

NAPA VALLEY FLEX USE BUILDINGS SEDIMENT AND STORMWATER MANAGEMENT PLANS

GREATER MILFORD BUSINESS COMPLEX
CITY OF MILFORD, KENT COUNTY, DELAWARE

MISPILLION RIVER WATERSHED
MILFORD HUNDRED

TAX MAP ID : 5-16-17300-01-3.14
PREPARED FOR: NAPA VALLEY INVESTMENTS, LLC.

GENERAL NOTES

- THE BOUNDARY INFORMATION SHOWN ON THESE DRAWINGS IS BASED ON A SURVEY PERFORMED BY DAVIS, BOWEN, & FRIEDEL, INC., DATED JUNE 19, 2000, AND LAST REVISED ON APRIL 22, 2003 AND RECORDED IN THE KENT COUNTY RECORDER OF DEEDS OFFICE, PLAT BOOK 68, PAGE 44.
- A TOPOGRAPHIC SURVEY WAS PERFORMED BY DAVIS, BOWEN, & FRIEDEL, INC. OF MILFORD, DELAWARE IN JULY 2018. VERTICAL DATUM IS BASED ON NAVD88. HORIZONTAL DATUM IS BASED ON NAD83.
- EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48 HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY DELMARVA (800-282-8555) A MINIMUM OF THREE (3) CONSECUTIVE WORKING DAYS PRIOR TO ANY EXCAVATION.
- HYDROIC SOILS ARE NOT INDICATED AS BEING PRESENT ACCORDING TO THE KENT COUNTY SOIL SURVEY. SOILS HAVE BEEN INSPECTED BY TOM KING, A LICENSED WETLAND SCIENTIST.
- ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MATERIALS AND WORKMANSHIP SHALL MEET THE REQUIREMENTS OF THE CITY OF MILFORD STANDARD SPECIFICATIONS FOR INSTALLATION OF UTILITY CONSTRUCTION AND SUBDIVISION PAVEMENT DESIGN, AND ALL APPLICABLE AGENCIES HAVING JURISDICTION OVER THE PROPOSED IMPROVEMENTS.
- USE ONLY SUITABLE AND APPROVED GRANULAR MATERIAL FOR BACK FILLING TRENCHES.
- THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL RIGHT-OF-WAY LINES AND PROPERTY LINES TO HIS OWN SATISFACTION. ANY DISTURBED AREAS BEYOND THE RIGHT-OF-WAY OR EASEMENT LINES SHALL BE RESTORED IMMEDIATELY TO THEIR ORIGINAL CONDITION.
- ALL VALVE CLOSURES AND CUT-INS SHALL BE COORDINATED WITH THE CITY. CITY OFFICIALS WILL CARRY OUT ALL NECESSARY VALVE CLOSURES. CONTRACTOR SHALL COORDINATE ISOLATION OF EXISTING WATER MAINS WITH THE CITY AND NOTIFY AFFECTED RESIDENTS AT LEAST 48 HOURS PRIOR TO CUT-IN.
- PIPELINE DETECTION TAPE SHALL BE COLOR CODED, APPROPRIATELY LABELED, AND INSTALLED 18 INCHES BELOW THE GROUND SURFACE AND DIRECTLY ABOVE ALL PROPOSED NON-METALLIC WATER MAIN, SEWER MAIN, SEWER LATERALS, AND WATER SERVICES. CONDUCTIVE TRACER WIRE SHALL BE INSTALLED WITH ALL NON-METALLIC WATER PIPE AND SERVICES; AND ALONG ALL SEWER LATERALS AND FORCE MAINS. WIRE SHALL BE SECURELY BONDED TO THE PIPE AND SHALL BE SECURELY BONDED TOGETHER AT ALL WIRE JOINTS WITH APPROVED WATERTIGHT CONNECTORS. TRACER WIRE SHALL BE ACCESSIBLE AT ALL VALVE BOXES, METER PITS, CLEANOUTS, AND AIR RELEASE VALVES.
- PRIOR TO ISOLATION AND CUT-IN PROCEDURES, CONTRACTOR SHALL EXCAVATE, LOCATE, AND OBSERVE FUNCTION OF ALL EXISTING VALVES TO ASSIST IN THE SYSTEM ISOLATION.
- SHOP DRAWINGS FOR ANY ITEM(S) WHICH WILL EVENTUALLY BE TAKEN OVER BY THE CITY SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO THE INSTALLATION OF THE ITEM(S).
- ALL SANITARY SEWER MAINS AND FORCE MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES AND ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 42 INCHES AS MEASURED FROM THE TOP OF PIPE TO PROPOSED GRADE. SEWER LATERALS SHALL HAVE A MINIMUM DIAMETER OF SIX (6) INCHES AND HAVE A MINIMUM COVER OF 36 INCHES.
- THERE SHALL BE A MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER MAINS AND FORCE MAINS OF 10 FEET, AS MEASURED FROM EDGE OF PIPE TO EDGE OF PIPE. THERE SHALL BE A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN WATER MAINS AND SANITARY SEWER MAINS OR FORCE MAINS AT CROSSINGS. ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE AT CROSSINGS.
- THERE SHALL BE A MINIMUM VERTICAL SEPARATION OF 12 INCHES BETWEEN ANY STORM DRAIN PIPE AND ANY WATER MAIN OR SEWER MAIN. IF 12 INCHES CANNOT BE MAINTAINED, A MINIMUM OF SIX (6) INCHES IS REQUIRED AND PROVISIONS SHALL BE MADE ACCEPTABLE TO THE CITY OF MILFORD FOR PROPERLY ENCASED PIPE IN CONCRETE.
- FLOODPLAIN: THIS SITE IS NOT WITHIN THE 100-YEAR FLOODPLAIN. THE PROPERTY IS DESIGNATED AS ZONE X "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN." PER FIRM MAP NUMBER 100050037J, LAST REVISED JANUARY 6, 2005.
- ALL ROADWAYS ARE TO BE SWEEPED FREE OF SEDIMENT ON A DAILY BASIS.
- THE CONTRACTOR SHALL REMOVE AND IMMEDIATELY REPLACE, RELOCATE, RESET OR RECONSTRUCT ALL OBSTRUCTIONS IN THE WORK AREA, INCLUDING, BUT NOT LIMITED TO, MAILBOXES, SIGNS, LANDSCAPING, LIGHTING, PLANTERS, CULVERTS, DRIVEWAYS, PARKING AREAS, CURBS, GUTTERS, FENCES, OR OTHER NATURAL OR MAN-MADE OBSTRUCTIONS. TRAFFIC CONTROL, REGULATORY, WARNING AND INFORMATIONAL SIGNS SHALL REMAIN FUNCTIONAL AND VISIBLE TO THE APPROPRIATE LANES OF TRAFFIC AT ALL TIMES, WITH THEIR RELOCATION KEPT TO A MINIMUM DISTANCE. THE COST SHALL BE INCLUDED IN THE COST OF ITEMS BID. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT PAVING IS INSTALLED TO THE ELEVATIONS SHOWN AND THAT NO PONDING OF WATER WILL OCCUR AFTER PAVING IS COMPLETE.
- THE STORM DRAINAGE SYSTEM HAS BEEN DESIGNED USING THE CRITERIA OF THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION DEVELOPMENT COORDINATION MANUAL, LATEST EDITION.
- ALL FIRE LINES, FIRE HYDRANTS, EXITS, AND STANDPIPES WILL BE MARKED IN ACCORDANCE WITH STATE FIRE PREVENTION REGULATIONS.
- DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING THE EXCAVATION FOR STRUCTURES AND UTILITY LINES ON AND OFF SITE MUST BE REMOVED AND PROPERLY DISPOSED. ANY REMEDIAL ACTION REQUIRED IS THE RESPONSIBILITY OF THE OWNER.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND ALL RULES AND REGULATIONS THERETO APPLICABLE.
- CONTRACTOR SHALL GRADE, TOPSOIL, SEED AND MULCH ALL DISTURBED AREAS OF CONSTRUCTION, INCLUDING PIPE INSTALLATION OR DITCH CONSTRUCTION. EROSION CONTROL MATTING SHALL BE PROVIDED ON ALL SLOPES GREATER THAN 3:1.
- THE OWNER AND/OR THEIR CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE SERVICES OF A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF DELAWARE SHALL BE RESPONSIBLE FOR PERMANENTLY RE-ESTABLISHING ANY PROPERTY MARKERS OR MONUMENTS DISTURBED DURING CONSTRUCTION. A SURVEY AND METES AND BOUNDS THAT INCLUDES THE RE-ESTABLISHED MARKERS(S) OR MONUMENT(S) SHALL BE PRESENTED TO THE PROPERTY OWNER FOR COMPARISON WITH THE ORIGINAL PLAT, FOR VERIFICATION.
- THE OWNER SHALL BE RESPONSIBLE FOR THE SHORT-TERM MAINTENANCE OF ANY AND ALL STORMWATER MANAGEMENT FACILITY AND STORM SEWER SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LONG-TERM MAINTENANCE RESPONSIBILITIES CAN BE TRANSFERRED TO A LEGALLY ESTABLISHED HOMEOWNERS ASSOCIATION OR OTHER RESPONSIBLE PARTY.
- THE CITY OF MILFORD WILL ASSUME OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF WATER AND SEWER PIPES AND APPURTENANCES, INSTALLED WITHIN CITY RIGHT-OF-WAY AND EASEMENTS DEDICATED TO THE CITY. STORM SEWER PIPES AND CATCH BASINS FULLY WITHIN CITY RIGHT-OF-WAY, INSTALLED FULLY WITHIN CITY RIGHT-OF-WAY, ONCE THE FOLLOWING CONDITIONS HAVE BEEN MET:
27.1. AFTER ALL ITEMS HAVE PASSED CITY INSPECTION;
27.2. AFTER THE CITY HAS RECEIVED AND APPROVED DIGITAL AND HARD COPIES OF THE RECORD DRAWINGS, AND
27.3. AFTER THE RIGHTS-OF-WAY AND/OR EASEMENTS HAVE BEEN DEEDED TO THE CITY AND RECORDED WITH THE RECORDER OF DEEDS.
- SEWER AND WATER CAPACITY ARE NOT GUARANTEED UNTIL BUILDING PERMITS ARE ISSUED, ALL FEES ARE PAID, AND SUITABLE UTILITIES ARE IN PLACE FOR PROPER CONVEYANCE, TREATMENT, AND DISPOSAL.
- PRELIMINARY APPROVAL FROM PLANNING COMMISSION SHALL BE VOID AFTER TWENTY-FOUR (24) MONTHS, UNLESS AN EXTENSION IS REQUESTED BY THE OWNER AND APPROVED FOR GOOD CAUSE BY THE PLANNING COMMISSION PRIOR TO THE DATE OF APPROVAL OF A CONDITIONAL USE IN CONJUNCTION WITH A SITE PLAN APPLICATION SHALL EXPIRE UPON EXPIRATION OF THE ASSOCIATED SITE PLAN.
- FINAL APPROVAL FROM THE CITY SHALL BECOME VOID IF THE FINAL RECORD PLAT IS NOT RECORDED WITHIN 90 DAYS OF THE DATE OF PLANNING COMMISSION'S GRANTING OF FINAL APPROVAL. IF CONSTRUCTION OF THE APPROVED IMPROVEMENTS IS NOT SUBSTANTIALLY UNDERTAKEN WITHIN EIGHTEEN (18) MONTHS OF FINAL SITE PLAN APPROVAL, THE SITE PLAN APPROVAL SHALL BE VOID. THE APPLICANT MAY REQUEST A ONE (1) YEAR EXTENSION FROM THE PLANNING COMMISSION FOR GOOD CAUSE.
- THE APPLICANT IS RESPONSIBLE TO ENSURE THAT ALL CITY AND/OR AGENCY CONSTRUCTION PERMIT APPLICATIONS HAVE BEEN COMPLETED, SUBMITTED, AND ALL APPLICABLE FEES HAVE BEEN PAID PRIOR TO COMMENCING CONSTRUCTION. THE CITY SHALL NOT BE HELD RESPONSIBLE FOR AN ANTICIPATED CONSTRUCTION START DATE THAT IS NOT MET DUE TO THE APPLICANT OR HIS/HER CONTRACTOR NOT HAVING MET THE CONSTRUCTION PERMITTING REQUIREMENTS.
- AS A CONDITION OF THE APPROVAL OF THE CONSTRUCTION DRAWINGS, AND PRIOR TO THE ISSUANCE OF THE FIRST BUILDING PERMIT, THE APPLICANT SHALL POST A COMPLETE GUARANTY IN THE AMOUNT OF 125% OF THE COST OF INSTALLATION FOR THE CONSTRUCTION OF RECREATIONAL AND OPEN SPACE AMENITIES, INCLUDING BUT NOT LIMITED TO COMMUNITY BUILDINGS, PLAYGROUNDS, WALKING PATHS, LANDSCAPING AND LANDSCAPE SCREENING. THE GUARANTY SHALL BE IN THE FORM OF A BOND FOR FUNDS DEPOSITED IN AN ESCROW ACCOUNT.
- A MAINTENANCE BOND IN THE AMOUNT OF 10% OF THE AMOUNT OF THE CONSTRUCTION VALUE FOR ANY CONSTRUCTED IMPROVEMENTS AND A PERFORMANCE BOND IN THE AMOUNT OF 125% OF THE CONSTRUCTION VALUE FOR ANY UNCOMPLETED WORK SHALL BE PROVIDED IN ORDER TO OBTAIN CERTIFICATES OF OCCUPANCY AND ACHIEVE FINAL COMPLETION OF THE IMPROVEMENTS AND RELEASE OF ANY COMPLETION GUARANTY. THE MAINTENANCE PERIOD SHALL BE A MINIMUM OF ONE YEAR AND ALL CONSTRUCTION VALUES MUST BE SUBMITTED TO, REVIEWED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE ISSUANCE OF ANY BONDS.
- UPON COMPLETION OF THE CONSTRUCTION IMPROVEMENTS AND PRIOR TO THE RELEASE OF ANY DEVELOPER'S COMPLETION GUARANTY, THE DEVELOPER SHALL PROVIDE THE CITY ENGINEER A DRAFT PAPER SET OF DETAILED RECORD PLANS (PLAN VIEW AND PROFILE SHEETS), RECORD INFORMATION SHALL BE PLACED ON THE APPROPRIATE APPROVED DRAWINGS. ORIGINAL DESIGN ELEVATION AND/OR DISTANCE INFORMATION SHALL BE STRUCK THROUGH WITH A FINE LINE AND THE RECORD INFORMATION SHALL BE INSERTED NEXT TO IT. WHEN THE DRAFT SET OF DRAWINGS HAS BEEN APPROVED BY THE CITY, THREE (3) FINAL PAPER COPIES SHALL BE SUBMITTED, SIGNED AND SEALED BY THE OWNER'S ENGINEER OR SURVEYOR. ADDITIONALLY, A CD SHALL BE PROVIDED WITH DIGITAL RECORD INFORMATION IN AUTOCAD FORMAT (VERSION 2016 OR LATER). THE DIGITAL INFORMATION SHALL BE ON DELAWARE STATE PLANE, NAD 83 HORIZONTAL CONTROL AND NAVD88 VERTICAL CONTROL. RECORD PLAN INFORMATION SHALL INCLUDE SURVEYED AS-BUILT ELEVATIONS AND HORIZONTAL LOCATIONS OF THE FOLLOWING:
35.1. ALL PROPERTY MONUMENTS/MARKERS;
35.2. SEWER MANHOLE RIM & INVERT ELEVATIONS, WITH ASSOCIATED PIPE SIZES & MATERIALS NOTED, PUMP STATION RIM, BOTTOM & INVERT ELEVATIONS WITH ASSOCIATED PIPE SIZES & MATERIALS NOTED, FORCE MAIN INVERT ELEVATIONS EVERY 50 FEET, FORCE MAIN AIR RELEASE VALVE RIM & INVERT ELEVATIONS, SEWER CLEANOUT RIM & INVERT ELEVATIONS, AND GREASE TRAP RIM, BOTTOM & INVERT ELEVATIONS;
35.3. WATER VALVES, FIRE HYDRANTS, METER VAULTS, METER PITS, AND CURB STOPS;
35.4. STORM SEWER CATCH BASIN AND/OR MANHOLE GRATE, RIM & INVERT ELEVATIONS WITH ASSOCIATED PIPE SIZES & MATERIALS NOTED; AND
35.5. ANY OTHER ITEM WHICH WILL BE TAKEN OVER BY THE CITY.
- THE CONTRACTOR SHALL NOTIFY THE CITY PUBLIC WORKS DEPARTMENT AT (302) 422-1110 A MINIMUM OF TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND SCHEDULE A PRE-CONSTRUCTION MEETING. THE SITE CONTRACTOR AND THE OWNER, OR HIS/HER REPRESENTATIVE SHALL BE IN ATTENDANCE.
- THERE ARE NO SOURCEWATER PROTECTION AREAS LOCATED ON OR IMMEDIATELY ADJACENT TO THE PROPERTY.
- WETLANDS STATEMENT: WETLANDS ARE NOT BEING IMPACTED, THERE ARE NO WETLANDS PRESENT ON THE PROPERTY. HOWEVER, NON-TIDAL WETLANDS EXIST ON ADJACENT LANDS.



LOCATION MAP
SCALE: 1" = 400'



VICINITY MAP
SCALE: 1" = 1/3 MILE

SHEET LIST

SHEET NO.	DRAWING NO.	DRAWING TITLE
1	G-001	TITLE SHEET
2	C-101	EXISTING CONDITIONS AND DEMOLITION
3	C-102	SITE PLAN
4	C-103	UTILITY PLAN
5	C-104	GRADING AND DRAINAGE PLAN
6	C-105	FIRE MARSHAL PLAN
7	C-106	PLANTING PLAN
8	C-107	EROSION AND SEDIMENT CONTROL PLAN
9	C-501	DETAIL I
10	C-502	DETAIL II
11	C-503	EROSION AND SEDIMENT CONTROL PLAN NOTES
12	C-504	EROSION AND SEDIMENT CONTROL DETAILS I
13	C-505	EROSION AND SEDIMENT CONTROL DETAILS II

LEGEND

DESCRIPTION	EXISTING	PROPOSED
IRON ROD W/ CAP FOUND	⊙ 10"	NA
PROPERTY LINE	---	NA
CONSOLIDATED PROPERTY LINE	---	NA
ADJACENT PROPERTY LINE	---	NA
EASEMENT LINE	---	NA
ROAD CENTER LINE	---	NA
ASPHALT PAVEMENT	---	---
CONCRETE SIDEWALK	---	---
SEWER MAIN	---	NA
SEWER MANHOLE	⊙	NA
SEWER CLEANOUT	⊙	NA
STORM DRAIN	---	NA
STORM DRAIN INLET	⊙	NA
STORM DRAIN MANHOLE	⊙	NA
CONTOUR	---	---
SPOT ELEVATION	x32.50	9.5 8.8
TREE LINE	---	---
WETLANDS LINE	---	---
WATER MAIN	---	---
WATER VALVE	⊙	---
FIRE HYDRANT	⊙	---
SIGN	⊙	---
LIGHT POLE	⊙	---
ELECTRICAL BOX	⊙	---
TELEPHONE PEDESTAL	⊙	---
DECIDUOUS TREE	⊙	---
CONIFEROUS TREE	⊙	---
NATURAL GAS / PROPANE	---	---
DESCRIPTION	EXISTING	PROPOSED
SILT FENCE	NA	---
SILT FENCE / LIMIT OF DISTURBANCE	NA	---
SUPER SILT FENCE / LIMIT OF DISTURBANCE	NA	---
INLET PROTECTION TYPE -2	NA	IP-2
STABILIZED CONSTRUCTION ENTRANCE	NA	SCE
CONCRETE WASHOUT	NA	CW

PROJECT AND SITE DATA

- OWNER/APPLICANT: NAPA VALLEY INVESTMENTS, LLC
12 W. PERIWINKLE LANE
NEWARK, DELAWARE 19711
CONTACT: FRAN POLLINGER
EMAIL: FJPOLLING@COMCAST.NET
PHONE: 302-275-5436
- ENGINEER: EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC. PBC
11200 RACETRACK ROAD, UNIT 101A
OCEAN PINES, MARYLAND 21811
CONTACT: STEVEN LEMASTERS, P.E.
EMAIL: SLEMASTERS@EAEST.COM
PHONE: 410-641-5341
- SITE ADDRESS: 320 MULLETT RUN
MILFORD, DELAWARE 19663
- PROPERTY: MAP NUMBER: 5-16-17300-01-3.14
TAX ACCOUNT ID: 83316
PARCEL AREA: 2.0 ACRES
- ZONING: BP - BUSINESS PARK DISTRICT
- SETBACKS: FRONT: 30 FEET, SIDES: 15 FEET, REAR: 25 FEET
- LOT WIDTH: MINIMUM: 150 FEET, ACTUAL: 309 FEET
- LOT AREA: MINIMUM: 1 ACRE, ACTUAL: 2 ACRES
- BUILDING HEIGHT: MAXIMUM = 50 FEET, PROPOSED: 26 FEET
- EXISTING USE: UNIMPROVED VACANT LOT
- PROPOSED USE: FLEX WAREHOUSE WITH INTEGRAL OFFICE SPACE
(3) 1-STORY STORAGE POLE BUILDINGS
PROPOSED BUILDING FOOTPRINTS: (2) 9,868 SQ. FT. AND (1) 3,248 SQ. FT.
TOTAL BUILDING GROSS FOOTPRINT: 23,184 SQ. FT.
15% OFFICE SPACE ALLOCATION = 3,477 S.F.
85% WAREHOUSE SPACE ALLOCATION = 19,707 S.F.
- PARKING REQ'D: 1 SPACE PER 250 SQUARE FEET OF ALLOCATED GENERAL OFFICE FLOOR AREA = 3,477 / 250 = 14 SPACES
1 SPACE PER 2 EMPLOYEES (2 EMPLOYEE PER UNIT) x 16 UNITS = 32 EMPLOYEES / 2 = 16 SPACES
TOTAL PARKING REQUIRED = 30 SPACES
- BICYCLE PARKING REQ'D: 5 SPACES PLUS 1 SPACE PER 20 PARKING SPACES = 7 SPACES
PROVIDED: (2) RACKS OF FOUR BICYCLE SPACES = 8 SPACES
- PARKING PROV.: (36) 9'x18' SPACES PROVIDED
(2) 9'x18' HANDICAP PARKING SPACE
TOTAL PROVIDED 38
- SOILS PRESENT: hbb - HAMBROOK SANDY LOAM, 2 TO 5 PERCENT SLOPES, HSG 'B'
- AN APPROVED STORMWATER MANAGEMENT PLAN EXISTS FOR THE MILFORD BUSINESS COMPLEX. EACH LOT IS PERMITTED A MAXIMUM OF 75% IMPERVIOUS COVERAGE.
TOTAL PARCEL AREA = 2 ACRES = 87,120 SQ. FT.
75% PERMITTED MAXIMUM IMPERVIOUS COVERAGE = 87,120 * 75% = 65,340 SQ. FT.
PROPOSED IMPERVIOUS COVERAGE = 52,267 SQ. FT. (60%)
- OPEN SPACE REQUIRED: 25% OF SITE AREA = 0.25 * 87,120 = 21,780
OPEN SPACE PROVIDED = 87,120 - 52,267 = 34,853 S.F. (40%)
- ESTIMATED WATER AND SEWER USAGE = 9 COMMERCIAL EDUs. EACH UNIT ALLOCATED THREE FIXTURES UNITS, WASHSTAND AND TOILET FOR A TOTAL OF 48 FIXTURE UNITS. 1 * (48 / 6) = 9 EDU.
- WATER SEWER AND ELECTRIC ARE TO BE PROVIDED BY THE CITY OF MILFORD. NATURAL GAS IS TO BE PROVIDED BY CHESAPEAKE UTILITIES.

