

# RT 24 WAVES CAR WASH

LEWES & REHOBOTH HUNDRED,  
SUSSEX COUNTY, DE

DBF #4361A001  
JANUARY 2024

## CONSTRUCTION PLANS

### OWNER/DEVELOPER STATEMENT

I, THE UNDERSIGNED, HEREBY STATE THAT I AM THE DEVELOPER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN. THE PLAN WAS MADE AT MY DIRECTION. I ACKNOWLEDGE THE SAME TO BE MY ACT AND DESIRE THE PLAN BE RECORDED ACCORDING TO LAW.

CHERNER DEVELOPMENT GROUP  
1577 SPRING HILL ROAD  
VIENNA, VA 22182

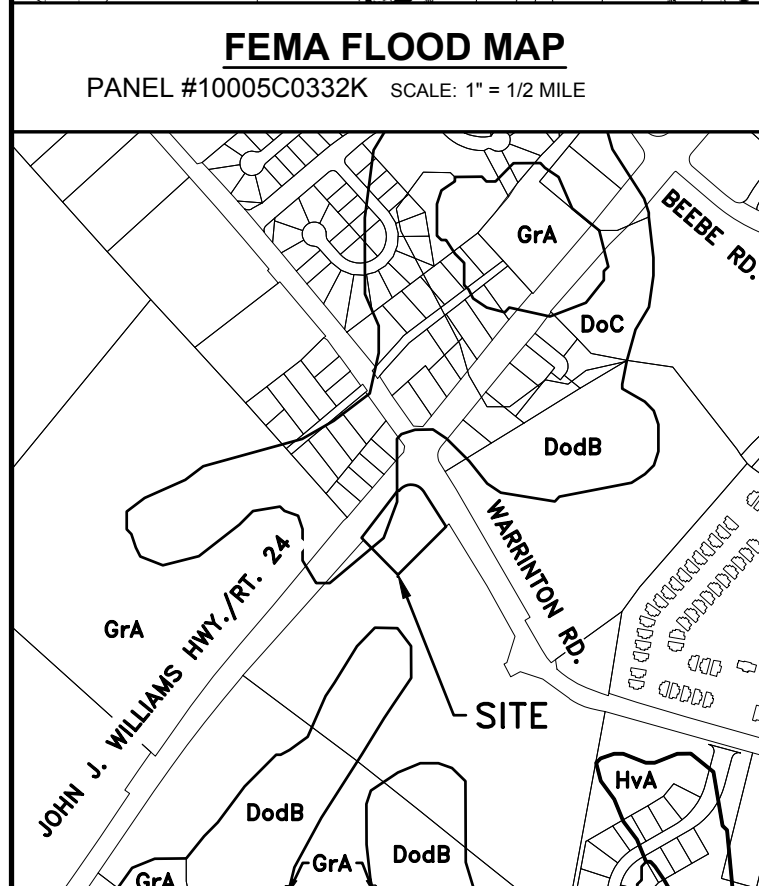
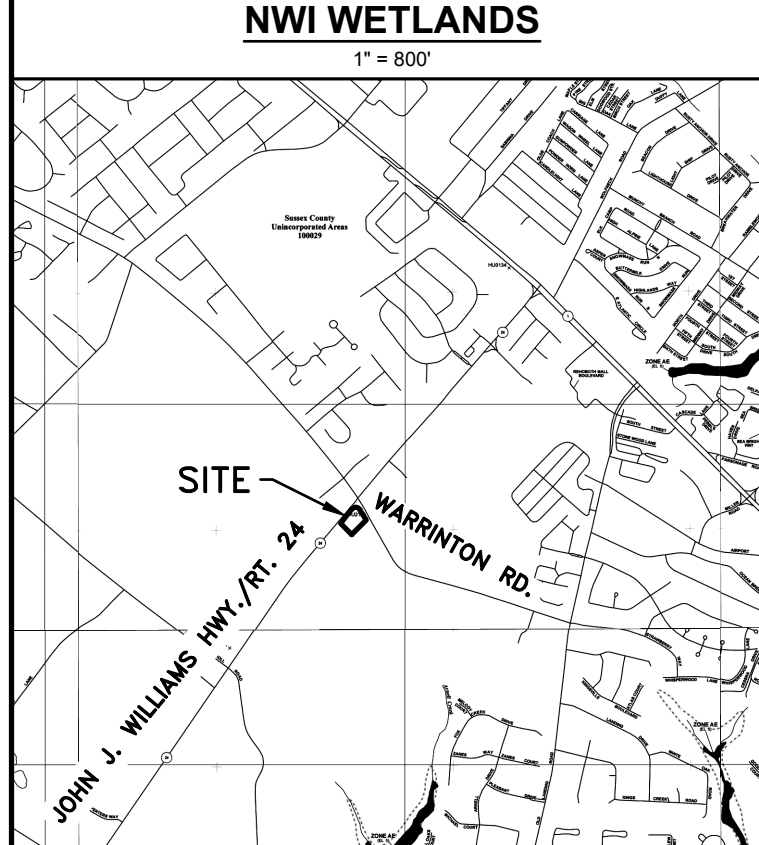
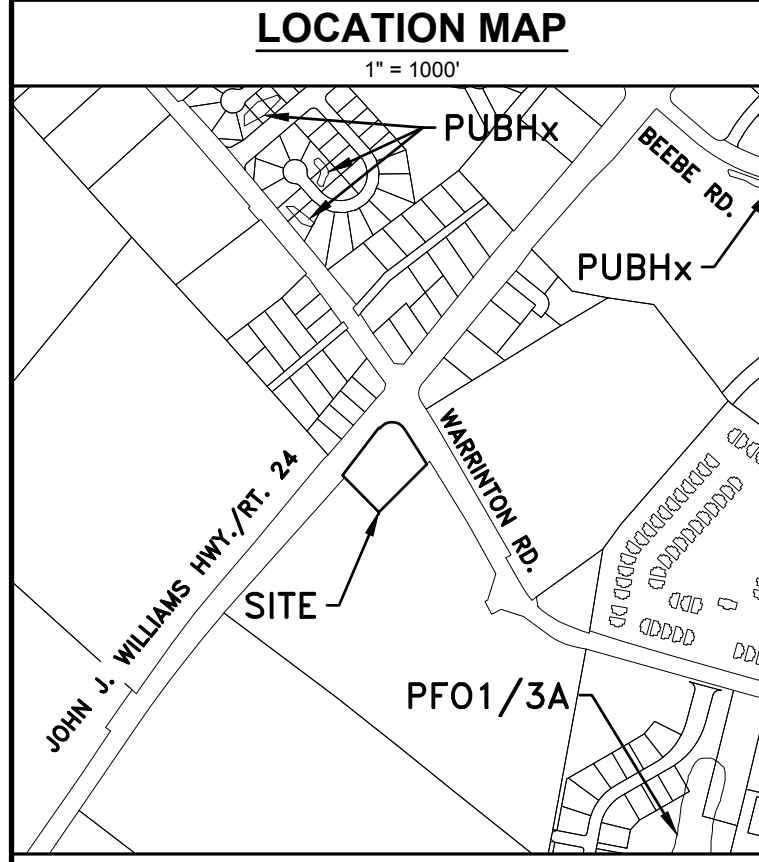
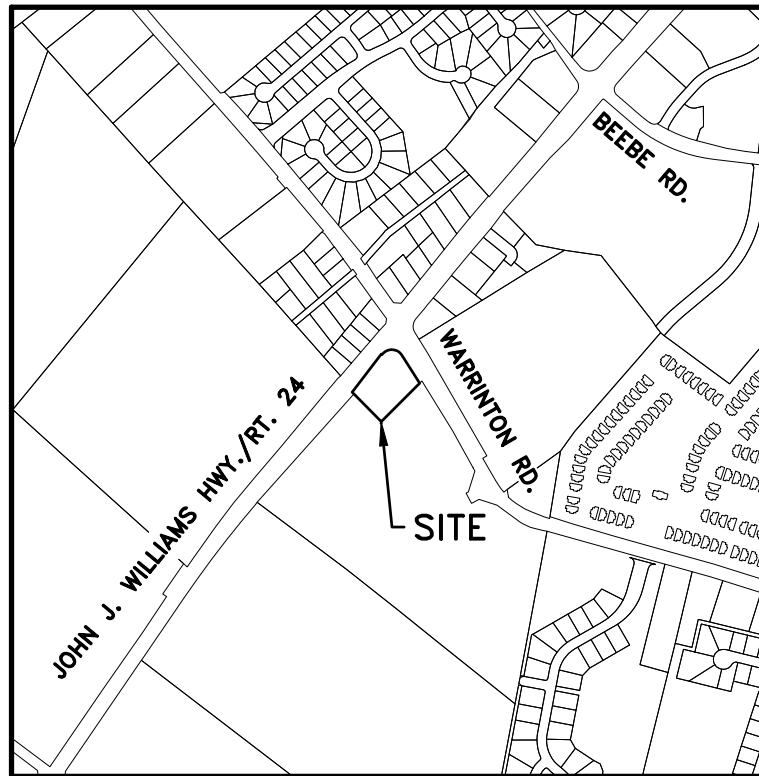
### ENGINEER'S STATEMENT

I, JAMIE L. SECHLER, P.E., HEREBY STATE 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 AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

