CONSTRUCTION DOCUMENTS

FOR

MADISON GREENS

(FORMERLY THE COMMONS AT FAIRFAX CROSSING RANSON PROJECT:22-22CD)

SITUATED WEST OF NORTH FAIRFAX BOULEVARD AND BAKER PLACE

AND NORTH OF 19TH AVENUE

CITY OF RANSON

JEFFERSON COUNTY, WEST VIRGINIA

CLIENT/OWNER/DEVELOPER:
MADISON GREENS LLC
9729 GARIS SHOP ROAD
HAGERSTOWN, MARYLAND 21740

ATTN: ROB ROTZ
EMAIL: ROB@RIVERSIDEAMERICAN.COM
PHONE: 301.491.6999

CIVIL ENGINEER / SURVEYOR:
FSA INC.
128 SOUTH POTOMAC STREET
HAGERSTOWN, MARYLAND 21740

PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PHONE: 301.791.3650

APPROVALS

DISTURBED AREA QUANTITY

THE TOTAL AREA TO BE DISTURBED SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY 61.80 ACRES AND THE TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO BE APPROXIMATELY
3,905 CU. YDS. OF EXCAVATION AND APPROXIMATELY
103,501 CU. YDS. OF FILL.

LIST OF APPROVALS

American Water Availability Letter (Water)
Dated: June 23, 2021

Charles Town Utility Board Availability Letter (Sewer)
Dated: February 17, 2022

West Virginia Department of Environmental Protection:
WV/NPDES Permit #: WVR111244

West Virginia Department of Health and Human Resources State Health Permits Bureau for Public Health:
Permit #: 20,943
Date: September 12, 2022
Permit #: 20,944
Date: September 12, 2022

Jefferson County GIS/Addressing
Approved:_____

OWNER CERTIFICATION

The owner of this property hereby affirms that these plans meet the requirements of the Ranson zoning and subdivision ordinances and the above conditions of approval set forth by the Ranson Planning Commission.

Robert A. Rotz — 4/24/2025
Owner's Signature — Date

APPROVAL BLOCK

The Ranson Planning Commission approves this Site Plan on __/__/__ with the following conditions.

1. _____
2. _____
3. _____

_____
Planning Commission President's Signature — Date

SHEET INDEX

TYPE	NUMBER	TITLE
C-001	SHEET 01	COVER SHEET
C-002	SHEET 02	NOTES & LEGENDS
C-101	SHEET 03	EXISTING CONDITIONS & DEMOLITION PLAN
C-102	SHEET 04	OVERALL DEVELOPMENT PLAN
C-103	SHEET 05	PRELIMINARY PLAT
C-104	SHEET 06	PRELIMINARY PLAT
C-105	SHEET 07	PRELIMINARY PLAT
C-106	SHEET 08	LOT & LINE TABLES
C-107	SHEET 09	EROSION & SEDIMENT CONTROL PLAN - INITIAL
C-108	SHEET 10	EROSION & SEDIMENT CONTROL PLAN - FINAL
C-109	SHEET 11	EROSION & SEDIMENT CONTROL PLAN - FINAL
C-110	SHEET 12	EROSION & SEDIMENT CONTROL PLAN - FINAL
C-111	SHEET 13	GRADING & DRAINAGE PLAN
C-112	SHEET 14	GRADING & DRAINAGE PLAN
C-113	SHEET 15	GRADING & DRAINAGE PLAN
C-114	SHEET 16	ADA RAMP ENLARGEMENTS
C-115	SHEET 17	UTILITY PLAN
C-116	SHEET 18	UTILITY PLAN
C-117	SHEET 19	UTILITY PLAN
C-118	SHEET 20	SITE & DIMENSIONING PLAN
C-119	SHEET 21	SITE & DIMENSIONING PLAN
C-120	SHEET 22	SITE & DIMENSIONING PLAN
C-201	SHEET 23	WALLACE BOULEVARD PLAN & PROFILE
C-202	SHEET 24	WALLACE BOULEVARD PLAN & PROFILE
C-203	SHEET 25	20TH AVENUE PLAN & PROFILE
C-204	SHEET 26	21ST AVENUE PLAN & PROFILE
C-205	SHEET 27	DESTRIER STREET PLAN & PROFILE
C-206	SHEET 28	DESTRIER STREET PLAN & PROFILE
C-207	SHEET 29	ALLEY PLAN & PROFILE
C-208	SHEET 30	DOROTHY LANE PLAN & PROFILE
C-209	SHEET 31	PENELOPE PLACE PLAN & PROFILE
C-210	SHEET 32	TYPICAL ROAD SECTIONS
C-301	SHEET 33	STORMWATER MANAGEMENT PLAN
C-302	SHEET 34	STORMWATER MANAGEMENT PLAN
C-303	SHEET 35	STORMWATER MANAGEMENT PROFILES
C-304	SHEET 36	STORMWATER MANAGEMENT DETAILS
C-401	SHEET 37	CONSTRUCTION PROFILES - STORM
C-402	SHEET 38	CONSTRUCTION PROFILES - SEWER
C-403	SHEET 39	CONSTRUCTION PROFILES - WATER
C-404	SHEET 40	STRUCTURE SCHEDULES
C-405	SHEET 41	STORM DRAIN CALCULATIONS
C-406	SHEET 42	STORM DRAIN CALCULATIONS
C-501	SHEET 43	CONSTRUCTION DETAILS & NOTES - E & S CONTROLS
C-502	SHEET 44	CONSTRUCTION DETAILS & NOTES - E & S CONTROLS
C-503	SHEET 45	CONSTRUCTION DETAILS & NOTES - WATER
C-504	SHEET 46	CONSTRUCTION DETAILS & NOTES - WATER
C-505	SHEET 47	CONSTRUCTION DETAILS & NOTES - WATER
C-506	SHEET 48	CONSTRUCTION DETAILS & NOTES - WATER
C-507	SHEET 49	CONSTRUCTION DETAILS & NOTES - SEWER
C-508	SHEET 50	CONSTRUCTION DETAILS & NOTES - STORM DRAINAGE
C-509	SHEET 51	CONSTRUCTION DETAILS & NOTES - SITE
C-510	SHEET 52	CONSTRUCTION DETAILS & NOTES - SITE
C-511	SHEET 53	CONSTRUCTION DETAILS & NOTES - SITE
L-101	SHEET 54	LANDSCAPE PLAN
L-102	SHEET 55	LANDSCAPE PLAN
L-103	SHEET 56	LANDSCAPE PLAN
L-501	SHEET 57	LANDSCAPE PLAN DETAILS & NOTES

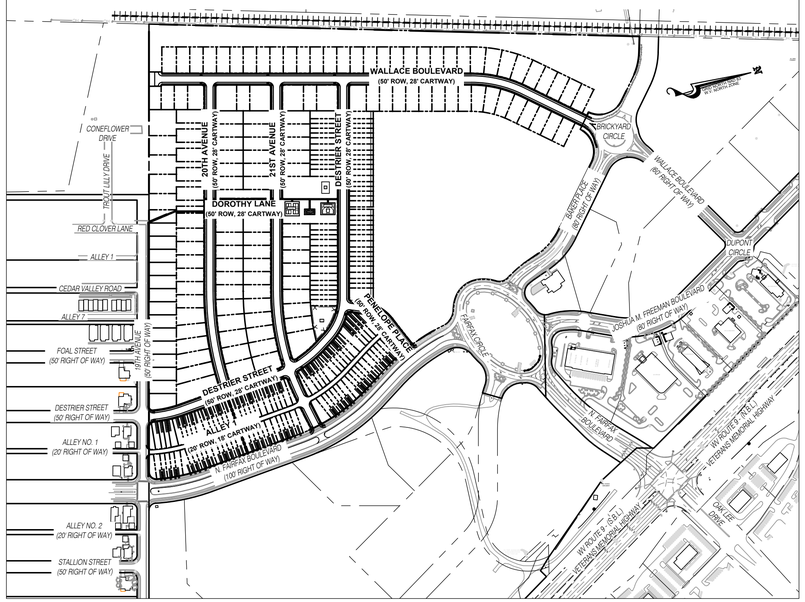
PLANS BY OTHERS:

SL-001	SYMBOLS, SCHEDULES, AND DETAILS
SL-100	OVERALL SITE PLAN
SL-101	SITE PLAN - SECTION 101
SL-102	SITE PLAN - SECTION 102
SL-103	SITE PLAN - SECTION 103

LOCATION PLAN

SCALE: 1" = 300'

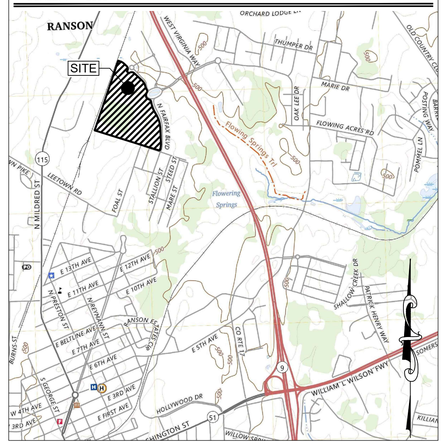
PARCELS IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
DISTRICT #8- RANSON CORP



VICINITY MAP

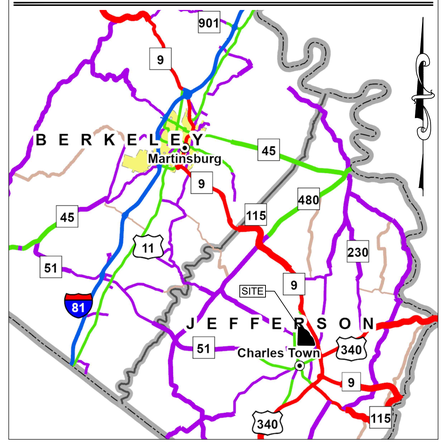
SCALE: 1" = 2000'

ADC MAP 21, B8
USGS MAPS (CHARLES TOWN, WEST VIRGINIA)



WVDOH VICINITY MAP

SCALE: N.T.S.



Know what's below.
Call before you dig.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
15 EAST MAIN STREET
NEW BLOOMFIELD, PA 17068
717-582-8844
355 SOUTH HANOVER STREET
CARLISLE, PA 17013
717-249-0411
@ 2025
128 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
301-791-3650
11142 WILLIAMSPORT PIKE
GREENCASTLE, PA 17225
717-597-3647

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF NORTH FAIRFAX BOULEVARD AND BAKER PLACE
AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOP ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS | DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE: AS SHOWN
SHEET TITLE:

COVER SHEET

C-001
SHEET 01 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\DWGS\CIVIL\CT01\2023-0285 01-02 COVER SHEET & GENERAL NOTES.DWG 2025-06-13

GENERAL NOTES

1. Any damage to adjoining public roads, utilities, etc. during construction will be repaired in kind by the contractor.
2. No subsurface investigation has been performed by Frederick, Seibert and Associates, Inc. to determine ground water, rock, sinkholes or any other natural or man-made existing features. See geotech report by ECS Mid-Atlantic, LLC for sub-surface findings.
3. FSA, Inc. assumes no liability for the location of any above ground and below ground utilities. Existing utilities are shown from the best available information. Contractor to field verify location and depth of all above and below ground utilities prior to construction.
4. The contractor shall locate existing utilities in advance of construction operations in the vicinity of proposed utilities.
5. The contractor shall take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to the contractor's operation shall be repaired immediately at the contractor's expense. Contractor to use caution in areas where low hanging wires exist.
6. All utilities shall be cleared by a minimum of 1'-0". All utility poles shall be cleared by a minimum of 2'-0" or tunneled if required.
7. The Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these drawings:

Miss Utility	1-800-245-4848
Potomac Edison	1-800-686-0011
Mountaineer Gas	1-800-834-2070
Frontier Communications	(304) 728-8500
WVDOH	(304) 289-3521
City of Ranson	(304) 725-1010
Charles Town Utility Board	(304) 725-2316
West Virginia American Water	(304)-707-5834

8. The contractor shall be responsible for coordination of his construction with the construction of other contractors.
9. Benchmarks to be established by FSA prior to the start of construction.
10. The contractor shall notify the Architect/Engineer, before construction, of any conflicts between the plans and actual field conditions.
11. The contractor shall protect all utilities and culvert pipes during construction by insuring proper cover, increasing cover, or constructing roadway and parking through base course before loading site with heavy vehicles.
12. Job site safety is the sole responsibility of the contractor. The Contractor shall perform all excavation in accordance with O.S.H.A. Regulations for trench safety.
13. The contractor shall perform his own field inspection and surveys (if necessary) to determine the limit of earthwork needed to complete this project. Any earthwork quantities that may be shown hereon are preliminary estimates only, and are intended for Soil Erosion Control plan review, if required. There has been no correction made to the earthwork quantities shown hereon due to the compaction of fill.
14. The contractor shall be aware that in the event of discrepancy between scaled and figured dimensions shown on the plan, the figured dimensions shall govern.
15. Sediment erosion control measures shall be installed per sediment erosion control plans, details and specifications.
16. Please refer to Geotechnical Report completed by ECS Mid-Atlantic, LLC for load bearing fills, etc.
17. The entire area included within the proposed limits of cut and fill shall be stripped of all root material, trash and other organic and otherwise objectionable, non-complying and unsuitable soils and materials.
18. It shall be distinctly understood that failure to mention specifically any work which would naturally be required to complete the project shall not relieve the contractor of his responsibility to complete such work.
19. The existing site contours shown hereon are LIDAR 2' contours and field checked by FSA in September 2024. (Contour accuracy is to plus or minus one half the contour interval).
20. Limit of disturbed areas are to be the limit of property ownership, unless otherwise noted.
21. Exterior lighting will consist of pole mounted lights as shown on the utility plans.
22. The contractor shall provide MOSH safety assistance for City Utilities Department, Water and Wastewater Division Inspectors.
23. Applicant to provide as built mylars at the completion of the project.
24. This project has a projected start date of June 2025 and a completion date of July 2027.
25. A complete set of approved plans and a copy of the grading permit must be on site and available for use by the inspector, or other representative of the City of Ranson.
26. There are no Board of Zoning Appeals Cases for this property.
27. Proposed SWM will consist of on-site bio-retention facilities and wet ponds.
28. All existing drainage culverts and drainage easements are to be maintained and unaltered.
29. There are no existing or proposed pumping stations in this development.

GENERAL C.T.U.B UTILITY NOTES

1. REFER TO THE CHARLES TOWN UTILITY BOARD (CTUB) SANITARY SEWER SYSTEM SPECIFICATIONS DATED MAY 2016, AND THE LATEST MODIFICATIONS OR REVISIONS THERETO, FOR SANITARY SEWER CONSTRUCTION METHODS, MATERIALS, FIELD QUALITY CONTROL, AND FOR ALL DETAILS AND SPECIFICATIONS FOR ALL SANITARY SEWER LINES TO BE SERVED BY THE CHARLES TOWN UTILITY BOARD.
2. SEPARATION OF WATER MAINS / SANITARY SEWERS: ALL NEW WATER MAINS SHALL CONFORM TO THE WEST VIRGINIA BUREAU FOR PUBLIC HEALTH, OFFICE OF ENVIRONMENTAL HEALTH SERVICES, ENVIRONMENTAL ENGINEERING DIVISION, PUBLIC WATER SYSTEM DESIGN STANDARDS 64CSR77 10.7 SEPARATION OF WATER MAINS, SANITARY SEWERS AND STORM SEWERS INCLUDING:
   A. PARALLEL INSTALLATION - WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWER. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
   B. CROSSINGS - WATER MAINS SHALL CROSS ABOVE SEWERS AND SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER MAIN AND TOP OF THE SEWER. AT CROSSINGS, ONE FULL LENGTH (20 FEET) OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.
   C. HORIZONTAL SEPARATION - A MINIMUM OF 10 FEET SEPARATION BETWEEN SEWER LINES AND WATER LINES MUST BE MAINTAINED. IN CASES WHERE THE 10 FEET MINIMUM CANNOT BE MAINTAINED, THE SEWER PIPE SHALL BE 18" LOWER THAN THE WATER LINE AND CONSTRUCTED OF A PRESSURE TYPE PIPE. WHEN LINES ARE PLACED WITHIN 5 FEET OF EACH OTHER, PERMANENT IDENTIFICATION TAPE MUST BE BURIED DIRECTLY ABOVE THE LINES DENOTING "SEWER LINE" OR POTABLE WATER LINE.
   D. VERTICAL SEPARATION - A MINIMUM OF 18" OF SEPARATION BETWEEN THE TOP OF THE SEWER LINES AND THE BOTTOM OF WATER LINES MUST BE MAINTAINED. IN CASES WHERE THE 18" CANNOT BE MAINTAINED, THE SEWER LINE SHALL CROSS AT MIDPOINT OF A 20' LONG JOINT OF THE WATER LINE AND BE CONSTRUCTED OF PRESSURE TYPE PIPE. A SEWER LINE SHALL NOT BE CONSTRUCTED OVER TOP OF A WATER LINE. IF THE STANDARD VERTICAL INSTALLATION REQUIREMENTS CANNOT BE MAINTAINED, THE SEWER LINE SHALL BE ENCASED SO THAT THE CASING EXTENDS AT LEAST 15 FEET EACH SIDE OF THE CROSSING WITH A MINIMUM OF 18" VERTICAL SEPARATION.
3. THERE SHALL BE NO PHYSICAL CONNECTION BETWEEN THE WATER DISTRIBUTION SYSTEM AND A SANITARY SEWER SYSTEM; ANY PIPES, PUMPS, HYDRANTS OR TANKS WHEREBY UNSAFE WATER OR OTHER CONTAMINATING MATERIALS MAY BE DISCHARGED OR DRAWN INTO THE SYSTEM.
4. PIPE BEDDING - NO. 8 OR NO. 10 LIMESTONE SHALL BE USED FOR ALL PIPE BEDDING UNLESS OTHERWISE APPROVED BY CTUB. SANITARY SEWER MAIN AND SANITARY LATERALS SHALL BE INSTALLED WITH MINIMUM 6" BEDDING BELOW PIPE AND 12" OVER PIPE.
5. REFER TO THE CTUB SEWER SYSTEM SPECIFICATIONS, AND THE LATEST MODIFICATIONS OR REVISIONS THERETO, FOR:
   - A LIST OF MATERIALS REPRESENTING THE MINIMUM REQUIREMENTS ACCEPTABLE FOR USE BY CTUB.
   - ALL PIPE, FITTINGS, AND OTHER RELATED MATERIALS USED IN THE CONSTRUCTION OF LINES
   - FIRE HYDRANT STANDARDS AND SPECIFICATIONS
   - GRAVITY SEWER CONSTRUCTION METHODS & PIPELINE TESTING.
   - MANHOLES SUBMITTALS, DELIVERY, STORAGE & HANDLING, INSPECTION, PREPARATION, CONSTRUCTION METHODS, AND VACUUM TESTING.
   - CAST IN-PLACE CONCRETE SPECIFICATIONS AND REQUIREMENTS.

SANITARY SEWER:

1. ALL SANITARY SEWER LINES SHALL BE COVERED WITH A MINIMUM OF 48" OF EARTH COVERING OVER THE TOP OF PIPE.
2. SEWER LINES SHALL BE LAID IN STRAIGHT LINE WITH UNIFORM SLOPE BETWEEN MANHOLES. SEWERS ON 20%%% SLOPE OR GREATER SHALL BE ANCHORED SECURELY WITH CONCRETE ANCHORS, OR APPROVED EQUAL (SEE CTUB SEWER SYSTEM SPECIFICATIONS FOR SPACING REQUIREMENTS).
3. MANHOLES - SHALL BE PRE-CAST CONCRETE MEETING REQUIREMENTS OF AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM). THE MINIMUM BASE DIAMETER SHALL BE 48" (MINIMUM OPENING 24"). THE INSIDE BASE OF THE MANHOLE SHALL BE FILLED WITH CONCRETE TO FORM A BENCH SLOPING TOWARD THE FLOW CHANNEL. WATERTIGHT MANHOLE COVERS ARE TO BE USED WHEREVER THE MANHOLE COVERS MAY BE FLOODED BY STREET RUNOFF OR HIGH WATER. PIPE CONNECTIONS TO MANHOLES AND JOINTS ON MANHOLES SHALL BE WATERTIGHT. CONCRETE MANHOLES SHALL BE WATERPROOFED ON THE EXTERIOR WHERE GROUNDWATER CONDITIONS ARE UNFAVORABLE.
4. GRAVITY SEWER LINES SHALL BE PVC PIPE, SCHEDULE SDR-35. ALL PIPES AND FITTINGS SHALL MEET OR EXCEED ALL REQUIREMENTS OF ASTM SPECIFICATIONS D-3034 AND/OR OTHER REQUIREMENTS OF UNI-BELL UNI-B4. JOINTS SHALL BE EITHER O-RING TYPE "OR" MECHANICAL SEAL JOINT MEETING MATERIAL REQUIREMENTS OF ASTM 1784 AND JOINT REQUIREMENTS OF ASTM 3212. NO SOLVENT CEMENT JOINTS WILL BE PERMITTED IN FIELD CONSTRUCTION, EXCEPT AS SPECIFICALLY AUTHORIZED BY CTUB.
5. LATERAL PIPING AND FITTINGS, IN SIZES 4" THROUGH 6", SHALL BE PVC PIPE, SCHEDULE 40.
6. THE DEVELOPER SHALL FURNISH AND INSTALL THE WYE BRANCHES, RISER PIPE, SERVICE LATERALS, TRANSITION FITTINGS, AND INCIDENTALS WHERE SHOWN ON THE PLANS OR WHERE DIRECTED BY THE CTUB.
7. HOME OWNER INSTALLED SERVICE LATERALS - PIPE SHALL BE 4" MINIMUM SDR-35 OR SCHEDULE 40 INSTALLED AT 2%%% MINIMUM SLOPE. LATERAL SHOULD BE PLACED WITH 3 FEET MINIMUM COVER UNLESS OTHERWISE APPROVED BY CTUB. CONNECTION OF HOME OWNER LATERAL TO EXISTING LATERAL SHALL BE BY FITTING OF SAME TYPE OF PIPE. BEDDING SHALL BE NO. 8 OR NO. 10 LIMESTONE OR OTHER MATERIAL AS APPROVED BY CTUB. THE LATERAL AND CONNECTIONS SHALL BE INSPECTED AND APPROVED BY A REPRESENTATIVE OF CTUB PRIOR TO COVERING WITH BEDDING.

WEST VIRGINIA AMERICAN WATER NOTES

1. INSTALLATION OF MAINS:
   A. BEFORE ANY PIPE IS INSTALLED IN TRENCHES, IT SHALL BE INSPECTED FOR DAMAGE AND THE INSIDE OF THE PIPE SHALL BE SWABBED TO REMOVE LOOSE DIRT AND FOREIGN OBJECTS. NO DAMAGED PIPE WILL BE PERMITTED TO BE INSTALLED.
   B. BEDDING: CONTINUOUS AND UNIFORM BEDDING SHALL BE PROVIDED IN THE TRENCH FOR ALL BURIED PIPE. BACKFILL MATERIAL SHALL BE TAMPED IN LAYERS AROUND THE PIPE AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE. STONES FOUND IN THE TRENCH SHALL BE REMOVED FOR A DEPTH OF AT LEAST 6" BELOW THE BOTTOM OF THE PIPE. SEE TYPICAL WATER LINE TRENCH DETAIL.
   C. COVER: ALL WATER MAINS SHALL BE COVERED WITH A MINIMUM OF 48" OF EARTH COVERING TO PREVENT FREEZING. ALL MAINS LESS THAN 8" IN DIAMETER AND WITHIN 5 FEET OF A HEAVILY TRAVELED HIGHWAY SHALL HAVE A MINIMUM OF 42" OF COVERING.
   D. BLOCK: ALL TEES, BENDS, PLUGS AND HYDRANTS SHALL BE PROVIDED WITH TIE RODS OR JOINTS DESIGNED TO PREVENT MOVEMENT.
   E. PRESSURE AND LEAKAGE TESTING: ALL TYPES OF INSTALLED PIPE SHALL BE PRESSURE TESTED AND LEAK TESTED IN ACCORDANCE WITH AWWA STANDARD C600. DEVELOPER SHALL SUBMIT PLAN OF PROPOSED TESTING.
   F. DISINFECTION: ALL NEW, CLEANED OR REPAIRED WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651. THE SPECIFICATIONS SHALL INCLUDE MICROBIOLOGICAL TESTING OF ALL WATER MAINS.
   G. ALL NON-METALIC MAINS SHALL BE PROVIDED WITH TRACER WIRE OR METALLIC TAPE.
2. WATER SERVICE LINES SHOWN ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON BUILDING ARCHITECTURAL DRAWINGS AND UTILITY CONNECTION LOCATIONS.
3. CONTRACTOR SHALL NOTIFY WEST VIRGINIA AMERICAN WATER PRIOR TO INSTALLATION OF ANY IMPROVEMENTS WITHIN THE WATER AND SEWER EASEMENTS TO ENSURE THAT NO FENCE POSTS OR OTHER IMPROVEMENTS ARE PLACED ON TOP OF THE UTILITIES.

GENERAL NOTES

1. A PRECONSTRUCTION MEETING WITH WEST VIRGINIA AMERICAN WATER, WVAW'S 3RD PARTY INSPECTOR, THE DEVELOPER, AND THE CONTRACTOR MUST TAKE PLACE PRIOR TO THE START OF CONSTRUCTION.
2. WVAW MUST BE NOTIFIED A MINIMUM OF 2 WEEKS PRIOR TO START OF CONSTRUCTION. INSPECTION FEES WILL APPLY.
3. ALL MAINS SHALL BE PROVIDED WITH TRACER WIRE AND DETECTABLE WARNING TAPE.
4. IN THE EVENT BLASTING IS TO OCCUR ONSITE, A BLASTING PLAN MUST BE PROVIDED TO WVAW FOR REVIEW PRIOR TO START OF WORK.

ZONING DATA

ZONING DISTRICT	**R6 - RESIDENTIAL DISTRICT**
MAX BUILDING HEIGHT	35 FT
MINIMUM LOT SIZE	6,000 SF
MINIMUM LOT WIDTH	50 FT
MINIMUM YARD SETBACK:	
FRONT	25 FT.
SIDE	5 FT.
REAR	20 FT.
ACREAGE	35.10 AC. (57%)
PROPOSED LOTS	199 LOTS
ZONING DISTRICT	**T3 - SUB-URBAN**
MAX BUILDING HEIGHT	35 FT TO EAVE / PARAPET
MINIMUM YARD SETBACKS FOR PRINCIPAL BUILDINGS:	
FRONT (PRINCIPAL)	20 FT. MIN., 30 FT. MAX
FRONT (SECONDARY)	2 FT. MIN., 12 FT. MAX
SIDE	0 FT. FOR DUPLEX OR 8' MIN.
REAR	24 FT. MIN.
MINIMUM YARD SETBACKS FOR OUTBUILDINGS:	
FRONT (PRINCIPAL)	20 FT. MIN. + BUILDING SETBACK
SIDE	3 FT. OR 6 FT. AT CORNER
REAR	3 FT. MIN.
ACREAGE	3.87 AC. (6%)
PROPOSED LOTS	16 LOTS
ZONING DISTRICT	**T4 - SUB-URBAN**
MAX BUILDING HEIGHT	48 FT TO EAVE / PARAPET
MINIMUM YARD SETBACKS FOR PRINCIPAL BUILDINGS:	
FRONT (PRINCIPAL)	18 FT.
FRONT (SECONDARY)	10 FT.
SIDE	0 FT. OR 6' MIN. TOTAL
REAR	3 FT. MIN.
MINIMUM YARD SETBACKS FOR OUTBUILDINGS:	
FRONT (PRINCIPAL)	40 FT. MAX. FROM REAR PROPERTY LINE
SIDE	0 FT. OR 3 FT. AT CORNER
REAR	3 FT. MIN.
ACREAGE	8.37 AC. (14%)
PROPOSED LOTS	77 LOTS
ZONING DISTRICT	**HC - HIGHWAY COMMERCIAL**
MAX BUILDING HEIGHT	80 FT
MINIMUM YARD SETBACKS :	
FRONT	NONE
SIDE	10 FT ABUTTING RESIDENTIAL DISTRICT
REAR	10 FT ABUTTING RESIDENTIAL DISTRICT
ACREAGE	14.07 AC. (23%)
PROPOSED LOTS	1

PARKING, LOADING & BICYCLE DATA

ZONING	REQUIREMENT	CALCULATION	REQUIRED
R6 - RESIDENTIAL DISTRICT	2 SPACES PER UNIT	2 SPACES * 199 UNITS	398 SPACES
T3 - SUBURBAN DISTRICT	2 SPACES PER UNIT	2 SPACES * 16 UNITS	32 SPACES
T4 - GENERAL URBAN DISTRICT	1.5 SPACES PER UNIT	1.5 SPACES * 77 UNITS	116 SPACES
TOTAL REQUIRED SPACES			**546 SPACES**
PARKING PROVIDED:			
2 SPACES PER SINGLE FAMILY LOT			**286 SPACES**
2 SPACES PER TOWNHOUSE LOT			**298 SPACES**
STREET PARKING LOT			**20 SPACES**
TOTAL PROVIDED PARKING SPACES			**604 SPACES**

SITE DATA

PARCEL ID'S	08 8000100010000 (PARCEL 1.1)
	08 8000100030000 (PARCEL 1.3)
	08 8000100050000 (PARCEL 1.5)
	08 8000900020000 (PARCEL 9.2)
	08 8E00170000000 (PARCEL 17)
DISTRICT	8 - RANSON CORP
LIBER/ FOLIO	1322/264
AREA SUMMARY:	
PARCEL	61.41 AC.
DISTURBED AREA	2,526,480 SF / 58.00 Ac
EXISTING IMPERVIOUS	0 SF / 0.0 AC (0%)
PROPOSED TOTAL IMPERVIOUS	921,294 SF / 21.43 AC (35%)
PROPOSED USE	SINGLE FAMILY & TOWNHOUSE RESIDENTIAL
PROPOSED LOTS	293
HIGHWAY COMMERCIAL LOTS	1
SINGLE FAMILY LOTS	143; 21-T4 (14%) , 16-T3 (11%) , 106-R6 (71%)
MAX LOT COVERAGE	50%
TOWNHOUSE LOTS	149
MAX LOT COVERAGE	70%
WATER & SEWER USAGE:	
WATER PROVIDED	WEST VIRGINIA AMERICAN WATER
SEWER PROVIDED	CHARLES TOWN UTILITY BOARD
EXISTING ALLOCATION	0 GPD
PROPOSED ALLOCATION	292 EDU
SITE LIGHTING:	
EXISTING	NONE
PROPOSED	POLE MOUNTED
SITE SIGNAGE:	
EXISTING	NONE
PROPOSED	YES
FEMA PANEL #	54037C0130E DATED 12-18-2009

LEGEND

	EXISTING	PROPOSED
SUBJECT BOUNDARY		
BUILDING SETBACK LINE		
RIGHT OF WAY		
EASEMENT LINE		
ADJOINER BOUNDARY		
FENCE (METAL)		
FENCE (WOODEN)		
DITCH (STREAM)		
EDGE OF WATER		
WETLAND		
FLOODPLAIN		
SOIL BOUNDARY		
RAILWAY		
CENTERLINE		
EDGE OF PAVEMENT		
EDGE OF GRAVEL		
CURB		
WALL		
GUARD RAIL		
EDGE OF CONCRETE		
BUILDING	MB	MB
MAIL BOX		
SIGN (ROAD)		
SIGN (SITE)		
TRAFFIC SIGNAL		
TOPOGRAPHIC FEATURES		
CONTOUR (INDEX)	500	500
CONTOUR (INTERMEDIATE)	501.65 / 501	501.65 / 501
SPOTS ELEVATION		
VEGETATION AREAS		
TREELINE		
DECIDUOUS TREES		SEE LANDSCAPE SHEET FOR LEGEND
EVERGREEN TREES		SEE LANDSCAPE SHEET FOR LEGEND
SANITARY SEWER		
GRAVITY LINE	SS	SS
FORCE MAIN LINE	FM	FM
LATERAL		
MANHOLE	SS	SS
CLEANOUT		
VALVE		
WATER		
COLD WATER LINE	W	W
HOT WATER LINE	HW	HW
MANHOLE	MH	MH
FIRE HYDRANT		
VALVE		
METER		
WELL		
STORM DRAINAGE		
STORM SEWER LINE		
ROOF DRAIN LINE	RD	RD
MANHOLE	SW	
INLETS		
CLEANOUT		
UTILITIES		
GAS LINE	G	G
ELECTRICAL LINE	UGE	UGE
FIBER OPTIC LINE		
COMMUNICATION LINE	COMM	COMM
OVERHEAD LINES	OH	OH
MANHOLE	MH	MH
PEDS, BOX, & ETC		
POLE		
LIGHT POLE		
GAS METER		
GAS VALVE		

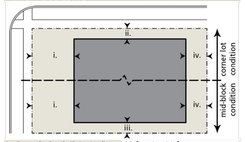
LEGEND - ABBREVIATIONS

AASHTO — AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	OC — ON CENTER
ADS — ADVANCED DRAINAGE SYSTEM	PC — POINT OF CURVE
ASTM — AMERICAN SOCIETY FOR TESTING AND MATERIAL	PCC — POINT OF COMPOUND CURVE
AWWA — AMERICAN WATER WORKS ASSOCIATION	PGL — PROPOSED GRADE LINE
BLDG — BUILDING	PRC — POINT OF REVERSE CURVE
BOT — BOTTOM	PT — POINT OF TANGENT
CIP — CAST IRON PIPE	PVC — POINT OF VERTICAL CURVE
CL — CENTERLINE	PVI — POINT OF VERTICAL INTERSECTION
CMP — CORRUGATED METAL PIPE	PVT — POINT OF VERTICAL TANGENT
CO — SANITARY SEWER CLEAN-OUT	ROW — RIGHT-OF-WAY
COMM — COMMUNICATION	SAN — SANITARY
CONC — CONCRETE	SCE — STABILIZED CONSTRUCTION ENTRANCE
DA — DRAINAGE AREA	SDR — STANDARD DIMENSION RATIO
DIA — DIAMETER	SIP — SET IRON PIN
EGL — EXISTING GRADE LINE	SD — STORM DRAINAGE
EX — EXISTING	SDMH — STORM DRAIN MANHOLE
EIP — EXISTING IRON PIN	SF — SQUARE FEET
FFE — FINISH FLOOR ELEVATION	SS — SANITARY SEWER
FH — FIRE HYDRANT	SSMH — SANITARY SEWER MANHOLE
GV — GATE VALVE	STA — STATION
HGL — HYDRAULIC GRADE LINE	STD — STANDARD
HDPE — HIGH DENSITY POLYETHYLENE	SY — SQUARE YARDS
INV — INVERT	TAN — TYPE AS NOTED
LF — LINEAR FEET	TEMP — TEMPORARY
MAX — MAXIMUM	TS — TOP OF STRUCTURE
MB — MAIL BOX	TG — TOP OF GRATE
MIN — MINIMUM	TR — TOP OF RIM
MJ — MECHANICAL JOINT	TYP — TYPICAL
NO — NUMBER	UP — UTILITY POLE
NIC — NOT IN CONTRACT	VIF — VERIFY IN FIELD
NTS — NOT TO SCALE	WL — WATERLINE
OAC — OR APPROVED EQUAL	WM — WATER METER
	WV — WATER VALVE

TABLE 12. T3 STANDARDS

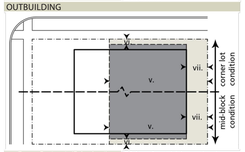
A. BUILDING PLACEMENT

PRINCIPAL BUILDING



i. Front Setback (Principal)	20 ft. min., 30 ft. max.
ii. Front Setback (Secondary)	2 ft. min, 12 ft. max.
iii. Side Setback	0 ft. for duplex or 8 ft. min.
iv. Rear Setback	24 ft. min.

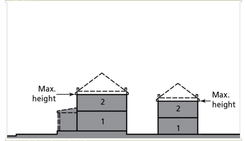
OUTBUILDING



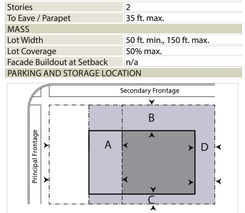
v. Front Setback (Principal)	20 ft. min. + bldg. setback
vi. Side Setback	3 ft. or 6 ft. at corner
vii. Rear Setback	3 ft. min.
ENCROACHMENTS	
i. Setback Encroachments	
Open Porch	50% max.
Balcony and / or Bay Window	25% max.
Stoop, Lightwell or Terrace	n/a
ii. Sidewalk Encroachments	
Awning or Gallery	n/a
iii. Encroachment Depths	
Open Porch	10 ft. max.
Balcony and / or Bay Window	6 ft. max.
Stoop, Lightwell or Terrace	n/a

B. BUILDING FORM

HEIGHT



PRINCIPAL BUILDING	
Stories	2
To Eave / Parapet	35 ft. max.
OUTBUILDING BUILDING	
Stories	2
To Eave / Parapet	35 ft. max.
MASS	
Lot Width	50 ft. min., 150 ft. max.
Lot Coverage	50% max.
Facade Buildout at Setback	n/a
PARKING AND STORAGE LOCATION	



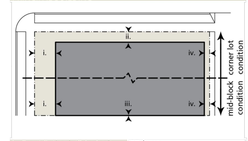
PARKING	
A. Front Setbacks (Principal Frontage)	25 ft. min., or 20 ft. min. for side or rear entry
B. Front Setbacks (Secondary Frontage)	25 ft. min.
C. Side Setbacks	8 ft. min.
D. Rear Setback	24 ft. min.
TRASH & STORAGE * LOCATION	
1st layer (see Table 15)	not permitted
2nd layer (see Table 15)	not permitted
3rd layer (see Table 15)	permitted

* Storage includes boats and recreational vehicles.

TABLE 13. T4 / T4O STANDARDS

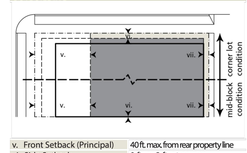
A. BUILDING PLACEMENT

PRINCIPAL BUILDING



i. Front Setback (Principal)	18 ft. max.
ii. Front Setback (Secondary)	10 ft. max.
iii. Side Setback	0 ft. or 6 ft. min. total
iv. Rear Setback	3 ft. min.

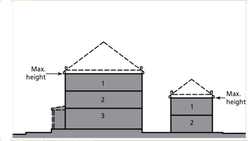
OUTBUILDING



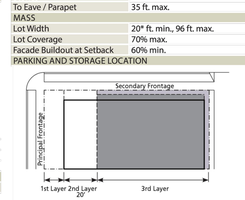
v. Front Setback (Principal)	40ft. max.from rear property line
vi. Side Setback	0 ft. or 3 ft. at corner
vii. Rear Setback	3 ft. min.
ENCROACHMENTS	
i. Setback Encroachments	
Open Porch	80% max.
Balcony and / or Bay Window	80% max.
Stoop, Lightwell or Terrace	80% max.
ii. Sidewalk Encroachments	
Awning or Gallery	80% max.
iii. Encroachment Depths	
Open Porch	10 ft. max.
Balcony and / or Bay Window	6 ft. max.
Stoop, Lightwell or Terrace	6 ft. max
Gallery	within 2 ft. of curb
Awning	within 2 ft. of curb

B. BUILDING FORM

HEIGHT



PRINCIPAL BUILDING	
Stories	3
To Eave / Parapet	48 ft. max., 60 ft. max. T4O
OUTBUILDING BUILDING	
Stories	2
To Eave / Parapet	35 ft. max.
MASS	
Lot Width	20* ft. min., 96 ft. max.
Lot Coverage	70% max.
Facade Buildout at Setback	60% min.
PARKING AND STORAGE LOCATION	



PARKING	
1st layer (see Table 15)	not permitted
2nd layer (see Table 15)	not permitted
3rd layer (see Table 15)	permitted
TRASH & STORAGE ** LOCATION	
1st layer (see Table 15)	not permitted
2nd layer (see Table 15)	not permitted
3rd layer (see Table 15)	permitted

* 16 ft. minimum width is permitted if on site parking is provided.

** Storage includes boats and recreational vehicles.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

fsainc.com
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NEW BLOOMFIELD, PA 17068
717-582-2644

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305 SOUTH HANOVER STREET
CARLISLE, PA 17013
717-249-0411

11142 WILLIAMSPORT PIKE
GREENCASTLE, PA 17225
717-597-2657

128 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
301-797-8999

FSA
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CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

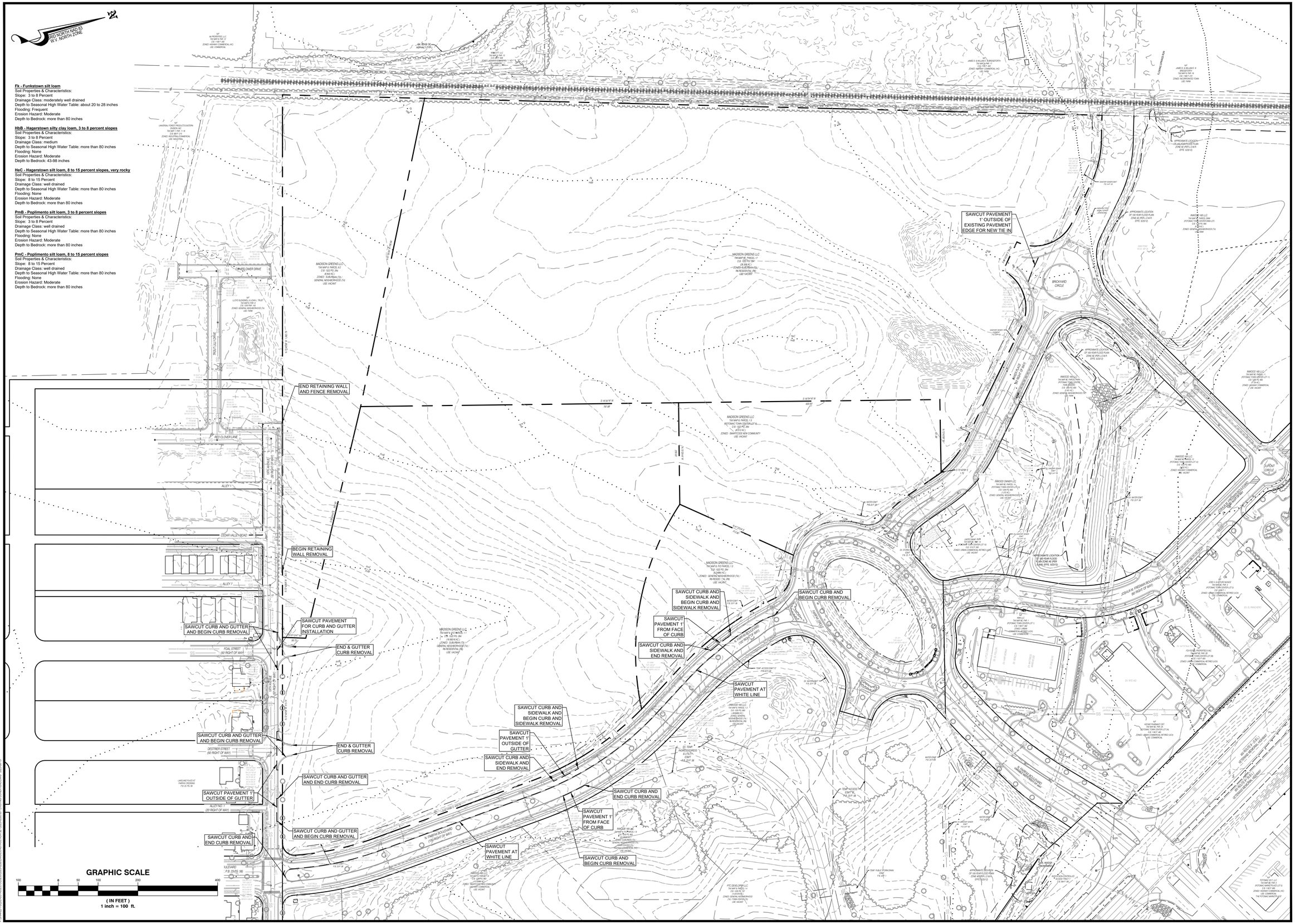
MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-9999

PROJECT NO.: 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1-1, 8-1-3, 8-1-5, 8-9.2, 8E-17
SCALE: N.T.S.
SHEET TITLE: GENERAL NOTES

C-002
SHEET 02 OF 57

P:\SHARED FILES\PROJECTS\2023\0285\CIVIL\CONSTRUCTION SET\2023-0285 T-1 COVER SHEET & GENERAL NOTES.DWG, 2025-06-13



TREVOR MARK FREDERICK
24227
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

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240-818-8666

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MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.05.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE
AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

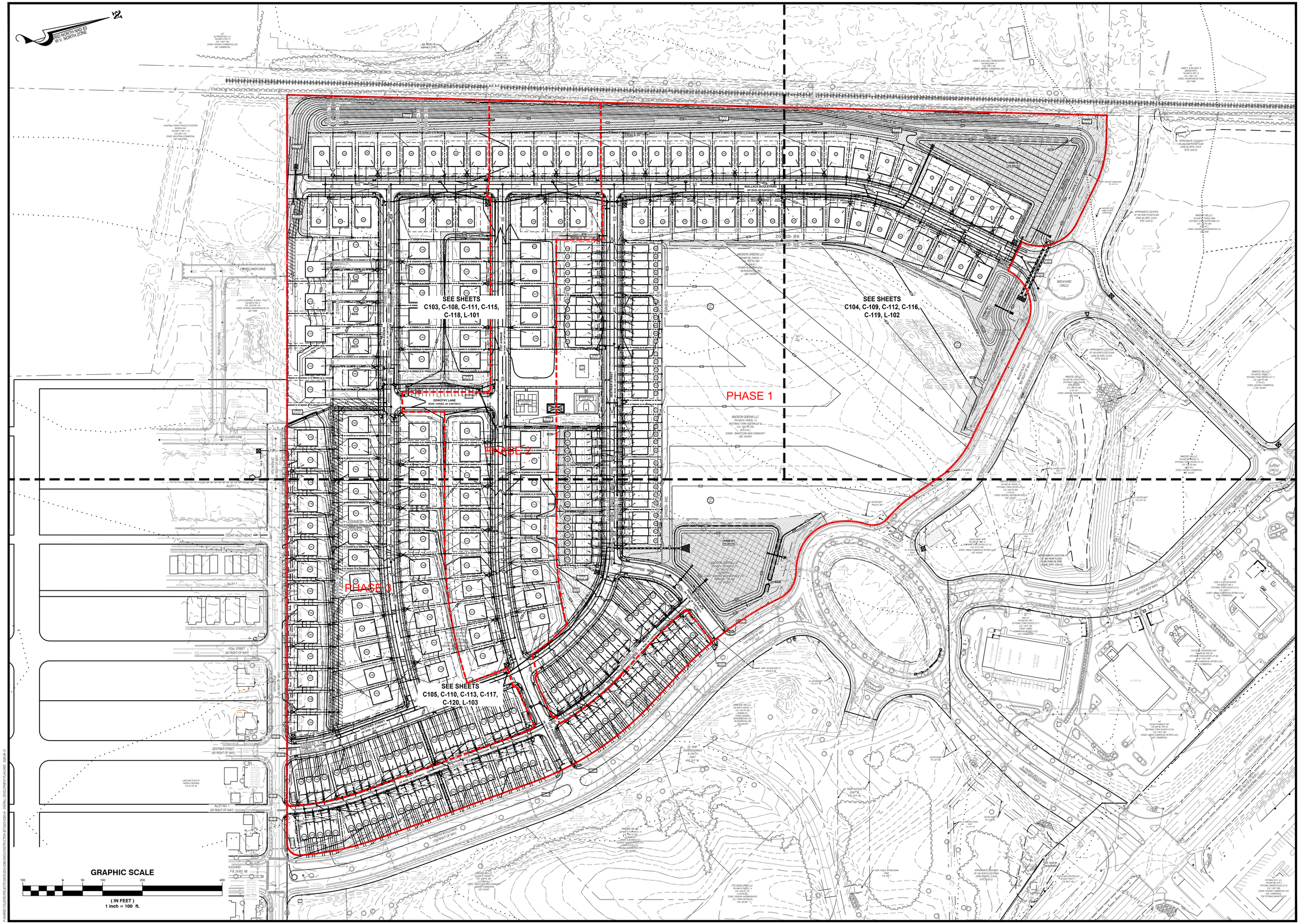
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9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.9999

PROJECT NO.: 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE: 1" = 100'
SHEET TITLE:

EXISTING CONDITIONS & DEMOLITION PLAN

C-101
SHEET 03 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\PROCESS\CIVIL\SHEETS\EXISTING CONDITIONS & DEMOLITION PLAN - EXISTING CONDITIONS & DEMOLITION PLAN.DWG 2025-06-13



NAD 83 NORTH NAD 83
W.V. NORTH ZONE

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
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Expiration Date: 12-31-2024

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MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.05.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE

CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-6999

PROJECT NO. 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE: 1" = 100'

SHEET TITLE
OVERALL DEVELOPMENT PLAN

C-102
SHEET 04 OF 57

P:\DRAWING FOLDER\PROJECTS\2023\2023-0285\DRAWINGS\CONSTRUCTION SET\2023-0285 CM - OVERALL DEVELOPMENT PLAN.DWG 2025-06-13

HATCH LEGEND	
HATCH	DESCRIPTION
	UTILITY EASEMENT
	STORMWATER MANAGEMENT AND DRAINAGE EASEMENT

EX. EDGE OF ASPHALT (TYP.)

N/F
WESCOTT, LLC
TAX MAP 8, PAR. 13
D.B. 935 P. 649
ZONED: HIGHWAY COMMERCIAL (HC)
USE: COMMERCIAL

NAD 83 NORTH NAD 83
W.V. NORTH ZONE

N/F
UNIVERSAL FOREST PRODUCTS EASTERN DIVISION, INC.
TAX MAP 7, PAR. 11.18
D.B. 926 P. 215
ZONED: INDUSTRIAL/COMMERCIAL
USE: INDUSTRIAL

NORFOLK AND WESTERN RAILROAD
60' RIGHT-OF-WAY

N 18°41'54" E 356.26'

N 18°41'54" E 1700.55'

ZONED- T4 | ZONED- T3 | ZONED- R6 | ZONED- HC

EXISTING PROPERTY LINE TO BE VACATED

OPEN SPACE 1

OPEN SPACE 2

OPEN SPACE 3

OPEN SPACE 4

OPEN SPACE 5

TOT LOT

PICKLEBALL COURT

BASKETBALL COURT

PAVILION

10' SWM EASEMENT

20' SWM EASEMENT

20' WATER EASEMENT

30' UTILITY EASEMENT

WALLACE BOULEVARD
(50' ROW, 28' CARTWAY)

DOROTHY LANE
(50' ROW, 28' CARTWAY)

20TH AVENUE
(50' ROW, 28' CARTWAY)

21ST AVENUE
(50' ROW, 28' CARTWAY)

DESTRIER STREET
(50' ROW, 28' CARTWAY)

19TH AVENUE
(50' RIGHT OF WAY)

CONEFLOWER DRIVE

RED CLOVER LANE

TROUT LILLY DRIVE

FM

N/F
LLOYD GLENDWELL & JOAN L. TRUST
TAX MAP 8, PAR. 9
D.B. 1203 PAR. 143
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: FARM

MADISON GREENS LLC
TAX MAP 8, PARCEL 9.2
D.B. 1322 PG. 264
(6.218 AC.)
ZONED: SUBURBAN (T3) / GENERAL NEIGHBORHOOD (T4)
USE: VACANT

MADISON GREENS LLC
TAX MAP 8E, PARCEL 17
D.B. 1322 PG. 264
(28.308 AC.)
ZONED: SUBURBAN (T3) / R6-RESIDENTIAL (R6)
USE: VACANT

MADISON GREENS LLC
TAX MAP 8, PARCEL 1.5
(POTOMAC TOWN CENTER LOT 6)
D.B. 1322 PG. 264
(4.512 AC.)
ZONED: SMARTCODE NEW COMMUNITY
USE: VACANT

NEW "HC" ZONING LINE

EXISTING PROPERTY LINES TO BE VACATED

SEE SHEET C-103 FOR CONTINUATION
SEE SHEET C-104 FOR CONTINUATION
SEE SHEET C-103 FOR CONTINUATION
SEE SHEET C-105 FOR CONTINUATION

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
24227
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
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555 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717-249-3611
11142 WILLIAMSPORT PIKE, GREENCASTLE, PA 17225, 717-597-3407
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 301-739-8866

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MARK	DESCRIPTION	DATE
	REVISED PER AGENCY COMMENTS	03.18.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
RANSON, WEST VIRGINIA
JEFFERSON COUNTY, WEST VIRGINIA

PROJECT NO.
2023-0285

DWN BY	DATE
ABRAM MYERS	12.12.2024

PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #:
8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE
1"=50'

SHEET TITLE
PRELIMINARY PLAT

C-103
SHEET 05 OF 57

P:\SHARED FILES\SRS PROJECTS\2023\2023-0285\ENGINEERING\CONSTRUCTION SET\2023-0285 09-27 - PRELIMINARY PLAT.DWG, 2025-06-13

HATCH LEGEND	
HATCH	DESCRIPTION
	UTILITY EASEMENT
	STORMWATER MANAGEMENT AND DRAINAGE EASEMENT

NAD 83 NORTH NAD 83 W.V. NORTH ZONE

OPEN SPACE 1

OPEN SPACE 2

WALLACE BOULEVARD (60' ROW, 28' CARTWAY)

BAKER PLACE (60' RIGHT OF WAY)

BRICKYARD CIRCLE

DUPONT CIRCLE

JOSHUA M. FREEMAN BOULEVARD Ex. 80' RIGHT-OF-WAY

ZONED- R6

ZONED- HC

NEW "HC" ZONING LINE

EXISTING PROPERTY LINES TO BE VACATED

LOT 293

APPROXIMATE LOCATION OF 100-YEAR FLOOD PLAIN ZONE AE (PER L.O.M.R. EFFE. 5/23/12)

EX. SWM FOREBAY

SWM POND W.S.E. 497.40

SWM POND W.S.E. 498.40

SANITARY SEWER ESMT P.B. 24 P. 53

SANITARY SEWER EASEMENT P.B. 24 P. 53

EX. SANITARY SEWER ESMT P.B. 24 P. 53

EX. WATER ESMT P.B. 23 P. 58

WATER ESMT P.B. 23 P. 58

EX. ACCESS ESMT P.B. 23 P. 53

INWOOD 165 LLC.
TAX MAP 8E, PARCEL SWM
(POTOMAC TOWN CENTER SWM LOT)
D.B. 1235 PG. 693
(6.225 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: SWM

INWOOD 165 LLC.
TAX MAP 8E, PARCEL 10
(POTOMAC TOWN CENTER LOT 10)
D.B. 1235 PG. 693
(1.653 AC.)
ZONED: HIGHWAY COMMERCIAL
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8E, PARCEL 11
(POTOMAC TOWN CENTER LOT 11)
D.B. 1235 PG. 693
(1.724 AC.)
ZONED: HIGHWAY COMMERCIAL
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8E, PARCEL 12
(POTOMAC TOWN CENTER LOT 12)
D.B. 1235 PG. 693
(2.722 AC.)
ZONED: HIGHWAY COMMERCIAL
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8E, PARCEL PARK
(POTOMAC TOWN CENTER PARK PARCEL)
D.B. 1235 PG. 693
(2.451 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: PARK

INWOOD OWNER LLC.
TAX MAP 8E, PARCEL 14
(POTOMAC TOWN CENTER LOT 14)
D.B. 1235 PG. 693
(1.372 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: VACANT

N/F
EAST MOUNTAIN HEALTH ADVANTAGE INC.
TAX MAP 8E, PAR. 5
(POTOMAC TOWN CENTER LOT 5)
D.B. 1215 P. 306
ZONED: URBAN COMMERCIAL-RETIRED (UCX)
USE: FUTURE COMMERCIAL

INWOOD
TAX MAP 8E
(POTOMAC TOWN
D.B. 1235
(1.383
ZONED: HIGHWA
USE: VA

SEE SHEET C-103 FOR CONTINUATION

SEE SHEET C-104 FOR CONTINUATION

S 16°34'16" W 685.65'

65' I.B.I. M.-6567+52 N

S 17°16'45" E 91.17'

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
LICENSED
PROFESSIONAL ENGINEER
24227
STATE OF
WEST VIRGINIA
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2024

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
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355 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717-516-9811
11142 WILLIAMSPORT PIKE, GREENCASTLE, PA 17225, 717-597-1807
125 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-779-9566

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

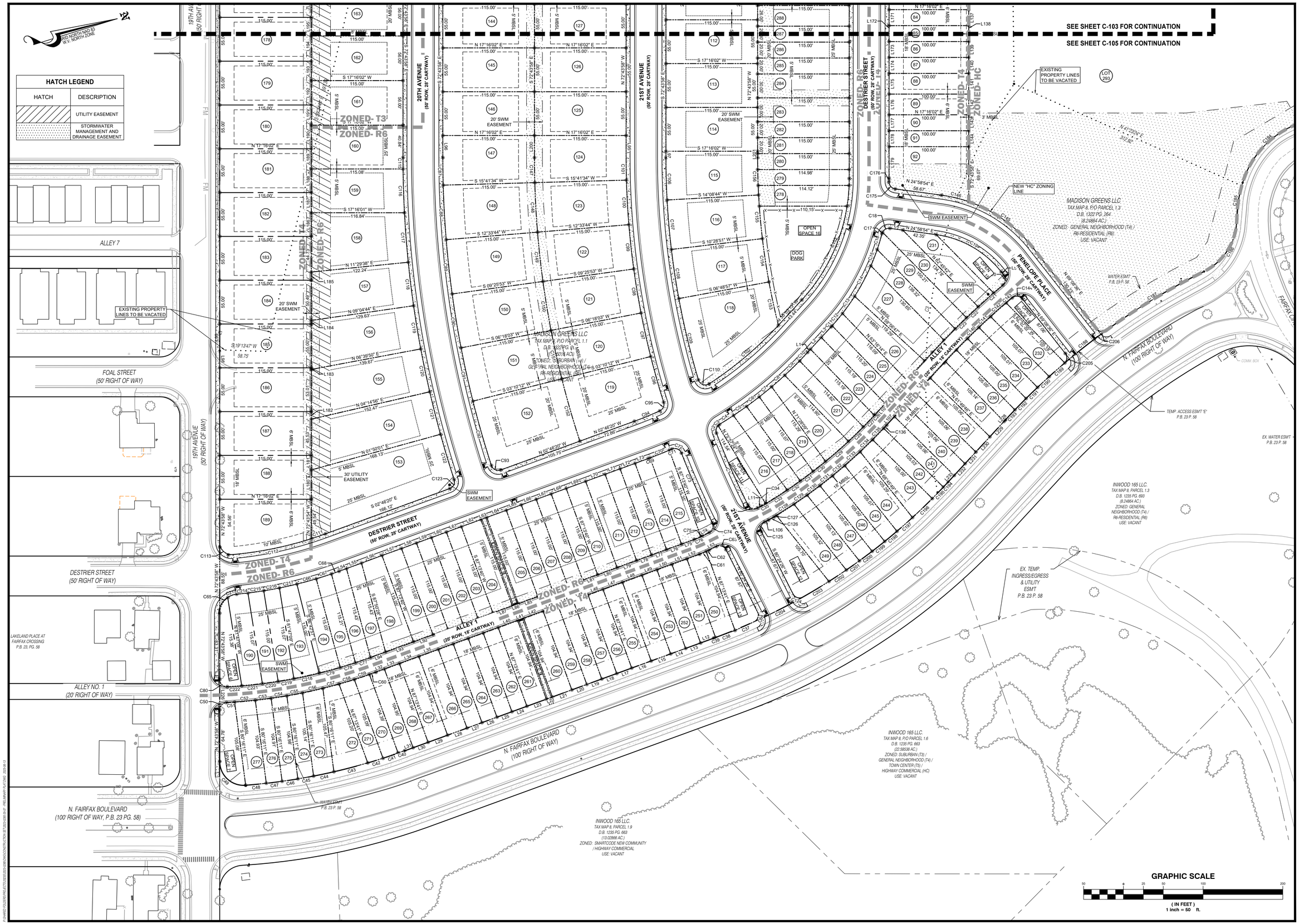
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
RANSON, WEST VIRGINIA
JEFFERSON COUNTY, WEST VIRGINIA

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE 1"=50'
SHEET TITLE

PRELIMINARY PLAT

C-104
SHEET 06 OF 57

P:\DRAWINGS\PROJPRELIM\2023\2023-0285\DWG\2023-0285 PLAT.DWG 2025-06-13



TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date 12-31-2026

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15 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717-582-2644
555 SOUTHANOVER STREET, CARLISLE, PA 17013, 717-249-5811
11142 WILLIAMSPORT PIKE, GREENCASTLE, PA 17225, 717-597-3647
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, (301) 739-8866

MARK	DESCRIPTION:	DATE
	REVISED PER AGENCY COMMENTS	03.18.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
RANSON, WEST VIRGINIA
JEFFERSON COUNTY, WEST VIRGINIA

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE 1" = 50'
SHEET TITLE

PRELIMINARY PLAT

C-105
SHEET 07 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\ENGR\DWG\PLOTS\2023-0285 PP - PRELIMINARY PLAT.DWG 2025-06-13