SITE DESIGNER CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES.

DARL O. KOLAR, P.E. (DE LICENSE # 16413) DATE
EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC PBC
11200 RACETRACK ROAD, UNIT 101A
OCEAN PINES, MARYLAND 21811
410-641-5341

OWNER/DEVELOPER/APPLICANTS CERTIFICATION

"I, THE UNDERSIGNED, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (I.E. BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT, AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION, I GRANT THE DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE RELEVANT DELEGATED AGENCY THE RIGHT TO CONDUCT ON-SITE REVIEWS, AND I UNDERSTAND MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REFERENCED ON THIS COVERSHEET."

APPLICANT: DATE

MR. FRAN POLLINGER
NAPA VALLEY INVESTMENTS, LLC
12 W. PERIWINKLE LANE
NEWARK, DELAWARE 19711
PHONE: 302-275-5436

KENT CONSERVATION DISTRICT APPROVAL BLOCK



EA Engineering, Science, and Technology, Inc., PBC
11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

DATE: APRIL 2023

PROJECT NUMBER: 6387801

G-001

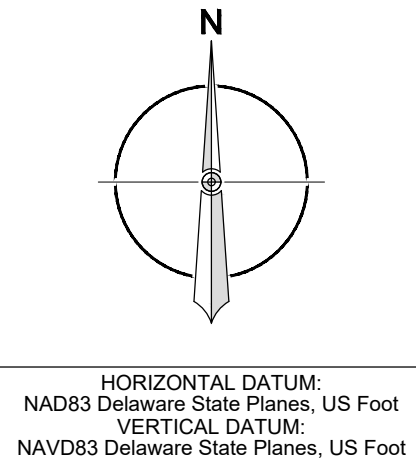
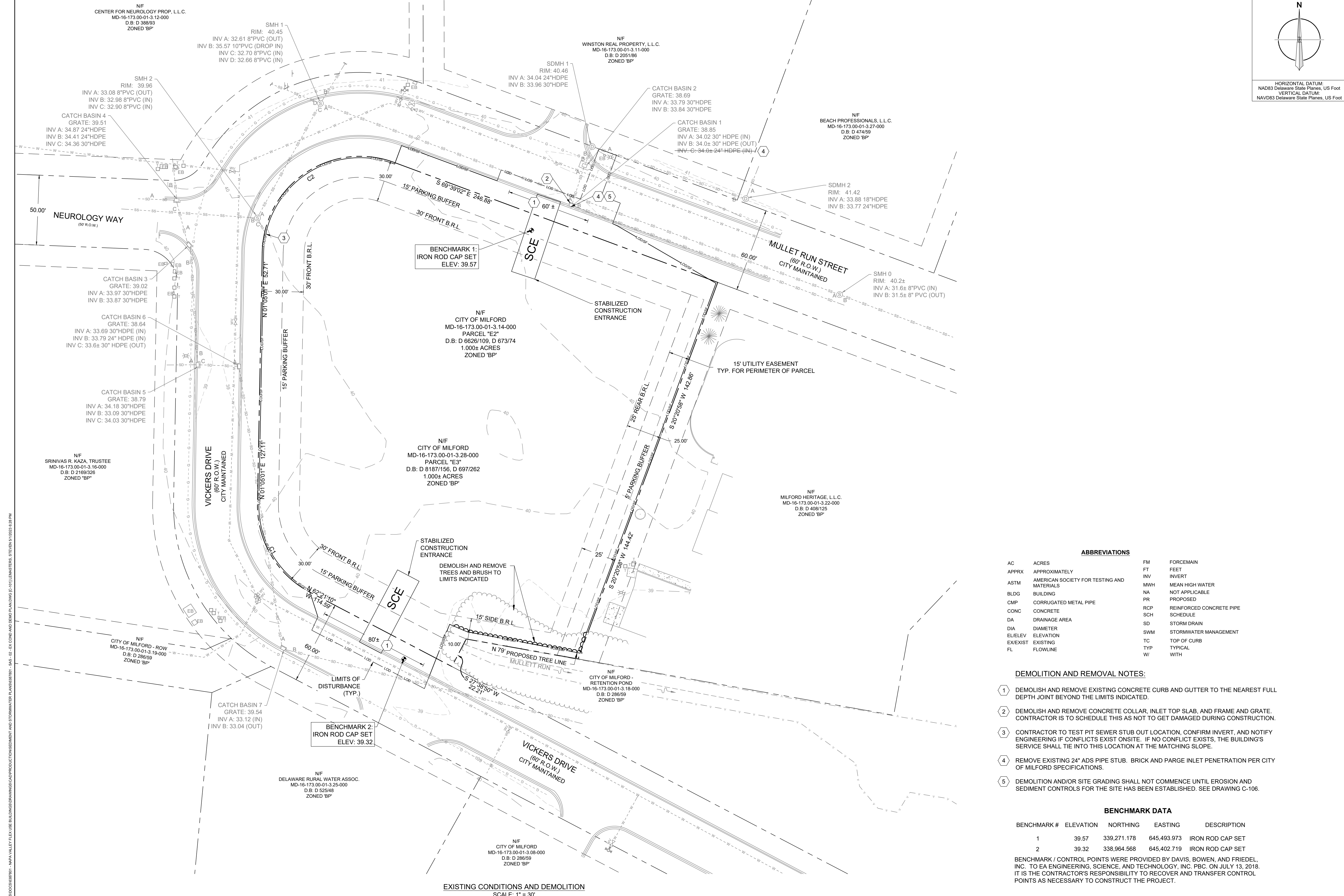
SHEET: 1 OF 13

NAPA VALLEY FLEX USE BUILDINGS
SEDIMENT AND STORMWATER MANAGEMENT PLANS
GREATER MILFORD BUSINESS COMPLEX

CITY OF MILFORD, KENT COUNTY, DELAWARE

TITLE SHEET

SEDIMENT AND STORMWATER PLANS - FOR PERMITTING



NO.	DATE	BY	DESCRIPTION

DESIGN INFORMATION	
DESIGNED BY:	SCL
DRAWN BY:	JAP/SCL
CHECKED BY:	MEP
PROJECT MANAGER:	SCL

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE, LICENSE NO. 16413, EXPIRATION DATE: JUNE 30, 2024.

SEAL

**NAPA VALLEY FLEX USE BUILDINGS
SEDIMENT AND STORMWATER MANAGEMENT PLANS
GREATER MILFORD BUSINESS COMPLEX**

CITY OF MILFORD, KENT COUNTY, DELAWARE

EXISTING CONDITIONS AND DEMOLITION

ABBREVIATIONS

AC	ACRES	FM	FORCEMAIN
APPRX	APPROXIMATELY	FT	FEET
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	INV	INVERT
BLDG	BUILDING	MWH	MEAN HIGH WATER
CMP	CORRUGATED METAL PIPE	NA	NOT APPLICABLE
CONC	CONCRETE	PR	PROPOSED
DA	DRAINAGE AREA	RCP	REINFORCED CONCRETE PIPE
DIA	DIAMETER	SCH	SCHEDULE
ELEV	ELEVATION	SD	STORM DRAIN
EX/EXIST	EXISTING	SWM	STORMWATER MANAGEMENT
FL	FLOWLINE	TC	TOP OF CURB
		TYP	TYPICAL
		WI	WITH

- DEMOLITION AND REMOVAL NOTES:**
- 1 DEMOLISH AND REMOVE EXISTING CONCRETE CURB AND GUTTER TO THE NEAREST FULL DEPTH JOINT BEYOND THE LIMITS INDICATED.
 - 2 DEMOLISH AND REMOVE CONCRETE COLLAR, INLET TOP SLAB, AND FRAME AND GRATE. CONTRACTOR IS TO SCHEDULE THIS AS NOT TO GET DAMAGED DURING CONSTRUCTION.
 - 3 CONTRACTOR TO TEST PIT SEWER STUB OUT LOCATION, CONFIRM INVERT, AND NOTIFY ENGINEERING IF CONFLICTS EXIST ONSITE. IF NO CONFLICT EXISTS, THE BUILDING'S SERVICE SHALL TIE INTO THIS LOCATION AT THE MATCHING SLOPE.
 - 4 REMOVE EXISTING 24" ADS PIPE STUB. BRICK AND PARGE INLET PENETRATION PER CITY OF MILFORD SPECIFICATIONS.
 - 5 DEMOLITION AND/OR SITE GRADING SHALL NOT COMMENCE UNTIL EROSION AND SEDIMENT CONTROLS FOR THE SITE HAS BEEN ESTABLISHED. SEE DRAWING C-106.

BENCHMARK DATA

BENCHMARK #	ELEVATION	NORTHING	EASTING	DESCRIPTION
1	39.57	339,271.178	645,493.973	IRON ROD CAP SET
2	39.32	338,964.568	645,402.719	IRON ROD CAP SET

BENCHMARK / CONTROL POINTS WERE PROVIDED BY DAVIS, BOWEN, AND FRIEDEL, INC. TO EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC. PBC. ON JULY 13, 2018. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RECOVER AND TRANSFER CONTROL POINTS AS NECESSARY TO CONSTRUCT THE PROJECT.

CURVE TABLE

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	77.50'	77.00'	63°26'11"	N 30°38'05" W	73.60'
C2	133.49'	77.00'	109°15'57"	N 355°42'59" E	114.16'

EXISTING CONDITIONS AND DEMOLITION
SCALE: 1" = 30'

FILE PATH: \\C:\ADMIN\PROJECTS\DESIGN\NAPA VALLEY FLEX USE BUILDINGS\DRAWING\PRODUCTION\DRAWING AND STORMWATER PLANS\DWG - SCL - EX COND AND DEM PLAN\DWG - SCL - EX COND AND DEM PLAN.DWG, DATE: 04/11/2023 10:28 AM

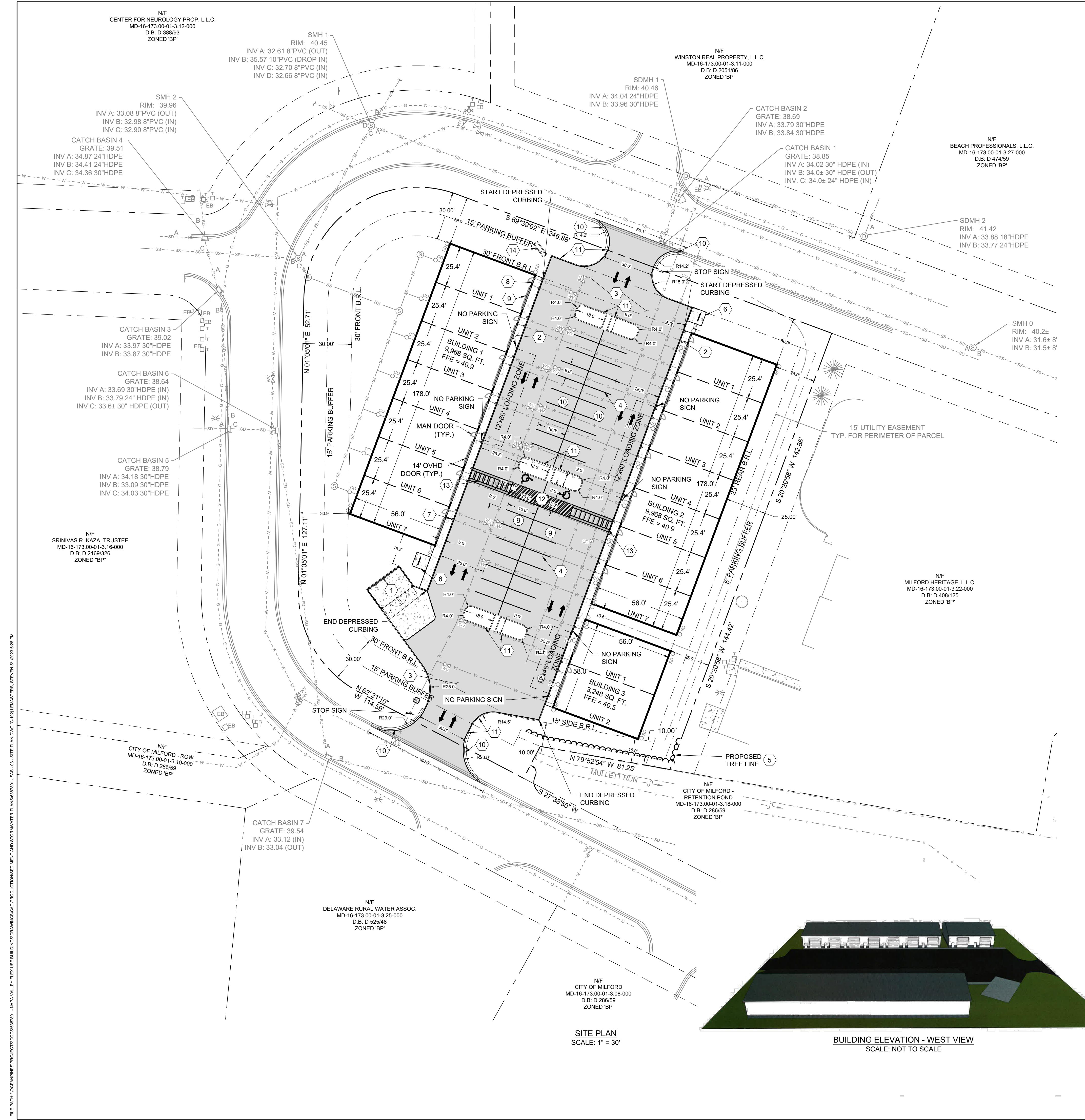
EA Engineering, Science, and Technology, Inc., PBC
11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341
www.eaest.com

0 15 30 60
GRAPHIC SCALE IN FEET

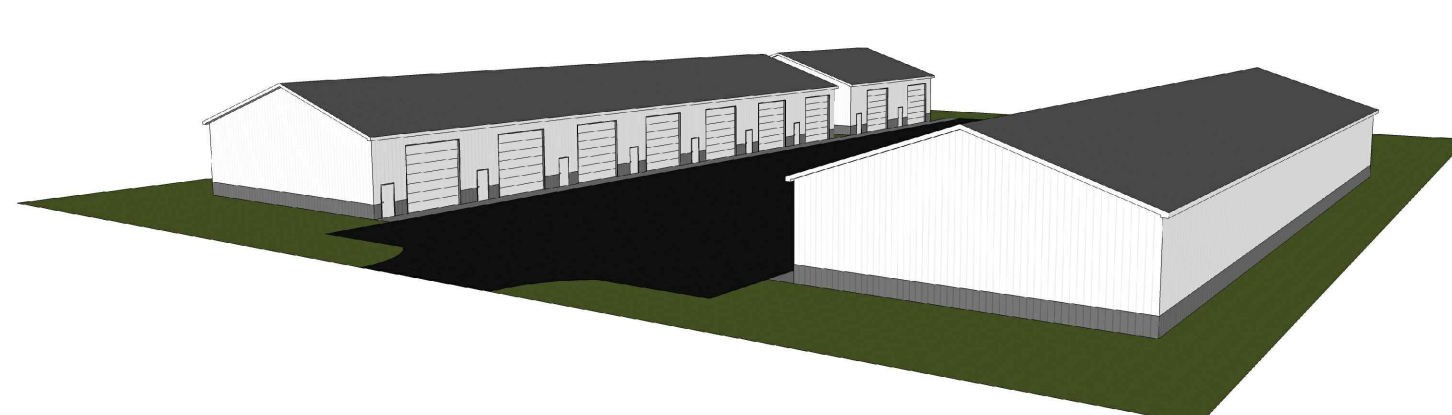
FULL SIZE PLOT: 24" x 36"
DATE: APRIL 2023
PROJECT NUMBER: 6387801

C-101
SHEET: 2 OF 13

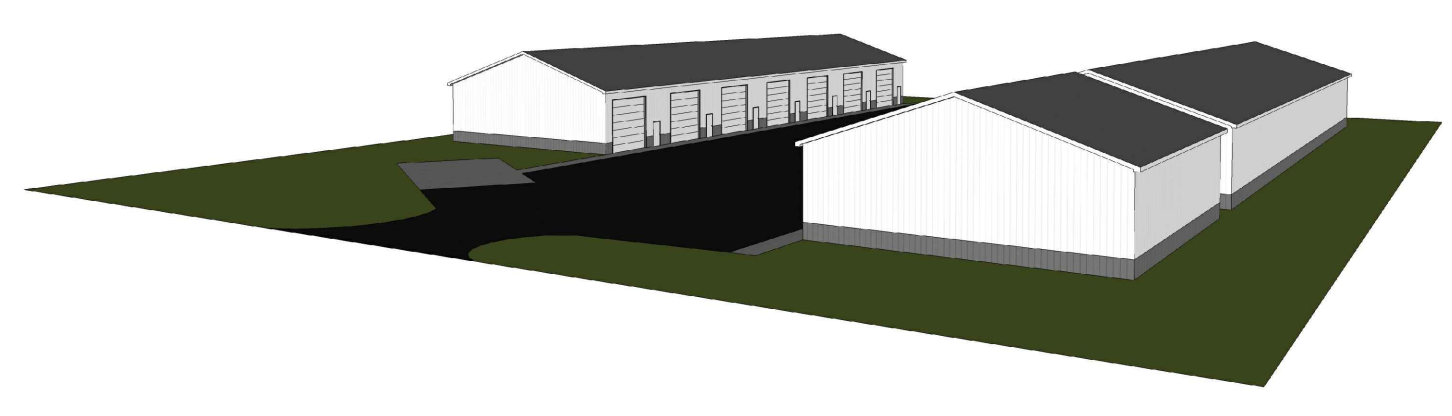
SEDIMENT AND STORMWATER PLANS - FOR PERMITTING



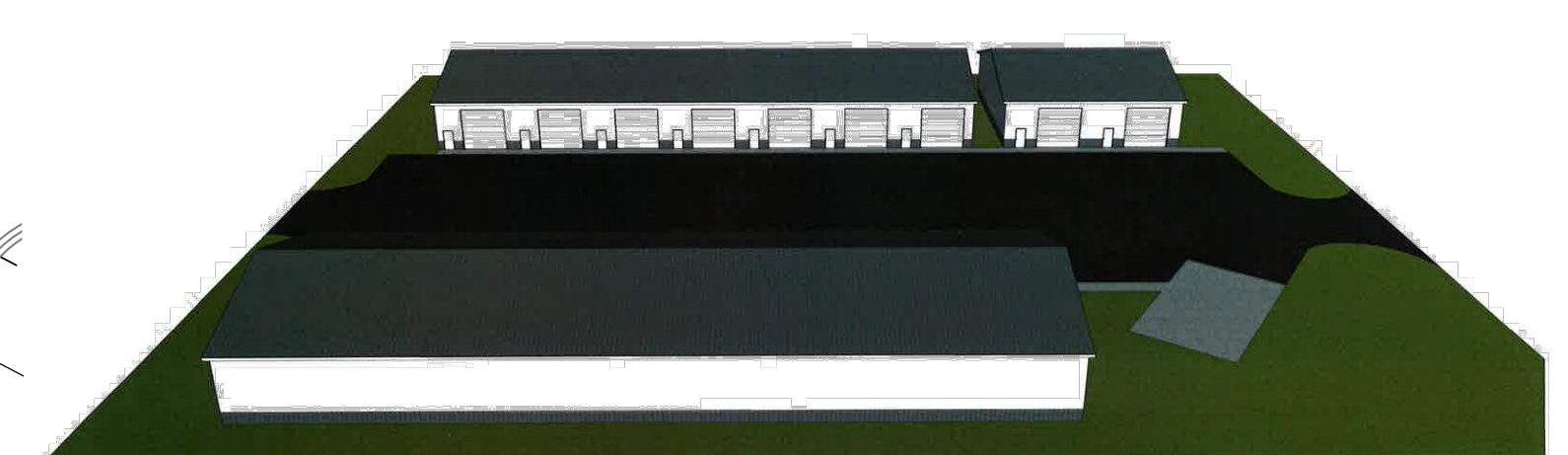
- SITE PLAN NOTES:**
- 1 DUMPSTER PAD AND ENCLOSURE. SEE DETAIL ON SHEET C-501.
 - 2 5' WIDE CONCRETE WALKWAYS. WALKWAYS SHALL BE FLUSH WITH ADJACENT PAVEMENT UNLESS OTHERWISE SHOWN. SEE DETAIL ON SHEET C-501.
 - 3 ASPHALT PAVEMENT AND PARKING. SEE DETAIL ON SHEET C-501.
 - 4 PARKING STRIPES SHALL BE PAINTED WHITE, 4-INCHES WIDE, AND APPLIED IN TWO COATS TO OBTAIN A MINIMUM 15MIL THICKNESS USING A WATERBASED ACRYLIC PAINT.
 - 5 CONTRACTOR SHALL PERFORM TREE CLEARING TO LIMITS INDICATED.
 - 6 SURFACE MOUNTED BIKE RACK, MINIMUM CAPACITY OF 4 BIKES. (VICTOR STANLEY BRCS-103 OR ENGINEER/OWNER APPROVED EQUAL) AND 9'x9' CONCRETE MOUNTING PAD. TYPICAL x2. SEE DETAIL ON SHEET C-501.
 - 7 CONCRETE BOLLARDS. TYPICAL x32, 2 AT ON EITHER SIDE OF UNIT MAN-DOORS. SEE DETAIL ON DRAWING C-501.
 - 8 UNIT MAN-DOOR ENTRANCE. TYPICAL x16.
 - 9 UNIT OVERHEAD DOORS. TYPICAL x16.
 - 10 TYPE 2 INTEGRAL P.C.C. CURB AND GUTTER. SEE DETAIL ON SHEET C-501.
 - 11 MODIFIED TYPE 1-6 P.C.C. CURB - 6" WIDTH. SEE DETAIL ON SHEET C-501. PROVIDE A 5' TRANSITION LENGTH OF CURB WHEN CONVERTING TO TYPE 2 INTEGRAL P.C.C. CURB AND GUTTER.
 - 12 ADA VAN ACCESSIBLE PARKING SPACES, PAVEMENT MARKINGS, AND SIGNAGE. SEE DETAIL ON C-501.
 - 13 PAINTED CROSSWALK. SEE DETAIL ON DRAWING C-501.
 - 14 8'x6'x2' FREESTANDING NATURAL STONE MONUMENT BUSINESS SIGN.



