PROPOSED USE: OFFICE BUILDING

 ACCOUNT/PARCEL #: 588240A000 MAP ID #: 3-157C-1669-00-4.2

CURRENT ZONING: C-0 PUD

6. THIS DEVELOPMENT SHALL COMPLY WITH ALL CONDITIONS AS SET FORTH IN ORDINANCES BY THE CITY OF O'FALLON, ST. CHARLES COUNTY AND THE STATE OF MISSOURI.

BENCHMARKS:

U.S.G.S. BENCHMARK STATION: SC-18, ELEV.=611.55.

BOTH THE STATION AND THE AZIMUTH MARK ARE STANDARD MO DNR ALUMINUM GRS DISK. THE STATION IS STAMPED "SC-18, 1999". THE AZIMUTH IS STAMPED "SC-12, 1999". BOTH DISK ARE SET IN 12 INCH DIAMETER BY 30 INCH DEEP CONCRETE MONUMENTS FLUSH WITH THE

PROJECT BM: TOP OF SANITARY MANHOLE, EASTERN SIDE OF LOT E, ALONG WATERBURY FALLS DRIVE ELEV.=544.88

8. PROPERTY BOUNDARY INFORMATION TAKEN FROM BOUNDARY AND TOPOGRAPHIC SURVEY PREPARED BY ZAVRADINOS PROFESSIONAL SERVICES, INC., DATED OCTOBER, 2004. ADDITIONAL INFORMATION PROVIDED BY THE CITY OF O'FALLON AND ST. CHARLES COUNTY RECORDER OF DEEDS OFFICE.

UTILITIES/DISTRICTS:

WATER: MISSOURI AMERICAN WATER CO. - (314) 996-2286 GAS: LACLEDE GAS CO. - (314) 621-6960 TELEPHONE: CENTURY-TEL TELEPHONE - (800) 201-4102 ELECTRIC: AMEREN UE - (800) 552-7583 SANITARY SEWER: DUCKETT CREEK SEWER DIST. - (636) 441-1244 SCHOOL DISTRICT: FRANCIS HOWELL SCHOOL DISTRICT FIRE DISTRICT: COTTLEVILLE FIRE PROTECTION DISTRICT - (636) 447-6655 WATER/SEWER: PUBLIC WATER DISTRICT #2 - (636) 561-3737

10. TRACT IS LOCATED IN: WELDON SPRING, MO USGS QUADRANGLE MAP WUNNENBURG MAP PAGE 56, SECTION RR-23

 SITE ADDRESS:BLDG. 1 - 856 WATERBURY FALLS DRIVE BLDG. 2 - 844 WATERBURY FALLS DRIVE BLDG. 3 - 830 WATERBURY FALLS DRIVE

12. BUILDING SETBACKS: FRONT YARD - 25' SIDE YARD - 10' REAR YARD - 35'

13. BUILDING HEIGHT: PROPOSED BUILDING NOT TO EXCEED 50' OR 3-STORIES.

14. ALL SIGNAGE TO REQUIRE SEPARATE REVIEW, APPROVAL AND PERMITS. MONUMENT SIGN TO BE PROPOSED WHEN TENANT HAS BEEN

15. DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH SOILS REPORTS PRIOR TO OR DURING SITE SOIL TESTING.

16. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL ROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN). CONTROL SHALL COMMENCE WITH GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF O'FALLON. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNERS AND/OR THE CITY OF O'FALLON MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILTS OR MUD ON NEW OR EXISTING PAVEMENT OR IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF O'FALLON.

17. TREE PRESERVATION CALC'S: BARE SITE, NO EXISTING TREES. REFER TO LANDSCAPE PLAN FOR PROPOSED PLANTINGS.

18. ALL UTILITIES WILL BE LOCATED UNDERGROUND.

19. DETENTION PROVIDED FOR IN OVERALL WATERBURY DEVELOPMENT, DRAINAGE AREA PLANS BY BAX ENGINEERING PLANNING SURVEYING.

20. CROSS ACCESS EASEMENT TO TRAVERSE LOTS 4A, 4B & 4C AND CONTINUE THRU ENTRANCES TO WATERBURY FALLS DRIVE.

21. ALL HVAC UNITS WILL BE ROOFTOP MOUNTED AND WILL BE SCREENED BY PARAPETS FROM VIEW. PARAPET WILL BE AS HIGH AS THE

22. THE FOLLOWING SYSTEMS SHALL BE USED TO ENHANCE THE EROSION CONTROL IMPACT TO THE DETENTION BASIN WITHIN THE WATERBURY SUBDIVISION: "SOCK" STYLE SILTATION SYSTEM TO BE UTILIZED, ADDITIONAL SILTATION BASINS AT ALL OFFSITE DRAINAGE COURSES, SURVEYS TO CHECK SILTATION LEVELS IN THE SILTATION BASIN PRE AND POST CONSTRUCTION, AND WEEKLY REPORTS OF SILTATION TURNED INTO THE CITY.