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	975.00'	98.15'	98.10'	S 83°36'41" W	5°46'03"
C2	8.91'	10.14'	9.60'	N 59°56'35" W	65°12'40"
C3	8.94'	2.24'	2.23'	N 25°58'27" W	14°20'32"
C4	510.00'	20.84'	20.84'	N 15°07'21" W	2°20'30"
C5	510.00'	20.01'	20.00'	N 17°25'02" W	2°14'51"
C6	510.00'	20.01'	20.00'	N 19°39'53" W	2°14'51"
C7	510.00'	20.04'	20.03'	N 21°54'50" W	2°15'03"
C8	510.07'	21.85'	21.85'	N 23°57'20" W	2°27'16"
C9	510.16'	26.00'	26.00'	N 26°43'46" W	2°55'13"
C10	510.19'	14.60'	14.60'	N 30°05'58" W	1°38'21"
C11	275.00'	2.07'	2.07'	N 30°16'07" W	0°25'49"
C12	275.00'	20.11'	20.10'	N 32°34'43" W	4°11'23"
C13	275.00'	26.47'	26.46'	N 37°25'52" W	5°30'54"
C14	275.00'	43.35'	43.30'	N 44°47'32" W	9°02'26"
C15	275.00'	21.95'	21.94'	N 51°30'55" W	4°34'21"
C16	275.00'	20.84'	20.83'	N 55°58'20" W	4°20'28"
C17	975.00'	1.91'	1.91'	N 52°12'55" W	0°06'43"
C18	9.00'	11.14'	10.44'	N 10°29'11" W	70°56'10"
C19	125.00'	96.35'	93.98'	N 47°09'42" W	44°09'42"
C20	9.00'	13.82'	12.50'	S 66°51'28" E	87°59'52"
C21	975.08'	41.23'	41.23'	S 24°04'14" E	2°25'23"
C22	975.08'	20.01'	20.01'	S 25°42'27" E	1°10'32"
C23	975.08'	20.00'	20.00'	S 27°02'42" E	1°10'31"
C24	975.08'	20.00'	20.00'	S 28°13'14" E	1°10'31"
C25	975.08'	21.19'	21.20'	S 29°25'51" E	1°14'43"
C26	625.00'	1.24'	1.24'	S 29°59'48" E	0°06'50"
C27	625.00'	20.02'	20.02'	S 29°01'20" E	1°50'06"
C28	625.00'	26.00'	26.00'	S 26°54'46" E	2°23'01"
C29	625.00'	38.32'	38.31'	S 23°57'53" E	3°30'45"
C30	625.00'	20.02'	20.02'	S 21°17'26" E	1°50'06"
C31	625.00'	20.00'	20.00'	S 19°27'21" E	1°50'02"
C32	625.00'	20.00'	20.00'	S 17°37'20" E	1°50'02"
C33	625.00'	31.49'	31.49'	S 15°15'43" E	2°53'13"
C34	90.02'	0.55'	0.55'	S 14°32'56" E	0°20'51"
C35	90.00'	6.09'	6.09'	S 11°27'03" E	3°52'42"
C36	9.00'	14.19'	12.76'	S 35°34'03" W	90°19'12"
C37	750.44'	26.24'	26.24'	S 07°09'33" E	2°00'12"
C38	750.38'	26.00'	26.00'	S 05°04'46" E	1°59'07"
C39	750.50'	2.64'	2.64'	S 02°44'15" E	0°12'07"
C40	751.63'	8.60'	8.60'	S 01°40'08" W	0°39'20"
C41	750.36'	20.00'	20.00'	S 03°07'13" E	1°31'39"
C42	749.92'	20.04'	20.04'	S 00°38'20" W	1°31'51"
C43	749.91'	43.93'	43.93'	S 02°30'52" W	3°21'24"
C44	749.90'	26.08'	26.08'	S 05°18'20" W	1°59'33"
C45	749.89'	20.02'	20.02'	S 07°03'59" W	1°31'47"
C46	749.88'	20.00'	20.00'	S 08°35'43" W	1°31'43"
C47	749.86'	20.00'	20.00'	S 10°07'24" W	1°31'42"
C48	749.85'	26.29'	26.29'	S 11°40'24" W	2°00'32"
C49	30.00'	49.42'	44.02'	S 60°04'37" W	94°22'52"
C50	9.00'	13.67'	12.39'	N 29°13'21" W	87°01'13"
C51	645.00'	10.26'	10.26'	N 13°49'55" E	0°54'40"
C52	645.00'	26.03'	26.02'	N 12°13'14" E	2°18'43"
C53	645.00'	20.00'	20.00'	N 10°10'34" E	1°46'36"
C54	645.00'	20.01'	20.01'	N 08°23'57" E	1°46'38"
C55	645.00'	20.03'	20.03'	N 06°37'15" E	1°46'45"
C56	645.00'	26.11'	26.11'	N 04°34'18" E	2°19'09"
C57	645.00'	21.00'	21.00'	N 02°28'46" E	1°51'54"
C58	645.00'	20.04'	20.04'	N 00°39'25" E	1°46'48"
C59	645.00'	20.01'	20.01'	N 01°07'18" W	1°46'39"
C60	645.00'	8.58'	8.58'	N 02°23'29" W	0°45'43"
C61	110.34'	9.02'	9.01'	N 02°23'09" W	4°42'54"
C62	110.81'	4.14'	4.14'	N 04°28'45" W	2°08'19"
C63	9.00'	14.14'	12.73'	N 35°24'26" E	89°59'59"
C64	9.00'	14.55'	13.02'	S 53°16'40" E	92°37'48"
C65	24.00'	35.49'	32.35'	N 30°21'54" W	84°44'08"
C66	510.00'	25.14'	25.14'	N 02°01'44" E	2°49'27"
C67	510.00'	20.02'	20.02'	N 00°30'28" W	2°14'58"
C68	510.00'	10.14'	10.14'	N 02°12'09" W	1°08'23"
C69	510.01'	2.65'	2.65'	N 02°46'27" W	0°17'50"
C70	510.00'	26.02'	26.01'	N 04°32'45" W	2°55'22"
C71	510.00'	3.55'	3.55'	N 06°11'31" W	0°23'58"
C72	9.00'	14.52'	13.00'	N 39°49'54" E	92°26'47"
C73	1025.00'	95.68'	95.65'	N 83°22'50" E	5°20'54"
C74	9.00'	14.09'	12.69'	S 54°26'35" E	89°42'03"
C75	90.00'	1.69'	1.69'	S 09°03'22" E	1°04'22"
C76	90.00'	9.03'	9.02'	S 05°38'46" E	5°44'51"
C77	625.00'	20.05'	20.05'	S 01°51'12" E	1°50'17"
C78	625.00'	20.02'	20.01'	S 00°10'01" E	1°50'06"
C79	625.00'	27.40'	27.40'	S 02°09'23" W	2°30'42"
C80	9.00'	14.63'	13.07'	S 60°41'07" W	93°09'49"
C81	9.00'	14.14'	12.73'	N 62°16'02" E	90°00'00"
C82	9.00'	14.14'	12.73'	N 27°43'58" W	90°00'00"
C83	9.00'	14.14'	12.73'	S 62°16'02" W	90°00'00"
C84	9.00'	14.14'	12.73'	S 27°43'58" E	90°00'00"
C85	9.00'	14.14'	12.73'	S 62°16'02" W	90°00'00"
C86	9.00'	14.14'	12.73'	S 27°43'58" E	90°00'00"
C87	1255.00'	34.49'	34.49'	S 73°31'12" E	1°34'28"
C88	1255.00'	68.57'	68.57'	S 75°52'21" E	3°07'51"
C89	1255.00'	68.57'	68.57'	S 79°00'12" E	3°07'51"
C90	1255.00'	68.57'	68.57'	S 82°08'02" E	3°07'51"
C91	1255.00'	68.57'	68.57'	S 85°15'53" E	3°07'51"
C92	1255.00'	84.02'	84.00'	S 88°44'42" E	3°50'09"
C93	9.00'	14.47'	12.96'	N 43°16'51" E	92°06'23"
C94	460.00'	34.32'	34.31'	N 04°54'35" W	4°16'29"
C95	9.00'	13.06'	11.94'	N 48°36'20" W	83°07'02"
C96	1025.00'	59.64'	59.64'	N 88°29'49" W	3°20'03"
C97	1025.00'	56.01'	56.00'	N 85°15'53" W	3°07'51"
C98	1025.00'	56.01'	56.00'	N 82°08'02" W	3°07'51"
C99	1025.00'	56.01'	56.00'	N 79°00'12" W	3°07'51"
C100	1025.00'	56.01'	56.00'	N 75°52'21" W	3°07'51"
C101	1023.00'	28.17'	28.17'	N 73°31'12" W	1°34'28"
C102	460.00'	113.81'	113.52'	N 22°57'56" W	14°10'33"
C103	225.00'	167.60'	163.75'	N 51°23'35" W	42°40'45"
C104	9.00'	14.14'	12.73'	S 62°16'02" W	90°00'00"
C105	9.00'	14.14'	12.73'	S 27°43'58" E	90°00'00"
C106	975.00'	53.12'	53.11'	S 74°17'37" E	3°07'18"
C107	975.00'	62.37'	62.35'	S 77°41'12" E	3°39'54"
C108	975.00'	62.37'	62.35'	S 81°21'06" E	3°39'54"
C109	975.00'	105.05'	104.99'	S 86°16'14" E	6°10'23"
C110	9.00'	16.73'	14.42'	N 37°22'57" E	106°31'14"
C111	460.00'	18.65'	18.64'	S 01°36'40" E	2°19'21"
C112	460.00'	100.82'	100.62'	S 05°49'45" W	12°33'30"
C113	15.01'	24.93'	22.16'	S 59°39'32" W	95°09'29"
C114	9.00'	14.14'	12.73'	N 62°16'02" E	90°00'00"
C115	1305.00'	14.16'	14.16'	S 73°02'37" E	0°37'19"
C116	1305.00'	55.03'	55.03'	S 74°33'46" E	2°24'58"
C117	1305.00'	62.30'	62.30'	S 77°08'19" E	2°44'07"
C118	1305.00'	55.00'	55.00'	S 79°42'49" E	2°24'54"
C119	1305.00'	55.00'	55.00'	S 82°07'43" E	2°24'54"
C120	1305.00'	55.00'	55.00'	S 84°32'37" E	2°24'54"
C121	1305.00'	55.02'	55.01'	S 86°57'31" E	2°24'56"
C122	1305.00'	59.41'	59.40'	S 89°28'14" E	2°36'30"
C123	9.00'	13.82'	12.50'	S 46°46'25" E	88°00'09"
C124	9.00'	14.59'	13.02'	S 34°05'32" W	92°37'47"
C125	9.00'	14.14'	12.73'	N 54°35'34" W	90°00'01"
C126	110.00'	8.11'	8.11'	N 11°42'20" W	4°13'33"
C127	645.00'	3.46'	3.46'	N 13°58'20" W	0°18'27"
C128	645.00'	26.14'	26.14'	N 15°17'13" W	2°19'20"
C129	645.00'	20.05'	20.05'	N 17°20'19" W	1°46'51"
C130	645.00'	20.01'	20.01'	N 19°07'05" W	1°46'40"
C131	645.00'	20.00'	20.00'	N 20°53'43" W	1°46'36"
C132	645.00'	20.01'	20.01'	N 22°40'20" W	1°46'38"
C133	645.00'	26.05'	26.05'	N 24°42'33" W	2°18'50"
C134	645.01'	21.73'	21.73'	N 26°49'33" W	1°55'49"
C135	645.01'	20.00'	20.00'	N 28°40'46" W	1°46'36"
C136	645.01'	5.31'	5.31'	N 29°58'15" W	0°28'18"
C137	955.09'	2.69'	2.69'	N 29°37'48" W	0°09'40"
C138	955.07'	20.02'	20.02'	N 29°17'59" W	1°12'03"
C139	955.07'	20.00'	20.00'	N 28°05'58" W	1°12'00"
C140	955.07'	20.00'	20.00'	N 26°54'06" W	1°11'59"
C141	955.07'	20.01'	20.01'	N 25°41'55" W	1°12'01"
C142	955.07'	26.03'	26.03'	N 24°19'14" W	1°33'42"
C143	955.07'	9.84'	9.84'	N 23°14'05" W	0°35'25"
C144	9.00'	14.46'	12.96'	N 23°06'07" E	92°04'58"
C145	175.00'	99.76'	98.42'	S 52°48'43" W	32°39'48"
C146	175.00'	35.12'	35.06'	S 30°43'52" W	11°29'56"
C147	1140.00'	31.33'	31.33'	S 73°31'12" E	1°34'28"
C148	1140.00'	62.29'	62.28'	S 75°52'21" E	3°07'51"
C149	1140.00'	62.29'	62.28'	S 79°00'12" E	3°07'51"
C150	1140.00'	62.29'	62.28'	S 82°08'02" E	3°07'51"
C151	1140.00'	62.29'	62.28'	S 85°15'53" E	3°07'51"
C152	1140.00'	81.43'	81.41'	S 88°52'34" E	4°05'33"
C153	860.00'	55.68'	55.67'	N 85°02'20" W	3°42'35"
C154	860.00'	55.01'	55.00'	N 81°21'06" W	3°39'54"
C155	860.00'	55.01'	55.00'	N 77°41'12" W	3°39'54"
C156	860.00'	46.85'	46.85'	N 74°17'37" W	3°07'18"
C157	365.00'	21.38'	21.37'	S 41°34'32" W	3°21'20"
C158	365.00'	48.06'	48.03'	S 36°07'32" W	7°32'40"
C159	543.96'	48.04'	48.03'	S 28°34'52" W	5°03'37"
C160	543.96'	48.03'	48.01'	S 21°02'17" W	5°03'31"
C161	475.00'	27.82'	27.81'	S 41°34'32" W	3°21'20"
C162	475.00'	62.55'	62.50'	S 36°07'32" W	7°32'40"
C163	475.00'	62.55'	62.50'	S 28°34'52" W	7°32'40"
C164	475.00'	62.52'	62.48'	S 21°02'17" W	7°32'30"
C165	525.00'	51.60'	51.58'	N 20°04'58" E	5°37'52"
C166	525.00'	56.03'	56.00'	N 25°57'20" E	6°06'52"
C167	525.00'	56.03'	56.00'	N 32°04'12" E	6°06'52"
C168	525.00'	56.03'	56.00'	N 38°11'04" E	6°06'52"
C169	525.00'	18.43'	18.43'	N 42°14'51" E	2°00'42"
C170	635.00'	62.41'	62.38'	N 20°04'58" E	5°37'52"
C171	635.00'	67.77'	67.73'	N 25°57'20" E	6°06'52"
C172	635.00'	67.77'	67.73'	N 32°04'12" E	6°06'52"
C173	635.00'	67.77'	67.73'	N 38°11'04" E	6°06'52"
C174	635.00'	22.30'	22.29'	N 42°14'51" E	2°00'42"
C175	9.00'	13.06'	11.94'	N 66°32'37" E	83°07'27"
C176	275.00'	4.02'	4.02'	N 72°18'49" W	0°50'19"
C177	9.00'	14.14'	12.73'	S 27°43'58" E	90°00'00"
C178	100.00'	79.54'	77.46'	S 69°31'55" E	45°34'23"
C179	260.00'	105.97'	105.24'	S 35°04'09" E	23°21'09"
C180	340.00'	89.31'	89.05'	S 24°50'16" E	15°03'00"

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C181	49.00'	56.83'	53.70'	S 00°51'44" W	66°27'00"
C182	297.64'	7.26'	7.26'	S 33°24'16" W	1°23'52"
C183	169.33'	75.68'	75.05'	S 19°54'04" W	25°36'30"
C184	114.43'	125.59'	119.38'	S 24°20'38" E	62°52'54"
C185	169.33'	47.21'	47.06'	S 63°46'19" E	15°58'27"
C186	74.08'	81.17'	77.17'	S 40°22'11" E	62°46'42"
C187	849.95'	142.90'	142.73'	S 13°47'47" E	9°37'59"
C188	849.94'	67.31'	67.29'	S 20°52'54" E	4°32'14"
C189	849.94'	25.22'	25.22'	S 24°00'28" E	1°42'01"
C190	849.94'	20.01'	20.01'	S 25°32'04" E	1°20'55"
C191	849.94'	20.00'	20.00'	S 26°52'59" E	1°20'54"
C192	849.94'	20.00'	20.00'	S 28°13'53" E	1°20'55"
C193	849.94'	17.18'	17.18'	S 29°25'47" E	1°09'29"
C194	750.01'	8.76'	8.76'	S 29°48'29" E	0°40'09"
C195	750.00'	20.00'	20.00'	S 28°36'29" E	1°31'41"
C196	750.00'	34.45'	34.45'	S 26°31'41" E	2°37'55"
C197	749.99'	26.04'	26.04'	S 24°13'04" E	1°59'21"
C198	749.99'	20.01'	20.00'	S 22°27'32" E	1°31'42"
C199	749.99'	20.00'	20.00'	S 20°55'51" E	1°31'41"
C200	749.99'	20.01'	20.01'	S 19°24'09" E	1°31'43"
C201	749.99'	20.04'	20.03'	S 17°52'22" E	1°31'50"
C202	749.99'	26.11'	26.10'	S 16°06'38" E	1°59'40"
C203	749.99'	38.00'	37.99'	S 13°42'46" E	2°54'10"
C204	750.00'	68.83'	68.83'	S 09°35'33" E	5°15'35"
C205	9.00'	13.78'	12.47'	N 67°09'12" W	87°42'24"
C206	9.00'	13.78'	12.48'	N 25°15'55" E	87°45'23"
C207	100.01'	2.00'	2.00'	S 88°15'17" E	1°08'46"
C208	100.00'	79.64'	77.55'	S 66°00'48" W	45°37'42"
C209	100.00'	79.64'	77.55'	N 20°29'45" E	45°37'41"
C210	100.00'	2.00'	2.00'	N 01°44'04" W	1°08'46"
C211	100.00'	79.54'	77.46'	N 23°47'32" W	45°34'23"
C212	260.00'	111.43'	110.58'	N 59°01'25" W	24°33'23"
C213	24.00'	12.70'	12.55'	N 03°09'08" W	30°18'36"
C214	510.00'	13.72'	13.72'	N 11°13'56" E	1°32'28"
C215	510.00'	20.01'	20.00'	N 09°20'17" E	2°14'51"
C216	510.00'	20.01'	20.00'	N 07°05'26" E	2°14'51"
C217	510.00'	22.48'	22.48'	N 04°42'14" E	2°31'33"
C218	625.00'	32.38'	32.38'	S 04°53'47" W	2°58'06"
C219	625.00'	20.00'	20.00'	S 07°17'51" W	1°50'02"
C220	625.00'	20.00'	20.00'	S 09°07'52" W	1°50'02"
C221	625.00'	26.04'	26.04'	S 11°14'30" W	2°23'13"
C222	625.00'	18.20'	18.20'	S 13°16'10" W	1°40'07"

LINE	BEARING	DISTANCE
L1	N 30°03'13" W	5.44'
L2	N 30°03'13" W	20.03'
L3	N 30°03'13" W	17.97'
L4	N 24°58'54" E	16.32'
L5	N 69°08'36" E	5.17'
L6	S 30°03'13" E	14.33'
L7	S 30°03'13" E	32.97'
L8	S 30°03'13" E	20.03'
L9	S 30°03'13" E	20.03'
L10	S 30°03'13" E	18.79'
L11	S 09°35'33" E	5.41'
L12	S 02°46'37" E	17.36'
L13	S 02°46'19" E	20.00'
L14	S 02°46'19" E	20.00'
L15	S 02°46'19" E	26.00'
L16	S 02°46'19" E	26.00'
L17	S 02°46'19" E	20.00'
L18	S 02°46'19" E	20.00'
L19	S 02°46'19" E	20.00'
L20	S 02°46'20" E	20.00'
L21	S 02°46'20" E	26.00'
L22	S 02°20'08" E	8.00'
L23	S 02°46'19" E	26.00'
L24	S 02°46'19" E	20.00'
L25	S 02°46'19" E	20.00'
L26	S 02°46'19" E	20.00'
L27	S 02°46'19" E	20.00'
L28	S 02°46'19" E	26.00'
L29	S 02°46'19" E	26.00'
L30	S 02°34'39" E	20.00'
L31	S 03°25'33" E	11.43'
L32	N 03°09'22" W	11.42'
L33	N 02°33'11" W	20.00'
L34	N 02°46'20" W	26.00'
L35	N 02°46'20" W	26.00'
L36	N 02°46'20" W	20.00'
L37	N 02°46'20" W	20.00'
L38	N 02°46'20" W	20.00'
L39	N 02°46'20" W	20.00'
L40	N 02°46'20" W	26.00'
L41	N 02°20'14" W	8.00'
L42	N 02°46'20" W	26.00'
L43	N 02°46'20" W	20.00'
L44	N 02°46'20" W	20.00'
L45	N 02°46'20" W	20.00'
L46	N 02°46'20" W	20.00'
L47	N 02°46'20" W	26.00'
L48	N 02°46'20" W	26.00'
L49	N 02°46'20" W	20.00'
L50	N 02°46'20" W	20.00'
L51	N 02°46'20" W	20.00'
L52	N 02°58'38" W	16.99'
L53	N 09°35'33" W	10.04'
L54	N 02°46'20" W	9.92'
L55	N 02°46'20" W	20.07'
L56	N 03°18'07" W	27.43'
L57	N 05°12'49" W	26.06'
L58	N 02°46'20" W	20.00'
L59	N 02°46'20" W	20.00'
L60	N 02°46'20" W	20.00'
L61	N 02°46'20" W	20.00'
L62	N 02°46'20" W	26.00'
L63	N 02°46'20" W	8.00'
L64	N 02°46'21" W	26.00'
L65	N 02°46'20" W	20.00'
L66	N 02°46'20" W	20.00'
L67	N 02°46'20" W	20.00'
L68	N 02°46'20" W	20.00'
L69	N 02°46'20" W	26.00'
L70	N 02°46'20" W	26.00'
L71	N 02°46'20" W	20.00'
L72	N 02°46'20" W	20.00'
L73	N 02°46'19" W	17.35'
L74	S 09°35'33" E	10.06'
L75	S 02°46'19" E	16.99'
L76	S 02°46'20" E	20.00'
L77	S 02°46'20" E	20.00'
L78	S 02°46'20" E	20.00'
L79	S 02°46'20" E	26.00'
L80	S 02°46'20" E	26.00'
L81	S 02°46'20" E	20.00'
L82	S 02°46'20" E	20.00'
L83	S 02°46'20" E	20.00'
L84	S 02°46'20" E	20.00'
L85	S 02°46'20" E	26.00'
L86	S 02°46'20" E	8.00'
L87	S 02°46'21" E	26.00'
L88	S 02°46'20" E	20.00'
L89	S 02°46'20" E	20.00'
L90	S 02°46'20" E	20.00'
L91	S 02°46'20" E	20.00'
L92	S 02°18'59" E	26.00'
L93	S 02°58'43" E	37.34'
L94	S 02°58'43" E	20.08'
L95	N 72°43'58" W	27.84'
L96	S 72°43'58" E	27.84'
L97	S 72°43'58" E	8.15'
L98	N 72°44'16" W	21.48'
L99	N 72°43'44" W	33.52'
L100	S 72°43'58" E	25.00'
L101	S 72°43'58" E	25.00'
L102	S 72°43'58" E	25.00'
L103	S 72°43'58" E	25.00'
L104	S 72°43'58" E	25.00'
L105	S 72°43'58" E	29.00'
L106	N 09°35'33" W	5.42'
L107	N 29°59'33" W	14.70'
L108	N 30°03'11" W	20.01'
L109	N 30°03'11" W	20.01'
L110	N 30°03'11" W	26.01'
L111	N 30°05'24" W	25.42'
L112	S 72°43'58" E	31.00'
L113	S 72°43'58" E	20.00'
L114	S 72°43'58" E	20.00'
L115	S 72°43'58" E	20.00'
L116	S 72°43'58" E	20.00'
L117	S 72°43'58" E	26.00'
L118	S 72°43'58" E	26.00'
L119	S 72°43'58" E	20.00'
L120	S 72°43'58" E	20.00'
L121	S 72°43'58" E	20.00'
L122	S 72°43'58" E	20.00'
L123	S 72°43'58" E	26.00'
L124	S 72°43'58" E	26.00'
L125	S 72°43'58" E	20.00'
L126	S 72°43'58" E	20.00'
L127	S 72°43'58" E	20.00'
L128	S 72°43'58" E	20.00'
L129	S 72°43'58" E	26.00'
L130	S 72°43'58" E	26.00'
L131	S 72°43'58" E	20.00'
L132	S 72°43'58" E	20.00'
L133	S 72°43'58" E	20.00'
L134	S 72°43'58" E	20.00'
L135	S 72°43'58" E	26.00'
L136	S 72°43'58" E	26.00'
L137	S 72°43'58" E	20.00'
L138	S 72°43'58" E	20.00'
L139	S 72°43'58" E	20.00'
L140	S 72°43'58" E	20.00'
L141	S 72°43'58" E	26.00'
L142	S 72°43'58" E	26.00'
L143	S 72°43'58" E	20.00'
L144	S 72°43'58" E	20.00'
L145	S 72°43'58" E	31.00'
L146	S 72°43'58" E	20.00'
L147	S 72°43'58" E	20.00'
L148	S 72°43'58" E	20.00'
L149	S 72°43'58" E	20.00'
L150	S 72°43'58" E	26.00'
L151	S 72°43'58" E	26.00'
L152	S 72°43'58" E	20.00'
L153	S 72°43'58" E	20.00'
L154	S 72°43'58" E	20.00'
L155	S 72°43'58" E	20.00'
L156	S 72°43'58" E	26.00'
L157	S 72°43'58" E	26.00'
L158	S 72°43'58" E	20.00'
L159	S 72°43'58" E	20.00'
L160	S 72°43'58" E	20.00'
L161	S 72°43'58" E	20.00'
L162	S 72°43'58" E	26.00'
L163	S 72°41'32" E	10.00'
L164	S 72°44'54" E	26.00'
L165	S 72°43'58" E	20.00'
L166	S 72°43'58" E	20.00'
L167	S 72°43'58" E	20.00'
L168	S 72°43'58" E	20.00'
L169	S 72°43'58" E	26.00'
L170	S 72°43'58" E	26.00'
L171	S 72°43'58" E	20.00'
L172	S 72°43'58" E	20.00'
L173	S 72°43'58" E	20.00'
L174	S 72°43'58" E	20.00'
L175	S 72°43'58" E	26.00'
L176	S 72°43'58" E	26.00'
L177	S 72°43'58" E	20.00'
L178	S 72°43'58" E	20.00'
L179	S 72°43'58" E	39.96'
L180	N 72°43'54" W	36.80'

LINE	BEARING	DISTANCE
L181	N 72°43'54" W	18.20'
L182	N 72°43'54" W	9.47'
L183	N 72°43'54" W	1.99'
L184	N 72°43'54" W	4.51'
L185	N 72°43'54" W	10.27'
L186	N 72°43'54" W	29.67'
L187	N 72°43'16" W	25.33'
L188	N 72°36'13" W	29.67'
L189	N 72°52'56" W	25.33'
L190	N 72°44'36" W	29.67'
L191	N 72°43'17" W	25.33'
L192	N 72°43'53" W	30.67'
L193	N 72°43'53" W	24.33'
L194	N 72°43'59" W	31.67'
L195	N 72°43'53" W	23.33'
L196	N 72°43'58" W	32.67'
L197	N 72°43'53" W	22.33'
L198	N 72°44'01" W	33.67'
L199	N 72°43'54" W	21.33'
L200	S 72°43'58" E	27.84'
L201	N 72°43'58" W	8.15'
L202	S 43°15'12" W	32.75'
L203	S 17°16'02" W	26.00'
L204	S 17°16'02" W	29.00'
L205	S 43°15'12" W	30.67'
L206	S 43°15'12" W	32.75'
L207	N 17°16'02" E	4.43'
L208	N 43°15'12" E	37.57'
L209	N 43°15'12" E	21.86'
L210	N 17°16'02" E	4.43'
L211	N 43°15'12" E	37.57'
L212	S 72°43'58" E	15.00'
L213	N 72°43'56" W	28.00'
L214	N 72°43'56" W	28.00'
L215	N 72°43'56" W	28.00'
L216	N 72°43'56" W	28.00'
L217	N 72°43'56" W	28.00'
L218	N 72°43'56" W	28.00'
L219	N 72°43'56" W	28.00'
L220	N 72°43'56" W	28.00'
L221	S 17°16'02" W	9.00'
L222	N 17°16'02" E	27.50'
L223	N 17°16'02" E	27.50'
L224	N 17°16'02" E	27.50'
L225	N 17°16'02" E	27.50'
L226	N 72°43'58" W	38.05'
L227	S 73°46'02" E	1.75'
L228	S 30°23'08" E	2.84'
L229	S 30°03'11" E	26.04'
L230	S 30°03'11" E	26.01'
L231	S 30°03'11" E	20.01'
L232	S 30°03'11" E	20.01'
L233	S 29°58'26" E	11.25'
L234	N 17°06'02" E	9.42'
L235	N 72°43'58" W	14.58'
L236	N 72°43'58" E	14.58'
L237	N 17°06'02" E	11.42'

LOT NUMBER	SQ FEET	ACRES
1	6160.00	0.14
2	6160.00	0.14
3	6160.00	0.14
4	6160.00	0.14
5	6372.73	0.15
6	6808.56	0.16
7	6808.56	0.16
8	6808.56	0.16
9	6757.41	0.16
10	6160.00	0.14
11	6160.00	0.14
12	6160.00	0.14
13	6160.00	0.14
14	6160.00	0.14
15	6160.00	0.14
16	6160.00	0.14
17	6160.00	0.14
18	6160.00	0.14
19	6160.00	0.14
20	6160.00	0.14
21	6160.00	0.14
22	6160.00	0.14
23	6160.00	0.14
24	6160.00	0.14
25	6160.00	0.14
26	6160.00	0.14
27	6160.00	0.14
28	6160.00	0.14
29	6160.00	0.14
30	6160.00	0.14
31	6160.00	0.14
32	6710.00	0.15
33	5665.00	0.13
34	5768.00	0.13
35	6986.62	0.16
36	9432.62	0.22
37	5940.00	0.14
38	9432.62	0.22
39	9432.62	0.22
40	5940.00	0.14
41	9432.62	0.22
42	7792.62	0.18
43	6050.00	0.14
44	6050.00	0.14
45	6050.00	0.14
46	6050.00	0.14
47	6050.00	0.14
48	6050.00	0.14
49	6050.00	0.14
50	6097.20	0.14
51	6089.55	0.14
52	6091.68	0.14
53	6083.34	0.14
54	6238.66	0.14
55	6050.00	0.14
56	6050.00	0.14
57	6050.00	0.14
58	6050.00	0.14
59	3100.00	0.07
60	2000.00	0.05
61	2000.00	0.05
62	2000.00	0.05
63	2000.00	0.05
64	2600.00	0.06
65

SEDIMENT BASIN 1.0
DRAINAGE AREA: 81.28 AC.
TOTAL STORAGE REQ: 296,608 CF
TOTAL STORAGE PROV: 348,410 CF
WET STORAGE REQ: 146,304 CF
WET STORAGE PROV: 157,345 CF
WET STORAGE ELEV: 503.90
DRY STORAGE REQ: 146,304 CF
DRY STORAGE PROV: 191,065 CF
WEIR ELEV: 505.00
TRAP BOTTOM ELEV: 502.00
TRAP BOTTOM AREA: 0.52 AC.
CLEANOUT ELEV: 502.95
TOP BERM ELEV. (CONST.): 508.50
TOP BERM ELEV. (SETTLED): 508.00
10 YEAR WSEL: 505.62
SIDE SLOPE: 3:1
TOP BERM WIDTH: 6 FT

SEDIMENT BASIN 2.0
DRAINAGE AREA: 31.91 AC.
TOTAL STORAGE REQ: 114,876 CF
TOTAL STORAGE PROV: 172,299 CF
WET STORAGE REQ: 57,438 CF
WET STORAGE PROV: 58,228 CF
WET STORAGE ELEV: 505.90
DRY STORAGE REQ: 57,438 CF
DRY STORAGE PROV: 114,071 CF
WEIR ELEV: 508.50
TRAP BOTTOM ELEV: 504.00
TRAP BOTTOM AREA: 0.66 AC.
CLEANOUT ELEV: 504.95
TOP BERM ELEV. (CONST.): 511.00
TOP BERM ELEV. (SETTLED): 510.50
10 YEAR WSEL: 509.28
SIDE SLOPE: 3:1
TOP BERM WIDTH: 6 FT

LIMIT OF DISTURBANCE: 63.0 AC.

STABILIZED CONSTRUCTION ENTRANCE 01 C-501

BEGIN SMART FENCE 42

SEDIMENT BASIN 1.0 FG:502.00

40LF 18" HDPE WRAPPED IN FILTER CLOTH AND GEOTEXTILE FABRIC 9 ROWS OF 1" PERFORATIONS SPACED 6" O/C

SMART FENCE-42 04 C-501

BEGIN SMART FENCE 42

STONE FILTER DIKE

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 20.76 CFS
V10: 6.61 FPS
L: 9'
W: 6'

TOPSOIL STOCKPILE

END SMART FENCE 42

END SMART FENCE 42

SMART FENCE-42 04 C-501

20 LF 10" PVC WRAPPED IN FILTER CLOTH AND GEOTEXTILE FABRIC 6 ROWS OF 1" PERFORATIONS SPACED 6" O/C

SEDIMENT BASIN 2.0 FG:504.00

STONE FILTER DIKE

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 25.31 CFS
V10: 6.61 FPS
L: 9'
W: 6'

SMART FENCE-42 04 C-501

END SMART FENCE 42

01 C-502 CURB INLET PROTECTION

General E&S Notes:
1. Contractor to only open up length of trench that can be constructed and backfilled in one working day in paved areas.
2. Contractor to remove excavated materials to an approved location to waste materials.
3. All fill material should be brought from a location with an approved and current sediment erosion control plan.
4. Contractor to backfill trench with approved materials and stabilize disturbed areas the same working day.
5. If dewatering of the trench is required, contractor to pump water to a filter bag to dewater.
6. Contractor to sweep streets immediately of any debris or sediments caused by construction operations and dispose of at an approved location.
7. Contractor to stabilize all disturbed areas with seed and mulch or appropriate street repair.
8. All slopes 3:1 or greater to be stabilized with temporary matting immediatley.
9. Place 6" minimum topsoil in all green areas before permanent seeding is performed.
10. All sinkholes that are present or develop during construction must be remediated and certified by the site Geotechnical Engineer. Contractor to contact Geotechnical Engineer immediately after the discovery of any sinkhole.

LEGEND

SF42	- SMART FENCE-42
LOD	-LIMIT OF DISTURBANCE (61.8 AC)
	-TEMPORARY STRAW AND NET MATTING
	-STABILIZED CONSTRUCTION ENTRANCE
	-RIPRAP INFLOW/ OUTLET PROTECTION
	-CURB INLET PROTECTION
	-EXISTING CONTOURS
+606.0	-EXISTING TEXT
589.1	-FINISHED GRADE SPOT ELEVATION
600	-FINISHED GRADE INDEX CONTOUR
590	-FINISHED GRADE INTERMEDIATE CONTOUR
	-SOIL BOUNDARY

INITIAL SEQUENCE OF CONSTRUCTION

Pre-Construction Notification - Contracotr shall notify the West Virginia Miss Utility (800) 245-4848, WVDEP, City of Ranson, and the Design Engineer (301) 791-3650 at least five (5) days prior to the start of any work shown on these plans to schedule a pre-construction meeting.

All spoil and/or borrow material must come from and/or go to a site with a current and approved Sediment and Erosion Control Plan.

Site Benchmark Notification - The contractor shall contact Frederick Seibert & Associates (301) 791-3650 prior to any construction activities beginning at the site to verify the site benchmark.

Prior to beginning construction, limit of disturbance to be staked.

If a sinkhole develops during site work, work must stop, and the sinkhole must be remediated immediately in accordance with guidelines stated in the geotech report.

1. Within 72 hours of filing an application with the WVDEP Division of Water and Waste Management (DWWM), install public notice sign near the entrance of the project, or near an active part of the construction project, that is accessible by the public. The public notice sign must remain displayed for the duration of the project.
2. Contractor to install stabilized construction entrance off Brick Yard circle.
3. Contractor to install all perimeter controls (i.e. smart fence, etc) as shown on plans.
4. Contractor to begin stripping topsoil for installation of sediment Basin 1.0 and 2.0, placing in designated topsoil location.
5. Contractor to grade Sediment Basin 1.0 and 2.0 and install outlet structures and draw down devices. Contractor to seed and mulch sediment traps once installed.
6. Contractor to grade Swale 'A' and install Culvert Pipes ES3 to ES5 and ES4 to ES6 for clean water bypass. Contractor to work from downstream to upstream. Install outlet protection and stabilize with temporary channel matting.
7. Once initial sediment erosion control measures are installed contractor to move to final sequence of construction.

SWALE SCHEDULE

ID	Q10 (CFS)	V10 (FPS)	SLOPE (%)	CHANNEL WIDTH (FT)	FLOW DEPTH (FT)	MATTING TYPE	CHECK DAM REQ.
"A"	95.29	0.69	0.11	4.00	2.68	TEMPORARY	NO

OUTLET PROTECTION TABLE

ID	PIPE	Q10 (CFS)	V10 (FPS)	LENGTH (FT)	WIDTH (FT)	d50 (IN)	Dmax (IN)	DEPTH (IN)	MDSHA CLASS
ES1	24" RCP	20.76	6.61	9.00	6.00	9.50	15	19	I
ES2	18" RCP	0.49	3.34	7.00	4.30	9.50	15	19	I

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

TREVOR MARK FREDERICK — 24227 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE 1" = 100'
SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN - INITIAL

C-107
SHEET 09 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\ENGR\DGN\CIVIL\CTION (BT 2023-0285.M...EROSION & SEDIMENT CONTROL PLAN.DWG 2025-06-13

FINAL SEQUENCE OF CONSTRUCTION

If a sinkhole develops during site work, work must stop, and the sinkhole must be remediated immediately in accordance with guidelines stated in the geotech report.

1. With initial sequence completed, contractor to begin final sequence of construction.
2. Contractor to ensure all perimeter controls are in good working order prior to beginning any further work.
3. Contractor to begin mass grading operations.
4. As site is brought to grade, contractor to install utilities as shown on plans. Contractor to install storm drains beginning at the downstream end and work upstream. Install inlet and outlet protection immediately upon completion.
5. Contractor to begin curbing, base paving and sidewalk construction.
6. With roads completed, contractor to begin house construction.
7. Contractor to spread topsoil and place necessary matting and stabilize per the permanent seeding specifications

Conversion of Sediment Basins to Final Stormwater Management Practices:

1. After site has been stabilized, contractor shall flush all storm drainage pipes.
2. Contractor to contact the City of Ranson and the Design Engineer at least 48 hours prior to converting sediment basins to final stormwater practices, to verify site is adequately stabilized. Final stormwater management facilities may not be constructed until the entire upstream drainage area to each structure has been completed and stabilized.
3. Contractor to use filter bag to dewater sediment basins prior to conversion. Filter bags shall be placed on vegetated areas outside limits of disturbance. With water removed, contractor to remove draw down device from basins and excavate to final grade.
4. Contractor shall use light-weight equipment to avoid compaction of the filtering media during construction. No equipment shall be permitted on the BMPs after the soil layer has been installed. Contractor shall contact Frederick Seibert & Associates for an interim inspection of the BMPs during the installation of the media layers.
5. Approval from the Sediment Control Inspector and WVDEP is needed for notice of termination (NOT) inspection before the removal of any sediment and erosion control structures.
6. Remove all sediment control devices and stabilize any disturbed areas.

LEGEND

- SF42 — **- SMART FENCE-42**
- LOD — **-LIMIT OF DISTURBANCE (61.8 AC)**
- **-TEMPORARY STRAW & NET MATTING**
- **-STABILIZED CONSTRUCTION ENTRANCE**
- **-RIPRAP INFLOW/ OUTLET PROTECTION**
- **-SILTSACK INLET PROTECTION**
- **-CURB INLET PROTECTION**
- **-COMBINATION INLET PROTECTION**
- **-EXISTING CONTOURS**
- +606.0 — **-EXISTING TEXT**
- +589.1 — **-FINISHED GRADE SPOT ELEVATION**
- 524 — **-FINISHED GRADE INDEX CONTOUR**
- 528 — **-FINISHED GRADE INTERMEDIATE CONTOUR**
- **-SOIL BOUNDARY**

General E&S Notes:

1. **Contractor to only open up length of trench that can be constructed and backfilled in one working day in paved areas.**
2. **Contractor to remove excavated materials to an approved location to waste materials.**
3. **All fill material should be brought from a location with an approved and current sediment erosion control plan.**
4. **Contractor to backfill trench with approved materials and stabilize disturbed areas the same working day.**
5. **If dewatering of the trench is required, contractor to pump water to a filter bag to dewater.**
6. **Contractor to sweep streets immediately of any debris or sediments caused by construction operations and dispose of at an approved location.**
7. **Contractor to stabilize all disturbed areas with seed and mulch or appropriate street repair.**
8. **All slopes 3:1 or greater to be stabilized with temporary matting immediatley.**
9. **Place 6" minimum topsoil in all green areas before permanent seeding is performed.**
10. **All sinkholes that are present or develop during construction must be remediated and certified by the site Geotechnical Engineer. Contractor to contact Geotechnical Engineer immediately after the discovery of any sinkhole.**

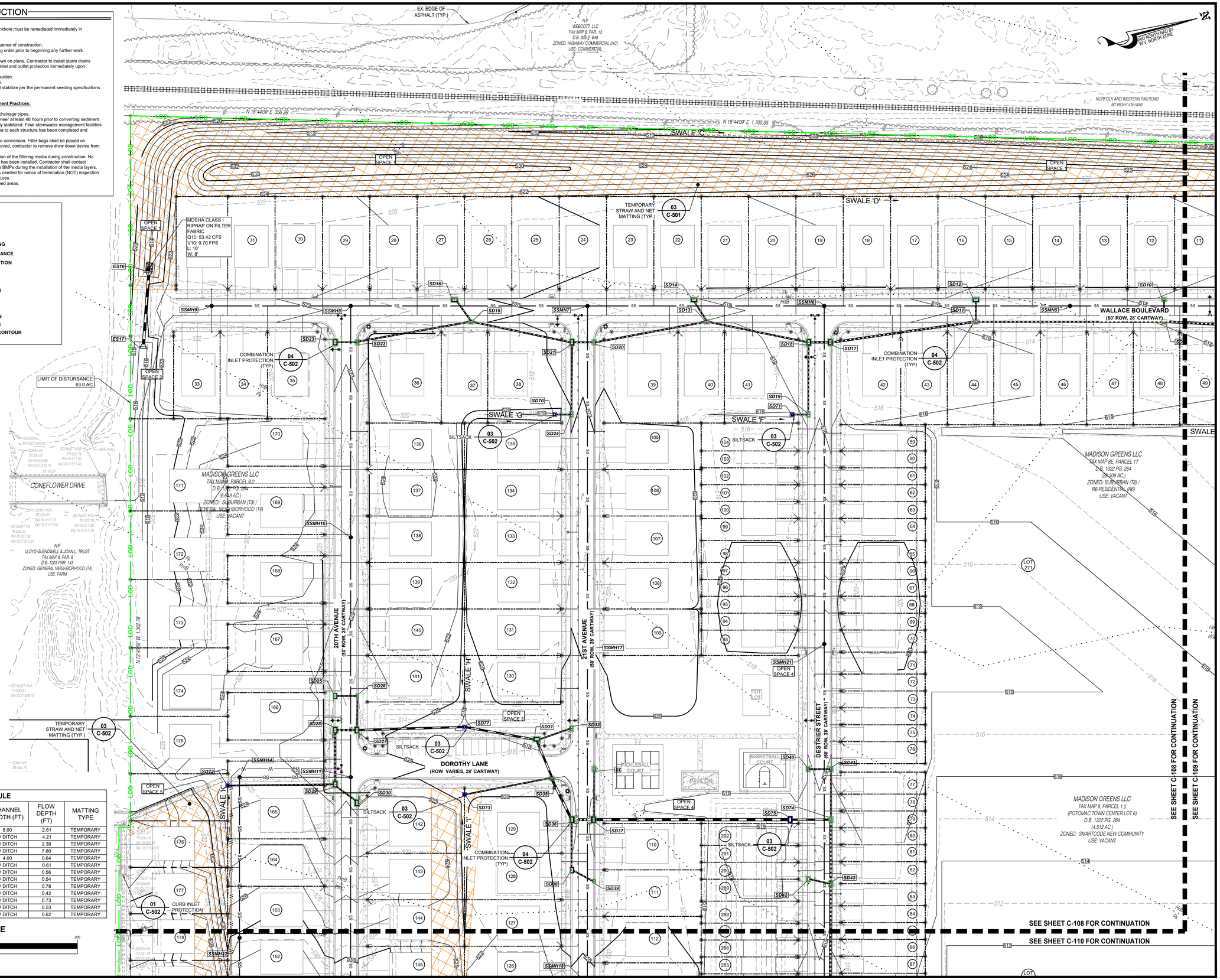
SEDIMENT BASIN 3.0

DRAINAGE AREA: 14.40 AC.
TOTAL STORAGE REQ: 51,840 CF
TOTAL STORAGE PROV: 57,275 CF
WET STORAGE REQ: 25,920 CF
WET STORAGE PROV: 27,676 CF
WET STORAGE ELEV: 506.50
DRY STORAGE REQ: 25,920 CF
DRY STORAGE PROV: 29,599 CF
WEIR ELEV: 507.25
TRAP BOTTOM ELEV: 505.75
TRAP BOTTOM AREA: 0.82 AC.
CLEANOUT ELEV: 506.13
TOP BERM ELEV. (CONST.): 509.50
TOP BERM ELEV. (SETTLED): 509.00
10 YEAR WSEL: 507.75
SIDE SLOPE: 3:1
TOP BERM WIDTH: 6 FT

SWALE SCHEDULE

ID	Q10 (CFS)	V10 (FPS)	SLOPE (%)	CHANNEL WIDTH (FT)	FLOW DEPTH (FT)	MATTING TYPE
A	84.65	2.24	0.10	8.00	2.61	TEMPORARY
B	84.65	6.43	0.10	V DITCH	4.21	TEMPORARY
C	50.53	4.47	0.75	V DITCH	2.38	TEMPORARY
D	7.80	1.59	0.80	V DITCH	7.80	TEMPORARY
E	11.35	3.00	1.00	4.00	0.64	TEMPORARY
F	2.37	2.16	1.00	V DITCH	0.61	TEMPORARY
G	1.96	2.06	1.00	V DITCH	0.56	TEMPORARY
H	1.76	2.00	1.00	V DITCH	0.54	TEMPORARY
I	4.58	2.54	1.00	V DITCH	0.78	TEMPORARY
J	2.19	4.07	5.75	V DITCH	0.42	TEMPORARY
K	5.49	3.45	2.00	V DITCH	0.73	TEMPORARY
L	4.11	4.84	6.00	V DITCH	0.53	TEMPORARY
M	2.47	2.18	1.00	V DITCH	0.62	TEMPORARY

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.



TREVOR MARK FREDERICK REGISTERED 24227 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
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128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION:	DATE:
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	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE 1" = 50'
SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN FINAL

C-108
SHEET 10 OF 57

P:\SHARED FILES\PROJECTS\2023\2023-0285\CIVIL\CONSTRUCTION SET\2023-0285 09-17 - EROSION & SEDIMENT CONTROL PLAN FINAL.DWG 2025-06-13

LIMIT OF DISTURBANCE
63.0 AC.

SWALE 'B'

OPEN SPACE

TEMPORARY STRAW AND NET MATTING (TYP.)

03
C-501

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 21.50 CFS
V10: 7.02 FPS
L: 12'
W: 7.3'

SEDIMENT BASIN 3.0
FG:505.75

19.5LF 8" PVC WRAPPED IN FILTER CLOTH AND GEOTEXTILE FABRIC 4 ROWS OF 1" PERFORATIONS SPACED 6" O/C

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 2.78 CFS
V10: 4.03 FPS
L: 6'
W: 3.7'

COMBINATION INLET PROTECTION (TYP)

04
C-502

SWALE 'E'

STABILIZED CONSTRUCTION ENTRANCE

01
C-501

SMART FENCE 42

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 0.48 CFS
V10: 2.50 FPS
L: 6'
W: 7.5'

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 82.71 CFS
V10: 6.32 FPS
L: 10'
W: 8'

STONE FILTER DIKE

SEDIMENT BASIN 1.0
FG:505.75

SEDIMENT BASIN 2.0
FG:505.75

BERM 509

SWALE 'A'

SWALE 'C'

BRICKYARD CIRCLE

WALLACE BOULEVARD (80' RIGHT-OF-WAY)

BAKER PLACE (80' RIGHT-OF-WAY)

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 20.76 CFS
V10: 6.61 FPS
L: 9'
W: 6'

TOPSOIL STOCKPILE

LOT 271

SMART FENCE 42

LIMIT OF DISTURBANCE
63.0 AC.
P.B. 23 P. 58

SEE SHEET C-108 FOR CONTINUATION

SEE SHEET C-109 FOR CONTINUATION

APPROXIMATE LOCATION OF 100-YEAR FLOOD PLAIN ZONE AE (PER L.O.M.R. EFFE. 5/23/12)

EX. SWM FOREBAY
W.S.E. 498.0

SANITARY SEWER ESMT P.B. 24 P. 53

MANHOLE PER AERIAL SURVEY (UNKNOWN)

EX. SANITARY SEWER ESMT P.B. 24 P. 53

EX. WATER ESMT P.B. 23 P. 58

EX. ACCESS ESMT P.B. 23 P. 53

DUPONT CIRCLE

JOSHUA M. FREEMAN BOULEVARD (VA. RIGHT-OF-WAY)

INWOOD 165 LLC.
TAX MAP 8E, PARCEL SWM
(POTOMAC TOWN CENTER SWM LOT)
D.B. 1235 PG. 693
(6.235 AC.)
ZONED: GENERAL/NEIGHBORHOOD (T4)
USE: SWM

INWOOD 165 LLC.
TAX MAP 8E. PARCEL -10
(POTOMAC TOWN CENTER LOT 10)
D.B. 1235 PG. 693
(1.653 AC.)
ZONED: HIGHWAY COMMERCIAL
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8E. PARCEL 11
(POTOMAC TOWN CENTER LOT 11)
D.B. 1235 PG. 693
(1.724 AC.)
ZONED: HIGHWAY COMMERCIAL
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8E. PARCEL 12
(POTOMAC TOWN CENTER LOT 12)
D.B. 1235 PG. 693
(2.722 AC.)
ZONED: HIGHWAY COMMERCIAL
USE: VACANT

INWOOD OWNER LLC.
TAX MAP 8E. PARCEL 14
(POTOMAC TOWN CENTER LOT 14)
D.B. 1235 PG. 693
(1.372 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8E. PARK
(POTOMAC TOWN CENTER PARK PARCEL)
D.B. 1235 PG. 693
(2.451 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: PARK

N/F
EAST MOUNTAIN HEALTH ADVANTAGE INC.
TAX MAP 8E. PAR. 5
(POTOMAC TOWN CENTER LOT 5)
D.B. 1215 P. 308
ZONED: URBAN COMMERCIAL RETIRED (UCR)
USE: FUTURE COMMERCIAL

INWOOD
TAX MAP 8E
(POTOMAC TOWN
D.B. 1235
(1.383
ZONED: HIGHWA
USE: VA

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

NAD NORTH NAD 83
W.V. NORTH ZONE

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
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128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-79-8666

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
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	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

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CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO.
2023-0285

DWN BY: ABRAM MYERS
DATE: 12.12.2024

PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM

PARCEL IDENTIFICATION #:
8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17

SCALE
1" = 50'

SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN - FINAL

C-109
SHEET 11 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\CIVIL\CONSTRUCTION SET\2023-0285-19-1 - EROSION & SEDIMENT CONTROL PLAN (FINAL).DWG 2025-06-13

SEE SHEET C-108 FOR CONTINUATION

SEE SHEET C-110 FOR CONTINUATION

CEDAR VALLEY ROAD

ALLEY 7

FOAL STREET (50' RIGHT OF WAY)

19TH AVENUE (50' RIGHT OF WAY)

DESTRIER STREET (50' RIGHT OF WAY)

LAKELAND PLACE AT FAIRFAX CROSSING P.B. 23, PG. 58

ALLEY NO. 1 (20' RIGHT OF WAY)

N. FAIRFAX BOULEVARD (100' RIGHT OF WAY, P.B. 23 PG. 58)

SWALE "L"

SWALE "J"

SWALE "M"

DESTRIER STREET (50' ROW, 28' CARTWAY)

21ST AVENUE (50' ROW, 28' CARTWAY)

PENELOPE PLACE (50' ROW, 28' CARTWAY)

ALLEY 1 (20' ROW, 18' CARTWAY)

ALLEY 1 (50' ROW, 18' CARTWAY)

N. FAIRFAX BOULEVARD (100' RIGHT OF WAY)

FAIRFAX CIRCLE

MADISON GREENS LLC
TAX MAP 8, P/O PARCEL 1.1
D.B. 1322 PG. 264
(18.35016 AC.) ±
ZONED: SUBURBAN (SB) / GENERAL NEIGHBORHOOD (T4) / R6-RESIDENTIAL (R6)
USE: VACANT

MADISON GREENS LLC
TAX MAP 8, P/O PARCEL 1.3
D.B. 1322 PG. 264
(8.24864 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4) / R6-RESIDENTIAL (R6)
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8, PARCEL 1.9
D.B. 1235 PG. 663
(13.02866 AC.)
ZONED: SMARTCODE NEW COMMUNITY / HIGHWAY COMMERCIAL
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8, P/O PARCEL 1.6
D.B.=1235 PG. 663
(22.58538 AC.)
ZONED: SUBURBAN (T3) / GENERAL NEIGHBORHOOD (T4) / TOWN CENTER (T5) / HIGHWAY COMMERCIAL (HC)
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8, PARCEL 1.3
D.B. 1235 PG. 693
(8.24864 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4) / R6-RESIDENTIAL (R6)
USE: VACANT

PTC DEVELOPER LLC.
TAX MAP 8, PARCEL 1.4
D.B. 1235 PG. 707
(14.81079 AC.)

OPEN SPACE 16

OPEN SPACE 15

OPEN SPACE 14

OPEN SPACE 13

OPEN SPACE 12

OPEN SPACE 11

OPEN SPACE 10

OPEN SPACE 9

OPEN SPACE 8

OPEN SPACE 7

OPEN SPACE 6

OPEN SPACE 5

OPEN SPACE 4

OPEN SPACE 3

OPEN SPACE 2

OPEN SPACE 1

SEDIMENT BASIN 2.0
FG:504.00

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 47.01 CFS
V10: 17.89 FPS
L: 20'
W: 23'

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 3.74 CFS
V10: 7.41 FPS
L: 6'
W: 3.7'

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 25.31 CFS
V10: 6.61 FPS
L: 9'
W: 6'

MDSHA CLASS I RIPRAP ON FILTER FABRIC
Q10: 10.44 CFS
V10: 11.21 FPS
L: 8'
W: 5.2'

STONE FILTER DIKE

TEMPORARY STRAW AND NET MATTING (TYP.)

SILTSACK

COMBINATION INLET PROTECTION (TYP)

CURB INLET PROTECTION

SMART FENCE 42

LIMIT OF DISTURBANCE 63.0 AC.

TEMP. ACCESS ESMT "E" P.B. 23 P. 58

EX. WATER ESMT P.B. 23 P. 58

EX. TEMP. INGRESS/EGRESS & UTILITY ESMT P.B. 23 P. 58

WATER ESMT P.B. 23 P. 58

OUTLET PROTECTION TABLE

ID	PIPE	Q10 (CFS)	V10 (FPS)	LENGTH (FT)	WIDTH (FT)	d50 (IN)	Dmax (IN)	DEPTH (IN)	MDSHA CLASS
ES3	48" HDPE	82.71	6.32	10.00	8.00	9.50	15	19	I
ES4	48" HDPE	82.71	6.32	10.00	8.00	9.50	15	19	I
ES7	18" RCP	0.48	2.50	6.00	7.50	9.50	15	19	I
ES8	15" HDPE	2.78	4.03	6.00	3.70	9.50	15	19	I
ES9	24" HDPE	13.93	6.15	10.00	6.00	9.50	15	19	I
ES13	36" HDPE	47.01	17.89	20.00	23.00	9.50	15	19	I
ES14	15" HDPE	3.74	7.41	6.00	3.70	9.50	15	19	I
ES15	30"HDPE	21.50	7.02	12.00	7.30	9.50	15	19	I
ES16	36" HDPE	53.42	9.70	10.00	8.00	9.50	15	19	I
ES20	24" HDPE	10.44	11.21	8.00	5.20	9.50	15	19	I

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
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MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB RIOTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE 1" = 50'
SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN - FINAL

C-110
SHEET 12 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\CONSTRUCTION SET\2023-0285-19-1 - EROSION & SEDIMENT CONTROL PLAN FINAL.DWG 2025-06-13

NOTES:

1. ALL ROOF DRAINS FOR LOTS 169-182 SHALL BE PIPED TO THE REAR OF THE LOTS
2. SEE SHEET C-404 FOR STRUCTURE SCHEDULES.

NAD 83/91 NORTH NAD 83 W.V. NORTH ZONE

ZONED: HIGHWAY COMMERCIAL (HC)
USE: COMMERCIAL

EX. EDGE OF ASPHALT (TYP.)

