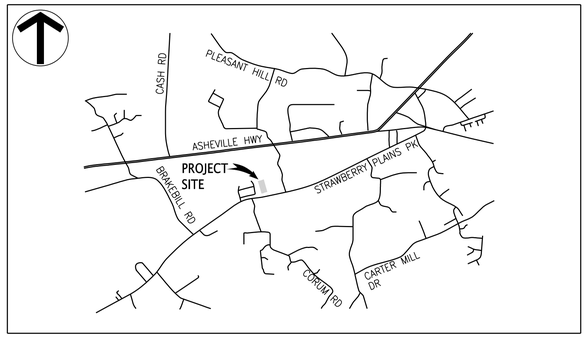
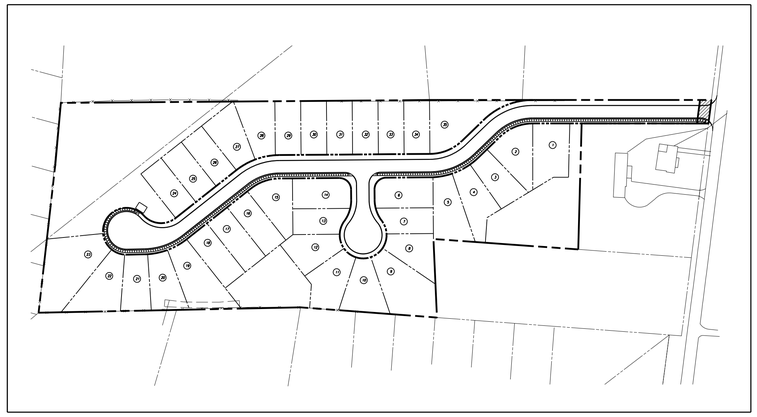
STRAWBERRY PLAINS SUBDIVISION
STRAWBERRY PLAINS PIKE
KNOXVILLE, TENNESSEE 37924



LOCATION MAP
(NOT TO SCALE)



OVERALL PLAN
(NOT TO SCALE)

DRAWING INDEX

SHEET NO.	REV. NO.	ISSUE DATE	TITLE
C1	3	05/08/20	COVER SHEET AND INDEX
C2	0	09/18/19	LAYOUT AND PAVING PLAN
C3	1	02/04/20	GRADING PLAN
C4	0	09/18/19	EPSC PLAN – STAGE 1
C5	1	02/04/20	EPSC PLAN – STAGE 2
C6	1	02/04/20	EPSC PLAN – STAGE 3
C7	1	02/04/20	STORM DRAINAGE PLAN
C8	2	05/08/20	WATER PLAN LINE A STA. 0+00 TO 7+52
C9	1	04/24/20	WATER PLAN LINE A STA. 7+52 TO 14+40 (EOL) LINE B STA. 0+00 TO 1+78 (EOL)
C10	2	05/08/20	SANITARY SEWER PLAN LPS: LINE 1 STA. 0+00 TO 7+81
C11	2	05/08/20	SANITARY SEWER PLAN LPS: LINE 1 STA. 7+81 TO 13+69 (EOL) LPS: LINE 2 STA. 0+00 TO 3+24 (EOL)
C12	0	09/18/19	ROADWAY PROFILES
C13	1	02/04/20	DETAILS
C14	1	02/20/04	DETAILS
C15	1	02/04/20	DETAILS
C16	1	02/04/20	DETAILS
C17	1	02/04/20	DETAILS

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COVER SHEET AND INDEX

PROJ. MGR.	DESIGNED BY	DRAWN BY
AMG	AMG	RPJ

No.	Revision/Issue	Date
1	REVISED PER KUB	05/08/20
2	REVISED DRAWING INDEX	04/24/20
3	REVISED PER KNOX COUNTY COMMENTS	02/04/20
4	ISSUED FOR CONSTRUCTION	09/18/19

Project 620.001
Date 09/18/19
Scale NTS
Sheet C1

File Name: J:\620\620.001\DWGS\620001c001.dgn
Plot Date: 5/9/2020

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0 50 100

SCALE: 1" = 50'

NOTES:

1. THE BOUNDARY DATA WAS TAKEN FROM SMOKEY MOUNTAIN LAND SURVEYING CO., INC. DATED FEBRUARY 4, 2019.
2. UNLESS NOTED OTHERWISE, DIMENSIONS ARE TAKEN FROM THE FENCE LINE, PROPERTY LINE, FACE OF CURB, OR EDGE OF PAVEMENT.
3. THE MINERAL AGGREGATE BASE AND ASPHALTIC SURFACE COURSES SHALL MEET THE MATERIALS, EQUIPMENT, CONSTRUCTION, AND TESTING REQUIREMENTS OF THESE DRAWINGS, AND THE KNOX COUNTY DEPARTMENT OF ENGINEERING & PUBLIC WORKS STANDARD SPECIFICATIONS.
4. CONCRETE CURB AND PAVEMENT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. CONCRETE CURB AND PAVEMENT SHALL MEET THE MATERIALS, EQUIPMENT, AND CONSTRUCTION REQUIREMENTS OF THE KNOX COUNTY DEPARTMENT OF ENGINEERING & PUBLIC WORKS STANDARD SPECIFICATIONS.
5. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKING SHALL CONFORM TO THE FEDERAL HIGHWAY ADMINISTRATIONS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
6. PROPERTY CONCERNED REFLECTS PARCEL 073172 AS SHOWN IN KNOX COUNTY CLT MAP 73. ZONING FOR THE PROPERTY IS PR, PLANNED RESIDENTIAL ZONE. TOTAL AREA = 10.90± AC. TOTAL DISTURBED AREA = 10.90± AC.

   OWNER: KNOXVILLE HABITAT FOR HUMANITY
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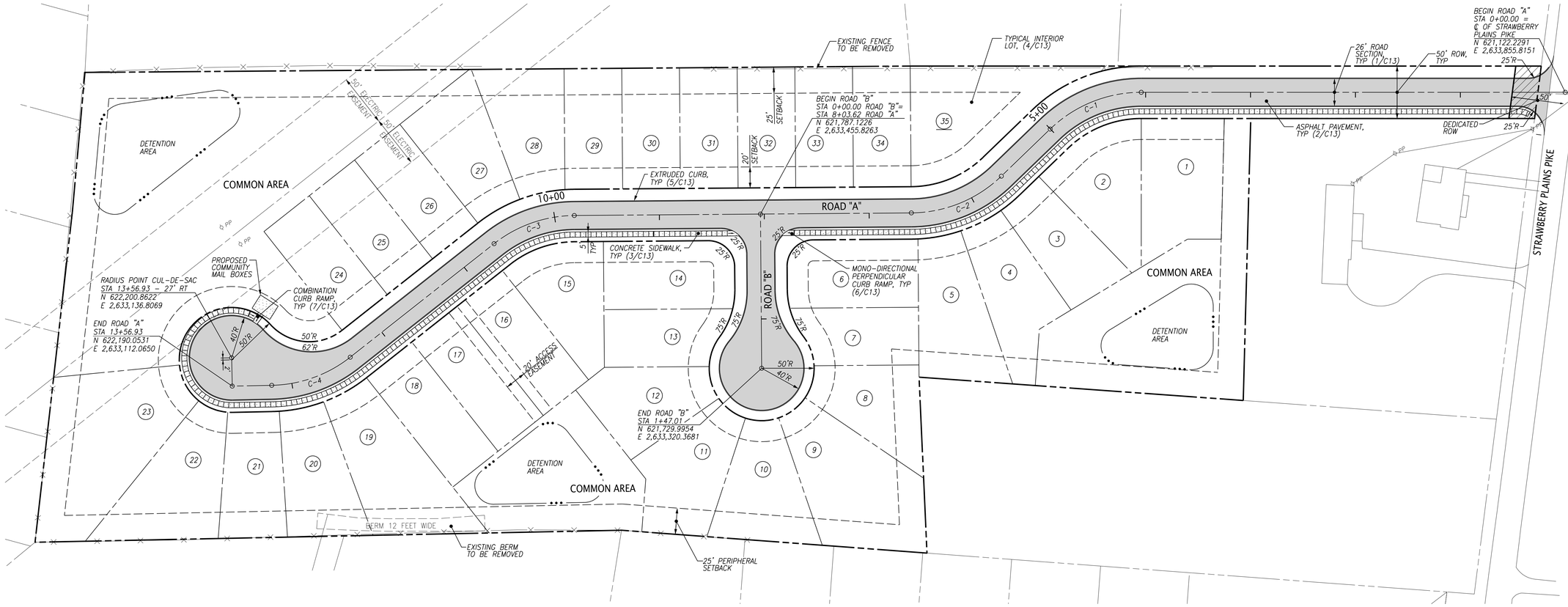
   KNOXVILLE, TN 37917
7. BUILDING SETBACKS INTERNAL TO SUBDIVISION ARE 20-FT. IN FRONT, 5-FT. ON SIDE, 15-FT. REAR, AND 25-FT. AT THE PERIPHERY.
8. REMOVE OVER-PAVEMENT OF ASPHALT AND STONE FROM UNDERNEATH LANDSCAPE AREAS UP TO THE LIMITS THAT HAVE BEEN SPECIFIED (REFER TO THE CURB DETAIL) IN ORDER TO PROVIDE A SOLID BASE FOR THE CONCRETE CURB.
9. A FAVORABLE GEOTECHNICAL REPORT SHALL BE REQUIRED FOR LOTS LOCATED WITHIN A CLOSED CONTOUR, OR WITHIN 50 FEET OF A CLOSED CONTOUR.
10. DRIVEWAYS AND SIDEWALKS FOR EACH LOT SHALL CONFORM TO TENNESSEE DEPARTMENT OF TRANSPORTATION DETAILS OF STANDARD CONCRETE DRIVEWAYS (TDOT RP-D-15).



LEGEND:

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- (10) PROPOSED LOT NUMBER
- PROPOSED PROPERTY/ROW LINE
- EXISTING PROPERTY LINE
- PROPOSED ROAD CENTER LINE
- 1010 EXISTING CONTOUR LINE (KGIS)
- PROPERTY SETBACKS

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LAYOUT AND PAVING PLAN

No.	Revision/Issue	Date
1	REVISED PER KNOX COUNTY COMMENTS	02/26/20
2	ISSUED FOR CONSTRUCTION	09/18/19

DRAWN BY: RPJ
DESIGNED BY: AMG
PROJ. MGR.: AMG

Project: 620.001
Date: 09/18/19
Scale: 1"=50'
Sheet: C2

File Name: s:\620\620.001\LDWCS\620001c002.dgn
Plot Date: 2/26/2020

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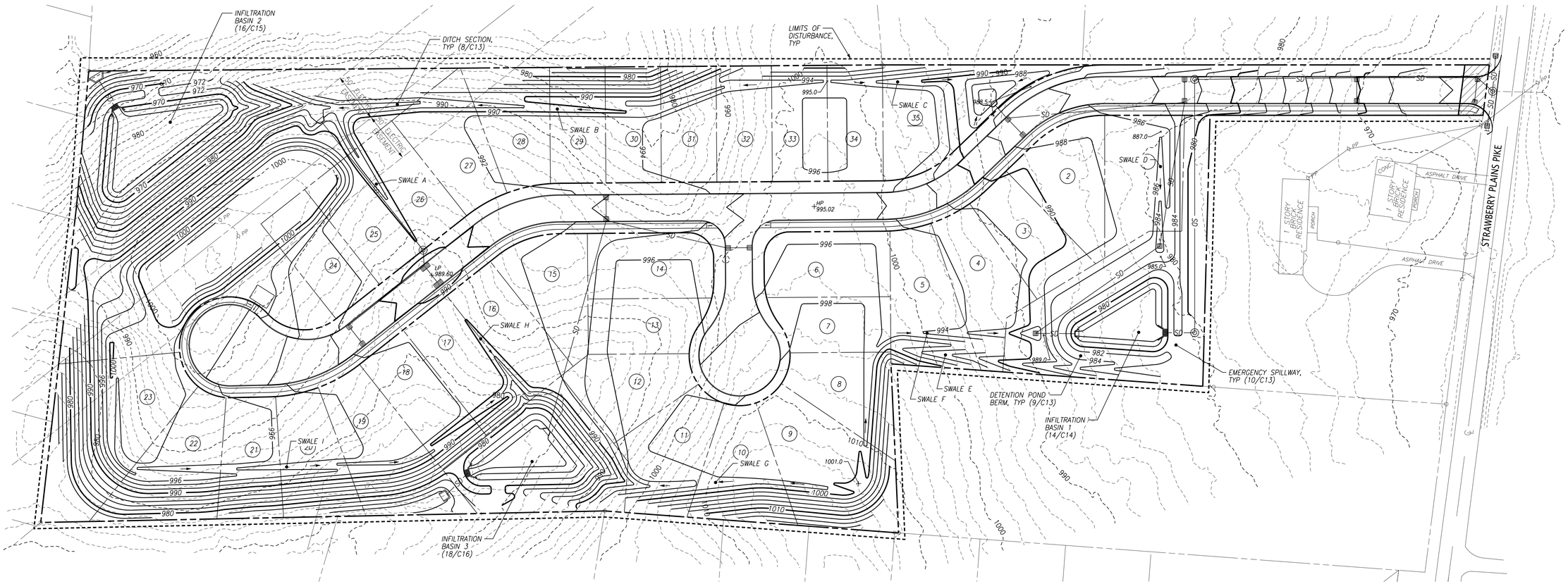
GRADING NOTES:

1. UNLESS NOTED OTHERWISE, THE PROPOSED GRADES SHOWN ON THESE DRAWINGS ARE FINISHED GRADE. EXISTING AND PROPOSED CONTOURS ARE SHOWN AT 2-FT. INTERVALS.
2. EXISTING GRADES ARE TAKEN FROM KGIS. FIELD VERIFY AS NECESSARY PRIOR TO CONSTRUCTION.
3. THE SITE SHALL BE CLEARED AND GRUBBED WITHIN THE LIMITS OF EXCAVATION. COMPLETELY DISPOSE OF ALL MATERIALS RESULTING FROM CLEARING AND GRUBBING OFF-SITE. BURNING SHALL NOT BE PERMITTED UNLESS PRIOR APPROVAL IS OBTAINED BY THE LOCAL FIRE DEPARTMENT. THE CONTRACTOR MUST OBTAIN A PERMIT AND MEET ALL OF THE REQUIREMENTS AS SPECIFIED BY THE FIRE DEPARTMENT.
4. ALL TREES STUMPS, BOULDERS, AND OTHER OBSTRUCTIONS SHALL BE REMOVED TO A DEPTH OF 2 FT BELOW THE SUBGRADE. ROCK SHALL BE SCARIFIED TO DEPTH OF 1 FT BELOW SUBGRADE.
5. STRIP TOPSOIL FULL DEPTH (6-IN. MIN.) AND TEMPORARILY STOCKPILE EXCAVATED MATERIALS. INSTALL SILT FENCE OR OTHER APPROPRIATE EROSION CONTROL STRUCTURES ON THE DOWN HILL SIDE OF THE STOCKPILE.
6. PROOF ROLL ALL AREAS TO RECEIVE FILL. PROOF ROLL WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK USING A CRISS-CROSS PATTERN (4 PASSES MIN.) AREAS FAILING THE PROOF ROLLING SHALL BE UNDERCUT AND BACKFILLED USING AN ENGINEERED FILL OR STABILIZED BY A METHOD APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
7. AREAS THAT EXHIBIT WEAK SOIL OR OTHERWISE UNSUITABLE CONDITIONS SHALL BE UNDERCUT TO A FIRM LEVEL OF SOIL FOLLOWED BY BACKFILLING THE UNDERCUT AREAS USING AN ENGINEERED FILL. TDOT NO. 57, OR TDOT NO. 67 STONE.
8. FILL MATERIAL SHALL BE SATISFACTORY MATERIAL FREE FROM ROOTS AND OTHER ORGANIC MATERIAL, FROZEN MATERIAL, AND TRASH. FILL MATERIAL SHALL ALSO BE FREE OF STONE OR OTHER MATERIAL LARGER THAN 6 IN. AND LARGER THAN 4 IN. IN THE TOP 6 IN. OF AN EMBANKMENT.
9. FILL SOILS SHALL HAVE A PI LESS THAN 30 & A MAXIMUM DRY DENSITY OF 90 PCF OR GREATER.
10. UNSATISFACTORY SOILS INCLUDE MATERIALS THAT ARE TOO WET OR TOO SOFT, EXPANSIVE SOILS AND SOILS CLASSIFIED PT, OH, AND OL. LEGALLY DISPOSE OF UNSATISFACTORY SOILS OFF-SITE UNLESS OTHERWISE APPROVED BY THE OWNER OR GEOTECHNICAL ENGINEER.
11. FILL MATERIAL SHALL BE PLACED IN LOOSE, HORIZONTAL LIFTS NOT EXCEEDING 8 IN. THICKNESS. COMPACT EACH LAYER TO AT LEAST 98% MAXIMUM DRY DENSITY. COMPACT THE UPPER 24 IN. OF FILL BENEATH PAVEMENTS AND THE UPPER 12 IN. BENEATH BUILDING SLABS TO 100% MAXIMUM DRY DENSITY. MAINTAIN THE MOISTURE CONTENT TO WITHIN -1 TO +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT.
12. A 6 IN. (MIN.) LAYER OF TOPSOIL SHALL BE PLACED OVER THE AREAS TO BE SEEDED AND TO THE FINISH GRADE ELEVATIONS AS SHOWN ON THE DRAWINGS.
13. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS OR POND ON-SITE. PROVIDE NECESSARY MEASURES TO KEEP THE SITE FREE-DRAINING.
14. NO SLOPE SHALL EXCEED 2:1 UNLESS PROPER SLOPE STABILIZATION MEASURES ARE IMPLEMENTED.
15. PROTECT AND MAINTAIN SUBGRADES UNTIL PLACEMENT OF THE FINAL SURFACE IS ACHIEVED.
16. CONTRACTOR IS RESPONSIBLE TO ASSURE THAT THE FINISHED GRADES CONFORM WITH THE RETENTION AREA DESIGN PARAMETERS. ONCE GRADING IS COMPLETE AND PRIOR TO FINAL SEEDING, SUBMIT AN AS-BUILT SURVEY FOR THE OWNER'S REVIEW.
17. VERIFY GRADES WHEREVER NECESSARY TO BRING THE PROPOSED LINES, ELEVATIONS, SLOPES, AND CROSS-SECTIONS OF THE GRADING WORK TO WITHIN THE FOLLOWING TOLERANCES ABOVE OR BELOW THAT AS SHOWN ON THE PLANS: SUBGRADE 0.1', UNPAVED AREAS 0.1', SIDEWALKS 0.10', PAVEMENTS 0.04', AND BUILDINGS 0.04'.
18. SLOPES GREATER THAN 4:1 SLOPE AT A HEIGHT GREATER THAN 6-FT SHALL BE TESTED BY THE PROJECT GEOTECHNICAL ENGINEER TO DETERMINE STABILITY.
19. DISTURBED AREAS SHALL BE STABILIZED IN AN EXPEDIENT MANNER TO MINIMIZE TIME OF EXPOSURE TO WEATHER.