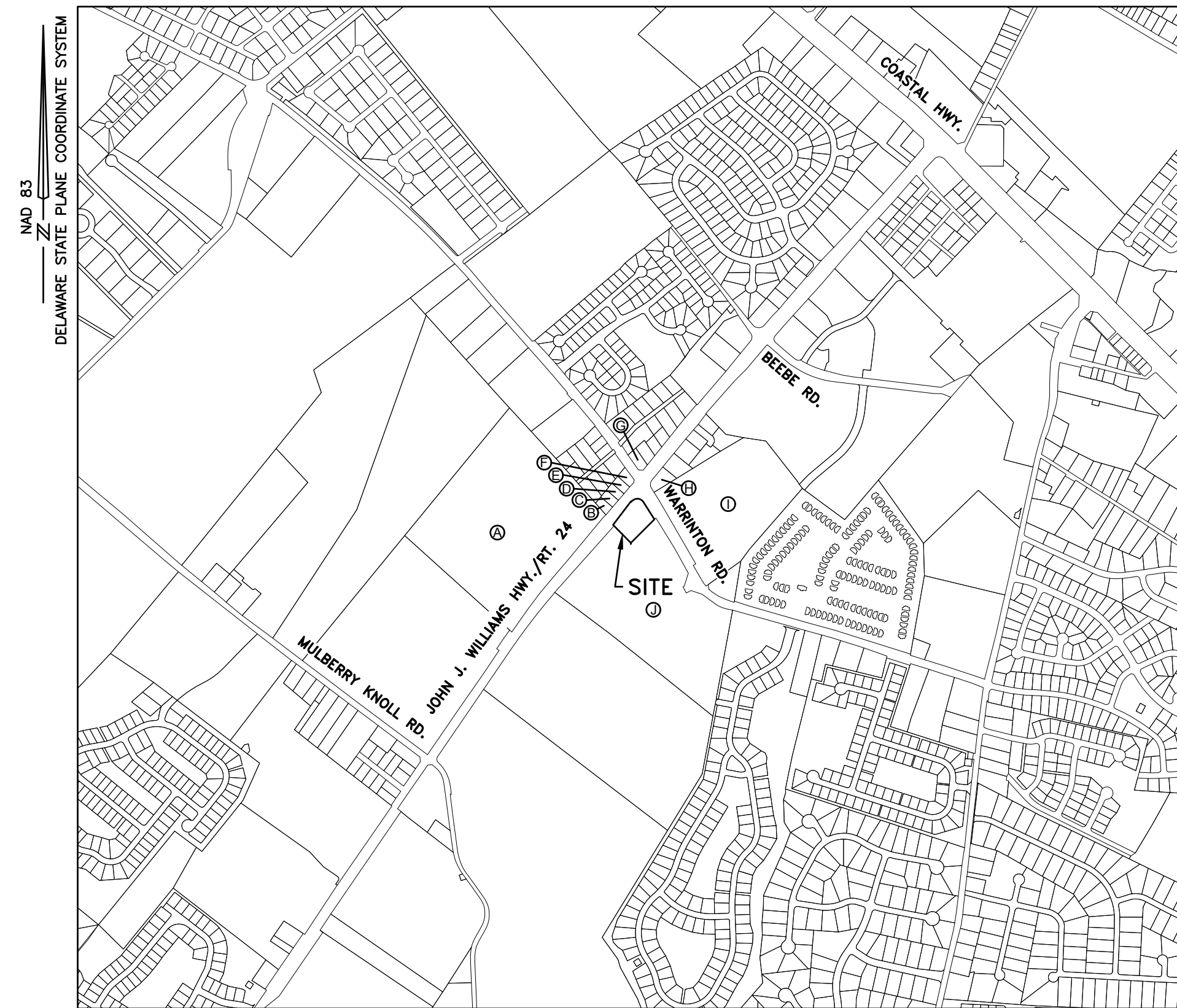
DATE: 07-31-2024

BY: JAMIE L. SECHLER, P.E.  
DAVIS, BOWEN & FRIEDEL, INC.  
1 PARK AVENUE  
MILFORD, DELAWARE, 19968

**DAVIS BOWEN & FRIEDEL, INC.**  
ARCHITECTS • ENGINEERS • SURVEYORS  
MILFORD, DELAWARE  
BALTIMORE, MARYLAND  
410.776.7474



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LOCATION MAP  
SCALE: 1"=1000'

ADJACENT PROPERTY OWNERS				
PARCEL#	OWNER	DEED	ZONING	
A	334-12.00-46.00 J. G. TOWNSEND JR. CO.	D/2223/321	AR-1	
B	334-12.00-58.00 JULIANE O TTEE HEIN	D/4372/43	AR-1	
C	334-12.00-59.00 CORNELIUS S ELIZABETH DOLAN		AR-1	
D	334-12.00-60.00 ISLAND DREAMS, LLC.	D/5979/135	AR-1	
E	334-12.00-61.00 AYAN PATEL (SECOND OWNER: JIGNESH J. DESAI, SANJAY PATEL ETAL.)	D/5766/327	AR-1	
F	334-12.00-62.00 AYAN PATEL (SECOND OWNER: JIGNESH J. DESAI, SANJAY PATEL ETAL.)	D/5766/327	AR-1	
G	334-12.00-81.00 JOAN M. DEAVER	D/2400/218	AR-1	
H	334-12.00-187.00 KOSTA TSOUKALAS	D/2584/287	AR-1	
I	334-12.00-125.00 BEEBE MEDICAL CENTER, INC.	D/3535/251	I-1	
J	334-12.00-116.00 J. G. TOWNSEND JR. CO.	D/3534/17	AR-1	

DATA COLUMN		
1 TAX MAP ID	3-34-12.00-115.00	
2 DEED REFERENCE	BOOK: 5511, PAGE: 124	
3 APPROXIMATE PROJECT CENTER	LATITUDE: 38.7228 LONGITUDE: -75.1428	
4 SITE ADDRESS	19101 JOHN J. WILLIAMS HWY, REHOBOTH BEACH, DE 19971	
5 ENGINEER	OWNER/DEVELOPER DAVIS, BOWEN & FRIEDEL, INC. 1 PARK AVENUE MILFORD, DE 19963 JAMIE L. SECHLER, P.E. PHONE: (302) 424-1441 EMAIL: JLS@DBFINC.COM	
6 DATUM	HORIZONTAL: NAVD 83 (DE STATE PLANE) VERTICAL: NAVD 88	
7 ZONING	EXISTING: AR-1 PROPOSED: CR-1	
8 LAND USE	EXISTING: SINGLE STORY HOUSING PROPOSED: CAR WASH: 1 BUILDING AND 1 FULL SERVICE CANOPY	
9 BUILDING	EXISTING: 3,466 S.F. BUILDING: 9,359 S.F.	
10 BUILDING CONSTRUCTION	IBC V-8 NFPA V(000)	
11 UTILITY PROVIDERS	SEWER: SUSSEX COUNTY WATER: TIDEWATER UTILITIES, INC.	
12 STATE STRATEGIES MAP	INVESTMENT LEVEL AREA: LEVEL 2	
13 POSTED SPEED LIMIT	WARRINGTON RD. (SCR 275): 35 MPH JOHN J. WILLIAMS HWY (RT 24): 45 MPH	
14 FLOODPLAIN	THE PROPERTY IS NOT IMPACTED BY THE 100 YEAR FLOODPLAIN AS DETERMINED BY FEMA PANEL 10005C0332K DATED MARCH 16, 2015.	
15 TRANSPORTATION IMPROVEMENT DISTRICT (TID)	THE PROPERTY IS LOCATED IN A TRANSPORTATION IMPROVEMENT DISTRICT. HENL OPEN TID	
16 GROUNDWATER RECHARGE	THE PROPERTY IS NOT LOCATED IN AN AREA OF EXCELLENT GROUNDWATER RECHARGE	
17 WELLHEAD PROTECTION AREA	THE PROPERTY IS LOCATED IN A WELLHEAD PROTECTION AREA	
18 WETLANDS	THE PROPERTY IS NOT IMPACTED BY STATE OR FEDERALLY REGULATED WETLANDS.	
19 CODE COMPLIANCE	REQUIRED: FRONT SETBACK 60 FT, SIDE SETBACK 15 FT, REAR SETBACK 20 FT, MAXIMUM BUILDING HEIGHT 42 FT (3 STORIES) PROPOSED: FRONT SETBACK 60 FT, SIDE SETBACK 15 FT, REAR SETBACK 20 FT, MAXIMUM BUILDING HEIGHT 42 FT (3 STORIES)	
20 AREAS	EXISTING: TOTAL SITE AREA 70,212 S.F. (1.612 AC.) PROPOSED: TOTAL SITE AREA 70,212 S.F. (1.612 AC.), BUILDING AREA 9,359 S.F. (0.214 A.C.) (13.27%), PAVED AREAS 31,390 S.F. (0.721 A.C.) (44.73%), TOTAL IMPERVIOUS COVER 40,749 S.F. (0.935 A.C.) (58.00%), PERVIOUS COVER 29,470 S.F. (0.677 A.C.) (42.00%)	
21 SURVEY DATE	OCTOBER 2023	
22 TOTAL LOD AREA	2,287 AC.	

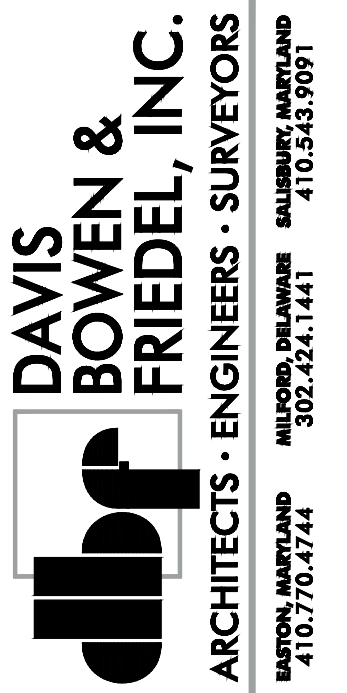
RT 24 WAVES CAR WASH  
JOHN J. WILLIAMS HWY. & WARRINGTON RD.  
LEWES & REHOBOTH HUNDRED, SUSSEX COUNTY, DE

DATE	DESCRIPTION
2024-02-28	SCD, RM COMMENTS & OWNER REQUEST

Date: JANUARY 2024  
Scale: AS NOTED  
Dwn By: YGW  
Proj No.: 4361A001

TITLE SHEET

Dwg No.: C-001



**RT 24 WAVES CAR WASH**  
**JOHN J. WILLIAMS HWY. & WARRINGTON RD.**  
**LEWES & REHOBOTH HUNDRED, SUSSEX COUNTY, DE**

MANMADE ROADSIDE FEATURES			
FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
BOLLARD	○	○	
CURB, TYPE 1 AND 3	====	====	(C) (C)
CURB OPENING WITH SIDEWALK		⊕	(A) (C)
FENCE – CHAINLINK OR STRANDED	-x-x-x-x-	⊕	(F)
LAMP AND POST – RESIDENTIAL	⊕	⊕	
MAILBOX	MB	MB	
TRAFFIC SIGN AND POST	⊕	⊕	
CURB OPENING		⊕	(C) (D)

UTILITY FEATURES		
FEATURE DESCRIPTION	EXISTING	PROPOSED
ELECTRIC – UNDERGROUND	UG-E	
ELECTRIC MANHOLE	⊕	
ELECTRIC METER	EM	
ELECTRIC TRANSFORMER	⊕	⊕
GAS – UNDERGROUND	UGG	UGG
GAS MANHOLE	⊕	
GAS METER	G.M.	
GAS VALVE	G.V.	
RAILROAD TRACKS	⊕	⊕
SANITARY MAIN	EX-SS	
SANITARY SEWER MANHOLE	⊕	⊕
SOIL BORING LOCATION		⊕
TELEPHONE TEST POINT	⊕	
UTILITY POLE GUY WIRE ANCHOR	⊕	⊕
UTILITY POLE	⊕	⊕
WATER MAIN	EX-W	

NATURAL FEATURES		
FEATURE DESCRIPTION	EXISTING	PROPOSED
HEDGEROW OR THICKET	⊕	⊕
SHRUBBERY	⊕	⊕
TREE – CONIFEROUS	⊕	⊕
TREE – DECIDUOUS	⊕	⊕
TREE LINE	⊕	⊕
CONTOUR ELEVATION & LABEL	---33---	---33---
ELEVATION	44.70 x	21.96

DRAINAGE FEATURES			
FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
FLARED END SECTION		⊕	(FE)
DRAINAGE MANHOLE	⊕	⊕	(MH)
DRAINAGE INLET	⊕	⊕	(DI)
DIRECTIONAL FLOW ARROW	→	→	
RIPRAP	⊕	⊕	(RR)
DRAINAGE PIPE	====	====	(P)
UNDERDRAIN		→	(UD)
UNDERDRAIN OUTLET		→	(UDO)
SAFETY END SECTION		⊕	(SES)
BIOFILTRATION SWALE		x---BFS---x	
DITCH CENTERLINE	-x-x-x-	-x-x-x-	
DRAINAGE JUNCTION BOX	J.B.	⊕	(JB)
DRAINAGE PIPE HEADWALL	⊕	⊕	

PAVEMENT SECTIONS	
HEAVY DUTY PAVEMENT	⊕
LIGHT DUTY PAVEMENT	⊕
SIDEWALK	⊕
PAVERS	⊕
OVERLAY PAVEMENT	
RECONSTRUCTED PAVEMENT	
DRIVEWAY AND ENTRANCE PAVEMENT	