N/F
WESCOTT, LLC
TAX MAP 8, PAR. 13
D.B. 935 P. 649
ZONED: HIGHWAY COMMERCIAL (HC)
USE: COMMERCIAL

NORFOLK AND WESTERN RAILROAD
60' RIGHT-OF-WAY

N/F
UNIVERSAL FOREST PRODUCTS EASTERN DIVISION, INC.
TAX MAP 7, PAR. 11.18
D.B. 926 P. 215
ZONED: INDUSTRIAL/COMMERCIAL
USE: INDUSTRIAL

N 18°44'09" E 356.26

N 18°44'09" E 1,700.55

SWALE 'C'

SWALE 'D'

SWALE 'F'

SWALE 'G'

SWALE 'H'

SWALE 'I'

OPEN SPACE 1

OPEN SPACE 2

OPEN SPACE 3

OPEN SPACE 4

2:1 SLOPE

3:1 SLOPE

1.00%

WALLACE BOULEVARD
(50' ROW, 28' CARTWAY)

DOROTHY LANE
(ROW VARIES, 28' CARTWAY)

20TH AVENUE
(50' ROW, 28' CARTWAY)

21ST AVENUE
(50' ROW, 28' CARTWAY)

DESTRIES STREET
(50' ROW, 28' CARTWAY)

19TH AVENUE
(50' RIGHT OF WAY)

CONEFLOWER DRIVE

TROUT LILLY DRIVE

RED CLOVER LANE

SEE SHEET C-108 FOR GRADING ENLARGEMENT IN THIS AREA

SEE SHEET C-511 FOR STEP CROSS SECTION

TIE NEW WALL TO EXISTING WALL SEE SHEET C-511 FOR WALL PROFILE WALL DESIGN TO BE DONE BY OTHERS

SEE SHEET C-111 FOR CONTINUATION

SEE SHEET C-112 FOR CONTINUATION

SEE SHEET C-111 FOR CONTINUATION

SEE SHEET C-113 FOR CONTINUATION

DISON GREENS LLC
TAX MAP 8, PARCEL 9.2
D.B. 1322 PG. 264
(6.643 AC.)
ZONED: SUBURBAN (T3) / GENERAL NEIGHBORHOOD (T4)
USE: VACANT

N/F
LLOYD GLENDWELL & JOAN L. TRUST
TAX MAP 8, PAR. 9
D.B. 1203 PAR. 143
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: FARM

MADISON GREENS LLC
TAX MAP 8E, PARCEL 17
D.B. 1322 PG. 264
(28.308 AC.)
ZONED: SUBURBAN (T3) / R6-RESIDENTIAL (R6)
USE: VACANT

MADISON GREENS LLC
TAX MAP 8, PARCEL 1.5
(POTOMAC TOWN CENTER LOT 6)
D.B. 1322 PG. 264
(4.512 AC.)
ZONED: SMARTCODE NEW COMMUNITY
USE: VACANT

LOT 271

TOT LOT

BASKETBALL COURT

PICKLEBALL COURT

PAVILION

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

P:\SHARED FILES\PROJECTS\2023\2023-0285\CONSTRUCTION SET\2023-0285 C1 - 13 GRADING & DRAINAGE PLAN.DWG 2025-06-13

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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15 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717-275-7844
555 SOUTHANOVER STREET CARLISLE, PA 17013 717-249-4911
20 WEST BALTIMORE STREET GREENCASTLE, PA 17225 717-597-3667
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

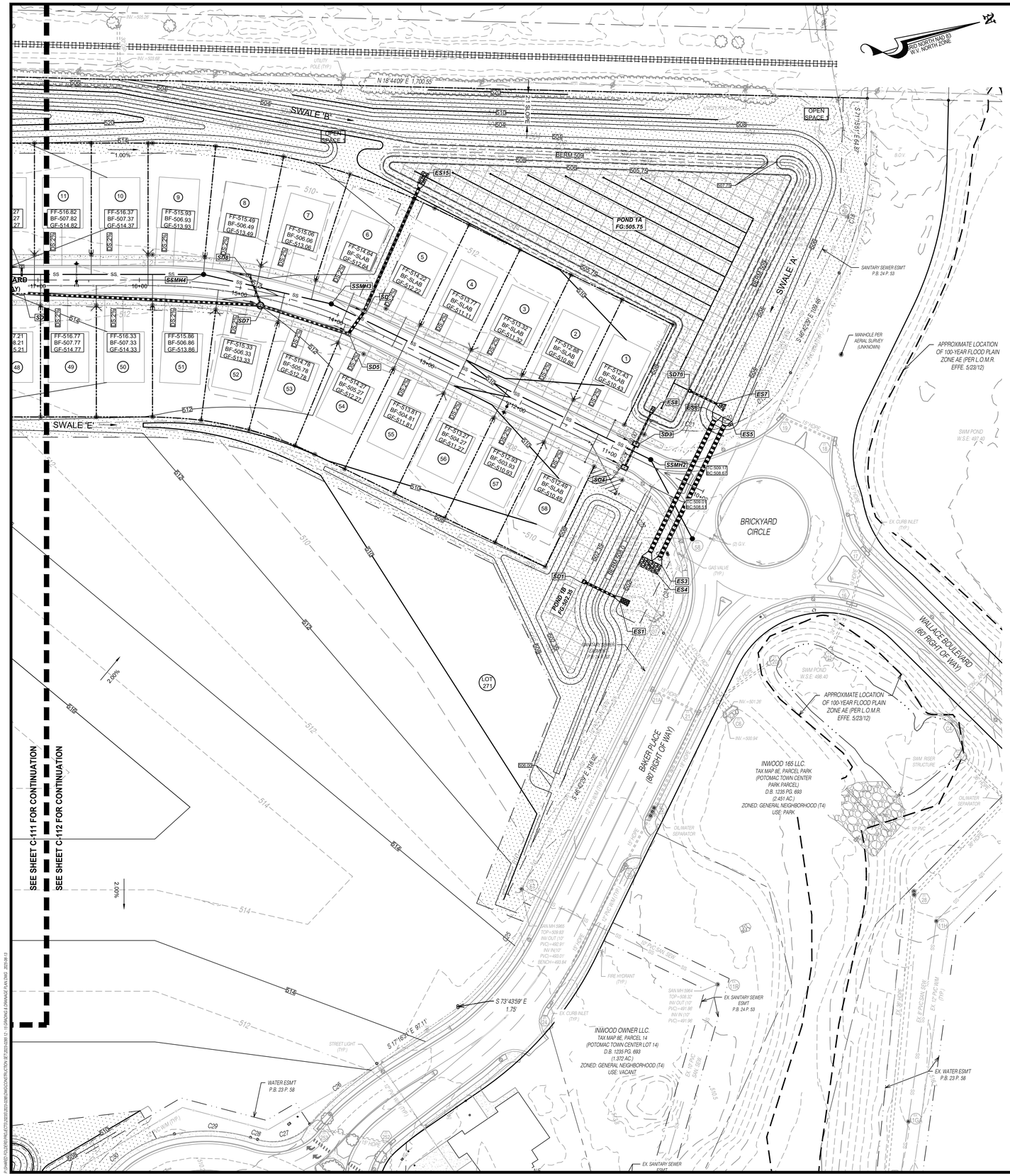
MARK	DESCRIPTION:	DATE
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-8999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE 1" = 50'
SHEET TITLE

GRADING & DRAINAGE PLAN

C-111
SHEET 13 OF 57


SEE SHEET C-111 FOR CONTINUATION
SEE SHEET C-112 FOR CONTINUATION
SWALE 'B'
SWALE 'E'
SWALE 'A'
POND 1A
FG:505.75
BERM 504
OPEN SPACE
BRICKYARD CIRCLE
WALLACE BOULEVARD (60' RIGHT OF WAY)
BAKER PLACE (60' RIGHT OF WAY)
POND 1B
FG:502.35
LOT 271
INWOOD 165 LLC.
TAX MAP:BE, PARCEL:PARK
(POTOMAC TOWN CENTER PARK PARCEL)
D.B. 1238 PG. 693
(2.451 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: PARK
INWOOD OWNER LLC.
TAX MAP:BE, PARCEL:14
(POTOMAC TOWN CENTER LOT 14)
D.B. 1235 PG. 693
(1.372 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: VACANT
APPROXIMATE LOCATION OF 100-YEAR FLOOD PLAIN ZONE AE (PER L.O.M.R. EFFE. 5/23/12)
SANITARY SEWER ESMT P.B. 24 P. 53
WATER ESMT P.B. 23 P. 58
EX. WATER ESMT P.B. 23 P. 58
MANHOLE PER AERIAL SURVEY (UNKNOWN)
SWM POND W.S.E: 497.30
SWM POND W.S.E: 498.40
SWM RISER STRUCTURE
OIL/WATER SEPARATOR
FIRE HYDRANT (TYP.)
STREET LIGHT (TYP.)
GAS VALVE (TYP.)
EX. CURB INLET (TYP.)
UTILITY POLE (TYP.)
BERM 506.5
BERM 508.5
N 18°44'09" E 1,700.55'
S 71°15'51" E 360.53'
S 40°42'09" E 216.02'
S 73°43'59" E 1.75'
S 17°16'41" E 97.11'
2.00%
1.00%
%00'2
SSMH1
SSMH2
SSMH3
SSMH4
SD1
SD2
SD3
SD4
SD5
SD6
SD7
SD8
ES1
ES2
ES3
ES4
ES5
ES6
ES7
ES8
ES9
FF-516.82 BF-507.82 GF-514.82
FF-516.37 BF-507.37 GF-514.37
FF-515.93 BF-506.93 GF-513.93
FF-515.49 BF-506.49 GF-513.49
FF-515.06 BF-506.06 GF-513.06
FF-514.64 BF-SLAB GF-512.64
FF-516.77 BF-507.77 GF-514.77
FF-516.33 BF-507.33 GF-514.33
FF-515.86 BF-506.86 GF-513.86
FF-515.33 BF-506.33 GF-513.33
FF-514.78 BF-505.78 GF-512.78
FF-514.27 BF-505.27 GF-512.27
FF-513.81 BF-504.81 GF-511.81
FF-513.27 BF-504.27 GF-511.27
FF-512.77 BF-SLAB GF-511.77
FF-513.32 BF-SLAB GF-511.32
FF-512.88 BF-SLAB GF-510.88
FF-512.43 BF-SLAB GF-510.43
FF-513.27 BF-501.93 GF-510.93
FF-513.78 BF-SLAB GF-510.49
SAN MH 5965 TOP=509.93 INV OUT (10") PVC=492.91 INV IN(10") PVC=493.01 BENCH=493.84
SAN MH 5964 TOP=508.32 INV OUT (10") PVC=491.96 INV IN (15") PVC=491.96
EX. 24"W SAN. SEW.
EX. 8"W WATER
EX. 8"DUCAN VERI
EX. 12"W WM (TYP.)
EX. 6"W WM
EX. 8"W WATER
EX. 8"W WATER
EX. 8"W WATER

SEE SHEET C-111 FOR CONTINUATION

SEE SHEET C-113 FOR CONTINUATION

CEDAR VALLEY ROAD

ALLEY 7

FOAL STREET (50' RIGHT OF WAY)

19TH AVENUE (50' RIGHT OF WAY)

DESTRIER STREET (50' RIGHT OF WAY)

LAKELAND PLACE AT FAIRFAX CROSSING P.B. 23, PG. 58

ALLEY NO. 1 (20' RIGHT OF WAY)

N. FAIRFAX BOULEVARD (100' RIGHT OF WAY, P.B. 23 PG. 58)

N. FAIRFAX BOULEVARD (100' RIGHT OF WAY)

SWALE "L"

SWALE "M"

SWALE "J"

DESTRIER STREET (50' ROW, 28' CARTWAY)

2ND AVENUE (60' ROW, 28' CARTWAY)

ALLEY (20' ROW, 16' CARTWAY)

ALLEY 1 (16' ROW, 14' CARTWAY)

PENELOPE PLACE (50' ROW, 28' CARTWAY)

POND 2C FG:504.00

OPEN SPACE 16

OPEN SPACE 17

MADISON GREENS LLC
TAX MAP 8, P/O PARCEL 1.1
D.B. 1322/PG. 264
(18.4501± AC.)
ZONED: T-SUBURBAN (T3) / GENERAL NEIGHBORHOOD (T4) / R6-RESIDENTIAL (R6)
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8, PARCEL 1.3
D.B. 1235 PG. 693
(9.24864 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4) / R6-RESIDENTIAL (R6)
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8, P/O PARCEL 1.6
D.B. 1235 PG. 663
(22.58538 AC.)
ZONED: SUBURBAN (T3) / GENERAL NEIGHBORHOOD (T4) / TOWN CENTER (T5) / HIGHWAY COMMERCIAL (HC)
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8, PARCEL 1.9
D.B. 1235 PG. 663
(13.02866 AC.)
ZONED: SMARTCODE\NEW COMMUNITY / HIGHWAY COMMERCIAL /
USE: VACANT

EX. TEMP. INGRESS/EGRESS & UTILITY ESMT P.B. 23 P. 58

EX. WATER ESMT P.B. 23 P. 58

TEMP. ACCESS ESMT "E" P.B. 23 P. 58

WATER ESMT P.B. 23 P. 58

NOTES:

1. ALL ROOF DRAINS FOR LOTS 169-182 SHALL BE PIPED TO THE REAR OF THE LOTS
2. SEE SHEET C-404 FOR STRUCTURE SCHEDULES.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License # 24227
Expiration Date 12-31-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
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15 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717-582-2644
355 SOUTHHANOVER STREET, CARLISLE, PA 17013, 717-243-9411
20 WEST BALTIMORE STREET, GREENCASTLE, PA 17225, 717-597-3647
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-719-8666

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MARK	DESCRIPTION:	DATE
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	09.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GABBS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-8899

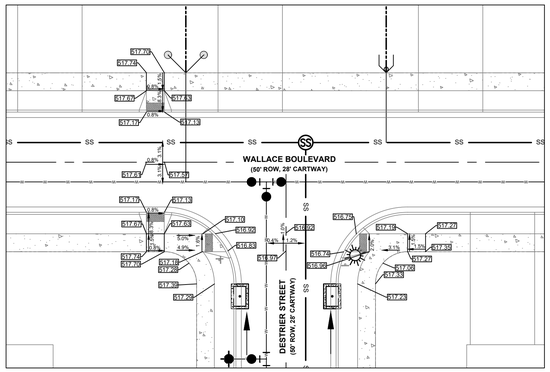
PROJECT NO.	2023-0285
DWN BY	ABRAM MYERS
DATE	12.12.2024
PROJECT MANAGER:	TREVOR FREDERICK
EMAIL:	TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #:	8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE	1" = 50'

SHEET TITLE

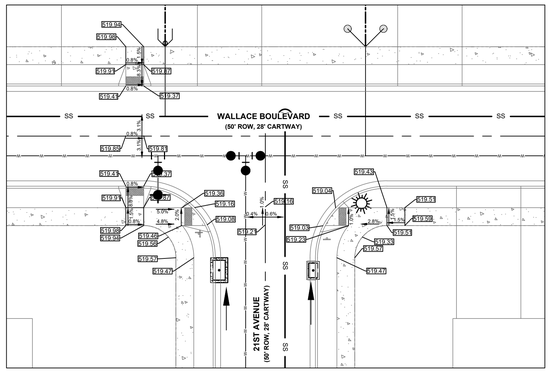
GRADING & DRAINAGE PLAN

C-113
SHEET 15 OF 57

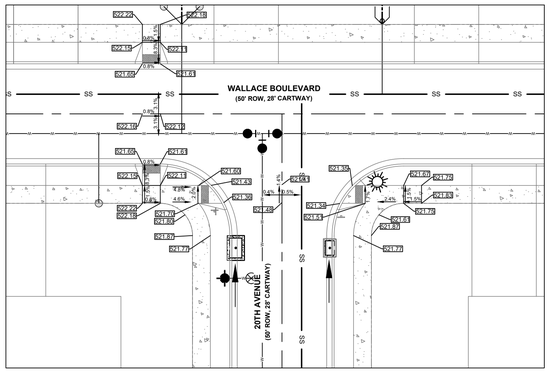
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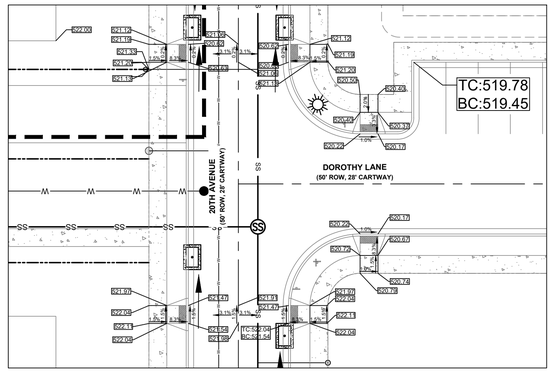
INTERSECTION OF WALLACE BOULEVARD & DESTRIER STREET ADA RAMPS



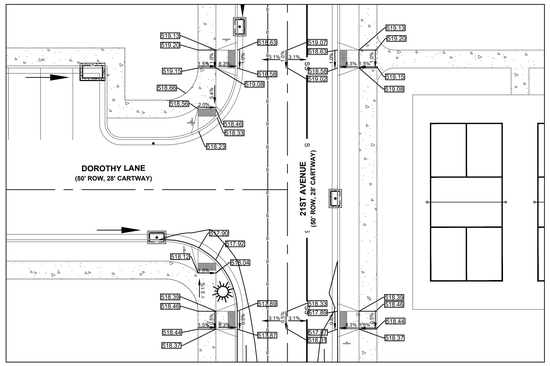
INTERSECTION OF WALLACE BOULEVARD & 21ST AVENUE ADA RAMPS



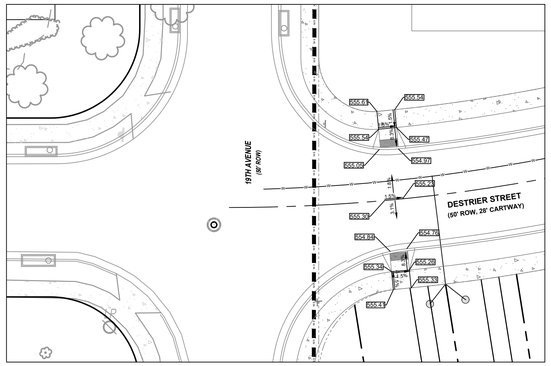
INTERSECTION OF WALLACE BOULEVARD & 20TH AVENUE ADA RAMPS



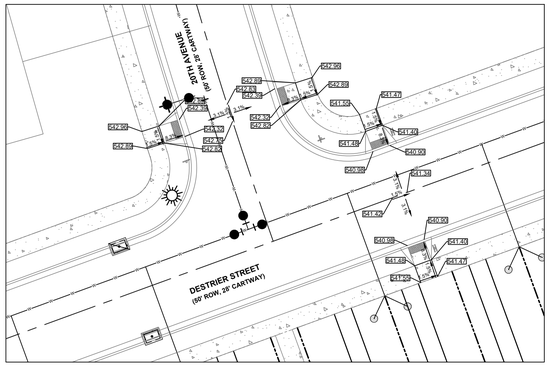
INTERSECTION OF DOROTHY LANE & 20TH AVENUE ADA RAMPS



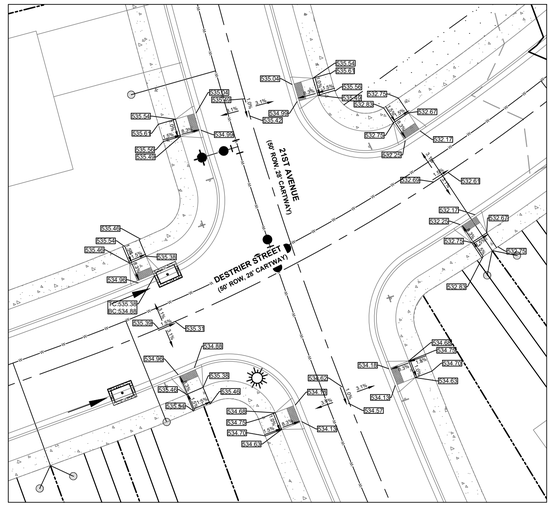
INTERSECTION OF DOROTHY LANE & 21ST AVENUE ADA RAMPS



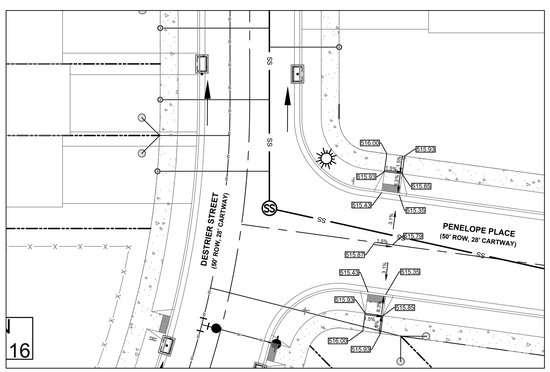
INTERSECTION OF 19TH AVENUE & DESTRIER STREET ADA RAMPS



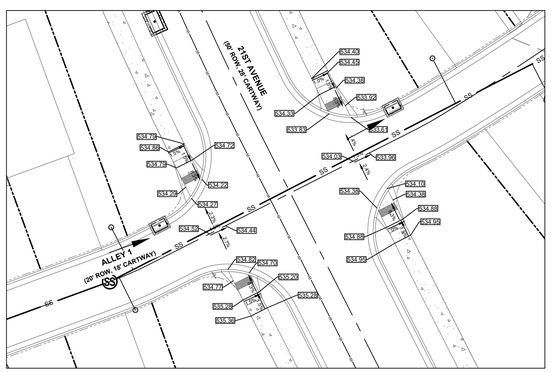
INTERSECTION OF DESTRIER STREET & 20TH AVENUE ADA RAMPS



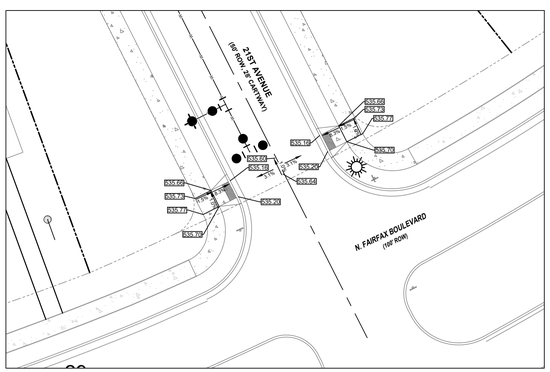
INTERSECTION OF DESTRIER STREET & 21ST AVENUE ADA RAMPS



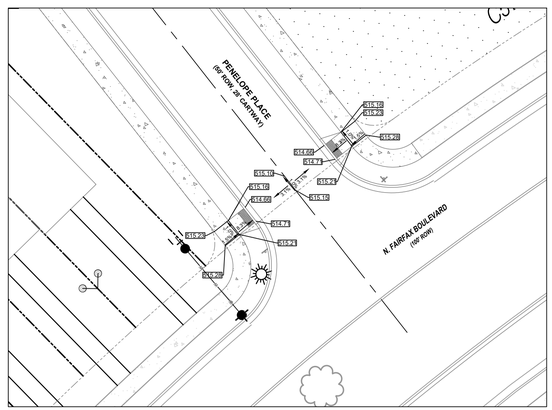
INTERSECTION OF DESTRIER STREET & PENELOPE PLACE ADA RAMPS



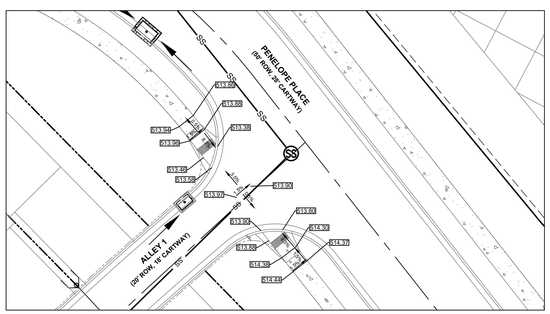
INTERSECTION OF ALLEY 1 & 21ST AVENUE ADA RAMPS



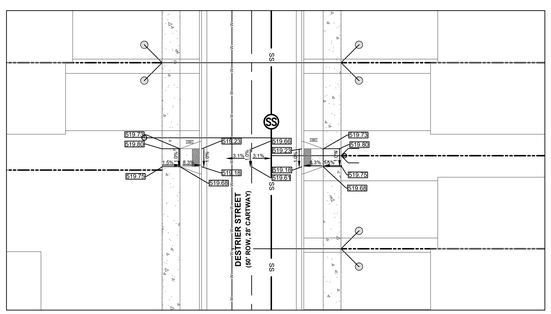
INTERSECTION OF 21ST AVENUE & N. FAIRFAX BOULEVARD ADA RAMPS



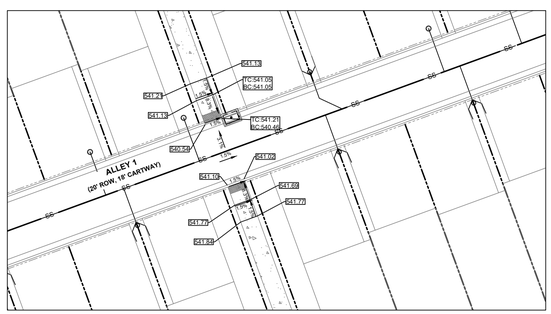
INTERSECTION OF PENELOPE PLACE & N. FAIRFAX BOULEVARD ADA RAMPS



INTERSECTION OF ALLEY 1 & PENELOPE PLACE ADA RAMPS



ADA RAMP #1 & #2 ENLARGEMENT



ADA RAMP #3 & #4 ENLARGEMENT

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

FSA
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CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
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15 EAST MAIN STREET
NEW BLOOMFIELD, PA 17068
717-582-2644
555 SOUTH HANOVER STREET
CARLISLE, PA 17013
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20 WEST BALTIMORE STREET
GREENCASTLE, PA 17225
717-597-3667
128 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
240-313-0666

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MARK	DESCRIPTION	DATE
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE 1" = 20'
SHEET TITLE

ADA RAMP ENLARGEMENTS

C-114
SHEET 16 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\CIVIL\2023-0285 - 15 DRAWING & DRAINAGE FLAN.DWG 2025-06-13

ELECTRICAL LEGEND

- 2" LIGHT CONDUIT
- 3 IN — 3" SERVICE CONDUIT
- 3 IN — 3" PRIMARY CONDUIT
- 5 IN — 5"PRIMARY CONDUIT
- 6 IN — 6"PRIMARY CONDUIT
- TRANSFORMER
- 3 PHASE JUNCTION
- CONCRETE VAULT

NAD 83 NORTH NAD 83 W.V. NORTH ZONE

EX. EDGE OF ASPHALT (TYP.)

N/F WESCOTT, LLC TAX MAP 8, PAR. 13 D.B. 935 P. 649 ZONED: HIGHWAY COMMERCIAL (HC) USE: COMMERCIAL

STORM PIPE (TYP.)

NORFOLK AND WESTERN RAILROAD 60' RIGHT-OF-WAY

N 18°44'09" E 356.26

N 18°44'09" E 1,700.55

OPEN SPACE 1

OPEN SPACE 2

OPEN SPACE 3

OPEN SPACE 4

OPEN SPACE 5

OPEN SPACE 6

4" SINGLE SANITARY SEWER LATERAL (TYP.)

1" DOUBLE WATER SERVICE LATERAL W/ 3/4" WYE SPLIT (TYP.)

6" DOUBLE SANITARY SEWER LATERAL (TYP.)

8" PVC SANITARY SEWER

8" C909 CL305 WATER MAIN

WALLACE BOULEVARD (50' ROW, 28' CARTWAY)

(2) 45° BENDS

1" SINGLE WATER SERVICE LATERAL W/ 3/4" REDUCER

(1) 8"X6" REDUCER (1) 6" GATE VALVE (1) FIRE HYDRANT ASSEMBLY

(1) 8"X6" TEE (1) 6" GATE VALVE (1) FIRE HYDRANT ASSEMBLY

(1) 8"X8" TEE (3) 8" GATE VALVES

20' WATER EASEMENT

SAMPLING STATION

20TH AVENUE (50' RIGHT-OF-WAY)

21ST AVENUE (50' ROW, 28' CARTWAY)

19TH AVENUE (50' RIGHT-OF-WAY)

DOROTHY LANE 12+00 (ROW VARIES, 28' CARTWAY)

DESTRIER STREET (50' ROW, 28' CARTWAY)

RED CLOVER LANE

CONEFLOWER DRIVE

TROUT LILLY DRIVE

N/F LLOYD GLENDWELL & JOAN L. TRUST TAX MAP 8, PAR. 9 D.B. 1203 PAR. 143 ZONED: GENERAL NEIGHBORHOOD (14) USE: FARM

CONTRACTOR TO TEST PIT EXISTING 8" WATERLINE. REMOVE EXISTING BLOW OFF AND TIE INTO

N 72°45'58" W 1,362.79'

TOT LOT

PICKLEBALL COURT

PAVILION

BASKETBALL COURT

SEE SHEET C-115 FOR CONTINUATION

SEE SHEET C-116 FOR CONTINUATION

SEE SHEET C-115 FOR CONTINUATION

SEE SHEET C-117 FOR CONTINUATION

NOTE:

ALL SEWER CLEANOUTS FOR TOWNHOMES SHALL BE TRAFFIC BEARING.

ADJUST STORM MANHOLE TO MATCH FINAL GRADE

Service Legend

Water

Single (1" with 3/4" reducer at meter) — Double(1")

Sewer

Single (4") — Double (6")

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET) 1 inch = 50 ft.

TREVOR MARK FREDERICK — REGISTERED — 24227 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER

06/13/2025

Professional Certification:

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227

Expiration Date 12-31-2026

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MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE

RANSON, WEST VIRGINIA

JEFFERSON COUNTY, WEST VIRGINIA

PROJECT NO. 2023-0285

DWN BY ABRAM MYERS — DATE 12.12.2024

PROJECT MANAGER: TREVOR FREDERICK

EMAIL: TFREDERICK@FSA-INC.COM

PROPERTY INFORMATION

SCALE 1"=50'

SHEET TITLE

UTILITY PLAN

C-115

SHEET 17 OF 57

P:\SHARED FILES\PROJECTS\2023\2023-0285\ENGINEERING\CONSTRUCTION SET\2023-0285 S-17 UTILITY PLAN.DWG 2025-06-13

SEE SHEET C-115 FOR CONTINUATION

SEE SHEET C-116 FOR CONTINUATION

OPEN SPACE 1

OPEN SPACE 1

N 18°44'09" E 1,700.55'

S 71°51'49" E

S 18°08'11" W

S 46°42'09" E 316.02'

S 73°43'59" E 1.75'

S 17°16'31" E 97.11'

N/F TAX MAP 8E, PARCEL 1 (POTOMAC TOWN CENTER LOT 1) D.B. 1235 PG. 693 (1.724 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 2 (POTOMAC TOWN CENTER LOT 2) D.B. 1235 PG. 693 (1.724 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 3 (POTOMAC TOWN CENTER LOT 3) D.B. 1235 PG. 693 (1.724 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 4 (POTOMAC TOWN CENTER LOT 4) D.B. 1235 PG. 693 (1.724 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 5 (POTOMAC TOWN CENTER LOT 5) D.B. 1235 PG. 693 (1.724 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 6 (POTOMAC TOWN CENTER LOT 6) D.B. 1235 PG. 693 (1.724 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 7 (POTOMAC TOWN CENTER LOT 7) D.B. 1235 PG. 693 (1.724 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 8 (POTOMAC TOWN CENTER LOT 8) D.B. 1235 PG. 693 (1.724 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 9 (POTOMAC TOWN CENTER LOT 9) D.B. 1235 PG. 693 (1.724 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 10 (POTOMAC TOWN CENTER LOT 10) D.B. 1235 PG. 693 (1.653 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 11 (POTOMAC TOWN CENTER LOT 11) D.B. 1235 PG. 693 (1.724 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 12 (POTOMAC TOWN CENTER LOT 12) D.B. 1235 PG. 693 (2.722 AC.) ZONED: HIGHWAY COMMERCIAL USE: VACANT

N/F TAX MAP 8E, PARCEL 14 (POTOMAC TOWN CENTER LOT 14) D.B. 1235 PG. 693 (1.372 AC.) ZONED: GENERAL NEIGHBORHOOD (T4) USE: VACANT

INWOOD 165 LLC. TAX MAP 8E, PARCEL SWM (POTOMAC TOWN CENTER SWM LOT) D.B. 1235 PG. 693 (6.225 AC.) ZONED: GENERAL NEIGHBORHOOD (T4) USE: SWM

INWOOD TAX MAP 8E (POTOMAC TOWN D.B. 1235 (1.383 ZONED: HIGHWA USE: VA

INWOOD 165 LLC. TAX MAP 8E, PARCEL PARK (POTOMAC TOWN CENTER PARK PARCEL) D.B. 1235 PG. 693 (2.451 AC.) ZONED: GENERAL NEIGHBORHOOD (T4) USE: PARK

INWOOD OWNER LLC. TAX MAP 8E, PARCEL 14 (POTOMAC TOWN CENTER LOT 14) D.B. 1235 PG. 693 (1.372 AC.) ZONED: GENERAL NEIGHBORHOOD (T4) USE: VACANT

APPROXIMATE LOCATION OF 100-YEAR FLOOD PLAIN ZONE AE (PER L.O.M.R. EFFE. 5/23/12)

APPROXIMATE LOCATION OF 100-YEAR FLOOD PLAIN ZONE AE (PER L.O.M.R. EFFE. 5/23/12)

EX. SWM FOREBAY

SWM POND W.S.E. 498.40

SWM POND W.S.E. 497.40

SWM POND W.S.E. 499.40

EX. BOX CULVERT

SANITARY SEWER ESMT P.B. 24 P. 53

MANHOLE PER AERIAL SURVEY (UNKNOWN)

6" DOUBLE SANITARY SEWER LATERAL (TYP.)

8" PVC SANITARY SEWER

8" CONCRETE SANITARY SEWER

8" DUCTILE IRON SANITARY SEWER

(1) 8"X6" TEE
(1) 6" GATE VALVE
(1) FIRE HYDRANT ASSEMBLY

1" DOUBLE WATER SERVICE LATERAL W/ 3/4" WYE SPLIT (TYP.)

8" SINGLE SANITARY SEWER LATERAL (TYP.)

45° BEND

TEST PIT EXISTING LINE. VERIFY SIZE AND MATERIAL REMOVE EXISTING BLOW OFF VALVE AND INSTALL (1) 16"X8" REDUCER

TIE INTO EXISTING MANHOLE

BRICKYARD CIRCLE

WALLACE BOULEVARD (60' RIGHT-OF-WAY)

BAKER PLACE (60' RIGHT OF WAY)

DUPONT CIRCLE

JOSHUA M. FREEMAN BOULEVARD EX. 60' RIGHT-OF-WAY

SANITARY SEWER EASEMENT P.B. 24 P. 53

EX. SANITARY SEWER ESMT P.B. 24 P. 53

EX. WATER ESMT P.B. 23 P. 58

WATER ESMT P.B. 23 P. 58

EX. SANITARY SEWER ESMT

EX. CURB INLET (TYP.)

EX. FIRE HYDRANT (TYP.)

FIRE HYDRANT (TYP.)

STREET LIGHT (TYP.)

GAS VALVE (TYP.)

OIL/WATER SEPARATOR

SWM RISER STRUCTURE

10" PVC

SAN MH 5965 TOP=509.93 INV OUT (10" PVC)=492.91 INV IN(10" PVC)=493.01 BENCH=493.84

SAN MH 5964 TOP=509.32 INV OUT (10" PVC)=491.96 INV IN (15" PVC)=491.96

INV.=501.26

INV.=500.94

INV.=503.68

INV.=505.28

UTILITY POLE (TYP.)

EX. 6" PVC WM (TYP.)

EX. 8" PVC SAN. SEW.

EX. 10" PVC SAN. SEW.

EX. 12" PVC SAN. SEW.

EX. 8" PVC WM

EX. 12" PVC WM (TYP.)

EX. 6" PVC WM

EX. 8" PVC WM

EX. 8" PVC SAN. SEW.

EX. 6" PVC SAN. SEW.

EX. 10" PVC WM

EX. 8" PVC SAN. SEW.

EX. 8" PVC SAN. SEW.

EX. 8" PVC SAN. SEW.

SEE SHEET C-115 FOR CONTINUATION

SEE SHEET C-117 FOR CONTINUATION

GRID NORTH NAD 83 W.V. NORTH ZONE

19TH AVENUE (50' RIGHT OF WAY)

CEDAR VALLEY ROAD

ALLEY 7

FOAL STREET (50' RIGHT OF WAY)

19TH AVENUE (50' RIGHT OF WAY)

DESTRIER STREET (50' RIGHT OF WAY)

ALLEY NO. 1 (20' RIGHT OF WAY)

N. FAIRFAX BOULEVARD (100' RIGHT OF WAY, P.B. 23 PG. 58)

N. FAIRFAX BOULEVARD (100' RIGHT OF WAY)

PENELOPE PLACE (50' R/W, P.B. 23 P. 58 CARTWAY)

21ST AVENUE (50' R/W, P.B. 23 P. 58 CARTWAY)

ADJUST STORM MANHOLE TO MATCH FINAL GRADE

RESET ELECTRIC TRANSFORMER OUTSIDE OF SIDEWALK AND MATCH TO FINAL GRADE

TEST PIT EXISTING LINE, VERIFY SIZE AND MATERIAL AND CONNECT TO EXISTING 8" STUB

TEST PIT EXISTING LINE, VERIFY SIZE AND MATERIAL AND INSTALL 12X6 TAPPING SLEEVE & VALVE

TEST PIT EXISTING LINE, VERIFY SIZE AND MATERIAL AND INSTALL12X8 TAPPING SLEEVE & VALVE

1" DOUBLE WATER SERVICE LATERAL W/ 3/4" WYE SPLIT (TYP.)

1" SINGLE WATER SERVICE LATERAL W/ 3/4" REDUCER

6" DOUBLE SANITARY SEWER LATERAL (TYP.)

4" SINGLE SANITARY SEWER LATERAL (TYP.)

(1) 8"X6" TEE (1) 6" GATE VALVE (1) FIRE HYDRANT ASSEMBLY

(1) 8"X8" CROSS (4) 8" GATE VALVES

(1) 8"X8" TEE (3) 8" GATE VALVES

SAMPLING STATION

OPEN SPACE 16

OPEN SPACE 17

OPEN SPACE 18

DOG PARK

ADJUST WATER VALVES TO MATCH FINAL GRADE

ADJUST WATER VALVE TO MATCH FINAL GRADE

WATER ESMT. P.B. 23 P. 58

TEMP. ACCESS ESMT "E" P.B. 23 P. 58

EX. WATER ESMT P.B. 23 P. 58

EX. TEMP. INGRESS/EGRESS & UTILITY ESMT P.B. 23 P. 58

INWOOD 165 LLC. TAX MAP 8, PARCEL 1.3 D.B. 1235 PG. 693 (8.24864 AC.) ZONED: GENERAL NEIGHBORHOOD (T4) / RB-RESIDENTIAL (RB) USE: VACANT

INWOOD 165 LLC. TAX MAP 8, P/O PARCEL 1.6 D.B. 1235 PG. 663 (22.58538 AC.) ZONED: SUBURBAN (T3) / GENERAL NEIGHBORHOOD (T4) / TOWN CENTER (T5) / HIGHWAY COMMERCIAL (HC) USE: VACANT

INWOOD 165 LLC. TAX MAP 8, PARCEL 1.9 D.B. 1235 PG. 663 (13.02866 AC.) ZONED: SMARTCODE NEW COMMUNITY / HIGHWAY COMMERCIAL USE: VACANT

LAKELAND PLACE AT FAIRFAX CROSSING P.B. 23, PG. 58

LOT 271

OPEN SPACE 14

OPEN SPACE 15

ELECTRICAL LEGEND

2" LIGHT CONDUIT	
3 IN	3" SERVICE CONDUIT
3 IN	3" PRIMARY CONDUIT
5 IN	5"PRIMARY CONDUIT
6 IN	6"PRIMARY CONDUIT
	TRANSFORMER
	3 PHASE JUNCTION
	CONCRETE VAULT

NOTE:

ALL SEWER CLEANOUTS FOR TOWNHOMES SHALL BE TRAFFIC BEARING.

Service Legend

Water

Single (1" with 3/4" reducer at meter) — Double(1")

Sewer

Single (4") — Double (6")

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET) 1 inch = 50 ft.

TREVOR MARK FREDERICK REGISTERED 24227 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER 06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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MARK	DESCRIPTION:	DATE
	REVISED PER AGENCY COMMENTS	03.18.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
RANSON, WEST VIRGINIA
JEFFERSON COUNTY, WEST VIRGINIA

PROJECT NO. 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PROPERTY INFORMATION
SCALE: 3/4"=50'
SHEET TITLE

UTILITY PLAN

C-117
SHEET 19 OF 57

P:\SHARED FOLDER\PROJECTS\2023\2023-0285\ENGINEERING\CONSTRUCTION SET\2023-0285 10-17 UTILITY PLAN.DWG 2025-06-13

HATCH LEGEND		
HATCH	DESCRIPTION	SHEET/DETAIL
	LOCAL STREET PAVEMENT	C-510/01
	2" MILL & OVERLAY	C-510/04
	CONCRETE SIDEWALK	C-510/02

SIGN LEGEND:

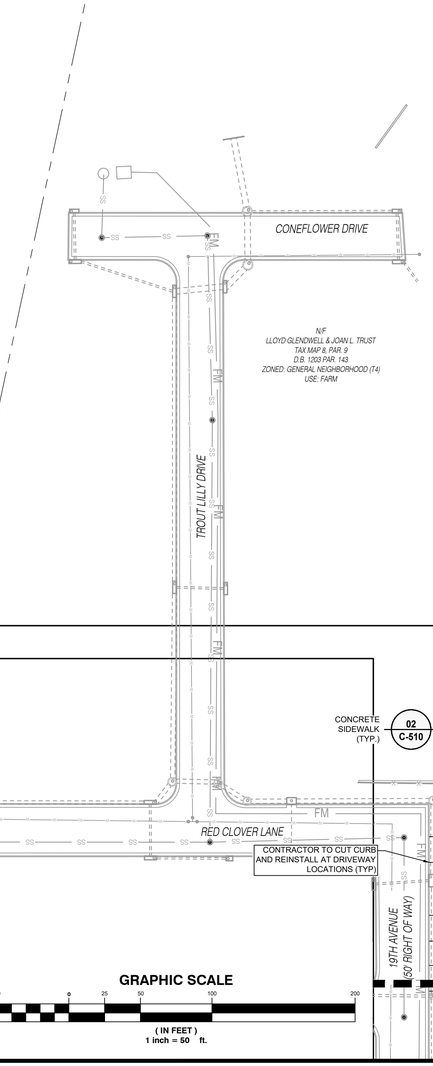
1. "STOP" SIGN (30" X 30") (R1-1)
2. "YIELD" SIGN (24" X 24") (R1-2)
3. OBJECT MARKER SIGN
4. SPEED LIMIT SIGN (R2-1)
5. PEDESTRIAN CROSSING SIGN (W11A-2)
6. STREET NAME SIGNS

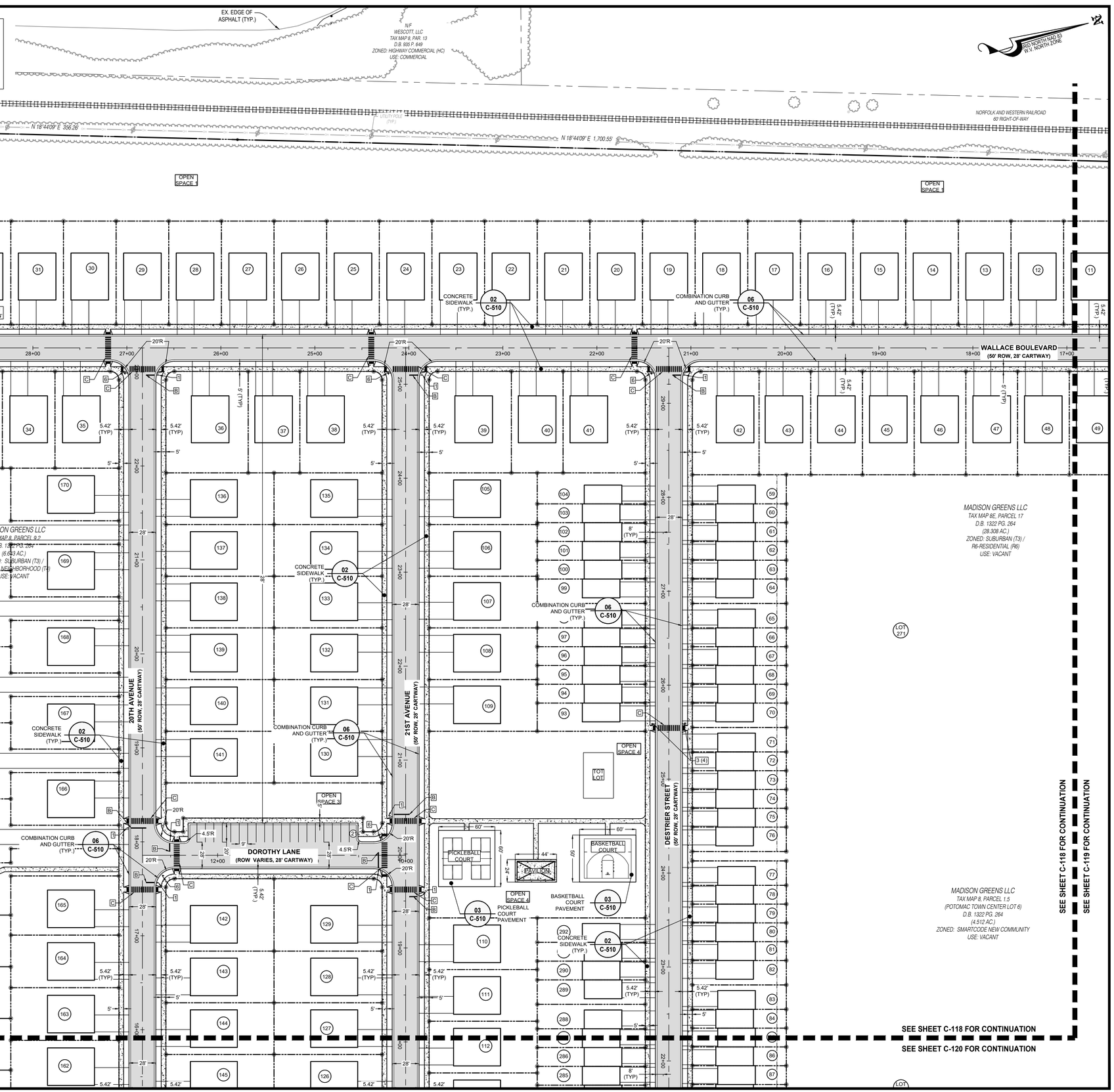
STRIPING LEGEND:

- A 4" WHITE LINE
- B 24" WHITE STOP BAR
- C 12" WHITE LINE FOR CROSSWALK
- D 4" YELLOW LINE

STRIPING NOTES:

1. FINAL APPLICATION OF WHITE AND YELLOW WATERBORNE PAVEMENT MARKINGS SHALL BE AFTER COMPLETION OF ALL ASSOCIATED PROJECT ROADWAY CLEAN-UP.
2. REFERENCE PUBLICATION 111M TC-8600 RECOMMENDED JUNE 13, 2013 FOR PAVEMENT MARKING DETAILS.
3. REFERENCE PUBLICATION 111M TC-8604 RECOMMENDED JUNE 13, 2013 FOR DELINEATION DETAILS.
4. REFERENCE PUBLICATION 111M TC-8700 SERIES RECOMMENDED JUNE 13, 2013 AND ANY CHANGES/REVISIONS FOR TRAFFIC CONTROL SIGNING STANDARDS.
5. REFERENCE FEDERAL HIGHWAY ADMINISTRATION M.U.T.C.D. 2009 EDITION CHAPTER 8B SECTION 27 FOR GRADE CROSSING PAVEMENT MARKINGS (FIGURE 8B-7).
6. ALL LONGITUDINAL WATERBORNE PAVEMENT MARKINGS SHALL REQUIRE TWO COATS.
7. ALL STRIPING/MARKINGS WITHIN THE RIGHT OF WAY TO BE 40 MIL HOT APPLIED THERMOPLASTIC.





TREVOR MARK FREDERICK — REGISTERED — 24227 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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3	REVISED PER AGENCY COMMENTS	03.19.2025
2	REVISED PER AGENCY COMMENTS	05.02.2025
1	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

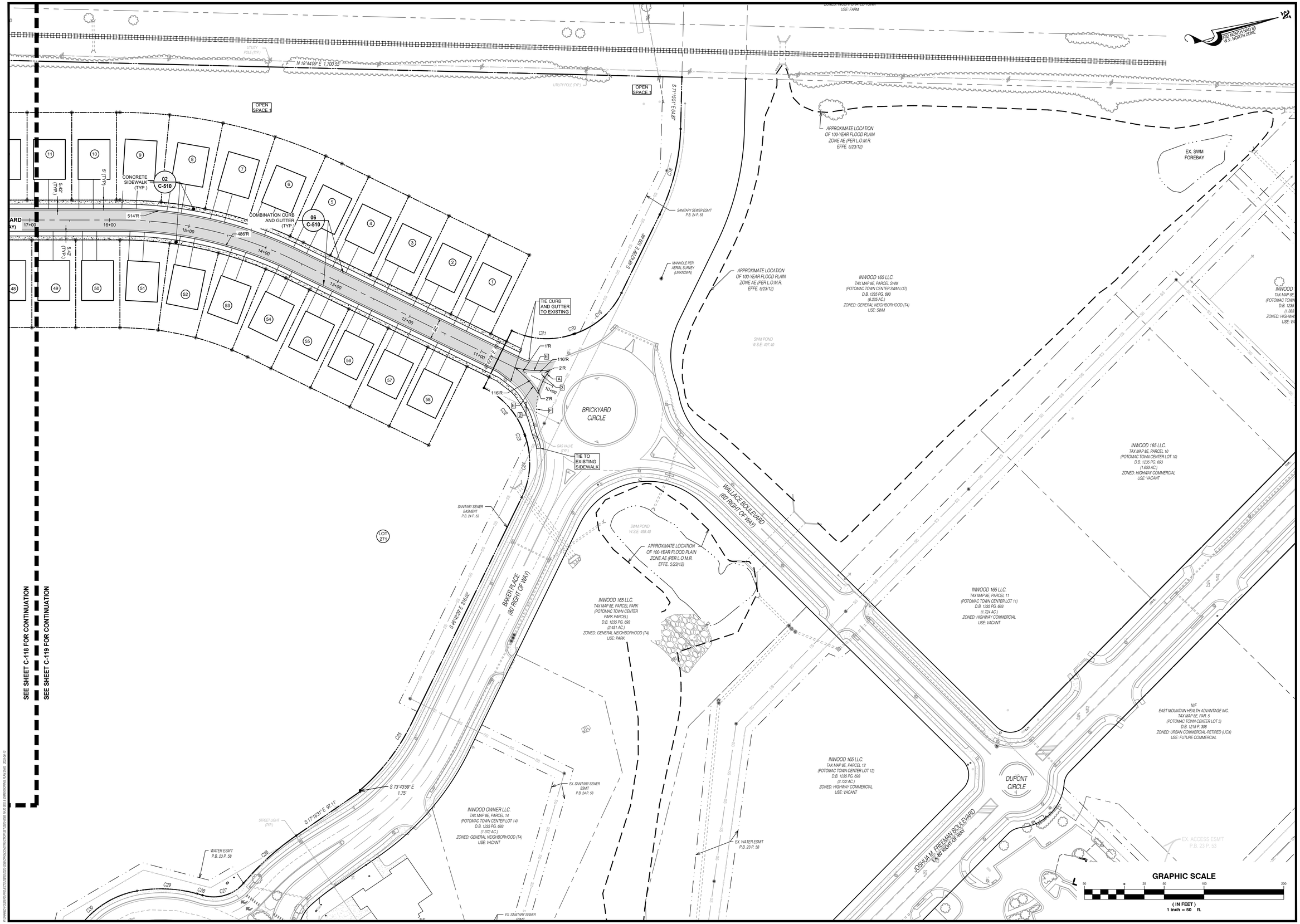
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN, MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS — DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE 1" = 50'
SHEET TITLE

SITE & DIMENSIONING PLAN

C-118
SHEET 20 OF 57

P:\SHARED FILES\SRD PROJECTS\2023\2023-0285\CIVIL\CONSTRUCTION SET\2023-0285 18-SITE & DIMENSIONING PLAN.DWG 2025-06-13



NAD 83/91 NORTH NAD 83 W.V. NORTH ZONE

TREVOR MARK FREDERICK — REGISTERED — 24227 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
06/13/2025

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	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

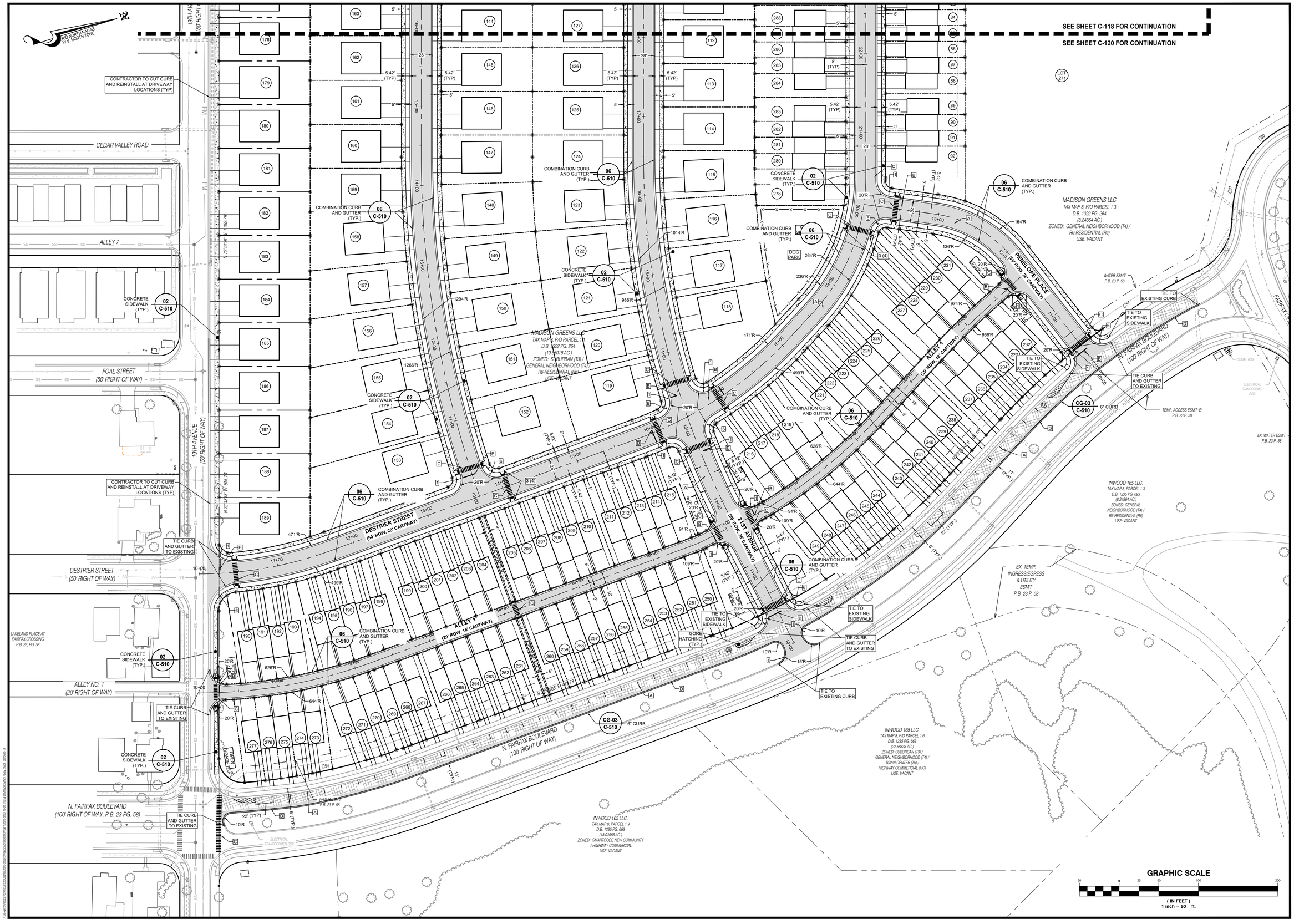
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-9999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS | DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE: 1" = 50'
SHEET TITLE:

SITE & DIMENSIONING PLAN

C-119
SHEET 21 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\ENGR\CIVIL\CT\[2023-0285 M-S SHT & DIMENSIONING PLAN.DWG 2025-06-13



TREVOR MARK FREDERICK REGISTERED 24227 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
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128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 240-313-2666

MARK	DESCRIPTION:	DATE
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE

CITY OF RANSON

JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO. 2023-0285

DWN BY: ABRAM MYERS | DATE: 12.12.2024

PROJECT MANAGER: TREVOR FREDERICK

EMAIL: TFREDERICK@FSA-INC.COM

PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17

SCALE: 1" = 50'

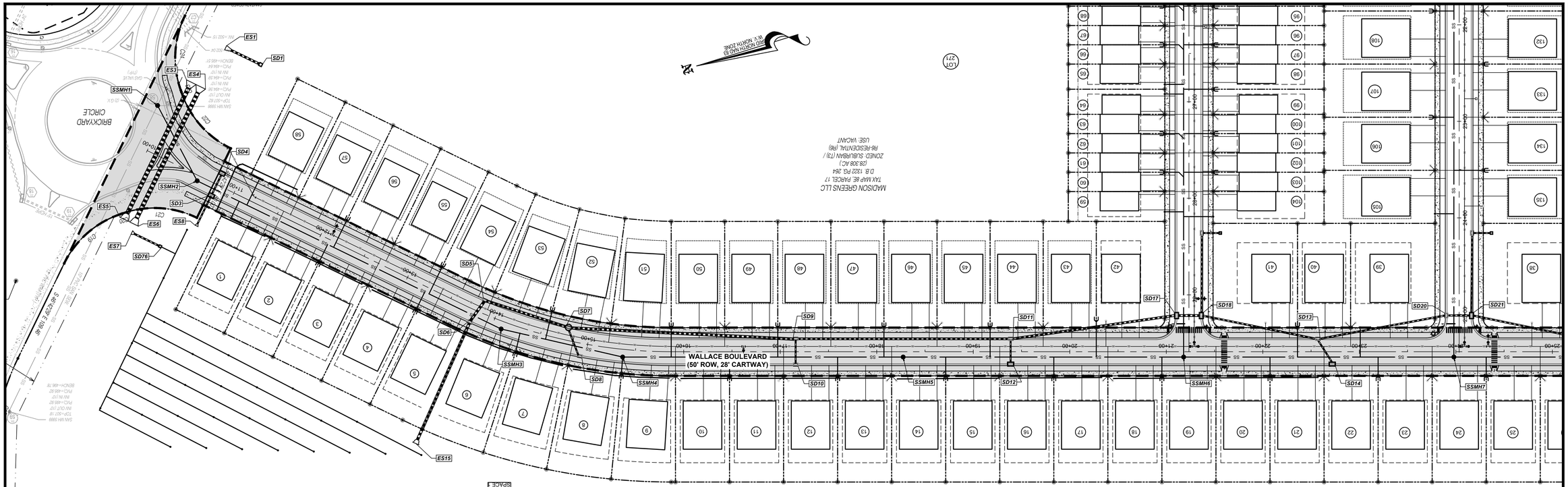
SHEET TITLE

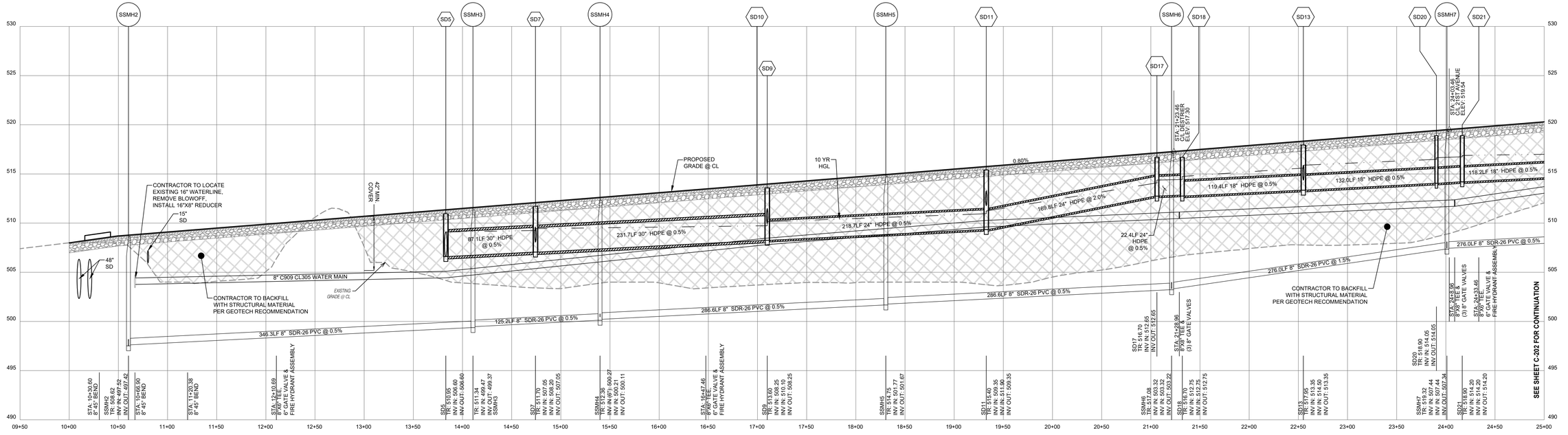
SITE & DIMENSIONING PLAN

C-120

SHEET 22 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\CIVIL\CONSTRUCTION SET\2023-0285 1-8-25 SITE & DIMENSIONING PLAN.DWG 2025-06-13





WALLACE BOULEVARD CENTERLINE PROFILE
(DESIGN SPEED: 35 MPH POSTED SPEED: 25 MPH)
SCALE - H: 1" = 50'; V: 1" = 5'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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HAGERSTOWN, MD 21740
301-739-8866

MARK	DESCRIPTION	DATE
	REVISED PER AGENCY COMMENTS	03.18.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

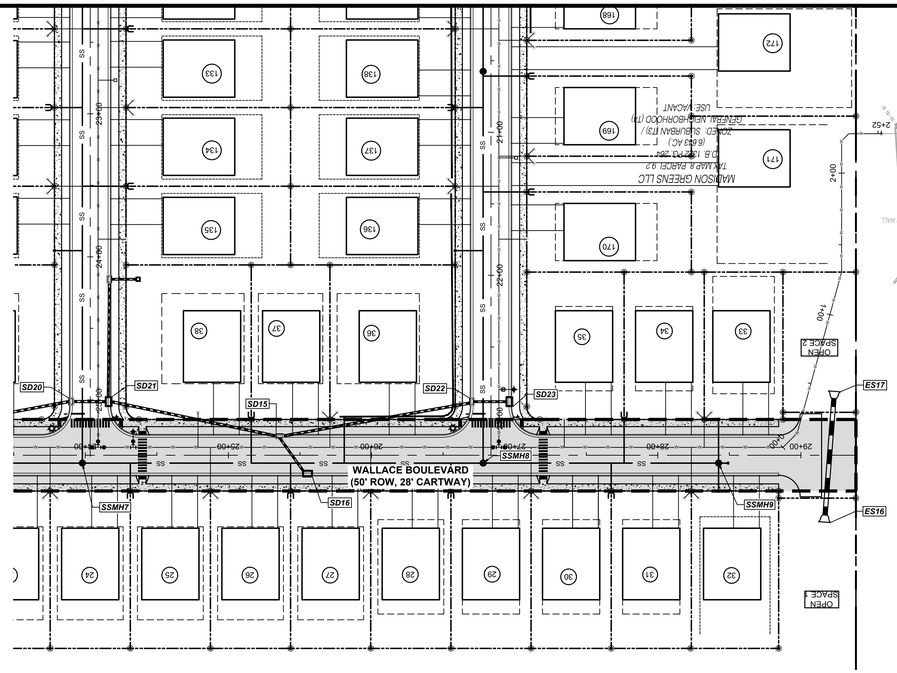
MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE
AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOP ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

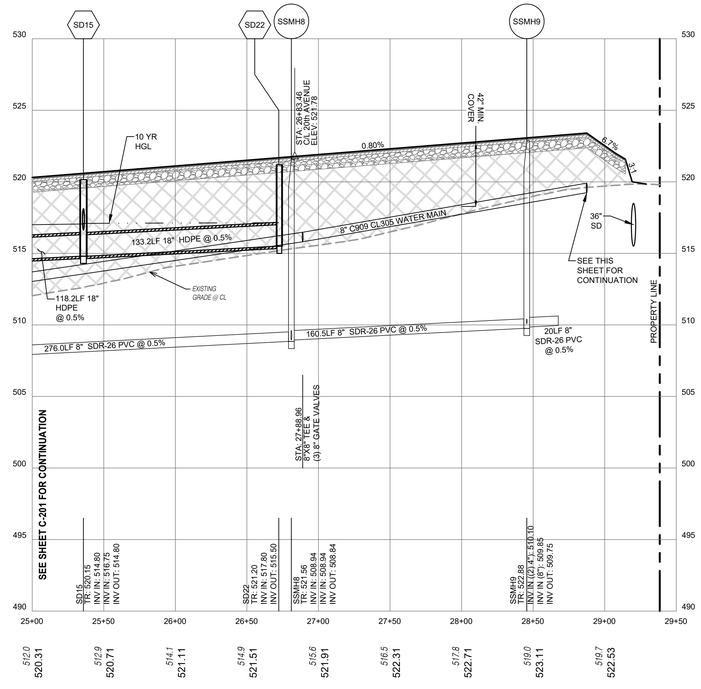
PROJECT NO.: 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PROPERTY INFORMATION
SCALE: 1"=50'
SHEET TITLE

WALLACE BLVD
PLAN & PROFILE

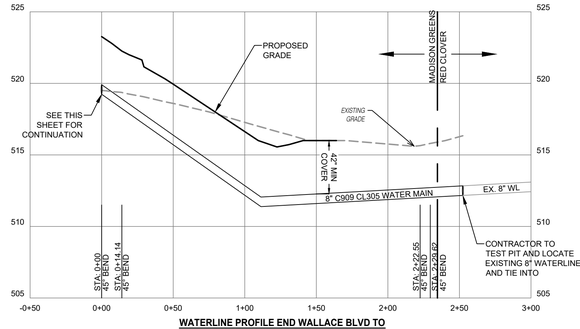
C-201
SHEET 23 OF 57

P:\SHARED FILES\PROJECTS\2023\2023-0285\ENGINEERING\CONSTRUCTION SET\2023-0285 C-201 (9 RADIAN PLAN & PROFILE).DWG 2025-06-17





WALLACE BOULEVARD CENTERLINE PROFILE
(DESIGN SPEED: 35 MPH POSTED SPEED: 25 MPH)
SCALE - H: 1" = 50'; V: 1" = 5'



WATERLINE PROFILE END WALLACE BLVD TO
EXISTING WATERLINE AT CONEFLOWER DRIVE
SCALE - H: 1" = 50'; V: 1" = 5'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date 12-31-2026

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11142 WILLIAMSPORT PIKE, GREENCASTLE, PA 17225, 717-597-7667
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 301-739-8866

MARK	DESCRIPTION	DATE
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE

CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

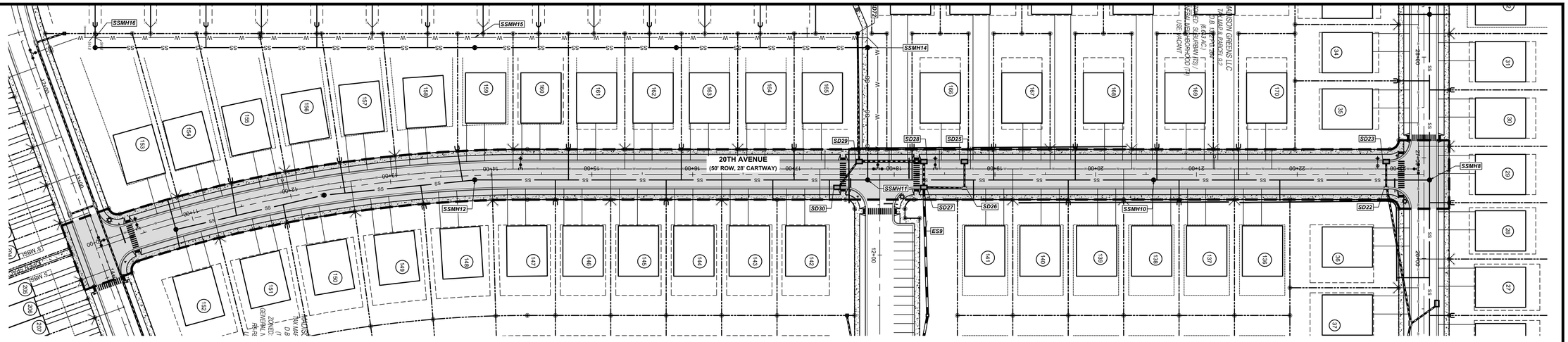
ATTN: ROB ROTZ
9729 GARIS SHOP ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

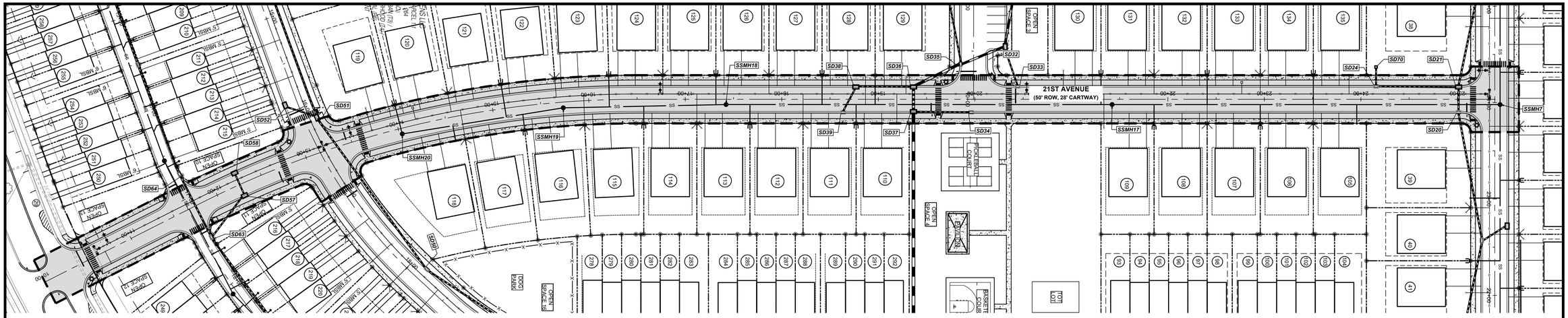
PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PROPERTY INFORMATION
SCALE 1"=50'
SHEET TITLE

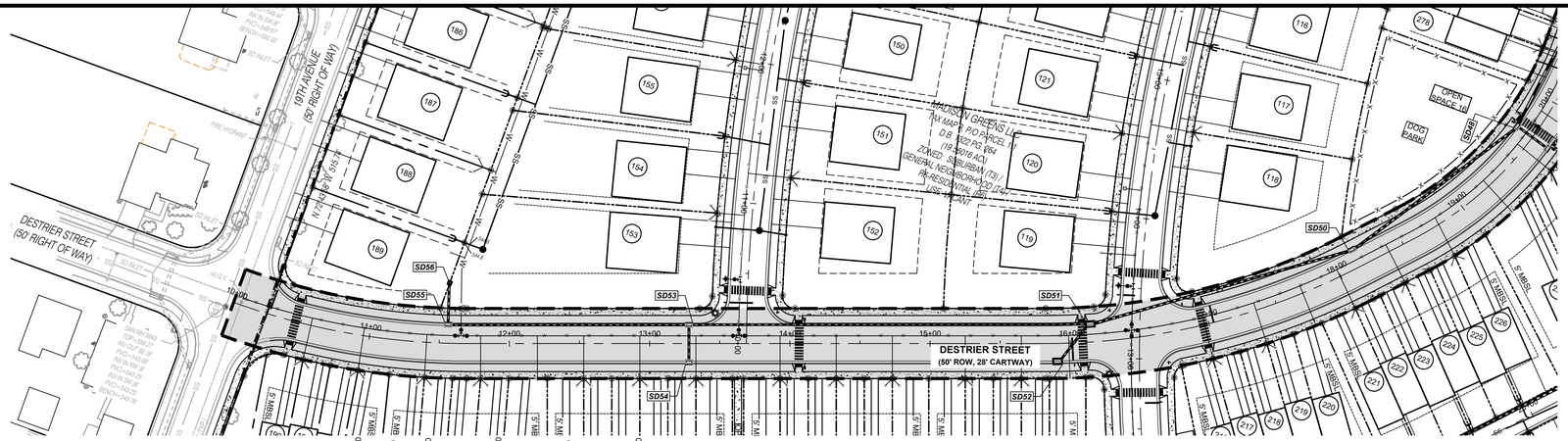
WALLACE BLVD
PLAN & PROFILE

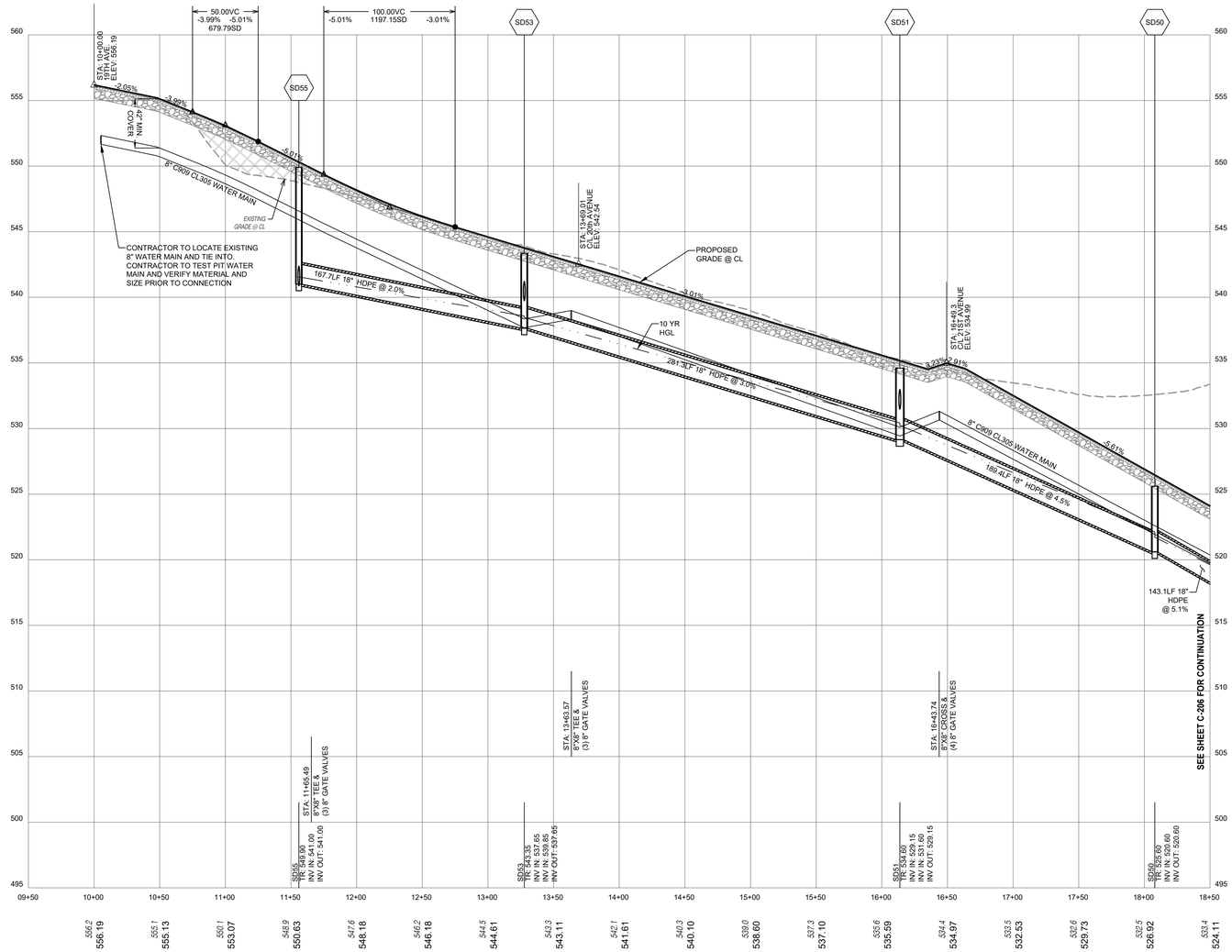
C-202
SHEET 24 OF 57

P:\SHARED FILES\SRD FILES\2023\2023-0285\ENGINEERING\CONSTRUCTION SET\2023-0285 C-11-19 RADWAY PLAN & PROFILE.DWG 2025-06-17


SSMH16
SSMH15
SSMH14
SSMH12
SSMH11
SSMH10
SSMH8
SD29
SD28
SD25
SD23
SD30
SD27
SD26
SD22
ES9
20TH AVENUE
(50' ROW, 28' CARTWAY)
MASON GREENS LLC
TAX MAP 8 PARCEL 92
DEED REFERENCE (TYP.)
(6' BSL) (TYP.)
USE & MAINT.
GENERAL NOTE 23
DEDICATE A 23' WIDE PUBLIC ACCESS EASEMENT
TO THE CITY OF RANSON
FOR ROAD PURPOSES
TO BE MAINTAINED BY THE CITY OF RANSON
GENERAL NOTE 23
DEDICATE A 23' WIDE PUBLIC ACCESS EASEMENT
TO THE CITY OF RANSON
FOR ROAD PURPOSES
TO BE MAINTAINED BY THE CITY OF RANSON
N/F
TAX MAP 8
PARCEL 92
MASON GREENS LLC
DEED REFERENCE
(6' BSL) (TYP.)
USE & MAINT.


