HARTSVILLE/TROUSDALE COUNTY PLANNING COMMISSION

John Kerr – Chair | *Rhonda Keisling* | *David Thomas*
David Nollner – Vice Chair | *Carol Pruitt* | *Mark Swaffer*
Mary Ann Baker – Sec | *Sarah Murray* | *Thomas Harper*

FEBRUARY 14, 2022 | 7:00PM | TC COURTHOUSE

AGENDA

The Hartsville/Trousdale County Planning Commission meeting in regular session on February 14, 2022 at 7:00 pm, in the Hartsville/Trousdale County Courthouse.

CALL TO ORDER

ROLL CALL

APPROVAL OF MINUTES

Regular meeting January 10, 2022

CHANGES TO THE AGENDA

PUBLIC HEARING

OLD BUSINESS

NEW BUSINESS

- Final Subdivision Plat approval for Marshall Property for 2 lots (Map 26 Parcel 64.00) located in the 7th Civil District.
- Preliminary Subdivision Plat approval for Arthur B. Harper (Map 19M C Parcel 17.02) 21 lots located 7th Civil District.
- Site Plan approval for Jesse Peters Front Street Apartments (Map 027B A Parcel 10.00) located in the 7th Civil District.
- Request by Robert Powers for rezoning approval for 3 lots at 613,615,617 East Main Street (Map 027D A Parcel 3.00,4.00,5.00) from R-1 to R-3 located in 9th Civil District. Lots will be combined, and apartment buildings are planned.
- Request by staff to amend the Trousdale County Zoning Resolution, section 5.041 D to add Mining Activities and Related Services as a special exception.
- Site Plan Approval for The Towns at Melrose, a Townhome Subdivision, on 11.15 acres (Map 26A Group A Parcel 5.00) located in the 4th Civil District.

DISCUSSION TOPICS

- Proposal for the West Main Sidewalk Rehabilitation project of the sidewalks on West Main from the termination of the streetscape project at the corner of East Main Street and Broadway/Church Street intersection to the West Main Street and Littleton Street.

REPORT FROM CHAIRMAN

REPORT FROM BUILDING INSPECTOR

January	Residence No. of Permits	Residence Total Sq Feet	Res Permit Fees	Accessory Permits	Access Permit Fees	Commercial Permits	Commercial Permit Fees
2021	5	9,342	$5,960	0	0	0	0
2022	6	10,990	$10,994	3	$1,274	2	$1,125
(Dec 2021)	7	12,832	$8,888	6	$2,044	0	0

CLOSING REMARKS FROM THE CHAIR AND COMMISSION

ADJOURN

Hartsville/Trousdale Planning Commission
Meeting Minutes

January 10, 2022 – 7:00 P.M. – Trousdale County Courthouse – 2nd Floor

Present: John Kerr, Mary Ann Baker, David Nollner, Thomas Harper, Rhonda Keisling, Sarah Murray, Carol Pruitt, Mark Swaffer, Sam Edwards and Mary Turner (GNRC).

Absent: David Thomas

Others Present: Jim Carman and Dwight Jewell

Chairman Kerr called the meeting to order at 7:00 P.M. and Secretary Baker conducted a roll call.

Approval of Minutes

Thomas Harper made a motion to approve the minutes of the December 13, 2021 meeting as presented, Seconded by Sarah Murray. **MOTION CARRIED**

Changes to the Agenda

None

Public Hearing

None

Old Business

- *Final Plat approval Crestview Acres Subdivision, 12.2 acres (Map 27 C Parcel 37.00) in Civil District 1.* As discussed last month Jim Carman spoke with property owner Mr. Robbins and the request for the variance for the sidewalks had been withdrawn and the plat had been brought forward with them included. Mr. Carman advised that he had made the adjustments requested by Mary Turner at last month's meeting regarding setbacks, label size of water line, site plan for the mailboxes. Mr. Carman noted that the homeowner's association was being finalized and would be brought to Mr. Edwards when finished. David Nollner made a motion to approve the final plat, seconded by Sarah Murray. **MOTION CARRIED**

New Business

None.

Discussion Topics

None.

Report from Chairman

None.

Report From Building Inspector

A chart was provided to members showing the change in activity from last year as follows:

December	2021	2020	Nov. 2021
Residence Permits	7	5	7
Residence Total Sq Feet	12,832	9,342	13,254
Res Permit Fees	$8,888.00	$5,960.00	$8,472
Accessory Permits	6	0	3
Access Permit Fees	$2,044.00	$0.00	$2,653

Closing Remarks from the Chair and Commission

Mary Turner asked if any of the planning members had attended the (4 Hour) online training committee members Sarah Murray, Mary Ann Baker, Carol Pruitt and Thomas Harper advised they had. Thomas Harper reminded members to complete their ethics training.

Other Business

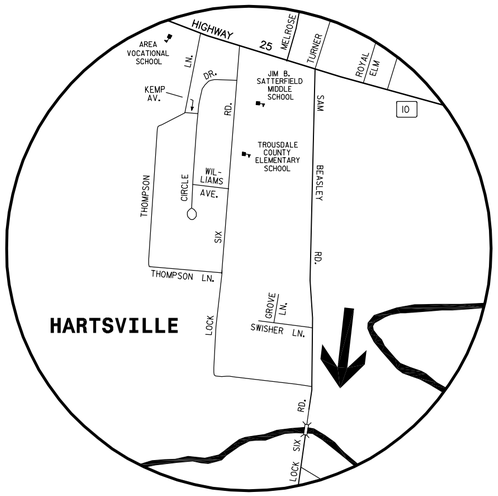
Dwight Jewell wanted to make the commission aware that the 911 Board had received approved plats with internal road names that had not been approved by the 911 Board or the County Commission and was causing confusion. Chairman Kerr understood the issue and Mrs. Turner advised that moving forward they would work on establishing a process that a preliminary plat comes thru it go thru the 911 Board and County Commission before final plat approval.

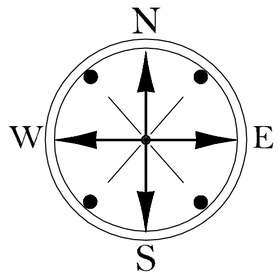
Adjourn

David Nollner made a motion to adjourn, seconded by Carol Pruitt and the meeting was adjourned.

Minutes Submitted by
Committee Secretary
Mary Ann Baker
01-13 -2021

LOCATION SKETCH n.t.s.



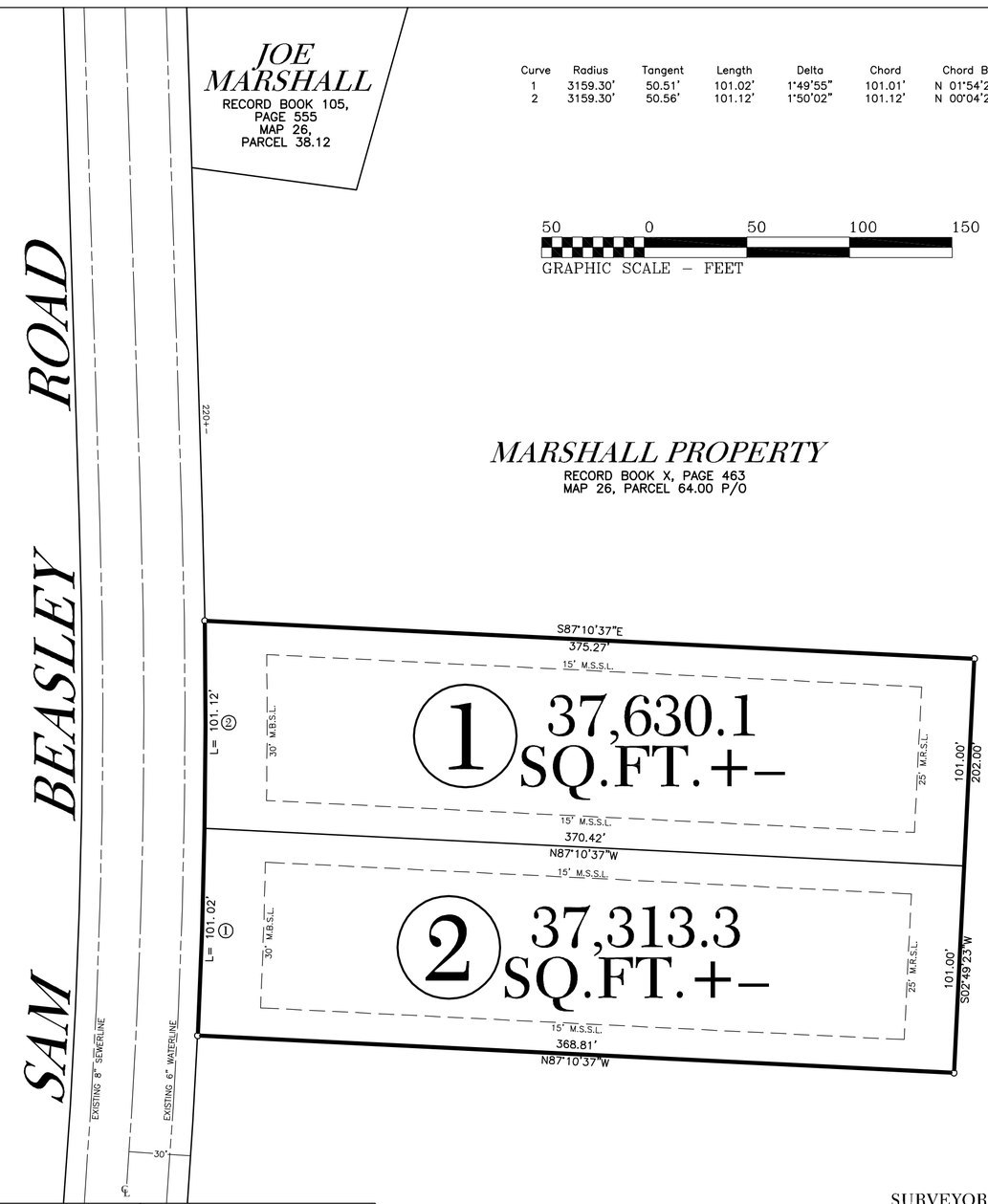


FINAL SUBDIVISION PLAT OF THE

MARSHALL PROPERTY

LOCATED IN THE 7TH CIVIL DISTRICT OF TROUSDALE COUNTY, TENNESSEE

SCALE : 1" = 50'
DATE : JANUARY 18, 2022
SIZE : 74,943.4 SQ.FT.+−
DEED : D. B. "X", PG. 463, R.O.T.C.T.
MAP : MAP 26, PAR. 64.00 P/O, T.A.O.T.C.T.



Curve	Radius	Tangent	Length	Delta	Chord	Chord Bear.
1	3159.30'	50.51'	101.02'	1°49'55"	101.01'	N 01°54'25" E
2	3159.30'	50.56'	101.12'	1°50'02"	101.12'	N 00°04'26" E

50 0 50 100 150
GRAPHIC SCALE – FEET

CERTIFICATE OF OWNERSHIP AND DEDICATION

I (We) hereby certify that I am (we are) the owner(s) of the property shown and described hereon as evidenced in Deed Book X, Page 463, Trousdale County Register's Office, and that I (we) hereby adopt this plan of subdivision with my (our) free consent, establish the minimum building restriction lines, and that offers of irrevocable dedication for all public ways, utilities, and other facilities have been filed.

Date:_____

_____
Owner

Date:_____

_____
Owner

CERTIFICATE OF SURVEY ACCURACY

I hereby certify that to the best of my knowledge and belief this is a true and accurate survey of the property shown hereon, that this is a Category 1 Land Survey as defined in, Chapter 0820-3-.05, Tennessee Code Annotated and that the ratio of precision is greater than or equal to 1:10,000.

Date: _____

_____
JIM CARMAN
Registered Land Surveyor #2053

CERTIFICATE OF APPROVAL OF WATER SYSTEMS

I hereby certify that the water system(s) outlined or indicated on the final subdivision plat entitled "FINAL SUBDIVISION PLAT OF THE MARSHALL PROPERTY", have been installed in accordance with current local and/or state government requirements, or a sufficient bond or cash has been filed which will guarantee said installation.

Date: _____

_____
Name, Title, and Title Agency or Authorized Approving Agency

CERTIFICATE OF APPROVAL OF SEWER SYSTEMS

I hereby certify that the sewer system(s) outlined or indicated on the final subdivision plat entitled "FINAL SUBDIVISION PLAT OF THE MARSHALL PROPERTY", have been installed in accordance with current local and/or state government requirements, or a sufficient bond or cash has been filed which will guarantee said installation.

Date: _____

_____
Name, Title, and Title Agency or Authorized Approving Agency

CERTIFICATE OF APPROVAL OF PUBLIC WAYS FOR BOND POSTING

I hereby certify: (1) that all designated public ways on this final subdivision plat have been installed in an acceptable manner and according to the specifications of the Hartsville/ Trousdale County Subdivision Regulations, or (2) That a performance bond or other surety has been posted with the Planning Commission to assure completion of all required improvements in case of default.

Date: _____

_____
Appropriate Government Representative

CERTIFICATE OF APPROVAL FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the Hartsville/Trousdale County, Tennessee Subdivision Regulations, with the exceptions of such variances, if any, as are noted in the minutes of the Planning Commission, and that it has been approved for recording in the Office of the County Register.

Date: _____

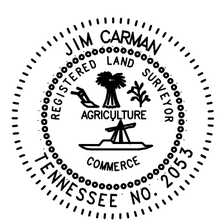
_____
Secretary Planning Commission

NOTES:

1. PROPERTY IS ZONED R1.
2. THIS PROPERTY DOES NOT LIE IN AN AREA DESIGNATED AS "SPECIAL FLOOD HAZARD". SEE COMMUNITY PANEL NUMBER 47169C0044C, WITH AN EFFECTIVE DATE OF SEPTEMBER 29, 2010.
3. OWNER: MARSHALL PROPERTY
   820 McMURRY BLVD. EAST
   HARTSVILLE, TENNESSEE 37074
4. ALL CORNERS ARE NEW IRON RODS.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS IS A CATEGORY 1 SURVEY, AND THAT THE RATIO OF PRECISION OF THE UNADJUSTED SURVEY IS AT LEAST 1 : 10,000 AS SHOWN HEREON.



CARMAN SURVEYING
50 LINDA LANE
HARTSVILLE, TENNESSEE
PHONE: (615) 374-3344

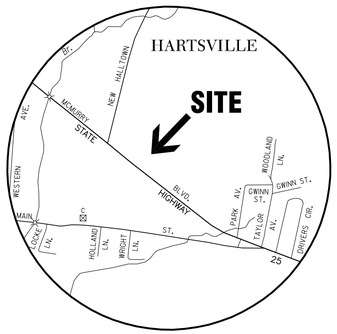
PRELIMINARY SUBDIVISION PLAT FOR

ARTHUR B. HARPER

LOCATED IN THE 7TH CIVIL DISTRICT OF TROUSDALE COUNTY, TENNESSEE

SCALE : 1" = 50'
DATE : JANUARY 21, 2022
SIZE : 7.15 AC.+−
DEED : R. B. 142, PG. 577, R.O.T.C.T.
MAP : MAP 19−M, PAR. C−17.02, T.A.O.T.C.T.

LOCATION SKETCH n.t.s.



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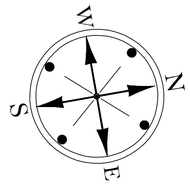
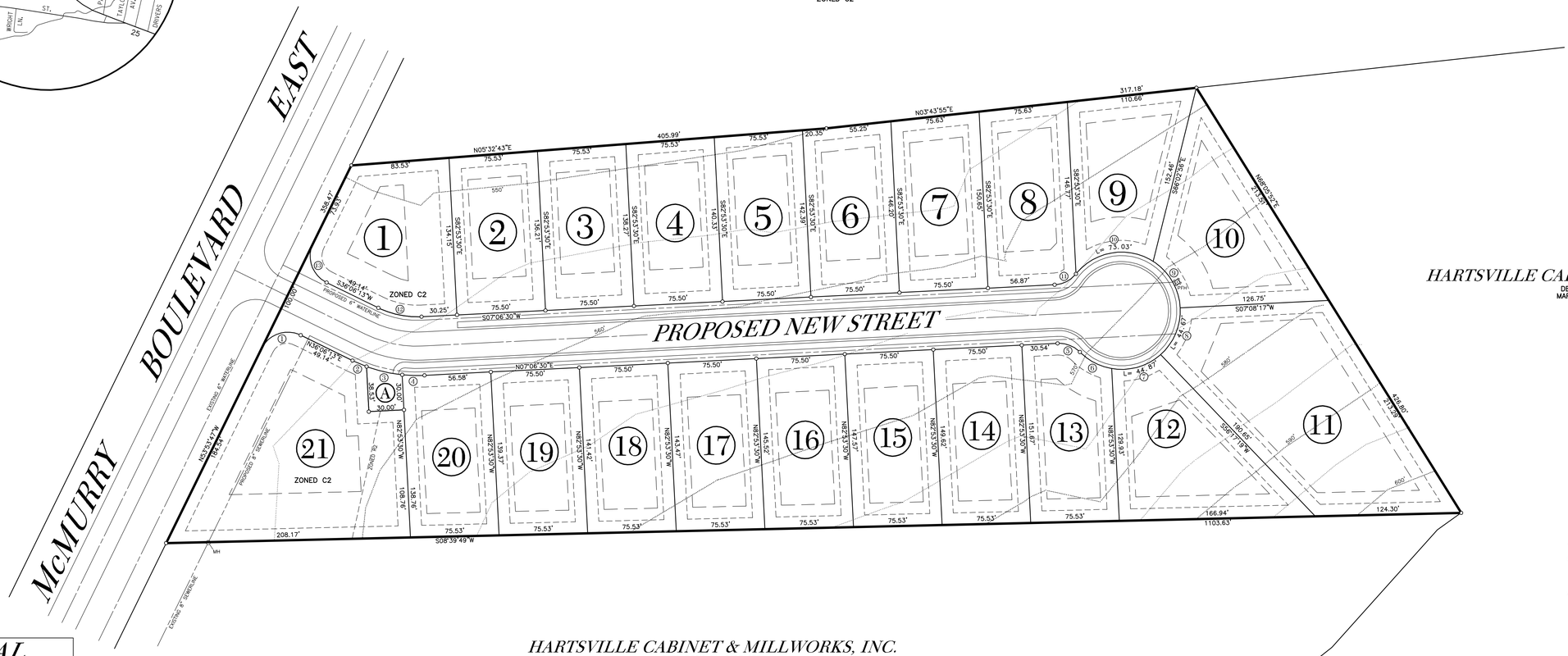
GRAPHIC SCALE − FEET



STANLEY HOLDER
RECORD BOOK 9, PAGE 19
MAP 19−M, PARCEL A−1.04
ZONED C2



HARTSVILLE CABINET & MILLWORKS, INC.
DEED BOOK 64, PAGE 277
MAP 19−M, PARCEL C−17.01
ZONED R3

HARTSVILLE CABINET & MILLWORKS, INC.
DEED BOOK 64, PAGE 274
MAP 19−M, PARCEL C−17.03
ZONED R1

NOTES:

1. PROPERTY IS ZONED R2.
2. THIS PROPERTY DOES NOT LIE IN AN AREA DESIGNATED AS "SPECIAL FLOOD HAZARD", SEE COMMUNITY PANEL NUMBER 47165C0044D, WITH AN EFFECTIVE DATE OF SEPTEMBER 29, 2010.
3. OWNER: ARTHUR B. HARPER
   125 BROWNING BRANCH ROAD
   BETHPAGE, TENNESSEE 37022

TYPICAL RESIDENTIAL LOT

CERTIFICATE OF OWNERSHIP AND DEDICATION

I (We) hereby certify that I am (we are) the owner(s) of the property shown and described hereon as evidenced in Record Book 142, Page 577, Trousdale County Register's Office, and that I (we) hereby adopt this plan of subdivision with my (our) free consent, establish the minimum building restriction lines, and that offers of irrevocable dedication for all public ways, utilities, and other facilities have been filed.

Date:_____

_____
ARTHUR B. HARPER

CERTIFICATE OF COMMON AREA DEDICATION

Arthur B. Harper in recording this plat has designated certain areas of land shown hereon as common areas intended for use by the homeowners within rolling meadows for mail service related activities. the above described areas are not dedicated for use by the general public, but are dedicated to the common use of the homeowners within the named subdivision. "Declaration of covenants and Restrictions", applicable to the above named subdivision, is hereby incorporated and made part of this plat.

Date: _____

_____
ARTHUR B. HARPER

CERTIFICATE OF SURVEY ACCURACY

I hereby certify that to the best of my knowledge and belief this is a true and accurate survey of the property shown hereon, that this is a Category 1 Land Survey as defined in, Chapter 0820-3-.05, Tennessee Code Annotated and that the ratio of precision is greater than or equal to 1:10,000.

Date: _____

_____
JIM CARMAN
Registered Land Surveyor #2053

CERTIFICATE OF APPROVAL OF WATER SYSTEMS

I hereby certify that the water system(s) outlined or indicated on the final subdivision plat entitled "ARTHUR B. HARPER" have been installed in accordance with current local and/or state government requirements, or a sufficient bond or cash has been filed which will guarantee said installation.

Date: _____

_____
Name, Title, and Title
Agency or Authorized
Approving Agency

CERTIFICATE OF APPROVAL OF SEWER SYSTEMS

I hereby certify that the sewer system(s) outlined or indicated on the final subdivision plat entitled "ARTHUR B. HARPER" have been installed in accordance with current local and/or state government requirements, or a sufficient bond or cash has been filed which will guarantee said installation.

Date: _____

_____
Name, Title, and Title Agency
or Authorized Approving Agency

CERTIFICATE OF APPROVAL OF PUBLIC WAYS FOR BOND POSTING

I hereby certify: (1) that all designated public ways on this final subdivision plat have been installed in an acceptable manner and according to the specifications of the Hartsville/ Trousdale County Subdivision Regulations, or (2) That a performance bond or other surety has been posted with the Planning Commission to assure completion of all required improvements in case of default.

Date: _____

_____
Appropriate Government
Representative

CERTIFICATE OF APPROVAL FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the Hartsville/Trousdale County, Tennessee Subdivision Regulations, with the exceptions of such variances, if any, as are noted in the minutes of the Planning Commission, and that it has been approved for recording in the Office of the County Register.

Date: _____

_____
Secretary Planning Commission

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS IS A CATEGORY 1 SURVEY, AND THAT THE RATIO OF PRECISION OF THE UNADJUSTED SURVEY IS AT LEAST 1 : 10,000 AS SHOWN HEREON.

JIM CARMAN
REGISTERED LAND SURVEYOR
AGRICULTURE
COMMERCE
TENNESSEE NO. 2053

_____
CARMAN SURVEYING
150 MIDDLE FORK ROAD
HARTSVILLE, TENNESSEE
PHONE: (615) 374-3344

LOT	SIZE − SQ.FT.
A	1,007.6
1	13,335.2
2	10,205.9
3	10,361.4
4	10,517.0
5	10,672.5
6	10,876.3
7	11,206.1
8	11,542.4
9	12,198.1
10	14,085.8
11	26,661.5
12	14,349.7
13	11,009.0
14	11,373.8
15	11,219.0
16	11,064.3
17	10,909.5
18	10,754.8
19	10,600.0
20	10,454.3
21	25,260.7

JESSE PETERS
FRONT STREET APARTMENT BUILDING

HARTSVILLE, TENNESSEE

TAX MAP 027B, GROUP A, PARCEL 010.00
FRONT STREET

INDEX OF DRAWINGS

DESCRIPTION	SHEET
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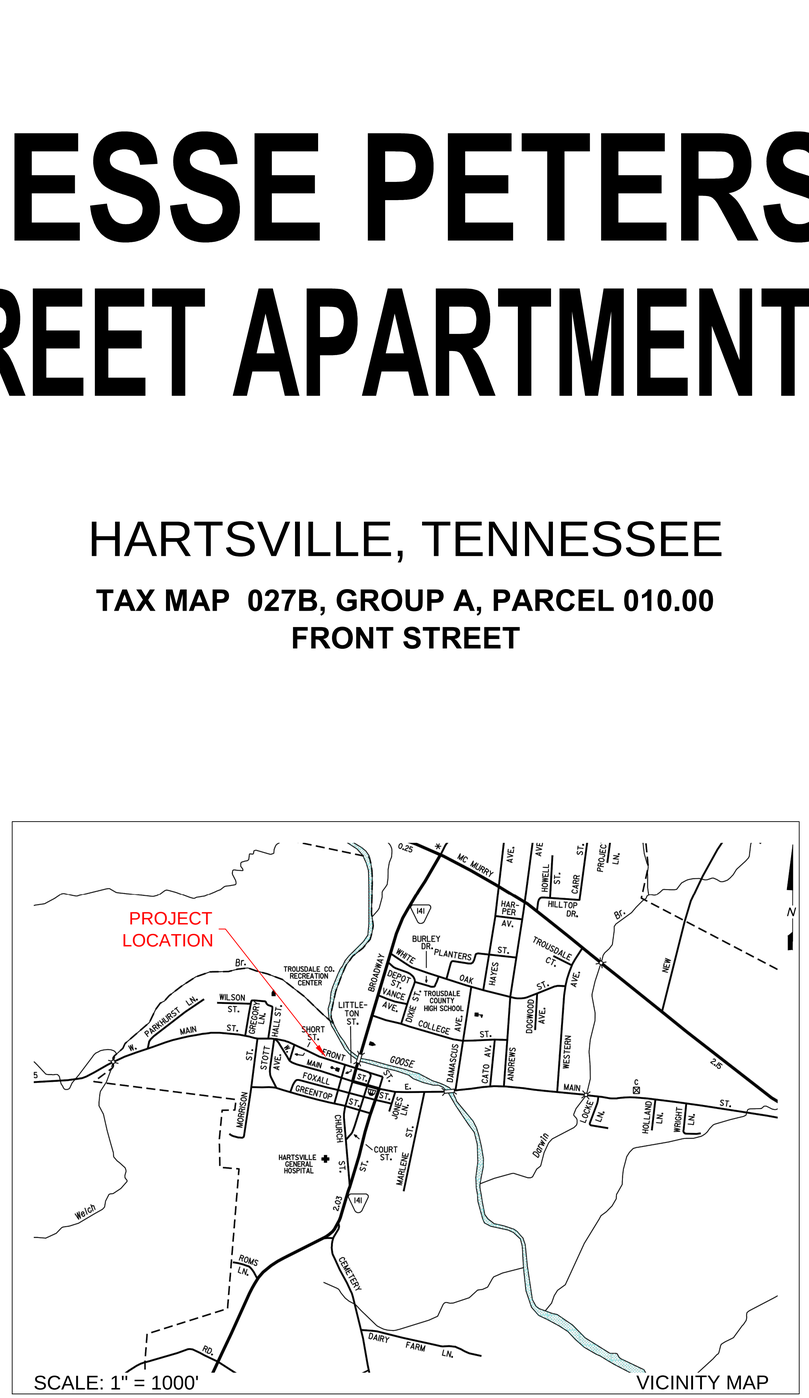
PROPOSED GRADING & DRAINAGE PLAN	C3
PROPOSED UTILITIES PLAN	C4
STANDARD SITE DETAILS	C5
STANDARD SITE DETAILS	C6



SITE DATA

OWNER / APPLICANT:	JESSE PETERS 514 COLLEGE AVENUE EAST CARTHAGE, TN 37030
ZONING:	C-2
AREA OF TRACT:	0.48± AC.
TAX MAP ID:	027B
PROPOSED USE OF STRUCTURES:	APARTMENTS
LAND DISTURBANCE:	0.45± AC.
WATER:	PUBLIC, HTWSUD
WASTE:	PUBLIC, HTWSUD
EXISTING BUILDING GROSS:	2982 S.F.
PROPOSED BUILDING GROSS:	3,875 S.F.
EXISTING IMPERVIOUS SURFACE AREA :	2,982 S.F.
PROPOSED IMPERVIOUS SURFACE AREA:	11,275 S.F.

MID - TENN ENGINEERING CO.
648 HWY. 52 BYPASS WEST
LAFAYETTE,TN (615) 666-2385

JOB NO. 859101

NO	DATE	DESCRIPTION	BY	CKD

REVISIONS

MID - TENN ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE,TN (615) 666-2385

JESSE PETERS APARTMENTS
FRONT STREET
HARTSVILLE, TENNESSEE

COVER SHEET

JAMES D. CLAIRE
REGISTERED ENGINEER
No. 122997
STATE OF TENNESSEE
1/5/22

DESIGNED BY:	DRAWN BY:	SCALE:
J.D.C.	J.D.C.	AS-NOTED

CHECKED BY:	DATE	JOB NO.
E.J.W.	1/05/22	859101

SHEET
T1

GENERAL NOTES

1. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS BY ALL OF THE PERMITTING AUTHORITIES.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS, REFERENCED DOCUMENTS, AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
3. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO OUR OFFICE AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY OUR OFFICE IF ACTUAL SITE CONDITIONS DIFFER FROM THAT SHOWN ON THE PLAN, OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER SITE FEATURES.
4. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OF GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
5. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL / BUILDING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY / EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY LOCATIONS AND SITE LIGHTING ELECTRICAL DESIGN AND LAYOUT.
6. LOCATIONS OF PROPERTY LINES & UNDERGROUND UTILITIES POSSIBLY INCOMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION & ELEVATION OF ALL EXISTING UNDERGROUND UTILITIES BEFORE MAKING TIES TO THEM.
7. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL TOWN, COUNTY, STATE AND FEDERAL LAWS AND APPLICABLE CODES. CONTRACTOR SHALL PROPERLY REMOVE AND DISPOSE OF HAZARDOUS / UNSUITABLE MATERIAL OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE CODES AND LAWS.
8. THE CONTRACTOR SHALL OBTAIN & POST ALL NECESSARY PERMITS.
9. THE CONTRACTOR SHALL PROVIDE SAFETY MEASURES, THROUGHOUT THE FULL TERM OF THE PROJECT, IN STRICT ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AS PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
10. A COPY OF THE APPROVED PROJECT PLANS SHALL REMAIN WITH THE CONTRACTOR ON SITE AT ALL TIMES DURING THE PROJECT.
11. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS / MEANS FOR COMPLETION OF THE WORK DEPICTED ON THESE PLANS NOR ANY CONFLICTS / SCOPE REVISIONS WHICH RESULT FROM SAME. CONTRACTOR RESPONSIBLE FOR DETERMINING METHOD / MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND NOTIFICATION OF OWNER AND ENGINEER OF RECORD WHEN A CONFLICT IS IDENTIFIED.
12. NEITHER THE PROFESSIONAL ACTIVITIES OF MID-TENN ENGINEERING COMPANY NOR THE PRESENCE OF MID-TENN ENGINEERING COMPANY OR ITS EMPLOYEES AND SUB-CONSULTANTS AT A CONSTRUCTION SITE SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THESE PLANS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. MID-TENN ENGINEERING COMPANY AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY. MID-TENN ENGINEERING COMPANY SHALL BE INDEMNIFIED BY THE GENERAL CONTRACTOR AND SHALL BE MADE ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR;S POLICIES OF GENERAL LIABILITY INSURANCE.

GRADING GENERAL NOTES

1. CONTOURS SHOWN ARE FOR FINISHED PAVING, SIDEWALK, SLAB, OR GROUND. ADJUSTMENT TO SUBGRADE IS THE CONTRACTOR'S RESPONSIBILITY.
2. PROOF ROLL THE SITE WITH A TANDEM AXLE LOADED DUMP TRUCK IN TWO DIRECTIONS, ANY AREAS WHICH ARE NOTED TO RUT OR PUMP EXCESSIVELY SHALL BE UNDERCUT AND BACKFILLED WITH COMPACTED ENGINEERED FILL ACCORDING TO THE COMPACTION REQUIREMENTS BELOW.
3. IF DURING THE OVERLOT GRADING PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE AN UNIDENTIFIED SOILS SITUATION IS PRESENT, THE GEOTECHNICAL ENGINEER AND OWNER'S CIVIL ENGINEER CONSULTANT (MID-TENN ENGINEERING COMPANY) SHALL BE CONTACTED FOR RECOMMENDATIONS.
4. UNLESS OTHERWISE SHOWN, NO PROPOSED SLOPE SHALL EXCEED TWO (2) HORIZONTAL TO ONE (10) VERTICAL. ALL SLOPED AREAS MUST BE PROTECTED FROM EROSION.
5. SPOT ELEVATIONS SHALL TAKE PRECEDENCE OVER CONTOURS AND SLOPES SHOWN. THE CONTRACTOR SHALL NOTIFY THE OWNERS ENGINEER OF SPOT ELEVATIONS THAT DO NOT APPEAR TO BE CONSISTENT WITH THE CONTOURS AND SLOPES. SPOT ELEVATIONS AND SPECIFIC PROFILE DESIGN SHALL BE USED FOR SETTING ELEVATIONS OF CURB, GUTTER, AND UTILITIES.
6. CONTRACTOR SHALL USE BENCHMARKS AND DATUMS SHOWN HEREON TO SET PROJECT BENCHMARK(S), BY RUNNING A LEVEL LOOP BETWEEN AT LEAST TWO BENCHMARKS, AND SHALL PROVIDE SURVEY NOTES OF SUCH TO PROJECT ENGINEER PRIOR TO COMMENCING CONSTRUCTION.
7. ALL UTILITIES (MANHOLES, VALVE COVERS, CLEANOUTS, VAULTS, BOXES, ETC.) SHALL BE ADJUSTED TO FINAL GRADE PRIOR TO FINAL LIFT OF ASPHALT.
8. SPOT ELEVATIONS REPRESENT FLOW LINE OR TOP OF ASPHALT UNLESS OTHERWISE NOTED.
9. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
10. EXISTING GRADE CONTOUR INTERVALS SHOWN AT ONE (2) FOOT INTERVALS.
11. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT ONE (2) FOOT INTERVALS.
12. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
13. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES AND NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION.
14. ALL SITE CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3500 PSI.
15. PAVEMENT OPERATION TO COMMENCE AS SOON AS POSSIBLE AFTER COMPLETION OF FINAL GRADING.

ADA GENERAL NOTES

1. ALL HANDICAP PARKING STALLS SHALL BE PAINTED AND SIGNED IN STRICT ACCORDANCE WITH CURRENT ADA STANDARDS AND LOCAL REGULATIONS.
2. ALL HANDICAP RAMPS AND ACCESSIBLE RAMPS SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH CURRENT ADA STANDARDS AND LOCAL REGULATIONS.
3. THE FOLLOWING CRITERIA SHALL APPLY TO ALL CONSTRUCTION WITHIN THE LIMITS OF THIS PROJECT.
   (A) THE MAXIMUM CROSS SLOPE OF ANY SIDEWALK, PEDESTRIAN ACCESS OR STORE FRONT SHALL NOT EXCEED 2%. THE SLOPE SHALL BE MEASURED PERPENDICULAR TO THE DIRECTION OF TRAVEL.
   (B) THE GRADES WITHIN HANDICAP PARKING STALLS SHALL NOT EXCEED 2% MEASURED IN ANY DIRECTION. HANDICAP PARKING STALLS SHALL HAVE AN ACCESSIBLE ROUTE, AS NOTED BELOW, TO THE BUILDING ENTRY AS SHOWN ON THE PLANS.
   (C) ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5%. ACCESSIBLE ROUTES EXCEEDING 5% SHALL BE CONSTRUCTED WITH RAMPS AND HANDRAILS HAVING A MAXIMUM SLOPE OF 8.33% FOR A MAXIMUM RISE OF THIRTY (30) INCHES. A 5-FOOT BY 5-FOOT LANDING PAD (WITH MAXIMUM SLOPE OF 2% IN ANY DIRECTION) SHALL BE CONSTRUCTED AT THE BOTTOM AND TOP OF ALL RAMPS.
4. ALL SITE DIRECTIONAL SIGNS SHALL HAVE A MINIMUM CLEAR DISTANCE OF SEVEN (7) FEET AS MEASURED FROM THE GROUND TO THE BOTTOM OF THE LOWEST SIGN.
5. ALL ACCESSIBLE ROUTES THAT CROSS A VEHICULAR DRIVE SHALL CONTAIN DETECTIBLE WARNING IN STRICT ACCORDANCE WITH CURRENT ADA STANDARDS AND LOCAL REGULATIONS WHETHER OR NOT A RAMP IS NEEDED.
6. THE MAXIMUM VERTICAL GRADE DIFFERENTIAL BETWEEN SURFACES ALONG AN ACCESSIBLE ROUTE SHALL BE A MAXIMUM OF $\frac{1}{2}$ INCH.
7. THE CONTRACTOR SHALL HAVE ALL CONCRETE FORMS THAT ARE PART OF ANY DESIGNATED ACCESSIBLE ROUTE, STORE FRONT, HANDICAP PARKING SPACE OR RAMP CHECKED BY OWNERS ENGINEER OF RECORD TO VERIFY GRADES AND CROSS SLOPES PRIOR TO PLACEMENT OF ANY CONCRETE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS AND DAMAGES FOR IMPROVEMENTS INSTALLED OR OTHERWISE IMPACTED BY WORK NOT APPROVED BY THE OWNERS ENGINEER.

UTILITY GENERAL NOTES

1. ALL INSTALLATION AND MATERIALS SHALL, AT A MINIMUM, CONFORM TO HARTSVILLE/TROUSDALE WATER SEWER UTILITY DISTRICT STANDARDS, SPECIFICATIONS, PLANS, AND DETAILS.
2. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
3. ALL NECESSARY INSPECTIONS AND / OR CERTIFICATIONS REQUIRED BY CODES AND / OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIES UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
5. UNDERGROUND UTILITIES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
6. CONTRACTOR SHALL NOTIFY THE UTILITY BEFORE CONNECTING TO EXISTING UTILITY.
7. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
8. ALL UTILITY PIPES SHALL BE BEDDED AND BACKFILLED IN ACCORDANCE WITH THE DETAIL DRAWINGS.
9. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS. ANY EXISTING MANHOLES IN UNPAVED AREAS SHALL BE FOUR (4) INCHES ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS.
10. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI.
11. SITE WORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IMPROVEMENTS TO WITHIN FIVE (5) FEET OF PROPOSED BUILDING UNLESS SPECIFIED OTHERWISE. SITE WORK CONTRACTOR SHALL COORDINATE WITH BUILDING CONTRACTOR ON ALL UTILITY BUILDING ENTRANCE LOCATIONS.
12. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
13. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS PRIOR TO SUBSURFACE WORK FOR LIGHT POLES, BORING, ETC. AND SIMILAR STRUCTURES.
14. ALL UTILITIES SHALL BE TESTED TO ENSURE PROPER INSTALLATION.

SANITARY SEWER GENERAL NOTES

1. ALL GRAVITY SANITARY SEWER PIPE SHALL MEET SDR26 PVC REQUIREMENTS. SEWER LINE CONSTRUCTION AND MATERIALS SHALL CONFORM TO ASTM STANDARDS AND SPECIFICATIONS.
2. DISTANCES FOR SANITARY SEWER ARE THE HORIZONTAL DISTANCES FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. THEREFORE, DISTANCES SHOWN ON PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT.
3. RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATION. PIPELINE CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS, GROUT, AND STEEL SHIMS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE IN ACCORDANCE WITH THE PLANS. ALL FRAME SHALL BE ADJUSTED TO FINAL GRADE PRIOR TO THE FINAL LIFT OF ASPHALT.
4. ALL SANITARY SEWER MAIN TESTING SHALL BE IN ACCORDANCE WITH UTILITY COMPANY STANDARDS. ALL TEST RESULTS SHALL BE PROVIDED TO THE OWNERS ENGINEER, THE OWNER, AND THE G0VERNING AUTHORITY PRIOR TO BEGINNING SERVICE.
5. COMPACTION OF ALL TRENCHES WITHIN PROJECT SITE MUST BE ATTAINED AND COMPACTION RESULTS SUBMITTED THE ENGINEER PRIOR TO FINAL ACCEPTANCE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING STRUCTURES AND IMPROVEMENTS DURING INSTALLATION OF SANITARY SEWER SYSTEM.
7. CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR ALL CONNECTIONS TO BUILDING SERVICES AND VERIFY LOCATIONS AS SHOWN PRIOR TO CONSTRUCTION.
8. SANITARY SEWER STRUCTURES AND PIPES SHALL BE BEDDED IN ACCORDANCE WITH DETAILS ON PLANS.
9. ALL SANITARY SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH ASPHALT, AND SHALL HAVE TRAFFIC BEARING CASTINGS. MANHOLES IN UNPAVED AREAS SHALL BE FOUR (4) INCHES ABOVE FINISH GROUND GRADING. ALL STORM STRUCTURE LIDS SHALL BE BITUMINOUS COATED AND LABELED "SANITARY SEWER".

