



SUBDIVISION REPORT - CONCEPT/DEVELOPMENT PLAN

▶ **FILE #:** 4-SC-23-C
4-D-23-DP

AGENDA ITEM #: 37
AGENDA DATE: 4/13/2023

▶ **SUBDIVISION:** POPLAR FARMS
▶ **APPLICANT/DEVELOPER:** REBECCA WALLS
OWNER(S): Raymond Arthur Popp and Diana Marriott Popp

TAX IDENTIFICATION: 76 018,021 [View map on KGIS](#)

JURISDICTION: County Commission District 6

STREET ADDRESS: 0 W EMORY RD (9841 W EMORY RD)

▶ **LOCATION:** Northwest side of W Emory Road, northeast of Oak Ridge Hwy

SECTOR PLAN: Northwest County

GROWTH POLICY PLAN: Rural Area

WATERSHED: Beaver Creek & Clinch River

▶ **APPROXIMATE ACREAGE:** 67.32 acres

▶ **ZONING:** PR (Planned Residential)

▶ **EXISTING LAND USE:** Agriculture/Forestry/Vacant Land

▶ **PROPOSED USE:** Detached residential subdivision

SURROUNDING LAND USE AND ZONING:
North: Clinch River -- A (Agricultural)
South: Agriculture/forestry/vacant, single family residential, public/quasi-public land -- A (Agricultural)
East: Rural residential, single family residential, agriculture/forestry/vacant -- A (Agricultural)
West: Commercial, rural residential -- A (Agricultural)

▶ **NUMBER OF LOTS:** 143

SURVEYOR/ENGINEER: Chris Sharp, P.E. Urban Engineering, Inc.

ACCESSIBILITY: Access is via W Emory Rd, a minor collector street with an 18-ft pavement width within a 50-ft right-of-way.

▶ **SUBDIVISION VARIANCES REQUIRED:** **VARIANCES**
1. Reduce the minimum vertical curve from K=25 to K=15 at the Road 'B' intersection with W. Emory Road
2. Reduce the minimum tangent distance between broken back curves from 150 ft to 96.04 ft on Road 'B' between STA 6+30.34 and 7+26.38
3. Reduce the minimum tangent distance between broken back curves from 150 ft to 40 ft on Road 'B' between stations 32+43.67 and 32+83.67
4. Reduce the minimum tangent distance between broken back curves from 150 ft to 73.09 ft on Road 'B' between STA 44+47.08 and 45+20.17
5. Reduce the minimum tangent distance between broken back curves from 150 ft to 34.73 ft on Road 'C' between stations 7+53.01 and 7+87.74

ALTERNATIVE DESIGN STANDARDS REQUIRING KNOXVILLE-KNOX COUNTY PLANNING COMMISSION APPROVAL

1. Reduce the minimum horizontal curve radius from 250 ft to 150 ft on Road 'B' between STA 3+06.73 and 4+11.52
2. Reduce the minimum horizontal curve radius from 250 ft to 150 ft on Road 'B' between STA 5+54.83 and 6+30.34
3. Reduce the minimum horizontal curve radius from 250 ft to 150 ft on Road 'B' between STA 7+26.38 and 8+20.44
4. Reduce the minimum horizontal curve radius from 250 ft to 125 ft on Road 'B' between STA 10+30.90 and 12+30.27
5. Reduce the minimum horizontal curve radius from 250 ft to 225 ft on Road 'B' between STA 22+02.09 and 24+60.32
6. Reduce the minimum horizontal curve radius from 250 ft to 225 ft on Road 'B' between STA 25+83.41 and 27+15.92
7. Reduce the minimum horizontal curve radius from 250 ft to 125 ft on Road 'B' between STA 30+47.80 and 32+43.67
8. Reduce the minimum horizontal curve radius from 250 ft to 125 ft on Road 'B' between STA 32+83.67 and 34+80.50
9. Reduce the minimum horizontal curve radius from 250 ft to 225 ft on Road 'B' between STA 43+57.11 and 44+47.08
10. Reduce the minimum horizontal curve radius from 250 ft to 110 ft on Road 'C' between STA 0+20.70 and 0+88.47
11. Reduce the minimum horizontal curve radius from 250 ft to 125 ft on Road 'C' between STA 5+36.55 and 7+53.01
12. Reduce the minimum horizontal curve radius from 250 ft to 125 ft on Road 'C' between STA 7+87.74 and 9+45.16
13. Increase the maximum road grade from 12% to 14.58% on Road 'A' between STA 2+13.81 and 2+20.41
14. Increase the maximum road grade from 12% to 12.01% on Road 'B' between STA 1+84.73 and 2+93.27

ALTERNATIVE DESIGN STANDARDS REQUIRING KNOX COUNTY ENGINEERING AND PUBLIC WORKS APPROVAL

**** See attached variance and alternative design request form**

STAFF RECOMMENDATION:

- **Approve the requested variances and alternative design standards based on the justification provided by the applicant and recommendations of the Knox County Department of Engineering and Public Works.**

Approve the Concept Plan subject to 14 conditions.

- 1) Connection to sanitary sewer and meeting other relevant utility provider requirements.
- 2) Provision of street names consistent with the Uniform Street Naming and Addressing System within Knox County (County Ord. 91-1-102).
- 3) Certifying that the required sight distance is available along W. Emory Road in both directions at the Road 'B' intersection, with documentation provided to Knox County Engineering and Public Works for review and approval during the design plan phase. The sight distance shall be certified using design grades at the entrance before grading permits are issued for the site.
- 4) If a new road or pedestrian connection is provided in the western portion of Road 'B' to provide additional connectivity in the loop road, this may be approved by Planning Commission staff and Knox County Engineering and Public Works during the design plan phase, provided there are no new variances or alternative design standards requiring Planning Commission approval.
- 5) Adding the non-disturbance line to the final plat, which includes the slopes 25% or greater on the north side of the property. The non-disturbance line is a condition of this PR (Planned Residential) district.
- 6) Any sidewalks installed that are not required per Chapter 54, Article IV of the Knox County Code ("sidewalk ordinance") must be maintained by the home owners association.
- 7) Providing a 250-ft sight distance easement in both directions for the western intersection of Road 'B' at Road 'C', per the requirements of Knox County Engineering and Public Works during the design plan phase.
- 8) Providing a minimum 200-ft sight distance easement for all horizontal curves with a radius less than 200 ft.

- 9) The driveways on lots with sight distance easements must be shown on the final plat located outside the sight distance easement, or the driveway must have a 20 ft depth outside the easement.
- 10) If any building construction is proposed within the 50-ft buffer area around the designated sinkholes/depressions (including the depressions), a geotechnical report must be prepared by a registered engineer to determine soil stability and that report must be submitted to the Knox County Department of Engineering and Public Works for consideration. Any construction in these areas is subject to approval by the County following a review of the report. Engineered footings must be designed for these areas.
- 11) Implementing the recommendations of the Poplar Farms Subdivision Transportation Impact Analysis (J.M. Teague, revised 3/30/2023), as revised and approved by Planning Commission staff and Knox County Engineering and Public Works (see Exhibit A).
- 12) Providing access to all common area lots per the requirements of Knox County Engineering and Public Works during the design plan phase.
- 13) Meeting all applicable requirements of Knox County Engineering and Public Works.
- 14) Before certification of the final plat for the subdivision, establish a property owners association or other legal entity responsible for maintaining common facilities, such as common areas, amenities, private roads, and/or stormwater drainage systems.

► **Approve the development plan for a detached residential subdivision with up to 143 dwellings on individual lots, subject to 2 conditions.**

- 1) Meeting all applicable requirements of the Knox County Zoning Ordinance.
- 2) Providing a Type 'B' landscape screen, or equivalent, along the external boundary of the common area lot where the clubhouse is located (see Exhibit C).

With the conditions noted, this plan meets the requirements for approval in the PR district and the criteria for approval of a development plan.

COMMENTS:

This proposal is a residential subdivision with 143 lots on 67.32 acres at a density of 2.12 du/ac. The property was rezoned from A (Agricultural) to PR (Planned Residential) up to 2.2 du/ac in February 2023 (1-W-23-RZ), with the condition that the portion of the parcel with slopes of 25% or greater shall be left undisturbed (see Exhibit B).

Approximately 65.95 acres of the 67-acre site are within the HP (Hillside Protection) area. The slope analysis (attached) recommends limiting land disturbance within the HP area to 37.7 acres. This proposal will disturb approximately 30 acres in the HP area.

The development has one access point to W. Emory Road. According to the transportation impact analysis, turn lanes on W. Emory Road are not warranted.

The proposed road design requires the approval of several variances and alternative design standards. Most of these are reductions in horizontal curves and tangents between curves that will help reduce travel speeds and not impact safety on a 25 MPH road. There are two requests to increase the maximum road grade from 12% to 14.58% and 12.01%. Road grades between 12-15% are generally acceptable over short distances.

DEVELOPMENT PLAN ANALYSIS PER ARTICLE 6, SECTION 6.50.06 (APPROVAL OR DENIAL)

In the exercise of its administrative judgment, the Planning Commission shall determine if the proposed plan is in harmony with the general purpose and intent of the zoning ordinance and adopted plans.

1) ZONING ORDINANCE

PR (Planned Residential) up to 2.2 du/ac:

- a) The PR zone allows detached houses as a permitted use. The administrative procedures for the PR zone require the Planning Commission to approve the development plan before permits can be issued (Article 5, Section 5.13.15).
- b) This PR zone district is approved for a maximum of 2.2 du/ac. The proposed density is 2.12 du/ac.

2) GENERAL PLAN – DEVELOPMENT POLICIES

- a) Policy 6.1, Encourage flexible, planned development zones to protect hillsides, woodlands, wildlife habitats, and stream corridors, and
- Policy 9.2, Encourage development practices that respect and fit the natural landscape, minimizing the loss of trees, woodlands and wildlife habitat -- The site has very steep slopes on the northern portion of the property

leading down to Clinch River. The PR zoning condition requires all 25% slopes or greater on the north side of the property to remain undisturbed.

b) Policy 9.3, Ensure that the context of new development, including scale and compatibility, does not impact existing neighborhoods and communities — The development will consist of detached houses with a similar scale as other nearby residential uses.

c) Policy 9.8, Encourage a mixture of housing sizes and prices within planned residential developments — The development will consist of detached houses. The existing residential development on W. Emory Road is on larger, rural residential lots. This development diversifies the housing mix in the area and should provide different price points.

3) NORTHWEST COUNTY SECTOR PLAN

a) The property is classified as RR (Rural Residential) and HP (Hillside Protection).

b) The RR land use allows consideration of up to 2-3 du/ac, consistent with the recommendations of the Growth Policy Plan. The proposed density is 2.12 du/ac.

c) There are approximately 65.95 acres in the HP (Hillside Protection) area. The steepest slopes on the northern portion of the site. The slope analysis recommends disturbing no more than 37.7 acres in the HP area. Approximately 30 acres of HP area will be disturbed. This proposal is consistent with the HP recommendations.

4) KNOXVILLE – FARRAGUT – KNOX COUNTY GROWTH POLICY PLAN

a) The property is within the Rural Area. Rural areas are to include land to be preserved for farming, recreation, and other non-urban uses. The rural designation shall not impede the right of a property owner to use or develop the property for a purpose permitted by that property's zoning.

b) The Rural Area recommends a maximum density of 2-3 du/ac. Three (3) du/ac can be considered as an extension of low density residential development if the property is PR, sanitary sewer and public water is provided, connecting collector and arterial roads from the development to the Planned Growth area meet the standards of Knox County Engineering and Public Works, and a transportation impact analysis demonstrates to the satisfaction of the Planning Commission that the effect of the proposed and similar developments in the traffic analysis zone will not reasonably impair traffic flow.

ESTIMATED TRAFFIC IMPACT: A traffic impact study was prepared by the applicant. The findings of that study were used in formulating the recommendations of this staff report.

ESTIMATED STUDENT YIELD: 59 (public school children, grades K-12)

Schools affected by this proposal: Karns Elementary, Karns Middle, and Karns High.

- Potential new school population is estimated using locally-derived data on public school student yield generated by new housing.
- Students are assigned to schools based on current attendance zones as determined by Knox County Schools. Students may request transfers to different zones, and zone boundaries are subject to change.
- Estimates presume full build-out of the proposed development. Build-out is subject to market forces, and timing varies widely from proposal to proposal.
- Student yields from new development do not reflect a net addition of children in schools. Additions occur incrementally over the build-out period. New students may replace current population that ages through the system or moves from the attendance zone.

Knoxville-Knox County Planning Commission's approval or denial of this concept plan request is final, unless the action is appealed to Knox County Chancery Court. The date of the Knox County Chancery Court hearing will depend on when the appeal application is filed.

The Planning Commission's approval or denial of this development plan request is final, unless the action is appealed either to the Board of Zoning Appeals or to a court of competent jurisdiction within thirty (30) days of the decision being appealed (Knox County, Tennessee Code of Ordinances, Appendix A, Zoning, 6.50.08).

Requested Variances & Alternative Design Standards

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VARIANCES

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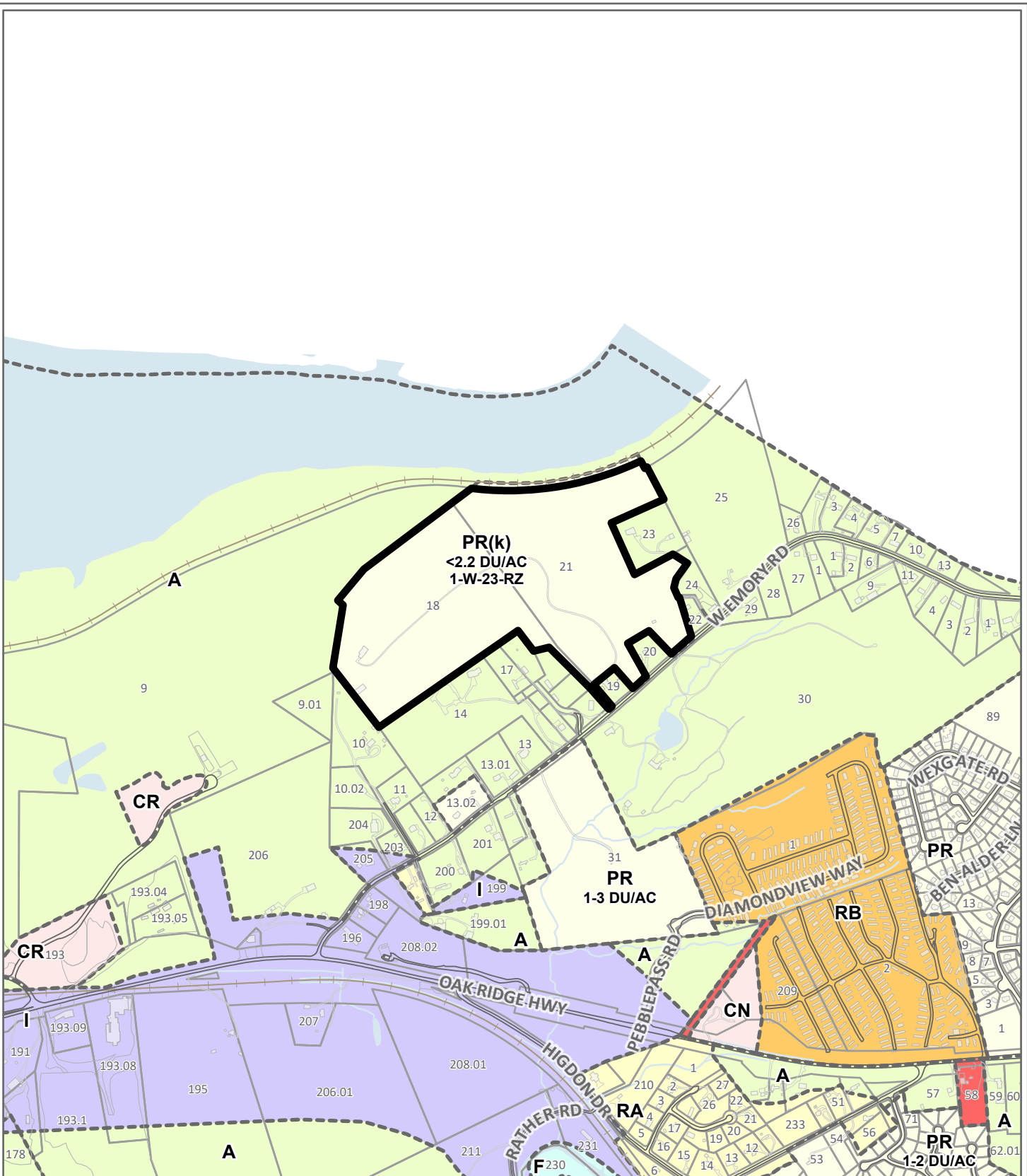
ALTERNATIVE DESIGN STANDARDS REQUIRING KNOX COUNTY ENGINEERING AND PUBLIC WORKS APPROVAL

1. Increase the maximum intersection grade from 1 to 2 percent on Road 'A' at the Road 'C' intersection
2. Increase the maximum intersection grade from 1 to 2 percent on Road 'B' at the W. Emory Road intersection
3. Increase the maximum intersection grade from 1 to 2 percent on Road 'B' at the Road 'C' intersection
4. Increase the maximum intersection grade from 1 to 2 percent on Road 'C' at both Road 'B' intersections

KNOX COUNTY ENGINEERING AND PUBLIC WORKS RECOMMENDATION:

Approve variances and ADS as requested since they will not create any unsafe conditions.

Steve Elliott 4/5/2023



CONCEPT PLAN / DEVELOPMENT PLAN

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Petitioner: Rebecca Walls



Detached residential subdivision in PR (Planned Residential)

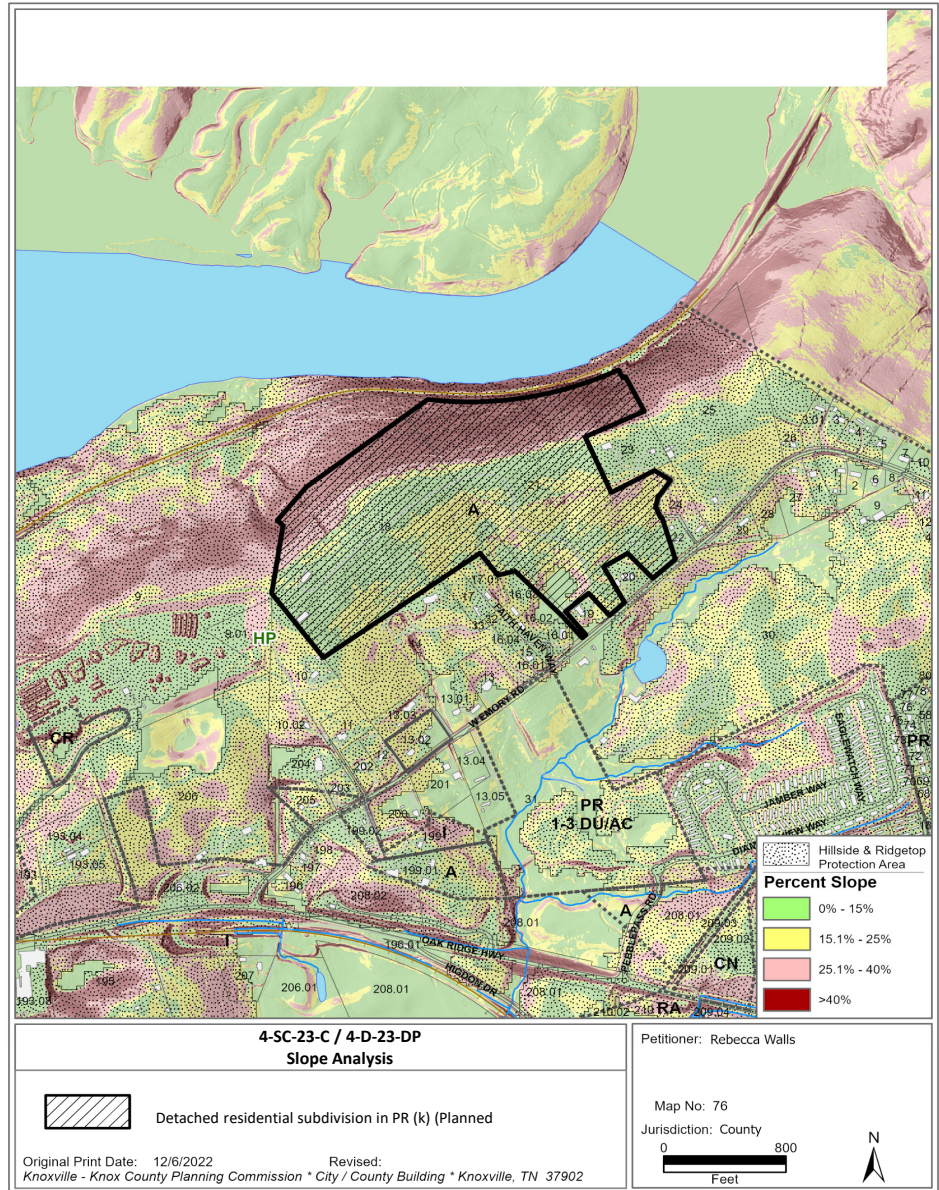
Original Print Date: 4/4/2023
 Knoxville - Knox County Planning Commission * City / County Building * Knoxville, TN 37902