21ST AVENUE
(50' ROW, 28' CARTWAY)
SD51
SD52
SD58
SD64
SD57
SD63
SD60
SSMH20
SSMH19
SSMH18
SD38
SD36
SD35
SD32
SD33
SD39
SD37
SD34
SSMH17
SD24
SD70
SD21
SD20
SSMH7
OPEN SPACE 10
OPEN SPACE 11
OPEN SPACE 12
OPEN SPACE 13
OPEN SPACE 14
OPEN SPACE 15
OPEN SPACE 16
OPEN SPACE 17
OPEN SPACE 18
OPEN SPACE 19
OPEN SPACE 20
OPEN SPACE 21
OPEN SPACE 22
OPEN SPACE





DESTRIER STREET CENTERLINE PROFILE
(DESIGN SPEED: 35 MPH POSTED SPEED: 25 MPH)
SCALE - H: 1" = 50'; V: 1" = 5'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

P:\SHARED FILES\PROJECTS\2023\2023-0285\CIVIL\CONSTRUCTION DOCUMENTS\PLAN & PROFILE.DWG 2025-06-13

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date 12-31-2026

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GREENCASTLE, PA 17225
717-597-1807
128 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
301-739-8866

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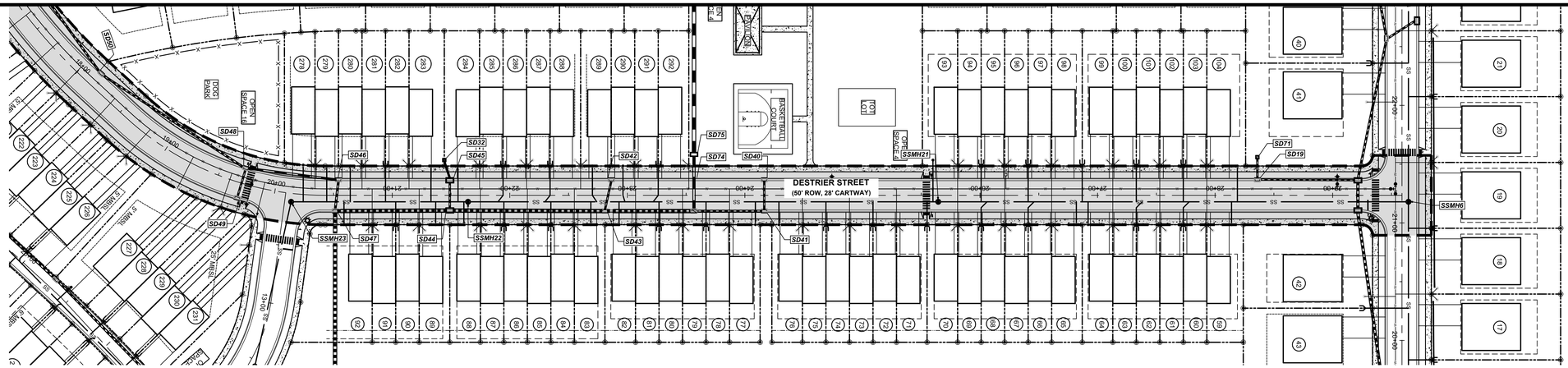
MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

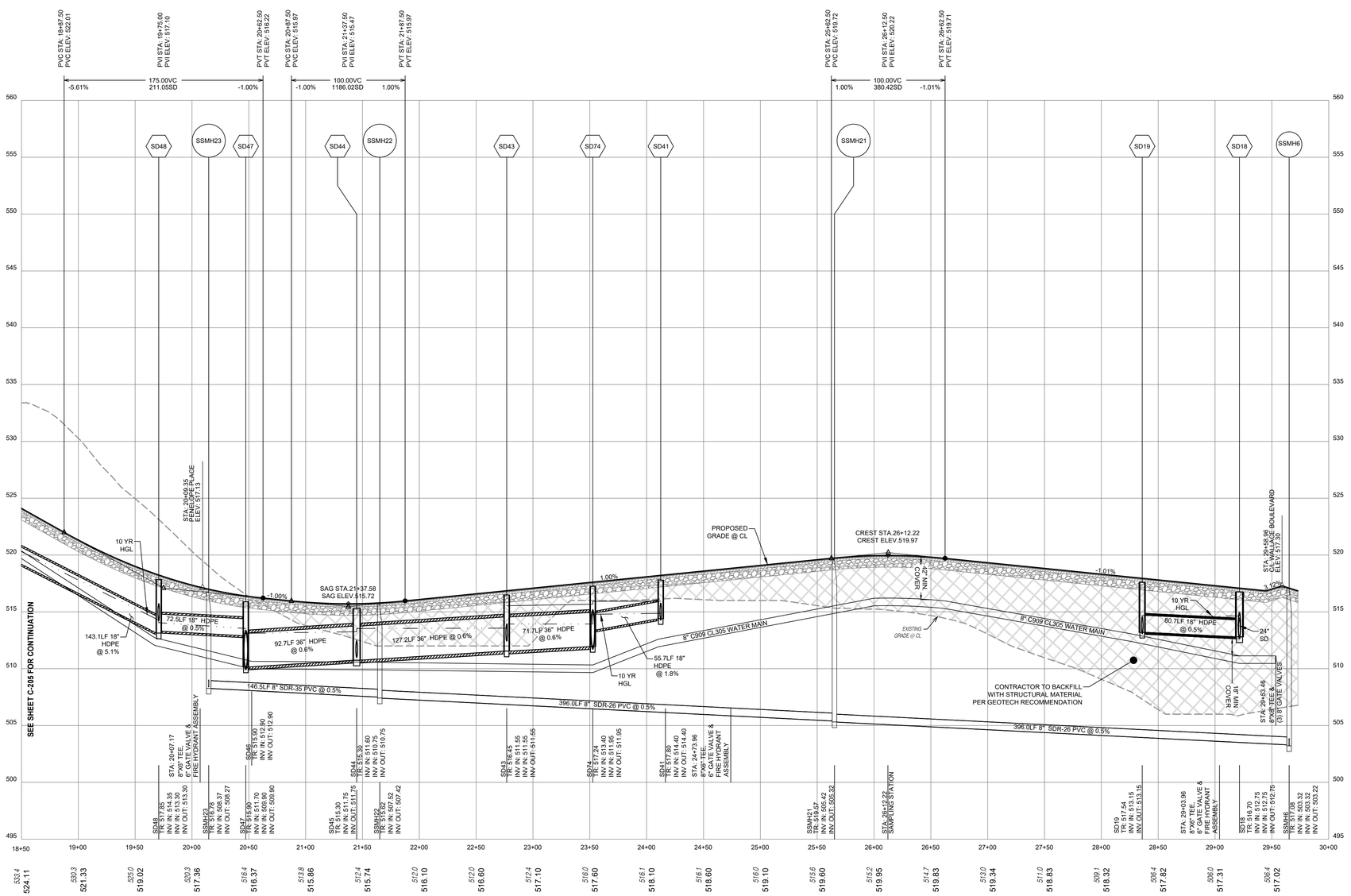
MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE
AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOP ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PROPERTY INFORMATION
SCALE 1"=50'
SHEET TITLE

DESTRIER STREET
PLAN & PROFILE

C-205
SHEET 27 OF 57





DESTRIER STREET CENTERLINE PROFILE
(DESIGN SPEED: 35 MPH POSTED SPEED: 25 MPH)
SCALE - H: 1" = 50'; V: 1" = 5'

GRAPHIC SCALE

50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

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Expiration Date: 12-31-2026

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MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

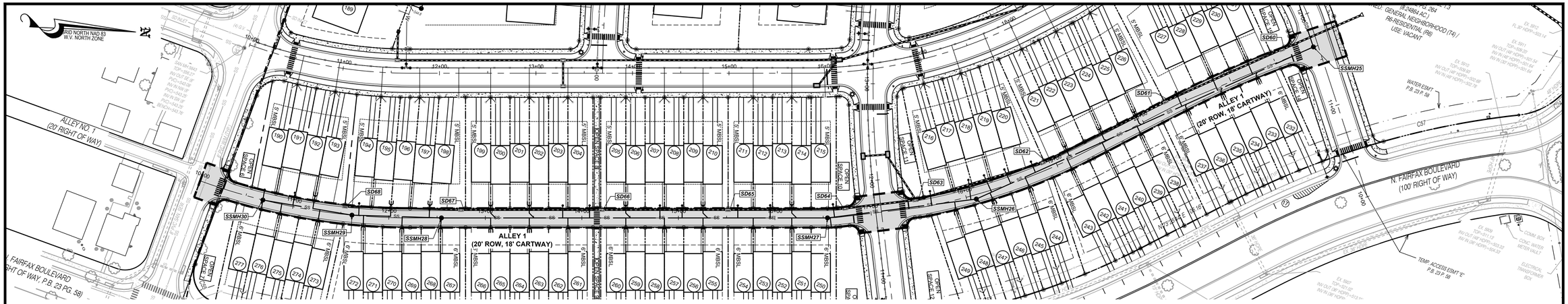
MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOP ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-9999

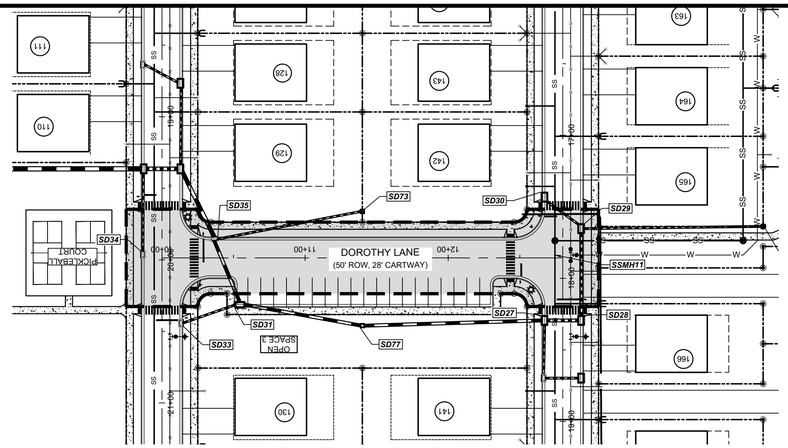
PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PROPERTY INFORMATION
SCALE 1"=50'
SHEET TITLE

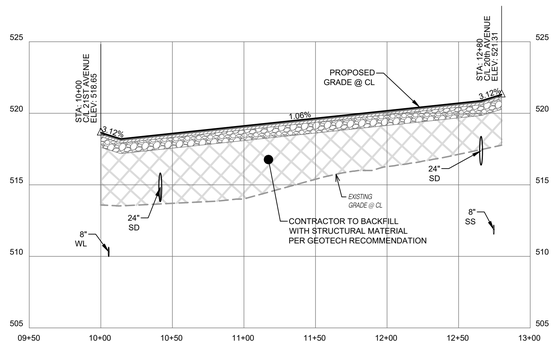
DESTRIER STREET
PLAN & PROFILE

C-206
SHEET 28 OF 57

P:\SHARED FILES\PROJECTS\2023\2023-0285\DWGS\CIVIL\C206 DESTRIER PLAN & PROFILE.DWG 2025-06-13


GRID NORTH NAD 83
W.V. NORTH ZONE
ALLEY NO. 1
(20' RIGHT OF WAY)
N. FAIRFAX BOULEVARD
(100' RIGHT OF WAY, P.B. 23 PG. 39)
ALLEY 1
(20' ROW, 18' CARTWAY)
N. FAIRFAX BOULEVARD
(100' RIGHT OF WAY)
SSMH30
SSMH29
SSMH28
SSMH27
SSMH26
SSMH25
SD68
SD67
SD66
SD65
SD64
SD63
SD62
SD61
SD60
TEMP. ACCESS ESMT "E" P.B. 23 P. 39
WATER ESMT P.B. 23 P. 54
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C277
OPEN SPACE 1
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OPEN SPACE 12
OPEN SPACE 13
OPEN SPACE





DOROTHY LANE CENTERLINE PROFILE
(DESIGN SPEED: 35 MPH POSTED SPEED: 25 MPH)
SCALE - H: 1" = 50'; V: 1" = 5'



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date 12-31-2026

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1114 2 WILLIAMSPORT PIKE
GREENCASTLE, PA 17225
717-597-1807
128 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
301-739-8866

MARK	DESCRIPTION	DATE
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE

CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOP ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO.
2023-0285

DWN BY: ABRAM MYERS | DATE: 12.12.2024

PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM

PROPERTY INFORMATION

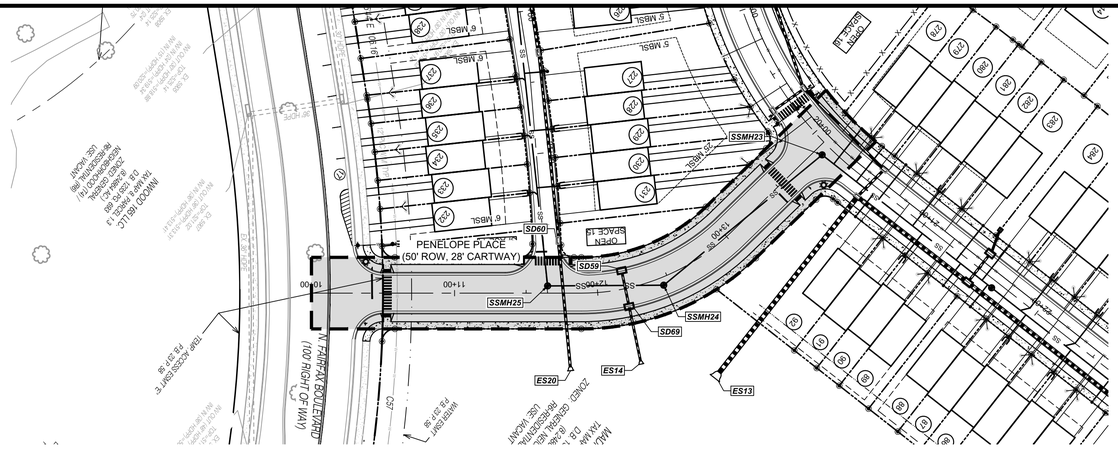
SCALE
1"=50'

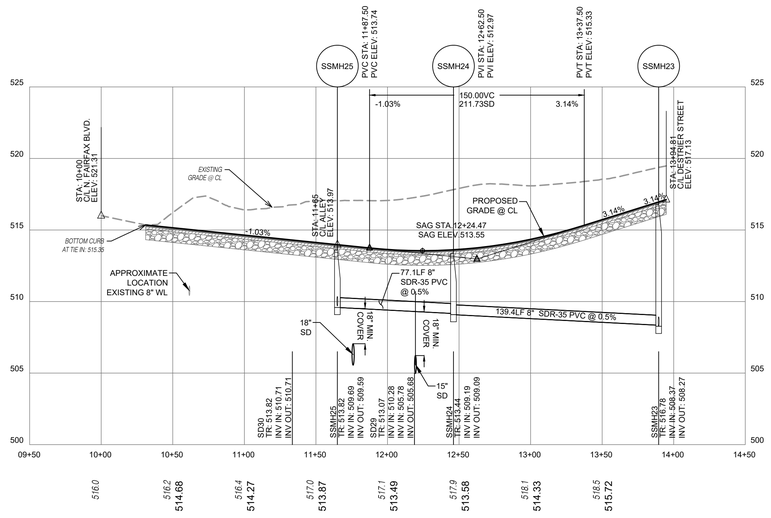
SHEET TITLE

DOROTHY LANE
PLAN & PROFILE

C-208
SHEET 30 OF 57

P:\SHARED FILES\PROJECTS\2023\2023-0285\ENGINEERING\CONSTRUCTION SET\2023-0285 C-21-39 RADWAY PLAN & PROFILE.DWG 2025-06-17





PENELOPE PLACE CENTERLINE PROFILE
(DESIGN SPEED: 35 MPH POSTED SPEED: 25 MPH)
SCALE - H: 1" = 50'; V: 1" = 5'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
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Expiration Date 12-31-2026

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555 SOUTH HANOVER STREET, CARLISLE, PA 17013, (717) 249-0911
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MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

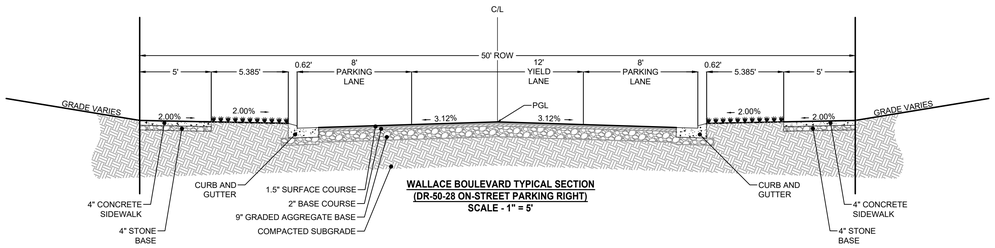
ATTN: ROB ROTZ
9729 GARIS SHOP ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6899

PROJECT NO. 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PROPERTY INFORMATION
SCALE: 1"=50'
SHEET TITLE

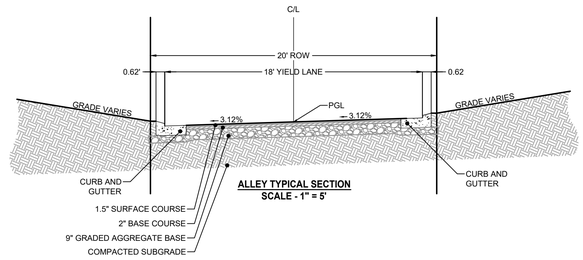
PENELOPE PLACE
PLAN & PROFILE

C-209
SHEET 31 OF 57

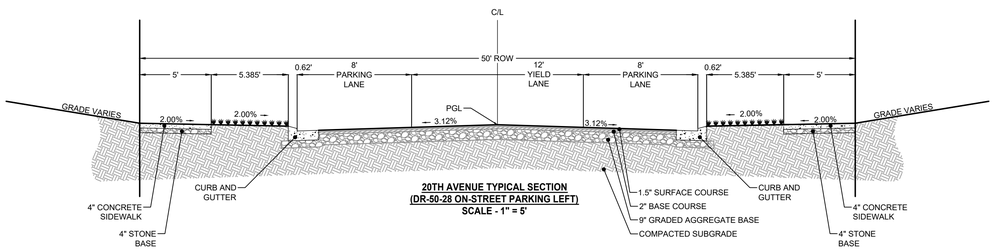
P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\ENGR\DWG\CONSTRUCTION SET\2023-0285 C-209 ROADWAY PLAN & PROFILE.DWG 2025-06-13



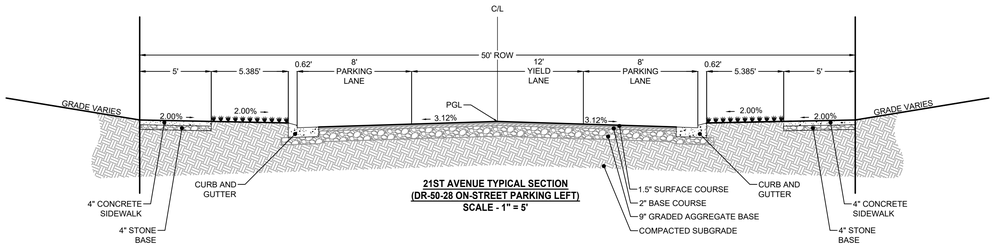
WALLACE BOULEVARD TYPICAL SECTION
(DR-50-28 ON-STREET PARKING RIGHT)
SCALE - 1" = 5'



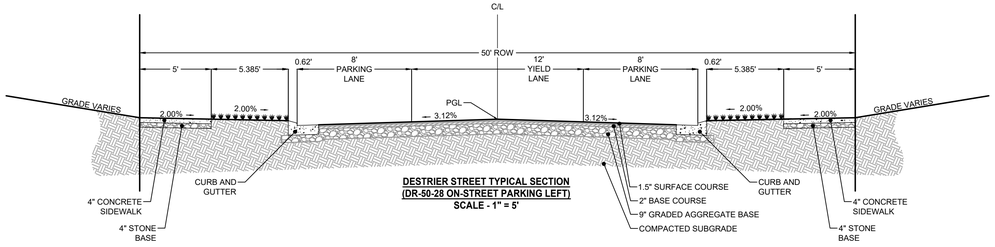
ALLEY TYPICAL SECTION
SCALE - 1" = 5'



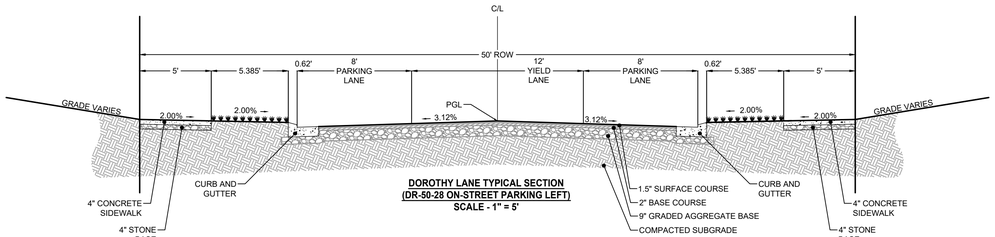
20TH AVENUE TYPICAL SECTION
(DR-50-28 ON-STREET PARKING LEFT)
SCALE - 1" = 5'



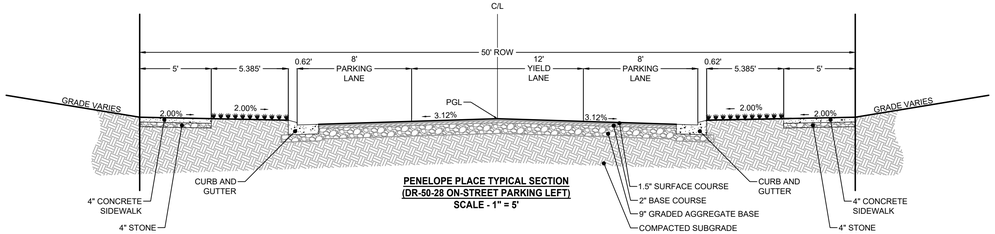
21ST AVENUE TYPICAL SECTION
(DR-50-28 ON-STREET PARKING LEFT)
SCALE - 1" = 5'



DESTRIER STREET TYPICAL SECTION
(DR-50-28 ON-STREET PARKING LEFT)
SCALE - 1" = 5'



DOROTHY LANE TYPICAL SECTION
(DR-50-28 ON-STREET PARKING LEFT)
SCALE - 1" = 5'



PENELOPE PLACE TYPICAL SECTION
(DR-50-28 ON-STREET PARKING LEFT)
SCALE - 1" = 5'

P:\SHARED FILES\DEV\PROJECTS\2023\2023-0285\ENGINEERING\CIVIL\SHEETS\C210 SECTIONS.DWG 12-19 ROADWAY PLAN & PROFILE.DWG 2025-06-17

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
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MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOP ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

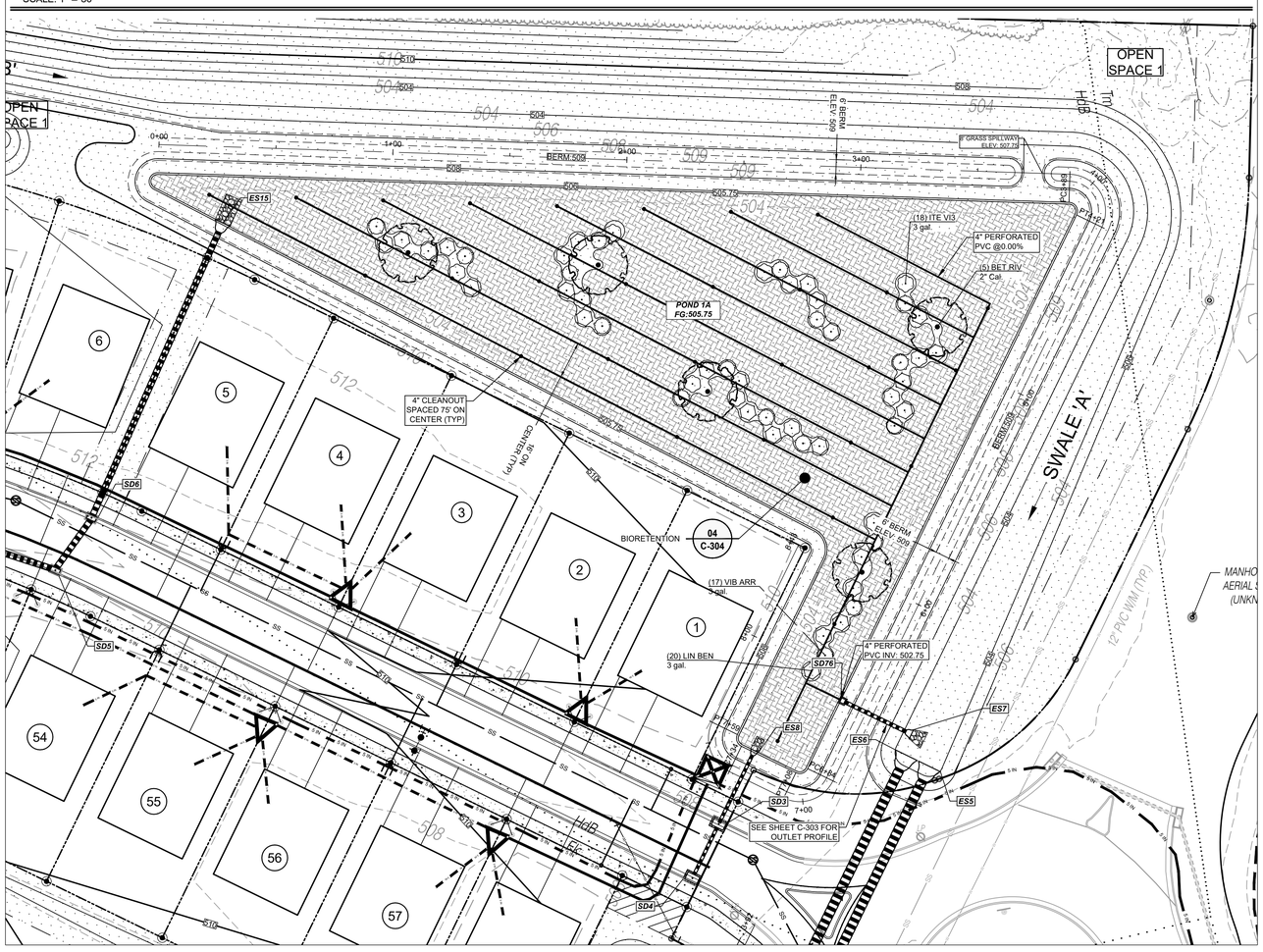
PROJECT NO.: 2023-0285
DWN BY: ABRAM MYERS | DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PROPERTY INFORMATION
SCALE: 1"=50'
SHEET TITLE

TYPICAL ROADWAY SECTIONS

C-210
SHEET 32 OF 57

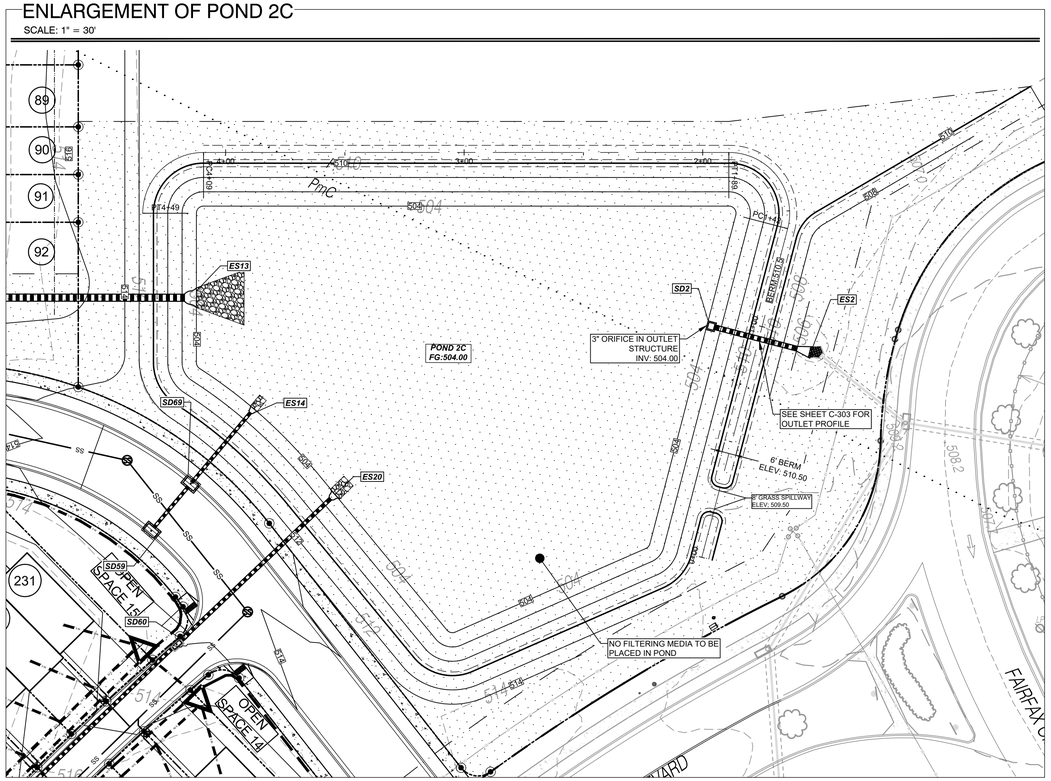
ENLARGEMENT OF POND 1A

SCALE: 1" = 30'



ENLARGEMENT OF POND 2C

SCALE: 1" = 30'





Maintenance Tasks	Frequency
▪ For the first 6 months following construction, the practice and CDA should be inspected at least twice after storm events that exceed 1/2 in. of rainfall. Conduct any needed repairs or stabilization. ▪ Inspectors should look for bare or eroding areas in the CDS or around the Bioretention area, and make sure they are immediately stabilized with grass cover. ▪ One-time, spot fertilization may be needed for initial plantings. ▪ Watering is needed once a week during the first 2 months, and then as needed during first growing season (April-October), depending on rainfall. ▪ Remove and replace dead plants. Up to 10% of the plant stock may die off in the first year, so construction contracts should include a care and replacement warranty to ensure that vegetation is properly established and survives during the first growing season following construction.	Upon establishment
▪ Mowing of grass filter strips and Bioretention with turf cover ▪ Check curb cuts and inlets for accumulated grit, leaves, and debris that may block inflow	At least 4 times a year
▪ Spot weeding, trash removal, and mulch raking	Twice during growing season

Pond MD-378

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the em-bankment.
Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.
All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out. When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Material	Specification	Notes
Filter Media	• 70%–88% sand • 8%–26% top soil • 3%–5% organic matter in the form of leaf compost • Supplied by qualified vendor • Refer to **Table BR-5** for specific media material composition	Minimum depth of 24 in.; 36 in. recommended; (18 in. if an infiltration sump is used) The volume of filter media used should be based on 110% of the plan volume, to account for settling or compaction.
Filter Media Testing	Between 7 and 21 mg/kg. of P in the soil media. CECs greater than 10	Qualified vendors should test media in batches.
Mulch Layer	Use aged, shredded hardwood bark mulch	Lay a 2 to 3 in. layer on the surface of the filter bed.
Alternative Surface Cover	Use river stone or pea gravel, coir and jute matting, or turf cover.	Lay a 2 to 3 in. layer to suppress weed growth.
Top Soil For Turf Cover	Loamy sand or sandy loam texture, with less than 5% clay content, pH corrected to between 6 and 7, and an organic matter content of at least 2%.	3 inches tilled into surface layer.
Filter Fabric (optional)	Woven monofilament fabric or non-woven geotextile as per AASHTO M-288 (do not use silt fence)	Apply only to the side slopes and, optionally, in a 2 ft. wide strip directly above the underdrain pipes.
Choking Layer	Layer of choker stone (typically No.8 or No.89 washed gravel), which is laid over the underdrain stone at a depth of 1 in. of choker stone for every 1 ft. of overlying soil media. An alternative is needle-punched, non-woven geotextile with the flow rate of > 110 gal./ min./sq. ft. (ONLY if stone choking layer cannot fit into the practice).	

Material	Specification	Notes
Underdrain Stone	1-in. diameter stone should be double-washed and clean and free of all fines (e.g., ASTM D448 No. 57 stone).	12 in. depth
Infiltration Sump (As Needed)	1-in. diameter stone should be double-washed and clean and free of all fines (e.g., ASTM D448 No. 57 stone).	Designed to drain the sump design volume (gravel layer below underdrain or with an upturned elbow) within 48 hours; can use standard 12 in. depth below the underdrain invert if soil at the infiltration sump elevation has a verified infiltration rate ≥ 0.25 in./hr.
Storage Layer (optional)	To increase storage for larger storm events, chambers, perforated pipe, stone, or other acceptable material can be incorporated below the filter media layer	
Impermeable Liner (optional)	Use a thirty mil (minimum) PVC Geomembrane liner covered by 8 to 12 oz/sq. yd. non-woven geotextile. Note: This is used only for stormwater hotspots, Karst, and small practices near building foundations, or in fill soils as determined by a geotechnical investigation.	
Underdrains, Cleanouts, and Observation Wells	Use 4- or 6-in. rigid schedule 40 PVC pipe (or equivalent corrugated HDPE for small Bioretention practices), with 3/8-in. perforations at 6 in. on center; each underdrain should be located no more than 20 feet from the next pipe.	Lay the perforated pipe under the length of the Bioretention cell, and install non-perforated pipe as needed to connect with the storm drain system or to daylight in a stabilized conveyance. Install Ts and Ys as needed, depending on the underdrain configuration. Extend cleanout pipes to the surface with vented caps at the Ts and Ys.
Plant Materials	See Section BR-4.17	Establish plant materials as specified in the landscaping plan and the recommended plant list.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
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HAGERSTOWN, MD 21740
301-739-8866

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	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
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JEFFERSON COUNTY, WEST VIRGINIA

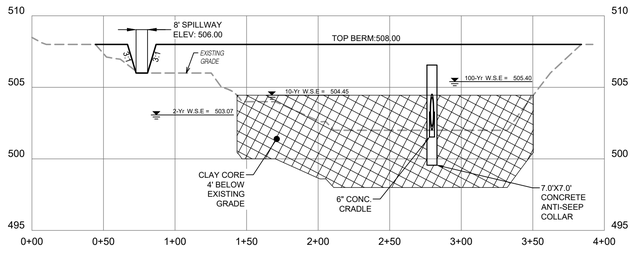
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
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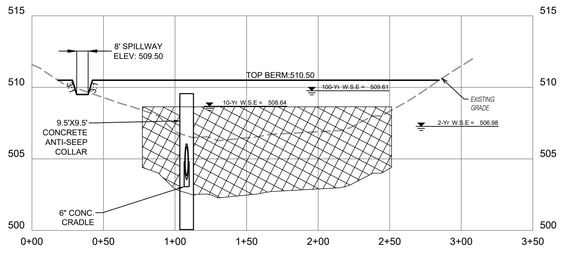
STORMWATER MANAGEMENT PLAN

C-302
SHEET 34 OF 57

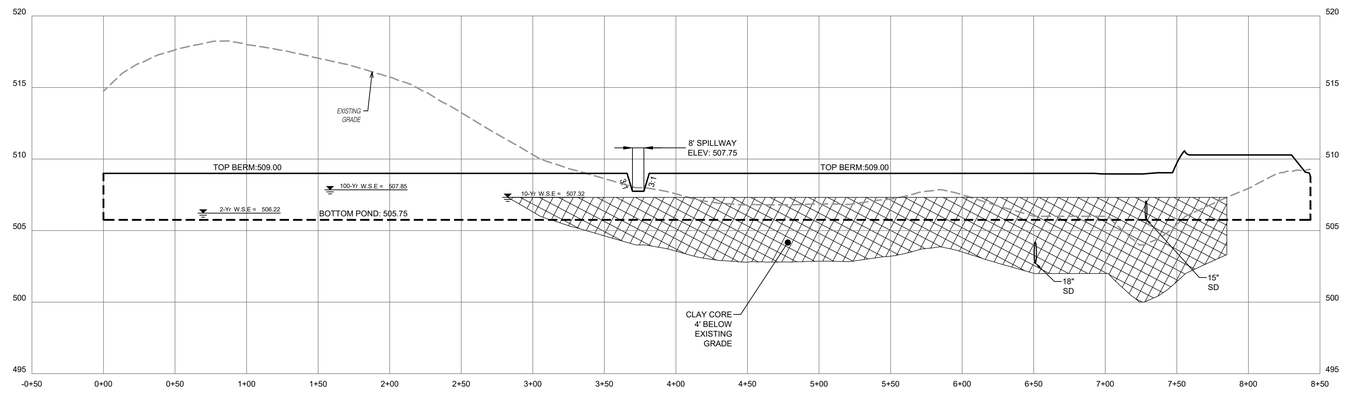
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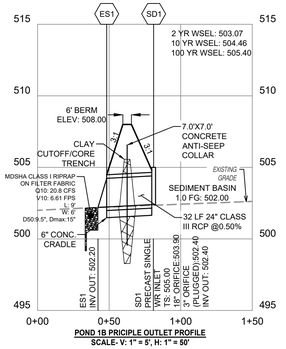
POND 1B BERM PROFILE
SCALE- V: 1" = 5', H: 1" = 50'



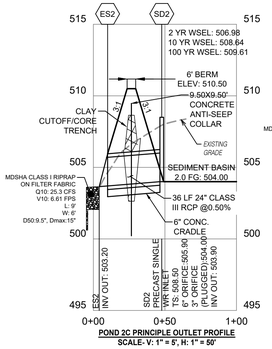
POND 2C BERM PROFILE
SCALE- V: 1" = 5', H: 1" = 50'



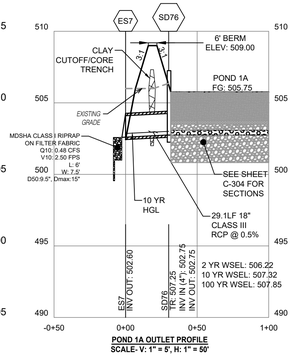
POND 1A BERM PROFILE
SCALE- V: 1" = 5', H: 1" = 50'



POND 1B PRICIPLE OUTLET PROFILE
SCALE- V: 1" = 5', H: 1" = 50'



POND 2C PRINCIPLE OUTLET PROFILE
SCALE- V: 1" = 5', H: 1" = 50'



POND 1A OUTLET PROFILE
SCALE- V: 1" = 5', H: 1" = 50'

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TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

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	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

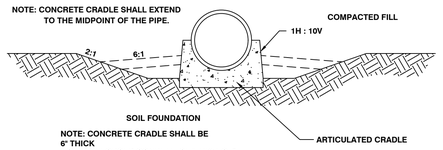
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CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
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SCALE: AS SHOWN
SHEET TITLE

STORMWATER MANAGEMENT PROFILES

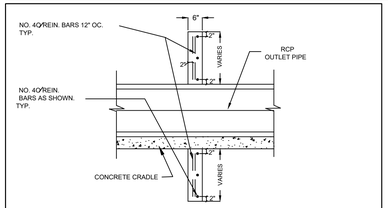
C-303
SHEET 35 OF 57



01 C-304 **CONCRETE CRADLE DETAIL**

NOT TO SCALE

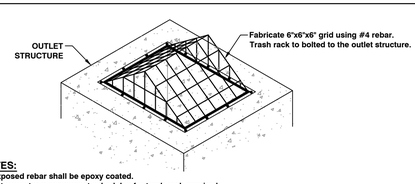
REV. DATE 2-16-09



02 C-304 **CONCRETE ANTISEEP COLLAR**

NOT TO SCALE

REV. DATE 2-16-09

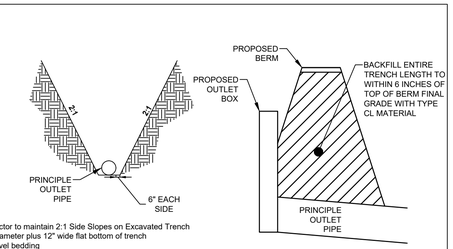


NOTES:
All exposed rebar shall be epoxy coated.
See stormwater management schedules for trash rack required.

05 C-304 **TRASH RACK - TOP SLANTED**

NOT TO SCALE

REVISION DATE 02-16-2009



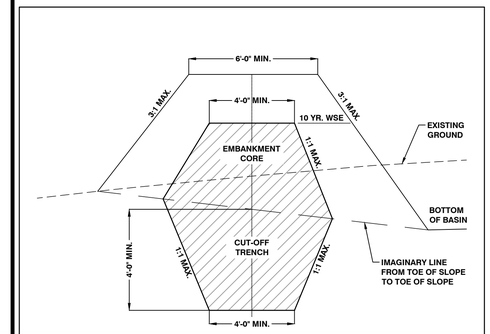
Notes:
1. Contractor to maintain 2:1 Side Slopes on Excavated Trench
2. Pipe diameter plus 12" wide flat bottom of trench
3. No gravel bedding
4. Backfill with Type CL material.

06 C-304 **PIPE TRENCH EXCAVATION FOR PONDS**

NOT TO SCALE

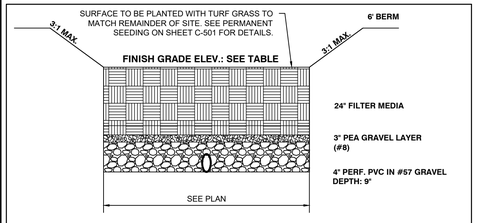
DIMENSIONS

	A	B	C	D	E
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POND 2C	3"	504.00	N/A	N/A	508.50



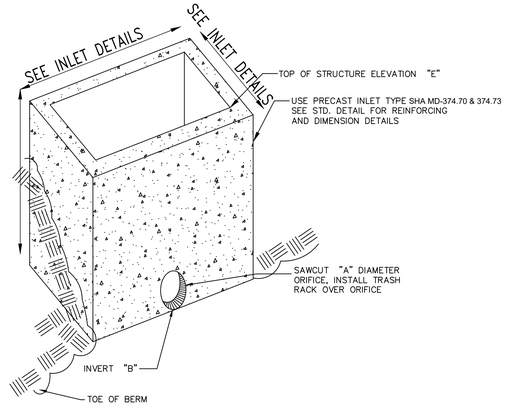
03 C-304 **CUT-OFF TRENCH - POND**

NOT TO SCALE



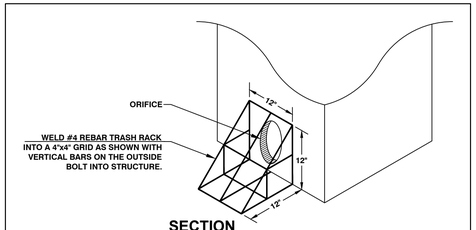
04 C-304 **BIO-RETENTION (TYP)**

NOT TO SCALE



07 C-304 **STORMWATER MANAGEMENT OUTLET STRUCTURE DETAIL**

NOT TO SCALE



NOTES:
1. **TRASH RACK SHALL BE HOT DIPPED GALVANIZE (ALL EXPOSED STEEL)**
2. **CONTRACTOR TO INSTALL AFTER THE APPROVED REMOVAL OF THE DRAW-DOWN DEVICE**

08 C-304 **TRASH RACK - ORIFICE**

NOT TO SCALE

Geotechnical Notes:
1. In areas of deep cuts into bedrock, it is possible to encounter groundwater. The contractor should be prepared to implement temporary de-watering measures in these areas during construction. Refer to the Geotechnical Report for additional recommendations.
2. Consideration should be given to installing temporary monitoring wells to observe the groundwater levels in areas of deep cuts.
3. If significant groundwater is encountered, the project Civil Engineer (FSA) and Geotechnical Engineer should immediately be notified to determine if any changes in design are warranted.
4. If blasting is proposed, it is recommended that the design team and owner of the project evaluate any existing structures within close proximity to the site and consult with a qualified blasting contractor to determine any potential problems associated with blasting near the existing utilities, roadways and buildings. In addition, the selected blasting contractor should submit a detailed blasting plan to the design team and owner for review and approval prior to any blasting operations. A pre-blast survey of the existing structures may be warranted, as well as seismographs to monitor all blasting activities. Controlled blasting can be performed within 15 to 20 feet of existing structures. However, mechanical means of excavation should be considered for all rock removal within 15 to 20 feet of existing structures.

CLAY LINER NOTES (MAY BE USED IN PLACE OF SYNTHETIC LINER IF APPROVED BY SITE GEOTECHNICAL ENGINEER):

1. **Remove 18 inches of the SWM facilities subgrade.**
2. **Place soil materials that meet the minimum requirements.**
   - **2.1. The materials shall have a maximum dry density of at least 100 PCF as per ASTM D-698**
   - **2.2. Acceptable materials shall be ml, cl, mh, ch with no rock greater than 1-icnh in diameter and constituting no more than 15% of the matrix**
   - **2.3. Materials are to be placed in 6-inch lifts and properly compacted to at least 98% of the maximum dry density value as determined by ASTM D-698 (Standard Proctor) at a moisture content in the range of optimum to 3 percent above optimum moisture as determined by the same standard. A sufficient number of in-place density tests should be performed by an experienced engineering technician to verify that the proper degree of compaction is being obtained.**
3. **Any rock encountered within the SWM ponds shall be undercut at least 12 inches and covered and controlled and compacted clay liner soils.**

NOTES:
1. Developer/contractor must contact the certifying engineer and Washington County at least 5 days prior to the start of construction of the stormwater management system to schedule and coordinate inspection time tables.
2. Due to karst soils on the site, there is increases risk of sinkhole development within the swm facility. If encountered, contact a geotechnical engineer to prepare remediation plan.
3. If rock is encountered, undercut 12" s.w.m. facility and backfill with CL type soil.
4. Core trench and earth dams shall be compacted to a minimum 95% dry density.
5. No trees or shrubs are permitted on the embankment.
6. Pond embankment shall be planted with grass only.
7. All pipe joints shall be watertight. (HDPE pipe joints shall meet the 10.8 psi water-tight requirements of ASTM D3212.)
8. All proposed storm drain pipes must be placed on 95% compacted fill according to AASHTO T180A standards.
9. The contractor is to contact miss utility a minimum of 2 days prior to any digging on the site. (1-800-257-7777)

Pond MD-378
NRCS - MARYLAND JANUARY 2000
CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation
Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the em-bankment. Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.
All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill
Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out. The minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill
Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe. Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi; 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Pipe Conduits
All pipes shall be circular in cross section.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.

2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding / cradle for their entire length. This bedding / cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete
Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap
Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311. Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

Care of Water during Construction
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

Stabilization
All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

TREVOR MARK FREDERICK REGISTERED 24227 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsainc.com
15 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717-582-8744
355 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-0411
11142 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-3647
126 SOUTH FOTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION:	DATE:
1	REVISED PER AGENCY COMMENTS	03.19.2025
2	REVISED PER AGENCY COMMENTS	05.02.2025
3	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

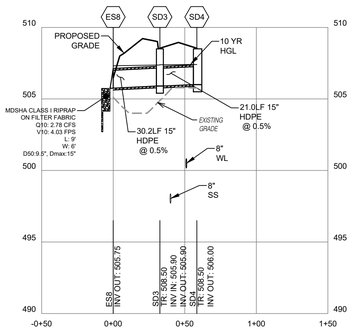
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301 491 6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS | DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
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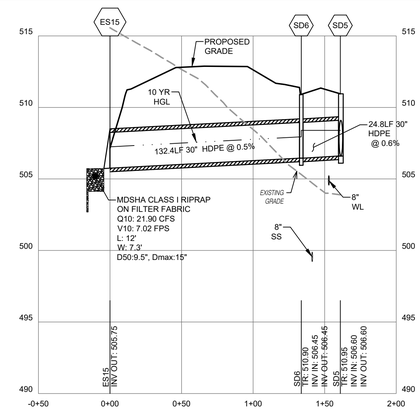
STORMWATER MANAGEMENT DETAILS

C-304
SHEET 36 OF 57

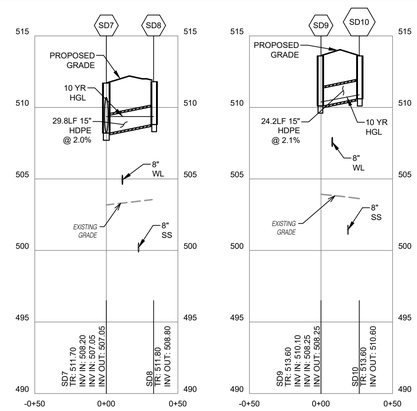
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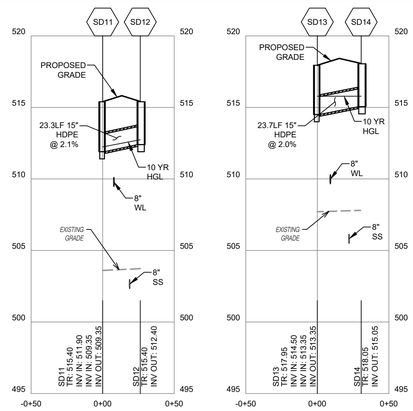


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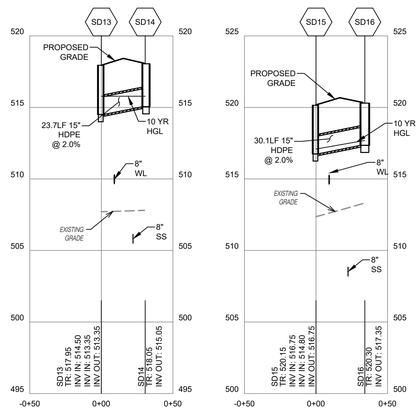


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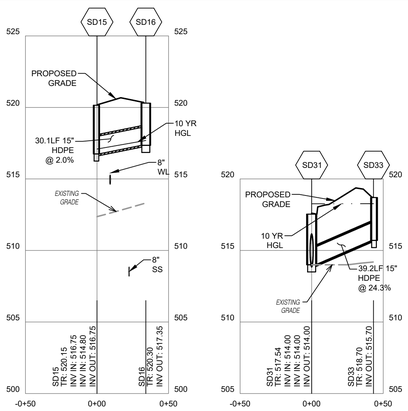
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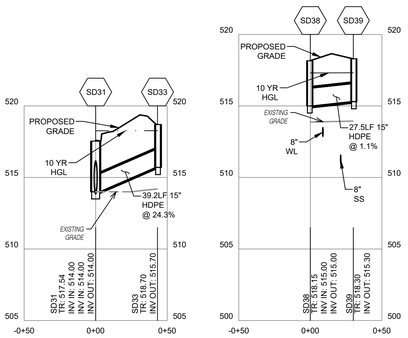
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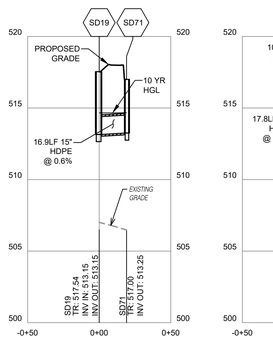


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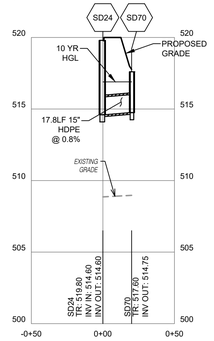


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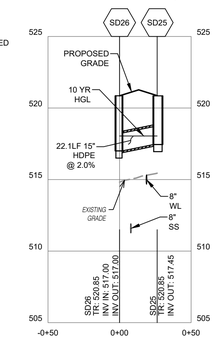
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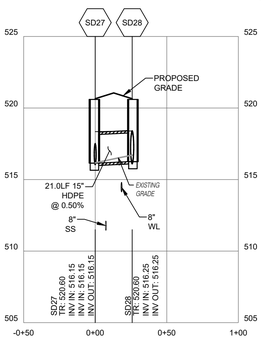
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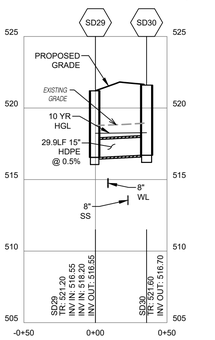
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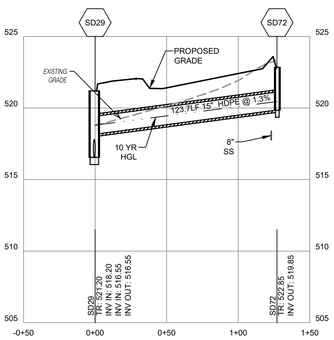
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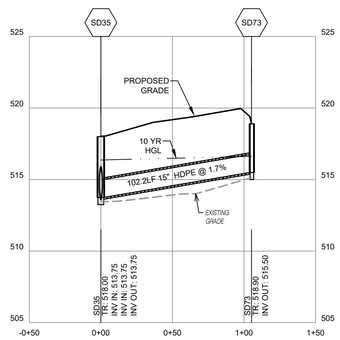
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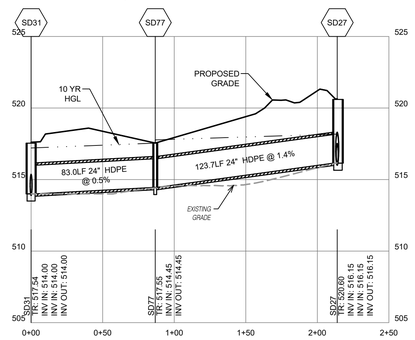
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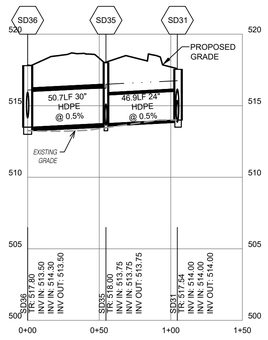
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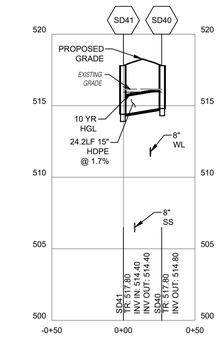
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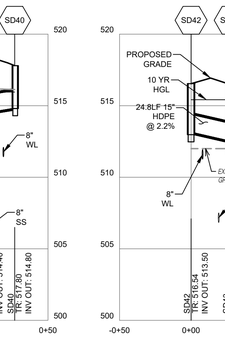
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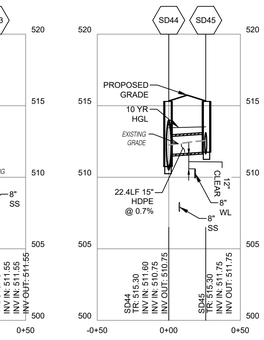
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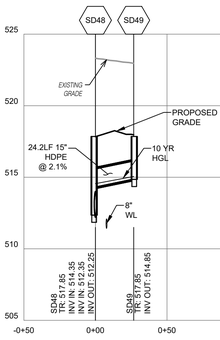
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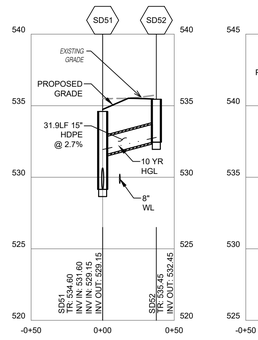
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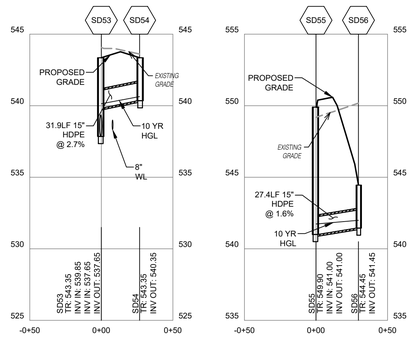
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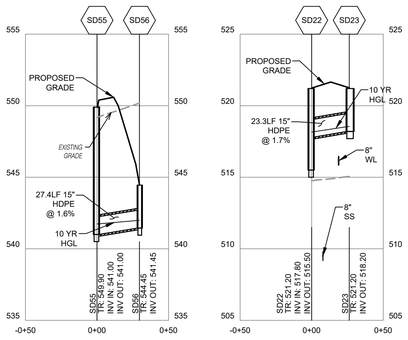
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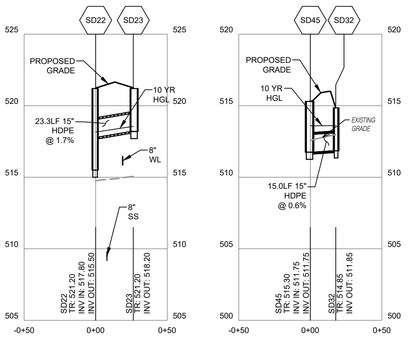
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SCALE - H: 1" = 50'; V: 1" = 5'



