## SITE IMPROVEMENT PLANS

FOR A PROPOSED MULTI-FAMILY DEVELOPMENT CONSISTING OF 4 DWELLING UNITS

# **GREENWICH BAY TOWNHOUSES**

## **5 WILLIAMS STREET** WARWICK, RHODE ISLAND AP 220, LOT 95

**ZONING DISTRICT: RESIDENCE A-10 DISTRICT (A-10) with (PDR-L) PLANNED RESIDENTIAL-LIMITED OVERLAY** 

### **APPROVALS:**

WARWICK PLANNING BOARD OF REVIEW - MASTER PLAN APPROVAL WITH A CITY COUNCIL ZONE CHANGE RECOMMENDATION (FEBRUARY 8, 2023) WARWICK CITY COUNCIL - PETITION GRANTED FOR A ZONE CHANGE OF THE SUBJECT PARCEL TO RESIDENCE A-10 DISTRICT (A-10) WITH THE PLANNED DISTRICT RESIDENTIAL-LIMITED (PDR-L) OVERLAY

### **FILINGS:**

- WARWICK PLANNING BOARD OF REVIEW PRELIMINARY PLAN
- RHODE ISLAND COASTAL RESOURCE MANAGEMENT COUNCIL (CRMC) CATEGORY 'A' COUNCIL ASSENT  $\bullet$
- RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT STORMWATER CONSTRUCTION AND WATER QUALITY CERTIFICATION APPLICATION  $\bullet$
- KENT COUNTY WATER AUTHORITY
- WARWICK SEWER AUTHORITY  $\bullet$
- WARWICK DEPARTMENT OF PUBLIC WORKS, ENGINEERING DIVISION

	PROJECT TEAM							
<i>OWNER/ APPLICANT:</i>	JMR PROPERTIES, INC. C/O MR. STEPHEN MILLER 40 MALBONE STREET WARWICK, RI 02888 PHONE: 401-641-4455	CIVIL ENGINEER:	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 PHONE: 401-944-1300 FAX: 401-944-1313					
ARCHITECT:	STUDIO 401ARCHITECTURE, LLC 5 DIVISION STREET, UNIT 39 WARWICK, RI 02818 PHONE: 401-884-1546	SURVEYOR:	OCEAN STATE PLANNERS, INC. 1225 OAKLAWN AVENUE CRANSTON, RI 02920 PHONE: 401-463-9696					
		LANDSCAPE ARCHITECT:	DIANE C. SOULE & ASSOCIATES, ASLA 422 FARNUM PIKE SMITHFIELD, RI 02917 PHONE: 401-231-0736					



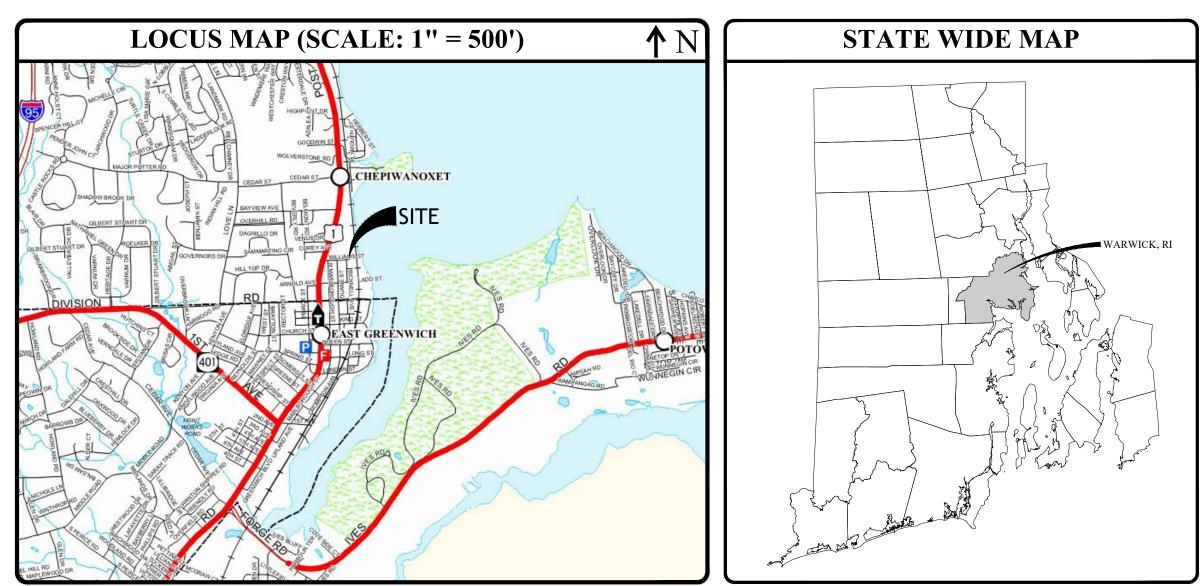
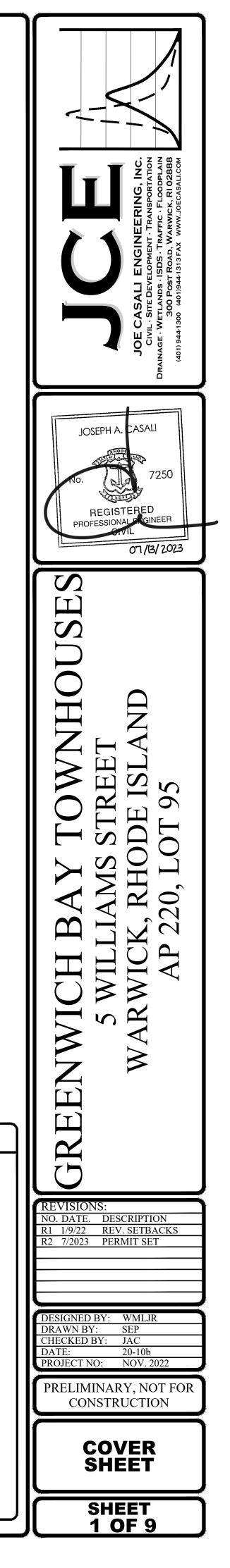


IMAGE COURTESY OF STUDIO 401ARCHITECTURE, LLC

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R1	BOUNDARY STAKE-OUT SURVEY, PREPARED BY OCEAN STATE PLANNERS, DATED FEBRUARY 2022
R2	LANDSCAPE PLAN, PREPARED BY DIANE C. SOULE AND ASSOCIATES, DATED JULY 2023



1.	CLASS I PROPERTY LINE & CLASS III TOPOGRAPHIC SURVEY COMPLETED BY OCEAN STATE PLANNERS, INC. OF 1255 OAKLAWN AVENUE, CRANSTON, RI 02920 IN FEBRUARY 2022.
2.	THE SITE LIES WITHIN FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FIRM MAP FOR THE CITY OF WARWICK, MAP NUMBER 44003C0137H, EFFECTIVE DATE SEPTEMBER 18, 2013.
3.	THE SUBJECT PARCEL IS NOT LOCATED WITHIN A HISTORIC DISTRICT. THERE ARE NO EXISTING STRUCTURES LOCATED ON THE SUBJECT PARCELS LISTED ON THE NATIONAL HISTORIC REGISTER. THERE ARE NO HISTORIC CEMETERIES OR STONE WALLS ON OR IMMEDIATELY ADJACENT TO THE PROPOSED DEVELOPMENT.
4.	THERE ARE NO EASEMENTS WITHIN THE SUBJECT PARCEL.
5.	A PORTION OF THE SITE LIES WITHIN THE 200-FOOT CRMC JURISDICTIONAL BUFFER ASSOCIATED WITH GREENWICH COVE.
6.	EXISTING SOILS ON THE SITE HAVE BEEN CLASSIFIED AS HINCKLEY LOAMY SAND, 8-15 SLOPES (HKC). HKC SOILS ARE CLASSIFIED AS HYDROLOGIC GROUP A AND ARE CONSIDERED FARMLAND OF STATEWIDE IMPORTANCE.
7.	THE SUBJECT PARCEL IS NOT LOCATED WITHIN A NATURAL HERITAGE AREA OR A GROUNDWATER PROTECTION AREA.
8.	PUBLIC WATER, SEWER AND GAS ARE AVAILABLE TO THE PROJECT SITE.
	<u>E NOTES:</u> CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
2.	ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS, AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICAN WITH DISABILITIES ACT AND WITH ALL APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS, WHICHEVER IS MORE STRINGENT.
3.	STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
4.	ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
5.	THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.
6.	THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT "AS-BUILT" DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR.
7.	ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
8.	REFER TO ARCHITECTURAL PLANS, STRUCTURAL PLANS, PLUMBING PLANS AND ELECTRICAL PLANS FOR ACTUAL SIZE OF THE PROPOSED BUILDINGS AND WORK WITHIN 5 FEET OF THE PROPOSED BUILDINGS.
9.	WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
10.	ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER.
11.	THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION, UNLESS OTHERWISE NOTED ON THE SITE PLANS.
12.	THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
13.	ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
14.	WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
15.	IF ENCOUNTERED, ALL LEDGE TO BE REMOVED BY MECHANICAL MEANS.
16.	ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WET POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
17.	ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, AMENDED DECEMBER 2010 (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).
<u>MAI</u> 1.	<b><u>NTENANCE AND PROTECTION OF TRAFFIC NOTES:</u></b> THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION.

- 2. TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
- 3. THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED IN THE CITY RIGHT-OF-WAY.
- 4. ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC, SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.

5. SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

#### **DRAINAGE SYSTEM NOTES:**

**GENERAL NOTES:** 

1. THE PROPOSED DRAINAGE LINES SHALL BE ADS N-12 HDPE PIPE OR AN APPROVED EQUAL UNLESS OTHERWISE NOTED ON THE SITE PLANS.

2. ALL RIM ELEVATIONS SHOWN ARE APPROXIMATE AND ARE TO BE SET FLUSH WITH FINAL GRADES.

- SOIL EROSION AND SEDIMENTATION CONTROL NOTES NATURAL CONDITION.
- IS MAINTAINED.
- GROUND COVER IS ESTABLISHED.

- COMPLETION OF CONSTRUCTION.
- AMENDED 2014.
- MISCELLANEOUS UTILITY NOTES:
- THE CONTRACTOR.
- PROPERLY SAFEGUARD THE PUBLIC FROM THEIR OPERATIONS.

- LOW PRESSURE (IE., HYDROSTATIC) TEST.
- AUTHORITY.
- OF 48-HOURS.
- WARWICK.
- RIGHT-OF-WAY, AS SHOWN ON THE DRAWINGS.

THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN

2. ALL CATCH BASINS SHALL BE PROTECTED WITH SILTSACK SEDIMENT TRAPS DURING CONSTRUCTION ACTIVITIES. ALL PROPOSED STORM WATER DISCHARGE AREAS SHALL BE LINED WITH A RIPRAP SPLASH PAD AND PROTECTED WITH STAKED HAYBALE OUTLET PROTECTION (R.I. STD. 9.1.0), OR STAKED HAYBALE WITH SILT FENCE (R.I. STD. 9.3.0) OUTLET PROTECTION (STAKED HAYBALE OR STAKED HAYBALE WITH SILT FENCE) SHALL ALSO BE INSTALLED AT ALL EXISTING STORMWATER DISCHARGE LOCATIONS WHERE DISTRIBUTING PIPES, CATCH BASINS, AND MANHOLES ARE TO BE CLEANED AND FLUSHED.

3. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STANDING OF VEGETATION

4. ALL SILT FENCE, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED

5. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.

6. THE SILT FENCE/HAYBALES SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY SILT FENCE/HAYBALES AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE HAY-BALES BECOMES FILLED WITH SEDIMENTS.

7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE RESIDENT ENGINEER, TOWN ENGINEER, OR OWNER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE

8. ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", DATED 1993

1. PRIOR TO CONSTRUCTION ALL POTENTIAL UTILITY/DRAINAGE CONFLICTS MUST BE IDENTIFIED BY THE CONTRACTOR. ANY MODIFICATIONS TO THE PROPOSED UTILITIES TO AVOID CONFLICTS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. 2. OVERHEAD ELECTRIC AND TELEPHONE SERVICES ARE TO BE REMOVED BY THE APPROPRIATE UTILITY COMPANY AND COORDINATED BY

3. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE A SUFFICIENT NUMBER OF WORKMEN AND GUARDS AS MAY BE NECESSARY TO

4. THE CONTRACTOR SHALL TAKE PRECAUTIONS AGAINST DAMAGING OF PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES AND SHALL PROMPTLY REPAIR AT THEIR OWN EXPENSE ANY DAMAGE TO SUCH PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES TO THE SATISFACTION OF THE OWNER OR CITY.

5. EXISTING UTILITY FRAMES AND COVERS FOR SANITARY SEWER, WATER, GAS, STORM DRAINAGE AND OTHER UTILITIES SHALL BE ADJUSTED TO GRADE AS REQUIRED IN NEW PAVING AND PAVEMENT OVERLAY AREAS.

6. ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE WARWICK SEWER AUTHORITY REQUIREMENTS.

7. ALL NEW SEWER PIPES AND MANHOLES SHALL BE CLEANED AND TESTED PRIOR TO ACCEPTANCE. GRAVITY SEWER PIPES SHALL BE REQUIRED TO PASS BOTH LOW PRESSURE AIR AND DEFLECTION (IE., MANDREL) TESTING. LOW PRESSURE SEWER PIPING SHALL BE REQUIRED TO PASS A

8. A BACKFLOW PREVENTION DEVICE MUST BE INSTALLED AT EACH SEWER SERVICE BUILDING CONNECTION THAT IS BELOW THE RIM ELEVATION OF THE NEAREST SEWER MANHOLE, AS REQUIRED BY THE INTERNATIONAL PLUMBING CODE AND THE WARWICK SEWER

9. APPLICANT IS REQUIRED TO PROVIDE TWO SETS OF FINAL AS-BUILT PLANS TO WARWICK SEWER AUTHORITY AND ENGINEERING DEPARTMENT UPON COMPLETION OF CONSTRUCTION, PRIOR TO FINAL ACCEPTANCE. AS-BUILT PLANS SHALL INCLUDE FIELD MEASUREMENTS OF ALL INSTALLED PIPE AND APPURTENANCES, INCLUDING LENGTH, SLOPE, MANHOLE RIMS AND INVERTS, AS WELL AS SWING TIES/MEASUREMENTS TO ALL MANHOLES, SEWER STUBS, AND/OR LATERAL SERVICE CONNECTIONS.

10. INSPECTION OF ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY WARWICK SEWER AUTHORITY. APPLICANT SHALL PROVIDE SCHEDULE FOR CONSTRUCTION AS SOON AS POSSIBLE TO ALLOW FOR DEVELOPMENT OF INSPECTION FEE, TO BE PAID BY APPLICANT DIRECTLY TO THE WARWICK SEWER AUTHORITY. UPON PAYMENT OF FEE. COMMENCEMENT OF CONSTRUCTION INSPECTION REQUIRES MINIMUM NOTIFICATION

11. APPLICANT IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM LOCAL, STATE, AND/OR FEDERAL AGENCIES WITH REGULATORY JURISDICTION OVER THE PROPOSED WORK. COPIES OF ALL PERMITS SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO CONSTRUCTION. ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY A DRAIN LAYER LICENSED IN THE STATE OF RHODE ISLAND AND THE CITY OF

12. NO FLOW WILL BE ACCEPTED UNTIL A COMPLETION CERTIFICATE IS ISSUED.

13. THE CONTRACTOR SHALL CONFINE HIS CONSTRUCTION OPERATIONS AND ACTIVITIES TO WITHIN THE STREET LINES, EASEMENT AND/OR

15. PRIOR TO CONSTRUCTION OF THE RELOCATION OF ALL WATER MAINS, THE CONTRACTOR SHALL COORDINATE WITH PROVIDENCE WATER SUPPLY BOARD FOR INSPECTION AND CHLORINATION OF NEW PIPING, FITTINGS AND VALVES.

BMP MAINTENANCE SCHEDULE:

1. ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:

A. MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS TO INCLUDE INSPECTION, CLEANING AND REPAIRS ALL PIPES, INTAKE AND DISCHARGE STRUCTURES, CATCH BASIN SUMPS, AND MANHOLES.

B. INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES, AND MAINTENANCE OF THESE STRUCTURES IF NECESSARY. INSPECTIONS SHALL BE PERFORMED FOLLOWING ALL RAIN EVENTS OF 1/2 INCH RAINFALL OR MORE IN A 24-HOUR PERIOD, OR BI-MONTHLY IF NO RAINFALL EVENT OCCURS.

- UPON COMPLETION OF THE PROJECT CONSTRUCTION, AND PRIOR TO VACATING THE SITE, THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION AND CLEANING OF THE DRAINAGE SYSTEM AND ALL ASSOCIATED STRUCTURES.
- ALL INSTALLATION, CLEANING, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL FOLLOW AT LEAST THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION MINIMUM STANDARDS, SECTION 212 AND SECTION 708. WHERE APPROPRIATE, PROCEDURES REGARDING THE DRAINAGE INSTALLATION, CLEANING, INSPECTION, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL BE FOLLOWED AS OUTLINED IN THE "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" (RIDEM/RICRMC, 2010).
- AFTER CONSTRUCTION, STORMWATER BMPS SHALL BE INSPECTED AND MAINTAINED BY THE CONDOMINIUM ASSOCIATION AS FOLLOWS:

ROOF DRAIN LEADERS • PERFORM ROUTINE ROOF INSPECTIONS QUARTERLY.

- KEEP ROOFS CLEAN AND FREE OF DEBRIS.
- KEEP ROOF DRAINAGE SYSTEMS CLEAR.

UNDERGROUND INFILTRATION SYSTEM

- INFILTRATION SYSTEMS SHALL BE INSPECTED ON A BI-ANNUAL BASIS TO ENSURE PROPER FUNCTIONS. INSPECTION PORTS SHALL BE USED TO VERIFY THAT THE SYSTEMS ARE DRAINING WITHIN 72 HOURS. IF THE SYSTEM FAILS TO DRAIN WITHIN 72-HOURS, THE SYSTEM SHALL BE CLEANED OR REPLACED AS NECESSARY.
- THE INFILTRATION SYSTEM SHALL BE INSPECTED BI-ANNUALLY FOR SEDIMENT ACCUMULATIONS.. IF THE SYSTEM HAS ACCUMULATED 3 INCHES OF SEDIMENT, THE SEDIMENT SHALL BE REMOVED BY FLUSHING FROM THE SYSTEM WITH HIGH PRESSURE WATER JETS AND AND VACUUMING THE SEDIMENT AND DEBRIS THROUGH THE ACCESS PORTS. ALL SEDIMENT REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL STATE AND FEDERAL REGULATIONS.

**BIORETENTION BASIN:** 

- DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE INFILTRATION BASIN SHALL BE INSPECTED AFTER THE FIRST TWO RAINFALL EVENTS OF AT LEAST 1.0 INCH TO ENSURE THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER INSPECTIONS SHALL BE CONSTRUCTED ON AN ANNUAL BASIS AND AFTER STORM EVENTS GREATER THAN OR EQUAL TO 2 INCHES.
- SURFACE OF THE INFILTRATION BASIN FOR MORE THAN 48 HOURS.
- SOIL ERIOSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
- THE OUTLET DEVICES SHALL BE CLEANED/REPAIRED WHEN NECESSARY.
- TRASH AND DEBRIS SHALL BE REMOVED WHEN NECESSARY. THE OUTLET CONTROL STRUCTURE SHALL BE INSPECTED ANNUALLY TO ENSURE THAT IT IS FUNCTIONING PROPERLY.

ALL REMOVED SEDIMENT IS TO BE TESTED TO DETERMINE POLLUTANT CONTENT. SEDIMENT IS TO BE PROPERLY DISPOSED OF BASED UPON THE TEST RESULTS AND LOCAL, STATE, AND FEDERAL REGULATIONS.

LOAMING & SEEDING

SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA), AND SHALL ALSO CONFORM TO THE FOLLOWING:

- AFTER ROUGH GRADING IS COMPLETED, ALL DISTURBED AREAS AND AREAS LABELED AS 'LOAM AND SEED' ARE TO BE BROUGHT TO AN ELEVATION OF 6" BELOW THE PROPOSED FINISHED GRADE. SCARIFY THE SUBGRADE TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE OR A POWER RAKE TO RESULT IN AN UNCOMPACTED SUBSOIL. 6" OF GOOD QUALITY TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE.
- THE TOPSOIL IS TO BE GOOD QUALITY LOAM, FERTILE AND FREE OF WEEDS, STICKS AND STONES OVER 3/4" IN SIZE AND OTHERWISE COMPLYING WITH SECTION M.18.01 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA),
- PRIOR TO SEEDING OR SODDING, FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 1-2" OF THE PLANTING SOIL. APPLY AT A RATE OF 8 LBS. PER 1000 SQUARE FEET.
- 4. APPLY LIME AT A RATE OF ONE TON PER ACRE AND UNIFORMLY INCORPORATE INTO THE TOP 1-2" OF TOPSOIL.
- SEEDING AFTER THE SEED BED IS PREPARED, SEED IS TO BE BROADCAST EVENLY OVER THE SURFACE AND WORKED INTO THE TOP 1" OF SOIL. SEED SHALL BE APPROVED URI #2 OR APPROVED EQUAL. APPLY AT A RATE OF 4-5 LBS. PER 1000 SQUARE FEET OR AS OTHERWISE DIRECTED BY THE MANUFACTURER.

URI #2 IMPROVED SEED MIX, % BY WEIGHT:

40% CREEPING RED FESCUE 20% IMPROVED PERENNIAL RYEGRASS 20% IMPROVED KENTUCKY BLUEGRASS 20% KENTUCKY BLUEGRASS

RECOMMENDED SEEDING DATES ARE APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 15. AT THE CONTRACTORS DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

SEQUENCE & STAGING OF PROPOSED CONSTRUCTION ACTIVITIES: THIS IS A GENERAL SEQUENCE AND STAGING OF CONSTRUCTION ACTIVITIES. A DETAILED SEQUENCE WITH TIME LINES SHALL BE ESTABLISHED BY THE CONTRACTOR IN COORDINATION WITH THE OWNER, ENGINEER AND SITE CONTRACTORS PRIOR TO THE START OF CONSTRUCTION.

