.4	11.1	14.6
Z5_PIPE_2061	Z5_MH_3717	Z5_MH_3800	M2	180	0.010	Circular	2.00	-	6.5	8.4	11.1	14.6
Z5_PIPE_2064	Z5_MH_3839	Z5_MH_4199	M2	16	0.015	Circular	1.50	-	4.7	5.2	5.7	6.3
Z5_PIPE_2066	Z5_IL_2176	Z5_MH_3839	M2	26	0.015	Circular	3.00	-	22.1	25.2	28.2	31.7
Z5_PIPE_2067	Z5_IL_2516	Z5_CB_43	M2	51	0.015	Circular	1.75	-	17.6	21.4	26.1	28.7
Z5_PIPE_2068	Z5_SGIL_4809	Z5_MH_5152	K2	58	0.015	Circular	2.00	-	13.9	17.8	22.2	29.0
Z5_PIPE_2069	Z5_SGIL_4810	Z5_MH_5152	K2	26	0.015	Circular	1.00	-	1.7	2.2	3.0	4.1
Z5_PIPE_2071	Z5_IL_1685	Z5_IL_1684	J4	70	0.015	Circular	1.50	-	1.2	1.9	2.8	4.2
Z5_PIPE_2072	Z5_IL_1684	Z5_IL_1683	J4	69	0.015	Circular	1.50	-	1.2	1.9	2.8	4.2
Z5_PIPE_2073	Z5_IL_1683	Z5_IL_1682	J4	59	0.015	Circular	1.50	-	1.6	2.4	3.5	5.2
Z5_PIPE_2074	Z5_IL_1682	Z5_IL_1681	J4	60	0.015	Circular	1.50	-	1.6	2.4	3.5	5.2
Z5_PIPE_2077	Z5_IL_1681	Z5_IL_1680	J4	60	0.015	Circular	1.50	-	1.6	2.4	3.5	5.2
Z5_PIPE_2078	Z5_IL_1680	Z5_IL_1679	J4	57	0.015	Circular	1.50	-	1.6	2.4	3.5	5.2
Z5_PIPE_2079	Z5_IL_1679	Z5_IL_1678	J4	65	0.015	Circular	1.50	-	3.4	4.6	6.3	8.9
Z5_PIPE_2080	Z5_IL_1678	Z5_IL_1272	J4	56	0.015	Circular	1.50	-	3.4	4.6	6.3	8.9
Z5_PIPE_2081	Z5_IL_1272	Z5_OF_5016	J4	112	0.015	Circular	1.50	-	3.4	4.6	6.3	8.9
Z5_PIPE_2097	Z5_IL_4936	Z5_CB_261	F3	29	0.024	Circular	1.00	-	1.3	1.5	1.8	2.2
Z5_PIPE_2102	Z5_IL_3475	Z5_IL_3474	F3	45	0.010	Circular	1.00	-	2.9	3.6	4.6	6.1
Z5_PIPE_2103	Z5_IL_3474	Z5_SGIL_4765	F3	153	0.010	Circular	1.00	-	2.9	3.6	4.6	6.1
Z5_PIPE_2104	Z5_MH_4248	Z5_IL_3475	F3	94	0.010	Circular	1.00	-	2.9	3.6	4.6	6.1
Z5_PIPE_2105	Z5_IL_3042	Z5_SGIL_4765	F3	81	0.010	Circular	1.00	-	0.6	0.7	2.0	4.3
Z5_PIPE_2106	Z5_SGIL_4765	Z5_IL_2962	F3	111	0.015	Circular	1.00	-	6.1	7.4	8.9	9.1
Z5_PIPE_2112	Z5_IL_3493	Z5_IL_1774	G4	159	0.015	Circular	1.00	-	1.2	1.5	1.9	2.5
Z5_PIPE_2113	Z5_IL_3494	Z5_IL_3493	G4	48	0.015	Circular	1.00	-	1.2	1.5	1.9	2.5
Z5_PIPE_2114	Z5_CB_400	Z5_CB_399	F4	239	0.024	Circular	1.00	-	0.8	1.1	1.4	1.8
Z5_PIPE_2116	Z5_MH_4081	Z5_MH_4082	F4	106	0.024	Circular	1.50	-	7.1	7.5	7.6	8.2
Z5_PIPE_2227	Z5_MH_4252	Z5_MH_5139	F4	128	0.015	Circular	1.00	-	3.9	4.2	4.3	4.4
Z5_PIPE_2228	Z5_MH_4251	Z5_IL_3485	G3	159	0.015	Circular	1.00	-	4.1	4.0	4.1	3.9
Z5_PIPE_2229	Z5_IL_3485	Z5_IL_3045	G3	96	0.015	Circular	1.25	-	4.8	4.6	4.6	4.3
Z5_PIPE_223	Z5_IL_1647	Z5_CB_261	F3	37	0.015	Circular	1.00	-	0.6	0.7	0.9	1.1
Z5_PIPE_2236	Z5_SGIL_4709	Z5_MH_4260	J4	77	0.010	Circular	1.00	-	3.1	4.0	7.7	8.2
Z5_PIPE_2290	Z5_MH_4261	Z5_IL_3514	L4	68	0.010	Circular	1.00	-	1.5	1.6	2.0	2.7
Z5_PIPE_2324	Z5_MH_3923	Z5_IL_2783	L4	104	0.015	Circular	1.75	-	1.8	2.8	4.2	6.4
Z5_PIPE_2325	Z5_MH_3922	Z5_MH_3956	L4	179	0.015	Circular	1.75	-	2.0	3.2	4.7	7.1
Z5_PIPE_2326	Z5_MH_3956	Z5_MH_4264	L4	24	0.015	Circular	1.75	-	2.2	3.4	5.1	7.7
Z5_PIPE_2327	Z5_MH_4264	Z5_OF_4570	L4	58	0.015	Circular	1.75	-	2.2	3.4	5.1	7.7
Z5_PIPE_2328	Z5_IL_2782	Z5_OF_4405	L4	46	0.015	Circular	1.00	-	11.6	15.0	16.5	18.3
Z5_PIPE_2344	Z5_IL_3676	Z5_CB_642	J2	111	0.015	Circular	2.75	-	25.5	31.7	36.6	40.7
Z5_PIPE_2345	Z5_IL_3153	Z5_IL_3154	J3	38	0.024	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2365	Z5_MH_4141	Z5_MH_4270	K4	416	0.015	Circular	3.50	-	44.1	55.9	70.9	85.3
Z5_PIPE_2366	Z5_CB_538	Z5_MH_4271	K4	14	0.015	Circular	1.00	-	0.7	1.0	1.4	7.8
Z5_PIPE_2367	Z5_MH_5567	Z5_MH_4196	K4	55	0.015	Circular	3.50	-	46.3	59.0	74.9	86.1
Z5_PIPE_2368	Z5_MH_4271	Z5_MH_4270	K4	31	0.015	Circular	1.00	-	0.8	1.0	1.4	6.7
Z5_PIPE_2369	Z5_SGIL_4746	Z5_MH_4272	J4	453	0.015	Circular	1.50	-	4.2	5.4	7.0	9.2
Z5_PIPE_2370	Z5_IL_3536	Z5_SGIL_4746	J4	446	0.015	Circular	1.25	-	0.8	1.0	1.2	1.6
Z5_PIPE_2374	Z5_IL_3537	Z5_MH_4144	J4	52	0.015	Circular	1.75	-	3.0	3.6	4.5	6.1
Z5_PIPE_2375	Z5_MH_4144	Z5_MH_4143	K4	292	0.015	Circular	3.50	-	37.5	47.5	60.5	72.5

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_2376	Z5_MH_4194	Z5_MH_4144	J4	319	0.015	Circular	3.50	-	31.0	39.3	49.9	57.8
Z5_PIPE_2377	Z5_IL_3538	Z5_MH_4194	J4	52	0.015	Circular	1.25	-	2.0	2.6	3.5	4.9
Z5_PIPE_2379	Z5_IL_1065	Z5_MH_4273	J4	9	0.015	Circular	3.00	-	26.1	33.1	42.1	47.6
Z5_PIPE_2380	Z5_MH_4273	Z5_MH_3714	J4	441	0.015	Circular	3.00	-	26.2	33.1	42.0	47.8
Z5_PIPE_2422	Z5_CB_165	Z5_CB_164	K4	292	0.015	Circular	1.00	-	1.9	2.8	4.0	6.2
Z5_PIPE_2423	Z5_CB_164	Z5_MH_4001	K4	121	0.015	Circular	1.50	-	4.5	6.6	9.5	14.0
Z5_PIPE_2424	Z5_MH_4001	Z5_OF_4590	K4	161	0.015	Circular	1.50	-	17.6	18.5	19.1	22.1
Z5_PIPE_2425	Z5_MH_4319	Z5_OF_4591	K4	60	0.015	Circular	1.00	-	3.9	5.0	6.6	9.0
Z5_PIPE_2426	Z5_IL_2467	Z5_CB_164	K4	43	0.015	Circular	1.50	-	3.2	4.6	6.5	9.2
Z5_PIPE_2427	Z5_CB_170	Z5_IL_2467	K4	133	0.015	Circular	1.75	-	2.1	3.2	4.6	6.7
Z5_PIPE_2428	Z5_CB_166	Z5_MH_4320	K4	291	0.015	Circular	1.75	-	2.1	3.2	4.6	6.7
Z5_PIPE_2429	Z5_IL_2468	Z5_CB_166	K4	323	0.015	Circular	1.75	-	1.0	1.3	1.8	2.5
Z5_PIPE_2431	Z5_MH_3868	Z5_CB_166	K4	14	0.024	Circular	1.00	-	1.3	2.1	3.1	4.6
Z5_PIPE_2432	Z5_IL_2469	Z5_IL_2468	L4	31	0.015	Circular	1.50	-	1.0	1.3	1.8	2.5
Z5_PIPE_2433	Z5_IL_2944	Z5_IL_2469	L4	43	0.024	Arch	0.92	1.50	1.0	1.3	1.8	2.5
Z5_PIPE_2434	Z5_MH_4276	Z5_MH_4277	K4	220	0.015	Circular	1.50	-	7.9	11.3	13.7	15.6
Z5_PIPE_2435	Z5_MH_4277	Z5_MH_4278	K4	87	0.015	Circular	1.50	-	11.1	15.4	18.2	20.1
Z5_PIPE_2436	Z5_MH_4278	Z5_MH_3999	K4	78	0.015	Circular	2.00	-	11.1	15.4	18.3	20.1
Z5_PIPE_2437	Z5_MH_3999	Z5_IL_2789	K4	57	0.024	Circular	2.00	-	12.4	17.0	21.1	23.5
Z5_PIPE_2438	Z5_IL_2789	Z5_MH_4001	K4	60	0.015	Circular	2.00	-	13.7	19.2	24.2	27.9
Z5_PIPE_2439	Z5_SGIL_4749	Z5_MH_3999	K4	69	0.015	Circular	1.00	-	1.1	1.3	1.7	2.2
Z5_PIPE_2441	Z5_IL_5175	Z5_MH_4276	K4	150	0.015	Circular	1.50	-	7.9	11.3	13.7	15.6
Z5_PIPE_2444	Z5_IL_2939	Z5_IL_2938	K4	34	0.015	Circular	1.00	-	2.6	3.6	4.9	7.2
Z5_PIPE_2445	Z5_IL_2938	Z5_OF_4574	K4	145	0.010	Circular	2.00	-	5.1	7.2	10.1	14.5
Z5_PIPE_2446	Z5_IL_2936	Z5_IL_2938	K4	226	0.010	Circular	2.00	-	2.5	3.7	5.2	7.6
Z5_PIPE_2447	Z5_IL_2937	Z5_IL_2936	K4	154	0.010	Circular	1.50	-	2.0	2.9	4.1	5.9
Z5_PIPE_2448	Z5_CB_539	Z5_CB_540	K4	147	0.010	Circular	1.00	-	0.6	0.8	1.1	1.6
Z5_PIPE_2449	Z5_CB_540	Z5_IL_2937	L4	128	0.010	Circular	1.00	-	0.6	0.8	1.1	1.6
Z5_PIPE_2450	Z5_IL_2941	Z5_IL_2940	K4	29	0.015	Circular	1.00	-	0.8	1.3	2.0	3.1
Z5_PIPE_2451	Z5_IL_2940	Z5_IL_5175	K4	305	0.015	Circular	1.00	-	0.8	1.3	2.0	3.0
Z5_PIPE_2520	Z5_MH_4272	Z5_MH_4196	K4	30	0.015	Circular	1.50	-	4.2	5.4	6.9	11.6
Z5_PIPE_2527	Z5_IL_3195	Z5_IL_3205	H2	108	0.015	Circular	2.00	-	6.8	8.7	11.2	15.1
Z5_PIPE_2535	Z5_MH_3802	Z5_MH_3801	M1	54	0.015	Circular	2.00	-	4.7	6.3	8.5	11.3
Z5_PIPE_2536	Z5_MH_3803	Z5_MH_3802	M1	187	0.015	Circular	2.00	-	4.1	5.0	6.3	8.3
Z5_PIPE_2537	Z5_IL_1494	Z5_MH_3803	M1	45	0.015	Circular	1.00	-	1.1	1.4	1.9	2.7
Z5_PIPE_2539	Z5_IL_1496	Z5_MH_3803	M1	28	0.015	Circular	2.00	-	3.6	4.5	5.0	5.8
Z5_PIPE_2540	Z5_IL_2762	Z5_SGMH_4856	M1	40	0.015	Circular	1.25	-	0.7	0.9	1.2	1.6
Z5_PIPE_2541	Z5_IL_1497	Z5_SGMH_4856	M1	12	0.015	Circular	1.25	-	3.3	4.2	4.5	4.9
Z5_PIPE_2542	Z5_IL_2805	Z5_SGMH_4868	M2	56	0.010	Circular	1.00	-	3.1	3.7	4.4	5.5
Z5_PIPE_2543	Z5_SGMH_4868	Z5_OF_4474	M2	143	0.010	Circular	1.00	-	3.1	3.7	4.4	5.5
Z5_PIPE_2544	Z5_IL_1176	Z5_MH_4119	L2	75	0.010	Circular	2.00	-	3.4	4.3	5.4	7.0
Z5_PIPE_2545	Z5_MH_4119	Z5_CB_457	L2	50	0.010	Circular	2.00	-	3.4	4.3	5.4	7.0
Z5_PIPE_2546	Z5_CB_460	Z5_OF_5025	L2	60	0.024	Circular	2.00	-	5.1	6.4	8.2	10.8
Z5_PIPE_2551	Z5_MH_4330	Z5_IL_2807	L2	104	0.015	Circular	1.50	-	3.4	4.3	5.7	7.9
Z5_PIPE_2552	Z5_IL_1195	Z5_MH_3746	L2	23	0.015	Circular	1.25	-	1.2	1.6	2.1	4.4
Z5_PIPE_2553	Z5_IL_2807	Z5_MH_3746	L2	198	0.015	Circular	1.50	-	3.4	4.3	5.7	7.9
Z5_PIPE_2554	Z5_SGMH_4856	Z5_IL_1496	M1	303	0.015	Circular	1.75	-	3.6	4.5	5.0	5.8
Z5_PIPE_2555	Z5_MH_3743	Z5_IL_1177	M2	134	0.015	Circular	2.00	-	6.6	8.4	11.0	13.8
Z5_PIPE_2556	Z5_SGIL_4623	Z5_CB_51	M2	125	0.015	Circular	1.75	-	10.2	12.5	15.2	18.8
Z5_PIPE_2557	Z5_IL_3535	Z5_IL_3314	K4	145	0.015	Circular	1.00	-	2.1	2.6	3.4	3.3
Z5_PIPE_2565	Z5_CB_842	Z5_CB_843	J4	24	0.015	Circular	1.00	-	1.1	1.4	1.9	3.5
Z5_PIPE_2566	Z5_CB_843	Z5_CB_844	J4	209	0.015	Circular	1.25	-	4.3	5.5	7.0	8.5
Z5_PIPE_2567	Z5_CB_844	Z5_MH_4300	J4	85	0.015	Circular	1.25	-	4.3	5.5	7.0	9.1
Z5_PIPE_2569	Z5_CB_841	Z5_CB_839	J4	78	0.015	Circular	1.50	-	3.8	4.8	6.1	8.1
Z5_PIPE_2571	Z5_CB_839	Z5_MH_4295	J4	16	0.015	Circular	1.50	-	3.8	4.8	6.1	8.1
Z5_PIPE_2572	Z5_MH_4295	Z5_CB_838	J4	282	0.015	Circular	1.75	-	4.7	6.0	7.7	10.2
Z5_PIPE_2573	Z5_CB_838	Z5_CB_837	J4	35	0.015	Circular	2.00	-	4.7	6.0	7.7	10.2
Z5_PIPE_2574	Z5_CB_837	Z5_CB_836	J4	73	0.015	Circular	1.75	-	6.7	8.7	11.3	15.2
Z5_PIPE_2575	Z5_CB_836	Z5_CB_835	J4	67	0.015	Circular	2.00	-	6.7	8.7	11.3	15.3
Z5_PIPE_2576	Z5_CB_835	Z5_MH_4297	J4	74	0.015	Circular	2.25	-	6.7	8.7	11.3	15.3
Z5_PIPE_2578	Z5_CB_833	Z5_CB_832	J4	52	0.015	Circular	1.50	-	5.3	6.5	7.9	10.2
Z5_PIPE_2579	Z5_CB_831	Z5_MH_4297	J4	271	0.015	Circular	1.75	-	8.7	10.6	12.8	14.3
Z5_PIPE_2587	Z5_IL_2857	Z5_CB_518	K3	68	0.015	Circular	1.00	-	0.7	1.0	1.3	1.8
Z5_PIPE_2588	Z5_CB_518	Z5_SGIL_4801	K3	208	0.015	Circular	1.00	-	0.7	1.0	1.3	1.8
Z5_PIPE_2589	Z5_CB_127	Z5_OF_5040	J3	129	0.024	Circular	1.00	-	0.8	1.0	1.4	2.0
Z5_PIPE_2590	Z5_CB_568	Z5_OF_5041	J3	148	0.024	Circular	1.00	-	1.1	1.4	1.9	2.7
Z5_PIPE_2591	Z5_IL_3341	Z5_IL_3342	H3	33	0.015	Circular	4.50	-	5.5	7.2	9.7	13.4
Z5_PIPE_2592	Z5_IL_3342	Z5_IL_2736	H3	216	0.015	Circular	4.50	-	5.5	7.2	9.7	13.4
Z5_PIPE_2593	Z5_CB_126	Z5_CB_125	H3	34	0.015	Circular	1.00	-	1.4	1.8	2.3	3.1
Z5_PIPE_2594	Z5_CB_124	Z5_MH_3977	H3	46	0.015	Circular	1.00	-	1.8	2.4	3.2	4.4

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_2595	Z5_CB_125	Z5_MH_3977	H3	28	0.015	Circular	1.00	-	1.4	1.8	2.3	3.1
Z5_PIPE_2596	Z5_MH_3977	Z5_MH_3976	H3	89	0.015	Circular	1.50	-	3.1	4.1	5.4	7.4
Z5_PIPE_2598	Z5_IL_3411	Z5_IL_1188	L3	56	0.024	Parabolic	1.25	0.63	1.8	2.0	2.1	2.4
Z5_PIPE_2599	Z5_CB_500	Z5_IL_3411	L3	103	0.015	Rectangular	1.08	1.83	2.9	3.6	4.9	4.7
Z5_PIPE_2600	Z5_CB_501	Z5_CB_499	L3	165	0.010	Circular	1.00	-	1.6	2.2	3.0	4.6
Z5_PIPE_2601	Z5_CB_499	Z5_CB_500	L3	91	0.010	Circular	1.00	-	2.7	3.6	4.9	7.4
Z5_PIPE_2602	Z5_IL_2781	Z5_CB_501	L3	99	0.015	Circular	1.00	-	1.2	1.6	2.1	3.9
Z5_PIPE_2603	Z5_IL_2853	Z5_IL_3116	K3	147	0.015	Circular	1.00	-	0.2	0.2	0.1	0.4
Z5_PIPE_2616	Z5_CB_849	Z5_MH_4145	K4	24	0.015	Circular	1.25	-	2.2	2.0	2.1	2.4
Z5_PIPE_2635	Z5_IL_3154	Z5_MH_5159	J3	68	0.024	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2636	Z5_MH_3974	Z5_OF_4583	J3	101	0.024	Circular	1.50	-	2.7	3.5	4.7	6.4
Z5_PIPE_2638	Z5_IL_3164	Z5_OF_4452	M1	33	0.015	Circular	1.25	-	0.8	1.1	1.4	1.9
Z5_PIPE_2640	Z5_CB_829	Z5_CB_830	J4	34	0.015	Circular	1.00	-	0.7	1.0	1.5	2.1
Z5_PIPE_2641	Z5_CB_830	Z5_MH_4301	J4	277	0.015	Circular	1.00	-	0.7	1.0	1.4	2.2
Z5_PIPE_2642	Z5_MH_4300	Z5_MH_4299	J4	101	0.015	Circular	2.00	-	7.8	10.2	13.3	17.5
Z5_PIPE_2643	Z5_MH_4299	Z5_MH_4298	J4	23	0.015	Circular	2.00	-	7.8	10.2	13.3	17.7
Z5_PIPE_2644	Z5_MH_4298	Z5_MH_4297	J4	126	0.015	Circular	2.00	-	9.0	11.8	15.4	19.7
Z5_PIPE_2646	Z5_MH_4297	Z5_IL_1065	J4	253	0.015	Circular	3.00	-	24.2	30.7	39.4	46.3
Z5_PIPE_2647	Z5_CB_832	Z5_CB_858	J4	21	0.015	Circular	1.75	-	5.3	6.5	7.9	10.2
Z5_PIPE_2648	Z5_CB_858	Z5_CB_831	J4	163	0.015	Circular	1.75	-	5.3	6.5	8.0	10.2
Z5_PIPE_2658	Z5_IL_2999	Z5_MH_4008	H2	10	0.015	Circular	1.25	-	1.9	2.5	3.2	4.4
Z5_PIPE_2659	Z5_MH_5166	Z5_MH_4312	H2	41	0.015	Circular	2.00	-	5.1	6.4	8.3	11.2
Z5_PIPE_2660	Z5_IL_3135	Z5_MH_4312	H2	35	0.015	Circular	1.50	-	0.7	0.9	1.1	1.5
Z5_PIPE_2661	Z5_MH_4170	Z5_MH_4008	H2	51	0.015	Circular	1.25	-	2.2	2.6	3.1	3.9
Z5_PIPE_2662	Z5_MH_4293	Z5_MH_4304	H2	165	0.010	Circular	2.00	-	6.7	8.5	10.9	16.8
Z5_PIPE_2664	Z5_IL_1177	Z5_IL_1194	M2	132	0.015	Circular	2.00	-	8.6	10.9	13.9	17.0
Z5_PIPE_2683	Z5_IL_2593	Z5_MH_5153	M1	68	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z5_PIPE_2686	Z5_SGMH_4869	Z5_OF_4585	K3	103	0.015	Circular	3.50	-	42.2	54.6	71.1	88.6
Z5_PIPE_2687	Z5_MH_4209	Z5_IL_3341	H3	108	0.015	Circular	4.50	-	3.1	4.1	5.4	7.5
Z5_PIPE_2692	Z5_CB_902	Z5_OF_4586	L4	80	0.024	Circular	1.00	-	2.3	3.1	4.2	5.6
Z5_PIPE_2693	Z5_CB_4912	Z5_OF_4449	J3	60	0.024	Circular	1.00	-	0.5	0.7	0.9	1.3
Z5_PIPE_2694	Z5_CB_296	Z5_OF_4427	G3	154	0.015	Circular	1.50	-	10.1	11.9	14.2	17.8
Z5_PIPE_2706	Z5_SGIL_4769	Z5_OF_5054	G4	93	0.024	Circular	1.75	-	5.8	7.5	9.1	10.2
Z5_PIPE_2708	Z5_MH_4211	Z5_MH_4311	J3	580	0.015	Circular	4.50	-	8.8	11.7	15.7	21.7
Z5_PIPE_2713	Z5_IL_1646	Z5_OF_5052	E3	81	0.024	Circular	1.00	-	0.4	0.6	0.8	1.3
Z5_PIPE_2714	Z5_IL_2988	Z5_IL_2989	H2	64	0.015	Circular	3.00	-	16.4	20.9	26.9	34.0
Z5_PIPE_2716	Z5_CB_174	Z5_IL_2988	H2	286	0.015	Circular	2.00	-	12.2	15.5	19.9	24.4
Z5_PIPE_2717	Z5_MH_4006	Z5_CB_174	H2	14	0.015	Circular	2.00	-	9.5	12.1	15.8	19.6
Z5_PIPE_2718	Z5_IL_3044	Z5_IL_3043	G3	57	0.015	Circular	1.50	-	10.1	11.9	14.3	17.8
Z5_PIPE_2719	Z5_IL_3043	Z5_CB_296	G3	168	0.015	Circular	1.50	-	10.1	11.9	14.3	17.8
Z5_PIPE_2720	Z5_IL_3340	Z5_OF_5043	H3	109	0.015	Circular	1.00	-	1.0	1.3	1.7	2.4
Z5_PIPE_2721	Z5_IL_2989	Z5_OF_4999	H2	64	0.015	Circular	3.00	-	18.2	23.0	29.6	37.4
Z5_PIPE_2722	Z5_IL_2731	Z5_MH_3906	J3	14	0.015	Circular	1.00	-	0.0	0.0	0.0	1.2
Z5_PIPE_2723	Z5_CB_437	Z5_CB_438	D4	33	0.015	Circular	1.00	-	3.2	4.3	5.8	6.1
Z5_PIPE_2724	Z5_CB_438	Z5_CB_439	D4	73	0.015	Circular	1.00	-	3.8	5.1	6.9	7.3
Z5_PIPE_2726	Z5_MH_3882	Z5_IL_2575	K2	65	0.015	Circular	1.50	-	7.3	9.1	11.0	14.0
Z5_PIPE_2727	Z5_IL_2575	Z5_MH_3950	K2	153	0.015	Circular	1.50	-	7.3	9.1	11.0	14.0
Z5_PIPE_2729	Z5_MH_3888	Z5_MH_3882	L2	471	0.015	Circular	1.50	-	4.9	6.2	7.5	9.5
Z5_PIPE_2730	Z5_MH_3945	Z5_MH_3890	K2	121	0.015	Circular	1.50	-	2.7	3.4	4.3	5.5
Z5_PIPE_2731	Z5_IL_2740	Z5_MH_3890	K2	11	0.015	Circular	1.00	-	0.0	0.0	0.0	1.3
Z5_PIPE_2732	Z5_MH_3890	Z5_MH_3889	K2	68	0.015	Circular	1.50	-	2.7	3.4	4.3	5.5
Z5_PIPE_2733	Z5_MH_3889	Z5_MH_3913	K2	92	0.015	Circular	1.50	-	3.5	4.4	5.6	6.9
Z5_PIPE_2734	Z5_MH_3887	Z5_MH_3913	K2	235	0.015	Circular	1.50	-	0.8	1.0	1.4	3.4
Z5_PIPE_2735	Z5_CB_327	Z5_CB_326	F4	44	0.015	Circular	1.75	-	5.4	8.1	11.8	17.6
Z5_PIPE_2736	Z5_CB_326	Z5_MH_5144	G3	372	0.015	Circular	2.00	-	5.4	8.1	11.8	17.5
Z5_PIPE_2737	Z5_MH_5143	Z5_MH_4114	G3	117	0.024	Arch	3.17	4.75	75.8	87.5	91.1	96.3
Z5_PIPE_2738	Z5_CB_324	Z5_CB_323	F4	34	0.024	Parabolic	1.50	0.92	4.0	4.9	5.6	7.0
Z5_PIPE_2739	Z5_CB_439	Z5_OF_4433	D4	12	0.024	Circular	1.00	-	3.8	5.1	6.9	7.3
Z5_PIPE_2740	Z5_CB_441	Z5_CB_442	D4	43	0.015	Circular	1.00	-	2.3	3.1	4.2	5.6
Z5_PIPE_2741	Z5_CB_442	Z5_CB_443	D4	110	0.024	Circular	1.00	-	2.3	3.1	4.2	5.5
Z5_PIPE_2742	Z5_MH_4105	Z5_MH_4920	E4	127	0.015	Circular	1.25	-	8.0	10.7	14.4	19.5
Z5_PIPE_2743	Z5_CB_436	Z5_OF_4432	D4	131	0.024	Circular	1.00	-	1.2	1.6	2.2	3.0
Z5_PIPE_2744	Z5_CB_415	Z5_CB_414	D4	38	0.015	Circular	1.00	-	5.4	7.0	9.1	10.8
Z5_PIPE_2745	Z5_CB_414	Z5_OF_4498	D4	73	0.024	Circular	1.25	-	5.4	7.0	9.1	10.8
Z5_PIPE_2746	Z5_IL_3092	Z5_MH_4097	D4	50	0.015	Circular	1.25	-	2.0	2.6	3.5	5.0
Z5_PIPE_2747	Z5_CB_416	Z5_MH_4097	D4	41	0.015	Circular	1.25	-	1.7	2.3	3.0	4.3
Z5_PIPE_2748	Z5_MH_4097	Z5_MH_4098	D4	342	0.015	Circular	1.50	-	3.6	4.9	6.6	9.2
Z5_PIPE_2749	Z5_MH_4098	Z5_MH_4099	D4	123	0.015	Circular	2.00	-	5.7	7.7	10.4	14.6
Z5_PIPE_2750	Z5_MH_4099	Z5_MH_4100	D4	108	0.015	Circular	2.00	-	5.7	7.7	10.4	14.6
Z5_PIPE_2751	Z5_CB_418	Z5_MH_4100	D4	18	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0

*The term "NEW" in a Link ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_2752	Z5_IL_2992	Z5_CB_185	G3	39	0.015	Circular	1.50	-	1.9	2.5	3.2	4.4
Z5_PIPE_2753	Z5_CB_186	Z5_CB_185	G3	88	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2754	Z5_CB_419	Z5_MH_4100	D4	14	0.015	Circular	1.00	-	0.5	0.7	1.0	1.3
Z5_PIPE_2755	Z5_MH_4100	Z5_OF_4487	D4	95	0.015	Circular	2.00	-	6.2	8.3	11.3	15.8
Z5_PIPE_2756	Z5_CB_423	Z5_MH_4107	E4	104	0.015	Circular	1.00	-	2.1	2.8	3.7	5.7
Z5_PIPE_2757	Z5_MH_4107	Z5_CB_421	E4	132	0.015	Circular	1.00	-	2.1	2.8	3.7	5.6
Z5_PIPE_2758	Z5_CB_422	Z5_CB_421	E4	32	0.015	Circular	1.00	-	1.5	2.0	2.7	4.9
Z5_PIPE_2759	Z5_CB_420	Z5_MH_4106	E4	44	0.015	Circular	1.00	-	3.0	4.1	5.5	9.2
Z5_PIPE_2760	Z5_CB_421	Z5_MH_4106	E4	41	0.015	Circular	1.50	-	5.0	6.7	9.1	12.8
Z5_PIPE_2761	Z5_MH_4106	Z5_MH_4105	E4	102	0.015	Circular	1.50	-	8.0	10.7	14.4	20.2
Z5_PIPE_2762	Z5_CB_424	Z5_CB_425	E4	33	0.015	Circular	1.00	-	3.6	4.9	6.6	10.3
Z5_PIPE_2763	Z5_MH_5170	Z5_CB_183	G3	227	0.015	Circular	1.50	-	2.5	3.2	4.2	5.7
Z5_PIPE_2764	Z5_MH_4103	Z5_CB_428	E4	106	0.015	Circular	2.00	-	20.3	26.4	34.8	44.5
Z5_PIPE_2765	Z5_CB_428	Z5_MH_4102	E4	195	0.015	Circular	3.00	-	20.3	26.4	34.8	44.5
Z5_PIPE_2766	Z5_CB_430	Z5_CB_431	E4	35	0.024	Circular	1.00	-	1.0	1.4	1.8	2.6
Z5_PIPE_2767	Z5_CB_431	Z5_OF_4379	E4	33	0.024	Circular	1.00	-	1.0	1.4	1.8	2.6
Z5_PIPE_2768	Z5_CB_429	Z5_OF_4484	E4	93	0.024	Circular	1.00	-	1.6	2.2	3.0	4.1
Z5_PIPE_2769	Z5_CB_432	Z5_CB_433	F4	35	0.024	Circular	1.00	-	1.7	2.3	3.1	4.3
Z5_PIPE_2770	Z5_CB_433	Z5_OF_4485	E4	160	0.024	Circular	1.00	-	1.7	2.3	3.1	4.3
Z5_PIPE_2771	Z5_IL_2971	Z5_IL_2970	H3	71	0.015	Circular	1.00	-	1.7	2.3	3.1	3.9
Z5_PIPE_2772	Z5_IL_2970	Z5_IL_2969	H3	72	0.015	Circular	1.50	-	14.1	15.4	16.1	17.7
Z5_PIPE_2773	Z5_IL_2969	Z5_OF_4450	H3	221	0.015	Circular	1.50	-	14.8	16.5	17.6	18.4
Z5_PIPE_2774	Z5_CB_341	Z5_CB_340	G3	74	0.015	Circular	1.50	-	8.0	9.2	10.7	12.8
Z5_PIPE_2775	Z5_CB_340	Z5_IL_3047	G3	259	0.015	Circular	2.00	-	10.7	12.3	14.4	17.4
Z5_PIPE_2776	Z5_CB_425	Z5_MH_5281	E4	41	0.015	Circular	1.00	-	3.6	4.9	6.6	10.6
Z5_PIPE_2777	Z5_MH_5281	Z5_MH_4103	E4	265	0.015	Circular	1.50	-	11.6	15.6	21.0	26.7
Z5_PIPE_2778	Z5_CB_426	Z5_MH_4103	E4	47	0.015	Circular	1.25	-	3.4	4.5	6.1	8.5
Z5_PIPE_2779	Z5_CB_427	Z5_MH_4103	E4	58	0.015	Circular	1.50	-	5.0	5.9	7.1	8.9
Z5_PIPE_2780	Z5_MH_4102	Z5_MH_5134	E4	130	0.015	Circular	2.50	-	22.2	29.6	39.8	52.3
Z5_PIPE_2781	Z5_MH_5134	Z5_MH_4101	E4	316	0.015	Circular	3.00	-	22.2	29.6	39.8	52.3
Z5_PIPE_2782	Z5_CB_308	Z5_CB_306	F4	70	0.015	Circular	1.00	-	1.6	2.1	2.9	4.1
Z5_PIPE_2783	Z5_CB_306	Z5_CB_307	F4	33	0.015	Circular	1.50	-	2.5	3.3	4.5	6.4
Z5_PIPE_2784	Z5_CB_307	Z5_MH_4052	F4	146	0.015	Circular	1.50	-	2.5	3.3	4.5	6.4
Z5_PIPE_2786	Z5_MH_4052	Z5_MH_4051	F4	345	0.015	Circular	1.50	-	2.4	3.3	4.5	6.4
Z5_PIPE_2787	Z5_CB_302	Z5_MH_4051	F4	35	0.015	Circular	1.00	-	2.4	3.2	4.4	6.2
Z5_PIPE_2788	Z5_CB_304	Z5_MH_4051	F4	23	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2789	Z5_MH_4051	Z5_MH_4050	F4	205	0.015	Circular	1.50	-	4.8	6.5	8.9	12.6
Z5_PIPE_2790	Z5_CB_300	Z5_CB_299	G4	33	0.015	Circular	1.00	-	0.0	0.0	0.0	0.1
Z5_PIPE_2791	Z5_CB_299	Z5_MH_4049	F4	75	0.015	Circular	2.00	-	4.8	6.5	8.9	12.5
Z5_PIPE_2792	Z5_CB_298	Z5_CB_297	F4	34	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2793	Z5_CB_297	Z5_MH_4049	F4	50	0.015	Circular	1.00	-	0.3	0.5	0.8	1.3
Z5_PIPE_2794	Z5_MH_4049	Z5_OF_5062	F4	96	0.015	Circular	2.50	-	64.8	76.4	77.6	77.6
Z5_PIPE_2795	Z5_CB_396	Z5_CB_397	F4	48	0.015	Circular	1.00	-	0.5	0.7	1.0	1.3
Z5_PIPE_2796	Z5_CB_397	Z5_CB_398	F4	27	0.015	Circular	1.00	-	0.5	0.7	1.0	1.3
Z5_PIPE_2797	Z5_CB_394	Z5_CB_395	F4	241	0.015	Circular	1.00	-	0.5	0.7	1.0	1.3
Z5_PIPE_2798	Z5_CB_395	Z5_CB_396	F4	113	0.015	Circular	1.00	-	0.5	0.7	1.0	1.3
Z5_PIPE_2804	Z5_CB_313	Z5_CB_315	F4	76	0.015	Circular	1.00	-	0.6	0.8	1.1	1.6
Z5_PIPE_2806	Z5_CB_312	Z5_CB_313	F4	62	0.015	Circular	1.00	-	0.6	0.8	1.1	1.6
Z5_PIPE_2807	Z5_CB_315	Z5_CB_316	F4	156	0.015	Circular	1.00	-	0.6	0.8	1.1	2.1
Z5_PIPE_2808	Z5_CB_317	Z5_CB_318	F4	87	0.015	Circular	1.00	-	1.5	2.0	2.7	3.8
Z5_PIPE_2810	Z5_IL_2996	Z5_IL_2995	G3	51	0.015	Circular	1.50	-	0.9	1.2	1.5	2.0
Z5_PIPE_2811	Z5_IL_2995	Z5_IL_2994	G3	30	0.015	Circular	1.50	-	0.9	1.2	1.5	2.0
Z5_PIPE_2813	Z5_MH_4160	Z5_MH_4200	J2	16	0.015	Circular	1.50	-	2.0	2.3	3.3	4.2
Z5_PIPE_2814	Z5_MH_4159	Z5_MH_4160	J2	131	0.015	Circular	1.50	-	2.0	2.3	3.3	4.2
Z5_PIPE_2815	Z5_MH_4201	Z5_MH_4921	K2	305	0.015	Circular	2.00	-	6.8	8.4	10.6	13.6
Z5_PIPE_2816	Z5_IL_2596	Z5_MH_3887	K2	39	0.015	Circular	1.00	-	0.0	0.0	0.0	1.2
Z5_PIPE_2817	Z5_IL_3621	Z5_MH_3889	K2	31	0.015	Circular	1.00	-	0.8	1.0	1.3	1.8
Z5_PIPE_2818	Z5_IL_2981	Z5_MH_3946	K2	26	0.015	Circular	1.00	-	1.4	1.8	2.2	3.3
Z5_PIPE_2819	Z5_IL_2982	Z5_MH_3946	K2	101	0.015	Circular	1.00	-	0.0	0.0	0.0	0.5
Z5_PIPE_2820	Z5_MH_3946	Z5_MH_3945	K2	273	0.015	Circular	1.00	-	1.4	1.8	2.2	2.9
Z5_PIPE_2821	Z5_IL_2977	Z5_MH_3945	K2	28	0.015	Circular	1.00	-	1.3	1.7	2.1	3.3
Z5_PIPE_2823	Z5_IL_2741	Z5_MH_3945	K2	15	0.015	Circular	1.00	-	0.0	0.0	0.0	1.3
Z5_PIPE_2824	Z5_MH_3950	Z5_OF_5019	K2	61	0.015	Circular	1.50	-	8.0	9.8	11.9	15.0
Z5_PIPE_2825	Z5_IL_3114	Z5_MH_3954	K2	38	0.015	Circular	1.00	-	0.5	0.7	0.9	1.1
Z5_PIPE_2826	Z5_IL_3111	Z5_MH_3954	K2	10	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2827	Z5_IL_3110	Z5_MH_3953	K2	18	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2828	Z5_IL_2743	Z5_MH_3953	K2	9	0.015	Circular	1.00	-	0.8	1.0	1.3	1.8
Z5_PIPE_2829	Z5_IL_3136	Z5_MH_3960	J2	29	0.015	Circular	1.00	-	0.9	1.1	1.4	1.9
Z5_PIPE_2830	Z5_IL_3137	Z5_MH_3960	J2	9	0.015	Circular	1.00	-	0.7	1.0	1.2	1.6
Z5_PIPE_2831	Z5_IL_3134	Z5_MH_3959	J2	9	0.015	Circular	1.00	-	0.8	1.1	1.4	1.8

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_2832	Z5_IL_3139	Z5_MH_3964	J2	29	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2833	Z5_IL_3140	Z5_MH_3964	J2	8	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2834	Z5_IL_3141	Z5_MH_3965	J2	19	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2835	Z5_IL_3143	Z5_MH_3965	J2	35	0.015	Circular	1.00	-	3.3	3.9	4.6	5.8
Z5_PIPE_2836	Z5_MH_4123	Z5_MH_4200	J2	262	0.015	Circular	1.00	-	1.3	1.7	2.6	2.3
Z5_PIPE_2837	Z5_IL_3150	Z5_MH_4122	J2	20	0.015	Circular	1.00	-	0.1	0.3	5.3	3.0
Z5_PIPE_2838	Z5_MH_4053	Z5_MH_4122	J2	190	0.015	Circular	1.50	-	0.5	1.3	6.5	5.0
Z5_PIPE_2839	Z5_MH_4122	Z5_MH_4159	J2	112	0.015	Circular	1.50	-	1.1	1.3	3.2	3.3
Z5_PIPE_2840	Z5_IL_3144	Z5_MH_3967	J2	18	0.015	Circular	1.00	-	0.5	0.6	1.3	3.2
Z5_PIPE_2841	Z5_MH_3967	Z5_MH_4053	J2	43	0.015	Circular	1.50	-	0.5	0.6	2.9	3.4
Z5_PIPE_2842	Z5_IL_3149	Z5_MH_4053	J2	13	0.015	Circular	1.00	-	0.0	0.0	0.0	0.7
Z5_PIPE_2843	Z5_IL_3168	Z5_MH_4161	J2	19	0.015	Circular	1.00	-	5.4	6.8	8.3	8.6
Z5_PIPE_2844	Z5_IL_3166	Z5_MH_4159	K2	14	0.015	Circular	1.00	-	1.1	1.4	4.4	3.6
Z5_PIPE_2845	Z5_CB_4914	Z5_CB_4915	F4	65	0.015	Circular	1.00	-	2.0	2.7	3.7	4.9
Z5_PIPE_2846	Z5_CB_4915	Z5_CB_4916	F4	68	0.015	Circular	1.00	-	2.0	2.7	3.7	5.0
Z5_PIPE_2847	Z5_CB_321	Z5_IL_5138	F4	90	0.015	Circular	1.00	-	3.0	4.0	5.4	7.4
Z5_PIPE_2849	Z5_CB_434	Z5_CB_435	D4	43	0.015	Circular	1.00	-	1.9	2.6	3.5	4.9
Z5_PIPE_2850	Z5_CB_435	Z5_CB_526	D4	20	0.015	Circular	1.00	-	3.1	4.2	5.8	8.2
Z5_PIPE_2852	Z5_IL_2968	Z5_MH_3978	H3	14	0.015	Circular	1.00	-	0.8	1.1	1.4	2.0
Z5_PIPE_2853	Z5_IL_1107	Z5_MH_3726	G3	124	0.015	Circular	1.00	-	2.4	3.0	3.9	5.1
Z5_PIPE_2854	Z5_IL_1106	Z5_MH_5169	G3	34	0.015	Circular	1.00	-	1.2	1.5	1.8	2.2
Z5_PIPE_2856	Z5_CB_461	Z5_CB_329	F4	74	0.015	Circular	1.50	-	4.3	6.1	8.7	12.8
Z5_PIPE_2857	Z5_CB_329	Z5_CB_328	F4	34	0.015	Circular	1.50	-	5.0	7.2	10.3	15.4
Z5_PIPE_2858	Z5_CB_328	Z5_CB_327	F4	232	0.015	Circular	1.75	-	5.0	7.2	10.3	15.4
Z5_PIPE_2859	Z5_MH_4921	Z5_MH_4918	K2	213	0.015	Circular	2.00	-	9.1	11.3	14.2	18.4
Z5_PIPE_286	Z5_SGIL_4752	Z5_OF_4587	M2	56	0.015	Circular	1.00	-	0.7	0.9	1.2	1.6
Z5_PIPE_2860	Z5_MH_4918	Z5_MH_3914	K2	169	0.015	Circular	2.00	-	9.1	11.3	14.2	18.4
Z5_PIPE_2861	Z5_IL_2747	Z5_OF_4512	K2	34	0.010	Circular	2.00	-	10.7	13.3	16.8	21.9
Z5_PIPE_2862	Z5_MH_3850	Z5_IL_2325	K2	321	0.015	Circular	1.25	-	8.8	8.9	9.2	10.0
Z5_PIPE_2863	Z5_IL_2325	Z5_OF_4513	K2	39	0.015	Circular	1.50	-	10.8	11.9	13.6	16.0
Z5_PIPE_2864	Z5_CB_392	Z5_OF_5135	F4	13	0.024	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2865	Z5_CB_398	Z5_IL_3704	F4	78	0.015	Circular	1.50	-	2.2	2.9	4.0	5.5
Z5_PIPE_2866	Z5_CB_323	Z5_MH_5143	G3	112	0.024	Trapezoidal	2.00	1.00	4.0	4.9	5.6	7.0
Z5_PIPE_2867	Z5_CB_4913	Z5_CB_197	H3	25	0.015	Circular	1.50	-	1.7	2.0	2.5	3.1
Z5_PIPE_2868	Z5_CB_197	Z5_CB_198	H3	155	0.015	Circular	1.50	-	1.7	2.0	2.4	3.1
Z5_PIPE_2869	Z5_CB_198	Z5_OF_4423	H3	36	0.015	Circular	1.50	-	4.1	4.9	6.0	7.6
Z5_PIPE_2870	Z5_MH_4011	Z5_MH_4010	H3	38	0.015	Circular	4.50	-	150.6	182.1	214.6	246.3
Z5_PIPE_2882	Z5_IL_1335	Z5_IL_1108	G3	234	0.015	Circular	1.75	-	6.8	8.0	9.5	12.2
Z5_PIPE_2883	Z5_IL_1108	Z5_OF_5058	G3	140	0.015	Circular	1.75	-	6.7	7.9	9.5	12.3
Z5_PIPE_2885	Z5_CB_391	Z5_CB_392	F4	35	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2886	Z5_IL_4941	Z5_OF_4422	H3	40	0.015	Circular	4.50	-	158.8	193.5	229.8	268.5
Z5_PIPE_2888	Z5_IL_2818	Z5_MH_3952	M2	21	0.015	Circular	1.25	-	2.8	3.5	4.4	5.7
Z5_PIPE_2889	Z5_IL_2817	Z5_IL_2818	M2	79	0.015	Circular	1.25	-	2.8	3.5	4.4	5.7
Z5_PIPE_2890	Z5_IL_2815	Z5_IL_2819	M2	107	0.015	Circular	2.00	-	8.6	11.2	14.7	19.9
Z5_PIPE_2891	Z5_MH_4010	Z5_MH_4009	H3	50	0.015	Circular	4.50	-	150.6	182.1	214.6	246.3
Z5_PIPE_2892	Z5_MH_4009	Z5_IL_3156	H3	209	0.015	Circular	4.50	-	151.3	183.0	215.7	248.0
Z5_PIPE_2893	Z5_CB_335	Z5_CB_336	G4	291	0.024	Circular	1.50	-	4.2	5.6	6.7	7.1
Z5_PIPE_2894	Z5_CB_336	Z5_CB_337	G4	157	0.015	Circular	1.75	-	7.2	9.3	11.5	13.3
Z5_PIPE_2895	Z5_CB_337	Z5_CB_338	G4	232	0.015	Circular	1.75	-	7.2	9.3	12.0	13.2
Z5_PIPE_2897	Z5_IL_2754	Z5_MH_3917	J2	39	0.015	Circular	1.00	-	0.6	0.8	1.1	1.5
Z5_PIPE_2898	Z5_MH_3917	Z5_MH_3916	J2	79	0.015	Circular	1.00	-	0.6	0.8	1.1	1.5
Z5_PIPE_2899	Z5_IL_2753	Z5_MH_3916	J2	33	0.015	Circular	1.25	-	2.0	2.7	3.6	5.0
Z5_PIPE_2900	Z5_MH_5157	Z5_MH_4218	J2	116	0.015	Circular	1.25	-	2.4	3.2	4.1	6.0
Z5_PIPE_2901	Z5_IL_3372	Z5_MH_4218	J3	6	0.015	Circular	1.00	-	6.2	8.1	10.6	13.1
Z5_PIPE_2902	Z5_IL_3133	Z5_MH_3959	J2	29	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2904	Z5_IL_3331	Z5_MH_4162	J2	97	0.015	Circular	1.25	-	2.8	3.4	4.2	5.4
Z5_PIPE_2905	Z5_MH_3965	Z5_MH_3964	J2	276	0.015	Circular	1.50	-	3.3	3.8	4.6	5.8
Z5_PIPE_2906	Z5_MH_3964	Z5_MH_3960	J2	278	0.015	Circular	1.50	-	3.3	3.8	4.6	5.6
Z5_PIPE_2907	Z5_MH_3960	Z5_MH_3959	J2	139	0.015	Circular	1.50	-	4.8	5.8	7.2	9.1
Z5_PIPE_2908	Z5_MH_3959	Z5_MH_3954	K2	451	0.015	Circular	2.00	-	5.7	6.9	8.6	11.0
Z5_PIPE_2909	Z5_MH_3954	Z5_MH_3953	K2	286	0.015	Circular	2.00	-	6.0	7.4	9.2	11.9
Z5_PIPE_2911	Z5_IL_2724	Z5_SGMH_4867	H2	18	0.015	Circular	1.00	-	2.0	2.6	3.3	4.4
Z5_PIPE_2912	Z5_IL_2723	Z5_SGMH_4867	H2	54	0.015	Circular	1.50	-	7.7	10.1	13.3	18.2
Z5_PIPE_2913	Z5_SGMH_4867	Z5_OF_5036	H2	30	0.015	Circular	1.50	-	8.7	11.3	14.8	20.2
Z5_PIPE_2914	Z5_IL_2964	Z5_MH_4204	J2	17	0.015	Circular	1.00	-	2.4	2.9	3.7	4.9
Z5_PIPE_2915	Z5_MH_4204	Z5_MH_4203	J2	58	0.015	Circular	1.50	-	7.7	10.1	13.3	18.2
Z5_PIPE_2916	Z5_MH_4203	Z5_IL_2723	J2	434	0.015	Circular	1.50	-	7.7	10.1	13.3	18.2
Z5_PIPE_2917	Z5_MH_4162	Z5_MH_3968	J2	112	0.015	Circular	1.25	-	7.9	9.9	11.9	13.5
Z5_PIPE_2918	Z5_MH_3978	Z5_MH_5162	H3	105	0.015	Circular	1.00	-	0.8	1.1	1.4	1.9
Z5_PIPE_2919	Z5_IL_1467	Z5_MH_4207	H3	72	0.024	Circular	1.50	-	10.1	10.5	10.8	11.8

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_292	Z5_IL_1199	Z5_MH_3883	L4	51	0.010	Circular	1.00	-	5.9	2.6	3.2	3.6
Z5_PIPE_2920	Z5_MH_4207	Z5_CB_123	H3	35	0.015	Circular	1.50	-	10.9	11.4	11.4	13.1
Z5_PIPE_2921	Z5_MH_3831	Z5_MH_3975	H3	173	0.015	Circular	4.50	-	6.5	8.6	11.4	15.8
Z5_PIPE_2922	Z5_CB_643	Z5_OF_4421	G3	103	0.015	Circular	1.50	-	0.4	0.5	0.6	0.8
Z5_PIPE_2923	Z5_IL_2994	Z5_OF_4516	G3	113	0.015	Circular	1.50	-	0.9	1.2	1.5	2.0
Z5_PIPE_2924	Z5_IL_3346	Z5_IL_2992	H3	65	0.015	Circular	1.00	-	1.9	2.5	3.2	4.4
Z5_PIPE_2925	Z5_IL_4940	Z5_MH_5155	H3	151	0.015	Circular	4.50	-	68.9	84.9	101.5	117.8
Z5_PIPE_2926	Z5_IL_3349	Z5_OF_4448	J3	94	0.024	Circular	1.00	-	3.0	4.1	5.5	6.8
Z5_PIPE_2928	Z5_SGMH_4872	Z5_MH_4219	J3	35	0.015	Circular	1.50	-	8.1	10.6	14.0	16.4
Z5_PIPE_2929	Z5_IL_3376	Z5_MH_3910	J3	54	0.015	Circular	1.00	-	1.9	2.5	3.2	4.3
Z5_PIPE_293	Z5_IL_2585	Z5_MH_3883	L4	17	0.010	Circular	1.00	-	6.8	4.0	3.8	3.3
Z5_PIPE_2930	Z5_IL_3377	Z5_MH_4221	J3	14	0.015	Circular	1.00	-	1.2	1.6	2.1	3.0
Z5_PIPE_2931	Z5_IL_2728	Z5_MH_3909	J3	51	0.015	Circular	1.00	-	1.7	2.1	2.7	3.7
Z5_PIPE_2933	Z5_IL_2732	Z5_MH_3907	J3	15	0.015	Circular	1.00	-	2.7	3.4	4.4	5.8
Z5_PIPE_2934	Z5_IL_2729	Z5_MH_3908	J3	51	0.015	Circular	1.25	-	1.1	1.4	1.7	2.2
Z5_PIPE_2936	Z5_IL_2730	Z5_MH_3906	J3	52	0.015	Circular	1.00	-	3.3	4.3	5.6	6.9
Z5_PIPE_2937	Z5_MH_3906	Z5_MH_3908	J3	234	0.015	Circular	1.25	-	3.3	4.3	5.6	6.9
Z5_PIPE_2938	Z5_MH_3908	Z5_MH_3907	J3	97	0.015	Circular	1.50	-	4.2	5.4	6.9	8.0
Z5_PIPE_2939	Z5_MH_3907	Z5_MH_3909	J3	115	0.015	Circular	1.75	-	6.8	8.6	11.2	13.2
Z5_PIPE_294	Z5_IL_3514	Z5_IL_2585	L4	226	0.010	Circular	1.00	-	1.4	1.6	2.0	2.6
Z5_PIPE_2940	Z5_MH_3909	Z5_MH_4221	J3	141	0.015	Circular	1.75	-	8.3	10.5	13.5	16.5
Z5_PIPE_2941	Z5_MH_4343	Z5_OF_1187	J3	190	0.015	Circular	2.00	-	12.4	15.9	20.7	26.2
Z5_PIPE_2943	Z5_IL_4938	Z5_MH_4231	G3	209	0.015	Circular	2.50	-	51.8	53.8	55.9	58.6
Z5_PIPE_2944	Z5_MH_3953	Z5_MH_4201	K2	72	0.015	Circular	2.00	-	6.8	8.4	10.6	13.6
Z5_PIPE_2945	Z5_IL_3402	Z5_CB_656	H3	113	0.010	Circular	1.00	-	1.3	1.8	2.4	3.4
Z5_PIPE_2946	Z5_CB_656	Z5_CB_657	H3	82	0.010	Circular	1.00	-	1.3	1.8	2.4	3.4
Z5_PIPE_2947	Z5_CB_657	Z5_MH_4210	H3	335	0.015	Circular	1.00	-	1.3	1.8	2.4	3.4
Z5_PIPE_2948	Z5_IL_2746	Z5_MH_3914	K2	12	0.010	Circular	1.50	-	0.0	0.0	0.0	0.0
Z5_PIPE_2949	Z5_MH_3914	Z5_IL_2747	L2	22	0.010	Circular	2.00	-	9.1	11.3	14.2	18.4
Z5_PIPE_295	Z5_MH_3883	Z5_MH_3780	L4	67	0.015	Circular	1.00	-	4.1	3.9	4.0	4.0
Z5_PIPE_2950	Z5_IL_3045	Z5_IL_3046	G3	37	0.024	Parabolic	1.33	0.67	3.1	3.5	3.8	4.5
Z5_PIPE_2951	Z5_IL_3046	Z5_CB_616	G3	153	0.015	Circular	1.50	-	3.4	4.0	4.3	4.6
Z5_PIPE_2954	Z5_IL_2825	Z5_OF_4530	L3	44	0.015	Circular	1.50	-	9.0	10.5	11.8	15.1
Z5_PIPE_2956	Z5_MH_5133	Z5_MH_5132	H4	13	0.015	Circular	2.00	-	28.0	31.4	36.1	43.8
Z5_PIPE_2957	Z5_MH_5132	Z5_OF_4533	H4	172	0.015	Circular	2.00	-	22.7	24.1	26.3	31.2
Z5_PIPE_2958	Z5_IL_4944	Z5_IL_5386	H4	35	0.015	Circular	2.00	-	23.8	25.4	27.4	31.1
Z5_PIPE_2959	Z5_IL_4945	Z5_OF_4535	H4	118	0.015	Circular	2.00	-	25.1	26.5	28.7	31.5
Z5_PIPE_296	Z5_IL_2594	Z5_MH_3886	M3	9	0.015	Circular	1.00	-	0.4	0.4	0.4	0.6
Z5_PIPE_2960	Z5_IL_4946	Z5_OF_4536	H4	180	0.015	Circular	2.00	-	25.8	27.6	29.9	32.9
Z5_PIPE_2961	Z5_IL_4947	Z5_OF_4503	H4	129	0.015	Circular	2.00	-	26.8	28.7	31.1	34.5
Z5_PIPE_2964	Z5_MH_3928	Z5_IL_2815	M2	106	0.015	Circular	2.00	-	8.6	11.2	14.7	19.9
Z5_PIPE_2966	Z5_IL_2839	Z5_IL_2834	K2	37	0.015	Circular	1.00	-	2.4	3.3	3.5	4.6
Z5_PIPE_2967	Z5_IL_2834	Z5_MH_4246	K2	139	0.015	Circular	1.50	-	6.7	8.2	9.8	11.3
Z5_PIPE_2968	Z5_MH_4246	Z5_MH_3930	K2	191	0.015	Circular	1.50	-	6.7	8.2	9.8	11.3
Z5_PIPE_297	Z5_MH_3780	Z5_MH_3886	M3	163	0.015	Circular	1.00	-	6.5	6.8	7.2	7.7
Z5_PIPE_2970	Z5_IL_5140	Z5_IL_3485	G3	43	0.015	Circular	1.00	-	3.8	3.4	2.3	2.7
Z5_PIPE_2971	Z5_IL_3155	Z5_CB_124	H3	28	0.015	Circular	1.00	-	1.8	2.4	3.2	4.4
Z5_PIPE_2972	Z5_MH_4218	Z5_CB_130	J3	145	0.015	Circular	1.50	-	8.1	10.6	14.0	16.4
Z5_PIPE_2973	Z5_IL_3635	Z5_OF_4594	H5	47	0.010	Circular	2.00	-	5.4	6.8	8.8	11.8
Z5_PIPE_2977	Z5_CB_187	Z5_OF_5056	G3	60	0.024	Circular	1.00	-	3.8	4.6	5.7	7.2
Z5_PIPE_2979	Z5_MH_5573	Z5_MH_4006	H2	300	0.010	Circular	2.00	-	9.5	12.1	15.7	19.6
Z5_PIPE_298	Z5_MH_3886	Z5_OF_4365	M3	65	0.015	Circular	1.00	-	6.3	6.5	6.8	7.2
Z5_PIPE_2980	Z5_MH_4161	Z5_MH_4162	J2	13	0.015	Circular	1.00	-	5.4	6.8	8.3	8.6
Z5_PIPE_2981	Z5_IL_5389	Z5_IL_3331	J2	120	0.015	Circular	1.00	-	2.8	3.4	4.2	5.4
Z5_PIPE_2982	Z5_CB_130	Z5_SGMH_4872	K3	75	0.015	Circular	1.50	-	8.1	10.6	14.0	16.4
Z5_PIPE_2983	Z5_MH_4344	Z5_MH_4343	J3	137	0.015	Circular	2.00	-	11.4	14.6	18.8	23.7
Z5_PIPE_2984	Z5_MH_3910	Z5_MH_4344	J3	108	0.015	Circular	2.00	-	11.4	14.6	18.8	23.7
Z5_PIPE_2987	Z5_CB_443	Z5_MH_5387	D4	97	0.024	Circular	1.00	-	2.3	3.1	4.2	5.5
Z5_PIPE_2988	Z5_MH_5387	Z5_CB_444	D4	39	0.024	Circular	1.25	-	2.3	3.1	4.2	5.5
Z5_PIPE_2989	Z5_CB_444	Z5_OF_4434	D4	151	0.015	Circular	1.25	-	2.3	3.1	4.2	5.5
Z5_PIPE_299	Z5_MH_3795	Z5_IL_1200	M3	92	0.015	Circular	1.25	-	9.4	10.2	10.4	10.7
Z5_PIPE_2990	Z5_CB_383	Z5_OF_5048	E4	114	0.015	Circular	1.00	-	0.8	1.1	1.5	2.2
Z5_PIPE_2995	Z5_CB_316	Z5_CB_317	F4	97	0.015	Circular	1.00	-	1.5	2.0	2.7	3.8
Z5_PIPE_2996	Z5_CB_318	Z5_CB_4914	F4	60	0.015	Circular	1.00	-	1.5	2.0	2.7	4.0
Z5_PIPE_2997	Z5_CB_4916	Z5_CB_321	F4	59	0.015	Circular	1.00	-	2.0	2.7	3.6	5.0
Z5_PIPE_2999	Z5_MH_4050	Z5_CB_299	G4	172	0.015	Circular	1.50	-	4.8	6.5	8.9	12.5
Z5_PIPE_300	Z5_IL_1456	Z5_MH_3795	M3	200	0.015	Circular	1.25	-	9.4	10.2	10.4	11.2
Z5_PIPE_3000	Z5_CB_408	Z5_OF_5047	E4	155	0.024	Circular	1.25	-	0.9	1.3	1.8	2.5
Z5_PIPE_3002	Z5_CB_325	Z5_MH_5144	G3	17	0.015	Circular	2.25	-	0.6	1.1	1.7	2.7
Z5_PIPE_3003	Z5_MH_5144	Z5_MH_4114	G3	25	0.015	Circular	2.25	-	5.9	9.0	13.3	20.0

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_3004	Z5_IL_3002	Z5_MH_5154	H3	32	0.015	Circular	1.00	-	2.5	3.2	4.1	5.5
Z5_PIPE_3006	Z5_MH_4311	Z5_OF_4582	J3	149	0.015	Circular	4.50	-	10.3	13.8	18.6	25.9
Z5_PIPE_3007	Z5_CB_128	Z5_IL_5158	J3	102	0.024	Circular	1.00	-	0.4	0.6	0.8	1.2
Z5_PIPE_3009	Z5_CB_514	Z5_IL_2840	K2	146	0.015	Circular	1.00	-	1.6	2.0	2.6	3.5
Z5_PIPE_301	Z5_IL_1200	Z5_OF_4364	M3	46	0.015	Circular	1.25	-	10.1	11.1	12.1	12.7
Z5_PIPE_3015	Z5_SGMH_4855	Z5_OF_5569	M1	167	0.015	Circular	2.00	-	6.8	9.1	12.1	16.3
Z5_PIPE_3016	Z5_MH_3801	Z5_SGMH_4855	M1	116	0.015	Circular	2.00	-	6.8	9.1	12.1	16.3
Z5_PIPE_3026	Z5_CB_204	Z5_OF_5570	H4	63	0.015	Circular	1.50	-	2.1	2.7	3.6	4.9
Z5_PIPE_3052	Z5_MH_5152	Z5_SGIL_4757	K2	62	0.015	Circular	2.50	-	15.6	20.0	25.2	33.2
Z5_PIPE_3053	Z5_SGIL_4757	Z5_OF_4998	K2	236	0.015	Circular	2.50	-	15.6	20.0	25.2	33.2
Z5_PIPE_3077	Z5_SGMH_4863	Z5_OF_4597	N3	39	0.015	Circular	1.25	-	2.4	3.1	3.9	5.3
Z5_PIPE_3078	Z5_IL_2821	Z5_OF_5028	M3	77	0.015	Circular	0.67	-	0.7	1.0	1.4	1.9
Z5_PIPE_3079	Z5_IL_2802	Z5_OF_4473	M2	70	0.015	Circular	0.83	-	1.9	2.6	3.4	4.6
Z5_PIPE_3080	Z5_IL_4930	Z5_IL_2814	M3	151	0.015	Circular	1.00	-	1.0	1.3	1.7	2.2
Z5_PIPE_3081	Z5_IL_2814	Z5_OF_4588	M3	41	0.015	Circular	1.25	-	1.0	1.3	1.7	2.2
Z5_PIPE_3082	Z5_SGIL_4755	Z5_OF_4407	M3	29	0.015	Circular	1.00	-	1.8	2.5	3.5	4.9
Z5_PIPE_3090	Z5_IL_4965	Z5_OF_4478	M3	59	0.015	Circular	2.50	-	34.9	42.7	47.1	51.7
Z5_PIPE_3094	Z5_IL_1178	Z5_MH_5578	M2	30	0.015	Circular	1.50	-	4.1	4.8	5.6	6.1
Z5_PIPE_3095	Z5_IL_2766	Z5_OF_4589	M1	49	0.015	Circular	1.00	-	2.8	3.7	4.8	6.5
Z5_PIPE_3096	Z5_IL_5216	Z5_IL_3184	M1	39	0.015	Circular	1.00	-	1.2	1.6	2.1	2.9
Z5_PIPE_3097	Z5_IL_3639	Z5_MH_4331	L2	24	0.015	Circular	1.00	-	0.8	1.1	1.4	2.1
Z5_PIPE_3098	Z5_MH_4331	Z5_MH_4330	L2	61	0.015	Circular	1.50	-	3.4	4.3	5.7	7.9
Z5_PIPE_3113	Z5_IL_2854	Z5_IL_3116	K3	354	0.015	Circular	1.00	-	3.2	3.4	3.9	4.6
Z5_PIPE_3118	Z5_IL_2861	Z5_IL_2860	K4	21	0.015	Circular	1.00	-	5.6	7.7	10.2	12.9
Z5_PIPE_3119	Z5_IL_2860	Z5_OF_5003	K4	67	0.015	Circular	1.25	-	5.6	7.7	10.2	12.9
Z5_PIPE_3120	Z5_IL_2858	Z5_IL_2859	K4	62	0.015	Circular	1.50	-	2.1	3.3	4.9	7.4
Z5_PIPE_3121	Z5_IL_2859	Z5_OF_4526	K4	170	0.015	Circular	1.50	-	2.1	3.3	4.9	7.4
Z5_PIPE_3126	Z5_IL_2788	Z5_OF_5077	K4	47	0.015	Circular	1.00	-	1.5	1.8	2.2	2.7
Z5_PIPE_3127	Z5_SGIL_4801	Z5_MH_3920	K3	35	0.015	Circular	1.75	-	5.5	6.4	6.9	7.9
Z5_PIPE_3131	Z5_IL_3645	Z5_IL_3644	K2	18	0.015	Circular	1.00	-	0.1	0.1	0.1	0.2
Z5_PIPE_3132	Z5_IL_3644	Z5_CB_513	K2	52	0.015	Circular	1.00	-	0.0	0.0	0.0	0.2
Z5_PIPE_3139	Z5_IL_3648	Z5_MH_4217	K3	58	0.015	Circular	1.75	-	4.6	6.1	8.2	10.0
Z5_PIPE_3140	Z5_MH_4340	Z5_MH_4222	J3	24	0.015	Circular	1.00	-	2.3	2.9	3.8	5.1
Z5_PIPE_3141	Z5_MH_4342	Z5_SGIL_4783	J4	137	0.015	Circular	1.00	-	1.0	1.3	1.7	2.4
Z5_PIPE_3150	Z5_IL_3374	Z5_OF_5000	J3	51	0.015	Circular	1.00	-	0.8	1.1	1.4	1.9
Z5_PIPE_3153	Z5_IL_3664	Z5_IL_3663	J2	35	0.015	Circular	1.50	-	0.0	0.0	0.0	3.2
Z5_PIPE_3158	Z5_IL_2712	Z5_MH_4186	H4	18	0.015	Circular	1.50	-	0.3	0.4	0.6	1.0
Z5_PIPE_3159	Z5_IL_2562	Z5_CB_136	J4	11	0.015	Circular	1.25	-	1.0	1.4	1.9	2.8
Z5_PIPE_3165	Z5_IL_3673	Z5_IL_2967	J2	157	0.015	Circular	2.50	-	10.4	12.5	15.4	20.1
Z5_PIPE_3166	Z5_IL_3677	Z5_CB_121	J2	35	0.015	Circular	2.50	-	8.7	10.3	12.3	15.5
Z5_PIPE_3167	Z5_IL_3671	Z5_IL_2967	J2	12	0.015	Circular	1.50	-	1.5	1.9	2.5	3.8
Z5_PIPE_3168	Z5_IL_2967	Z5_IL_1457	J2	39	0.015	Circular	2.00	-	11.5	13.9	17.2	22.4
Z5_PIPE_3169	Z5_IL_3672	Z5_MH_3796	J2	40	0.015	Circular	1.00	-	1.8	2.1	2.5	3.2
Z5_PIPE_3170	Z5_IL_3675	Z5_IL_3676	J2	36	0.015	Circular	1.75	-	0.0	0.0	0.1	2.4
Z5_PIPE_3174	Z5_IL_2999	Z5_MH_5166	H2	17	0.015	Circular	1.25	-	1.7	2.3	3.1	4.4
Z5_PIPE_3175	Z5_IL_2431	Z5_IL_2464	H2	103	0.015	Circular	1.50	-	3.2	4.1	5.4	6.3
Z5_PIPE_3176	Z5_CB_192	Z5_MH_3870	H2	32	0.015	Circular	1.50	-	2.9	3.5	4.4	5.7
Z5_PIPE_3214	Z5_IL_3685	Z5_IL_2701	G3	24	0.015	Circular	0.83	-	1.3	1.7	2.2	2.8
Z5_PIPE_3215	Z5_IL_2701	Z5_IL_2702	G3	24	0.015	Circular	0.67	-	1.3	1.7	2.2	2.8
Z5_PIPE_3216	Z5_IL_2703	Z5_IL_2705	G3	30	0.015	Circular	1.00	-	1.7	2.2	2.8	3.8
Z5_PIPE_3220	Z5_IL_3687	Z5_CB_335	G4	42	0.015	Circular	1.50	-	3.0	4.0	5.6	5.8
Z5_PIPE_3236	Z5_CB_737	Z5_MH_5139	G3	17	0.015	Circular	1.00	-	2.2	2.7	1.5	2.0
Z5_PIPE_3238	Z5_CB_459	Z5_MH_5136	F4	14	0.015	Circular	1.00	-	1.4	1.8	2.5	3.5
Z5_PIPE_3255	Z5_IL_3703	Z5_OF_4600	F4	67	0.015	Circular	1.25	-	3.7	4.7	5.9	7.8
Z5_PIPE_3256	Z5_IL_3705	Z5_CB_308	F4	55	0.015	Circular	1.00	-	0.8	1.1	1.4	2.0
Z5_PIPE_3259	Z5_MH_4101	Z5_MH_4076	E4	99	0.015	Circular	3.00	-	22.2	29.6	39.8	52.3
Z5_PIPE_3265	Z5_IL_3708	Z5_MH_4098	E4	26	0.015	Circular	1.00	-	0.8	1.1	1.5	2.1
Z5_PIPE_3266	Z5_CB_526	Z5_IL_3709	D4	40	0.015	Circular	4.00	-	3.1	4.2	5.8	8.2
Z5_PIPE_3267	Z5_IL_3709	Z5_OF_4602	D4	219	0.015	Circular	1.00	-	3.1	4.2	5.8	8.2
Z5_PIPE_3302	Z5_MH_4260	Z5_CB_530	J4	156	0.015	Circular	1.00	-	4.0	5.3	6.6	6.9
Z5_PIPE_3304	Z5_IL_3174	Z5_MH_3951	M1	6	0.015	Circular	1.00	-	1.2	1.6	2.1	2.9
Z5_PIPE_3309	Z5_MH_3976	Z5_MH_5160	H3	12	0.015	Circular	1.50	-	3.1	4.1	5.4	7.4
Z5_PIPE_3311	Z5_IL_2760	Z5_IL_2727	H2	34	0.015	Circular	2.00	-	1.8	2.3	3.1	4.3
Z5_PIPE_3312	Z5_IL_3704	Z5_MH_4049	F4	262	0.015	Circular	4.00	-	72.8	95.3	100.3	96.6
Z5_PIPE_3314	Z5_MH_5154	Z5_OF_4423	H3	290	0.015	Circular	4.50	-	156.6	190.3	225.4	261.2
Z5_PIPE_3316	Z5_IL_5505	Z5_CB_515	K3	35	0.015	Circular	1.00	-	7.9	9.0	10.2	12.6
Z5_PIPE_3317	STOR-10	Z5_MH_4049	F4	51	0.015	Circular	3.00	-	14.7	32.2	41.8	35.9
Z5_PIPE_3318	Z5_CB_227	Z5_CB_590	L4	68	0.010	Circular	0.83	-	2.0	2.6	3.5	4.5
Z5_PIPE_3319	Z5_IL_2414	Z5_IL_2413	L3	98	0.015	Circular	0.83	-	0.0	0.0	0.0	0.0
Z5_PIPE_3320	Z5_CB_590	Z5_CB_902	L4	49	0.010	Circular	0.83	-	2.3	3.1	4.2	5.6

