TOWN OF DANDRIDGE, TENNESSEE

BOARD OF ZONING APPEALS &
DANDRIDGE REGIONAL PLANNING COMMISSION
REGULAR MEETING
8 July 2025
4:30 p.m.

DANDRIDGE REGIONAL PLANNING COMMISSION

I. PUBLIC COMMENTS

II. READING OF THE MINUTES

- June 10, 2025 Meeting

III. BUSINESS PRESENTED BY THE MAYOR

IV. OLD BUSINESS

V. NEW BUSINESS

- Jefferson County (Stephanie Rustin) – Resolution 2025-14
- James Smith (Tuck REI LLC) (Epco Dr.) Map 058, Parcel 069.02 – Site Plan Review
- Paul Patel (V&P Developers Inc.) (N. Gay St.) Map 68J, Group D, Parcels 9,10,& 11 – 3 Lot Subdivision
- Paul Patel (V&P Developers Inc.) (N. Gay St.) Map 68J, Group D - Rezoning Request from R1 to B2
- Matt McQueen (Carlyle Construction) (Sycamore Stream Rd.) Map 57, Parcel 056.07 – Preliminary Plat for 50+ Lot Creekside Ridge Phase 3
- Tim Messer/Terry Romans (Valley Home Rd./Fancy Way) Map 068E, Group A, Parcel 027.00 – Preliminary Plat for 8-Lot Subdivision

VI. MISCELLANEOUS

VII. ADJOURNMENT

Zach Reese
Town Recorder
Agenda 070825

TOWN OF DANDRIDGE, TENNESSEE
REGIONAL PLANNING COMMISSION
REGULAR MEETING
June 10, 2025

I. CALL TO ORDER

A. The Dandridge Regional Planning Commission met in regular session on Tuesday, June 10, 2025, at 5:00 p.m.

B. Chairman MARK CHAMBERS called the meeting to order and called for roll.

II. ROLL CALL

- A roll call of the Planning Commission was conducted with the following members responding:
  - Chairman CHAMBERS
  - Mayor CHAMBERS
  - Commissioner COLLINS
  - Commissioner FOLEY
  - Alderman LONGMIRE
  - Commissioner OPEIL
  - Commissioner SCHOLLER
  - Commissioner WILLOUGHBY

ABSENT:

- Commissioner NELSON

- A quorum being present, the following business was conducted and entered on the record:

III. PUBLIC COMMENTS

None

IV. READING OF THE MINUTES

It came on a motion by Mayor CHAMBERS, seconded by Commissioner OPEIL to adopt the Regular Meeting Minutes for the May 13, 2025 meeting.

<u>On a voice vote, the motion passed unanimously, and was so ordered.</u>

V. BUSINESS PRESENTED BY THE MAYOR

None Presented

VI. OLD BUSINESS

None Presented

VII. NEW BUSINESS

- Paul Patel (V&P Developers Inc.) (N. Gay St.) Map 68J, Group D, Parcels 9,10, & 11 – 3 Lot Subdivision and Rezoning Request from R1 to B2

  <u>It came on a motion by Commissioner WILLOUGHBY, seconded by Mayor CHAMBERS, to Postpone to Next Meeting due to Absence of Owner</u>

  <u>On a voice vote, the motion passed unanimously, and was so ordered</u>

- David & Josh Cate (Greenhill Rd. – Growth Boundary) Map 067, Parcel 037.00 – Preliminary 16-30 Lot Subdivision

  Town Building Inspector Terry Reneau *– Ready to proceed with construction of interior roads and water. Drainage and utility plan submitted by engineer, Shady Grove has approved. Roads meet county requirements for slope. Shady Grove sent letter saying fire hydrants weren't required/not allowed because there is not enough flow. Everything else meets requirements.*

It came on a motion by Mayor CHAMBERS, seconded by Commissioner OPEIL, to Approve the Preliminary Plat as Presented

On a voice vote, the motion passed unanimously, and was so ordered

- Charlie Bryant (MB&R Contractors) (939 Nichols Rd.) Map 068F, Parcel 004.00 – 3-5 Lot Subdivision

  Removed from agenda at owner's request

VIII. MISCELLANEOUS

***ETDD Regional Planner Ekem Amonoo-Lartson** – will begin working with Terry soon on the plan for the year*

IX. ADJOURNMENT

It came on a motion by Mayor CHAMBERS, seconded by Commissioner FOLEY, to adjourn the June 10, 2025, meeting of the Dandridge Regional Planning Commission.

On a voice vote, the motion passed unanimously, and was so ordered.

_____ **ATTEST:** _____

Mark Chambers, Chairman Zach Reese, Town Recorder

TOWN OF DANDRIDGE REGIONAL PLANNING COMMISSION
REQUEST FORM

Presenter: Stephanie Rustin Date: 6-23-25

Property Owner(s): Jefferson County

Property Address: _____

(House#, Street Name, Subdivision Name if applicable)

Map and Parcel Number(s): _____

Phone Number(s) _____ or _____

(Please list number where you can be reached during the day)

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Special Note: According to the Tennessee Coded Annotated (T.C.A) all subdivision plats (in areas without city sewer/water services) presented to the Town of Dandridge's Planning Commission are required by law to have the signature of the Jefferson County Health Department representative prior to **FINAL PLAT** submission.

_____	Site Plan Review	$50.00
_____	Rezoning Request_____ to_____	$50.00
_____	Subdivision Plats (Preliminary/Final)	
	• 2 lots or less	$20.00
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	• 16-30 lots	$70.00
	• 31-50 lots	$80.00
	• 50+ lots	$100.00
_____	Annexation	$25.00
_____	Board of Zoning Appeals (Explanation)	$50.00
Other		
_____	Point(s) of Clarification	No Fee

Total amount of fees paid: _____ Receipt Number: _____

RESOLUTION 2025-14

A RESOLUTION AMENDING THE ZONING RESOLUTION OF JEFFERSON COUNTY, TENNESSEE TO REFLECT CERTAIN PROHIBITED USES AND PERMITTED USES IN THE A-1, R-1, R-2, RR AND C-2 ZONING DISTRICTS

WHEREAS, The Jefferson County Regional Planning Commission, has reviewed the provisions of the Jefferson County Zoning Resolution (hereinafter "Zoning Resolution") and believes that certain provisions of the Zoning Resolution should be amended;

NOW, THEREFORE, BE IT RESOLVED by the Jefferson County Regional Planning Commission that it recommends the Board of Commissioners of Jefferson County (hereinafter referred to as the "Board") amend the Zoning Resolution as follows:

Section 1. Article 9.3 A.12. Permitted Uses is hereby amended by deleting in this Section 12, after the phrase "including: marinas," the words "*travel trailer parks*,".

Section 2. Article 9.3 B. Uses Prohibited: is hereby amended by deleting the current sentence/section and substituting the following sentence: "*Campgrounds, manufactured residential dwelling parks (mobile home parks), recreation vehicles, travel trailer parks, motor courts, travel trailer courts, and recreation vehicle parks; and any other use not specifically identified in permitted uses, unless the Jefferson County Board of Zoning Appeals determines that a proposed use is similar to one listed in permitted uses and is within the intent of the zoning district. The storage of a single recreational vehicle titled to the property owner/*renter *is not prohibited by this section. In no event can the use of a recreational vehicle, travel trailer, camper, motor home, tent or readily removable shed or other structures that do not meet the adopted building codes be considered a principal use, primary use, or accessory use in the A-1 zone*."

Section 3. Article 9.4.B Prohibited Uses is hereby amended by deleting the current sentence/section and substituting the following sentence: "*Campgrounds, manufactured residential dwelling parks (mobile home parks), recreation vehicles, travel trailer parks, motor courts, travel trailer courts, and recreation vehicle parks; and any other use not specifically identified in permitted uses, unless the Jefferson County Board of Zoning Appeals determines that a proposed use is similar to one listed in permitted uses and is within the intent of the zoning district. The storage of a single recreational vehicle titled to the property owner/*renter *is not prohibited by this section. In no event can the use of a recreational vehicle, travel trailer, camper, motor home, tent or readily removable shed or other structures that do not meet the adopted building codes be considered a principal use, primary use, or accessory use in the R-1 zone*."

Section 4. Article 9.5.A.1 Permitted Uses is hereby amended by adding after the phrase "and multi-family dwellings" the words "and manufactured residential dwelling park (mobile home park)."

Section 5. Article 9.5.B is hereby amended by deleting the current sentence/section and substituting the following sentence: "*Campgrounds, recreation vehicles, travel trailer parks, motor courts, travel trailer courts, and recreation vehicle parks; and any other use not specifically identified in permitted uses, unless the Jefferson County Board of Zoning Appeals determines that a proposed use is similar to one listed in permitted uses and is within the intent of the zoning district. The storage of a single recreational vehicle titled to the property owner/*renter *is not prohibited by this section. In no event can the use of a recreational vehicle, travel trailer, camper, motor home, tent or readily removable shed or other structures that do not meet the adopted building codes be considered a principal use, primary use, or accessory use in the R-2 zone.*"

Section 6. Article 9.6.B Prohibited Uses is hereby amended by deleting the current sentence/section and substituting the following sentence: "*Campgrounds, manufactured residential dwelling parks (mobile home parks), mobile homes single chassis, recreation vehicles, travel trailer parks, motor courts, travel trailer courts, and recreation vehicle parks; and any other use not specifically identified in permitted uses, unless the Jefferson County Board of Zoning Appeals determines that a proposed use is similar to one listed in permitted uses and is within the intent of the zoning district. The storage of a single recreational vehicle titled to the property owner/*renter *is not prohibited by this section. In no event can the use of a recreational vehicle, travel trailer, camper, motor home, tent or readily removable shed or other structures that do not meet the adopted building codes be considered a principal use, primary use, or accessory use in the RR zone.*"

Section 7. Article 9.8 A. Permitted Uses: is hereby amended by adding a paragraph 18, which states: "*Campgrounds, recreation vehicles, travel trailer parks, motor courts, travel trailer courts, and recreation vehicle parks.*"

BE IT FURTHER RESOLVED that these regulations shall take effect immediately upon passage, the public welfare requiring it.

BE IT FURTHER RESOLVED, if any provision of this resolution or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this resolution which can be given effect without the invalid provision or application and to that end the provisions of this resolution are declared to be severable.

Date Considered by Jefferson County Regional Planning Commission: May 27, 2025

Approve __X__ Denied ____

_____
Chairman Jefferson County Regional Planning Commission

_____
Secretary Jefferson County Regional Planning Commission

Date Considered by Jefferson City Regional Planning Commission: _____

Approved ____ Denied ____

_____
Chairman Jefferson City Regional Planning Commission

_____
Secretary Jefferson City Regional Planning Commission

Date Considered by Town of Dandridge Regional Planning Commission: _____

Approved ____ Denied ____

_____
Chairman Dandridge Regional Planning Commission

_____
Secretary Dandridge Regional Planning Commission

Date Considered by Town of White Pine Regional Planning Commission: _____

Approved ____ Denied ____

_____
Chairman White Pine Regional Planning Commission

_____
Secretary White Pine Regional Planning Commission

Date of Public Hearing- Jefferson County Board of Commissioners: _____

Date of Voting Meeting Jefferson County Board of Commissioners: _____

Ayes: _____ Nays: ____ - Passed: ____ Failed: ____

_____
Chairman Jefferson County Board of Commissioners

_____
Jefferson County Clerk

Approved ____ Vetoed ____

_____

County Mayor, Mark Potts **Approved** ____ **Denied** ____

_____

Chairman Dandridge Regional Planning Commission

DANDRIDGE PLANNING COMMISSION

REQUEST FORM

Presenter: James Smith Date: 6-20-25

Property Owner(s): TJCK REI LLC

Property Address: EPCO DR

(House#, Street Name, Subdivision Name if applicable)

Map and Parcel Number(s): 058- 069.02

Phone Number(s)_____ or_____

(Please list number where you can be reached during the day)

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✓	Site Plan Review	$50.00
_____	Rezoning Request_____ to_____	$50.00
_____	Subdivision Plats (Preliminary/Final)	
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	• 16-30 lots	$70.00
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	• 50+ lots	$100.00
_____	Annexation	$25.00
_____	Board of Zoning Appeals (Explanation)	$50.00
_____	Point(s) of Clarification	No Fee

Total amount of fees paid:_____ Receipt Number:_____

LEGEND
- IP Iron Pin
- (F) Found
- (S) Set
- POB Point of Beginning
- PP Electric Pole
- WM Water Meter
- BRADFORD PEAR
- EVERGREEN SHRUBS

NOTES:

NEW 1/2" IRON PINS SET ON ALL CORNERS UNLESS OTHERWISE NOTED.

UTILITY & DRAINAGE EASEMENTS: 10' EACH SIDE OF ALL LINES.

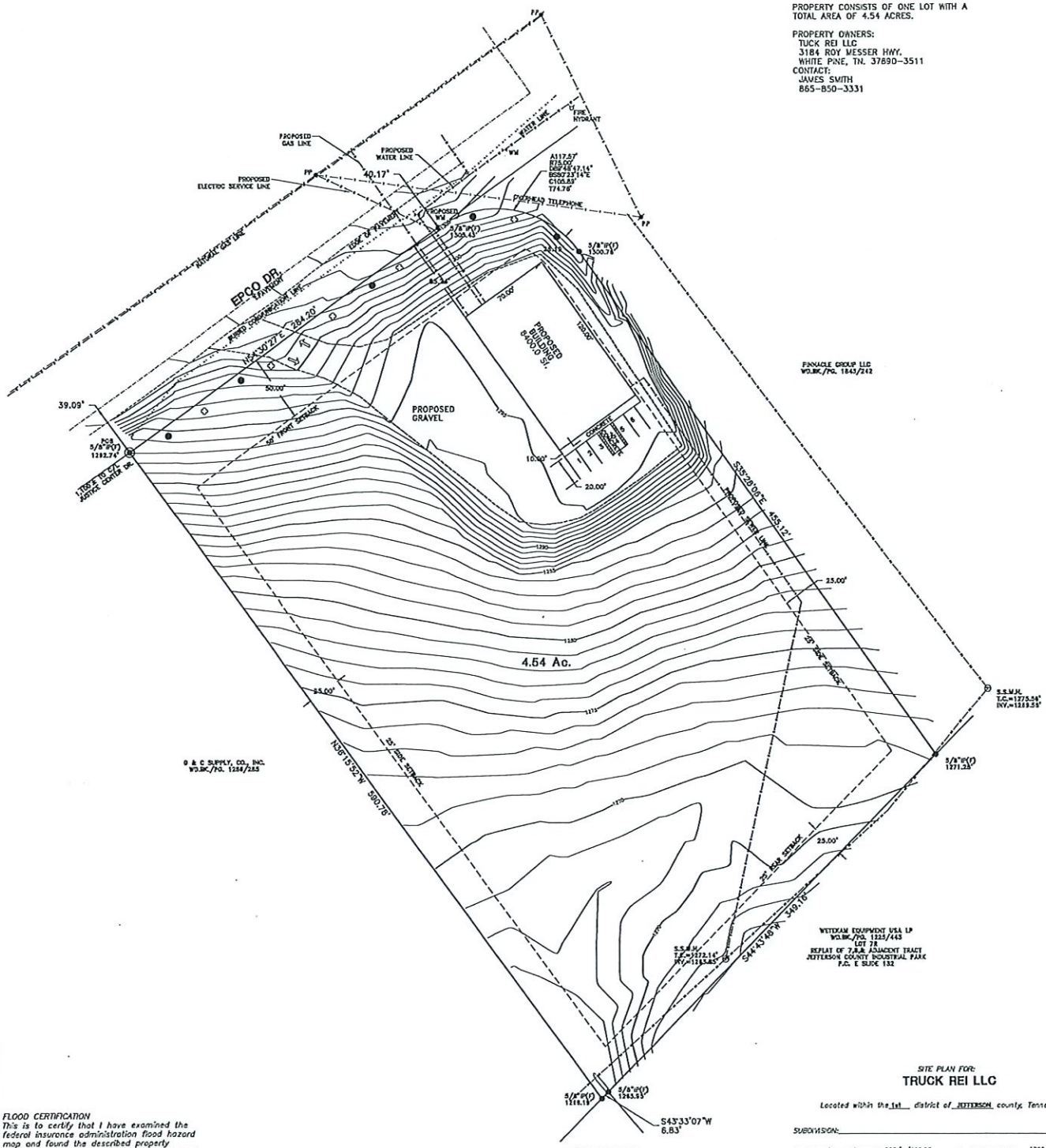
PROPERTY IS ZONED: M-1

BUILDING SETBACKS:
FRONT: 50'
SIDE: 25'
REAR: 25'

PROPERTY CONSISTS OF ONE LOT WITH A TOTAL AREA OF 4.54 ACRES.

PROPERTY OWNERS:
TUCK REI LLC
3184 ROY MESSER HWY.
WHITE PINE, TN. 37890-3511
CONTACT:
JAMES SMITH
865-850-3331

Tn. State Grid



FLOOD CERTIFICATION
This is to certify that I have examined the federal insurance administration flood hazard map and found the described property IS NOT located within a special flood hazard area.

CERTIFICATE OF ACCURACY AND PRECISION
I hereby certify that this is a category IV survey and the ratio of precision of the unadjusted survey is 1:15,000 or greater as shown hereon and that this survey was performed in compliance with current Tennessee Minimum Standards of Practice.

Part or All of this survey was performed using a
CARLSON BRX7 MULTIPLE FREQUENCY RECEIVER
Published accuracy: 10mm+1ppm horizontal, 15mm+1ppm vertical
Type of GPS field procedure: Real Time Kinematic Network
Datum/Epoch: Horizontal-NAD 83, Vertical-NAVD 88
Published/fixed-control used: TDOT DGPS Reference Network
Geoid Model: 2018
Combined grid factor: non-applied

EDDY R. GARRETT, TENNESSEE CERTIFICATE NO. 1544

EDDY R. GARRETT REGISTERED LAND SURVEYOR AGRICULTURE TENNESSEE 6/13/2025 No. 1544

SITE PLAN FOR:
TRUCK REI LLC

Located within the 1st *district of* JEFFERSON *county, Tennessee*

SUBDIVISION: _____

Tax Map/Group/Parcel # 058/-/049.02 *Deed Ref. Bk/Pg:* 1799/632

Bearing Base: Tn. State Grid

GARRETT & ASSOCIATES

EDDY R. GARRETT, RLS#1544
4839 SHADY RD., STRAWBERRY PLAINS, TN 37871
PHONE: (865)-933-5622 FAX: (865)-933-1277
EMAIL: GARRETT15440@BELLSOUTH.NET
36°01'14.318" -83°39'21.028"

LAND SURVEYORS

DATE 6/13/2025
REVISIONS _____
DRAWN BY TDH

811 Know what's below. Call before you dig.

SCALE 1"= 50'
DRAWING NO. 25-113

C:\DATA_DWG\2025\25-113.dwg 6/13/2025 10:39:24 AM, DWG To PDF.pc3

TOWN OF DANDRIDGE REGIONAL PLANNING COMMISSION
REQUEST FORM

Presenter: Mr. Paul Patel Date: 11th April 2025

Property Owner(s): V & P Developers INC.

Property Address: N Gay st

(House#, Street Name, Subdivision Name if applicable)

Map and Parcel Number(s): 68J- D - 9,10+11

Phone Number(s) _____ or _____

(Please list number where you can be reached during the day)

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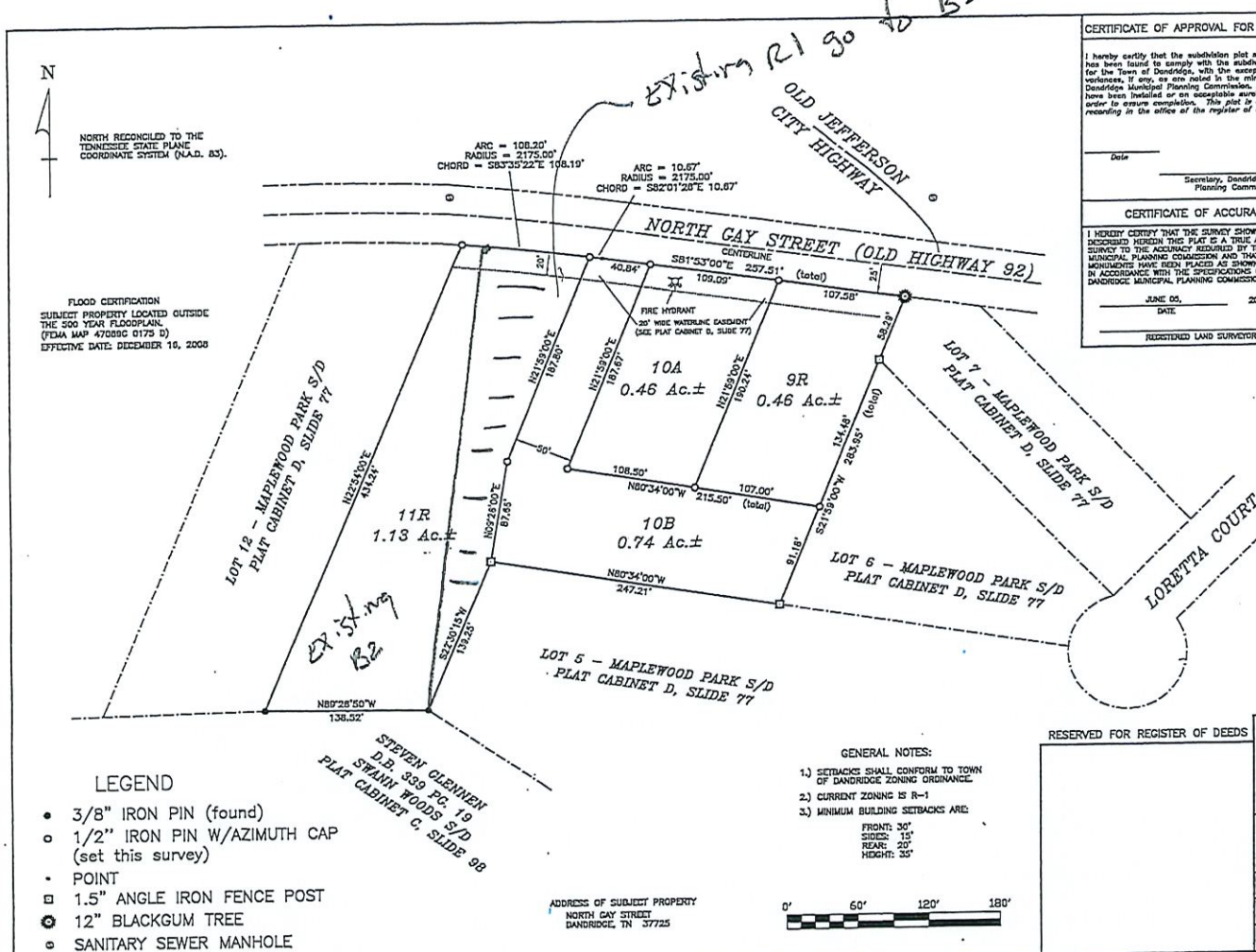
_____	Site Plan Review	$50.00
✓	Rezoning Request R1 to B2	$50.00
✓	Subdivision Plats (Preliminary/Final)	
	• 2 lots or less	$20.00
	• 3-5 lots	$30.00
	• 6-15 lots	$60.00
	• 16-30 lots	$70.00
	• 31-50 lots	$80.00
	• 50+ lots	$100.00
_____	Annexation	$25.00
_____	Board of Zoning Appeals (Explanation)	$50.00
_____	Point(s) of Clarification	No Fee

Total amount of fees paid: $ 80.00 Receipt Number: 24390



LEGEND

- ● 3/8" IRON PIN (found)
- ○ 1/2" IRON PIN W/AZIMUTH CAP (set this survey)
- • POINT
- ▫ 1.5" ANGLE IRON FENCE POST
- 12" BLACKGUM TREE
- SANITARY SEWER MANHOLE

ADDRESS OF SUBJECT PROPERTY
NORTH GAY STREET
DANDRIDGE, TN 37725

0' 60' 120' 180'

GENERAL NOTES:

1.) SETBACKS SHALL CONFORM TO TOWN OF DANDRIDGE ZONING ORDINANCE.
2.) CURRENT ZONING IS R-1
3.) MINIMUM BUILDING SETBACKS ARE:
FRONT: 30'
SIDES: 15'
REAR: 20'
HEIGHT: 35'

CERTIFICATE OF APPROVAL FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the subdivision regulations for the Town of Dandridge, with the exception of such variances, if any, as are noted in the minutes of the Dandridge Municipal Planning Commission. All improvements have been installed or an acceptable surety posted in order to ensure completion. This plat is approved for recording in the office of the register of deeds.

Date

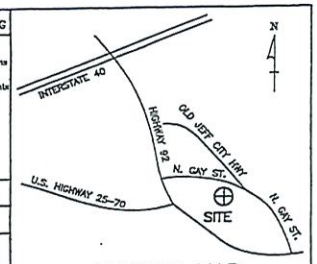
Secretary, Dandridge Municipal Planning Commission

CERTIFICATE OF ACCURACY

I HEREBY CERTIFY THAT THE SURVEY SHOWN AND DESCRIBED HEREON THIS PLAT IS A TRUE AND CORRECT SURVEY TO THE ACCURACY REQUIRED BY THE DANDRIDGE MUNICIPAL PLANNING COMMISSION AND THAT THE MONUMENTS HAVE BEEN PLACED AS SHOWN HEREON, IN ACCORDANCE WITH THE SPECIFICATIONS OF THE DANDRIDGE MUNICIPAL PLANNING COMMISSION.

JUNE 05, 20 25
DATE

REGISTERED LAND SURVEYOR



VICINITY MAP
(NOT TO SCALE)

THIS PROPERTY SUBJECT TO ANY AND ALL EASEMENTS, COVENANTS, OR RESTRICTIONS EITHER WRITTEN OR UNWRITTEN.

THIS RTK GNSS SURVEY WAS PERFORMED USING CARLSON BR67 DUAL FREQUENCY RECEIVERS. THE GEOID MODEL USED IS GEOID18 BASED ON AN OPUS SOLUTION AND THE COMBINED GRID FACTOR IS 0.999905. ALL DISTANCES ARE REFERENCED TO GROUND. THE PRECISION OF THE MEASUREMENTS DOES NOT EXCEED 0.06'.

I CERTIFY THAT THE INFORMATION FOR AND ON THIS PLAT WAS OBTAINED FROM AN ACTUAL FIELD SURVEY PERFORMED TO CATEGORY V STANDARDS UNDER MY SUPERVISION AND DIRECTION.

DANIEL R. COFFEY
REGISTERED LAND SURVEYOR
XVI
AGRICULTURE
ON 2025
COMMERCE
TENNESSEE NO. 1578

TAX REF.: TAX MAP 68-J, GROUP D, PARCELS 9, 10, & 11
DEED REF.: D.B. 1870 PG. 27
PLAT REF.: PLAT CABINET D, SLIDE 77

RESERVED FOR REGISTER OF DEEDS

RE-PLAT OF LOTS 9-11 MAPLEWOOD PARK

(DIVISION OF THE V & P DEVELOPERS, Inc. PROPERTY)

1ST CIVIL DISTRICT JEFFERSON CO.,TN

AZIMUTH ENGINEERING, INC.
Engineers • Surveyors • Planners
P.O. BOX 1466 GREENEVILLE, TN 37744 (423) 638-9191

SCALE: 1"=60'	DATE: 06/05/2025
JOB NO. 25SU025	DRAWN BY CAD: ADO
FILE LOC. NET	FILE NAME. 25SU025

CERTIFICATE OF OWNERSHIP AND DEDICATION

I(WE) HEREBY CERTIFY THAT I AM(WE ARE) THE OWNER(S) OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT I(WE) HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY(OUR) FREE CONSENT, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS, AND OTHER OPEN SPACES TO PUBLIC OR PRIVATE USE AS NOTED.

OWNER DATE

CERTIFICATION OF STREETS

I certify that the streets and related appurtenances installed, or proposed for installation along with the financial guarantee provided, fully meet the specifications established by the Dandridge Municipal Planning Commission.

Date

Authorized Representative of Town

CERTIFICATE OF THE APPROVAL OF THE PUBLIC WATER SYSTEMS

I certify that the water system installed, or proposed for installation along with the financial guarantee provided, fully meets requirements of the State of Tennessee.

Date

Authorized Representative of Utility Provider

CERTIFICATE OF SEWERAGE SYSTEM

I certify that the sewage disposal system installed, or proposed for installation along with the financial guarantee provided, fully meets requirements of the State of Tennessee and is approved as shown with all restrictions/conditions as noted.

Date

Authorized Representative of Utility Provider

CERTIFICATE OF THE APPROVAL OF STREET NAMES

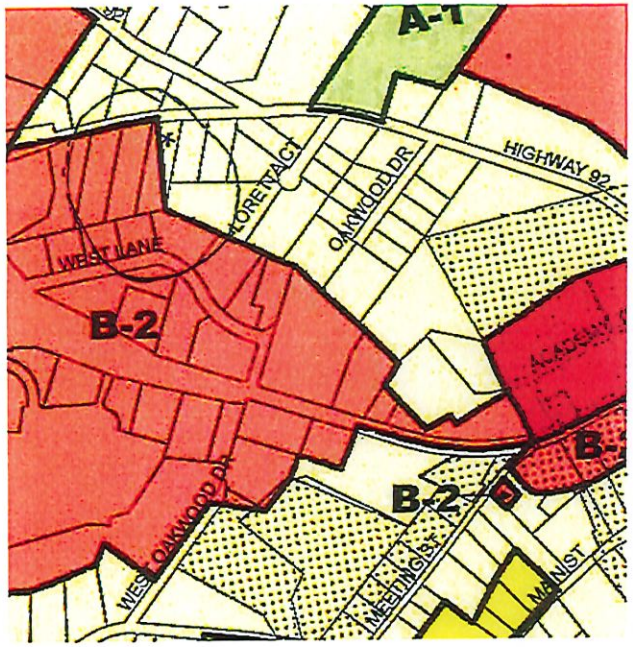
I certify that the street names on this plat have been reviewed and are acceptable in accordance with the policies of the Jefferson County Communications District.

Date

Authorized Representative of the Jefferson County Communications District.

DANDRIDGE MUNICIPAL PLANNING COMMISSION

TOTAL ACRES 2.79 ±	TOTAL LOTS 4
ACRES NEW ROAD 0.00	MILES NEW ROAD 0.00
DEVELOPER V & P DEVELOPERS, Inc.	CIVIL DISTRICT 1ST
SURVEYOR AZIMUTH ENGINEERING	CLOSURE ERROR 1/10,000


A-1
HIGHWAY 92
LORENTACT
OAKWOOD DR
WEST LANE
B-2
B-2
WEST OAKWOOD DR
MEETINGER
MAIN ST

TOWN OF DANDRIDGE REGIONAL PLANNING COMMISSION
REQUEST FORM

Presenter: Matt McQueen Date: 6-23-25

Property Owner(s): Carlyle Construction

Property Address: Sycamore Stream Rd

(House#, Street Name, Subdivision Name if applicable)

Map and Parcel Number(s): 57 -056.17

Phone Number(s)_____ or_____

(Please list number where you can be reached during the day)

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_____	Point(s) of Clarification	No Fee

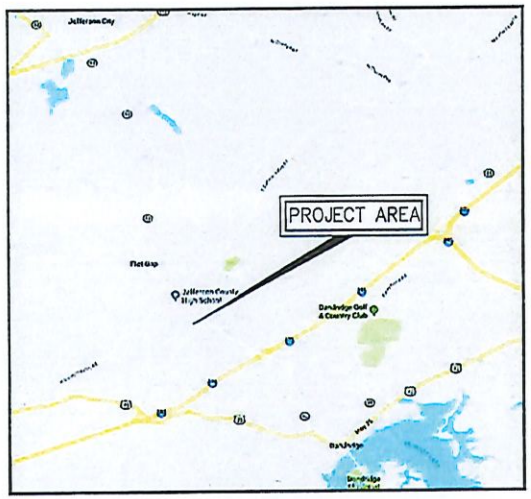
Total amount of fees paid:_____ Receipt Number:_____

CREEKSIDE RIDGE SUBDIVISION - PHASE 3
TOWN OF DANDRIDGE, TN

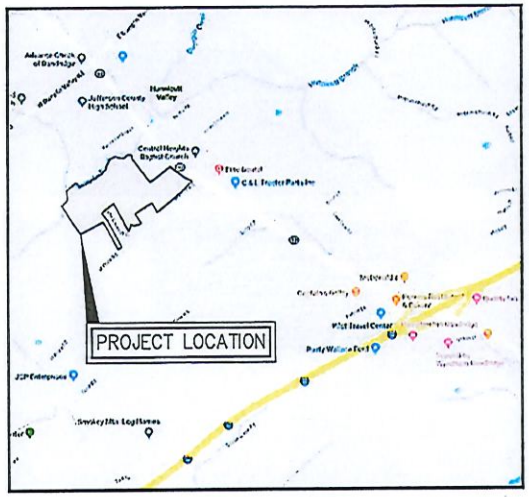
JUNE 2025

COMMISSION NO.: 4246A

PROJECT CONTACTS
PLANNING
Jefferson County Zoning Department 360 W Main Street Dandridge, Tennessee 37725 Contact: Tim Gent (865) 397-6016
PUBLIC WORKS
City of Dandridge 367 W Highway 25 70 Dandridge, Tennessee 37725 Contact:Randy Phelps (865) 397-3156
WATER
Water Department Pottersville Road Dandridge, Tennessee 37725 (865) 397-3614
SEWER
Water Department Pottersville Road Dandridge, Tennessee 37725 (865) 397-3615
ELECTRICAL
Appalachian Electric Cooperative 1109 Hwy 25E New Market, Tennessee 37820 (865) 475-3032
TELEPHONE
Frontier 520 Patriot Drive Dandridge, Tennessee 37725 (336) 647-5621
CABLE
Frontier 520 Patriot Drive Dandridge, Tennessee 37725 (336) 647-5621
GAS
Johnson Cocke County Utility District 122 Hwy 25 E. Newport, TN. 37821 (865) 475-7311
CIVIL ENGINEER
Mattern & Craig, Inc. Engineers - Surveyors 400 East Main Street Johnson City, Tennessee 37601 (423) 979-2220 Contact: Randy W. Bowman, PE
SURVEYOR
Mattern & Craig, Inc. Engineers - Surveyors 400 East Main Street Johnson City, Tennessee 37601 (423) 979-2220 Contact: Randy W. Bowman, PE
CLIENT / DEVELOPER
Philip Carlyle 216 West Walnut Road Morristown, TN 37813 (423) 331-4523 Contact: Philip Carlyle



VICINITY MAP
NO SCALE



LOCATION MAP
NO SCALE

SHEET LIST

SHEET	TITLE
C1	COVER
C2	ABBREVIATIONS AND LEGEND
C3	EXISTING CONDITIONS
C4.0	SITE LAYOUT
C4.1	SITE DETAILS
C5.0	GRADING AND STORMWATER PLAN
C5.1	STORMWATER DETAILS & TABLES
C5.2	STORMWATER DETAILS
C5.3	EARTHWORK NOTES
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DANDRIDGE, TN