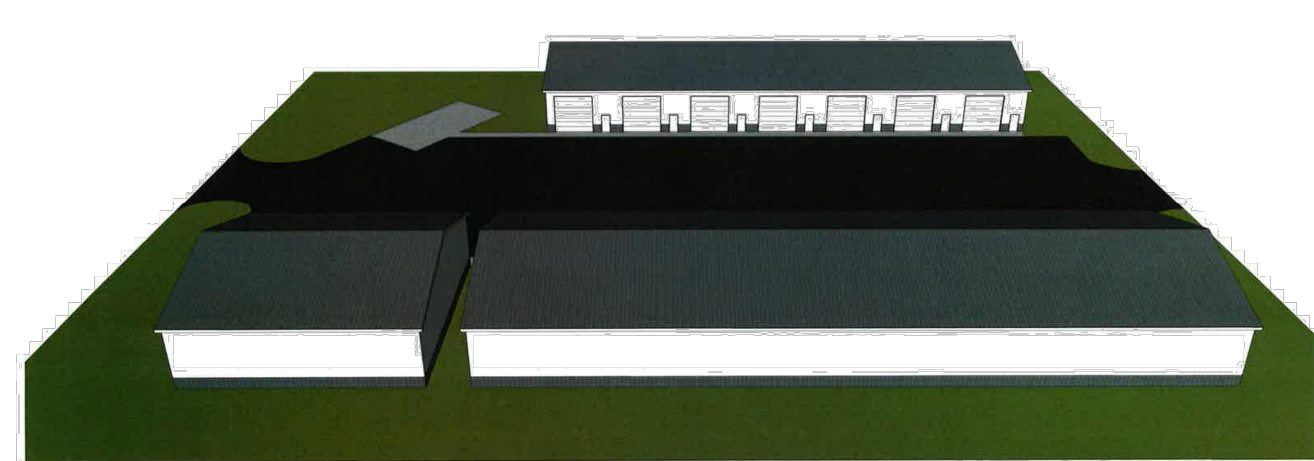
BUILDING ELEVATION - NORTH VIEW
SCALE: NOT TO SCALE



BUILDING ELEVATION - SOUTH VIEW
SCALE: NOT TO SCALE

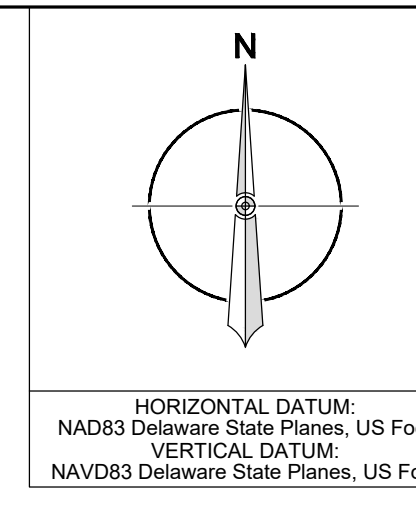


BUILDING ELEVATION - WEST VIEW
SCALE: NOT TO SCALE



BUILDING ELEVATION - EAST VIEW
SCALE: NOT TO SCALE

SITE PLAN
SCALE: 1" = 30'

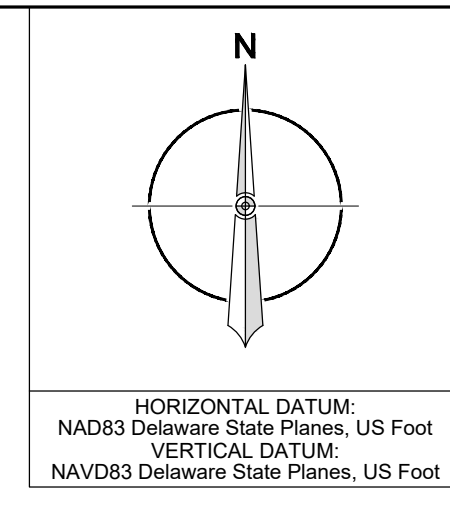
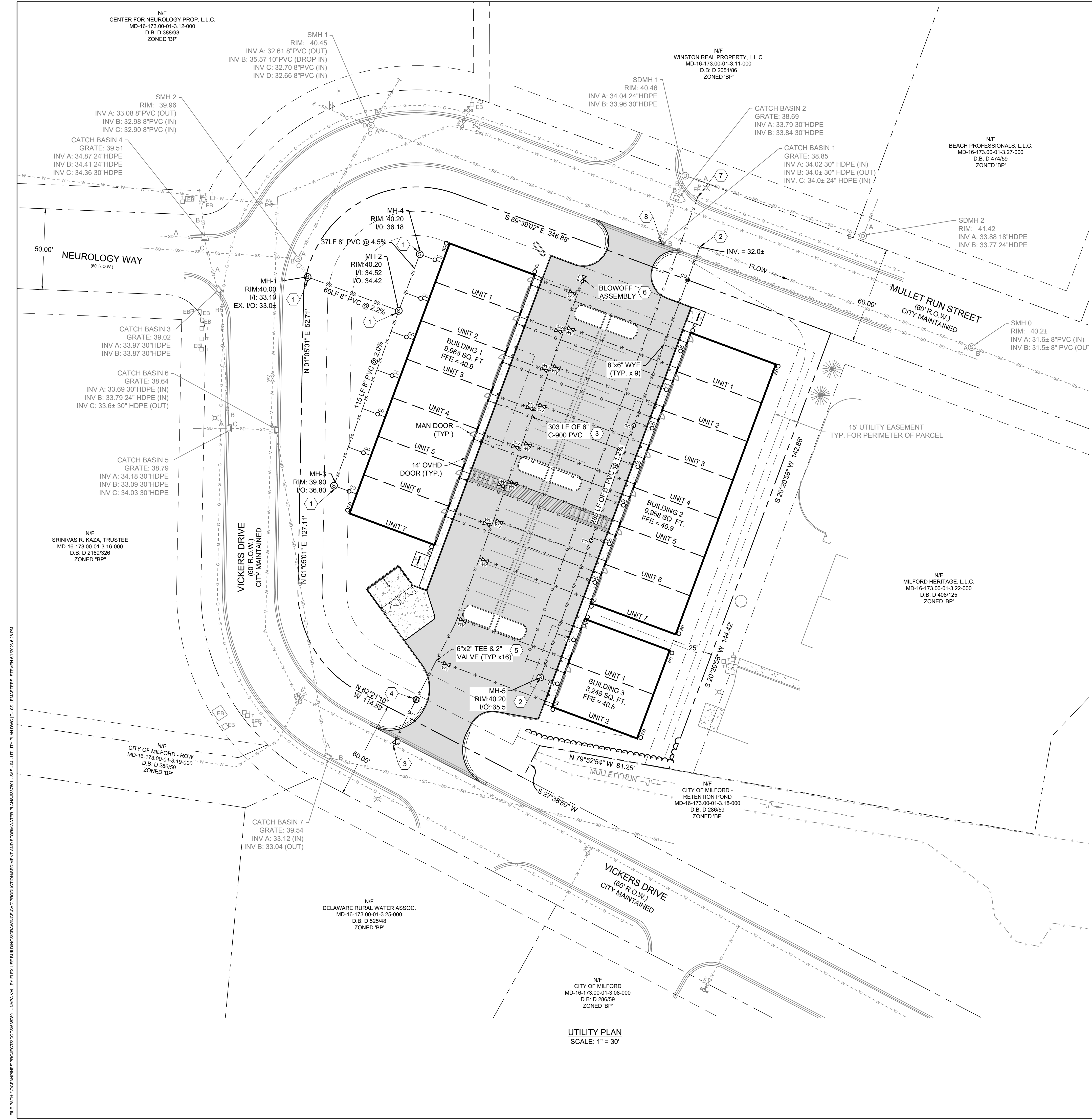


HORIZONTAL DATUM:
NAD83 Delaware State Planes, US Foot
VERTICAL DATUM:
NAV83 Delaware State Planes, US Foot

REVISIONS	DESCRIPTION
	BY
DESIGN INFORMATION	DATE
	NO.
DESIGNED BY:	SCL
	DRAWN BY:
	JAP/SCL
	CHECKED BY:
	MEP
PROJECT MANAGER:	SCL
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE. LICENSE NO. 16413 EXPIRATION DATE: JUNE 30, 2024	
<p>NAPA VALLEY FLEX USE BUILDINGS SEDIMENT AND STORMWATER MANAGEMENT PLANS GREATER MILFORD BUSINESS COMPLEX</p> <p>CITY OF MILFORD, KENT COUNTY, DELAWARE</p> <p>SITE PLAN</p>	
<p>EA Engineering, Science, and Technology, Inc., PBC 11200 Racetrack Road, Unit A101 Ocean Pines, Maryland 21811 (410) 641-5341 www.eaest.com</p>	
<p>0 15 30 60 GRAPHIC SCALE IN FEET</p>	
<p>FULL SIZE PLOT: 24" x 36"</p>	
<p>DATE: APRIL 2023</p>	
<p>PROJECT NUMBER: 6387801</p>	
<p>C-102</p>	
<p>SHEET: 3 OF 13</p>	

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SEDIMENT AND STORMWATER PLANS - FOR PERMITTING



UTILITY PLAN NOTES:

- 1 CONNECT PROPOSED 8" SDR-35 PVC SEWER LATERAL TO EXISTING 8" SDR-35 PVC SEWER STUB. CONTINUE 8" SDR-35 PVC SANITARY PER LAYOUT ON THE PLAN. PROVIDE 6" SERVICE LINES AND CLEANOUTS TO EACH BUILDING UNIT (2.0% MINIMUM SLOPE FROM MAIN TO BUILDING). GRAVITY SEWER SHALL BE PVC SDR-35 WITH GASKETED JOINTS AND FITTINGS SHALL BE PVC SDR-26. MANHOLES SHALL ADHERE TO DETAIL D3-2 ON DRAWING C-502.
- 2 CONNECT PROPOSED 8" SDR-35 PVC SEWER LATERAL TO EXISTING 8" SDR-35 PVC SEWER MAIN PER THE LINES AND GRADES SHOWN ON THE PLAN. PROVIDE 6" SERVICE LINES AND CLEANOUTS TO EACH BUILDING UNIT (2.0% MINIMUM SLOPE FROM MAIN TO BUILDING). GRAVITY SEWER SHALL BE PVC SDR-35 WITH GASKETED JOINTS AND FITTINGS SHALL BE PVC SDR-26. MANHOLES SHALL ADHERE TO DETAIL D3-2 ON DRAWING C-502. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF MILFORD TO ESTABLISH A TEMPORARY BLOCK AND/OR PUMP AROUND OF THE SANITARY SEWER SYSTEM PRIOR TO MAKING THE CONNECTION.
- 3 6" C-900 DOMESTIC SERVICE LATERAL WATER MAIN. 6" WET TAP AND 6" TAPPING VALVE. MAINTAIN 42" VERTICAL COVER AND 10' HORIZONTAL SEPARATION FROM SANITARY SEWER AND NATURAL GAS SERVICES.
- 4 6" COMMERCIAL WATER METER AND PIT INSTALLED ON PROPERTY LINE. WATER METER LID TO BE PROTECTED WITH A CONCRETE 3' x 3' x 4" 3,000 PSI (MIN.) CONCRETE COLLAR POURED AROUND THE LID. COORDINATE PURCHASING AND INSTALLATION WITH THE CITY OF MILFORD.
- 5 6"x2" TEE, 2" BALL VALVE, AND 2" SCHEDULE 80 PVC PIPE FOR WATER SERVICE TO EACH UNIT PER LAYOUT ON THE PLANS. TYPICAL X16.
- 6 PROVIDE BLOWOFF ASSEMBLY AFTER FINAL WATER SERVICE. SEE DETAIL ON DRAWING C-501.
- 7 NATURAL GAS SERVICE LATERAL. COORDINATE WITH UTILITY COMPANY FOR SERVICE TIE-IN, FITTINGS, TESTING, AND BACKFILLING REQUIREMENTS. TRENCH RESTORATION SHALL BE PER CITY OF MILFORD REQUIREMENTS WITHIN THE LIMIT OF THE RIGHT-OF-WAY.
- 8 PROVIDE A NEW CONCRETE TOP SLAB AND DELDOT TYPE 3 FRAME AND GRATE. PROVIDE A CONCRETE COLLAR 1' WIDE AROUND NEW FRAME AND GRATE. SEE DETAILS ON SHEET C-7.

UTILITY PLAN
SCALE: 1" = 30'

REVISIONS	DESCRIPTION								
NO.	DATE								
BY									
DESIGN INFORMATION	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">DESIGNED BY:</td> <td style="width: 25%;">SCL</td> <td style="width: 25%;">DRAWN BY:</td> <td style="width: 25%;">JAP/SCL</td> </tr> <tr> <td>CHECKED BY:</td> <td>MEP</td> <td>PROJECT MANAGER:</td> <td>SCL</td> </tr> </table>	DESIGNED BY:	SCL	DRAWN BY:	JAP/SCL	CHECKED BY:	MEP	PROJECT MANAGER:	SCL
DESIGNED BY:	SCL	DRAWN BY:	JAP/SCL						
CHECKED BY:	MEP	PROJECT MANAGER:	SCL						
SEAL	<p>PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE. LICENSE NO. 16413 EXPIRATION DATE: JUNE 30, 2024</p>								
<p>NAPA VALLEY FLEX USE BUILDINGS SEDIMENT AND STORMWATER MANAGEMENT PLANS GREATER MILFORD BUSINESS COMPLEX</p> <p>CITY OF MILFORD, KENT COUNTY, DELAWARE</p> <p>UTILITY PLAN</p>									
<p>EA Engineering, Science, and Technology, Inc., PBC 11200 Racetrack Road, Unit A101 Ocean Pines, Maryland 21811 (410) 641-5341 www.eaest.com</p>									
<p>0 15 30 60 GRAPHIC SCALE IN FEET</p>									
<p>FULL SIZE PLOT: 24" x 36" DATE: APRIL 2023 PROJECT NUMBER: 6387801</p>									
<p>C-103 SHEET: 4 OF 13</p>									

FILE PATH: \\C:\WORK\PROJECTS\6387801 - NAPA VALLEY FLEX USE BUILDINGS\DRAWING\CD\PRODUCTION\DRAWING AND STORMWATER PLANS\6387801 - 04 - UTILITY PLAN.DWG; DATE: 04/10/2023 10:28 AM

NF
CENTER FOR NEUROLOGY PROP, L.L.C.
MD-16-173-00-01-3-12-000
D.B. D 388/93
ZONED 'BP'

NF
WINSTON REAL PROPERTY, L.L.C.
MD-16-173-00-01-3-11-000
D.B. D 2051/86
ZONED 'BP'

NF
BEACH PROFESSIONALS, L.L.C.
MD-16-173-00-01-3-27-000
D.B. D 474/59
ZONED 'BP'

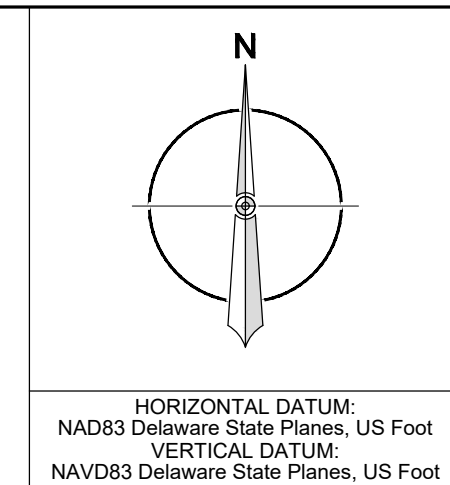
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SRINIVAS R. KAZA, TRUSTEE
MD-16-173-00-01-3-16-000
D.B. D 2169/226
ZONED 'BP'

NF
MILFORD HERITAGE, L.L.C.
MD-16-173-00-01-3-22-000
D.B. D 408/125
ZONED 'BP'

NF
CITY OF MILFORD - ROW
MD-16-173-00-01-3-19-000
D.B. D 286/59
ZONED 'BP'

NF
DELAWARE RURAL WATER ASSOC.
MD-16-173-00-01-3-25-000
D.B. D 525/48
ZONED 'BP'

NF
CITY OF MILFORD
MD-16-173-00-01-3-08-000
D.B. D 286/59
ZONED 'BP'



GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTRACTING OF A PROFESSIONAL SURVEYOR TO PERFORM CONSTRUCTION STAKEOUT FOR THE PROJECT.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY FOR CONFIRMING EXISTING ELEVATIONS FOR FEATURES THAT ARE TO BE TIED INTO SUCH AS CURBING, PAVEMENT, SIDEWALKS, ETC.
3. THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD FOR DISCREPANCIES ON EXISTING ELEVATIONS GREATER THAN 0.17 FEET TO DETERMINE ADJUSTMENT NECESSARY FOR PROPOSED GRADING.
4. THE CONTRACTOR SHALL PERFORM GRADING SO THAT POSITIVE DRAINAGE IS ACHIEVED. STANDING WATER AT CONSTRUCTION COMPLETION WILL NOT BE ACCEPTED.
5. CONTRACTOR SHALL ADHERE TO THE GENERAL FLOW PATTERNS AND DIRECTIONS INDICATED ON THE PLANS.
6. IMPORTED EARTHEN FILL MATERIAL SHALL BE ENVIRONMENTALLY CLEAN AND FREE OF REFUSE, DEBRIS, ORGANIC MATTER, FROZEN MATERIAL, AND/OR DELETERIOUS MATERIALS. MATERIAL SHALL BE CLASSIFIED AS SM OR SP ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM. MATERIAL SHALL NOT CONTAIN STONES LARGER THAN 2 INCHES. MATERIAL SHALL HAVE A MAXIMUM DRY DENSITY NOT THAN THAN 100 POUNDS PER CUBIC FEET AS DETERMINED BY ASTM D-698. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE UNSUITABLE MATERIAL FROM BORROW SOURCES AND SUBMIT REPRESENTATIVE SAMPLES TO THE OWNER/ENGINEER FOR REVIEW PRIOR TO USE.
7. A MINIMUM VERTICAL SEPARATION OF 6" SHALL BE PROVIDED FROM THE FINISHED FLOOR ELEVATION TO HIGHEST ADJACENT OUTSIDE ELEVATION. GRADING SHALL BE PERFORMED TO PROVIDE A MINIMUM OF 6" OF FALL WITHIN THE FIRST 10 FEET (5% GRADE) AWAY FROM THE BUILDING.

GRADING AND DRAINAGE PLAN NOTES:

- 1 DIRECT ALL DOWNSPOUTS AWAY FROM THE BUILDING INTO ADJACENT SWALES, DOWNGRADIENT AREAS, OR HARDENED SIDEWALK/ASPHALT SURFACE. DOWNSPOUTS SHALL BE DISCHARGED AT-GRADE EITHER ONTO A PROPOSED HARDENED SURFACE OR ONTO 5X5' R4 STONE SPLASH PADS UNDERLAID WITH NON-WOVEN GEOTEXTILE WITHIN GRASSED AREAS.
- 2 V-SWALE. SEE LAYOUT AND GRADES ON PLANS. SEE DETAIL ON DRAWING C-501.
- 3 3' WIDE ASPHALT FLOW CHANNEL. PROVIDE UNIFORM CHANNEL SLOPE AND TRANSITIONS THROUGH PARKING LANDSCAPE ISLANDS.
- 4 PROVIDE 3' WIDE, FACE OF CURB TO FACE OF CURB, CONCRETE FLOW CHANNEL THROUGH PARKING LANDSCAPE ISLANDS.
- 5 ASPHALT SHALL BE FLUSH WITH HE CONCRETE SIDEWALK FRONTING EACH BUILDING. THE TRANSITION SHALL BE SMOOTH AND EVEN WITH NO GREATER THAN 1/2-INCH LIP.
- 6 THE CONTRACTOR SHALL PERFORM MICRO-GRADING BEHIND BUILDING 1 TO MAINTAIN POSITIVE DRAINAGE AWAY FROM THE BUILDING.

GRADING AND DRAINAGE PLAN
SCALE: 1" = 30'

REVISIONS	NO.	DATE	BY	DESCRIPTION
DESIGN INFORMATION	DESIGNED BY:	SCL		
	DRAWN BY:	JAP/SCL		
	CHECKED BY:	MEP		
	PROJECT MANAGER:	SCL		
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE, LICENSE NO. 16413, EXPIRATION DATE: JUNE 30, 2024.				
NAPA VALLEY FLEX USE BUILDINGS SEDIMENT AND STORMWATER MANAGEMENT PLANS GREATER MILFORD BUSINESS COMPLEX <small>CITY OF MILFORD, KENT COUNTY, DELAWARE</small>				
GRADING AND DRAINAGE PLAN				
 EA Engineering, Science, and Technology, Inc., PBC 11200 Racetrack Road, Unit A101 Ocean Pines, Maryland 21811 (410) 641-5341 www.eaest.com				
0 15 30 60 GRAPHIC SCALE IN FEET				
FULL SIZE PLOT: 24" x 36" DATE: APRIL 2023 PROJECT NUMBER: 6387801				
C-104 SHEET: 5 OF 13				

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SEDIMENT AND STORMWATER PLANS - FOR PERMITTING

NF
CENTER FOR NEUROLOGY PROP, L.L.C.
MD-16-173.00-01-3.12-000
D.B. D 388/93
ZONED 'BP'

NF
WINSTON REAL PROPERTY, L.L.C.
MD-16-173.00-01-3.11-000
D.B. D 2051/86
ZONED 'BP'

NF
BEACH PROFESSIONALS, L.L.C.
MD-16-173.00-01-3.27-000
D.B. D 474/59
ZONED 'BP'

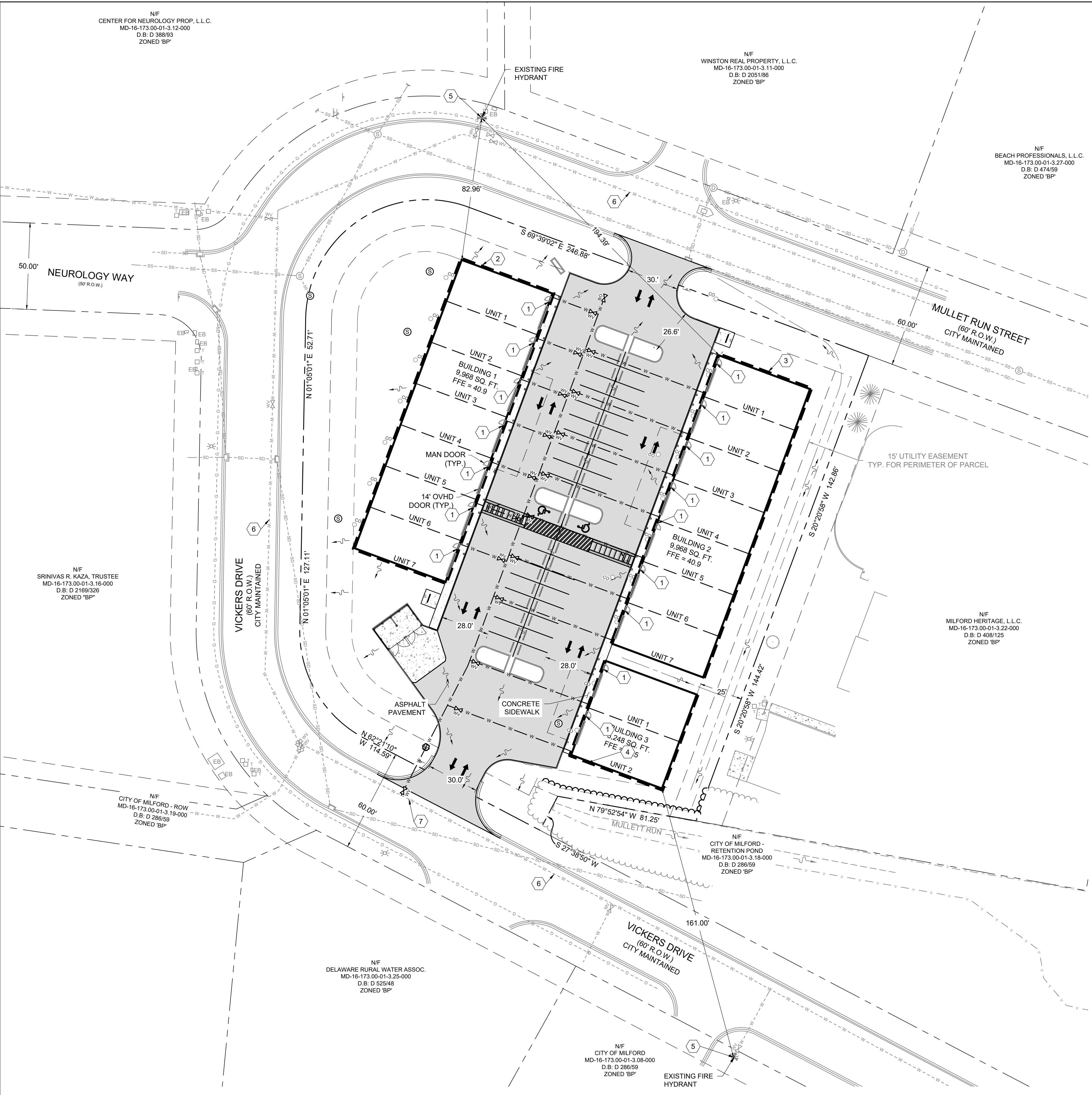
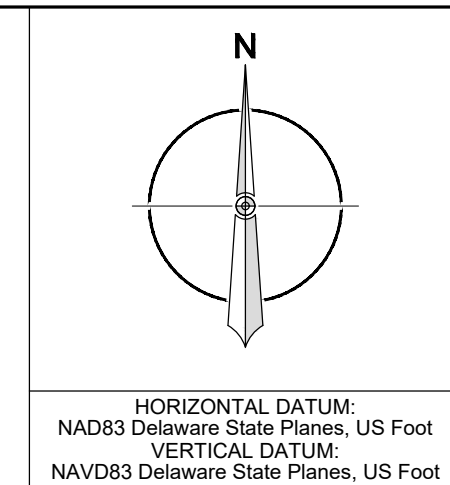
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SRINIVAS R. KAZA, TRUSTEE
MD-16-173.00-01-3.16-000
D.B. D 2169/226
ZONED 'BP'