23. SHOULD GRADING OR CONSTRUCTION OPERATIONS ON THIS PROPERTY ADVERSELY EFFECT THE EXISTING RETENTION LAKES IN THE WATERBURY DEVELOPMENT, THIS DEVELOPER SHALL BE RESPONSIBLE FOR CLEANING THE BASINS PRIOR TO OCCUPANCY PERMITS BEING ISSUED FOR ANY OF

24. ALL PAVING TO BE IN ACCORDANCE WITH ST. CHARLES COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES.

25. LIGHTING VALUES WILL BE REVIEWED ON SITE PRIOR TO THE FINAL OCCUPANCY INSPECTION. CORRECTIONS WILL NEED TO BE MADE IF NOT IN COMPLIANCE WITH CITY STANDARDS.

26. THE CITY OF O'FALLON TO BE CONTACTED FOR UTILITY LOCATED UNDER ITS MAINTENANCE RESPONSIBILITY. THIS MAY INCLUDE WATER, SANITARY, STORM AND TRAFFIC LOCATES.

27. ALL EXCAVATIONS, GRADING OR FILLING SHALL HAVE A FINISH GRADE NOT TO EXCEED A 3:1 SLOPE {3 HORIZONTAL TO 1 VERTICAL} (33%) UNLESS SPECIFICALLY APPROVED OTHERWISE.

28. GRADES FOR ENTRANCES SHOULD NOT EXCEED 2% AT WALKS, 4% FROM STREET AND 10% OVERALL. TYPICAL 2% FROM BACK OF CURB THROUGH THE RIGHT OF WAY IS DESIRED.

29. STRIPING ALONG WATERBURY FALLS DRIVE TO BE COMPLETED DURING BUILDING 3 CONSTRUCTION. IF BUILDING 3 IS DELAYED, THE NEXT ENSUING BUILDING WILL BE REQUIRED TO ADD PROPOSED STRIPING ALONG WATERBURY FALLS DRIVE.

NOTES, cont.:

30. "DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH SOILS REPORT PRIOR TO OR DURING SITE SOIL TESTING." THE SOIL REPORT WILL BE REQUIRED TO CONTAIN THE FOLLOWING INFORMATION ON SOIL TEST CURVES (PROCTOR REPORTS) FOR PROJECTS WITHIN THE CITY: 1) MAXIMUM DRY DENSITY

OPTIMUM MOISTURE CONTENT 3) MAXIMUM AND MINIMUM ALLOWABLE MOISTURE CONTENT 4) CURVE MUST BE PLOTTED TO SHOW DENSITY FROM A MINIMUM OF 90% COMPACTION AND ABOVE AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (A.S.T.M.-D-1157) OR FROM A MINIMUM OF 95% AS DETERMINED BY THE "STANDARD PROCTOR TEST ASSHTO T-99, METHOD C" (A.S.T.M.-D-698). PROCTOR TYPE MUST BE DESIGNATED ON DOCUMENT.

5) CURVE MUST HAVE AT LEAST 5 DENSITY POINTS WITH MOISTURE CONTENT AND SAMPLE LOCATIONS LISTED ON DOCUMENT

SPECIFIC GRAVITY 7) NATURAL MOISTURE CONTENT

8) LIQUID LIMIT

9) PLASTIC LIMIT BE ADVISED THAT IF THIS INFORMATION IS NOT PROVIDED TO THE CITY'S CONSTRUCTION INSPECTOR, THE CITY WILL NOT ALLOW GRADING OR CONSTRUCTION ACTIVITIES TO PROCEED ON ANY PROJECT SITE".

31. CONTRACTOR TO SUBMIT ENGINEERING DRAWINGS TO THE CITY FOR THE RETAINING WALL CONTAINING THE FOLLOWING;

A) TOP OF WALL & FOOTING ELEVATIONS

B) STEPS IN FOOTING DESIGN C) LOCATION OF THE GEOGRID DESIGNATED ON THE PROFILE

D) EXISTING & PROPOSED GRADES

E) WALL STRUCTURAL CALCULATIONS, (SIGNED & SEALED BY P.E.) SHOWING 1.5 OVERTURN FACTOR OF SAFETY PER IBC.

32. PROPOSED STORM SEWERS TO BE DESIGNED WITH FULL FLOW TO SIZE PIPES. FREEBOARD TO BE 1'/SILL AND 2'/TOP AL.

33. THE CITY WILL ALLOW THE FOLLOWING MARKERS AND ADHESIVE PROCEDURES ONLY AS SHOWN IN THE TABLE BELOW. 'PEEL AND STICK' ADHESIVE PADS WILL

| NOT BE ALLOWED. | PROVIDE A | MARKING ON | THE STORM SEWER | INLETS. | |
|----------------------------|-----------|------------|-----------------|---|--------|
| Manufacturer | Size | Adhesive | Style | Message (Part #) | |
| 1 4 4 | 3 7/8" | Ероху | Crystal Cap | No Dumping Drains To Waterways (SD-W-CC) | www.ac |
| DAS Manufacturing, Inc. | 4" | Ероху | Standard Style | No Dumping Drains To Stream (#SDS) | www.da |