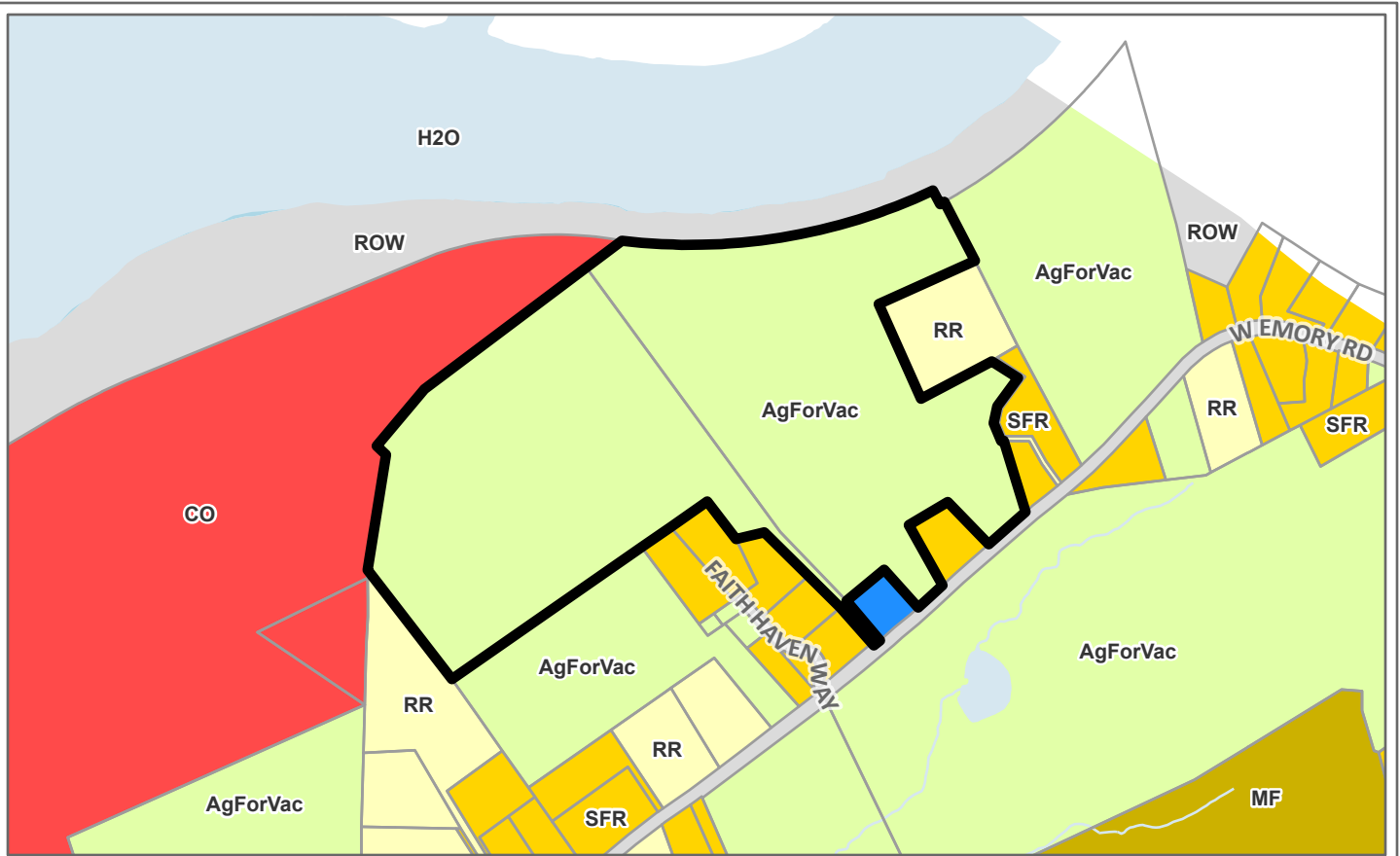
Map No: 76
Jurisdiction: County

0 1,000
 Feet



CATEGORY	ACRES	RECOMMENDED DISTURBANCE BUDGET (Percent)	DISTURBANCE AREA (Acres)
Total Area of Site	67.19		
Non-Hillside	1.24	N/A	
0-15% Slope	26.24	100%	26.24
15-25% Slope	17.28	50%	8.64
25-40% Slope	5.42	20%	1.08
Greater than 40% Slope	17.01	10%	1.70
Ridgetops			
Hillside Protection (HP) Area	65.95	Recommended disturbance budget within HP Area (acres)	37.7
		Percent of HP Area	0.6



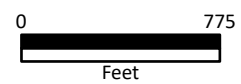


Existing Land Use and Aerial Maps

4-SC-23-C / 4-D-23-DP



Case boundary

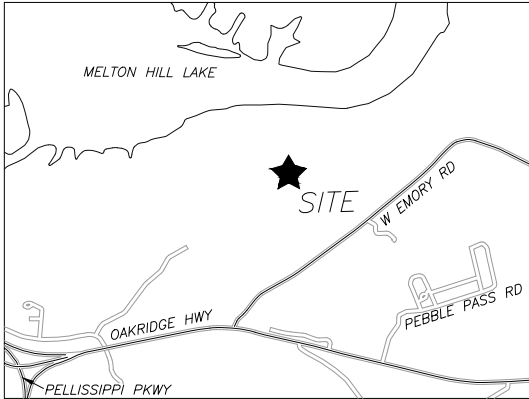


CONCEPT PLAN

U.E.I. PROJECT NO. 2211028

POPLAR FARMS

SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE, TENNESSEE 37931
TAX MAP: 076, PARCELS: 018.00 & 021.00



LOCATION MAP

DEVELOPER:
HOME DEVELOPMENT INC.
120 SUBURBAN ROAD, SUITE #204
KNOXVILLE, TN 37923

SITE ENGINEER:
URBAN ENGINEERING, INC.
CHRIS SHARP
11852 KINGSTON PIKE
FARRAGUT, TENNESSEE 37934
(865) 966-1924

SPECIFICATIONS
EXCEPT WHERE DIRECTED OTHERWISE BY THE PLANS, WORKMANSHIP AND MATERIAL (BUT NOT MEASUREMENT AND PAYMENT) FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS AND STANDARDS.

ELECTRICAL – AS DIRECTED BY LENOIR CITY UTILITIES BOARD
GAS – AS DIRECTED BY KNOXVILLE UTILITIES BOARD
WATER & SEWER – AS DIRECTED BY WEST KNOX UTILITY DISTRICT
TELEPHONE – AS DIRECTED BY AT&T
CABLE – AS DIRECTED BY COMCAST
SITE DEVELOPMENT – KNOX COUNTY STANDARDS AND SPECIFICATIONS

SHEET INDEX

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TYPICAL SECTION / KEY SHEET	C-1
SITE PLAN	C-2 THRU C-5
PRELIMINARY GRADING PLANS	C-6 THRU C-9
ROADWAY PROFILES	C-10 THRU C-15

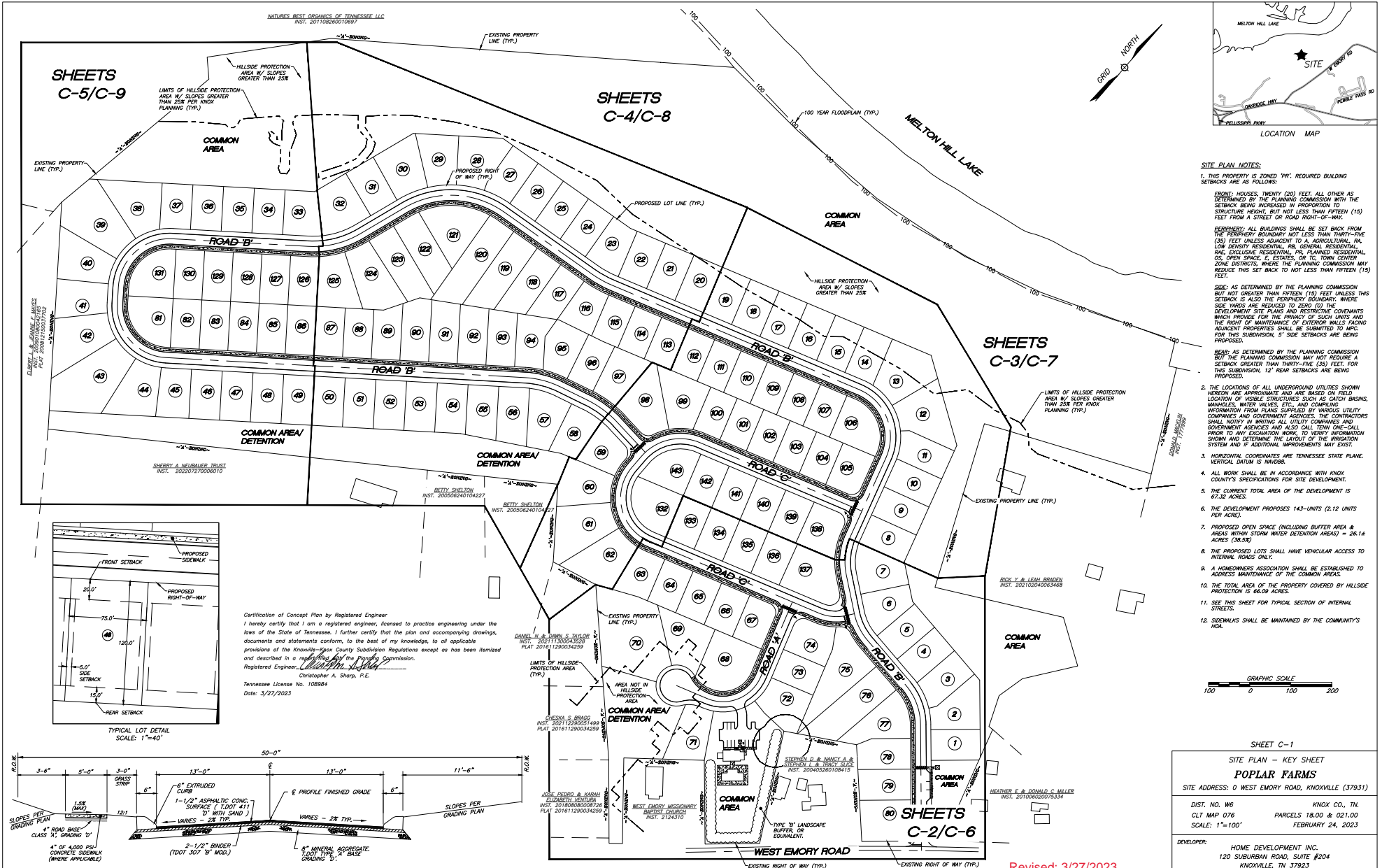
VARIANCE REQUESTS / ALTERNATIVE DESIGN STANDARD REQUESTS:

- 1) REDUCE THE CENTERLINE RADIUS FROM 250' TO 150' BETWEEN STATIONS 3+06.73 AND 4+11.52 (ROAD B)
- 2) REDUCE THE CENTERLINE RADIUS FROM 250' TO 150' BETWEEN STATIONS 5+54.83 AND 6+30.34 (ROAD B)
- 3) REDUCE THE CENTERLINE RADIUS FROM 250' TO 150' BETWEEN STATIONS 7+26.38 AND 8+20.44 (ROAD B)
- 4) REDUCE THE CENTERLINE RADIUS FROM 250' TO 125' BETWEEN STATIONS 10+30.90 AND 12+30.27 (ROAD B)
- 5) REDUCE THE CENTERLINE RADIUS FROM 250' TO 225' BETWEEN STATIONS 22+02.09 AND 24+60.32 (ROAD B)
- 6) REDUCE THE CENTERLINE RADIUS FROM 250' TO 225' BETWEEN STATIONS 25+83.41 AND 27+13.92 (ROAD B)
- 7) REDUCE THE CENTERLINE RADIUS FROM 250' TO 125' BETWEEN STATIONS 30+47.80 AND 32+43.67 (ROAD B)
- 8) REDUCE THE TANGENT DISTANCE BETWEEN BROKEN BACK CURVES FROM 150' TO 40' BETWEEN STATIONS 32+43.67 AND 32+83.67 (ROAD B)
- 9) REDUCE THE CENTERLINE RADIUS FROM 250' TO 125' BETWEEN STATIONS 32+83.67 AND 34+60.32 (ROAD B)
- 10) REDUCE THE CENTERLINE RADIUS FROM 250' TO 225' BETWEEN STATIONS 43+57.11 AND 44+47.08 (ROAD B)
- 11) REDUCE THE CENTERLINE RADIUS FROM 250' TO 110' BETWEEN STATIONS 0+20.70 AND 0+88.47 (ROAD C)
- 12) REDUCE THE CENTERLINE RADIUS FROM 250' TO 125' BETWEEN STATIONS 5+36.55 AND 7+53.01 (ROAD C)
- 13) REDUCE THE TANGENT DISTANCE BETWEEN BROKEN BACK CURVES FROM 150' TO 34.73' BETWEEN STATIONS 7+53.01 AND 7+87.74 (ROAD C)
- 14) REDUCE THE CENTERLINE RADIUS FROM 250' TO 125' BETWEEN STATIONS 7+87.74 AND 9+45.16 (ROAD C)
- 15) INCREASE THE INTERSECTION GRADE FROM 1% TO 2% AT THE INTERSECTION OF ROADS A AND C
- 16) INCREASE THE MAXIMUM ROAD GRADE FROM 12% TO 14.58% BETWEEN STATIONS 2+13.81 AND 2+20.41 (ROAD A)
- 17) INCREASE THE INTERSECTION GRADE FROM 1% TO 2% AT THE INTERSECTION OF ROAD B AND WEST EMORY ROAD (ROAD B)
- 18) INCREASE THE MAXIMUM ROAD GRADE FROM 12% TO 12.01% BETWEEN STATIONS 1+04.73 AND 2+70.07 (ROAD B)
- 19) INCREASE THE MAXIMUM ROAD GRADE FROM 12% TO 12.47% BETWEEN STATIONS 43+05.38 AND 45+20.28 (ROAD B)
- 20) INCREASE THE INTERSECTION GRADE FROM 1% TO 2% AT THE INTERSECTION OF ROADS B AND C
- 21) REDUCE THE MINIMUM TANGENT FOR BROKEN BACK CURVES FROM 150 FT TO 96.04 FT ON ROAD "B" BETWEEN STA 6+30.34 AND 7+26.38.
- 22) REDUCE THE MINIMUM TANGENT FOR BROKEN BACK CURVES FROM 150 FT TO 73.09 FT ON ROAD "B" BETWEEN STA 44+47.08 AND 45+20.17.

Revised: 3/27/2023

KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

ISSUE NO.	DATE	SUBMITTAL 2 DESCRIPTION
2	3/27/23	SUBMITTAL 2

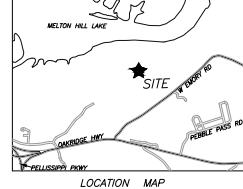


SHEETS
C-5/C-9

SHEETS
C-4/C-8

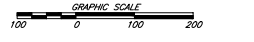
SHEETS
C-3/C-7

SHEETS
C-2/C-6



SITE PLAN NOTES:

1. THIS PROPERTY IS ZONED 'PR'. REQUIRED BUILDING SETBACKS ARE AS FOLLOWS:
FRONT: HOUSES, TWENTY (20) FEET, ALL OTHER AS DETERMINED BY THE PLANNING COMMISSION WITH THE SETBACK BEING INCREASED IN PROPORTION TO STRUCTURE HEIGHT, BUT NOT LESS THAN FIFTEEN (15) FEET FROM A STREET OR ROAD RIGHT-OF-WAY.
REAR: ALL BUILDINGS SHALL BE SET BACK FROM THE PERIPHERY BOUNDARY NOT LESS THAN THIRTY-FIVE (35) FEET UNLESS ADJACENT TO A AGRICULTURAL, PA, LOW DENSITY RESIDENTIAL, RA, GENERAL RESIDENTIAL, RA1, EXCLUSIVE RESIDENTIAL, PR, PLANNED RESIDENTIAL, OR OPEN SPACE, E. EXCEPT ON ITS TOWN CENTER ZONE DISTRICTS, WHERE THE PLANNING COMMISSION MAY REDUCE THIS SET BACK TO NOT LESS THAN FIFTEEN (15) FEET.
SIDE: AS DETERMINED BY THE PLANNING COMMISSION BUT NOT GREATER THAN FIFTEEN (15) FEET UNLESS THIS SETBACK IS ALSO THE PERIPHERY BOUNDARY. WHERE SIDE YARDS ARE REDUCED TO ZERO (0) THE DEVELOPMENT SITE PLANS AND RESTRICTIVE COVENANTS WHICH PROVIDE FOR THE PROTECTION OF SUCH UNITS AND THE RIGHT OF MAINTENANCE OF EXTERIOR WALLS FACING ADJACENT PROPERTIES SHALL BE SUBMITTED TO APC. FOR THIS SUBDIVISION, 5' SIDE SETBACKS ARE BEING PROPOSED.
REAR: AS DETERMINED BY THE PLANNING COMMISSION BUT THE PLANNING COMMISSION MAY NOT REQUIRE A SETBACK GREATER THAN THIRTY-FIVE (35) FEET. FOR THIS SUBDIVISION, 12' REAR SETBACKS ARE BEING PROPOSED.
2. THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON FIELD LOCATION OF VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER VALVES, ETC. AND CONSULTING INFORMATION FROM PLANS SUPPLIED BY VARIOUS UTILITY COMPANIES AND GOVERNMENT AGENCIES. THE CONTRACTORS SHALL NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES AND ALSO CALL TONY ONE-CALL PRIOR TO ANY EXCAVATION WORK, TO VERIFY INFORMATION SHOWN AND DETERMINE THE EXACT LOCATION OF THE UTILITY SYSTEM AND IF ADDITIONAL IMPROVEMENTS MAY EXIST.
3. HORIZONTAL COORDINATES ARE TENNESSEE STATE PLANE. VERTICAL DATUM IS NAVD83.
4. ALL WORK SHALL BE IN ACCORDANCE WITH KNOX COUNTY'S SPECIFICATIONS FOR SITE DEVELOPMENT.
5. THE CURRENT TOTAL AREA OF THE DEVELOPMENT IS 67.82 ACRES.
6. THE DEVELOPMENT PROPOSES 143-UNITS (2.12 UNITS PER ACRE).
7. PROPOSED OPEN SPACE (INCLUDING BUFFER AREA & AREAS WITHIN STORM WATER DETENTION AREAS) = 26.18 ACRES (38.5%).
8. THE PROPOSED LOTS SHALL HAVE VEHICULAR ACCESS TO INTERNAL ROADS ONLY.
9. A HOMEOWNERS ASSOCIATION SHALL BE ESTABLISHED TO ADDRESS MAINTENANCE OF THE COMMON AREAS.
10. THE TOTAL AREA OF THE PROPERTY COVERED BY HILLSIDE PROTECTION IS 66.09 ACRES.
11. SEE THIS SHEET FOR TYPICAL SECTION OF INTERNAL STREETS.
12. SIDEWALKS SHALL BE MAINTAINED BY THE COMMUNITY'S HOA.



SHEET C-1

SITE PLAN - KEY SHEET

POPLAR FARMS

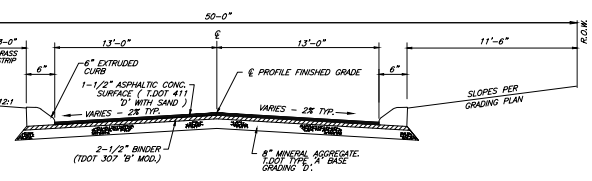
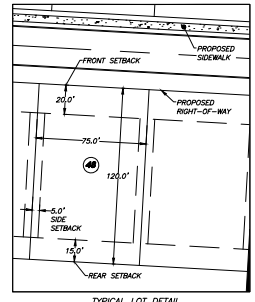
SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)

DIST. NO. W6 KNOX CO., TN.
CLT MAP 076 PARCELS 18.00 & 021.00
SCALE: 1"=100' FEBRUARY 24, 2023

DEVELOPER: HOME DEVELOPMENT INC.
120 SUBURBAN ROAD, SUITE #204
KNOXVILLE, TN 37932

URBAN ENGINEERING, INC.
10330 HARDIN VALLEY RD., SUITE #201
KNOXVILLE, TN 37932
(865) 966-1924

Certification of Concept Plan by Registered Engineer
I hereby certify that I am a registered engineer, licensed to practice engineering under the laws of the State of Tennessee. I further certify that the plan and accompanying drawings, documents and statements conform, to the best of my knowledge, to all applicable provisions of the Knoxville-Knox County Subdivision Regulations except as has been itemized and described in a report filed with the Planning Commission.
Registered Engineer: *Christopher A. Shans, P.E.*
Tennessee License No. 108984
Date: 3/27/2023



ALL WORKMANSHIP AND MATERIALS SHALL BE PER KNOX COUNTY STANDARD SPECIFICATIONS FOR SITE DEVELOPMENT PERMITS.

KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

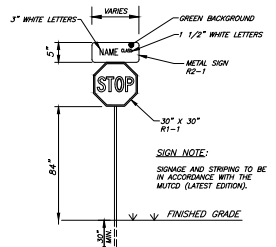
Revised: 3/27/2023

REVISION	DATE	PER PLANNING / ENGINEERING COMMENTS	CAS
1	3/27/23	PER PLANNING / ENGINEERING COMMENTS	CAS
		DESCRIPTION	BY

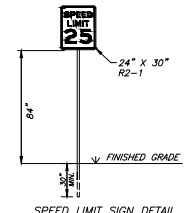


KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

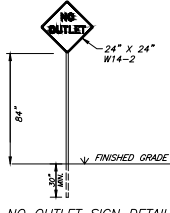
Revised: 3/27/2023



COMBINATION STOP SIGN / STREET NAME SIGN DETAIL N.T.S.