CREEKSIDE RIDGE SUBDIVISION - PHASE 3
TOWN OF DANDRIDGE, TN

Mattern & Craig
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2-WAY	TWO-WAY INTERSECTION
A/B	AS BUILT
AB	ANCHOR BOLT, AGGREGATE BASE
ABAN	ABANDON OR ABANDONED
ABBR	ABBREVIATION
ABUT	ABUTMENT
ABV	ABOVE
AC	ACRE, ALTERNATING CURRENT, AIR CONDITIONING
ACSM	AMERICAN CONGRESS ON SURVEYING & MAPPING
ACT	ACOUSTICAL
ADD	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AGGR	AGGREGATE
AI	ANGLE IRON
ALT	ALTERNATE
ALTA	AMERICAN LAND TITLE ASSOCIATION
ALUM	ALUMINUM
ANC	ANCHOR
APPROX	APPROXIMATE
APRV	APPROVE(D)
APT	APARTMENT
ARCH	ARCHITECTURAL
ARV	AIR RELEASE VALVE
ASSY	ASSEMBLY
AST	ABOVEGROUND STORAGE TANK
AWWA	AMERICAN WATER WORKS ASSOCIATION
AVE	AVENUE
AVG	AVERAGE
AX	AXLE
AZ	AZIMUTH
BARB	BARBED WIRE (FENCE)
BB	BRUSH BARRIER
BDG	BRIDGE
BDY	BOUNDARY
BEG	BEGIN, BEGINNING
BF	BUFFER ZONE
BFP	BACK FLOW PREVENTER
BFV	BUTTERFLY VALVE
BIT	BITUMINOUS
BJ	BELL JOINT
BKF	BACKFILL
BL	BASE LINE
BLDG	BUILDING
BLKG	BLOCKING
BLVD	BOULEVARD
B/M	BLANKETS & MATTING
BM	BENCH MARK, BEAM
BND	BOUND
BOL	BOLLARD
BOTT	BOTTOM
BOV	BLOW OFF VALVE
BP	BYPASS
BR	BRANCH
BRG	BEARING
BSMT	BASEMENT
BV	BUTTERFLY VALVE
BW	BOTTOM OF WALL
C	CHANNEL, COLD, CABLE
C/C or C TO C	CENTER TO CENTER
C&G	CURB & GUTTER
CC&G	CONCRETE C&G
CAB	CABINET
CAD	COMPUTER AIDED DRAFTING
CADD	COMPUTER AIDED DRAFTING & DESIGN
CALC	CALCULATE, CALCULATION
CAP	CAPACITY
CB	CATCH BASIN
CD	CHECK DAM
CE	CONSTRUCTION ENTRANCE/EXIT
CEM	CEMETERY
CF	CUBIC FEET
CG	CHANGE OF GRADE
CHK	CHECK
CHKD	CHECKED
CI	CAST IRON
CIP	CULVERT INLET PROTECTION, CAST-IN-PLACE, CAST IRON PIPE
CIRC	CIRCULAR
CKT	CIRCUIT
CL	CENTER LINE
CLF	CHAIN LINK FENCE
CLR	CLEAR, CLEARANCE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNITS
CND	CONDUIT
CNTL	CONTROL
CO	CLEAN OUT
COORD	COORDINATE GEOMETRY
COMB	COMBINATION
CONC	CONCRETE
CONN	CONNECT, CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COR	CORNER
COV	COVER
CP	COORDINATE POINT, CONTROL POINT
CPED	CABLE PEDESTAL
CPLG	COUPLING
CPP	CORRUGATED PLASTIC PIPE
CR	CREEK
CRS	CONSTRUCTION ROAD STABILIZATION
CR STONE	CRUSHED STONE
CSW	CONCRETE SIDEWALK
CTR	CENTER
CTY	COUNTY
CU	CUBIC, COPPER
CULV	CULVERT
CV	CHECK VALVE
CY	CUBIC YARD
D	DEPTH OR DEGREE OF CURVE
DAT	DATUM
DB	DEED BOOK
DC	DUST CONTROL
DD	TEMPORARY DIVERSION DIKE
DEG	DEGREE
DEPT	DEPARTMENT
DEMO	DEMOLISH, DEMOLITION
DF	DRINKING FOUNTAIN
DI	DROP INLET, DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISC	DISCONNECT
DIV	DIVISION
DMH	DROP MANHOLE
DN	DOWN
DR	DRIVE
DS	DOWN SPOUT, DEWATERING STRUCTURE
DTL	DETAIL
DV	DIVERSION
DW, D/W	DRIVEWAY
DWL	DWELLING
DWG	DRAWING
E	EAST, ELECTRIC
EA	EACH
EBL	EASTBOUND LANE
EC	END OF CURVE
EF	EACH FACE
EG	EDGE OF GRAVEL
EJ	EXPANSION JOINT
EL, ELEV	ELEVATION
ELEC	ELECTRICAL
EM	ELECTRIC METER
ENGR	ENGINEER
ENTR	ENTRANCE
EOL	END OF LINE
EP	EDGE OF PAVEMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
EPED	ELECTRIC PEDESTAL
EQ	EQUAL
EQPT	EQUIPMENT
ESC	EROSION AND SEDIMENT CONTROL
ESMT	EASEMENT
EST	ESTIMATE
EV	EVERGREEN
EW	EACH WAY, ENDWALL
EX, EXIST	EXISTING
EXC	EXCAVATE
EXP	EXPANSION
EXT	EXTERIOR, EXTENSION
F	FOUND
FAC	FACILITY
FC	FACE OF CURB
FD	FLOOR DRAIN, TEMPORARY FILL DIVERSION
FDN	FOUNDATION
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FES	FLARED END SECTION
FF	FINISH FLOOR
FFE	FINISHED FLOOR ELEVATION
FGL	FIBERGLASS
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH
FIXT	FIXTURE
FL	FLOOR
FLD	FIELD
FLEX	FLEXIBLE
FLG	FLANGE
FM	FORCE MAIN
FO	FIBER OPTIC
FP	FENCE POST
FR	FRAME, FLUTER RING
FR RD	FRONTAGE ROAD
FS	FIRE SERVICE
FT	FOOT
FTG	FOOTING, FITTING
FTK	FUEL TANK
FUST	FILL PORT – UNDERGROUND STORAGE TANK
FUT	FUTURE
FWD	FORWARD
FWY	FREEWAY
G	GAS (NATURAL)
GA	GABION
GAL	GALLON
GALV	GALVANIZED
GAR	GARAGE
GC	GENERAL CONTRACTOR
GC	GEOTEXTILE
GEN	GENERAL
GEO	GEOGRAPHIC
GIS	GEOGRAPHIC INFORMATION SYSTEM
GM	GAS METER
GND	GROUND
GR	GRAVEL
GOVT	GOVERNMENT
GPM	GALLONS PER MINUTE
GPS	GLOBAL POSITIONING SYSTEM, GALLONS PER SECOND
GRTG	GRATING
GT	GROUT, GRADIENT TREATMENT
GV	GAS VALVE, GATE VALVE
GW	GRAY WATER
H	HOT
HAZMAT	HAZARDOUS MATERIAL
HB	HOSE BIBB
HCAP	HANDICAP
HD	HEAVY DUTY, HEAD
HDPE	HIGH DENSITY POLYETHYLENE
HGT	HEIGHT
HK	HOOK
HM	HOLLOW METAL
HOR, HORIZ	HORIZONTAL
HP	HORSE POWER, HIGH PRESSURE
HPT	HIGH POINT
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HYD	HYDRANT, HYDRAULIC
HWY	HIGHWAY
I	IRON, INTERSTATE
ICV	IRRIGATION CONTROL VALVE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INSP	INSPECT
INSUL	INSULATION
INV	INVERT
IP	IRON PIN, INLET PROTECTION
IR	IRON ROD
IRR	IRRIGATION
JB	JUNCTION BOX
JCT	JUNCTION
JT	JOINT
K	COPPER
KG	KILOGRAM
KW	KILOWATT
L	LENGTH, LONG
LBL	LABEL
LAT	LATERAL, LATITUDE
LC	LONG CHORD
LF	LINEAL FOOT
LG	LONG, LENGTH
LIC	LICENSE
LIM	LIMIT
LK	LAKE
LOC	LOCATION
LOD	LIMITS OF DISTURBANCE
LN	LINE, LANE LONG, LONGITUDE
LP	LIGHT POLE
LR	LONG RADIUS
LS	LEVEL SPREADER
LT	LEFT
LTD	LIMITED
LTG	LIGHTING
LPT	LIQUID PROPANE TANK
M	METER
MACH	MACHINERY
MAINT	MAINTENANCE
MAG	MAGNETIC
MAJ	MAJOR
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MAILBOX
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE, MOUNTING HEIGHT
MIN	MINIMUM, MINUTE
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MKR	MARKER
MM	MASTER METER, MILLIMETER
MO	MASONRY OPENING
MON	MONUMENT
MRV	MALE REFERENCE MARKER
MSDS	MATERIAL SAFETY DATA SHEET
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MU	MULCHING
MV	MAIN VALVE
MWL	MONITORING WELL
N	NORTH, NEW
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
NBC	NAIL AND CAP
NC	NORTH CAROLINA
NCDOI	NC DIVISION OF ENVIRONMENTAL HEALTH
NCDOIR	NC DEPT. OF ENVIRONMENT AND NATURAL RESOURCES
NCDOT	NC DEPT OF TRANSPORTATION
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NO	NUMBER
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NTS	NOT TO SCALE
O	OLD
O2	LIQUID OXYGEN
OC	ON CENTERS
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OP	OUTLET PROTECTION
OPER	OPERATOR
OPNG	OPENING
OPP	OPPOSITE
OPRV	OVER PRESSURE RELIEF VALVE
ORN	ORNAMENTAL
ORTHO	ORTHOGRAPHIC PHOTOGRAPHY
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
PB	PAPER BOX
PC	POINT OF CURVE
PCC	POINT OF COMPOUND
PED	PEDESTAL, PEDESTRIAN
PER	PERIMETER
PERF	PERFORATED
PERP	PERPENDICULAR
PF	PAVED FLUME
PG	PAGE, PRESSURE GAUGE
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PK	PARKER-KALON (SURVEY) NAIL
PKG	PARKING
PKWY	PARKWAY
PL	PLATE, PROPERTY LINE, PLACE
PLG	PLUG
PLYWD	PLYWOOD
PNL	PANEL
PNT	POINT
POL	POINT ON LINE
PP	POWER POLE
POB	POINT OF BEGINNING
POT	POINT OF TANGENT
PRC	POINT OF REVERSE CURVE
PROP	PROPERTY
PRV	PRESSURE REDUCING VALVE
PS	PUMP STATION, PERMANENT SECOND
PSI	POUNDS PER SQUARE INCH
PT	POINT, POINT OF TANGENT
PUB	PULL BOX
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	PRIVATE
PWR	POWER
QUAD	QUADRANGLE
QUAL	QUALITY
QTY	QUANTITY
(R)	RAW WATER
R	RADIUS, RISER
RAD	RADIUS
RAS	RETURN ACTIVATED SLUDGE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN, ROAD
RDCR	REDUCER
REBAR	REINFORCING STEEL
RECPT	RECEPTACLE
RECT	RECTANGULAR
REINF	REINFORCE, REINFORCEMENT
REF	REFERENCE
REL	RELOCATED
REPL	REPLACE
REQD	REQUIRED
REV	REVISION, REVERSE
RIV	RIVER
RLS	REGISTERED LAND SURVEYOR
RR	RAILROAD, RIP RAP
RRS	RAILROAD SPIKE
RTE	ROUTE RT RIGHT R/W, ROW
RW	RIGHT OF WAY
RWD	RIGHT OF WAY DIVERSION
RWM	RIGHT OF WAY MONUMENT
RXR	HIGHWAY-RAIL GRADE CROSSING MARKER
S	SANITARY SEWER, SOUTH, SWITCH
SAF	SAFETY FENCE
SALV	SALVAGE
SAN	SANITARY
SB	SETTING BASIN, SEDIMENT BASIN, SPLASH BLOCK
SC	SIGNAL CONTROL, STREAM CROSSING
SCC	STORMWATER CONVEYANCE CHANNEL
SCH	SCHOOL
SCHD	SCHEDULE
SCR	SCREEN
SD	STORM DRAIN, SUBSURFACE DRAIN
SDC	STREAM DIVERSION CHANNEL
SEC	SECOND(S), SECONDARY, SECURITY
SECT	SECTION
SEP	SEPTIC TANK
SER	SERVICE
SF	SILT FENCE
SHLD	SHOULDER
SHT	SHEET
SHTG	SHEETING
SIG	SIGNAL
SIM	SIMILAR
SL	SIDELINE
SLD	SATELLITE DISH
SIG	SIGN
SO, SOD	SODDING
SPEC	SPECIFICATION
SP	SIGNAL POLE
SPCS	STATE PLANE COORDINATE SYSTEM
SQ	SQUARE
SR	STATE ROUTE, SURFACE ROUGHENING
SS	STAINLESS STEEL
SSS	STRUCTURAL STREAMBANK STABILIZATION
ST	STREET, SEDIMENT TRAP, STATE
STA	STATION
STB	STRAW BALE BARRIER
STD	STANDARD
STL	STEEL
STR	STRAIGHT, STRUCTURE
STRUCT	STRUCTURAL
STY	STORY
SUCT	SUCTION
SUR	SURVEY
SURF	SURFACE
SURV	SURVEY
SW	SOLVENT WELD
S/W	SIDEWALK
SYMM	SYMMETRICAL
T	THREAD, TOP, TELEPHONE
TA	TURN ARROW
T&B	TOP AND BOTTOM
TBM	TEMPORARY BENCH MARK
TC	TURBIDITY CURTAIN
TDC	TURNED DOWN CURB
TDEC	TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION
TDOT	TENNESSEE DEPT. OF TRANSPORTATION
TELE	TELEPHONE
TEMP	TEMPORARY
TER	TERRACE
THK	THICK
TK	TANK
TLP	TRAFFIC LIGHT POLE
TN	TENNESSEE
TO	TOPSOILING
TOPO	TOPOGRAPHIC
TP	TELEPHONE POLE, TREE PROTECTION
TPED	TELEPHONE PEDESTAL
TR	TREE, TRAIL
TR-CON	TREE – CONIFER
TRAF	TRAFFIC
TRANS	TRANSFORMER
TRTD	TREATED
TS	TOP OF SLAB, TEMPORARY SECOND
TSC	TEMPORARY STREAM CROSSING
TSD	TEMPORARY SLOPE DRAIN
TV	TELEVISION
TW	TOP OF WALL
TWRA	TENNESSEE WILDLIFE RESOURCES AGENCY
TYP	TYPICAL
USACE	UNITED STATES ARMY CORPS OF ENGINEERS
UGE	UNDERGROUND ELECTRIC
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
USC	UTILITY STREAM CROSSING
USC&GS	UNITED STATES COAST AND GEODETIC SURVEY
USGS	UNITED STATES GEOLOGICAL SURVEY
US HWY	UNITED STATES HIGHWAY
UST	UNDERGROUND STORAGE TANK
UT	UTILITY
UTM	UNIVERSAL TRANSVERSE MERCATOR
V, VAL	VALVE
VA	VIRGINIA
VAP BAR	VAPOR BARRIER
VDMP	VIRGINIA DAMS MANAGEMENT PROGRAM
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VDEQ	VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
VDH	VIRGINIA DEPARTMENT OF HEALTH
VDOT	VIRGINIA DEPARTMENT OF TRANSPORTATION
VEG	VEGETATION
VEH	VEHICLE
VERT	VERTICAL
VGN	VIRGINIA GEOGRAPHIC INFORMATION NETWORK
VIF	VERIFY IN THE FIELD
VLT	VAULT
VH	VENT
VOL	VOLUME
VPI	VERTICAL POINT OF INTERSECTION
VSD	VERTICAL SIGHT DISTANCE
VSS	VEGETATIVE STREAMBANK STABILIZATION
VVLT	VALVE VAULT
W	WIDE FLANGE, WIDE, WATER
W/	WITH
W/O	WITHOUT
WBL	WEST BOUND LANE
WD	WOOD
WF	WOOD FENCE
WH	WELL HOUSE OR SPRING HOUSE
WL	WATER LINE, WATER LEVEL
WM	WATER METER
WPR	WATERPROOFING
WS	WATER SURFACE
WT	WATERTIGHT, WEIGHT
WV	WATER VALVE
WVDOT	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
WW	WINGWALL
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
X-ING	CROSSING
XREF	CROSS REFERENCE
XWLK	CROSSWALK
YD	YARD
ZN	ZONE

STANDARD LINEWORK LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUILDING WITH PORCH OR STOOP
		FOUNDATION ONLY
		CONCRETE CURB
		CONCRETE CURB & GUTTER
		CONCRETE WALK OR SLAB
		PAVEMENT
		UNPAVED OR GRAVEL ROAD
		RAILROAD
		GUARDRAIL
		WIRE FENCE
		CHAINLINK FENCE
		WOODEN FENCE
35	35	CONTOUR, CONTOUR WITH ELEVATION
		TREE LINE
		CENTERLINE CREEK, SWALE OR DITCH
		WETLANDS LIMITS
		FLOODWAY-FLOODPLAIN
OR	OR	PROPERTY LINE
		CENTERLINE
		BASELINE
		LIMITS OF WORK
		DIRECTION OF FLOW
SD	SD	STORM DRAIN AND ENDWALL
S	S	SANITARY SEWER
FM	FM	FORCE MAIN – PROFILE
FM	FM	FORCE MAIN – PLAN
G	G	GAS MAIN OR SERVICE LINE
W	W	WATER MAIN OR SERVICE LINE
E	E	ELECTRICAL LINE
UE	UE	UNDERGROUND ELECTRICAL LINE
T	T	TELEPHONE LINE
UT	UT	UNDERGROUND TELEPHONE LINE
FO	FO	FIBER OPTIC LINE
FO-U	FO-U	UNDERGROUND FIBER OPTIC LINE
C	C	CABLE LINE
UTL	UTL	UTILITY CONDUIT
E/T	E/T	ELECTRICAL\TELEPHONE LINES
E/T/C	E/T/C	ELECTRICAL\TELEPHONE\CABLE LINES
OR PE	OR PE	PERMANENT EASEMENT
OR TE	OR TE	TEMPORARY EASEMENT
		ABANDON OR REMOVE
		PAVED DITCH
		DRIVEWAY CULVERT
OR	OR	CULVERT WITH FLARED END SECT.

STANDARD SYMBOL LEGEND

EXIST	PROP	DESCRIPTION
		ANGLE IRON
AVV	AIV	AIR RELEASE VALVE
		AXLE
BFP	BFP	BACK FLOW PREVENTER
BH	BH1	GEOLOGIC BORE HOLE
		BASELINE
	BM	BENCHMARK
BOL	BOL	BOLLARD
BOV	BOV	BLOW OFF VALVE
		CATCH BASIN
		CHECK DAM
		CENTERLINE
CO	CO	CLEAN OUT
CP1	CP1	COORDINATE POINT
		CABLE PEDESTAL
		BENCHMARK
		DROP INLET
ELEV	ELEV	SPOT ELEVATIONS
EM	EM	ELECTRIC METER
		ELECTRIC PEDESTAL
		FIRE HYDRANT
		FLOW ARROW
		FLAG POLE
		FENCE POST
F-UST		FILL PORT-UST
GM	GM	GAS METER
		GROUND SHOT
		GUY WIRE
GV	GV	GAS VALVE
		ACCESSIBLE SYMBOL
ICV	ICV	IRRIGATION CONTROL VALVE
		IRON PIN – FOUND
	IPN	IRON PIN – NEW
		IRON PIN – OLD
IRO		IRON ROD – OLD
	IRON	IRON ROD W/ CAP – NEW
	IRN	IRON ROD – NEW
		JUNCTION BOX
		LIGHT POLE
		LIQUID PROPANE TANK
		MAIL BOX
		MANHOLE
		MASTER METER
		MONUMENT
		MONITORING WELL
		AST – PETROLEUM OIL
		PAPER BOX
	PKN	PIN CONTROL POINT
PKO		PK NAIL NEW
		PK NAIL OLD
		PROPERTY LINE
		PLUG – WATERLINE
		DEFAULT POINT MARK
PM	PM	PARKING METER
		POWER POLE
PRV	PRV	PRESSURE REDUCING VALVE
PS	PS	PLANTED STONE
		PULL BOX
		PUMP
		REDUCER
RR		RAILROAD SIGNAL
RRS	RRS	RAILROAD SPIKE
		ROW MONUMENT
		SIGNAL CONTROLLER
		SEPTIC TANK
		SHRUB – 3 TYPES
		SATELLITE DISH
		SIGN
		SANITARY SEWER FLOW
	SMP	PAINTED STOP MARKER
		PAINTED STOP BAR
		PAINTED AHEAD MARKER
	DIO	PAINTED DIOS MARKER
	LNE	PAINTED LANE MARKER
	ONLY	PAINTED ONLY MARKER
		PAINTED RXR MARKER
	SCHL	PAINTED SCHOOL MARKER
	YIELD	PAINTED YIELD MARKER
		PAINTED YIELD BAR
		3 WAY TRAFFIC ARROW
		TRAFFIC ARROW – LEFT
		TRAFFIC ARROW – RIGHT
		TRAFFIC ARROW – STRAIGHT
		TRAFFIC ARROWS– STRAIGHT & L
		TRAFFIC ARROWS– STRAIGHT & R
	E	TELEPHONE – PAY PHONE
		PIPE TERMINUS
		TRAFFIC LIGHT POLE
		TELEPHONE POLE
		TELEPHONE PEDESTAL
		TREE – 4 TYPES
		TREE EVERGREEN – 3 TYPES
	TV	TELEPHONE VAULT
	VAN	VENT – MANHOLE, UST, ETC
	VV	VALVE VAULT
	WELL	WELL
	WM	WATER METER
	WV	WATER VALVE

PIPE FITTINGS

- 11.25° BEND
- 22.5° BEND
- 45° BEND
- 90° BEND
- COUPLING
- PIPE JOINT MARK
- PIPE TEE

SECTION SYMBOL

C3.1 / C4

SHEET WHERE SECTION IS DRAWN

DETAIL NUMBER

SHEET WHERE SECTION IS CUT

Revisions	Date

Issue Date: JUNE 2025

Drawn By: DAS

Designed By: DAS

Checked By: RMB

Date: 06/24/2025

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CREEKSIDE RIDGE SUBDIVISION – PHASE 3

ABBREVIATIONS & LEGEND

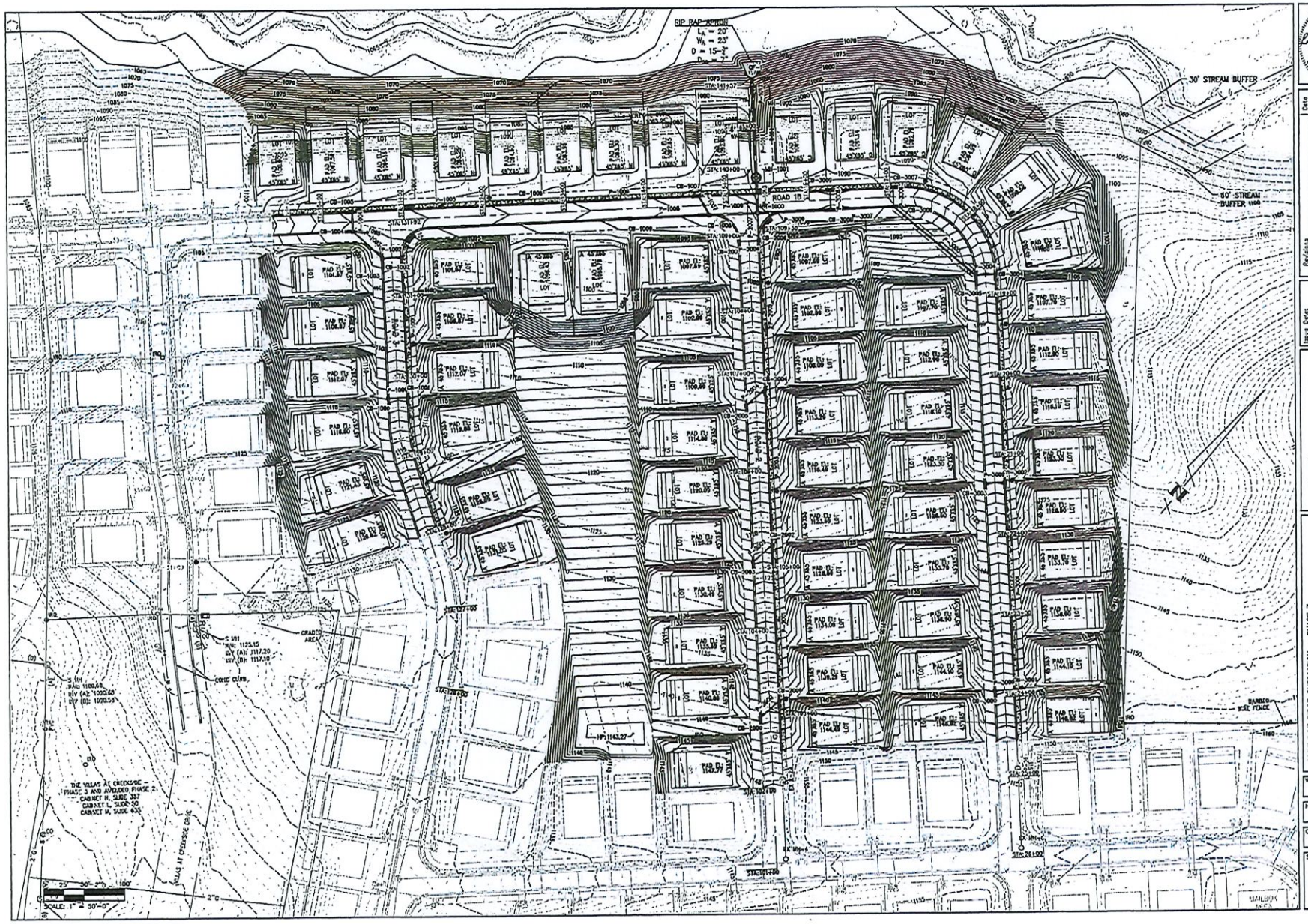
TOWN OF DANDRIDGE, TN

Vertical Scale: N/A

Horizontal Scale: N/A

Commission Number: 4246A

Sheet No.: C2



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Revisions	Date

CREEKSIDE RIDGE SUBDIVISION - PHASE 3

GRADING & STORMWATER PLAN

TOWN OF DANDRIDGE, TN

Vertical Scale: N/A

Horizontal Scale: 1" = 20'

Commission Number: 4246A

Sheet No.: C5.0

STRUCTURE TABLE		
STRUCTURE NAME	STRUCTURE DETAILS	STRUCTURE TYPE
CB-1000	RIM = 1109.827 SUMP = 1103.280 P-1000 INV OUT = 1103.280	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 10'
CB-1001	RIM = 1109.518 SUMP = 1103.160 P-1000 INV IN = 1103.160 P-1001 INV OUT = 1103.160	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 10'
CB-1002	RIM = 1095.827 SUMP = 1089.580 P-1001 INV IN = 1089.580 P-1002 INV OUT = 1089.580	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 15'
CB-1003	RIM = 1095.828 SUMP = 1089.450 P-1002 INV IN = 1089.450 P-1003 INV OUT = 1089.450	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 15'
CB-1004	RIM = 1094.723 SUMP = 1087.720 P-1003 INV IN = 1088.470 P-1004 INV OUT = 1087.720	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 15'
CB-1005	RIM = 1094.723 SUMP = 1087.600 P-1004 INV IN = 1087.600 P-1005 INV OUT = 1087.600	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 10'
CB-1006	RIM = 1092.371 SUMP = 1085.370 P-1005 INV IN = 1085.370 P-1006 INV OUT = 1085.370	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 10'
CB-1007	RIM = 1090.418 SUMP = 1083.420 P-1006 INV IN = 1083.420 P-1007 INV OUT = 1083.420	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 10'
CB-1008	RIM = 1090.285 SUMP = 1082.780 P-1007 INV IN = 1083.280 P-1008 INV IN = 1084.030 P-1009 INV OUT = 1082.780	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 15'
CB-1009	RIM = 1091.276 SUMP = 1085.030 P-1008 INV OUT = 1085.030	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 15'
MH-1000	RIM = 1090.108 SUMP = 1080.330 P-1009 INV IN = 1080.830 P-2007 INV IN = 1082.080 P-3009 INV IN = 1080.830 P-1010 INV OUT = 1080.330	48" CONCRETE MANHOLE
MH-1001	RIM = 1090.435 SUMP = 1080.110 P-1010 INV IN = 1080.110 P-1011 INV OUT = 1080.110	120" CONCRETE MANHOLE W/ HYDRODYNAMIC SEPERATOR
MH-1002	RIM = 1082.913 SUMP = 1073.000 P-1011 INV IN = 1076.540 P-1012 INV OUT = 1073.000	48" CONCRETE MANHOLE
OF-1	RIM = 1075.333 SUMP = 1072.000 P-1012 INV IN = 1072.000	TDOT STD D-PEW-1

NOTE: CATCH BASIN RIM ELEVATION INDICATES ELEVATION AT CURB OPENING. ADD 6" FOR TOP OF STRUCTURE.

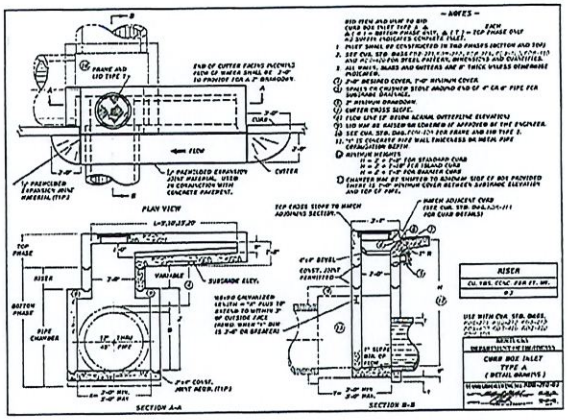
PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
P-1000	15"	24.32'	0.5%	HDPE
P-1001	15"	175.00'	7.8%	HDPE
P-1002	15"	24.80'	0.5%	HDPE
P-1003	15"	48.02'	2.0%	HDPE
P-1004	24"	24.81'	0.5%	HDPE
P-1005	24"	232.67'	1.0%	HDPE
P-1006	24"	194.91'	1.0%	HDPE
P-1007	24"	27.47'	0.5%	HDPE
P-1008	15"	97.78'	1.0%	HDPE
P-1009	30"	56.17'	3.3%	HDPE
P-1010	36"	43.96'	0.5%	HDPE
P-1011	36"	83.13'	5.5%	HDPE
P-1012	36"	41.00'	2.5%	HDPE

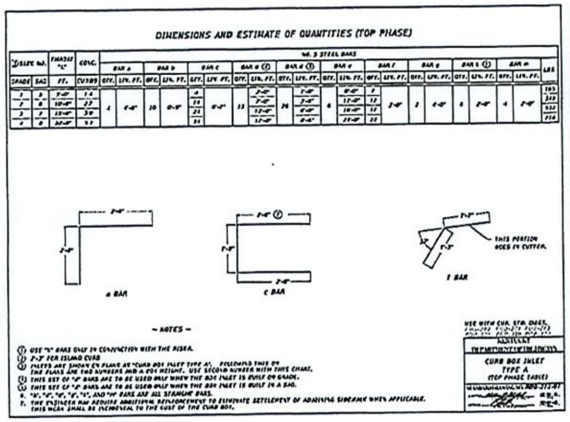
STRUCTURE TABLE		
STRUCTURE NAME	STRUCTURE DETAILS	STRUCTURE TYPE
CB-2000	RIM = 1138.351 SUMP = 1132.100 P-2000 INV OUT = 1132.100	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 10'
CB-2001	RIM = 1136.742 SUMP = 1130.910 EX P-22 INV IN = 1130.910 P-2000 INV IN = 1130.490 P-2001 INV OUT = 1130.490	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 10'
CB-2002	RIM = 1121.142 SUMP = 1114.890 P-2001 INV IN = 1114.890 P-2002 INV IN = 1114.890 P-2003 INV OUT = 1114.890	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 10'
CB-2003	RIM = 1122.743 SUMP = 1116.400 P-2002 INV OUT = 1116.400	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 10'
CB-2004	RIM = 1106.542 SUMP = 1099.290 P-2003 INV IN = 1099.290 P-2004 INV IN = 1099.290 P-2005 INV OUT = 1099.290	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 10'
CB-2005	RIM = 1107.143 SUMP = 1100.890 P-2004 INV OUT = 1100.890	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 10'
CB-2006	RIM = 1091.218 SUMP = 1084.840 P-2005 INV IN = 1084.840 P-2006 INV IN = 1084.840 P-2007 INV OUT = 1084.840	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 15'
CB-2007	RIM = 1091.211 SUMP = 1084.960 P-2006 INV OUT = 1084.960	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 15'
EX MH-4	RIM = 1139.068 SUMP = 1137.130 EX P-22 INV OUT = 1137.130	EX 48" CONCRETE MANHOLE

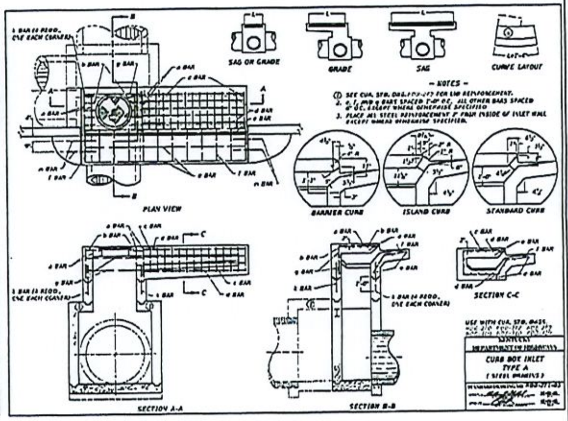
PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
EX P-22	15"	198.56'	3.6%	HDPE
P-2000	15"	31.84'	5.1%	HDPE
P-2001	15"	195.00'	8.0%	HDPE
P-2002	15"	31.83'	5.1%	HDPE
P-2003	15"	195.01'	8.0%	HDPE
P-2004	15"	31.83'	5.1%	HDPE
P-2005	15"	183.00'	7.8%	HDPE
P-2006	15"	24.48'	0.5%	HDPE
P-2007	15"	34.68'	8.0%	HDPE

STRUCTURE TABLE		
STRUCTURE NAME	STRUCTURE DETAILS	STRUCTURE TYPE
CB-3000	RIM = 1141.881 SUMP = 1135.300 P-3000 INV OUT = 1135.300	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 10'
CB-3001	RIM = 1141.848 SUMP = 1134.850 EX P-28 INV IN = 1134.850 P-3000 INV IN = 1134.850 P-3001 INV OUT = 1134.850	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 10'
CB-3002	RIM = 1120.748 SUMP = 1114.370 P-3001 INV IN = 1114.370 P-3002 INV IN = 1114.370 P-3003 INV OUT = 1114.370	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 10'
CB-3003	RIM = 1120.748 SUMP = 1114.500 P-3002 INV OUT = 1114.500	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 10'
CB-3004	RIM = 1099.948 SUMP = 1093.450 P-3003 INV IN = 1093.700 P-3004 INV OUT = 1093.450	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 10'
CB-3005	RIM = 1099.949 SUMP = 1093.330 P-3004 INV IN = 1093.330 P-3005 INV OUT = 1093.330	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 15'
CB-3006	RIM = 1088.944 SUMP = 1083.320 P-3005 INV IN = 1083.320 P-3006 INV IN = 1083.570 P-3007 INV OUT = 1083.320	KY CURB BOX INLET TYPE "A" PHASE = RT CURB OPENING = 15'
CB-3007	RIM = 1088.944 SUMP = 1083.690 P-3006 INV OUT = 1083.690	KY CURB BOX INLET TYPE "A" PHASE = LT CURB OPENING = 10'
CB-3008	RIM = 1088.898 SUMP = 1081.280 P-3007 INV IN = 1083.280 P-3008 INV IN = 1082.530 P-3009 INV OUT = 1081.280	KY CURB BOX INLET TYPE "A" PHASE = CTR CURB OPENING = 15'
CB-3009	RIM = 1088.909 SUMP = 1082.660 P-3008 INV OUT = 1082.660	KY CURB BOX INLET TYPE "A" PHASE = CTR CURB OPENING = 10'
EX MH-8	RIM = 1144.418 SUMP = 1142.980 EX P-28 INV OUT = 1142.980	EX 48" CONCRETE MANHOLE

PIPE TABLE				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
EX P-28	15"	198.41'	4.1%	HDPE
P-3000	15"	24.80'	1.8%	HDPE
P-3001	15"	260.00'	7.9%	HDPE
P-3002	15"	24.30'	0.5%	HDPE
P-3003	15"	260.00'	8.0%	HDPE
P-3004	18"	24.80'	0.5%	HDPE
P-3005	18"	132.23'	7.6%	HDPE
P-3006	15"	24.47'	0.5%	HDPE
P-3007	18"	77.74'	0.1%	HDPE
P-3008	15"	24.54'	0.5%	HDPE
P-3009	30"	90.80'	0.5%	HDPE







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Issue Date:	JUNE 2025
Drawn By:	CAS
Designed By:	CAS
Checked By:	RWB
Date:	06/04/2025

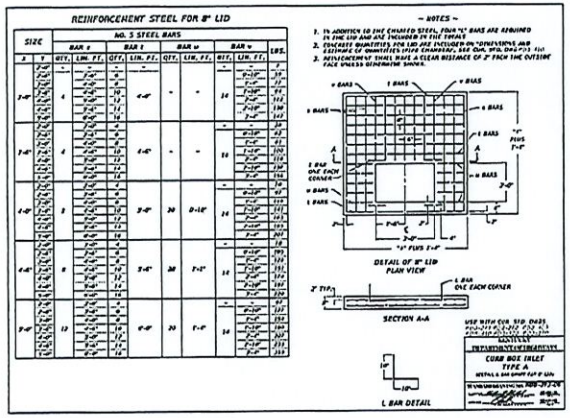
Revisions	Date

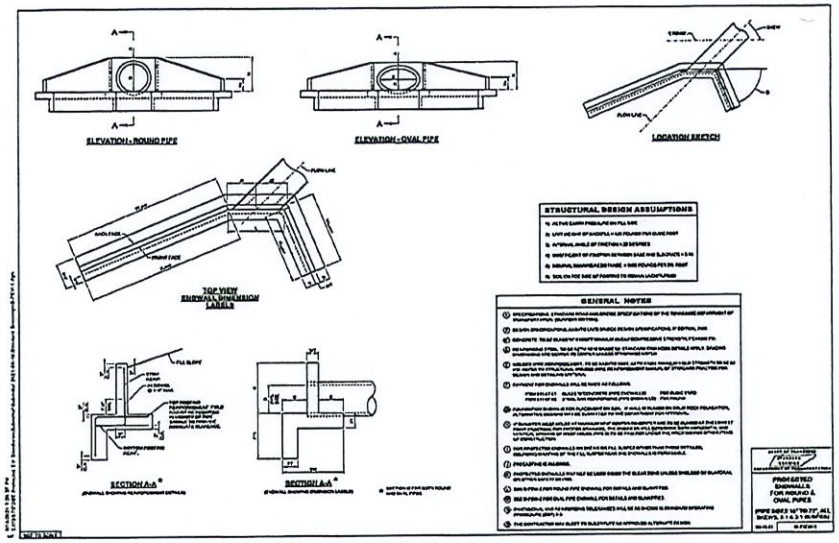
CREEKSIDE RIDGE SUBDIVISION – PHASE 3

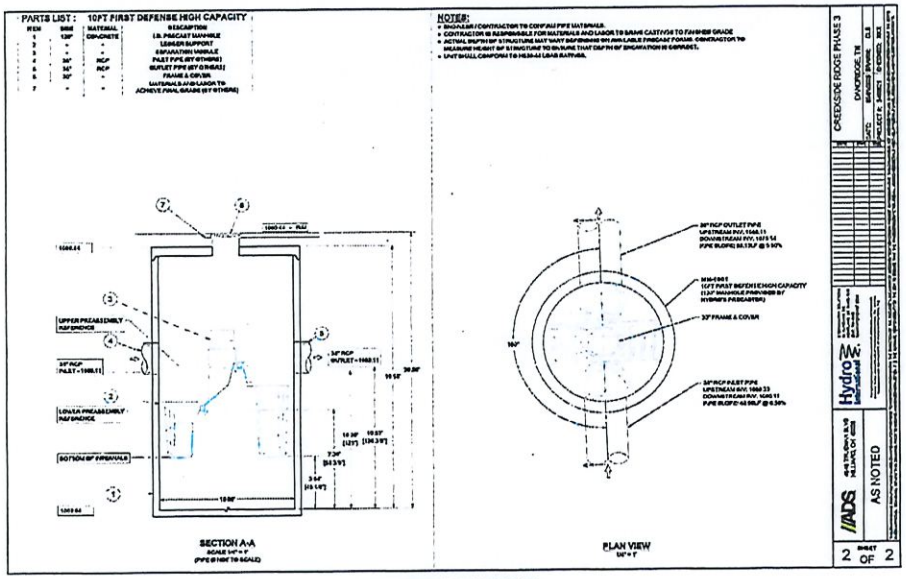
STORMWATER DETAILS & TABLES

TOWN OF DANDRIDGE, TN

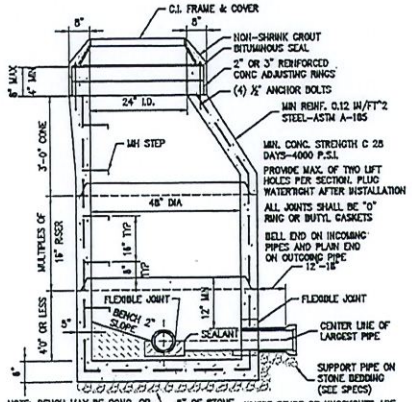
Vertical Scale: N/A
Horizontal Scale: N/A
Commission Number: 4246A
Sheet No.: C5.1







HYDRODYNAMIC SEPARATOR
SCALE: 1" = 50'



MC SS-1 PRECAST CONCRETE MANHOLE-4' DIA-STD
SCALE: NOT TO SCALE

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Issue Date: JUNE 2025
Drawn By: DAS
Designed By: DAS
Checked By: RHB
Date: 06/04/2025

Revisions
Date

CREEKSIDE RIDGE SUBDIVISION - PHASE 3

STORMWATER DETAILS

TOWN OF DAVIDSON, TN

Vertical Scale: N/A
Horizontal Scale: N/A
Commission Number: 4246A
Sheet No.: C5.2

EARTHWORK NOTES

GENERAL

A. COMPLY WITH ALL CODES, LAWS, ORDINANCES AND REGULATIONS OF GOVERNMENTAL AUTHORITIES HAVING JURISDICTION OVER THIS PART OF THE WORK.

B. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL EROSION AND SEDIMENT CONTROL ORDINANCES AND REGULATIONS.

C. A TESTING LABORATORY SHALL BE SELECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER AND WILL BE RESPONSIBLE FOR CONDUCTING AND INTERPRETING TESTS. THE TESTING LABORATORY SHALL STATE IN EACH REPORT WHETHER OR NOT THE TEST SPECIMENS CONFORM TO ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS AND SPECIFICALLY NOTE ANY DEVIATION THEREFROM.

D. SUBMIT THE TEST REPORTS FOR OPTIMUM MOISTURE – MAXIMUM DENSITY OF SOILS AND ALL FIELD DENSITY TESTS.

PROTECTION OF UTILITIES

A. PROTECT ALL EXISTING SERVICE LINES AND RELATED STRUCTURES ENCOUNTERED IN THE EXCAVATION WORK. WHERE SUCH LINES AND STRUCTURES HAVE BEEN UNDERMINED DUE TO THE EXCAVATION WORK, PROVIDE SUITABLE SUPPORTS. IF DAMAGED, REPAIR SUCH LINES OR STRUCTURES OR ARRANGE FOR THEIR REPAIR WITH THE PROPER AUTHORITIES OR COMPANIES, AT NO ADDITIONAL COST TO THE PROJECT.

B. REPORT ANY UNCHARTED OR INCORRECTLY CHARTED LINES TO THE ENGINEER FOR FURTHER DIRECTION.

MATERIALS

A. SUITABLE MATERIAL FOR FILL, BACKFILL AND SUBGRADE PREPARATION SHALL BE GW, GP, GM, GC, SW, SP, SM, ML, CL, OR SC AS CLASSIFIED IN THE UNIFIED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH ASTM D 2487. MATERIAL FOR STRUCTURAL FILL SHALL BE CL OR BETTER (SILTY CLAY OF LOW TO MEDIUM PLASTICITY), FREE OF ORGANIC OR OTHER DELETERIOUS MATERIALS AND ROCK LARGER THAN 3" NOMINAL DIAMETER. THE SUITABILITY OF MATERIAL TO BE USED AS FILL SHALL BE DETERMINED BY THE CLASSIFICATION METHOD SPECIFIED IN ASTM D 2487 AND BY THE MOISTURE/DENSITY TESTS IN ACCORDANCE WITH ASTM D698 AND D2216. SUITABLE MATERIAL REMOVED FROM THE EXCAVATION SHALL BE USED IN FORMING THE NECESSARY FILL. MATERIAL SHALL BE FREE OF DEBRIS, ROOTS, AND ORGANIC MATTER. FROZEN MATERIAL SHALL NOT BE USED AS FILL. ANY ADDITIONAL MATERIAL NECESSARY FOR ESTABLISHING THE INDICATED GRADES SHALL BE FURNISHED BY THE CONTRACTOR AND APPROVED BY THE GEOTECHNICAL ENGINEER AS PART OF THIS CONTRACT. THE MAXIMUM PARTICLE SIZE SHALL BE SIX INCHES LARGEST DIMENSION, EXCEPT IN THE UPPERMOST LIFT, WHERE THE MAXIMUM PARTICLE SIZE SHALL BE TWO INCHES LARGEST DIMENSION.

B. IMPROVED BEDDING MATERIAL SHALL BE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) #57 COARSE AGGREGATE.

C. TRENCH STABILIZATION MATERIAL SHALL BE TDOT #357 COARSE AGGREGATE.

D. SELECT BACKFILL MATERIAL SHALL BE TDOT #57 COARSE AGGREGATE, OR CRUSHER RUN AGGREGATE MATERIAL SIZE 68, AS INDICATED ON THE DRAWINGS.

E. UNSUITABLE MATERIALS SHALL BE THOSE MATERIALS NOT MEETING THE REQUIREMENTS SPECIFIED HEREINBEFORE FOR SUITABLE MATERIALS. ROCK PARTICLES GREATER THAN SIX (6) INCHES IN DIAMETER OR DIMENSION SHALL BE CONSIDERED UNSUITABLE MATERIAL.

EARTHWORK

A. THE WORK INCLUDES DEMOLITION, CLEARING AND GRUBBING THE SITE, DEWATERING, STRIPPING AND STORING OF TOPSOIL, EXCAVATION, FILLING AND BACKFILLING, COMPACTION, TESTING, ROUGH AND FINISH GRADING OVER THE AREAS INDICATED, EROSION CONTROL, SPREADING TOPSOIL, SEEDING, AND UTILITY EARTHWORK. THE CONTRACTOR SHALL EXCAVATE ALL MATERIALS ENCOUNTERED TO THE LINES AND GRADES SPECIFIED AND LINES AND GRADES INDICATED ON THE PLANS. ANY WATER THAT ACCUMULATES IN THE EXCAVATIONS SHALL BE PROMPTLY REMOVED.

B. THE ENTIRE AREA WITHIN THE LIMIT OF WORK SHALL BE CLEARED AND GRUBBED AND SHALL BE CLEANED OF ALL DEBRIS. TOPSOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED, PAVED AND BUILT UPON TO THE DEPTH ENCOUNTERED AND STORED FOR REUSE LATER IN THE WORK. UNDER THE STRUCTURES, PAVED, AND FILL AREAS, STUMPS, ROOTS, LOGS, MATTED ROOTS AND OTHER DEBRIS NOT SUITABLE FOR FOUNDATION PURPOSES SHALL BE REMOVED TO A MINIMUM DEPTH OF EIGHTEEN (18) INCHES BELOW ANY SUBGRADE AND AT LEAST 15 FEET BEYOND THE BUILDING PERIMETER. THE RESULTING HOLE SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED AS SPECIFIED HEREINAFTER FOR BACKFILL. CLEARED MATERIAL SHALL BE COMPLETELY REMOVED FROM THE SITE, AND DISPOSED OF BY THE CONTRACTOR, AT HIS EXPENSE. ALL AREAS TO RECEIVE FILL SHALL BE STRIPPED OF ROOTMAT FIVE FEET BEYOND TOE OF ANTICIPATED FILLS. TOPSOIL, ALL VEGETATION, SUCH AS ROOTS, BRUSH, HEAVY SODS, HEAVY GROWTH OF GRASS, AND ALL DECAYED VEGETABLE MATTER, RUBBISH AND OTHER DEBRIS WITHIN THE AREA UPON WHICH FILL IS TO BE PLACED, SHALL BE STRIPPED OR OTHERWISE REMOVED BEFORE THE FILL IS STARTED. IN NO CASE WILL SUCH OBJECTIONABLE MATERIAL BE ALLOWED TO REMAIN IN OR UNDER THE FILL AREA. SLOPED GROUND SURFACES STEEPER THAN ONE VERTICAL TO FOUR HORIZONTAL ON WHICH FILL IS TO BE PLACED SHALL BE PLOWED, STEPPED, BENCHED, OR BROKEN UP IN SUCH MANNER THAT FILL MATERIAL WILL BOND WITH THE EXISTING SURFACE, AS DIRECTED. BEFORE STARTING THE FILL, OR BEFORE PLACING STRUCTURES OR PAVEMENT, THE AREA SHALL BE PROOFROLLED WITH A RUBBER-TIRED VEHICLE, TYPICALLY A LOADED DUMP TRUCK. ANY SOFT, PUMPING, OR RUTTING SPOTS THAT ARE DISCOVERED SHALL HAVE THE SOFT MATERIAL EXCAVATED AND THE VOID FILLED WITH SUITABLE MATERIAL, COMPACTED AS HEREINAFTER SPECIFIED.

C. TOPSOIL SHALL BE CAREFULLY STRIPPED TO ITS FULL DEPTH FROM ALL AREAS INDICATED TO BE GRADED, OR TO BE BUILT UPON. STRIPPED TOPSOIL SHALL BE STORED AND PROTECTED FOR REUSE LATER. CONTRACTOR SHALL STOCKPILE A QUANTITY OF TOPSOIL THAT WILL BE REQUIRED FOR USE TO COMPLETE THE WORK. ALL EXCESS TOPSOIL SHALL BE HAULED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.

D. STORE AND USE EXPLOSIVES IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT AND WITH OTHER FEDERAL, STATE AND LOCAL ORDINANCES AND REGULATIONS. PRIOR TO FIRING BLASTS, THE CONTRACTOR SHALL HAVE A COMPETENT MAN, CARRYING A RED FLAG, STATIONED AT A REASONABLE DISTANCE FROM THE BLAST AT EACH AVENUE OF APPROACH TO GIVE WARNING OF THE BLAST. BLASTING IN THE VICINITY OF ANY EXISTING UTILITIES SHALL BE DONE CAREFULLY AND WITH THE KNOWLEDGE AND APPROVAL OF THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL CONDUCT PREBLASTING INSPECTION OF NEARBY FACILITIES AND STRUCTURES, AND VIBRATION MONITORING DURING BLASTING, AND BOTH SHALL BE AVAILABLE TO THE OWNER AND ENGINEER AS A CERTIFIED REPORT.

E. EXCAVATIONS:

1. ALL EXCAVATIONS OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED WITHIN THE GRADING LIMITS SHALL BE PERFORMED TO THE GRADES, SLOPES, AND ELEVATIONS INDICATED. ALL EXCAVATED MATERIALS WHICH ARE NOT CONSIDERED SUITABLE FOR FILL AND ANY SURPLUS OF EXCAVATED MATERIAL WHICH IS NOT REQUIRED FOR FILL SHALL BE STOCKPILED AT AN APPROVED LOCATION ON SITE BY THE CONTRACTOR FOR USE IN THE FINAL GRADING PHASE OF THE PROJECT. ANY WATER THAT ACCUMULATES IN THE EXCAVATIONS SHALL BE PROMPTLY REMOVED, AND FILTERED TO REDUCE SEDIMENT, IN ACCORDANCE WITH SEDIMENT CONTROL REGULATIONS.

2. THE CONTRACTOR SHALL CLEAR AND GRUB ALL VEGETATION, DEBRIS AND ANY OTHER MATERIAL ENCOUNTERED WITHIN THE LIMITS OF GRADING AND AS REQUIRED FOR TRENCHES AND DITCHES INDICATED TO BE WORKED ON, BUT WHERE GRADING CONTOURS ARE NOT SHOWN. ALL MATERIAL FROM THE DEMOLITION, THE CLEARING AND GRUBBING AND DEBRIS REMOVAL SHALL BE DISPOSED OF OFF THE SITE BY THE CONTRACTOR AT HIS EXPENSE.

3. DRYING OR WETTING THE SOIL TO ACHIEVE COMPACTION AND PROPER DENSITY SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.

4. UTILITY EXCAVATION

a. THE CONTRACTOR SHALL EXCAVATE ALL MATERIALS ENCOUNTERED IN THE TRENCHES AND DITCHES ALONG THE ALIGNMENTS SHOWN ON THE DRAWINGS. EXCAVATED SUITABLE MATERIAL TO BE UTILIZED FOR BACKFILLING SHALL BE PILED ALONGSIDE THE TRENCH AT A DISTANCE SUFFICIENT TO AVOID OVERLOADING THE TRENCH WALLS AND CAUSING CAVE-INS, AND LOCATED TO PREVENT OBSTRUCTION OF DRIVEWAYS, ROADS AND HYDRANTS. ALL EXCAVATED MATERIAL NOT SUITABLE FOR OR NOT REQUIRED FOR BACKFILLING, INCLUDING THAT FROM THE TRENCHES AND THE DITCHES, SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR SHALL UTILIZE MEANS NECESSARY TO PREVENT SURFACE WATER FROM WASHING INTO THE TRENCH. ANY WATER THAT ACCUMULATES IN THE TRENCH SHALL BE PROMPTLY REMOVED, AND FILTERED TO REDUCE SEDIMENT. DO NOT OPEN MORE THAN 100 FEET OF TRENCH IN ADVANCE OF PIPE LAYING EXCEPT AS SPECIFICALLY APPROVED IN ADVANCE BY THE ENGINEER. TRENCHING SHALL BE BY THE OPEN CUT METHOD.

b. TRENCHES SHALL BE EXCAVATED WITH VERTICAL WALLS TO THE WIDTH INDICATED IN THE DETAIL ON THE DRAWING TO A POINT ONE FOOT ABOVE THE TOP OF PIPE.

c. THE TRENCH BOTTOM SHALL BE EXCAVATED TO PROVIDE A FIRM, STABLE, AND UNIFORM SUPPORT FOR THE FULL LENGTH OF THE PIPE. BELL HOLES SHALL BE PROVIDED AT EACH JOINT TO PERMIT THE PROPER JOINT ASSEMBLY AND PIPE SUPPORT. ANY PART OF THE TRENCH BOTTOM EXCAVATED BELOW THE REQUIRED GRADE SHALL BE BACKFILLED TO GRADE AND COMPACTED TO PROVIDE FIRM PIPE SUPPORT. TRENCHES SHALL HAVE FOUR (4) INCHES OF LOOSE SOIL IN THE BOTTOM BEFORE PIPE IS PLACED, SO PIPE IS FIRMLY AND CONTINUOUSLY IN CONTACT WITH SOIL. PIPE SHALL NOT BRIDGE ANY AREAS. ROCK LARGER THAN 3 INCHES SHALL BE REMOVED FROM THE TRENCH BOTTOM AND ANY VOIDS FILLED WITH SOIL OR IMPROVED BEDDING. LEDGE ROCK, BOULDERS AND LARGE STONES SHALL BE REMOVED TO PROVIDE SIX (6) INCHES OF SOIL CUSHION ON ALL SIDES OF THE PIPE INCLUDING THE BOTTOM, AND ON ALL SIDES OF ACCESSORIES. WHEN AN UNSTABLE SUBGRADE CONDITION IS ENCOUNTERED, WHICH WILL PROVIDE INADEQUATE PIPE SUPPORT, ADDITIONAL TRENCH DEPTH SHALL BE EXCAVATED AND REFILLED WITH TRENCH STABILIZATION MATERIAL.

d. TRENCHES AND EXCAVATIONS SHALL BE SHEETED AND BRACED AS REQUIRED BY THE OCCUPATIONAL SAFETY AND HEALTH ACT AND ANY APPLICABLE STATE AND LOCAL LAWS, AND AS REQUIRED TO PROTECT THE PUBLIC, ADJACENT PROPERTY AND THE WORK. DO NOT REMOVE SHEETING EXCEPT WHEN SUCH REMOVAL WILL NOT RESULT IN DAMAGE TO THE WORK OR THE ADJACENT PROPERTY. SHEETING LEFT IN PLACE SHALL BE CUT OFF 18 INCHES BELOW THE EXISTING GROUND SURFACE, AND SHALL BE DIMENSIONALLY LOCATED ON THE SET OF CONTRACT DRAWINGS PROVIDED BY THE CONTRACTOR SHOWING "RECORD OF CONSTRUCTION."

e. THE TRENCHES FOR GRAVITY PIPELINES SHALL BE EXCAVATED TO THE GRADE LINES INDICATED WHICH SHALL BE THE TRUE ELEVATION OF THE INVERT OF THE PIPE. WHERE IMPROVED BEDDING IS REQUIRED, THE BOTTOM OF THE TRENCH SHALL BE EXCAVATED TO A MINIMUM OVER DEPTH OF FOUR (4) INCHES BELOW THE BOTTOM OF THE PIPE TO PROVIDE FOR IMPROVED PIPE BEDDING FOR THE ENTIRE LENGTH OF THE GRAVITY PIPELINE. THE BEDDING SHALL BE SHAPED SO THAT THE BOTTOM QUADRANT OF THE PIPE RESTS ON THE BED. BELL HOLES AND DEPRESSIONS AS REQUIRED FOR THE JOINT SHALL BE DUG AFTER THE BEDDING HAS BEEN GRADED AND SHAPED, AND SHALL BE ONLY OF SUCH LENGTH, DEPTH, AND WIDTH AS REQUIRED FOR PROPERLY MAKING THE PARTICULAR TYPE OF JOINT.

g. UNAUTHORIZED OVER DEPTHS SHALL BE BACKFILLED WITH TRENCH STABILIZATION MATERIAL.

h. EXCAVATION FOR MANHOLES, INLETS, AND OTHER STRUCTURES SHALL BE SUFFICIENT TO LEAVE AT LEAST TWELVE (12) INCHES IN THE CLEAR BETWEEN THEIR OUTER SURFACES AND THE EMBANKMENT OR TIMBER WHICH MAY BE USED TO HOLD AND PROTECT THE BANKS. ANY OVER DEPTHS OF EXCAVATION BELOW SUCH APPURTENANCES SHALL BE BACKFILLED AS SPECIFIED ABOVE FOR OVER DEPTH IN TRENCHES.

i. GRADING OR CONSTRUCTION OF BERMS SHALL BE PERFORMED AS REQUIRED TO PREVENT SURFACE WATER FROM FLOWING INTO TRENCHES AND OTHER EXCAVATIONS.

5. IN AREAS WHERE TRENCHING FOR PIPES WILL BE IN FILLS, THE FILLS SHALL BE BROUGHT TO AN ELEVATION AT LEAST ONE (1) FOOT ABOVE THE TOP OF THE PIPE, AND THEN THE TRENCH EXCAVATED IN THE COMPACTED FILL, AS HEREIN SPECIFIED FOR TRENCH EXCAVATION.

A. FILLING AND BACKFILLING:

1. SUITABLE MATERIAL SHALL BE USED FOR FILL, BACKFILL AND SUBGRADE PREPARATION. MATERIAL SHALL BE FREE OF DEBRIS, ROOTS AND ORGANIC MATTER. FROZEN MATERIAL SHALL NOT BE USED AS FILL OR BACKFILL. ANY ADDITIONAL MATERIAL NECESSARY FOR ESTABLISHING THE INDICATED GRADES SHALL BE FURNISHED BY THE CONTRACTOR AND APPROVED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM PARTICLE SIZE SHALL BE SIX INCHES LARGEST DIMENSION, EXCEPT IN THE UPPERMOST LIFT, WHERE THE MAXIMUM PARTICLE SIZE SHALL BE TWO INCHES LARGEST DIMENSION. FILL MATERIAL SHALL BE PLACED IN SUCCESSIVE HORIZONTAL LAYERS NOT TO EXCEED EIGHT (8) INCHES OF LOOSE MATERIAL, AND THEN THOROUGHLY COMPACTED AS HEREINAFTER SPECIFIED.

2. THE SINKHOLES INDICATED ON THE PLANS, AS WELL AS ANY ADDITIONAL SINKHOLES FOUND DURING EXCAVATIONS, SHALL BE CLOSED IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER IN ACCORDANCE WITH THE TYPICAL SINKHOLE REPAIR DETAIL INCLUDED HEREIN.

3. EMBANKMENT SLOPES SHALL BE CONSTRUCTED BY FILLING ONE (1) FOOT BEYOND THE PROPOSED FINISHED SLOPE SURFACE FOR EACH LIFT. COMPACTION EQUIPMENT SHALL WORK TO THE EDGE OF EACH LIFT. AFTER THE ENTIRE FILL IS PLACED AND COMPACTED, THE OUTSIDE FOOT OF THE SLOPE SHALL BE TRIMMED TO THE DESIGN SLOPE WITH A DOZER. UNLESS INDICATED ON THE DRAWINGS, NO SLOPES SHALL BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.

C. UTILITY PLACEMENT:

1. PROPER IMPLEMENTS, TOOLS AND EQUIPMENT SHALL BE USED FOR THE PLACEMENT OF THE PIPE IN THE TRENCH. THE RECOMMENDATIONS OF THE PIPE MANUFACTURER SHALL BE STRICTLY ADHERED TO. THE PIPE AND ACCESSORIES SHALL BE INSPECTED BY THE ENGINEER FOR DEFECTS PRIOR TO LOWERING INTO TRENCH. ANY DEFECTIVE, DAMAGED OR UNSOUND MATERIAL SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER. UNDER NO CIRCUMSTANCES SHOULD THE PIPE OR ACCESSORIES BE DROPPED INTO THE TRENCH. ALL FOREIGN MATTER AND SOIL SHALL BE REMOVED FROM THE PIPE INTERIOR. WHEN PIPE LAYING IS NOT IN PROGRESS, OPEN ENDS OF INSTALLED PIPE SHALL BE CLOSED OR PLUGGED TO PREVENT ENTRANCE OF TRENCH WATER, SOIL, AND FOREIGN MATTER INTO THE PIPELINE.

2. ELEVATIONS AND SLOPES INDICATED SHOW THE POSITION OF THE INVERT OF THE GRAVITY PIPE. ALL GRAVITY PIPE SHALL BE LAID TO TRUE LINE AND GRADE WITH BELL ENDS UP GRADE. THE SECTIONS OF THE PIPE SHALL BE LAID AND FITTED TOGETHER THAT, WHEN COMPLETE, THE GRAVITY LINE WILL HAVE A SMOOTH AND UNIFORM INVERT BETWEEN MANHOLES. THE TRENCH BOTTOM SHALL BE DUG TO FIT THE BELL ENDS SO THAT THE BODY OR BARREL OF THE PIPE RESTS ON THE BOTTOM OF THE TRENCH FOR ITS FULL LENGTH. ALL PIPE SHALL BE INSPECTED FOR DEFECTS, BEFORE LOWERING IT INTO THE TRENCH.

3. ESTABLISH AND MAINTAIN PIPELINE ALIGNMENT AND GRADES, FROM THE HORIZONTAL AND VERTICAL REFERENCE POINTS INDICATED. ALL PIPE EIGHT (8) INCHES IN DIAMETER AND LARGER SHALL BE LAID TO A GRADE ESTABLISHED BY LASER AS ESTABLISHED FROM THE REFERENCE POINTS INDICATED. ALIGNMENT SHALL BE MAINTAINED BY A TRANSIT OR THEODOLITE PLUMBED OVER THE CENTERLINE OF THE DOWNSTREAM MANHOLE. THE ADJUSTABLE LASER LEVEL MOUNTED AT THE INVERT OF THE DOWNSTREAM MANHOLE SHALL BE USED WITH TARGETS SET IN THE BELL END OF THE PIPE SECTIONS BEING LAID. A STEEL TAPE SHALL BE USED TO MEASURE DISTANCES.

4. TRENCHING SHALL BE IN ACCORDANCE WITH THE DETAILS. EACH SECTION OF PIPE IS TO BE PLACED IN A "HOME" POSITION AND BACKFILLED TO THE CENTERLINE WITH SUITABLE OR IMPROVED BEDDING MATERIAL, AS PREVIOUSLY SPECIFIED, PRIOR TO ANOTHER SECTION BEING JOINED TO THE FIRST. CONTRACTOR SHALL PROVIDE ADDITIONAL BEDDING MATERIAL OR OTHER BEDDING METHODS AS REQUIRED TO BE ABLE TO INSTALL PVC PIPE AND MEET THE DEFLECTION TEST. EXCAVATING EQUIPMENT IS NOT TO BE USED TO SHOVE SECTIONS OF PIPE TOGETHER, UNLESS AUTHORIZED BY THE ENGINEER, AND THEN ONLY ONE SECTION AT A TIME. THE INTERIOR OF THE PIPELINE SHALL BE CLEARED OF ALL SOIL AND DEBRIS OF EVERY DESCRIPTION AS INSTALLATION PROGRESSES. WHEN WORK IS NOT IN PROGRESS, PLUG OPEN ENDS OF PIPES TO PREVENT TRENCH WATER OR OTHER SUBSTANCES FROM ENTERING THE PIPELINE.

H. UTILITY BACKFILLING:

1. THE TRENCH FOR HDPE AND PVC SHALL BE BEDDED TO THE TOP OF PIPE WITH IMPROVED BEDDING. CONCRETE CULVERTS AND STORM DRAINS SHALL BE BEDDED TO THE BOTTOM QUADRANT OF THE PIPE WITH IMPROVED BEDDING. DO NOT BED WATER PIPE AND SEWAGE FORCE MAINS, EXCEPT IN ROCK.

2. AFTER THE UTILITY LINE HAS BEEN PLACED, THE TRENCH AND PIPE SHALL BE VISUALLY INSPECTED BY THE ENGINEER. AFTER THIS INSPECTION, THE INITIAL BACKFILL ABOVE THE IMPROVED BEDDING SHALL BE THOROUGHLY FILLED AND TAMPED IN LAYERS NOT EXCEEDING SIX (6) INCHES IN DEPTH WITH SUITABLE MATERIAL THAT IS FREE FROM CINDERS, ASHES, REFUSE, VEGETABLE OR ORGANIC MATERIALS, PAVEMENT, DEBRIS, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL DEEMED UNSUITABLE BY THE GEOTECHNICAL ENGINEER. NO FROZEN MATERIAL SHALL BE USED. BACKFILLING SHALL BE DONE IN SUCH A WAY AS TO PREVENT DROPPING OF MATERIAL DIRECTLY ON TOP OF THE PIPE THROUGH ANY VERTICAL DISTANCE GREATER THAN THREE (3) FEET AND SHALL BE DEPOSITED IN HORIZONTAL LAYERS. AT ONE FOOT BELOW FINAL GRADE, THE CONTINUOUS METALLIC PIPE LOCATOR TAPE SHALL BE PLACED IN THE TRENCH ABOVE PRESSURE PIPE. IF PVC, PE, OR OTHER NON-METALLIC PIPE OR TUBING IS USED. BACKFILLING SHALL BE WITH SUITABLE MATERIAL AS HEREINBEFORE SPECIFIED IN THIS SECTION. NO PARTICLES WITH A DIAMETER GREATER THAN ONE (1) INCH SHALL BE PLACED IN THE INITIAL BACKFILL FROM THE TOP OF THE IMPROVED BEDDING TO A POINT ONE (1) FOOT OVER THE TOP OF THE GRAVITY PIPE. NO ROCK PARTICLES WITH A DIAMETER OR DIMENSION GREATER THAN FIVE (5) INCHES SHALL BE PLACED IN THE REMAINDER OF THE BACKFILL. IF THERE IS INSUFFICIENT SUITABLE BACKFILL MATERIAL FROM THE EXCAVATION, THE CONTRACTOR SHALL PROVIDE THE REQUIRED SUITABLE MATERIAL. FINAL BACKFILL SHALL BE MOUNDED THREE (3) INCHES ABOVE SURROUNDING GRADE TO ALLOW FOR SETTLEMENT.

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Revisions | Date

CREEKSIDE RIDGE SUBDIVISION – PHASE 3

EARTHWORK NOTES

TOWN OF DANDRIDGE, TN

Vertical Scale: N/A

Horizontal Scale: N/A

Commission Number: 4246A

Sheet No.: C5.3

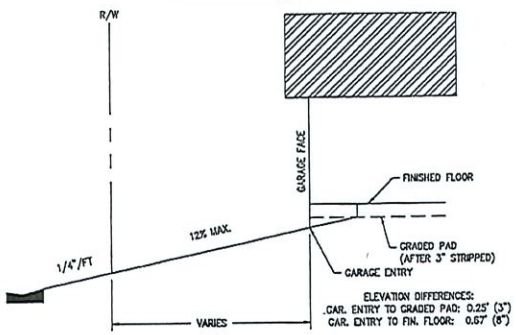
GENERAL GRADING GUIDELINES:

1. EACH FILL LOT SHALL HAVE COMPACTION REPORTS WITH A MINIMUM COMPACTION OF 95% USING STANDARD PROCTOR TEST ASTM D698A. CUT LOTS SHALL PASS A PROOF ROLL AND HAND AUGER TESTS TO BE PROVIDED TO DR HORTON FOR REVIEW.
2. PAD ELEVATIONS SHALL BE ESTABLISHED BASED ON THE HIGH SIDE OF THE LOT/BUILDING PAD BUT WILL VARY BASED ON SETBACK SIZES, NOMINAL DEPTH OF PRODUCTS AND/OR PADS, ETC.
3. FINISHED/GRADED PAD ELEVATIONS SHALL BE SET 3"-4" HIGHER THAN REQUIRED GRADE (THIS ADDITIONAL SOIL TO BE STRIPPED OFF DURING HOMEBUILDING OPERATIONS).
4. REAR YARD (MEASURING FROM BACK OF HOUSE/BUILDING PAD TO CENTERLINE OF REAR SWALE OR SLOPE BREAK POINT) MUST HAVE AT LEAST 20' OF USABLE (CLEAR) YARD. THE USABLE CLEAR YARD SHALL BE GRADED AT 5% MAINTAINING POSITIVE FALL AWAY FROM THE BUILDING.
5. TRANSITIONAL SLOPE FROM END OF USABLE/CLEAR YARD SHALL BE GRADED AT 3:1 OR FLATTER, WHENEVER PRACTICAL. MAXIMUM ALLOWABLE SLOPE SHALL BE 2:1 AND SUBJECT TO REVIEW BY DR HORTON.
6. ROAD SHOULDERS AS MEASURED FROM BACK-OF-CURB TO RIGHT-OF-WAY, SHALL BE GRADED AT 2% SLOPE (¼"/FT) OR AS GOVERNED BY APPLICABLE REGULATORY AGENCY RESPONSIBLE FOR THE APPROVAL OF THE DESIGN AND/OR MAINTENANCE OF THE ROAD. CONTRACTOR WILL BE RESPONSIBLE FOR ANY OVERBURDEN THAT MUST BE REMOVED AT NO EXPENSE TO DR HORTON.
7. WHEN PAD ELEVATION IS ABOVE CURB, FRONT YARD SHALL BE LEFT DEPRESSED APPROXIMATELY 8" BELOW DESIGN GRADE TO ALLOW FOR DRIVEWAY EXCAVATION TO BE ROLLED INTO FRONT YARD (WAS OF APPROXIMATELY 12 CY).
8. WHEN PAD ELEVATION IS BELOW CURB, THE REAR YARD SHALL BE LEFT DEPRESSED APPROXIMATELY 8" BELOW DESIGN GRADE TO ALLOW FOR DRIVEWAY EXCAVATION TO BE ROLLED INTO REAR YARD (WASTE OF APPROXIMATELY 12 CY).
9. TYPICAL TOPSOIL STRIPPING ON WOODED LOTS IS ASSUMED TO BE 12"-18". TYPICAL STRIPPING ON PREVIOUSLY CLEARED AND GRADED LOTS IS ASSUMED TO BE 3"-4".
10. BUILDING PAD SHALL BE GRADED IN SUCH A MANNER TO SHED WATER FROM CENTER OF THE PAD AND DRAIN 1% IN ALL DIRECTIONS. ADDITIONAL MATERIAL TO CREATE HIGH POINT IN CENTER OF PAD TO BE PROVIDED AS NEEDED AND FOUR CORNERS OF BUILDING PAD SHALL MEET PAD DESIGN GRADES.
11. FOR LOW SIDE OF LOT SLOPE TRANSITIONS (SIDE TO SIDE), TOP OF SLOPE SHALL BEGIN AT SIDE YARD AND WORK TOWARD PROPERTY LINE.

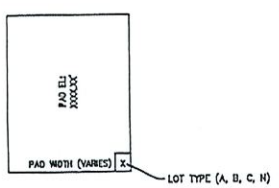
DRAINAGE GUIDELINES:

1. BUILDING PADS MUST HAVE A MINIMUM OF 5% SLOPE (6" IN 10') AWAY FROM PAD IN ALL DIRECTIONS. THIS IS MEASURED FROM THE STRIPPED BUILDING PAD (3" LESS THAN SPECIFIED BUILDING PAD GRADE SHOWN ON PLANS) TO A POINT 10' OUTSIDE OF BUILDING PAD.
2. ALL SWALES SHALL BE GRADED AT MINIMUM 2% (2.5% IS PREFERRED FOR GRASSED SWALES).
3. SWALES SHALL BE CUT AS PART OF FINE PAD GRADING BY DEVELOPER. GRADED PADS SHALL NOT SIT FOR PROLONGED PERIODS OF TIME WITH NO SWALES.
4. SWALES SHALL BE PLACE ALONG PROPERTY LINES WHENEVER PRACTICAL.
5. SURFACE RUNOFF SHALL NOT DRAIN ACROSS MORE THAN 2 LOTS WITHOUT A RECEIVING STORM COLLECTION SYSTEM. DRAIN/YARD INLETS SHALL BE PLACED NO LESS THAN 1 STRUCTURE PER 3 LOTS.
6. A PERMANENT STORM DRAIN EASEMENT (S.D.E.) SHALL BE PLACED AROUND ALL SWALES DRAINING ACROSS MORE THAN 2 LOTS OR ANY STORM DRAIN SYSTEM LOCATED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY. EASEMENT WIDE SHALL BE MIN. 15' (7.5' L/R OF CENTERLINE) OR AS SPECIFIED BY REGULATORY AGENCIES.
7. ROOF DOWNSPOUTS SHALL BE BUILT TO ACHIEVE AN IMPERVIOUS DISCONNECT. THE DOWNSPOUTS SHALL BE AT LEAST 10 FEET AWAY FROM THE NEAREST ACCESSIBLE IMPERVIOUS SURFACE. THE DISCONNECTION SHALL DRAIN CONTINUOUSLY THROUGH THE GRASS SWALES.

DRIVEWAY DETAIL (R/W TO GARAGE ENTRY)

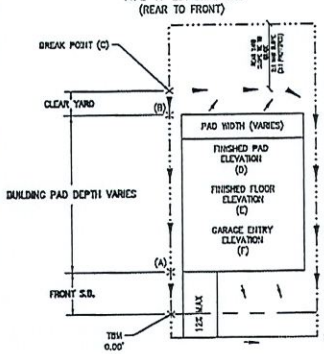


ELEVATION DIFFERENCES:
.GAR. ENTRY TO GRADED PAD: 0.25' (3")
GAR. ENTRY TO FIN. FLOOR: 0.67' (8")

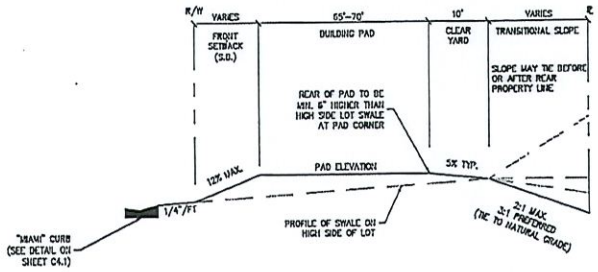


NOTE: FOR LOTS LABELED 'N' (NON-DR HORTON STANDARD GRADING) OWNER TO DEVELOP STEM WALL OR CRAWL SPACE LOTS AS INDICATED ON C5.0.