STORM DRAIN PROFILE SD53 TO SD54
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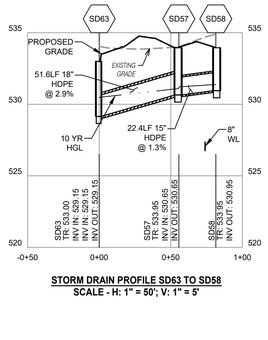


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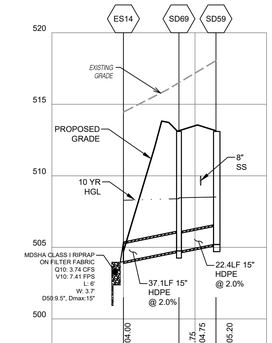


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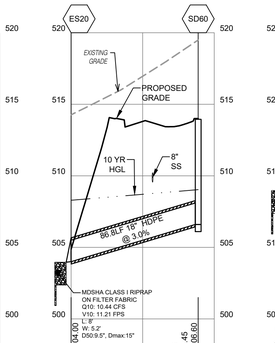
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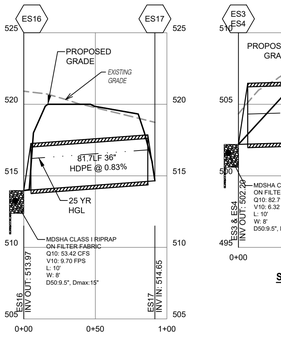
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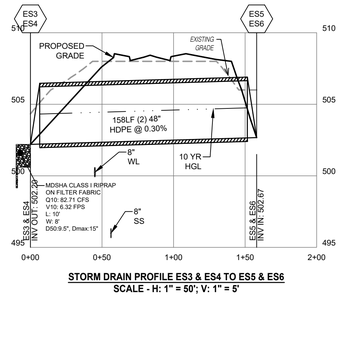
STORM DRAIN PROFILE ES14 TO SD59
SCALE - H: 1" = 50'; V: 1" = 5'



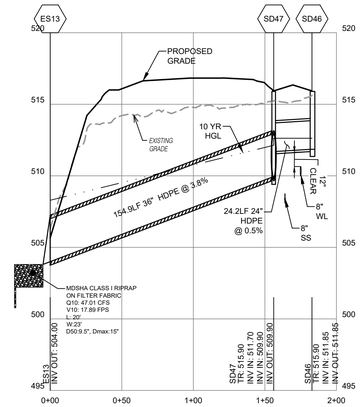
STORM DRAIN PROFILE ES20 TO SD60
SCALE - H: 1" = 50'; V: 1" = 5'



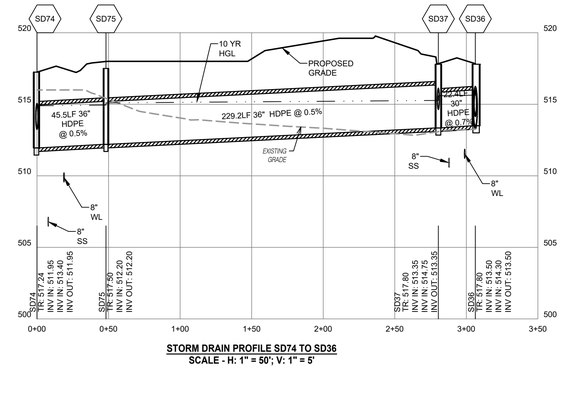
STORM DRAIN PROFILE ES16 & ES17
SCALE - H: 1" = 50'; V: 1" = 5'



STORM DRAIN PROFILE ES3 & ES4 TO ES5 & ES6
SCALE - H: 1" = 50'; V: 1" = 5'



STORM DRAIN PROFILE ES13 TO SD46
SCALE - H: 1" = 50'; V: 1" = 5'



STORM DRAIN PROFILE SD74 TO SD36
SCALE - H: 1" = 50'; V: 1" = 5'

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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11142 WILLIAMSPORT PLACE GREENCASTLE, PA 17225 717-597-3697
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

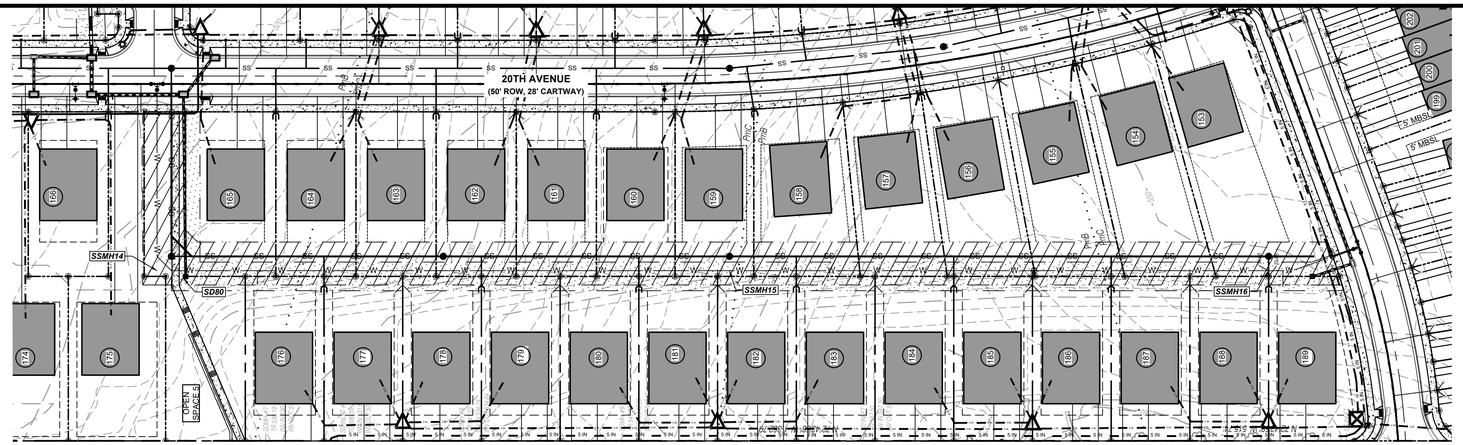
MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

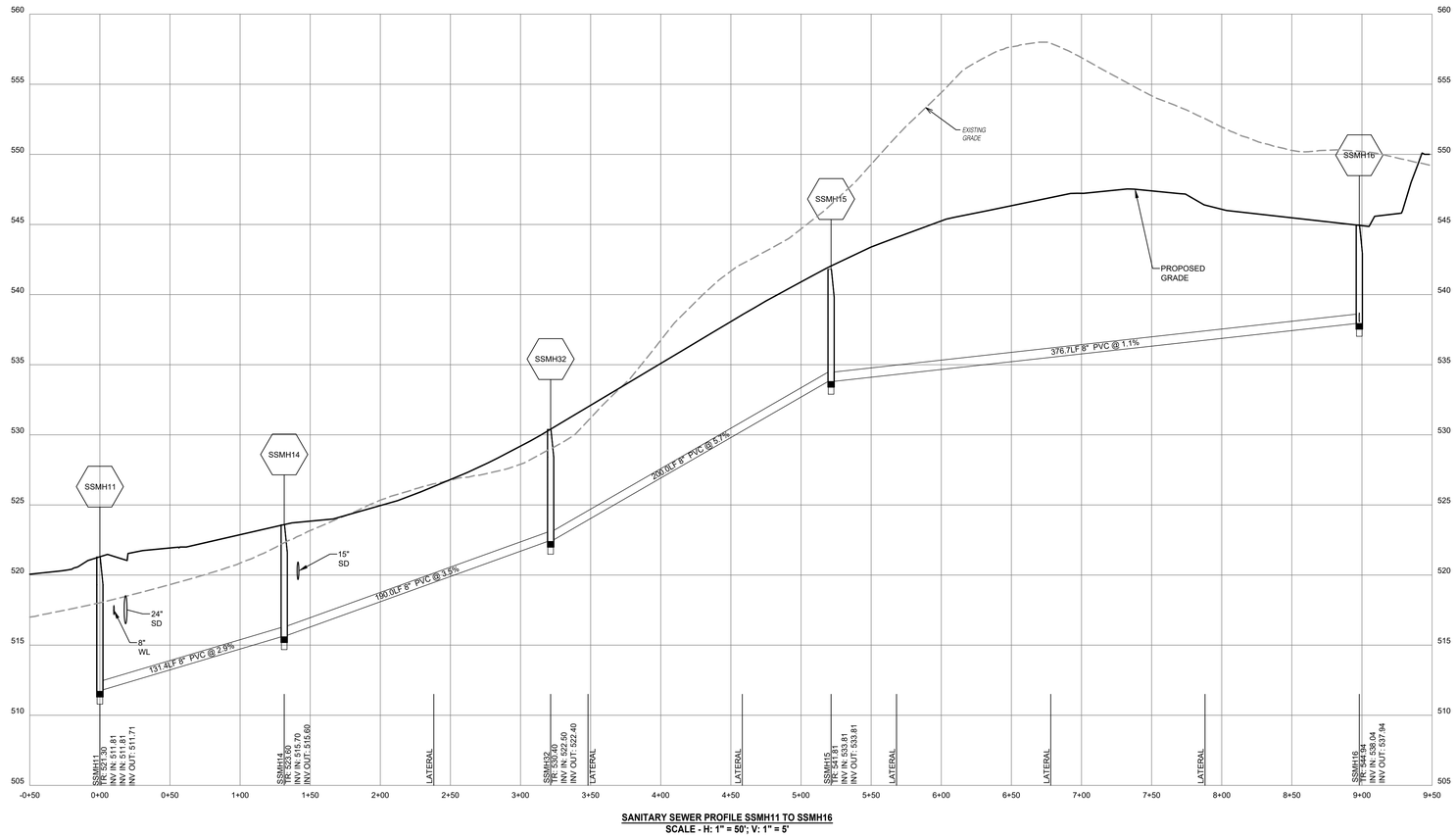
PROJECT NO.: 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE: 1" = 50'
SHEET TITLE:

CONSTRUCTION PROFILES - STORM

C-401
SHEET 37 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\ENGD\CONSTRUCTION DRAWINGS\PROFILES\PROFILES.DWG 2025-06-13





SANITARY SEWER PROFILE SSMH11 TO SSMH16
SCALE - H: 1" = 50'; V: 1" = 5'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

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11142 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-3457
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION	DATE
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO.
2023-0285

DWN BY: ABRAM MYERS
DATE: 12.12.2024

PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM

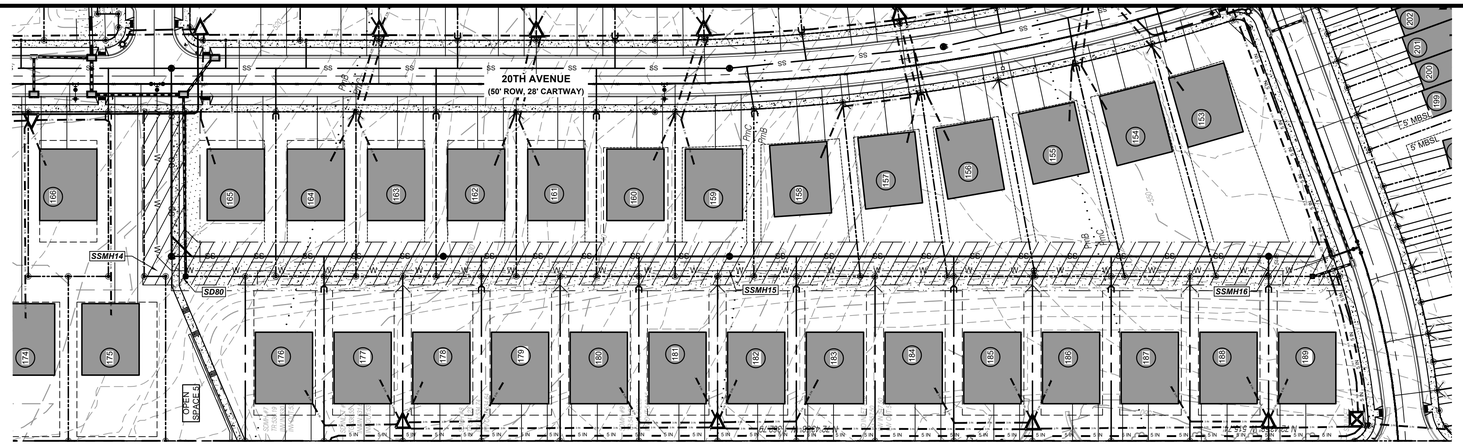
PARCEL IDENTIFICATION #:
8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17

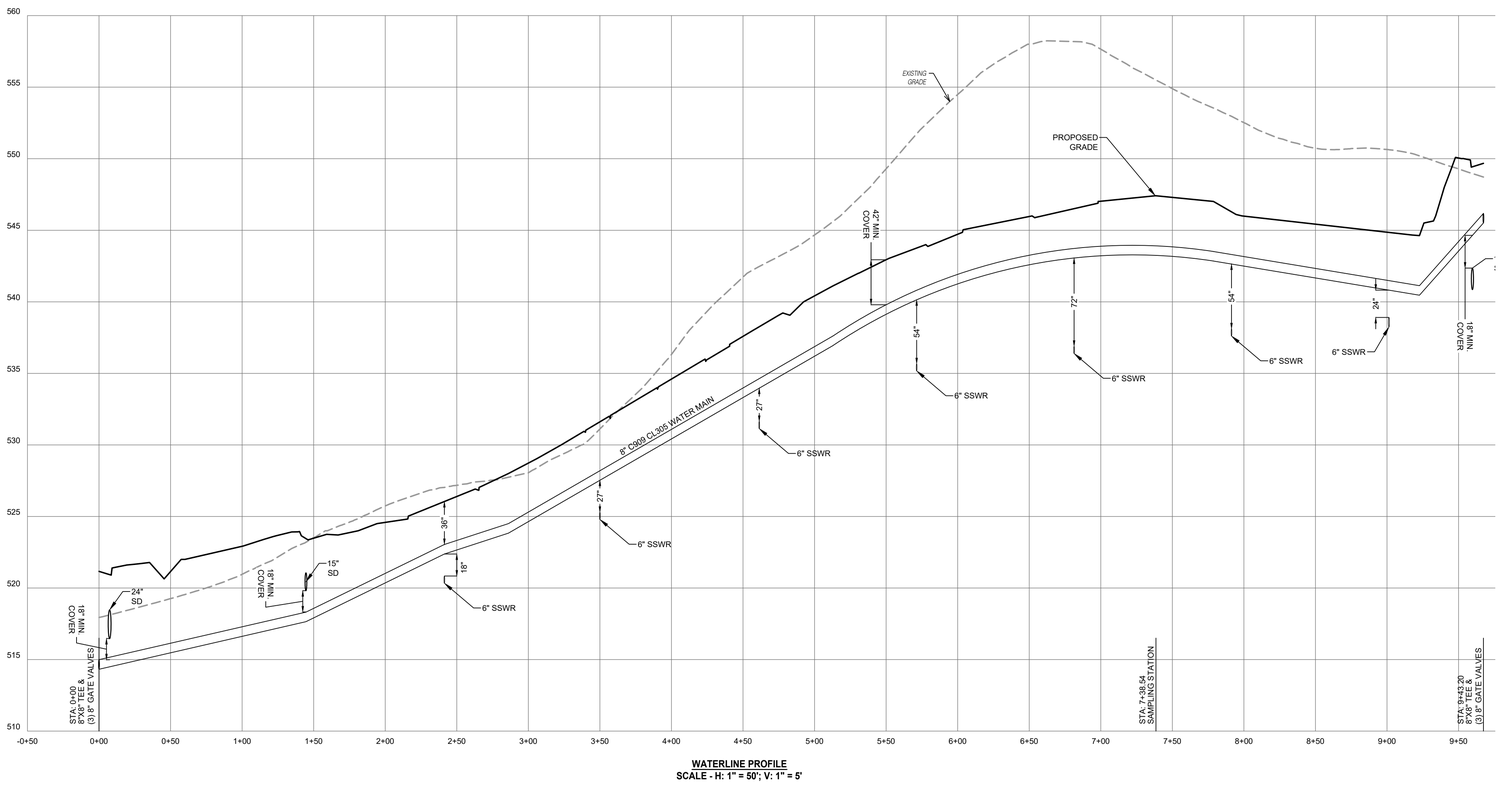
SCALE
1" = 50'

SHEET TITLE
CONSTRUCTION PROFILES - SEWER

C-402
SHEET 38 OF 57

P:\SHARED FOLDER\PROJECTS\2023\2023-0285\DWG\CONSTRUCTION\ 07.2023-0285 @ CONSTRUCTION PROFILES.DWG, 2025-06-13





WATERLINE PROFILE
SCALE - H: 1" = 50'; V: 1" = 5'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
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Expiration Date 12-31-2026

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717-597-3007
128 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
301-739-8866

MARK	DESCRIPTION	DATE
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.9999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE 1" = 50'
SHEET TITLE

CONSTRUCTION PROFILES - WATER

C-403
SHEET 39 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\ENGR\CIVIL\CONSTRUCTION PROFILES.DWG 2025-06-13

STORM DRAIN STRUCTURE SCHEDULE

NAME	NORTHING	EASTING	RIM ELEV(FT)	INVERT-IN ELEV(FT) (1)	INVERT-IN ELEV(FT) (2)	INVERT-IN ELEV(FT) (3)	INVERT-OUT ELEV(FT)	STRUCTURE ID
ES5	303047.89	2433794.36	N/A	502.67	N/A	N/A	N/A	48" METAL END SECTION
ES7	303047.17	2433772.47	N/A	N/A	N/A	N/A	502.60	18" METAL END SECTION
ES6	303039.93	2433786.88	N/A	502.67	N/A	N/A	N/A	48" METAL END SECTION
SD76	303025.21	2433751.86	507.25	N/A	N/A	N/A	502.75	MDSHA YARD INLET
ES8	302981.50	2433762.59	N/A	N/A	N/A	N/A	505.75	15" METAL END SECTION
SD3	302959.14	2433786.36	508.50	505.90	N/A	N/A	505.90	MDSHA PRECAST TYPE S COMBINATION INLET
ES3	302948.47	2433900.03	N/A	N/A	N/A	N/A	502.2	48" METAL END SECTION
SD4	302941.44	2433805.17	508.50	N/A	N/A	N/A	506.00	MDSHA PRECAST TYPE S COMBINATION INLET
ES4	302940.52	2433892.55	N/A	N/A	N/A	N/A	502.2	48" METAL END SECTION
ES1	302894.77	2433922.83	N/A	N/A	N/A	N/A	502.20	24" METAL END SECTION
SD1	302869.95	2433900.89	505.00	N/A	N/A	N/A	502.40	MDSHA TYPE S SINGLE
ES15	302830.17	2433481.44	N/A	N/A	N/A	N/A	505.75	30" METAL END SECTION
SD6	302742.05	2433581.94	510.90	506.45	N/A	N/A	506.45	MDSHA PRECAST TYPE E COMBINATION INLET
SD5	302720.62	2433598.75	510.95	506.60	N/A	N/A	506.60	MDSHA PRECAST TYPE E COMBINATION INLET
SD7	302646.20	2433546.11	511.70	507.05	508.20	N/A	507.05	MDSHA PRECAST TYPE E COMBINATION INLET
SD8	302643.77	2433514.22	511.80	N/A	N/A	N/A	508.80	MDSHA PRECAST TYPE E COMBINATION INLET
SD10	302432.87	2433439.46	513.60	N/A	N/A	N/A	510.60	MDSHA PRECAST TYPE E COMBINATION INLET
SD9	302424.94	2433464.99	513.60	508.25	510.10	N/A	508.25	MDSHA PRECAST TYPE E COMBINATION INLET
SD12	302220.04	2433373.77	515.40	N/A	N/A	N/A	512.40	MDSHA PRECAST TYPE E COMBINATION INLET
SD11	302212.23	2433398.87	515.40	509.35	511.90	N/A	509.35	MDSHA PRECAST TYPE E COMBINATION INLET
ES2	302171.12	2433444.97	N/A	N/A	N/A	N/A	503.20	24" METAL END SECTION
SD2	302139.56	2434325.31	507.50	N/A	N/A	N/A	503.90	MDSHA TYPE S SINGLE
SD17	302041.00	2433370.90	516.70	512.65	N/A	N/A	512.65	MDSHA PRECAST TYPE S COMBINATION INLET
SD18	302016.33	2433363.23	516.70	512.75	512.75	N/A	512.75	MDSHA PRECAST TYPE S COMBINATION INLET
SD19	301990.51	2433444.76	517.54	513.15	N/A	N/A	513.15	MDSHA PRECAST TYPE S COMBINATION INLET
SD71	301972.24	2433439.08	517.00	N/A	N/A	N/A	513.25	MDSHA YARD INLET
ES20	301965.69	2434346.97	N/A	N/A	N/A	N/A	504.00	18" METAL END SECTION
ES14	301944.36	2434302.57	N/A	N/A	N/A	N/A	504.00	15" METAL END SECTION
ES13	301932.27	2434248.33	N/A	N/A	N/A	N/A	504.00	36" METAL END SECTION
SD69	301911.69	2434323.54	513.10	504.75	N/A	N/A	504.75	MDSHA PRECAST TYPE S COMBINATION INLET
SD13	301908.28	2433304.39	517.95	513.35	514.50	N/A	513.35	MDSHA PRECAST TYPE S COMBINATION INLET
SD14	301901.84	2433274.86	518.05	N/A	N/A	N/A	515.05	MDSHA PRECAST TYPE S COMBINATION INLET
SD41	301891.53	2433853.27	517.80	514.40	N/A	N/A	514.40	MDSHA PRECAST TYPE E COMBINATION INLET
SD59	301889.94	2434337.50	513.10	N/A	N/A	N/A	505.20	MDSHA PRECAST TYPE E COMBINATION INLET
SD60	301885.98	2434386.15	513.95	507.45	N/A	N/A	506.60	MDSHA PRECAST TYPE E COMBINATION INLET
SD40	301866.00	2433845.33	517.80	N/A	N/A	N/A	514.80	MDSHA PRECAST TYPE E COMBINATION INLET
SD43	301851.31	2433982.68	516.45	511.55	511.55	N/A	511.55	MDSHA PRECAST TYPE E COMBINATION INLET
SD74	301848.25	2433902.42	517.24	511.95	513.40	N/A	511.95	MDSHA PRECAST TYPE E COMBINATION INLET
SD75	301827.77	2433896.06	517.50	512.20	N/A	N/A	512.20	MDSHA TYPE S DOUBLE
SD42	301825.77	2433974.75	516.54	N/A	N/A	N/A	513.50	MDSHA PRECAST TYPE E COMBINATION INLET
SD44	301811.69	2434108.60	515.30	511.60	510.75	N/A	510.75	MDSHA PRECAST TYPE E COMBINATION INLET
SD45	301787.02	2434100.93	515.30	511.75	N/A	N/A	511.75	MDSHA PRECAST TYPE E COMBINATION INLET
SD47	301783.18	2434201.86	515.90	509.90	517.70	N/A	509.90	MDSHA PRECAST TYPE E COMBINATION INLET
SD20	301774.03	2433287.98	518.90	514.05	N/A	N/A	514.05	MDSHA PRECAST TYPE E COMBINATION INLET
SD32	301769.32	2434100.33	514.85	N/A	N/A	N/A	511.85	MDSHA YARD INLET
SD61	301768.10	2434445.95	519.70	516.90	N/A	N/A	511.90	MDSHA PRECAST TYPE E COMBINATION INLET
SD46	301757.64	2434193.92	515.90	511.85	N/A	N/A	510.15	MDSHA PRECAST TYPE E COMBINATION INLET
SD21	301748.95	2433280.12	518.90	514.20	514.20	N/A	514.20	MDSHA PRECAST TYPE E COMBINATION INLET
SD49	301747.99	2434278.31	517.85	N/A	N/A	N/A	514.85	MDSHA PRECAST TYPE E COMBINATION INLET
SD48	301725.74	2434263.48	517.85	514.35	512.35	N/A	512.35	MDSHA PRECAST TYPE E COMBINATION INLET
SD24	301723.13	2433361.65	519.80	514.60	N/A	N/A	514.60	MDSHA PRECAST TYPE E COMBINATION INLET
SD70	301703.96	2433355.67	517.60	N/A	N/A	N/A	514.75	MDSHA YARD INLET
SD62	301644.29	2434515.37	526.40	523.80	N/A	N/A	521.50	MDSHA PRECAST TYPE E COMBINATION INLET
SD15	301642.06	2433221.64	520.15	514.80	516.75	N/A	514.80	MDSHA PRECAST TYPE E COMBINATION INLET
SD16	301631.28	2433190.76	520.30	N/A	N/A	N/A	517.35	MDSHA PRECAST TYPE E COMBINATION INLET
SD34	301624.15	2433770.16	518.20	N/A	N/A	N/A	515.20	MDSHA PRECAST TYPE E COMBINATION INLET
SD33	301612.86	2433716.38	518.70	N/A	N/A	N/A	515.70	MDSHA PRECAST TYPE E COMBINATION INLET
SD50	301612.26	2434357.05	525.60	520.60	N/A	N/A	520.60	MDSHA PRECAST TYPE E COMBINATION INLET
SD37	301605.97	2433827.11	517.80	513.35	514.75	N/A	513.35	MDSHA PRECAST TYPE E COMBINATION INLET
SD39	301584.80	2433896.77	518.30	N/A	N/A	N/A	515.30	MDSHA PRECAST TYPE E COMBINATION INLET
SD36	301581.30	2433819.45	517.80	513.50	514.30	N/A	513.50	MDSHA PRECAST TYPE E COMBINATION INLET
SD35	301573.28	2433765.75	518.00	513.75	513.75	N/A	513.75	MDSHA PRECAST TYPE E COMBINATION INLET
SD31	301569.87	2433716.22	517.54	514.00	514.00	N/A	514.00	MDSHA PRECAST TYPE E COMBINATION INLET
SD38	301563.13	2433876.37	518.15	515.00	N/A	N/A	515.00	MDSHA PRECAST TYPE E COMBINATION INLET
SD63	301514.20	2434560.47	533.00	529.15	529.15	N/A	529.15	MDSHA PRECAST TYPE E COMBINATION INLET
SD22	301506.67	2433204.81	521.20	517.80	N/A	N/A	515.50	MDSHA PRECAST TYPE E COMBINATION INLET
SD77	301492.48	2433677.08	517.55	514.45	N/A	N/A	514.45	MDSHA YARD INLET
SD57	301483.44	2434514.62	533.95	530.65	N/A	N/A	530.65	MDSHA PRECAST TYPE S COMBINATION INLET
SD23	301481.57	2433197.00	521.20	N/A	N/A	N/A	518.20	MDSHA PRECAST TYPE S COMBINATION INLET
SD73	301468.78	2433753.30	518.90	N/A	N/A	N/A	515.50	MDSHA YARD INLET
SD58	301457.79	2434517.71	533.95	N/A	N/A	N/A	530.95	MDSHA PRECAST TYPE S COMBINATION INLET
SD64	301442.17	2434572.59	534.50	531.25	N/A	N/A	531.25	MDSHA PRECAST TYPE E COMBINATION INLET
SD51	301428.34	2434419.01	534.60	531.60	529.15	N/A	529.15	MDSHA PRECAST TYPE E COMBINATION INLET
SD52	301406.44	2434446.93	535.45	N/A	N/A	N/A	532.45	MDSHA PRECAST TYPE E COMBINATION INLET
SD26	301382.45	2433604.44	520.85	517.00	N/A	N/A	517.00	MDSHA PRECAST TYPE E COMBINATION INLET
SD27	301370.04	2433642.82	520.60	516.15	516.15	N/A	516.15	MDSHA PRECAST TYPE E COMBINATION INLET
SD25	301357.35	2433596.64	520.85	N/A	N/A	N/A	517.45	MDSHA PRECAST TYPE E COMBINATION INLET
SD28	301345.37	2433635.15	520.60	516.25	N/A	N/A	516.25	MDSHA PRECAST TYPE E COMBINATION INLET
SD30	301344.47	2433725.11	521.60	N/A	N/A	N/A	516.70	MDSHA PRECAST TYPE S COMBINATION INLET
SD29	301326.33	2433696.43	521.20	516.55	518.20	N/A	516.55	MDSHA PRECAST TYPE S COMBINATION INLET
SD65	301320.87	2434580.02	537.10	533.60	N/A	N/A	533.60	MDSHA PRECAST TYPE E COMBINATION INLET
ES16	301294.50	2433055.89	515.97	N/A	N/A	N/A	513.97	24" METAL END SECTION
ES17	301264.44	2433131.81	516.65	514.65	N/A	N/A	N/A	24" METAL END SECTION
SD72	301204.53	2433660.16	522.85	N/A	N/A	N/A	519.85	MDSHA YARD INLET
SD66	301190.11	2434586.35	540.30	536.15	N/A	N/A	536.15	MDSHA PRECAST TYPE E COMBINATION INLET
SD54	301143.93	2434460.18	543.35	N/A	N/A	N/A	540.35	MDSHA PRECAST TYPE E COMBINATION INLET
SD53	301142.64	2434433.47	543.35	539.85	537.65	N/A	537.65	MDSHA PRECAST TYPE E COMBINATION INLET
SD67	301044.44	2434593.40	544.70	541.00	N/A	N/A	541.00	MDSHA PRECAST TYPE E COMBINATION INLET
SD55	300971.12	2434441.59	549.90	541.00	N/A	N/A	541.00	MDSHA PRECAST TYPE E COMBINATION INLET
SD56	300970.84	2434411.90	544.45	N/A	N/A	N/A	541.45	MDSHA YARD INLET
SD68	300924.29	2434595.57	548.35	N/A	N/A	N/A	544.30	MDSHA PRECAST TYPE E COMBINATION INLET

STORM DRAIN PIPE SCHEDULE

DN STRUCTURE	UP STRUCTURE	LENGTH (FT)	SLOPE (%)	MATERIAL	SIZE (IN)
ES7	SD76	29.12	0.515	HDPE	18.0
ES8	SD3	30.21	0.500	HDPE	15.0
SD3	SD4	20.99	0.476	HDPE	15.0
ES13	SD47	154.91	3.809	HDPE	36.0
SD47	SD44	92.71	0.917	HDPE	36.0
SD47	SD46	24.40	0.615	HDPE	18.0
SD44	SD45	22.42	0.669	HDPE	15.0
SD44	SD43	127.19	0.629	HDPE	36.0
SD45	SD32	15.04	0.665	HDPE	15.0
SD43	SD42	24.82	2.216	HDPE	15.0
SD43	SD74	71.70	0.558	HDPE	36.0
SD74	SD41	55.74	1.800	HDPE	18.0
SD74	SD75	45.55	0.549	HDPE	36.0
SD41	SD40	24.23	1.651	HDPE	15.0
SD75	SD37	229.18	0.500	HDPE	36.0
SD37	SD36	22.42	0.669	HDPE	30.0
SD37	SD34	54.98	0.819	HDPE	15.0
SD36	SD35	50.69	0.500	HDPE	30.0
SD36	SD38	54.95	1.274	HDPE	18.0
SD35	SD31	46.90	0.533	HDPE	24.0
SD35	SD73	102.23	1.712	HDPE	15.0
SD31	SD77	82.96	0.542	HDPE	24.0
SD31	SD33	39.15	4.342	HDPE	15.0
SD77	SD27	123.72	1.374	HDPE	24.0
SD27	SD26	34.33	2.476	HDPE	15.0
SD27	SD28	20.99	0.500	HDPE	24.0
SD26	SD25	22.12	2.035	HDPE	15.0
SD28	SD29	57.21	0.524	HDPE	24.0
SD29	SD30	29.86	0.500	HDPE	15.0
SD29	SD72	123.67	1.334	HDPE	15.0
SD38	SD39	27.52	1.090	HDPE	15.0
SD46	SD48	75.34	0.531	HDPE	18.0
SD48	SD49	24.23	2.064	HDPE	15.0
SD48	SD50	143.15	5.100	HDPE	18.0
SD50	SD51	189.37	4.515	HDPE	18.0
SD51	SD52	31.94	2.662	HDPE	15.0
SD51	SD53	281.26	3.022	HDPE	18.0
SD53	SD54	24.23	2.064	HDPE	15.0
SD33	SD55	167.67	2.000	HDPE	18.0
SD55	SD56	27.38	1.644	HDPE	15.0
ES14	SD69	37.12	2.021	HDPE	15.0
SD69	SD59	22.43	2.006	HDPE	15.0
ES15	SD6	132.41	0.529	HDPE	30.0
SD6	SD5	24.78	0.605	HDPE	30.0
SD5	SD7	87.14	0.516	HDPE	30.0
SD7	SD9	231.66	0.518	HDPE	30.0
SD7	SD8	29.78	2.015	HDPE	15.0
SD9	SD11	218.70	0.503	HDPE	24.0
SD9	SD10	24.23	2.064	HDPE	15.0
SD11	SD17	169.82	1.943	HDPE	24.0
SD11	SD12	23.33	2.143	HDPE	15.0
SD17	SD18	22.42	0.446	HDPE	24.0
SD18	SD13	119.38	0.500	HDPE	18.0
SD13	SD19	80.71	0.500	HDPE	18.0
SD13	SD20	132.03	0.530	HDPE	18.0
SD13	SD14	27.69	2.000	HDPE	15.0
SD20	SD21	23.33	0.643	HDPE	18.0
SD20	SD15	118.19	0.508	HDPE	18.0
SD21	SD24	80.71	0.500	HDPE	18.0
SD15	SD22	133.21	0.525	HDPE	18.0
SD15	SD16	30.07	2.000	HDPE	15.0
SD22	SD23	23.33	1.715	HDPE	15.0
SD24	SD70	17.83	0.841	HDPE	18.0
SD19	SD71	16.88	0.593	HDPE	15.0
SD60	SD60	86.80	2.995	HDPE	18.0
SD60	SD61	128.15	3.473	HDPE	18.0
SD61	SD62	137.91	3.335	HDPE	18.0
SD62	SD63	133.68	4.002	HDPE	18.0
SD63	SD57	51.62	2.906	HDPE	18.0
SD63	SD64	69.01	3.043	HDPE	18.0
SD57	SD58	22.43	1.337	HDPE	15.0
SD64	SD65	117.50	2.000	HDPE	18.0
SD65	SD66	126.87	2.010	HDPE	18.0
SD66	SD67	141.80	3.420	HDPE	18.0
SD67	SD68	116.14	2.842	HDPE	18.0
ES1	SD1	32.65	0.613	Concrete	24.0
ES2	SD2	35.88	1.951	Concrete	24.0

SEWER STRUCTURE SCHEDULE

NAME	NORTHING	EASTING	RIM ELEV(FT)	INVERT-IN ELEV(FT) (1)	INVERT-IN ELEV(FT) (2)	INVERT-OUT ELEV(FT)	STRUCTURE ID
SSMH1	302984.52	2433892.06	507.62	494.59	N/A	N/A	MDSHA STANDARD 48" MANHOLE
SSMH2	302968.51	2433805.36	508.62	497.62	N/A	497.52	MDSHA STANDARD 48" MANHOLE
SSMH3	302713.35	2433565.36	511.34	499.47	N/A	499.37	MDSHA STANDARD 48" MANHOLE
SSMH4	302601.74	2433500.19	512.36	500.21	N/A	500.11	MDSHA STANDARD 48" MANHOLE
SSMH5	302324.21	2433413.92	514.75	501.77	N/A	501.67	MDSHA STANDARD 48" MANHOLE
SSMH6	302046.67	2433327.65	517.08	503.32	503.32	503.22	MDSHA STANDARD 48" MANHOLE
SSMH7	301779.30	2433244.54	519.32	507.44	507.44	507.34	MDSHA STANDARD 48" MANHOLE
SSMH8	301511.91	2433161.43	521.56	508.94	508.94	508.84	MDSHA STANDARD 48" MANHOLE
SSMH9	301354.83	2433112.60	522.88	N/A	N/A	514.88	MDSHA STANDARD 48" MANHOLE
SSMH10	301430.62	2433422.83	522.98	510.31	N/A	510.31	MDSHA STANDARD 48" MANHOLE
SSMH11	301346.37	2433693.78	521.30	511.81	511.81	511.71	MDSHA STANDARD 48" MANHOLE
SSMH12	301230.56	2434066.19	540.46	531.56	N/A	531.46	MDSHA STANDARD 48" MANHOLE
SSMH13	301189.58	2434363.95	543.77	N/A	N/A	535.77	MDSHA STANDARD 48" MANHOLE
SSMH14	301220.86	2433854.77	523.60	515.70	N/A	515.60	MDSHA STANDARD 48" MANHOLE
SSMH15	301105.09	2434027.19	541.81	533.81	N/A	533.81	MDSHA STANDARD 48" MANHOLE
SSMH16	300993.29	2434386.89	544.94	N/A	N/A	537.94	MDSHA STANDARD 48" MANHOLE
SSMH17	301659.93	2433628.41	520.04	509.55	N/A	509.45	MDSHA STANDARD 48" MANHOLE
SSMH18	301541.20	2434010.39	520.89	511.65	N/A	511.55	MDSHA STANDARD 48" MANHOLE
SSMH19	301494.39	2434172.41	529.94	522.04	N/A	521.94	MDSHA STANDARD 48" MANHOLE
SSMH20	301470.73	2434339.75	535.68	N/A	N/A	527.68	MDSHA STANDARD 48" MANHOLE
SSMH21	301927.94	2433709.63	519.57	505.42	N/A	505.32	MDSHA STANDARD 48" MANHOLE
SSMH22	301809.21	2434091.60	515.62	507.52	N/A	507.42	MDSHA STANDARD 48" MANHOLE
SSMH23	301764.53	2434235.33	516.78	508.37	N/A	508.27	MDSHA STANDARD 48" MANHOLE
SSMH24	301889.08	2434306.34	513.44	509.19	N/A	509.09	MDSHA STANDARD 48" MANHOLE
SSMH25	301918.43	2434381.99	513.82	509.69	N/A	509.59	MDSHA STANDARD 48" MANHOLE
SSMH26	301577.27	2434556.41	530.46	521.17	N/A	521.07	MDSHA STANDARD 48" MANHOLE
SSMH27	301424.21	2434583.39	535.20	527.33	N/A	527.23	MDSHA STANDARD 48" MANHOLE
SSMH28	301024.67	2434602.74	545.58	538.68	N/A	538.58	MDSHA STANDARD 48" MANHOLE
SSMH29	300931.90	2434604.36	548.36	542.46	N/A	542.36	MDSHA STANDARD 48" MANHOLE
SSMH30	300839.00	2434593.16	551.18	N/A	N/A	545.18	MDSHA STANDARD 48" MANHOLE
SSMH31	301200.66	2434213.45	545.45	533.76	N/A	533.66	MDSHA STANDARD 48" MANHOLE
SSMH32	301164.46	2433836.20	530.40	522.50	N/A	522.40	MDSHA STANDARD 48" MANHOLE

SEWER PIPE SCHEDULE

DN STRUCTURE	UP STRUCTURE	DOWN INVERT (FT)	UP INVERT (FT)	LENGTH (FT)	SLOPE (%)	MATERIAL	SIZE (IN)	NUMBER OF BARRELS
SSMH1	SSMH2	494.59	497.52	84.17	3.475	PVC	8.0	1
SSMH2	SSMH3	497.62	499.37	346.34	0.506	PVC	8.0	1
SSMH3	SSMH4	499.47	500.11	125.21	0.516	PVC	8.0	1
SSMH4	SSMH5	500.21	501.67	286.63	0.507	PVC	8.0	1
SSMH5	SSMH6	501.77	503.22	286.63	0.507	PVC	8.0	1
SSMH6	SSMH21	503.32	505.32	396.00	0.505	PVC	8.0	1
SSMH6	SSMH7	503.32	507.34	275.99	1.457	PVC	8.0	1
SSMH21	SSMH22	505.42	507.42	396.00	0.505	PVC	8.0	1
SSMH22	SSMH23	507.52	508.27	146.51	0.514	PVC	8.0	1
SSMH23	SSMH24	508.37	509.09	139.37	0.514	PVC	8.0	1
SSMH24	SSMH25	509.19	509.59	77.15	0.526	PVC	8.0	1
SSMH25	SSMH26	509.69	521.07	379.16	3.000	PVC	8.0	1
SSMH26	SSMH27	521.17	527.23	151.42	4.000	PVC	8.0	1
SSMH27	SSMH28	527.33	538.58	396.00	2.841	PVC	8.0	1
SSMH28	SSMH29	538.68	542.36	88.79	4.145	PVC	8.0	1
SSMH29	SSMH30	542.46	545.16	89.57	3.037	PVC	8.0	1
SSMH7	SSMH17	507.44	509.45	398.00	0.505	PVC	8.0	1
SSMH7	SSMH8	507.44	508.84	276.01	0.507	PVC	8.0	1
SSMH17	SSMH18	509.55	511.55	396.00	0.505	PVC	8.0	1
SSMH18	SSMH19	511.65	521.94	164.65	6.248	PVC	8.0	1
SSMH19	SSMH20	522.04	527.68	165.00	3.417	PVC	8.0	1
SSMH8	SSMH10	508.94	510.31	269.75	0.507	PVC	8.0	1
SSMH8	SSMH9	508.94	514.88	160.50	3.701	PVC	8.0	1
SSMH10	SSMH11	510.31	511.71	279.75	0.500	PVC	8.0	1
SSMH11	SSMH12	511.81	531.46	386.00	5.091	PVC	8.0	1
SSMH11	SSMH14	511.81	515.60	127.44	2.973	PVC	8.0	1
SSMH12	SSMH31	531.56	533.66	146.26	1.439	PVC	8.0	1
SSMH31	SSMH13	533.76	535.77	146.91	1.368	PVC	8.0	1
SSMH14	SSMH32	515.70	522.40	186.00	3.603	PVC	8.0	1
SSMH32	SSMH15	522.50	533.81	196.00	5.770	PVC	8.0	1
SSMH15	SSMH16	533.81	537.94	372.67	1.108	PVC	8.0	1

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

fsainc.com
15 EAST MAIN STREET
NEW BLOOMFIELD, PA 17068
717-581-7644

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355 SOUTH HANOVER STREET
CARLISLE, PA 17013
717-243-5911

1114 LIL' BILLIARDS POINT PKWY
GREENCASTLE, PA 17225
717-597-3667

128 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
301-791-2666

MARK	DESCRIPTION	DATE
1	REVISED PER AGENCY COMMENTS	03.19.2025
2	REVISED PER AGENCY COMMENTS	05.02.2025
3	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE

CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB RIOTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO.
2023-0285

DWN BY: ABRAM MYERS | DATE: 12.12.2024

PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM

PARCEL IDENTIFICATION #:
8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17

SCALE
N.T.S.

SHEET TITLE

STRUCTURE SCHEDULES

C-404
SHEET 40 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\DWG\CONSTRUCTION (EPSTAR)\2023-0285 CONSTRUCTION PHOPLAT.DWG 2025-06-13

SHA-61.1-493
1-1-77

MARYLAND STATE HIGHWAY ADMINISTRATION

SHEET 1 OF 9

HYDRAULIC GRADIENT FOR STORM SEWERS

DESIGNED / CHECKED BY: ABRAM MYERS / TREVOR FREDERICK

CONTRACT

DATE: 05.01.2025

RAINFALL FACTOR: 4 IN/HOUR

TITLE: MADISON GREENS

* FROM FORM SHA-611.1-420

STRUCTURE		10 YEAR RUNOFF				PIPE								HYDRAULIC GRADIENT	
FROM	TO	ΣCA *	T_C *	I RAIN FALL INTENS IN/HR	Q cfs	SIZE IN. *	n MANNIN GS COEF	S_O SLOPE *%	S_F SLOPE %	V_F VEL. ft/sec	L LENGTH ft. *	d_n NORM DEPTH ft.	K_b	DESCRIPTION OF LOSS	ELEVATION
															507.32
ES15	SD6	7.17	5	4	21.5	30	0.013	0.53%	0.27%	4.38	132.4	1.55	0.50	Hf = 0.36 Kf = 0.85	507.68
														Hb = 0.15	507.90
SD6	SD5	5.24	5	4	21.0	30	0.013	0.61%	0.26%	4.27	24.78	1.45	1.35	Hf = 0.06 Kf = 0.85	507.96
														Hb = 0.38	508.35
SD5	SD7	5.16	5	4	20.6	30	0.013	0.52%	0.25%	4.20	87.14	1.53	0.63	Hf = 0.22 Kf = 0.85	508.57
														Hb = 0.17	508.74
SD7	SD9	4.64	5	4	18.6	30	0.013	2.00%	0.20%	3.78	231.7	1.43	0.63	Hf = 0.47 Kf = 0.85	509.21
														Hb = 0.14	509.93
SD9	SD11	4.11	5	4	16.4	24	0.013	0.50%	0.53%	5.23	218.7	1.68	0.51	Hf = 1.15 Kf = 1.14	511.08
														Hb = 0.22	511.30
SD11	SD17	3.52	5	4	14.1	24	0.013	0.50%	0.39%	4.48	169.8	1.44	0.57	Hf = 0.66 Kf = 1.14	511.96
														Hb = 0.18	514.15
SD17	SD18	3.19	5	4	12.8	24	0.013	0.45%	0.32%	4.06	22.42	1.4	0.57	Hf = 0.07 Kf = 1.14	514.22
														Hb = 0.15	514.37
SD18	SD13	2.37	5	4	9.5	18	0.013	0.50%	0.81%	5.36	119.4	1.5	0.50	Hf = 0.97 Kf = 1.67	515.34
														Hb = 0.22	515.56
SD13	SD20	1.90	5	4	7.6	18	0.013	0.53%	0.52%	4.30	132	1.22	0.70	Hf = 0.69 Kf = 1.67	516.25
														Hb = 0.20	516.46
SD20	SD21	1.68	5	4	6.7	18	0.013	0.64%	0.41%	3.80	23.33	1.01	0.60	Hf = 0.10 Kf = 1.67	516.55
														Hb = 0.13	516.69

SHA-61.1-493
1-1-77

MARYLAND STATE HIGHWAY ADMINISTRATION

SHEET 2 OF 9

HYDRAULIC GRADIENT FOR STORM SEWERS

DESIGNED / CHECKED BY:

CONTRACT

DATE:

RAINFALL FACTOR

TITLE

* FROM FORM SHA-611.1-420

STRUCTURE		10 YEAR RUNOFF				PIPE								HYDRAULIC GRADIENT	
FROM	TO	ΣCA *	T_C *	I RAIN FALL INTENS IN/HR	Q cfs	SIZE IN. *	n MANNIN GS COEF	S_O SLOPE *%	S_F SLOPE %	V_F VEL. ft/sec	L LENGTH ft. *	d_n NORM DEPTH ft.	K_b	DESCRIPTION OF LOSS	ELEVATION
															516.69
SD21	SD15	1.06	5	4	4.2	18	0.013	0.51%	0.16%	2.40	118.2	0.81	0.61	Hf = 0.19 Kf = 1.67	516.88
														Hb = 0.05	516.94
SD15	SD22	0.52	5	4	2.1	18	0.013	0.53%	0.04%	1.18	133.2	0.53	0.70	Hf = 0.05 Kf = 1.67	516.99
														Hb = 0.02	517.00
SD22	SD23	0.39	5	4	1.6	15	0.013	1.71%	0.06%	1.27	23.33	0.36	0.60	Hf = 0.01 Kf = 2.14	518.16
														Hb = 0.02	518.18
															508.74
SD7	SD8	0.26	5	4	1.0	15	0.013	2.00%	0.03%	0.85	29.78	0.28	1.16	Hf = 0.01 Kf = 2.14	508.75
														Hb = 0.01	508.80
															509.21
SD9	SD10	0.26	5	4	1.0	15	0.013	2.00%	0.03%	0.85	24.23	0.28	1.50	Hf = 0.01 Kf = 2.14	510.38
														Hb = 0.02	510.60
															511.96
SD11	SD12	0.39	5	4	1.6	15	0.013	2.14%	0.06%	1.27	23.33	0.34	1.50	Hf = 0.01 Kf = 2.14	512.24
														Hb = 0.04	512.40
															515.34
SD13	SD14	0.24	5	4	1.0	15	0.013	2.00%	0.02%	0.78	27.69	0.26	1.10	Hf = 0.01 Kf = 2.14	515.35
														Hb = 0.01	515.36

SHA-61.1-493
1-1-77

MARYLAND STATE HIGHWAY ADMINISTRATION

SHEET 3 OF 9

HYDRAULIC GRADIENT FOR STORM SEWERS

DESIGNED / CHECKED BY:

CONTRACT

DATE:

RAINFALL FACTOR

TITLE

* FROM FORM SHA-611.1-420

STRUCTURE		10 YEAR RUNOFF				PIPE								HYDRAULIC GRADIENT	
FROM	TO	ΣCA *	T_C *	I RAIN FALL INTENS IN/HR	Q cfs	SIZE IN. *	n MANNIN GS COEF	S_O SLOPE *%	S_F SLOPE %	V_F VEL. ft/sec	L LENGTH ft. *	d_n NORM DEPTH ft.	K_b	DESCRIPTION OF LOSS	ELEVATION
SD15	SD16	0.39	5	4	1.6	15	0.013	2.00%	0.06%	1.27	30.07	0.34	1.10	Hf = 0.02 Kf = 2.14	515.14
														Hb = 0.03	517.35
															514.22
SD18	SD19	0.27	5	4	1.1	18	0.013	0.50%	0.01%	0.61	80.71	0.6	1.50	Hf = 0.01 Kf = 1.67	514.23
														Hb = 0.01	514.24
SD19	SD71	0.37	5	4	1.5	15	0.013	0.59%	0.05%	1.21	16.88	0.46	1.50	Hf = 0.01 Kf = 2.14	514.25
														Hb = 0.03	514.28
															516.55
SD21	SD24	0.45	5	4	1.8	18	0.013	0.50%	0.03%	1.02	80.71	0.5	1.50	Hf = 0.02 Kf = 1.67	516.57
														Hb = 0.02	516.60
SD24	SD70	0.30	5	4	1.2	15	0.013	0.84%	0.03%	0.98	17.83	0.38	1.50	Hf = 0.01 Kf = 2.14	516.60
														Hb = 0.02	516.63
															507.32
ES8	SD3	0.70	5	4	2.8	15	0.013	0.50%	0.19%	2.28	30.21	0.46	0.50	Hf = 0.06 Kf = 2.14	507.38
														Hb = 0.04	507.42
SD3	SD4	0.35	5	4	1.4	15	0.013	0.50%	0.05%	1.14	20.99	0.7	0.50	Hf = 0.01 Kf = 2.14	507.43
														Hb = 0.01	507.44

SHA-61.1-493
1-1-77

MARYLAND STATE HIGHWAY ADMINISTRATION

SHEET 4 OF 9

HYDRAULIC GRADIENT FOR STORM SEWERS

DESIGNED / CHECKED BY:

CONTRACT

DATE:

RAINFALL FACTOR

TITLE

* FROM FORM SHA-611.1-420

STRUCTURE		10 YEAR RUNOFF				PIPE								HYDRAULIC GRADIENT	
FROM	TO	ΣCA *	T_C *	I RAIN FALL INTENS IN/HR	Q cfs	SIZE IN. *	n MANNIN GS COEF	S_O SLOPE *%	S_F SLOPE %	V_F VEL. ft/sec	L LENGTH ft. *	d_n NORM DEPTH ft.	K_b	DESCRIPTION OF LOSS	ELEVATION
															508.68
ES13	SD47	6.27	5	4	25.1	36	0.013	3.81%	0.14%	3.55	154.9	0.87	0.50	Hf = 0.22 Kf = 0.66	508.90
														Hb = 0.10	511.13
SD47	SD46	6.22	5	4	24.9	36	0.013	1.03%	0.14%	3.52	24.23	1.23	0.50	Hf = 0.03 Kf = 0.66	511.16
														Hb = 0.10	511.50
SD46	SD45	5.62	5	4	22.5	36	0.013	0.65%	0.11%	3.18	92.71	1.35	1.50	Hf = 0.11 Kf = 0.66	511.61
														Hb = 0.24	511.84
SD45	SD42	4.87	5	4	19.5	36	0.013	0.63%	0.09%	2.76	127.2	0.96	0.50	Hf = 0.11 Kf = 0.66	511.95
														Hb = 0.06	512.36
SD42	SD74	4.59	5	4	18.4	36	0.013	0.70%	0.08%	2.60	71.7	0.81	0.50	Hf = 0.05 Kf = 0.66	512.41
														Hb = 0.05	513.16
SD74	SD75	4.42	5	4	17.7	36	0.013	0.80%	0.07%	2.50	18.8	1.11	1.50	Hf = 0.01 Kf = 0.66	513.17
														Hb = 0.15	513.32
SD75	SD37	3.29	5	4	13.2	36	0.013	0.50%	0.04%	1.86	229.2	1.08	0.50	Hf = 0.09 Kf = 0.66	513.41
														Hb = 0.03	514.38
SD37	SD36	2.97	5	4	11.9	30	0.013	0.67%	0.08%	2.42	22.42	1.03	0.50	Hf = 0.02 Kf = 0.85	514.40
														Hb = 0.05	514.53
SD36	SD35	2.66	5	4	10.6	30	0.013	0.50%	0.07%	2.17	50.69	1.03	1.28	Hf = 0.03 Kf = 0.85	514.56
														Hb = 0.09	514.79
SD35	SD31	2.24	5	4	9.0	24	0.013	0.53%	0.16%	2.85	46.9	1.04	0.50	Hf = 0.07 Kf = 1.14	514.86
														Hb = 0.06	514.93

SHA-61.1-493
1-1-77

MARYLAND STATE HIGHWAY ADMINISTRATION

SHEET 5 OF 9

HYDRAULIC GRADIENT FOR STORM SEWERS

DESIGNED / CHECKED BY:

CONTRACT

DATE:

RAINFALL FACTOR

TITLE

* FROM FORM SHA-611.1-420

STRUCTURE		10 YEAR RUNOFF				PIPE								HYDRAULIC GRADIENT	
FROM	TO	ΣCA *	T_C *	I RAIN FALL INTENS IN/HR	Q cfs	SIZE IN. *	n MANNIN GS COEF	S_O SLOPE *%	S_F SLOPE %	V_F VEL. ft/sec	L LENGTH ft. *	d_n NORM DEPTH ft.	K_b	DESCRIPTION OF LOSS	ELEVATION
															519.93
SD31	SD77	1.60	5	4	6.4	24	0.013	0.54%	0.08%	2.04	82.96	0.86	1.22	Hf = 0.07 Kf = 1.14	520.00
														Hb = 0.08	520.08
SD77	SD27	0.93	5	4	3.7	24	0.013	1.37%	0.03%	1.18	123.7	0.5	0.61	Hf = 0.03 Kf = 1.14	520.11
														Hb = 0.01	520.12
SD27	SD26	0.84	5	4	3.4	15	0.013	2.48%	0.27%	2.74	34.33	0.49	1.50	Hf = 0.09 Kf = 2.14	520.21
														Hb = 0.17	520.39
SD26	SD25	0.55	5	4	2.2	15	0.013	2.03%	0.12%	1.79	22.12	0.41	1.50	Hf = 0.03 Kf = 2.14	520.41
														Hb = 0.07	520.49
															520.21
SD27	SD28	3.94	5	4	15.8	24	0.013	0.50%	0.49%	5.02	20.99	1.6	0.50	Hf = 0.10 Kf = 1.14	520.31
														Hb = 0.20	520.51
SD28	SD29	3.40	5	4	13.6	24	0.013	0.52%	0.36%	4.33	57.21	1.38	1.50	Hf = 0.21 Kf = 1.14	520.71
														Hb = 0.44	521.15
SD29	SD30	1.69	5	4	6.8	15	0.013	0.50%	1.10%	5.51	29.86	1.25	1.19	Hf = 0.33 Kf = 2.14	521.48
														Hb = 0.56	522.04
															521.48
SD29	SD72	1.10	5	4	4.4	15	0.013	1.33%	0.46%	3.59	123.7	1.25	1.50	Hf = 0.57 Kf = 2.14	522.05
														Hb = 0.30	522.35

SHA-61.1-493
1-1-77

MARYLAND STATE HIGHWAY ADMINISTRATION

SHEET 6 OF 9

HYDRAULIC GRADIENT FOR STORM SEWERS

DESIGNED / CHECKED BY:

CONTRACT

DATE:

RAINFALL FACTOR

TITLE

* FROM FORM SHA-611.1-420

STRUCTURE		10 YEAR RUNOFF				PIPE								HYDRAULIC GRADIENT	
FROM	TO	ΣCA *	T_C *	I RAIN FALL INTENS IN/HR	Q cfs	SIZE IN. *	n MANNIN GS COEF	S_O SLOPE *%	S_F SLOPE %	V_F VEL. ft/sec	L LENGTH ft. *	d_n NORM DEPTH ft.	K_b	DESCRIPTION OF LOSS	ELEVATION
SD31	SD33	0.72	5	4	2.9	15	0.013	4.34%	0.20%	2.35	39.15	0.39	1.47	Hf = 0.08 Kf = 2.14	514.39
														Hb = 0.13	515.70
															514.40
SD37	SD34	0.09	5	4	0.4	15	0.013	0.82%	0.00%	0.29	54.98	0.2	1.50	Hf = 0.00 Kf = 2.14	514.95
														Hb = 0.00	515.20
															514.56
SD36	SD38	0.91	5	4	3.6	18	0.013	1.27%	0.12%	2.06	54.95	0.56	1.50	Hf = 0.07 Kf = 1.67	514.86
														Hb = 0.10	515.39
SD38	SD39	0.36	5	4	1.4	15	0.013	1.09%	0.05%	1.17	27.52	0.39	1.27	Hf = 0.01 Kf = 2.14	515.40
														Hb = 0.03	515.43
															511.61
SD35	SD73	0.91	5	4	3.6	15	0.013	1.71%	0.32%	2.97	102.2	0.86	1.37	Hf = 0.32 Kf = 2.14	514.61
														Hb = 0.19	515.50
SD74	SD40	0.40	5	4	1.6	18	0.013	1.79%	0.02%	0.91	55.74	0.38	0.50	Hf = 0.01 Kf = 1.67	#VALUE!
														Hb = 0.01	#VALUE!
SD40	SD41	0.26	5	4	1.0	15	0.013	1.65%	0.03%	0.85	24.23	0.29	1.50	Hf = 0.01 Kf = 2.14	
														Hb = 0.02	

SHA-61.1-493
1-1-77

MARYLAND STATE HIGHWAY ADMINISTRATION

SHEET 7 OF 9

HYDRAULIC GRADIENT FOR STORM SEWERS

DESIGNED / CHECKED BY:

CONTRACT

DATE:

RAINFALL FACTOR

TITLE

* FROM FORM SHA-611.1-420

STRUCTURE		10 YEAR RUNOFF				PIPE								HYDRAULIC GRADIENT	
FROM	TO	ΣCA *	T_C *	I RAIN FALL INTENS IN/HR	Q cfs	SIZE IN. *	n MANNIN GS COEF	S_O SLOPE *%	S_F SLOPE %	V_F VEL. ft/sec	L LENGTH ft. *	d_n NORM DEPTH ft.	K_b	DESCRIPTION OF LOSS	ELEVATION
SD42	SD43	0.18	5	4	0.7	15	0.013	2.27%	0.01%	0.59	24.23	0.23	1.50	Hf = 0.00 Kf = 2.14	513.13
														Hb = 0.01	513.45
															514.86
SD45	SD44	0.28	5	4	1.1	15	0.013	0.89%	0.03%	0.91	22.42	0.29	1.50	Hf = 0.01 Kf = 2.14	514.87
														Hb = 0.02	514.89
															513.17
SD46	SD48	2.31	5	4	9.2	18	0.013	2.90%	0.77%	5.23	72.53	0.75	1.44	Hf = 0.56 Kf = 1.67	513.73
														Hb = 0.61	515.00
SD48	SD50	2.10	5	4	8.4	18	0.013	5.76%	0.64%	4.75	143.2	0.65	0.76	Hf = 0.92 Kf = 1.67	515.92
														Hb = 0.27	516.18
SD50	SD51	1.97	5	4	7.9	18	0.013	4.51%	0.56%	4.46	189.4	0.6	0.69	Hf = 1.07 Kf = 1.67	517.25
														Hb = 0.21	521.10
SD51	SD53	1.11	5	4	4.4	18	0.013	3.02%	0.18%	2.51	281.3	0.5	0.64	Hf = 0.50 Kf = 1.67	521.60
														Hb = 0.06	529.53
SD53	SD55	0.54	5	4	2.2	18	0.013	2.00%	0.04%	1.22	167.7	0.38	0.50	Hf = 0.07 Kf = 1.67	529.60
														Hb = 0.01	529.61
SD55	SD56	0.46	5	4	1.8	15	0.013	1.64%	0.08%	1.50	27.38	0.39	1.50	Hf = 0.02 Kf = 2.14	
														Hb = 0.05	

SHA-61.1-493
1-1-77

MARYLAND STATE HIGHWAY ADMINISTRATION

SHEET 8 OF 9

HYDRAULIC GRADIENT FOR STORM SEWERS

DESIGNED / CHECKED BY:

CONTRACT

DATE:

RAINFALL FACTOR

TITLE

* FROM FORM SHA-611.1-420

STRUCTURE		10 YEAR RUNOFF				PIPE								HYDRAULIC GRADIENT	
FROM	TO	ΣCA *	T_C *	I RAIN FALL INTENS IN/HR	Q cfs	SIZE IN. *	n MANNIN GS COEF	S_O SLOPE *%	S_F SLOPE %	V_F VEL. ft/sec	L LENGTH ft. *	d_n NORM DEPTH ft.	K_b	DESCRIPTION OF LOSS	ELEVATION
SD48	SD49	0.14	5	4	0.6	15	0.013	2.06%	0.01%	0.46	24.23	0.2	1.50	Hf = 0.00 Kf = 2.14	514.55
														Hb = 0.00	514.85
															521.60
SD51	SD52	0.43	5	4	1.7	15	0.013	2.66%	0.07%	1.40	31.94	0.34	0.96	Hf = 0.02 Kf = 2.14	531.94
														Hb = 0.03	532.45
															529.60
SD53	SD54	0.28	5	4	1.1	15	0.013	2.06%	0.03%	0.91	24.23	0.29	1.50	Hf = 0.01 Kf = 2.14	540.14
														Hb = 0.02	540.35
															529.90
SD63	SD57	0.37	5	4	1.5	18	0.013	2.91%	0.02%	0.84	51.62	0.29	1.36	Hf = 0.01 Kf = 1.67	529.91
														Hb = 0.01	530.99
SD57	SD58	0.30	5	4	1.2	15	0.013	1.34%	0.03%	0.98	22.43	0.34	1.26	Hf = 0.01 Kf = 2.14	531.00
														Hb = 0.02	531.02
															508.68
ES14	SD69	0.93	5	4	3.7	15	0.013	2.02%	0.33%	3.03	37.12	0.55	0.50	Hf = 0.12 Kf = 2.14	508.80
														Hb = 0.07	508.87
SD69	SD59	0.76	5	4	3.0	15	0.013	2.01%	0.22%	2.48	22.43	0.49	0.50	Hf = 0.05 Kf = 2.14	
														Hb = 0.05	