- 1. SURVEY AND STAKE THE PROPOSED DRAINAGE BMP'S (UNDERGROUND INFILTRATION CHAMBER SYSTEMS), PARKING LOTS, WATER LINE, SEWER LINE AND LIMIT OF DISTURBANCE.
- 2. PLACE SEDIMENTATION BARRIERS (SILT FENCE) AS SHOWN ON THE PLANS AND AS STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.
- 3. BEGIN SITE WORK (CLEARING AND GRUBBING, EXCAVATING AND GRADING ETC.) TOPSOIL IS TO STRIPPED AND STOCKPILED WITHIN DISTURBANCE LIMITS. THE STOCKPILES ARE TO BE PROTECTED BY A ROW OF SEDIMENTATION BARRIERS. STOCKPILES TO BE COVERED OR TEMPORARILY SEEDED.
- 4. EXCAVATE AND CONSTRUCT STORMWATER MANAGEMENT AREAS AS SHOWN ON PLAN. DIVERT ALL THE RUNOFF FROM DISTURBED AREAS TO THE PROPOSED STORMWATER STORAGE AREA.
- 5. INSTALL UTILITIES AND DRAINAGE INCLUDING DRAINAGE PIPE. SEED ALL DISTURBED AREAS.
- 6. BEGIN BUILDING CONSTRUCTION.
- 7. BEGIN PAVEMENT AND PROPOSED GRADING.
- FINISH PAVEMENT CONSTRUCTION.
- 9. MAINTAIN SEDIMENT AND EROSIONS CONTROLS WHILE BUILDING ARE CONSTRUCTED.
- 10. FINISH LANDSCAPING AND PERMANENT STABILIZATION.
- 11. INSPECT AND REPAIR ALL DRAINAGE STRUCTURES INCLUDING DISCHARGE POINTS. REMOVE ANY DEBRIS (LEAVES, TREE LIMBS, BOULDERS, ETC.) FROM DRAINAGE INLETS AND OUTLETS. FLUSH ALL SEDIMENTS FROM DRAINAGE PIPES AND APPLY TOPSOIL TO PONDS.
- 12. REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE VEGETATION HAS BEEN ESTABLISHED TO ALL DISTURBED AREAS.

LEGEND

\_\_\_\_D \_\_\_\_

------ TEL ------ EXISTING TELECOM DUCTBANK

E EXISTING ELECTRIC DUCTBANK

— LOD — LIMIT OF DISTURBANCE

— GAS — EXISTING GAS LINE

— GAS — PROPOSED GAS LINE -------W------- EXISTING WATER LINE

TREELINE

------S ------- PROPOSED SEWER LINE

— — — BUILDING SETBACK LINE

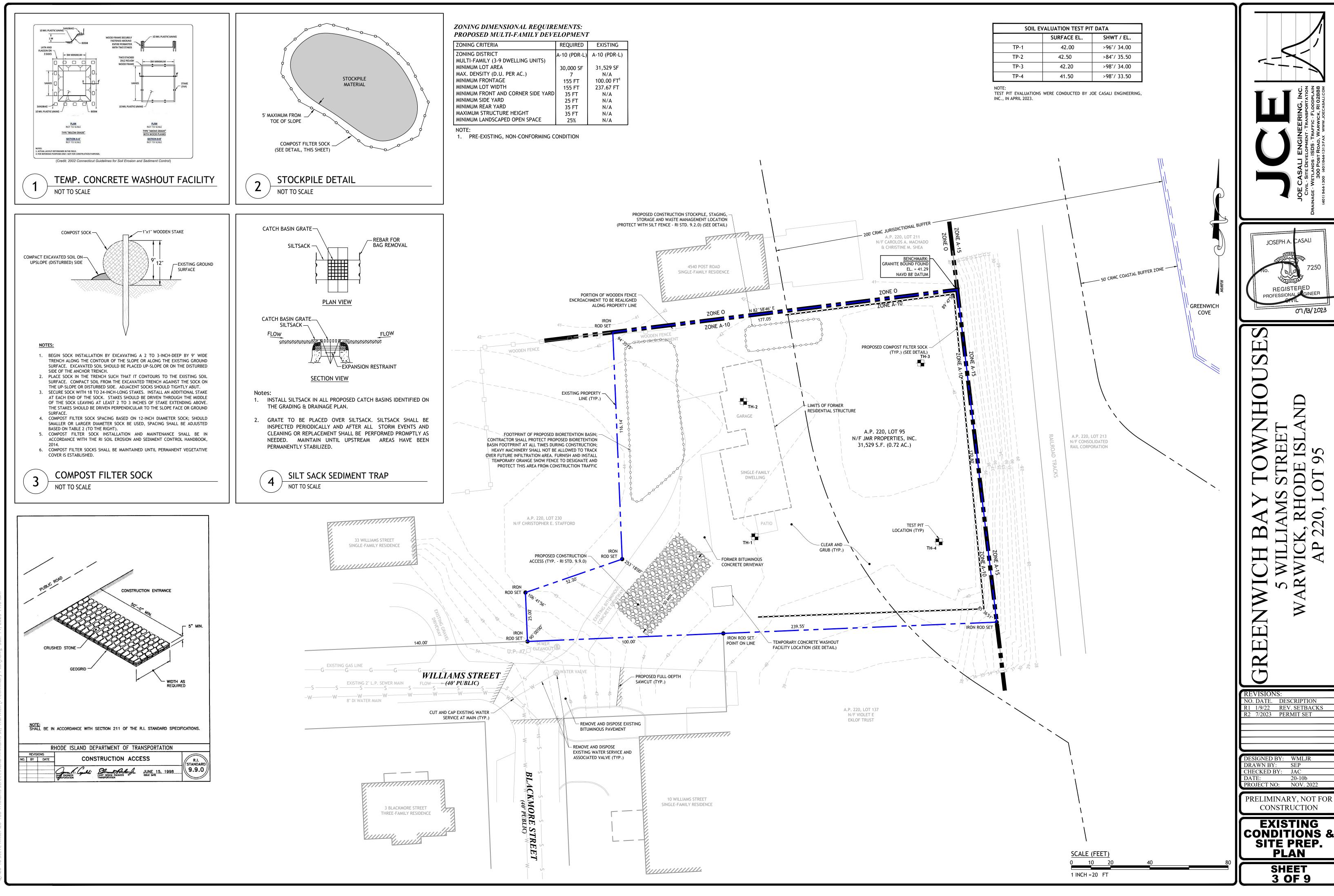
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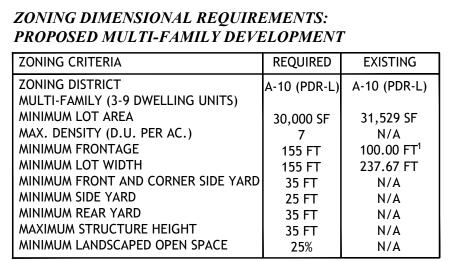
COCOCOC EXISTING STONE WALL

------D ------- PROPOSED DRAIN LINE

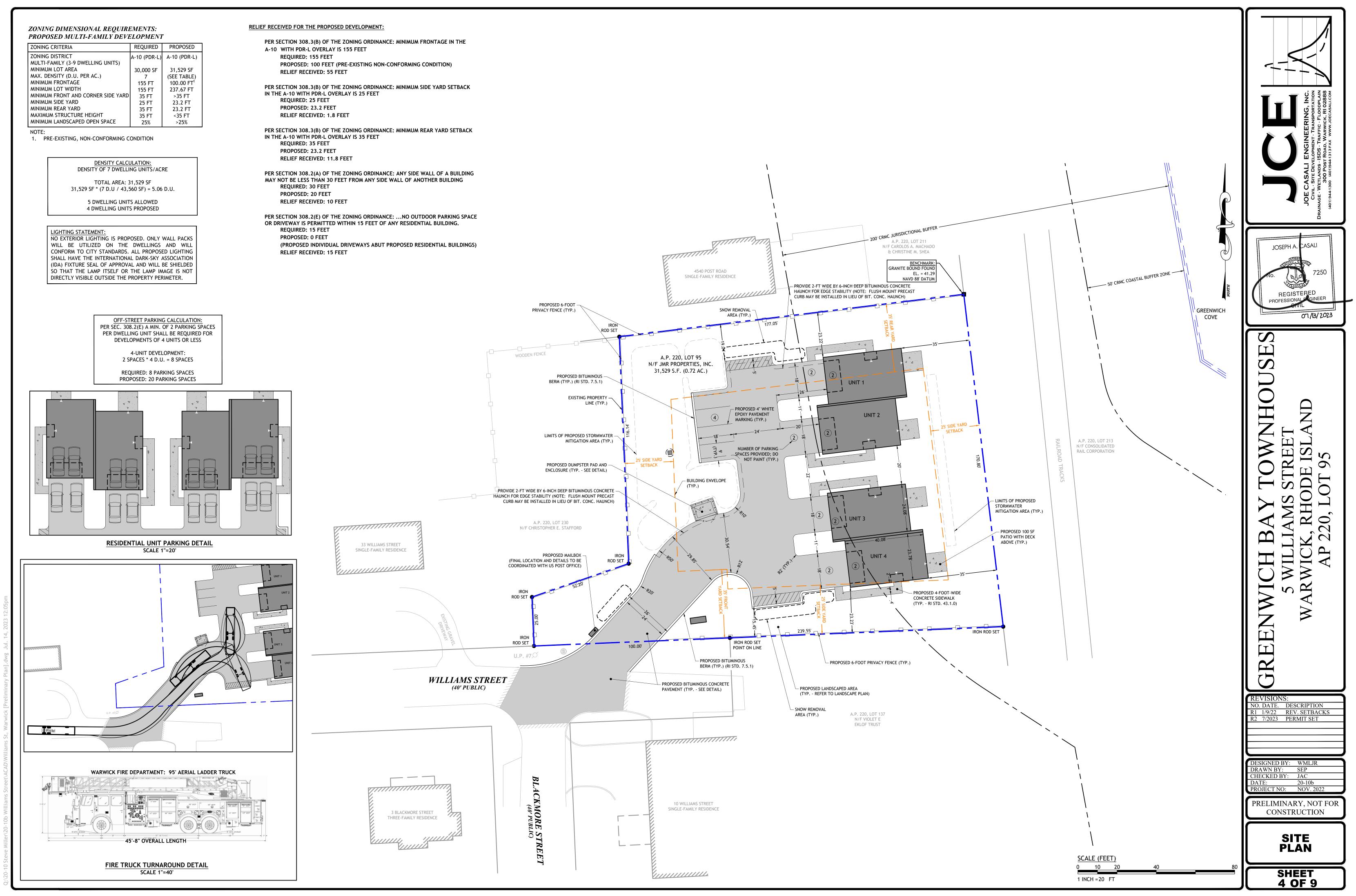
• SILT AND SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN THE ACCUMULATION EXCEEDS SIX INCHES, OR WHEN WATER PONDS ON THE

