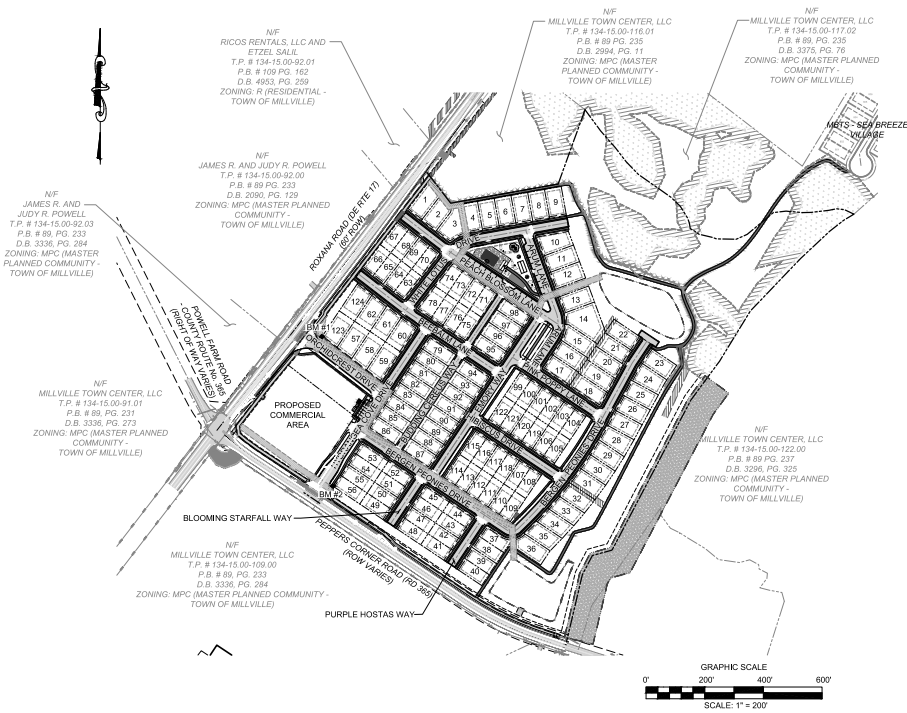


# CONSTRUCTION PLANS FOR HUDSON'S RESERVE

BALTIMORE HUNDRED  
SUSSEX COUNTY, DELAWARE  
PREPARED FOR:  
CHRISTOPHER AT MILLVILLE, LLC



## CERTIFICATION OF OWNERSHIP:

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT ALL STREETS HEREON AND NOT HERETOFORE DEDICATED ARE TO BE DEDICATED TO THE PUBLIC USE AND OWNERSHIP TRANSFERRED TO THE HOMEOWNERS ASSOCIATIONS VIA SEPARATE SUBSEQUENT DEED OF DEDICATION AND TRANSFER, TO BE APPROVED BY THE TOWN OF MILLVILLE.

CHARLES R. HUDSON TRUSTEE

SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

## CERTIFICATION OF PLAN ACCURACY:

I RONALD H. SUTTON, JR. HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD SURVEYING PRACTICES AS REQUIRED BY APPLICABLE LAWS OF THE STATE OF DELAWARE.

RONALD H. SUTTON JR., P.E.

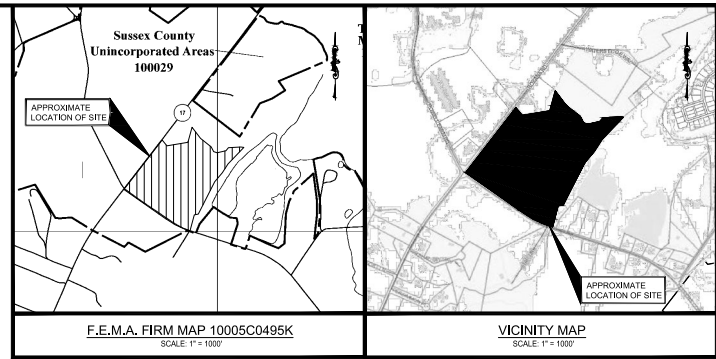
DATE \_\_\_\_\_

## TOWN OF MILLVILLE:

TOWN OF MILLVILLE APPROVAL.

SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_



## SITE DATA COLUMN

- PROPERTY INFORMATION/OWNER:  
CHARLES R. HUDSON TRUSTEE  
31487 RIVER DRIVE  
MILLVILLE, DE 19967  
TAX PARCEL NO.  
T.P. 134-15.00-115.00  
TOTAL AREA: 41.51 +/- ACRES
- DEVELOPER/APPLICANT:  
THE CHRISTOPHER COMPANIES  
10461 WHITE GRANITE DRIVE, SUITE 103  
OAKTON, VA 22124  
(703) 352-5950
- ENGINEER:  
CIVIL ENGINEERING ASSOCIATES, LLC  
55 WEST MAIN STREET  
MIDDLETOWN, DE 19947  
(302) 376-8833
- AGENCY:  
SUSSEX CONSERVATION DISTRICT  
23818 SHORTLY ROAD  
GEORGETOWN, DE 19947  
(302) 856-2105
- EXISTING ZONING: MPC
- PROJECT BENCHMARK: BM #1: N 19047.41 E 733766.42 ELEV. = 21.83  
BM #2: N 190538.18 E 733803.70 ELEV. = 20.90
- BUILDING TYPE: FRAME
- BUILDING SETBACKS:  
# OF UNITS LOT DESIGNATION MIN LOT WIDTH FRONT SIDE REAR  
SINGLE FAMILY 44 A 55' 10/20' 7' 10/20' 10'  
DUPLICATE 60 B 45' 10/20' 7' 10/20' 10'  
ALLEY LOADED 20 C 45' 10/20' 7' 10/20' 10'

LOT TYPE	# OF UNITS	LOT DESIGNATION	MIN LOT WIDTH	FRONT	SIDE	REAR
SINGLE FAMILY	44	A	55'	10/20'	7'	10/20'
DUPLICATE	60	B	45'	10/20'	7'	10/20'
ALLEY LOADED	20	C	45'	10/20'	7'	10/20'

\*10' TO FRONT OF BUILDING, 20' TO GARAGE  
\*\*10' WHEN ABUTTING OPEN SPACE, 20' WHEN ABUTTING LOTS

9. MAXIMUM BUILDING HEIGHT: 42 FT (MPC CODE)

10. PROPOSED USE: RESIDENTIAL

11. AREAS:

TOTAL AREA	1,808,239.22 S.F. +/- = 41.51 AC. +/-
COMMERCIAL AREA	82,127.79 S.F. +/- = 1.89 AC. +/-
COM. ROW DEDICATION	12,625.72 S.F. +/- = 0.29 AC. +/-
COM. PERMANENT EASEMENT	8,975.37 S.F. +/- = 0.21 AC. +/-
COMMERCIAL OPEN SPACE	60,528.70 S.F. +/- = 1.39 AC. +/-
GROSS RESIDENTIAL AREA	1,726,111.43 S.F. +/- = 39.63 AC. +/-
LOT AREA	669,056.87 S.F. +/- = 15.36 AC. +/-
STORMWATER MANAGEMENT AREA	67,047.48 S.F. +/- = 1.54 AC. +/-
RES. ROW DEDICATION	38,750.86 S.F. +/- = 0.89 AC. +/-
RES. PERMANENT EASEMENT	28,323.94 S.F. +/- = 0.65 AC. +/-
TOWN/PRIVATE ROW	335,884.46 S.F. +/- = 7.71 AC. +/-
WETLANDS	75,944.51 S.F. +/- = 1.73 AC. +/-
RESIDENTIAL OPEN SPACE	511,703.29 S.F. +/- = 11.75 AC. +/-
NET RESIDENTIAL AREA	1,659,036.61 S.F. +/- = 38.09 AC. +/-
(NET RESIDENTIAL AREA - ROW DEDICATION - PERMANENT EASEMENT)	

12. LOTS: 124 RESIDENTIAL LOTS  
DENSITY = 2.39 +/- LOTS/ACRE (124 LOTS/41.51 ACRES)

13. PARKING: OFF-STREET PARKING: AVERAGE - 3 SPACES PER LOT  
(3 SPACES)/(124 LOTS) = 372 PARKING SPACES

14. UTILITIES: WATER: TIDEWATER UTILITIES  
SANITARY SEWER: SUSSEX COUNTY

15. FIRE LANES: ALL FIRE LANES, FIRE HYDRANTS AND FIRE CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH DELAWARE FIRE PREVENTION REGULATIONS.

16. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP NO. 10005C0495K DATED MARCH 16, 2015.

17. WETLANDS: PER WETLAND REVIEW LETTER DATED JUNE 10, 2021, A WETLAND DELINEATION WAS PERFORMED BY WATERSHED ECD, LLC IN SEPTEMBER 2019. THERE ARE 1.53 +/- AC. OF 40A WETLANDS. THERE ARE NO PROPOSED DISTURBANCE OF WETLANDS.

18. TOPOGRAPHIC REFERENCE: U.S.G.S. VERTICAL DATUM NAVD 88  
U.S.G.S. HORIZONTAL DATUM NAVD 83 SPC

19. BOUNDARY AND TOPOGRAPHY: BOUNDARY & TOPOGRAPHY WAS PERFORMED BY CIVIL ENGINEERING ASSOCIATES IN APRIL 2020.

20. COMMERCIAL AREA WILL BE SUBMITTED FOR SITE PLAN APPROVAL AT A LATER DATE.

## INDEX OF DRAWINGS

### SHEET NUMBER

- T-1
- T-2
- EX-1
- C-1
- G-1 THROUGH G-3
- RD-1
- RD-2 THROUGH RD-16
- L-1 THROUGH L-3
- SWM-1 THROUGH SWM-4
- U-1
- L-1 THROUGH L-2
- D-1 THROUGH D-7

### SHEET TITLE

- COVER SHEET
- CONSTRUCTION & GENERAL NOTES
- EXISTING CONDITIONS PLAN
- SITE PLAN
- GRADING PLAN
- OVERALL ROAD PLAN
- ROAD PROFILES
- INTERSECTION DETAILS
- STORMWATER MANAGEMENT PLAN
- UTILITY PLAN
- LANDSCAPE PLAN
- CONSTRUCTION DETAILS

## REVISIONS

REVISION	DATE	DESCRIPTION
1	9/2/21	REVISION PER GMS COMMENTS DATED 8/18/21
2	11/18/21	REVISION PER GMS COMMENTS DATED 9/24/21

CIVIL ENGINEERING ASSOCIATES, LLC  
55 WEST MAIN STREET  
MIDDLETOWN, DE 19947  
PHONE (302) 376-8833  
FAX (302) 376-8831  
WWW.CEAA-DE.COM

## COVER SHEET FOR HUDSON'S RESERVE

DATE:	MAY 17, 2021
DESIGNED BY:	RT
APPROVED BY:	RHS
FILE:	COVER_SHEET.DWG
SHEET NO.:	T-1

### MASTER PLAN DESIGN ELEMENTS:

- LOT TYPES, SIZES, AND LAYOUT:
  - RESIDENTIAL:
    - LOT TYPES - SINGLE FAMILY, DUPLEX, AND ALLEY LOADED
    - TYPICAL SIZES:
      - SINGLE FAMILY - 55' X 100'
      - DUPLEX - 60' X 100'
      - ALLEY LOADED - 46' X 110'
  - COMMERCIAL:
    - RETAIL & AMENITIES
- SETBACKS

LOT TYPE	# OF UNITS	LOT DESIGNATION	MIN. LOT WIDTH	FRONT	SIDE	REAR
SINGLE FAMILY	44	A	55	10/20**	7	10/20**
DUPLEX	60	B	40	10/20**	7	10/20**
ALLEY LOADED	20	C	46	10/20**	7	10/20**