EROSION PREVENTION AND SEDIMENT CONTROLS

1. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PROPER SOIL EROSION MEASURES FOR PROTECTION OF ALL ADJOINING ROADS, LANDS, AND STREAMS. REFER TO S.C.S. MANUAL "RAINWATER AND LAND DEVELOPMENT" AND T.D.E.C. "EROSION & SEDIMENT CONTROL HANDBOOK" FOR REQUIREMENTS.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING AND GRUBBING. THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL AT ALL POINTS WHERE STORM WATER LEAVES THE LIMITS OF THE PROJECT, ALL POINTS WHERE STORM WATER ENTERS A STREAM THAT TRAVERSES THE PROJECT, AND ALL POINTS WHERE STORM WATER ENTERS PORTIONS OF COMPLETED UNDERGROUND PIPING.
3. THE CONSTRUCTION BMP'S WITHIN THESE PLANS REPRESENT THE MINIMUM REQUIRED ONSITE. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ONSITE BMP'S AS THE PROJECT PROGRESSES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ALL TEMPORARY AND PERMANENT CONTROL PRACTICES TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. SHOULD A STRUCTURE OR FEATURE BECOME DAMAGED, THE CONTRACTOR SHALL REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER.

NO.	DATE	DESCRIPTION REVISIONS	BY	CKD

MID - TENN ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE,TN (615) 666-2355

JESSE PETERS APARTMENTS
FRONT STEET
HARTSVILLE, TENNESSEE

GENERAL NOTES

JOHN D. CLAIR
REGISTERED ENGINEER
No. 123910
STATE OF TENNESSEE
11/5/22

DESIGNED BY:	DRAWN BY:	SCALE:
J.D.C.	J.D.C.	NONE

CHECKED BY:	DATE:	JOB NO.
E.J.W.	1/05/22	859101

SHEET
G1

BENCHMARK TABLE

BENCHMARK	DESCRIPTION	NORTHING	EASTING	ELEVATION
BM#1	TOP OF HYDRANT	694,423.478	1,983,258.684	497.00

NOTES: ALL COORDINATES AND ELEVATIONS ARE SITE SPECIFIC.

SITE LEGEND

SYMBOL	DESCRIPTION
℄	EXISTING PROPERTY LINE
ROW	EXISTING RIGHT-OF-WAY
EOP	EXISTING EDGE OF PAVEMENT
480	EXISTING CONTOUR
W 6"	EXISTING WATER MAIN
SA 8"	EXISTING SEWER MAIN
	EXISTING POWER POLE
	IR(O) EXISTING IRON ROD (OLD)
	EXISTING BENCHMARK

FRONT ST.

WEST MAIN ST.

EXIST. BUILDING TO BE REMOVED

EXIST. BUILDING TO BE REMOVED

L1 153.43'

L2 162.87'

N21°09'44"W 134.13'

S14°42'24"W 150.89'

BM#1

MICHAEL WOODARD ETUX HANNAH
MAP 27B, GROUP A, PARCEL 9.00
DB. RB131, PG. 426

JESSE PETERS
MAP 27B, GROUP A, PARCEL 10.00
DB. RB131, PG. 255

WAYNE THOMAS HARPER
MAP 27, GROUP B, PARCEL A-11.00
R.B. 70, PG. 48

NO.	DATE	DESCRIPTION	BY	CKD
		REVISIONS		

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LAFAYETTE,TN (615) 666-2385

JESSE PETERS APARTMENTS
FRONT STEET
HARTSVILLE, TENNESSEE

EXISTING SITE LAYOUT

JOSHUA D. CLARK
REGISTERED ENGINEER
No. 123910
STATE OF TENNESSEE
11/5/22

DESIGNED BY:	DRAWN BY:	SCALE:	CHECKED BY:	DATE:	JOB NO.
J.D.C.	J.D.C.	1" = 10'	E.J.W.	1/05/22	859101

SHEET
C1

SITE DATA INFORMATION

ZONING: C-2
AREA OF TRACT: 0.48 AC.

EXISTING BUILDING GROSS S.F. 2982 S.F.
PROPOSED BUILDING GROSS S.F. 3,825 S.F.

# OF PARKING SPACES REQUIRED **	16 SPACES
# OF PARKING SPACES PROPOSED IN PAVEMENT	16 SPACES
# OF HANDICAP PARKING SPACES REQUIRED	1 SPACE
# OF HANDICAP PARKING SPACES PROPOSED	1 SPACE
# OF LOADING / UNLOADING SPACES REQUIRED	1 SPACE
# OF LOADING / UNLOADING SPACES PROPOSED	1 SPACE
EXISTING IMPERVIOUS SURFACE AREA	2982 S.F.
TOTAL PROPOSED IMPERVIOUS SURFACE AREA	11,275 S.F.

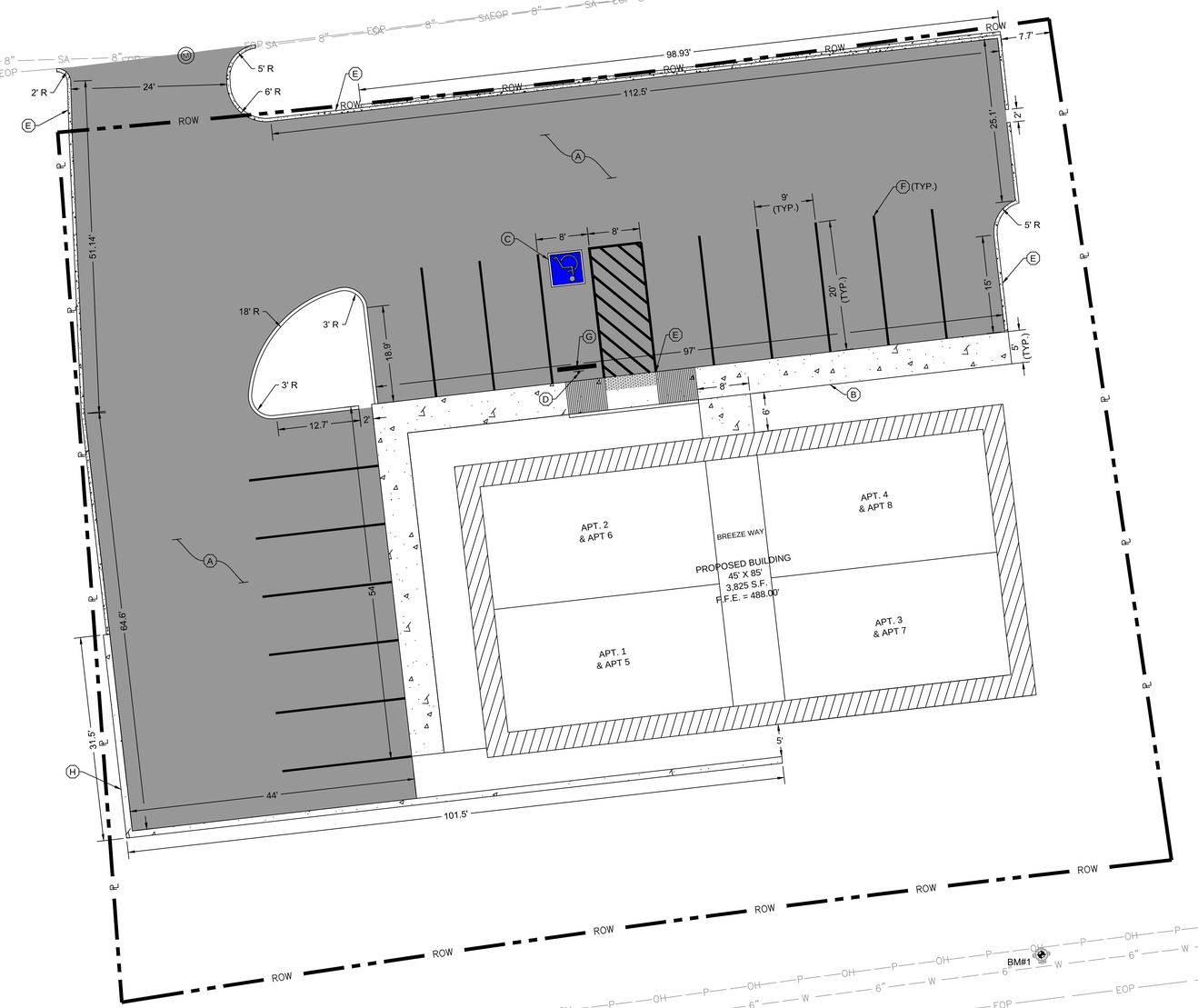
PROPOSED:

TOTAL ASPHALT PAVEMENT AREA 9,118 S.F.

** NUMBER OF PARKING SPACES WAS CALCULATED USING 2 SPACE PER PROP. MULTI-FAMILY UNIT WHICH IS EQUAL TO 8 UNITS.

KEYNOTES

SYMBOL	DESCRIPTION	DETAIL
A	ASPHALTIC PAVING	1 / C5
B	BRUSHED CONCRETE SIDEWALK W/ TURNDOWN	2 / C5
C	HANDICAP SYMBOL SIGNAGE	7 / C5
D	HANDICAP PARKING SIGNAGE	8 / C5
E	ACCESSIBLE RAMP	5 / C5
F	4" WIDE PAINTED WHITE LINE	N / A
G	PRECAST CONCRETE WHEEL STOP	4 / C5
H	PROP. RETAINING WALL	15 / C5
I	6" CONCRETE CURB	15 / C5

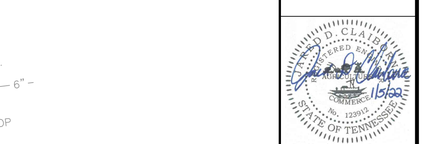


NO	DATE	DESCRIPTION	BY	CKD
		REVISIONS		

MID - TENN ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE,TN (615) 666-2385

JESSE PETERS APARTMENTS
FRONT STEET
HARTSVILLE, TENNESSEE

PROPOSED SITE LAYOUT

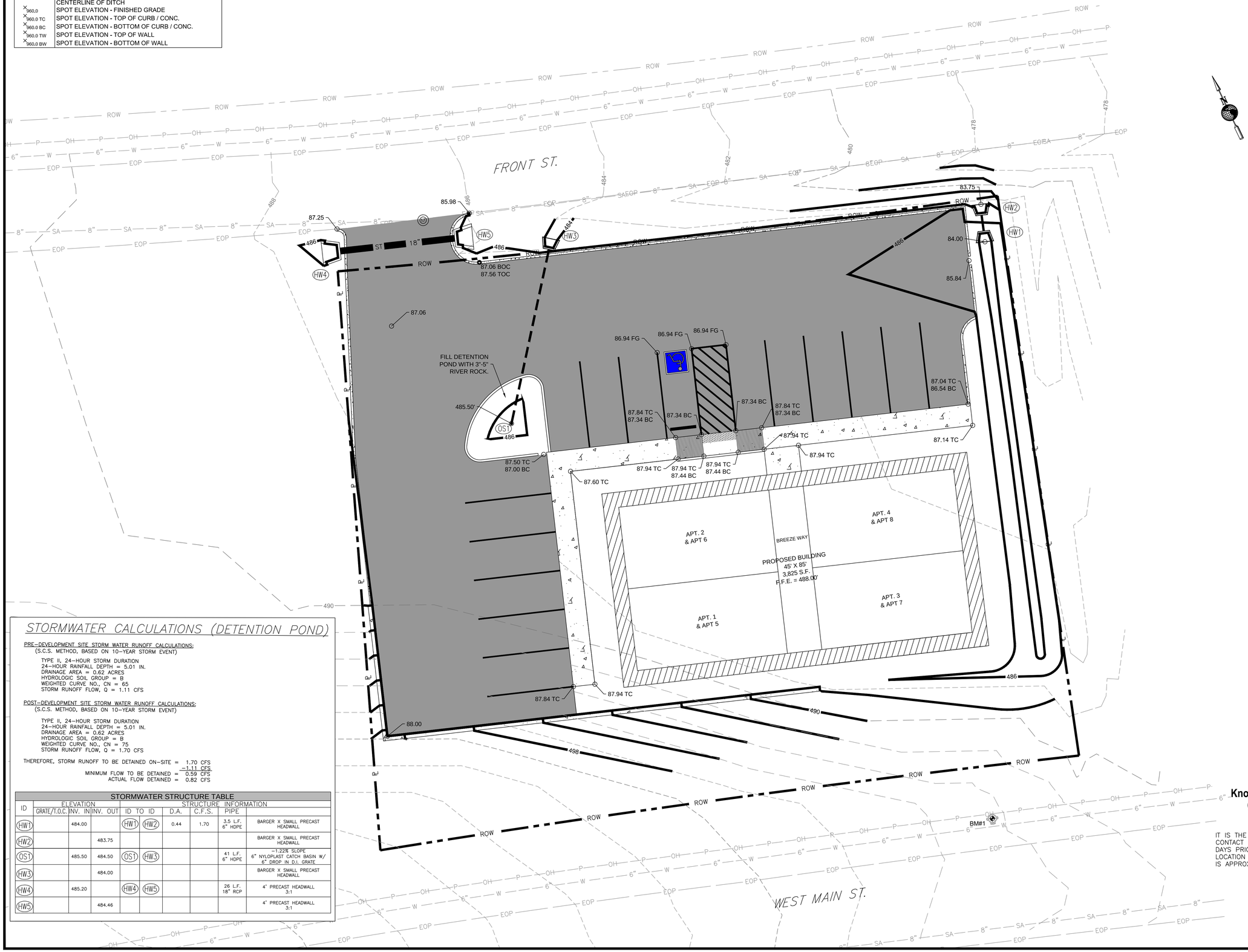


DESIGNED BY: J.D.C.	DRAWN BY: J.D.C.	CHECKED BY: E.J.W.	DATE: 1/05/22
SCALE: 1" = 10'		JOB NO. 859101	

SHEET
C2

PROPOSED SITE LEGEND

SYMBOL	DESCRIPTION
460	EXISTING CONTOUR
460	PROPOSED CONTOUR
	CENTERLINE OF DITCH
960.0	SPOT ELEVATION - FINISHED GRADE
960.0 TC	SPOT ELEVATION - TOP OF CURB / CONC.
960.0 BC	SPOT ELEVATION - BOTTOM OF CURB / CONC.
960.0 TW	SPOT ELEVATION - TOP OF WALL
960.0 BW	SPOT ELEVATION - BOTTOM OF WALL



STORMWATER CALCULATIONS (DETENTION POND)

PRE-DEVELOPMENT SITE STORM WATER RUNOFF CALCULATIONS:
(S.C.S. METHOD, BASED ON 10-YEAR STORM EVENT)

TYPE II, 24-HOUR STORM DURATION
24-HOUR RAINFALL DEPTH = 5.01 IN.
DRAINAGE AREA = 0.62 ACRES
HYDROLOGIC SOIL GROUP = B
WEIGHTED CURVE NO., CN = 65
STORM RUNOFF FLOW, Q = 1.11 CFS

POST-DEVELOPMENT SITE STORM WATER RUNOFF CALCULATIONS:
(S.C.S. METHOD, BASED ON 10-YEAR STORM EVENT)

TYPE II, 24-HOUR STORM DURATION
24-HOUR RAINFALL DEPTH = 5.01 IN.
DRAINAGE AREA = 0.62 ACRES
HYDROLOGIC SOIL GROUP = B
WEIGHTED CURVE NO., CN = 75
STORM RUNOFF FLOW, Q = 1.70 CFS

THEREFORE, STORM RUNOFF TO BE DETAINED ON-SITE = 1.70 CFS
−1.11 CFS
MINIMUM FLOW TO BE DETAINED = 0.59 CFS
ACTUAL FLOW DETAINED = 0.82 CFS

STORMWATER STRUCTURE TABLE

ID	ELEVATION GRATE/T.O.C.	ELEVATION INV. IN	ELEVATION INV. OUT	STRUCTURE INFORMATION ID TO ID		D.A.	C.F.S.	PIPE	
HW1		484.00		HW1	HW2	0.44	1.70	3.5 L.F. 6" HDPE	BARGER X SMALL PRECAST HEADWALL
HW2			483.75						BARGER X SMALL PRECAST HEADWALL
OS1		485.50	484.50	OS1	HW3			41 L.F. 6" HDPE	−1.22% SLOPE 6" NYLOPLAST CATCH BASIN W/ 6" DROP IN D.I. GRATE
HW3			484.00						BARGER X SMALL PRECAST HEADWALL
HW4		485.20		HW4	HW5			26 L.F. 18" RCP	4' PRECAST HEADWALL 3:1
HW5			484.46						4' PRECAST HEADWALL 3:1

Know what's below. Call before you dig.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES THREE WORKING DAYS PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UTILITIES SHOWN IN THESE PLANS IS APPROXIMATE AND POSSIBLY INCOMPLETE.

NO.	DATE	DESCRIPTION	BY	CKD
		REVISIONS		

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648 HIGHWAY 52 BYPASS W.
LAFAYETTE,TN (615) 666-2385

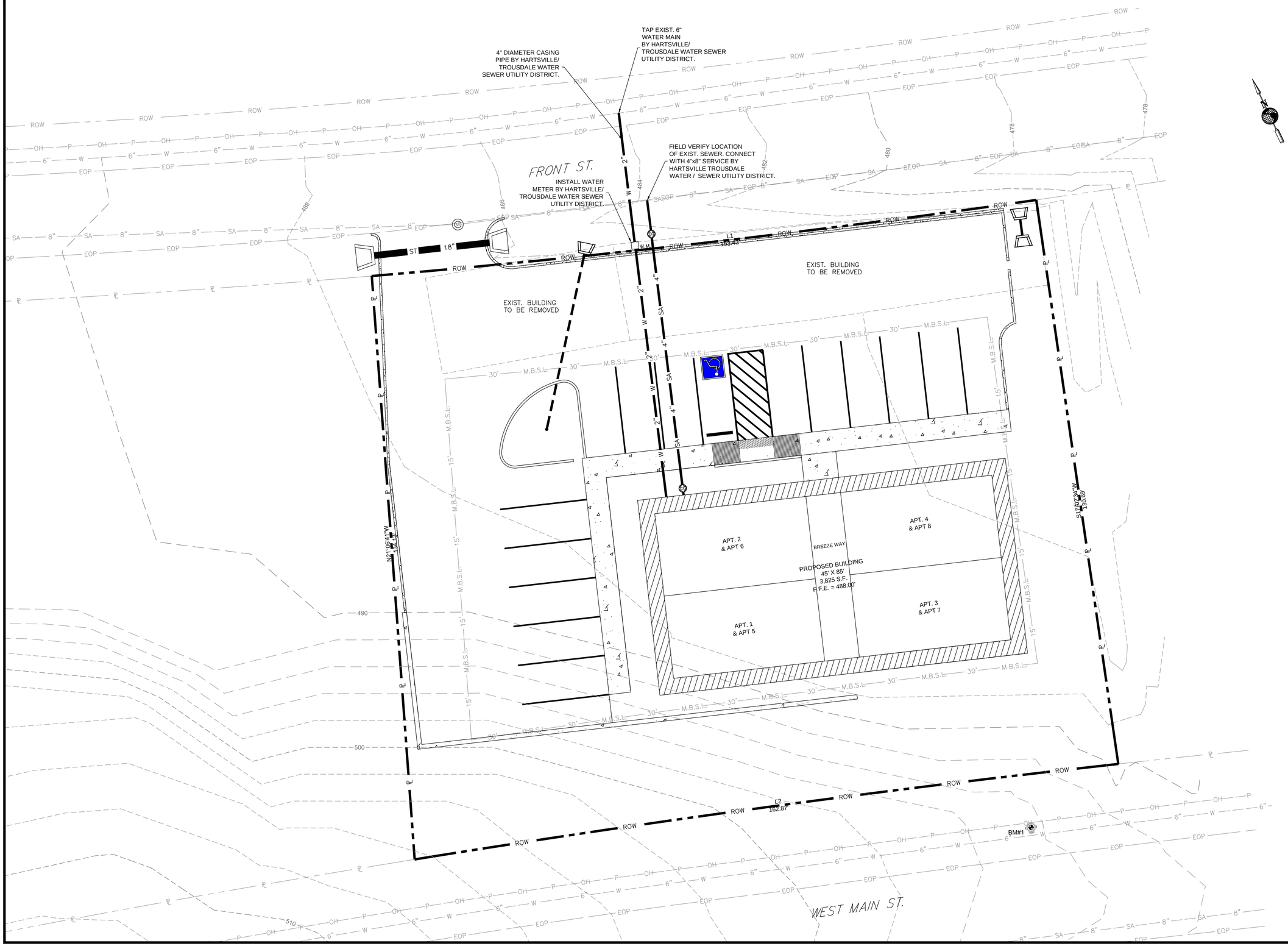
JESSE PETERS APARTMENTS
FRONT STEET
HARTSVILLE, TENNESSEE

PROPOSED GRADING PLAN

DONALD C. CLAIBORNE
REGISTERED ENGINEER
No. 109913
STATE OF TENNESSEE
11/5/22

CHECKED BY:	DATE:	JOB NO.
E.J.W.	1/05/22	859101
DESIGNED BY:	DRAWN BY:	SCALE:
J.D.C.	J.D.C.	1" = 10'

SHEET
C3



NO.	DATE	DESCRIPTION	BY	CKD
		REVISIONS		

MID - TENN ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE,TN (615) 666-2385

JESSE PETERS APARTMENTS
FRONT STEET
HARTSVILLE, TENNESSEE

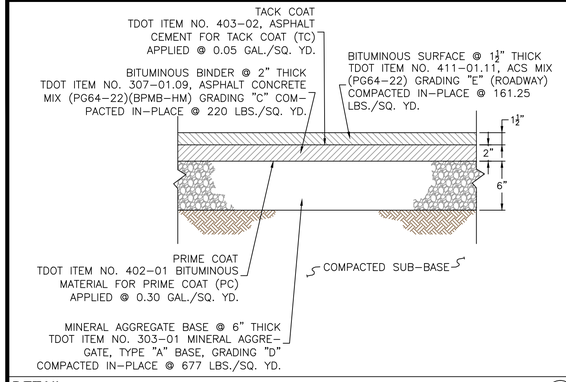
PROPOSED UTILITIES PLAN

DONALD CLAIBORNE — REGISTERED ENGINEER — STATE OF TENNESSEE — 15122 — 1/5/22

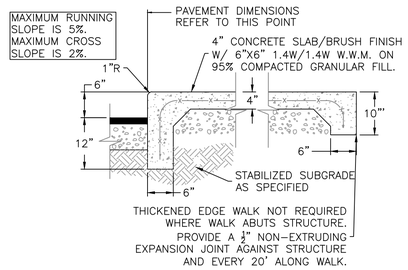
DESIGNED BY:	DRAWN BY:	SCALE:
J.D.C.	J.D.C.	1" = 10'

CHECKED BY:	DATE:	JOB NO.
E.J.W.	1/05/22	859101

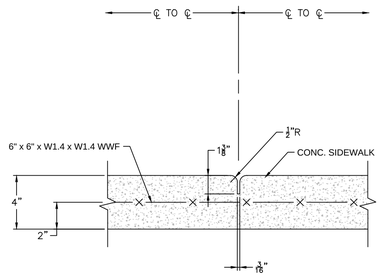
SHEET
C4



DETAIL
ASPHALTIC PAVING
SCALE: N.T.S. (1)

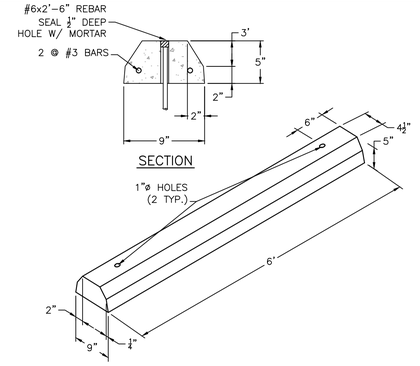


DETAIL
BRUSHED CONCRETE SIDEWALK
SCALE: N.T.S. (2)

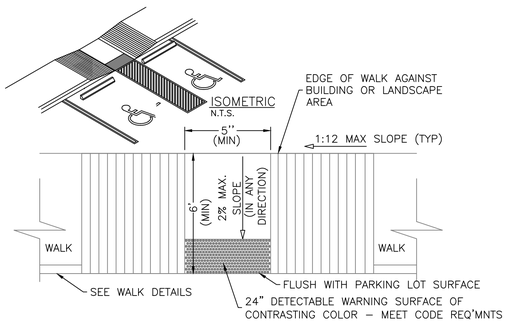


NOTE: CONTROL JOINTS SPACED AT INTERVALS EQUAL TO SIDEWALK WIDTH

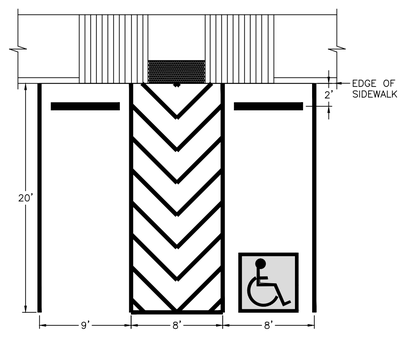
DETAIL
SIDEWALK CONTROL JOINT
SCALE: N.T.S. (3)



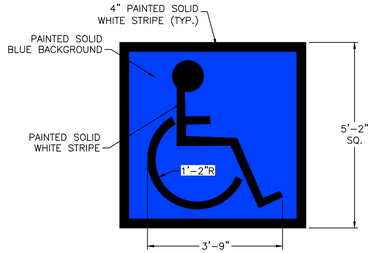
DETAIL
PRE-CAST CONCRETE WHEEL STOP
SCALE: N.T.S. (4)



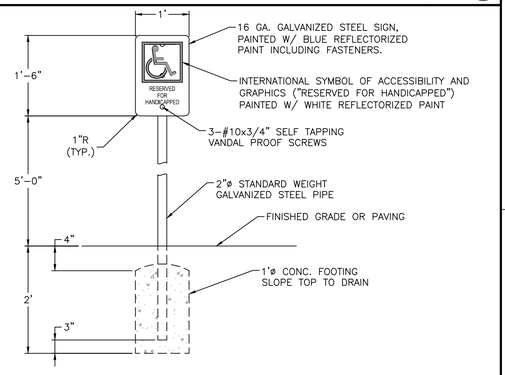
DETAIL
ACCESSIBLE PARKING RAMP
SCALE: N.T.S. (5)



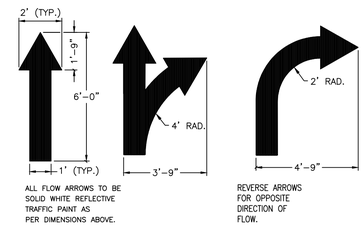
DETAIL
HANDICAP PARKING LAYOUT
SCALE: N.T.S. (6)



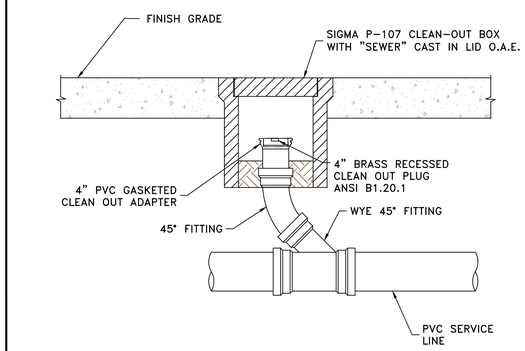
DETAIL
HANDICAP PARKING SIGNAGE
SCALE: N.T.S. (7)



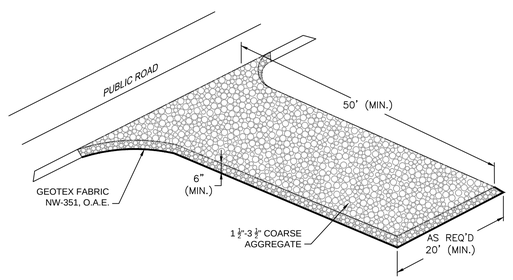
DETAIL
HANDICAP PARKING SIGNAGE
SCALE: N.T.S. (8)



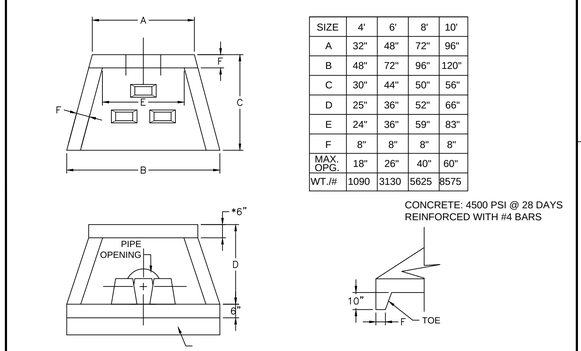
DETAIL
PAINTED DIRECTIONAL ARROWS
SCALE: N.T.S. (9)



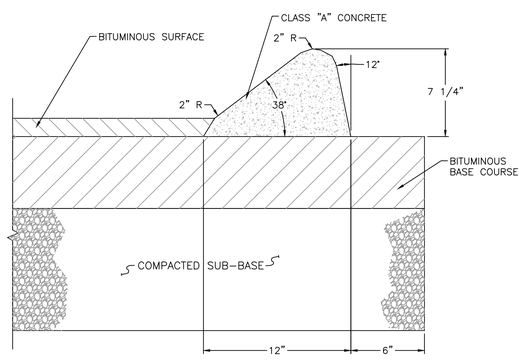
DETAIL
TYPICAL TRAFFIC CLEAN-OUT ASSEMBLY
SCALE: N.T.S. (10)



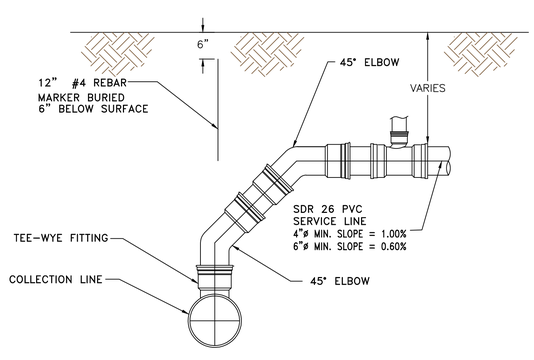
DETAIL
TEMPORARY CONSTRUCTION ENTRANCE
SCALE: N.T.S. (11)



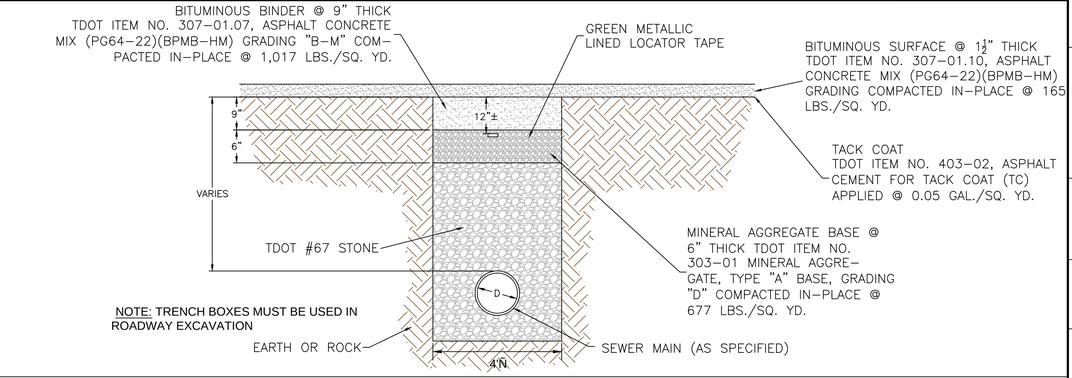
DETAIL
PRECAST HEADWALL W/ DISSIPATERS
SCALE: N.T.S. (12)



DETAIL
EXTRUDED 6" MOUNTABLE CONCRETE CURB
SCALE: N.T.S. (12)



SECTION
INSTALLED GRAVITY SERVICE DETAIL
SCALE: N.T.S. (13)



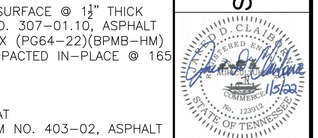
DETAIL
SEWER TRENCH IN BITUMINOUS SURFACE
SCALE: N.T.S. (14)

NO.	DATE	DESCRIPTION	BY	CKD
		REVISIONS		

MID - TENN ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE,TN (615) 666-2385

JESSE PETERS APARTMENTS
FRONT STEET
HARTSVILLE, TENNESSEE

STANDARD SITE DETAILS



CHECKED BY:	DATE:	JOB NO.
E.J.W.	1/05/22	859101
DESIGNED BY:	DRAWN BY:	SCALE:
J.D.C.	J.D.C.	AS-NOTED

SHEET
C5

HARTSVILLE/TROUSDALE COUNTY
Sam Edwards | Zoning & Building Inspector
328 Broadway, Room 1 | Hartsville, TN 37074
office (615) 374-1125 | fax (615) 374-0558

1/26/22
MR# 1942

ZONING CHANGE

PARCEL INFORMATION

Current Zoning R-1 Requested Zoning R-3 Reason combine lots and build apts

Property Owner Robert Powers Phone (615) 804-1907

Property Address 613, 615, 617 East Main St Hartsville TN 37074

Lot Size 1.93 acres Road Frontage _____ ft. Easements _____ ft

Tax Map Number 027D Group A Parcel 5.00,4.00,3.00 Record/Deed Book _____

Subdivision Name _____ Phase _____ Lot # _____

Water Source city Sewer or Septic sewer

APPLICANT INFORMATION

Applicant Name Robert Powers Phone (615) 804-1907

Mailing Address 784 McMurry Blvd Hartsville TN 37074

Email: reaprayzer@aol.com

IMPACT INFORMATION

Zoning of Surrounding Properties R-1, C-2, R-3

Names of Surrounding Property Owners Dwight Jewell, Robert Lee, Beach One Properties, Jeff Gregory, George Gregory, Amber Branscum, Monica Wilderson, Veronica Miller, Phillip Harris

Affected Roads East Main St

Schools Affected _____

Public Utilities HTC Water, Tri County Electric

ACTION TAKEN

Reviewed by Planning Commission _____ Action _____

Reviewed by BZA _____ Action _____

Zoning Ordinance at County Commission

1st Reading _____ Action _____

Public Hearing _____ Action _____

2nd Reading _____ Action _____

Passed _____ Failed, *state reason* _____

Robert Powers — *Applicant Signature*

1-26-22 — *Date Submitted*

$100 Application fee

Trousdale County - Parcel: 027D A 003.00 00.400 005.00

Date: February 3, 2022
County: Trousdale
Owner: POWERS ROBERT E
Address: E MAIN ST 617
Parcel Number: 027D A 003.00
Deeded Acreage: 0
Calculated Acreage: 0
Date of Imagery: 2017

Esri, HERE, Garmin, (c) OpenStreetMap contributors
State of Tennessee, Comptroller of the Treasury, Department of Property Assessment (DPA) – Geographic Services
TDOT

The property lines are compiled from information maintained by your local county Assessor's office but are not conclusive evidence of property ownership in any court of law.

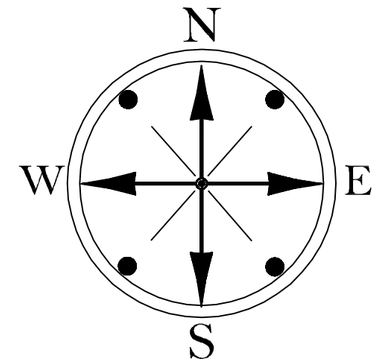
EXHIBIT FOR

ROBERT E. POWERS

LOCATED IN THE 7TH CIVIL DISTRICT OF TROUSDALE COUNTY, TENNESSEE

SCALE : 1" = 50'
DEED : R. B. 77, PG. 157, R.O.T.C.T.
MAP : MAP 27-D, PARS. A-3.00, A-4.00 & A-5.00, T.A.O.T.C.T.

GRACE BAPTIST CHURCH
RECORD BOOK 73, PAGES 494 & 497
MAP 27-D, PARCELS A-5.00 & 8.02



PROPOSED R-3 ZONE

BEACH ONE PROPERTIES INC.
RECORD BOOK 63, PAGE 287
MAP 27-D, PARCEL A-1.01

DWIGHT JEWELL
RECORD BOOK 8, PAGE 28
MAP 27-D, PARCEL A-6.00

MULTI-FAMILY EXHIBIT

HARTSVILLE HOUSING AUTHORITY
MAP 27-D, PARCEL A-2.00

EAST MAIN STREET

Trousdale County - Parcel: 026A A 005.00

Date: February 1, 2022
County: Trousdale
Owner: WHITTMORE TONY
Address: MELROSE DR
Parcel Number: 026A A 005.00
Deeded Acreage: 10.4
Calculated Acreage: 0
Date of Imagery: 2017

TN Comptroller - DPA
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State of Tennessee, Comptroller of the Treasury, Department of Property Assessment (DPA) – Geographic Services
TDOT

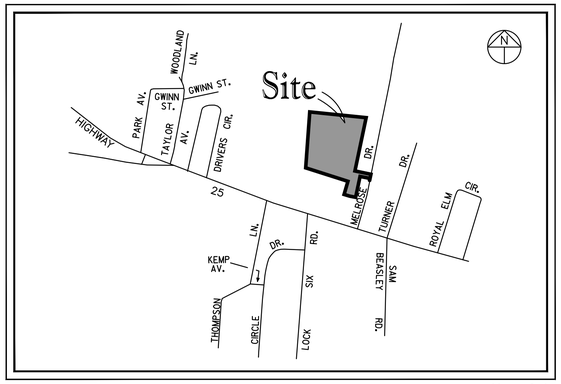
The property lines are compiled from information maintained by your local county Assessor's office but are not conclusive evidence of property ownership in any court of law.

The Towns at Melrose

Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

GENERAL NOTES

1. FINISHED PROFILE GRADE IS SHOWN ON PLANS AND CUT STAKE WILL BE FINISHED GRADE.
2. THE CONTRACTOR SHALL OFFSET ALL CENTERLINE STAKES BEFORE BEGINNING THE CLEARING AND GRADING OPERATIONS AND SET ALL NECESSARY STAKES FOR THE PROPER EXECUTION OF THE WORK.
3. THE CONTRACTOR IS TO CHECK AND VERIFY ALL MEASUREMENTS, LEVELS, ETC. BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE WORK, AND IS TO BE RESPONSIBLE FOR THE SAME.
4. ALL TREES, STUMPS, OBSTRUCTIONS, ETC. REMOVED FROM THE RIGHT-OF-WAY AND BORROW AREAS ARE TO BE DISPOSED OF BY THE CONTRACTOR AS APPROVED BY OWNER, SO AS TO CAUSE NO POLLUTION OF THE ENVIRONMENT.
5. ANY ADDITIONAL MATERIAL REQUIRED TO COMPLETE EMBANKMENTS BEYOND THAT REMOVED FROM THE ROADWAY IS TO BE SECURED FROM AREAS APPROVED BY THE OWNER.
6. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE DAMAGE OR LOSS OF ANY REFERENCE POINTS, MONUMENTS, HUBS, AND STAKED LOT CORNERS DURING THE CONSTRUCTION OF HIS WORK, AND SHALL BEAR THE COST OF REPLACING THE SAME.
7. CARE SHALL BE TAKEN TO PROTECT ANY UTILITIES, TREES, BUILDINGS, ETC. WHICH ARE TO REMAIN AND NOT TO BE DISTURBED BY THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO SUCH PROPERTY.
8. ALL SURPLUS EXCAVATION SHALL BE PLACED ON THE SITE AS APPROVED BY OWNER FOR PURPOSES OF LANDSCAPING.
9. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS AND PAY ALL LEGAL FEES. HE SHALL ALSO COMPLY WITH ALL CITY, COUNTY, AND STATE BUILDING LAWS, ORDINANCES OR REGULATIONS RELATING TO BUILDING SIDEWALKS, STREETS, WATER MAINS, SEWERS, BLASTING, ETC.
10. THE CONTRACTOR MUST UNDERSTAND THAT THE WORK IS ENTIRELY AT HIS RISK UNTIL SAME IS ACCEPTED, AND HE WILL BE HELD RESPONSIBLE FOR ITS SAFETY BY THE OWNER.
11. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY TEMPORARY WORKS FOR THE PROTECTION OF THE WORK, INCLUDING BARRICADES, WARNING SIGNS, AND LIGHTS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE PREMISES OF ADJACENT PREMISES, OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION OF THE WORK, CAUSED BY HIMSELF, HIS SUBCONTRACTORS OR THE CARELESSNESS OF ANY OF HIS EMPLOYEES.
13. ALL PAY ITEMS HAVE BEEN EXPLICITLY SET FORTH AS SUCH IN THE PROPOSAL, ALL OTHER ITEMS OF COST ARE TO BE INCLUDED IN THE PRICE OF THE ITEMS ACTUALLY BID UPON.
14. THE CONTRACTOR SHALL PROVIDE SUCH BRACING, SHEETING AND SHORING, BLASTING PROTECTION, WARNING LIGHTS AND BARRICADES, ETC. AS MAY BE NECESSARY FOR THE PROTECTION OF LIFE AND PROPERTY FOR HIS OWN EMPLOYEES AND THE GENERAL PUBLIC. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY STATUTES AND RULES REQUIRING CERTAIN PROTECTIVE PERSONAL APPAREL SUCH AS HARD HATS, EAR PLUGS, EYE SHIELDS, PROTECTIVE SHOES, ETC. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY OR LIABILITY FOR ACTIONS TAKEN BY THE CONTRACTOR ENDANGERING LIFE OR PROPERTY.
15. THE CONTRACTOR SHALL CHECK ALL GRADES AND FINAL DIMENSIONS ON THE GROUND AND REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY FOR A DECISION.
16. THE CONTRACTOR SHALL LOCATE AND STAKE THE LAYOUT IN THE FIELD FOR INSPECTION BY THE ARCHITECT. THE CONTRACTOR SHALL NOT PROCEED UNTIL HE RECEIVES WRITTEN APPROVAL FROM THE ARCHITECT OF THE FIELD STAKING.
17. MINIMUM GRADE ON ALL PAVING SHALL BE ONE PER CENT.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION AND LOCATION OF ANY EXISTING UTILITIES. ANY DAMAGE OR RELOCATION SHALL BE ACCOMPLISHED TO LOCAL STANDARD AT THE CONTRACTORS EXPENSE.
19. TRANSITION BETWEEN EXISTING PAVEMENT AND PROPOSED PAVEMENTS SHALL BE SMOOTH IN BOTH HORIZONTAL AND VERTICAL ALIGNMENT. FIELD ADJUSTMENT MAY BE NECESSARY.
20. THE CONTRACTOR SHALL CUT CLEAN EDGES ON EXISTING PAVEMENT AND PROVIDE SMOOTH TRANSITION INTO PROPOSED PAVEMENT. PROPOSED CURBS SHALL MEET EXISTING CURBS TANGENT TO THE EXISTING CURBS AS SHOWN.