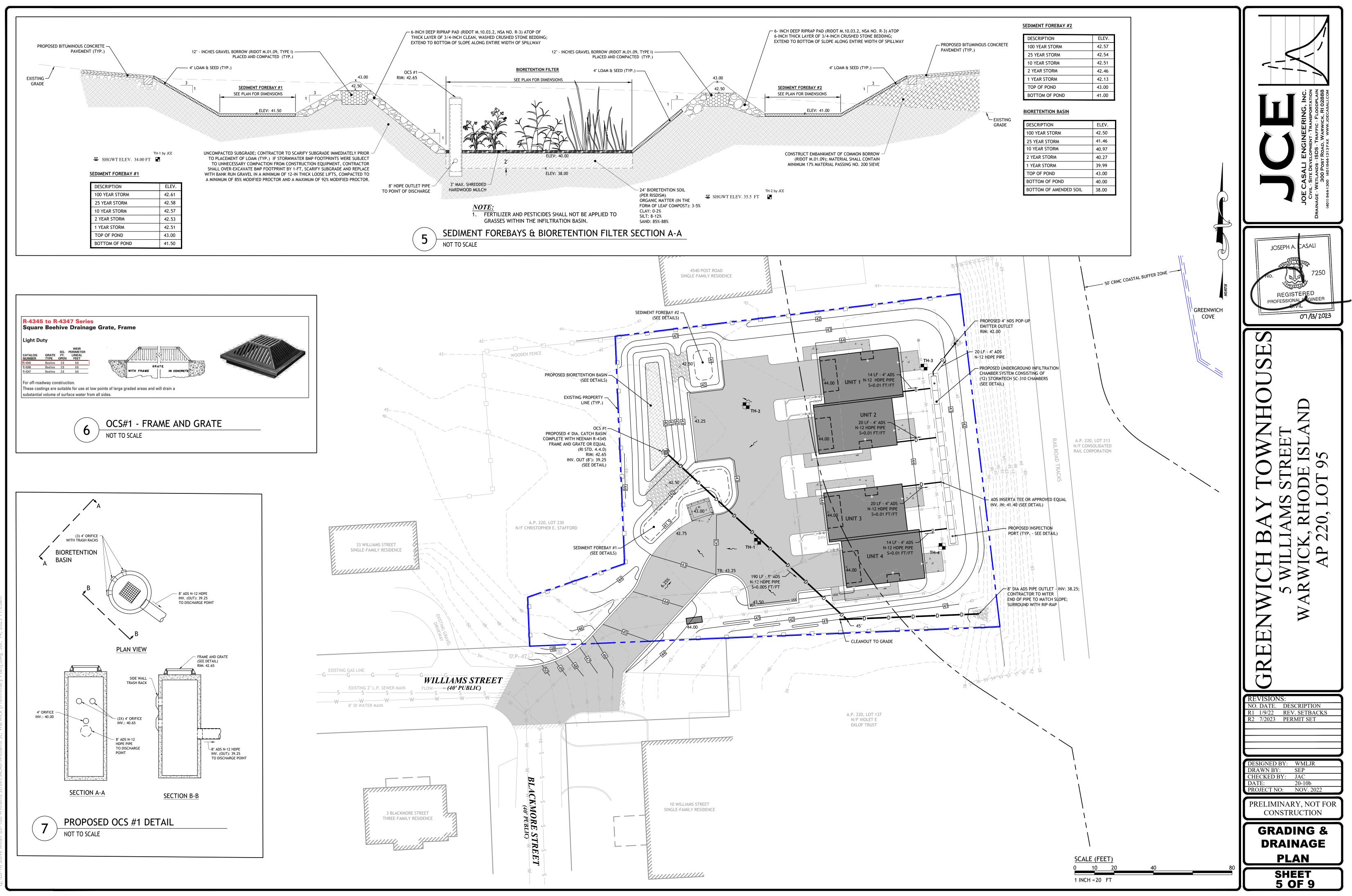
BUTTINESSENCE LINE     BUTTINESSENCE     BU	ABUTTING PROPERTY LINE BUILDING SETBACK LINE EXISTING CONTOUR PROPOSED CONTOUR EXISTING STONE WALL EXISTING STONE WALL EXISTING CURB PROPOSED CURB EXISTING GUARD RAIL EXISTING DRAIN LINE D PROPOSED DRAIN LINE D PROPOSED DRAINAGE MANHOLE D PROPOSED DRAINAGE MANHOLE D PROPOSED DRAINAGE MANHOLE D PROPOSED CATCH BASIN D EXISTING CATCH BASIN D EXISTING UTILITY POLE D PROPOSED UTILITY POLE D PROPOSED UTILITY POLE D EXISTING TELECOM DUCTBANK E EXISTING ELECTRIC DUCTBANK E RELOCATED ELECTRIC DUCTBANK GAS EXISTING GAS LINE W EXISTING WATER LINE W PROPOSED WATER LINE EXISTING WATER SHUT OFF VALVE	ELOPMEL FELOPMEL ST ROAD, 44-1313FA
A 220, LOT 95 A 220, LOT 95	S EXISTING SEWER LINE S PROPOSED SEWER LINE S PROPOSED SEWER MANHOLE N/F PROPOSED SEWER MANHOLE N/F NOW OR FORMERLY TREELINE S COMPOST SOCK LOD LIMIT OF DISTURBANCE	No. REGISTERED PROFESSIONAL FRIGINEER
DESIGNED BY: WILL S MILLIAMS STREET		071/13/2023
NO. DATE. DESCRIPTION R1 1/9/22 REV. SETBACKS R2 7/2023 PERMIT SET DESIGNED BY: WMLJR DRAWN BY: SEP CHECKED BY: JAC DATE: 20-10b PROJECT NO: NOV. 2022 PRELIMINARY, NOT FOR CONSTRUCTION GENERAL NOTES & LEGEND SHEET		GREENWICH BAY TOWNHOU 5 WILLIAMS STREET WARWICK, RHODE ISLAND AP 220, LOT 95
DESIGNED BY: WMLJR DRAWN BY: SEP CHECKED BY: JAC DATE: 20-10b PROJECT NO: NOV. 2022 PRELIMINARY, NOT FOR CONSTRUCTION <b>GENERAL NOTES &amp;</b> <b>LEGEND</b> SHEET		NO. DATE.DESCRIPTIONR11/9/22REV. SETBACKS
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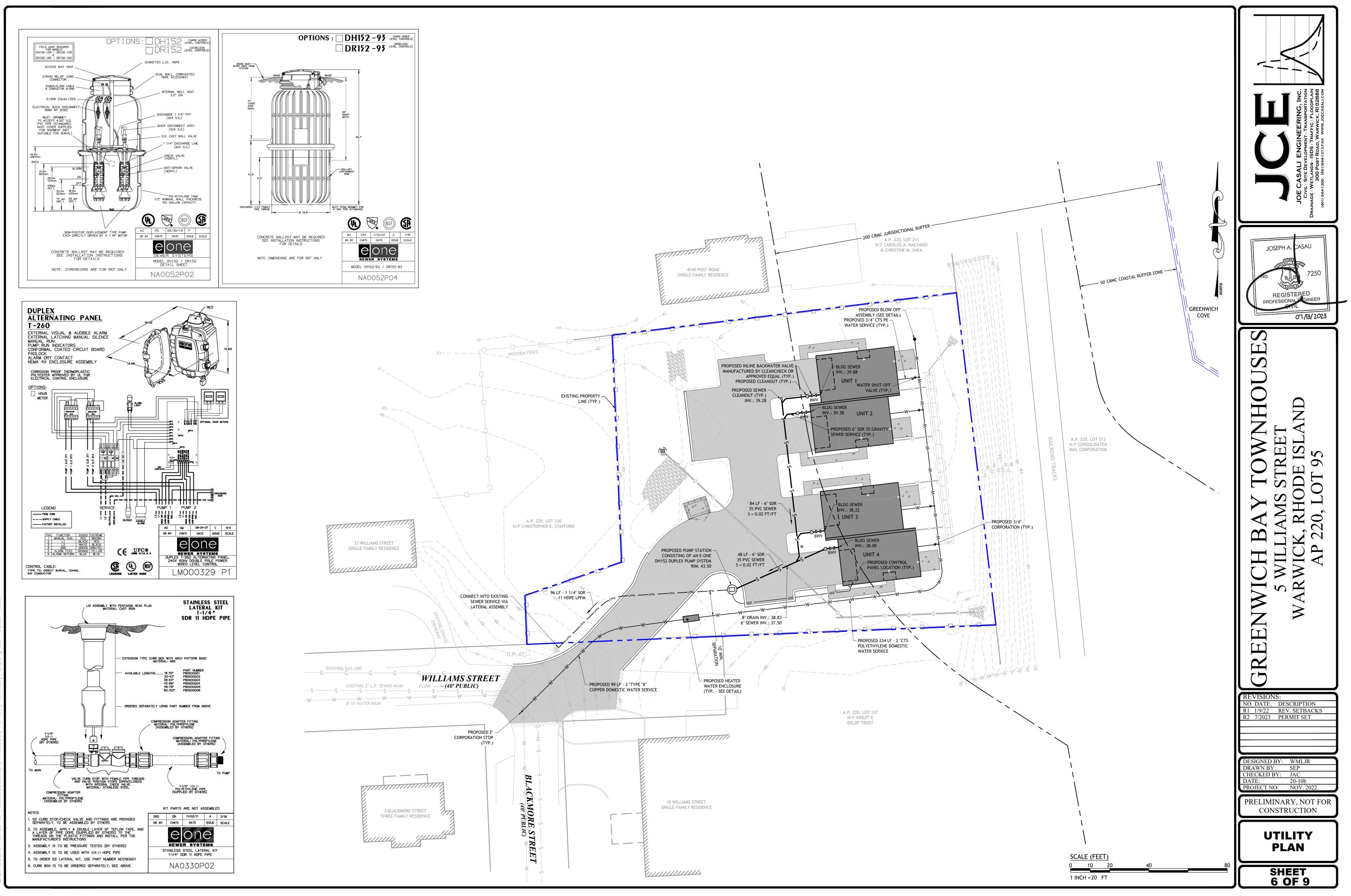