TYPE "A" LOT DRAINAGE
(REAR TO FRONT)



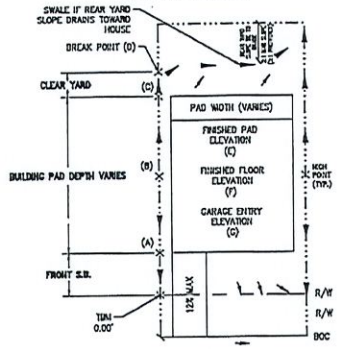
TYPE "A" LOT DRAINAGE BACK TO FRONT DRAIN PATTERN PROFILE VIEW



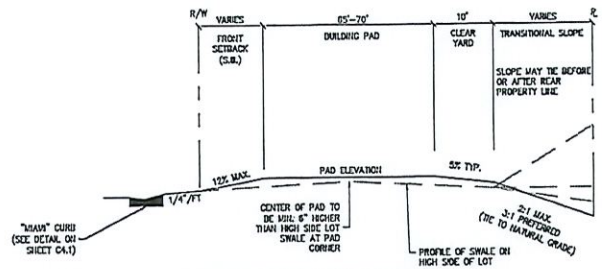
STANDARDS FOR TYPE 'A' LOT GRADING									
FRONT S.B	PAD DEPTH	CLEAR YARD	A	B	C	D	E	F
25	65	10	0.50	1.90	2.00	2.30	2.32	2.05
25	70	10	0.50	1.90	2.10	2.40	2.82	2.15

*ALL DIMENSIONS IN FEET

TYPE "B" LOT DRAINAGE
(SPLIT DRAIN CONDITION)



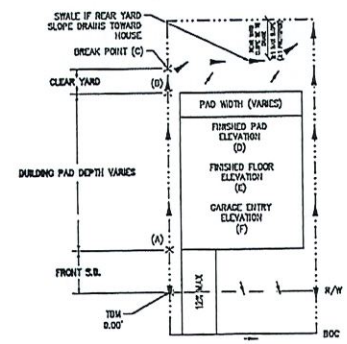
TYPE "B" LOT DRAINAGE SPLIT DRAINAGE PATTERN PROFILE VIEW



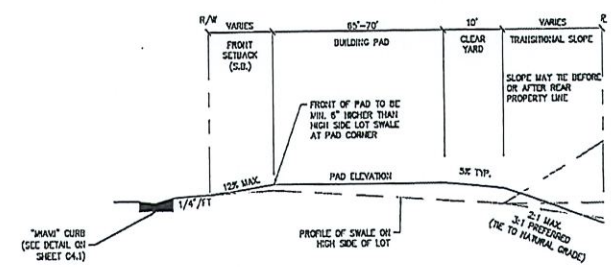
STANDARDS FOR TYPE 'B' LOT GRADING									
FRONT S.B	PAD DEPTH	CLEAR YARD	A	B	C	D	E	F	G
25	65	10	0.50	1.15	0.50	0.50	1.65	2.07	1.40
25	70	10	0.50	1.30	0.50	0.50	1.70	2.17	1.45

*ALL DIMENSIONS IN FEET

TYPE "C" LOT DRAINAGE
(FRONT TO BACK)



TYPE "C" LOT DRAINAGE FRONT TO BACK DRAINAGE PATTERN PROFILE VIEW



STANDARDS FOR TYPE 'C' LOT GRADING								
FRONT S.B	PAD DEPTH	CLEAR YARD	A	B	C	D	E	F
25	65	10	0.50	-0.90	-1.00	1.00	1.42	0.75
25	70	10	0.50	-0.90	-1.10	1.00	1.47	0.75

*ALL DIMENSIONS IN FEET

Date | Revisions

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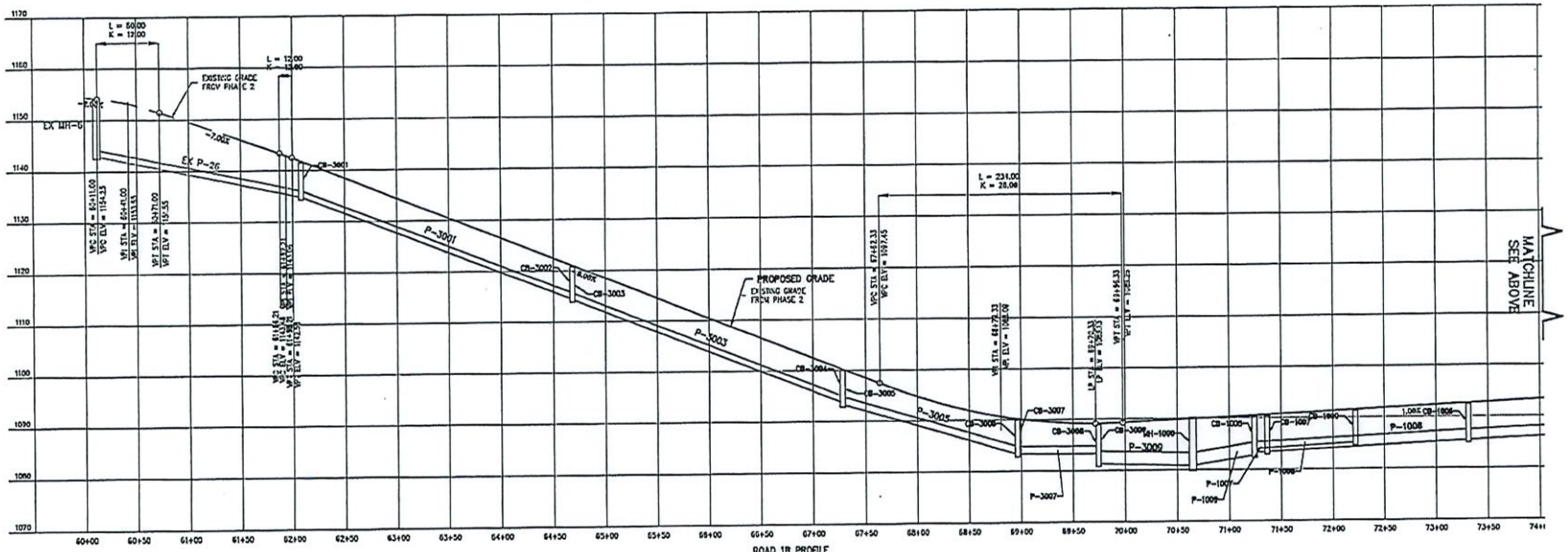
CREEKSIDE RIDGE SUBDIVISION – PHASE 3

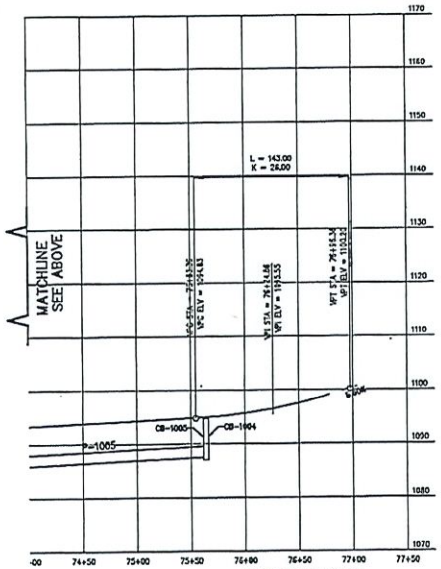
PAD GRADING NOTES & DETAILS

TOWN OF DAYBREAK, TN

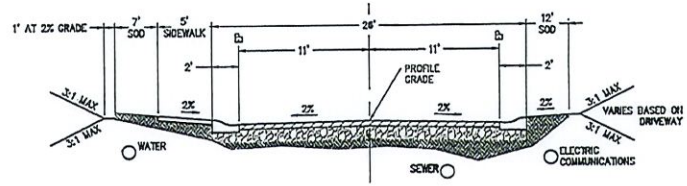
Vertical Scale: N/A
Horizontal Scale: N/A
Commission Number: 4246A
Sheet No.: C5.5



ROAD 1B PROFILE
STA. 60+00 – 77+03.90



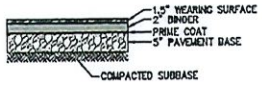
ROAD 1B PROFILE (CONT.)
STA. 60+00 – 77+03.90



RESIDENTIAL STREET (50' R.O.W)
N.T.S.

PAVEMENT NOTES:

- PREPARATION AND CONSTRUCTION OF THE SUBGRADE SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SECTION 203, EXCAVATION AND UNDERCUTTING, SECTION 206, EMBANKMENTS, AND SECTION 207, SUBGRADE CONSTRUCTION AND PREPARATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, TENNESSEE DEPARTMENT OF TRANSPORTATION.
- PAVEMENT BASE SHALL BE SURFACED WITH TDOT TYPE A MINERAL AGGREGATE CRUSHED STONE, PUGMILL MIXED WITH ENOUGH WETTING TO MAINTAIN A UNIFORM MOISTURE CONTENT.
- A PRIME COAT OF CUT-BACK ASPHALT, GRADE RC-70 OR RC-250, OR EMULSIFIED ASPHALT, GRADE AE-P OR CAE-P, SHALL BE APPLIED AT A RATE OF 0.2 TO 0.5 GALLONS PER SQUARE YARD, AND, IF CONDITIONS REQUIRE, AGGREGATE COVER MATERIAL, SIZE 7, 8, OR 78, SHALL BE APPLIED.
- A BINDER COURSE CONSISTING OF HOT MIX ASPHALTIC CONCRETE (307-B), SHALL BE APPLIED TO A DEPTH OF TWO INCHES.
- THE WEARING SURFACE SHALL BE ASPHALTIC CONCRETE, AS SET OUT IN SECTION 411, ASPHALTIC CONCRETE SURFACE (HOT MIX), STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, TENNESSEE DEPARTMENT OF TRANSPORTATION.



DANDRIDGE TYPICAL PAVEMENT SCHEDULE (RESIDENTIAL)
N.T.S.

0 25' 50' 100'
SCALE: 1" = 50'-0"

Revisions	Date

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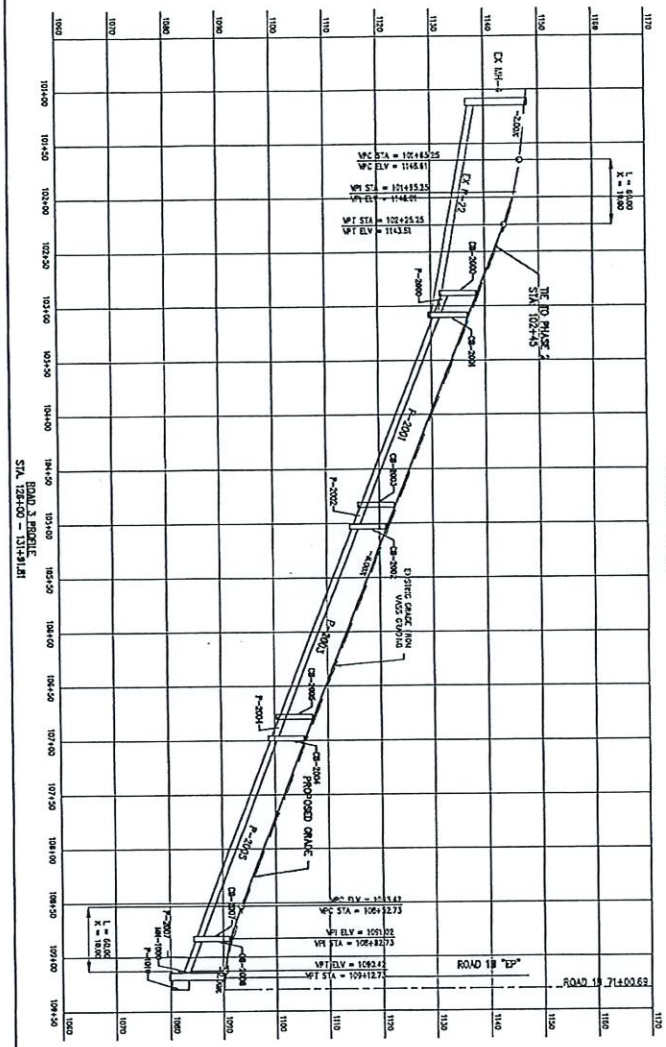
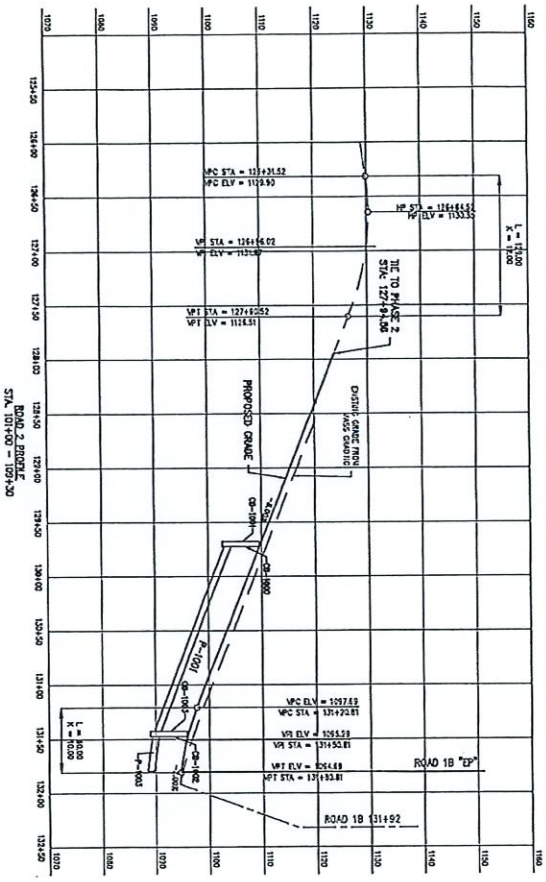
CREEKSIDE RIDGE SUBDIVISION – PHASE 3

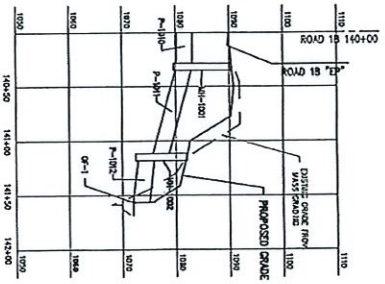
ROAD AND STORMWATER PROFILES

TOWN OF DANDRIDGE, TN

Vertical Scale: 1"=10'
Horizontal Scale: 1" = 50'
Commission Number: 4246A
Sheet No.: C5.6







SCALE: 1" = 50'-0"

Sheet No.: C5.7	Commission Number: 4246A	Horizontal Scale: 1" = 50'	Vertical Scale: 1" = 10'	CREEKSIDE RIDGE SUBDIVISION – PHASE 3 ROAD AND STORMWATER PROFILES TOWN OF DANDRIDGE, TN	Mattern & Craig ENGINEERS/SURVEYORS 433 EAST MARKET STREET JOHNSON CITY, TENNESSEE 37601 (423) 979-2220 FAX (423) 979-2222

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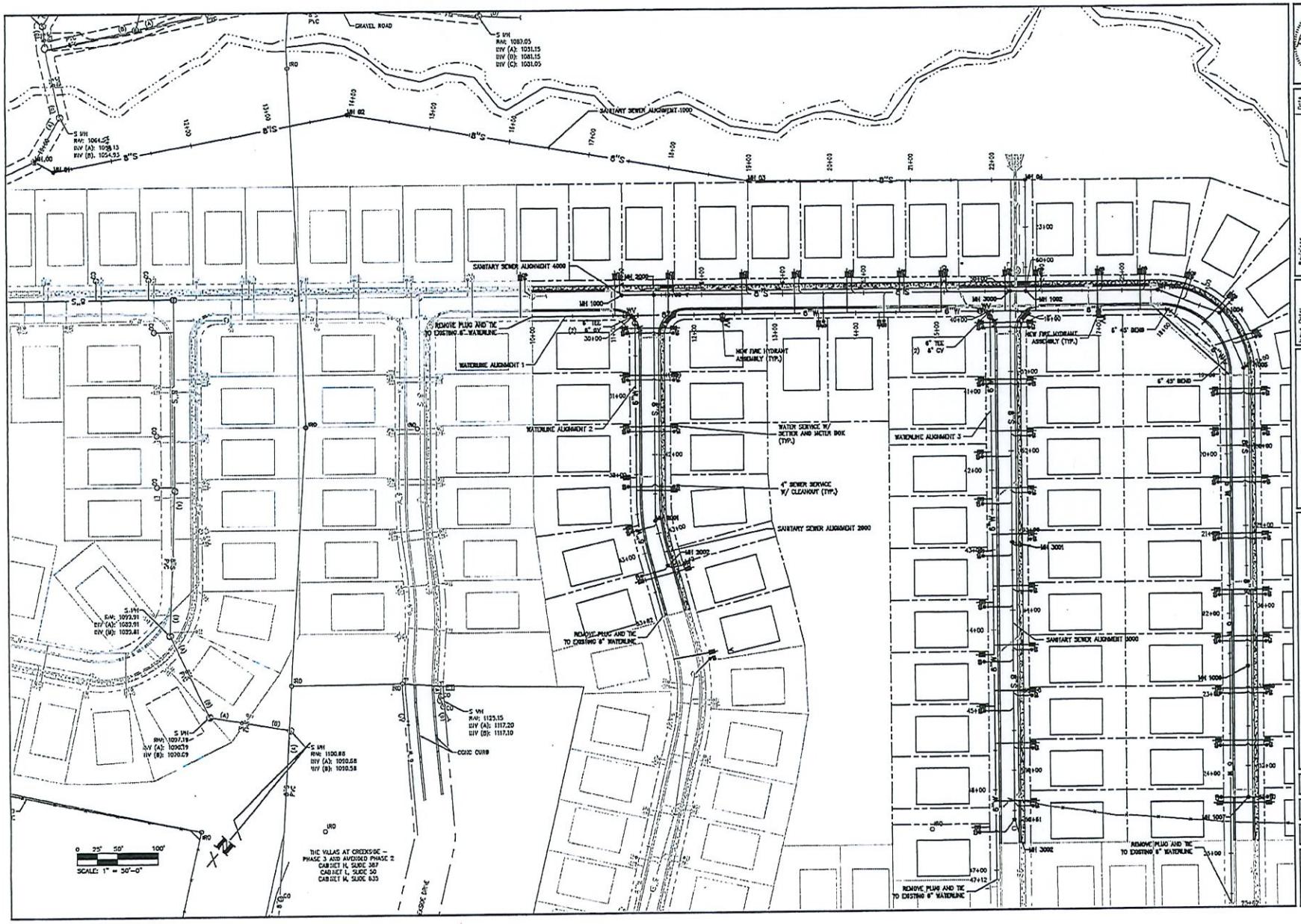

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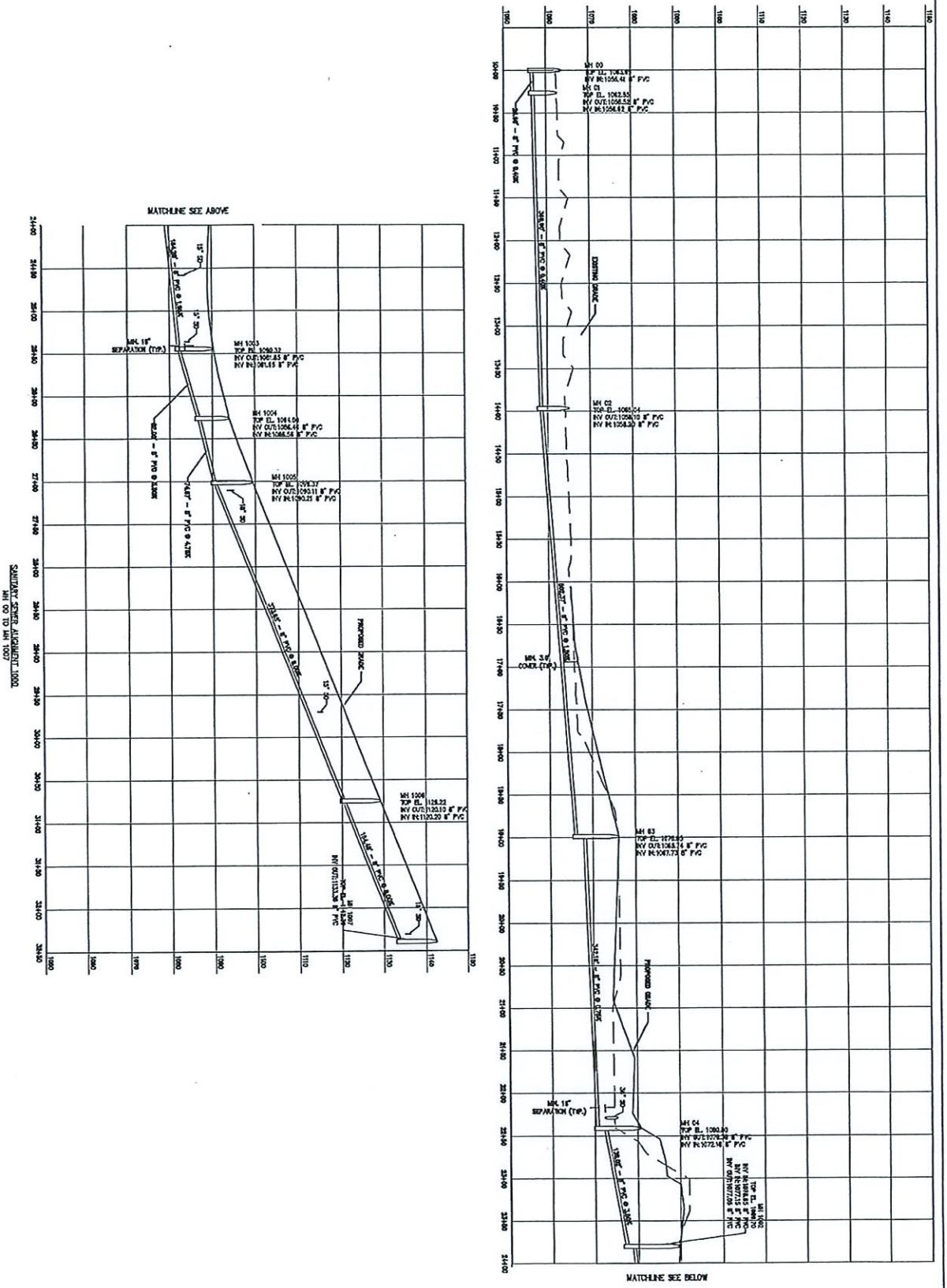
CREEKSIDE RIDGE SUBDIVISION - PHASE 3

UTILITY PLAN

TOWN OF DANDRIDGE, TN

Vertical Scale: N/A
Horizontal Scale: 1"=50'
Commission Number: 4246A
Sheet No.: C6.0



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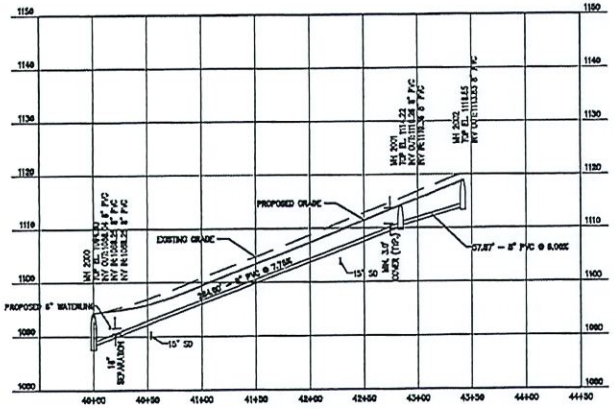
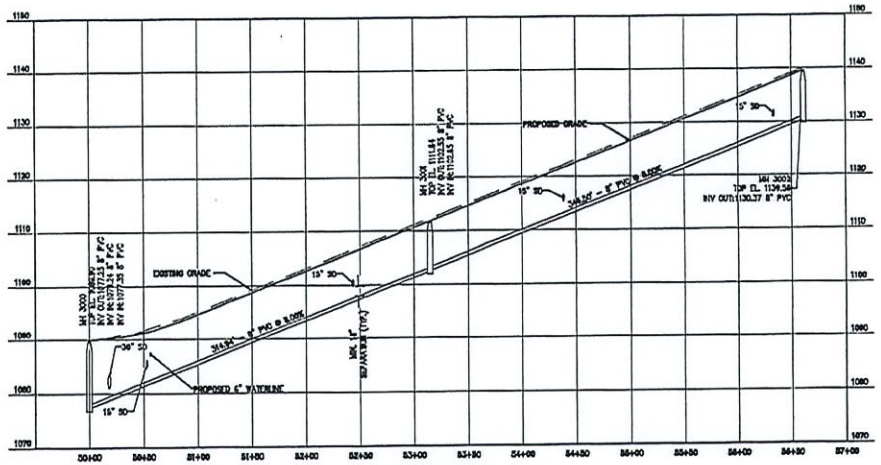
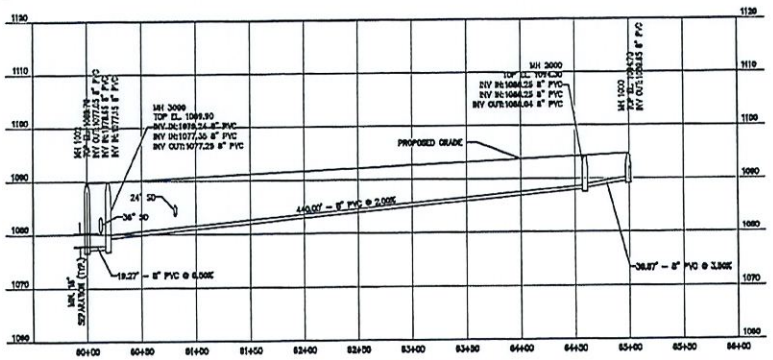


SANITARY SEWER ALIGNMENT 2000
MH 2000 TO MH 2002



SANITARY SEWER ALIGNMENT 3000
MH 3000 TO MH 3002



SANITARY SEWER ALIGNMENT 4000
MH 1002 TO MH 1000

Revisions

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GREENSIDE RIDGE SUBDIVISION – PHASE 3

SANITARY SEWER PROFILES

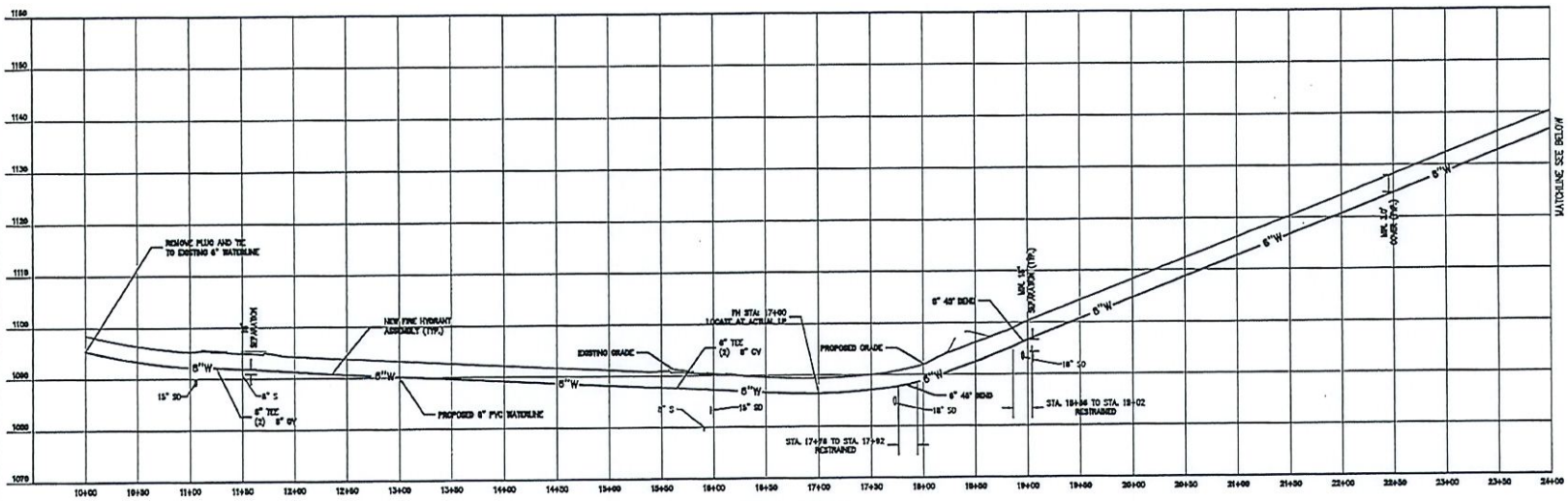
TOWN OF DANDRIDGE, TN

Vertical Scale: 1"=10'

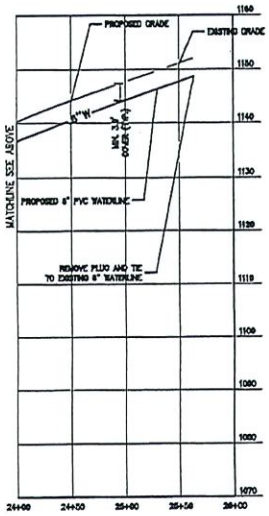
Horizontal Scale: 1"=50'

Commission Number: 4246A

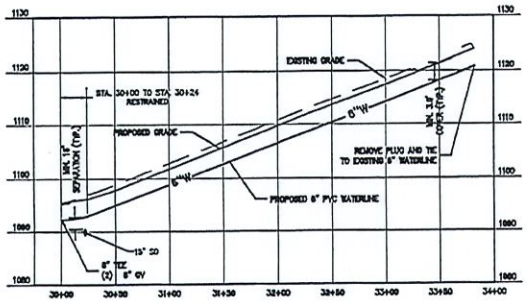
Sheet No.: C6.2



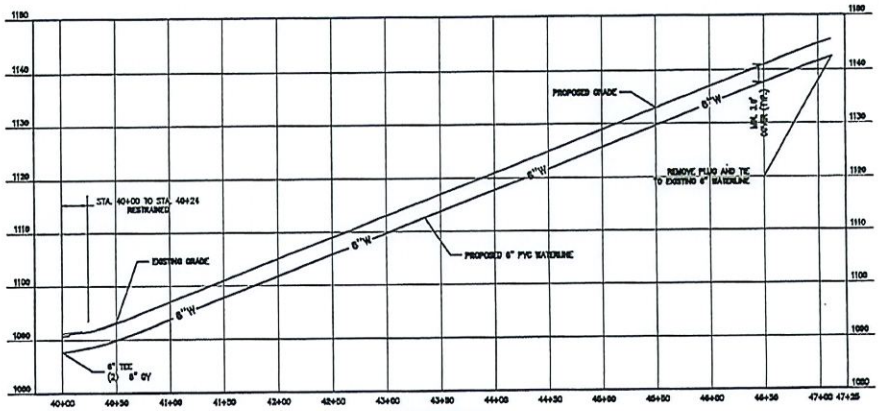
WATERLINE ALIGNMENT 1
STA: 10+00 TO STA: 24+00



WATERLINE ALIGNMENT 1
STA: 24+00 TO STA: 25+66



WATERLINE ALIGNMENT 2
STA: 30+00 TO STA: 33+52



WATERLINE ALIGNMENT 3
STA: 40+00 TO STA: 47+12

Date

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CREEKSIDE RIDGE SUBDIVISION - PHASE 3

WATERLINE PROFILES

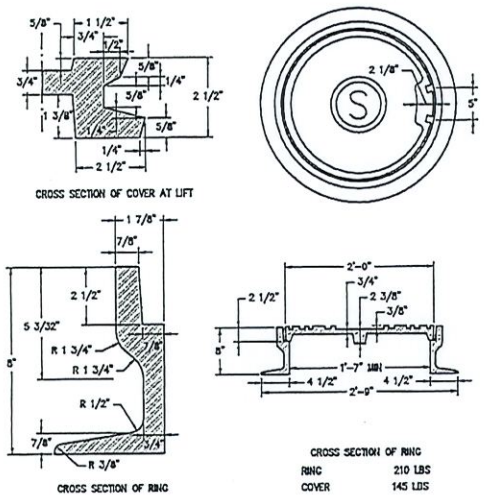
TOWN OF DANDRIDGE, TN

Vertical Scale: 1"=10'

Horizontal Scale: 1"=50'

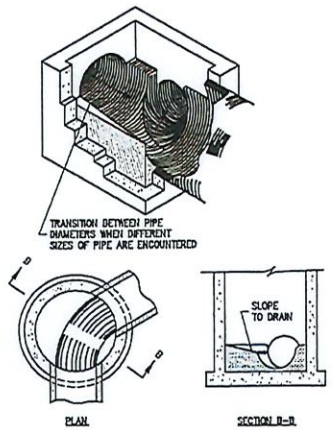
Commission Number: 4246A

Sheet No: C6.3



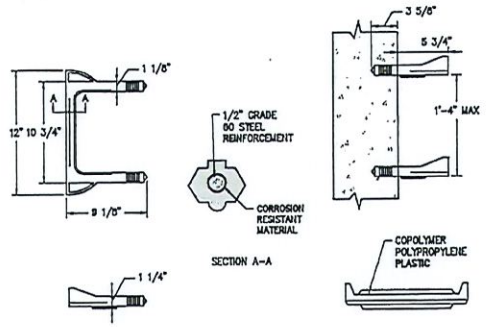
MC SS-12 MANHOLE FRAME AND COVER

NOT TO SCALE



MC SS-9 MANHOLE INVERT SHAPING

SCALE: NOT TO SCALE



NOTES:
STEPS WILL BE REQUIRED IN ALL STRUCTURES WITH A DEPTH OF 4'-0" OR GREATER UNLESS OTHERWISE NOTED IN THE PLANS.

ALL STEPS SHALL PROTRUDE 5" FROM INSIDE FACE OF STRUCTURE WALL.

MAXIMUM STEP SPACING TO BE 1'-4" C-C.

STEPS SHALL WITHSTAND A MINIMUM LOAD OF 300 LBS WHEN EXTENDED 5" FROM THE FACE OF THE SUPPORT.

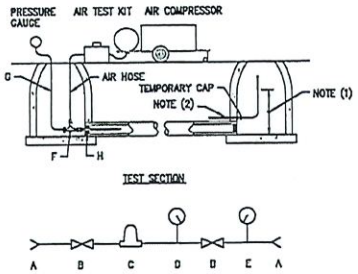
STEPS ARE TO BE VERTICALLY ALIGNED AND UNIFORMLY SPACED FOR THE ENTIRE DEPTH OF ANY STRUCTURE.

IN PRECAST UNITS STEPS MAY BE CAST IN PLACE OR MORTARED INTO HOLES PROVIDED BY THE FABRICATOR.

STEPS OFFERING DIMENSIONS, CONFIGURATIONS, OR MATERIALS FROM THOSE SHOWN MAY ALSO BE USED PROVIDED THEY MEET THE MINIMUM REQUIREMENTS SHOWN HEREIN AND THE CONTRACTOR AND THE CONTRACTOR HAS FURNISHED THE ENGINEER WITH DETAILS AND CERTIFIED TEST REPORTS OF THE PROPOSED SUBSTITUTE AND HAS RECEIVED WRITTEN APPROVAL FROM THE ENGINEER FOR USE OF SUCH STEPS.