INSTRUMENT NORTH

0 50 100

SCALE: 1" = 50'



LEGEND:

1020	PROPOSED CONTOUR
1022	EXISTING CONTOUR
887.12 / 886.62	TOP CURB/TOP PVMT.
→	PROPOSED FLOW ARROW
(1/C2)	DETAIL REF. (DETAIL NO./SHT. NO.)
TYP	TYPICAL

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GRADING PLAN

No.	Revision/Issue	Date
1	REVISED PER KNOX COUNTY COMMENTS	02/04/20
2	ISSUED FOR CONSTRUCTION	09/18/19

PROJ. MGR. AMG | DESIGNED BY AMC | DRAWN BY RPJ

Project	620.001
Date	09/18/19
Scale	1"=50'
Sheet	C3

File Name: J:\620\620.001\DWGS\620001c003.dgn
Plot Date: 2/4/2020

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EROSION CONTROL NOTES:

1. EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE TDEC'S EROSION AND SEDIMENT CONTROL HANDBOOK AND TDEC'S CONSTRUCTION ACTIVITY PERMIT REQUIREMENTS. THE DEVICES SHOWN ON THE DRAWINGS ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED.
2. INSTALL TEMPORARY SEDIMENT TRAP(S) WHERE SHOWN OR AS OTHERWISE APPROPRIATE. CONSTRUCT AND MAINTAIN IN ACCORDANCE WITH THE REQUIREMENTS OF TDEC'S EROSION & SEDIMENT CONTROL HANDBOOK. MUDDY WATER COLLECTED IN SEDIMENT TRAP(S) SHALL BE HELD UNTIL IT IS AT LEAST AS CLEAR AS UPSTREAM WATER BEFORE IT IS DISCHARGED TO SURFACE WATERS. DISCHARGE THROUGH A PIPE OR LINED CHANNEL SO THAT THE DISCHARGE DOES NOT CAUSE EROSION & SEDIMENTATION.
3. INSTALL TEMPORARY DIVERSION BERMS OR DIVERSION CHANNELS AS NECESSARY TO DIVERT STORM WATER FROM RUNNING ONTO THE DISTURBED AREAS AND TO DIVERT RUNOFF FROM DISTURBED AREAS TO THE TEMPORARY SEDIMENT TRAP(S).
4. APPLY TEMPORARY SEEDING WHENEVER GRADING OPERATIONS ARE TEMPORARILY HALTED FOR OVER 14 DAYS AND FINAL GRADING OF EXPOSED SURFACES IS TO BE COMPLETED WITHIN ONE YEAR. APPLY TEMPORARY SEEDING TO SOIL STOCKPILES.
5. APPLY PERMANENT SEEDING WHENEVER GRADING OPERATIONS ARE COMPLETED AND ALL CONSTRUCTION OPERATIONS WILL NOT IMPACT THE DISTURBED AREA. APPLY PERMANENT SEEDING TO ALL NON-CONSTRUCTION AREAS, WHICH SHOW SIGNS OF EXCESSIVE EROSION.

EROSION CONTROL NOTES (CONT.):

6. PERMANENT SEEDING SHALL BE DROUGHT TOLERANT, HYBRID KENTUCKY 31 (JAGUAR, LANCER, REBEL II, FALCON II, ETC.). SEED AT A RATE OF 6-8 LBS./1000 S.F. USE A SLOW RELEASE STARTER FERTILIZER WITH 1 LBS./1000 S.F. NITROGEN. IF GRADING IS PERFORMED DURING THE WINTER MONTHS, SEED MIXTURE SHALL BE SUPPLEMENTED WITH A WINTER RYE OR OTHER APPROPRIATE MIXTURE TO ASSURE STABILIZATION DURING THE WINTER SEASON.
7. MULCH WITH STRAW AT A RATE OF 100 LBS./1000 S.F. OVER THE SEEDED AREAS.
8. EXCAVATE STORMWATER SEDIMENT PONDS AS FIRST ITEM OF CONSTRUCTION.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF SITE CONSTRUCTION POLLUTION PREVENTION CONTROLS THROUGHOUT THE LIFE OF THE PROJECT.
10. ADEQUATE DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES, BEST MANAGEMENT PRACTICES, AND/OR OTHER STORMWATER MANAGEMENT FACILITIES SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DAMAGES TO ADJACENT PROPERTY AND/OR THE CONSTRUCTION SITE CAUSED BY THE CONTRACTOR'S FAILURE TO PROVIDE AND MAINTAIN ADEQUATE DRAINAGE, EROSION PREVENTION AND SEDIMENT CONTROL FOR THE CONSTRUCTION AREA SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

KNOX COUNTY STANDARD NOTES:

1. THIS SITE IS A PRIORITY CONSTRUCTION ACTIVITY.
2. ADEQUATE DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES, BEST MANAGEMENT PRACTICES, AND/OR OTHER STORMWATER MANAGEMENT FACILITIES SHALL BE PROVIDED & MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DAMAGES TO ADJACENT PROPERTY AND/OR THE CONSTRUCTION SITE CAUSED BY THE CONTRACTOR'S FAILURE TO PROVIDE AND MAINTAIN ADEQUATE DRAINAGE AND EROSION/SEDIMENT CONTROL FOR THE CONSTRUCTION AREA SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. QUALITY ASSURANCE OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE CONDUCTED BY QUALIFIED PERSONNEL PERFORMING SITE ASSESSMENT AT EACH OUTFALL INVOLVING DRAINAGE TOTALING 10 OR MORE ACRES, OR FIVE OR MORE ACRES IF DRAINING TO IMPAIRED OR EXCEPTIONAL WATERS. THIS ASSESSMENT WILL BE CONDUCTED AT EACH QUALIFYING OUTFALL WITHIN A MONTH OF CONSTRUCTION COMMENCEMENT. (SEE CGP SEC 3.1.2 FOR ASSESSMENT LANGUAGE)
4. FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND/OR STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS. ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED BY THE PERMITTED AND THE ADJOINING LAND OWNER.
5. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT TRAPS, SILT FENCES, SEDIMENTATION PONDS, OTHER SEDIMENT CONTROLS WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

KNOX COUNTY STANDARD NOTES (CONT.):

6. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTION SOURCE FOR STORMWATER DISCHARGES.
7. PRECONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED, OR DISTURBED MORE THAN 14 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
8. EXISTING VEGETATION SHOULD BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE.
9. TEMPORARY OR PERMANENT SOIL STABILIZATION MUST BE COMPLETED NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY OR TEMPORARILY CEASED. STEEP SLOPES (>35%) MUST BE PERMANENTLY OR TEMPORARILY STABILIZED WITHIN 7 DAYS.
10. SITE INSPECTIONS SHALL BE PERFORMED AT LEAST TWICE WEEKLY AT A MINIMUM OF 72 HOURS APART ON ALL UNSTABILIZED SITES.

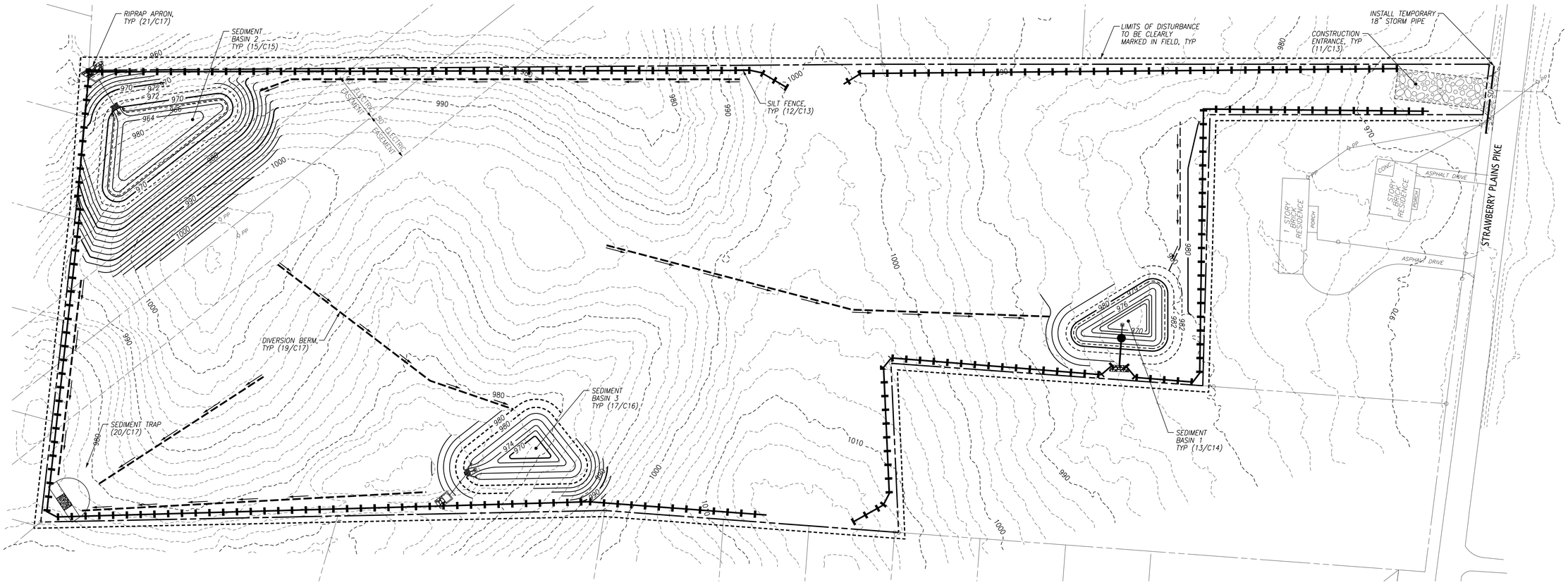
STAGE 1 SEQUENCING NOTES:

1. BEGIN STAGE 1 EROSION PROTECTION & SEDIMENT CONTROL BY INSTALLING A STABILIZED CONSTRUCTION ENTRANCE. THIS WILL BE THE FIRST CONSTRUCTION WORK ON THE PROJECT.
2. INSTALL PERIMETER SILT FENCE & CHECK DAMS AS SHOWN ON THIS PLAN.
3. STOP AND CONTACT THE ENGINEER FOR OBSERVATION. KNOX COUNTY WILL INSPECT THE SITE & ISSUE A NOTICE OF COVERAGE (NOC) IF THE INITIAL BMP'S ARE PROPERLY INSTALLED.
4. CONSTRUCT THE STORM DRAINAGE PIPING & STRUCTURES NEEDED TO ROUTE STORMWATER FROM THE SEDIMENT PONDS. ONCE COMPLETE, CONSTRUCT THE SEDIMENT PONDS AS SHOWN ON THESE PLANS.
5. CONSTRUCT DIVERSION DITCHES AS NEEDED TO ROUTE STORM WATER TO THE SEDIMENT PONDS.
6. THIS WILL END STAGE 1.

INSTRUMENT NORTH

0 50 100

SCALE: 1" = 50'



LEGEND:

	CONSTRUCTION ENTRANCE
	PROPERTY LINE
972	EXISTING CONTOUR LINE
	PROPOSED SILT FENCE
	PROPOSED DIVERSION BERM
(1/C2)	DETAIL REF. (DETAIL NO./SHT. NO.)
TYP.	TYPICAL

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EPSC - STAGE 1

PROJ. MGR.	AMG
DESIGNED BY	AMG
DRAWN BY	RPJ
ISSUED FOR CONSTRUCTION	09/18/19
No.	Revision/Issue
	Date

Project	620.001
Date	09/18/19
Scale	1"=50'
Sheet	C4

File Name: J:\620\620.001\LDWDS\620001c004.dgn
Plot Date: 9/20/2019

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STAGE 2 SEQUENCING NOTES:

1. STAGE 2 WILL BEGIN FOLLOWING COMPLETION OF STAGE 1, AND PRIOR TO MASS GRADING, UTILITY INSTALLATION, ETC.
2. MAINTAIN STAGE 1 CONSTRUCTION ENTRANCE/EXIT & OTHER EROSION & SEDIMENT CONTROL DEVICES.
3. INSTALL, ADJUST, AND MAINTAIN STAGE 2 EROSION & SEDIMENT CONTROLS AS SHOWN ON THIS PLAN INCLUDING INSTALLATION OF OTHER BMP'S NEEDED TO MEET TDEC'S PERFORMANCE REQUIREMENTS. THESE BMP'S MAY INCLUDE SEDIMENT TRAPS, DIVERSION BERMS, SLOPE DRAINS, ETC.
4. NOTE THAT THE TYPICAL LIFESPAN OF SILT FENCE IS 9 MO. REPLACE OLD SILT FENCE. INCLUDE THE COST OF THIS IN THE MAINTENANCE OF EROSION & SEDIMENT CONTROLS PAY ITEM.
5. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF DISTURBANCE.
6. BEGIN MASS GRADING, STORMWATER SYSTEM, & UTILITY CONSTRUCTION;
7. INSTALL INLET PROTECTION AS DESCRIBED ON THIS PLAN.
8. ONCE SUBGRADES ARE ACHIEVED APPLY TOPSOIL, SEEDING, MULCH, OR OTHER PROTECTION TO THE DISTURBED AREAS;
9. INSTALL SLOPE PROTECTION AS INDICATED ON THIS PLAN.
10. DO NOT DISTURB MORE THAN 25 ACRES AT ANY TIME WITHOUT STABILIZING PREVIOUSLY DISTURBED AREAS.

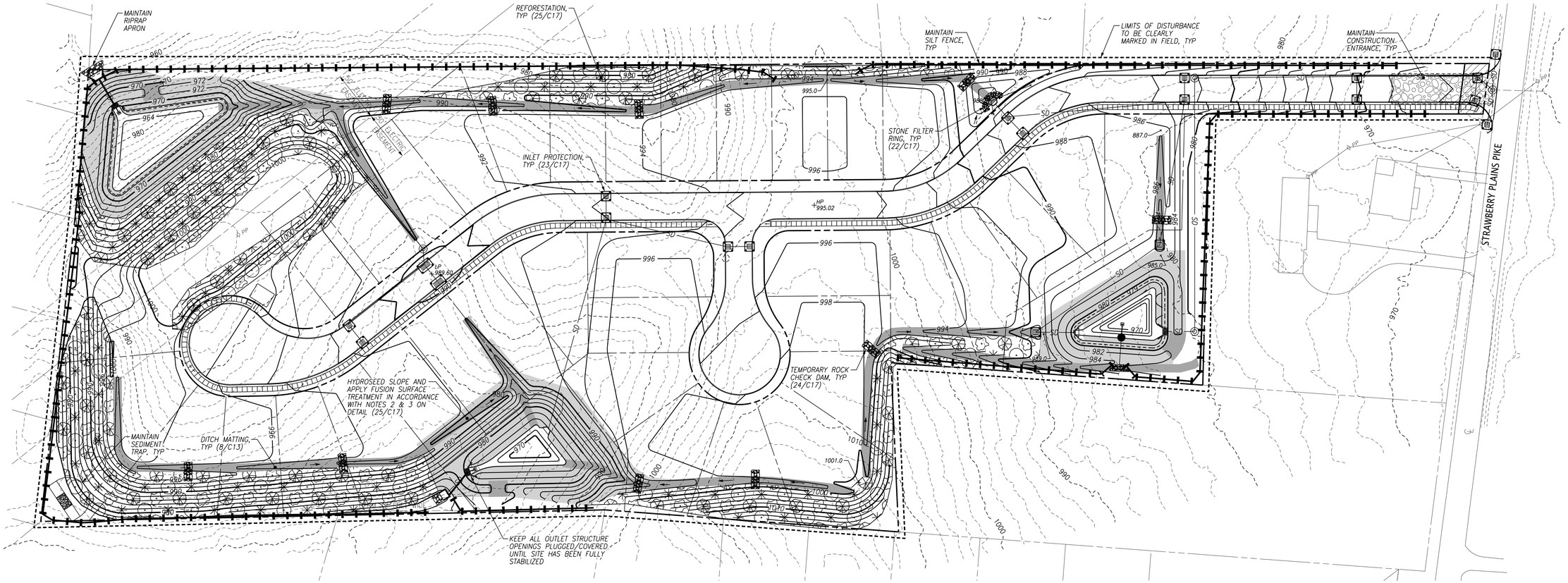
INSTRUMENT NORTH

0 50 100

SCALE: 1" = 50'

EROSION CONTROL NOTES:

1. REFERENCE SHEET C4 FOR NOTES.



LEGEND:

- PROPOSED DITCH PROTECTION
- PROPOSED SLOPE PROTECTION
- PROPOSED REFORESTATION
- PROPOSED PROPERTY LINE
- PROPOSED SILT FENCE
- LIMITS OF DISTURBANCE
- PROPOSED DIVERSION BERM
- TEMPORARY INLET PROTECTION
- TEMPORARY ROCK CHECK DAM

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ALARON MORAN REGISTERED ENGINEER AGRICULTURE COMMERCE No. 010846 STATE OF TENNESSEE

STRAWBERRY PLAINS SUBDIVISION
STRAWBERRY PLAINS PIKE
KNOXVILLE, TENNESSEE 37924

KNOXVILLE HABITAT FOR HUMANITY
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EPSC - STAGE 2

No.	Revision/Issue	Date
1	REVISED PER KNOX COUNTY COMMENTS	02/04/20
0	ISSUED FOR CONSTRUCTION	09/18/19

PROJ. MGR. AMG | DESIGNED BY AMG | DRAWN BY RPJ

Project 620.001
Date 09/18/19
Scale 1"=50'
Sheet C5

File Name: J:\620\620.001\DWGS\620001c005.dgn
Plot Date: 2/4/2020

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EROSION CONTROL NOTES:

1. REFERENCE SHEET C4 FOR NOTES.

STAGE 3 SEQUENCING NOTES:

1. STAGE 3 BEGINS AFTER THE PAVEMENT (BINDER COURSE, MIN.) IS INSTALLED.
2. THE GENERAL CONTRACTOR & OTHER SUB-CONTRACTORS SHALL SUBMIT A NOI TO KNOX COUNTY PRIOR TO BEGINNING WORK;
3. THROUGHOUT STAGE 3, ADJUST, MAINTAIN, & REPLACE SILT FENCE, ROCK CHECK DAMS, & INLET PROTECTION AS NECESSARY TO MEET TDEC AND KNOX COUNTY'S PERFORMANCE STANDARDS;
4. INSTALL ADDITIONAL EROSION PROTECTION & SEDIMENT CONTROL DEVICES TO PREVENT EROSION AT THE PAVEMENT AND SOIL INTERFACE AND TO PREVENT SEDIMENT RUNOFF ONTO THE NEW PAVEMENT;
5. FOR THE WET EXTENDED DETENTION PONDS, CLEAN OUT ANY ACCUMULATED SEDIMENT FROM THE SEDIMENT PONDS. PERFORM ANY GRADING, RE-SPREADING OF TOPSOIL AND SEEDING NECESSARY TO CONVERT THE TEMPORARY SEDIMENT PONDS INTO PERMANENT WET EXTENDED DETENTION PONDS AS SHOWN ON THE GRADING PLAN.