Vicinity Map — Not to Scale

Sheet Schedule

C0.0 Cover Sheet
C1.0 Intial Erosion Control Plan
C1.1 Intermediate Erosion Control Plan
C2.0 Site Layout Plan
C2.1 Public Roadway A Plan & Profile
C2.2 Public Roadway B Plan & Profile
C2.3 Public Roadway C Plan & Profile
C3.0 Master Utility Plan
C3.1 Public Sewer Line A Plan & Profile
C3.2 Public Sewer Line B Plan & Profile
C3.3 Public Sewer Line C Plan & Profile
C3.4 Public Water Line Plan
C4.0 Grading & Drainage Plan
C5.0 Layout & Roadway Details
C6.0 Public Sewer Details
C7.0 Public Water Details
C8.0 Grading & Drainage Details
C9.0 Construction Notes
C10.0 Landscape Plan

SITE DATA TABLE	
PROJECT NAME:	THE TOWNS AT MELROSE
ADDRESS:	MELROSE DRIVE
TOWN:	HARTSVILLE
COUNTY:	TROUSDALE COUNTY
STATE:	TENNESSEE
EXISTING ZONING	R3 (HIGH DENSITY RESIDENTIAL)
ADJOINING ZONING	R1 & R3
PROPOSED USE / PERMITTED	MULTI-FAMILY DWELLINGS / ALLOWED
ACREAGE OF SITE	11.15 ± ACRES
SQUARE FOOTAGE OF SITE	485,739.74 SQ.FT. ±
FRONT SETBACK	25'
SIDE SETBACK	10'
REAR SETBACK	15'
MAXIMUM HEIGHT	3 Stories or 35' (Proposal does not exceed maximum)
MAX DENSITY BY ZONING	12 Units per Acre; 11.15 x 12 = 133.8 Units => 133 Units Maximum
PROPOSED DENSITY	118 Units
DISTURBED AREA	12.0 Acres ±
STRUCTURE COVERAGE	40% [194,295.9 sf] Allowable; 21.7% [105,492 sf] Proposed
PROPOSED IMPERVIOUS	253,257.11 s.f. (5.81 acres) Impervious Coverage
PARKING REQUIRED	2 Spaces per Unit (236 spaces required)
PARKING PROVIDED	236 Spaces provided at the Units + 46 Guest Spaces Provided

1. THIS PROPERTY IS NOT WITHIN AN AREA DESIGNATED AS A SPECIAL FLOOD AREA, AS SHOWN ON COMMUNITY MAP/PANEL NUMBER 47169C0043C, EFFECTIVE DATE 9/29/2010.

A HOA WILL BE STARTED TO MAINTAIN SIDEWALKS AND MAIL KIOSK.

Cover Sheet

Initial Submittal: January 24, 2022
Revisions:

Not to Scale

Designed By: Charley Dean, PE

Dean Design Group
Civil Engineering, Land Planning & Zoning
1633 West Main Street, Suite 1002, Lebanon TN 37087
Phone: 615-300-6316; EMail: charley@deandesigngroupllc.com

CHARLES TAYLOR DEAN — REGISTERED ENGINEER — STATE OF TENNESSEE — 120171

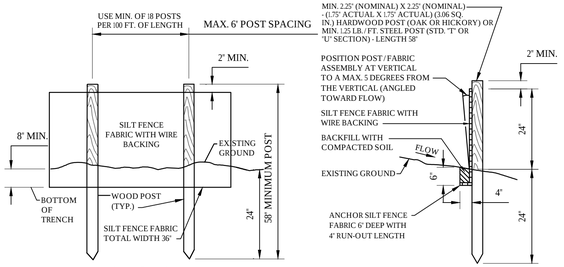
The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C0.0

Sheet 1 of 19



ELEVATION VIEW

SECTIONAL VIEW

MAINTENANCE NOTES:
1. INSPECT WEEKLY AND AFTER EACH RAINFALL.
2. REPAIR FENCE WHEREVER IT IS DAMAGED.
3. REMOVE SEDIMENT WHEN IT REACHES ½ THE HEIGHT OF THE FENCE.
4. INSPECT SILT FENCE WHEN RAIN IS FORECAST. PERFORM REQUIRED MAINTENANCE BEFORE THE STORM EVENT.
5. REMOVE SILT FENCE ONCE IT IS NO LONGER NEEDED. FILL AND COMPACT HOLES AND TRENCHES, REMOVE SEDIMENT, AND COMPACT EARTH TO PRODUCE FINISH GRADE.

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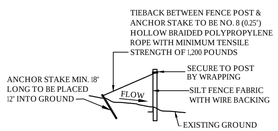
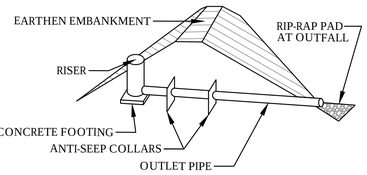
3. WOODEN POSTS SHALL BE 2" x 2" MIN. AND MADE OF HARDWOOD.
4. POSTS SHALL BE PLACED AT 6' INTERVALS.
5. BIND FILTER FABRIC TO POSTS WITH STAPLES OR WIRE TIES.
6. WIRE-BACKED FILTER FABRIC SHALL BE POLYPROPYLENE TO MEET THE CORPS OF ENGINEERS SPEC. CW 02215 WITH EQUIVALENT OPENING SIZE OF # 100 SIEVE MIN. AND # 40 SIEVE MAX.
7. WHERE SILT FENCE IS PERPENDICULAR TO CONTOURS SECURE SILT FENCE WITH J-HOOKS.

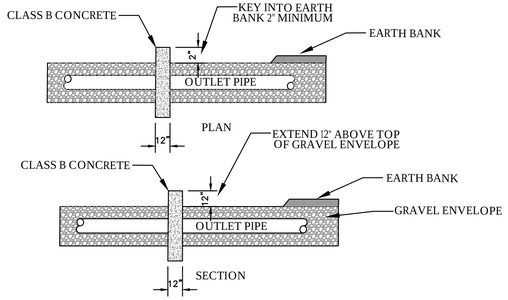


SILT FENCE TIEBACK
FOR STEEL POSTS OR WOOD POSTS

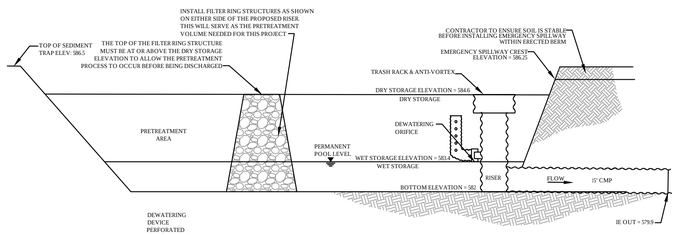
(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS. COST TO BE INCLUDED IN THE ITEMS FOR SILT FENCE)

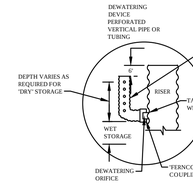
WIRE-BACKED SILT FENCE
Not to Scale





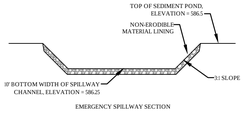
ANTI-SEEP COLLAR DETAIL
Not to Scale



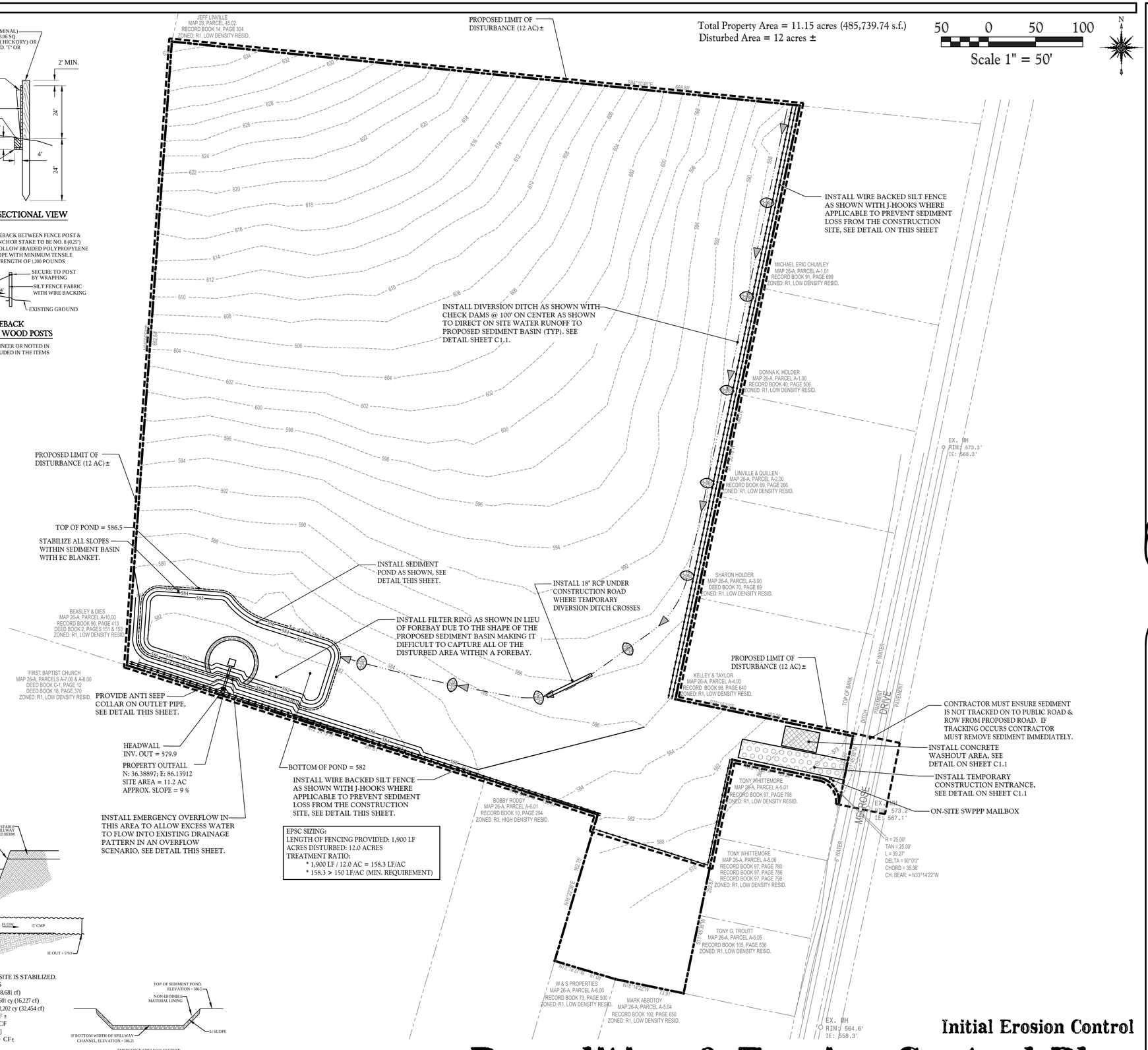


DESIGN NOTES:
1. BASIN MUST REMAIN IN PLACE UNTIL SITE IS STABILIZED.
2. DRAINAGE AREA TO POND = 8.97 ACRES
3. TOTAL REQUIRED STORAGE = 1,803 cy (48,681 cf)
   * WET STORAGE (67 cy PER ACRE) = 601 cy (16,227 cf)
   * DRY STORAGE (134 cy PER ACRE) = 1,202 cy (32,454 cf)
4. TOTAL STORAGE PROPOSED = 61,149 CF ±
5. FOREBAY STORAGE REQUIRED = 8,113.5 CF
   * 25% OF DRY STORAGE [32,454 x 0.25]
6. FOREBAY STORAGE PROPOSED = 40,000 CF±

SEDIMENT BASIN
Not to Scale



EMERGENCY SPILLWAY SECTION



Initial Erosion Control

Demolition & Erosion Control Plan

Initial Submittal: January 24, 2022
Revisions:

50 Scale

Designed By: Charley Dean, PE

Dean Design Group
Civil Engineering, Land Planning & Zoning
1633 West Main Street, Suite 1002, Lebanon TN 37087
Phone: 615-300-6316; EMail: charley@deandesigngroupllc.com

CHARLES TAYLOR DEAN — REGISTERED PROFESSIONAL ENGINEER — STATE OF TENNESSEE — 120 — 1/24/2022

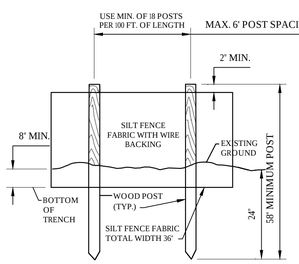
The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

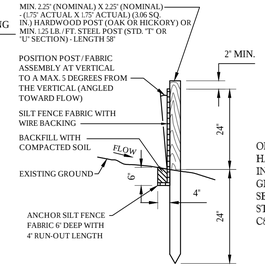
Project: 22003

C1.0

Sheet 2 of 19



ELEVATION VIEW



SECTIONAL VIEW

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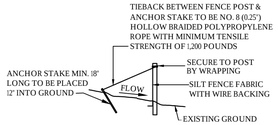
7. WHERE SILT FENCE IS PERPENDICULAR TO CONTOURS SECURE SILT FENCE WITH J-HOOKS.

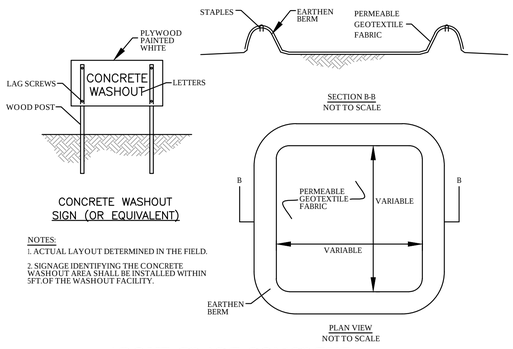
WIRE-BACKED SILT FENCE

Not to Scale



SILT FENCE TIEBACK FOR STEEL POSTS OR WOOD POSTS

(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS. COST TO BE INCLUDED IN THE ITEMS FOR SILT FENCE)

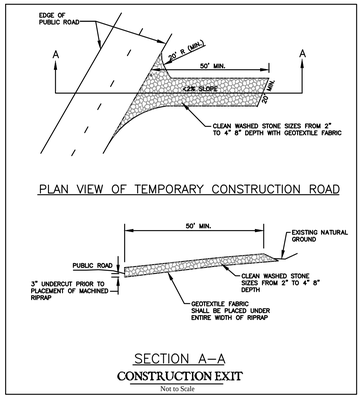


CONCRETE WASHOUT SIGN (OR EQUIVALENT)

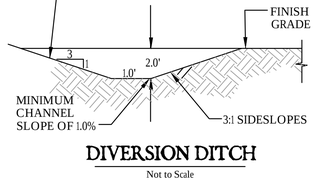
NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. SIGNAGE IDENTIFYING THE CONCRETE WASHOUT AREA SHALL BE INSTALLED WITHIN 5FT.OF THE WASHOUT FACILITY.

ABOVE GRADE CONCRETE WASHOUT AREA

Not to Scale



SECTION A–A
CONSTRUCTION EXIT
Not to Scale



DIVERSION DITCH

Not to Scale

CONVERT SEDIMENT POND TO DETENTION POND:
- STABILIZE AS MUCH OF THE SITE AS POSSIBLE
- TEMPORARILY REDUCE THE SIZE OF THE SEDIMENT POND AS NEEDED WHILE CONSTRUCTING THE PROPOSED DETENTION FACILITY (SEE SHEET C5.0)
- INSTALL PROPOSED STORM DRAINAGE SYSTEM
- REMOVE SEDIMENT CONTROL OUTLET AND REGRADE THE SEDIMENT POND IN ACCORDANCE WITH THE PROPOSED GRADING PLAN
- ELIMINATE DIVERSION DITCHES AND ACHIEVE FINISHED GRADE.

Total Property Area = 11.15 acres (485,739.74 s.f.)
Disturbed Area = 12 acres ±

Scale 1" = 50'

PROPOSED LIMIT OF DISTURBANCE (12 AC)±

ONCE PROPOSED STORM DRAINAGE HAS BEEN INSTALLED, PROVIDE INLET PROTECTION AROUND GRATES AS NEEDED TO PREVENT SEDIMENTATION OF PROPOSED STORM SYSTEM SEE DETAIL SHEET C8.0 (TYPICAL AS SHOWN)

MAINTAIN DIVERSION DITCH AND CHECK DAMS AS NEEDED THROUGHOUT CONSTRUCTION PROCESS TO MAINTAIN COMPLIANCE WITH DETAIL & REGULATIONS

PROPOSED LIMIT OF DISTURBANCE (12 AC)±

CONTRACTOR MUST MAINTAIN SEDIMENT POND DURING ALL STAGES OF DEVELOPMENT (typ).

PROPERTY OUTFALL
N: 36.38897; E: 86.13912
SITE AREA = 11.2 AC
APPROX. SLOPE = 9 %

CONTRACTOR SHALL MAINTAIN SEDIMENT POND DURING ALL PHASES OF DEVELOPMENT (typ).

CONTRACTOR SHALL MAINTAIN SILT FENCE AS NEEDED TO MAINTAIN COMPLIANCE WITH DETAIL & REGULATIONS

MAINTAIN CONCRETE WASHOUT AS NEEDED TO MAINTAIN COMPLIANCE WITH DETAIL & REGULATIONS

MAINTAIN CONSTRUCTION ENTRANCE AS NEEDED TO MAINTAIN COMPLIANCE WITH DETAIL & REGULATIONS

JEFF LINVILLE
MAP 26, PARCEL 45.02
RECORD BOOK 14, PAGE 304
ZONED: R1, LOW DENSITY RESID.

MICHAEL ERIC CHUMLEY
MAP 26-A, PARCEL A-1.01
RECORD BOOK 91, PAGE 699
ZONED: R1, LOW DENSITY RESID.

DONNA K. HOLDER
MAP 26-A, PARCEL A-1.00
RECORD BOOK 40, PAGE 506
ZONED: R1, LOW DENSITY RESID.

LINVILLE & QUILLEN
MAP 26-A, PARCEL A-2.00
RECORD BOOK 69, PAGE 266
ZONED: R1, LOW DENSITY RESID.

SHARON HOLDER
MAP 26-A, PARCEL A-3.00
DEED BOOK 70, PAGE 69
ZONED: R1, LOW DENSITY RESID.

BEASLEY & DIES
MAP 26-A, PARCEL A-10.00
RECORD BOOK 96, PAGE 413
DEED BOOK 2, PAGES 151 & 153
ZONED: R1, LOW DENSITY RESID.

FIRST BAPTIST CHURCH
MAP 26-A, PARCELS A-7.00 & A-8.00
DEED BOOK C-1, PAGE 12
DEED BOOK 18, PAGE 370
ZONED: R1, LOW DENSITY RESID.

KELLEY & TAYLOR
MAP 26-A, PARCEL A-4.00
RECORD BOOK 98, PAGE 640
ZONED: R1, LOW DENSITY RESID.

BOBBY RODDY
MAP 26-A, PARCEL A-6.01
RECORD BOOK 10, PAGE 294
ZONED: R3, HIGH DENSITY RESID.

TONY WHITTEMORE
MAP 26-A, PARCEL A-5.01
RECORD BOOK 97, PAGE 798
ZONED: R1, LOW DENSITY RESID.

TONY WHITTEMORE
MAP 26-A, PARCEL A-5.06
RECORD BOOK 97, PAGE 780
RECORD BOOK 97, PAGE 786
RECORD BOOK 97, PAGE 798
ZONED: R1, LOW DENSITY RESID.

TONY G. TROUTT
MAP 26-A, PARCEL A-5.05
RECORD BOOK 105, PAGE 536
ZONED: R1, LOW DENSITY RESID.

W & S PROPERTIES
MAP 26-A, PARCEL A-6.00
RECORD BOOK 73, PAGE 500
ZONED: R1, LOW DENSITY RESID.

MARK ABBOTOY
MAP 26-A, PARCEL A-5.04
RECORD BOOK 102, PAGE 650
ZONED: R1, LOW DENSITY RESID.

EX. MH
RIM: 573.3'
IE: 568.3'

EX. MH
RIM: 573.2'
IE: 567.1'

EX. MH
RIM: 564.6'
IE: 558.3'

R = 25.00'
TAN = 25.00'
L = 39.27'
DELTA = 90°00'
CHORD = 35.36'
CH. BEAR. = N33°14'22"W

MELROSE DRIVE
TOP OF BANK
BOTTOM OF DITCH
PAVEMENT
8" WATER
8" WATER

Intermediate Erosion Control Plan

Initial Submittal: January 24, 2022
Revisions:

50 Scale

Designed By: Charley Dean, PE

Dean Design Group
Civil Engineering, Land Planning & Zoning
1633 West Main Street, Suite 1002, Lebanon TN 37087
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CHARLES TAYLOR DEAN
REGISTERED
STATE OF TENNESSEE
2016
04-14-22

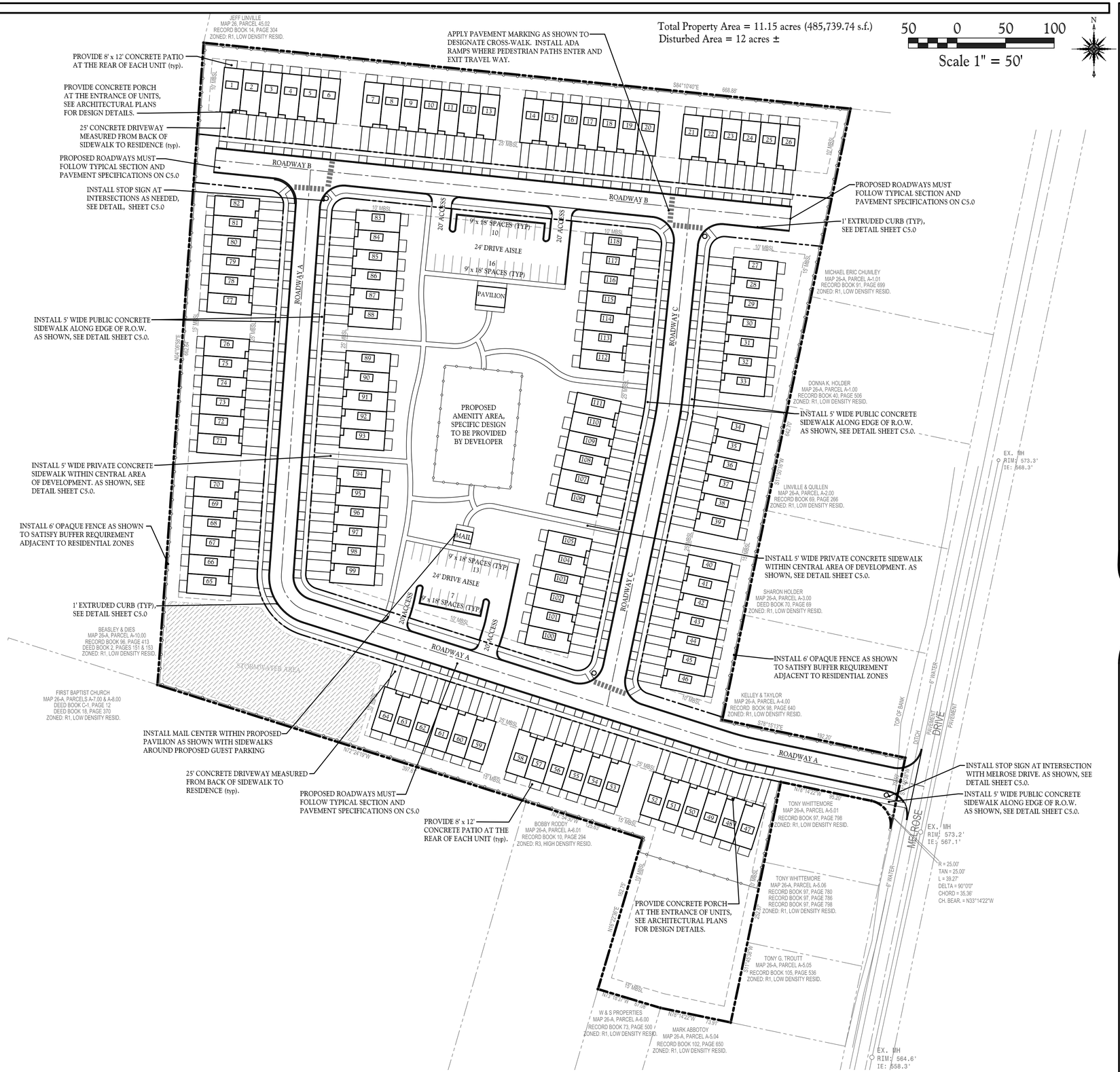
The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C1.1

Sheet 3 of 19



Site Layout Plan

Initial Submittal:
January 24, 2022
Revisions:

50 Scale

Designed By:
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STATE OF TENNESSEE
102470
1/24/2022

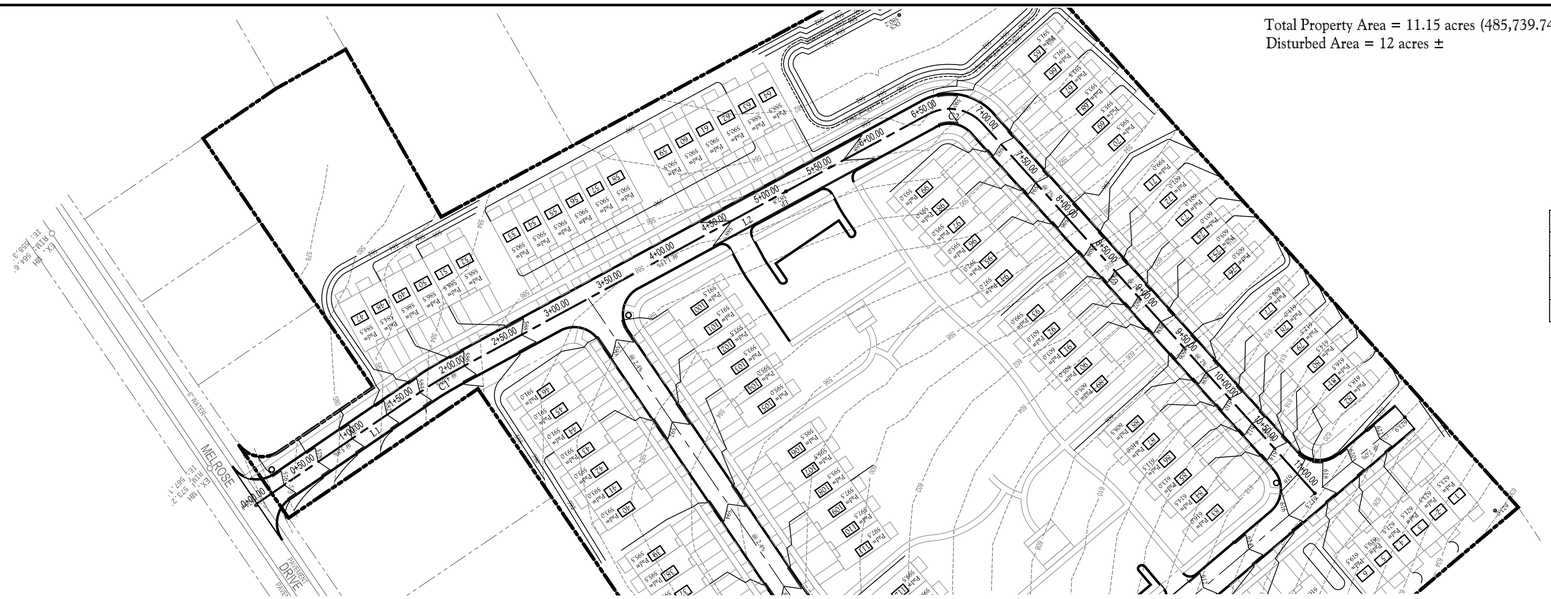
The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C2.0

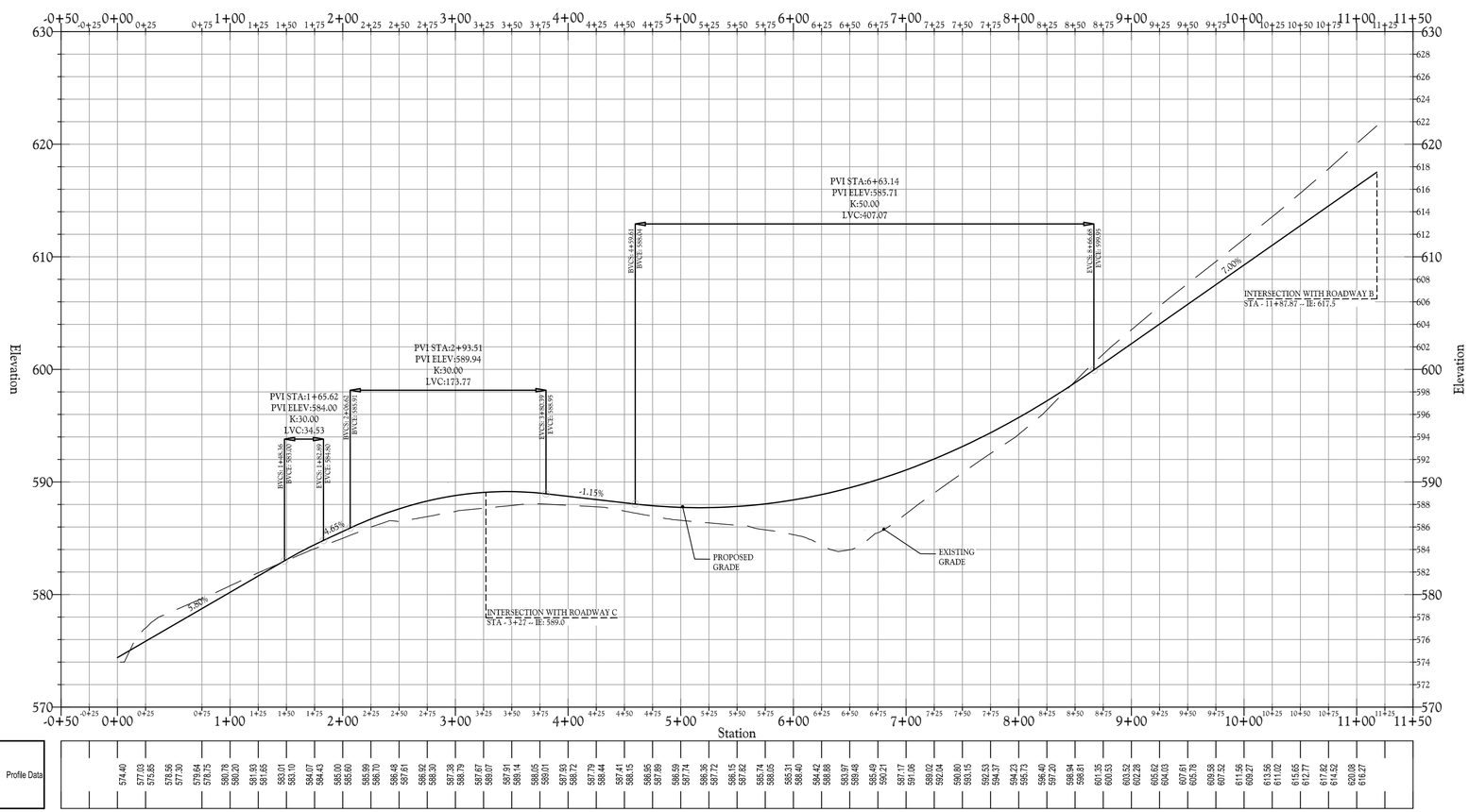
Sheet 4 of 19



Total Property Area = 11.15 acres (485,739.74 s.f.)
Disturbed Area = 12 acres ±

60 0 60 120
Scale 1" = 60'

Line Table			Curve Table			
Line #	Length	Direction	Curve #	Length	Radius	Delta
L1	177.62	S78° 15' 12.81"E	C1	30.62	300.000	005.8483
L2	453.15	S72° 24' 18.99"E	C2	49.42	37.000	076.5215
L3	417.02	S04° 06' 58.32"W				



Public Roadway A Plan & Profile

Initial Submittal:
January 24, 2022
Revisions:

60 Scale

Designed By:
Charley Dean, PE

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REGISTERED
LICENSED PROFESSIONAL ENGINEER
1-24-22

The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

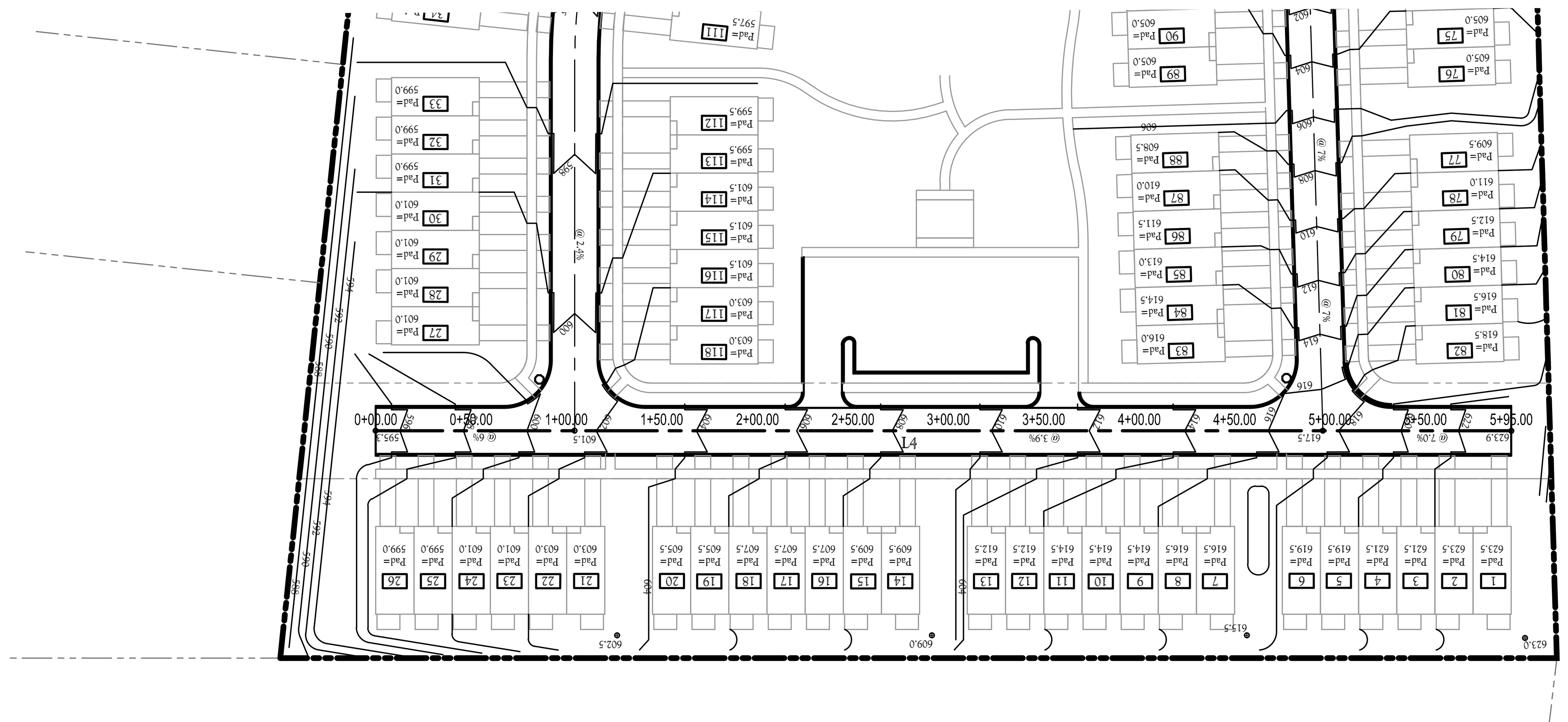
Project: 22003

C2.1
Sheet 5 of 19

Total Property Area = 11.15 acres (485,739.74 s.f.)
Disturbed Area = 12 acres ±

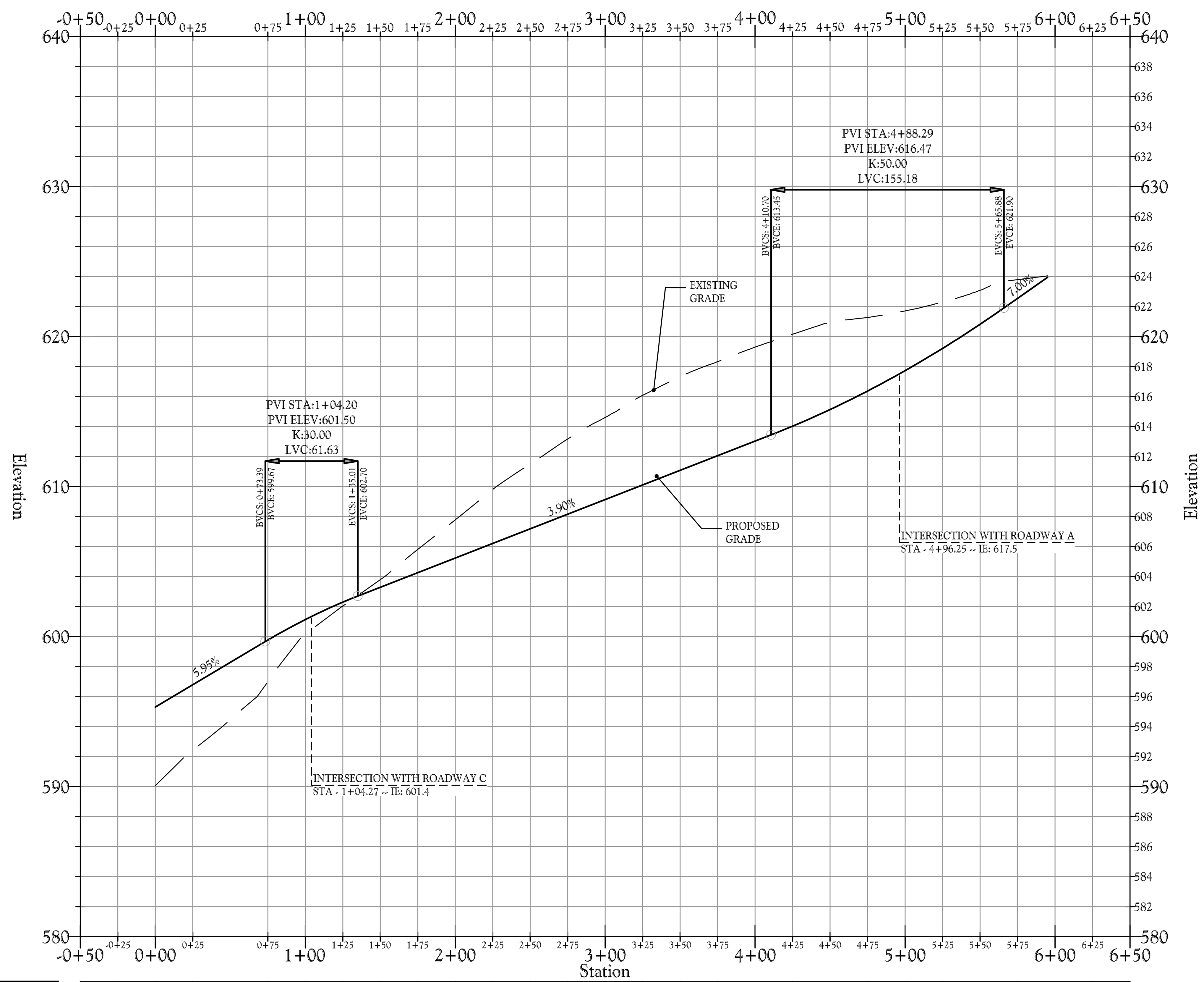
Line Table		
Line #	Length	Direction
L4	595.00	S84° 10' 39.80"E

60 0 60 120
Scale 1" = 60'



HORIZ - 1"=60'
VERT - 1"=6'