MC SS-11 MANHOLE STEP

NOT TO SCALE



EQUIPMENT SCHEDULE:

- A QUICK COUPLING
- B AIR VALVE
- C INPUT AIR PRESSURE REGULATOR
- D INPUT PRESSURE GAUGE
- E PRESSURE SENSOR GAUGE
- F AIR FEED & PRESSURE SENSOR ASSEMBLY
- G PRESSURE SENSOR AIR HOSE
- H STANDARD PLUMBERS PLUGS

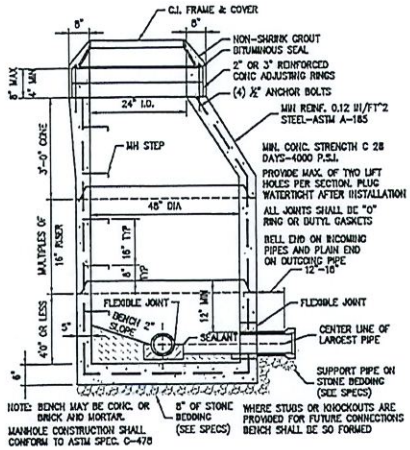
NOTES:

(1) CLEAR PLASTIC TUBING - HEIGHT MEASURED FROM PIPE INVERT

(2) 1/2" CAPPED PIPE - 10" LONG INSTALLED WHEN MANHOLE IS INSTALLED

MC SS-21 AIR TEST SKETCH

NOT TO SCALE



MC SS-1 PRECAST CONCRETE MANHOLE-4' DIA-STD

SCALE: NOT TO SCALE

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GREENSIDE RIDGE SUBDIVISION - PHASE 3

UTILITY DETAILS

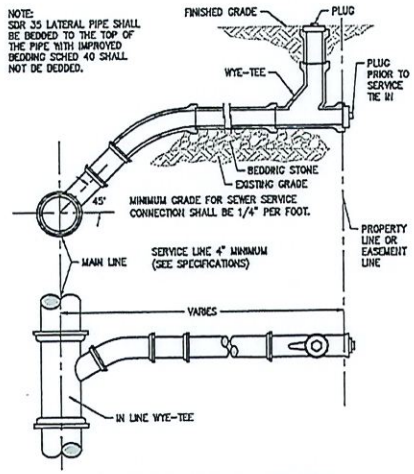
TOWN OF DANDRIDGE, TN

Vertical Scale: N/A

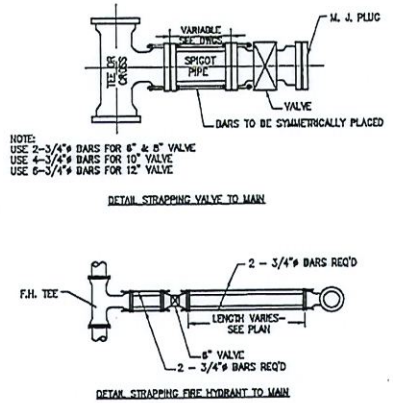
Horizontal Scale: N/A

Commission Number: 4246A

Sheet No.: C6.4

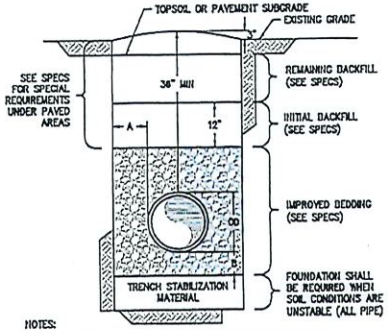


MC SS-14 SEWER LATERAL CONNECTION
NOT TO SCALE



NOTE: SEE SPECIFICATIONS FOR HARNESSING REQUIREMENTS

MC W-2 HARNESSING VALVE & FIRE HYDRANT TO MAIN
SCALE: NOT TO SCALE



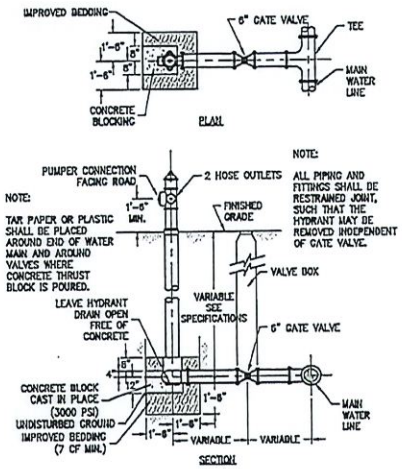
NOTES:

THE MAXIMUM TRENCH WIDTH (OD+2A) SHALL BE MEASURED FROM THE PIPE INVERT TO ONE FOOT ABOVE THE TOP OF PIPE.

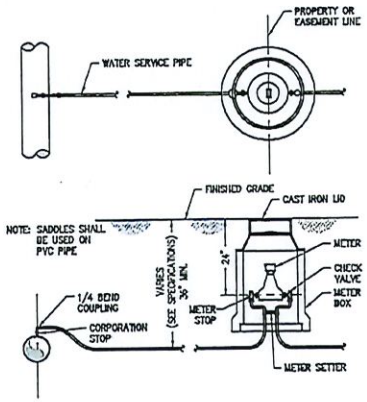
DIMENSION "A" SHALL BE 12" WHEN TRENCH IS 10 FEET OR LESS DEEP FROM INVERT OF PIPE, AND 18" WHEN TRENCH IS GREATER THAN 10 FEET DEEP.

DIMENSION "B" 4" TYPICAL OR 6" IF ROCK IN BOTTOM OF TRENCH SEE SPECIFICATIONS.

MC SS-20 TRENCH DETAILS FOR GRAVITY PIPES
NOT TO SCALE



MC W-1 FIRE HYDRANT INSTALLATION
SCALE: NOT TO SCALE



MC W-3A TYPICAL SERVICE CONNECTION WITH METER
SCALE: NOT TO SCALE

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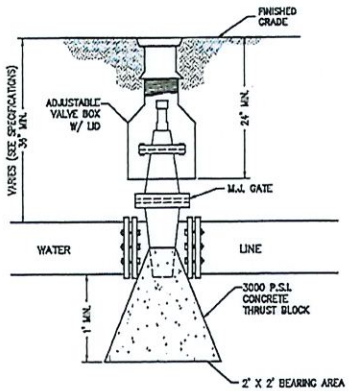
CREEKSIDE RIDGE SUBDIVISION - PHASE 3

UTILITY DETAILS

TOWN OF DANDRIDGE, TN

Vertical Scale: N/A
Horizontal Scale: N/A
Commission Number: 4246A
Sheet No.: C6.5

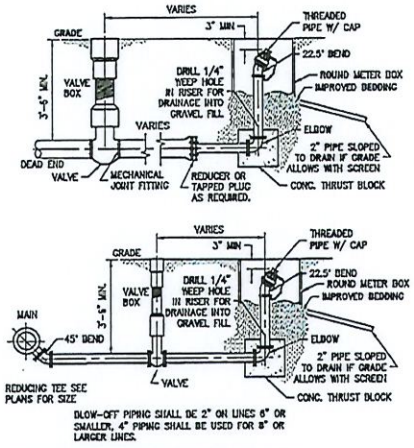


NOTES: 1. IN REMOTE AREAS, VALVE BOXES SHALL EXTEND SIX(6) INCHES ABOVE GRADE

2. TAR PAPER OR PLASTIC SHALL BE PLACED AROUND END OF WATER MAIN AND AROUND VALVES WHERE CONCRETE ANCHOR BLOCK IS POURED.

MC W-4 TYPICAL GATE VALVE INSTALLATION

NOT TO SCALE

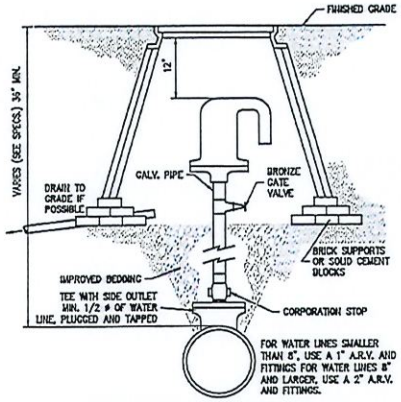


BLOW-OFF PIPING SHALL BE 2" ON LINES 6" OR SMALLER, 4" PIPING SHALL BE USED FOR 8" OR LARGER LINES.

NOTE: TAR PAPER OR PLASTIC SHALL BE PLACED AROUND END OF WATER MAIN AND AROUND VALVES WHERE CONCRETE THRUST BLOCK IS POURED

MC W-5 BLOW-OFF DETAIL (STANDARD)

SCALE: NOT TO SCALE



FOR WATER LINES SMALLER THAN 8", USE A 1" A.R.V. AND FITTINGS FOR WATER LINES 8" AND LARGER, USE A 2" A.R.V. AND FITTINGS.

A PRECAST MANHOLE CONE AND COVER WITH "WATER" CAST ON THE LID SHALL BE USED. AN ADEQUATE FOUNDATION SHALL BE INSTALLED SO THE WATER LINE DOESN'T SUPPORT THE MANHOLE CONE.

MC W-6 COMBINATION AIR VALVE

SCALE: NOT TO SCALE

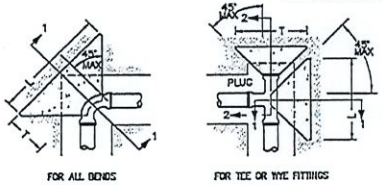
Pipe Size	Fitting Type	4.1 Mpa (600 PSI)		2.8 Mpa (400 PSI)		1.4 Mpa (200 PSI)	
		m	Feet	m	Feet	m	Feet
4"	Tee	4	12	10	30	13	41
	Dead-End	10	30	21	69	32	104
	90°	12	39	26	85	40	130
	45°	5	16	11	36	17	56
	22.5°	2	7	5	16	8	26
	11.25°	1	3	2	8	3	9
6"	Tee	13	44	31	103	46	150
	Dead-End	23	77	54	177	80	263
	90°	17	56	40	131	59	194
	45°	7	23	16	54	24	79
	22.5°	3	10	7	23	10	34
	11.25°	1	3	2	8	3	9
8"	Tee	31	104	74	243	109	358
	Dead-End	30	98	70	231	103	338
	90°	22	72	52	171	76	251
	45°	9	30	21	70	31	102
	22.5°	4	13	9	30	13	44
	11.25°	2	6	4	14	6	19
12"	Tee	57	187	135	443	198	650
	Dead-End	67	219	160	525	235	770
	90°	47	156	111	365	163	536
	45°	20	66	47	156	69	227
	22.5°	8	27	19	64	28	94
	11.25°	4	13	9	30	13	44
16"	Tee	98	322	232	762	341	1120
	Dead-End	120	393	287	941	421	1382
	90°	83	274	196	644	288	945
	45°	35	116	83	274	122	400
	22.5°	15	49	35	116	51	169
	11.25°	7	23	17	56	25	82
18"	Tee	127	416	299	981	439	1440
	Dead-End	151	496	362	1188	531	1743
	90°	105	346	248	814	364	1194
	45°	44	146	105	346	154	506
	22.5°	19	62	45	148	66	217
	11.25°	9	30	21	70	31	102
24"	Tee	227	744	534	1752	784	2572
	Dead-End	270	886	647	2122	949	3114
	90°	188	617	443	1453	650	2133
	45°	79	259	187	614	275	902
	22.5°	34	112	80	263	117	384
	11.25°	16	53	38	125	56	184
30"	Tee	353	1158	831	2726	1220	4000
	Dead-End	420	1378	1006	3300	1476	4842
	90°	293	961	689	2261	1011	3317
	45°	123	403	291	955	428	1404
	22.5°	53	174	125	410	183	600
	11.25°	25	82	59	194	87	285

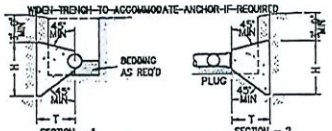
NOTES:

1. LENGTHS SHOWN ARE IN FEET.
2. WHERE TEST PRESSURES EXCEED 300 PSI, CONSULT WITH MFR. REP.
3. IN AREAS OF POOR SOILS, CONFIRM LENGTHS WITH ENGINEER.
4. AS AN ALTERNATE, THRUST BLOCKS IN ACCORDANCE WITH MC W-7A MAY BE USED WHEN APPROVED BY THE ENGINEER.
5. BOTH SIDES OF VALVES SHALL BE RESTRAINED AS INDICATED FOR DEAD ENDS.
6. FOR VERTICAL BENDS, USE MOST STRINGENT COLUMN.

MC W-7 MINIMUM REQUIRED PIPE RESTRAINT LENGTH

SCALE: NOT TO SCALE



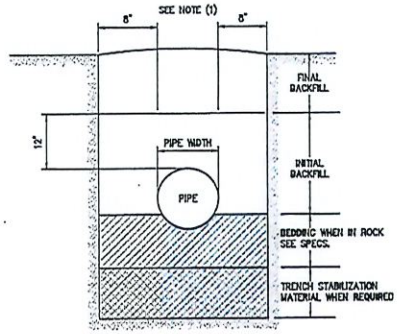


PIPE SIZE	DEGREE OF BEND	BEND DIMENSIONS (FEET)				VOL. CU.YD.	TEE AND PLUGS (FEET)				VOL. CU.YD.
		T	H	L	I		L	H	T	I	
4" & 6"	90°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.00	2.00	2.50	0.40	
	45°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
	22.5°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
	11.25°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
8"	90°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.50	2.50	3.00	0.50	
	45°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
	22.5°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
	11.25°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
10" & 12"	90°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.00	3.00	3.50	0.70	
	45°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
	22.5°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
	11.25°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
16"	90°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.00	4.5	5.00	0.70	
	45°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
	22.5°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
	11.25°	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

1. THRUST BLOCKS ARE REQUIRED WHENEVER THE PIPELINE: CHANGES DIRECTION, CHANGES SIZE, DEAD ENDS AND AT VALVES.
2. USE 3000 P.S.I. CONCRETE
3. NO CONCRETE SHALL BE POURED ON ANY PART OF THE JOINT.
4. TAR PAPER OR PLASTIC SHALL BE PLACED AROUND END OF WATER MAIN AND AROUND VALVES WHERE CONCRETE ANCHOR BLOCK IS POURED.

MC W-7A THRUST BLOCK DETAIL

SCALE: NOT TO SCALE

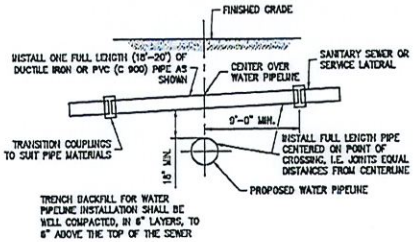


NOTES:

1. SEE SPECIFICATIONS FOR BEDDING MATERIAL. IF PIPE IS NOT BEDDED, BOTTOM OF TRENCH SHALL BE SHAPED TO MATCH PIPE.
2. SEE SPECIFICATIONS FOR BACKFILL REQUIREMENTS AND COMPACTION.
3. THIS DETAIL IS FOR WATER LINES, FORCE MAINS, AND OTHER PRESSURE PIPES.

MC W-9 TRENCH INSTALLATION FOR PRESSURE PIPE (NOT BEDDED)

SCALE: NOT TO SCALE



MC W-18 WATER PIPELINE CROSSING SANITARY SEWER

SCALE: NOT TO SCALE

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GREENSIDE RIDGE SUBDIVISION – PHASE 3

UTILITY DETAILS

TOWN OF DANDRIDGE, TN

Vertical Scale: N/A

Horizontal Scale: N/A

Commission Number: 4246A

Sheet No.: C6.6

SANITARY SEWER INSTALLATION

MATERIALS – GENERAL

A. ALL MATERIALS AND APPURTENANCES REQUIRED FOR THE WORK SHALL BE NEW, OF FIRST-CLASS QUALITY AND SHALL BE FURNISHED, DELIVERED, ERECTED, CONNECTED AND FINISHED IN EVERY DETAIL AS SPECIFIED OR INDICATED. ALL MATERIALS FOUND DEFECTIVE, REGARDLESS OF THE CIRCUMSTANCES, SHALL BE REPLACED WITH NEW MATERIAL.

B. COMPLY WITH ALL CODES, LAWS, ORDINANCES AND REGULATIONS OF GOVERNMENTAL AUTHORITIES INCLUDING, BUT NOT LIMITED TO, LOCAL MUNICIPALITIES AND SANITARY DISTRICTS HAVING JURISDICTION OVER THIS PART OF THE WORK.

PIPE SELECTIONS

A. THE CONTRACTOR SHALL INSTALL ONLY ONE (1) TYPE OF PIPE BETWEEN STRUCTURES EXCEPT WHERE DUCTILE IRON PIPE IS SPECIFIED OR INDICATED. WHERE EXISTING PIPE IS TO BE REPLACED OR EXTENDED THE SAME TYPE OF PIPE SHALL BE INSTALLED, UNLESS SPECIFIED OR INDICATED OTHERWISE. ALL PIPING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.

B. GRAVITY SANITARY SEWERS SHALL BE EITHER SMOOTH INSIDE AND OUTSIDE WALL POLYVINYL CHLORIDE OR DUCTILE IRON PIPE, AT THE CONTRACTOR'S OPTION, UNLESS SPECIFIED OR INDICATED OTHERWISE. CARRIER PIPES IN CASING PIPES SHALL BE DUCTILE IRON PIPE.

C. SANITARY SEWER LATERALS SHALL BE EITHER SCHEDULE 40 POLYVINYL CHLORIDE, THE SAME MATERIAL AS THE GRAVITY SANITARY SEWER, OR DUCTILE IRON PIPE, AT THE CONTRACTOR'S OPTION.

TYPES OF PIPE

A. POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS SHALL BE SDR 35 AND SHALL CONFORM WITH ASTM D3034 FOR PIPE SIZES 4"-15" AND ASTM-679 FOR PIPE SIZES 18"-48". SCHEDULE 40 PVC PIPE FOR SERVICE LATERALS SHALL CONFORM TO ASTM D1785.

B. DUCTILE IRON PIPE SHALL CONFORM WITH AWWA C151/ANSI 21.51 AND FITTINGS SHALL CONFORM WITH ANSI/AWWA C110, OR C153 (COMPACT FITTINGS). THE PIPE AND FITTINGS SHALL BE ASPHALT COATED AND CEMENT LINED IN ACCORDANCE WITH AWWA C104/ANSI 21.40. THE PIPE THICKNESS SHALL CONFORM WITH AWWA C 150/ANSI 21.50 AND SHALL BE CLASS 350, AS A MINIMUM.

C. SCHEDULE 40 PVC SHALL CONFORM TO ASTM D1785.

JOINTS AND COUPLINGS

A. PVC PIPE AND FITTINGS SHALL BE BELL AND SPIGOT TYPE JOINTS. THE BELL AND SPIGOT JOINT SHALL BE SEALED WITH ELASTOMERIC GASKETS CONFORMING TO ASTM D3212. THE JOINTS SHALL BE MADE IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE PIPE MANUFACTURER.

B. JOINTS FOR ALL GRAVITY PVC PIPE AND POLYETHYLENE SHALL BE PUSH-ON TYPE BELL AND SPIGOT, SEALED WITH ELASTOMERIC GASKETS, CONFORMING TO ASTM D3212.

C. DUCTILE IRON PIPE AND FITTINGS FOR BURIED SERVICE SHALL BE EITHER MECHANICAL OR BELL AND SPIGOT TYPE JOINTS AS SPECIFIED OR INDICATED. JOINTS SHALL BE MADE WITH A SINGLE WATERTIGHT RUBBER GASKET MANUFACTURED IN ACCORDANCE WITH AWWA C111/ANSI 21.11. THE JOINTS SHALL BE MADE IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE PIPE MANUFACTURER.

D. JOINTS FOR SCHEDULE 40 PVC SHALL BE COUPLINGS WITH SOLVENT CEMENT. FITTINGS SHALL CONFORM TO ASTM D2466, SCHEDULE 40.

E. COUPLINGS SHALL BE PVC, AND SHALL ATTACH TO EACH PIPE WITH A STAINLESS-STEEL BAND. ALL COUPLINGS SHALL BE MARKED TO SHOW PART NUMBER, SIZE OF EACH PIPE CONNECTION, AND PIPE MATERIALS. COUPLINGS SHALL BE FERNCO FLEXIBLE COUPLINGS OR EQUAL.

SEWER SYSTEM APPURTENANCES

A. SANITARY SEWER LATERAL CONNECTIONS SHALL INCLUDE ALL PIPE REQUIRED AT THE DEPTHS ENCOUNTERED AND SHALL INCLUDE THE WYE OR THE TEE REQUIRED AT THE CONNECTION TO THE SEWER LINE, OR THE SADDLE TAP WHERE APPROVED BY THE ENGINEER, AND SHALL INCLUDE PIPE TO RUN TO THE CLEANOUT AT THE PROPERTY OR EASEMENT LINE. THE PIPE SHALL BE LAID TO THE PROPERTY LINE AND CAPPED, IF NOT CONNECTED TO THE SERVICE CONNECTION. AFTER BACKFILLING THE TRENCH, A 2 X 4 X 18-INCH STAKE WITH THE END PAINTED ORANGE SHALL BE DRIVEN, FLUSH WITH THE GROUND, AT THE CAP TO MARK ITS LOCATION.

B. PLUGS OR CAPS USED SHALL BE MANUFACTURED SPECIFICALLY FOR THE TYPE OF PIPE USED. THEY SHALL BE SECURED SUCH THAT THEY WILL BE WATERTIGHT AND WILL WITHSTAND THE INTERNAL PRESSURE APPLIED BY AIR OR EXFILTRATION TESTING.

LAYING PIPE AND PLACING MANHOLES

A. THE INSTALLATION OF THE SANITARY SEWER SYSTEM SHALL BEGIN AT THE DOWNSTREAM MANHOLE AND PROCEED UPSTREAM. THE DOWNSTREAM SECTIONS SHALL BE COMPLETED, TESTED AND APPROVED PRIOR TO ALLOWING SANITARY SEWAGE TO ENTER THE SYSTEM.

B. DO NOT LAY PIPE OR PLACE MANHOLES UNTIL ALL WATER HAS BEEN REMOVED FROM THE TRENCH, OR WHEN IN THE OPINION OF THE ENGINEER, THE TRENCH OR THE WEATHER CONDITIONS ARE UNSUITABLE FOR WORK.

C. PIPE THAT MAY REQUIRE FIELD CUTTING SHALL BE DONE SO IN A NEAT AND WORKMANLIKE MANNER, SO AS TO LEAVE A SMOOTH END AT RIGHT ANGLES TO THE AXIS OF THE PIPE. CARE SHALL BE TAKEN TO AVOID DAMAGING THE PIPE AND ANY COATINGS OR LININGS. DUCTILE IRON PIPE SHALL NOT BE CUT WITH AN OXYACETYLENE TORCH.

D. THE MATERIALS SHALL BE VISUALLY INSPECTED FOR DEFECTS BEFORE LOWERING THE PIPE OR PLACING THE MANHOLES INTO THE TRENCH. DURING THE LAYING OPERATION NO TOOLS, CLOTHING OR OTHER MATERIAL SHALL BE PLACED IN THE PIPE OR MANHOLE. THE INTERIOR OF THE PIPE SHALL BE CLEAR OF ALL SOIL, DEBRIS AND SUPERFLUOUS MATERIALS PRIOR TO AND DURING THE INSTALLATION.

E. EXERCISE EVERY PRECAUTION TO PREVENT FOREIGN MATERIAL FROM ENTERING THE PIPE WHILE IT IS BEING PLACED IN THE TRENCH. FAILURE BY THE CONTRACTOR TO TAKE SUCH PRECAUTIONS MAY RESULT IN THE ENGINEER REQUIRING A HEAVY, TIGHTLY WOVEN CANVAS BAG OF SUITABLE SIZE BE PLACED OVER EACH END OF THE PIPE AND REMOVED ONLY WHEN THE JOINT CAN BE MADE PROPERLY.

F. THE PIPE AND MANHOLES SHALL BE LOWERED CAREFULLY INTO THE TRENCH BY SUITABLE MEANS AND HANDLED WITH CARE AT ALL TIMES TO AVOID DAMAGE. UNDER NO CIRCUMSTANCES SHALL THE MATERIALS BE DROPPED OR DUMPED INTO THE TRENCHES.

G. THE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER. THE PIPE SHALL BE LAID IN TRUE STRAIGHT LINES WITH THE BELL ENDS UPSTREAM AND WITH THE INVERT OF THE PIPE BEING THE TRUE ELEVATION AND GRADE OF THE SYSTEM.

H. ESTABLISH AND MAINTAIN THE HORIZONTAL ALIGNMENT AND VERTICAL ELEVATION AND GRADE OF THE SYSTEM IN ACCORDANCE WITH THE SURVEY INFORMATION INDICATED ON THE PLANS.

I. THE HORIZONTAL ALIGNMENT OF THE PIPE SHALL BE MAINTAINED BY A TRANSIT OR THEODOLITE PLUMBED OVER THE CENTER OF THE DOWNSTREAM MANHOLE. THE VERTICAL ELEVATION AND GRADE SHALL BE MAINTAINED BY AN ADJUSTABLE LASER LEVEL MOUNTED AT THE INVERT OF THE DOWNSTREAM MANHOLE WITH TARGET(S) PLACED IN THE BELL END OF THE PIPE BEING LAID.

J. WHEN WORK IS NOT IN PROGRESS, PLUG THE OPEN ENDS OF THE PIPE TO PREVENT TRENCH WATER OR OTHER SUBSTANCES FROM ENTERING THE PIPE. THE PLUG SHALL BE WATERTIGHT AND SHALL REMAIN IN PLACE UNTIL ANY REQUIRED DEWATERING HAS BEEN COMPLETED.

K. CHECK DAMS SHALL BE INSTALLED IN THE BEDDING AND BACKFILL OF ALL NEW OR REPLACED SEWER LINES TO LIMIT THE DRAINAGE AREA SUBJECT TO THE FRENCH DRAIN EFFECT OF GRAVEL BEDDING. DAMS SHALL CONSIST OF COMPACTED CLAY BEDDING AND BACKFILL AT LEAST THREE (3) FEET THICK TO THE TOP OF THE TRENCH AND CUT INTO THE WALLS OF THE TRENCH TWO (2) FEET. ALTERNATIVELY, CONCRETE KEYED INTO THE TRENCH WALLS OR ABS PLASTIC RIPLEY'S DAM BY MCRIP MANUFACTURING MAY BE USED. DAMS SHALL BE PLACED NO MORE THAN 500 FEET APART AND SHALL BE LOCATED UPSTREAM OF EACH MANHOLE. ALL STREAM CROSSINGS SHALL INCLUDE CHECK DAMS ON BOTH SIDES OF THE CROSSING.

JOINTING

A. THE SANITARY SEWER SYSTEM SHALL BE LAID AND JOINED COMPLETE-IN-PLACE IN ORDER THAT EACH LENGTH AND SECTION OF PIPE BETWEEN THE MANHOLES SHALL HAVE A SMOOTH AND UNIFORM INVERT.

B. THE PREVIOUS JOINT SHALL HAVE BEEN COMPLETED AND THE ENTIRE LENGTH OF PIPE SHALL BE WELL BEDDED AND FIRMLY BACKFILLED BEFORE JOINTING ANOTHER LENGTH OF PIPE. BELL HOLES SHALL BE DUG OF SUFFICIENT SIZE TO INSURE PROPER JOINTING.

C. DO NOT USE EXCAVATION EQUIPMENT TO PUSH THE PIPE INTO THE HOME POSITION, UNLESS APPROVED BY THE ENGINEER, AND THEN ONLY FOR ONE LENGTH OF PIPE AT A TIME.

D. JOINTS FOR PIPES OF DIFFERENT MATERIALS SHALL EITHER BE MADE AT MANHOLES OR WITH STANDARD ADAPTER FITTINGS.

E. JOIN THE PIPE AS RECOMMENDED BY THE MANUFACTURER TO OBTAIN THE DEGREE OF WATERTIGHTNESS REQUIRED. THE USE OF LUBRICANTS, PRIMERS, ADHESIVES AND SIMILAR MATERIALS SHALL BE AS RECOMMENDED BY THE MANUFACTURERS.

F. THE PIPE SHALL BE CONNECTED TO MANHOLES THROUGH PRECAST OPENINGS AND JOINED WITH EITHER A FLEXIBLE BOOT ADAPTER OR A PIPE SEAL GASKET.

CONNECTION TO EXISTING MANHOLE

A. MAINTAIN THE EXISTING SEWAGE FLOW AT ALL TIMES BY PUMPING, DIVERSION OR OTHER MEANS APPROVED BY THE ENGINEER. CARE SHALL BE TAKEN TO PROHIBIT DEBRIS FROM ENTERING THE SYSTEM.

B. DO NOT ALLOW SEWAGE TO BE DIVERTED INTO A NATURAL WATERCOURSE OR BACK UP INTO ANY SERVICE CONNECTIONS. THE CONTRACTOR SHALL PAY FOR ALL DAMAGES WHICH MAY OCCUR AS A RESULT OF FAILING TO MAINTAIN THE SEWAGE FLOW IN THE SYSTEM.

C. THE NEW PIPE CONNECTION TO BE MADE TO AN EXISTING MANHOLE, WHERE NO STUB OR OPENING EXISTS, SHALL BE MADE THROUGH AN OPENING OF MINIMUM DIAMETER CUT INTO THE MANHOLE WALL AT THE REQUIRED LOCATION AND ELEVATION.

D. THE EXISTING INVERT CHANNELS AND BENCHES SHALL BE REWORKED AS REQUIRED TO FORM A NEW FLOW CHANNEL FROM THE NEW CONNECTION TO THE EXISTING FLOW CHANNEL.

E. THE PIPE SHALL EXTEND INTO THE MANHOLE AND THE OPENING AROUND THE PIPE SEALED WITH A RUBBER BOOT SEALED TO THE MANHOLE WITH AN INTERNAL, EXPANDING STAINLESS STEEL BAND, AND TO THE PIPE WITH A STAINLESS-STEEL CLAMP. BOOT SHALL BE BY PSX, PRESS-SEAL GASKET CORP OR EQUAL.

SEWER LATERAL CONNECTIONS

A. MAKE ALL SEWER LATERAL CONNECTIONS TO THE SEWER PIPE AND FROM MANHOLES WHERE SHOWN ON THE PLANS AND/OR WHERE LOCATED IN THE FIELD BY THE ENGINEER. THE SEWER LATERAL CONNECTIONS TO THE SEWER PIPE SHALL BE MADE WITH EITHER A WYE OR TEE BRANCH FITTING, OR SADDLE TAP WHERE APPROVED BY THE ENGINEER. THE ACTUAL LOCATION OF LATERALS INSTALLED SHALL BE SHOWN ON THE RECORD DRAWINGS.

B. THE WYE AND TEE BRANCH FITTINGS FOR SEWER LATERAL CONNECTIONS SHALL BE COMMERCIALLY MANUFACTURED AND INSTALLED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE PIPE MANUFACTURER.

C. THE SEWER PIPE SHALL NOT BE CUT OR TAPPED FOR SEWER LATERAL CONNECTIONS EXCEPT WHEN AND WHERE PERMITTED BY THE ENGINEER.

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CREEKSIDE RIDGE SUBDIVISION – PHASE 3

SANITARY SEWER NOTES

TOWN OF DANDRIDGE, TN

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SANITARY SEWER INSTALLATION (CONTINUED)

D. ALL SEWER LATERAL CONNECTIONS SHALL BE MADE WITH FOUR (4) INCH DIAMETER PIPE AS A MINIMUM, UNLESS THE SIZE OF AN EXISTING SEWER LATERAL CONNECTION DICTATES OTHERWISE AND SHALL BE INSTALLED ON A MINIMUM GRADE OF ONE-QUARTER INCH PER ONE FOOT FROM THE SEWER PIPE OR MANHOLE TO THE PROPERTY OR EASEMENT LINE.

E. FUTURE SEWER LATERAL CONNECTIONS SHALL EXTEND TO THE PROPERTY OR EASEMENT LINE AND BE PROPERLY CAPPED WITH A WATERTIGHT FITTING TO PREVENT INFILTRATION INTO THE SEWERAGE SYSTEM. THE FITTING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE PIPE MANUFACTURER. A CLEANOUT SHALL BE INSTALLED AT THE PROPERTY OR EASEMENT LINE.

F. FUTURE SEWER LATERAL CONNECTIONS SHALL BE FIELD MARKED BY A TREATED, SOLID WOODEN 2 INCH BY 4-INCH MARKER THREE FEET LONG SET VERTICALLY PLUMB WITH THE END OF THE CAPPED SERVICE CONNECTION. THE TOPS OF THE MARKERS SHALL BE PAINTED ORANGE AND SET FLUSH WITH THE FINISHED GRADE. THE LOCATION AND INVERT DEPTH OF THE SEWER LATERAL CONNECTION SHALL BE SHOWN ON THE RECORD PLANS.

G. EXISTING SEWER LATERALS THAT ARE TO BE CONNECTED TO THE NEW SEWER PIPE AND ARE IN SATISFACTORY CONDITION, AS APPROVED BY THE ENGINEER, SHALL NOT BE REPLACED TO THE PROPERTY LINE BUT SHALL BE REPLACED AND CONNECTED TO THE FIRST COMPATIBLE JOINT WHICH WILL INSURE A WATERTIGHT CONNECTION, OUTSIDE THE TRENCH EXCAVATION FOR THE SEWER MAIN.

H. WHEN CONDITIONS ARE SUCH THAT SEWER LATERAL CONNECTIONS CANNOT BE ADEQUATELY SUPPORTED ON UNDISTURBED EARTH OR COMPACTED BACKFILL THE FITTING SHALL BE ENCASED IN CONCRETE OR SUPPORTED BY A CONCRETE CRADLE AS SHOWN ON THE DRAWINGS.

TESTING

A. ALL PIPE SHALL BE TESTED BY THE CONTRACTOR IN THE PRESENCE OF THE ENGINEER BEFORE BEING INCORPORATED INTO THE WORK. WHEN laid, PIPE SHALL NOT BE COVERED UNLESS AND UNTIL INSPECTED BY THE ENGINEER AND PERMISSION GRANTED. THE NECESSARY FACILITIES FOR PROPER INSPECTION SHALL BE PROVIDED BY THE CONTRACTOR WHEN REQUESTED BY THE ENGINEER.

B. PRIOR TO THE FINAL INSPECTION, THE REQUIRED TESTS SHALL BE COMPLETED IN THE PRESENCE OF THE ENGINEER IN AN APPROVED MANNER WITH ACCEPTABLE RESULTS.

C. PROVE THE WATERTIGHTNESS OF THE SEWER SYSTEM OR PORTIONS THEREOF BY A LOW-PRESSURE AIR TEST, AT SUCH TIMES AS THE ENGINEER MAY DIRECT. TEST SHALL BE MADE ONLY IN THE PRESENCE OF THE ENGINEER. FURNISH ALL PLUGS, COMPRESSOR, POWER, AND OTHER LABOR AND EQUIPMENT REQUIRED FOR THE TEST AND SHALL MAKE REPAIRS NECESSARY UNTIL TEST RESULTS ARE SATISFACTORY.

D. A LOW-PRESSURE AIR TEST SHALL BE EMPLOYED. THE TESTING EQUIPMENT, PROCEDURE, AND RESULTS WILL ALL BE SUBJECT TO THE STRICT APPROVAL OF THE ENGINEER. RESULTS OF THE AIR TEST WILL BE REVIEWED FOR COMPLIANCE WITH ASTM DESIGNATION C828, AND C924, CURRENT REVISIONS. THE AIR TEST IS TO BE CONDUCTED BETWEEN TWO (2) CONSECUTIVE MANHOLES. THE TEST EQUIPMENT SHALL CONSIST OF TWO (2) PLUGS (ONE TAPPED AND EQUIPPED FOR AIR INLET CONNECTION), A SHUT-OFF VALVE, A PRESSURE REGULATING VALVE, A PRESSURE REDUCTION VALVE, AND A MONITORING PRESSURE GAUGE HAVING A PRESSURE RANGE FROM 0 TO 5 PSI, GRADUATED IN 0.10 PSI WITH AN ACCURACY OF ± 0.04 PSI. THE TEST EQUIPMENT SHALL BE SET UP OUTSIDE THE MANHOLE FOR EASY ACCESS AND READING. AIR SHALL BE SUPPLIED TO THE TEST SLOWLY AND SHALL BE REGULATED TO PREVENT THE PRESSURE INSIDE THE PIPE FROM EXCEEDING 5.0 PSIG. THE PIPELINE SHALL BE FILLED UNTIL A CONSTANT INTERNAL PRESSURE OF 3.5 PSIG IS MAINTAINED. THE INTERNAL PRESSURE SHALL BE MAINTAINED AT 3.5 PSIG OR SLIGHTLY ABOVE FOR A FIVE (5) MINUTE STABILIZATION PERIOD, AFTER WHICH TIME THE INTERNAL PRESSURE WILL BE ADJUSTED TO 3.5 PSIG, THE AIR SUPPLY SHUT OFF AND THE TEST BEGUN. NO PERSON SHALL REMAIN IN THE MANHOLE WHILE PIPE IS BEING PRESSURIZED OR THROUGHOUT THE TEST FOR SAFETY PURPOSES. A PRESSURE DROP OF 1.0 PSI FROM 3.5 TO 2.5 PSIG SHALL BE ALLOWED FOR THE TEST TIMES SPECIFIED IN THE FOLLOWING TABLE, BASED UPON THE DESIGNATED PIPE SIZE AND TEST SEGMENT LENGTH.

1. FOR CONCRETE PIPE TEST, SEE ASTM C924.
2. FOR PVC PIPE, SEE THE NEXT TABLE.

AIR TEST TABLE
PVC PIPE
BASED ON EQUATIONS FROM ASTM C-828 LATEST REVISION
SPECIFICATIONS TIME (MIN:SEC)
REQUIRED FOR PRESSURE DROP FROM 3.5 TO 2.5 PSI
WHEN TESTING ONE PIPE DIAMETER ONLY

LENGTH OF TEST SEGMENT	PIPE DIAMETER, INCHES						
	4	6	8	10	12	15	18
25	00:04	00:10	00:17	00:22	00:26	00:31	00:38
50	00:09	00:20	00:35	00:44	00:53	01:02	01:12
75	00:13	00:30	00:53	01:06	01:20	01:33	01:45
100	00:18	00:40	01:11	01:28	01:47	02:05	02:24
125	00:22	00:50	01:29	01:51	02:13	02:36	03:00
150	00:26	01:00	01:46	02:13	02:40	03:07	03:30
175	00:31	01:10	02:04	02:35	03:07	03:39	04:12
200	00:35	01:19	02:22	02:58	03:33	04:14	04:48
225	00:40	01:30	02:40	03:20	04:00	04:41	05:24
250	00:44	01:40	02:58	03:42	04:45	05:13	06:00
275	00:48	01:50	03:18	04:06	04:54	05:44	06:36
300	00:53	02:00	03:33	04:27	05:20	06:15	07:12
350	01:02	02:20	04:09	05:11	06:14	07:18	08:24
400	01:10	02:40	04:45	05:56	07:07	08:20	09:36
450	01:19	03:00	05:20	06:40	08:01	09:23	10:49
500	01:28	03:20	05:56	07:25	08:54	10:26	12:01

SHOULD THE 1.0 PSI DROP OCCUR IN LESS TIME THAN THAT SPECIFIED IN THE TABLE THE SEWER SEGMENT SHALL HAVE FAILED. IF THE TIME REQUIRED FOR THE PRESSURE TO DROP 1.0 PSI IS GREATER THAN THAT SHOWN IN THE TABLE, THE SEWER SEGMENT SHALL HAVE PASSED. FOR A MORE DETAILED DESCRIPTION OF THE AIR TEST METHOD REFER TO ASTM DESIGNATION C-828, CURRENT REVISION. AN AIR PRESSURE CORRECTION SHALL BE REQUIRED WHEN THE PREVAILING GROUND WATER IS ABOVE THE SEWER LINE BEING TESTED AND SHALL BE CALCULATED AS FOLLOWS:

(GROUND WATER DEPTH (FT.) ÷ 2.31) + 3.5 = STARTING TEST PRESSURE

ENDING TEST PRESSURE = STARTING PRESSURE − 1.0 PSI

THERE IS NO CHANGE FROM TIME REQUIREMENTS ESTABLISHED FOR THE BASIC AIR TEST.