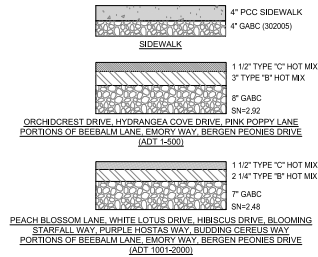
\*\*10' TO FRONT OF BUILDING, 20' TO GARAGE  
\*\*10' WHEN ABUTTING OPEN SPACE, 20' WHEN ABUTTING LOTS
- PARKING:
  - OFF-STREET PARKING: AVERAGE - 3 SPACES PER LOT  
(3 SPACES)/(124 LOTS) = 372 PARKING SPACES
- PERMANENT EASEMENT:
  - A 15 FOOT WIDE PERMANENT EASEMENT IS TO BE UTILIZED FOR THE SHARED USED PATH.
- GREEN AREA:
  - RESIDENTIAL GREEN AREA SHALL BE 30% OF THE GROSS RESIDENTIAL AREA.
    - GREEN AREA CALCULATION:
      - RESIDENTIAL GREEN AREA:
        - MINIMUM GREEN AREA = 30% OF GROSS RESIDENTIAL AREA = (0.30)/(1,702.473.27 S.F.) = 510.741.98 S.F.
        - PROPOSED GREEN AREA = 754,148.59 S.F. = 44% GREEN AREA (754,148.59 S.F.) / (1,702,473.27 S.F.) = 0.44 = 44%
      - COMMERCIAL GREEN AREA SHALL BE 25% OF THE GROSS COMMERCIAL AREA.
        - COMMERCIAL EMPLOYMENT GREEN AREA:
          - MINIMUM GREEN AREA = 25% OF GROSS COMMERCIAL AREA = (0.25)/(1,055,765.95 S.F.) = 26,441.49 S.F.
          - PROPOSED GREEN AREA = 57,296.56 S.F. = 54% GREEN AREA (57,296.56 S.F.) / (1,055,765.95 S.F.) = 0.54 = 54%
  - BUFFERS:
    - MPC BUFFER:
      - 20 FEET WHEN ABUTTING DIFFERENTLY ZONED PARCELS
      - 0 FEET WHEN ABUTTING SIMILARLY ZONED PARCELS
    - WETLANDS BUFFER - 25 FEET:
      - PERMITTED ACTIVITIES WITHIN THE WETLANDS BUFFER:
        - MINOR GRADING
        - STORMWATER MANAGEMENT, IF NECESSARY
    - TAX DITCH BUFFER - 25 FEET:
      - PERMITTED ACTIVITIES WITHIN THE TAX DITCH BUFFER:
        - STORMWATER MANAGEMENT
        - LANDSCAPING
  - MAILBOX CLUSTER DESIGN:
    - MAILBOX CLUSTER DESIGN SHALL FOLLOW THE TYPICAL DESIGN USED WITHIN MILLVILLE BY THE SEA.
  - COMMERCIAL/EMPLOYMENT DENSITY:
    - MAXIMUM PERMITTED DENSITY:
      - MAXIMUM FLOOR AREA RATIO = 1.5
      - COMMERCIAL LOT AREA = 84,219.29 S.F.
      - MAXIMUM PERMITTED DENSITY = (1.5)/(84,219.29 S.F.) = 126,328.94 S.F.
      - GROSS FLOOR AREA OF BUILDINGS
    - PROPOSED DENSITY:
      - COMMERCIAL LOT AREA = 84,219.29 S.F.
      - PROPOSED BUILDING GROSS FLOOR AREA = 14,514.34 S.F.
      - (14,514.34 S.F.) / (84,219.29 S.F.) = 0.17 DENSITY