34. MINIMUM VELOCITY OF FLOW SHALL EXCEEDS 3 FPS FOR PIPES

35. ALL STRUCTURES SHALL BE PRE-CAST WITH A .2 FALL INSIDE THE

36. TRAFFIC CONTROL IS TO BE PER MODOT OR MUTCD STANDARDS, WHICHEVER IS MOST STRINGENT.

37. SHOULD GRADING OR CONSTRUCTION OPERATIONS ON THIS PARCEL ADVERSELY EFFECT THE EXISTING RETENTION LAKES IN THE WATERBURY DEVELOPMENT, THIS DEVELOPER SHALL BE RESPONSIBLE FOR CLEANING THE BASINS PRIOR TO OCCUPANCY PERMITS BEING ISSUED FOR ANY OF THE OFFICE BUILDINGS.

38. FLOOD DATA PROVIDED PER FIRM MAP OF ST. CHARLES COUNTY, MISSOURI AND INCORPORATED AREAS, PANEL 430 OF 525. MAP NUMBER 29183C0430 E, REVISED AUGUST 2, 1996. DATA VERIFIED WITH FEMA ON-LINE WEB SITE.

39. RIP RAP SHOWN AT FLARED ENDS WILL BE EVALUATED IN THE FIELD AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED IF NECESSARY TO REDUCE EROSION ON AND OFF SITE.

40. ALL FILL PLACED UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ALL FILL PLACED IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS. NOTE THAT THE MOISTURE CONTENT OF THE SOIL IN FILL AREAS IS TO CORRESPOND TO THE COMPACTIVE EFFORT AS DEFINED BY THE STANDARD OR MODIFIED PROCTOR TEST, OPTIMUM MOISTURE CONTENT SHALL BE DETERMINED USING THE SAME TEST THAT WAS USED FOR COMPACTION. SOIL COMPACTION CURVES SHALL BE SUBMITTED TO THE CITY OF O'FALLON PRIOR TO PLACEMENT OF FILL. PROFF ROLLING MAY BE REQUIRED TO VERIFY SOIL STABILITY AT THE DISCRETION OF THE CITY OF O'FALLON.

41. ALL JOINTS SHALL BE GASKETED "O-RING" TYPE.

42. SIDEWALKS, CURB RAMPS, RAMP AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED "AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAG) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAG GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR PRIOR TO ANY CONSTRUCTION SHALL NOTIFY THE PROJECT ENGINEER. (NOTE THAT AT LEAST ONE EIGHT FOOT {8'{WIDE HANDICAP ACCESS AISLE IS PROVIDED AND CURB RAMPS DO NOT PROJECT INTO HANDICAP ACCESS AISLE.

43 BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF SANITARY OR STORM SEWER CONSTRUCTION. PRECAST CONCRETE STRUCTURES ARE TO BE USED UNLESS OTHERWISE APPROVED BY THE CITY.

44. ALL SANITARY LATERALS AND SANITARY MAINS CROSSING UNDER ROADWAYS MUST HAVE THE PROPER ROCK BACKFILL AND TO REQUIRE

45. LIGHTING VALUES WILL BE REVIEWED ON SITE PRIOR TO FINAL OCCUPANCY INSPECTION. CORRECTIONS WILL NEED TO BE MADE IF NOT IN COMPLIANCE WITH CITY STANDARDS.

46. ALL PROPOSED FENCING TO REQUIRE SEPARATE PERMIT THROUGH PLANNING DIVISION.

47. ALL SIGN LOCATIONS AND SIZES MUST BE APPROVED SEPARATELY THROUGH THE PLANNING DIVISION. SIGN LOCATIONS TO BE SHOWN ON

48. ALL SIGN POSTS, BACKS AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBOLINE RUSTBOND PENETRTATING SEALER SG AND CARBOLINE 133 HB PAINT (OR EQUIVALENT AS APPROVED BY THE CITY AND MODOT). SIGNS DESIGNATING STREET NAME SHALL BE ON THE OPPOSITE SIDE OF THE STREET FROM THE TRAFFIC CONTROL SIGNS.