SPEED LIMIT SIGN DETAIL N.T.S.



NO OUTLET SIGN DETAIL N.T.S.



SITE PLAN NOTES:
1. THIS PROPERTY IS ZONED "RR", REQUIRED BUILDING SETBACKS ARE AS FOLLOWS:
FRONT: HOUSES, TWENTY (20) FEET, ALL OTHER AS DETERMINED BY THE PLANNING COMMISSION WITH THE SETBACK BEING INCREASED IN PROPORTION TO STRUCTURE HEIGHT, BUT NOT LESS THAN FIFTEEN (15) FEET FROM A STREET OR ROAD RIGHT-OF-WAY.
REAR: ALL BUILDINGS SHALL BE SET BACK FROM THE PERMITS BOUNDARY NOT LESS THAN THIRTY-FIVE (35) FEET UNLESS ADJACENT TO AN AGRICULTURAL, RURAL LOW DENSITY RESIDENTIAL, RURAL GENERAL RESIDENTIAL, RURAL EXCLUSIVE RESIDENTIAL, OR PLANNED RESIDENTIAL OPEN SPACE, ESTATES, SUBTOWN CENTRAL ZONE DISTRICTS, WHERE THE PLANNING COMMISSION MAY REDUCE THIS SET BACK TO NOT LESS THAN FIFTEEN (15) FEET.
SIDE: AS DETERMINED BY THE PLANNING COMMISSION BUT NOT GREATER THAN FIFTEEN (15) FEET UNLESS THIS SETBACK IS ALSO THE PERMITS BOUNDARY, WHERE SIDE YARDS ARE REDUCED TO ZERO (0) THE DEVELOPMENT SITE PLANS AND RESTRICTIVE COVENANTS WHICH PROVIDE FOR THE PRIVACY OF SUCH UNITS AND THE RIGHT OF MAINTENANCE OF EXTERIOR WALLS OF ADJACENT PROPERTIES SHALL BE SUBMITTED TO MPC. FOR THIS SUBDIVISION, 5' SIDE SETBACKS ARE BEING PROPOSED.
REAR: AS DETERMINED BY THE PLANNING COMMISSION BUT THE PLANNING COMMISSION MAY NOT REQUIRE A SETBACK GREATER THAN THIRTY-FIVE (35) FEET, FOR THIS SUBDIVISION, 12' REAR SETBACKS ARE BEING PROPOSED.

- THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON FIELD LOCATION OF VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER VALVES, ETC., AND COMPILING INFORMATION FROM PLANS SUPPLIED BY OWNERS AND COMPANIES AND GOVERNMENT AGENCIES. THE CONTRACTORS SHALL NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES AND ALSO CALL TENN ONE-CALL PRIOR TO ANY EXCAVATION WORK. TO VERIFY INFORMATION SHOWN AND DETERMINE THE LAYOUT OF THE IRRIGATION SYSTEM AND IF ADDITIONAL IMPROVEMENTS MAY EXIST.
- HORIZONTAL COORDINATES ARE TENNESSEE STATE PLANE, VERTICAL DATUM IS NAVD83.
- ALL WORK SHALL BE IN ACCORDANCE WITH KNOX COUNTY'S SPECIFICATIONS FOR SITE DEVELOPMENT.
- THE CURRENT TOTAL AREA OF THE DEVELOPMENT IS 67.32 ACRES.
- THE DEVELOPMENT PROPOSES 143-UNITS (2.12 UNITS PER ACRE).
- PROPOSED OPEN SPACE, INCLUDING BUFFER AREA & AREAS WITHIN STORM WATER DETENTION AREAS) = 26.14 ACRES (38.54%)
- THE PROPOSED LOTS SHALL HAVE VEHICULAR ACCESS TO INTERNAL ROADS ONLY.
- A HOMEOWNERS ASSOCIATION SHALL BE ESTABLISHED TO ADDRESS MAINTENANCE OF THE COMMON AREAS.
- THE TOTAL AREA OF THE PROPERTY COVERED BY HILLSIDE PROTECTION IS 46.09 ACRES.
- SEE THIS SHEET FOR TYPICAL SECTION OF INTERNAL STREETS.
- SIDEWALKS SHALL BE MAINTAINED BY THE COMMUNITY'S HOA.

ALL WORKMANSHIP AND MATERIALS SHALL BE PER KNOX COUNTY STANDARD SPECIFICATIONS FOR SITE DEVELOPMENT PERMITS.

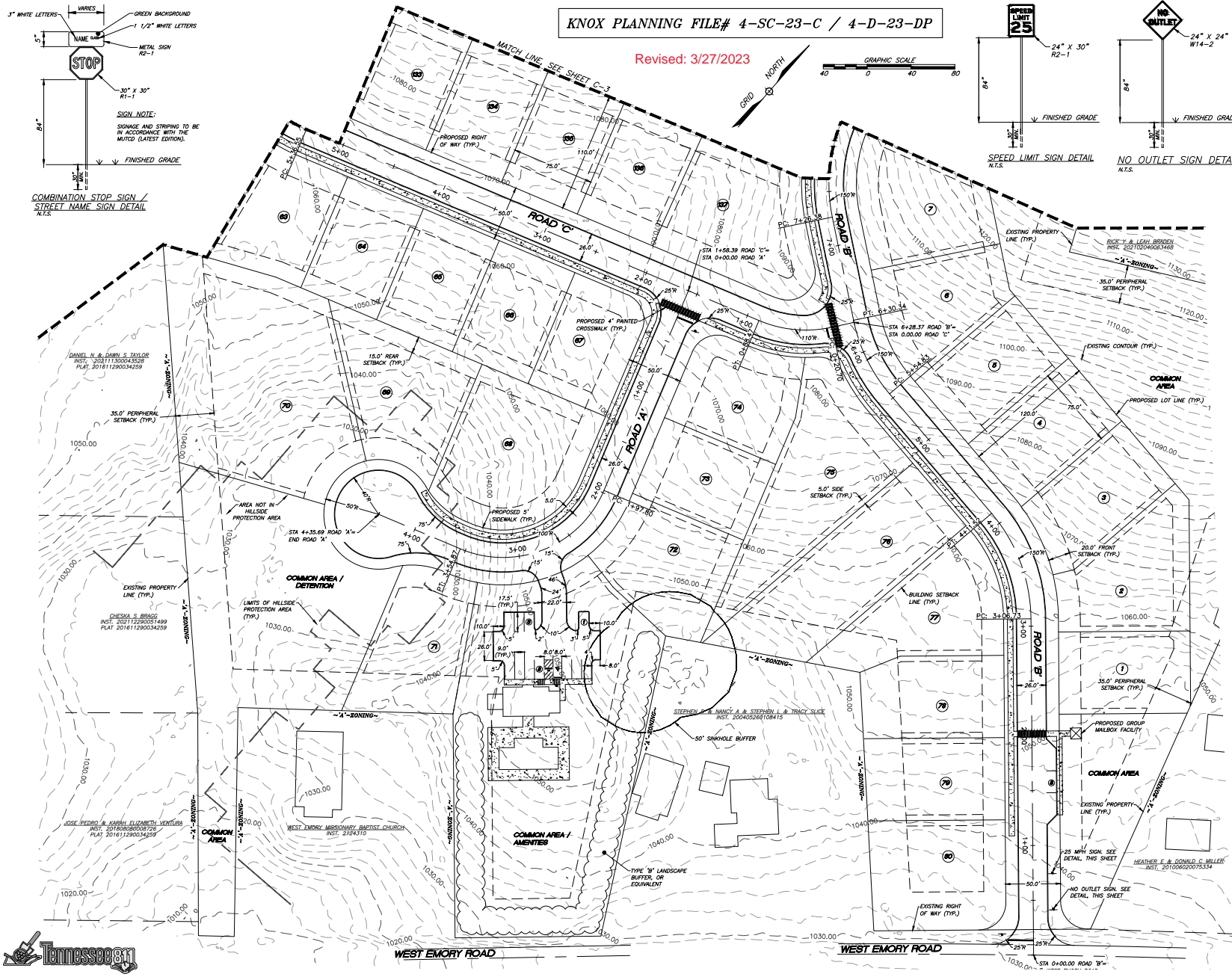
SHEET C-2
SITE PLAN
POPLAR FARMS
SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)

DIST. NO. W6 KNOX CO., TN.
CLT MAP 076 PARCELS 18.00 & 021.00
SCALE: 1"=40' FEBRUARY 24, 2023

DEVELOPER: HOME DEVELOPMENT INC.
120 SUBURBAN ROAD, SUITE #204
KNOXVILLE, TN 37923

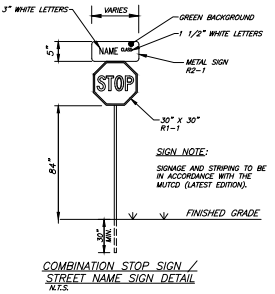
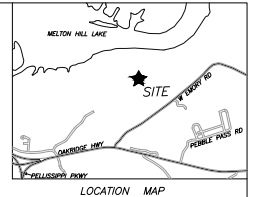
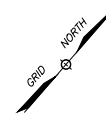
URBAN ENGINEERING, INC.
10330 HARDIN VALLEY RD., SUITE #201
KNOXVILLE, TN 37932
(865) 966-1924

DWG: CLM	DWG: GAS	DWG: NO. 2211028
1	3/23/23	PER PLANNING / ENGINEERING COMMENTS
REVISION	DATE	DESCRIPTION

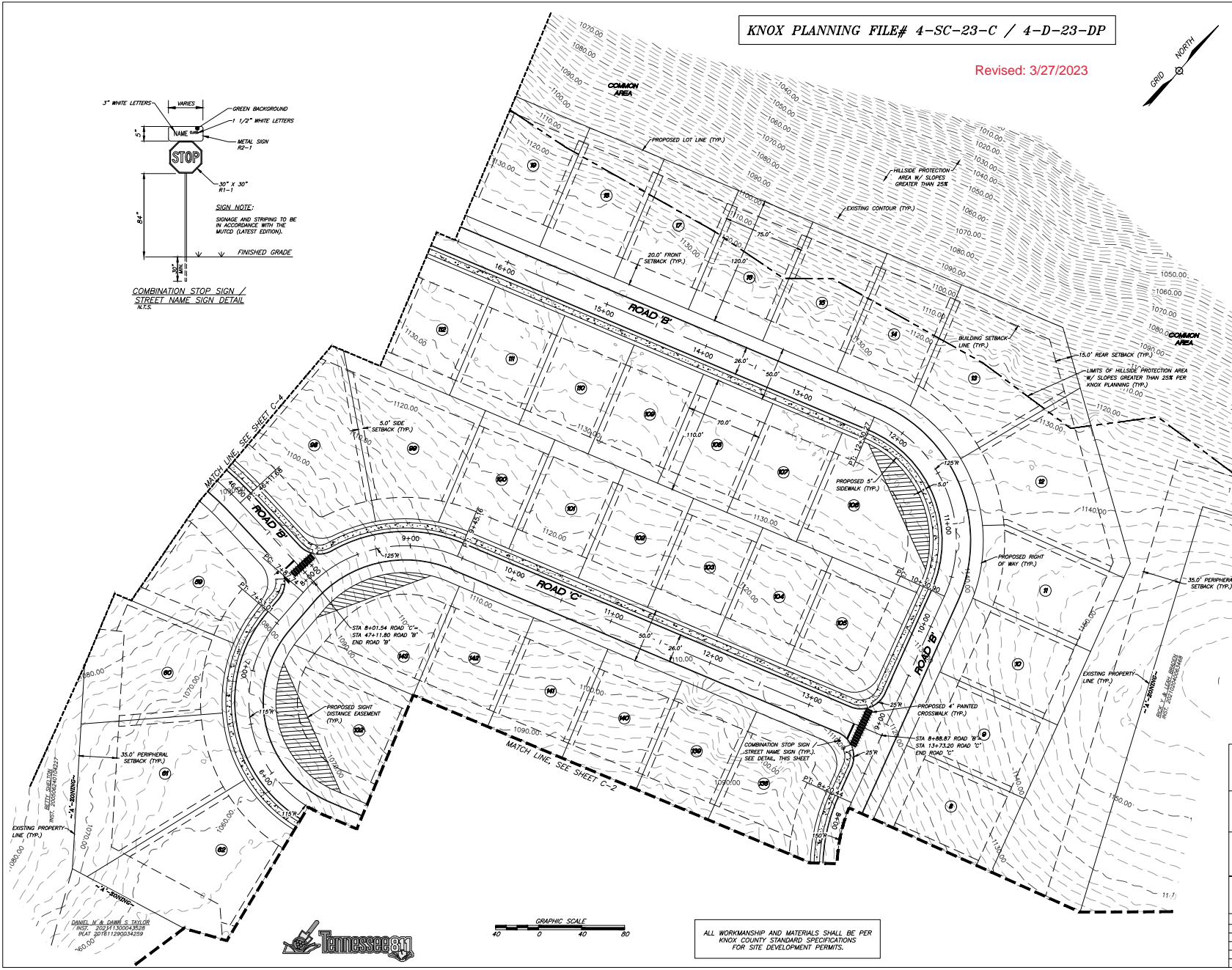


KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

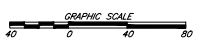
Revised: 3/27/2023



- SITE PLAN NOTES:**
- THIS PROPERTY IS ZONED "PW". REQUIRED BUILDING SETBACKS ARE AS FOLLOWS:
FRONT: HOUSES, TWENTY (20) FEET. ALL OTHERS AS DETERMINED BY THE PLANNING COMMISSION WITH THE SETBACK BEING INCREASED IN PROPORTION TO STRUCTURE HEIGHT, BUT NOT LESS THAN FIFTEEN (15) FEET FROM A STREET OR ROAD RIGHT-OF-WAY.
REAR: ALL BUILDINGS SHALL BE SET BACK FROM THE PERIPHERY BOUNDARY NOT LESS THAN THIRTY-FIVE (35) FEET UNLESS ADJACENT TO A AGRICULTURAL, RA-LOW DENSITY RESIDENTIAL, RB, GENERAL RESIDENTIAL, RAC, EXCLUSIVE RESIDENTIAL, OR TC. TOWN CENTER ZONE DISTRICTS, WHERE THE PLANNING COMMISSION MAY REDUCE THIS SET BACK TO NOT LESS THAN FIFTEEN (15) FEET.
SIDE: AS DETERMINED BY THE PLANNING COMMISSION BUT NOT GREATER THAN FIFTEEN (15) FEET UNLESS THIS SETBACK IS ALSO THE PERIPHERY BOUNDARY. WHERE SIDE YARDS ARE REDUCED TO ZERO (0) THE DEVELOPMENT SITE PLANS AND RESTRICTIVE COVENANTS WHICH PROVIDE FOR THE PRIVACY OF SUCH UNITS AND THE RIGHT OF MAINTENANCE OF EXTERIOR WALLS FACING ADJACENT PROPERTIES SHALL BE SUBMITTED TO MPC. FOR THIS SUBDIVISION, 5' SIDE SETBACKS ARE BEING PROPOSED.
REAR: AS DETERMINED BY THE PLANNING COMMISSION BUT THE PLANNING COMMISSION MAY NOT REQUIRE A SETBACK GREATER THAN THIRTY-FIVE (35) FEET FOR THIS SUBDIVISION, 12' REAR SETBACKS ARE BEING PROPOSED.
 - THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON FIELD LOCATION OF VISIBLE STRUCTURES SUCH AS GUTTER BASINS, MANHOLES, WATER VALVES, ETC., AND COMPILING INFORMATION FROM PLANS SUBMITTED BY PUBLIC UTILITY COMPANIES AND GOVERNMENT AGENCIES. THE CONTRACTORS SHALL NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES AND ALSO CALL TENN ONE-CALL PRIOR TO ANY EXCAVATION WORK, TO OBTAIN INFORMATION SHOWN AND DETERMINE THE LAYOUT OF THE IRRIGATION SYSTEM AND IF ADDITIONAL IMPROVEMENTS MAY EXIST.
 - HORIZONTAL COORDINATES ARE TENNESSEE STATE PLANE. VERTICAL DATUM IS NAVD83.
 - ALL WORK SHALL BE IN ACCORDANCE WITH KNOX COUNTY'S SPECIFICATIONS FOR SITE DEVELOPMENT.
 - THE CURRENT TOTAL AREA OF THE DEVELOPMENT IS 62.32 ACRES.
 - THE DEVELOPMENT PROPOSES 143 UNITS (2.12 UNITS PER ACRE).
 - PROPOSED OPEN SPACE (INCLUDING BUFFER AREA & AREAS WITHIN STORM WATER DETENTION AREAS) = 26.12 ACRES (38.5%).
 - THE PROPOSED LOTS SHALL HAVE VEHICULAR ACCESS TO INTERNAL ROADS ONLY.
 - A HOMEOWNERS ASSOCIATION SHALL BE ESTABLISHED TO ADDRESS MAINTENANCE OF THE COMMON AREAS.
 - THE TOTAL AREA OF THE PROPERTY COVERED BY HILLSIDE PROTECTION IS 66.09 ACRES.
 - SEE THIS SHEET FOR TYPICAL SECTION OF INTERNAL STREETS.
 - SIDEWALKS SHALL BE MAINTAINED BY THE COMMUNITY'S HOA.



SHEET C-3		
SITE PLAN		
POPLAR FARMS		
SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)		
DIST. NO. W6	KNOX CO., TN.	
CLT MAP 076	PARCELS 18.00 & 021.00	
SCALE: 1"=40'	FEBRUARY 24, 2023	
DEVELOPER: HOME DEVELOPMENT INC. 120 SUBURBAN ROAD, SUITE #204 KNOXVILLE, TN 37923		
URBAN ENGINEERING, INC. 10330 HARDIN VALLEY RD., SUITE #201 KNOXVILLE, TN 37932 (865) 966-1924		
DWG. CLM	CWG. CAS	DWG. NO. 2211028
1	3/27/23	PER PLANNING / ENGINEERING COMMENTS
REVISION	DATE	DESCRIPTION



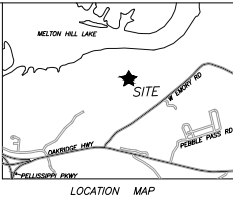
ALL WORKMANSHIP AND MATERIALS SHALL BE PER KNOX COUNTY STANDARD SPECIFICATIONS FOR SITE DEVELOPMENT PERMITS.



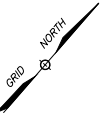
DANIEL W. & DAWN S. TAYLOR
INC. 202111300034259
PLAT 201611290034259

KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

Revised: 3/27/2023



- SITE PLAN NOTES:**
- THIS PROPERTY IS ZONED 'PR'. REQUIRED BUILDING SETBACKS ARE AS FOLLOWS:
 FRONT: HOUSES, TWENTY (20) FEET, ALL OTHER AS DETERMINED BY THE PLANNING COMMISSION WITH THE SETBACK BEING INCREASED IN PROPORTION TO STRUCTURE HEIGHT, BUT NOT LESS THAN FIFTEEN (15) FEET FROM A STREET OR ROAD RIGHT-OF-WAY.
 REAR: ALL BUILDINGS SHALL BE SET BACK FROM THE PERIPHERY BOUNDARY NOT LESS THAN THIRTY-FIVE (35) FEET UNLESS ADJACENT TO A AGRICULTURAL, LOW DENSITY RESIDENTIAL, RB, GENERAL RESIDENTIAL, OR EXCLUSIVE RESIDENTIAL. THE PLANNING COMMISSION MAY, AT ITS DISCRETION, INSTEAD OF THE PLANNING COMMISSION MAY REDUCE THIS SET BACK TO NOT LESS THAN FIFTEEN (15) FEET.
 SIDE: AS DETERMINED BY THE PLANNING COMMISSION BUT NOT GREATER THAN FIFTEEN (15) FEET UNLESS THIS SETBACK IS ALSO THE PERIPHERY BOUNDARY. WHERE SIDE YARDS ARE REDUCED TO ZERO (0) THE DEVELOPMENT SITE PLANS AND RESTRICTIVE COVENANTS WHICH PROVIDE FOR THE PRIVACY OF SUCH UNITS AND THE RIGHT OF MAINTENANCE OF EXTERIOR WALLS FACING ADJACENT PROPERTIES SHALL BE SUBMITTED TO MPC. FOR THIS SUBDIVISION, 5' SIDE SETBACKS ARE BEING PROPOSED.
 REAR: AS DETERMINED BY THE PLANNING COMMISSION BUT THE PLANNING COMMISSION MAY NOT REQUIRE A SETBACK GREATER THAN THIRTY-FIVE (35) FEET. FOR THIS SUBDIVISION, 12' REAR SETBACKS ARE BEING PROPOSED.
 - THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON FIELD LOCATION OF VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER VALVES, ETC. AND COMPUTING INFORMATION FROM PLANS SUPPLIED BY VARIOUS UTILITY COMPANIES AND GOVERNMENT AGENCIES. THE CONTRACTOR SHALL NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES AND ALSO CALL, TOWN ONE-CALL PRIOR TO ANY EXCAVATION WORK TO VERIFY INFORMATION SHOWN AND DETERMINE THE LAYOUT OF THE IRRIGATION SYSTEM AND IF ADDITIONAL IMPROVEMENTS MAY EXIST.
 - HORIZONTAL COORDINATES ARE TENNESSEE STATE PLANE. VERTICAL DATUM IS NAVD83.
 - ALL WORK SHALL BE IN ACCORDANCE WITH KNOX COUNTY'S SPECIFICATIONS FOR SITE DEVELOPMENT.
 - THE CURRENT TOTAL AREA OF THE DEVELOPMENT IS 67.12 ACRES.
 - THE DEVELOPMENT PROPOSES 143-UNITS (2.12 UNITS PER ACRE).
 - PROPOSED OPEN SPACE (INCLUDING BUFFER AREA & AREAS WITHIN STORM WATER DETENTION AREAS) = 26.1± ACRES (38.8%).
 - THE PROPOSED LOTS SHALL HAVE VEHICULAR ACCESS TO INTERNAL ROADS ONLY.
 - A HOMEOWNERS ASSOCIATION SHALL BE ESTABLISHED TO ADDRESS MAINTENANCE OF THE COMMON AREAS.
 - THE TOTAL AREA OF THE PROPERTY COVERED BY HILLSIDE PROTECTION IS 66.09 ACRES.
 - SEE THIS SHEET FOR TYPICAL SECTION OF INTERNAL STREETS.
 - SIDEWALKS SHALL BE MAINTAINED BY THE COMMUNITY'S PCA.