Public Roadway B



Profile Data

EXISTING GRADE	PROPOSED GRADE
590.06	595.30
592.43	596.79
594.46	598.28
596.99	599.76
600.17	601.13
602.04	602.30
603.79	603.29
605.81	604.26
607.78	605.24
609.80	606.21
611.50	607.18
613.17	608.16
614.60	609.13
616.08	610.11
617.34	611.08
618.33	612.06
619.30	613.03
620.15	614.03
620.93	615.13
621.27	616.37
621.71	617.73
622.30	619.21
623.09	620.82
623.79	622.54

Public Roadway B Plan & Profile

Initial Submittal:
January 24, 2022
Revisions:

60 Scale

Designed By:
Charley Dean, PE

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CHARLES TAYLOR DEAN
STATE OF TENNESSEE
1/24/2022

The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

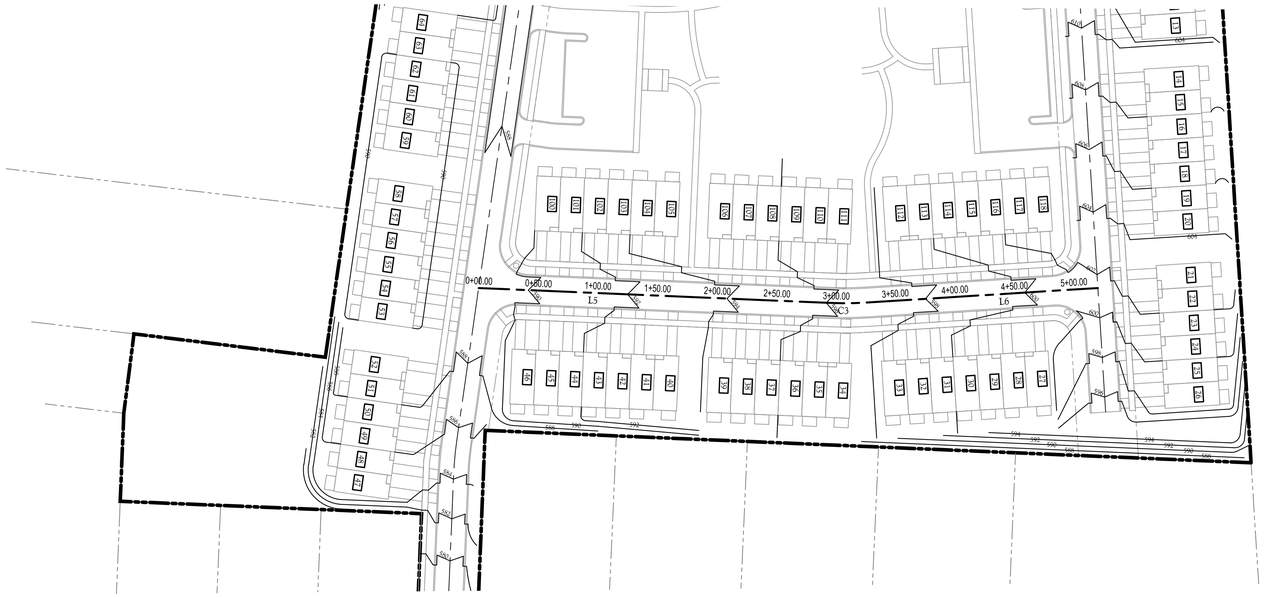
Project: 22003

C2.2

Sheet 6 of 19

Total Property Area = 11.15 acres (485,739.74 s.f.)
Disturbed Area = 12 acres ±

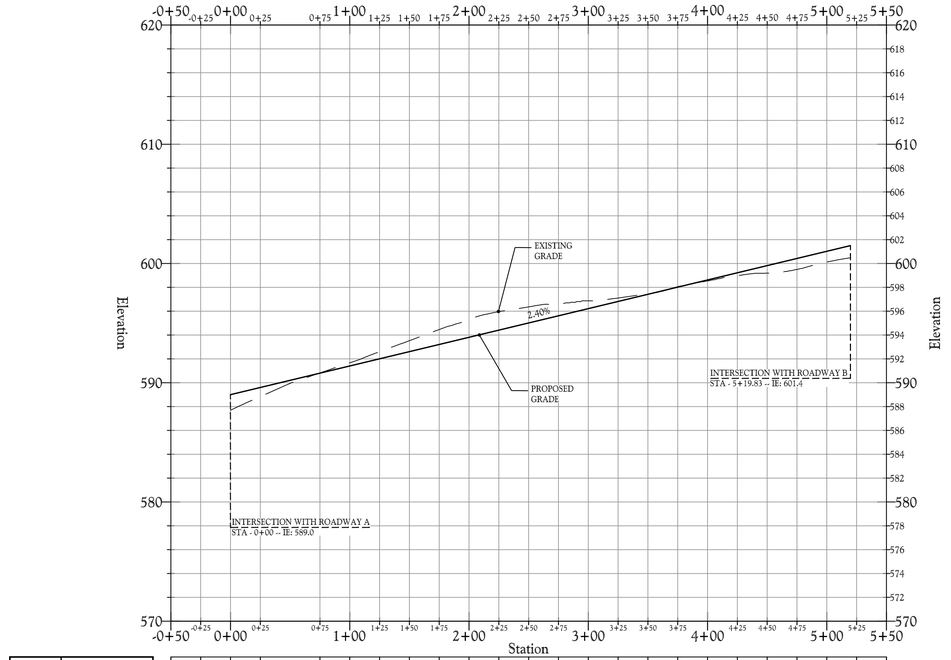
60 0 60 120
Scale 1" = 60'



Line Table			Curve Table			
Line #	Length	Direction	Curve #	Length	Radius	Delta
L5	294.37	S11° 50' 15.99"W	C3	31.50	300.000	006.0155
L6	193.96	S05° 49' 20.20"W				

HORIZ - 1"=60'
VERT - 1"=6'

Public Roadway C



Profile Data

EXISTING GRADE	587.69	588.84	589.95	590.83	591.67	592.00	593.53	594.46	595.30	595.97	596.37	596.62	596.87	597.11	597.46	598.05	598.54	598.98	599.19	599.50	600.13
PROPOSED GRADE	589.00	589.60	590.20	590.80	591.40	592.01	592.61	593.21	593.81	594.41	595.01	595.61	596.21	596.82	597.42	598.02	598.62	599.22	599.82	600.42	601.02

Public Roadway C Plan & Profile

Initial Submittal:
January 24, 2022
Revisions:

60 Scale

Designed By:
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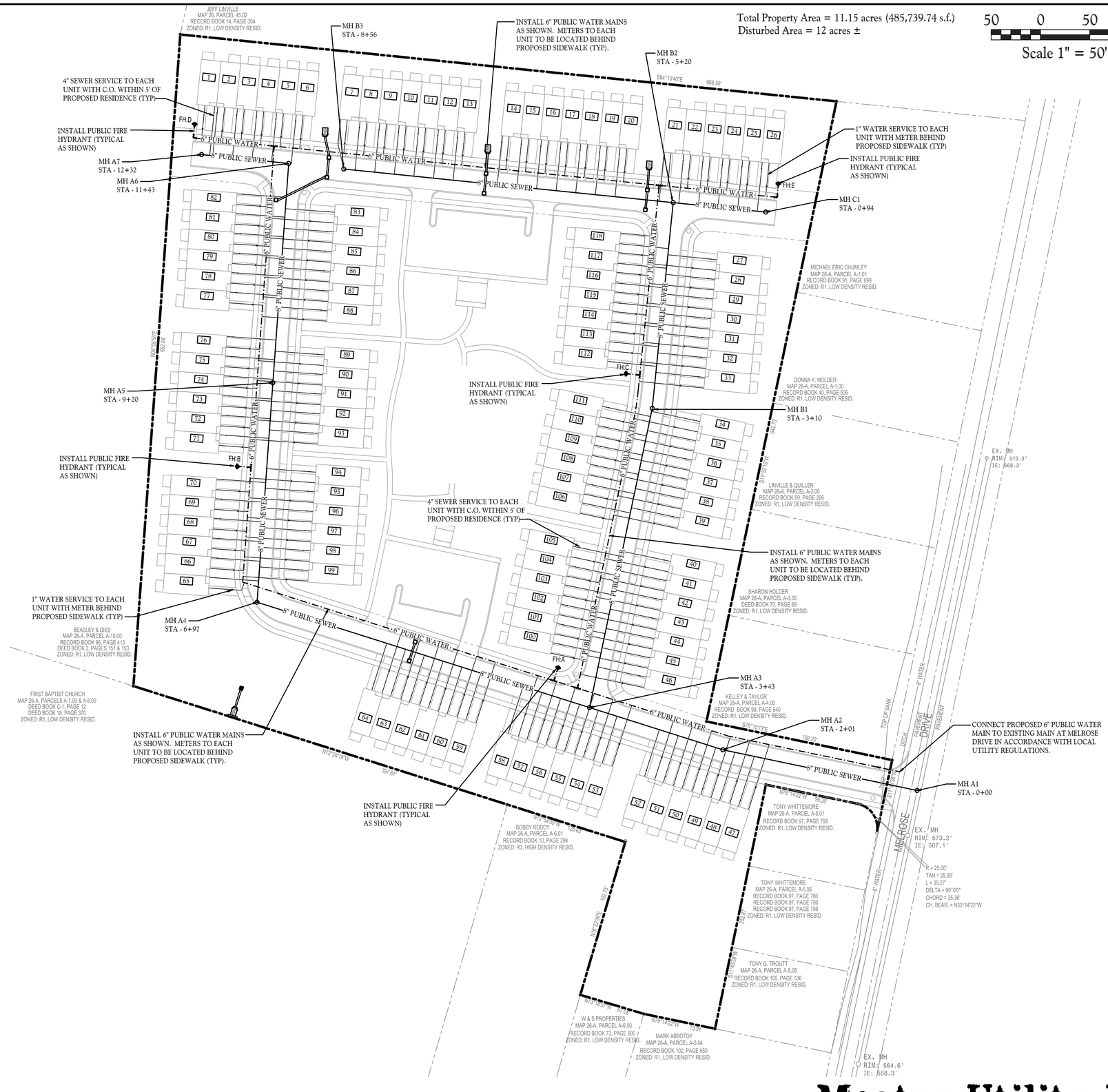
1/24/2022

The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C2.3
Sheet 7 of 19



Master Utility Plan

Initial Submittal:
January 24, 2022
Revisions:

50 Scale

Designed By:
Charley Dean, PE

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Civil Engineering, Land Planning & Zoning
1633 West Main Street, Suite 1002, Lebanon TN 37087
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CHARLES TAYLOR DEAN
REGISTERED
LICENSED PROFESSIONAL ENGINEER
STATE OF TENNESSEE
1-24-22

The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C3.0

Sheet 8 of 19

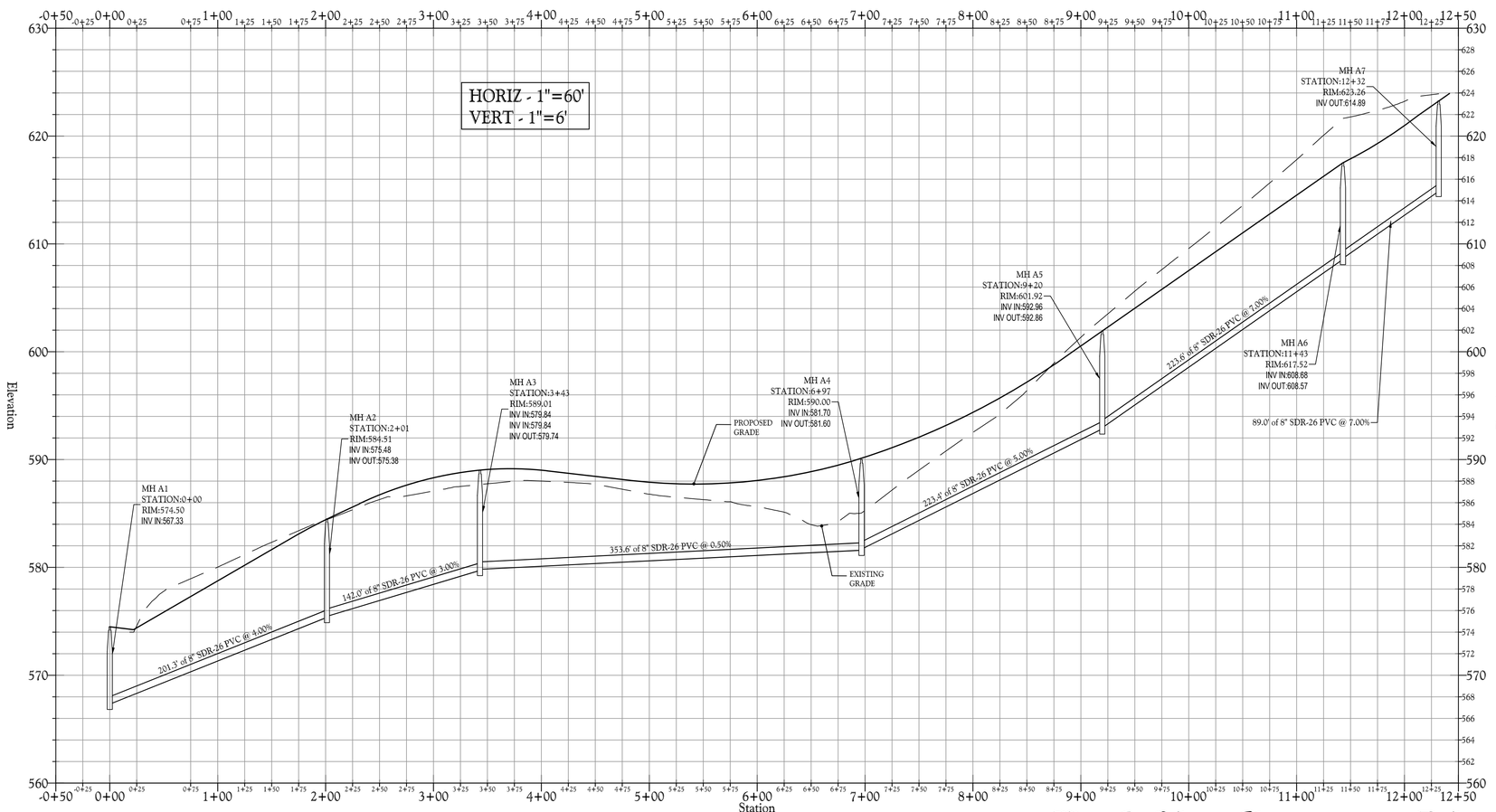
Total Property Area = 11.15 acres (485,739.74 s.f.)
Disturbed Area = 12 acres ±

60 0 60 120
Scale 1" = 60'

Public Sewer Line A

Structure Table	
Structure Name	Structure Details
MH A1	RIM = 574.50 CONNECTED PIPES = 1 MH A1 - MH A2 INV IN = 567.33
MH A2	RIM = 584.51 CONNECTED PIPES = 2 MH A2 - MH A3 INV IN = 575.48 MH A1 - MH A2 INV OUT = 575.38
MH A3	RIM = 589.01 CONNECTED PIPES = 3 MH A3 - MH A4 INV IN = 579.84 MH A3 - MH B1 INV IN = 579.84 MH A2 - MH A3 INV OUT = 579.74
MH A4	RIM = 590.00 CONNECTED PIPES = 2 MH A4 - MH A5 INV IN = 581.70 MH A3 - MH A4 INV OUT = 581.60
MH A5	RIM = 601.92 CONNECTED PIPES = 2 MH A5 - MH A6 INV IN = 592.96 MH A4 - MH A5 INV OUT = 592.86
MH A6	RIM = 617.52 CONNECTED PIPES = 2 MH A6 - MH A7 INV IN = 608.68 MH A5 - MH A6 INV OUT = 608.57
MH A7	RIM = 623.26 CONNECTED PIPES = 1 MH A6 - MH A7 INV OUT = 614.89

Pipe Table			
Pipe Name	Size	Length	Slope
MH A1 - MH A2	8" SDR-26	201.3	4.00%
MH A2 - MH A3	8" SDR-26	142.0	3.00%
MH A3 - MH A4	8" SDR-26	353.6	0.50%
MH A4 - MH A5	8" SDR-26	223.4	5.00%
MH A5 - MH A6	8" SDR-26	223.6	7.00%
MH A6 - MH A7	8" SDR-26	89.0	7.00%



Public Sewer Line A Plan & Profile

Dean Design Group
Civil Engineering, Land Planning & Zoning
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Phone: 615-300-6316; EMail: charley@deandesigngroupllc.com

Initial Submittal: January 24, 2022
Revisions:

60 Scale

Designed By: Charley Dean, PE

CHARLES TAYLOR DEAN — REGISTERED ENGINEER — STATE OF TENNESSEE — 120161 — 1-24-22

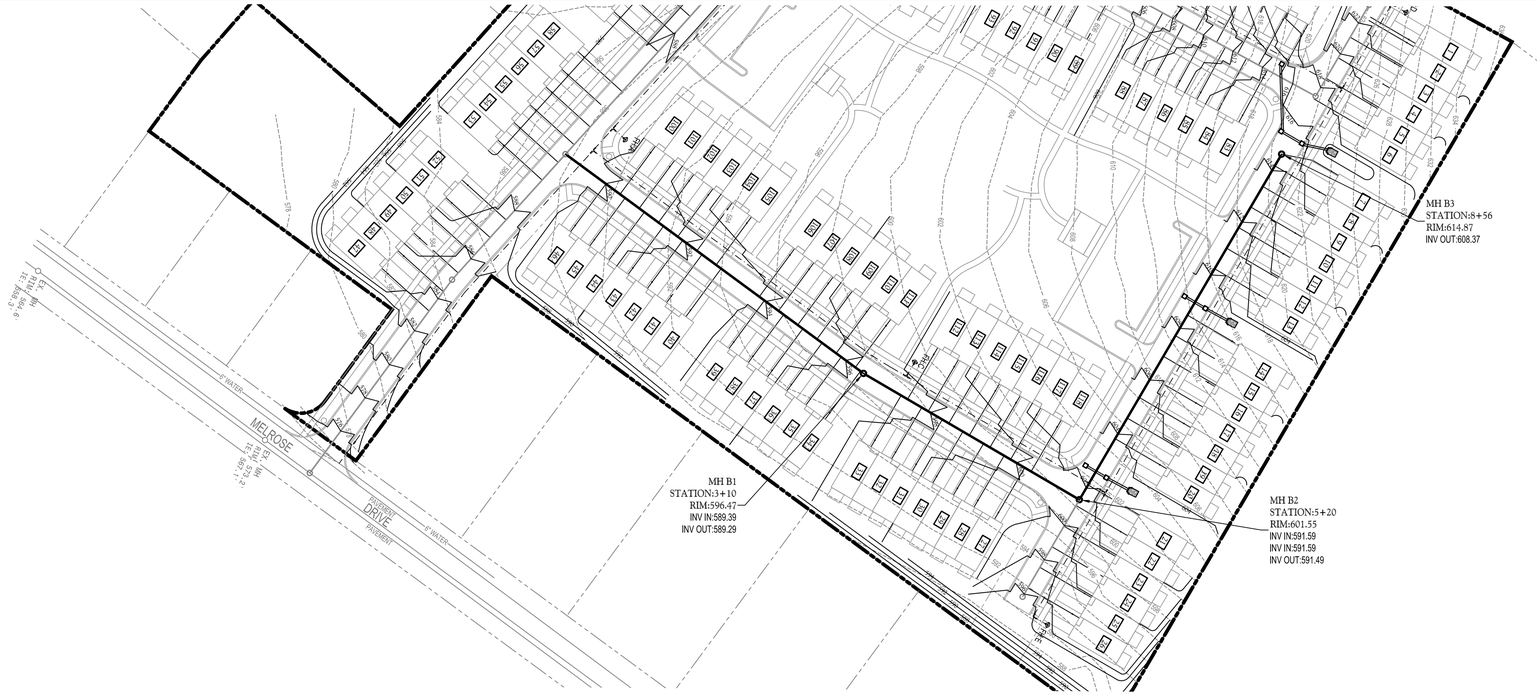
The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C3.1

Sheet 9 of 19



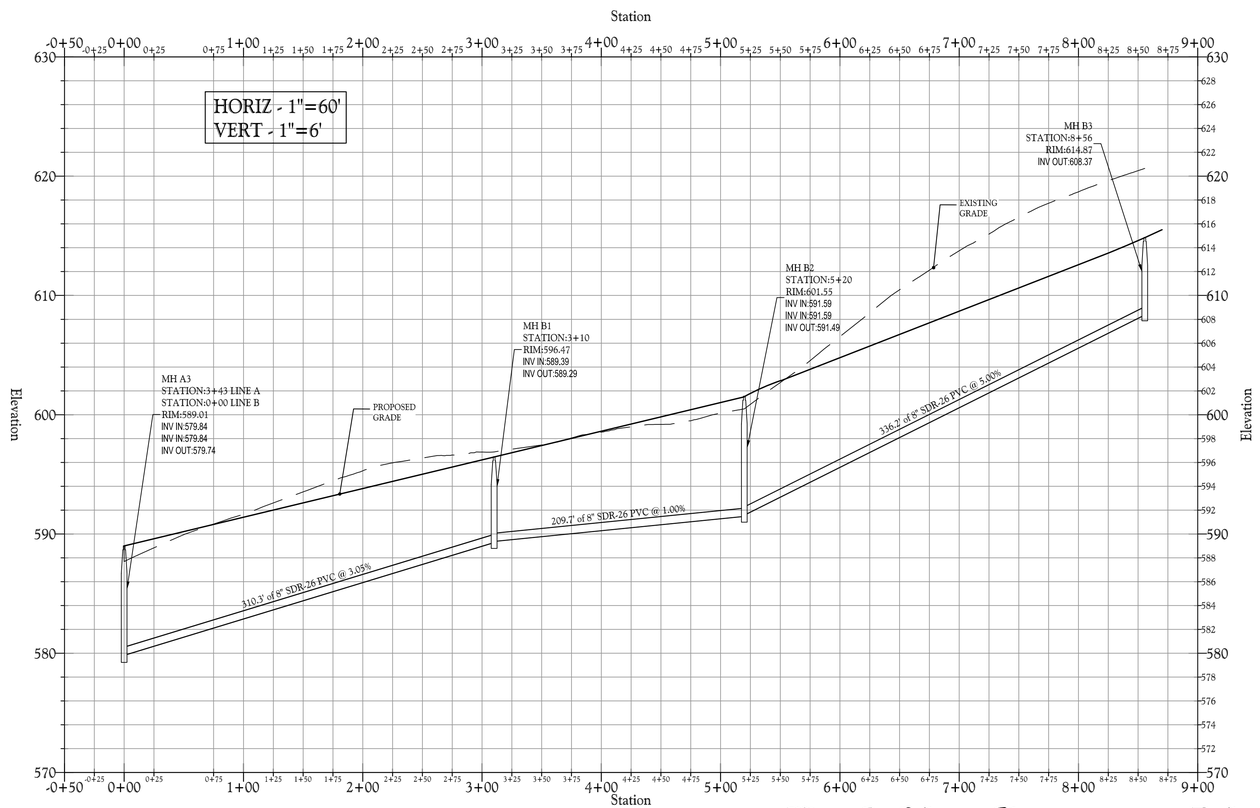
60 0 60 120

Scale 1" = 60'

Total Property Area = 11.15 acres (485,739.74 s.f.)
Disturbed Area = 12 acres ±

Structure Table		Pipe Table			
Structure Name	Structure Details	Pipe Name	Size	Length	Slope
MH A3	RIM = 589.01 CONNECTED PIPES = 3 MH A3 - MH A4 INV IN = 579.84 MH A3 - MH B1 INV IN = 579.84 MH A2 - MH A3 INV OUT = 579.74	MH A3 - MH B1	8" SDR-26	310.3	3.05%
MH B1	RIM = 596.47 CONNECTED PIPES = 2 MH B1 - MH B2 INV IN = 589.39 MH A3 - MH B1 INV OUT = 589.29	MH B1 - MH B2	8" SDR-26	209.7	1.00%
MH B2	RIM = 601.55 CONNECTED PIPES = 3 MH B2 - MH B3 INV IN = 591.59 MH B2 - MH C1 INV IN = 591.59 MH B1 - MH B2 INV OUT = 591.49	MH B2 - MH B3	8" SDR-26	336.2	5.00%
MH B3	RIM = 614.87 CONNECTED PIPES = 1 MH B2 - MH B3 INV OUT = 608.37				

Public Sewer Line B



Public Sewer Line B Plan & Profile

Initial Submittal:
January 24, 2022
Revisions:

60 Scale

Designed By:
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CHARLES TAYLOR DEAN
REGISTERED ENGINEER
STATE OF TENNESSEE
1/24/2022

The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C3.2

Sheet 10 of 19

Total Property Area = 11.15 acres (485,739.74 s.f.)
Disturbed Area = 12 acres ±

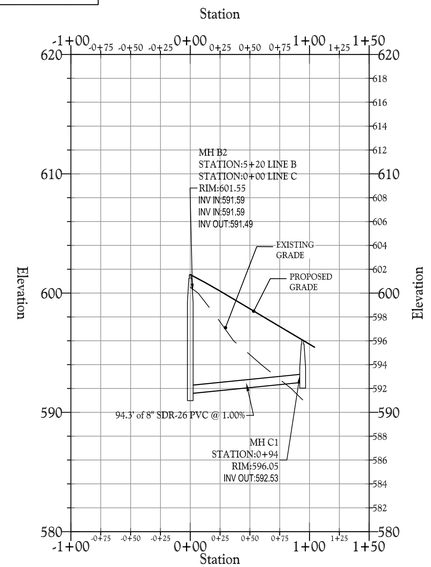
60 0 60 120
Scale 1" = 60'

Structure Table	
Structure Name	Structure Details
MH B2	RIM = 601.55 CONNECTED PIPES = 3 MH B2 - MH B3 INV IN = 591.59 MH B2 - MH C1 INV IN = 591.59 MH B1 - MH B2 INV OUT = 591.49
MH C1	RIM = 596.05 CONNECTED PIPES = 1 MH B2 - MH C1 INV OUT = 592.53

Pipe Table			
Pipe Name	Size	Length	Slope
MH B2 - MH C1	8" SDR-26	94.3	1.00%

HORIZ - 1"=60'
VERT - 1"=6'

Public Sewer Line C



Public Sewer Line C Plan & Profile

Initial Submittal:
January 24, 2022
Revisions:

60 Scale

Designed By:
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Civil Engineering, Land Planning & Zoning
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CHARLES TAYLOR DEAN
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PROFESSIONAL ENGINEER
TENNESSEE
1 24 22

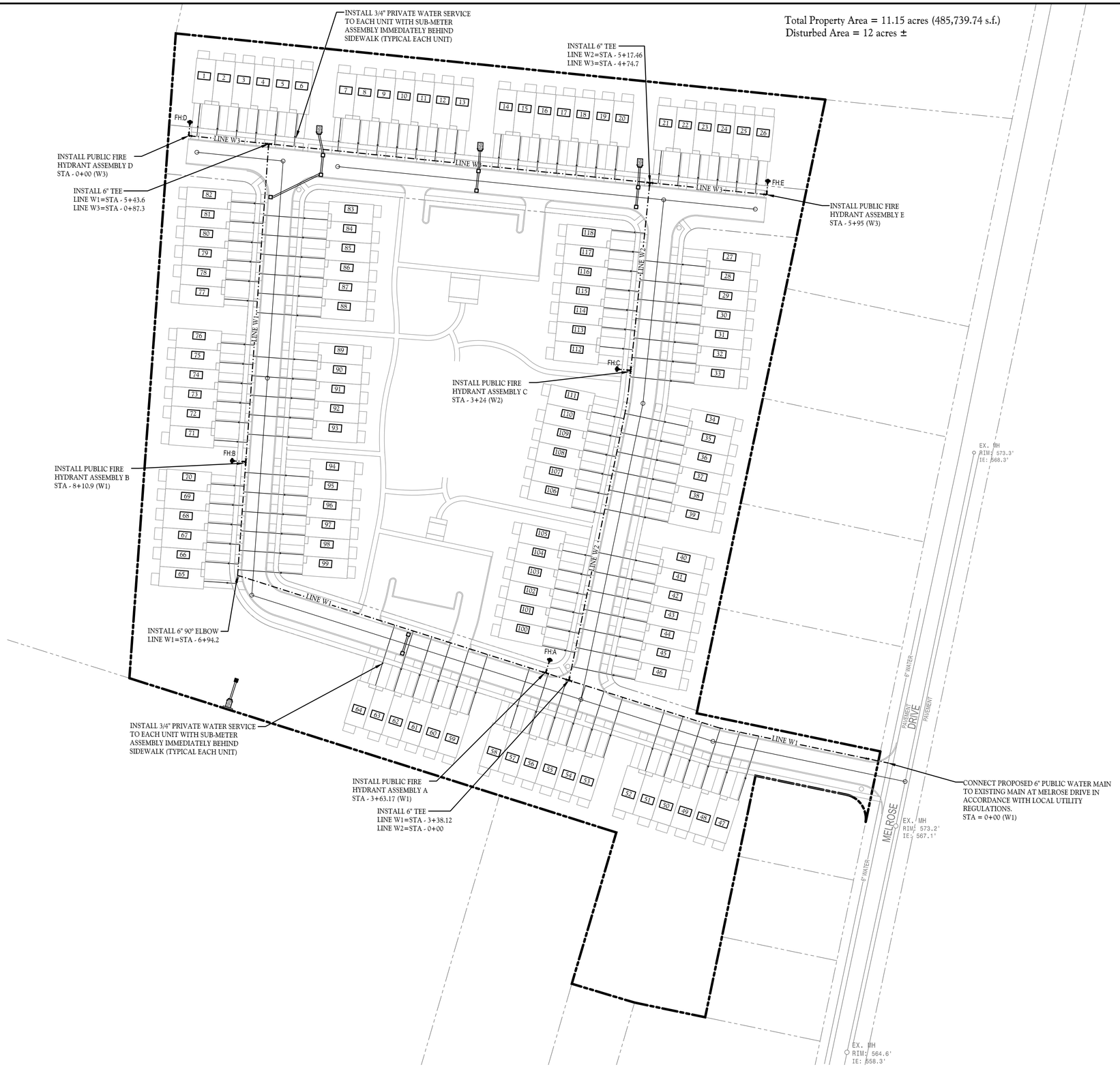
The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C3.3

Sheet 11 of 19



Public Water Line Plan

Initial Submittal:
January 24, 2022
Revisions:

50 Scale

Designed By:
Charley Dean, PE

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CHARLES TAYLOR DEAN
STATE OF TENNESSEE
REGISTERED
1-24-22

The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C3.4

Sheet 12 of 19

RETAINING WALL TABLES

Point	Top of Wall	Finish Grade Inside Wall	Finish Grade Outside Wall	Approx. Wall Height (feet)
A1	590.0	588.0	586.5	3.5
A2	590.0	588.0	582.0	8.0
A3	590.0	589.0	583.0	7.0
A4	590.0	589.0	584.0	6.0
A5	590.0	589.0	588.5	1.5

Point	Top of Wall	Finish Grade Inside Wall	Finish Grade Outside Wall	Approx. Wall Height (feet)
B1	596.0	595.0	593.5	2.5
B2	596.0	595.0	589.5	6.5
B3	597.0	596.0	589.5	7.5
B4	597.5	596.5	589.5	8.0
B5	599.5	598.5	592.0	7.5
B6	601.0	600.0	596.0	5.0
B7	601.0	600.0	599.0	2.0

Point	Top of Wall	Finish Grade Inside Wall	Finish Grade Outside Wall	Approx. Wall Height (feet)
C1	625.0	622.0	624.0	3.0
C2	627.0	622.0	626.0	5.0
C3	634.0	622.5	633.0	11.5
C4	637.5	623.0	636.5	14.5
C5	634.0	620.0	633.0	14.0
C6	629.0	616.0	628.0	13.0
C7	622.0	604.5	621.0	17.5
C8	613.5	607.0	612.5	6.5
C9	605.0	602.5	604.0	2.5

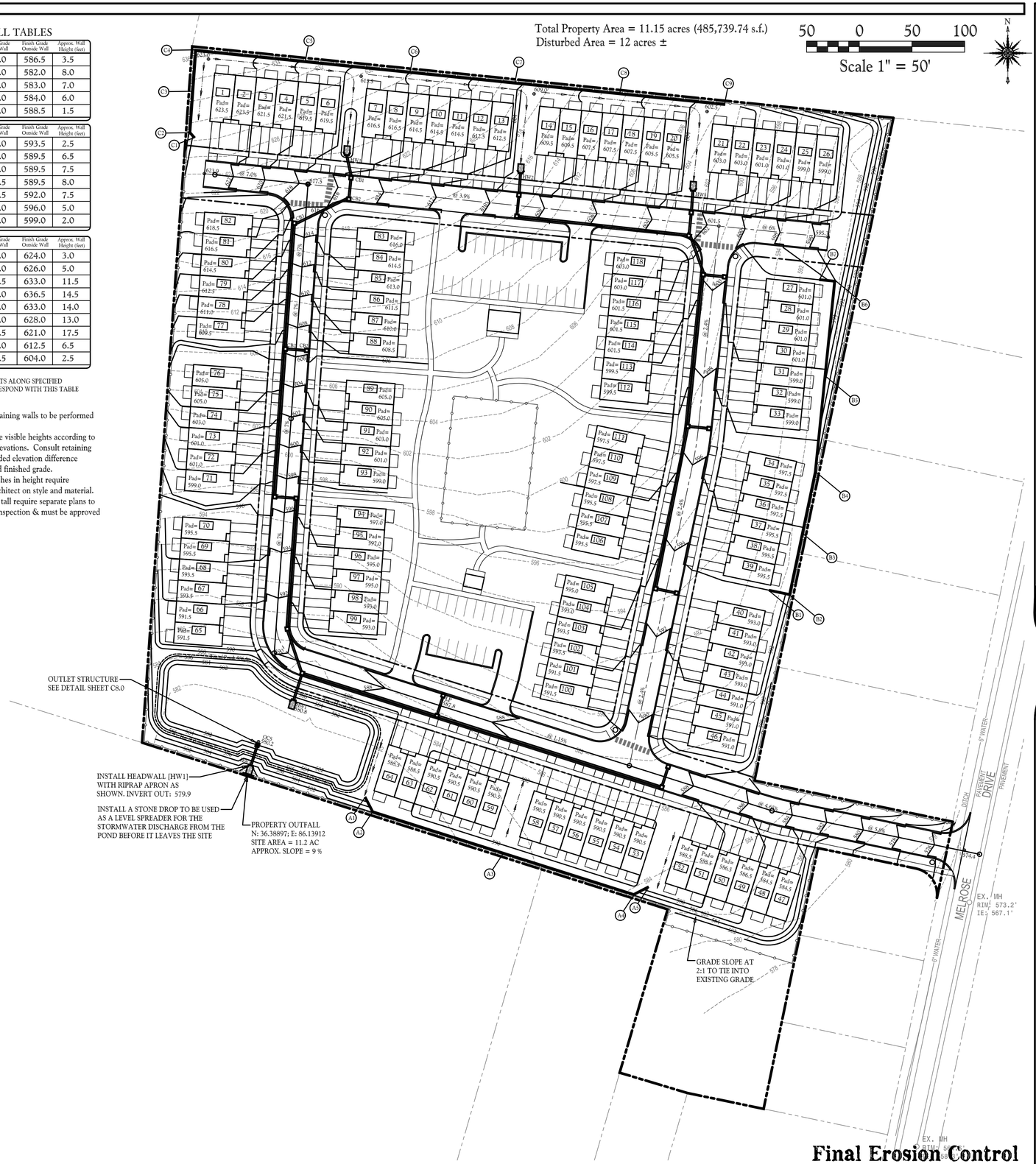
(A1) :: INDICATES POINTS ALONG SPECIFIED WALL THAT CORRESPOND WITH THIS TABLE

Retaining Wall Notes:

1. Structural design of retaining walls to be performed by others.
2. Heights in this table are visible heights according to proposed finished grade elevations. Consult retaining wall design for recommended elevation difference between top of footing and finished grade.
3. Walls exceeding 30 inches in height require handrails, consult with architect on style and material.
4. Retaining walls over 4' tall require separate plans to be submitted to building inspection & must be approved prior to installation.

Total Property Area = 11.15 acres (485,739.74 s.f.)
Disturbed Area = 12 acres ±

50 0 50 100
Scale 1" = 50'



Final Erosion Control
Grading & Drainage Plan

Initial Submittal:
January 24, 2022
Revisions:

50 Scale

Designed By:
Charley Dean, PE

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Civil Engineering, Land Planning & Zoning
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Phone: 615-300-6316; EMail: charley@deandesigngroupllc.com

CHARLES TAYLOR DEAN
STATE OF TENNESSEE
1-24-2022

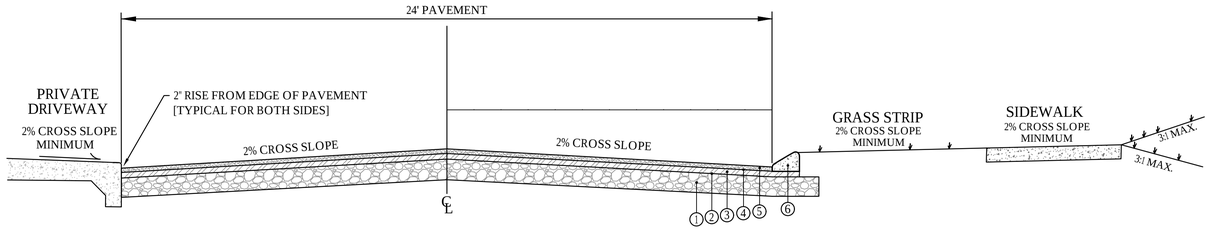
The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C4.0

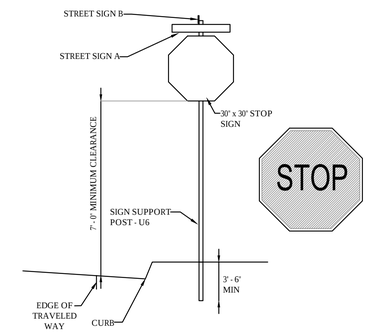
Sheet 13 of 19



1 MINERAL AGGREGATE BASE @ 8 INCHES ± THICK ITE NO. 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"	4 TACK COAT ITEM NO. 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) @ 0.02 GAL / SQ. YD.
2 BITUMINOUS BINDER @ 2 INCHES ± THICK (APPROX. 200 LBS / SQ. YD. ITEM NO. 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING "CW"	5 PRIME COAT: ITEM NO. 402-1 BITUMINOUS MATERIAL FOR PRIME COAT (PC) @ 0.30 -0.35 GAL. / SQ. YD ITEM NO. 402-02 AGGREGATE FOR COVER MATERIAL (PC) @ 8-12 LBS / SQ. YD.
3 BITUMINOUS SURFACE @ 1-1 / 2 INCHES ± THICK (APPROX. 165 LBS / SQ. YD) ITEM NO. 411-01.02 AGGREGATE (ACS) GRADING "E" ITEM NO. 411-01.01 ASPHALT CEMENT (PG64-22 (ACS) GRADING "E"	6 6" EXTRUDED MOUNTABLE CURB ITEM NO. 702-01.01 SEE DETAIL , THIS SHEET

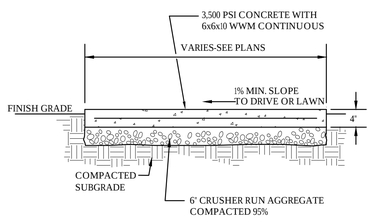
PRIVATE DRIVE SECTION
EAST / WEST PORTION OF ROADWAY

Not to Scale



NOTES:
1. ALL MARKINGS SHALL COMPLY WITH THE MILLENNIUM EDITION OF THE TENNESSEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, TENNESSEE D.O.T. STANDARD DRAWINGS, AND THE CITY OF HARTSVILLE SPECIFICATIONS.
2. MATERIAL SHALL BE HIGH DENSITY REFLECTIVE SHEETING (TYPE II).
3. ALL STREET NAME SIGNS SHALL BE MADE FROM A CITY APPROVED MATERIAL AND SHALL CONTAIN THE CITY APPROVED FONT.

