

**CITY OF BOONVILLE
COUNCIL MEETING
AGENDA
February 16, 2016
7:00 p.m.**

I. Call to Order – Pledge and Prayer (Becky Ehlers)

II. Roll Call

III. Hearing of Citizens' Comments

IV. Approval of the Minutes of the February 1, 2016 Council Meeting

V. Consent Items

- a. None.

VI. Presentation of Accounts and Claims

VII. Unfinished Business

- A) Second Reading of Bill No. 2016-001 Amending Solid Waste Collection Fees

VIII. New Business

- A) First Reading of Bill No. 2016-002 Approving Final Site Plan for Expansion of Hartmann Village
- B) First Reading of Bill No. 2016-003 Approving Final Site Plat of Minor Subdivision of Tract 9 of Boone Village Estates

IX. Reports of Standing Committees

- A) Cemetery Board (Vanessa Dorman)
- B) Police Board (Henry Hurt)
- C) Tourism Commission (Vanessa Dorman)
- D) Parks Board (Becky Ehlers)
- E) Board of Public Works (Becky Ehlers)

X. Reports of City Officials

City Administrator

- Code Enforcement Initiatives Update

Mayor

- Special Committee Appointment

City Counselor

City Clerk

Building Inspector

- January 2016 Report

XI. Miscellaneous

XII. Adjourn

NOTICE: The City of Boonville will comply with the Americans with Disabilities Act (ADA). Individuals who require an accommodation due to disability to attend this meeting should contact our office at 660-882-2332 or Relay Missouri, 1-800-735-2966 TTY at least 48 hours in advance.

DRAFT COPY PENDING REVIEW AND APPROVAL OF CITY COUNCIL

City of Boonville
City Council Meeting
Minutes
February 1, 2016

The Boonville City Council met in Regular Session on February 1, 2016 at 7:00 p.m. in the Council Chambers. The following officers were present: Julie Thacher, Mayor; Irl Tessendorf, City Administrator; Charissa Mayes, City Counselor; and Teresa Studley, City Clerk.

CALL TO ORDER – PLEDGE AND PRAYER

The meeting was called to order at 7:00 p.m. and Mr. Henry Hurt led the prayer after the pledge of allegiance.

ROLL CALL

The following Council Representatives were present: Henry Hurt, Mark Livingston, Becky Ehlers, Vanessa Dorman, Michael Stock, Whitney Venable, Susan Meadows, and Ned Beach.

HEARING OF CITIZENS' COMMENTS

None.

APPROVAL OF THE MINUTES OF THE JANUARY 19, 2016 COUNCIL MEETING

The minutes were approved as presented.

CONSENT ITEMS

None.

PRESENTATION OF ACCOUNTS AND CLAIMS

Ms. Studley read the ordinance in its entirety and a second time by title only, since a copy of the ordinance had been made available prior to the meeting. Ms. Ehlers moved and Ms. Meadows seconded the motion for approval. Ayes: Hurt, Livingston, Ehlers, Dorman, Stock, Venable, Meadows, and Beach, Total (8); Opposed: None, Total (0); Absent: None, Total (0). Motion Carried.

UNFINISHED BUSINESS

None.

NEW BUSINESS

CONSIDER RESOLUTION R2016-02 APPROVING AN AGREEMENT WITH J. LOUIS CRUM CORPORATION FOR WATER TREATMENT PLANT ULTRAVIOLET LIGHT DISINFECTION

Ms. Studley read the resolution in its entirety. Mr. Beach moved and Ms. Ehlers seconded the motion for approval. M. L. Cauthon III gave a brief history of the previous work that J. Louis Crum Corporation has completed for the City. Roll call was taken on Mr. Beach's motion. Ayes: Hurt, Livingston, Ehlers, Dorman, Stock, Venable, Meadows, and Beach, Total (8); Opposed: None, Total (0); Absent: None, Total (0). Motion Carried.

CONSIDER RESOLUTION R2016-03 APPROVING A JOINT VENTURE RECREATIONAL PROJECT WITH BOONVILLE R-1 SCHOOL DISTRICT AND THE CITY OF BOONVILLE

Ms. Studley read the resolution in its entirety. Mr. Livingston moved and Mr. Venable seconded the motion for approval. There was some brief discussion of the council. Mr. Beach clarified that the only financial obligation that the Council will be voting on with this Resolution, is the \$500,000 expense of the District's improvements to the baseball/softball field. Dr. Gann, Board Member of the Boonville R-1 School District, updated the Council on the progress of the updates for the baseball/softball field. Roll call was taken on Mr. Livingston's motion. Ayes: Hurt, Livingston, Ehlers, Dorman, Stock, Venable, Meadows, and Beach, Total (8); Opposed: None, Total (0); Absent: None, Total (0). Motion Carried.

FIRST READING OF BILL NO. 2016-001 AMENDING SOLID WASTE COLLECTION FEES

Ms. Studley read, by title only, a copy of the bill.

ACCEPT RESIGNATION OF WARD 4 COUNCILMAN MR. MARK LIVINGSTON

Mayor Thatcher advised that the City of Boonville has received Mr. Mark Livingston's written resignation. Mayor Thatcher stated that it would be effective at the end of the meeting. Mr. Beach moved and Mr. Stock seconded the motion for approval. Roll call was taken on Mr. Beach's motion. Ayes: Hurt, Livingston, Ehlers, Dorman, Stock, Venable, Meadows, and Beach, Total (8); Opposed: None, Total (0); Absent: None, Total (0). Motion Carried.

REPORTS OF STANDING COMMITTEES

INDUSTRIAL DEVELOPMENT AUTHORITY and MUNICIPAL FACILITIES AUTHORITY

Mr. Livingston stated that he was unable to attend either of the meetings. Mayor Thacher stated that Dr. Jim Gann would be giving an update on Economic Development, which will cover the items that were discussed in both meetings.

HOUSING AUTHORITY

Mr. Livingston stated that he was unable to attend the meeting. Mayor Thacher stated that the minutes, which are very thorough, are available in the packet.

STREET, ALLEY, AND SANITATION BOARD

Mr. Hurt stated the meeting was cancelled due to the lack of agenda items.

REPORTS OF CITY OFFICIALS

CITY ADMINISTRATOR

Mr. Tessendorf reminded that the Council that there will be a work session at the next council meeting on Tuesday, February 16, starting at 6:00 p.m.

MAYOR

Mayor Thacher stated that she has formed the Project Pele' Committee. There are currently four people that were selected by the Boonville R-1 School District. The remaining members selected by Mayor Thacher are Scott Vogler, Kate Fjell, Jimi Barbarotta, Charissa Mayes, Ned Beach, Vanessa Dorman, and Gary Nauman, who will be the Acting Chairman. Mayor Thacher stated that this board would be reporting to the Council and Boonville R-1 School District.

Mayor Thacher advised the Council that there would be a Chili Fundraiser for the animal shelter on Saturday, February 20. Mayor Thacher stated that Ms. Marcey Caldwell is a member of a group that is helping to raise funds for a new shelter. Mayor Thacher commented that City of Fulton had fundraising in the private sector to assist in building their animal shelter and it has become a public/private partnership. Mayor Thacher commented that in her opinion, it was a great idea. Mayor Thacher stated that Ms. Caldwell invited her to speak on KWRT Radio, with her, to tell the public what the City's roll is with this new shelter. Mayor Thacher stated that she has made no commitment to anyone regarding the new shelter, and this is the City Council's decision for the shelter.

CITY COUNSELOR

No report was provided.

ECONOMIC DEVELOPMENT

Dr. Jim Gann reviewed his January 21, 2016 report with the Council with particular note to several items.

2. a) iii) "Project Sesame 2" - Dr. Gann advised that included in the packet, were several email correspondences for the project. Dr. Gann reported that the City was not selected for this project. Dr. Gann stated that the City of Boonville was a first runner up to the selected city, Rolla Missouri. Dr. Gann stated that this project would have been for the Nordyne and Indeeco facilities. Dr. Gann commented that the City of Boonville was praised for such an outstanding job representing Boonville. Dr. Gann stated that as a result of this, the City of Boonville has a possible opportunity with "Project Tito".

4) Economic Gardening - Dr. Gann stated that there has been some activity in the "Revolving Loan Fund". Dr. Gann stated that the fund is going towards local businesses that it was intended.

4. b) i) Concept for Artex Building – Dr. Gann stated that he is creating a concept for the Artex building, since the building can no longer be used for manufacturing, due to the building's size (height).

7. g) "Project Sparkle" – Dr. Gann invited everyone to the upcoming press release for the project on February 2, at 10:00 a.m. at the Council Chambers.

CITY CLERK

Ms. Studley reminded the council that the next regular Council Meeting would be scheduled for Tuesday, February 16, due to the President's Day Holiday on Monday, February 15.

MISCELLANEOUS

Ms. Dorman stated that she had received a call from one of her constituents in reference to the proposed rate increase on the sanitation. Ms. Dorman stated that he was concerned about the increase and someone had told him that government entities would not have any rate increase due the fact that there was not a COLA increase for social security. Mayor Thatcher reassured Ms. Dorman that the City of Boonville is trying to keep costs low.

***RECOGNITION OF MARK LIVINGSTON, FORMER WARD FOUR
COUNCILMAN***

Mayor Thacher presented Mr. Mark Livingston with a Recognition of Service Award and thanked him for the time and dedication that he has given to the City of Boonville while on the Council.

ADJOURN

With no further discussion, Mr. Livingston moved and Ms. Ehlers seconded the motion to adjourn at 7:35 p.m. and the voice vote was unanimous

Respectfully Submitted,

Teresa Studley, City Clerk

Approved:

Julie Thacher, Mayor

ORDINANCE APPROPRIATING MONEY

Be it Ordained by the Council of the City of Boonville, as follows:

Section 1: For the purpose of paying salaries and various accounts against the City of Boonville, which have been allowed by the Council, at the regular meeting thereof on February 16, 2016 the sum of **\$667,070.59**

General Fund	\$261,679.86
Sanitation	\$17,641.87
CIP Tax	\$28,689.54
Water Works	\$37,568.14
Capital Projects	\$159,932.51
Waste Water	\$45,249.29
Tourism	\$9,309.06
Gaming	\$107,000.32
Parks/Water	\$0.00

Section 2: The Accountant is hereby authorized and instructed to draw checks on the respective City bank accounts, in favor of the persons whose salaries and accounts have been allowed as above, amounting to \$667,070.59 being the total amount of money above appropriated.

Section 3: This ordinance shall take effect and be in force from and after its passage. First reading on February 16, 2016 read for the second time this 16th day of February 2016 since a copy was made available prior to the meeting.

Approved February 16, 2016 _____
Mayor

Endorsed February 16, 2016: I hereby certify that a sufficient sum of money stands to the credit of the City, unappropriated, in the various funds to meet the requirements of this ordinance.

Accountant

AN ORDINANCE OF THE CITY OF BOONVILLE, MISSOURI APPROVING THE FINAL SITE PLANS FOR THE EXPANSION OF THE DEVOPMENT KNOWN AS THE COTTAGES AT HARTMANN VILLAGE

WHEREAS, Americare, Inc. has made application for the approval of its plans to expand the senior living development known as The Cottages at Hartmann Village to include construction of four additional buildings at 615 Rankin Mill Lane in the City of Boonville; and

WHEREAS, the current base zoning of the subject 5.8 acre development site is R-3 and subject to standards for final site planning under Sections 2.95 (adjacent to residential property) and 2.98 of Appendix C – Zoning along with the erosion control, storm water, lighting, traffic and landscape management standards of the Code of Ordinances; and

WHEREAS, after review of the Building Inspector and City Engineer, the Planning and Zoning Commission voted on February 9, 2016 to approve the final site plans, attached hereto and marked as Exhibit A. Said site plans are incorporated herein as if set forth fully in this ordinance; and

WHEREAS, the City Council has evaluated the site plans and all attachments thereto in accordance with the standards set forth in Sections 2.99 of the Appendix C – Zoning of the Code of Ordinances, specifically for consistency with the zoning district and regulations, compatibility with the use of abutting sites, and the safety and convenience of vehicle and pedestrian traffic.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOONVILLE, MISSOURI AS FOLLOWS:

SECTION 1: That the final site plans for the expansion of The Cottages at Hartmann Village at 615 Rankin Mill Lane in the City of Boonville be and are hereby approved.

SECTION 2: This ordinance shall take effect and be in full force from passage of this ordinance.

READ FOR THE FIRST TIME THE 16th DAY OF FEBRUARY, 2016 AND PASSED THIS 7TH DAY OF MARCH, 2016, AFTER A COPY OF THIS ORDINANCE AND REFERENCED SITE PLANS HAVE BEEN MADE AVAILABLE FOR PUBLIC INSPECTION PRIOR TO ITS PASSAGE.

PRESIDENT OF THE COUNCIL

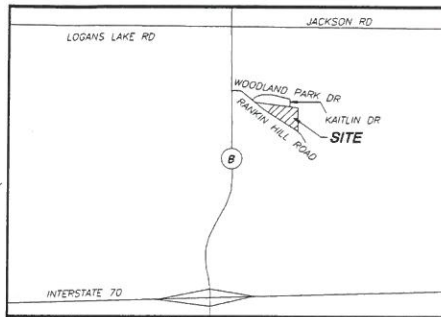
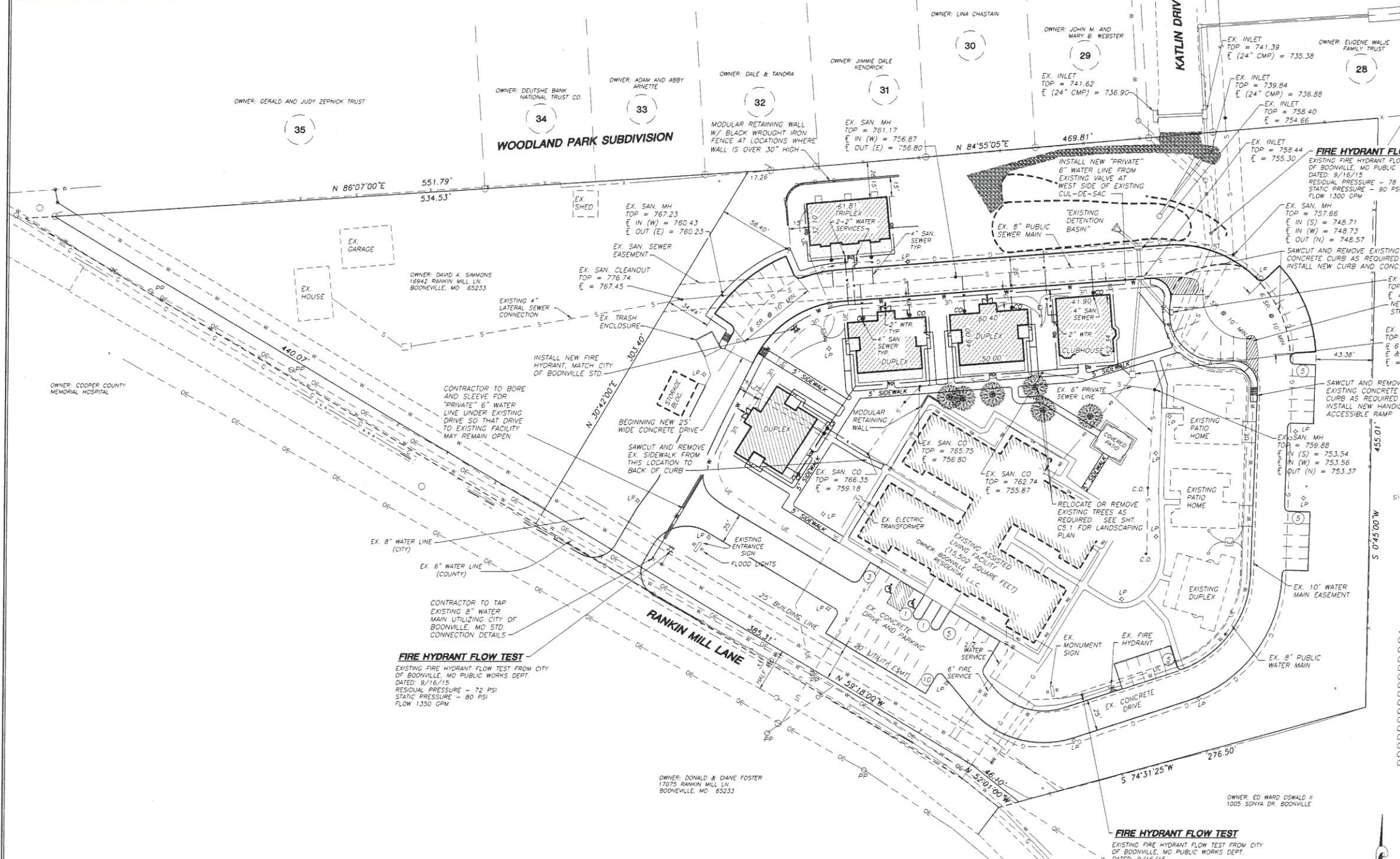
APPROVED THIS 7TH DAY OF MARCH, 2016

JULIE THACHER, MAYOR

ATTEST:

TERESA STUDLEY, CITY CLERK

**THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE**



VICINITY MAP
SCALE: NTS

OWNER/DEVELOPER:
OWNER - BOONVILLE RESIDENTIAL L.L.C.
C/O HENLEY MONTGOMERY
915 E ASH STREET
COLUMBIA, MO 65201
(573) 442-5188

DEVELOPER - AMERICARE
C/O HENLEY MONTGOMERY
915 E ASH STREET
COLUMBIA, MO 65201
(573) 442-5188

SITE DATA
ZONING: - R-3
ACREAGE: - 5.67 AC
LOCATION: 615 RANKIN MILL LANE
BOONVILLE, MISSOURI 65201

CIVIL PLAN SHEET INDEX - THE ARBORS @ HARTMANN VILLAGE

- C1.1 OVERALL SITE PLAN
- C1.2 TOPOGRAPHICAL SURVEY (FOR INFORMATION ONLY)
- C1.3 LEGEND/NOTES PLAN
- C2.1 OVERALL GRADING PLAN
- C2.2 GRADING PLAN
- C2.3 DRAINAGE PLAN
- C2.4 DRAINAGE NOTES AND DETAILS
- C2.5 DRAINAGE NOTES AND DETAILS
- C3.1 EROSION CONTROL PLAN
- C3.2 EROSION CONTROL DETAILS
- C3.3 EROSION CONTROL NOTES AND DETAILS
- C4.1 SITE WORK DETAILS
- C4.2 SITE WORK DETAILS
- C4.3 SITE WORK DETAILS
- C5.1 LANDSCAPING PLAN

NOTE:
THE BUILDING DIMENSIONS SHOWN ON THIS PLAN "MAY" BE PRELIMINARY OR A MORE RECENT BUILDING FOOTPRINT MAY EXIST. DO NOT USE THIS PLAN OR THE ELECTRONIC DRAWING OF THIS PLAN TO STAKE THE BUILDINGS UNLESS THE FINAL APPROVED FOUNDATION PLAN HAS BEEN OBTAINED FROM THE ARCHITECT. IT IS THE SURVEYOR'S RESPONSIBILITY THAT IS SUPPLYING THE PROJECT STAKING TO ENSURE THAT THE NECESSARY CHECKS HAVE BEEN MADE BEFORE STAKING THE BUILDINGS. THE SURVEYOR SHOULD STAKE OUT THE FOUNDATION PLAN DIMENSIONS WHICH ARE THE BUILDING SLAB EDGE AND ALSO REPRESENT THE OUTSIDE OF THE FRAMING LINE. AFTER THE BUILDINGS HAVE BEEN STAKED ON THE GROUND IT IS THE GENERAL CONTRACTOR AND HIS CONCRETE SUBCONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY AND CHECK THAT THE SURVEY POINTS ARE IN AGREEMENT WITH THE FINAL APPROVED FOUNDATION PLAN BEFORE PROCEEDING ANY FURTHER. CONTACT ARCHITECT AND ENGINEER WITH ANY DISCREPANCIES.

REVISIONS		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
DEVELOPER: AMERICARE SYSTEMS, INC.
ENGINEER: AMERICARE SYSTEMS, INC.

DIVISION OF ENGINEERING
OVERALL SITE PLAN
LOCATION: 615 RANKIN MILL LANE
BOONVILLE, MISSOURI

SURVEY BY	DATE	1" = 30'-0"
DRAWN BY	DATE	BOONVILLE
DESIGN BY	DATE	
REVIEWED		
DEPUTY CITY ENGINEER	DATE	CITY ENGINEER

SHEET C11
AMERICARE SYSTEMS, INC.
PROJECT DEVELOPMENT
915 E ASH STREET
COLUMBIA, MO 65201
PHONE: (573) 442-5188, FAX: (573) 442-5177

THIS PROPERTY IS NOT LOCATED WITHIN AN AREA DESIGNATED AS A "SPECIAL FLOOD HAZARD AREA" AS PER FLOOD LINES ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AS SHOWN ON FLOOD INSURANCE RATE MAP #29053C0155C, DATED MAY 03, 2011.