49. NO SLOPES STEEPER THAN 3 (HORIZONTAL) TO 1 (VERTICAL).

50. GRADED AREAS THAT ARE TO REMAIN BARE FOR OVER TWO (2) WEEKS ARE TO BE SEEDED AND MULCHED. (DNR REQUIREMENT).

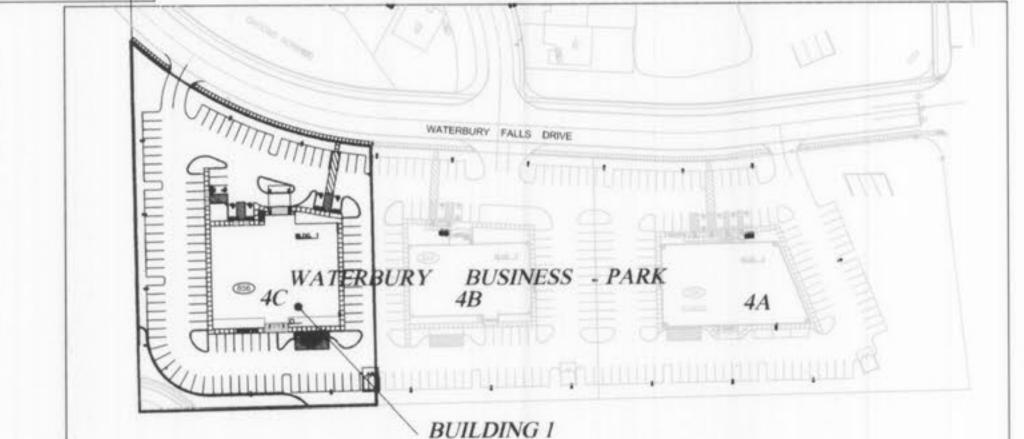
51. ALL EROSION CONTROL SYSTEMS ARE TO BE INSPECTED AND NECESSARY CORRECTIONS MADE WITHIN 24 HOURS OF ANY RAINSTORM RESULTING IN ONE-HALF INCH OF RAIN OR MORE.

52. HDPE PIPE IS TO BE N-12WT OR EQUAL AND TO MEET ASTM F1417 WATER TIGHT FIELD TEST.

53. TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS AND OTHER DELETRIOUS MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED INCOMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. LANDFILL TICKETS FOR SUCH DISPOSAL SHALL BE MAINTAINED ON FILE BY THE DEVELOPER, BURNING ON SITE SHALL BE ALLOWED ONLY BY PERMIT FROM THE LOCAL FIRE DISTRICT. IF A BURN PIT IS PROPOSED, THE LOCATION AND MITIGATION SHALL BE SHOWN ON THE GRADING PLAN AND DOCUMENTED BY THE SOILS ENGINEER.

AS-BUILT PLANS LOT 4C BLDG. 1 WATERBURY BUSINESS PARK

A TRACT OF LAND BEING APART OF LOT 15 OF "JOHN D. COALTER'S HOWELL'S PRAIRIE TRACT" IN U.S. SURVEY 1669, T46N, R3E, OF THE FIFTH PRINCIPAL MERIDIAN, CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI



NOTES, cont.:

Website

cpinternational.com

asmanufacturing.com

54. ALL GRADES FOR ENTRANCES SHOULD NOT EXCEED 2% AT WALKS, 4 % FROM STREET AND 10% OVERALL. TYPICALLY 2% FROM BACK OF CURB THROUGH THE RIGHT-OF-WAY IS DESIRED.

55. AT NEW ENTRANCE CONSTRUCTION, ALL PAVEMENT IS TO BE REMOVED TO THE NEAREST CURB JOINT.

56. IF THE PROPOSED ENTRANCE IS INTERSECTING WITH AN EXISTING ROADWAY THAT IS NOT CURBED, THEN THE CURBING ON THE NEW ENTRACE SHALL BEGIN 10' FROM THE EDGE OF THE EXISTING ROADWAY.

56. ALL SILTATION AND EROSION CONTROL MEASURES (SILT FENCES, SILTATION BASINS, ETC.) TO FOLLOW "ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL"

57. NOTE 36" COVER REQUIRED OVER STORM AND SANITARY LINES.

58. ALL AREA INLETS TO HAVE INCOMING SWALES AT 2% MINIMUM.

59. ALL DROP MANHOLES TO BE 48" DIAMETER MINIMUM.

60. PROVIDE 20' OF DUCTILE IRON PIPE WHEN THE SANITARY LINE CROSSES OVER THE STORM LINE SEWER LINES.

THE PROPERTY LINE, SHALL NOT EXCEED 0.5 FOOT-CANDLES. 62. ALL UTILITIES CROSSING UNDER EXISTING STREETS OF COLLECTOR SIZE AND GREATER SHALL BE IN CONDUIT OR CASING PIPE.

61. ILLUMINATION ATTRIBUTABLE TO EXTERIOR LIGHTING, AS MEASURED AT

63. ALL PROPOSED UTILITIES UNDER EXISTING CITY OF O'FALLON STREETS SHALL BE BORED.



Missouri One Call System, Inc. Call Before You Dig! 1-800-DIG-RITE (1-800-344-7483)

All the improvements & facilities and utilities, above ground and underground shown herein were plotted from available information and do not necessarily reflect the actual existence, nonexistence, elevation, size, type, number or location of these or other improvements, facilities, or utilities. The General Contractor and/or owner shall be responsible for verifying the actual location & elevation of all improvements, facilities, & utilities, shown or not shown, and said improvements, facilities, & utilities shall be located in the field prior to any grading, excavation or construction of any improvements. These provisions shall in no way absolve any port from complying with the Underground Facility Safety & Damage Prevention Act, Chapter 319, RSMo CALL MISSOURI ONE-CALL, 1-800-DIG-RITE,

PREPARED FOR:

DEVELOPER:

CB&E CONSTRUCTION GROUP ATTN .: JIMMY LEE 17724 EDISON AVENUE CHESTERFIELD, MO 63005 PHONE (314) 781-2700 FAX (314) 781-2748

ENGINEER / SURVEYORS:

ZAVRADINOS PROFESSIONAL SERVICES, INC. 17813 EDISON AVENUE, SUITE 201 CHESTERFIELD, MO 63005 PHONE (636) 946-5555 FAX (636) 449-0148

STORM SEWER AS-BUILT FIELD DATA: FIELD COLLECTION, 9-25-07 STRUCTURES STORM (7-12) BENCHMARKS: U.S.G.S. BM STA. SC-18, ELEV. 611.55 PROJ. BM, TOP SAN. M.H. EAST SIDE OF LOT E ALONG WATERBURY FALLS DRIVE, ELEV.=544.88 INSTRUMENT @ PT. 13 (OLD CROSS) ELEV.=527.01 BACKSITE PT #9 (CL CROSS) ELEV.=528.50

SHEET INDEX.

DESCRIPTION SHEET NO. COVER SHEET 1 OF 3

SITE/GRADING PLAN

STORM PROFILES 3 OF 3

Location Map

G

LOT CALCULATIONS

A) LOT COVERAGE: {BLDG. 1} OVERALL LOT 4C76,686 S.F. BUILDING (FOOTPRINT).......13386 S.F.-17.5%

LANDSCAPE/GREENSPACE....16,512 S.F.-21.5% 100.0%

PARKING & DRIVES......46,788 S.F.-61.0%

B) PROPOSED BUILDING & PARKING INFORMATION: OTAL BLDG. S.F. (BLDG 1 - 2 FL.)=26,772 S.F. OFFICE BLDG: 1 SPACE/300 S.F.

> 26,772/300 = 89.2 SPACES HANDICAPPED = 5 SPACES 44% MEDICAL = 26,716x.44 = 11,755/200 = 59 56% OFFICE = 26,716x.56 = 14,961/300 = 50

> > SPACES PROVIDED = REGULAR SPACES 107 VAN HC 1 REG. HC 4 SPACES TOTAL 112

*PARKING BASED ON APPROVED PARKING STUDY BY

C) BICYCLE PARKING SPACES: 109 PARKING/15 BIKE=7.3 SPACES REQUIRED BIKE RACK LOCATED ADJACENT TO FRONT ENTRANCE.

LEGEND

Drainage Flow Arrow — Sanitary Sewer (Proposed) Sanitary Sewer (Existing) Storm Sewer (Proposed) Storm Sewer (Existing) -8"W Water Line and size Tee and Valve II Fire Hydrant - X X Existing Fence Line

www Existing Tree Line -- 522 -- Existing Contour (522) Proposed Contour Street Sign Power Pole. Guy Wire Light Standard (TYP Height 24')

— G — Gas Line - E - Electric Line - T - Telephone Line Gas Valve

Gas Meter Water Valve Water Meter Found Old Iron Pipe Found Old Iron Rod Reinforced Concrete Pipe Corregated Metal Pipe P.V.C. Polyvinyl Choride Pipe Cast Iron Pipe End Pipe

F.E. Flared End Section C.O. Clean Out M.H. Manhole T.B.R. To Be Removed Set Iron Rod with Cap

O.I.P. Old Iron Pipe 0.1.R. Old Iron Rod New Light Standard

STORM SEWER AND SANITARY SEWER MEASUREMENTS

The existing sewer lengths, sizes, flowlines, depths of structures and sewer and locations with respect to the proposed plans have been measured. The results of those measurements are shown on this set of FINAL MEASUREMENT PLANS Zavradinos & Polk Inc.



O'FALLON P & Z FILE NO.: (9950.08) 10/04/07 'AS BUILT' STORM SEWERS

CAD Filename Original Issue Date 10-04-07 Project No.