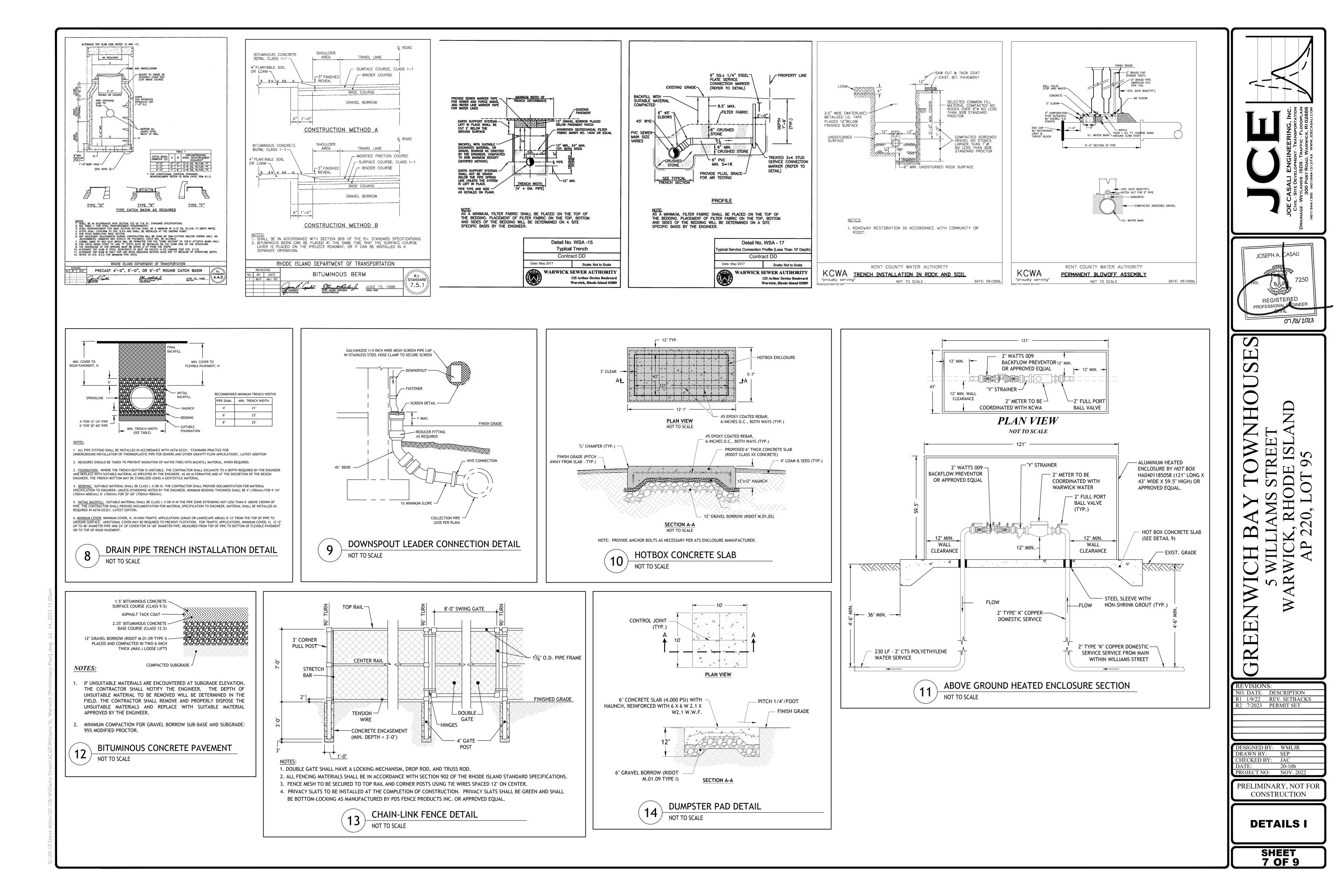
SOIL EV	ALUATION TEST PIT	T DATA
	SURFACE EL.	SHWT / EL.
TP-1	42.00	>96"/ 34.00
TP-2	42.50	>84"/ 35.50
TP-3	42.20	>98"/ 34.00
TP-4	41.50	>98"/ 33.50

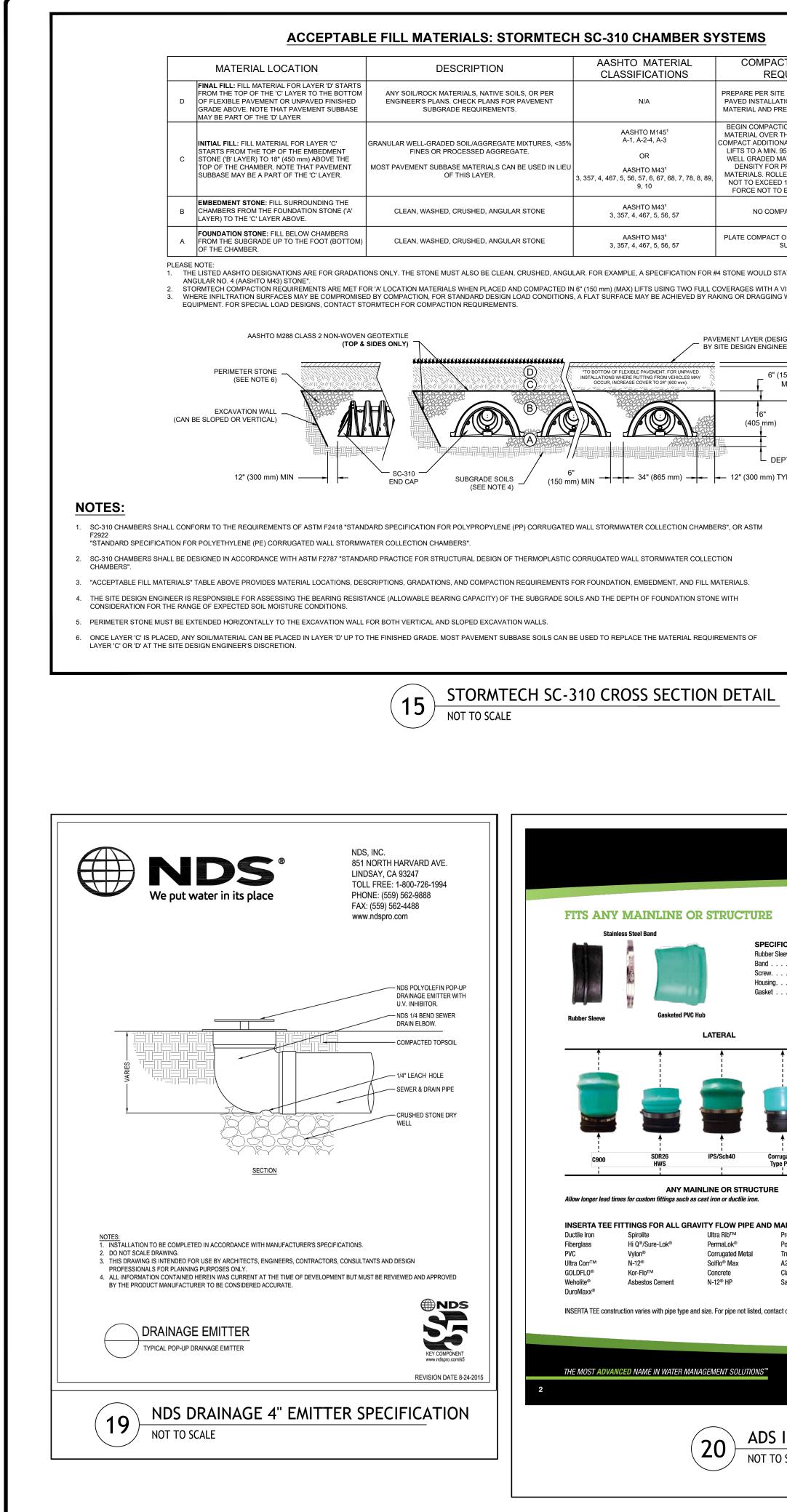






10 Steve Miller\20-10b Williams Street\ACAD\Williams St, Warwick [Preliminary Plan].dwg Jul. 14, 2023 11

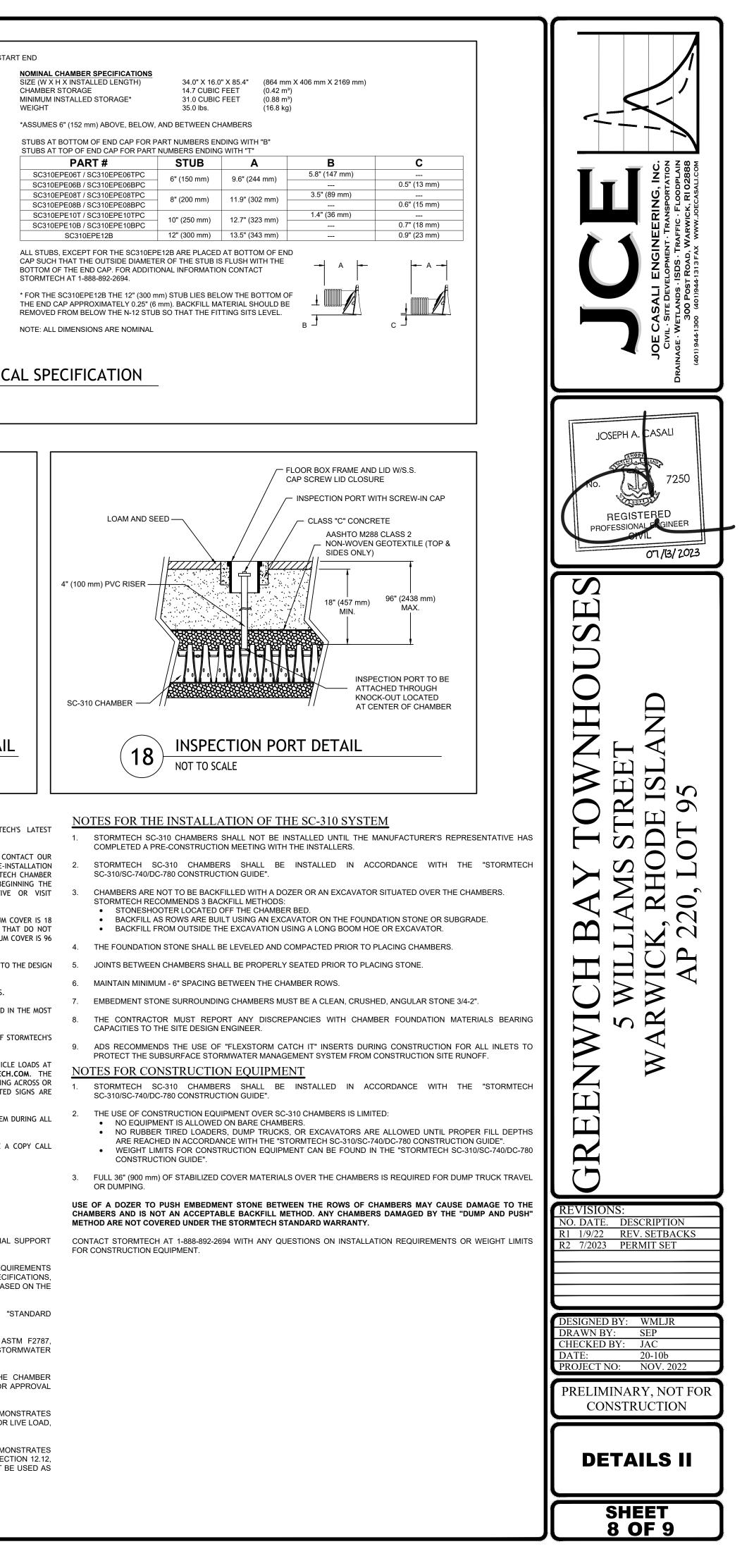




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CTION / DENSITY COUREMENT	460 TRUEMAN BLV       460 TRUEMAN BLV       26.310         1000000000000000000000000000000000000	STAR STAR
IFICATIONS         Sterve       ASTM F477         305 SS       305 SS         305 SS       SS         305 SS       SS         ASTM F477		<ul> <li>CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING A PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.</li> <li>THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM D PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.</li> <li>STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A (STORMTECH AT 1-888-892-2694 OR VISIT WWW.STORMTECH.COM.</li> <li>STORMWATER CHAMBER SPECIFICATIONS</li> <li>CHAMBERS SHALL BE STORMTECH SC-310.</li> </ul>

8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.