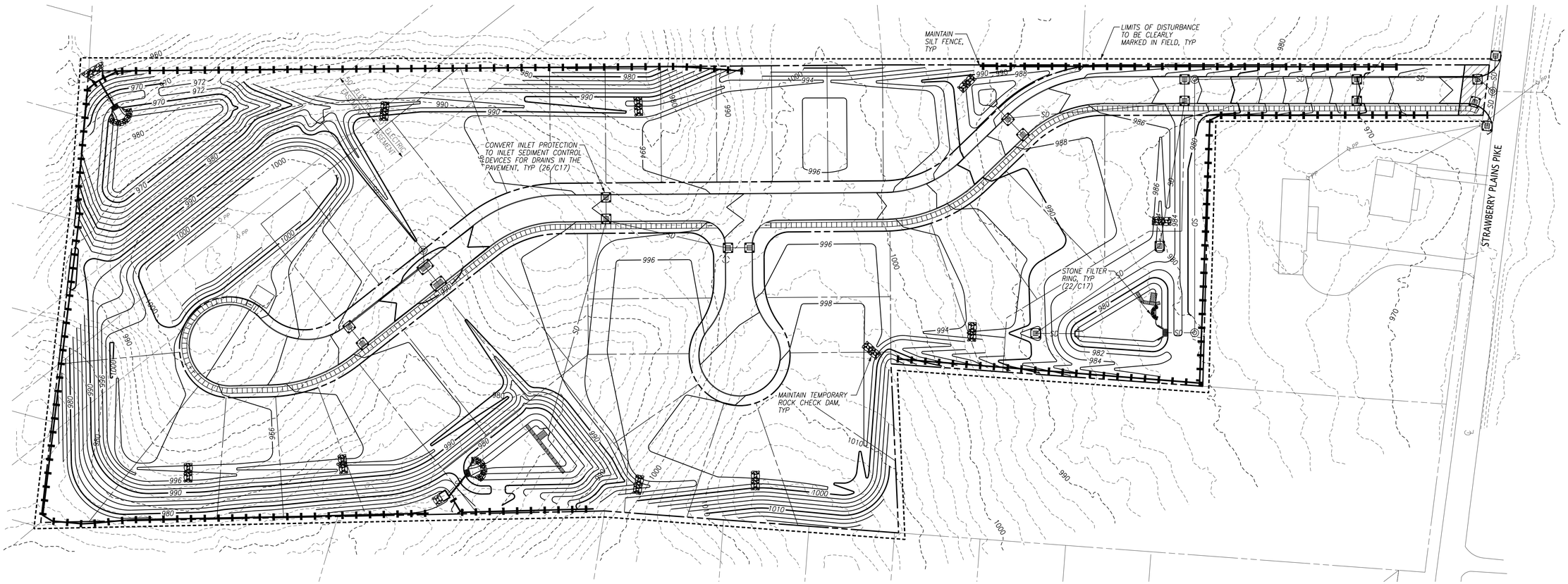
STAGE 3 SEQUENCING NOTES (CONT.):

6. BEGIN HOUSE CONSTRUCTION & INSTALL REMAINING SITE UTILITIES;
7. AS SOON AS PRACTICAL, RE-SPREAD TOPSOIL AND APPLY SEEDING & MATTING OR MULCH TO DISTURBED AREAS;
8. REMOVE AND DISPOSE OF REMAINING EROSION & SEDIMENT CONTROL DEVICES ONCE THE SITE IS FULLY STABILIZED;
9. THE CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION (NOT) AFTER THE COMPLETE INSTALLATION AND SUCCESSFUL ESTABLISHMENT OF THE FINAL STABILIZATION ACTIVITIES HAVE OCCURRED AT THE SITE.
10. DO NOT DISTURB MORE THAN 25 ACRES AT ANY TIME WITHOUT STABILIZING PREVIOUSLY DISTURBED AREAS.

INSTRUMENT NORTH

0 50 100

SCALE: 1" = 50'



LEGEND:

	PROPOSED PROPERTY LINE
1020	PROPOSED CONTOUR
1022	EXISTING CONTOUR
	PROPOSED SILT FENCE
	LIMITS OF DISTURBANCE
	TEMPORARY INLET PROTECTION
	TEMPORARY ROCK CHECK DAM
	TEMPORARY STONE FILTER RING
SD	PROPOSED STORM LINE

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ALAN M. MORAN
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 010841
STATE OF TENNESSEE

STRAWBERRY PLAINS SUBDIVISION
STRAWBERRY PLAINS PIKE
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EPSC - STAGE 3

No.	Revision/Issue	Date
1	REVISED PER KNOX COUNTY COMMENTS	02/04/20
0	ISSUED FOR CONSTRUCTION	09/18/19

PROJ. MGR. AMG | DESIGNED BY AMG | DRAWN BY RPJ

Project 620.001
Date 09/18/19
Scale 1"=50'
Sheet C6

File Name: J:\620\620.001\DWGS\620001c006.dgn
Plot Date: 2/4/2020

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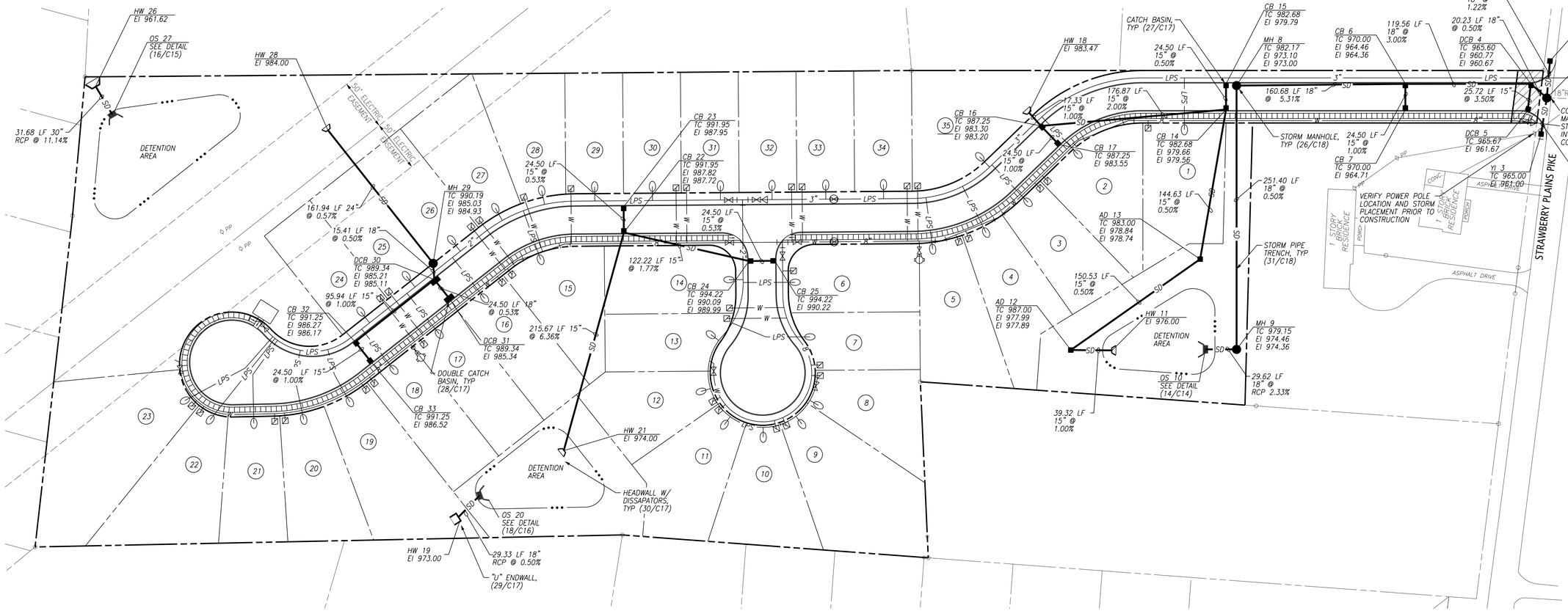
STORM PIPE NOTES:

1. INSTALL STORM SEWER PIPING AND APPURTENANCES TO MEET THE MATERIALS, EQUIPMENT, AND CONSTRUCTION REQUIREMENTS OF KNOX COUNTY ENGINEERING & PUBLIC WORKS' STANDARD SPECIFICATIONS.
2. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
3. UNLESS NOTED OTHERWISE, STORM SEWER PIPE SHALL BE EITHER CLASS III REINFORCED CONCRETE PIPE OR SMOOTH INTERIOR HIGH DENSITY POLYETHYLENE PIPE IN ACCORDANCE WITH AASHTO M294 OR EQUAL.
4. HDPE PIPE SHALL BE INSTALLED WITH WATERTIGHT (WT) JOINTS MEETING ALL AASHTO AND ASTM REQUIREMENTS. JOINTS SHALL BE MADE OF POLYISOPRENE AND INSTALLED AND COVERED WITH A REMOVABLE, PROTECTIVE WRAP BY THE MANUFACTURER.
5. PIPE DEFLECTION AND ALIGNMENT SHALL BE CHECKED AFTER BACKFILLING & COMPACTION ARE COMPLETE & PRIOR TO PLACING THE BASE. TEST DEFLECTION WITH A MANDREL OR OTHER APPROVED METHOD.
6. PIPE WITH DEFLECTION 5% OR GREATER OR WITH UNDUE MISALIGNMENT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
7. PIPE/CULVERTS ARE MEASURED IN TERMS OF HORIZONTAL LENGTH COMPLETE IN PLACE REGARDLESS OF TYPE, DEPTH, CLASS, SHAPE AND SIZE, AS MEASURED ALONG THE CENTERLINE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE (NO DEDUCTIONS FOR STRUCTURES). ACTUAL QUANTITY OF PIPE MAY VARY. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE NECESSARY QUANTITY OF PIPE TO CONSTRUCT THE COMPLETE SYSTEM AS SHOWN. INSTALLATION INCLUDES EXCAVATION, SHORING, FURNISHING AND INSTALLATION OF PIPES, JOINT MATERIALS, COUPLINGS, AND BACKFILL.
8. FOR RCP PIPE WITH SLOPES GREATER THAN 15% USE JOINT TIES OR JOINT FASTENERS AS SPECIFIED BY THE MANUFACTURER. FOR HDPE PIPE WITH SLOPES GREATER THAN 15% USE CONCRETE PIPE ANCHORS AS SPECIFIED BY THE MANUFACTURER.
9. PRIOR TO INSTALLING NEW PIPING, CONTRACTOR SHALL LOCATE EXISTING UTILITIES/STRUCTURES WHERE NEW PIPE CROSS BY POT-HOLING. AFTER EXPOSING EXISTING UTILITY/STRUCTURES, CONTRACTOR SHALL OBTAIN HORIZONTAL AND VERTICAL LOCATIONS BY FIELD SURVEY, AND RESOLVE ANY CONFLICTS BETWEEN UNDERGROUND UTILITIES/STRUCTURES AND NEW PIPING UNDER THE DIRECTION OF THE OWNER PRIOR TO INSTALLING NEW PIPING.
10. HOUSE ROOF DRAINS TO BE FREE DRAINING ABOVE GROUND. DO NOT CONNECT ROOF DRAINS TO UNDERGROUND PIPE SYSTEM.

INSTRUMENT NORTH

0 50 100

SCALE: 1" = 50'



LEGEND:

———	PROPERTY LINE
—SD—	PROPOSED STORM PIPE
(1/C2)	DETAIL REF. (DETAIL NO./SHT. NO.)
TYP.	TYPICAL
■	PROPOSED CATCH BASIN/AREA DRAIN
▬	PROPOSED DOUBLE CATCH BASIN
●	PROPOSED STORM MANHOLE
⏢	PROPOSED HEADWALL

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ANDREW M. GIOBBIA — REGISTERED ENGINEER — AGRICULTURE — CIVIL — No. 120810 — STATE OF TENNESSEE — 3/4/20

STRAWBERRY PLAINS SUBDIVISION
STRAWBERRY PLAINS PIKE
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STORM DRAINAGE PLAN

No.	Revision/Issue	Date
1	ISSUED FOR CONSTRUCTION	09/18/19
2	REVISED PER KNOX COUNTY COMMENTS	02/04/20

DRAWN BY: RPJ
DESIGNED BY: AMG
PROJ. MGR.: AMG

Project: 620.001
Date: 09/18/19
Scale: 1"=50'
Sheet: C7

File Name: s:\620\620.001\LDWGS\620001-c007.dgn
Plot Date: 2/4/2020

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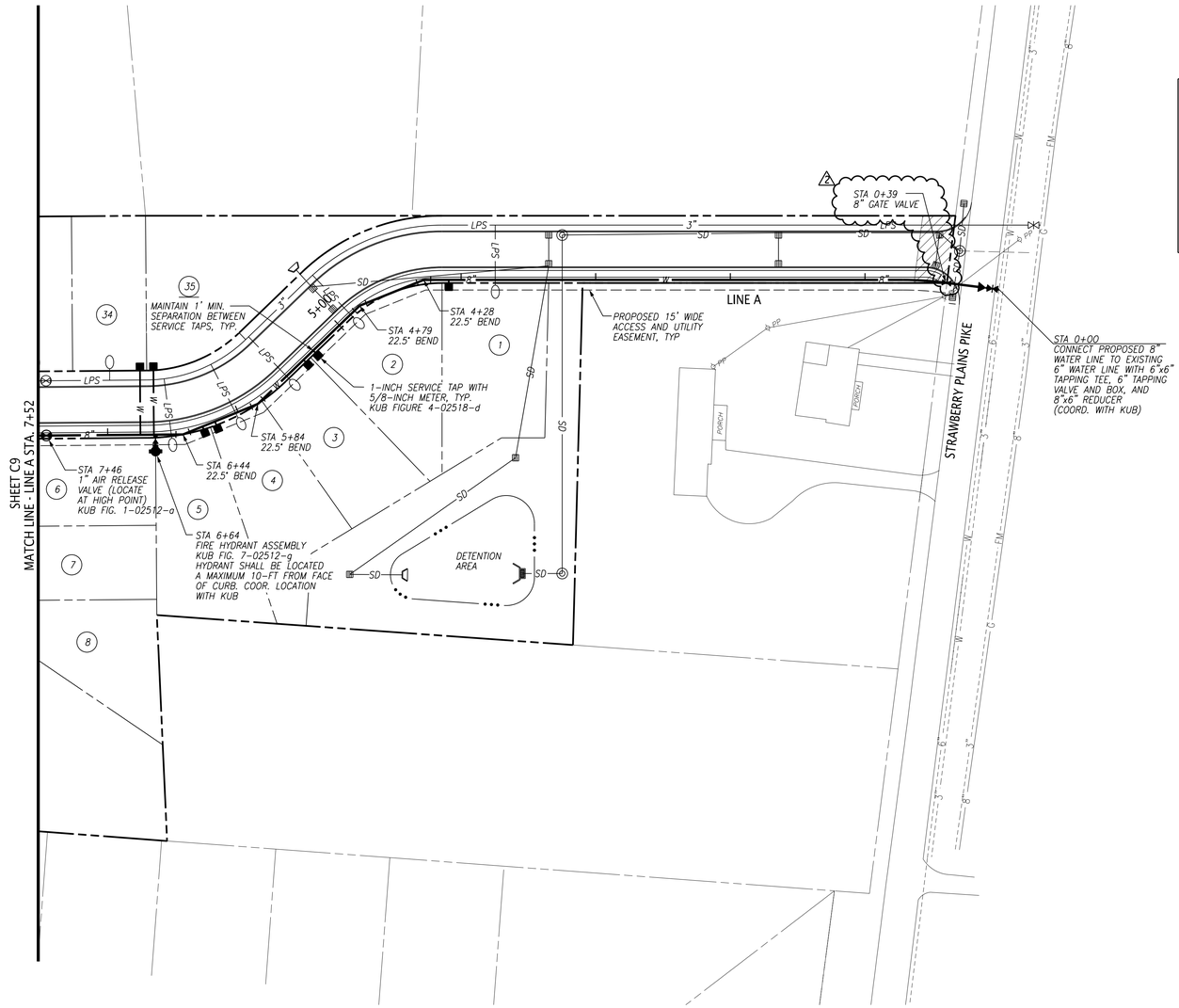
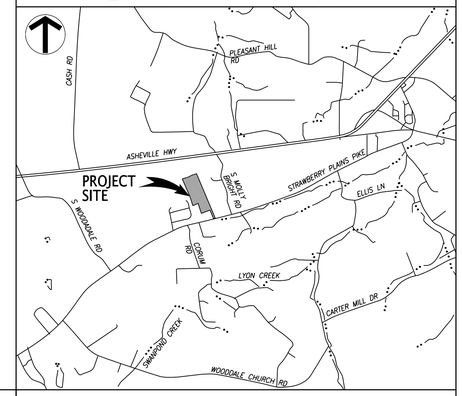
LEGEND

- PROPOSED WATER MAIN & FITTINGS
- EXISTING WATER MAIN & FITTINGS
- VALVE
- AIR RELEASE VALVE
- BLOW-OFF
- METER
- PROPOSED FIRE HYDRANT
- REDUCER
- PROPOSED TAP PLUG

PROPERTY UNITS	
MATERIALS	QTY
8" DIP	1,618 LF
6"x6" TAP TEE	1 EA
8" VALVE	4 EA
6" VALVE	3 EA
FH ASSEMBLY	2 EA
ARV ASSEMBLY	1 EA
2" BLOW-OFF VALVE	2 EA
5/8" METER ASSY.	35 EA



LOCATION MAP (N.T.S.)