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_3321	Z5_IL_2412	Z5_IL_2413	L3	100	0.015	Circular	0.67	-	0.8	1.2	1.7	2.5
Z5_PIPE_3322	Z5_CB_226	Z5_CB_590	L4	64	0.015	Circular	0.83	-	0.0	0.0	0.0	0.8
Z5_PIPE_3328	Z5_IL_1867	Z5_SGIL_4689	M3	122	0.015	Circular	0.50	-	1.3	1.4	1.4	1.5
Z5_PIPE_3329	Z5_SGIL_4689	Z5_OF_5009	M3	24	0.010	Circular	0.50	-	1.7	1.7	1.7	1.7
Z5_PIPE_3330	Z5_IL_1866	Z5_IL_1867	M3	38	0.015	Circular	0.50	-	1.3	1.4	1.4	1.5
Z5_PIPE_3331	Z5_IL_3173	NEW_Z5_MH_6015	L1	11	0.015	Circular	1.00	-	8.5	11.1	13.0	13.9
Z5_PIPE_3332	Z5_MH_3912	Z5_OF_5017	L1	8	0.015	Circular	1.00	-	1.2	1.5	2.1	2.9
Z5_PIPE_3333	Z5_IL_2269	Z5_OF_5024	L2	46	0.015	Circular	1.00	-	1.7	2.2	2.8	3.7
Z5_PIPE_3335	Z5_CB_522	Z5_CB_660	L3	140	0.015	Circular	1.75	-	13.0	16.0	17.8	19.7
Z5_PIPE_3337	Z5_MH_5150	Z5_SGMH_4859	K3	115	0.015	Circular	3.50	-	54.3	64.5	76.5	89.2
Z5_PIPE_3338	Z5_IL_5156	Z5_OF_5044	K3	182	0.010	Circular	0.50	-	1.8	2.3	3.0	3.6
Z5_PIPE_3341	Z5_SGIL_4619	Z5_OF_5035	J2	37	0.015	Circular	1.25	-	3.7	4.6	5.9	7.7
Z5_PIPE_3342	Z5_IL_2727	Z5_IL_4932	H2	30	0.015	Circular	2.00	-	1.8	2.3	3.1	4.3
Z5_PIPE_3343	Z5_IL_4932	Z5_OF_5037	H2	14	0.015	Circular	2.00	-	1.8	2.3	3.1	4.3
Z5_PIPE_3344	Z5_MH_5164	Z5_MH_5162	H3	18	0.015	Rectangular	4.00	6.00	171.1	208.9	249.2	290.0
Z5_PIPE_3345	Z5_IL_2580	Z5_IL_3385	K3	233	0.015	Circular	2.50	-	7.7	10.6	14.4	17.4
Z5_PIPE_3346	Z5_CB_92	Z5_CB_81	E3	58	0.015	Circular	0.83	-	1.2	1.5	2.0	2.8
Z5_PIPE_3347	Z5_CB_80	Z5_CB_81	E3	90	0.015	Circular	0.83	-	1.4	1.8	2.4	3.2
Z5_PIPE_3348	Z5_CB_81	Z5_OF_5053	E3	31	0.015	Circular	0.83	-	2.5	3.3	4.3	5.9
Z5_PIPE_3349	Z5_MH_5131	Z5_OF_5055	G4	76	0.015	Circular	0.67	-	1.5	1.9	2.4	3.1
Z5_PIPE_3350	Z5_IL_2702	Z5_OF_5059	G3	102	0.015	Circular	0.67	-	1.3	1.7	2.2	2.8
Z5_PIPE_3351	Z5_IL_2705	Z5_OF_5060	G3	116	0.015	Circular	0.67	-	1.7	2.2	2.8	3.8
Z5_PIPE_3352	Z5_IL_3487	Z5_MH_4252	F4	19	0.015	Circular	1.00	-	3.9	4.2	4.9	6.4
Z5_PIPE_3353	Z5_MH_5137	Z5_MH_5141	F4	198	0.015	Rectangular	3.00	5.00	67.9	78.9	82.0	85.5
Z5_PIPE_3354	Z5_MH_5561	Z5_CB_616	G3	100	0.015	Rectangular	2.50	6.00	67.9	78.5	81.6	85.2
Z5_PIPE_3355	Z5_MH_4114	Z5_OF_5063	G3	64	0.024	Arch	3.17	4.75	81.6	93.5	103.4	116.2
Z5_PIPE_3356	Z5_MH_5146	Z5_MH_5147	G4	75	0.015	Circular	4.00	-	89.2	105.8	119.2	133.7
Z5_PIPE_3357	Z5_IL_2563	Z5_OF_135	J4	49	0.010	Circular	1.00	-	1.5	2.0	2.6	3.7
Z5_PIPE_358	Z5_CB_48	Z5_IL_2244	L4	30	0.015	Circular	1.00	-	0.7	1.0	1.4	1.9
Z5_PIPE_359	Z5_IL_2244	Z5_OF_4499	L4	100	0.015	Circular	1.00	-	0.7	1.0	1.4	1.9
Z5_PIPE_360	Z5_MH_3807	Z5_SGMH_4858	L2	55	0.015	Circular	3.00	-	13.5	15.5	18.0	21.5
Z5_PIPE_366	Z5_IL_2082	Z5_IL_2083	J4	103	0.010	Circular	1.00	-	1.7	2.2	4.7	5.8
Z5_PIPE_367	Z5_IL_2083	Z5_SGIL_4709	J4	184	0.010	Circular	1.00	-	1.7	2.2	4.4	4.7
Z5_PIPE_368	Z5_IL_2084	Z5_IL_2085	J4	103	0.010	Circular	1.00	-	1.8	2.3	2.9	4.0
Z5_PIPE_369	Z5_IL_2085	Z5_SGIL_4710	J4	165	0.010	Circular	1.00	-	1.8	2.3	2.9	4.0
Z5_PIPE_370	Z5_IL_2201	Z5_IL_2202	N3	116	0.024	Circular	1.00	-	1.6	2.1	2.2	2.4
Z5_PIPE_371	Z5_IL_2202	Z5_OF_5007	N3	49	0.024	Circular	1.00	-	1.6	2.1	2.2	2.4
Z5_PIPE_3827	Z5_MH_3911	Z5_MH_3912	L1	2	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_395	Z5_CB_44	Z5_MH_3843	M2	14	0.015	Circular	1.50	-	2.8	3.5	4.4	5.7
Z5_PIPE_397	Z5_IL_2270	Z5_IL_2271	N3	68	0.024	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_398	Z5_IL_4963	Z5_IL_2271	N3	253	0.024	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_4034	Z5_CB_475	Z5_CB_50	M2	11	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_408	Z5_IL_1092	Z5_MH_3724	K3	37	0.010	Circular	1.00	-	0.0	0.0	0.2	2.5
Z5_PIPE_409	Z5_IL_3250	Z5_IL_3654	K4	30	0.015	Circular	1.50	-	0.9	1.2	1.6	2.3
Z5_PIPE_410	Z5_IL_3250	Z5_OF_4599	K4	68	0.015	Circular	1.50	-	3.1	3.9	5.1	6.9
Z5_PIPE_4224	Z5_IL_2840	Z5_MH_3931	K2	10	0.015	Circular	1.25	-	5.1	6.6	8.7	12.2
Z5_PIPE_437	Z5_IL_1507	Z5_MH_4158	J4	37	0.015	Circular	1.50	-	3.7	5.0	6.6	9.0
Z5_PIPE_439	Z5_IL_1513	Z5_OF_5070	J4	120	0.015	Circular	1.00	-	0.5	0.6	0.7	1.0
Z5_PIPE_440	Z5_IL_5391	Z5_OF_5071	J4	159	0.015	Circular	1.00	-	1.4	1.8	2.2	2.9
Z5_PIPE_4404	Z5_IL_2841	Z5_MH_3931	K2	18	0.015	Circular	1.00	-	1.6	2.1	2.8	3.9
Z5_PIPE_457	Z5_SGIL_4604	Z5_MH_4229	J3	39	0.015	Circular	1.00	-	0.0	0.0	0.0	2.0
Z5_PIPE_463	Z5_IL_2231	Z5_IL_2232	K4	35	0.015	Circular	1.00	-	1.0	1.3	1.7	2.3
Z5_PIPE_464	Z5_IL_2232	Z5_MH_3832	K4	73	0.015	Circular	1.00	-	1.0	1.3	1.7	2.3
Z5_PIPE_465	Z5_MH_3832	Z5_MH_4319	K4	244	0.015	Circular	1.00	-	1.0	1.3	1.7	2.3
Z5_PIPE_466	Z5_IL_2233	Z5_IL_2467	K4	29	0.015	Circular	1.00	-	1.3	1.6	2.1	2.8
Z5_PIPE_4711	Z5_CB_50	Z5_MH_5578	M2	500	0.010	Circular	1.00	-	0.1	0.1	0.1	0.1
Z5_PIPE_477	Z5_IL_2945	Z5_MH_3897	L4	20	0.015	Circular	1.25	-	0.5	0.8	1.3	2.0
Z5_PIPE_478	Z5_IL_2885	Z5_MH_3897	L4	11	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_479	Z5_IL_2888	Z5_MH_3898	L4	15	0.015	Circular	1.25	-	0.5	0.8	1.2	1.8
Z5_PIPE_480	Z5_MH_3897	Z5_MH_3898	L4	233	0.015	Circular	1.50	-	0.5	0.8	1.3	1.9
Z5_PIPE_481	Z5_IL_2889	Z5_MH_3898	M4	20	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_482	Z5_MH_3898	Z5_MH_3924	L4	202	0.015	Circular	1.50	-	0.9	1.5	2.3	3.6
Z5_PIPE_483	Z5_IL_2887	Z5_MH_3925	L4	70	0.015	Circular	1.50	-	0.6	0.9	1.3	2.0
Z5_PIPE_484	Z5_IL_2886	Z5_MH_3924	L4	8	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_485	Z5_MH_3924	Z5_MH_3925	L4	45	0.015	Circular	1.75	-	0.9	1.5	2.3	3.6
Z5_PIPE_486	Z5_MH_3925	Z5_MH_3923	L4	109	0.015	Circular	1.75	-	1.5	2.4	3.7	5.6
Z5_PIPE_487	Z5_IL_2259	Z5_IL_2260	K4	32	0.015	Circular	1.00	-	0.7	0.9	1.2	1.7
Z5_PIPE_488	Z5_IL_2260	Z5_IL_2261	K4	100	0.015	Circular	1.00	-	0.7	0.9	1.2	1.7
Z5_PIPE_489	Z5_IL_2261	Z5_MH_3833	K4	75	0.015	Circular	1.25	-	0.7	0.9	1.2	1.7
Z5_PIPE_500	Z5_IL_2466	Z5_CB_445	H2	134	0.015	Circular	1.50	-	5.4	6.8	8.8	9.3

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_501	Z5_IL_2465	Z5_IL_2466	H2	139	0.015	Circular	1.50	-	5.4	6.8	8.7	9.3
Z5_PIPE_502	Z5_IL_2464	Z5_IL_2465	H2	11	0.015	Circular	1.50	-	3.2	4.1	5.5	6.3
Z5_PIPE_507	Z5_IL_4931	Z5_MH_5572	M3	21	0.015	Rectangular	6.00	6.00	4.3	5.6	7.3	10.0
Z5_PIPE_525	Z5_CB_404	Z5_MH_4077	F4	101	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_526	Z5_CB_405	Z5_CB_406	F4	30	0.015	Circular	1.00	-	1.0	1.4	1.9	2.7
Z5_PIPE_527	Z5_CB_406	Z5_MH_4077	F4	39	0.015	Circular	1.00	-	1.0	1.4	1.9	2.7
Z5_PIPE_528	Z5_CB_407	Z5_MH_4077	F4	19	0.015	Circular	1.00	-	1.1	1.3	1.7	2.1
Z5_PIPE_529	Z5_MH_4077	Z5_MH_4078	F4	167	0.015	Circular	1.25	-	2.1	2.7	3.6	4.9
Z5_PIPE_530	Z5_CB_401	Z5_MH_4078	F4	11	0.015	Circular	1.00	-	0.6	0.8	1.0	1.4
Z5_PIPE_531	Z5_CB_402	Z5_MH_4078	F4	20	0.015	Circular	1.00	-	0.7	0.9	1.2	1.6
Z5_PIPE_532	Z5_MH_4078	Z5_MH_4079	F4	212	0.015	Circular	1.50	-	3.3	4.3	5.7	7.9
Z5_PIPE_533	Z5_CB_403	Z5_MH_4079	F4	16	0.015	Circular	1.00	-	1.1	1.4	2.0	2.8
Z5_PIPE_534	Z5_MH_4079	Z5_MH_4080	F4	176	0.015	Circular	1.50	-	4.3	5.7	7.7	10.6
Z5_PIPE_535	Z5_CB_131	Z5_MH_4080	F4	20	0.015	Circular	1.00	-	2.5	4.1	3.7	3.8
Z5_PIPE_536	Z5_CB_399	Z5_MH_4080	F4	51	0.015	Circular	1.00	-	2.3	3.0	4.1	5.6
Z5_PIPE_537	Z5_MH_4080	Z5_MH_4081	F4	130	0.024	Circular	1.50	-	7.1	7.6	7.6	8.4
Z5_PIPE_538	Z5_IL_2783	Z5_MH_3922	L4	54	0.015	Circular	1.75	-	1.8	2.8	4.2	6.4
Z5_PIPE_5380	Z5_MH_3931	Z5_MH_3930	K2	37	0.015	Circular	2.00	-	6.6	8.6	11.3	15.4
Z5_PIPE_541	Z5_IL_5130	Z5_IL_1507	J4	70	0.024	Circular	1.50	-	1.4	1.8	2.5	3.4
Z5_PIPE_542	Z5_IL_3162	Z5_IL_1507	J4	114	0.015	Circular	1.25	-	2.4	3.2	4.3	5.8
Z5_PIPE_543	Z5_IL_2984	Z5_MH_4158	J4	16	0.015	Circular	1.25	-	4.7	6.3	8.4	11.5
Z5_PIPE_544	Z5_MH_4158	Z5_OF_5072	J4	55	0.015	Circular	1.50	-	8.0	10.7	14.3	19.6
Z5_PIPE_545	Z5_CB_205	Z5_CB_204	H4	73	0.015	Circular	1.75	-	2.1	2.7	3.6	4.9
Z5_PIPE_5456	Z5_CB_513	Z5_CB_514	K2	148	0.015	Circular	1.00	-	1.6	2.0	2.6	3.5
Z5_PIPE_5457	Z5_CB_512	Z5_CB_513	K2	126	0.015	Circular	1.00	-	1.6	2.0	2.6	3.6
Z5_PIPE_546	Z5_IL_3126	Z5_CB_515	K3	23	0.015	Circular	1.50	-	3.5	4.7	6.3	7.3
Z5_PIPE_547	Z5_IL_2836	Z5_IL_2837	K3	45	0.015	Circular	1.00	-	1.1	1.3	1.7	2.1
Z5_PIPE_548	Z5_IL_2837	Z5_MH_4129	K3	39	0.015	Circular	1.50	-	1.1	1.3	1.7	2.1
Z5_PIPE_5570	Z5_IL_5565	Z5_IL_3654	K4	17	0.015	Circular	1.00	-	0.1	0.1	0.1	0.2
Z5_PIPE_5571	Z5_IL_5566	Z5_IL_5565	K4	15	0.015	Circular	1.00	-	0.1	0.1	0.1	0.2
Z5_PIPE_5595	Z5_IL_2271	Z5_OF_5008	N3	50	0.015	Circular	1.00	-	0.7	0.9	1.2	1.7
Z5_PIPE_5596	Z5_MH_3777	Z5_MH_3860	M3	106	0.015	Circular	1.50	-	6.9	8.9	10.9	12.5
Z5_PIPE_5597	Z5_MH_3778	Z5_MH_3779	M3	14	0.015	Circular	1.50	-	11.2	14.4	18.0	22.1
Z5_PIPE_5598	Z5_IL_5125	Z5_MH_5126	M3	16	0.015	Circular	2.50	-	40.0	47.8	53.3	56.8
Z5_PIPE_5601	Z5_IL_1186	Z5_IL_3405	L3	329	0.015	Circular	1.25	-	1.1	1.5	1.9	2.7
Z5_PIPE_5602	Z5_MH_5127	Z5_IL_3483	L3	14	0.015	Circular	1.75	-	1.8	2.2	2.8	3.7
Z5_PIPE_5603	Z5_MH_4320	Z5_CB_170	K4	185	0.015	Circular	1.75	-	2.1	3.2	4.6	6.7
Z5_PIPE_5604	Z5_IL_2410	Z5_IL_2411	L3	49	0.015	Circular	1.00	-	0.0	0.0	0.0	0.5
Z5_PIPE_5605	Z5_IL_2409	Z5_IL_2410	L3	56	0.015	Circular	1.00	-	0.0	0.0	0.0	0.5
Z5_PIPE_5606	Z5_IL_2408	Z5_IL_2409	L3	50	0.015	Circular	1.00	-	0.0	0.0	0.0	0.5
Z5_PIPE_5607	Z5_MH_5128	Z5_SGMH_4869	K3	131	0.015	Circular	3.50	-	41.9	54.1	70.4	87.5
Z5_PIPE_5608	Z5_IL_3283	Z5_IL_3399	H4	174	0.015	Circular	2.00	-	11.7	14.0	17.2	21.9
Z5_PIPE_5609	Z5_MH_4352	Z5_MH_4185	J3	106	0.015	Circular	2.50	-	22.3	27.8	35.1	45.8
Z5_PIPE_5610	Z5_MH_4341	Z5_MH_3722	K3	138	0.015	Circular	3.00	-	36.1	46.6	60.1	74.1
Z5_PIPE_5611	Z5_IL_3385	Z5_MH_4225	K3	21	0.015	Circular	2.50	-	7.7	10.6	14.4	17.4
Z5_PIPE_5612	Z5_MH_4228	Z5_MH_5129	K3	46	0.015	Circular	3.00	-	17.0	22.5	30.3	41.2
Z5_PIPE_5614	Z5_IL_3651	Z5_MH_4342	J4	165	0.015	Circular	1.00	-	1.0	1.3	1.8	2.4
Z5_PIPE_5615	Z5_SGIL_4783	Z5_OF_4573	K4	191	0.015	Circular	1.00	-	1.6	2.0	2.7	3.6
Z5_PIPE_5616	Z5_IL_2120	Z5_MH_4260	J4	198	0.015	Circular	1.00	-	1.0	1.2	2.6	3.0
Z5_PIPE_5617	Z5_MH_3810	Z5_MH_3815	H4	35	0.015	Circular	3.00	-	28.0	31.6	35.3	39.6
Z5_PIPE_5618	Z5_MH_3814	Z5_MH_3816	H4	48	0.015	Circular	3.00	-	31.2	36.4	42.0	48.9
Z5_PIPE_5619	Z5_MH_4345	Z5_MH_4346	H4	60	0.015	Circular	3.00	-	31.9	37.0	43.0	50.4
Z5_PIPE_5620	Z5_MH_4346	Z5_MH_4347	H4	96	0.015	Circular	3.00	-	31.9	37.0	43.0	50.4
Z5_PIPE_5621	Z5_MH_4347	Z5_MH_4348	J4	40	0.015	Circular	3.00	-	32.2	37.4	43.6	51.5
Z5_PIPE_5622	Z5_IL_3668	Z5_MH_4186	H4	29	0.015	Circular	2.50	-	1.3	2.0	2.9	4.3
Z5_PIPE_5623	Z5_MH_3980	Z5_MH_4348	J4	11	0.015	Circular	2.50	-	2.7	3.7	5.4	8.1
Z5_PIPE_5624	Z5_MH_4348	Z5_MH_3844	J4	18	0.015	Circular	2.75	-	34.8	41.1	48.9	59.3
Z5_PIPE_5625	Z5_MH_4326	Z5_MH_4020	H4	44	0.015	Circular	1.00	-	0.7	0.9	2.4	3.9
Z5_PIPE_5626	Z5_MH_4021	Z5_MH_4323	H4	31	0.015	Circular	1.00	-	2.0	2.5	3.8	3.8
Z5_PIPE_5627	Z5_CB_384	Z5_CB_385	E4	5	0.015	Circular	2.25	-	3.4	4.4	5.8	8.1
Z5_PIPE_5628	Z5_IL_3211	Z5_CB_389	E4	31	0.015	Circular	2.50	-	41.4	56.4	72.0	90.5
Z5_PIPE_5629	Z5_MH_5139	Z5_MH_4251	G3	13	0.015	Circular	1.00	-	5.2	5.4	5.1	5.1
Z5_PIPE_5630	Z5_IL_5138	Z5_MH_5136	F4	108	0.015	Rectangular	3.00	5.00	66.1	77.2	78.8	81.1
Z5_PIPE_5631	Z5_MH_5136	Z5_MH_5137	F4	39	0.024	Rectangular	3.00	5.00	67.5	78.4	81.3	84.5
Z5_PIPE_5632	Z5_IL_5142	Z5_MH_5143	G3	23	0.024	Arch	3.17	4.75	72.0	82.6	85.8	90.7
Z5_PIPE_5633	Z5_IL_4939	Z5_MH_5146	G4	19	0.015	Circular	4.00	-	87.7	104.5	117.0	131.6
Z5_PIPE_5634	Z5_IL_2691	Z5_OF_5064	G4	148	0.015	Circular	4.50	-	117.0	138.5	160.0	178.3
Z5_PIPE_5635	Z5_MH_5147	Z5_MH_3903	G4	21	0.015	Circular	4.50	-	116.5	138.0	159.3	177.5
Z5_PIPE_5636	Z5_IL_3156	Z5_MH_5154	H3	35	0.015	Circular	4.50	-	154.1	187.1	221.3	255.8
Z5_PIPE_5637	Z5_MH_3800	Z5_MH_4169	M2	165	0.015	Circular	2.00	-	7.4	9.6	12.7	16.9

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_5638	Z5_MH_3998	Z5_MH_3744	M2	8	0.015	Circular	2.00	-	10.5	13.1	16.5	20.2
Z5_PIPE_5639	Z5_MH_4315	Z5_SGMH_4847	M2	123	0.015	Circular	2.00	-	10.5	13.1	16.5	20.2
Z5_PIPE_5640	Z5_SGIL_4721	Z5_IL_1178	M2	58	0.015	Circular	1.50	-	4.1	4.8	5.6	6.1
Z5_PIPE_5641	Z5_IL_1179	Z5_SGIL_4623	M2	20	0.015	Circular	1.75	-	10.2	12.5	15.2	18.8
Z5_PIPE_5642	Z5_MH_3951	Z5_OF_5013	M1	7	0.015	Circular	1.00	-	1.2	1.6	2.1	2.9
Z5_PIPE_5643	Z5_IL_2771	Z5_IL_2262	M1	76	0.015	Circular	1.00	-	1.9	2.5	3.4	4.6
Z5_PIPE_5644	Z5_IL_2263	Z5_OF_5012	M1	50	0.015	Circular	1.00	-	2.5	3.3	4.5	6.2
Z5_PIPE_5645	Z5_IL_2835	Z5_IL_3210	K3	30	0.015	Circular	1.50	-	12.2	9.2	11.7	8.9
Z5_PIPE_5646	Z5_IL_1515	Z5_MH_3806	L3	44	0.015	Circular	1.50	-	16.0	17.6	19.4	21.6
Z5_PIPE_5647	Z5_MH_4222	Z5_MH_4339	J3	12	0.015	Circular	2.00	-	2.9	3.7	4.9	7.7
Z5_PIPE_5648	Z5_MH_4336	Z5_IL_2986	K3	19	0.015	Circular	1.25	-	7.8	8.0	7.4	8.5
Z5_PIPE_5649	Z5_SGIL_4799	Z5_MH_5150	K3	93	0.015	Circular	3.50	-	19.7	33.9	48.2	61.4
Z5_PIPE_5650	Z5_MH_4130	Z5_MH_4212	K3	12	0.015	Circular	2.50	-	24.8	24.9	24.7	24.6
Z5_PIPE_5651	Z5_MH_4212	Z5_MH_4333	K3	14	0.015	Circular	2.50	-	24.8	24.9	24.6	24.6
Z5_PIPE_5652	Z5_IL_2855	Z5_IL_2854	K3	124	0.015	Circular	1.00	-	2.3	2.4	2.7	3.3
Z5_PIPE_5653	Z5_IL_3646	Z5_IL_3645	K2	16	0.015	Circular	1.00	-	0.0	0.0	0.0	0.1
Z5_PIPE_5654	Z5_MH_3916	Z5_MH_5157	J2	140	0.015	Circular	1.25	-	2.4	3.2	4.3	6.0
Z5_PIPE_5656	Z5_IL_2973	Z5_IL_2974	H3	33	0.015	Arch	4.00	5.50	187.9	228.7	266.7	298.5
Z5_PIPE_5657	Z5_MH_5160	Z5_MH_4209	H3	111	0.015	Circular	4.50	-	3.1	4.1	5.4	7.5
Z5_PIPE_5658	Z5_IL_3339	Z5_IL_3340	H3	34	0.015	Circular	1.00	-	1.0	1.3	1.7	2.4
Z5_PIPE_5659	Z5_IL_5163	Z5_MH_5164	H3	15	0.015	Rectangular	4.00	6.00	161.4	196.7	233.9	272.4
Z5_PIPE_5660	Z5_MH_5162	Z5_OF_4450	H3	30	0.015	Rectangular	4.00	6.00	171.6	209.6	250.3	291.7
Z5_PIPE_5661	Z5_CB_121	Z5_IL_3673	J2	52	0.015	Circular	2.50	-	10.4	12.5	15.4	20.0
Z5_PIPE_5662	Z5_IL_1457	Z5_IL_3676	J2	32	0.015	Circular	2.75	-	25.4	31.7	36.6	40.7
Z5_PIPE_5663	Z5_MH_3979	Z5_IL_3667	J2	64	0.015	Circular	2.75	-	25.5	31.7	36.6	40.7
Z5_PIPE_5664	Z5_IL_3667	Z5_IL_3666	J2	64	0.015	Circular	2.75	-	27.0	33.6	39.3	43.8
Z5_PIPE_5665	Z5_IL_3665	Z5_MH_3973	J2	80	0.015	Circular	2.75	-	31.9	39.1	46.8	53.2
Z5_PIPE_5666	Z5_MH_3973	Z5_IL_3663	J2	44	0.015	Circular	2.75	-	31.9	39.1	46.8	53.2
Z5_PIPE_5667	Z5_MH_4200	Z5_IL_3168	J2	111	0.015	Circular	1.00	-	4.5	5.6	6.8	6.9
Z5_PIPE_5668	Z5_MH_4312	Z5_IL_3195	H2	15	0.015	Circular	2.00	-	6.8	8.7	11.2	15.1
Z5_PIPE_5669	Z5_MH_3770	Z5_MH_5167	H2	61	0.015	Circular	1.25	-	1.1	1.3	1.5	1.9
Z5_PIPE_5670	Z5_CB_193	Z5_MH_3771	H2	26	0.015	Circular	2.25	-	17.6	20.7	24.9	31.1
Z5_PIPE_5671	Z5_MH_4231	Z5_MH_5168	G3	52	0.015	Circular	2.50	-	54.7	55.8	58.4	61.3
Z5_PIPE_5672	Z5_MH_3726	Z5_MH_5169	G3	73	0.015	Circular	2.50	-	50.8	52.2	53.1	56.9
Z5_PIPE_5673	Z5_CB_185	Z5_MH_5170	G3	40	0.015	Circular	1.50	-	1.9	2.5	3.2	4.4
Z5_PIPE_5675	Z5_IL_3643	Z5_IL_3110	K2	15	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_5679	Z5_IL_3316	Z5_MH_4338	K4	29	0.015	Circular	1.25	-	0.5	0.6	1.6	2.3
Z5_PIPE_5683	Z5_MH_4920	Z5_MH_5281	E4	26	0.015	Circular	1.25	-	8.0	10.7	14.4	19.6
Z5_PIPE_5693	Z5_MH_4008	Z5_MH_5166	H2	13	0.015	Circular	2.00	-	3.6	4.5	5.6	7.3
Z5_PIPE_5697	Z5_MH_4001	Z5_OF_5560	K4	161	0.015	Circular	1.50	-	0.1	6.8	13.4	18.0
Z5_PIPE_5698	Z5_MH_5141	Z5_MH_5561	G3	151	0.024	Rectangular	2.50	6.00	67.9	78.5	81.6	85.2
Z5_PIPE_5699	Z5_MH_5562	Z5_MH_5563	L3	285	0.015	Circular	1.00	-	0.8	1.1	1.7	2.4
Z5_PIPE_5700	Z5_MH_5563	Z5_OF_4527	L3	221	0.015	Circular	1.00	-	0.8	1.1	1.7	2.4
Z5_PIPE_5702	Z5_MH_4270	Z5_MH_5567	K4	500	0.015	Circular	3.50	-	46.3	59.0	74.8	86.1
Z5_PIPE_5704	Z5_IL_5570	Z5_IL_5571	M3	48	0.015	Circular	1.25	-	0.2	0.3	0.4	0.5
Z5_PIPE_5705	Z5_MH_5572	Z5_OF_4436	M3	45	0.015	Rectangular	6.00	6.00	7.9	8.1	8.2	10.1
Z5_PIPE_5706	Z5_IL_5571	Z5_MH_5572	M3	19	0.010	Circular	1.25	-	0.2	0.3	0.4	0.5
Z5_PIPE_5707	Z5_IL_4940	Z5_MH_5155	H3	151	0.015	Rectangular	4.00	4.00	77.0	90.8	105.3	120.6
Z5_PIPE_5709	Z5_IL_5161	Z5_IL_2973	H3	95	0.015	Arch	4.00	5.50	186.3	226.4	263.9	295.3
Z5_PIPE_5712	Z5_MH_5577	Z5_OF_5030	K2	58	0.015	Circular	1.00	-	6.3	6.3	6.3	6.4
Z5_PIPE_5713	Z5_IL_2851	Z5_MH_4131	K3	54	0.015	Circular	1.50	-	0.1	0.1	0.2	2.4
Z5_PIPE_5714	Z5_MH_5579	Z5_MH_3955	L3	50	0.015	Circular	1.50	-	6.3	7.9	12.2	11.3
Z5_PIPE_576	Z5_IL_2564	Z5_CB_140	J4	95	0.015	Circular	1.50	-	3.8	4.8	6.1	8.1
Z5_PIPE_577	Z5_CB_140	Z5_CB_841	J4	177	0.015	Circular	1.50	-	3.8	4.8	6.1	8.1
Z5_PIPE_583	Z5_MH_4301	Z5_MH_4300	J4	153	0.015	Circular	1.50	-	2.9	3.8	5.1	7.4
Z5_PIPE_584	Z5_CB_534	Z5_MH_4144	J4	13	0.015	Circular	1.00	-	5.9	7.7	10.1	14.0
Z5_PIPE_585	Z5_SGIL_4609	Z5_IL_1046	K4	8	0.015	Circular	1.50	-	5.7	5.7	5.6	5.6
Z5_PIPE_587	Z5_CB_386	Z5_MH_4076	E4	11	0.015	Circular	2.25	-	3.4	4.4	5.8	8.1
Z5_PIPE_598	Z5_IL_2822	Z5_OF_4461	M3	122	0.015	Circular	1.00	-	1.0	1.4	1.9	2.6
Z5_PIPE_599	Z5_IL_4928	Z5_OF_4464	M3	114	0.015	Circular	1.00	-	3.3	4.4	6.0	8.4
Z5_PIPE_600	Z5_IL_4929	Z5_OF_4463	M3	27	0.015	Circular	1.25	-	1.2	1.7	2.3	3.2
Z5_PIPE_601	Z5_IL_3196	Z5_OF_4462	M3	42	0.015	Circular	1.00	-	6.1	7.7	9.8	13.0
Z5_PIPE_618	Z5_IL_2715	Z5_MH_3905	J3	26	0.015	Circular	1.00	-	0.9	1.2	1.7	2.3
Z5_PIPE_619	Z5_IL_2716	Z5_MH_3905	J3	20	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_62	Z5_IL_2525	Z5_OF_4444	J4	160	0.015	Circular	1.25	-	3.2	4.1	5.3	6.3
Z5_PIPE_620	Z5_IL_2714	Z5_MH_3904	J3	24	0.015	Circular	0.67	-	0.7	1.0	1.4	2.0
Z5_PIPE_621	Z5_IL_2713	Z5_MH_3904	J3	17	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_622	Z5_MH_3904	Z5_MH_3905	J3	204	0.015	Circular	1.50	-	0.7	1.0	1.4	2.0
Z5_PIPE_623	Z5_IL_2595	Z5_MH_3887	K2	9	0.015	Circular	1.00	-	0.7	0.9	1.1	3.4
Z5_PIPE_624	Z5_MH_3913	Z5_MH_3888	K2	43	0.015	Circular	1.50	-	4.9	6.2	7.7	9.5

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_628	Z5_IL_1105	Z5_IL_1106	G3	73	0.015	Circular	1.00	-	1.2	1.5	1.8	2.2
Z5_PIPE_629	Z5_MH_5169	Z5_OF_5057	G3	104	0.015	Circular	2.50	-	51.7	53.4	54.6	57.7
Z5_PIPE_63	Z5_IL_2526	Z5_IL_2525	J4	18	0.024	Circular	1.00	-	1.9	2.4	3.2	3.5
Z5_PIPE_630	Z5_IL_1145	Z5_MH_3729	G3	177	0.015	Circular	1.00	-	0.9	1.1	1.5	2.0
Z5_PIPE_632	Z5_MH_3729	Z5_MH_3730	G3	86	0.015	Circular	1.00	-	0.9	1.2	1.5	2.0
Z5_PIPE_633	Z5_MH_3731	Z5_MH_3730	G3	73	0.015	Circular	2.00	-	12.9	14.3	14.7	15.3
Z5_PIPE_634	Z5_MH_3732	Z5_MH_3731	G3	310	0.015	Circular	2.00	-	12.9	14.2	14.7	15.3
Z5_PIPE_635	Z5_IL_1147	Z5_MH_3732	G3	31	0.015	Circular	1.00	-	1.6	2.0	2.4	3.1
Z5_PIPE_636	Z5_MH_3733	Z5_MH_3732	G3	100	0.015	Circular	1.75	-	11.3	12.3	12.4	12.7
Z5_PIPE_64	Z5_CB_64	Z5_IL_2530	J4	77	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_640	Z5_IL_1151	Z5_IL_1150	G3	218	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_641	Z5_IL_1150	Z5_MH_3734	G3	30	0.015	Circular	1.00	-	6.4	7.8	8.5	8.5
Z5_PIPE_642	Z5_IL_1154	Z5_MH_3734	G3	66	0.015	Circular	1.00	-	0.9	1.1	1.3	1.7
Z5_PIPE_643	Z5_MH_3734	Z5_MH_3735	G3	413	0.015	Circular	1.50	-	7.4	8.6	9.0	8.8
Z5_PIPE_644	Z5_MH_3735	Z5_IL_1155	G3	19	0.015	Circular	2.50	-	48.9	50.9	55.9	62.0
Z5_PIPE_646	Z5_IL_1153	Z5_MH_3734	G3	128	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_647	Z5_SGIL_4618	Z5_MH_3727	L4	96	0.015	Circular	1.00	-	1.6	2.1	2.9	4.1
Z5_PIPE_648	Z5_MH_3727	Z5_MH_3728	K4	59	0.015	Circular	1.00	-	1.6	2.1	2.9	4.1
Z5_PIPE_65	Z5_IL_2550	Z5_SGIL_4746	J4	81	0.015	Circular	1.25	-	3.6	4.7	6.0	8.0
Z5_PIPE_66	Z5_IL_2563	Z5_IL_2562	J4	25	0.015	Circular	1.25	-	0.6	0.9	1.2	1.7
Z5_PIPE_660	Z5_IL_2565	Z5_IL_2564	J4	38	0.010	Circular	1.50	-	3.5	4.4	5.5	7.1
Z5_PIPE_676	Z5_MH_3714	Z5_MH_4194	J4	233	0.015	Circular	3.00	-	27.7	35.1	44.5	51.8
Z5_PIPE_68	Z5_IL_2576	Z5_IL_2577	J4	65	0.015	Circular	1.25	-	4.5	6.2	7.6	8.6
Z5_PIPE_681	Z5_CB_111	Z5_MH_3966	J2	15	0.015	Circular	3.00	-	38.9	47.2	56.0	64.5
Z5_PIPE_682	Z5_CB_570	Z5_SGIL_4619	J2	49	0.010	Circular	1.25	-	3.7	4.6	5.9	7.7
Z5_PIPE_69	Z5_CB_132	Z5_IL_2579	J4	34	0.015	Circular	1.50	-	4.5	6.2	7.9	10.0
Z5_PIPE_697	Z5_MH_4143	Z5_MH_4142	K4	384	0.015	Circular	3.50	-	37.5	47.5	60.3	72.6
Z5_PIPE_699	Z5_MH_4142	Z5_MH_4145	K4	364	0.015	Circular	3.50	-	41.0	51.9	65.9	78.8
Z5_PIPE_70	Z5_IL_2579	Z5_IL_2576	J4	340	0.015	Circular	1.50	-	4.5	6.2	7.6	8.7
Z5_PIPE_700	Z5_CB_537	Z5_MH_4142	K4	7	0.015	Circular	1.00	-	2.4	2.9	3.6	4.6
Z5_PIPE_707	Z5_MH_3833	Z5_OF_4445	K4	100	0.015	Circular	1.25	-	2.0	2.7	3.6	5.0
Z5_PIPE_708	Z5_MH_4338	Z5_MH_4197	K4	65	0.015	Circular	3.50	-	44.1	55.9	70.8	82.9
Z5_PIPE_709	Z5_IL_3315	Z5_SGIL_4609	K4	50	0.015	Circular	1.00	-	1.2	1.5	2.0	3.6
Z5_PIPE_71	Z5_IL_2577	Z5_IL_2581	K3	202	0.015	Circular	1.75	-	5.6	7.7	9.8	11.8
Z5_PIPE_710	Z5_MH_4145	Z5_MH_4338	K4	80	0.015	Circular	3.50	-	43.7	55.3	69.9	81.8
Z5_PIPE_711	Z5_MH_4197	Z5_MH_4294	K4	276	0.015	Circular	3.50	-	44.1	55.9	70.8	82.9
Z5_PIPE_712	Z5_MH_4294	Z5_MH_4141	K4	292	0.015	Circular	3.50	-	44.1	55.9	70.8	83.5
Z5_PIPE_713	Z5_IL_3138	Z5_MH_4196	K4	52	0.015	Circular	1.00	-	6.0	7.7	9.9	11.1
Z5_PIPE_714	Z5_MH_4196	Z5_MH_4140	K4	181	0.015	Circular	3.50	-	54.7	70.2	87.4	100.1
Z5_PIPE_715	Z5_MH_4140	Z5_OF_5568	K4	275	0.015	Circular	3.50	-	54.7	70.2	87.4	100.1
Z5_PIPE_716	Z5_IL_3249	Z5_IL_3250	K4	77	0.015	Circular	1.50	-	2.1	2.7	3.5	4.6
Z5_PIPE_723	Z5_CB_52	Z5_OF_5026	M2	56	0.015	Circular	2.00	-	12.4	15.3	19.0	24.0
Z5_PIPE_725	Z5_IL_5299	Z5_MH_5300	L2	196	0.015	Circular	1.00	-	5.1	5.5	5.5	5.5
Z5_PIPE_727	Z5_MH_5300	Z5_OF_5022	L2	108	0.015	Circular	1.00	-	5.1	6.5	8.2	8.8
Z5_PIPE_729	Z5_IL_1464	Z5_IL_1465	H3	75	0.015	Circular	1.25	-	3.6	4.5	5.6	7.4
Z5_PIPE_737	Z5_IL_1658	Z5_IL_2978	K2	92	0.015	Circular	2.50	-	8.3	11.0	14.7	20.3
Z5_PIPE_739	Z5_IL_2739	Z5_MH_3912	L1	6	0.015	Circular	1.00	-	1.2	1.5	2.1	2.9
Z5_PIPE_740	Z5_IL_2411	Z5_IL_2412	L3	50	0.015	Circular	1.00	-	0.0	0.0	0.1	0.5
Z5_PIPE_741	Z5_IL_2413	Z5_IL_2415	L3	168	0.015	Circular	1.25	-	0.8	1.2	1.7	2.5
Z5_PIPE_743	Z5_IL_2419	Z5_IL_2420	L3	45	0.024	Circular	1.25	-	1.8	2.4	3.3	4.6
Z5_PIPE_744	Z5_IL_2513	Z5_IL_2420	L3	78	0.024	Circular	1.25	-	0.6	0.8	1.1	1.6
Z5_PIPE_745	Z5_IL_2421	Z5_MH_4387	L4	87	0.015	Circular	1.50	-	2.9	4.0	5.4	7.6
Z5_PIPE_749	Z5_IL_976	Z5_MH_4230	J3	52	0.010	Circular	1.50	-	0.0	0.0	0.0	3.5
Z5_PIPE_750	Z5_IL_977	Z5_MH_4230	J3	41	0.010	Circular	1.50	-	1.8	2.6	3.7	6.1
Z5_PIPE_751	Z5_MH_4230	Z5_MH_4229	J3	253	0.010	Circular	1.50	-	1.8	2.6	3.7	7.0
Z5_PIPE_757	Z5_IL_2415	Z5_OF_4388	K4	14	0.010	Circular	1.25	-	1.4	2.1	3.0	4.4
Z5_PIPE_759	Z5_IL_2326	Z5_MH_3850	J2	357	0.015	Circular	1.25	-	7.2	7.5	8.0	9.7
Z5_PIPE_762	Z5_IL_2552	Z5_IL_2551	H4	31	0.015	Circular	1.25	-	0.9	1.1	1.4	1.8
Z5_PIPE_763	Z5_IL_2551	Z5_OF_4391	H4	95	0.010	Circular	1.25	-	0.9	1.1	1.4	1.8
Z5_PIPE_764	Z5_IL_2553	Z5_OF_5074	H4	88	0.010	Circular	1.00	-	0.9	1.2	1.6	2.2
Z5_PIPE_765	Z5_IL_2558	Z5_IL_1271	J4	40	0.010	Circular	1.25	-	1.2	1.9	2.8	4.2
Z5_PIPE_766	Z5_IL_2559	Z5_IL_2558	J4	21	0.015	Circular	1.00	-	0.6	0.8	1.1	1.6
Z5_PIPE_767	Z5_IL_2561	Z5_IL_2558	J4	77	0.010	Circular	1.25	-	0.8	1.3	2.0	3.1
Z5_PIPE_768	Z5_IL_2581	Z5_IL_2580	K3	53	0.015	Circular	2.50	-	5.6	7.7	9.8	11.1
Z5_PIPE_769	Z5_IL_2582	Z5_SGIL_4729	K3	65	0.015	Circular	1.00	-	1.1	1.4	1.8	2.4
Z5_PIPE_842	Z5_SGIL_4779	Z5_MH_4169	M2	22	0.015	Circular	1.00	-	0.0	0.0	0.0	0.3
Z5_PIPE_843	Z5_IL_2737	Z5_IL_2738	L1	63	0.015	Circular	1.00	-	1.2	1.5	2.1	2.9
Z5_PIPE_844	Z5_IL_2765	Z5_OF_5018	M2	131	0.015	Circular	0.83	-	2.1	2.7	3.5	4.6
Z5_PIPE_853	Z5_IL_1755	Z5_SGIL_4684	K4	70	0.010	Circular	1.00	-	3.0	4.0	5.4	7.6
Z5_PIPE_854	Z5_SGIL_4684	Z5_OF_5045	K4	85	0.024	Circular	1.25	-	3.0	4.0	5.4	7.6

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Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_855	Z5_IL_2398	Z5_MH_4170	H2	6	0.015	Circular	1.00	-	2.2	2.6	3.1	3.9
Z5_PIPE_856	Z5_IL_3205	Z5_IL_2431	H2	114	0.010	Circular	2.00	-	6.8	8.7	11.2	15.1
Z5_PIPE_857	Z5_IL_2431	Z5_IL_2432	H2	18	0.015	Circular	2.00	-	4.3	5.4	7.0	11.5
Z5_PIPE_858	Z5_IL_2432	Z5_SGIL_4717	H2	17	0.015	Circular	2.00	-	4.3	5.4	7.0	11.5
Z5_PIPE_859	Z5_SGIL_4717	Z5_MH_3859	H2	214	0.010	Circular	2.00	-	5.5	7.0	9.0	14.4
Z5_PIPE_860	Z5_MH_3859	Z5_MH_4293	H2	111	0.010	Circular	2.00	-	5.5	7.0	9.0	14.4
Z5_PIPE_862	Z5_IL_2823	Z5_MH_3929	L3	6	0.015	Circular	2.00	-	14.8	18.8	22.2	23.2
Z5_PIPE_863	Z5_IL_2824	Z5_OF_4440	L3	400	0.015	Circular	2.00	-	21.3	27.7	32.5	32.7
Z5_PIPE_865	Z5_MH_5126	Z5_SGMH_4853	M3	34	0.015	Circular	2.50	-	43.3	52.1	58.4	64.1
Z5_PIPE_866	Z5_IL_3206	Z5_SGMH_4853	M3	19	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_867	Z5_SGMH_4853	Z5_OF_4439	M3	54	0.015	Circular	2.50	-	43.3	52.1	58.4	64.1
Z5_PIPE_893	Z5_IL_2184	Z5_IL_2185	M4	31	0.015	Circular	1.00	-	0.7	1.0	1.3	1.7
Z5_PIPE_894	Z5_IL_2185	Z5_IL_2186	N3	359	0.015	Circular	1.75	-	0.7	0.9	1.3	1.7
Z5_PIPE_895	Z5_IL_2187	Z5_IL_2186	N3	31	0.015	Circular	1.00	-	1.1	1.5	2.0	2.9
Z5_PIPE_896	Z5_IL_2188	Z5_MH_3829	N3	207	0.015	Circular	1.75	-	2.3	3.0	4.1	5.7
Z5_PIPE_897	Z5_IL_2189	Z5_IL_2188	N3	28	0.015	Circular	1.00	-	0.5	0.7	0.9	1.3
Z5_PIPE_898	Z5_CB_529	Z5_IL_2190	N3	137	0.024	Circular	1.00	-	2.1	2.5	2.9	3.6
Z5_PIPE_899	Z5_IL_2186	Z5_IL_2191	N3	182	0.015	Circular	1.75	-	1.8	2.4	3.3	4.6
Z5_PIPE_900	Z5_IL_2191	Z5_IL_2188	N3	56	0.015	Circular	1.75	-	1.8	2.4	3.3	4.6
Z5_PIPE_901	Z5_MH_3829	Z5_MH_3830	N3	365	0.015	Circular	1.75	-	2.7	3.5	4.8	6.7
Z5_PIPE_902	Z5_MH_3830	Z5_SGMH_4863	N3	46	0.015	Circular	1.75	-	2.7	3.5	4.8	6.7
Z5_PIPE_903	Z5_CB_118	Z5_SGMH_4863	N3	33	0.015	Circular	1.00	-	1.7	2.1	2.7	3.5
Z5_PIPE_904	Z5_SGMH_4863	Z5_OF_4370	N3	39	0.010	Circular	1.25	-	3.8	4.8	6.1	8.2
Z5_PIPE_905	Z5_IL_3119	Z5_IL_3120	J2	6	0.010	Circular	1.00	-	2.8	3.1	3.2	1.6
Z5_PIPE_906	Z5_IL_3207	Z5_IL_5163	H3	33	0.024	Circular	1.25	-	3.1	3.8	4.9	6.3
Z5_PIPE_907	Z5_SGIL_4645	Z5_MH_5164	H3	48	0.010	Circular	1.50	-	10.0	13.2	15.9	19.3
Z5_PIPE_909	Z5_IL_3638	Z5_IL_2771	M1	37	0.015	Circular	1.00	-	1.9	2.5	3.4	4.6
Z5_PIPE_910	Z5_IL_2262	Z5_IL_2263	M1	55	0.015	Circular	1.00	-	1.9	2.5	3.4	4.6
Z5_PIPE_911	Z5_IL_2264	Z5_IL_2265	L2	68	0.015	Circular	1.00	-	0.8	1.0	1.2	1.5
Z5_PIPE_912	Z5_IL_2265	Z5_IL_2266	L2	78	0.015	Circular	1.00	-	0.8	1.0	1.2	1.5
Z5_PIPE_913	Z5_IL_2266	Z5_IL_2267	L2	97	0.015	Circular	1.00	-	0.8	1.0	1.2	1.5
Z5_PIPE_914	Z5_IL_2267	Z5_IL_2268	L2	53	0.015	Circular	1.00	-	0.8	1.0	1.2	1.6
Z5_PIPE_915	Z5_IL_2268	Z5_IL_2269	L2	91	0.015	Circular	1.00	-	1.7	2.2	2.8	3.7
Z5_PIPE_920	Z5_MH_3718	Z5_MH_3719	L3	219	0.015	Circular	1.00	-	0.8	1.1	1.5	2.1
Z5_PIPE_921	Z5_IL_1083	Z5_IL_1087	M3	87	0.015	Circular	1.50	-	4.2	5.5	7.3	10.1
Z5_PIPE_922	Z5_IL_1089	Z5_MH_3721	K3	30	0.010	Circular	1.00	-	0.0	0.0	0.2	4.4
Z5_PIPE_923	Z5_IL_1090	Z5_MH_3722	K3	69	0.010	Circular	1.00	-	0.0	0.0	0.0	1.7
Z5_PIPE_924	Z5_IL_1091	Z5_MH_3722	K3	13	0.010	Circular	1.00	-	0.0	0.0	0.0	3.7
Z5_PIPE_925	Z5_IL_1093	Z5_MH_3725	J3	183	0.010	Circular	3.00	-	33.3	42.5	55.0	78.9
Z5_PIPE_926	Z5_IL_1094	Z5_IL_1093	J3	32	0.010	Circular	1.25	-	3.7	3.9	5.0	18.7
Z5_PIPE_927	Z5_IL_1096	Z5_IL_1095	J3	32	0.010	Circular	1.00	-	1.6	2.0	2.6	5.0
Z5_PIPE_928	Z5_IL_1098	Z5_IL_1097	J3	32	0.010	Circular	1.00	-	1.4	1.9	2.5	3.6
Z5_PIPE_929	Z5_IL_1101	Z5_IL_1100	J3	33	0.010	Circular	1.00	-	2.7	3.5	4.5	6.0
Z5_PIPE_930	Z5_IL_1102	Z5_IL_1101	H4	211	0.010	Circular	1.00	-	1.6	2.0	2.5	3.3
Z5_PIPE_931	Z5_IL_1104	Z5_IL_1103	H3	33	0.010	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_932	Z5_SGMH_4859	Z5_SGMH_4858	L2	507	0.015	Circular	4.50	-	57.9	69.3	82.9	98.0
Z5_PIPE_933	Z5_SGMH_4857	Z5_MH_3807	K3	184	0.015	Circular	2.50	-	11.4	12.8	14.4	16.6
Z5_PIPE_934	Z5_SGIL_4650	Z5_SGMH_4857	K3	171	0.015	Circular	1.00	-	1.7	2.2	2.7	3.5
Z5_PIPE_935	Z5_MH_3806	Z5_SGMH_4857	K3	12	0.015	Circular	2.50	-	9.7	10.7	11.8	13.3
Z5_PIPE_936	Z5_SGMH_4858	Z5_OF_5571	L2	34	0.015	Circular	4.50	-	75.0	89.9	108.2	130.0
Z5_PIPE_937	Z5_IL_1519	Z5_MH_3808	L2	182	0.010	Circular	1.00	-	3.7	5.0	6.7	9.4
Z5_PIPE_938	Z5_MH_3806	Z5_OF_5029	L2	250	0.015	Circular	1.50	-	6.3	6.9	7.5	8.3
Z5_PIPE_941	Z5_IL_1278	Z5_IL_1279	F4	35	0.015	Circular	1.00	-	3.5	4.1	5.0	6.2
Z5_PIPE_942	Z5_MH_3730	Z5_IL_1156	G3	174	0.015	Circular	2.00	-	13.8	15.4	16.1	17.2
Z5_PIPE_943	Z5_IL_1156	Z5_IL_1157	G3	225	0.015	Circular	2.00	-	13.7	15.4	16.1	17.2
Z5_PIPE_944	Z5_IL_1158	Z5_IL_1157	G3	38	0.015	Circular	1.00	-	3.1	3.8	4.8	6.3
Z5_PIPE_945	Z5_IL_1157	Z5_IL_1159	G3	107	0.015	Circular	2.00	-	16.8	19.2	20.9	23.4
Z5_PIPE_946	Z5_IL_1159	Z5_IL_1160	G3	109	0.015	Circular	2.00	-	16.8	19.2	20.9	23.4
Z5_PIPE_947	Z5_IL_1160	Z5_SGMH_4846	G3	12	0.015	Circular	2.00	-	16.8	19.2	20.9	23.4
Z5_PIPE_948	Z5_SGMH_4846	Z5_IL_1161	G3	54	0.015	Circular	2.00	-	16.8	19.2	20.9	23.4
Z5_PIPE_949	Z5_IL_1161	Z5_OF_5066	H3	13	0.015	Circular	2.00	-	18.2	21.1	23.4	26.8
Z5_PIPE_950	Z5_MH_3736	Z5_MH_3733	G3	340	0.015	Circular	1.50	-	11.7	12.3	12.4	12.7
Z5_PIPE_951	Z5_IL_1162	Z5_MH_3736	G3	39	0.015	Circular	1.00	-	1.6	3.4	5.0	5.1
Z5_PIPE_952	Z5_MH_3737	Z5_MH_3736	G3	136	0.015	Circular	1.50	-	12.6	13.8	12.1	13.7
Z5_PIPE_953	Z5_IL_1163	Z5_MH_3737	G3	7	0.015	Circular	1.00	-	2.0	4.8	4.6	4.5
Z5_PIPE_954	Z5_MH_3738	Z5_MH_3737	G3	329	0.015	Circular	1.50	-	9.6	10.9	10.9	11.1
Z5_PIPE_955	Z5_MH_3739	Z5_MH_3738	G3	212	0.015	Circular	1.50	-	8.7	9.8	9.9	10.0
Z5_PIPE_956	Z5_IL_1164	Z5_MH_3738	G3	30	0.015	Circular	1.00	-	0.9	1.1	1.4	1.9
Z5_PIPE_958	Z5_IL_1166	Z5_MH_3739	G3	34	0.015	Circular	1.00	-	2.8	5.6	6.1	6.1
Z5_PIPE_959	Z5_IL_1167	Z5_MH_3739	G3	5	0.015	Circular	1.00	-	6.0	7.0	7.1	8.0

*The term "NEW" in a Link ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 5 West Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_961	Z5_IL_1173	Z5_MH_3741	L2	30	0.015	Circular	1.00	-	1.0	1.2	1.6	2.0
Z5_PIPE_962	Z5_IL_3558	Z5_IL_1173	L2	28	0.015	Circular	1.00	-	1.0	1.2	1.6	2.0
Z5_PIPE_967	Z5_SGIL_4700	Z5_MH_4021	H4	55	0.015	Circular	1.00	-	0.0	0.0	0.0	0.2
Z5_PIPE_974	Z5_IL_1672	Z5_MH_5129	K3	29	0.024	Circular	1.00	-	0.6	0.8	1.0	1.4
Z5_PIPE_977	Z5_SGIL_4660	Z5_OF_5015	J4	196	0.015	Circular	1.00	-	1.1	1.5	2.0	2.8
Z5_PIPE_978	Z5_MH_3712	Z5_MH_3765	H4	96	0.015	Circular	1.50	-	2.9	3.9	5.4	7.3
Z5_PIPE_981	Z5_MH_3741	Z5_IL_1174	L2	143	0.015	Circular	1.00	-	1.0	1.2	1.6	2.0
Z5_PIPE_982	Z5_IL_1174	Z5_MH_3742	L2	31	0.015	Circular	1.00	-	3.4	4.3	5.4	7.0
Z5_PIPE_984	Z5_MH_3745	Z5_OF_4504	M2	108	0.015	Circular	2.00	-	11.4	14.3	18.1	23.4
Z5_PIPE_984	Z5_MH_3745	Z5_OF_4504	M2	108	0.015	Circular	2.00	-	11.4	14.3	18.1	23.4
Z5_PIPE_985	Z5_IL_990	Z5_OF_5031	K2	181	0.010	Circular	1.25	-	2.1	2.6	3.2	4.2
Z5_PIPE_995	Z5_MH_3775	Z5_MH_3776	M3	199	0.015	Circular	1.00	-	4.6	6.0	6.6	6.9
Z5_PIPE_996	Z5_MH_3776	Z5_MH_3777	M3	174	0.015	Circular	1.50	-	6.0	7.7	9.3	10.4
Z5_PIPE_997	Z5_MH_3860	Z5_MH_3778	M3	117	0.015	Circular	1.50	-	9.9	12.7	15.9	19.1
Z5_PIPE_998	Z5_MH_3779	Z5_SGMH_4852	M3	37	0.015	Circular	1.75	-	11.2	14.4	18.0	22.1
Z5_STREET_001	Z5_IL_2090	Z5_SGMH_4862	J2	48	0.025	Trapezoidal	0.50	30.00	2.6	4.5	5.1	6.1
Z5_STREET_002	Z5_IL_5299	Z5_MH_5300	L2	196	0.025	Trapezoidal	0.50	25.00	0.0	1.7	5.8	9.0

*The term "NEW" in a Link ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
NEW_Z5_CHANNEL_6302	NEW_Z5_IL_6301	NEW_Z5_IL_6300	H6	91	0.025	Trapezoidal	1.20	0.50	6.1	6.5	6.5	6.2
NEW_Z5_CHANNEL_6500	Z5_OF_5004	NEW_Z5_IL_6500	M4	233	0.030	Trapezoidal	5.00	1.00	182.9	206.1	235.8	263.8
NEW_Z5_CHANNEL_6502	NEW_Z5_IL_6501	NEW_Z5_IL_6502	M4	140	0.030	Trapezoidal	5.00	1.00	182.7	205.9	235.5	263.7
NEW_Z5_CHANNEL_6504	NEW_Z5_IL_6503	Z5_OF_4441	N4	72	0.030	Trapezoidal	8.40	1.00	187.3	211.1	241.3	271.4
NEW_Z5_CHANNEL_6505	Z5_OF_4441	Z5_OF_5005	M4	211	0.030	Trapezoidal	5.00	1.00	189.7	213.9	244.2	275.6
NEW_Z5_CHANNEL_6506	Z5_OF_5005	NEW_Z5_IL_6504	M4	217	0.030	Trapezoidal	5.00	1.00	192.3	217.2	248.1	281.3
NEW_Z5_CHANNEL_6508	NEW_Z5_IL_6505	NEW_Z5_IL_6506	M4	113	0.030	Trapezoidal	17.00	1.00	202.0	228.8	263.4	301.4
NEW_Z5_PIPE_3277_1	NEW_Z5_MH_6020	Z5_MH_4237	G6	78	0.015	Rectangular	3.00	5.00	114.2	131.5	153.9	179.7
NEW_Z5_PIPE_3277_2	NEW_Z5_MH_6021	NEW_Z5_MH_6020	G6	72	0.015	Rectangular	3.00	5.00	113.0	131.0	154.7	180.9
NEW_Z5_PIPE_5570	NEW_Z5_MH_6052	Z5_MH_3872	K5	163	0.015	Rectangular	4.00	8.00	148.1	180.0	213.6	250.3
NEW_Z5_PIPE_6000	NEW_Z5_CB_6000	NEW_Z5_OUT_6000	H7	103	0.015	Circular	1.50	-	2.6	3.1	3.7	4.6
NEW_Z5_PIPE_6001	NEW_Z5_CB_6001	NEW_Z5_CB_6002	G8	49	0.015	Circular	1.00	-	3.7	4.4	5.2	6.4
NEW_Z5_PIPE_6002	NEW_Z5_CB_6002	NEW_Z5_CB_6003	G8	48	0.015	Circular	1.00	-	3.7	4.4	5.2	6.4
NEW_Z5_PIPE_6003	NEW_Z5_CB_6003	NEW_Z5_OUT_6001	G8	142	0.015	Circular	1.00	-	3.7	4.4	5.2	6.4
NEW_Z5_PIPE_6010	NEW_Z5_CB_6004	NEW_Z5_CB_6005	G8	28	0.015	Circular	1.25	-	14.8	16.2	18.1	19.1
NEW_Z5_PIPE_6011	NEW_Z5_CB_6005	NEW_Z5_MH_6006	G8	216	0.015	Circular	1.50	-	14.8	16.1	18.1	18.9
NEW_Z5_PIPE_6012	NEW_Z5_MH_6006	Z5_IL_1351	G8	130	0.015	Circular	1.50	-	14.8	16.1	18.1	18.2
NEW_Z5_PIPE_6020	Z5_MH_4250	NEW_Z5_OUT_6002	H7	174	0.010	Circular	3.50	-	62.5	71.7	78.5	86.1
NEW_Z5_PIPE_6021	Z5_IL_2685	NEW_Z5_CB_6010	G7	114	0.011	Circular	2.00	-	0.7	0.8	1.0	1.2
NEW_Z5_PIPE_6022	NEW_Z5_CB_6010	NEW_Z5_CB_6011	G7	16	0.011	Circular	2.00	-	0.7	0.8	1.0	1.2
NEW_Z5_PIPE_6023	NEW_Z5_CB_6011	NEW_Z5_CB_6012	G7	52	0.011	Circular	2.00	-	0.7	0.8	1.0	1.2
NEW_Z5_PIPE_6024	NEW_Z5_CB_6012	NEW_Z5_CB_6013	G7	24	0.011	Circular	2.00	-	0.7	0.8	1.0	1.2
NEW_Z5_PIPE_6025	NEW_Z5_CB_6013	NEW_Z5_CB_6014	G7	17	0.011	Circular	2.00	-	3.1	3.4	3.8	4.4
NEW_Z5_PIPE_6026	NEW_Z5_CB_6014	NEW_Z5_OUT_6003	H7	3	0.011	Circular	0.67	-	3.1	3.4	3.8	4.4
NEW_Z5_PIPE_6030	Z5_IL_3013	NEW_Z5_MH_6020	G6	42	0.024	Circular	1.00	-	4.7	5.1	5.6	6.1
NEW_Z5_PIPE_6032	Z5_IL_3425	NEW_Z5_MH_6021	G6	500	0.024	Circular	1.00	-	1.2	1.4	1.5	1.7
NEW_Z5_PIPE_6033	Z5_MH_4059	Z5_IL_3013	G6	125	0.015	Circular	1.00	-	3.1	3.2	3.3	3.2
NEW_Z5_PIPE_6034	NEW_Z5_IL_6022	Z5_IL_3636	H6	55	0.015	Circular	1.00	-	1.8	2.1	2.6	7.9
NEW_Z5_PIPE_6040	Z5_CB_852	Z5_MH_4303	J5	50	0.015	Circular	1.25	-	6.1	9.5	11.5	13.6
NEW_Z5_PIPE_6050	NEW_Z5_CB_6050	Z5_MH_3872	K5	93	0.015	Circular	1.00	-	2.3	2.7	3.3	4.1
NEW_Z5_PIPE_6051	NEW_Z5_CB_6051	NEW_Z5_MH_6052	K5	84	0.015	Circular	1.00	-	5.4	5.5	5.9	6.6
NEW_Z5_PIPE_6100	Z5_IL_3020	Z5_MH_5089	G7	500	0.015	Circular	3.50	-	62.5	71.7	78.5	86.1
NEW_Z5_PIPE_6101	Z5_OF_4395	Z5_IL_3020	G7	233	0.015	Circular	2.75	-	48.7	56.6	63.6	70.8
NEW_Z5_PIPE_6102	NEW_Z5_IL_6100	Z5_OF_4395	G7	60	0.015	Circular	2.75	-	47.6	55.0	62.1	78.8
NEW_Z5_PIPE_6103	NEW_Z5_IL_6100	NEW_Z5_IL_6101	G7	104	0.050	Trapezoidal	8.00	2.00	45.9	52.6	61.1	73.9
NEW_Z5_PIPE_6104	NEW_Z5_IL_6101	Z5_MH_3884	H7	135	0.015	Circular	2.50	-	45.9	52.6	61.1	73.9
NEW_Z5_PIPE_6105	Z5_MH_3884	NEW_Z5_MH_6103	H7	76	0.015	Circular	2.50	-	45.3	51.6	59.9	72.2
NEW_Z5_PIPE_6106	NEW_Z5_MH_6103	NEW_Z5_IL_6102	G7	28	0.015	Circular	2.50	-	42.5	47.9	55.0	65.4
NEW_Z5_PIPE_6107	Z5_IL_4903	NEW_Z5_MH_6103	G7	40	0.015	Circular	1.00	-	2.8	3.7	4.9	6.8
NEW_Z5_PIPE_6108	Z5_OF_4396	NEW_Z5_IL_6102	H7	432	0.050	Trapezoidal	26.00	15.00	35.9	39.9	45.4	53.4
NEW_Z5_PIPE_6109	Z5_OF_4397	NEW_Z5_IL_6103	G6	106	0.050	Trapezoidal	16.00	15.00	35.2	57.3	89.6	129.1
NEW_Z5_PIPE_6110	NEW_Z5_IL_6104	Z5_OF_4396	G6	497	0.050	Trapezoidal	18.00	15.00	30.5	33.6	38.0	44.3
NEW_Z5_PIPE_6111	NEW_Z5_IL_6103	NEW_Z5_IL_6104	G6	18	0.015	Circular	1.50	-	30.5	33.8	38.2	44.6
NEW_Z5_PIPE_6113	Z5_OF_4398	NEW_Z5_IL_6112	G7	414	0.050	Trapezoidal	18.00	15.00	15.9	19.9	25.5	33.9
NEW_Z5_PIPE_6114	Z5_OF_4399	Z5_OF_4398	F7	475	0.050	Trapezoidal	6.00	4.00	5.9	7.8	10.4	14.4
NEW_Z5_PIPE_6115	Z5_OF_4393	Z5_OF_4399	F7	133	0.500	Trapezoidal	6.00	4.00	3.5	4.6	6.2	8.6
NEW_Z5_PIPE_6116	NEW_Z5_IL_6112	Z5_OF_4397	F7	212	0.050	Trapezoidal	24.00	15.00	25.3	31.1	38.8	50.6
NEW_Z5_PIPE_6200	NEW_Z5_IL_6205	NEW_Z5_IL_6204	F5	151	0.015	Circular	2.00	-	33.2	36.1	39.4	44.4
NEW_Z5_PIPE_6201	NEW_Z5_IL_6204	NEW_Z5_IL_6203	F5	95	0.015	Circular	2.00	-	32.9	34.3	36.8	40.6
NEW_Z5_PIPE_6202	NEW_Z5_IL_6203	NEW_Z5_IL_6202	F5	195	0.015	Circular	2.00	-	32.9	34.3	36.3	39.4
NEW_Z5_PIPE_6203	NEW_Z5_IL_6202	NEW_Z5_IL_6201	F5	158	0.015	Circular	2.00	-	32.9	34.3	36.3	39.4
NEW_Z5_PIPE_6204	NEW_Z5_IL_6201	NEW_Z5_IL_6200	F5	359	0.015	Circular	2.50	-	32.9	34.3	36.2	39.4
NEW_Z5_PIPE_6205	NEW_Z5_IL_6200	Z5_IL_5362	F5	307	0.015	Circular	2.50	-	41.9	44.6	47.3	52.1
NEW_Z5_PIPE_6300	Z5_IL_2590	NEW_Z5_IL_6300	H6	80	0.015	Circular	1.00	-	3.8	3.7	3.6	4.4
NEW_Z5_PIPE_6303	NEW_Z5_IL_6302	NEW_Z5_IL_6301	H6	45	0.015	Circular	1.00	-	3.1	3.4	3.5	3.7
NEW_Z5_PIPE_6304	NEW_Z5_IL_6302	NEW_Z5_IL_6301	H6	45	0.015	Circular	1.00	-	3.1	3.4	3.5	3.7
NEW_Z5_PIPE_6305	NEW_Z5_IL_6303	NEW_Z5_IL_6302	H6	111	0.015	Circular	1.00	-	3.1	3.4	3.6	4.3
NEW_Z5_PIPE_6306	NEW_Z5_IL_6303	NEW_Z5_IL_6302	H6	111	0.015	Circular	1.00	-	3.1	3.4	3.6	4.3
NEW_Z5_PIPE_6400	NEW_Z5_MH_6400	NEW_Z5_OF_6402	H5	42	0.015	Circular	5.00	-	46.3	56.1	69.2	88.8
NEW_Z5_PIPE_6401	NEW_Z5_MH_6401	NEW_Z5_MH_6400	H5	92	0.015	Circular	5.00	-	46.3	56.1	69.1	88.8
NEW_Z5_PIPE_6402	Z5_MH_4283	Z5_IL_3547	H5	99	0.015	Circular	1.50	-	8.8	10.4	12.5	15.5
NEW_Z5_PIPE_6403	NEW_Z5_IL_6402	Z5_IL_3546	H5	396	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6404	NEW_Z5_IL_6403	NEW_Z5_IL_6402	H5	36	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6405	NEW_Z5_IL_6404	NEW_Z5_IL_6402	H5	46	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6406	NEW_Z5_MH_6406	NEW_Z5_MH_6405	H5	33	0.015	Circular	5.00	-	46.3	56.1	69.1	88.8
NEW_Z5_PIPE_6407	Z5_IL_3161	NEW_Z5_IL_6402	H5	554	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6408	NEW_Z5_IL_6407	Z5_IL_3160	H5	55	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6409	NEW_Z5_MH_6408	NEW_Z5_MH_6406	H5	359	0.015	Circular	5.00	-	46.3	56.1	69.1	88.8
NEW_Z5_PIPE_6410	NEW_Z5_IL_6411	NEW_Z5_MH_6410	H5	46	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6411	NEW_Z5_MH_6410	NEW_Z5_MH_6408	H5	59	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0