ALL WORKMANSHIP AND MATERIALS SHALL BE PER KNOX COUNTY STANDARD SPECIFICATIONS FOR SITE DEVELOPMENT PERMITS.



SHEET C-4		
SITE PLAN		
POPLAR FARMS		
SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)		
DIST. NO. W6	KNOX CO., TN.	
CLT MAP 076	PARCELS 18.00 & 021.00	
SCALE: 1"=40'	FEBRUARY 24, 2023	
DEVELOPER: HOME DEVELOPMENT INC. 120 SUBURBAN ROAD, SUITE #204 KNOXVILLE, TN 37923		
URBAN ENGINEERING, INC. 10330 HARDIN VALLEY RD., SUITE #201 KNOXVILLE, TN 37932 (865) 966-1924		
DWG. CLM	CHK. CAS	DWG. NO. 2211028
1	3/23/23	PER PLANNING / ENGINEERING COMMENTS
REVISION	DATE	DESCRIPTION



MATCH LINE, SEE SHEET C-3

MATCH LINE, SEE SHEET C-3

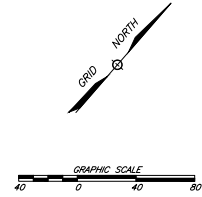
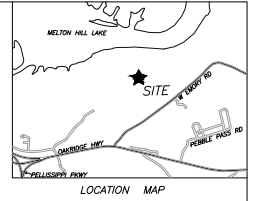
SHERY A. NEUBER, TRUST
INST. 20220727000010

BETTY SHELTON
INST. 200506240104227

BETTY SHELTON
INST. 200506240104227

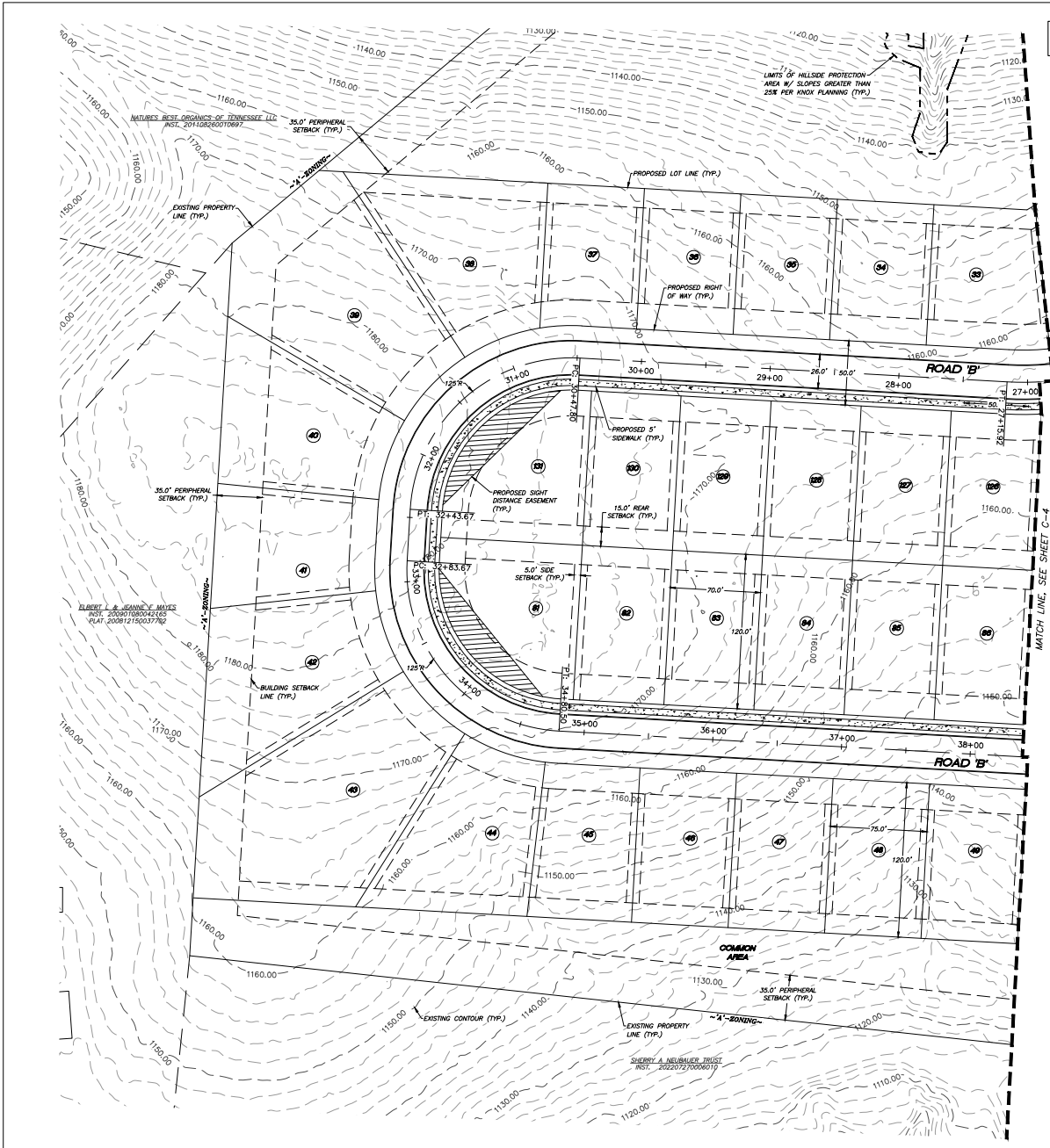
KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

Revised: 3/27/2023



SITE PLAN NOTES:

1. THIS PROPERTY IS ZONED 'PK'. REQUIRED BUILDING SETBACKS ARE AS FOLLOWS:
 FRONT: HOUSES, TWENTY (20) FEET, ALL OTHER AS DETERMINED BY THE PLANNING COMMISSION WITH THE SETBACK BEING INCREASED IN PROPORTION TO STRUCTURE HEIGHT, BUT NOT LESS THAN FIFTEEN (15) FEET FROM A STREET OR ROAD RIGHT-OF-WAY.
 PERIPHERY: ALL BUILDINGS SHALL BE SET BACK FROM THE PERIPHERY BOUNDARY NOT LESS THAN THIRTY-FIVE (35) FEET UNLESS ADJACENT TO A AGRICULTURAL, R/L, LOW DENSITY RESIDENTIAL, RB, GENERAL RESIDENTIAL, RAE, EXCLUSIVE RESIDENTIAL OR PLANNED RESIDENTIAL, OS, OPEN SPACE, E. ESTATES, OR TO TOWN CENTER ZONE DISTRICTS. WHERE THE PLANNING COMMISSION MAY REDUCE THIS SET BACK TO NOT LESS THAN FIFTEEN (15) FEET.
 SIDE: AS DETERMINED BY THE PLANNING COMMISSION BUT NOT GREATER THAN FIFTEEN (15) FEET UNLESS THIS SETBACK IS ALSO THE PERIPHERY BOUNDARY. WHERE SIDE YARDS ARE REDUCED TO ZERO (0) THE DEVELOPMENT SITE PLANS AND RESTRICTIVE COVENANTS WHICH PROVIDE FOR THE PRIVATE OF SUCH UNITS AND THE RIGHT OF MAINTENANCE OF EXTERIOR WALLS FACING ADJACENT PROPERTIES SHALL BE SUBMITTED TO APC FOR THIS SUBDIVISION, 5' SIDE SETBACKS ARE BEING PROPOSED.
 REAR: AS DETERMINED BY THE PLANNING COMMISSION BUT THE PLANNING COMMISSION MAY NOT REQUIRE A SETBACK GREATER THAN THIRTY-FIVE (35) FEET. FOR THIS SUBDIVISION, 12' REAR SETBACKS ARE BEING PROPOSED.
2. THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON FIELD LOCATION OF THESE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER VALVES, ETC. AND COMPLYING INFORMATION FROM PLANS SUPPLIED BY VARIOUS UTILITY COMPANIES AND GOVERNMENT AGENCIES. THE CONTRACTORS SHALL NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES AND ALSO CALL TENN ONE-CALL PRIOR TO ANY EXCAVATION WORK TO VERIFY INFORMATION SHOWN AND DETERMINE THE LAYOUT OF THE IRRIGATION SYSTEM AND IF ADDITIONAL IMPROVEMENTS MAY EXIST.
3. HORIZONTAL COORDINATES ARE TENNESSEE STATE PLANE. VERTICAL CURVE IS IN FEET.
4. ALL WORK SHALL BE IN ACCORDANCE WITH KNOX COUNTY'S SPECIFICATIONS FOR SITE DEVELOPMENT.
5. THE CURRENT TOTAL AREA OF THE DEVELOPMENT IS 67.32 ACRES.
6. THE DEVELOPMENT PROPOSES 143-UNITS (2.12 UNITS PER ACRE).
7. PROPOSED OPEN SPACE (INCLUDING BUFFER AREA & AREAS WITHIN STORM WATER DETENTION AREAS) = 26.14 ACRES (38.5%).
8. THE PROPOSED LOTS SHALL HAVE VEHICULAR ACCESS TO INTERNAL ROADS ONLY.
9. A HOMEOWNERS ASSOCIATION SHALL BE ESTABLISHED TO ADDRESS MAINTENANCE OF THE COMMON AREAS.
10. THE TOTAL AREA OF THE PROPERTY COVERED BY HILLSIDE PROTECTION IS 66.09 ACRES.
11. SEE THIS SHEET FOR TYPICAL SECTION OF INTERNAL STREETS.
12. SIDEWALKS SHALL BE MAINTAINED BY THE COMMUNITY'S HOA.

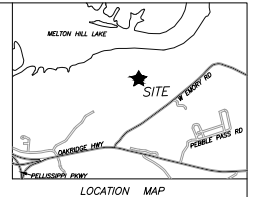


ALL WORKMANSHIP AND MATERIALS SHALL BE PER KNOX COUNTY STANDARD SPECIFICATIONS FOR SITE DEVELOPMENT PERMITS.

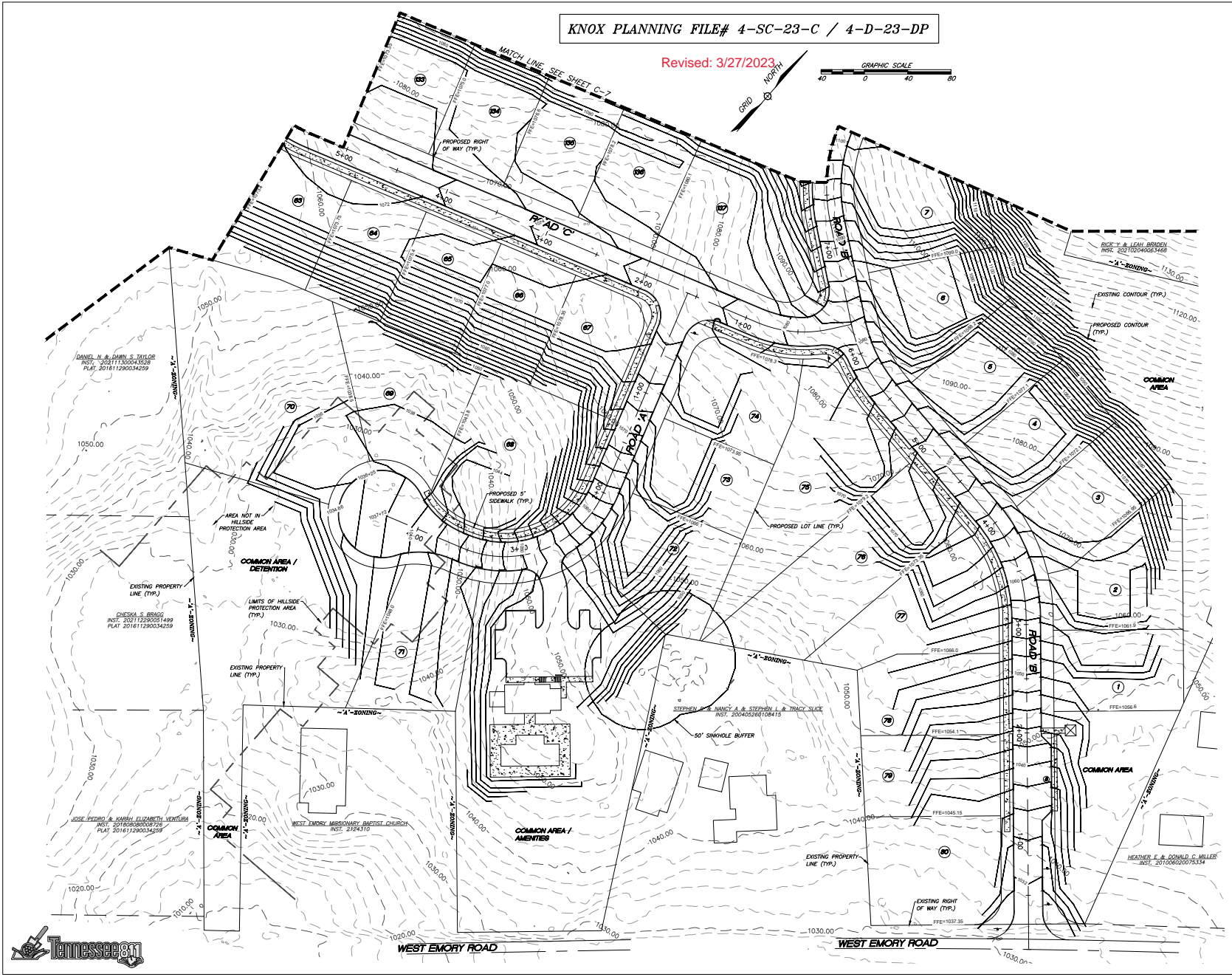
SHEET C-5		
SITE PLAN		
POPLAR FARMS		
SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)		
DIST. NO. W6	KNOX CO., TN.	
CLT MAP 076	PARCELS 18.00 & 021.00	
SCALE: 1"=40'	FEBRUARY 24, 2023	
DEVELOPER: HOME DEVELOPMENT INC. 120 SUBURBAN ROAD, SUITE #204 KNOXVILLE, TN 37923		
URBAN ENGINEERING, INC. 10330 HARDIN VALLEY RD., SUITE #201 KNOXVILLE, TN 37932 (865) 966-1924		
DWG. CLM	CWG. CAS	DWG. NO. 2211028
1	3/27/23	PER PLANNING / ENGINEERING COMMENTS
REVISION	DATE	DESCRIPTION

KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

Revised: 3/27/2023



GRADING PLAN NOTES:
 1. GRADING SHOWN HEREON IS CONCEPTUAL ONLY AND IS SUBJECT TO MORE IN DEPTH STUDY.
 2. THE APPROXIMATE DISTURBED AREA IN THE HP OVERLAY IS 30.0-ACRES.



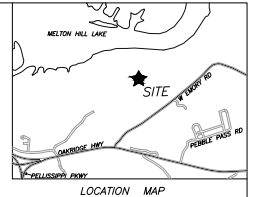
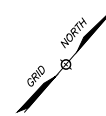
ALL WORKMANSHIP AND MATERIALS SHALL BE PER KNOX COUNTY STANDARD SPECIFICATIONS FOR SITE DEVELOPMENT PERMITS.

SHEET C-6		
PRELIMINARY GRADING PLAN		
POPLAR FARMS		
SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)		
DIST. NO. W6	KNOX CO., TN.	
CLT MAP 076	PARCELS 18.00 & 021.00	
SCALE: 1"=40'	FEBRUARY 24, 2023	
DEVELOPER: HOME DEVELOPMENT INC. 120 SUBURBAN ROAD, SUITE #204 KNOXVILLE, TN 37923		
URBAN ENGINEERING, INC. 10330 HARDIN VALLEY RD., SUITE #201 KNOXVILLE, TN 37932 (865) 966-1924		
DWG: CLM	CWG: CAS	DWG. NO. 2211028
1	3/27/23	PER PLANNING / ENGINEERING COMMENTS
REVISION	DATE	DESCRIPTION



KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

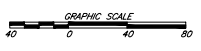
Revised: 3/27/2023



GRADING PLAN NOTES:
 1. GRADING SHOWN HEREIN IS CONCEPTUAL ONLY AND IS SUBJECT TO MORE IN DEPTH STUDY.
 2. THE APPROXIMATE DISTURBED AREA IN THE HP OVERLAY IS 30.0-ACRES.



SHEET C-7			
PRELIMINARY GRADING PLAN			
POPLAR FARMS			
SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)			
DIST. NO. W6	KNOX CO., TN.	PARCELS 18.00 & 021.00	
CLT MAP 076			FEBRUARY 24, 2023
SCALE: 1"=40'			
DEVELOPER: HOME DEVELOPMENT INC. 120 SUBURBAN ROAD, SUITE #204 KNOXVILLE, TN 37923			
URBAN ENGINEERING, INC. 10330 HARDIN VALLEY RD., SUITE #201 KNOXVILLE, TN 37932 (865) 966-1924			
DWG. NO.	CLM	CWG	CAS
DWG. NO.	2211028		
1	3/27/23	PER PLANNING / ENGINEERING COMMENTS	CAS
REVISION	DATE	DESCRIPTION	BY



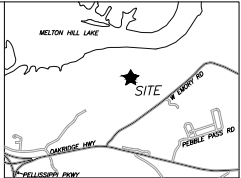
ALL WORKMANSHIP AND MATERIALS SHALL BE PER KNOX COUNTY STANDARD SPECIFICATIONS FOR SITE DEVELOPMENT PERMITS.



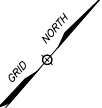
DANIEL W. & DAWN S. DAVIS
 INC. 202111300043628
 PLAT 201811290034259

KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

Revised: 3/27/2023



GRADING PLAN NOTES:
 1. GRADING SHOWN HEREON IS CONCEPTUAL ONLY AND IS SUBJECT TO MORE IN DEPTH STUDY.
 2. THE APPROXIMATE DISTURBED AREA IN THE HP OVERLAY IS 30.0-ACRES.



ALL WORKMANSHIP AND MATERIALS SHALL BE PER KNOX COUNTY STANDARD SPECIFICATIONS FOR SITE DEVELOPMENT PERMITS.