NF
MILFORD HERITAGE, L.L.C.
MD-16-173.00-01-3.22-000
D.B. D 4081/25
ZONED 'BP'

NF
CITY OF MILFORD - ROW
MD-16-173.00-01-3.19-000
D.B. D 286/59
ZONED 'BP'

NF
DELAWARE RURAL WATER ASSOC.
MD-16-173.00-01-3.25-000
D.B. D 525/48
ZONED 'BP'

NF
CITY OF MILFORD
MD-16-173.00-01-3.08-000
D.B. D 286/59
ZONED 'BP'



PROJECT AND SITE DATA

- OWNER/APPLICANT: NAPA VALLEY INVESTMENTS, LLC
12 W. PERIWINKLE LANE
NEWARK, DELAWARE 19711
CONTACT: FRAN POLLINGER
EMAIL: F.POLLINGER@COMCAST.NET
PHONE: 302-275-5436
- ENGINEER: EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC. PBC
11200 RACETRACK ROAD, UNIT 101A
OCEAN PINES, MARYLAND 21811
CONTACT: STEVEN LEMASTERS, P.E.
EMAIL: SLEMASTERS@EAEST.COM
PHONE: 410-641-5341
- SITE ADDRESS: 320 MULLETT RUN
MILFORD, DELAWARE 19963
- PROPERTY: MAP NUMBER: 5-16-17300-01-3-14
PARCEL AREA: 2.0 ACRES
- PROPOSED USE: WAREHOUSING / GENERAL OFFICE-BUSINESS
(3) 1-STORY STORAGE POLE BUILDINGS
PROPOSED BUILDING FOOTPRINTS: (2) 9,968 SQ. FT. AND (1) 3,248 SQ. FT.
TOTAL BUILDING GROSS FOOTPRINT: 23,184 SQ. FT.
- WATER IS TO BE PROVIDED BY THE CITY OF MILFORD.
- BUILDING IS NOT PROPOSED TO BE PROTECTED BY AUTOMATIC SPRINKLERS.
- BUILDING CONSTRUCTION: NFPA TYPE V (000)
- NORTHERN-MOST HYDRANT FLOW RESULTS: 1,870 GPM @ 20 PSI.

FIRE MARSHAL PLAN NOTES:

- PRIMARY BUILDING UNIT ENTRANCES.
- BUILDING 1 PERIMETER = 468 FEET
BUILDING 1 REQUIRED ACCESSIBILITY = 468 * 0.50 = 234 FEET
BUILDING 1 PROVIDED ACCESSIBILITY = 468 FEET
- BUILDING 2 PERIMETER = 468 FEET
BUILDING 2 REQUIRED ACCESSIBILITY = 468 * 0.50 = 234 FEET
BUILDING 2 PROVIDED ACCESSIBILITY = 412 FEET
- BUILDING 3 PERIMETER = 228 FEET
BUILDING 3 REQUIRED ACCESSIBILITY = 228 * 0.50 = 114 FEET
BUILDING 3 PROVIDED ACCESSIBILITY = 172 FEET
- EXISTING FIRE HYDRANTS
- EXISTING 10" WATER MAIN.
- PROPOSED 6" WATER SERVICE MAIN INTO THE SITE WITH 2" WATER SERVICE LATERALS TO EACH BUILDING UNIT.

FIRE MARSHAL PLAN
SCALE: 1" = 30'

REVISIONS	NO.	DATE	BY	DESCRIPTION
DESIGN INFORMATION	DESIGNED BY:	SCL		
	DRAWN BY:	JAP/SCL		
	CHECKED BY:	MEP		
	PROJECT MANAGER:			
SEAL	PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE. LICENSE NO. 16413 EXPIRATION DATE: JUNE 30, 2024			
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FIRE MARSHAL PLAN				
<p>EA Engineering, Science, and Technology, Inc., PBC 11200 Racetrack Road, Unit A101 Ocean Pines, Maryland 21811 (410) 641-5341 www.eaest.com</p>				
FULL SIZE PLOT: 24" x 36" DATE: APRIL 2023 PROJECT NUMBER: 6387801				
C-105 SHEET: 6 OF 13				

FILE PATH: \\C:\ADMIN\PROJECTS\6387801 - NAPA VALLEY FLEX USE BUILDINGS\DRAWINGS\PRODUCTION\SEDIMENT AND STORMWATER PLANS\6387801 - 06 - 08 - FIRE MARSHAL PLAN\6387801 - 06 - 08 - FIRE MARSHAL PLAN.DWG, DATE: 4/17/2023 8:51 AM

SEDIMENT AND STORMWATER PLANS - FOR PERMITTING

NF
CENTER FOR NEUROLOGY PROP, L.L.C.
MD-16-173.00-01-3.12-000
D.B. D 388/93
ZONED 'BP'

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WINSTON REAL PROPERTY, L.L.C.
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BEACH PROFESSIONALS, L.L.C.
MD-16-173.00-01-3.27-000
D.B. D 474/59
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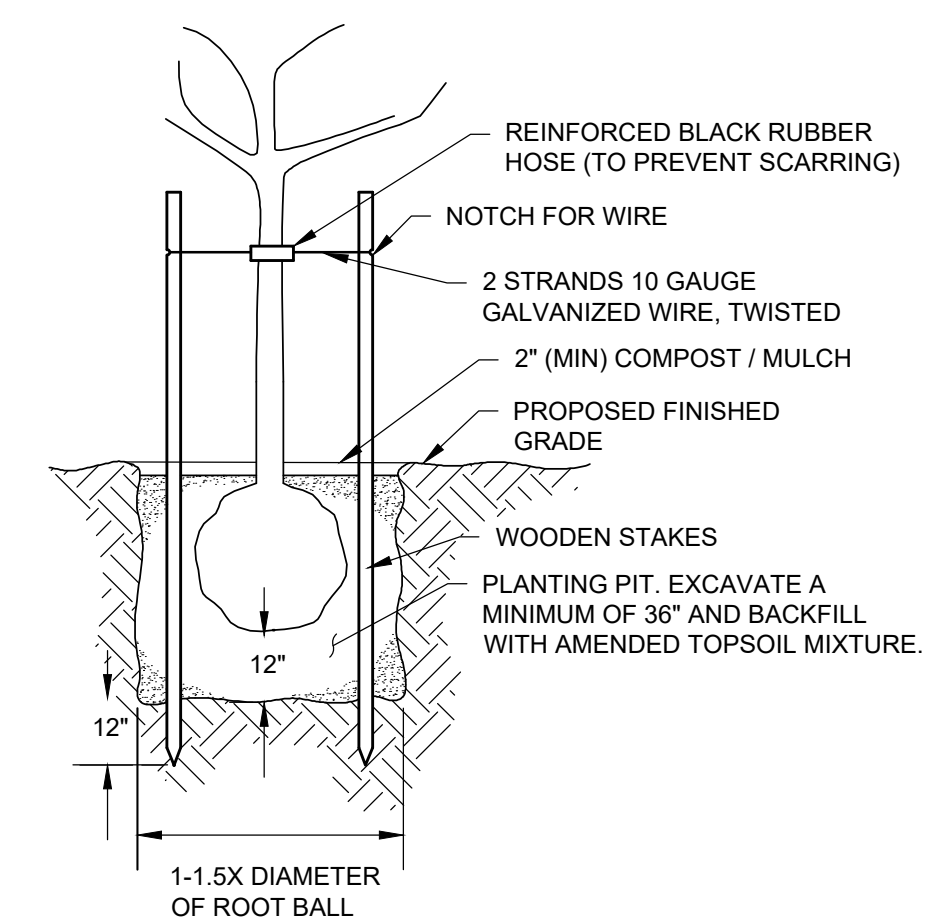
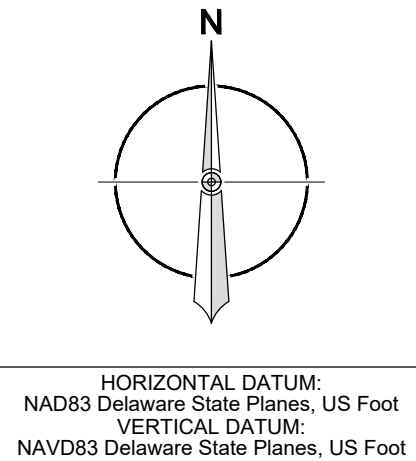
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SRINIVAS R. KAZA, TRUSTEE
MD-16-173.00-01-3.16-000
D.B. D 2169/226
ZONED 'BP'

NF
MILFORD HERITAGE, L.L.C.
MD-16-173.00-01-3.22-000
D.B. D 4081/25
ZONED 'BP'

NF
CITY OF MILFORD - ROW
MD-16-173.00-01-3.19-000
D.B. D 286/59
ZONED 'BP'

NF
DELAWARE RURAL WATER ASSOC.
MD-16-173.00-01-3.25-000
D.B. D 525/48
ZONED 'BP'

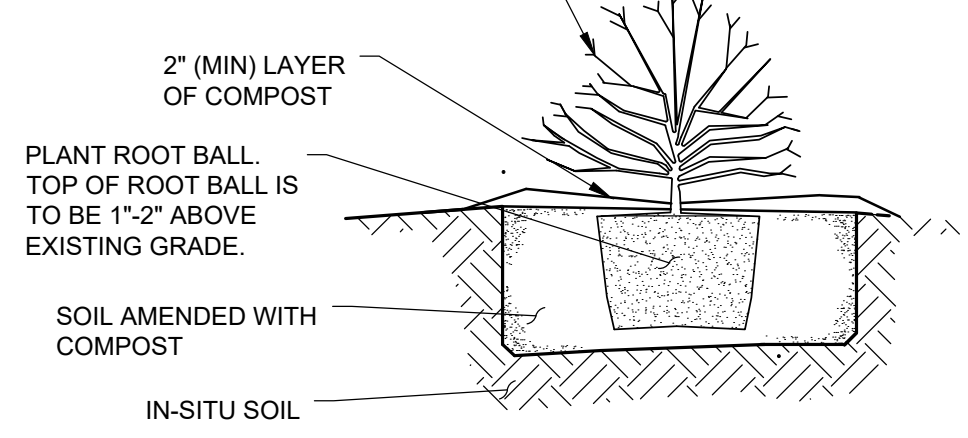
NF
CITY OF MILFORD
MD-16-173.00-01-3.08-000
D.B. D 286/59
ZONED 'BP'



- NOTES:
1. TO BE USED WHEN BALLED STOCK IS SUBSTITUTED FOR CONTAINERIZED.
 2. TO BE USED FOR LARGE CALIPER, HIGH-VISIBILITY PLANTINGS.

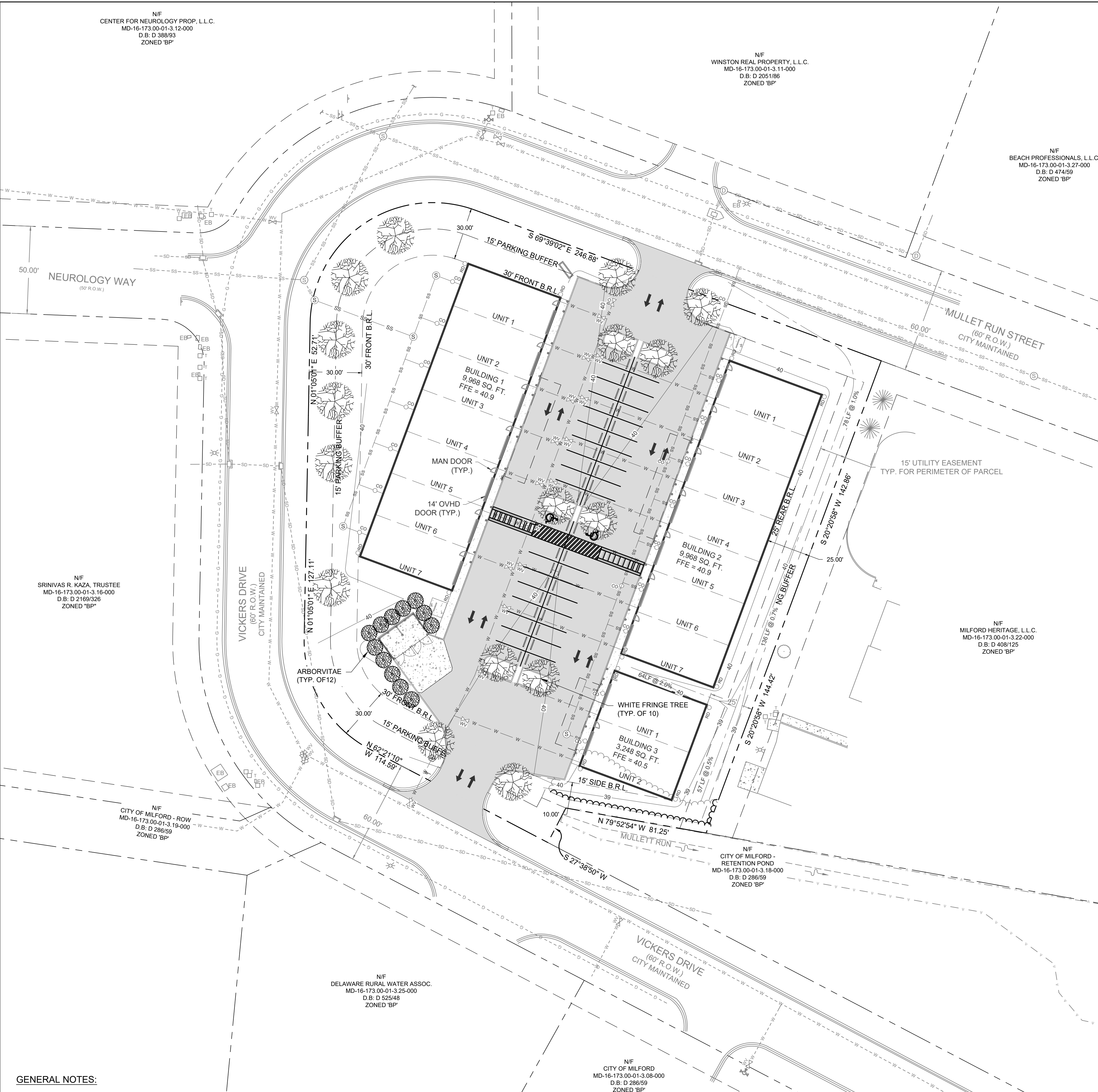
BALLED TREE PLANTING AND STAKING DETAIL
NOT TO SCALE

TYPICAL CONTAINERIZED DECIDUOUS TREE OR SHRUB. SIZE VARIES.



- NOTES:
1. PRUNE SHRUBS ONLY AFTER INSTALLED AND AFTER THE PLANT HAS BEEN SUFFICIENTLY WATERED.
 2. MULCH DIAMETER OF PLANTING HOLE, MINIMUM 2\"/>

CONTAINER STOCK PLANTING DETAIL
NOT TO SCALE



PLANTING PLAN
SCALE: 1" = 30'

- GENERAL NOTES:**
1. SYMBOLS ON THIS SHEET DEPICT SUGGESTED PLANTING SCHEMES.
 2. PLANTS SHOULD BE SPACED AT A MINIMUM DISTANCE SPECIFIED IN THE TABLE ON THIS SHEET AND IN A RANDOM OR CLUMPING PATTERN.
 3. MINOR ADJUSTMENTS TO PLANT MATERIAL PLACEMENT LOCATIONS MAY BE SUBSTITUTED IN THE FIELD WITH THE APPROVAL OF THE TOWN OF OCEAN CITY BASED ON EXISTING PLANT COMMUNITY SPECIES.
 4. THE CONTRACTOR SHALL PURCHASE ALL PLANTS FROM A LOCAL NURSERY, WITHIN APPROXIMATELY 50 MILES OF THE PROJECT SITE TO ENSURE NATIVE ECOTYPES.
 5. ALL LAWN AREAS SHALL BE GRASS SEEDED PER EROSION AND SEDIMENT CONTROL STANDARDS FOR PERMANENT STABILIZATION. ALTERNATIVE LAWN TREATMENTS SUCH AS STONE, SOD, ETC. SHALL BE COORDINATED WITH THE OWNER.

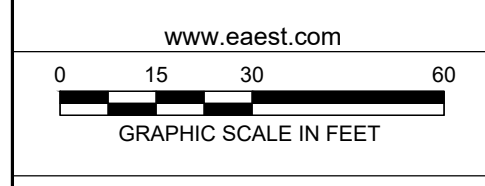
PLANTING LIST					
IDENTIFIER	SCIENTIFIC NAME	COMMON NAME	SIZE	MATURE HEIGHT	COUNT
TREES					
WFT	CHIONANTHUS VIRGINICUS	FRINGE TREE, WHITE	>2.5\"/>		

**NAPA VALLEY FLEX USE BUILDINGS
SEDIMENT AND STORMWATER MANAGEMENT PLANS
GREATER MILFORD BUSINESS COMPLEX**

CITY OF MILFORD, KENT COUNTY, DELAWARE

PLANTING PLAN

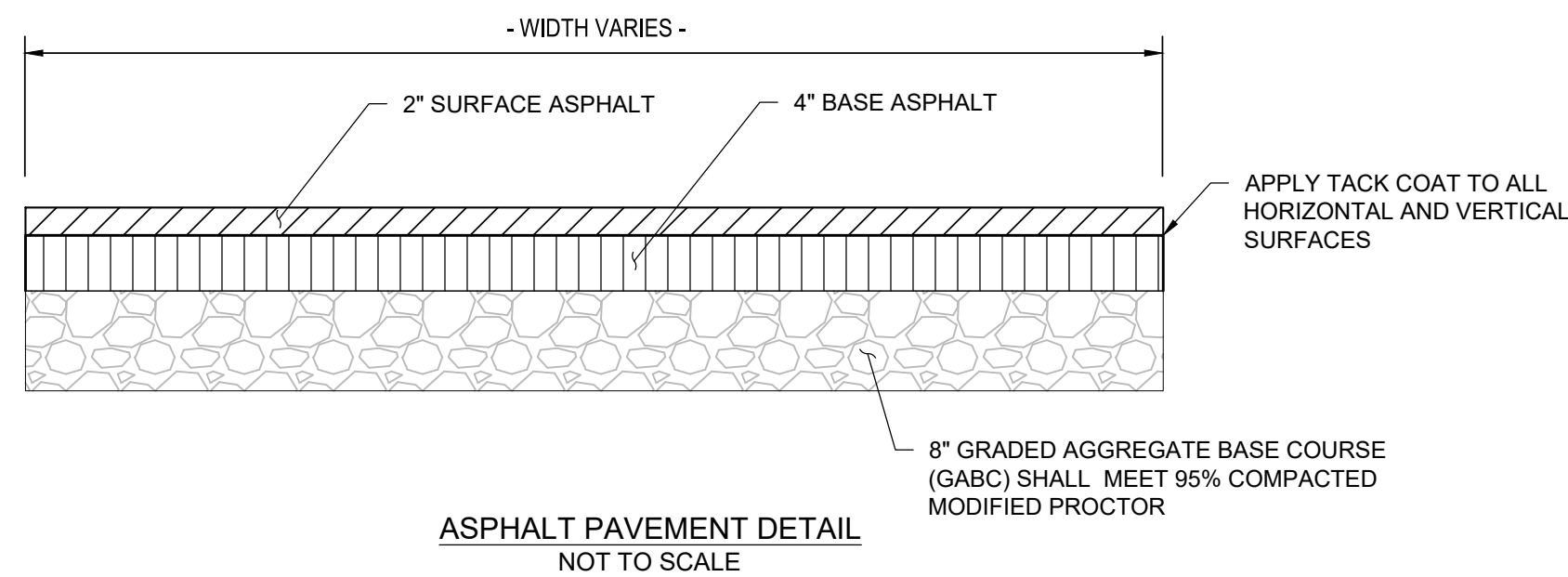
EA
EA Engineering, Science,
and Technology, Inc., PBC
11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341
www.eaest.com



