SCARLET OAKS SUBDIVISION
CONSTRUCTION PLAN

TM#: 235-20.00-63.02
BROADKILL HUNDRED
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

PREPARED FOR:

OWNER/DEVELOPER

RIBERA DEVELOPMENT, LLC

JOHN STAMATO
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108
(443) 871-0486

SITE DATA:

1. TAX MAP NUMBER: 235-20.00-63.02
2. SITE REFERENCES: PLAT BOOK 26, PAGE 340
   DEED BOOK 6212, 340
3. OWNER/DEVELOPER: RIBERA DEVELOPMENT, LLC
   C/O JOHN STAMATO
   8684 VETERANS HIGHWAY, SUITE 203
   MILLERSVILLE, MD 21108
4. SITE ADDRESS: SHINGLE POINT ROAD (SCR 249)
   MILTON, DE 19968
5. SITE LOCATION: SOUTHEAST SIDE OF SHINGLE POINT ROAD WITH ROAD FRONTAGE ALONG SOUTHWEST SIDE OF HARBESON ROAD
6. HUNDRED/ COUNTY: BROADKILL HUNDRED, SUSSEX COUNTY
7. ZONING: R-1 WITH LPD OVERLAY (TOWN OF MILTON)
8. PRESENT USE: AGRICULTURAL FIELD AND WOODLANDS
9. PROPOSED USE: DWELLING, SINGLE-FAMILY DETACHED & DWELLING, MULTI-FAMILY (TOWNHOUSE) & COMMUNITY CENTER WITH RECREATIONAL FACILITIES INCLUDING A NON-COMMERCIAL POOL
10. LOT BREAK DOWN:
    SINGLE FAMILY DETACHED = 64 LOTS
    MULTI-FAMILY (TOWNHOUSE) = 99 LOTS
    TOTAL = 163 LOTS

    LOT SIZES (S220-20M):

	MINIMUM	AVERAGE	MAXIMUM	MIN. REQUIRED	MIN. REQ. WIDTH
SINGLE FAMILY	7,246 ± SF	8,832 ± SF	16,042 ± SF	5,000 ± SF	50'
TOWNHOUSE	3,219 ± SF	3,698 ± SF	4,757 ± SF	2,500 ± SF	20'

11. GROSS ACREAGE: 50.08 AC.
12. REQUESTED SETBACKS (B.R.L.):

	SF DETACHED LOTS	MULTI-FAMILY (TOWNHOUSE) LOTS
FRONT:	25'	25'
SIDE:	6' *	8'
REAR:	10'	10'

    * LOTS 5, 6,16, 17, 36, 37, 45, 46, 48, 49, 57, 58, 70, AND 71 HAVE A 10' WIDE SIDE YARD SETBACK ON ONE OR BOTH SIDES TO ALLOW A 20' WIDE DRAINAGE EASEMENT AND NOT OVERLAP WITH BUILDABLE AREA. REFER TO PLAN VIEW FOR NOTED INFORMATION.
13. PARKING: REQUIRED:
    DWELLINGS: 2 SPACES PER DWELLING = 326 SPACES
    PROVIDED: 4 SPACES PER DWELLING(2 IN DRIVEWAY, 2 IN GARAGE) = 652 SPACES
    CAR PARKS = 44 SPACES
    COMMUNITY CENTER = 15 SPACES (2 ADA SPACES INCLUDED)
    TOTAL SPACES PROVIDED: = 711 SPACES
    [UTILIZING ONE SPACE WITHIN GARAGE OR 3 SPACES PER DWELLING UNIT = 489 SPACES]
    [SEE DETAIL 2, CS1000 FOR INDIVIDUAL LOT PARKING SPACES]
14. BUILDING HEIGHT: 30.5' MAX. ALLOWED (2 STORIES)
15. WATER SUPPLY: PUBLIC - TOWN OF MILTON
16. SOURCE WATER PROTECTION:
    A. SUBJECT PROPERTY IS WITHIN AN AREA OF "GOOD, FAIR, AND POOR" GROUND WATER RECHARGE
    B. SUBJECT PROPERTY IS NOT LOCATED IN A WELLHEAD PROTECTION AREA.
17. SEWER SUPPLY: PUBLIC - ARTESIAN WASTEWATER MANAGEMENT, INC.
18. STREETS: PUBLIC USE - TOWN OF MILTON MAINTAINED
19. LATITUDE AND LONGITUDE STATE PLANE COORDINATES:
    BENCHMARK 1
    LONGITUDE: -75.3108611°, LATITUDE: 38.7604089°
    BENCHMARK 2
    LONGITUDE: -75.3183906°, LATITUDE: 38.7587226°
20. FUTURE LAND USE MAP (2018): RESIDENTIAL
21. STATE INVESTMENT LEVEL (2025): LEVEL 1
22. SITE AREA AND ACREAGE:

LOT AREA:	928,845± SF	21.32 AC.	(42.6%)
INTERNAL PUBLIC RIGHT-OF-WAY	324,191± SF	7.44 AC.	(14.9%)
SWM FACILITIES	199,125± SF	4.57 AC.	(9.1%)
OPEN SPACE:	729,386± SF	16.74 AC.	(33.4%)
TOTAL:	2,181,547± SF	50.08 AC.	(100.0%)

23. IMPERVIOUS AREA:

ROAD AREA:	205,233± SF	4.71 AC.	(9.4%)
PATH AREA:	117,438± SF	2.70 AC.	(5.4%
TOTAL:	322,671± SF	7.41 AC.	(14.8%)

24. FORESTED AREA:

EXISTING AREA:	375,907± SF	8.63 AC.	(100.0%)
IMPACTED/ REMOVED AREA:	191,929± SF	4.41 AC.	(51.1%)
REMAINING AREA:	183,978± SF	4.22 AC.	(48.9%)

    (REMAINING FORESTED AREA IS PART OF THE PASSIVE/ACTIVE OPEN SPACE AREA)

25. OPEN SPACE AREA BREAKDOWN:

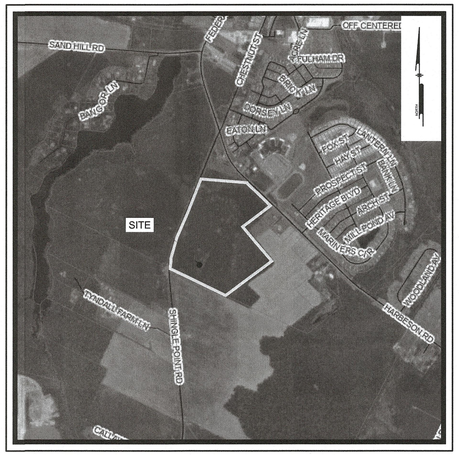
REMAINING FORESTED AREA:	183,978± SF	4.22 AC.	(25.2%)
PASSIVE & ACTIVE RECREATION SPACE:	545,408± SF	12.52 AC.	(74.8%)
TOTAL OPEN SPACE AREA:	729,386± SF	16.74 AC.	(100%)

26. DATUM: HORIZONTAL = NORTH AMERICAN DATUM 1983 (NAD 83/ 2011)
    VERTICAL = NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
27. FLOOD ZONE: THIS PROPERTY IS LOCATED ON THE FEMA FLOOD INSURANCE RATE MAP NUMBER 10005C0164J, MAP REVISED JANUARY 6, 2005 AND 10005C0168K, MAP REVISED MARCH 16, 2015.
    AREA DESIGNATED AS FLOOD ZONE "X" (UNSHADED)
28. PROPOSED LOD DISCHARGE LOCATION:

PROPOSED ONSITE INFILTRATION BASINS:	47.00 AC.
SOUTH EAST SIDE OF SITE:	0.16 AC.
HARBESON ROAD - NORTH SIDE:	0.01 AC.
HARBESON ROAD - SOUTH SIDE:	0.02 AC.
SHINGLE POINT ROAD - ROAD IMPROVEMENTS:	1.02 AC.
OFFSITE UTILITIES - WATER/FORCE MAIN (SHINGLE POINT RD./HARBESON RD.):	0.19 AC.
TOTAL:	48.40 AC.

29. WATERSHED: BROADKILL RIVER/ DELAWARE BAY
    HUC8: 02040207
    HUC10: 0204020706
30. FEDERALLY REGULATED NONTIDAL WETLAND AREA: 0.00 ± AC.
    STATE REGULATED TIDAL WETLAND AREA: 0.00 ± AC.
31. TRANSPORTATION IMPROVEMENT DIST: MILTON TID (CURRENTLY UNDER DEVELOPMENT)
32. STATE TAX DITCH AREAS AND THEIR RIGHT OF WAYS: NOT APPLICABLE
33. LOCAL GOVERNMENT RESPONSIBLE FOR LAND USE APPROVAL: TOWN OF MILTON

CALL BEFORE YOU DIG
Call Miss Utility of Delmarva
800-282-8555
Ticket Number(s): 251270993
251270994
251280076



LOCATION MAP
Scale: 1" = 1500'

DEVIATION REQUESTS FOR LPD DEVELOPMENT

THE FOLLOWING REQUESTS WAS APPROVED AS PART OF THE MASTER PLAN, DATED MAY 9, 2024, LAST REVISED JULY 25, 2024, RECORDED PLAT BOOK 435, PAGE 1, AS IT RELATES TO SCARLET OAKS BEING WITHIN AN LPD OVERLAY DISTRICT, REQUESTING DEVIATION FROM THE UNDERLYING R-1 ZONE:

1) SETBACKS: SINGLE-FAMILY DETACHED LOTS MULTI-FAMILY (TOWNHOUSE) LOTS
   FRONT YARD 25 FEET
   25 FEET
   SIDE YARD 6 FEET
   8 FEET
   REAR YARD 10 FEET
   10 FEET
2) RIGHT-OF-WAY WIDTH: 50 FEET RIGHT-OF-WAY FOR INTERIOR SUBDIVISION RIGHT-OF-WAYS
3) STREET WIDTHS: 28 FEET (BACK OF CURB TO BACK OF CURB) WITH 24 FEET WIDE PAVED AREA
4) CURB TYPE: PCC CURB AND GUTTER TYPE 2 ROLLED CURB FOR INTERIOR SUBDIVISION STREETS

Sheet List Table

Sheet Number	Sheet Description	Sheet Title
1	CS0001	COVER SHEET
2	CS0200	EXISTING CONDITIONS PLAN KEY SHEET
3	CS0201	EXISTING CONDITIONS PLAN
4	CS0202	EXISTING CONDITIONS PLAN
5	CS0203	EXISTING CONDITIONS PLAN
6	CS0204	EXISTING CONDITIONS PLAN
7	CS0901	CONSTRUCTION PHASING PLAN
8	CS1000	NOTES & DETAILS
9	CS1001	MAJOR SUBDIVISION CONSTRUCTION PLAN KEY SHEET
10	CS1002	MAJOR SUBDIVISION CONSTRUCTION PLAN
11	CS1003	MAJOR SUBDIVISION CONSTRUCTION PLAN
12	CS1004	MAJOR SUBDIVISION CONSTRUCTION PLAN
13	CS1005	MAJOR SUBDIVISION CONSTRUCTION PLAN
14	CS1500	GRADING PLAN KEY SHEET
15	CS1501	GRADING NOTES AND DETAILS
16	CS1501	GRADING PLAN
17	CS1503	GRADING PLAN
18	CS1504	GRADING PLAN
19	CS1505	GRADING PLAN
20	CS1701	UTILITY PLAN KEY SHEET
21	CS1701A	SANITARY SEWER STRUCTURE AND PIPE TABLE
22	CS1703	UTILITY PLAN
23	CS1704	UTILITY PLAN
24	CS1705	UTILITY PLAN
25	CS1706	UTILITY PLAN
26	CS2001	LANDSCAPE PLAN KEY SHEET
27	CS2002	LANDSCAPE PLAN
28	CS2003	LANDSCAPE PLAN
29	CS2004	LANDSCAPE PLAN
30	CS2005	LANDSCAPE PLAN
31	CS2007	LANDSCAPE NOTE AND DETAILS
32	CS2201	SITE LIGHTING PLAN
33	CS3501	ROAD PLAN KEY SHEET
34	CS3502	ROAD PROFILE - STELLATA BOULEVARD
35	CS3503	ROAD PROFILE - SCARLET OAK LANE
36	CS3504	ROAD PROFILE - SCARLET OAK LANE
37	CS3505	ROAD PROFILE - SCARLET OAK LANE
38	CS3506	ROAD PROFILE - SHUMARD DRIVE
39	CS3507	ROAD PROFILE - SHUMARD DRIVE
40	CS3508	ROAD PROFILE - SHUMARD DRIVE
41	CS3509	ROAD PROFILE - OVERCUP COURT
42	CS3510	ROAD PROFILE - OVERCUP COURT
43	CS3511	ROAD PROFILE - TURKEY COURT & OVERCUP COURT
44	CS3512	ROAD PROFILE - BEAR OAK DRIVE
45	CS3513	ROAD PROFILE - SCRUB OAK DRIVE
46	CS3514	ROAD PLAN - INTERSECTION DETAILS
47	CS3515	ROAD PLAN - INTERSECTION DETAILS
48	CS3516	ROAD PLAN - CULDESAC DETAILS
49	CS4001	STORM DRAIN PROFILES
50	CS4002	STORM DRAIN PROFILES
51	CS4003	STORM DRAIN PROFILES
52	CS4004	STORM DRAIN PROFILES
53	CS4501	SANITARY SEWER PROFILES
54	CS4502	SANITARY SEWER PROFILES
55	CS4503	SANITARY SEWER PROFILES
56	CS4601	WATER PROFILES
57	CS4602	WATER PROFILES
58	CS4603	WATER PROFILES
59	CS4701	OFF-SITE WATER MAIN PLAN AND PROFILE
60	CS4702	OFF-SITE WATER MAIN PLAN AND PROFILE
61	CS4703	OFF-SITE WATER MAIN PLAN AND PROFILE
62	CS4704	OFF-SITE WATER MAIN PLAN AND PROFILE
63	CS6001	SITE DETAILS
64	CS6002	SANITARY SEWER DETAIL
65	CS6003	WATER DETAILS
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69	PS1700	COVER SHEET
70	PS1701	PUMP STATION SITE PLAN
71	PS1702	PUMP STATION PLAN AND SECTIONS
72	PS1703	PUMP STATION DETAILS
73	PS1704	PUMP STATION DETAILS
74	PS1705	ELECTRICAL SITE PLAN
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78	PS1709	SEWER FORCE MAIN PLAN AND PROFILE
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80	PS1711	SEWER FORCE MAIN PLAN AND PROFILE
81	PS1712	SEWER FORCE MAIN NOTES AND DETAILS
82	PS1713	SEWER FORCE MAIN NOTES & DETAILS

DEVELOPER
RIBERA DEVELOPMENT, LLC
C/O JOHN STAMATO
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

ENGINEER/ PLANNER
PENNONI ASSOCIATES INC.
18072 DAVIDSON DRIVE
MILTON, DE 19968
(302) 684-8030

SURVEYOR
PENNONI ASSOCIATES, INC.

ENVIRONMENTAL CONSULTANT
GEO-TECHNOLOGY ASSOCIATES, INC.
21491 BALTIMORE AVENUE, UNIT 1
GEORGETOWN, DE 19947

SCHOOL DISTRICT
CAPE HENLOPEN

FIRE DISTRICT
MILTON FIRE DEPT. (85)

POSTAL DISTRICT
MILTON (19968)

WATER UTILITY
TOWN OF MILTON

SEWER UTILITY
ARTESIAN WASTEWATER MANAGEMENT, INC.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		CURB
		EDGE OF PAVEMENT
		PAVEMENT
		EDGE OF GRAVEL
		EASEMENT
		FENCE
		PROPERTY LINE/ RIGHT OF WAY
		BUILDING RESTRICTION LINE
		PROPERTY, CORNER FOUND / TO BE SET
		PROPERTY, ADJOINING LINED
		SITE, MAIL BOX
		SITE, TRAFFIC SIGN
		SOIL BOUNDARY
WaC		SOIL LABEL
		STORM SEWER, INLET
		STORM SEWER,HEADWALL
		STORM SEWER, MANHOLE
D	D	STORM SEWER, UNDERGROUND
101	101	MINOR CONTOUR
100	100	MAJOR CONTOUR
X 100.5	35.00	SPOT ELEVATION
		TREE LINE
W	W	WATER, UNDERGROUND
		WATER VALVE
		WATER MAIN
		CLEAN OUT
S	S	SANITARY SEWER, UNDERGROUND
FM	FM	SANITARY SEWER, FORCED MAIN
		SANITARY SEWER, MANHOLE
UE	E	POWER-UNDERGROUND ELECTRIC
		POWER, UTILITY POLE
		STREET LIGHT
		BOUNDARY OF FEDERALLY REGULATED WETLANDS (USACOE)
		BOUNDARY OF DNREC (STATE) REGULATED TIDAL WETLAND
		LANDSCAPE BUFFER
		ROADWAY CENTERLINE
		CONCRETE SIDEWALK
		SHARED USE PATH
		DESIGNATED PUMPING STATION
UG	UG	UNDERGROUND GAS
UC	UC	UNDERGROUND COMMUNICATION
		STREET SIGNAGE / STRIPING

WETLANDS CERTIFICATION:
THIS PROPERTY HAS BEEN EXAMINED BY MICHAEL A. MARRA, WETLAND SCIENTIST OF PENNONI IN 2023 FOR THE PRESENCE OF WATERS OF THE UNITED STATES, INCLUDING WETLANDS (SECTION 404 AND SECTION 10), STATE SUBAQUEOUS LANDS AND SATE REGULATED WETLANDS AS ESTABLISHED BY THE REVIEWING AGENCIES IN THE FORM OF MANUALS, POLICIES AND PROCEDURES IN PLACE AT THE TIME THAT THE INVESTIGATION WAS CONDUCTED, THERE WERE NO WETLANDS FOUND ON THIS PROPERTY.

SIGNATURE DATE
MICHAEL A. MARRA, PROFESSIONAL WETLANDS SCIENTIST #3557
18072 DAVIDSON DRIVE, MILTON, DE 19968
(717) 620-5991 / EMAIL:MMARRA@PENNONI.COM

OWNER/DEVELOPER CERTIFICATION:
I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AS SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

RIBERA DEVELOPMENT, LLC DATE
C/O JOHN STAMATO
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108
JOHNSTAMATO@RIBERADEV.COM
(443) 871-0486

TOWN OF MILTON CERTIFICATION
THIS MAP HAS BEEN APPROVED BY THE TOWN COUNCIL OF THE TOWN OF MILTON AT A MEETING HELD ON _____.

THE TOWN OF MILTON

BY: _____
MAYOR

ATTEST: _____
SECRETARY

ENGINEER CERTIFICATION:
IT IS HEREBY CERTIFIED THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION, AND TO MY BEST KNOWLEDGE COMPLIES WITH APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES, THE DESIGN REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

SIGNATURE DATE
ALAN DECKTOR, PE (DE PE17771)
PENNONI ASSOCIATES, INC.
18072 DAVIDSON DRIVE
MILTON, DE 19968
OFFICE (302) 684-8030 - FAX (302) 684-8054
ADECKTOR@PENNONI.COM

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER BEFORE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

COVER SHEET

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

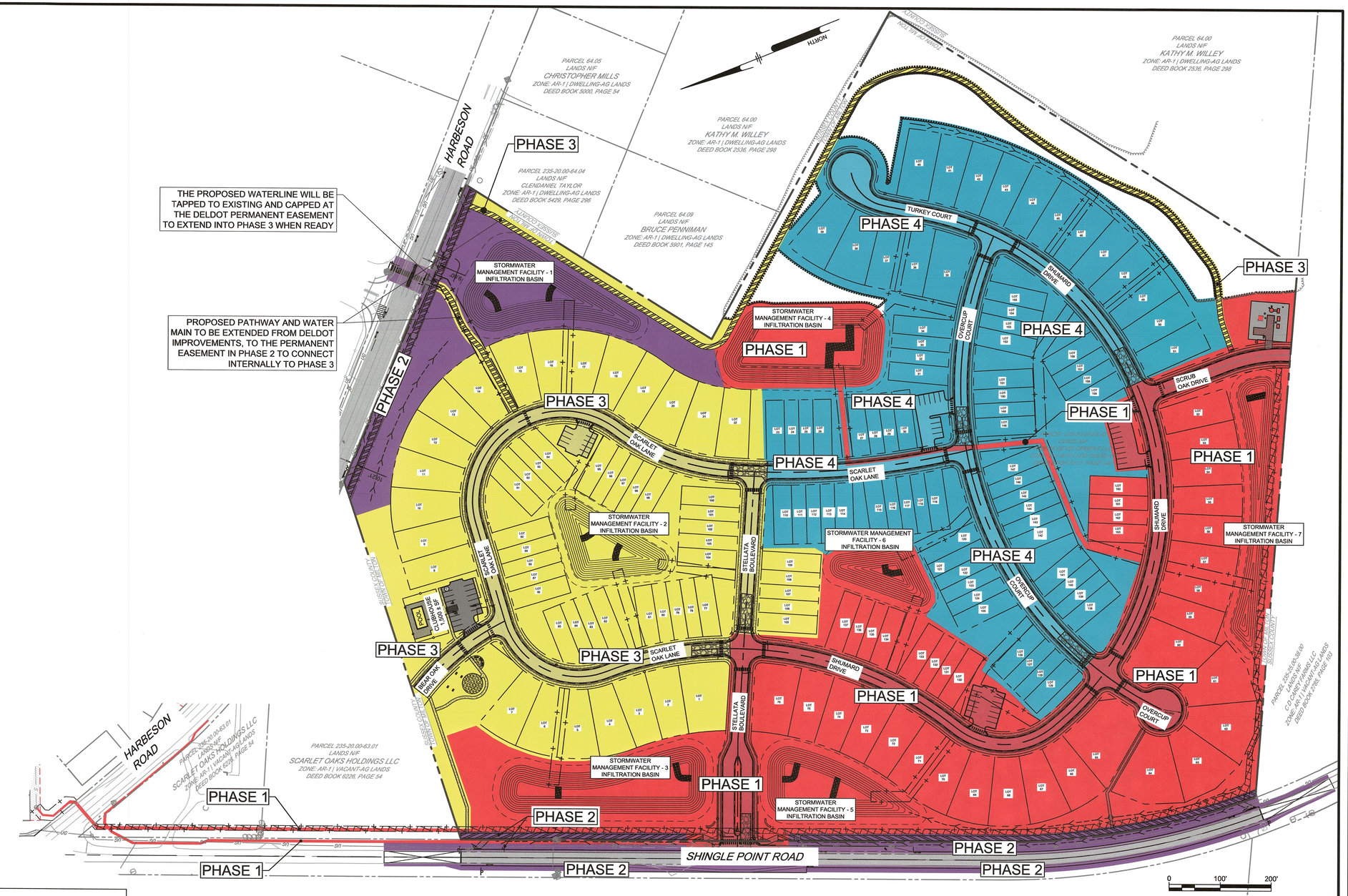
NO.	DATE	REVISIONS	BY	CH
1	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS		

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PROJECT	RIBER21002
DATE	2024-04-03
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

CS0001
SHEET 1 OF 82

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CONSTRUCTION PHASING DATA

PHASE	# OF LOTS	LOT #	STORM FACILITIES	LOD ACRES	ROADWAY FOOTAGE
1	37	DELDOT PHASE 1 ENTRANCE, LOTS 52-76, 130-137, 160-163, PUMP STATION & OFFSITE UTILITIES	STORM FACILITY 3,4,5,6 & 7	17.40	2,031 LF
2	0	DELDOT PROADWAY IMPROVEMENTS & OFFSITE	STORM FACILITY 1	4.47	1,562 LF
3	55	LOTS 1-22, 77-109 & WALKING PATH, AMENITY AREA (CLUBHOUSE, POOL & TOT LOT)	STORM FACILITY 2	12.90	1,767 LF
4	71	LOTS 23-51, 110-129, 138-159		13.71	2,069 LF
TOTAL	163			48.48	7,429 LF

NOTES:

1. ENTRANCE TO BE BUILT IN TWO PHASES.
2. THE DEVELOPER/CONTRACTOR SHOULD BE AWARE THAT THE RELEASE OF BUILDING PERMITS BY THE LAND USE AGENCY FOR THIS PROJECT IS BEING PHASED. THE CONSTRUCTION OF THE FULL MOVEMENT HAMMERHEAD SITE ENTRANCE SHALL BEGIN AND SHALL BE SUBSTANTIALLY COMPLETE, AS DEFINED PER THE DEPARTMENT'S STANDARD SPECIFICATIONS, PRIOR TO THE ISSUANCE OF THE 1ST BUILDING PERMIT AND SHALL BE COMPLETE, INCLUDING ACCEPTANCE BY THE DEPARTMENT, PRIOR TO THE ISSUANCE OF THE 5TH BUILDING PERMIT. THE REMAINING CONSTRUCTION OF THE FULL MOVEMENT SITE ENTRANCE AND ALL ASSOCIATED ROADWAY AND PEDESTRIAN IMPROVEMENTS, AS DEPICTED IN THE DELDOT-APPROVED PLANS, SHALL BEGIN PRIOR TO THE ISSUANCE OF THE 6TH BUILDING PERMIT AND BE COMPLETE, INCLUDING ACCEPTANCE BY THE DEPARTMENT, PRIOR TO THE ISSUANCE OF THE 35TH BUILDING PERMIT (A MAXIMUM OF 23 SINGLE FAMILY HOME BUILDING PERMITS AND 12 MULTI FAMILY HOMES BUILDING PERMITS).
3. THE PUMP STATION IS PART OF PHASE 1 AND IS RECOMMENDED TO BE BUILT AND OPERATIONAL BEFORE THE FIRST HOME IS BUILT, BUT DUE TO THE LONG LEAD ITEMS ON SPECIFIC EQUIPMENT FOR THE PUMP STATION, A DNREC PUMP AND HAUL PERMIT CAN BE OBTAINED TO ALLOW FOR HOME CONSTRUCTION OCCUPANCY WHILE THE PUMP STATION IS COMPLETED.
4. A LETTER OF ACCEPTANCE BY ARTESIAN SHALL BE SUBMITTED TO THE TOWN TO INITIATE BUILDING PERMITS FOR PHASE 1.
5. THE COMMUNITY AND AMENITIES WILL BE PART OF PHASE 3 AND SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF THE 93RD BUILDING PERMIT.

Pennoni

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16072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

ALAN M. DECKLOR LICENSED No. 17771 DELAWARE PROFESSIONAL ENGINEER
8/6/2025

SCARLET OAKS SUBDIVISION

TM#: 235-20.00-63.02
SHINGLE POINT (SR 249)
MILTON, DE 19968

CONSTRUCTION PHASING PLAN

RIBERA DEVELOPMENT, LLC
8664 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
1	2025-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH

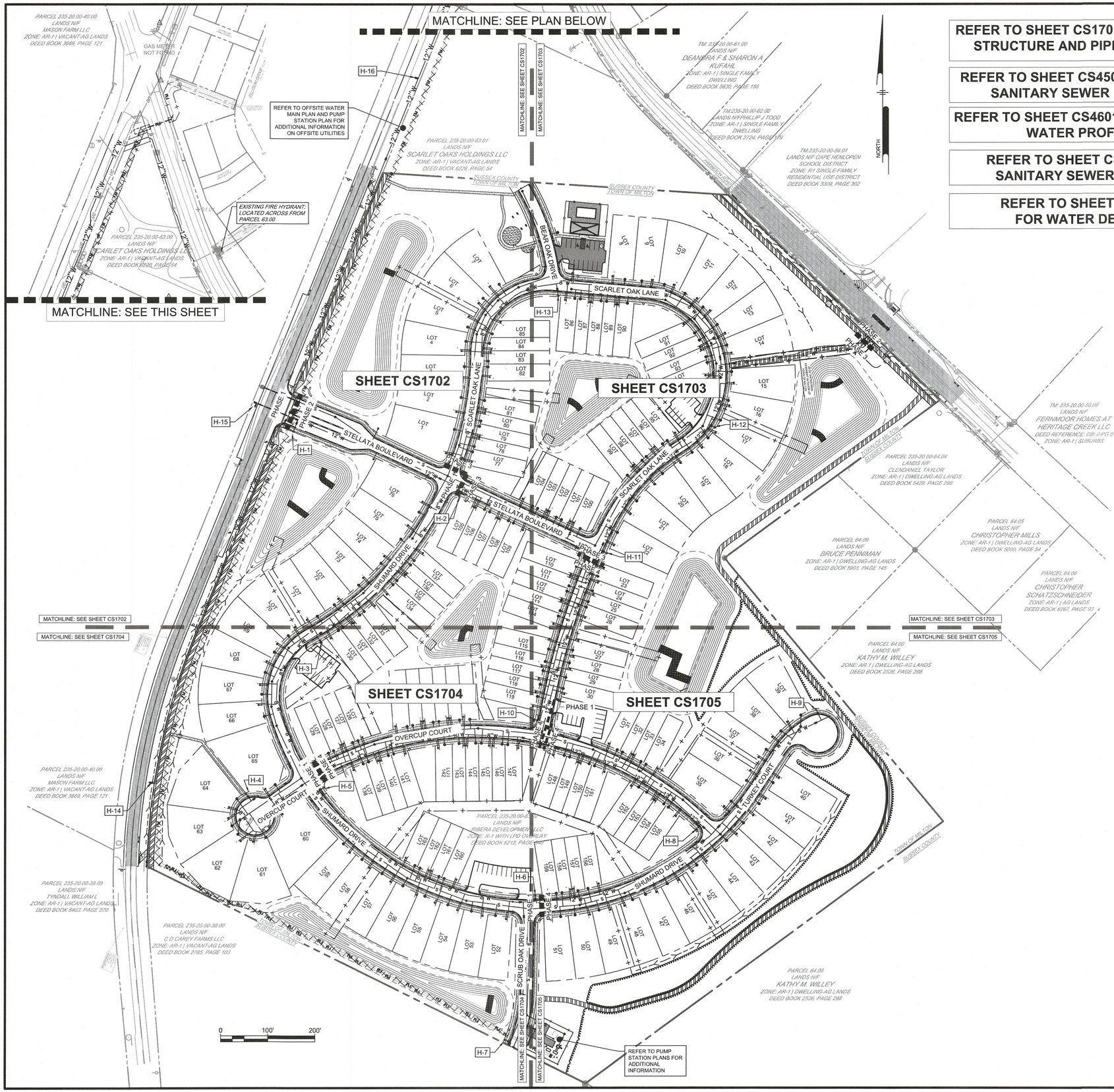
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PROJECT	RIBER21002
DATE	2025-08-19
DRAWING SCALE	1" = 100'
DRAWN BY	ACC
APPROVED BY	AMD

CS0901

SHEET 7 OF 82

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PLOTSTYLE: Pennoni NCS.stb



REFER TO SHEET CS1701A FOR SEWER STRUCTURE AND PIPE SCHEDULE

REFER TO SHEET CS4501-CS4503 FOR SANITARY SEWER PROFILES

REFER TO SHEET CS4601 & CS4602 FOR WATER PROFILES

REFER TO SHEET CS6002 FOR SANITARY SEWER DETAILS

REFER TO SHEET CS6003 FOR WATER DETAILS

FIRE HYDRANT LOCATION (WITHIN SCARLET OAKS SUBDVISION)

HYDRANT #	LOCATION
H-1	INGRESS SIDE OF MAIN ENTRANCE (STELLATA BLVD.)
H-2	ADJACENT TO LOT 105 (STELLATA BLVD.)
H-3	ACROSS FROM LOT 71 (SHUMARD DRIVE)
H-4*	IN FRONT OF LOT 65 (OVERCUP COURT)
H-5	ACROSS FROM LOT 60 (SHUMARD DRIVE)
H-6	ADJACENT TO LOT 159 (SHUMARD DRIVE)
H-7**	ACROSS FROM PUMP STATION (SCRUB OAK DRIVE)
H-8	ACROSS FROM LOT 44 (OVERCUP COURT)
H-9*	ADJACENT TO LOT 39 (TURKEY COURT)
H-10	ADJACENT TO LOT 119 (SCARLET OAK LANE)
H-11	BETWEEN LOTS 22 AND 23 (SCARLET OAK LANE)
H-12	IN FRONT OF LOT 17 (SCARLET OAK LANE)
H-13	ADJACENT OF LOT 86 (SCARLET OAK LANE)

* FIRE HYDRANT ACTING AS A PERMANENT BLOW-OFF
** FIRE HYDRANT ACTING AS A TEMPORARY BLOW-OFF

FIRE HYDRANT LOCATION (ALONG SHINGLE POINT ROAD FRONTAGE)

HYDRANT #	LOCATION
H-14	WEST OF LOT 64 ON SHINGLE POINT RD.
H-15**	ACROSS FROM PROPERTY ENTRANCE ON SHINGLE POINT RD.
H-16	NORTHWEST OF LOT 7 ON SHINGLE POINT RD.

LEGEND

EXISTING

PROPOSED

WATER MAIN, VALVE, HYDRANT & METER PIT
FIRE SERVICE LINE
SEWER MAIN, MANHOLE, CLEAN OUT, AND DIRECTIONAL FLOW
STORMPIPE, INLET, MANHOLE & FLARED END
FIRE HYDRANT
WATER VALVE
DOMESTIC WATER METER
SEWER SERVICE LINE AND CLEAN OUT

UTILITY NOTES:

1. ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL AND LOCAL CODES. ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER.
2. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE ENGINEER OF ANY DISCREPANCIES OR ERRORS THEY DISCOVER IN THE PLAN.
3. UTILITIES ENTER THE PREMISES FROM PUBLIC STREETS OR RIGHTS OF WAY.
4. PROPOSED UTILITY SERVICE AND CONNECTIONS (SANITARY SEWERS) SUBJECT TO FINAL DESIGN AND APPROVAL.
5. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN THE WATER AND SEWER MAINS.
6. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
7. PROVIDE A FLOW TEST ON NEW HYDRANT TO FIRE MARSHALL ONCE IT HAS BEEN INSTALLED AND PRIOR TO OPERATIONS.
8. THE DISTANCE BETWEEN THE FIRE HYDRANT AND THE FIRE LANE SHALL NOT BE GREATER THAN SEVEN FEET.
   8.1. THE STEAMER CONNECTION OF ALL FIRE HYDRANTS SHALL BE SO POSITIONED SO AS TO BE FACING THE STREET OR FIRE LANE.
   8.2. THE CENTER OF ALL HOSE OUTLETS ON FIRE HYDRANTS SHALL NOT BE LESS THAN 18" ABOVE FINAL GRADE.
   8.3. FIRE HYDRANTS SHALL BE COLOR CODED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
9. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN THE WATER AND SEWER MAINS, AND A MINIMUM 12" VERTICAL SEPARATION BETWEEN STORM AND SEWER MAINS/ WATER MAINS.
10. WATER AND SEWER SERVICE WILL BE INSTALLED IN PHASES, REFER TO PHASING CONSTRUCTION PLAN, SHEET CS0901
11. ALL FACILITIES TO MEET TOWN OF MILTON WATER AND ARTESIAN WASTEWATER MANAGEMENT, INC. STANDARDS AND SPECIFICATIONS.
12. ALL SEWER SERVICE LATERALS SHALL BE 6" PVC SDR C900 GREEN.
13. ALL WATER SERVICE CONNECTIONS FOR THE RESIDENTIAL LOTS TO BE SERVICED WITH A MINIMUM OF 2" LATERAL (SPLIT TO ALLOW FOR A 2" FIRE SERVICE LINE AND A 1" DOMESTIC LINE) AND DOMESTIC METER (NO METER ON FIRE SERVICE LINE) AND A 2" LATERAL AND METER FOR THE PUMP STATION AND CLUBHOUSE. THE
14. WATER SERVICES CANOT BE TAPPED AT SAME LOCATION ON THE WATER MAIN. MAINTAIN 18" HORIZONTAL SEPARATION FOR SERVICES OF LOTS ON OPPOSITE SIDES OF THE ROAD AND ALL PIPE JOINTS.
15. ALL SERVICES SHALL BE LOCATED 10' MINIMUM FROM LOT CORNER.
16. MAINTAIN A MINIMUM OF 10' SEPARATION BETWEEN THE WATER AND SEWER SERVICE LATERALS.
17. NO OBJECTS, STANDS, DISPLAYS, OR OTHER IMPEDIMENTS SHALL BE LOCATED WITHIN THE DEMARCATION AREA.
18. PROPOSED ELECTRIC AND TELECOMMUNICATION CONNECTIONS TO BE DETERMINED WITH COORDINATION FROM UTILITY PROVIDERS AT SUCH TIME WHEN A HOMEBUILDER IS IDENTIFIED AND SERVICE TO THEIR DESIRED PRODUCTS ARE KNOWN. THERE IS A UTILITY EASEMENT ALONG THE INTERNAL ROW TO ALLOW FOR THIS INFRASTRUCTURE TO BE PLACED.
19. PROPOSED ONSITE FIRE HYDRANT LOCATIONS AND FIRE WATER SUPPLY LINE LOCATIONS TO BE COORDINATED IN THE FIELD WITH THE STATE FIRE MARSHALL.
20. THE PROPOSED RESIDENTIAL DWELLINGS AND CLUBHOUSE SHALL BE PROTECTED WITH AUTOMATIC SPRINKLERS IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS AND NFPA 13.
21. THE CONTRACTOR SHALL INSTALL AIR RELEASE VALVES AS SPECIFIED IN FIELD.