SHEET C-8		
PRELIMINARY GRADING PLAN		
POPLAR FARMS		
SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)		
DIST. NO. W6	KNOX CO., TN.	
CLT MAP 076	PARCELS 18.00 & 021.00	
SCALE: 1"=40'	FEBRUARY 24, 2023	
DEVELOPER: HOME DEVELOPMENT INC. 120 SUBURBAN ROAD, SUITE #204 KNOXVILLE, TN 37923		
URBAN ENGINEERING, INC. 10330 HARDIN VALLEY RD., SUITE #201 KNOXVILLE, TN 37932 (865) 966-1924		
DWG: CLM	CWG: CAS	DWG. NO. 2211028
1	3/27/23	PER PLANNING / ENGINEERING COMMENTS
REVISION	DATE	DESCRIPTION

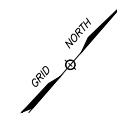
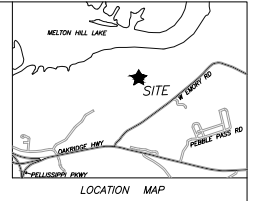
SHERY A. NEUBAUER TRUST
 INST. 20220727004010

BETTY SHELTON
 INST. 200506240104227

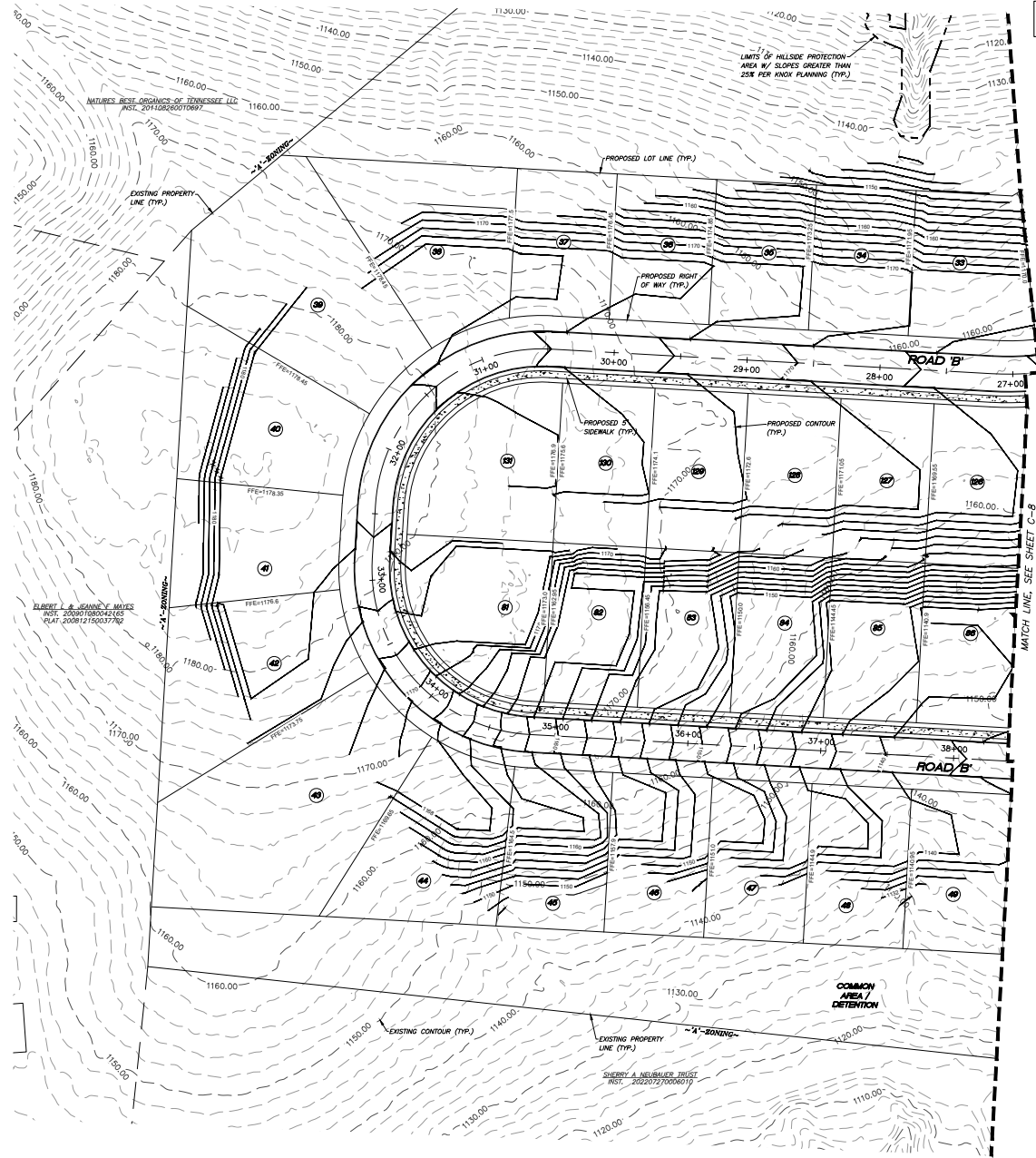
BETTY SHELTON
 INST. 200506240104227

KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

Revised: 3/27/2023

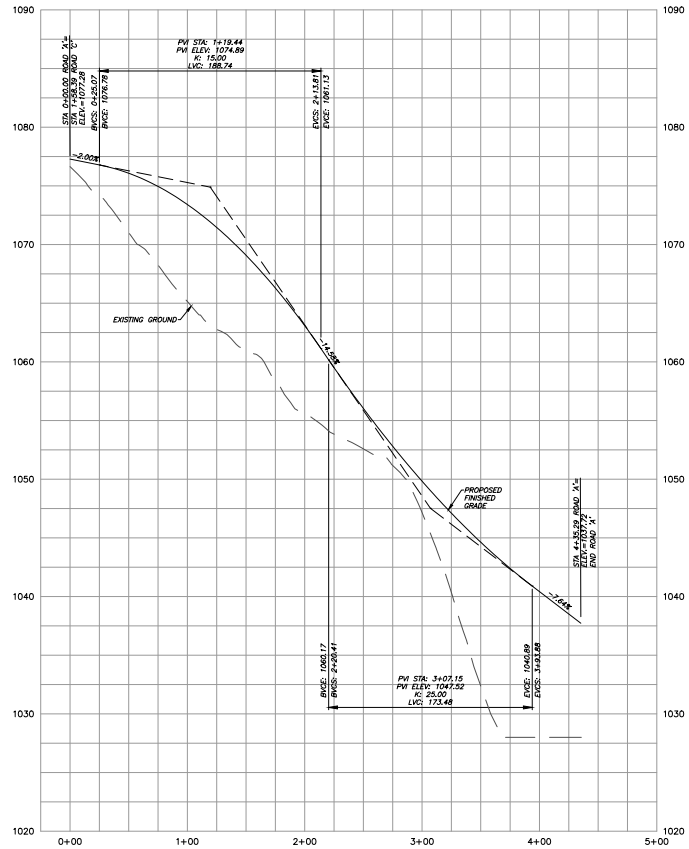


- GRADING PLAN NOTES:**
1. GRADING SHOWN HEREON IS CONCEPTUAL ONLY AND IS SUBJECT TO MORE IN DEPTH STUDY.
 2. THE APPROXIMATE DISTURBED AREA IN THE HP OVERLAY IS 30.0-ACRES.



ALL WORKMANSHIP AND MATERIALS SHALL BE PER KNOX COUNTY STANDARD SPECIFICATIONS FOR SITE DEVELOPMENT PERMITS.

SHEET C-9 PRELIMINARY PLAN POPLAR FARMS SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)		
DIST. NO. W6	KNOX CO., TN.	
CLT MAP 076	PARCELS 18.00 & 021.00	
SCALE: 1"=40'	FEBRUARY 24, 2023	
DEVELOPER: HOME DEVELOPMENT INC. 120 SUBURBAN ROAD, SUITE #204 KNOXVILLE, TN 37923		
URBAN ENGINEERING, INC. 10330 HARDIN VALLEY RD., SUITE #201 KNOXVILLE, TN 37932 (865) 966-1924		
DWG: CLM	CHK: CAS	DWG. NO. 2211028
1	3/27/23	PER PLANNING / ENGINEERING COMMENTS
REVISION	DATE	DESCRIPTION



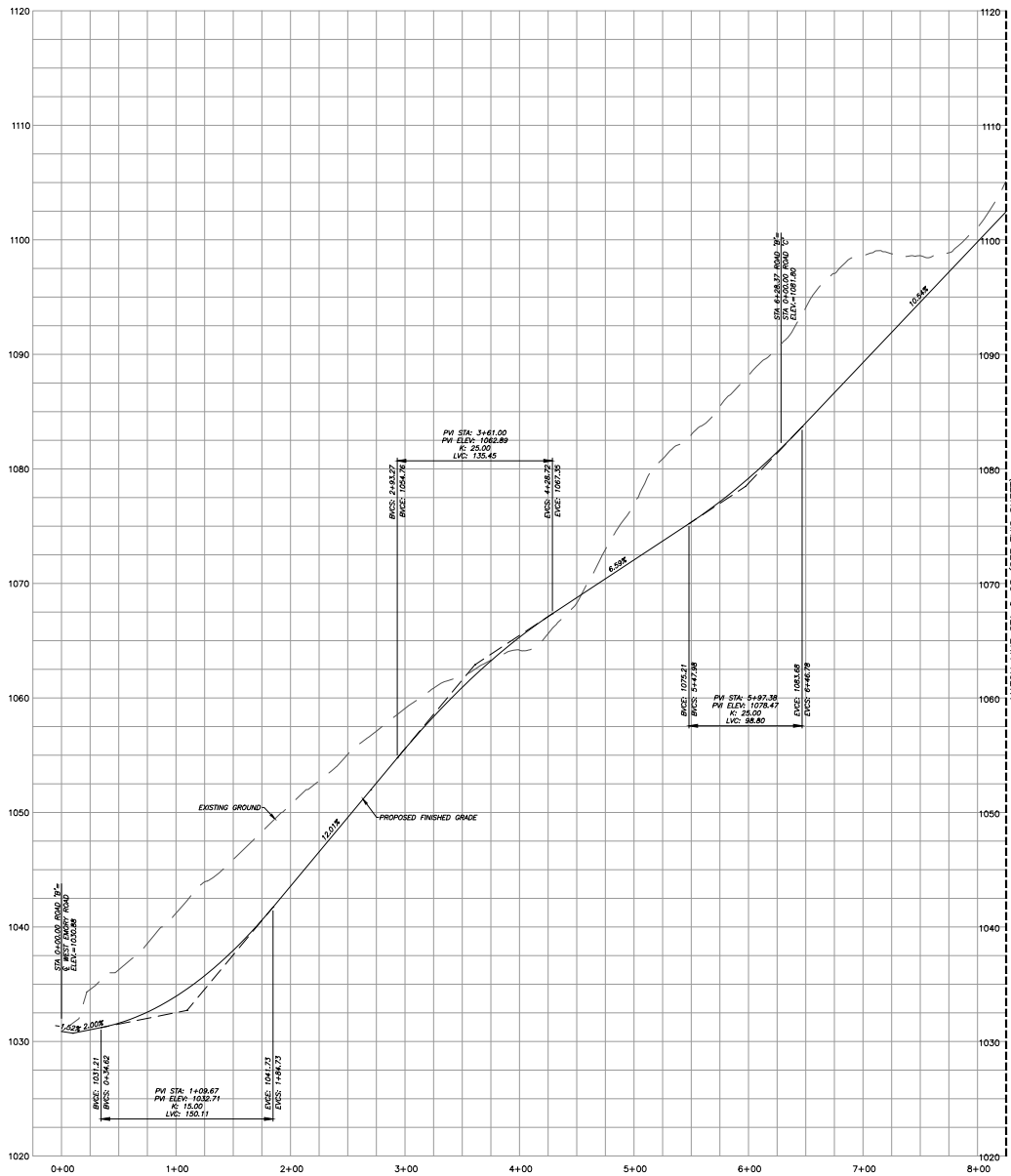
PROFILE VIEW: ROAD 'A'
 1"=50' (HORIZONTAL)
 1"=5' (VERTICAL)

Revised: 3/27/2023

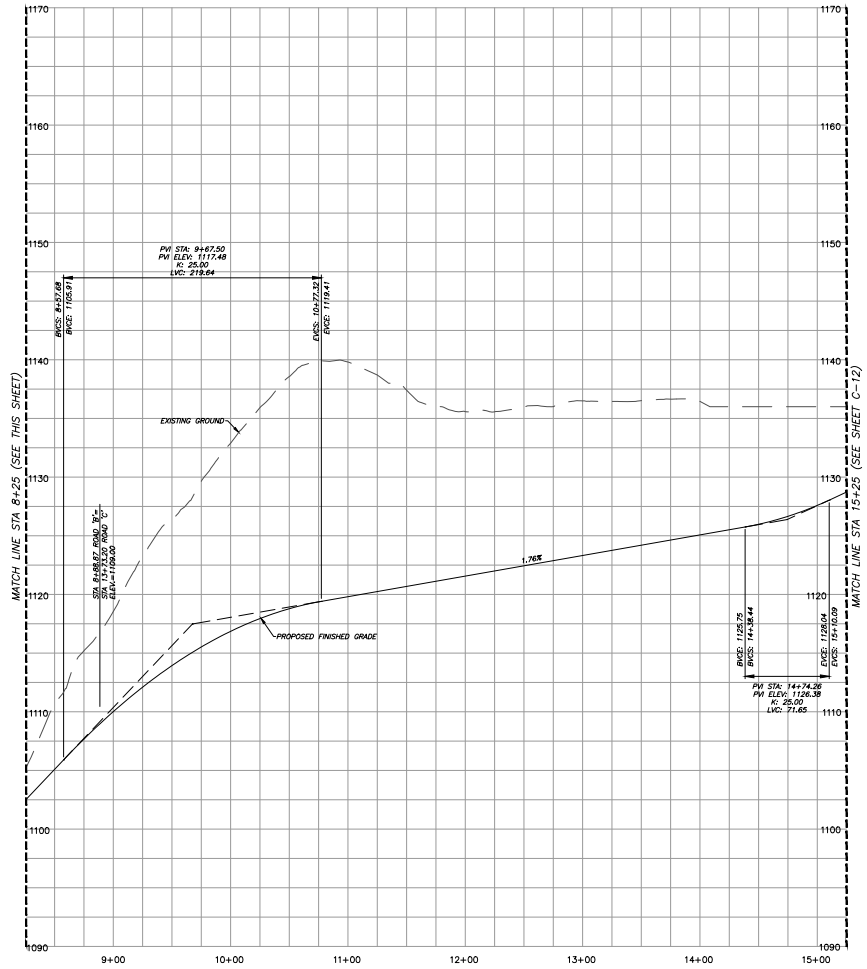
KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP



SHEET C-10		
ROAD PROFILES		
POPLAR FARMS		
SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)		
DIST. NO. W6	KNOX CO., TN.	
CLT MAP 076	PARCELS 18.00 & 021.00	
SCALE: AS NOTED	FEBRUARY 24, 2023	
DEVELOPER: HOME DEVELOPMENT INC. 120 SUBURBAN ROAD, SUITE #204 KNOXVILLE, TN 37923		
URBAN ENGINEERING, INC. 10330 HARDIN VALLEY RD., SUITE #201 KNOXVILLE, TN 37932 (865) 966-1924		
DWG: CLM	CHK: CAS	DWG. NO. 2211028
1	3/27/23	GENERAL REVISIONS
REVISION	DATE	DESCRIPTION



PROFILE VIEW: ROAD 'B'
 1"=50' (HORIZONTAL)
 1"=5' (VERTICAL)



PROFILE VIEW: ROAD 'B'
 1"=50' (HORIZONTAL)
 1"=5' (VERTICAL)

Revised: 3/27/2023

KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

SHEET C-11
 ROAD PROFILES
POPLAR FARMS
 SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)

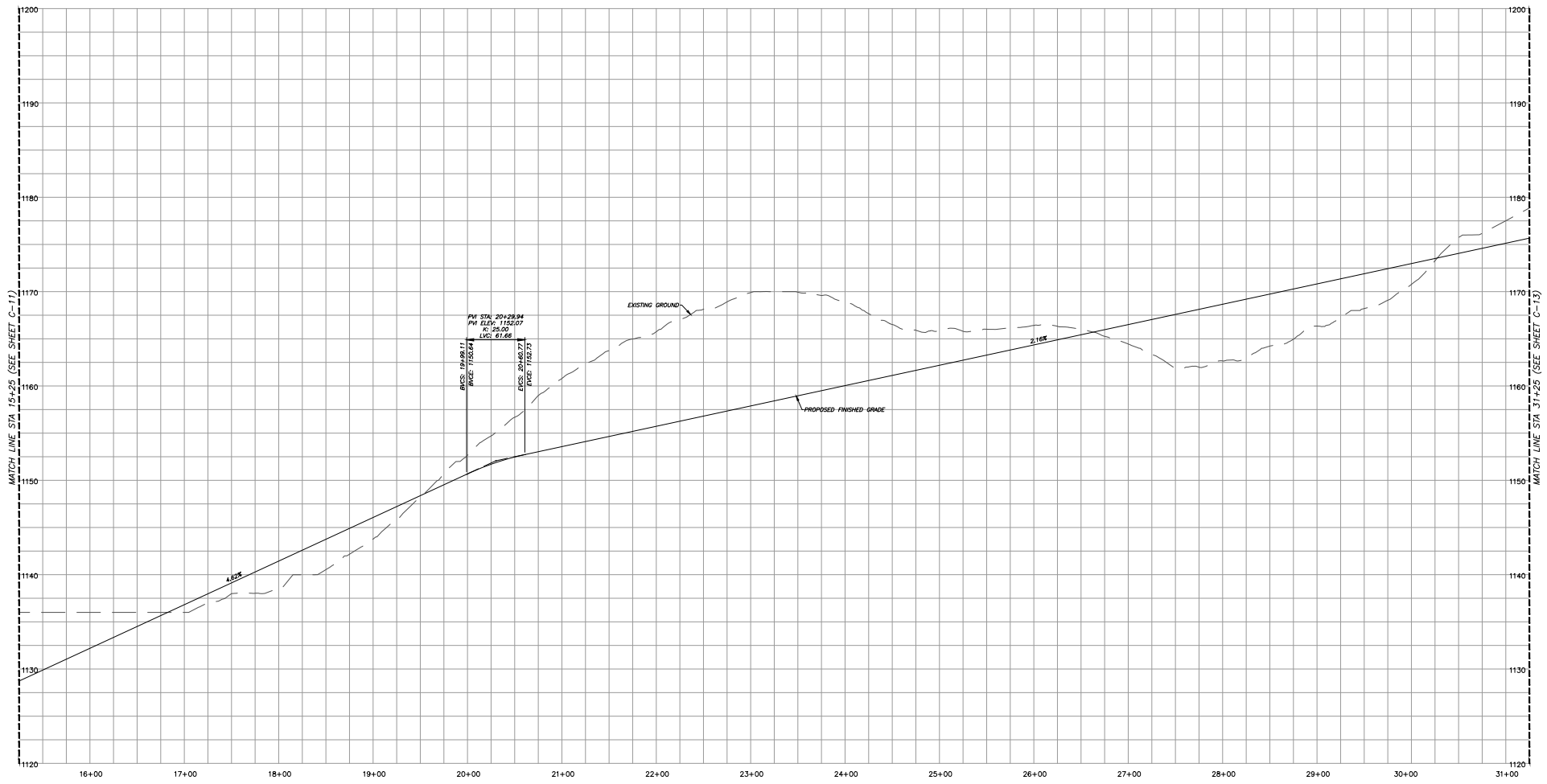
DIST. NO. W6 KNOX CO., TN.
 CLT MAP 076 PARCELS 18.00 & 021.00
 SCALE: AS NOTED FEBRUARY 24, 2023

DEVELOPER:
 HOME DEVELOPMENT INC.
 120 SUBURBAN ROAD, SUITE #204
 KNOXVILLE, TN 37923

URBAN ENGINEERING, INC.
 10330 HARDIN VALLEY RD., SUITE #201
 KNOXVILLE, TN 37932
 (865) 966-1924

1	3/27/23	GENERAL REVISIONS	CAS	DWN: CLM	CHK: CAS	DWG. NO. 2211028
REVISION	DATE	DESCRIPTION	BY			






PVI STA: 20+29.94
 PV ELEV: 1150.07
 IC: 25.00
 LVC: 61.66
 BVC STA: 19+98.11
 BVC ELEV: 1150.04
 EVC STA: 20+61.77
 EVC ELEV: 1150.10

PROFILE VIEW: ROAD 'B'
 1"=50' (HORIZONTAL)
 1"=5' (VERTICAL)

Revised: 3/27/2023

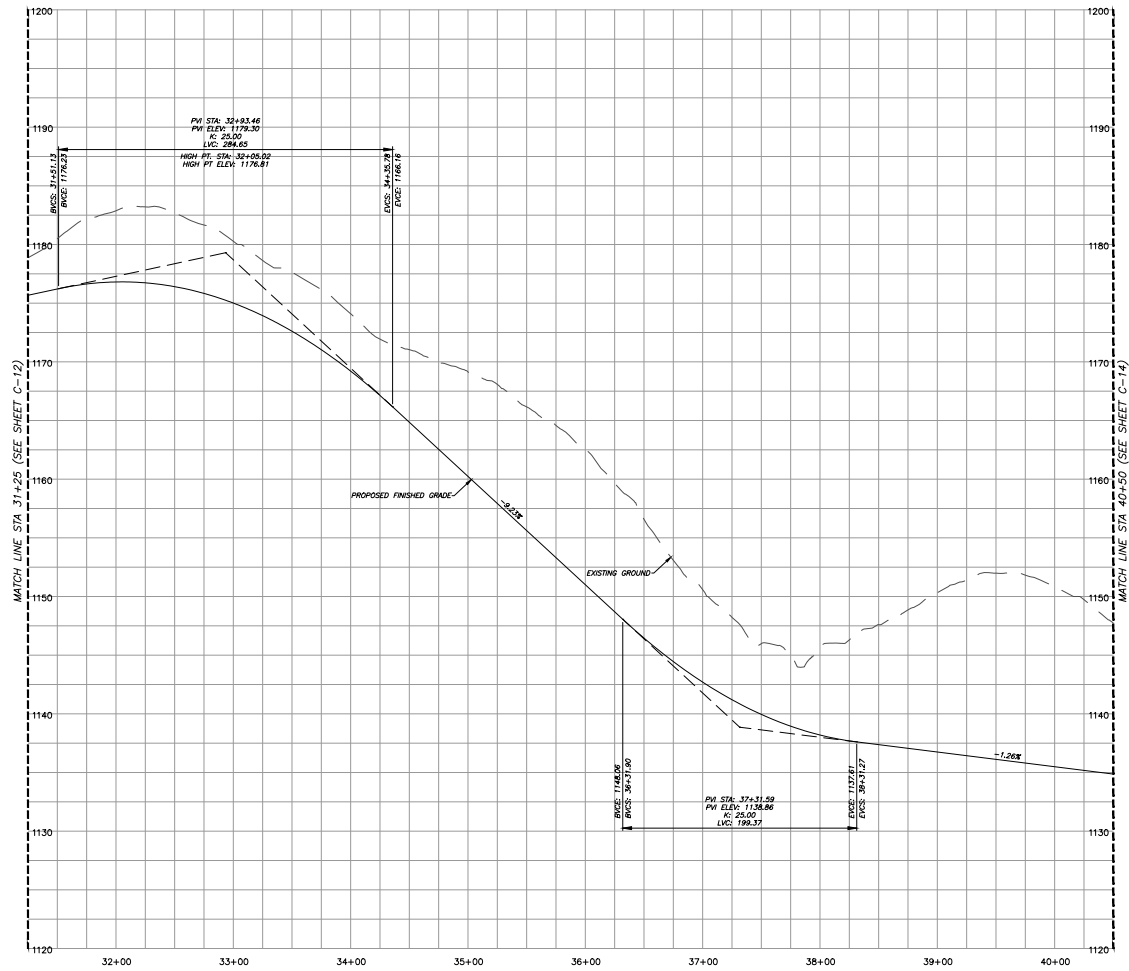
KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