FULL SIZE PLOT: 24" x 36"
DATE: APRIL 2023
PROJECT NUMBER: 6387801

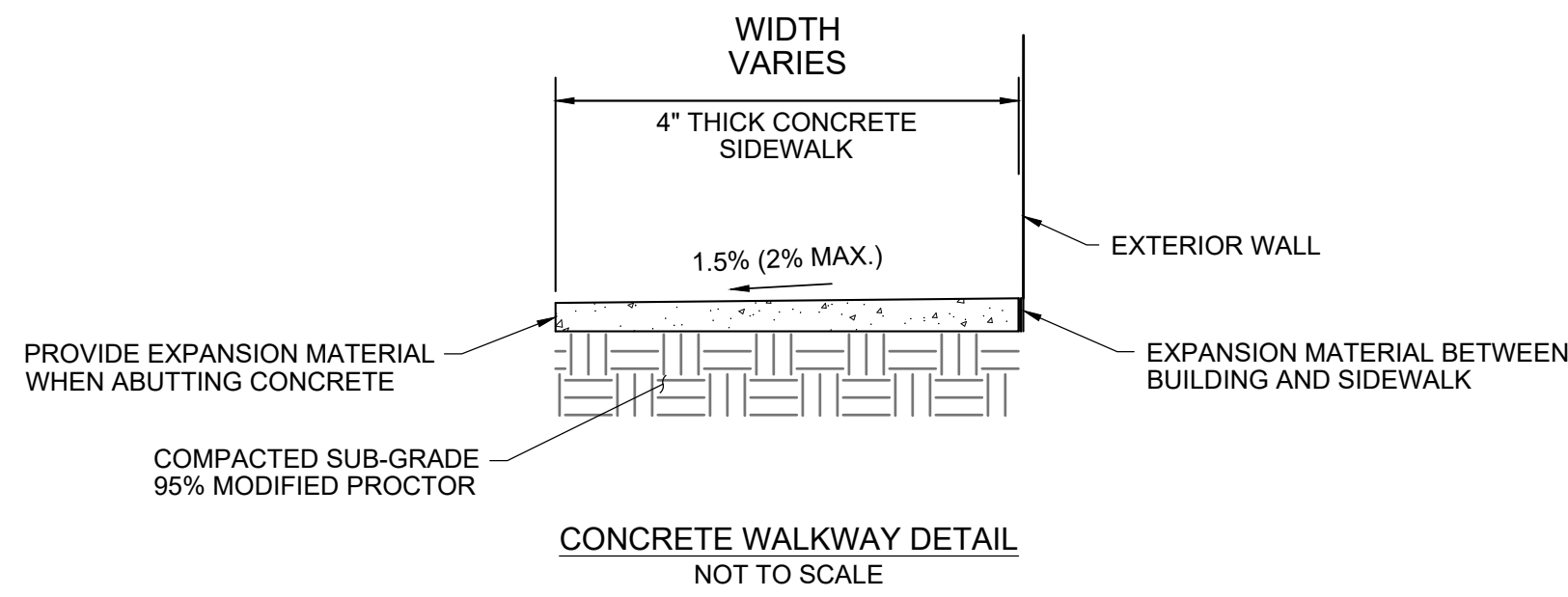
FILE PATH: \\C:\PROJECTS\PROJECTS\NAPA VALLEY FLEX USE BUILDINGS\SEDIMENT AND STORMWATER MANAGEMENT PLANS\BIBLI - 648 - 07 - PLANTING PLANS\DC - 06\DRAWINGS - STEVEN F. JONES ESI.PLA

SEDIMENT AND STORMWATER PLANS - FOR PERMITTING



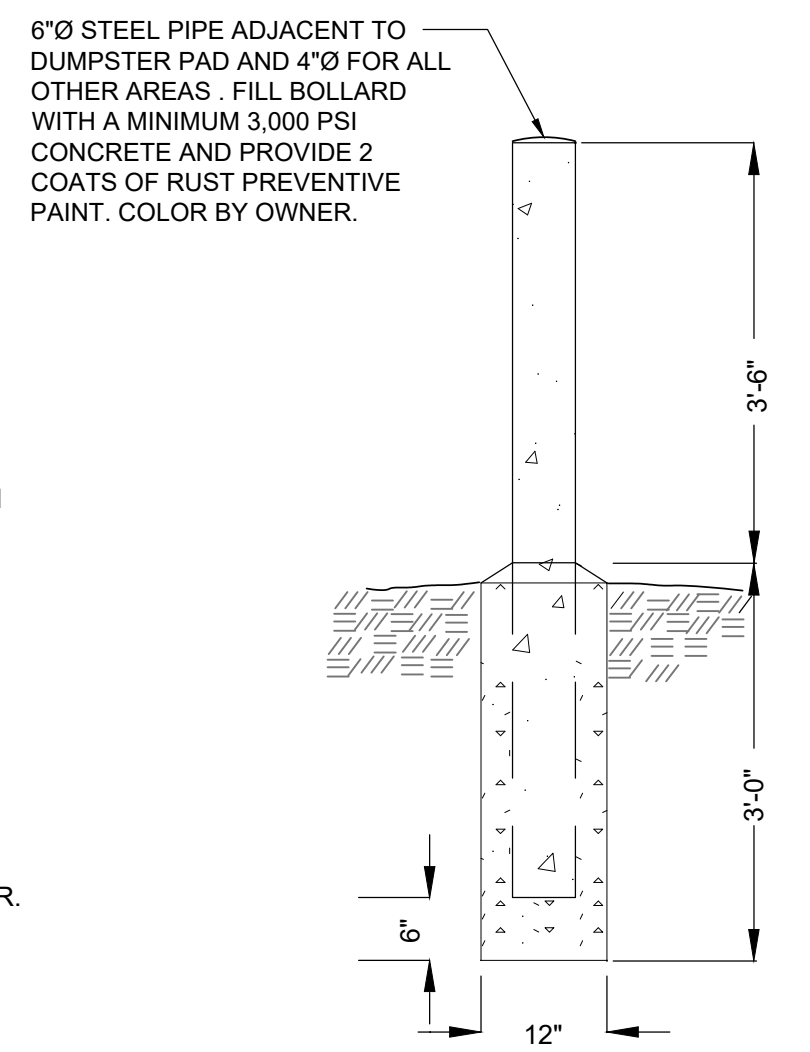
ASPHALT PAVEMENT DETAIL
NOT TO SCALE

- NOTES:**
1. SHALL BE UTILIZED FOR ALL IMPERVIOUS ASPHALT AREAS WITHIN THE PROPERTY BOUNDARY. ASPHALT PAVEMENT SHALL ADHERE TO CITY OF MILFORD SPECIFICATIONS.
 2. CONSULT GEOTECHNICAL ENGINEER FOR PROPER SUBGRADE INSPECTION, TESTING, AND VERIFICATION OF PAVEMENT SECTION, SUBGRADE AND AGGREGATE SUITABILITY.
 3. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE. POOLING/PONDING OF WATER WILL NOT BE ACCEPTED.

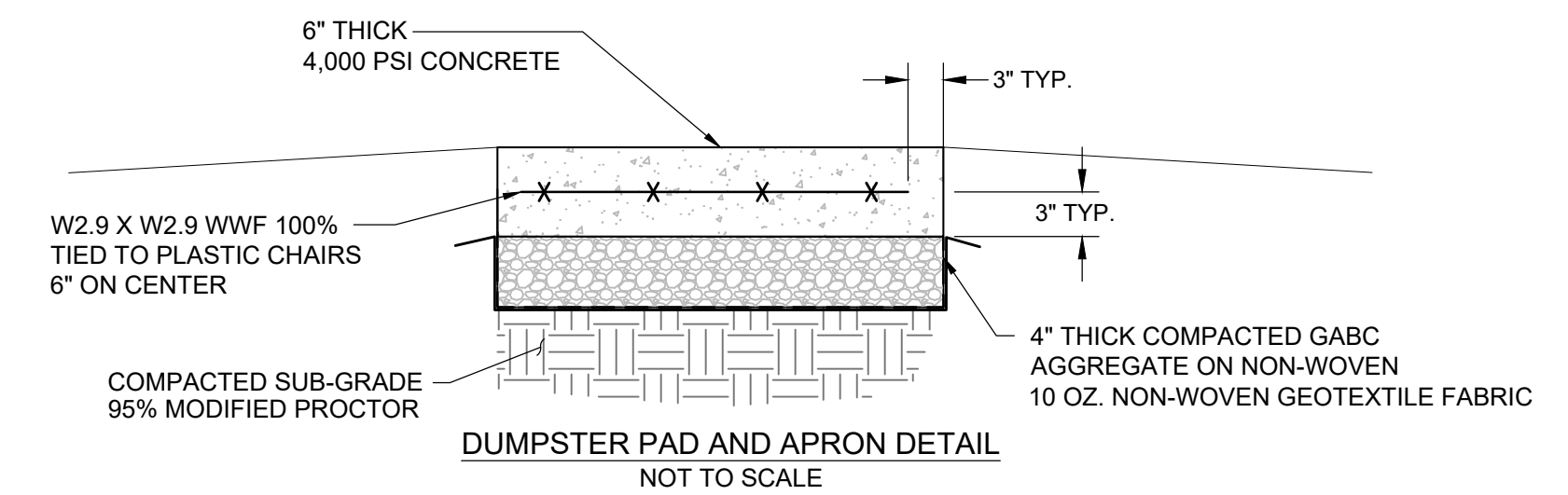


CONCRETE WALKWAY DETAIL
NOT TO SCALE

- NOTES:**
1. CONCRETE SHALL BE 4,000 PSI, 28 DAY COMPRESSIVE STRENGTH.
 2. SUB-GRADE SHALL BE 4\"/>

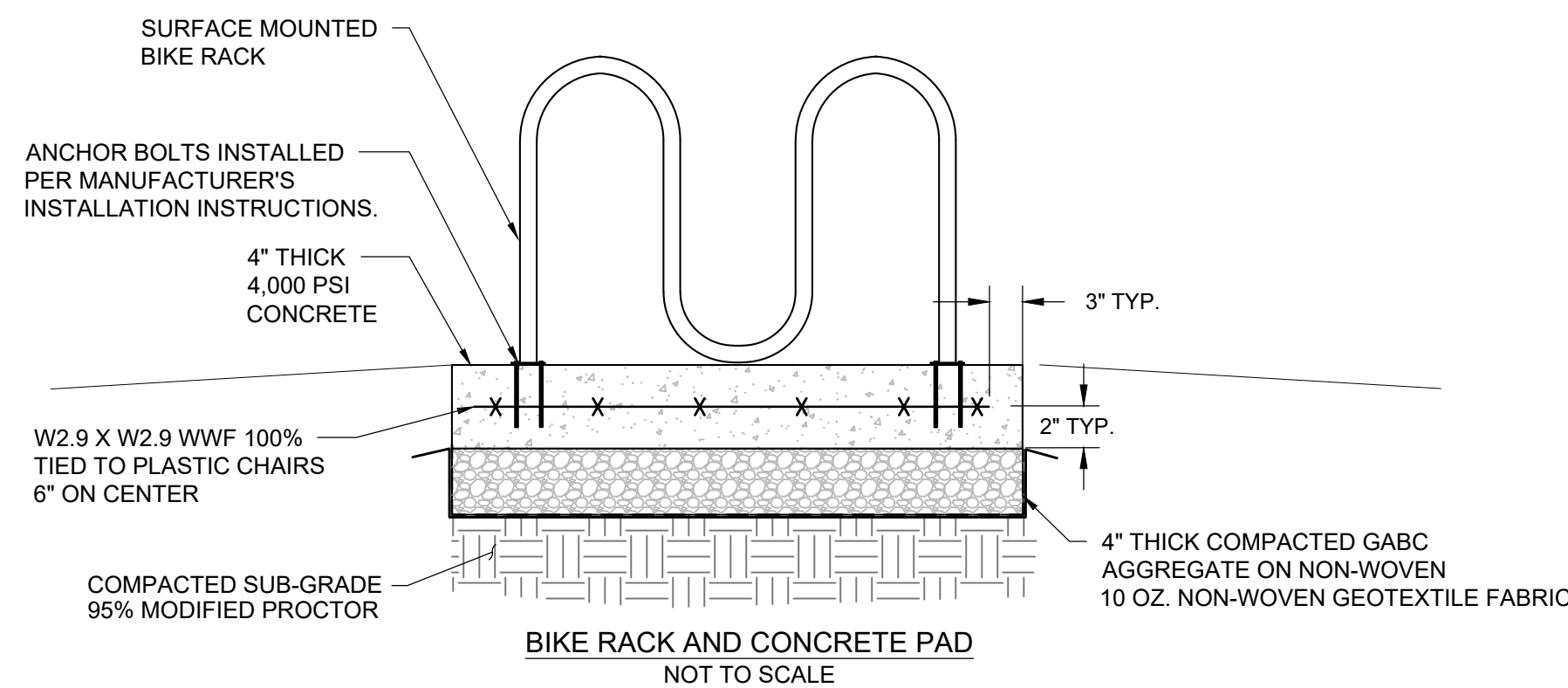


TYPICAL BOLLARD DETAIL
NOT TO SCALE



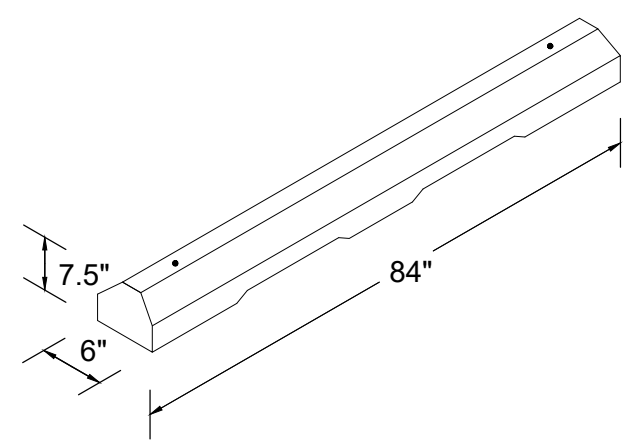
DUMPSTER PAD AND APRON DETAIL
NOT TO SCALE

- NOTES:**
1. CONCRETE SHALL HAVE EXPANSION JOINTS SAW CUT IN.
 2. EXPANSION MATERIAL SHALL BE PROVIDED WHEN ABUTTING EXISTING CONCRETE.
 3. A SMOOTH BROOM FINISH SHALL BE PROVIDED.
 4. IF UNSUITABLE SUBGRADE IS FOUND TO BE PRESENT A GEOTECHNICAL ENGINEER SHALL BE USED TO PROVIDE RECOMMENDATIONS.
 5. SAW CUT JOINTS 25% OF THE SLAB THICKNESS AT APPROXIMATELY 8\"/>



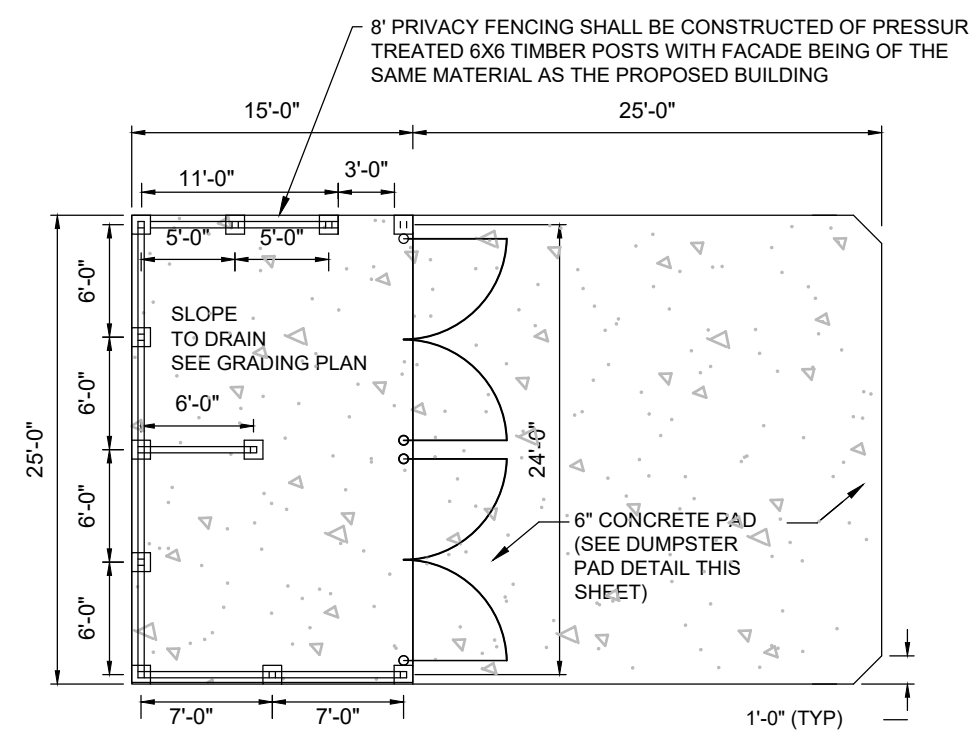
BIKE RACK AND CONCRETE PAD
NOT TO SCALE

- NOTES:**
1. A SMOOTH BROOM FINISH SHALL BE PROVIDED.
 2. IF UNSUITABLE SUBGRADE IS FOUND, THE CONTRACTOR SHALL CONSULT WITH A GEOTECHNICAL ENGINEER TO PROVIDE RECOMMENDATIONS.
 3. SUB-GRADE SHALL BE 4\"/>

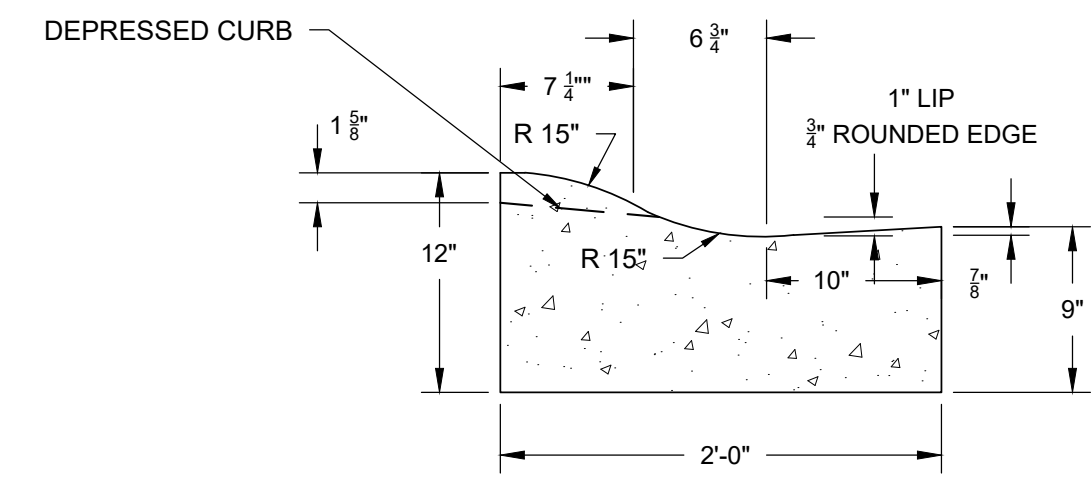


STANDARD CONCRETE PARKING DETAIL
NOT TO SCALE

- NOTES:**
1. 7'-0\"/>

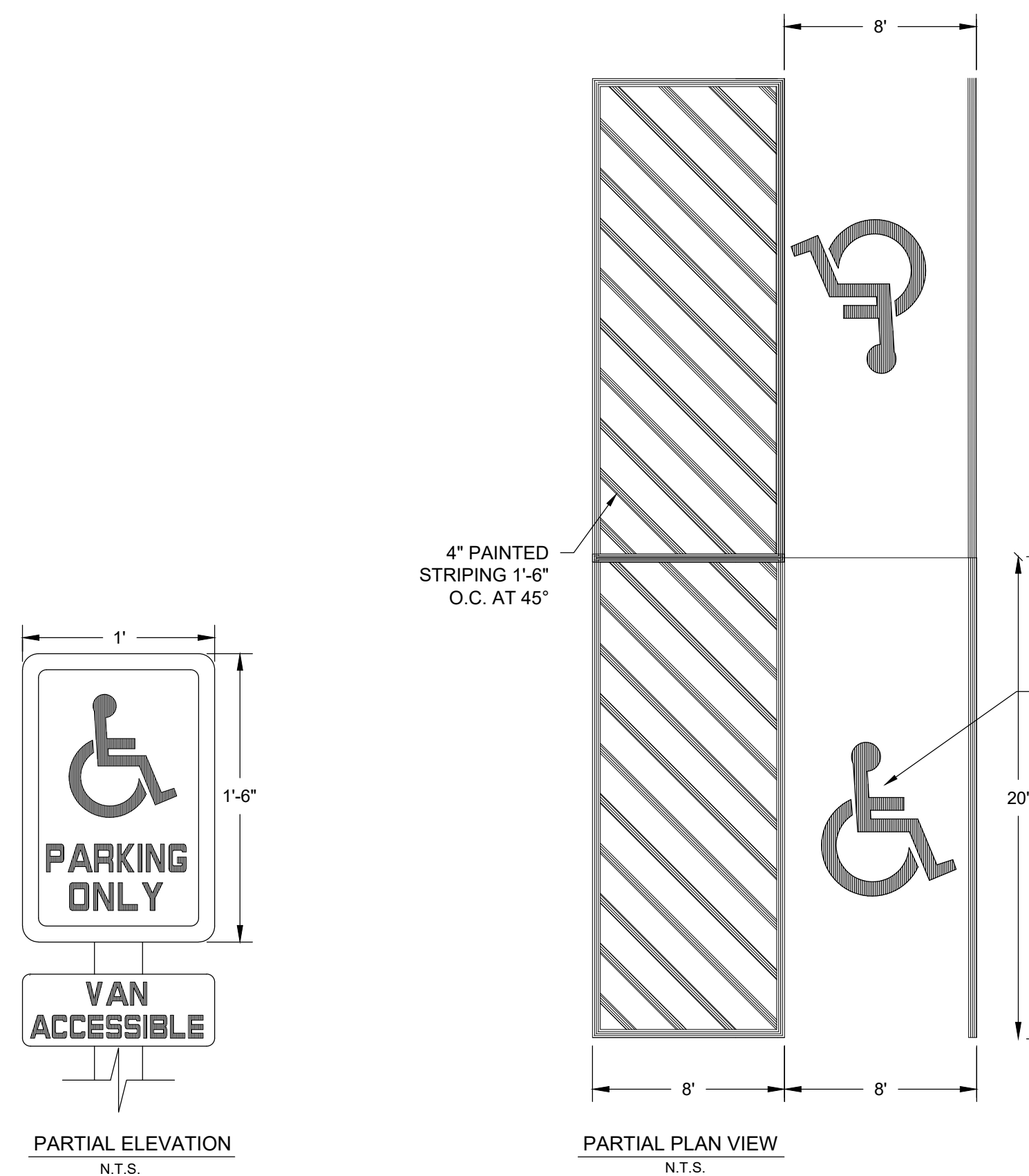


DUMPSTER CORRAL LAYOUT DETAIL
NOT TO SCALE



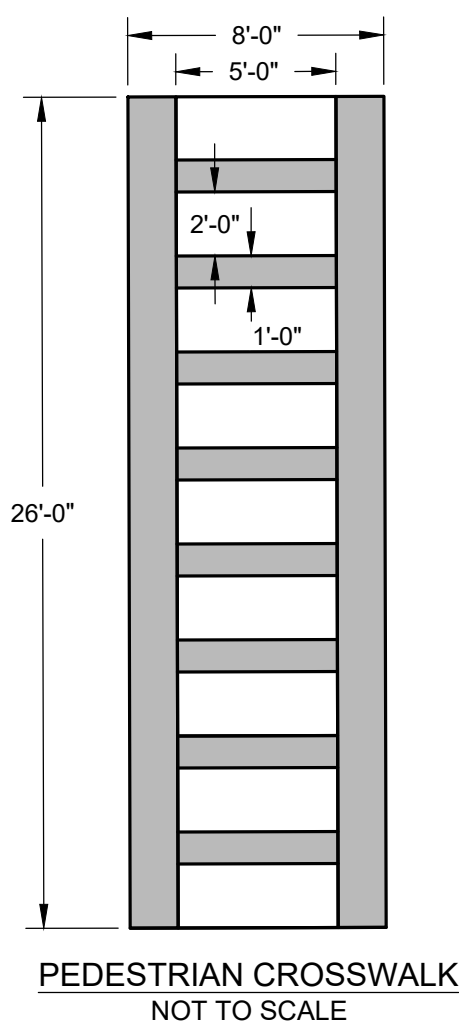
TYPE 2 INTEGRAL P.C.C. CURB AND GUTTER DETAIL
NOT TO SCALE

- NOTES:**
1. TO BE CONSTRUCTED PER DELAWARE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
 2. PROVIDE 2\"/>



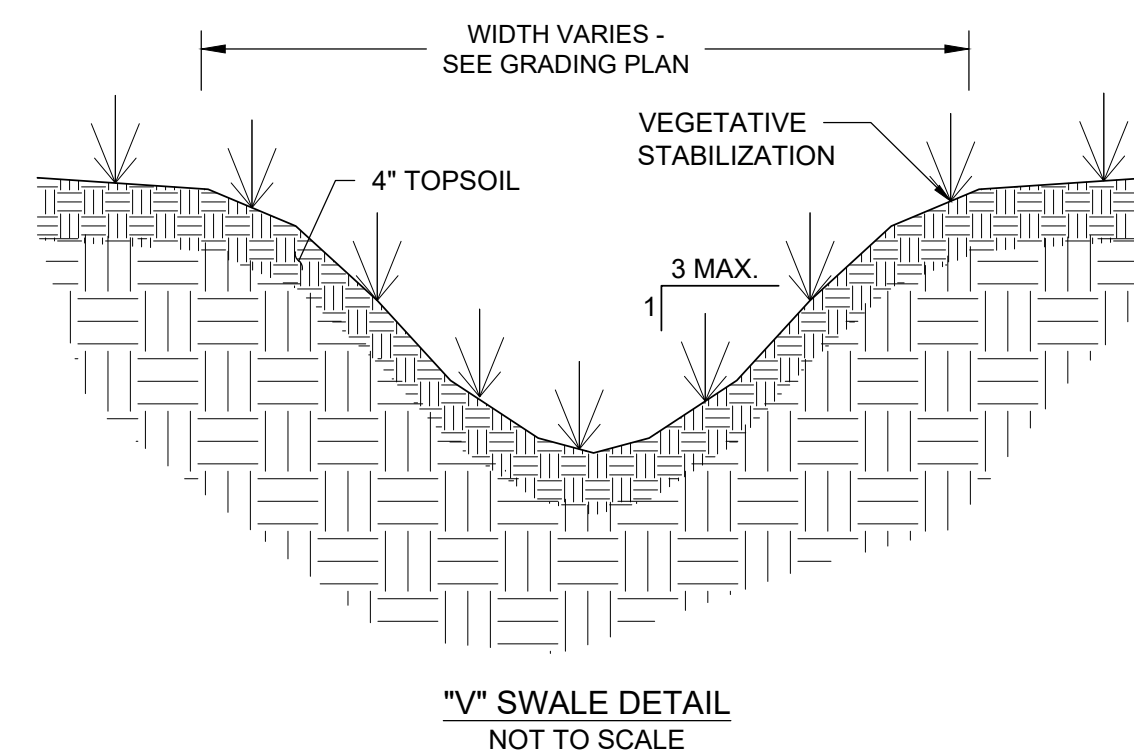
HANDICAP PARKING STALL AND SIGNAGE DETAIL
NOT TO SCALE

- NOTES:**
1. STRIPING AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE CITY OF MILFORD AND CURRENT A.D.A. REGULATIONS.
 2. SIGNAGE SHALL BE POST MOUNTED AT THE HEAD OF THE FRONT-ABUTTING PARKING STALLS.