*The term "NEW" in a Link ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
NEW_Z5_PIPE_6412	NEW_Z5_IL_6409	NEW_Z5_MH_6408	H5	51	0.015	Circular	4.00	-	4.1	4.8	5.8	7.2
NEW_Z5_PIPE_6413	NEW_Z5_IL_6412	NEW_Z5_IL_6409	H5	261	0.015	Circular	2.00	-	4.1	4.8	5.8	7.2
NEW_Z5_PIPE_6414	NEW_Z5_IL_6413	NEW_Z5_IL_6412	H5	54	0.015	Circular	1.50	-	4.1	4.8	5.8	7.2
NEW_Z5_PIPE_6415	NEW_Z5_MH_6415	NEW_Z5_MH_6408	H5	153	0.015	Circular	4.00	-	32.7	40.1	50.0	64.9
NEW_Z5_PIPE_6416	NEW_Z5_IL_6414	NEW_Z5_MH_6415	H5	177	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6417	Z5_CB_212	NEW_Z5_MH_6415	H5	46	0.015	Circular	4.00	-	32.7	40.1	50.0	64.9
NEW_Z5_PIPE_6418	Z5_IL_3213	NEW_Z5_IL_6412	H5	98	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6419	NEW_Z5_IL_6415	NEW_Z5_IL_6413	H5	159	0.015	Circular	1.50	-	4.1	4.8	5.8	7.2
NEW_Z5_PIPE_6420	Z5_IL_3242	NEW_Z5_IL_6415	H5	54	0.015	Circular	1.50	-	4.1	4.8	5.8	7.2
NEW_Z5_PIPE_6421	NEW_Z5_IL_6416	NEW_Z5_IL_6415	H5	164	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6422	NEW_Z5_IL_6417	NEW_Z5_IL_6415	H5	492	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
NEW_Z5_PIPE_6423	NEW_Z5_IL_6418	NEW_Z5_IL_6412	H5	176	0.015	Circular	1.50	-	0.1	0.1	0.1	0.1
NEW_Z5_PIPE_649	NEW_Z5_MH_6040	Z5_OF_4429	G6	36	0.015	Circular	2.00	-	58.1	64.4	72.0	82.4
NEW_Z5_PIPE_6500	Z5_MH_3948	Z5_MH_4039	H7	40	0.015	Circular	4.00	-	1.1	1.1	1.1	3.1
NEW_Z5_PIPE_6501	NEW_Z5_IL_6500	NEW_Z5_IL_6501	M4	25	0.020	Circular	6.00	-	182.8	205.9	235.5	263.7
NEW_Z5_PIPE_6502	Z5_MH_3948	Z5_MH_4039	H7	40	0.015	Circular	4.00	-	1.1	1.1	1.1	3.1
NEW_Z5_PIPE_6503	NEW_Z5_IL_6502	NEW_Z5_IL_6503	M4	58	0.020	Circular	6.00	-	187.3	211.1	241.3	271.4
NEW_Z5_PIPE_6507	NEW_Z5_IL_6504	NEW_Z5_IL_6505	M4	330	0.020	Circular	6.00	-	197.0	222.7	255.1	290.2
NEW_Z5_PIPE_6509	NEW_Z5_IL_6506	NEW_Z5_OF_6510	M4	50	0.020	Circular	6.00	-	202.0	228.8	263.3	301.4
NEW_Z5_PIPE_6510	NEW_Z5_IL_6507	Z5_IL_2897	N4	64	0.015	Circular	1.25	-	4.6	6.2	8.3	8.4
NEW_Z5_PIPE_6511	NEW_Z5_IL_6508	NEW_Z5_IL_6507	N4	26	0.015	Circular	1.00	-	0.0	0.4	6.3	4.9
NEW_Z5_PIPE_6600	Z5_IL_2557	NEW_Z5_MH_6600	G7	188	0.015	Circular	1.25	-	2.4	2.8	3.3	4.1
NEW_Z5_PIPE_6601	ORCHARGE_STORAGE	NEW_Z5_MH_6600	G7	10	0.010	Triangular	0.33	2.00	1.4	0.7	0.7	0.9
NEW_Z5_PIPE_6602	NEW_Z5_MH_6600	NEW_Z5_MH_6601	G7	52	0.015	Circular	0.50	-	1.7	1.7	1.7	1.7
NEW_Z5_PIPE_6603	NEW_Z5_MH_6601	NEW_Z5_CB_6013	G7	41	0.015	Circular	0.50	-	1.6	1.7	1.7	1.7
NEW_Z5_PIPE_7000	NEW_Z5_OUT_6000	Z5_CB_738	H7	476	0.025	Trapezoidal	2.00	1.00	2.6	3.0	3.7	4.6
Z5_CHANNEL_122	Z5_OF_4431	Z5_IL_3422	E6	406	0.025	Trapezoidal	5.00	2.00	11.1	14.7	17.0	19.9
Z5_CHANNEL_123	Z5_OF_4538	Z5_IL_4885	E6	78	0.015	Trapezoidal	2.00	4.00	7.0	9.6	13.0	18.7
Z5_CHANNEL_129	Z5_OF_4428	Z5_IL_4887	G5	34	0.025	Trapezoidal	5.00	2.00	5.5	7.4	9.9	14.1
Z5_CHANNEL_133	Z5_MH_5189	Z5_IL_3701	F8	27	0.025	Trapezoidal	5.00	2.00	2.3	15.5	26.3	31.3
Z5_CHANNEL_136	Z5_OF_4592	Z5_OF_4382	H5	281	0.015	Trapezoidal	5.00	2.00	13.1	15.7	19.2	24.5
Z5_CHANNEL_313	Z5_OF_4493	Z5_IL_3215	E6	128	0.025	Trapezoidal	5.00	3.00	1.8	2.7	3.9	5.6
Z5_CHANNEL_379	Z5_OF_4991	Z5_IL_3157	G8	90	0.025	Trapezoidal	5.00	2.00	5.3	8.4	12.2	12.0
Z5_CHANNEL_380	Z5_OF_4414	Z5_IL_3157	G8	19	0.025	Trapezoidal	5.00	2.00	21.4	28.0	28.0	27.4
Z5_CHANNEL_396	Z5_IL_2501	Z5_IL_5272	L4	366	0.025	Trapezoidal	5.00	2.00	5.0	6.9	9.4	13.3
Z5_CHANNEL_398	Z5_OF_4443	STOR-1	L4	1	0.025	Trapezoidal	5.00	5.00	30.2	912.5	767.4	43.6
Z5_CHANNEL_546	Z5_IL_5272	Z5_IL_4956	M4	21	0.025	Trapezoidal	6.00	34.00	128.5	133.7	141.6	151.2
Z5_CHANNEL_547	Z5_OF_5080	Z5_IL_4957	L4	30	0.025	Trapezoidal	6.00	34.00	722.9	748.9	791.1	831.1
Z5_CHANNEL_65	Z5_OF_5078	Z5_IL_4953	L4	450	0.020	Trapezoidal	5.00	5.00	138.4	138.4	126.3	122.5
Z5_CHANNEL_66	Z5_OF_4437	Z5_IL_4952	L4	45	0.020	Trapezoidal	5.00	4.00	124.1	123.5	118.6	118.0
Z5_CHANNEL_67	Z5_OF_5073	Z5_IL_5272	M4	392	0.025	Trapezoidal	6.00	34.00	121.2	124.8	130.2	135.7
Z5_CHANNEL_69	Z5_OF_5079	Z5_OF_5080	M4	286	0.025	Trapezoidal	6.00	34.00	137.3	142.7	150.9	160.6
Z5_CHANNEL_793	Z5_OF_4996	Z5_IL_2651	E5	116	0.025	Trapezoidal	5.00	2.00	0.8	1.2	1.7	2.5
Z5_CHANNEL_795	Z5_OF_4384	Z5_IL_4889	G6	385	0.025	Trapezoidal	5.00	2.00	20.5	27.5	37.1	51.9
Z5_CHANNEL_796	Z5_OF_4975	Z5_IL_5379	E5	1113	0.025	Trapezoidal	5.00	2.00	1.7	2.6	3.8	5.5
Z5_CHANNEL_797	Z5_OF_4976	Z5_IL_5379	E5	589	0.025	Trapezoidal	5.00	2.00	0.8	1.2	1.8	2.7
Z5_CHANNEL_798	Z5_IL_5379	NEW_Z5_IL_6205	F5	1240	0.025	Trapezoidal	5.00	2.00	25.8	31.2	38.4	49.3
Z5_PIPE_1029	Z5_MH_3804	Z5_IL_1501	J6	45	0.015	Circular	2.00	-	10.6	14.8	20.5	26.4
Z5_PIPE_1037	Z5_IL_1207	Z5_IL_1206	F6	207	0.015	Circular	2.50	-	24.6	28.8	32.7	38.4
Z5_PIPE_1038	Z5_IL_1208	Z5_IL_1207	F6	163	0.015	Circular	2.50	-	24.6	28.8	32.7	38.4
Z5_PIPE_1039	Z5_IL_1206	Z5_OF_4977	F6	24	0.015	Circular	2.50	-	107.1	107.1	107.1	107.1
Z5_PIPE_1040	Z5_IL_997	Z5_IL_1208	F6	40	0.015	Circular	2.50	-	23.2	27.2	30.5	35.1
Z5_PIPE_1041	Z5_IL_1210	Z5_IL_1208	F6	35	0.015	Circular	1.00	-	1.4	2.1	3.0	4.3
Z5_PIPE_1042	Z5_IL_3700	Z5_IL_997	F6	348	0.015	Circular	2.00	-	14.3	16.5	17.8	20.3
Z5_PIPE_1043	Z5_SGIL_4628	Z5_IL_1209	F6	80	0.015	Circular	2.00	-	13.2	18.2	22.7	24.8
Z5_PIPE_1045	Z5_IL_1211	Z5_IL_1209	F6	114	0.015	Circular	1.00	-	1.7	1.6	2.1	3.0
Z5_PIPE_1046	Z5_SGIL_4629	Z5_IL_1211	F6	10	0.015	Circular	1.00	-	0.5	0.7	3.4	2.9
Z5_PIPE_1047	Z5_IL_2542	Z5_SGIL_4628	F6	58	0.015	Circular	2.00	-	13.2	18.2	25.4	29.9
Z5_PIPE_1063	Z5_IL_2131	Z5_IL_2132	G8	16	0.010	Circular	1.00	-	0.1	0.2	0.2	0.3
Z5_PIPE_1064	Z5_IL_2132	Z5_OF_4497	G8	114	0.010	Circular	1.00	-	0.1	0.2	0.2	0.3
Z5_PIPE_1067	Z5_IL_2148	Z5_IL_2147	H8	25	0.015	Circular	1.00	-	1.1	1.4	1.8	2.4
Z5_PIPE_1068	Z5_IL_2149	Z5_IL_2148	H8	42	0.010	Circular	1.00	-	1.1	1.4	1.8	2.4
Z5_PIPE_1070	Z5_MH_3825	Z5_OF_4496	H8	156	0.010	Circular	1.00	-	1.1	1.4	1.8	2.4
Z5_PIPE_1088	Z5_IL_1663	Z5_IL_1664	E6	114	0.015	Circular	2.00	-	0.5	0.7	1.0	1.5
Z5_PIPE_1089	Z5_IL_1664	Z5_IL_2151	E6	224	0.015	Circular	2.00	-	0.5	0.7	1.0	1.5
Z5_PIPE_1090	Z5_IL_2152	Z5_IL_2151	E6	34	0.015	Circular	1.25	-	0.8	1.2	1.7	2.4
Z5_PIPE_1092	Z5_IL_2151	Z5_MH_3826	E6	19	0.015	Circular	2.50	-	1.8	2.7	3.9	5.6
Z5_PIPE_1093	Z5_MH_3826	Z5_OF_4493	E6	40	0.010	Circular	2.50	-	1.8	2.7	3.9	5.6
Z5_PIPE_1097	Z5_IL_2164	Z5_IL_3187	F8	33	0.015	Circular	1.00	-	1.1	1.4	1.8	2.4
Z5_PIPE_110	Z5_IL_4883	Z5_OF_4973	H5	104	0.015	Circular	2.25	-	47.5	47.5	47.5	47.5

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_1195	Z5_IL_1169	Z5_IL_2182	H5	189	0.015	Circular	2.00	-	7.1	8.4	10.1	12.5
Z5_PIPE_1198	Z5_IL_2182	Z5_MH_3740	H5	56	0.015	Circular	2.00	-	14.6	14.6	22.1	23.4
Z5_PIPE_1199	Z5_MH_3740	Z5_IL_2183	G6	66	0.015	Circular	2.25	-	21.2	21.2	28.0	25.8
Z5_PIPE_12	Z5_IL_3147	Z5_IL_3055	G5	153	0.015	Circular	1.25	-	2.3	1.8	1.3	1.8
Z5_PIPE_1203	Z5_IL_996	Z5_OF_4978	G6	164	0.015	Circular	1.25	-	7.9	11.0	12.4	12.6
Z5_PIPE_1204	Z5_IL_2533	Z5_MH_3876	G6	47	0.015	Circular	1.00	-	0.8	1.0	1.2	1.6
Z5_PIPE_1205	Z5_IL_2534	Z5_MH_3876	G6	14	0.015	Circular	1.50	-	4.1	4.1	4.1	4.1
Z5_PIPE_1206	Z5_MH_3876	Z5_OF_4390	G6	93	0.015	Circular	3.00	-	58.1	76.9	99.9	114.1
Z5_PIPE_1207	Z5_MH_3878	Z5_MH_3877	G6	34	0.015	Circular	3.00	-	47.2	62.8	81.6	108.9
Z5_PIPE_1208	Z5_IL_2538	Z5_IL_2540	F6	246	0.010	Circular	1.50	-	7.3	10.1	14.0	20.0
Z5_PIPE_1209	Z5_IL_2540	Z5_IL_2541	F6	69	0.015	Circular	2.00	-	13.2	18.4	25.4	29.9
Z5_PIPE_1210	Z5_IL_5359	Z5_IL_2540	F6	18	0.015	Circular	1.00	-	6.0	8.4	11.6	13.0
Z5_PIPE_1211	Z5_IL_2541	Z5_IL_2542	F6	131	0.015	Circular	2.00	-	13.2	18.4	25.4	29.9
Z5_PIPE_1214	Z5_MH_4094	Z5_MH_4091	F5	250	0.015	Circular	1.75	-	6.8	10.2	14.8	21.1
Z5_PIPE_1215	Z5_IL_3074	Z5_MH_4084	F5	51	0.015	Circular	1.25	-	1.1	1.6	2.4	3.6
Z5_PIPE_1216	Z5_MH_4084	Z5_MH_4094	F5	227	0.015	Circular	1.25	-	4.6	6.9	10.1	11.6
Z5_PIPE_1217	Z5_IL_2300	Z5_IL_2301	H5	42	0.015	Circular	1.25	-	3.8	4.4	5.3	5.3
Z5_PIPE_1225	Z5_IL_2476	Z5_IL_2535	G6	208	0.015	Circular	2.00	-	9.2	12.2	16.4	21.9
Z5_PIPE_1226	Z5_IL_2474	Z5_IL_2476	G6	61	0.015	Circular	2.00	-	9.2	12.2	16.4	24.0
Z5_PIPE_1244	Z5_MH_3947	Z5_MH_4176	E6	83	0.015	Circular	1.50	-	4.1	6.1	8.8	12.7
Z5_PIPE_1245	Z5_MH_4176	Z5_OF_5565	E6	62	0.015	Rectangular	4.00	2.50	25.7	32.5	40.8	50.8
Z5_PIPE_1246	Z5_MH_4088	Z5_OF_4492	E6	135	0.015	Circular	3.00	-	40.0	59.3	89.7	92.2
Z5_PIPE_1247	Z5_MH_4360	Z5_MH_4176	E6	187	0.015	Circular	2.00	-	20.2	24.9	29.7	32.6
Z5_PIPE_1248	Z5_IL_3087	Z5_MH_4088	E6	39	0.015	Circular	1.25	-	0.2	0.4	2.7	2.4
Z5_PIPE_1249	Z5_IL_3089	Z5_IL_3088	F5	34	0.015	Circular	1.00	-	1.2	1.7	6.1	9.3
Z5_PIPE_1250	Z5_IL_3088	Z5_MH_4089	E6	110	0.015	Circular	1.00	-	1.2	1.7	6.1	7.3
Z5_PIPE_1251	Z5_MH_4089	Z5_MH_4088	E6	216	0.015	Circular	2.75	-	39.9	59.2	88.9	91.6
Z5_PIPE_1252	Z5_IL_3091	Z5_IL_3090	F5	35	0.015	Circular	1.00	-	0.9	1.3	4.8	5.4
Z5_PIPE_1253	Z5_IL_3090	Z5_MH_4090	F5	103	0.015	Circular	1.00	-	0.9	1.3	4.9	8.4
Z5_PIPE_1254	Z5_MH_4090	Z5_MH_4089	F6	281	0.015	Circular	2.75	-	38.3	56.8	88.7	94.4
Z5_PIPE_1255	Z5_MH_4168	Z5_OF_4430	F6	41	0.015	Circular	2.00	-	4.3	6.5	9.4	13.7
Z5_PIPE_1256	Z5_MH_4096	Z5_MH_4095	F6	329	0.015	Circular	1.00	-	2.9	3.4	3.0	3.4
Z5_PIPE_1257	Z5_IL_3094	Z5_IL_3095	E5	36	0.015	Circular	1.00	-	2.9	4.0	5.5	6.9
Z5_PIPE_1258	Z5_IL_2678	Z5_IL_2679	E5	40	0.015	Circular	1.50	-	10.8	13.8	15.7	17.9
Z5_PIPE_1259	Z5_IL_2679	Z5_IL_3096	E5	215	0.015	Circular	1.50	-	10.6	13.8	15.7	17.9
Z5_PIPE_1260	Z5_IL_3096	Z5_IL_3097	E6	62	0.015	Circular	1.75	-	10.6	13.8	15.7	17.9
Z5_PIPE_1261	Z5_MH_4065	Z5_MH_4064	F8	134	0.015	Circular	1.25	-	2.1	2.7	3.5	4.6
Z5_PIPE_1262	Z5_MH_4064	Z5_MH_4063	F8	63	0.015	Circular	1.25	-	2.1	2.7	3.5	4.6
Z5_PIPE_1263	Z5_MH_4063	Z5_OF_4415	F8	59	0.015	Circular	1.25	-	2.1	2.7	3.5	4.6
Z5_PIPE_1264	Z5_IL_5086	Z5_MH_4063	F8	17	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1272	Z5_CB_230	Z5_CB_231	H5	274	0.015	Circular	1.50	-	5.8	6.9	8.4	10.7
Z5_PIPE_1273	Z5_MH_4325	Z5_CB_231	H5	48	0.015	Circular	1.00	-	2.7	3.2	4.0	5.0
Z5_PIPE_1274	Z5_CB_231	Z5_MH_4027	H5	196	0.015	Circular	2.00	-	11.3	13.6	16.7	21.2
Z5_PIPE_1275	Z5_MH_4027	Z5_OF_4592	H5	70	0.015	Circular	2.00	-	13.1	15.7	19.3	24.5
Z5_PIPE_1276	Z5_CB_233	Z5_MH_4027	H5	90	0.015	Circular	1.00	-	1.8	2.2	2.7	3.4
Z5_PIPE_1277	Z5_SGIL_4736	Z5_OF_4976	E5	233	0.010	Circular	1.00	-	0.5	0.8	1.1	1.6
Z5_PIPE_1278	Z5_CB_34	Z5_OF_4976	E5	38	0.010	Circular	1.00	-	0.3	0.5	0.7	1.1
Z5_PIPE_1288	Z5_IL_3072	Z5_MH_4085	E5	53	0.015	Circular	1.00	-	0.4	0.6	0.9	1.3
Z5_PIPE_1289	Z5_IL_3073	Z5_MH_4085	E5	33	0.015	Circular	1.25	-	0.6	0.8	1.2	1.7
Z5_PIPE_1290	Z5_IL_2668	Z5_MH_4085	E5	143	0.015	Circular	2.50	-	24.2	35.6	51.2	74.8
Z5_PIPE_1291	Z5_MH_4085	Z5_MH_4091	F5	479	0.015	Circular	2.50	-	25.1	37.0	53.3	77.8
Z5_PIPE_1292	Z5_IL_3083	Z5_MH_4091	F5	28	0.015	Circular	1.00	-	1.2	1.8	2.6	4.7
Z5_PIPE_1293	Z5_IL_3081	Z5_MH_4094	F5	13	0.015	Circular	1.00	-	2.2	3.3	4.7	10.9
Z5_PIPE_1328	Z5_CB_229	Z5_CB_230	G5	96	0.015	Circular	1.50	-	5.8	6.9	8.5	10.7
Z5_PIPE_1330	Z5_MH_4086	Z5_MH_4084	F5	245	0.015	Circular	1.25	-	3.0	4.5	6.5	8.0
Z5_PIPE_1331	Z5_IL_3082	Z5_MH_4093	F5	48	0.015	Circular	1.00	-	2.8	4.1	5.9	8.8
Z5_PIPE_1332	Z5_IL_3085	Z5_IL_3084	F5	60	0.015	Circular	1.00	-	1.0	1.5	2.1	3.9
Z5_PIPE_1333	Z5_IL_3084	Z5_MH_4093	F5	237	0.015	Circular	1.50	-	2.0	2.9	4.2	6.7
Z5_PIPE_1334	Z5_IL_3098	Z5_MH_4108	E6	45	0.015	Circular	1.00	-	0.6	0.9	1.2	1.8
Z5_PIPE_1335	Z5_MH_4108	Z5_IL_3084	E6	262	0.015	Circular	1.00	-	0.6	0.9	1.2	1.8
Z5_PIPE_1336	Z5_MH_3824	Z5_IL_2987	F5	109	0.015	Circular	1.50	-	3.0	4.5	6.5	9.5
Z5_PIPE_1337	Z5_IL_2987	Z5_MH_3947	F5	412	0.015	Circular	1.50	-	3.0	4.5	6.5	9.5
Z5_PIPE_1338	Z5_IL_3215	Z5_MH_4176	E6	14	0.015	Rectangular	4.00	2.50	2.1	3.2	4.6	6.7
Z5_PIPE_1403	Z5_CB_692	Z5_CB_693	M4	170	0.010	Circular	1.00	-	7.4	8.3	9.6	11.4
Z5_PIPE_1404	Z5_CB_693	Z5_OF_4546	M4	40	0.015	Circular	1.00	-	7.4	8.3	9.6	11.4
Z5_PIPE_1407	NEW_Z5_IL_6300	Z5_MH_4249	H6	172	0.015	Circular	1.25	-	7.1	7.2	7.5	8.1
Z5_PIPE_1409	Z5_MH_4249	Z5_MH_5095	H6	87	0.015	Circular	1.50	-	7.1	7.2	7.5	7.9
Z5_PIPE_1410	Z5_IL_3026	Z5_OF_4979	J7	77	0.015	Circular	2.00	-	12.7	15.2	18.5	23.3
Z5_PIPE_1411	Z5_IL_3480	Z5_IL_3482	H6	58	0.015	Circular	1.00	-	3.7	5.0	6.7	8.3
Z5_PIPE_1412	Z5_IL_2557	Z5_MH_3880	G7	38	0.015	Circular	1.25	-	2.4	2.8	3.3	4.1

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_1414	Z5_MH_5089	Z5_MH_4250	G7	96	0.010	Circular	3.50	-	62.5	71.7	78.5	86.1
Z5_PIPE_1415	Z5_IL_2684	Z5_IL_2685	G7	25	0.015	Circular	2.00	-	0.7	0.8	1.0	1.2
Z5_PIPE_1460	Z5_IL_3437	Z5_MH_4243	H5	37	0.015	Circular	1.00	-	1.1	1.3	1.6	2.1
Z5_PIPE_1461	Z5_MH_3774	Z5_MH_4244	H5	290	0.015	Circular	1.50	-	6.4	7.9	8.4	8.1
Z5_PIPE_1462	Z5_MH_4244	Z5_MH_4243	H5	262	0.015	Circular	1.50	-	7.0	8.8	9.7	9.9
Z5_PIPE_1463	Z5_IL_1415	Z5_IL_3438	H5	19	0.015	Circular	1.00	-	1.3	1.3	7.3	7.3
Z5_PIPE_148	Z5_SGIL_4781	Z5_MH_4267	L5	19	0.010	Circular	1.25	-	4.6	2.9	2.5	3.2
Z5_PIPE_1487	Z5_MH_4093	Z5_MH_4092	F5	106	0.015	Circular	1.50	-	4.6	6.8	9.8	13.6
Z5_PIPE_1488	Z5_MH_4092	Z5_MH_5105	F5	24	0.015	Circular	1.50	-	4.6	6.8	9.9	16.7
Z5_PIPE_1489	Z5_IL_3420	Z5_IL_3421	E6	37	0.015	Circular	1.50	-	10.9	11.4	12.1	12.5
Z5_PIPE_1490	Z5_IL_3421	Z5_MH_4087	E6	127	0.015	Circular	1.50	-	10.9	11.4	12.1	12.4
Z5_PIPE_1491	Z5_MH_4109	Z5_MH_4087	E6	104	0.015	Circular	1.75	-	8.6	12.0	15.8	18.3
Z5_PIPE_1492	Z5_MH_4087	Z5_MH_4360	E6	247	0.015	Circular	2.00	-	20.0	24.6	29.3	32.0
Z5_PIPE_1493	Z5_MH_4110	Z5_MH_4109	E6	209	0.015	Circular	1.75	-	8.6	12.0	15.8	18.3
Z5_PIPE_1494	Z5_MH_4111	Z5_IL_3099	E6	27	0.015	Circular	2.25	-	8.6	12.0	16.3	23.9
Z5_PIPE_1495	Z5_IL_3099	Z5_MH_4110	F6	101	0.015	Circular	2.25	-	8.6	12.0	16.2	23.9
Z5_PIPE_1496	Z5_IL_3097	Z5_OF_4431	E6	20	0.015	Circular	1.75	-	11.2	14.7	17.0	19.9
Z5_PIPE_1497	Z5_IL_3422	Z5_IL_3420	E6	126	0.015	Circular	1.25	-	10.6	10.7	11.3	11.8
Z5_PIPE_1498	Z5_SGIL_4740	Z5_MH_4361	E5	38	0.015	Circular	1.50	-	0.5	0.8	1.1	1.6
Z5_PIPE_1499	Z5_IL_2677	Z5_MH_5106	E5	26	0.015	Circular	1.50	-	0.7	1.0	1.5	2.2
Z5_PIPE_1500	Z5_IL_3101	Z5_IL_3100	E6	52	0.015	Modbasket Handle	1.50	3.50	5.7	7.7	10.4	14.5
Z5_PIPE_1501	Z5_IL_3100	Z5_OF_4538	E6	96	0.015	Circular	2.00	-	7.0	9.6	13.1	18.6
Z5_PIPE_1502	Z5_IL_4884	Z5_IL_3101	E6	114	0.015	Circular	2.00	-	5.2	7.0	9.3	13.0
Z5_PIPE_1503	Z5_MH_4112	Z5_IL_3100	E6	15	0.015	Circular	1.25	-	1.3	1.9	2.8	4.1
Z5_PIPE_1505	Z5_MH_4235	Z5_IL_3706	E5	192	0.015	Circular	1.25	-	7.6	9.5	10.1	10.4
Z5_PIPE_1506	Z5_IL_3095	Z5_MH_4235	E5	28	0.015	Circular	1.00	-	2.9	4.0	6.8	6.9
Z5_PIPE_1507	Z5_IL_3093	Z5_MH_4236	E5	12	0.015	Circular	1.00	-	0.0	1.0	1.2	1.9
Z5_PIPE_1508	Z5_MH_4236	Z5_MH_4235	E5	107	0.015	Circular	1.00	-	4.7	6.5	6.9	6.7
Z5_PIPE_1510	Z5_IL_3690	Z5_IL_3689	G5	240	0.015	Circular	1.50	-	1.4	1.9	2.6	3.7
Z5_PIPE_1514	Z5_IL_3056	Z5_IL_3055	G5	33	0.015	Circular	1.00	-	2.8	2.1	2.4	2.8
Z5_PIPE_157	Z5_MH_4037	Z5_SGMH_4866	G7	156	0.015	Circular	1.50	-	8.3	10.6	13.6	18.2
Z5_PIPE_158	Z5_IL_3023	Z5_MH_4037	G7	9	0.015	Circular	1.00	-	0.8	1.0	1.2	2.0
Z5_PIPE_159	Z5_IL_3022	Z5_MH_4037	G7	23	0.015	Circular	1.00	-	0.6	0.8	1.1	1.7
Z5_PIPE_160	Z5_IL_2607	Z5_MH_4062	G7	11	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_161	Z5_IL_2606	Z5_MH_4062	G7	20	0.015	Circular	1.00	-	0.4	0.6	0.8	1.1
Z5_PIPE_162	Z5_IL_3151	Z5_MH_4062	G7	319	0.010	Circular	1.50	-	6.6	8.3	10.7	14.2
Z5_PIPE_163	Z5_IL_3059	Z5_IL_3151	G7	21	0.015	Circular	1.00	-	0.8	1.1	1.4	1.9
Z5_PIPE_1630	Z5_IL_3430	Z5_IL_2301	H5	25	0.015	Circular	1.25	-	8.0	8.0	8.0	8.5
Z5_PIPE_1638	Z5_MH_4240	Z5_SGIL_4806	H5	160	0.015	Circular	1.25	-	13.5	14.3	15.5	17.3
Z5_PIPE_1639	Z5_SGIL_4806	Z5_MH_4241	H5	116	0.015	Circular	1.25	-	13.3	13.3	13.3	14.6
Z5_PIPE_164	Z5_MH_4157	Z5_MH_4037	G7	172	0.015	Circular	1.50	-	7.0	8.9	11.4	15.2
Z5_PIPE_1640	Z5_CB_663	Z5_MH_4241	H5	13	0.015	Circular	1.00	-	1.3	1.6	6.1	1.9
Z5_PIPE_1641	Z5_MH_4241	Z5_MH_4242	H5	226	0.015	Circular	1.25	-	11.8	12.1	12.5	13.2
Z5_PIPE_1642	Z5_MH_4242	Z5_OF_5569	H5	99	0.015	Circular	1.75	-	12.0	12.3	12.8	13.5
Z5_PIPE_1643	Z5_IL_3194	Z5_OF_4541	H5	79	0.015	Circular	2.00	-	21.8	26.8	30.7	37.6
Z5_PIPE_1644	Z5_IL_1423	Z5_IL_3163	H5	33	0.015	Circular	1.00	-	2.5	3.1	3.9	4.8
Z5_PIPE_1645	Z5_IL_3163	Z5_OF_4451	H5	99	0.015	Circular	1.00	-	2.5	3.1	3.9	4.7
Z5_PIPE_1646	Z5_IL_1417	Z5_IL_1416	H5	36	0.015	Circular	1.00	-	2.2	2.6	4.1	3.4
Z5_PIPE_1647	Z5_IL_1418	Z5_MH_3774	H5	33	0.015	Circular	1.00	-	1.0	1.5	6.4	5.6
Z5_PIPE_1648	Z5_IL_1419	Z5_MH_3774	H5	38	0.015	Circular	1.00	-	0.0	0.3	4.7	3.8
Z5_PIPE_1649	Z5_IL_1416	Z5_MH_3774	H5	60	0.015	Circular	1.00	-	2.2	2.5	3.0	2.4
Z5_PIPE_1650	Z5_IL_1420	Z5_MH_3774	H5	55	0.015	Circular	1.25	-	4.0	5.1	9.6	5.4
Z5_PIPE_1651	Z5_MH_4243	Z5_SGIL_4807	H5	40	0.015	Circular	1.50	-	9.0	11.4	13.7	15.1
Z5_PIPE_1652	Z5_SGIL_4807	Z5_OF_4410	H5	77	0.015	Circular	1.50	-	9.0	11.4	13.7	15.1
Z5_PIPE_1653	Z5_IL_3436	Z5_MH_4243	H5	14	0.015	Circular	1.00	-	1.9	2.5	3.1	4.1
Z5_PIPE_1655	Z5_IL_1422	Z5_IL_2300	H5	88	0.015	Circular	1.25	-	3.8	4.4	5.4	5.4
Z5_PIPE_1658	Z5_IL_1005	Z5_IL_1004	G6	104	0.015	Circular	1.00	-	0.8	1.0	1.3	1.7
Z5_PIPE_1659	Z5_IL_1004	Z5_IL_1003	G6	221	0.015	Circular	1.00	-	0.8	1.0	1.3	1.7
Z5_PIPE_1660	Z5_IL_3172	Z5_IL_1002	G6	55	0.010	Circular	1.00	-	0.9	1.2	1.6	5.0
Z5_PIPE_1661	Z5_IL_1003	Z5_IL_1002	G6	47	0.010	Circular	1.00	-	1.7	2.2	2.7	7.2
Z5_PIPE_1662	Z5_IL_3439	Z5_SGMH_4873	G6	18	0.010	Circular	1.50	-	6.7	9.4	12.8	14.3
Z5_PIPE_1663	Z5_SGMH_4873	Z5_IL_5559	G6	78	0.015	Circular	1.50	-	6.7	9.4	12.8	14.3
Z5_PIPE_1664	Z5_IL_1002	Z5_IL_3439	G6	109	0.010	Circular	1.00	-	6.7	9.4	12.8	14.3
Z5_PIPE_1665	Z5_MH_4033	Z5_MH_5098	H6	252	0.015	Circular	1.00	-	4.0	5.3	5.5	5.8
Z5_PIPE_1666	Z5_IL_3440	Z5_MH_4034	H6	24	0.015	Circular	1.00	-	1.4	1.8	2.6	3.0
Z5_PIPE_1667	Z5_MH_4034	Z5_MH_4033	H6	132	0.015	Circular	1.00	-	3.4	4.3	4.6	4.7
Z5_PIPE_1668	Z5_IL_1267	Z5_MH_3759	N4	19	0.015	Circular	1.00	-	0.9	1.1	1.4	1.9
Z5_PIPE_1669	Z5_IL_1242	Z5_IL_1241	M4	25	0.015	Circular	1.00	-	0.7	1.0	1.3	2.1
Z5_PIPE_1670	Z5_IL_1251	Z5_IL_1250	N5	26	0.015	Circular	1.00	-	0.5	0.7	0.9	4.2
Z5_PIPE_1671	Z5_CB_474	Z5_IL_1241	M4	118	0.015	Circular	1.00	-	2.4	3.0	3.3	3.6

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_1672	Z5_IL_1239	Z5_IL_1237	M4	322	0.015	Circular	1.25	-	4.0	5.1	5.2	5.2
Z5_PIPE_1673	Z5_IL_1229	Z5_IL_1227	M4	358	0.015	Circular	1.25	-	1.5	2.0	2.6	3.1
Z5_PIPE_1674	Z5_IL_1227	Z5_IL_1226	M4	141	0.015	Circular	1.25	-	2.9	3.8	4.8	6.4
Z5_PIPE_1675	Z5_IL_1288	Z5_IL_1287	M4	34	0.015	Circular	1.00	-	1.5	2.0	3.0	3.5
Z5_PIPE_1677	Z5_IL_1197	Z5_MH_3747	M5	9	0.015	Circular	1.00	-	0.9	1.1	1.3	1.6
Z5_PIPE_1680	Z5_IL_980	Z5_IL_979	M5	36	0.010	Circular	1.00	-	2.1	2.6	3.2	4.1
Z5_PIPE_1684	Z5_IL_978	Z5_IL_1202	M5	35	0.015	Circular	1.00	-	1.7	2.3	3.3	5.4
Z5_PIPE_1685	Z5_IL_3530	Z5_IL_3531	K5	6	0.015	Circular	1.00	-	2.8	2.5	2.2	2.7
Z5_PIPE_1686	Z5_IL_3533	Z5_CB_4917	K5	20	0.015	Rectangular (open)	8.00	10.00	266.6	226.3	218.4	231.4
Z5_PIPE_1687	Z5_IL_3531	Z5_MH_5118	K5	54	0.015	Circular	1.00	-	2.8	2.5	2.2	2.8
Z5_PIPE_1691	Z5_SGIL_4751	Z5_IL_3534	K5	70	0.015	Circular	1.00	-	4.3	4.8	4.8	4.9
Z5_PIPE_1692	Z5_IL_3534	Z5_MH_3873	K5	23	0.015	Circular	1.00	-	9.7	10.8	11.3	12.1
Z5_PIPE_170	Z5_IL_1280	Z5_SGMH_4851	N4	28	0.015	Circular	1.00	-	0.3	0.5	0.6	0.8
Z5_PIPE_171	Z5_SGMH_4851	Z5_OF_4401	O4	64	0.015	Circular	1.50	-	13.1	16.4	20.1	23.0
Z5_PIPE_1710	Z5_IL_3571	Z5_MH_4305	L4	104	0.015	Circular	2.25	-	10.0	13.1	17.2	23.0
Z5_PIPE_1711	Z5_MH_4305	Z5_CB_503	L5	44	0.015	Circular	2.25	-	10.0	13.1	17.2	23.0
Z5_PIPE_1712	Z5_IL_2942	Z5_IL_3571	L4	76	0.015	Circular	1.00	-	1.1	1.5	1.9	2.6
Z5_PIPE_1713	Z5_IL_3055	Z5_IL_1986	G6	97	0.015	Circular	1.00	-	3.7	3.5	3.1	3.0
Z5_PIPE_1714	Z5_IL_1483	Z5_MH_3869	G6	84	0.015	Circular	1.50	-	7.3	9.0	11.3	11.9
Z5_PIPE_1715	Z5_IL_1481	Z5_MH_3869	G6	23	0.015	Circular	1.50	-	3.3	4.6	6.3	13.8
Z5_PIPE_1716	Z5_IL_1482	Z5_MH_3869	G6	41	0.015	Circular	1.50	-	0.6	0.9	1.2	3.7
Z5_PIPE_1717	Z5_MH_3869	Z5_MH_3876	G6	144	0.015	Circular	3.00	-	57.0	75.5	98.1	112.0
Z5_PIPE_1718	Z5_MH_3877	Z5_MH_3869	G6	107	0.015	Circular	3.00	-	47.2	62.8	81.6	95.4
Z5_PIPE_1719	Z5_IL_2535	Z5_MH_3878	G6	192	0.015	Circular	2.00	-	11.3	14.9	19.7	22.5
Z5_PIPE_172	Z5_SGMH_4849	Z5_SGMH_4851	N4	50	0.015	Circular	2.00	-	12.8	16.0	19.6	22.2
Z5_PIPE_1721	Z5_IL_4882	Z5_MH_4237	G6	53	0.015	Circular	1.00	-	5.1	5.1	5.1	5.1
Z5_PIPE_1723	Z5_MH_4237	Z5_MH_5101	G6	85	0.015	Rectangular	3.00	5.00	120.0	130.4	151.9	178.4
Z5_PIPE_1724	Z5_IL_3426	Z5_MH_4237	G6	29	0.015	Circular	1.25	-	8.7	8.7	8.7	8.7
Z5_PIPE_1726	Z5_IL_3427	Z5_MH_5101	G6	62	0.015	Circular	1.00	-	4.5	4.5	4.5	5.1
Z5_PIPE_173	Z5_IL_1219	Z5_SGMH_4849	N4	13	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_174	Z5_IL_2401	Z5_MH_3856	G7	45	0.015	Circular	1.00	-	7.8	7.9	8.5	9.7
Z5_PIPE_175	Z5_IL_2402	Z5_MH_3856	G7	258	0.015	Circular	1.25	-	10.5	11.0	11.8	13.1
Z5_PIPE_176	Z5_IL_4879	Z5_IL_2402	G7	187	0.015	Circular	1.25	-	9.4	9.6	10.0	10.6
Z5_PIPE_177	Z5_IL_2404	Z5_IL_4879	G7	206	0.015	Circular	1.25	-	8.6	9.3	10.1	10.8
Z5_PIPE_178	Z5_MH_5094	Z5_IL_2404	G7	99	0.015	Circular	1.25	-	8.6	9.3	10.1	10.9
Z5_PIPE_179	Z5_MH_3857	Z5_MH_5094	G7	137	0.015	Circular	1.00	-	7.5	7.9	8.2	8.8
Z5_PIPE_180	Z5_IL_2407	Z5_IL_2406	G7	52	0.015	Circular	1.00	-	0.8	1.1	1.4	1.9
Z5_PIPE_181	Z5_IL_2406	Z5_MH_3857	G7	130	0.015	Circular	1.00	-	0.8	1.1	1.4	1.9
Z5_PIPE_186	Z5_MH_5104	Z5_OF_4384	G6	76	0.015	Circular	3.00	-	20.5	27.5	37.1	51.9
Z5_PIPE_187	Z5_IL_2446	Z5_IL_2445	G6	29	0.015	Circular	1.00	-	0.9	1.3	1.7	2.4
Z5_PIPE_188	Z5_IL_2445	Z5_MH_5104	G6	43	0.015	Circular	1.00	-	3.5	4.8	6.4	8.9
Z5_PIPE_1908	Z5_IL_1986	Z5_MH_4059	G6	253	0.015	Circular	1.00	-	2.0	1.8	2.0	2.0
Z5_PIPE_1912	Z5_IL_3199	Z5_IL_1502	H6	15	0.015	Circular	1.75	-	0.0	0.0	0.8	12.2
Z5_PIPE_1913	Z5_IL_1502	Z5_MH_3804	H6	9	0.015	Circular	2.00	-	9.9	14.8	17.5	23.6
Z5_PIPE_1914	Z5_MH_3805	Z5_MH_3804	J6	211	0.010	Circular	2.00	-	4.2	5.4	7.0	9.1
Z5_PIPE_1916	Z5_MH_5098	Z5_MH_4032	H6	175	0.015	Circular	1.00	-	6.2	8.1	9.2	10.7
Z5_PIPE_1917	Z5_MH_4032	Z5_MH_4031	H6	164	0.015	Circular	1.00	-	7.2	9.5	10.9	12.9
Z5_PIPE_1918	Z5_MH_4031	Z5_OF_4972	H6	121	0.015	Circular	1.25	-	7.2	9.5	10.9	12.9
Z5_PIPE_1919	Z5_IL_3448	Z5_MH_5099	G6	103	0.015	Circular	1.00	-	3.2	4.5	6.1	8.5
Z5_PIPE_192	Z5_IL_3003	Z5_IL_3004	H5	34	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_1920	Z5_MH_5099	Z5_IL_1002	G6	215	0.015	Circular	1.25	-	3.2	4.5	6.1	8.5
Z5_PIPE_1921	Z5_IL_2548	Z5_IL_2547	G6	77	0.015	Circular	1.50	-	15.1	19.6	22.7	23.2
Z5_PIPE_1922	Z5_IL_2547	Z5_MH_5103	G6	32	0.015	Circular	1.50	-	15.9	20.9	24.7	26.1
Z5_PIPE_1924	Z5_IL_2546	Z5_IL_2548	G6	180	0.015	Circular	1.50	-	14.1	18.4	21.6	22.0
Z5_PIPE_1925	Z5_IL_2543	Z5_IL_2546	G6	216	0.015	Circular	1.50	-	12.0	15.9	20.2	20.7
Z5_PIPE_193	Z5_IL_3004	Z5_IL_3011	H5	170	0.015	Circular	1.25	-	0.8	1.2	1.7	2.4
Z5_PIPE_194	Z5_IL_3010	Z5_IL_3011	H5	74	0.015	Circular	1.00	-	1.7	2.3	3.1	4.3
Z5_PIPE_195	Z5_IL_3011	Z5_IL_3681	H5	79	0.015	Circular	1.25	-	2.5	3.5	4.8	6.7
Z5_PIPE_196	Z5_IL_3012	Z5_IL_3430	H5	121	0.015	Circular	1.25	-	3.1	4.3	6.2	8.7
Z5_PIPE_200	Z5_IL_1220	Z5_SGMH_4849	N4	33	0.015	Circular	1.00	-	0.9	1.2	1.6	2.3
Z5_PIPE_202	Z5_CB_528	Z5_IL_3112	N4	50	0.015	Circular	2.00	-	11.5	14.3	17.3	19.0
Z5_PIPE_203	Z5_IL_1222	Z5_MH_3756	N4	16	0.015	Circular	1.75	-	7.5	9.2	10.8	11.4
Z5_PIPE_2035	Z5_MH_5105	Z5_MH_4090	F5	235	0.015	Circular	2.75	-	37.1	55.1	85.1	103.9
Z5_PIPE_2036	Z5_MH_5102	Z5_MH_4035	G6	266	0.015	Circular	3.00	-	34.9	46.6	63.1	80.1
Z5_PIPE_2037	Z5_IL_2549	Z5_MH_5102	G6	9	0.015	Circular	1.75	-	2.0	2.6	3.4	4.6
Z5_PIPE_204	Z5_IL_1225	Z5_MH_3756	N4	35	0.015	Circular	1.25	-	3.6	4.7	6.0	7.8
Z5_PIPE_205	Z5_IL_1226	Z5_IL_1225	N4	224	0.015	Circular	1.25	-	2.9	3.8	4.8	6.9
Z5_PIPE_206	Z5_MH_4061	Z5_MH_4157	G7	80	0.015	Circular	1.50	-	7.0	8.9	11.5	15.2
Z5_PIPE_207	Z5_MH_4062	Z5_MH_4061	G7	153	0.015	Circular	1.50	-	7.0	8.9	11.5	15.2
Z5_PIPE_208	Z5_SGMH_4866	Z5_MH_3896	G7	98	0.015	Circular	1.50	-	12.6	10.6	13.5	13.9

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_209	Z5_CB_597	Z5_IL_2622	E7	37	0.015	Circular	1.00	-	1.8	2.4	3.2	4.4
Z5_PIPE_2095	Z5_SGIL_4811	Z5_MH_5100	G6	89	0.010	Circular	1.00	-	4.4	7.2	9.6	7.5
Z5_PIPE_210	Z5_IL_2622	Z5_IL_5356	E7	93	0.015	Circular	1.00	-	1.8	2.4	3.2	4.4
Z5_PIPE_211	Z5_IL_2608	NEW_Z5_OF_6600	G7	68	0.015	Circular	1.50	-	14.2	14.1	14.9	16.0
Z5_PIPE_2118	Z5_IL_2644	Z5_SGIL_4739	E5	28	0.010	Circular	1.00	-	0.8	1.2	1.7	2.5
Z5_PIPE_2119	Z5_SGIL_4739	Z5_OF_4996	E5	107	0.010	Circular	1.00	-	0.8	1.2	1.7	2.5
Z5_PIPE_2123	Z5_MH_4171	Z5_IL_1474	G8	103	0.010	Circular	1.75	-	26.7	34.2	35.1	34.2
Z5_PIPE_2124	Z5_IL_1474	Z5_IL_1472	G8	55	0.015	Circular	1.75	-	26.7	29.1	29.1	29.1
Z5_PIPE_2128	Z5_IL_1351	Z5_CB_363	G8	42	0.015	Circular	1.50	-	16.8	17.8	17.3	16.9
Z5_PIPE_2129	Z5_CB_363	Z5_MH_4254	G8	102	0.015	Circular	1.50	-	14.1	14.2	13.0	12.2
Z5_PIPE_213	Z5_MH_3856	Z5_MH_5093	G7	94	0.015	Circular	1.50	-	17.8	18.4	19.6	21.2
Z5_PIPE_2130	Z5_MH_4254	Z5_CB_361	G8	34	0.015	Circular	2.50	-	38.1	37.7	40.7	41.0
Z5_PIPE_2131	Z5_CB_361	Z5_MH_4118	G8	136	0.015	Circular	1.75	-	35.3	36.8	38.4	40.3
Z5_PIPE_2133	Z5_MH_4166	Z5_MH_4254	G8	198	0.015	Circular	1.75	-	27.7	28.5	29.3	30.6
Z5_PIPE_2136	Z5_CB_380	Z5_CB_379	G8	54	0.015	Circular	1.00	-	0.7	0.9	1.2	1.5
Z5_PIPE_2137	Z5_CB_379	Z5_MH_4255	G8	87	0.015	Circular	1.00	-	0.7	0.9	1.2	1.5
Z5_PIPE_2138	Z5_IL_3496	Z5_MH_4255	G8	17	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2139	Z5_IL_3498	Z5_MH_4255	G8	7	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2140	Z5_IL_3497	Z5_MH_4255	G8	41	0.015	Circular	1.00	-	1.0	1.2	1.5	2.0
Z5_PIPE_2141	Z5_CB_370	Z5_CB_369	G8	77	0.015	Circular	1.00	-	0.0	0.0	1.1	1.6
Z5_PIPE_2142	Z5_CB_369	Z5_MH_4067	G8	52	0.015	Circular	1.00	-	0.0	0.2	1.5	1.8
Z5_PIPE_2143	Z5_CB_371	Z5_CB_373	G8	84	0.015	Circular	1.00	-	0.9	1.1	2.0	2.5
Z5_PIPE_2144	Z5_CB_372	Z5_MH_3949	G8	83	0.015	Circular	1.00	-	1.8	2.3	3.2	3.3
Z5_PIPE_2145	Z5_CB_376	Z5_CB_375	G8	89	0.015	Circular	1.00	-	0.9	1.2	1.5	1.9
Z5_PIPE_2146	Z5_CB_375	Z5_CB_374	G8	78	0.015	Circular	1.00	-	0.9	1.2	1.5	1.9
Z5_PIPE_2147	Z5_CB_374	Z5_CB_378	G8	112	0.015	Circular	1.25	-	0.9	1.2	1.5	1.9
Z5_PIPE_2148	Z5_CB_377	Z5_CB_378	G8	152	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2149	Z5_CB_378	Z5_CB_714	G8	100	0.015	Circular	1.75	-	12.4	15.1	18.9	19.6
Z5_PIPE_215	Z5_IL_2686	Z5_IL_2687	G6	24	0.015	Circular	1.00	-	0.6	0.7	1.0	1.3
Z5_PIPE_2150	Z5_CB_714	Z5_CB_715	G8	64	0.015	Circular	1.50	-	12.4	15.1	18.9	19.6
Z5_PIPE_2151	Z5_CB_715	Z5_OF_4416	G8	82	0.015	Circular	1.50	-	13.3	16.3	18.2	19.3
Z5_PIPE_2152	Z5_IL_2397	Z5_OF_4566	G8	130	0.015	Circular	1.00	-	2.3	2.8	3.5	4.6
Z5_PIPE_2153	Z5_IL_3036	Z5_IL_3035	G8	32	0.015	Circular	1.00	-	0.4	0.6	0.8	1.1
Z5_PIPE_2154	Z5_MH_4040	Z5_OF_4414	G8	26	0.015	Circular	1.25	-	3.6	4.6	5.9	7.0
Z5_PIPE_2155	Z5_CB_253	Z5_CB_252	G8	39	0.015	Circular	1.00	-	1.8	2.2	2.8	3.6
Z5_PIPE_2156	Z5_CB_252	Z5_CB_251	G8	66	0.015	Circular	1.00	-	3.4	4.2	5.3	7.0
Z5_PIPE_2157	Z5_IL_3157	Z5_IL_3165	G8	43	0.015	Circular	1.25	-	8.2	10.2	11.9	13.2
Z5_PIPE_2158	Z5_MH_4070	Z5_MH_4071	G8	98	0.015	Circular	1.00	-	0.0	1.6	2.7	2.7
Z5_PIPE_2159	Z5_MH_4255	Z5_MH_4069	G8	164	0.015	Circular	1.00	-	1.7	2.1	2.7	3.5
Z5_PIPE_216	Z5_IL_2687	Z5_IL_2599	H7	164	0.015	Circular	1.25	-	5.6	6.6	8.0	10.2
Z5_PIPE_2160	Z5_IL_3067	Z5_MH_4069	G8	19	0.015	Circular	1.00	-	1.3	1.7	2.1	2.7
Z5_PIPE_2161	Z5_MH_4069	Z5_MH_4068	G8	58	0.015	Circular	1.00	-	3.0	3.8	4.8	6.2
Z5_PIPE_2162	Z5_IL_3066	Z5_MH_4068	G8	27	0.015	Circular	1.00	-	0.6	0.7	1.0	1.4
Z5_PIPE_2163	Z5_IL_3065	Z5_MH_4068	G8	25	0.015	Circular	1.00	-	0.0	0.0	0.0	0.5
Z5_PIPE_2164	Z5_MH_4068	Z5_MH_4043	G8	224	0.015	Circular	1.50	-	3.6	4.5	5.8	7.6
Z5_PIPE_2165	Z5_MH_4044	Z5_MH_4043	G8	33	0.015	Circular	1.00	-	4.7	5.5	5.6	5.8
Z5_PIPE_2166	Z5_MH_4045	Z5_MH_4044	G8	46	0.015	Circular	1.00	-	4.7	5.5	5.6	5.8
Z5_PIPE_2167	Z5_MH_4071	Z5_MH_4072	G8	278	0.015	Circular	1.00	-	4.7	5.5	5.6	5.8
Z5_PIPE_2168	Z5_MH_4072	Z5_MH_5333	G8	77	0.015	Circular	1.00	-	4.7	5.5	5.6	5.8
Z5_PIPE_2169	Z5_IL_3070	Z5_CB_716	G8	51	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_2170	Z5_MH_4073	Z5_MH_4045	G8	133	0.015	Circular	1.00	-	4.7	5.5	5.6	5.8
Z5_PIPE_2171	Z5_MH_4042	Z5_MH_4041	G8	40	0.015	Circular	6.00	-	36.3	79.2	52.9	29.8
Z5_PIPE_2172	Z5_MH_4041	Z5_IL_3500	G8	194	0.015	Circular	6.00	-	44.4	66.4	57.8	26.5
Z5_PIPE_2173	Z5_IL_3500	Z5_MH_5390	G8	196	0.015	Circular	1.00	-	8.0	8.1	8.7	9.2
Z5_PIPE_2174	Z5_MH_4043	Z5_CB_717	G8	102	0.015	Circular	1.50	-	9.7	12.5	13.6	16.1
Z5_PIPE_2175	Z5_CB_717	Z5_MH_4042	G8	83	0.015	Circular	6.00	-	28.8	63.9	42.5	23.0
Z5_PIPE_2176	Z5_IL_3499	Z5_MH_4070	G8	54	0.015	Circular	1.00	-	0.0	0.1	0.0	0.1
Z5_PIPE_2177	Z5_SGIL_4814	Z5_IL_3500	G8	17	0.015	Circular	1.00	-	7.0	10.2	10.2	6.7
Z5_PIPE_2178	Z5_IL_3502	Z5_IL_3501	G8	35	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2179	Z5_IL_3501	Z5_MH_4042	G8	65	0.015	Circular	1.00	-	0.0	0.0	0.0	0.1
Z5_PIPE_2180	Z5_IL_3037	Z5_MH_4257	G8	32	0.015	Circular	1.00	-	0.9	1.1	2.0	1.3
Z5_PIPE_2181	Z5_MH_5084	Z5_MH_4257	H8	29	0.015	Circular	1.00	-	1.0	1.3	1.7	2.2
Z5_PIPE_2182	Z5_MH_4257	Z5_MH_4258	G8	79	0.015	Circular	1.00	-	1.9	2.4	2.8	2.7
Z5_PIPE_2183	Z5_CB_249	Z5_MH_4258	G8	51	0.015	Circular	1.00	-	0.7	0.8	1.1	1.4
Z5_PIPE_2184	Z5_MH_4258	Z5_SGIL_4814	G8	323	0.015	Circular	1.00	-	2.7	3.1	3.8	3.7
Z5_PIPE_2185	Z5_IL_3038	Z5_MH_5084	G8	10	0.015	Circular	1.25	-	1.0	1.7	1.9	2.2
Z5_PIPE_2186	Z5_MH_5390	Z5_MH_4256	G8	34	0.015	Circular	1.50	-	9.3	9.9	10.6	11.6
Z5_PIPE_2187	Z5_MH_4256	Z5_MH_4259	G8	87	0.015	Circular	1.75	-	12.1	13.5	15.3	17.8
Z5_PIPE_2188	Z5_MH_4259	Z5_IL_3034	G8	51	0.015	Circular	1.75	-	12.1	13.5	15.3	17.8
Z5_PIPE_2189	Z5_IL_3165	Z5_IL_3033	G8	53	0.015	Circular	1.00	-	8.2	8.6	9.3	10.1

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_2190	Z5_IL_3033	Z5_IL_3032	G8	37	0.015	Circular	1.25	-	8.4	9.1	9.7	10.6
Z5_PIPE_2191	Z5_IL_3032	Z5_MH_4357	G8	21	0.015	Circular	1.25	-	8.4	9.1	9.7	10.6
Z5_PIPE_2192	Z5_IL_3034	Z5_MH_4357	G8	191	0.015	Circular	1.75	-	12.1	13.5	15.3	17.8
Z5_PIPE_2193	Z5_MH_4357	Z5_CB_731	G8	200	0.015	Circular	2.00	-	21.2	23.5	26.0	29.7
Z5_PIPE_2199	Z5_CB_725	Z5_CB_248	G8	90	0.015	Circular	1.00	-	2.2	2.7	3.4	4.5
Z5_PIPE_2208	Z5_CB_726	Z5_CB_725	G8	40	0.015	Circular	1.00	-	2.2	2.7	3.4	4.5
Z5_PIPE_2209	Z5_CB_731	Z5_OF_4567	G8	177	0.015	Circular	2.00	-	21.2	23.4	26.0	29.7
Z5_PIPE_221	Z5_CB_594	Z5_OF_4454	F7	71	0.015	Circular	1.00	-	0.5	0.7	0.9	1.2
Z5_PIPE_2210	Z5_CB_248	Z5_OF_4568	G8	16	0.015	Circular	1.00	-	2.2	2.7	3.4	4.5
Z5_PIPE_2211	Z5_IL_3040	Z5_IL_3041	H8	68	0.015	Circular	1.50	-	4.4	5.6	7.2	9.4
Z5_PIPE_2212	Z5_IL_3041	Z5_OF_4991	G8	87	0.015	Circular	1.50	-	5.3	6.7	8.7	10.5
Z5_PIPE_2213	Z5_CB_259	Z5_CB_258	H8	293	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2214	Z5_CB_258	Z5_CB_257	H8	92	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2215	Z5_CB_257	Z5_CB_256	H8	96	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2216	Z5_CB_256	Z5_CB_255	H8	92	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2217	Z5_CB_255	Z5_CB_254	H8	80	0.015	Circular	1.00	-	0.0	0.0	0.0	0.2
Z5_PIPE_2218	Z5_CB_254	Z5_IL_3040	H8	92	0.015	Circular	1.50	-	2.6	3.3	4.3	5.6
Z5_PIPE_2219	Z5_CB_367	Z5_CB_368	G8	34	0.015	Circular	1.25	-	8.3	10.3	13.4	15.2
Z5_PIPE_222	Z5_IL_3105	Z5_IL_3106	G8	47	0.015	Circular	1.50	-	7.3	9.8	13.3	18.5
Z5_PIPE_2220	Z5_CB_368	Z5_MH_4067	G8	39	0.015	Circular	1.50	-	8.3	10.3	13.4	15.1
Z5_PIPE_2221	Z5_MH_4067	Z5_CB_373	G8	102	0.015	Circular	1.50	-	8.3	10.8	13.4	15.1
Z5_PIPE_2222	Z5_CB_373	Z5_MH_3949	G8	109	0.015	Circular	1.50	-	9.8	12.3	14.6	16.6
Z5_PIPE_2223	Z5_MH_3949	Z5_CB_378	G8	59	0.015	Circular	1.50	-	11.7	14.4	17.4	17.8
Z5_PIPE_2224	Z5_IL_3505	Z5_CB_116	G8	15	0.010	Circular	1.00	-	2.1	2.7	3.4	4.5
Z5_PIPE_2225	Z5_CB_116	Z5_OF_4426	G8	80	0.010	Circular	1.00	-	2.1	2.7	3.4	4.5
Z5_PIPE_2226	Z5_IL_5191	Z5_IL_3505	G8	76	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2233	Z5_IL_3508	Z5_CB_738	H7	47	0.015	Circular	2.25	-	8.1	9.5	11.4	14.3
Z5_PIPE_2234	Z5_IL_3509	Z5_CB_738	H8	27	0.015	Circular	2.00	-	2.2	2.8	3.5	4.7
Z5_PIPE_2235	Z5_OF_4593	Z5_MH_5083	H8	88	0.015	Circular	2.25	-	13.0	15.5	18.9	24.0
Z5_PIPE_2237	Z5_IL_1250	Z5_IL_1247	N5	251	0.015	Circular	1.25	-	4.6	6.1	7.6	8.2
Z5_PIPE_2238	Z5_IL_1257	Z5_IL_1250	M4	259	0.015	Circular	1.25	-	3.3	4.4	5.3	6.7
Z5_PIPE_2239	Z5_IL_1249	Z5_IL_1248	N4	45	0.015	Circular	1.00	-	0.6	0.8	1.1	1.5
Z5_PIPE_224	Z5_IL_3106	Z5_OF_4992	G8	114	0.015	Circular	1.50	-	7.3	9.8	13.3	18.5
Z5_PIPE_2240	Z5_IL_1248	Z5_IL_1247	N4	35	0.015	Circular	1.00	-	0.6	0.8	1.1	1.5
Z5_PIPE_2242	Z5_IL_1238	Z5_IL_1237	N4	31	0.015	Circular	1.00	-	0.8	1.0	1.4	2.8
Z5_PIPE_2243	Z5_IL_1236	Z5_CB_551	N4	27	0.015	Circular	1.00	-	0.8	1.0	1.5	1.9
Z5_PIPE_2244	Z5_IL_1240	Z5_IL_1239	M4	24	0.015	Circular	1.00	-	0.5	0.9	0.9	2.1
Z5_PIPE_2245	Z5_IL_1228	Z5_IL_1227	M4	24	0.015	Circular	1.25	-	0.9	1.2	1.7	2.9
Z5_PIPE_2246	Z5_IL_1230	Z5_IL_1229	M4	22	0.015	Circular	1.25	-	0.9	1.2	1.5	7.3
Z5_PIPE_2247	Z5_IL_1265	Z5_IL_1264	N4	24	0.015	Circular	1.00	-	0.8	1.0	1.6	1.8
Z5_PIPE_2248	Z5_IL_1263	Z5_IL_1262	N4	24	0.015	Circular	1.00	-	0.4	0.6	0.7	1.0
Z5_PIPE_2249	Z5_IL_2872	Z5_IL_1282	M4	135	0.010	Circular	1.00	-	1.1	1.5	2.6	2.2
Z5_PIPE_225	Z5_IL_3024	Z5_IL_1478	G7	97	0.015	Circular	2.00	-	17.1	22.4	27.1	36.7
Z5_PIPE_2250	Z5_IL_1283	Z5_IL_1282	M5	25	0.010	Circular	1.00	-	0.0	0.9	3.8	2.6
Z5_PIPE_2251	Z5_IL_1285	Z5_IL_1284	M4	23	0.015	Circular	1.00	-	0.8	1.1	2.0	2.2
Z5_PIPE_2252	Z5_IL_1254	Z5_IL_1253	M4	37	0.015	Circular	1.00	-	1.9	2.5	3.3	7.9
Z5_PIPE_2253	Z5_IL_1245	Z5_IL_1243	M4	38	0.015	Circular	1.00	-	0.8	1.4	2.2	2.7
Z5_PIPE_2254	Z5_IL_1244	Z5_IL_1243	M4	25	0.015	Circular	1.00	-	1.6	2.0	2.4	2.7
Z5_PIPE_2255	Z5_IL_1287	Z5_IL_1284	M4	277	0.015	Circular	1.00	-	1.5	2.0	2.2	2.1
Z5_PIPE_2256	Z5_IL_1284	Z5_IL_1286	M4	107	0.015	Circular	1.00	-	2.3	3.1	4.5	4.1
Z5_PIPE_2257	Z5_IL_1270	Z5_MH_3766	M4	28	0.015	Circular	1.25	-	3.5	4.7	8.0	6.4
Z5_PIPE_2258	Z5_MH_3761	Z5_MH_3760	N4	110	0.015	Circular	1.50	-	4.9	6.4	6.8	7.1
Z5_PIPE_2259	Z5_MH_3760	Z5_MH_3759	N4	129	0.015	Circular	1.50	-	4.9	6.4	6.8	7.1
Z5_PIPE_226	Z5_MH_3935	Z5_MH_3936	N4	88	0.015	Circular	1.00	-	0.6	0.9	1.0	1.4
Z5_PIPE_2260	Z5_IL_1253	Z5_IL_1256	M4	50	0.015	Circular	1.00	-	1.9	2.5	3.3	7.2
Z5_PIPE_2261	Z5_CB_464	Z5_IL_1258	M4	109	0.015	Circular	1.00	-	1.9	2.5	3.3	4.4
Z5_PIPE_2262	Z5_IL_1259	Z5_IL_1257	M4	30	0.015	Circular	1.00	-	0.5	0.7	0.9	5.4
Z5_PIPE_2263	Z5_IL_1202	Z5_MH_3752	M5	49	0.015	Circular	1.00	-	3.8	4.8	5.9	6.7
Z5_PIPE_2264	Z5_IL_982	Z5_IL_981	M5	38	0.015	Circular	1.00	-	0.7	0.9	1.1	1.5
Z5_PIPE_2265	Z5_MH_3751	Z5_MH_3750	M5	341	0.015	Circular	2.00	-	10.9	12.9	15.6	17.9
Z5_PIPE_2266	Z5_MH_3752	Z5_MH_3751	M5	13	0.015	Circular	2.00	-	10.9	12.9	15.6	17.8
Z5_PIPE_2267	Z5_IL_3260	Z5_IL_2462	M5	116	0.015	Circular	1.67	-	13.1	12.4	12.7	13.9
Z5_PIPE_2268	Z5_IL_2462	Z5_IL_979	M5	249	0.015	Circular	1.67	-	12.8	13.0	13.3	13.9
Z5_PIPE_2269	Z5_IL_979	Z5_MH_3752	M5	34	0.015	Circular	1.67	-	14.8	15.3	16.0	16.7
Z5_PIPE_227	Z5_MH_3936	Z5_MH_3937	M4	78	0.015	Circular	1.00	-	1.2	1.5	2.1	2.5
Z5_PIPE_2270	Z5_MH_3752	Z5_IL_981	M5	87	0.015	Circular	1.67	-	8.1	8.0	8.0	8.0
Z5_PIPE_2271	Z5_IL_981	Z5_IL_2983	M5	239	0.015	Circular	1.67	-	8.6	8.6	8.6	8.5
Z5_PIPE_2272	Z5_MH_3750	Z5_MH_3749	M5	79	0.015	Circular	2.00	-	12.2	14.4	17.4	20.4
Z5_PIPE_2274	Z5_IL_3513	Z5_MH_4156	M5	29	0.015	Circular	1.67	-	9.8	10.1	10.3	10.7
Z5_PIPE_2275	Z5_IL_2983	Z5_IL_3513	M5	119	0.015	Circular	1.67	-	9.8	10.0	10.3	10.7