DEVELOPER: KNOXVILLE HABITAT FOR HUMANITY

ADDRESS: 0 STRAWBERRY PLAINS PIKE

PHONE: 865.523.3539

PROPERTY INFO:

MAP 73

PARCEL 172

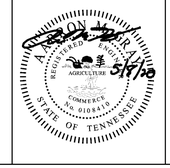
10.93 ACRES

KUB WATER CONSTRUCTION NOTES:

1. Road right-of-ways or utility easements shall be to finished grade and sloped to meet required specifications or as approved by KUB prior to staking and installing water mains.
2. The Developer's Authorized Representative shall stake the proposed water main layouts, property corners, and easement locations etc...prior to construction or approval of plans or both to allow ample time for KUB's inspectors to inspect the layouts prior to construction. KUB will determine if staking may be required prior to approval of plans.
3. Construction materials must meet KUB specifications. KUB representatives must approve material submittals prior to construction.
4. Water main installation must be inspected by KUB. Contact KUB Field Services at least three (3) days prior to construction at 558-2786. Trenches shall be left open and not backfilled until inspected by KUB.
5. Contractor will sterilize water mains when installation and testing are complete. Contractor shall provide taps as required for sterilizing mains. Water quality sampling and testing will be performed by KUB.
6. Contractor must have a valid State of Tennessee municipal utility license for construction of water mains on site at all times.
7. Air release valves shall be installed on high points on the mains in accordance with the plans and/or as requested by KUB's inspectors.
8. The Contractor must have water service lines installed across streets before any surface cover is finalized to include paving, concrete driveways, etc.

GENERAL WATER NOTES:

1. All water lines and appurtenances shall be installed in accordance with the Knoxville Utilities Board's Standard Water System Specifications and Details.
2. Requirements for proper trench and backfill operations must meet or exceed the City of Knoxville, Knox County, and TDOT Standards.
3. Location of all existing utilities is approximate. Contractor shall field locate all existing utilities prior to excavation.
4. Water services shall be buried at a minimum depth of 24 inches to prevent freezing.
5. Minimum 36 inches depth of cover for water mains.
6. Utilities shall be installed after grading has been completed and approved before any surface cover is finalized to include paving, concrete driveways, etc.
7. After completing each section of water, all debris and construction materials shall be removed from the work site. The disturbed ground surface shall be smoothly graded.
8. All water valves shall conform to KUB standards and specifications.
9. KUB personnel will test water service to the existing public ROW or easement from the existing system for the proposed water system.
10. Horizontal separation between water and sewer mains is a minimum of 10 feet.
11. Water mains are not installed in the same trench with other utilities unless approved through KUB Engineering in writing.
12. Any field changes to approved plans must be approved by the appropriate KUB representative before construction.
13. A copy of the latest approved set of utility plans designated by the RED KUB/TDEC RED stamp must be present during all times of construction of the appropriate utilities.



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TELEPHONE: 865.523.3539
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DESIGNED RPJ
DRAWN RPJ
CHECKED AMG

NO.	DATE	REVISION	APPR.
2	5/8/20	REVISED PER KUB COMMENTS	
1	4/24/20	REVISED PER KUB COMMENTS	
0	9/18/19	ISSUED FOR CONSTRUCTION	

SCALE 1" = 50'

DATE 9/18/19

KUB

KNOXVILLE UTILITIES BOARD STRAWBERRY PLAINS SUBDIVISION PUBLIC WATER PLAN

LINE A: STA. 0+00 TO 7+52

C8

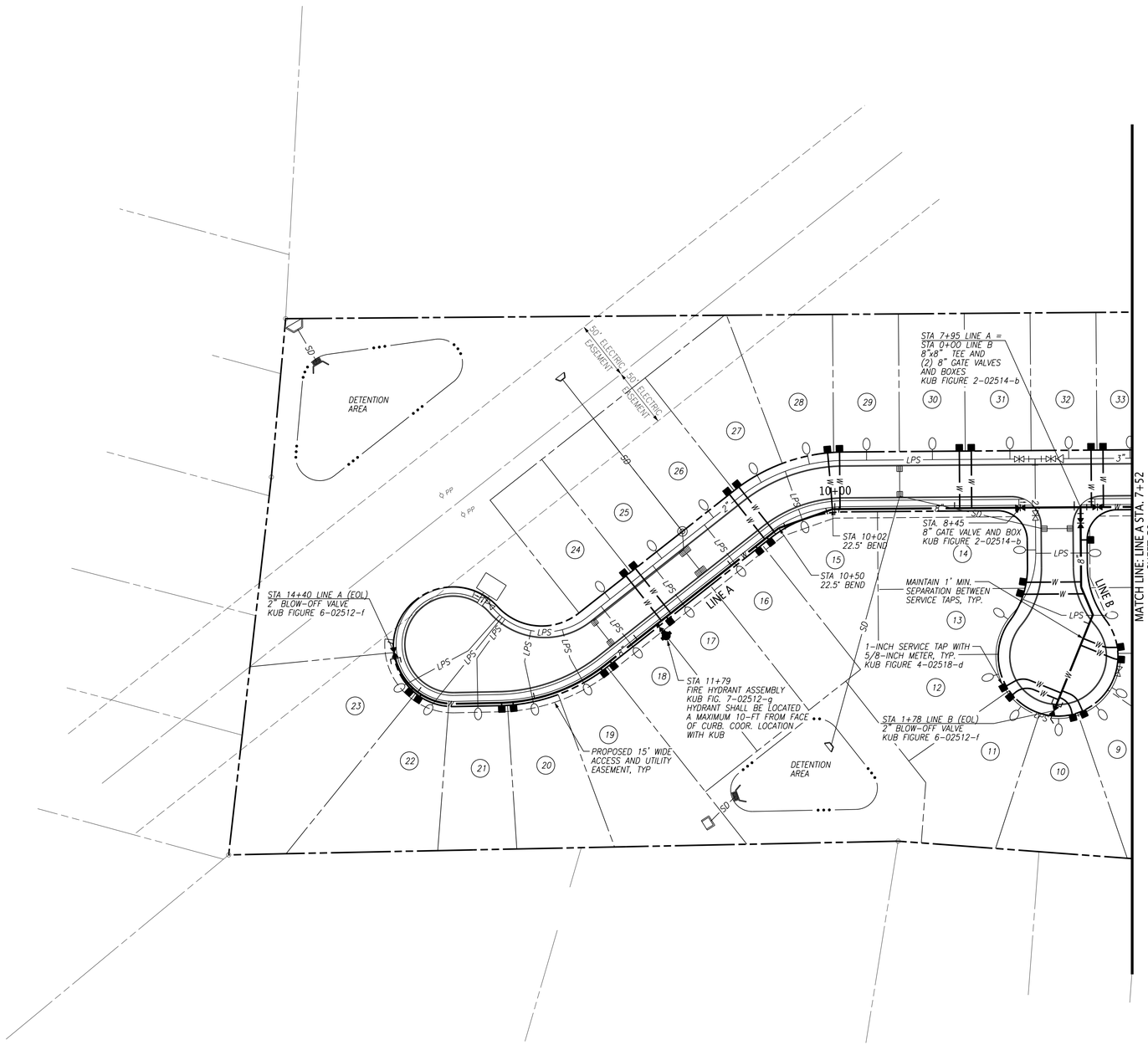
SHEET 1 OF 2 SHEETS

FMA PROJECT NO. 620.001

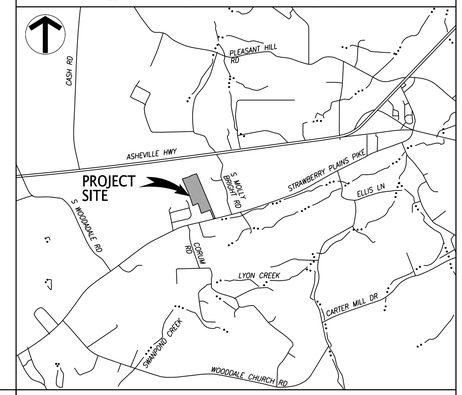
Model: Default
File Name: J:\620\620.001\CIVIL\S\620001c008.dgn
Plot Date: 5/5/2020

LEGEND

- PROPOSED WATER MAIN & FITTINGS
- EXISTING WATER MAIN & FITTINGS
- VALVE
- AIR RELEASE VALVE
- BLOW-OFF
- METER
- PROPOSED FIRE HYDRANT
- REDUCER
- PROPOSED TAP PLUG



LOCATION MAP (N.T.S.)



DEVELOPER: KNOXVILLE HABITAT FOR HUMANITY

ADDRESS: 0 STRAWBERRY PLAINS PIKE

PHONE: 865.523.3539

PROPERTY INFO:

MAP 73

PARCEL 172

10.93 ACRES

KUB WATER CONSTRUCTION NOTES:

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10. Horizontal separation between water and sewer mains is a minimum of 10 feet.
11. Water mains are not installed in the same trench with other utilities unless approved through KUB Engineering in writing.
12. Any field changes to approved plans must be approved by the appropriate KUB representative before construction.
13. A copy of the latest approved set of utility plans designated by the RED KUB/TDEC RED stamp must be present during all times of construction of the appropriate utilities.

ANDREW C. MACINDOE — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — NO. 010849 — STATE OF TENNESSEE

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DESIGNED RPJ
DRAWN RPJ
CHECKED AMG

NO.	DATE	REVISION	APPR.
1	4/24/20	REVISED PER KUB COMMENTS	
0	9/18/19	ISSUED FOR CONSTRUCTION	

SCALE 1" = 50'

DATE 9/18/19

KUB

KNOXVILLE UTILITIES BOARD
STRAWBERRY PLAINS SUBDIVISION
PUBLIC WATER PLAN
LINE A: STA. 7+52 TO 14+40 (EOL)
LINE B: STA. 0+00 TO 1+78 (EOL)

C9

SHEET 2 OF 2 SHEETS

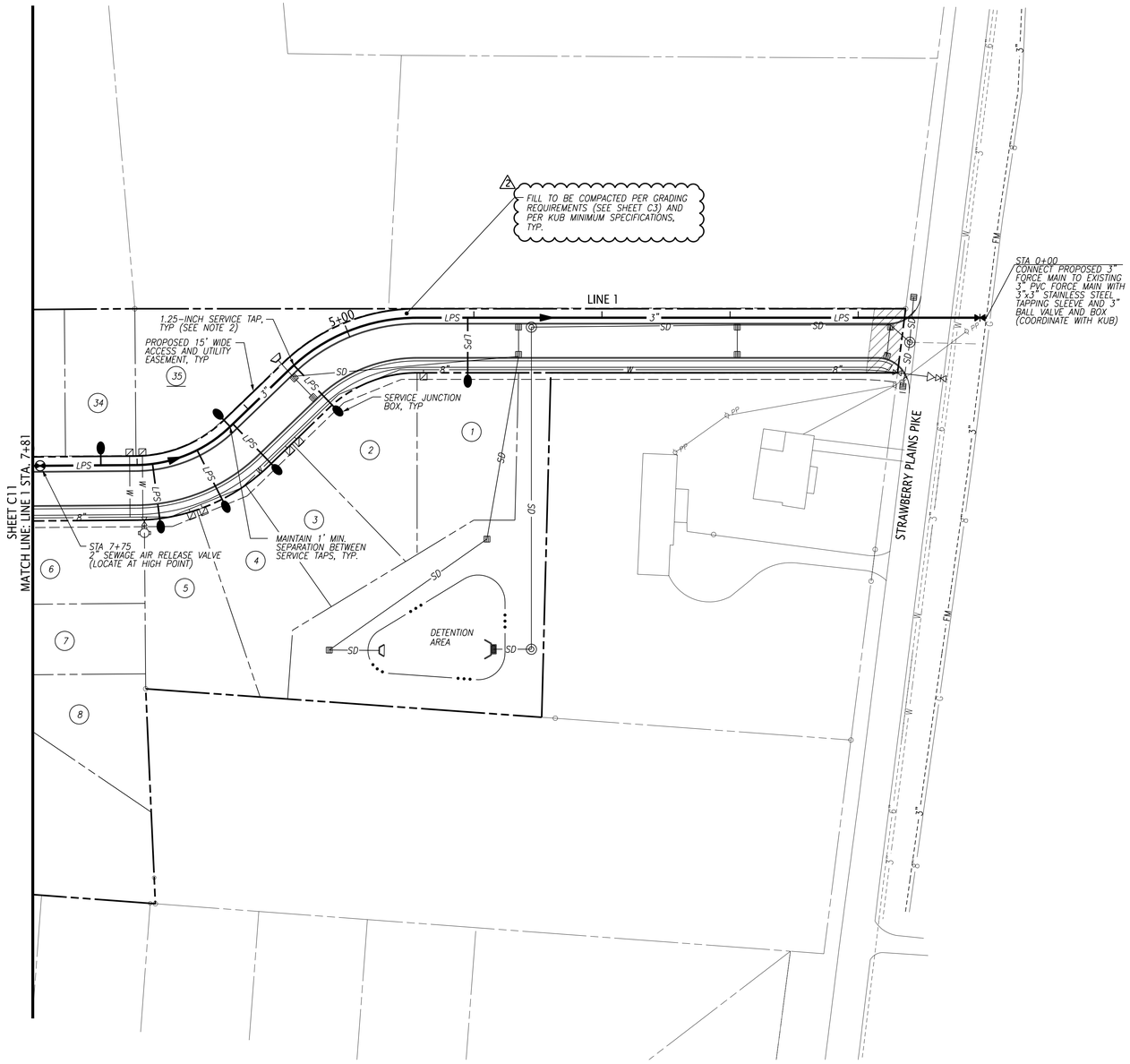
FMA PROJECT NO. 620.001

Model: Default
File Name: J:\620\620.001\CIVIL\620001c009.dgn
Plot Date: 4/24/2020

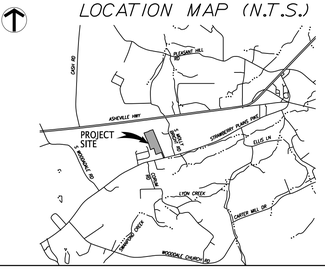
LEGEND

- ---FM--- EXISTING SANITARY LINE (FORCE MAIN)
- —LPS— PROPOSED LOW PRESSURE SEWER LINE
- PROPOSED LPS SERVICE JUNCTION BOX
- PROPOSED BALL VALVE
- PROPOSED LPS EOL FLUSHING STATION
- PROPOSED SEWAGE AIR RELEASE VALVE
- LPS FLOW DIRECTION ARROW
- PROPOSED REDUCER

PROPERTY UNITS	
MATERIALS	QTY
3" SDR 11 HDPE	862 LF
2" SDR 11 HDPE	831 LF
3" BALL VALVE	1 EA
2" BALL VALVE	3 EA
FLUSH STATION	2 EA
2" SARV	2 EA
SERVICE BOX	35 EA



LOCATION MAP (N.T.S.)



DEVELOPER: KNOXVILLE HABITAT FOR HUMANITY

ADDRESS: 0 STRAWBERRY PLAINS PIKE

PHONE: 865.523.3539

PROPERTY INFO:

MAP 73

PARCEL 172

10.93 ACRES

GENERAL SANITARY SEWER REQUIREMENTS:

1. ALL SANITARY SEWER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE THE KUB STANDARD SEWER SYSTEM SPECIFICATIONS AND DETAILS.
2. LOCATION OF ALL EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION.
3. ALL PIPE SHALL BE INSTALLED IN THE PRESENCE OF THE OWNER.
4. UTILITIES SHALL BE INSTALLED AFTER GRADING HAS BEEN COMPLETED AND APPROVED BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING, CONCRETE DRIVEWAYS, ETC.
5. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE AND OSHA REGULATIONS.
6. REQUIREMENTS FOR PROPER TRENCH AND BACKFILL OPERATIONS MUST MEET OR EXCEED CITY OF KNOXVILLE, KNOX COUNTY AND TDOT STANDARDS.
7. AFTER COMPLETING EACH SECTION OF SEWER, ALL DEBRIS AND CONSTRUCTION MATERIALS SHALL BE REMOVED FROM THE WORK SITE. THE DISTURBED GROUND SURFACE SHALL BE SMOOTHLY GRADED.
8. THE CONTRACTOR SHALL OBTAIN PLASIC WARNING TAPE FOR WASTEWATER MAINS AND BURY IT ONE FOOT ABOVE THE ENTIRE LENGTH OF EACH LATERAL. A #3 INCH DIAMETER STEEL REBAR SHALL BE DRIVEN INTO THE GROUND AT THE END OF EACH LATERAL AND PAINTED GREEN.
9. SANITARY SEWER FLOW CONTROL (SECTION 02542 OF KUB STANDARDS AND SPECIFICATIONS) ARE FULLY UNDERSTOOD AND IMPLEMENTED IN THE WASTEWATER PROJECT.
10. ANY FIELD CHANGES TO APPROVED PLANS MUST BE APPROVED BY THE APPROPRIATE KUB REPRESENTATIVE.
11. A COPY OF THE LATEST APPROVED SET OF UTILITY PLANS DESIGNATED BY THE KUB RED STAMP MUST BE PRESENT DURING ALL TIMES OF CONSTRUCTION OF THE APPROPRIATE UTILITIES.