### CONSTRUCTION NOTES:

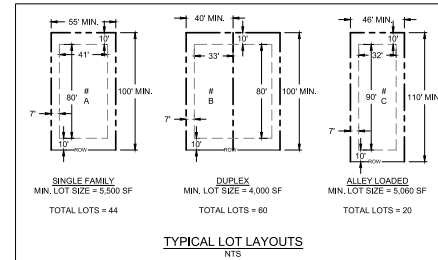
- THESE DRAWINGS SHOW INFORMATION OBTAINED FROM THE AVAILABLE RECORDS REGARDING PIPES, CONDUITS, TELEPHONE LINES, AND OTHER STRUCTURES AND CONDITIONS WHICH EXIST ALONG THE LINES OF WORK AT AND BELOW THE SURFACE OF THE GROUND. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITIES FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION BEING SHOWN ONLY FOR THE CONVENIENCE OF THE CONTRACTOR WHO MUST VERIFY THE INFORMATION TO HIS OWN SATISFACTION. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE GIVING OF THE INFORMATION ON THE CONTRACT DRAWINGS WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO SUPPORT AND PROTECT ALL PIPES, CONDUITS, TELEPHONE LINES AND OTHER STRUCTURES.
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, TIDEWATER UTILITIES INCORPORATED (TUI) SPECIFICATIONS, LOCAL BUILDING CODES, AND THE STANDARD SPECIFICATIONS.
- WATER LINES WILL BE INSTALLED AT A DEPTH THAT WILL PROVIDE 48" COVER OVER THE PIPES BELOW PROPOSED GRADE UNLESS SHOWN OTHERWISE ON THESE PLANS OR DIRECTED OTHERWISE BY THE ENGINEER IN THE FIELD.
- ALL DISTURBED AREAS SHALL BE SMOOTHLY GRADED TO PROMOTE POSITIVE DRAINAGE AND STABILIZED WITH TOPSOIL, SEED AND MULCH. IF SETTLEMENT OCCURS, TOPSOIL, SEEDING AND MULCH SHALL BE REPEATED UNTIL SETTLEMENT SUBSIDES. (SEE EROSION AND SEDIMENT CONTROL DETAILS AND SPECIFICATIONS.)
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO (2) WEEKS PRIOR TO THE START OF CONSTRUCTION AND SHALL COORDINATE ALL CONSTRUCTION PHASES WITH THEM:  
TOWN OF MILLVILLE ..... 1-302-539-0449  
CEA, LLC ..... 1-302-376-8833  
MBS UTILITIES ..... 1-800-282-8555  
  
SHOULD ANY DAMAGE OCCUR TO EXISTING UTILITIES, IT SHALL BE REPAIRED SOLELY AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL CONTACT DELAWARE ELECTRIC COOPERATIVE AT 1-302-368-0090 PRIOR TO COMMENCING WORK WITHIN THE PROXIMITY OF OVERHEAD HIGH-VOLTAGE POWER LINES.
- ALL DRAINAGE STRUCTURES AND TRENCHES SHALL REMAIN FUNCTIONAL DURING CONSTRUCTION.
- THE OWNER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENT, BOTH TEMPORARY AND PERMANENT.
- ALL WATER VALVES, BOXES AND HYDRANTS SHALL BE SET AND ADJUSTED TO FINISHED GRADE.
- TRENCHES SHALL NOT REMAIN OPEN OVERNIGHT. IF IT IS NECESSARY FOR TRENCHES TO REMAIN OPEN, STEEL PLATES CAPABLE OF BEARING TRAFFIC SHALL BE USED TO COMPLETELY COVER THE TRENCH OPENINGS.
- WATER MAINS SHALL HAVE A MINIMUM 10 FOOT HORIZONTAL AND 18 INCH VERTICAL SEPARATION FROM SANITARY SEWER. WHERE MINIMUM VERTICAL SEPARATION DISTANCES CANNOT BE MAINTAINED, SANITARY SEWER MATERIALS SHALL BE WATER WORKS GRADE 150 PSI PRESSURE RATED PIPE MEETING AWWA STANDARDS. PRESSURE TEST RESULTS SHALL BE PROVIDED ON THE AS-BUILT DRAWINGS.
- THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ANY DEVIATION FROM THESE PLANS.
- ANY PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED SOLELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL VERIFY EXISTING INVERTS PRIOR TO CONSTRUCTION OF UNDERGROUND UTILITIES. TEST FITTING OF EXISTING LINES PRIOR TO CONSTRUCTION, IF NECESSARY, SHALL BE COORDINATED WITH THE OWNER.
- THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL SURVEY CONTROL PRIOR TO STAKING OUT CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH WORK.