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_2276	Z5_CB_108	Z5_CB_748	M5	51	0.015	Circular	1.00	-	1.1	1.3	1.7	2.2
Z5_PIPE_2277	Z5_CB_748	Z5_MH_4156	M5	40	0.015	Circular	1.00	-	1.1	1.3	1.7	2.2
Z5_PIPE_2278	Z5_CB_479	Z5_MH_3750	M5	26	0.015	Circular	1.00	-	1.8	2.1	2.6	3.2
Z5_PIPE_2279	Z5_MH_3749	Z5_MH_3748	M5	114	0.015	Circular	2.50	-	12.2	14.4	17.4	20.4
Z5_PIPE_228	Z5_MH_3937	Z5_MH_3938	M4	67	0.015	Circular	1.00	-	1.2	1.6	2.1	2.5
Z5_PIPE_2285	Z5_SGIL_4624	Z5_OF_4402	M5	39	0.015	Circular	1.50	-	5.0	6.0	7.3	9.3
Z5_PIPE_2286	Z5_IL_1241	Z5_IL_1239	M4	225	0.015	Circular	1.25	-	3.1	3.9	4.1	4.1
Z5_PIPE_2287	Z5_IL_1237	Z5_CB_551	N4	31	0.015	Circular	1.25	-	4.8	5.8	6.1	7.5
Z5_PIPE_2288	Z5_CB_551	Z5_CB_545	N4	211	0.015	Circular	1.50	-	5.5	6.8	7.5	8.5
Z5_PIPE_2289	Z5_MH_4126	Z5_MH_3791	M4	71	0.015	Circular	1.00	-	0.0	0.0	0.1	1.4
Z5_PIPE_229	Z5_MH_3938	Z5_MH_3939	N4	129	0.015	Circular	1.00	-	1.3	1.6	2.1	2.5
Z5_PIPE_2291	Z5_IL_3515	Z5_MH_4124	L4	52	0.015	Circular	1.00	-	3.2	3.9	4.8	6.1
Z5_PIPE_2292	Z5_MH_4124	Z5_IL_1448	L4	217	0.015	Circular	1.50	-	3.2	3.8	4.8	6.1
Z5_PIPE_2293	Z5_MH_3785	Z5_IL_1448	L4	74	0.015	Circular	3.50	-	46.5	57.0	69.0	80.7
Z5_PIPE_2294	Z5_CB_471	Z5_CB_472	L4	68	0.015	Circular	1.50	-	4.8	4.0	6.9	7.1
Z5_PIPE_2295	Z5_CB_472	Z5_OF_5080	L4	47	0.015	Circular	1.50	-	5.9	6.4	8.1	8.5
Z5_PIPE_2296	Z5_IL_2500	Z5_SGIL_4719	L4	18	0.010	Circular	1.00	-	1.3	1.5	1.8	2.2
Z5_PIPE_2297	Z5_SGIL_4719	Z5_MH_3875	L4	150	0.010	Circular	1.00	-	1.3	1.5	1.8	2.2
Z5_PIPE_2298	Z5_MH_3875	Z5_IL_2504	L4	85	0.010	Circular	1.50	-	0.8	1.0	1.2	1.6
Z5_PIPE_2299	Z5_IL_2502	Z5_IL_2501	L4	175	0.010	Circular	1.50	-	3.2	4.3	5.8	7.9
Z5_PIPE_230	Z5_IL_2875	Z5_MH_3935	M4	22	0.015	Circular	1.00	-	0.0	0.2	0.3	0.5
Z5_PIPE_2302	Z5_MH_3792	Z5_MH_3791	M4	251	0.015	Circular	1.50	-	3.4	4.0	4.9	5.7
Z5_PIPE_2303	Z5_IL_1451	Z5_MH_3792	L5	16	0.015	Circular	1.00	-	3.4	4.0	5.0	5.7
Z5_PIPE_2304	Z5_MH_3791	Z5_MH_3790	M4	288	0.015	Circular	1.50	-	5.0	6.1	7.4	8.6
Z5_PIPE_2305	Z5_MH_3790	Z5_MH_3789	M4	45	0.015	Circular	3.00	-	28.8	35.3	43.5	49.0
Z5_PIPE_2306	Z5_MH_3789	Z5_MH_3788	M4	274	0.015	Circular	3.00	-	30.2	36.9	45.5	51.4
Z5_PIPE_2307	Z5_MH_3788	Z5_MH_3787	M4	300	0.015	Circular	3.50	-	32.5	39.7	48.5	55.7
Z5_PIPE_2308	Z5_MH_3787	Z5_MH_3786	M4	347	0.015	Circular	3.50	-	41.6	50.9	62.3	70.5
Z5_PIPE_2309	Z5_MH_3782	Z5_MH_3787	M4	48	0.015	Circular	1.00	-	4.8	5.8	7.0	7.1
Z5_PIPE_231	Z5_IL_2874	Z5_MH_3935	M4	11	0.015	Circular	1.00	-	0.0	0.2	0.2	0.7
Z5_PIPE_2312	Z5_MH_3786	Z5_MH_3785	M4	455	0.015	Circular	3.50	-	44.8	54.8	66.3	77.0
Z5_PIPE_2318	Z5_IL_3524	Z5_MH_5109	M4	159	0.024	Circular	1.50	-	1.4	1.7	2.1	2.8
Z5_PIPE_2319	Z5_MH_5109	Z5_OF_5073	M4	312	0.015	Rectangular	4.00	8.00	121.2	125.2	130.3	135.7
Z5_PIPE_232	Z5_IL_2876	Z5_MH_3936	M4	18	0.015	Circular	1.00	-	0.6	0.8	1.1	1.5
Z5_PIPE_2321	Z5_IL_1437	Z5_IL_1438	M4	36	0.015	Circular	1.00	-	1.5	1.8	2.7	4.4
Z5_PIPE_2322	Z5_IL_3525	Z5_MH_3791	M4	8	0.015	Circular	1.00	-	1.7	2.1	2.7	4.4
Z5_PIPE_2323	Z5_IL_2932	Z5_MH_5115	L4	16	0.015	Circular	1.00	-	4.3	4.8	5.5	7.2
Z5_PIPE_2329	Z5_IL_2613	Z5_MH_5108	M4	13	0.015	Circular	1.00	-	4.0	5.2	6.3	7.3
Z5_PIPE_233	Z5_IL_2877	Z5_MH_3937	M4	12	0.015	Circular	1.00	-	0.0	0.1	0.6	0.7
Z5_PIPE_2337	Z5_CB_107	Z5_CB_106	M5	12	0.015	Circular	1.00	-	1.3	2.0	2.9	4.3
Z5_PIPE_2338	Z5_IL_1446	Z5_MH_3784	L5	87	0.015	Circular	1.00	-	3.9	4.6	5.8	7.5
Z5_PIPE_2339	Z5_IL_1445	Z5_MH_3784	L5	29	0.015	Circular	1.00	-	1.2	0.1	0.6	1.1
Z5_PIPE_234	Z5_IL_2879	Z5_MH_3939	N4	20	0.015	Circular	1.00	-	1.8	2.1	2.4	2.7
Z5_PIPE_2340	Z5_IL_3527	Z5_MH_4266	L5	63	0.015	Circular	1.00	-	6.0	0.5	0.6	0.7
Z5_PIPE_2342	Z5_IL_3528	Z5_CB_791	L5	58	0.015	Circular	1.00	-	2.9	3.1	3.1	3.5
Z5_PIPE_2343	Z5_IL_3529	Z5_MH_5122	L5	5	0.015	Circular	1.00	-	4.7	1.6	1.6	1.6
Z5_PIPE_2346	Z5_IL_3549	Z5_MH_3984	H5	52	0.015	Circular	1.00	-	3.2	4.0	5.1	6.7
Z5_PIPE_2347	Z5_MH_3984	Z5_MH_4285	H5	15	0.015	Circular	2.00	-	8.7	10.5	12.8	16.4
Z5_PIPE_2348	Z5_CB_822	Z5_MH_4285	H5	18	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2349	Z5_MH_4285	Z5_MH_4350	H5	193	0.015	Circular	2.00	-	8.7	10.5	12.8	16.4
Z5_PIPE_235	Z5_IL_2878	Z5_MH_3939	N4	7	0.015	Circular	1.00	-	0.1	0.1	0.7	1.4
Z5_PIPE_2350	Z5_CB_141	Z5_MH_4349	H5	32	0.015	Circular	1.25	-	3.0	3.7	4.7	5.4
Z5_PIPE_2351	Z5_CB_142	Z5_CB_143	H5	75	0.015	Circular	1.50	-	11.4	13.7	17.5	21.7
Z5_PIPE_2352	Z5_CB_823	Z5_CB_143	H5	48	0.015	Circular	1.50	-	1.8	2.3	6.2	9.4
Z5_PIPE_2353	Z5_CB_143	Z5_MH_4286	H5	136	0.015	Circular	1.50	-	12.1	14.6	16.1	16.8
Z5_PIPE_2354	Z5_MH_4286	Z5_CB_147	H5	71	0.015	Circular	2.00	-	13.7	16.8	18.8	19.8
Z5_PIPE_2355	Z5_CB_147	Z5_CB_148	H5	228	0.015	Circular	2.00	-	14.0	17.1	19.9	21.0
Z5_PIPE_2356	Z5_CB_824	Z5_MH_4286	H5	80	0.015	Circular	1.00	-	2.2	2.8	3.1	3.2
Z5_PIPE_2357	Z5_CB_146	Z5_CB_148	H5	179	0.015	Circular	1.75	-	9.2	10.7	11.5	12.9
Z5_PIPE_2358	Z5_CB_145	Z5_CB_146	H5	60	0.015	Circular	1.00	-	6.9	8.0	8.4	9.1
Z5_PIPE_236	Z5_MH_3939	Z5_MH_3940	N4	199	0.015	Circular	1.00	-	2.7	3.4	4.3	4.3
Z5_PIPE_2362	Z5_IL_2275	Z5_IL_2273	L5	45	0.015	Circular	1.00	-	0.8	1.0	1.3	1.9
Z5_PIPE_2363	Z5_IL_2272	Z5_MH_3836	L5	42	0.015	Circular	1.00	-	1.0	1.5	2.1	3.1
Z5_PIPE_2364	Z5_IL_2456	Z5_MH_3866	L5	35	0.015	Circular	1.00	-	1.2	1.7	2.4	3.5
Z5_PIPE_237	Z5_IL_2880	Z5_MH_3940	N4	12	0.015	Circular	1.00	-	0.0	0.0	2.4	2.5
Z5_PIPE_238	Z5_MH_3941	Z5_MH_3713	N4	241	0.015	Circular	1.50	-	7.4	9.2	10.1	10.7
Z5_PIPE_2381	Z5_MH_4193	Z5_CB_150	J5	161	0.015	Circular	2.00	-	15.8	19.3	23.8	30.4
Z5_PIPE_2382	Z5_CB_552	Z5_MH_4274	K4	5	0.015	Circular	1.00	-	4.6	5.8	7.4	9.8
Z5_PIPE_2387	Z5_CB_549	Z5_MH_5119	K5	8	0.015	Circular	1.00	-	11.1	12.9	14.6	17.4
Z5_PIPE_2389	Z5_MH_5120	Z5_MH_4004	J5	836	0.015	Rectangular	3.67	8.00	102.8	126.9	150.6	171.2

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_2391	Z5_MH_4149	Z5_CB_563	J5	14	0.015	Circular	5.00	-	82.5	99.0	114.1	125.7
Z5_PIPE_2392	Z5_CB_563	Z5_MH_5120	J5	86	0.015	Circular	3.50	-	82.5	99.1	114.1	125.7
Z5_PIPE_2393	Z5_CB_561	Z5_MH_5120	J5	5	0.015	Circular	2.50	-	25.2	30.5	37.5	46.9
Z5_PIPE_2394	Z5_CB_639	Z5_MH_4148	J5	138	0.015	Circular	2.50	-	23.9	28.9	35.6	44.4
Z5_PIPE_2396	Z5_MH_4148	Z5_CB_561	J5	26	0.015	Circular	2.50	-	23.9	28.9	35.6	44.4
Z5_PIPE_2398	Z5_IL_3539	Z5_MH_4275	K4	5	0.015	Circular	1.00	-	1.5	1.8	2.2	2.8
Z5_PIPE_2399	Z5_MH_4274	Z5_MH_5119	K4	731	0.015	Circular	2.50	-	10.6	13.0	16.2	20.1
Z5_PIPE_2400	Z5_MH_4337	Z5_MH_4274	K4	201	0.015	Circular	1.50	-	6.1	7.3	8.9	11.2
Z5_PIPE_2401	Z5_IL_2479	Z5_MH_5271	K5	9	0.015	Circular	1.00	-	5.8	7.5	9.7	12.1
Z5_PIPE_2402	Z5_IL_3118	Z5_MH_4136	K5	41	0.015	Circular	1.00	-	4.4	5.8	6.3	5.8
Z5_PIPE_2403	Z5_MH_4136	Z5_MH_3927	K5	273	0.015	Circular	1.50	-	10.2	11.3	13.2	15.8
Z5_PIPE_2404	Z5_IL_2799	Z5_MH_3927	K5	43	0.015	Circular	1.00	-	1.4	4.4	3.8	4.0
Z5_PIPE_2405	Z5_IL_2800	Z5_MH_3927	K5	47	0.015	Circular	1.00	-	2.5	6.0	5.5	7.4
Z5_PIPE_2406	Z5_MH_3927	Z5_MH_3926	K5	321	0.015	Circular	2.00	-	13.7	14.8	16.2	20.7
Z5_PIPE_2407	Z5_MH_3926	Z5_MH_4134	K5	129	0.015	Circular	2.25	-	17.8	20.3	21.0	24.9
Z5_PIPE_2408	Z5_MH_4133	Z5_MH_4002	K5	86	0.015	Circular	2.50	-	28.1	32.3	35.0	35.2
Z5_PIPE_2409	Z5_IL_2796	Z5_IL_2797	K5	30	0.015	Circular	1.00	-	3.0	4.9	6.3	5.2
Z5_PIPE_241	Z5_IL_2881	Z5_OF_4409	O4	39	0.015	Circular	1.50	-	12.3	15.3	18.2	20.5
Z5_PIPE_2410	Z5_IL_2797	Z5_MH_3926	K5	38	0.015	Circular	1.25	-	3.5	5.7	7.2	6.5
Z5_PIPE_2411	Z5_IL_2798	Z5_MH_4134	K5	17	0.015	Circular	1.00	-	3.3	5.3	6.2	5.7
Z5_PIPE_2412	Z5_CB_506	Z5_MH_4133	K5	127	0.015	Circular	1.00	-	3.2	4.0	5.1	4.8
Z5_PIPE_2413	Z5_IL_2791	Z5_IL_2792	K5	246	0.015	Circular	1.00	-	3.8	4.0	4.6	4.7
Z5_PIPE_2414	Z5_IL_2792	Z5_CB_507	K5	125	0.015	Circular	1.25	-	3.8	4.0	6.2	4.7
Z5_PIPE_2415	Z5_CB_507	Z5_MH_4133	K5	159	0.024	Circular	2.00	-	4.9	5.7	6.5	6.6
Z5_PIPE_2416	Z5_MH_4002	Z5_IL_3533	K5	406	0.015	Circular	2.50	-	28.1	31.3	34.8	35.2
Z5_PIPE_2417	Z5_IL_1018	Z5_MH_4134	K5	21	0.015	Circular	1.00	-	1.0	1.6	2.6	2.8
Z5_PIPE_2419	Z5_IL_3117	Z5_IL_3540	K5	33	0.015	Circular	1.00	-	6.5	7.4	8.2	10.5
Z5_PIPE_242	Z5_IL_2898	Z5_MH_3940	N4	39	0.015	Circular	1.00	-	0.8	1.0	3.1	2.7
Z5_PIPE_2420	Z5_IL_3540	Z5_MH_4136	K5	51	0.015	Circular	1.00	-	6.5	7.7	9.7	8.7
Z5_PIPE_243	Z5_IL_2897	Z5_MH_3941	N4	161	0.015	Circular	1.50	-	4.6	6.3	7.6	8.4
Z5_PIPE_244	Z5_IL_2891	Z5_IL_2894	N4	331	0.015	Circular	1.00	-	0.7	0.9	2.6	2.5
Z5_PIPE_245	Z5_IL_2894	Z5_IL_2895	N4	57	0.015	Circular	1.00	-	2.3	3.1	6.5	4.8
Z5_PIPE_2455	Z5_MH_3989	Z5_MH_3990	H5	336	0.015	Circular	2.00	-	6.7	8.7	11.3	15.3
Z5_PIPE_2456	Z5_MH_3990	Z5_MH_3991	H5	104	0.015	Circular	2.00	-	19.6	23.8	29.5	37.9
Z5_PIPE_2457	Z5_MH_3991	Z5_OF_4419	H5	65	0.015	Circular	2.00	-	19.6	23.8	29.5	37.9
Z5_PIPE_2458	Z5_CB_160	Z5_CB_161	H5	31	0.015	Circular	2.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2459	Z5_CB_161	Z5_MH_3991	H5	9	0.015	Circular	2.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_246	Z5_IL_2895	Z5_MH_3754	N4	59	0.015	Circular	1.25	-	2.3	3.2	5.9	5.1
Z5_PIPE_2460	Z5_MH_4028	NEW_Z5_MH_6401	H5	430	0.015	Circular	5.00	-	46.3	56.1	69.2	88.8
Z5_PIPE_2461	Z5_OF_4382	Z5_MH_4113	H5	163	0.015	Circular	3.00	-	17.8	21.6	26.7	34.2
Z5_PIPE_2462	Z5_MH_4113	Z5_CB_212	H5	42	0.015	Horizontal Ellipse	3.17	5.00	32.7	40.1	50.0	64.9
Z5_PIPE_247	Z5_IL_2899	Z5_MH_3754	N4	42	0.015	Circular	1.00	-	2.2	2.7	5.2	6.8
Z5_PIPE_2478	Z5_CB_805	Z5_CB_144	H5	12	0.015	Circular	1.50	-	2.3	2.7	3.3	4.1
Z5_PIPE_248	Z5_CB_102	Z5_CB_101	N4	66	0.024	Circular	1.00	-	1.0	1.3	1.7	2.3
Z5_PIPE_2485	Z5_MH_4282	Z5_MH_4283	H5	67	0.015	Circular	1.50	-	0.0	0.0	0.0	0.4
Z5_PIPE_2486	Z5_MH_4029	Z5_MH_4282	J5	195	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z5_PIPE_2487	Z5_IL_3546	Z5_IL_3547	H5	94	0.015	Circular	1.50	-	12.3	15.5	19.8	26.1
Z5_PIPE_2488	Z5_IL_3547	Z5_IL_3192	H5	74	0.015	Circular	1.50	-	21.0	25.8	32.1	41.6
Z5_PIPE_249	Z5_SGIL_4760	Z5_IL_2883	N4	39	0.015	Circular	1.00	-	2.4	3.3	4.9	4.6
Z5_PIPE_2490	NEW_Z5_MH_6405	Z5_MH_4028	H5	334	0.015	Circular	5.00	-	46.3	56.1	69.2	88.8
Z5_PIPE_2493	Z5_IL_3160	Z5_IL_3161	H5	43	0.015	Circular	2.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2499	Z5_IL_2568	Z5_MH_4284	H5	22	0.010	Circular	1.25	-	5.2	6.2	7.4	9.3
Z5_PIPE_250	Z5_IL_2883	Z5_IL_2884	N4	42	0.015	Circular	1.00	-	3.5	4.4	6.8	6.1
Z5_PIPE_2500	Z5_IL_2567	Z5_MH_4284	H5	15	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_2501	Z5_MH_3983	Z5_MH_4284	H5	101	0.015	Circular	1.50	-	0.7	0.8	1.1	1.4
Z5_PIPE_2502	Z5_MH_4284	Z5_MH_3984	H5	158	0.015	Circular	1.75	-	5.5	6.5	7.9	9.9
Z5_PIPE_2505	Z5_IL_4954	Z5_IL_2470	J5	109	0.015	Circular	1.00	-	0.5	0.7	0.9	1.3
Z5_PIPE_2506	Z5_CB_211	Z5_IL_3244	H5	68	0.015	Circular	1.00	-	4.1	4.8	5.8	7.3
Z5_PIPE_2507	Z5_IL_3241	Z5_IL_3242	H5	62	0.015	Circular	1.50	-	4.1	4.8	5.8	7.3
Z5_PIPE_251	Z5_IL_2884	Z5_IL_2862	N4	43	0.015	Circular	1.25	-	6.5	7.9	9.2	8.8
Z5_PIPE_2510	Z5_IL_3244	Z5_IL_3241	H5	158	0.015	Circular	1.50	-	4.1	4.8	5.8	7.3
Z5_PIPE_2514	Z5_IL_3550	Z5_OF_4980	H7	64	0.015	Circular	2.50	-	1.5	1.9	2.4	3.3
Z5_PIPE_2517	Z5_IL_4890	Z5_CB_241	H7	54	0.015	Circular	1.00	-	5.1	6.8	8.5	9.8
Z5_PIPE_2518	Z5_IL_1448	Z5_OF_5004	L4	38	0.024	Circular	7.50	-	184.5	207.7	237.4	265.3
Z5_PIPE_2519	Z5_MH_3871	Z5_MH_4004	K5	16	0.015	Circular	2.50	-	21.2	24.7	28.2	34.5
Z5_PIPE_252	Z5_IL_2882	Z5_IL_2884	N4	76	0.015	Circular	1.25	-	3.0	3.9	4.6	4.6
Z5_PIPE_2521	Z5_MH_3942	Z5_IL_2881	N4	128	0.015	Circular	1.50	-	9.0	11.0	12.9	13.3
Z5_PIPE_2522	Z5_IL_3553	Z5_OF_4578	N3	63	0.015	Circular	1.00	-	3.3	4.1	5.3	7.0
Z5_PIPE_2524	Z5_IL_3557	Z5_IL_3151	G7	229	0.010	Circular	1.50	-	6.0	7.6	9.7	12.8
Z5_PIPE_2525	Z5_IL_2459	Z5_IL_3557	F7	25	0.010	Circular	1.00	-	6.0	7.6	9.7	12.8

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_2526	Z5_MH_4296	Z5_CB_861	J5	94	0.015	Circular	2.00	-	3.5	4.2	5.2	6.6
Z5_PIPE_253	Z5_IL_2862	Z5_IL_938	N4	169	0.015	Circular	1.25	-	6.7	8.2	8.6	9.0
Z5_PIPE_254	Z5_IL_938	Z5_OF_4418	N4	56	0.015	Circular	1.25	-	7.1	8.8	9.7	10.4
Z5_PIPE_255	Z5_IL_3115	Z5_CB_103	N4	49	0.015	Circular	1.00	-	3.0	4.0	5.1	5.6
Z5_PIPE_2558	Z5_IL_4957	Z5_IL_3226	L4	285	0.015	Circular	5.50	-	163.0	168.7	180.5	195.7
Z5_PIPE_256	Z5_CB_103	Z5_IL_2882	N4	133	0.015	Circular	1.25	-	3.0	3.9	6.7	7.1
Z5_PIPE_2562	Z5_CB_156	Z5_CB_155	J5	48	0.015	Circular	1.75	-	14.7	18.8	22.1	22.6
Z5_PIPE_2563	Z5_CB_155	Z5_MH_3995	J5	125	0.015	Circular	1.75	-	20.6	22.8	23.9	25.4
Z5_PIPE_2564	Z5_MH_3995	Z5_MH_4307	J5	355	0.015	Circular	1.75	-	20.6	22.6	23.5	25.4
Z5_PIPE_257	Z5_MH_4919	Z5_IL_2881	N4	23	0.015	Circular	1.00	-	3.4	4.4	5.7	7.2
Z5_PIPE_2583	Z5_IL_2868	Z5_OF_5010	N3	194	0.015	Circular	1.00	-	8.4	9.5	10.8	12.7
Z5_PIPE_2584	Z5_CB_53	Z5_OF_4580	N4	72	0.024	Circular	1.00	-	1.1	1.5	1.9	2.6
Z5_PIPE_2585	Z5_MH_3766	Z5_MH_3761	M5	123	0.015	Circular	1.25	-	4.5	5.8	6.5	7.1
Z5_PIPE_2607	Z5_IL_2777	Z5_IL_2776	L5	28	0.024	Circular	1.00	-	0.7	0.8	1.0	1.3
Z5_PIPE_2608	Z5_IL_2776	Z5_MH_5123	L5	87	0.024	Circular	1.00	-	0.7	0.8	1.0	1.3
Z5_PIPE_2609	Z5_IL_2778	Z5_MH_5123	L5	129	0.024	Circular	1.00	-	7.2	8.1	9.4	10.9
Z5_PIPE_261	Z5_IL_2917	Z5_MH_3944	N4	100	0.015	Circular	1.00	-	1.9	2.4	3.0	3.5
Z5_PIPE_2610	Z5_IL_1121	Z5_IL_1063	L4	43	0.015	Circular	2.50	-	11.4	15.2	20.8	27.5
Z5_PIPE_2611	Z5_CB_503	Z5_IL_1121	L4	124	0.015	Circular	2.25	-	10.0	13.1	17.2	22.8
Z5_PIPE_2612	Z5_MH_4154	Z5_MH_4132	K5	105	0.015	Circular	2.00	-	4.9	6.7	9.0	12.7
Z5_PIPE_2613	Z5_MH_4153	Z5_MH_4154	K5	163	0.015	Circular	1.75	-	4.9	6.7	9.0	12.7
Z5_PIPE_2615	Z5_CB_47	Z5_MH_4153	K5	84	0.015	Circular	1.75	-	3.8	5.3	7.2	10.0
Z5_PIPE_262	Z5_IL_2914	Z5_IL_2917	N4	49	0.015	Circular	1.00	-	1.9	2.4	3.0	3.5
Z5_PIPE_263	Z5_IL_2915	Z5_IL_2914	N4	18	0.015	Circular	1.00	-	1.2	1.5	1.9	2.4
Z5_PIPE_2633	Z5_IL_3272	Z5_MH_4113	H5	260	0.015	Circular	2.50	-	15.7	19.5	24.5	32.0
Z5_PIPE_264	Z5_IL_2913	Z5_IL_2914	N4	47	0.015	Circular	1.00	-	0.7	0.9	1.2	1.7
Z5_PIPE_2649	Z5_CB_637	Z5_MH_4296	J5	47	0.015	Circular	1.00	-	2.1	2.5	3.0	3.8
Z5_PIPE_2650	Z5_CB_860	Z5_MH_4296	J5	13	0.015	Circular	1.00	-	1.5	1.8	2.2	2.8
Z5_PIPE_2651	Z5_CB_862	Z5_CB_861	J5	42	0.015	Circular	2.00	-	8.5	10.4	13.0	17.4
Z5_PIPE_2653	Z5_CB_857	Z5_CB_856	J5	37	0.015	Circular	1.00	-	9.0	10.8	10.9	12.0
Z5_PIPE_2654	Z5_CB_854	Z5_CB_855	J5	38	0.015	Circular	1.00	-	2.8	3.4	4.0	5.0
Z5_PIPE_2655	Z5_CB_856	Z5_CB_855	J5	253	0.015	Circular	1.50	-	9.1	10.3	10.9	12.0
Z5_PIPE_2656	Z5_CB_855	Z5_CB_866	J5	59	0.015	Circular	2.00	-	11.3	13.6	14.4	15.8
Z5_PIPE_2657	Z5_CB_883	Z5_CB_852	J5	159	0.024	Arch	42.00	29.00	14.3	17.3	18.8	20.2
Z5_PIPE_2667	Z5_CB_154	Z5_CB_564	J5	80	0.010	Circular	1.00	-	3.9	4.8	6.1	6.7
Z5_PIPE_2668	Z5_CB_564	Z5_MH_4155	J5	53	0.010	Circular	1.00	-	3.8	4.8	6.1	6.7
Z5_PIPE_2669	Z5_MH_4306	Z5_CB_866	J5	256	0.015	Circular	1.00	-	4.1	4.5	4.6	4.7
Z5_PIPE_2675	Z5_MH_4134	Z5_MH_4133	K5	349	0.015	Circular	2.25	-	21.6	24.4	26.2	26.7
Z5_PIPE_2676	Z5_CB_866	Z5_CB_883	J5	119	0.015	Circular	2.00	-	14.7	17.8	19.0	20.5
Z5_PIPE_2677	Z5_IL_3576	Z5_MH_4151	J5	11	0.015	Circular	1.00	-	3.2	4.0	4.9	6.4
Z5_PIPE_2678	Z5_IL_3577	Z5_MH_4150	J5	52	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_268	Z5_IL_2912	Z5_IL_2913	N4	140	0.015	Circular	1.00	-	0.7	0.9	1.2	1.7
Z5_PIPE_269	Z5_IL_2910	Z5_IL_2912	N4	64	0.015	Circular	1.00	-	0.7	0.9	1.2	1.7
Z5_PIPE_2697	Z5_IL_2890	Z5_OF_5567	M4	61	0.015	Circular	1.00	-	3.2	4.1	5.2	6.9
Z5_PIPE_2698	Z5_IL_2624	Z5_OF_4970	G7	74	0.015	Circular	1.25	-	3.2	4.1	5.2	6.9
Z5_PIPE_270	Z5_IL_2911	Z5_IL_2910	N4	27	0.015	Circular	1.00	-	0.0	0.0	0.0	0.6
Z5_PIPE_2705	Z5_IL_1478	Z5_IL_3608	H7	294	0.015	Circular	2.00	-	17.1	22.4	27.1	31.1
Z5_PIPE_2709	Z5_IL_3585	Z5_CB_846	J5	40	0.015	Circular	2.00	-	3.0	3.7	4.5	5.8
Z5_PIPE_271	Z5_IL_2905	Z5_IL_2904	M4	7	0.015	Circular	1.00	-	0.0	0.0	0.0	0.5
Z5_PIPE_2710	Z5_CB_846	Z5_CB_862	J5	71	0.015	Circular	2.00	-	6.5	8.1	10.1	13.2
Z5_PIPE_272	Z5_IL_2903	Z5_IL_2904	M4	9	0.015	Circular	1.00	-	0.0	0.0	0.0	0.4
Z5_PIPE_273	Z5_IL_2904	Z5_IL_2907	M4	47	0.015	Circular	1.00	-	0.0	0.0	0.0	0.5
Z5_PIPE_274	Z5_IL_2907	Z5_IL_2909	N4	105	0.015	Circular	1.00	-	0.0	0.0	0.0	0.6
Z5_PIPE_275	Z5_IL_2909	Z5_IL_2910	N4	82	0.015	Circular	1.00	-	0.7	0.9	1.2	1.7
Z5_PIPE_276	Z5_IL_2906	Z5_IL_2907	N4	16	0.015	Circular	1.00	-	0.0	0.0	0.0	0.3
Z5_PIPE_277	Z5_IL_2908	Z5_IL_2909	N4	7	0.015	Circular	1.00	-	0.7	0.9	1.2	1.7
Z5_PIPE_278	Z5_IL_2873	Z5_MH_3935	M4	32	0.015	Circular	1.00	-	0.6	0.8	1.0	1.3
Z5_PIPE_280	Z5_IL_2920	Z5_MH_3944	N4	6	0.015	Circular	1.00	-	0.0	0.0	0.0	0.2
Z5_PIPE_281	Z5_IL_2896	Z5_MH_3754	N4	83	0.015	Circular	1.00	-	0.6	0.8	3.9	3.8
Z5_PIPE_283	Z5_SGIL_4759	Z5_MH_3934	M4	35	0.015	Circular	1.00	-	0.7	0.9	4.1	2.5
Z5_PIPE_284	Z5_MH_3934	Z5_IL_2891	M4	135	0.015	Circular	1.00	-	0.7	0.9	2.7	2.5
Z5_PIPE_285	Z5_IL_2635	Z5_IL_2303	H7	23	0.015	Circular	1.00	-	2.5	3.1	3.9	5.1
Z5_PIPE_287	Z5_IL_2323	Z5_OF_4476	N4	30	0.024	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_3014	Z5_MH_5103	Z5_MH_5102	G6	229	0.015	Circular	3.00	-	33.5	44.8	61.7	78.4
Z5_PIPE_3017	Z5_CB_852	Z5_MH_4303	J5	50	0.015	Circular	1.00	-	8.5	8.5	8.5	8.5
Z5_PIPE_3018	Z5_IL_2472	Z5_MH_4303	J5	56	0.015	Circular	5.00	-	61.9	73.2	84.1	91.5
Z5_PIPE_3019	Z5_MH_4303	Z5_MH_4151	J5	199	0.015	Circular	5.00	-	78.3	93.4	106.9	116.4
Z5_PIPE_302	Z5_MH_4327	Z5_OF_4408	M4	84	0.015	Circular	1.00	-	8.8	10.3	12.4	12.8
Z5_PIPE_3029	Z5_MH_4167	Z5_MH_4877	H5	29	0.010	Circular	1.50	-	4.0	5.1	6.4	8.2
Z5_PIPE_303	Z5_IL_2947	Z5_CB_228	M5	86	0.015	Circular	1.50	-	8.7	10.2	10.7	11.9

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_3030	Z5_MH_4877	Z5_MH_5097	H5	198	0.015	Circular	1.50	-	4.0	5.1	6.4	8.2
Z5_PIPE_3031	Z5_MH_5097	Z5_IL_1420	H5	17	0.015	Circular	1.50	-	4.0	5.1	5.4	8.0
Z5_PIPE_304	Z5_IL_2950	Z5_IL_2949	N4	204	0.015	Circular	2.00	-	9.4	10.7	11.8	13.3
Z5_PIPE_3046	Z5_IL_2345	Z5_IL_2346	G8	77	0.015	Circular	1.00	-	1.4	1.8	2.2	2.9
Z5_PIPE_3047	Z5_IL_2346	Z5_CB_726	G8	80	0.015	Circular	1.00	-	1.4	1.8	2.2	2.9
Z5_PIPE_3049	Z5_MH_4074	Z5_OF_4994	G8	73	0.015	Circular	2.50	-	15.4	19.3	24.5	32.1
Z5_PIPE_305	Z5_IL_2948	Z5_IL_2949	N4	38	0.015	Circular	1.00	-	1.7	2.0	2.3	2.9
Z5_PIPE_3050	Z5_IL_4910	Z5_MH_4074	G8	46	0.015	Circular	2.00	-	15.3	19.3	24.5	32.1
Z5_PIPE_3051	Z5_IL_1650	Z5_MH_4074	G8	22	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_3054	Z5_IL_3555	Z5_IL_3554	L4	30	0.015	Circular	1.00	-	5.5	1.1	0.8	1.0
Z5_PIPE_3055	Z5_IL_3554	Z5_MH_4287	L4	28	0.015	Circular	1.00	-	6.5	2.6	1.9	2.3
Z5_PIPE_3056	Z5_MH_4287	Z5_MH_4288	L4	57	0.015	Circular	1.50	-	11.4	2.6	1.9	2.9
Z5_PIPE_3057	Z5_MH_4288	Z5_MH_4263	L4	85	0.015	Circular	1.50	-	10.4	2.6	2.9	3.5
Z5_PIPE_3058	Z5_MH_4321	Z5_MH_5114	L4	45	0.015	Rectangular	2.00	6.00	82.0	85.2	75.9	69.2
Z5_PIPE_3059	Z5_IL_2934	Z5_MH_4263	L4	35	0.015	Circular	3.50	-	65.1	69.3	60.1	55.6
Z5_PIPE_306	Z5_IL_2949	Z5_OF_4438	N4	82	0.024	Circular	2.00	-	10.3	12.3	14.0	16.1
Z5_PIPE_3060	Z5_MH_5115	Z5_MH_5116	L4	14	0.015	Rectangular (open)	2.67	6.00	85.5	89.8	78.5	72.6
Z5_PIPE_3061	Z5_IL_2933	Z5_MH_5114	L4	45	0.015	Circular	1.00	-	1.3	1.5	1.5	1.6
Z5_PIPE_3062	STOR-1	Z5_IL_5117	L4	13	0.024	Circular	2.50	-	0.0	28.7	30.9	21.0
Z5_PIPE_3065	Z5_IL_2301	Z5_OF_4968	H5	94	0.015	Circular	1.25	-	9.8	9.8	9.8	11.1
Z5_PIPE_3068	Z5_MH_3754	NEW_Z5_IL_6507	N4	36	0.015	Circular	1.25	-	4.6	6.1	11.0	8.4
Z5_PIPE_307	Z5_CB_213	Z5_IL_2950	M5	121	0.015	Circular	1.75	-	9.4	10.7	11.8	13.3
Z5_PIPE_3070	Z5_IL_1196	Z5_MH_3747	M5	8	0.015	Circular	2.50	-	0.0	0.0	0.0	0.0
Z5_PIPE_3074	Z5_IL_4961	Z5_IL_2483	N3	58	0.015	Circular	1.25	-	3.0	3.8	4.9	6.6
Z5_PIPE_308	Z5_CB_228	Z5_CB_213	M5	34	0.015	Circular	1.50	-	9.4	11.5	11.8	13.3
Z5_PIPE_3083	Z5_MH_4328	Z5_IL_2613	M4	45	0.015	Circular	1.00	-	4.0	5.2	6.3	7.3
Z5_PIPE_3086	Z5_IL_3613	Z5_IL_1440	M4	37	0.015	Circular	1.00	-	1.8	2.2	2.8	3.4
Z5_PIPE_309	Z5_IL_2522	Z5_IL_2947	M5	357	0.015	Circular	1.50	-	6.6	7.5	8.3	9.5
Z5_PIPE_3106	Z5_IL_4952	Z5_MH_5113	L4	46	0.024	Circular	5.00	-	85.2	85.2	84.5	85.3
Z5_PIPE_3107	Z5_IL_2309	Z5_IL_2307	L4	367	0.024	Arch	3.67	6.00	116.2	118.5	121.7	124.2
Z5_PIPE_3108	Z5_IL_1455	Z5_MH_3794	L5	84	0.015	Circular	1.33	-	12.8	6.6	6.1	5.9
Z5_PIPE_3110	Z5_IL_5124	Z5_CB_483	L5	55	0.015	Circular	1.00	-	0.4	0.6	0.8	2.5
Z5_PIPE_3111	Z5_CB_508	Z5_IL_2932	L4	164	0.015	Circular	1.00	-	4.0	4.7	5.5	6.7
Z5_PIPE_312	Z5_CB_359	Z5_MH_4118	G8	40	0.015	Circular	1.00	-	1.5	1.9	2.3	3.0
Z5_PIPE_3123	Z5_IL_3623	Z5_MH_5116	L4	26	0.015	Circular	1.00	-	1.5	1.3	1.1	1.3
Z5_PIPE_313	Z5_CB_358	Z5_MH_4066	G8	9	0.015	Circular	1.00	-	5.4	5.7	6.5	8.3
Z5_PIPE_314	Z5_CB_101	Z5_MH_4919	N4	96	0.024	Circular	1.00	-	1.0	1.3	1.7	2.3
Z5_PIPE_3143	Z5_IL_3655	Z5_MH_4303	J5	27	0.015	Circular	1.00	-	3.1	3.7	4.6	5.9
Z5_PIPE_3145	Z5_IL_5269	Z5_IL_3585	J5	40	0.015	Circular	1.50	-	3.0	3.7	4.5	5.7
Z5_PIPE_316	Z5_MH_4127	Z5_OF_4572	L5	9	0.010	Circular	3.00	-	23.6	30.5	40.0	54.8
Z5_PIPE_3160	Z5_CB_158	Z5_IL_2471	J5	115	0.015	Circular	1.50	-	11.5	14.3	17.7	18.8
Z5_PIPE_3161	Z5_IL_3670	Z5_MH_4351	H5	19	0.015	Circular	1.00	-	2.2	2.8	3.6	3.9
Z5_PIPE_3162	Z5_IL_3669	Z5_CB_147	H5	23	0.015	Circular	1.50	-	0.8	1.0	1.2	1.5
Z5_PIPE_3163	Z5_MH_4349	Z5_CB_142	H5	34	0.015	Circular	1.25	-	3.0	3.8	13.2	14.0
Z5_PIPE_3164	Z5_MH_4350	Z5_CB_142	H5	32	0.015	Circular	1.50	-	8.7	10.5	16.6	14.1
Z5_PIPE_317	Z5_CB_106	Z5_IL_2453	L5	258	0.015	Circular	1.00	-	1.3	2.0	2.9	3.3
Z5_PIPE_318	Z5_CB_482	Z5_CB_107	L5	52	0.015	Circular	1.00	-	1.3	2.0	2.9	4.4
Z5_PIPE_3186	Z5_IL_3628	Z5_IL_3508	H7	106	0.015	Circular	1.50	-	8.1	9.5	11.4	14.3
Z5_PIPE_3187	Z5_IL_3629	Z5_IL_3508	H7	48	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z5_PIPE_3188	Z5_IL_4907	Z5_OF_4593	H8	82	0.015	Circular	1.50	-	0.4	0.5	0.7	1.0
Z5_PIPE_319	Z5_CB_483	Z5_CB_482	L5	53	0.015	Circular	1.00	-	0.4	0.5	0.8	3.8
Z5_PIPE_3193	Z5_IL_2639	Z5_MH_4354	G7	79	0.015	Circular	1.00	-	2.7	3.3	4.2	5.6
Z5_PIPE_3194	Z5_SGIL_4730	Z5_IL_2608	G7	63	0.015	Circular	1.50	-	1.5	1.5	2.1	2.4
Z5_PIPE_320	Z5_OF_4362	Z5_CB_483	L5	57	0.024	Circular	1.00	-	0.0	0.0	0.0	0.8
Z5_PIPE_3200	Z5_CB_70	Z5_IL_1928	G7	12	0.015	Circular	1.25	-	2.8	3.5	4.4	5.9
Z5_PIPE_3207	Z5_CB_237	Z5_IL_2543	G6	127	0.015	Circular	1.00	-	0.8	1.1	1.6	2.2
Z5_PIPE_3223	Z5_IL_3688	Z5_IL_3147	G5	126	0.015	Circular	1.25	-	2.7	3.0	3.7	2.7
Z5_PIPE_3226	Z5_IL_3692	Z5_MH_4359	G7	111	0.015	Circular	1.00	-	0.8	1.0	1.3	1.8
Z5_PIPE_3231	Z5_CB_362	Z5_CB_363	G8	70	0.015	Circular	1.00	-	4.3	4.8	4.3	2.1
Z5_PIPE_324	Z5_IL_2958	Z5_MH_3863	L5	36	0.010	Circular	1.00	-	2.6	3.5	4.8	6.6
Z5_PIPE_3240	Z5_IL_3699	Z5_IL_3201	F6	197	0.015	Circular	3.50	-	53.7	57.9	62.7	69.5
Z5_PIPE_3242	Z5_IL_3698	Z5_IL_3699	F6	189	0.015	Circular	3.50	-	50.8	54.0	57.4	62.4
Z5_PIPE_3243	Z5_IL_3697	Z5_IL_3698	F6	42	0.015	Circular	3.00	-	49.8	51.4	54.2	58.6
Z5_PIPE_3244	Z5_IL_5362	Z5_IL_3697	F6	247	0.015	Circular	2.50	-	48.3	44.6	47.3	50.8
Z5_PIPE_3245	Z5_IL_3696	Z5_IL_3697	F6	59	0.015	Circular	1.00	-	6.9	7.1	7.5	8.4
Z5_PIPE_3246	Z5_IL_5363	Z5_IL_3696	F6	41	0.015	Circular	1.00	-	6.9	8.3	8.8	10.5
Z5_PIPE_3247	Z5_IL_5364	Z5_IL_3698	F6	53	0.015	Circular	3.25	-	0.9	0.5	0.4	2.2
Z5_PIPE_3249	Z5_IL_4886	Z5_IL_3050	F6	31	0.015	Circular	1.00	-	0.9	1.4	2.0	2.9
Z5_PIPE_325	Z5_CB_109	Z5_CB_110	L5	98	0.015	Circular	1.00	-	1.3	1.8	2.2	2.7
Z5_PIPE_3250	Z5_IL_3180	Z5_IL_5085	F8	27	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_3251	Z5_IL_3701	Z5_IL_3702	F8	29	0.015	Circular	1.25	-	18.2	23.8	27.0	31.5
Z5_PIPE_3253	Z5_MH_3899	Z5_IL_3170	F8	36	0.015	Circular	3.50	-	21.7	27.5	33.0	38.3
Z5_PIPE_3254	Z5_IL_2634	Z5_MH_3900	F8	31	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_3258	Z5_IL_3711	Z5_MH_4091	F5	51	0.015	Circular	1.00	-	0.4	0.6	0.9	1.6
Z5_PIPE_326	Z5_CB_120	Z5_CB_486	L5	126	0.015	Circular	1.00	-	0.3	0.5	0.7	1.0
Z5_PIPE_3261	Z5_IL_3707	Z5_IL_2088	E6	64	0.015	Circular	1.00	-	0.6	0.9	1.3	1.9
Z5_PIPE_3262	Z5_IL_4885	Z5_MH_4111	E6	20	0.015	Circular	3.00	-	8.6	12.0	16.3	23.9
Z5_PIPE_3263	Z5_IL_3086	Z5_MH_4360	E6	3	0.015	Rectangular	1.00	1.00	0.3	0.5	0.7	1.1
Z5_PIPE_3264	Z5_IL_4911	Z5_MH_4236	E6	13	0.015	Circular	1.25	-	4.7	6.5	7.6	8.9
Z5_PIPE_327	Z5_CB_58	Z5_IL_2485	M5	59	0.015	Circular	1.00	-	0.3	0.5	0.7	1.0
Z5_PIPE_3271	Z5_IL_2147	Z5_MH_3825	J8	40	0.015	Circular	1.00	-	1.1	1.4	1.8	2.4
Z5_PIPE_3277	Z5_MH_5100	NEW_Z5_MH_6021	G6	241	0.015	Rectangular	3.00	5.00	115.3	134.2	159.2	185.3
Z5_PIPE_3278	Z5_MH_4354	Z5_OF_4982	G7	117	0.015	Circular	1.00	-	2.7	3.3	4.2	5.6
Z5_PIPE_3279	Z5_CB_347	Z5_OF_4993	G8	60	0.015	Circular	1.00	-	1.0	1.3	1.6	2.1
Z5_PIPE_328	Z5_IL_2486	Z5_IL_2484	M5	54	0.015	Circular	1.00	-	1.3	1.8	2.2	2.5
Z5_PIPE_3282	Z5_IL_3169	Z5_IL_2640	H7	30	0.015	Circular	0.83	-	4.1	5.3	6.9	7.5
Z5_PIPE_3283	Z5_IL_2627	Z5_IL_3169	H7	88	0.015	Circular	0.83	-	0.8	1.1	1.4	2.0
Z5_PIPE_3284	Z5_IL_2640	Z5_OF_4453	H7	29	0.015	Circular	0.83	-	4.1	5.3	6.9	7.5
Z5_PIPE_3285	Z5_IL_4997	Z5_IL_3636	H5	123	0.015	Rectangular	3.00	5.00	115.0	135.4	167.9	196.7
Z5_PIPE_3286	Z5_IL_2003	Z5_OF_4400	H6	155	0.015	Circular	0.67	-	0.8	1.0	1.3	1.7
Z5_PIPE_3287	Z5_IL_2011	Z5_OF_4974	H6	124	0.015	Circular	0.67	-	1.6	1.7	1.8	2.1
Z5_PIPE_3288	Z5_IL_3027	Z5_OF_4988	H7	5	0.015	Circular	1.50	-	2.8	3.0	3.4	3.8
Z5_PIPE_329	Z5_CB_105	Z5_IL_2484	M5	53	0.015	Circular	1.00	-	0.4	0.6	0.8	1.1
Z5_PIPE_3290	Z5_IL_3113	Z5_SGMH_4849	N4	127	0.015	Circular	2.00	-	12.0	14.9	18.2	20.2
Z5_PIPE_3291	Z5_CB_104	Z5_MH_4919	N4	144	0.015	Circular	1.00	-	1.9	2.4	2.9	3.5
Z5_PIPE_3292	Z5_CB_519	Z5_IL_2871	N4	6	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_3293	Z5_IL_2935	Z5_IL_4925	L4	78	0.015	Circular	1.00	-	0.6	2.1	3.4	3.7
Z5_PIPE_3294	Z5_IL_4925	Z5_CB_504	L4	38	0.015	Circular	1.25	-	0.6	2.1	3.5	5.9
Z5_PIPE_330	Z5_IL_2484	Z5_IL_2485	M5	48	0.015	Circular	1.25	-	1.5	2.1	2.7	3.1
Z5_PIPE_3301	Z5_MH_3747	Z5_OF_5006	M5	37	0.015	Circular	2.50	-	23.9	26.7	30.5	34.8
Z5_PIPE_3307	Z5_MH_3873	Z5_MH_4269	K5	375	0.015	Rectangular	4.00	8.00	158.7	192.2	225.9	263.0
Z5_PIPE_331	Z5_IL_2485	Z5_OF_4571	M5	127	0.015	Circular	1.25	-	2.2	3.0	3.9	4.8
Z5_PIPE_3324	Z5_MH_4266	Z5_IL_3526	L5	71	0.015	Circular	1.33	-	12.8	6.4	6.2	6.2
Z5_PIPE_3325	Z5_MH_4267	Z5_MH_4266	L5	127	0.015	Circular	1.33	-	10.6	6.6	6.8	7.1
Z5_PIPE_3326	Z5_MH_5122	Z5_MH_4268	L5	124	0.015	Circular	1.33	-	9.4	6.2	6.3	6.7
Z5_PIPE_3327	Z5_MH_4268	Z5_MH_4267	L5	132	0.015	Circular	1.33	-	10.3	5.9	6.0	6.3
Z5_PIPE_333	Z5_CB_504	Z5_CB_505	L4	97	0.015	Circular	2.75	-	15.3	20.1	26.8	33.7
Z5_PIPE_334	Z5_CB_505	Z5_OF_4443	K5	100	0.015	Circular	2.75	-	16.9	22.2	29.5	36.8
Z5_PIPE_335	Z5_IL_1224	Z5_MH_3756	N4	21	0.015	Circular	1.25	-	0.5	0.6	0.9	2.4
Z5_PIPE_3358	Z5_CB_4917	Z5_MH_4924	K5	13	0.010	Circular	5.00	-	250.5	188.4	202.7	200.5
Z5_PIPE_3359	Z5_MH_4924	Z5_MH_4923	K5	156	0.010	Circular	5.00	-	161.0	164.6	157.7	153.3
Z5_PIPE_336	Z5_IL_1223	Z5_IL_1221	N4	22	0.015	Circular	1.00	-	0.5	0.7	0.9	1.3
Z5_PIPE_3360	Z5_MH_4923	Z5_IL_5117	L4	194	0.015	Circular	5.00	-	153.2	165.6	152.2	145.5
Z5_PIPE_337	Z5_MH_3757	Z5_IL_1222	N4	197	0.015	Circular	1.75	-	7.5	9.2	10.7	11.4
Z5_PIPE_338	Z5_IL_1232	Z5_MH_3757	N4	79	0.015	Circular	1.00	-	0.8	1.0	1.6	2.3
Z5_PIPE_339	Z5_CB_543	Z5_MH_3757	N4	32	0.015	Circular	1.50	-	6.8	8.3	9.4	10.0
Z5_PIPE_340	Z5_CB_545	Z5_IL_1234	N4	72	0.015	Circular	1.50	-	6.1	7.4	8.2	9.1
Z5_PIPE_341	Z5_IL_1233	Z5_IL_1232	N4	23	0.015	Circular	1.00	-	0.8	1.2	1.6	4.0
Z5_PIPE_342	Z5_IL_1235	Z5_CB_545	N4	24	0.015	Circular	1.00	-	0.6	0.8	2.2	2.6
Z5_PIPE_343	Z5_IL_1246	Z5_SGMH_4850	N4	18	0.015	Circular	1.50	-	5.8	7.7	10.0	11.6
Z5_PIPE_344	Z5_IL_1247	Z5_IL_1246	N4	276	0.015	Circular	1.50	-	5.8	7.7	10.0	11.6
Z5_PIPE_345	Z5_MH_3759	Z5_IL_1264	N4	194	0.015	Circular	1.50	-	5.7	7.5	7.8	8.0
Z5_PIPE_346	Z5_IL_1264	Z5_IL_1262	N4	143	0.015	Circular	1.50	-	6.4	8.3	8.9	9.5
Z5_PIPE_347	Z5_IL_1262	Z5_IL_1260	N4	212	0.015	Circular	1.50	-	6.8	8.9	9.6	10.5
Z5_PIPE_348	Z5_IL_1261	Z5_IL_1260	N4	49	0.015	Circular	1.00	-	0.9	1.2	1.5	2.1
Z5_PIPE_349	Z5_IL_1266	Z5_MH_3759	N4	5	0.015	Circular	1.50	-	0.1	0.3	0.3	0.2
Z5_PIPE_350	Z5_IL_1268	Z5_MH_3760	N4	23	0.015	Circular	1.00	-	0.0	0.0	1.0	0.1
Z5_PIPE_351	Z5_IL_1269	Z5_MH_3761	M5	10	0.015	Circular	1.00	-	0.5	0.7	3.0	1.2
Z5_PIPE_352	Z5_IL_1281	Z5_IL_1270	M4	24	0.015	Circular	1.00	-	0.4	0.7	4.5	2.2
Z5_PIPE_353	Z5_IL_1282	Z5_MH_3766	M4	31	0.015	Circular	1.00	-	1.1	1.8	5.5	3.8
Z5_PIPE_354	Z5_IL_1289	Z5_SGMH_4850	N4	32	0.015	Circular	1.00	-	0.6	0.8	1.1	1.5
Z5_PIPE_355	Z5_SGMH_4850	Z5_OF_4506	N4	85	0.015	Circular	1.50	-	14.5	19.1	23.3	27.2
Z5_PIPE_356	Z5_MH_3767	Z5_SGMH_4850	N4	150	0.015	Circular	1.75	-	7.4	9.8	11.1	12.4
Z5_PIPE_372	Z5_IL_2452	Z5_MH_3861	L5	19	0.015	Circular	1.00	-	1.1	1.6	2.1	2.9
Z5_PIPE_373	Z5_IL_2451	Z5_MH_3861	L5	22	0.015	Circular	1.00	-	0.4	0.6	0.9	1.3
Z5_PIPE_374	Z5_MH_3861	Z5_MH_3862	M5	142	0.015	Circular	3.50	-	18.3	22.9	29.4	39.2
Z5_PIPE_375	Z5_MH_3862	Z5_MH_3864	L5	161	0.015	Circular	3.50	-	19.6	24.8	32.1	43.1
Z5_PIPE_377	Z5_IL_2454	Z5_IL_2954	L5	58	0.015	Circular	2.50	-	0.6	0.9	1.3	1.9
Z5_PIPE_378	Z5_IL_2954	Z5_IL_2453	M5	155	0.015	Circular	2.50	-	0.6	0.9	1.3	1.9
Z5_PIPE_379	Z5_MH_3863	Z5_SGMH_4865	L5	78	0.015	Circular	3.50	-	21.6	27.7	36.0	48.5

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_380	Z5_IL_2453	Z5_SGMH_4865	L5	39	0.015	Circular	2.50	-	1.9	2.9	4.2	5.1
Z5_PIPE_381	Z5_MH_3864	Z5_MH_3863	L5	186	0.015	Circular	3.50	-	19.6	24.8	32.1	43.1
Z5_PIPE_382	Z5_CB_57	Z5_SGMH_4865	L5	113	0.015	Circular	1.00	-	1.0	1.4	2.0	2.8
Z5_PIPE_383	Z5_MH_5123	Z5_OF_4385	L5	26	0.015	Circular	2.00	-	11.6	13.5	16.2	20.1
Z5_PIPE_384	Z5_OF_4385	Z5_MH_3865	L5	28	0.015	Circular	2.50	-	11.6	13.5	16.2	20.1
Z5_PIPE_385	Z5_MH_3865	Z5_IL_2455	L5	105	0.015	Circular	2.50	-	11.6	13.5	16.2	20.1
Z5_PIPE_386	Z5_IL_2455	Z5_MH_3866	L5	8	0.015	Circular	2.50	-	11.9	14.0	16.9	21.1
Z5_PIPE_387	Z5_MH_3866	Z5_MH_3834	L5	270	0.015	Circular	3.00	-	13.1	15.7	19.3	24.5
Z5_PIPE_388	Z5_MH_3834	Z5_MH_3835	L5	66	0.015	Circular	3.00	-	13.9	16.9	20.8	26.7
Z5_PIPE_389	Z5_MH_3835	Z5_MH_3836	L5	190	0.015	Circular	3.00	-	13.9	16.9	20.8	26.7
Z5_PIPE_390	Z5_IL_2273	Z5_MH_3837	L5	20	0.015	Circular	1.00	-	1.9	2.5	3.3	4.8
Z5_PIPE_391	Z5_MH_3838	Z5_MH_3837	L5	24	0.015	Circular	1.00	-	0.7	1.1	1.6	2.3
Z5_PIPE_392	Z5_MH_3837	Z5_MH_3861	L5	143	0.015	Circular	3.50	-	16.8	20.9	26.5	35.1
Z5_PIPE_393	Z5_MH_3836	Z5_MH_3837	L5	236	0.015	Circular	3.50	-	14.9	18.2	22.8	29.6
Z5_PIPE_394	Z5_IL_2274	Z5_MH_3838	L5	23	0.024	Circular	1.00	-	0.7	1.1	1.6	2.3
Z5_PIPE_396	Z5_IL_2179	Z5_IL_2181	K4	31	0.015	Circular	1.50	-	2.1	2.9	3.9	5.5
Z5_PIPE_403	Z5_IL_1063	Z5_CB_504	L4	169	0.015	Circular	2.75	-	12.8	17.1	23.3	30.7
Z5_PIPE_404	Z5_IL_1064	Z5_IL_1063	L4	40	0.015	Circular	1.25	-	1.0	1.5	2.0	2.3
Z5_PIPE_411	Z5_IL_1181	Z5_IL_1182	M5	118	0.015	Circular	1.50	-	4.1	4.9	6.0	7.7
Z5_PIPE_413	Z5_IL_1434	Z5_MH_4124	L4	26	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_414	Z5_IL_1439	Z5_MH_3782	M4	36	0.015	Circular	1.00	-	0.9	1.0	1.9	1.9
Z5_PIPE_415	Z5_IL_1441	Z5_MH_3789	M4	24	0.015	Circular	1.00	-	1.4	1.7	2.0	2.6
Z5_PIPE_416	Z5_IL_1444	Z5_MH_3783	L5	39	0.015	Circular	1.00	-	2.9	0.8	1.0	1.3
Z5_PIPE_417	Z5_IL_1447	Z5_IL_1448	L4	69	0.024	Circular	6.00	-	144.9	154.9	168.2	184.3
Z5_PIPE_418	Z5_IL_1435	Z5_MH_3786	M4	52	0.015	Circular	1.00	-	2.3	2.8	3.5	4.9
Z5_PIPE_419	Z5_IL_3109	Z5_MH_3786	M4	63	0.015	Circular	1.00	-	1.4	1.7	2.2	2.9
Z5_PIPE_420	Z5_IL_1440	Z5_MH_3788	M4	80	0.015	Circular	1.00	-	1.8	2.2	2.8	3.4
Z5_PIPE_421	Z5_IL_1450	Z5_MH_3788	M4	12	0.015	Circular	1.00	-	1.0	1.2	1.4	2.4
Z5_PIPE_422	Z5_IL_1442	Z5_MH_3790	M4	29	0.015	Circular	3.00	-	19.9	24.2	30.2	38.4
Z5_PIPE_423	Z5_IL_1443	Z5_MH_3790	M4	98	0.015	Circular	1.00	-	2.5	3.1	3.9	4.7
Z5_PIPE_424	Z5_IL_1453	Z5_MH_3793	L5	42	0.015	Circular	1.00	-	5.2	4.4	4.2	5.3
Z5_PIPE_425	Z5_MH_3794	Z5_MH_3793	L5	72	0.015	Circular	1.67	-	12.2	7.6	6.8	6.6
Z5_PIPE_426	Z5_IL_1454	Z5_MH_3794	L5	39	0.015	Circular	1.25	-	6.5	2.4	1.1	1.1
Z5_PIPE_427	Z5_IL_3526	Z5_IL_1455	L5	36	0.015	Circular	1.33	-	12.4	6.5	6.1	6.0
Z5_PIPE_428	Z5_IL_1480	Z5_IL_1479	H7	29	0.015	Circular	1.50	-	0.0	0.6	2.1	10.3
Z5_PIPE_43	Z5_IL_2610	Z5_MH_3896	G7	65	0.015	Circular	1.25	-	7.6	5.5	6.6	5.5
Z5_PIPE_432	Z5_IL_1479	Z5_IL_1478	G7	35	0.015	Circular	1.50	-	0.0	0.6	2.2	14.9
Z5_PIPE_433	Z5_MH_3768	Z5_MH_3767	N4	109	0.015	Circular	1.75	-	7.4	9.8	11.1	12.4
Z5_PIPE_434	Z5_IL_1260	Z5_MH_3768	N4	87	0.015	Circular	1.75	-	7.4	9.8	11.1	12.4
Z5_PIPE_44	Z5_IL_1928	Z5_IL_2610	G7	102	0.015	Circular	2.00	-	6.4	6.6	10.2	6.9
Z5_PIPE_441	Z5_SGIL_4696	Z5_MH_3885	H6	64	0.015	Circular	1.00	-	0.6	0.8	1.1	1.6
Z5_PIPE_4434	Z5_MH_5573	Z5_MH_3747	M5	11	0.015	Circular	2.50	-	10.9	11.3	11.9	12.7
Z5_PIPE_4435	Z5_MH_3748	Z5_MH_3747	M5	100	0.015	Circular	2.50	-	12.4	14.7	17.8	21.0
Z5_PIPE_45	Z5_IL_1477	Z5_IL_2611	G7	159	0.015	Circular	1.50	-	13.1	13.1	13.6	14.4
Z5_PIPE_453	Z5_IL_2646	Z5_IL_2648	E5	80	0.010	Circular	1.00	-	1.2	1.8	2.5	3.7
Z5_PIPE_454	Z5_IL_2641	Z5_SGIL_4737	E5	28	0.010	Circular	1.25	-	1.7	2.6	3.8	5.5
Z5_PIPE_455	Z5_SGIL_4737	Z5_OF_4975	E5	173	0.010	Circular	1.25	-	1.7	2.6	3.8	5.5
Z5_PIPE_46	Z5_MH_3896	Z5_IL_1477	G7	62	0.015	Circular	1.50	-	15.8	15.1	17.1	17.4
Z5_PIPE_47	Z5_IL_2611	Z5_IL_2608	G7	101	0.015	Circular	1.50	-	13.1	13.1	13.6	14.4
Z5_PIPE_473	Z5_IL_2425	Z5_IL_2426	N4	24	0.015	Circular	1.00	-	1.0	1.4	1.8	2.5
Z5_PIPE_474	Z5_IL_2426	Z5_IL_2427	N4	39	0.010	Circular	1.00	-	1.0	1.4	1.8	2.5
Z5_PIPE_475	Z5_IL_2427	Z5_MH_3858	N4	107	0.010	Circular	1.50	-	1.0	1.4	1.8	2.5
Z5_PIPE_476	Z5_IL_3551	Z5_MH_5107	N3	271	0.015	Circular	1.50	-	3.6	4.8	6.3	8.6
Z5_PIPE_4871	Z5_MH_4156	Z5_MH_5573	M5	161	0.015	Circular	1.67	-	10.9	11.3	11.9	12.7
Z5_PIPE_490	Z5_IL_2276	Z5_IL_2451	L5	35	0.024	Circular	1.00	-	0.4	0.6	0.9	1.3
Z5_PIPE_491	Z5_IL_2303	Z5_MH_3845	H7	7	0.015	Circular	1.25	-	2.5	3.1	3.9	5.1
Z5_PIPE_492	Z5_MH_3845	Z5_IL_2304	H7	130	0.015	Circular	1.25	-	2.5	3.1	3.9	5.1
Z5_PIPE_493	Z5_IL_2304	Z5_IL_2305	H7	50	0.015	Circular	1.25	-	2.5	3.1	3.9	5.1
Z5_PIPE_494	Z5_IL_2305	Z5_OF_4470	H7	87	0.015	Circular	1.50	-	4.7	5.9	7.7	10.2
Z5_PIPE_495	Z5_IL_4951	Z5_MH_5111	M4	29	0.024	Circular	1.00	-	1.6	1.9	2.3	2.1
Z5_PIPE_496	Z5_IL_2306	Z5_MH_5110	M4	56	0.024	Circular	1.00	-	1.9	2.2	1.9	2.3
Z5_PIPE_498	Z5_MH_5111	Z5_MH_5110	M5	157	0.024	Arch	3.67	6.00	120.2	123.4	127.5	132.5
Z5_PIPE_499	Z5_IL_2463	Z5_IL_2462	M5	38	0.024	Circular	1.00	-	2.1	1.8	2.2	2.3
Z5_PIPE_50	Z5_CB_615	Z5_IL_3271	H5	61	0.015	Circular	2.50	-	15.4	19.1	24.0	31.3
Z5_PIPE_503	Z5_CB_148	Z5_IL_2470	H5	287	0.015	Circular	4.00	-	23.2	27.9	30.7	32.9
Z5_PIPE_504	Z5_IL_2470	Z5_IL_2471	J5	119	0.015	Circular	4.00	-	23.5	28.3	31.6	34.1
Z5_PIPE_505	Z5_IL_2471	Z5_IL_5558	J5	404	0.015	Circular	4.50	-	37.1	45.1	51.6	56.3
Z5_PIPE_51	Z5_IL_3271	Z5_IL_3272	H5	33	0.015	Circular	2.50	-	15.4	19.1	24.0	31.4
Z5_PIPE_510	Z5_IL_2483	Z5_OF_5566	N3	50	0.010	Circular	1.25	-	3.0	3.8	4.9	6.6
Z5_PIPE_511	Z5_IL_2181	Z5_CB_45	K5	22	0.015	Circular	1.75	-	3.8	5.2	7.1	10.1