EX. MANHOLE ON KAITLIN DR
STA 7+73.5
ELEV= 743.50'

MH	●	EXISTING SANITARY MANHOLE
MH	○	PROPOSED SANITARY MANHOLE
CO	○	EXISTING SANITARY CLEANOUT
CO	●	PROPOSED SANITARY CLEANOUT
FM	—	EXISTING FIRE HYDRANT
FM	—	PROPOSED FIRE HYDRANT
—	—	EXISTING GUY WIRE
LP	○	EXISTING LIGHT POLE
LP	●	PROPOSED LIGHT POLE
EM	○	EXISTING ELECTRIC METER
EM	●	PROPOSED ELECTRIC METER
GM	○	EXISTING GAS METER
GM	●	PROPOSED GAS METER
WM	○	EXISTING WATER METER
WM	●	PROPOSED WATER METER
—	—	EXISTING CABLE BOX
—	—	EXISTING ELECTRIC TRANSFORMER
—	—	PROPOSED ELECTRIC TRANSFORMER
—	—	EXISTING TELEPHONE BOX
PP	—	EXISTING UTILITY POLE
WV	—	EXISTING WATER VALVE
WV	—	PROPOSED WATER VALVE
—	—	PROPOSED DOWN SPOUT
—	—	PROPOSED HANDICAPPED SPACE
—	—	EXISTING HANDICAPPED SPACE
—	—	IRON PIPE CAP #2001008115
E	—	EXISTING SET
(REC)	—	RECORD
—	—	BORE HOLE
—	—	BENCH MARK
DM	—	DRILL HOLE
—	—	IRON PIPE
RB	—	REBAR
—	—	MONUMENT
PM	—	PERMANENT MONUMENT
RW	—	RIGHT OF WAY MARKER
—	—	STONE
—	—	EXISTING STREET SIGN
B	—	EXISTING BOLLARD
—	—	EXISTING ROOF DRAIN
—	—	EXISTING SPRINKLER VALVE
—	—	EXISTING MAILBOX
—	—	EXISTING FLAGPOLE
—	—	BOONE COUNTY SURVEY
E/A	—	EDGE ASPHALT
F/A	—	FINISH GRADE
T/C	—	TOP OF CURB
T/P	—	TOP OF PAVEMENT
—	—	FINISH FLOOR
(R)	—	RADIAL LINE
IC	—	CENTERLINE

0.000 SQUARE FEET
00.00 AC ACRES

X	_____	EXISTING FENCE
	_____	PROPOSED FENCE
UE	_____	EXISTING UNDERGROUND ELECTRIC
	_____	PROPOSED UNDERGROUND ELECTRIC
OE	_____	EXISTING OVER-HEAD ELECTRIC
	_____	PROPOSED OVER-HEAD ELECTRIC
UT	_____	EXISTING UNDERGROUND TELEPHONE
	_____	PROPOSED UNDERGROUND TELEPHONE
OT	_____	EXISTING OVER-HEAD TELEPHONE
	_____	PROPOSED OVER-HEAD TELEPHONE
FO	_____	EXISTING FIBER OPTIC CABLE
	_____	PROPOSED FIBER OPTIC CABLE
G	_____	EXISTING GAS
	_____	PROPOSED GAS
S	_____	EXISTING SANITARY
	_____	PROPOSED SANITARY
FM	_____	EXISTING SANITARY FORCEMAIN
	_____	PROPOSED SANITARY FORCEMAIN
W	_____	EXISTING WATER
	_____	PROPOSED WATER
	 _____	EXISTING STORM SEWER
	 _____	PROPOSED STORM SEWER
CATV	_____	EXISTING CABLE TELEVISION
	_____	PROPOSED ROOF DRAIN
	_____	EXISTING FLOWLINE (E)
	 _____	EXISTING TRELISE
	 _____	PRESERVED TRELISE
	_____	PROPOSED CONTOUR
	_____	EXISTING CONTOUR

772.00 PROPOSED SPOT ELEVATION
771.50

100-YR FLOODPLAIN

FLOODWAY

DIVERSION BERM

DRAINAGE SWALE

EROSION CONTROL SILT FENCE

TEMPORARY SILT TRAP WITH ROCK OUTLET

TEMPORARY SILT TRAP WITH PIPED OUTLET

1. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING THE MISSOURI ONE CALL SYSTEM AT 1-800-344-7483 (DIGITEL) OR 816-481-LEAST-THREE (3) WORKING DAYS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTACT THE ENGINEER WITH ANY DISCREPANCIES.
2. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE APPROPRIATE UTILITY COMPANIES AND CONTRACTOR HAS BEEN NOTIFIED.
3. THE CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCES OF PROXY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR.
4. ALL NECESSARY INSPECTIONS, APPROVALS, AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR AUTHORITIES SHALL BE COMPLETED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CERTIFICATION OF SERVICES.
5. THE CONTRACTOR SHALL COORDINATE WITH THE WATER COMPANY FOR REQUIREMENTS OF DOMESTIC ENTRY, ALL APPURTENANCES SUCH AS VALVES BACKFLOW PREVENTION DEVICES, METER PROBES AND/OR METERS REQUIRED. THE CONTRACTOR SHALL NOT PURCHASE OR HAVE PURCHASED BY THE CONTRACTOR AND INSTALLED PER THE WATER COMPANIES REQUIREMENTS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING PIPE BOLLARD PROTECTION AROUND UTILITY ENTRANCES AND METER LOCATIONS. CONTRACTOR SHALL COORDINATE WITH THE UTILITY REQUIREMENT FOR EXACT REQUIREMENTS.
7. THE SANITARY SEWER MUST MEET WATER AND SEWER SEPARATION REQUIREMENTS OF 10' FEET HORIZONTAL AND 2' VERTICAL.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ANY UTILITY COMPANY WHICH MAINTAINS A UTILITY LINE WITHIN THE BOUNDARIES OF THE PROJECT PRIOR TO THE START OF CONSTRUCTION.
9. ALL UTILITY CONSTRUCTION SHALL CONFORM WITH THE MOST STRINGENT REQUIREMENTS OF THE UTILITY COMPANY OR PROJECT SPECIFICATIONS.
10. CONTRACTOR SHALL COORDINATE WITH THE BOONVILLE, MO. PUBLIC WORKS DEPARTMENT AND ALL APPROPRIATE UTILITY COMPANIES FOR PROPOSED METER PLACEMENTS. THE CUSTOMER IS RESPONSIBLE FOR INSTALLING LINES FROM THE METERS TO THE BUILDING AND APPROPRIATE BACKFLOW PROTECTIONS. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE APPROPRIATE UTILITY COMPANIES.
11. CONTRACTOR SHALL CONNECT TO THE EXISTING 8" SEWER MAIN. THE ELEVATIONS SHOWN ARE BASED ON AN ACTUAL FIELD SURVEY. THE CONTRACTOR SHALL CONFIRM THE INVERT ELEVATIONS PRIOR TO INSTALLING ANY SEWER LINES. IF THERE IS ANY DISCREPANCIES WITH THE INFORMATION SHOWN ON THE PLANS, CONTACT THE ENGINEER.
12. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND ARE NOT NECESSARILY ALL THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANIES TO DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY CONSTRUCTION. CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS.

BOONVILLE, MISSOURI
CONTACT: TIM COLLARD
(314) 554-4942

220 E. 5TH ST.
SEDALIA, MISSOURI 65301
CONTACT: STEVE HARLAN
(660) 829-0990

CITY OF BOONVILLE
PUBLIC WORKS DEPARTMENT
1200 LOCUST ST.
BOONVILLE, MISSOURI 65233
CONTACT: M. L. CAUTHON
(660) 882-5257

LIGHT POLES SHOWN SHALL BE SEMI-CUTOFF SHOEBOX FIXTURES, INWARD AND DOWNWARD DIRECTED, WHICH MAY BE RELOCATED OR CHANGED IN TOTAL NUMBER BY THE LIGHTING ENGINEER WITHOUT ADDITIONAL APPROVAL. MAXIMUM LIGHT POLE HEIGHT WILL BE 12 FEET. BUILDING MOUNTED LIGHTING IS UNKNOWN AT THIS TIME. ALL OUTDOOR LIGHTING SHALL BE SHOWN ON A FUTURE LIGHTING PLAN THAT WILL COMPLY WITH THE CITY OF BOONVILLE, MO CODE OF ORDINANCES.

TWO EXISTING MONUMENT SIGNS ARE CURRENTLY LOCATED ON THIS SITE. ONE SIGN IS AT THE MAIN ENTRANCE TO THE FACILITY "HARTMANN VILLAGE" AND A SECOND SIGN IS LOCATED APPROXIMATELY 35' SOUTHEAST OF THE EXISTING ASSISTED LIVING FACILITY "THE COTTAGES". BOTH SIGNS WERE PERMITTED AND CONSTRUCTED AS PART OF THE ORIGINAL CONSTRUCTION PROJECT.

<u>STYLE</u>	<u>HEIGHT</u>	<u>QTY.</u>	<u>STYLE</u>
A	12'	4	LIGHTPOLE
B	42"	4	BOLLARD
C	< 1'	2	GROUND L

THIS FACILITY WILL HAVE A SPRINKLER SYSTEM.
DESIGN CRITERIA: FIRE FLOW 275 GPM (INCLUDES 100 GPM HOSE
ALLOWANCE)
60 PSI AT WATER MAIN

THE DESIGN FLOW FOR THE SANITARY SEWER EXTENSION TO THE EXISTING MAIN WILL BE

EXISTING ALF = 30 UNITS X 100 GAL/DAY = 3000 GAL/DAY
 EMPLOYEES - MAX. SHIFT = 6 EMPLOYEES PER DAY X 15 GAL/DAY = 90 GAL/DAY
 VISITORS - 10 VISITORS PER DAY X 5 GAL/DAY = 50 GAL/DAY
 EXISTING SINGLE FAMILY DETACHED = 2 X 370 GAL/DAY = 740 GAL/DAY
 EXISTING DUPLEX = 1 X 300 GAL/DAY = 300 GAL/DAY

EXISTING TOTAL FLOW = 4,180 GAL/DAY

PROPOSED DUPLEXES = 3 X 300 GAL/DAY = 900 GAL/DAY
PROPOSED TRIPLEX = 1 X 370 GAL/DAY = 370 GAL/DAY
PROPOSED CLUBHOUSE = 1 X 300 GAL/DAY = 300 GAL/DAY

PROPOSED TOTAL FLOW = 1,570 GAL/DAY

TOTAL FLOW = 5,750 GAL/DAY

ALL SEWER LATERALS ARE TO BE 6" PVC WITH A MINIMUM SLOPE OF 2.00%

- * EXISTING GREASE INTERCEPTOR
 - 1000 GALLON POLYETHYLENE TANK
 - MANUFACTURED BY - AK INDUSTRIES
 - STANDARD LOADING
 - 24" DIAMETER TOP ACCESS GAS TIGHT MANHOLE

2. RECORD TITLE INFORMATION PROVIDED BY STEWART TITLE GUARANTEE COMPANY, COMMITMENT NUMBER 3384, DATED: 09/08/06.
3. TRACT SUBJECT TO ALL EASEMENTS AS SHOWN ON THIS PLAN.
4. THE FINAL PLAT SHOWING THIS PROPERTY WAS RECORDED AS DOCUMENT - THE TOPOGRAPHIC SURVEY FOR THIS PROJECT WAS PREPARED BY A CIVIL GROUP.
5. CONTRACTOR SHALL VERIFY EXISTING CONDITION AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THEY SHALL BE RESPONSIBLE FOR CALLING THE MISSOURI ONE CALL SYSTEM AT 1-800-344-7483 (DIG-RITE) OR 811 AT LEAST 3 WORKING DAYS PRIOR THE COMMENCEMENT OF ANY CONSTRUCTION. CONTACT ENGINEER WITH ANY DISCREPANCIES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING ANY TESTING REQUIREMENTS FOR BUILDING FOUNDATIONS, RETAINING WALLS & EARTH BANKS OR SLOPES AT THE APPROPRIATE TIMES DURING CONSTRUCTION.
7. BUILDING SIZE AND DIMENSIONS ARE APPROXIMATE. SEE ARCHITECTS' PLANS FOR ACCURATE DIMENSIONS. CONTACT ARCHITECT FOR FINAL FOUNDATION PLAN BEFORE STAKING.
8. ALL DIMENSIONS ARE FROM BACK OF CURB UNLESS SHOWN OTHERWISE.
9. ALL SPOT ELEVATIONS ARE TOP OF CURB UNLESS SHOWN OTHERWISE.
10. ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED AS SOON AS GENERAL GRADING OPERATIONS ARE COMPLETE. IF VEGETATIVE COVER CAN NOT BE ESTABLISHED PRIOR TO THE ONSET OF WINTER, AN ALTERNATIVE METHOD OF STABILIZATION SHALL BE USED UNTIL VEGETATIVE COVER IS ESTABLISHED.
11. SEE MECHANICAL & ELECTRICAL PLANS FOR ALL DETAILED INFORMATION REGARDING SITE LIGHTING AND WATER & SEWER SERVICE CONNECTIONS TO THE MAIN BUILDING.
12. CONTRACTOR SHALL NOTIFY THE BOONVILLE, MO. BUILDING INSPECTOR @ (660) 621-0297 A MINIMUM OF 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
13. FOR TRAFFIC SIGN NUMBERS REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
14. ALL NECESSARY INSPECTIONS, APPROVALS, AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR AUTHORITIES SHALL BE COMPLETED PRIOR TO THE ANNOUNCED BUILDING POSSESSION AND THE FINAL CERTIFICATE OF SERVICES.
15. ALL PAINTED PAVEMENT MARKINGS SUCH AS DIRECTIONAL ARROWS AND LETTERING SHALL BE PAINTED USING TEMPLATES.
16. ALL SIDEWALKS TO HAVE SCORING JOINTS AT NO DISTANCE GREATER THAN 10'. SEE DETAIL SHEET FOR CONCRETE JOINT REQUIREMENT.
17. COORDINATE FIRE LANE STRIPING AND SIGN REQUIREMENTS WITH LOCAL FIRE DEPARTMENT. PROVIDE ALL REQUIRED SIGNS AND STRIPING AS A PART OF THE CONTRACT.
18. THE SIDEWALK AND CONCRETE APRONS TO BE 4000 PSI, AIR ENTRAINMENT CONCRETE.
19. TRANSITION FROM A 6" TALL CURB DOWN TO A 0" CURB IN THE LANE 2'.
20. CONNECT TO EXISTING CURB AND GUTTER. MATCH EXISTING IN GRADE AND ALIGNMENT.
21. CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT AS SHOWN TO ALLOW FOR A CLEAN, STRAIGHT JOINT.
22. CONNECT TO EXISTING SIDEWALK. MATCH EXISTING GRADE. CONTRACTOR TO TRANSITION FROM THE EXISTING SIDEWALK TO THE PROPOSED SIDEWALK IN THE LANE 20'.
23. THE CROSS-SLOPES OF ALL SIDEWALKS AND OF ALL CURB CUTS SHALL NOT EXCEED 2%.
24. ALL CURB & GUTTER SECTIONS FOR PARKING LOT SHALL BE 6" TALL - 22" WIDE UNLESS OTHERWISE SHOWN. "SEE PLAN".

Plotted by: nslottery; 20 Jan 2016 - 8:35am

OWNER:
BOONVILLE RESIDENTIAL, L.L.C.
915 E ASH STREET
COLUMBIA, MO 65201
(573) 442-5188

DEVELOPER:
AMERICARE
C/O WENLEY MONTGOMERY
915 E. ASH STREET
COLUMBIA, MO. 65201
(573) 442-5188

ZONING: - R-3
ACREAGE: - 5.67 AC
LOCATION: ~ 1,350 SOUTHEAST OF THE
INTERSECTION OF STATE
ROUTE 8 AND RANKIN MIL
LANE

CONSTRUCTION

COTTAGES:

(3) DUPLEXES	@ 2,743 SQ. FT.	= 8,229 SQ. FT.	* MAX. BUILDING HEIGHTS. ~ 28'
(1) TRIPLEX	@ 1,997 SQ. FT.	= 1,997 SQ. FT.	AVERAGE ROOF HEIGHT 19'
(1) CLUBHOUSE	@ 1,883 SQ. FT.	= 1,883 SQ. FT.	
TOTAL		= 10,009 SQ. FT.	

A. APPLICABLE CODES: CLUBHOUSE AND TRIPLEX BUILDINGS
B061, B062

A. APPLICABLE CODES:

BOCA 2000
IMC 2000
IPC 2000
NEC 2002

DUPLEX BUILDINGS
IRC 2000
IMC 2000
IPC 2000
NEC 2002

EXISTING ALF :
7-3 PM ~ 6 TO 7 STAFF
3 PM TO 11 PM ~ 2-3 STAFF
11 PM TO 7 AM ~ 1-2 STAFF
THIS CAN VARY WITH CARE NEEDS

REQUIRED:
EXISTING ALF: 30 UNITS * 1 SPACE/3 UNITS = 10 SPACES
6 EMPLOYEES @ MAX. SHIFT * 1 SPACE/1 EMPLOYEE = 6 SPACES
EXISTING COTTAGES: 4 UNITS * 2 SPACES/1 UNIT = 8 SPACES
PROPOSED COTTAGES: 9 UNITS * 2 SPACES/1 UNIT = 18 SPACES
PROPOSED CLUBHOUSE: 1,893 SQ. FT. * 1 SPACE/1,000 SQ. FT. = 2 SPACES
44 TOTAL SPACES REQUIRED

PROVIDED:
EXISTING ALF: 20 PARKING SPACES PROVIDED, INCLUDING 2 VAN
ACCESSIBLE HANDICAP SPACES.
EXISTING COTTAGES: 10 PARKING SPACES PROVIDED, INCLUDING 4 GARAGE
SPACES AT SINGLE FAMILY RATIO HOMES
PROPOSED COTTAGES: 10 PARKING SPACES PROVIDED
PROPOSED CLUBHOUSE: 6 PARKING SPACES PROVIDED
TOTAL PARKING SPACES: 55 PARKING SPACES PROVIDED

AFTER EVALUATING THE PROPOSED TRAFFIC IMPACTS FROM THIS PROJECT IT WAS DETERMINED THAT IT DID NOT MEET THE SPECIFICATIONS AS DESCRIBED IN SECTION 2.97 ITEM 8 OF THE BOONVILLE ORDINANCES. THIS PROJECT WILL REQUIRE VERY LOW TRAFFIC VOLUMES TO BE ACCOMMODATED BY THE ROAD SYSTEM. THE ABOVE INFORMATION DISPLAYS THE PROJECTED TRAFFIC STAFFING THIS FACILITY. IN ADDITION VERY FEW RESIDENTS WILL ACTUALLY HAVE VEHICLES AT THE SITE. THE EXPERIENCE FROM SIMILAR FACILITIES IS THAT THE TRAFFIC LOAD IS VERY MINIMAL. THE PARKING SPACES PROVIDED ARE MAINLY FOR VISITORS ON HOLIDAYS OR SPECIAL OCCASIONS.

A TRACT OF LAND LOCATED IN THE NORTHEAST QUARTER OF SECTION 11, AND THE NORTHWEST QUARTER OF SECTION 12, ALL BEING WITHIN TOWNSHIP 48 NORTH, RANGE 17 WEST, COOPER COUNTY, MISSOURI AS DESCRIBED BY THE DEED OF TRUST RECORDED IN BOOK 437, PAGE 216 OF THE COOPER COUNTY RECORDS; I THEN SUBDIVIDED SAID TRACT INTO TWO (2) TRACTS BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

ENCLOSING AN EXISTING 1/4 SECTION IN THE SOUTHEAST CORNER OF THE
20' WIDE ROAD. THE 1/4 SECTION IS RECORDED IN BOOK 100, PAGE 10.
COUNTY RECORDS; THENCE ALONG THE SOUTH LINE OF SAID LOT, 584'55"05", 22.26'
FEET TO THE POINT OF BEGINNING AND BEING THE NORTHEAST CORNER OF THE
1/4 SECTION, BEING BOOK 100, PAGE 387; THENCE ALONG THE LINES OF SAID
SURVEY WITH THE 1/4 FOLLOWING: THENCE 50'45"00", 45.01' FEET
THENCE 57'43"12", 29.68' FEET TO THE NORTH RIGHT-OF-WAY LINE OF RANKIN
MILL LANE; THENCE ALONG SAID RIGHT-OF-WAY LINE WITH THE TWO (2) FOLLOWING
CALLS; THENCE N52°01'20", 35.63' FEET; THENCE N59°18'00", 34.49' FEET; THENCE
N52°01'20", 35.63' FEET; THENCE N50°00'00", 45.01' FEET; THENCE
ALONG SAID SUBDIVISION LINE WITH THE TWO (2) FOLLOWING CALLS; THENCE
N85°07'00", 17.26' FEET; THENCE N84°55'05", 48.81' FEET TO THE POINT OF
BEGINNING AND CONTAINING 5.80 ACRES.

[illegible]

THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
DEVELOPER: AMERICARE SYSTEMS, INC.
ENGINEER: AMERICARE SYSTEMS, INC.

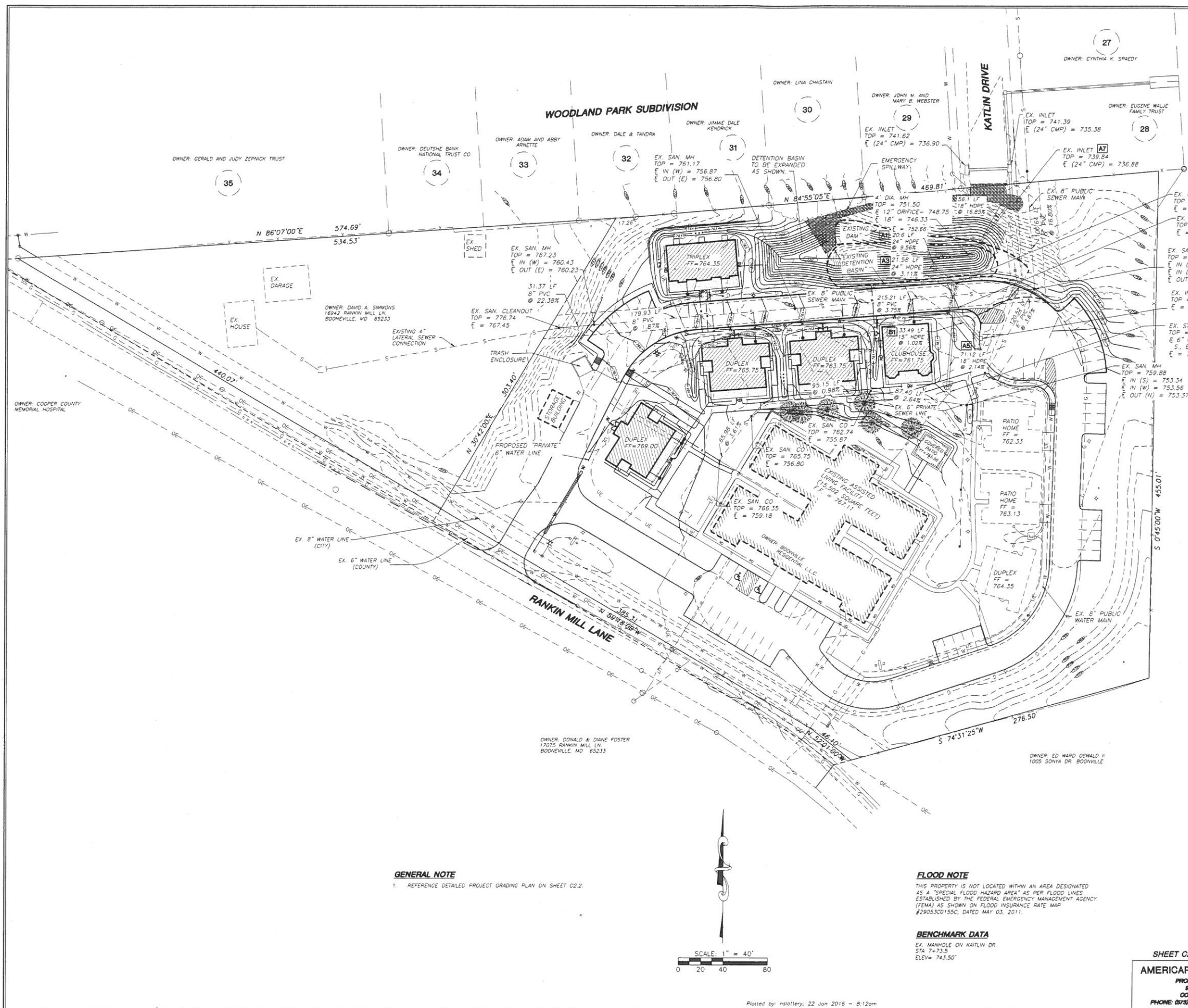
DIVISION OF ENGINEERING
LEGEND/NOTES
LOCATION: 615 RANKIN MILL LANE
BOONVILLE, MISSOURI

SURVEY _____ DATE _____
DRAWN BY RAC DATE _____
DESIGN BY NRS DATE _____

REVIEW _____

DEPUTY CITY ENGINEER DATE _____

AMERICARE SYSTEMS, INC.
PROJECT DEVELOPMENT
915 E. ASH STREET
COLUMBIA, MO 65201
PHONE: (373) 442-5188, FAX: (373) 442-5277



NOTES

1. ALL NEWLY CUT AND / OR FILLED AREAS LACKING ADEQUATE VEGETATION SHALL BE SEEDED, FERTILIZED, MULCHED AND/OR SODDED AS REQUIRED TO EFFECTIVELY PREVENT SOIL EROSION.
2. ALL AREAS NOT RECEIVING OTHER PERMANENT STABILIZATION SUCH AS PAVEMENT, ROOFS, SOD, ETC., SHALL BE SEEDED AND MULCHED AS SPECIFIED ON THE EROSION CONTROL PLANS BEFORE TEMPORARY SEDIMENT CONTROLS CAN BE REMOVED AND PRIOR TO FINAL APPROVAL OF CONSTRUCTION.
3. ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED AS SOON AS GENERAL GRADING OPERATIONS ARE COMPLETE. IF VEGETATIVE COVER CAN NOT BE ESTABLISHED PRIOR TO THE ONSET OF WINTER, AN ALTERNATE METHOD OF STABILIZATION SHALL BE USED UNTIL COVER IS ESTABLISHED.
4. ALL UNSURFACED AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL AND SOD WHERE CALLED SPECIFIED. WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
5. SLOPES ON ALL ADA ACCESSIBLE ROUTES SHALL NOT EXCEED 1:20.
6. THE CONTRACTOR SHALL HAVE ALL PROPERTY CORNERS LOCATED BY A LICENSED SURVEYOR PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES WITHIN THE RIGHT-OF-WAY. ANY MONUMENTS WHICH ARE DESTROYED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED.
7. THERE SHALL BE NO SUBSTITUTIONS FOR THE PIPE MATERIALS SHOWN ON THIS PLAN, WITHOUT CONTACTING ENGINEER.
8. THE CROSS-SLOPES OF ALL SIDEWALKS AND CURB CUTS SHALL NOT EXCEED 2% (1/4" PER FOOT).
9. ALL CURBS SECTIONS FOR PARKING LOT SHALL BE 6" TALL TYPE "A" CURB UNLESS OTHERWISE SHOWN. "SEE DETAIL IN PLANS".