TOWN OF MILTON WATER GENERAL NOTES:

1. WATER SUPPLY BY THE TOWN OF MILTON WATER. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE TOWN OF MILTON WATER STANDARDS AND SPECIFICATIONS.
2. CONTRACTORS SHALL BE REQUIRED TO PROVIDE MATERIAL AND CONSTRUCTION SUBMITTALS TO THE TOWN AND TOWN ENGINEER FOR VERIFICATION OF COMPLIANCE WITH REQUIREMENTS.
3. ALL WATER MAINS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM SANITARY SEWER.
4. WATER MAINS CROSSING SANITARY SEWERS, STORM SEWERS, OR FORCE MAINS SHALL BE LOCATED TO PROVIDE A MIN. DISTANCE OF ATLEAST 18 INCHES VERTICALLY BETWEEN THE OUTSIDE OF THE WATER MAIN IS EITHER ABOVE OR BELOW THE OTHER PIPE WITH PREFERENCE TO THE WATER MAIN LOCATION ABOVE THE OTHER PIPE. CROSSING SHALL BE ARRANGED SO THAT THE JOINTS IN THE WATER MAIN WILL BE AS FAR AS POSSIBLE FROM SEWER JOINTS. WATER MAINS SHALL NOT PASS THROUGH OR COME IN CONTACT WITH ANY SEWER MANHOLE.
   4.1. WHERE SEPARATION OF UTILITIES FAILS TO MEET THE 18-INCH MINIMUM REQUIREMENT, THE WATER MAIN SHALL BE SLEEVED TO ATLEAST 5 FEET TO EACH SIDE F THE CROSSING USING A CASING PIPE AND CASING SPACERS.
   4.2. WATERMAIN PIPING SHALL BE ROUTED TO A MINIMUM COVER AS POSSIBLE. WATER MAIN PIPING SHALL ONLY BE INSTALLED DEEPER IN UTILITY CROSSING LOCATIONS (OR AS OTHERWISE NOTED ON THE PLANS). IF A SHALLOWER BURIAL DEPTH OF 36 INCHES OF COVER ALLOWS FOR A SUBSTANTIALLY LESS BURIAL DEPTH, THE ENGINEER / CONTRACTOR MAY REQUEST A REDUCTION IN DEPTH TO BE APPROVED BY THE TOWN.
5. THE ENTIRE WATER DISTRIBUTION SYSTEM MUST BE IN COMPLIANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE DELAWARE STATE DIVISION OF PUBLIC HEALTH.
6. FIXTURE LOCATIONS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF MILTON.
7. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND ALLOW FOR UTILITY LOCATIONS.
8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DONE TO EXISTING UTILITIES DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY REPAIRED AT HIS/HER EXPENSE.
9. PLAN LOCATIONS AND DIMENSIONS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE SPECIFIED BY ENGINEER. THE CONTRACTOR SHALL ADJUST WATERLINE LOCATIONS AS REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF DAMAGED OR DESTROYED LANDSCAPE.
11. THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE PERFORMED IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
12. DISINFECTION REQUIREMENTS SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE STATE ENVIRONMENTAL PROTECTION AGENCY OR EQUIVALENT TO THE AMERICAN WATER WORKS ASSOCIATION STANDARD C60-08.
13. THE MIN. DEPTH OF COVER FROM THE TOP OF THE WATER MAIN TO FINISHED GRADE SHALL BE 42 INCHES.
14. WATER MAIN PIPING TO BE C900 OR C909 FOR PIPE SIZES 4 IN - 12 IN AND C909 FOR PIPE SIZED 12 IN -24 IN.
15. INDIVIDUAL RESIDENTIAL SERVICE PIPING SHALL BE 2" CTS SDR9 (SPLIT TO ALLOW FOR A 2" FIRE SERVICE LINE AND A 1" DOMESTIC LINE) PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS.
16. ALL COMPRESSION FITTINGS (ALL SIZES) SHALL BE FORD QUICK JOINT FITTINGS PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS.
17. THE CONTRACTOR SHALL PROVIDE PRESSURE REDUCING VALVES IN UNITS, IF NECESSARY.
18. THE CONTRACTOR SHALL PROVIDE BUTTRESSES FOR ALL HORIZONTAL AND VERTICAL BENDS AS REQUIRED PER STANDARDS AND SPECIFICATIONS OF THE TOWN OF MILTON.
   18.1. ALL WATER MAIN FITTINGS NOT COMPRESSION SHALL BE STANDARD DUCTILE IRON FITTINGS PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS.
19. ALL WATER MAIN VALVE BOXES (INCLUDING THOSE LOCATED WITHIN GRASS) SHALL BE SET WITH A CONCRETE COLLAR AT FINISHED GRADE IN ACCORDANCE WITH TOWN DETAILS.
20. EROSION CONTROL FOR WORK RELATED TO THE INSTALLATION OF WATERLINE IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED IN ACCORDANCE WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK OF JANUARY 2026 OR LATEST ISSUE.
21. PROPOSED RESIDENTIAL SITES ARE REQUIRED TO PURCHASE THE WATER METER AND THE METER PIT FROM THE TOWN OF MILTON AND INSTALLED BY THE DEVELOPER AT THEIR COST
22. FINAL PROJECT SUBMITTALS SHALL BE PROVIDED TO DOCUMENT:
   22.1. AS-BUILT UTILITY LOCATION REFERENCED TO DELAWARE STATE PLANE COORDINATE SYSTEM INCLUDING LABELS FOR SIZES, MATERIALS AND DEPTHS OF BURIED FACILITIES.
   22.2. TEST RESULTS FOR POTABLE DRINKING WATER DISTRIBUTION SYSTEMS.
   22.3. TEST RESULTS FOR POTABLE DRINKING WATER STORAGE FACILITIES.
   22.4. NO INSPECTION, REVIEW OR ACCEPTANCE OF SUBMITTALS BY THE TOWN, TOWN ENGINEER, OR OTHER ENTITY HIRED BY THE TOWN FOR THE PURPOSE OF MAKING INSPECTIONS SHALL RELIEVE THE CONTRACTOR FROM ANY OF ITS RESPONSIBILITIES LISTED IN THE TOWN OF MILTON STANDARDS AND SPECIFICATIONS.

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

ALAN M. DECKTOR LICENSE No. 17771 DELAWARE PROFESSIONAL ENGINEER
8/8/2026

SCARLET OAKS SUBDIVISION

TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

UTILITY PLAN KEY SHEET

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	BY
1	2026-04-08	LFS
2	2026-04-22	CH
3	2026-06-29	ASM
	REVISIONS	
1	REVISED PER ARTESIAN COMMENTS	
2	REVISED PER TOWN OF MILTON COMMENTS	
3	REVISED PER ARTESIAN COMMENTS	

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSION OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	RIBER21002
DATE	2024-04-03
DRAWING SCALE	1"= 100'
DRAWN BY	EWW
APPROVED BY	AMD

CS1701

SHEET 20 OF 82

u:\Accounts\RIBER\river21002 - company store property\DESIGN_SHEETS\CONSTRUCTION PLANS\CS1701.dwg PLOTTED: 7/14/2026 12:26 PM BY: Ahmed Mohamed PLOTSTYLE: Pennoni MCS.ctb

SANITARY SEWER STRUCTURE TABLE					
ID	RIM ELEVATION	INV IN (FROM)	INV OUT (TO)	TYPE	DEPTH
CAP-1	30.55		23.12 (8" SDR-26) SMH-54	CLEANOUT	6.97
CAP-2	31.32		17.80 (8" SDR-26) SMH-18	CLEANOUT	13.14
CAP-3	32.08			NULL STRUCTURE	???
PS-1 WW	10.81	9.91 (10" SDR @ 0.28%) SMH-1		CLEANOUT	???
SMH-1	33.32	10.08 (8" SDR @ 0.28%) SMH-2	9.98 (10" SDR) PS-1 WW	60" MH	22.67
SMH-2	32.06	10.43 (8" SDR @ 0.28%) SMH-3 10.53 (8" SDR @ 0.28%)	10.33 (8" SDR) SMH-1	60" MH	21.07
SMH-3	32.88	16.12 (8" SDR-26 @ 0.28%) SMH-27 11.17 (8" SDR @ 0.28%) SMH-4	11.07 (8" SDR) SMH-2	60" DROP MH	21.14
SMH-4	32.94	11.65 (8" SDR @ 0.28%) SMH-5	11.55 (8" SDR) SMH-3	60" MH	20.72
SMH-5	32.11	12.13 (8" SDR @ 0.28%) SMH-6	12.03 (8" SDR) SMH-4	60" MH	19.41
SMH-6	32.12	12.62 (8" SDR @ 0.26%) SMH-7	12.52 (8" SDR) SMH-5	60" MH	18.93
SMH-7	32.53	12.90 (8" SDR @ 0.28%) SMH-8	12.80 (8" SDR) SMH-6	60" MH	19.06
SMH-8	32.98	13.29 (8" SDR @ 0.28%) SMH-9 25.02 (8" SDR-26 @ 0.40%) SMH-19	13.19 (8" SDR) SMH-7	60" DROP MH	19.12
SMH-9	32.38	13.73 (8" SDR @ 0.28%) SMH-10	13.63 (8" SDR) SMH-8	60" MH	18.08
SMH-10	32.13	13.95 (8" SDR @ 0.28%) SMH-11	13.85 (8" SDR) SMH-9	60" MH	17.62
SMH-11	31.83	14.20 (8" SDR @ 0.28%) SMH-12	14.10 (8" SDR) SMH-10	60" MH	17.06
SMH-12	31.36	14.52 (8" SDR @ 0.28%) SMH-13	14.42 (8" SDR) SMH-11	60" MH	16.28
SMH-13	32.24	15.18 (8" SDR @ 0.28%) SMH-14	15.08 (8" SDR) SMH-12	60" MH	16.49
SMH-14	31.62	15.72 (8" SDR @ 0.28%) SMH-15	15.62 (8" SDR) SMH-13	60" MH	15.33
SMH-15	30.88	19.66 (8" SDR-26 @ 0.28%) SMH-36 20.09 (8" SDR-26 @ 0.28%) SMH-20 16.25 (8" SDR-26 @ 0.28%) SMH-16	16.15 (8" SDR) SMH-14	60" DROP MH	14.06
SMH-16	30.97	16.89 (8" SDR-26 @ 0.28%) SMH-17	16.79 (8" SDR-26) SMH-15	48" MH	13.51

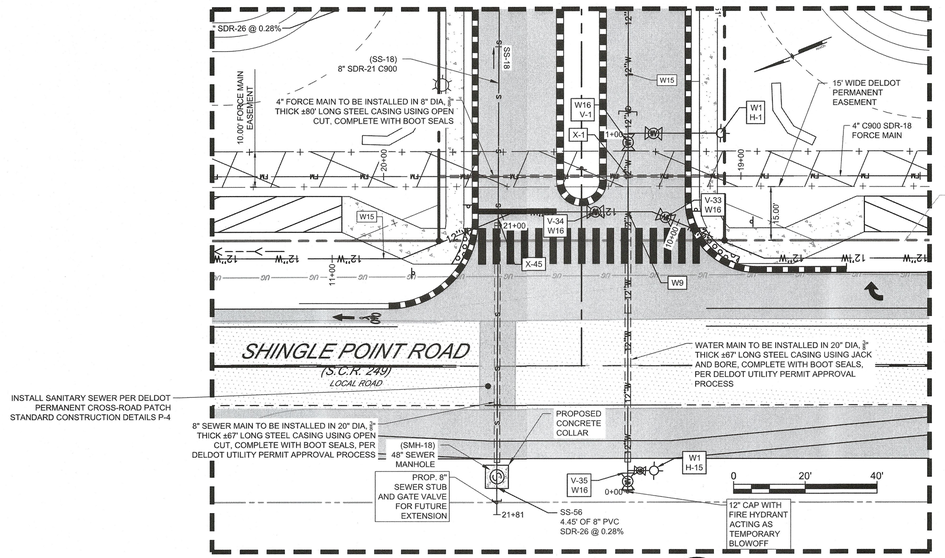
SANITARY SEWER STRUCTURE TABLE					
ID	RIM ELEVATION	INV IN (FROM)	INV OUT (TO)	TYPE	DEPTH
SMH-17	31.14	17.22 (8" SDR-26 @ 0.28%) SMH-18	17.12 (8" SDR-26) SMH-16	48" MH	13.35
SMH-18	31.94	17.79 (8" SDR-26 @ 0.17%) CAP-2	17.69 (8" SDR-26) SMH-17	48" MH	13.58
SMH-19	33.72		25.64 (8" SDR-26) SMH-8	48" TERMINAL MH	7.41
SMH-20	30.49	20.39 (8" SDR-26 @ 0.28%) SMH-21	20.29 (8" SDR-26) SMH-15	48" MH	9.53
SMH-21	29.88	20.80 (8" SDR-26 @ 0.28%) SMH-22	20.70 (8" SDR-26) SMH-20	48" MH	8.51
SMH-22	29.19	21.26 (8" SDR-26 @ 0.28%) SMH-23	21.16 (8" SDR-26) SMH-21	48" MH	7.36
SMH-23	29.10	21.49 (8" SDR-26 @ 0.28%) SMH-24	21.39 (8" SDR-26) SMH-22	48" MH	7.05
SMH-24	29.22	21.70 (8" SDR-26 @ 0.28%) SMH-25	21.60 (8" SDR-26) SMH-23	48" MH	6.95
SMH-25	29.54	21.94 (8" SDR-26 @ 0.28%) SMH-26	21.84 (8" SDR-26) SMH-24	48" MH	7.03
SMH-26	29.84	22.24 (8" SDR-26 @ 0.28%) SMH-52	22.14 (8" SDR-26) SMH-25	48" MH	7.03
SMH-27	32.26	16.51 (8" SDR-26 @ 0.28%) SMH-28	16.41 (8" SDR-26) SMH-3	48" MH	15.18
SMH-28	31.71	16.89 (8" SDR-26 @ 0.28%) SMH-29	16.79 (8" SDR-26) SMH-27	48" MH	14.25
SMH-29	32.17	17.37 (8" SDR-26 @ 0.28%) SMH-30	17.27 (8" SDR-26) SMH-28	48" MH	14.23
SMH-30	32.67	17.76 (8" SDR-26 @ 0.28%) SMH-50 17.76 (8" SDR-26 @ 0.28%) SMH-31	17.66 (8" SDR-26) SMH-29	48" MH	14.34
SMH-31	31.94	18.16 (8" SDR-26 @ 0.28%) SMH-32	18.06 (8" SDR-26) SMH-30	48" MH	13.21
SMH-32	31.85	18.57 (8" SDR-26 @ 0.28%) SMH-33	18.47 (8" SDR-26) SMH-31	48" MH	12.71
SMH-33	32.48	18.97 (8" SDR-26 @ 0.28%) SMH-34	18.87 (8" SDR-26) SMH-32	48" MH	12.94
SMH-34	33.05	19.42 (8" SDR-26 @ 0.28%) SMH-35 25.11 (8" SDR-26 @ 0.30%) SMH-46	19.32 (8" SDR-26) SMH-33	60" DROP MH	13.06
SMH-35	30.39	20.07 (8" SDR-26 @ 0.40%) SMH-45	19.97 (8" SDR-26) SMH-34	48" MH	9.76
SMH-36	31.11	20.74 (8" SDR-26 @ 0.28%) SMH-37	20.64 (8" SDR-26) SMH-15	60" DROP MH	9.80

SANITARY SEWER STRUCTURE TABLE					
ID	RIM ELEVATION	INV IN (FROM)	INV OUT (TO)	TYPE	DEPTH
SMH-37	30.55	21.18 (8" SDR-26 @ 0.28%) SMH-38	21.08 (8" SDR-26) SMH-36	48" MH	8.81
SMH-38	29.83	21.64 (8" SDR-26 @ 0.28%) SMH-39	21.54 (8" SDR-26) SMH-37	48" MH	7.63
SMH-39	29.38	22.02 (8" SDR-26 @ 0.28%) SMH-40	21.92 (8" SDR-26) SMH-38	48" MH	6.79
SMH-40	29.22	22.30 (8" SDR-26 @ 0.28%) SMH-41	22.23 (8" SDR-26) SMH-39	48" MH	6.33
SMH-41	29.60	22.58 (8" SDR-26 @ 0.28%) SMH-41A	22.48 (8" SDR-26) SMH-40	48" MH	6.46
SMH-41A	29.91	22.80 (8" SDR-26 @ 0.28%) SMH-42	22.70 (8" SDR-26) SMH-41	48" MH	6.54
SMH-42	30.30	23.07 (8" SDR-26 @ 0.28%) SMH-43	22.97 (8" SDR-26) SMH-41A	48" MH	6.66
SMH-43	30.78	23.38 (8" SDR-26 @ 0.40%) SMH-44	23.28 (8" SDR-26) SMH-42	48" MH	6.84
SMH-44	30.25		24.18 (8" SDR-26) SMH-43	48" MH	5.40
SMH-45	31.10		20.82 (8" SDR-26) SMH-35	48" MH	9.62
SMH-46	32.34	25.58 (8" SDR-26 @ 0.28%) SMH-47	25.48 (8" SDR-26) SMH-34	48" MH	6.19
SMH-47	32.64	25.96 (8" SDR-26 @ 0.28%) SMH-48	25.86 (8" SDR-26) SMH-46	48" MH	6.11
SMH-48	32.06	26.41 (8" SDR-26 @ 0.40%) SMH-49	26.31 (8" SDR-26) SMH-47	48" MH	5.09
SMH-49	32.50		26.82 (8" SDR-26) SMH-48	48" MH	5.01
SMH-50	31.44	18.20 (8" SDR-26 @ 0.62%) SMH-51	18.10 (8" SDR-26) SMH-30	48" MH	12.67
SMH-51	31.53		19.21 (8" SDR-26) SMH-50	48" TERMINAL MH	11.65
SMH-52	30.17	22.61 (8" SDR-26 @ 0.40%) SMH-54	22.51 (8" SDR-26) SMH-26	48" MH	6.99
SMH-54	30.52	23.10 (8" SDR-26 @ 0.28%) CAP-1	22.98 (8" SDR-26) SMH-52	48" MH	6.87

SANITARY SEWER PIPE TABLE								
ID	FROM STRUCTURE	INV OUT	TO STRUCTURE	INV IN	DIAMETER (in)	MATERIAL	LENGTH (ft)	SLOPE
SS-1	SMH-1	9.98	PS-1 WW	9.91	10"	PVC SDR-21 C900	26.00'	0.28%
SS-2	SMH-1	10.08	SMH-2	10.33	8"	PVC SDR-21 C900	89.45'	0.28%
SS-3	SMH-2	10.43	SMH-3	11.07	8"	PVC SDR-21 C900	225.68'	0.28%
SS-4	SMH-4	11.55	SMH-3	11.17	8"	PVC SDR-21 C900	138.53'	0.28%
SS-5	SMH-5	12.03	SMH-4	11.65	8"	PVC SDR-21 C900	134.20'	0.28%
SS-6	SMH-6	12.52	SMH-5	12.13	8"	PVC SDR-21 C900	139.07'	0.28%
SS-7	SMH-7	12.80	SMH-6	12.62	8"	PVC SDR-21 C900	69.31'	0.26%
SS-8	SMH-8	13.19	SMH-7	12.90	8"	PVC SDR-21 C900	105.23'	0.28%
SS-9	SMH-9	13.63	SMH-8	13.29	8"	PVC SDR-21 C900	122.57'	0.28%
SS-10	SMH-10	13.85	SMH-9	13.73	8"	PVC SDR-21 C900	41.91'	0.28%
SS-11	SMH-11	14.10	SMH-10	13.95	8"	PVC SDR-21 C900	53.22'	0.28%
SS-12	SMH-12	14.42	SMH-11	14.20	8"	PVC SDR-21 C900	79.71'	0.28%
SS-13	SMH-13	15.08	SMH-12	14.52	8"	PVC SDR-21 C900	197.30'	0.28%
SS-14	SMH-14	15.62	SMH-13	15.18	8"	PVC SDR-21 C900	156.18'	0.28%
SS-15	SMH-15	16.15	SMH-14	15.72	8"	PVC SDR-21 C900	152.16'	0.28%
SS-16	SMH-16	16.79	SMH-15	16.25	8"	PVC SDR-26	189.70'	0.28%
SS-17	SMH-17	17.12	SMH-16	16.89	8"	PVC SDR-26	81.03'	0.28%
SS-18	SMH-18	17.69	SMH-17	17.22	8"	PVC SDR-26	166.99'	0.28%
SS-19	SMH-20	20.29	SMH-15	20.09	8"	PVC SDR-26	70.15'	0.28%
SS-20	SMH-21	20.70	SMH-20	20.39	8"	PVC SDR-26	110.62'	0.28%

SANITARY SEWER PIPE TABLE								
ID	FROM STRUCTURE	INV OUT	TO STRUCTURE	INV IN	DIAMETER (in)	MATERIAL	LENGTH (ft)	SLOPE
SS-21	SMH-22	21.16	SMH-21	20.80	8"	PVC SDR-26	127.93'	0.28%
SS-22	SMH-23	21.39	SMH-22	21.26	8"	PVC SDR-26	45.17"	0.28%
SS-23	SMH-24	21.60	SMH-23	21.49	8"	PVC SDR-26	40.67"	0.28%
SS-24	SMH-25	21.84	SMH-24	21.70	8"	PVC SDR-26	51.87"	0.28%
SS-25	SMH-26	22.14	SMH-25	21.94	8"	PVC SDR-26	71.85'	0.28%
SS-26	SMH-27	16.41	SMH-3	16.12	8"	PVC SDR-21 C900	104.14'	0.28%
SS-27	SMH-28	16.79	SMH-27	16.51	8"	PVC SDR-21 C900	98.34'	0.28%
SS-28	SMH-29	17.27	SMH-28	16.89	8"	PVC SDR-26	136.11'	0.28%
SS-29	SMH-30	17.66	SMH-29	17.37	8"	PVC SDR-26	103.24'	0.28%
SS-30	SMH-31	18.06	SMH-30	17.76	8"	PVC SDR-26	108.20'	0.28%
SS-31	SMH-32	18.47	SMH-31	18.16	8"	PVC SDR-26	110.83'	0.28%
SS-32	SMH-33	18.87	SMH-32	18.57	8"	PVC SDR-26	107.98'	0.28%
SS-33	SMH-34	19.32	SMH-33	18.97	8"	PVC SDR-26	124.65'	0.28%
SS-34	SMH-35	19.97	SMH-34	19.42	8"	PVC SDR-26	195.02'	0.28%
SS-35	SMH-45	20.82	SMH-35	20.07	8"	PVC SDR-26	188.30'	0.40%
SS-36	SMH-37	21.08	SMH-36	20.74	8"	PVC SDR-26	119.97'	0.28%
SS-37	SMH-38	21.54	SMH-37	21.18	8"	PVC SDR-26	128.04'	0.28%
SS-38	SMH-39	21.92	SMH-38	21.64	8"	PVC SDR-26	99.09'	0.28%
SS-39	SMH-40	22.23	SMH-39	22.02	8"	PVC SDR-26	74.73'	0.28%
SS-40	SMH-41	22.48	SMH-40	22.30	8"	PVC SDR-26	62.72'	0.28%

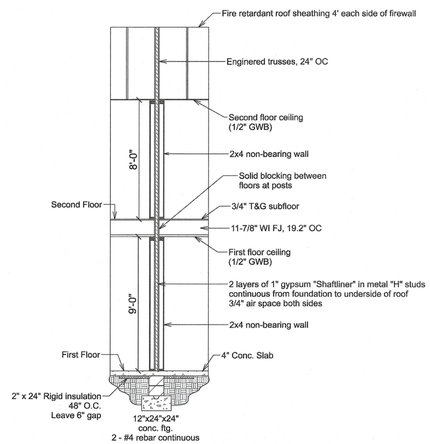
SANITARY SEWER PIPE TABLE								
ID	FROM STRUCTURE	INV OUT	TO STRUCTURE	INV IN	DIAMETER (in)	MATERIAL	LENGTH (ft)	SLOPE
SS-41	SMH-42	22.97	SMH-41A	22.80	8"	PVC SDR-26	62.86'	0.28%
SS-41A	SMH-41A	22.70	SMH-41	22.58	8"	PVC SDR-26	44.15'	0.28%
SS-42	SMH-43	23.28	SMH-42	23.07	8"	PVC SDR-26	73.66'	0.28%
SS-43	SMH-44	24.18	SMH-43	23.38	8"	PVC SDR-26	200.81'	0.40%
SS-44	SMH-15	19.66	SMH-36	20.64	8"	PVC SDR-26	346.45'	0.28%
SS-45	SMH-46	25.48	SMH-34	25.11	8"	PVC SDR-26	124.89'	0.30%
SS-46	SMH-47	25.86	SMH-46	25.58	8"	PVC SDR-26	100.56'	0.28%
SS-47	SMH-48	26.31	SMH-47	25.96	8"	PVC SDR-26	123.26'	0.28%
SS-48	SMH-49	26.82	SMH-48	26.41	8"	PVC SDR-26	102.57'	0.40%
SS-49	SMH-50	18.10	SMH-30	17.76	8"	PVC SDR-26	123.29'	0.28%
SS-50	SMH-51	19.21	SMH-50	18.20	8"	PVC SDR-26	162.66'	0.62%
SS-51	SMH-19	25.64	SMH-8	25.02	8"	PVC SDR-26	156.82'	0.40%
SS-52	SMH-52	22.51	SMH-26	22.24	8"	PVC SDR-26	97.55'	0.28%
SS-53	SMH-54	22.98	SMH-52	22.61	8"	PVC SDR-26	93.52'	0.40%
SS-54	CAP-1	23.12	SMH-54	23.10	8"	PVC SDR-26	7.10'	0.28%
SS-55	CAP-2	17.80	SMH-18	17.79	8"	PVC SDR-26	7.19'	0.17%
SS-56		10.73	SMH-2	10.53	8"	PVC SDR-21 C900	72.49'	0.28%



DETAIL- ENTRANCE UTILITIES BLOWUP (1 / CS1701A)
SCALE: 1"= 20'

UTILITY KEYED NOTES

- W1 PROPOSED FIRE HYDRANT ASSEMBLY
- W2 1" CTS SDR9 SERVICE LATERAL WATER CONNECTION, ∯ METER WITH CURB STOP AND VALVE BOX PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS AND TOWN OF MILTON DETAILS
- W2A 2" CTS SDR9 SERVICE LATERAL FOR FIRE SERVICE, SPRINKLER CONNECTION PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS AND TOWN OF MILTON DETAILS
- W2B 2" CTS SDR9 SERVICE LATERAL WATER CONNECTION FOR PUMP STATION AND CLUBHOUSE
- W3 INSTALL VALVE, CAP AND 2" TEMPORARY BLOW-OFF (TO BE INSTALLED 20' FROM ASSOCIATED VALVE)
- W4 8" x 12" REDUCER
- W5 11.25° HORIZONTAL BEND
- W6 22.5° HORIZONTAL BEND
- W7 45° HORIZONTAL BEND
- W8 8" X 12" WATER TEE
- W9 12" X 12" WATER TEE
- W10 8" X 8" WATER TEE
- W11 12" X 8" DUCTILE IRON CROSS
- W12 8" CAP WITH FIRE HYDRANT ACTING AS PERMANENT BLOW OFF
- W13 8" WATER VALVE
- W14 8" DOMESTIC WATER MAIN, C909 PVC PR 235
- W15 12" DOMESTIC WATER MAIN, C909 PVC PR 235
- W16 12" WATER VALVE
- W17 2" WATER SERVICE, CORP STOP, CURB STOP, AND WATER METER PIT FOR IRRIGATION AT ENTRANCE (DEVELOPER/CONTRACTOR TO ENSURE ELECTRIC IS AVAILABLE AT THIS LOCATION)
- S1 6" SANITARY LATERAL CONNECTION (TYP.) WITH CONCRETE COLLAR LOCATED IN DRIVEWAY FOR PROPER SEPARATION FROM WATER LATERALS
- S2 VALVE WITH EXTENSION TO BE APPROXIMATELY 4' DEEP FROM FINISHED GRADE WITH 6" PIPE USED AS VALVE BOX (TO BE INSTALLED AT EACH PHASE BREAK)
- S3 12" VALVE WITH ROADWAY BOX
- S4 10" SEWER GATE VALVE
- S5 INSTALL 20' STEEL CASING SLEEVE CENTERED ON STORM DRAIN CROSSING
- S6 LIMIT OF SEWER INSTALLATION PER EACH PHASE OF CONSTRUCTION



DETAIL- TOWN HOUSES FIRE WALL (U373) 2 HOUR RATING (2 / CS1701A)
SCALE: 1/2" = 1'-0"

SEE SHEET CS4501 THROUGH CS4503 FOR SANITARY SEWER PROFILES

SEE SHEET CS4601 THROUGH CS4603 FOR WATER PROFILES

SEE SHEET CS6002 FOR SANITARY SEWER DETAILS

SEE SHEET CS6003 & CS6004 FOR WATER DETAILS

Pennoni
PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

ALAN M. DECKLON LICENSE No. 17771 DELAWARE PROFESSIONAL ENGINEER 8/19/26

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

SANITARY SEWER STRUCTURE AND PIPE TABLE

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

BY	DATE	NO.	REVISIONS
ASM	2026-09-29	3	REVISED PER ARTESIAN COMMENTS
CH	2026-08-22	2	REVISED PER TOWN OF MILTON COMMENTS
LSF	2026-04-06	1	REVISED PER ARTESIAN COMMENTS

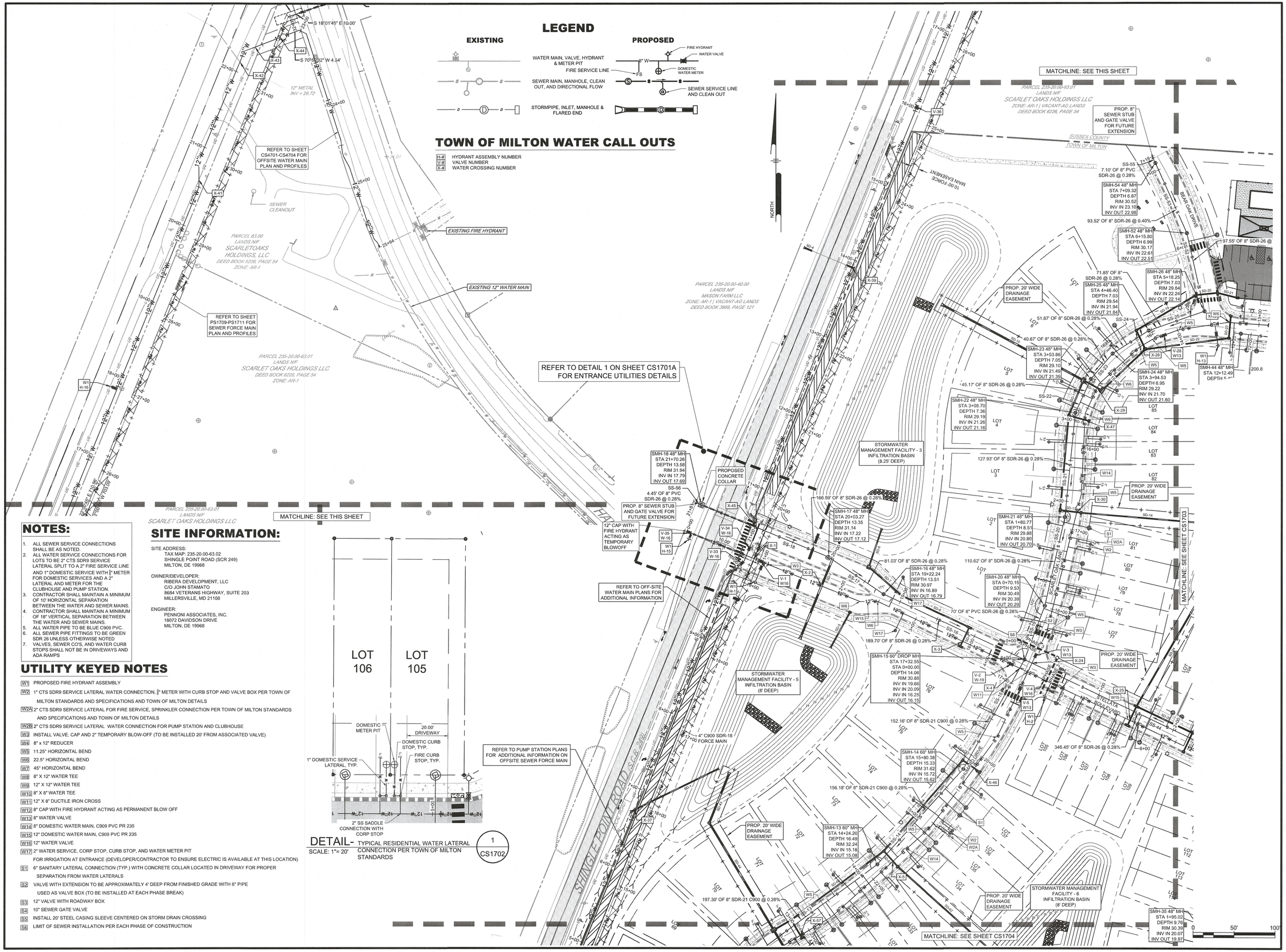
ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

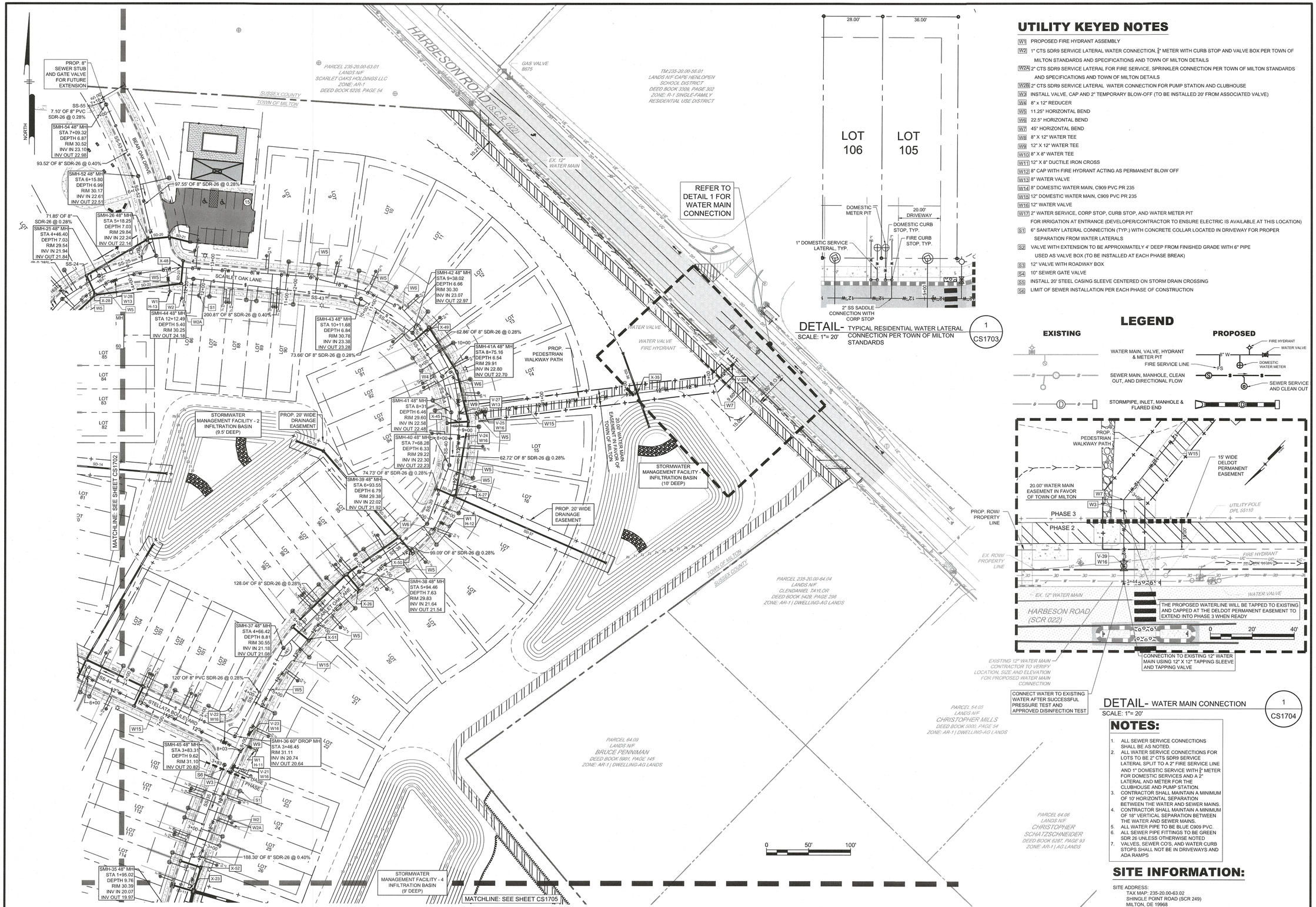
PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS SHOWN
DRAWN BY	EWW
APPROVED BY	AMD

CS1701A

SHEET 21 OF 82

u:\Accounts\RIBER\Active\21002 - company store property\DESIGN_SHEETS\CONSTRUCTION PLANS\S1701A.dwg PLOTTED: 7/14/2026 12:27 PM, BY: Ahmed Mohamed PLOTSTYLE: Pennoni NCS.ctb


LEGEND
EXISTING
PROPOSED
WATER MAIN, VALVE, HYDRANT & METER PIT
FIRE SERVICE LINE
SEWER MAIN, MANHOLE, CLEAN OUT, AND DIRECTIONAL FLOW
STORMPIPE, INLET, MANHOLE & FLARED END
FIRE HYDRANT
WATER VALVE
DOMESTIC WATER METER
SEWER SERVICE LINE AND CLEAN OUT
TOWN OF MILTON WATER CALL OUTS
H-# HYDRANT ASSEMBLY NUMBER
V-# VALVE NUMBER
X-# WATER CROSSING NUMBER
MATCHLINE: SEE THIS SHEET
MATCHLINE: SEE SHEET CS1703
MATCHLINE: SEE SHEET CS1704
REFER TO SHEET CS4701-CS4704 FOR OFFSITE WATER MAIN PLAN AND PROFILES
REFER TO SHEET PS1709-PS1711 FOR SEWER FORCE MAIN PLAN AND PROFILES
REFER TO DETAIL 1 ON SHEET CS1701A FOR ENTRANCE UTILITIES DETAILS
REFER TO OFF-SITE WATER MAIN PLANS FOR ADDITIONAL INFORMATION
REFER TO PUMP STATION PLANS FOR ADDITIONAL INFORMATION ON OFFSITE SEWER FORCE MAIN
EXISTING FIRE HYDRANT
EXISTING 12" WATER MAIN
PROPOSED CONCRETE COLLAR
12" CAP WITH FIRE HYDRANT ACTING AS TEMPORARY BLOWOFF
PROP. 8" SEWER STUB AND GATE VALVE FOR FUTURE EXTENSION
PROP. 8" SEWER STUB AND GATE VALVE FOR FUTURE EXTENSION
PROP. 20' WIDE DRAINAGE EASEMENT
STORMWATER MANAGEMENT FACILITY - 3 INFILTRATION BASIN (8.25' DEEP)
STORMWATER MANAGEMENT FACILITY - 5 INFILTRATION BASIN (8' DEEP)
STORMWATER MANAGEMENT FACILITY - 6 INFILTRATION BASIN (8' DEEP)
SEWER CLEANOUT
12" METAL INV = 29.72
PARCEL 63.00 LANDS N/F SCARLETOAKS HOLDINGS, LLC DEED BOOK 6236, PAGE 54 ZONE: AR-1
PARCEL 235-20.00-63.01 LANDS N/F SCARLET OAKS HOLDINGS LLC DEED BOOK 6236, PAGE 54 ZONE: AR-1
PARCEL 235-20.00-40.00 LANDS N/F MASON FARM LLC ZONE: AR-1 | VACANT-AG LANDS DEED BOOK 3669, PAGE 121
PARCEL 235-20.00-83.01 LANDS N/F SCARLET OAKS HOLDINGS LLC ZONE: AR-1 | VACANT-AG LANDS DEED BOOK 6236, PAGE 54
SUSSEX COUNTY
TOWN OF MILTON
10.00' FORCE MAIN EASEMENT
SHINGLE POINT ROAD (SCR 249)
BEAR OAK DRIVE
SCARLET OAK LANE
STELLATA DRIVE
SMH-18 48" MH STA 21+70.26 DEPTH 13.58 RIM 31.94 INV IN 17.79 INV OUT 17.69
SMH-17 48" MH STA 20+03.27 DEPTH 13.35 RIM 31.14 INV IN 17.22 INV OUT 17.12
SMH-16 48" MH STA 19+22.24 DEPTH 13.51 RIM 30.97 INV IN 16.89 INV OUT 16.79
SMH-15 60" DROP MH STA 17+32.55 STA 0+00.00 DEPTH 14.06 RIM 30.88 INV IN 19.66 INV IN 20.09 INV IN 16.25 INV OUT 16.15
SMH-14 60" MH STA 15+80.38 DEPTH 15.33 RIM 31.62 INV IN 15.72 INV OUT 15.62
SMH-13 60" MH STA 14+24.20 DEPTH 16.49 RIM 32.24 INV IN 15.18 INV OUT 15.08
SMH-22 48" MH STA 3+08.70 DEPTH 7.36 RIM 29.19 INV IN 21.26 INV OUT 21.16
SMH-23 48" MH STA 3+53.86 DEPTH 7.05 RIM 29.10 INV IN 21.49 INV OUT 21.39
SMH-24 48" MH STA 3+94.53 DEPTH 6.95 RIM 29.22 INV IN 21.70 INV OUT 21.60
SMH-25 48" MH STA 4+46.40 DEPTH 7.03 RIM 29.54 INV IN 21.94 INV OUT 21.84
SMH-26 48" MH STA 5+18.25 DEPTH 7.03 RIM 29.84 INV IN 22.24 INV OUT 22.14
SMH-52 48" MH STA 6+15.80 DEPTH 6.99 RIM 30.17 INV IN 22.61 INV OUT 22.51
SMH-54 48" MH STA 7+09.32 DEPTH 6.87 RIM 30.52 INV IN 23.10 INV OUT 22.88
SMH-21 48" MH STA 1+80.77 DEPTH 8.51 RIM 29.88 INV IN 20.80 INV OUT 20.70
SMH-20 48" MH STA 0+70.15 DEPTH 9.53 RIM 30.49 INV IN 20.39 INV OUT 20.29
SMH-35 48" MH STA 1+95.02 DEPTH 9.76 RIM 30.39 INV IN 20.07 INV OUT 19.97
SMH-44 48" MH STA 12+12.49 DEPTH 5.4
SS-55 7.10' OF 8" PVC SDR-26 @ 0.28%
93.52' OF 8" SDR-26 @ 0.40%
97.55' OF 8" SDR-26 @
71.85' OF 8" SDR-26 @ 0.28%
51.87' OF 8" SDR-26 @ 0.28%
40.67' OF 8" SDR-26 @ 0.28%
45.17' OF 8" SDR-26 @ 0.28%
127.93' OF 8" SDR-26 @ 0.28%
166.99' OF 8" SDR-26 @ 0.28%
81.03' OF 8" SDR-26 @ 0.28%
110.62' OF 8" SDR-26 @ 0.28%
70' OF 8" PVC SDR-26 @ 0.28%
189.70' OF 8" SDR-26 @ 0.28%
152.16' OF 8" SDR-21 C900 @ 0.28%
346.45' OF 8" SDR-26 @ 0.28%
156.18' OF 8" SDR-21 C900 @ 0.28%
197.30' OF 8" SDR-21 C900 @ 0.28%
4.45' OF 8" PVC SDR-26 @ 0.28%
4" C900 SDR-18 FORCE MAIN
SS-56
SS-57
SS-58
SS-59
SS-60
SS-61
SS-62
SS-63
SS-64
SS-65
SS-66
SS-67
SS-68
SS-69
SS-70
SS-71
SS-72
SS-73
SS-74
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SS-83
SS-84
SS-85
SS-86
SS-87
SS-88
SS-89
SS-90
SS-91
SS-92
SS-93
SS-94
SS-95