ERVICES:		4.10 HYDRANTS:
4.2.1 S	SERVICE PIPE SIZES <sup>3</sup> / <sub>4</sub> TO 2 INCH SHALL BE EITHER COPPER OR H.D.P.E. PIPE. COLOR MUST BE BLUE WITH A VIRGIN CLEAR NATURAL CENTER. CONTINUOUS IDENTIFICATION MARKINGS OVER THE ENTIRE LENGTH OF THE PIPE WITH SEALED ENDS AND COILED IN ROLLS FROM 100 FT. MINIMUM. WHEN H.D.P.E. SERVICE PIPE IS CHOSEN, A SOLID STAINLESS STEEL INSERT SHALL BE INSTALLED AT EACH CONNECTION AND A 12-FOOT TYPE "K" COPPER WHIP SHALL BE INSTALLED AT THE POINT OF ENTRY INTO ANY BUILDING OR STRUCTURE, AND ON THE INLET AND OUTLET OF A METER PIT. 1 H.D.P.E. SHALL CONFORM TO ASTM D1248 TYPE III, GRADE P34, CLASS A, CATEGORY 5, COLOR BLUE WITH VIRGIN CLEAR NATURAL CENTER. AWWA C901, 200	TO MAINTAIN SYSTEM WIDE STANDA SPECIFICATIONS FOR FIRE HYDRANTS FOR WATER AUTHORITY AS LISTED. HYDRANT MINIMUM COVER. HYDRANTS SHALL BE A WITH 6 INCH MECHANICAL JOINT CONNEC
	PSI (CTS). 2 COPPER PIPE SHALL BE TYPE "K" COPPER TUBING DESIGNED FOR POTABLE WATER SERVICE ANSI/ASTM B88. SERVICES 3 INCH AND ABOVE SHALL BE DUCTILE IRON AND CONFORM TO THE REQUIREMENTS FOR MAIN MATERIALS AND INSTALLATION.	DRAINS, NATIONAL STANDARD THREAD, H' WATER PRESSURE. THE HYDRANTS SHAL ALIGNMENT WITHOUT SHUTTING DOWN SE MUST BE MARKED WITH AN ARROW AND WO BOOT COATINGS TO BE FUSE BOND
4.3.1 / 4.3.2 /	ALL METERS SHALL BE COMPATIBLE WITH THE SYSTEM UTILIZED BY THE KENT COUNTY WATER AUTHORITY. THE NEPTUNE E-CODER R-900: SYSTEM IS STANDARDIZED IN KENT COUNTY. ALL METERS ARE TO READ IN CUBIC FEET. MUST BE CAPABLE OF BEING READ THE RADIO FREQUENCY SYSTEM IN PLACE AT THE KENT COUNTY WATER AUTHORITY. REGISTER SHALL CONTAIN A 9-DIGIT LOCAL REGISTRATION AND 4-8 DIGITS CAN BE COMMUNICATED FOR BILLING PURPOSES.	EXCEEDING AWWA C550. EPOXY COATINC TOUCH-UP OF EPOXY INTERIOR COATIN SPECIFICATIONS ONLY. CONTRACTORS SI ENSURE THAT NO COATING SYSTEM DAMA
4.3.4 / F	ANY METER LOCATED IN A METER PIT OR CHAMBER SHALL BE EQUIPPED WITH REGISTERS DESIGNED SPECIFICALLY FOR MOISTURE PROTECTION AND "PIT" STYLE APPLICATION. ALL FIRE SERVICE METERS SHALL BE IN ACCORDANCE WITH THE KENT COUNTY WATER AUTHORITY AND NFPA STANDARDS WITH UL/FM APPROVED STRAINER DESIGNED FOR FIRE SERVICE.	REMOVED FROM THE JOB SITE. ABOVE GI THICKNESS. HYDRANT BARREL, BREAKAW, COAT. TOPCOAT SHALL PRODUCE A CON URETHANE ENAMEL 4.0 MILS DRY FILM THI BLASTED TO SSPC/SP-6 PRIOR TO COATING
AIR R COVER. CO DESIGNED T	E MANHOLE: ELEASE MANHOLES SHALL BE WATERTIGHT PRE-CAST CONCRETE CONSTRUCTED WITH WATERTIGHT CAST IRON MANHOLE FRAME AND DIAMOND CHECK PATTERN OVER SHALL HAVE THE WORD "WATER" CAST UPON IT IN 4 INCH CAPITAL LETTERS. THE CHAMBER, FRAME, COVER, AND STRUCTURAL COMPONENTS SHALL BE TO WITHSTAND A H-20 WHEEL LOADING. THE FRAME AND WATERTIGHT COVER ASSEMBLY MUST CONFORM TO THE REQUIREMENTS OF THE KENT COUNTY WATER (FOR SIZE AND DIMENSION. MANHOLE SHALL BE OUTFITTED WITH CORROSION RESISTANT, NON-SLIP STEPS.	WORKMANSHIP. HYDRANT REPAIR KITS SI MEET OR EXCEED ADDITIONAL DESIGN AND TYPE: 5 ¼ INCH OPENING: OPEN LE DEPTH OF BURY: 5'-0" MIN PORTS: TWO 2 ½
4.6.1 F	RESTRAINING DEVICES SHALL BE UTILIZED ON ALL MAINS. THRUST BLOCKS SHALL BE CONSTRUCTED FROM CONCRETE 3000 PSI AT 28 DAYS, SIZED ACCORDING TO THE SIZE OF PIPELINE, TYPE OF FITTING, WATER PRESSURE AND THE CHARACTERISTICS OF THE SOIL. THE CONCRETE SHALL BE PROPERLY FORMED AS TO SLOPE FOR THE GIVEN APPLICATION AND BEARING WIDTH. THE CONCRETE SHALL BE IN CONTACT ONLY WITH THE FITTING, NOT WITH THE PIPE ITSELF, FASTENERS OR THE JOINT. CONCRETE CURING TIME SHALL BE A MINIMUM OF 7 DAYS. THRUST RESTRAINT MAY BE VIA RESTRAINED JOINT, DUCTILE IRON PIPE MEETING ANSI/AWWA C151/A21.51 AND ANSI/AWWA C11/A21. RESTRAINED JOINT PIPE LENGTHS (RESTRAINED LENGTH) SHALL BE SUFFICIENT TO RESTRAIN THRUST IMPARTED BY 1-1/2 TIMES THE ANTICIPATED WORKING PRESSURE BUT NOT LESS THAN	BREAKAWAY: ALL HYD DRAIN WAYS: SLIDING COATINGS: PRIOR TO COATS E
4.6.3 ( // /	150 PSI WITH A 1.5 FACTOR OF SAFETY. GLAND AND RESTRAINT COMPONENTS MADE FROM DUCTILE IRON AND SHALL HAVE A BITUMINOUS OUTSIDE COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C153/A21.53 RESPECTIVELY. CAPABLE OF BEING USED WITH STANDARDIZED MECHANICAL JOINT BELL CONFORMING TO AWWA C111 AND C153. MULTIPLE WEDGE STYLE RESTRAINT MECHANISM WITH POWDER COATED HEAT-TREATED DUCTILE IRON WEDGES. PROPER ACTUATION ENSURED BY TORQUE LIMITING TWIST OFF NUTS. MINIMUM SAFETY FACTOR 2 TO 1. RESTRAINED JOINTS SHALL BE SUITABLE FOR 150 PSI WORKING PRESSURE AND FABRICATED OF HEAVY SECTION DUCTILE IRON CASTING. GASKETS SHALL MEET THE MATERIAL REQUIREMENTS OF ANSI/AWWA C111 FOR MECHANICAL JOINT GASKETS. BOLTS AND NUTS AS REQUIRED SHOULD BE LOW CARBON STEEL CONFORMING TO ASTM A307, GRADE B.	FUSE BO EXCEEDI EXTERIOR LOWER E STEM: STAINLE OTHER C MAIN VALVE: DUCTILE WEATHER SHIELD AND CAP: DUCTILE
[  	EXAMPLE AND APPURTENANCES SHALL BE FROM A SINGLE MANUFACTURER SOURCE. FOREIGN PIPE FITTINGS AND GASKETS ARE STRICTLY FORBIDDEN. DUCTILE IRON PIPE SHALL CONFORM TO ANSI/AWWA C151/A21.51, ANSI/AWWA C150/A21.50 CLASS 52 DOUBLE CEMENT MORTAR LINED. GASKETS SHALL CONFORM TO ANSI/AWWA C111/A21.1. ALL PIPES SHALL HAVE A BITUMINOUS OUTSIDE COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C153/A21.53 RESPECTIVELY. ALL PIPES SHALL BE CEMENT-MORTAR LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA C104/A21.14 EXCEPT THE LINING THICKNESS SHALL BE TWICE THAT SPECIFIED. JOINTS FOR PIPE SHALL BE PUSH-ON (TYTON STYLE ONLY) OR MECHANICAL JOINT CONFORMING TO ANSI/AWWA C111. ALL MECHANICAL JOINT PIPES SHALL BE SUPPLIED WITH ACCESSORIES. RESTRAINED JOINTS SHALL BE SUITABLE FOR 150 PSI WORKING PRESSURE AND FABRICATED OF HEAVY SECTION DUCTILE IRON CASTING. GASKETS SHALL MEET THE MATERIAL REQUIREMENTS OF ANSI/AWWA AND MADE IN THE USA.	CHAINS: NO CHAI A.11 CORPORATION STOP: CORPORATION STOPS SHALL BE BAL WATER SERVICE UP TO 300 PSI. BODY SHA OR EXCEEDING THE LEAD LEACHING PERF AWWA C800 ALONG WITH THE DESIGN AND TYPE: FORD OR EQUAL. SIZES: ¾, 1 INCH, 1 ½ IN
C L E	TYPE: DUCTILE IRON MEETING ANSI/AWWA C151/A21.51 ANSI/AWWA C150/A21.50. CLASS: SPECIAL THICKNESS CLASS 52. LINING: DOUBLE CEMENT MORTAR MEETING ANSI/AWWA C151/A21.5. END JOINTS: PUSH ON - TYTON STYLE ONLY - MEETING ANSI/AWWA C111/A21.51. MECHANICAL JOINT - MEETING ANSI/AWWA C111/A21.11. COATING: EXTERIOR: ANSI/AWWA C104/A21.4.	OPENING: OPEN LEFT. END CONNECTIONS: COMPRESSION WI TAPER THREAD FO MATERIAL: HEAVY CAST LEAD LEAD LEACHING P
I	INTERIOR: ALL REQUIREMENTS OF EPA FOR POTABLE WATER. GASKET: RUBBER MEETING ANSI/AWWA C111/A21.11. NITRILE (IN CONTAMINATED SOIL).	4.12 CURB STOPS: CURB STOPS SHALL BE BALL TYPE WI BODY SHALL BE HEAVY CAST LEAD FREI SPECIFICATIONS OF ANSI/NSF 61 STANDA CHARACTERISTICS OF THE FOLLOWING:
DUCTI SHALL HAV CEMENT-MC	ILE IRON FITTINGS SHALL CONFORM TO ANSI/AWWA C153/A21.53. FOREIGN FITTINGS, GASKET GLANDS AND ACCESSORIES ARE STRICTLY FORBIDDEN. ALL FITTINGS (E A BITUMINOUS OUTSIDE COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C153/A21.53 RESPECTIVELY. ALL FITTINGS SHALL BE DRTAR LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA C104/A21.14 EXCEPT THE LINING THICKNESS SHALL BE TWICE THAT SPECIFIED. JOINTS FOR HALL BE MECHANICAL JOINT CONFORMING TO ANSI/AWWA C111. ALL MECHANICAL JOINT FITTINGS SHALL BE SUPPLIED WITH GLANDS AND ACCESSORIES. 4 INCH TO 12 INCH DUCTILE IRON COMPACT MEETING ANSI/AWWA C153/A21.53. 16 INCH AND LARGER DUCTILE IRON MEETING ANSI/AWWA C153/A21.53	TYPE: FORD OR EQUAL SIZES: ¾ INCH, 1 INCH OPENING: OPEN LEFT. END CONNECTIONS: COMPRESSION V MATERIAL: HEAVY CAST LE
PRESS GASKE	OR ANSI/AWWA C110/A21.10. URE CLASS: PIPE FITTINGS SHALL HAVE A PRESSURE RATING OF 350 FOR 24-INCH AND SMALLER AND 250 PSI FOR 30-INCH AND LARGER. FITTINGS SHALL AT A MINIMUM HAVE THE SAME PRESSURE RATING AS THE CONNECTING PIPE. ETS: RUBBER MEETING ANSI/AWWA C111/A21.11. NITRILE (IN CONTAMINATED SOIL).	LEAD LEACHING OPENING: OPEN LEFT. DRAIN: NONE. 4.13 SERVICE & GATE BOX: 4.13.1 CURB BOXES MAY BE MANUFACT