TYPICAL SIGN DETAIL
Not to Scale



CONCRETE SIDEWALK
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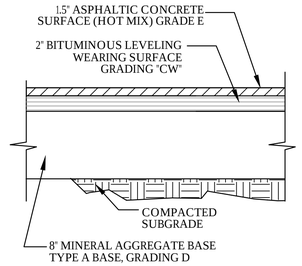
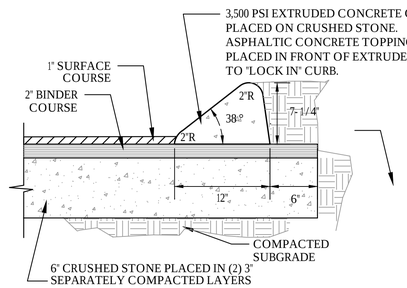


PAVEMENT SECTION TO BE IN COMPLIANCE WITH TROUSDALE CO ROAD COMMISSION STANDARDS

HEAVY-DUTY ASPHALT PAVEMENT
Not to Scale



REGULAR-DUTY PAVEMENT W/ EXTRUDED CURB
Not to Scale

Layout & Roadway Details

Initial Submittal: January 24, 2022
Revisions:

Not to Scale

Designed By: Charley Dean, PE

Dean Design Group
Civil Engineering, Land Planning & Zoning
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Phone: 615-300-6316; EMail: charley@deandesigngroupllc.com

CHARLES TAYLOR DEAN — STATE OF TENNESSEE — 102676 — REGISTERED ENGINEER

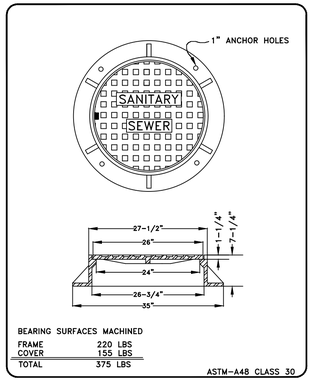
The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

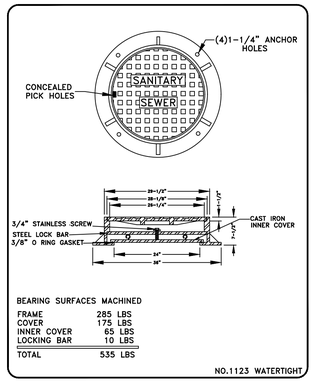
C5.0

Sheet 14 of 19



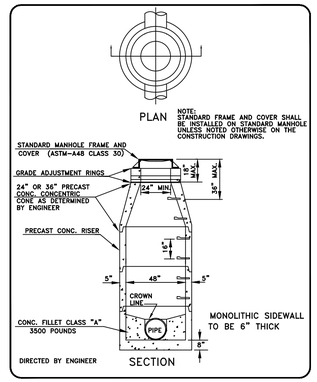
STANDARD MANHOLE FRAME & COVER

NOT TO SCALE



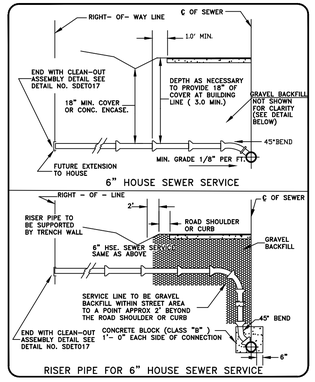
STANDARD WATERTIGHT MANHOLE FRAME & COVER

NOT TO SCALE



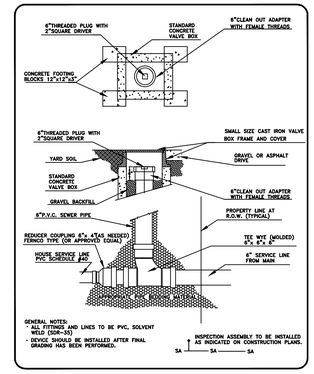
STANDARD PRECAST CONCRETE MANHOLE

NOT TO SCALE



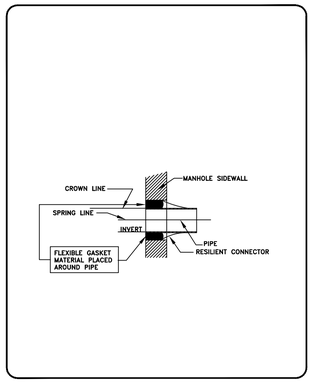
6" HOUSE SEWER SERVICE

NOT TO SCALE



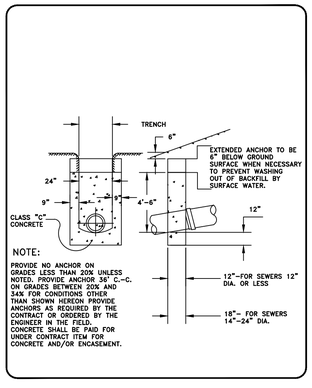
SEWER SERVICE LINE INSPECTION ASSEMBLY

NOT TO SCALE



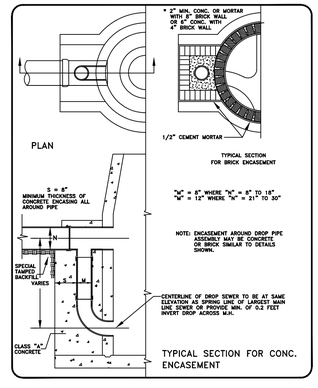
RESILIENT CONNECTOR FOR PIPE TO MH CONNECTION

NOT TO SCALE



CONCRETE ANCHOR DETAIL

NOT TO SCALE



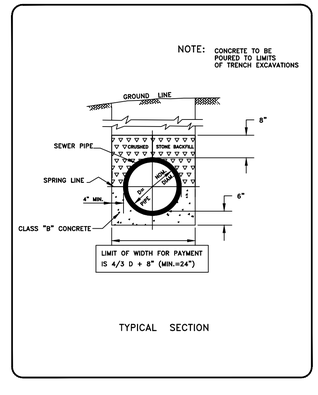
DROP PIPE ASSEMBLY FOR STANDARD MANHOLES

NOT TO SCALE

SUPPORT SPACING FOR SUSPENDED HORIZONTAL PVC PIPE	
PIPE SIZE	SUPPORT SPACING IN FEET
2"	4.5'
3"	5.0'
4"	6.0'
6"	6.5'
8"	7.5'
10"	8.0'
12"	8.0'
14"	8.0'

PIPE SIZE IN INCHES	MINIMUM DEFLECTION SDR21 PIPE	MAX. TRENCH WIDTH (Bd)
2"	56"	2.00'
4"	31"	2.33'
6"	22"	2.50'
8"	17"	2.66'
10"	13"	2.83'
12"	11"	3.00'
14"	10"	3.16"

PIPE SUPPORT SPACING, MAX. DEFLECTION & TRENCH WIDTH



CONCRETE CRADLE

NOT TO SCALE

FIELD TEST- INITIAL PROOF TESTING OF SANITARY SEWERS

A. IT IS THE INTENT TO SPECIFY A "TEST AS YOU GO" PROCEDURE IN ORDER TO ESTABLISH CONFIDENCE IN THE INSTALLATION AND AVOID THE NECESSARY DELAY OF FINAL ACCEPTANCE.

B. BEFORE A REACH OF PIPELINE IS APPROVED FOR PAYMENT, SUCCESSFULLY PROOF TEST THE REACH FOR GRADE, ALIGNMENT, CLEANLINESS, AND LEAKAGE.

C. IN THE EVENT THAT FOUR OR MORE REACHES FAIL TO SATISFACTORILY PASS PROOF TESTING PROCEDURES, CEASE PIPE LAYING UNTIL DEFICIENCIES ARE IDENTIFIED AND CORRECTED.

D. THE BASIS FOR GRADE, ALIGNMENT AND CLEANLINESS TESTING WILL BE VISUAL INSPECTION. LEAKAGE TESTING WILL BE BY MEANS OF LOW-PRESSURE AIR, EXFILTRATION, OR INFILTRATION AS DEEMED BY THE ENGINEER.

E. PROOF TEST FLEXIBLE PIPELINE INSTALLATION FOR DEFLECTION BY PULLING A "GO-NO GO" TEST MANDREL THROUGH THE LINE AFTER THE INITIAL BACKFILL IS COMPLETE TO AVOID UNNECESSARY DIG-UPS.

FIELD TEST - FINAL GRAVITY SEWER TESTING

A. BEFORE THE JOB IS ACCEPTED AND BEFORE ANY HOUSE SERVICES ARE CONNECTED, A FINAL TESTING PROCEDURE IS TO BE FOLLOWED

.

B. PERFORM A VISUAL INSPECTION WHEN GROUNDWATER LEVELS ARE ABOVE THE PIPELINE IF POSSIBLE. ALL VISIBLE LEAKS SHALL BE REPAIRED.

C. IF THERE IS EVIDENCE OF INFILTRATION, MAKE MEASUREMENT WITH SUITABLE PIPE WEIRS:

1. IF THE FLOW THROUGH THE LOWER MOST MANHOLE OF A CONTINUOUS SECTION OF SEWER DOES NOT EXCEED 25 GALLONS/DAY/INCH/MILE OF PIPELINE AND THE GROUNDWATER LEVEL IS REPRESENTATIVE OF THE HIGHEST ANNUAL LEVEL, THE ENTIRE CONTINUOUS SECTION SHALL BE APPROVED FOR LEAKAGE.

2. THE LEAKAGE TEST WILL BE CONDUCTED WITH ALL LINES CONNECTED (INCLUDING SERVICE LINES).

3. IF THE APPARENT INFILTRATION RATE EXCEEDS 25 GALLONS/DAY/INCH/MILE, THEN TAKE ADDITIONAL WEIR MEASUREMENTS TO ISOLATE THOSE SECTIONS LEAKING.

4. ANY SINGLE REACH OF PIPELINE WHICH EXHIBITS AN APPARENT INFILTRATION RATE IN EXCESS OF 25 GALLONS/DAY/INCH/MILE WILL NOT BE ACCEPTED AND ALL LEAKS WILL BE LOCATED AND CORRECTED.

D. IF IT IS NOT PRACTICAL TO WAIT FOR GROUNDWATER LEVELS THAT ARE REPRESENTATIVE OF THE HIGHEST ANNUAL LEVEL, THE CONTRACTOR MAY REQUEST APPROVAL ON THE BASIS OF A LOW PRESSURE AIR EXFILTRATION (OR OTHER APPROVED EXFILTRATION) TEST.

1. SUCH TESTS, IF APPROVED BY THE ENGINEER, WILL BE CONDUCTED IN ACCORDANCE WITH ASTM C-828 OR LATEST REVISION

.

2. WHEN AN EXFILTRATION TEST IS USED AS A SUBSTITUTE FOR INFILTRATION TESTING, CORRECT ALL CONDITIONS THAT ARE POTENTIAL SOURCES OF FILTRATION.

E. IF FLEXIBLE PIPE IS USED, PULL AN APPROVED "GO-NO GO" DEFLECTION MANDREL OF 95 PERCENT (95%) PIPE DIAMETER THROUGH ALL REACHES OF GRAVITY SEWER MAIN. THIS TEST SHALL BE CONDUCTED NO SOONER THAN 24-HOURS AFTER COMPLETION OF BACKFILL OF THE TESTED REACH. ANY PIPE NOT PASSING THE MANDREL SHALL BE REPLACED AND RETESTED.

F. THE MAXIMUM ALLOWABLE DEFLECTION IS FIVE PERCENT (5%).

G. OWNER MAY TELEVISE LINE PRIOR TO FINAL ACCEPTANCE.

LOW PRESSURE AIR EXFILTRATION TEST METHOD - PVC, DUCTILE IRON, HDPE, AND CONCRETE GRAVITY SEWER

A. CALCULATE THE PRESSURE DROP AS THE NUMBER OF MINUTES FOR THE AIR PRESSURE TO DROP FROM A STABILIZED PRESSURE OF 3-1/2 TO 2-1/2 PSIG.

B. TIMES FOR MIXED PIPE SIZED OF VARYING LENGTHS SHOULD BE CALCULATED AS DESCRIBED IN ASTM C-828 USING FORMULA T = KD/Q (Q=0.0020).

C. LENGTHS OF SECTION UNDER TEST SHALL NOT EXCEED 500 LINEAR FEET.

D. THE FOLLOWING ITEMS ARE FOR ONE PIPE SIZE ONLY.

PUBLIC UTILITY AS-BUILT NOTE:

UPON COMPLETION OF THESE PUBLIC UTILITY IMPROVEMENTS, THE ENGINEER SHALL PROVIDE THE CITY OF HARTSVILLE WITH A COMPLETE SET OF SIGNED AND SEALED AS-BUILT PLANS AND DIGITAL .DWG DRAWINGS IF REQUESTED. ALL AS-BUILT DRAWINGS MUST BE COMPLETED AND SUBMITTED PRIOR TO ACCEPTANCE OF THE UTILITY IMPROVEMENTS INTO THE PUBLIC SYSTEM AND ANY CONNECTIONS BEING MADE TO SAID SYSTEM.

AS-BUILT SEWER PLANS SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER OR REGISTERED LAND SURVEYOR AND SHALL INCLUDE ACTUAL FIELD ANGLES BETWEEN LINES; LOCATION OF SERVICE LINE STUBS AND TEE LOCATIONS; THE DISTANCE OF THE END OF THE SERVICE LINE TO THE PROPERTY CORNERS; STATION AND OFFSET INFORMATION FROM THE SEWER CENTERLINE TO THE END OF THE SERVICE LINE; THE DEPTH TO THE TOP OF THE END OF THE SERVICE LINE; AND REFLECTION OF ALL ALIGNMENT AND GRADE CHANGES.

Public Sewer Details

Initial Submittal:
January 24, 2022
Revisions:

Not to Scale

Designed By:
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CHARLES TAYLOR DEAN
STATE OF TENNESSEE
REGISTERED
1 24 2022

The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C6.0

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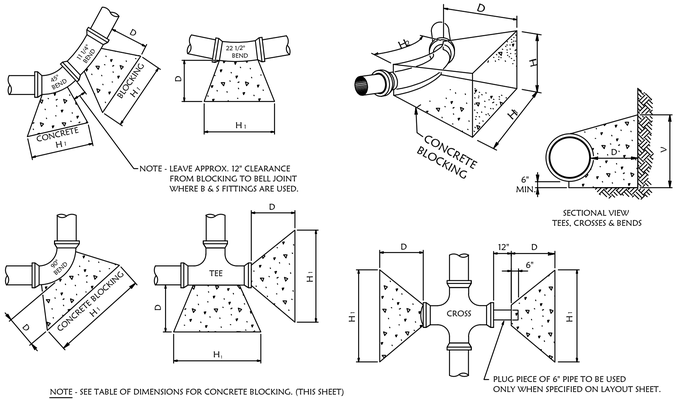


NOTE - SEE TABLE OF DIMENSIONS FOR CONCRETE BLOCKING. (THIS SHEET)

CONCRETE BLOCKING

Not to Scale

TABLE OF DIMENSIONS FOR CONCRETE BLOCKING																							
SIZE OF PIPE	TAPPING SLEEVES TEES & PLUGS					90° BENDS					45° BENDS					22 1/2 ° BENDS					11 1/4 ° BENDS				
	H_1	H_2	V	D	CU. FT.	H_1	H_2	V	D	CU. FT.	H_1	H_2	V	D	CU. FT.	H_1	H_2	V	D	CU. FT.	H_1	H_2	V	D	CU. FT.
2"&2 1/4	18"	10"	12"	18"	1.90	18"	10"	12"	18"	1.90	18"	6"	12"	18"	1.50	18"	6"	12"	18"	1.50	18"	6"	12"	18"	1.50
3"&4"	24"	12"	12"	18"	2.25	24"	12"	12"	18"	2.25	18"	8"	12"	18"	1.60	18"	8"	12"	18"	1.60	18"	8"	12"	18"	1.60
6"	24"	16"	18"	18"	3.50	30"	16"	18"	18"	4.05	24"	10"	16"	18"	3.20	24"	10"	16"	18"	3.20	24"	10"	16"	18"	3.20
8"	36"	18"	18"	18"	5.05	39"	18"	24"	18"	7.30	30"	11"	18"	18"	3.95	24"	11"	18"	18"	3.40	24"	11"	16"	18"	3.40
10"	48"	24"	18"	24"	7.15	54"	32"	12"	18"	10.25	24"	18"	21"	18"	4.60	24"	18"	21"	18"	4.60	24"	18"	21"	18"	4.60
12"	54"	30"	24"	24"	13.4	54"	36"	26"	24"	18.15	42"	18"	24"	24"	9.60	24"	18"	24"	24"	6.80	24"	18"	21"	24"	6.10
16"	66"	34"	36"	24"	22.5	69"	48"	48"	24"	29.0	48"	30"	36"	24"	17.0	24"	30"	27"	24"	11.8	27"	24"	27"	24"	9.10
24"	84"	48"	46"	30"	75.6	88"	68"	68"	36"	126.8	60"	36"	42"	36"	48.0	36"	30"	42"	36"	22.7	36"	30"	42"	36"	22.7

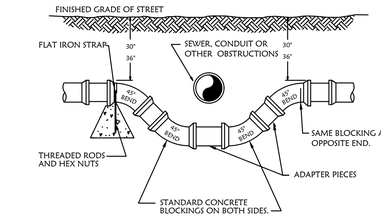
TABLE IS BASED ON 225 P.S.I. OR 150 P.S.I. WORKING PRESSURE PLUS 50% WATER HAMMER.

NOTE: CONCRETE USED FOR BLOCKING SHALL BE 3500#/sq. in

EARTH PRESSURES ARE FIGURED AT 4000# PER SQ. FT. BEARING AREA OF KICKERS SHALL BE INCREASED WHEN POURED AGAINST SAND, LOOSE FILL, WET EARTH, CINDERS, ETC.

TABLE OF DIMENSIONS FOR CONCRETE BLOCKING

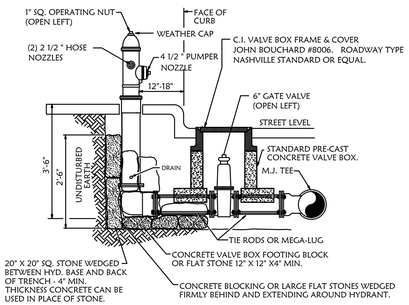
Not to Scale



NOTE: SIZE OF BLOCKING, CLAMP & RODS SHALL BE AS SHOWN ON THE DRAWINGS OR AS REQUIRED.

METHOD OF CROSSING UNDER OBSTRUCTION

Not to Scale



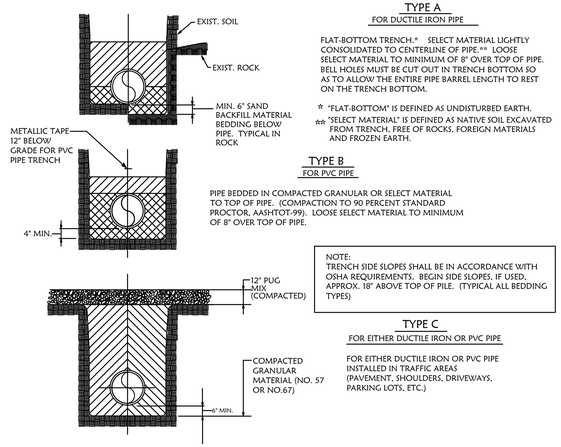
CONCRETE BLOCKING OR HYDRANT SHALL BE SET ON FLAT STONE OR CONC. VALVE BOX FOOTING BLOCK. LARGE FLAT STONES SHALL BE WEDGED FIRMLY BEHIND AND EXTENDING AROUND HYDRANT TO UNDISTURBED EARTH.

CARE SHALL BE TAKEN TO SET HYDRANT PLUMB. THE FIRE HYDRANT SHALL BE LOCATED NOT LESS THAN 12 INCHES NOR MORE THAN 18 INCHES FROM FACE OF CURB TO FRONT OF HYDRANT PROTECTION CASE.

A MINIMUM OF 2 CU. FT. OF CRUSHED STONE SHALL BE PLACED AROUND LEAD ADJOINING BLOCKING FOR DRAINAGE FROM WASTE OPENING.

FIRE HYDRANT INSTALLATION

Not to Scale



TYPE A

FOR DUCTILE IRON PIPE

FLAT-BOTTOM TRENCH.* SELECT MATERIAL LIGHTLY CONSOLIDATED TO CENTERLINE OF PIPE.** LOOSE SELECT MATERIAL TO MINIMUM OF 8" OVER TOP OF PIPE. BELL HOLES MUST BE CUT OUT IN TRENCH BOTTOM SO AS TO ALLOW THE ENTIRE PIPE BARREL LENGTH TO REST ON THE TRENCH BOTTOM.

* "FLAT-BOTTOM" IS DEFINED AS UNDISTURBED EARTH.

** "SELECT MATERIAL" IS DEFINED AS NATIVE SOIL EXCAVATED FROM TRENCH, FREE OF ROCKS, FOREIGN MATERIALS AND FROZEN EARTH.

TYPE B

FOR PVC PIPE

PIPE BEDDED IN COMPACTED GRANULAR OR SELECT MATERIAL TO TOP OF PIPE. (COMPACTION TO 90 PERCENT STANDARD PROCTOR, AASHTOT-99). LOOSE SELECT MATERIAL TO MINIMUM OF 8" OVER TOP OF PIPE.

NOTE:
TRENCH SIDE SLOPES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS. BEGIN SIDE SLOPES, IF USED, APPROX. 18" ABOVE TOP OF PILE. (TYPICAL ALL BEDDING TYPES)

TYPE C

FOR EITHER DUCTILE IRON OR PVC PIPE

FOR EITHER DUCTILE IRON OR PVC PIPE INSTALLED IN TRAFFIC AREAS (PAVEMENT, SHOULDERS, DRIVEWAYS, PARKING LOTS, ETC.)

TRENCH DETAILS

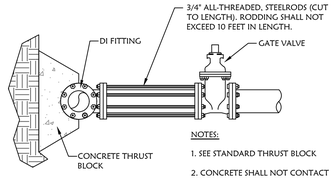
Not to Scale

SUPPORT SPACING FOR SUSPENDED HORIZONTAL PVC PIPE	
PIPE SIZE	SUPPORT SPACING IN FEET
2"	4.5'
3"	5.0'
4"	6.0'
6"	6.5'
8"	7.5'
10"	8.0'
12"	8.0'
14"	8.0'

PIPE SIZE IN INCHES	MINIMUM RADIUS (FT.) C-900 PIPE	OFFSET IN INCHES	MAX. TRENCH WIDTH (Bd)
4"	100	24.08	2.33'
6"	150	16.02	2.50'
8"	200	12.01	2.66'
10"	250	9.61	2.83'
12"	300	8.00	3.00'

OFFSET BASED ON 20 FT. LENGTH OF PIPE FORMING A TRUE ARC.

PIPE SUPPORT SPACING, MAX. DEFLECTION & TRENCH WIDTH



NOTES:

1. SEE STANDARD THRUST BLOCK

2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL FITTINGS.

ROD REQUIREMENTS	
BRANCH SIZE	NUMBER OF RODS
4"	2
6"	2
8"	4
12"	6
16"	8
24"	10

STANDARD VALVE RODDING

Not to Scale

WATER LINE PRESSURE TESTS

A. SUBJECT ALL NEWLY LAID PIPE OR ANY VALVED SECTION THEREOF TO A HYDROSTATIC PRESSURE OF AT LEAST 1.5 TIMES THE WORKING PRESSURE OR 150 PSI, WHICHEVER IS GREATER, AT THE POINT OF TESTING.

B. TEST PRESSURES SHALL:

1. NOT BE LESS THAN 1.5 TIMES THE WORKING PRESSURE AT THE HIGHEST POINT ALONG THE TEST SECTION.
2. NOT EXCEED THE PIPE OR THRUST RESTRAINT DESIGN PRESSURES.
3. BE OF AT LEAST 2-HOUR DURATION.
4. NOT VARY BY MORE THAN ±2 PSI.
5. NOT EXCEED TWICE THE RATED PRESSURE OF CLOSED VALVES OR HYDRANTS INCLUDED IN THE TEST SECTION.
6. NOT EXCEED THE RATED PRESSURE OF RESILIENT-SEATED BUTTERFLY VALVES.

C. PRESSURIZATION:

1. SLOWLY FILL EACH VALVED SECTION OF PIPE WITH WATER.
2. APPLY THE SPECIFIED TEST PRESSURE, BASED ON THE ELEVATION OF THE LOWEST POINT OF THE LINE SECTION UNDER TEST AND CORRECT TO THE ELEVATION OF THE TEST GAUGE BY MEANS OF A PUMP CONNECTED TO THE PIPE IN A MANNER SATISFACTORY TO THE OWNER.

D. AIR REMOVAL:

1. BEFORE APPLYING THE SPECIFIED TEST PRESSURE, EXPEL AIR COMPLETELY FROM THE PIPE, VALVES, AND HYDRANTS.
2. IF PERMANENT AIR VENTS ARE NOT LOCATED AT ALL HIGH POINTS, INSTALL CORPORATION COCKS AT SUCH POINTS TO EXPEL AIR AS THE LINE IS FILLED WITH WATER.
3. AFTER ALL AIR HAS BEEN EXPELLED, CLOSE THE CORPORATION COCKS AND APPLY THE TEST PRESSURE.
4. AT THE CONCLUSION OF THE PRESSURE TEST, REMOVE THE CORPORATION COCKS AND PLUG OR LEAVE IN PLACE AT THE DISCRETION OF THE OWNER.

E. EXAMINATION:

1. CAREFULLY EXAMINE ALL EXPOSED PIPE, FITTINGS, VALVES, HYDRANTS, AND JOINTS.
2. REPAIR OR REPLACE ANY DAMAGED OR DEFECTIVE PIPE, FITTINGS, VALVES, OR HYDRANTS THAT ARE DISCOVERED WITH SOUND MATERIAL AND REPEAT THE TEST UNTIL IT IS SATISFACTORY TO THE OWNER.

WATER LINE LEAKAGE TESTS

A. CONCURRENTLY CONDUCT A LEAKAGE TEST WITH THE PRESSURE TEST.

B. LEAKAGE DEFINED: THE QUANTITY OF WATER THAT MUST BE SUPPLIED INTO THE NEWLY LAID PIPE TO MAINTAIN THE SPECIFIED TEST PRESSURE AFTER THE AIR IN THE PIPELINE HAS BEEN EXPELLED AND THE PIPE HAS BEEN FILLED WITH WATER.

C. ALLOWABLE LEAKAGE:

1. DETERMINE ALLOWABLE LEAKAGE BY:

$$\frac{2\ L=ND(P)^{1/2}}{7400}$$

WHERE L IS THE ALLOWABLE LEAKAGE, IN GALLONS PER HOUR; N IS THE NUMBER OF JOINTS IN THE TESTED PIPELINE; D IS THE NOMINAL DIAMETER OF THE PIPE IN INCHES; AND P IS THE AVERAGE TEST PRESSURE DURING THE LEAKAGE TEST IN PSIG.

2. ALLOWABLE LEAKAGE AT VARIOUS PRESSURES: (SEE TABLE, BELOW)
ALLOWABLE LEAKAGE TABLE PIPE DIAMETER (IN.) 50 100 150 200 4 0.35 0.50 0.60 0.75 6 0.53 0.75 0.90 1.10 8 0.70 1.00 1.20 1.40
*SINGLE GASKET COUPLING IS ONE JOINT. TWIN GASKET COUPLING IS TWO JOINTS.

3. WHEN TESTING AGAINST CLOSED METAL-SEATED VALVES, AN ADDITIONAL LEAKAGE PER CLOSED VALVE OF 0.078 GAUHR/IN. OF NOMINAL VALVE SIZE SHALL BE ALLOWED.

4. WHEN HYDRANTS ARE IN THE TESTED SECTION, TEST AGAINST THE CLOSED HYDRANT.

ALLOWABLE LEAKAGE TABLE				
PIPE DIAMETER IN INCHES	50	100	150	200
4	0.35	0.50	0.60	0.75
6	0.53	0.75	0.90	1.10
8	0.70	1.00	1.20	1.40

CLEANING AND DISINFECTION OF WATER LINES

A. FLUSH WATER LINES CLEAN PRIOR TO DISINFECTION.

B. THOROUGHLY DISINFECT WATER LINES PRIOR TO CONNECTING INDIVIDUAL SERVICES.

1. USE CHLORINE-DISINFECTING AGENT APPLIED TO PRODUCE A 50 PPM DOSAGE.
2. ALLOW WATER TO ESCAPE FROM THE ENDS OF ALL LINES TO CAUSE DISPERSION OF THE CHLORINE SOLUTION INTO ALL PARTS OF THE SYSTEM.
3. OPERATE ALL VALVES AND HYDRANTS DURING THE TIME DISINFECTION IS OCCURRING.
4. RETAIN THE CHLORINE SOLUTION IN THE LINES FOR A PERIOD OF 24 HOURS.
5. AT THE END OF THE 24-HOUR PERIOD, THE RESIDUAL CHLORINE MUST BE A MINIMUM OF 25 PPM OTHERWISE, REPEAT THE DISINFECTION PROCEDURE.
6. UPON REFILLING THE LINES, COLLECT A SAMPLE FOR BACTERIOLOGICAL ANALYSIS. IF THE SAMPLE IS ACCEPTABLE, THE LINES MAY BE CONNECTED TO THE SYSTEM. OTHERWISE, REPEAT THE DISINFECTION PROCEDURE UNTIL ACCEPTABLE SAMPLES ARE ACHIEVED.

ACCEPTANCE OF INSTALLATION

A. IF ANY TEST OF PIPE LAID DISCLOSES LEAKAGE GREATER THAN THAT SPECIFIED ABOVE, LOCATE AND REPAIR THE DEFECTIVE MATERIAL UNTIL THE LEAKAGE IS WITHIN THE SPECIFIED ALLOWANCES.

B. REPAIR ALL VISIBLE LEAKS REGARDLESS OF THE AMOUNT OF LEAKAGE.

PUBLIC UTILITY AS-BUILT NOTE:

UPON COMPLETION OF THESE PUBLIC UTILITY IMPROVEMENTS, THE ENGINEER SHALL PROVIDE THE CITY OF HARTSVILLE WITH A COMPLETE SET OF SIGNED AND SEALED AS-BUILT PLANS AND DIGITAL .DWG DRAWINGS IF REQUESTED. ALL AS-BUILT DRAWINGS MUST BE COMPLETED AND SUBMITTED PRIOR TO ACCEPTANCE OF THE UTILITY IMPROVEMENTS INTO THE PUBLIC SYSTEM AND ANY CONNECTIONS BEING MADE TO SAID SYSTEM.

AS-BUILT SEWER PLANS SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER OR REGISTERED LAND SURVEYOR AND SHALL INCLUDE ACTUAL FIELD ANGLES BETWEEN LINES; LOCATION OF SERVICE LINE STUBS AND TEE LOCATIONS; THE DISTANCE OF THE END OF THE SERVICE LINE TO THE PROPERTY CORNERS; STATION AND OFFSET INFORMATION FROM THE SEWER CENTERLINE TO THE END OF THE SERVICE LINE; THE DEPTH TO THE TOP OF THE END OF THE SERVICE LINE; AND REFLECTION OF ALL ALIGNMENT AND GRADE CHANGES.

Public Water Details

Initial Submittal: January 24, 2022
Revisions:

Not to Scale

Designed By: Charley Dean, PE

Dean Design Group
Civil Engineering, Land Planning & Zoning
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Phone: 615-300-6316; EMail: charley@deandesigngroupllc.com

The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C7.0

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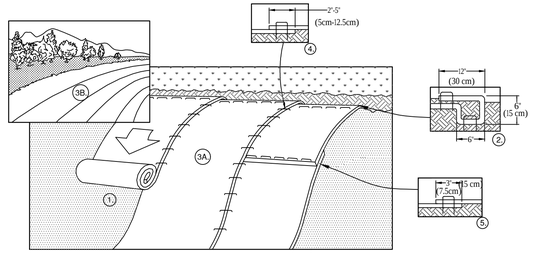


1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES / STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES / STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES / STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM , STAPLES / STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL MATTING DETAIL

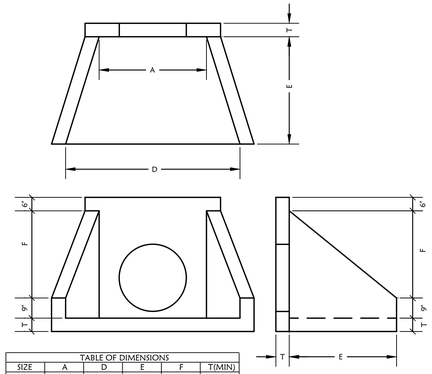
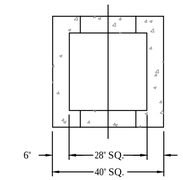


TABLE OF DIMENSIONS					
SIZE	A	D	E	F	T(MIN)
15"	2'-6"	5'-0"	2'-6"	1'-9"	6"
18"	2'-6"	5'-0"	2'-6"	1'-9"	6"
21"	2'-6"	5'-0"	2'-6"	1'-9"	6"
24"	4'-0"	6'-6"	4'-0"	3'-3"	6"
30"	4'-0"	6'-6"	4'-0"	3'-3"	6"
36"	5'-6"	8'-0"	3'-6"	4'-5"	6"
42"	5'-6"	8'-0"	3'-6"	4'-5"	6"
48"	5'-6"	8'-0"	3'-6"	4'-5"	6"
54"	7'-0"	9'-5"	4'-6"	5'-9"	6"
60"	7'-0"	9'-5"	4'-6"	5'-9"	6"
66"	8'-6"	11'-0"	5'-6"	6'-11"	6"
72"	8'-6"	11'-0"	5'-6"	6'-11"	6"

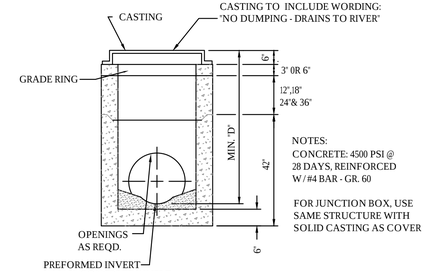
NOTES:
1. CONCRETE SHALL BE 4000 PSI @ 28 DAYS REINFORCED WITH NO.4 BARS @ 10"O.C., EACH WAY WITH WINGS AND TOE SLAB DOWELED TO HEADWALL WITH NO.5 BARS.
2. 3/4" CHAMFER ON ALL EXPOSED EDGES.

PRECAST CONCRETE HEADWALL

Not to Scale



MIN. DEPTH FOR RCP	
PIPE	"D"
12"	2.08'
15"	2.40'
18"	2.70'
24"	3.16'

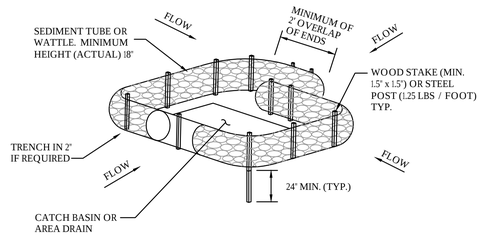


NOTES:
CONCRETE: 4500 PSI @ 28 DAYS, REINFORCED W / #4 BAR - GR. 60

FOR JUNCTION BOX, USE SAME STRUCTURE WITH SOLID CASTING AS COVER

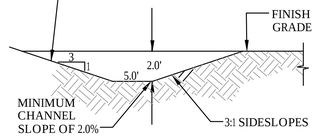
SINGLE INLET CATCH BASIN

Not to Scale



INLET PROTECTION

NOT TO SCALE



DRAINAGE SWALE

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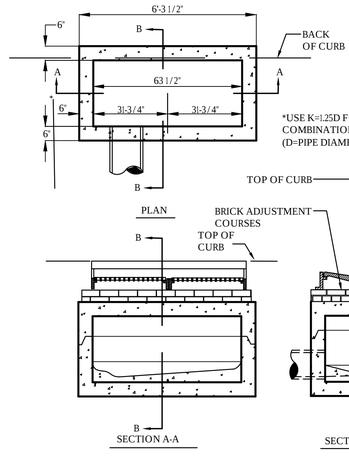

DOUBLE INLET (PRECAST)

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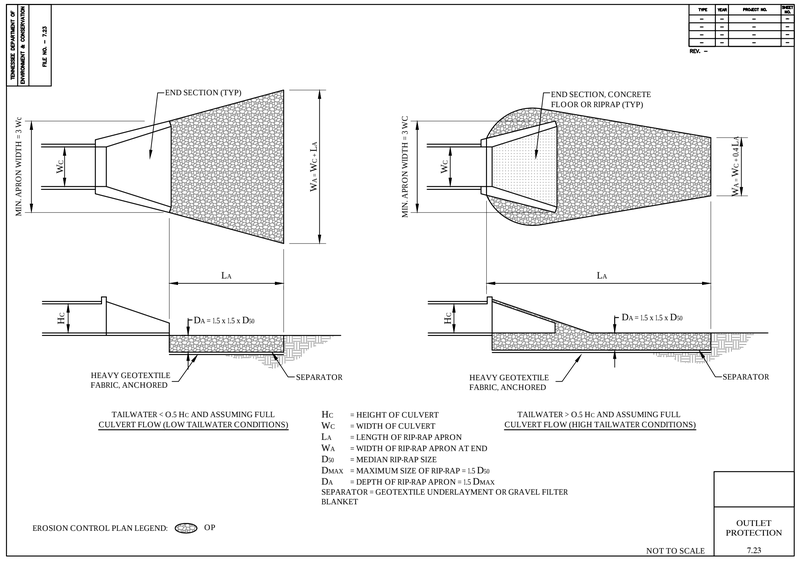


TAILWATER < 0.5 Hc AND ASSUMING FULL CULVERT FLOW (LOW TAILWATER CONDITIONS)

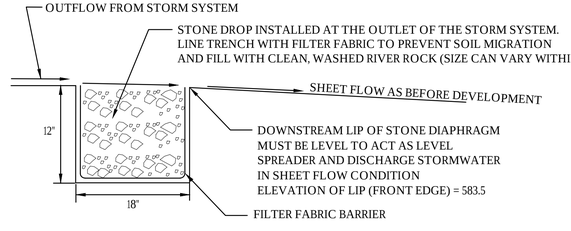
Hc = HEIGHT OF CULVERT
Wc = WIDTH OF CULVERT
LA = LENGTH OF RIP-RAP APRON
WA = WIDTH OF RIP-RAP APRON AT END
D50 = MEDIAN RIP-RAP SIZE
DMAX = MAXIMUM SIZE OF RIP-RAP = 1.5 D50
DA = DEPTH OF RIP-RAP APRON = 1.5 DMAX
SEPARATOR = GEOTEXTILE UNDERLAYMENT OR GRAVEL FILTER BLANKET

TAILWATER > 0.5 Hc AND ASSUMING FULL CULVERT FLOW (HIGH TAILWATER CONDITIONS)

EROSION CONTROL PLAN LEGEND: OP

NOT TO SCALE

OUTLET PROTECTION
7.23



NOTES:
1. TRENCH DIMENSIONS: 18 INCHES WIDE, 12 INCHES DEEP, 10 FEET LONG
2. TRENCH TO BE LINED WITH FILTER FABRIC TO PREVENT SOIL MIGRATION INTO STONE CHAMBER

STONE DROP DETAIL

Not to Scale

Grading & Drainage Details

Initial Submittal:
January 24, 2022
Revisions:

Not to Scale

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CHARLES TAYLOR DEAN
STATE OF TENNESSEE
REGISTERED
10647
LICENSED PROFESSIONAL ENGINEER
1-21-22

The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C8.0

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LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES AND TAKE PRECAUTIONS TO PREVENT DAMAGE TO THE UTILITIES.
2. ALL PLANTING AND MULCH BEDS SHALL BE HAND WEEDED OR SPRAYED WITH ROUND-UP (CONTRACTOR'S OPTION) PRIOR TO THE INSTALLATION OF MULCH.
3. PLANT MATERIALS AND STUMPS INDICATED FOR REMOVAL SHALL BE REMOVED AND DISPOSED OFF-SITE BY THE CONTRACTOR. BACKFILL HOLES WITH TOPSOIL FREE OF ROOTS AND ROCKS.
4. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINE GRADING OF ALL PLANTING AREAS.
5. ALL PLANTING AREAS SHALL BE FERTILIZED WITH 12#/1000 S.F. OF 10-10-10 FERTILIZER.
6. ALL PLANTING BEDS SHALL HAVE A MINIMUM OF 3" DEPTH OF SHREDDED HARDWOOD BARK MULCH.
7. THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL MATERIAL QUANTITIES AND NOTIFY DESIGNER IN THE EVENT OF A DISCREPANCY.
8. THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH WRITTEN INSTRUCTIONS ON THE PROPER CARE OF ALL SPECIFIED PLANT MATERIALS PRIOR TO FINAL PAYMENT.
9. EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION DAMAGE. SELECTIVELY PRUNE DEAD WOOD.
10. ALL DISTURBED AREAS SHALL BE PLANTED WITH TURF AS INDICATED ON THE MATERIALS SCHEDULE.
11. ALL DECIDUOUS TREES, EXISTING AND PROPOSED SHALL BE PRUNED TO PROVIDE 4' MINIMUM CLEAR TRUNK UNLESS OTHERWISE NOTED.
12. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A ONE YEAR WARRANTY ON ALL PLANT MATERIALS AND REPLACE ANY DEAD OR DYING MATERIAL WITHIN THAT TIME PERIOD.
13. NO PLANT MATERIALS SHOULD BE SUBSTITUTED WITHOUT AUTHORIZATION BY THE DESIGN PROFESSIONAL. PLANT SIZES SHOWN ARE MINIMUMS REQUIRED BY THE LOCAL REGULATIONS AND MATERIALS SHOWN HAVE BEEN SELECTED SPECIFICALLY FOR THIS PROJECT.
14. ALL WIRE BASKETS SHALL BE COMPLETELY REMOVED AND DISPOSED OF, BURLAP SHOULD BE REMOVED OR PUNCTURED IN AT LEAST 5 PLACES. REMOVE ALL TWINE FROM BURLAPPED MATERIALS.
15. THE OWNER ACKNOWLEDGES THAT LANDSCAPING IN A DEDICATED EASEMENT DOES NOT WAIVE OR MODIFY THE CITY OF HARTSVILLE'S RIGHTS AS THE EASEMENT HOLDER. THE OWNER UNDERSTANDS THAT THE CITY OF HARTSVILLE, ITS AUTHORIZED CONTRACTOR OR APPLICABLE PRIVATE UTILITY MAY AT ANY TIME AND FOR ANY REASON PERFORM WORK WITHIN THE DEDICATED EASEMENT. THE CITY, ITS AUTHORIZED CONTRACTOR OR APPLICABLE PRIVATE UTILITY SHALL HAVE NO LIABILITY TO THE OWNER FOR ANY DAMAGE TO THE LANDSCAPING IN THE EASEMENTS WHEN SAID DAMAGE IS DUE TO WORK WITHIN THE EASEMENT. THE OWNER MAY BE HELD RESPONSIBLE FOR THE REMOVAL OF THE LANDSCAPING TO ENABLE THE WORK TO BE DONE. THE OWNER SHALL BE SOLELY RESPONSIBLE FOR ANY COSTS INCURRED IN REPAIRING AND/OR REPLACING THE REQUIRED LANDSCAPING.
16. DURING THE WARRANTY PERIOD, DEFECTIVE MATERIALS, EQUIPMENT, AND WORKMANSHIP SHALL BE REPAIRED, CORRECTED, OR REPLACED WITHOUT CHARGE OR COST TO THE CITY. THE CITY MAY AT ANY TIME DURING THE WARRANTY PERIOD INSPECT, PHOTOGRAPH, OR TELEVISE SUCH LANDSCAPING AND SHALL NOTIFY THE DEVELOPER OF ANY NECESSARY REPAIR, CORRECTION, OR REPLACEMENT.
17. ALL REQUIRED LANDSCAPING SHALL BE PROVIDED WITH A READILY AVAILABLE AND ACCEPTABLE WATER SUPPLY. UNDERGROUND SPRINKLER SYSTEMS ARE ENCOURAGED FOR ALL STREET YARD LANDSCAPING, PARKING LOT LANDSCAPING, SCREENING. IF UNDERGROUND SPRINKLERS ARE NOT PROVIDED, AN OUTSIDE HOSE ATTACHMENT WITHIN TWO-HUNDRED (200) FEET OF ALL LANDSCAPING REQUIRED BY THIS ORDINANCE SHALL BE REQUIRED.