KUB LOW PRESSURE SEWER REQUIREMENTS:

1. CONTRACTOR MUST BE CERTIFIED TO WELD/FUSE HDPE PIPE FOR LOW PRESSURE SEWER PROJECTS.
2. LOW PRESSURE SEWER LATERALS SHALL BE 1-1/4 INCH HDPE SDR-11 FROM MAIN TO TRANSITION FITTING. CHANGE TO 1-1/4 INCH SCH-40 PVC FROM TRANSITION FITTING TO GRINDER PUMP (SEE KUB SPECS. FIGURE 1-2536-A).
3. INSTALL AN E-ONE CHECK VALVE ON THE 1-1/4 INCH PVC LATERAL WITHIN 24 INCHES FOR THE HDPE TRANSITION FITTING.
4. BACKFILL MATERIAL WITHIN ONE FOOT OF PIPE SHALL NOT EXCEED ¾ INCH (TDOT #57 STONE).
5. ALL PIPE SHALL BE INSTALLED WITH A 12-GAUGE SOLID COPPER WIRE FOR LOCATING PURPOSES (SEE KUB SPECS. 2536, PG. 3).
6. POLYETHYLENE PIPE (HDPE) AND FITTINGS SHALL BE MADE OF HIGH DENSITY, EXTRA HIGH MOLECULAR WEIGHT POLYETHYLENE WITH A STANDARD THERMOPLASTIC MATERIAL DESIGNATION OF PE3408.
7. POLYETHYLENE PIPE (HDPE) SHALL HAVE A CO-EXTRUDED GREEN COVER OR EXTRUDED GREEN STRIPES DESIGNATING USE FOR SANITARY SEWER. COLOR PRINT LINES ARE NOT AN ACCEPTABLE METHOD FOR DESIGNATION OF LOW PRESSURE SEWER MAINS. PIPE WITH EXTRUDED GREEN STRIPES SHALL HAVE A MINIMUM OF THREE EQUALLY SPACED STRIPES.
8. PROPER INSTALLATION OF LPS FOUND IN KUB'S STANDARDS AND SPECIFICATIONS SECTION 02536 SHALL BE FULLY UNDERSTOOD AND IMPLEMENTED.
9. THRUST/RESTRAINT BLOCKS SHALL BE INSTALLED IN LOCATIONS SHOWN ON THE PLANS IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS OR AS REQUIRED BY OWNER. THRUST/RESTRAINT BLOCKS SHALL BE CONSIDERED AN INTEGRAL PART OF THE LOW PRESSURE SEWER MAIN INSTALLATION.

KUB WASTEWATER CONSTRUCTION NOTES:

1. ROAD RIGHT-OF-WAYS SHALL BE GRADED AND SLOPED TO REQUIRED SPECIFICATIONS OR AS APPROVED BY KUB PRIOR TO STAKING AND INSTALLING WASTEWATER MAINS.
2. THE DEVELOPER'S AUTHORIZED REPRESENTATIVE SHALL STAKE THE PROPOSED WASTEWATER MAIN LAYOUTS, PROPERTY CORNERS AND EASEMENT PRIOR TO CONSTRUCTION TO ALLOW AMPLE TIME FOR KUB'S INSPECTORS TO INSPECT THE LAYOUTS PRIOR TO CONSTRUCTION.
3. CONSTRUCTION MATERIALS MUST MEET KUB SPECIFICATIONS. KUB ENGINEERING DEPARTMENT MUST APPROVE MATERIAL SUBMITTALS PRIOR TO CONSTRUCTION.
4. WASTEWATER MAIN INSTALLATION MUST BE INSPECTED BY KUB. CONTACT KUB FIELD SERVICES AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION AT (865) 558-2786. TRENCHES SHALL BE LEFT OPEN AND NOT BACKFILLED UNTIL INSPECTED BY KUB.
5. CONTRACTOR MUST HAVE A VALID STATE OF TENNESSEE MUNICIPAL UTILITY LICENSE FOR CONSTRUCTION OF WASTEWATER MAINS.
6. AN A-LOCK OR Z-LOCK GASKET SHALL BE PROVIDED FOR EACH WASTEWATER MAIN OR LATERAL CONNECTING TO A NEW MANHOLE. EACH TAP TO AN EXISTING MANHOLE MUST BE MECHANICALLY AND PROPERLY BOOTED.
7. THE CONTRACTOR MUST INSTALL LATERALS INSTALLED ACROSS STREETS BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING, CONRETE DRIVEWAYS, ETC.

ANDREW C. NELSON REGISTERED ENGINEER AGRICULTURE 5/1/20 CONTRACT NO. 0108610 STATE OF TENNESSEE

TDEC APPROVAL STAMP GOES HERE

ENGINEER
FULGHUM MACINDOE & ASSOCIATES, INC.
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KNOXVILLE, TN. 37932
OFFICE: 865.690.6419
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DEVELOPER
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1501 WASHINGTON AVENUE
KNOXVILLE, TN 37917
CONTACT: MR. BILL TERRY
TELEPHONE: 865.523.3539
EMAIL: BTERRY@KHFH.COM

DESIGNED RPJ
DRAWN RPJ
CHECKED AMG

NO.	DATE	REVISION	APPR.
2	5/8/20	REVISED PER KUB COMMENTS	
1	4/24/20	REVISED PER KUB COMMENTS	
0	9/18/19	ISSUED FOR CONSTRUCTION	

SCALE 1" = 50'

DATE 9/18/19

KUB

KNOXVILLE UTILITIES BOARD
STRAWBERRY PLAINS SUBDIVISION
PUBLIC WASTEWATER PLAN
LPS: LINE 1 STA. 0+00 TO 7+81

C10

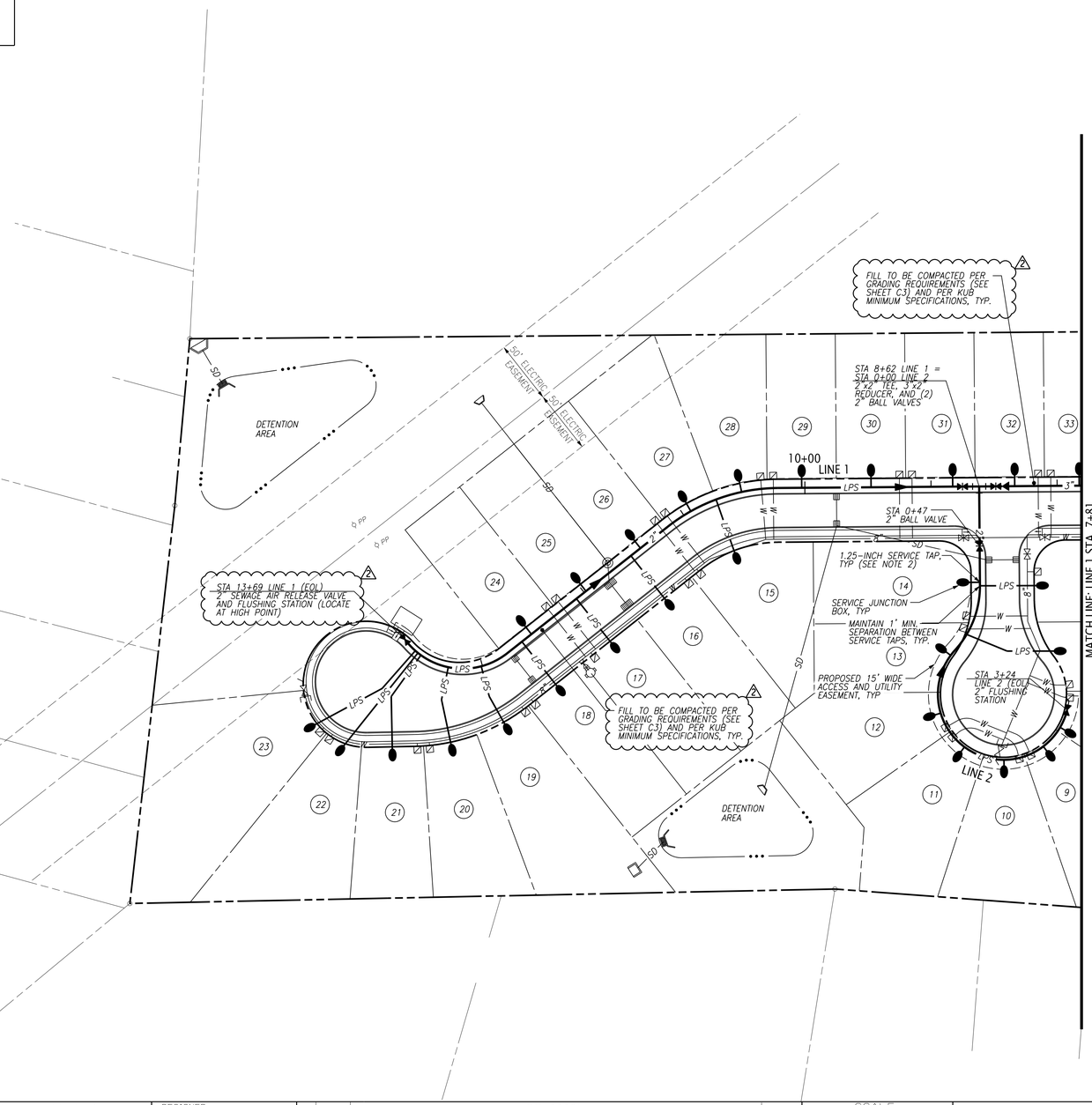
SHEET 1 OF 2 SHEETS

FMA PROJECT NO. 620.001

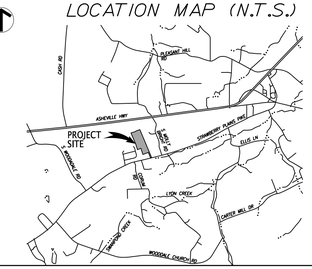
Model: Default
File Name: J:\620\620.001\LWDS\620001c010.dgn
Plot Date: 5/1/2020

LEGEND

- ---FM--- EXISTING SANITARY LINE (FORCE MAIN)
- —LPS— PROPOSED LOW PRESSURE SEWER LINE
- PROPOSED LPS SERVICE JUNCTION BOX
- PROPOSED BALL VALVE
- PROPOSED LPS EOL FLUSHING STATION
- PROPOSED SEWAGE AIR RELEASE VALVE
- LPS FLOW DIRECTION ARROW
- PROPOSED REDUCER



LOCATION MAP (N.T.S.)



DEVELOPER: KNOXVILLE HABITAT FOR HUMANITY

ADDRESS: 0 STRAWBERRY PLAINS PIKE

PHONE: 865.523.3539

PROPERTY INFO:

MAP 73

PARCEL 172

10.93 ACRES

GENERAL SANITARY SEWER REQUIREMENTS:

1. ALL SANITARY SEWER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE THE KUB STANDARD SEWER SYSTEM SPECIFICATIONS AND DETAILS.
2. LOCATION OF ALL EXISTING UTILITIES IS APPROXIMATE.CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION.
3. ALL PIPE SHALL BE INSTALLED IN THE PRESENCE OF THE OWNER.
4. UTILITIES SHALL BE INSTALLED AFTER GRADING HAS BEEN COMPLETED AND APPROVED BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING,CONCRETE DRIVEWAYS,ETC.
5. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL,STATE AND OSHA REGULATIONS.
6. REQUIREMENTS FOR PROPER TRENCH AND BACKFILL OPERATIONS MUST MEET OR EXCEED CITY OF KNOXVILLE,KNOX COUNTY AND TDOT STANDARDS.
7. AFTER COMPLETING EACH SECTION OF SEWER,ALL DEBRIS AND CONSTRUCTION MATERIALS SHALL BE REMOVED FROM THE WORK SITE,THE DISTURVED GROUND SURFACE SHALL BE SMOOTHLY GRADED.
8. THE CONTRACTOR SHALL OBTAIN PLASIC WARNING TAPE FOR WASTEWATER MAINS AND BURY IT ONE FOOT ABOVE THE ENTIRE LENGTH OF EACH LATERAL.A ½INCH DIAMETER STEEL REBAR SHALL BE DRIVEN INTO THE GROUND AT THE END OF EACH LATERAL AND PAINTED GREEN.
9. SANITARY SEWER FLOW CONTROL (SECTION 02542 OF KUB STANDARDS AND SPECIFICATIONS) ARE FULLY UNDERSTOOD AND IMPLEMENTED IN THE WASTEWATER PROJECT.
10. ANY FIELD CHANGES TO APPROVED PLANS MUST BE APPROVED BY THE APPROPRIATE KUB REPRESENTATIVE.
11. A COPY OF THE LATEST APPROVED SET OF UTILITY PLANS DESIGNATED BY THE KUB RED STAMP MUST BE PRESENT DURING ALL TIMES OF CONSTRUCTION OF THE APPROPRIATE UTILITIES.

KUB LOW PRESSURE SEWER REQUIREMENTS:

1. CONTRACTOR MUST BE CERTIFIED TO WELD/FUSE HDPE PIPE FOR LOW PRESSURE SEWER PROJECTS.
2. LOW PRESSURE SEWER LATERALS SHALL BE 1¼ INCH HDPE SDR-11 FROM MAIN TO TRANSITION FITTING.CHANGE TO 1¼ INCH SCH-40 PVC FROM TRANSITION FITTING TO GRINDER PUMP (SEE KUB SPECS.FIGURE 12536-A).
3. INSTALL AN E-ONE CHECK VALVE ON THE 1¼ INCH PVC LATERAL WITHIN 24 INCHES FOR THE HDPE TRANSITION FITTING.
4. BACKFILL MATERIAL WITHIN ONE FOOT OF PIPE SHALL NOT EXCEED ¾INCH (TDOT #57 STONE).
5. ALL PIPE SHALL BE INSTALLED WITH A 12-GAUGE SOLID COPPER WIRE FOR LOCATING PURPOSES (SEE KUB SPECS.2536,PG.3).
6. POLYETHYLENE PIPE (HDPE) AND FITTINGS SHALL BE MADE OF HIGH DENSITY,EXTRA HIGH MOLECULAR WEIGHT POLYETHYLENE WITH A STANDARD THERMOPLASTIC MATERIAL DESIGNATION OF PE3408.
7. POLYETHYLENE PIPE (HDPE) SHALL HAVE A CO-EXTRUDED GREEN COVER OR EXTRUDED GREEN STRIPES DESIGNATING USE FOR SANITARY SEWER.COLOR PRINT LINES ARE NOT AN ACCEPTABLE METHOD FOR DESIGNATION OF LOW PRESSURE SEWER MAINS.PIPE WITH EXTRUDED GREEN STRIPES SHALL HAVE A MINIMUM OF THREE EQUALLY SPACED STRIPES.
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7. THE CONTRACTOR MUST INSTALL LATERALS INSTALLED ACROSS STREETS BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING,CONRETE DRIVEWAYS,ETC.

ALEXANDER M. MAY — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — No. 018819 — STATE OF TENNESSEE — 5/8/20

TDEC APPROVAL STAMP GOES HERE

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DESIGNED RPJ
DRAWN RPJ
CHECKED AMG

NO.	DATE	REVISION	APPR.
2	5/8/20	REVISED PER KUB COMMENTS	
1	4/24/20	REVISED PER KUB COMMENTS	
0	9/18/19	ISSUED FOR CONSTRUCTION	

SCALE 1" = 50'

DATE 9/18/19

KUB

KNOXVILLE UTILITIES BOARD
STRAWBERRY PLAINS SUBDIVISION
PUBLIC WASTEWATER PLAN
LPS: LINE 1 STA. 7+81 TO 13+69 (EOL)
LPS: LINE 2 STA. 0+00 TO 3+24 (EOL)

C11

SHEET 2 OF 2 SHEETS

FMA PROJECT NO. 620.001

Model: Default
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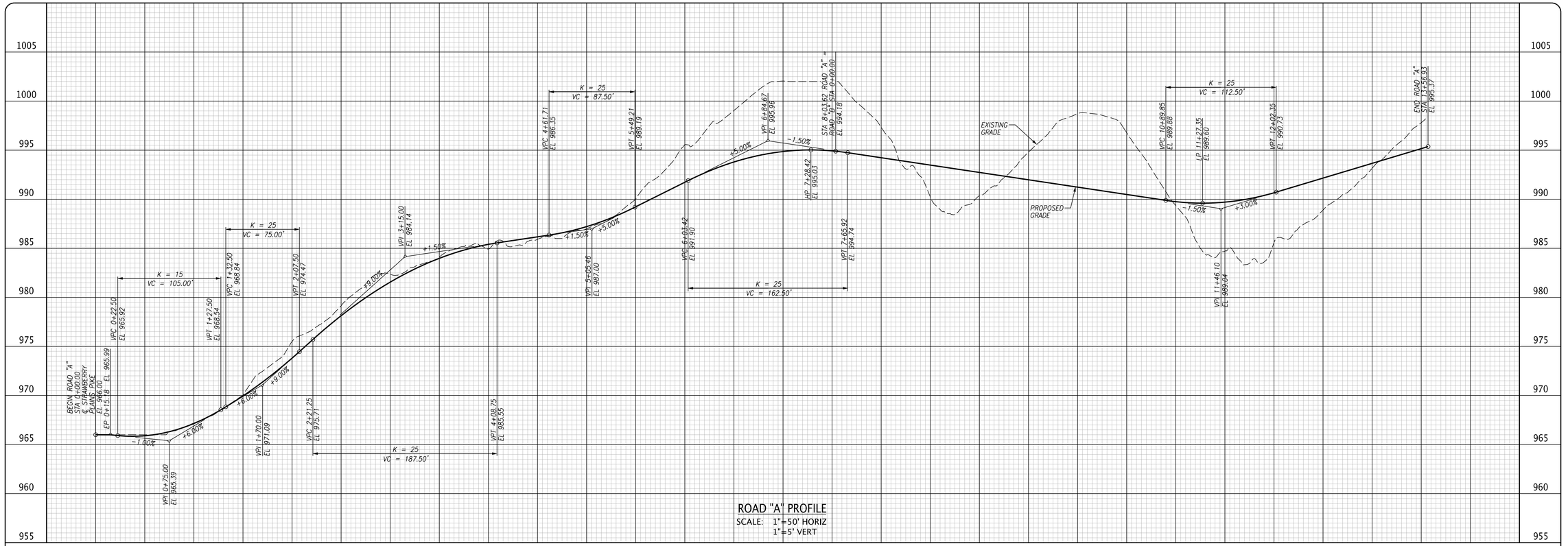
Print Date: 5/7/2020



ROAD "A" PROFILE
SCALE: 1"=50' HORIZ
1"=5' VERT

ROAD "B" PROFILE
SCALE: 1"=50' HORIZ
1"=5' VERT

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File Name: J:\620\620.001\DWGS\620001c012.dgn
Plot Date: 9/19/2019

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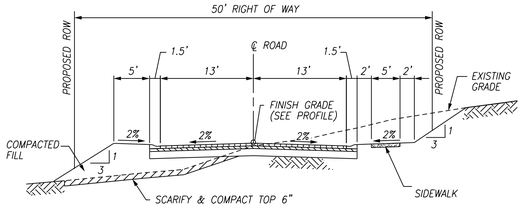
ROADWAY PROFILES

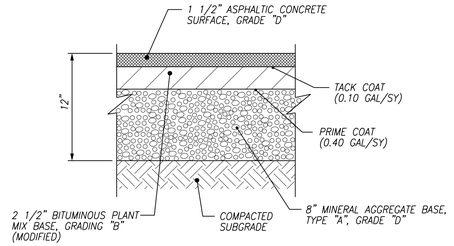
No.	Revision/Issue	Date
0	ISSUED FOR CONSTRUCTION	09/18/19

PROJ. MGR. AMG | DESIGNED BY AMG | DRAWN BY RPJ

Project 620.001
Date 09/18/19
Scale 1"=50'
Sheet C12

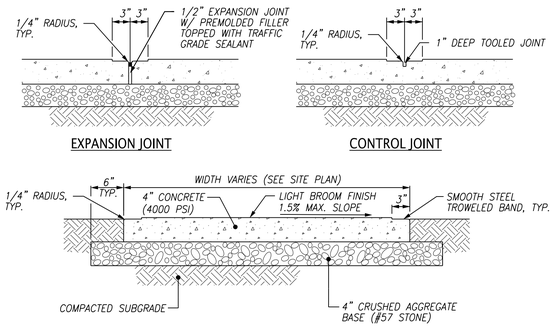


1 / C1.3 TYPICAL 26' ROAD SECTION
NTS



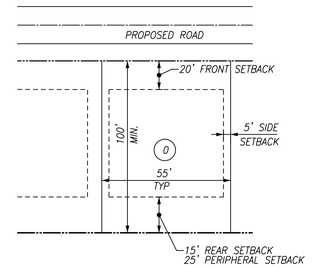
NOTES:
1. PAVEMENT HAS NOT BEEN DESIGNED FOR CONSTRUCTION TRAFFIC/ACTIVITIES. USE OF THESE SURFACES FOR CONSTRUCTION ACTIVITIES SHALL BE DONE AT THE CONTRACTOR'S CONVENIENCE AND RISK. DAMAGE TO PAVEMENT RESULTING FROM THESE ACTIVITIES SHALL BE REPAIRED IN CONFORMANCE WITH THE INITIAL PAVEMENT SPECIFICATIONS.