GENERAL NOTES:

1. CONTRACTOR SHALL NOTIFY THE BOONVILLE, MO. BUILDING INSPECTORS OFFICE @ (660) 882-5124 A MINIMUM OF 24 HOURS PRIOR TO BEGINNING CONSTRUCTION.
2. ALL NEWLY CUT OR FILLED AREAS, LACKING ADEQUATE VEGETATION, SHALL BE SEEDED, MULCHED, FERTILIZED AND/OR SODDED AS REQUIRED TO EFFECTIVELY CONTROL SOIL EROSION.
3. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT NECESSARILY ALL THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY CONSTRUCTION. CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS. FOR SITE LOCATION OF EXISTING UTILITIES CONTACT THE TENNESSEE ONE CALL SYSTEM AND THE RESPECTIVE UTILITY CONTACTS SHOWN.
4. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.
5. ALL FILL SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D-698) WITHIN 3% OF OPTIMUM MOISTURE CONTENT IN LIFTS NOT TO EXCEED SIX (6) INCHES OF COMPACTED THICKNESS.
6. ALL CONSTRUCTION MATERIALS TO BE PER BOONVILLE, MO. STANDARD CONSTRUCTION SPECIFICATIONS.
7. PROPERTY LINES SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. GRADING, CLEARING AND THE ERECTION AND REMOVAL OF FENCES ALONG THE PROPERTY LINES SHALL BE FULLY COORDINATED WITH ADJACENT PROPERTY OWNERS.
8. ALL GRADING WORK SHALL BE PERFORMED IN SUCH A MANNER THAT ADJACENT PROPERTIES ARE NOT DAMAGED OR ADVERSELY AFFECTED.
9. LOT DRAINAGE: THE FINISHED GRADE SHALL BE SLOPED AWAY FROM THE FOUNDATION FOR DRAINAGE. THE FINISHED GRADE MUST BEGIN AT LEAST 6" BELOW THE TOP OF THE FOUNDATION WALL OR THE FINISHED FLOOR ELEVATION OF THE CONCRETE SLAB. THE MINIMUM GRADE AWAY FROM THE FOUNDATION OR FINISHED FLOOR ELEVATION SHALL BE 2 PERCENT FOR AT LEAST 6 FEET FROM THE STRUCTURE.

GENERAL NOTE

1. REFERENCE DETAILED PROJECT GRADING PLAN ON SHEET C2.2.

FLOOD NOTE

THIS PROPERTY IS NOT LOCATED WITHIN AN AREA DESIGNATED AS A "SPECIAL FLOOD HAZARD AREA" AS PER FLOOD LINES ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AS SHOWN ON FLOOD INSURANCE RATE MAP #29033C01550, DATED MAY 03, 2011.

BENCHMARK DATA

EX. MANHOLE ON KATLIN DR.
STA 7+73.5
ELEV = 743.50'

SHEET C2.1

AMERICARE SYSTEMS, INC.
PROJECT DEVELOPMENT
918 E. ASH STREET
COLUMBIA, MO 65201
PHONE: (573) 442-9188, FAX: (573) 442-8877

REVISIONS		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
DEVELOPER: AMERICARE SYSTEMS, INC.
ENGINEER: AMERICARE SYSTEMS, INC.

DIVISION OF ENGINEERING
OVERALL GRADING PLAN
LOCATION: 615 RANKIN MILL LANE
BOONVILLE, MISSOURI

SURVEY
DRAWN BY: RAC
DESIGN BY: NRS

REVIEWED

DEPUTY CITY ENGINEER DATE CITY ENGINEER

1" = 30'-0"
BOONVILLE

<u>STORMWATER INFORMATION TABLE</u>	
PARCEL ID	101012002001018001 - COOPER COUNTY, MO
PROJECT AREA - PHASE 2	1.76 ACRES
TOTAL AREA PROPERTY	5.67 ACRES
IMPERVIOUS AREA	2.21 ACRES / 39%
EXPECTED HOT SPOTS	DUMPSTER PAD
STRUCTURAL BMP'S	RIPRAP, & OUTLET STRUCTURES
G & M REQUIREMENTS FOR STRUCTURAL BMP'S	KEEP OUTLET STRUCTURES FREE OF DEBRIS
NON-STRUCTURAL BMP'S	EMPLOYEE TRAINING
ENTITY RESPONSIBLE FOR BMP'S IMPLEMENTATION	AMERICARE HENLEY MONTGOMERY 573-442-5188
BASIN NAME (WATERSHED)	PETITE SALINE CREEK
SUB-BASIN NAME (RECEIVING WATERS)	REAM BRANCH
SEE ACREAGE SUMMARY ON SHEET C3.1 FOR MORE DETAIL	

SITE LOCATION :
 LAT: 36°56'47" N
 LONG: 92°44'14" W

MISSOURI

IN AMERICA PROJECTS MISSOURI, BOONVILLE

[illegible]

THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
DEVELOPER: AMERICARE SYSTEMS, INC.
ENGINEER: AMERICARE SYSTEMS, INC.

DIVISION OF ENGINEERING
DRAINAGE PLAN
LOCATION: 615 RANKIN MILL LANE
BOONVILLE, MISSOURI

SURVEY _____ DATE _____
DRAWN BY RAC DATE _____
DESIGN BY NRS DATE _____

1" = 30'-0"
BOONVILLE

REVIEWED _____

DEPUTY CITY ENGINEER DATE CITY ENGINEER

DRAINAGE AREAS	
SYMBOL	ACRES
A2	1.79
A4	0.42
A8	1.14
B2	0.69
RD	0.48
TOTAL AREA	4.52

DRAINAGE STRUCTURE, PIPES				
STRUCTURE	MATERIAL	LINEAR FEET	SLOPE (%)	PIPE DIAMETER (IN)
A1	HDPE	27	0.55	24
A3	HDPE	21	0.40	24
A5	HDPE	25	0.32	18
B1	HDPE	14	0.15	15

DRAINAGE STRUCTURE, PIPES				
STRUCTURE	MATERIAL	LINEAR FEET	SLOPE (%)	PIPE DIAMETER (IN)
A1	HDPE	20.6	9.58	24
A3	HDPE	21.58	3.11	24
A5	HDPE	71.12	2.14	18
B1	HDPE	33.49	1.02	15

<u>"ORIGINAL PLANS"</u>					
DRAINAGE STRUCTURE, INLET					
STRUCTURE	TYPE	SIZE (FT)	TOP EL. (FT)	FL IN (FT)	FL OUT (FT)
A2	A	6' x 2'	758.0	754.46	754.36
A4	A	6' x 2'	758.0	755.0	754.9
A6	SIDE OPENING INLET	4 x 4	759.8	6" OPENING IF 7.5 E & W	756.30
A7	AREA INLET	4' x 4'	740.0	-	736.83
B2	A	3' x 2'	758.7	-	755.40

<u>* AS-BUILT *</u>				
DRAINAGE STRUCTURE, INLET				
STRUCTURE	TYPE	SIZE (FT)	TOP EL. (FT)	FL (FT)
A2	A	6' x 2'	758.37	754.63
A4	A	6' x 2'	758.45	755.50
A6	SIDE OPENING INLET	4 x 4	760.27	6' OPENING S. E. W 759.27, F 18" HDPE 756.62
A7	AREA INLET	4' X 4'	739.84	736.68
B2	A	3' x 2'	758.89	755.64

NOTE: ALL CALCULATIONS FOR THE INLETS & CULVERTS ON THIS PROJECT WERE DESIGNED TO HANDLE THE 25-YEAR, 24 HOUR STORM. IN MOST CASES THE NEW INLETS & PIPING CAN ALSO HANDLE THE 100-YEAR, 24 HOUR STORM AS WELL. A CONSERVATIVE APPROACH WAS USED BY TAKING THE $T_c = 5$ MINUTES RESULTING IN A HIGHER Q_{peak} = IN SIZING ALL PIPES, INLETS & SWALES.

ALL DRAINAGE CALCULATIONS FOR THIS PROJECT SUPPLIED AS PART OF A SEPARATE DRAINAGE REPORT.

ALL DRAINAGE CALCULATIONS FOR THIS PROJECT SUPPLIED AS PART
OF A SEPARATE DRAINAGE REPORT.

SHEET C23

AMERICARE SYSTEMS, INC.
PROJECT DEVELOPMENT
915 E ASH STREET
COLUMBIA, MO 65201
PHONE: (313) 442-5188, FAX: (313) 442-5277

Plotted by: nslottery; 22 Jan 2016 - 8:22am

STORM WATER CALCULATIONS - CULVERT DETAIL														
JOB NAME / NUMBER:														
CULVERT ID	CULVERT LENGTH (FT)	COMPOSITE O (UPSTREAM INLET ID#)	COMPOSITE O (CFS)	UPSTREAM SURFACE ELEVATION (FT)	DOWNSTREAM SURFACE ELEVATION (FT)	UPSTREAM FLOWLINE ELEVATION (FT)	DOWNSTREAM FLOWLINE ELEVATION (FT)	DEPTH SURFACE TO FLOWLINE, UPSTREAM (FT)	DEPTH SURFACE TO FLOWLINE, DOWNSTREAM (FT)	CULVERT COMPOSITION (CMP, RCP, HDPE)	CULVERT SLOPE (%)	CULVERT DIAMETER (IN)	FLOW VELOCITY @ COMPOSITE O	MAXIMUM PIPE CAPACITY (CFS)
A1	23	A2,A4,A6,B2,RD	23.84	758	754.36	754.46	752.1	3.64	0	HDPE	9.85	24	22.60	76.37
A3	21	A4,A6,B2,RD	14.28	758	758	754.9	754.46	3.10	3.54		2.10	24	10.44	35.26
A5	75.5	A6,RD	7.43	759.8	758	756.3	755.0	3.50	3.0	HDPE	1.72	18	7.80	14.82
B1	34.9	B2	4.23	758.7	758	755.4	755.0	3.30	3.0	HDPE	1.15	15	6.45	8.51
RD1		RD1	1.74	N/A	N/A	N/A	N/A	N/A	N/A	HDPE	1.0 (MIN.)	12	4.51	3.56
RD2		RD2	1.74	N/A	N/A	N/A	N/A	N/A	N/A	HDPE	1.0 (MIN.)	12	4.51	3.56
RD3		RD1,RD2	3.48	N/A	N/A	N/A	756.55	N/A	2.75	HDPE	1.0 (MIN.)	15	5.36	6.46

STORM WATER CALCULATIONS - INLET DETAIL																
JOB NAME / NUMBER:																
CONTRIBUTING AREA ID	AREA (ACRES)	ELEV. DIFF. (FT)	LENGTH (FT)	I (IN/HR)	K	C	10-YEAR O O INLET (CFS)	25-YEAR O O INLET (CFS)	INLET ID	SUMP OR GRADE	STREET SLOPE AT INLET (%)	STREET WIDTH AT INLET (FT)	GUTTER DEPTH O INLET (FT)	SPECIFIED INLET TYPE	SPECIFIED INLET DIMENSIONS	INLET CAPACITY (C)
RD1	0.24	3.16	316	8	1.008	0.9	1.52	1.74	RD1	SUMP	N/A	N/A	N/A	ROOF DRAIN	12" ROUND	3.56
RD2	0.24	2.66	266	8	1.008	0.9	1.52	1.74	RD2	SUMP	N/A	N/A	N/A	ROOF DRAIN	12" ROUND	3.56
A8	1.14	7.9	287	8	1.008	0.43	3.46	3.95	A8	SUMP	N/A	N/A	N/A	SIDE OPENING INLET	4' X 4'	14.12
B2	0.69	10.8	780	8	1.008	0.76	3.70	4.23	B2	SUMP	2.3%	64	0.5	SINGLE TYPE-A	3' X 2'	7
A4	0.42	11.5	370	8	1.008	0.76	2.25	2.57	A4	SUMP	0%	24	0.5	DOUBLE TYPE-A	6' X 2'	14
A2	2.77	25.4	935	8	1.008	0.43	8.40	9.61	A2	SUMP	0%	24	0.5	DOUBLE TYPE-A	6' X 2'	14

Diagram illustrating the cross-section of a spillway structure, showing various channels and flow conditions:

- Emergency Spillway:** 1.5' @ Full Depth, Capacity = 21.77 CFS, Top of Dam.
- Outlet:** 12.01 CFS Thru Primary Outlet, 12.01 CFS Thru Emergency Spillway.
- Flow Conditions:**
 - O100 If Primary Outlet Ever Became Clogged WSE = 755.91
 - O100post = Qout = 38.50 CFS @ depth = 0.91'
 - O100 WSE = 755.50, Qout = 12.01 CFS @ depth = 0.50'
 - O100 Routed Thru Pond = 37.18 CFS
 - 12.01 CFS Thru Primary Outlet
 - 12.01 CFS Thru Emergency Spillway
- Channels:**
 - Spillway Channel E = 755.00
 - Line Upper Part of Spillway Channel with Turf Reinforcement Mat Landlock Trm = 50
 - Line Overflow Spillway with Riprap Protection Class "A-3" Riprap
- Dimensions:**
 - 16.0'
 - 756.50
 - 10.0'
- Notes:**
 - SEE SIZE ON RESPECTIVE BASIN DETAIL
 - INSTALL UP TO ELEVATION 756.50

Diagram illustrating the cross-section of a culvert structure, showing existing and future ground levels, riprap protection, and structural details.

Structural Details and Dimensions:

- 4' DIAMETER CONCRETE MH SECTION** (Top = 751.5)
- 12" DIA. ORIFICE** (E = 749.00)
- INSIDE BOTTOM OF BASIN** = 749.0
- 8" ORIFICES TO STRUCTURE** @ 748.00
- OUTLET PIPE** (58 LF = 18" HDPE @ 15.9% slope)
- 18" HDPE** = 746.00
- MIN - 5'** (Minimum depth)
- TOP** = 756.50
- E = 736.80** (Elevation at outlet)

Ground Levels:

- EXISTING GROUND** (Dashed line)
- FUTURE GROUND** (Solid line)

Protection:

- RIPRAP PROTECTION TYPE 1 ROCK BLANKET**

Notes:

- * ADD 4 "NEW"

	N	T	S
--	---	---	---

DETENTION BASIN IS DESIGNED FOR THE 25 YR 24 HR STORM
- 25 YR, 24 HR RAINFALL DEPTH = 6.0" *REVISED CN = 76, ORIGINAL CN = 72
DRAINAGE AREA = 5.5 ACRES

OUTLET STRUCTURE DESIGN -
THE PRIMARY OUTLET WILL BE DESIGNED TO BE LESS THAN OR
EQUAL TO THE PEAK RUNOFF RATE FOR THE PRE-DEVELOPMENT
25 YEAR, 24 HOUR STORM & 50 YEAR, 24 HOUR STORM AS PER
APPENDIX E OF THE CITY OF BOONVILLE STORMWATER REGULATIONS

Q25 PRE = 22.82 CFS Q25 POST = 28.05 CFS
Q25 ROUTED = 21.16 CFS < Q25 PRE -- OK

Q50 PRE = 28.09 CFS Q50 POST = 33.60 CFS
Q50 ROUTED = 24.45 CFS < Q50 PRE -- OK

MAX. WATER ELEVATION @ Q25 = 752.94
MAX. WATER ELEVATION @ Q50 = 755.01
MAX. WATER ELEVATION @ Q100 = 755.50

* THIS BASIN WILL BE DESIGNED IN ACCORDANCE WITH THE ADJACENT
DETAIL AND COMPLETE DESIGN CALCULATIONS WILL BE PROVIDED
WITH THE FINAL DESIGN.

THE SITE HAS BEEN GRADED TO WHERE TO WHERE AT LEAST 78% (4.52 AC) OF THE ORIGINAL TRACT B (5.80 AC) IS BE ROUTED THRU THE EXISTING DETENTION BASIN AND DETAINED AT OR LESS THAN THE PRE-DEVELOPMENT FLOW RATES. THIS IS A TOTAL DRAINAGE AREA OF 4.52 ACRES ROUTED THRU THE DETENTION STRUCTURE.

TOTAL AREA OF LOT= 5.67 AC. = 247,021 SQ.FT.
TOTAL PAVED AREA= 64,134 SQ.FT. (25.96%)
TOTAL BUILDING AREA= 32,134 SQ.FT. (13.01%)
TOTAL IMPERVIOUS AREA= 96,383 SQ.FT. (39.02%)
TOTAL AREA OF LANDSCAPING= 150,638 SQ.FT. (60.98%)

NOTE: ~ 4.34% INCREASE IN IMPERVIOUS SURFACE FROM ORIGINAL 2007 DESIGN.

PREF-DEVELOPMENT

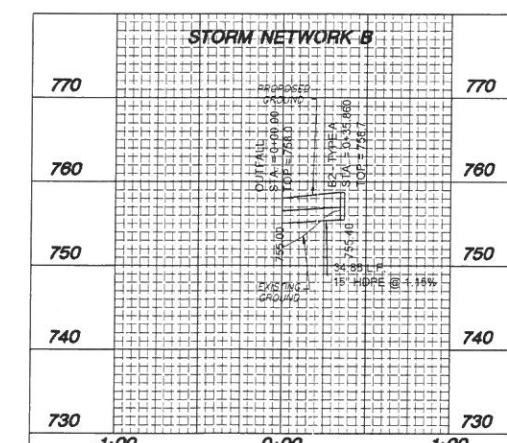
"ORIGINAL PLANS"

TOTALS:	5.8
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* INCLUDES EXISTING IMPERVIOUS SURFACE
IN ADDITION TO PROPOSED PHASE 2 IMPROVEMENTS

POST-DEVELOPMENT					
COVER DESCRIPTION	SOIL HSG	CURVE NUMBER	AREA (AC)	% OF TOTAL AREA	WEIGHT CURVE NUMBER
BUILDING	N/A	98	0.74	13.01	12.75
PARKING	N/A	98	1.47	25.96	25.44
TURF LAWN, GOOD	B	61	3.46	60.98	37.20
PASTURE, FAIR	N/A	0	0	0	0
TOTAL:			5.67	100	26

AFTER PREVIOUS STREET
R/W DEDICATION IN 2007



• **NOTE**

SEE EROSION CONTROL SHEETS C3.1 THRU C3.3 FOR ALL ADDITIONAL
EROSION CONTROL INFORMATION ALONG WITH PROJECT SWPPP.

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THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
DEVELOPER: AMERICARE SYSTEMS, INC.
ENGINEER: AMERICARE SYSTEMS, INC.

DIVISION OF ENGINEERING
DRAINAGE NOTES AND DETAILS
LOCATION: 615 RANKIN MILL LANE

BOONVILLE, MISSOURI

SURVEY DRAWN BY RAC DATE DATE

DRAWN BY: RAC DATE:
DESIGN BY: NRS DATE:

REVIEWED

DEPUTY CITY ENGINEER

DATE _____ CL _____

CITY ENGINEER

1" = 30'-0"
BOONVILLE

SHEET C2.4

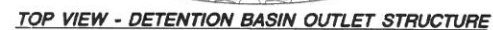
AMERICARE SYSTEMS, INC.