G

MSD P-

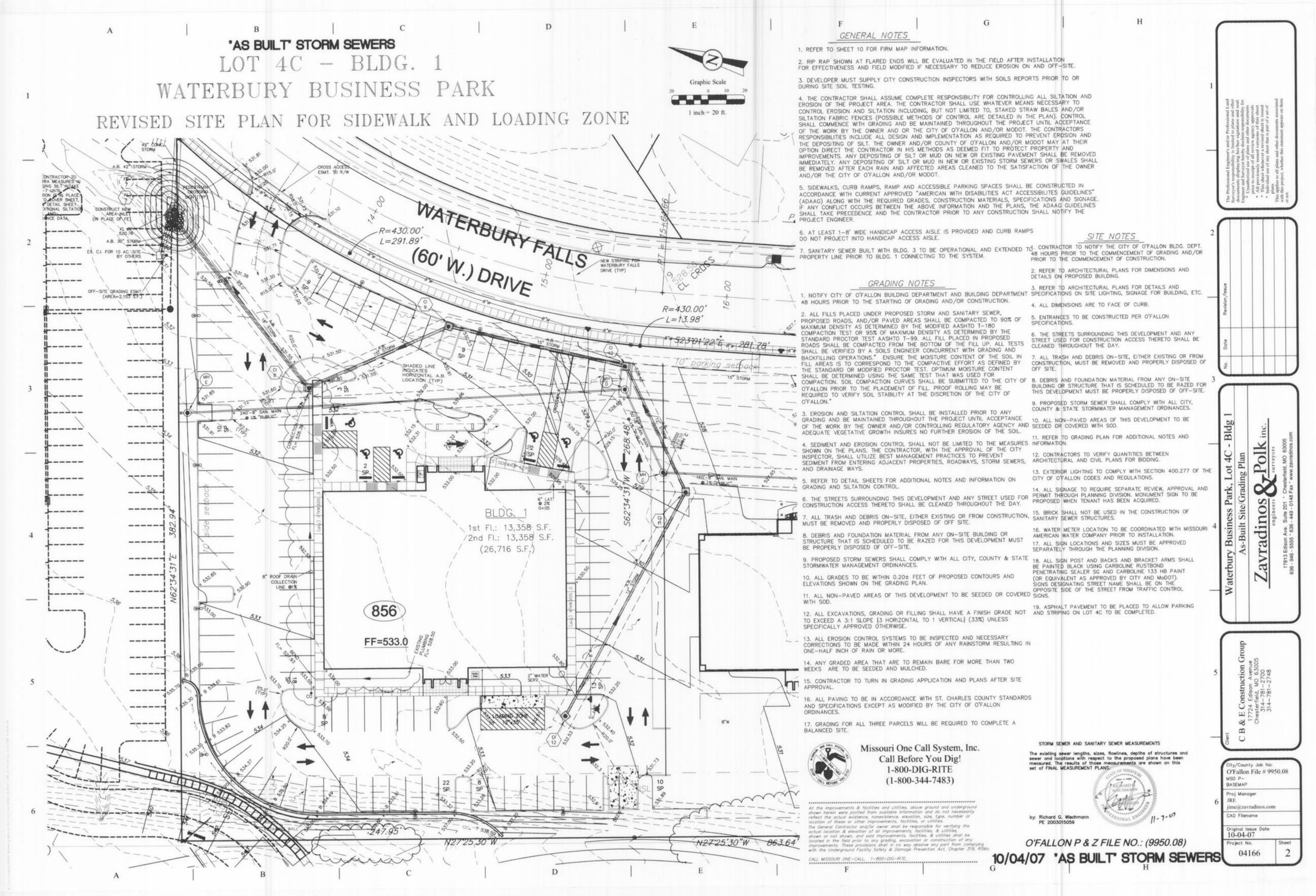
BASEMAP

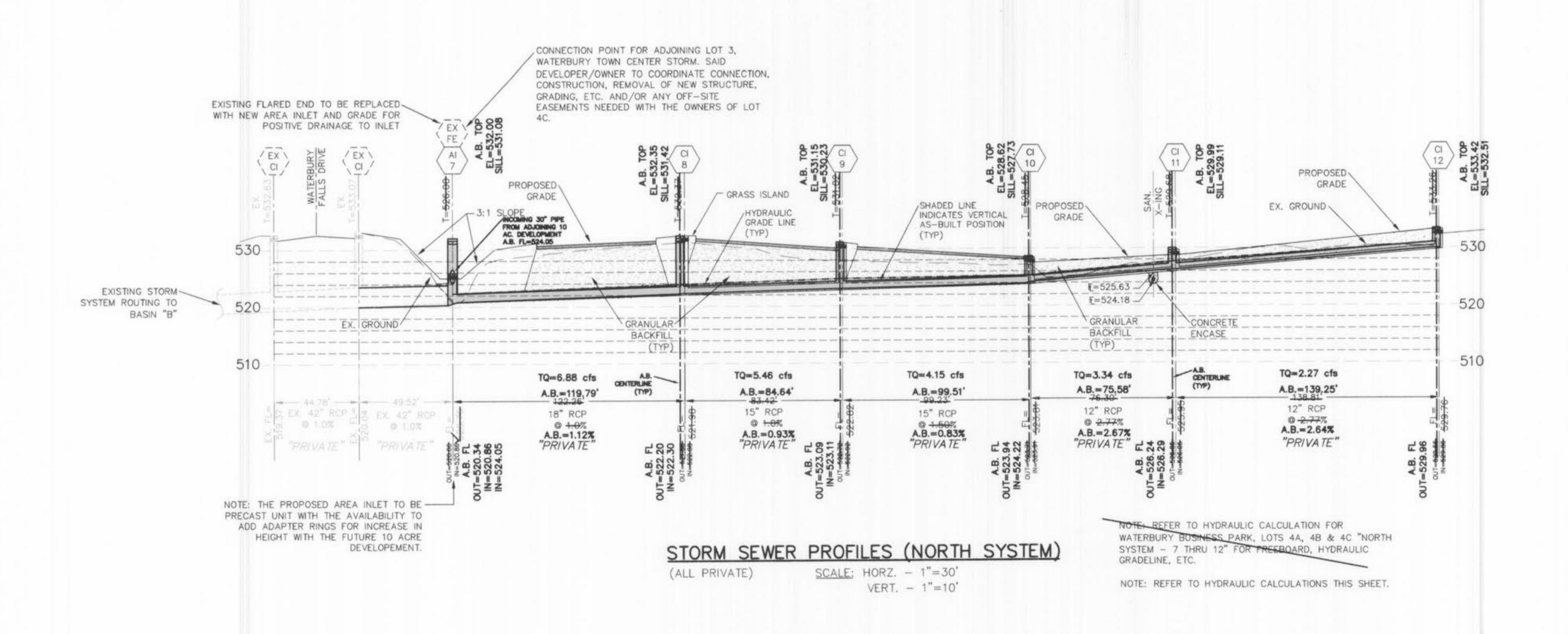
Proj Manager

jime@zavradinos.com

City/County Job No: O'Fallon file # 9950.08

781 781 781





| | | | | _ | | | // | 1011 | - | | 1 | | 1177 | TIES | HYE | DRAU | LIC D | ATA | SHE | ET | | | | | | | | | | | | | |
|--|-----------------|--------|--------------------|--------|--------------------|------|--|---------------|------|--|----------|-------|-------|------|--------------|--|----------------------------|--------|------------|----------|-----------------|------------------------|--------|-------------|----------|-----------------|------------|---------|--------|--------|---------------|---------|-----------|
| FORMULAS: FRICTION-LOSS 16 = 2.67 +75 LV/5 6/45 16 16 16 16 16 16 16 16 16 16 16 16 16 | | | | | | | JUNCTIONAL BEND LOSSE BMSLE COOP | 6 | : | + (CV*pout) - E. CV*port) + 1.30 - C(out) - Vr. + AMOLE COSSFICEROT (V*-fir incoming time) - William - 0.7 - 41 mag + 0.47 - 31 deg + 0.30 | | | | | | NOTES - IF NOTE THAN ONE WOOMING LINE CALCULATE SACH MEND LOSS. AND ADD TOGETHER NO STRUCTURE LOSSISE TO BE CALCULATED AT A DROP IF GROUP > QUAYOUT, NO JUNCTION LOSS TO BE CALCULATED. | | | | | | | | | | | | | | | | | |
| 35 | 1.0 | NG. | PLOWERE ELEVATIONS | | PLOWERE ELEVATIONS | | | 8. | 100 | -62 | 2.5 | - 9 | 100 | - 50 | 0.0 | 8.80 | EgF | - 08 | PPE | 1 | HEAD S STRUC | COSSES TURE (HVNOC) | LOSSES | | UPP | HYDE DR.H.E. | CACLE SLEV | TIONS | STRUCT | TOP OF | PRES | | PERMITS |