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_512	Z5_CB_45	Z5_IL_2177	K4	112	0.015	Circular	1.75	-	3.8	5.2	7.1	10.0
Z5_PIPE_513	Z5_IL_2177	Z5_CB_46	K4	55	0.015	Circular	1.75	-	3.8	5.2	7.1	10.0
Z5_PIPE_515	Z5_CB_46	Z5_CB_47	K4	62	0.015	Circular	1.75	-	3.8	5.2	7.2	10.0
Z5_PIPE_518	Z5_IL_2544	Z5_IL_2545	G6	75	0.015	Circular	1.50	-	10.0	13.0	16.4	17.5
Z5_PIPE_52	Z5_IL_2953	Z5_OF_4441	N4	56	0.010	Circular	1.00	-	4.4	5.2	6.2	7.8
Z5_PIPE_520	Z5_IL_2545	Z5_IL_2543	G6	203	0.015	Circular	1.50	-	10.9	14.4	18.2	19.3
Z5_PIPE_523	Z5_MH_3885	Z5_IL_2545	H6	154	0.015	Circular	1.00	-	0.6	0.8	1.1	1.5
Z5_PIPE_53	Z5_IL_2955	Z5_OF_5005	M4	44	0.015	Circular	1.00	-	4.6	5.6	7.0	9.1
Z5_PIPE_539	Z5_SGMH_4865	Z5_MH_4127	L5	190	0.015	Circular	3.50	-	23.6	30.5	40.0	54.8
Z5_PIPE_549	Z5_IL_3076	Z5_MH_4086	F5	49	0.015	Circular	1.00	-	2.0	2.9	4.3	6.8
Z5_PIPE_550	Z5_IL_3078	Z5_MH_4096	F6	33	0.015	Circular	1.00	-	0.6	1.3	2.0	2.7
Z5_PIPE_551	Z5_IL_3077	Z5_MH_4096	F6	41	0.015	Circular	1.00	-	2.5	3.8	5.3	4.7
Z5_PIPE_5510	Z5_IL_5117	Z5_MH_4321	L4	93	0.015	Circular	5.00	-	153.8	154.4	145.2	137.3
Z5_PIPE_5515	Z5_CB_250	Z5_IL_3039	G8	9	0.015	Circular	1.00	-	1.0	1.3	1.7	2.2
Z5_PIPE_5516	Z5_IL_3170	Z5_MH_3900	F8	162	0.015	Circular	2.00	-	21.7	27.5	33.0	38.4
Z5_PIPE_5519	Z5_MH_5088	Z5_IL_3027	H8	17	0.015	Circular	1.50	-	2.8	3.0	3.4	3.8
Z5_PIPE_552	Z5_IL_4953	Z5_OF_4437	L4	28	0.015	Circular	5.00	-	130.8	130.5	122.6	119.6
Z5_PIPE_5520	Z5_CB_241	Z5_OF_4386	H7	27	0.015	Circular	1.00	-	5.1	6.8	8.5	9.8
Z5_PIPE_5522	Z5_MH_5095	Z5_IL_2554	H6	31	0.015	Circular	1.00	-	6.7	7.0	7.4	7.8
Z5_PIPE_5523	Z5_IL_3481	Z5_IL_3480	H6	106	0.015	Circular	1.00	-	1.4	2.0	2.7	4.6
Z5_PIPE_5524	Z5_IL_3482	Z5_OF_4547	H6	24	0.015	Circular	1.00	-	3.7	5.0	6.7	8.2
Z5_PIPE_5526	Z5_CB_232	Z5_MH_4325	H5	21	0.015	Circular	1.00	-	2.7	3.2	4.0	5.0
Z5_PIPE_5527	Z5_IL_3681	Z5_IL_3012	H5	23	0.015	Circular	1.25	-	2.5	3.4	4.9	6.7
Z5_PIPE_5528	Z5_IL_1421	Z5_MH_5097	H5	15	0.015	Circular	1.50	-	0.0	0.5	3.3	10.1
Z5_PIPE_5529	Z5_IL_2980	Z5_MH_5098	H6	10	0.015	Circular	1.00	-	2.3	3.0	3.8	5.1
Z5_PIPE_553	Z5_IL_3214	Z5_MH_5112	L4	15	0.024	Circular	1.00	-	1.0	1.1	0.8	0.9
Z5_PIPE_5532	Z5_MH_5101	Z5_OF_4540	G6	350	0.015	Rectangular	3.00	5.00	126.4	132.4	154.3	181.7
Z5_PIPE_5533	Z5_IL_4889	Z5_MH_5103	G6	89	0.015	Circular	3.00	-	21.3	28.5	38.9	53.7
Z5_PIPE_5534	Z5_IL_4888	Z5_MH_5104	G6	155	0.015	Circular	3.00	-	18.9	25.5	34.5	48.3
Z5_PIPE_5535	Z5_IL_3691	Z5_IL_3690	G5	190	0.015	Circular	1.50	-	1.4	1.9	2.6	3.7
Z5_PIPE_5536	Z5_IL_3689	Z5_IL_3159	G5	66	0.015	Circular	1.50	-	3.5	4.8	6.4	8.9
Z5_PIPE_5537	Z5_IL_3202	Z5_IL_3693	F6	40	0.015	Circular	1.00	-	0.6	0.9	1.2	1.7
Z5_PIPE_5538	Z5_IL_1209	Z5_IL_3700	F6	117	0.015	Circular	2.00	-	14.1	18.4	18.7	20.4
Z5_PIPE_5539	Z5_IL_1001	Z5_MH_4095	F6	21	0.015	Circular	1.00	-	15.3	17.4	20.4	24.9
Z5_PIPE_554	Z5_IL_4956	Z5_OF_5079	M4	44	0.015	Rectangular	6.00	34.00	126.5	131.8	139.7	149.3
Z5_PIPE_5540	Z5_MH_4095	Z5_IL_1000	F6	29	0.015	Circular	1.00	-	11.5	12.5	13.5	15.2
Z5_PIPE_5541	Z5_MH_4091	Z5_MH_5105	F5	110	0.015	Circular	2.75	-	32.7	48.5	70.1	96.0
Z5_PIPE_5542	Z5_IL_3706	Z5_IL_2678	E5	28	0.015	Circular	1.25	-	9.4	12.0	13.1	14.1
Z5_PIPE_5543	Z5_MH_5106	Z5_IL_2678	E5	5	0.015	Circular	1.50	-	2.6	3.0	2.8	3.9
Z5_PIPE_5544	Z5_MH_4361	Z5_MH_5106	E5	7	0.015	Circular	1.50	-	1.4	1.6	1.4	1.7
Z5_PIPE_5546	Z5_IL_3552	Z5_IL_3551	N4	87	0.015	Circular	1.50	-	1.9	2.5	3.4	4.7
Z5_PIPE_5547	Z5_MH_3858	Z5_IL_3552	N4	181	0.015	Circular	1.50	-	1.9	2.5	3.4	4.7
Z5_PIPE_5549	Z5_IL_3226	Z5_IL_3227	L4	49	0.015	Circular	6.00	-	139.8	147.6	158.8	173.2
Z5_PIPE_555	Z5_IL_1449	Z5_MH_3787	M4	12	0.015	Circular	1.00	-	4.8	6.0	7.6	10.4
Z5_PIPE_5550	Z5_IL_3227	Z5_IL_1447	L4	34	0.015	Circular	6.00	-	141.1	149.1	160.4	174.7
Z5_PIPE_5551	Z5_IL_1438	Z5_MH_3782	M4	32	0.015	Circular	1.00	-	4.0	4.8	5.8	6.4
Z5_PIPE_5552	Z5_IL_2504	Z5_IL_2503	L4	82	0.015	Circular	1.50	-	2.2	2.9	3.7	4.8
Z5_PIPE_5553	Z5_IL_2503	Z5_IL_2502	L4	138	0.015	Circular	1.50	-	2.2	2.9	3.7	4.8
Z5_PIPE_5554	Z5_IL_2307	Z5_MH_5112	L4	69	0.024	Arch	3.67	6.00	119.3	121.9	125.7	130.5
Z5_PIPE_5555	Z5_MH_5112	Z5_MH_5111	L4	87	0.024	Arch	3.67	6.00	119.6	122.7	126.4	131.0
Z5_PIPE_5556	Z5_MH_5110	Z5_MH_5109	M4	86	0.024	Arch	3.67	6.00	120.8	124.7	129.3	134.6
Z5_PIPE_5557	Z5_MH_5113	Z5_IL_2308	L4	74	0.024	Arch	3.67	6.00	114.9	117.1	119.3	120.3
Z5_PIPE_5558	Z5_IL_2308	Z5_IL_2309	L4	87	0.024	Arch	3.67	6.00	115.4	117.9	120.7	122.7
Z5_PIPE_5559	Z5_IL_1452	Z5_IL_1451	M5	25	0.015	Circular	1.00	-	3.4	4.0	5.0	5.7
Z5_PIPE_556	Z5_IL_2931	Z5_IL_2930	L5	80	0.015	Circular	1.50	-	5.7	6.7	8.0	10.0
Z5_PIPE_5560	Z5_MH_4321	Z5_IL_2934	L4	10	0.015	Circular	3.50	-	73.9	74.4	76.1	73.1
Z5_PIPE_5561	Z5_MH_5116	Z5_IL_5557	L4	73	0.015	Trapezoidal	5.00	5.00	153.9	163.0	140.3	127.5
Z5_PIPE_5562	Z5_MH_5114	Z5_MH_5115	L4	27	0.015	Rectangular	2.00	6.00	82.2	86.3	75.7	69.8
Z5_PIPE_5563	Z5_MH_4263	Z5_MH_5116	L4	38	0.015	Circular	3.50	-	67.0	70.8	61.1	55.4
Z5_PIPE_5564	Z5_MH_4132	Z5_IL_3571	K5	41	0.015	Circular	2.25	-	4.9	6.7	9.0	13.0
Z5_PIPE_5565	Z5_MH_4322	Z5_MH_5118	K5	23	0.015	Rectangular	3.00	6.00	256.1	201.9	246.9	270.2
Z5_PIPE_5566	Z5_MH_5118	Z5_IL_3533	K5	42	0.015	Rectangular	3.00	6.00	223.5	222.8	230.8	269.2
Z5_PIPE_5567	Z5_MH_4269	Z5_MH_5564	K5	178	0.015	Rectangular	4.00	10.00	158.5	192.0	225.4	262.5
Z5_PIPE_5569	Z5_MH_4004	Z5_MH_5271	K5	92	0.015	Rectangular	4.00	8.00	137.5	168.4	200.3	235.2
Z5_PIPE_557	Z5_IL_2930	Z5_IL_2929	L5	66	0.015	Circular	1.75	-	5.7	6.7	8.0	14.6
Z5_PIPE_5570	Z5_MH_5271	NEW_Z5_MH_6052	K5	226	0.015	Rectangular	4.00	8.00	142.9	174.9	208.5	244.5
Z5_PIPE_5571	Z5_MH_3872	Z5_MH_3873	K5	401	0.015	Rectangular	4.00	8.00	149.3	181.7	215.9	252.5
Z5_PIPE_5572	Z5_MH_4275	Z5_MH_4337	K4	193	0.015	Circular	1.50	-	1.5	1.7	2.1	2.6
Z5_PIPE_5573	Z5_MH_5119	Z5_MH_3871	K5	41	0.015	Circular	2.50	-	21.2	24.7	28.2	34.5
Z5_PIPE_5575	Z5_MH_5121	Z5_IL_2473	J5	271	0.015	Circular	4.50	-	58.1	68.2	75.1	80.8

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_5576	Z5_MH_4307	Z5_MH_5121	J5	21	0.015	Circular	1.75	-	21.0	23.3	24.0	26.0
Z5_PIPE_5577	Z5_CB_159	Z5_CB_158	J5	59	0.015	Circular	1.50	-	9.1	11.5	16.7	16.6
Z5_PIPE_5578	Z5_MH_4351	Z5_CB_824	H5	158	0.015	Circular	1.00	-	2.2	2.8	3.1	3.2
Z5_PIPE_5579	Z5_MH_3940	Z5_MH_3941	N4	25	0.015	Circular	1.00	-	3.5	4.4	6.8	6.2
Z5_PIPE_558	Z5_IL_2929	Z5_IL_2928	L5	210	0.015	Circular	2.00	-	7.9	9.5	11.6	14.2
Z5_PIPE_5580	Z5_MH_3944	Z5_CB_104	N4	50	0.015	Circular	1.00	-	1.9	2.4	3.0	3.5
Z5_PIPE_5581	Z5_IL_2871	Z5_MH_4919	N4	4	0.015	Circular	1.00	-	0.8	1.0	1.4	1.9
Z5_PIPE_5582	Z5_IL_1221	Z5_IL_3113	N4	147	0.015	Circular	2.00	-	12.0	14.9	18.2	20.2
Z5_PIPE_5583	Z5_IL_3112	Z5_IL_1221	N4	55	0.015	Circular	2.00	-	11.5	14.3	17.3	19.0
Z5_PIPE_5584	Z5_MH_3756	Z5_CB_528	N4	34	0.015	Circular	2.00	-	11.5	14.3	17.3	19.0
Z5_PIPE_5585	Z5_IL_1234	Z5_CB_543	N4	53	0.015	Circular	1.50	-	6.1	7.4	8.2	9.0
Z5_PIPE_5586	Z5_IL_1243	Z5_CB_474	M4	176	0.015	Circular	1.00	-	2.4	3.0	3.3	4.5
Z5_PIPE_5587	Z5_IL_1256	Z5_CB_464	M4	128	0.015	Circular	1.00	-	1.9	2.5	3.3	4.8
Z5_PIPE_5588	Z5_IL_1258	Z5_IL_1257	N4	65	0.015	Circular	1.00	-	1.9	2.5	3.3	4.7
Z5_PIPE_5589	Z5_IL_1286	Z5_IL_1270	M4	42	0.015	Circular	1.00	-	2.3	3.1	3.9	4.1
Z5_PIPE_559	Z5_IL_2928	Z5_IL_2927	L5	81	0.015	Circular	2.25	-	7.9	9.5	11.6	14.2
Z5_PIPE_5590	Z5_IL_1182	Z5_IL_1180	M5	75	0.015	Circular	1.50	-	4.1	4.9	6.0	7.7
Z5_PIPE_5591	Z5_IL_1180	Z5_SGIL_4624	M5	10	0.015	Circular	1.50	-	5.0	6.0	7.3	9.3
Z5_PIPE_5592	Z5_CB_791	Z5_MH_5122	L5	4	0.015	Circular	1.33	-	8.9	6.4	7.0	7.4
Z5_PIPE_5593	Z5_CB_110	Z5_IL_2486	M5	56	0.015	Circular	1.00	-	1.3	1.8	2.2	2.5
Z5_PIPE_5594	Z5_CB_486	Z5_CB_58	M5	113	0.015	Circular	1.00	-	0.3	0.5	0.7	1.0
Z5_PIPE_560	Z5_IL_2927	Z5_IL_2926	L5	57	0.015	Circular	2.25	-	12.3	15.0	18.6	21.8
Z5_PIPE_561	Z5_IL_2926	Z5_IL_2925	L5	110	0.015	Circular	2.25	-	12.3	15.0	18.6	21.6
Z5_PIPE_562	Z5_IL_2925	Z5_IL_2924	L5	224	0.015	Circular	2.25	-	12.3	15.0	18.5	21.5
Z5_PIPE_563	Z5_IL_2924	Z5_IL_2923	M4	190	0.015	Circular	2.25	-	14.5	17.7	22.0	25.3
Z5_PIPE_564	Z5_IL_2923	Z5_IL_1442	M4	262	0.015	Circular	2.50	-	19.9	24.2	30.0	35.7
Z5_PIPE_565	Z5_IL_2922	Z5_IL_2921	L5	24	0.015	Circular	1.00	-	1.8	2.1	2.6	3.5
Z5_PIPE_566	Z5_IL_2921	Z5_IL_1452	L5	330	0.015	Circular	1.00	-	1.8	2.1	2.6	3.0
Z5_PIPE_567	Z5_MH_3793	Z5_MH_3783	L5	51	0.015	Circular	1.67	-	16.4	12.0	12.5	13.2
Z5_PIPE_5676	Z5_MH_3713	Z5_MH_3942	N4	141	0.015	Circular	1.50	-	8.5	10.5	12.1	12.4
Z5_PIPE_5677	Z5_CB_716	Z5_MH_5333	G8	18	0.015	Circular	1.25	-	0.0	0.1	0.1	0.1
Z5_PIPE_5678	Z5_MH_5333	Z5_MH_4073	G8	12	0.015	Circular	1.00	-	4.7	5.5	5.6	5.8
Z5_PIPE_568	Z5_MH_3783	Z5_IL_3259	L5	46	0.015	Circular	1.67	-	15.9	12.2	12.6	13.4
Z5_PIPE_5680	Z5_IL_3619	Z5_MH_4139	L5	313	0.015	Circular	1.50	-	4.9	6.0	6.1	5.9
Z5_PIPE_5681	Z5_IL_2946	Z5_IL_3620	L5	286	0.015	Circular	1.50	-	2.3	3.9	5.0	4.5
Z5_PIPE_5682	Z5_MH_3784	Z5_CB_791	L5	49	0.015	Circular	1.33	-	4.7	4.6	5.1	6.1
Z5_PIPE_5684	Z5_MH_3875	Z5_IL_2504	L4	85	0.010	Circular	5.00	-	1.5	1.9	2.4	3.2
Z5_PIPE_5686	Z5_IL_2638	Z5_IL_2639	G7	18	0.015	Circular	1.00	-	2.7	3.3	4.2	5.6
Z5_PIPE_5687	Z5_IL_3179	Z5_IL_5085	F8	31	0.015	Circular	1.00	-	1.2	1.5	2.0	2.7
Z5_PIPE_5688	Z5_IL_3176	Z5_MH_4164	G8	8	0.015	Circular	1.00	-	8.3	10.8	14.2	16.1
Z5_PIPE_5689	Z5_IL_2183	Z5_IL_1414	G6	46	0.015	Circular	2.25	-	25.1	25.1	32.7	32.1
Z5_PIPE_569	Z5_IL_3259	Z5_IL_3260	M5	92	0.015	Circular	1.67	-	14.3	12.2	12.6	13.3
Z5_PIPE_5690	Z5_CB_738	Z5_OF_4593	H8	84	0.015	Circular	2.25	-	12.8	15.2	18.4	23.2
Z5_PIPE_5692	Z5_IL_3636	Z5_MH_5100	H6	161	0.015	Rectangular	3.00	5.00	119.0	140.2	175.8	194.7
Z5_PIPE_5693	Z5_IL_5557	Z5_OF_5078	L4	500	0.010	Rectangular	4.00	8.00	142.8	141.7	131.1	124.7
Z5_PIPE_5694	Z5_IL_4952	Z5_MH_5113	L4	45	0.024	Circular	3.50	-	35.0	35.1	35.1	35.1
Z5_PIPE_5695	Z5_IL_5558	Z5_MH_5121	J5	40	0.015	Rectangular	4.00	8.00	37.1	45.1	51.6	56.3
Z5_PIPE_5696	Z5_IL_5559	Z5_OF_4471	G6	28	0.015	Circular	1.50	-	6.7	9.4	12.8	14.3
Z5_PIPE_570	Z5_MH_4139	Z5_MH_3793	L5	90	0.015	Circular	1.25	-	4.8	4.5	5.2	5.5
Z5_PIPE_5701	Z5_MH_5564	Z5_MH_4322	K5	200	0.015	Rectangular	3.00	6.00	157.9	191.5	224.4	261.7
Z5_PIPE_571	Z5_IL_2960	Z5_IL_2956	L5	125	0.015	Circular	1.50	-	0.7	1.0	1.5	2.1
Z5_PIPE_5710	Z5_IL_5575	Z5_IL_2881	N4	13	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_572	Z5_IL_2956	Z5_IL_2946	L5	52	0.015	Circular	1.50	-	1.8	2.7	3.8	4.8
Z5_PIPE_573	Z5_IL_3620	Z5_IL_3619	L5	208	0.015	Circular	1.50	-	5.0	6.9	7.9	7.8
Z5_PIPE_575	Z5_CB_144	Z5_CB_146	H5	62	0.015	Circular	1.50	-	2.3	2.7	3.3	4.1
Z5_PIPE_580	Z5_IL_2324	Z5_OF_4581	N4	66	0.024	Circular	1.00	-	1.4	1.8	2.2	2.9
Z5_PIPE_581	Z5_IL_2893	Z5_IL_2894	N4	35	0.015	Circular	1.00	-	1.0	1.3	4.5	4.2
Z5_PIPE_582	Z5_IL_4960	Z5_OF_4507	N4	278	0.015	Circular	1.00	-	0.9	1.2	1.6	2.2
Z5_PIPE_586	Z5_IL_3075	Z5_MH_4086	F5	19	0.015	Circular	1.00	-	1.1	1.6	2.3	3.2
Z5_PIPE_593	Z5_IL_3187	Z5_IL_3062	F8	180	0.015	Circular	1.00	-	1.1	1.4	1.8	2.4
Z5_PIPE_595	Z5_IL_4887	Z5_IL_3054	G5	39	0.015	Circular	1.75	-	6.3	8.6	11.5	16.6
Z5_PIPE_597	Z5_IL_3192	Z5_IL_3194	H5	30	0.015	Circular	1.50	-	21.0	25.8	29.5	36.1
Z5_PIPE_603	Z5_IL_3200	Z5_IL_1502	H6	23	0.015	Circular	2.00	-	8.8	12.4	17.4	27.7
Z5_PIPE_605	Z5_IL_1501	Z5_OF_4472	H5	175	0.015	Circular	2.00	-	12.4	17.0	23.1	28.8
Z5_PIPE_606	Z5_IL_3159	Z5_OF_4428	G5	46	0.015	Circular	1.75	-	5.5	7.4	10.0	13.9
Z5_PIPE_607	Z5_IL_3053	Z5_OF_4411	G5	175	0.015	Circular	1.75	-	10.0	13.8	18.5	24.7
Z5_PIPE_608	Z5_IL_2675	Z5_IL_3053	G5	132	0.015	Circular	1.25	-	3.0	4.1	5.6	7.7
Z5_PIPE_609	Z5_IL_3054	Z5_IL_3053	G5	145	0.015	Circular	1.75	-	6.3	8.6	11.5	15.2
Z5_PIPE_61	Z5_IL_2520	Z5_IL_2522	M5	101	0.015	Circular	2.00	-	5.4	9.2	9.8	9.8
Z5_PIPE_610	Z5_IL_3052	Z5_IL_2675	G5	125	0.015	Circular	1.25	-	1.0	1.4	2.0	2.9

*The term "NEW" in a Link ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_611	Z5_IL_3050	Z5_MH_4060	F6	32	0.015	Circular	1.00	-	0.9	1.4	2.0	2.9
Z5_PIPE_612	Z5_IL_3051	Z5_MH_4060	F6	20	0.015	Circular	1.00	-	0.3	0.5	0.7	1.0
Z5_PIPE_613	Z5_IL_3702	Z5_IL_2633	F8	81	0.010	Circular	2.50	-	18.2	23.6	27.0	31.5
Z5_PIPE_614	Z5_IL_2633	Z5_MH_3899	F8	87	0.010	Circular	3.50	-	18.7	24.2	27.8	32.6
Z5_PIPE_615	Z5_IL_1472	Z5_MH_4166	G8	273	0.015	Circular	1.75	-	27.9	28.0	27.9	28.5
Z5_PIPE_617	Z5_SGIL_4733	Z5_MH_3899	F8	38	0.015	Circular	1.00	-	3.8	4.9	6.4	8.6
Z5_PIPE_649	Z5_MH_4060	NEW_Z5_MH_6040	F6	66	0.015	Circular	2.50	-	58.1	64.4	72.0	82.4
Z5_PIPE_650	Z5_CB_598	Z5_IL_3201	F6	14	0.015	Circular	1.50	-	5.2	5.8	5.9	7.9
Z5_PIPE_651	Z5_IL_3693	Z5_IL_3201	F6	30	0.015	Circular	1.00	-	0.6	0.9	1.2	1.7
Z5_PIPE_652	Z5_IL_3201	Z5_IL_3048	F6	52	0.015	Circular	3.50	-	57.2	62.7	69.1	78.1
Z5_PIPE_653	Z5_IL_3048	Z5_IL_3049	F6	43	0.015	Circular	2.75	-	56.9	62.5	69.1	78.1
Z5_PIPE_654	Z5_IL_3049	Z5_MH_4060	F6	176	0.015	Circular	2.75	-	57.2	63.0	69.8	79.2
Z5_PIPE_655	Z5_IL_3080	Z5_IL_3079	F5	26	0.015	Circular	1.50	-	1.5	2.3	3.3	5.0
Z5_PIPE_656	Z5_IL_3079	Z5_MH_4168	G6	44	0.015	Circular	1.00	-	3.5	5.2	7.6	10.8
Z5_PIPE_657	Z5_IL_3203	Z5_MH_4168	F6	36	0.015	Circular	1.00	-	1.0	1.4	2.1	3.0
Z5_PIPE_669	Z5_CB_861	Z5_MH_4193	J5	284	0.015	Circular	2.00	-	11.9	14.5	18.0	23.5
Z5_PIPE_672	Z5_CB_150	Z5_MH_4147	J5	161	0.015	Circular	2.00	-	15.8	19.3	23.8	30.9
Z5_PIPE_673	Z5_MH_4147	Z5_CB_638	J5	36	0.015	Circular	2.50	-	15.8	19.3	23.9	30.8
Z5_PIPE_675	Z5_CB_638	Z5_CB_639	J5	48	0.015	Circular	2.50	-	23.9	29.0	35.6	44.4
Z5_PIPE_679	Z5_MH_4151	Z5_MH_4150	J5	46	0.015	Circular	5.00	-	81.4	97.4	111.8	122.8
Z5_PIPE_680	Z5_MH_4150	Z5_MH_4149	J5	26	0.015	Circular	5.00	-	81.4	97.4	111.8	122.8
Z5_PIPE_683	Z5_MH_4155	Z5_IL_2472	J5	289	0.015	Circular	4.50	-	61.9	73.5	84.1	91.5
Z5_PIPE_684	Z5_IL_2473	Z5_MH_4155	J5	160	0.015	Circular	4.50	-	59.0	69.2	76.9	83.3
Z5_PIPE_72	Z5_IL_4895	Z5_OF_4393	F7	56	0.015	Circular	1.00	-	3.5	4.7	6.2	8.6
Z5_PIPE_733	Z5_IL_3435	Z5_MH_4242	H5	20	0.015	Circular	1.75	-	0.6	0.8	1.0	1.3
Z5_PIPE_754	Z5_IL_2062	Z5_IL_2058	F5	91	0.010	Circular	1.00	-	0.6	0.9	1.3	1.9
Z5_PIPE_755	Z5_IL_2086	Z5_MH_3824	F5	71	0.010	Circular	1.50	-	0.5	0.7	1.0	1.5
Z5_PIPE_756	Z5_IL_2088	Z5_IL_2044	E6	53	0.010	Circular	1.00	-	1.1	1.6	2.3	3.4
Z5_PIPE_77	Z5_IL_2587	Z5_MH_3884	H7	100	0.015	Circular	1.00	-	0.8	1.1	1.4	1.9
Z5_PIPE_770	Z5_MH_3880	Z5_IL_2556	G7	63	0.015	Circular	1.25	-	2.4	2.8	3.3	4.2
Z5_PIPE_771	Z5_IL_2554	Z5_IL_2555	H6	46	0.015	Circular	1.75	-	7.1	7.4	7.8	8.6
Z5_PIPE_772	Z5_IL_3061	Z5_MH_4065	F8	33	0.015	Circular	1.25	-	1.0	1.3	1.7	2.3
Z5_PIPE_773	Z5_IL_3062	Z5_MH_4065	F8	43	0.015	Circular	1.25	-	1.1	1.4	1.8	2.4
Z5_PIPE_774	Z5_IL_3060	Z5_MH_4065	F8	36	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_775	Z5_IL_1215	Z5_IL_3060	F8	55	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_776	Z5_CB_251	Z5_MH_4040	G8	108	0.015	Circular	1.00	-	3.4	4.3	5.3	7.0
Z5_PIPE_777	Z5_IL_3035	Z5_MH_4256	G8	23	0.015	Circular	1.00	-	2.9	3.6	4.6	6.2
Z5_PIPE_778	Z5_IL_3503	Z5_MH_4257	G8	4	0.015	Circular	1.00	-	0.0	0.0	0.7	1.1
Z5_PIPE_779	Z5_IL_3039	Z5_IL_3038	G8	21	0.015	Circular	1.00	-	1.0	1.3	1.7	2.2
Z5_PIPE_780	Z5_IL_3068	Z5_MH_4071	G8	5	0.015	Circular	1.00	-	3.5	4.4	4.6	4.7
Z5_PIPE_781	Z5_IL_3069	Z5_IL_3068	G8	52	0.015	Circular	1.00	-	3.5	4.4	4.6	4.9
Z5_PIPE_782	Z5_IL_3071	Z5_IL_3070	G8	31	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z5_PIPE_783	Z5_IL_2555	Z5_IL_3025	H6	178	0.015	Circular	1.75	-	7.1	7.4	7.8	8.6
Z5_PIPE_784	Z5_IL_2628	Z5_IL_2623	G7	116	0.015	Circular	1.00	-	1.5	1.9	2.4	3.1
Z5_PIPE_785	Z5_IL_3025	Z5_IL_3026	H7	216	0.015	Circular	2.00	-	7.7	8.6	9.8	11.5
Z5_PIPE_786	Z5_IL_2623	Z5_IL_2624	G7	27	0.015	Circular	1.25	-	3.2	4.1	5.2	6.9
Z5_PIPE_787	Z5_IL_2625	Z5_OF_4469	G7	16	0.015	Circular	1.00	-	0.5	0.7	0.9	1.2
Z5_PIPE_789	Z5_IL_3019	Z5_IL_3020	G7	164	0.015	Circular	1.50	-	15.2	15.3	15.7	16.6
Z5_PIPE_790	Z5_IL_3021	Z5_OF_5568	G7	70	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z5_PIPE_792	Z5_IL_3018	Z5_IL_3019	G7	68	0.015	Circular	1.50	-	2.3	5.2	6.5	8.5
Z5_PIPE_793	Z5_IL_2991	Z5_IL_2980	H6	29	0.015	Circular	1.00	-	2.3	3.0	3.8	5.1
Z5_PIPE_794	Z5_IL_3017	Z5_MH_4034	H6	18	0.015	Circular	1.00	-	2.0	2.6	3.6	6.1
Z5_PIPE_795	Z5_IL_3030	Z5_IL_3029	H7	33	0.015	Circular	1.00	-	2.7	3.5	4.6	6.3
Z5_PIPE_796	Z5_IL_3029	Z5_MH_3948	H7	45	0.015	Circular	1.00	-	2.7	3.5	4.6	6.3
Z5_PIPE_797	Z5_MH_4039	Z5_MH_5088	H7	24	0.015	Circular	0.50	-	1.9	2.0	2.2	2.3
Z5_PIPE_799	Z5_IL_3028	Z5_MH_5088	G8	240	0.015	Circular	1.50	-	0.9	1.1	1.4	1.8
Z5_PIPE_800	Z5_IL_3104	Z5_IL_2972	G8	32	0.015	Circular	1.25	-	2.3	3.2	4.4	6.3
Z5_PIPE_801	Z5_IL_2972	Z5_OF_4467	G8	68	0.015	Circular	1.75	-	2.3	3.2	4.4	6.3
Z5_PIPE_802	Z5_SGIL_4780	Z5_MH_4171	G8	15	0.010	Circular	1.25	-	4.1	5.1	6.4	8.2
Z5_PIPE_803	Z5_MH_3901	Z5_MH_4163	G8	272	0.015	Circular	2.00	-	22.9	29.2	35.7	42.0
Z5_PIPE_804	Z5_MH_4163	Z5_MH_4171	G8	80	0.015	Circular	1.75	-	23.0	29.2	30.4	34.2
Z5_PIPE_805	Z5_SGIL_4734	Z5_MH_3901	F8	20	0.015	Circular	1.25	-	1.1	1.3	1.7	2.6
Z5_PIPE_807	Z5_MH_3900	Z5_MH_3901	F8	87	0.015	Circular	2.00	-	21.7	27.5	33.0	38.4
Z5_PIPE_808	Z5_IL_3171	Z5_MH_3901	F8	14	0.015	Circular	1.00	-	0.7	0.9	1.1	2.0
Z5_PIPE_809	Z5_SGIL_4731	Z5_MH_5189	F8	126	0.010	Circular	1.25	-	2.3	3.1	4.0	5.4
Z5_PIPE_81	Z5_IL_2589	Z5_OF_4395	G7	100	0.010	Circular	1.00	-	1.3	1.7	2.2	3.0
Z5_PIPE_810	Z5_SGIL_4732	Z5_IL_2633	F8	25	0.015	Circular	1.25	-	1.2	1.6	2.1	2.9
Z5_PIPE_811	Z5_MH_4164	Z5_MH_4165	G8	5	0.015	Circular	1.00	-	8.3	10.8	14.2	16.1
Z5_PIPE_812	Z5_MH_4165	Z5_OF_4990	G8	108	0.015	Circular	2.75	-	48.4	51.7	56.2	60.0
Z5_PIPE_813	Z5_IL_3177	Z5_OF_5563	G8	40	0.015	Circular	1.00	-	1.7	2.1	2.7	3.5

*The term "NEW" in a Link ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z5_PIPE_814	Z5_IL_3186	Z5_OF_4460	F8	114	0.015	Circular	1.00	-	0.6	0.8	1.1	1.5
Z5_PIPE_815	Z5_IL_3185	Z5_OF_4459	F8	108	0.015	Circular	1.25	-	0.4	0.6	0.7	1.0
Z5_PIPE_816	Z5_IL_3178	Z5_OF_4455	F8	82	0.015	Circular	1.25	-	7.9	10.3	13.6	18.7
Z5_PIPE_817	Z5_IL_5085	Z5_OF_5541	F8	60	0.015	Circular	1.00	-	1.2	1.5	2.0	2.7
Z5_PIPE_818	Z5_IL_4880	Z5_OF_4457	F8	76	0.015	Circular	1.00	-	0.7	0.9	1.1	1.5
Z5_PIPE_819	Z5_IL_2667	Z5_IL_2668	E5	55	0.010	Circular	2.50	-	22.4	33.0	47.4	69.2
Z5_PIPE_82	Z5_IL_4896	Z5_OF_4399	F7	38	0.015	Circular	1.00	-	2.6	3.4	4.5	6.3
Z5_PIPE_820	Z5_IL_2663	Z5_IL_2664	E5	11	0.010	Circular	1.00	-	0.6	1.0	1.4	2.0
Z5_PIPE_821	Z5_IL_2664	Z5_IL_2667	E5	132	0.010	Circular	2.00	-	15.9	23.1	33.0	47.9
Z5_PIPE_822	Z5_IL_2665	Z5_IL_2664	E5	27	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_823	Z5_IL_2666	Z5_IL_2665	E5	21	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_824	Z5_IL_2661	Z5_IL_2664	E5	297	0.010	Circular	2.00	-	15.4	22.4	31.9	46.3
Z5_PIPE_825	Z5_IL_2660	Z5_IL_2661	E5	27	0.010	Circular	1.00	-	3.3	5.1	7.5	11.1
Z5_PIPE_826	Z5_IL_2659	Z5_IL_2660	E5	11	0.010	Circular	1.00	-	3.3	5.1	7.5	11.1
Z5_PIPE_827	Z5_IL_2662	Z5_IL_2661	E5	11	0.010	Circular	1.00	-	3.0	4.2	5.8	8.3
Z5_PIPE_828	Z5_IL_2657	Z5_IL_2661	E5	460	0.010	Circular	1.75	-	9.4	13.5	19.1	27.5
Z5_PIPE_829	Z5_IL_2656	Z5_IL_2657	E5	53	0.010	Circular	1.50	-	6.1	8.7	12.3	17.7
Z5_PIPE_83	Z5_IL_4898	Z5_OF_4398	G7	40	0.024	Circular	1.00	-	3.2	4.2	5.6	7.7
Z5_PIPE_830	Z5_IL_2655	Z5_IL_2656	F5	9	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z5_PIPE_831	Z5_IL_2658	Z5_IL_2657	E5	10	0.010	Circular	1.00	-	3.4	4.8	6.8	9.8
Z5_PIPE_832	Z5_IL_2654	Z5_IL_2653	E5	12	0.010	Circular	1.00	-	0.8	1.3	1.8	2.7
Z5_PIPE_833	Z5_IL_2653	Z5_IL_2652	E5	28	0.010	Circular	1.00	-	0.8	1.3	1.8	2.7
Z5_PIPE_834	Z5_IL_2651	Z5_IL_2652	E5	12	0.010	Circular	1.00	-	1.1	1.7	2.5	3.6
Z5_PIPE_835	Z5_IL_2652	Z5_IL_2656	E5	349	0.010	Circular	1.50	-	6.1	8.7	12.3	17.7
Z5_PIPE_836	Z5_IL_2649	Z5_IL_2652	E5	300	0.010	Circular	1.25	-	4.3	6.0	8.3	11.8
Z5_PIPE_837	Z5_IL_2650	Z5_IL_2649	E5	28	0.010	Circular	1.00	-	0.5	0.8	1.1	1.7
Z5_PIPE_838	Z5_IL_2648	Z5_IL_2649	E5	151	0.010	Circular	1.00	-	3.8	5.2	7.2	10.2
Z5_PIPE_839	Z5_IL_2647	Z5_IL_2648	E5	78	0.010	Circular	1.00	-	2.6	3.5	4.7	6.5
Z5_PIPE_84	Z5_IL_4901	Z5_OF_4396	G6	58	0.015	Circular	1.00	-	2.2	2.8	3.7	5.1
Z5_PIPE_840	Z5_IL_2645	Z5_IL_2646	E5	28	0.010	Circular	1.00	-	1.2	1.8	2.5	3.7
Z5_PIPE_841	Z5_IL_2632	Z5_IL_2668	E5	27	0.010	Circular	1.00	-	1.3	2.0	2.8	4.4
Z5_PIPE_847	Z5_IL_3188	Z5_MH_4165	G8	103	0.015	Circular	2.75	-	35.8	37.4	39.0	40.9
Z5_PIPE_848	Z5_MH_4118	Z5_IL_3188	G8	39	0.015	Circular	2.75	-	35.8	37.4	39.0	40.9
Z5_PIPE_849	Z5_MH_4066	Z5_MH_4165	G8	349	0.015	Circular	1.00	-	5.1	5.1	5.1	5.2
Z5_PIPE_85	Z5_IL_4899	Z5_OF_4397	G6	40	0.024	Circular	1.00	-	1.4	1.9	2.5	3.4
Z5_PIPE_850	Z5_MH_4035	Z5_MH_3878	G6	230	0.015	Circular	3.00	-	36.3	48.4	64.3	81.8
Z5_PIPE_851	Z5_IL_3193	Z5_MH_4167	H5	22	0.010	Circular	1.50	-	3.3	4.2	5.3	6.9
Z5_PIPE_86	Z5_IL_2599	Z5_IL_2598	G7	57	0.015	Circular	1.25	-	9.7	11.4	13.6	13.6
Z5_PIPE_87	Z5_IL_2598	Z5_MH_3891	G7	28	0.015	Circular	1.00	-	8.0	7.6	8.3	9.0
Z5_PIPE_876	Z5_IL_2044	Z5_IL_2042	E6	78	0.010	Circular	1.00	-	1.1	1.6	2.3	3.4
Z5_PIPE_877	Z5_IL_2042	Z5_IL_2043	E6	35	0.010	Circular	1.00	-	1.1	1.6	2.3	3.4
Z5_PIPE_878	Z5_IL_2043	Z5_IL_2045	E6	36	0.010	Circular	1.50	-	1.1	1.6	2.3	3.4
Z5_PIPE_879	Z5_IL_2045	Z5_IL_2046	E6	54	0.010	Circular	1.50	-	1.1	1.6	2.3	3.4
Z5_PIPE_88	Z5_IL_2597	Z5_MH_4359	G7	27	0.015	Circular	1.50	-	0.0	0.1	0.9	3.3
Z5_PIPE_880	Z5_IL_2046	Z5_SGIL_4708	E6	120	0.010	Circular	1.50	-	1.7	2.5	3.6	5.3
Z5_PIPE_881	Z5_SGIL_4708	Z5_MH_3824	F5	108	0.010	Circular	1.50	-	2.6	3.8	5.5	8.0
Z5_PIPE_882	Z5_IL_2051	Z5_IL_2046	E6	35	0.010	Circular	1.50	-	0.6	0.9	1.3	1.9
Z5_PIPE_883	Z5_IL_2052	Z5_IL_2051	E6	53	0.010	Circular	1.00	-	0.6	0.9	1.3	1.9
Z5_PIPE_884	Z5_IL_2059	Z5_IL_2052	F5	89	0.010	Circular	1.25	-	0.6	0.9	1.3	1.9
Z5_PIPE_885	Z5_IL_2048	Z5_SGIL_4708	F5	34	0.010	Circular	1.50	-	0.9	1.3	1.9	2.7
Z5_PIPE_888	Z5_IL_2058	Z5_IL_2059	F5	54	0.010	Circular	1.00	-	0.6	0.9	1.3	1.9
Z5_PIPE_89	Z5_IL_2592	Z5_IL_2597	G7	7	0.015	Circular	1.00	-	0.0	0.0	0.5	0.8
Z5_PIPE_891	Z5_MH_3773	Z5_SGIL_4712	H5	127	0.015	Circular	2.50	-	49.7	49.7	49.7	49.7
Z5_PIPE_892	Z5_SGIL_4712	Z5_OF_4369	G6	128	0.015	Circular	2.50	-	71.9	71.9	71.9	71.9
Z5_PIPE_90	Z5_MH_3891	Z5_MH_4358	G7	161	0.015	Circular	1.00	-	7.4	7.3	7.4	7.5
Z5_PIPE_91	Z5_MH_4358	Z5_MH_3857	G7	206	0.015	Circular	1.00	-	8.6	8.8	9.0	8.9
Z5_PIPE_92	Z5_IL_2591	Z5_MH_3891	G7	24	0.015	Circular	1.00	-	3.1	3.4	6.3	1.8
Z5_PIPE_93	Z5_MH_4359	Z5_IL_2591	G7	34	0.015	Circular	1.50	-	1.9	5.5	6.0	3.0
Z5_PIPE_94	Z5_IL_2601	Z5_IL_2600	G7	40	0.015	Circular	1.00	-	1.7	1.8	1.9	2.0
Z5_PIPE_95	Z5_IL_2602	Z5_IL_2601	G7	232	0.015	Circular	1.00	-	0.9	1.2	1.6	2.2
Z5_PIPE_96	Z5_IL_2603	Z5_IL_2602	G7	36	0.015	Circular	1.00	-	0.9	1.2	1.6	2.2
Z5_PIPE_960	Z5_IL_1168	Z5_IL_1169	H5	38	0.015	Circular	1.50	-	7.1	8.4	10.1	12.6
Z5_PIPE_97	Z5_IL_2600	Z5_MH_3857	G7	270	0.015	Circular	1.00	-	2.8	2.9	3.6	2.4
Z5_PIPE_989	Z5_IL_995	Z5_IL_996	F6	61	0.015	Circular	1.25	-	7.9	11.0	12.8	14.1
Z5_PIPE_990	Z5_IL_998	Z5_IL_997	F6	174	0.015	Circular	2.00	-	9.9	11.0	12.2	14.1
Z5_PIPE_991	Z5_IL_999	Z5_IL_998	F6	111	0.015	Circular	2.00	-	9.9	11.0	12.2	14.1
Z5_PIPE_992	Z5_IL_1000	Z5_IL_999	F6	95	0.015	Circular	1.00	-	9.3	10.2	11.1	12.6
Z5_PIPE_993	Z5_IL_3438	Z5_MH_3773	H5	47	0.015	Rectangular	2.00	2.00	6.9	6.9	25.9	24.7
Z5_PIPE_994	Z5_IL_1414	Z5_MH_3773	G6	82	0.015	Circular	2.25	-	28.1	28.1	28.1	28.1
Z6_PIPE_1377	Z6_IL_1148	Z6_MH_1681	G8	5	0.015	Circular	1.50	-	3.0	4.0	5.3	7.4

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Zone 5 East Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_844	Z6_IL_1147	Z6_MH_1680	G8	2	0.015	Circular	1.00	-	0.8	1.1	1.4	1.9
Z6_PIPE_846	Z6_MH_1681	Z6_IL_1149	G8	61	0.015	Circular	1.50	-	3.6	4.8	6.3	8.7
Z6_PIPE_847	Z6_MH_1740	Z6_MH_1681	G8	71	0.010	Circular	1.50	-	0.8	1.1	1.4	1.9
Z6_PIPE_848	Z6_MH_1680	Z6_MH_1740	G8	74	0.010	Circular	1.00	-	0.8	1.1	1.4	1.9

*The term "NEW" in a Link ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
NEW_Z6_PIPE_1000	NEW_Z6_IL_1000	Z6_MH_1732	K12	561	0.015	Circular	2.00	-	37.7	49.7	61.5	74.6
NEW_Z6_PIPE_1001	Z6_IL_1508	NEW_Z6_MH_1001	H10	139	0.015	Circular	2.00	-	10.8	13.0	13.7	14.9
NEW_Z6_PIPE_1002	NEW_Z6_MH_1001	NEW_Z6_MH_1002	H10	216	0.015	Circular	2.00	-	10.8	13.0	13.7	14.9
NEW_Z6_PIPE_1003	NEW_Z6_MH_1002	NEW_Z6_IL_1003	H10	32	0.015	Circular	2.00	-	10.8	13.0	13.7	14.9
NEW_Z6_PIPE_1004	NEW_Z6_IL_1003	Z6_MH_1565	H10	91	0.015	Circular	2.00	-	10.8	13.0	13.8	15.3
Z6_CHANNEL_109	Z6_OF_1904	Z6_IL_2320	L13	1578	0.025	Trapezoidal	5.00	2.00	2.6	6.1	10.8	15.5
Z6_CHANNEL_110	Z6_OF_2265	Z6_IL_2172	M13	381	0.025	Trapezoidal	5.00	3.00	5.3	7.7	14.7	22.2
Z6_CHANNEL_112	Z6_OF_2220	Z6_IL_2254	K12	17	0.025	Trapezoidal	5.00	5.00	16.2	22.3	30.1	96.0
Z6_CHANNEL_118	Z6_OF_2074	Z6_IL_2151	J10	866	0.025	Trapezoidal	5.00	5.00	12.8	16.4	18.5	19.6
Z6_CHANNEL_122	Z6_OF_1923	Z6_OF_1922	O14	118	0.025	Trapezoidal	5.00	2.00	1.5	1.9	2.6	3.6
Z6_CHANNEL_126	Z6_OF_1831	Z6_IL_2273	L13	600	0.025	Trapezoidal	5.00	2.00	1.5	2.9	5.2	8.6
Z6_CHANNEL_130	Z6_OF_2176	Z6_IL_2261	N12	53	0.025	Trapezoidal	5.00	2.00	0.8	1.2	2.4	4.4
Z6_CHANNEL_147	Z6_OF_2177	Z6_IL_2261	N12	14	0.025	Trapezoidal	5.00	3.00	8.4	12.8	19.5	36.7
Z6_CHANNEL_148	Z6_OF_2263	Z6_IL_2260	N12	17	0.025	Trapezoidal	5.00	5.00	9.4	14.1	21.6	39.8
Z6_CHANNEL_149	Z6_OF_2029	Z6_IL_1373	J10	85	0.025	Trapezoidal	5.00	5.00	0.1	0.2	0.2	0.3
Z6_CHANNEL_150	Z6_OF_1955	Z6_IL_2302	J10	288	0.025	Trapezoidal	5.00	5.00	3.3	4.5	6.2	8.8
Z6_CHANNEL_18	Z6_OF_2214	Z6_IL_2152	J10	139	0.025	Trapezoidal	5.00	5.00	12.9	17.3	23.2	32.4
Z6_CHANNEL_19	Z6_OF_1846	Z6_IL_2152	J10	182	0.025	Trapezoidal	5.00	5.00	37.1	52.1	68.5	88.4
Z6_CHANNEL_194	Z6_OF_2206	Z6_IL_1262	J12	67	0.025	Trapezoidal	5.00	3.00	3.2	6.6	11.5	16.1
Z6_CHANNEL_203	Z6_OF_1903	Z6_IL_2144	J12	949	0.025	Trapezoidal	5.00	5.00	1.8	3.1	6.4	8.6
Z6_CHANNEL_21	Z6_OF_2210	Z6_IL_2153	J10	42	0.025	Trapezoidal	5.00	5.00	48.4	67.9	90.8	121.9
Z6_CHANNEL_22	Z6_OF_2211	Z6_IL_2154	K10	99	0.025	Trapezoidal	5.00	5.00	48.4	67.9	90.8	121.9
Z6_CHANNEL_226	Z6_IL_2301	Z6_OF_1954	J10	6	0.015	Trapezoidal	5.00	5.00	36.6	51.4	67.4	222.8
Z6_CHANNEL_23	Z6_OF_2209	Z6_IL_2301	J10	124	0.025	Trapezoidal	5.00	5.00	3.8	5.2	7.2	10.3
Z6_CHANNEL_238	Z6_OF_2069	Z6_IL_2165	H10	453	0.015	Trapezoidal	5.00	5.00	9.4	13.0	17.9	25.2
Z6_CHANNEL_242	Z6_OF_2202	Z6_IL_2141	M12	27	0.025	Trapezoidal	5.00	3.00	10.7	15.6	136.5	213.1
Z6_CHANNEL_243	Z6_OF_2203	Z6_IL_2142	M12	55	0.025	Trapezoidal	5.00	3.00	10.8	15.8	27.6	42.9
Z6_CHANNEL_250	Z6_OF_1907	Z6_IL_2264	M13	252	0.015	Trapezoidal	5.00	2.00	5.3	7.8	15.5	26.8
Z6_CHANNEL_255	Z6_IL_2320	Z6_IL_2140	M12	71	0.025	Trapezoidal	5.00	3.00	5.4	12.6	22.8	33.4
Z6_CHANNEL_264	Z6_OF_1976	Z6_IL_2268	K12	53	0.015	Trapezoidal	5.00	5.00	3.0	6.1	10.9	13.9
Z6_CHANNEL_268	Z6_OF_2013	Z6_IL_2320	L12	680	0.025	Trapezoidal	5.00	3.00	3.0	7.1	12.7	18.5
Z6_CHANNEL_378	Z6_OF_1912	Z6_OF_1921	O14	278	0.025	Trapezoidal	5.00	5.00	8.4	15.3	26.0	42.6
Z6_CHANNEL_379	Z6_OF_1921	Z6_OF_1920	O14	749	0.025	Trapezoidal	5.00	5.00	9.1	16.4	27.5	44.8
Z6_CHANNEL_380	Z6_OF_1920	Z6_OF_1922	O14	6	0.025	Trapezoidal	5.00	5.00	10.0	17.7	29.5	47.7
Z6_CHANNEL_382	Z6_OF_1922	Z6_OF_1913	O14	301	0.025	Trapezoidal	5.00	5.00	12.8	21.6	34.9	55.5
Z6_CHANNEL_383	Z6_OF_1951	Z6_IL_2275	O13	244	0.025	Trapezoidal	5.00	5.00	13.6	22.8	36.8	58.3
Z6_CHANNEL_39	Z6_OF_2213	Z6_IL_2155	J10	19	0.025	Trapezoidal	5.00	5.00	8.6	12.1	16.6	23.8
Z6_CHANNEL_40	Z6_OF_2194	Z6_IL_2148	J10	151	0.025	Trapezoidal	5.00	5.00	3.8	5.2	6.9	9.7
Z6_CHANNEL_407	Z6_OF_1906	Z6_OF_1908	M13	228	0.015	Trapezoidal	5.00	2.00	3.2	5.1	10.1	18.4
Z6_CHANNEL_408	Z6_OF_1908	Z6_OF_1907	M13	11	0.015	Trapezoidal	5.00	2.00	3.9	5.8	11.5	21.2
Z6_CHANNEL_411	Z6_OF_1905	Z6_OF_1904	L13	49	0.025	Trapezoidal	5.00	2.00	0.7	1.5	2.3	3.5
Z6_CHANNEL_412	Z6_OF_2021	Z6_IL_2345	L12	372	0.025	Trapezoidal	5.00	2.00	0.8	1.7	2.6	3.8
Z6_CHANNEL_414	Z6_OF_2185	Z6_IL_2345	M12	265	0.025	Trapezoidal	5.00	3.00	2.2	4.9	9.1	12.7
Z6_CHANNEL_415	Z6_IL_2345	Z6_OF_2013	L12	494	0.025	Trapezoidal	5.00	3.00	2.7	6.5	11.6	16.4
Z6_CHANNEL_416	Z6_OF_2186	Z6_OF_2185	L12	446	0.025	Trapezoidal	5.00	3.00	1.3	3.1	5.7	7.3
Z6_CHANNEL_419	Z6_IL_2322	Z6_IL_2321	L12	118	0.025	Trapezoidal	5.00	5.00	5.3	10.2	18.7	24.1
Z6_CHANNEL_420	Z6_OF_2005	Z6_OF_2004	L12	342	0.025	Trapezoidal	5.00	5.00	4.6	9.0	16.3	18.9
Z6_CHANNEL_421	Z6_OF_2173	Z6_IL_2346	L12	127	0.025	Trapezoidal	20.00	20.00	0.2	0.4	0.7	1.3
Z6_CHANNEL_422	Z6_OF_2007	Z6_IL_2346	L12	277	0.025	Trapezoidal	20.00	20.00	3.5	5.6	8.4	12.3
Z6_CHANNEL_423	Z6_IL_2346	Z6_OF_2008	L12	132	0.025	Trapezoidal	20.00	20.00	3.6	5.9	9.0	13.4
Z6_CHANNEL_435	Z6_OF_2189	Z6_IL_1283	K14	12	0.015	Trapezoidal	5.00	10.00	18.0	30.5	47.6	78.0
Z6_CHANNEL_436	Z6_OF_2278	Z6_IL_1283	K14	41	0.025	Trapezoidal	5.00	5.00	0.0	0.0	0.0	0.2
Z6_CHANNEL_44	Z6_OF_2208	Z6_IL_2233	J10	166	0.025	Trapezoidal	5.00	5.00	3.8	5.2	6.9	9.7
Z6_CHANNEL_465	Z6_OF_1902	Z6_OF_1903	J12	234	0.025	Trapezoidal	5.00	5.00	1.3	2.4	4.7	5.6
Z6_CHANNEL_488	Z6_OF_2191	Z6_IL_2301	J10	12	0.025	Trapezoidal	5.00	5.00	32.9	46.2	60.3	77.9
Z6_CHANNEL_489	Z6_OF_1954	Z6_IL_2157	J10	5	0.025	Trapezoidal	5.00	5.00	37.1	52.1	68.5	183.2
Z6_CHANNEL_492	Z6_IL_2302	Z6_IL_2150	J10	217	0.025	Trapezoidal	5.00	5.00	3.3	4.5	6.1	8.7
Z6_CHANNEL_78	Z6_OF_2022	Z6_IL_2255	K12	511	0.025	Trapezoidal	20.00	20.00	16.1	22.2	30.0	40.6
Z6_CHANNEL_79	Z6_OF_2004	Z6_IL_2322	L12	941	0.025	Trapezoidal	5.00	5.00	5.2	10.0	18.5	23.0
Z6_CHANNEL_80	Z6_OF_1913	Z6_OF_1951	O13	560	0.025	Trapezoidal	5.00	5.00	13.4	22.3	36.0	57.0
Z6_CHANNEL_9	Z6_OF_1994	Z6_IL_2156	K9	1619	0.025	Trapezoidal	5.00	2.00	6.3	7.9	9.9	12.7
Z6_CHANNEL_90	Z6_OF_1901	Z6_CB_160	K12	289	0.025	Trapezoidal	5.00	5.00	0.4	0.6	0.9	1.3
Z6_CHANNEL_91	Z6_OF_2008	Z6_IL_2256	L12	558	0.025	Trapezoidal	20.00	20.00	3.8	6.5	10.0	14.9
Z6_CHANNEL_92	Z6_OF_2174	Z6_IL_2321	L12	209	0.025	Trapezoidal	20.00	20.00	0.1	0.2	0.4	0.7
Z6_CHANNEL_93	Z6_OF_2187	Z6_IL_2322	L12	1356	0.025	Trapezoidal	5.00	5.00	0.2	0.5	0.9	1.4
Z6_CHANNEL_94	Z6_IL_2321	Z6_IL_2323	L12	869	0.025	Trapezoidal	5.00	5.00	5.4	10.2	18.8	24.6
Z6_PIPE_100	Z6_IL_1054	Z6_IL_909	N13	206	0.015	Circular	2.50	-	6.3	11.7	22.2	40.1
Z6_PIPE_1000	Z6_IL_597	Z6_MH_1624	H10	13	0.015	Circular	2.00	-	5.4	7.2	9.6	13.4
Z6_PIPE_1001	Z6_IL_1418	Z6_MH_1779	K12	22	0.015	Circular	1.50	-	2.8	5.8	10.5	16.8
Z6_PIPE_1003	Z6_IL_270	Z6_MH_1764	H11	112	0.015	Circular	1.00	-	0.5	0.9	1.5	2.5

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_1008	Z6_MH_1779	Z6_IL_1419	K12	219	0.015	Circular	1.50	-	3.0	6.1	10.9	13.9
Z6_PIPE_101	Z6_MH_1715	Z6_IL_959	L11	35	0.015	Circular	0.67	-	3.2	4.2	5.3	6.3
Z6_PIPE_1010	Z6_IL_934	Z6_MH_2266	L12	111	0.015	Circular	1.50	-	0.7	1.5	2.6	3.9
Z6_PIPE_1012	Z6_MH_1539	Z6_MH_1540	H10	221	0.015	Circular	2.50	-	7.9	11.1	15.5	21.1
Z6_PIPE_1019	Z6_IL_998	Z6_CB_176	K12	184	0.015	Circular	1.50	-	9.3	10.3	10.9	11.9
Z6_PIPE_102	Z6_IL_959	Z6_OF_1896	L11	20	0.015	Circular	1.00	-	3.2	4.2	5.3	6.3
Z6_PIPE_1020	Z6_CB_176	Z6_IL_1405	K12	85	0.015	Circular	1.50	-	8.7	8.9	9.4	10.0
Z6_PIPE_1021	Z6_IL_922	Z6_IL_921	L13	29	0.015	Circular	1.25	-	0.5	1.2	2.2	3.8
Z6_PIPE_1022	Z6_IL_921	Z6_IL_939	L12	283	0.024	Circular	1.25	-	0.5	1.2	2.2	3.8
Z6_PIPE_1025	Z6_IL_588	Z6_OF_1963	H9	70	0.010	Circular	1.00	-	0.1	0.1	0.1	0.2
Z6_PIPE_1027	Z6_MH_1575	Z6_IL_589	H9	124	0.015	Circular	1.00	-	2.0	2.7	3.7	5.1
Z6_PIPE_1028	Z6_MH_1576	Z6_MH_1575	H9	71	0.015	Circular	1.00	-	2.0	2.7	3.7	5.1
Z6_PIPE_1029	Z6_IL_590	Z6_MH_1576	H9	45	0.015	Circular	1.00	-	0.5	0.7	0.9	1.3
Z6_PIPE_103	Z6_IL_1028	Z6_IL_1029	M13	21	0.015	Circular	1.00	-	0.3	0.5	0.7	1.0
Z6_PIPE_1030	Z6_IL_441	Z6_IL_442	H10	26	0.015	Circular	1.50	-	2.8	3.9	5.4	7.8
Z6_PIPE_1031	Z6_IL_442	Z6_IL_487	H10	271	0.015	Circular	1.75	-	2.8	3.9	5.4	7.8
Z6_PIPE_1032	Z6_IL_487	Z6_MH_1558	H10	194	0.015	Circular	1.75	-	2.8	3.9	5.4	7.8
Z6_PIPE_104	Z6_IL_1029	Z6_OF_1897	M13	137	0.010	Circular	1.00	-	0.3	0.5	0.7	1.0
Z6_PIPE_1044	Z6_IL_452	Z6_IL_457	H9	109	0.010	Circular	1.50	-	1.4	1.9	2.6	3.6
Z6_PIPE_1045	Z6_IL_457	Z6_IL_453	H9	119	0.010	Circular	1.50	-	1.4	1.9	2.6	3.6
Z6_PIPE_1046	Z6_IL_455	Z6_IL_453	H9	50	0.010	Circular	1.50	-	1.7	2.3	3.1	4.4
Z6_PIPE_1047	Z6_IL_402	Z6_IL_403	K12	61	0.010	Circular	1.00	-	1.7	2.5	3.7	5.3
Z6_PIPE_1048	Z6_IL_403	Z6_IL_404	K12	57	0.010	Circular	1.00	-	2.2	3.3	4.7	6.8
Z6_PIPE_1049	Z6_IL_404	Z6_IL_405	K12	78	0.010	Circular	1.00	-	2.2	3.3	4.7	6.8
Z6_PIPE_105	Z6_IL_1027	Z6_IL_1026	M13	24	0.015	Circular	1.00	-	0.3	0.5	0.7	1.0
Z6_PIPE_1050	Z6_IL_405	Z6_IL_406	K12	15	0.010	Circular	1.00	-	2.2	3.3	4.7	6.8
Z6_PIPE_1051	Z6_IL_406	Z6_IL_407	K12	64	0.010	Circular	1.50	-	4.6	6.6	9.2	12.9
Z6_PIPE_1052	Z6_IL_407	Z6_IL_408	K12	21	0.010	Circular	1.50	-	5.4	7.7	10.7	14.9
Z6_PIPE_1053	Z6_IL_408	Z6_SGIL_2098	K12	125	0.010	Circular	1.50	-	5.4	7.7	10.7	14.9
Z6_PIPE_1054	Z6_MH_1557	Z6_MH_1556	K12	24	0.010	Circular	1.50	-	0.4	0.6	0.8	1.1
Z6_PIPE_1055	Z6_IL_410	Z6_IL_409	K12	29	0.010	Circular	1.00	-	1.7	2.4	3.2	4.5
Z6_PIPE_106	Z6_IL_1026	Z6_OF_2066	M13	132	0.024	Circular	1.00	-	0.3	0.5	0.7	1.0
Z6_PIPE_1061	Z6_IL_229	Z6_IL_228	N13	60	0.015	Circular	1.00	-	0.7	1.0	1.4	2.0
Z6_PIPE_1062	Z6_IL_227	Z6_SGIL_2089	N13	63	0.015	Circular	1.25	-	1.3	2.1	3.4	5.3
Z6_PIPE_1063	Z6_SGIL_2089	Z6_OF_1937	O13	280	0.024	Circular	1.25	-	1.3	2.1	3.4	5.3
Z6_PIPE_1064	Z6_SGIL_2090	Z6_OF_1938	N13	23	0.015	Circular	1.00	-	0.6	0.9	1.4	2.1
Z6_PIPE_1065	Z6_MH_1542	Z6_SGIL_2090	N13	37	0.015	Circular	1.00	-	0.6	0.9	1.4	2.1
Z6_PIPE_1066	Z6_IL_236	Z6_MH_1542	N13	74	0.015	Circular	1.00	-	0.6	0.9	1.4	2.1
Z6_PIPE_1067	Z6_IL_237	Z6_IL_236	N13	302	0.015	Circular	1.00	-	0.3	0.4	0.6	1.0
Z6_PIPE_1068	Z6_IL_238	Z6_IL_237	N13	112	0.015	Circular	1.00	-	0.3	0.4	0.6	1.0
Z6_PIPE_1071	Z6_IL_514	Z6_IL_513	H10	65	0.010	Circular	2.00	-	4.8	6.4	8.7	12.1
Z6_PIPE_1072	Z6_MH_1561	Z6_IL_514	H10	26	0.010	Circular	2.00	-	4.8	6.4	8.7	12.1
Z6_PIPE_1074	Z6_MH_1562	Z6_MH_1561	H10	324	0.010	Circular	2.00	-	4.3	5.7	7.6	10.6
Z6_PIPE_1075	Z6_IL_516	Z6_MH_1562	H10	6	0.010	Circular	1.00	-	0.8	1.2	1.7	2.5
Z6_PIPE_1076	Z6_IL_517	Z6_MH_1562	H10	27	0.010	Circular	2.00	-	3.5	4.5	5.9	8.1
Z6_PIPE_1077	Z6_IL_519	Z6_IL_518	H10	50	0.010	Circular	1.50	-	3.5	4.5	5.9	8.1
Z6_PIPE_1082	Z6_IL_330	Z6_IL_329	P14	141	0.015	Circular	1.00	-	0.7	0.9	1.1	1.5
Z6_PIPE_1083	Z6_IL_329	Z6_SGIL_2095	P14	26	0.015	Circular	1.00	-	0.7	0.9	1.1	1.5
Z6_PIPE_1084	Z6_SGIL_2095	Z6_IL_332	P14	36	0.015	Circular	1.00	-	0.7	0.9	1.1	1.5
Z6_PIPE_1085	Z6_IL_331	Z6_IL_333	P14	40	0.015	Circular	1.00	-	0.7	0.9	1.1	1.4
Z6_PIPE_1086	Z6_IL_333	Z6_IL_334	P14	66	0.015	Circular	1.00	-	0.7	0.9	1.1	1.4
Z6_PIPE_1087	Z6_IL_334	Z6_IL_335	P14	22	0.015	Circular	1.00	-	0.7	0.9	1.1	1.4
Z6_PIPE_1088	Z6_IL_335	Z6_IL_336	P14	88	0.015	Circular	1.00	-	0.7	0.9	1.1	1.4
Z6_PIPE_1089	Z6_IL_338	Z6_IL_351	P14	11	0.015	Circular	1.00	-	0.7	0.9	1.1	1.4
Z6_PIPE_109	Z6_IL_1499	Z6_IL_1402	K12	91	0.015	Circular	1.50	-	2.1	4.5	8.2	13.5
Z6_PIPE_1090	Z6_IL_351	Z6_IL_339	P14	37	0.015	Circular	1.00	-	1.3	1.6	2.0	2.6
Z6_PIPE_1091	Z6_IL_336	Z6_IL_337	P14	159	0.015	Circular	1.00	-	0.7	0.9	1.1	1.4
Z6_PIPE_1092	Z6_IL_337	Z6_IL_338	P14	108	0.015	Circular	1.00	-	0.7	0.9	1.1	1.4
Z6_PIPE_1093	Z6_IL_346	Z6_IL_347	P14	55	0.010	Circular	1.00	-	2.4	3.4	4.6	6.5
Z6_PIPE_1094	Z6_IL_347	Z6_IL_348	P14	90	0.010	Circular	1.00	-	2.8	3.8	5.1	7.2
Z6_PIPE_1095	Z6_IL_348	Z6_IL_349	P14	138	0.010	Circular	1.00	-	2.8	3.8	5.1	7.9
Z6_PIPE_1096	Z6_IL_349	Z6_IL_350	P14	161	0.010	Circular	1.00	-	3.4	4.6	6.2	8.7
Z6_PIPE_1097	Z6_IL_350	Z6_OF_2043	O15	21	0.024	Circular	1.00	-	4.3	5.7	7.6	10.4
Z6_PIPE_1098	Z6_IL_339	Z6_IL_346	P14	31	0.024	Circular	1.00	-	1.3	1.6	2.0	2.6
Z6_PIPE_1099	Z6_IL_351	Z6_SGIL_2096	P14	24	0.015	Circular	1.00	-	0.4	0.4	0.5	0.7
Z6_PIPE_11	Z6_IL_1436	Z6_MH_1553	O13	28	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1100	Z6_SGIL_2096	Z6_IL_347	P14	46	0.010	Circular	1.00	-	0.4	0.4	0.5	0.7
Z6_PIPE_1105	Z6_MH_1565	Z6_IL_534	H10	31	0.015	Circular	3.00	-	11.2	13.9	15.0	16.7
Z6_PIPE_1107	Z6_IL_534	Z6_MH_1566	H10	77	0.010	Circular	3.00	-	11.2	13.9	15.0	16.7
Z6_PIPE_1110	Z6_MH_1566	Z6_SGMH_2134	J10	53	0.010	Circular	3.00	-	13.0	16.5	18.5	21.5

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_1112	Z6_IL_571	Z6_IL_570	H10	77	0.010	Circular	2.00	-	5.5	7.5	10.3	14.5
Z6_PIPE_1113	Z6_IL_572	Z6_IL_571	H10	92	0.010	Circular	2.00	-	5.5	7.5	10.3	14.5
Z6_PIPE_1114	Z6_IL_570	Z6_MH_1568	H10	13	0.010	Circular	2.00	-	6.0	8.2	11.2	15.9
Z6_PIPE_1115	Z6_MH_1568	Z6_MH_1569	H10	140	0.010	Circular	2.50	-	6.0	8.2	11.2	15.9
Z6_PIPE_1116	Z6_MH_1569	Z6_MH_1570	J10	221	0.010	Circular	2.50	-	6.0	8.2	11.2	15.9
Z6_PIPE_1117	Z6_MH_1570	Z6_MH_1571	J10	441	0.015	Circular	2.50	-	5.9	8.1	11.2	15.9
Z6_PIPE_1118	Z6_MH_1571	Z6_MH_1572	J9	222	0.015	Circular	2.50	-	6.1	8.4	11.7	16.7
Z6_PIPE_1119	Z6_MH_1572	Z6_OF_5564	J9	62	0.010	Circular	2.50	-	6.1	8.5	11.7	16.7
Z6_PIPE_112	Z6_IL_2156	Z6_MH_2238	J10	18	0.010	Circular	2.50	-	8.1	10.5	13.5	18.2
Z6_PIPE_1120	Z6_IL_513	Z6_IL_572	H10	88	0.010	Circular	2.00	-	5.3	7.1	9.7	13.7
Z6_PIPE_113	Z6_MH_2238	Z6_IL_879	J10	6	0.015	Circular	2.50	-	12.9	17.3	23.2	32.6
Z6_PIPE_1132	Z6_SGIL_2102	Z6_OF_5561	O13	155	0.015	Circular	1.00	-	0.7	1.0	1.4	2.1
Z6_PIPE_1135	Z6_IL_555	Z6_OF_1952	P13	80	0.015	Circular	1.00	-	1.1	1.3	1.6	2.1
Z6_PIPE_1136	Z6_SGIL_2088	Z6_IL_235	H9	190	0.015	Circular	1.00	-	0.8	1.0	1.3	1.8
Z6_PIPE_1137	Z6_IL_235	Z6_OF_1967	H9	104	0.015	Circular	1.00	-	0.8	1.0	1.3	1.8
Z6_PIPE_1138	Z6_IL_293	Z6_IL_292	O14	158	0.015	Circular	1.50	-	1.8	2.6	3.8	5.7
Z6_PIPE_1139	Z6_IL_1271	Z6_IL_293	O14	140	0.015	Circular	1.50	-	1.0	1.5	2.2	3.2
Z6_PIPE_114	Z6_IL_879	Z6_OF_2214	J10	63	0.024	Circular	2.50	-	12.9	17.3	23.2	32.5
Z6_PIPE_1140	Z6_IL_294	Z6_SGIL_2092	O14	22	0.015	Circular	1.25	-	0.3	0.5	0.7	1.0
Z6_PIPE_1141	Z6_IL_251	Z6_MH_1549	P14	25	0.015	Circular	1.00	-	1.8	2.6	3.7	5.3
Z6_PIPE_1142	Z6_IL_209	Z6_MH_1549	P14	30	0.015	Circular	1.00	-	1.8	2.6	3.5	5.5
Z6_PIPE_1143	Z6_SGIL_2093	Z6_IL_295	O13	24	0.010	Circular	1.00	-	1.6	2.4	3.3	4.4
Z6_PIPE_1144	Z6_IL_296	Z6_SGIL_2093	O13	52	0.010	Circular	1.00	-	1.6	2.4	3.3	4.4
Z6_PIPE_1145	Z6_IL_297	Z6_IL_296	O13	177	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1146	Z6_CB_108	Z6_MH_1620	J11	142	0.024	Circular	1.00	-	1.3	1.8	2.5	3.6
Z6_PIPE_1147	Z6_MH_1620	Z6_MH_1621	J11	150	0.024	Circular	1.00	-	1.3	1.8	2.5	3.6
Z6_PIPE_1148	Z6_IL_738	Z6_IL_379	J10	21	0.015	Circular	1.25	-	3.1	4.2	5.6	7.8
Z6_PIPE_1149	Z6_IL_379	Z6_OF_1944	J10	272	0.024	Circular	1.50	-	3.1	4.2	5.6	7.8
Z6_PIPE_1150	Z6_MH_1621	Z6_OF_2049	J11	42	0.024	Circular	1.00	-	1.3	1.8	2.5	3.6
Z6_PIPE_1151	Z6_IL_1385	Z6_MH_1782	P14	14	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1152	Z6_IL_726	Z6_IL_727	M12	51	0.015	Circular	1.00	-	0.1	0.2	0.5	0.8
Z6_PIPE_1153	Z6_IL_727	Z6_IL_728	M12	25	0.015	Circular	1.00	-	0.1	0.2	0.5	0.8
Z6_PIPE_1154	Z6_IL_728	Z6_OF_2011	M12	85	0.015	Circular	1.00	-	0.3	0.7	1.3	2.2
Z6_PIPE_1157	Z6_IL_633	Z6_IL_634	K11	34	0.024	Circular	1.00	-	0.7	1.0	1.3	1.9
Z6_PIPE_1158	Z6_IL_634	Z6_IL_635	K11	71	0.015	Circular	1.00	-	0.7	1.0	1.3	1.9
Z6_PIPE_1159	Z6_IL_636	Z6_IL_637	K11	116	0.015	Circular	1.25	-	4.9	6.9	9.5	11.9
Z6_PIPE_1160	Z6_IL_635	Z6_IL_636	K11	130	0.015	Circular	1.25	-	4.9	6.9	9.5	11.9
Z6_PIPE_1161	Z6_IL_637	Z6_IL_638	K11	109	0.015	Circular	1.50	-	5.0	7.1	9.9	12.5
Z6_PIPE_1162	Z6_IL_638	Z6_IL_639	K11	120	0.015	Circular	1.50	-	5.0	7.1	9.9	12.5
Z6_PIPE_1163	Z6_IL_639	Z6_IL_640	K11	102	0.015	Circular	1.50	-	5.0	7.1	9.9	12.6
Z6_PIPE_1171	Z6_MH_2226	Z6_MH_1567	H10	55	0.015	Circular	3.50	-	23.3	32.2	44.8	64.4
Z6_PIPE_1172	Z6_IL_2164	Z6_MH_2226	H10	24	0.015	Circular	3.00	-	17.1	23.5	32.4	46.1
Z6_PIPE_1173	Z6_MH_1623	Z6_MH_2226	H10	274	0.015	Circular	3.50	-	6.4	9.0	12.7	18.7
Z6_PIPE_1174	Z6_IL_1105	Z6_MH_1623	H10	23	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z6_PIPE_1175	Z6_MH_1624	Z6_MH_1623	H10	250	0.015	Circular	3.50	-	6.4	9.0	12.7	18.7
Z6_PIPE_1179	Z6_IL_1401	Z6_IL_1400	K11	80	0.015	Circular	1.00	-	6.9	8.4	9.4	11.0
Z6_PIPE_1191	Z6_IL_1368	Z6_MH_2277	P13	151	0.015	Circular	2.00	-	1.3	1.6	2.0	2.6
Z6_PIPE_1192	Z6_MH_2277	Z6_OF_5567	P13	308	0.015	Circular	3.00	-	5.7	8.3	13.1	24.5
Z6_PIPE_1194	Z6_MH_2276	Z6_OF_2178	P13	18	0.015	Circular	1.00	-	1.9	2.6	3.6	5.1
Z6_PIPE_1195	Z6_IL_486	Z6_MH_2276	P13	42	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1198	Z6_IL_989	Z6_MH_2276	P13	116	0.015	Circular	1.00	-	1.9	2.6	3.6	5.1
Z6_PIPE_120	Z6_IL_870	Z6_IL_2231	J10	208	0.015	Circular	1.00	-	1.9	2.7	4.0	5.8
Z6_PIPE_1200	Z6_IL_1371	Z6_OF_1953	O15	19	0.024	Circular	1.50	-	0.2	0.3	0.4	0.5
Z6_PIPE_1201	Z6_IL_2172	Z6_OF_2177	N12	114	0.015	Circular	3.00	-	8.4	12.8	19.5	36.7
Z6_PIPE_1202	Z6_IL_2261	Z6_OF_2263	N12	54	0.015	Circular	3.00	-	9.4	14.1	21.6	39.8
Z6_PIPE_1203	Z6_IL_2260	Z6_IL_775	N12	70	0.015	Circular	3.00	-	10.2	15.2	23.6	42.4
Z6_PIPE_1204	Z6_MH_2237	Z6_MH_2238	J10	37	0.015	Circular	1.50	-	6.0	8.4	11.8	16.9
Z6_PIPE_1205	Z6_IL_880	Z6_MH_2237	J10	12	0.015	Circular	1.00	-	0.0	0.0	0.0	0.3
Z6_PIPE_1206	Z6_IL_1374	Z6_OF_1955	J10	54	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_121	Z6_IL_2231	Z6_IL_871	K10	353	0.015	Circular	1.00	-	1.9	2.7	4.0	5.8
Z6_PIPE_1210	Z6_IL_332	Z6_MH_1782	P15	14	0.015	Circular	1.00	-	1.3	1.7	2.2	3.0
Z6_PIPE_1211	Z6_MH_1782	Z6_MH_1783	P14	111	0.015	Circular	1.00	-	1.2	1.7	2.2	3.0
Z6_PIPE_1212	Z6_MH_1783	Z6_MH_1550	P14	242	0.015	Circular	1.00	-	1.2	1.7	2.2	3.0
Z6_PIPE_1216	Z6_MH_1656	Z6_MH_1655	O14	97	0.015	Circular	1.00	-	0.2	0.4	0.6	0.9
Z6_PIPE_1217	Z6_IL_753	Z6_MH_1655	O13	194	0.015	Circular	2.00	-	5.5	7.7	10.9	15.8
Z6_PIPE_1218	Z6_IL_754	Z6_IL_753	O13	60	0.015	Circular	1.25	-	2.3	3.3	4.7	6.9
Z6_PIPE_1219	Z6_IL_720	Z6_IL_753	O13	394	0.015	Circular	1.50	-	2.6	3.5	4.8	6.8
Z6_PIPE_122	Z6_IL_867	Z6_SGIL_2115	J10	621	0.015	Circular	1.25	-	3.8	4.3	4.7	5.4
Z6_PIPE_1220	Z6_IL_757	Z6_IL_758	O13	35	0.015	Circular	1.00	-	0.8	1.4	2.2	3.6
Z6_PIPE_1221	Z6_IL_759	Z6_MH_1618	N14	14	0.015	Circular	1.00	-	0.9	1.4	3.0	5.6