UTILITY KEYED NOTES

- W1 PROPOSED FIRE HYDRANT ASSEMBLY
- W2 1" CTS SDR9 SERVICE LATERAL WATER CONNECTION, 1" METER WITH CURB STOP AND VALVE BOX PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS AND TOWN OF MILTON DETAILS
- W2A 2" CTS SDR9 SERVICE LATERAL FOR FIRE SERVICE, SPRINKLER CONNECTION PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS AND TOWN OF MILTON DETAILS
- W2B 2" CTS SDR9 SERVICE LATERAL WATER CONNECTION FOR PUMP STATION AND CLUBHOUSE
- W3 INSTALL VALVE, CAP AND 2" TEMPORARY BLOW-OFF (TO BE INSTALLED 20' FROM ASSOCIATED VALVE)
- W4 8" x 12" REDUCER
- W5 11.25° HORIZONTAL BEND
- W6 22.5° HORIZONTAL BEND
- W7 45° HORIZONTAL BEND
- W8 8" X 12" WATER TEE
- W9 12" X 12" WATER TEE
- W10 8" X 8" WATER TEE
- W11 12" X 8" DUCTILE IRON CROSS
- W12 8" CAP WITH FIRE HYDRANT ACTING AS PERMANENT BLOW OFF
- W13 8" WATER VALVE
- W14 8" DOMESTIC WATER MAIN, C909 PVC PR 235
- W15 12" DOMESTIC WATER MAIN, C909 PVC PR 235
- W16 12" WATER VALVE
- W17 2" WATER SERVICE, CORP STOP, CURB STOP, AND WATER METER PIT FOR IRRIGATION AT ENTRANCE (DEVELOPER/CONTRACTOR TO ENSURE ELECTRIC IS AVAILABLE AT THIS LOCATION)
- S1 6" SANITARY LATERAL CONNECTION (TYP.) WITH CONCRETE COLLAR LOCATED IN DRIVEWAY FOR PROPER SEPARATION FROM WATER LATERALS
- S2 VALVE WITH EXTENSION TO BE APPROXIMATELY 4' DEEP FROM FINISHED GRADE WITH 6" PIPE USED AS VALVE BOX (TO BE INSTALLED AT EACH PHASE BREAK)
- S3 12" VALVE WITH ROADWAY BOX
- S4 10" SEWER GATE VALVE
- S5 INSTALL 20' STEEL CASING SLEEVE CENTERED ON STORM DRAIN CROSSING
- S6 LIMIT OF SEWER INSTALLATION PER EACH PHASE OF CONSTRUCTION

LEGEND

EXISTING		PROPOSED	
WATER MAIN, VALVE, HYDRANT & METER PIT		8" W	FIRE HYDRANT, WATER VALVE
FIRE SERVICE LINE		FS	DOMESTIC WATER METER
SEWER MAIN, MANHOLE, CLEAN OUT, AND DIRECTIONAL FLOW		S	SEWER SERVICE AND CLEAN OUT
STORMPIPE, INLET, MANHOLE & FLARED END		D	

NOTES:

1. ALL SEWER SERVICE CONNECTIONS SHALL BE AS NOTED.
2. ALL WATER SERVICE CONNECTIONS FOR LOTS TO BE 2" CTS SDR9 SERVICE LATERAL SPLIT TO A 2" FIRE SERVICE LINE AND 1" DOMESTIC SERVICE WITH 1" METER FOR DOMESTIC SERVICES AND A 2" LATERAL AND METER FOR THE CLUBHOUSE AND PUMP STATION.
3. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN THE WATER AND SEWER MAINS.
4. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN THE WATER AND SEWER MAINS.
5. ALL WATER PIPE TO BE BLUE C909 PVC.
6. ALL SEWER PIPE FITTINGS TO BE GREEN SDR 26 UNLESS OTHERWISE NOTED
7. VALVES, SEWER CO'S, AND WATER CURB STOPS SHALL NOT BE IN DRIVEWAYS AND ADA RAMPS

SITE INFORMATION:

SITE ADDRESS:
TAX MAP: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

OWNER/DEVELOPER:
RIBERA DEVELOPMENT, LLC
C/O JOHN STAMATO
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

ENGINEER:
PENNONI ASSOCIATES, INC.
18072 DAVIDSON DRIVE
MILTON, DE 19968

TOWN OF MILTON WATER CALL OUTS

- H-# HYDRANT ASSEMBLY NUMBER
- V-# VALVE NUMBER
- X-# WATER CROSSING NUMBER

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

ALAN M. DECTOR LICENSE No. 17771 DELAWARE PROFESSIONAL ENGINEER
8/18/2026

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

UTILITY PLAN

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-08	REVISED PER ARTESIAN COMMENTS	LSF

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PROJECT	RIBER21002
DATE	2024-04-03
DRAWING SCALE	1" = 50'
DRAWN BY	EWW
APPROVED BY	AMD

CS1703

SHEET 23 OF 82

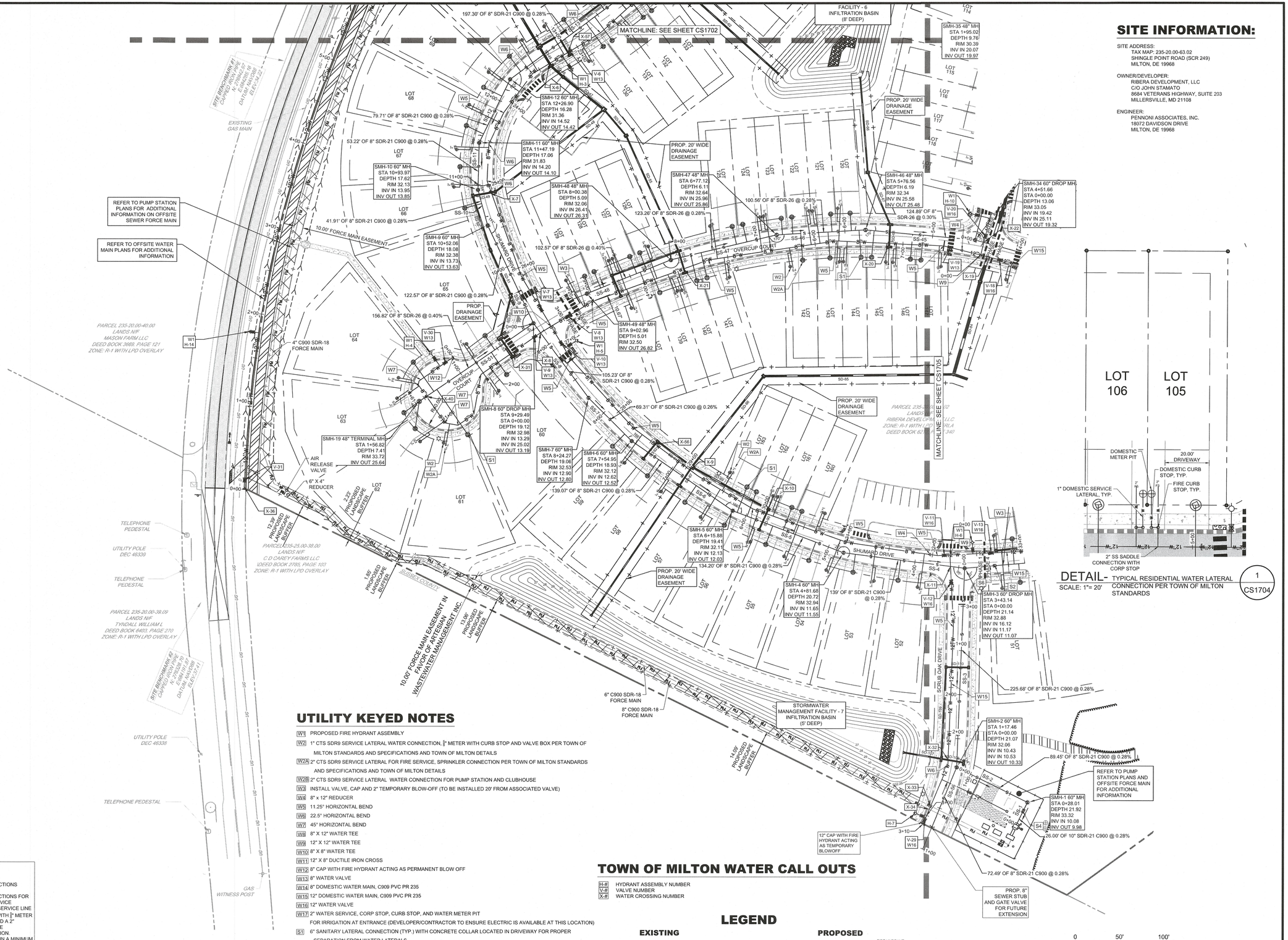
U:\Accounts\RIBER\Rdwc\21002 - company share property\DESIGN_SHEETS\CONSTRUCTION PLANS\CS1703.dwg PLOTTED: 7/14/2026, 5:47 PM, BY: Ahmed Mohamed PLOTSTYLE: Pennoni WCS.ctb

SITE INFORMATION:

SITE ADDRESS:
TAX MAP: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

OWNER/DEVELOPER:
RIBERA DEVELOPMENT, LLC
C/O JOHN STAMATO
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

ENGINEER:
PENNONI ASSOCIATES, INC.
18072 DAVIDSON DRIVE
MILTON, DE 19968



DETAIL- TYPICAL RESIDENTIAL WATER LATERAL CONNECTION PER TOWN OF MILTON STANDARDS

SCALE: 1"= 20'

1 / CS1704

UTILITY KEYED NOTES

- W1 PROPOSED FIRE HYDRANT ASSEMBLY
- W2 1" CTS SDR9 SERVICE LATERAL WATER CONNECTION, 1" METER WITH CURB STOP AND VALVE BOX PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS AND TOWN OF MILTON DETAILS
- W2A 2" CTS SDR9 SERVICE LATERAL FOR FIRE SERVICE, SPRINKLER CONNECTION PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS AND TOWN OF MILTON DETAILS
- W2B 2" CTS SDR9 SERVICE LATERAL WATER CONNECTION FOR PUMP STATION AND CLUBHOUSE
- W3 INSTALL VALVE, CAP AND 2" TEMPORARY BLOW-OFF (TO BE INSTALLED 20' FROM ASSOCIATED VALVE)
- W4 8" x 12" REDUCER
- W5 11.25° HORIZONTAL BEND
- W6 22.5° HORIZONTAL BEND
- W7 45° HORIZONTAL BEND
- W8 8" X 12" WATER TEE
- W9 12" X 12" WATER TEE
- W10 8" X 8" WATER TEE
- W11 12" X 8" DUCTILE IRON CROSS
- W12 8" CAP WITH FIRE HYDRANT ACTING AS PERMANENT BLOW OFF
- W13 8" WATER VALVE
- W14 8" DOMESTIC WATER MAIN, C909 PVC PR 235
- W15 12" DOMESTIC WATER MAIN, C909 PVC PR 235
- W16 12" WATER VALVE
- W17 2" WATER SERVICE, CORP STOP, CURB STOP, AND WATER METER PIT FOR IRRIGATION AT ENTRANCE (DEVELOPER/CONTRACTOR TO ENSURE ELECTRIC IS AVAILABLE AT THIS LOCATION)
- S1 6" SANITARY LATERAL CONNECTION (TYP.) WITH CONCRETE COLLAR LOCATED IN DRIVEWAY FOR PROPER SEPARATION FROM WATER LATERALS
- S2 VALVE WITH EXTENSION TO BE APPROXIMATELY 4' DEEP FROM FINISHED GRADE WITH 6" PIPE USED AS VALVE BOX (TO BE INSTALLED AT EACH PHASE BREAK)
- S3 12" VALVE WITH ROADWAY BOX
- S4 10" SEWER GATE VALVE
- S5 INSTALL 20' STEEL CASING SLEEVE CENTERED ON STORM DRAIN CROSSING
- S6 LIMIT OF SEWER INSTALLATION PER EACH PHASE OF CONSTRUCTION

TOWN OF MILTON WATER CALL OUTS

- H-# HYDRANT ASSEMBLY NUMBER
- V-# VALVE NUMBER
- X-# WATER CROSSING NUMBER

LEGEND

EXISTING	PROPOSED
WATER MAIN, VALVE, HYDRANT & METER PIT	8" W, FIRE HYDRANT, WATER VALVE
FIRE SERVICE LINE	FS, DOMESTIC WATER METER
SEWER MAIN, MANHOLE, CLEAN OUT, AND DIRECTIONAL FLOW	S, SEWER SERVICE LINE AND CLEAN OUT
STORMPIPE, INLET, MANHOLE & FLARED END	D

NOTES:

1. ALL SEWER SERVICE CONNECTIONS SHALL BE AS NOTED.
2. ALL WATER SERVICE CONNECTIONS FOR LOTS TO BE 2" CTS SDR9 SERVICE LATERAL SPLIT TO A 2" FIRE SERVICE LINE AND 1" DOMESTIC SERVICE WITH 1" METER FOR DOMESTIC SERVICES AND A 2" LATERAL AND METER FOR THE CLUBHOUSE AND PUMP STATION.
3. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN THE WATER AND SEWER MAINS.
4. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN THE WATER AND SEWER MAINS.
5. ALL WATER PIPE TO BE BLUE C909 PVC.
6. ALL SEWER PIPE FITTINGS TO BE GREEN SDR 26 UNLESS OTHERWISE NOTED
7. VALVES, SEWER CO'S, AND WATER CURB STOPS SHALL NOT BE IN DRIVEWAYS AND ADA RAMPS

Pennoni
PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

ALAN M. DECKTON LICENSE No. 17771 DELAWARE PROFESSIONAL ENGINEER 8/19/2026

SCARLET OAKS SUBDIVISION

TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

UTILITY PLAN

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-08	REVISED PER ARTESIAN COMMENTS	LSF

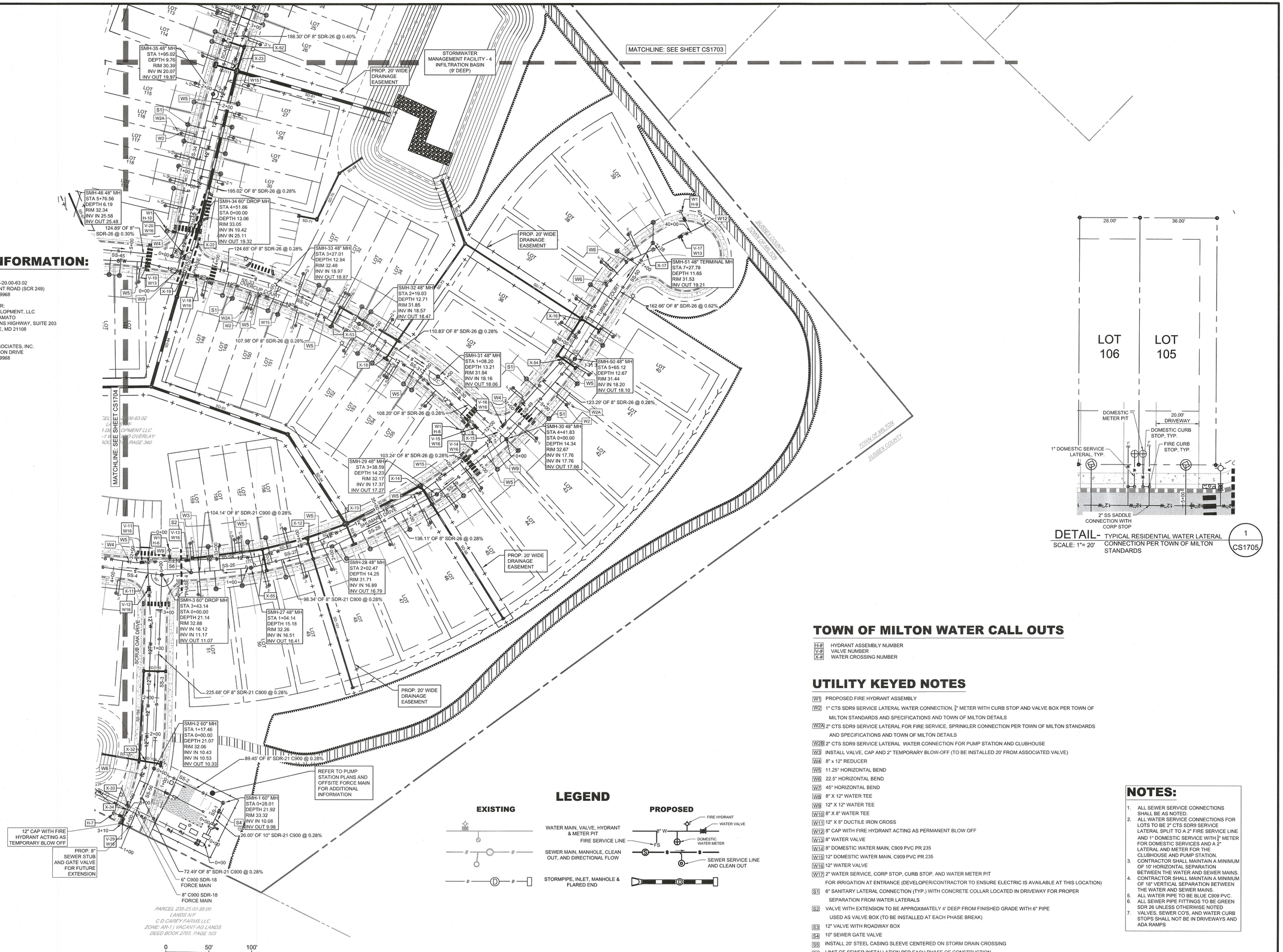
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PROJECT	RIBER21002
DATE	2024-04-03
DRAWING SCALE	1" = 50'
DRAWN BY	EWW
APPROVED BY	AMD

CS1704

SHEET 24 OF 82

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SITE INFORMATION:

SITE ADDRESS:
TAX MAP: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

OWNER/DEVELOPER:
RIBERA DEVELOPMENT, LLC
C/O JOHN STAMATO
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

ENGINEER:
PENNONI ASSOCIATES, INC.
18072 DAVIDSON DRIVE
MILTON, DE 19968

DETAIL- TYPICAL RESIDENTIAL WATER LATERAL CONNECTION PER TOWN OF MILTON STANDARDS
SCALE: 1"= 20'
1 / CS1705

LEGEND

EXISTING / PROPOSED

WATER MAIN, VALVE, HYDRANT & METER PIT
FIRE SERVICE LINE
SEWER MAIN, MANHOLE, CLEAN OUT, AND DIRECTIONAL FLOW
STORMPIPE, INLET, MANHOLE & FLARED END
FIRE HYDRANT
WATER VALVE
8" W
FS
DOMESTIC WATER METER
SEWER SERVICE LINE AND CLEAN OUT

TOWN OF MILTON WATER CALL OUTS

H-# HYDRANT ASSEMBLY NUMBER
V-# VALVE NUMBER
X-# WATER CROSSING NUMBER

UTILITY KEYED NOTES

W1 PROPOSED FIRE HYDRANT ASSEMBLY
W2 1" CTS SDR9 SERVICE LATERAL WATER CONNECTION, 1" METER WITH CURB STOP AND VALVE BOX PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS AND TOWN OF MILTON DETAILS
W2A 2" CTS SDR9 SERVICE LATERAL FOR FIRE SERVICE, SPRINKLER CONNECTION PER TOWN OF MILTON STANDARDS AND SPECIFICATIONS AND TOWN OF MILTON DETAILS
W2B 2" CTS SDR9 SERVICE LATERAL WATER CONNECTION FOR PUMP STATION AND CLUBHOUSE
W3 INSTALL VALVE, CAP AND 2" TEMPORARY BLOW-OFF (TO BE INSTALLED 20' FROM ASSOCIATED VALVE)
W4 8" x 12" REDUCER
W5 11.25° HORIZONTAL BEND
W6 22.5° HORIZONTAL BEND
W7 45° HORIZONTAL BEND
W8 8" X 12" WATER TEE
W9 12" X 12" WATER TEE
W10 8" X 8" WATER TEE
W11 12" X 8" DUCTILE IRON CROSS
W12 8" CAP WITH FIRE HYDRANT ACTING AS PERMANENT BLOW OFF
W13 8" WATER VALVE
W14 8" DOMESTIC WATER MAIN, C909 PVC PR 235
W15 12" DOMESTIC WATER MAIN, C909 PVC PR 235
W16 12" WATER VALVE
W17 2" WATER SERVICE, CORP STOP, CURB STOP, AND WATER METER PIT FOR IRRIGATION AT ENTRANCE (DEVELOPER/CONTRACTOR TO ENSURE ELECTRIC IS AVAILABLE AT THIS LOCATION)
S1 6" SANITARY LATERAL CONNECTION (TYP.) WITH CONCRETE COLLAR LOCATED IN DRIVEWAY FOR PROPER SEPARATION FROM WATER LATERALS
S2 VALVE WITH EXTENSION TO BE APPROXIMATELY 4' DEEP FROM FINISHED GRADE WITH 6" PIPE USED AS VALVE BOX (TO BE INSTALLED AT EACH PHASE BREAK)
S3 12" VALVE WITH ROADWAY BOX
S4 10" SEWER GATE VALVE
S5 INSTALL 20' STEEL CASING SLEEVE CENTERED ON STORM DRAIN CROSSING
S6 LIMIT OF SEWER INSTALLATION PER EACH PHASE OF CONSTRUCTION

NOTES:

1. ALL SEWER SERVICE CONNECTIONS SHALL BE AS NOTED.
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6. ALL SEWER PIPE FITTINGS TO BE GREEN SDR 26 UNLESS OTHERWISE NOTED
7. VALVES, SEWER CO'S, AND WATER CURB STOPS SHALL NOT BE IN DRIVEWAYS AND ADA RAMPS

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

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ALAN M. DECKTER LICENSE No. 17771 DELAWARE PROFESSIONAL ENGINEER

SCARLET OAKS SUBDIVISION

TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

UTILITY PLAN

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	LSF	BY
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2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS		
1	2026-04-08	REVISED PER ARTESIAN COMMENTS		

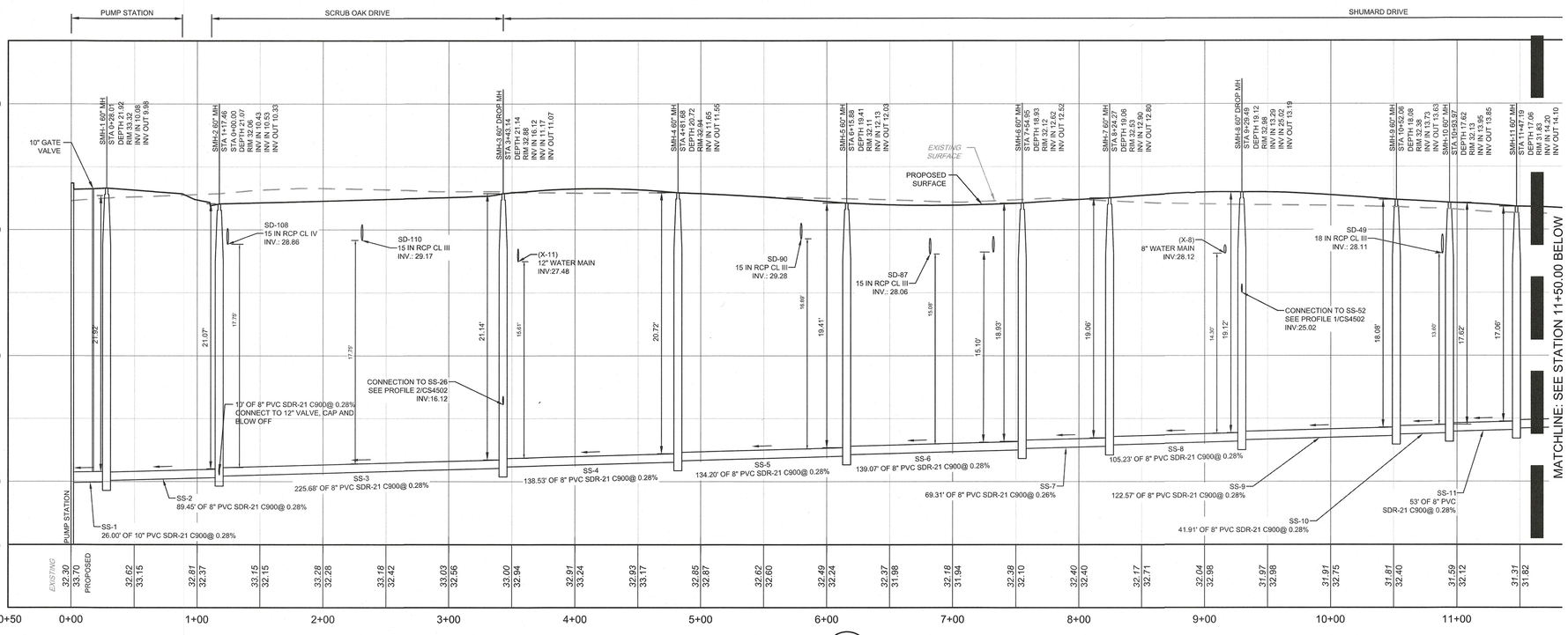
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PROJECT	RIBER21002
DATE	2024-04-03
DRAWING SCALE	1" = 50'
DRAWN BY	EWW
APPROVED BY	AMD

CS1705

SHEET 25 OF 82

PLOTTED: 7/14/2026 12:47 PM, BY: Ahmed Mahmoud PLOTSTYLE: Pennoni NCS.stb
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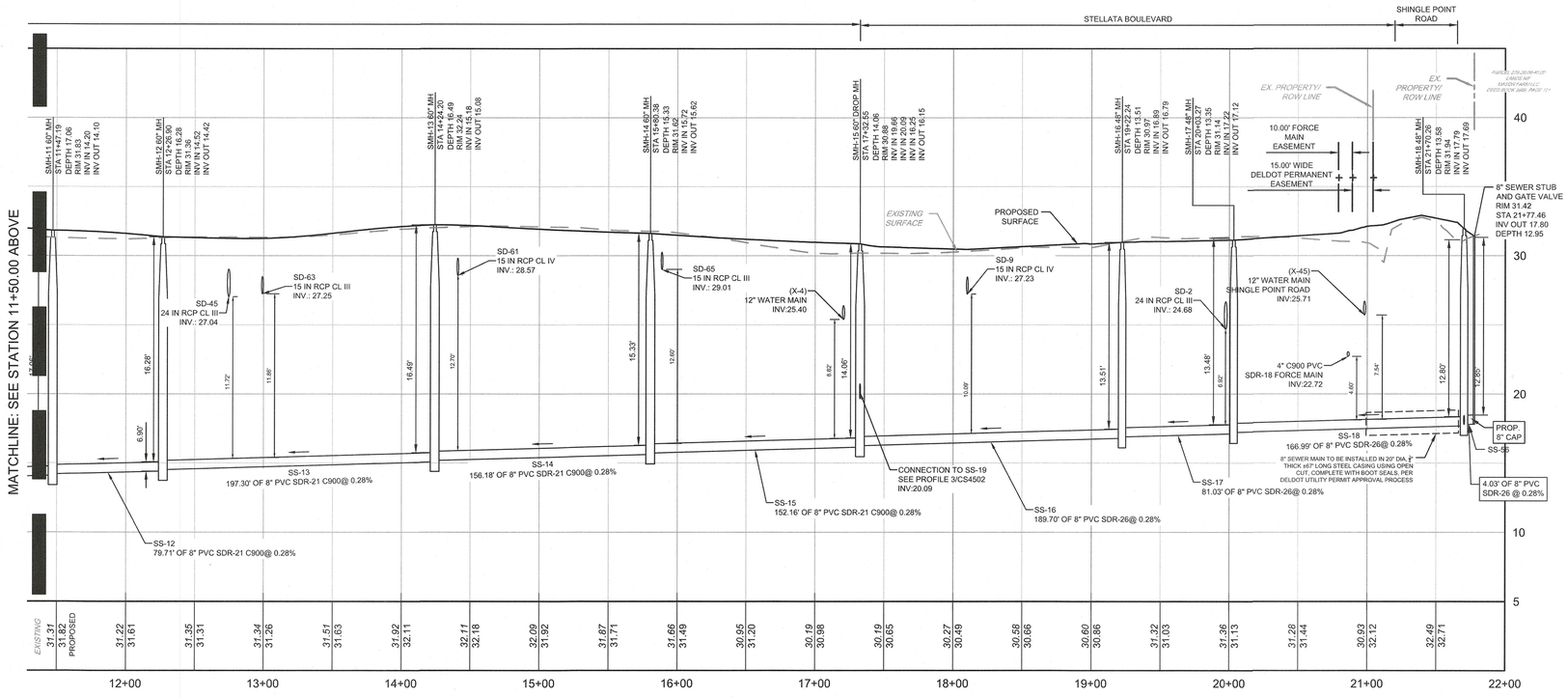


PROFILE - PS-1 TO SMH-18

H: 1" = 50' , V: 1" = 5'

1

CS4501



PROFILE - PS-1 TO SMH-18

H: 1" = 50' , V: 1" = 5'

2

CS4501

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

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ALAN M. DEKKON — LICENSED — No. 17771 — DELAWARE — PROFESSIONAL ENGINEER

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

SANITARY SEWER PROFILES

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
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1	2026-04-08	REVISED PER ARTESIAN COMMENTS	LFS

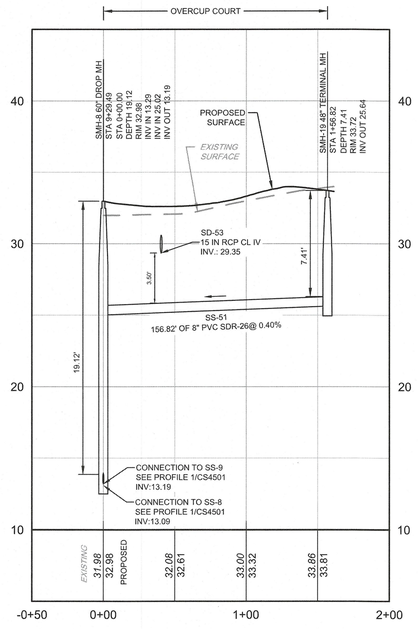
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PROJECT	RIBER21002
DATE	2026-07-02
DRAWING SCALE	1" = 50'
DRAWN BY	ASM
APPROVED BY	AMD

CS4501

SHEET 53 OF 82

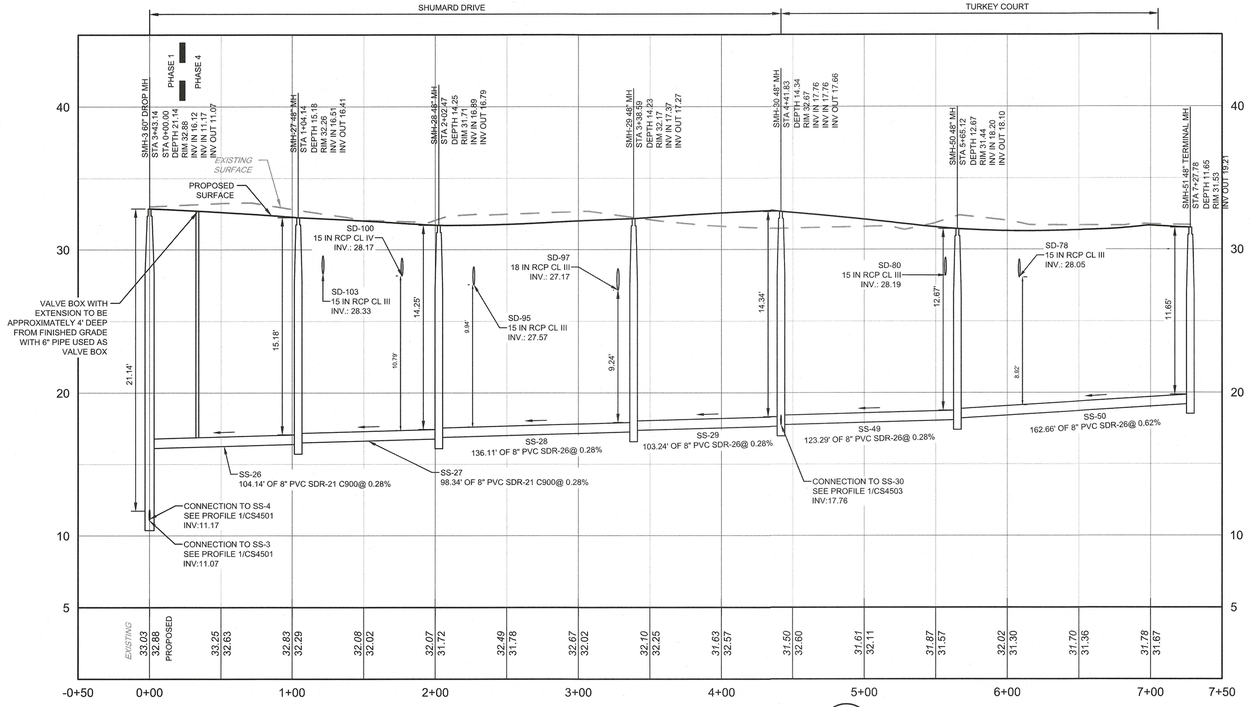
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PROFILE - SMH-8 TO SMH-19

H: 1" = 50' , V: 1" = 5'

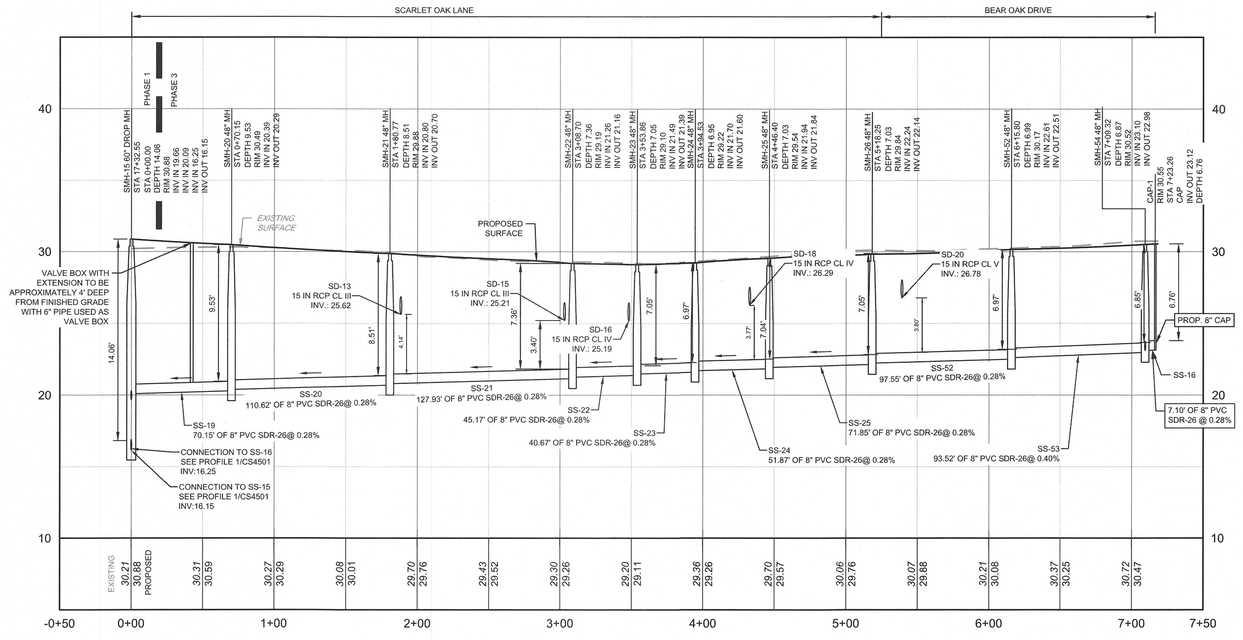
1 CS4502



PROFILE - SMH-3 TO SMH-51

H: 1" = 50' , V: 1" = 5'

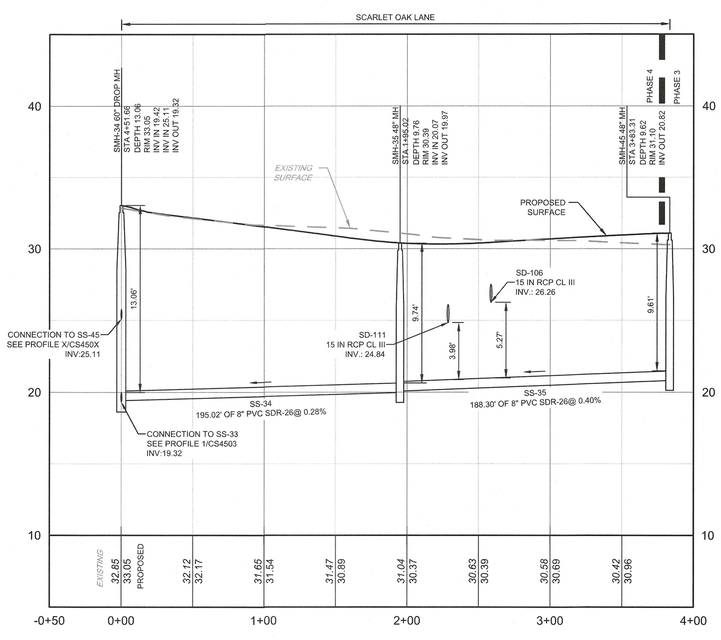
2 CS4502



PROFILE - SMH-15 TO SMH-54

H: 1" = 50' , V: 1" = 5'

3 CS4502



PROFILE - SMH-34 TO SMH-45

H: 1" = 50' , V: 1" = 5'

4 CS4502

PENNONI ASSOCIATES INC.
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ALAN M. DEKATOR LICENSE No. 17771 DELAWARE PROFESSIONAL ENGINEER 8/19/2026

SCARLET OAKS SUBDIVISION

TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

SANITARY SEWER PROFILES

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

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3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-06	REVISED PER ARTESIAN COMMENTS	LFS