RIGHT-OF-WAY FEATURES		
FEATURE DESCRIPTION	EXISTING	PROPOSED
EASEMENT	++	++
PROPERTY LINE	---	---
RIGHT-OF-WAY BASELINE	1+00	1+00
RIGHT-OF-WAY LINE	---	---
TAX DITCH RIGHT OF WAY		TAX RW
PERMANENT EASEMENT	PE	PE
TEMPORARY CONSTRUCTION EASEMENT		TCE

SURVEY CONTROL & MONUMENTATION		
FEATURE DESCRIPTION	EXISTING	PROPOSED
SURVEY BENCHMARK LOCATION		BM#2
IRON ROD WITH CAP SET		⊕
CONCRETE MONUMENT		⊕
IRON PIPE FOUND	IPF	
IRON ROD FOUND	IRF	

IDENTIFIERS	
FEATURE DESCRIPTION	ID
ABANDON BY CONTRACTOR	(A) (C)
ABANDON BY OTHERS	(A) (C)
ADJUST BY CONTRACTOR	(A) (C)
ADJUST BY OTHERS	(A) (D)
CONVERT TO JUNCTION BOX	(CJB)
CONVERT TO DRAINAGE MANHOLE	(CMH)
DO NOT DISTURB	(DND)
PEDESTRIAN CONNECTION/TYPE	(PC)
PEDESTRIAN CONNECTION/TYPE WITHOUT DETECTABLE WARNING SYSTEM	(PC-N)
RELOCATE BY CONTRACTOR	(RL) (C)
RELOCATE BY OTHERS	(RL) (D)
REMOVE BY CONTRACTOR	(RM) (C)
REMOVE BY OTHERS	(RM) (D)

MISCELLANEOUS FEATURES		
FEATURE DESCRIPTION	EXISTING	PROPOSED
LIMIT OF DISTURBANCE		LOD
WETLAND BOUNDARY – DELINEATED		

DESCRIPTION	DATE	BY
SCD, RM COMMENTS & OWNER REQUEST	2024-02-28	A

Date: JANUARY 2024  
Scale: NONE  
Dwn By: YGW  
Proj No.: 4361A001

**LEGEND**

Dwg No.: **C-002**

P:\Chemical\381A001-ROUTE 24 CAR WASH\DESIGN\381A001 TITLE SHEET.dwg, Jul 31, 2024, 11:00am stud

CIVIL PLAN GENERAL NOTES

- 1. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND SHALL APPRISE AND COORDINATE DURING ALL PHASES OF CONSTRUCTION:
2. BOUNDARY AND TOPOGRAPHIC SURVEY WAS PERFORMED BY DAVIS, BOWEN & FRIEDEL, INC. ON AUGUST 16, 2023.
3. CONTRACTOR SHALL PROVIDE STAKEOUT NECESSARY FOR THE INSTALLATION OF UTILITIES, STORM DRAINS, PAVING AND ALL OTHER SITE WORK INCLUDED IN THESE PLANS. ALL STAKEOUT WORK IS TO BE PERFORMED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF DELAWARE.
4. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DEVIATION FROM THESE PLANS UNLESS WRITTEN APPROVAL HAS BEEN PROVIDED BY THE ENGINEER.

DRAINAGE, GRADING AND SEDIMENT CONTROL GENERAL NOTES

- 1. ALL STORM DRAIN PIPING, INLET, MANHOLE, AND ENDSECTION INSTALLATION SHALL BE IN ACCORDANCE WITH DELDOT STANDARDS AND SPECIFICATIONS AND STANDARD CONSTRUCTION DETAILS.
2. ALL STORM DRAIN DESIGNATED AS RCP IS TO BE REINFORCED CONCRETE PIPE, MEETING ASTM DESIGNATION: C-76 REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE. FOR PIPE CLASSIFICATION, SEE PIPE SCHEDULE.
3. ALL STORM DRAIN DESIGNATED AS HDPE IS TO BE HIGH DENSITY POLYETHYLENE PIPE. HDPE PIPE SHALL COMPLY WITH AASHTO M252, M294, MFI, AND ASTM 3350. PIPE SHALL BE INSTALLED PER ASTM D2321 AND AS RECOMMENDED BY THE MANUFACTURER. ALL HDPE PIPE SHALL HAVE WATERTIGHT CONNECTIONS.
4. PIPE SPAN LENGTHS ARE MEASURED FROM C/L OF STRUCTURE TO C/L OF STRUCTURE, WHERE APPLICABLE ARE ROUNDED TO THE NEAREST FOOT.
5. ALL SEALS MUST BE WATERTIGHT AND CONCRETE STRUCTURES MUST BE PRECAST OR POURED IN PLACE.
6. CONTRACTOR SHALL GRADE, TOPSOIL, SEED AND MULCH ALL DISTURBED AREAS OF CONSTRUCTION, INCLUDING PIPE INSTALLATION OR DITCH CONSTRUCTION. EROSION CONTROL MATTING SHALL BE PROVIDED ON ALL SLOPES GREATER THAN 3:1.
7. THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL MEASURES TO PROTECT STOCKPILE AREAS AND STORAGE AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE PROJECT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE STAGING AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH RE-ESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
8. EQUIPMENT AND/OR STOCKPILE MATERIAL SHALL NOT BE STORED IN THE DRIPLINE AREA OF ANY TREE.
9. IF THE APPROVED PLAN NEEDS TO BE MODIFIED DUE TO THE SITE CONDITION DURING CONSTRUCTION, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY THE SUSSEX CONSERVATION DISTRICT. ALL COSTS FOR THE ADDITIONAL MEASURES TO INCLUDE FLOCCULANTS SHALL BE AT THE SOLE COST OF THE CONTRACTOR.
10. IF LARGE AMOUNTS OF SEDIMENT HAVE ENTERED INTO THE STORM DRAIN SYSTEM, THE COUNTY ENGINEER, PROJECT ENGINEER OR SUSSEX CONSERVATION DISTRICT MAY REQUIRE THE PIPES BE FLUSHED AND VIDEO INSPECTED. ALL COSTS FOR THE PIPE FLUSHING AND VIDEO INSPECTION SHALL BE AT THE SOLE COST OF THE CONTRACTOR.
11. SEE ADDITIONAL NOTES ON C-401.

POTABLE WATER DISTRIBUTION GENERAL NOTES

- 1. MISS UTILITY OF DELMARVA SHALL BE NOTIFIED THREE (3) CONSECUTIVE WORKING DAYS PRIOR TO EXCAVATION, AT 1-800-282-8555.
2. ALL WATER DISTRIBUTION WORK SHALL COMPLY WITH THE TIDEWATER UTILITIES, INC. WATER MAIN CONSTRUCTION SPECIFICATIONS, LATEST EDITION. CONTRACTOR SHALL OBTAIN A COPY FROM TIDEWATER UTILITIES, INC. PRIOR TO BIDDING ON THE JOB. FAILURE TO OBTAIN A COPY OF THE SPECIFICATIONS SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY. ANY ADDITIONAL COSTS CAUSED BY THE FAILURE TO FOLLOW THE SPECIFICATIONS SHALL BE AT THE SOLE COST OF THE CONTRACTOR.
3. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
4. THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING WATER MAINS TO WHICH NEW CONSTRUCTION WILL CONNECT.
5. WATER LATERALS SHALL HAVE A MINIMUM COVER OF 4.0 FEET FROM PROPOSED GRADE, AS MEASURED FROM THE TOP OF PIPE.
6. THE CONTRACTOR SHALL OPEN ONLY THAT SECTION OF TRENCH OR ACCESS PITS WHICH CAN BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY. TRENCHES MAY NOT BE LEFT OPEN WITHOUT THE APPROVAL OF TIDEWATER UTILITIES, INC.
7. FINAL APPROVED SET OF PLANS AND SPECIFICATIONS SHALL BE MAINTAINED ON THE JOB SITE. FAILURE TO COMPLY WITH THIS PROVISION SHALL BE CONSIDERED CAUSE TO STOP THE WORK.
8. THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF CONTRACT DRAWINGS ON WHICH HE SHALL NOTE, IN RED, THE ALIGNMENTS AND INVERTS OF ALL UNDERGROUND UTILITIES INSTALLED OR ENCOUNTERED DURING THE PROSECUTION OF THE WORK. ALL DISCREPANCIES BETWEEN THE PLAN LOCATIONS AND ELEVATIONS OF BOTH THE EXISTING AND PROPOSED UTILITIES SHALL BE MAINTAINED BY THE CONTRACTOR IN THE FIELD.
9. ROUTINE PERIODIC INSPECTIONS DURING CONSTRUCTION WILL BE PROVIDED BY TIDEWATER UTILITIES, INC. OR DESIGNEE. THESE INSPECTIONS DO NOT RELIEVE THE CONTRACTOR FROM HIS/HER OBLIGATION AND RESPONSIBILITY FOR CONNECTING THE WATER SERVICES IN ACCORDANCE WITH TIDEWATER UTILITY, INC. STANDARDS AND SPECIFICATIONS.
10. DIFFERING SITE CONDITIONS AND/OR DIFFERING MATERIAL PROPERTIES SHALL REQUIRE TIDEWATER UTILITY, INC. OR DESIGNEE APPROVAL OF SPECIAL DESIGN DETAILS PREPARED BY THE DESIGN ENGINEER PRIOR TO INITIATING OR RESUMING CONSTRUCTION ACTIVITIES.
11. THE CONTRACTOR SHALL ALLOW SUFFICIENT TIME FOLLOWING EXCAVATIONS FOR INSPECTION AND EVALUATION OF EXISTING SOIL SUBGRADE CONDITIONS BY TIDEWATER UTILITIES, INC. OR DESIGNEE. TIDEWATER UTILITIES, INC. OR DESIGNEE SHALL INSPECT ALL LATERAL SUBGRADES FOLLOWING EXCAVATION AND PRIOR TO CONSTRUCTION OF NEW WORK TO CONFIRM DESIGN CONDITIONS ARE MET AND SUBGRADE CONDITIONS ARE SUITABLE FOR CONSTRUCTION. IN THE EVENT THE SOIL BEARING CAPACITY IS LESS THAN THE MINIMUM DESIGN VALUE, TIDEWATER UTILITIES, INC. OR DESIGNEE SHALL CAUSE AFFECTED CONSTRUCTION TO CEASE AND SHALL NOTIFY THE DESIGN ENGINEER FOR RE-DESIGN TO ACCOMMODATE THE REDUCED SOIL BEARING CAPACITY.
12. IN THE EVENT THE SUBGRADE CONDITION IS UNSTABLE, DUE TO UNSUITABLE MATERIALS AND/OR GROUNDWATER INFILTRATION/INTRUSION INTO THE SURROUNDING SOILS, AS DETERMINED BY TIDEWATER UTILITIES, INC. OR DESIGNEE, THE CONTRACTOR SHALL AS DIRECTED BY TIDEWATER UTILITIES, INC. OR DESIGNEE, REMOVE THE UNSUITABLE MATERIAL AND FILL WITH SUITABLE APPROVED GRANULAR FILL MATERIAL.
13. CONTRACTOR SHALL EXTEND LATERAL BELOW ANY CONFLICTS OR OBSTRUCTIONS TO PROVIDE REQUIRED CLEARANCES. COST SHALL BE INCLUDED IN THE PRICE OF THE CONTRACT.
14. THROUGHOUT THE PROJECT, WHERE WATER MAINS ARE LOCATED IN, ACROSS OR ADJACENT TO DRAINAGE DITCHES AND SWALES, THE CONTRACTOR SHALL RESTORE DISTURBED AREAS TO THEIR ORIGINAL CONDITION AND VEGETATE AS REQUIRED.
15. ALL PROPOSED WATER MAINS 6" AND LARGER SHALL BE C-909 CL235 PVC. ALL PROPOSED WATER SERVICES SHALL BE 1" SDR-9 POLY PVC TUBING.
16. ALL WATER CONNECTIONS LESS THAN OR EQUAL TO 2" SHALL USE A STAINLESS STEEL SADDLE, CORPORATION STOP AND CURB STOP. ALL CONNECTIONS LARGER THAN 2" SHALL USE A TEE AND GATE VALVE WITH VALVE BOX.
17. ALL GATE VALVES SHALL BE PROVIDED WITH A ROADWAY SCREW-TYPE CAST IRON VALVE BOX.
18. VALVES LARGER THAN 4" SHALL BE ONE OF THE THREE TYPES APPROVED BY TIDEWATER UTILITIES, INC. ALL VALVES SHALL BE OPERABLE BY A 6" VALVE WRENCH.
19. PLACE NEW VALVES NEXT TO TEES, BENDS, ETC., SUPPORT ALL VALVES ON A SOLID 4"x8" CONCRETE MASONRY UNIT.
20. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED AND DISINFECTED IN ACCORDANCE WITH TIDEWATER UTILITIES, INC. STANDARDS AND SPECIFICATIONS BEFORE ACCEPTANCE.
21. ALL PROPOSED WATER MAIN AND SERVICES SHALL BE INSTALLED WITH A TRACER WIRE CONTINUOUSLY ALONG AND DIRECTLY ADHERED TO THE PIPE.
22. THE CONTRACTOR WILL INSTALL THE WATER SERVICE TO THE GROUND MARKER AS SHOWN ON THE STANDARD DETAILS. THE WATER METER AND PIT ASSEMBLY WILL BE PURCHASED BY THE DEVELOPER AND INSTALLED BY TIDEWATER UTILITIES, INC.
23. ALL VALVE CLOSURES AND CUT-INS SHALL BE COORDINATED WITH TIDEWATER UTILITIES, INC. OR DESIGNEE. TIDEWATER CONTRACTOR SHALL COORDINATE ISOLATION OF EXISTING WATER MAINS WITH TIDEWATER UTILITIES, INC. OR DESIGNEE AND NOTIFY RESIDENTS AT LEAST 48 HOURS PRIOR TO CUT-IN.
24. ALL FITTINGS SHALL BE DUCTILE IRON, MECHANICAL JOINT RESTRAINT AND AWWA APPROVED. SEE TIDEWATER UTILITIES, INC. STANDARDS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL FITTINGS SHALL BE THRUST RESTRAINED AS SHOWN ON THE STANDARD DETAILS.
25. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM SEWER MAINS. WATER CROSSING SEWER MAINS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 18" TO OUTSIDE OF PIPES. IF AN 18" CLEARANCE CANNOT BE OBTAINED, CONTRACTOR IS TO CONTACT THE DESIGN ENGINEER TO DETERMINE THE APPROPRIATE INSTALLATION (PER TIDEWATER'S APPROVAL) OF WATER MAIN AT CLEARANCE CONFLICT. WATER MAINS MAY NEED TO BE DEFLECTED TO MEET THE SEPARATION REQUIREMENTS.
26. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO LOCATE PROPERTY LINES, EASEMENTS, AND RIGHT-OF-WAY LINES PRIOR TO CONSTRUCTION AND AVOID CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY AND/OR RIGHTS OF WAYS WHERE SAID CONSTRUCTION IS PROHIBITED. THE CONTRACTOR MAY CONDUCT CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY PROVIDED HE HAS OBTAINED PRIOR WRITTEN PERMISSION FROM THE PROPERTY OWNER AND HAS SUBMITTED A COPY OF SAID WRITTEN PERMISSION TO SUSSEX COUNTY ENGINEERING AND TIDEWATER UTILITIES, INC. ANY DISTURBED AREAS BEYOND THE RIGHT-OF-WAY OR EASEMENT LINES SHALL BE RESTORED IMMEDIATELY TO THEIR ORIGINAL CONDITION. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE COST OF ITEMS BID.