SHEET C-12
 ROAD PROFILES
POPLAR FARMS
 SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)
 DIST. NO. W6 KNOX CO., TN.
 CLT MAP 076 PARCELS 18.00 & 021.00
 SCALE: AS NOTED FEBRUARY 24, 2023
 DEVELOPER: HOME DEVELOPMENT INC.
 120 SUBURBAN ROAD, SUITE #204
 KNOXVILLE, TN 37923

 URBAN ENGINEERING, INC.
 10330 HARDIN VALLEY RD., SUITE #201
 KNOXVILLE, TN 37932
 (865) 966-1924
 DWN: CLM CHR: CAS DWG. NO. 2211028

REVISION	DATE	DESCRIPTION	BY
1	3/27/23	GENERAL REVISIONS	CAS





PROFILE VIEW: ROAD 'B'
 1"=50' (HORIZONTAL)
 1"=5' (VERTICAL)

Revised: 3/27/2023

KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

SHEET C-13

ROAD PROFILES

POPLAR FARMS

SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)

DIST. NO. W6 KNOX CO., TN.
 CLT MAP 076 PARCELS 18.00 & 021.00
 SCALE: AS NOTED FEBRUARY 24, 2023

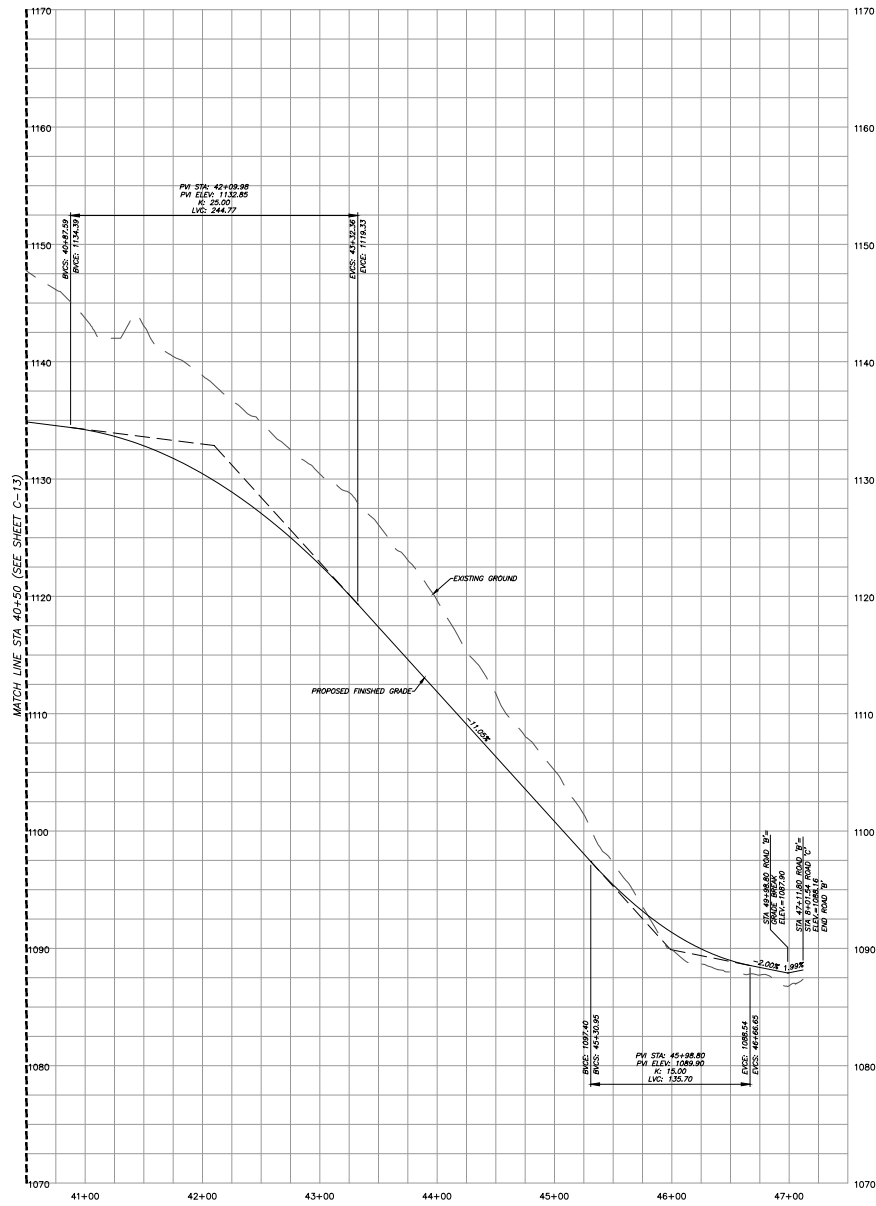
DEVELOPER: HOME DEVELOPMENT INC.
 120 SUBURBAN ROAD, SUITE #204
 KNOXVILLE, TN 37923

URBAN ENGINEERING, INC.
 10330 HARDIN VALLEY RD., SUITE #201
 KNOXVILLE, TN 37932
 (865) 966-1924

DWN: CLM CHK: CAS DWG. NO. 2211028

REVISION	DATE	DESCRIPTION	BY
1	3/27/23	GENERAL REVISIONS	CAS





PROFILE VIEW: ROAD 'B'
1"=50' (HORIZONTAL)
1"=5' (VERTICAL)

SHEET C-14

ROAD PROFILES

POPLAR FARMS

SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)

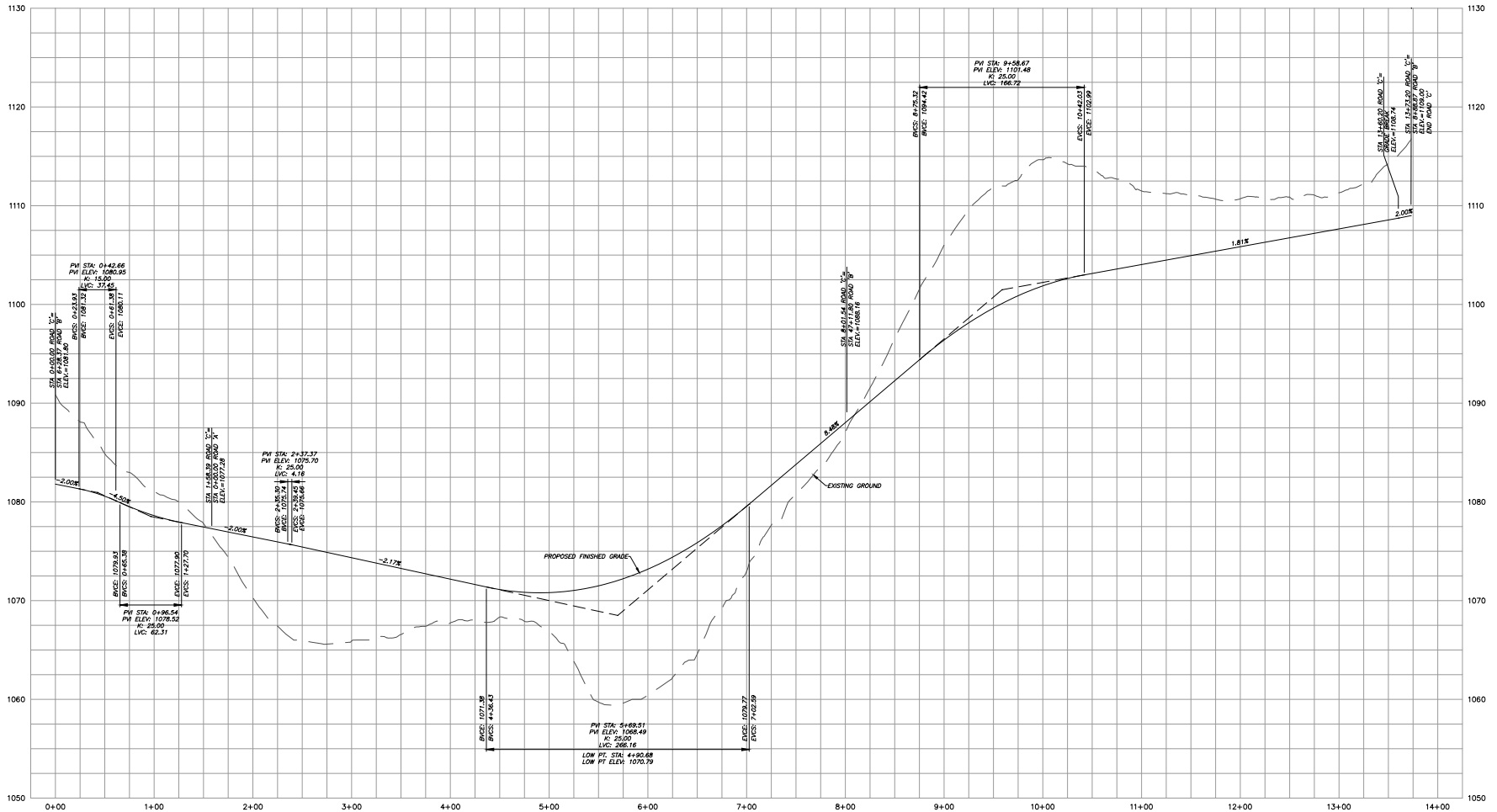
DIST. NO. W6 KNOX CO., TN.
CLT MAP 076 PARCELS 18.00 & 021.00
SCALE: AS NOTED FEBRUARY 24, 2023

DEVELOPER: HOME DEVELOPMENT INC.
120 SUBURBAN ROAD, SUITE #204
KNOXVILLE, TN 37923

URBAN ENGINEERING, INC.
10330 HARDIN VALLEY RD., SUITE #201
KNOXVILLE, TN 37932
(965) 966-1924

REVISION	DATE	DESCRIPTION	BY	DWN: CLM	CHK: CAS	DWG. NO. 2211028
1	3/27/23	GENERAL REVISIONS	CAS			





PROFILE VIEW: ROAD 'C'
 1"=50' (HORIZONTAL)
 1"=5' (VERTICAL)

Revised: 3/27/2023

KNOX PLANNING FILE# 4-SC-23-C / 4-D-23-DP

SHEET C-15
 ROAD PROFILES
POPLAR FARMS
 SITE ADDRESS: 0 WEST EMORY ROAD, KNOXVILLE (37931)
 DIST. NO. W6 KNOX CO., TN.
 CLT MAP 076 PARCELS 18.00 & 021.00
 SCALE: AS NOTED FEBRUARY 24, 2023

DEVELOPER:
 HOME DEVELOPMENT INC.
 120 SUBURBAN ROAD, SUITE #204
 KNOXVILLE, TN 37923

URBAN ENGINEERING, INC.
 10330 HARDIN VALLEY RD., SUITE #201
 KNOXVILLE, TN 37932
 (865) 966-1924
 DWN: CLM CHR: CAS DWG. NO. 2211028

REVISION	DATE	DESCRIPTION	BY
1	3/27/23	GENERAL REVISIONS	CAS



Poplar Farms Subdivision Transportation Impact Analysis


Knox County, Tennessee

Documentation Prepared by:



— Est. 2010 —

1155 North Main Street
Waynesville, NC 28786
828-456-8383

DocuSigned by:
 Mar-30-2023
4226FF2577A7414...



This Traffic Impact Analysis
supercedes the previously sealed Analysis on
March 27, 2023

John Mark Teague, P.E.

March 30, 2023

4-SC-23-C / 4-D-23-DP
TIS Version 3
3/30/2023

ANALYSIS RESULTS

The next section of this report presents the analysis of each intersection and driveway. The intersection numbers are consistent with the numbers used in the Synchro analysis.

Intersections 1 – 4 have been removed from this report per request of Knoxville-Knox County Plannings Staff.

Intersection 5: West Emory Road & Access 1

Figure 14 shows the proposed intersection of West Emory Road and Access 1.

Table 5 shows the Traffic Volumes for each analyzed case, period, and approach. It also shows how the components of the total volumes come together.

Table 6 shows West Emory Road and Access 1 operate at a level of service A in the build-out case.

Table 7 shows the queuing for each analyzed case, period, and approach.

Table 8 shows the turn lane warrant analysis performed since this is a proposed access point.



Figure 14: Intersection 5 West Emory Road & Access 1

Table 5: Intersection 5 West Emory Road & Access 1 Traffic Volumes

	Approach Dir (N/S/E/W)	L/T/R/U	Base Vol.	Projected Vol.	Adjacent Development	Background Vol.	Trip Gen.	Future Vol.
AM	Eastbound	Left	0	0	0	0	56	56
AM	Eastbound	Right	0	0	0	0	21	21
AM	Eastbound	Through	0	0	0	0	0	0
AM	Eastbound	U-Turn	0	0	0	0	0	0
AM	Northbound	Left	0	0	0	0	7	7
AM	Northbound	Right	0	0	0	0	0	0
AM	Northbound	Through	12	12	0	12	0	12
AM	Northbound	U-Turn	0	0	0	0	0	0
AM	Southbound	Left	0	0	0	0	0	0
AM	Southbound	Right	0	0	0	0	19	19
AM	Southbound	Through	39	41	0	41	0	41
AM	Southbound	U-Turn	0	0	0	0	0	0
AM	Westbound	Left	0	0	0	0	0	0
AM	Westbound	Right	0	0	0	0	0	0
AM	Westbound	Through	0	0	0	0	0	0
AM	Westbound	U-Turn	0	0	0	0	0	0
PM	Eastbound	Left	0	0	0	0	37	37
PM	Eastbound	Right	0	0	0	0	14	14
PM	Eastbound	Through	0	0	0	0	0	0
PM	Eastbound	U-Turn	0	0	0	0	0	0
PM	Northbound	Left	0	0	0	0	24	24
PM	Northbound	Right	0	0	0	0	0	0
PM	Northbound	Through	62	65	0	65	0	65
PM	Northbound	U-Turn	0	0	0	0	0	0
PM	Southbound	Left	0	0	0	0	0	0
PM	Southbound	Right	0	0	0	0	64	64
PM	Southbound	Through	24	25	0	25	0	25
PM	Southbound	U-Turn	0	0	0	0	0	0
PM	Westbound	Left	0	0	0	0	0	0
PM	Westbound	Right	0	0	0	0	0	0
PM	Westbound	Through	0	0	0	0	0	0
PM	Westbound	U-Turn	0	0	0	0	0	0

Table 6: Intersection 5 West Emory Road and Access 1 Comparison Table

Intersection 5: West Emory Road & Access 1												
Background vs. Build-Out												
Period	Approach	LOS					Delay in Seconds				Percent Change	
		Background	Build-Out	Mitigated	Build-out Change	Mitigated Change	Background	Build-Out	Change	Mitigated	Build-Out	Mitigated
AM	EB-Left		A					8.5				
AM	EB-Right		A					8.5				
AM	NB-Left/Thru		A					7.2				
AM	SB-Thru/Right		A					0				
PM	EB-Left		A					9.1				
PM	EB-Right		A					9.1				
PM	NB-Left/Thru		A					7.4				
PM	SB-Thru/Right		A					0				

Table 7: Intersection 5 West Emory Road & Access 1 Queuing

Intersection 5: West Emory Road & Access 1								
Period	Approach	Storage (ft)	Background Queue (ft)	Build-out Queue (ft)	Difference (ft)	Mitigation Needed	Que After Mitigation (ft)	Mitigated Difference (ft)
AM	EB-Left			0	0	0		
AM	EB-Right			0	0	0		
AM	NB-Left/Thru			0	0	0		
AM	SB-Thru/Right			0	0	0		
PM	EB-Left			0	0	0		
PM	EB-Right			0	0	0		
PM	NB-Left/Thru			0	0	0		
PM	SB-Thru/Right			0	0	0		

As shown in Table 8 from *Knox County Department of Engineering and Public Works Handbook, "Access Control and Driveway Design Policy (1996)"*, the combination of turning volumes and opposing through volumes are below the thresholds needed to justify a turn lane at this location.

Table 8: Intersection 5 Right Turn Lane Warrant Analysis

OPPOSING VOLUME	THROUGH VOLUME PLUS LEFT-TURN VOLUME *					
	<100	100 - 199	200 - 249	250 - 299	300 - 349	350 - 399
Fewer Than 25	AM: 41 Thru 19 Right	PM: 25 Thru 64 Right				
25 - 49						
50 - 99						
100 - 149						
150 - 199						
200 - 249						
250 - 299						Yes
300 - 349					Yes	Yes
350 - 399				Yes	Yes	Yes
400 - 449			Yes	Yes	Yes	Yes
450 - 499			Yes	Yes	Yes	Yes
500 - 549		Yes	Yes	Yes	Yes	Yes
550 - 599		Yes	Yes	Yes	Yes	Yes
600 or More	Yes	Yes	Yes	Yes	Yes	Yes

No right turn lane is needed.

Table 9: Intersection 5 Left Turn Lane Warrant Analysis

OPPOSING VOLUME	THROUGH VOLUME PLUS RIGHT-TURN VOLUME *					
	100 - 149	150 - 199	200 - 249	250 - 299	300 - 349	350 - 399
100 - 149	300	235	185	145	120	100
150 - 199	245	200	160	130	110	90
200 - 249	205	170	140	115	100	80
250 - 299	175	150	125	105	90	70
300 - 349	155	135	110	95	80	65
350 - 399	135	120	100	85	70	60
400 - 449	120	105	90	75	65	55
450 - 499	105	90	80	70	60	50
500 - 549	95	80	70	65	55	50
550 - 599	85	70	65	60	50	45
600 - 649	75	65	60	55	45	40
650 - 699	70	60	55	50	40	35
700 - 749	65	55	50	45	35	30
750 or More	60	50	45	40	35	30

During the AM peak hour there are 12 through vehicles and 60 opposing vehicles. This is not shown on the chart.

During the PM peak hour there are 65 through vehicles and 89 opposing vehicles. This is not shown on the chart.

Considering neither the AM nor PM peak hour volumes are shown on the chart, no left turn lane is warranted. Also, no other mitigation is warranted at this intersection.

MITIGATION

This section discusses the proposed mitigations at each intersection and access point. If no mitigations are proposed, that too is noted.

Intersection 5: West Emory Road & Access 1

No mitigation is recommended at this intersection. However, Home Development Incorporated is responsible for ensuring that sight distance at this location is adequate to provide safe access for vehicles entering or leaving the site.

EFFECT OF THE PROJECT ON ALTERNATE MODES

The project will not affect alternative modes in the area.

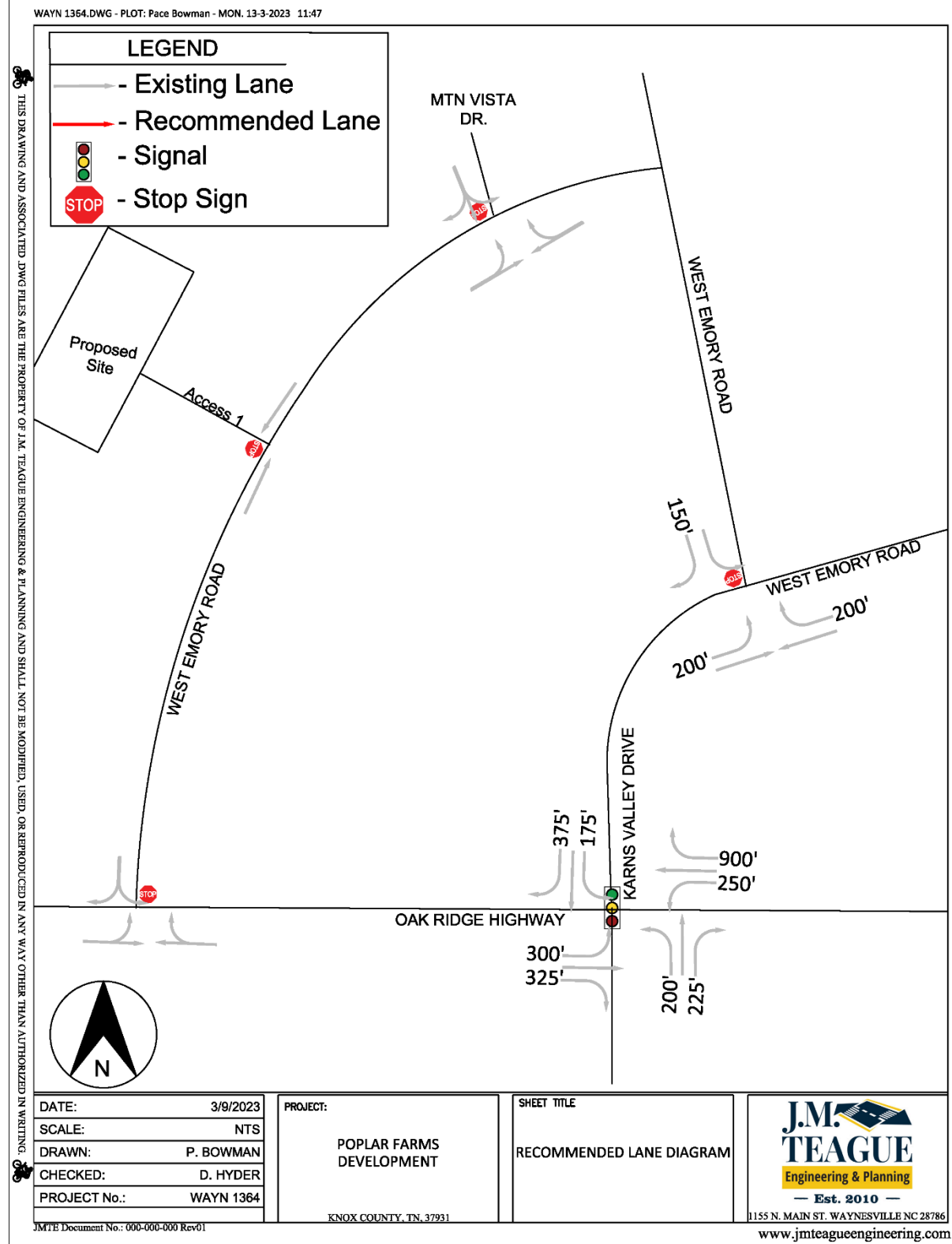


Figure 15: Recommended Lane Diagram

CONCLUSION

In accordance with the Knoxville-Knox County Plannings Transportation Impact Analysis Guidelines, this TIA was performed because the development is proposed to generate more than 750 trips per day.