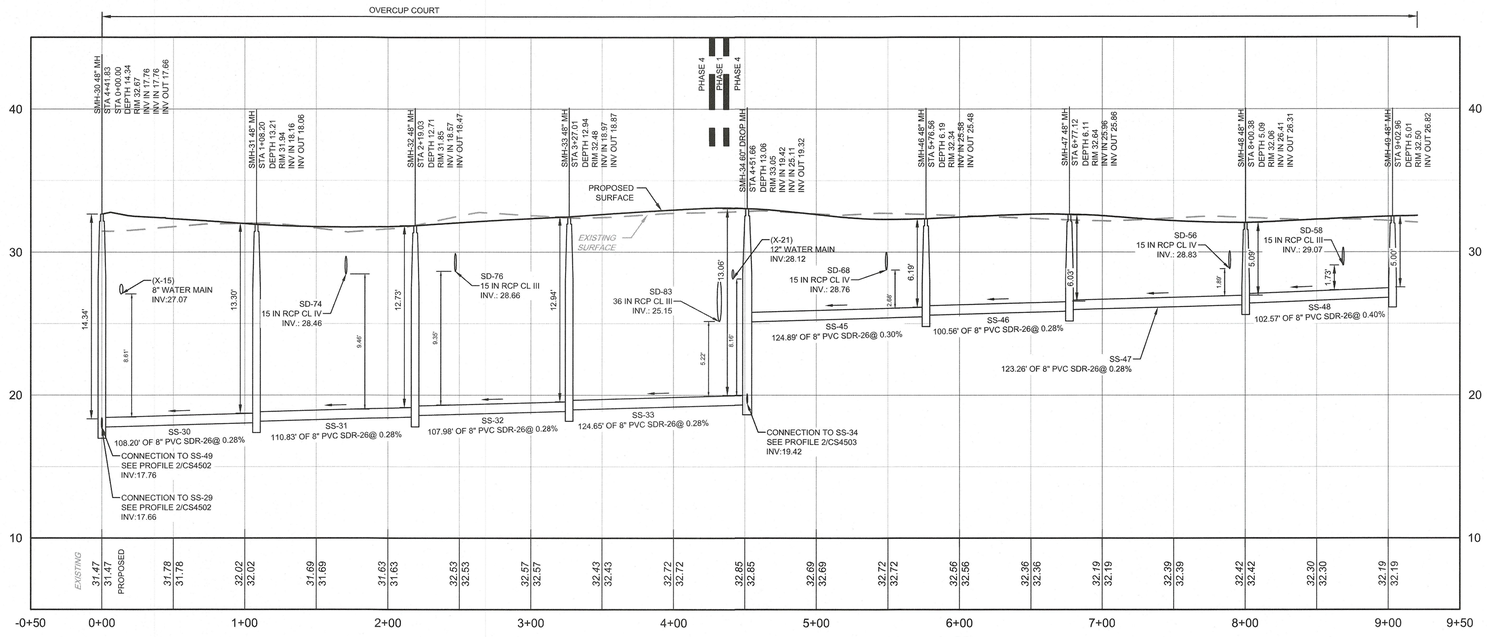
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PROJECT	RIBER21002
DATE	2026-07-13
DRAWING SCALE	1" = 50'
DRAWN BY	ASM
APPROVED BY	AMD

CS4502

SHEET 54 OF 82

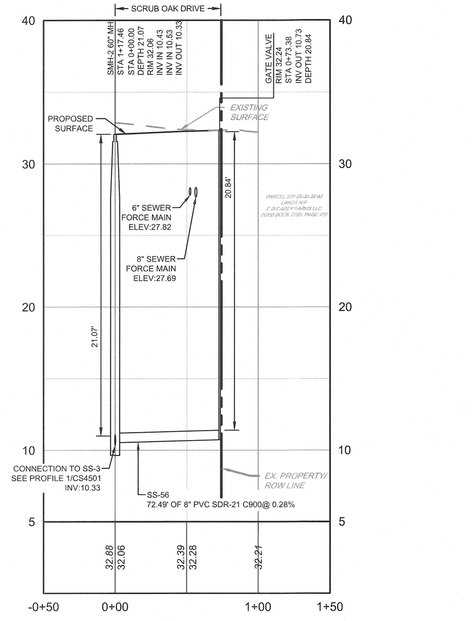
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PROFILE - SMH-30 TO SMH-49

H: 1" = 50' , V: 1" = 5'

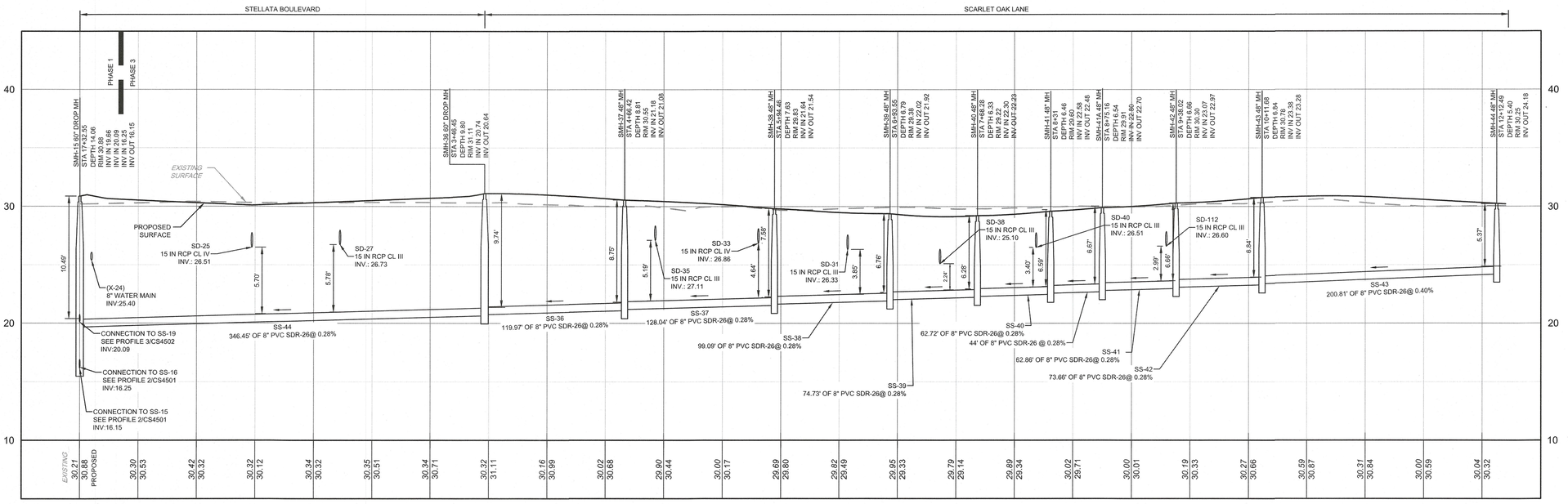
1
CS4503



PROFILE - SMH-2 TO GATE VALVE

H: 1" = 50' , V: 1" = 5'

3
CS4503



PROFILE - SMH-15 TO SMH-44

H: 1" = 50' , V: 1" = 5'

2
CS4503

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

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DISCREPANCIES MUST BE NOTIFIED OF ANY WORK
DISCREPANCIES BEFORE PROCEEDING WITH WORK

ALAN M. DECKARD
LICENSE
No. 17771
DELAWARE
PROFESSIONAL ENGINEER

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

SANITARY SEWER PROFILES

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	BY
3	2026-06-29	ASM
2	2026-06-22	CH
1	2026-04-08	LFS
	REVISIONS	
3	REVISED PER ARTESIAN COMMENTS	
2	REVISED PER TOWN OF MILTON COMMENTS	
1	REVISED PER ARTESIAN COMMENTS	

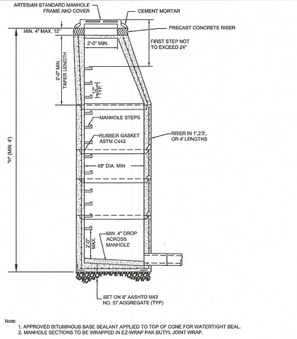
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PROJECT	RIBER21002
DATE	2026-07-02
DRAWING SCALE	1" = 50'
DRAWN BY	ASM
APPROVED BY	AMD

CS4503

SHEET 55 OF 82

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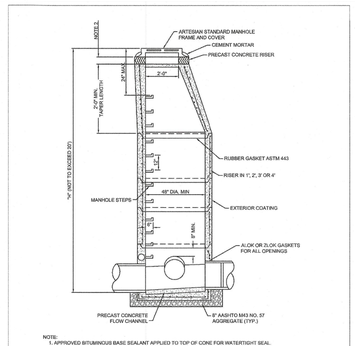


Note:
1. APPROVED BITUMINOUS BASE SEALANT APPLIED TO TOP OF CONE FOR WATERTIGHT SEAL.
2. MANHOLE SECTIONS TO BE WRAPPED IN EZ-WRAP PAK BUTYL JOINT WRAP.

STANDARD DETAILS
TERMINAL MANHOLE

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED:	PLATE: MH-02

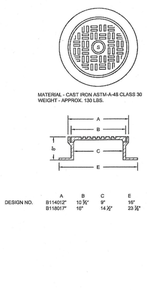


NOTE:
1. APPROVED BITUMINOUS BASE SEALANT APPLIED TO TOP OF CONE FOR WATERTIGHT SEAL.
2. MIN 4", MAX 12"
3. MANHOLE SECTIONS TO BE WRAPPED IN EZ-WRAP PAK BUTYL JOINT WRAP.

STANDARD DETAILS
PRECAST MANHOLE

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED:	PLATE: MH-01



STANDARD DETAILS
RICHARD FOUNDRY CORP. CLEANOUT FRAME AND COVER B-1140 & B-1180

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 28, 2014	
REVISED:	PLATE: CO-05

MANHOLE NOTES:

1. ALL PRECAST CONCRETE MANHOLE TAPERS, RISERS, AND BASES SHALL CONFORM TO THE LATEST REVISION OF ASTM C478.

2. CONCRETE SHALL BE 4000 PSI AT 28 DAYS MINIMUM.

3. STEEL REINFORCEMENT SHALL BE GRADE 40 BILLET STEEL CONFORMING TO THE LATEST REVISION OF ASTM-A-185 FOR WALL REINFORCEMENT THE LATEST REVISION OF ASTM A615 FOR BASE REINFORCEMENT.

4. STANDARD JOINTS SHALL BE RUBBER O-RING GASKET PER ASTM-C443.

5. MANHOLE INLETS AND OUTLETS SHALL BE PRECAST WITH ALOK OR ZLOK GASKETS.

6. THE MINIMUM SEPARATION OF INVERT IN TO INVERT OUT WITHIN A MANHOLE IS 0.05 FEET. WHEN THE SEPARATION IS GREATER THAN 24 INCHES A DROP MANHOLE MUST BE USED.

7.MANHOLES GREATER THAN 18 FEET IN DEPTH SHALL HAVE AN INSIDE DIAMETER OF 5'. FOR SANITARY SEWER MAINS GREATER THAN 18 INCHES IN DIAMETER, MANHOLES SHALL BE A MINIMUM OF 5' IN DIAMETER.

8.RIM ELEVATIONS SHALL BE AT GRADE IN STREETS & PARKING LOTS.

9. RIM ELEVATIONS ALONG OUTFALLS SHALL BE A MINIMUM OF 3' ABOVE EXISTING GROUND ELEVATIONS. IF THE OUTFALL IS LOCATED WITHIN THE FLOOD PLAIN, RIM ELEVATIONS SHALL BE 2' ABOVE THE 100-YEAR FLOOD ELEVATION (WHILE STILL MAINTAINING THE 3' ABOVE THE EXISTING GROUND ELEVATION MINIMUM REQUIREMENT). THE 100-YEAR FLOOD ELEVATION SHALL BE NOTED ON THE CONSTRUCTION DRAWINGS.

10. MANHOLE STEPS TO BE NO. 3 REBAR ENCASED IN POLYPROPYLENE, SPACED AS SHOWN IN A SINGLE VERTICAL ALIGNMENT.

11. EXTERIOR COATING TO BE 2 COATS OF WATERPROOF BITUMASTIC COMPOUND.

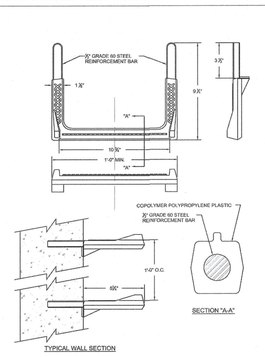
12. APPROVED BITUMINOUS BASE SEALANT TO BE APPLIED TO TOP OF CONE FOR WATERTIGHT SEAL.

13. MANHOLE SECTIONS TO BE WRAPPED IN EZ-WRAP BUTYL JOINT WRAP.

STANDARD DETAILS
MANHOLE NOTES

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

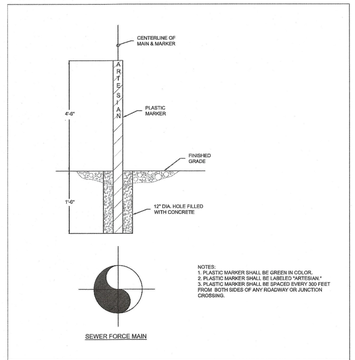
ISSUED: JUNE 15, 2012	REVISED: AUGUST 31, 2015
REVISED: FEBRUARY 28, 2014	SCALE: NOT TO SCALE
REVISED: AUGUST 7, 2015	PLATE: MH-NOTES



STANDARD DETAILS
SANITARY SEWER MANHOLE STEP

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED:	PLATE: MH-12



NOTES:
1. PLASTIC MARKER SHALL BE GREEN IN COLOR.
2. PLASTIC MARKER SHALL BE LABELED "ARTESIAN."
3. PLASTIC MARKER SHALL BE SPACED EVERY 300 FEET FROM BOTH SIDES OF ANY ROADWAY OR JUNCTION CROSSING.

STANDARD DETAILS
STANDARD MARKER FOR SEWER FORCE MAINS IN EASEMENTS

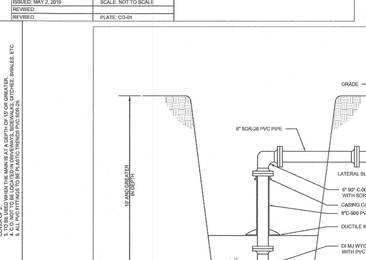
ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED:	PLATE: SD-03

STANDARD DETAILS
STANDARD LATERAL CONNECTIONS

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 28, 2014	
REVISED:	PLATE: CO-03

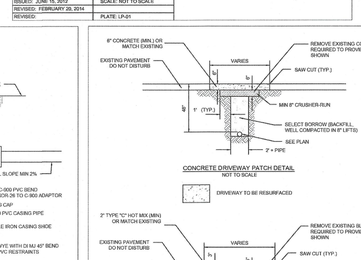


NOTES:
1. CO'S NOT TO BE LOCATED IN DITCH, SWALE, ETC.
2. C.O. NOT TO BE LOCATED IN DRIVEWAYS OR SIDEWALKS.
3. MAINTAIN 10' MIN. SEPARATION BETWEEN WATER AND SEWER LINES.
4. ALL FITTINGS TO BE PLASTIC TREADS PVC DEN-26.

STANDARD DETAILS
STANDARD LATERAL CLEANOUT

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

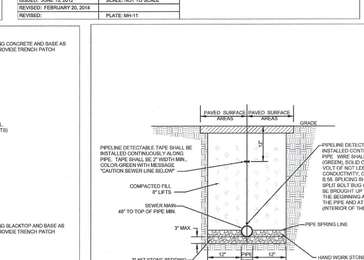
ISSUED: MAY 2, 2019	SCALE: NOT TO SCALE
REVISED:	
REVISED:	PLATE: CO-01



STANDARD DETAILS
TERMINAL CLEANOUT

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED:	PLATE: LP-01



REINFORCED CONCRETE RISER

RUBBER ADJUSTMENT RISER

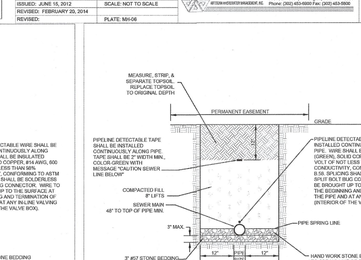
NOTES:
1. CONCRETE SHOULD ATTAIN A COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS.
2. DESIGN MEETS REQUIREMENTS OF ASTM STANDARD C-478
3. APPROX. TOTAL WEIGHT OF ONE REINFORCED CONCRETE RISER:
24"Ø - 140 LBS.
30"Ø - 185 LBS

NOTES:
1. USE QAR INFRA-RISER RUBBER GRADE RINGS AS DISTRIBUTED BY EAST JORDAN IRON WORKS, INC. EAST JORDAN, MICHIGAN OR APPROVED EQUAL.
2. POLYURETHANE ADHESIVE SEALANT, CONFORMING TO ASTM-D 1850, OR EQUIVALENT, TO BE USED BETWEEN ALL CONTACT SURFACES. SEALANT TO BE APPLIED ON A DIAMETER 1" SMALLER THAN THE OUTSIDE DIAMETER OF THE RUBBER RISER.

STANDARD DETAILS
GRADE RING

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED:	PLATE: MH-11

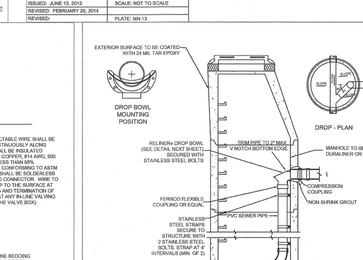


NOTES:
THE "B-8" BOWL WILL SERVICE UP THROUGH FULL 10" INLETS. THE "B-10" BOWL WILL SERVICE UP THROUGH FULL 12" INLET. CAN BE USED FOR 15" AND 18" INLET MODERATE FLOWS. ALL SIZES ARE FOR RETROFIT OR NEW CONSTRUCTION. FABRICATED IN MARINE GRADE FIBERGLASS AND FINISHED IN BRIGHT WHITE GEL COAT.

STANDARD DETAILS
B-8 & B-10 DROP BOWLS 2 OF 2

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED:	PLATE: MH-08

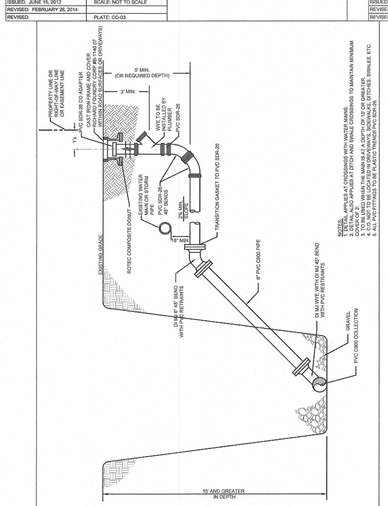


NOTE: MINIMUM 90° AT MANHOLES.

STANDARD DETAILS
TYPICAL MANHOLE FLOW CHANNEL PATTERNS

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED:	PLATE: MH-13

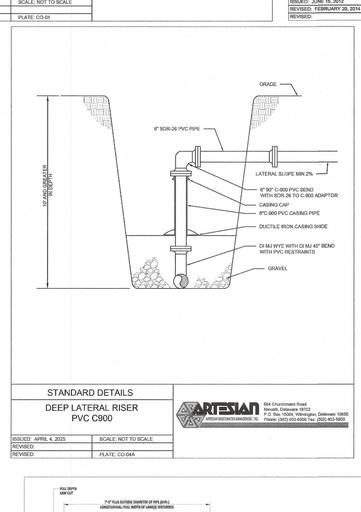


NOTES:
1. ALL PIPING, APPLIED AT CROSSINGS WITH WATER MAINS, SHALL BE ARRANGED TO MAINTAIN MINIMUM 18" VERTICAL SEPARATION.
2. TEE IS A WHARMAN #6572. IF THE EXISTING WEIRWORT HAS A HEAVIER CROSS SECTION THAN SHOWN HERE, IT WILL BE REPLACED WITH THAT CROSS SECTION, OR AS DIRECTED BY THE ENGINEER.
3. ALL PVC FITTINGS TO BE PLASTIC TREADS PVC DEN-26.

STANDARD DETAILS
DEEP LATERAL RISER & CLEANOUT - PVC C900

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

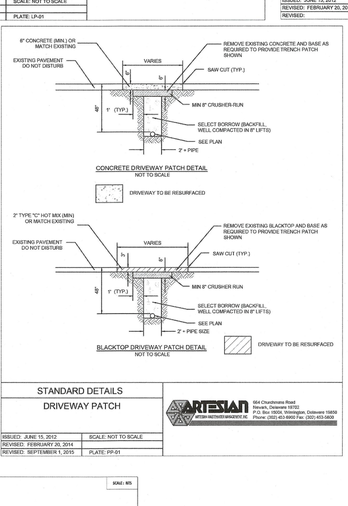
ISSUED: APRIL 4, 2025	SCALE: NOT TO SCALE
REVISED:	
REVISED:	PLATE: CO-02A



STANDARD DETAILS
DEEP LATERAL RISER PVC C900

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

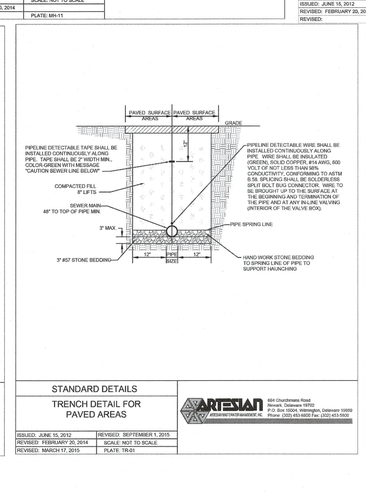
ISSUED: APRIL 4, 2025	SCALE: NOT TO SCALE
REVISED:	
REVISED:	PLATE: CO-04A



STANDARD DETAILS
DRIVEWAY PATCH

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

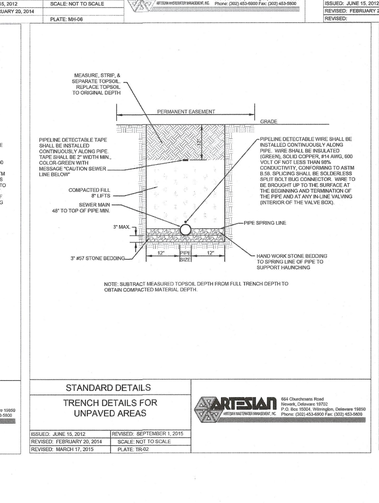
ISSUED: JUNE 15, 2012	REVISED: SEPTEMBER 1, 2015
REVISED: FEBRUARY 20, 2014	
REVISED: SEPTEMBER 1, 2015	PLATE: PP-01



STANDARD DETAILS
TRENCH DETAIL FOR PAVED AREAS

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

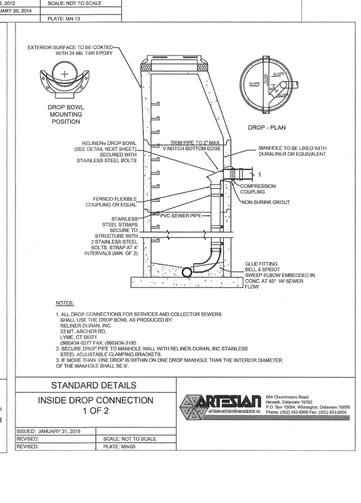
ISSUED: JUNE 15, 2012	REVISED: SEPTEMBER 1, 2015
REVISED: FEBRUARY 20, 2014	SCALE: NOT TO SCALE
REVISED: MARCH 17, 2015	PLATE: TR-01



STANDARD DETAILS
TRENCH DETAILS FOR UNPAVED AREAS

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012	REVISED: SEPTEMBER 1, 2015
REVISED: FEBRUARY 20, 2014	SCALE: NOT TO SCALE
REVISED: MARCH 17, 2015	PLATE: TR-02

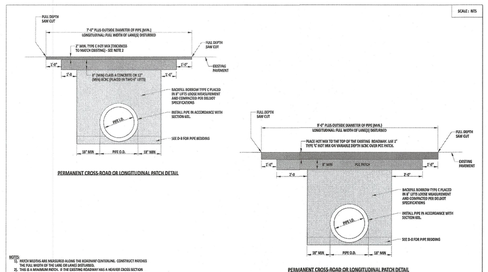


NOTES:
1. ALL DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BWL AS PRODUCED BY:
RELINER DURAN, INC.
1 CHERRY HILL RD.
LYNE, CT 06371
(860)434-0777 FAX. (860)434-3185
2. SECURE DROP PIPE TO MANHOLE WALL WITH RELINER-DURANK, INC STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS.
3. IF NEEDED, THERE ONE DROP IS WITHIN ON ONE DROP MANHOLE THAN THE INTERIOR DIAMETER OF THE MANHOLE SHALL BE 6'.

STANDARD DETAILS
INSIDE DROP CONNECTION 1 OF 2

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JANUARY 31, 2019	
REVISED:	SCALE: NOT TO SCALE
REVISED:	PLATE: MH-03



NOTES:
1. PATCH MUSTAS AND MEASURED ALONG THE ROADWAY CENTERLINE. CONTRACT MAYAS BE REQUIRED TO ADJUST PATCH LOCATIONS.
2. TIES IS A WHARMAN #6572. IF THE EXISTING WEIRWORT HAS A HEAVIER CROSS SECTION THAN SHOWN HERE, IT WILL BE REPLACED WITH THAT CROSS SECTION, OR AS DIRECTED BY THE ENGINEER.

DelDOT

PERMANENT CROSS-ROAD PATCH OVER PIPE TRENCH						REVIEWED	
RECOMMENDED	STANDARD NO.	P-4 (3504)	SHT.	1	OF 1	APPROVED	

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALAN M. DECKER LICENSE NO. 17771 DELAWARE PROFESSIONAL ENGINEER
8/9/25

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

SANITARY SEWER DETAIL

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	BY	REVISIONS
1	2026-06-22	CH	REVISED PER TOWN OF MILTON COMMENTS

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

CS6002

SHEET 64 OF 82

U:\Accounts\RIBER\RIBER21002 - Company Store Property\DESIGN_SHEETS\CONSTRUCTION PLAN\CS6002.dwg PLOTTED: 7/14/2026 11:39 AM BY: Logan Strickland PLOTSTYLE: Pennoni MCS.ctb

SCARLET OAKS SUBDIVISION
PUMP STATION CONSTRUCTION PLAN SET

TM#: 235-20.00-63.02

BROADKILL HUNDRED

SHINGLE POINT ROAD (SCR 249)

MILTON, DE 19968

PREPARED FOR:

DEVELOPER

RIBERA DEVELOPMENT, LLC

JOHN STAMATO

8684 VETERANS HIGHWAY, SUITE 203

MILLERSVILLE, MD 21108

(443) 871-0486

DEVELOPER
RIBERA DEVELOPMENT, LLC
C/O JOHN STAMATO
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

ENGINEER/ PLANNER
PENNONI ASSOCIATES INC.
18072 DAVIDSON DRIVE
MILTON, DE 19968
(302) 684-8030

SURVEYOR
PENNONI ASSOCIATES, INC.

ENVIRONMENTAL CONSULTANT
GEO-TECHNOLOGY ASSOCIATES, INC.
21491 BALTIMORE AVENUE, UNIT 1
GEORGETOWN, DE 19947

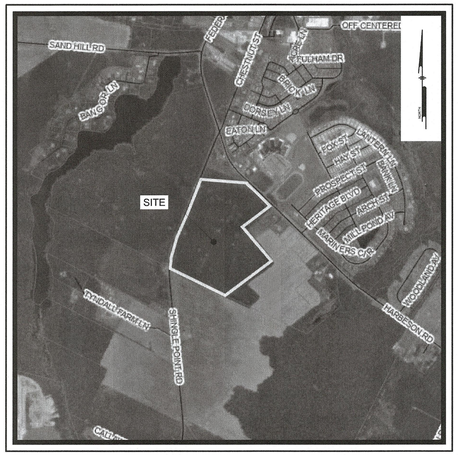
SCHOOL DISTRICT
CAPE HENLOPEN

FIRE DISTRICT
MILTON FIRE DEPT. (85)

POSTAL DISTRICT
MILTON (19968)

WATER UTILITY
TOWN OF MILTON

SEWER UTILITY
ARTESIAN WASTEWATER MANAGEMENT, INC.



LOCATION MAP
Scale: 1" = 1500'

LEGEND

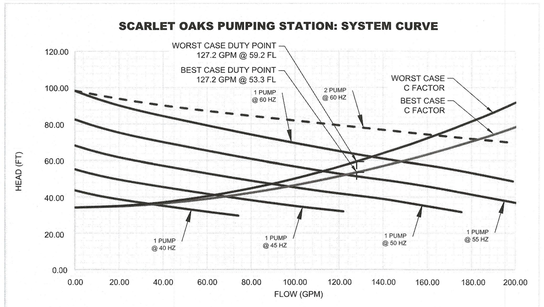
EXISTING	PROPOSED	DESCRIPTION
		CURB
		EDGE OF PAVEMENT
		PAVEMENT
		EDGE OF GRAVEL
		EASEMENT
		FENCE
		PROPERTY LINE/ RIGHT OF WAY
		BUILDING RESTRICTION LINE
		PROPERTY, CORNER FOUND
		PROPERTY, ADJOINING LINED
		SITE, MAIL BOX
		SITE, TRAFFIC SIGN
		SOIL BOUNDARY
WaC		SOIL LABEL
		STORM SEWER, INLET
		STORM SEWER,HEADWALL
		STORM SEWER, MANHOLE
D	D	STORM SEWER, UNDERGROUND
101	101	MINOR CONTOUR
100	100	MAJOR CONTOUR
100.5	35.00	SPOT ELEVATION
		TREE LINE
W	W	WATER, UNDERGROUND
	WV	WATER VALVE
	WM	WATER MAIN
		CLEAN OUT
S	S	SANITARY SEWER, UNDERGROUND
FM	FM	SANITARY SEWER, FORCED MAIN
	S	SANITARY SEWER, MANHOLE
UE	E	POWER-UNDERGROUND ELECTRIC
		POWER, UTILITY POLE
		STREET LIGHT
		BOUNDARY OF FEDERALLY REGULATED WETLANDS (USACOE)
		BOUNDARY OF DNREC (STATE) REGULATED TIDAL WETLAND
		LANDSCAPE BUFFER
		ROADWAY CENTERLINE
		CONCRETE SIDEWALK

FLOW GENERATION:

Scarlet Oaks Pumping Station Flow Generation

Flow Generation Scource	Units	Phase 1 Scarlet / Com.	Phase2 S/C/M/C Combined
Scarlet Oaks	163	39120	39120
Mason Farm	300 EST		72000
Carey Farm East	385 EST		92400
Carey Farm West	150 EST		36000
Mason Farm Clubhouse	4 EDU @240		960
Carey Farm Clubhouse	4 EDU @240		960
Commercial Property	4 units @ 5 EDU	4800	4800
Scarlet Infiltration	0.93 miles	1860	1860
Mason Infiltration	EST 2 miles		4000
Carey Farm West Infiltration	EST 3 miles		6000
Carey Farm East Infiltration	EST 1.4 Miles		2800
Total Daily flow		45780	260900 gpd
		31.8	181.1 gpm
Peak 1 Hour Flow	3.75/4.0	183120	978375 gpd
Design Flow		127.2	679.4 gpm

SYSTEM CURVE:



SYSTEM EMERGENCY STORAGE:

SYSTEM EMERGENCY STORAGE

Stored Wastewater Elevation	Accumulated wetwell storage (gal)	Accumulated MH Vol (gal)	Accumulated pipe vol (gal)	Total stored Volume (gal)	Phase 1 Time (hours)
6	752	0	0	752	0.4
8	1504	0	0	1504	0.8
10	2256	0	46	2302	1.2
12	3008	470	1331	4809	2.5
14	3760	1692	2798	8250	4.3
16	4512	3760	4240	12512	6.6
18	5264	6580	5576	17420	9.1
20	6016	10058	7094	23168	12.1
22	6768	14288	8216	29272	15.3
24	7520	20210	10710	38440	20.1
26	8272	27350	13306	48928	25.6
28	9024	35434	14483	58941	30.9

SITE DATA COLUMN:

1. TAX MAP NUMBER: 235-20.00-63.02 [DEED REF. PARCEL BOOK 6212, PG. 340
2. DEVELOPER NAME: RIBERA DEVELOPMENT, LLC
3. DEVELOPER ADDRESS: 8684 VETERAN'S HIGHWAY, SUITE 203 MILLERSVILLE, MD 21108
4. SITE ADDRESS: SHINGLE POINT ROAD (SCR 249) MILTON, DE 19968
5. CURRENT ZONING: R-1
6. LATITUDE AND LONGITUDE STATE PLAN COORDINATES: LATITUDE: 38.760489 LONGITUDE: -75.3183906
7. GROSS ACREAGE: 50.08 ± ACRES
8. PROPOSED USE: DWELLING, SINGLE-FAMILY DETACHED, MULTI-FAMILY (TOWNHOUSE)
9. SEWER SERVICE ARTESIAN WASTEWATER MANAGEMENT INC.
10. WATER SERVICE: TOWN OF MILTON DE
11. 100 YEAR FLOOD PLAIN: THIS PROPERTY IS LOCATED ON THE FEMA FLOOD INSURANCE RATE MAP NUMBER 10005C0164J, MAP REVISED JANUARY 06, 2005. AREA DESIGNATED AS FLOOD ZONE "X" (UNSHADED).

CALL BEFORE YOU DIG
Call Miss Utility of Delmarva
800-282-8555
Ticket Number(s):

PREPARED BY:
PENNONI ASSOCIATES INC.

Pennoni
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030
F 302.684.8054

Sheet List Table		
Sheet Number	Sheet Description	Sheet Title
69	PS1700	PUMP STATION COVER SHEET
70	PS1701	PUMP STATION SITE PLAN
71	PS1702	PUMP STATION PLAN AND SECTIONS
72	PS1703	PUMP STATION DETAILS
73	PS1704	PUMP STATION DETAILS
74	PS1705	ELECTRICAL SITE PLAN
75	PS1706	ELECTRICAL DETAILS
76	PS1707	ELECTRICAL DETAILS
77	PS1708	ELECTRICAL NOTES
78	PS1709	SEWER FORCE MAIN PLAN AND PROFILE
79	PS1710	SEWER FORCE MAIN PLAN AND PROFILE
80	PS1711	SEWER FORCE MAIN PLAN AND PROFILE
81	PS1712	SEWER FORCE MAIN NOTES AND DETAILS
82	PS1713	SEWER FORCE MAIN NOTES & DETAILS

GENERAL NOTES:

1. THIS PLAN AND APPROVAL IS FOR DOMESTIC WASTE WATER ONLY.
2. ALL WASTEWATER FACILITIES TO MEET ARTESIAN WASTEWATER MANAGEMENT INC. STANDARDS AND SPECIFICATIONS.

SITE NOTES:

1. THE PROPERTY LINES SHOWN ON THIS PLAT WERE TAKEN FROM DOCUMENTS OF PUBLIC RECORDS AS WELL AS ACTUAL FIELD SURVEY PREPARED BY PENNONI ASSOCIATES.
2. THE TOPOGRAPHY SHOWN ON THIS PLAN WAS TAKEN FROM A PLAN PREPARED BY PENNONI ASSOCIATES, VERTICAL DATUM NAVD88, HORIZONTAL DATUM NAD83.
3. SANITARY SEWER SERVICE FOR THE SUBDIVISION WILL BE HANDLED BY ARTESIAN WASTEWATER MANAGEMENT, INC..
4. WATER FOR THE SITE WILL BE PROVIDED BY TOWN OF MILTON DE.
5. WATER AND SEWER MAINS SHALL HAVE A MINIMUM OF 10 FEET OF HORIZONTAL AND A MINIMUM OF 18 INCHES VERTICAL CLEARANCE BETWEEN THEM.
6. IF THE SITE CONTAINS WETLANDS CONFINED TO THE TAX DITCHES. ACTIVITIES WITHIN THESE WETLANDS MAY REQUIRE A PERMIT FROM THE U.S. ARMY CORPS OF ENGINEERS AND/OR THE STATE OF DELAWARE.
7. THE SITE IS LOCATED IN ZONE X BASED ON THE FEMA FLOOD INSURANCE RATE MAP NUMBER 10005C0164J, MAP REVISED JANUARY 06, 2005 AND IS DETERMINED TO NOT BE INSIDE THE 500 YEAR FLOODPLAIN
8. THE SUSSEX CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE OR MODIFY ANY EROSION AND SEDIMENT CONTROL MEASURES AS THEY DEEM NECESSARY.
9. ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, BUT NOT IN PAVEMENT, SHALL BE TOPSOILED (6" MINIMUM), FERTILIZED AND SEEDED.
10. A 72 HOUR (MINIMUM) NOTICE SHALL BE GIVEN TO THE DELDOT DISTRICT PERMIT SUPERVISOR PRIOR TO STARTING ANY WORK IN THE PUBLIC RIGHT OF WAY.
11. MISS UTILITY (811) OR 1-800-282-8555 SHALL BE NOTIFIED THREE (3) DAYS PRIOR TO EXCAVATION.
12. ALL SIGNING FOR MAINTENANCE OF TRAFFIC IS THE CONTRACTORS RESPONSIBILITY, AND SHALL FOLLOW THE GUIDELINES SHOWN IN "DELAWARE 2000 TRAFFIC CONTROLS FOR STREETS AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY, AND EMERGENCY OPERATIONS."
13. DAMAGE TO EXISTING SIGNS SHALL BE REPAIRED OR REPLACED AS PER THE "GUIDE FOR FABRICATION AND INSTALLATION OF TRAFFIC CONTROL DEVICES".
14. ALL PROPOSED FOREST BUFFERS ARE TO BE MAINTAINED BY THE CONTRACTOR.
15. ALL FIRE LANES, FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.