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_1222	Z6_IL_678	Z6_MH_1596	K11	117	0.024	Circular	1.00	-	0.8	1.0	1.3	1.8
Z6_PIPE_1223	Z6_MH_1596	Z6_OF_1991	K11	170	0.024	Circular	1.00	-	2.2	2.9	3.7	4.9
Z6_PIPE_1225	Z6_IL_677	Z6_MH_1596	K11	158	0.024	Circular	1.00	-	0.6	0.8	1.0	1.4
Z6_PIPE_1226	Z6_IL_681	Z6_IL_680	N13	34	0.015	Circular	1.00	-	1.2	1.9	2.8	4.3
Z6_PIPE_1227	Z6_IL_682	Z6_IL_683	N13	34	0.015	Circular	1.00	-	0.8	1.3	2.2	3.5
Z6_PIPE_1228	Z6_IL_781	Z6_IL_782	M13	258	0.024	Circular	1.00	-	0.5	1.1	2.1	3.7
Z6_PIPE_1229	Z6_IL_740	Z6_IL_741	K11	102	0.015	Circular	2.00	-	0.7	0.9	1.3	1.8
Z6_PIPE_123	Z6_IL_2244	Z6_IL_1504	K11	20	0.024	Circular	2.00	-	1.2	2.1	3.4	5.5
Z6_PIPE_1230	Z6_IL_741	Z6_IL_1213	K11	44	0.024	Circular	2.00	-	0.7	0.9	1.3	1.8
Z6_PIPE_1231	Z6_IL_742	Z6_IL_1213	K11	36	0.024	Circular	1.00	-	1.9	2.3	2.9	3.8
Z6_PIPE_1232	Z6_IL_1213	Z6_IL_743	K11	31	0.015	Circular	2.00	-	2.8	3.6	4.8	6.6
Z6_PIPE_1233	Z6_IL_743	Z6_OF_1889	K11	55	0.015	Circular	2.00	-	2.8	3.6	4.8	6.6
Z6_PIPE_1234	Z6_IL_871	Z6_MH_2235	J10	102	0.015	Circular	1.50	-	3.2	4.6	6.5	9.7
Z6_PIPE_1235	Z6_IL_744	Z6_MH_2235	J10	58	0.015	Circular	1.50	-	2.9	4.0	5.5	8.0
Z6_PIPE_1236	Z6_MH_2235	Z6_MH_2236	J10	78	0.015	Circular	1.50	-	6.0	8.4	11.8	16.9
Z6_PIPE_1237	Z6_IL_745	Z6_IL_881	J10	56	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1238	Z6_IL_837	Z6_MH_1695	J11	15	0.015	Circular	1.50	-	0.7	0.9	1.2	1.6
Z6_PIPE_1239	Z6_MH_1703	Z6_MH_1695	J11	175	0.015	Circular	1.50	-	2.3	2.9	3.8	5.1
Z6_PIPE_124	Z6_IL_1504	Z6_OF_1850	K11	81	0.010	Circular	2.50	-	6.4	9.5	13.6	19.7
Z6_PIPE_1240	Z6_MH_1695	Z6_IL_828	J11	25	0.015	Circular	1.50	-	2.9	3.8	4.9	6.6
Z6_PIPE_1241	Z6_MH_1625	Z6_MH_1624	H10	325	0.015	Circular	3.50	-	10.9	15.3	21.6	31.4
Z6_PIPE_1242	Z6_MH_1626	Z6_MH_1625	H10	145	0.015	Circular	2.00	-	6.8	9.6	13.6	19.7
Z6_PIPE_1243	Z6_IL_811	Z6_MH_1635	J11	22	0.010	Circular	2.50	-	3.9	7.6	13.0	18.9
Z6_PIPE_1244	Z6_MH_1635	Z6_MH_1634	J12	37	0.010	Circular	2.50	-	4.2	8.1	14.4	21.6
Z6_PIPE_1245	Z6_MH_1634	Z6_MH_1636	J11	155	0.010	Circular	2.50	-	4.2	8.1	14.4	21.6
Z6_PIPE_1246	Z6_MH_1652	Z6_MH_1653	L12	132	0.010	Circular	1.75	-	19.5	30.1	35.7	43.6
Z6_PIPE_1247	Z6_MH_1653	Z6_IL_982	L12	162	0.015	Circular	3.00	-	19.8	31.0	36.9	45.3
Z6_PIPE_1248	Z6_MH_1654	Z6_IL_731	L12	513	0.015	Circular	4.00	-	25.5	43.1	66.2	93.9
Z6_PIPE_1249	Z6_MH_1661	Z6_MH_1707	M12	130	0.010	Circular	4.00	-	26.8	44.9	69.3	98.4
Z6_PIPE_125	Z6_IL_954	Z6_IL_1504	K11	67	0.010	Circular	2.00	-	1.2	1.8	2.7	4.0
Z6_PIPE_1250	Z6_MH_1707	Z6_MH_1647	M12	58	0.010	Circular	4.00	-	37.9	57.3	93.5	142.3
Z6_PIPE_1252	Z6_IL_2099	Z6_OF_5562	O13	127	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z6_PIPE_1259	Z6_MH_1764	Z6_SGMH_2135	H11	176	0.015	Circular	1.00	-	0.5	0.9	1.5	2.5
Z6_PIPE_126	Z6_IL_1172	Z6_MH_2241	K10	85	0.024	Circular	1.25	-	0.1	0.2	0.4	1.0
Z6_PIPE_1261	Z6_IL_1348	Z6_SGMH_2135	J11	43	0.015	Circular	1.00	-	2.5	3.7	5.5	8.2
Z6_PIPE_1262	Z6_SGMH_2135	Z6_OF_1940	J10	123	0.015	Circular	1.75	-	3.2	5.0	7.6	11.6
Z6_PIPE_127	Z6_MH_2241	Z6_MH_2240	K10	162	0.010	Circular	2.00	-	0.1	0.2	0.4	1.0
Z6_PIPE_1276	Z6_MH_1624	Z6_IL_647	H10	53	0.015	Circular	2.00	-	9.5	13.1	17.9	25.3
Z6_PIPE_1277	Z6_MH_1786	Z6_OF_2069	H10	196	0.015	Circular	2.00	-	9.5	13.0	17.9	25.3
Z6_PIPE_1278	Z6_MH_1589	Z6_MH_1786	H10	51	0.015	Circular	2.00	-	9.5	13.1	17.9	25.3
Z6_PIPE_1279	Z6_IL_1338	Z6_IL_1428	O14	108	0.015	Circular	1.50	-	1.3	2.0	4.6	9.1
Z6_PIPE_128	Z6_MH_2240	Z6_OF_1851	K10	55	0.010	Circular	1.50	-	0.1	0.2	0.4	1.0
Z6_PIPE_1280	Z6_IL_1429	Z6_IL_1428	O14	83	0.015	Circular	1.00	-	0.2	0.3	0.6	1.1
Z6_PIPE_1281	Z6_IL_1428	Z6_IL_1430	O14	227	0.015	Circular	1.75	-	1.6	2.3	5.4	10.8
Z6_PIPE_1282	Z6_IL_1430	Z6_IL_1432	O14	86	0.015	Circular	1.75	-	1.6	2.3	5.4	10.8
Z6_PIPE_1283	Z6_CB_183	Z6_MH_1784	O14	43	0.015	Circular	1.75	-	0.0	0.0	0.0	0.0
Z6_PIPE_1284	Z6_MH_1784	Z6_MH_1785	O14	39	0.015	Circular	1.75	-	0.0	0.0	0.0	0.0
Z6_PIPE_1285	Z6_MH_1785	Z6_CB_182	O14	45	0.015	Circular	1.75	-	0.0	0.0	0.0	0.0
Z6_PIPE_1286	Z6_CB_183	Z6_CB_182	O14	37	0.015	Circular	1.75	-	1.6	2.3	5.4	10.8
Z6_PIPE_1287	Z6_CB_182	Z6_IL_996	O14	166	0.015	Circular	2.00	-	1.7	2.5	5.7	11.3
Z6_PIPE_1288	Z6_IL_1432	Z6_CB_183	O14	11	0.015	Circular	1.75	-	1.6	2.3	5.4	10.8
Z6_PIPE_1289	Z6_MH_2247	Z6_OF_2078	K11	180	0.024	Circular	1.50	-	0.6	0.8	1.1	1.5
Z6_PIPE_129	Z6_CB_130	Z6_CB_124	K10	150	0.024	Circular	1.00	-	0.0	0.1	0.1	0.3
Z6_PIPE_1290	Z6_IL_680	Z6_OF_2079	N13	127	0.015	Circular	1.00	-	1.2	1.9	2.8	4.3
Z6_PIPE_1291	Z6_IL_683	Z6_OF_2080	N13	95	0.015	Circular	1.00	-	0.8	1.3	2.2	3.5
Z6_PIPE_1294	Z6_IL_731	Z6_MH_1617	M12	14	0.015	Circular	4.00	-	25.6	43.1	66.5	94.2
Z6_PIPE_1296	Z6_MH_1647	Z6_OF_1884	M12	70	0.015	Circular	4.00	-	37.9	57.3	93.5	142.3
Z6_PIPE_1297	Z6_MH_1648	Z6_OF_5563	M12	67	0.015	Circular	4.00	-	0.2	0.4	0.7	1.7
Z6_PIPE_1299	Z6_MH_1724	Z6_OF_1911	H10	47	0.024	Circular	1.00	-	0.6	0.8	1.1	1.6
Z6_PIPE_130	Z6_CB_124	Z6_CB_123	K10	70	0.010	Circular	1.00	-	0.0	0.1	0.1	0.3
Z6_PIPE_1300	Z6_IL_592	Z6_IL_591	H9	34	0.015	Circular	1.00	-	1.6	2.1	2.8	3.9
Z6_PIPE_1301	Z6_IL_591	Z6_MH_1576	H9	101	0.015	Circular	1.00	-	1.6	2.1	2.8	3.9
Z6_PIPE_1306	Z6_IL_1413	Z6_IL_872	J10	75	0.015	Circular	1.50	-	4.2	5.4	6.9	7.7
Z6_PIPE_1307	Z6_IL_1437	Z6_IL_1413	J10	255	0.015	Circular	1.50	-	1.2	1.6	2.0	2.7
Z6_PIPE_131	Z6_MH_2239	Z6_IL_1174	K10	86	0.010	Circular	1.25	-	0.1	0.1	0.3	0.7
Z6_PIPE_1317	Z6_IL_1433	Z6_OF_2199	P13	192	0.015	Circular	1.00	-	1.0	1.3	1.7	2.3
Z6_PIPE_1323	Z6_IL_2290	Z6_IL_2289	K11	33	0.015	Circular	1.00	-	0.3	0.4	0.5	0.8
Z6_PIPE_1338	Z6_IL_395	Z6_IL_393	G9	103	0.010	Circular	1.00	-	1.6	2.1	2.7	3.6
Z6_PIPE_1339	Z6_IL_393	Z6_MH_1554	G9	37	0.010	Circular	1.50	-	1.6	2.1	2.7	3.6
Z6_PIPE_134	Z6_IL_865	Z6_MH_1685	J9	25	0.015	Circular	1.00	-	0.6	4.9	0.7	0.7

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_1343	Z6_MH_1553	Z6_OF_2198	O13	144	0.015	Circular	3.00	-	0.7	1.0	1.4	2.0
Z6_PIPE_1344	Z6_IL_2153	Z6_CB_109	J10	39	0.024	Circular	5.00	-	48.4	67.9	90.8	121.9
Z6_PIPE_1345	Z6_CB_109	Z6_CB_110	K10	71	0.024	Circular	5.00	-	48.4	67.9	90.8	121.9
Z6_PIPE_1346	Z6_IL_818	Z6_MH_1637	J11	41	0.015	Circular	2.00	-	0.3	0.4	0.6	1.0
Z6_PIPE_1347	Z6_IL_808	Z6_MH_1633	J11	75	0.015	Circular	2.00	-	4.9	9.0	16.3	24.6
Z6_PIPE_1348	Z6_IL_888	Z6_IL_2228	K10	207	0.015	Circular	1.00	-	0.6	0.9	1.4	2.1
Z6_PIPE_1349	Z6_IL_2152	Z6_OF_2210	J10	29	0.024	Circular	5.00	-	48.4	67.9	90.8	121.9
Z6_PIPE_135	Z6_CB_89	Z6_MH_1685	J9	8	0.015	Circular	1.25	-	3.9	6.5	4.5	6.2
Z6_PIPE_1350	Z6_CB_74	Z6_IL_1504	K11	120	0.024	Circular	2.00	-	4.4	6.1	8.1	11.1
Z6_PIPE_1351	Z6_CB_110	Z6_OF_2211	K10	106	0.024	Circular	5.00	-	48.4	67.9	90.8	121.9
Z6_PIPE_1352	Z6_SGIL_2127	Z6_OF_1903	J12	39	0.010	Circular	1.00	-	0.4	1.1	2.1	3.7
Z6_PIPE_1353	Z6_MH_1655	Z6_OF_1826	O13	120	0.015	Circular	4.00	-	20.7	33.3	52.5	82.6
Z6_PIPE_1354	Z6_IL_814	Z6_IL_813	J12	26	0.015	Circular	1.50	-	0.6	1.0	4.5	4.9
Z6_PIPE_1355	Z6_IL_813	Z6_SGIL_2114	J12	30	0.015	Circular	1.50	-	1.3	2.4	6.8	9.3
Z6_PIPE_1356	Z6_SGIL_2114	Z6_OF_1902	J12	26	0.015	Circular	0.83	-	1.3	2.4	4.7	5.6
Z6_PIPE_1357	Z6_IL_812	Z6_SGIL_2127	J12	58	0.015	Circular	1.00	-	0.3	0.7	1.5	2.8
Z6_PIPE_1358	Z6_MH_1665	Z6_IL_843	K11	70	0.015	Circular	3.50	-	31.5	54.9	82.0	118.5
Z6_PIPE_1360	Z6_IL_843	Z6_MH_1709	J11	101	0.015	Circular	3.50	-	31.5	54.9	82.0	118.5
Z6_PIPE_1361	Z6_MH_1709	Z6_OF_2058	J11	102	0.015	Circular	3.50	-	33.1	57.4	85.5	124.2
Z6_PIPE_1362	Z6_IL_816	Z6_MH_1806	J12	145	0.015	Circular	1.00	-	2.0	2.9	6.7	10.6
Z6_PIPE_1363	Z6_IL_2248	Z6_IL_814	J12	13	0.015	Circular	1.50	-	0.6	1.0	2.9	4.0
Z6_PIPE_1364	Z6_IL_1193	Z6_OF_1926	K12	82	0.015	Circular	3.50	-	3.9	7.9	13.4	17.1
Z6_PIPE_1365	Z6_IL_1375	Z6_OF_1936	N13	125	0.015	Circular	2.75	-	9.7	18.8	34.0	59.8
Z6_PIPE_1366	Z6_IL_1047	Z6_IL_1375	N13	50	0.015	Circular	2.75	-	9.6	18.4	33.2	58.2
Z6_PIPE_1367	Z6_IL_815	Z6_IL_816	J12	37	0.015	Circular	1.00	-	0.5	0.8	1.7	3.2
Z6_PIPE_1369	Z6_MH_1541	Z6_OF_2083	H10	60	0.015	Circular	4.00	-	38.8	53.9	74.9	104.5
Z6_PIPE_1374	Z6_IL_903	Z6_OF_5560	G9	8	0.015	Circular	1.00	-	1.2	1.6	2.2	3.0
Z6_PIPE_1376	Z6_IL_1439	Z6_OF_2278	K14	19	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_138	Z6_MH_2242	Z6_CB_126	K10	71	0.024	Circular	1.00	-	0.7	1.0	1.5	2.2
Z6_PIPE_1382	Z6_IL_1215	Z6_IL_1214	J11	141	0.010	Circular	1.50	-	0.7	1.0	1.3	1.8
Z6_PIPE_1383	Z6_MH_2245	Z6_IL_740	K11	39	0.015	Circular	1.50	-	0.7	0.9	1.3	1.8
Z6_PIPE_1384	Z6_IL_1214	Z6_MH_2245	J11	263	0.010	Circular	1.50	-	0.7	0.9	1.3	1.8
Z6_PIPE_1386	Z6_MH_1637	Z6_IL_808	J11	89	0.015	Circular	2.00	-	4.4	8.2	14.9	22.4
Z6_PIPE_1387	Z6_MH_1636	Z6_MH_1637	J11	188	0.015	Circular	2.50	-	4.2	8.1	14.4	21.5
Z6_PIPE_1388	Z6_IL_809	Z6_MH_2252	J11	51	0.024	Circular	2.00	-	1.8	2.6	3.8	5.6
Z6_PIPE_139	Z6_CB_126	Z6_CB_125	K10	69	0.015	Circular	1.00	-	0.7	1.0	1.5	2.2
Z6_PIPE_1390	Z6_IL_1115	Z6_MH_2253	J11	8	0.015	Circular	1.50	-	4.6	6.8	9.7	14.3
Z6_PIPE_1391	Z6_IL_1123	Z6_MH_1665	J11	41	0.015	Circular	1.50	-	1.5	2.4	3.7	5.7
Z6_PIPE_1393	Z6_IL_842	Z6_MH_1709	J11	23	0.024	Horizontal Ellipse	1.50	2.00	2.3	3.1	4.3	6.1
Z6_PIPE_1396	Z6_IL_1217	Z6_OF_2188	K12	62	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z6_PIPE_1397	Z6_MH_1689	Z6_OF_5568	K12	45	0.024	Circular	1.50	-	2.8	5.4	9.1	14.8
Z6_PIPE_1398	Z6_MH_1690	Z6_MH_1689	K12	12	0.024	Circular	1.50	-	1.0	1.5	2.2	3.2
Z6_PIPE_1399	Z6_CB_160	Z6_MH_1690	K12	55	0.024	Circular	1.50	-	1.0	1.5	2.2	3.2
Z6_PIPE_140	Z6_CB_129	Z6_CB_125	K10	150	0.015	Circular	1.00	-	0.0	0.1	0.1	0.3
Z6_PIPE_1400	Z6_MH_1719	Z6_MH_2269	K12	42	0.015	Circular	2.00	-	3.9	8.1	14.6	25.2
Z6_PIPE_1401	Z6_MH_1730	Z6_MH_1719	K12	106	0.015	Circular	2.00	-	3.9	8.1	14.6	25.2
Z6_PIPE_1402	Z6_MH_1686	Z6_MH_1687	H9	228	0.010	Circular	1.50	-	2.6	3.6	4.9	7.0
Z6_PIPE_1403	Z6_IL_1299	Z6_MH_1686	G9	4	0.010	Circular	1.50	-	1.1	1.6	2.4	3.6
Z6_PIPE_1404	Z6_IL_1380	Z6_IL_290	H9	76	0.015	Circular	1.00	-	0.6	0.8	1.1	1.4
Z6_PIPE_141	Z6_CB_131	Z6_CB_123	K10	148	0.010	Circular	1.00	-	0.0	0.1	0.1	0.3
Z6_PIPE_1413	Z6_IL_1060	Z6_IL_1210	P13	16	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1414	Z6_IL_1474	Z6_OF_2181	O15	62	0.015	Circular	1.25	-	0.4	0.7	1.0	2.8
Z6_PIPE_1415	Z6_IL_1476	Z6_OF_2184	O15	23	0.015	Circular	1.00	-	0.2	0.4	0.9	1.9
Z6_PIPE_1416	Z6_IL_1475	Z6_OF_2183	O15	30	0.015	Circular	1.50	-	0.5	0.7	1.0	1.4
Z6_PIPE_1417	Z6_IL_1477	Z6_OF_2182	O15	138	0.015	Circular	1.00	-	1.1	2.2	3.4	8.4
Z6_PIPE_142	Z6_CB_122	Z6_CB_123	K10	70	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1422	Z6_IL_1288	Z6_OF_5557	L13	27	0.015	Circular	1.50	-	7.4	13.8	22.9	35.9
Z6_PIPE_1423	Z6_IL_1289	Z6_MH_1739	L13	29	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z6_PIPE_1426	Z6_IL_1481	Z6_IL_1482	K14	59	0.015	Circular	1.50	-	0.2	0.4	0.9	2.0
Z6_PIPE_1427	Z6_IL_1482	Z6_IL_2350	K14	28	0.015	Circular	1.50	-	0.2	0.4	0.9	2.0
Z6_PIPE_1428	Z6_IL_1484	Z6_MH_1735	K13	75	0.010	Circular	1.00	-	0.8	1.6	2.8	4.6
Z6_PIPE_1429	Z6_IL_1483	Z6_MH_1735	K13	13	0.010	Circular	1.00	-	1.5	3.5	6.1	9.7
Z6_PIPE_143	Z6_IL_2140	Z6_OF_2202	M12	127	0.015	Circular	3.00	-	10.7	15.6	26.9	48.4
Z6_PIPE_1430	Z6_MH_1723	Z6_MH_1797	K13	28	0.015	Circular	2.00	-	5.3	10.1	16.4	23.3
Z6_PIPE_1431	Z6_IL_2280	Z6_IL_1281	K14	36	0.015	Circular	3.00	-	6.7	11.0	16.4	38.6
Z6_PIPE_1432	Z6_IL_2281	Z6_IL_1281	K14	36	0.024	Circular	1.50	-	0.0	0.0	0.0	0.0
Z6_PIPE_1433	Z6_IL_1282	Z6_MH_1798	K14	238	0.015	Circular	3.00	-	17.8	30.0	46.7	76.7
Z6_PIPE_1434	Z6_MH_1798	Z6_MH_1738	K14	448	0.015	Circular	3.00	-	18.0	30.3	47.2	77.5
Z6_PIPE_1435	Z6_MH_1738	Z6_MH_1799	K14	48	0.010	Circular	3.00	-	18.0	30.3	47.2	77.5
Z6_PIPE_1436	Z6_MH_1799	Z6_MH_1788	K14	55	0.015	Circular	3.00	-	18.0	30.3	47.2	77.5

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_1437	Z6_MH_1788	NEW_Z6_STORE_01	K14	130	0.015	Circular	3.00	-	18.1	30.6	47.6	78.1
Z6_PIPE_1438	Z6_IL_1283	Z6_MH_2279	K14	52	0.015	Circular	5.00	-	18.3	36.8	83.3	192.6
Z6_PIPE_1439	NEW_Z6_STORE_01	Z6_OF_2189	K14	70	0.015	Circular	3.00	-	18.0	30.6	47.6	78.0
Z6_PIPE_144	Z6_OF_2030	Z6_IL_1252	J10	349	0.015	Circular	3.25	-	14.2	19.3	23.5	29.5
Z6_PIPE_1440	Z6_IL_1284	Z6_MH_2279	K14	111	0.015	Circular	3.00	-	5.6	10.9	19.4	33.3
Z6_PIPE_1443	Z6_MH_1689	Z6_MH_2269	K12	11	0.010	Circular	2.00	-	2.4	5.0	8.6	14.1
Z6_PIPE_1444	Z6_IL_838	Z6_IL_1165	J11	30	0.015	Circular	1.00	-	0.9	1.2	1.5	2.1
Z6_PIPE_1445	Z6_IL_795	Z6_OF_5566	J11	85	0.015	Circular	1.25	-	1.4	1.9	2.4	3.2
Z6_PIPE_1446	Z6_IL_773	Z6_MH_1631	N12	65	0.015	Circular	1.00	-	0.9	1.5	2.2	3.4
Z6_PIPE_145	Z6_IL_996	Z6_MH_1725	O14	137	0.015	Circular	2.00	-	1.7	2.5	5.7	11.3
Z6_PIPE_1450	Z6_IL_1081	Z6_MH_1688	K11	142	0.024	Circular	1.00	-	2.8	3.7	4.9	6.4
Z6_PIPE_1452	Z6_IL_1084	Z6_IL_1086	L11	367	0.015	Circular	1.50	-	2.7	2.6	3.1	3.3
Z6_PIPE_1455	Z6_IL_972	Z6_OF_2173	L12	40	0.015	Circular	1.00	-	0.2	0.4	0.7	1.3
Z6_PIPE_1456	Z6_IL_943	Z6_IL_1489	L12	3	0.015	Circular	1.00	-	3.9	7.9	13.5	14.8
Z6_PIPE_1457	Z6_IL_1488	Z6_IL_1241	L12	3	0.015	Circular	1.00	-	3.9	7.9	13.5	16.5
Z6_PIPE_1458	Z6_IL_1493	Z6_IL_914	L12	2	0.015	Circular	1.00	-	0.6	1.3	2.2	3.5
Z6_PIPE_1459	Z6_IL_1492	Z6_IL_915	L12	2	0.015	Circular	1.00	-	2.1	4.5	7.6	11.1
Z6_PIPE_146	Z6_IL_1269	Z6_MH_1595	O14	64	0.015	Circular	1.00	-	0.7	1.0	1.4	2.0
Z6_PIPE_1462	Z6_IL_1498	Z6_IL_1402	K12	65	0.015	Circular	1.50	-	0.6	1.1	2.1	3.7
Z6_PIPE_1468	Z6_IL_1501	Z6_IL_1413	J10	20	0.015	Circular	1.25	-	3.1	3.9	4.9	5.5
Z6_PIPE_1469	Z6_IL_1506	Z6_CB_47	J9	47	0.015	Circular	1.00	-	0.9	1.2	1.8	2.6
Z6_PIPE_147	Z6_IL_719	Z6_IL_720	O13	56	0.015	Circular	1.50	-	1.4	1.9	2.5	3.5
Z6_PIPE_1471	Z6_IL_1508	Z6_MH_2234	H10	22	0.015	Circular	2.00	-	9.6	11.3	11.8	12.7
Z6_PIPE_1474	Z6_IL_1511	Z6_IL_1512	H10	34	0.015	Circular	1.00	-	0.9	1.1	1.4	1.9
Z6_PIPE_1475	Z6_IL_1512	Z6_IL_1510	H10	9	0.015	Circular	1.00	-	0.9	1.1	1.4	1.9
Z6_PIPE_1478	Z6_IL_2143	Z6_OF_2204	J12	30	0.024	Circular	1.00	-	3.1	4.6	6.8	10.3
Z6_PIPE_1479	Z6_IL_1274	Z6_OF_2205	J12	32	0.015	Circular	1.50	-	3.4	5.6	11.3	20.2
Z6_PIPE_148	Z6_MH_1590	Z6_MH_1591	L11	111	0.015	Circular	1.00	-	3.1	4.5	7.5	9.1
Z6_PIPE_1480	Z6_IL_1516	Z6_IL_1515	J12	19	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z6_PIPE_1481	Z6_IL_2399	Z6_IL_1515	J12	32	0.015	Circular	1.25	-	1.0	1.7	2.8	4.5
Z6_PIPE_1482	Z6_IL_1515	Z6_IL_1514	J12	48	0.010	Circular	1.25	-	1.0	1.7	2.8	4.5
Z6_PIPE_1483	Z6_IL_1514	Z6_MH_1805	J12	75	0.015	Circular	1.50	-	2.7	4.3	9.2	15.5
Z6_PIPE_1484	Z6_MH_1805	Z6_IL_1513	J12	204	0.015	Circular	1.50	-	3.0	4.9	10.1	17.0
Z6_PIPE_1485	Z6_IL_1513	Z6_IL_1274	J12	225	0.015	Circular	1.50	-	3.1	5.1	10.5	17.9
Z6_PIPE_1486	Z6_MH_1806	Z6_IL_1514	J12	201	0.015	Circular	1.25	-	2.1	3.1	6.9	11.0
Z6_PIPE_1487	Z6_IL_1249	Z6_MH_1806	J12	18	0.015	Circular	1.25	-	0.2	0.4	0.6	1.0
Z6_PIPE_149	Z6_MH_1727	Z6_IL_671	O14	44	0.015	Circular	1.25	-	1.8	2.9	4.4	6.7
Z6_PIPE_1491	Z6_IL_1522	Z6_MH_1809	H8	75	0.015	Circular	1.25	-	0.2	0.2	0.4	0.6
Z6_PIPE_1492	Z6_IL_1521	Z6_MH_1809	H8	47	0.015	Circular	1.25	-	0.3	0.6	0.9	1.4
Z6_PIPE_1494	Z6_MH_1809	Z6_IL_1519	H8	22	0.015	Circular	1.50	-	0.5	0.8	1.3	2.0
Z6_PIPE_1495	Z6_IL_1523	Z6_IL_1519	H8	62	0.015	Circular	1.50	-	0.1	0.3	0.4	0.7
Z6_PIPE_1496	Z6_IL_1519	Z6_IL_1518	H8	27	0.015	Circular	1.50	-	1.7	2.9	4.7	7.7
Z6_PIPE_1497	Z6_IL_1518	Z6_MH_1808	H8	24	0.015	Circular	1.50	-	1.7	2.9	4.7	7.7
Z6_PIPE_150	Z6_IL_1031	Z6_IL_1030	M13	21	0.015	Circular	1.00	-	0.1	0.2	0.3	0.8
Z6_PIPE_1501	Z6_MH_1808	Z6_MH_1807	H8	44	0.015	Circular	2.50	-	2.3	3.9	6.2	10.0
Z6_PIPE_1502	Z6_MH_1807	Z6_MH_1673	H8	48	0.015	Circular	2.50	-	2.3	3.9	6.2	10.9
Z6_PIPE_1503	Z6_MH_1673	Z6_IL_1129	H8	83	0.015	Circular	2.50	-	16.5	23.7	34.0	48.9
Z6_PIPE_1504	Z6_MH_1810	Z6_IL_1129	H8	32	0.015	Circular	1.00	-	0.0	0.0	0.0	0.5
Z6_PIPE_1508	Z6_MH_1813	Z6_MH_1812	G9	238	0.015	Circular	2.00	-	1.1	1.5	2.0	2.9
Z6_PIPE_1509	Z6_IL_1526	Z6_MH_1813	G9	5	0.015	Circular	1.00	-	1.1	1.5	2.1	2.9
Z6_PIPE_151	Z6_IL_1030	Z6_OF_1977	M13	116	0.015	Circular	1.00	-	0.1	0.2	0.3	0.8
Z6_PIPE_1510	Z6_MH_1814	Z6_MH_1813	G9	39	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z6_PIPE_1511	Z6_MH_1815	Z6_MH_1679	G9	358	0.015	Circular	2.00	-	2.1	3.0	4.3	6.3
Z6_PIPE_1512	Z6_IL_1145	Z6_MH_1815	G9	28	0.015	Circular	2.00	-	2.1	3.0	4.3	6.3
Z6_PIPE_1513	Z6_IL_2394	Z6_IL_1146	G9	15	0.015	Circular	1.25	-	2.1	3.0	4.3	6.3
Z6_PIPE_1514	Z6_CB_146	Z6_IL_1530	H9	29	0.015	Circular	1.50	-	6.8	10.0	14.7	21.9
Z6_PIPE_1515	Z6_IL_1530	Z6_OF_2193	H9	34	0.010	Circular	1.50	-	6.8	10.0	14.7	21.9
Z6_PIPE_1549	Z6_IL_434	Z6_IL_210	K12	21	0.010	Circular	1.00	-	0.6	1.5	2.6	4.1
Z6_PIPE_1559	Z6_IL_958	Z6_OF_1895	M11	9	0.010	Circular	0.83	-	2.3	4.1	6.1	7.6
Z6_PIPE_1560	Z6_CB_163	Z6_IL_958	M11	47	0.015	Circular	0.83	-	2.3	4.1	6.1	7.6
Z6_PIPE_157	Z6_IL_666	Z6_MH_1590	L11	53	0.015	Circular	1.00	-	3.1	4.5	7.5	13.2
Z6_PIPE_1572	Z6_IL_906	Z6_IL_908	M11	134	0.015	Circular	1.00	-	0.5	0.8	1.4	1.5
Z6_PIPE_1573	Z6_CB_51	Z6_IL_906	M11	46	0.015	Circular	1.00	-	0.5	0.8	1.4	1.7
Z6_PIPE_1575	Z6_IL_1350	Z6_IL_1351	H9	27	0.010	Circular	0.67	-	0.4	0.7	1.0	1.5
Z6_PIPE_1576	Z6_IL_1349	Z6_IL_1350	H9	140	0.010	Circular	0.67	-	0.4	0.7	1.0	1.5
Z6_PIPE_158	Z6_MH_1591	Z6_MH_1715	L11	108	0.015	Circular	1.00	-	3.4	4.5	5.7	6.5
Z6_PIPE_1590	Z6_CB_104	Z6_OF_1968	J9	166	0.015	Circular	0.67	-	1.1	1.6	2.3	3.4
Z6_PIPE_1600	Z6_IL_895	Z6_CB_91	J9	40	0.024	Circular	0.83	-	0.8	1.2	1.7	2.5
Z6_PIPE_1618	Z6_CB_63	Z6_CB_138	K10	68	0.010	Circular	0.67	-	0.7	1.1	1.7	2.7
Z6_PIPE_1619	Z6_CB_138	Z6_OF_1853	K10	14	0.010	Circular	0.50	-	0.7	1.1	1.7	2.7

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_162	Z6_IL_1040	Z6_IL_1250	M13	120	0.015	Circular	1.00	-	0.4	0.8	1.6	2.9
Z6_PIPE_1622	Z6_CB_65	Z6_OF_1843	K11	27	0.010	Circular	0.83	-	7.8	7.8	7.8	7.8
Z6_PIPE_1625	Z6_CB_79	Z6_SGIL_2123	K11	56	0.015	Circular	0.67	-	1.6	1.9	2.2	2.5
Z6_PIPE_1626	Z6_CB_144	Z6_CB_79	K11	216	0.015	Circular	0.67	-	1.6	1.9	2.2	2.6
Z6_PIPE_163	Z6_IL_1250	Z6_IL_781	M13	165	0.015	Circular	1.00	-	0.5	1.1	2.1	3.7
Z6_PIPE_1630	Z6_IL_1067	Z6_MH_1728	L10	54	0.015	Circular	0.83	-	1.5	1.1	1.6	2.2
Z6_PIPE_1634	Z6_IL_884	Z6_IL_885	K9	25	0.015	Circular	0.83	-	1.0	1.5	2.3	3.5
Z6_PIPE_165	Z6_IL_2264	Z6_OF_2265	M13	275	0.015	Circular	2.00	-	5.3	7.8	14.7	22.2
Z6_PIPE_1654	Z6_MH_1650	Z6_MH_1651	L12	311	0.015	Circular	3.00	-	16.9	24.5	30.9	39.7
Z6_PIPE_1658	Z6_IL_287	Z6_OF_1972	G9	58	0.010	Circular	0.50	-	0.5	0.6	0.8	1.0
Z6_PIPE_1659	Z6_IL_288	Z6_OF_1973	G9	68	0.010	Circular	0.50	-	0.4	0.5	0.6	0.8
Z6_PIPE_166	Z6_IL_782	Z6_IL_1251	M13	29	0.010	Circular	2.00	-	1.7	2.9	5.8	10.7
Z6_PIPE_1660	Z6_IL_289	Z6_OF_1974	G9	69	0.010	Circular	0.50	-	0.5	0.6	0.8	1.1
Z6_PIPE_167	Z6_IL_1039	Z6_IL_1251	M13	2	0.015	Rectangular	1.25	1.25	1.5	2.4	4.7	8.4
Z6_PIPE_1675	Z6_IL_1291	Z6_IL_1292	L11	33	0.015	Circular	0.50	-	0.8	0.9	1.0	1.1
Z6_PIPE_168	Z6_IL_1251	Z6_OF_1906	M13	123	0.015	Circular	2.00	-	3.2	5.1	10.1	18.4
Z6_PIPE_169	Z6_IL_1041	Z6_IL_1043	M13	26	0.024	Circular	1.00	-	1.3	2.0	4.0	5.7
Z6_PIPE_17	Z6_CB_73	Z6_CB_170	H9	111	0.015	Circular	1.00	-	0.6	0.7	0.9	1.3
Z6_PIPE_170	Z6_IL_1043	Z6_OF_1907	M13	185	0.024	Circular	1.00	-	1.3	2.0	4.0	5.5
Z6_PIPE_1707	Z6_IL_585	Z6_OF_1966	H9	95	0.010	Circular	0.50	-	0.1	0.2	0.2	0.3
Z6_PIPE_1708	Z6_IL_586	Z6_OF_1965	H9	96	0.010	Circular	0.50	-	0.1	0.1	0.1	0.2
Z6_PIPE_1709	Z6_IL_587	Z6_OF_1964	H9	91	0.010	Circular	0.50	-	0.1	0.1	0.1	0.2
Z6_PIPE_171	Z6_IL_1372	Z6_OF_1954	J10	38	0.015	Circular	1.50	-	0.5	0.8	1.1	1.7
Z6_PIPE_172	Z6_IL_881	Z6_IL_1373	J10	125	0.015	Circular	1.50	-	0.4	0.5	0.8	1.1
Z6_PIPE_1724	Z6_MH_1555	Z6_IL_400	K12	72	0.010	Circular	0.83	-	1.5	2.2	3.2	4.5
Z6_PIPE_1725	Z6_IL_400	Z6_IL_401	K12	60	0.010	Circular	0.83	-	1.5	2.2	3.2	4.5
Z6_PIPE_1726	Z6_IL_401	Z6_IL_402	K12	61	0.010	Circular	0.83	-	1.7	2.5	3.7	5.3
Z6_PIPE_173	Z6_IL_1373	Z6_OF_2191	J10	109	0.015	Circular	1.50	-	0.5	0.7	1.0	1.4
Z6_PIPE_174	Z6_IL_1257	Z6_OF_2191	J10	171	0.015	Circular	3.25	-	32.5	45.6	59.5	76.9
Z6_PIPE_177	Z6_MH_2266	Z6_OF_2185	L12	255	0.015	Circular	1.50	-	1.0	2.1	3.8	6.0
Z6_PIPE_179	Z6_IL_396	Z6_MH_2223	G9	17	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_18	Z6_IL_1129	Z6_MH_1674	H8	76	0.015	Circular	2.50	-	19.0	27.1	38.7	56.0
Z6_PIPE_1857	Z6_IL_747	Z6_OF_1824	J9	56	0.024	Circular	0.67	-	1.7	2.2	2.8	3.8
Z6_PIPE_186	Z6_IL_609	Z6_IL_608	N13	45	0.015	Circular	1.00	-	0.6	1.1	1.8	3.3
Z6_PIPE_187	Z6_MH_1577	Z6_MH_1578	N13	202	0.015	Circular	1.00	-	2.2	3.9	6.3	9.6
Z6_PIPE_188	Z6_IL_225	Z6_MH_1578	N13	57	0.015	Circular	1.00	-	0.4	0.9	1.5	2.6
Z6_PIPE_189	Z6_MH_1578	Z6_MH_1579	N13	245	0.015	Circular	1.50	-	2.4	4.3	7.0	11.0
Z6_PIPE_190	Z6_IL_610	Z6_MH_1579	N13	15	0.015	Circular	1.25	-	0.6	1.2	2.2	3.8
Z6_PIPE_191	Z6_IL_611	Z6_IL_610	N13	37	0.015	Circular	1.00	-	0.6	1.2	2.2	3.8
Z6_PIPE_192	Z6_MH_1579	Z6_MH_1580	N13	95	0.015	Circular	1.50	-	2.9	5.4	9.1	14.6
Z6_PIPE_1929	Z6_IL_2289	Z6_OF_2197	J11	85	0.015	Circular	0.67	-	0.3	0.4	0.5	0.8
Z6_PIPE_193	Z6_MH_1581	Z6_OF_1917	N13	80	0.024	Circular	1.50	-	3.2	6.1	10.5	17.2
Z6_PIPE_194	Z6_MH_1580	Z6_MH_1581	N13	75	0.024	Circular	1.50	-	2.9	5.4	9.1	14.6
Z6_PIPE_1947	Z6_IL_2412	Z6_MH_1640	J11	107	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_195	Z6_IL_1006	Z6_IL_1479	L13	37	0.015	Circular	1.00	-	3.2	5.2	6.3	8.2
Z6_PIPE_1950	Z6_IL_626	Z6_IL_627	N12	35	0.015	Circular	1.00	-	0.4	0.9	1.8	3.0
Z6_PIPE_1951	Z6_IL_1307	Z6_IL_1309	G9	100	0.015	Circular	1.50	-	3.8	5.2	7.3	10.4
Z6_PIPE_1952	Z6_IL_1309	Z6_IL_1310	G9	49	0.015	Circular	1.50	-	3.8	5.2	7.3	10.4
Z6_PIPE_1953	Z6_IL_1310	Z6_OF_1970	G9	95	0.015	Circular	1.50	-	6.4	8.7	12.1	17.4
Z6_PIPE_1954	Z6_IL_1302	Z6_MH_1817	G9	17	0.024	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1955	Z6_IL_669	Z6_IL_668	O14	39	0.015	Circular	1.25	-	3.8	5.4	7.5	10.8
Z6_PIPE_1958	Z6_MH_2229	Z6_OF_1841	K10	43	0.015	Circular	4.00	-	56.9	82.1	113.3	157.0
Z6_PIPE_1959	Z6_MH_2252	Z6_MH_2253	J11	260	0.015	Horizontal Ellipse	3.00	3.50	26.7	45.8	68.8	99.2
Z6_PIPE_196	Z6_IL_612	Z6_IL_613	N12	25	0.015	Circular	1.00	-	0.6	1.4	2.5	4.2
Z6_PIPE_1960	Z6_IL_1005	Z6_IL_1478	K13	30	0.010	Circular	2.00	-	2.9	4.6	7.0	10.6
Z6_PIPE_1961	Z6_OF_2085	Z6_OF_2085	K13	4	0.015	Circular	2.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1962	Z6_IL_2271	Z6_IL_1246	J13	30	0.015	Circular	2.00	-	3.1	6.5	10.8	17.0
Z6_PIPE_1963	Z6_OF_2085	Z6_OF_2084	K13	5	0.015	Circular	2.00	-	2.9	4.6	7.0	10.6
Z6_PIPE_1964	Z6_MH_1800	Z6_MH_1788	K14	6	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1965	Z6_IL_556	Z6_MH_2276	P13	49	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1966	Z6_MH_2236	Z6_MH_2237	J10	29	0.015	Circular	1.50	-	6.0	8.4	11.8	16.9
Z6_PIPE_197	Z6_IL_613	Z6_OF_1915	N12	154	0.015	Circular	1.25	-	0.6	1.4	2.5	4.2
Z6_PIPE_1973	Z6_IL_290	Z6_MH_2223	G9	79	0.010	Circular	1.00	-	0.6	0.8	1.1	1.4
Z6_PIPE_1974	Z6_MH_1554	Z6_MH_1686	G9	108	0.015	Circular	1.50	-	1.6	2.1	2.7	3.6
Z6_PIPE_1975	Z6_IL_1494	Z6_MH_1667	K10	47	0.015	Circular	1.75	-	5.9	10.0	15.7	24.0
Z6_PIPE_1976	Z6_IL_1500	Z6_IL_1437	J10	153	0.015	Circular	1.50	-	1.2	1.6	2.0	2.7
Z6_PIPE_1977	Z6_IL_872	Z6_MH_1803	J10	6	0.015	Circular	1.75	-	7.7	10.1	13.3	16.2
Z6_PIPE_1978	Z6_MH_1803	Z6_IL_1503	J10	20	0.015	Circular	1.75	-	7.7	10.1	13.3	16.2
Z6_PIPE_1979	Z6_IL_1503	Z6_IL_1502	J10	21	0.015	Circular	1.75	-	8.0	10.6	14.0	17.3
Z6_PIPE_198	Z6_IL_614	Z6_MH_1582	O13	37	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_1980	Z6_IL_1167	Z6_IL_1255	K10	102	0.015	Circular	1.00	-	0.2	0.3	0.5	0.8
Z6_PIPE_1981	Z6_IL_1509	Z6_IL_1510	H10	137	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1982	Z6_CB_128	Z6_MH_2242	K10	80	0.024	Circular	1.00	-	0.0	0.0	0.1	0.2
Z6_PIPE_1983	Z6_IL_1087	Z6_IL_1495	K11	2	0.010	Circular	1.75	-	0.0	0.0	0.0	0.0
Z6_PIPE_1984	Z6_IL_804	Z6_IL_805	J11	252	0.015	Circular	2.50	-	20.4	33.7	50.4	65.9
Z6_PIPE_1985	Z6_MH_2253	Z6_MH_1665	J11	21	0.015	Horizontal Ellipse	3.00	3.50	30.0	52.5	78.4	113.1
Z6_PIPE_1986	Z6_IL_1296	Z6_IL_1295	J12	4	0.015	Circular	1.50	-	0.8	1.0	1.3	1.8
Z6_PIPE_1987	Z6_IL_1258	Z6_IL_1259	K12	21	0.015	Circular	2.00	-	5.6	7.8	10.3	12.7
Z6_PIPE_1989	Z6_IL_1204	Z6_IL_1162	L12	111	0.015	Circular	1.75	-	2.7	4.0	6.0	9.1
Z6_PIPE_199	Z6_IL_615	Z6_MH_1582	O13	24	0.015	Circular	1.00	-	0.3	0.5	0.9	1.5
Z6_PIPE_1990	Z6_MH_1697	Z6_MH_1698	N12	8	0.015	Circular	2.00	-	0.8	1.2	2.4	4.4
Z6_PIPE_1992	Z6_MH_2269	Z6_OF_2270	K12	46	0.015	Circular	2.00	-	1.5	3.1	6.0	11.1
Z6_PIPE_1993	Z6_MH_1610	Z6_MH_2272	M13	295	0.015	Circular	1.25	-	1.4	2.1	4.1	7.6
Z6_PIPE_1994	Z6_MH_2279	Z6_IL_1124	K14	36	0.015	Circular	5.00	-	23.9	47.7	102.7	225.9
Z6_PIPE_1995	Z6_MH_1797	Z6_IL_2352	K13	24	0.015	Circular	2.00	-	5.3	10.1	16.4	23.3
Z6_PIPE_1996	Z6_IL_1442	Z6_IL_1005	K13	1	0.010	Circular	2.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_1997	Z6_IL_1478	Z6_OF_2085	K13	21	0.010	Circular	2.00	-	2.9	4.6	7.0	10.6
Z6_PIPE_1998	Z6_IL_925	Z6_IL_1499	K12	1	0.015	Circular	1.50	-	2.1	4.5	8.2	13.5
Z6_PIPE_1999	Z6_MH_1633	Z6_MH_2252	J11	30	0.015	Horizontal Ellipse	3.00	3.50	25.8	43.4	65.2	94.2
Z6_PIPE_20	Z6_MH_1672	Z6_MH_1673	H8	145	0.015	Circular	2.50	-	14.7	20.4	28.6	40.2
Z6_PIPE_200	Z6_IL_616	Z6_MH_1582	O13	30	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_2000	Z6_IL_1235	Z6_OF_2045	O14	33	0.015	Circular	1.00	-	0.7	1.3	2.0	4.3
Z6_PIPE_2001	Z6_IL_1305	Z6_IL_1307	G9	146	0.015	Circular	1.50	-	3.8	5.2	7.3	10.4
Z6_PIPE_2002	Z6_IL_1510	Z6_IL_1508	H10	124	0.015	Circular	1.00	-	0.8	1.1	1.4	1.9
Z6_PIPE_2003	Z6_IL_1324	Z6_IL_1508	H10	30	0.015	Circular	1.00	-	0.4	0.6	0.8	1.1
Z6_PIPE_2004	Z6_MH_2259	Z6_MH_1631	N12	54	0.015	Circular	3.00	-	10.5	15.6	24.6	43.5
Z6_PIPE_2005	Z6_IL_2151	Z6_OF_2030	K10	47	0.015	Circular	3.25	-	14.2	19.3	23.5	29.5
Z6_PIPE_2006	Z6_IL_1381	Z6_IL_1194	K12	242	0.015	Circular	2.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_201	Z6_MH_1583	Z6_MH_1582	N13	88	0.015	Circular	1.50	-	3.3	5.8	9.3	14.7
Z6_PIPE_202	Z6_IL_617	Z6_MH_1583	N13	39	0.015	Circular	1.00	-	0.2	0.5	0.9	1.5
Z6_PIPE_203	Z6_MH_1584	Z6_MH_1583	N13	168	0.015	Circular	1.00	-	3.1	5.3	8.5	13.3
Z6_PIPE_204	Z6_IL_618	Z6_IL_619	O13	9	0.015	Circular	1.00	-	0.2	0.4	0.7	1.5
Z6_PIPE_205	Z6_IL_619	Z6_MH_1584	N13	17	0.015	Circular	1.00	-	0.2	0.4	0.7	1.4
Z6_PIPE_206	Z6_IL_620	Z6_MH_1584	N13	31	0.015	Circular	1.00	-	0.4	0.8	1.5	2.5
Z6_PIPE_207	Z6_IL_621	Z6_IL_620	N13	47	0.015	Circular	1.00	-	0.2	0.5	0.9	1.5
Z6_PIPE_208	Z6_IL_623	Z6_MH_1585	O13	44	0.015	Circular	1.00	-	0.3	0.6	1.0	1.7
Z6_PIPE_209	Z6_MH_1585	Z6_MH_1584	N13	180	0.015	Circular	1.00	-	2.6	4.2	6.5	10.0
Z6_PIPE_21	Z6_IL_1128	Z6_MH_1672	H8	15	0.010	Circular	1.00	-	0.3	0.4	0.6	0.8
Z6_PIPE_210	Z6_IL_624	Z6_IL_623	N13	26	0.015	Circular	1.00	-	0.3	0.6	1.0	1.7
Z6_PIPE_211	Z6_IL_622	Z6_IL_625	N13	57	0.015	Circular	1.00	-	0.8	1.3	2.0	3.2
Z6_PIPE_212	Z6_IL_625	Z6_MH_1585	O13	48	0.015	Circular	1.00	-	2.4	3.8	5.7	8.7
Z6_PIPE_214	Z6_IL_627	Z6_MH_1586	N12	35	0.015	Circular	1.00	-	0.4	0.9	1.8	3.0
Z6_PIPE_215	Z6_IL_628	Z6_MH_1586	N12	42	0.015	Circular	1.00	-	0.6	1.3	2.4	4.1
Z6_PIPE_216	Z6_MH_1586	Z6_MH_1587	N12	109	0.015	Circular	1.25	-	1.0	2.2	4.2	7.1
Z6_PIPE_217	Z6_IL_631	Z6_MH_1588	N13	12	0.015	Circular	1.00	-	0.3	0.4	0.6	1.0
Z6_PIPE_22	Z6_MH_1671	Z6_MH_1672	H8	148	0.015	Circular	2.50	-	14.4	20.0	28.0	39.4
Z6_PIPE_223	Z6_IL_907	Z6_CB_51	M11	31	0.015	Circular	1.00	-	0.5	0.8	1.8	2.5
Z6_PIPE_224	Z6_MH_1668	Z6_IL_1153	K10	245	0.015	Circular	4.00	-	56.9	81.9	112.8	155.6
Z6_PIPE_225	Z6_MH_1669	Z6_MH_1668	K10	28	0.015	Circular	4.00	-	56.9	81.9	112.8	155.6
Z6_PIPE_227	Z6_MH_1666	Z6_MH_1669	K10	162	0.015	Circular	4.00	-	54.2	77.9	107.2	148.3
Z6_PIPE_228	Z6_SGIL_2125	Z6_MH_1666	K10	8	0.010	Circular	2.00	-	6.9	11.5	18.0	27.3
Z6_PIPE_229	Z6_IL_1116	Z6_SGIL_2125	K10	76	0.015	Circular	1.50	-	1.1	1.4	1.7	2.2
Z6_PIPE_23	Z6_IL_1127	Z6_MH_1671	H8	15	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_231	Z6_IL_1094	Z6_IL_1093	K10	123	0.015	Circular	1.50	-	0.7	1.5	2.4	3.6
Z6_PIPE_232	Z6_IL_1092	Z6_IL_1093	K10	39	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_233	Z6_MH_1667	Z6_SGIL_2125	K10	207	0.010	Circular	2.00	-	6.5	11.0	17.3	26.4
Z6_PIPE_234	Z6_IL_1153	Z6_MH_2229	K10	515	0.015	Circular	4.00	-	56.9	82.1	113.3	157.0
Z6_PIPE_235	Z6_IL_1091	Z6_IL_1090	K10	37	0.010	Circular	1.25	-	0.7	1.2	2.0	3.0
Z6_PIPE_236	Z6_IL_1118	Z6_IL_1494	L10	39	0.015	Circular	1.75	-	5.0	8.8	14.0	21.6
Z6_PIPE_237	Z6_IL_1090	Z6_IL_1118	L10	210	0.015	Circular	1.50	-	2.3	3.8	5.9	8.7
Z6_PIPE_238	Z6_IL_1093	Z6_IL_1090	K10	135	0.015	Circular	1.50	-	0.7	1.5	2.4	3.6
Z6_PIPE_239	Z6_IL_1119	Z6_IL_1494	K10	66	0.010	Circular	1.25	-	1.0	1.5	2.2	3.1
Z6_PIPE_24	Z6_MH_1676	Z6_MH_1671	H9	223	0.015	Circular	2.50	-	14.4	20.0	28.0	39.4
Z6_PIPE_240	Z6_IL_1117	Z6_MH_1667	K10	47	0.015	Circular	1.00	-	1.0	1.6	2.3	3.5
Z6_PIPE_241	Z6_IL_868	Z6_IL_870	J10	70	0.015	Circular	1.00	-	1.3	1.9	2.7	4.1
Z6_PIPE_242	Z6_IL_2376	Z6_IL_744	J10	46	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_243	Z6_IL_893	Z6_OF_2024	K9	25	0.010	Circular	1.00	-	4.4	6.6	9.8	13.0
Z6_PIPE_244	Z6_SGIL_2115	Z6_OF_1994	K9	64	0.024	Parabolic	1.50	2.00	6.4	8.0	10.0	12.8
Z6_PIPE_245	Z6_MH_1733	Z6_MH_1728	L10	533	0.015	Circular	1.00	-	2.2	2.5	2.8	3.4
Z6_PIPE_246	Z6_IL_1095	Z6_IL_1094	K10	43	0.024	Circular	1.25	-	0.7	1.5	2.4	3.6

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_247	Z6_IL_2154	Z6_MH_1666	K10	24	0.015	Rectangular	5.00	5.00	48.9	68.6	91.7	122.9
Z6_PIPE_248	Z6_MH_1685	Z6_IL_867	J9	355	0.015	Circular	1.25	-	3.1	3.9	3.9	3.7
Z6_PIPE_249	Z6_IL_866	Z6_IL_867	J9	155	0.015	Circular	1.00	-	2.1	3.0	3.0	3.3
Z6_PIPE_25	Z6_MH_1675	Z6_MH_1676	G9	15	0.015	Circular	1.00	-	1.3	1.8	2.6	3.9
Z6_PIPE_255	Z6_IL_2146	Z6_OF_5565	K11	159	0.015	Circular	2.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_258	Z6_IL_1304	Z6_IL_1305	G9	171	0.015	Circular	1.50	-	3.8	5.2	7.3	10.4
Z6_PIPE_26	Z6_IL_1130	Z6_MH_1675	G9	27	0.010	Circular	1.00	-	1.3	1.8	2.6	3.9
Z6_PIPE_263	Z6_IL_1351	Z6_OF_1941	H9	25	0.024	Circular	1.00	-	0.4	0.7	1.0	1.5
Z6_PIPE_266	Z6_CB_171	Z6_SGIL_2128	J9	121	0.015	Circular	1.00	-	0.6	0.7	0.9	1.3
Z6_PIPE_267	Z6_CB_170	Z6_CB_171	J9	27	0.015	Circular	1.00	-	0.6	0.7	0.9	1.3
Z6_PIPE_268	Z6_SGIL_2128	Z6_OF_1942	H9	67	0.024	Circular	1.25	-	2.3	2.9	3.7	4.9
Z6_PIPE_27	Z6_IL_1131	Z6_IL_1130	G9	34	0.015	Circular	1.00	-	1.3	1.8	2.6	3.9
Z6_PIPE_271	Z6_IL_942	Z6_OF_2065	L13	6	0.015	Circular	1.50	-	2.2	4.9	7.9	12.1
Z6_PIPE_272	Z6_MH_1631	Z6_MH_1587	N12	317	0.015	Circular	3.00	-	11.1	16.4	26.4	45.5
Z6_PIPE_273	Z6_MH_1587	Z6_MH_1692	N12	173	0.015	Circular	3.00	-	12.2	18.0	29.1	49.2
Z6_PIPE_274	Z6_MH_1692	Z6_OF_1919	N12	52	0.015	Circular	3.00	-	12.4	18.2	29.4	49.7
Z6_PIPE_275	Z6_MH_1770	Z6_MH_1658	N14	197	0.015	Circular	1.25	-	0.3	0.7	1.3	2.2
Z6_PIPE_276	Z6_MH_1771	Z6_OF_1923	O14	12	0.024	Circular	1.00	-	1.5	1.9	2.6	3.6
Z6_PIPE_277	Z6_IL_1369	Z6_OF_1949	O13	109	0.024	Circular	1.00	-	0.7	0.9	1.3	1.8
Z6_PIPE_278	Z6_IL_1370	Z6_OF_1950	O13	134	0.024	Circular	1.00	-	0.6	0.8	1.1	1.5
Z6_PIPE_279	Z6_IL_226	Z6_IL_227	N13	109	0.015	Circular	1.00	-	0.2	0.5	0.8	1.4
Z6_PIPE_28	Z6_IL_1132	Z6_MH_1676	H9	18	0.015	Circular	1.50	-	2.2	3.0	4.1	6.0
Z6_PIPE_280	Z6_IL_228	Z6_IL_227	N13	169	0.015	Circular	1.00	-	0.8	1.3	1.9	2.9
Z6_PIPE_283	Z6_IL_1098	Z6_OF_1862	K11	208	0.015	Circular	1.00	-	2.6	4.6	7.0	8.7
Z6_PIPE_284	Z6_IL_828	Z6_OF_1864	J11	23	0.015	Circular	1.33	-	2.9	3.8	4.9	6.6
Z6_PIPE_285	Z6_IL_829	Z6_OF_1865	J11	70	0.024	Circular	1.00	-	0.9	1.1	1.4	1.8
Z6_PIPE_286	Z6_IL_845	Z6_OF_1866	J9	128	0.015	Circular	2.00	-	2.2	3.0	4.1	5.8
Z6_PIPE_289	Z6_IL_838	Z6_IL_1165	J11	30	0.010	Circular	1.00	-	1.4	1.8	2.3	3.1
Z6_PIPE_290	Z6_IL_1165	Z6_MH_1703	J11	16	0.010	Circular	1.50	-	2.3	2.9	3.8	5.1
Z6_PIPE_291	Z6_IL_839	Z6_IL_840	J10	31	0.015	Circular	1.00	-	3.0	4.0	5.3	7.4
Z6_PIPE_292	Z6_IL_840	Z6_OF_2213	J10	20	0.015	Circular	2.00	-	8.6	12.1	16.6	23.8
Z6_PIPE_294	Z6_IL_1184	Z6_OF_2194	J10	25	0.015	Circular	1.50	-	3.8	5.2	6.9	9.7
Z6_PIPE_295	Z6_IL_1186	Z6_IL_1185	J10	152	0.015	Circular	1.50	-	2.8	3.8	5.2	7.4
Z6_PIPE_296	Z6_IL_1185	Z6_IL_1184	J10	82	0.015	Circular	1.50	-	2.8	3.8	5.2	7.4
Z6_PIPE_30	Z6_MH_1547	Z6_OF_5559	K12	87	0.015	Circular	1.00	-	1.5	2.6	4.1	6.6
Z6_PIPE_301	Z6_CB_47	Z6_OF_1822	J9	193	0.015	Circular	1.50	-	0.9	1.2	1.8	2.6
Z6_PIPE_302	Z6_CB_90	Z6_IL_1156	J9	40	0.015	Circular	1.00	-	0.3	0.4	0.5	0.8
Z6_PIPE_303	Z6_IL_1156	Z6_IL_748	J9	33	0.010	Circular	1.00	-	0.3	0.4	0.5	0.8
Z6_PIPE_305	Z6_IL_1159	Z6_IL_893	K9	83	0.024	Circular	1.00	-	1.8	2.8	4.2	4.5
Z6_PIPE_307	Z6_IL_890	Z6_IL_889	K10	21	0.015	Circular	1.00	-	1.0	1.6	2.4	3.7
Z6_PIPE_31	Z6_IL_385	Z6_MH_1553	P13	25	0.010	Circular	1.50	-	0.7	1.0	1.4	2.0
Z6_PIPE_310	Z6_IL_735	Z6_IL_1177	K10	319	0.024	Circular	1.00	-	1.3	2.4	4.2	5.3
Z6_PIPE_312	Z6_CB_81	Z6_IL_735	K9	30	0.024	Circular	1.00	-	1.3	2.4	4.2	5.3
Z6_PIPE_313	Z6_IL_844	Z6_IL_845	J9	45	0.015	Circular	2.00	-	2.2	3.0	4.2	5.8
Z6_PIPE_317	Z6_IL_2157	Z6_OF_1846	J10	85	0.015	Circular	3.00	-	37.1	52.1	68.5	90.8
Z6_PIPE_318	Z6_IL_1106	Z6_IL_1107	H9	22	0.015	Circular	1.00	-	0.7	1.0	1.4	2.0
Z6_PIPE_319	Z6_IL_1107	Z6_OF_1957	H9	85	0.015	Circular	1.25	-	0.7	1.0	1.4	2.0
Z6_PIPE_322	Z6_IL_1111	Z6_IL_1110	G10	59	0.015	Circular	1.50	-	4.8	6.6	9.3	13.3
Z6_PIPE_323	Z6_IL_1110	Z6_IL_1109	G10	38	0.015	Circular	2.00	-	4.8	6.6	9.3	13.3
Z6_PIPE_325	Z6_IL_1109	Z6_OF_1986	H9	439	0.010	Circular	1.75	-	4.8	6.6	9.3	13.3
Z6_PIPE_330	Z6_IL_1191	Z6_CB_146	H9	10	0.015	Circular	1.00	-	2.1	2.9	4.1	5.9
Z6_PIPE_331	Z6_IL_1192	Z6_IL_1191	H9	23	0.015	Circular	1.00	-	2.1	2.9	4.1	5.9
Z6_PIPE_332	Z6_IL_1412	Z6_OF_2029	J10	16	0.015	Circular	1.00	-	0.1	0.2	0.2	0.3
Z6_PIPE_339	Z6_IL_1298	Z6_OF_1971	G9	33	0.015	Circular	0.50	-	0.5	0.6	0.8	1.0
Z6_PIPE_346	Z6_IL_739	Z6_MH_1626	H10	22	0.015	Circular	1.25	-	6.8	9.6	13.6	19.7
Z6_PIPE_347	Z6_IL_1146	Z6_IL_1145	H9	12	0.015	Circular	2.00	-	2.1	3.0	4.3	6.3
Z6_PIPE_348	Z6_IL_1325	Z6_IL_2351	K14	83	0.015	Circular	1.00	-	2.3	3.8	5.9	6.9
Z6_PIPE_351	Z6_IL_1168	Z6_IL_1169	J10	52	0.015	Circular	1.50	-	2.0	2.6	3.5	4.8
Z6_PIPE_352	Z6_IL_1169	Z6_IL_1170	J10	22	0.015	Circular	1.83	-	2.2	3.0	4.0	5.6
Z6_PIPE_353	Z6_IL_1181	Z6_IL_1182	J10	15	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_354	Z6_IL_1182	Z6_MH_1702	J10	152	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_355	Z6_IL_1180	Z6_MH_1702	J10	5	0.015	Circular	1.00	-	1.3	1.8	2.5	3.6
Z6_PIPE_356	Z6_MH_1702	Z6_OF_1955	J10	141	0.015	Circular	1.83	-	3.3	4.5	6.2	8.8
Z6_PIPE_363	Z6_CB_123	Z6_MH_1701	K10	23	0.010	Circular	1.25	-	0.1	0.1	0.2	0.5
Z6_PIPE_364	Z6_MH_1701	Z6_IL_1173	K10	126	0.010	Circular	1.50	-	0.1	0.1	0.3	0.5
Z6_PIPE_365	Z6_CB_132	Z6_MH_2242	K10	67	0.015	Circular	1.00	-	0.7	1.0	1.4	2.0
Z6_PIPE_366	Z6_CB_121	Z6_IL_1172	K10	89	0.010	Circular	1.25	-	0.1	0.2	0.4	1.0
Z6_PIPE_367	Z6_CB_133	Z6_MH_2239	K10	57	0.015	Circular	1.00	-	0.1	0.1	0.3	0.7
Z6_PIPE_369	Z6_IL_2228	Z6_CB_137	K10	77	0.010	Circular	1.00	-	0.6	0.9	1.4	2.1
Z6_PIPE_370	Z6_CB_137	Z6_OF_1852	K10	13	0.024	Circular	1.50	-	0.6	0.9	1.4	2.1