WATER GENERAL NOTES

1. THRUST BLOCKS SHALL BE USED AT ALL BENDS AND FITTINGS. MECHANICAL JOINT RESTRAINTS (GRIP-RING) SHALL BE USED AT ALL BENDS AND FITTINGS.
2. PROVIDE NO LESS THAN THIRTY (30) INCHES (NON-R.O.W.), THIRTY-SIX (36) INCHES (R.O.W.) OF COVER FROM TOP OF PIPE TO BOTTOM OF ASPHALT OR TO FINISHED GRADE.
3. ALL WATERLINES AT SEWER CROSSINGS SHALL BE LOCATED ABOVE AND HAVE AN EIGHTEEN (18) INCH VERTICAL SEPARATION FROM THE SEWER PIPE.
4. A MINIMUM HORIZONTAL CLEARANCE OF TEN (10) FEET FOR STORM AND SANITARY SEWERS SHALL BE MAINTAINED BETWEEN THE WATERLINE AND OTHER UTILITIES RUNNING PARALLEL TO THE DESIGNED MAINS.
5. UNLESS OTHERWISE SPECIFIED, ALL WATERLINES SHALL BE ASTM D-3139, C900, CLASS 235 PSI (DR-18) PVC.
6. ALL WATERLINES SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH AWWA.
7. ALL WATER MAINS, VALVES, FIRE HYDRANTS, SERVICES, AND APPURTENANCES SHALL BE INSTALLED, TESTED, AND APPROVED PRIOR TO PAVING.

SANITARY SEWER GENERAL NOTES

1. ALL GRAVITY SANITARY SEWER PIPE SHALL MEET SDR26 PVC REQUIREMENTS. SEWER LINE CONSTRUCTION AND MATERIALS SHALL CONFORM TO ASTM STANDARDS AND SPECIFICATIONS.
2. DISTANCES FOR SANITARY SEWER ARE THE HORIZONTAL DISTANCES FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. THEREFORE, DISTANCES SHOWN ON PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT.
3. RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATION. PIPELINE CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS, GROUT, AND STEEL SHIMS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE IN ACCORDANCE WITH THE PLANS. ALL FRAME SHALL BE ADJUSTED TO FINAL GRADE PRIOR TO THE FINAL LIFT OF ASPHALT.
4. ALL SANITARY SEWER MAIN TESTING SHALL BE IN ACCORDANCE WITH UTILITY COMPANY STANDARDS. ALL TEST RESULTS SHALL BE PROVIDED TO THE OWNERS ENGINEER, THE OWNER, AND THE GOVERNING AUTHORITY PRIOR TO BEGINNING SERVICE.
5. COMPACTION OF ALL TRENCHES WITHIN PROJECT SITE MUST BE ATTAINED AND COMPACTION RESULTS SUBMITTED THE ENGINEER PRIOR TO FINAL ACCEPTANCE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING STRUCTURES AND IMPROVEMENTS DURING INSTALLATION OF SANITARY SEWER SYSTEM.
7. SANITARY SEWER STRUCTURES AND PIPES SHALL BE BEDDED IN ACCORDANCE WITH DETAILS ON PLANS.
8. ALL SANITARY SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH ASPHALT, AND SHALL HAVE TRAFFIC BEARING CASTINGS. MANHOLES IN UNPAVED AREAS SHALL BE FOUR (4) INCHES ABOVE FINISH GROUND GRADING. ALL STORM STRUCTURE LIDS SHALL BE BITUMINOUS COATED AND LABELED "SANITARY SEWER".

UTILITY GENERAL NOTES

1. ALL INSTALLATION AND MATERIALS SHALL, AT A MINIMUM, CONFORM TO THE CITY OF HARTSVILLE TROUSDALE WATER AND SEWER UTILITY DISTRICT STANDARDS, SPECIFICATIONS, PLANS, AND DETAILS.
2. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
3. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIES UTILITY COMPANIES, AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
5. UNDERGROUND UTILITIES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
6. CONTRACTOR SHALL NOTIFY THE UTILITY BEFORE CONNECTING TO EXISTING UTILITY.
7. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
8. ALL UTILITY PIPES SHALL BE BEDDED AND BACKFILLED IN ACCORDANCE WITH THE DETAIL DRAWINGS.
9. TOPS OF EXISTING MANHOLES SHALL BE RAISED, AS NECESSARY, TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS. ANY EXISTING MANHOLES IN UNPAVED AREAS SHALL BE FOUR (4) INCHES ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS.
10. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 PSI.
11. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
12. ALL UTILITIES SHALL BE TESTED TO ENSURE PROPER INSTALLATION.

STORM SEWER GENERAL NOTES

1. DISTANCES FROM STORM DRAINS ARE THE HORIZONTAL DISTANCES FROM CENTER OF MANHOLE OR INLET TO CENTER OF MANHOLE OR INLET. THEREFORE, DISTANCES SHOWN ON PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT.
2. RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATION. PIPELINE CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS, GROUT, AND STEEL SHIMS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE IN ACCORDANCE WITH THE PLANS. ALL FRAME SHALL BE ADJUSTED TO FINAL GRADE PRIOR TO THE FINAL LIFT OF ASPHALT.
3. COMPACTION OF ALL TRENCHES WITHIN THE PROJECT SITE MUST BE ATTAINED AND COMPACTION RESULTS SUBMITTED TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.
4. ALL STORM SEWER PIPES ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
5. ALL STORM SEWER STRUCTURES IN PAVED AREAS SHALL BE FLUSH WITH ASPHALT, AND SHALL HAVE TRAFFIC BEARING GRATES / LIDS. STRUCTURES IN UNPAVED AREAS SHALL BE FLUSH WITH FINISH GROUND GRADING. ALL STORM STRUCTURE LIDS SHALL BE BITUMINOUS COATED AND LABELED "STORM SEWER".
6. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING STORM DRAIN STRUCTURES, PIPES, AND ALL UTILITIES PRIOR TO CONSTRUCTION.
7. ALL STORM SEWER STRUCTURES AND PIPES SHALL BE BEDDED IN ACCORDANCE WITH DETAILS ON PLANS.

GRADING GENERAL NOTES

1. CONTOURS SHOWN ARE FOR FINISHED PAVING, SIDEWALK, SLAB, OR GROUND. ADJUSTMENT TO SUBGRADE IS THE CONTRACTOR'S RESPONSIBILITY.
2. PROOF ROLL THE SITE WITH A TANDEM AXLE, LOADED DUMP TRUCK IN TWO DIRECTIONS. ANY AREAS WHICH ARE NOTED TO RUT OR PUMP EXCESSIVELY SHALL BE UNDERCUT AND BACKFILLED WITH COMPACTED, ENGINEERED FILL ACCORDING TO THE COMPACTION REQUIREMENTS BELOW.
3. IF DURING THE OVERLOT GRADING PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE AN UNIDENTIFIED SOIL SITUATION, THE GEOTECHNICAL ENGINEER AND OWNER'S CIVIL ENGINEER CONSULTANT (DEAN DESIGN GROUP, LLC) SHALL BE CONTACTED FOR RECOMMENDATIONS.
4. UNLESS OTHERWISE SHOWN, NO PROPOSED SLOPE SHALL EXCEED TWO (2) HORIZONTAL TO ONE (1) VERTICAL. ALL SLOPED AREAS MUST BE PROTECTED FROM EROSION.
5. CONTRACTOR SHALL USE BENCHMARKS AND DATUMS SHOWN HEREON TO SET PROJECT BENCHMARK(S), BY RUNNING A LEVEL LOOP BETWEEN AT LEAST TWO BENCHMARKS, AND SHALL PROVIDE SURVEY NOTES OF SUCH TO PROJECT ENGINEER PRIOR TO COMMENCING CONSTRUCTION.
6. ALL UTILITIES (MANHOLES, VALVE COVERS, CLEANOUTS, VAULTS, BOXES, ETC.) SHALL BE ADJUSTED TO FINAL GRADE PRIOR TO FINAL LIFT OF ASPHALT.
7. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
8. EXISTING GRADE CONTOUR INTERVALS SHOWN AT TWO (2) FOOT INTERVALS.
9. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT TWO (2) FOOT INTERVALS.
10. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
11. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES AND NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION.
12. PAVEMENT OPERATION TO COMMENCE AS SOON AS POSSIBLE AFTER COMPLETION OF FINAL GRADING.

EROSION PREVENTION & SEDIMENT CONTROLS

1. A COPY OF ALL STORMWATER RELATED PERMITS SHALL BE POSTED ON-SITE AT ALL TIMES.
2. A COPY OF THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP), NOTICE OF INTENT (N01) AND RELATED DOCUMENTS SHALL BE BE MAINTAINED ON THE SITE AND AVAILABLE FOR REVIEW UPON REQUEST.
3. THE CONTRACTOR SHALL BE DESIGNATED A CO-PERMITTEE TO THE GENERAL CONSTRUCTION STORM WATER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS UNDER THE T.D.E.C. ENVIRONMENTAL PROTECTION AGENCY (TDEC EPA) GENERAL PERMIT.
4. ALL CONTRACTORS AND SUB-CONTRACTORS SHALL PROVIDE SIGNATURES TO THE OWNER ACKNOWLEDGING THAT THEY REVIEWED AND UNDERSTAND THE CONDITIONS AND RESPONSIBILITIES OF THE GENERAL PERMIT AND SWPPP. THESE SIGNATURES SHALL BE PROVIDED PRIOR TO THE COMMENCEMENT OF WORK ON THE CONSTRUCTION SITE.
5. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO INITIAL DISTURBANCE ACTIVITIES OR AS SOON AS PRACTICAL. THE CONTRACTOR SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE TENNESSEE EPA GENERAL PERMIT AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) DEVELOPED FOR THE PROJECT.
6. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PROPER SOIL EROSION MEASURES FOR PROTECTION OF ALL ADJOINING ROADS, LANDS, AND STREAMS. REFER TO S.C.S. MANUAL "RAINWATER AND LAND DEVELOPMENT" AND T.D.E.C. "EROSION & SEDIMENT CONTROL HANDBOOK" FOR REQUIREMENTS
7. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING AND GRUBBING. THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL AT ALL POINTS WHERE STORM WATER LEAVES THE LIMITS OF THE PROJECT, ALL POINTS WHERE STORM WATER ENTERS A STREAM THAT TRAVERSES THE PROJECT, AND ALL POINTS WHERE STORM WATER ENTERS PORTIONS OF COMPLETED UNDERGROUND PIPING.
8. THE SWPPP PLAN IS A DYNAMIC PLAN BASED UPON SITE CONDITIONS AND THE CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND UPDATING THE SWPPP AS THE PROJECT PROCEEDS.
9. THE CONSTRUCTION BMP'S WITHIN THESE PLANS REPRESENT THE MINIMUM REQUIRED ONSITE. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ONSITE BMP'S AS THE PROJECT PROGRESSES.
10. THE CONTRACTOR SHALL PROVIDE QUALIFIED INSPECTION PERSONNEL TO CONDUCT INSPECTIONS PER SECTION 3.5.8 OF THE TENNESSEE GENERAL PERMIT. RECORDS OF THESE INSPECTIONS SHALL BE KEPT AND MADE AVAILABLE TO THE OWNER, THE OWNER'S REPRESENTATIVE, OR THE JURISDICTIONAL AGENCIES IF REQUESTED.
11. AT A MINIMUM, ALL CONTROLS ON THE SITE SHALL BE INSPECTED AT LEAST TWICE PER CALENDAR WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN OF RAIN PER 24 HOUR PERIOD. INSPECTION PERIOD SHALL BE AT LEAST 72 HOURS APART.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ALL TEMPORARY AND PERMANENT CONTROL PRACTICES TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. SHOULD A STRUCTURE OR FEATURE BECOME DAMAGED, THE CONTRACTOR SHALL REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER.
13. ONCE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND THE SITE HAS MET FINAL STABILIZATION REQUIREMENTS WITH ALL TEMPORARY BMP'S REMOVED, THE AUTHORIZED SITE REPRESENTATIVE MAY FILE A NOTICE OF TERMINATION (NOT) WITH T.D.E.C..

GENERAL NOTES

1. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS BY ALL OF THE PERMITTING AUTHORITIES.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS. SPECIFICATIONS, REFERENCED DOCUMENTS. AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
3. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO OUR OFFICE AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY OUR OFFICE IF ACTUAL SITE CONDITIONS DIFFER FROM THAT SHOWN ON THE PLAN. OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER SITE FEATURES.
4. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OF GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
5. LOCATIONS OF PROPERTY LINES & UNDERGROUND UTILITIES POSSIBLY INCOMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATION & ELEVATION OF ALL EXISTING UNDERGROUND UTILITIES BEFORE MAKING TIES TO THEM.
6. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL TOWN, COUNTY, STATE AND FEDERAL LAWS AND APPLICABLE CODES. CONTRACTOR SHALL PROPERLY REMOVE AND DISPOSE OF HAZARDOUS / UNSUITABLE MATERIAL OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE CODES AND LAWS.
7. THE CONTRACTOR SHALL OBTAIN & POST ALL NECESSARY PERMITS.
8. THE CONTRACTOR SHALL PROVIDE SAFETY MEASURES, THROUGHOUT THE FULL TERM OF THE PROJECT. IN STRICT ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AS PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
9. A COPY OF THE APPROVED PROJECT PLANS SHALL REMAIN WITH THE CONTRACTOR ON SITE AT ALL TIMES DURING THE PROJECT.
10. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS / MEANS FOR COMPLETION OF THE WORK DEPICTED ON THESE PLANS NOR ANY CONFLICTS / SCOPE REVISIONS WHICH RESULT FROM SAME. CONTRACTOR RESPONSIBLE FOR DETERMINING METHOD / MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND NOTIFICATION OF OWNER AND ENGINEER OF RECORD WHEN A CONFLICT IS IDENTIFIED.
11. NEITHER THE PROFESSIONAL ACTIVITIES OF MID-TENN ENGINEERING COMPANY NOR THE PRESENCE OF MID-TENN ENGINEERING COMPANY OR ITS EMPLOYEES AND SUB-CONSULTANTS AT A CONSTRUCTION SITE SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS. DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THESE PLANS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. MID-TENN ENGINEERING COMPANY AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY. MID-TENN ENGINEERING COMPANY SHALL BE INDEMNIFIED BY THE GENERAL CONTRACTOR AND SHALL BE MADE ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR:S POLICIES OF GENERAL LIABILITY INSURANCE.

Construction Notes

Initial Submittal:
January 24, 2022
Revisions:

Not to Scale

Designed By:
Charley Dean, PE

Dean Design Group
Civil Engineering, Land Planning & Zoning
1633 West Main Street, Suite 1002, Lebanon TN 37087
Phone: 615-300-6316; EMail: charley@deandesigngroupllc.com

CHARLES TAYLOR DEAN
REGISTERED
PROFESSIONAL
ENGINEER
No. 124,765
STATE OF TENNESSEE

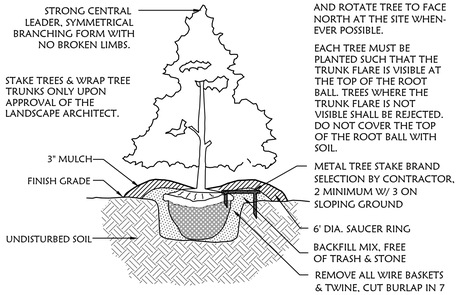
The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C9.0

Sheet 18 of 19



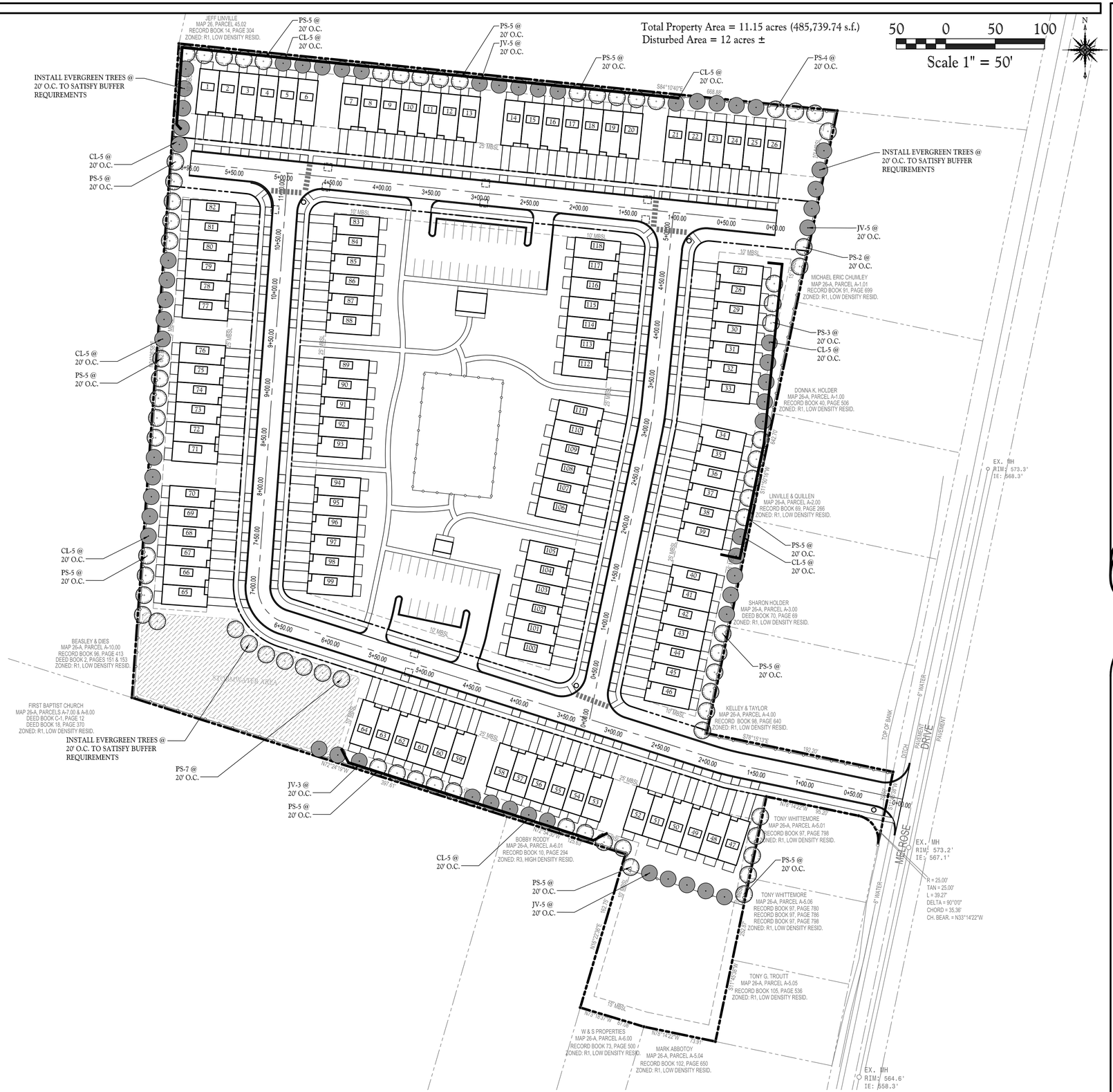
ALL PLANT MATERIAL TO MEET AMERICAN STANDARDS FOR NURSERY STOCK & ANSI A300 STANDARDS.

EVERGREEN TREE PLANTING DETAIL

Not to Scale

MATERIALS SCHEDULE

KEY	QTY.	SCIENTIFIC NAME/ COMMON NAME	HEIGHT	SPREAD	TRUNK	REMARKS
TREES						
CL	40	x Cupressocyparis leylandii/ Leyland Cypress	4'-5'	2'-3'	1.5"	Full to base, matched
JV	18	Juniperus virginiana/ Eastern Redcedar	4'-5'	2'-3'	1.5"	Full to base, matched
PS	71	Pinus strobus/ White Pine	4'-5'	3'-4'	1.5"	Full to base, matched
TURF						
SEED		Turf Mixture	80% Rebel Supreme,20% Merion Bluegrass. Seed all disturbed areas @ 5#/1,000 sf.			
MISCELLANEOUS			REMARKS			
MULCH		Shredded Hardwood Bark Mulch	Minimum 3" depth throughout. Min. 4" deep on slopes greater than 3:1.			
		Topsoil				



Landscape Plan

Dean Design Group
Civil Engineering, Land Planning & Zoning
1633 West Main Street, Suite 1002, Lebanon TN 37087
Phone: 615-300-6316; EMail: charley@deandesigngroupllc.com

Initial Submittal:
January 24, 2022
Revisions:

50 Scale

Designed By:
Charley Dean, PE

The Towns at Melrose
Map 26-A, Parcel A-500 in Trousdale Co
Melrose Drive, Hartsville, Tennessee

Permit Info:

Project: 22003

C10.0

Sheet 19 of 19

HARTSVILLE/TROUSDALE COUNTY GOVERNMENT
W. MAIN ST. SIDEWALK REPLACEMENT

INDEX OF DRAWINGS

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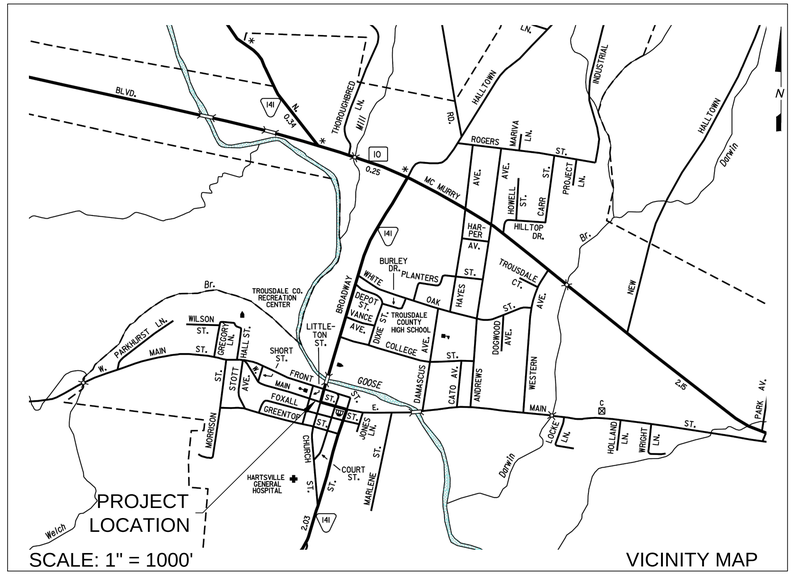
PROPOSED LAYOUT	C2
PROPOSED GRADING PLAN	C3
TDOT STANDARD DETAILS	C4
STANDARD DETAILS	C5

HARTSVILLE, TENNESSEE



MID - TENN
ENGINEERING CO.
648 HWY. 52 BYPASS WEST
LAFAYETTE,TN (615) 666-2385

HARTSVILLE/TROUSDALE COUNTY GOVERNMENT APPROVAL

APPROVED _____ DATE _____

HONORABLE STEPHEN CHAMBERS, MAYOR

JOB NO. 851102

NO.	DATE	DESCRIPTION	BY	CKD

REVISIONS

MID - TENN
ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE,TN (615) 666-2385

HARTSVILLE/TROUSDALE COUNTY GOVERNMENT
W. MAIN ST. SIDEWALK REPLACEMENT
HARTSVILLE, TENNESSEE

COVER SHEET

E. J. WHITE
REGISTERED ENGINEER
AGRICULTURE
CIVIL
COMMERCE
No. 115151
STATE OF TENNESSEE
1-24-22

DESIGNED BY:	DRAWN BY:	SCALE:
E.J.W.	E.J.W.	AS-NOTED

CHECKED BY:	DATE:	JOB NO.
E.J.W.	01-24-22	851102

SHEET
T1

GENERAL NOTES

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5. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL / BUILDING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY / EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY LOCATIONS AND SITE LIGHTING ELECTRICAL DESIGN AND LAYOUT.
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GRADING GENERAL NOTES

1. CONTOURS SHOWN ARE FOR FINISHED PAVING, SIDEWALK, SLAB, OR GROUND. ADJUSTMENT TO SUBGRADE IS THE CONTRACTOR'S RESPONSIBILITY.
2. UNLESS OTHERWISE SHOWN, NO PROPOSED SLOPE SHALL EXCEED TWO (2) HORIZONTAL TO ONE (1) VERTICAL. ALL SLOPED AREAS MUST BE PROTECTED FROM EROSION.
3. SPOT ELEVATIONS SHALL TAKE PRECEDENCE OVER CONTOURS AND SLOPES SHOWN. THE CONTRACTOR SHALL NOTIFY THE OWNERS ENGINEER OF SPOT ELEVATIONS THAT DO NOT APPEAR TO BE CONSISTENT WITH THE CONTOURS AND SLOPES. SPOT ELEVATIONS AND SPECIFIC PROFILE DESIGN SHALL BE USED FOR SETTING ELEVATIONS OF CURB, GUTTER, AND UTILITIES.
4. CONTRACTOR SHALL USE BENCHMARKS AND DATUMS SHOWN HEREON TO SET PROJECT BENCHMARK(S), BY RUNNING A LEVEL LOOP BETWEEN AT LEAST TWO BENCHMARKS, AND SHALL PROVIDE SURVEY NOTES OF SUCH TO PROJECT ENGINEER PRIOR TO COMMENCING CONSTRUCTION.
5. ALL UTILITIES (MANHOLES, VALVE COVERS, CLEANOUTS, VAULTS, BOXES, ETC.) SHALL BE ADJUSTED TO FINAL GRADE PRIOR TO FINAL LIFT OF ASPHALT.
6. SPOT ELEVATIONS REPRESENT FLOW LINE OR TOP OF ASPHALT UNLESS OTHERWISE NOTED.
7. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
8. EXISTING GRADE CONTOUR INTERVALS SHOWN AT ONE (1) FOOT INTERVALS.
9. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT ONE (1) FOOT INTERVALS.
10. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND / OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
11. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
12. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES AND NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION.
13. ALL SITE CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3,000 PSI.

SPECIAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE PREMISES OR ADJACENT PREMISES, OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION OF THE WORK, CAUSED BY HIMSELF, HIS SUBCONTRACTORS OR THE CARELESSNESS OF ANY OF HIS EMPLOYEES.
2. CONTRACTOR SHALL PROVIDE SAFE ACCESS TO ALL BUSINESSES THROUGHOUT THE DURATION OF THIS PROJECT.

WATER METER BOX RELOCATION

1. HARTSVILLE TROUSDALE COUNTY WATER AND SEWER WILL REPLACE/RELOCATE WATER METER BOXES DURING CONSTRUCTION.
2. CONTRACTOR SHALL WORK CLOSELY WITH HARTSVILLE TROUSDALE COUNTY WATER AND SEWER ON EXPECTED SCHEDULING TO ENSURE WATER METER BOX WORK CAN BE COMPLETED.

ADA GENERAL NOTES

1. ALL HANDICAP PARKING STALLS SHALL BE PAINTED AND SIGNED IN STRICT ACCORDANCE WITH CURRENT ADA STANDARDS AND LOCAL REGULATIONS.
2. ALL HANDICAP RAMPS AND ACCESSIBLE RAMPS SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH CURRENT ADA STANDARDS AND LOCAL REGULATIONS.
3. THE FOLLOWING CRITERIA SHALL APPLY TO ALL CONSTRUCTION WITHIN THE LIMITS OF THIS PROJECT.
   (A) THE MAXIMUM CROSS SLOPE OF ANY SIDEWALK, PEDESTRIAN ACCESS OR STORE FRONT SHALL NOT EXCEED 2%. THE SLOPE SHALL BE MEASURED PERPENDICULAR TO THE DIRECTION OF TRAVEL.
   (B) THE GRADES WITHIN HANDICAP PARKING STALLS SHALL NOT EXCEED 2% MEASURED IN ANY DIRECTION. HANDICAP PARKING STALLS SHALL HAVE AN ACCESSIBLE ROUTE, AS NOTED BELOW, TO THE BUILDING ENTRY AS SHOWN ON THE PLANS.
   (C) ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5%. ACCESSIBLE ROUTES EXCEEDING 5% SHALL BE CONSTRUCTED WITH RAMPS AND HANDRAILS HAVING A MAXIMUM SLOPE OF 8.33% FOR A MAXIMUM RISE OF THIRTY (30) INCHES. A 5-FOOT BY 5-FOOT LANDING PAD (WITH MAXIMUM SLOPE OF 2% IN ANY DIRECTION) SHALL BE CONSTRUCTED AT THE BOTTOM AND TOP OF ALL RAMPS.
4. ALL SITE DIRECTIONAL SIGNS SHALL HAVE A MINIMUM CLEAR DISTANCE OF SEVEN (7) FEET AS MEASURED FROM THE GROUND TO THE BOTTOM OF THE LOWEST SIGN.
5. ALL ACCESSIBLE ROUTES THAT CROSS A VEHICULAR DRIVE SHALL CONTAIN DETECTIBLE WARNING IN STRICT ACCORDANCE WITH CURRENT ADA STANDARDS AND LOCAL REGULATIONS WHETHER OR NOT A RAMP IS NEEDED.
6. THE MAXIMUM VERTICAL GRADE DIFFERENTIAL BETWEEN SURFACES ALONG AN ACCESSIBLE ROUTE SHALL BE A MAXIMUM OF $\frac{1}{4}$ INCH.
7. THE CONTRACTOR SHALL HAVE ALL CONCRETE FORMS THAT ARE PART OF ANY DESIGNATED ACCESSIBLE ROUTE, STORE FRONT, HANDICAP PARKING SPACE OR RAMP CHECKED BY OWNERS ENGINEER OF RECORD TO VERIFY GRADES AND CROSS SLOPES PRIOR TO PLACEMENT OF ANY CONCRETE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS AND DAMAGES FOR IMPROVEMENTS INSTALLED OR OTHERWISE IMPACTED BY WORK NOT APPROVED BY THE OWNERS ENGINEER.

DEMOLITION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE, UTILITIES, ETC. SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
3. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF THE WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
4. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES..
5. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK. UTILITIES DETERMINED TO BE ABANDONED AND LEFT IN PLACE SHALL BE GROUTED.
6. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION. CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE ROAD RIGHT-OF-WAY DURING CONSTRUCTION.
7. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY ENGINEER OR OWNER.
8. CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.
9. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
10. SHOULD REMOVAL AND/OR RELOCATION ACTIVITIES DAMAGE FENCING, LIGHTING AND/OR ANY OTHER APPURTENANCES, THE CONTRACTOR SHALL PROVIDE NEW MATERIALS / STRUCTURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. EXCEPT FOR MATERIALS DESIGNED TO BE RELOCATED ON THIS PLAN, ALL OTHER CONSTRUCTION MATERIALS SHALL BE NEW.
11. CONTRACTOR SHALL LIMIT SAW-CUT & PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS, BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC., THE CONTRACTOR SHALL BE RESPONSIBLE FOR IT'S REMOVAL AND REPAIR.
12. DAMAGE TO ALL EXISTING CONDITIONS SHOWN TO REMAIN IN THESE PLANS WILL BE REPLACED AT THE CONTRACTORS EXPENSE.

ESTIMATED QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	L.S.	1
	202-03	REMOVAL OF RIGID PAVEMENT, SIDEWALK, STAIRS, ETC.	S.Y.	211
	303-01	MINERAL AGGREGATE, TYPE A, GRADING D	TONS.	5
	604-01.01	CLASS "A" CONCRETE (ROADWAY)	C.Y.	4
	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LBS.	200
①	701-01.01	CONCRETE SIDEWALK (4")	S.F.	1712
	701-02	CONCRETE DRIVEWAY	S.F.	96
①	701-02.03	CONCRETE CURB RAMP	S.F.	58
	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	10
	716-02.09	PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK)	L.F.	18
	717-01	MOBILIZATION	L.S.	1
	721-01.02	TRASH RECEPTACLE	E.A.	2
	955-02.01	FENCE	L.F.	36

1. ANY NECESSARY MINERAL AGGREGATE BASE MATERIAL NEEDED AS SUBGRADE MATERIAL FOR SIDEWALK CONSTRUCTION WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.

NO.	DATE	DESCRIPTION REVISIONS	BY	CKD

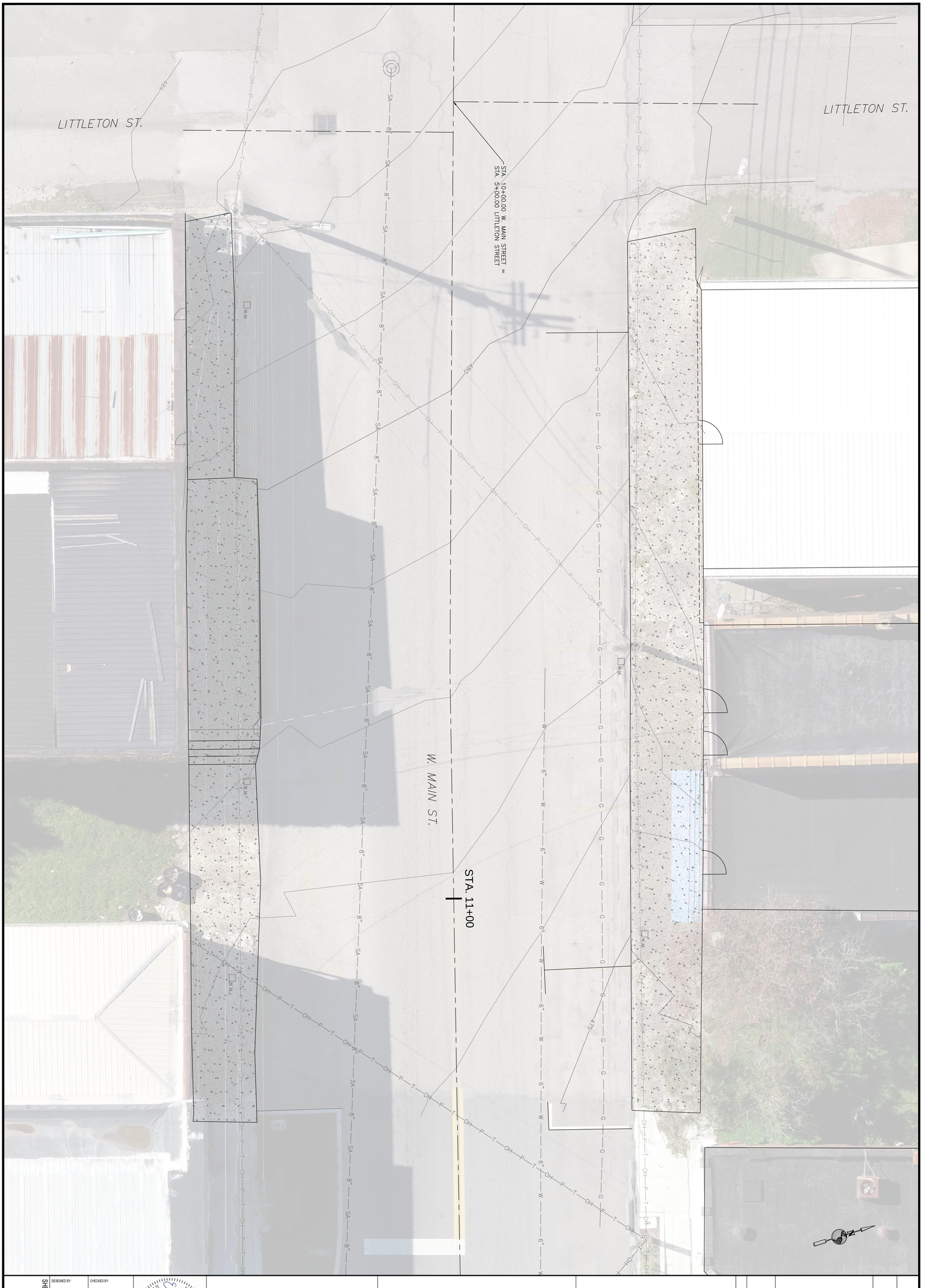
MID - TENN ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE, TN (615) 666-2345

HARTSVILLE/TROUSDALE COUNTY GOVERNMENT
W. MAIN ST. SIDEWALK REPLACEMENT
HARTSVILLE, TENNESSEE

GENERAL NOTES

DESIGNED BY:	DRAWN BY:	CHECKED BY:	DATE:	SCALE:	JOB NO.
E.J.W.	E.J.W.	E.J.W.	01-24-22	NONE	851102

SHEET
G1



SHEET C1

DESIGNED BY:	CHECKED BY:
E.J.W.	E.J.W.
DRAWN BY:	DATE:
E.J.W.	01-24-22
SCALE:	JOB NO.
1" = 5'	851102

PRESENT LAYOUT

HARTSVILLE/TROUSDALE COUNTY
GOVERNMENT
W. MAIN ST. SIDEWALK REPLACEMENT
HARTSVILLE, TENNESSEE

MID - TENN
ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE,TN (615) 666-2385

NO.	DATE	DESCRIPTION	BY	CKD
		REVISIONS		

LITTLETON ST.

24" STOP BAR
PER TDOT T-M-4
(MIN. 4' FROM CROSSWALK)

STA. 10+10.02
OFF. -35.62

STA. 10+15.02
OFF. -35.68

STA. 10+17.30
OFF. -30.71

STA. 10+23.36
OFF. -31.32

EXIST. CURB
(TO BE REMOVED)

STA. 10+23.37
OFF. -30.78

STA. 10+65.53
OFF. -31.83

16"

48"

14"

48"

STA. 10+91.99
OFF. -31.37

STA. 11+01.85
OFF. -31.15

STA. 11+27.48
OFF. -30.52

CURB RAMP
PER TDOT STANDARDS
& DETAIL RP-H-7

STA. 10+17.40
OFF. -22.21

6' CROSSWALK
PER TDOT T-M-4

CONCRETE SIDEWALK
(WIDTH VARIES)
PER TDOT STANDARDS
& DETAIL MM-SW-1

TRASH RECEPTACLE
SEE DETAIL 2 ON SHEET C5

STA. 10+91.76
OFF. -22.47

STA. 11+26.93
OFF. -22.04

STA. 10+00.00 W. MAIN STREET =
STA. 5+00.00 LITTLETON STREET

STA. 11+00

W. MAIN ST.

RAILING SYSTEM SHALL BE 42ò HIGH MONTAGE
INDUSTRIAL ORNAMENTAL STEEL, MAJESTIC
DESIGN, FLUSH BOTTOM RAIL TREATMENT, 3-RAIL
STYLE MANUFACTURED BY AMERISTAR FENCE
PRODUCTS, OR APPROVED EQUAL

TRASH RECEPTACLE
SEE DETAIL 2 ON SHEET C5

CONCRETE SIDEWALK
(WIDTH VARIES)
PER TDOT STANDARDS
& DETAIL MM-SW-1

PEDESTRIAN STEPS
WITH HANDRAILS
PER TDOT STANDARDS
& DETAIL MM-PS-1

LOWERED STANDARD
CONCRETE DRIVEWAY
PER TDOT STANDARDS
& DETAIL RP-D-16

STA. 10+82.68
OFF. 24.96

STA. 10+87.32
OFF. 24.98

STA. 10+99.32
OFF. 25.05

STA. 11+02.82
OFF. 25.06

STA. 11+27.62
OFF. 25.14

STA. 10+47.57
OFF. 25.07

STA. 10+14.15
OFF. 27.56

STA. 10+47.57
OFF. 27.05

STA. 10+87.31
OFF. 27.98

STA. 10+99.31
OFF. 28.05

STA. 11+27.34
OFF. 33.18

STA. 10+14.26
OFF. 33.56

48"

12"

48"

12"

STA. 10+47.59
OFF. 33.05

STA. 10+87.28
OFF. 32.98

STA. 10+99.28
OFF. 33.05

PEDESTRIAN STEPS
PER TDOT STANDARDS
& DETAIL MM-PS-1
(4 TYP. THIS SHEET)

LITTLETON ST.