2 / C1.3 ASPHALT PAVEMENT SECTION
NTS

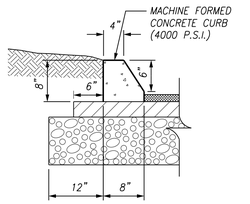


NOTES:
1. PREFORMED EXPANSION JOINTS SHALL BE EQUALLY SPACED AT 20' O.C. AND WHERE THE SIDEWALK IS IN CONTACT WITH THE STREET RETURNS, ON BUILDING LINES, AND AT OTHER FIXED OBJECTS. EXPANSION JOINT AT BUILDINGS AND RETAINING WALLS SHALL BE INCREASED TO 1" WIDTH.
2. EQUALLY SPACE CONTRACTION JOINTS AT 5' O.C (MAX.) BETWEEN EXPANSION JOINTS.
3. PROTECT AND CURE CONCRETE WITH AN APPROVED CURING COMPOUND (KURE-N-SEAL BY SONNEBORN OR EQUAL). APPLY ACCORDING TO THE MANUFACTURER'S SPECIFICATION.

3 / C1.3 CONCRETE SIDEWALK
NTS

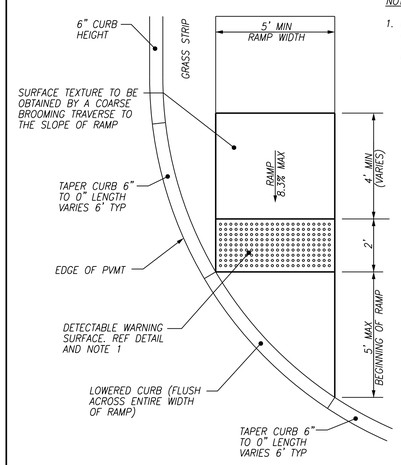


4 / C1.3 TYPICAL INTERIOR LOT
NTS



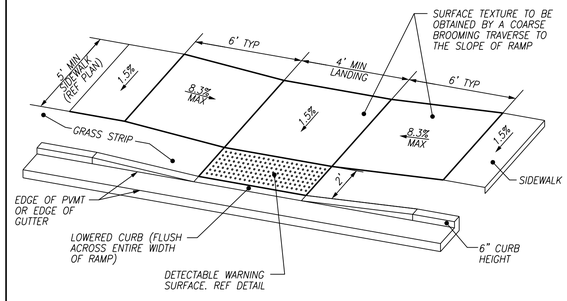
NOTES:
1. PREFORMED 1/2" EXPANSION JOINTS SHALL BE EQUALLY SPACED AT 25' MAX. CENTERS. EQUALLY SPACE 1/4" CONTRACTION JOINTS AT 5' MAX. CENTERS BETWEEN EXPANSION JOINTS.
2. EXPANSION JOINT MATERIAL REQUIRED FOR GRASS MEDIANS.
3. EXACT CURB DIMENSIONS MAY BE ALTERED SLIGHTLY TO FIT STANDARD EXTRUDED CURB MACHINES, BUT SUCH VARIANCES MUST BE APPROVED BY THE ENGINEER.
4. IMMEDIATELY AFTER THE CONCRETE HAS SUFFICIENTLY SET, BACKFILL BEHIND CURBS TO PREVENT PONDING OF SURFACE WATER.

5 / C1.3 EXTRUDED CURB
NTS



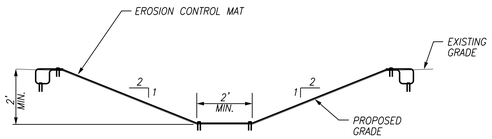
NOTES:
1. DETECTABLE WARNING SHALL BE INSTALLED AT ALL LOCATIONS WHERE RAMP EXITS TO VEHICULAR DRIVE PATH.

6 / C1.3 MONO-DIRECTIONAL PERPENDICULAR CURB RAMP
NTS



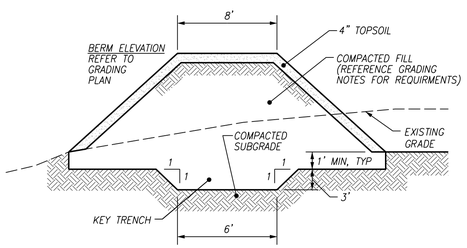
NOTES:
1. DETECTABLE WARNING SHALL BE INSTALLED AT ALL LOCATIONS WHERE RAMP EXITS TO VEHICULAR DRIVE PATH.

7 / C1.3 COMBINATION CURB RAMP
NTS



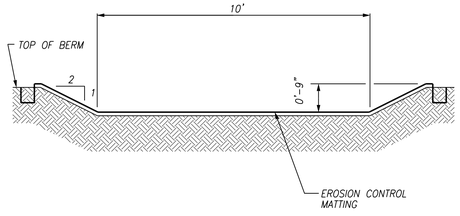
NOTES:
1. EROSION CONTROL MAT SHALL BE WESTERN EXCELSIOR EXCEL PP5-12 OR EQUAL AND INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.

8 / C1.3 TYPICAL DITCH SECTION
NTS



NOTES:
1. CONSTRUCT/INSTALL ANTI-SEEP COLLARS (REFER TO DETAIL) ON ALL PIPES THAT GO THROUGH THE BERM.
2. NO TRENCH EXCAVATION THROUGH BERM.

9 / C1.3 DETENTION POND BERM
NTS

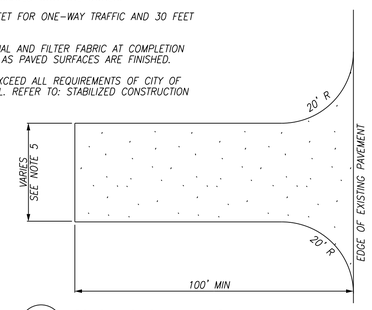


FRONT VIEW

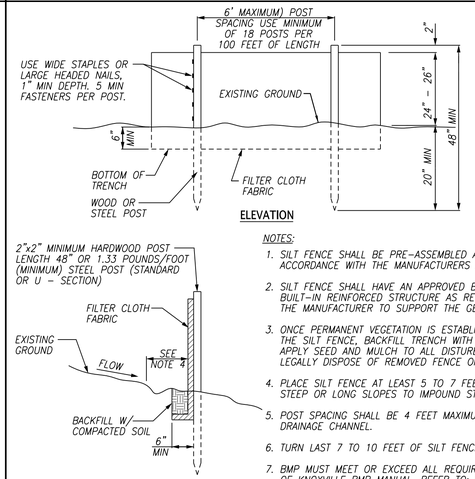
NOTES:
1. EROSION CONTROL MAT SHALL BE PYRAMAT BY SYNTHETIC INDUSTRIES OR EQUAL AND INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
2. EXTEND MATTING 10' BEYOND TOE OF SLOPE ON THE DOWNHILL SIDE AND 10' BEYOND THE TOP OF SPILLWAY ON THE POND SIDE.

10 / C1.3 EMERGENCY SPILLWAY
NTS

NOTES:
1. THE PURPOSE OF THE STABILIZED CONSTRUCTION ENTRANCE IS TO AID THE CONTRACTOR IN ELIMINATING TRACKING OF MUD ONTO PUBLIC STREETS. THE DETAIL DOES NOT LIMIT THIS RESPONSIBILITY. OTHER METHODS OF SEDIMENT REMOVAL SHALL BE IMPLEMENTED IF THIS DOES NOT ADEQUATELY REMOVE THE MUD.
2. CONSTRUCT THE PAD WITH A 6" (MIN) THICKNESS OF 2" TO 3" CRUSHED STONE. UNDERLAY STONE WITH PROPEX 315ST WOVEN GEOTEXTILE OR EQUAL. FABRIC TO MEET OR EXCEED AASHTO M288, CLASS 1 STANDARDS.
3. ADD CRUSHED STONE TO THE PAD AS NECESSARY TO MAINTAIN THE PROPER FUNCTIONING OF THE PAD.
4. LOCATION TO BE COORDINATED WITH THE OWNER.
5. WIDTH SHALL BE 20 FEET FOR ONE-WAY TRAFFIC AND 30 FEET FOR TWO-WAY.
6. REMOVE GRAVEL MATERIAL AND FILTER FABRIC AT COMPLETION OF CONSTRUCTION, OR AS PAVED SURFACES ARE FINISHED.
7. BMP MUST MEET OR EXCEED ALL REQUIREMENTS OF CITY OF KNOXVILLE BMP MANUAL. REFER TO: STABILIZED CONSTRUCTION ENTRANCE ES-01.



11 / C1.3 CONSTRUCTION ENTRANCE
NTS



NOTES:
1. SILT FENCE SHALL BE PRE-ASSEMBLED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
2. SILT FENCE SHALL HAVE AN APPROVED BACKING OR A BUILT-IN REINFORCED STRUCTURE AS RECOMMENDED BY THE MANUFACTURER TO SUPPORT THE GEOTEXTILE FABRIC.
3. ONCE PERMANENT VEGETATION IS ESTABLISHED, REMOVE THE SILT FENCE, BACKFILL TRENCH WITH TOPSOIL, AND APPLY SEED AND MULCH TO ALL DISTURBED AREAS. LEGALLY DISPOSE OF REMOVED FENCE OFF-SITE.
4. PLACE SILT FENCE AT LEAST 5 TO 7 FEET AWAY FROM STEEP OR LONG SLOPES TO IMPOUND STORMWATER RUNOFF.
5. POST SPACING SHALL BE 4 FEET MAXIMUM WITHIN A DRAINAGE CHANNEL.
6. TURN LAST 7 TO 10 FEET OF SILT FENCE UPHILL.
7. BMP MUST MEET OR EXCEED ALL REQUIREMENTS OF CITY OF KNOXVILLE BMP MANUAL. REFER TO: SILT FENCE ES-14.

12 / C1.3 SILT FENCE
NTS

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ANDREW M. MARTIN — REGISTERED ENGINEER — AGRICULTURE — CIVIL — No. 0108319 — STATE OF TENNESSEE

STRAWBERRY PLAINS SUBDIVISION
STRAWBERRY PLAINS PIKE
KNOXVILLE, TENNESSEE 37924

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CONTACT: BILL TERRY
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EMAIL: BTERRY@KHFH.COM

DETAILS

No.	Revision/Issue	Date
1	REVISED PER KNOX COUNTY COMMENTS	02/04/20
0	ISSUED FOR CONSTRUCTION	09/18/19

DESIGNED BY: AMG
DRAWN BY: RPJ
PROJ. MGR.: AMG

Project: 620.001
Date: 09/18/19
Scale: 1"=50'
Sheet: C13

File Name: J:\620\620.001\DWGS\620001-d13.dgn
Plot Date: 2/4/2020

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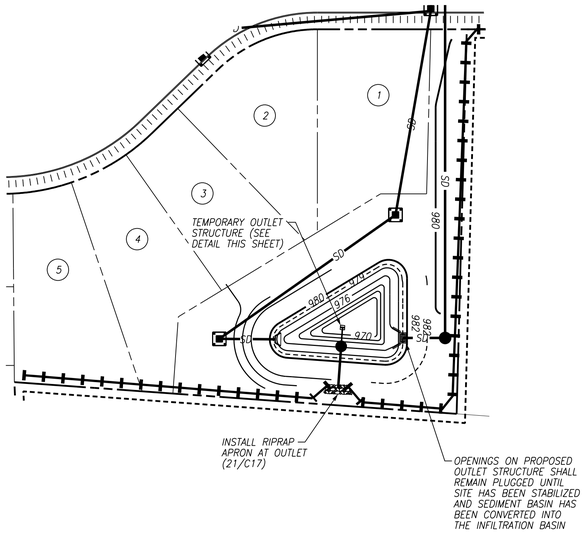
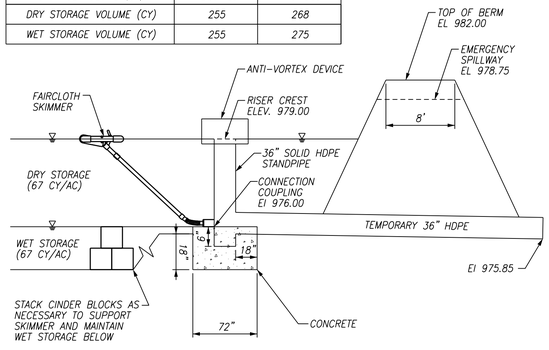


STORAGE VOLUME (CY)	REQUIRED	PROVIDED
DRY STORAGE VOLUME (CY)	255	268
WET STORAGE VOLUME (CY)	255	275



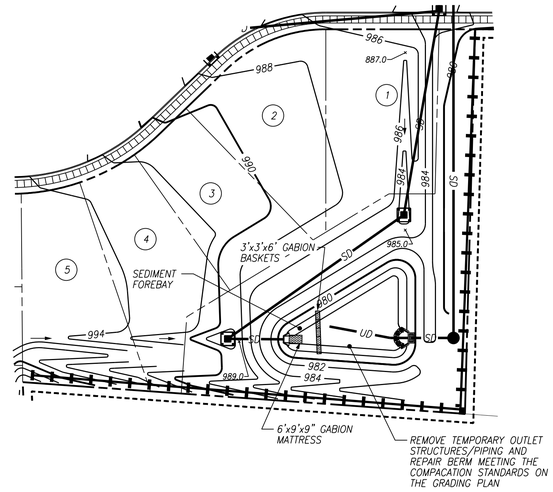
NOTES:

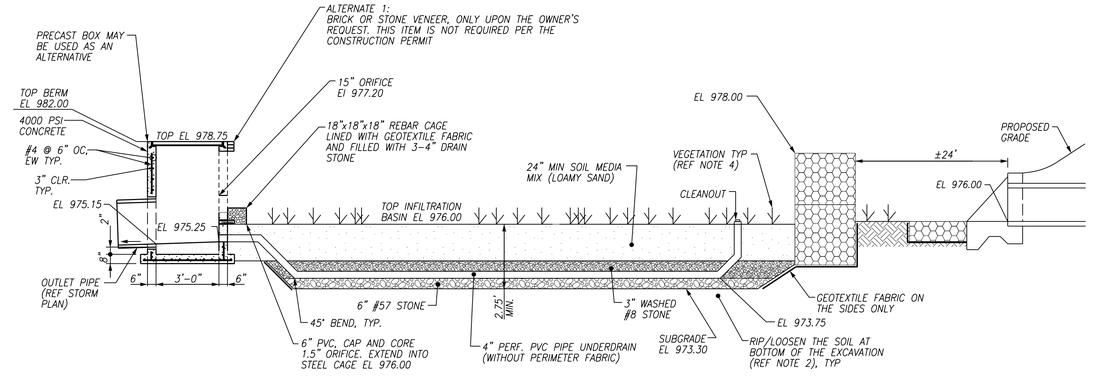
1. DRAINAGE AREA: 3.8 AC
2. INSTALL & MAINTAIN FLOATING SKIMMER PER THE MANUFACTURER'S RECOMMENDATIONS.
3. INSTALL 2" FAIRCLOTH SKIMMER WITH A 1.5" DIA. ORIFICE IN THE PLUG. USE 1.5" DIA. ARM.