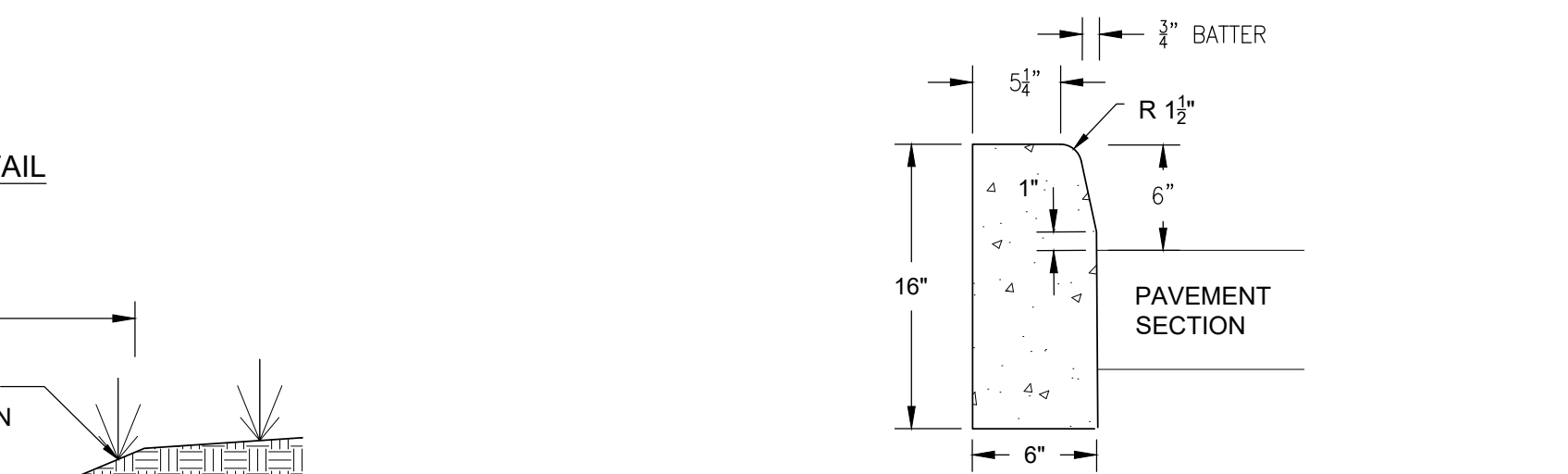


PEDESTRIAN CROSSWALK
NOT TO SCALE

- NOTES:**
1. STRIPING SHALL ADHERE TO THE DIMENSIONS INDICATED ON THE DETAIL.
 2. STRIPING SHALL BE WHITE IN COLOR AND BE A NON-TOXIC, LEAD-FREE WATERBORNE PAVEMENT MARKING PAINT APPLIED IN TWO COATS WITH A MINIMUM THICKNESS OF 15 MIL.
 3. STRIPING SHALL BE INSTALLED A MINIMUM OF TWO WEEKS AFTER THE ASPHALT PAVEMENT HAS BEEN INSTALLED.

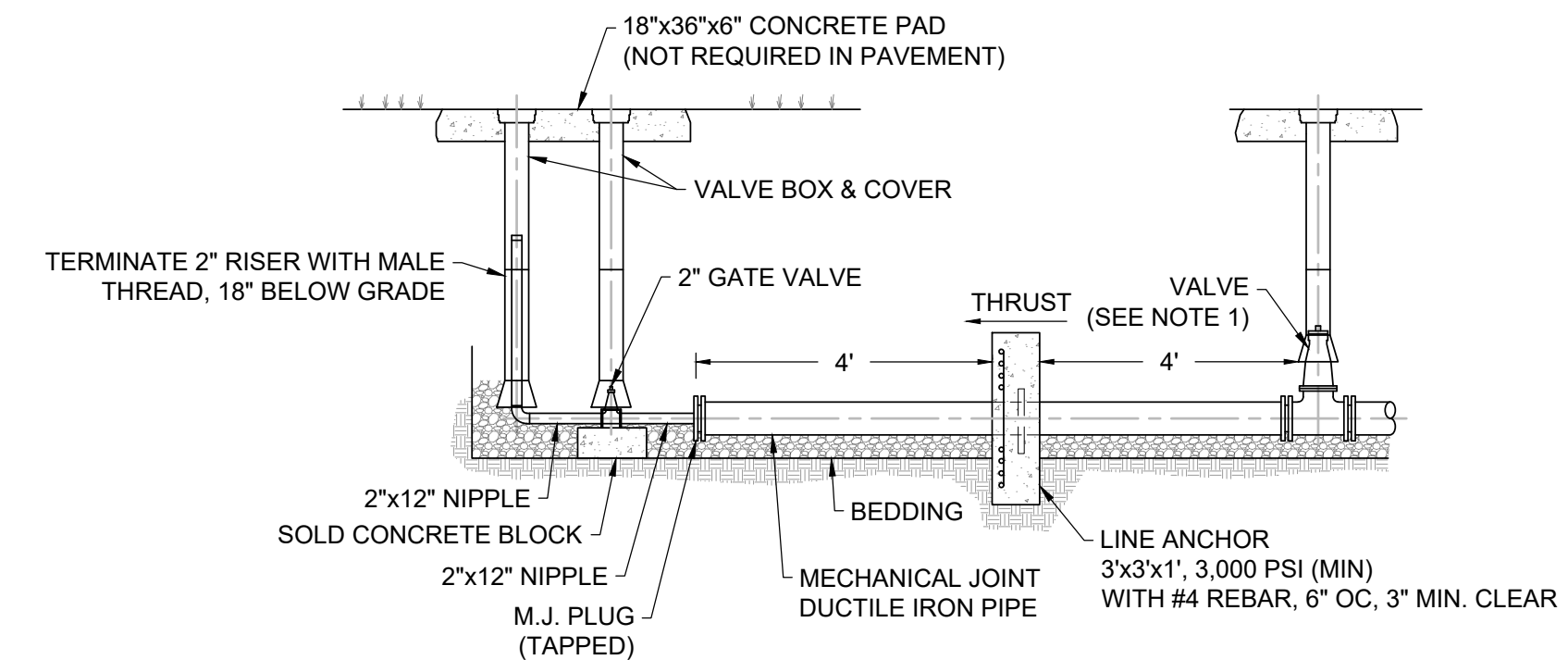


"V" SWALE DETAIL
NOT TO SCALE



MODIFIED TYPE 1-6 P.C.C. CURB - 6\"/>

- NOTES:**
1. TO BE CONSTRUCTED PER DELAWARE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
 2. PROVIDE 5\"/>



BLOW-OFF ASSEMBLY
NOT TO SCALE

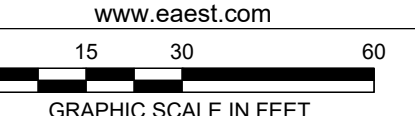
- NOTES:**
1. WHERE PLANS DO NOT SPECIFY A MAINLINE VALVE WITHIN 50 FEET, OR WHERE A SERVICE CONNECTION OCCURS DOWNSTREAM OF NEAREST MAINLINE VALVE, PROVIDE MAINLINE VALVE UPSTREAM OF LINE ANCHOR.
 2. ALL 2\"/>

**NAPA VALLEY FLEX USE BUILDINGS
 SEDIMENT AND STORMWATER MANAGEMENT PLANS
 GREATER MILFORD BUSINESS COMPLEX**

CITY OF MILFORD, KENT COUNTY, DELAWARE

DETAILS I

EA
 Engineering, Science,
 and Technology, Inc., PBC
 11200 Racetrack Road, Unit A101
 Ocean Pines, Maryland 21811
 (410) 641-5341
 www.eaest.com



FULL SIZE PLOT: 24" x 36"

DATE: APRIL 2023

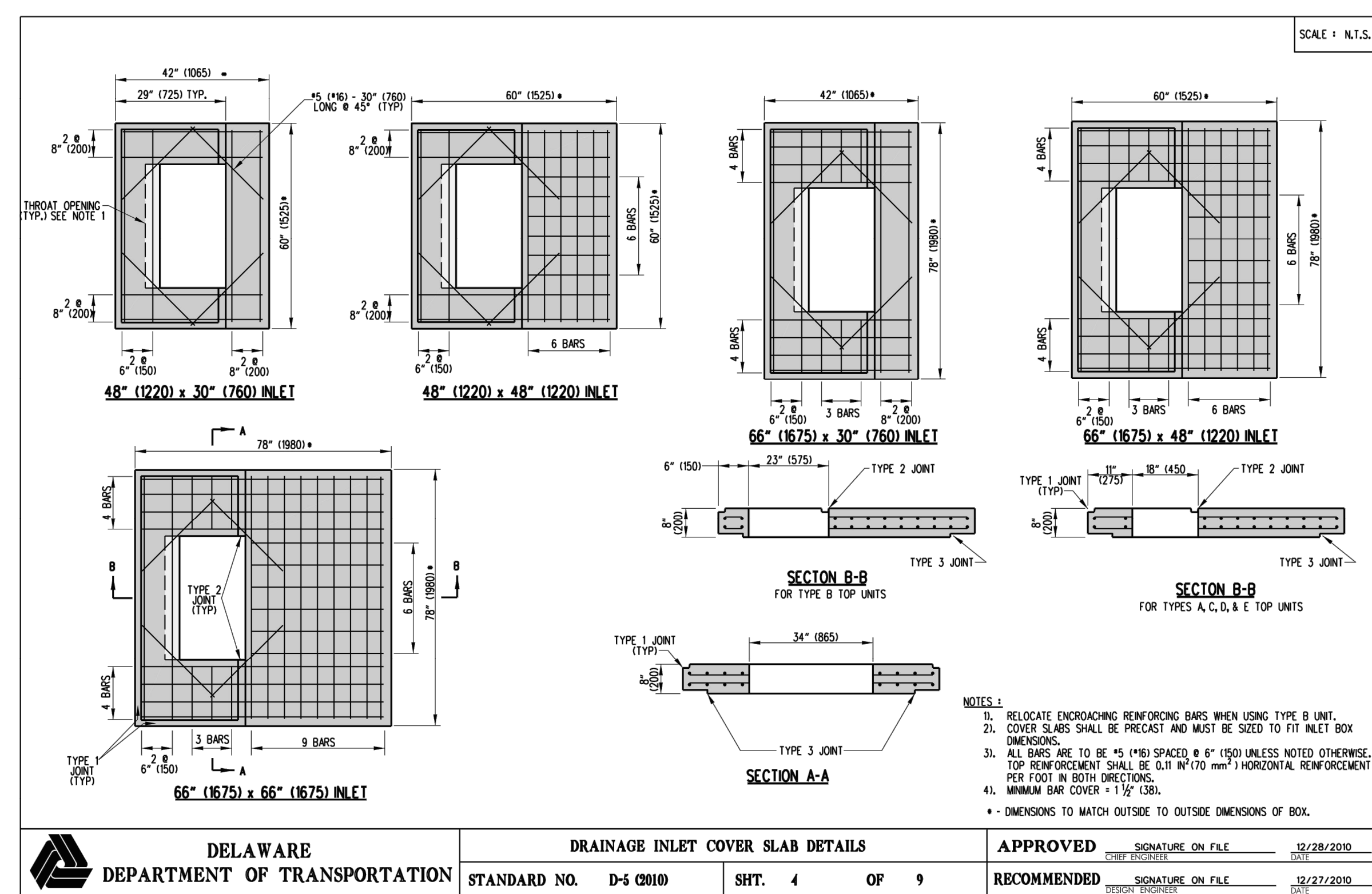
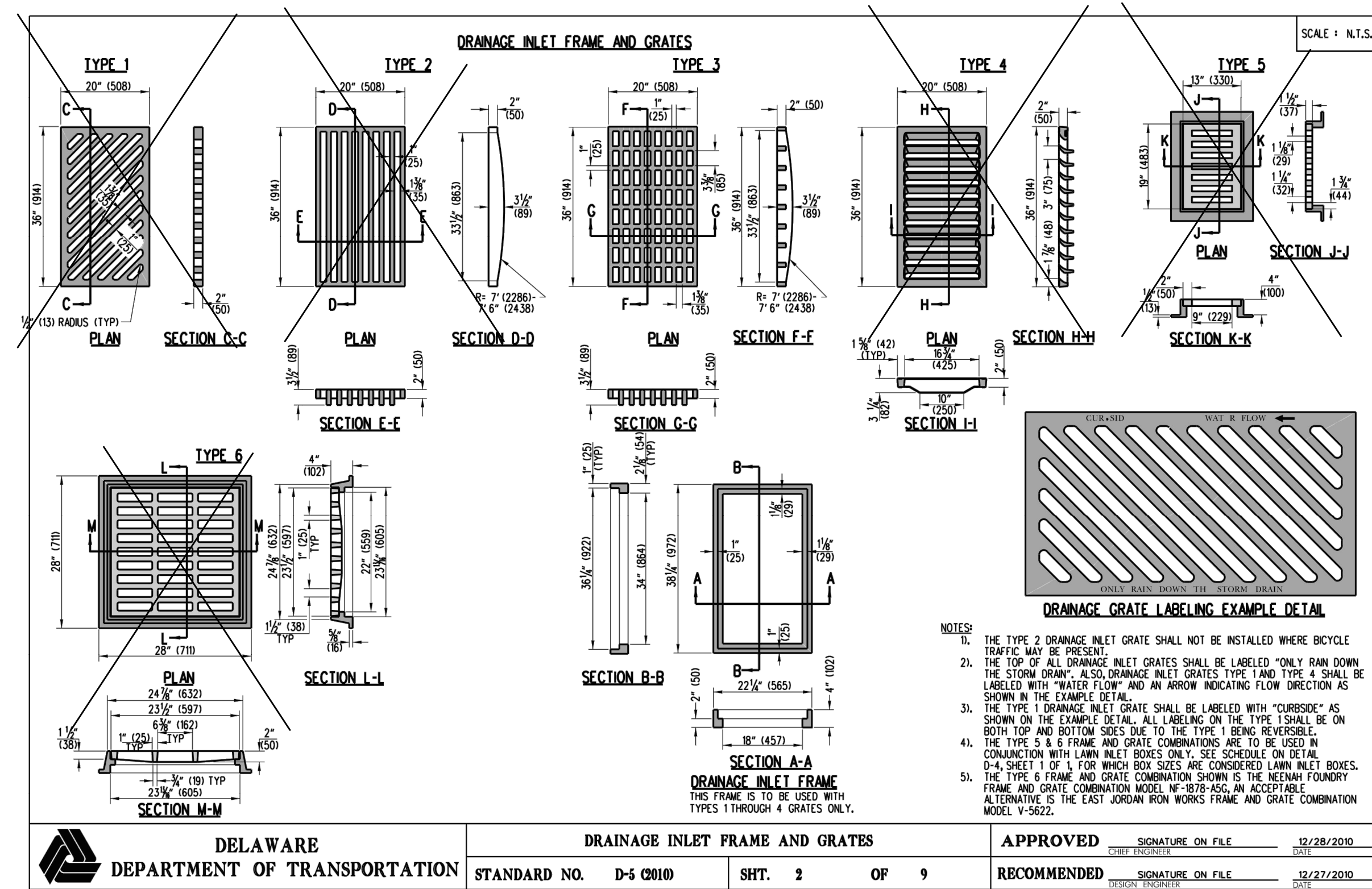
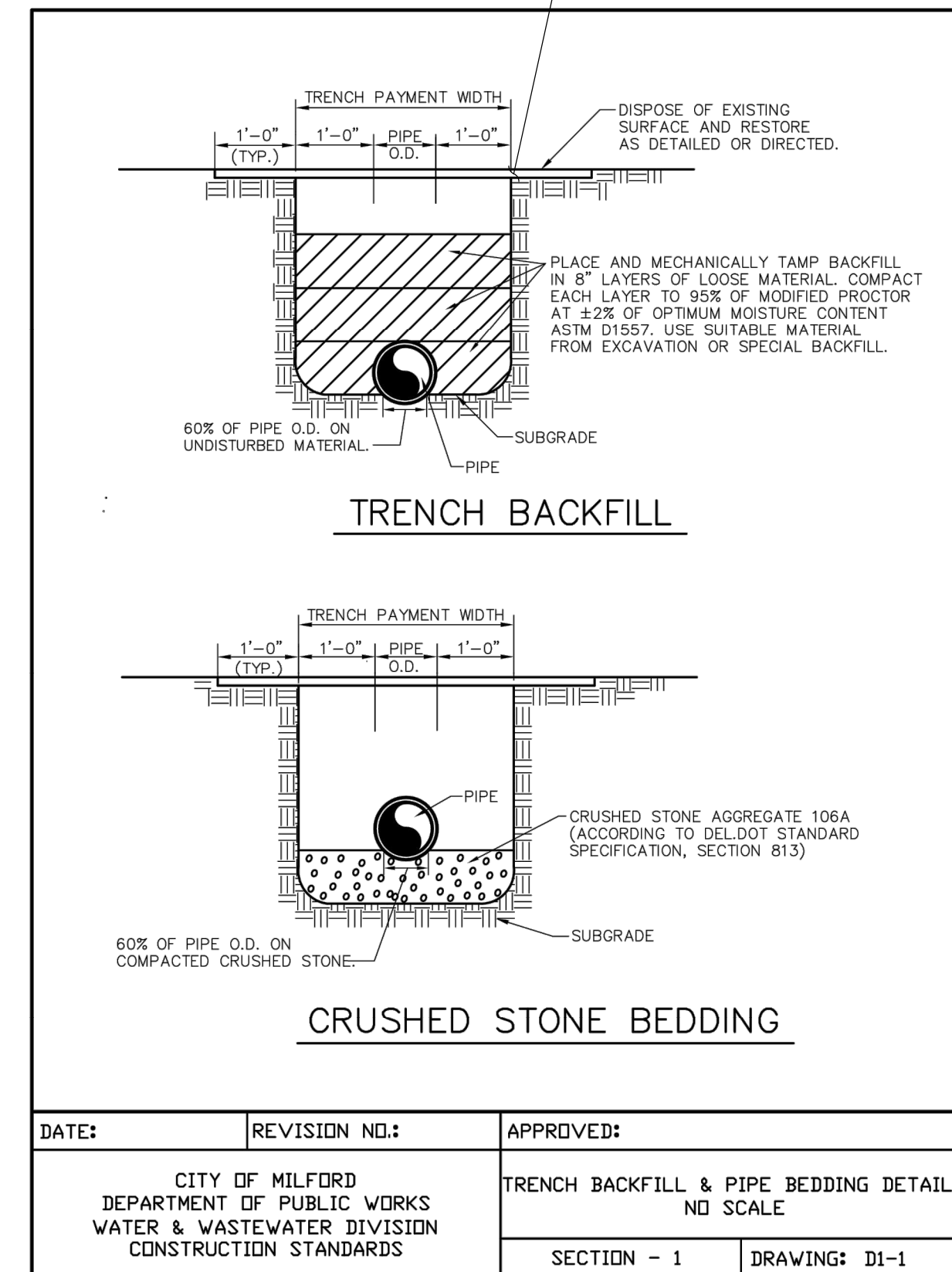
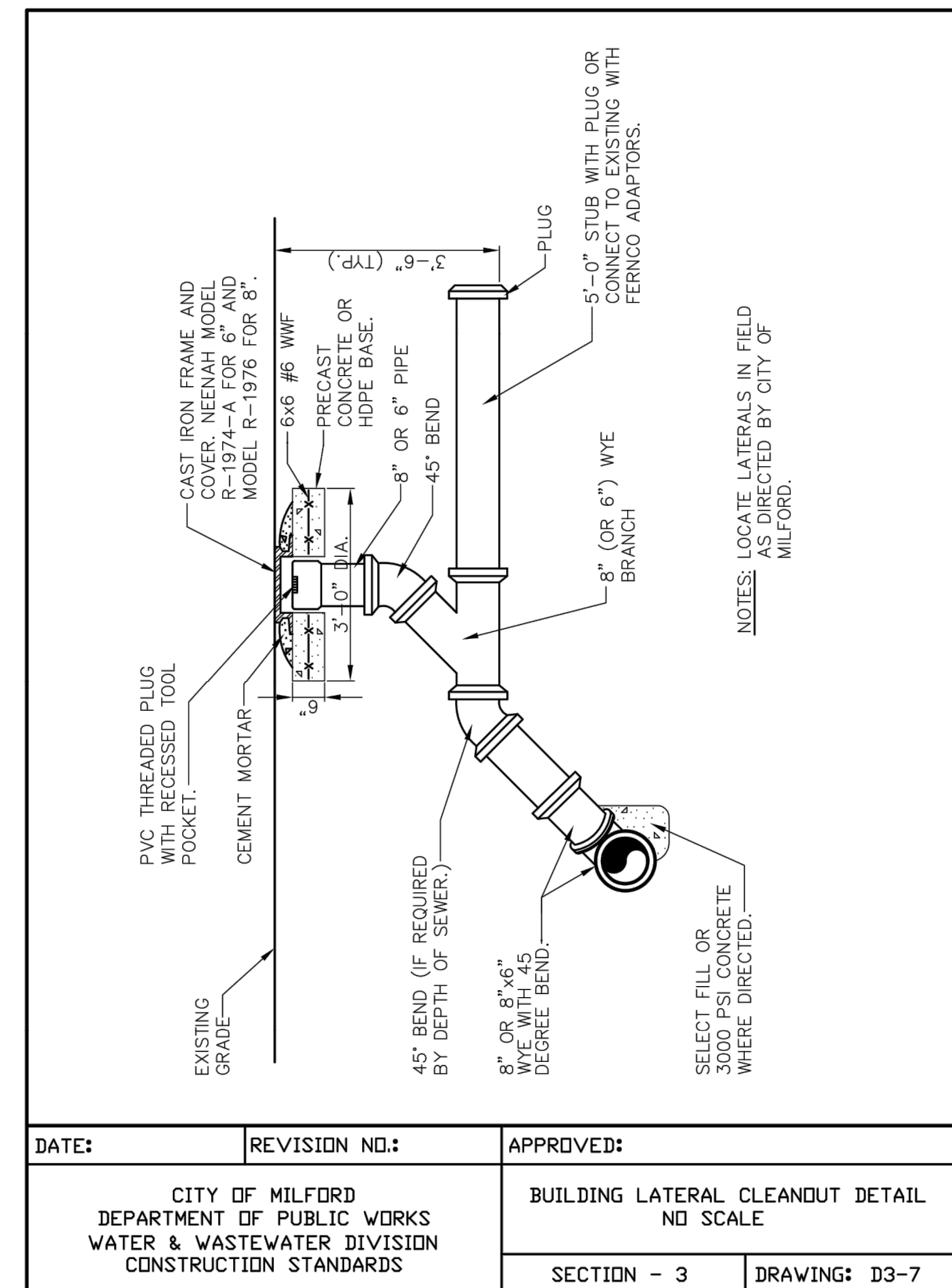
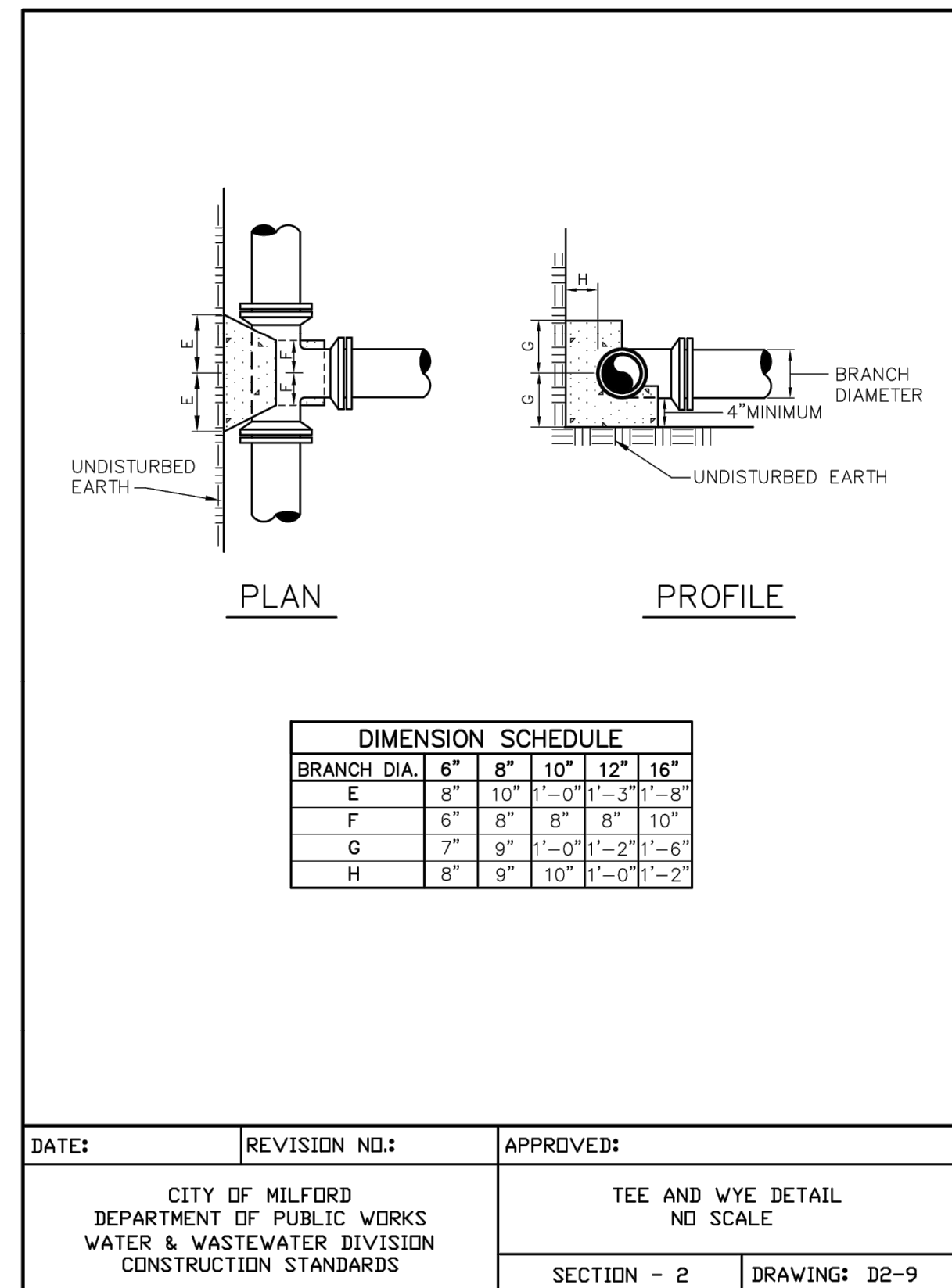
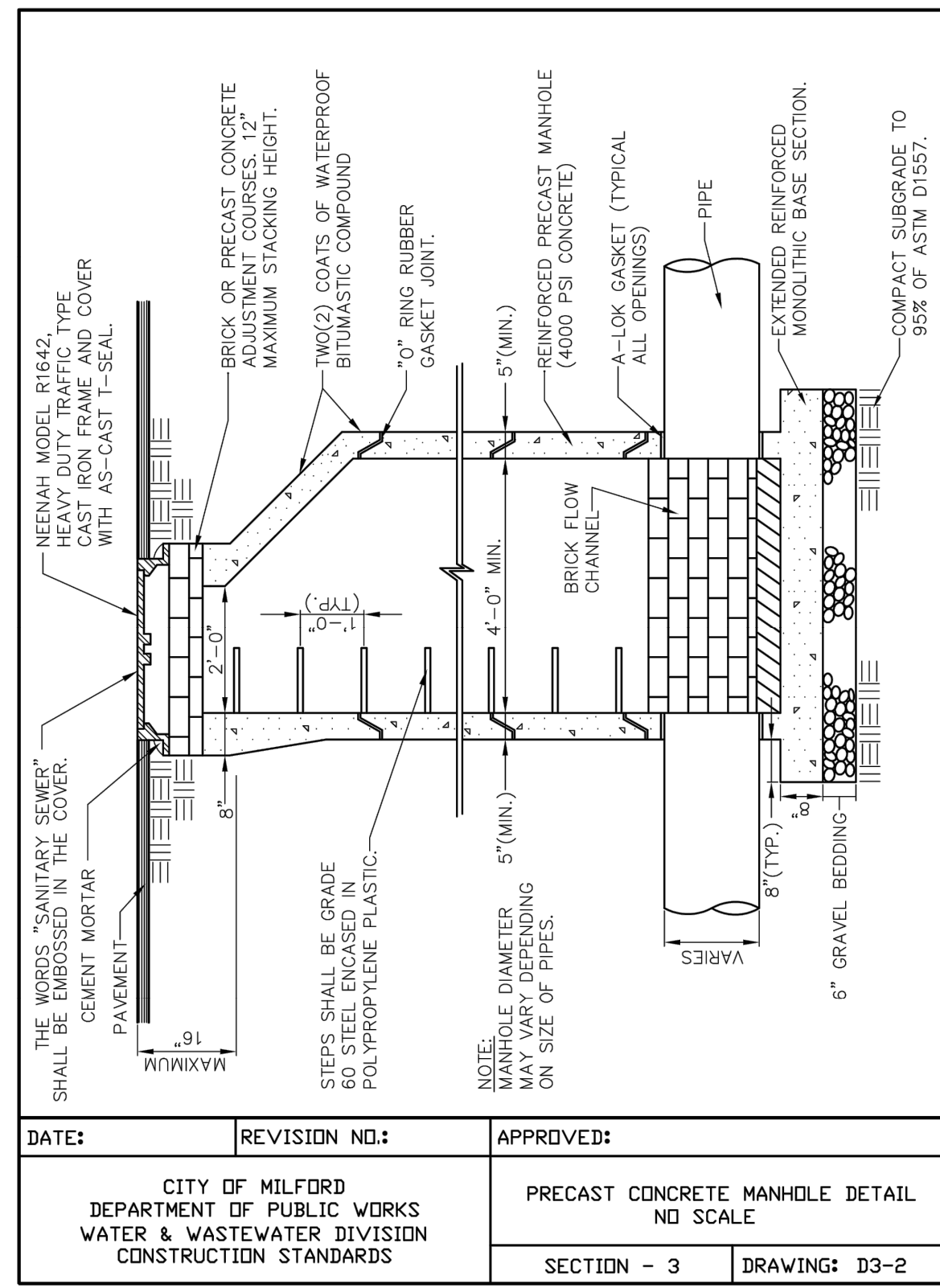
PROJECT NUMBER: 6387801