SANITARY SEWER GENERAL NOTES

- 1. CONTRACTOR SHALL PROVIDE STAKEOUT SURVEY NECESSARY FOR THE INSTALLATION OF UTILITY WORK AND APPURTENANCES.
2. SANITARY SEWER CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH SUSSEX COUNTY ENGINEERING STANDARDS AND SPECIFICATIONS AND DETAILS LATEST EDITION.
3. USE ONLY SUITABLE GRANULAR MATERIAL APPROVED BY (TIDEWATER UTILITIES). FOR BACKFILLING TRENCHES.
4. SANITARY SEWER LATERAL SHALL BE 6" PVC SDR-26. SEWER LATERAL SHALL INCLUDE A 6" CLEANOUT, WYE, AND CAP JUST BEHIND THE EDGE OF SIDEWALK.
5. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
6. TOP OF MANHOLE ELEVATIONS ARE TOP OF MANHOLE FRAME AND COVER.
7. PIPE SPAN LENGTHS ARE MEASURED FROM C/L OF STRUCTURE TO C/L OF STRUCTURE, WHERE APPLICABLE ARE ROUNDED TO THE NEAREST FOOT.
8. THE CONTRACTOR SHALL FIELD VERIFY INVERTS AND LOCATION OF EXISTING SANITARY SEWER MAINS OR MANHOLES TO WHICH NEW CONSTRUCTION WILL CONNECT.
9. THE SEWER LATERAL SHALL HAVE A MINIMUM COVER OF 3.0 FEET FROM PROPOSED GRADE, AS MEASURED FROM THE TOP OF PIPE.
10. THE CONTRACTOR SHALL OPEN ONLY THAT SECTION OF TRENCH OR ACCESS PITS WHICH CAN BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY. TRENCHES MAY NOT BE LEFT OPEN WITHOUT PERMISSION FROM (UTILITIES COMPANY).
11. FINAL APPROVED SET OF PLANS AND SPECIFICATIONS SHALL BE MAINTAINED ON THE JOB SITE. FAILURE TO COMPLY WITH THIS PROVISION SHALL BE CONSIDERED CAUSE TO STOP THE WORK.
12. THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF CONTRACT DRAWINGS ON WHICH THE CONTRACTOR SHALL NOTE, IN RED, THE ALIGNMENTS AND INVERTS OF ALL UNDERGROUND UTILITIES INSTALLED OR ENCOUNTERED DURING THE PROSECUTION OF THE WORK. ALL DISCREPANCIES BETWEEN THE PLAN LOCATIONS AND ELEVATIONS OF BOTH THE EXISTING AND PROPOSED UTILITIES SHALL BE SHOWN ON THE AS-BUILT DRAWINGS TO BE MAINTAINED BY THE CONTRACTOR IN THE FIELD.
13. (UTILITIES COMPANY) WILL PROVIDE FULL TIME INSPECTIONS DURING ALL SANITARY SEWER CONSTRUCTION. THESE INSPECTIONS DO NOT RELIEVE THE CONTRACTOR FROM HIS OBLIGATION AND RESPONSIBILITY FOR CONSTRUCTING A SANITARY SEWER SYSTEM IN STRICT ACCORDANCE WITH ARTESIAN WASTEWATER MANAGEMENT, INC. STANDARDS AND SPECIFICATIONS.
14. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO LOCATE PROPERTY LINES, EASEMENTS, AND RIGHT-OF-WAY LINES PRIOR TO CONSTRUCTION AND AVOID CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY AND/OR RIGHTS OF WAYS WHERE SAID CONSTRUCTION IS PROHIBITED. THE CONTRACTOR MAY CONDUCT CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY PROVIDED HE HAS OBTAINED PRIOR WRITTEN PERMISSION FROM THE PROPERTY OWNER AND HAS SUBMITTED A COPY OF SAID WRITTEN PERMISSION TO ARTESIAN AND TIDEWATER UTILITIES, INC. ANY DISTURBED AREAS BEYOND THE RIGHT-OF-WAY OR EASEMENT LINES SHALL BE RESTORED IMMEDIATELY TO THEIR ORIGINAL CONDITION. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE COST OF ITEMS BID.
15. DIFFERING SITE CONDITIONS AND/OR DIFFERING MATERIAL PROPERTIES SHALL REQUIRE ARTESIAN WASTEWATER MANAGEMENT, INC. APPROVAL OF SPECIAL DESIGN DETAILS PREPARED BY THE DESIGN ENGINEER PRIOR TO INITIATING OR RESUMING CONSTRUCTION ACTIVITIES.
16. THE CONTRACTOR SHALL ALLOW SUFFICIENT TIME FOLLOWING EXCAVATIONS FOR INSPECTION AND EVALUATION OF EXISTING SOIL SUBGRADE CONDITIONS. ARTESIAN WASTEWATER MANAGEMENT, INC. SHALL INSPECT ALL SUBGRADES FOLLOWING EXCAVATION AND PRIOR TO CONSTRUCTION OF NEW WORK TO CONFIRM DESIGN CONDITIONS ARE MET AND SUBGRADE CONDITIONS ARE SUITABLE FOR CONSTRUCTION. IN THE EVENT THE SOIL BEARING CAPACITY IS LESS THAN THE MINIMUM DESIGN VALUE, (UTILITIES COMPANY) SHALL CAUSE AFFECTED CONSTRUCTION TO CEASE AND SHALL NOTIFY THE DESIGN ENGINEER FOR RE-DESIGN TO ACCOMMODATE THE REDUCED SOIL BEARING CAPACITY.
17. IN THE EVENT THE SUBGRADE CONDITION IS UNSTABLE, DUE TO UNSUITABLE MATERIALS AND/OR GROUNDWATER INFILTRATION/INTRUSION INTO THE SURROUNDING SOILS, REMOVE THE UNSUITABLE MATERIAL AND FILL WITH SUITABLE APPROVED GRANULAR FILL MATERIAL.
18. SEWER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM WATER MAINS. SEWER CROSSING WATER MAINS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 18" TO OUTSIDE OF PIPES. IF AN 18" CLEARANCE CANNOT BE OBTAINED, A 10 LINEAR FOOT CONCRETE ENCASEMENT SHALL BE USED. WATER MAINS MAY NEED TO BE DEFLECTED TO MEET THE SEPARATION REQUIREMENTS.