E. MANHOLE TESTS:

1. MANHOLES SHALL BE TESTED BY VACUUM TEST, AFTER ASSEMBLY BUT PRIOR TO BACKFILLING. TEST SHALL COMPLY WITH ASTM STANDARD C1244, LATEST REVISION. MANHOLES SHALL BE TESTED BY VACUUM, ONLY IF CONSTRUCTED OF PRECAST CONCRETE. TESTING SHALL INCLUDE THE JOINT BETWEEN THE CONCRETE CONE AND SPACER RINGS.
2. STUBOUTS, MANHOLE BOOTS AND PIPE PLUGS SHALL BE SECURED TO PREVENT MOVEMENT WHILE THE VACUUM IS DRAWN.
3. INSTALLATION AND OPERATION OF VACUUM EQUIPMENT AND INDICATING DEVICES SHALL BE IN ACCORDANCE WITH EQUIPMENT SPECIFICATIONS FOR WHICH PERFORMANCE INFORMATION HAS BEEN PROVIDED BY THE MANUFACTURER AND APPROVED BY THE TENNESSEE STATE DEPARTMENT OF HEALTH.
4. A MEASURED VACUUM OF 10 INCHES OF MERCURY SHALL BE ESTABLISHED IN THE MANHOLE. THE TIME FOR THE VACUUM TO DROP TO NINE INCHES OF MERCURY SHALL BE RECORDED.
5. ACCEPTANCE STANDARDS FOR LEAKAGE SHALL BE ESTABLISHED FROM THE ELAPSED TIME FOR A NEGATIVE PRESSURE CHANGE FROM 10 INCHES TO NINE INCHES OF MERCURY. THE MAXIMUM ALLOWABLE LEAKAGE RATE FOR A FOUR-FOOT DIAMETER MANHOLE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

MANHOLE DEPTH	MINIMUM ELAPSED TIME FOR A PRESSURE CHANGE OF 1 INCH HG
10 FT OR LESS	60 SECONDS
>10 FT BUT <15 FT	75 SECONDS
>15 FT BUT <25 FT	90 SECONDS

FOR MANHOLES FIVE FEET IN DIAMETER, ADD AN ADDITIONAL 15 SECONDS AND FOR MANHOLES SIX FEET IN DIAMETER, ADD AN ADDITIONAL 30 SECONDS TO THE TIME REQUIREMENTS FOR FOUR-FOOT DIAMETER MANHOLES.

6. IF THE MANHOLE FAILS THE TEST, NECESSARY REPAIRS SHALL BE MADE AND THE VACUUM TEST REPEATED ONE TIME.
7. IF A MANHOLE FAILS THE SECOND TEST OR IF THE JOINT MASTIC IS COMPLETELY PULLED OUT DURING THE VACUUM TEST, THE MANHOLE SHALL BE DISASSEMBLED AND THE MASTIC REPLACED.

F. TESTING OF FLEXIBLE PIPES:

1. THE CONTRACTOR SHALL DEFLECTION TEST THE ENTIRE LENGTH OF PVC PIPE BY MEANS OF A GO-NO-GO MANDREL TO ASSURE THAT DEFLECTION LIMITS HAVE NOT BEEN EXCEEDED. FOR PIPE BACKFILLED 60 DAYS OR LESS, THE MANDREL SHALL BE SET FOR 5% MAXIMUM DEFLECTION, AND FOR PIPE BACKFILLED MORE THAN 60 DAYS, THE MANDREL SHALL BE SET FOR 7.5% MAXIMUM DEFLECTION. THE TESTING SHALL BE PERFORMED COMPLETELY AT THE EXPENSE OF THE CONTRACTOR AND SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER. MANDREL AND PROVING RING DETAILS SHALL BE APPROVED BY THE ENGINEER AND SHALL BE SIZED AT 5% OR 7.5% LESS THAN ASTM DIMENSIONS FOR THE SEWER PIPE (IN ACCORDANCE WITH ASTM D3034 AND F679). THE 5% MANDREL TEST SHALL BE PERFORMED UP TO TWO (2) MONTHS AFTER PIPE IS BACKFILLED. THE 7.5% MANDREL TEST SHALL BE PERFORMED NO SOONER THAN TWO (2) MONTHS AFTER BACKFILL OF THE PIPE IS COMPLETED. ALL PIPE THAT FAILS THE DEFLECTION TEST SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. THE "REROUNDER" TECHNIQUE SHALL NOT BE ALLOWED. THE CONTRACTOR SHALL USE APPROVED NINE (9) ARM MANDRELS AND PROVING RINGS FOR EACH SIZE OF MAINLINE PIPE. THE CONTRACT LENGTH "L" OF THE MANDREL ARMS AND THE ACTUAL MANDREL DIAMETER "D" (ID OF THE PROVING RING) SHALL EQUAL THE DIMENSIONS IN TABLE I BELOW. CRITICAL MANDREL DIMENSIONS SHALL CARRY A TOLERANCE OF +.01".

TABLE
9 ARM MANDREL
D DIMENSION

NOM. DIA.	L	ASTM D3034 SDR35	ASTM D2751 (6"ONLY)* ASTM D2680
6"	6"	5.31"	5.31" (SDR 35) 5.14" (SDR 23.5)
8"	8"	7.08"	
10"	10"	8.84"	
12"	12"	10.51"	
15"	15"	12.86"	
18"	18"	15.84"	
21"	18"	18.95"	
24"	18"	21.32"	
27"	18"	23.61"	

MANDREL AND PROVING RING MAY BE OBTAINED FROM WORTCO, INC., 220 HIGH STREET, FRANKLIN, OHIO 45005 (1-513-746-8439). HURCO ENTERPRISES (1-800-843-1300), CHERNE INDUSTRIES (1-800-843-7564) OR EQUAL.

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CREEKSIDE RIDGE SUBDIVISION - PHASE 3

SANITARY SEWER NOTES

TOWN OF DANDRIDGE, TN

Vertical Scale: N/A
Horizontal Scale: N/A
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WATER SYSTEM INSTALLATION

MATERIALS – GENERAL

A. All materials and appurtenances required for the work shall be new, of first-class quality and shall be furnished, delivered, erected, connected and finished in every detail as specified or indicated. All materials found defective, regardless of the circumstances, shall be replaced with new material.

B. All materials and appurtenances shall be per the locality's standard manufacturer and model.

C. Comply with all codes, laws, ordinances and regulations of governmental authorities including, but not limited to, local municipalities and sanitary districts having jurisdiction over this part of the work.

PIPE SELECTIONS

A. Water pipe shall be ductile cast iron, or AWWA polyvinyl chloride (AWWA PVC). PVC pipe shall have metallic locator tape placed one (1) foot below final grade, above the pipe. Carrier pipes in casing pipes shall be ductile iron pipe.

B. Water service pipes shall be polyethylene tubing or copper tubing.

TYPES OF PIPE

A. Ductile iron pipe shall conform with AWWA C151/ANSI 21.51 and fittings shall conform with ANSI/AWWA C110, or C153 (compact fittings). The pipe and fittings shall be asphalt coated and cement lined in accordance with AWWA C104/ANSI 21.40. The pipe thickness shall conform with AWWA C 150/ANSI 21.50 and shall be Class 350, as a minimum. Fittings for water pipe shall be mechanical or push-on joint. Fittings shall be either ductile iron or gray iron.

B. Polyvinyl chloride (PVC) pipe for water lines shall conform to AWWA C900 and shall have a wall thickness dimension ratio of 18 unless indicated otherwise on the drawings. The pipe shall have an outside diameter conforming to the dimensions of cast iron pipe. The pipe shall be listed by Underwriters Laboratory and shall be Factory Mutual approved. The pipe shall have a factory installed coupling or gasket bell end. Fittings shall be cast iron as specified for ductile iron pipe.

C. Molecularly oriented polyvinyl chloride (PVCO) pressure pipe for water lines shall conform to AWWA C909 and shall have a pressure class rating of. The pipe shall have an outside diameter conforming to the dimensions of cast iron pipe. Certification for use in potable-water service shall meet the requirements of ANSI/NSF 61. The pipe shall be listed by Underwriters Laboratory and shall be Factory Mutual approved. The pipe shall have a factory installed coupling or gasket bell end. Fittings shall be cast iron as specified for ductile iron pipe.

D. Polyethylene tubing shall conform to AWWA C 901 and shall be PE 3408 code designation. Tubing shall be the size indicated with a DR of 11and a pressure rating of 160 psi.

E. Copper tubing shall conform to AWWA C800 and shall be Type "K" or Type "L". Tubing shall be the size indicated, suitable for 250 PSI working pressure.

F. Brass service pipe and fittings shall be UNS No. 83600, have a minimum working pressure rating of 150 psi and shall conform to AWWA C800 and ASTM B62

JOINTS AND COUPLINGS

A. Ductile iron pipe and fittings for buried service shall be either mechanical or bell and spigot type joints as specified or indicated. Joints shall be made with a single watertight rubber gasket manufactured in accordance with AWWA C111/ANSI 21.11. The joints shall be made in strict accordance with the recommendations of the pipe manufacturer. Joints for above ground or in-vault service shall be flanged joints in accordance with AWWA C115.

B. Joints for PVC water pipe shall be elastomeric gaskets conforming to AWWA C900. All fittings and valves shall be mechanical joint. When assembling the PVC pipe to the fittings, the rubber gasket supplied with the fitting shall be used. The rubber ring provided with the PVC pipe shall not be used. When connecting to the mechanical joints, the beveled spigot of the PVC pipe is not required. The beveled end of the pipe shall be cut off prior to insertion into the mechanical joint fitting.

C. Joints for polyethylene tubing shall be couplings manufactured by Ford Meter Box Company, Mueller, McDonald or equal.

D. Joints for copper tubing shall be couplings manufactured by Ford Meter Box Company, Mueller, McDonald or equal.

E. Brass fittings shall be stamped or embossed with the manufacturer's name. All brass fittings surfaces in contact with potable water shall comply with ANSI/NSF Standard 61.

WATER SYSTEM APPURTENANCES

A. Gate Valves and Blowoff Valves:

1. Gate valves and blowoff gate valves shall be compression resilient seated valves conforming to AWWA C515. The valve shall be designed so that no sliding or shear on the resilient seating surface is present when compressed to a drop tight shut off. Valve shall seal equally well in either direction. Valve shall provide fully open waterway. Valve shall have O-ring sealing and a fusion bonded epoxy coating inside and out. Valve shall be permanently lubricated. Valve shall have a manganese bronze stem and nut with anti-thrust washers. Operating nut shall be 2-inch square.

2. Gate valves smaller than 3 inch shall be bronze with ends to suit piping and shall be 125 psi working pressure. Valves shall be Stockham Figure B103, B104, or B100 or equal.

3. Each gate valve shall be provided with a valve box constructed of cast iron with a round base. The valve box shall be the sliding (screw) type with a five-inch shaft and the cover shall be slotted for easy removal. Covers shall have the word "WATER" cast into them.

B. Fire hydrant laterals shall include 6-inch ductile-iron pipe, as specified, 6-inch gate valve with valve box (vault), frame and cover.

C. Fire hydrants shall conform to AWWA C 502 (latest revision) and shall be dry top, dry barrel, compression type with double O-ring seals suitable for 150 psi working pressure. Hydrants shall be designed for water mains having three (3) feet minimum cover; however, each proposed location shall be coordinated by the Contractor as to the exact setting depth required. Hydrants shall be equipped with a 5 1/4-inch valve opening, and a 7-inch minimum inside diameter standpipe. Each hydrant shall have a 6-inch mechanical joint shoe, two (2) 2-1/2" inch hose nozzles with National Standard threads connection and one (1) 4-1/2" inch pumper nozzle with National Standard threads connection. Prior to ordering hydrants, Contractor shall confirm with local fire department that nozzles, threads, and operating nut suit their standards. Each hydrant shall be provided with one operating wrench for its operating stem nut. The direction of rotation shall be counterclockwise. The operating stem nut shall be a 5-sided nut with a flat to point dimension of one and one half (1-1/2) inches. Hydrants shall be coated and painted in accordance with AWWA C502, with colors to suit the Owner's standard. The upper and lower operating stems shall be joined by a safety coupling, located to prevent damage to hydrant valve when upper standpipe is damaged.

D. Restrained Joints

1. Shall be follower gland type, suitable for a 250 PSI working pressure and a 500 PSI water hammer (surge) pressure. Glands shall be single piece, except where required to be split for application on existing pipe. Material shall be ductile iron. Joint shall be designed to restrain standard mechanical joints.

   Rated pressure shall include a 2:1 safety factor. Joint shall be Ebee Iron Megalug, Tyton Joint by US Pipe, or equal. Gasket type restraints are not acceptable.

2. Restrained joints shall be used for all fittings, valves and transitions.

   Minimum restrained lengths shall be as specified on Mattern & Craig Supplementary Drawing MCW-7.

E. Water Service Connections:

1. Water service connections shall include all 3/4-inch diameter pipe (tubing) required at the depths encountered to run the service to the property line or the connection point to the residence's system as indicated and unless otherwise noted. The length shown on the drawings is an approximate value and the location shall be adjusted to suit the requirements of each residence. The connection shall include all lineal footage of pipe required to serve the residence or business indicated and the connection of the new service line to the building water line. The work shall include the tap at the main, the corporation stop, the insert stiffeners, the service pipe, the meter, the meter setter, the meter stop valve, the angle check valve, the meter box and cover, the pressure reducing valve, if required, the connection to the existing meter or pipe, if required, and the cap of the tubing, if connection is to be made in the future. The equipment shall all be compatible with the tubing provided.

2. All connections which are indicated or directed to be for future use shall be capped with a standard, manufactured cap installed in strict accordance with the manufacturer's recommendations. Each cap shall be marked by a 2 x 4 x 18-inch stake, with the end painted dark blue, driven at the cap, flush with the ground.

3. Taps of the new or existing mains shall be made on the top quadrant of the main and shall be made with a standard tool designed for this purpose. Each tap shall be threaded (direct threaded taps only on ductile iron pipe) and shall be provided with a quarter bend coupling and a corporation stop. Corporation stops shall be ball type corporation valves suitable for 300 psi working pressure. All products shall be per the locality's standard manufacturer and model. Multiple taps on the same length of pipe shall be located on slightly different planes and separated by at least three (3) feet.

4. Meter setters shall be 5/8 by 3/4 copper setter or meter yoke (tandem type for use with a pressure reducing valve ahead of the meter) with 9-inch rise with end connections to suit tubing provided, an angle meter ball valve and a dual cartridge check valve.

F. Approved automatic air relief valves shall be installed at the high points in the system as shown on the drawings. Each assembly shall consist of a riser pipe, isolation valve, fittings, a screened vent, and a precast concrete manhole cone section (including frame and cover). The riser shall be brass pipe. Fittings shall be brass. Gate valves shall be inside screw, solid bronze, tapered seat and double disc with a working pressure of not less than 250 psi. Air relief valves shall be rated per the system pressures.

G. Topping sleeves shall be manufactured from gray iron, meeting or exceeding ASTM A126 Grade B, or ductile iron, meeting ASTM A536 Grade 65-45-12. As an alternative, topping sleeves can be all stainless steel (18-8 Type 304) style FAST as manufactured by Ford Meter Box Co. or equal. Topping sleeves shall have mechanical joint ends and flanged outlets conforming to Class 125, ANSI B16.1. Outside coating of iron sleeves shall be asphaltic coating. Topping valves shall meet the requirements of ANSI/AWWA C515. Topping sleeves and topping valves shall be supplied by the same manufacturer.

LAYING PIPE AND INSTALLING APPURTENANCES

A. Proper implements, tools and facilities as approved by the Engineer shall be provided and used. All pipes, fittings, valves and appurtenances shall be lowered carefully into the trenches by means of derricks, ropes or other suitable equipment. Under no circumstances shall water system materials be dropped or dumped into the trenches. All pipe shall be installed with the bell ends facing the direction of laying or flow and in accordance with the recommendations of the pipe manufacturers and as directed by the Engineer.

B. The water pipe shall be laid and maintained at the required lines and grades with fittings and valves at the required locations. The cutting of pipe for inserting valves, fittings or closure pieces shall be done in a neat and workmanlike manner, without damage to the pipe, so as to leave a smooth end at right angles to the axis of the pipe. Care shall be taken to avoid damaging the lining. Flame cutting of pipe with oxyacetylene torch will not be permitted.

C. Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the trench. If the pipe-laying crew cannot put the pipe into the trench and in place without getting earth into it, the Engineer may require that a heavy, tightly woven canvas bag of suitable size be placed over each end of the pipe before lowering the pipe into the trench and left there until the connection is to be made to the adjacent pipe. During laying operations, no debris, tools, clothing or other materials shall be placed in the pipe.

D. At times when pipe laying is not in progress, the open ends of the pipe shall be closed by a watertight plug or other means approved by the Engineer. This provision shall apply during the noon hour as well as overnight. If water is in the trench, the seal shall remain in place until the trench is pumped completely dry.

E. Before joints are made the pipe shall be well bedded on a firm foundation and no pipe shall be brought into position until the preceding length has been thoroughly embedded and secured in place. Any defects due to settlement shall be made good by the Contractor at his expense. Bell holes shall be dug sufficiently large to insure the making of proper joints.

F. All tees, bends, plugs and abrupt change in direction of the water lines three (3) inches and larger in diameter shall be restrained as indicated above, except hydrants and their isolation gate valves shall be harnessed to the main water pipe and shall be harnessed such that the hydrant could be removed and the valve would still be harnessed to the main water pipe.

G. The trench may be curved to change direction or to avoid obstructions within the limits of the curvature of the pipe (joint deflections) as recommended by the pipe manufacturer. Where necessary to maintain the required curvature, short sections of pipe or fittings shall be provided. Restraint shall be provided for these short sections of pipe or where fittings are provided for the water pipe.

H. All fittings, valves and hydrants shall be supported by concrete independently of the pipe. All bends, tees, and changes in direction or changes in pipe size shall be provided with harnessing. Joints between the pipe and the mechanical joint fittings shall be made in accordance with the pipe manufacturer's requirements with a lubricant supplied by the pipe manufacturer. All nuts shall be tightened to the torque listed below:

STATE OF TENNESSEE
JAMES W. CRAIG
No. 108324
7/1/2025

Revisions	Date

Issue Date: JUNE 2025
Drawn By: DAS
Designed By: DAS
Checked By: RWB
Date: 06/04/2025

Mattern & Craig
ENGINEERS/SURVEYORS
413 EAST MAIN STREET
JOHNSON CITY, TENNESSEE 37601
(423) 928-7224
FAX (423) 926-2222

CREEKSIDE RIDGE SUBDIVISION – PHASE 3

WATER NOTES

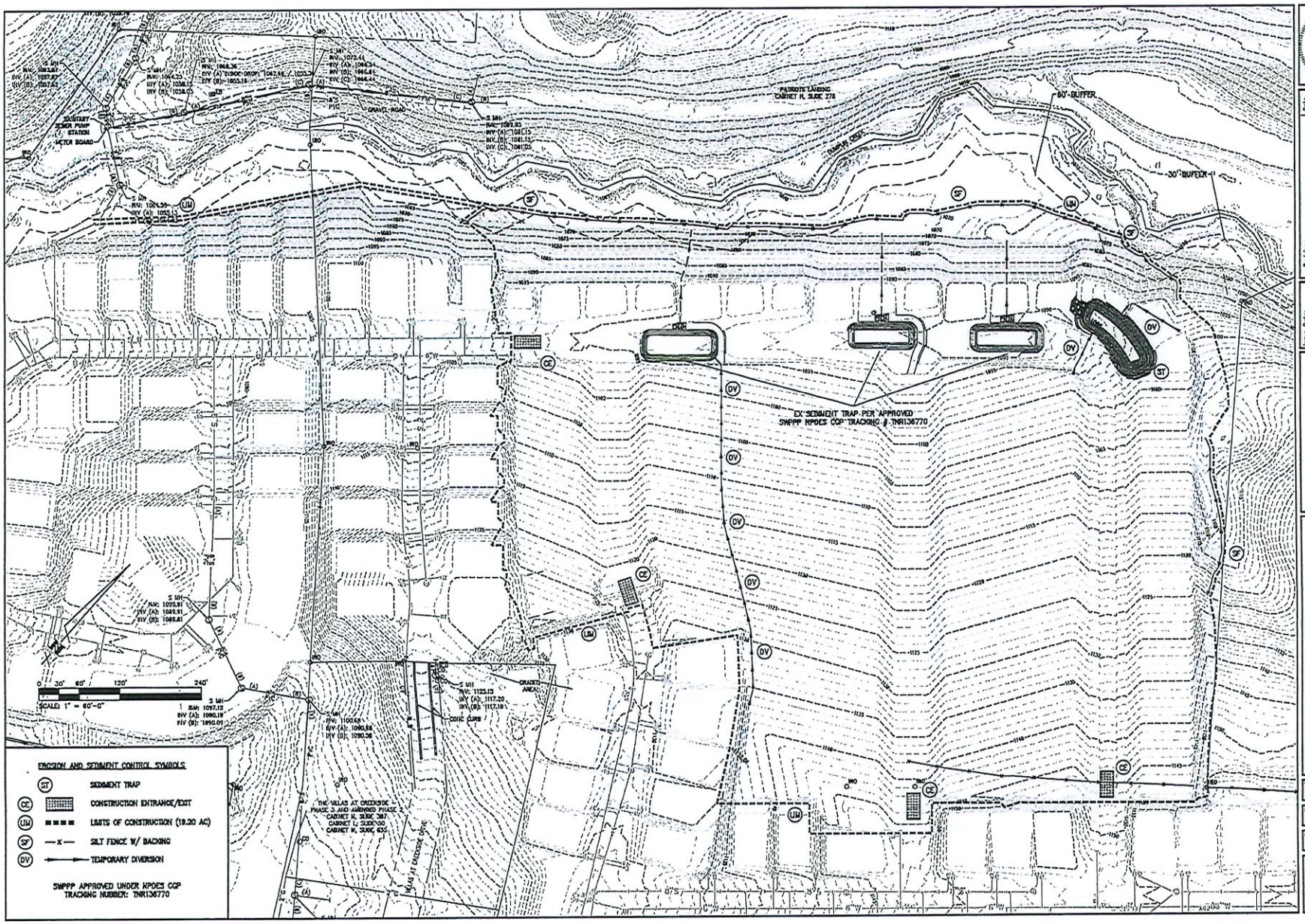
TOWN OF DANDRIDGE, TN

Vertical Scale: N/A

Horizontal Scale: N/A

Commission Number: 4246A

Sheet No.: C6.9



Issue Date: JUNE 2025
Drawn By: JAC
Designed By: DJS
Checked By: RCS
Date: 06/01/2023

Revisions

Date

Mattern & Craig
ENGINEERS/SURVEYORS
423 EAST MAIN STREET
JACKSON, TN 38301 (731) 423-7250
FAX (731) 423-2222

CREEKSIDE RIDGE SUBDIVISION - PHASE 3

ESPC PHASE 1 INITIAL

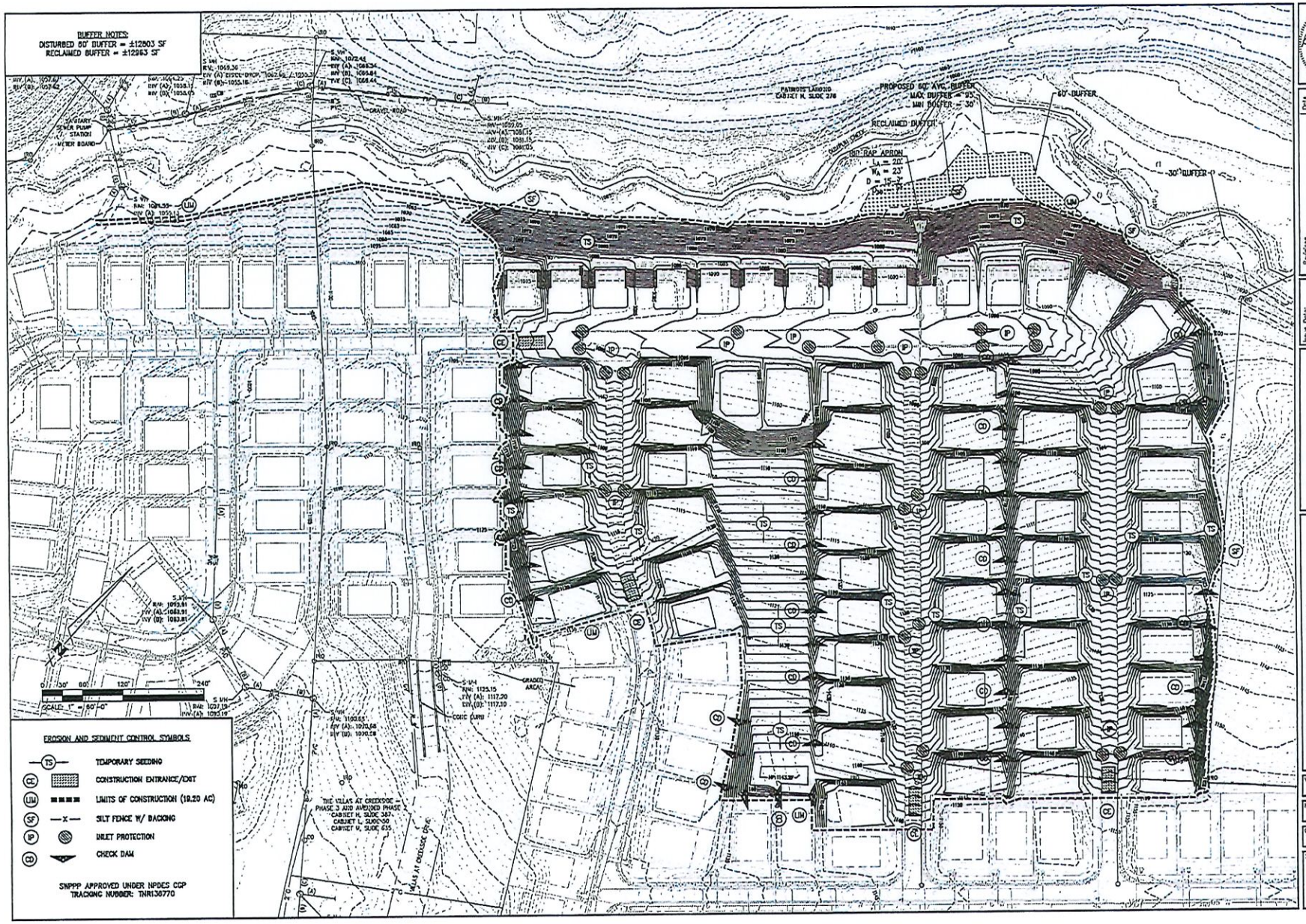
TOWN OF DANDRIDGE, TN

Vertical Scale: N/A

Horizontal Scale: 1" = 60'

Commission Number: 4246A

Sheet No: C7.0



Revisions

Date

Issue Date: JUNE 2025

Drawn By: JAC

Designed By: DJS

Checked By: RCB

Date: 06/04/2025

Mattern & Craig
ENGINEERS-SURVEYORS
401 EAST MOORE STREET
JOHNSON CITY, TENNESSEE 37601
(423) 979-2220
FAX (423) 979-2222

CREEKSIDE RIDGE SUBDIVISION - PHASE 3

EPSC PHASE II CONSTRUCTION

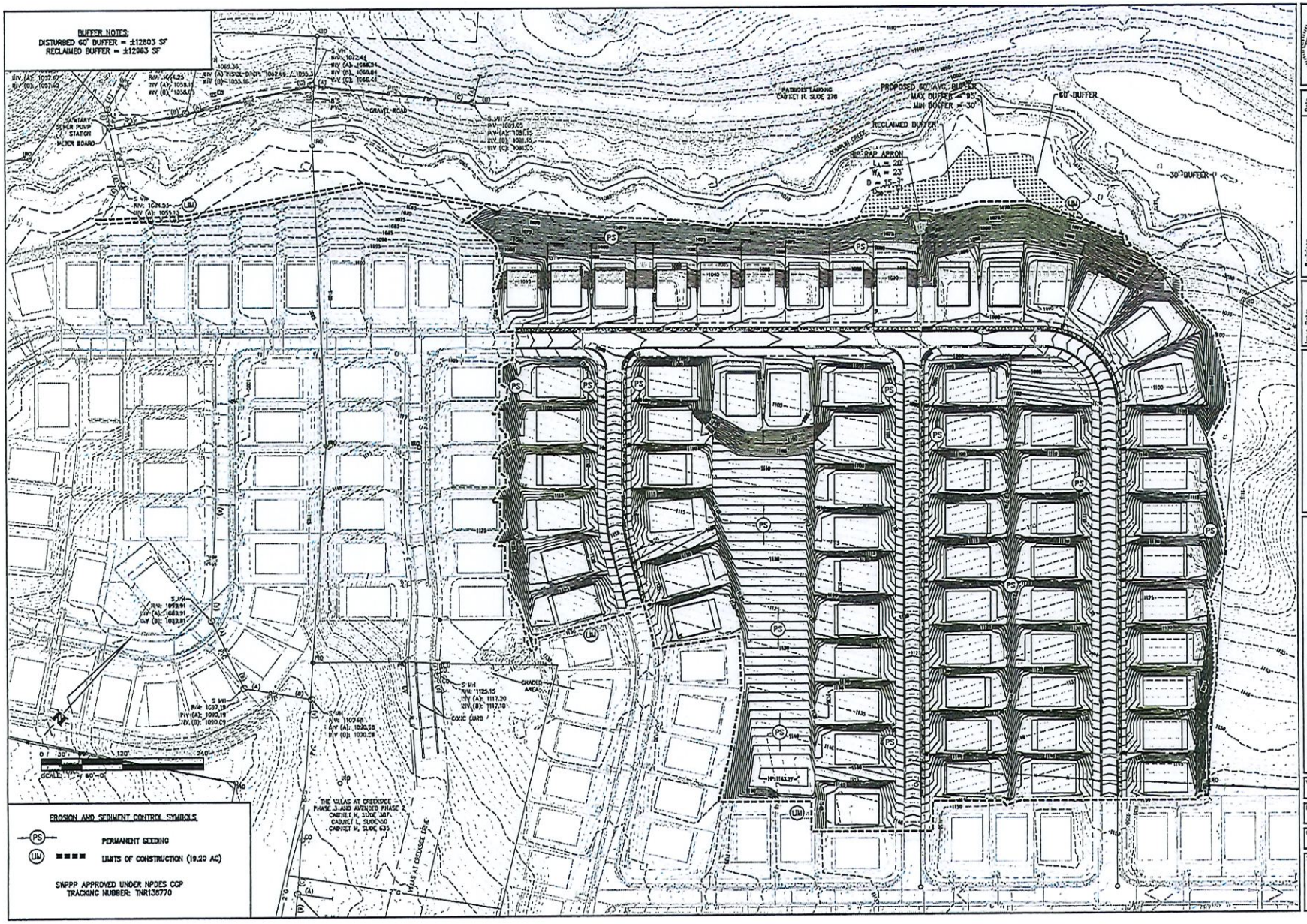
TOWN OF DANDRIDGE, TN

Vertical Scale: N/A

Horizontal Scale: 1" = 60'

Commission Number: 4246A

Sheet No.: C7.1



Revisions

Date

Issue Date: JUNE 2025
Drawn By: JKC
Designed By: PAS
Checked By: RKB
Date: 06/04/2025

Mattern & Craig
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(423) 573-2223
FAX (423) 573-2222

CREEKSIDE RIDGE SUBDIVISION – PHASE 3

EPSC PAHSE III FINAL STABILIZATION

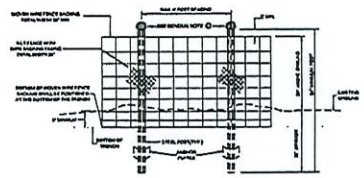
TOWN OF DANDRIDGE, TN

Vertical Scale: n/A

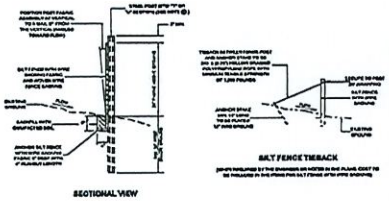
Horizontal Scale: 1" = 80'

Commission Number: 4246A

Sheet No.: C7.2



ELEVATION VIEW



SECTIONAL VIEW

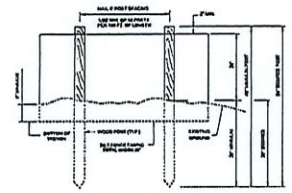
SILT FENCE TIEBACK

EROSION CONTROL PLAN LEGEND: * SF8 * SF8 * SF8 * SILT FENCE WITH WIRE BACKING

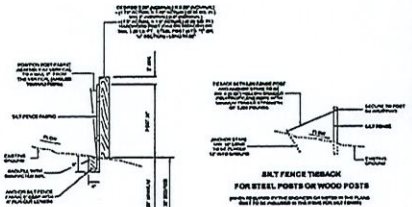
SILT FENCE WITH WIRE BACKING FABRIC SPECIFICATIONS	
FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MARV VALUES OF TEST DATA)
[illegible]	[illegible]

GENERAL NOTES

SILT FENCE WITH WIRE BACKING



ELEVATION VIEW



SECTIONAL VIEW

SILT FENCE TIEBACK FOR STEEL POSTS OR WOOD POSTS

EROSION CONTROL PLAN LEGEND: * SF * SF * SF * SILT FENCE

SILT FENCE FABRIC SPECIFICATIONS	
FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MARV VALUES OF TEST DATA)
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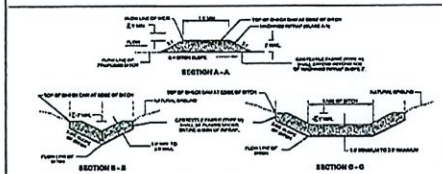
SILT FENCE GENERAL NOTES

SILT FENCE



SECTION A-A

SECTION B-B

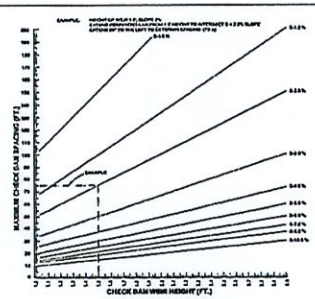
SECTION C-C

PLAN VIEW

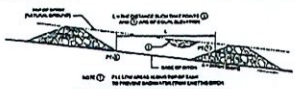
DETAIL FOR V-DITCH

PLAN VIEW

DETAIL FOR TRAPEZOIDAL DITCH



ROCK CHECK DAM SPACING



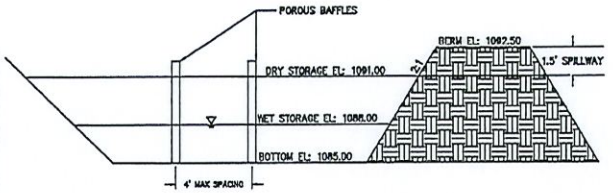
DETAIL FOR SPACING BETWEEN CHECK DAMS

ROCK CHECK DAM ESTIMATED QUANTITIES

2:1 DITCH SLOPE				3:1 DITCH SLOPE				4:1 DITCH SLOPE			
	HEIGHT	SP FOR	GRAPE VINE	HEIGHT	SP FOR	GRAPE VINE		HEIGHT	SP FOR	GRAPE VINE	
1 WIRE ①	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	
2 WIRES ②	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	
	HEIGHT	SP FOR	GRAPE VINE	HEIGHT	SP FOR	GRAPE VINE		HEIGHT	SP FOR	GRAPE VINE	
1 WIRE ③	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	
2 WIRES ④	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	

ROCK CHECK DAM GENERAL NOTES

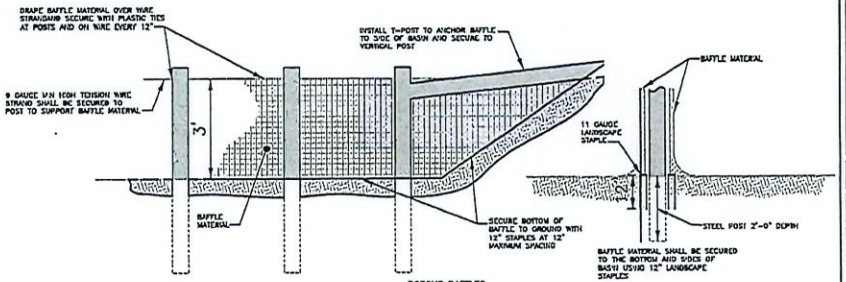
ROCK CHECK DAM



SEDIMENT TRAP DETAIL
N.T.S

SEDIMENT TRAP DIMENSIONS

DRAINAGE AREA: 4.91 AC
VOLUME REQ:17,764 CF
VOLUME PROVIDED: 18,686 CF
SURFACE AREA REQ: 4,359 SF
SURFACE AREA PROVIDED: 4,872 SF
LENGTH @ DRY STORAGE: 120.50 FT
WIDTH @ DRY STORAGE: 40.17 FT