Pennoni
PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 **F** 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

GRAEME LANE LICENSED PROFESSIONAL ENGINEER No. 20668 STATE OF DELAWARE
8-10-2026

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968
COVER SHEET
RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-08	REVISED PER ARTESIAN COMMENTS	LFS

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATE; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

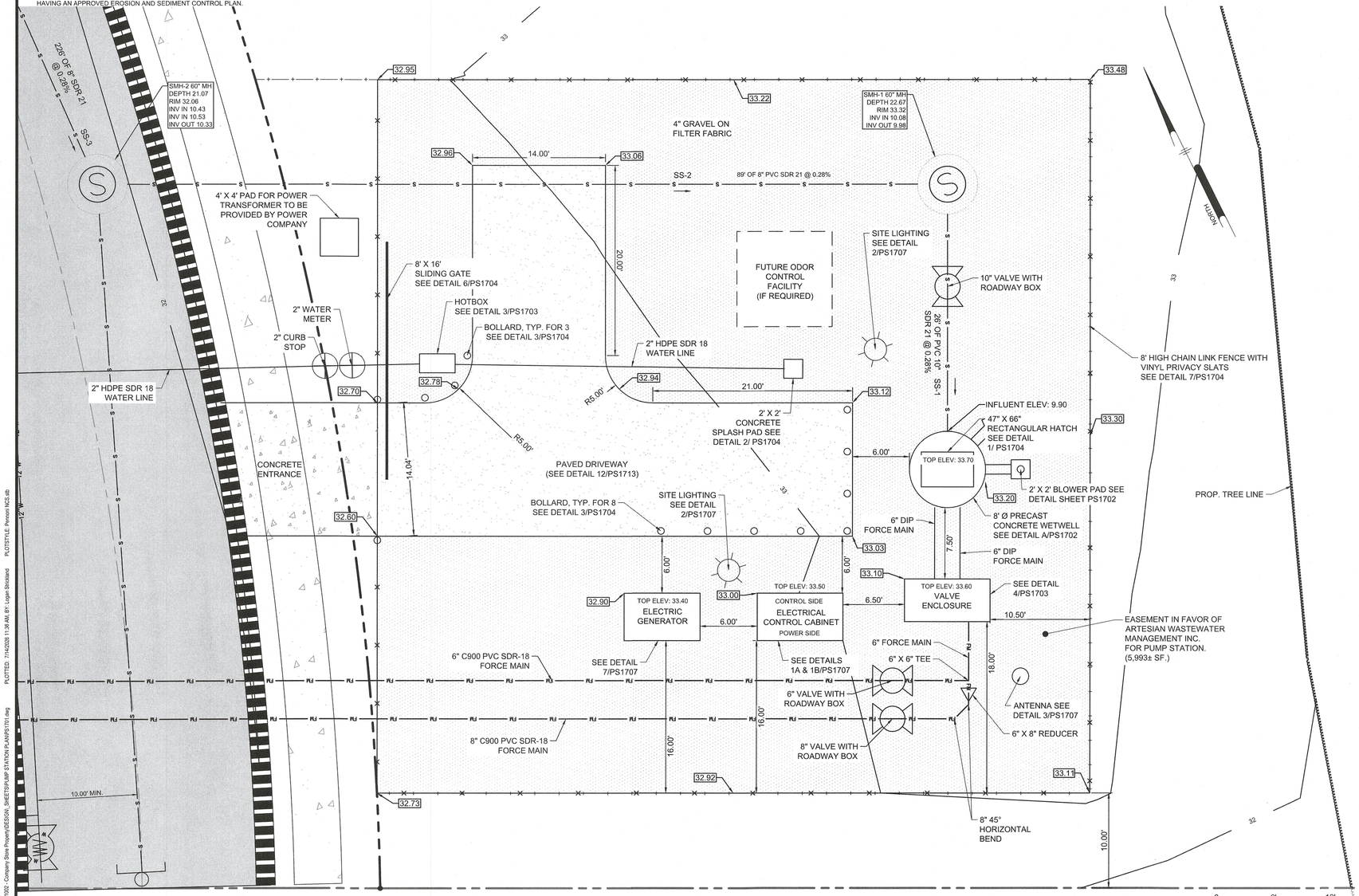
PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1700
SHEET 69 OF 82

I:\Accounts\RIBER\RIBER21002 - Company Store Property\DESIGN_SHEETS\PUMP STATION PLANS\PS1700.dwg PLOTTED: 7/14/2026 11:36 AM, BY: Logan Strickland PLOTSTYLE: Pennoni NCS.ctb

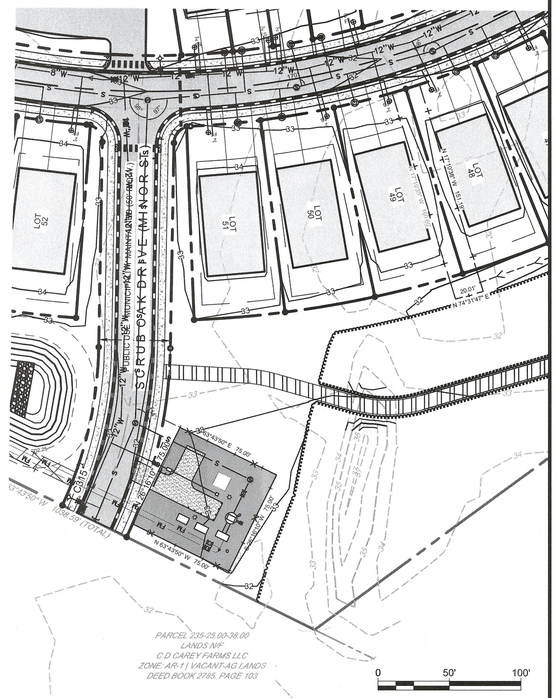
GENERAL NOTES FOR PUMP STATION CONSTRUCTION:

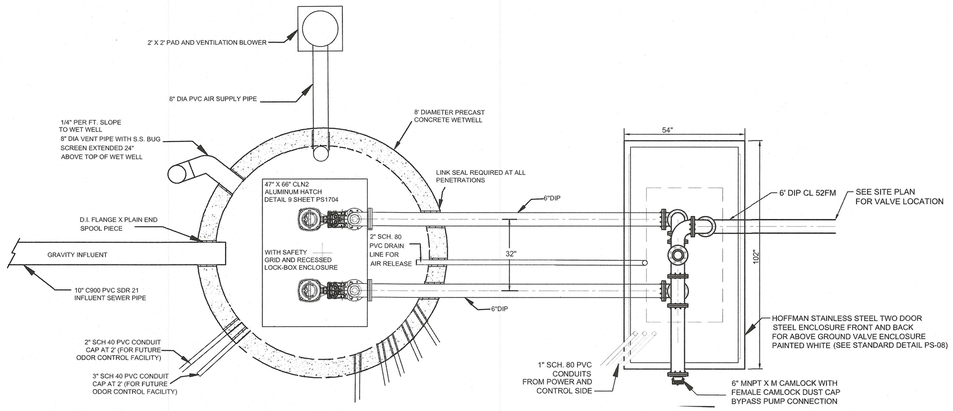
1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ARTESIAN WASTEWATER MANAGEMENT, INC. STANDARDS AND SPECIFICATIONS LATEST EDITION.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL AMENDMENTS THERETO. THESE DRAWINGS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
3. NO DEBRIS SHALL BE BURIED ON SITE. DEBRIS ENCOUNTERED DURING CONSTRUCTION SHALL BE REMOVED AT THE CONTRACTORS EXPENSE, TO AN AREA OR SITE WITH AN APPROVED DRY WASTE FILL PLAN AND EROSION AND SEDIMENT CONTROL PLAN.
4. EXISTING UTILITIES, AS OF THIS DATE ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS AND CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFER WITH THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION. THE FAILURE TO SHOW ON THE DRAWINGS ANY EXISTING UTILITIES SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY OF DETERMINING THE LOCATION OF THESE UTILITIES. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BE DONE WITHOUT FIRST CALLING "MISS UTILITY" (1-800-282-8555) 72 HOURS PRIOR TO EXCAVATION TO HAVE UNDERGROUND UTILITY CABLES LOCATED AND MARKED.
5. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE, AND ANY DAMAGE DONE TO THEM DUE TO THEIR NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED TO THE OWNERS SATISFACTION AT THE CONTRACTORS SOLE EXPENSE. IF THE CONTRACTOR RELIES ON THE UTILITY LOCATIONS SHOWN HEREON, HE DOES SO AT HIS OWN RISK AND WILL NOT BE ENTITLED TO ADDITIONAL COMPENSATION DUE TO TIME DELAYS FROM SAID RELIANCE.
6. CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER WHEN PERMANENT OR TEMPORARY RELOCATION OF THE EXISTING UTILITY IS REQUIRED. THIS SHALL INCLUDE BUT NOT BE LIMITED TO STORM DRAINS, INLETS, PAVEMENT, SIGNALS, CONDUITS, CABLES, PIPING, GUY WIRES, POLES, AND OVERHEAD FACILITIES, ETC., REGARDLESS OF OWNERSHIP.
7. THE CONTRACTOR SHALL PROTECT ALL ADJOINING AND NEARBY BUILDINGS, EQUIPMENT, ALL UTILITIES, STRUCTURES, FENCES, TREES, SHRUBBERY, ETC., FROM DAMAGE DUE TO EXCAVATION, DEMOLITION, AND CONSTRUCTION, DURING THE ENTIRE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED DIRECTLY OR INDIRECTLY WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL INSTALLED UTILITIES UNTIL THE COMPLETION OF CONSTRUCTION. PIPES WITH SHALLOW COVER SHALL BE PROTECTED FROM DAMAGE BY CONSTRUCTION MACHINERY WITH ADEQUATE TEMPORARY COVER. PIPING, MANHOLE AND VAULT OPENINGS SHALL BE PROTECTED TO PREVENT SEDIMENT, DEBRIS AND WATER FROM ENTERING THE FACILITIES. THE CONTRACTOR SHALL CLEAN AND DISPOSE OF ALL MATERIAL TO THE SATISFACTION OF THE CITY SHOULD THESE MATERIALS BE ALLOWED TO ENTER THE INSTALLED FACILITIES OR EXISTING FACILITIES WHERE CONNECTIONS EXIST.
9. ALL EXCAVATION FOR STRUCTURES AND PIPE TRENCHES SHALL BE KEPT FREE OF WATER UNTIL BACKFILL IS PROPERLY TAMPED IN PLACE TO FINISH GRADE. SPECIAL ATTENTION IS CALLED TO THE NEED TO PROPERLY REMOVE SEDIMENT FROM DEWATERING ACTIVITIES WITHOUT THE USE OF EXCAVATED SEDIMENT PITS. THE CONTRACTORS ATTENTION IS CALLED TO THE NEED TO ACHIEVE DEWATERING ACTIVITY AND SEDIMENT REMOVAL WITH PORTABLE DEWATERING BOXES OR OTHER SIMILAR DEVICES WHILE MINIMIZING THE DISRUPTION TO BUSINESSES AND ADJACENT GROUND AREAS. WATER DISCHARGED FROM DEWATERING / SEDIMENT REMOVAL DEVICES SHALL BE CONVEYED TO EXISTING DRAINAGE FACILITIES SUCH AS INLETS AND DRAINAGE DITCHES SO AS TO PREVENT HAZARDOUS CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE AND INJURY WHICH OCCURS AS A RESULT OF IMPROPER DEWATERING / SEDIMENT REMOVAL ACTIVITIES.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE APPROVAL AND ACCEPTANCE OF THE PUMP STATION, BY ARTESIAN WASTEWATER MANAGEMENT INC., UPON COMPLETION OF CONSTRUCTION.
11. SANITARY SEWER SEPARATION FROM WATER MAINS SHALL BE 10 FEET HORIZONTAL, 18 INCH VERTICAL MINIMUM AT ALL WATER AND SEWER CROSSINGS, UNLESS OTHERWISE NOTED.
12. CONTRACTOR TO DISPOSE OF ALL HAZARDOUS WASTE ENCOUNTERED DURING EXCAVATION IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. THE DISPOSAL SITE MUST BE A PERMITTED SITE.
13. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DISPOSE OF ALL EXCAVATED MATERIAL NOT USED IN THE PROJECT CONSTRUCTION AT AN APPROVED UPLAND DISPOSAL SITE HAVING AN APPROVED EROSION AND SEDIMENT CONTROL PLAN.



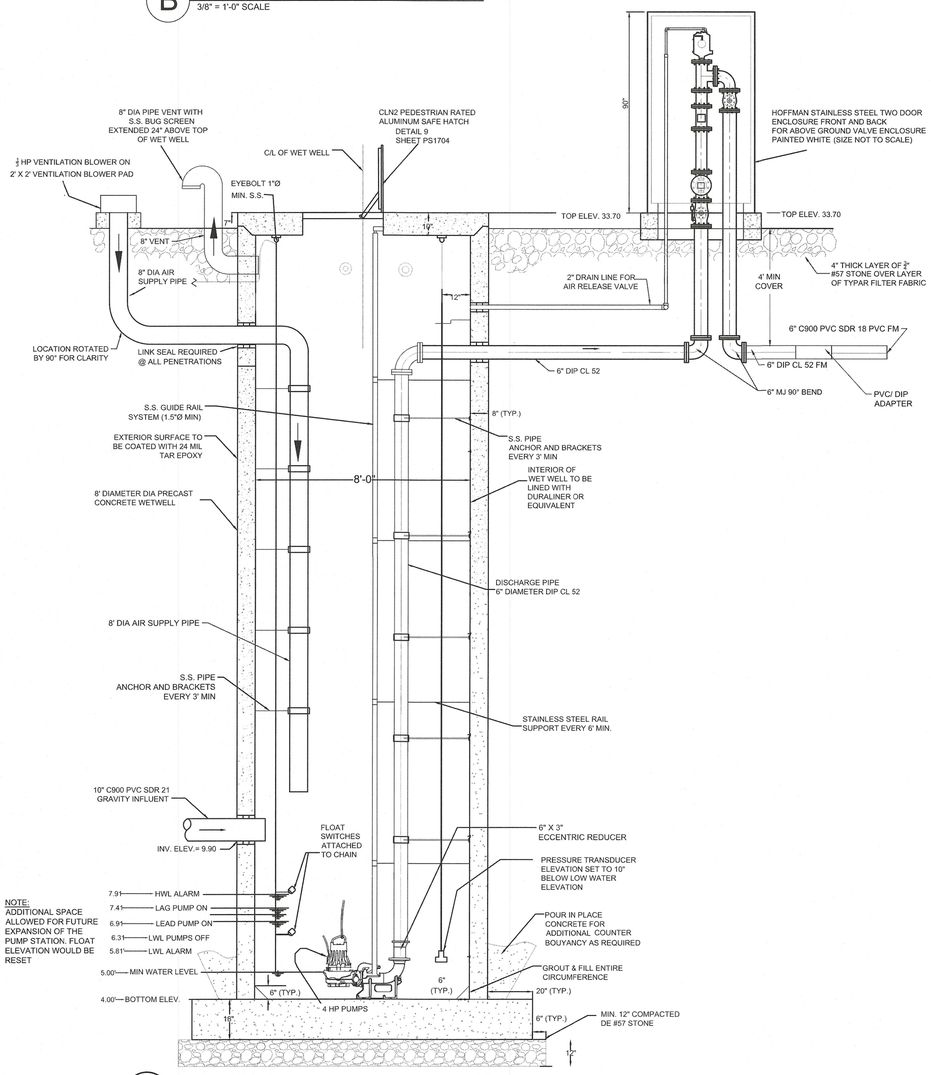
PUMP STATION SITE PLAN

SCALE: 1" = 6'





B PUMP STATION - WET WELL AND VALVE ENCLOSURE
3/8" = 1'-0" SCALE



A PUMP STATION - WET WELL AND VALVE ENCLOSURE SECTION
3/8" = 1'-0" SCALE

GENERAL NOTES FOR PUMP STATION (CIVIL MECHANICAL):

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ARTESIAN WATER MANAGEMENT, INC. STANDARDS AND SPECIFICATIONS.
2. THE STRUCTURAL DESIGN OF THE WET WELL AND VALVE CHAMBER, INCLUDING ANTI-FLOATATION CALCULATIONS, SHALL BE PROVIDED BY THE PRECAST CONCRETE MANUFACTURER AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE. ADDITIONAL CONCRETE IS TO BE PLACED IN THE FIELD TO OVERCOME BUOYANCY.
3. CONCRETE EDGES ABOVE FINISHED GRADE SHALL HAVE 3/4" CHAMFER.
4. WALLS AND TOP OF VAULTS SHALL HAVE A MINIMUM THICKNESS OF 8" AND THE BOTTOM SHALL HAVE A MINIMUM THICKNESS OF 10" OR AS INDICATED ON PLAN AND SHALL BE DESIGNED FOR A LIVE LOAD OF 300 PSF, UNLESS OTHERWISE NOTED.
5. WET WELL TO BE A MINIMUM OF 6" ABOVE FINISHED GRADE.
6. ALUMINUM LADDERS, ACCESS DOORS, ETC. IN CONTACT WITH CONCRETE SHALL BE COATED WITH AN 24 MIL TAR EPOXY.
7. ALL EXTERIOR PRECAST CONCRETE BELOW FINISH GRADE SHALL RECEIVE A COATING OF EPOXY WATERPROOFING COMPOUND.
8. EXACT DIMENSIONS FOR LOCATION OF PUMPS, GUIDERAILS, ACCESS DOORS, ETC. SHALL BE OBTAINED FROM PUMP MANUFACTURER'S APPROVED SHOP DRAWINGS.
9. FORCE MAIN PIPING SHALL BE ANCHORED WITH THRUST BLOCKS AT ALL BENDS, IF FUSED HDPE IS NOT USED.
10. ALL PIPING WORK SHALL INCLUDE MISCELLANEOUS PIPING MATERIALS AND FITTINGS, INCLUDING, BUT NOT LIMITED TO, FLANGE FILLERS, BEVELED AND PLAIN SPACERS, SPOOLS, UNI-FLANGES, COUPLINGS AND ALL OTHER MATERIALS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
11. ALL PIPING SHALL BE INSTALLED WITH PIPE SUPPORTS, INCLUDING, BUT NOT LIMITED TO, HANGERS AND FLOOR STANDS. ALL HARDWARE SHALL BE STAINLESS STEEL.

C PUMP STATION - VALVE AND ENCLOSURE DETAILS
3/8" = 1'-0" SCALE

PUMP STATION DESIGN SUMMARY:

DESIGN FLOW

	EDU	PHASE 2	PHASE 1
SCARLET OAKS	163	39,120 GPD	39,120 GPD
MASON FARM	300	72,200 GPD	
CAREY FARM EAST	385	92,400 GPD	
CAREY FARM WEST	150	36,000 GPD	
CLUBHOUSE (MASON FARM)	4	960 GPD	
CLUBHOUSE (CAREY FARM)	4	960 GPD	
COMMERCIAL PROPERTY	20	4,800 GPD	4,800 GPD
INFILTRATION INFLOW (SCARLET OAKS)	.93	1,860 GPD	1,860 GPD
INFILTRATION INFLOW (MASON FARM)	± 2m	4,000 GBD	
INFILTRATION INFLOW (CAREY FARM E.)	± 3m	6,000 GPD	
INFILTRATION INFLOW (CAREY FARM W.)	± 1.4m	2,800 GPD	

AVERAGE DAILY FLOW

TOTAL DAILY FLOW =	146,760 GPD	45,780 GPD

PEAK FLOW

PEAK FACTOR (PF) =	3.75	4.00
PEAK DAILY FLOW =	978,375 GPD	183,120 GPD
DESIGN FLOW =	679 GPM	127.2 GPM

PUMP CYCLE TIME

WET WELL DIAMETER (FT) :	8 FT
CROSS SECTIONAL AREA (SF):	50.27 SF
VOLUME PER V.F. (GAL):	376.02 GAL
PUMP RATE (GPM):	127.2 GPM
TDH:	
AVERAGE FLOW IN (GPM):	31.8 GPM
PUMP DOWN TIME (MIN.):	7.50
PUMP RUN TIME (MIN.):	2.50
TOTAL CYCLE TIME (MIN.):	10.00
NUMBER STARTS PER HOUR:	6.00

FORCE MAIN VELOCITY (MINIMUM)

MINIMUM VELOCITY REQUIRED (FPS):	2.50 FPS
ACTUAL VELOCITY: 4" PVC SDR-18 INTERIOR DIAMETER 4.266"	2.45 FPS

HORSEPOWER REQUIRED

DESIGN OPERATING POINT (BEST CASE NO FLOW IN HOST FM):	127.2 GPM @ 53.3 FT
DESIGN OPERATING POINT (WORST CASE MAX FLOW IN HOST FM) :	127.2 GPM @ 59.2 FT
PUMP EFFICIENCY @ D.O.P.	55%
REQUIRED HORSEPOWER =	4 HP.

PUMP STATION DATA

ACTUAL PUMP RATE =	127.2 GPM
STATIC HEAD =	34.22 FT
TOTAL HEAD (TDH) (BEST CASE) =	53.3 FT
WET WELL DIAMETER =	8 FT
TOP OF PUMP STATION ELEVATION (10" SLAB) =	32.75 FT
INFLUENT PIPE ELEV. =	9.90 FT
HW ALARM =	7.91 FT
LAG PUMP ON ELEV. =	7.41 FT
LEAD PUMP ON =	6.91 FT
PUMP OFF ELEVATION =	6.31 FT
LOW LEVEL ALARM ELEV.=	5.81 FT
BOTTOM OF WET WELL ELEVATION =	4.00 FT
MINIMUM WATER ELEVATION =	5.00 FT
TOTAL DEPTH OF WET WELL =	26.92 FT

PUMPS:

PUMP:	FLYGT NP 3085 SH3 255
CONTROL PANEL:	PROVIDED BY FLYGT
MOTORS:	3 PHASE, 240 VOLT, 3445 RPM MAX, 4 HORSEPOWER 45-09-2AL
IMPELLER:	125 MM
STARTER:	VARIABLE FREQUENCY DRIVES
CONTROLS:	PRESSURE TRANSDUCER WITH BACKUP FLOAT SWITCHES
POWER:	AUXILIARY STANDBY GENERATOR CUMMINS 25 KW
EXTERNAL ALARMS:	SCADA PER ARTESIAN WASTEWATER MANAGEMENT, INC. REQUIREMENTS
BLOWER	250 CFM ¾ HP 120V (MIN 12 AIR EXCHANGES PER HOUR)

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK



SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

PUMP STATION PLAN AND SECTIONS

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-08	REVISED PER ARTESIAN COMMENTS	LFS

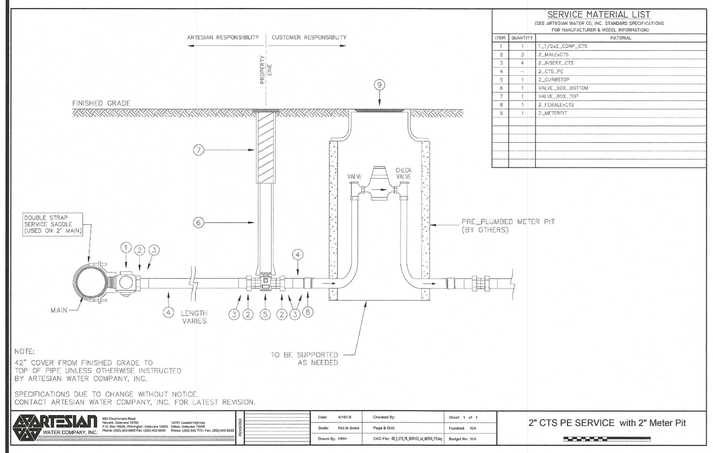
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PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1702

SHEET 71 OF 82

PLOTTED: 7/14/2026 11:57 AM BY: Logan Shotsteel PLOTSTYLE: Pennoni MCS.stb
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SERVICE MATERIAL LIST

(SEE ARTESIAN WATER CO., INC. STANDARD SPECIFICATIONS FOR MANUFACTURER & MODEL INFORMATION)

ITEM	QUANTITY	MATERIAL
1	1	1_1/2X2_COMP_CTS
2	3	2_MALE-CTS
3	4	2_BORST_CTS
4	--	2_CTS_PE
5	1	2_CURBSTOP
6	1	VALVE_BOX_BOTTOM
7	1	VALVE_BOX_TOP
8	1	2_FEMALE-CTS
9	1	2_METERYT

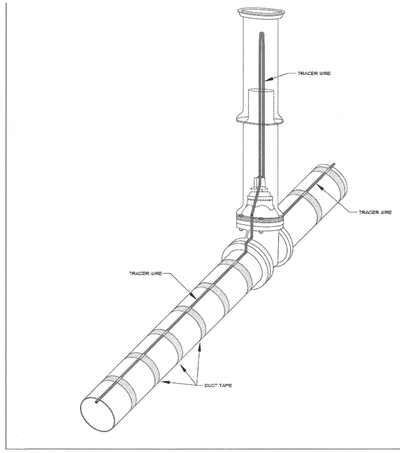
NOTE:
42" COVER FROM FINISHED GRADE TO TOP OF PIPE UNLESS OTHERWISE INSTRUCTED BY ARTESIAN WATER COMPANY, INC.

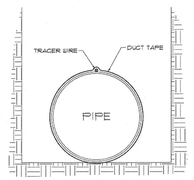
SPECIFICATIONS DUE TO CHANGE WITHOUT NOTICE. CONTACT ARTESIAN WATER COMPANY, INC. FOR LATEST REVISION.

ARTESIAN WATER COMPANY, INC.	Date: 4/16/19	Checked By:	Sheet 1 of 1
	Scale: Not to Scale	Page & Grid:	Finished: N/A
	Drawn By: HRH	CAD File: R:\LOLR_ENG\Land\MISC\Files	Budget No.: N/A

2" CTS PE SERVICE with 2" Meter Pit

DETAIL- 2" CTS PE SERVICE WITH 2" METER PIT
NOT TO SCALE
1 / PS1703





TRACER WIRE DETAIL

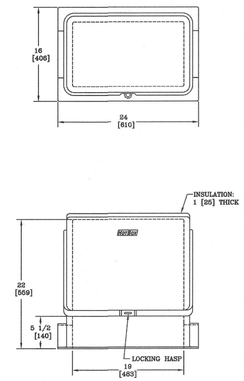
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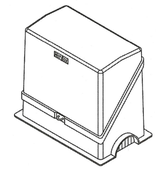
SKAIN: BY: HRH 3/5/20

ARTESIAN WATER COMPANY, INC.
664 Churchmans Road, Newark, Delaware 19702
P.O. Box 15004, Wilmington, Delaware 19850
Phone: (302) 453-6900 Fax: (302) 453-5900

LEWS Clerkell Highway, Milton, Delaware 19968
Phone: (302) 645-7339 Fax: (302) 645-8235

DETAIL- TRACER WIRE DETAIL
NOT TO SCALE
2 / PS1703





NOTES:

1. HEAT IS PROVIDED BY A 30WATT, 120V SINGLE PHASE HEAT TRACE TAPE. FOR UNHEATED VERSION REPLACE THE PREFIX "H" WITH AN "L".
2. FOUR INTERNAL BRACKETS AND CONCRETE ANCHORS ARE SUPPLIED WITH THE ENCLOSURE. (NOT SHOWN)
3. STANDARD COLOR IS BEIGE. (OPTIONS AVAILABLE)
4. FOR RECOMMENDED SLAB SIZE ADD 9" [229] TO THE ENCLOSURE EXTERIOR.
5. INTERIOR DIMENSIONS ARE NOMINAL.
6. OLD P/N: HB.75

DIMENSIONS ARE IN INCHES OR MILLIMETERS IN BRACKETS UNLESS OTHERWISE NOTED.

	BY	DATE	
DRN	KPF	9/15/16	
CHK			
ENG			
APR			
APR			
PROJECT NUMBER			
09902			

WEIGHT 35# 145#

HIGHBOX

924 LANE AVENUE JACKSONVILLE, FL 32254 (904) 786-7990 www.hot-box.com

SCALE 1 1/4"=1"

DRAWING DESCRIPTION

HOT BOX® FIBERGLASS FLIP TOP ENCLOSURE

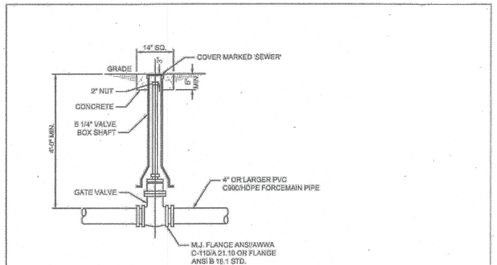
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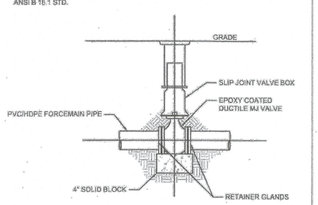
DRAWING NUMBER HFO11019022

SHEET 1 OF 1

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DETAIL- HOT BOX FIBERGLASS FLIP TOP ENCLOSURE
NOT TO SCALE
3 / PS1703





VALVE SUPPORT
NOT TO SCALE

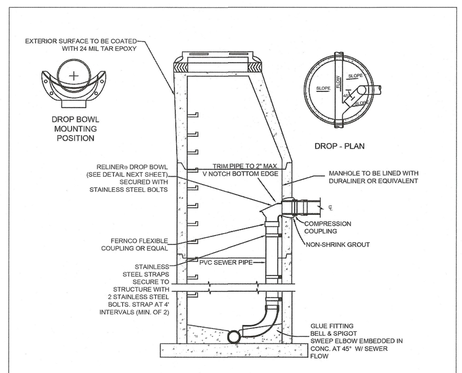
STANDARD DETAILS

TYPICAL VALVE, VALVE BOX & VALVE SUPPORT

ARTESIAN WATER COMPANY, INC.
664 Churchmans Road
Newark, Delaware 19702
P.O. Box 15004, Wilmington, Delaware 19850
Phone: (302) 453-6900 Fax: (302) 453-5900

ISSUED: FEBRUARY 20, 2014	SCALE: NOT TO SCALE
REVISED:	
REVISED:	PLATE: AWCBS-6A

DETAIL- TYPICAL VALVE, VALVE BOX & VALVE SUPPORT
NOT TO SCALE
4 / PS1703



NOTES:

1. ALL DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BOWL AS PRODUCED BY: RELINER-DURAN, INC. 53 MT. ARCHER RD., LYME, CT 06371 (860)434-0277 FAX: (860)434-3195
2. SECURE DROP PIPE TO MANHOLE WALL WITH RELINER-DURAN, INC STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS.
3. IF MORE THAN ONE DROP IS WITHIN ON ONE DROP MANHOLE THAN THE INTERIOR DIAMETER OF THE MANHOLE SHALL BE 6'.

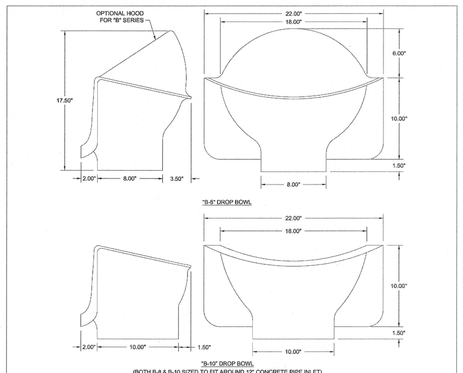
STANDARD DETAILS

INSIDE DROP CONNECTION 1 OF 2

ARTESIAN WATER COMPANY, INC.
664 Churchmans Road
Newark, Delaware 19702
P.O. Box 15004, Wilmington, Delaware 19850
Phone: (302) 453-6900 Fax: (302) 453-5900

ISSUED: JANUARY 31, 2019	
REVISED:	SCALE: NOT TO SCALE
REVISED:	PLATE: MH-05

DETAIL- INSIDE DROP CONNECTION
NOT TO SCALE
5 / PS1703



NOTES:
THE "B-8" BOWL WILL SERVICE UP THROUGH FULL 10" INLETS. THE "B-10" BOWL WILL SERVICE UP THROUGH FULL 12" INLET. CAN BE USED FOR 15" AND 16" INLET MODERATE FLOWS. ALL SIZES ARE FOR RETROFIT OR NEW CONSTRUCTION. FABRICATED IN MARINE GRADE FIBERGLASS AND FINISHED IN BRIGHT WHITE GEL COAT.

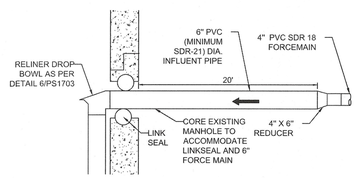
STANDARD DETAILS

B-8 & B-10 DROP BOWLS 2 OF 2

ARTESIAN WATER COMPANY, INC.
664 Churchmans Road
Newark, Delaware 19702
P.O. Box 15004, Wilmington, Delaware 19850
Phone: (302) 453-6900 Fax: (302) 453-5900

ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED:	PLATE: MH-06

DETAIL- DROP BOWLS
NOT TO SCALE
6 / PS1703



DETAIL- DROP BOWL CONNECTION
NOT TO SCALE
7 / PS1703

U:\Documents\RIBER\RIBER21002 - Company Store Property\DESIGN_SHEETS\PUMP STATION PLANS\PS1703.dwg PLOTTED: 7/14/2026 11:37 AM BY Logan Strickland PLOTSTYLE: Pennoni HCS.ctb

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

STATE OF DELAWARE — CLIFTON E. LAKE — No. 20689 — PROFESSIONAL ENGINEER
8-10-2026

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

PUMP STATION DETAILS

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-08	REVISED PER ARTESIAN COMMENTS	LFS

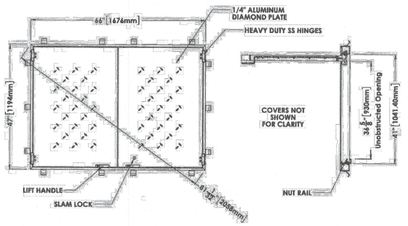
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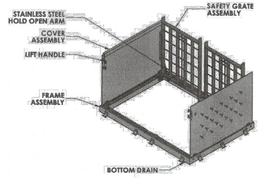
PROJECT	RIBER21002
DATE	2024-04-03
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1703

SHEET 72 OF 82

CLN2 Pedestrian Rated Aluminum SAFE HATCH®





STYLE "CLN2" ACCESS HATCH, AS MANUFACTURED BY EJ.

MATERIAL SHALL BE 6061-T6 ALUMINUM FOR BARS, ANGLES, AND EXTRUSIONS. 1/4" DIAMOND PLATE SHALL BE 5086 ALUMINUM.

UNIT DESIGNED PEDESTRIAN RATED, FOR A MINIMUM LIVE LOAD OF 300 LBS./SQ. FT.

HINGES SHALL BE OF HEAVY DUTY DESIGN. MATERIAL SHALL BE GRADE 316 STAINLESS STEEL. EACH HINGE SHALL HAVE A GRADE 316 STAINLESS STEEL, 3/8" DIAMETER PIN. HINGES SHALL BE FASTENED TO THE CHANNEL FRAME AND DIAMOND PLATE USING GRADE 316 STAINLESS STEEL BOLTS AND NY-LOCK NUTS.

EACH DOOR SHALL BE EQUIPPED WITH A STAINLESS STEEL HOLD OPEN ARM. DOOR SHALL LOCK OPEN IN THE 90 DEGREE POSITION. HOLD OPEN ARM SHALL BE FASTENED TO THE FRAME WITH A 1/2" GRADE 316 STAINLESS STEEL BOLT.

CHANNEL FRAME SHALL BE OF EXTRUDED ALUMINUM. FRAME SHALL HAVE A DOVE TAIL GROOVE TO ACCEPT A 1/8" SILICONE CUSHION GASKET.

EXTERIOR OF FRAME WHICH COMES IN CONTACT WITH THE CONCRETE SHALL BE COATED WITH ONE COAT OF BLACK PAINT.

ALL HARDWARE SHALL BE STAINLESS STEEL.

EACH HATCH SHALL BE EQUIPPED WITH AN ALUMINUM LIFT HANDLE.THE LIFT HANDLE SHALL BE PLUSH WITH THE TOP OF THE 1/4" DIAMOND PLATE.

UNITS SHALL BE SUPPLIED WITH HINGED SAFETY GRATES TO PROVIDE PROTECTION AGAINST FALL THROUGH AND TO CONTROL ACCESS TO THE CONFINED SPACE.

EACH CLN2 STYLE HATCH IS SUPPLIED WITH A 1-1/2" THREADED DRAIN COUPLER ON UNDERSIDE OF CHANNEL FRAME FOR PIPE CONNECTION.

EACH HATCH SHALL BE SUPPLIED WITH A GRADE 316 STAINLESS STEEL SLAM LOCK, WITH KEY WAY PROJECTED BY A THREADED PLUG. PLUG SHALL BE FLUSH WITH THE TOP OF THE 1/4" DIAMOND PLATE. SLAM LOCK SHALL BE FASTENED WITH FOUR GRADE 316 STAINLESS STEEL BOLTS AND WASHERS.

Product Number
H36601591

Design Features
- Materials
  - Aluminum
- Design Load
  - 300 psf
- Open Area
- Coating
  - Mill Finish
- √ Designates Machined Surface

Certification
- NPR18-00XXXX
- 201810-XXXX
- Estimated Weight: 197 LBS
- Country of Origin: USA
- Revision Level: +

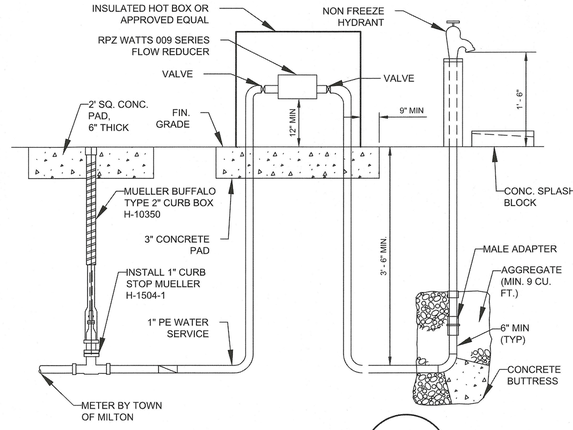
Drawing Revision
2/23/2021 Designer: SB
Revised By:

Disclaimer
Weights, ratings, dimensions (inches/mm) and drawings provided are for your guidance. We reserve the right to modify specifications without prior notice.

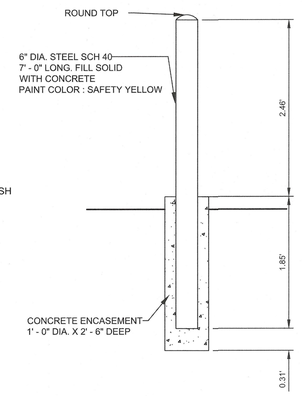
Drawing is very important for ALL and should be carefully read for measurements and features in this drawing. We are constantly looking at innovation and continual growth so, mistakes. Please check our website ejco.com for more information. Any unauthorized use of these drawings is prohibited and represents intellectual property of EJ. If you are using it in other documents please contact EJ, us.sales@ejco.com.
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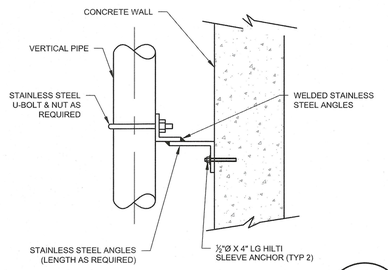
DETAIL- CLNZ HATCH — NOT TO SCALE — 1 / PS1704



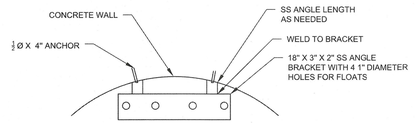
DETAIL- YARD HYDRANT — NOT TO SCALE — 2 / PS1704



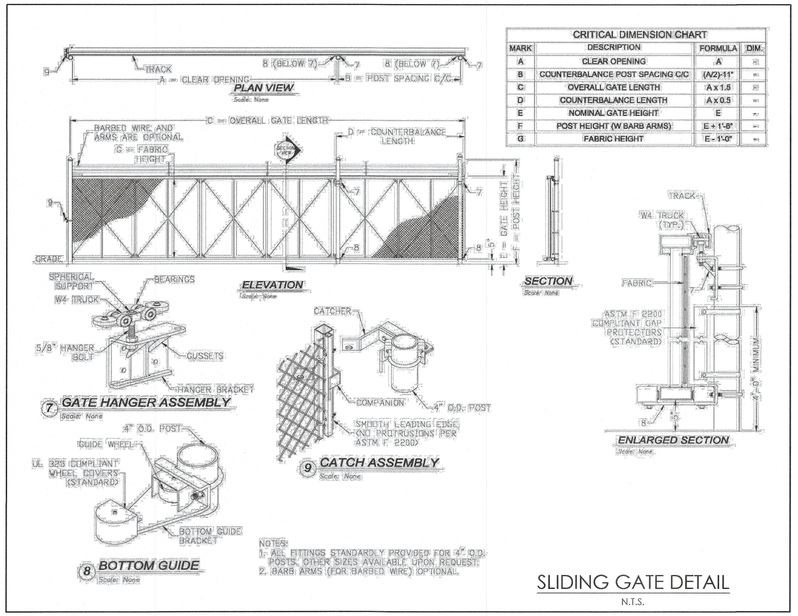
DETAIL- STANDARD BOLLARD — NOT TO SCALE — 3 / PS1704



DETAIL- BRACKET AND PIPE SUPPORT DETAIL — NOT TO SCALE — 4 / PS1704



DETAIL-FLOAT SUPPORT BRACKET DETAIL — NOT TO SCALE — 5 / PS1704

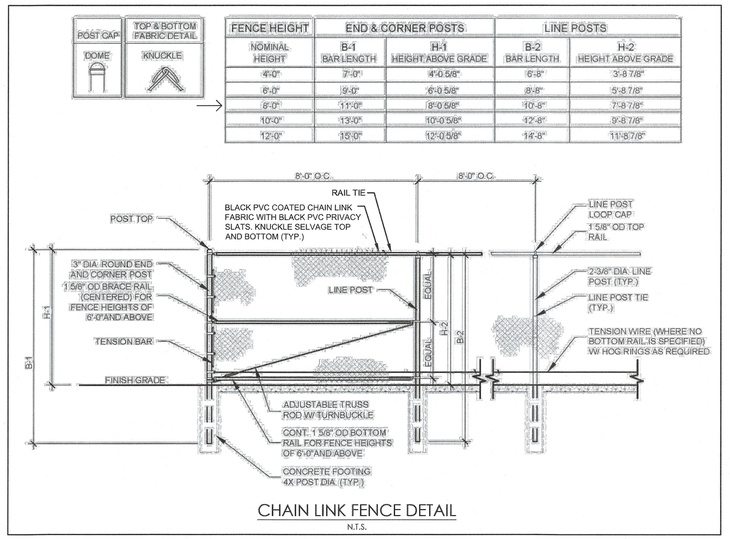


CRITICAL DIMENSION CHART			
MARK	DESCRIPTION	FORMULA	DIM.
A	CLEAR OPENING	A	in
B	COUNTERBALANCE POST SPACING C/C	(A/2)-11"	in
C	OVERALL GATE LENGTH	A x 1.5	in
D	COUNTERBALANCE LENGTH	A x 0.5	in
E	NOMINAL GATE HEIGHT	E	in
F	POST HEIGHT (W BARB ARMS)	E + 1'-8"	in
G	FABRIC HEIGHT	E - 1'-0"	in

NOTES:
1. ALL FITTINGS STANDARDLY PROVIDED FOR 4" O.D. POSTS. OTHER SIZES AVAILABLE UPON REQUEST.
2. BARB ARMS (FOR BARBED WIRE) OPTIONAL.