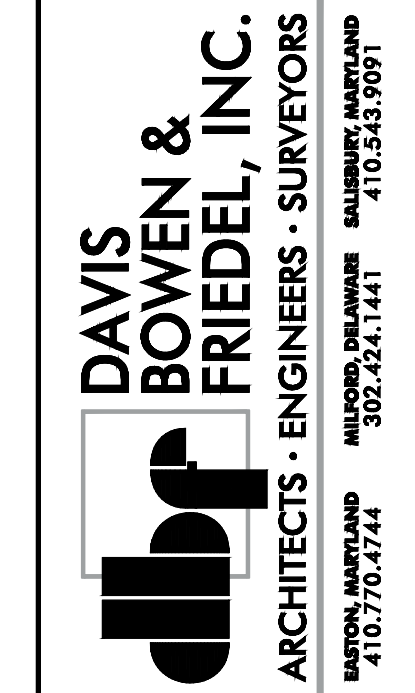
DEMOLITION AND SAFETY GENERAL NOTES

- 1. MISS UTILITY OF DELMARVA SHALL BE NOTIFIED THREE CONSECUTIVE WORKING DAYS PRIOR TO EXCAVATION, AT 1-800-282-8555.
2. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48 HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA.
3. THE CONTRACTOR SHALL REMOVE AND IMMEDIATELY REPLACE, RELOCATE, RESET OR RECONSTRUCT ALL OBSTRUCTIONS IN THE ROAD WAY, INCLUDING, BUT NOT LIMITED TO, MAILBOXES, SIGNS, LANDSCAPING, LIGHTING, PLANTERS, CULVERTS, DRIVEWAYS, PARKING AREAS, CURBS, GUTTERS, FENCES, OR OTHER NATURAL OR MAN-MADE OBSTRUCTIONS. TRAFFIC CONTROL, REGULATORY, WARNING AND INFORMATIONAL SIGNS SHALL REMAIN FUNCTIONAL AND VISIBLE TO THE APPROPRIATE LANES OF TRAFFIC AT ALL TIMES, WITH THEIR RELOCATION KEPT TO A MINIMUM DISTANCE. THE COST SHALL BE INCLUDED IN THE COST OF ITEMS BID.
4. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION.
5. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING THE EXCAVATION FOR STRUCTURES AND UTILITY LINES ON AND OFF SITE MUST BE REMOVED AND PROPERLY DISCARDED. ANY REMEDIAL ACTION REQUIRED IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM. ADDITIONAL COSTS WILL BE NEGOTIATED WITH THE OWNER.
6. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL WORK MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
7. PROPER DISCONNECTION OF EXISTING STRUCTURES FROM COUNTY SEWER SHALL BE COMPLETE AND INSPECTED BY COUNTY PERSONNEL PRIOR TO DEMOLITION OF STRUCTURES OR COMMENCEMENT OF SITE WORK. CONTACT THE SUSSEX COUNTY UTILITY PERMITS SECTION AT 302-855-7719, JAYNE DICKERSON, DIRECTOR, TO OBTAIN DISCONNECT PERMITS FOR THE SEWER CLEANOUTS FOR EACH RESIDENTIAL DWELLING. A DISCONNECT PERMIT WILL BE REQUIRED BEFORE DEMOLITION BEGINS.

POTABLE WATER DISTRIBUTION GENERAL NOTES

- 1. TIDEWATER UTILITIES RESIDENT PROJECT REPRESENTATIVE SHALL BE ON-SITE AT ALL TIMES WHEN THE CONTRACTOR IS INSTALLING AND/OR TESTING THE WATER DISTRIBUTION AND HOUSE SERVICE SYSTEM.
2. THE DEVELOPER SHALL PURCHASE THE METER PIT FROM TIDEWATER UTILITIES AND INSTALL IT IN ACCORDANCE WITH TIDEWATER UTILITIES STANDARDS AND SPECIFICATIONS.
3. ALL WORK MUST BE IN CONFORMANCE WITH TIDEWATER UTILITIES STANDARDS AND SPECIFICATIONS.
4. ALL WORK MUST BE HYDROSTATICALLY TESTED AND THEN DISINFECTED. CONTRACTOR SHALL SUPPLY ALL MATERIALS TO TEST AND DISINFECT THE SYSTEM. CONTRACTOR IS REQUIRED TO OBTAIN A CERTIFICATE TO OPERATED FROM DHSS OFFICE OF DRINKING WATER.
5. ALL AREAS DISTURBED SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. IF ADDITIONAL WORK IS REQUIRED IN THE FUTURE THEN THE AREA SHALL BE STABILIZED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLANS.
6. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM SEWER MAINS. WATER CROSSING SEWER MAINS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 18" TO OUTSIDE OF PIPES. IF AN 18" CLEARANCE CANNOT BE OBTAINED, A 10 LINEAR FOOT CONCRETE ENCASEMENT SHALL BE USED ON THE SEWER MAIN.
7. THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF CONTRACT DRAWINGS ON WHICH HE SHALL NOTE, IN RED, THE ALIGNMENTS AND INVERTS OF ALL UNDERGROUND UTILITIES INSTALLED OR ENCOUNTERED DURING THE PROSECUTION OF THE WORK. ALL DISCREPANCIES BETWEEN THE PLAN LOCATIONS AND ELEVATIONS OF BOTH THE EXISTING AND PROPOSED UTILITIES SHALL BE SHOWN ON THE AS-BUILT DRAWINGS TO BE MAINTAINED BY THE CONTRACTOR IN THE FIELD.
8. PLAN LOCATIONS AND DIMENSIONS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE SPECIFIED BY THE ENGINEER. THE CONTRACTOR SHALL ADJUST WATERLINE LOCATIONS AS REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES.
9. THE DEVELOPER SHALL CONFIRM THE LOCATION OF VALVES BETWEEN PHASES OF THE WATER SYSTEM TO FACILITATE CONSTRUCTION OF FUTURE PHASES OF THE DEVELOPMENT.
10. ALL TIDEWATER UTILITIES, INC. WATER MAINS 6" AND UP SHALL BE C-909 CL235. WATER MAINS 4" SHOULD BE C-900 DR18 PVC.
11. THE OWNER SHALL BE REQUIRED TO PROVIDE A REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY (RPBP) FOR THE DOMESTIC AND FIRE SERVICE LINES. FOR THE DOMESTIC SERVICE, THE RPBP IS TO BE INSTALLED AFTER THE WATER METER AND PRIOR TO THE FIRST BRANCH LINE IN THE PLUMBING SYSTEM. FOR THE FIRE SERVICE, THE RPBP IS TO BE INSTALLED AFTER THE FIRE SERVICE SHUTOFF VALVE AND PRIOR TO THE FIRST BRANCH IN THE PLUMBING SYSTEM. THE RPBP MUST BE ASSE 1013 CERTIFIED AND IT MAY EITHER BE LOCATED INSIDE THE BUILDING OR OUTSIDE IN AN ABOVE GROUND ENCLOSURE.

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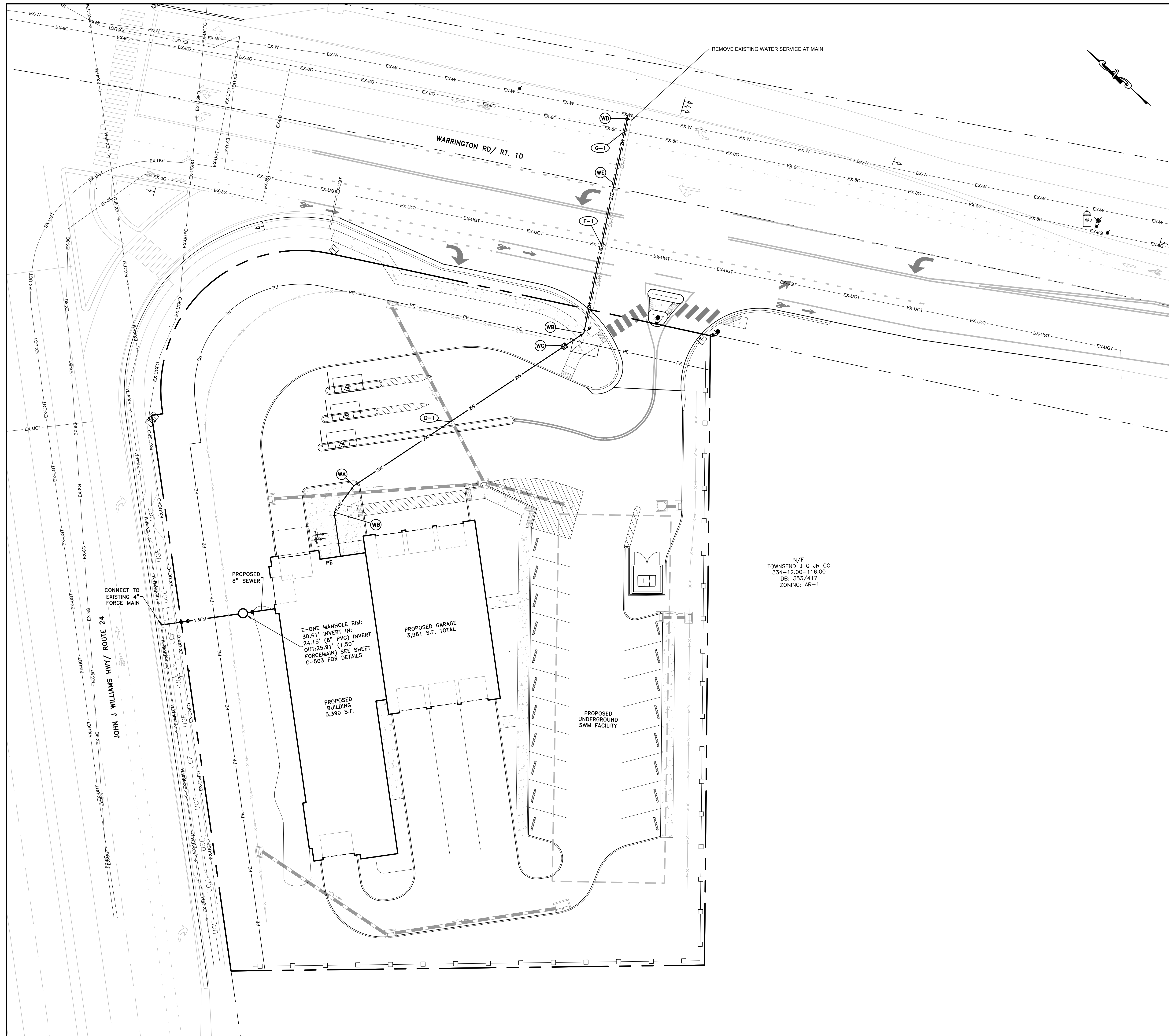
RT 24 WAVES CAR WASH
JOHN J. WILLIAMS HWY. & WARRINGTON RD.
LEWES & REHOBOTH HUNDRED, SUSSEX COUNTY, DE

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Date: JANUARY 2024
Scale: NONE
Dwn By: YGW
Proj No.: 4361A001

NOTES

Dwg No.: C-003



**FIRE PROTECTION NOTES**

- ALL FIRE LANES, AND FIRE HYDRANTS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
- FIRE HYDRANTS, WATER VALVES, TEES, CROSSES, REDUCERS, WATER METERS AND BLOW-OFF SYMBOLS ON THE SITE PLAN ARE FOR GENERAL LOCATIONS. FOR PROPER LOCATION OF INSTALLATION ON THE ABOVE ITEMS, REFER TO DETAIL SHEETS C-503.
- WATER METER LOCATION AND MATERIAL TO BE COORDINATED WITH TIDEWATER UTILITIES, INC.
- WATER PROVIDER: TIDEWATER UTILITIES, INC.
- PROPOSED BUILDING CONSTRUCTION: IBC-V-B AND VFPAN(000)
- INTENDED USE: COMMERCIAL (CAR WASH)
- MAXIMUM HEIGHT OF BUILDING: 3 STORIES; 45 FEET  
PROPOSED HEIGHT OF BUILDING: 1 STORIES; 26 FEET
- SITE WILL BE SERVED BY AN UNDERGROUND CLOSED PIPE NATURAL GAS OR PROPANE SYSTEM.
- ALL BUILDINGS WILL NOT BE PROTECTED BY AUTOMATIC SPRINKLERS IN ACCORDANCE WITH NFPA 14.
- IN THE AREAS USED FOR THE PERIMETER ACCESS AROUND THE BUILDINGS, THERE SHALL BE A MINIMUM OF 15 FEET @ LESS THAN 10% SLOPE.
- LOCK BOX REQUIRED, CONTACT LOCAL FIRE CHIEF FOR ORDERING INFORMATION AND LOCATION OF BOX ON THE BUILDING.
- DURING CONSTRUCTION THE BUILDING SHALL BE ACCESSIBLE TO FIRE DEPARTMENT APPARATUS BY WAY OF ACCESS ROADWAYS WITH ALL WEATHER DRIVING SURFACE OF NOT LESS THAN 20' OF UNOBSTRUCTED WIDTH AND A MIN. OF 13.5' VERTICAL CLEARANCE. DEAD-END FIRE DEPARTMENT ACCESS ROADS IN EXCESS OF 150' LENGTH SHALL BE PROVIDED WITH APPROVED PROVISIONS FOR THE TURNING AROUND OF FIRE DEPARTMENT APPARATUS.