| SANS. | UPPER STRUCT | \$795E | UPPER | LOWER | DELTA | 1690 | PLOSA GRAD GPT.P | 26 344 (N) | E. | PPR CARNO (CFS | SAN SHOW | 14.00 | TRANS | CF) | TOTA (SP) | 200 400 400 400 400 400 400 400 400 400 | VELOCITY HEAD (MPPT) | 97.488 | 973 973 | JUNCTION | Admit (bis. | TURN LOSS | TURN | TOTAL total | FL + DW. | LOWER HE HV | LOWER | (FT.FT) | | BIRGET | ROARD (FT) | FACTOR: | |
| | 8 | 7 | 520.20 | 520.86 | 1.54 | 120 | 0.0112 | 18 | 1.77 | 13,11 | | | | 1.42 | 6.88 | 3.69 | 0.24 | 1.62 | 0.51 | | | 0.15 | 77 | 0.15 | 523.70 | 522.87 | 522.36 | 0.0043 | 523.85 | 532.35 | 8.50 | 0.013 | |
| 9 | 9 | 8 | 523.09 | 522.30 | 0.79 | 85 | 0.0000 | 15 | 1.23 | 6.24 | | | | 1.31 | 5.46 | 4.45 | 0.31 | 1.68 | 0.60 | 0.23 | | 0.12 | 37 | 0.35 | 524.34 | 524.45 | 523.85 | 0.0071 | 524.80 | 531.15 | 6.35 | 0.013 | |
| 10 | 10 | 9 | 523.94 | 523.11 | 0.83 | 100 | 0.0083 | 15 | 1.23 | 5.90 | | | | 0.81 | 4.15 | 3.38 | 0.18 | 0.74 | 0.41 | | | 0.09 | 52 | 0.09 | 525.19 | 525.21 | 524.80 | 0.0041 | 525.30 | 528.62 | 3.32 | 0.013 | |
| 11 | 11 | 10 | 526.24 | 524.22 | 2.02 | 76 | 0.0267 | 12 | 0.79 | 5.82 | | | | 1.07 | 3.34 | 4.25 | 0.28 | 0.94 | 0.66 | 0.26 | | 0.14 | 54 | 0.40 | 527.24 | 525.97 | 525.30 | 0.0088 | 527.64 | 529.99 | 2.35 | 0.013 | |
| 12 | 12 | 11 | 529.96 | 526.29 | 3.67 | 139 | 0.0264 | 12 | 0.79 | 5.78 | | | | 2.27 | 2.27 | 2.89 | 0.13 | 0.29 | 0.57 | | | | | | 530.96 | 528.20 | 527.64 | 0.0041 | 530.96 | 533.42 | 2.46 | 0.013 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | /m==m==== |