NO.	DATE	DESCRIPTION	BY	CKD
		REVISIONS		

MID - TENN ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE, TN (615) 666-2385

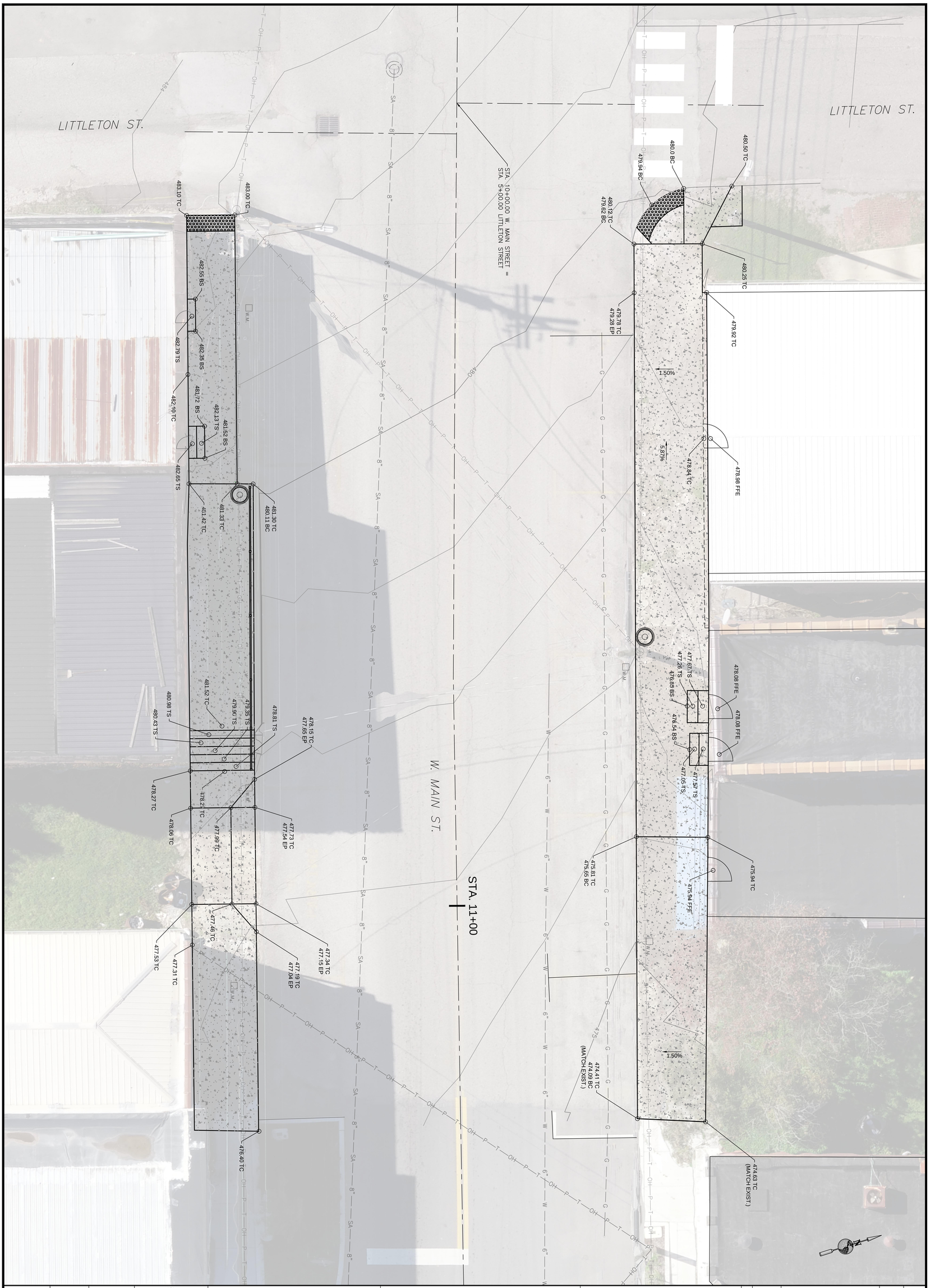
HARTSVILLE/TROUSDALE COUNTY GOVERNMENT
W. MAIN ST. SIDEWALK REPLACEMENT
HARTSVILLE, TENNESSEE

PROPOSED LAYOUT

EVAN J. WHITE
REGISTERED ENGINEER
No. 119751
STATE OF TENNESSEE

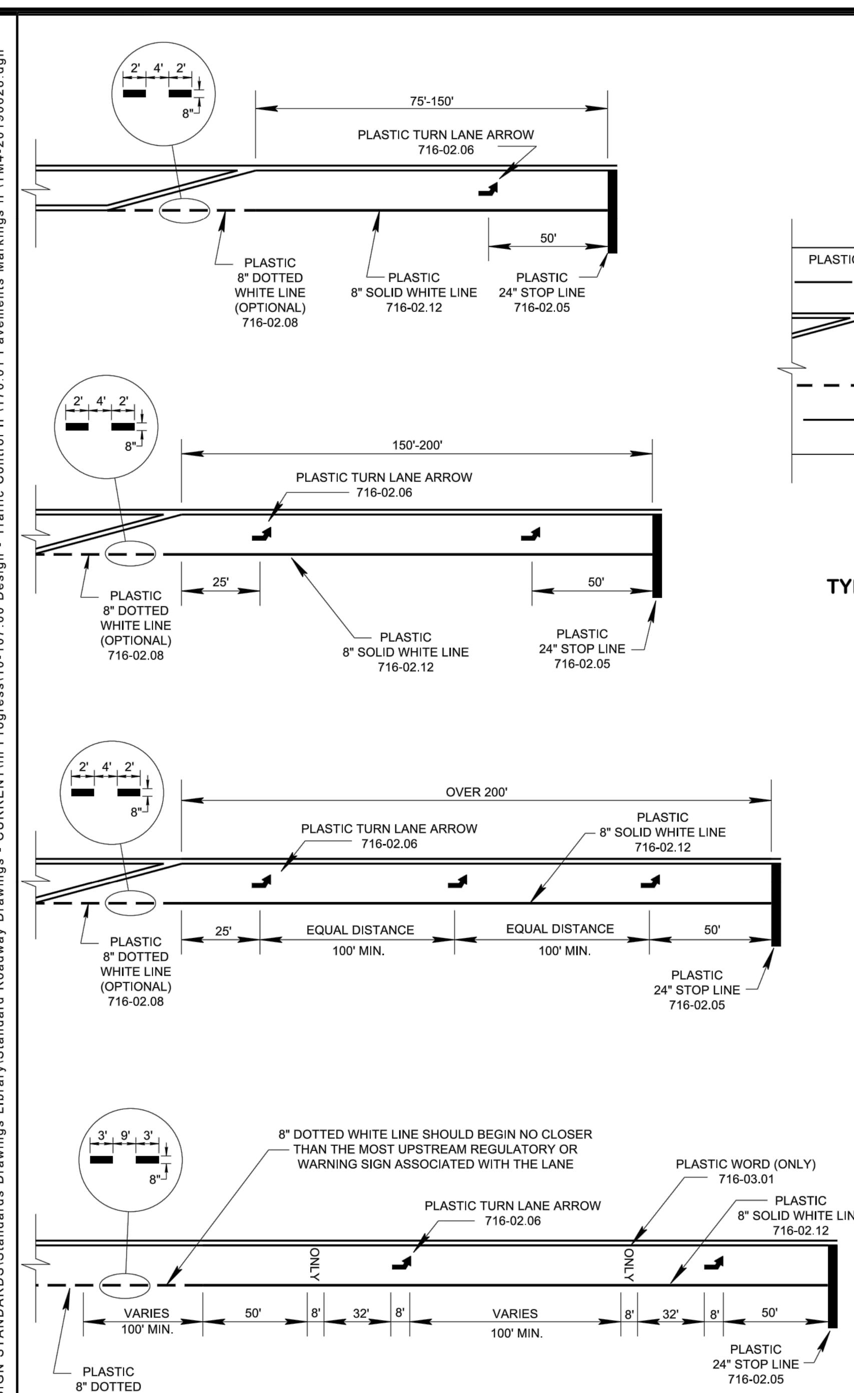
CHECKED BY:	DATE:	JOB NO.
E.J.W.	01-24-22	851102
DESIGNED BY:	DRAWN BY:	SCALE:
E.J.W.	E.J.W.	1" = 5'

SHEET
C2



SHEET C3	DESIGNED BY: E.J.W.	CHECKED BY: E.J.W.	PROPOSED GRADING PLAN	HARTSVILLE/TROUSDALE COUNTY GOVERNMENT W. MAIN ST. SIDEWALK REPLACEMENT HARTSVILLE, TENNESSEE	MID - TENN ENGINEERING CO. 648 HIGHWAY 52 BYPASS W. LAFAYETTE,TN (615) 666-2385
	DRAWN BY: E.J.W.	DATE: 01-24-22			
	SCALE: 1" = 5'	JOB NO. 851102			

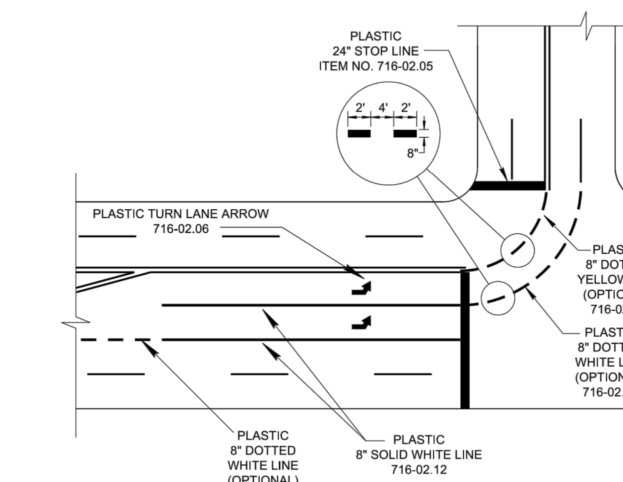
NO.	DATE	DESCRIPTION	BY	CKD
		REVISIONS		



TYPICAL MARKING FOR LEFT TURN LANES

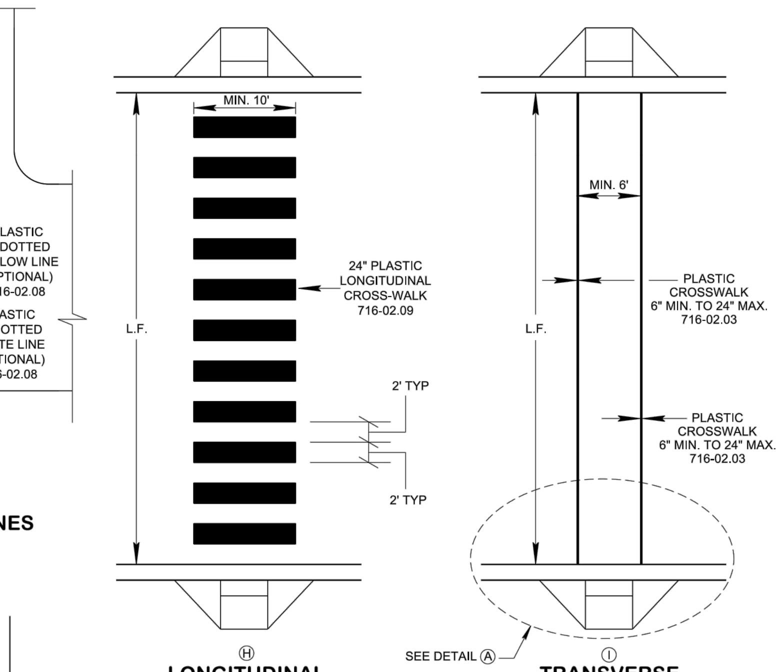
APPLICABLE FOR RIGHT TURN LANES

IF A THROUGH LANE BECOMES AN EXCLUSIVE LEFT TURN LANE, AN "ONLY" MESSAGE IS REQUIRED FOR EACH ARROW. THE "ONLY" MESSAGE SHALL BE PAID FOR UNDER ITEM NO. 716-03.01, PLASTIC WORD PAVEMENT MARKING (ONLY), PER EACH.



TYPICAL MARKING FOR DOUBLE LEFT TURN LANES

LEFT TURN ARROWS SHALL BE PAID FOR UNDER ITEM NO. 716-02.06, PLASTIC PAVEMENT MARKING (TURN LANE ARROW), PER EACH. 8" DOTTED WHITE LINE SHALL BE PAID FOR UNDER ITEM NO. 716-02.08, PLASTIC PAVEMENT MARKING (8" DOTTED LINE), PER LINEAR FOOT.

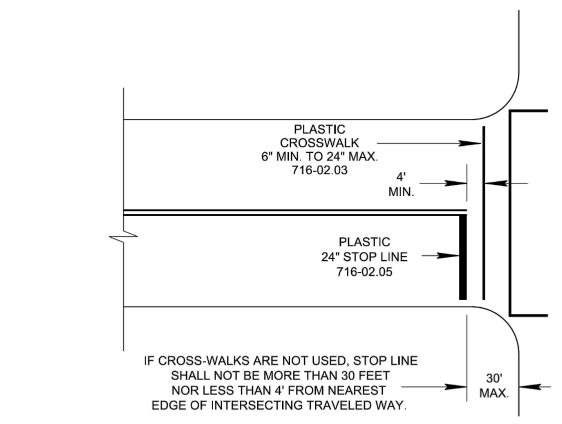


Ⓗ
LONGITUDINAL CROSS-WALK MARKING

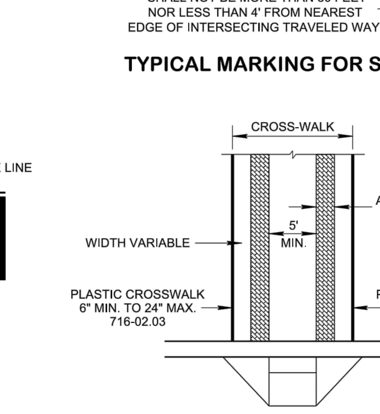
PREFERRED PAVEMENT CROSSWALK TYPE SHALL BE USED WHERE V>40 MPH

Ⓘ
TRANSVERSE CROSS-WALK MARKING

TYPICALLY USED AT LOCAL ROADS AND STREETS WHERE ADT<2000



TYPICAL MARKING FOR STOP LANE



DETAIL A

SMOOTH SURFACE (I.E. CONCRETE SURFACE)

GENERAL NOTES

Ⓐ 6" PAVEMENT MARKING WILL BE USED FOR ALL CENTER LINE, LANE LINES AND EDGE LINES ON ALL ROADS EXCEPT WHERE AS SHOWN ON STANDARD DRAWINGS.

CROSS-WALK

Ⓑ SPECIAL PAVERS AND PAVEMENT TEXTURES ARE NOT ACCEPTABLE CROSS-WALK MARKINGS. THEREFORE, SPECIAL PAVERS AND PAVEMENT TEXTURES SHALL ONLY BE USED IN CONJUNCTION WITH TRANSVERSE CROSS-WALK MARKINGS. SPECIAL PAVERS ARE TO BE DESIGNED TO MEET PAVEMENT DESIGN SCHEDULE AND DESIGN LOADING, ON STATE ROUTES, DETAILS SHALL BE REVIEWED AND APPROVED BY THE DEPARTMENT.

Ⓒ IF SPECIAL PAVERS, PAVEMENT TEXTURES, OR ANY OTHER ARCHITECTURAL PAVEMENT MATERIALS ARE USED, THE ARCHITECTURAL PAVEMENT MATERIALS SHALL PROVIDE A SMOOTH, WITHOUT JOINT, WALKABLE/RIDEABLE, STABLE, FIRM AND SLIP-RESISTANT SURFACE PER ADA STANDARDS.

Ⓓ ARCHITECTURAL PAVERS SHALL BE PAID FOR UNDER ITEM NO. 701-01.08, CONCRETE PAVERS (CROSS-WALK) PER. SF.

STOP LINE PLACEMENT

Ⓔ LOCATION SHALL BE DETERMINED BY VEHICLE TURNING PATHS FROM INTERSECTION ROADWAY, AND IF SIGNALIZED, ITS POSITION RELATIVE TO SIGNAL HEADS, PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

Ⓕ STOP LINES SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBER: 716-02.05, PLASTIC PAVEMENT MARKING (STOP LINE), PER LF.

Ⓖ STOP LINES REQUIRED ONLY ON APPROACHES CONTROLLED BY STOP SIGNS OR TRAFFIC SIGNALS.

PAYMENT

Ⓗ PAVEMENT MARKINGS SHALL BE PAID FOR UNDER ITEM NO. 716-02.09, PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK) PER LF. ON LOCAL ROADS WITH ADT<1000, PAVEMENT MARKINGS COULD ALTERNATIVELY BE PAID FOR UNDER ITEM NO. 716-05.22, PAINTED PAVEMENT MARKING (LONGITUDINAL CROSS-WALK) PER LF. MEASUREMENT IS CALCULATED AS THE FULL WIDTH OF PAVEMENT.

Ⓘ PAVEMENT MARKINGS SHALL BE PAID FOR UNDER ITEM NO. 716-02.03, PLASTIC PAVEMENT MARKING (CROSSWALK) PER LF. ON LOCAL ROADS WITH ADT<1000, PAVEMENT MARKINGS COULD ALTERNATIVELY BE PAID FOR UNDER ITEM NO. 716-05.03, PAINTED PAVEMENT MARKING (CROSS-WALK) PER LF. MEASUREMENT IS CALCULATED AS THE FULL WIDTH OF PAVEMENT.

REV. 2-22-88: REVISED DETAIL LEFT TURN LANE MARKING. ADDED NOTE FOR STOP LINE TO BE PARALLEL TO CROSS-WALK. NOTED LONGITUDINAL CROSS-WALK LINES TO BE WHITE. CHANGED DWG. NO. FROM T-M-11 TO T-M-4. ADDED DETAIL FOR DOUBLE LEFT TURN LANE.

REV. 3-20-91: REDREW AND REORGANIZED SHEET. ADDED PAY ITEMS AND THEIR DESCRIPTIONS.

■ REV. 5-27-01: CHANGED DESCRIPTION IN ITEM NO. 716-02.09.

■ REV. 9-5-01: CHANGED DESCRIPTION IN ITEM NO. 716-02.03.

■ REV.1-19-05: CHANGED HANDICAP RAMP DETAIL SHOWN ON CROSS-WALK MARKING DETAILS.

■ REV.3-15-07: REVISED TO REFER THE HANDICAP RAMP STANDARDS TO DETERMINE THE MINIMUM WIDTH OF CROSS-WALK MARKINGS.

■ REV.6-1-09: TYPICAL STOP LINE PLACEMENT NOTE REVISED.

■ REV. 11-1-11: REVISED PAVEMENT MARKINGS FOR LEFT TURN DETAILS.

■ REV. 7-24-14: REVISED CROSS-WALK TO SHOW LONGITUDINAL LINES AS PREFERRED OPTION. ADDED PAVEMENT MARKING TABLE.

REV. 10-10-16: ADDED DETAIL FOR CROSS-WALK MARKING, UPDATED ITEM NUMBERS FOR CROSS-WALK MARKING, UPDATED NOTES FOR STOP LINE PLACEMENT AND CROSS-WALK MARKING.

■ REV. 08-02-18: MODIFIED NOTE Ⓐ. ADDED ALTERNATIVE PAY ITEMS FOR PAINTED CROSS-WALK MARKINGS. ADDED NOTE Ⓒ TO THE CROSS-WALK NOTES. REDREW SHEET.

REV. 06-28-19: REMOVED PAVEMENT MARKING TABLE. PUT CROSS-WALK NOTES AND STOP LINE PLACEMENT NOTES IN GENERAL NOTES. REDREW SHEET.

REV. 07-17-20: ADDED NOTE UNDER TRANSVERSE CROSS-WALK MARKING AND REVISED V FOR LONGITUDINAL CROSS-WALK MARKING TO >40 MPH.

■ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED

STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

STANDARD INTERSECTION PAVEMENT MARKINGS

T-M-4

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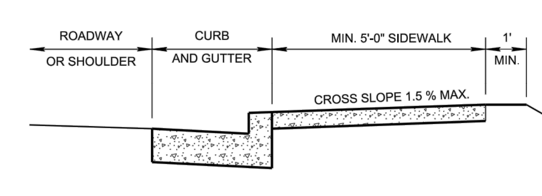
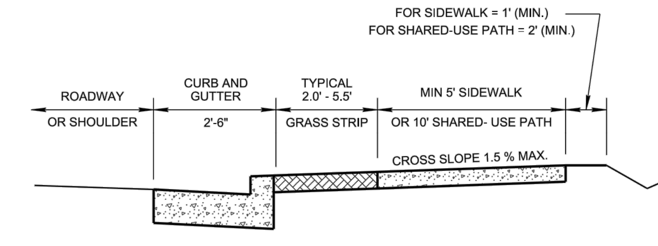
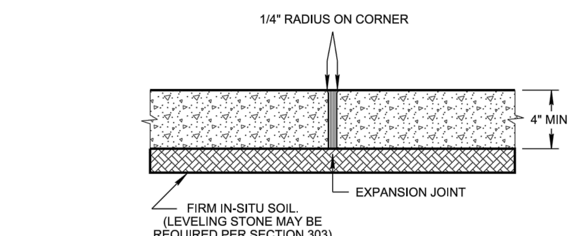


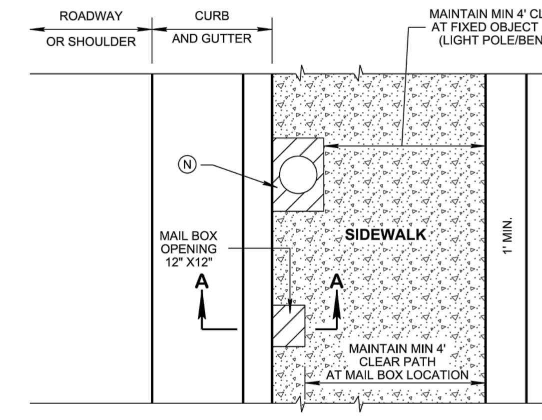
TYPICAL SIDEWALK CROSS SECTION WITHOUT GRASS STRIP



TYPICAL SIDEWALK CROSS SECTION WITH GRASS STRIP

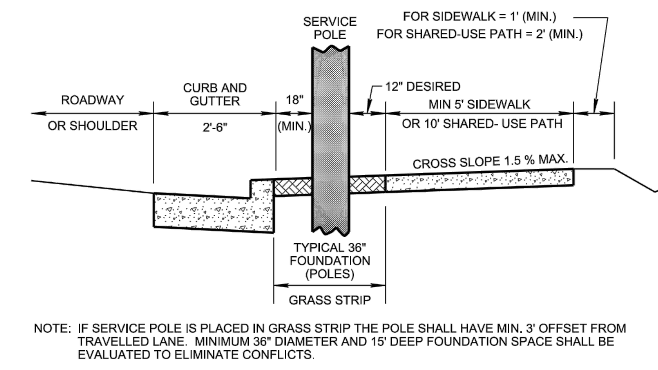


EXPANSION JOINT DETAIL



NOTE: WHEN NEEDED DUE TO EXTREME SITE CONDITIONS THE PLACEMENT OF SERVICE APPURTENANCES SHALL PROVIDE MINIMUM 4' CLEAR PATH.

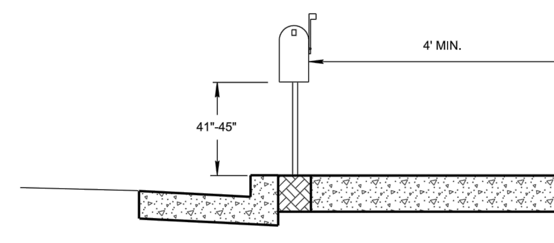
SIDEWALK CONSTRUCTION DETAILS WITHOUT GRASS STRIP PLAN VIEW



NOTE: IF SERVICE POLE IS PLACED IN GRASS STRIP THE POLE SHALL HAVE MIN. 3' OFFSET FROM TRAVELLED LANE. MINIMUM 36" DIAMETER AND 15' DEEP FOUNDATION SPACE SHALL BE EVALUATED TO ELIMINATE CONFLICTS.

SERVICE APPURTENANCES (LARGE SIGNS, STRUCTURES, SIGNAL, LUMINARY AND UTILITY POLES 2' DIAMETER OR LARGER) SHALL BE PLACED OUTSIDE THE PEDESTRIAN ACCESSIBLE SPACE, PREFERABLY OUTSIDE THE SIDEWALK AREA AND INSIDE THE RIGHT-OF-WAY.

TYPICAL SIDEWALK CROSS SECTION WITH GRASS STRIP AND SERVICE APPURTENANCES



SECTION A-A MAILBOX DETAIL

NOTE: LEAVE 12"X12" OPENING IN SIDEWALK FOR MAILBOX POST. ORIENT THE BOXES TO FACE THE DIRECTION OF ONCOMING TRAFFIC. EDGE OF MAILBOX SHALL NOT OVERHANG BEYOND THE FACE OF THE CURB. NOR SHALL THE MAILBOX OVERHANG THE SIDEWALK SUCH THAT THE USABLE WIDTH IS LESS THAN 4 FEET.

REMOVAL AND RESETTING MAILBOXES TO BE INCLUDED IN THE COST OF SIDEWALK.

REFERENCED STANDARD DRAWINGS

- SEE T-M-4, FOR CROSS WALK MARKING
- SEE MM-CR SERIES FOR CURB RAMP DETAILS
- SEE MM-BPR-1, FOR PEDESTRIAN RAIL REQUIREMENTS
- SEE MM-SW-2, FOR ALTERNATE DETAILS FOR CONCRETE SIDEWALK (REHABILITATION)
- SEE RP-SC-1, FOR 6" SLOPING CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
- SEE RP-VC-10 OR 11, FOR VERTICAL CONCRETE CURB AND CONCRETE CURBS AND GUTTER DETAILS
- SEE MM-PM-1 THRU MM-PM-5, FOR BIKE LANE/ROUTE PAVEMENT MARKINGS
- SEE S-PL-6, FOR GUARDRAIL PLACEMENT
- SEE RP-D-15 & 16 FOR CONCRETE DRIVEWAYS
- SEE MM-TS-2 FOR PEDESTRIAN FACILITY LATERAL OFFSETS
- SEE MM-TS-3 FOR SHARED USE TYPICAL SECTIONS

GENERAL NOTES

Ⓐ ALWAYS PLACE SIDEWALK AS FAR AS AWAY FROM THE TRAVELLED WAY WHEN POSSIBLE FOR SPECIFICATIONS SEE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION.

Ⓑ WHERE IT BECOMES NECESSARY TO REMOVE PARTS OF EXISTING CONCRETE SIDEWALKS OR RAMPS, THE RESULTING EDGES SHALL BE CUT TO A NEAT LINE, AND ANY OFFSETS IN SUCH LINES SHALL BE MADE AT RIGHT ANGLES.

Ⓒ SIDEWALK WIDTHS DO NOT INCLUDE THE SIX INCH CURB WIDTH OF PROPOSED TOP OF CURB.

Ⓓ MAXIMUM SIDEWALK CROSS SLOPE IS 1.5 %. ALL SIDEWALKS SHALL HAVE A BROOM FINISH AND SHALL BE 4" THICK UNLESS THE PLANS CALL FOR 6" THICKNESS. THE CONCRETE SHALL BE CLASS "A" AT 3000 PSI. ALL COST TO BE INCLUDED IN ITEM NO. 701-01.01,CONCRETE SIDEWALK (4"), S.F. OR 701-01.02,CONCRETE SIDEWALK (6"), S.F.

Ⓔ SEE STD. DWG. MM-TS-2 FOR LATERAL OFFSET/ BUFFER GUIDANCE.

Ⓕ EXPANSION JOINTS ARE TO BE PLACED 25 TO 30 FEET APART DEPENDING ON TRANSVERSE JOINT MARKINGS AND NEED TO MATCH CURB EXPANSION JOINT WHERE SIDEWALK IS BUILT DIRECTLY AGAINST CURB, OR AS DIRECTED BY THE ENGINEER WHERE THE PROPOSED SIDEWALK IS IN CONTACT WITH THE STREET RETURNS, ON BUILDING LINES PRODUCED AT STREET INTERSECTIONS, WHERE WALKS LEAD TO HOUSE OR OTHER ENTRANCES AND ANY OTHER LOCATIONS WHERE STRESSES MAY DEVELOP. THE COST OF ALL EXPANSION JOINTS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PROPOSED SIDEWALK.

Ⓖ CONCRETE JOINT MATERIAL TO BE FLUSH WITH THE SIDEWALK SURFACE, ONE INCH PREFORMED FILLER IN ACCORDANCE WITH SECTION 702.06 OF THE STANDARD SPECIFICATIONS.

Ⓗ ONE INCH EXPANSION JOINTS ARE TO BE PLACED WHERE THE PROPOSED SIDEWALK IS IN CONTACT WITH CIRCULAR CURBS, BUILDINGS AND/OR RETAINING WALLS.

Ⓘ HALF INCH EXPANSION JOINTS ARE TO BE USED AT ALL OTHER LOCATIONS.

Ⓙ LONGITUDINAL JOINT MARKINGS WILL NOT BE REQUIRED ON SIDEWALKS THAT ARE 5 FEET OR LESS IN WIDTH.

Ⓚ ONE LONGITUDINAL JOINT MARKING WILL BE REQUIRED ON SIDEWALKS OVER 5 FEET BUT LESS THAN 9 FEET IN WIDTH.

Ⓛ TWO LONGITUDINAL JOINT MARKINGS WILL BE REQUIRED ON SIDEWALKS OVER 9 FEET BUT LESS THAN 12 FEET IN WIDTH.

Ⓜ TRANSVERSE JOINT MARKINGS ARE TO BE MADE TO FORM BLOCKS AS NEARLY TO SQUARE AS PRACTICAL.

Ⓝ WHEN LEAVING A SQUARE OPENING IN THE SIDEWALK, THE LENGTH OF THE SIDE OF THE SQUARE OPENING SHOULD BE EQUAL TO THE DIAMETER OF THE FIXED OBJECT PLUS SIXTEEN INCHES. IT WILL BE BORDERED BY HALF INCH EXPANSION JOINT.

Ⓞ WHEN NEW SIDEWALK IS PLACED ADJACENT TO EXISTING SIDEWALK THE CONTRACTOR SHALL CORRECT ALL ABRUPT CHANGES AND SLOPES TO PROVIDE A SMOOTH TRANSITION FROM THE LIMIT OF CONSTRUCTION TO EXISTING PEDESTRIAN FACILITY.

REV. 06-28-19: REVISED GENERAL NOTES Ⓑ,Ⓓ,Ⓖ & Ⓗ ALONG WITH DETAIL NOTES FOR "TYPICAL SIDEWALK CROSS SECTION WITH GRASS STRIP AND SERVICE APPURTENANCES" AND "SIDEWALK CONSTRUCTION DETAILS WITHOUT GRASS STRIP". ADDED NOTE TO MAILBOX DETAIL.

(Replaced Std Dwg RP-S-7)

STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

DETAILS FOR CONCRETE SIDEWALK

01-07-2019 MM-SW-1

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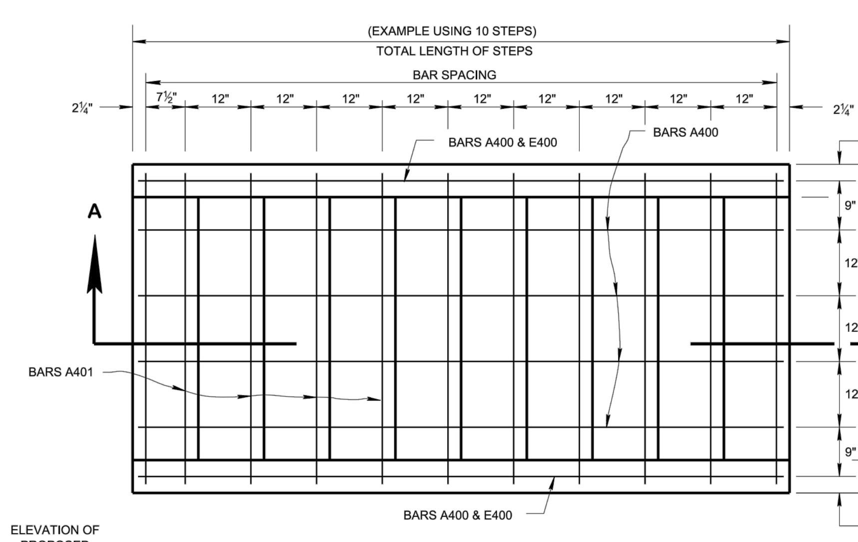
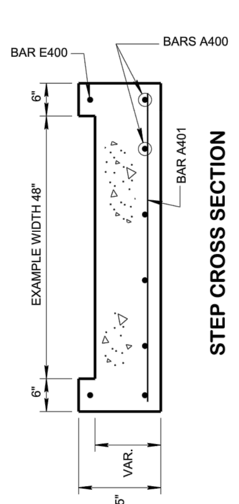
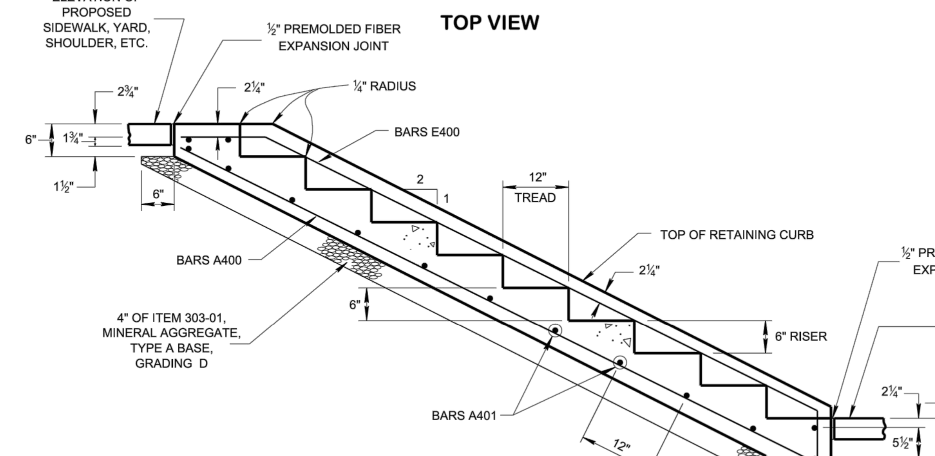


TOP VIEW

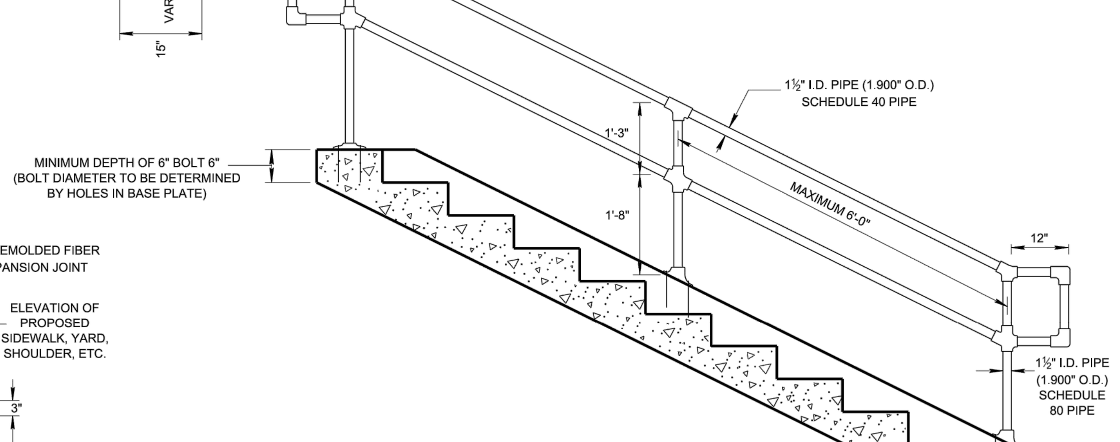


STEP CROSS SECTION



SECTIONAL VIEW A-A

(EXAMPLE BASED ON 2:1 SLOPE USING 10 STEPS)



PLAN VIEW WITH HANDRAIL INSTALLATION ON CONCRETE STEPS

CONCRETE STEP GENERAL NOTES

(C1) FOR SPECIFICATIONS SEE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION.

(C2) CONCRETE STEPS MAY BE CAST IN PLACE OR PRECAST. ALL CONCRETE CAST IN PLACE TO BE CLASS "A". ALL PRECAST TO BE 4000 POUNDS PER SQUARE INCH.

(C3) ALL EXPOSED EDGES ARE TO BE ROUNDED USING A QUARTER INCH RADIUS.

(C4) THE TREAD IS TO BE TWELVE INCHES DEEP. THE RISER HEIGHT IS TO BE VARIED SO AS TO CONFORM TO THE PROPOSED SLOPE. A MAXIMUM RISER HEIGHT OF SEVEN INCHES IS NOT TO BE EXCEEDED.

(C5) CONCRETE JOINT MATERIAL TO BE ½" PREMOLDED FIBER IN ACCORDANCE WITH SECTION 905 OF THE STANDARD SPECIFICATIONS. COST OF JOINT MATERIAL WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(C6) ALL REINFORCING STEEL TO ADHERE TO SPECIFICATION ASTM A 615. ALL REINFORCING STEEL TO BE NO. 4 BARS.

(C7) THE COST OF EXCAVATION BELOW LEVEL ON PROPOSED SLOPE TO BE INCLUDED IN THE COST OF OTHER ITEMS.

(C8) PAYMENT FOR CONCRETE STEPS WILL BE MADE AS FOLLOWS

ITEM NO. 604-01.01	CLASS "A" CONCRETE (ROADWAY)	PER CUBIC YARD
ITEM NO. 604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	PER POUND

HANDRAIL GENERAL NOTES

(H1) PIPE CROSS MEMBERS ARE TO ADHERE TO SPECIFICATION ASTM A 53 TYPE E OR S-GRADE A OR B.

(H2) THE PIPE HANDRAIL IS TO BE PAINTED BLACK IN COLOR AND ADHERE TO FEDERAL SPECIFICATION TT-E-489H.

(H3) THE PIPE HANDRAIL IS TO BE USED ONLY AS A PROTECTION FOR PEDESTRIANS AND SHOULD NOT BE PLACED IN ANY LOCATION WHERE IT MIGHT BE SUBJECT TO VEHICULAR IMPACT. FOR VEHICULAR PROTECTION STANDARD GUARD RAIL SHOULD BE USED.

(H4) THE PIPE HANDRAIL IS TO BE PAID FOR UNDER ITEM NO. 604-01.04, 1½" STEEL PIPE HANDRAIL PER LINEAR FEET.

(H5) THE PIPE HANDRAIL SHALL BE REQUIRED WITH FIVE OR MORE STEPS AND WILL MEET THE FOLLOWING CONDITIONS:

1. ON STEPS LESS THAN 44 INCHES WIDE HAVING BOTH SIDES ENCLOSED, ONE HANDRAIL ON EACH SIDE.
2. ON STEPS LESS THAN 44 INCHES WIDE HAVING ONE SIDE OPEN, ONE HANDRAIL ON EACH SIDE.
3. ON STEPS LESS THAN 44 INCHES WIDE HAVING BOTH SIDES OPEN, ONE HANDRAIL ON EACH SIDE.
4. ON STEPS MORE THAN 44 INCHES WIDE BUT LESS THAN 88 INCHES WIDE, ONE HANDRAIL ON EACH SIDE
5. ON STEPS 88 OR MORE INCHES WIDE, ONE HANDRAIL ON EACH SIDE, AND ONE INTERMEDIATE HANDRAIL LOCATED APPROXIMATELY MIDWAY OF THE WIDTH.