Based on the analysis presented in the report, the operational problems caused by the project can be successfully mitigated. Also, there is no material impact on public health and safety, nor does the proposed project negatively impact planned public expenditures.



1155 North Main Street
Waynesville, NC 28786
(P) 828.456.8383
(F) 828.456.8797
www.jmteagueengineering.com

JMTE WAYN 1364

TECHNICAL MEMORANDUM

DECEMBER 20, 2022

To: Rebecca Walls
120 Suburban Road,
Suite 204
Knoxville, TN 31923
Becca@hditn.com

From: David W. Hyder, P.E., Engineering Director
J.M. Teague Engineering & Planning

SUBJECT: Traffic Impact Letter for Poplar Farms (WAYN 1364)

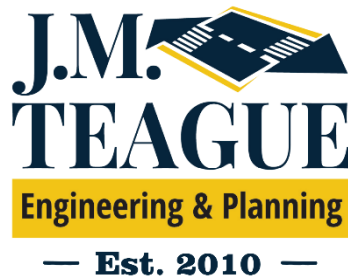
J.M. Teague Engineering and Planning (JMTE) has prepared a Traffic Impact Letter documenting the impacts of Home Development Incorporated's Poplar Farms development. Poplar Farms is a one hundred and fifty (150) unit single-family residential development off West Emory Road on approximately 68 acres in the unincorporated portion of Knox County Tennessee (Figure 1). The Knox County Development Ordinance provides for a two-phase process for getting development approval. The first phase of the process is developing a Traffic Impact Letter addressing the impacts of the "maximum potential use" for the proposed parcel. The second phase of the process is preparing a formal traffic impact study of the specific project and its immediate area.

Based on the Growth Policy Plan and the current zoning regulations, 204 dwelling units is the maximum number of dwelling units allowed on this 68 acre site.

Poplar Farms Subdivision Technical Memorandum

Knoxville, Tennessee

Documentation Prepared by:



1155 North Main Street
Waynesville, NC 28786
(P) 828-456-8383



J. Mark Teague, P.E.

December 20, 2022

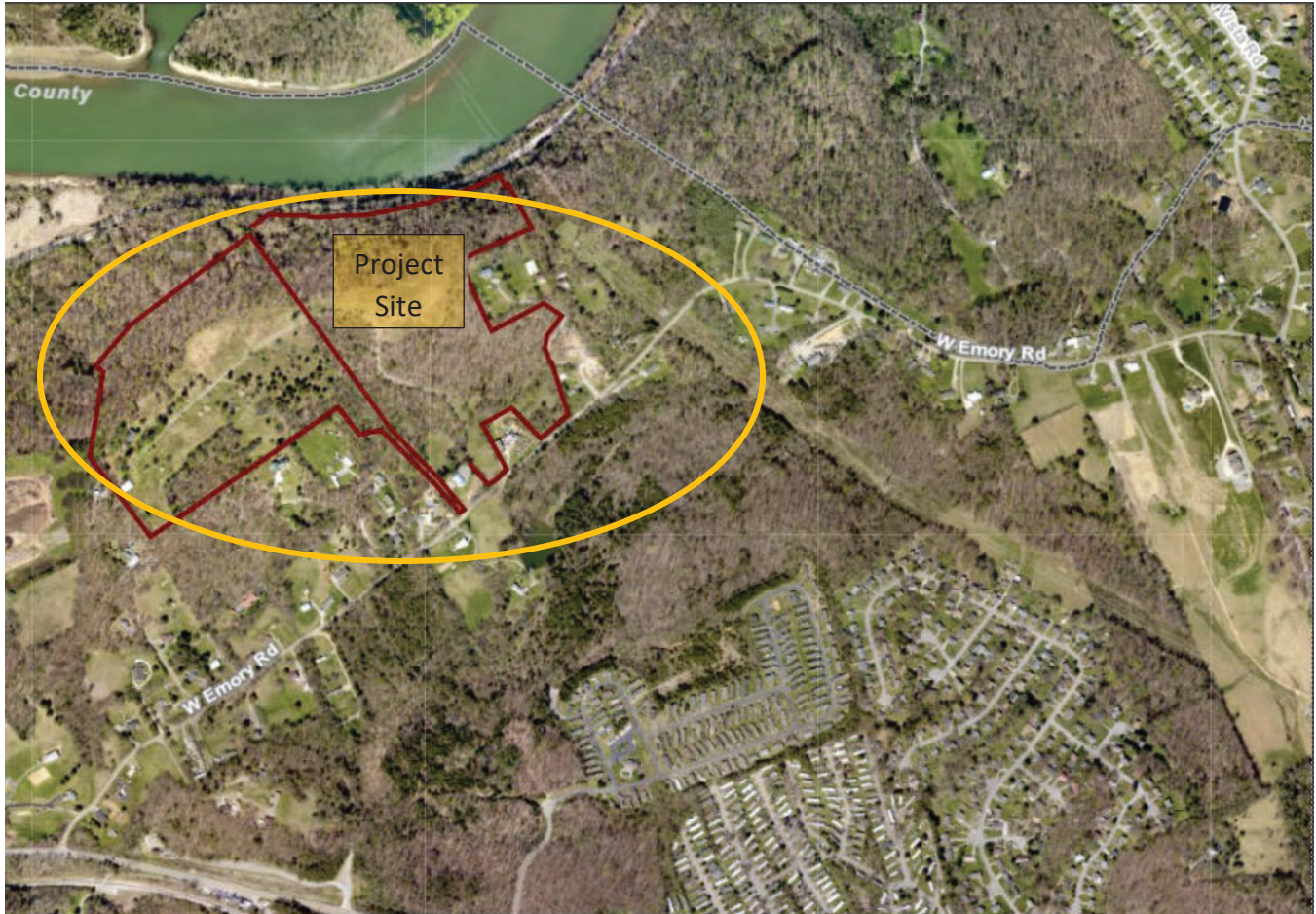


Figure 1: Site (Poplar Farms) Location (source Knox County GIS)

This Traffic Impact Letter (TIL) includes a project description, an assessment of existing conditions, proposed site access information, and information on trip demand. Based on our fieldwork and capacity analysis, we believe that a development of up to 204 dwelling units will not cause or contribute to a significant decline in traffic operations or safety on the affected roads or at the affected intersections.

EXISTING SITE CONDITIONS

JMTE visited Oak Ridge Highway and West Emory Road on the afternoon of November 16, 2022, and November 21, 2022. The site visits included driving on West Emory Road from the intersection with Oak Ridge Highway to the intersection with Karns Valley Drive. The conditions observed during the site visit are described below.

OAK RIDGE HIGHWAY – Oak Ridge Highway (TN 62) is a publicly maintained, two-lane 24-foot-wide paved highway with a 6-foot paved shoulder with a guardrail on both sides. The posted speed limit near the intersection with West Emory Road is 55 mph. The cross-section, vertical alignment, and horizontal alignment are typical of 2-lane rural, medium-volume, highways in east Tennessee. The condition of the asphalt and the width of the road indicate a medium to high traffic volume.



Figure 1: Site (Poplar Farms) Location (source Knox County GIS)

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The intersection of Oak Ridge Highway and West Emory Road is a 'T' intersection. The intersection is approximately sixty-five (65) feet wide and has no dedicated turn lanes on any approach. West Emory Road is the minor approach and is controlled by a stop sign. Figure 2 and Figure 3 show the intersection of Oak Ridge Highway with West Emory Road. Figure 4 shows the measured sight distances at the intersection of Oak Ridge Highway and West Emory Road. The shortest measured sight distance is nine hundred seventy (970) feet; exceeding AASHTO's recommended sight distance (of 610 feet) by three hundred sixty (360) feet.



Figure 2: Oak Ridge Highway at W. Emory Rd (looking east)



Figure 3: Oak Ridge Highway at W. Emory Rd. (looking west)

WEST EMORY ROAD - Beginning at the intersection with Oak Ridge Highway, West Emory Road is a two-lane paved road approximately three miles in length between Oak Ridge Highway and Karns Valley Drive. The travel way consists of asphalt paving, the width is approximately 20 feet wide near the connection to Oak Ridge Highway narrowing to approximately eighteen (18) feet in width near the proposed Poplar Farm entrances. The grades on West Emory Road vary and the terrain

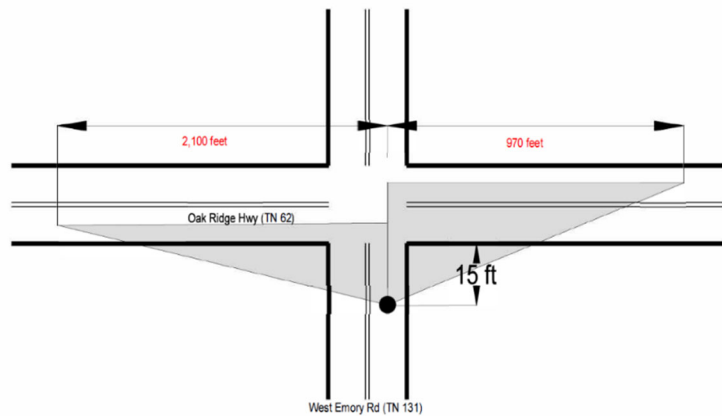


Figure 4: Sight Distance (Oak Ridge Highway & Emory Road)

is considered rolling, the longitudinal grade near the proposed subdivision entrances is approximately 5.5%. On the north side of the road, the shoulder falls off immediately from the edge of the pavement into the drainage ditch (i.e., there is no recovery area). On the south side of the road, the shoulder is approximately two-feet wide between the edge of the pavement and the top of the embankment. The

posted speed limit is 30 mph (Figure 5). The distance from the intersection of Oak Ridge Highway to the first proposed entrance is approximately 0.8 miles (4,224 feet) and the second entrance is approximately 0.9 miles (4,752 feet) from the intersection of Oak Ridge Highway and West Emory Road. There is a “Hill Blocks View Next 1.2 Miles” sign (Figure 6). Both proposed entrances are within that 1.2 miles.



Figure 5: West Emory Road (Posted Speed Limit)



Figure 6: Hill Blocks View Sign on West Emory Road

KARNS VALLEY DRIVE – Karns Valley Drive is a paved road approximately one mile east from the intersection with Oak Ridge Highway to the intersection with West Emory Road. The three-lane cross-section includes two twelve (12) foot travel lanes separated by a two-way turn lane plus an eight-foot paved shoulder on each side (Figure 7). The posted speed limit for this section of Karns Valley Road is roadway is 45 mph (Figure 8).



Figure 7: Karns Valley Drive at West Emory Road



Figure 8: Karns Valley Drive (Posted Speed Limit)

Figure 10 shows the measured sight distances at the intersection of Karns Valley Drive and West Emory Road. The shortest measured sight distance is seven hundred (700) feet; exceeding AASHTO’s recommended sight distance (of 500 feet) by two hundred (200) feet. Figure 10 shows the measured sight distances at the intersection of Oak Ridge Road and Karns Valley Drive. The shortest measured sight

distance is seven hundred seventy (700) feet; exceeding AASHTO’s recommended sight distance (of 610 feet) by ninety (90) feet.

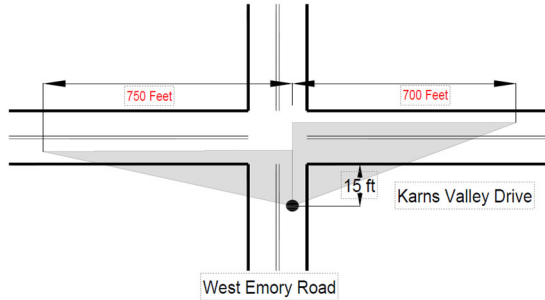


Figure 10: Sight Distance (Karns Valley Drive & West Emory Road)

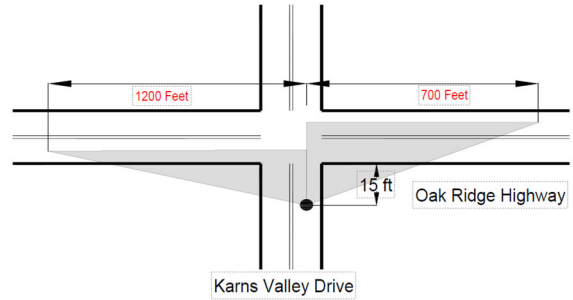


Figure 9: Sight Distance (Oak Ridge Highway & Karns Valley Drive)

Table 1 estimates the existing Level of Service (LOS) for each studied roadway using the Florida Department of Transportation (FDOT) method. The estimated LOS is based on Table 4-3 of the FDOT capacity guidance (See Appendix B). Each studied roadway section is assumed to be a rural uninterrupted two-lane roadway. Using these assumptions all the studied roadways operate at or above LOS C.

Existing Travel Demand

JMTE installed a pneumatic tube volume counter between the two proposed access points. The count began on Wednesday, November 16th at 1 PM and ended Saturday, November 19th at 1 pm. The three-day average daily traffic at that location was 535 vehicles with the AM peak hour being 48 vehicles and the PM peak hour at 79 vehicles. (See attached Appendix A). An equipment failure Sunday, November 20th, 2022, resulted in a shorter-than-expected count.

Figure 11 below shows the location of the Tennessee DOT average daily traffic count stations. Table 1 shows the counts of each location for the year 2021.



Figure 11: TDOT Traffic Count Stations

Table 1 Current Roadway Operating Conditions

Roadway Name	FDOT Class	Count Station ID	Average Daily Traffic	Next Highest FDOT Capacity	Level of Service
Oak Ridge Highway	Rural Uninterrupted Flow Highways	47000364	10,611	13,800	C
West Emory Road	Rural Uninterrupted Flow Highways	47000582	818	2,600	A
Karns Valley Drive	Rural Uninterrupted Flow Highways	47000468	7,904	8,600	C

Differences in Travel Demand

JMTE used the *ITE Trip Generation Manual* (11th ed.) to estimate the daily, morning, and afternoon weekday trips for the proposed Development as it is currently zoned (1 dwelling unit per acre) and proposed zoning (3 dwelling units per acre. Table 2 summarized the results of the trip generation calculation. The housing trips for the development are shown below and are based on the proposed 150 single-family detached housing units.

Table 2: Poplar Farms Trip Generation

ITE LUC	Proposed Land Use	Size	Trip Rate	Daily	AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total
210	Proposed Zoning	204 DU		1944	37	106	143	122	72	194
	Existing Zoning	68 DU		708	14	38	52	43	26	69
<i>Difference</i>		136 DU		1236	23	68	91	79	46	125

Table 4 estimates the effects of Poplar Farms on the studied roadways. One hundred percent of the trips generated by Poplar Farms are assumed to use West Emory Road. Sixty percent (Table 3) of the trips generated by Poplar Farms are assumed to use Oak Ridge Highway and the remaining forty percent (Table 3) of trips are assumed to use Karns Valley Drive (Figure 12). The trip distribution on West Emory is assumed to be proportional to the traffic volumes in Table 1 and Table 3. This proposed development does not change the trip distribution in this region. The Average Daily Traffic column of Table 1 shows the existing traffic, the added traffic, and the total traffic at build-out. *Comparing Table 1 with Table 4 shows no significant change in the Levels of Service.*

Table 3: Trip Distribution Calculations

Road Name	AADT	Portion	Rounded
Oak Ridge Highway	10,611	0.57	60%
Karns Valley Drive	7,904	0.43	40%
<i>Totals</i>	<i>18,515</i>	<i>1.00</i>	<i>100%</i>

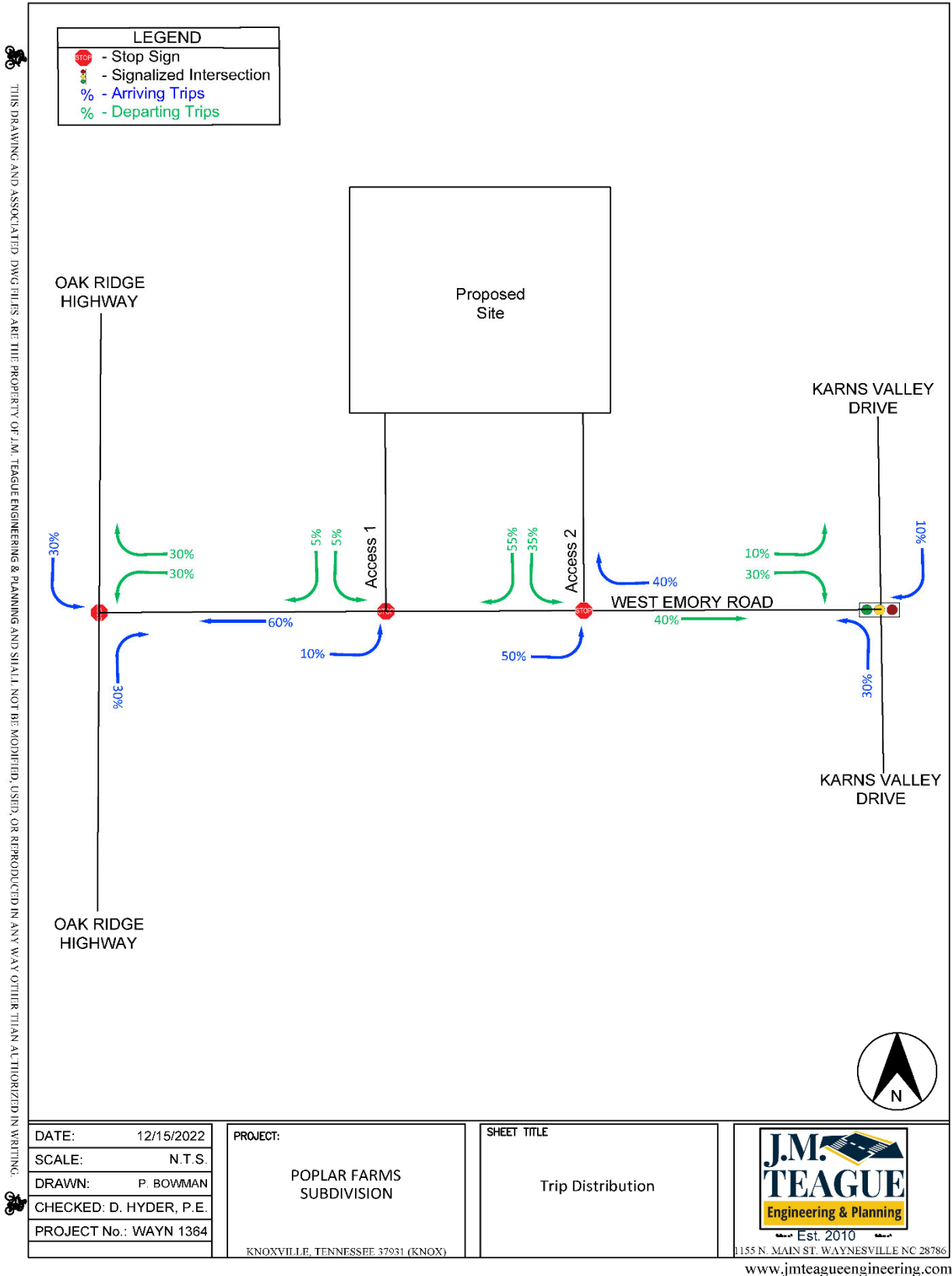


Figure 12: Trip Distribution Diagram

Table 4: Estimated Effect of Poplar Farms on Traffic Operations

Roadway Name	FDOT Class	Count Station ID	Average Daily Traffic	Next Highest FDOT Capacity	Level of Service	
Oak Ridge Highway	Rural Uninterrupted Flow Highways	47000364	Existing	10,611	13,800	C
			Added	879		
			Total	11,490		
West Emory Road	Rural Uninterrupted Flow Highways	47000582	Existing	818	2,600	A
			Added	1,465		
			Total	2,283		
Karns Valley Drive	Rural Uninterrupted Flow Highways	47000468	Existing	7,904	8,600	C
			Added	586		
			Total	8,490		

SITE ACCESS

Safe access to and from the roadway is critical in the development process. This section of the TIL addresses sight distance, the need for turn lanes, and the ability of emergency vehicles to access the sight. Figure 13 and Figure 14 are photographs taken at the approximate location of Access 1. Figure 15 and Figure 16 are photographs taken at the approximate location of Access 2.