PROJECT DEVELOPMENT

915 E. ASH STREET
COLUMBIA MO 65201

PHONE: (573) 442-5188, FAX: (573) 442-5271

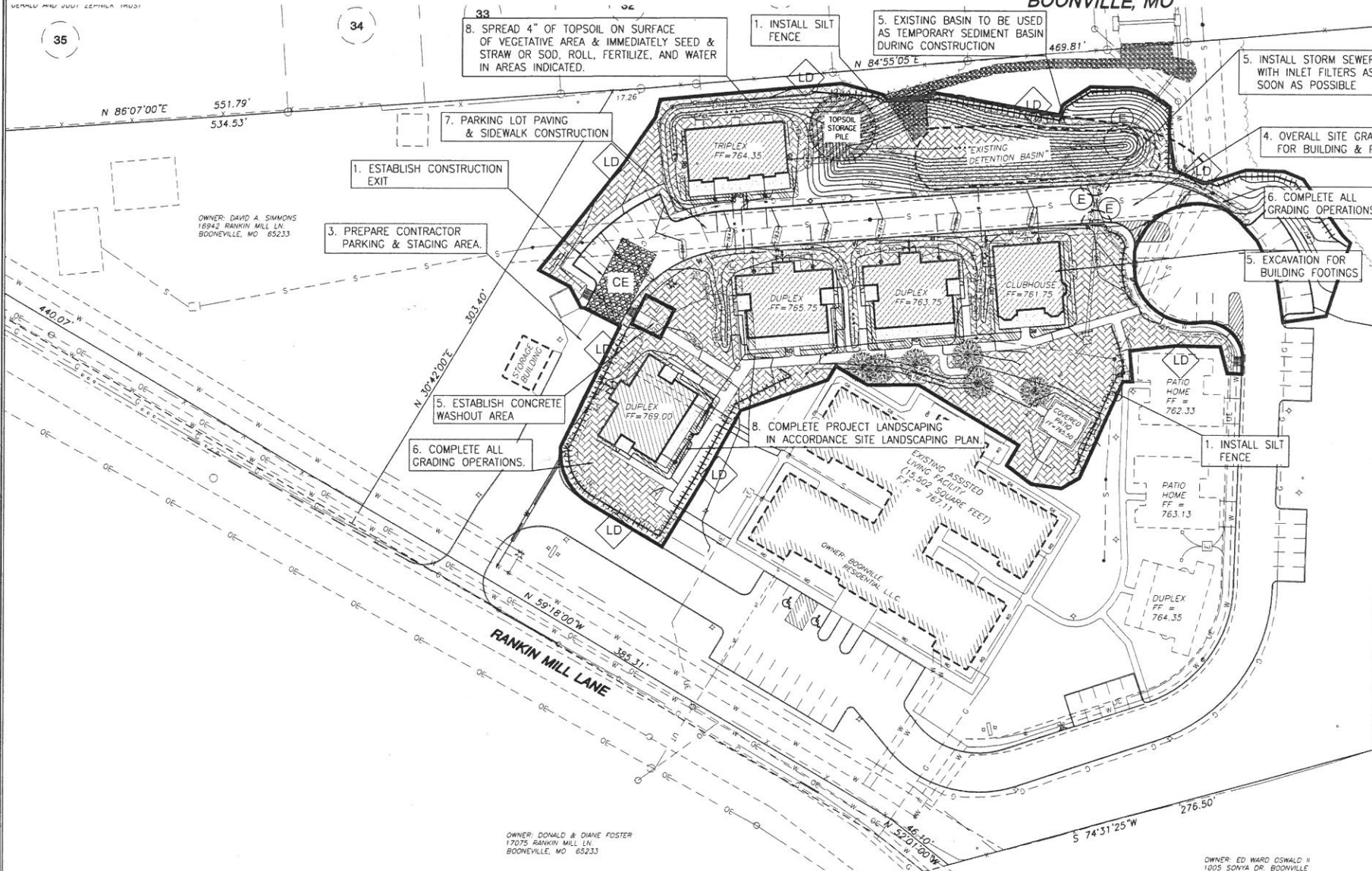
Plotted by: nslattery: 22 Jan 2016 - 8:53am



DETAIL OF OVERFLOW SPILLWAY

Plotted by: nslottery; 22 Jan 2016 - 11:04am

THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
BOONVILLE, MO



GENERAL NOTES:

1. LIMITS OF DISTURBANCE: THE CONTRACTOR SHALL LIMIT DISTURBANCE OF THE SITE IN ACCORDANCE WITH THE EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPER SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.
2. CAUTION TO CONTRACTOR: IF PROPERLY IMPLEMENTED, THIS PLAN WILL PROVIDE AN EFFECTIVE MEANS FOR CONTROLLING EROSION. HOWEVER, IT IS ACKNOWLEDGED THAT NO ONE PLAN CAN BE PREPARED THAT WILL DEPICT ALL POSSIBLE CONTROL MEASURES NECESSARY FOR VARIOUS STAGES OF CONSTRUCTION. THE CONTRACTOR SHALL INCLUDE IN THE BASE BID ADEQUATE FUNDS TO PROVIDE ALL EROSION CONTROL MEASURES NECESSARY TO COMPLY WITH THE CODES FOR THE DURATION OF THE CONSTRUCTION PROJECT.
3. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT NECESSARILY ALL THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE EXCAVATION TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY CONSTRUCTION. CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS.
4. SPECIFICATIONS REQUIREMENTS: THE REQUIREMENTS SHOWN ON THIS PLAN ARE SUPPLEMENTED BY THE SWPPP CONTAINED WITHIN THE PROJECT SPECIFICATIONS. IN CASE OF CONFLICTS BETWEEN THE PLANS, SWPPP SPECIFICATIONS AND THE ACTUAL GENERAL PERMIT, THE MOST STRINGENT REQUIREMENTS SHALL APPLY.
5. PERMANENT SEEDING: SOD TO BE A LOCALLY GROWN TURF FESCUE SOD SELECTED FROM REGIONAL SUPPLIER AND TO BE SUITABLE FOR PROJECT LOCATION.
6. ALL WORK SHALL COMPLY WITH THE CITY OF BOONVILLE AND STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND DISTURBANCE REGULATIONS.
7. THE EROSION CONTROL MEASURES ARE SHOWN ON THE PLAN USING SYMBOLS. REFER TO THE LEGEND FOR A LIST AND MEANING OF THE SYMBOLS.
8. ALL DISTURBED AREAS SHALL BE SEEDING AND MULCHED AFTER CONSTRUCTION IS COMPLETE AND MUST BE IN COMPLIANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN. SEEDING MAY BE PHASED SO THAT GROUND COVER IS ESTABLISHED SOONER.
9. THE FINAL CONTOURS SHOWN ARE APPROXIMATE, AND MAY BE CHANGED IN THE FIELD WITH THE APPROVAL OF THE ENGINEER. THE GOAL BEING TO GRADE THE SITE TO MINIMIZE THE OCCURRENCE OF DRAINAGE PROBLEMS.
10. THE LOW FLOOR ELEVATIONS SHOWN ARE FOR THE LOWEST LIVING FLOOR OF A STRUCTURE. THIS ELEVATION MAY BE REVISED IF AN ALTERNATE BUILDING DESIGN IS PROPOSED, AND THE ALTERNATE DESIGN DOES NOT POSE A RISK FROM STORM WATER INTRUSION TO THE STRUCTURE. ANY CHANGE TO THE MINIMUM LOW FLOOR ELEVATION MUST BE SUBMITTED BY THE DESIGN ENGINEER AND APPROVED BY THE CITY OF COLUMBIA PUBLIC WORKS DEPARTMENT.
11. THE CONTRACTOR SHALL BE REQUIRED TO HAVE COMPACTION TESTING PERFORMED ON ALL FILL AREAS. THIS DATA MUST BE RECORDED IN A FORM THAT ALLOWS THE TEST SITES TO BE RELOCATED ON A PLAN. THE TESTING REQUIRED SHALL BE ONE PASSING TEST FOR EACH 8 INCHES OF FILL ON EACH LOT WITHIN THE FILLED AREAS.
12. THIS TRACT IS LOCATED IN THE NE 1/4 OF SECTION 12, TOWNSHIP 47 NORTH, RANGE 17 WEST, CITY OF BOONVILLE, COOPER COUNTY, MISSOURI.
13. IN ORDER TO TERMINATE A STATE OPERATING PERMIT THE MISSOURI DEPARTMENT OF NATURAL RESOURCES (MDNR) REQUIRES THAT THE PERMITTEE SUBMIT A COMPLETED FORM-H (INCLUDED WITH THE APPROVED PERMIT) TO THE MDNR. A PERMIT IS ELIGIBLE FOR TERMINATION WHEN EITHER PERENNIAL VEGETATION, PAVEMENT, BUILDINGS, OR STRUCTURES USING PERMANENT MATERIALS HAVE BEEN DISTURBED. ALL AREAS THAT HAVE BEEN DISTURBED MUST BE COVERED WITH VEGETATION COVER SHALL BE AT LEAST 70% OF FULLY ESTABLISHED PLANT DENSITY OVER 100% OF THE DISTURBED AREA. A COPY OF FORM-H SHOULD BE SUBMITTED TO THE CITY AT WHICH TIME THE CITY WILL REMOVE THE PROJECT FROM ITS INSPECTION SCHEDULE.
14. LAND DISTURBANCE SITES SHOULD BE INSPECTED ON A REGULAR SCHEDULE AND WITHIN A REASONABLE TIME PERIOD (NOT TO EXCEED 48 HOURS) FOLLOWING HEAVY RAINS. REGULARLY SCHEDULED INSPECTIONS SHALL BE AT A MINIMUM OF ONCE PER WEEK. ANY DEFICIENCIES SHALL BE NOTED IN A WEEKLY REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN CALENDAR DAYS OF THE REPORT. CONTRACTORS ARE REQUIRED TO SUBMIT TO CITY INSPECTION STAFF COPIES OF THEIR INSPECTION REPORTS REQUIRED BY THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ON A MONTHLY BASIS.
15. DISPOSE OF MATERIAL REMOVED FROM MAINTENANCE OF TRAPS IN BLACK DIRT STOCK PILES.

MDNR REQUIREMENTS

1. SUBSTANCES REGULATED BY FEDERAL LAW UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) OR THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA) WHICH ARE TRANSPORTED, STORED OR USED FOR MAINTENANCE, CLEARING OR REPAIRS SHALL BE MANAGED ACCORDING TO THE PROVISIONS OF RCRA AND CERCLA.
2. ALL PAINTS, SOLVENTS, PETROLEUM PRODUCTS AND PETROLEUM WASTE PRODUCTS (EXCEPT FUELS) AND STORAGE CONTAINERS (SUCH AS DRUMS, CANS, OR CARTONS) SHALL BE STORED SUCH THAT THESE MATERIALS ARE NOT EXPOSED TO STORM WATER. SUFFICIENT PRACTICES OF SPILL PREVENTION, CONTROL AND/OR MANAGEMENT SHALL BE PROVIDED TO PREVENT ANY SPILLS OF THESE POLLUTANTS FROM ENTERING A WATER OF THE STATE. ANY CONTAINMENT SYSTEM USED TO IMPLEMENT THIS REQUIREMENT SHALL BE CONSTRUCTED OF MATERIALS COMPATIBLE WITH THE SUBSTANCES CONTAINED AND SHALL ALSO PREVENT THE CONTAMINATION OF GROUNDWATER.
3. THE APPLICANT SHALL NOTIFY BY TELEPHONE AND IN WRITING THE DEPARTMENT OF NATURAL RESOURCES, WATER POLLUTION CONTROL PROGRAM, POST OFFICE BOX 176, JEFFERSON CITY, MO 65102, 1-800-361-4827, OF ANY OIL SPILLS OR IF HAZARDOUS SUBSTANCES ARE FOUND DURING THE PROSECUTION OF WORK UNDER THIS PERMIT.

LEGEND

- SOD AREA
- PLANTING BEDS
- RIP-RAP
- CONSTRUCTION EXIT
- LIMITS OF DISTURBANCE
- SILT FENCE
- EROSION EEL
- TREE PROTECTION FENCE

ACREAGE SUMMARY

	PROPOSED	EXISTING	TOTAL
TOTAL PROJECT SITE AREA	1.86 ACRES	-	5.67 ACRES
ON-SITE DISTURBED AREA	1.86 ACRES	-	-
OFF-SITE DISTURBED AREA	0.00 ACRES	-	-
TOTAL DISTURBED AREA	1.86 ACRES	-	-
IMPERVIOUS AREA AT COMPLETION	0.73 ACRES	1.48 ACRES	2.21 ACRES/39%
PERVIOUS / SEEDING AREA AT COMPLETION	1.13 ACRES	-	3.46 ACRES/61%
TOTAL AREA	1.86 ACRES	-	5.67 ACRES

ACREAGE SUMMARY

OWNER - BOONVILLE RESIDENTIAL, L.L.C.
DEVELOPER - AMERICARE
C/O HENLEY MONTGOMERY
915 E. ASH STREET
COLUMBIA, MO. 65201
(573) 442-5188

SITE OPERATOR / GENERAL CONTRACTOR:
SUPERINTENDENT:

1. INSTALLATION OF TEMPORARY SEDIMENT TRAPS

THE SEDIMENT TRAPS ARE TO REMAIN FOR THE DURATION OF THIS PROJECT AND WILL ONLY BE CONVERTED TO THE PERMANENT DETENTION BASINS AFTER ALL MAJOR CONSTRUCTION HAS BEEN COMPLETED. THIS WOULD BE AT THE SAME TIME AS ITEM 8 OF THE EROSION CONTROL SCHEDULE IS STARTED, WHERE ALL FINAL SITE GRADING, SODDING AND PERMANENT SITE STABILIZATION FOR THIS PROJECT BEGINS. AT THAT TIME, ALL SEDIMENT WITHIN THE BASINS CAN BE DISPOSED OF PROPERLY IN FILL AREAS ON THIS SITE OR REMOVAL TO AN APPROVED OFF-SITE LOCATION. THE BASINS CAN BE FINAL GRADED IN ACCORDANCE TO THE FINAL DESIGN SHOWN ON THE GRADING AND DRAINAGE PLAN. THE STONE OUTLET STRUCTURE OF THE TEMPORARY SEDIMENT TRAPS CAN BE REMOVED AND ONLY THEN CAN THE PERMANENT OUTLET STRUCTURE FOR THE DETENTION BASINS BE INSTALLED AND ROUTED TO THE LOCATION INDICATED ON THE PLANS.

IT MAY BE NECESSARY DURING THE COURSE OF THIS PROJECT WHERE ADDITIONAL MEASURES BEYOND THE BEST MANAGEMENT PRACTICES INDICATED ON THESE PLANS OR IN THE STORMWATER POLLUTION PREVENTION PLAN MAY BE NEEDED TO CONTROL THE SEDIMENT FROM BEING DISCHARGED OFF THIS PROJECT. THEY WILL BE DETERMINED AS NEEDED AND THE CONTRACTOR SHOULD BE PREPARED TO UTILIZE THESE ADDITIONAL MEASURES.

NOTE:

IN ADDITION TO THE INFORMATION SHOWN ON THESE EROSION CONTROL SHEETS "SEE THE STORMWATER PREVENTION PLAN" FOR THE FOLLOWING EXHIBITS & SPECIFICATIONS.

EXHIBIT	DESCRIPTION	PGS
EXHIBIT A	SEDIMENT FENCE / SILT FENCE	PGS 12-19
EXHIBIT B	CONSTRUCTION ENTRANCE / EXIT	CE PGS 20-23
EXHIBIT C	MULCHING	MU PGS 24-25
EXHIBIT D	TEMPORARY SEEDING	TS PGS 26-27
EXHIBIT E	PERMANENT SEEDING	PS PGS 28-33
EXHIBIT F	SODDING	SO PGS 34-37
EXHIBIT G	SEDIMENT TRAP (TEMPORARY)	ST PGS 38-42
EXHIBIT H	RIPRAP	RR PGS 43-51
EXHIBIT I	INLET PROTECTION	IP PGS 52-59
EXHIBIT J	OUTLET PROTECTION	OP PGS 60-65
EXHIBIT K	DUST CONTROL	DC PGS 66-68
EXHIBIT L	CONCRETE WASHOUT AREA	WA PGS 69-70

* PLEASE REFER TO THE CITY OF BOONVILLE STORMWATER REFERENCES FOR STANDARD SPECIFICATIONS AND ADDITIONAL INFORMATION OR GUIDANCE NOT SHOWN ON THESE PLANS OR IN THE SWPPP.

"SEE SHEET C3.3 OF EROSION CONTROL PLANS FOR ALL GENERAL EROSION CONTROL NOTES"

- EROSION CONTROL SCHEDULE**
- THE LAND DISTURBANCE ACTIVITIES FOR THIS PROJECT WILL OCCUR IN THE FOLLOWING ORDER:
1. ESTABLISH CONSTRUCTION ENTRANCE AND INSTALL EROSION EELS, SILT FENCES AND TREE PROTECTION.
 2. CLEAR BRUSH AND STRIPPING AND STOCKPILING TOPSOIL
 3. REMOVE ASPHALT PAVEMENT, CONCRETE CURB & SIDEWALKS AT DESIGNATED LOCATIONS
 3. PREPARE CONTRACTOR PARKING & STAGING AREA
 4. OVERALL SITE GRADING FOR BUILDING & PARKING LOT, DETENTION BASINS
 5. EXCAVATION OF FOOTINGS FOR BUILDINGS
 5. INSTALL STORM SEWER WITH INLET FILTERS AS SOON AS POSSIBLE, EXCAVATION FOR OTHER GENERAL UTILITIES
 6. COMPLETE ALL GRADING OPERATIONS
 7. PARKING LOT PAVING & SIDEWALK CONSTRUCTION
 8. SPREAD 4" OF TOPSOIL ON SURFACE OF VEGETATIVE AREA & IMMEDIATELY SOD, ROLL, FERTILIZE AND WATER.
 9. COMPLETE PROJECT LANDSCAPING IN ACCORDANCE WITH PROJECT LANDSCAPING PLAN.

"SEE SHEET C3.3 OF EROSION CONTROL PLANS FOR ALL GENERAL EROSION CONTROL NOTES"

EROSION CONTROL NARRATIVE:

1. THIS PHASE OF THE PROJECT CONSISTS OF CONSTRUCTING FIVE BUILDINGS ALONG WITH ITS REQUIRED INFRASTRUCTURE. THIS INCLUDES CONSTRUCTION OF THE BUILDINGS, PARKING LOT/DRIVEWAYS, SANITARY SEWERS, STORM SEWERS, ELECTRIC, GAS, WATER, TELEPHONE, AND CABLE TV UTILITIES. IN MY OPINION, THERE ARE NO SIGNIFICANT SILTATION OR EROSION CONTROL PROBLEM AREAS ON THE SITE AT THIS TIME. HOWEVER, CONSTRUCTION OF THESE IMPROVEMENTS MAY CREATE THE POTENTIAL OF SILTATION AND EROSION PROBLEMS IF NOT CAREFULLY MANAGED.
2. TO MY KNOWLEDGE THERE ARE NO EXISTING OFF-SITE EROSION, SILTATION PROBLEMS DOWN STREAM FROM THIS DEVELOPMENT. THE DEVELOPMENT WILL HAVE MINOR IMPACTS TO THE RECEIVING CHANNELS IMMEDIATELY DOWN STREAM FROM THE SITE DURING THE 12 TO 15 MONTHS OF DEVELOPMENT. AFTER CONSTRUCTION, LAND DISTURBANCE ACTIVITIES WILL DIMINISH AND THERE WILL BE LITTLE TO NO OFF-SITE IMPACTS.
3. THE CURRENT RUNOFF FACTORS INCLUDE SEASONAL LEAF COVER ON TREES AND PLANTS AND FESCUE PASTURES. THE SITE WILL CHANGE FROM APPROXIMATELY 26% IMPERVIOUS AREA TO APPROXIMATELY 39% IMPERVIOUS AREA.
4. THE PEAK DISCHARGE FOR THE 25-YEAR STORM ON THE ENTIRE SITE= $Q = CIA = 0.50 \times 8.25 \times 5.67 = 23.39$ CFS.
5. THE MANAGEMENT OF THE EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNER UNTIL ALL AREAS ARE ESTABLISHED WITH NEW GROUND COVER.
6. THE CONSTRUCTION OF THE PROJECT SHALL INCLUDE THE PHASES OF: CLEARING, GRADING, RETAINING WALL CONSTRUCTION, UTILITY INSTALLATION, PARKING AND BUILDING CONSTRUCTION. THE ENTIRE PROPOSED PHASE SHALL BE GRADED AT ONE TIME AND ALL SURFACES SHALL NOT BE DENuded FOR, AND SHALL BE STABLE AND NON-EROSIVE WITHIN THE LESSER OF 30 WORKING DAYS OR 120 CALENDAR DAYS AFTER COMPLETION OF THE WORK AUTHORIZED BY THE LAND DISTURBANCE PERMIT. ALL SOIL STOCKPILES SHALL BE PROTECTED WITH AN APPROPRIATE BEST MANAGEMENT PRACTICE. ALL GRADING ACTIVITIES SHALL BE DONE IN A MANNER THAT CONFORMS TO THE MEASURES SHOWN ON THE PLAN.
7. THE EROSION CONTROL MEASURES SHOWN ON THE PLAN WERE CHOSEN AS THE BEST MANAGEMENT PRACTICES APPROPRIATE FOR THE SITE.
8. THE EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A PRECIPITATION EVENT OF 0.5" OR GREATER TO INSURE MAXIMUM EFFECTIVENESS OF THE PROTECTIVE MEASURES AND TO ASSURE THAT PREVENTATIVE MAINTENANCE EFFORTS ARE CARRIED OUT WHEN NEEDED. ALL AREAS SHALL BE STABILIZED WITHIN 7 DAYS OF THE COMPLETION OF GRADING. ALL STRUCTURAL MEASURES SHALL BE MAINTAINED AND THE WASTE MATERIALS REMOVED AND DISPOSED OF PROPERLY.
9. ALL STORM INLETS WILL HAVE SILT FENCE PLACED AROUND THEM FOR EROSION CONTROL.
10. ALL TEMPORARY CONSTRUCTION ENTRANCES SHALL BE 12' W X 50' L X 6" DEEP, 2" WASH STONE.

EROSION & SEDIMENTATION CONTROL PLAN / SITE MAP
SHEET C3.1 MUST BE POSTED IN JOB TRAILER

AMERICARE SYSTEMS, INC.
PROJECT DEVELOPMENT
915 E. ASH STREET
COLUMBIA, MO 65201
PHONE: (573) 442-5188, FAX: (573) 442-5277

REVISIONS		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE

THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
DEVELOPER: AMERICARE SYSTEMS, INC.
ENGINEER: AMERICARE SYSTEMS, INC.

DIVISION OF ENGINEERING
EROSION CONTROL PLAN
LOCATION: 615 RANKIN MILL LANE
BOONVILLE, MISSOURI

SURVEY: _____ DATE: _____
DRAWN BY: RAC DATE: _____
DESIGN BY: NRS DATE: _____

1" = 30'-0"
BOONVILLE

REVIEWED: _____
DEPUTY CITY ENGINEER: _____ DATE: _____ CITY ENGINEER: _____

THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
BOONVILLE, MO

CLEAN CONSTRUCTION DETAIL:

BELOW ARE SOME GENERAL GUIDELINES TO MAINTAIN A CLEAN CONSTRUCTION SITE:

- PREVENT POLLUTION AND AVOID FINES
- DO NOT ALLOW CONCRETE, PAINTS, CHEMICALS, SEDIMENT, YARD DEBRIS, ETC. TO ENTER THE GUTTERS OR STORM DRAINS. STORE THESE PRODUCTS OUT OF THE RAIN SO THEY WILL STAY DRY.
- ESTABLISH AND USE AN ADEQUATELY SIZED CONCRETE WASHOUT AREA TO CONTAIN ALL LIQUIDS ON SITE.
- PROVIDE EROSION AND SEDIMENT CONTROL TO PREVENT THESE POLLUTANTS FROM LEAVING THE SITE.
- PROVIDE STABILIZED ENTRANCE AND EXIT FOR VEHICLES TO PREVENT TRACKING DIRT OFF SITE.
- SWEEP-UP SURFACE AREAS REGULARLY AND PLACE WASTE IN A COVERED DUMPSTER. DON'T USE HOSE WATER TO CLEAN.
- STORE MATERIALS IN A SECURE PLACE TO PREVENT SEEPAGE AND SPILLAGE. PROPERLY DISPOSE OF ALL MATERIALS. DO NOT DUMP UNUSED OR WASTE PRODUCTS ON THE GROUND, WHERE WATER CAN CARRY THEM TO THE STORM DRAINS.
- WHEN WASHING EQUIPMENT ON SITE, PREVENT WASTEWATER FROM ENTERING THE STORM DRAINS. DO NOT LET THE WATER LEAVE THE SITE.