POROUS BAFFLES
N.T.S

Revisions	Date

Issue Date: JUNE 2025
Drawn By: JHC
Designed By: DKS
Checked By: RCS
Date: 06/24/2025

Mattern & Craig
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(423) 913-1221
FAX (423) 913-1222

GREENSIDE RIDGE SUBDIVISION - PHASE 3

EPSC DETAILS

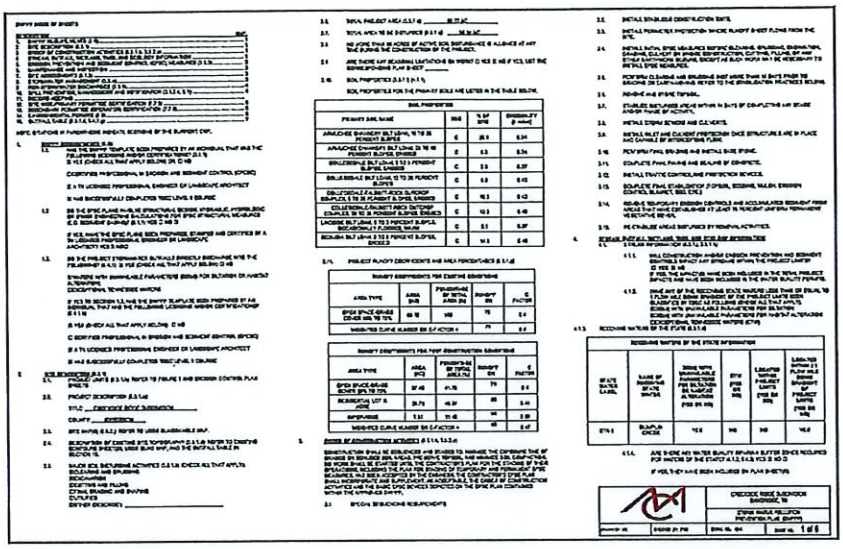
TOWN OF DANDRIDGE, TN

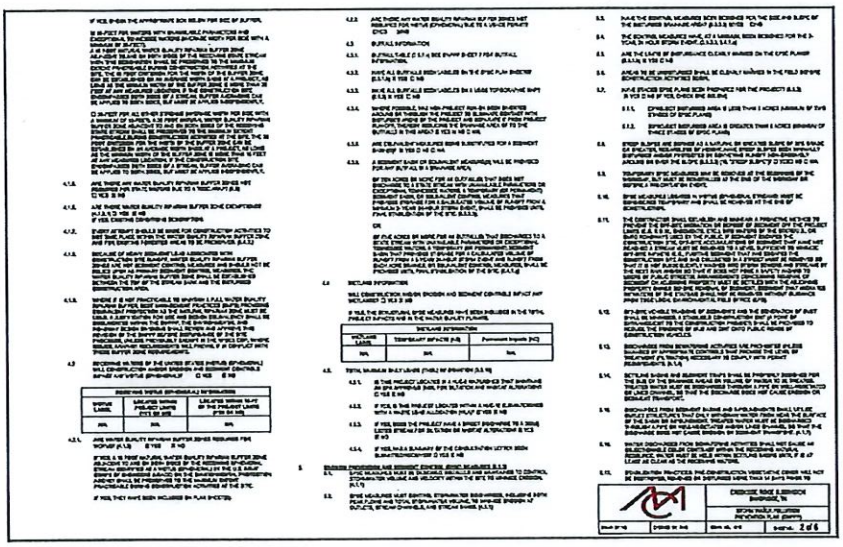
Vertical Scale: N/A

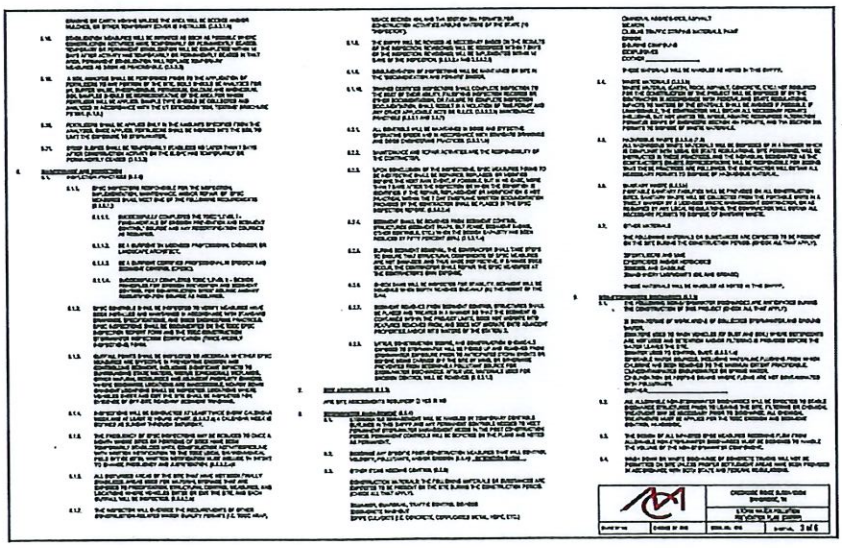
Horizontal Scale: N/A

Commission Number: 4246A

Sheet No.: C7.4







SWPPP APPROVED UNDER NPDES CGP TRACKING NUMBER: TNR136770

Sheet: 17 of 24	C7.5	Commitment Number: 424GA	Horizontal Scale: N/A	Vertical Scale: N/A	CREEKSIDE RIDGE SUBDIVISION – PHASE 3 SWPPP TOWN OF DANDRIDGE, TN

Mattern & Craig
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453 EAST MARKET STREET
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(423) 979-2220
FAX (423) 979-2222

Issue Date:	JUNE 2025
Drawn By:	J-C
Designed By:	DAS
Checked By:	RWB
Date:	06/24/2025

Revisions	Date

DANDRIDGE PLANNING COMMISSION

REQUEST FORM

Presenter: Tim Messer Date: 6-23-2025

Property Owner(s): Tim + Hazel messer + Tiffany messer

Property Address: Valley Home Rd / Forney Way

(House#, Street Name, Subdivision Name if applicable)

Map and Parcel Number(s): [redacted] 048E-A 027.00

Phone Number(s)_____ or_____

(Please list number where you can be reached during the day)

Attention: All requesters to the Town of Dandridge Planning Commission and/or Board of Zoning Appeals are required to present their materials in accordance to the written regulations within the City's Zoning Ordinance and Subdivision Regulations. Failure to follow these regulations prior to submission will result in having your request removed from the City's Planning Commission and/or Board of Zoning Appeals monthly meeting until such requirements are met.

Special Note: According to the Tennessee Coded Annotated (T.C.A) all subdivision plats (in areas without city sewer/water services) presented to the Town of Dandridge's Planning Commission are required by law to have the signature of the Jefferson County Health Department representative prior to FINAL PLAT submission.

_____	Site Plan Review	$50.00
_____	Rezoning Request_____ to_____	$50.00
✓	Subdivision Plats (Preliminary/Final)	
	• 2 lots or less	$20.00
	• 3-5 lots	$30.00
	• 6-15 lots	$60.00
	• 16-30 lots	$70.00
	• 31-50 lots	$80.00
	• 50+ lots	$100.00
_____	Annexation	$25.00
_____	Board of Zoning Appeals (Explanation)	$50.00
_____	Point(s) of Clarification	No Fee

Total amount of fees paid:_____ Receipt Number:_____

MESSER SUBDIVISION

DANDRIDGE, TENNESSEE 37725

CIVIL INDEX

ENGINEER:
ROMANS ENGINEERING
1923 HOPEWELL RD.
KNOXVILLE, TN 37920
TERRY E. ROMANS, PE, RLS

OWNER/DEVELOPER:
JEREMY MESSER
(828) 226-1171
CJEREMYMESSER@GMAIL.COM
1748 OLD OAK GROVE RD
DANDRIDGE, TN 37725

SITE ADDRESS: FANCY WAY
DANDRIDGE, TN 37725
TAX MAP: 068E GROUP A
PARCEL: 027.00 & 027.01
ZONE: R-1
DEED: 1575-727 (PARCEL 027.00)
1793-149 (PARCEL 027.01)
PLAT: BOOK L PAGE 35 (PARCEL 027.00)
BOOK M PAGE 1961 (PARCEL 027.01)

ROMANS Engineering
Phone (865) 679-5736 romansengineering@gmail.com

ROMANS Engineering
1923 Hopewell Rd Knoxville, TN 37920
Phone (865) 679-5736 romansengineering@gmail.com

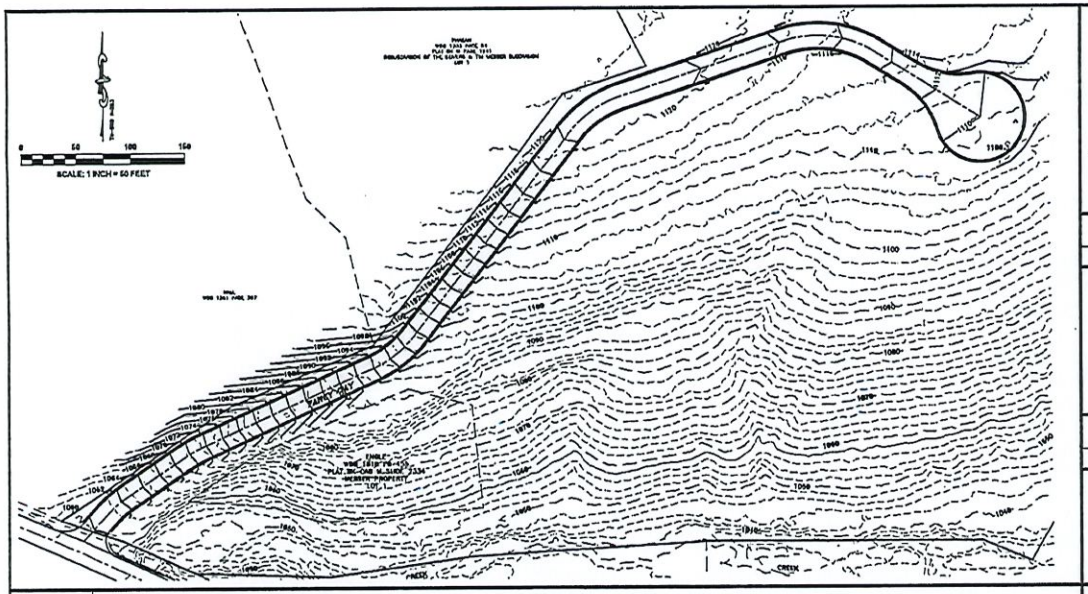
MESSER SUBDIVISION
DANDRIDGE, TENNESSEE
COVER SHEET

MARKER	REVISIONS	DATE

TERRY E. ROMANS
REGISTERED ENGINEER
NO. 112160
STATE OF TENNESSEE
6/24/25

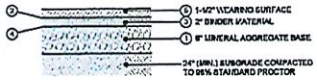
JOB NO: 23-114-1
DATE: 6/24/25
DRAWN: MLR
CHECKED: TER

C0



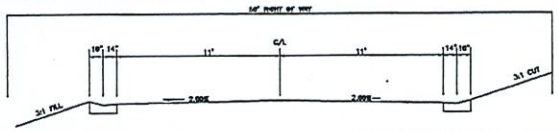
2 NTS FANCY WAY PLAN VIEW

PAVEMENT SCHEDULE
① MINERAL AGGREGATE BASE - MINERAL AGGREGATE, TYPE "A" BASE, GRADING B
② PRIME COAT - BITUMINOUS MATERIAL FOR PRIME COAT (PC) @ 0.30-0.50 GAL./S.Y.
③ BINDER MATERIAL - BITUMINOUS PLANT MIX BASE (HOT MIX) GRADING "BM" ASPHALTIC CONCRETE FOR BITUMINOUS PLANT BASE 307 (PG64-22)
④ TACK COAT - BITUMINOUS MATERIAL FOR TACK COAT (TC) @ 0.05 GAL./S.Y.
⑤ WEARING SURFACE MATERIAL - ASPHALTIC CONCRETE SURFACE 411 (HOT MIX) GRADING "E" ASPHALTIC CONCRETE FOR ASPHALTIC CONCRETE SURFACE (PG64-22) FOR SLOPES GREATER THAN 10% USE GRADE SEC.

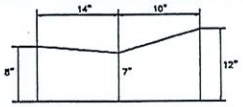


HEAVY DUTY ASPHALT

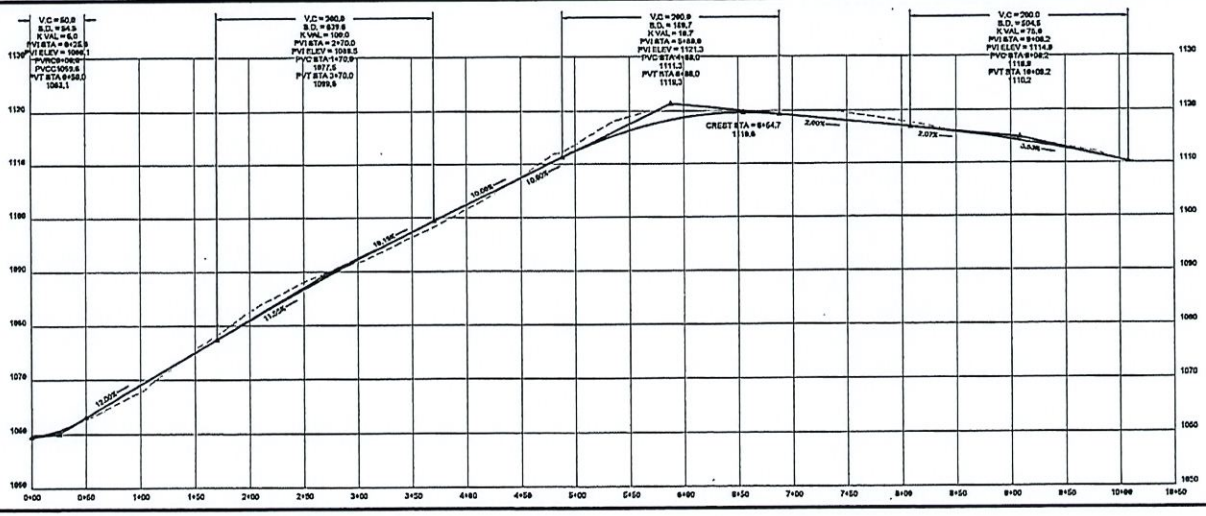
5 NTS PAVEMENT SCHEDULE



4 NTS ROADWAY SECTION



3 NTS MOUNTABLE CURB



1 AS NOTED FANCY WAY ROADWAY PROFILE SCALE HORIZONTAL: 1 INCH = 50 FEET VERTICAL: 1 INCH = 10 FEET

ROMANS Engineering
1513 Highway 64 East Brownsville, TN 38012
Phone (901) 475-3134 www.romansengineering.com

MESSER SUBDIVISION
DAVIDSON, TENNESSEE

ROAD GRADING PLAN & PROFILE GRADING

NUMBER	REVISIONS	DATE

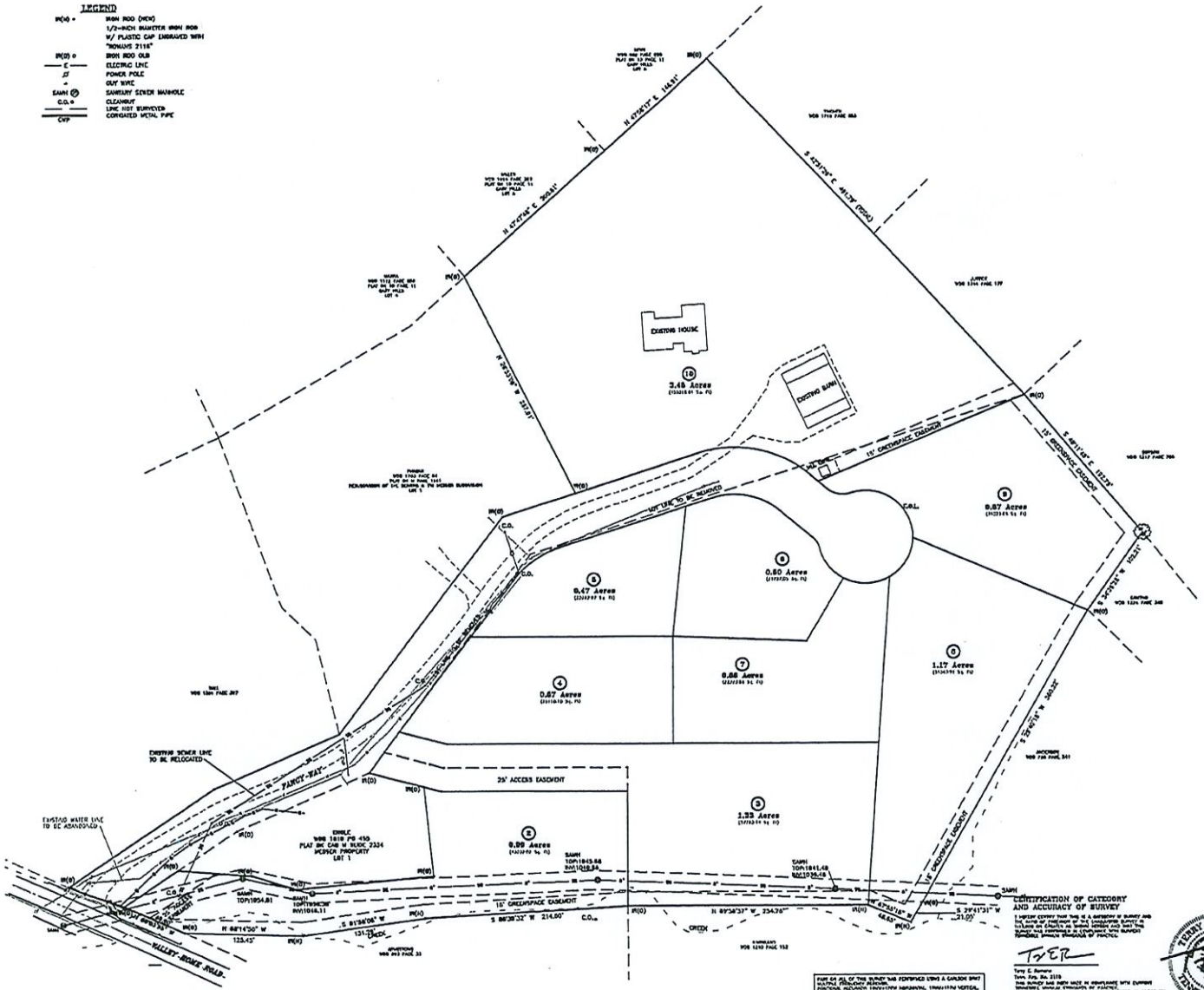
TERRY E. ROMAN
REGISTERED ENGINEER
NO. 101159
STATE OF TENNESSEE
6/24/25

JOB NO: 23-114-1
DATE: 6/24/25
DRAWN: MLR
CHECKED: TER

C3

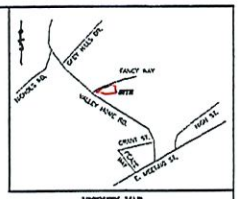
LEGEND

- IR(x) ● — IRON ROD (NEW) 1/2-INCH DIAMETER IRON ROD W/ PLASTIC CAP ENGRAVED WITH "ROMANS 2116"
- IR(O) o — IRON ROD OLD
- —— E —— — ELECTRIC LINE
- — POWER POLE
- — GUY WIRE
- SAMH (S) — SANITARY SEWER MANHOLE
- C.O. o — CLEANOUT
- — — — LINE NOT SURVEYED
- CMP — CORRUGATED METAL PIPE



0 60 120 150

SCALE: 1 INCH = 60 FEET



VICINITY MAP

CERTIFICATION OF OWNERSHIP AND DEDICATION

I (we) hereby certify that I am (we are) the owner(s) of the property shown and described hereon and that I (we) hereby adopt this plan of subdivision with my (our) free consent and dedicate all streets, alleys, walks, park or other public ways and open spaces to public or private use as noted.

Owner Date

Owner Date

Owner Date

CERTIFICATION OF APPROVAL OF WATER SYSTEMS

This is to certify that the water lines within this plat meet the requirements of the Tennessee State Health Department, and is hereby approved as shown.

Utility District Representative Date

CERTIFICATION OF SEWERAGE SYSTEM

This is to certify that the sewerage disposal system fully meet the requirements of the Tennessee State Health Department, and is hereby approved as shown.

Utility District Representative Date

CERTIFICATION OF APPROVAL FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the subdivision regulations for the Knoxville Regional Planning Commission, with the exception of such variances, if any, as are noted on the minutes of the planning commission, and that it has been duly registered for recording in the offices of the county register.

Secretary, KRPC Date

NOTES

1. PROPERTY OWNER:
   PARCEL 027.00
   CHARLES T. MERRER
   HAZEL K. MERRER
   TIFFANY MERRER
   1748 OLD OAK GROVE RD
   DANDRIDGE, TN 37725
2. SURVEY REQUESTED BY:
   CHARLES MERRER
   (828) 226-1171
3. SURVEY REQUESTED FOR:
   TO SUBDIVIDE PART OF PARCEL 027.00 INTO 1 LOT.
4. REFER TO LOCAL ZONING REGULATIONS FOR REQUIRED SETBACKS.
5. THIS IS TO CERTIFY THAT I HAVE EXAMINED THE FLOOD INSURANCE RATE MAP FOR JEFFERSON COUNTY TENNESSEE AND FOUND THAT MERRER RESIDENCE PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE.
6. BEFORE DIGGING IN THIS AREA, CALL "ONE CALL" FOR FIELD LOCATIONS (REQUEST FOR GROUND MARKINGS) OF UNDERGROUND UTILITIES.
7. UTILITY, DRAINAGE, AND CONSTRUCTION EASEMENTS:
   10 FEET ALONG ALL EXTERIOR LOT LINES AND ALONG ROADS, 5 FEET ALONG ALL INTERIOR LOT LINES.

CERTIFICATION OF CATEGORY AND ACCURACY OF SURVEY

I HEREBY CERTIFY THAT THIS IS A SURVEY IN SURVEY AND THE ACCURACY PROVIDED BY THE UNDERSIGNED SURVEYOR IS TO BE A CLASS IV SURVEY AS DEFINED IN THE MINIMUM STANDARDS FOR PROPERTY SURVEYS ADOPTED BY THE TENNESSEE BOARD OF PROFESSIONAL ENGINEERS AND PROFESSIONAL SURVEYORS.

Terry E. Romans
Tenn. Reg. No. 2116
THIS SURVEY WAS MADE UNDER MY SUPERVISION AND WITH CURRENT REFERENCE TO THE RECORDS SHOWN HEREON. I HAVE ALSO PERFORMED A FIELD TIES OF THE SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION, THAT THE GROUND ACCURATELY REPRESENTS THE SURVEY, AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF. FIELD WORK WAS COMPLETED ON 8/21/26 AND THE MONUMENTS SHOWN WERE IN PLACE ON SAID DATE.

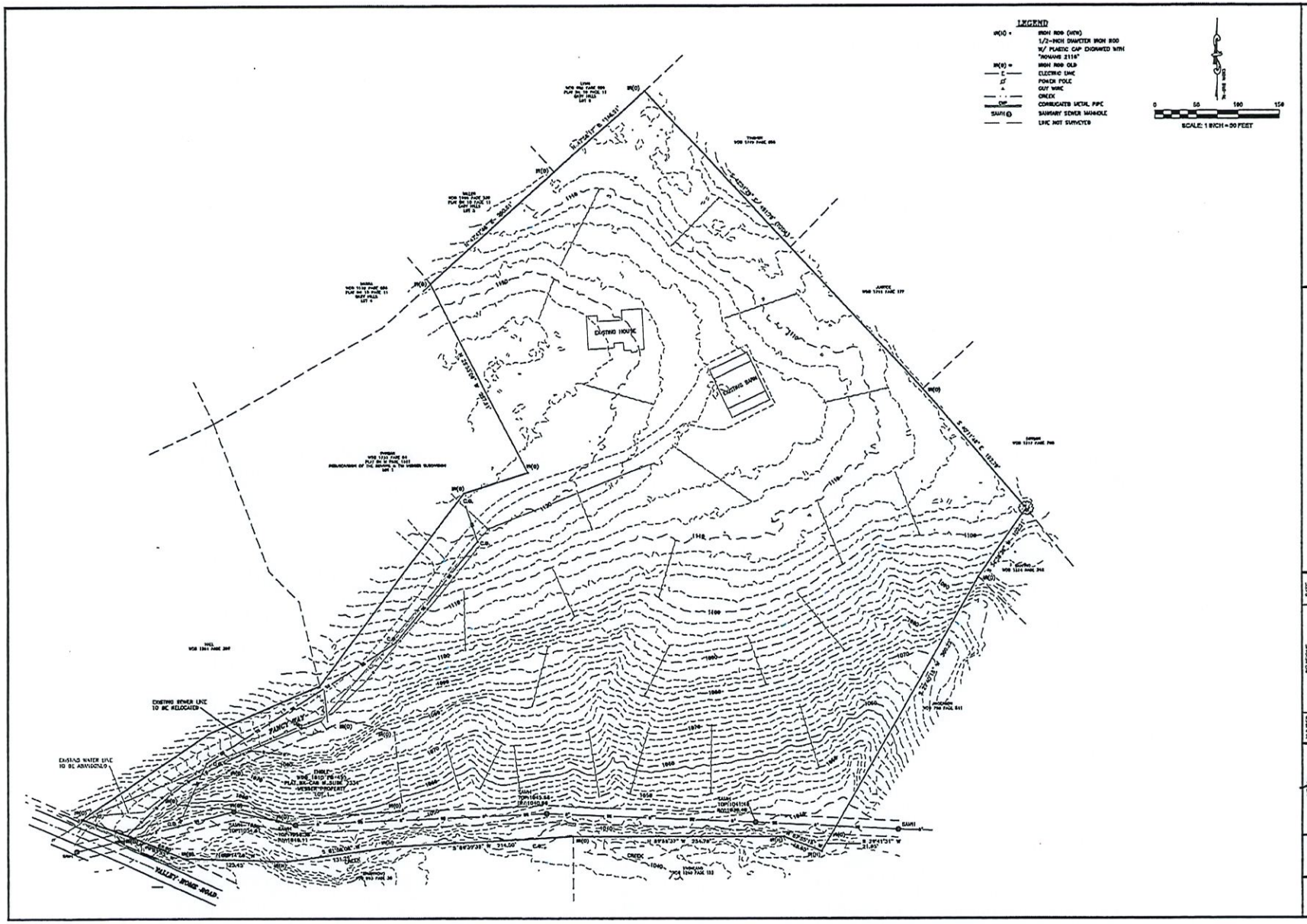
8/21/26

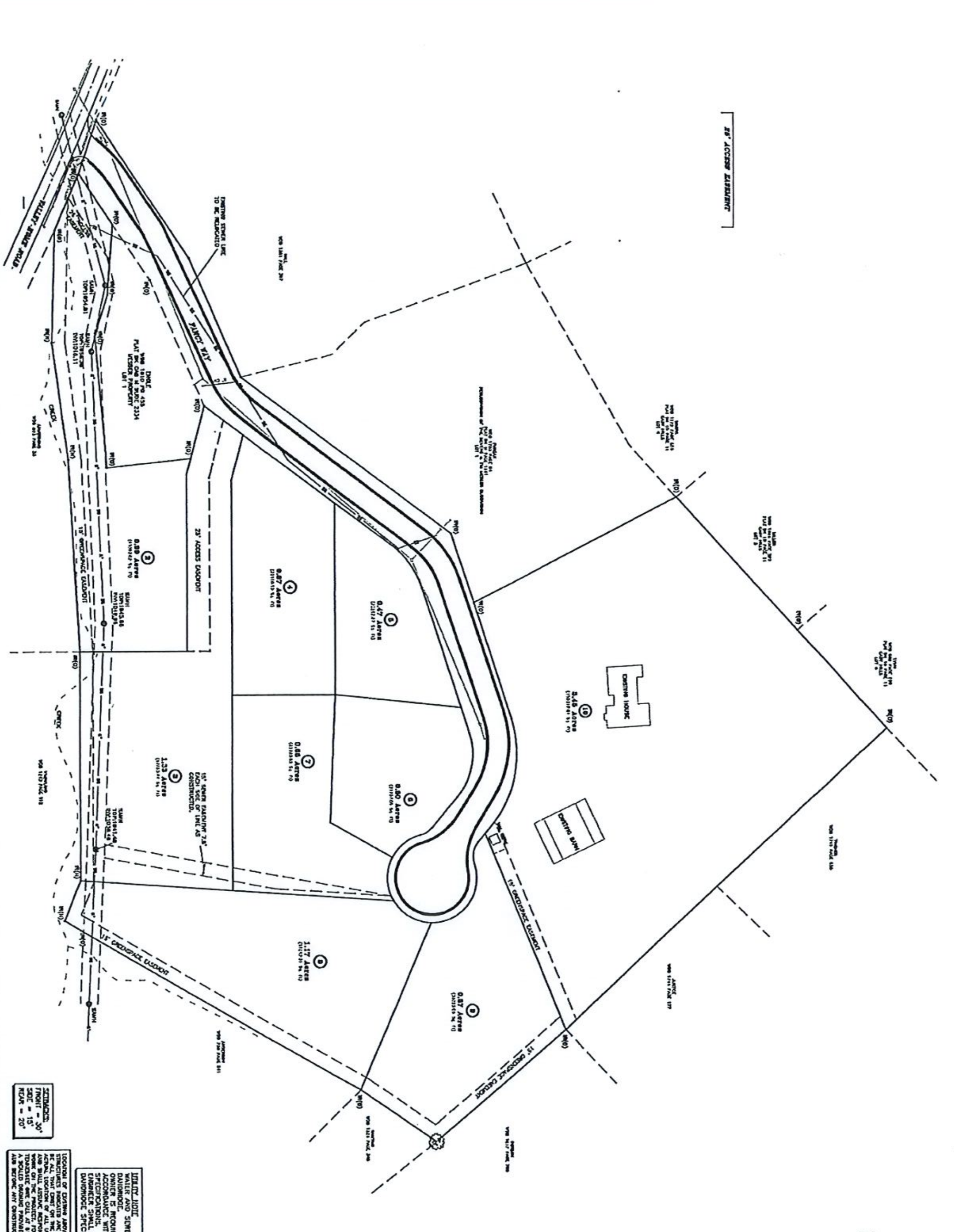
TERRY E. ROMANS
TENNESSEE No. 2116

FOR 64 AS OF THIS SURVEY WAS PERFORMED USING A GARMIN GPS MULTIPLE FREQUENCY RECEIVER
THE ACCURACY OF THE RECEIVER IS 1.0 HORIZONTAL, 1.5 VERTICAL, 95% OF THE TIME PROVIDED HAS THE FOLLOWING METHODS: SATELLITE AUGMENTATION AS VERIFIED AND SA.
PROCESSING/POST-PROCESSING, LOCAL POST DATA REFERENCE NETWORK
NEAR MODEL USED
CORRECTIONS AND FACTORS WERE APPLIED

ROMANS Engineering
1973 Merrell Road
Knoxville, TN 37922
Phone (865) 675-3735
romansengineering@gmail.com

SURVEY TITLE	XXXX
LOCATION	VALLEY HOME RD.
CITY	DANDRIDGE STATE TN ZIP CODE 37725
DISTRICT 1st COUNTY JEFFERSON	ZONE —
TAX MAP 082E GROUP A	PARCEL 027.01 & 027.00
STATE — ZONE —	SCALE 1"=50'
DEED BK — PAGE 1472-341 (027.01)	DATE 08/25/26
PLAT BOOK M PAGE 1981 LOT 2	DRAWN BY MLB
DEED BK — PAGE 1575-777 (027.00)	SHEET 1 OF 1
PLAT BOOK L PAGE 32	JOB NO. 22-114-1


LEGEND
IR(O) = IRON ROD (NEW) 1/2-INCH DIAMETER IRON ROD W/ PLASTIC CAP CHISELED WITH "ROMANS 2116"
IR(O) = IRON ROD OLD
ELECTRIC LINE
POWER POLE
GUY WIRE
CREEK
CORRUGATED METAL PIPE
SANITARY SEWER MANHOLE
LINE NOT SURVEYED
SCALE: 1 INCH = 50 FEET
EXISTING HOUSE
EXISTING BARN
EXISTING SEWER LINE TO BE RELOCATED
EXISTING WATER LINE TO BE ABANDONED
NANCY WAY
VALLEY HOME ROAD
ROMANS Engineering
MESSER SUBDIVISION
DICKSON, TENNESSEE
EXISTING SITE
DATE
REVISIONS
NUMBER
JOB NO: 23-114-1
DATE: 6/24/25
DRAWN: MLR
CHECKED: TER
C1



SETBACKS:
FRONT = 30'
SIDE = 15'
REAR = 20'

UTILITY NOTE
WATER AND SEWER IS PROVIDED BY THE TOWN OF DANDRIDGE.
OWNER IS REQUIRED TO INSTALL UTILITIES IN ACCORDANCE WITH THE TOWN OF DANDRIDGE SPECIFICATIONS.
ENGINEER SHALL DESIGN UTILITIES TO THE TOWN OF DANDRIDGE SPECIFICATIONS.

LOCATION OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES AND STRUCTURES INDICATED ARE APPROXIMATE ONLY, AND THOSE SHOWN MAY NOT BE ALL THAT EXIST ON THE PROJECT SITE. CONTRACTOR SHALL DETERMINE ACTUAL LOCATION OF ALL UTILITIES AND STRUCTURES ON THE PROJECT SITE AND SHALL ASSUME RESPONSIBILITY FOR ANY DAMAGE TO UTILITY LINES DURING WORK ON THE PROJECT. FOR UNDERGROUND UTILITY LOCATION CALL TENNESSEE ONE CALL AT 811. UTILITY LOCATIONS SHOWN WERE TAKEN FROM A SCALED DRAWING PROVIDED BY ARMOS UTILITY BOARD (AUB). CONTACT AUB BEFORE ANY CONSTRUCTION.