Figure 13 Access 1 looking northeast

Figure 14 Access 1 looking southwest



Figure 15 Access 2 looking northeast



Figure 16 Access 2 looking southwest

Sight Distance

Per the Knoxville-Knox County *Subdivision Regulations* section 3.04.j.5. The minimum required sight distance for a road with a posted speed limit of 35 mph is 350 feet in each direction. During the site visit, JMTE was not able to get an accurate sight distance from the proposed entrances due to the terrain and vegetation. It appears that the sight distance may be acceptable. However, it is the affirmative responsibility of the developer to ensure that sight distance is adequate when construction is complete.

Turn lane Warrant

The Knox County Department of Engineering and Public Works handbook, “*Access Control and Driveway Design Policy*,” was used to determine if a northbound left turn lane or a southbound right turn lane is warranted at either of the proposed entrances. With an AM peak of 48 vehicles per hour (vph) and a PM peak of 79 vph, turn lanes are not warranted at either proposed driveway connection. (See Table 5). The red block indicates where these unwarranted values fall.

Table 5: Knox County Left Turns Thresholds for 2-lane Roads (source Knox County)

OPPOSING VOLUME	THROUGH VOLUME PLUS LEFT-TURN VOLUME *					
	<100	100 -199	200 - 249	250 - 299	300 - 349	350 - 399
Fewer Than 25						
25 - 49						
50 - 99						
100 - 149						
150 - 199						
200 - 249						
250 - 299						Yes
300 - 349					Yes	Yes
350 - 399				Yes	Yes	Yes
400 - 449			Yes	Yes	Yes	Yes
450 - 499			Yes	Yes	Yes	Yes
500 - 549		Yes	Yes	Yes	Yes	Yes
550 - 599		Yes	Yes	Yes	Yes	Yes
600 or More	Yes	Yes	Yes	Yes	Yes	Yes

Emergency Access

Emergency access will be available through the intersection of Oak Ridge Highway and West Emory Road. The width and condition of West Emory Road at the proposed access point would not hamper emergency vehicle access to the site. The National Fire Protection Association’s Brian O’Connor summarizes the needed fire access requirements at <https://www.nfpa.org/News-and-Research/Publications-and-media/Blogs-Landing-Page/NFPA-Today/Blog-Posts/2021/01/08/Fire-Apparatus-Access-Roads> Fire Departments need 20 feet of unobstructed width and 13.5 feet of vertical clearance.

Appendix D of the 2012 International Fire Code requires multiple-family residential projects having more than 100 dwelling units to be equipped with two separate and approved fire access roads. The code also requires these roads to be spaced not less than one-half the length of the longest diagonal dimension of the area to be served. If the developer cannot meet the spacing requirement Appendix D provides for other methods to ensure the safety of lives and property.

CRASH HISTORY

Knox County staff did not require crash history.

OTHER CONDITIONS

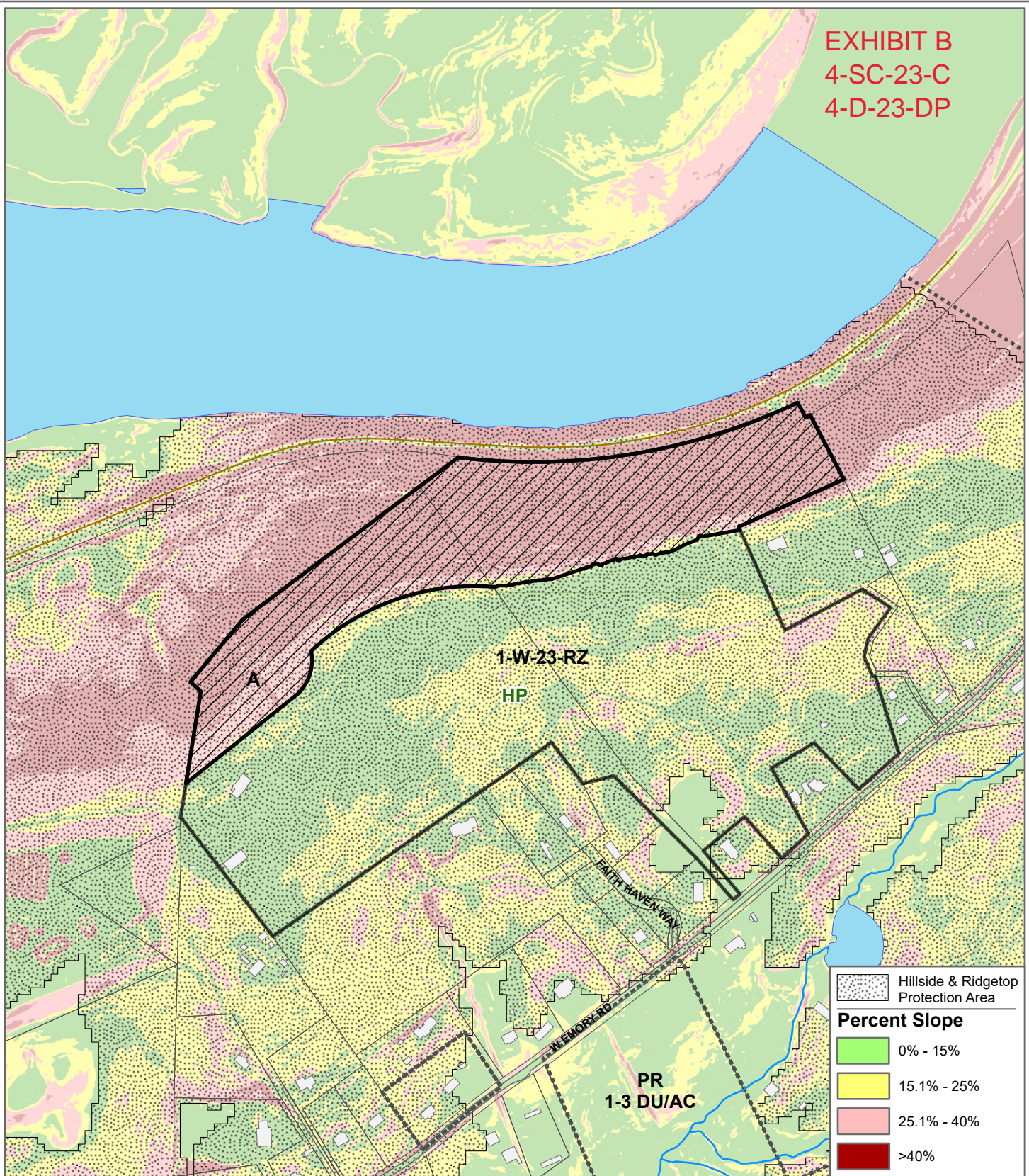
Knox County staff reported no special considerations.

CONCLUSION

Poplar Farms Subdivision will cause no significant deterioration of Oak Ridge Highway, West Emory Road, or Karns Valley Drive. Oak Ridge Highway operates at LOS C, West Emory Road operates at LOC A and Karns Valley Drive operates at LOS C. After the construction of the proposed Poplar Farms Subdivision,

it is expected that the Levels of Service on all studied roadways will maintain the same LOS. The sight distances at the existing intersections are adequate. The sight distance at the proposed intersections could not be evaluated because of the terrain and vegetation. The developer will be responsible for achieving the required sight distance from both proposed entrances and getting approval for these entrances from Knox County. The developer is also responsible for ensuring proper stem length to prevent blockage of internal intersections.

EXHIBIT B
4-SC-23-C
4-D-23-DP



1-W-23-RZ/ 1-J-23-SP (4-SC-23-C / 4-D-23-DP)
Exhibit B: Staff Recommended Undisturbed Area



Area to remain undisturbed

Original Print Date: 1/4/2023 Revised:
 Knoxville - Knox County Planning Commission * City / County Building * Knoxville, TN 37902

Petitioner:

Map No.: 076

Jurisdiction: County



Type “B” Screen: Continuous

APPROPRIATE LOCATION: Screening parking and loading areas from adjoining residential and office districts

NOTE: Landscape buffer strips should be a minimum of 12 feet in width, and sown with grass or ground cover for their full width, allowing for mulch at the base of plantings.

INTRODUCTION

Landscape screening reduces the impact of intense development upon adjacent land uses by providing visual separation, reducing the transmission of glare and air pollution, and limiting access. Screening also promotes the aesthetic appeal of a neighborhood and promotes higher property values.

This series of design guidelines defines several types of landscape screen. Each type is applicable to a certain intensity of conflict between adjacent land uses. Each screen type is illustrated by several planting schemes with an equivalent height, density and opacity of landscaping.

Planning uses these guidelines to illustrate desirable levels of screening appropriate to various site planning situations. Creative alternatives which achieve a comparable effect are encouraged.

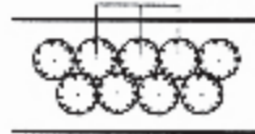
The contents of these guidelines are advisory and are intended to supplement, but not replace, the requirements of the Knoxville Zoning Ordinance and the Knox County Zoning Ordinance.

SHRUB HEIGHT
Installed: 4 ft.
Mature: 6 ft.

- Two offset rows of evergreen shrubs

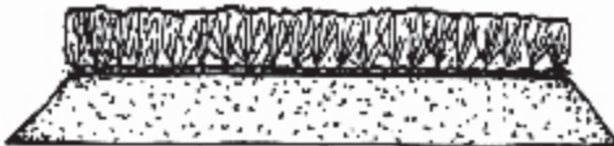


Maximum 4' Centers



SHRUB HEIGHT
Installed: 2 ft.
Mature: 3 ft.

- A continuous row of evergreen shrubs on a 3 ft. high earth berm



Maximum 3' Centers



TREE HEIGHT
Installed: 8 ft.
Mature: 15 ft.

- A 5 ft. high masonry wall or timber fence with evergreen trees and low shrubs or climbing vines



Maximum 50' Centers

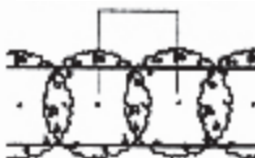


TREE HEIGHT
Installed: 8 ft.
Mature: 20 ft.

- One row of evergreen trees with branches touching the ground



Maximum 10' Centers





Development Request

DEVELOPMENT

- Development Plan
- Planned Development
- Use on Review / Special Use
- Hillside Protection COA

SUBDIVISION

- Concept Plan
- Final Plat

ZONING

- Plan Amendment
 - Sector Plan
 - One Year Plan
- Rezoning

Rebecca Walls

Applicant Name

Affiliation

2/27/2023

Date Filed

4/13/2023

Meeting Date (if applicable)

4-SC-23-C / 4-D-23-DP

File Number(s)

CORRESPONDENCE

All correspondence related to this application should be directed to the approved contact listed below.

Rebecca Walls HDI

Name / Company

120 Suburban Rd Ste 204 Knoxville TN 37923

Address

773-620-1627 / becca@hditn.com

Phone / Email

CURRENT PROPERTY INFO

Raymond Arthur Popp and Diana Marrio

Owner Name (if different)

200 Bus Terminal Rd Oak Rdg Oak Ridge TN 37803

Owner Address

931-575-9851

Owner Phone / Email

0 W EMORY RD / 9841 W EMORY RD

Property Address

76 018,021

Parcel ID

67.32 acres

Tract Size

Part of Parcel (Y/N)?

West Knox Utility District

Sewer Provider

West Knox Utility District

Water Provider

Septic (Y/N)

STAFF USE ONLY

Northwest side of W Emory Road, northeast of Oak Ridge Hwy

General Location

City

Commission District 6

PR (Planned Residential)

Agriculture/Forestry/Vacant Land

County District

Zoning District

Existing Land Use

Northwest County

Planning Sector

RR (Rural Residential), HP (Hillside Protection), SP (Strea

Sector Plan Land Use Classification

Rural Area

Growth Policy Plan Designation

DEVELOPMENT REQUEST

<input checked="" type="checkbox"/> Development Plan <input type="checkbox"/> Planned Development <input type="checkbox"/> Use on Review / Special Use	Related City Permit Number(s)
<input type="checkbox"/> Hillside Protection COA <input type="checkbox"/> Residential <input type="checkbox"/> Non-residential	
Home Occupation (specify) _____	
Other (specify) Detached residential subdivision	

SUBDIVISION REQUEST

Poplar Farms	Related Rezoning File Number
Proposed Subdivision Name	
Unit / Phase Number	143 Total Number of Lots Created
Additional Information _____	
<input type="checkbox"/> Attachments / Additional Requirements	

ZONING REQUEST

<input type="checkbox"/> Zoning Change	Proposed Zoning	Pending Plat File Number
Proposed Zoning		
<input type="checkbox"/> Plan Amendment	Proposed Plan Designation(s)	

Proposed Density (units/acre) Previous Zoning Requests

Additional Information _____

STAFF USE ONLY

PLAT TYPE

Staff Review Planning Commission

ATTACHMENTS

Property Owners / Option Holders Variance Request

ADDITIONAL REQUIREMENTS

- COA Checklist (Hillside Protection)
 Design Plan Certification (Final Plat)
 Site Plan (Development Request)
 Traffic Impact Study
 Use on Review / Special Use (Concept Plan)

Fee 1	Total
\$1,600.00	
Fee 2	
Fee 3	

AUTHORIZATION

Applicant Signature: **Rebecca Walls** Please Print Date: **2/27/2023**

Phone / Email _____
Property Owner Signature: **Raymond Arthur Popp and Diana Marriott Popp** Please Print Date: **2/27/2023**

I declare under penalty of perjury the foregoing (i.e., he/she/they is/are the owner of the property and that the application and all associated materials are being submitted with his/her/their consent) is true and correct.



Development Request

- DEVELOPMENT**
- Development Plan
 - Planned Development
 - Use on Review / Special Use
 - Hillside Protection COA

- SUBDIVISION**
- Concept Plan
 - Final Plat

- ZONING**
- Plan Amendment
 - SP OYP
 - Rezoning

Rebecca Walls with HDI		Option Holder
Applicant Name		Affiliation
2/27/23	4/13/23	File Number(s)
Date Filed	Meeting Date (if applicable)	

CORRESPONDENCE All correspondence related to this application should be directed to the approved contact listed below.

Applicant Property Owner Option Holder Project Surveyor Engineer Architect/Landscape Architect

Rebecca Walls	HDI
Name	Company
120 Suburban Rd	Knoxville TN 37923
Address	City State ZIP
773-620-1627	becca@hditn.com
Phone	Email

CURRENT PROPERTY INFO

Raymond Arthur Popp & Diana Marriott Po	200 Bus Terminal Rd Oak Ridge, TN 37830	931-575-9851
Property Owner Name (if different)	Property Owner Address	Property Owner Phone
9841 West Emory Rd Knoxville TN 37931	And 0 West Emory Rd	076 018, 076 021
Property Address	Parcel ID	
West Knox Utility District	West Knox Utility District	
Sewer Provider	Water Provider	Septic (Y/N)

STAFF USE ONLY

Northwest side of W Emory Road, northeast of Oak Ridge Hwy	67.32 acres		
General Location	Tract Size		
<input type="checkbox"/> City <input checked="" type="checkbox"/> County	6th	PR (Planned Residential)	Agriculture/forestry/vacant
District	Zoning District	Existing Land Use	
Northwest County	RR, HP, & SP	Rural Area	
Planning Sector	Sector Plan Land Use Classification	Growth Policy Plan Designation	

DEVELOPMENT REQUEST

Development Plan Use on Review / Special Use Hillside Protection COA

Residential Non-Residential

Home Occupation (specify) _____

Other (specify) Detached residential subdivision

Related City Permit Number(s)

SUBDIVISION REQUEST

Poplar Farms

Proposed Subdivision Name _____

Unit / Phase Number _____ Combine Parcels Divide Parcel 143 Total Number of Lots Created

Other (specify) _____

Attachments / Additional Requirements

Related Rezoning File Number

1-W-23-RZ

ZONING REQUEST

Zoning Change Proposed Zoning _____

Plan Amendment Change Proposed Plan Designation(s) _____

Pending Plat File Number

Proposed Density (units/acre) _____ Previous Rezoning Requests _____

Other (specify) _____

STAFF USE ONLY

PLAT TYPE

Staff Review Planning Commission

ATTACHMENTS

Property Owners / Option Holders Variance Request

ADDITIONAL REQUIREMENTS

Design Plan Certification (*Final Plat*)

Use on Review / Special Use (*Concept Plan*)


Traffic Impact Study

COA Checklist (*Hillside Protection*)

Fee 1		Total
0102	Concept Plan	
Fee 2		
		\$1,600
Fee 3		

MR


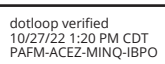
AUTHORIZATION

 **Rebecca Walls** 2/22/23

Applicant Signature Please Print Date

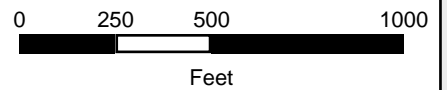
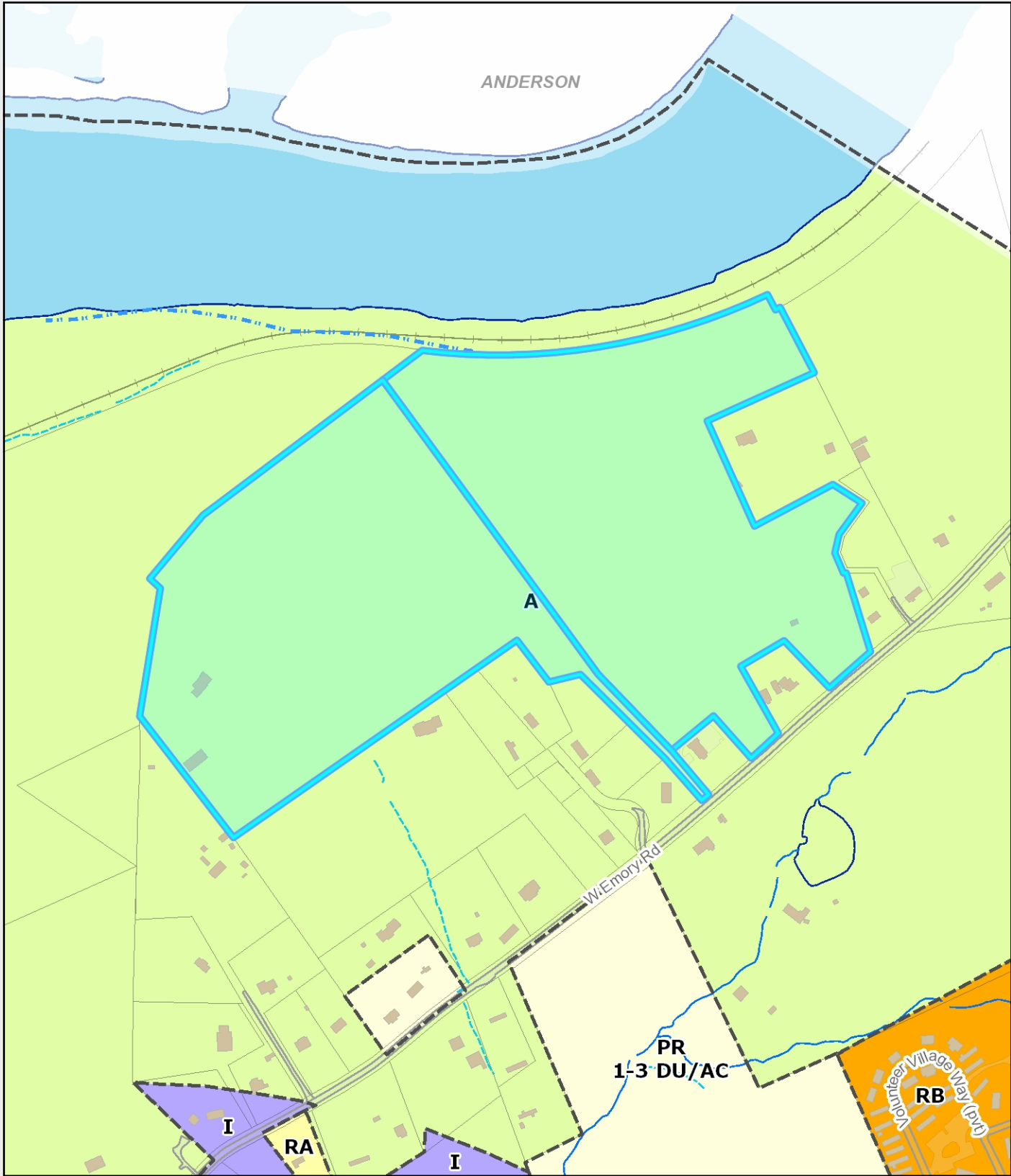
773-620-1627 becca@hditn.com

Phone Number Email

  **Stevan D. Popp; On behalf of The Raymond Arthur Popp & Diana Marriott Popp Revocable Trust** 10/27/2022

Property Owner Signature Please Print Date

I declare under penalty of perjury the foregoing [i.e., he/she/they is/are the owner of the property and that the application and all associated materials are being submitted with his/her/their consent] is true and correct.



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