CONSTRUCTION SITE BEST MANAGEMENT PRACTICES

THE FOLLOWING BMPs MUST BE PROPERLY USED AT ALL CONSTRUCTION SITES IN THE CITY TO PROTECT STORM DRAINS AND MINIMIZE POLLUTION

CITY CODE PROHIBITS POLLUTANT DISCHARGES AT WORK SITES FROM FLOWING INTO STORM DRAINS AND POLLUTING STREAMS. TO STAY IN COMPLIANCE WITH THE LAW AND KEEP YOUR PROJECT ON SCHEDULE, MAKE SURE BMPs ARE IN PLACE AND FUNCTIONING. SITES MUST BE CHECKED AND MAINTAINED DAILY. BELOW ARE GENERAL GUIDELINES ON MAINTAINING A CLEAN CONSTRUCTION SITE.

PAINT AND STUCCO

ALL PAINT AND STUCCO MATERIALS STORED ON THE SITE MUST BE CONTAINED AND COVERED. IT IS ILLEGAL TO DUMP UNUSED PAINT OR STUCCO IN THE SEWER OR STORM DRAIN SYSTEM. DO NOT WASH OUT PAINT BRUSHES IN THE STREET OR DUMP ANY RESIDUE IN THE STORM DRAIN. PAINTBRUSHES AND SPRAY GUNS MUST BE WASHED/CLEANED OUT INTO A HAZARDOUS MATERIALS DRUM OR BACK INTO THE ORIGINAL CONTAINER AND DISPOSED OF PROPERLY.

PERIMETER CONTROLS

GRAVEL BAGS, SILT FENCES AND STRAW MATS (WEIGHED DOWN) ARE ACCEPTABLE PERIMETER CONTROLS. IT IS RECOMMENDED THAT THESE CONTROLS ARE USED TO SURROUND THE ENTIRE SITE. AVOID RUNNING OVER PERIMETER CONTROLS WITH VEHICLES OR HEAVY EQUIPMENT AS THEY CAN DAMAGE THE MATERIALS. KEEP EXTRA ABSORBENT MATERIAL AND/OR A WET-DRY VACUUM ON SITE TO QUICKLY PICK UP UNINTENDED SPILLS.

BUILDING MATERIALS/STAGING AREAS

CONSTRUCTION MATERIALS MUST BE STORED ON SITE AT ALL TIMES. BUILDING MATERIALS SHOULD ALWAYS BE COVERED WHEN NOT IN USE TO PREVENT RUNOFF CAUSED BY WIND OR RAIN. FLOODING MUST ALSO BE PREVENTED BY MONITORING YOUR SITE BEFORE, DURING AND AFTER RAIN EVENTS TO ENSURE THAT BMPs ARE FUNCTIONING AND THAT THERE ARE NOT ANY SAFETY ISSUES.

LIMIT LAND DISTURBANCE

PRESERVE AS MUCH GRASSED AREA AS POSSIBLE. NOT ONLY DOES IT IMPROVE THE APPEARANCE OF YOUR SITE, IT ALSO FILTERS MUCH OF THE SEDIMENT FROM STORMWATER RUNOFF BEFORE IT REACHES THE DRAINAGE SYSTEM.

SINGLE GRAVEL ENTRANCE/EXIT

RESTRICT VEHICLE ACCESS TO ONE ENTRY/EXIT POINT WHERE POSSIBLE. ADDING GRAVEL TO A SINGLE SITE ACCESS LOCATION WILL REDUCE THE AMOUNT OF SOIL CARRIED OFF THE SITE BY VEHICLES.

DUMPSTERS

ALWAYS COVER DUMPSTERS WITH A ROLLBACK TARP. AREAS AROUND DUMPSTERS SHOULD BE SWEEP DAILY. PERIMETER CONTROLS AROUND DUMPSTER AREA SHOULD BE PROVIDED IF POLLUTANTS ARE LEAKING OR DISCHARGING FROM THE DUMPSTER.

THE STORMWATER MANAGEMENT PROGRAM WAS ESTABLISHED TO ENSURE THAT THE PROJECT COMPLIES WITH FEDERAL, STATE AND LOCAL CLEAN WATER REGULATIONS. FIELD INSPECTORS, ENGINEERS AND CONTRACTORS WORK TOGETHER TO ENSURE CONSTRUCTION SITES ARE IN COMPLIANCE WITH THESE LAWS.

CONCRETE TRUCKS/PUMPS/FINISHERS

BMPs SUCH AS TARPS AND GRAVEL BAGS SHOULD BE IMPLEMENTED TO PREVENT MATERIALS AND RESIDUE FROM ENTERING INTO THE STORM DRAIN SYSTEM. CONCRETE TRUCKS SHOULD CLEAN EQUIPMENT ON THE CONSTRUCTION SITE AT THE WASHOUT AREA OR SHOULD RETURN TO THE CONCRETE PLANT TO WASH OUT EQUIPMENT.

WASHOUT AREA

THE DISPOSAL OF "WET" CONSTRUCTION MATERIALS SHOULD BE HANDLED IN THE WASHOUT AREA. THIS INCLUDES PAINT, STUCCO AND CONCRETE. USE A BERM WITH AN IMPERVIOUS LINE TO CONTAIN THE WET MATERIALS AND PREVENT RUNOFF IN NEARBY AREAS. THE WASHOUT AREA MUST BE CHECKED AND MAINTAINED DAILY TO ENSURE COMPLIANCE. ALL DRIED MATERIALS MUST BE DISPOSED OF AT THE LANDFILL.

DIRT AND GRADING

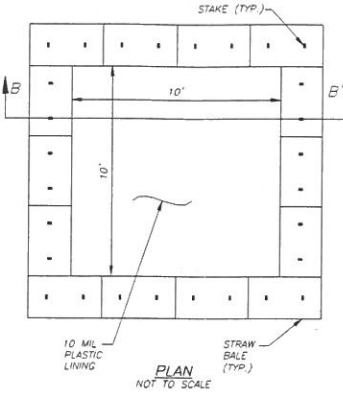
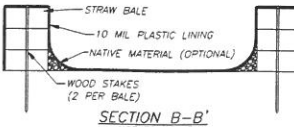
MOUNDS OF DIRT OR GRAVEL SHOULD BE STORED ON SITE AND SPRAYED DAILY WITH WATER TO PREVENT EXCESSIVE DUST. DURING THE RAINY SEASON, THESE MATERIALS SHOULD BE COVERED. FOR THOSE AREAS THAT ARE ACTIVE AND EXPOSED, A WET WEATHER TRIGGERED ACTION PLAN INCLUDING ADDITIONAL BMPs SHOULD BE IN PLACE TO PROTECT THE SITE DURING A RAIN EVENT. SITES MUST HAVE ADEQUATE TRACKING CONTROL TO PREVENT THE TRANSPORT OF DIRT/GRAVEL FROM THE SITE. ANY DIRT, SILT OR MUD THAT ENTERS THE STREET GUTTERS SHALL BE REMOVED FROM THE GUTTER AT THE END OF EACH DAY.

EARTHMOVING EQUIPMENT

ALL EARTHMOVING EQUIPMENT SHOULD BE STORED ON SITE. MAINTENANCE OF ANY EQUIPMENT SHOULD BE CONDUCTED ON SITE, AND MUD TRACKS AND DIRT TRAILS LEFT BY EQUIPMENT LEADING TO AND FROM THE SITE SHOULD BE CLEANED UP IMMEDIATELY.

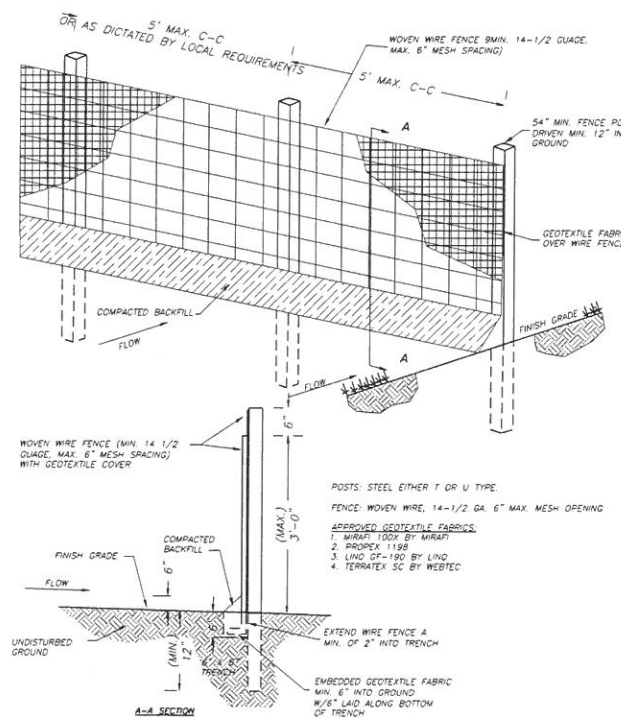
STORM DRAINS

STORM DRAINS MUST BE PROTECTED AT ALL TIMES WITH PERIMETER CONTROLS, SUCH AS GRAVEL BAGS (SAND BAGS ARE TYPICALLY NOT USED FOR INLET PROTECTION BECAUSE THEY DO NOT PERMIT FLOW-THROUGH). REPLACE RUPTURED OR DAMAGED GRAVEL BAGS AND REMOVE THE DEBRIS FROM THE RIGHT-OF-WAY IMMEDIATELY.



CONCRETE WASHOUT DETAIL

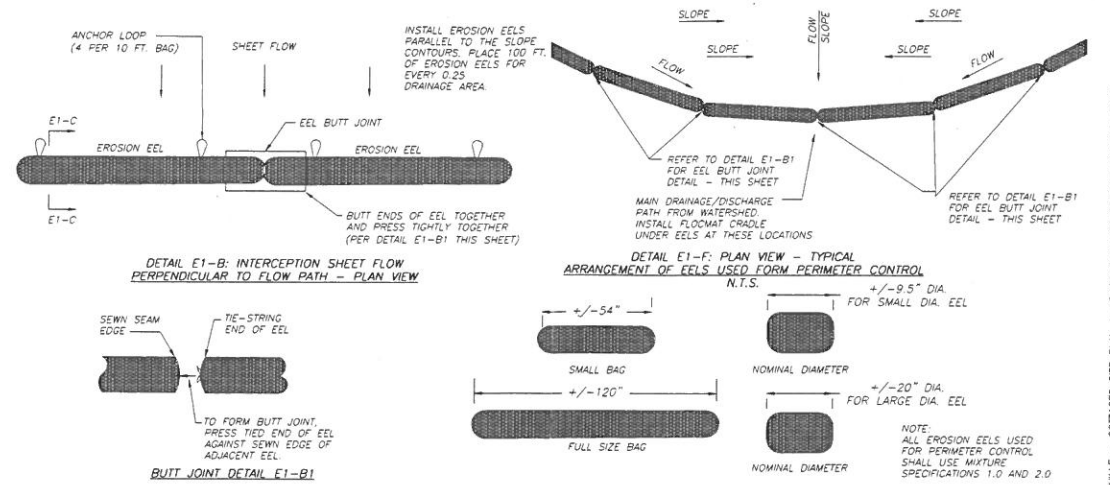
N.T.S.



1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE NET.
2. GEOTEXTILE FABRIC TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH NETS SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF GEOTEXTILE FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. ALL SILT FENCE SHALL INCLUDE WIRE SUPPORT UNLESS INDICATED OTHERWISE.

SEDIMENTATION / SILT FENCE WITH WIRE SUPPORT

N.T.S.



GENERAL NOTES

1. EROSION EELS USED IN PERIMETER CONTROL APPLICATIONS SHALL HAVE A SPECIFICATION MIXTURE 1.0 OR 2.0.
2. A MIXTURE SPECIFICATION 1.0: A FILTER MATERIAL COMPRISED OF 100% RUBBER SHREDS. THE RUBBER SHALL BE DERIVED FROM RECYCLED TIRES AND SHALL BE SHREDDED TO PRODUCE A MAXIMUM PARTICLE SIZE OF +/- 3/4" INCH.
3. B. MIXTURE SPECIFICATION 2.0: A FILTER MIXTURE COMPRISED OF 100% SHREDDED RUBBER DERIVED FROM RECYCLED TIRES. MAXIMUM PARTICLE SIZE IS +/- 2" INCHES.
4. LENGTHS OF EROSION EELS SHALL BE EITHER A NOMINAL +/- 10 FT. OR +/- 4.5 FT. NOMINAL DIAMETER SHALL BE +/- 9.5 INCHES FOR PERIMETER CONTROLS AND +/- 20 INCHES FOR CHECK DAM APPLICATIONS.
5. EROSION EELS CAN BE PLACED AT THE TOP, ON THE FACE, OR AT THE TOE OF SLOPES TO INTERCEPT RUNOFF. REDUCE FLOW VELOCITY, RELEASE THE RUNOFF OF SHEET FLOW AND PROVIDE REMOVAL OF SEDIMENT FROM THE RUNOFF.
6. EROSION EELS SHALL BE INSTALLED ALONG THE GROUND CONTOUR, AT THE TOE OF SLOPES, AT AN ANGLE TO THE CONTOUR TO DIRECT FLOW AS A DIVERSION BERM, AROUND INLET STRUCTURES, IN A DITCH AS A CHECK DAM TO HELP REDUCE SUSPENDED SOLIDS LOADING AND RETAIN SEDIMENT, OR AS A GENERAL FILTER FOR ANY DISTURBED SOIL AREA.
7. NO TRENCHING IS REQUIRED FOR INSTALLATION OF EROSION EELS.
8. PREPARE BED FOR EEL INSTALLATION BY REMOVING ANY LARGE DEBRIS INCLUDING ROCKS, SOIL CLODS, AND WOODY VEGETATION. EROSION EELS CAN ALSO BE PLACED OVER PAVED SURFACES INCLUDING CONCRETE AND ASPHALT WITH NO SURFACE PREPARATION REQUIRED.
9. RAKE BED AREA WITH HAND RAKE OR BY DRAG HARROW.
10. DO NOT PLACE EEL DIRECTLY OVER RILL AND GULLIES UNTIL AREA HAS BEEN HAND-EXCAVATED AND RAKED TO PROVIDE A LEVEL BEDDING SURFACE. ALL SURFACES SHALL BE UNIFORMLY COMPACTED FOR MAXIMUM SEATING OF EELS IN PLACE.
11. FOR LOCATIONS WHERE EELS WILL BE PLACED IN CONCENTRATED FLOWS (SUCH AS CHECK DAMS, INLET PROTECTION) AND FOR PERIMETER CONTROLS AT PRIMARY DISCHARGE LOCATIONS.
12. FOR DITCH APPLICATIONS, THE MAXIMUM DRAINAGE AREA SHALL BE 10 ACRES.
13. IF MORE THAN ONE EROSION EEL IS PLACED IN A ROW, PREPARE JOINTS PER DETAIL E1-B1.
14. EROSION EELS SHALL REMAIN IN PLACE UNTIL FULLY ESTABLISHED VEGETATION HAS COMPLETELY DEVELOPED OR UNTIL STORAGE CAPACITY IS FUNCTIONAL.
15. LIFE OF THE EEL HAS BEEN EXHAUSTED (REQUIRING REPLACEMENT WITH NEW EELS).
16. ANCHORING POSTS FOR CHECK DAM APPLICATIONS SHALL HAVE A MINIMUM WEIGHT OF 1.25 LBS/FT STEEL T-POSTS (5 TO 7 FT LENGTHS).
17. ROLLED FROM HIGH CARBON STEEL, POSTS SHOULD BE HOT-DIPPED GALVANIZED OR COATED WITH A WEATHER-RESISTANT PAINT FOR STEEL APPLICATION. POSTS SHOULD BE EQUIPPED WITH A METAL ANCHOR PLATE. INSTALL PER DETAILS ON THIS SHEET.
18. PLACE T-POSTS THROUGH HANDLE OF BAGS. DO NOT DRIVE POSTS THROUGH EROSION EELS. T-POSTS ARE TO BE EMBEDDED A MINIMUM OF 3 FT. INTO GROUND ON STEEP SLOPES GREATER THAN 25%.

CONSTRUCTION:

INSTALL EROSION EELS NEAR THE DOWNSTREAM PERIMETER OF DISTURBED AREA TO INTERCEPT SEDIMENT FROM SHEET FLOW. INCORPORATE THE EELS INTO EROSION CONTROL MEASURES USED TO THE SEGMENT ON CONSTRUCTION SITES. INSTALL, ALIGN, AND LOCATE THE EROSIONS EELS AS SPECIFIED BELOW, AS SHOWN ON THE PLANS, AS DIRECTION.

A. STABILIZING / SECURING. SECURE EROSION EELS IN A METHOD ADEQUATE TO PREVENT DISPLACEMENT AS A RESULT OF NORMAL RAIN EVENTS AND SUCH THAT FLOW IS NOT ALLOWED UNDER THE BAGS.

B. MAINTENANCE. INSPECT AND MAINTAIN THE EROSION EELS IN GOOD CONDITION. MAINTAIN THE INTEGRITY OF THE CONTROL, INCLUDING KEEPING THE BAGS FREE OF ACCUMULATED SILT, DEBRIS, ETC., UNTIL PERMANENT EROSION CONTROL FEATURES ARE IN PLACE, OR THE DISTURBED AREA HAS BEEN ADEQUATELY STABILIZED. STABILIZE THE AREAS DAMAGED BY THE REMOVAL PROCESS USING APPROPRIATE METHODS AS APPROVED. REPAIR OR REPLACE DAMAGED EROSION EELS AS REQUIRED AND AS DIRECTED. TEMPORARILY REMOVE AND REPLACE EROSION EELS AS REQUIRED TO FACILITATE WORK. REMOVE SEDIMENT AND DEBRIS WHEN ACCUMULATION REACHES 50% OF THE STORAGE HEIGHT BEHIND THE SHOULDER OF STACKED EEL. ARRANGE AND DISPOSE OF SEDIMENT AND DEBRIS AT AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

C. REMOVAL. REMOVE AND REUSE EROSION EELS WHEN DIRECTED.

EROSION EELS

N.T.S.

SPACING RECOMMENDATIONS FOR THE EROSION EEL FOR PERIMETER CONTROL AND INTERCEPTING SHEET FLOW ON SLOPES.

SLOPE(%)	SINGLE EEL SPACING(FT)
0.5	300
1	200
2	160
3	80
4	50
5	40
6	35
8	30
10	25
15	+12
20	N/A
25	N/A
33	N/A
50	N/A

CONTACT INFORMATION

FRIENDLY ENVIRONMENT
100 PRINCE STREET
SHELBYVILLE, TN 37160
1-888-H2O-EELS
INFO@FRIENDLYENVIRONMENTUS.COM
HTTP://FRIENDLYENVIRONMENTUS.COM/INDEX.HTML

CONTACT THEM TO FIND LOCAL DISTRIBUTORS IN KANSAS.

REVISIONS		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
DEVELOPER: AMERICARE SYSTEMS, INC.
ENGINEER: AMERICARE SYSTEMS, INC.

DIVISION OF ENGINEERING
EROSION CONTROL DETAILS
LOCATION: 615 RANKIN MILL LANE
BOONVILLE, MISSOURI

SURVEY	DATE	1" = 30'-0" BOONVILLE
DRAWN BY	DATE	
DESIGN BY	DATE	
REVIEWED	DATE	
DEPUTY CITY ENGINEER	DATE	CITY ENGINEER

SHEET C3.2

AMERICARE SYSTEMS, INC.

PROJECT DEVELOPMENT
110 E 48th STREET
COLUMBIA MO 65201
PHONE: (673) 448-9188, FAX: (673) 448-5877

Plotted by: nslattery, 20 Jan 2016 - 9:50am

- A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING ('SITE MAP'), THE STANDARD DETAILS, SPECIFICATIONS SECTION "SWPPP", PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS IF APPLICABLE.
- C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- D. THE EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A PRECIPITATION EVENT OF 0.5" OR GREATER, TO INSURE MAXIMUM EFFECTIVENESS OF THE PROTECTIVE MEASURES AND TO ASSURE THAT PREVENTATIVE MAINTENANCE EFFORTS ARE CARRIED OUT WHEN NEEDED. ALL AREAS SHALL BE STABILIZED WITHIN 7 DAYS OF THE COMPLETION OF GRADING. ALL STRUCTURAL MEASURES SHALL BE MAINTAINED AND THE WASTE MATERIALS REMOVED AND DISPOSED OF PROPERLY.
- E. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- F. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- G. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- H. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. CONTRACTOR SHALL CONSTRUCT TEMPORARY BERM ON DOWN STREAM SIDES IN COMPLIANCE WITH THE SWPPP SPECIFICATIONS.
- I. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- J. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- K. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER OR OTHER APPROVED DUST SUPPRESSION MATERIAL. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- L. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- M. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
- N. ALL DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE, MUST BE STABILIZED TEMPORARILY WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAIN VARIETIES, STRAW/HAY MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING OR BLANKETS AS SHOWN ON SITE MAP.
- O. DISBURSED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THE PLANS. THESE AREAS SHALL BE SEEDED, SODDED, AND/OR VEGETATED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRED IN THESE AREAS. REFER TO THE PHASE II PLAN.
- P. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.
- Q. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- R. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- S. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES AND SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS ACHIEVED. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- T. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- U. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCE, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE.
- V. SEE SITE PLAN FOR PERMANENT AND TEMPORARY SIGNAGE.
- W. GENERAL CONTRACTOR IS TO DESIGNATE/IDENTIFY AREAS ON THE SITE MAPS, INSIDE OF THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.
- X. REFER TO THE SWPPP FOR REPORTABLE SPILL QUANTITIES OF PETROLEUM PRODUCTS AND/OR HAZARDOUS WASTES.
- Y. SEE PHASING PLAN FOR EROSION CONTROL MEASURES AND PLACEMENT, THE CONSTRUCTION EXIT LOCATION, AND EROSION CONTROL SEQUENCING.
- Z. REFER TO THE SWPPP SPECIFICATIONS FOR RUN-OFF SAMPLING/MONITORING REQUIREMENTS IF APPLICABLE TO SITE DURING CONSTRUCTION.
- AA. CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR UNTIL FINAL STABILIZATION IS ACHIEVED ON THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

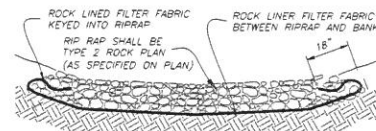
1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES, TREE PROTECTION, AND EROSION EELS SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREAS SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS, SILT FENCES AND OTHER SEDIMENT CONTROLS AS RECOMMENDED BY THE TENNESSEE EROSION CONTROL HANDBOOK AND MUST BE REMOVED WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
7. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS AND/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

The diagram illustrates a fluid flow through a converging nozzle. On the left, a large reservoir with a diameter of $3D$ is shown. A fluid element of diameter D is indicated at a point labeled 'A'. The fluid flows from the reservoir into a nozzle. The nozzle has an inlet diameter of D and a throat diameter of $D/2$. The flow direction is indicated by an arrow labeled 'DIRECTION OF FLOW'. The nozzle exit is shown as a turbulent jet of fluid.