C-501

SHEET: 9 OF 13

FILE PATH: \\C:\Users\jgarcia\OneDrive\Documents\PROJECTS\6387801 - NAPA VALLEY FLEX USE BUILDINGS\ASB\PRODUCTION\ASB\DETAILS\DWG\C-501\DETAILS.DWG (S-501) LHMATERS, REVISED 03/23/2023

SEDIMENT AND STORMWATER PLANS - FOR PERMITTING



DESIGN INFORMATION		REVISIONS		DESCRIPTION
DESIGNED BY:	SCL	NO.	DATE	BY
DRAWN BY:	JAP/SCL			
CHECKED BY:	MEP			
PROJECT MANAGER:	SCL			

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE, LICENSE NO. 16413, EXPIRATION DATE: JUNE 30, 2024.

DETAILS II

CITY OF MILFORD, KENT COUNTY, DELAWARE

**NAPA VALLEY FLEX USE BUILDINGS
SEDIMENT AND STORMWATER MANAGEMENT PLANS
GREATER MILFORD BUSINESS COMPLEX**

www.eaest.com
EA Engineering, Science, and Technology, Inc., PBC
11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

FULL SIZE PLOT: 24" x 36"
DATE: APRIL 2023
PROJECT NUMBER: 6387801
C-502
SHEET: 10 OF 13

FILE PATH: \\C:\ADMIN\PROJECTS\6387801 - NAPA VALLEY FLEX USE BUILDINGS\DRAWINGS\PRODUCTION\DETAILS AND STANDARD PLAN\DETAILS - D-6 - DETAIL D-6 (010) LAYOUTS - SECTION D-6 (010) 03/20/23.PLT

SEDIMENT AND STORMWATER PLANS - FOR PERMITTING

Standard Detail & Specifications
Silt Fence

Section

Min. 40" stake length
Reinforcing strip over geosynthetic fabric (typ. each stake)
Flow
Embed fabric min. 8" vertically into ground
Min. 24" stake length above ground
Min. 16" stake length driven into ground

Plan

Ends placed upslope to contain runoff
6' Max.
2' X 2" wooden post (Typ.)
DATA
Max. controlled slope

Source: Adapted from MD Stds. & Specs. for ESC
Symbol: **SF**
Detail No. **DE-ESC-3.1.2.1**
Sheet 1 of 2
Date: 6/05

Standard Detail & Specifications
Silt Fence

Construction Detail

Posts
Staple
Section A
Section B
Staple
Top
Method for joining continuous sections

Construction Notes:

- Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
- When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
- Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

Materials:

- Stakes: Steel (either T or U) or 2" x 2" hardwood
- Geosynthetic Fabric: Type GD-I
- Reinforcing strip: Wooden lath, plastic strip or other approved equivalent
- Prefabricated Unit: Geofab, Envirofence, or approved equivalent

Source: Adapted from MD Stds. & Specs. for ESC
Symbol: **SF**
Detail No. **DE-ESC-3.1.2.1**
Sheet 2 of 2
Date: 6/05

SILT FENCE DETAIL
NOT TO SCALE

Standard Detail & Specifications
Super Silt Fence

Perspective

10' Max.
33" Min.
36" Min.
8" Min.
2-1/2" dia. galvanized or aluminum posts
Chain link fence with geotextile fabric
Flow

Section

Chain link fencing
Geotextile fabric
Post
33" min. post and 2nd layer geotextile fabric
16" min. 1st layer geotextile fabric
Embed fabric min. 8" into ground
DATA
Max. controlled slope

Source: Adapted from MD Stds. & Specs. for ESC
Symbol: **SSF**
Detail No. **DE-ESC-3.1.2.3**
Sheet 1 of 2
Date: 12/03

Standard Detail & Specifications
Super Silt Fence

Construction Notes:

- The poles do not need to be set in concrete.
- Chain link fence shall be fastened securely to the fence posts with wire ties or staples.
- Geotextile fabric shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Geotextile fabric shall be embedded a minimum of 8" into the ground.
- When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6' and folded.
- Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence.

Materials:

- Fencing: Fencing shall be 42 inches in height and constructed in accordance with the latest Delaware Department of Transportation (Del-DOT) Specifications for Chain Link Fencing Section 728. The Del-DOT specification for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot length posts.
- Geosynthetic Fabric: Type GD-I

Source: Adapted from MD Stds. & Specs. for ESC
Symbol: **SSF**
Detail No. **DE-ESC-3.1.2.3**
Sheet 2 of 2
Date: 12/03

SUPER SILT FENCE DETAIL
NOT TO SCALE

Standard Detail & Specifications
Inlet Protection - Type 2

Bag Detail

Dump straps, 2 ea.
Expansion restraint (1/4" nylon rope w/2" flat washers)

Dump strap
1" rebar for bag removal from inlet
GD-III geotextile inlet insert (ACF Hi-Flow Siltsack or approved equiv.)
DEPTH = D
WIDTH = W

Perspective

Source: Adapted from ACF Products, Inc.
Symbol: **IP-2**
Detail No. **DE-ESC-3.1.5.2**
Sheet 1 of 2
Date: 12/03

Standard Detail & Specifications
Inlet Protection - Type 2

Notes:

- This practice shall only be used in situations in which Inlet Protection - Type 1 cannot be used due to site constraints. These include, but are not limited to partially completed parking areas, streets, roads, etc.
- It may be necessary to transition from Type 1 to Type 2 Inlet Protection as construction proceeds.
- For areas where there is a concern for oil run-off or spills, insert shall meet one of the above specifications with an oil-absorbent pillow or shall be made completely from an oil-absorbent material with a woven pillow.

Materials:

The geotextile inlet insert shall meet or exceed the specifications of Type GD-III geotextile in accordance with Appendix A-3 of the Delaware Erosion & Sediment Control Handbook.

Source: Adapted from ACF Products, Inc.
Symbol: **IP-2**
Detail No. **DE-ESC-3.1.5.2**
Sheet 2 of 2
Date: 12/03

TYPE II - INLET PROTECTION DETAIL
NOT TO SCALE

Standard Detail & Specifications
Dust Control

Temporary Methods:

- Mulches - See **DE-ESC-3.4.5**, Standard Detail and Specifications for Mulching.
- Vegetative cover - See **DE-ESC-3.4.3**, Std. Detail and Specifications for Vegetative Stabilization.
- Adhesives - Use on mineral soils only (not effective on muck soils). Keep traffic off these areas. The following table may be used for general guidance.

Type of Emulsion	Water Dilution	Type of Nozzle	Apply Gal/Ac.
Latex emulsion	12.5:1	Fine spray	235
Resin-in-water emulsion	4:1	Fine spray	300
Acrylic emulsion (non-traffic)	7:1	Coarse spray	450
Acrylic emulsion (traffic)	3.5:1	Coarse spray	350

Permanent Methods:

- Vegetative cover - See **DE-ESC-3.4.3**, Std. Detail and Specifications for Vegetative Stabilization.
- Stone - Apply layer of crushed stone or coarse gravel to protect soil surface.

Source: Adapted from VA ESC Handbook
Symbol: **DE-ESC-3.4.8**
Detail No. **DE-ESC-3.4.8**
Sheet 1 of 1

DUST CONTROL
NOT TO SCALE
Effective February 2019

Standard Detail & Specifications
Stabilized Construct. Entrance

Equipment: wheel track + 2'
Metal bars set in reinforced conc. (traffic bearing grates, timber mats or other approved equiv. may be substituted)
Provide space for drainage
Section A-A (Opt.)

Construction Notes:

- Stone size - Use DE #3 stone.
- Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
- Thickness - Not less than size (6) inches.
- Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
- Geotextile - Type GS-I; placed over the entire area prior to placing of stone.
- Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing - Vehicle wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Inspection - Periodic inspection and needed maintenance shall be provided after each rain.

Source: Adapted from VA ESC Handbook
Symbol: **SCE**
Detail No. **DE-ESC-3.4.7**
Sheet 2 of 2
Date: 12/03

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE

DESIGN INFORMATION

DESIGNED BY: SCL
DRAWN BY: JAP/SCL
CHECKED BY: MEP
PROJECT MANAGER: SCL

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE, LICENSE NO. 16413, EXPIRATION DATE: JUNE 30, 2024

REVISIONS

NO. DATE BY DESCRIPTION

SEAL

NAPA VALLEY FLEX USE BUILDINGS
SEDIMENT AND STORMWATER MANAGEMENT PLANS
GREATER MILFORD BUSINESS COMPLEX

CITY OF MILFORD, KENT COUNTY, DELAWARE

EROSION AND SEDIMENT CONTROL DETAILS I

EA Engineering, Science, and Technology, Inc., PBC
11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341
www.eaest.com

0 15 30 60
GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"
DATE: APRIL 2023
PROJECT NUMBER: 6387801

C-504
SHEET: 12 OF 13

SEDIMENT AND STORMWATER PLANS - FOR PERMITTING

FILE PATH: \\C:\ADMIN\PROJECTS\6387801\NAPA VALLEY FLEX USE BUILDINGS\DRAWINGS\CD\PRODUCTION\EROSION AND SEDIMENT PLAN\6387801 - S&M - ESC NOTES AND DETAILS.DWG (SCALE: METERS, STYLE: 1/2023) 2:39 PM

Standard Detail & Specifications Vegetative Stabilization

TEMPORARY SEEDING BY RATES, DEPTHS AND DATES

Mx #	Species ⁶	Seeding Rate ¹ #/Ac	Optimum Seeding Dates ¹ O = Optimum Planting Period, A = Acceptable Planting Period			Planting Depth ²			
			Coastal Plain	Piedmont	All				
1	Barley	125	4	O	A	O	A	O	1-2 inches
2	Oats	125	4	O	A	O	A	O	2-3" sandy soils 1-2 inches
3	Rye	125	4	O	A	O	A	O	2-3" sandy soils
4	Perennial Ryegrass	125	4	O	A	O	A	O	0.5 inches 1.2" sandy soils
5	Annual Leuzespeiza	125	4	O	A	O	A	O	0.5 inches
6	Winter Wheat	125	4	O	A	O	A	O	1-2 inches 2-3" sandy soils
7	Foxtail Millet	30 PLS	0.7						0.5 inches 1.2" sandy soils
8	Pearl Millet	20 PLS	0.5						0.5 inches 1.2" sandy soils

- Winter seeding requires 3 tons per acre of straw mulch for proper stabilization.
- May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
- Apply on slopes 2:1 or less.
- Fifty pounds per acre of Annual Leuzespeiza may be added to 1/2 the seeding rate of any of the above species.
- Use varieties currently recommended for Delaware. Contact a County Extension Office for information.
- Warm season grasses such as Millet or Weeping Lovegrass may be used between 5/1 and 9/1 if desired. Seed at 3-5 lbs. per acre. Good on low fertility and acid areas. Seed after frost through summer at a depth of 0.5".

Source: Delaware ESC Handbook Symbol: _____ Detail No. **DE-ESC-3.4.3** Sheet 1 of 4 Date: 12/03

TEMPORARY SEEDING DETAIL
NOT TO SCALE

Standard Detail & Specifications Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES

Mx No.	Certified Seed ¹	Seeding Rate ¹ #/Ac	Optimum Seeding Dates ¹ O = Optimum Planting Period, A = Acceptable Planting Period			Remarks
			Coastal Plain	Piedmont	All	
1	Well Drained Soils Tall Fescue Weeping Lovegrass	125 10 0.23	4 A	O A	A A	Good erosion control mix Tolerant of low fertility soils. Longways very difficult to mow. Chlorinated only in hot weather.
2	Overlapped Sheep Fescue Common Leuzespeiza ² Inoculated	30 30 0.89 15	4 A	O A	A A	Good erosion control mix Tolerant of low fertility soils Good wildlife cover and food.
3	Tall Fescue (Luffgrass or Strong Creeping Red Fescue or Perennial Ryegrass plus one of: Kentucky Bluegrass Canada Bluegrass Kentucky Bluegrass	55 50 1.15 15	4 A	O A	A A	Good erosion control mix Tall Fescue for droughty conditions. Creeping Red Fescue for heavy shade. Flatpea to suppress woody vegetation.
4	Strong Creeping Red Fescue Kentucky Bluegrass Perennial Ryegrass or Ryegrass plus one of: Little Bluestem ³ Big Bluestem ³ Little Bluestem ³ Big Bluestem ³	100 70 1.81 15 0.11 3 0.07	4 A	O A	A A	Shade tolerant mix. Canada Bluegrass more drought tolerant. Use Ryegrass for increased drought tolerance.
5	Big Bluestem ³ Little Bluestem ³ Crested Dogstail plus one of: Perennial Ryegrass Kentucky Bluegrass	10 10 0.23 5 0.11 5 0.11	4 A	O A	A A	Native warm-season mix. Tolerant of low fertility soils. Drought tolerant. Poor shade tolerance. M better than ryegrass - weeds Wet Blue 20% for nutrient uptake.
6	Tall Fescue (Luffgrass) plus one of: Kentucky Bluegrass Canada Bluegrass Kentucky Bluegrass	100 35 0.46 20	4 A	O A	A A	Three colors of Kentucky Bluegrass. Traffic tolerant.
7	Tall Fescue Kentucky Bluegrass (Blend) Perennial Ryegrass	100 20 0.46 20	4 A	O A	A A	
8	Big Bluestem ³ Little Bluestem ³ Crested Dogstail plus one of: Perennial Ryegrass Kentucky Bluegrass Wild Indigo Crown Vetch	10 8 0.18 30 0.09 5 0.11 3 0.07 2 0.05	4 A	O A	A A	All species are native. Indian Grass and Bluestem have fluffy seeds. Plant with a specializer or use seed drill. Creeping Red Fescue will provide erosion protection while the warm season grasses get established.