NUMBER	REVISIONS	DATE

ROMANS Engineering
1823 Hopewell Road Knoxville, TN 37920
Phone (865) 679-5736 romansengineeringllc@gmail.com

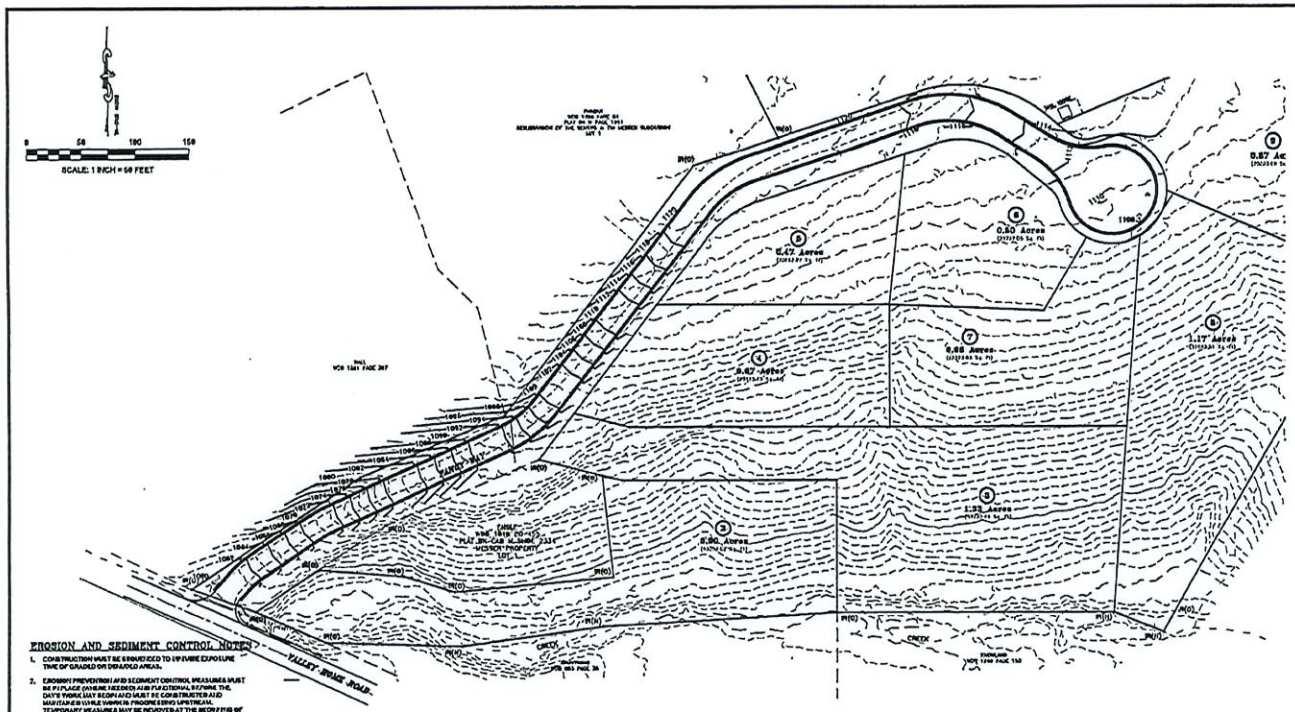
MESSER SUBDIVISION
DANDRIDGE, TENNESSEE

LOT LAYOUT

TERRY E. ROMANS
6/24/25

JOB NO: 23-114-1
DATE: 6/24/25
DRAWN: MLR
CHECKED: TER

C2



EROSION AND SEDIMENT CONTROL NOTES:

1. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE EXPOSURE TIME OF GRADED OR DISTURBED AREAS.
2. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE (WHERE NEEDED) AND FUNCTIONAL BEFORE THE DAILY WORK ACTIVITY STOPS AND MUST BE CONSTRUCTED AND MAINTAINED WHILE WORK IS PROGRESSING UPSTREAM. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT MUST BE REPLACED AT THE END OF THE WORK DAY.
3. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 15 DAYS PRIOR TO WORK IN THAT AREA UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER INSTALLED.
4. CLEARING AND GRUBBING MUST BE HELD TO THE MINIMUM AREA NECESSARY FOR INSTALLATION AND EQUIPMENT OPERATION. EXISTING VEGETATION AT THE WORK AREA SHOULD BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE.
5. LITTER, CONSTRUCTION DEBRIS AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF SITE BY WIND OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
6. AFTER USE, MATERIALS USED FOR EROSION PREVENTION AND SEDIMENT CONTROL (BLOCKS AND SILT FENCE) SHOULD BE REMOVED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
7. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT TRAPS, SILT FENCES, SEDIMENTATION PONDS, AND OTHER SEDIMENT CONTROLS ONCE BELOW CAPACITY HAS BEEN REDUCED BY 50%.
8. IF SEDIMENT ESCAPES THE PERMITTED AREA, OFF-SITE ACCUMULATION THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF SITE IMPACTS. PERMITTEE SHALL NOT REMOVE SEDIMENT FROM A PROPERTY OF A STREAM WITHOUT CONSULTING TDEC FIRST. THIS PERMIT DOES NOT AUTHORIZE ACCESS TO PRIVATE PROPERTY. AND JUDGMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJACENT PROPERTY MUST BE SETTLED BY THE PERMITTEE WITH THE ADJACENT PROPERTY OWNER.
9. PERMITTEE SHALL INSPECT A RAIN GAUGE AND RECORD DAILY RAINFALL AT THE WORK AREA, OR USE INCREASE SITE FOR RECORD OF DAILY RAINFALL AMOUNTS.
10. THE FOLLOWING RECORDS MUST BE KEPT AT OR NEAR THE WORK AREA:
    A. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.
    B. THE DATES WHEN CONSTRUCTION AND/OR TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.
    C. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
    D. INSPECTION RECORDS.
    E. RAINFALL RECORDS.
11. THE CONTRACTOR SHALL FOLLOW THE SUMNER COUNTY STORM WATER MANAGEMENT ORDINANCE AND, IF APPLICABLE, THE STATE OF TENNESSEE GENERAL PERMIT. THE MORE STRICT INTERPRETATION SHALL APPLY.
12. EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES SHALL FOLLOW APPROVED PLAN DETAILS AND THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
13. EROSION PREVENTION AND SEDIMENT CONTROL AND OTHER MEASURES FOR THE CONTROL OF OTHER CONSTRUCTION / POLLUTION POINTS SHALL BE IN PLACE AND FUNCTIONAL BEFORE A GRADING PERMIT IS ISSUED.

EROSION CONTROL LEGEND

SF	TEMPORARY SILT FENCE (WITH J-HOOKS)
CE	CONSTRUCTION ENTRANCE
OP	OUTLET PROTECTION

ADEQUATE DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES, BEST MANAGEMENT PRACTICES, AND/OR OTHER WATER QUALITY 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 OR PROPERTY OWNER'S FAILURE TO PROVIDE AND MAINTAIN ADEQUATE DRAINAGE AND EROSION/SEDIMENT CONTROL FOR THE CONSTRUCTION AREA SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

STAGE 1 EROSION CONTROL SEQUENCE:

1. POST NOTICE OF COVERAGE (NOC) IN A PROMINENT DISPLAY NEAR THE ENTRANCE TO THE SITE(S).
2. INSTALL RAIN GAGE ON SITE.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE TO SITE.
4. INSTALL SILT FENCING OR MULCH BERM AS INDICATED ON THE CONSTRUCTION DRAWINGS.
5. CLEAR AND GRUB THE SITE.
6. STRIP TOPSOIL FROM THE AREA TO BE GRADED. TOPSOIL STOCKPILE AREAS SHALL BE PROTECTED WITH SILT FENCING.

GENERAL NOTES

1. ALL ELEVATIONS BASED ON TENNESSEE LIDAR DATA. THE PROPOSED CONTOURS SHOWN ON THE PLANS REPRESENT FINISH GRADE ELEVATION. CONTRACTOR SHALL DETERMINE SUBGRADE ELEVATIONS BY DEDUCTING TYPICAL PAVEMENT SECTIONS AND STRUCTURAL DRAWINGS.
2. LOCATION OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES AND STRUCTURES INDICATED ARE APPROXIMATE ONLY, AND THOSE SHOWN MAY NOT BE ALL THAT EXIST ON THE PROJECT SITE. THE CONTRACTOR SHALL DETERMINE THE ACTUAL LOCATION OF ALL UTILITIES AND STRUCTURES ON THE PROJECT SITE AND SHALL ASSUME RESPONSIBILITY FOR ANY DAMAGE TO UTILITY LINES DURING WORK ON THE PROJECT. FOR UNDERGROUND UTILITY LOCATION CALL TENNESSEE ONE CALL AT 811.
3. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND INSPECTED BEFORE GRADING OPERATIONS MAY BEGIN.
4. SITE CLEARING SHALL BE KEPT TO THE MINIMUM NECESSARY TO INSTALL SILT FENCE, CHECK DAMS AND CONSTRUCTION ENTRANCE. GENERAL SITE CLEARING MAY BEGIN ONLY AFTER THESE MEASURES HAVE BEEN INSTALLED.
5. THE CONTRACTOR IS ENCOURAGED TO MULCH ANY TREES THAT ARE TO BE REMOVED AND USE MULCH TO SUPPLEMENT TEMPORARY SILT FENCE. MULCH SHALL BE A MINIMUM 2' HIGH WITH A MINIMUM BASE WIDTH OF 6'. ALL MULCH SHALL BE REMOVED ONCE SITE IS STABILIZED. GRASS SHALL BE ESTABLISHED WHERE SILT FENCE AND MULCH HAVE BEEN REMOVED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING ALL EROSION PREVENTION AND SEDIMENT CONTROL DEVICES SHOWN ON THE PLANS AND DESCRIBED IN THE ASSOCIATED STORM WATER POLLUTION PREVENTION PLAN.
7. ALL NEWLY GRADED EARTHEN AREAS THAT ARE NOT TO BE PAVED SHALL HAVE A MINIMUM OF 3 INCHES OF TOPSOIL PLACED OVER THEM AND SHALL BE SEEDED AS SPECIFIED.
8. ALL GRADING PRACTICES SHALL CONFORM TO THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK AND ANY OTHER PROCEDURES REQUIRED BY THE TOWN OF GALLATIN.
9. NO SLOPES SHALL EXCEED 2:1; SLOPES GREATER THAN 3:1 SHALL RECEIVE MATTING.
10. APPLY TEMPORARY SEEDING WHEN GRADING OPERATIONS ARE CEASED MORE THAN 14 DAYS AND ON ALL STOCKPILES.
11. PERMANENT SEEDING IS REQUIRED WHEN GRADING OPERATIONS ARE COMPLETE.
12. AREA TO BE DISTURBED 4.79 ACRES.

EXCAVATION AND GRADING NOTES:

GENERAL
THE REQUIREMENTS LISTED BELOW ARE INTENDED TO SERVE AS AN OUTLINE OF GENERAL REQUIREMENTS. ADDITIONAL REQUIREMENTS MAY BE SET FORTH IN THE PROJECT MANUAL. CONTRACTOR IS CAUTIONED TO CONSIDER ALL REQUIREMENTS OF THE PROJECT DURING THE BIDDING PROCESS.

CLEARING
COMPLY WITH LOCAL AND STATE ORDINANCES REGARDING DISPOSAL OF DEBRIS. DO NOT BURN DEBRIS ON SITE WITHOUT SPECIFIC WRITTEN APPROVAL OF THE LOCAL AUTHORITY. CLEAR AND GRUB FOR NEW CONSTRUCTION AS REQUIRED.

EXCAVATION/ PREPARATION
VERIFY LOCATION OF EXISTING ON-SITE UTILITIES. PROTECT AND MAINTAIN EXISTING UTILITIES AS REQUIRED. EXTRAPOLATE AND VERIFY EXISTING LINES, GRADE AND INVERSELEVS SHOWN ON THE DRAWINGS. REPORT ANY ERRORS OR INCONSISTENCIES TO THE GENERAL CONTRACTOR, BEFORE COMMENCEMENT OF WORK. COMMENCEMENT OF WORK WITHOUT NOTIFICATION WILL CONSTITUTE ACCEPTANCE OF THE SITE AS IS.

EXISTING INFO ACCURACY
EXISTING CONTOURS SHOWN ARE INTENDED TO FORM A GENERAL DESCRIPTION OF SURFACE GROUND ELEVATIONS. TOPOGRAPHIC INFORMATION SHOWN HEREON SHALL BE CONSIDERED TO HAVE NOT MORE THAN THE FOLLOWING PLUS OR MINUS LIMITS OF ACCURACY: 0.10 FEET AT BENCHMARKS, 0.25 FEET AT SPOT GRADES, 1.0 FEET AT CONTOUR LINES. CONTRACTOR IS CAUTIONED THAT STRAIGHT LINE INTERPOLATION BETWEEN CONTOURS MAY NOT EXACTLY REFLECT EXISTING CONDITIONS. AREAS OF RELATIVELY QUICK CHANGES IN CONTOURS SHOULD NOT BE ALLOWED TO UNDULY INFLUENCE INTERPRETATION OF CONTOURS. REPORT ANY ERRORS OR INCONSISTENCIES TO THE GENERAL CONTRACTOR, BEFORE COMMENCEMENT OF WORK. ANY ERROR NOT SO REPORTED CANNOT BE CONSIDERED FOR ADJUSTMENT IN CONTRACT PRICE.

STRIPPED AND SPREADING TOPSOIL
TOPSOIL SHALL BE STRIPPED AND TEMPORARILY STOCK PILED FOR LATER REUSE. IF NO STOCK PILE AREA IS INDICATED ON GRADING PLANS, STOCK PILE SHALL BE IN SUCH A PLACE TO AVOID CONFLICTS WITH PROPOSED SITE FEATURES AND OTHER TRADES. IF A CONFLICT WITH PROPOSED SITE FEATURES AND OR OTHER TRADES, THE GRADING CONTRACTOR IS TO RELOCATE THE STOCK PILE AT NO ADDITIONAL FEE TO THE OWNER. PARTICULAR ATTENTION SHALL BE PAID TO FINELY TEXTURED TOPSOIL THAT WILL BE SUITABLE FOR LANDSCAPING PURPOSES. GENERAL TOPSOIL SPREADING WILL BE BY GRADING CONTRACTOR TO A MINIMUM DEPTH OF 6" AT ANY POINT EXCEPT ON SLOPE OF 2-1/2 TO 1 OR STEEPER WHERE TOPSOIL DEPTH SHALL BE 2" MIN. AT ANY POINT NOT EXCEEDING 3:1.

PROOF-ROLLING
ALL AREAS TO RECEIVE NEW STRUCTURAL FILL OR OTHER NEW CONSTRUCTION SHALL BE PROOF ROLLED WITH A 20 TON TANDEM DUMP TRUCK IN PRESENCE OF 30LS TESTING AGENT BEFORE COMMENCING ANY CONSTRUCTION ACTIVITY. ALL AREAS TO BE COMPACTED SHALL RECEIVE 8 PASSES WITH A COMPACTION ROLLER. SOIL ENGINEER SHALL VERIFY OC. THAT ALL AREAS HAVE PASSED PROOF ROLL INSPECTION PRIOR TO COMMENCEMENT CUT & FILL OF GRADING. DO NOT CONVENCE GRADING PRIOR TO SUCH NOTIFICATION.

UNDERCUT-BACKFILL
UNDERCUT SHALL MEAN EXCAVATION OR OTHER REMOVAL OF UNSUITABLE MATERIAL BELOW ELEVATION OF PROPOSED FINAL SUBGRADE. IN NO CASE SHALL THE TERM UNDERCUT BE USED TO DESCRIBE MATERIAL OCCURRING ABOVE FINAL SUBGRADE ELEVATION. EXTENT OF UNDERCUT OF UNSUITABLE MATERIALS, IF ANY MUST BE RECOMMENDED BY THE SOIL ENGINEER FOR THE OWNERS APPROVAL. SOIL ENGINEER SHALL NOT GIVE UNILATERAL AUTHORITY TO DIRECT UNDERCUT ACTIVITIES WITHOUT APPROVAL OF THE OWNER'S REPRESENTATIVE. SOIL ENGINEER'S WRITTEN FIELD NOTES WILL BE REQUIRED TO SUBSTANTIATE AMOUNTS OF UNDERCUT. BACKFILL SHALL BE OF APPROVED MATERIAL ONLY. MONEY FOR REQUIRED TESTING SHALL BE INCLUDED IN QUOTED PRICES CONCERNING UNDERCUT AND BACKFILL. WHERE TERMS OF BIDDING CALL FOR AN UNCLASSIFIED CONTRACT NO PAYMENTS FOR UNDERCUT/BACKFILL WILL BE CONSIDERED. SUCH QUOTES SHALL BE INCLUDED IN THE CONTRACTOR'S BASE BID. UNDERCUT & BACKFILL SHALL NOT CONSTITUTE AN EXTRA TO THE CONTRACT IN UNCLASSIFIED CONTRACTS.

STRUCTURAL FILL
STRUCTURAL FILL SHALL BE COMPACTED AS SPECIFIED IN EXCAVATION AND GRADING SCHEDULE WITHIN -1% TO +3% OF OPTIMUM MOISTURE CONTENT. OFF SITE BORROW AREAS SHALL BE APPROVED BY SOILS ENG. PLACE FILL AND BACKFILL IN LAYERS AS SPECIFIED IN EXCAVATION AND GRADING NOTES. USE NO DELETERIOUS MATERIAL, ORGANIC, OR ROCK LARGER THAN AS REQUIRED. IN-SITU SOILS MAY REQUIRE ADDITIONAL WATER OR MAY REQUIRE ADDITIONAL DRYING TO REACH OPTIMUM MOISTURE CONTENT FOR COMPACTION.

GRADING TOLERANCE
GRADING CONTRACTOR SHALL BRING SUBGRADE TO WITHIN AN AVERAGE OF 1/10 OF ONE FOOT OF REQUIRED ELEVATION TO OBTAIN FINISHED GRADE INDICATED ON DRAWINGS EXCEPT AT LOCATIONS WHERE SPOT ELEVATIONS ARE SHOWN AND WHERE FLOOR ELEVATIONS ARE SHOWN WHICH SHALL BE WITHIN 1/100 OF ONE FOOT OF REQUIRED ELEVATIONS. FINAL SUBGRADE SHALL BE SPOT CHECKED BY A LICENSED SURVEYOR NOT LESS THAN ONE SHOT PER 25 SF AND AT EACH FINISHED FLOOR ELEVATION AND A GRADING PREPARED AND FORWARDED TO ARE FOR APPROVAL PRIOR TO COMMENCING FINE GRADE, MAKING ON BUILDING CONSTRUCTION. GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ADJUSTMENTS IN GRADES AS DIRECTED BY THE OC. SUCH CHANGES SHALL BE LIMITED TO 3,000 CUBIC YARDS TOTAL. NO ADDITIONAL COST WILL BE ALLOWED FOR THIS WORK.

IMPORT / EXPORT OF SITE MATERIALS
ALL IMPORT AND EXPORT MATERIALS NEEDED TO COMPLETE PLAN PER SPECIFICATIONS SHALL BE THE SOLE RESPONSIBILITY OF SITE GRADING CONTRACTOR. ALLOWANCES WILL NOT BE GIVEN FOR THE REMOVAL OF CUT OR FILL MATERIAL NOR WILL ALLOWANCES BE GIVEN FOR THE EXPORTING OR IMPORTING OF CUT OR FILL MATERIAL. ANY OFF SITE BORROW OR WASTE AREAS TO BE PERMITTED BY THE SITE GRADING CONTRACTOR PRIOR TO CONSTRUCTION. ALL SITE TESTING OF MATERIALS WILL BE THE SOLE RESPONSIBILITY OF THE SITE GRADING CONTRACTOR.

TESTING
THE GRADING CONTRACTOR SHALL INCLUDE PRICE OF ALL REQUIRED TESTING AS SET FORTH HEREON TO BE PERFORMED BY AN INDEPENDENT QUALIFIED GEOTECHNICAL TESTING AGENT SUBJECT TO THE REVIEWER. TEST REPORTS MUST USE GRAPHIC LOCATION MAP AT 1" = 100' SCALE FOR LOCATION OF DENSITY TESTS. ORIGINAL COPIES OF ALL TESTS SHALL BE FORWARDED DIRECTLY TO THE GENERAL CONTRACTOR FROM THE TESTING AGENT. ALL TESTS SHALL SPECIFICALLY STATE THAT THE TESTS OTHER PASSES OR FAILS TO MEET GEOTECHNICAL SPECIFICATIONS. GRADING CONTRACTOR SHALL INCLUDE IN HIS BASE BID 10 (TEN) SOIL COMPACTION TESTS AFTER COMPLETION OF THE WORK, LOCATED PER GENERAL CONTRACTOR.

WATER CONTROL
THE GRADING CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO KEEP THE WORK FREE OF WATER EITHER FROM SURFACE SOURCES OR FROM UNDERGROUND SOURCES OR BOTH. SELECTION OF EQUIPMENT AND METHODS SHALL BE THE SOLE RESPONSIBILITY OF THE GRADING CONTRACTOR. THE GRADING CONTRACTOR SHALL BE AND IS RESPONSIBLE FOR ALL DAMAGE INCURRED BY HANDLING WATER CONDITIONS. ADDITIONALLY, THE GRADING CONTRACTOR SHALL PROVIDE WEARS NECESSARY TO AVOID DIRECT RUN-OFF FROM THIS PROJECT ONTO ADJACENT PROPERTY.

SECTION
BEDDING OF ALL DISTURBED AREAS NOT PAVED OR BUILT UPON SHALL BE THE RESPONSIBILITY OF THE GRADING CONTRACTOR UNLESS NOTED OTHERWISE AND ENCH 90% SHALL BE LOOSENED TO A DEPTH OF 6" AND TOPSOIL RESPREAD AS NOTED BEFORE SEEDING. RESPREAD TOPSOIL SHALL BE FREE OF ANY ROBBIS AND OR GRAVEL, NEEDED PER THE LISTED BEDDING SCHEDULE. BEDDING SHALL BE AS SPECIFIED ON THE LANDSCAPE PLAN.

EROSION CONTROL
EXPOSE MINIMUM AMOUNT OF SUBGRADE POSSIBLE AT ONE TIME TO ALLOW FOR EFFICIENT PROCEEDING OF THE WORK. GRADING AND OTHER EROSION CONTROL WORKS SHALL BE EMPLOYED, MAINTAINED AND RECONSTRUCTED AS REQUIRED IF DESTROYED BY EROSION. SEDIMENT DEPOSITED ON ADJACENT PROPERTY BY CONSTRUCTION ACTIVITIES SHALL BE CLEANED-UP IMMEDIATELY. TEMPORARY SEDIMENT FENCES SHALL BE CONSTRUCTED AND/OR INSTALLED PRIOR TO STRIPPING OF TOPSOIL. PROVIDE AND MAINTAIN INLET PROTECTION AROUND DRAINAGE STRUCTURES AND TO PREVENT SILTATION THROUGHOUT CONSTRUCTION. RE-TOPSOIL OR REWORK TOPSOIL AND RESEED IN AREAS THAT EXPERIENCE EROSION DURING CONSTRUCTION. DO NOT REMOVE EROSION CONTROL MEASURES UNTIL ENTIRE SITE IS STABILIZED.

EXISTING UNDERGROUND FEATURES
BECAUSE OF PREVIOUS DEVELOPMENT AT THE SITE (HOUSE AND ASSOCIATED BUILDINGS) FOUNDATIONS, ABANDONED UTILITIES, AND OTHER SUBSURFACE OBSTRUCTIONS SUCH AS PIPES, SEPTIC TANKS, AND BRUSH PILES MAY BE ENCOUNTERED WITHIN THE CONSTRUCTION AREAS. IF ENCOUNTERED, THESE ITEMS SHOULD BE REMOVED OR REPLACED SO AS TO NOT IMPACT THE NEW CONSTRUCTION.

PERMITS
GRADING CONTRACTOR SHALL PAY ALL GRADING PERMIT FEES.
GRADING CONTRACTOR TO POST GRADING BOND, IF REQUIRED.

ROMANS Engineering
1323 Hogwood Road Nashville, TN 37238
Phone (615) 672-3134 romansengineering@gmail.com

MESSER SUBDIVISION
DAMPERCE, TENNESSEE

EROSION CONTROL AND NOTES

NUMBER	REVISIONS	DATE

TERRY E. ROMANS REGISTERED ENGINEER NO. 110146 STATE OF TENNESSEE
6/24/25

JOB NO: 23-114-1
DATE: 6/24/25
DRAWN: MLR
CHECKED: TER

C4

Construction

A silt fence should be placed on the contour. On slopes with grades greater than 2%, the silt fence should be located at least 8 to 7 feet upslope from the toe of the slope to ensure that the ponded water may be retained in front of the silt fence. The impounded depth should be at least 12 inches, but no more than the height of the silt fence. Any existing trees should be kept outside of the area of the silt fence so as not to damage the root system. This will allow desired water, exceeding the capacity of the silt fence, to be filtered and diffused deeply.

The silt fence should be installed in a continuous roll to the length of the barrier to avoid the use of joints. When joints are unavoidable, they shall be spliced tight firmly at a supporting post, with a minimum 6 inch overlap and securely sealed.

Post installation should start at the center of the low point (if applicable) with remaining posts spaced 6 feet apart for Type A and B silt fences and 4 feet apart for Type C silt fences. While Type A and B silt fences can be used with both wood and steel posts, only steel posts should be used with Type C silt fence due to the flow capacity of the fabric.

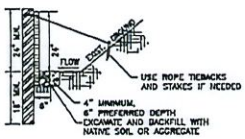
Inspection

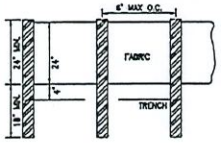
Inspect silt fence before anticipated storm events (or before of storm events such as thunderstorms when one one or more days) and within 24 hours after the end of a storm event of 0.5 inches or greater, and at least once every fourteen calendar days. Where silt fences have been finally or temporarily stabilized, such inspections may be conducted only once per month.

Maintenance

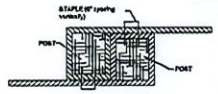
Sediment should be removed once it has accumulated to one-half the original height of the barrier. Filter fabric should be replaced whenever it has deteriorated to such an extent that the effectiveness of the fabric is reduced (approximately six months). Silt fence should remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the fence should be removed properly upon it when it was removed.

FOR ADDITIONAL REQUIREMENTS
SEE BMP: SILT FENCE ES-14

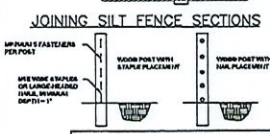




SILT FENCE TYPE B



JOINING SILT FENCE SECTIONS



TYPE FENCE	A	B	C
Tensile Strength (Lbs. Min.) (1) (ASTM D-4632)	Warp – 120 Fill – 100	Warp – 120 Fill – 100	Warp – 260 Fill – 180
Elongation (%Max.) (ASTM D-4632)	40	40	40
AOS (Apparent Opening Size) (Max. Sieve Size)(ASTM D-4751)	#30	#30	#30
Flow Rate (Gal/Min/Sq. Ft.) (CDT-87)	25	25	70
Ultra Stability (2) (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355	80	80	80
Bursting Strength (PSI Min.) (ASTM D-3786 Diaphragm Bursting Strength Tester)	175	175	175
Minimum Fabric Width (inches)	36	22	36

(1) Minimum roll average of five specimens.
(2) Percent of required initial minimum tensile strength.

SILT FENCE SPECIFICATIONS

Post Size & Fastner Requirements

Post Size			
	Minimum Length	Type of Post	Size of Post
Type A	4'	Soft Wood Oak Steel	3" dia. or 2X4 1.5"x1.5" 1.3 lb/ft. min.
Type B	3'	Soft Wood Oak Steel	2" dia. or 2X2 1"X1" 0.75 lb/ft. min.
Type C	4'	Steel	1.3 lb/ft. min.
Fasteners For Wood Posts			
	Gauge	Crown	Legs	Staples Per Post
Wire Staples	17 Min.	3/4" wide	1/2" Long	5 Min.
	Gauge	Length	Legs	Nails Per Post
Nails	14 Min.	1"	3/4"	4 Min.
Note: Filter Fabric may also be attached to the Post by wire, cord, and pockets.				

NOTES:
1. POST SPACING SHALL BE 8 FEET MAXIMUM FOR TYPICAL APPLICATION IN AT THE BOTTOM OF SLOPES OR ALONG SITE PERIMETER.
2. POST SPACING SHALL BE 6 FEET MAXIMUM AT THE BOTTOM OF STEEP SLOPES. POSTS SPACING SHALL BE SUFFICIENT TO MAINTAIN SUPPORT OF CONTRIBUTING.
3. PLACE FILTER FABRIC AT LEAST 5 TO 7 FEET UPHILL FROM STEEP SLOPES IN ORDER TO PROVIDE SUFFICIENT SURFACE. SEE FIGURE ES-14A. SEE SHEET C6.
4. NAIL FENCE REINFORCEMENT WIRE TO POSTS TO ALLOW SLUMPED TOP THAT ARE OVER 6 FEET, OR WHERE SILT FENCE IS IN A FALLED IMPROVEMENT, A SIGNIFICANT TO CAUSE IS UNFIT, FAILURE IMPROVEMENT AT LOCATION WHERE THE FRONT OR HEAVY FLOW THAT OCCUR.

1 NTS — TEMPORARY SILT FENCE (SF)

APPLYING MULCH

Mulch is required for all permanent vegetation specifications. Mulch applied to seeded areas shall achieve 75% soil cover. Behind the mulching material from the following and apply as indicated.

1. Mulching by hand must be completed likewise or blown out, mulch is not required.
2. Dry straw or dry hay of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hat shall be applied at a rate of 2 1/2 tons per acre. Care as to produce hay containing mature seed shall be applied at a rate of three tons per acre.
3. Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or planting. The mulch may be spread by blower type spreading equipment, other spreading equipment or by hand.
4. Wood cellulose mulch or wood pulp fiber shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
5. One thousand pounds per acre of wood cellulose and wood pulp fiber, which includes a tackifier, shall be used with hydraulic seeding on slopes 3X:1 or steeper.
6. Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when applied in water. The fibers shall remain dye to aid in the uniform application during seeding.

ASPHALT MULCH

Another straw or hay mulch immediately after application by one of the following methods:

1. Emulsified asphalt can be (a) sprayed without/with mulch on 2 to 4 inches from the blower machine or (b) sprayed on the mulch from fully following mulch application when straw or hay is spread by methods other than special blower equipment. The combination of asphalt emulsion and water shall consist of a homogeneous mixture satisfactory for spraying. The mixture shall consist of 100 gallons of emulsified asphalt and 100 gallons of water per ton of mulch. Care shall be taken in addition to protect state roads, the public, adjacent property, pavements, curbs, sidewalks, and all other structures from asphalt discoloration.
2. Heavy and straw mulches may be pressed into the soil immediately after the mulch is spread. A special "crimper" or disk harrow with the disks set straight may be used. Serrated disks are preferred, and should be 20 inches or more in diameter and 6 to 12 inches apart. The edges of the disks shall be sharp enough to press the mulch into the ground without cutting it, leaving much of its original position. Mulch shall not be plowed into the soil.
3. Synthetic tackifiers or binders may be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers should be mixed and applied according to the manufacturer's specifications. Refer to Specification Tackifiers and Binders.

BEDDING MATERIAL

Mulch is used as a bedding material in areas of moisture and aerial weeds in nurseries, ornamental beds, around shrubs, and on berm areas.

Material	Depth
Grass clippings	4" to 8"
Grass hay	4" to 8"
Pine needles	3" to 8"
Wood Chips	4" to 8"

MAINTENANCE

Inspection will be applied at a rate that will not cause runoff.

MAINTENANCE

Inspection of the seeding and mulch application should be performed along with other regularly scheduled erosion and sediment control inspections. Any areas that have washed out due to high storm water flows, areas that have been disturbed by blowing wind, and areas that do not show good germination should be reseeded. Maintenance needs identified in inspections or by other means shall be accomplished before the next storm event if possible, but in no case more than seven days after the need is identified.

3 NTS — APPLYING MULCH

CONSTRUCTION SPECIFICATIONS

Grading and Shaping: Excessive runoff shall be reduced by properly designed and installed erosion control practices such as ditches, dikes, diversions, sediment barriers, etc.

No shaping or grading is needed if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeded equipment is used.

Seedbed Preparation: When a hydraulic seeder is used, seedbed preparation may not be required. When using conventional or hand seeding, seedbed preparation may not be required when the soil material is loose and not compacted by equipment or traffic.

When soil has been compacted by equipment or traffic, or consists of smooth cut slopes, the soil shall be disked, plowed, tilled, or otherwise scarified to provide a place for seed to lodge and germinate.

Seeding: Select a grass or grass/legume mixture suitable to the area and to time of the year. See Table 1 for suggestions of temporary seeding species. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker seeder, or hydraulic seeder (slurry including seed and mulch). Drill or cultipacker seeders should normally place seed one quarter to one half inch deep. Appropriate depth of planting is two times the seed diameter. Seed should be "raked" lightly in cover seed with soil if seeded by hand.

Mulching: Temporary vegetation may be established without the use of mulch. Mulch without seeding may be mentioned in short term protection, flows in Disturbed Area Stabilization (with Mulching) SPU.

Irrigation: During times of drought, water shall be applied at a rate that conserves runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made as needed. Heavy seeded areas require more water than more mature plants.

MAINTENANCE

Inspections of temporary seeded areas should be made before anticipated storm events (or after of storm events such as thunderstorms when one or more days) and within 24 hours after the end of a storm event of 0.5 inches or greater, and at least once every fourteen calendar days. Inspections should identify areas that need reseeding or need additional BMPs. Maintenance needs identified in inspections or by other means shall be accomplished before the next storm event if possible, but in no case more than seven days after the need is identified.

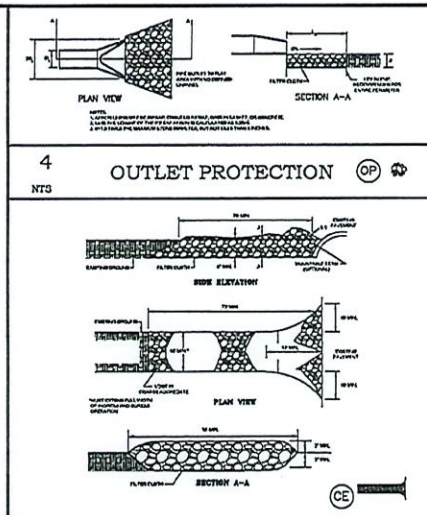
Temporary Cover Seeding Mixtures

Seeding Dates	Grass Seed	Percentages
January 1 to May 1	Rye/Rye	33%
	Annual Lespedeza	33%
	Summer Oats	34%
May 1 to July 15	Sudan/Sorghum	100%
May 1 to July 15	Millet	100%
July 15 to January 1	Winter Rye	67%
	Rye/Rye	33%

Source: TDOT Standard Specifications

Table 1

4 NTS — TEMPORARY SEEDING (TS)



4 NTS — OUTLET PROTECTION (OP)

5 NTS — CONSTRUCTION ENTRANCE

Construction Specifications

Grading and Shaping: Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape the slope, where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching, and maintenance of vegetation.

Concentrations of water that could cause excessive soil erosion should be diverted in a safe outlet. Diversions and other treatment practices must conform to the appropriate standards and specifications of the Tennessee Erosion and Sediment Control Handbook.

Plant Selection: Refer to Table 1 for suggested species. Plants should be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area; time of year of planting, method of planting, and the needs and desires of the land user.

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during their optimum planting period. Care should be taken in selecting companion cross species and seeding rates because the annual crops will compete with the perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Legumes shall not be used in any seeding mixtures containing permanent, perennial species due to the ability to out-compete desired species for permanent perennial cover.

Seed Quality: The term "pure live seed" is used to express the quality of seed and is not shown on the label. Pure live seed (PLS) is expressed as a percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination; i.e.,

(PLS=%germination X% purity)

Example: Common Bermuda seed

70% germination, 90% purity
PLS = 70% germination x 90% purity
PLS = 56%

The percent of PLS determines the amount of seed needed. If the seeding rate is 10 pounds PLS and the bulk seed is 56% PLS, the bulk seeding rate is:

10 lbs PLS/acre = 17.9 lbs/acre
56% PLS

An application of 17.9 lbs/acre will provide 10 lbs/acres of pure live seed.

Topsoil: Topsoil should be friable and loamy, free of debris, objectionable weeds and stones, and contain no toxic substances that may be harmful to plant growth. When replacing topsoil on disturbed areas, maintain needed erosion and sediment control practices such as diversions, berms, sediment basins, etc. Grades containing these structures should be maintained after the topsoil is applied.

Topsoil could be handled only when it is dry enough to work without damaging soil structure. A uniform application of 6 inches (unsettled) is recommended, but may be adjusted at the direction of the engineer or landscape architect. See Table 2 for additional information about the volume of topsoil to achieve various depths.

Seedbed Preparation: When conventional seeding is to be used, topsoil should be applied to any area where the disturbance results in subsoil being the final grade surface.

Broadcast plantings

1. Seedbed preparation may not be required where hydraulic seeding equipment is to be used.
2. Tillage, at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches; alleviate compaction; incorporate lime, fertilizer; smooth and firm soil, allow for the anchoring of straw or hay mulch if a cover is to be used.
3. Tillage may be done with any suitable equipment.
4. Tillage should be done parallel to the contour where feasible.
5. On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide consecutive beds, 6 to 8 inches apart, in which seed may lodge and germinate. Hydraulic seeding may also be used.

Individual Plants:

1. Where individual plants are to be set, the soil shall be prepared by excavating holes, open furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, use a subsoiler and/or the row to a depth of 28 inches on the contour four or six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.
4. Trees should not be planted in power line right-of-ways or under power lines.

Inoculants: All legume seed shall be inoculated with the appropriate nitrogen fixing bacteria. The inoculants shall be pure culture prepared specifically for the seed species and used within the dates on the container.

A mixing medium recommended by the manufacturer shall be used to bond the inoculants to the seed. For conventional seeding, use twice the amount of inoculants recommended by the manufacturer. For hydraulic seeding, four times the amount of inoculant recommended by the manufacturer shall be used.

All inoculated seed shall be protected from the sun and high temperature, and shall be planted the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than one hour.

Cubic Yards of Topsoil Required to Attain Various Soil Depths

Depth (inches)	Per 1,000 Square Feet	Per Acre
1	3.1	134
2	6.2	269
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806

Table 2

2 NTS — PERMANENT SEEDING (PS)

Permanent Cover Seeding Mixtures

Seeding Dates	Grass Seed	Percentages
February 1 to July 1	Kanaan 31 Fescue	80%
	Korean Lespedeza	10%
	English Rye	5%
June 1 to August 1	Kanaan 31 Fescue	55%
	English Rye	20%
	Korean Lespedeza	15%
	German Millet	10%
April 15 to August 15	Bermudagrass (Hulled)	70%
	Annual Lespedeza	30%
August 1 to December 1	Kentucky 31 Fescue	70%
	English Rye	20%
	White Clover	10%
February 1 to December 1	Kentucky 31 Fescue	70%
	Crown Vetch	25%
	English Rye	5%

Source: TDOT Standard Specifications

Table 1

PLANTING

Hydraulic Seeding: Mix the seed (inoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

Conventional Seeding: Seeding will be done on a freshly prepared seedbed. For a broadcast planting, use a cultipacker seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

No-Till Seeding: No-till seeding is permitted into live annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants: Shrubs, vines and spigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding of the roots.

Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and spigs must be at or slightly above the ground surface.

Where individual holes are dug, an appropriate amount of fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added, and the plant shall be set in the hole and the hole filled in.

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MESSER SUBDIVISION
DANCROSS, TENNESSEE

EROSION CONTROL DETAILS

NUMBER	REVISIONS	DATE

TERRY E. ROMAN
REGISTERED ENGINEER
No. 121111
STATE OF TENNESSEE
6/24/25

JOB NO: 23-114-1
DATE: 6/24/25
DRAWN: MLR
CHECKED: TER

C5