SLIDING GATE DETAIL
N.T.S.

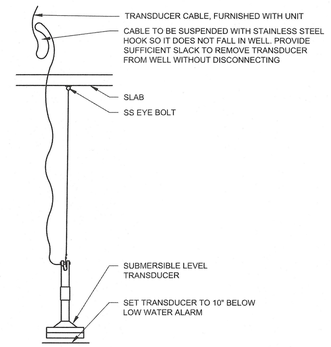
DETAIL- 8' HIGH CHAINLINK FENCE SLIDING GATE — NOT TO SCALE — 6 / PS1704



FENCE HEIGHT	END & CORNER POSTS		LINE POSTS	
NOMINAL HEIGHT	B-1 BAR LENGTH	H-1 HEIGHT ABOVE GRADE	B-2 BAR LENGTH	H-2 HEIGHT ABOVE GRADE
4'-0"	7'-0"	4'-0 5/8"	6'-8"	3'-8 7/8"
6'-0"	9'-0"	6'-0 5/8"	8'-8"	5'-8 7/8"
8'-0"	11'-0"	8'-0 5/8"	10'-8"	7'-8 7/8"
10'-0"	13'-0"	10'-0 5/8"	12'-8"	9'-8 7/8"
12'-0"	15'-0"	12'-0 5/8"	14'-8"	11'-8 7/8"

CHAIN LINK FENCE DETAIL
N.T.S.

DETAIL- 8' HIGH CHAINLINK FENCE — NOT TO SCALE — 7 / PS1704



NOTE: ALL MOUNTING HARDWARE IN WET WELL SHALL BE STAINLESS STEEL

DETAIL- TRANSDUCER MOUNTING DETAIL — NOT TO SCALE — 8 / PS1704

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

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GREGORY E. LAKE — LICENSED PROFESSIONAL ENGINEER — NO. 20098 — STATE OF DELAWARE — 8-6-2026

SCARLET OAKS SUBDIVISION
TM# 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

PUMP STATION DETAILS

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-08	REVISED PER ARTESIAN COMMENTS	LFS

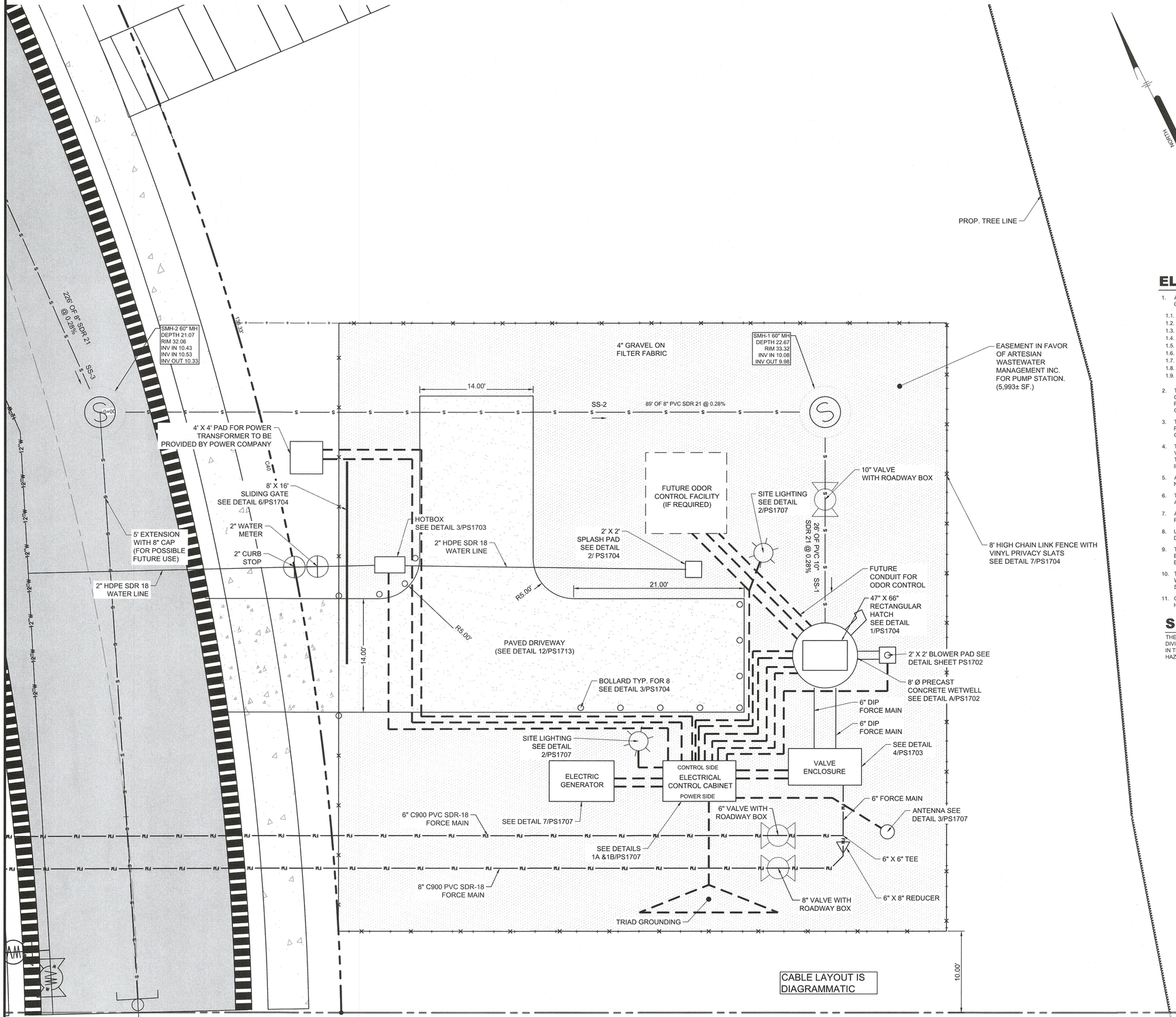
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PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1704

SHEET 73 OF 82

U:\Accounts\RIBER\RIBER21002 - Company Store Property\DESIGN_SHEETS\PUMP STATION PLANS\PS1704.dwg PLOTTED: 7/14/2026 11:37 AM, BY: Logan Strickland PLOTSTYLE: Pennoni HCS.stb PROJECT STATUS: —



ELECTRICAL SITE PLAN

SCALE: 1" = 6'

ELECTRICAL NOTES

1. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH THE REQUIREMENTS / REGULATIONS OF THE FOLLOWING CODES / AGENCIES / UTILITIES:
   - 1.1. THE NATIONAL ELECTRICAL CODE (NEC)
   - 1.2. LOCAL BUILDING AND FIRE CODES
   - 1.3. ALL LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS
   - 1.4. ALL LOCAL, STATE, AND FEDERAL ENVIRONMENTAL PROTECTION REGULATIONS
   - 1.5. DESIGN SAFETY STANDARDS FOR ELECTRICAL SYSTEMS (OSHA)
   - 1.6. ANY OTHER PUBLIC AGENCIES HAVING JURISDICTION
   - 1.7. DELMARVA
   - 1.8. ARTESIAN WASTEWATER MANAGEMENT INC.
   - 1.9. THE LOCATION OF TRANSFORMER AND METER TO BE DECIDED IN CONJUNCTION WITH POWER COMPANY/SUPPLIER
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE "ON THE JOB" SAFETY FOR HIS EMPLOYEES. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT HIS WORK SHALL BE PERFORMED IN A MANNER THAT SHALL PROVIDE SAFE CONDITIONS FOR OTHER PERSONS EMPLOYED ON THE PROJECT, EMPLOYEES OF THE OWNER, AND ALL OTHER PERSONS HAVING AUTHORIZED OR UNAUTHORIZED ACCESS TO THE WORK AND THE PUBLIC.
3. THE ELECTRICAL DRAWINGS DO NOT INDICATE ALL OF THE EXISTING EQUIPMENT, DEVICES, WIRING, STRUCTURES, PIPING, ETC., EITHER EXPOSED OR CONCEALED. PRIOR TO COMMENCING CONSTRUCTION THE CONTRACTOR SHALL OBTAIN OR VERIFY THE EXACT LOCATION OF ALL THE EXISTING ITEMS THAT AFFECT THE WORK.
4. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE GENERAL ARRANGEMENT OF THE VARIOUS SYSTEMS AND THE APPROXIMATE / RELATIVE LOCATIONS OF THE EQUIPMENT / DEVICES / ITEMS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THAT THERE IS ADEQUATE SPACE AT THE LOCATIONS INDICATED FOR ALL THE EQUIPMENT / DEVICES / ITEMS PRIOR TO INSTALLATION OF SAME.
5. ALL WORK SHALL BE GROUNDED AS INDICATED ON THE DRAWINGS AND / OR AS REQUIRED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
6. THE CONTRACTOR SHALL USE WHERE APPROPRIATE A MECHANICAL STRUT SYSTEM (1-5/8" CHANNEL WIDTH SERIES) AS A MEANS OF SUPPORT FOR THE INSTALLATION AND MOUNTING OF EQUIPMENT / DEVICES.
7. ALL EQUIPMENT SHALL BE INSTALLED AND WIRED IN STRICT COMPLIANCE WITH THE REQUIREMENTS AND RECOMMENDATIONS OF THE EQUIPMENT MANUFACTURER.
8. UPON COMPLETION OF THE INSTALLATION THE CONTRACTOR SHALL BALANCE THE LOAD ON ALL PARTS OF THE DISTRIBUTION SYSTEM.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ALL DAMAGE CAUSED BY THE INSTALLATION OF EQUIPMENT / DEVICES / MATERIALS AT THE PROJECT. REPAIRS OR REPLACEMENT WORK SHALL CONFORM TO HE EXISTING CONDITIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY / ALL CORE DRILLING AS REQUIRED FOR THE COMPLETION OF HIS WORK. COORDINATE CORE DRILLING WITH REBAR PLACEMENT AND/OR REINFORCEMENT ELEMENTS OF THE PRECAST STRUCTURES TO AVOID DAMAGE TO THESE ITEMS.
11. CONTRACTOR SHALL PROVIDE ARC FLASH LABELS FOR ALL EQUIPMENT BEING INSTALLED. LABELS SHALL INDICATE HAZARD LEVEL AND PPE REQUIREMENTS AS REQUIRED BY NFPA 70E AND IEEE 1584

SPECIAL NOTE:

THE WET WELL SHALL BE CONSIDERED CLASSIFIED AREAS - CLASS I, DIVISION1, GROUPS C AND D. ALL EQUIPMENT AND WIRING INSTALLED IN THESE AREAS SHALL MEET THE REQUIREMENTS FOR THIS TYPE OF HAZARDOUS LOCATION.

Pennoni
PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

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GRAEME LAKE ASHWORTH — 20686 — PROFESSIONAL ENGINEER — DELAWARE — 8-10-2026

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

ELECTRICAL SITE PLAN

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
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PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1705

SHEET 74 OF 82

PLOTTED: 7/14/2026 11:37 AM BY: Logan Strickland PLOTSTYLE: Pennoni.NCS.ctb
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B-PHASE HIGH LEG

PANEL SCHEDULE

PANEL SHALL HAVE COPPER BUS AND COPPER GROUND BUS

PANEL: PP | INTERRUPTING RATING: 22,000 AMP RMS SYM. | MOUNTING: SURFACE

VOLTAGE: 240/120V | AMP: 250A | PHASE: 3Ø | WIRE: 4 | MAIN: MCB

CIRCUIT	DESCRIPTION	WIRE	POLES	BKR SIZE	VA/PHASE A LEFT	A RIGHT	B LEFT	B RIGHT	C LEFT	C RIGHT	BKR SIZE	POLES	WIRE	DESCRIPTION	CIRCUIT
1	SPARE		1	20	-	2106					25	3	4	PUMP NO. 1 STARTER	2
3							-	2106							4
5										2106					6
7	SPARE		1	20		2106					25	3	4	PUMP NO. 2 STARTER	8
9	SPARE		1	20			-	2106							10
11	WP CABINET RECP *	12	1	20					180	2106					12
13	SPARE		1	20							30	3	10	TVSS	14
15							-	-							16
17									-	-					18
19	CABINET LIGHTING TYPE "A"	12	1	20	72	*					20	1		SPARE	20
21	SPACE						-	-						SPACE	22
23	CABINET RECEPTACLE *	12	1	20					360	240	20	1	12	BATTERY CHARGER	24
25	RTU		1	20	40	25					20	1	12	FLOW METER	26
27	SPACE						-	-						SPACE	28
29	JACKET HEATER	12	2	20					500	140	20	1	12	SITE LIGHT	30
31					500	600					20	1	12	PCP	32
33	SPACE						-	-						SPACE	34
35	WET WELL FAN	12	1	20					864	200	20	1	12	CABINET HEATER	36
37	HOT BOX HEATING	12	1	20	30	*					60	3	6	SPARE	38
39	SPACE						-	-							40
41	CABINET HEATER	12	1	20					200	*					42
	TOTALS				5479		4212		6896						
					16587										

1. NEMA TYPE 1 ENCLOSURE
* INDICATES GFI TYPE CIRCUIT BREAKER

LIGHTING FIXTURE AND POLE SCHEDULE							
TYPE	MANUFACTURER/CATALOG NO.	LAMP NO.	LAMP TYPE	LAMP WATT	MOUNTING TYPE	MOUNTING HEIGHT	REMARKS
A	COLUMBIA FEM L48 MD MVOLT 35K E10WMCP	4	LED	18	SURFACE	TOP OF CABINET	120 VOLT ONE IN EACH FOR POWER AND CONTROL CABINET
B	HUBBELL/ SPAULDING RAR1-160L-70-4K7-4W-UNV-ASQU-DBT-7PR-TL SSA-S-14-40-A-1-S2-DB	2	LED	70	POLE	14'-0"	MOUNTING ARM; ALL ITEMS SHALL HAVE DARK BRONZE FINISH 120 VOLT
C	SPAULDING SSA-S-20-40-B-OT-DB	N/A	N/A	N/A	POLE	20'-0"	ANTENNA MTG POLE; DARK BRONZE FINISH W/ POLE CAP

GENERATOR LOAD CALCULATIONS

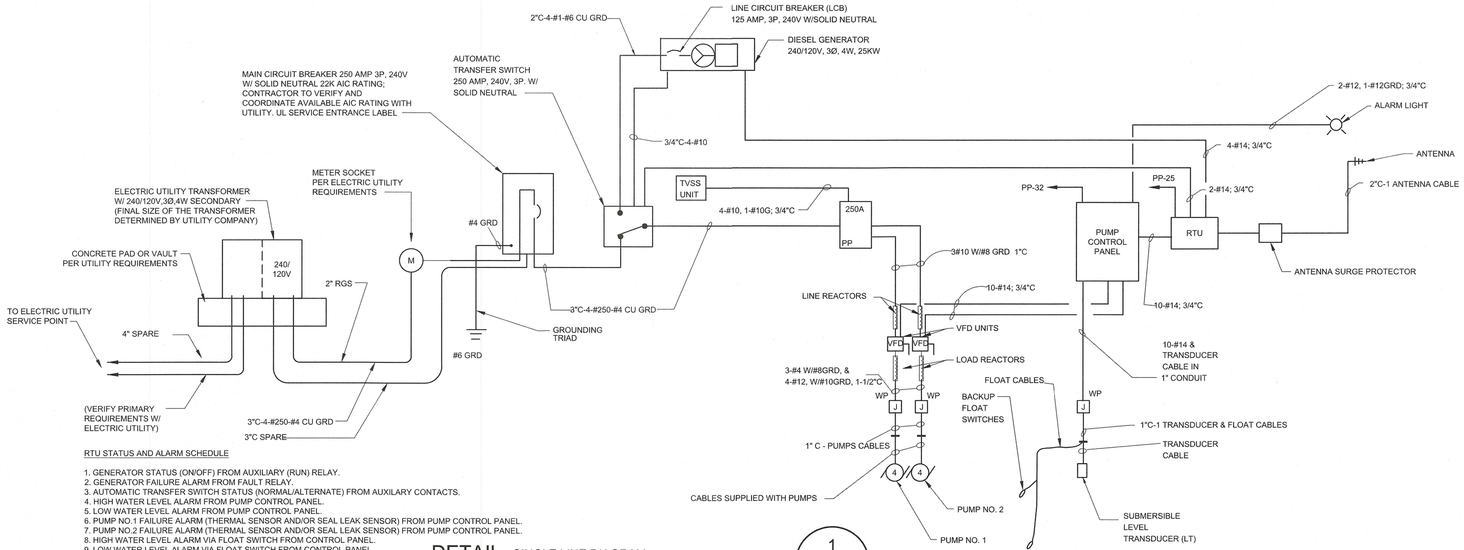
PENNONI ASSOCIATES, INC. CONSULTING ENGINEERS | JOB NO. RIBER21002

PROJECT SCARLET OAKS | SHEET NO. 1 of 1

SUBJECT SCARLETS OAK SUBDIVISION | DATE 20-Nov-25

" 1.732=3 " | BY: SPS

ITEM	VOLTS	AMPS	PHASE	VA	HP	QTY	NOTE	TOTAL
Pump 1&2	240	15.2	1.732	6318	4 HP	2	NEMA-J	12636
Lights "A"	120	0.15	1	18.0		4	Cabinets	72
Lights "B"	120	0.58	1	69.6		2	Site	140
Receptacles	120	1.5	1	180.0		3		540
PCP	120	5.0	1	600.0		1		600
RTU	120	0.33	1	40.0		1		40
Jkt Htr	240	4.17	1	1000.0	1KW	1	Genset	1000
Batt Chgr	120	2.0	1	240.0		1	Genset	240
FM/SC	120	0.21	1	25.0		1	Flowmeter	25
Cabinet Heater	120	1.67	1	200.0		2	Cabinets	400
WW Supply Fan	120	7.2	1	864.0	1/3HP	1	Wet Well	864
Hot Box Heat Trace	120	0.25	1	30.0		1		30
	Connected Load: in VA							16587
	39.90	A at 240V-3Phase						
Base Load=	3951	9.50A						
Pump 1 Load=	6318	15.2A						
Pump 2 Load=	6318	15.2A						
Generator Size	25KW	31KVA	at 0.8PF	74.60 AMP				



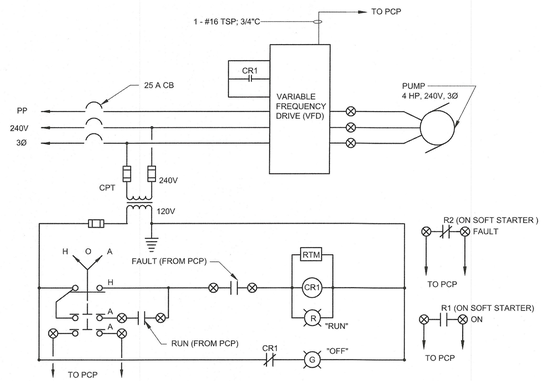
DETAIL- SINGLE LINE DIAGRAM

NOT TO SCALE

1 PS 1705

RTU STATUS AND ALARM SCHEDULE

1. GENERATOR STATUS (ON/OFF) FROM AUXILIARY (RUN) RELAY.
2. GENERATOR FAILURE ALARM FROM FAULT RELAY.
3. AUTOMATIC TRANSFER SWITCH STATUS (NORMAL/ALTERNATE) FROM AUXILARY CONTACTS.
4. HIGH WATER LEVEL ALARM FROM PUMP CONTROL PANEL.
5. LOW WATER LEVEL ALARM FROM PUMP CONTROL PANEL.
6. PUMP NO.1 FAILURE ALARM (THERMAL SENSOR AND/OR SEAL LEAK SENSOR) FROM PUMP CONTROL PANEL.
7. PUMP NO.2 FAILURE ALARM (THERMAL SENSOR AND/OR SEAL LEAK SENSOR) FROM PUMP CONTROL PANEL.
8. HIGH WATER LEVEL ALARM VIA FLOAT SWITCH FROM CONTROL PANEL.
9. LOW WATER LEVEL ALARM VIA FLOAT SWITCH FROM CONTROL PANEL.



DETAIL- PUMP ENCLOSED VFD UNIT ELEMENTARY DIAGRAM

NOT TO SCALE

2 PS 1705

NOTE:
ALL CABLES DESIGNED FOR FUTURE PUMPS AND GENERATOR UPGRADE. CURRENTLY ESTIMATED TO BE 65 HP PUMPS AND 250 KW GENERATOR

ELECTRICAL ABBREVIATIONS

A, AMP	AMPERE	MFR	MANUFACTURER
ATD	AUTOMATIC TELEPHONE DIALER	MLO	MAIN LUG ONLY
ATS	AUTOMATIC TRANSFER SWITCH	OC	ON CENTER
BC	BATTERY CHARGER	P	POLE
C, CND	CONDUIT	PCP	PUMP CONTROL PANEL
CCR	CIRCULAR CHART RECORDER	PF	POWER FACTOR
CKT	CIRCUIT	PP	POWER PANEL
CONC	CONCRETE	RECP	RECEPTACLE
CPT	CONTROL POWER TRANSFORMER	RTM	RUNNING TIME METER
ELEC	ELECTRICAL	RTU	REMOTE TELEMETRY UNIT
FLUOR	FLUORESCENT	SC	SIGNAL CONVERTER
G, GRD	GROUND GEN GENERATOR	T	TRANSFORMER
GFI	GROUND FAULT CIRCUIT INTERRUPTER	TSP	TWISTED SHIELDED PAIR
HOA	HAND-OFF-AUTOMATIC	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
HP	HORSEPOWER HP	UL	UNDERWRITERS LABORATORIES
HPS	HIGH PRESSURE SODIUM	V	VOLT
J, JB	JUNCTION BOX	VA	VOLT AMPERES
KVA	KILOVOLT AMPERES	VFD	VARIABLE FREQUENCY DRIVE
KW	KILOWATT	W	WATT, WIRE
LP	LIGHTING PANELBOARD	W/	WITH
M	METER	W/W	WIREWAY
MCB	MAIN CIRCUIT BREAKER	WP	WEATHERPROOF
		XP	EXPLOSION PROOF

ELECTRICAL LEGEND

- A a — LED LIGHTING FIXTURE; UPPER CASE LETTER DENOTES TYPE IN SCHEDULE, LOWER CASE LETTER DENOTES SWITCH LEG
- WP GFI — DUPLEX RECEPTACLE, 120V, 20A
- k — TOGGLE SWITCH, 120V, 20A, LOWER CASE LETTER DENOTES FIXTURES TO BE SWITCHED
- 10 — MOTOR, NUMBER DENOTES HP
- J JB — JUNCTION BOX
- E — DIESEL GENERATOR
- 8 — WIRING, ARROW INDICATES HOMERUN TO PANEL NUMBER "8" INDICATES CIRCUIT
- CIRCUIT BREAKER
- M — METER
- AUTOMATIC TRANSFER SWITCH
- PHASE, DIAMETER
- CONTACT
- G — PILOT LIGHT; R = RED, G = GREEN
- EXTERNAL WIRING TERMINAL
- EXPOSED CONDUIT
- CONCEALED CONDUIT
- CONDUIT SEAL
- GROUND ROD
- G — GROUND CONDUCTOR
- FE — FIRE EXTINGUISHER
- GROUND CONNECTION
- TELEPHONE OUTLET
- COMBINATION MOTOR STARTER
- DISCONNECT SWITCH
- E — ELECTRIC LINES
- T — TELEPHONE LINES
- HT — HEAT TRACE
- VFD — VARIABLE FREQUENCY DRIVE

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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

GRACE L. LAKE — 12745 — REGISTERED PROFESSIONAL ENGINEER — DELAWARE — 12/31/2026

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

ELECTRICAL DETAILS

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-08	REVISED PER ARTESIAN COMMENTS	LFS

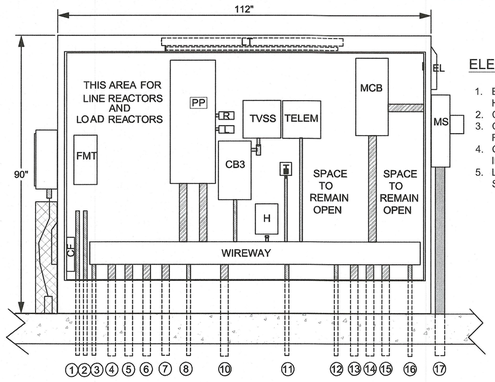
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PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1706

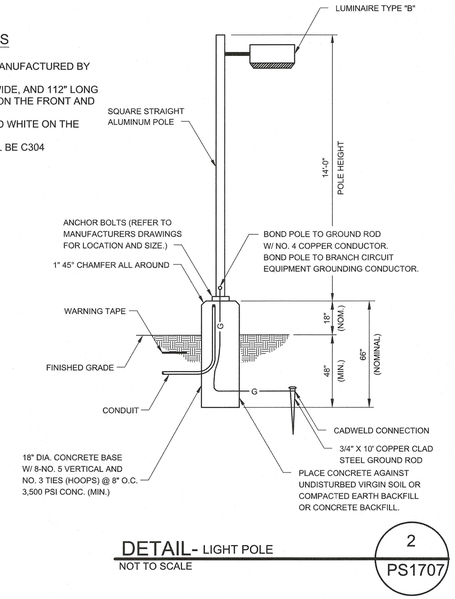
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U:\Accounts\RIBER\Riber21002 - company docs\property\DESIGN_SHEETS\PUMP STATION PLANS\PS1706.dwg PLOTTED: 7/14/2026 4:16 PM, BY: Ahmed Mohamed PLOTSTYLE: Pennoni MCS.ctb PROJECT STATUS: —

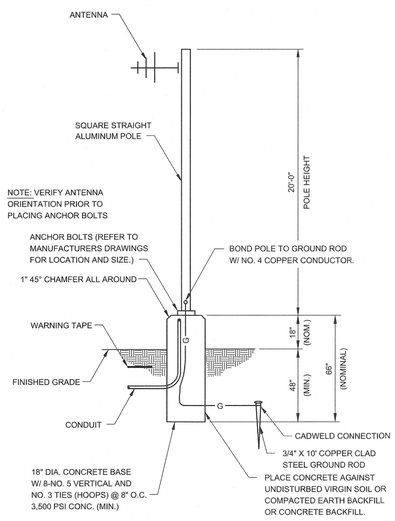


ELECTRICAL CABINET NOTES

1. ELECTRICAL CABINET SHALL BE MANUFACTURED BY HOFFMAN OR APPROVED EQUAL
2. CABINET SHALL BE 90" HIGH, 48" WIDE, AND 112" LONG
3. CABINET SHALL HOUSE 3 DOORS ON THE FRONT AND REAR SIDE
4. CABINET SHALL BE STEEL PAINTED WHITE ON THE INSIDE AND OUTSIDE
5. LOWER SUPPORT CHANNEL SHALL BE C304 STAINLESS STEEL



DETAIL- LIGHT POLE — NOT TO SCALE — 2 / PS1707



DETAIL- ANTENNA POLE — NOT TO SCALE — 3 / PS1707

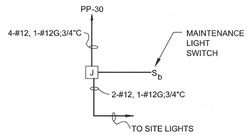
ELECTRICAL CONDUIT DESIGN LEGEND

3 IN. SCH. 80 PVC CONDUIT	T - CABINET COOLING THERMOSTAT
2 IN. SCH. 80 PVC CONDUIT	EL - EXHAUST LOUVER
1 1/4 IN. SCH. 80 PVC CONDUIT	H -400 WATT CABINET HEATER
1 IN. SCH. 80 PVC CONDUIT	CF -CABINET COOLING FAN
3/4 IN. SCH. 80 PVC CONDUIT	MCB - SQUARE D, 250 AMP, 240 V, 3 PH. MAIN CIRCUIT BREAKER SIZED FOR FAULT CURRENT AVAILABILITY, CONTACT SERVICE PROVIDER
	P P - POWER PANEL
	TVSS- TRANSIENT VOLTAGE SURGE SUPRESSOR,240 V., 3 PH., 4 WIRE.SQUARE D EMA SERIES, 160 kA
	MS -METER SOCKET-240/120 V., 3 PH. 300 AMP., 4 WIRE.
	R -RECEPTACLE
	L -LIGHT SWITCH
	LT -CABINET LIGHT
	CB3 - SQUARE D, 30 AMP CIRCUIT BREAKER, 240 V., 3 PH.
	FMT - FLOW METER TOTALIZER ELECTRONICS.
	TELEM - TELEMETRY UNIT.

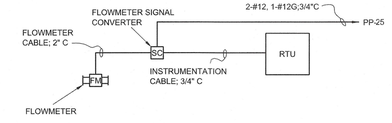
1. 1 IN. SCH. 80 PVC TO FLOW METER.
2. 1 IN. SCH. 80 PVC TO PCP.
3. 1 IN. SCH. 80 PVC TO FLOW METER.
4. 2 IN. SCH. 80 PVC TO LINE REACTOR NO.1 (FOR FUTURE USE).
5. 2 IN. SCH. 80 PVC FEED TO VFD NO.1 .
6. 2 IN. SCH. 80 PVC TO LINE REACTOR NO.2. (FOR FUTURE USE).
7. 2 IN. SCH. 80 PVC FEED TO VFD NO.2 .
8. 1 IN. SCH. 80 PVC TO YARD LIGHT.
10. 2 IN. SCH. 80 PVC TO CONTROL SIDE (2 0/120 V.FEED OUT).
11. 1 IN. SCH. 80 PVC TO CONTROL SIDE.
12. 1 IN. SCH. 80 PVC TO FUTURE ODOR CONTROL.
13. 2 IN. SCH. 80 PVC TO FUTURE ODOR CONTROL AREA.
14. 2 IN. SCH. 80 PVC TO FUTURE ODOR CONTROL AREA.
15. 2 IN. SCH. 80 PVC TO CONTROL SIDE (240 V. FEED OUT TO CS1 & CS2).
16. 1 IN. SCH. 80 PVC TO PCP.
17. 3 IN. SCH. 40 PVC TO TRANSFORMER, SCH. 80 PVC ABOVE CONCRETE SLAB.

ELECTRICAL CABINET - REAR VIEW POWER SIDE

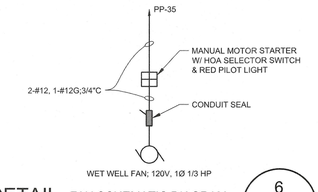
NOT TO SCALE — 1A / PS1707



DETAIL- SITE LIGHTING SCHEMATIC — NOT TO SCALE — 4 / PS1707



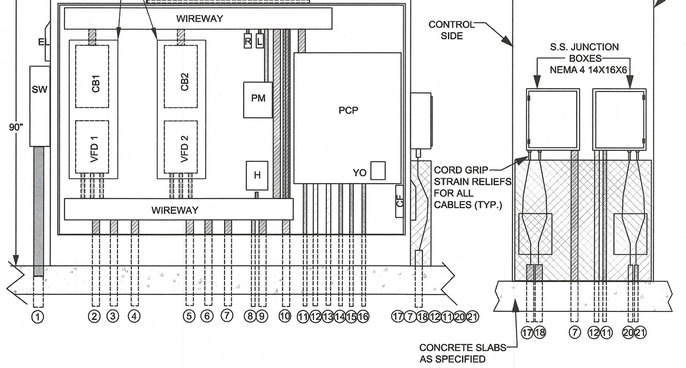
DETAIL- FLOWMETER SCHEMATIC DIAGRAM — NOT TO SCALE — 5 / PS1707



DETAIL- FAN SCHEMATIC DIAGRAM — NOT TO SCALE — 6 / PS1707

ELECTRICAL CABINET - FRONT VIEW CONTROL SIDE

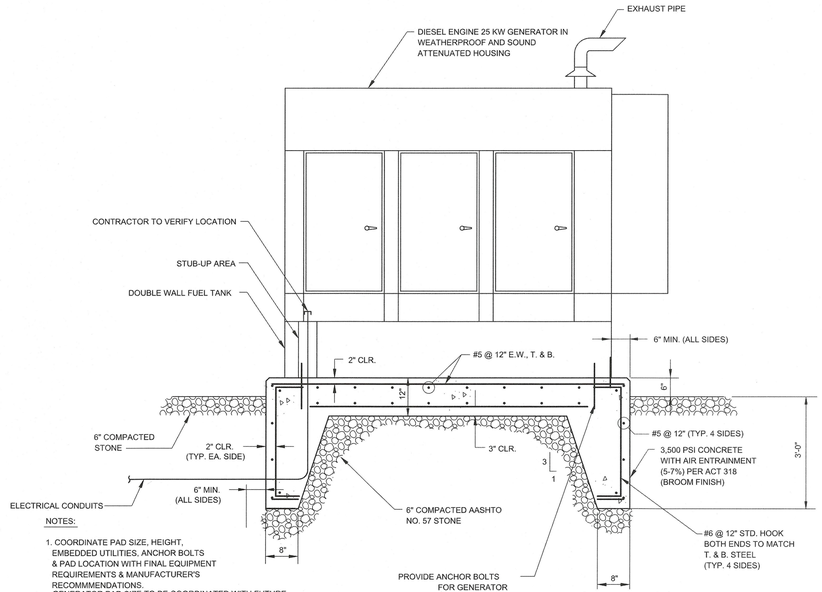
NOT TO SCALE — 1B / PS1707



ELECTRICAL CONDUIT DESIGN LEGEND

3 IN. SCH. 80 PVC CONDUIT	T - CABINET COOLING THERMOSTAT
2 IN. SCH. 80 PVC CONDUIT	EL - EXHAUST LOUVER
1 1/4 IN. SCH. 80 PVC CONDUIT	PCP -SCADA CONTROL PANEL
1 IN. SCH. 80 PVC CONDUIT	PM -PHASE MONITOR
3/4 IN. SCH. 8- PVC CONDUIT	H -400 WATT CABINET HEATER
	CF -CABINET COOLING FAN
	SW -125 AMP., SQUARE D, NEMA 3R, 3 PH. NON-FUSIBLE SAFETY SWITCH
	R -RECEPTACLE
	L -LIGHT SWITCH
	LT -CABINET LIGHT
	CS1 - SQUARE D COMBINATION STARTER W/ THERMAL MAGNETIC BREAKER, 120 V. COIL, W/O CONTROL TRANSFORMER
	CS2 - SQUARE D COMBINATION STARTER W/ THERMAL MAGNETIC BREAKER, 120 V. COIL W/O CONTROL TRANSFORMER
	YO - YOKAGAWA

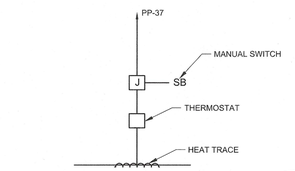
1. 3 IN. SCH. 80 PVC TO SERVICE TRANSFORMER.
2. 2 IN. SCH. 80 PVC FEED TO LINE REACTOR NO.1 (FOR FUTURE USE).
3. 2 IN. SCH. 80 PVC FEED FROM LINE REACTOR NO.1 (FOR FUTURE USE).
4. 2 IN. SCH. 80 PVC TO FUTURE ODOR CONTROL.
5. 2 IN. SCH. 80 PVC FEED TO LINE REACTOR NO.2 (FOR FUTURE USE).
6. 2 IN. SCH. 80 PVC FEED FROM LINE REACTOR NO.2 (FOR FUTURE USE).
7. 2 IN. SCH. 80 PVC TO STAINLESS STEEL JUNCTION BOX (PUMP NO. 1 & 2).
8. 1 IN. SCH. 80 PVC TO POWER SIDE.
9. 2 IN. SCH. 80 PVC TO POWER SIDE (240/120 V.FEED IN)..
10. 2 IN. SCH. 80 PVC TO POWER SIDE (240 V/3 PH.FEED IN FOR CS1 & CS2)..
11. 1 IN. SCH. 80 PVC TO STAINLESS STEEL JUNCTION BOX (TRANSDUCER).
12. 1 1/4 IN. SCH. 80 PVC TO STAINLESS STEEL JUNCTION BOX (REDUNDANT ON/OFF FLOATS).
13. 1 1/4 IN. SCH. 80 PVC TO ANTENNA POLE.
14. 1 IN. TO FUTURE ATS ON POWER SIDE.
15. 1 IN. TO BLOWER.
16. 1 IN. TO FLOW METER ELECTRONICS ON POWER SIDE.
17. 2 IN. SCH. 80 PVC CONDUIT TO WET WELL (PUMP NO. 1).
18. 2 IN. SCH. 80 PVC CONDUIT TO WET WELL (PUMP NO. 2).
7. 2 IN. SCH. 80 PVC CONDUIT (CONDUIT NO. 7 CONTROL SIDE TERMINATES AT NO. 7 UNDER STAINLESS STEEL JUNCTION BOX, FEED IN TO OUTSIDE S.S. JUNCTION BOX FROM EACH COMBINATION STARTER).
20. 1 1/4 IN. SCH. 80 PVC CONDUIT TO WET WELL (REDUNDANT ON/OFF FLOATS).
21. 1 IN. SCH. 80 PVC CONDUIT TO WET WELL (TRANSDUCER).



NOTES:

1. COORDINATE PAD SIZE, HEIGHT, EMBEDDED UTILITIES, ANCHOR BOLTS & PAD LOCATION WITH FINAL EQUIPMENT REQUIREMENTS & MANUFACTURER'S RECOMMMENDATIONS. GENERATOR PAD SIZE TO BE COORDINATED WITH FUTURE 250KW GENERATOR TO BE INSTALLED WITH STATION UPGRADING
2. ALL PADS TO HAVE 1", 45° CHAMFERED EDGES, ALL AROUND.
3. PAD DIMENSIONS SHALL PROJECT 6" (MIN.) PAST UNIT, ALL AROUND.