RIP-RAP DETAIL

SECTION A-A SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS

1. ALL TREES AND NATURAL AREAS SHOWN ON THIS PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
2. PROTECTIVE FENCES SHALL BE ERECTED ACCORDING TO PLANS AND SPECIFICATIONS FOR TREE PROTECTION.
3. PROTECTIVE FENCES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
4. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRAPLINES.
5. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES, AND WILL BE LOCATED AT THE LIMITS OF THE CRITICAL ROOT ZONE, FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
 - A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT.
 - B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6") OR TRENCHING NOT REVIEWED BY CITY ARBORIST.
 - C. WOUNDS TO EXPOSED ROOTS, TRUNK, OR LIMBS BY MECHANICAL EQUIPMENT.
 - D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, STORAGE, CEMENT TRUCK CLEANING, & FIRES.
6. EXCEPTIONS TO INSTALLING FENCES AT THE LIMITS OF THE CRITICAL ROOT ZONE MAY BE PERMITTED IN THE FOLLOWING CASES:
 - A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT.
 - B. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN THE PROTECTED AREA, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA (PRIOR TO SITE GRADING SO THAT THIS AREA IS GRADED SEPARATELY PRIOR TO PAVING INSTALLATION TO MINIMIZE ROOT DAMAGE).
 - C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS ERECT THE FENCE TO 6 TO 10 FEET OF WORK SPACE BETWEEN THE FENCE AND THE BUILDING.
 - D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE OR OTHER SPECIAL REQUIREMENTS.
7. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED ON PLANKING TO A HEIGHT OF 8 FEET (OR LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
8. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
9. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
10. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE. ALL TRENCHING WITHIN THE DRIPLINE SHALL BE DONE BY HAND.
11. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIP LINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
12. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.
13. ALL FINISHED PRUNING MUST BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE UPON REQUEST FROM THE CITY ARBORIST.)
14. DEVIATIONS FROM THE ABOVE NOTES WILL BE CONSIDERED SPECIFICATION VIOLATIONS. IF THERE IS SUBSTANTIAL NONCOMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL REPLACEMENTS OR CORRECTIVE ACTIONS AT HIS OWN EXPENSE.



NOTE:
1. ROCK LINER FILTER FABRIC SHALL CONSIST OF A NON-WOVEN POLYPROPYLENE TYPE FABRIC AS: AMOCO 4553 NON-WOVEN GEOTEXTILE FABRIC OR APPROVED EQUAL.

RIP-RAP DETAIL
N.T.S.

[illegible]

THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
DEVELOPER: AMERICARE SYSTEMS, INC.
ENGINEER: AMERICARE SYSTEMS, INC.

DIVISION OF ENGINEERING
EROSION CONTROL NOTES AND DETAILS
LOCATION: 615 RANKIN MILL LANE
BOONVILLE, MISSOURI

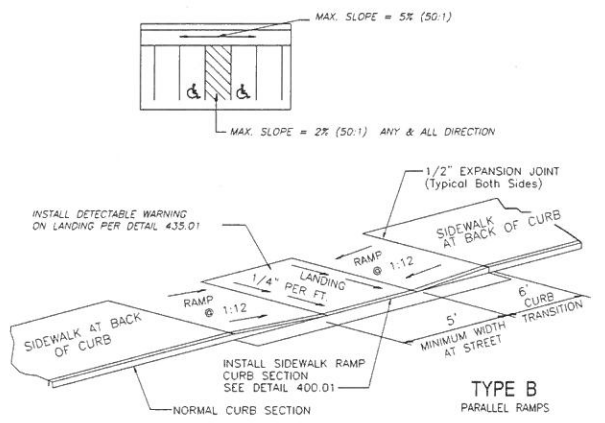
SURVEY _____ DATE _____
DRAWN BY RAC DATE _____
DESIGN BY NRS DATE _____

REVIEWED _____

DEPUTY CITY ENGINEER DATE _____

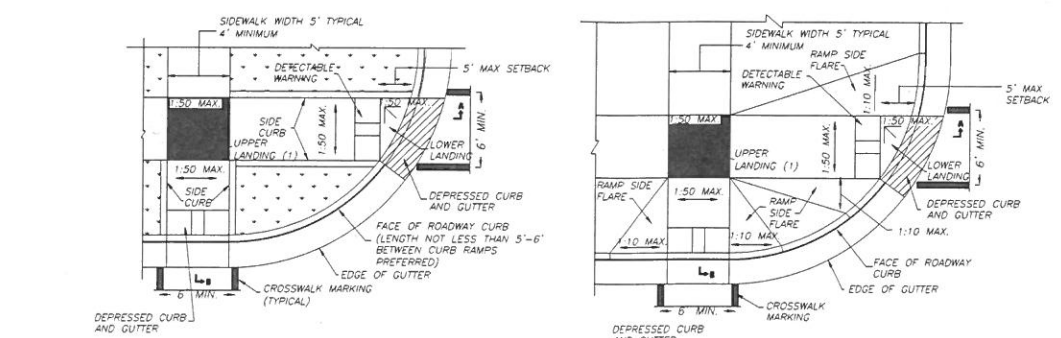
1" = 30'-0"
BOONVILLE

Plotted by: nslottery; 20 Jan 2016 - 9:51am



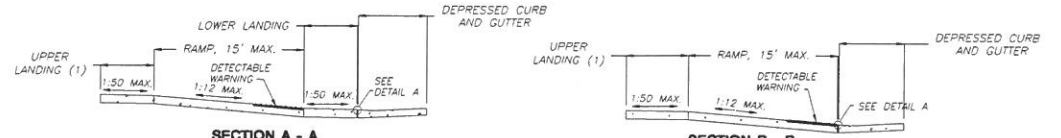
- NOTE:
1. RAMP SHALL BE 4" THICK CLASS A CONCRETE.
 2. EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
 3. MAXIMUM RAMP CROSS SLOPE IS 1/4" PER FT.
 4. ALL SLOPES ARE MEASURED FROM THE HORIZONTAL.
 5. REPLACE STANDARD CURB SECTION WITH SIDEWALK RAMP CURB SECTION - DETAIL 400.01
 6. RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE.
 7. LANDING AREA SHALL BE 4'-0" MIN WIDTH. CROSS SLOPE OF LANDING SHALL NOT EXCEED 1/4" PER FT.
 8. TYPE "A" RAMP NOT APPLICABLE WHEN NORMAL SIDEWALK WIDTH DOES NOT PROVIDE 4'-0" LANDING AT THE TOP OF RAMP. WIDEN SIDEWALK OR USE TYPE "B" RAMP.
 9. 10:1 FLARES ARE REQUIRED ON TYPE "A" RAMP.

ACCESSIBLE PAVEMENT/RAMP DETAIL • FRONT OF BUILDINGS



RAMPS IN LANDSCAPED AREA SETBACK <= 5'

RAMPS IN PAVED AREA SETBACK <= 5'



SECTION A - A

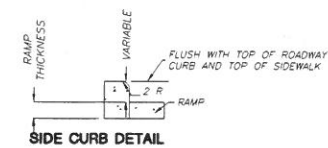
SECTION B - B

(1) UPPER LANDING NOT REQUIRED FOR RAMP SLOPES FLATTER THAN 1:20

(1) UPPER LANDING NOT REQUIRED FOR RAMP SLOPES FLATTER THAN 1:20

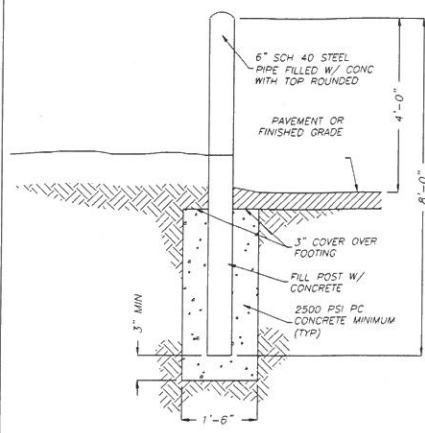


DETAIL A



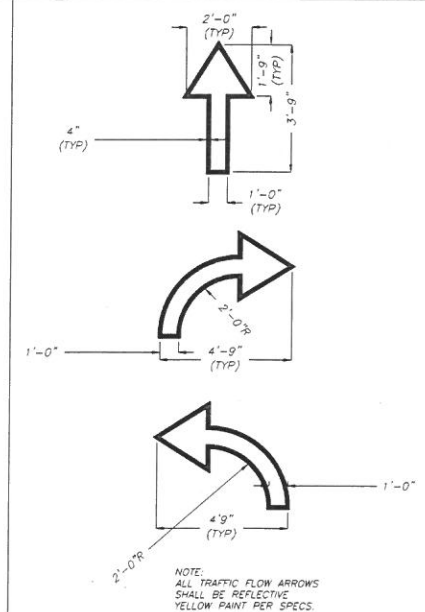
SIDE CURB DETAIL

PERPENDICULAR CURB RAMPS FOR SIDEWALKS

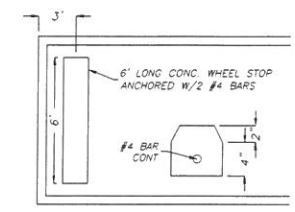


NOTE: ALL PIPES SHALL BE PAINTED TRAFFIC YELLOW

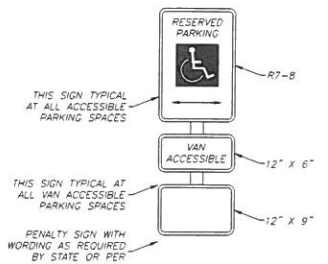
PIPE BOLLARD



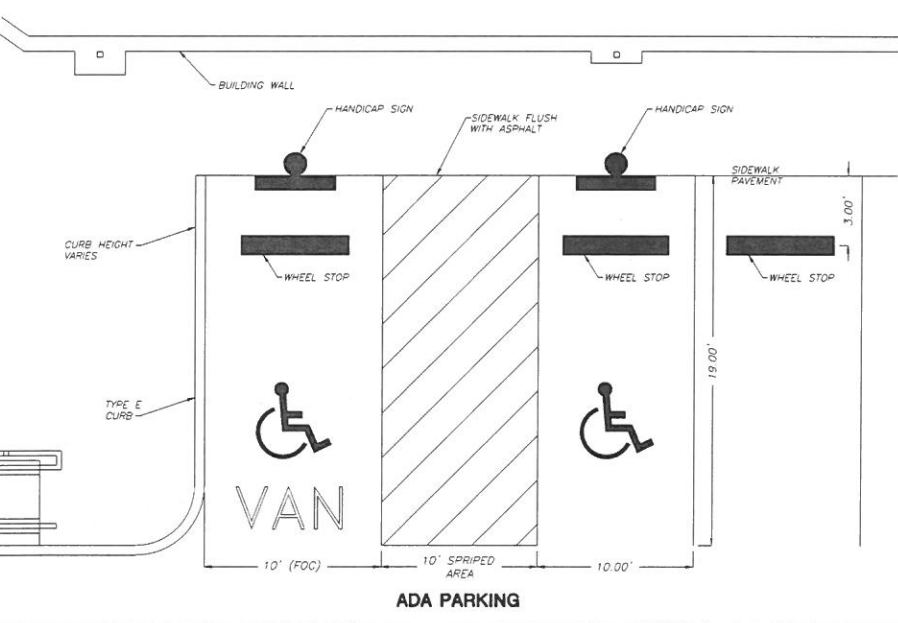
DIRECTIONAL ARROWS



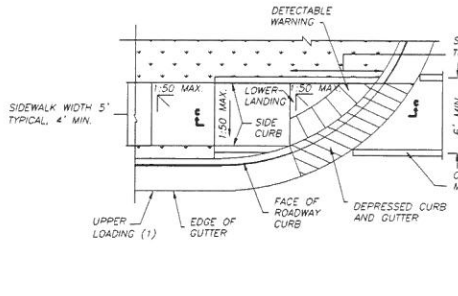
CONCRETE WHEEL STOP



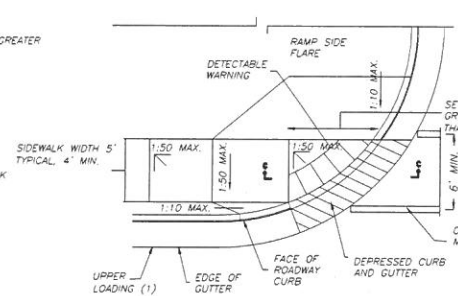
ACCESSIBLE PARKING SIGN



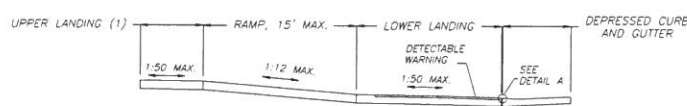
ADA PARKING



RAMPS IN LANDSCAPED AREA SETBACK > 5'



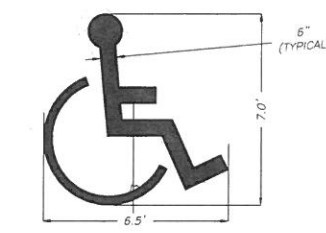
RAMPS IN PAVED AREA SETBACK > 5'



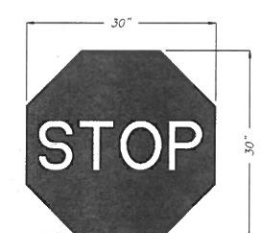
SECTION C - C

(1) UPPER LANDING NOT REQUIRED FOR RAMP SLOPES FLATTER THAN 1:20

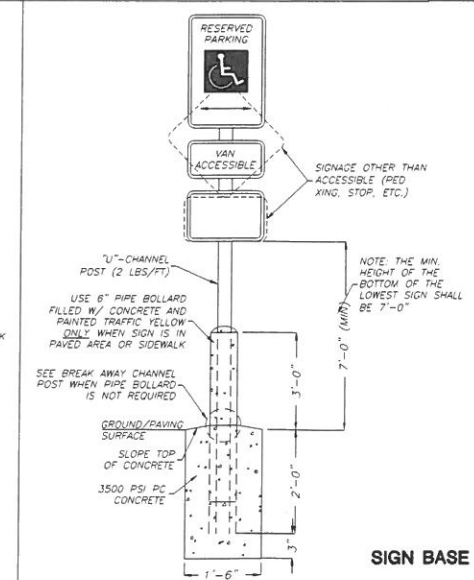
PERPENDICULAR CURB RAMPS FOR SIDEWALKS



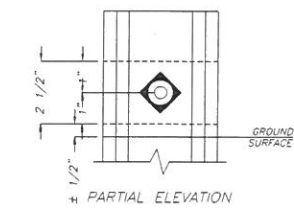
ACCESSIBLE PARKING SYMBOL



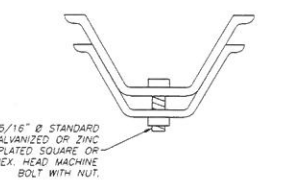
STOP SIGN



SIGN BASE



PARTIAL ELEVATION



PLAN VIEW BREAK AWAY CHANNEL POST

ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

SIGN BASE DETAILS

REVISIONS	APPROVAL
ITEM NO.	DESCRIPTION OF CHANGE



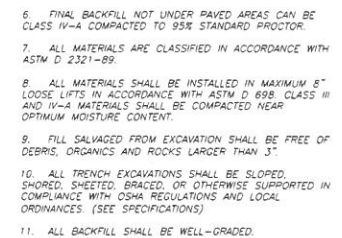
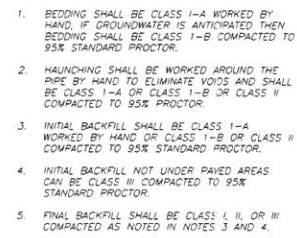
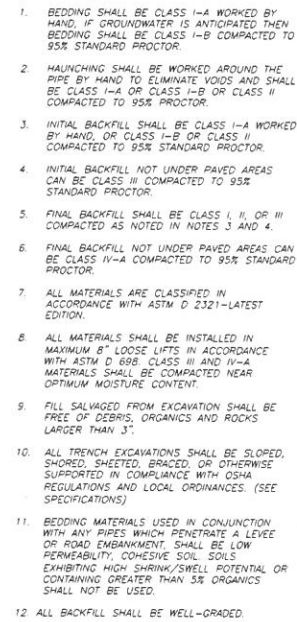
SHEET C4.1
AMERICARE SYSTEMS, INC.
PROJECT DEVELOPMENT
808 E. ASH STREET
COLUMBIA, MO 65201
PHONE: (314) 442-5100, FAX: (314) 442-5277

THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
DEVELOPER: AMERICARE SYSTEMS, INC.
ENGINEER: AMERICARE SYSTEMS, INC.

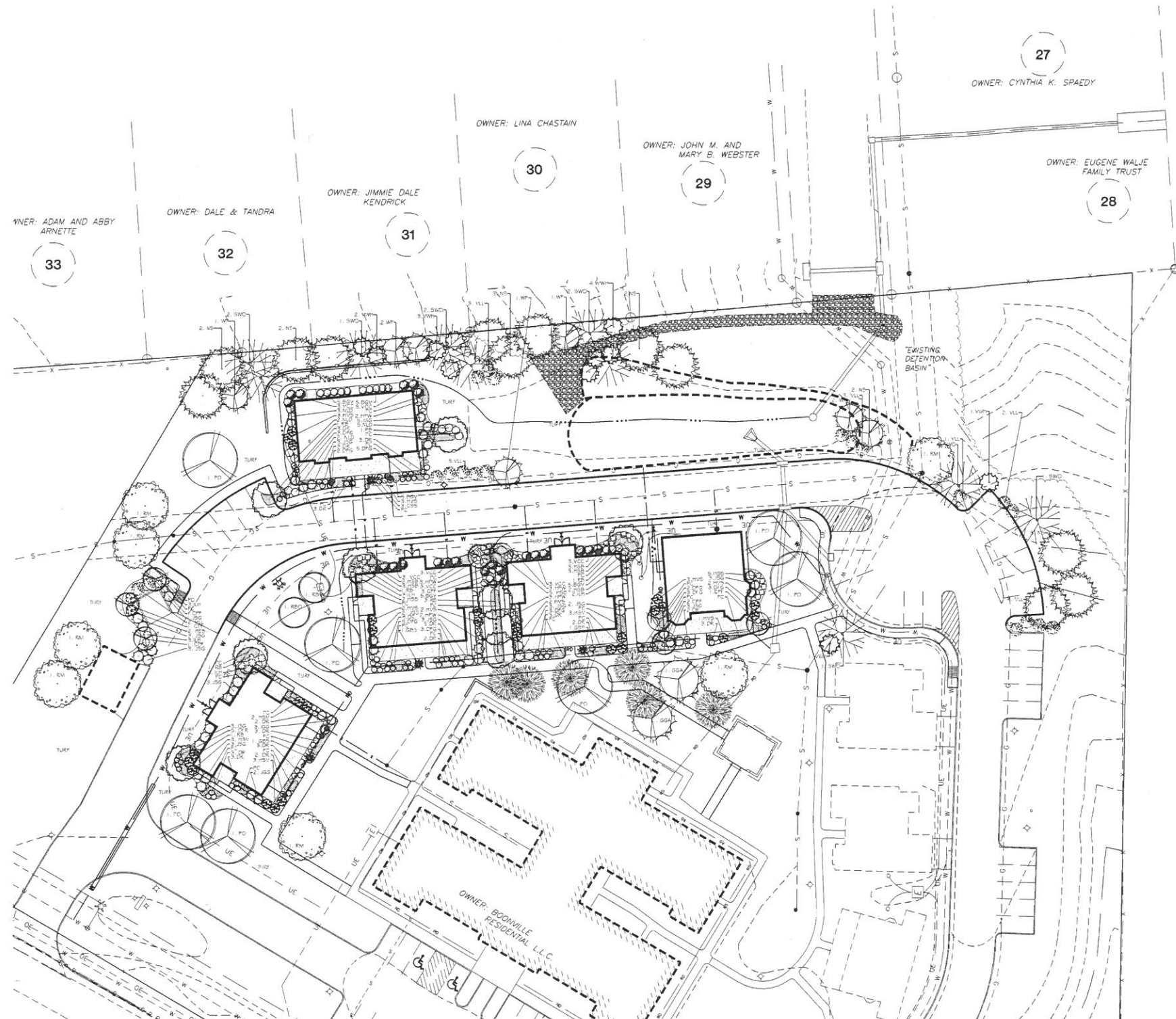
DIVISION OF ENGINEERING
SITE WORK DETAILS
LOCATION: 615 RANKIN MILL LANE
BOONVILLE, MISSOURI
SURVEY: _____ DATE: _____
DRAWN BY: RAC DATE: _____
DESIGN BY: NRS DATE: _____
REVIEWED: _____
DEPUTY CITY ENGINEER: _____ CITY ENGINEER: _____

1" = 30'-0"
BOONVILLE

AL:\AMERICARE PROJECTS\MISSOURI BOONVILLE\Source Drawings\Site Plan\1-13-2016.dwg C4 DETAIL SHEETS



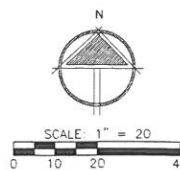
PLANT SCHEDULE



- 7 - PO - PIN OAK - 2.5'
- 10 - SWO - SWAMP WHITE OAK - 2.5'
- 12 - NS - NORWAY SPRUCE - 8'
- 2 - GGA - ARBORVITAE 'GREEN GIANT' - 10'
- 6 - RM - RED MAPLE 'RED SUNSET' - 2.5'
- 7 - WP - WHITE PINE - 8'
- 9 - RB - RIVER BIRCH 'DURA-HEAT' - 12'
- 2 - RBO - REDBUD 'OKLAHOMA' - 2'
- 9 - CPF - CRABAPPLE 'PRAIRIE FIRE' - 2'
- 8 - VWH - VERNAL WITCHHAZEL - 4'
- 20 - VLL - VIBURNUM LEATHERLEAF - 4'
- 4 - GBS - GLOBE BLUE SPRUCE - #5
- 23 - JSG - JUNIPER 'SAYBROOK GOLD' - #5
- 21 - JGG - JUNIPER 'GREY GUARDIAN' - #5
- 26 - HSV - HYDRANGEA 'VANILLA STRAWBERRY' - #5
- 2 - HES - HYDRANGEA 'ENDLESS SUMMER' - #5
- 19 - BGV - BOXWOOD 'GREEN VELVET' - #5
- 12 - NLD - NINEBARK 'LITTLE DEVIL' - #3
- 18 - VCC - VIBURNUM 'CARDINAL CANDY' - #5
- 16 - ILH - ITEA 'LITTLE HENRY' - #3
- 13 - HPW - HYDRANGEA 'PEE WEE' - #3
- 36 - DFG - DWARF FOUNTAIN GRASS - #3
- 54 - DR - DRIFT ROSE - #3
- 25 - HSB - HYPERICUM 'SUNBURST' - #3
- 400 - PC - PERENNIAL COLOR - DAYLILY, SEDUM, SAGE, NEPETA, DAISY, HOSTA, ASTILBE ETC #1



THE PLANT LIST IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY ALL PLANT COUNTS AND IF A DISCREPANCY EXISTS THE PLAN SHALL GOVERN. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING AWARE OF ALL UNDERGROUND UTILITIES, PIPES, AND STRUCTURES. THE LANDSCAPE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF ALL UNDERGROUND UTILITY LINES PRIOR TO ANY EXCAVATION. LANDSCAPE CONTRACTOR TO RECEIVE SITE GRADED TO +/-0.33 FOOT OF FINISHED GRADE. PLANTING BACK FILL MIX IS TO CONSIST OF 80% NATIVE TOPSOIL, AND 20% ORGANIC MATTER. SHRUB BEDS AND TREE WELLS ARE TO BE MULCHED WITH 3-4" DYED BROWN HARDWOOD MULCH. ALL TURF AREAS TO BE SOODED WITH FESCUE SOD. ALL SEEDED AREAS WITH A SLOPE OF 2:1 OR GREATER SHALL BE CONTROLLED WITH EROSION CONTROL NETTING. ALL BED AND LAWN AREAS SHALL BE IRRIGATED WITH POP-UP SPRAY HEADS. LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF TWELVE MONTHS. ALL PLANTING BEDS AND TREE RINGS TO BE SEPERATED FROM TURF AREAS BY 'V' TRENCHING. ALL PLANT MATERIAL MUST MEET THE SPECIFICATIONS OF THE AMERICAN ASSOCIATION OF NURSEYMEN.