### GENERAL NOTES:

- THE SIDEWALK AND MULTI-USE PATH SHALL BE MAINTAINED BY THE DEVELOPER. THE STATE AND/OR TOWN OF MILLVILLE ASSUMES NO MAINTENANCE RESPONSIBILITY OF THE SIDEWALK AND MULTI-USE PATH.
- MAINTENANCE OF THE STREETS WILL BE THE RESPONSIBILITY OF THE DEVELOPER. THE STATE AND/OR TOWN OF MILLVILLE ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THESE STREETS.
- THE SUSSEX CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, MODIFY OR DELETE ANY EROSION AND SEDIMENT CONTROL MEASURES AT IT DEEMS NECESSARY.
- THE SUSSEX CONSERVATION DISTRICT RESERVES THE RIGHT TO ENTER PRIVATE PROPERTY FOR PURPOSES OF PERIODIC INSPECTION.
- PUBLIC OPEN SPACE, GREEN SPACE, STORMWATER MANAGEMENT AREAS, SIDEWALKS, MULTI-USE PATH AND STREETS NOT DEDICATED SHALL BE MAINTAINED BY THE DEVELOPER.
- THE DEVELOPER HEREBY GRANTS A SEWER EASEMENT IN FAVOR OF SUSSEX COUNTY WHICH INCLUDES ALL ROADWAYS, STREETS, ALLEYS FOR THE PURPOSE TO CONSTRUCT, MAINTAIN AND REPAIR UNDERGROUND PIPE, LINES AND MAINS FOR THE PURPOSE OF CONVEYING SEWER THROUGH THE LANDS. ADDITIONAL RIGHTS AND RESPONSIBILITIES OF SUSSEX COUNTY WILL BE MORE FULLY DETAILED IN A SEPARATE DEED OF EASEMENT TO BE RECORDED.
- THE DEVELOPER HEREBY GRANTS A WATER EASEMENT IN FAVOR OF TIDEWATER UTILITIES, INC. WHICH INCLUDES ALL ROADWAYS, STREETS, ALLEYS FOR THE PURPOSE TO CONSTRUCT, MAINTAIN AND REPAIR UNDERGROUND PIPE, LINES AND MAINS FOR THE PURPOSE OF CONVEYING WATER SERVICE TO THE RESIDENTIAL AREAS SHOWN. ADDITIONAL RIGHTS AND RESPONSIBILITIES OF TIDEWATER UTILITIES, INC. WILL BE MORE FULLY DETAILED IN A SEPARATE DEED OF EASEMENT TO BE RECORDED.
- ALL LOTS SHALL BE CONNECTED TO THE COMMUNITY-WIDE OPEN SPACE NETWORK VIA SIDEWALKS, PATHWAYS, AND/OR PUBLIC STREETS. A PLANNED OPEN SPACE OF ONE QUARTER ACRE OR LARGER - INCLUDING OPEN GREENS, POCKET PARKS, SEATING AREAS AND TRAILS - MUST BE WITHIN 1,500 FEET OF EVERY SINGLE-FAMILY DETACHED LOT MEASURED FROM THE CENTER OF THE LOT TO THE CENTER OF THE OPEN SPACE.
- STREET LIGHTING DESIGN AND LAYOUT WILL BE PROVIDED BY DELAWARE ELECTRIC COOPERATIVE (DEC).