SHA-61.1-493
1-1-77

MARYLAND STATE HIGHWAY ADMINISTRATION

SHEET 9 OF 9

HYDRAULIC GRADIENT FOR STORM SEWERS

DESIGNED / CHECKED BY:

CONTRACT

DATE:

RAINFALL FACTOR

TITLE

* FROM FORM SHA-611.1-420

STRUCTURE		10 YEAR RUNOFF				PIPE								HYDRAULIC GRADIENT	
FROM	TO	ΣCA *	T_C *	I RAIN FALL INTENS IN/HR	Q cfs	SIZE IN. *	n MANNIN GS COEF	S_O SLOPE *%	S_F SLOPE %	V_F VEL. ft/sec	L LENGTH ft. *	d_n NORM DEPTH ft.	K_b	DESCRIPTION OF LOSS	ELEVATION
															508.68
ES20	SD60	2.61	5	4	10.4	18	0.013	3.00%	0.99%	5.91	86.8	0.81	0.50	Hf = 0.86 Kf = 1.67	509.54
														Hb = 0.27	509.81
SD60	SD61	2.35	5	4	9.4	18	0.013	3.47%	0.80%	5.32	128.2	0.72	0.50	Hf = 1.03 Kf = 1.67	510.83
														Hb = 0.22	512.58
SD61	SD62	2.06	5	4	8.2	18	0.013	3.34%	0.62%	4.66	137.9	0.68	0.50	Hf = 0.85 Kf = 1.67	517.58
														Hb = 0.17	522.10
SD62	SD63	1.80	5	4	7.2	18	0.013	4.00%	0.47%	4.07	133.7	0.6	0.59	Hf = 0.63 Kf = 1.67	524.40
														Hb = 0.15	529.71
SD63	SD64	1.36	5	4	5.4	18	0.013	3.04%	0.27%	3.08	69.01	0.56	0.59	Hf = 0.19 Kf = 1.67	529.90
														Hb = 0.09	531.81
SD64	SD65	1.11	5	4	4.4	18	0.013	2.00%	0.18%	2.51	117.5	0.56	0.55	Hf = 0.21 Kf = 1.67	532.02
														Hb = 0.05	534.02
SD65	SD66	0.84	5	4	3.4	18	0.013	2.01%	0.10%	1.90	126.9	0.42	0.50	Hf = 0.13 Kf = 1.67	534.15
														Hb = 0.03	536.48
SD66	SD67	0.53	5	4	2.1	18	0.013	3.42%	0.04%	1.20	141.8	0.33	0.50	Hf = 0.06 Kf = 1.67	536.54
														Hb = 0.01	541.24
SD67	SD68	0.28	5	4	1.1	18	0.013	2.84%	0.01%	0.63	116.1	0.24	0.50	Hf = 0.01 Kf = 1.67	541.25
														Hb = 0.00	544.30
															511.95
SD45	SD32	0.62	5	4	2.5	15	0.013	3.99%	0.15%	2.02	15.04	0.36	1.35	Hf = 0.02 Kf = 2.14	511.97
														Hb = 0.09	512.06

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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11142 WILLIAMSPORT PIKE, GREENCASTLE, PA 17225, 717-597-3007
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-313-2666

MARK	DESCRIPTION:	DATE:
3	REVISED PER AGENCY COMMENTS	03.19.2025
2	REVISED PER AGENCY COMMENTS	09.05.2025
1	REVISED PER AGENCY COMMENTS	09.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO. 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE: N.T.S.
SHEET TITLE

STORM DRAIN CALCULATIONS

C-405
SHEET 41 OF 57

P:\SHARED FILES\PROJECTS\2023\2023-0285\ENGINEERING\CONSTRUCTION PROFILES\2-SWC_2025-06-13

SHEET: 1 OF 5

STORM SEWER DESIGN

DESIGNED BY: AKM
CHECKED: TMF
CONTRACT:
TITLE: MADISON GREENS RESIDENTIAL

Structure From	Structure To	Drainage Area Info A Area Acres	C Runoff Coeff	CA	ΣCA Total Coeff x Area	10 yr Runoff T_c Time Conc. Min	i Rainfall Intensity in/hr	Q Flow cfs	Pipe Dia Pipe Size inches	Pipe Type	n Manning Coeff.	S_o Slope %	L Length Ft.	V_o Velocity ft/sec	Time in pipe min	Capacity Full cfs	Remarks
SD4	SD3	0.52	0.67	0.35	0.35	5	4.00	1.39	15	HDPE	0.013	0.50	20.99	3.24	0.11	4.58	Dn= 0.46
SD3	ES8	0.52	0.67	0.35	0.70	5	4.00	2.79	15	HDPE	0.013	0.50	30.21	3.91	0.13	4.58	Dn= 0.70
SD23	SD22	0.58	0.67	0.39	0.39	5	4.00	1.55	15	HDPE	0.013	1.71	23.33	5.26	0.07	8.47	Dn= 0.36
SD22	SD15	0.23	0.59	0.14	0.52	5	4.00	2.10	18	HDPE	0.013	0.53	133.21	3.66	0.61	7.67	Dn= 0.53
SD15	SD21	0.78	0.69	0.54	1.06	5	4.00	4.25	18	HDPE	0.013	0.50	118.19	4.35	0.45	7.45	Dn= 0.81
SD21	SD20	1.13	0.55	0.62	1.68	5	4.00	6.74	18	HDPE	0.013	0.64	23.33	5.28	0.07	8.43	Dn= 1.01
SD202	SD13	0.35	0.62	0.22	1.90	5	4.00	7.60	18	HDPE	0.013	0.53	132.03	4.95	0.44	7.67	Dn= 1.22
SD13	SD18	0.70	0.67	0.47	2.37	5	4.00	9.48	18	HDPE	0.013	0.50	119.38	4.21	0.47	7.45	Dn= 1.50 ERROR
SD18	SD17	1.44	0.57	0.82	3.19	5	4.00	12.76	24	HDPE	0.013	0.45	22.42	5.42	0.07	15.22	Dn= 1.40
SD17	SD11	0.45	0.73	0.33	3.52	5	4.00	14.08	24	HDPE	0.013	0.50	169.82	5.75	0.49	16.04	Dn= 1.44
SD11	SD9	0.86	0.69	0.59	4.11	5	4.00	16.45	24	HDPE	0.013	0.50	218.7	5.81	0.63	16.04	Dn= 1.68 ERROR
SD9	SD7	0.78	0.67	0.52	4.64	5	4.00	18.54	30	HDPE	0.013	0.52	231.66	6.36	0.61	29.66	Dn= 1.43
SD7	SD5	0.80	0.66	0.53	5.16	5	4.00	20.65	30	HDPE	0.013	0.52	87.14	6.51	0.22	29.66	Dn= 1.53
SD5	SD6	0.13	0.62	0.08	5.24	5	4.00	20.98	30	HDPE	0.013	0.61	24.78	6.94	0.06	32.12	Dn= 1.45
SD6	ES15	0.21	0.64	0.13	5.38	5	4.00	21.51	30	HDPE	0.013	0.53	132.41	6.61	0.33	29.94	Dn= 1.55
SD8	SD7	0.40	0.66	0.26	0.26	5	4.00	1.06	15	HDPE	0.013	2.00	29.78	4.86	0.10	9.16	Dn= 0.28
SD10	SD9	0.39	0.67	0.26	0.26	5	4.00	1.05	15	HDPE	0.013	2.00	24.23	4.86	0.08315	9.16	Dn= 0.28

SHEET: 2 OF 5

STORM SEWER DESIGN

DESIGNED BY: AKM
CHECKED: TMF
CONTRACT:
TITLE: MADISON GREENS RESIDENTIAL

Structure From	Structure To	Drainage Area Info A Area Acres	C Runoff Coeff	CA	ΣCA Total Coeff x Area	10 yr Runoff T_c Time Conc. Min	i Rainfall Intensity in/hr	Q Flow cfs	Pipe Dia Pipe Size inches	Pipe Type	n Manning Coeff.	S_o Slope %	L Length Ft.	V_o Velocity ft/sec	Time in pipe min	Capacity Full cfs	Remarks
SD12	SD11	0.58	0.68	0.39	0.39	5	4.00	1.58	15	HDPE	0.013	2.14	23.33	5.65	0.07	9.48	Dn= 0.34
SD71	SD19	0.78	0.47	0.37	0.37	5	4.00	1.47	15	HDPE	0.013	0.59	16.88	3.52	0.08	4.98	Dn= 0.46
SD19	SD18	0.35	0.76	0.27	0.63	5	4.00	2.53	18	HDPE	0.013	0.50	80.71	3.80	0.35	7.45	Dn= 0.60
SD14	SD13	0.49	0.49	0.24	0.24	5	4.00	0.96	15	HDPE	0.013	2.00	27.69	4.73	0.10	9.16	Dn= 0.26
SD70	SD24	0.63	0.48	0.30	0.30	5	4.00	1.21	15	HDPE	0.013	0.84	17.83	3.75	0.08	5.94	Dn= 0.38
SD24	SD21	0.22	0.67	0.15	0.45	5	4.00	1.80	18	HDPE	0.013	0.50	80.71	3.44	0.39	7.45	Dn= 0.50
SD16	SD15	0.56	0.69	0.39	0.39	5	4.00	1.55	15	HDPE	0.013	2.00	30.07	5.46	0.09	9.16	Dn= 0.34
SD25	SD26	0.90	0.61	0.55	0.55	5	4.00	2.20	15	HDPE	0.013	2.03	22.12	6.15	0.06	9.23	Dn= 0.41
SD26	SD27	0.42	0.70	0.29	0.84	5	4.00	3.37	15	HDPE	0.013	2.48	34.33	7.41	0.08	10.20	Dn= 0.49
SD27	SD77	0.14	0.60	0.08	0.93	5	4.00	3.71	24	HDPE	0.013	1.37	123.72	5.92	0.35	26.55	Dn= 0.50
SD77	SD31	1.44	0.47	0.68	1.60	5	4.00	6.42	24	HDPE	0.013	0.54	82.96	4.96	0.28	16.67	Dn= 0.86
SD31	SD35	0.78	0.81	0.63	2.24	5	4.00	8.94	24	HDPE	0.013	0.53	46.9	5.34	0.15	16.51	Dn= 1.04
SD35	SD36	0.68	0.63	0.43	2.66	5	4.00	10.66	30	HDPE	0.013	0.50	50.69	5.41	0.16	29.08	Dn= 1.03
SD36	SD37	0.47	0.66	0.31	2.97	5	4.00	11.90	30	HDPE	0.013	0.67	22.42	6.26	0.05967	33.66	Dn= 1.03
SD37	SD75	0.50	0.63	0.32	3.29	5	4.00	13.16	36	HDPE	0.013	0.50	229.18	5.72	0.66745	47.29	Dn= 1.08

SHEET: 3 OF 5

STORM SEWER DESIGN

DESIGNED BY: AKM
CHECKED: TMF
CONTRACT:
TITLE: MADISON GREENS RESIDENTIAL

Structure From	Structure To	Drainage Area Info A Area Acres	C Runoff Coeff	CA	ΣCA Total Coeff x Area	10 yr Runoff T_c Time Conc. Min	i Rainfall Intensity in/hr	Q Flow cfs	Pipe Dia Pipe Size inches	Pipe Type	n Manning Coeff.	S_o Slope %	L Length Ft.	V_o Velocity ft/sec	Time in pipe min	Capacity Full cfs	Remarks
					3.29												
SD75	SD74	2.46	0.46	1.13	4.42	5	4.00	17.69	36	HDPE	0.013	0.80	18.8	7.34	0.04	59.82	Dn= 1.11
SD74	SD42	0.23	0.73	0.17	4.59	5	4.00	18.36	36	HDPE	0.013	2.64	62.51	11.25	0.09	108.66	Dn= 0.81
SD42	SD45	0.40	0.71	0.28	4.87	5	4.00	11.91	36	HDPE	0.013	0.63	127.19	6.04	0.35	53.08	Dn= 0.96
SD45	SD46	1.11	0.67	0.74	5.62	5	4.00	22.47	36	HDPE	0.013	0.65	92.71	7.28	0.21	53.92	Dn= 1.35
SD46	SD47	1.20	0.50	0.60	6.22	5	4.00	24.87	36	HDPE	0.013	1.03	24.23	8.77	0.05	67.87	Dn= 1.23
SD47	ES13	0.08	0.68	0.05	6.27	5	4.00	25.09	36	HDPE	0.013	3.81	154.91	14.07	0.18	130.54	Dn= 0.87
SD39	SD38	0.56	0.65	0.36	0.36	5	4.00	1.46	15	HDPE	0.013	1.09	27.52	4.35	0.11	6.76	Dn= 0.39
SD38	SD36	0.82	0.66	0.54	0.91	5	4.00	3.62	18	HDPE	0.013	1.27	54.95	5.83	0.16	11.87	Dn= 0.56
SD34	SD37	0.16	0.56	0.09	0.09	5	4.00	0.36	15	HDPE	0.013	0.82	54.98	2.57	0.36	5.87	Dn= 0.20
SD33	SD31	1.05	0.69	0.72	0.72	5	4.00	2.90	15	HDPE	0.013	4.34	39.15	8.69	0.08	13.49	Dn= 0.39
SD41	SD40	0.32	0.80	0.26	0.26	5	4.00	1.02	15	HDPE	0.013	1.65	24.23	4.53	0.09	8.32	Dn= 0.29
SD40	SD74	0.20	0.70	0.14	0.40	5	4.00	1.58	18	HDPE	0.013	1.10	131.48	4.38	0.50	11.05	Dn= 0.38
SD43	SD42	0.22	0.80	0.18	0.18	5	4.00	0.70	15	HDPE	0.013	2.06	24.23	4.37	0.09231	9.30	Dn= 0.23

SHEET: 4 OF 5

STORM SEWER DESIGN

DESIGNED BY: AKM
CHECKED: TMF
CONTRACT:
TITLE: MADISON GREENS RESIDENTIAL

Structure From	Structure To	Drainage Area Info A Area Acres	C Runoff Coeff	CA	ΣCA Total Coeff x Area	10 yr Runoff T_c Time Conc. Min	i Rainfall Intensity in/hr	Q Flow cfs	Pipe Dia Pipe Size inches	Pipe Type	n Manning Coeff.	S_o Slope %	L Length Ft.	V_o Velocity ft/sec	Time in pipe min	Capacity Full cfs	Remarks
SD44	SD45	0.36	0.77	0.28	0.28	5	4.00	1.11	15	HDPE	0.013	2.01	22.42	5.00	0.07	9.18	Dn= 0.29
SD56	SD55	0.95	0.48	0.46	0.46	5	4.00	1.82	15	HDPE	0.013	1.64	27.38	5.34	0.09	8.29	Dn= 0.39
SD55	SD53	0.13	0.66	0.09	0.54	5	4.00	2.17	18	HDPE	0.013	2.00	167.67	5.91	0.47	14.90	Dn= 0.38
SD53	SD51	0.86	0.66	0.57	1.11	5	4.00	4.44	18	HDPE	0.013	3.02	281.26	8.46	0.55	18.30	Dn= 0.50
SD51	SD50	1.41	0.61	0.86	1.97	5	4.00	7.88	18	HDPE	0.013	4.51	189.37	11.42	0.28	22.37	Dn= 0.60
SD50	SD48	0.22	0.60	0.13	2.10	5	4.00	8.41	18	HDPE	0.013	4.02	143.15	11.17	0.21	21.12	Dn= 0.65
SD48	SD46	0.28	0.76	0.21	2.31	5	4.00	9.26	18	HDPE	0.013	2.90	72.53	10.15	0.12	17.94	Dn= 0.75
SD49	SD48	0.19	0.72	0.14	0.14	5	4.00	0.55	15	HDPE	0.013	2.06	24.23	4.07	0.10	9.30	Dn= 0.20
SD52	SD51	0.75	0.57	0.43	0.43	5	4.00	1.71	15	HDPE	0.013	2.66	31.94	6.30	0.08	10.56	Dn= 0.34
SD54	SD53	0.43	0.64	0.28	0.28	5	4.00	1.10	15	HDPE	0.013	2.06	24.23	5.06	0.08	9.30	Dn= 0.29
SD58	SD57	0.57	0.53	0.30	0.30	5	4.00	1.21	15	HDPE	0.013	1.34	22.43	4.47	0.08	7.50	Dn= 0.34
SD57	SD63	0.08	0.79	0.06	0.37	5	4.00	1.46	18	HDPE	0.013	2.91	51.62	6.07	0.14	17.97	Dn= 0.29
SD59	SD69	1.29	0.59	0.76	0.76	5	4.00	3.04	15	HDPE	0.013	2.01	22.43	6.67	0.05608	9.18	Dn= 0.49
SD69	ES14	0.25	0.69	0.17	0.93	5	4.00	3.73	15	HDPE	0.013	2.02	37.12	7.08	0.08732	9.21	Dn= 0.55

SHEET: 5 OF 5

STORM SEWER DESIGN

DESIGNED BY: AKM
CHECKED: TMF
CONTRACT:
TITLE: MADISON GREENS RESIDENTIAL

Structure From	Structure To	Drainage Area Info A Area Acres	C Runoff Coeff	CA	ΣCA Total Coeff x Area	10 yr Runoff T_c Time Conc. Min	i Rainfall Intensity in/hr	Q Flow cfs	Pipe Dia Pipe Size inches	Pipe Type	n Manning Coeff.	S_o Slope %	L Length Ft.	V_o Velocity ft/sec	Time in pipe min	Capacity Full cfs	Remarks
SD68	SD67	0.38	0.73	0.28	0.28	5	4.00	1.11	18	HDPE	0.013	2.84	116.14	5.40	0.36	17.75	Dn= 0.24
SD67	SD66	0.32	0.79	0.25	0.53	5	4.00	2.12	18	HDPE	0.013	3.42	141.8	7.17	0.33	19.48	Dn= 0.33
SD66	SD65	0.39	0.79	0.31	0.84	5	4.00	3.35	18	HDPE	0.013	3.02	126.87	7.74	0.27	18.30	Dn= 0.42
SD65	SD64	0.34	0.81	0.28	1.11	5	4.00	4.45	18	HDPE	0.013	2.00	117.5	7.31	0.27	14.90	Dn= 0.56
SD64	SD63	0.31	0.79	0.24	1.36	5	4.00	5.43	18	HDPE	0.013	3.04	69.01	9.02	0.13	18.36	Dn= 0.56
SD63	SD62	0.75	0.59	0.44	1.80	5	4.00	7.20	18	HDPE	0.013	4.00	133.68	10.75	0.21	21.07	Dn= 0.60
SD62	SD61	0.34	0.75	0.26	2.06	5	4.00	8.22	18	HDPE	0.013	3.34	137.91	10.40	0.22	19.25	Dn= 0.68
SD61	SD60	0.36	0.81	0.29	2.35	5	4.00	9.39	18	HDPE	0.013	3.47	128.15	10.91	0.20	19.62	Dn= 0.72
SD60	ES20	0.35	0.76	0.27	2.61	5	4.00	10.45	18	HDPE	0.013	3.00	86.8	10.65	0.14	18.24	Dn= 0.81
SD30	SD29	2.49	0.68	1.69	1.69	5	4.00	6.77	15	HDPE	0.013	0.50	29.86	3.73	0.13	4.58	Dn= 1.25 ERROR
SD29	SD28	2.58	0.66	1.70	3.40	5	4.00	13.58	24	HDPE	0.013	0.52	57.21	5.81	0.16	16.36	Dn= 1.38
SD28	SD27	0.98	0.55	0.54	3.94	5	4.00	15.74	24	HDPE	0.013	0.50	20.99	5.82	0.06	16.04	Dn= 1.60
SD72	SD29	2.15	0.51	1.10	1.10	5	4.00	4.39	15	HDPE	0.013	1.33	123.67	6.33	0.33	7.47	Dn= 0.69
SD73	SD35	1.90	0.48	0.91	0.91	5	4.00	3.65	15	HDPE	0.013	1.71	102.23	6.59	0.26	8.47	Dn= 0.56
SD32	SD45	1.22	0.51	0.62	0.62	5	4.00	2.49	15	HDPE	0.013	3.99	15.04	8.03	0.03121	12.94	Dn= 0.36

SHA-61.1-491 9-1-80 1V-3-13-2

MARYLAND STATE HIGHWAY ADMINISTRATION
INLET SPACING

SHEET 1 of 1
DATE: 19-Mar-25
REV:

DESIGNED BY: AKM
CHECKED BY: TMF
CONTRACT:
PROJECT: Madison Greens Residential
RAINFALL FACTORS: VDOT Drainage Manual

INLET NO.	AREA ACRES	C	CA	BYPASS CA	TOTAL CA	t_c MIN.	I_d & I_{hr}	Q_d CFS	INLET TYPE	CROSS SLOPE	STREET GRADE	SPREAD FT.	Max Spread (FT.)	PICKUP %	BYPASS CA TO	Downstream Inlet	REMARKS
SD3	0.52	0.67	0.35	0.02	0.37	5	4.00	1.47	MDSHA TYPE S COMBINATION	0.313	0.01	7.7	12	94%	0.02	N/A	UNDER 12'
SD4	0.52	0.67	0.35	0.02	0.37	5	4.00	1.47	MDSHA TYPE E COMBINATION	0.313	0.01	7.6	12	95%	0.02	N/A	UNDER 12'
SD5	0.13	0.62	0.08	0.05	0.13	5	4.00	0.52	MDSHA TYPE S COMBINATION	0.313	0.01	5.2	12	93%	0.01	SD4	UNDER 12'
SD6	0.21	0.64	0.13	0.05	0.18	5	4.00	0.73	MDSHA TYPE E COMBINATION	0.313	0.01	5.9	12	90%	0.02	SD3	UNDER 12'
SD7	0.4	0.66	0.27	0.04	0.31	5	4.00	1.22	MDSHA TYPE E COMBINATION	0.313	0.01	7.2	12	84%	0.05	SD5	UNDER 12'
SD8	0.4	0.66	0.27	0.04	0.31	5	4.00	1.22	MDSHA TYPE E COMBINATION	0.313	0.01	7.2	12	84%	0.05	SD6	UNDER 12'
SD9	0.39	0.67	0.26	0.03	0.29	5	4.00	1.17	MDSHA TYPE E COMBINATION	0.313	0.01	7.0	12	85%	0.04	SD7	UNDER 12'
SD10	0.39	0.67	0.26	0.02	0.28	5	4.00	1.13	MDSHA TYPE E COMBINATION	0.313	0.01	7.0	12	85%	0.04	SD8	UNDER 12'
SD11	0.28	0.71	0.20	0.02	0.22	5	4.00	0.87	MDSHA TYPE E COMBINATION	0.313	0.01	6.3	12	88%	0.03	SD9	UNDER 12'
SD12	0.58	0.68	0.39	0.02	0.41	5	4.00	1.65	MDSHA TYPE E COMBINATION	0.313	0.01	8.0	12	94%	0.02	SD10	UNDER 12'
SD13	0.21	0.68	0.14	0.03	0.17	5	4.00	0.69	MDSHA TYPE E COMBINATION	0.313	0.01	5.7	12	91%	0.02	SD18	UNDER 12'
SD14	0.49	0.67	0.33		0.33	5	4.00	1.31	MDSHA TYPE E COMBINATION	0.313	0.01	7.3	12	95%	0.02	SD12	UNDER 12'
SD15	0.22	0.69	0.15		0.15	5	4.00	0.61	MDSHA TYPE E COMBINATION	0.313	0.01	5.5	12	92%	0.01	SD21	UNDER 12'
SD16	0.56	0.69	0.39		0.39	5	4.00	1.54	MDSHA TYPE E COMBINATION	0.313	0.01	5.4	12	100%	0.00	SD14	UNDER 12'
SD17	0.45	0.73	0.33		0.33	5	4.00	1.31	MDSHA TYPE E COMBINATION	0.313	0.01	7.1	12	95%	0.02	SD11	UNDER 12'
SD18	0.31	0.61	0.19	0.06	0.25	5	4.00	0.99	MDSHA TYPE E COMBINATION	0.313	0.01	6.3	12	100%	0.00	N/A	UNDER 12'
SD19	0.35	0.76	0.27		0.27	5	4.00	1.07	MDSHA TYPE E COMBINATION	0.313	0.01	6.5	12	86%	0.04	SD18	UNDER 12'
SD20	0.345	0.62	0.21		0.21	5	4.00	0.85	MDSHA TYPE E COMBINATION	0.313	0.01	6.1	12	88%	0.03	SD13	UNDER 12'
SD21	0.28	0.62	0.17	0.02	0.19	5	4.00	0.77	MDSHA TYPE E COMBINATION	0.313	0.01	5.8	12	100%	0.00	N/A	UNDER 12'
SD22	0.23	0.59	0.14		0.14	5	4.00	0.54	MDSHA TYPE E COMBINATION	0.313	0.01	4.8	12	100%	0.00	SD15	UNDER 12'
SD23	0.58	0.67	0.39		0.39	5	4.00	1.55	MDSHA TYPE E COMBINATION	0.313	0.01	7.1	12	100%	0.00	N/A	UNDER 12'
SD24	0.22	0.67	0.15		0.15	5	4.00	0.59	MDSHA TYPE E COMBINATION	0.313	0.01	5.2	12	92%	0.01	SD21	UNDER 12'
SD25	0.9	0.61	0.55		0.55	5	4.00	2.16	MDSHA TYPE E COMBINATION	0.313	0.01	8.5	12	91%	0.05	SD28	UNDER 12'
SD26	0.42	0.70	0.29		0.29	5	4.00	1.17	MDSHA TYPE E COMBINATION	0.313	0.01	6.8	12	84%	0.05	SD27	UNDER 12'
SD27	0.06	0.60	0.04	0.05	0.09	5	4.00	0.34	MDSHA TYPE E COMBINATION	0.313	0.01	4.2	12	100%	0.00	N/A	UNDER 12'
SD28	0.44	0.55	0.24	0.11	0.35	5	4.00	1.42	MDSHA TYPE E COMBINATION	0.313	0.01	7.3	12	100%	0.00	N/A	UNDER 12'
SD29	0.97	0.66	0.64		0.64	5	4.00	2.58	MDSHA TYPE E COMBINATION	0.313	0.04	7.1	12	91%	0.06	SD28	UNDER 12'
SD30	0.92	0.68	0.62		0.62	5	4.00	2.49	MDSHA TYPE E COMBINATION	0.313	0.04	7.0	12	91%	0.06	SD35	UNDER 12'
SD31	0.24	0.24	0.06		0.06	5	4.00	0.23	MDSHA TYPE E COMBINATION	0.313	0.01	4.4	12	96%	0.00	SD32	UNDER 12'
SD32	0.08	0.73	0.06	0.04	0.10	5	4.00	0.39	MDSHA TYPE E COMBINATION	0.313	0.01	4.5	12	100%	0.00	N/A	UNDER 12'
SD33	0.38	0.69	0.26		0.26	5	4.00	1.05	MDSHA TYPE E COMBINATION	0.313	0.01	6.5	12	86%	0.04	SD32	UNDER 12'
SD34	0.33	0.71	0.24		0.24	5	4.00	0.94	MDSHA TYPE E COMBINATION	0.313	0.01	6.2	12	87%	0.03	SD37	UNDER 12'
SD35	0.27	0.63	0.17	0.06	0.23	5	4.00	0.92	MDSHA TYPE E COMBINATION	0.313	0.01	5.5	12	91%	0.02	SD36	UNDER 12'

SHA-61.1-491 9-1-80 1V-3-13-2

MARYLAND STATE HIGHWAY ADMINISTRATION
INLET SPACING

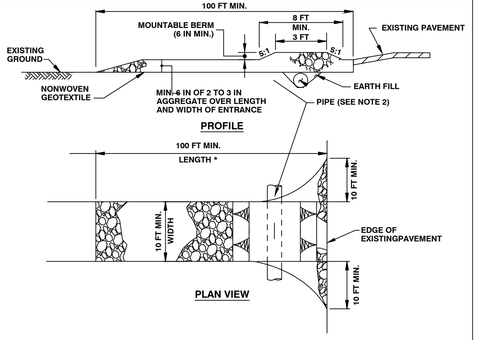
SHEET 1 of 1
DATE: 19-Mar-25
REV:

DESIGNED BY: AKM
CHECKED BY: TMF
CONTRACT:
PROJECT: Madison Greens Residential
RAINFALL FACTORS: VDOT Drainage Manual

INLET NO.	AREA ACRES	C	CA	BYPASS CA	TOTAL CA	t_c MIN.	I_d & I_{hr}	Q_d CFS	INLET TYPE	CROSS SLOPE	STREET GRADE	SPREAD FT.	Max Spread (FT.)	PICKUP %	BYPASS CA TO	Downstream Inlet	REMARKS
SD36	0.18	0.66	0.12	0.02	0.14	5	4.00	0.55	MDSHA TYPE S COMBINATION	0.313	0.01	5.7	12	100%	0.00	N/A	UNDER 12'
SD37	0.2	0.63	0.13	0.10	0.23	5	4.00	0.90	MDSHA TYPE S COMBINATION	0.313	0.01	6.1	12	100%	0.00	N/A	UNDER 12'
SD38	0.82	0.66	0.54		0.54	5	4.00	2.17	MDSHA TYPE S COMBINATION	0.313	0.01	8.5	12	91%	0.05	SD36	UNDER 12'
SD39	0.56	0.65	0.37		0.37	5	4.00	1.46	MDSHA TYPE S COMBINATION	0.313	0.01	7.3	12	82%	0.07	SD37	UNDER 12'
SD40	0.2	0.70	0.14		0.14	5	4.00	0.56	MDSHA TYPE S COMBINATION	0.313	0.01	5.1	12	92%	0.01	SD42	UNDER 12'
SD41	0.32	0.80	0.26		0.26	5	4.00	1.03	MDSHA TYPE S COMBINATION	0.313	0.01	6.5	12	86%	0.04	SD43	UNDER 12'
SD42	0.14	0.73	0.10	0.01	0.11	5	4.00	0.45	MDSHA TYPE S COMBINATION	0.313	0.01	3.9	12	98%	0.00	SD45	UNDER 12'
SD43	0.22	0.70	0.15		0.15	5	4.00	0.62	MDSHA TYPE S COMBINATION	0.313	0.01	6.0	12	88%	0.02	SD44	UNDER 12'
SD44	0.36	0.77	0.28	0.02	0.30	5	4.00	1.18	MDSHA TYPE S COMBINATION	0.313	0.01	6.8	12	100%	0.00	N/A	UNDER 12'
SD45	0.35	0.79	0.28		0.28	5	4.00	1.11	MDSHA TYPE S COMBINATION	0.313	1.00	4.5	12	100%	0.00	N/A	UNDER 12'
SD46	0.6	0.50	0.30		0.30	5	4.00	1.20	MDSHA TYPE S COMBINATION	0.313	0.01	3.0	12	100%	0.00	SD45	UNDER 12'
SD47	0.03	0.68	0.02		0.02	5	4.00	0.08	MDSHA TYPE S COMBINATION	0.313	0.01	2.5	12	100%	0.00	SD44	UNDER 12'
SD48	0.09	0.85	0.08		0.08	5	4.00	0.31	MDSHA TYPE S COMBINATION	0.313	0.06	3.0	12	100%	0.00	SD46	UNDER 12'
SD49	0.19	0.72	0.14		0.14	5	4.00	0.55	MDSHA TYPE S COMBINATION	0.313	0.06	3.7	12	97%	0.00	SD59	UNDER 12'
SD50	0.22	0.60	0.13		0.13	5	4.00	0.53	MDSHA TYPE S COMBINATION	0.313	0.06	3.6	12	97%	0.00	SD48	UNDER 12'
SD51	0.66	0.65	0.43		0.43	5	4.00	1.72	MDSHA TYPE S COMBINATION	0.313	0.03	6.4	12	100%	0.00	N/A	UNDER 12'
SD52	0.75	0.57	0.43	0.04	0.47	5	4.00	1.87	MDSHA TYPE S COMBINATION	0.313	0.03	6.5	12	94%	0.03	SD58	UNDER 12'
SD53	0.43	0.69	0.30		0.30	5	4.00	1.18	MDSHA TYPE S COMBINATION	0.313	0.03	5.5	12	100%	0.00	N/A	UNDER 12'
SD54	0.43	0.64	0.28		0.28	5	4.00	1.10	MDSHA TYPE S COMBIN

01 C-501 DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

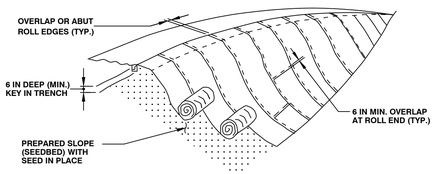
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 100 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

02 C-501 DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: TSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS

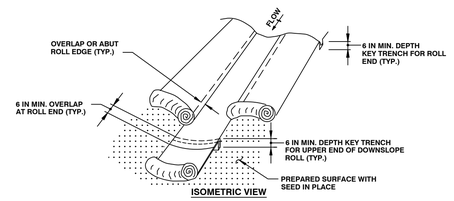
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWNSLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

03 C-501 DETAIL B-4-6-A TEMPORARY SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: TSSMC - * lb/ft² (* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

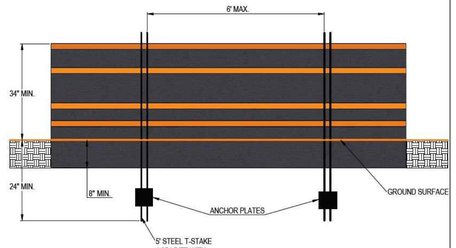
CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
7. OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

04 C-501 SMARTfence® 42 Detail:



SMARTfence® 42 is NTPEP Compliant
GTX-2018-01-187

SMARTFENCE 42"
INSTALLATION INSTRUCTIONS

SEDIMENT & PERIMETER CONTROL

STEP 1: Excavate trench a maximum of 4" wide and 6" deep. The trench shall be hand-cleaned following excavation to remove bulky debris such as rocks, sticks, and soil clods from the trench. Drive studded metal T-posts with anchor plates having a minimum weight of 1.25 lb /ft and a minimum 5 ft length. Drive post into ground a minimum of 18" depth. Post spacing must be no greater than 6 ft maximum.

STEP 2: Layout SMARTfence® 42 along proposed fence line next to anchor trench. Locate one end of the SMARTfence® 42 and position near the initial post. Position SMARTfence® 42 vertically along the initial post.

STEP 3: For the initial post, place the end of SMARTfence® 42 along the post height and rotate the post 360 degrees, maintaining tension on the fence system. Secure the fence to the post at all four (4) orange-colored band locations with steel wire or nylon ties.

STEP 4: For fastening SMARTfence® 42 to studded, metal T-posts using one of following methods:

- Method I (T-Post): 16-gage wire- attach SMARTfence® 42 to metal T-posts using the 16-gage 304 SS wire with mitered ends, securing the fence to the post using safety pliers.
- Method II (T-Post): 8" nylon heavy-duty, UV-stabilized, cable ties (zip-ties) with minimum 120-lb tensile strength. Puncture two 0.25" openings, spaced at a width apart that is roughly equivalent to the post width, and secure the fence to the post.

STEP 5: Drive the initial post with the attached fence into the ground to a 18" depth.

STEP 6: Drive the interior t-posts of the fence system into the ground at least 18".

STEP 7: Move to the next t-post while pulling SMARTfence® 42 tightly. Position the SMARTfence® 42 in front of the adjacent t-post in preparation for fastening the fence to the post. Fasten fence to post at all four (4) orange-colored band locations as instructed in Step 4.

STEP 8: After the interior posts have been fastened to the SMARTfence® 42, secure the fence to the final post by pulling the final section of fencing taut, then rotating the post 360 degrees, maintaining tension on the fence system. Secure the fence to the post at all four (4) orange-colored band locations with the steel wire or nylon ties per Step 4. Drive the final post into the ground to a 18" depth.

STEP 9: Place bottom 8" of fabric into the trench. Backfill trench (overfill) with soil placed around fabric. Compact soil backfill with either manual tamping (or other manual means) or via mechanical equipment such as the front wheel of a tractor, skid steer, roller, or other device (per Note 5 of ASTM D 6462 Standard Practice for Silt Fence Installation). Do not damage the fabric during compaction (damaged fabric shall be replaced).

Please contact our team at 800-448-3636 or info@acfenv.com with any questions regarding the installation process.

LET'S GET IT DONE!™

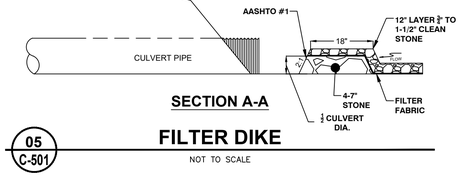
SMARTfence

For more information, contact our Inside Sales team at 800.448.3636 email at info@acfenv.com

ACF ENVIRONMENTAL

05 C-501 FILTER DIKE

NOT TO SCALE



SOIL EROSION, SEDIMENT CONTROL & SEEDING NOTES

1. All soil erosion/sediment control measures shall comply with the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control" and the provisions of the approved plan.
2. All grading and stabilization shall comply with the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control", "Section B - Grading and Stabilization" and the provisions of the approved plan.
3. All soil erosion and sediment control practices (BMPs) are to be constructed and/or installed prior to or at the initiation of grading in accordance with "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control", and the approved plan.
4. For initial soil disturbance or re-disturbance, temporary or permanent stabilization must be completed within:
   a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
   b) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.
6. Stockpiles must be stabilized in accordance within the 7 day stabilization requirement, as well as, Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization (as applicable).
7. All constructed channels and swales shall have specified treatment installed to the design flow depth completed downstream to upstream as construction progresses. An installation detail shall be shown on the plans.
8. All storm drain and sanitary sewer lines not in paved areas are to be mulched and seeded within 3 days of initial backfill unless otherwise specified on plans.
9. Electric Power, telephone, and gas lines are to be compacted, seeded, and mulched within 3 days after initial backfill unless otherwise specified on plans.
10. No slope shall be greater than 2:1.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE (FIGURE B.3): 6b SEED MIXTURE (TABLE B.1)					FERTILIZER RATE (10-20-20)	LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS		
1	Barley	96	Zone 6b: Mar 15-May 31/ Aug 1-Sept 30	1"	436 lb/ac. (10 lb/1000 s.f.)	2 tons/ac. (90 lb/1000 s.f.)

PERMANENT SEEDING SUMMARY

HARDINESS ZONE (FIGURE B.3): 6b SEED MIXTURE (TABLE B.1)					FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTH	N	P205	K20	
6	Tall Fescue	40	Zone 6b: Mar 15-May 31/Aug 1-Sep 30	1/4"-1/2"	45 lb/ac. (1 lb/1000 s.f.)	90 lb/ac. (2 lb/1000 s.f.)	90 lb/ac. (2 lb/1000 s.f.)	2 tons/ac. (90 lb/1000 s.f.)
	Perennial Ryegrass	25						
	White Clover	5						

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\DWG\CONSTRUCTION\CT\CT-ALT-3 NOTES.DWG 2025-06-13

TREVOR MARK FREDERICK REGISTERED STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER 24227
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsainc.com
15 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717-275-7844
355 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-5411
11142 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-3667
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GABIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS | DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: B-1.1, B-1.3, B-1.5, B-9.2, 8E-17
SCALE: N.T.S.
SHEET TITLE:

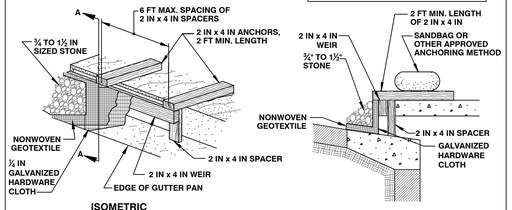
CONSTRUCTION DETAILS EROSION CONTROL

C-501
SHEET 43 OF 57

01 C-502 — DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



ISOMETRIC

SECTION A-A

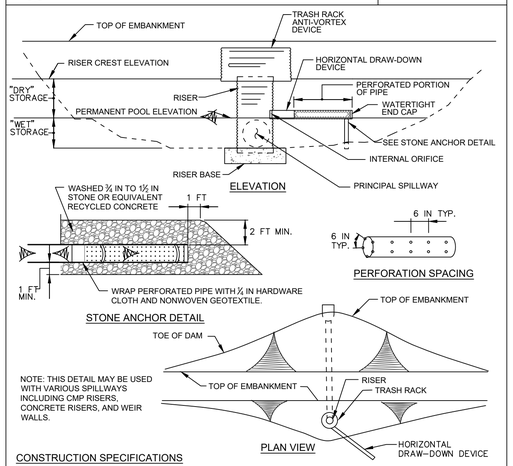
CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ½ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

02 C-502 — DETAIL G-2-6 SEDIMENT BASIN SCHEMATIC HORIZONTAL DRAW-DOWN DEVICE

STANDARD SYMBOL: HDDD

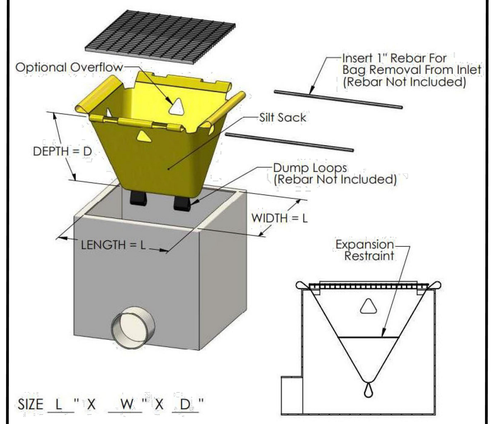


CONSTRUCTION SPECIFICATIONS

1. PERFORATE PIPE WITH 1 INCH DIAMETER PERFORATIONS SPACED 6 INCHES APART LONGITUDINALLY AND RADIALLY OR IN ACCORDANCE WITH APPROVED PLAN.
2. WRAP THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE FIRST WITH ½ INCH GALVANIZED HARDWARE CLOTH, THEN WITH NONWOVEN GEOTEXTILE. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE.
3. AS AN ALTERNATE TO STONE ANCHORING, SECURE DRAW-DOWN DEVICE WITH TWO 1 INCH STEEL ANGLES SET 3 FEET MINIMUM INTO THE GROUND ATTACHED TO DRAW-DOWN DEVICE BY A 1 INCH WIDE GALVANIZED STEEL STRAP OR 12 GAUGE OR HEAVIER WIRE.
4. REMOVE SEDIMENT WHEN IT ACCUMULATES TO CLEANOUT ELEVATION (50% OF THE WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA IN A SUCH A MANNER THAT IT WILL NOT ERODE. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

03 C-502 — HIGH VISIBILITY SILTSACK



AVAILABLE IN HIGH FLOW/REGULAR FLOW
DESIGNS TO FIT EVERY GRATE SIZE/SHAPE

ACF SILTSACK

FERGUSON WATERWORKS

CORPORATE OFFICE
2831 CARDWELL RD
RICHMOND, VA 23234
INFOGEO@FERGUSON.COM
WWW.FERGUSONGSS.COM

FOR ADDITIONAL INFORMATION PLEASE CONTACT FERGUSON SALES
INFOGEO@FERGUSON.COM OR VISIT
WWW.FERGUSONGSS.COM

3/21/24

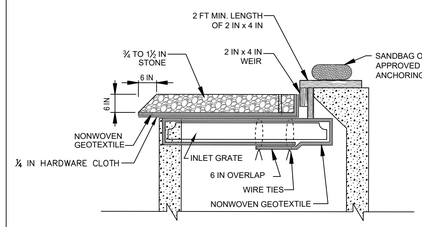
SILTSACK MAINTENANCE NOTES:

1. The structure shall be inspected after each .5" of rain and at least once a week and repairs made as needed. Construction traffic has a tendency to destroy these practices so frequent inspections are necessary.
2. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
3. Inlet protection should remain in place and operational until the drainage area is completely stabilized. Immediately stabilize the area disturbed by the installation and removal of the practice.
4. It is essential that maintenance be done to insure that structures do not fail, especially to prevent clogging. Failure of one practice can create a domino effect of failures, with the potential of severe flooding of adjacent properties.

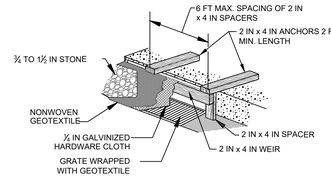
04 C-502 — DETAIL E-9-6 COMBINATION INLET PROTECTION

STANDARD SYMBOL: COIP

MAXIMUM DRAINAGE AREA = ¾ ACRE



SECTION



ISOMETRIC VIEW

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

05 C-502 — DETAIL E-9-6 COMBINATION INLET PROTECTION

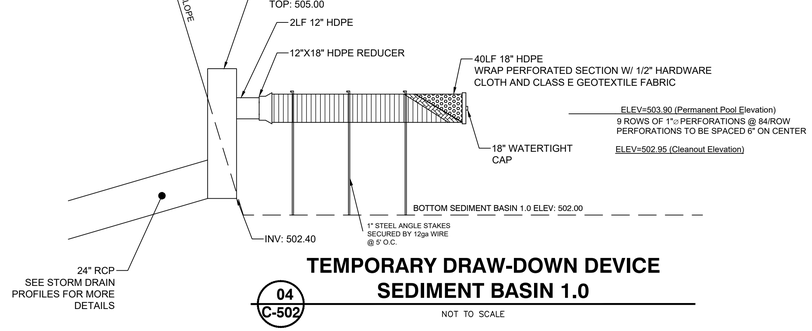
STANDARD SYMBOL: COIP

CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. LIFT GRATE, AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.
4. ATTACH A CONTINUOUS PIECE OF ½ INCH GALVANIZED HARDWARE CLOTH WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2X4 WEIR, EXTENDING 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH IT TO THE WEIR.
6. NAIL THE 2X4 WEIR TO THE TOP OF A 9 INCH LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAXIMUM 4 FEET APART).
7. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2X4 ANCHORS (MINIMUM 2 FOOT LENGTHS OF 2x4 INCH TO THE TOP OF THE WEIR AT SPACER LOCATIONS). EXTEND 2X4 ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
8. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND BOTH ENDS OF THE THROAT OPENING.
9. FORM THE ¼ INCH HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE OVER THE HARDWARE CLOTH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
10. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
11. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

2 OF 2

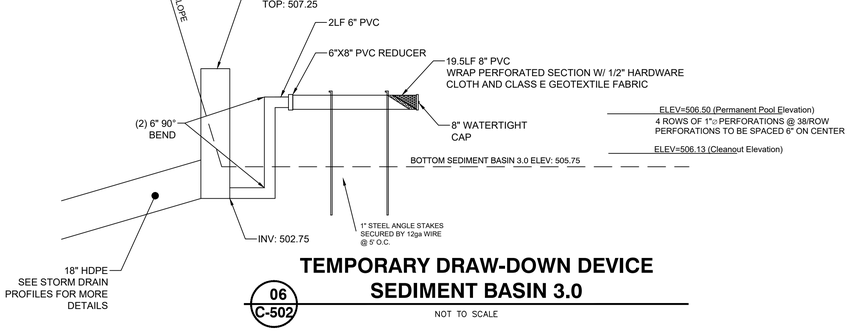
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



TEMPORARY DRAW-DOWN DEVICE SEDIMENT BASIN 1.0

04 C-502

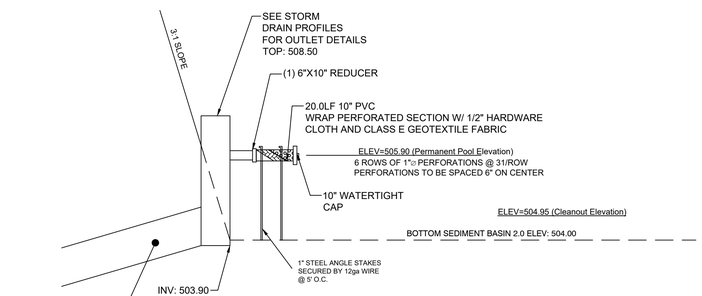
NOT TO SCALE



TEMPORARY DRAW-DOWN DEVICE SEDIMENT BASIN 3.0

06 C-502

NOT TO SCALE



TEMPORARY DRAW-DOWN DEVICE SEDIMENT BASIN 2.0

05 C-502

NOT TO SCALE

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\DWG\CONSTRUCTION SET\SHEETS\C-502 DETAILS AND NOTES.DWG 2025-06-13

TREVOR MARK FREDERICK — REGISTERED — 24227 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA, License #: 24227
Expiration Date: 12-31-2026

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11142 BELLMAWR PORT PAVE, GREENCASTLE, PA 17225, 717-597-1647
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-818-8666

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

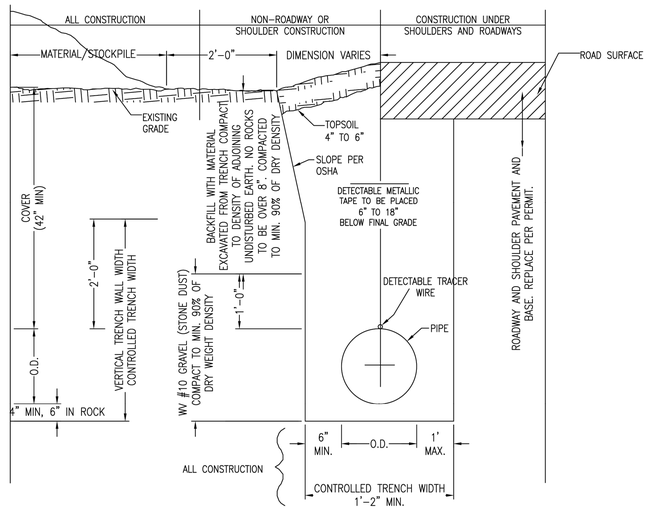
MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO: 2023-0285
DWN BY: ABRAM MYERS | DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE: N.T.S.
SHEET TITLE

CONSTRUCTION DETAILS
EROSION CONTROL

C-502
SHEET 44 OF 57

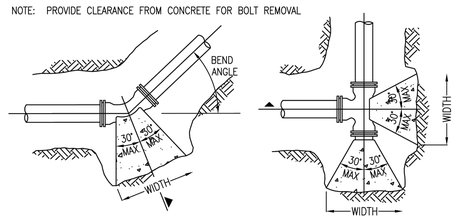


WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

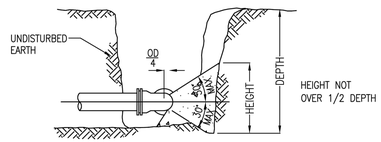
TRENCH DETAIL
•Not to Scale•

W-1.00
REVISED:
April 2, 2024

NOTE: PROVIDE CLEARANCE FROM CONCRETE FOR BOLT REMOVAL



TYP. BEND — TYP. TEE AND CAP



TYPICAL SECTION

NOTE: BEARING AREAS ARE BASED ON 225 P.S.I. TEST PRESSURE AND A SOIL RESISTANCE OF 2000 P.S.F. IF WEAK (LESS THAN 2000 P.S.F. RESISTANCE) SOIL POCKETS ARE ENCOUNTERED, INCREASE THE BEARING AREAS SHOWN TO PREVENT MOVEMENT UNDER TEST OR OPERATING PRESSURES.

PIPE SIZE	MINIMUM BEARING AREA (S.F.) = WIDTH X DEPTH				HYD, TEE, CAP
	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	VALVE, PLUG
3"	3	2	1	1	2
4"	4	2	2	1	3
6"	7	4	3	2	5
8"	12	7	4	3	8
10"	19	11	6	4	13
12"	26	15	8	5	18

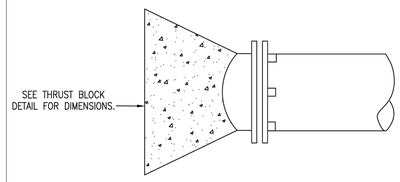
THRUST BLOCKS TO BE CLASS 3000 PSI CONCRETE (MIN.)

ALL MECHANICAL JOINTS ARE TO BE PROVIDED WITH MEGA LUGE JOINT RESTRAINTS.

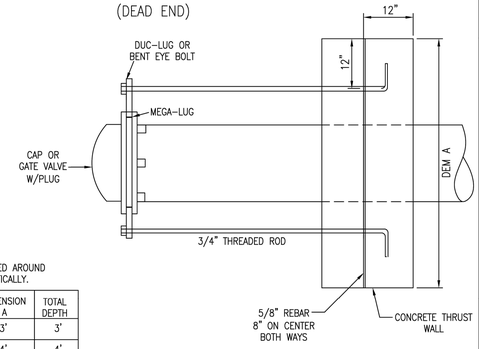
WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

THRUST BLOCK
•Not to Scale•

W-2.00
REVISED:
April 2, 2024



PERMANENT CAP THRUST BLOCK
(DEAD END)



NOTE:

THRUST WALL TO BE CENTERED AROUND PIPE HORIZONTALLY AND VERTICALLY.

PIPE SIZE	# THREADED RODS	DIMENSION A	TOTAL DEPTH
4"	2	3'	3'
6"	2	4'	4'
8"	2	4'	4'
10"	2	5'	5'
12"	4	6'	6'
16"	4	8'	8'

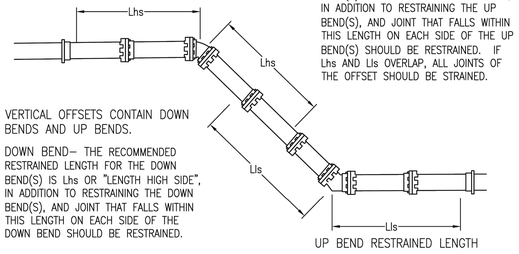
TEMPORARY CAP THRUST BLOCK/WALL
(DEAD END)

WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

PERMANENT AND TEMPORARY THRUST BLOCK/WALL
•Not to Scale•

W-2.01
REVISED:
April 2, 2024

DOWN BEND RESTRAINED LENGTH



UP BEND– THE RECOMMENDED RESTRAINED LENGTH FOR THE UP BEND(S) IS Lls OR "LENGTH LOW SIDE", IN ADDITION TO RESTRAINING THE UP BEND(S), AND JOINT THAT FALLS WITHIN THIS LENGTH ON EACH SIDE OF THE UP BEND(S) SHOULD BE RESTRAINED. IF Lhs AND Lls OVERLAP, ALL JOINTS OF THE OFFSET SHOULD BE STRAINED.

VERTICAL OFFSETS CONTAIN DOWN BENDS AND UP BENDS.

DOWN BEND– THE RECOMMENDED RESTRAINED LENGTH FOR THE DOWN BEND(S) IS Lhs OR "LENGTH HIGH SIDE", IN ADDITION TO RESTRAINING THE DOWN BEND(S), AND JOINT THAT FALLS WITHIN THIS LENGTH ON EACH SIDE OF THE DOWN BEND SHOULD BE RESTRAINED.

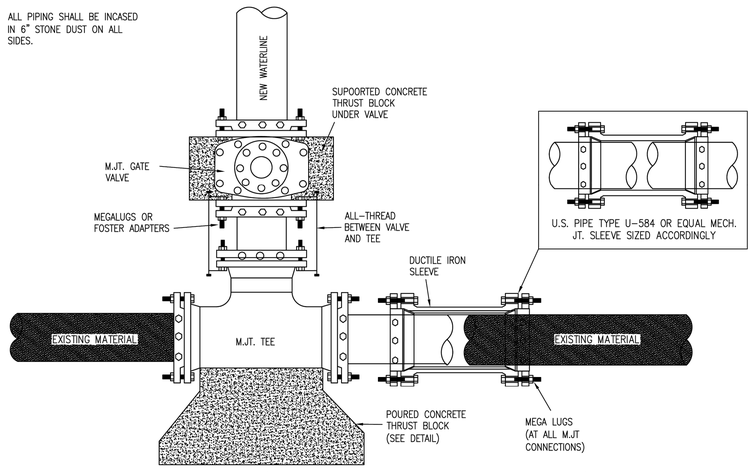
WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

VERTICAL OFFSET
•Not to Scale•

W-2.02
REVISED:
April 2, 2024

NOTE:

ALL PIPING SHALL BE INCASED IN 6" STONE DUST ON ALL SIDES.



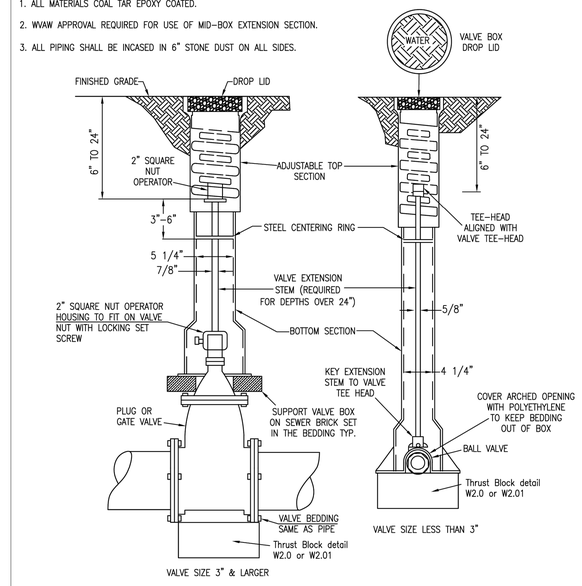
WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

NEW WATERLINE TIE-IN/ CUT-IN TIE DETAIL
•Not to Scale•

W-2.03
REVISED:
April 2, 2024

NOTES:

1. ALL MATERIALS COAL TAR EPOXY COATED.
2. WVAW APPROVAL REQUIRED FOR USE OF MID-BOX EXTENSION SECTION.
3. ALL PIPING SHALL BE INCASED IN 6" STONE DUST ON ALL SIDES.



WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

VALVE AND BOX INSTALLATION
•Not to Scale•

W-3.00
REVISED:
April 2, 2024

TREVOR MARK FREDERICK — REGISTERED — 24227 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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11142 WILLIAMSPORT PIKE, GREENCASTLE, PA 17225, 717-597-3457
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-719-8666

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE N.T.S.
SHEET TITLE

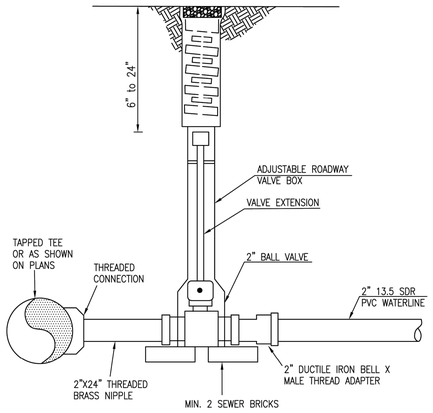
CONSTRUCTION DETAILS - WATER

C-503
SHEET 45 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\ENGR\CAD\CONSTRUCTION DETAILS & NOTES.DWG - 2025-06-13

NOTE:

ALL PIPING SHALL BE INCASED IN 6" STONE DUST ON ALL SIDES.



WEST VIRGINIA AMERICAN WATER

Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

2" VALVE DETAIL

•Not to Scale•

W-3.01

REVISED:
April 2, 2024

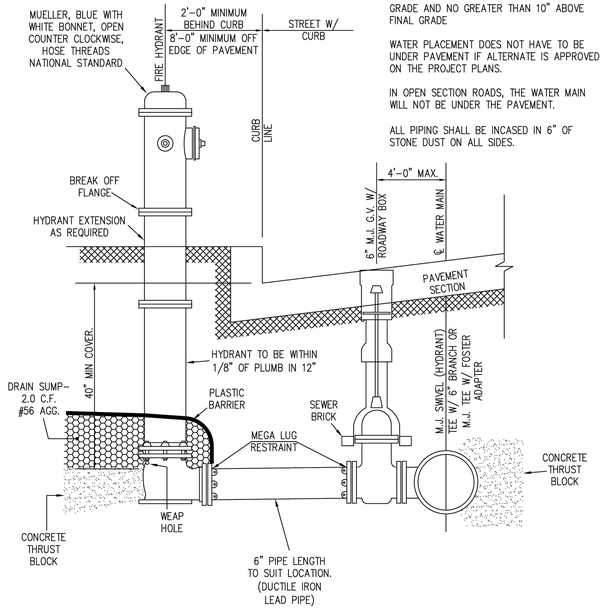
NOTE:

HYDRANT SHALL BE SET WITH BREAK OF FLANGE NO LESS THAN 2" ABOVE FINAL GRADE AND NO GREATER THAN 10" ABOVE FINAL GRADE

WATER PLACEMENT DOES NOT HAVE TO BE UNDER PAVEMENT IF ALTERNATE IS APPROVED ON THE PROJECT PLANS.

IN OPEN SECTION ROADS, THE WATER MAIN WILL NOT BE UNDER THE PAVEMENT.

ALL PIPING SHALL BE INCASED IN 6" OF STONE DUST ON ALL SIDES.



WEST VIRGINIA AMERICAN WATER

Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

FIRE HYDRANT SETTINGS

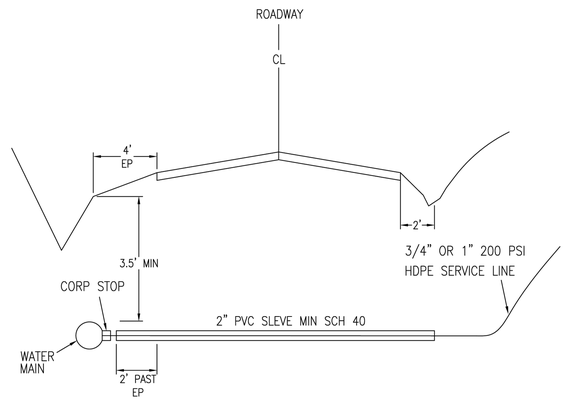
•Not to Scale•

W-3.02

REVISED:
April 2, 2024

NOTE:

ALL PIPING SHALL BE INCASED IN 6" STONE DUST ON ALL SIDES.



WEST VIRGINIA AMERICAN WATER

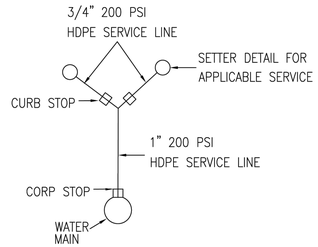
Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

SERVICE LINE CROSSING OF STREETS

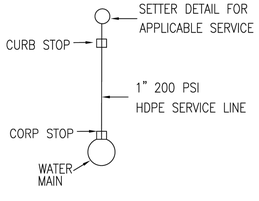
•Not to Scale•

W-4.01

REVISED:
April 2, 2024



DUAL SERVICE WITH ONE TAP OFF MAIN



SINGLE SERVICE WITH ONE TAP OFF MAIN

WEST VIRGINIA AMERICAN WATER

Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

RESIDENTIAL SERVICE LINE CONFIGURATIONS

•Not to Scale•

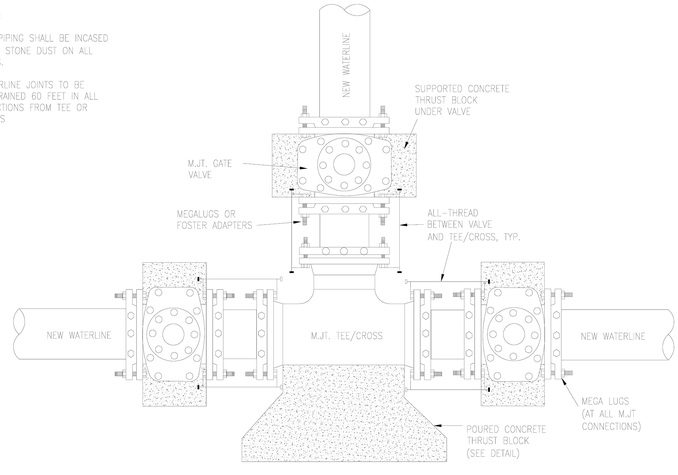
W-4.02

REVISED:
April 2, 2024

NOTE:

ALL PIPING SHALL BE INCASED IN 6" STONE DUST ON ALL SIDES.