SHEET C5.1
AMERICARE SYSTEMS, INC.
PROJECT DEVELOPMENT
818 E ASH STREET
COLUMBIA, MO 65201
PHONE: (637) 442-9199, FAX: (637) 442-9877

REVISIONS		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE

THE COTTAGES AT HARTMANN VILLAGE
ASSISTED LIVING BY AMERICARE
DEVELOPER: AMERICARE SYSTEMS, INC.
ENGINEER: AMERICARE SYSTEMS, INC.

DIVISION OF ENGINEERING
LANDSCAPE PLAN
LOCATION: 615 RANKIN MILL LANE
BOONVILLE, MISSOURI

SURVEY: RAC DATE:
DRAWN BY: NRS DATE:
DESIGN BY:
REVIEWED:
DEPUTY CITY ENGINEER DATE:
CITY ENGINEER

1" = 40'-0"
BOONVILLE

AN ORDINANCE OF THE CITY OF BOONVILLE, MISSOURI APPROVING THE FINAL PLAT OF THE MINOR SUBDIVISION OF PROPERTY IN THE CITY OF BOONVILLE CURRENTLY KNOWN AND NUMBERED AS TRACT 9, BOONE VILLAGE ESTATES

WHEREAS, Debra Rapp has made application to subdivide the above-referenced parcel in the City of Boonville into two (2) separate parcels; and

WHEREAS, the current base zoning of the subject 0.94 acre lot is R-3, and the Building Inspector has determined that the proposed subdivision of the parcel qualifies as a minor subdivision, subject to the procedures in Section 2 of Appendix A – Subdivisions; and

WHEREAS, after review, the Planning and Zoning Commission voted on February 9, 2016 to approve the final plat, attached hereto and marked as Exhibit A. Said final plat is incorporated herein as if set forth fully in this ordinance; and

WHEREAS, the City Council is required to approve this final plat before it may be recorded, in accordance with Section 89.400.1, RSMo.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOONVILLE, MISSOURI AS FOLLOWS:

SECTION 1: That the final plat at Exhibit A, subdividing Tract 9, Boone Village Estates in the City of Boonville, be and is hereby approved.

SECTION 2: This ordinance shall take effect and be in full force from passage of this ordinance.

READ FOR THE FIRST TIME THE 16th DAY OF FEBRUARY, 2016 AND PASSED THIS 7TH DAY OF MARCH, 2016, AFTER A COPY OF THIS ORDINANCE AND REFERENCED FINAL PLAT HAS BEEN MADE AVAILABLE FOR PUBLIC INSPECTION PRIOR TO ITS PASSAGE.

PRESIDENT OF THE COUNCIL

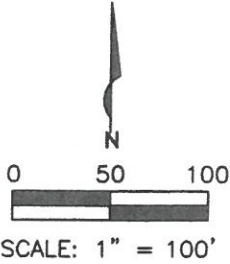
APPROVED THIS 7TH DAY OF MARCH, 2016

JULIE THACHER, MAYOR

ATTEST:

TERESA STUDLEY, CITY CLERK

FINAL PLAT A MINOR SUBDIVISION OF TRACT 9,
IN BOONE VILLAGE ESTATES FOR DEBRA RAPP,
IN THE SOUTHEAST QUARTER OF SECTION 2, TOWNSHIP 48 NORTH, RANGE 17
WEST, COOPER COUNTY, CITY OF BOONVILLE, MISSOURI



SURVEYOR'S NOTES

ORDER # 10851

THE BASIS OF BEARING IS GRID
NORTH OF THE MISSOURI STATE
PLANE COORDINATE SYSTEM.

THIS SURVEY WAS EXECUTED TO
COMPLY WITH THE ACCURACY
STANDARDS FOR AN URBAN
CLASS PROPERTY.

LEGEND

- 1/2" IRON ROD OR PIPE
- 5/8" OR LARGER IRON
- △ RIGHT OF WAY MARKER
- ▣ STONE MONUMENT
- CORNER POST
- × FENCE LINE
- OVERHEAD ELECTRIC

APPROVED BY THE BOONVILLE PLANNING AND ZONING
COMMISSION THIS _____ DAY OF _____, 2016

CHAIRMAN

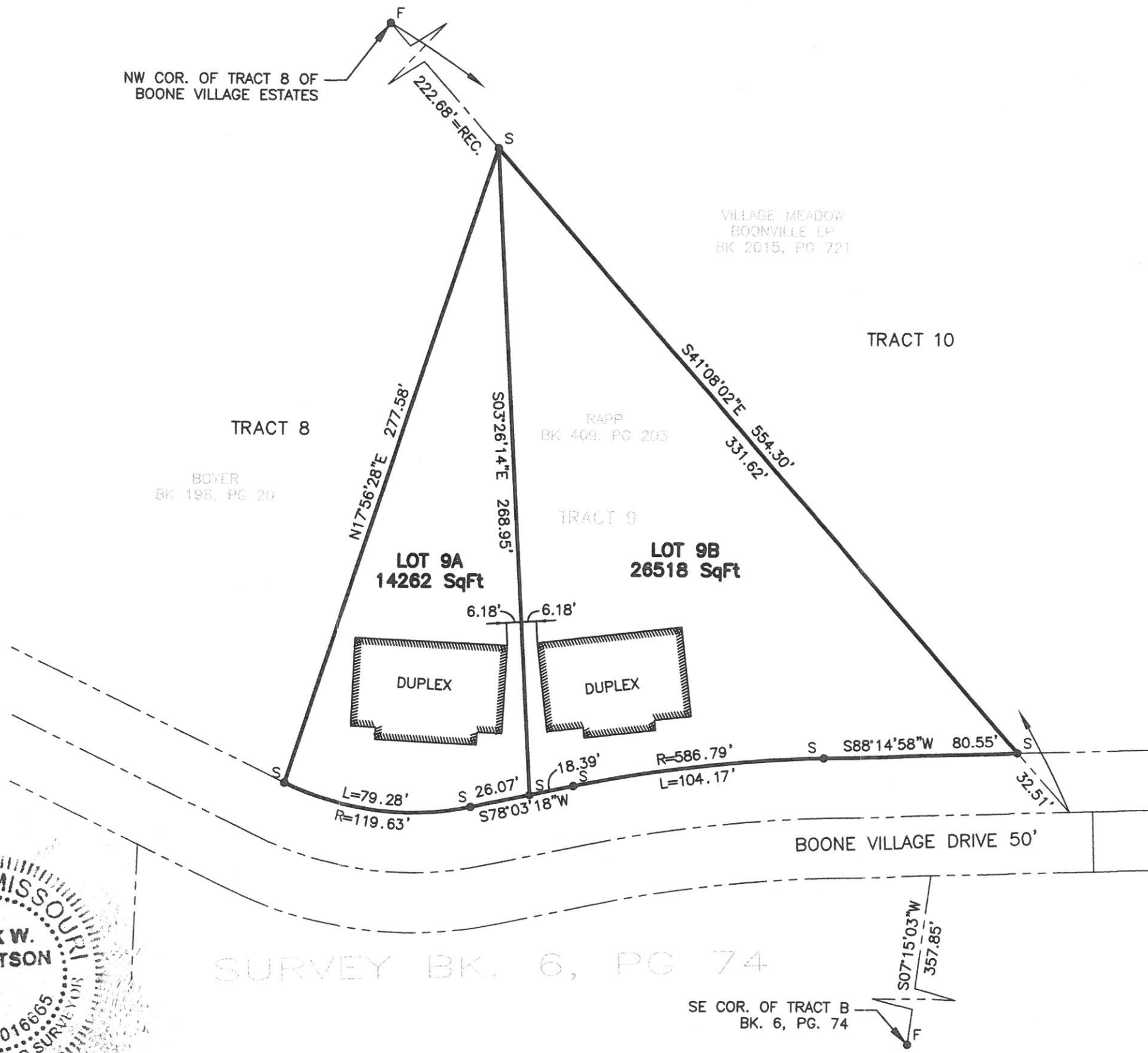
APPROVED BY THE BOONVILLE CITY COUNCIL THIS _____ DAY OF _____, 2016

JULIE THACHER, MAYOR

MARY McALLISTER, CLERK

THIS IS TO CERTIFY THAT A SURVEY WAS EXECUTED UNDER MY
PERSONAL SUPERVISION AND I HEREBY DECLARE THAT TO THE BEST
OF MY KNOWLEDGE AND BELIEF, THIS SURVEY WAS EXECUTED IN
ACCORDANCE WITH THE CURRENT MINIMUM STANDARDS FOR
PROPERTY BOUNDARY SURVEYS, 10CSR 30-2 AND THE RESULTS
ARE REPRESENTED ON THIS PLAT OF SURVEY.


MARK W. ROBERTSON, P.L.S. 2008016665
DATE: JANUARY 19, 2016



SURVEY BK. 6, PG. 74

Cemetery Board Minutes
January 28, 2016

Present: Judy Shields, LaDonna Drew, Helen Fisher, Shirley McGowan and Gary Nauman, Director of Parks

Absent: Hubert McClary and Vanessa Dorman, Council Representative.

Guests: Tim Derendinger

LaDonna Drew moved, seconded by Judy Shields to approve Minutes of the November 19, 2015 meeting. Motion carried.

Public Comments: None

Chair Report: None

Sexton Report: Gary Nauman reported no burials or lot sales.

Old Business: None

New Business:

A. Review Cemetery Mowing Bids: Gary Nauman presented copies of two bids received from Santa Fe Lawns and Custom Creations for the 2016 contract. The bid from Santa Fe Lawns was \$11,900.00 and Custom Creations was \$16,750.00 for mowing with a provision for additional charges for any maintenance work such as straightening stones. The additional charges would be based upon \$45.00 per hour plus materials with a set amount being placed in the budget each year.

Mr. Tim Derendinger, Santa Fe Lawns, made a short presentation to the Board discussing problems from 2015 and his desire to continue working with the Cemetery Board and City of Boonville and how he plans to improve his Company's performance in 2016.

Following a discussion, Helen Fisher moved, seconded by LaDonna Drew, to award the 2016 Cemetery Maintenance to Santa Fe Lawns for a bid price of \$11,900.00. Motion carried.

Miscellaneous: None

There being no further business, Helen Fisher moved, seconded by LaDonna Drew to adjourn. Motion carried.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Gary W. Nauman".

Gary W. Nauman
Director of Parks

**City Of Boonville
Police Board Minutes From
February 8, 2016**

1. Meeting was called to order at 7:00 P.M. by Chairman Michael Drew
2. Members Present: Michael Drew, Ralph Twillman, Gene Cummins, Brett Cooper, Tom Halford City Council Representative Henry Hurt, and Chief Bobby Welliver
3. Members Absent:
4. Guests Present:
5. Public Comments:
6. Tom Halford made the motion to approve the minutes from the December 12, 2015 meeting which was seconded by Ralph Twillman. Motion was passed by unanimous vote.

Reports

A. Chief Welliver

1. Sgt. James Deckard and Ptl. Justin Cummings were awarded the departments lifesaving medal at the City Council Meeting held on January 19th, 2016. Both officers were awarded the medal for saving a man from jumping from the Boonslick Bridge.

7. Unfinished Business

A. None

8. New Business:

- A. Patrol Vehicle Bids were sent out on January 13, 2016 and are due back on February 18, 2016. The Missouri State bids indicate there will be a small increase in the price of vehicles. The Board recommended we purchase two vehicles as we have in the past several years. The Board was advised we will be retaining one of the Ford SUV's for a spare vehicle which will replace the 2005 Chevrolet Trailblazer.
- B. We will be acquiring our new K9 at the end of February and Sgt. Scott Wack will be in training for eight weeks starting approximately March 1, 2016. The K9 is being paid for from our Capital Sales Tax Reserve Fund. The cost for the K9 is \$7,000.00.

9. Miscellaneous:

- A. Chief Welliver gave a brief update on the body cameras and the success of using them.**
- B. Tom Halford stated he was happy to see the police department implement the NIXLE Alert System and would like to see it used more in the future.**

10. Meeting Adjourned At 8:00 P.M.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read "Bobby Welliver".

Chief Bobby Welliver

Tourism Commission Meeting- Minutes
Tuesday, February 9th, 2016 @ 12 p.m.
Katy Depot, 320 1st Street

Members present: Leah Jonkers, Robin Billings, Deb Jewett, Vanessa Dorman (City Council rep) and Staff members- Kate Fjell and Katie Gibson
Members Absent: Theresa Krebs, Holly Peterson

I. Call to Order

The meeting was called to order at 12:04 PM with a quorum present

II. Public Comments

There were no public comments

III. NEW BUSINESS

a. Minutes from December meeting

Robin moved and Deb seconded that the minutes be approved as presented, the motion passed unanimously.

b. December 2015 and January 2016 Financial Reports

The Financial Reports was presented. Katie noted that we have exceeded our revenue goals for this fiscal year. These additional revenues have in part helped us to get the Gingrich Warehouse open for this summer.

c. Missouri Life Revised Proposal for guide

Katie presented the Missouri Life proposal for a 5X5 square 50 page walking tour brochure/booklet. This would be an upgrade from our current trifold brochure which does not have enough space for information or pictures of the properties on the tour. Katie explained that this is the most popular brochure for visitors who are spending time in Boonville, since it is self-guided and she liked the idea of having a souvenir piece for visitors. We will also be adding additional stops on the tour, including the Gingrich Warehouse and the Mitchell Motor Car Museum. The cost for Missouri Life to prepare and produce 10,000 booklets is \$12,000. The Commission agreed that staff could write content for booklet and use some existing pictures to bring the price down. Additionally, it was discussed that Tourism could sell the books for a nominal fee, \$2 to help recoup the cost of these booklets. Robin moved and Deb seconded that Katie proceed with getting these booklets printed, the motion passed unanimously.

d. Grant Applications for unencumbered funds

1. Soil and Water Conference – for 2016 & 2017

Katie explained that the soil and water conference is an annual event held at the Isle of Capri. They were seeking funds to enable them to advertise beyond the local area. The conference typically has about 300 farmers each day in attendance. It was noted that the 2016 conference was already planned and organized and the

Commission felt that funding was not necessary. Robin moved and Leah seconded that the commission give the Soil and Water Conference \$0 for 2016 conference and \$1000 for the 2017 conference. The motion passed unanimously.

2. Eagles Beer Garden – Heritage Days

Katie noted that this application was submitted before the initial Tourism grant deadline to City Hall, it was just inadvertently not passed to Tourism office. The Eagles are hosting the Beer Garden for Heritage Days and requested \$1500 for the event. Leah moved and Deb seconded that the Eagles be awarded \$750 for the Beer Garden, the motion passed unanimously.

3. Blackwater – Advertising Assistance

Katie explained that the Friends of Blackwater are working to grow their tourism base and want to expand their marketing base. Katie also explained that Boonville is the DMO for all of Cooper County not just Boonville, so it is not unusual or inappropriate to award funds to group in Cooper County. Robin also noted that if people come to Blackwater they may spend the night, eat or partake in the tourist amenities in the Boonville area. Deb moved and Robin seconded that the Commission award Blackwater \$500 for their enhanced advertising campaign. The motion passed unanimously.

d. Upcoming/ Past Events-

Katie reminded the Tourism Commission of the following events:

1. Rotary Trivia Night –March 12
2. New Hope Animal Shelter Chili Dinner- February 20
3. CCBC Soul Food Dinner- February 27
4. River Rats- Love Notes- February 12, 13, 14

IV. OLD BUSINESS

Budget was proposed to City Council

Katie noted that the budget was presented to City Council at the January Council meeting.

V. Misc.

Katie presented an advertising opportunity in the 417 Magazine for 2016. It is a spring quarter page ad in April and September 2016 for \$1000. Leah moved and Robin seconded that the Commission advertise in 417.

VI. Adjourn

Robin moved that the meeting be adjourned at 1:05PM

Respectfully submitted,
Kate Fjell, acting secretary

Park Board Minutes
February 9, 2016

Present: Morris Carter, Kathleen Conway, Jimi Barbarotta, Becky Ehlers, Council Representative and Gary W. Nauman, Director of Parks.

Absent: Albert Turner, Kevin Griffy and Matt Schneringer

Motion by Jimi Barbarotta, seconded by Kathleen Conway to accept the December 15, 2015 Minutes as submitted. Motion carried.

Public Comments: None

Old Business: None

New Business:

A. Activity Report: Gary Nauman reviewed the February 2016 Activity Report with the Board.

B. Project Pele` Overview: Gary Nauman gave the Board an overview of Project Pele`. He provided the Board with a site plan developed by MECO Engineering, and explained where the soccer fields are proposed. He explained the City's commitment to the School Board on improvements to the High School baseball field. Kathleen Conway asked about the time frame. Gary Nauman explained that the improvements to the baseball field will take place in 2016 and construction on the soccer fields will likely start in 2017. He also advised the Board of the appointment of the Project Pele` Committee to facilitate the process and advise the City Council and Boonville R-1 School Board.

Miscellaneous: None

There being no further business, Jimi Barbarotta moved to adjourn. The motion was seconded by Morris Carter and carried.

Respectfully submitted,



Gary W. Nauman
Director of Parks

**BOARD OF PUBLIC WORKS
MEETING
February 10, 2016**

The Board of Public Works met at the City Services Building at 1200 Locust, 5:30 p.m. February 10, 2016 was a rescheduled date from January 28, 2016. The following voting members were present: Kathy Lang, Ed Scrivner and Van Donley. Other members present: Becky Ehlers, Council Representative, Charissa Mayes, City Counselor and M.L. Cauthon III, Director of Public Works. Also present; Mark Wild, Alliance Water Resources Local Manger.

ABSENT or EXCUSED: Wade Davis

MINUTES:

Minutes of the October 29, 2015 Board of Public Works meeting were approved as presented. The motion to accept was made by Mrs. Lang, seconded by Mr. Scrivner. Voting yes: Lang, Scrivner and Donley. Voting no: none.

PUBLIC COMMENTS: None.

ACCOUNTS:

Motion was made by Mr. Donley to approve the bills that were paid February 1, 2016. The motion was seconded by Mr. Scrivner. Voting yes: Lang, Scrivner and Donley. Voting no: none.

OLD BUSINESS: None

NEW BUSINESS:

- a. Discussion of 2016-2017 budget was moved to the February 25, 2016 meeting. The later date will better accommodate preparation of the budget document packet.

MISCELLANEOUS:

The new City Counselor, Ms. Mayes, introduced herself. Mark Wild gave the Board an overview of the water treatment process. He specifically addressed testing and adjusting water treatment chemicals to maintain balanced water for prevention of corrosivity. He further briefed the Board on lead and copper sampling, testing and reporting procedures.

ADJOURN:

With no further business the meeting was adjourned at 6:10 p.m. with the motion from Mr. Scrivner, seconded by Mr. Donley. Voting yes: Lang, Scrivner and Donley. Voting no: none.

Respectfully submitted,

M. L. Cauthon III

Approved by:

Wade Davis, Chairman

2015 Code Enforcement Report

Weeds/Debris Cases-427 total

344 Voluntary Compliance

62 City Abated

20 Closed-Unfounded

1 Prosecutor

4 of these cases were under the 13-5 (c) classification, one-time notice, which means they were frequent violators and were notified once that we would automatically mow their lawn when needed and bill them of the cost without sending out letters each time they were in violation.

Derelict Cars-149 total

127 Voluntary Compliance

12 Sent to Prosecutor

10 Closed-Unfounded

General Public Nuisance-16 total

These are letters that were sent for dead trees, a storm water detention pond, sewer leakage, a travel trailer, open doors, and excessive and dangerous debris.

FOG Inspections-41 total

39 Passed and Inspections Rescheduled for 2016

2 Formal Violations sent for not having a grease trap, 1 voluntarily complied and 1 pending, due 02/17/16

Property Maintenance-16 total

We have initiated cases during our survey on all Ward 1 properties. We will begin Ward 2 in the next fiscal year.

1 Voluntary Compliance

4 Sent to Prosecutor

11 Work Plan

Derelict Building-10 total

3 Voluntary Compliance-properties are demolished

2 Voluntary Compliance-rehab

1 Pending

1 Donated to the City-demolishing soon

3 City Demolished

BUILDING INSPECTOR REPORT
JANUARY 2016

Permits Sold – 5

Phone Call – 19 General questions

Worked on next set of Dangerous Buildings

Worked with Bob Cook – Americare – on site plan, including drainage and parking.

Helped Street Department with Snow removal.

Helped Irl with Capital Building Project

Things continue slow.

MEMORADUM

TO: Irl Tessendorf, City Administrator

FROM: Gary W. Nauman, Director of Parks 

DATE: February 1, 2016

SUBJECT: January Activity Report

The guys worked on cleaning up brush and dead trees along the new drive to the Katy Bridgehead. They spent two days cutting out dead trees, trimming trees and clearing brush. We are at a standstill with that project until the bridge contractor gets semi-trailers moved. They have been working on trees and brush at Harley, Kemper and Lion's Parks.

Mark Strange and Kerry Shipman took down the Christmas Tree at City Hall on January 5th.

The guys completed removing the old walk-in cooler at the Gingrich Warehouse in early January. Kate Fjell asked if we could disassemble it and remove it. Paul Linhart and I looked at it and determined that the job should be relatively simple. Took them a little time to figure out how it was put together, but the demo was fairly simple once they figured out what to do.

The guys also cleaned up the inside of the warehouse to get it ready for the contractors who will be completing the interior renovations. The project took two days and several loads of junk to the transfer station.

I have notified both Shaffer, Kline and Warren and the University Extension that the Kemper Park Master Plan is on indefinite hold. I expected to hear something from Shaffer, Kline and Warren, but they have been silent so far.

We have started working on refinishing the downtown benches and are working them in during bad weather. We have completed six so far.

Public Works Monthly Report
January 2016

WWTP:

Total flow processed - 41,260,000 gallons

Average daily flow - 1,331,000 gallons

Sludge disposed - 84.36 tons

Precipitation - .76" total

Remarks - Clarifier #1 returned to full service after scum trough project post adjustments.

WTP:

Gallons pumped from river - 33,232,000 gallons

Gallons pumped to customer - 34,403,000 gallons

Precipitation - .95" total

Remarks -

Water Distribution / Sewer Collection:

Installed or renewed water service - 2

Remarks - extended 2" line along Pine Street to new construction apartment building at Rear Main and Pine; assisted with snow removal; jetted sewer lines for Prairie Home; continued systematic inspection of manholes; continued updating sewer system maps; routine sewer jetting and TV inspection.