13 / C14 SEDIMENT BASIN 1 - STAGE 1 & 2
NTS

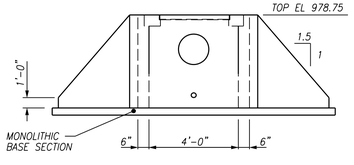
INFILTRATION BASIN NOTES:

1. BEGIN CONSTRUCTION OF THE VEGETATED INFILTRATION BASIN AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED AND IMPLEMENT TEMPORARY EPSC MEASURES TO DIVERT STORMWATER AWAY FROM THE BASIN UNTIL IT IS COMPLETED.
2. REMOVE ACCUMULATED SEDIMENT AND RIP/LOOSEN THE BOTTOM SOILS (SUBGRADE) TO A DEPTH OF 6 TO 12 INCHES TO PROMOTE GREATER INFILTRATION AND PROTECT IT FROM COMPACTION AND OTHER CONSTRUCTION ACTIVITIES.
3. DELIVER OR PREPARE THE SOIL MEDIA, AND STORE IT ON AN ADJACENT IMPERVIOUS AREA OR PLASTIC SHEETING. APPLY THE MEDIA IN 12-INCH LIFTS UNTIL THE DESIRED SURFACE ELEVATION. AFTER 5 DAYS, CHECK FOR SETTLEMENT, AND ADD ADDITIONAL MEDIA, AS NEEDED, TO ACHIEVE THE DESIGN ELEVATION. SOIL MEDIA MIXTURE SHALL BE APPROVED BY KNOX COUNTY ENGINEERING.
4. SEED THE AREA WITH SOUTHEAST RAIN GARDEN MIX (ITEM #ERNMX-180-2) AS PROVIDED BY ERNST SEEDS (800.873.3321). PREPARE THE BED, APPLY SEED PER THE RECOMMENDATIONS OF ERNST SEEDS. WATER AS NECESSARY DURING WEEKS OF NO RAIN FOR THE FIRST TWO MONTHS.
5. IF THE SURFACE COVERAGE IS LESS THAN 50% WITHIN 60 DAYS OF PLANTING, REWORK THE GROUND AND RESEED.
6. IF SITE CONSTRUCTION WILL CONTINUE, CORDON-OFF THE BASIN FROM CONSTRUCTION TRAFFIC AND KEEP THE AREA FREE OF SEDIMENT AND DEBRIS.
7. FOR THE FIRST 6 MONTHS FOLLOWING CONSTRUCTION, INSPECT THE BASIN AT LEAST TWICE AFTER STORM EVENTS THAT EXCEED 0.5 INCH OF RAINFALL.
8. ACHIEVE SURFACE AREA COVERAGE OF AT LEAST 75% IN THE FIRST TWO YEARS OF PLANT GROWTH.





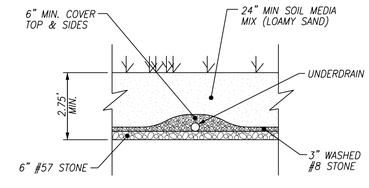
SECTION



OUTLET STRUCTURE FRONT

NOTES:

1. KEEP ALL ORIFICES BELOW SPILLWAY ELEVATION PLUGGED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
2. CONCRETE TO BE F_c = 4000 PSI @ 28 DAYS, REINFORCEING STEEL TO MEET THE REQUIREMENTS OF ASTM 4615, F_Y = 60,000 PSI.
3. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.



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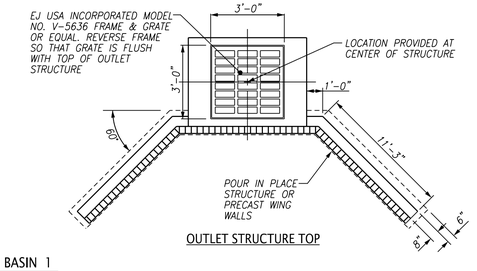

OUTLET STRUCTURE TOP

14 / C14 INFILTRATION BASIN 1
NTS

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KNOXVILLE, TN 37917
CONTACT: BILL TERRY
TELEPHONE NO.: 865.523.3539
EMAIL: BTERRY@KHFH.COM

DETAILS

No.	Revision/Issue	Date
1	ISSUED FOR CONSTRUCTION	09/18/19
2	REVISED PER KNOX COUNTY COMMENTS	02/04/20

DESIGNED BY: AMG
DRAWN BY: RPJ
PROJ. MGR.: AMC

Project: 620.001
Date: 09/18/19
Scale: 1"=50'
Sheet: C14

File Name: J:\620\620.001\DWGS\620001c014.dgn
Plot Date: 2/4/2020

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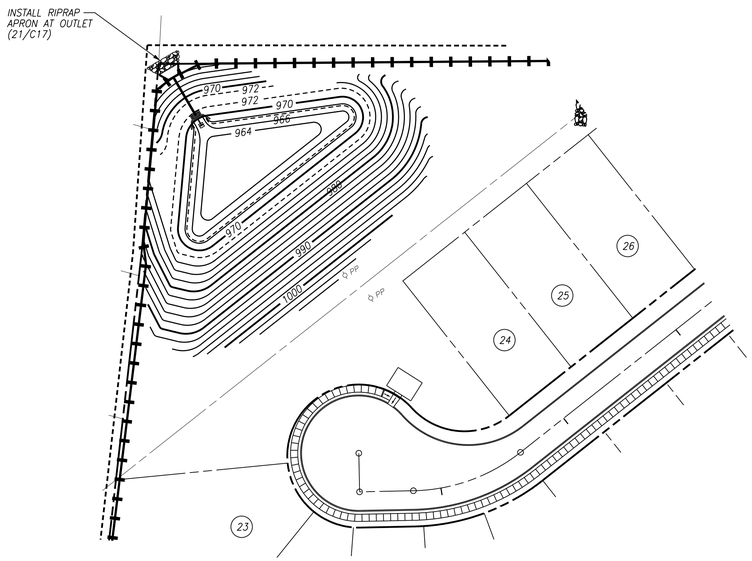
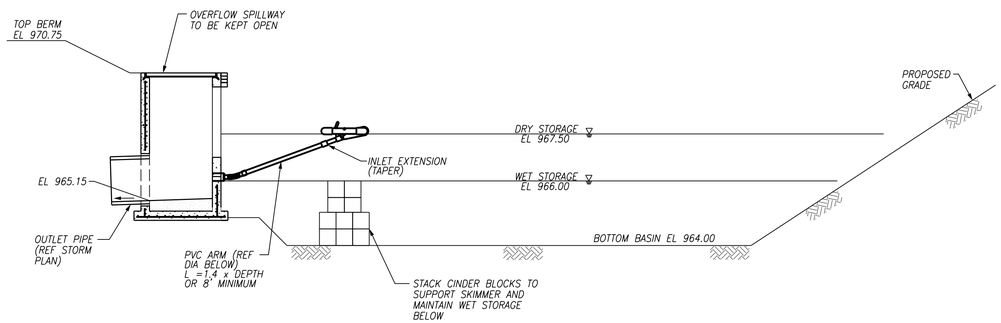




SECTION

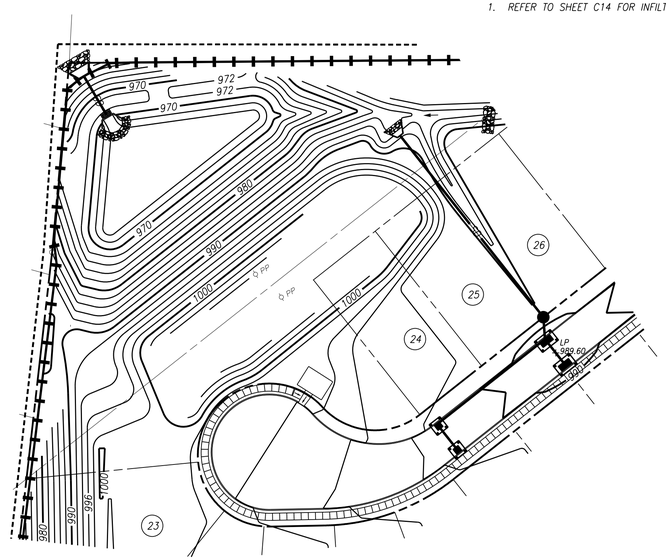
SKIMMER NOTES:

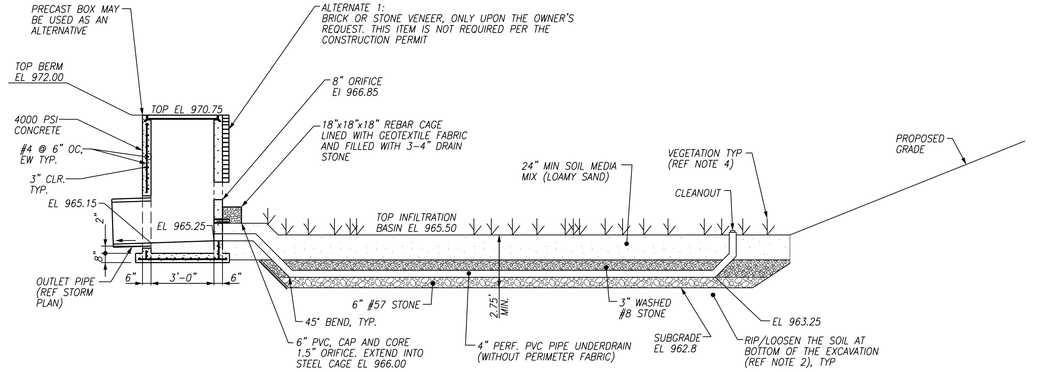
1. INSTALL 1.5" FAIRCLOTH SKIMMER WITH A 1.5" DIAMETER ORIFICE IN THE PLUG, SET CONNECTION COUPLING AT EL 966.00. USE 1.5" DIAMETER ARM.
2. STORAGE VOLUME REQUIRED: 187 CY DRY AND 187 CY WET
   STORAGE VOLUME PROVIDED: 284 CY DRY AND 271 CY WET
3. INSTALL AND MAINTAIN FAIRCLOTH SKIMMER PER THE MANUFACTURER'S SPECIFICATIONS.

15 / C15 SEDIMENT BASIN 2 - STAGE 1 & 2
NTS

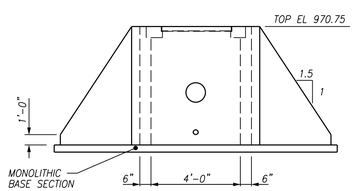
INFILTRATION BASIN NOTES:

1. REFER TO SHEET C14 FOR INFILTRATION BASIN NOTES.





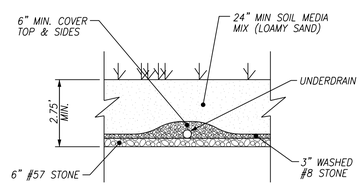
SECTION



OUTLET STRUCTURE FRONT

NOTES:

1. KEEP ALL ORIFICES BELOW SPILLWAY ELEVATION PLUGGED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
2. CONCRETE TO BE F_C = 4000 PSI @ 28 DAYS, REINFORCEING STEEL TO MEET THE REQUIREMENTS OF ASTM 4615, F_Y = 60,000 PSI.
3. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.



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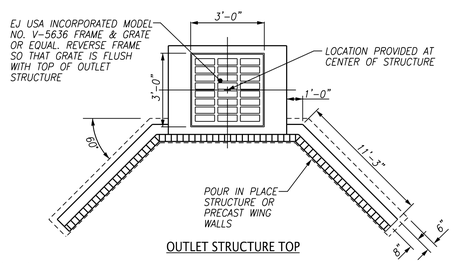

OUTLET STRUCTURE TOP

16 / C15 INFILTRATION BASIN 2
NTS

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DETAILS

No.	Revision/Issue	Date
1	REVISED PER KNOX COUNTY COMMENTS	02/04/20
0	ISSUED FOR CONSTRUCTION	09/18/19

DESIGNED BY: AMG
DRAWN BY: RPJ
PROJ. MGR.: AMG

Project: 620.001
Date: 09/18/19
Scale: 1"=50'
Sheet: C15

File Name: J:\620\620.001\DWGS\620001-c015.dgn
Plot Date: 2/4/2020

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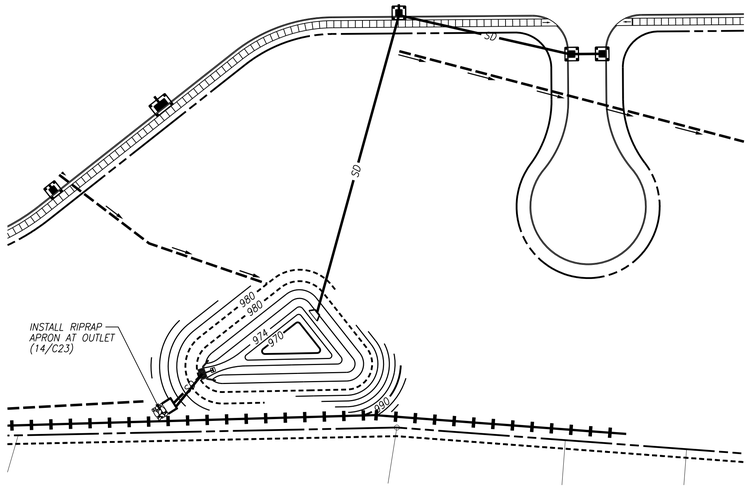
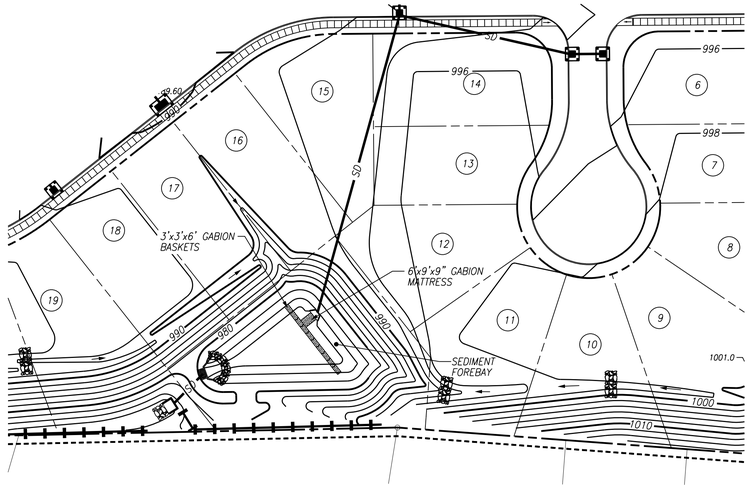
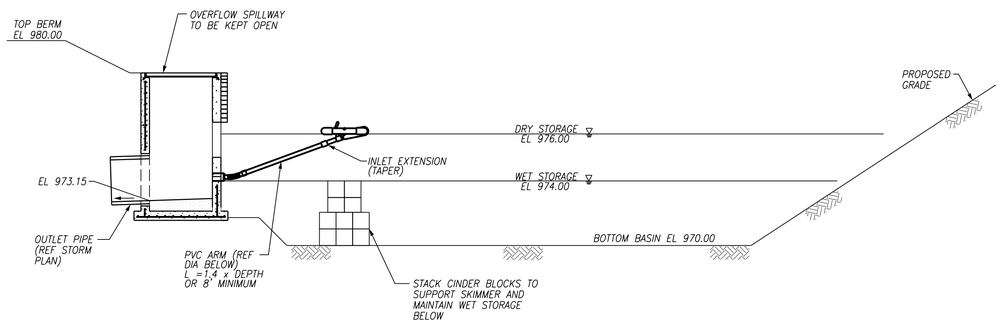




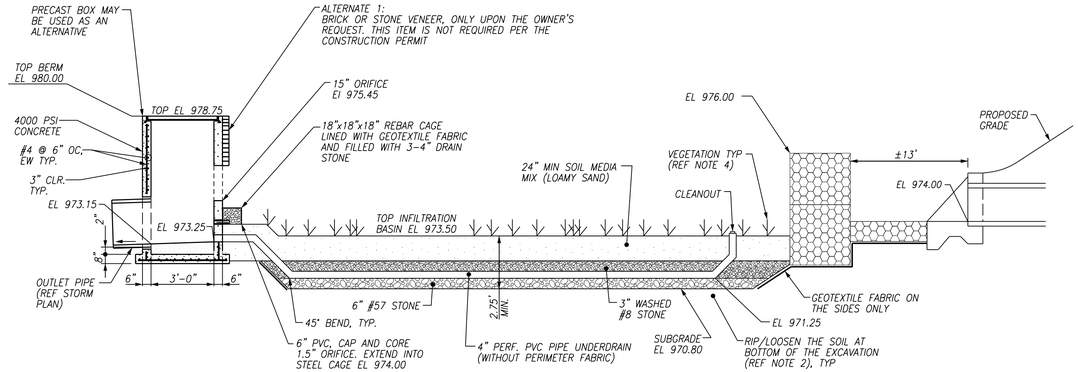


SECTION

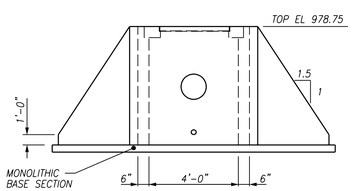
SKIMMER NOTES:

1. INSTALL 1.5" FAIRCLOTH SKIMMER WITH A 1.3" DIAMETER ORIFICE IN THE PLUG, SET CONNECTION COUPLING AT EL 974.00. USE 1.5" DIAMETER ARM.
2. STORAGE VOLUME REQUIRED: 146 CY DRY AND 146 CY WET
   STORAGE VOLUME PROVIDED: 189 CY DRY AND 167 CY WET
3. INSTALL AND MAINTAIN FAIRCLOTH SKIMMER PER THE MANUFACTURER'S SPECIFICATIONS.

17 / C16 SEDIMENT BASIN 3 - STAGE 1 & 2
NTS



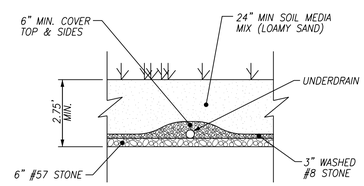
SECTION



OUTLET STRUCTURE FRONT

NOTES:

1. KEEP ALL ORIFICES BELOW SPILLWAY ELEVATION PLUGGED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
2. CONCRETE TO BE F_C = 4000 PSI @ 28 DAYS, REINFORCEING STEEL TO MEET THE REQUIREMENTS OF ASTM 4615, F_Y = 60,000 PSI.
3. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.