AS-BUILT HYDRAULIC CALCULATIONS for WATERBURY BUSINESS PARK LOTS 4A, 4B & 4C North System - 7 thru 12

Original calculations issued August, 2005

Revised for As-Builts, October, 2007

Missouri One Call System, Inc. Call Before You Dig! 1-800-DIG-RITE (1-800-344-7483)

All the improvements & facilities and utilities, above ground and underground shown herein were plotted from available information and do not necessarily reflect the actual existence, nonexistence, elevation, size, type, number or location of these or other improvements, facilities, or utilities. The General Contractor and/or owner shall be responsible for verifying the actual location & elevation of all improvements, facilities, & utilities, shown or not shown, and said improvements, facilities, & utilities shall be located in the field prior to any grading, excavation or construction of any improvements. These provisions shall in no way absolve any part from complying with the Underground Facility Safety & Damage Prevention Act, Chapter 319, RSMo.

CALL MISSOURI ONE-CALL, 1-800-DIG-RITE,

A

1. PROPOSED STORM LAYOUT IS CONNECTING TO EXISTING STORM SYSTEM DESIGNED FOR THE OVERALL WATERBURY COMMERCIAL AND RESIDENTIAL DEVELOPMENT.

2. EXISTING STORM SYSTEM HAS BEEN VERIFIED BY BAX ENGINEERING FOR ADEQUATE

3. REFER TO DETAIL SHEETS FOR SILTATION CONTROL STANDARDS AND PRACTICES TO BE EMPLOYED FOR THIS SITE.

4. CONTRACTOR TO TURN IN WEEKLY REPORT OF SILTATION AND EROSION MEASURES.

5. REFER TO "OVERALL GRADING PLAN" AND "DRAINAGE AREA MAP" FOR ADDITIONAL

6. REFER TO SITE/GRADING PLAN FOR ADDITIONAL NOTES.

STORM SEWER NOTES:

7. SANITARY SEWER TO BE CONCRETE ENCASED TO PROTECT FROM DAMAGE.

8. ENTIRE SANITARY RUN TO BE CONSTRUCTED AS PART OF BUILDING 3 CONSTRUCTION. NO CONNECTION TO SANITARY WILL BE ALLOWED UNTIL SANITARY SEWER IS ACCEPTED BY DUCKETT CREEK SEWER DISTRICT.

9. AS-BUILT INFORMATION ON STORM AND SANITARY TO BE PROVIDED TO CITY OF O'FALLON BUILDING DEPARTMENT ONCE CONSTRUCTION IF THIS SYSTEM IS COMPLETE.

10. REFER TO HYDRAULIC REPORT FOR WATERBURY BUSINESS PARK, LOTS 4A, B & C, NORTH SYSTEM - 7 THRU 12 FOR ADDITIONAL HYDRAULIC DATA.

11. STORM SEWER CURB INLETS AND AREA INLETS TO HAVE SILT SCREENING BY PROPOSED INLET PROTECTION FABRIC W/SILTSOCK. REFER TO SHEET 10 FOR DETAILS.

12. PROPOSED AREA INLET 7 TO BE UTILIZED AS A TEMPORARY SILTATION BASIN UNTIL PROJECT COMPLETION. PENDING ADJOINING DEVELOPMENT FOR LOT 3 MAY EVENTUALLY ALTER THE STRUCTURE AND OR ITS APPURTENANCES.

13. PROPOSED 4' GRASS LINED SWALE TO DIRECT STORM RUNOFF TO INLETS 9 AND 10 UNTIL PAVEMENT AND PARKING LOT IS COMPLETE. CONTRACTOR TO MAINTAIN SWALE FROM ANY DEBRIS AND SILT.

14. PIPE RUNS FOR STORM EXTENSION NOT BUILT FOR BUILDING 3 TO BE CAPPED AND PROTECTED FOR FUTURE CONNECTION.

STORM SEWER AND SANITARY SEWER MEASUREMENTS

The existing sewer lengths, sizes, flowlines, depths of structures and sewer and locations with respect to the proposed plans have been measured. The results of those measurements are shown on this set of FINAL MEASUREMENT PLANS.

by: Richard G. Wischmann PE 2003015059

O'FALLON P & Z FILE NO.: (9950.08) 10/04/07 'AS BUILT' STORM SEWERS

--City/County Job No: O'Fallon file # 9950.08 MSD P-BASEMAP Proj Manager jime@zavradinos.com CAD Filename 10-04-07 Project No. 04166

Bldg

G