Street Department:

Completed retaining wall replacement at Logans Lake Rd and Boonslick Dr.; constructed ladders and service platforms at salt spreader storage; two snow events; repaired street cuts and pot holes; major repair to salt spreader.

Central Garage:

Vehicles serviced and inspected - 5

Vehicle and equipment repairs - 19

Remarks: Assisted with snow removal

Project Status:

1) Sewer Collection System Rehab (Insituform): line inspection and heavy cleaning completed. Waiting scheduling of lining crew.

2) WTP UV Disinfection Project: Contractor - J. Louis Crum Corp. Exchanging contract documents.

**PROUDLY
SERVING**

MISSOURI

Atchison County

Bonne Terre

Bowling Green

Buchanan County #1

Boonville

Cameron

Cape Girardeau

Carroll County #1

Craig

East Central Missouri
Water & Sewer
Authority

Elsberry

Fayette

Franklin County #1

Franklin County #3

Henry County
Water Company

Henry County #3

Lake Ozark/
Osage Beach

Lincoln County #1

Nevada

Parkville

Phelps County #2

Platte County #C-1

Ralls County #1

Russellville

St Charles County #2

St Genevieve

Sedalia

Versailles

IOWA

Maquoketa

Tipton

REPORT OF OPERATIONS

Boonville Mo.

Water Treatment System

Month of January 2016

Submitted by Alliance Water Resources, Inc. for

February 2016

City Council Meeting

January 2016 Report to the City of Boonville

PROUDLY SERVING

MISSOURI

Atchison County
 Bonne Terre
 Bowling Green
 Buchanan County #1

Boonville

Cameron
 Cape Girardeau
 Carroll County #1
 Craig
 East Central Missouri
 Water & Sewer
 Authority

Elsberry
 Fayette

Franklin County #1
 Franklin County #3

Henry County
 Water Company

Henry County #3
 Lake Ozark/
 Osage Beach

Lincoln County #1

Nevada
 Parkville

Phelps County #2
 Platte County #C-1

Ralls County #1

Russellville

St Charles County #2

St Genevieve

Sedalia

Versailles

IOWA

Maquoketa
 Tipton

Water Treatment Plant Operations & Maintenance

- Normal operations and maintenance were performed this month.
- Replaced a check valve on the tap sample line in the basement.
- Hach performed the maintenance on the turbidimeters and the CI17 analyzers.
- Replaced the fan on the north heater unit in the booster station.
- High raw turbidities this month.
- Changed the location where the sodium permanganate is added.
- Ran the de-icing blowers
- Replaced a pulley and belt on the large de-icing blower.
- Replaced a vacuum hose on the Ford truck.
- Fixed the communication error at the plant tower.

Regulatory

- Ten Microbiological samples were taken in the distribution system. All samples tested were absent of Total Coliform and E-Coli. Report sent to DNR. (see attach)
- Prepared and sent the Tier II report.

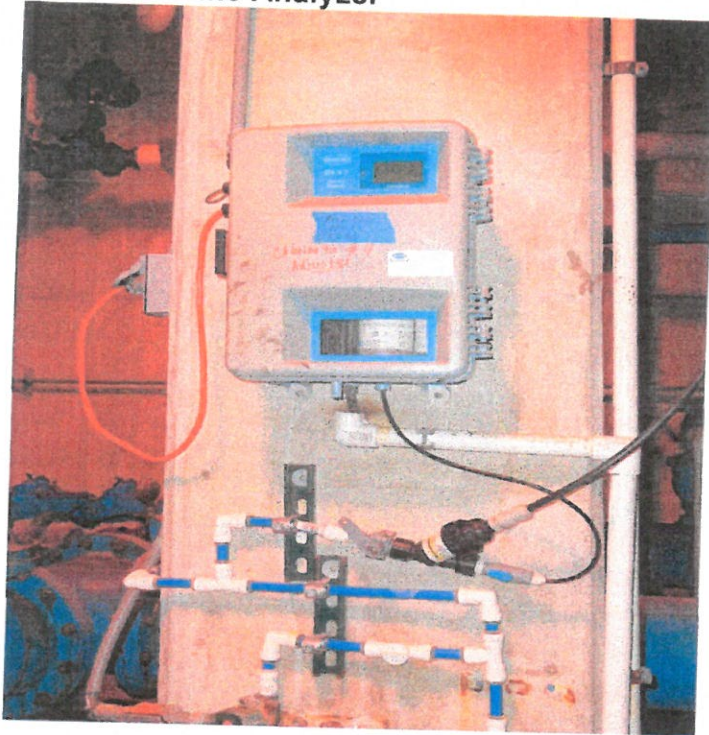
Project Updates

- Pre-bid meeting for the UV project was held at the water plant.
- The UV project bid opening was on the 20th.
- Received quotes to install the PAX system in the towers.

Safety

- Completed the annual safety audit.

CL 17 Chlorine Analyzer



Turbidimeters



ALLIANCE WATER RESOURCES BOONVILLE DIVISION

JANUARY 2016

<u>WEATHER & RIVER CONDITIONS</u>				
1. River Stage:	Average:	12.13	Maximum:	18
2. High Temperature:	Average:	38.77	Maximum:	63
3. Low temperature:	Average:	21.65	Maximum:	39
4. Precipitation:		0.95	Minimum:	-2
			liquid inches	

<u>PUMPING</u>			
1. Million Gallons Pumped:	33.232	Average /day:	1.07
2. Million Gallons Filtered:	33.232	Average /day:	1.07
3. Hours #1 Pump Operated:	12.75	Average /day:	0.41
4. Hours #2 Pump Operated:	196.5	Average /day:	6.34
5. Total Hours River Pumps Operated:	209.25	Average /day:	6.75
6. Main St. Booster Station Gallons Pumped:	2.879	Average /day:	0.092870968

<u>FILTRATION</u>			
1. Hours Transfer Pumps Operated:	153.75	Average/day:	4.96
2. Hours Tower Pump Operated:	2.00	Average/day:	0.06
3. Filters Washed:	12		
4. Gallons Washwater Used:	0.371		
5. % Treated water used in backwashing:	1.12		

<u>MATERIALS PRECIPITATED DURING TREATMENT (IN TONS)</u>	
Calcium Carbonate	0.398904
Magnesium Hydroxide	1.313657
Aluminum Hydroxide	0
Lime Inerts	0
Polymer	1.725
Others	0
Total	3.437561

Effect Of Materials Precipitated On Missouri River

Increase In River Water Suspended Solids: 0.0005321462342 mg/L

<u>LABORATORY ANALYSIS</u>						
TESTS	RAW	PRESET	PRIMARY	FILTERS	BOF	TAP
Temperature	7 ° C	X	X	X	X	6 ° C
Fluoride (ppm)	X	X	X	0.54	X	1.02
Free Cl2 Residual (ppm)	X	X	X	2.03	1.02	0.21
Total Cl2 Residual (ppm)	X	X	X	2.58	X	2.91
Turbidity (NTU)	64	2.80	1.25	0.69	X	0.06
pH	7.85	7.9	7.8	7.6	X	7.8
Total Alkalinity (ppm)	X	189	X	X	X	183
Non Carb Hardness (ppm)	X	76	X	X	X	71
Total Hardness (ppm)	X	265	X	X	X	254
Calcium Hardness (ppm)	X	183	X	X	X	185
Magnesium Hardness (ppm)	X	82	X	X	X	69
Total Iron (ppm)	0.01	X	X	X	X	0.00
Manganese (ppm)	0.05	X	X	0.05	X	0.03
Copper (ppm)	X	X	X	X	X	0.00
Total Dissolved Solids (ppm)	X	X	X	X	X	396

Bacteriological Samples Examined:	10
Bacteriological Samples Positive:	0
Bact. Samples Below 0.2 ppm Cl2:	0
Average Free Chlorine in Dist. System at time of Bact. Samples (ppm):	0
Average Total Chlorine in Dist. System at time of Bact. Samples (ppm):	2.35
Total # tap turbidity samples taken for month:	213
Average # of tap turbidity samples taken daily:	6.870968
Total # tap turbidity samples taken for month below 0.3 NTU:	213
Total # tap turbidity samples taken for month above 1.0 NTU:	0
Total # tap turbidity samples taken for month above 5.0 NTU:	0
Average lowest Total Chlorine to distribution system:	2.91
Duration Total Chlorine fell below 1.0 ppm:	0

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM - PUBLIC DRINKING WATER BRANCH
**DISINFECTION AND TURBIDITY REPORT FOR SURFACE WATER
SYSTEMS < 10,000 POPULATION**

PWS NAME CITY OF BOONVILLE				PWS-ID MO3010089		MONTH JANUARY	
ADDRESS 901 RIVIERA DRIVE				PHONE (660) 882-4021			
CITY BOONVILLE, MO		ZIP CODE 65233		COUNTY COOPER COUNTY		2016	
						PLANT Main Plant	
<i>(See instructions on back of this sheet)</i>							
DISTRIBUTION DISINFECTION 1. Number of samples analyzed, A: <u>10</u> 2. Number of samples below 0.2 mg/L, B: <u>0</u> $[(A-B)/A \times 100 = C: \quad \underline{100} \text{ \% meeting}]$ minimum disinfection required. 3. Avg. dsfctnt residual for month: <u>2.68</u> mg/l				TURBIDITY 1. Total number measurements taken monthly, A: <u>213</u> 2. number of measurements below 0.3 NTU, B: <u>213</u> $[B/A] \times 100 = C: \quad \underline{100} \text{ \% meeting}]$ turbidity requirements.			
Date	Hours of Operation	Finished Water Temperature (C)	Lowest disinfectant at entrance to distribution system (mg/L) ☐ Free Chlorine ☒ Chloramines	Highest turbidity measurement of the day	Duration disinfectant fell below 0.5 mg/L free Cl ₂ or 1 mg/L chloramines	Value of turbidity measurements that exceed	
						1 NTU	5 NTU
1	4.75	7	2.08	0.05	0	0	0
2	5.00	9	2.37	0.05	0	0	0
3	4.50	8	2.69	0.05	0	0	0
4	5.75	9	2.56	0.05	0	0	0
5	5.50	4	2.82	0.06	0	0	0
6	6.25	7	2.29	0.06	0	0	0
7	4.50	8	3.28	0.05	0	0	0
8	4.75	5	3.07	0.06	0	0	0
9	4.00	5	3.11	0.05	0	0	0
10	4.75	5	3.49	0.05	0	0	0
11	6.00	5	2.15	0.05	0	0	0
12	5.00	8	3.00	0.05	0	0	0
13	6.00	6	2.97	0.06	0	0	0
14	5.00	6	3.08	0.05	0	0	0
15	4.50	7	2.58	0.08	0	0	0
16	4.50	6	3.43	0.05	0	0	0
17	5.25	6	3.56	0.05	0	0	0
18	6.75	6	2.98	0.05	0	0	0
19	4.75	4	3.35	0.05	0	0	0
20	5.00	6	3.18	0.05	0	0	0
21	6.75	4	2.71	0.07	0	0	0
22	4.50	6	3.80	0.06	0	0	0
23	5.00	3	3.27	0.06	0	0	0
24	5.00	3	3.22	0.06	0	0	0
25	6.50	5	2.80	0.06	0	0	0
26	4.50	3	2.98	0.06	0	0	0
27	3.50	4	2.83	0.06	0	0	0
28	6.25	4	2.76	0.06	0	0	0
29	4.75	4	2.71	0.05	0	0	0
30	3.75	5	2.95	0.05	0	0	0
31	2.75	6	2.13	0.05	0	0	0

Name of Person Preparing Report Todd W. Baslee	Signature of Responsible Official 	DATE 2/10/2016
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MO 780-1904 (12-04)

INSTRUCTIONS: DISINFECTION AND TURBIDITY REPORT FOR SURFACE WATER SYSTEMS < 10,000 POPULATION

1. Please fill out information completely and legibly.

Distribution Disinfection

1. On Line 1., enter the total number of samples from the distribution system that were analyzed for residual disinfectant concentration (total chlorine or combined chlorine) during the month. The residual disinfectant concentration measurements must be taken at the same time and location as your routine monthly coliform samples. This is the value for A.
2. On line 2., enter the number of samples for the distribution systems that had less than 0.2 mg/l residual disinfectant concentration. This is the value for B.
3. Subtract B, from A. (A-B). Divide that number by A. Then multiply by 100. This will give you the value for C. For example: if A = 20 and B = 3, then $C = [(20-3)/20] \times 100 = 85\%$
4. On line 3., enter the arithmetic average for all residual disinfectant samples taken during the month.

Turbidity:

1. On line 1., enter the total number of combined filter turbidity measurements taken during the month. This is the value for A.
2. On line 2., enter the number of combined filter turbidity measurements taken during the month, which are less than or equal to 0.3 NTU. This is the value for B.
3. Divide B, by A. (B/A). Then multiply that number by 100. This will give you the value for C. For example: if A = 120 and B = 117, then $C = (117/120) \times 100 = 97.5\%$

Hours of Operation

For each day, record the number of hours each water treatment plant was in operation.

Finished Water Temperature

For each day, record the temperature of water entering the distribution.

Lowest Residual Disinfectant at Entrance to Distribution System:

For each day, record the lowest measurement of residual disinfectant (mg/L) in water entering the distribution system (free available chlorine or chloramines).

Duration Residual Disinfectant Fell Below Requirement:

For each day, record the duration (hours, tenths) of each period (if any) when the residual disinfectant concentration in water entering the distribution system fell below 0.5 mg/L free chlorine or 1 mg/L chloramines. Note: should this occur, the public water system must notify the department as soon as possible, but no later than by the end of the next business day.

Value of Turbidity Measurements that exceed 1 NTU and 5 NTU:

For each day, record the value of any turbidity measurements taken during the month, which exceed 1 NTU and 5 NTU. Note: should this occur, the public water system must notify the department as soon as possible, but no later than by the end of the next business day.

INDIVIDUAL FILTER MONITORING & REPORTING

1. Was filter continuously monitored for turbidity and results recorded every 15 minutes?
2. Was there a failure of the continuous turbidity monitoring equipment?

YES
NO

If yes on 2., was the equipment repaired within 5 working days, or 14 days with department approval?

3. Was any individual filter level >1.0 NTU in two (2) consecutive recording fifteen (15) minutes apart?

N/A

NO

4. Was any individual filter level, for three (3) months in a row > 1.0 NTU in two (2) consecutive recordings, fifteen (15) minutes apart?

NO

{If YES, perform "follow-up actions" no.2}

5. Was any individual filter turbidity level >2.0 NTU in two (2) consecutive recordings, fifteen (15) minutes apart for two (2) consecutive months?

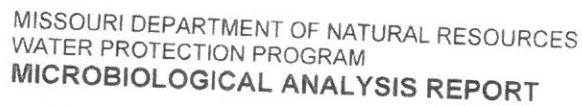
NO

{If YES, perform "follow-up actions" no. 3}

"FOLLOW-UP ACTIONS to PERFORM"

1. Report filter number(s); turbidity measurements which exceed 1 NTU; and date(s) the exceedance(s) occurred and causes if known.
2. Conduct a "Self-Assessment" of the filter(s) within fourteen (14) days of the triggering event. The system must report the date the self-assessment was triggered and the date it was completed.
3. The system must arrange to have a "Comprehensive Performance Evaluation" (CPE) performed not later than sixty (60) days following the triggering event. The CPE must be completed and submitted to the department within 120 following the trigger event.

The Missouri Department of Natural Resources-Public Drinking Water Branch recommends contacting your local regional office if any individual filter exceeds 1.0 NTU, the lowest trigger in the individual filter standards.



Return completed form to Department of Natural Resources, Public Drinking Water Branch, P.O. Box 176, Jefferson City, MO 65102-0176



City of Boonville

RESIDENTIAL SPRING CLEAN-UP

On designated Spring Clean-Up Dates
Advanced Disposal will pick up the following
items **FREE OF CHARGE**:

TRASH FURNITURE BEDDING
and other miscellaneous HOUSEHOLD items

Please keep all items dry. Wet mattresses and other absorbent furniture become too heavy to lift when wet.

Please cut and bundle all carpet into 4x4 ft sections.

Items that we are not able to take include: Paint, gas, oil, yard waste, vegetation, batteries, tires, car parts, appliances demolition or construction material, or any hazardous material.

If your regular collection day is:

Your bulk day is:

MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY

MARCH 14TH
MARCH 15TH
MARCH 16TH
MARCH 17TH
MARCH 18TH

800-778-7652



PO Box 371 • Boonville, Missouri 65233

January 30, 2016

Boonville City Council
City of Boonville
401 Main Street
Boonville, MO 65233

Dear Boonville City Council Members

On behalf of the board of Neighbors Helping Neighbors, I want to thank you for the \$5429.70 that the pantry received in Gaming and Local Agency Funds. We are very fortunate and grateful for the support of the city council. Thank you for your continued generosity.

Sincerely,

A handwritten signature in cursive script that reads "Jeanne M. Pascale".

Jeanne M. Pascale
Board Member

In 2013, Gov. Jay Nixon signed legislation reinstating the tax credits for donations to food pantries. Go to <http://dor.mo.gov/taxcredit/fpt.php> or call 573-526-8733 for more information.



Missouri Gaming Commission

State/Local Allocation of Gaming Revenues

For the Period 1/1/2016 through 1/31/2016

Year beginning: 1/1/2016



RECEIVED

2/1/2016

RPT MGC/3

Gaming Date	Day	Admission Tax Remitted	Gaming Tax Remitted	Total Tax Remitted	State & Local Portion of Adm Tax	State Portion of Gaming Tax	Local Portion of Gaming Tax	Total Local Adm & Gaming Tax
Isle of Capri IB								
01/01/2016	Friday	\$19,296.00	\$83,742.19	\$103,038.19	\$9,648.00	\$75,367.97	\$8,374.22	\$18,022.22
01/02/2016	Saturday	\$16,144.00	\$75,666.61	\$91,810.61	\$8,072.00	\$68,099.95	\$7,566.66	\$15,638.66
01/03/2016	Sunday	\$10,150.00	\$51,162.68	\$61,312.68	\$5,075.00	\$46,046.41	\$5,116.27	\$10,191.27
01/04/2016	Monday	\$4,774.00	\$23,762.52	\$28,536.52	\$2,387.00	\$21,386.27	\$2,376.25	\$4,763.25
01/05/2016	Tuesday	\$6,392.00	\$32,654.21	\$39,046.21	\$3,196.00	\$29,388.79	\$3,265.42	\$6,461.42
01/06/2016	Wednesday	\$7,132.00	\$30,558.60	\$37,690.60	\$3,566.00	\$27,502.74	\$3,055.86	\$6,621.86
01/07/2016	Thursday	\$6,424.00	\$33,257.31	\$39,681.31	\$3,212.00	\$29,931.58	\$3,325.73	\$6,537.73
01/08/2016	Friday	\$13,092.00	\$57,501.79	\$70,593.79	\$6,546.00	\$51,751.61	\$5,750.18	\$12,296.18
01/09/2016	Saturday	\$7,240.00	\$32,955.97	\$40,195.97	\$3,620.00	\$29,660.37	\$3,295.60	\$6,915.60
01/10/2016	Sunday	\$7,568.00	\$40,493.24	\$48,061.24	\$3,784.00	\$36,443.92	\$4,049.32	\$7,833.32
01/11/2016	Monday	\$4,838.00	\$25,440.33	\$30,278.33	\$2,419.00	\$22,896.30	\$2,544.03	\$4,963.03
01/12/2016	Tuesday	\$6,294.00	\$33,218.06	\$39,512.06	\$3,147.00	\$29,896.25	\$3,321.81	\$6,468.81
01/13/2016	Wednesday	\$8,228.00	\$43,595.34	\$51,823.34	\$4,114.00	\$39,235.81	\$4,359.53	\$8,473.53
01/14/2016	Thursday	\$7,458.00	\$29,372.09	\$36,830.09	\$3,729.00	\$26,434.88	\$2,937.21	\$6,666.21
01/15/2016	Friday	\$13,386.00	\$56,462.51	\$69,848.51	\$6,693.00	\$50,816.26	\$5,646.25	\$12,339.25
01/16/2016	Saturday	\$12,874.00	\$68,479.34	\$81,353.34	\$6,437.00	\$61,631.41	\$6,847.93	\$13,284.93
01/17/2016	Sunday	\$7,036.00	\$33,548.10	\$40,584.10	\$3,518.00	\$30,193.29	\$3,354.81	\$6,872.81
01/18/2016	Monday	\$5,870.00	\$25,066.19	\$30,936.19	\$2,935.00	\$22,559.57	\$2,506.62	\$5,441.62
01/19/2016	Tuesday	\$2,466.00	\$9,593.08	\$12,059.08	\$1,233.00	\$8,633.77	\$959.31	\$2,192.31
01/20/2016	Wednesday	\$6,102.00	\$30,467.46	\$36,569.46	\$3,051.00	\$27,420.71	\$3,046.75	\$6,097.75
01/21/2016	Thursday	\$5,474.00	\$30,118.69	\$35,592.69	\$2,737.00	\$27,106.82	\$3,011.87	\$5,748.87
01/22/2016	Friday	\$9,828.00	\$63,166.98	\$72,994.98	\$4,914.00	\$56,850.28	\$6,316.70	\$11,230.70
01/23/2016	Saturday	\$18,936.00	\$90,996.90	\$109,932.90	\$9,468.00	\$81,897.21	\$9,099.69	\$18,567.69
01/24/2016	Sunday	\$9,726.00	\$45,028.51	\$54,754.51	\$4,863.00	\$40,525.66	\$4,502.85	\$9,365.85
01/25/2016	Monday	\$5,140.00	\$15,977.17	\$21,117.17	\$2,570.00	\$14,379.45	\$1,597.72	\$4,167.72
01/26/2016	Tuesday	\$5,598.00	\$14,094.93	\$19,692.93	\$2,799.00	\$12,685.44	\$1,409.49	\$4,208.49
01/27/2016	Wednesday	\$7,850.00	\$34,429.58	\$42,279.58	\$3,925.00	\$30,986.62	\$3,442.96	\$7,367.96
01/28/2016	Thursday	\$9,688.00	\$47,112.29	\$56,800.29	\$4,844.00	\$42,401.06	\$4,711.23	\$9,555.23
01/29/2016	Friday	\$17,178.00	\$65,966.45	\$83,144.45	\$8,589.00	\$59,369.81	\$6,596.64	\$15,185.64
01/30/2016	Saturday	\$19,246.00	\$92,546.13	\$111,792.13	\$9,623.00	\$83,291.52	\$9,254.61	\$18,877.61
01/31/2016	Sunday	\$11,306.00	\$55,928.95	\$67,234.95	\$5,653.00	\$50,336.06	\$5,592.89	\$11,245.89
Casino Report Totals:		\$292,734.00	\$1,372,364.20	\$1,665,098.20	\$146,367.00	\$1,235,127.79	\$137,236.41	\$283,603.41
Casino YTD Totals:		\$292,734.00	\$1,372,364.20	\$1,665,098.20	\$146,367.00	\$1,235,127.78	\$137,236.42	\$283,603.42