DETAIL- GENERATOR FOUNDATION — NOT TO SCALE — 7 / PS1707



DETAIL- HOT BOX HEAT TRACE DIAGRAM — NOT TO SCALE — 8 / PS1707

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GARAGE LICENSED PROFESSIONAL ENGINEER DELAWARE No. 20008 LANE ASENSIO — 7-8-2026

SCARLET OAKS SUBDIVISION

TM#: 235-20.00-83.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

ELECTRICAL DETAILS

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PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1707

SHEET 76 OF 82

u:\Accounts\RIBER\river21002 - company store property\DESIGN_SHEETS\PUMP STATION PLANS\PS1707.dwg PLOTTED: 7/14/2026 4:11 PM, BY: Ahmed Mohamed PLOTSTYLE: Pennoni MCS.stb PROJECT STATUS: —

ELECTRICITY SPECIFICATIONS:

A. CONDUIT AND FITTINGS

1. RIGID STEEL CONDUIT: ANSI C80.1.
2. PVC EXTERNALLY-COATED CONDUIT: NEMA RN 1; RIGID STEEL CONDUIT WITH EXTERNAL 40 MIL PVC COATING AND INTERNAL GALVANIZED SURFACE.
3. PVC SCHEDULE 80 CONDUIT.
4. FITTINGS AND CONDUIT BODIES: ANSI/NEMA FB1; MATERIALS TO MATCH CONDUIT, ALL CONNECTIONS SHALL BE THREADED.
5. LIQUIDTIGHT FLEXIBLE METAL CONDUIT: FLEXIBLE METAL CONDUIT WITH PVC JACKET.
6. CONDUIT CLAMPS, STRAPS, AND SUPPORTS: STEEL OR MALLEABLE IRON, FINISH TO MATCH CONDUIT.
7. SIZE CONDUIT FOR CONDUCTOR TYPE INSTALLED OR FOR TYPE THWN CONDUCTORS, WHICHEVER INCH MINIMUM SIZE. 3/4 IS LARGER;
8. ARRANGE CONDUIT TO MAINTAIN ACCESSIBILITY AND PRESENT A NEAT APPEARANCE.
9. ROUTE EXPOSED CONDUIT PARALLEL AND PERPENDICULAR TO ELECTRICAL EQUIPMENT RACK AND ADJACENT CABINETS/ENCLOSURES.
10. MAINTAIN MINIMUM 6 INCH CLEARANCE BETWEEN CONDUIT AND PIPING. MAINTAIN 12 INCH CLEARANCE BETWEEN CONDUIT AND HEAT SOURCES SUCH AS FLUES, STEAM PIPES, AND HEATING APPLIANCES.
11. ARRANGE CONDUIT SUPPORTS TO PREVENT DISTORTION OF ALIGNMENT BY WIRE PULLING OPERATIONS. FASTEN CONDUIT USING GALVANIZED SPACERS AND STRAPS, LAY-IN ADJUSTABLE HANGERS, CLEVIS HANGERS, OR BOLTED SPLIT STAMPED GALVANIZED HANGERS.
12. SUPPORT CONDUIT AT A MAXIMUM OF 7 FEET ON CENTER.
13. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL NOT EXCEED 24 INCHES IN LENGTH AND ALL RUNS SHALL BE PROVIDED WITH AN APPROPRIATE LENGTH OF GROUND CONDUCTOR.
14. USE CONDUIT HUBS FOR FASTENING CONDUIT TO CAST BOXES, AND FOR FASTENING CONDUIT TO CABINETS/ENCLOSURES IN DAMP OR WET LOCATIONS.
15. INSTALL NO MORE THAN THE EQUIVALENT OF THREE 90º BENDS BETWEEN BOXES.
16. USE SUITABLE CONDUIT CAPS TO PROTECT INSTALLED CONDUIT AGAINST ENTRANCE OF DIRT AND MOISTURE.
17. PROVIDE NO. 12 AWG INSULATED CONDUCTOR OR SUITABLE PULL STRING IN EMPTY CONDUIT, EXCEPT SLEEVES AND NIPPLES.
18. INSTALL EXPANSION JOINTS WHERE CONDUIT CROSSES STRUCTURAL EXPANSION JOINTS.
19. ALL UNDERGROUND CONDUIT SHALL BE CONCRETE ENCASED. THE THICKNESS OF CONCRETE COVERING THE CONDUIT ON ALL SIDES AND BETWEEN CONDUITS SHALL NOT BE LESS THAN THREE (3) INCHES.
20. INSTALL TOP OF UNDERGROUND CONDUIT A MINIMUM OF 36 INCHES BELOW FINISHED GRADE.
21. STAGGER CONDUIT JOINTS IN CONCRETE ENCASEMENT 6 INCHES MINIMUM, HORIZONTALLY.
22. USE SUITABLE SEPARATORS AND CHAIRS INSTALLED NOT GREATER THAN 4 FEET ON CENTERS. BAND CONDUIT TOGETHER WITH SUITABLE BANDING DEVICES. SECURELY ANCHOR CONDUIT TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.
23. PROVIDE MINIMUM 3 INCH CONCRETE COVER AT BOTTOM, TOP, AND SIDES OF CONDUIT.
24. PROVIDE TWO NO. 4 STEEL REINFORCING BARS IN TOP OF CONCRETE ENCASEMENT.
25. ALL RIGID STEEL CONDUIT WHICH IS UNDERGROUND OR ENCASED IN CONCRETE SHALL BE COATED WITH TWO (2) COATS OF BITUMINOUS MASTIC PAINT OR SHALL BE PVC EXTERNALLY-COATED CONDUIT. THE BITUMINOUS OR PVC COATING SHALL BE CARRIED NO LESS THAN SIX (6) INCHES ABOVE GRADE.
26. A PLASTIC WARNING TAPE SHALL BE INSTALLED OVER ALL BURIED CONDUIT. THE TAPE SHALL HAVE THE WARNING "CAUTION--BURIED ELECTRIC LINE" CONTINUOUSLY IMPRINTED ON A RED BACKGROUND OR "BURIED TELEPHONE LINE" ON AN ORANGE BACKGROUND. THE CAUTION TAPE SHALL BE POSITIONED ABOVE THE CONDUIT AT A POINT TWELVE INCHES (12") BELOW FINISHED GRADE.

B. CONDUIT INSTALLATION SCHEDULE

1. OUTDOOR LOCATIONS : PVC EXTERNALLY-COATED RIGID STEEL CONDUIT.
2. UNDERGROUND: SCHEDULE 80 PVC
3. FLEXIBLE CONNECTIONS: LIQUIDTIGHT FLEXIBLE METAL CONDUIT.
4. INSTALLATIONS WITHIN WET WELL OR VALVE VAULT: PVC EXTERNALLY-COATED RIGID STEEL CONDUIT.
5. INSTALLATION WITHIN CABINETS: EMT.

C. WIRE AND CABLE

1. BUILDING WIRE: SINGLE COPPER CONDUCTOR INSULATED WIRE, 600 VOLTS INSULATION VOLTAGE RATING,TYPE THHN/THWN-2.
2. INSTRUMENTATION CABLE: MULTICONDUCTOR TYPE HAVING STRANDED TINNED COPPER CONDUCTORS INDIVIDUALLY INSULATED. THE CABLE SHALL HAVE ALUMINUM-POLYESTER SHIELDING TAPE PROVIDING 100% COVERAGE, A STRANDED TINNED COPPER DRAIN WIRE, AND A CHROME PVC JACKET. THE CABLE SHALL HAVE A NOMINAL CAPACITANCE OF 24 PF/FT. AND VOLTAGE RATING OF 300 VOLTS. THE CABLE SHALL BE UL LISTED AND LABELED.
3. TELEPHONE CABLE: MULTICONDUCTOR TYPE HAVING SOLID 20 AWG TINNED COPPER CONDUCTORS INDIVIDUALLY INSULATED. THE CABLE SHALL HAVE ALUMINUM-POLYESTER SHIELDING PROVIDING 100% COVERAGE, A SOLID 22 AWG TINNED COPPER DRAIN WIRE, AND AN OVERALL HIGH DENSITY BLACK POLYETHYLENE JACKET. THE CABLE SHALL HAVE A NOMINAL CAPACITANCE OF 23 PF/FT AND A VOLTAGE RATING OF 300 VOLTS. THE CABLE SHALL BE UL LISTED AND LABELED. CONDUCTOR QUANTITY: SIX (6) SINGLE CONDUCTORS (3 PAIR); MINIMUM.
4. USE CONDUCTOR NOT SMALLER THAN 12 AWG FOR POWER AND LIGHTING CIRCUITS.
5. USE CONDUCTOR NOT SMALLER THAN 14 AWG FOR CONTROL CIRCUITS.
6. USE SPLIT BOLT CONNECTORS FOR COPPER CONDUCTOR SPLICES AND TAPS, 6 AWG AND LARGER.
7. USE SOLDERLESS PRESSURE CONNECTORS WITH INSULATING COVERS FOR COPPER CONDUCTOR SPLICES AND TAPS, 8 AWG AND SMALLER.
8. USE INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR COPPER CONDUCTOR SPLICES AND TAPS, 10 AWG AND SMALLER.

D. OUTLET BOXES

1. CAST BOXES: NEMA FB 1, TYPE FD, CAST FERALLOY. PROVIDE GASKETED COVER BY BOX MANUFACTURER. PROVIDE THREADED HUBS.

E. PULL AND JUNCTION BOXES

1. PROVIDE SURFACE-MOUNTED CAST METAL BOX: NEMA 250, TYPE 4; FLAT-FLANGED, SURFACE-MOUNTED JUNCTION BOX AND COVER: GROUND FLANGE, NEOPRENE GASKET, AND STAINLESS STEEL COVER SCREWS.
2. MATERIAL: NEMA 4X STAINLESS STEEL

F. WIRING DEVICES

1. LIGHT SWITCHES: NEMA WD 1, HEAVY-DUTY, AC ONLY GENERAL-USE SNAP SWITCH, BROWN PLASTIC WITH TOGGLE HANDLE, 120-277 VOLTS, AC, 20 AMPERES.
2. RECEPTACLES: NEMA WD 1; HEAVY-DUTY GENERAL-USE RECEPTACLE, BROWN PLASTIC, NEMA WD 6, TYPE 5-20.
3. GFCI RECEPTACLE: CONVENIENCE RECEPTACLE WITH INTEGRAL CLASS A GROUND FAULT CIRCUIT INTERRUPTER.
4. INTERIOR COVER PLATE: SMOOTH STAINLESS STEEL, TO MATCH TYPE FD BOXES.
5. WEATHERPROOF COVER PLATE: GASKETED CAST METAL WITH HINGED GASKETED DEVICE COVER AND SUITABLE FOR USE IN "WET LOCATIONS".
6. INSTALL LIGHT SWITCHES 48 INCHES ABOVE FINISHED FLOOR.
7. IN GENERAL, INSTALL INTERIOR CONVENIENCE RECEPTACLES 18 INCHES ABOVE FINISHED FLOOR, UNLESS INDICATED OTHERWISE.
8. INSTALL EXTERIOR CONVENIENCE RECEPTACLES 36 INCHES ABOVE FINISHED GRADE.

G. GROUNDING AND BONDING

1. PROVIDE ALL GROUNDING AND BONDING IN ACCORDANCE WITH THE NEC.
2. GROUND THE ELECTRICAL SERVICE SYSTEM NEUTRAL AT SERVICE ENTRANCE EQUIPMENT TO METALLIC WATER PIPING AND TO SUPPLEMENTARY GROUNDING ELECTRODES. BOND TOGETHER SYSTEM NEUTRALS, SERVICE EQUIPMENT ENCLOSURES, EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT, METAL RACEWAY SYSTEMS, GROUNDING CONDUCTOR IN RACEWAYS AND CABLES, RECEPTACLE GROUND CONNECTORS, AND METALLIC PIPING SYSTEMS.
3. ALL GROUNDING AND BONDING CONNECTIONS BELOW GRADE SHALL BE OF THE EXOTHERMIC (CADWELD) WELDED TYPE.
4. GROUND RODS: COPPER-ENCASED STEEL, 3/4 INCH DIAMETER, MINIMUM LENGTH TEN (10) FEET.
5. PROVIDE A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN FEEDER AND BRANCH CIRCUITS. TERMINATE EACH END ON A GROUNDING LUG, BUS, OR BUSHING.
6. CONNECT GROUNDING ELECTRODE CONDUCTORS TO METAL WATER PIPE USING A SUITABLE GROUND CLAMP. MAKE CONNECTIONS TO FLANGED PIPING AT STREET SIDE OF FLANGE. PROVIDE BONDING JUMPER AROUND METERS.

H. NAMEPLATES AND LABELS

1. NAMEPLATES AND LABELS: ENGRAVED TWO-LAYER LAMINATED PLASTIC, WHITE LETTERS ON A BLACK BACKGROUND.
2. NAMEPLATES AND LABELS SHALL BE AFFIXED TO ITEMS USING BRASS OR STAINLESS STEEL SCREWS. NO ADHESIVE TYPES WILL BE ALLOWED.
3. WIRE AND CABLE MARKERS: CLOTH MARKERS, SPLIT SLEEVE OR TUBING TYPE.
4. PROVIDE WIRE MARKERS ON EACH CONDUCTOR IN PANELBOARD GUTTERS, EQUIPMENT CABINETS AND ENCLOSURES, PULL BOXES, OUTLET AND JUNCTION BOXES, AND AT LOAD CONNECTION. IDENTIFY WITH BRANCH CIRCUIT OR FEEDER NUMBER FOR POWER AND LIGHTING CIRCUITS, AND WITH CONTROL WIRE NUMBER AS INDICATED ON EQUIPMENT MANUFACTURER'S SHOP DRAWINGS FOR CONTROL WIRING.

I. SUPPORTS

1. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY HANGARS AND SUPPORTS FOR EQUIPMENT AND MATERIALS. EQUIPMENT AND MATERIALS SHALL BE ADEQUATELY SUPPORTED TO PROVIDE A STRUCTURALLY SOUND INSTALLATION.
2. WIRING/RACEWAYS AND/OR EQUIPMENT FASTENED TO CONCRETE AND/OR MASONRY CONSTRUCTION SHALL BE SECURED THERETO USING APPROVED CLAMPS AND/OR FITTINGS WITH EXPANSION ANCHORS AND MACHINE SCREWS OR CONCRETE INSERTS WITH APPROVED FASTENERS. WOOD PLUGS AND PLASTIC ANCHORS SHALL NOT BE PERMITTED.
3. WHERE APPLICABLE, ALL RACEWAY, DEVICES, EQUIPMENT, ETC. MAY BE SUPPORTED AND HUNG BY THE USE OF ONE AND FIVE-EIGHTS INCH (1-5/8") SIZE CHANNEL STRUT SYSTEM. INTERIOR CHANNELS SHALL BE CONSTRUCTED OF MILD STRIP STEEL, WHICH HAS BEEN HOT DIPPED GALVANIZED CONFORMING TO ASTM SPECIFICATIONS A-386 OR A-153. THE SUPPORT AND HANGER SYSTEM SHALL BE INSTALLED FOLLOWING THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. EXTERIOR CHANNELS SHALL BE STAINLESS STEEL.
4. ALL SCREWS AND NUTS USED TO FASTEN DEVICE COVERS, ENCLOSURE COVERS, AND SIMILAR APPLICATIONS WHERE SCREWS MUST BE USED FOR SERVICING OR REPLACEMENT OF EQUIPMENT SHALL BE STAINLESS STEEL. ALL OTHER SCREWS AND BOLTS SHALL BE ZINC OR CADMIUM PLATED OR HOT-DIPPED GALVANIZED.
5. CONDUIT STRAPS SHALL BE OF MALLEABLE IRON CONSTRUCTION, HOT-DIPPED GALVANIZED, SIZE AND FINISH TO MATCH RACEWAY.
6. FASTEN HANGER RODS, CONDUIT CLAMPS, AND OUTLET AND JUNCTION BOXES TO BUILDING STRUCTURE USING EXPANSION ANCHORS. DO NOT USE SPRING STEEL CLIPS AND CLAMPS.
7. USE TOGGLE BOLTS ON HOLLOW WALL FASTENERS IN HOLLOW MASONRY, PLASTER, OR GYPSUM BOARD PARTITIONS AND WALLS; EXPANSION ANCHORS OR PRESET INSERTS IN SOLID MASONRY WALLS.
8. DO NOT FASTEN SUPPORTS TO PIPING, DUCTWORK, MECHANICAL EQUIPMENT, OR CONDUIT.

J. ELECTRIC SERVICE

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ALL ARRANGEMENTS WITH THE UTILITY COMPANY FOR PERMANENT ELECTRIC SERVICE, FOR THE PUMP STATION, INCLUDING ALL COST AND WORK REQUIRED FOR SAME.
2. UTILITY COMPANY (DELAWARE ELECTRIC COOPERATIVE) HAS CONFIRMED THAT 240 V POWER WILL BE AVAILABLE AT SITE, EVERY BIDDER SHALL BE RESPONSIBLE TO CONTACT THE UTILITY COMPANY TO VERIFY ALL ELECTRIC SERVICE REQUIREMENTS. ADDITIONAL EQUIPMENT, MATERIALS AND LABOR REQUIRED THROUGH FAILURE TO FOLLOW THESE INSTRUCTIONS SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
3. INSTALL SERVICE ENTRANCE IN ACCORDANCE WITH THE UTILITY COMPANY RULES AND REGULATIONS.
4. METERS: FURNISHED BY UTILITY COMPANY, INSTALLED BY CONTRACTOR, PER UTILITY COMPANY REQUIREMENTS.
5. METER BOX AND CONDUIT: PROVIDED BY CONTRACTOR, PER UTILITY COMPANY REQUIREMENTS.
6. UNDERGROUND SERVICE ENTRANCE CONDUIT: PROVIDED BY CONTRACTOR, PER UTILITY COMPANY REQUIREMENTS.
7. PRIMARY AND SECONDARY CABLE: PROVIDED BY CONTRACTOR, PER UTILITY COMPANY REQUIREMENTS.
8. CONCRETE TRANSFORMER VAULT/PAD: PROVIDED BY CONTRACTOR, PER UTILITY COMPANY REQUIREMENTS.
9. BOLLARDS: PROVIDED BY CONTRACTOR, PER UTILITY COMPANY REQUIREMENTS.
10. ON SITE TRANSFORMER: FURNISHED AND INSTALLED BY UTILITY COMPANY.
11. GROUND RING, PROTECTIVE BARRIERS, AND APPURTENANCES: PROVIDED BY CONTRACTOR, PER UTILITY COMPANY REQUIREMENTS.

K. GENERATOR SET

1. ENGINE

   a. TYPE: RADIATOR COOLED, INLINE, FOUR STROKE CYCLE, COMPRESSION IGNITION DIESEL COMBUSTION ENGINE.
   b. FUEL SYSTEM: APPROPRIATE FOR USE OF NO. 2 DIESEL FUEL OIL.
   c. ENGINE SPEED: 1800 RPM.
   d. ELECTRONIC GOVERNOR: ISOCHRONOUS TYPE TO MAINTAIN ENGINE SPEED WITHIN 0.5 PERCENT, STEADY STATE, AND 5 PERCENT, NO LOAD TO FULL LOAD, WIT RECOVERY TO STEADY STATE WITHIN 2 SECONDS FOLLOWING SUDDEN LOAD CHANGES. EQUIP GOVERNOR WITH MEANS FOR MANUAL OPERATION AND ADJUSTMENT.
   e. SAFETY DEVICES: ENGINE SHUTDOWN ON HIGH COOLANT TEMPERATURE, LOW COOLANT LEVEL, LOW OIL PRESSURE, OVERSPEED, AND ENGINE OVERCRANK. LIMITS AS SELECTED BY MANUFACTURER
   f. ENGINE STARTING: DC STARTING SYSTEM WITH POSITIVE ENGAGEMENT, NUMBER AND VOLTAGE OF STARTER MOTORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INCLUDE REMOTE STARTING CONTROL CIRCUIT, WITH MANUAL-OFF-REMOTE SELECTOR SWITCH ON ENGINE-GENERATOR CONTROL PANEL.
   g. ENGINE JACKET HEATER: THERMAL CIRCULATION TYPE HEATER WITH INTEGRAL THERMOSTATIC CONTROL, NOMINAL RATING 1000 WATTS, AND SUITABLE FOR OPERATION ON 240 VOLTS AC, 1-PHASE.
   h. RADIATOR: RADIATOR USING GLYCON COOLANT, WITH BLOWER TYPE FAN, SIZED TO MAINTAIN SAFE DEGREES F. RADIATOR AIR FLOW ENGINE TEMPERATURE IN AMBIENT TEMPERATURE OF 110 RESTRICTION: 0.50 INCHES OF WATER, MAXIMUM.
   i. ENGINE ACCESSORIES: FUEL FILTER, LUBE OIL FILTER, INTAKE AIR FILTER, FLEXIBLE FUEL LINES, LUBE OIL COOLER, AND GEAR DRIVEN COOLANT PUMP. INCLUDE COOLANT TEMPERATURE GAGE, OIL TEMPERATURE GAGE, AND OIL PRESSURE GAGE ON ENGINE-GENERATOR CONTROL PANEL.
   j. MOUNTING: PROVIDE UNIT WITH SUITABLE PAD-TYPE VIBRATION ISOLATORS AND MOUNT ON STRUCTURAL STEEL BASE.

2. GENERATOR

   a. GENERATOR: ANSI/NEMA MG 1; THREE PHASE, FOUR POLE, RECONNECTIBLE BRUSHLESS SYNCHRONOUS GENERATOR WITH PMG EXCITATION.
   b. RATING: 25 KW, 31 KVA, AT 0.8 POWER FACTOR, 240/120 VOLTS, 3 PHASE, 4 WIRE, 60 HZ AT 1800 RPM.
   c. MOTOR STARTING KVA SHALL BE 46 KVA, BASED ON SUSTAINED RMS VOLTAGE DROP OF NO MORE THAN 10% OF NO LOAD VOLTAGE WITH THE SPECIFIED LOAD KVA AT NEAR ZERO POWER MONITOR. FACTOR APPLIED TO THE ENGINE-GENERATOR SET.
   d. INSULATION: ANSI/NEMA MG 1 CLASS H.
   e. TEMPERATURE RISE: 125 DEGREES C.
   f. ENCLOSURE: WEATHER PROOF SOUND ATTENUATED HOUSING WITH CRITICAL SILENCER; 66 dB (A) AT 23 FT. (MAX.).
   g. VOLTAGE REGULATION: INCLUDE GENERATOR-MOUNTED VOLTS PER HERTZ EXCITER-REGULATOR TO MATCH ENGINE AND GENERATOR CHARACTERISTICS, WITH VOLTAGE REGULATIONS +/- TWO PERCENT FROM NO LOAD TO FULL LOAD. INCLUDE MANUAL CONTROLS TO ADJUST VOLTAGE DROP +/- 5 PERCENT VOLTAGE LEVEL, AND VOLTAGE GAIN.

3. ACCESSORIES

   a. SUB-BASE FUEL TANK: 60 GALLON (NOMINAL) UL DOUBLE WALL TANK UNIT COMPATIBLE WITH GENERATOR SET. INCLUDE LOW LEVEL SWITCH, FLEXIBLE FUEL LINE CONNECTIONS, FUEL GAGE, CHECK VALVE, AND ALL REQUIRED FILL AND VENT PIPING (SCHEDULE 40 BLACK STEEL), INCLUDING EMERGENCY RELIEF VENT FITTING.
   b. BATTERIES: HEAVY DUTY STARTING TYPE LEAD-ACID STORAGE BATTERIES, MATCH BATTERY VOLTAGE TO STARTING SYSTEM. INCLUDE NECESSARY CABLES AND CLAMPS.
   c. BATTERY TRAY: PLASTIC COATED METAL OR WOODEN TRAY TREATED FOR ELECTROLYTE RESISTANCE, CONSTRUCTED TO CONTAIN SPILLAGE OF ELECTROLYTE.
   d. BATTERY CHARGER: RATED TO MATCH BATTERY (6 AMP, 12 VOLT) WITH CHARGE RATE AMMETER AND VOLTMETER, MOUNTED WITHIN GENERATOR ENCLOSURE. INPUT POWER: 120V, 60 HZ EXTERNAL SOURCE.
   e. LINE CIRCUIT BREAKER: NEMA AB 1; MOLDED CASE CIRCUIT BREAKER ON GENERATOR OUTPUT WITH INTEGRAL THERMAL AND INSTANTANEOUS MAGNETIC TRIP IN EACH POLE; 100% RATING AS INDICATED. MOUNT UNIT IN ENCLOSURE TO MEET ANSI/NEMA 250; TYPE 12 REQUIREMENTS.
   f. ENGINE-GENERATOR CONTROL PANEL: ANSI/NEMA 250, TYPE 12 GENERATOR MOUNTED CONTROL PANEL ENCLOSURE WITH ENGINE AND GENERATOR CONTROLS AND INDICATORS. INCLUDE PROVISION FOR PADLOCK AND THE FOLLOWINGS EQUIPMENT AND FEATURES:

      f.1. FREQUENCY METER: 45-65 HZ RANGE.
      f.2. AC OUTPUT VOLTMETER.
      f.3. AC OUTPUT AMMETER.
      f.4. OUTPUT VOLTAGE ADJUSTMENT.
      f.5. RUN LIGHT; GREEN.
      f.6. COOLANT TEMPERATURE GAUGE.
      f.7. FAULT RESET SWITCH.
      f.8. ENGINE RUN/STOP/REMOTE SELECTOR SWITCH.
      f.9. ENGINE RUNNING TIME METER.
      f.10. OIL PRESSURE GAUGE.
      f.11. OIL TEMPERATURE GAUGE.
      f.12. BATTERY VOLTMETER.
      f.13. INDICATOR LAMPS; RED, ONE EACH FOR LOW OIL PRESSURE, HIGH COOLANT TEMPERATURE, LOW COOLANT LEVEL, LOW FUEL LEVEL, OVERSPEED, AND OVERCRANK.
      f.14. AUXILIARY RELAY; 3 PDT, OPERATES WHEN ENGINE RUNS, WITH CONTACTS PRE-WIRED TO TERMINAL STRIP.
      f.15. FAULT RELAY; 3 PDT, OPERATES WHEN SAFETY DEVICES SHUTDOWN ENGINE, WITH CONTACTS PRE-WIRED TO TERMINAL STRIP.
      f.16. AUXILIARY RELAY; DPDT, OPERATES WHEN FUEL IN SUB-BASE STORAGE TANK REACHES LOW LEVEL.

   g. THE CONTRACTOR SHALL BE RESPONSIBLE TO SUPPLY ONE (1) LOAD OF DIESEL FUEL TO FILL THE SUB-BASE FUEL TANK.

4. WARRANTY

   a. A. PROVIDE MANUFACTURER'S TWO (2) YEAR WARRANTY FOR GENERATOR SET.

5. MAINTENANCE SERVICE

   a. FURNISH SERVICE AND MAINTENANCE AGREEMENT BETWEEN THE SUPPLIER OF PACKAGED ENGINE GENERATOR SYSTEM AND THE OWNER FOR ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION. MAINTENANCE SERVICES SHALL CONSIST OF NOT LESS THAN TWO (2) SERVICE OR MAINTENANCE CALLS/VISITS. PROVIDE FULL LOAD TEST UTILIZING PORTABLE RESISTIVE TEST BANK RATED AT THE NAMEPLATE OF THE GENERATOR, FOR FOUR (4) HOURS MINIMUM. DURING TEST, RECORD PARAMETERS AT 20 MINUTE INTERVALS. SUBMIT FULL LOAD TEST RESULTS FOR REVIEW.
   b. CLEAN ENGINE AND GENERATOR SURFACES. REPLACE ALL OIL AND FUEL FILTERS AFTER FULL LOAD TESTING.
   c. PROVIDE MANUFACTURER'S FIELD SERVICES AS FOLLOWS: 1. SERVICES OF QUALIFIED TECHNICIAN TO SUPERVISE INSTALLATIONS, ADJUSTMENTS, FINAL CONNECTIONS, AND SYSTEM STARTUP AND TESTING. 2. MANUFACTURER'S LETTER CERTIFYING THAT THE SYSTEM'S INSTALLATION, START-UP, AND TESTING ARE ACCEPTABLE AND THAT THE SYSTEM IS OPERATING PROPERLY.
   d. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH THE MANUFACTURER AND PAY ALL CHARGES MADE BY THE MANUFACTURER FOR FIELD SERVICES INVOLVED WITH THE PROJECT. THE CONTRACTOR'S BID SHALL INCLUDE ALL MANUFACTURER'S CHARGES.

L. AUTOMATIC TRANSFER SWITCH

1. DESCRIPTION: NEMA ICS 10; AUTOMATIC TRANSFER SWITCH.
2. CONFIGURATION: ELECTRICALLY-OPERATED, MECHANICALLY-HELD TRANSFER SWITCH.
3. MANUFACTURER: THE AUTOMATIC TRANSFER SWITCH SHALL BE FROM THE SAME MANUFACTURER AS THE GENERATOR SET.
4. RATINGS

   a. RATINGS: NEMA ICS 10; AS FOLLOWS:
   b. VOLTAGE: 240 VOLTS, THREE PHASE, FOUR WIRE, 60 HZ., SOLID NEUTRAL.
   c. SWITCHED POLES: 3.
   d. LOAD INRUSH RATING: COMBINATION; MOTORS, ELECTRIC DISCHARGE LIGHTING, AND RESISTIVE LOADS.
   e. CONTINUOUS RATING: 200 AMPERES.
   f. INTERRUPTING CAPACITY: 100 PERCENT OF CONTINUOUS RATING.
   g. WITHSTAND CURRENT RATING: 22,000 RMS SYMMETRICAL AMPERES, WHEN USED WITH MOLDED CASE CIRCUIT BREAKER.

5. AUTOMATIC SEQUENCE OF OPERATION

   a. A. INITIATE TIME DELAY TO START ALTERNATE SOURCE ENGINE GENERATOR: UPON INITIATION BY NORMAL SOURCE MONITOR.
   b. TIME DELAY TO START ALTERNATE SOURCE ENGINE GENERATOR: 0 TO 10 SECONDS, ADJUSTABLE.
   c. INITIATE TRANSFER LOAD TO ALTERNATE SOURCE: UPON INITIATION BY NORMAL SOURCE MONITOR AND PERMISSION BY ALTERNATE SOURCE MONITOR.
   d. TIME DELAY BEFORE TRANSFER TO ALTERNATE POWER SOURCE: 2 TO 120 SECONDS, ADJUSTABLE.
   e. INITIATE RETRANSFER LOAD TO NORMAL SOURCE: UPON PERMISSION BY NORMAL SOURCE MONITOR.
   f. TIME DELAY BEFORE TRANSFER TO NORMAL POWER: 0 TO 30 MINUTES, ADJUSTABLE; BYPASS TIME DELAY IN EVENT OF ALTERNATE SOURCE FAILURE.
   g. TIME DELAY BEFORE ENGINE SHUT DOWN: 0 TO 10 MINUTES, ADJUSTABLE, OF UNLOADED OPERATION.
   h. ENGINE EXERCISER: START ENGINE EVERY 7 DAYS; RUN FOR 30 MINUTES BEFORE SHUTTING DOWN. BYPASS EXERCISER CONTROL IF NORMAL SOURCE FAILS DURING EXERCISING PERIOD

6. ENCLOSURE A. ENCLOSURE: NEMA ICS 6; TYPE 1, UNLESS INDICATED OTHERWISE.
7. ACCESSORIES

   a. INDICATING LIGHTS: MOUNT IN COVER OF ENCLOSURE TO INDICATE NORMAL SOURCE AVAILABLE, ALTERNATE SOURCE AVAILABLE, AND SWITCH POSITION.
   b. TEST SWITCH: MOUNT IN COVER OF ENCLOSURE TO SIMULATE FAILURE OF NORMAL SOURCE.
   c. RETURN TO NORMAL SWITCH: MOUNT IN COVER OF ENCLOSURE TO INITIATE MANUAL TRANSFER FROM ALTERNATE TO NORMAL SOURCE BY PASSING TYPICAL TIME DELAY.
   d. TRANSFER SWITCH AUXILIARY CONTACTS: 2 NORMALLY OPEN; 2 NORMALLY CLOSED.
   e. NORMAL SOURCE MONITOR: MONITOR EACH LINE OF NORMAL SOURCE VOLTAGE; INITIATE TRANSFER WHEN VOLTAGE DROPS BELOW 85 PERCENT FROM RATED NOMINAL VALUE, ADJUSTABLE. ALTERNATE SOURCE MONITOR: MONITOR ALTERNATE SOURCE VOLTAGE AND FREQUENCY; ALLOW TRANSFER WHEN VOLTAGE IS 90 PERCENT FREQUENCY AND 2 HERTZ FROM RATED NOMINAL, ADJUSTABLE.
   f. PROGRAMMED TRANSITION: SWITCH TO AN OPEN POSITION, THEN INHIBIT TRANSFER FOR AN ADJUSTABLE TIME DELAY PERIOD (1 TO 60 SECONDS, MINIMUM).
   g. PROVIDE MANUFACTURER'S FIELD SERVICES AS FOLLOWS:
   h. SERVICES OF QUALIFIED TECHNICIAN TO SUPERVISE INSTALLATIONS, ADJUSTMENTS, FINAL CONNECTIONS, AND SYSTEM STARTUP AND TESTING.
   i. MANUFACTURER'S LETTER CERTIFYING THAT THE SYSTEM'S INSTALLATION, START-UP, AND TESTING ARE ACCEPTABLE AND THAT THE SYSTEM IS OPERATING PROPERLY.
   j. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH THE MANUFACTURER AND PAY ALL CHARGES MADE BY THE MANUFACTURER FOR FIELD SERVICES INVOLVED WITH THE PROJECT. THE CONTRACTOR'S BID SHALL INCLUDE ALL MANUFACTURER'S CHARGES.

M. FIRE EXTINGUISHERS

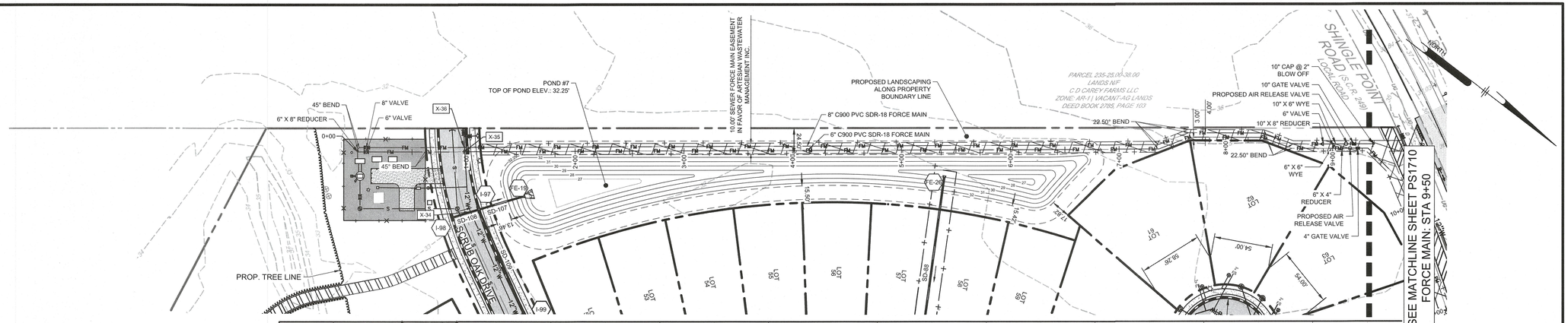
1. NFPA 10 DRY CHEMICAL TYPE: STEEL TANK WITH PRESSURE GAGE AND UPRIGHT SQUEEZE GRIP OPERATION, NOMINAL CAPACITY: SIX (6) POUNDS, MONO AMMONIUM PHOSPHATE POWDER WITH UL RATING: 3A - 40B: C. PROVIDE WALL/SURFACE MOUNTING BRACKET.

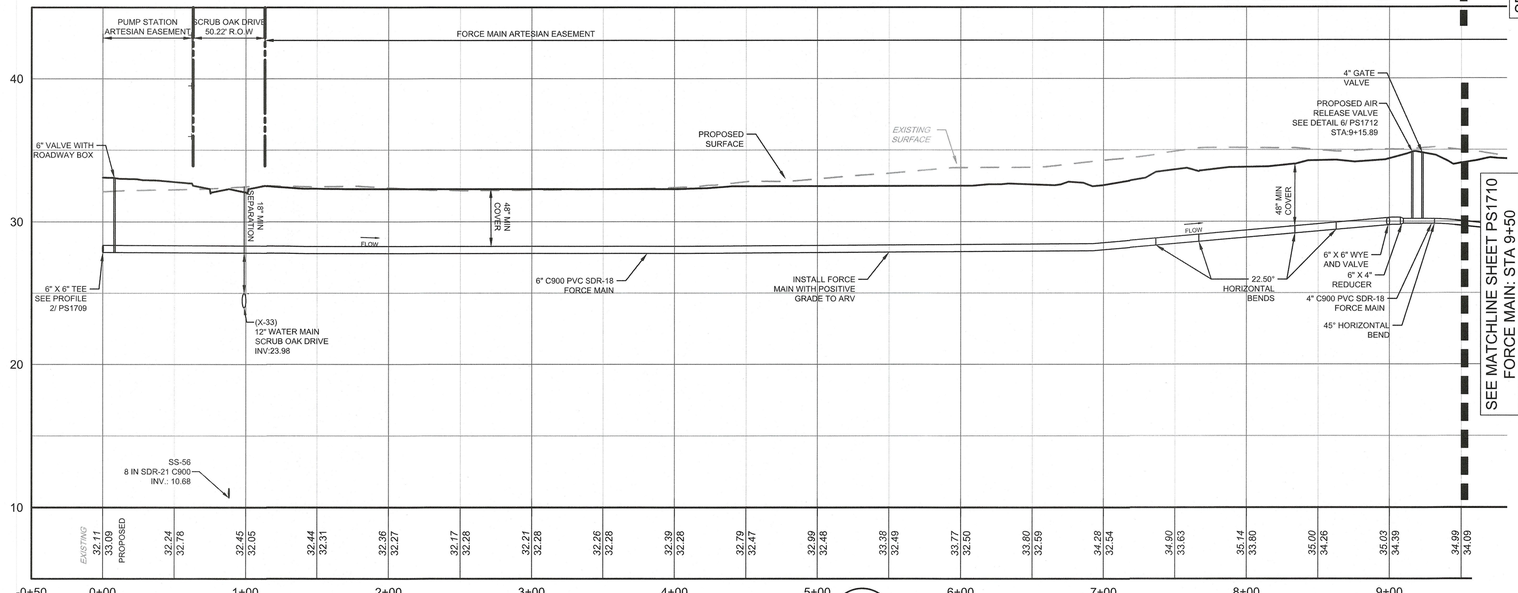
N. PUMP CONTROL PANEL (PCP) AND REMOTE TELEMETRY UNIT (RTU)

PCP/RTU PANELS AND CONTROLS SHALL BE PROVIDED BY XYLEM/FLYGT AND THE SYSTEM INTEGRATOR SHALL COMPLY WITH ARTESIAN WASTEWATER MANAGEMENT SPECIFICATIONS REQUIREMENTS.