WATERLINE JOINTS TO BE RESTRAINED 60 FEET IN ALL DIRECTIONS FROM TEE OR CROSS



WEST VIRGINIA AMERICAN WATER

Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

VALVE CLUSTER CONFIGURATION

•Not to Scale•

W-4.03

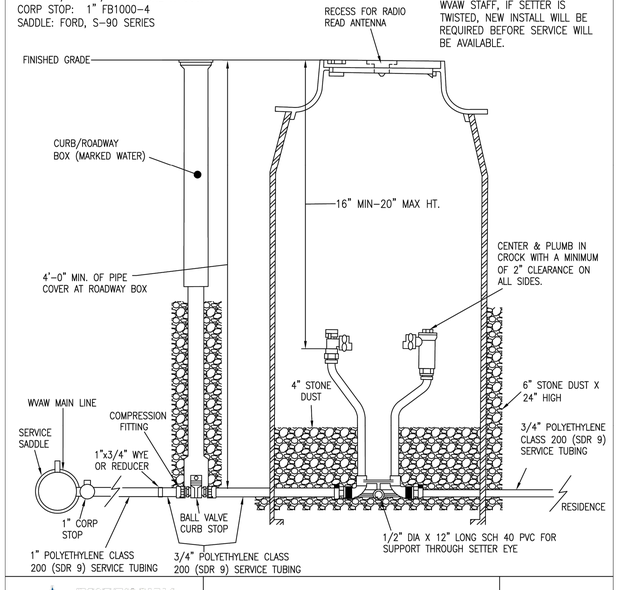
REVISED:
January 3, 2025

NOTES:

BOX: 18X22X30 BULLET METER BOX
LID: AYM 74 MAL 115
SETTER: VBHC 72-12W 44-33 (EITHER 12" OR 16" HIGH)
TUBING: 3/4" AND 1" CTS HDPE TUBING – 200 PSI
METER: 3/4" X 5/8" NEPTUNE R-900i
CORP STOP: 1" FB1000-4
SADDLE: FORD, S-90 SERIES

NOTE:

WHEN INSTALLING THE SETTER, THE USE OF A JUMPER OR IDLER PIPE IS REQUIRED TO ELIMINATE TWISTING OF THE SETTER. WHEN INSPECTION IS COMPLETED BY WVAW STAFF, IF SETTER IS TWISTED, NEW INSTALL WILL BE REQUIRED BEFORE SERVICE WILL BE AVAILABLE.



WEST VIRGINIA AMERICAN WATER

Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

5/8 x 3/4 COPPERSETTER

•Not to Scale•

W-5.00

RREVISED:
April 2, 2024

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

FSA
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11142 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-3457
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 240-313-2666

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
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ATTN: ROB ROTZ
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PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
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PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE N.T.S.
SHEET TITLE

CONSTRUCTION DETAILS - WATER

C-504
SHEET 46 OF 57

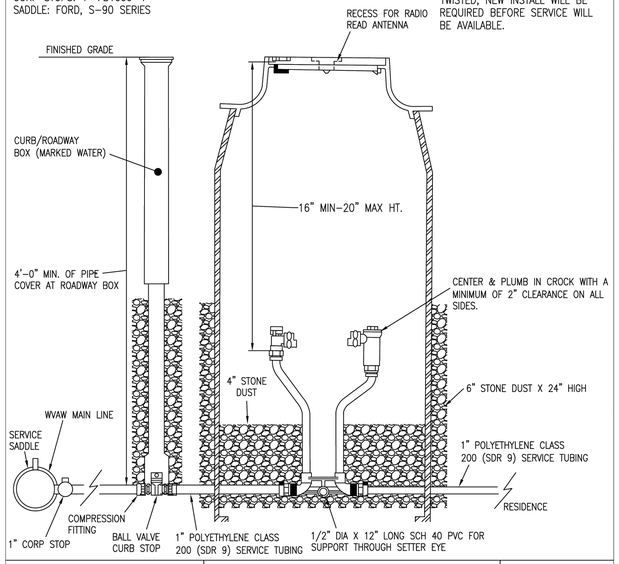
P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\ENGINEERING\CONSTRUCTION DETAILS\CONSTRUCTION DETAILS & NOTES.DWG 2025-06-13

NOTES:

BOX: 18X22X30 BULLET METER BOX
LID: AYM 74 MAL 115
SETTER: VBHC 74-15W 44-44 (EITHER 12" OR 16" HIGH)
TUBING: 1" CTS HDPE TUBING - 200 PSI
METER: 1" NEPTUNE R-900i
CORP STOPS: 1" FB1000-4
SADDLE: FORD, S-90 SERIES

NOTE:

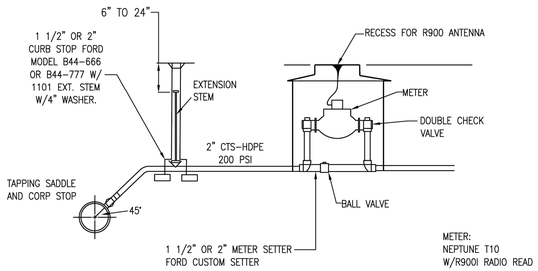
WHEN INSTALLING THE SETTER, THE USE OF A JUMPER OR IDLER PIPE IS REQUIRED TO ELIMINATE TWISTING OF THE SETTER. WHEN INSPECTION IS COMPLETED BY WVAW STAFF, IF SETTER IS TWISTED, NEW INSTALL WILL BE REQUIRED BEFORE SERVICE WILL BE AVAILABLE.



WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

1" COPPERSETTER
•Not to Scale•

W-5.01
REVISED:
April 2, 2024



METER:
NEPTUNE T10
W/R900I RADIO READ

METER SIZE	BOX SIZE	FRAME & COVER	METER SETTER
1.5"	36" X 36"	MC36-T (NON-TRAFFIC) MC36T/RML12 (TRAFFIC)	VBH76 X 15B 13.5-11-66
2"	36" X 36"	MC36-T (NON-TRAFFIC) MC36T/RML12 (TRAFFIC)	VBH77 X 15B 13.2-11-77

**METER BOXES INSTALLED IN TRAFFIC AREAS MUST BE OF MATERIAL AND DESIGN TO SUPPORT TRAFFIC LOADING.

WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

1 1/2" AND 2" METER INSTALLATION
•Not to Scale•

W-5.02
REVISED:
April 2, 2024

NOTES:

METER BOX: 20X24X30 BULLET

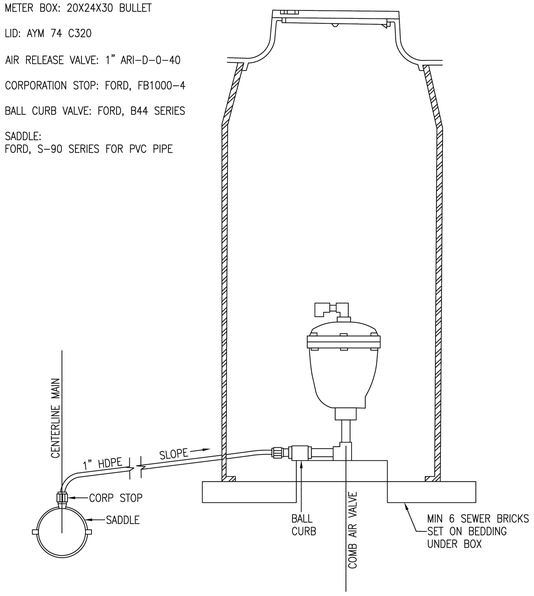
LID: AYM 74 C320

AIR RELEASE VALVE: 1" ARI-D-0-40

CORPORATION STOP: FORD, FB1000-4

BALL CURB VALVE: FORD, B44 SERIES

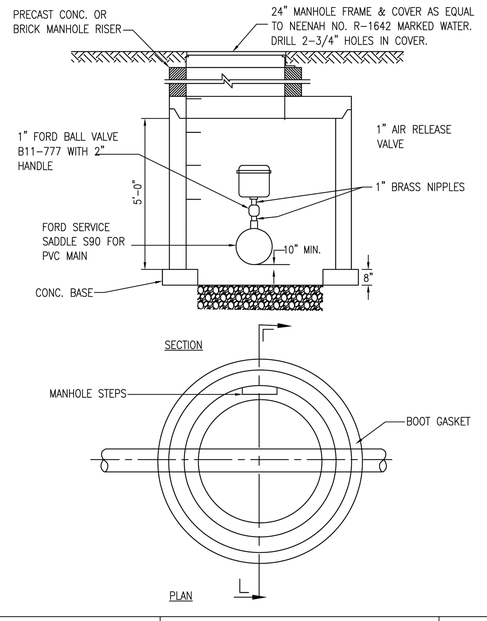
SADDLE:
FORD, S-90 SERIES FOR PVC PIPE



WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
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NON-TRAFFIC INSTALLATION COMBINATION AIR VALVE AND VAULT
•Not to Scale•

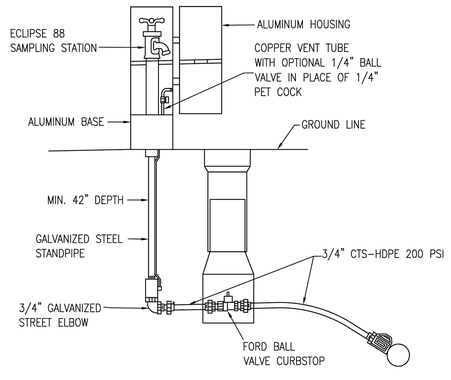
W-5.03
REVISED:
April 2, 2024



WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
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TRAFFIC INSTALLATION AIR VALVE MANHOLE
•Not to Scale•

W-5.04
REVISED:
April 2, 2024

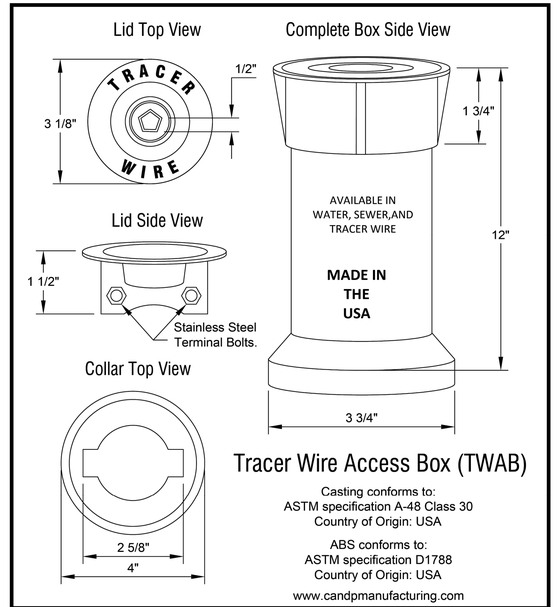


NOTES: THRUST BLOCK DETAIL MUST BE USED TO ANCHOR THE ELBOW AND STANDPIPE FROM SHIFTING.

WEST VIRGINIA AMERICAN WATER
Eastern Operating Area
150 East Burr Boulevard
Kearneysville, WV 25430

SAMPLING STATION
•Not to Scale•

W-5.05
REVISED:
April 2, 2024



Tracer Wire Access Box (TWAB)

Casting conforms to:
ASTM specification A-48 Class 30
Country of Origin: USA

ABS conforms to:
ASTM specification D1788
Country of Origin: USA

www.candpmanufacturing.com

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
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11142 WILLIAMSPORT PIKE
GREENCASTLE, PA 17225
717-597-7467
126 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
240-818-8666

MARK	DESCRIPTION	DATE
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO.: 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE: N.T.S.
SHEET TITLE:

CONSTRUCTION DETAILS - WATER

C-505
SHEET 47 OF 57

P:\SHARED FILES\PROJECTS\2023\2023-0285\CIVIL\CONSTRUCTION SET\W-5.01-W-5.05 CONSTRUCTION DETAILS & NOTES.DWG 2025-06-13

Non-Detectable Warning Tape

Material Specifications
- 100% virgin low density polyethylene
- Pigmented with lead-free resins
- Withstands temperature range of -94 F through 200 F
- All colors are consistent with A.P.W.A. color code guidelines
- Manufactured for durability and resistance to the elements

Applications
- Non-detectable warning tape is used for protection, early identification, and accurately locating underground utility installations
- A.P.W.A. color code denotes: Orange--Telecommunication and CATV Lines, Blue--Water Lines, Green--Sewer Lines, Purple--Reclaimed Water Lines, Red--Electrical Lines, Yellow--Gas Lines

Product Analysis

ATTRIBUTE		PROCEDURE	VALUE*
Thickness		ASTM D 2103	4.0 MIL
Elongation		ASTM D 88280A	
	MD		600%
	TD		750%
Density		ASTM D 792-66	0.922 (gm/cc)
Tensile Strength		ASTM D 882	
	MD		3,500PSI
	TD		2,700PSI
Printability		ASTM D 2578	Min .45 Dynes
Flexibility		ASTM D 671-76	Pliable Hand
Graphic Repeat		MFRG. SPECS	Repeat Every 23"
Material		MFRG. SPECS	Virgin LDPE

Endorsements
- Meets federal gas safety regulation S-192-321(E)
- Meets OSHA regulation 1926-956 (C) (I) covering the location of underground utility lines

* Values are a nominal + or - 10% to allow for manufacturing variance

Detectable Warning Tape

Material Specifications
- 5.0 mil overall thickness
- 100% virgin low density polyethylene
- Aluminum center core
- Withstands temperature range of -94 F through 200 F
- Manufactured for durability and resistance to the elements

Manufacturing Specifications
- Subsurface graphics
- Triple-layer lamination

Applications
- Detectable warning tape is used for protection, early identification, and accurately locating underground utility installations
- A.P.W.A. color code denotes: Orange--Telecommunication and CATV Lines, Blue--Water Lines, Green--Sewer Lines, Purple--Reclaimed Water Lines, Red--Electrical Lines, Yellow--Gas Lines

Product Analysis

ATTRIBUTE		PROCEDURE	VALUE*
Thickness		ASTM D 2103	5.0 Overall Thickness
Elongation		ASTM D 88280A	
	MD		80%
	TD		139%
Density		ASTM D 792-66	1.090 (gm/cc)
Coefficient of Friction		ASTM D 3248-73	Static 0.247
Tensile Strength		ASTM D 882	5,800 PSI
Printability		ASTM D 2578	Min .45 Dynes
Flexibility		ASTM D 671-76	Pliable Hand
Graphic Repeat		MFRG. SPECS	Repeat Every 23"

Endorsements
- Meets federal gas safety regulation S-192-321(E)
- Meets OSHA regulation 1926-956 (C) (I) covering the location of underground utility lines

* Values are a nominal + or - 10% to allow for manufacturing variance

Omega Marking Co.
P.O. Box 655 Beaver Dam, WI 53916

Spec Pages.indd 1 6/25/07 1:01:10 PM

Updated: April 1, 2014

Jefferson Utilities, Inc.
270 Industrial Boulevard, Kearneysville, WV 25430
(304) 728-2077 P (304) 728-7326 F
support@juiwater.net

This replaces section 603.2 of the IPC. Specification for water service line in Jefferson Utilities, Inc. for the separation of TOWN HOUSE and APARTMENTS water service line and building sewer laterals

TOWN HOUSE:

Water service line and building sewer shall be:
A) separated by a minimum of two (2) feet [610 mm] horizontal with a twelve (12) inch [305 mm] vertical separation, between the top of the sewer line and the bottom of the water line, sleeved from the foundation to the water vault, if the building sewer is constructed of materials listed in Table 702.2 of the IPC.

B) Five (5) feet [1524 mm] horizontally of undisturbed or compacted earth sleeved from the water vault to the building foundation.

APARTMENTS:

Water service line and building sewer shall be:
A) separated by a minimum of two (2) feet [610 mm] horizontal with a twelve (12) inch [305 mm] vertical separation, between the top of the sewer line and the bottom of the water line, sleeved from the foundation to the water vault, if the building sewer is constructed of materials listed in Table 702.2 of the IPC.

B) Ten (10) feet [3048 mm] horizontally of undisturbed or compacted earth sleeved from the water vault to the building foundation.

There shall be a minimum of six (6) inches [153mm] of suitable bedding (stone dust, sand, etc. approved by the water utility) under, over and around the water service line, sleeving pipe and sewer service pipe.

Water service line sleeving should be achieved by two (2) inch schedule 40 PVC for ¾ service line or for larger services the encasement pipe shall be 2" greater inside diameter than the outside diameter of the water service line or water service line coupling if such coupling is needed to be placed inside the encasement pipe.

If crossing of any utilities is unavoidable, at the discretion of the utility, the water service line will be sleeved from the foundation to the water vault constructed of materials with a minimum of 200 psi piping. Where any water service line crosses a path of vehicular traffic or public travel ways the line is required to be sleeved five (5) feet on either side of the edge of the travel path with materials listed in the IPC Table 702.2 Underground building drainage and Vent Pipe Material Standard.

Location of water service lines and sewer laterals as provided on site plan must be approved with the proper separation and constructed as such as approved by the City of Ranson and Jefferson Utilities, Inc.

Location of water crocks, curb stops and sewer clean outs will not be prohibited in paved, concreted surfaces, vehicular traffic ways or in public travel ways. Clean outs and other standards for construction of sewer laterals shall conform to the IPC.

Updated: April 1, 2014

A curb stop will be located between the meter vault and the property line.

The minimum sewer pipe size shall be four (4) inches and be either SDR21, SDR26 or SCH 40.

If existing water service is being eliminated (example: Row of townhouse services being converted to single family homes), services must be dug up to water main, shut off, capped and thrusted. Service inspection is required once this is completed.

Updated: April 1, 2014

Jefferson Utilities, Inc.
270 Industrial Boulevard, Kearneysville, WV 25430
(304) 728-2077 P (304) 728-7326 F
support@juiwater.net

This replaces section 603.2 of the IPC. Specification for water service line in Jefferson Utilities, Inc. for the separation of SINGLE FAMILY HOME water service line and building sewer lateral.

Water service line and building sewer shall be:
A) separated by a minimum of two (2) feet [610 mm] horizontal with a twelve (12) inch [305 mm] vertical separation, between the top of the sewer line and the bottom of the water line, sleeved from the foundation to the water vault, if the building sewer is constructed of materials listed in Table 702.2 of the IPC.

B) Ten (10) feet [3048 mm] horizontally of undisturbed or compacted earth sleeved from the water vault to the building foundation.

There shall be a minimum of six (6) inches [153mm] of suitable bedding (stone dust, sand, etc. approved by the water utility) under, over and around the water service line, sleeving pipe and sewer service pipe.

Water service line sleeving should be achieved by two (2) inch schedule 40 PVC for ¾ service line or for larger services the encasement pipe shall be 2" greater inside diameter than the outside diameter of the water service line or water service line coupling if such coupling is needed to be placed inside the encasement pipe.

If crossing of any utilities is unavoidable, at the discretion of the utility, the water service line will be sleeved from the foundation to the water vault constructed of materials with a minimum of 200 psi piping. Where any water service line crosses a path of vehicular traffic or public travel ways the line is required to be sleeved five (5) feet on either side of the edge of the travel path with materials listed in the IPC Table 702.2 Underground building drainage and Vent Pipe Material Standard.

Location of water service lines and sewer laterals as provided on site plan must be approved with the proper separation and constructed as such as approved by Jefferson Utilities, Inc.

Location of water crocks, curb stops and sewer clean outs will not be prohibited in paved, concreted surfaces, vehicular traffic ways or in public travel ways. Clean outs and other standards for construction of sewer laterals shall conform to the IPC.

A curb stop will be located between the meter vault and the property line.

The minimum sewer pipe size shall be four (4) inches and be either SDR21, SDR26 or SCH 40.

If existing water service is being eliminated (example: Row of townhouse services being converted to single family homes), services must be dug up to water main, shut off, capped and thrusted. Service inspection is required once this is completed.

NOTE:
1. TRACER WIRE MUST BE CONNECTED AND PULLED THROUGH EACH VALVE LOCATION AND WITHIN 300 FEET OR A TRACER BOX SHOULD BE INSTALLED.

Kris-Tech Wire Co. **Copper Clad Steel Tracer Wire**

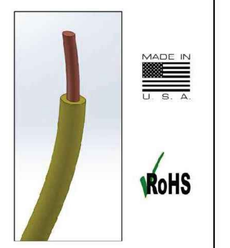
Scope:
Single conductor copper clad steel, HMWPE (high molecular weight polyethylene) insulated tracer/locator wire. Together with the high strength of steel, the electrical and corrosion resistant properties of copper and the rugged properties of HMWPE this product is suitable for direct burial use in wet and dry locations, designed to carry an electrical signal for use in locating underground non-metallic pipe. Versions available in 30 volt, 600 volt and 1000 volt.

Applicable Standards and Tests:
ASTM B-227, B-869, B-910/B-910M all for Copper Clad Steel. ASTM D-1248, ICEA S-70-547, ICEA S-61-402/NEMA WC5, ICEA S-95-658/NEMA WC70, UL 83, UL 1581. All products are spark tested at 7500 VAC unless otherwise specified.

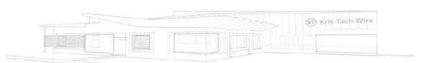
Construction:
Conductors: The single conductors 21% conductivity copper clad steel, dead soft annealed (DSA), stress relieved (SR), high strength (HS) and extra high strength (EHS). Other conductivities and break strengths available by request.

Insulation:
Concentrically applied HMWPE insulation in accordance with UL83. High Density HMWPE is available upon request.

Identification and Packaging:
Custom and standard print legends are available. 500 ft/spl.packed 4/box, or 2500 feet/spl spools are standard and packaged and labeled with product name, description, AWG, and manufacturer. Custom lengths, non-standard colors, AWG and custom packaging are available by request.



AWG	Breaking Pounds DSA/SR/HS/EHS	Bending Radius (Inches)	Insulation Thickness (Inches) 30/600/1KV	Nominal Overall Diameter – Inches	Approx. Shipping Weight (Lbs/Mft)
18	63 / 79 / NA / NA	0.64	0.030 / 0.045 / 0.060	0.10 / 0.13 / 0.16	7 / 9 / 12
16	99 / 125 / NA / NA	0.66	0.030 / 0.045 / 0.060	0.11 / 0.14 / 0.17	10 / 13 / 16
14	161 / 187 / 351 / NA	0.72	0.030 / 0.045 / 0.060	0.12 / 0.15 / 0.18	15 / 18 / 21
12	256 / 303 / 558 / 1135	0.80	0.030 / 0.045 / 0.060	0.14 / 0.17 / 0.20	22 / 25 / 29
10	408 / 473 / 887 / 1940	0.88	0.030 / 0.045 / 0.060	0.16 / 0.19 / 0.22	34 / 37 / 41
8	628 / 950 / 1005 / 2785	1.00	0.030 / 0.045 / 0.060	0.19 / 0.22 / 0.25	51 / 55 / 60



P: (315) 339 5268 • F: (315) 339-5277 • sales@kristechwire.com • www.kristechwire.com

Spec: Tracer-CCS
Issued: 05/03/19
Supersedes: 11/21/16

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-313-0666

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MARK	DESCRIPTION	DATE
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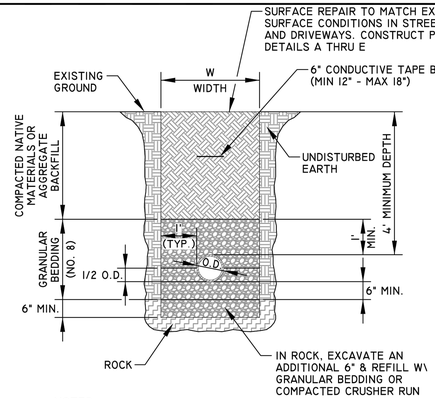
MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301 491 6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE N.T.S.
SHEET TITLE

CONSTRUCTION DETAILS - WATER

C-506
SHEET 48 OF 57

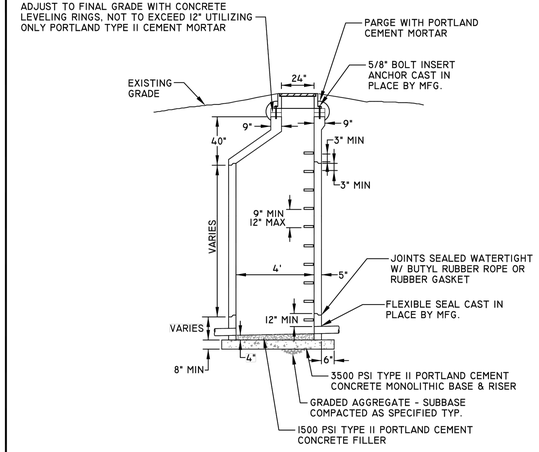
P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\DWGS\CIVIL\TECH\2023-0285 CIVIL TECH.DWG 6/13/2025 1:01:10 PM ABRAM MYERS



NOTES:

1. W = MAXIMUM PERMISSIBLE TRENCH WIDTH, BASED UPON, W = O.D. + 24", UNLESS APPROVED BY THE ENGINEER.
2. TRENCHES TO BE SHEETED AND BRACED AS REQUIRED.
3. PROVIDE BEARING FOR FULL LENGTH OF BARREL, DIG HOLES FOR THE BELL.
4. BACKFILL ON SIDES TO 1/2 O.D. OF PIPE TO HOLD PIPE IN PLACE PRIOR TO PLACING ADDITIONAL BEDDING.
5. BACKFILL TO BE COMPACTED IN 6" LAYERS TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE (+2%) IN ROADS AND STREETS. COMPACT TO MATCH EXISTING GROUND IN OTHER AREAS.
6. MAINTAIN MINIMUM OF 4' OF COVER TO THE TOP OF PIPE.
7. A CASING PIPE SHALL BE REQUIRED IN ROAD CROSSINGS WHERE SHOWN ON PLANS
8. ALL WATER LINES REQUIRE PERMIT FROM APPLICABLE REGULATORY ENTITIES. PERMIT REQUIREMENTS SUPERCEDE WHAT IS SHOWN ON THIS DETAIL.

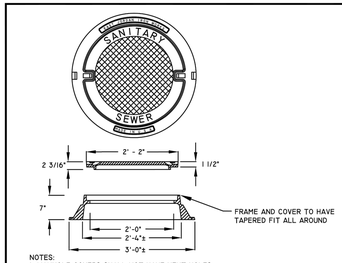
Charles Town Utility Board	SEWER LINE TRENCH DETAIL	Standard Detail No. S-1
832 S. George Street, P.O. Box 359, Charles Town, WV 25414 Phone: (304) 725-2316 •Fax: (304) 725-4313		NOT TO SCALE
		SEPTEMBER 2015



NOTES:

1. PRECAST MANHOLE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C 478 UTILIZING TYPE II PORTLAND CEMENT. 3500 PSI MIX MINIMUM.
2. 0.1' FALL TYPICAL INVERT IN TO INVERT OUT OR MATCH CROWNS FOR DIFFERING PIPE DIAMETERS.
3. COMPLETE MANHOLE SHALL PASS VACUUM TEST PRIOR TO ACCEPTANCE.

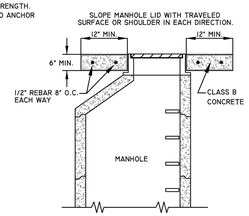
Charles Town Utility Board	PRECAST MANHOLE W/ ECCENTRIC TOP DETAIL	Standard Detail No. S-6
832 S. George Street, P.O. Box 359, Charles Town, WV 25414 Phone: (304) 725-2316 •Fax: (304) 725-4313		NOT TO SCALE
		SEPTEMBER 2015



NOTES:

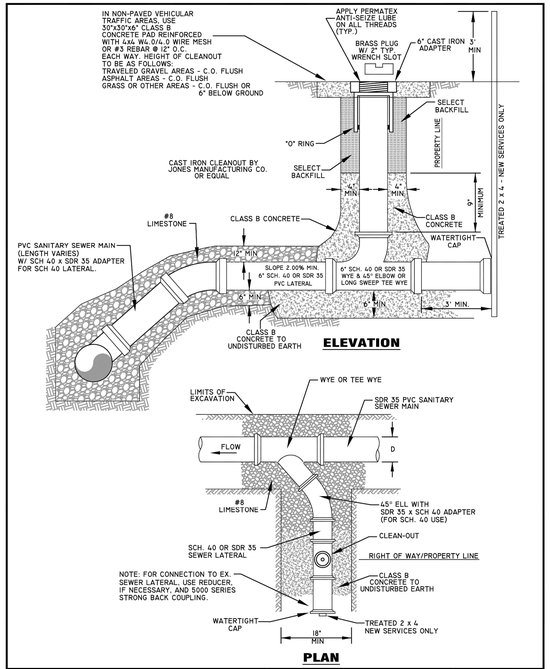
1. MANHOLE COVERS SHALL NOT HAVE VENT HOLES
2. AVERAGE WEIGHT IS 400 LBS
3. DIMENSIONS ABOVE ARE FOR EAST JORDAN IRONWORKS PRODUCTS
4. APPROVED SUPPLIERS:
   EAST JORDAN IRON WORKS
   HIGHWAY: FRAME - PROD. NO. 1045Z UNDIPPED
   COVER - PROD. NO. 1040A UNDIPPED, SELF SEALING
   FRAME & COVER - PROD. NO. 1045AGS UNDIPPED, SELF SEALING
   WATERTIGHT: FRAME & COVER PROD. NO. 1045ZPT/1010APT, UNDIPPED
   NEENAH
   HIGHWAY: FRAME & COVER R-1642, UNDIPPED, SELF SEALING
   WATERTIGHT: FRAME & COVER R-1916, UNDIPPED
5. FRAME AND COVER TO COMPLY WITH ASTM A48, CLASS 30 TENSILE STRENGTH.
6. USE THREADED STAINLESS STEEL STANDARD HEXAGON HEAD BOLTS TO ANCHOR FRAME AND COVER TO MANHOLE.

MANHOLE FRAME AND COVER



ANCHOR DETAIL FOR FRAME & COVER IN PAVED ROAD SURFACE AREAS AND SHOULDERS OF ROAD

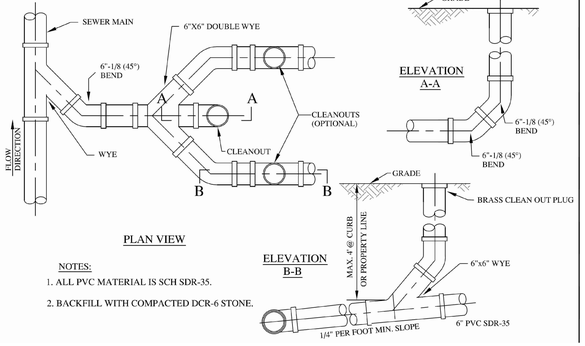
Charles Town Utility Board	MANHOLE FRAME & COVER ANCHOR FOR FRAME & COVER DETAIL	Standard Detail No. S-7
832 S. George Street, P.O. Box 359, Charles Town, WV 25414 Phone: (304) 725-2316 •Fax: (304) 725-4313		NOT TO SCALE
		SEPTEMBER 2015



ELEVATION

PLAN

Charles Town Utility Board	NEW LATERAL CONNECTION DETAIL	Standard Detail No. S-13
832 S. George Street, P.O. Box 359, Charles Town, WV 25414 Phone: (304) 725-2316 •Fax: (304) 725-4313		NOT TO SCALE
		SEPTEMBER 2015



PLAN VIEW

NOTES:

1. ALL PVC MATERIAL IS SCH SDR-35.
2. BACKFILL WITH COMPACTED DCR-6 STONE.

DOUBLE WYE HOUSE CONNECTION

N.T.S.

TREVOR MARK FREDERICK REGISTERED PROFESSIONAL ENGINEER STATE OF WEST VIRGINIA 24227
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

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ATTN: ROB ROTZ
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PHONE: 301.491.6899

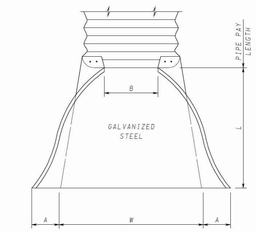
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SCALE: N.T.S.
SHEET TITLE

CONSTRUCTION DETAILS - SEWER

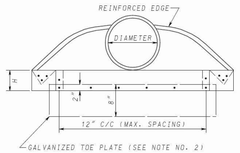
C-507
SHEET 49 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\ENGINEERING\CIVIL\CTN\SHEETS\CTN_SHT_2023-0285 CONSTRUCTION DETAILS & NOTES.DWG 2025-06-13

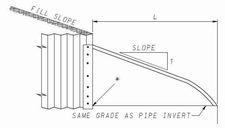
DIMENSIONS								
PIPE DIA.	GA.	A 1"±	B MAX.	H 1"±	L 1½"±	W 2"±	APPROX. SLOPE	UNIT
12"	16	6"	6"	6"	21"	24"	2½	1 PC.
15"	16	7"	8"	6"	26"	30"	2½	1 PC.
18"	16	8"	10"	6"	31"	36"	2½	1 PC.
21"	16	9"	12"	6"	36"	42"	2½	1 PC.
24"	16	10"	13"	6"	41"	48"	2½	1 PC.
30"	14	12"	16"	8"	51"	60"	2½	1 PC.
36"	14	14"	19"	9"	60"	72"	2½	2 PC.



PLAN



END VIEW



SIDE VIEW

* INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION. ELEVATIONS TO BE NOTED ON THE CONSTRUCTION PLANS.

NOTES

1. METAL END SECTIONS SHALL BE GAGE 16 FOR PIPES RANGING FROM 15" THRU 24". AND GAGE 14 FOR PIPES RANGING FROM 30" THRU 36" . MULTIPLE PANEL UNITS TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED BY ¾" DIAMETER GALVANIZED RIVETS OR BOLTS.
2. TOE PLATES SHALL BE USED WHEN SPECIFIED ON THE PLANS. THICKNESS OF END PLATE TO BE SAME AS END SECTION. COST OF TOE PLATE TO BE INCIDENTAL TO THE BID PRICE PER EACH OF METAL END SECTION.

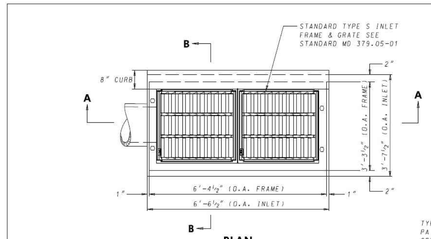
SPECIFICATION	CATEGORY CODE ITEMS
303	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	8-28-86	APPROVAL	12-12-86
REVISED	10-1-01	REVISED	7-27-09
REVISED	7-1-09	REVISED	
REVISED		REVISED	

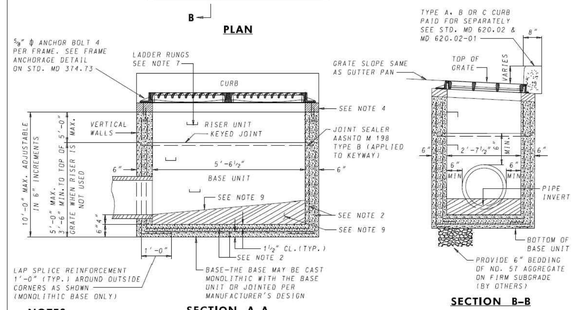
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD METAL END SECTION
ROUND METAL PIPE

STANDARD NO. MD 370.01



PLAN



SECTION A–A

SECTION B–B

NOTES

1. CONCRETE TO BE MIX NO. 6 (4500 PSI).
2. REINFORCING: WALLS – 2 LAYERS OF 4X4-W6.0 X W6.0 WELDED WIRE FABRIC; BASE – 2 LAYERS OF 4X4 – W7.0 X W7.0 WELDED WIRE FABRIC
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRADE AND SLOPE ADJUSTMENTS MIN. 2". MAX. 9" SHALL BE COMPLETED IN THE FIELD USING CONCRETE MIX NO. 6.
5. PIPE OPENINGS TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO THE CONSTRUCTION PLANS.
6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD MD 383.91 OR 383.92. RUNGS ARE INCIDENTAL TO THE COST OF THE INLET.
8. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 3'-6" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE GRATE AT ITS HIGHEST POINT. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 3'-6" INCLUDING ALL APPURTENANCES.
9. CONCRETE OR BRICK INVERT TO BE PROVIDED IN THE FIELD AND SHALL SLOPE 2 IN./FT TOWARD OUTLET OR AS DIRECTED.
10. BASE WALLS UNIT MAY TAPER PER MANUFACTURER'S DESIGN.
11. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR H5-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

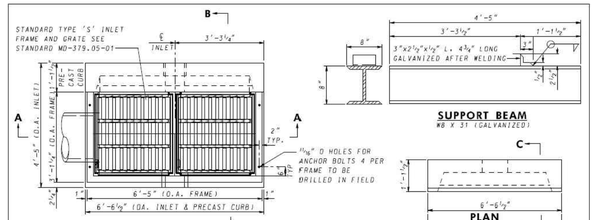
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	2-22-91	APPROVAL	1-2-91
REVISED	8-3-10	REVISED	7-26-10
REVISED	10-7-14	REVISED	9-29-14
REVISED	–	REVISED	

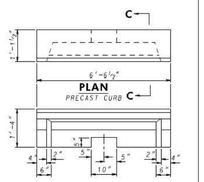
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST STANDARD TYPE S INLET
DOUBLE GRATE TANDEM

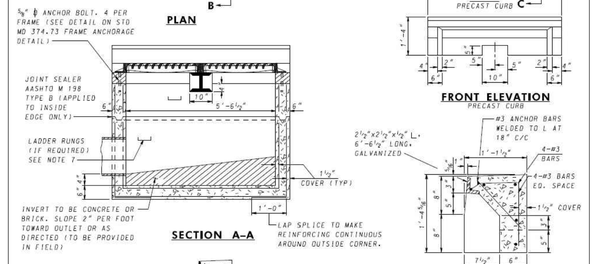
STANDARD NO. MD 374.70



PLAN

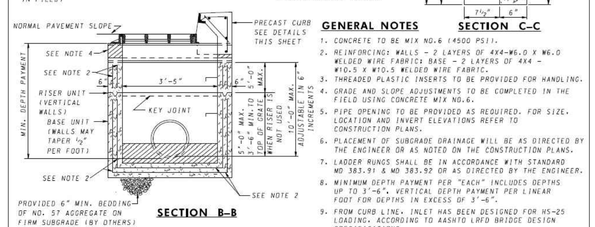


FRONT ELEVATION
PRECAST CURB



SECTION A–A

SECTION C–C



SECTION B–B

GENERAL NOTES

1. CONCRETE TO BE MIX NO.6 (4500 PSI).
2. REINFORCING: WALLS – 2 LAYERS OF 4X4-W6.0 X W6.0 WELDED WIRE FABRIC; BASE – 2 LAYERS OF 4X4 – W10.5 X W10.5 WELDED WIRE FABRIC.
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRADE AND SLOPE ADJUSTMENTS TO BE COMPLETED IN THE FIELD USING CONCRETE MIX NO.6.
5. PIPE OPENING TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD MD 383.91 & MD 383.92 OR AS DIRECTED BY THE ENGINEER.
8. MINIMUM DEPTH PAYMENT PER "EACH" INCLUDES DEPTHS UP TO 3'-6", VERTICAL DEPTH PAYMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 3'-6".
9. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR H5-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

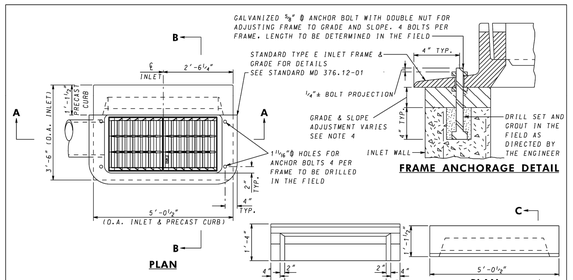
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	4-15-87	APPROVAL	6-23-87
REVISED	8-3-10	REVISED	7-26-10
REVISED	10-7-14	REVISED	9-29-14
REVISED	–	REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST STANDARD
TYPE S COMBINATION INLET
DOUBLE GRATE TANDEM

STANDARD NO. MD 374.71



GENERAL NOTES

1. CONCRETE TO BE MIX NO.6 (4500 PSI).
2. REINFORCING WALLS –2 LAYERS OF 4x4-W4.0x W4.0 WELDED WIRE FABRIC; BASE – 2 LAYERS OF 4X4 – W6.0 X W6.0 WELDED WIRE FABRIC
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRADE AND SLOPE ADJUSTMENTS TO BE COMPLETED IN THE FIELD USING CONCRETE MIX NO.6.
5. PIPE OPENINGS TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD MD 383.91 AND MD 383.92 OR AS DIRECTED BY THE ENGINEER.
8. MINIMUM DEPTH PAYMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-6". VERTICAL DEPTH PAYMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 3'-6".
9. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR H5-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

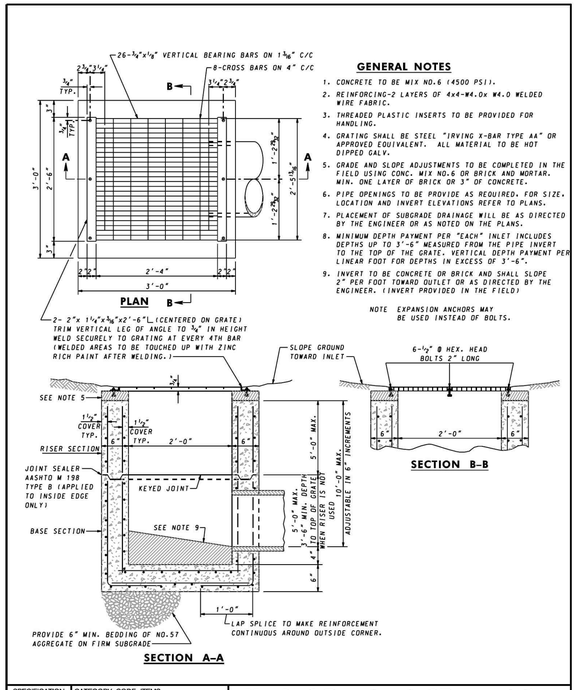
SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	3-10	APPROVAL	7-26-10
REVISED	10-7-14	REVISED	9-29-14
REVISED	–	REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST STANDARD
TYPE E COMBINATION INLET

STANDARD NO. MD 374.74



SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	4-5-87	APPROVAL	6-23-87
REVISED	10-1-01	REVISED	
REVISED		REVISED	
REVISED		REVISED	

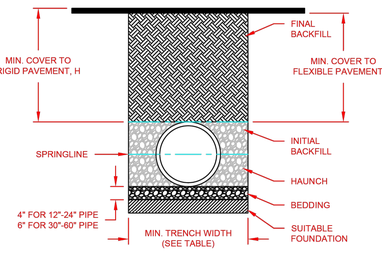
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST YARD INLET

STANDARD NO. MD 381.02

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4" (100mm)	21" (533mm)
6" (150mm)	23" (584mm)
8" (200mm)	26" (660mm)
10" (250mm)	28" (711mm)
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING TO THE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS**

PIPE DIAM.	SURFACE LIVE LOADING CONDITION H-25	SURFACE LIVE LOADING CONDITION HEAVY CONSTRUCTION (75T AXLE LAOD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER
**SEE BACKFILL REQUIREMENTS IN NOTE 6.

MAXIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	CLASS I		CLASS II		CLASS III
	COMPACTED	DUMPED	95%	90%	95%
4" (100mm)	37 (11.3m)	18 (5.5m)	25 (7.6m)	18 (5.5m)	18 (5.5m)
6" (150mm)	44 (13.4m)	20 (6.1m)	29 (8.8m)	20 (6.1m)	21 (6.4m)
8" (200mm)	32 (9.8m)	15 (4.6m)	22 (6.7m)	15 (4.6m)	16 (4.9m)
10" (250mm)	38 (11.6m)	18 (5.5m)	26 (7.9m)	18 (5.5m)	18 (5.5m)
12" (300mm)	35 (10.7m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
15" (375mm)	38 (11.6m)	17 (5.2m)	25 (7.6m)	17 (5.2m)	18 (5.5m)
18" (450mm)	36 (11.0m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	17 (5.2m)
24" (600mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
30" (750mm)	28 (8.5m)	13 (4.0m)	20 (6.1m)	13 (4.0m)	14 (4.3m)
36" (900mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	13 (4.0m)	13 (4.0m)
42" (1050mm)	25 (7.6m)	11 (3.4m)	17 (4.9m)	11 (3.4m)	11 (3.4m)
48" (1200mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)
60" (1500mm)	25 (7.6m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE,
UNIT WEIGHT OF SOIL (Ys) = 120 PCF

REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
6	INITIAL BACKFILL	JAB	04/02/20	

© 2020 ADS, INC.

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

TRENCH INSTALLATION DETAIL (N-12 PER AASHTO)

DRAWING NUMBER: STD-101

ADS Advanced Drainage Systems, Inc. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026

DRAWN BY: TJR
SCALE: 12/29/16
DATE BY:
SCALE:
SCALE: NTS
SHEET: 1 OF 1

SHEET TITLE
CONSTRUCTION DETAILS - STORM

C-508
SHEET 50 OF 57

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
15 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717-582-2644
© 2025
355 SOUTH HANOVER STREET CARLISLE, PA 17013 717-243-9411
11142 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-3647
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 240-313-2666

MARK	DESCRIPTION:	DATE
1	REVISED PER AGENCY COMMENTS	03/18/2025
2	REVISED PER AGENCY COMMENTS	05/02/2025
3	REVISED PER AGENCY COMMENTS	06/11/2025

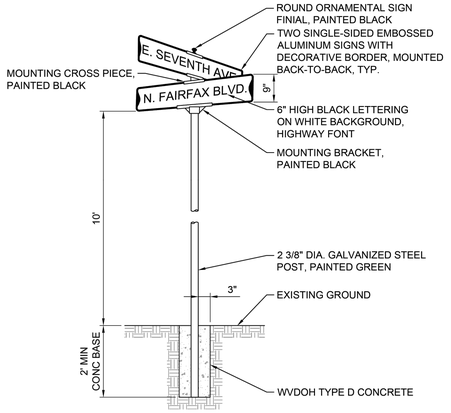
TREVOR MARK FREDERICK — REGISTERED — 24227 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE N.T.S.
SHEET TITLE CONSTRUCTION DETAILS - STORM

P:\SHARED\FOLDERS\PROJECTS\2023\2023-0285\ENGINEERING\CONSTRUCTION DETAILS\STORM CONSTRUCTION DETAILS & NOTES.DWG 2025-06-13

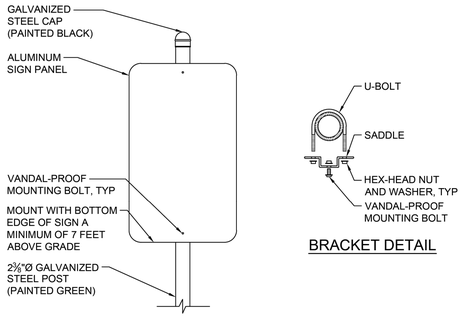


NOTES:

1. SIGN LENGTH SHALL BE A MINIMUM OF 30 INCHES AND A MAXIMUM OF 48 INCHES.
2. REQUEST PAINT COLOR SPECIFICATIONS FROM CITY DEPARTMENT OF PUBLIC WORKS PRIOR TO FABRICATION.
3. PROVIDE SHOP DRAWINGS TO THE CITY FOR APPROVAL PRIOR TO SIGN AND POST FABRICATION.

NOT TO SCALE

RANSON	STANDARD POST MOUNTED STREET NAME SIGN CITY OF RANSON, WEST VIRGINIA	DETAIL NO.	SHEET NO.	REVISION DATE
		SN-01	1 OF 1	12/1/2023



SIGN MOUNTING DETAIL

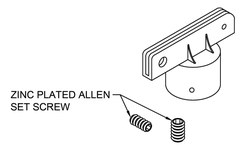
BRACKET DETAIL

NOTES:

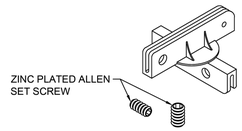
1. TAPCO SINGLE CLAMP-ON U-BRACKETS (OR APPROVED EQUAL) SHALL BE USED FOR SIGN PANEL ATTACHMENT TO POLE.
2. PAINT MOUNTING BRACKET AND U-BOLT BLACK TO MATCH SIGN POST.
3. SIGN PANELS SHALL COMPLY WITH WVDOH SPECIFICATIONS.
4. ALL BOLT HOLES SHALL BE ⅜" DIAMETER AND SHALL BE DRILLED OR FACTORY PUNCHED TO FINISHED SIZE.
5. SIGN BACKING SHALL BE NON-REFLECTIVE OPAQUE BLACK.
6. SIGN TYPE AS SHOWN ON PLANS. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR DIMENSIONS AND DETAILS OF SIGN LEGEND.

NOT TO SCALE

RANSON	SIGN MOUNTING CITY OF RANSON, WEST VIRGINIA	DETAIL NO.	SHEET NO.	REVISION DATE
		SN-02	1 OF 1	12/1/2023



POST TOP BRACKET



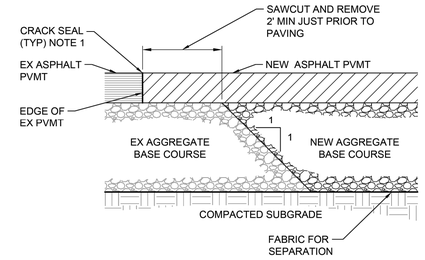
CROSSPIECE BRACKET

NOTES:

1. TAPCO SIGN BRACKETS (OR APPROVED EQUAL) SHALL BE USED FOR STREET SIGN ATTACHMENT TO POLES.
2. PAINT BRACKETS BLACK.

NOT TO SCALE

RANSON	STREET SIGN MOUNTING BRACKET CITY OF RANSON, WEST VIRGINIA	DETAIL NO.	SHEET NO.	REVISION DATE
		SN-03	1 OF 1	12/1/2023

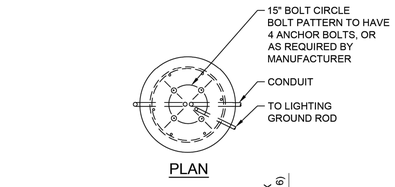


NOTES:

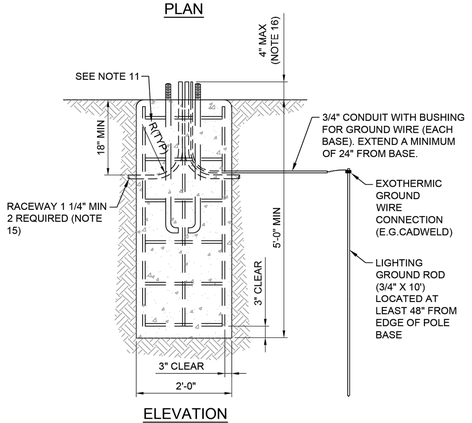
1. PAINT EDGE OF EX ASPHALT WITH TACK COAT PRIOR TO PAVING. CRACK SEAL JOINT AFTER PAVING OPERATION HAS BEEN COMPLETED.

NOT TO SCALE

RANSON	ASPHALT PAVEMENT CONNECTION CITY OF RANSON, WEST VIRGINIA	DETAIL NO.	SHEET NO.	REVISION DATE
		PVT-03	1 OF 1	12/1/2023



PLAN



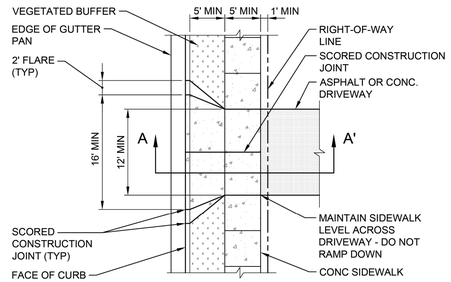
ELEVATION

NOTES:

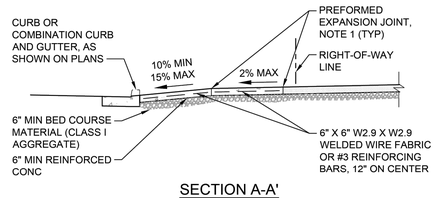
1. ALL EXPOSED CONCRETE SHALL HAVE A NORMAL FINISH.
2. ALL OUTSIDE CONCRETE CORNERS AND EDGES SHALL HAVE A 3/4 " CHAMFER.
3. CONCRETE TO BE RODDED OR VIBRATED WHILE POURING.
4. ALL CONCRETE SHALL BE WVDOH CLASS "B".
5. REINFORCING STEEL SHALL NOT BE CLOSER THAN 3" TO THE OUTSIDE SURFACE OF THE FOOTING AND SHALL BE TIED OR WELDED.
6. VERTICAL BARS SHALL BE TIED WITH #4 HOOP BARS AT 1'-0" ON CENTER. THE #4 HOOP BARS SHALL HAVE A 1'-0" MINIMUM LAP.
7. ALL FOOTINGS IN SIDEWALKS SHALL BE FINISHED FLUSH WITH THE EXISTING SIDEWALKS, UNLESS OTHERWISE SPECIFIED BY THE PROJECT ENGINEER.
8. FOOTINGS SHALL BE CIRCULAR IN CROSS-SECTION.
9. WITH PERMISSION OF THE PROJECT ENGINEER, THE DEPTH OF THE FOOTING MAY BE REDUCED ONE (1) FOOT WHEN THE FOOTING IS PLACED IN A CONCRETE OR ASPHALTIC CONCRETE SIDEWALK OR PAVED SURFACE. THE FOOTINGS MAY BE REDUCED BY ONE (1) FOOT WHEN THE FOOTING IS IN ROCK.
10. NO FORMS MAY EXTEND TO A DEPTH GREATER THAN 12" UNLESS APPROVAL IS GRANTED BY THE CITY ENGINEER.
11. THE RADIUS (R) OF THE CURVE OF THE INNER EDGE OF ANY BEND SHALL NOT BE LESS THAN THE SIZE SPECIFIED IN THE NATIONAL ELECTRICAL CODE.
12. GROUNDING:
    A. THE CONTRACTOR IS TO ENGAGE A QUALIFIED TESTING AND INSPECTION AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS
    B. AFTER INSTALLING GROUNDING SYSTEM BUT BEFORE PERMANENT ELECTRICAL CIRCUITS HAVE BEEN ENERGIZED, TEST FOR COMPLIANCE WITH THE FOLLOWING REQUIREMENTS:
    (1) TEST COMPLETED GROUNDING SYSTEM AT EACH POLE AND AT SERVICE DISCONNECT ENCLOSURE.
    (2) MEASURE GROUND RESISTANCE NOT LESS THAN TWO FULL DAYS AFTER THE LAST TRACE OF PRECIPITATION AND WITHOUT SOIL BEING MOISTENED BY ANY MEANS OTHER THAN NATURAL DRAINAGE OR SEEPAGE AND WITHOUT CHEMICAL TREATMENT OR OTHER ARTIFICIAL MEANS OF REDUCING NATURAL GROUND RESISTANCE.
    (3) PERFORM THE TEST BY THE FALL-OF-POTENTIAL METHOD ACCORDING TO IEEE STANDARD 81.
    C. INSTALL ADDITIONAL GROUND RODS AS REQUIRED UNTIL MEASURED GROUND RESISTANCE IS 5 OHMS OR LESS.
    D. GROUND RODS ARE TO BE DRIVEN TO A DEPTH OF 2 INCHES BELOW FINISHED GRADE TO TOP OF ROD AND SEPARATED BY A MINIMUM DISTANCE OF 8 FEET.
    E. INTERCONNECT GROUND RODS WITH A #2 AWG BARE, STRANDED COPPER CONDUCTOR BURIED AT 18 INCHES BELOW GRADE.
13. INSTALL POLE, ANCHOR BOLTS, LEVELING SYSTEM, GROUNDING, AND WIRING PER MANUFACTURER SPECIFICATIONS.
14. SEE DETAIL LT-01 FOR CITY STANDARD POST-TOP LIGHT POLE.
15. IF ONE IS SPARE CONDUIT, AN ARROW SHALL BE ETCHED ON THE TOP OF THE BASE TO SHOW THE LOCATION/ DIRECTION OF THE SPARE CONDUIT.
16. USE 3" MAX WHEN USING TRANSFORMER BASES.

NOT TO SCALE

RANSON	POST TOP STREETLIGHT FOUNDATION - 16' MAX POLE HEIGHT CITY OF RANSON, WEST VIRGINIA	DETAIL NO.	SHEET NO.	REVISION DATE
		LT-04	1 OF 1	12/1/2023



PLAN



SECTION A-A'

NOTES:

1. PROVIDE PREFORMED EXPANSION JOINT AT BACK OF CURB, GRADE BREAK AT FRONT OF SIDEWALK, AND WHERE APRON ABUTS CONC DRIVEWAY. FOR ASPHALT DRIVEWAY, OMIT EXPANSION JOINT AND COAT EDGE OF CONC APRON WITH BITUMINOUS MATERIAL.
2. ALL JOINTS SHALL BE MADE BY ACCEPTABLE FORMING METHODS.

NOT TO SCALE

RANSON	RESIDENTIAL DRIVEWAY APRON CURB AND GUTTER SECTION CITY OF RANSON, WEST VIRGINIA	DETAIL NO.	SHEET NO.	REVISION DATE
		DW-01	1 OF 1	12/1/2023

P:\PROJECTS\2023\2023-0285\CIVIL\CONSTRUCTION\DETAILS & NOTES.DWG - 2025-06-13

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date 12-31-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsa-inc.com
15 EAST MAIN STREET NEW BLOOMFIELD, PA 17068 717-582-2644
355 SOUTH HANOVER STREET CARLISLE, PA 17013 717-249-0411
11142 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-3457
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

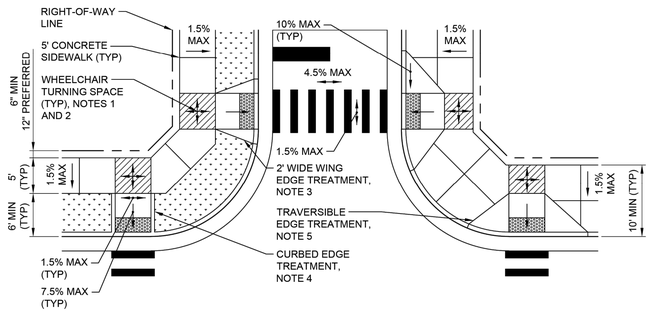
MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301 491 6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE N.T.S.
SHEET TITLE

CONSTRUCTION DETAILS - SITE

C-509
SHEET 51 OF 57



NOTES:

1. MINIMUM DIMENSIONS FOR WHEELCHAIR TURNING AREAS ARE 5'-0" X 4'-0". WHERE BACK OF TURNING AREA IS CONSTRAINED BY A VERTICAL OBSTRUCTION, INCREASE DIMENSIONS TO 5'-0" X 5'-0". WHEN CURB RAMP IS NOT DIRECTLY ALIGNED WITH PATH OF TRAVEL ALONG CROSSWALK, A MINIMUM 4'-0" X 4'-0" TURNING SPACE MUST ALSO BE PROVIDED AT THE BOTTOM OF THE CURB RAMP. TURNING SPACE MUST BE FULLY WITHIN THE CROSSWALK.
2. WHEELCHAIR TURNING AREAS MAY NOT EXCEED 2.0% SLOPE IN ANY DIRECTION. PROVIDE DETAILS DEMONSTRATING EDGE SLOPES OF TURNING SPACE DO NOT EXCEED 1.5% AND DIAGONAL SLOPE FROM HIGHEST TO LOWEST CORNER DOES NOT EXCEED 2%.
3. 2' WIDE WING EDGE TREATMENT MAY BE USED WHEN RAMP IS ADJACENT TO NON-TRAVERSIBLE VEGETATED SURFACE.
4. CURBED EDGE TREATMENTS MAY BE USED WHEN RAMP IS ADJACENT TO NON-TRAVERSIBLE VEGETATED SURFACE OR OBSTRUCTION. DO NOT USE CURBED EDGE TREATMENT UNLESS RAMP IS DIRECTLY ALIGNED WITH THE PATH OF TRAVEL ALONG THE CROSSWALK.
5. TRAVERSIBLE EDGE TREATMENT REQUIRED WHEN SIDEWALK IS A MINIMUM OF 10 FEET WIDE AND IMMEDIATELY ADJACENT TO CURB.

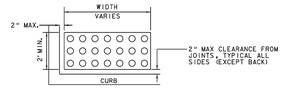
NOT TO SCALE

RANSON

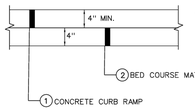
PERPENDICULAR CURB RAMP WITHOUT CURB EXTENSION

CITY OF RANSON, WEST VIRGINIA

DETAIL NO.	SHEET NO.	REVISION DATE
SW-04	1 OF 1	12/1/2023



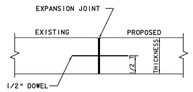
DETECTABLE WARNING SURFACE (DWS)



NOTES: CURB RAMP AND BED COURSE MATERIAL TO BE PAID BY ITEM 609005-001 CURB RAMP.

THICKNESS OF CONCRETE SHALL BE INCREASED TO 6" MINIMUM IN AREAS EXPOSED TO TRAFFIC.

CURB RAMP TYPICAL



NOTE: 1/2" DOWEL TO BE EVENLY SPACED, MINIMUM LENGTH 8", COST OF DOWEL INSTALLATION INCIDENTAL TO COST OF RAMP.

CURB RAMP TYPICAL

NOTES

DETECTABLE WARNING SURFACES (DWS'S) SHALL ONLY BE PURCHASED FROM VENDORS ON THE WEST VIRGINIA DIVISION OF HIGHWAYS APPROVED VENDOR LIST 609.2 - DETECTABLE WARNING SURFACES.

DESIGN AND PLACEMENT OF DETECTABLE WARNING SURFACE (DWS) SHALL BE IN ACCORDANCE WITH SECTION 609 OF THE CURRENT WVDOT, DOH STANDARD SPECIFICATIONS ROADS AND BRIDGES AND AND SUBSEQUENT DOH SUPPLEMENTAL SPECIFICATIONS AND THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG) DATED JULY 26, 2011.

DETECTABLE WARNING SURFACES SHALL EXTEND ACROSS THE FULL WIDTH OF THE CURB RAMP THRESHOLD WHERE THE CURB IS FLUSH WITH THE ROADWAY AND SHALL BE PLACED AT THE BACK OF THE CURB WITH A 0" MINIMUM, 2" MAXIMUM BORDER DIMENSION FROM JOINTS ON EACH SIDE OF THE DWS. WHERE THE BACK OF THE CURB EDGE IS TOOLED TO PROVIDE A RADIUS, THE BORDER DIMENSION SHOULD BE MEASURED FROM THE END OF THE RADIUS.

DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, STREET, OR HIGHWAY,EITHER LIGHT ON DARK OR DARK ON LIGHT.

A WET OR PLASTIC SET-IN-PLACE DETECTABLE WARNING SURFACE (DWS) SHALL BE INSTALLED AT THE TIME OF THE PLACEMENT OF THE CURB RAMP, WHILE THE CONCRETE IS STILL PLASTIC.

MOLD-IN-PLACE CONCRETE DOMES, BRICK PAVERS, OR IRON OR STEEL WARNING SYSTEMS SHALL NOT BE USED.

SET-IN-PLACE DWS SHALL BE USED IN NEW CONSTRUCTION. SURFACE MOUNTED DWS ARE NOT PERMITTED.

CONCRETE SHALL BE EDGED AROUND THE DWS AT TIME OF PLACEMENT.

A SINGLE DWS PANEL SHALL BE USED WITH CURB RAMP WIDTHS OF 5' OR LESS.

ANY CUTTING OF DWS DURING INSTALLATION SHALL BE APPROVED BY PROJECT ENGINEER.

IF DWS IS CUT TO CONFORM TO A SPECIFIC SHAPE OF RAMP AND ANCHORING DEVICES BECOME PART OF THE WASTE, THEN ANCHOR WILL BE REMOVED AND REATTACHED INTO THE DWS AT THE ORIGINAL EDGE OFFSET AS PER MANUFACTURER.

ALL DOWEL BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH SECTION 709.1 OF THE CURRENT WVDOH STANDARD SPECIFICATIONS ROADS AND BRIDGES

NOT TO SCALE

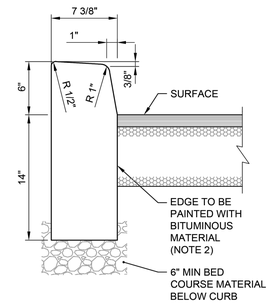
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STANDARD DETAIL

PREPARED 1-1-1999

REVISION DATE
7/15/15
10/22/20
10/15/20

SIDEWALK RAMPS
(Sheet 11 of 13)
DETECTABLE WARNING SURFACES & TYPICALS

STANDARD SHEET PVT 7



NOTES:

1. ALL CURB JOINTS SHALL BE MADE BY ACCEPTABLE FORMING METHODS.
2. DOES NOT APPLY WHEN ABUTTING CONCRETE PAVEMENT. INSTEAD A LONGITUDINAL JOINT WITH TIE BARS OR TIE BOLT ASSEMBLIES SHALL BE CONSTRUCTED AT THIS LOCATION. BARS OR BOLTS SHALL EXTEND THROUGH 1/2 THE WIDTH OF THE CONCRETE CURB.

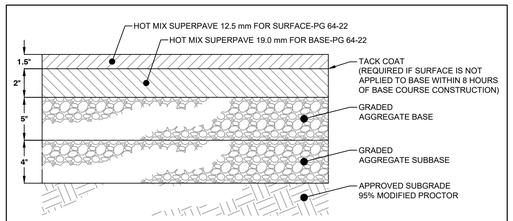
NOT TO SCALE

RANSON

CONCRETE CURB POSTED SPEED ≤ 25 MPH

CITY OF RANSON, WEST VIRGINIA

DETAIL NO.	SHEET NO.	REVISION DATE
CG-03	1 OF 1	12/1/2023



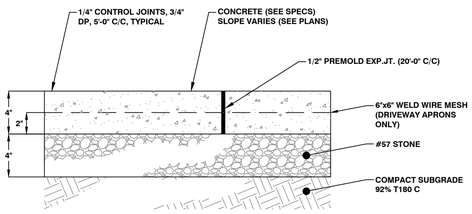
SECTION

NOTES:
The Asphalt Binder shall conform to AASHTO MP1-93 Table 1, Standard Specification for Performance Graded Asphalt Binder. Superpave mix designs shall be in conformance with AASHTO PP28-95, Standard Practice for Superpave Volumetric Design for HMA. The Performance Grading shall be achieved by the use of Neat Asphalt with polymer modification when needed.

01 / C-510

PAVEMENT - SITE

NOT TO SCALE



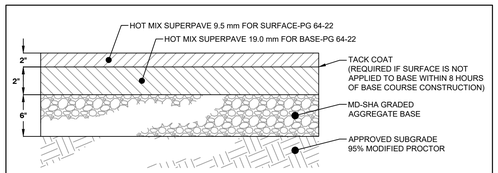
SECTION

NOTES:
1. **Concrete shall be MD SHA 902.10 Mix 13 (4000 psi) or equal.**
2. **Sidewalk to have 1/4" contraction joints scored at 5'-0" intervals.**
3. **Construct 1/2" expansion joints spaced every 20' and between curb and sidewalk where adjacent or isolation from fixed objects.**
4. **Sidewalk to be brush finished.**

02 / C-510

SIDEWALK - CONCRETE

NOT TO SCALE



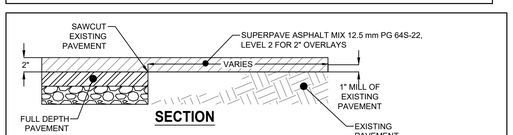
SECTION

NOTES:
The Asphalt Binder shall conform to AASHTO MP1-93 Table 1, Standard Specification for Performance Graded Asphalt Binder. Superpave mix designs shall be in conformance with AASHTO PP28-95, Standard Practice for Superpave Volumetric Design for HMA. The Performance Grading shall be achieved by the use of Neat Asphalt with polymer modification when needed.

03 / C-510

PAVEMENT - SPORTS COURT

NOT TO SCALE



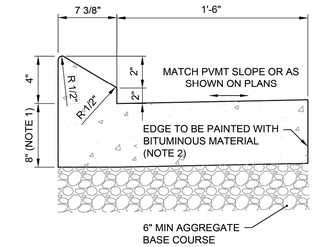
SECTION

NOTES:
The Asphalt Binder shall conform to AASHTO MP1-93 Table 1, Standard Specification for Performance Graded Asphalt Binder. Superpave mix designs shall be in conformance with AASHTO PP28-95, Standard Practice for Superpave Volumetric Design for HMA. The Performance Grading shall be achieved by the use of Neat Asphalt with polymer modification when needed.

04 / C-510

PAVEMENT - OVERLAY

NOT TO SCALE



NOTES:

1. MATCH THICKNESS OF PAVEMENT WHEN ABUTTING CONCRETE PAVEMENT.
2. DOES NOT APPLY WHEN ABUTTING CONCRETE PAVEMENT. INSTEAD A LONGITUDINAL JOINT WITH TIE BARS OR TIE BOLT ASSEMBLIES SHALL BE CONSTRUCTED AT THIS LOCATION.
3. ALL CURB JOINTS SHALL BE MADE BY ACCEPTABLE FORMING METHODS.

MODIFIED PER WAIVER REQUEST

NOT TO SCALE

RANSON

COMBINATION CURB AND GUTTER POSTED SPEED > 25 MPH AND ≤ 45 MPH

CITY OF RANSON, WEST VIRGINIA

DETAIL NO.	SHEET NO.	REVISION DATE
CG-02	1 OF 1	12/1/2023

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

FSA
FREDERICK, SEIBERT & ASSOCIATES, INC.
CIVIL ENGINEERS • SURVEYORS • LANDSCAPE ARCHITECTS • LAND PLANNERS
fsainc.com
15 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, 717-582-8844
355 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717-249-0611
11142 WILLIAMSPORT PIKE, GREENCASTLE, PA 17225, 717-597-3407
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 240-719-8666

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MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-6999

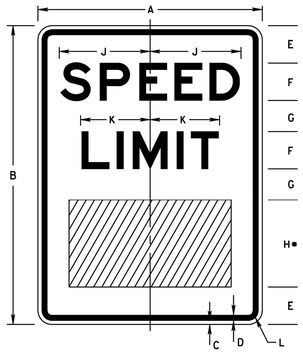
PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE N.T.S.
SHEET TITLE

CONSTRUCTION DETAILS - SITE

C-510
SHEET 52 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\DWGS\CONSTRUCTION\C510 SW-04 NOTES.DWG - 2025-06-13

REVISED //



COLORS
LEGEND - BLACK (NON-REF)
BACKGROUND - WHITE (REF)

DIMENSIONS (INCHES)

A	B	C	D	E	F	G	H	J	K	L
24	30	3/8	5/8	4	4E	2	10E	9 9/16	7 5/16	1 1/8
36	48	5/8	7/8	6	6E	5	14E	14 3/8	11	1 5/8
48	60	3/4	1 1/4	8	8E	6	16E	19 1/8	14 5/8	2 1/4

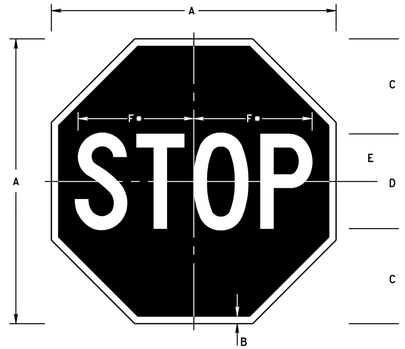
• - OPTICALLY SPACE NUMERALS ABOUT VERTICAL CENTERLINE

WV DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING DIVISION

R2-1 CODE
24"=30"=I0I0235
36"=48"=I0I0251
48"=60"=I0I0267

R2–1

REVISED //



COLORS
LEGEND - WHITE (REF)
BACKGROUND - RED (REF)

DIMENSIONS (INCHES)

A	B	C	D	E	F
18	3/8	6	6C	3	7 3/4
24	5/8	8	8C	4	10
30	3/4	10	10C	5	12 1/2
36	7/8	12	12C	6	15
48	1 1/4	16	16C	8	20

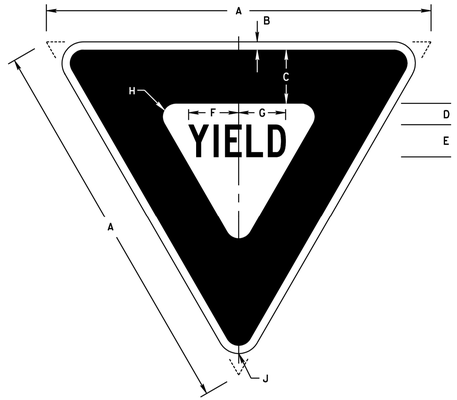
• - REDUCE SPACING 40%
18" FOR BIKE ROUTES ONLY

WV DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING DIVISION

R1-1 CODE
18"=I0I0100
24"=I0I0101
30"=I0I0102
36"=I0I0103
48"=I0I0104

R1–1

REVISED //



COLORS
LEGEND - RED (REF)
BACKGROUND - WHITE (REF)

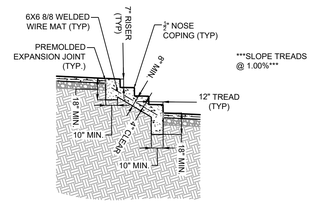
DIMENSIONS (INCHES)

A	B	C	D	E	F	G	H	J
24	3/8	3	1 1/8	2C	3 1/4	3	7/8	1 1/2
30	5/8	4	1 3/4	2 1/2 C	3 5/8	3 5/8	7/8	1 1/2
36	3/4	5	2	3C	4 5/8	4 3/8	1 1/4	2
48	1	6	2 3/4	4C	6 1/4	5 7/8	2	3
60	1 1/2	8	3 1/2	5C	7 7/8	7 1/4	2 1/2	4

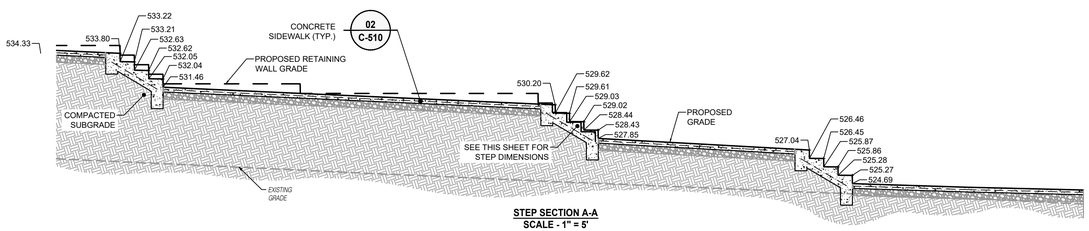
WV DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING DIVISION

R1-2 CODE
24"=
30"=
36"=I0I0111
48"=I0I0112
60"=I0I0113

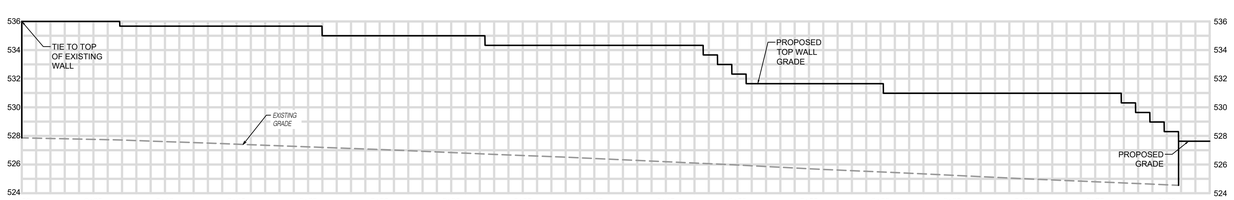
R1–2



TYPICAL STEP DIMENSIONS
SCALE - 1" = 5'



STEP SECTION A-A
SCALE - 1" = 5'



RETAINING WALL PROFILE
SCALE - 1" = 5'

P:\DrawIND\ 2023\0285\PLANS\C3\0285-SDM-SWM\CONSTRUCTION\STYLES & NOTES.DWG 2025-06-13

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11142 WILLIAMSPORT PIKE, GREENCASTLE, PA 17225, (717) 597-3667
555 SOUTH HANOVER STREET, CARLISLE, PA 17013, (717) 249-1411
15 EAST MAIN STREET, NEW BLOOMFIELD, PA 17068, (717) 582-2644
IP #2026

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date 12-31-2026

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	03.19.2025
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301-491-6899

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE N.T.S.
SHEET TITLE

CONSTRUCTION DETAILS - SITE

C-511
SHEET 53 OF 57

N/F
84 PROPERTIES, LLC.
TAX MAP 8, PAR. 12
D.B. 1158 P. 500
ZONED: HIGHWAY COMMERCIAL (HC)
USE: COMMERCIAL

EX. EDGE OF ASPHALT (TYP.)

N/F
WESCOTT, LLC
TAX MAP 8, PAR. 13
D.B. 935 P. 649
ZONED: HIGHWAY COMMERCIAL (HC)
USE: COMMERCIAL

NAD 83 NORTH NAD 83
W.V. NORTH ZONE

N/F
UNIVERSAL FOREST PRODUCTS EASTERN DIVISION, INC.
TAX MAP 7, PAR. 11.18
D.B. 926 P. 215
ZONED: INDUSTRIAL/COMMERCIAL
USE: INDUSTRIAL

N 18°44'09" E 356.26

UTILITY POLE

NORFOLK AND WESTERN RAILROAD
60' RIGHT-OF-WAY

N 18°44'09" E 1,700.55

SWALE 'C'

SWALE 'D'

OPEN SPACE 1

OPEN SPACE 2

OPEN SPACE 3

(4) ACE GLO
2.5" Cal.

(7) TIL GRE
2.5" Cal.

(5) ACE GLO
2.5" Cal.

(5) ZEL GR2
2.5" Cal.

(TYP.) NO PLANT CLEAR ZONE
(35' FROM INTERSECTION)

(3) CER CAN
2.5" Cal.

WALLACE BOULEVARD
(50' ROW / 28' CARTWAY)

(3) CER CAN
2.5" Cal.

(3) ACE CAM
2.5" Cal.

(3) ACE CAM
2.5" Cal.

(4) CER CAN
2.5" Cal.

(2) ACE CAM
2.5" Cal.

(4) COR FLO
2.5" Cal.

SWALE 'G'

(3) CER CAN
2.5" Cal.

(3) COR FLO
2.5" Cal.

SWALE

CONEFLOWER DRIVE

MADISON GREENS LLC
TAX MAP 8, PARCEL 9.2
D.B. 1322 PG. 264
(6.643 AC.)
ZONED: SUBURBAN (T3) / GENERAL NEIGHBORHOOD (T4)
USE: VACANT

(5) CER CAN
2.5" Cal.

(5) TIL GRE
2.5" Cal.

(5) ZEL GR2
2.5" Cal.

MADISON GREENS LLC
TAX MAP 8E, PARCEL 17
D.B. 1322 PG. 264
(28.308 AC.)
ZONED: SUBURBAN (T3) / R6-RESIDENTIAL (R6)
USE: VACANT

N/F
LLOYD GLENDWELL & JOAN L. TRUST
TAX MAP 8, PAR. 9
D.B. 1203 PAR. 143
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: FARM

TROUT LILLY DRIVE

N 72°43'58" W 1,362.79

20TH AVENUE
(50' ROW / 28' CARTWAY)

21ST AVENUE
(50' ROW / 28' CARTWAY)

SWALE 'H'

(8) CER CAN
2.5" Cal.

(5) ZEL GR2
2.5" Cal.

(3) ACE GLO
2.5" Cal.

(8) ACE CAM
2.5" Cal.

(4) TIL GRE
2.5" Cal.

TOT LOT

PICKLEBALL COURT

BASKETBALL COURT

PAVILION

(5) LIR TUL
2.5" Cal.

DESTRIER STREET
(50' ROW / 28' CARTWAY)

DOROTHY LANE
(ROW VARIES, 28' CARTWAY)

(3) COR FLO
2.5" Cal.

(TYP.) NO PLANT CLEAR ZONE
(35' FROM INTERSECTION)

(3) CEL OCC
2.5" Cal.

(2) CER CAN
2.5" Cal.

SWALE 'K'

SWALE 'I'

(2) TIL GRE
2.5" Cal.

(2) COR FLO
2.5" Cal.

(6) QUE RUB
2.5" Cal.

(2) COR FLO
2.5" Cal.

(2) COR FLO
2.5" Cal.

RED CLOVER LANE

19TH AVENUE
(50' RIGHT OF WAY)

MADISON GREENS LLC
TAX MAP 8, PARCEL 1.5
(POTOMAC TOWN CENTER LOT 6).
D.B. 1322 PG. 264
(4.512 AC.)
ZONED: SMARTCODE NEW COMMUNITY
USE: VACANT

LOT 271

(1) COR FLO
2.5" Cal.

SEE SHEET L-101 FOR CONTINUATION

SEE SHEET L-102 FOR CONTINUATION

SEE SHEET L-101 FOR CONTINUATION

SEE SHEET L-103 FOR CONTINUATION

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

P:\PROJECTS\2023\2023-0285\CONSTRUCTION DOCUMENTS\LANDSCAPE PLANS.DWG 2025-06-13

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date: 12-31-2026

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717-582-2644
555 SOUTH HANOVER STREET
CARLISLE, PA 17013
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717-597-3467
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HAGERSTOWN, MD 21740
301-797-8666

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MARK	DESCRIPTION	DATE
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE

CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB RIOTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO. 2023-0285
DWN BY ABRAM MYERS
DATE 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE 1" = 50'
SHEET TITLE

LANDSCAPE PLAN

L-101
SHEET 54 OF 57

SEE SHEET L-101 FOR CONTINUATION

SEE SHEET L-102 FOR CONTINUATION

SWALE 'B'

SWALE 'A'

SWALE 'E'

N 18°44'09" E 1,700.55'

S 71°55'15" E 64.8'

(5) CEL OCC
2.5" Cal.

(3) COR FLO
2.5" Cal.

(6) CER CAN
2.5" Cal.

(5) TIL GRE
2.5" Cal.

(5) ACE CAM
2.5" Cal.

BRICKYARD CIRCLE

WALLACE BOULEVARD (80' RIGHT OF WAY)

BAKER PLACE (80' RIGHT OF WAY)

JOSHUA M. FREEMAN BOULEVARD (EX. 80' RIGHT OF WAY)

DUPONT CIRCLE

OPEN SPACE

EX. SWM FOREBAY

SWM POND W.S.E. 497.40

SWM POND W.S.E. 498.40

APPROXIMATE LOCATION OF 100-YEAR FLOOD PLAIN ZONE AE (PER L.O.M.R. EFFE. 5/23/12)

SANITARY SEWER ESMT P.B. 24 P. 53

SANITARY SEWER EASEMENT P.B. 23 P. 58

EX. SANITARY SEWER ESMT P.B. 24 P. 53

EX. WATER ESMT P.B. 23 P. 58

WATER ESMT P.B. 23 P. 58

EX. ACCESS ESMT P.B. 23 P. 53

INWOOD 165 LLC.
TAX MAP 8E, PARCEL SWM
(POTOMAC TOWN CENTER SWM LOT)
D.B. 1235 PG. 693
(6.225 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: SWM

INWOOD 165 LLC.
TAX MAP 8E, PARCEL -10
(POTOMAC TOWN CENTER LOT 10)
D.B. 1235 PG. 693
(1.653 AC.)
ZONED: HIGHWAY COMMERCIAL
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8E, PARCEL 11
(POTOMAC TOWN CENTER LOT 11)
D.B. 1235 PG. 693
(1.724 AC.)
ZONED: HIGHWAY COMMERCIAL
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8E, PARCEL 12
(POTOMAC TOWN CENTER LOT 12)
D.B. 1235 PG. 693
(2.722 AC.)
ZONED: HIGHWAY COMMERCIAL
USE: VACANT

INWOOD 165 LLC.
TAX MAP 8E, PARCEL PARK
(POTOMAC TOWN CENTER PARK PARCEL)
D.B. 1235 PG. 693
(2.651 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: PARK

INWOOD OWNER LLC.
TAX MAP 8E, PARCEL 14
(POTOMAC TOWN CENTER LOT 14)
D.B. 1235 PG. 693
(1.372 AC.)
ZONED: GENERAL NEIGHBORHOOD (T4)
USE: VACANT

N/F
EAST MOUNTAIN HEALTH ADVANTAGE INC.
TAX MAP 8E, PAR. 5
(POTOMAC TOWN CENTER LOT 5)
D.B. 1215 P. 308
ZONED: URBAN COMMERCIAL-RETIRED (UCX)
USE: FUTURE COMMERCIAL

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

P:\SHARED FILES\SURVEY\PROJECTS\2023\2023-0285\CONSTRUCTION SET\2023-0285 LANDSCAPE PLAN.DWG 2025-06-13

TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date 12-31-2026

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717-249-9411
11142 WILLIAMSPORT PIKE
GREENCASTLE, PA 17225
717-597-7807
128 SOUTH POTOMAC STREET
HAGERSTOWN, MD 21740
240-313-0666

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

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MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE

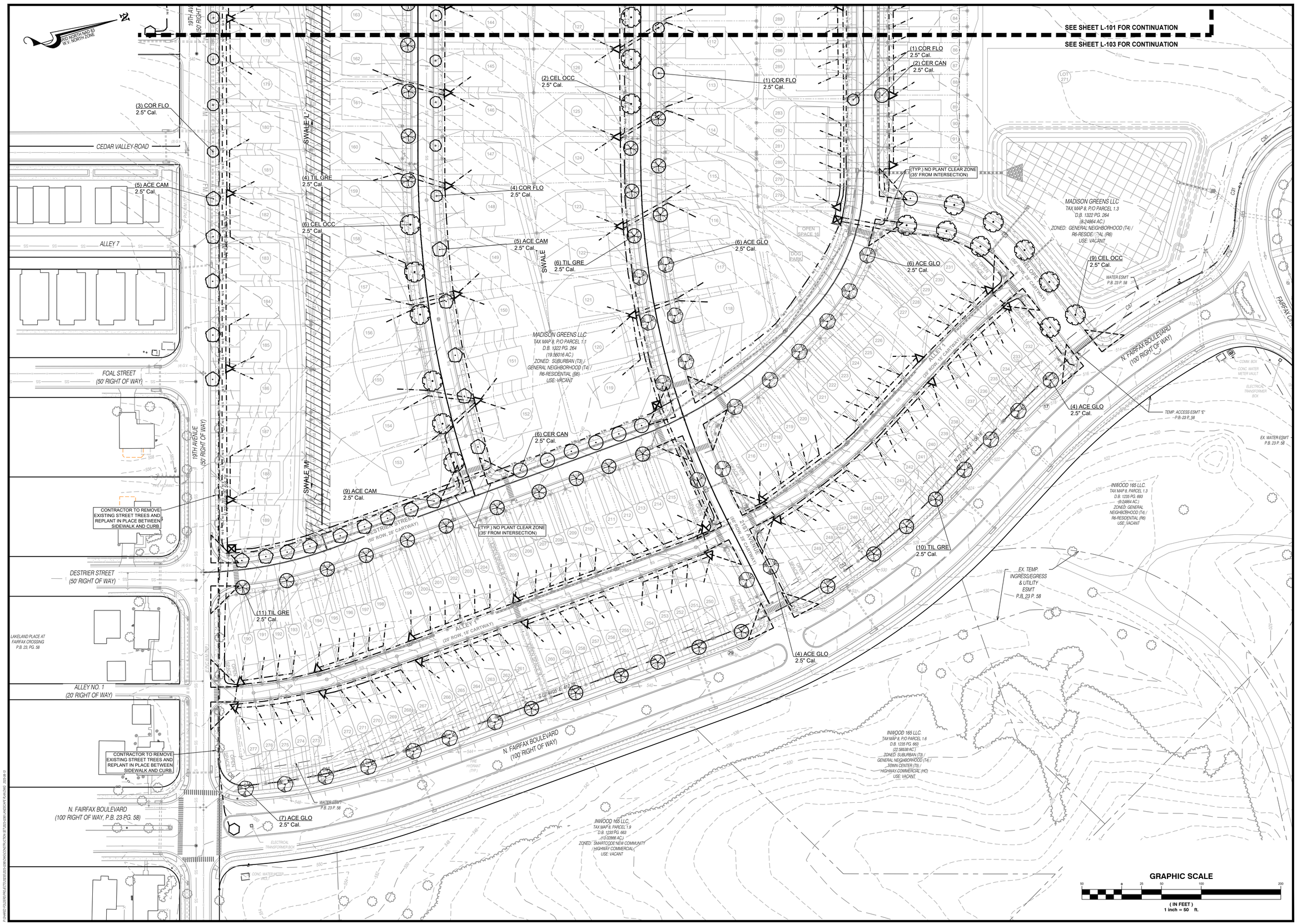
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB RIOTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO.: 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE: 1" = 50'
SHEET TITLE:

LANDSCAPE PLAN

L-102
SHEET 55 OF 57



TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA License #: 24227
Expiration Date 12-31-2026

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11142 WILLIAMSPORT PIKE GREENCASTLE, PA 17225 717-597-3467
128 SOUTH POTOMAC STREET HAGERSTOWN, MD 21740 301-739-8866

MARK	DESCRIPTION	DATE
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	09.11.2025

MADISON GREENS
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA
ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO.	2023-0285
DWN BY	ABRAM MYERS
DATE	12.12.2024
PROJECT MANAGER	TREVOR FREDERICK
EMAIL	TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #	8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE	1" = 50'

SHEET TITLE
LANDSCAPE PLAN

L-103
SHEET 56 OF 57

P:\SHARED FOLDERS\PROJECTS\2023\2023-0285\CIVIL\CONSTRUCTION SET\2023-0285 LANDSCAPE PLANS.DWG 2025-06-17

PLANT SCHEDULE

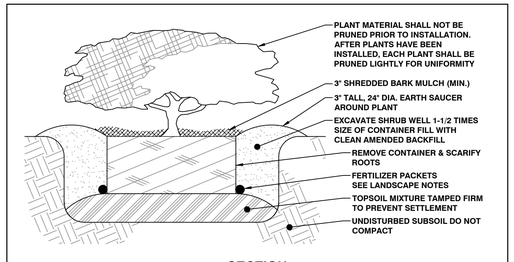
SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY	DETAIL	REMARKS
TREES							
	ACE CAM	Acer campestre / Hedge Maple	2.5" Cal.	B&B	40	3/L-501	Street Tree- Small
	ACE GLO	Acer rubrum `October Glory` TM / October Glory Maple	2.5" Cal.	B&B	39	3/L-501	Street Tree- Large
	CEL OCC	Celtis occidentalis / Common Hackberry	2.5" Cal.	B&B	25	3/L-501	Street Tree- Large
	CER CAN	Cercis canadensis / Eastern Redbud	2.5" Cal.	B&B	42	3/L-501	Street Tree- Small
	COR FLO	Cornus florida / Eastern Dogwood	2.5" Cal.	B&B	28	3/L-501	Street Tree- Small
	LIR TUL	Liriodendron tulipifera / Tulip Poplar	2.5" Cal.	B&B	5	3/L-501	
	QUE RUB	Quercus rubra / Red Oak	2.5" Cal.	B&B	6	3/L-501	
	TIL GRE	Tilia cordata `Greenspire` / Greenspire Littleleaf Linden	2.5" Cal.	B&B	54	3/L-501	Street Tree- Large
	ZEL GR2	Zelkova serrata `Green Vase` / Green Vase Sawleaf Zelkova	2.5" Cal.	B&B	15	3/L-501	Street Tree- Large

GENERAL LANDSCAPE NOTES:

1. Landscape contractor is to call Miss Utility and have all underground utilities marked prior to any digging or planting.
2. Landscape Contractor shall install all plant material in a timely fashion.
3. Landscape Contractor shall be responsible for all watering, weeding, repairs and replacements prior to final acceptance.
4. NO Substitutions of plant material without written permission of FSA. Planting plans have been proposed with plant sizes, types, and locations as important design elements.
5. Plants shall be in accordance with the current issue of American Standards for Nursery Stock published by the American Association of Nurserymen.
6. All plants shall be watered thoroughly during installation and prior to final acceptance.
7. All bark mulched areas shall be first covered with Typar Weed Barrier or approved equal.
8. All planting bed areas on the site shall be mulched with a hardwood bark mulch at a depth of approx. 3", unless noted otherwise.
9. Plant material shall be inspected yearly in order to remove and replace dead, diseased vegetation.
10. Warranted plant material that is 25% dead or more shall be considered dead and shall be replaced at no charge.
11. All plant material shall be warranted for two years. 60 days prior to the end of the warranted period, the Engineering Department shall perform an inspection. Of which there should be an 90% survival rate of all plant material. All surviving plant material shall be found in a healthy condition. The warranty shall commune on the date of initial acceptance by the owner.
12. The landscape contractor shall conduct a final inspection with the owner or owner's representative at the end of the warranty period.
13. Fertilizer Packets are to be Nutri-Pak 16-8-8 or approved equal per manufacturer's recommendations.
14. Landscape is recommended to be installed during the two growing seasons. Spring: April 15-June 15, Fall: September 1-November 1.

MAINTENANCE:

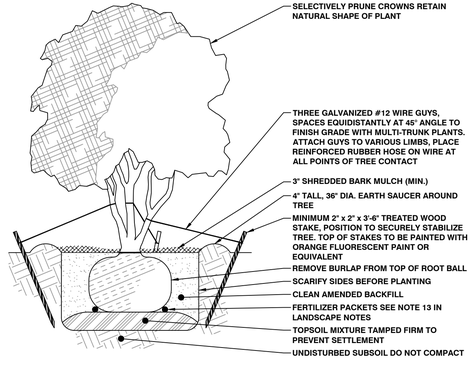
1. All trash and debris should be removed from the top of the wetland area as necessary.
2. Areas devoid of mulch shall be re-mulched on an annual basis.



SECTION

1 L-501 **CONTAINER PLANTING - SHRUB**

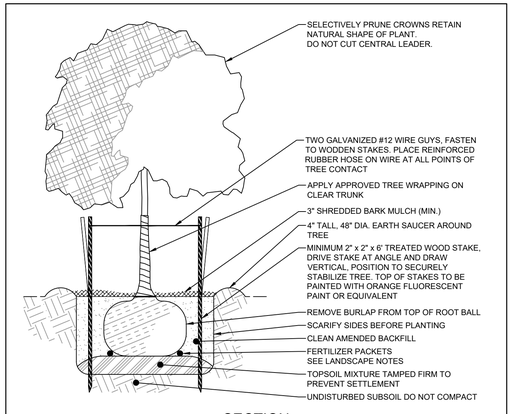
NOT TO SCALE



SECTION

2 L-501 **MULTI-TRUNK TREE PLANTING**

NOT TO SCALE



SECTION

3 L-501 **PLANTING - TREE (Up to 2-1/2" Cal.)**

NOT TO SCALE

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TREVOR MARK FREDERICK
REGISTERED
24227
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
06/13/2025

Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of: WEST VIRGINIA, License #: 24227
Expiration Date: 12-31-2026

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FREDERICK, SEIBERT & ASSOCIATES, INC.
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555 SOUTH HANOVER STREET, CARLISLE, PA 17013, 717-249-9111
11142 WILLIAMSPORT PIKE, GREENCASTLE, PA 17225, 717-597-1907
128 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740, 301-739-8866

MARK	DESCRIPTION:	DATE:
	REVISED PER AGENCY COMMENTS	05.02.2025
	REVISED PER AGENCY COMMENTS	06.11.2025

MADISON GREENS

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE

CITY OF RANSON
JEFFERSON COUNTY, WEST VIRGINIA

ATTN: ROB ROTZ
9729 GARIS SHOPO ROAD, HAGERSTOWN MARYLAND 21740
PHONE: 301.491.6999

PROJECT NO.: 2023-0285
DWN BY: ABRAM MYERS
DATE: 12.12.2024
PROJECT MANAGER: TREVOR FREDERICK
EMAIL: TFREDERICK@FSA-INC.COM
PARCEL IDENTIFICATION #: 8-1.1, 8-1.3, 8-1.5, 8-9.2, 8E-17
SCALE: AS SHOWN
SHEET TITLE:

LANDSCAPE PLAN DETAILS & NOTES

L-501

SHEET 57 OF 57

LIGHT FIXTURE SCHEDULE

SYMBOL	TAG	MANUFACTURER	MODEL NUMBER	VOLTAGE	FIXTURE DATA		MOUNTING HEIGHT	DESCRIPTION
					WATTAGE	LUMENS		
◎	SL1	HADCO	RL54-H-B-A-E-E-1-A-W-N-N-N-A-4-DH-N-N-N-SP1 POLE: MODEL # SPECIFIED BY TWP	120 - 277V	87	8,588	12'-0" A.F.G	DECORATIVE POST TOP LED FIXTURE

* INCLUDE ALL LIGHT FIXTURES WITH LAMPS.
* COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
* VERIFY ALL CEILING TYPES SHOWN ON THE ARCHITECTURAL DRAWINGS AND PROVIDE ALL NECESSARY MOUNTING ACCESSORIES.
* EXIT SIGNS SHALL BE CEILING, WALL, OR END MOUNTED. FIELD COORDINATE FINAL MOUNTING REQUIREMENTS. EXIT SIGNS IN WAREHOUSE SHALL NOT EXCEED A MOUNTING HEIGHT OF 30'-0" TO TOP OF FIXTURE. SUSPENDED EXIT SIGNS SHALL BE MOUNTED TO A 4" SQUARE BOX SUSPENDED FROM A 1" RIGID CONDUIT.
* EXIT SIGNS SHALL HAVE DIRECTIONAL CHEVRONS AS SHOWN ON PLANS.
* PROVIDE APPROPRIATE CORD/CABLE LENGTH FOR ALL PENDANT MOUNTED FIXTURES. REFER TO ARCHITECTURAL FLOOR PLAN, SECTIONS, AND INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION WHEN MOUNTING HEIGHT OF FIXTURES IS NOT CLEARLY STATED OR SHOWN ON DRAWINGS.
* PRIOR TO LIGHT FIXTURE SUBSTITUTIONS, CONTRACTOR SHALL PROVIDE POINT-BY-POINT CALCULATION FOR EACH INDIVIDUAL SPACE IN WHICH A SUBSTITUTION IS REQUESTED. NO SUBSTITUTIONS WILL BE ACCEPTED WITHOUT PROFESSIONAL PREPARED CALCULATIONS.
* CONNECT EXIT SIGNS TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCHES.

HADCO

Urban

Refractive globe with LumiLock LED engine GX4

RL34/RL54 Post Top

TYPE: SL1



Project:
Location:
Cat.No:
Type:
Lamps: Qty:
Notes:

Whether you are looking to beautify or add a sense of security and well-being to your outdoor space, the highly configurable Hadco LED refractive post tops paired with the latest LumiLock light engine GX4 will help you achieve your goals. A multitude of exterior luminaire styles allow you to create promenades and areas exuding timeless, historical charm both day and night. The configurable LED light engine GX4 is an ideal alternative to HID sources, providing you with significant energy savings, and more choices for light levels, optics and controls. Includes Service Tag, Hadco's innovative way to provide assistance throughout the life of the product.

Ordering guide

Example: RL34 A A B A 1 A S N R7 W A 3 N N N N SP1

Series	Pod	Roof	Cage	Finial	Fastener	Finish	Optic	Pod Photo Control (location inside of pod)
RL54	B	A	A	E	1	A	W	N
RL34 Wide Body Type 3 **RL54** Wide Body Type 5	**A** Octagonal style **B** Round fitter with scalloped petals **H** Iconic contemporary **L** Round fluted long **T** Decorative leaf with scalloped petals	**A** Victorian **C** Tall **D** Short **G** Adams	**B**[1] Cage for wide body globe **E** Band for wide body globe **F** Band for wide body globe **G**[1] Cage for wide body globe **I**[1] Cage for wide body globe **J**[1] Cage for wide body globe **N** None	**A** **B** **C**[2] **D**[2] **E**[3] **F** **G** **H** **N** None	**1** Hex head **2** Allen head	**A** Black **B** White **G** Verde **H** Bronze **J** Green	**S** Short **W** Wide	**E** 120 VAC Button Eye **H** 208/240/277 Button Eye **R**[3] 3 Pin Receptacle **N** None

Future Proof Photo Control	Color Temp.	Voltage	Drive Current	Integral Control Options	Optional programs: Option 1	Option 2	Option 3	Surge Protection
N	W	A	4	N	N	N	N	SP1
R5[4,5] 5 pin receptacle on the engine **R7**[4,7] 7 pin receptacle on the engine **N** None	**W** 3000K **N** 4000K	**A** 120-277 VAC **B** 347-480 VAC	**2**[7] 200mA **3** 350mA **4**[7] 450mA **5** 530mA	Dynadimmer [4,8] **DA** 4 Hrs 25% Reduction **DB** 4 Hrs 50% Reduction **DC** 4 Hrs 75% Reduction **DD** 6 Hrs 25% Reduction **DE** 6 Hrs 50% Reduction **DF** 6 Hrs 75% Reduction **DG** 8 Hrs 25% Reduction **DH** 8 Hrs 50% Reduction **DJ** 8 Hrs 75% Reduction **DL** [4] DALI **S** [4] FAWS Switch **N** None	**AST** [9] Adjustable start up time **N** None	**CLO** [6] Constant light output **N** None	**OTL** [6] Over the life **N** None	**SP1** 10kV/10kA Surge Protector **SP2**[6] 20kV/10kA Surge Protector

1 Not available with A pod.
2 Not available with B Roof.
3 Use of photoelectric cell (pod photo control (R) only) or shorting cap is required to ensure proper illumination. When R, RS, R7 options are selected, product will ship with shorting cap(s) installed.
4 Only available with A, C, and G roofs. InteractCity wil fit and communicate property - other nodes need to be confirmed. Does not fit with B and D roofs.
5 Optional Dynadimmer dimming schedules, DALI, AST, CLO, and OTL not available with 347-480 VAC.
6 When SP2 option is selected, luminaire will be fitted with SP2 instead of SP1.
7 Not available with B 347-480 voltage.
8 Not available with R5 or R7.
9 FAWS not available with CLO.

BAA · cULus · DLC PREMIUM · DLC LISTED

RL34/RL54 Refractive Globe with LumiLock LED engine GX4

Wide Body Type 5 – Acrylic Roof

Catalog Logic	LED QTY	System Current (mA)	Color Temperature	Avg System Wattage* (W)	Lumen Output	Short: Efficacy (Lm/W)	Short: BUG rating	Wide: Lumen Output	Wide: Efficacy (Lm/W)	Wide: BUG rating
RL54-A-x-N-2	64	200	4000	39	6274	161	B3-U5-G3	6082	156	B3-U5-G2
RL54-A-x-N-3	64	350	4000	69	10542	154	B3-U5-G4	10379	152	B3-U5-G3
RL54-A-x-N-4	64	450	4000	87	12770	147	B3-U5-G4	12686	146	B4-U5-G3
RL54-A-x-N-5	64	530	4000	104	14852	143	B3-U5-G4	14760	142	B4-U5-G4

Wide Body Type 5 – Metal Roof

Catalog Logic	LED QTY	System Current (mA)	Color Temperature	Avg System Wattage* (W)	Lumen Output	Short: Efficacy (Lm/W)	Short: BUG rating	Wide: Lumen Output	Wide: Efficacy (Lm/W)	Wide: BUG rating
RL54-D-x-N-2	64	200	4000	39	4286	110	B2-U3-G2	4164	106	B3-U3-G2
RL54-D-x-N-3	64	350	4000	69	7236	105	B3-U4-G3	7030	102	B3-U3-G3
RL54-D-x-N-4	64	450	4000	87	8839	101	B3-U4-G3	8588	99	B4-U4-G3
RL54-D-x-N-5	64	530	4000	104	10279	99	B3-U4-G4	9986	96	B4-U4-G4

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.
NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

HADCO

Poles & Brackets

Urban Decorative

P2000 Series Poles



Project:
Location:
Cat.No:
Type:
Qty:
Notes:

Hadco P2000 Series decorative aluminum poles provide a wide range of options in a timeless aesthetic. All poles are made in the USA and always open to a wide range of add-ons and customizations to meet any project need.

Ordering guide

example: P2060 10 A T D

Series	Pole height	Finish	Accessory Location (factory installed)	Pole Accessories	Tenon Options
P2025	8	A	N	N	N
P2025 [1] **P2060** **P2061** **P2063** **P2065** **P2071**	**8** 8ft [1] **10** 10ft **12** 12ft **14** 14ft **16** 16ft **18** 18ft **20** 20ft [2]	**A** Black **B** White **G** Verde **H** Bronze **I** Gray **J** Green **Z** Custom [3]	**N** No Option **1** 12" Down from Top - Aligned with House Side **B** 4" Up from Top of Base – Aligned with House Side **Z** Custom	**N** No Option **D** Standard Duplex **G** GFI Duplex **M** Motion Control [3]	**N** Standard Tenon - 3" OD x 3" **T4** 4" OD Tenon or 4" pole w/o standard 3" tenon (consult factory for 3" OD poles)

Note: Top outlets not available with the HFP arms. Consult factory for HFP arm outlet mounting.

Footnotes:
1. Not available on P2065 models
2. Only available on P2071 models
3. Consult factory for quotation

Anchor Bolts & Templates (ordered separately)

12NC	Description
912400110297	ANCHOR BOLT, 3/4-10x19x3, 4/PK
912400128329	AB TEMPLATE, P2000 (excl. P2060)
912400128328	AB TEMPLATE, P2060

Pole Specifications

Pole Family	Catalog Number	Pole Dia. (in.)	Pole Shape	Pole Style	Pole Height (ft.)	Wall Thickness (in.)	Tenon OD x H (in.)	Weight (lbs.)	Bolt Circle (in.)	Base Size Dia. x H (in.)	Hand Hole Size W x H (in.)	Anchor Bolts (in.)*
P2025	P2025-8	5–3	Tapered	Smooth	8	0.125	3 x 3	47	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2025	P2025-10	5–3	Tapered	Smooth	10	0.125	3 x 3	52	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2025	P2025-12	5–3	Tapered	Smooth	12	0.125	3 x 3	56	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2025	P2025-14	5–3	Tapered	Smooth	14	0.188	3 x 3	75	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2025	P2025-16	5–3	Tapered	Smooth	16	0.188	3 x 3	82	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2025	P2025-18	5–3	Tapered	Smooth	18	0.188	3 x 3	88	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2060	P2060-8	4	Straight	Fluted, 10 Round	8	0.125	3 x 3	43	12	16 x 21	5 x 8	3/4 x 19 x 3
P2060	P2060-10	4	Straight	Fluted, 10 Round	10	0.125	3 x 3	46	12	16 x 21	5 x 8	3/4 x 19 x 3
P2060	P2060-12	4	Straight	Fluted, 10 Round	12	0.125	3 x 3	50	12	16 x 21	5 x 8	3/4 x 19 x 3
P2060	P2060-14	4	Straight	Fluted, 10 Round	14	0.125	3 x 3	54	12	16 x 21	5 x 8	3/4 x 19 x 3
P2060	P2060-16	4	Straight	Fluted, 10 Round	16	0.125	3 x 3	58	12	16 x 21	5 x 8	3/4 x 19 x 3
P2060	P2060-18	4	Straight	Fluted, 10 Round	18	0.125	3 x 3	62	12	16 x 21	5 x 8	3/4 x 19 x 3
P2061	P2061-8	4	Straight	Fluted, 10 Round	8	0.125	3 x 3	49	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2061	P2061-10	4	Straight	Fluted, 10 Round	10	0.125	3 x 3	53	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2061	P2061-12	4	Straight	Fluted, 10 Round	12	0.125	3 x 3	57	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2061	P2061-14	4	Straight	Fluted, 10 Round	14	0.125	3 x 3	60	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2061	P2061-16	4	Straight	Fluted, 10 Round	16	0.125	3 x 3	64	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2061	P2061-18	4	Straight	Fluted, 10 Round	18	0.125	3 x 3	68	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2063	P2063-8	4	Straight	Fluted, 12 Flat	8	0.188 - 0.313	3 x 3	56	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2063	P2063-10	4	Straight	Fluted, 12 Flat	10	0.188 - 0.313	3 x 3	62	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2063	P2063-12	4	Straight	Fluted, 12 Flat	12	0.188 - 0.313	3 x 3	69	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2063	P2063-14	4	Straight	Fluted, 12 Flat	14	0.188 - 0.313	3 x 3	75	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2063	P2063-16	4	Straight	Fluted, 12 Flat	16	0.188 - 0.313	3 x 3	81	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2063	P2063-18	4	Straight	Fluted, 12 Flat	18	0.188 - 0.313	3 x 3	88	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2065	P2065-10	5	Straight	Fluted, 12 Flat	10	0.188 - 0.267	3 x 3	73	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2065	P2065-12	5	Straight	Fluted, 12 Flat	12	0.188 - 0.267	3 x 3	82	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2065	P2065-14	5	Straight	Fluted, 12 Flat	14	0.188 - 0.267	3 x 3	90	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2065	P2065-16	5	Straight	Fluted, 12 Flat	16	0.188 - 0.267	3 x 3	99	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2065	P2065-18	5	Straight	Fluted, 12 Flat	18	0.188 - 0.267	3 x 3	108	8 to 12	16 x 21	5 x 8	3/4 x 19 x 3
P2071	P2071-8	4	Straight	Fluted, 10 Round	8	0.125	3 x 3	60	8 to 12	16 x 47	5 x 8	3/4 x 19 x 3
P2071	P2071-10	4	Straight	Fluted, 10 Round	10	0.125	3 x 3	64	8 to 12	16 x 47	5 x 8	3/4 x 19 x 3
P2071	P2071-12	4	Straight	Fluted, 10 Round	12	0.125	3 x 3	68	8 to 12	16 x 47	5 x 8	3/4 x 19 x 3
P2071	P2071-14	4	Straight	Fluted, 10 Round	14	0.125	3 x 3	72	8 to 12	16 x 47	5 x 8	3/4 x 19 x 3
P2071	P2071-16	4	Straight	Fluted, 10 Round	16	0.125	3 x 3	76	8 to 12	16 x 47	5 x 8	3/4 x 19 x 3
P2071	P2071-18	4	Straight	Fluted, 10 Round	18	0.125	3 x 3	80	8 to 12	16 x 47	5 x 8	3/4 x 19 x 3
P2071	P2071-20	4	Straight	Fluted, 10 Round	20	0.125	3 x 3	84	8 to 12	16 x 47	5 x 8	3/4 x 19 x 3

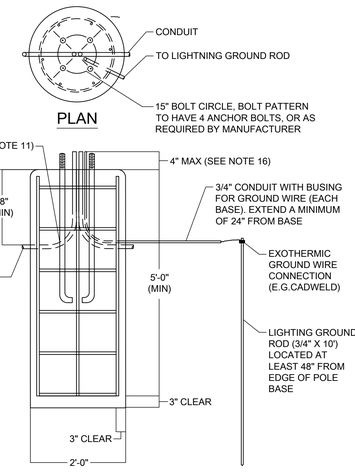
Tenon height is nominal, the available tenon height can be greater on tapered poles.
Anchor bolt max projection is determined by the anchor bolt template.
*Acceptable Anchor bolt lengths can vary from 17" to 20"

EPA Data

Pole Family	Catalog Number	80 MPH	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH
P2025	P2025-8	22.49	17.36	13.69	10.97	8.91	7.30	6.02	5.00
P2025	P2025-10	18.26	14.02	10.99	8.74	7.04	5.71	4.66	3.81
P2025	P2025-12	15.28	11.67	9.09	7.18	5.72	4.59	3.69	2.97
P2025	P2025-14	18.55	14.10	10.92	8.56	6.77	5.37	4.26	3.37
P2025	P2025-16	14.94	11.29	8.68	6.74	5.27	4.13	3.22	2.49
P2025	P2025-18	12.97	9.69	7.35	5.61	4.29	3.27	2.45	1.80
P2060	P2060-8	16.73	12.36	9.57	7.36	5.68	4.37	3.33	2.50
P2060	P2060-10	13.30	9.85	7.39	5.56	4.17	3.09	2.24	1.55
P2060	P2060-12	10.89	7.95	5.85	4.30	3.11	2.19	1.46	0.87
P2060	P2060-14	9.10	6.54	4.71	3.36	2.33	1.53	0.89	0.38
P2060	P2060-16	7.15	5.05	3.55	2.44	1.59	0.94	0.42	-
P2060	P2060-18	5.90	4.02	2.68	1.68	0.92	0.33	-	-

STATISTICS

DESCRIPTION	AVERAGE	MAXIMUM	MINIMUM	AVG/MIN
19TH AVE - ALLEY 1 (INTERSECTION)	0.7 FC	1.7 FC	0.1 FC	7.0:1
19TH AVE - DESTRIER ST (INTERSECTION)	0.7 FC	1.6 FC	0.0 FC	N/A
19TH AVE - FAIRFAX BLVD (INTERSECTION)	0.5 FC	1.7 FC	0.0 FC	N/A
20TH AVE - DESTRIER ST (INTERSECTION)	1.0 FC	1.9 FC	0.1 FC	10.0:1
20TH AVE - DOROTHY LN (INTERSECTION)	0.8 FC	1.8 FC	0.0 FC	8.0:1
20TH AVE - WALLACE BLVD (INTERSECTION)	0.6 FC	1.6 FC	0.0 FC	N/A
21ST AVE - ALLEY 1 (INTERSECTION)	1.0 FC	1.9 FC	0.1 FC	10.0:1
21ST AVE - DESTRIER ST (INTERSECTION)	0.8 FC	1.9 FC	0.1 FC	8.0:1
21ST AVE - DOROTHY LN (INTERSECTION)	1.1 FC	3.1 FC	0.1 FC	11.0:1
21ST AVE - FAIRFAX BLVD (INTERSECTION)	0.7 FC	1.6 FC	0.4 FC	7.0:1
21ST AVE - WALLACE BLVD (INTERSECTION)	0.5 FC	1.6 FC	0.0 FC	N/A
BAKER PL - WALLACE BLVD (ROUNDABOUT)	1.4 FC	3.0 FC	0.3 FC	4.7:1
DESTRIER ST - BASKETBALL COURT	1.0 FC	2.0 FC	0.1 FC	10.0:1
DESTRIER ST - PENELOPE PL (INTERSECTION)	0.6 FC	1.7 FC	0.0 FC	N/A
DESTRIER ST - WALLACE BLVD (INTERSECTION)	0.5 FC	1.6 FC	0.0 FC	N/A
PENELOPE PL - ALLEY 1 (INTERSECTION)	0.7 FC	1.6 FC	0.1 FC	7.0:1
PENELOPE PL - FAIRFAX BLVD (INTERSECTION)	0.5 FC	1.7 FC	0.0 FC	N/A
OVERALL	0.1 FC	3.1 FC	0.0 FC	N/A

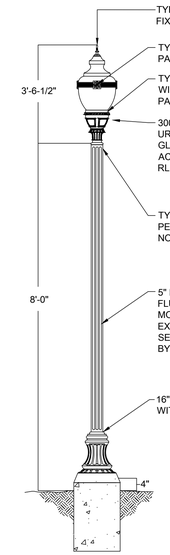


NOTES:

1. ALL EXPOSED CONCRETE SHALL HAVE A NORMAL FINISH.
2. ALL OUTSIDE CONCRETE CORNERS AND EDGES SHALL HAVE A 3/4 " CHAMFER.
3. CONCRETE TO BE RODDED OR VIBRATED WHILE POURING.
4. ALL CONCRETE SHALL BE WVDOH CLASS "B".
5. REINFORCING STEEL SHALL NOT BE CLOSER THAN 3" TO THE OUTSIDE SURFACE OF THE FOOTING AND SHALL BE TIED OR WELDED.
6. VERTICAL BARS SHALL BE TIED WITH #4 HOOP BARS AT 1'-0" ON CENTER. THE #4 HOOP BARS SHALL HAVE A 1'-0" MINIMUM LAP.
7. ALL FOOTINGS IN SIDEWALKS SHALL BE FINISHED FLUSH WITH THE EXISTING SIDEWALKS, UNLESS OTHERWISE SPECIFIED BY THE PROJECT ENGINEER.
8. FOOTINGS SHALL BE CIRCULAR IN CROSS-SECTION.
9. WITH PERMISSION OF THE PROJECT ENGINEER, THE DEPTH OF THE FOOTING MAY BE REDUCED ONE (1) FOOT WHEN THE FOOTING IS PLACED IN A CONCRETE OR ASPHALTIC CONCRETE SIDEWALK OR PAVED SURFACE. THE FOOTINGS MAY BE REDUCED BY ONE (1) FOOT WHEN THE FOOTING IS IN ROCK.
10. NO FORMS MAY EXTEND TO A DEPTH GREATER THAN 12" UNLESS APPROVAL IS GRANTED BY THE CITY ENGINEER.
11. THE RADIUS (R) OF THE CURVE OF THE INNER EDGE OF ANY BEND SHALL NOT BE LESS THAN THE SIZE SPECIFIED IN THE NATIONAL ELECTRICAL CODE.
12. GROUNDING:
    A. THE CONTRACTOR IS TO ENGAGE A QUALIFIED TESTING AND INSPECTION AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS
    B. AFTER INSTALLING GROUNDING SYSTEM BUT BEFORE PERMANENT ELECTRICAL CIRCUITS HAVE BEEN ENERGIZED, TEST FOR COMPLIANCE WITH THE FOLLOWING REQUIREMENTS:
    (1) TEST COMPLETED GROUNDING SYSTEM AT EACH POLE AND AT SERVICE DISCONNECT ENCLOSURE.
    (2) MEASURE GROUND RESISTANCE NOT LESS THAN TWO FULL DAYS AFTER THE LAST TRACE OF PRECIPITATION AND WITHOUT SOIL BEING MOISTENED BY ANY MEANS OTHER THAN NATURAL DRAINAGE OR SEEPAGE AND WITHOUT CHEMICAL TREATMENT OR OTHER ARTIFICIAL MEANS OF REDUCING NATURAL GROUND RESISTANCE.
    (3) PERFORM THE TEST BY THE FALL-OF-POTENTIAL METHOD ACCORDING TO IEEE STANDARD 81.
    C. INSTALL ADDITIONAL GROUND RODS AS REQUIRED UNTIL MEASURED GROUND RESISTANCE IS 5 OHMS OR LESS.
    D. GROUND RODS ARE TO BE DRIVEN TO A DEPTH OF 2 INCHES BELOW FINISHED GRADE TO TOP OF ROD AND SEPARATED BY A MINIMUM DISTANCE OF 8 FEET.
    E. INTERCONNECT GROUND RODS WITH A #2 AWG BARE, STRANDED COPPER CONDUCTOR BURIED AT 18 INCHES BELOW GRADE.
13. INSTALL POLE, ANCHOR BOLTS, LEVELING SYSTEM, GROUNDING, AND WIRING PER MANUFACTURER SPECIFICATIONS.
14. SEE DETAIL LT-01 FOR CITY STANDARD POST-TOP LIGHT POLE.
15. IF ONE IS SPARE CONDUIT, AN ARROW SHALL BE ETCHED ON THE TOP OF THE BASE TO SHOW THE LOCATION/ DIRECTION OF THE SPARE CONDUIT.
16. USE 3" MAX WHEN USING TRANSFORMER BASES.

BASE DETAIL FOR NEW POLE LIGHT FIXTURES

NO SCALE



NOTES:

1. PROVIDE TYPE III (RL34) OR TYPE V (RL54) LIGHT DISTRIBUTION AS SHOWN ON PLANS. PROVIDE TYPE V DISTRIBUTION WHERE REQUIRED TO PREVENT LIGHT SPILLOVER ONTO ADJACENT RESIDENTIAL USES.
2. SEE DETAIL LT-04 FOR LIGHT POLE FOUNDATION. DIRECT BURIAL NOT ALLOWED.
3. PROVIDE FIELD ADJUSTMENT SWITCH TO ALLOW THE CITY TO ADJUST ILLUMINATION LEVEL AFTER INSTALLATION. WHERE NEW LIGHTING IS TO BE INSTALLED ON A SEPARATE CIRCUIT, FIELD ADJUSTMENT SWITCH MAY BE LOCATED ON LIGHTING CONTROLLER. WHERE NEW LIGHTING IS TO BE ADDED TO AN EXISTING CIRCUIT, PROVIDE A FIELD ADJUSTMENT SWITCH ON EACH NEW POLE.

POLE MOUNTED LIGHTING FIXTURE DETAIL - TYPICAL FOR ALL TYPE "D1" FIXTURES

NO SCALE

FSA
FREDERICK SEIBERT & ASSOCIATES, INC.
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fsainc.com
15 EAST MAIN STREET, MECHANICSBURG, PA 17055 717.255.7321
30 LOCUST AVENUE STREET, CARLISLE, PA 17013 717.701.8111
20 WEST GAY STREET, WEST CHESTER, PA 19380 610.701.7919
201 WEST GAY STREET, WEST CHESTER, PA 19380 610.701.7919
130 SOUTH POTOMAC STREET, HAGERSTOWN, MD 21740 301.791.3000

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Professional Certification:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of:
License #
Expiration Date

MARK	DESCRIPTION	DATE

MADISON GREENS SUBDIVISION
SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
RANSON, WEST VIRGINIA
JEFFERSON COUNTY, WEST VIRGINIA

PROJECT NO.: 1838-25-001
DWN BY: ACB
DATE: 04.07.2025
PROJECT MANAGER: MARK KELLEY
EMAIL: MKELLEY@PESERVICES.ORG
PROPERTY INFORMATION
SCALE: AS NOTED
SHEET TITLE: SYMBOLS, SCHEDULES, & DETAILS

SL-001
SHEET 01 OF 05

PARAGON ENGINEERING SERVICES LLC
MECHANICAL ▼ ELECTRICAL ▼ PLUMBING
(717) 854-7374 | YORK ▼ LANCASTER ▼ CHAMBERSBURG | ONETEAM@PEServices.org

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Apr 07, 2025 - 3:35pm - ACB
P:\1800\1898\1838 Madison Greens LLC\1838-25-001 - Madison Greens Commons at Fairfax Crossing\Madison Greens Commons\Construct\Electrical\1838-25-001-SL-001.dwg

SL-101

SL-102

SL-103



1 SL-100 OVERALL SITE PLAN
SCALE: 1" = 100'-0"

KEYPLAN

PARAGON ENGINEERING SERVICES LLC
MECHANICAL ▼ ELECTRICAL ▼ PLUMBING
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30 E. MAIN STREET, CHARLES TOWN, WV 25414, 304.725.8435
15 EAST MAIN STREET, NEW FREEDOM, PA 17349, 717.235.7321
500 N. PRINCE ST., LANCASTER, PA 17603, 717.435.8161
3912 OLD GETTYSBURG ROAD, MECHANICSBURG, PA 17055, 717.697.1001

MARK	DESCRIPTION	DATE

MADISON GREENS SUBDIVISION

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
RANSON, WEST VIRGINIA
JEFFERSON COUNTY, WEST VIRGINIA

PROJECT NO. 1838-25-001
DWN BY ACB
DATE 04.07.2025
PROJECT MANAGER MARK KELLEY
EMAIL MKELLEY@PESERVICES.ORG
PROPERTY INFORMATION
SCALE AS NOTED
SHEET TITLE
OVERALL SITE PLAN

SL-100
SHEET 02 OF 05

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PROPERTY LINE

SL1

SL-101 SL-102 SL-103

KEYPLAN

1 SL-101 SITE PLAN - SECTION 101

SCALE: 1" = 100'-0"

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MADISON GREENS SUBDIVISION

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 10TH AVENUE
RANSON, WEST VIRGINIA
JEFFERSON COUNTY, WEST VIRGINIA

PROJECT NO. 1838-25-001
DWN BY ACB
DATE 04.07.2025
PROJECT MANAGER MARK KELLEY
EMAIL MKELLEY@PESERVICES.ORG
PROPERTY INFORMATION
SCALE AS NOTED
SHEET TITLE
SITE PLAN - SECTION 101

SL-101
SHEET 03 OF 05

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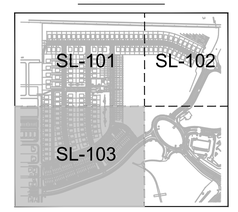
PROPERTY LINE

SL1

SL1

1 SITE PLAN - SECTION 102
SL-102 SCALE: 1" = 100'-0"

KEYPLAN



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WEST CHESTER, PA 19380
610.436.8355

20 WEST DAUPHIN STREET
MECHANICSBURG, PA 17055
717.697.1001

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MADISON GREENS SUBDIVISION

SITUATED WEST OF FAIRFAX BOULEVARD AND BAKER PLACE AND NORTH OF 19TH AVENUE
RANSON, WEST VIRGINIA
JEFFERSON COUNTY, WEST VIRGINIA

PROJECT NO.
1838-25-001

DWN BY: ACB
DATE: 04.07.2025

PROJECT MANAGER: MARK KELLEY
EMAIL: MKELLEY@PESERVICES.ORG
PROPERTY INFORMATION

SCALE
AS NOTED

SHEET TITLE
SITE PLAN - SECTION 102

SL-102
SHEET 04 OF 05

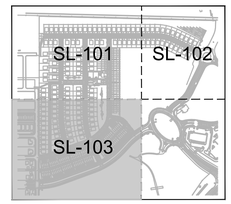
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SL-1

PROPERTY LINE

1 SITE PLAN - SECTION 103
SL-103 SCALE: 1" = 100'-0"

KEYPLAN



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PROJECT NO. 1838-25-001
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DATE 04.07.2025
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PROPERTY INFORMATION
SCALE AS NOTED
SHEET TITLE

SITE PLAN - SECTION 103

SL-103
SHEET 05 OF 05

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