TYPICAL PAVEMENT SECTIONS



### CONSTRUCTION & GENERAL NOTES

## HUDSON'S RESERVE

TOWN OF MILLVILLE  
SUSSEX COUNTY, DELAWARE

DATE: MAY 17, 2021  
DESIGNED BY: RT  
APPROVED BY: RJS  
FILE: COVER\_SHEET.DWG  
SHEET NO.: T-2

CIVIL ENGINEERING  
ASSOCIATES, LLC  
REGISTERED PROFESSIONAL ENGINEERS  
SUSSEX COUNTY, DELAWARE

PHONE (302) 376-8833  
FAX (302) 376-8834  
WWW.CEA-36.COM







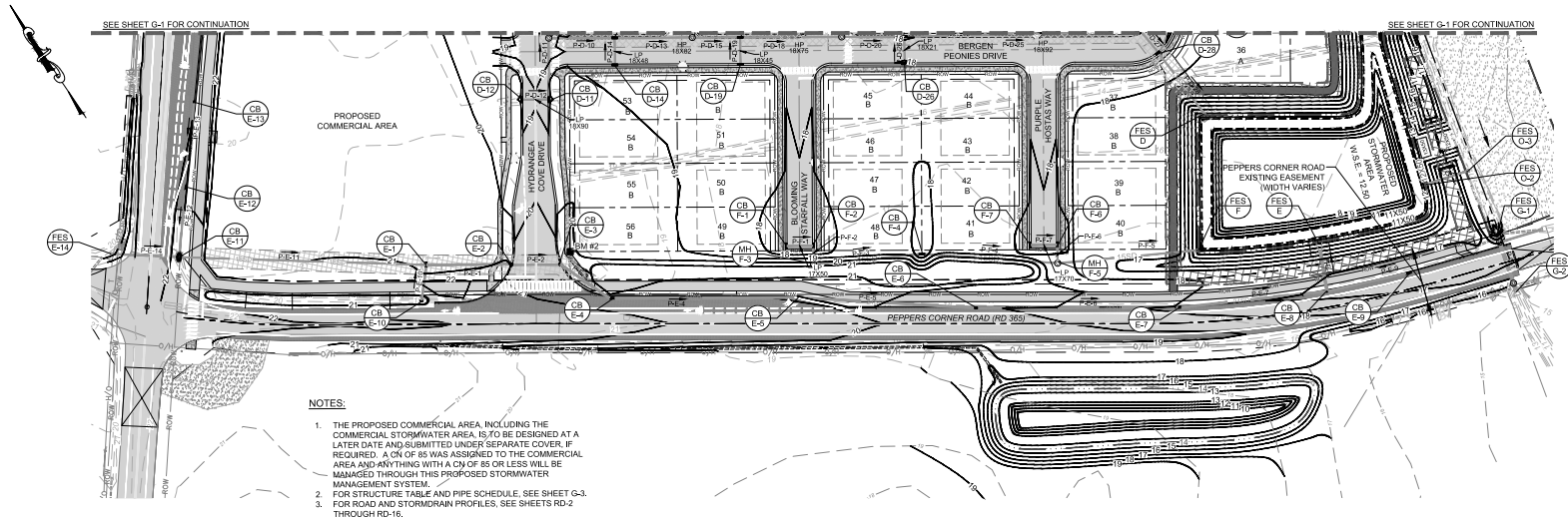


REVISIONS	
DATE	DESCRIPTION
11/18/21	REVISED PER GMB COMMENTS DATED 8/18/21
2	REVISED PER GMB COMMENTS DATED 9/24/21

**CIVIL ENGINEERING ASSOCIATES, LLC**  
55 W. MAIN STREET  
MIDDLETOWN, DE 19969  
PHONE (302) 376-9833  
FAX (302) 376-9831  
WWW.CEA-DE.COM

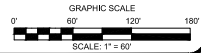
**GRADING PLAN FOR HUDSON'S RESERVE**  
TOWN OF MILLVILLE  
SUSSEX COUNTY, DELAWARE

DATE: MAY 17, 2021  
DESIGNED BY: RT  
APPROVED BY: RHS  
FILE: GRADING\_PLAN.DWG  
SHEET NO.: **G-1**



# NOTES:

1. THE PROPOSED COMMERCIAL AREA, INCLUDING THE COMMERCIAL STORMWATER AREA, IS TO BE DESIGNED AT A LATER DATE AND SUBMITTED UNDER SEPARATE COVER, IF REQUIRED. A CN OF 15 WAS ASSIGNED TO THE COMMERCIAL AREA AND ANYTHING WITH A CN OF 85 OR LESS WILL BE MANAGED THROUGH THIS PROPOSED STORMWATER MANAGEMENT SYSTEM.
2. FOR STRUCTURE TABLE AND PIPE SCHEDULE, SEE SHEET G-3.
3. FOR ROAD AND STORMDRAIN PROFILES, SEE SHEETS RD-2 THROUGH RD-16.



## GRADING PLAN FOR **HUDSON'S RESERVE** TOWN OF MILLVILLE SUSSEX COUNTY, DELAWARE

DATE: MAY 17, 2021  
DESIGNED BY: RT APPROVED BY: RHS  
FILE: GRADING\_PLAN.DWG  
SHEET NO. **G-2**

**CIVIL ENGINEERING  
ASSOCIATES, LLC**  
55 W. MAIN STREET  
MIDDLETOWN, DE 19709  
PHONE (302) 376-9833  
FAX (302) 376-9834  
WWW.CEA-DE.COM

REVISION	DATE	DESCRIPTION
1	9/7/21	REVISED PER GMB COMMENTS DATED 8/18/21
2	11/18/21	REVISED PER GMB COMMENTS DATED 9/24/21

DATE