SYSTEM CONTROL NOTES:

1. THE WORK SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR AND INCIDENTAL TO THE COMPLETE AND SATISFACTORY INSTALLATION OF THE PUMP CONTROL PROGRAMMABLE LOGIC CONTROLLER (PLC), OPERATOR INTERFACE, AND SUPERVISORY CONTROL AND DATA ACQUISITION COMPONENTS (SCADA) INCLUDING BUT NOT LIMITED TO THE RADIO TRANSCEIVER, MODEMS, ANTENNA, CABLES, SOFTWARE, ETC. ARTESIAN WASTEWATER MANAGEMENT, INC. WILL ADVISE WHICH SYSTEM SHOULD BE PROVIDED.
2. THE SYSTEM SHALL PROVIDE ALARM ANNUNCIATION, SYSTEM MONITORING, DATA COLLECTION, HISTORICAL TRENDING, AND REMOTE AUTOMATIC MODE OVERRIDE.
3. UPDATING THE SYSTEM AT THE CENTRAL MONITORING STATION WILL BE BY OTHERS.
4. A SYSTEMS INTEGRATOR EXPERIENCED IN PLC SYSTEMS SHALL BE UTILIZED TO PERFORM ALL THE WORK PERTAINING TO THE INSTALLATION AND PROPER FUNCTIONING OF THE PUMP CONTROL PLC SYSTEM, PROVIDING TECHNICAL SUPERVISION FOR THE INSTALLATION AND CONNECTIONS TO EQUIPMENT, AND SHALL BE RESPONSIBLE FOR THE PREPARATION OF SUBMITTAL DATA, CONDUCTING ALL TESTS AND OPERATIONAL DEMONSTRATIONS, AND EQUIPMENT CALIBRATIONS. IT SHALL BE THE SYSTEMS INTEGRATOR'S RESPONSIBILITY TO FURNISH A COMPLETE AND FUNCTIONAL, FULLY INTEGRATED PUMP CONTROL PLC SYSTEM, INCLUDING ALL SOFTWARE AND HARDWARE DEVICES NECESSARY TO INTERFACE THE COMPONENTS OF THE PUMPING STATION. THIS INTEGRATOR MUST BE LISTED ON THE SUBCONTRACTORS LIST ON THE BID FORM. THE ACCEPTED SYSTEMS INTEGRATOR SHALL BE CONTRACTED BY THE GENERAL CONTRACTOR TO PROVIDE ALL CONTROL SYSTEM PROGRAMMING AND DESIGN TO ACCOMMODATE THE FUNCTIONING OF PLC BASED SCADA SYSTEM.
5. THE SYSTEM INTEGRATOR SHALL PROVIDE SCADA FUNCTION PROGRAMMING IN THE PUMP CONTROL PLC AND COMPONENTS FOR RADIO COMMUNICATIONS AND BACK UP POWER, UNINTERRUPTIBLE POWER SUPPLY (UPS) AND SURGE PROTECTION, SYSTEM INSTALLATION CD ROM OR DISKS FOR ALL SOFTWARE, OPERATOR INTERFACE SCREENS AT THE PUMPING STATION HMI (HUMAN MACHINE INTERFACE), AND ALL INCIDENTAL EQUIPMENT NECESSARY FOR A PROPERLY FUNCTIONING FACILITY.
6. RADIO INSTALLATIONS SHALL BE COORDINATED WITH ARTESIAN WASTEWATER MANAGEMENT, INC. REQUIREMENTS.
7. SUBMITTALS FOR APPROVAL SHALL INCLUDE AND NOT BE LIMITED TO MANUFACTURERS DESCRIPTIVE LITERATURE AND DATA SHEETS FOR OPERATOR INTERFACE SCREENS, SOFTWARE, PLC'S, RADIO EQUIPMENT, UP

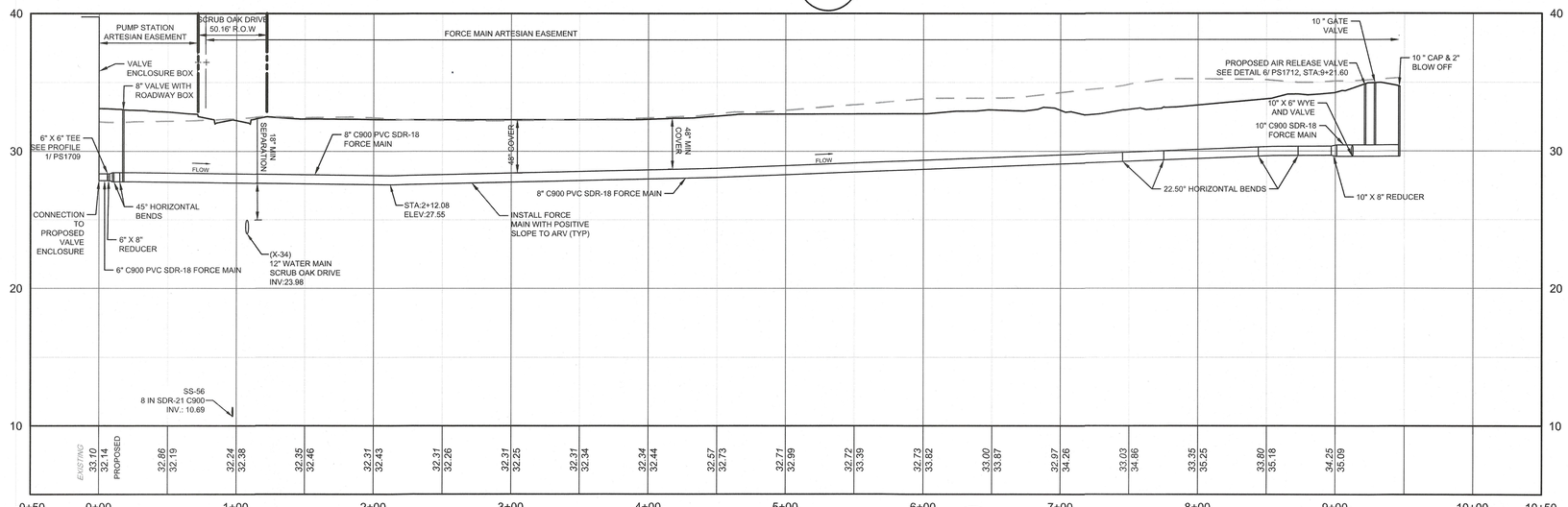




PLAN & PROFILE - 6" FORCE MAIN

H: 1"=50', V: 1"=5'

1 / PS1709



PLAN & PROFILE - 8" FORCE MAIN FOR FUTURE ADJACENT DEVELOPMENT

H: 1"=50', V: 1"=5'

2 / PS1709

LEGEND

EXISTING		PROPOSED
	WATER MAIN, VALVE, HYDRANT ASSEMBLY & WATER SERVICE CURB STOP	12" W 8" W
	SANITARY SEWER FLOW ARROW, MAIN, & CLEANOUT	S S
	VEGETATED SWALE	
	EASMENT	
	PROPERTY/ RIGHT OF WAY LINE	
	STORMPIPE, INLET, MANHOLE & FLARED END	D
	FORCE MAIN	FM FM

NOTES:

1. ROTATE PIPE JOINTS NO MORE THAN 1° PER JOINT TO ACHIEVE CHANGE OF VERTICAL AND HORIZONTAL DIRECTION
2. LOCATE FORCE MAIN TO AVOID DITCH LOW POINTS ALONG SHINGLE POINT ROAD
3. CONTRACTOR TO LOCATE ALL UTILITIES AT CROSSING AND VERIFY DEPTH PRIOR TO INSTALLATION OF FORCE MAIN.
4. JACK AND BORE DEPTH TO BE VERIFIED ONCE EDGES OF DRIVEWAYS AND ROAD PAVEMENT IDENTIFIED AND ALL UTILITIES DEPTH ARE IDENTIFIED.
5. ANY DAMAGE TO DRIVEWAYS, MAILBOXES, AND SIGNS TO BE REPAIRED AT CONTRACTORS COST.
6. CONTRACTOR TO INSTALL TRACER WIRE WITH THE FORCEMAIN PER ARTESIAN REQUIREMENTS

INSTALL STANDARD MARKERS FOR FORCE MAIN PER THE FOLLOWING LOCATIONS. REFER TO ARTESIAN DETAIL ON SHEET PS1713.

1. STATION: 1+22
2. STATION: 9+35
3. STATION: 10+50
4. STATION: 19+15
5. STATION: 20+05
6. STATION: 25+00
7. STATION: 31+10
8. STATION: 31+85
9. STATION: 32+45

U:\Accounts\RIBER\RIBER21002 - Company Store Property\DESIGN_SHEETS\PUMP STATION PLAN\PS1709.dwg PLOTTED: 7/14/2025 11:38 AM BY: Logan Strickland PLOTSTYLE: PennoniHCS.ctb

Pennoni
PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

GABRIEL LAKE EHEME LICENSED PROFESSIONAL ENGINEER No. 20988 DELAWARE 8-10-2025

BY	REVISIONS	NO.	DATE
LFS	REVISED PER ARTESIAN COMMENTS	1	2026-04-08
CH	REVISED PER TOWN OF MILTON COMMENTS	2	2026-06-22
ASM	REVISED PER ARTESIAN COMMENTS	3	2026-06-29

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SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

SEWER FORCE MAIN PLAN AND PROFILE

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

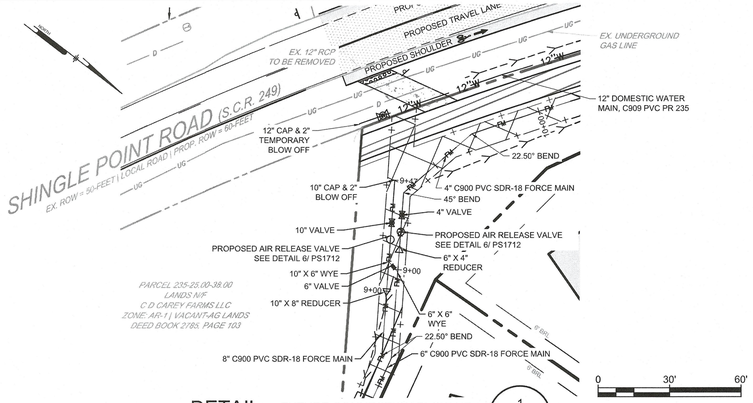
PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1709

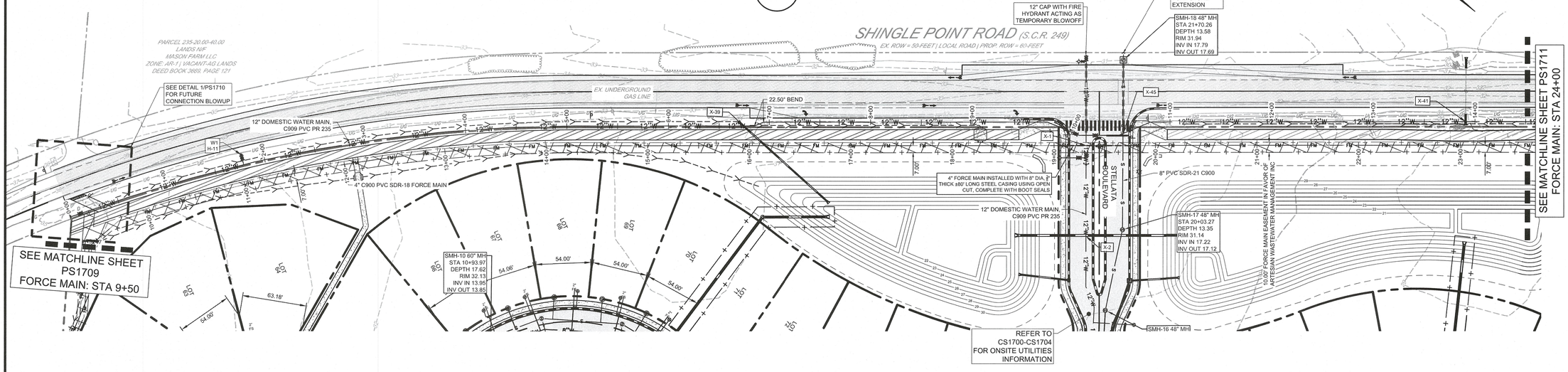
SHEET 78 OF 82

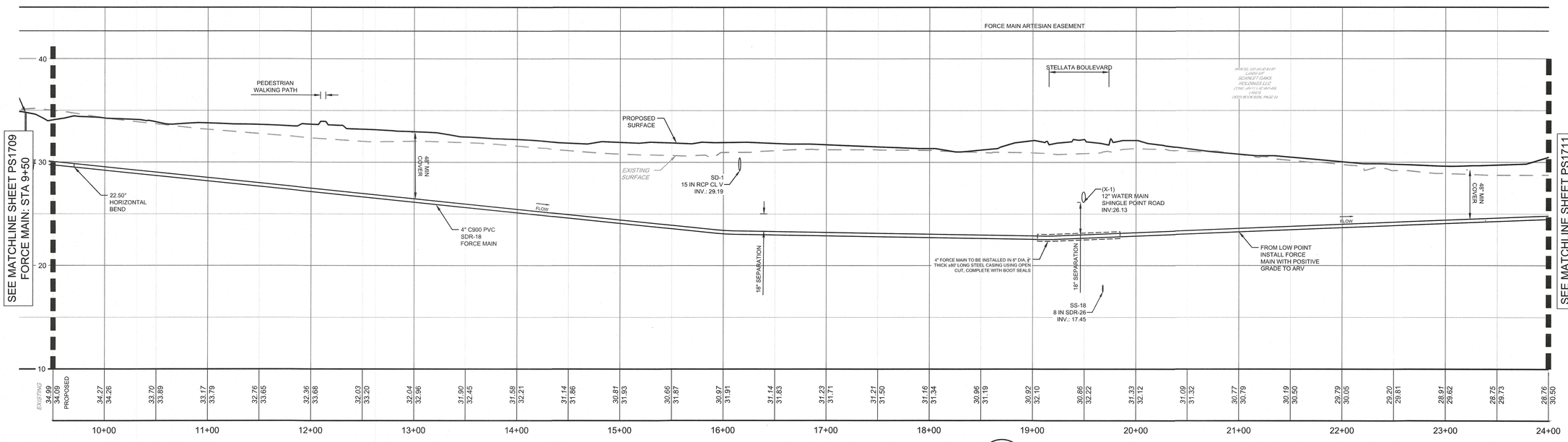
LEGEND

EXISTING		PROPOSED
WATER MAIN, VALVE, HYDRANT ASSEMBLY & WATER SERVICE CURB STOP		12" W 8" W
SANITARY SEWER FLOW ARROW, MAIN, & CLEANOUT		S S
VEGETATED SWALE		
EASMENT		
PROPERTY/ RIGHT OF WAY LINE		
STORMPIPE, INLET, MANHOLE & FLARED END		D
FORCE MAIN		FM FM



DETAIL - FUTURE CONNECTION BLOW UP (1 / PS1710)
H: 1"=30', V: 1"=3'





PLAN & PROFILE - 4" FORCE MAIN ALONG SHINGLE POINT ROAD (1 / PS1710)
H: 1"=50', V: 1"=5'

0 50' 100'

Pennoni
PENNONI ASSOCIATES INC.
16072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

GRAEME LAKE DELAWARE No. 20868 PROFESSIONAL ENGINEER 8-10-2026

SCARLET OAKS SUBDIVISION

TM#: 235-20.00-83.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

8884 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

SEWER FORCE MAIN PLAN AND PROFILE

RIBERA DEVELOPMENT, LLC

NO.	DATE	REVISIONS	BY
3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-08	REVISED PER ARTESIAN COMMENTS	LFS

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PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1710

SHEET 79 OF 82

PLOTTED: 7/14/2026 1:37 PM, BY: Ahmed Mohamed PLOTSTYLE: Pennoni INCS.stb
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LEGEND

EXISTING		PROPOSED
	WATER MAIN, VALVE, HYDRANT ASSEMBLY & WATER SERVICE CURB STOP	12" W 8" W
	SANITARY SEWER FLOW ARROW, MAIN, & CLEANOUT	S S
	VEGETATED SWALE	
	EASMENT	
	PROPERTY/ RIGHT OF WAY LINE	
	STORMPIPE, INLET, MANHOLE & FLARED END	
	FORCE MAIN	FM FM

NORTH

SEE MATCHLINE SHEET PS1710
FORCE MAIN: STA 24+00

PARCEL 235-20.00-49.00
LANDS N/F
MASON F&CM LLC
ZONE: AR-1 | VACANT-AG LANDS
DEED BOOK 3689, PAGE 121

SHINGLE POINT ROAD (S.C.R. 249)
EX. ROW = 50-FEET | LOCAL ROAD | PROP. ROW = 60-FEET

EX. UNDERGROUND GAS LINE

15.00' RESERVED FOR FUTURE SHARED USE PATH

SPACE RESERVED FOR FUTURE MULTI-USE PATH

W1
H-12

12" DOMESTIC WATER MAIN, C909 PVC PR 235

REMOVE AND REPLACE ALL DRIVEWAYS IN KIND (TYPICAL ALL IMPACTED DRIVEWAYS)

EX. 12" CMP

22.50° BENDS

45° BEND

20.00' CONSTRUCTION EASEMENT

10' X 35' JACKING PIT

45° BEND

FORCE MAIN TO BE INSTALLED IN 12" DIA, ¼" THICK ±53' LONG STEEL CASING USING JACK AND BORE, USE SPACERS TO SUPPORT CARRIER PIPE, SEAL ENDS WITH PER DELDOT UTILITY PERMIT APPROVAL PROCESS. EXTEND STEEL SLEEVE TO MINIMUM 5 FT PAST EDGE OF PAVING

10' X 10' RECEIVING PIT

45° BENDS

X-44

45° BENDS

EX. SEWER MANHOLE
RIM:30.44
INV: 26.00

EX. 8" GAS

EX. 8" SEWER

EX. UG

4" GATE VALVE

PROPOSED AIR RELEASE VALVE SEE DETAIL 6/ PS1712

SEWER CLEANOUT

10.00' FORCE MAIN EASEMENT IN FAVOR OF ARTESIAN WASTEWATER MANAGEMENT INC

EX. 20.00' FORCE MAIN EASEMENT IN FAVOR OF ARTESIAN WASTEWATER MANAGEMENT, INC

TERMINAL MANHOLE
SEE DETAIL 5/ PS1703

PARCEL 235-20.00-63.01
LANDS N/F
SCARLET OAKS HOLDINGS LLC
DEED BOOK 6226, PAGE 54
ZONE: AR-1

PARCEL 53.00
LANDS N/F
SCARLETOAKS HOLDINGS LLC
DEED BOOK 6226 PAGE 54
ZONE: AR-1

CHESTNUT PROPERTIES LLC
LANDS N/F

CHESTNUT ST
(PRIVATE DRIVE)

EATON LANE
(PRIVATE DRIVE)

KEVIN & STACEY CRAIG
DB: 5855, PG: 57
ZONE: R-1 WITH H1O OVERLAY
SINGLE-FAMILY DWELLING

JAMES & SHADRA HAAGEL
DB: 3432, PG:134
ZONE: R-1 WITH H1O OVERLAY
SINGLE-FAMILY DWELLING

DENNIS MOORE
DB: 1541, PG: 136
ZONE: R-1 WITH H1O OVERLAY
SINGLE-FAMILY DWELLING

JOEL BEVILACQUA
DB: 4874, PG:126
ZONE: R-1 WITH H1O OVERLAY
SINGLE-FAMILY DWELLING

JACK JR. & PATRICIA MORRIS
DB: 4607, PG:272
ZONE: R-1 WITH H1O OVERLAY
SINGLE-FAMILY DWELLING

GIBSON V-A-I
(PROPERTIES)

HARBESON ROAD (S.C.R. 022)
EX. ROW = 70-FEET | MAJOR COLLECTOR
ROW = 82-FEET

20.00

ELLISON DRIVE (S.C.R. 37059)
LOCAL ROAD

SEE MATCHLINE SHEET PS1710
FORCE MAIN: STA 24+00

FORCE MAIN ARTESIAN EASEMENT

EX. PROPERTY/ ROW LINE

EX. PROPERTY/ ROW LINE

EX. PROPERTY/ ROW LINE

PROPOSED SURFACE

EXISTING SURFACE

4" GATE VALVE

PROPOSED AIR RELEASE VALVE SEE DETAIL 6/ PS1712 STA:29+50.46

48" MIN COVER

FORCE MAIN TO BE INSTALLED IN 12" DIA, ¼" THICK ±53' LONG STEEL CASING USING JACK AND BORE, USE SPACERS TO SUPPORT CARRIER PIPE, SEAL ENDS WITH PER DELDOT UTILITY PERMIT APPROVAL PROCESS. EXTEND STEEL SLEEVE TO MINIMUM 5 FT PAST EDGE OF PAVING

HARBESON ROAD

10' X 10' RECEIVING PIT

10' X 35' JACKING PIT

EXISTING SURFACE

INV: 31.00 MANHOLE RIM:30.44

48" MIN COVER

4" C900 PVC SDR-18 FORCE MAIN

VERIFY DEPTH OF EXISTING SEWER MANHOLE PRIOR TO INSTALLING FORCE MAIN

EXISTING 8" SEWER LINE

EX. INV:23.48

FLOW

FLOW

INSTALL FORCE MAIN WITH POSITIVE GRADE TO ARV

45° HORIZONTAL BENDS

45° HORIZONTAL BENDS

(X-44)
12" WATER MAIN
INV:22.98

18" MIN SEPARATION

PROPOSED CONNECTION: CORE EXISTING MANHOLE FOR PENETRATION OF 6" DIAMETER FORCE MAIN, SEALED WITH LINK SEAL (SEE DETAIL 5/ SHEET PS1703, FOR CONNECTION AND INITIAL DROP)

45° HORIZONTAL BEND

	24+00	25+00	26+00	27+00	28+00	29+00	30+00	31+00	32+00	33+00	34+00	35+00
EXISTING	28.76	30.50	29.10	31.39	29.50	29.92	30.20	30.58	31.66	31.36	31.78	32.04
PROPOSED												
EXISTING	33.54	33.59	32.51	31.69	30.43	30.17	30.44	31.45	30.63	30.62		
PROPOSED												

40
30
20
10

0 50' 100'

PLAN & PROFILE - 4" FORCE MAIN ALONG SHINGLE POINT ROAD

H: 1"=50', V: 1"=5'

1
PS1711

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

STATE OF DELAWARE PROFESSIONAL ENGINEER ADAM M. DEJEME LAKE No. 20085 LICENSEE

9/27/2026

SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

SEWER FORCE MAIN PLAN AND PROFILE

RIBERA DEVELOPMENT, LLC
8884 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	REVISIONS	BY
3	2026-06-29	REVISED PER ARTESIAN COMMENTS	ASM
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-06	REVISED PER ARTESIAN COMMENTS	LFS

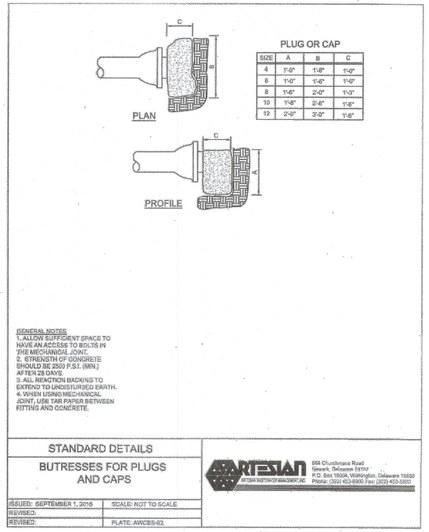
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PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1711

SHEET 80 OF 82

U:\Accounts\RIBER\Riber21002 - company store property\DESIGN_SHEETS\PUMP STATION PLANS\PS1711.dwg PLOTTED: 7/14/2026 1:40 PM, BY: Ahmed Mohamed PLOTSTYLE: Pennoni NCS.stb

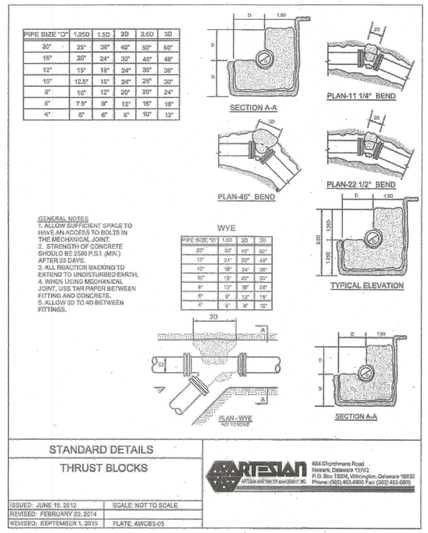


STANDARD DETAILS
BUTRESSES FOR PLUGS AND CAPS

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: SEPTEMBER 1, 2015 | SCALE: NOT TO SCALE
REVISED: | PLATE: AWCBS-03
REVISED:

DETAIL- BUTRESSES FOR PLUGS AND CAPS — NOT TO SCALE — 1 PS1712

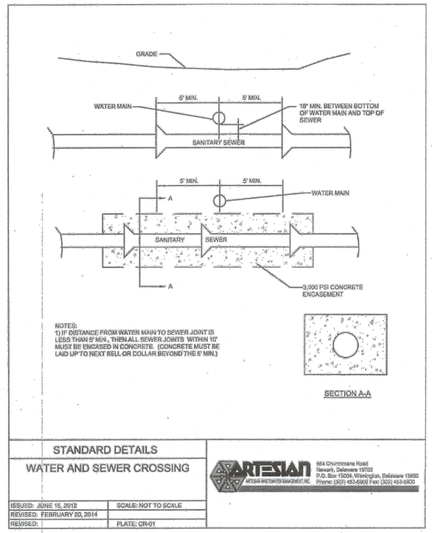


STANDARD DETAILS
THRUST BLOCKS

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012 | SCALE: NOT TO SCALE
REVISED: FEBRUARY 22, 2014
REVISED: SEPTEMBER 1, 2015 | PLATE: AWCBS-05

DETAIL- THRUST BLOCKS — NOT TO SCALE — 2 PS1712

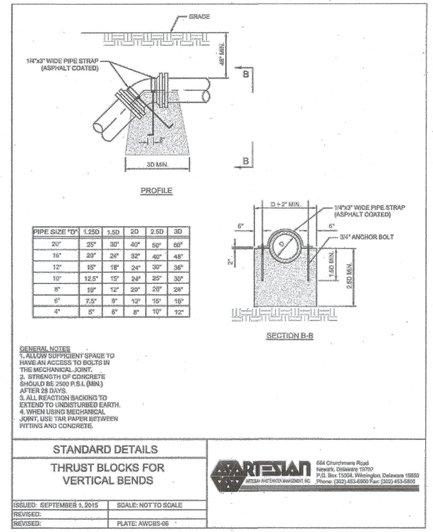


STANDARD DETAILS
WATER AND SEWER CROSSING

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JUNE 15, 2012 | SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014 | PLATE: CR-01
REVISED:

DETAIL- WATER AND SEWER CROSSING — NOT TO SCALE — 3 PS1712



STANDARD DETAILS
THRUST BLOCKS FOR VERTICAL BENDS

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: SEPTEMBER 1, 2015 | SCALE: NOT TO SCALE
REVISED:
REVISED: | PLATE: AWCBS-06

DETAIL- THRUST BLOCKS FOR VERTICAL BENDS — NOT TO SCALE — 4 PS1712

STANDARD DETAILS
TRANSITION FROM DIP/PVC TO HDPE TYPICAL

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: APRIL 20, 2011 | SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014
REVISED: SEPTEMBER 1, 2015 | PLATE: TRAN-01

DETAIL- TRANSITION FROM DIP/PVC TO HDPE TYPICAL — NOT TO SCALE — 5 PS1712

STANDARD DETAILS
MODIFIED COMB. SEWERAGE AIR RELEASE/VACUUM RELIEF VALVE NON-TRAFFIC AREAS

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: FEBRUARY 12, 2026 | SCALE: NOT TO SCALE
REVISED:
REVISED: | PLATE: MH-07

DETAIL- MODIFIED COMB. SEWERAGE AIR RELEASE/VACUUM RELIEF VALVE NON-TRAFFIC AREAS — NOT TO SCALE — 6 PS1712

STANDARD DETAILS
TYPICAL PIPE CASING CROSS-SECTION

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: FEBRUARY 20, 2014 | SCALE: NOT TO SCALE
REVISED: SEPTEMBER 1, 2015
REVISED: JANUARY 31, 2019 | PLATE: CR-03

DETAIL- TYPICAL PIPE CASING CROSS-SECTION — NOT TO SCALE — 7 PS1712

STANDARD DETAILS
STORMWATER AND SEWER CROSSING

ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-6900 Fax: (302) 453-5800

ISSUED: JANUARY 31, 2019 | SCALE: NOT TO SCALE
REVISED:
REVISED: | PLATE: CR-02

DETAIL- STORMWATER AND SEWER CROSSING — NOT TO SCALE — 8 PS1712

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

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SCALE: 1" = 40'

SCARLET OAKS SUBDIVISION

TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

SEWER FORCE MAIN NOTES AND DETAILS

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

NO.	DATE	BY
2	2026-06-22	CH
1	2026-04-08	LFS
	REVISIONS	
	REVISED PER TOWN OF MILTON COMMENTS	
	REVISED PER ARTESIAN COMMENTS	

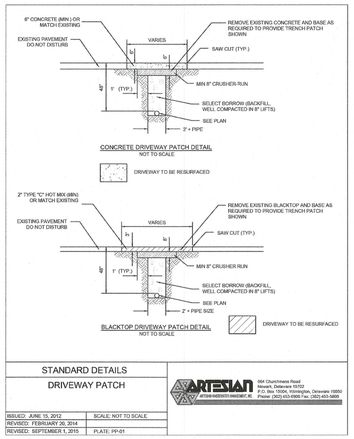
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PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1712

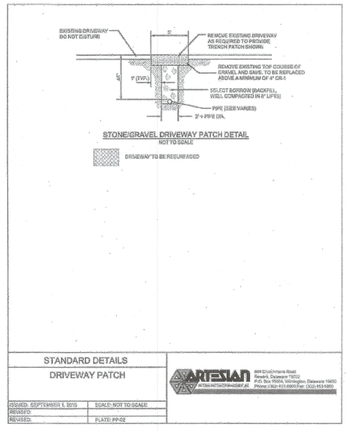
SHEET 81 OF 82

U:\Accounts\RIBER\RIBER21002 - Company Store Property\DESIGN_SHEETS\PUMP STATION PLANS\PS1712.dwg PLOTTED: 7/14/2026 11:36 AM BY: Logie Stickland PLOTSTYLE: Pennoni MCS.ctb



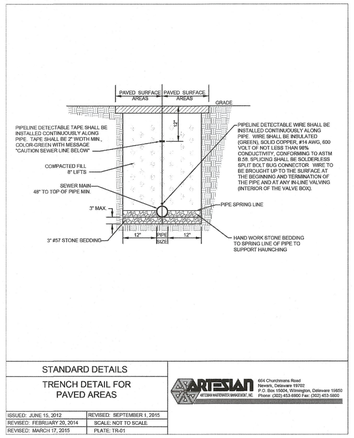
STANDARD DETAILS	
DRIVEWAY PATCH	ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-9360 Fax: (302) 453-9369
ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED: SEPTEMBER 1, 2015	PLATE: PP-01

DETAIL- DRIVEWAY PATCH — NOT TO SCALE — 1 — PS1713



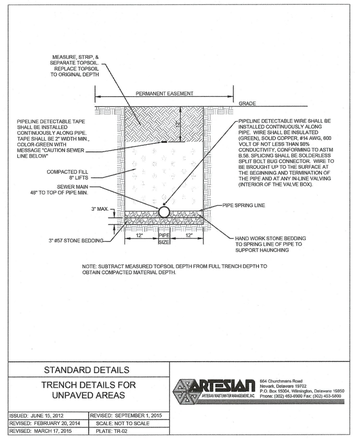
STANDARD DETAILS	
DRIVEWAY PATCH	ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-9360 Fax: (302) 453-9369
ISSUED: SEPTEMBER 1, 2015	SCALE: NOT TO SCALE
REVISED:	PLATE: PP-02

DETAIL- DRIVEWAY PATCH — NOT TO SCALE — 2 — PS1713



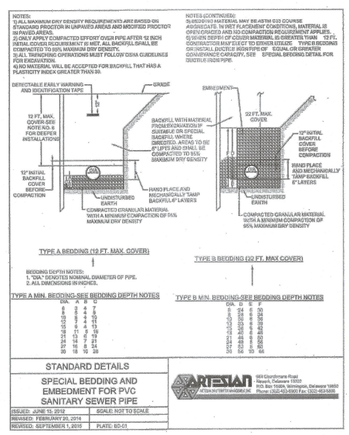
STANDARD DETAILS	
TRENCH DETAIL FOR PAVED AREAS	ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-9360 Fax: (302) 453-9369
ISSUED: JUNE 15, 2012	REVISED: SEPTEMBER 1, 2015
REVISED: FEBRUARY 20, 2014	SCALE: NOT TO SCALE
REVISED: MARCH 17, 2015	PLATE: TR-01

DETAIL- TRENCH DETAIL FOR PAVED AREAS — NOT TO SCALE — 3 — PS1713



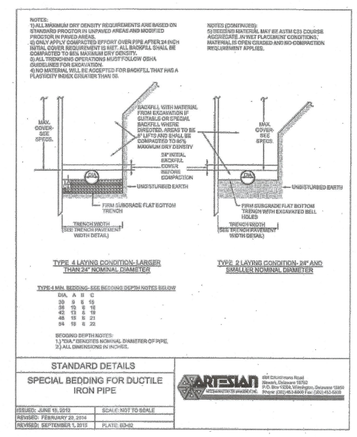
STANDARD DETAILS	
TRENCH DETAILS FOR UNPAVED AREAS	ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-9360 Fax: (302) 453-9369
ISSUED: JUNE 15, 2012	REVISED: SEPTEMBER 1, 2015
REVISED: FEBRUARY 20, 2014	SCALE: NOT TO SCALE
REVISED: MARCH 17, 2015	PLATE: TR-02

DETAIL- TRENCH DETAILS FOR UNPAVED AREAS — NOT TO SCALE — 4 — PS1713



STANDARD DETAILS	
SPECIAL BEDDING AND EMBEDMENT FOR PVC SANITARY SEWER PIPE	ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-9360 Fax: (302) 453-9369
ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED: SEPTEMBER 1, 2015	PLATE: SD-01

DETAIL- SPECIAL BEDDING AND EMBEDMENT FOR PVC SANITARY SEWER PIPE — NOT TO SCALE — 5 — PS1713



STANDARD DETAILS	
SPECIAL BEDDING FOR DUCTILE IRON PIPE	ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-9360 Fax: (302) 453-9369
ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED: SEPTEMBER 1, 2015	PLATE: SD-02

DETAIL- SPECIAL BEDDING FOR DUCTILE IRON PIPE — NOT TO SCALE — 6 — PS1713

Standard Detail & Specifications

Construction Site Pollution Prevention

Notes (cont.)

d. Dispose of all trash in accordance with all applicable Delaware laws.
e. Littering is strictly prohibited. Trash cans should be placed at all lunch spots and recycle bins should be placed near the construction trailer.
f. If fertilizer bags can not be stored in a weather-proof location, they should be kept on a pallet and covered with plastic sheeting which is overlapped and anchored.

4. **Equipment maintenance practices**
a. If possible, equipment should be taken to off-site commercial facilities for washing and maintenance.
b. If performed on-site, wash vehicles with high-pressure water spray without detergents in an area contained by an impervious berm.
c. Use drip pans for all equipment maintenance.
d. Inspect equipment for leaks on a daily basis.
e. Direct washout from concrete trucks into a temporary pit for hardening and proper disposal.
f. Equip fuel nozzles with automatic shut-off valves.
g. Dispose of all used products such as oil, antifreeze, solvents and tires in accordance with manufacturers' recommendations and local, state and federal laws and regulations.

5. **Spill prevention practices**
a. Identify potential spill areas and contain them in covered areas with no connection to the storm drain system.
b. Post warning signs in hazardous material storage areas.
c. Perform preventive maintenance on all tanks, valves, pumps, pipes and other equipment as necessary.
d. Prioritize low or non-toxic substances for use.

Source:	Symbol:	Detail No.
Adapted from USEPA Pub. 840-B-92-002		**DE-ESC-3.6.1** Sheet 3 of 4 Effective July 2023

DETAIL- CONSTRUCTION SITE POLLUTION PREVENTION - 1 — NOT TO SCALE — 7 — PS1713

Standard Detail & Specifications

Construction Site Pollution Prevention

Notes (cont.)

e. Prominently post contact information for reporting spills through the DNREC 24-Hour Toll Free Number.

6. **Education**
a. Include Best Management Practices (BMPs) for construction site pollution control as part of regular progress meetings.
b. Information regarding waste management, equipment maintenance and spill prevention should be prominently posted in the construction trailer.

CONTACT INFORMATION

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

Source:	Symbol:	Detail No.
Adapted from USEPA Pub. 840-B-92-002		**DE-ESC-3.6.1** Sheet 4 of 4 Effective July 2023

DETAIL- CONSTRUCTION SITE POLLUTION PREVENTION - 2 — NOT TO SCALE — 8 — PS1713

Standard Detail & Specifications

Construction Site Pollution Prevention

Delaware NPDES Discharge Permit
General Permit for Discharge of Stormwater from Construction Activities

((Project Name))

((NOI Permit Number))

((Agency Plan Approval ID))

((Contact Name & Number for Additional Site Information))

((Contact Name & Number to Obtain Copy of Approved Plan))

If you observe indicators of stormwater pollutants in the discharge or in the receiving waterbody, call the DNREC Spill Notification 24 HR Hotline at

1-800-662-8802

Example Construction General Permit (CGP) Signage

NOTES:
1. Minimum sign size 2' x 2'
2. Minimum text size 1"
3. Sign must be posted at a safe, publicly accessible location close to construction site
4. Sign must be visible from the public road nearest the active construction site
5. Signs posted within a DelDOT or other public road right-of-way (ROW) must be in accordance with all local and/or State requirements in regards to safety, location, orientation, etc.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.1** Sheet 1 of 4 Effective July 2023

DETAIL- CONSTRUCTION SITE POLLUTION PREVENTION - 3 — NOT TO SCALE — 9 — PS1713

Standard Detail & Specifications

Construction Site Pollution Prevention

Notes:

The Construction Site Pollution Prevention Plan includes the following elements:

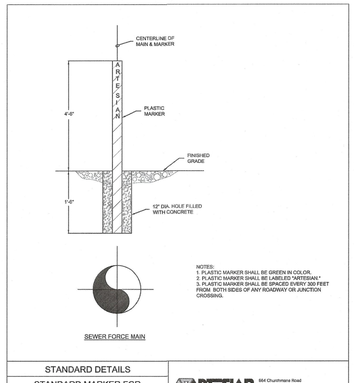
1. **Material Inventory**
Document the storage and use of the following materials:
a. Concrete
b. Detergents
c. Paints (enamel and latex)
d. Cleaning solvents
e. Pesticides
f. Wood scraps
g. Fertilizers
h. Petroleum based products

2. **Good housekeeping practices**
a. Store only enough product required to do the job.
b. Store all materials in a neat, orderly manner in their original labeled containers and covered.
c. Do not mix different substances.
d. When possible, use all of a product prior to disposal of the container.
e. Manufacturers' instructions for disposal should be strictly adhered to.
f. Designate someone to inspect all BMPs daily.

3. **Waste management practices**
a. Collect and store all waste materials in securely lidded dumpsters in a location that does not drain to a waterbody.
b. Salvage and/or recycle waste materials 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.

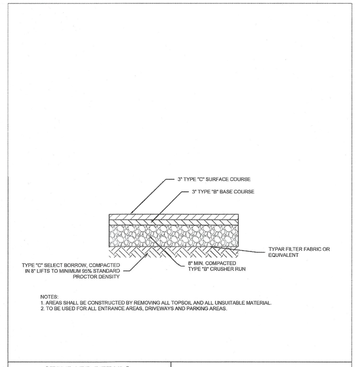
Source:	Symbol:	Detail No.
Adapted from USEPA Pub. 840-B-92-002		**DE-ESC-3.6.1** Sheet 2 of 4 Effective July 2023

DETAIL- CONSTRUCTION SITE POLLUTION PREVENTION - 4 — NOT TO SCALE — 10 — PS1713



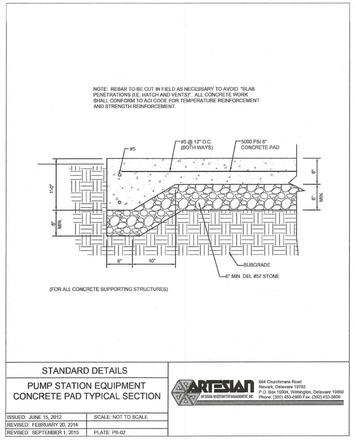
STANDARD DETAILS	
STANDARD MARKER FOR SEWER FORCE MAINS IN EASEMENTS	ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-9360 Fax: (302) 453-9369
ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED:	PLATE: SD-03

DETAIL- STANDARD MARKER FOR SEWER FORCE MAINS IN EASEMENTS — NOT TO SCALE — 11 — PS1713



STANDARD DETAILS	
PUMP STATION DRIVEWAY PAVEMENT SECTION	ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-9360 Fax: (302) 453-9369
ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	REVISED: JUNE 20, 2016
REVISED: SEPTEMBER 1, 2015	PLATE: PS-03

DETAIL- PUMP STATION DRIVEWAY PAVEMENT SECTION — NOT TO SCALE — 12 — PS1713



STANDARD DETAILS	
PUMP STATION EQUIPMENT CONCRETE PAD TYPICAL SECTION	ARTESIAN 664 Churchmans Road Newark, Delaware 19702 P.O. Box 15004, Wilmington, Delaware 19850 Phone: (302) 453-9360 Fax: (302) 453-9369
ISSUED: JUNE 15, 2012	SCALE: NOT TO SCALE
REVISED: FEBRUARY 20, 2014	
REVISED: SEPTEMBER 1, 2015	PLATE: PS-02

DETAIL- PUMP STATION EQUIPMENT CONCRETE PAD TYPICAL SECTION — NOT TO SCALE — 13 — PS1713

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK



SCARLET OAKS SUBDIVISION
TM#: 235-20.00-63.02
SHINGLE POINT ROAD (SCR 249)
MILTON, DE 19968

RIBERA DEVELOPMENT, LLC
8684 VETERANS HIGHWAY, SUITE 203
MILLERSVILLE, MD 21108

SEWER FORCE MAIN NOTES & DETAILS

NO.	DATE	REVISIONS	BY
2	2026-06-22	REVISED PER TOWN OF MILTON COMMENTS	CH
1	2026-04-08	REVISED PER ARTESIAN COMMENTS	LFS

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PROJECT	RIBER21002
DATE	2025-7-8
DRAWING SCALE	AS NOTED
DRAWN BY	EWW
APPROVED BY	AMD

PS1713

SHEET 82 OF 82

PLOTTED: 7/14/2026 11:08 AM BY: Logan Strickland PLOTSTYLE: Pennoni NCS.stb
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