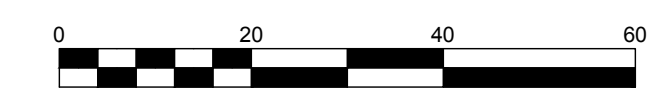
WATER KEY LEGEND	
LABEL	DESCRIPTION
WA	22.5" BEND
WB	45" BEND
WC	WATER METER
WD	PROPOSED WET TAP W/ VALVE
WE	4" PIPE CASING
D-1	WATER/ STORM CROSSING
F-1	WATER/UNDERGROUND TELEPHONE CROSSING
G-1	WATER/ GAS CROSSING

FIRE KEY LEGEND	
LABEL	DESCRIPTION
PE	PRIMARY ENTRANCE TO BUILDING

**LEGEND**

EXISTING HYDRANT

N/F  
TOWNSEND J G JR CO  
334-12.00-116.00  
DB: 353/417  
ZONING: AR-1



**DAVIS BOWEN & FRIEDEL, INC.**  
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**RT 24 WAVES CAR WASH**  
**JOHN J. WILLIAMS HWY. & WARRINGTON RD.**  
**LEWES & REHOBOTH HUNDRED, SUSSEX COUNTY, DE**

DATE	DESCRIPTION
1/2024	SCD, RM COMMENTS & OWNER REQUEST

Date: JANUARY 2024  
Scale: 1"=20'  
Dwn By: YGW  
Proj No.: 4361A001

**UTILITY PLAN**

Dwg No.: **C-501**

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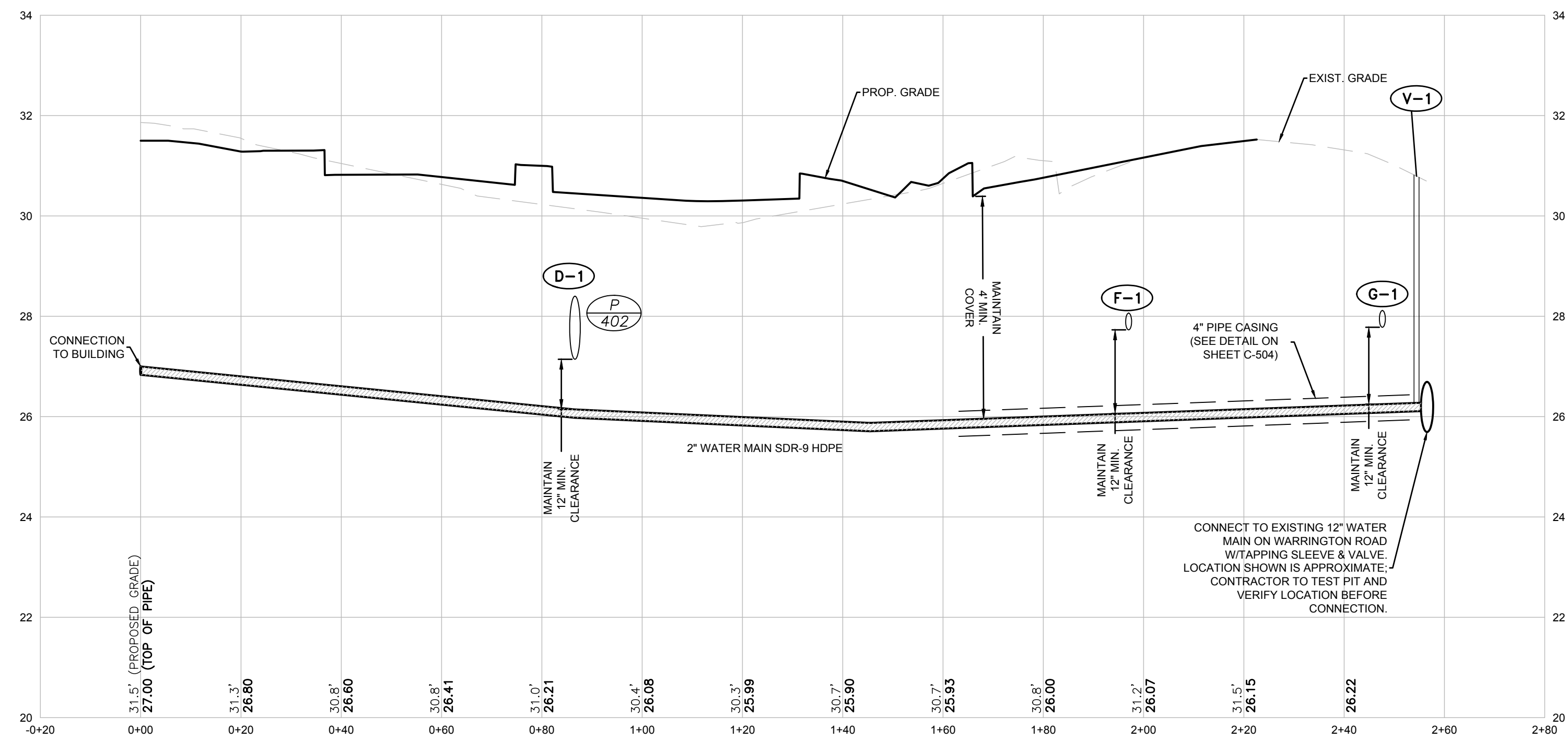
**RT 24 WAVES CAR WASH**  
**JOHN J. WILLIAMS HWY. & WARRINGTON RD.**  
**LEWES & REHOBOTH HUNDRED, SUSSEX COUNTY, DE**

DATE	DESCRIPTION
2024-02-28	SCD, PM COMMENTS & OWNER REQUEST
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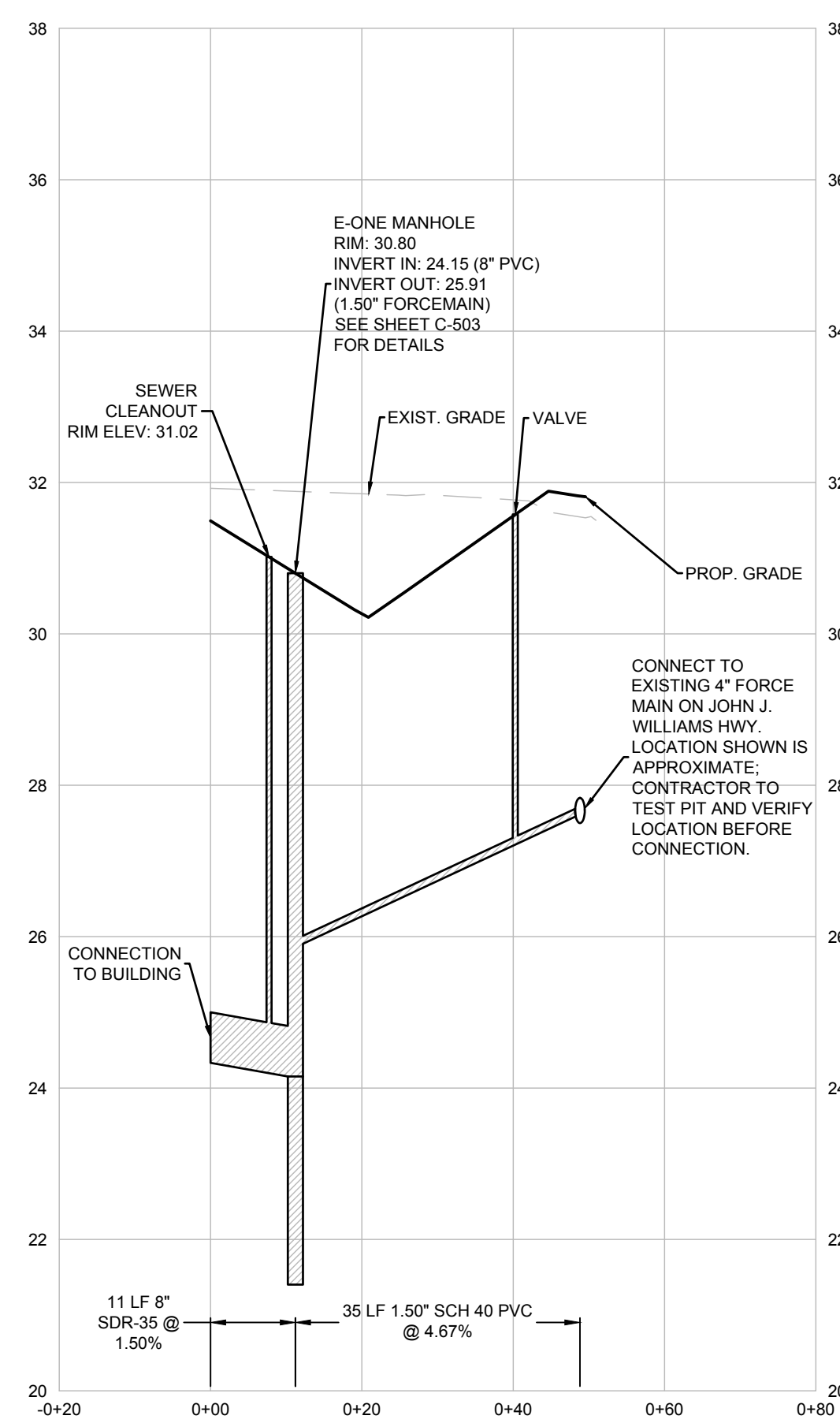
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Dwn By: YGW  
Proj No.: 4361A001