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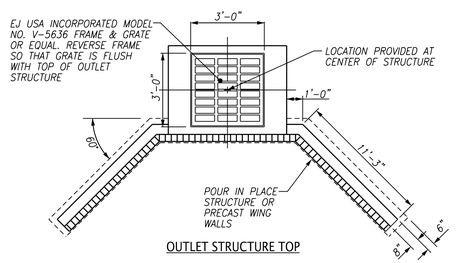

OUTLET STRUCTURE TOP

18 / C16 INFILTRATION BASIN 3
NTS

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TELEPHONE NO.: 865.523.3539
EMAIL: BTERRY@KHFH.COM

DETAILS

PROJ. MGR.	DESIGNED BY	DRAWN BY	No.	Revision/Issue	Date
AMG	AMG	RPJ	1	REVISED PER KNOX COUNTY COMMENTS	02/04/20
			2	ISSUED FOR CONSTRUCTION	09/18/19

Project 620.001
Date 09/18/19
Scale 1"=50'
Sheet C16

File Name: J:\620\620.001\DWGS\620001c016.dgn
Plot Date: 2/4/2020

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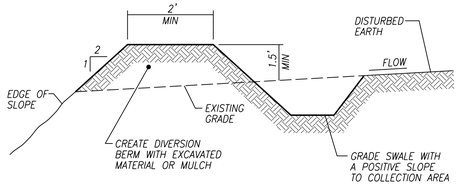
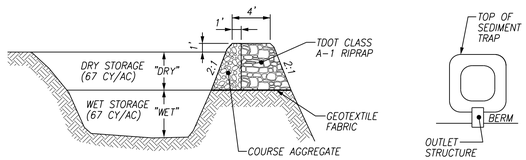


NOTES:
1. PROVIDE SLOPE DRAIN AS NECESSARY TO CONVEY RUNOFF TO A STABILIZED OUTLET.
2. PIPE DIAMETER SHALL CONFORM TO TDEC REQUIREMENTS.

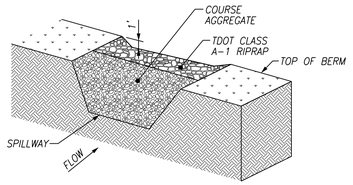
19 / C17 DIVERSION BERM
NTS

TRAP NO.	DRAINAGE AREA (AC)	WET VOLUME (CY)	DRY VOLUME (CY)	TOP DIM. (FT)	DRY DEPTH (FT)	WET DEPTH (FT)
1	1.86	125	125	10'x10'	1.5'	1.5'



SIDE VIEW SECTION

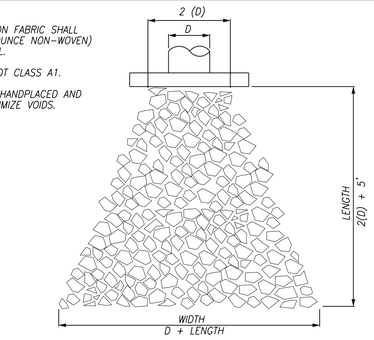
TYPCIAL PLAN VIEW



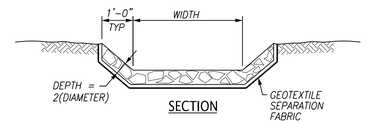
OUTLET STRUCTURE

20 / C17 TEMPORARY SEDIMENT TRAP AND OUTLET
NTS

NOTES:
1. GEOTEXTILE SEPARATION FABRIC SHALL BE GEOTEX 861 (8 OUNCE NON-WOVEN) BY PROPEX OR EQUAL.
2. RIPRAP SHALL BE TDOT CLASS A1.
3. ALL ROCK SHALL BE HANDPLACED AND IN A MANNER TO MINIMIZE VOIDS.

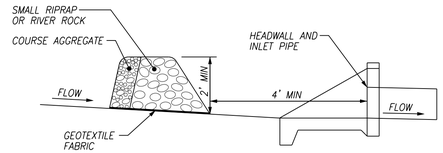


PLAN



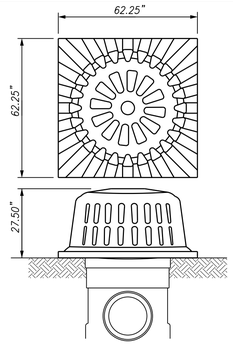
SECTION

21 / C17 RIPRAP APRON
NTS



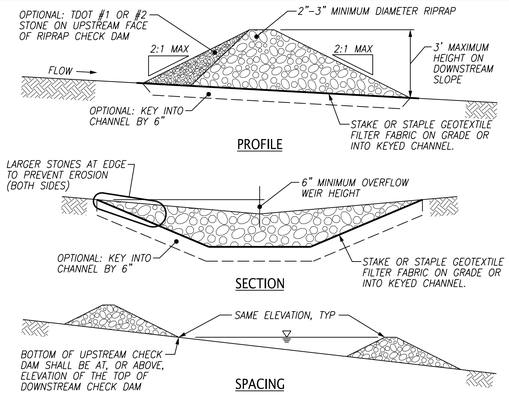
NOTES:
1. THE SMALL RIPRAP STONE SHALL BE TDOT CLASS A-1 (CLEAN FROM FINES) WITH STONE SIZES FROM 2" TO 15".
2. THE COURSE AGGREGATE SHALL BE TDOT #57 (CLEAN FROM FINES).
3. CONSTRUCT, MAINTAIN, AND REMOVE IN ACCORDANCE WITH THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK.

22 / C17 STONE FILTER RING
NTS



NOTES:
1. SILT SAVER SQUARE FRAME AND FILTER, MODEL NO. SS-200A OR APPROVED EQUAL FOR INLETS IN OPEN AREAS.
2. TO BE USED ON ALL STRUCTURES WHILE GRADING ACTIVITIES ARE ONGOING. REPLACE INLET PROTECTION WITH AN INTERNAL SYSTEM ONCE DRAINS ARE LOCATED IN PAVED AREAS.
3. ONCE PERMANENT VEGETATION IS ESTABLISHED, REMOVE THE INLET PROTECTION, BACKFILL TRENCH WITH TOPSOIL, AND APPLY SEED AND MULCH TO ALL DISTURBED AREAS.
4. BMP MUST MEET OR EXCEED ALL REQUIREMENTS OF CITY OF KNOXVILLE BMP MANUAL. REFER TO: TEMPORARY INLET PROTECTION ES-24.

23 / C17 INLET PROTECTION
NTS



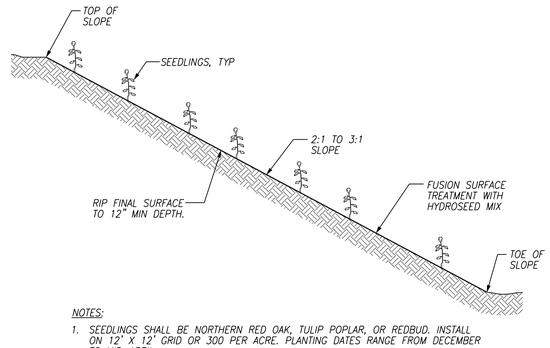
PROFILE

SECTION

SPACING

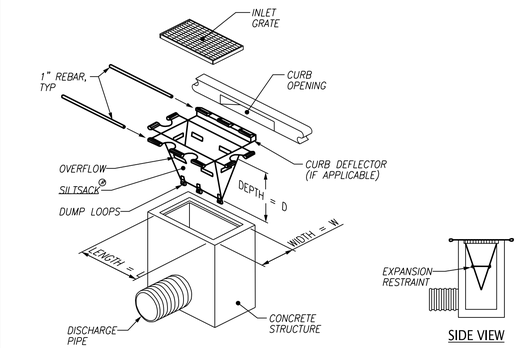
NOTES:
1. GEOTEXTILE SEPARATION FABRIC SHALL BE GEOTEX 801 (8 OUNCE NON-WOVEN) BY PROPEX OR EQUAL.
2. CONSTRUCT, MAINTAIN, AND REMOVE IN ACCORDANCE WITH THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK.

24 / C17 TEMPORARY ROCK CHECK DAM
NTS



NOTES:
1. SEEDLINGS SHALL BE NORTHERN RED OAK, TULIP POPLAR, OR REDBUD. INSTALL ON 12' X 12' GRID OR 300 PER ACRE. PLANTING DATES RANGE FROM DECEMBER TO MID-APRIL.
2. HYDROSEED SLOPE WITH ERNST NC MOUNTAINS UPL MEADOW MIX (ERNMX 303). APPLY 20 LBS/AC. ADD FERTILIZER TO THE HYDROSEED MIX. USE 19-19-19 AND APPLIED AT A RATE OF 400 LBS/AC.
3. APPLY FUSION SURFACE TREATMENT (JEN-HILL CONSTRUCTION MATERIALS) AT A RATE OF 4,500 LBS/AC ALONG WITH THE HYDROSEED MIX. OBTAIN A SOIL SAMPLE TO CONFIRM THE APPLICATION RATE. INSTALL PER THE MANUFACTURER'S RECOMMENDATIONS.
4. PROTECT FINISHED SLOPE FROM BEING DISTURBED.

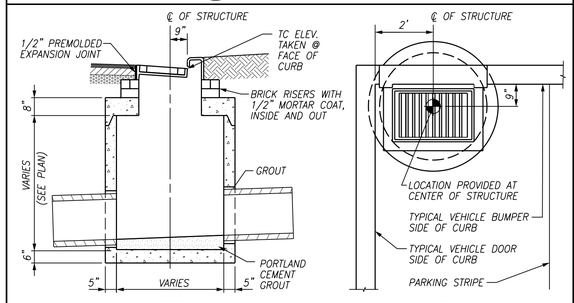
25 / C17 REFORESTATION
NTS



SIDE VIEW

NOTES:
1. THE INLET SEDIMENT CONTROL DEVICE SHALL BE SILTSACK® OR EQUIVALENT, FOR USE ON STORM STRUCTURES LOCATED IN PAVED AREAS WHERE THERE IS A POTENTIAL FOR RECEIVING SEDIMENT LADEN RUNOFF.
2. BMP MUST MEET OR EXCEED ALL REQUIREMENTS OF CITY OF KNOXVILLE BMP MANUAL. REFER TO: TEMPORARY INLET PROTECTION ES-24.
3. REMOVE ONCE PERMANENT VEGETATION IS ESTABLISHED.

26 / C17 INLET SEDIMENT CONTROL DEVICE
NTS

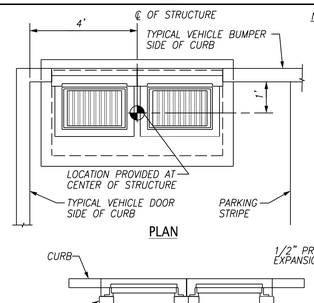


SECTION

PLAN

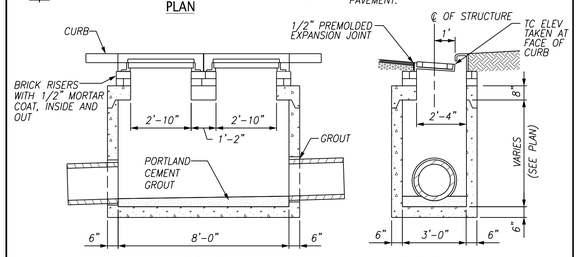
NOTES:
1. CATCH BASINS SHALL BE CIRCULAR OR SQUARE PRECAST CONCRETE STRUCTURE IN ACCORDANCE WITH ASTM C478 OR C913 (LATEST REVISION). DIMENSIONS VARY DEPENDING ON PIPE SIZE AND ANGLE OF PIPES IN AND OUT OF STRUCTURE. THE OPENING IN THE STRUCTURE TOP SHALL NOT BE LESS THAN THE GRATE DIMENSIONS.
2. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
3. CATCH BASIN FRAME AND GRATE SHALL BE EJ USA INC. NO. 7510, TYPE M3, T1 BACK OR EQUAL. THE GRATE AND CURB BACKS SHALL BE STAMPED WITH "DUMP NO WASTE... DRAINS TO WATERWAYS" WITH FISH IMAGE, OR EQUAL.
4. SHIM THE FRAME TO MATCH THE CROSS SLOPE AND GUTTER LINE SLOPES OF THE PAVEMENT.

27 / C17 SINGLE CATCH BASIN
NTS



PLAN

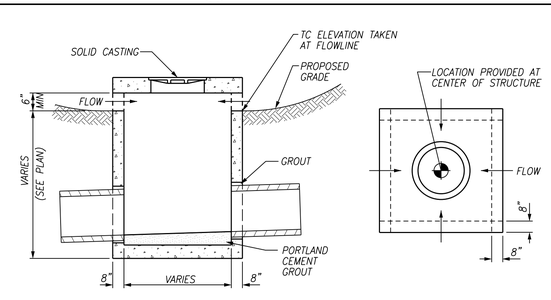
NOTES:
1. DOUBLE CATCH BASINS SHALL BE PRECAST CONCRETE STRUCTURE IN ACCORDANCE WITH ASTM C913 (LATEST REVISION). THE OPENING IN THE STRUCTURE TOP SHALL NOT BE LESS THAN THE GRATE DIMENSIONS
2. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
3. CATCH BASIN FRAME AND GRATE SHALL BE EJ USA INC. NO. 7510, TYPE M3, T1 BACK OR EQUAL. THE GRATE AND CURB BACKS SHALL BE STAMPED WITH "DUMP NO WASTE... DRAINS TO WATERWAYS" WITH FISH IMAGE, OR EQUAL.
4. SHIM THE FRAME TO MATCH THE CROSS SLOPE AND GUTTER LINE SLOPES OF THE PAVEMENT.



SECTION

SECTION

28 / C17 DOUBLE CATCH BASIN
NTS

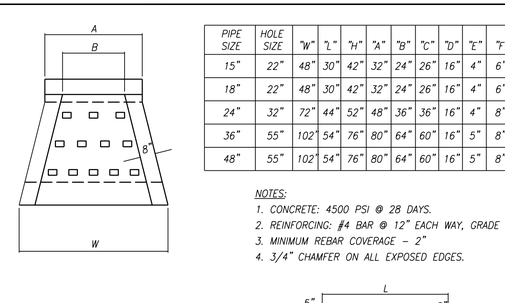


SECTION

PLAN

NOTES:
1. YARD INLETS SHALL BE SQUARE PRECAST CONCRETE STRUCTURE IN ACCORDANCE WITH ASTM C478 (LATEST REVISION). DIMENSIONS VARY DEPENDING ON PIPE SIZE AND ANGLE OF PIPES IN AND OUT OF STRUCTURE.
2. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
3. LOCATION GIVEN AT CENTER OF THE STRUCTURE, TC ELEVATION PROVIDED AT INLET AS SHOWN ABOVE.
4. FRAME AND COVER SHALL BE EJ USA INC MODEL NO. G-1860 OR EQUAL. THE FRAME SHALL BE STAMPED WITH "STORM SEWER" AND "DUMP NO WASTE...DRAINS TO WATERWAYS" WITH FISH IMAGE OR EQUAL.

29 / C17 YARD INLET
NTS



PIPE SIZE	HOLE SIZE	"W"	"L"	"H"	"A"	"B"	"C"	"D"	"E"	"F"
15"	22"	48"	30"	42"	32"	24"	26"	16"	4"	6"
18"	22"	48"	30"	42"	32"	24"	26"	16"	4"	6"
24"	32"	72"	44"	52"	48"	36"	36"	16"	4"	8"
36"	55"	102"	54"	76"	80"	64"	60"	16"	5"	8"
48"	55"	102"	54"	76"	80"	64"	60"	16"	5"	8"

NOTES:
1. CONCRETE: 4500 PSI @ 28 DAYS.
2. REINFORCING: #4 BAR @ 12" EACH WAY, GRADE 60.
3. MINIMUM REBAR COVERAGE – 2"
4. 3/4" CHAMFER ON ALL EXPOSED EDGES.

30 / C17 PRECAST CONCRETE HEADWALL W/DISSIPATORS
NTS

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ANDREW M. GIOBBIA — REGISTERED ENGINEER — AGRICULTURE — No. 120843 — STATE OF TENNESSEE

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KNOXVILLE, TENNESSEE 37924

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1501 WASHINGTON AVENUE
KNOXVILLE, TN 37917
CONTACT: BILL TERRY
TELEPHONE NO.: 865.523.3539
EMAIL: BTERRY@KHFH.COM

DETAILS

No.	Revision/Issue	Date	DESIGNED BY	DRAWN BY	PROJ. MGR.
1	REVISED PER KNOX COUNTY COMMENTS	02/04/20	AMG	RPJ	AMG
0	ISSUED FOR CONSTRUCTION	09/18/19			

Project 620.001
Date 09/18/19
Scale 1"=50'
Sheet C17

File Name: J:\620\620.001\DWGS\620001-c017.dgn
Plot Date: 2/4/2020

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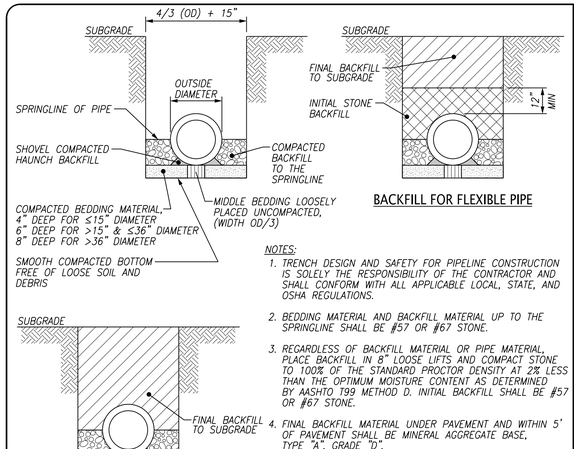
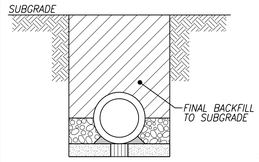


BACKFILL FOR FLEXIBLE PIPE



BACKFILL FOR RIGID PIPE

NOTES:

1. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
2. BEDDING MATERIAL AND BACKFILL MATERIAL UP TO THE SPRINGLINE SHALL BE #57 OR #67 STONE.
3. REGARDLESS OF BACKFILL MATERIAL OR PIPE MATERIAL, PLACE BACKFILL IN 8" LOOSE LIFTS AND COMPACT STONE TO 100% OF THE STANDARD PROCTOR DENSITY AT 2% LESS THAN THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY AASHTO T99 METHOD D. INITIAL BACKFILL SHALL BE #57 OR #67 STONE.
4. FINAL BACKFILL MATERIAL UNDER PAVEMENT AND WITHIN 5' OF PAVEMENT SHALL BE MINERAL AGGREGATE BASE, TYPE "A", GRADE "D".
5. FINAL BACKFILL BEYOND 5' OF PAVEMENT SHALL BE STRUCTURAL SOIL BACKFILL.

31 / C18 STORM PIPE TRENCH

NTS

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PROJ. MGR.	AMG		
DESIGNED BY	AMG		
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		1	ISSUED FOR CONSTRUCTION
		No.	Revision/Issue
			09/18/19
			Date

Project 620.001
Date 09/18/19
Scale 1"=50'
Sheet C18

File Name: J:\620\620.001\DWGS\620001c018.dgn
Plot Date: 9/19/2019

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