(Replaced Std Dwg RP-S-8)

STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

DETAILS FOR PEDESTRIAN STEPS AND HANDRAILS

01-07-2019 MM-PS-1

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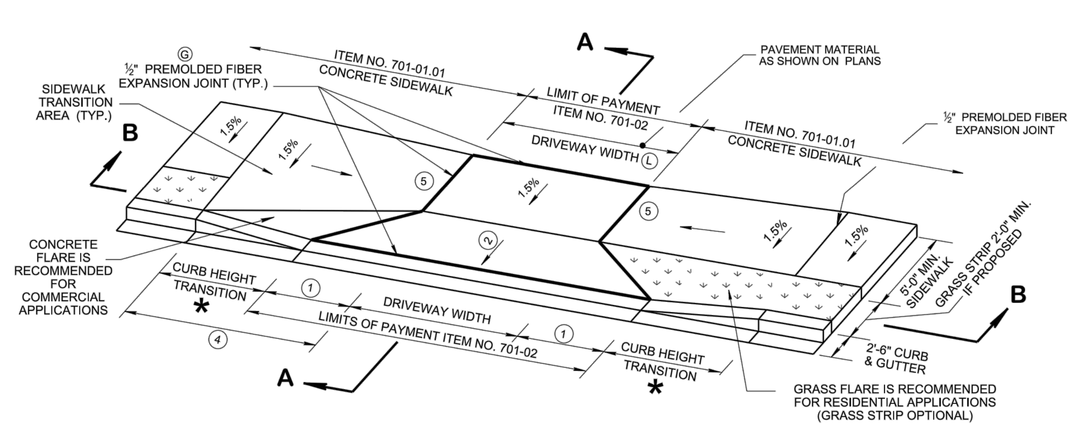
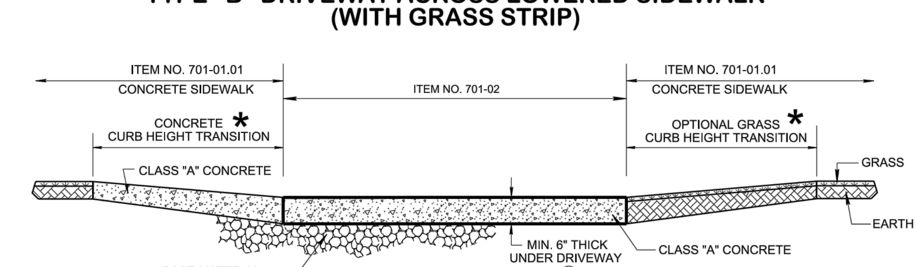
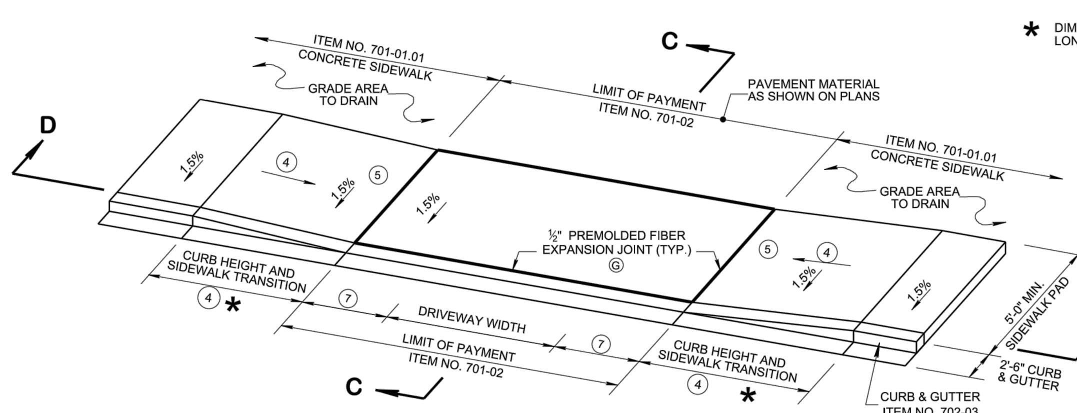


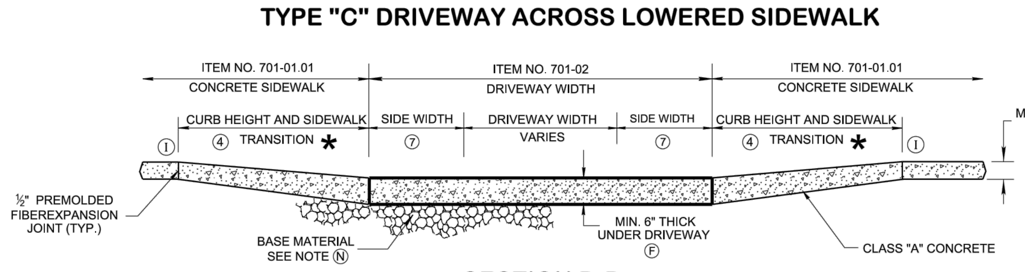
TYPE "B" DRIVEWAY ACROSS LOWERED SIDEWALK (WITH GRASS STRIP)



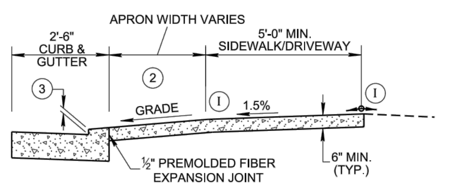
SECTION B-B



TYPE "C" DRIVEWAY ACROSS LOWERED SIDEWALK



SECTION D-D



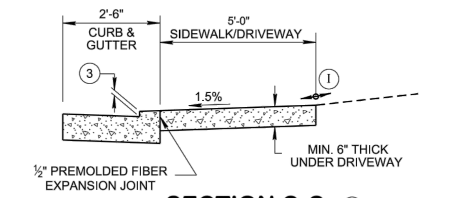
SECTION A-A ⑥

FOOTNOTES

1. SIDE FLARE WIDTH SHOULD BE A MINIMUM 7'-0" FOR COMMERCIAL DRIVEWAYS. SIDE FLARE WIDTH SHOULD BE A MINIMUM 3'-6" FOR RESIDENTIAL DRIVEWAYS.
2. DRIVEWAY RAMP GRADE VARIES, 15% MAX. (10% RECOMMENDED) APRON GRADE FOR RESIDENTIAL DRIVEWAYS. 8% MAX. (5% RECOMMENDED) APRON GRADE FOR COMMERCIAL DRIVEWAYS.
3. HEIGHT OF LOWERED CURB SHALL BE 2.25 INCHES. SEE STD DWG RP-VC-10 & RP-VC-11.
4. THE SLOPE OF THE SIDEWALK AND/OR CURB HEIGHT TRANSITION VARIES TO A MAXIMUM OF 8.33% LENGTH OF TRANSITION IS RELATIVE TO THE LONGITUDINAL ROADWAY GRADE.
5. COMMERCIAL DRIVEWAY ENTRANCE TYPICALLY (MAX. 40' WIDE) MAY REQUIRE DETECTABLE WARNING SURFACES IF ENTRANCE SERVES MORE THAN 400 VEHICLES PER DAY. SEE STD. DWG. NOS. MM-CR- SERIES FOR DETAILS.
6. 3R PROJECTS MAY REQUIRE SLOPE CORRECTION, PARALLEL CROSS-WALK MARKINGS (ESPECIALLY AT TWO WAY DRIVEWAY ENTRANCES), AND DETECTABLE DOME SURFACE TO MAINTAIN CONTINUITY AT COMMERCIAL DRIVE ENTRANCES. ADDITIONAL SIGNS (WATCH FOR PED) MAY BE ADDED AT DRIVEWAYS BY THE DIRECTION OF AN ENGINEER IF NEEDED.
7. SIDE WIDTH SHOULD BE A MINIMUM 7'-0" FOR COMMERCIAL DRIVEWAYS. SIDE WIDTH SHOULD BE A MINIMUM 3'-6" FOR RESIDENTIAL DRIVEWAYS.

LEGEND

* DIMENSION VARIES RELATIVE TO LONGITUDINAL ROADWAY GRADE.



SECTION C-C ⑥

GENERAL NOTES

Ⓐ DUE TO THE ELEVATION CHANGE FOR PEDESTRIANS ON THE SIDEWALK, THIS APPLICATION IS UNDESIRABLE AND IS TO BE USED IN LIMITED APPLICATIONS. SEE RP-D-15 FOR THE PREFERRED DRIVEWAY TYPE.

Ⓑ 5'-0" MINIMUM SIDEWALK WITH A MAXIMUM CROSS SLOPE OF 1.5% THROUGH DRIVEWAYS.

Ⓒ DESIGNER TO CHECK GUTTER FLOW DEPTH AT DRIVEWAY LOCATIONS TO ASSURE THAT THE DESIGN FLOW DOES NOT OVERTOP THE SIDEWALK AREA. IF OVERTOPPING OCCURS, PLACE AN INLET AT THE UPSTREAM SIDE OF THE DRIVEWAY OR PERFORM OTHER DESIGN MITIGATION

Ⓓ THE SLOPE OF THE LANDING AREA SHALL NOT EXCEED 1.5% IN THE SIDEWALK AREA.

Ⓔ DRIVEWAYS TO BE BUILT COMPLETE OR IN PART AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

Ⓕ ALL CONCRETE DRIVEWAYS TO BE 6" UNIFORM THICKNESS, UNLESS OTHERWISE SHOWN ON PLANS.

Ⓖ EXPANSION JOINTS ARE TO BE PLACED AS INDICATED ON THE PLANS. WHEN THE BACK OF THE DRIVEWAY ABUTS AGAINST A CONCRETE DRIVEWAY OR BUILDING, AN ADDITIONAL EXPANSION JOINT WILL BE PLACED AT THAT LOCATION.

Ⓗ THE ROADWAY DESIGNER SHALL CONSIDER THE USE OF A CATCH BASIN ON EITHER SIDE OF DRIVEWAY. CAREFUL CONSIDERATION TO THE PLACEMENT OF CATCH BASINS SHALL BE TAKEN IF THE DRIVEWAY IS IN A VERTICAL SAG CURVE.

Ⓘ ALGEBRAIC DIFFERENCE NOT TO EXCEED 10.0%.

Ⓙ PAY ITEMS:

ITEM NO:	303-01,	MINERAL AGGREGATE, TYPE A BASE, GRADING D,	PER TON.
ITEM NO:	701-01.01,	CONCRETE SIDEWALK (4"),	PER S.F.
ITEM NO:	701-02,	CONCRETE DRIVEWAY,	PER S.F.
ITEM NO:	701-02.02,	CONCRETE DRIVEWAY (8"),	PER S.F.
ITEM NO:	702-03,	CONCRETE COMBINED CURB & GUTTER,	PER C.Y.

Ⓚ WHEN MORE THAN 2 DRIVEWAYS ARE PROPOSED, USE TYPE "A" DRIVEWAY AS SHOWN ON STANDARD DRAWING RP-D-15 TO REDUCE ROLLER COASTER EFFECT FOR PEDESTRIANS.

Ⓛ TYPICAL DRIVEWAY WIDTHS ARE 12' (14' TWO WAY) FOR RESIDENTIAL AND 24' (40' MAX.) FOR COMMERCIAL. REFER TO SECTION 5 (ACCESS DESIGN) IN THE MANUAL FOR CONSTRUCTING DRIVEWAY ENTRANCES ON STATE HIGHWAYS (2015).

Ⓜ ALL SIDEWALKS SHALL HAVE A MINIMUM CONCRETE THICKNESS OF 4". THE SIDEWALK TRANSITION THICKNESS IS DEPEND ON THE DRIVEWAY AND THE SIDEWALK THICKNESSES, THE COST OF THE SIDEWALK TRANSITION WILL BE INCLUDED IN THE PAY ITEM NO. OF 701-01.01.

Ⓝ MINIMUM 4" MINERAL AGGREGATE BASE MATERIAL ITEM NO. 303-01 SHALL BE INSTALLED UNDER NEW CONCRETE DRIVEWAYS. SITE SPECIFIC PAVEMENT DESIGN MAY BE REQUIRED FOR COMMERCIAL DRIVEWAYS USED AS A DELIVERY ACCESS AS WELL. A DRIVEWAY PAVEMENT DESIGN WITH 6" CONCRETE PAVEMENT AND 4" AGGREGATE DEPTH MAY BE LIMITED TO LIGHT COMMERCIAL VEHICULAR TRAFFIC.

REV. 7-15-08: UPDATED SIDEWALK DIMENSIONS.

□ REV. 4-8-16: ADDED ITEM NUMBERS. UPDATED SLOPES AND DIMENSIONS. UPDATED NOTES.

□ REV. 07-16-18: ADDED NOTES TO CONC. FLARE AND GRASS FLARE IN ISOMETRIC VIEW. ADDED GENERAL NOTE Ⓜ & Ⓝ.

REV. 01-07-19: ADDED LIMITS FOR ITEM NO. 701-02. ADJUSTED LOCATION OF GENERAL NOTE NO'S. Ⓙ & Ⓝ ON DETAILS. REDREW SHEET.

REV. 10-16-20: ADDED GENERAL NOTE Ⓞ MINERAL AGGREGATE ITEM NUMBER AND BASE MATERIAL ON SECTIONS B-B AND D-D.

REV. 06-15-21: REVISED AND MERGED GENERAL NOTES Ⓛ AND Ⓜ. ADJUSTED LOCATION OF GENERAL NOTE NO'S. REVISED GENERAL NOTES Ⓖ Ⓜ AND Ⓝ ADDED PAY ITEM NO. 701-02.02.

REV. 10-29-2021: FOOTNOTE NUMBER 7 WAS ADDED. SIDE WIDTH AND FOOTNOTE NUMBER 7 WERE ADDED ON TYPE C DRIVEWAY AND ON SECTION D-D.

□ APPROVED BY FHWA (ALL OTHERS APPROVED BY TDOT)

STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS

02-15-2007 RP-D-16

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NO.	DATE	DESCRIPTION	BY	CKD

REVISIONS

MID - TENN ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE,TN (615) 666-2385

HARTSVILLE/TROUSDALE COUNTY GOVERNMENT
W. MAIN ST. SIDEWALK REPLACEMENT
HARTSVILLE, TENNESSEE

TDOT STANDARD DETAILS

DESIGNED BY: E.J.W.	DRAWN BY: E.J.W.	SCALE: N.T.S.
CHECKED BY: E.J.W.	DATE: 01-20-22	JOB NO. 851102

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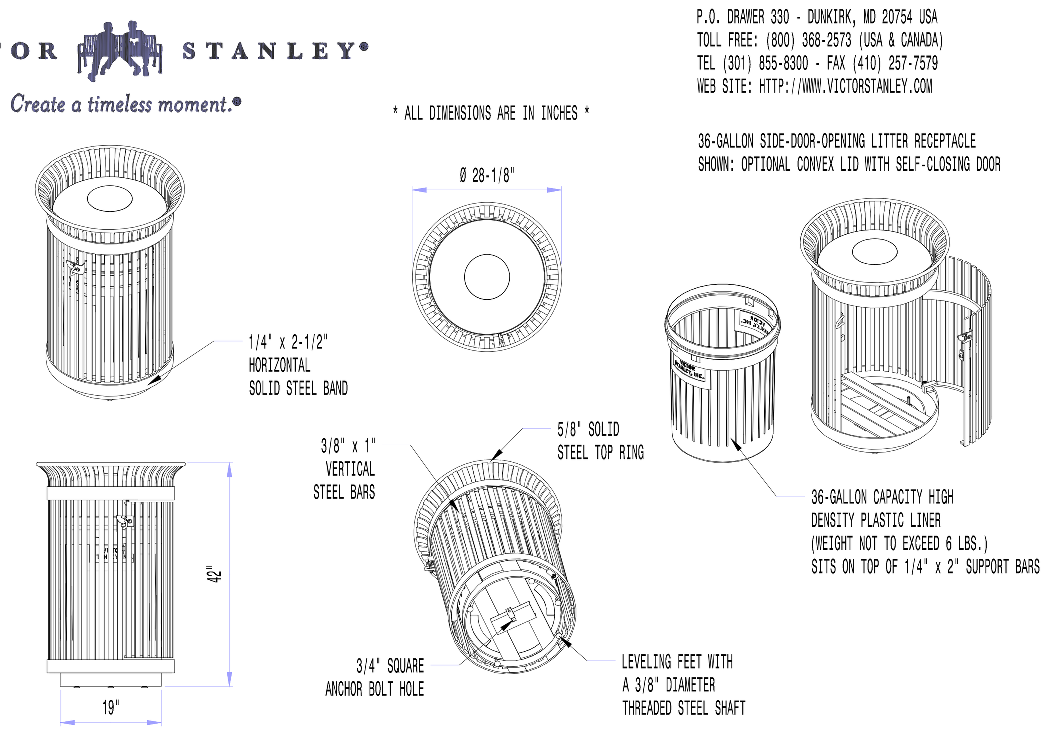
* ALL DIMENSIONS ARE IN INCHES *

36-GALLON SIDE-DOOR-OPENING LITTER RECEPTACLE
SHOWN: OPTIONAL CONVEX LID WITH SELF-CLOSING DOOR



AVAILABLE OPTIONS:
- POWDER COATING
  - 10 STANDARD COLORS, 2 OPTIONAL METALLIC COLORS, CUSTOM COLORS (INCLUDING THE RAL RANGE)
- SECURITY
  - STANDARD WITH LOCKABLE LATCH (AS SHOWN), AVAILABLE WITH OPTIONAL KEYED LOCK BOX, OPTIONAL TRIANGLE LOCK BOX. LID BOLTED IN PLACE, AVAILABLE WITH OPTIONAL MOUNT WITH 3 IN-LINE ANCHOR HOLES AND OPTIONAL BOTTOM PLATE COVER.
- LIDS
  - STANDARD TAPERED FORMED LID. AVAILABLE WITH OPTIONAL DOME LID, DOME LID WITH STAINLESS STEEL ASHTRAY, CONVEX LID, CONVEX LID WITH SELF-CLOSING DOOR (AS SHOWN), RAIN BONNET LID, RAIN BONNET LID WITH STAINLESS STEEL ASHTRAY, AND RECYCLE LIDS. ASHTRAYS AVAILABLE WITH OPTIONAL ASHTRAY COVER.
- CUSTOM PLAQUES & DECALS
  - AVAILABLE WITH STEEL PLAQUES IN VARIOUS SIZES AND PRESSURE SENSITIVE VINYL OUTDOOR DECALS.

NOTES:
1. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
2. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD FILM COATING. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
3. OIL IMPREGNATED BRONZE BUSHINGS AND STAINLESS STEEL PIVOT PINS FOR DOOR MOVEMENT, STANDARD 3/16" SOLID STEEL LATCH ASSEMBLY OR OPTIONAL PATENTED STAINLESS STEEL KEYED LOCK ASSEMBLY.
4. THIS VICTOR STANLEY, INC. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
5. VICTOR STANLEY, INC., PLASTIC INNER LINERS ARE MOLDED ON TOOLING DESIGNED FOR AND OWNED BY VICTOR STANLEY, INC. THEY OFFER MAXIMUM CAPACITY AND STRENGTH WITH LIGHTWEIGHT CONSTRUCTION USING CRITICAL MOLDED RIBS, INTEGRAL HANDHOLDS, AND HIGH-STRENGTH MATERIALS. THIS MINIMIZES HANDLING DIFFICULTY AND FACILITATES EASY EMPTYING AND STORAGE WHILE AFFORDING LONG SERVICE LIFE.
6. ANCHOR BOLT NOT PROVIDED BY VICTOR STANLEY, INC.
7. FOR HIGH SALT ABUSIVE CLIMATES, HOT-DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. HOT-DIP GALVANIZING IS PERFORMED FOR VICTOR STANLEY, INC. BY AN EXPERIENCED QUALIFIED FIRM TO WHICH PRODUCTS ARE SHIPPED FOR GALVANIZING. HOT-DIP GALVANIZING INCLUDES AN AGGRESSIVE PRE-TREATMENT AND IMMERSION IN A TANK OF CHARGED LIQUID ZINC AT OR AROUND 860°F (460°C). THE RESULTING SURFACE IS RESISTANT TO RUST BUT HAS SOME UNEVENNESS RESULTING FROM THE BONDING OF THE ZINC TO THE STEEL SURFACE. AS A RESULT, THE POWDER-COATING SURFACE FINISH OVER THAT GALVANIZED SURFACE MAY EXHIBIT BUMPS, UNEVENNESS, AND MAY NOT BE AS SMOOTH AS THE STANDARD FINISH; THIS UNEVEN AND INCONSISTENT FINISH IS NORMAL FOR GALVANIZING. CONTACT MANUFACTURER FOR DETAILS.
8. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
9. THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.

1/C5 SD-42 TRASH RECEPTACLE

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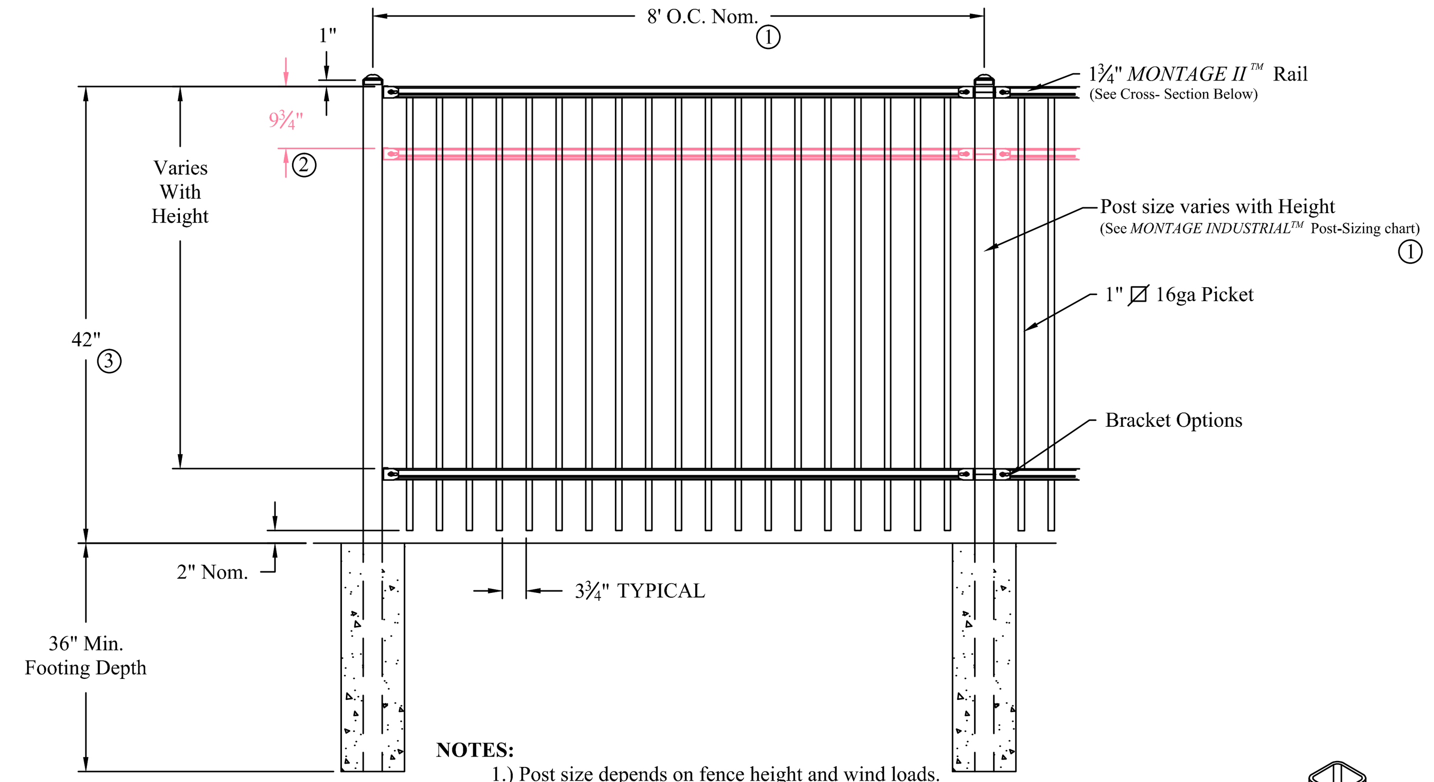
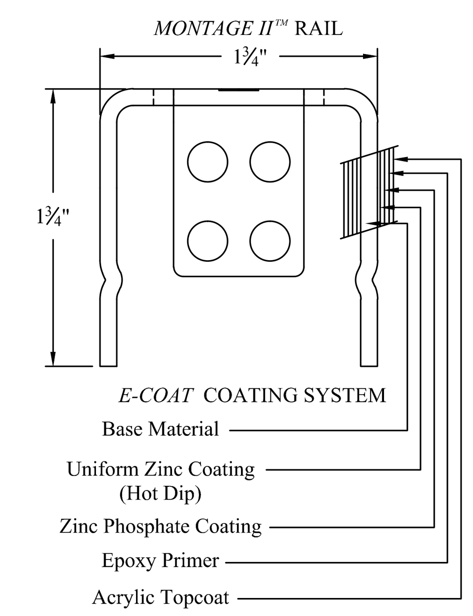
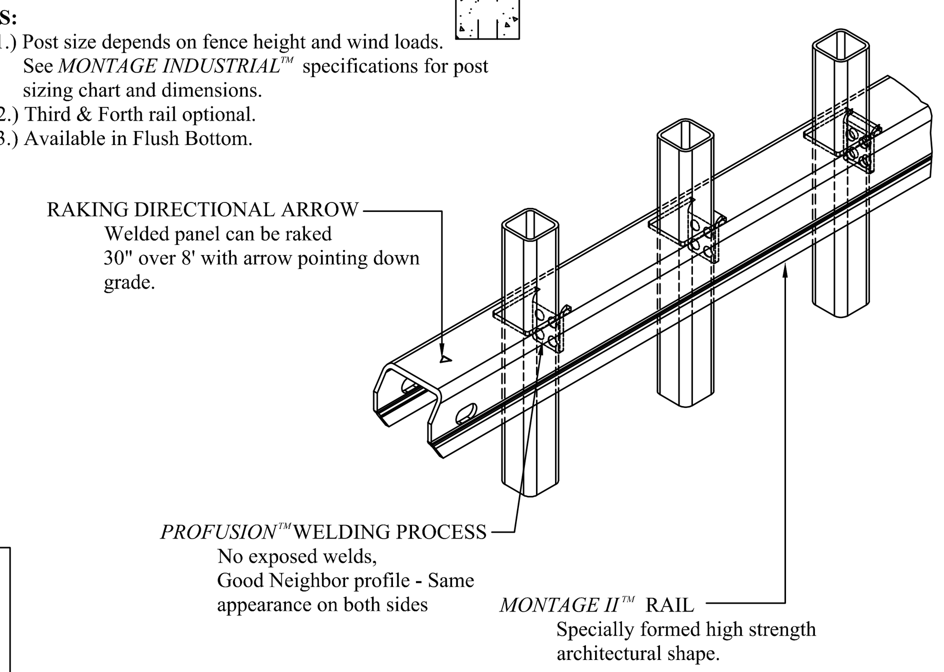
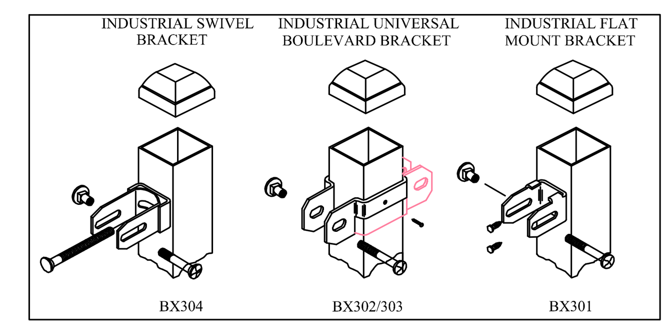


NOTES:
1.) Post size depends on fence height and wind loads. See *MONTAGE INDUSTRIAL*™ specifications for post sizing chart and dimensions.
2.) Third & Forth rail optional.
3.) Available in Flush Bottom.







Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.

2/C5 GUARDRAIL FENCE

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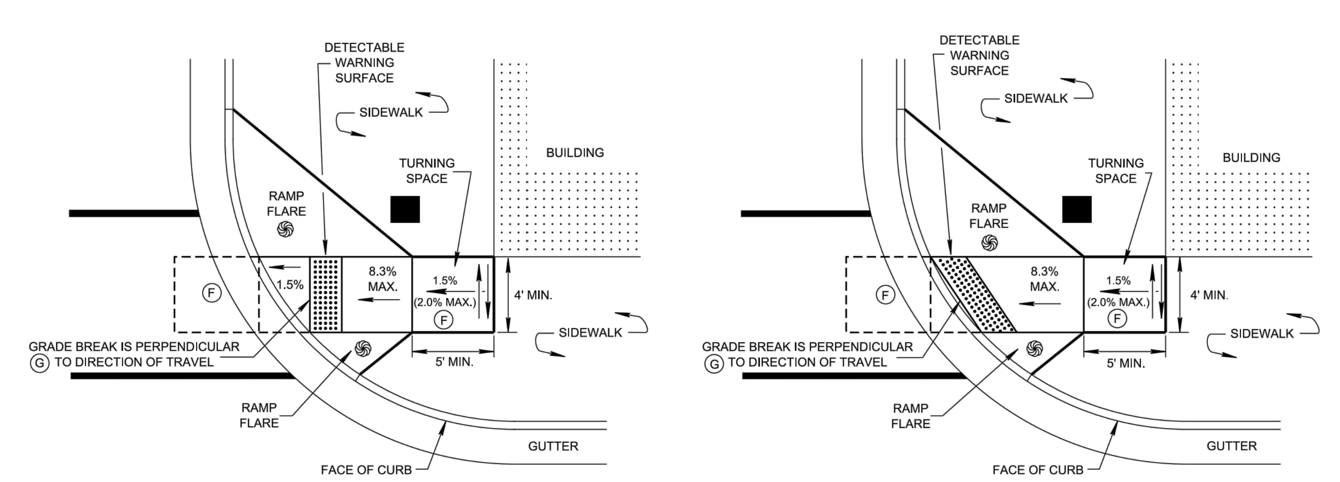
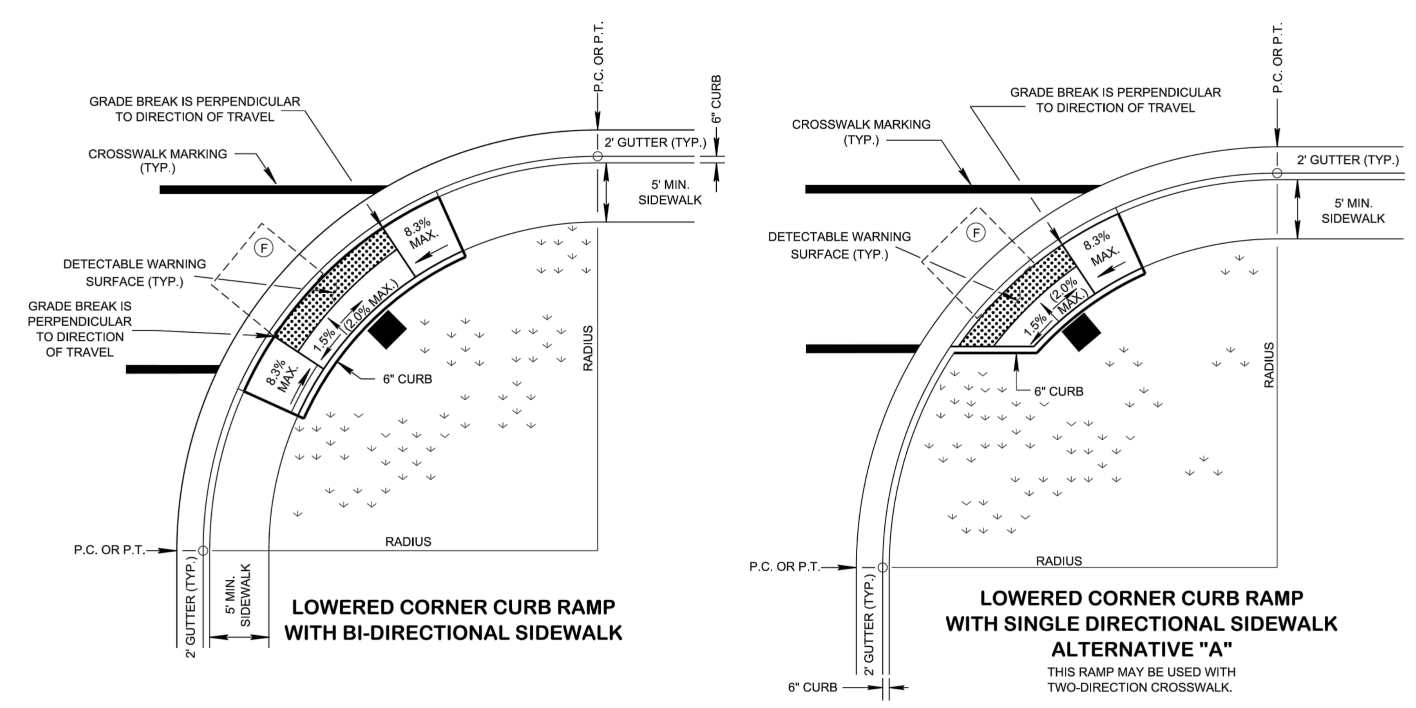
PERPENDICULAR CURB RAMPS FOR SINGLE CROSSING



PARALLEL CURB RAMPS FOR SINGLE CROSSING



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LEGEND	
⊛	DIMENSION VARIES RELATIVE TO LONGITUDINAL ROADWAY GRADE, 8.3% DESIRABLE (10.0% MAX.)
■	DENOTES: APPROXIMATE PEDESTRIAN POLE/PUSHBUTTON LOCATION FOR SIGNALIZED INTERSECTIONS

GENERAL NOTES

Ⓐ FOR DETECTABLE WARNING SURFACE DETAILS SEE STD. DWG. RP-H-3. FOR ADDITIONAL DETAILS AND OTHER INFORMATION FOR PERPENDICULAR CURB RAMPS NOT SHOWN ON THIS DRAWING SEE STD. DWG. RP-H-4 AND FOR PARALLEL CURB RAMPS SEE STD. DWG. RP-H-5. FOR CROSSWALK MARKING DETAILS SEE STD. DWG. T-M-4.

Ⓑ IF PERPENDICULAR CURB RAMPS AND TURNING SPACE CANNOT BE CONSTRUCTED DUE TO LIMITED RIGHT-OF-WAY, USE PARALLEL CURB RAMP INSTEAD.

Ⓒ CARE SHALL BE TAKEN ON ALL ROADWAY CURB RAMPS AT INTERSECTIONS WITH SIDEWALK AND CURB RAMPS TO ENSURE A UNIFORM GRADE AROUND THEM. THE ROADWAY CURB RAMP GRADE SHALL BE FREE OF SAGS AND SHORT GRADE CHANGES.

Ⓓ SIDEWALK WIDTH SHALL NOT INCLUDE 6" CONCRETE CURB. THE DESIRABLE SIDEWALK CROSS SLOPE IS 1.5 %, ABSOLUTE MAXIMUM IS 2.0%.

Ⓔ DRAINAGE STRUCTURES SHALL NOT BE PLACED IN THE CROSSWALK OR IN FRONT OF THE CURB RAMP.

Ⓕ TURNING SPACE \ CLEAR SPACE:

CLEAR SPACE BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE 4' (MIN.) BY 4' (MIN.) SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN STREET CROSSING AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE.

TURNING SPACE MUST BE PROVIDED AT THE TOP OF PERPENDICULAR CURB RAMPS. THE TURNING SPACE MUST BE 4' (MIN.) BY 4' (MIN.), AND IS PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF THE SIDEWALK, THE TURNING SPACE MUST BE 4' (MIN.) BY 5' (MIN.), WITH THE 5' DIMENSION PROVIDED IN THE DIRECTION OF THE RAMP RUN.

FOR PARALLEL CURB RAMPS, A TURNING SPACE 4' (MIN.) BY 4' (MIN.) SHALL BE PROVIDED AT THE BOTTOM OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. IF THE TURNING SPACE IS CONSTRAINED ON 2 OR MORE SIDES, THE TURNING SPACE SHALL 4' (MIN.) BY 5' (MIN.). THE 5' DIMENSION SHALL BE PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.

Ⓖ GRADE BREAKS:

GRADE BREAKS AT THE TOP AND BOTTOM OF CURB RAMP RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF THE CURB RAMP RUN. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF CURB RAMP RUNS AND TURNING SPACES. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH.

WHERE THE END OF BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS 5' OR LESS, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE CURB RAMP RUN WITHIN ONE DOME SPACING OF THE BOTTOM GRADE BREAK.

Ⓗ PEDESTRIAN SIGNAL PUSHBUTTON:

WHERE PEDESTRIAN SIGNALS ARE PROVIDED AT PEDESTRIAN STREET CROSSINGS, THEY SHALL INCLUDE ACCESSIBLE PEDESTRIAN SIGNALS AND POLE\PEDESTRIAN PUSHBUTTONS COMPLYING WITH SECTIONS 4E.08 THROUGH 4E.13 OF THE MUTCD. FOR DETAILS OF THE PLACING OF PEDESTRIAN SIGNAL PUSHBUTTONS SEE TDOT TRAFFIC DESIGN MANUAL.

WHEN TWO PEDESTRIAN PUSHBUTTONS ARE ON ONE CORNER THEY WILL BE SEPARATED BY 10 FEET.

Ⓘ PAYMENT:

COST OF CURB AND GUTTER TO BE INCLUDED IN THE PRICE OF ITEM NO. 702-01, CONCRETE CURB, PER C. Y. OR ITEM NO. 702-03, CONCRETE COMBINED CURB & GUTTER, PER C. Y.

NEW CURB RAMPS:
ALL COSTS OF INSTALLING CURB RAMP(S), INCLUDING DETECTABLE WARNING SURFACE(S) IN NEWLY CONSTRUCTED SIDEWALK AREAS, SHALL BE PAID BY ITEM NO. 701-02.03, CONCRETE CURB RAMP, PER SQUARE FOOT.

PAYMENT SHALL INCLUDE ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY FOR CONSTRUCTION OF THE CURB RAMP(S), INCLUDING INSTALLATION OF DETECTABLE WARNING SURFACE(S).

CURB RAMPS (RETROFIT):
ALL COSTS OF INSTALLING CURB RAMP(S), INCLUDING DETECTABLE WARNING SURFACE(S) IN EXISTING SIDEWALK AREAS, REMOVAL OF THE EXISTING SIDEWALK, AND ADJUSTMENT OF GUTTER PAN SLOPE, SHALL BE PAID BY ITEM NO. 701-02.01, CONCRETE CURB RAMP (RETROFIT), PER SQUARE FOOT.

PAYMENT SHALL INCLUDE ALL MATERIALS, EQUIPMENT, AND LABOR INSTALLATION OF CURB RAMP(S), INCLUDING INSTALLATION OF DETECTABLE WARNING SURFACE(S).

■ REV. 4-13-11: REVISED TABLE DIMENSIONS, ADDED NOTE ①, AND ADDED GUTTER TO CROSSWALK INTERSECTION DIMENSION.

■ REV. 5-8-13: REVISED TITLE FOR TERMINOLOGY.

REV. 6-4-13: REVISED NOTE Ⓒ, CHANGED TITLE.

■ REV. 1-30-15: REMOVED ALTERNATE. ADDED GENERAL NOTE Ⓔ, Ⓕ, Ⓖ, Ⓗ, Ⓘ AND Ⓙ. ADDED GRADE BREAKS DETAILS.

■ REV. 10-10-16: REVISED GENERAL NOTES, MISC. REVISIONS TO DETAILS.

REV. 07-16-18: REMOVED THE CURB RAMP DETAIL FOR ACCESS TO PEDESTRIAN REFUGE ISLAND. ADDED SINGLE AND BI-DIRECTIONAL SIDEWALK LABELS. REVISED DETAIL HEADING FOR PERPENDICULAR CURB RAMPS FOR SINGLE CROSSING. ADDED DETAILS FROM STD. DWG. RP-H-10 FOR PARALLEL CURB RAMPS FOR SINGLE CROSSING. REVISED GENERAL NOTES. RENAMED AND REDREW SHEET.

■ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SINGLE CROSSING CURB RAMP IN CURVE

01-15-07 | RP-H-7

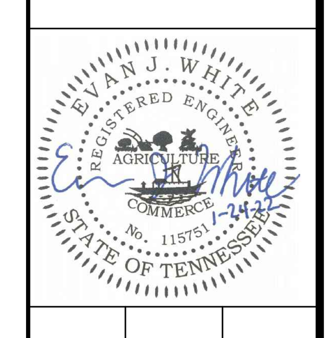
NO.	DATE	DESCRIPTION	BY	CKD

REVISIONS

MID - TENN ENGINEERING CO.
648 HIGHWAY 52 BYPASS W.
LAFAYETTE, TN (615) 666-2385

HARTSVILLE/TROUSDALE COUNTY GOVERNMENT
W. MAIN ST. SIDEWALK REPLACEMENT
HARTSVILLE, TENNESSEE

STANDARD DETAILS



DESIGNED BY: E.J.W.	DRAWN BY: E.J.W.	SCALE: N.T.S.
CHECKED BY: E.J.W.	DATE: 01-24-22	JOB NO. 851102

SHEET

C5