**UTILITY PROFILES**

Dwg No.: **C-502**



**WATER PROFILE**  
SCALE: HORIZ. 1"=20'  
VERT. 1"=2'



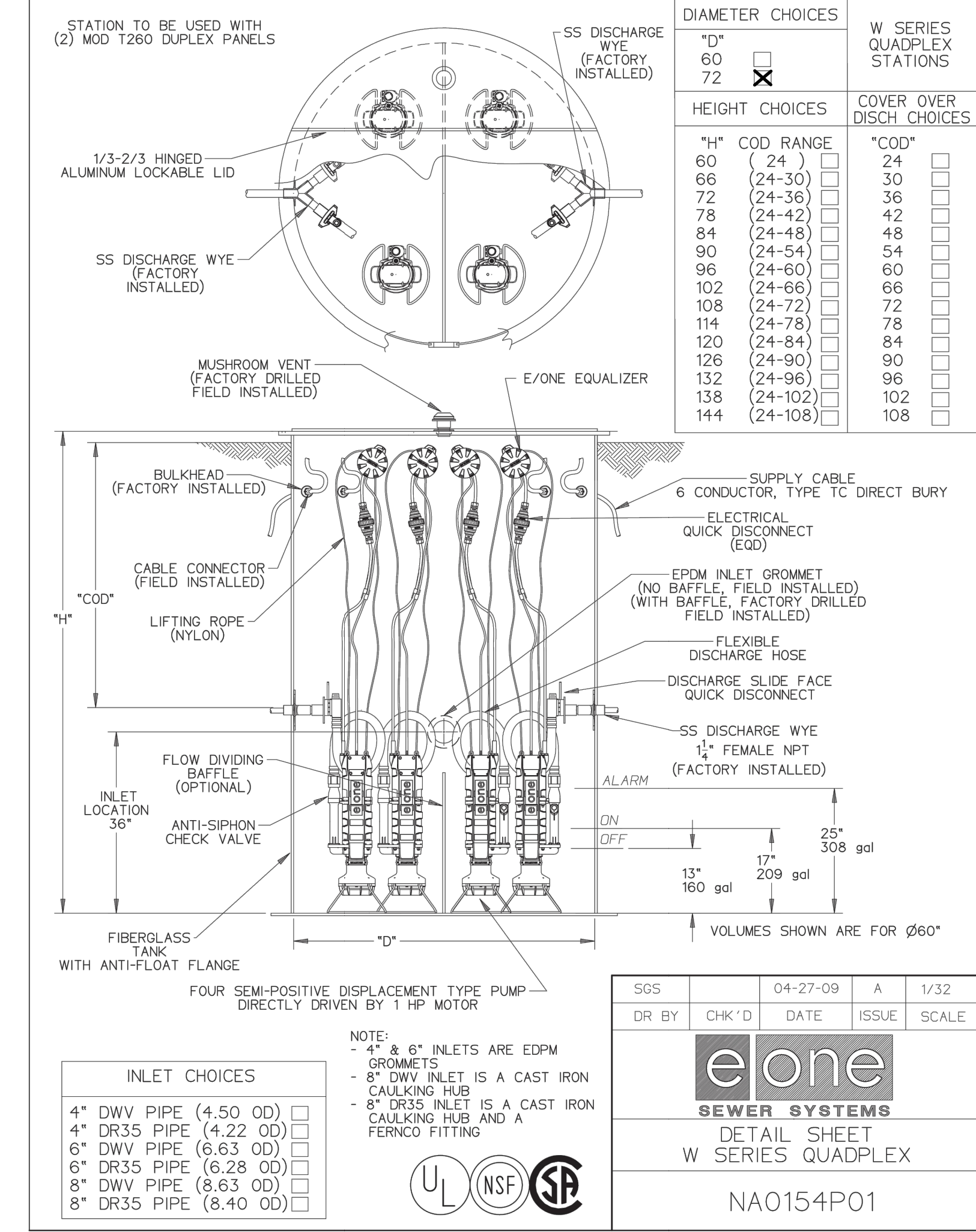
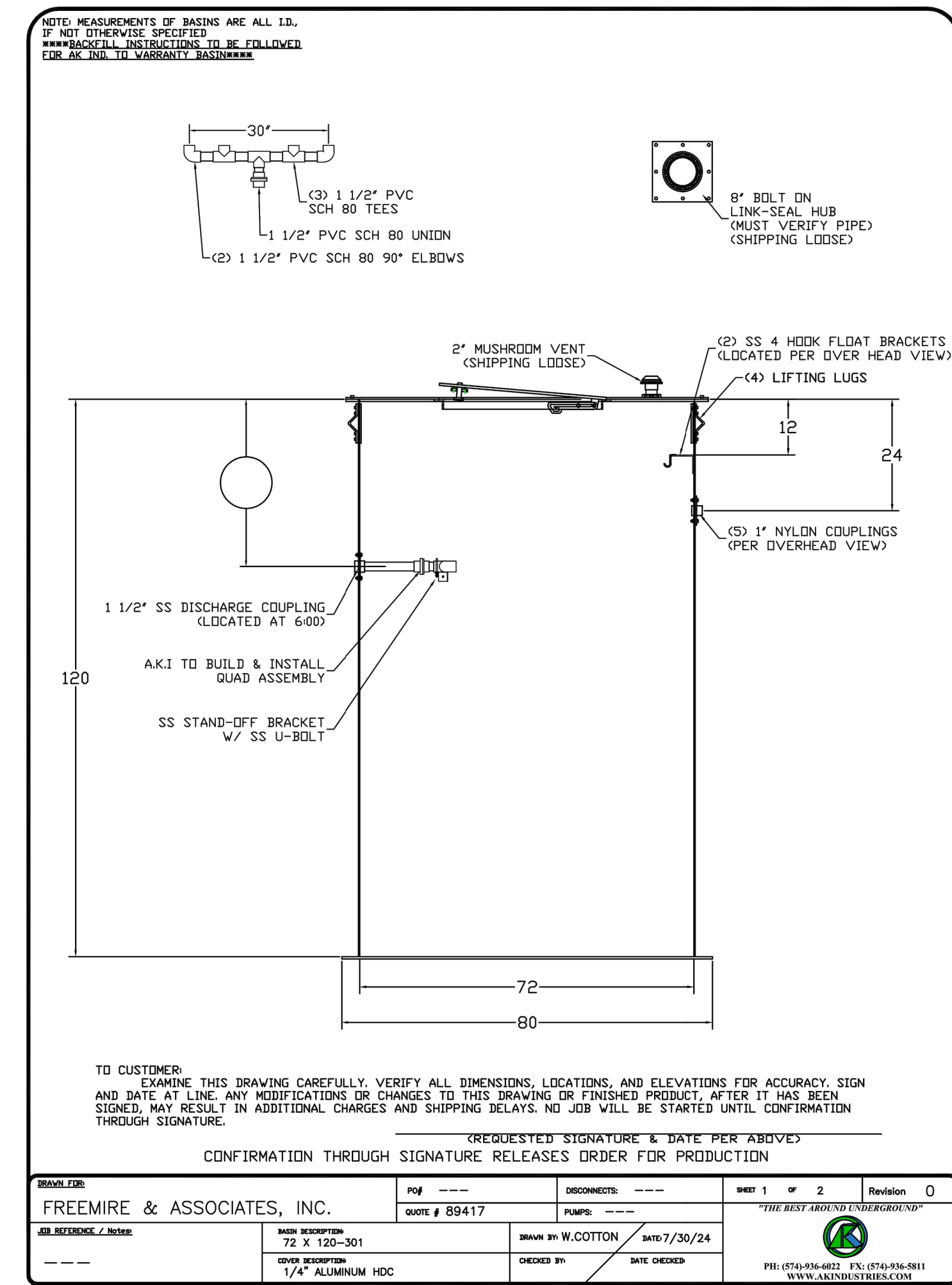
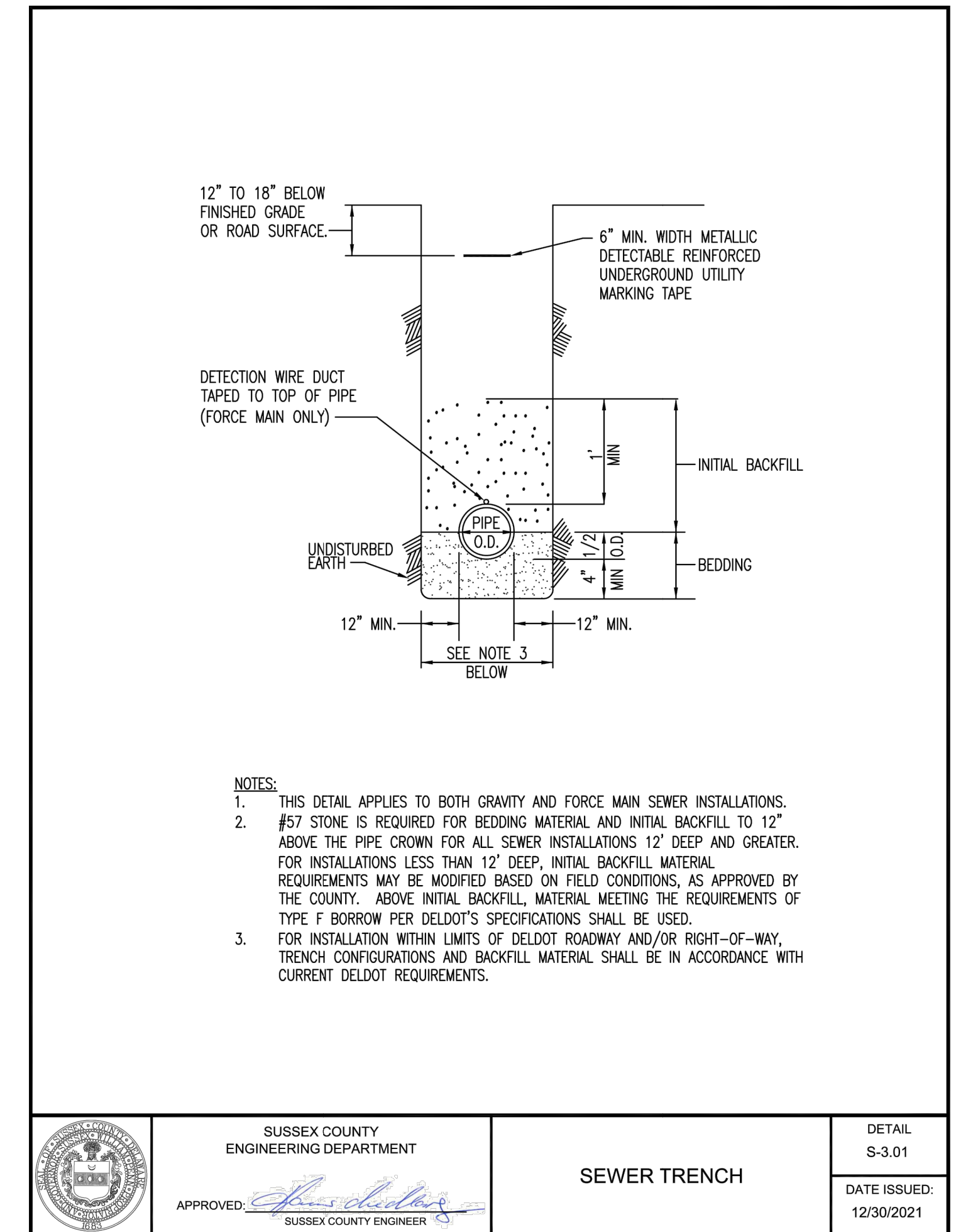
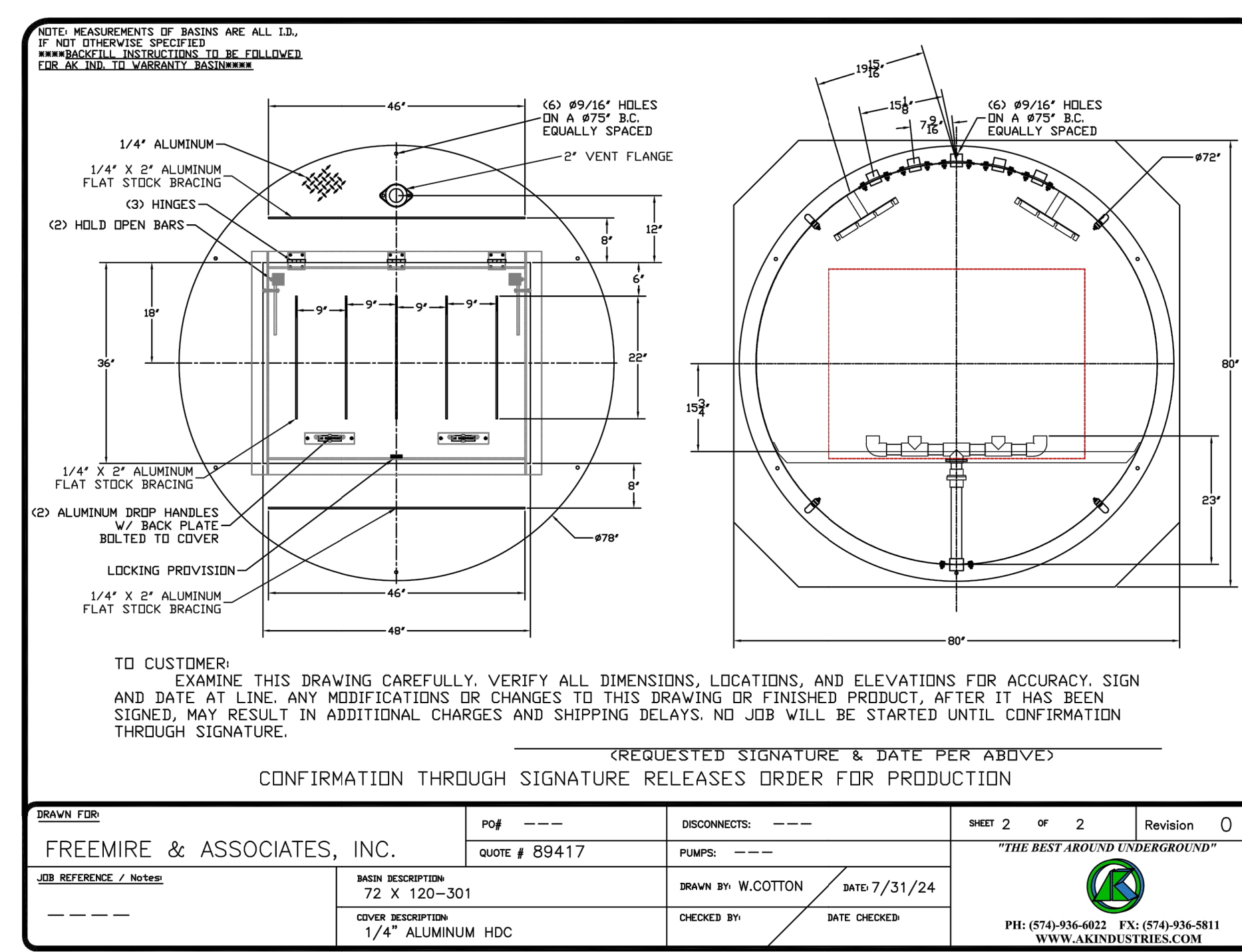
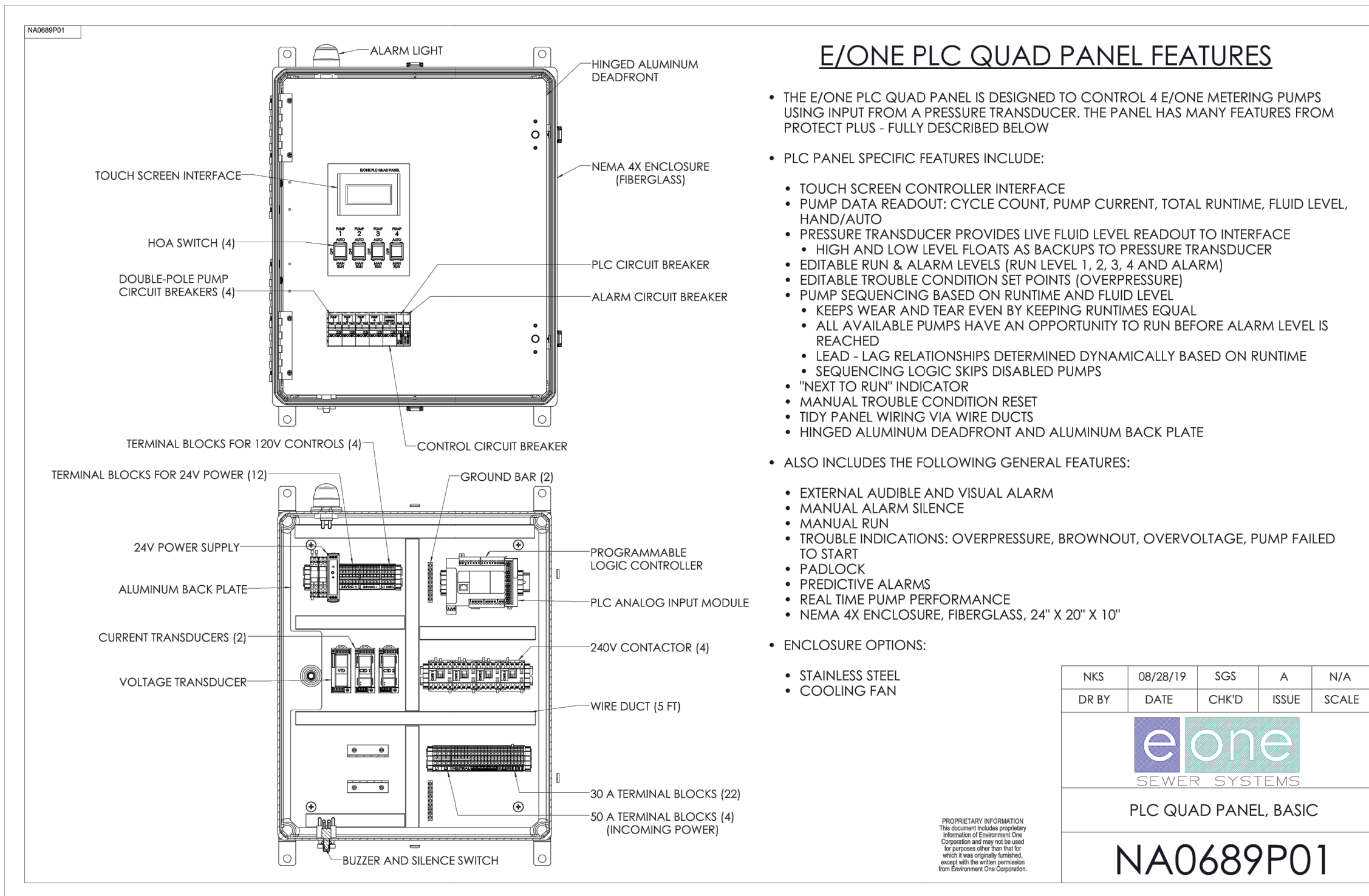
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**SANITARY SEWER PROFILE**