Source: Delaware ESC Handbook Symbol: _____ Detail No. **DE-ESC-3.4.3** Sheet 2 of 4 Date: 12/03

PERMANENT SEEDING DETAIL I
NOT TO SCALE

Standard Detail & Specifications Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES (cont.)

Mx No.	Certified Seed ¹	Seeding Rate ¹ #/Ac	Optimum Seeding Dates ¹ O = Optimum Planting Period, A = Acceptable Planting Period			Remarks
			Coastal Plain	Piedmont	All	
9	Poorly Drained Soils Redtop Creeping Bentgrass Sheep Fescue Rough Bluegrass	75 15 1.72 30 0.8 45	4 A	O A	A A	Quick stabilization of disturbed sites and waterways. Water Tolerant
10	Seed Composites ⁴	10	4 A	O A	A A	Good erosion control, wildlife cover and wetland revegetation.
11	Residential Lawns Tall Fescue Perennial Ryegrass Kentucky Bluegrass Blend	100 25 0.67 30	4 A	O A	A A	High value, high maintenance, light traffic. Irrigation necessary. Well drained soils, full sun.
12	Tall Fescue Perennial Ryegrass Sheep Fescue	100 25 0.67 30	4 A	O A	A A	Moderate value, low maintenance, traffic tolerant
13	Creeping Red Fescue Kentucky Bluegrass Kentucky Bluegrass	50 20 0.4 20	4 A	O A	A A	Shade tolerant, moderate traffic tolerance, moderate maintenance.
14	Creeping Red Fescue Rough Bluegrass Kentucky Bluegrass	50 20 0.4 20	4 A	O A	A A	Shade tolerant, moderate tolerant.
15	0-3:1 Tall Fescue	150	4 A	O A	A A	Monoculture, but performs well alone in lawns. Discouraged.

- When hydroseeding is the chosen method of application, the total rate of seed should be increased by 25%.
- Winter seeding requires 3 tons per acre of straw mulch. Planting dates listed above are averages for Delaware. These dates may require adjustment to reflect local conditions.
- All seed shall meet the minimum purity and minimum germination percentages recommended by the Delaware Department of Agriculture. The maximum % of weed seeds shall be in accordance with Section 1, Chapter 24, Title 3 of the Delaware Code.
- Cool season species may be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
- All leguminous seed must be inoculated.
- Warm season grass mix and Seed Canary Grass cannot be mowed more than 4 times per year.
- Warm season grasses require a soil temperature of at least 50 degrees in order to germinate, and will remain dormant until then.

Source: Delaware ESC Handbook Symbol: _____ Detail No. **DE-ESC-3.4.3** Sheet 3 of 4 Date: 12/03

PERMANENT SEEDING DETAIL II
NOT TO SCALE

Standard Detail & Specifications Vegetative Stabilization

Construction Notes:

- Site Preparation
 - Prior to seeding, install needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, and sediment basins.
 - Final grading and shaping is not necessary for temporary seedings.
- Seedbed Preparation

It is important to prepare a good seedbed to insure the success of establishing vegetation. The seedbed should be well prepared, loose, uniform, and free of large clods, rocks, and other objectionable material. The soil surface should not be compacted or crusted.
- Soil Amendments
 - Lime - Apply liming materials based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply dolomitic limestone at the rate of 1 to 2 tons per acre. Apply limestone uniformly and incorporate into the top 4 to 6 inches of soil.
 - Fertilizer - Apply fertilizer based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply a formulation of 10-10-10 at the rate of 600 pounds per acre. Apply fertilizer uniformly and incorporate into the top 4 to 6 inches of soils.
- Seeding
 - For **temporary stabilization**, select a mixture from **Sheet 1**. For a **permanent stabilization**, select a mixture from **Sheet 2** or **Sheet 3** depending on the conditions.
 - Apply seed uniformly with a broadcast seeder, drill, cultipacker seeder or hydroseeder. All seed will be applied at the recommended rate and planting depth.
 - Seed that has been broadcast should be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used and the seed and fertilizer is mixed, they will be mixed on site and the seeding shall be done immediately and without interruption.
- Mulching

All mulching shall be done in accordance with detail **DE-ESC-3.4.5**.

Source: Delaware ESC Handbook Symbol: _____ Detail No. **DE-ESC-3.4.3** Sheet 4 of 4 Date: 12/03

VEGETATIVE STABILIZATION NOTES
NOT TO SCALE

Standard Detail & Specifications Soil Stockpile

DATA TO BE PROVIDED
Max. Height, h

Source: Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3 Symbol: **SP** Detail No. **DE-ESC-3.7.3** Sheet 1 of 2 Date: 03/13

STOCKPILE AREA DETAIL
NOT TO SCALE

Standard Detail & Specifications Soil Stockpile

Construction Notes:

- Locate stockpiles so that they are 50 feet from any storm drain inlet, open channel, wetland or waterbody. Redirect any concentrated flow around the stockpile using an approved erosion and sediment control measure.
- Secure the perimeter of the stockpile with an approved erosion and sediment control perimeter device.
- If stockpile is to remain inactive for more than 14 calendar days, the stockpile must be vegetated. Follow the temporary vegetation specifications. The vegetation chosen shall last the duration of the stockpile; the stockpile shall be restabilized if the temporary vegetation dies or erosion results.

Source: Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3 Symbol: **SP** Detail No. **DE-ESC-3.7.3** Sheet 2 of 2 Date: 03/13

Standard Detail & Specifications Concrete Washout

DATA TO BE PROVIDED
Length, l
Width, w
Depth, d

Source: Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3 Symbol: **CW** Detail No. **DE-ESC-3.6.2** Sheet 1 of 2 Date: 03/13

CONCRETE WASHOUT AREA DETAIL
NOT TO SCALE

Standard Detail & Specifications Concrete Washout

Construction Notes:

- Locate washout area a minimum of 50 feet from open channels, storm drain inlets, wetlands or waterbodies.
- Locate washout area so that it is accessible to concrete equipment (service with a minimum 10 foot wide gravel accessway), but so it is not in a highly active construction area causing accidental damage.
- Minimum dimensions for prefabricated units are 4 feet by 4 feet by 1 foot deep with a minimum 4mil polyethylene plastic liner. Minimum dimensions for constructed concrete washout areas are 6 feet by 6 feet by 3 feet deep, with a minimum 10mil polyethylene liner, 2:1 side slopes, and a 1 foot high by 1 foot wide compacted fill berm.
- The liner must be free of tears or holes and placed over smooth surfaces to prevent puncturing. For excavated washouts, anchor the liner underneath the berm or overlap with sandbags or concrete blocks to hold in place.
- Provide a sign designating the washout area, and for large construction sites, provide signs throughout directing traffic to its location.
- Allow washed out concrete mixture to harden through evaporation of the wastewater. Once the facility has reached 75 percent of its capacity, remove the hardened concrete by reusing the broken aggregate onsite, recycling, or disposing of offsite. The hardened material can be buried on site with minimum of 1 foot of clean, compacted fill.
- Apply a new liner before reusing the station for additional washouts after maintenance has occurred.

Source: Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3 Symbol: **CW** Detail No. **DE-ESC-3.6.2** Sheet 2 of 2 Date: 03/13

NAPA VALLEY FLEX USE BUILDINGS
SEDIMENT AND STORMWATER MANAGEMENT PLANS
GREATER MILFORD BUSINESS COMPLEX

CITY OF MILFORD, KENT COUNTY, DELAWARE

EROSION AND SEDIMENT CONTROL DETAILS II

SEDIMENT AND STORMWATER PLANS - FOR PERMITTING

DESIGN INFORMATION

DESIGNED BY: SCL
DRAWN BY: JAP/SCL
CHECKED BY: MEP
PROJECT MANAGER: SCL

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE, LICENSE NO. 16413, EXPIRATION DATE: JUNE 30, 2024

REVISIONS

NO.	DATE	BY	DESCRIPTION

SCALE

0 15 30 60
GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"
DATE: APRIL 2023
PROJECT NUMBER: 6387801
C-505
SHEET: 13 OF 13

Standard Detail & Specifications
Construction Site Waste Mgt & Spill Control

DELaware EROSION & SEDIMENT CONTROL HANDBOOK

DATA TO BE PROVIDED:
Volume of Potential Pollution
Height of containment
Area of containment
Volume of containment

Labels: Fuel Tank, Double layer plastic sheeting, or approved equal, Min. 3' compost log or DE# 3 Stone berm, Stone as required per compost log manufacturer guidelines.

Source: Delaware ESC Handbook
Symbol:
Detail No. **DE-ESC-3.6.1**
Sheet 1 of 5
Date: 03/13

Standard Detail & Specifications
Construction Site Waste Mgt & Spill Control

DELaware EROSION & SEDIMENT CONTROL HANDBOOK

Pollution Prevention - Spill Prevention

- Fueling should only take place in signed designated areas, away from downstream drainage facilities and watercourses.
- Fueling must be with nozzles equipped with automatic shut-off to control drips. Do not top off.
- Protect the areas where equipment or vehicles are being repaired, maintained, fueled or parked from storm water run-on and runoff.
- Use barriers such as berms to prevent storm water run-on and runoff, and to contain spills.
- Place a "Fueling Area" sign next to each fueling area.
- Store hazardous materials such as fuel, solvents, oil and chemicals in secondary containment.
- Inspect vehicles and equipment for leaks on each day of use. Repair fluid and oil leaks immediately.
- Absorbent spill clean-up materials and spill kits must be available in fueling areas and on fuel trucks.
- If fueling is to take place at night, make sure the fueling area is sufficiently illuminated.
- Properly dispose of used oil, fluids, lubricants and spill clean-up materials.

CLEAN UP SPILLS

- If it is safe to do so, immediately contain and clean up any chemical and/or hazardous material spills.
- Properly dispose of used oil, fluids, lubricants and spill clean-up materials.
- Do not bury spills or wash them down with water.

LEAKS AND DRIPS

- Use drip pans or absorbent pads at all times. Place under and around leaky equipment.
- Do not allow oil, grease, fuel or chemicals to drip onto the ground.
- Have spill kits and clean up material on-site.
- Repair leaky equipment promptly or remove problem vehicles and equipment from the site. Clean up contaminated soil immediately.
- Store contaminated waste in sealed containers constructed of suitable material. Label these containers properly.
- Clean up all spills and leaks. Promptly dispose of waste and spent clean up materials.

Source: Delaware ESC Handbook
Symbol:
Detail No. **DE-ESC-3.6.1**
Sheet 2 of 5
Date: 03/13

Standard Detail & Specifications
Construction Site Waste Mgt & Spill Control

DELaware EROSION & SEDIMENT CONTROL HANDBOOK

Notes:
The Construction Site Pollution Prevention Plan should include the following elements:

- Material Inventory**
Document the storage and use of the following materials:
a. Concrete
b. Detergents
c. Paints (enamel and latex)
d. Cleaning solvents
e. Pesticides
f. Wood scraps
g. Fertilizers
h. Petroleum based products
- Good housekeeping practices**
a. Store only enough product required to do the job.
b. All materials shall be stored in a neat, orderly manner in their original labeled containers and covered.
c. Substances shall not be mixed.
d. When possible, all of a product shall be used up prior to disposal of the container.
e. Manufacturers' instructions for disposal shall be strictly adhered to.
f. The site foreman shall designate someone to inspect all BMPs daily.
- Waste management practices**
a. All waste materials shall be collected and stored in securely lidded dumpsters in a location that does not drain to a waterbody.
b. Waste materials shall be salvaged and/or recycled whenever possible.
c. The dumpsters shall be emptied a minimum of twice per week, or more if necessary. The licensed trash hauler is responsible for cleaning out dumpsters.

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No. **DE-ESC-3.6.1**
Sheet 3 of 5
Date: 03/13

Standard Detail & Specifications
Construction Site Waste Mgt & Spill Control

DELaware EROSION & SEDIMENT CONTROL HANDBOOK

Notes (cont.)

- Trash shall be disposed of in accordance with all applicable Delaware laws.
- Trash cans shall be placed at all lunch spots and littering is strictly prohibited. Recycle bins shall be placed near the construction trailer.
- If fertilizer bags can not be stored in a weather-proof location, they shall be kept on a pallet and covered with plastic sheeting which is overlapped and anchored.
- Equipment maintenance practices**
a. If possible, equipment should be taken to off-site commercial facilities for washing and maintenance.
b. If performed on-site, vehicles shall be washed with high-pressure water spray without detergents in an area contained by an impervious berm.
c. Drip pans shall be used for all equipment maintenance.
d. Equipment shall be inspected for leaks on a daily basis.
e. Washout from concrete trucks shall be disposed of in a temporary pit for hardening and proper disposal.
f. Fuel nozzles shall be equipped with automatic shut-off valves.
- Spill prevention practices**
a. Potential spill areas shall be identified and contained in covered areas with no connection to the storm drain system.
b. Warning signs shall be posted in hazardous material storage areas.
c. Preventive maintenance shall be performed on all tanks, valves, pumps, pipes and other equipment as necessary.
d. Low or non-toxic substances shall be prioritized for use.

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No. **DE-ESC-3.6.1**
Sheet 4 of 5
Date: 03/13

Standard Detail & Specifications
Construction Site Waste Mgt & Spill Control

DELaware EROSION & SEDIMENT CONTROL HANDBOOK

Notes (cont.)

- Contact information for reporting spills through the DNREC 24-Hour Toll Free Number shall be prominently posted.
- Education**
a. Best management practices for construction site pollution control shall be a part of regular progress meetings.
b. Information regarding waste management, equipment maintenance and spill prevention shall be prominently posted in the construction trailer.

CONTACT INFORMATION

DNREC 24-Hour Toll Free Number **800-662-8802**
DNREC Solid & Hazardous Waste Branch **302-739-9403**

Source: Adapted from USEPA Pub. 840-B-92-002
Symbol:
Detail No. **DE-ESC-3.6.1**
Sheet 5 of 5
Date: 03/13

CONSTRUCTION SITE, WASTE MGMT., AND SPILL CONTROL DETAILS
NOT TO SCALE

Standard Detail & Specifications
Geotextile Dewatering Bag

DELaware EROSION & SEDIMENT CONTROL HANDBOOK

Labels: Geotextile dewatering bag (ACF Dirtbag or approved equiv.), High strength strapping, Flow, Pump discharge hose, Aggregate underlayment.

Source: Adapted from ACF Products, Inc.
Symbol:
Detail No. **DE-ESC-3.2.1.2**
Sheet 1 of 2
Date: 12/03

Standard Detail & Specifications
Geotextile Dewatering Bag

DELaware EROSION & SEDIMENT CONTROL HANDBOOK

Construction Notes:

- The dewatering bag should be placed so the incoming water flows into and through the bag, and then flow off the site without creating more erosion. The neck should be tied off tightly to stop the water from flowing out of the bag without going through the walls. The dewatering bag should be placed on a gravel bed to allow water to flow in all directions.
- The dewatering bag is considered full and should be disposed when it is impractical for the bag to filter the sediment out at a reasonable flow rate. At this point, it should be replaced with a new bag.
- Disposal may be accomplished as directed by the construction reviewer. If the site allows, the bag may be buried on site and seeded, visible fabric removed and seeded or removed from site to a proper disposal area.

Materials:

- The geotextile fabric shall be a Type GD-IV.
- The dewatering bag shall be sewn with a double needle machine using high strength thread. All structural seams will be sewn with high strength, double stitched "J" type. Seam strength test will have the following minimum average roll values:

Type	TEST METHOD	TEST RESULT
Heavy duty	ASTM D-4884	100 lb / in

- The dewatering bag shall have an opening large enough to accommodate a four (4) inch discharge hose with attached strap to tie off the hose to prevent the pumped water from escaping from the bag without being filtered.

Source: Adapted from ACF Products, Inc.
Symbol:
Detail No. **DE-ESC-3.2.1.2**
Sheet 2 of 2
Date: 12/03

DEWATERING BAG DETAIL
NOT TO SCALE

STANDARD SEDIMENT AND STORMWATER CONSTRUCTION NOTES

- THE KENT CONSERVATION DISTRICT MUST BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- REVIEW AND OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANT WITH THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
- IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY KENT CONSERVATION DISTRICT.
- FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN 14 CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
- AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHALL BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
- APPROVED PLANS REMAIN VALID FOR 5 YEARS FROM THE DATE OF APPROVAL.
- POST CONSTRUCTION VERIFICATION DOCUMENT ARE TO BE SUBMITTED TO THE KENT CONSERVATION DISTRICT WITHIN 60-DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.
- APPROVAL OF A SEDIMENT AND STORMWATER MANAGEMENT PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC. NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
- THE NOTICE OF INTENT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT IS #----. AT ANY TIME THE OWNERSHIP FOR THIS PROJECT CHANGES, A TRANSFER OF AUTHORIZATION OR A CO-PERMITTEE APPLICATION MUST BE SUBMITTED TO DNREC. THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY DNREC.
- THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT ASSOCIATED WITH THE PROJECT, INCLUDING, BUT NOT LIMITED TO, PERFORMING WEEKLY SITE INSPECTIONS DURING CONSTRUCTION AND AFTER RAIN EVENTS, AND MAINTAINING WRITTEN LOTS OF THESE INSPECTIONS.
- BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHALL CALL MISS UTILITY AT 811 OR 1-800-282-8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITIES MARKED ONSITE.
- THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURE IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
- BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH THE REQUIREMENT OF 9. DEL. C. CH 60, REGULATIONS GOVERNING THE CONTROL OF WATER POLLUTION, SECTION 9.1.02, KNOWN AS SPECIAL CONDITIONS FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, AND DEPARTMENT POLICIES, PROCEDURES, AND GUIDANCE.
- DOCUMENTATION OF SOIL TESTING AND MATERIALS USED FOR TEMPORARY OR PERMANENT STABILIZATION INCLUDING BUT NOT LIMITED TO SOIL TEST RESULTS, SEED TAGS, SOILS AMENDMENT TAGS, ETC. SHALL BE PROVIDED TO THE DEPARTMENT OF DELEGATED AGENCY TO VERIFY THAT THE PERMANENT OR TEMPORALITY STABILIZATION HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLAN. THE DEPARTMENT OR DELEGATED AGENCY MAY REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OR PERMANENT OR TEMPORALITY STABILIZATION IN ACCORDANCE WITH SPECIFICATIONS PROVIDED IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, OR ALTERNATIVE MEASURES THAT PROVIDE FUNCTIONAL EQUIVALENCY.

SEDIMENT AND STORMWATER CONSTRUCTION NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ALL EROSION AND SEDIMENT CONTROL DEVICES FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL UTILIZE A WATER TRUCK TO DOSE DISTURBED EARTH AT ANY AND ALL TIMES THAT SEDIMENT PARTICLES BECOME AIRBORNE.
- ESTIMATED CUT VOLUME = 2250 C.Y. ESTIMATED FILL VOLUME = 750 C.Y. QUANTITIES SHOWN ARE FOR PERMITTED USE ONLY AND SHALL NOT BE UTILIZED FOR BIDDING PURPOSES.

SEDIMENT AND STORMWATER SEQUENCE OF CONSTRUCTION

- NOTIFY KENT CONSERVATION DISTRICT IN WRITING AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- OBTAIN THE REQUIRED PERMITS THROUGH ALL OF THE REGULATORY AGENCIES.
- CONTACT MISS UTILITY AT LEAST 48 HOURS PRIOR TO STARTING ANY WORK FOR THE DEMARCATION OF KNOWN UTILITIES IN THE PROJECT VICINITY.
- PRIOR TO ANY CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES, OR GRADING, A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED AND CONDUCTED WITH THE AGENCY CONSTRUCTION SITE REVIEWER. THE LANDOWNER/DEVELOPER, CONTRACTOR, AND CERTIFIED CONSTRUCTION REVIEWER ARE REQUIRED TO BE IN ATTENDANCE AT THE PRE-CONSTRUCTION MEETING; THE ENGINEER IS RECOMMENDED TO ATTEND.
- ALL MATERIALS STORED ON SITE SHALL BE PROTECTED AND PROPER SAFETY MEASURES SHALL BE PROVIDED TO ENSURE MATERIALS DO NOT FAIL TO REMAIN ONSITE.
- CLEAR AND GRUB ANY MATERIAL NEEDED TO INSTALL ALL SEDIMENT AND EROSION CONTROL DEVICES.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND INLET PROTECTION.
- ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY THE AGENCY CONSTRUCTION SITE REVIEWER AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.
- THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF/WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHOULD BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
- STRIP TOPSOIL AND STOCKPILE ONSITE OR HAUL OFFSITE TO AN AGENCY APPROVED LOCATION.
- PERFORM ROUGH GRADING OF THE SITE.
- COMMENCE BUILDING CONSTRUCTION.
- EXCAVATE AND INSTALL THE PROPOSED UTILITIES: WATER, SEWER, ELECTRIC, NATURAL GAS, ETC. PROVIDING TEMPORARY CAPS OR CLEANOUTS AS NECESSARY PRIOR TO MAKING FINAL CONNECTIONS AT THE BUILDING.
- ONCE THE BUILDING IS SUBSTANTIALLY COMPETED, PERFORM FINE GRADING OF THE SITE.
- FORM AND POUR CONCRETE CURBS.
- INSTALL PAVEMENT SECTION THROUGH BASE PAVING.
- FORM AND POUR SIDEWALKS AND TRASH ENCLOSURE PAD.
- INSTALL TRASH ENCLOSURE.
- PERFORM SURFACE PAVING AND FINAL STABILIZATION.
- PERFORM PARKING STRIPE INSTALLATION.
- EROSION AND SEDIMENT CONTROL DEVICES SHOULD BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED, STABILIZED, AND WITH THE WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.
- PERFORM REMOVAL OF SEDIMENT CONTROL DEVICES AT THE AGENCY CONSTRUCTION SITE REVIEWER'S APPROVAL. PERFORM ALL FINAL STABILIZATION NEEDED IN AREAS DISTURBED DURING THE REMOVAL PROCESS.
- REMOVE ANY AND ALL REMAINING DEBRIS OR TRASH FROM THE SITE.
- THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENT, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE, ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

NAPA VALLEY FLEX USE BUILDINGS
SEDIMENT AND STORMWATER MANAGEMENT PLANS
GREATER MILFORD BUSINESS COMPLEX

CITY OF MILFORD, KENT COUNTY, DELAWARE

EROSION AND SEDIMENT CONTROL PLAN NOTES

SEDIMENT AND STORMWATER PLANS - FOR PERMITTING



EA Engineering, Science, and Technology, Inc., PBC
11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

AS SHOWN

FULL SIZE PLOT: 24" x 36"

DATE: APRIL 2023

PROJECT NUMBER: 6387801

C-503

SHEET: 11 OF 13