*The term "NEW" in a Link ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_371	Z6_IL_2158	Z6_IL_944	J9	492	0.010	Circular	1.00	-	0.5	0.8	1.2	1.8
Z6_PIPE_373	Z6_IL_944	Z6_MH_1646	K9	56	0.024	Circular	1.50	-	0.5	0.8	1.2	1.8
Z6_PIPE_374	Z6_MH_1646	Z6_OF_1847	K9	50	0.024	Circular	1.50	-	0.5	0.8	1.2	1.8
Z6_PIPE_375	Z6_IL_2159	Z6_OF_1848	K9	219	0.024	Circular	1.00	-	0.2	0.4	0.5	0.8
Z6_PIPE_377	Z6_IL_2160	Z6_IL_2227	K9	195	0.024	Circular	1.50	-	0.3	0.4	0.6	1.0
Z6_PIPE_378	Z6_IL_1121	Z6_IL_1120	K10	58	0.010	Circular	1.00	-	1.6	2.3	4.0	6.5
Z6_PIPE_379	Z6_IL_1120	Z6_MH_2243	K10	106	0.024	Circular	1.25	-	1.6	2.3	4.0	6.5
Z6_PIPE_380	Z6_MH_2243	Z6_OF_1855	L10	88	0.024	Circular	1.50	-	1.6	2.3	4.0	6.5
Z6_PIPE_381	Z6_IL_1122	Z6_IL_1114	L10	46	0.010	Circular	1.00	-	3.5	6.8	10.2	13.3
Z6_PIPE_383	Z6_CB_125	Z6_IL_1174	K10	152	0.010	Circular	1.25	-	0.7	1.0	1.5	2.4
Z6_PIPE_384	Z6_IL_1173	Z6_OF_1857	K10	235	0.010	Circular	2.00	-	0.2	0.3	0.5	1.3
Z6_PIPE_387	Z6_IL_1174	Z6_OF_1858	K10	247	0.010	Circular	1.75	-	0.7	1.0	1.8	3.0
Z6_PIPE_388	Z6_CB_136	Z6_MH_2229	K10	45	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_390	Z6_IL_1411	Z6_OF_1859	K10	218	0.015	Circular	1.25	-	0.4	0.7	1.1	2.7
Z6_PIPE_392	Z6_IL_1114	Z6_OF_1856	L10	174	0.010	Circular	1.25	-	3.5	6.8	10.2	13.3
Z6_PIPE_393	Z6_IL_1177	Z6_OF_1849	K10	93	0.024	Circular	1.50	-	1.6	2.8	4.8	6.6
Z6_PIPE_396	Z6_IL_896	Z6_OF_1821	J9	307	0.010	Circular	1.00	-	2.9	4.3	6.2	9.3
Z6_PIPE_397	Z6_CB_91	Z6_OF_1823	J9	146	0.015	Circular	1.00	-	0.8	1.2	1.7	2.5
Z6_PIPE_398	Z6_IL_885	Z6_OF_2028	K9	74	0.015	Circular	1.00	-	1.0	1.5	2.3	3.5
Z6_PIPE_400	Z6_MH_1804	Z6_CB_74	K11	60	0.010	Circular	2.00	-	3.9	5.2	6.9	9.3
Z6_PIPE_401	Z6_IL_1061	Z6_MH_1804	K11	2	0.010	Circular	1.25	-	3.9	5.2	6.9	9.3
Z6_PIPE_402	Z6_IL_1171	Z6_IL_1061	K11	42	0.010	Circular	1.25	-	3.9	5.2	6.9	9.3
Z6_PIPE_404	Z6_IL_955	Z6_IL_954	J11	108	0.015	Circular	2.00	-	1.2	1.8	2.7	4.0
Z6_PIPE_405	Z6_IL_1099	Z6_IL_1098	K11	30	0.015	Circular	1.00	-	2.6	4.6	7.0	8.7
Z6_PIPE_406	Z6_IL_1178	Z6_IL_1179	J11	35	0.015	Circular	1.00	-	0.4	0.6	0.8	1.2
Z6_PIPE_407	Z6_IL_1179	Z6_OF_1861	J11	41	0.015	Circular	1.25	-	0.4	0.6	0.8	1.2
Z6_PIPE_408	Z6_IL_732	Z6_MH_1617	L12	28	0.015	Circular	1.50	-	0.3	0.5	0.9	1.7
Z6_PIPE_41	Z6_MH_1677	Z6_MH_1676	G9	165	0.015	Circular	3.00	-	11.1	15.3	21.4	29.8
Z6_PIPE_410	Z6_IL_2170	Z6_IL_985	M12	68	0.015	Circular	2.00	-	0.2	0.3	0.5	0.8
Z6_PIPE_411	Z6_IL_985	Z6_MH_1659	M12	78	0.015	Circular	2.00	-	0.2	0.3	0.5	0.8
Z6_PIPE_412	Z6_MH_1630	Z6_MH_1613	P14	394	0.015	Circular	1.50	-	1.2	1.8	2.8	5.5
Z6_PIPE_413	Z6_MH_1612	Z6_OF_1946	P14	73	0.010	Circular	2.25	-	4.9	7.6	12.0	18.5
Z6_PIPE_414	Z6_IL_1057	Z6_IL_770	P14	111	0.015	Circular	1.00	-	0.4	0.5	0.8	1.7
Z6_PIPE_415	Z6_IL_770	Z6_MH_1611	P14	69	0.015	Circular	1.25	-	1.3	2.0	3.0	5.9
Z6_PIPE_416	Z6_MH_1611	Z6_MH_1605	P14	379	0.015	Circular	2.00	-	2.4	3.7	5.5	10.7
Z6_PIPE_417	Z6_IL_1058	Z6_IL_700	P13	96	0.015	Circular	1.00	-	1.0	1.5	2.3	4.4
Z6_PIPE_418	Z6_IL_700	Z6_MH_1605	P13	106	0.015	Circular	1.00	-	1.2	1.7	2.7	5.1
Z6_PIPE_419	Z6_MH_1605	Z6_MH_1604	P13	489	0.015	Circular	2.00	-	3.6	5.4	8.2	15.8
Z6_PIPE_42	Z6_IL_1139	Z6_MH_1677	G9	16	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_420	Z6_MH_1604	Z6_IL_1210	P13	26	0.015	Circular	2.00	-	5.4	8.0	12.5	23.7
Z6_PIPE_421	Z6_IL_1210	Z6_MH_2277	P13	40	0.015	Circular	2.00	-	5.4	8.0	12.5	23.7
Z6_PIPE_425	Z6_MH_1552	Z6_MH_1551	L10	191	0.015	Circular	1.00	-	2.5	2.8	3.3	4.0
Z6_PIPE_426	Z6_MH_1696	Z6_MH_1552	K11	174	0.015	Circular	1.00	-	2.9	3.4	4.1	5.1
Z6_PIPE_428	Z6_IL_2148	Z6_OF_2208	J10	51	0.015	Circular	1.50	-	3.8	5.2	6.9	9.7
Z6_PIPE_429	Z6_MH_2232	Z6_IL_840	J10	267	0.015	Circular	2.00	-	3.8	5.2	6.9	9.7
Z6_PIPE_43	Z6_IL_1138	Z6_MH_1677	G9	19	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_430	Z6_IL_2233	Z6_MH_2232	J10	79	0.015	Circular	2.00	-	3.8	5.2	6.9	9.7
Z6_PIPE_431	Z6_IL_834	Z6_IL_833	J10	76	0.010	Circular	1.25	-	5.2	7.2	10.1	11.0
Z6_PIPE_432	Z6_IL_833	Z6_IL_819	J10	65	0.010	Circular	1.00	-	5.2	6.9	7.1	7.7
Z6_PIPE_433	Z6_IL_819	Z6_IL_820	J10	89	0.010	Circular	1.00	-	5.2	6.7	7.1	7.7
Z6_PIPE_434	Z6_IL_820	Z6_IL_821	J10	98	0.010	Circular	1.00	-	5.2	6.7	7.1	7.7
Z6_PIPE_435	Z6_IL_821	Z6_IL_824	J10	122	0.010	Circular	1.25	-	6.3	8.3	9.0	10.1
Z6_PIPE_438	Z6_IL_832	Z6_IL_824	J11	59	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_439	Z6_IL_824	Z6_IL_825	J11	184	0.010	Circular	1.50	-	6.3	8.2	9.0	10.1
Z6_PIPE_440	Z6_IL_831	Z6_IL_825	J11	41	0.015	Circular	1.00	-	0.7	0.8	1.1	1.4
Z6_PIPE_441	Z6_IL_825	Z6_IL_826	J11	190	0.010	Circular	2.00	-	6.6	8.8	10.0	11.4
Z6_PIPE_442	Z6_IL_826	Z6_IL_827	J11	83	0.010	Circular	2.00	-	6.6	8.8	10.0	11.4
Z6_PIPE_443	Z6_IL_827	Z6_IL_830	J11	41	0.015	Circular	2.00	-	8.7	11.6	13.8	16.5
Z6_PIPE_445	Z6_CB_143	Z6_OF_1871	K11	135	0.024	Circular	1.00	-	0.8	0.9	1.2	1.5
Z6_PIPE_447	Z6_IL_830	Z6_OF_1870	J11	61	0.015	Circular	2.00	-	8.7	11.6	13.8	16.5
Z6_PIPE_448	Z6_MH_1662	Z6_MH_1705	K11	143	0.010	Circular	2.00	-	4.3	5.7	7.7	10.5
Z6_PIPE_449	Z6_MH_1705	Z6_MH_1704	K11	25	0.010	Circular	2.00	-	4.8	6.4	8.6	11.8
Z6_PIPE_45	Z6_MH_1678	Z6_MH_1677	G9	225	0.015	Circular	3.00	-	11.1	15.4	21.4	29.8
Z6_PIPE_450	Z6_MH_1704	Z6_SGIL_2123	L11	42	0.010	Circular	2.00	-	30.0	30.0	30.0	30.0
Z6_PIPE_451	Z6_SGIL_2123	Z6_OF_1868	K11	52	0.010	Circular	2.00	-	38.6	38.6	38.6	38.6
Z6_PIPE_452	Z6_IL_1089	Z6_IL_1088	K11	39	0.010	Circular	2.00	-	4.3	5.7	7.7	10.5
Z6_PIPE_453	Z6_IL_1088	Z6_MH_1662	K11	40	0.010	Circular	2.00	-	4.3	5.7	7.7	10.5
Z6_PIPE_454	Z6_IL_1495	Z6_MH_1662	K11	12	0.010	Circular	1.75	-	0.0	0.0	0.0	0.0
Z6_PIPE_455	Z6_SGIL_2121	Z6_OF_1873	L10	13	0.024	Circular	1.00	-	6.5	7.4	8.8	11.0
Z6_PIPE_456	Z6_CB_76	Z6_OF_1872	L10	108	0.024	Circular	1.00	-	0.5	0.7	0.8	1.1

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_459	Z6_IL_1402	Z6_IL_1418	K12	62	0.015	Circular	1.50	-	2.7	5.6	10.2	17.1
Z6_PIPE_46	Z6_MH_1679	Z6_MH_1678	G9	45	0.015	Circular	3.75	-	10.7	14.9	20.8	28.8
Z6_PIPE_460	Z6_IL_1205	Z6_OF_2019	N12	209	0.015	Circular	1.50	-	0.8	1.1	2.2	4.0
Z6_PIPE_461	Z6_IL_1086	Z6_MH_1694	L11	16	0.015	Circular	1.50	-	7.7	5.1	6.7	8.4
Z6_PIPE_462	Z6_MH_1694	Z6_MH_1733	L11	109	0.015	Circular	1.00	-	5.9	3.2	6.1	5.3
Z6_PIPE_463	Z6_IL_1085	Z6_IL_1084	L11	20	0.015	Circular	1.00	-	1.8	2.4	3.7	5.4
Z6_PIPE_464	Z6_IL_889	Z6_IL_887	K10	167	0.015	Circular	1.00	-	1.0	1.6	2.4	3.7
Z6_PIPE_465	Z6_IL_887	Z6_OF_2025	K10	102	0.015	Circular	1.00	-	1.7	2.7	4.0	6.2
Z6_PIPE_47	Z6_IL_1140	Z6_MH_1678	G9	8	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_476	Z6_IL_1157	Z6_IL_1158	J10	242	0.015	Circular	1.50	-	1.6	2.0	2.5	3.3
Z6_PIPE_477	Z6_IL_1158	Z6_IL_738	J10	153	0.010	Circular	1.50	-	2.6	3.4	4.5	6.1
Z6_PIPE_479	Z6_CB_33	Z6_CB_108	J10	42	0.024	Circular	1.00	-	1.3	1.8	2.5	3.6
Z6_PIPE_48	Z6_SGIL_2098	Z6_MH_1556	K12	15	0.015	Circular	1.50	-	7.0	10.3	14.6	20.7
Z6_PIPE_482	Z6_IL_736	Z6_SGIL_2110	J10	21	0.010	Circular	1.00	-	0.8	1.2	1.7	2.4
Z6_PIPE_483	Z6_CB_107	Z6_SGIL_2110	J10	87	0.010	Circular	1.00	-	0.5	0.6	0.9	1.2
Z6_PIPE_484	Z6_SGIL_2110	Z6_CB_33	J10	93	0.010	Circular	1.00	-	1.3	1.8	2.5	3.6
Z6_PIPE_49	Z6_MH_1731	Z6_MH_1716	K13	121	0.010	Circular	1.50	-	2.5	5.8	10.1	16.1
Z6_PIPE_495	Z6_IL_993	Z6_OF_2175	M12	33	0.010	Circular	1.50	-	0.2	0.4	0.7	1.2
Z6_PIPE_496	Z6_IL_2141	Z6_OF_2203	M12	29	0.024	Circular	1.83	-	10.8	15.8	29.8	42.9
Z6_PIPE_497	Z6_IL_2142	Z6_MH_1707	M12	79	0.015	Circular	3.00	-	11.0	16.1	27.3	43.6
Z6_PIPE_498	Z6_IL_1056	Z6_MH_1660	M12	24	0.015	Circular	1.50	-	0.4	0.8	1.5	2.5
Z6_PIPE_499	Z6_IL_987	Z6_MH_1661	M12	22	0.015	Circular	1.00	-	0.1	0.3	0.6	1.0
Z6_PIPE_50	Z6_MH_1717	Z6_MH_1731	K13	131	0.010	Circular	1.50	-	2.5	5.8	10.1	16.1
Z6_PIPE_500	Z6_IL_986	Z6_MH_1661	M12	21	0.015	Circular	1.00	-	0.2	0.5	0.9	1.5
Z6_PIPE_501	Z6_CB_149	Z6_IL_1202	M12	45	0.015	Circular	1.00	-	0.2	0.5	0.9	1.6
Z6_PIPE_502	Z6_IL_1202	Z6_OF_2077	M12	897	0.015	Circular	2.00	-	3.6	5.3	7.7	11.7
Z6_PIPE_503	Z6_CB_150	Z6_IL_965	M12	42	0.015	Circular	1.00	-	0.2	0.4	0.7	1.4
Z6_PIPE_504	Z6_IL_964	Z6_IL_1202	M12	207	0.015	Circular	2.00	-	3.4	5.0	7.3	11.1
Z6_PIPE_505	Z6_IL_965	Z6_IL_964	M12	42	0.015	Circular	2.00	-	3.4	5.0	7.3	11.1
Z6_PIPE_506	Z6_IL_1203	Z6_IL_963	M12	41	0.015	Circular	1.00	-	0.3	0.5	1.0	1.8
Z6_PIPE_507	Z6_IL_963	Z6_IL_965	M12	273	0.015	Circular	2.00	-	3.2	4.7	6.9	10.5
Z6_PIPE_508	Z6_IL_962	Z6_IL_961	L12	31	0.015	Circular	1.00	-	2.1	3.1	4.6	8.1
Z6_PIPE_509	Z6_IL_960	Z6_IL_1204	L12	121	0.015	Circular	1.75	-	2.7	4.0	6.0	9.1
Z6_PIPE_51	Z6_IL_295	Z6_OF_1939	O13	91	0.015	Circular	1.00	-	1.6	2.4	3.3	4.4
Z6_PIPE_510	Z6_IL_1162	Z6_IL_963	L12	272	0.015	Circular	1.75	-	3.0	4.4	6.4	9.8
Z6_PIPE_511	Z6_IL_908	Z6_IL_960	L12	142	0.015	Circular	1.00	-	0.5	0.8	1.4	1.5
Z6_PIPE_512	Z6_IL_2257	Z6_IL_960	L12	91	0.024	Circular	1.00	-	0.1	0.1	0.3	0.6
Z6_PIPE_513	Z6_IL_1161	Z6_IL_1162	L12	31	0.015	Circular	1.00	-	0.2	0.3	0.7	1.2
Z6_PIPE_516	Z6_CB_152	Z6_CB_153	M12	35	0.015	Circular	1.00	-	0.9	1.3	2.1	3.9
Z6_PIPE_517	Z6_CB_153	Z6_OF_2016	M12	70	0.015	Circular	1.00	-	1.2	1.7	2.7	4.9
Z6_PIPE_518	Z6_IL_1207	Z6_IL_1206	L12	40	0.015	Circular	1.00	-	0.2	0.4	0.7	1.3
Z6_PIPE_519	Z6_IL_1206	Z6_OF_2015	L12	192	0.015	Circular	1.00	-	0.3	0.6	1.1	2.0
Z6_PIPE_520	Z6_IL_966	Z6_IL_967	L12	17	0.015	Circular	1.00	-	0.3	0.6	1.2	2.1
Z6_PIPE_521	Z6_IL_967	Z6_OF_2010	L12	256	0.015	Circular	1.00	-	0.3	0.6	1.2	2.1
Z6_PIPE_522	Z6_IL_1406	Z6_OF_1885	M11	267	0.010	Circular	2.00	-	0.9	1.3	2.4	4.4
Z6_PIPE_526	Z6_IL_772	Z6_MH_1630	P14	76	0.015	Circular	1.00	-	0.8	1.2	2.0	3.8
Z6_PIPE_527	Z6_IL_771	Z6_MH_1630	P14	43	0.015	Circular	1.00	-	0.4	0.5	0.9	1.7
Z6_PIPE_528	Z6_IL_724	Z6_IL_723	P14	72	0.015	Circular	1.00	-	1.0	1.5	2.3	4.5
Z6_PIPE_529	Z6_MH_1613	Z6_MH_1612	P14	87	0.015	Circular	2.00	-	4.9	7.5	11.9	18.1
Z6_PIPE_530	Z6_IL_723	Z6_MH_1611	P14	297	0.015	Circular	1.50	-	1.1	1.7	2.5	4.9
Z6_PIPE_531	Z6_MH_1558	Z6_IL_443	H10	121	0.015	Circular	1.75	-	4.0	5.6	7.8	11.3
Z6_PIPE_532	Z6_IL_443	Z6_MH_1625	H10	24	0.015	Circular	2.00	-	6.6	9.1	12.6	18.1
Z6_PIPE_533	Z6_IL_453	Z6_IL_456	H9	25	0.010	Circular	1.50	-	3.8	5.0	6.8	9.5
Z6_PIPE_534	Z6_IL_973	Z6_IL_972	L12	33	0.015	Circular	1.00	-	0.2	0.4	0.7	1.3
Z6_PIPE_535	Z6_IL_975	Z6_IL_974	L12	23	0.015	Circular	1.00	-	0.1	0.2	0.4	0.7
Z6_PIPE_536	Z6_IL_974	Z6_OF_2174	L12	72	0.015	Circular	1.00	-	0.1	0.2	0.4	0.7
Z6_PIPE_537	Z6_IL_970	Z6_IL_971	K12	23	0.015	Circular	1.50	-	3.5	5.7	8.4	12.3
Z6_PIPE_538	Z6_IL_971	Z6_OF_2007	K12	158	0.015	Circular	1.50	-	3.5	5.7	8.4	12.3
Z6_PIPE_539	Z6_IL_1208	Z6_IL_1209	L12	45	0.010	Circular	1.00	-	0.3	0.7	1.1	1.7
Z6_PIPE_540	Z6_IL_1209	Z6_CB_154	L12	12	0.010	Circular	1.00	-	0.3	0.7	1.1	1.7
Z6_PIPE_541	Z6_CB_154	Z6_OF_2008	L12	63	0.010	Circular	1.00	-	0.3	0.7	1.1	1.7
Z6_PIPE_542	Z6_IL_983	Z6_IL_982	L12	24	0.015	Circular	1.25	-	0.2	0.4	0.7	1.2
Z6_PIPE_543	Z6_IL_2014	Z6_IL_982	L12	79	0.015	Circular	1.50	-	0.2	0.4	0.6	1.1
Z6_PIPE_545	Z6_IL_979	Z6_MH_1650	L12	23	0.015	Circular	1.50	-	0.2	0.2	0.6	1.3
Z6_PIPE_547	Z6_IL_2009	Z6_MH_1650	L12	101	0.015	Circular	1.50	-	0.6	0.9	1.3	2.0
Z6_PIPE_548	Z6_IL_980	Z6_MH_1651	L12	21	0.015	Circular	1.50	-	0.5	0.8	1.9	3.9
Z6_PIPE_549	Z6_MH_1651	Z6_MH_1652	L12	275	0.015	Circular	3.00	-	17.0	25.1	32.6	42.3
Z6_PIPE_55	Z6_IL_1170	Z6_MH_1702	J10	334	0.015	Circular	1.83	-	2.2	3.0	4.0	5.6
Z6_PIPE_550	Z6_IL_2256	Z6_MH_1652	L12	71	0.015	Circular	1.50	-	3.7	6.6	16.3	18.7
Z6_PIPE_551	Z6_IL_981	Z6_MH_1653	L12	21	0.015	Circular	2.00	-	0.6	1.0	2.1	3.9

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_552	Z6_IL_984	Z6_MH_1654	L12	31	0.015	Circular	2.50	-	11.6	16.2	28.4	47.4
Z6_PIPE_553	Z6_IL_976	Z6_IL_1199	L12	64	0.015	Circular	2.00	-	0.4	0.9	1.7	3.1
Z6_PIPE_554	Z6_IL_1400	Z6_OF_1888	K11	73	0.024	Circular	1.00	-	6.9	8.4	9.4	11.0
Z6_PIPE_555	Z6_IL_1059	Z6_IL_699	P14	76	0.015	Circular	1.25	-	0.4	0.6	1.0	1.7
Z6_PIPE_557	Z6_IL_1211	Z6_MH_2247	K11	7	0.015	Circular	1.50	-	0.6	0.8	1.1	1.5
Z6_PIPE_558	Z6_IL_701	Z6_IL_702	P13	75	0.015	Circular	1.00	-	0.2	0.4	0.7	1.3
Z6_PIPE_559	Z6_IL_702	Z6_MH_1604	P13	57	0.015	Circular	1.25	-	0.8	1.3	2.5	4.4
Z6_PIPE_56	Z6_MH_2234	Z6_IL_1186	J10	694	0.015	Circular	1.25	-	0.8	0.9	1.0	1.2
Z6_PIPE_560	Z6_IL_699	Z6_MH_1604	O14	260	0.015	Circular	1.25	-	1.0	1.4	2.5	4.4
Z6_PIPE_561	Z6_IL_990	Z6_MH_1655	O13	46	0.010	Circular	1.00	-	0.6	0.8	1.1	1.7
Z6_PIPE_562	Z6_IL_2275	Z6_MH_1655	O13	132	0.015	Circular	3.00	-	17.7	28.8	45.3	71.2
Z6_PIPE_563	Z6_IL_752	Z6_MH_1656	O14	6	0.010	Circular	1.00	-	0.2	0.4	0.6	0.9
Z6_PIPE_564	Z6_IL_997	Z6_IL_999	K12	75	0.015	Circular	1.00	-	1.1	2.4	3.0	3.2
Z6_PIPE_565	Z6_IL_999	Z6_IL_998	K12	76	0.015	Circular	1.25	-	1.6	2.8	3.4	3.8
Z6_PIPE_5694	Z6_MH_1811	Z6_MH_1810	H8	3	0.015	Circular	1.00	-	0.0	0.0	0.0	0.4
Z6_PIPE_5695	Z6_MH_1707	Z6_MH_1647	M12	58	0.010	Circular	4.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_5696	Z6_MH_1647	Z6_MH_1648	M12	9	0.010	Circular	4.00	-	0.0	0.0	0.0	0.1
Z6_PIPE_5697	Z6_IL_961	Z6_IL_960	L12	44	0.015	Circular	1.75	-	2.2	3.2	4.7	8.4
Z6_PIPE_5698	Z6_MH_1661	Z6_MH_1707	M12	130	0.010	Circular	4.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_5711	Z6_MH_2272	Z6_OF_5576	M13	190	0.015	Circular	1.50	-	0.0	0.0	2.0	7.5
Z6_PIPE_5712	Z6_MH_1640	Z6_MH_1709	J11	57	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z6_PIPE_578	Z6_IL_1199	Z6_IL_981	L12	160	0.015	Circular	2.00	-	0.4	0.9	1.7	3.1
Z6_PIPE_579	Z6_IL_674	Z6_OF_1860	N14	247	0.015	Circular	1.00	-	0.9	1.2	1.6	2.3
Z6_PIPE_58	Z6_IL_982	Z6_MH_1654	L12	425	0.015	Circular	3.00	-	20.0	31.5	37.8	46.8
Z6_PIPE_580	Z6_IL_675	Z6_OF_1894	O14	139	0.015	Circular	1.00	-	0.3	0.5	0.6	0.9
Z6_PIPE_581	Z6_MH_1628	Z6_MH_1619	N14	257	0.015	Circular	1.50	-	0.8	1.5	3.3	6.3
Z6_PIPE_582	Z6_IL_767	Z6_IL_766	N14	33	0.015	Circular	1.00	-	0.2	0.5	1.0	1.9
Z6_PIPE_583	Z6_MH_1629	Z6_MH_1628	N14	204	0.015	Circular	1.25	-	0.8	1.5	3.3	6.3
Z6_PIPE_584	Z6_IL_766	Z6_MH_1629	N14	34	0.015	Circular	1.00	-	0.8	1.5	3.3	6.3
Z6_PIPE_585	Z6_MH_1627	Z6_MH_1618	N14	187	0.015	Circular	2.00	-	0.3	0.7	1.3	2.3
Z6_PIPE_586	Z6_IL_733	Z6_OF_1828	N14	32	0.015	Circular	2.00	-	1.1	1.9	3.9	7.3
Z6_PIPE_587	Z6_MH_1618	Z6_IL_733	N14	24	0.015	Circular	1.75	-	1.1	1.9	3.9	7.3
Z6_PIPE_588	Z6_IL_758	Z6_OF_1827	O13	44	0.015	Circular	1.00	-	1.3	2.0	3.1	4.8
Z6_PIPE_589	Z6_MH_1619	Z6_IL_708	N14	91	0.015	Circular	1.50	-	1.7	3.5	7.1	12.4
Z6_PIPE_59	Z6_MH_1660	Z6_MH_1661	M12	83	0.015	Circular	4.00	-	26.6	44.6	68.7	97.7
Z6_PIPE_590	Z6_IL_708	Z6_IL_709	N14	44	0.015	Circular	1.50	-	1.7	3.5	7.1	10.5
Z6_PIPE_591	Z6_IL_709	Z6_MH_1608	N14	130	0.015	Circular	1.50	-	2.1	4.4	8.4	12.2
Z6_PIPE_592	Z6_MH_1608	Z6_MH_1609	N14	90	0.015	Circular	1.50	-	2.0	4.4	8.4	12.2
Z6_PIPE_593	Z6_MH_1609	Z6_IL_710	N14	59	0.015	Circular	1.50	-	2.7	5.8	10.5	15.2
Z6_PIPE_594	Z6_IL_1048	Z6_IL_1053	N13	209	0.015	Circular	1.75	-	1.0	1.5	3.0	6.2
Z6_PIPE_595	Z6_MH_1658	Z6_IL_1048	N14	155	0.015	Circular	1.50	-	1.0	1.5	3.0	6.2
Z6_PIPE_596	Z6_IL_1049	Z6_MH_1658	N14	39	0.015	Circular	1.25	-	0.5	0.8	1.4	3.1
Z6_PIPE_597	Z6_IL_1050	Z6_MH_1770	N14	61	0.015	Circular	1.25	-	0.3	0.7	1.3	2.2
Z6_PIPE_598	Z6_IL_911	Z6_IL_910	N13	113	0.015	Circular	2.50	-	7.0	13.3	24.9	44.8
Z6_PIPE_599	Z6_IL_910	Z6_IL_1047	N13	191	0.015	Circular	3.00	-	8.9	16.9	30.5	53.5
Z6_PIPE_600	Z6_IL_1046	Z6_IL_1047	N13	35	0.015	Circular	1.00	-	0.4	0.6	1.0	1.6
Z6_PIPE_601	Z6_IL_909	Z6_IL_911	N13	266	0.015	Circular	2.50	-	6.7	12.5	23.7	42.9
Z6_PIPE_602	Z6_IL_1055	Z6_IL_909	N13	39	0.015	Circular	1.00	-	0.3	0.5	0.9	1.7
Z6_PIPE_603	Z6_IL_1238	Z6_IL_1239	L12	23	0.015	Circular	1.50	-	0.7	1.6	2.8	4.7
Z6_PIPE_604	Z6_IL_946	Z6_IL_947	M12	69	0.015	Circular	1.25	-	0.2	0.3	0.6	1.6
Z6_PIPE_605	Z6_IL_1387	Z6_IL_947	M12	48	0.015	Circular	1.00	-	0.2	0.2	0.5	1.2
Z6_PIPE_606	Z6_IL_947	Z6_OF_1899	M12	86	0.015	Circular	1.50	-	0.3	0.5	1.1	2.8
Z6_PIPE_607	Z6_IL_949	Z6_IL_948	N12	39	0.015	Circular	1.00	-	0.1	0.1	0.3	0.6
Z6_PIPE_61	Z6_IL_773	Z6_MH_2259	N12	26	0.015	Circular	1.00	-	0.1	0.2	0.2	0.4
Z6_PIPE_610	Z6_IL_923	Z6_IL_2273	L13	46	0.015	Circular	1.00	-	0.1	0.3	0.5	0.8
Z6_PIPE_611	Z6_IL_2273	Z6_IL_1023	L13	44	0.015	Circular	2.00	-	5.6	10.0	18.5	31.2
Z6_PIPE_612	Z6_IL_924	Z6_OF_2020	L13	254	0.015	Circular	1.00	-	0.4	0.9	1.6	2.7
Z6_PIPE_613	Z6_IL_1023	Z6_OF_1832	L13	295	0.015	Circular	2.00	-	5.9	10.6	19.7	33.1
Z6_PIPE_614	Z6_IL_1490	Z6_IL_918	L13	25	0.015	Circular	1.00	-	1.2	2.8	4.8	6.5
Z6_PIPE_615	Z6_IL_919	Z6_IL_1491	L13	30	0.015	Circular	1.00	-	0.5	1.1	2.0	3.2
Z6_PIPE_616	Z6_IL_1491	Z6_IL_1490	L13	251	0.015	Circular	1.00	-	0.5	1.1	2.0	3.8
Z6_PIPE_619	Z6_IL_1240	Z6_IL_942	L13	44	0.015	Circular	1.50	-	2.2	4.9	7.9	12.1
Z6_PIPE_62	Z6_IL_774	Z6_IL_773	N12	55	0.015	Circular	1.00	-	1.1	1.6	2.5	3.8
Z6_PIPE_620	Z6_IL_915	Z6_IL_914	L12	24	0.015	Circular	1.25	-	2.1	4.5	7.6	11.1
Z6_PIPE_621	Z6_IL_914	Z6_MH_1691	L12	16	0.015	Circular	1.25	-	2.7	5.6	9.7	14.4
Z6_PIPE_623	Z6_MH_1698	Z6_OF_2176	N12	30	0.015	Circular	2.00	-	0.8	1.2	2.4	4.4
Z6_PIPE_63	Z6_IL_775	Z6_MH_1632	N12	46	0.015	Circular	3.00	-	10.2	15.2	23.6	42.4
Z6_PIPE_638	Z6_IL_560	Z6_MH_1567	H10	28	0.015	Circular	2.50	-	0.3	0.4	0.5	0.7
Z6_PIPE_639	Z6_MH_1567	Z6_MH_1574	H10	139	0.015	Circular	3.50	-	23.5	32.5	45.1	64.9
Z6_PIPE_640	Z6_MH_1574	Z6_MH_1538	H10	102	0.015	Circular	3.00	-	23.5	32.5	45.1	64.9

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_641	Z6_IL_2165	Z6_MH_1539	J10	93	0.015	Circular	2.50	-	7.9	11.1	15.6	21.1
Z6_PIPE_642	Z6_MH_1538	Z6_MH_1540	H10	364	0.015	Circular	4.00	-	24.3	33.5	46.5	66.9
Z6_PIPE_643	Z6_IL_234	Z6_MH_1540	H10	139	0.015	Circular	2.25	-	4.9	6.8	9.3	13.8
Z6_PIPE_644	Z6_IL_2165	Z6_IL_234	H10	172	0.015	Circular	1.75	-	3.5	4.7	6.1	8.4
Z6_PIPE_645	Z6_IL_640	Z6_IL_641	K11	41	0.015	Circular	1.50	-	6.3	9.0	12.7	18.5
Z6_PIPE_646	Z6_IL_642	Z6_IL_640	K11	119	0.015	Circular	1.00	-	2.2	3.1	4.2	6.0
Z6_PIPE_647	Z6_IL_641	Z6_IL_1401	K11	145	0.015	Circular	1.25	-	6.9	10.0	14.0	16.4
Z6_PIPE_648	Z6_MH_1582	Z6_OF_1916	O13	142	0.015	Circular	1.50	-	3.4	6.1	10.0	15.9
Z6_PIPE_653	Z6_SGIL_2124	Z6_OF_2057	J11	156	0.015	Circular	1.00	-	0.5	0.7	1.0	1.4
Z6_PIPE_654	Z6_IL_988	Z6_MH_1769	L11	293	0.015	Circular	2.50	-	15.5	21.1	24.7	29.6
Z6_PIPE_655	Z6_MH_1769	Z6_MH_1650	L12	171	0.015	Circular	2.50	-	16.4	23.4	29.2	36.9
Z6_PIPE_656	Z6_MH_1617	Z6_MH_1659	M12	458	0.015	Circular	4.00	-	25.8	43.6	67.2	95.3
Z6_PIPE_657	Z6_MH_1659	Z6_MH_1660	M12	157	0.015	Circular	4.00	-	26.2	44.1	68.0	96.6
Z6_PIPE_658	Z6_MH_2272	Z6_OF_1945	M13	212	0.015	Circular	1.00	-	5.1	6.1	7.2	7.4
Z6_PIPE_660	Z6_IL_715	Z6_MH_2272	M13	173	0.015	Circular	1.00	-	2.5	4.1	6.3	8.7
Z6_PIPE_661	Z6_IL_920	Z6_MH_1691	L12	249	0.015	Circular	1.50	-	0.7	1.6	2.8	4.7
Z6_PIPE_662	Z6_IL_1239	Z6_IL_920	L12	136	0.015	Circular	1.50	-	0.7	1.6	2.8	4.7
Z6_PIPE_663	Z6_IL_1241	Z6_IL_943	L12	46	0.015	Circular	1.50	-	3.9	7.9	13.5	15.2
Z6_PIPE_664	Z6_MH_1691	Z6_IL_1488	L12	220	0.015	Circular	1.50	-	3.9	7.9	14.0	22.1
Z6_PIPE_665	Z6_IL_1489	Z6_IL_1016	L12	261	0.010	Circular	1.50	-	3.9	7.9	13.4	14.8
Z6_PIPE_666	Z6_MH_2267	Z6_MH_1691	L12	94	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z6_PIPE_667	Z6_IL_918	Z6_IL_927	L13	215	0.024	Circular	1.00	-	1.2	2.8	4.8	6.1
Z6_PIPE_668	Z6_IL_927	Z6_IL_926	L13	32	0.024	Circular	1.00	-	1.4	3.3	5.8	7.6
Z6_PIPE_669	Z6_IL_1016	Z6_IL_1017	L12	138	0.010	Circular	1.50	-	4.2	8.4	14.6	16.0
Z6_PIPE_670	Z6_IL_1017	Z6_OF_2005	L12	77	0.015	Circular	2.00	-	4.6	9.0	16.3	18.9
Z6_PIPE_671	Z6_IL_1022	Z6_IL_1021	L12	37	0.015	Circular	1.00	-	0.6	1.3	2.4	4.2
Z6_PIPE_672	Z6_IL_1020	Z6_IL_1021	L12	24	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_673	Z6_IL_1021	Z6_OF_2004	L12	238	0.015	Circular	1.00	-	0.6	1.3	2.4	4.2
Z6_PIPE_674	Z6_IL_1019	Z6_IL_1018	K12	26	0.015	Circular	1.00	-	0.3	0.6	0.9	1.4
Z6_PIPE_675	Z6_IL_1018	Z6_OF_2187	K12	26	0.015	Circular	1.50	-	0.3	0.6	0.9	1.4
Z6_PIPE_676	Z6_IL_1242	Z6_IL_1243	K12	69	0.015	Circular	1.50	-	0.5	0.9	1.6	2.9
Z6_PIPE_677	Z6_IL_1245	Z6_MH_1717	L13	5	0.010	Circular	1.00	-	0.8	1.2	1.8	2.5
Z6_PIPE_678	Z6_MH_1716	Z6_IL_1244	K13	40	0.010	Circular	1.50	-	2.5	5.8	10.1	16.1
Z6_PIPE_679	Z6_IL_926	Z6_MH_1720	M13	124	0.015	Circular	1.50	-	1.4	3.3	5.8	7.6
Z6_PIPE_680	Z6_MH_1720	Z6_MH_1721	L13	393	0.015	Circular	1.50	-	1.4	3.3	5.8	7.6
Z6_PIPE_681	Z6_IL_929	Z6_IL_928	L13	31	0.015	Circular	1.00	-	0.5	1.2	2.1	3.4
Z6_PIPE_682	Z6_IL_928	Z6_MH_1721	L13	43	0.015	Circular	1.00	-	0.5	1.2	2.1	3.4
Z6_PIPE_683	Z6_MH_1721	Z6_OF_1904	L13	134	0.015	Circular	1.50	-	2.0	5.0	8.8	12.5
Z6_PIPE_684	Z6_IL_931	Z6_IL_930	L13	25	0.015	Circular	1.00	-	0.7	1.5	2.3	3.5
Z6_PIPE_685	Z6_IL_930	Z6_OF_1905	L13	126	0.015	Circular	1.83	-	0.7	1.5	2.3	3.5
Z6_PIPE_686	Z6_IL_940	Z6_IL_941	L12	21	0.015	Circular	1.00	-	0.8	1.7	2.6	3.8
Z6_PIPE_687	Z6_IL_941	Z6_OF_2021	L13	100	0.015	Circular	1.25	-	0.8	1.7	2.6	3.8
Z6_PIPE_688	Z6_IL_1042	Z6_OF_1908	M13	178	0.015	Circular	1.50	-	0.8	1.2	2.1	3.9
Z6_PIPE_689	Z6_IL_1038	Z6_IL_713	M13	16	0.024	Circular	1.00	-	1.2	1.7	3.3	6.2
Z6_PIPE_69	Z6_IL_419	Z6_IL_432	K12	58	0.010	Circular	1.00	-	1.1	2.0	3.1	4.7
Z6_PIPE_690	Z6_IL_1037	Z6_IL_713	M13	10	0.024	Circular	1.00	-	0.3	0.4	0.9	1.6
Z6_PIPE_691	Z6_IL_2155	Z6_IL_1253	J10	117	0.015	Circular	2.00	-	9.1	12.7	17.6	25.1
Z6_PIPE_692	Z6_IL_1253	Z6_IL_1252	J10	292	0.015	Circular	2.00	-	9.7	13.6	18.9	27.0
Z6_PIPE_693	Z6_MH_1644	Z6_IL_872	J10	348	0.015	Circular	1.25	-	2.2	3.2	4.6	6.8
Z6_PIPE_694	Z6_IL_1252	Z6_IL_1256	J10	304	0.015	Circular	3.25	-	25.1	35.1	45.5	59.3
Z6_PIPE_695	Z6_IL_1256	Z6_IL_1257	J10	184	0.015	Circular	3.25	-	32.4	45.4	59.2	76.4
Z6_PIPE_696	Z6_IL_2150	Z6_OF_2209	J10	66	0.015	Circular	1.83	-	3.8	5.2	7.2	10.3
Z6_PIPE_70	Z6_IL_420	Z6_IL_419	K12	76	0.010	Circular	1.00	-	1.1	2.0	3.1	4.7
Z6_PIPE_701	Z6_IL_1258	Z6_IL_1260	K12	32	0.015	Circular	1.50	-	5.7	8.2	11.6	18.5
Z6_PIPE_702	Z6_IL_1259	Z6_IL_1260	K12	31	0.015	Circular	1.50	-	10.5	14.1	18.5	22.7
Z6_PIPE_703	Z6_IL_1260	Z6_OF_2220	K12	6	0.015	Circular	2.50	-	16.2	22.3	30.1	43.7
Z6_PIPE_704	Z6_IL_969	Z6_IL_1258	K12	156	0.015	Circular	2.00	-	11.3	16.0	21.9	30.4
Z6_PIPE_705	Z6_IL_968	Z6_IL_969	K12	62	0.015	Circular	1.75	-	0.8	1.1	1.4	2.2
Z6_PIPE_706	Z6_MH_1649	Z6_IL_969	K12	15	0.010	Circular	2.00	-	7.4	10.9	15.4	21.9
Z6_PIPE_707	Z6_IL_2254	Z6_OF_2022	K12	27	0.010	Circular	1.75	-	16.2	22.3	30.1	41.6
Z6_PIPE_708	Z6_MH_1556	Z6_MH_1649	K12	167	0.015	Circular	2.00	-	7.4	10.9	15.4	21.9
Z6_PIPE_709	Z6_IL_1243	Z6_IL_1496	K12	97	0.015	Circular	1.50	-	1.1	2.2	4.2	7.3
Z6_PIPE_71	Z6_IL_421	Z6_IL_420	K12	83	0.010	Circular	1.00	-	1.1	2.0	3.1	4.7
Z6_PIPE_710	Z6_IL_1496	Z6_MH_1722	K12	16	0.015	Circular	1.75	-	1.1	2.2	4.2	7.3
Z6_PIPE_711	Z6_MH_1722	Z6_OF_2003	K12	46	0.015	Circular	1.50	-	1.1	2.2	4.2	7.3
Z6_PIPE_712	Z6_IL_1261	Z6_IL_1496	K12	5	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_713	Z6_IL_409	Z6_IL_406	K12	108	0.015	Circular	1.00	-	2.5	3.4	4.6	6.4
Z6_PIPE_716	Z6_IL_1262	Z6_IL_1487	J11	140	0.010	Circular	1.50	-	3.6	7.3	12.5	18.6
Z6_PIPE_717	Z6_IL_1487	Z6_IL_811	J11	138	0.010	Circular	1.25	-	3.9	7.6	13.0	18.9
Z6_PIPE_718	Z6_IL_2144	Z6_OF_2206	J11	235	0.015	Circular	1.50	-	3.2	6.6	11.5	16.1

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_72	Z6_IL_422	Z6_IL_421	K12	77	0.010	Circular	1.00	-	1.1	2.0	3.1	4.7
Z6_PIPE_723	Z6_IL_1244	Z6_MH_1723	K13	64	0.010	Circular	1.50	-	3.2	7.0	11.9	17.3
Z6_PIPE_724	Z6_IL_1263	Z6_MH_1723	K13	95	0.024	Circular	1.00	-	1.3	1.9	2.8	3.8
Z6_PIPE_725	Z6_IL_2161	Z6_OF_1910	J9	94	0.015	Circular	1.50	-	2.2	3.1	4.7	8.7
Z6_PIPE_726	Z6_IL_1265	Z6_MH_1724	H10	68	0.015	Circular	1.00	-	0.6	0.8	1.1	1.6
Z6_PIPE_727	Z6_IL_1267	Z6_MH_1724	H10	5	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_728	Z6_IL_1266	Z6_MH_1540	H10	10	0.015	Circular	1.00	-	1.6	2.3	3.3	4.8
Z6_PIPE_729	Z6_MH_1540	Z6_MH_1541	H10	13	0.015	Circular	4.00	-	38.8	53.9	74.9	104.5
Z6_PIPE_73	Z6_IL_423	Z6_IL_422	K12	83	0.010	Circular	1.00	-	0.3	0.8	1.4	2.3
Z6_PIPE_730	Z6_IL_231	Z6_OF_1961	H9	172	0.024	Circular	1.00	-	0.3	0.4	0.5	0.8
Z6_PIPE_731	Z6_IL_807	Z6_IL_806	J11	54	0.015	Circular	1.50	-	1.0	1.5	2.1	3.3
Z6_PIPE_732	Z6_IL_806	Z6_MH_1633	J11	19	0.015	Circular	2.50	-	21.2	34.7	51.9	69.7
Z6_PIPE_734	Z6_IL_2249	Z6_IL_1160	J11	45	0.024	Circular	1.25	-	4.6	6.7	9.7	11.9
Z6_PIPE_735	Z6_IL_1160	Z6_IL_799	J11	22	0.010	Circular	2.00	-	4.6	6.8	9.7	11.9
Z6_PIPE_736	Z6_IL_800	Z6_IL_799	J11	28	0.015	Circular	2.50	-	10.2	14.7	19.0	25.8
Z6_PIPE_737	Z6_MH_2251	Z6_IL_800	J11	13	0.015	Circular	2.00	-	10.2	14.7	19.0	25.8
Z6_PIPE_738	Z6_IL_2250	Z6_MH_2251	J11	61	0.010	Circular	1.00	-	10.2	14.7	19.0	25.8
Z6_PIPE_739	Z6_IL_802	Z6_IL_804	J11	187	0.015	Circular	2.50	-	19.3	32.1	48.1	63.4
Z6_PIPE_74	Z6_IL_424	Z6_IL_423	K12	61	0.010	Circular	1.00	-	0.3	0.8	1.4	2.3
Z6_PIPE_740	Z6_IL_799	Z6_IL_801	J11	215	0.015	Circular	2.50	-	12.4	20.1	23.8	32.9
Z6_PIPE_741	Z6_IL_801	Z6_IL_802	J11	30	0.015	Circular	2.50	-	12.4	20.1	23.8	39.5
Z6_PIPE_742	Z6_IL_803	Z6_IL_802	J11	33	0.015	Circular	1.50	-	8.5	13.8	24.1	34.3
Z6_PIPE_745	Z6_IL_873	Z6_IL_874	H10	34	0.015	Circular	1.25	-	3.5	4.5	5.9	8.1
Z6_PIPE_746	Z6_IL_874	Z6_IL_519	H10	82	0.015	Circular	1.50	-	3.5	4.5	5.9	8.1
Z6_PIPE_747	Z6_IL_518	Z6_IL_517	H10	47	0.015	Circular	1.50	-	3.5	4.5	5.9	8.1
Z6_PIPE_748	Z6_IL_515	Z6_MH_1561	H10	9	0.015	Circular	1.00	-	0.6	0.8	1.2	1.8
Z6_PIPE_749	Z6_IL_1268	Z6_MH_1565	H10	29	0.010	Circular	1.50	-	0.7	0.9	1.3	2.0
Z6_PIPE_75	Z6_IL_425	Z6_IL_424	K12	61	0.010	Circular	1.00	-	0.3	0.8	1.4	2.3
Z6_PIPE_750	Z6_SGMH_2134	Z6_IL_537	J10	13	0.010	Circular	1.00	-	13.0	16.5	18.5	19.6
Z6_PIPE_751	Z6_IL_537	Z6_OF_2074	J10	10	0.010	Circular	3.00	-	13.0	16.5	18.5	19.6
Z6_PIPE_76	Z6_IL_684	Z6_IL_425	K12	91	0.015	Circular	1.00	-	0.3	0.8	1.4	2.3
Z6_PIPE_765	Z6_MH_1632	Z6_MH_2259	N12	85	0.015	Circular	3.00	-	10.5	15.6	24.4	43.3
Z6_PIPE_766	Z6_IL_776	Z6_MH_1632	N12	403	0.015	Circular	1.00	-	0.3	0.6	1.1	1.9
Z6_PIPE_767	Z6_MH_1550	Z6_MH_1549	P14	128	0.010	Circular	1.00	-	1.2	1.6	2.2	3.0
Z6_PIPE_768	Z6_MH_1549	Z6_IL_250	P14	314	0.010	Circular	1.50	-	4.9	6.8	9.4	13.0
Z6_PIPE_769	Z6_IL_1420	Z6_IL_1234	O14	19	0.015	Circular	1.00	-	0.6	1.1	1.8	3.7
Z6_PIPE_77	Z6_IL_426	Z6_IL_684	K12	35	0.015	Circular	1.00	-	0.3	0.8	1.4	2.3
Z6_PIPE_770	Z6_IL_687	Z6_IL_1277	O14	14	0.015	Circular	1.00	-	1.2	1.7	2.3	3.2
Z6_PIPE_771	Z6_IL_1277	Z6_IL_688	O14	95	0.015	Circular	1.00	-	1.2	1.7	2.3	3.2
Z6_PIPE_772	Z6_IL_688	Z6_OF_1920	O14	162	0.015	Circular	1.00	-	1.2	1.7	2.3	3.2
Z6_PIPE_773	Z6_IL_686	Z6_MH_1771	O14	79	0.015	Circular	1.00	-	0.8	1.1	1.4	2.0
Z6_PIPE_774	Z6_IL_722	Z6_OF_1921	O14	173	0.024	Circular	1.00	-	0.9	1.3	1.8	2.6
Z6_PIPE_775	Z6_IL_1278	Z6_MH_1771	O14	21	0.015	Circular	1.00	-	0.6	0.9	1.1	1.6
Z6_PIPE_776	Z6_IL_1272	Z6_IL_1278	O14	31	0.015	Circular	1.00	-	0.6	0.9	1.1	1.6
Z6_PIPE_777	Z6_MH_1573	Z6_OF_1922	O14	159	0.024	Circular	1.00	-	2.4	3.4	4.6	6.6
Z6_PIPE_78	Z6_IL_211	Z6_IL_433	K12	9	0.015	Circular	1.00	-	0.4	1.0	1.7	2.8
Z6_PIPE_782	Z6_MH_1735	Z6_MH_1734	K13	92	0.010	Circular	1.50	-	2.1	4.9	8.6	14.0
Z6_PIPE_783	Z6_MH_1734	Z6_MH_1717	L13	115	0.010	Circular	1.50	-	2.1	4.9	8.6	14.0
Z6_PIPE_785	Z6_IL_805	Z6_IL_806	J11	253	0.015	Circular	2.50	-	20.6	33.9	50.7	66.2
Z6_PIPE_787	Z6_IL_2344	Z6_IL_1032	L13	48	0.015	Circular	1.00	-	1.5	2.9	5.2	8.6
Z6_PIPE_788	Z6_IL_1032	Z6_IL_1033	L13	23	0.015	Circular	1.00	-	1.5	2.9	5.2	8.6
Z6_PIPE_789	Z6_IL_1033	Z6_OF_1831	L13	124	0.015	Circular	1.00	-	1.5	2.9	5.2	8.6
Z6_PIPE_79	Z6_IL_433	Z6_IL_212	K12	169	0.010	Circular	1.00	-	0.4	1.0	1.7	2.8
Z6_PIPE_792	Z6_IL_1281	Z6_IL_1282	K14	34	0.015	Circular	3.50	-	6.7	11.0	16.4	38.5
Z6_PIPE_793	Z6_IL_1124	Z6_MH_1670	K14	128	0.015	Circular	5.00	-	24.6	48.8	104.2	228.1
Z6_PIPE_794	Z6_MH_1670	Z6_OF_2288	K14	878	0.015	Circular	5.00	-	24.5	48.7	104.0	227.7
Z6_PIPE_796	Z6_IL_1285	Z6_IL_1284	K14	43	0.015	Circular	1.00	-	5.6	10.9	19.4	33.3
Z6_PIPE_799	Z6_IL_1125	Z6_OF_1924	K14	23	0.024	Circular	1.00	-	0.3	0.6	1.0	1.7
Z6_PIPE_80	Z6_IL_212	Z6_SGMH_2133	L12	162	0.010	Circular	1.00	-	0.4	1.0	1.7	2.8
Z6_PIPE_804	Z6_IL_1287	Z6_OF_2060	K14	174	0.010	Circular	1.00	-	4.4	8.1	13.2	15.3
Z6_PIPE_806	Z6_IL_2323	Z6_IL_984	L12	154	0.015	Circular	2.50	-	11.3	15.8	27.7	46.4
Z6_PIPE_807	Z6_IL_1292	Z6_OF_1925	L11	59	0.015	Circular	1.00	-	0.8	0.9	1.0	1.1
Z6_PIPE_808	Z6_MH_1708	Z6_MH_1696	K11	173	0.015	Circular	1.00	-	3.1	3.7	4.5	5.7
Z6_PIPE_809	Z6_MH_1688	Z6_MH_1708	K11	147	0.015	Circular	1.00	-	4.4	5.9	7.6	10.0
Z6_PIPE_81	Z6_SGMH_2133	Z6_IL_434	K12	71	0.010	Circular	1.00	-	0.6	1.5	2.6	4.1
Z6_PIPE_810	Z6_MH_1588	Z6_MH_1700	N13	322	0.015	Circular	1.25	-	0.6	1.0	1.9	3.5
Z6_PIPE_811	Z6_IL_630	Z6_MH_1588	N13	29	0.015	Circular	1.00	-	0.5	0.7	1.5	2.9
Z6_PIPE_812	Z6_IL_629	Z6_IL_630	N13	80	0.015	Circular	1.00	-	0.4	0.7	1.4	2.4
Z6_PIPE_813	Z6_IL_2262	Z6_MH_1699	N12	52	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z6_PIPE_814	Z6_MH_1700	Z6_MH_1699	N12	310	0.015	Circular	1.50	-	0.6	1.0	1.9	3.5

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Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_815	Z6_IL_951	Z6_IL_950	N12	38	0.015	Circular	1.25	-	0.1	0.1	0.2	0.4
Z6_PIPE_816	Z6_IL_950	Z6_MH_1697	N12	34	0.015	Circular	1.00	-	0.1	0.1	0.2	0.4
Z6_PIPE_817	Z6_MH_1699	Z6_MH_1697	N12	444	0.015	Circular	2.00	-	0.6	1.0	1.9	3.5
Z6_PIPE_818	Z6_IL_1097	Z6_MH_2230	K10	90	0.024	Circular	1.25	-	0.4	0.9	1.5	2.2
Z6_PIPE_819	Z6_IL_1096	Z6_MH_2230	K10	27	0.010	Circular	1.00	-	0.3	0.6	1.0	1.5
Z6_PIPE_82	Z6_IL_210	Z6_OF_2002	K12	47	0.010	Circular	1.00	-	0.6	1.5	2.6	4.1
Z6_PIPE_820	Z6_MH_2230	Z6_IL_1095	K10	30	0.024	Circular	1.25	-	0.7	1.5	2.4	3.6
Z6_PIPE_821	Z6_IL_938	Z6_IL_939	L12	29	0.015	Circular	1.00	-	0.5	1.2	2.1	4.7
Z6_PIPE_822	Z6_IL_939	Z6_MH_1684	L12	236	0.015	Circular	1.00	-	1.0	2.3	4.2	5.0
Z6_PIPE_823	Z6_MH_1684	Z6_IL_937	L12	101	0.015	Circular	1.50	-	1.2	2.8	5.1	6.3
Z6_PIPE_824	Z6_IL_937	Z6_OF_2186	L12	156	0.015	Circular	1.50	-	1.3	3.1	5.7	7.3
Z6_PIPE_825	Z6_IL_932	Z6_IL_933	L12	25	0.015	Circular	1.00	-	0.2	0.5	0.9	1.6
Z6_PIPE_826	Z6_IL_933	Z6_MH_1684	L12	135	0.015	Circular	1.25	-	0.2	0.5	0.9	1.6
Z6_PIPE_827	Z6_IL_1194	Z6_IL_1193	K12	54	0.015	Circular	2.50	-	3.8	7.6	13.1	16.7
Z6_PIPE_828	Z6_IL_1294	Z6_IL_1293	K11	26	0.024	Circular	1.75	-	0.7	1.0	1.4	2.0
Z6_PIPE_829	Z6_IL_1293	Z6_OF_1927	K11	74	0.015	Circular	1.75	-	0.7	1.0	1.4	2.0
Z6_PIPE_83	Z6_MH_1537	Z6_MH_1555	L12	98	0.010	Circular	1.00	-	1.5	2.2	3.2	4.5
Z6_PIPE_830	Z6_IL_1295	Z6_OF_1928	J12	106	0.015	Circular	1.50	-	0.8	1.0	1.3	1.8
Z6_PIPE_832	Z6_IL_1104	Z6_OF_1988	H9	273	0.015	Circular	1.50	-	4.6	6.2	8.1	10.8
Z6_PIPE_833	Z6_IL_936	Z6_IL_935	L12	30	0.015	Circular	1.00	-	0.4	0.6	1.3	2.2
Z6_PIPE_834	Z6_IL_761	Z6_IL_760	L12	23	0.015	Circular	1.50	-	0.3	0.6	1.2	2.1
Z6_PIPE_835	Z6_IL_760	Z6_OF_2013	L12	159	0.015	Circular	1.50	-	0.3	0.6	1.2	2.1
Z6_PIPE_836	Z6_IL_935	Z6_MH_2266	L12	119	0.015	Circular	1.50	-	0.4	0.6	1.3	2.2
Z6_PIPE_837	Z6_IL_197	Z6_OF_1929	G9	82	0.010	Circular	1.00	-	1.2	1.6	2.0	2.7
Z6_PIPE_838	Z6_MH_2223	Z6_IL_197	G9	55	0.010	Circular	1.00	-	0.6	0.8	1.1	1.4
Z6_PIPE_84	Z6_IL_216	Z6_MH_1537	K12	63	0.010	Circular	1.00	-	0.2	0.5	0.9	1.4
Z6_PIPE_840	Z6_IL_1300	Z6_IL_1102	H9	29	0.010	Circular	1.25	-	1.3	1.9	2.6	3.8
Z6_PIPE_841	Z6_IL_1102	Z6_OF_1959	H9	204	0.010	Circular	1.25	-	1.3	1.9	2.6	3.8
Z6_PIPE_843	Z6_IL_902	Z6_IL_1303	G9	34	0.010	Circular	1.00	-	0.7	0.9	1.3	1.9
Z6_PIPE_849	Z6_IL_904	Z6_MH_1645	G9	14	0.010	Circular	1.00	-	4.6	6.3	7.0	7.6
Z6_PIPE_85	Z6_IL_218	Z6_IL_216	K12	32	0.010	Circular	1.00	-	0.2	0.5	0.9	1.4
Z6_PIPE_850	Z6_MH_1645	Z6_MH_2222	G9	106	0.015	Circular	1.00	-	4.6	6.3	7.0	7.6
Z6_PIPE_851	Z6_IL_1528	Z6_IL_1302	G9	146	0.024	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_852	Z6_IL_1529	Z6_MH_1817	G9	166	0.024	Circular	1.00	-	0.8	1.1	1.6	2.3
Z6_PIPE_853	Z6_MH_1817	Z6_MH_1816	G9	91	0.024	Circular	1.00	-	0.8	1.1	1.6	2.3
Z6_PIPE_854	Z6_MH_1816	Z6_IL_1100	G9	36	0.010	Circular	1.00	-	0.8	1.1	1.6	2.3
Z6_PIPE_855	Z6_IL_1101	Z6_IL_1301	G9	22	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_856	Z6_IL_1100	Z6_IL_1301	G9	31	0.010	Circular	1.50	-	3.1	4.3	6.0	8.6
Z6_PIPE_857	Z6_IL_1303	Z6_IL_1304	G9	61	0.010	Circular	1.50	-	3.8	5.2	7.3	10.4
Z6_PIPE_858	Z6_IL_1301	Z6_IL_1303	G9	75	0.015	Circular	1.50	-	3.1	4.3	6.0	8.6
Z6_PIPE_865	Z6_IL_1141	Z6_MH_1678	H9	52	0.015	Circular	1.50	-	0.4	0.5	0.7	1.0
Z6_PIPE_868	Z6_MH_1674	Z6_OF_1930	H9	418	0.015	Circular	2.50	-	19.0	27.1	38.7	56.0
Z6_PIPE_869	Z6_IL_1144	Z6_MH_1683	G9	33	0.015	Circular	2.00	-	3.8	4.7	6.6	9.4
Z6_PIPE_870	Z6_MH_1683	Z6_MH_1682	G9	34	0.015	Circular	2.00	-	5.2	7.2	10.0	13.3
Z6_PIPE_871	Z6_MH_1683	Z6_MH_1679	G9	60	0.015	Circular	2.00	-	8.7	11.9	16.5	22.6
Z6_PIPE_872	Z6_MH_1812	Z6_IL_1144	G9	11	0.015	Circular	2.00	-	3.8	4.7	6.6	9.4
Z6_PIPE_873	Z6_IL_1152	Z6_MH_1682	G9	7	0.015	Circular	1.00	-	0.7	0.9	1.3	1.9
Z6_PIPE_874	Z6_IL_1151	Z6_MH_1682	G9	70	0.010	Circular	1.00	-	4.6	6.3	8.7	11.4
Z6_PIPE_877	Z6_IL_1502	Z6_IL_1256	J10	117	0.015	Circular	1.75	-	8.0	10.6	14.0	17.3
Z6_PIPE_878	Z6_IL_875	Z6_IL_876	H10	40	0.015	Circular	1.25	-	5.6	8.7	8.7	11.9
Z6_PIPE_879	Z6_IL_876	Z6_MH_2234	H10	167	0.015	Circular	1.25	-	10.4	12.3	12.8	13.8
Z6_PIPE_881	Z6_IL_1255	Z6_IL_1252	J10	56	0.015	Circular	1.00	-	0.2	0.3	0.5	0.8
Z6_PIPE_882	Z6_IL_1254	Z6_OF_2030	J10	36	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_883	Z6_IL_2255	Z6_IL_988	L11	27	0.015	Circular	1.50	-	15.0	20.4	23.9	28.6
Z6_PIPE_884	Z6_IL_977	Z6_IL_988	L11	353	0.010	Circular	2.00	-	0.7	1.1	1.7	2.7
Z6_PIPE_887	Z6_IL_892	Z6_OF_1993	J9	53	0.015	Circular	1.00	-	1.6	2.2	3.2	4.7
Z6_PIPE_888	Z6_IL_748	Z6_OF_1932	J9	232	0.010	Circular	1.00	-	0.8	1.1	1.6	2.3
Z6_PIPE_894	Z6_IL_1339	Z6_MH_1750	O14	13	0.015	Circular	1.25	-	1.1	1.7	3.8	7.7
Z6_PIPE_895	Z6_MH_1750	Z6_IL_1338	O14	15	0.015	Circular	1.50	-	1.1	1.7	3.8	7.7
Z6_PIPE_908	Z6_IL_1234	Z6_IL_1235	O14	35	0.015	Circular	1.00	-	0.6	1.1	1.8	3.7
Z6_PIPE_909	Z6_IL_1384	Z6_MH_1782	P14	100	0.015	Circular	1.25	-	0.0	0.0	0.0	0.0
Z6_PIPE_910	Z6_IL_2139	Z6_IL_1052	N13	140	0.015	Circular	1.50	-	2.9	5.1	8.5	14.1
Z6_PIPE_912	Z6_IL_432	Z6_SGIL_2098	K12	20	0.015	Circular	1.00	-	1.1	2.0	3.1	4.7
Z6_PIPE_913	Z6_IL_219	Z6_SGIL_2098	K12	12	0.015	Circular	1.00	-	0.7	0.9	1.1	1.5
Z6_PIPE_914	Z6_MH_1599	Z6_MH_1597	N13	79	0.015	Circular	1.00	-	1.1	1.6	2.4	3.6
Z6_PIPE_919	Z6_IL_703	Z6_MH_1606	N14	126	0.015	Circular	1.00	-	0.5	0.6	0.9	1.3
Z6_PIPE_920	Z6_MH_1607	Z6_IL_969	K12	257	0.015	Circular	1.50	-	3.1	4.0	5.2	6.8
Z6_PIPE_922	Z6_IL_710	Z6_OF_1948	O13	63	0.015	Circular	1.50	-	2.7	5.8	10.5	15.2
Z6_PIPE_923	Z6_IL_711	Z6_MH_1609	N14	184	0.015	Circular	1.25	-	0.9	1.2	1.7	2.4
Z6_PIPE_924	Z6_MH_1606	Z6_IL_711	N14	139	0.015	Circular	1.25	-	0.5	0.6	0.9	1.3

*The term "NEW" in a Link ID does not reflect the age or condition of the actual link. It is modeling nomenclature only.