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DATE	DESCRIPTION
2024-02-28	SCD, IPI COMMENTS & OWNER REQUEST

Date: JANUARY 2024  
 Scale: NTS  
 Dwn By: YGW  
 Proj No.: 4361A001

**UTILITY DETAILS**



**TYPICAL DESIGN DETAILS**  
METER PIT DETAIL PLAN  
A-4

Designation	Description	Manufacturer	Service Type	Model Number	Connection
A	FE Tapping, 3/4" x 1" CIS		Single / Double		
B1	Angle Meter Key Valve, 5/8" MN	Ford	Single	1044-1414-NL	1" QDS15 x 5/8" MN
B2	Key Valve Branch Assembly, 5/8" MN	Ford	Double	1048-1414-NL	1" QDS15 x 5/8" MN
B3	Angle Meter Key Valve, 1" MN	Ford	Single	1044-1414-NL	1" QDS15 x 1" MN
C	Meter, 5/8"	Stephens	Single / Double	1-10	1" Meter MN
D	Angle Cascading Dual Check Valve, 1" MN	Ford	Single	1048-1414-NL	1" MN x 1" FIP
D	Angle Cascading Dual Check Valve, 5/8" MN	Ford	Single	1048-1414-NL	5/8" MN x 3/4" FIP
F	Back Flange, 1"		Single / Double	PVC 1048-40	SEW x 10"
F	Jumbo Meter Box	Lightstone	Single / Double	100008	SEW x 10"
G	Jumbo Meter Box Extension	Lightstone	Single / Double	100110	

**TYPICAL DESIGN DETAILS**  
2" OUTSIDE SERVICE CONNECTION DETAIL  
A-5

Designation	Description	Manufacturer	Model Number	Connection
A	SERVICE SHAFT	FORD	7102-889-27	3"00 STD. P.
B	CONCRETE STEP			
C	2" PIPE x 1/2" FLANGE	FORD	10101-1-1001-NL	2" x 1/2"
D	CONCRETE STEP			
E	CONCRETE STEP			
F	CONCRETE STEP			
G	CONCRETE STEP			
H	CONCRETE STEP			
I	CONCRETE STEP			
J	CONCRETE STEP			
K	CONCRETE STEP			

**TYPICAL DESIGN DETAILS**  
2" INSIDE SERVICE CONNECTION DETAIL (OUTSIDE BUILDING)  
A-6

Designation	Description	Manufacturer	Service Type	Model Number	Connection
A	Service Shaft	Ford	Single	7102-889-27	3"00 STD. P.
B	Concretion Stop	Ford	Single	10101-1-1001-NL	2" x 1/2"
C	FE Tapping, 3/4" x 1" CIS		Single		1" QDS15 x 3/4" CIS
D	Curb Stop	Ford	Single	811-777-NL	2" FIP x 2" FIP
E	Coating	Ford	Single	10101-1-1001-NL	2" FIP x 2" QDS15
F	Ground Marker		Single		

**TYPICAL DESIGN DETAILS**  
WET TAPPING SLEEVE & VALVE INSTALLATION  
A-11

MFG	SERIES	DESCRIPTION
MULLER	H-304-S3	STAINLESS STEEL TAPPING SLEEVE, W/FLANGE OUTLET, SIZED FOR WET TAP
MULLER	T-387	TAPPING VALVE, FLANG END W/VAL ACCESSORIES
EDM IRON	3000P	MEG-A-LUG, SOLID FOR WATER MAIN

**TYPICAL DESIGN DETAILS**  
VALVE BOX DETAIL  
A-15

Designation	Description	Manufacturer	Model Number	Connection
A	VALVE BOX	FORD	1044-1414-NL	1" QDS15 x 5/8" MN
B	VALVE BOX COVER	FORD	1048-1414-NL	1" QDS15 x 5/8" MN
C	VALVE BOX ADAPTER	FORD	1044-1414-NL	1" QDS15 x 1" MN

**TYPICAL DESIGN DETAILS**  
ROAD BORING DETAIL  
A-12

Designation	Description	Manufacturer	Model Number	Connection
A	CARRIER PIPE			
B	WELDED STEEL ENGAGEMENT CONDUIT			
C	APVC POLYETHYLENE CASING INSULATOR			
D	FORD SERIES 1380 JOINT RESTRAINT			
E	WELDED STEEL ENGAGEMENT CONDUIT			

**TYPICAL DESIGN DETAILS**  
FLEXIBLE PVC BELL JOINT RESTRAINTS  
A-14

Designation	Description	Manufacturer	Model Number	Connection
A	FLEXIBLE PVC			
B	BELL JOINT RESTRAINT			

DATE	DESCRIPTION
2024-02-28	SCD, RM COMMENTS & OWNER REQUEST

Date: JANUARY 2024  
 Scale: NTS  
 Dwn By: YGW  
 Proj No.: 4361A001

**UTILITY DETAILS**  
 Dwg No.: **C-504**