Zone 6 Existing Pipes

Link ID*	From Node	To Node	County Grid #	Length (ft)	Manning's N	Shape	Max Depth (ft)	Bottom Width (ft)	Max Q (cfs)			
									5Yr	10Yr	25Yr	100Yr
Z6_PIPE_925	Z6_IL_712	Z6_IL_713	M13	28	0.010	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_926	Z6_IL_713	Z6_MH_1610	M13	179	0.015	Circular	1.00	-	1.4	2.1	4.1	7.6
Z6_PIPE_928	Z6_IL_676	Z6_OF_1914	O13	116	0.024	Circular	1.00	-	1.2	1.6	2.2	3.1
Z6_PIPE_929	Z6_IL_606	Z6_MH_1597	N13	54	0.015	Circular	1.00	-	0.0	0.0	0.0	0.0
Z6_PIPE_930	Z6_IL_607	Z6_MH_1597	N13	20	0.015	Circular	1.00	-	0.3	0.5	0.9	1.5
Z6_PIPE_931	Z6_MH_1597	Z6_MH_1577	N13	205	0.015	Circular	1.00	-	1.4	2.1	3.2	5.0
Z6_PIPE_932	Z6_IL_608	Z6_MH_1577	N13	38	0.015	Circular	1.00	-	0.9	1.8	3.1	5.4
Z6_PIPE_936	Z6_IL_603	Z6_IL_602	O13	229	0.015	Circular	1.00	-	0.3	0.5	0.8	1.2
Z6_PIPE_937	Z6_IL_602	Z6_SGIL_2106	O13	70	0.015	Circular	1.00	-	0.5	0.8	1.2	1.9
Z6_PIPE_938	Z6_SGIL_2106	Z6_OF_1951	O13	65	0.024	Circular	1.00	-	0.5	0.8	1.2	1.9
Z6_PIPE_939	Z6_IL_685	Z6_OF_1947	O14	74	0.015	Circular	1.00	-	0.5	0.7	0.9	1.3
Z6_PIPE_940	Z6_MH_1595	Z6_MH_1726	O14	477	0.015	Circular	1.75	-	1.5	3.2	5.8	9.8
Z6_PIPE_941	Z6_MH_1726	Z6_MH_1593	O14	5	0.015	Circular	2.00	-	4.0	7.4	12.3	19.9
Z6_PIPE_942	Z6_MH_1593	Z6_OF_1912	O14	120	0.015	Circular	2.00	-	5.1	10.1	18.9	32.5
Z6_PIPE_943	Z6_IL_668	Z6_OF_1912	O14	108	0.015	Circular	2.00	-	3.8	5.4	7.5	10.8
Z6_PIPE_944	Z6_MH_1725	Z6_MH_1594	O14	255	0.010	Circular	2.00	-	1.7	2.5	5.7	11.3
Z6_PIPE_945	Z6_MH_1594	Z6_MH_1593	O14	236	0.015	Circular	2.00	-	1.7	2.5	5.7	11.3
Z6_PIPE_946	Z6_MH_1592	Z6_MH_1726	O14	130	0.015	Circular	2.00	-	2.5	4.2	6.6	10.3
Z6_PIPE_948	Z6_IL_667	Z6_MH_1592	O14	95	0.015	Circular	1.00	-	0.8	1.5	2.4	3.7
Z6_PIPE_949	Z6_IL_755	Z6_MH_1595	O14	398	0.015	Circular	1.25	-	0.4	0.8	1.6	2.8
Z6_PIPE_950	Z6_IL_769	Z6_IL_768	O14	67	0.015	Circular	1.50	-	0.6	0.9	2.1	3.9
Z6_PIPE_951	Z6_IL_768	Z6_MH_1595	O14	54	0.015	Circular	1.75	-	0.8	1.5	2.9	5.2
Z6_PIPE_952	Z6_IL_670	Z6_MH_1592	O14	40	0.015	Circular	1.25	-	1.8	2.9	4.4	6.7
Z6_PIPE_953	Z6_IL_671	Z6_IL_670	O14	414	0.015	Circular	1.25	-	1.8	2.9	4.4	6.7
Z6_PIPE_954	Z6_IL_292	Z6_MH_1727	O14	7	0.015	Circular	1.25	-	1.8	2.9	4.4	6.7
Z6_PIPE_955	Z6_SGIL_2092	Z6_IL_1270	O14	23	0.024	Circular	1.25	-	1.0	1.5	2.2	3.2
Z6_PIPE_957	Z6_IL_1270	Z6_IL_1271	O14	8	0.024	Circular	1.50	-	1.0	1.5	2.2	3.2
Z6_PIPE_958	Z6_SGIL_2091	Z6_MH_1543	P14	20	0.015	Circular	1.25	-	5.0	7.3	10.3	11.9
Z6_PIPE_959	Z6_MH_1543	Z6_IL_248	P14	26	0.015	Circular	1.25	-	5.0	7.3	10.4	12.7
Z6_PIPE_96	Z6_IL_232	Z6_OF_1990	H9	39	0.015	Circular	1.00	-	0.5	0.7	0.9	1.3
Z6_PIPE_960	Z6_IL_248	Z6_MH_1616	P14	60	0.015	Circular	1.50	-	5.0	7.3	10.4	12.7
Z6_PIPE_961	Z6_IL_249	Z6_MH_1544	P14	31	0.010	Circular	1.00	-	0.4	0.7	1.4	8.1
Z6_PIPE_962	Z6_MH_1544	Z6_SGIL_2091	P14	183	0.015	Circular	1.50	-	5.0	7.3	10.3	11.9
Z6_PIPE_963	Z6_IL_250	Z6_MH_1544	P14	11	0.010	Circular	1.50	-	4.9	6.9	9.5	18.9
Z6_PIPE_964	Z6_MH_1616	Z6_MH_1615	P14	266	0.015	Circular	1.50	-	5.0	7.3	10.4	12.7
Z6_PIPE_965	Z6_MH_1615	Z6_MH_1614	P14	499	0.015	Circular	1.50	-	5.0	7.3	10.7	13.1
Z6_PIPE_966	Z6_MH_1614	Z6_MH_1613	P14	455	0.015	Circular	1.75	-	5.0	7.4	11.1	14.1
Z6_PIPE_967	Z6_IL_718	Z6_OF_1913	O14	170	0.024	Circular	1.00	-	1.4	1.8	2.4	3.4
Z6_PIPE_968	Z6_IL_721	Z6_IL_579	O14	61	0.015	Circular	1.00	-	2.2	3.1	4.3	6.0
Z6_PIPE_969	Z6_IL_578	Z6_MH_1573	O14	108	0.015	Circular	1.00	-	0.6	0.8	1.1	1.5
Z6_PIPE_97	Z6_IL_231	Z6_IL_232	H9	144	0.015	Circular	1.00	-	0.5	0.7	0.9	1.3
Z6_PIPE_970	Z6_IL_579	Z6_MH_1573	O14	198	0.015	Circular	1.00	-	2.2	3.1	4.3	6.0
Z6_PIPE_971	Z6_MH_1551	Z6_MH_1693	L10	195	0.015	Circular	1.00	-	2.6	2.6	3.0	3.5
Z6_PIPE_972	Z6_IL_1188	Z6_MH_1728	L10	21	0.024	Circular	1.00	-	1.3	0.9	1.2	0.8
Z6_PIPE_973	Z6_MH_1693	Z6_MH_1728	L10	64	0.015	Circular	1.00	-	3.6	3.2	3.1	3.6
Z6_PIPE_974	Z6_MH_1728	Z6_MH_1729	L10	109	0.015	Circular	1.00	-	4.5	4.6	5.0	5.3
Z6_PIPE_976	Z6_MH_1729	Z6_SGIL_2121	L10	242	0.015	Circular	1.00	-	4.5	4.6	4.7	4.7
Z6_PIPE_977	Z6_IL_1246	Z6_IL_1003	J13	50	0.010	Circular	2.00	-	3.1	6.5	10.8	17.0
Z6_PIPE_978	Z6_IL_1003	Z6_IL_1002	J13	32	0.010	Circular	2.00	-	3.7	7.3	11.9	18.4
Z6_PIPE_979	Z6_IL_1002	Z6_OF_1900	J13	78	0.010	Circular	2.00	-	3.7	7.3	11.9	18.4
Z6_PIPE_98	Z6_IL_1053	Z6_IL_1054	N13	100	0.015	Circular	2.00	-	4.9	8.2	16.8	31.6
Z6_PIPE_980	Z6_IL_1248	Z6_MH_1718	K12	20	0.024	Circular	1.25	-	0.0	0.0	0.0	0.0
Z6_PIPE_981	Z6_MH_1718	Z6_MH_1730	K12	157	0.015	Circular	2.00	-	3.9	8.1	14.6	25.2
Z6_PIPE_982	Z6_IL_1001	Z6_MH_1718	K12	173	0.010	Circular	1.50	-	4.0	8.1	14.6	25.3
Z6_PIPE_983	Z6_IL_1247	Z6_OF_1901	K12	20	0.024	Circular	1.00	-	0.4	0.6	0.9	1.3
Z6_PIPE_984	Z6_IL_1405	Z6_OF_1918	K12	165	0.024	Circular	1.50	-	8.1	8.5	8.9	9.6
Z6_PIPE_986	Z6_MH_1732	Z6_MH_1801	K12	97	0.015	Circular	3.50	-	37.9	49.9	61.8	75.1
Z6_PIPE_987	Z6_IL_1273	Z6_OF_5558	K12	13	0.024	Circular	1.50	-	0.4	0.6	0.9	1.3
Z6_PIPE_989	Z6_MH_1663	Z6_IL_1105	H10	2	0.015	Circular	1.50	-	0.0	0.0	0.0	0.0
Z6_PIPE_99	Z6_IL_1052	Z6_IL_1053	N13	72	0.015	Circular	1.75	-	3.0	5.8	10.9	19.6
Z6_PIPE_990	Z6_IL_647	Z6_MH_1589	H10	5	0.015	Circular	2.00	-	9.5	13.1	17.9	25.3
Z6_PIPE_991	Z6_IL_817	Z6_OF_1969	K12	70	0.010	Circular	1.25	-	2.0	3.6	6.0	10.0
Z6_PIPE_992	Z6_IL_1378	Z6_IL_1194	K12	143	0.015	Circular	2.00	-	3.8	7.6	13.1	16.7
Z6_PIPE_993	Z6_IL_1382	Z6_MH_1778	K12	40	0.015	Circular	1.50	-	1.1	1.5	2.1	3.0
Z6_PIPE_994	Z6_MH_1778	Z6_IL_1378	K12	155	0.015	Circular	2.00	-	1.1	1.5	2.1	3.0
Z6_PIPE_995	Z6_IL_1404	Z6_IL_1382	K12	82	0.015	Circular	1.50	-	1.1	1.5	2.1	3.0
Z6_PIPE_996	Z6_IL_2268	Z6_IL_1378	K12	9	0.015	Circular	2.00	-	3.0	6.1	10.9	13.9
Z6_PIPE_997	Z6_IL_1403	Z6_OF_1976	K12	39	0.015	Circular	2.00	-	3.0	6.1	10.9	13.9
Z6_PIPE_998	Z6_IL_1419	Z6_IL_1403	K12	82	0.015	Circular	1.50	-	3.0	6.1	10.9	13.9

APPENDIX J

RAINFALL DATA

Zone 5, 85th Percentile Balanced Storm											
Time	Unitless Rainfall (%/15 min)	15-Minute Intensity (in/hr)	Actual Rainfall (in/15 min)	Time	Unitless Rainfall (%/15 min)	15-Minute Intensity (in/hr)	Actual Rainfall (in/15 min)	Time	Unitless Rainfall (%/15 min)	15-Minute Intensity (in/hr)	Actual Rainfall (in/15 min)
0:15	0.0053	0.0826	0.0206	8:15	0.0114	0.1785	0.0446	16:15	0.0092	0.1439	0.0360
0:30	0.0053	0.0826	0.0206	8:30	0.0114	0.1785	0.0446	16:30	0.0092	0.1439	0.0360
0:45	0.0059	0.0928	0.0232	8:45	0.0133	0.2084	0.0521	16:45	0.0085	0.1337	0.0334
1:00	0.0059	0.0928	0.0232	9:00	0.0133	0.2084	0.0521	17:00	0.0085	0.1337	0.0334
1:15	0.0059	0.0928	0.0232	9:15	0.0220	0.3453	0.0863	17:15	0.0085	0.1337	0.0334
1:30	0.0059	0.0928	0.0232	9:30	0.0220	0.3453	0.0863	17:30	0.0085	0.1337	0.0334
1:45	0.0059	0.0928	0.0232	9:45	0.0386	0.6079	0.1520	17:45	0.0079	0.1235	0.0309
2:00	0.0059	0.0928	0.0232	10:00	0.0662	1.0413	0.2603	18:00	0.0079	0.1235	0.0309
2:15	0.0066	0.1030	0.0258	10:15	0.0242	0.3806	0.0951	18:15	0.0072	0.1133	0.0283
2:30	0.0066	0.1030	0.0258	10:30	0.0242	0.3806	0.0951	18:30	0.0072	0.1133	0.0283
2:45	0.0066	0.1030	0.0258	10:45	0.0184	0.2894	0.0724	18:45	0.0079	0.1235	0.0309
3:00	0.0066	0.1030	0.0258	11:00	0.0184	0.2894	0.0724	19:00	0.0079	0.1235	0.0309
3:15	0.0066	0.1030	0.0258	11:15	0.0126	0.1982	0.0496	19:15	0.0072	0.1133	0.0283
3:30	0.0066	0.1030	0.0258	11:30	0.0126	0.1982	0.0496	19:30	0.0072	0.1133	0.0283
3:45	0.0072	0.1133	0.0283	11:45	0.0130	0.2045	0.0511	19:45	0.0066	0.1030	0.0258
4:00	0.0072	0.1133	0.0283	12:00	0.0130	0.2045	0.0511	20:00	0.0066	0.1030	0.0258
4:15	0.0072	0.1133	0.0283	12:15	0.0141	0.2210	0.0553	20:15	0.0066	0.1030	0.0258
4:30	0.0072	0.1133	0.0283	12:30	0.0141	0.2210	0.0553	20:30	0.0066	0.1030	0.0258
4:45	0.0079	0.1235	0.0309	12:45	0.0155	0.2430	0.0608	20:45	0.0066	0.1030	0.0258
5:00	0.0079	0.1235	0.0309	13:00	0.0155	0.2430	0.0608	21:00	0.0066	0.1030	0.0258
5:15	0.0085	0.1337	0.0334	13:15	0.0131	0.2061	0.0515	21:15	0.0066	0.1030	0.0258
5:30	0.0085	0.1337	0.0334	13:30	0.0131	0.2061	0.0515	21:30	0.0066	0.1030	0.0258
5:45	0.0092	0.1439	0.0360	13:45	0.0118	0.1856	0.0464	21:45	0.0059	0.0928	0.0232
6:00	0.0092	0.1439	0.0360	14:00	0.0118	0.1856	0.0464	22:00	0.0059	0.0928	0.0232
6:15	0.0092	0.1439	0.0360	14:15	0.0112	0.1754	0.0438	22:15	0.0059	0.0928	0.0232
6:30	0.0092	0.1439	0.0360	14:30	0.0112	0.1754	0.0438	22:30	0.0059	0.0928	0.0232
6:45	0.0105	0.1652	0.0413	14:45	0.0105	0.1652	0.0413	22:45	0.0059	0.0928	0.0232
7:00	0.0105	0.1652	0.0413	15:00	0.0105	0.1652	0.0413	23:00	0.0059	0.0928	0.0232
7:15	0.0118	0.1856	0.0464	15:15	0.0105	0.1652	0.0413	23:15	0.0059	0.0928	0.0232
7:30	0.0118	0.1856	0.0464	15:30	0.0105	0.1652	0.0413	23:30	0.0059	0.0928	0.0232
7:45	0.0111	0.1738	0.0435	15:45	0.0099	0.1549	0.0387	23:45	0.0053	0.0826	0.0206
8:00	0.0111	0.1738	0.0435	16:00	0.0099	0.1549	0.0387	24:00	0.0053	0.0826	0.0206
								TOTAL:	**1.00**		**3.93**

Zone 5, 2-Year Balanced Storm											
Time	Unitless Rainfall (%/15 min)	15-Minute Intensity (in/hr)	Actual Rainfall (in/15 min)	Time	Unitless Rainfall (%/15 min)	15-Minute Intensity (in/hr)	Actual Rainfall (in/15 min)	Time	Unitless Rainfall (%/15 min)	15-Minute Intensity (in/hr)	Actual Rainfall (in/15 min)
0:15	0.0053	0.1000	0.0250	8:15	0.0114	0.2162	0.0540	16:15	0.0092	0.1743	0.0436
0:30	0.0053	0.1000	0.0250	8:30	0.0114	0.2162	0.0540	16:30	0.0092	0.1743	0.0436
0:45	0.0059	0.1124	0.0281	8:45	0.0133	0.2524	0.0631	16:45	0.0085	0.1619	0.0405
1:00	0.0059	0.1124	0.0281	9:00	0.0133	0.2524	0.0631	17:00	0.0085	0.1619	0.0405
1:15	0.0059	0.1124	0.0281	9:15	0.0220	0.4181	0.1045	17:15	0.0085	0.1619	0.0405
1:30	0.0059	0.1124	0.0281	9:30	0.0220	0.4181	0.1045	17:30	0.0085	0.1619	0.0405
1:45	0.0059	0.1124	0.0281	9:45	0.0386	0.7360	0.1840	17:45	0.0079	0.1495	0.0374
2:00	0.0059	0.1124	0.0281	10:00	0.0662	1.2608	0.3152	18:00	0.0079	0.1495	0.0374
2:15	0.0066	0.1248	0.0312	10:15	0.0242	0.4608	0.1152	18:15	0.0072	0.1371	0.0343
2:30	0.0066	0.1248	0.0312	10:30	0.0242	0.4608	0.1152	18:30	0.0072	0.1371	0.0343
2:45	0.0066	0.1248	0.0312	10:45	0.0184	0.3505	0.0876	18:45	0.0079	0.1495	0.0374
3:00	0.0066	0.1248	0.0312	11:00	0.0184	0.3505	0.0876	19:00	0.0079	0.1495	0.0374
3:15	0.0066	0.1248	0.0312	11:15	0.0126	0.2400	0.0600	19:15	0.0072	0.1371	0.0343
3:30	0.0066	0.1248	0.0312	11:30	0.0126	0.2400	0.0600	19:30	0.0072	0.1371	0.0343
3:45	0.0072	0.1371	0.0343	11:45	0.0130	0.2476	0.0619	19:45	0.0066	0.1248	0.0312
4:00	0.0072	0.1371	0.0343	12:00	0.0130	0.2476	0.0619	20:00	0.0066	0.1248	0.0312
4:15	0.0072	0.1371	0.0343	12:15	0.0141	0.2676	0.0669	20:15	0.0066	0.1248	0.0312
4:30	0.0072	0.1371	0.0343	12:30	0.0141	0.2676	0.0669	20:30	0.0066	0.1248	0.0312
4:45	0.0079	0.1495	0.0374	12:45	0.0155	0.2943	0.0736	20:45	0.0066	0.1248	0.0312
5:00	0.0079	0.1495	0.0374	13:00	0.0155	0.2943	0.0736	21:00	0.0066	0.1248	0.0312
5:15	0.0085	0.1619	0.0405	13:15	0.0131	0.2495	0.0624	21:15	0.0066	0.1248	0.0312
5:30	0.0085	0.1619	0.0405	13:30	0.0131	0.2495	0.0624	21:30	0.0066	0.1248	0.0312
5:45	0.0092	0.1743	0.0436	13:45	0.0118	0.2247	0.0562	21:45	0.0059	0.1124	0.0281
6:00	0.0092	0.1743	0.0436	14:00	0.0118	0.2247	0.0562	22:00	0.0059	0.1124	0.0281
6:15	0.0092	0.1743	0.0436	14:15	0.0112	0.2124	0.0531	22:15	0.0059	0.1124	0.0281
6:30	0.0092	0.1743	0.0436	14:30	0.0112	0.2124	0.0531	22:30	0.0059	0.1124	0.0281
6:45	0.0105	0.2000	0.0500	14:45	0.0105	0.2000	0.0500	22:45	0.0059	0.1124	0.0281
7:00	0.0105	0.2000	0.0500	15:00	0.0105	0.2000	0.0500	23:00	0.0059	0.1124	0.0281
7:15	0.0118	0.2247	0.0562	15:15	0.0105	0.2000	0.0500	23:15	0.0059	0.1124	0.0281
7:30	0.0118	0.2247	0.0562	15:30	0.0105	0.2000	0.0500	23:30	0.0059	0.1124	0.0281
7:45	0.0111	0.2105	0.0526	15:45	0.0099	0.1876	0.0469	23:45	0.0053	0.1000	0.0250
8:00	0.0111	0.2105	0.0526	16:00	0.0099	0.1876	0.0469	24:00	0.0053	0.1000	0.0250
								TOTAL:	**1.00**		**4.76**

Zone 5, 5-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0053	0.1328	0.0332	8:15	0.0114	0.2871	0.0718	16:15	0.0092	0.2315	0.0579
0:30	0.0053	0.1328	0.0332	8:30	0.0114	0.2871	0.0718	16:30	0.0092	0.2315	0.0579
0:45	0.0059	0.1492	0.0373	8:45	0.0133	0.3352	0.0838	16:45	0.0085	0.2150	0.0538
1:00	0.0059	0.1492	0.0373	9:00	0.0133	0.3352	0.0838	17:00	0.0085	0.2150	0.0538
1:15	0.0059	0.1492	0.0373	9:15	0.0220	0.5552	0.1388	17:15	0.0085	0.2150	0.0538
1:30	0.0059	0.1492	0.0373	9:30	0.0220	0.5552	0.1388	17:30	0.0085	0.2150	0.0538
1:45	0.0059	0.1492	0.0373	9:45	0.0386	0.9775	0.2444	17:45	0.0079	0.1986	0.0496
2:00	0.0059	0.1492	0.0373	10:00	0.0662	1.6745	0.4186	18:00	0.0079	0.1986	0.0496
2:15	0.0066	0.1657	0.0414	10:15	0.0242	0.6120	0.1530	18:15	0.0072	0.1821	0.0455
2:30	0.0066	0.1657	0.0414	10:30	0.0242	0.6120	0.1530	18:30	0.0072	0.1821	0.0455
2:45	0.0066	0.1657	0.0414	10:45	0.0184	0.4654	0.1164	18:45	0.0079	0.1986	0.0496
3:00	0.0066	0.1657	0.0414	11:00	0.0184	0.4654	0.1164	19:00	0.0079	0.1986	0.0496
3:15	0.0066	0.1657	0.0414	11:15	0.0126	0.3187	0.0797	19:15	0.0072	0.1821	0.0455
3:30	0.0066	0.1657	0.0414	11:30	0.0126	0.3187	0.0797	19:30	0.0072	0.1821	0.0455
3:45	0.0072	0.1821	0.0455	11:45	0.0130	0.3288	0.0822	19:45	0.0066	0.1657	0.0414
4:00	0.0072	0.1821	0.0455	12:00	0.0130	0.3288	0.0822	20:00	0.0066	0.1657	0.0414
4:15	0.0072	0.1821	0.0455	12:15	0.0141	0.3554	0.0889	20:15	0.0066	0.1657	0.0414
4:30	0.0072	0.1821	0.0455	12:30	0.0141	0.3554	0.0889	20:30	0.0066	0.1657	0.0414
4:45	0.0079	0.1986	0.0496	12:45	0.0155	0.3908	0.0977	20:45	0.0066	0.1657	0.0414
5:00	0.0079	0.1986	0.0496	13:00	0.0155	0.3908	0.0977	21:00	0.0066	0.1657	0.0414
5:15	0.0085	0.2150	0.0538	13:15	0.0131	0.3314	0.0828	21:15	0.0066	0.1657	0.0414
5:30	0.0085	0.2150	0.0538	13:30	0.0131	0.3314	0.0828	21:30	0.0066	0.1657	0.0414
5:45	0.0092	0.2315	0.0579	13:45	0.0118	0.2985	0.0746	21:45	0.0059	0.1492	0.0373
6:00	0.0092	0.2315	0.0579	14:00	0.0118	0.2985	0.0746	22:00	0.0059	0.1492	0.0373
6:15	0.0092	0.2315	0.0579	14:15	0.0112	0.2821	0.0705	22:15	0.0059	0.1492	0.0373
6:30	0.0092	0.2315	0.0579	14:30	0.0112	0.2821	0.0705	22:30	0.0059	0.1492	0.0373
6:45	0.0105	0.2656	0.0664	14:45	0.0105	0.2656	0.0664	22:45	0.0059	0.1492	0.0373
7:00	0.0105	0.2656	0.0664	15:00	0.0105	0.2656	0.0664	23:00	0.0059	0.1492	0.0373
7:15	0.0118	0.2985	0.0746	15:15	0.0105	0.2656	0.0664	23:15	0.0059	0.1492	0.0373
7:30	0.0118	0.2985	0.0746	15:30	0.0105	0.2656	0.0664	23:30	0.0059	0.1492	0.0373
7:45	0.0111	0.2795	0.0699	15:45	0.0099	0.2492	0.0623	23:45	0.0053	0.1328	0.0332
8:00	0.0111	0.2795	0.0699	16:00	0.0099	0.2492	0.0623	24:00	0.0053	0.1328	0.0332
								TOTAL:	**1.00**		**6.32**

Zone 5, 10-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0053	0.1562	0.0391	8:15	0.0114	0.3378	0.0844	16:15	0.0092	0.2723	0.0681
0:30	0.0053	0.1562	0.0391	8:30	0.0114	0.3378	0.0844	16:30	0.0092	0.2723	0.0681
0:45	0.0059	0.1756	0.0439	8:45	0.0133	0.3943	0.0986	16:45	0.0085	0.2530	0.0632
1:00	0.0059	0.1756	0.0439	9:00	0.0133	0.3943	0.0986	17:00	0.0085	0.2530	0.0632
1:15	0.0059	0.1756	0.0439	9:15	0.0220	0.6532	0.1633	17:15	0.0085	0.2530	0.0632
1:30	0.0059	0.1756	0.0439	9:30	0.0220	0.6532	0.1633	17:30	0.0085	0.2530	0.0632
1:45	0.0059	0.1756	0.0439	9:45	0.0386	1.1500	0.2875	17:45	0.0079	0.2336	0.0584
2:00	0.0059	0.1756	0.0439	10:00	0.0662	1.9700	0.4925	18:00	0.0079	0.2336	0.0584
2:15	0.0066	0.1949	0.0487	10:15	0.0242	0.7200	0.1800	18:15	0.0072	0.2143	0.0536
2:30	0.0066	0.1949	0.0487	10:30	0.0242	0.7200	0.1800	18:30	0.0072	0.2143	0.0536
2:45	0.0066	0.1949	0.0487	10:45	0.0184	0.5476	0.1369	18:45	0.0079	0.2336	0.0584
3:00	0.0066	0.1949	0.0487	11:00	0.0184	0.5476	0.1369	19:00	0.0079	0.2336	0.0584
3:15	0.0066	0.1949	0.0487	11:15	0.0126	0.3750	0.0937	19:15	0.0072	0.2143	0.0536
3:30	0.0066	0.1949	0.0487	11:30	0.0126	0.3750	0.0937	19:30	0.0072	0.2143	0.0536
3:45	0.0072	0.2143	0.0536	11:45	0.0130	0.3869	0.0967	19:45	0.0066	0.1949	0.0487
4:00	0.0072	0.2143	0.0536	12:00	0.0130	0.3869	0.0967	20:00	0.0066	0.1949	0.0487
4:15	0.0072	0.2143	0.0536	12:15	0.0141	0.4181	0.1045	20:15	0.0066	0.1949	0.0487
4:30	0.0072	0.2143	0.0536	12:30	0.0141	0.4181	0.1045	20:30	0.0066	0.1949	0.0487
4:45	0.0079	0.2336	0.0584	12:45	0.0155	0.4598	0.1149	20:45	0.0066	0.1949	0.0487
5:00	0.0079	0.2336	0.0584	13:00	0.0155	0.4598	0.1149	21:00	0.0066	0.1949	0.0487
5:15	0.0085	0.2530	0.0632	13:15	0.0131	0.3899	0.0975	21:15	0.0066	0.1949	0.0487
5:30	0.0085	0.2530	0.0632	13:30	0.0131	0.3899	0.0975	21:30	0.0066	0.1949	0.0487
5:45	0.0092	0.2723	0.0681	13:45	0.0118	0.3512	0.0878	21:45	0.0059	0.1756	0.0439
6:00	0.0092	0.2723	0.0681	14:00	0.0118	0.3512	0.0878	22:00	0.0059	0.1756	0.0439
6:15	0.0092	0.2723	0.0681	14:15	0.0112	0.3318	0.0830	22:15	0.0059	0.1756	0.0439
6:30	0.0092	0.2723	0.0681	14:30	0.0112	0.3318	0.0830	22:30	0.0059	0.1756	0.0439
6:45	0.0105	0.3125	0.0781	14:45	0.0105	0.3125	0.0781	22:45	0.0059	0.1756	0.0439
7:00	0.0105	0.3125	0.0781	15:00	0.0105	0.3125	0.0781	23:00	0.0059	0.1756	0.0439
7:15	0.0118	0.3512	0.0878	15:15	0.0105	0.3125	0.0781	23:15	0.0059	0.1756	0.0439
7:30	0.0118	0.3512	0.0878	15:30	0.0105	0.3125	0.0781	23:30	0.0059	0.1756	0.0439
7:45	0.0111	0.3288	0.0822	15:45	0.0099	0.2931	0.0733	23:45	0.0053	0.1562	0.0391
8:00	0.0111	0.3288	0.0822	16:00	0.0099	0.2931	0.0733	24:00	0.0053	0.1562	0.0391
								TOTAL:	**1.00**		**7.44**

Zone 5, 25-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0053	0.1875	0.0469	8:15	0.0114	0.4053	0.1013	16:15	0.0092	0.3268	0.0817
0:30	0.0053	0.1875	0.0469	8:30	0.0114	0.4053	0.1013	16:30	0.0092	0.3268	0.0817
0:45	0.0059	0.2107	0.0527	8:45	0.0133	0.4732	0.1183	16:45	0.0085	0.3036	0.0759
1:00	0.0059	0.2107	0.0527	9:00	0.0133	0.4732	0.1183	17:00	0.0085	0.3036	0.0759
1:15	0.0059	0.2107	0.0527	9:15	0.0220	0.7839	0.1960	17:15	0.0085	0.3036	0.0759
1:30	0.0059	0.2107	0.0527	9:30	0.0220	0.7839	0.1960	17:30	0.0085	0.3036	0.0759
1:45	0.0059	0.2107	0.0527	9:45	0.0386	1.3800	0.3450	17:45	0.0079	0.2803	0.0701
2:00	0.0059	0.2107	0.0527	10:00	0.0662	2.3640	0.5910	18:00	0.0079	0.2803	0.0701
2:15	0.0066	0.2339	0.0585	10:15	0.0242	0.8640	0.2160	18:15	0.0072	0.2571	0.0643
2:30	0.0066	0.2339	0.0585	10:30	0.0242	0.8640	0.2160	18:30	0.0072	0.2571	0.0643
2:45	0.0066	0.2339	0.0585	10:45	0.0184	0.6571	0.1643	18:45	0.0079	0.2803	0.0701
3:00	0.0066	0.2339	0.0585	11:00	0.0184	0.6571	0.1643	19:00	0.0079	0.2803	0.0701
3:15	0.0066	0.2339	0.0585	11:15	0.0126	0.4500	0.1125	19:15	0.0072	0.2571	0.0643
3:30	0.0066	0.2339	0.0585	11:30	0.0126	0.4500	0.1125	19:30	0.0072	0.2571	0.0643
3:45	0.0072	0.2571	0.0643	11:45	0.0130	0.4643	0.1161	19:45	0.0066	0.2339	0.0585
4:00	0.0072	0.2571	0.0643	12:00	0.0130	0.4643	0.1161	20:00	0.0066	0.2339	0.0585
4:15	0.0072	0.2571	0.0643	12:15	0.0141	0.5018	0.1254	20:15	0.0066	0.2339	0.0585
4:30	0.0072	0.2571	0.0643	12:30	0.0141	0.5018	0.1254	20:30	0.0066	0.2339	0.0585
4:45	0.0079	0.2803	0.0701	12:45	0.0155	0.5518	0.1379	20:45	0.0066	0.2339	0.0585
5:00	0.0079	0.2803	0.0701	13:00	0.0155	0.5518	0.1379	21:00	0.0066	0.2339	0.0585
5:15	0.0085	0.3036	0.0759	13:15	0.0131	0.4678	0.1170	21:15	0.0066	0.2339	0.0585
5:30	0.0085	0.3036	0.0759	13:30	0.0131	0.4678	0.1170	21:30	0.0066	0.2339	0.0585
5:45	0.0092	0.3268	0.0817	13:45	0.0118	0.4214	0.1054	21:45	0.0059	0.2107	0.0527
6:00	0.0092	0.3268	0.0817	14:00	0.0118	0.4214	0.1054	22:00	0.0059	0.2107	0.0527
6:15	0.0092	0.3268	0.0817	14:15	0.0112	0.3982	0.0995	22:15	0.0059	0.2107	0.0527
6:30	0.0092	0.3268	0.0817	14:30	0.0112	0.3982	0.0995	22:30	0.0059	0.2107	0.0527
6:45	0.0105	0.3750	0.0937	14:45	0.0105	0.3750	0.0937	22:45	0.0059	0.2107	0.0527
7:00	0.0105	0.3750	0.0937	15:00	0.0105	0.3750	0.0937	23:00	0.0059	0.2107	0.0527
7:15	0.0118	0.4214	0.1054	15:15	0.0105	0.3750	0.0937	23:15	0.0059	0.2107	0.0527
7:30	0.0118	0.4214	0.1054	15:30	0.0105	0.3750	0.0937	23:30	0.0059	0.2107	0.0527
7:45	0.0111	0.3946	0.0987	15:45	0.0099	0.3518	0.0879	23:45	0.0053	0.1875	0.0469
8:00	0.0111	0.3946	0.0987	16:00	0.0099	0.3518	0.0879	24:00	0.0053	0.1875	0.0469
								TOTAL:	**1.00**		**8.93**

Zone 5, 50-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0053	0.2109	0.0527	8:15	0.0114	0.4560	0.1140	16:15	0.0092	0.3676	0.0919
0:30	0.0053	0.2109	0.0527	8:30	0.0114	0.4560	0.1140	16:30	0.0092	0.3676	0.0919
0:45	0.0059	0.2370	0.0593	8:45	0.0133	0.5323	0.1331	16:45	0.0085	0.3415	0.0854
1:00	0.0059	0.2370	0.0593	9:00	0.0133	0.5323	0.1331	17:00	0.0085	0.3415	0.0854
1:15	0.0059	0.2370	0.0593	9:15	0.0220	0.8819	0.2205	17:15	0.0085	0.3415	0.0854
1:30	0.0059	0.2370	0.0593	9:30	0.0220	0.8819	0.2205	17:30	0.0085	0.3415	0.0854
1:45	0.0059	0.2370	0.0593	9:45	0.0386	1.5525	0.3881	17:45	0.0079	0.3154	0.0788
2:00	0.0059	0.2370	0.0593	10:00	0.0662	2.6595	0.6649	18:00	0.0079	0.3154	0.0788
2:15	0.0066	0.2632	0.0658	10:15	0.0242	0.9720	0.2430	18:15	0.0072	0.2893	0.0723
2:30	0.0066	0.2632	0.0658	10:30	0.0242	0.9720	0.2430	18:30	0.0072	0.2893	0.0723
2:45	0.0066	0.2632	0.0658	10:45	0.0184	0.7392	0.1848	18:45	0.0079	0.3154	0.0788
3:00	0.0066	0.2632	0.0658	11:00	0.0184	0.7392	0.1848	19:00	0.0079	0.3154	0.0788
3:15	0.0066	0.2632	0.0658	11:15	0.0126	0.5062	0.1266	19:15	0.0072	0.2893	0.0723
3:30	0.0066	0.2632	0.0658	11:30	0.0126	0.5062	0.1266	19:30	0.0072	0.2893	0.0723
3:45	0.0072	0.2893	0.0723	11:45	0.0130	0.5223	0.1306	19:45	0.0066	0.2632	0.0658
4:00	0.0072	0.2893	0.0723	12:00	0.0130	0.5223	0.1306	20:00	0.0066	0.2632	0.0658
4:15	0.0072	0.2893	0.0723	12:15	0.0141	0.5645	0.1411	20:15	0.0066	0.2632	0.0658
4:30	0.0072	0.2893	0.0723	12:30	0.0141	0.5645	0.1411	20:30	0.0066	0.2632	0.0658
4:45	0.0079	0.3154	0.0788	12:45	0.0155	0.6207	0.1552	20:45	0.0066	0.2632	0.0658
5:00	0.0079	0.3154	0.0788	13:00	0.0155	0.6207	0.1552	21:00	0.0066	0.2632	0.0658
5:15	0.0085	0.3415	0.0854	13:15	0.0131	0.5263	0.1316	21:15	0.0066	0.2632	0.0658
5:30	0.0085	0.3415	0.0854	13:30	0.0131	0.5263	0.1316	21:30	0.0066	0.2632	0.0658
5:45	0.0092	0.3676	0.0919	13:45	0.0118	0.4741	0.1185	21:45	0.0059	0.2370	0.0593
6:00	0.0092	0.3676	0.0919	14:00	0.0118	0.4741	0.1185	22:00	0.0059	0.2370	0.0593
6:15	0.0092	0.3676	0.0919	14:15	0.0112	0.4480	0.1120	22:15	0.0059	0.2370	0.0593
6:30	0.0092	0.3676	0.0919	14:30	0.0112	0.4480	0.1120	22:30	0.0059	0.2370	0.0593
6:45	0.0105	0.4218	0.1055	14:45	0.0105	0.4218	0.1055	22:45	0.0059	0.2370	0.0593
7:00	0.0105	0.4218	0.1055	15:00	0.0105	0.4218	0.1055	23:00	0.0059	0.2370	0.0593
7:15	0.0118	0.4741	0.1185	15:15	0.0105	0.4218	0.1055	23:15	0.0059	0.2370	0.0593
7:30	0.0118	0.4741	0.1185	15:30	0.0105	0.4218	0.1055	23:30	0.0059	0.2370	0.0593
7:45	0.0111	0.4439	0.1110	15:45	0.0099	0.3957	0.0989	23:45	0.0053	0.2109	0.0527
8:00	0.0111	0.4439	0.1110	16:00	0.0099	0.3957	0.0989	24:00	0.0053	0.2109	0.0527
								TOTAL:	**1.00**		**10.04**

Zone 5, 100-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0053	0.2344	0.0586	8:15	0.0114	0.5067	0.1267	16:15	0.0092	0.4085	0.1021
0:30	0.0053	0.2344	0.0586	8:30	0.0114	0.5067	0.1267	16:30	0.0092	0.4085	0.1021
0:45	0.0059	0.2634	0.0658	8:45	0.0133	0.5915	0.1479	16:45	0.0085	0.3794	0.0949
1:00	0.0059	0.2634	0.0658	9:00	0.0133	0.5915	0.1479	17:00	0.0085	0.3794	0.0949
1:15	0.0059	0.2634	0.0658	9:15	0.0220	0.9798	0.2450	17:15	0.0085	0.3794	0.0949
1:30	0.0059	0.2634	0.0658	9:30	0.0220	0.9798	0.2450	17:30	0.0085	0.3794	0.0949
1:45	0.0059	0.2634	0.0658	9:45	0.0386	1.7250	0.4313	17:45	0.0079	0.3504	0.0876
2:00	0.0059	0.2634	0.0658	10:00	0.0662	2.9550	0.7388	18:00	0.0079	0.3504	0.0876
2:15	0.0066	0.2924	0.0731	10:15	0.0242	1.0800	0.2700	18:15	0.0072	0.3214	0.0804
2:30	0.0066	0.2924	0.0731	10:30	0.0242	1.0800	0.2700	18:30	0.0072	0.3214	0.0804
2:45	0.0066	0.2924	0.0731	10:45	0.0184	0.8214	0.2053	18:45	0.0079	0.3504	0.0876
3:00	0.0066	0.2924	0.0731	11:00	0.0184	0.8214	0.2053	19:00	0.0079	0.3504	0.0876
3:15	0.0066	0.2924	0.0731	11:15	0.0126	0.5625	0.1406	19:15	0.0072	0.3214	0.0804
3:30	0.0066	0.2924	0.0731	11:30	0.0126	0.5625	0.1406	19:30	0.0072	0.3214	0.0804
3:45	0.0072	0.3214	0.0804	11:45	0.0130	0.5803	0.1451	19:45	0.0066	0.2924	0.0731
4:00	0.0072	0.3214	0.0804	12:00	0.0130	0.5803	0.1451	20:00	0.0066	0.2924	0.0731
4:15	0.0072	0.3214	0.0804	12:15	0.0141	0.6272	0.1568	20:15	0.0066	0.2924	0.0731
4:30	0.0072	0.3214	0.0804	12:30	0.0141	0.6272	0.1568	20:30	0.0066	0.2924	0.0731
4:45	0.0079	0.3504	0.0876	12:45	0.0155	0.6897	0.1724	20:45	0.0066	0.2924	0.0731
5:00	0.0079	0.3504	0.0876	13:00	0.0155	0.6897	0.1724	21:00	0.0066	0.2924	0.0731
5:15	0.0085	0.3794	0.0949	13:15	0.0131	0.5848	0.1462	21:15	0.0066	0.2924	0.0731
5:30	0.0085	0.3794	0.0949	13:30	0.0131	0.5848	0.1462	21:30	0.0066	0.2924	0.0731
5:45	0.0092	0.4085	0.1021	13:45	0.0118	0.5268	0.1317	21:45	0.0059	0.2634	0.0658
6:00	0.0092	0.4085	0.1021	14:00	0.0118	0.5268	0.1317	22:00	0.0059	0.2634	0.0658
6:15	0.0092	0.4085	0.1021	14:15	0.0112	0.4977	0.1244	22:15	0.0059	0.2634	0.0658
6:30	0.0092	0.4085	0.1021	14:30	0.0112	0.4977	0.1244	22:30	0.0059	0.2634	0.0658
6:45	0.0105	0.4687	0.1172	14:45	0.0105	0.4687	0.1172	22:45	0.0059	0.2634	0.0658
7:00	0.0105	0.4687	0.1172	15:00	0.0105	0.4687	0.1172	23:00	0.0059	0.2634	0.0658
7:15	0.0118	0.5268	0.1317	15:15	0.0105	0.4687	0.1172	23:15	0.0059	0.2634	0.0658
7:30	0.0118	0.5268	0.1317	15:30	0.0105	0.4687	0.1172	23:30	0.0059	0.2634	0.0658
7:45	0.0111	0.4933	0.1233	15:45	0.0099	0.4397	0.1099	23:45	0.0053	0.2344	0.0586
8:00	0.0111	0.4933	0.1233	16:00	0.0099	0.4397	0.1099	24:00	0.0053	0.2344	0.0586
								TOTAL:	**1.00**		**11.16**

Zone 6, 85th Percentile Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0051	0.0621	0.0155	8:15	0.0111	0.1346	0.0336	16:15	0.0090	0.1090	0.0272
0:30	0.0051	0.0621	0.0155	8:30	0.0111	0.1346	0.0336	16:30	0.0090	0.1090	0.0272
0:45	0.0058	0.0700	0.0175	8:45	0.0130	0.1577	0.0394	16:45	0.0083	0.1011	0.0253
1:00	0.0058	0.0700	0.0175	9:00	0.0130	0.1577	0.0394	17:00	0.0083	0.1011	0.0253
1:15	0.0058	0.0700	0.0175	9:15	0.0203	0.2472	0.0618	17:15	0.0083	0.1011	0.0253
1:30	0.0058	0.0700	0.0175	9:30	0.0203	0.2472	0.0618	17:30	0.0083	0.1011	0.0253
1:45	0.0058	0.0700	0.0175	9:45	0.0373	0.4546	0.1136	17:45	0.0077	0.0932	0.0233
2:00	0.0058	0.0700	0.0175	10:00	0.0773	0.9409	0.2352	18:00	0.0077	0.0932	0.0233
2:15	0.0064	0.0779	0.0195	10:15	0.0234	0.2854	0.0714	18:15	0.0070	0.0852	0.0213
2:30	0.0064	0.0779	0.0195	10:30	0.0234	0.2854	0.0714	18:30	0.0070	0.0852	0.0213
2:45	0.0064	0.0779	0.0195	10:45	0.0170	0.2070	0.0518	18:45	0.0077	0.0932	0.0233
3:00	0.0064	0.0779	0.0195	11:00	0.0170	0.2070	0.0518	19:00	0.0077	0.0932	0.0233
3:15	0.0064	0.0779	0.0195	11:15	0.0143	0.1741	0.0435	19:15	0.0070	0.0852	0.0213
3:30	0.0064	0.0779	0.0195	11:30	0.0143	0.1741	0.0435	19:30	0.0070	0.0852	0.0213
3:45	0.0070	0.0852	0.0213	11:45	0.0148	0.1796	0.0449	19:45	0.0064	0.0779	0.0195
4:00	0.0070	0.0852	0.0213	12:00	0.0148	0.1796	0.0449	20:00	0.0064	0.0779	0.0195
4:15	0.0070	0.0852	0.0213	12:15	0.0160	0.1942	0.0486	20:15	0.0064	0.0779	0.0195
4:30	0.0070	0.0852	0.0213	12:30	0.0160	0.1942	0.0486	20:30	0.0064	0.0779	0.0195
4:45	0.0077	0.0932	0.0233	12:45	0.0176	0.2137	0.0534	20:45	0.0064	0.0779	0.0195
5:00	0.0077	0.0932	0.0233	13:00	0.0176	0.2137	0.0534	21:00	0.0064	0.0779	0.0195
5:15	0.0083	0.1011	0.0253	13:15	0.0128	0.1553	0.0388	21:15	0.0064	0.0779	0.0195
5:30	0.0083	0.1011	0.0253	13:30	0.0128	0.1553	0.0388	21:30	0.0064	0.0779	0.0195
5:45	0.0090	0.1090	0.0272	13:45	0.0115	0.1401	0.0350	21:45	0.0058	0.0700	0.0175
6:00	0.0090	0.1090	0.0272	14:00	0.0115	0.1401	0.0350	22:00	0.0058	0.0700	0.0175
6:15	0.0090	0.1090	0.0272	14:15	0.0109	0.1321	0.0330	22:15	0.0058	0.0700	0.0175
6:30	0.0090	0.1090	0.0272	14:30	0.0109	0.1321	0.0330	22:30	0.0058	0.0700	0.0175
6:45	0.0102	0.1242	0.0311	14:45	0.0102	0.1242	0.0311	22:45	0.0058	0.0700	0.0175
7:00	0.0102	0.1242	0.0311	15:00	0.0102	0.1242	0.0311	23:00	0.0058	0.0700	0.0175
7:15	0.0115	0.1401	0.0350	15:15	0.0102	0.1242	0.0311	23:15	0.0058	0.0700	0.0175
7:30	0.0115	0.1401	0.0350	15:30	0.0102	0.1242	0.0311	23:30	0.0058	0.0700	0.0175
7:45	0.0108	0.1315	0.0329	15:45	0.0096	0.1163	0.0291	23:45	0.0051	0.0621	0.0155
8:00	0.0108	0.1315	0.0329	16:00	0.0096	0.1163	0.0291	24:00	0.0051	0.0621	0.0155
								TOTAL:	**1.00**		**3.05**

Zone 6, 2-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0051	0.0752	0.0188	8:15	0.0111	0.1629	0.0407	16:15	0.0090	0.1320	0.0330
0:30	0.0051	0.0752	0.0188	8:30	0.0111	0.1629	0.0407	16:30	0.0090	0.1320	0.0330
0:45	0.0058	0.0848	0.0212	8:45	0.0130	0.1910	0.0477	16:45	0.0083	0.1224	0.0306
1:00	0.0058	0.0848	0.0212	9:00	0.0130	0.1910	0.0477	17:00	0.0083	0.1224	0.0306
1:15	0.0058	0.0848	0.0212	9:15	0.0203	0.2993	0.0748	17:15	0.0083	0.1224	0.0306
1:30	0.0058	0.0848	0.0212	9:30	0.0203	0.2993	0.0748	17:30	0.0083	0.1224	0.0306
1:45	0.0058	0.0848	0.0212	9:45	0.0373	0.5504	0.1376	17:45	0.0077	0.1128	0.0282
2:00	0.0058	0.0848	0.0212	10:00	0.0773	1.1392	0.2848	18:00	0.0077	0.1128	0.0282
2:15	0.0064	0.0944	0.0236	10:15	0.0234	0.3456	0.0864	18:15	0.0070	0.1032	0.0258
2:30	0.0064	0.0944	0.0236	10:30	0.0234	0.3456	0.0864	18:30	0.0070	0.1032	0.0258
2:45	0.0064	0.0944	0.0236	10:45	0.0170	0.2507	0.0627	18:45	0.0077	0.1128	0.0282
3:00	0.0064	0.0944	0.0236	11:00	0.0170	0.2507	0.0627	19:00	0.0077	0.1128	0.0282
3:15	0.0064	0.0944	0.0236	11:15	0.0143	0.2109	0.0527	19:15	0.0070	0.1032	0.0258
3:30	0.0064	0.0944	0.0236	11:30	0.0143	0.2109	0.0527	19:30	0.0070	0.1032	0.0258
3:45	0.0070	0.1032	0.0258	11:45	0.0148	0.2175	0.0544	19:45	0.0064	0.0944	0.0236
4:00	0.0070	0.1032	0.0258	12:00	0.0148	0.2175	0.0544	20:00	0.0064	0.0944	0.0236
4:15	0.0070	0.1032	0.0258	12:15	0.0160	0.2352	0.0588	20:15	0.0064	0.0944	0.0236
4:30	0.0070	0.1032	0.0258	12:30	0.0160	0.2352	0.0588	20:30	0.0064	0.0944	0.0236
4:45	0.0077	0.1128	0.0282	12:45	0.0176	0.2588	0.0647	20:45	0.0064	0.0944	0.0236
5:00	0.0077	0.1128	0.0282	13:00	0.0176	0.2588	0.0647	21:00	0.0064	0.0944	0.0236
5:15	0.0083	0.1224	0.0306	13:15	0.0128	0.1880	0.0470	21:15	0.0064	0.0944	0.0236
5:30	0.0083	0.1224	0.0306	13:30	0.0128	0.1880	0.0470	21:30	0.0064	0.0944	0.0236
5:45	0.0090	0.1320	0.0330	13:45	0.0115	0.1696	0.0424	21:45	0.0058	0.0848	0.0212
6:00	0.0090	0.1320	0.0330	14:00	0.0115	0.1696	0.0424	22:00	0.0058	0.0848	0.0212
6:15	0.0090	0.1320	0.0330	14:15	0.0109	0.1600	0.0400	22:15	0.0058	0.0848	0.0212
6:30	0.0090	0.1320	0.0330	14:30	0.0109	0.1600	0.0400	22:30	0.0058	0.0848	0.0212
6:45	0.0102	0.1504	0.0376	14:45	0.0102	0.1504	0.0376	22:45	0.0058	0.0848	0.0212
7:00	0.0102	0.1504	0.0376	15:00	0.0102	0.1504	0.0376	23:00	0.0058	0.0848	0.0212
7:15	0.0115	0.1696	0.0424	15:15	0.0102	0.1504	0.0376	23:15	0.0058	0.0848	0.0212
7:30	0.0115	0.1696	0.0424	15:30	0.0102	0.1504	0.0376	23:30	0.0058	0.0848	0.0212
7:45	0.0108	0.1593	0.0398	15:45	0.0096	0.1408	0.0352	23:45	0.0051	0.0752	0.0188
8:00	0.0108	0.1593	0.0398	16:00	0.0096	0.1408	0.0352	24:00	0.0051	0.0752	0.0188
								TOTAL:	**1.00**		**3.69**

Zone 6, 5-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0051	0.0999	0.0250	8:15	0.0111	0.2164	0.0541	16:15	0.0090	0.1753	0.0438
0:30	0.0051	0.0999	0.0250	8:30	0.0111	0.2164	0.0541	16:30	0.0090	0.1753	0.0438
0:45	0.0058	0.1126	0.0282	8:45	0.0130	0.2536	0.0634	16:45	0.0083	0.1625	0.0406
1:00	0.0058	0.1126	0.0282	9:00	0.0130	0.2536	0.0634	17:00	0.0083	0.1625	0.0406
1:15	0.0058	0.1126	0.0282	9:15	0.0203	0.3976	0.0994	17:15	0.0083	0.1625	0.0406
1:30	0.0058	0.1126	0.0282	9:30	0.0203	0.3976	0.0994	17:30	0.0083	0.1625	0.0406
1:45	0.0058	0.1126	0.0282	9:45	0.0373	0.7310	0.1828	17:45	0.0077	0.1498	0.0375
2:00	0.0058	0.1126	0.0282	10:00	0.0773	1.5130	0.3783	18:00	0.0077	0.1498	0.0375
2:15	0.0064	0.1253	0.0313	10:15	0.0234	0.4590	0.1148	18:15	0.0070	0.1371	0.0343
2:30	0.0064	0.1253	0.0313	10:30	0.0234	0.4590	0.1148	18:30	0.0070	0.1371	0.0343
2:45	0.0064	0.1253	0.0313	10:45	0.0170	0.3329	0.0832	18:45	0.0077	0.1498	0.0375
3:00	0.0064	0.1253	0.0313	11:00	0.0170	0.3329	0.0832	19:00	0.0077	0.1498	0.0375
3:15	0.0064	0.1253	0.0313	11:15	0.0143	0.2801	0.0700	19:15	0.0070	0.1371	0.0343
3:30	0.0064	0.1253	0.0313	11:30	0.0143	0.2801	0.0700	19:30	0.0070	0.1371	0.0343
3:45	0.0070	0.1371	0.0343	11:45	0.0148	0.2889	0.0722	19:45	0.0064	0.1253	0.0313
4:00	0.0070	0.1371	0.0343	12:00	0.0148	0.2889	0.0722	20:00	0.0064	0.1253	0.0313
4:15	0.0070	0.1371	0.0343	12:15	0.0160	0.3124	0.0781	20:15	0.0064	0.1253	0.0313
4:30	0.0070	0.1371	0.0343	12:30	0.0160	0.3124	0.0781	20:30	0.0064	0.1253	0.0313
4:45	0.0077	0.1498	0.0375	12:45	0.0176	0.3437	0.0859	20:45	0.0064	0.1253	0.0313
5:00	0.0077	0.1498	0.0375	13:00	0.0176	0.3437	0.0859	21:00	0.0064	0.1253	0.0313
5:15	0.0083	0.1625	0.0406	13:15	0.0128	0.2497	0.0624	21:15	0.0064	0.1253	0.0313
5:30	0.0083	0.1625	0.0406	13:30	0.0128	0.2497	0.0624	21:30	0.0064	0.1253	0.0313
5:45	0.0090	0.1753	0.0438	13:45	0.0115	0.2252	0.0563	21:45	0.0058	0.1126	0.0282
6:00	0.0090	0.1753	0.0438	14:00	0.0115	0.2252	0.0563	22:00	0.0058	0.1126	0.0282
6:15	0.0090	0.1753	0.0438	14:15	0.0109	0.2125	0.0531	22:15	0.0058	0.1126	0.0282
6:30	0.0090	0.1753	0.0438	14:30	0.0109	0.2125	0.0531	22:30	0.0058	0.1126	0.0282
6:45	0.0102	0.1998	0.0499	14:45	0.0102	0.1998	0.0499	22:45	0.0058	0.1126	0.0282
7:00	0.0102	0.1998	0.0499	15:00	0.0102	0.1998	0.0499	23:00	0.0058	0.1126	0.0282
7:15	0.0115	0.2252	0.0563	15:15	0.0102	0.1998	0.0499	23:15	0.0058	0.1126	0.0282
7:30	0.0115	0.2252	0.0563	15:30	0.0102	0.1998	0.0499	23:30	0.0058	0.1126	0.0282
7:45	0.0108	0.2115	0.0529	15:45	0.0096	0.1870	0.0468	23:45	0.0051	0.0999	0.0250
8:00	0.0108	0.2115	0.0529	16:00	0.0096	0.1870	0.0468	24:00	0.0051	0.0999	0.0250
								TOTAL:	**1.00**		**4.90**

Zone 6, 10-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0051	0.1175	0.0294	8:15	0.0111	0.2546	0.0636	16:15	0.0090	0.2062	0.0516
0:30	0.0051	0.1175	0.0294	8:30	0.0111	0.2546	0.0636	16:30	0.0090	0.2062	0.0516
0:45	0.0058	0.1325	0.0331	8:45	0.0130	0.2984	0.0746	16:45	0.0083	0.1912	0.0478
1:00	0.0058	0.1325	0.0331	9:00	0.0130	0.2984	0.0746	17:00	0.0083	0.1912	0.0478
1:15	0.0058	0.1325	0.0331	9:15	0.0203	0.4677	0.1169	17:15	0.0083	0.1912	0.0478
1:30	0.0058	0.1325	0.0331	9:30	0.0203	0.4677	0.1169	17:30	0.0083	0.1912	0.0478
1:45	0.0058	0.1325	0.0331	9:45	0.0373	0.8600	0.2150	17:45	0.0077	0.1763	0.0441
2:00	0.0058	0.1325	0.0331	10:00	0.0773	1.7800	0.4450	18:00	0.0077	0.1763	0.0441
2:15	0.0064	0.1475	0.0369	10:15	0.0234	0.5400	0.1350	18:15	0.0070	0.1613	0.0403
2:30	0.0064	0.1475	0.0369	10:30	0.0234	0.5400	0.1350	18:30	0.0070	0.1613	0.0403
2:45	0.0064	0.1475	0.0369	10:45	0.0170	0.3917	0.0979	18:45	0.0077	0.1763	0.0441
3:00	0.0064	0.1475	0.0369	11:00	0.0170	0.3917	0.0979	19:00	0.0077	0.1763	0.0441
3:15	0.0064	0.1475	0.0369	11:15	0.0143	0.3295	0.0824	19:15	0.0070	0.1613	0.0403
3:30	0.0064	0.1475	0.0369	11:30	0.0143	0.3295	0.0824	19:30	0.0070	0.1613	0.0403
3:45	0.0070	0.1613	0.0403	11:45	0.0148	0.3398	0.0850	19:45	0.0064	0.1475	0.0369
4:00	0.0070	0.1613	0.0403	12:00	0.0148	0.3398	0.0850	20:00	0.0064	0.1475	0.0369
4:15	0.0070	0.1613	0.0403	12:15	0.0160	0.3675	0.0919	20:15	0.0064	0.1475	0.0369
4:30	0.0070	0.1613	0.0403	12:30	0.0160	0.3675	0.0919	20:30	0.0064	0.1475	0.0369
4:45	0.0077	0.1763	0.0441	12:45	0.0176	0.4044	0.1011	20:45	0.0064	0.1475	0.0369
5:00	0.0077	0.1763	0.0441	13:00	0.0176	0.4044	0.1011	21:00	0.0064	0.1475	0.0369
5:15	0.0083	0.1912	0.0478	13:15	0.0128	0.2938	0.0734	21:15	0.0064	0.1475	0.0369
5:30	0.0083	0.1912	0.0478	13:30	0.0128	0.2938	0.0734	21:30	0.0064	0.1475	0.0369
5:45	0.0090	0.2062	0.0516	13:45	0.0115	0.2650	0.0662	21:45	0.0058	0.1325	0.0331
6:00	0.0090	0.2062	0.0516	14:00	0.0115	0.2650	0.0662	22:00	0.0058	0.1325	0.0331
6:15	0.0090	0.2062	0.0516	14:15	0.0109	0.2500	0.0625	22:15	0.0058	0.1325	0.0331
6:30	0.0090	0.2062	0.0516	14:30	0.0109	0.2500	0.0625	22:30	0.0058	0.1325	0.0331
6:45	0.0102	0.2350	0.0588	14:45	0.0102	0.2350	0.0588	22:45	0.0058	0.1325	0.0331
7:00	0.0102	0.2350	0.0588	15:00	0.0102	0.2350	0.0588	23:00	0.0058	0.1325	0.0331
7:15	0.0115	0.2650	0.0662	15:15	0.0102	0.2350	0.0588	23:15	0.0058	0.1325	0.0331
7:30	0.0115	0.2650	0.0662	15:30	0.0102	0.2350	0.0588	23:30	0.0058	0.1325	0.0331
7:45	0.0108	0.2488	0.0622	15:45	0.0096	0.2200	0.0550	23:45	0.0051	0.1175	0.0294
8:00	0.0108	0.2488	0.0622	16:00	0.0096	0.2200	0.0550	24:00	0.0051	0.1175	0.0294
								TOTAL:	**1.00**		**5.76**

Zone 6, 25-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0051	0.1410	0.0353	8:15	0.0111	0.3055	0.0764	16:15	0.0090	0.2474	0.0619
0:30	0.0051	0.1410	0.0353	8:30	0.0111	0.3055	0.0764	16:30	0.0090	0.2474	0.0619
0:45	0.0058	0.1590	0.0397	8:45	0.0130	0.3580	0.0895	16:45	0.0083	0.2295	0.0574
1:00	0.0058	0.1590	0.0397	9:00	0.0130	0.3580	0.0895	17:00	0.0083	0.2295	0.0574
1:15	0.0058	0.1590	0.0397	9:15	0.0203	0.5613	0.1403	17:15	0.0083	0.2295	0.0574
1:30	0.0058	0.1590	0.0397	9:30	0.0203	0.5613	0.1403	17:30	0.0083	0.2295	0.0574
1:45	0.0058	0.1590	0.0397	9:45	0.0373	1.0320	0.2580	17:45	0.0077	0.2115	0.0529
2:00	0.0058	0.1590	0.0397	10:00	0.0773	2.1360	0.5340	18:00	0.0077	0.2115	0.0529
2:15	0.0064	0.1769	0.0442	10:15	0.0234	0.6480	0.1620	18:15	0.0070	0.1935	0.0484
2:30	0.0064	0.1769	0.0442	10:30	0.0234	0.6480	0.1620	18:30	0.0070	0.1935	0.0484
2:45	0.0064	0.1769	0.0442	10:45	0.0170	0.4700	0.1175	18:45	0.0077	0.2115	0.0529
3:00	0.0064	0.1769	0.0442	11:00	0.0170	0.4700	0.1175	19:00	0.0077	0.2115	0.0529
3:15	0.0064	0.1769	0.0442	11:15	0.0143	0.3954	0.0988	19:15	0.0070	0.1935	0.0484
3:30	0.0064	0.1769	0.0442	11:30	0.0143	0.3954	0.0988	19:30	0.0070	0.1935	0.0484
3:45	0.0070	0.1935	0.0484	11:45	0.0148	0.4078	0.1020	19:45	0.0064	0.1769	0.0442
4:00	0.0070	0.1935	0.0484	12:00	0.0148	0.4078	0.1020	20:00	0.0064	0.1769	0.0442
4:15	0.0070	0.1935	0.0484	12:15	0.0160	0.4410	0.1102	20:15	0.0064	0.1769	0.0442
4:30	0.0070	0.1935	0.0484	12:30	0.0160	0.4410	0.1102	20:30	0.0064	0.1769	0.0442
4:45	0.0077	0.2115	0.0529	12:45	0.0176	0.4852	0.1213	20:45	0.0064	0.1769	0.0442
5:00	0.0077	0.2115	0.0529	13:00	0.0176	0.4852	0.1213	21:00	0.0064	0.1769	0.0442
5:15	0.0083	0.2295	0.0574	13:15	0.0128	0.3525	0.0881	21:15	0.0064	0.1769	0.0442
5:30	0.0083	0.2295	0.0574	13:30	0.0128	0.3525	0.0881	21:30	0.0064	0.1769	0.0442
5:45	0.0090	0.2474	0.0619	13:45	0.0115	0.3180	0.0795	21:45	0.0058	0.1590	0.0397
6:00	0.0090	0.2474	0.0619	14:00	0.0115	0.3180	0.0795	22:00	0.0058	0.1590	0.0397
6:15	0.0090	0.2474	0.0619	14:15	0.0109	0.3000	0.0750	22:15	0.0058	0.1590	0.0397
6:30	0.0090	0.2474	0.0619	14:30	0.0109	0.3000	0.0750	22:30	0.0058	0.1590	0.0397
6:45	0.0102	0.2820	0.0705	14:45	0.0102	0.2820	0.0705	22:45	0.0058	0.1590	0.0397
7:00	0.0102	0.2820	0.0705	15:00	0.0102	0.2820	0.0705	23:00	0.0058	0.1590	0.0397
7:15	0.0115	0.3180	0.0795	15:15	0.0102	0.2820	0.0705	23:15	0.0058	0.1590	0.0397
7:30	0.0115	0.3180	0.0795	15:30	0.0102	0.2820	0.0705	23:30	0.0058	0.1590	0.0397
7:45	0.0108	0.2986	0.0746	15:45	0.0096	0.2640	0.0660	23:45	0.0051	0.1410	0.0353
8:00	0.0108	0.2986	0.0746	16:00	0.0096	0.2640	0.0660	24:00	0.0051	0.1410	0.0353
								TOTAL:	**1.00**		**6.91**

Zone 6, 50-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0051	0.1586	0.0397	8:15	0.0111	0.3437	0.0859	16:15	0.0090	0.2784	0.0696
0:30	0.0051	0.1586	0.0397	8:30	0.0111	0.3437	0.0859	16:30	0.0090	0.2784	0.0696
0:45	0.0058	0.1788	0.0447	8:45	0.0130	0.4028	0.1007	16:45	0.0083	0.2582	0.0645
1:00	0.0058	0.1788	0.0447	9:00	0.0130	0.4028	0.1007	17:00	0.0083	0.2582	0.0645
1:15	0.0058	0.1788	0.0447	9:15	0.0203	0.6314	0.1579	17:15	0.0083	0.2582	0.0645
1:30	0.0058	0.1788	0.0447	9:30	0.0203	0.6314	0.1579	17:30	0.0083	0.2582	0.0645
1:45	0.0058	0.1788	0.0447	9:45	0.0373	1.1610	0.2903	17:45	0.0077	0.2379	0.0595
2:00	0.0058	0.1788	0.0447	10:00	0.0773	2.4030	0.6008	18:00	0.0077	0.2379	0.0595
2:15	0.0064	0.1991	0.0498	10:15	0.0234	0.7290	0.1823	18:15	0.0070	0.2177	0.0544
2:30	0.0064	0.1991	0.0498	10:30	0.0234	0.7290	0.1823	18:30	0.0070	0.2177	0.0544
2:45	0.0064	0.1991	0.0498	10:45	0.0170	0.5288	0.1322	18:45	0.0077	0.2379	0.0595
3:00	0.0064	0.1991	0.0498	11:00	0.0170	0.5288	0.1322	19:00	0.0077	0.2379	0.0595
3:15	0.0064	0.1991	0.0498	11:15	0.0143	0.4448	0.1112	19:15	0.0070	0.2177	0.0544
3:30	0.0064	0.1991	0.0498	11:30	0.0143	0.4448	0.1112	19:30	0.0070	0.2177	0.0544
3:45	0.0070	0.2177	0.0544	11:45	0.0148	0.4588	0.1147	19:45	0.0064	0.1991	0.0498
4:00	0.0070	0.2177	0.0544	12:00	0.0148	0.4588	0.1147	20:00	0.0064	0.1991	0.0498
4:15	0.0070	0.2177	0.0544	12:15	0.0160	0.4961	0.1240	20:15	0.0064	0.1991	0.0498
4:30	0.0070	0.2177	0.0544	12:30	0.0160	0.4961	0.1240	20:30	0.0064	0.1991	0.0498
4:45	0.0077	0.2379	0.0595	12:45	0.0176	0.5459	0.1365	20:45	0.0064	0.1991	0.0498
5:00	0.0077	0.2379	0.0595	13:00	0.0176	0.5459	0.1365	21:00	0.0064	0.1991	0.0498
5:15	0.0083	0.2582	0.0645	13:15	0.0128	0.3966	0.0991	21:15	0.0064	0.1991	0.0498
5:30	0.0083	0.2582	0.0645	13:30	0.0128	0.3966	0.0991	21:30	0.0064	0.1991	0.0498
5:45	0.0090	0.2784	0.0696	13:45	0.0115	0.3577	0.0894	21:45	0.0058	0.1788	0.0447
6:00	0.0090	0.2784	0.0696	14:00	0.0115	0.3577	0.0894	22:00	0.0058	0.1788	0.0447
6:15	0.0090	0.2784	0.0696	14:15	0.0109	0.3375	0.0844	22:15	0.0058	0.1788	0.0447
6:30	0.0090	0.2784	0.0696	14:30	0.0109	0.3375	0.0844	22:30	0.0058	0.1788	0.0447
6:45	0.0102	0.3173	0.0793	14:45	0.0102	0.3173	0.0793	22:45	0.0058	0.1788	0.0447
7:00	0.0102	0.3173	0.0793	15:00	0.0102	0.3173	0.0793	23:00	0.0058	0.1788	0.0447
7:15	0.0115	0.3577	0.0894	15:15	0.0102	0.3173	0.0793	23:15	0.0058	0.1788	0.0447
7:30	0.0115	0.3577	0.0894	15:30	0.0102	0.3173	0.0793	23:30	0.0058	0.1788	0.0447
7:45	0.0108	0.3359	0.0840	15:45	0.0096	0.2970	0.0743	23:45	0.0051	0.1586	0.0397
8:00	0.0108	0.3359	0.0840	16:00	0.0096	0.2970	0.0743	24:00	0.0051	0.1586	0.0397
								TOTAL:	**1.00**		**7.78**

Zone 6, 100-Year Balanced Storm											
Time	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**	**Time**	**Unitless Rainfall (%/15 min)**	**15-Minute Intensity (in/hr)**	**Actual Rainfall (in/15 min)**
0:15	0.0051	0.1763	0.0441	8:15	0.0111	0.3819	0.0955	16:15	0.0090	0.3093	0.0773
0:30	0.0051	0.1763	0.0441	8:30	0.0111	0.3819	0.0955	16:30	0.0090	0.3093	0.0773
0:45	0.0058	0.1987	0.0497	8:45	0.0130	0.4476	0.1119	16:45	0.0083	0.2868	0.0717
1:00	0.0058	0.1987	0.0497	9:00	0.0130	0.4476	0.1119	17:00	0.0083	0.2868	0.0717
1:15	0.0058	0.1987	0.0497	9:15	0.0203	0.7016	0.1754	17:15	0.0083	0.2868	0.0717
1:30	0.0058	0.1987	0.0497	9:30	0.0203	0.7016	0.1754	17:30	0.0083	0.2868	0.0717
1:45	0.0058	0.1987	0.0497	9:45	0.0373	1.2900	0.3225	17:45	0.0077	0.2644	0.0661
2:00	0.0058	0.1987	0.0497	10:00	0.0773	2.6700	0.6675	18:00	0.0077	0.2644	0.0661
2:15	0.0064	0.2212	0.0553	10:15	0.0234	0.8100	0.2025	18:15	0.0070	0.2419	0.0605
2:30	0.0064	0.2212	0.0553	10:30	0.0234	0.8100	0.2025	18:30	0.0070	0.2419	0.0605
2:45	0.0064	0.2212	0.0553	10:45	0.0170	0.5875	0.1469	18:45	0.0077	0.2644	0.0661
3:00	0.0064	0.2212	0.0553	11:00	0.0170	0.5875	0.1469	19:00	0.0077	0.2644	0.0661
3:15	0.0064	0.2212	0.0553	11:15	0.0143	0.4942	0.1236	19:15	0.0070	0.2419	0.0605
3:30	0.0064	0.2212	0.0553	11:30	0.0143	0.4942	0.1236	19:30	0.0070	0.2419	0.0605
3:45	0.0070	0.2419	0.0605	11:45	0.0148	0.5098	0.1274	19:45	0.0064	0.2212	0.0553
4:00	0.0070	0.2419	0.0605	12:00	0.0148	0.5098	0.1274	20:00	0.0064	0.2212	0.0553
4:15	0.0070	0.2419	0.0605	12:15	0.0160	0.5512	0.1378	20:15	0.0064	0.2212	0.0553
4:30	0.0070	0.2419	0.0605	12:30	0.0160	0.5512	0.1378	20:30	0.0064	0.2212	0.0553
4:45	0.0077	0.2644	0.0661	12:45	0.0176	0.6065	0.1516	20:45	0.0064	0.2212	0.0553
5:00	0.0077	0.2644	0.0661	13:00	0.0176	0.6065	0.1516	21:00	0.0064	0.2212	0.0553
5:15	0.0083	0.2868	0.0717	13:15	0.0128	0.4406	0.1102	21:15	0.0064	0.2212	0.0553
5:30	0.0083	0.2868	0.0717	13:30	0.0128	0.4406	0.1102	21:30	0.0064	0.2212	0.0553
5:45	0.0090	0.3093	0.0773	13:45	0.0115	0.3974	0.0994	21:45	0.0058	0.1987	0.0497
6:00	0.0090	0.3093	0.0773	14:00	0.0115	0.3974	0.0994	22:00	0.0058	0.1987	0.0497
6:15	0.0090	0.3093	0.0773	14:15	0.0109	0.3750	0.0937	22:15	0.0058	0.1987	0.0497
6:30	0.0090	0.3093	0.0773	14:30	0.0109	0.3750	0.0937	22:30	0.0058	0.1987	0.0497
6:45	0.0102	0.3525	0.0881	14:45	0.0102	0.3525	0.0881	22:45	0.0058	0.1987	0.0497
7:00	0.0102	0.3525	0.0881	15:00	0.0102	0.3525	0.0881	23:00	0.0058	0.1987	0.0497
7:15	0.0115	0.3974	0.0994	15:15	0.0102	0.3525	0.0881	23:15	0.0058	0.1987	0.0497
7:30	0.0115	0.3974	0.0994	15:30	0.0102	0.3525	0.0881	23:30	0.0058	0.1987	0.0497
7:45	0.0108	0.3732	0.0933	15:45	0.0096	0.3300	0.0825	23:45	0.0051	0.1763	0.0441
8:00	0.0108	0.3732	0.0933	16:00	0.0096	0.3300	0.0825	24:00	0.0051	0.1763	0.0441
								TOTAL:	**1.00**		**8.64**

Zone 5 Culverts

ID	Q10 (cfs)	Q100 (cfs)	Dimensions	Culvert Shape	Length (ft)	Capacity (cfs)	Meet 10 Yr	Needed Capacity (cfs)	Minimum Size needed (HY8)
0	27	42	36"	circular	110	74	Y	-	-
1	318	654	72"	Circular	100	601	Y	-	-
2	239	484	60"	Circular	56	248	Y	-	-
2	239	484	66"	Circular	100	185	N	54	84"
3	276	563	66"	Circular	104	446	Y	-	-
5	616	1340	12' X 12'	Box	50	2044	Y	-	-
22	670	1442	6' X 6'	Rectangular	67	884	Y	-	-
25	47	113	48"	Circular	100	100	Y	-	-
26	42	98	48"	Circular	72	132	Y	-	-
27	109	184	54" & 4'x4'	Box	192	234	Y	-	-
27	78	133	54"	Circular	110	271	Y	-	-
34	382	970	(2) 66"	Circular	120	948	Y	-	-
37	97	245	48" & 36"	Circular	64	252	Y	-	-

Zone 6 Culverts

ID	Q10 (cfs)	Q100 (cfs)	Dimensions	Culvert Shape	Length (ft)	Capacity (cfs)	Meet 10 Yr	Needed Capacity (cfs)	Minimum Size needed (HY8)
6	65	113	36"	Circular	175	76	Y	-	-
7	341	599	54"	Circular	184	375	Y	-	-
9	1660	2913	12' X 12'	Box	110	4087	Y	-	-
10	119	206	60"	Circular	160	356	Y	-	-
10	78	135	66"	Circular	43	524	Y	-	-
10	182	346	84"	Circular	163	873	Y	-	-
29	563	1021	105"	Circular	160	1118	Y	-	-
30	63	110	36"	Circular	100	51	N	17	36"
30	63	110	30"	Circular	252	46	N	17	36"
32	40	70	48"	Circular	126	211	Y	-	-
38	62	103	42"	Circular	141	187	Y	-	-
39	26	44	24"	Circular	150	39	Y	-	-
47	342	613	10' X 4'-10"	Arch	135	437	Y	-	-
48	341	611	4' X 6'	Box	80	239	N	102	4'x9' box
48	341	611	10' X 4'-10"	Arch	77	201	N	140	6'x13' box