E   	VALVES SHALL BE CAST IRON OR DUCTILE IRON 250-PSI WORKING PRESSURE. OPERATING STEM SHALL BE PROVIDED WITH A MINIMUM OF TWO (2) O-RING STEM SEALS. BONNET AND GLAND BOLTS/WASHERS SHALL BE STAINLESS STEEL. WEDGES SHALL BE FULLY ENCAPSULATED. THE INTERIOR AND EXTERIOR SURFACES OF ALL CAST IRON OR DUCTILE IRON COMPONENTS SHALL BE FUSION BOND EPOXY COATED, 8 MILS MINIMUM THICKNESS. EPOXY COATING MUST BE UNDAMAGED WITH NO CHIPS OR ABRASIONS. FIELD TOUCH-UP OF INTERIOR COATING IS NOT ALLOWED. FIELD TOUCH-UP OF EXTERIOR SURFACES SHALL BE IN ACCORDANCE WITH MANUFACTURES RECOATING SPECIFICATIONS ONLY. CONTRACTORS SHALL USE SPECIAL HANDLING AND INSTALLATION PRECAUTIONS WITH THE USE OF EPOXY COATED VALVES AS NECESSARY TO ENSURE THAT NO COATING SYSTEM DAMAGE OCCURS. AT A MINIMUM FIBER SLINGS OR BELTS SHALL BE USED FOR ALL HANDLING. ALL EPOXY-COATED VALVES SHALL BE PALLETIZED AND PROPERLY SHRINK-WRAPPED UPON DELIVERY TO ASSURE COATING SYSTEM INTEGRITY IS NOT COMPROMISED. ALL EPOXY VALVES FOUND MISHANDLED AT DELIVERY OR DURING INSTALLATION SHALL BE REJECTED AND REMOVED FROM THE JOB SITE. ALL VALVES SHALL BE MANUFACTURED TO MEET OR EXCEED AWWA C509 AND ISO 9000 ALONG WITH THE DESIGN AND OPERATING CHARACTERISTICS OF THE FOLLOWING DEVICES: .1 RESILIENT SEAT GATE 4 INCH TO 12 INCH:	DESIGN AND STYLE SAMPLES TO IRON COVER AND BRASS BOLT F DROP IN TYPE WITHOUT FINS S AND ANSI/AWWA C153/A21.53 HAVE A BOTTOM FLANGE OF SU AND SIZED TO ENCLOSE THE CU GATE VALVE BOXES MAY BE EL APPROVAL BASES ON DESIGN AN WITH HEAVY CAST IRON COVER DROP IN TYPE WITHOUT FINS S AND ANSI/AWWA C153/A21.53
	TYPE:BURIED SERVICE NON-RISING STEM. ABOVE GRADE SERVICE OR PITS OS & Y WITH HAND WHEEL OR NON-RISING STEM WITH HAND WHEEL.WORKING PRESSURE:250 PSI.OPENING:LEFT OR RIGHT DEPENDING ON SYSTEM LOCATION.STEM:420 STAINLESS STEEL OR EQUAL WITH MINIMUM 60,000 PSI YIELD STRENGTH.FASTENERS:STAINLESS STEEL, TYPE 304 FOR ALL OF THE VALVE.COATINGS:INTERNAL & EXTERIOR TO BE COATED WITH FUSE BONDED HOLIDAY FREE EPOXY COATING MINIMUM 8 MILS NOMINAL THICKNESS MEETING OR	SETTLING. THE BOTTOM OF THE SHALL HAVE BARRELS OF NOT I BURY. UPPER PORTION SHALL E <u>4.14 SADDLES:</u> SERVICE SADDLES AND REPAIR SADDLI
4.9.1	EXCEEDING AWWA C550. WEDGES: FULLY RUBBER ENCAPSULATED CAST IRON, DUCTILE IRON OR BRONZE GATE MEETING AWWA C509. OPERATING NUT: 2 INCH SQUARE OPERATING NUT WITH HEXAGON STAINLESS STEEL BOLT FASTENER. STEM SEAL: MINIMUM TWO O-RING SEALS. CONNECTION: MECHANICAL JOINT. .2 BUTTERFLY 16" AND LARGER:	COMPONENTS SHALL BE COATED WITH FU MANUFACTURED TO MEET OR EXCEED THE 4.14.1 SERVICE: TYPE: FORD OR EQUAL. BODY: DUCTILE IRON OR GRADE COATING: DUCTILE IRON COMPONE
	TYPE: RUBBER SEATED TIGHT CLOSING OR EXCEEDING AWWA C504 UNDERGROUND SERVICE. CLASS 150 OR 250 DEPENDING UPON SERVICE APPLICATION REQUIREMENTS. STEM: GRADE 18-8 TYPE 304 STAINLESS STEEL. VALVE VANE/DISC: DUCTILE IRON OR HIGH STRENGTH CAST IRON WITH EITHER MECHANICALLY FASTENED BUNA RUBBER SEAL OR TYPE 316 STAINLESS STEEL SEAL SEAT RING. SEAT: STAINLESS STEEL OR BUNA N RUBBER. RUBBER SEAT CAN BE EITHER BONDED OR MECHANICALLY FASTENED AND SHALL NOT INTERRUPT FLOW.	BAND: GRADE 18-8 TYPE 304 ST FASTENERS: 304 STAINLESS STEEL STI GASKET: VIRGIN RUBBER ASTM 20 OUTLET: THREADED OUTLET TAPF 4.14.2 REPAIR:
(	ACTUATOR: DUAL LINK CONSTRUCTION WITHIN A SEALED HOUSING FOR UNDERGROUND USE DESIGNED FOR SUBMERGENCE IN WATER TO 25 FEET OF HEAD AND MEETING AWWA C504. VALVE NUT SHALL BE MINIMUM OF TWO-INCH SQUARE MADE OF DUCTILE IRON AND FASTENED TO STEM. OPERATOR TO BE TRAVELING NUT TYPE CAPABLE OF WITHSTANDING AN OVERLOAD INPUT TORQUE OF 450 FOOT-POUNDS WITHOUT DAMAGE TO THE VALVE OR OPERATOR. DPENING: LEFT OR RIGHT DEPENDING ON SYSTEM LOCATION. FASTENERS: GRADE 18-8 STAINLESS STEEL, TYPE 304 FOR ALL FASTENERS OF THE VALVE.	TYPE: FORD OR EQUAL BODY: DUCTILE IRON O COATING: DUCTILE IRON COMPONE BAND: GRADE 18-8 TYP FASTENERS: 304 STAINLESS STEEL STU GASKET: VIRGIN RUBBER
(	COATINGS: INTERIOR & EXTERIOR TO BE COATED WITH FUSE BONDED HOLIDAY FREE EPOXY MINIMUM THICKNESS 8 MILS NOMINAL MEETING OR EXCEEDING AWWA C-550. CONNECTION: MECHANICAL JOINT OR FLANGED. .3 TAPPING SLEEVES AND VALVES: VALVES SHALL BE FULL BODY AND FULL PORT TAPPING TYPE MEETING THE REQUIREMENTS PARAGRAPH 4.9.1.1 ABOVE. SLEEVES SHALL BE FULL PORT DUCTILE IRON OR GRADE 18-8 TYPE 304 STAINLESS STEEL. DUCTILE IRON SLEEVES SHALL BE OF THE SAME MANUFACTURER AS OF THE VALVE AND BITUMINOUS COATED.	OUTLET: THREADED OUT <u>4.15 FULL CIRCLE REPAIR:</u> ALL COMPONENTS AND FASTENERS MANUFACTURED TO BE EQUAL TO THE MAT
	ALL SLEEVES SHALL BE MANUFACTURED TO MEET OR EXCEED THE DESIGN AND OPERATING CHARACTERISTICS OF ONE OF THE FOLLOWING DEVICES: TYPE: RESILIENT SEAT GATE VALVES DESIGNED SPECIFICALLY FOR TAPPING. SEAL: STAINLESS STEEL SLEEVES SHALL USE GRID PATTERN VIRGIN RUBBER ASTM 2000, FULL 360-DEGREE PIPE COVERAGE. DUCTILE IRON SLEEVES SHALL USE MECHANICAL JOINT WITH RUBBER SEALS. MAXIMUM WORKING PRESSURE: 4 INCH-12 INCH 250 PSE, 16 INCH-24 INCH 200 PSI. FASTENER: GRADE 18-8 TYPE 304 STAINLESS STEEL.	TYPE: FORD OR EQUAL BODY: GRADE 18-8 TYP FASTENERS: 304 STAINLESS STEEL STI GASKET: GRID PATTERN
	<ul> <li>A SWING-CHECK:</li> <li>A SWING-CHECK:</li> <li>4.9.1.4.1 SWING CHECK VALVES SHALL UTILIZE IRON-BODY BRONZE-MOUNTED DESIGN. THEY MAY EMPLOY METAL TO METAL OR COMPOSITION TO METAL SEAT CONSTRUCTION.</li> <li>4.9.1.4.2 WORKING PRESSURE SHALL BE A MINIMUM OF 175 PSI FOR VALVES UP TO 12 INCH AND 150 PSI FROM 16 INCH TO 24 INCH.</li> <li>4.9.1.4.3 SWING CHECK VALVES SHALL BE A MOUNTED IN A HORIZONTAL POSITION. DIRECT ACCESS TO THE VALVE SHALL BE ACCOMPLISHED BY USING A PRE-CAST</li> </ul>	4.16 DUCTILE IRON COUPLINGS: STRAIGHT AND TRANSITION COUPLIN DUCTILE IRON COMPONENTS SHALL BE C MANUFACTURED TO MEET OR EXCEED THE 4.16.1 STRAIGHT:
<b>4.9.2</b> VA	CONCRETE MANHOLE WITH HEAVY-DUTY CAST IRON MANHOLE FRAME AND SOLID COVER. CONCRETE STRUCTURE AND COVER SHALL BE CAPABLE OF WITHSTANDING AN ASHTO H-20 LOAD. THE COVER SHALL HAVE A DIAMOND CHECK PATTERN WITH THE WORD "WATER" (IN UPPER CASE LETTERS) CAST UPON IT. THE MANHOLE SHALL BE OUTFITTED WITH CORROSION RESISTANT, NON-SLIP, STEPS. ALVE ROAD BOX: .1 ALL VALVES (EXCEPT SWING-CHECK) SHALL BE EQUIPPED WITH A CAST IRON "BUFFALO" TYPE, ADJUSTABLE (SLIDING) VALVE ROAD BOX. THE UPPER PORTION SHALL BE 26 INCH LONG AND THE BOTTOM SECTION 48 INCH (MIN). COVERS SHALL BE 5-1/4" IN DIAMETER SOLID RING SEAT WITH THE WORD "WATER" (IN	TYPE: FORD OR EQUAL BODY: DUCTILE IRON. COATING: DUCTILE IRON COMPONE FASTENERS: 304 STAINLESS STEEL STI GASKET: RUBBER ASTM 2
4.9.2	<ul> <li>CAPS) CAST UPON IT.</li> <li>THE UPPER PORTION OF THE BOX SHALL BE MANUFACTURED WITH A HEAVY FLANGE HAVING SUFFICIENT BEARING AREA TO PREVENT SETTLEMENT. THE LOWER SECTION SHALL BE CONFIGURED TO ENCLOSE THE VALVE STUFFING BOX WITH AN INSIDE DIAMETER OF AT LEAST 4-1/4 INCH. THE INSTALLED BOX SHALL BE CAPABLE OF VERTICAL ADJUSTMENT OF A MINIMUM OF 6 INCH WHILE MAINTAINING AN OVERLAP OF A LEAST 4 INCH BETWEEN SECTIONS.</li> </ul>	4.16.2 TRANSITIONAL: TYPE: FORD OR EQUAL BODY: DUCTILE IRON. COATING: DUCTILE IRON COMPONE FASTENERS: 304 STAINLESS STEEL STI GASKET: RUBBER ASTM 2
		4.17 BACKFLOW PREVENTERS: ALL DEVICES MUST HAVE BEEN APPRO OF SANITARY ENGINEERS. BACKFLOW DEV MANUFACTURER VALVES AS AN ASSEMBLY STANDARD OR BE MANUFACTURED WITH LE
		4.17.1 TESTABLE DOUBLE CHECK: TYPE: WATTS OR EQU. BODY: CAST IRON, BRC COATING: IRON COMPONENTS SHAL SPRINGS: STAINLESS STEEL. PRESSURE: MAXIMUM 150 PSI MINIMU
		4.17.2 TESTABLE REDUCED PRESSURE: TYPE: WATTS OR EQUAL. BODY: CAST IRON, BRONZE OR S COATING: IRON COMPONENTS SHAL SPRINGS: STAINLESS STEEL. PRESSURE: MAXIMUM 175 PSI - MINIM
		4.17.3 HOUSEHOLD DUAL CHECK:

WATTS OR EQUAL. BODY: CAST BRONZE. SPRINGS: STAINLESS STEEL

PRESSURE: MAXIMUM 150 PSI - MINIMUM 10 PSI. PEAT, VEGETABLE OR ORGANIC MATTER OR ANY OTHER DEBRIS AND READILY COMPACTABLE. RECYCLED ROAD SWEEPINGS AND CONTAMINATED MATERIAL ARE FORBIDDEN

4.18.2 SELECTED BACKFILL MAY BE FROM EXCAVATED MATERIALS THAT SHALL BE FREE DRAINING, CLEAN, GRANULAR SOIL SUITABLE FOR BACKFILL. IT SHALL BE FREE FROM PEAT, VEGETABLE OR ORGANIC MATTER OR ANY OTHER DEBRIS AND SHALL BE READILY COMPACTABLE TO THE REQUIREMENTS OF KENT COUNTY WATER AUTHORITY, TYPE 5 TRENCH. RECYCLED ROAD SWEEPINGS AND CONTAMINATED MATERIAL ARE FORBIDDEN. UP TO 20 PERCENT MAY BE ROCK LIKE MATERIAL, NOT TO EXCEED 🤅 INCH IN LENGTH OR DIAMETER AND MUST BE EVENLY DISTRIBUTED WITHIN THE TOTAL VOLUME OF THE FILL.

ANDARDIZATION, HYDRANTS SHALL BE DRY BARREL TYPE WITH 5¼ INCH VALVE. HYDRANTS SHALL CONFORM TO THE "STANDARD FOR ORDINARY WATER WORKS SERVICE," AWWA C-502, AND SHALL IN ADDITION MEET THE SPECIFIC REQUIREMENTS OF THE KENT COUNTY DRANTS SHALL BE UL RATED FOR 250-PSI WORKING PRESSURE AND SERVICE INSTALLATION IN A TRENCH THAT WILL PROVIDE VARIOUS BE ACCORDING TO MANUFACTURER'S STANDARD PATTERN UNLESS NOTED OTHERWISE AND OF STANDARD SIZE, AND SHALL BE EQUIPPED DNNECTION FOR 6" DUCTILE IRON PIPE, ONE 4 ½ INCH STEAMER NOZZLE AND TWO 2 ½ INCH HOSE NOZZLES, BRASS OR BRASS SLEEVED AD, HYDRANT INLET CONNECTIONS. HYDRANTS SHALL BE OF THE FULL COMPRESSION DESIGN, OPENING AGAINST AND CLOSING WITH THE SHALL BE DESIGNED TO PERMIT ROTARY MOVEMENT OF THE UPPER BARREL ANY NUMBER OF DEGREES REQUIRED TO EFFECT PROPER VN SERVICE OR REMOVING FLANGE BOLTS AND NUTS. HYDRANT MUST OPEN TURNING OPERATING NUT TO LEFT (COUNTERCLOCKWISE) AND ND WORD "OPEN" TO INDICATE THE DIRECTION TO TURN STEM TO OPEN. ALL FASTENERS USED SHALL BE STAINLESS STEEL BONDED EPOXY OR THERMAL SET EPOXY FOR INTERIOR AND EXTERIOR-HOLIDAY FREE WITH MINIMUM THICKNESS 8 MILS MEETING OR ITING MUST BE UNDAMAGED WITH NO CHIPS OR ABRASIONS. LOWER BARREL SHALL BE BITUMINOUS COATED OR EPOXY COATED. FIELD DATING IS NOT ALLOWED. FIELD TOUCH-UP OF EXTERIOR SURFACES SHALL BE IN ACCORDANCE WITH MANUFACTURES RECOATING IRS SHALL USE SPECIAL HANDLING AND INSTALLATION PRECAUTIONS WITH THE USE OF EPOXY COATED APPURTENANCES AS NECESSARY TO DAMAGE OCCURS. ALL EPOXY APPURTENANCES FOUND MISHANDLED AT DELIVERY OR DURING INSTALLATION SHALL BE REJECTED AND VE GRADE EXPOSED HYDRANT COMPONENTS SHALL BE COATED WITH ONE COAT ZINC RICH URETHANE PRIMER @ 2.5-3.5 MILLS DRY FILM KAWAY FLANGE, SHALL BE COATED WITH PHEROLIC URETHANE ENAMEL GLOSS SILVER, TWO COATS @ 4.0 MILS DRY FILM THICKNESS EACH CONSISTENT AND HOLIDAY FREE COLOR COATING. CAPS AND BONNET SHALL RECEIVE TWO COATS OF GLOSS SAFETY RED, PHENOLIC THICKNESS EACH COAT. COLOR COATS SHALL PRODUCE A CONSISTENT AND HOLIDAY FREE COLOR COATING. SURFACE SHALL BE SAND ATINGS. ALL HYDRANTS SHALL BE SHIPPED WITHOUT CHAINS. MANUFACTURE SHALL PROVIDE A TEN-YEAR WARRANTY ON ALL PARTS AND ITS SHALL BE ORIGINAL MANUFACTURE SPECIFICALLY DESIGNED FOR THE HYDRANT. ALL HYDRANTS SHALL ALSO BE MANUFACTURED TO AND OPERATING CHARACTERISTICS LISTED BELOW:

#### INCH VALVE OPENING/3 PORT STYLE, DRY BARREL.

MINIMUM FROM BURY LINE TO TOP FLANGE OF HYDRANT BOOT. O 2 ½ INCH BRONZE HOSE PORTS 180° APART NST THREAD. ONE 4 ½ INCH BRONZE PUMPER/STEAMER 90° FROM EACH HOSE PORT, NST HYDRANTS TO HAVE TRAFFIC BREAKAWAY FLANGE.

DING DRAIN SEAL TYPE. DRAIN CHANNEL SHALL BE 360 DEGREES AND CONTAIN A MINIMUM OF TWO BRONZE OR BRASS SLEEVED OUTLET OR TO PRIMING, SAND BLAST HYDRANT TO SSPC/SP-6 PRIMED WITH ZINC RICH URETHANE COMPATIBLE COATING. TOP COAT WITH TWO ATS EACH RED AND SILVER CONFORMING TO KCWA STANDARD COLOR, SILVER BARREL AND RED CAP AND BONNET. BOOT COATINGS TO BE

E BONDED EPOXY OR THERMAL SET EPOXY FOR INTERIOR AND EXTERÍOR - HOLIDAY FREE WITH MINIMUM THICKNESS 8 MILS MEETING OR

EEDING AWWA C550 WER BARREL TO BE BITUMINOUS COATED OR EPOXY COATED.

AINLESS STEEL UPPER AND LOWER STEM. ALL WETTED PARTS SUCH AS SPRINGS, PINS AND FASTENERS, SHALL BE STAINLESS STEEL OR HER COMPATIBLE LEAD FREE NON CORROSIVE MATERIALS. CTILE IRON OR CAST IRON CORE FULLY ENCAPSULATED IN RUBBER OR MULTIPLE PIECE. SEAT MAY BE EITHER BRONZE OR STAINLESS STEEL. CTILE IRON. CHAINS TO BE SUPPLIED.

BALL TYPE WITH EITHER STAINLESS STEEL, SYNTHETIC COATED BRASS BALL OR NICKEL COATED BRASS BALL DESIGNED FOR POTABLE ′ SHALL BE HEAVY CAST LEAD FREE "ENVIROBRASSII" UNS ALLOY NUMBER C89520 ASTM B584-98A AND/OR AWWA C800/ASTM B-62 MEETING PERFORMANCE SPECIFICATIONS OF ANSI/NSF 61 STANDARD. ALL CORPORATION STOPS SHALL MEET OR EXCEED DESIGN STANDARDS OF NAND OPERATING CHARACTERISTICS OF THE FOLLOWING:

#### 1 1/2 INCH, AND 2 INCH

IN WITH NON-CORROSIVE GRIP RING MEETING ASTM B-159-BUNA N RUBBER AND CONDUCTIVITY RING. THREADED END SHALL BE AWWA CC AD FOR DIRECT TAP. LEAD FREE "ENVIROBRASSII" UNS ALLOY NUMBER C89520 ASTM B584-98A AND/OR AWWA C800/ASTM B-62 MEETING OR EXCEEDING THE ING PERFORMANCES SPECIFICATIONS OF ANSI/NSF 61 STANDARD.

PE WITH EITHER STAINLESS STEEL, SYNTHETIC COATED BRASS OR NICKEL COATED BRASS BALL DESIGNED FOR WATER SERVICE UP TO 300 PSI. FREE "ENVIROBRASSII" UNS ALLOY NUMBER C89520 ASTM B584-98A AND/OR MEET OR EXCEED THE LEAD LEACHING PERFORMANCE ANDARD. ALL CURB STOPS TO MEET OR EXCEED THE DESIGN STANDARDS OF AWWA C800 ALONG WITH THE DESIGN AND OPERATING

#### INCH, 1 ½ INCH, AND 2 INCH

ION WITH NON CORROSIVE GRIP RING MEETING ASTM B-159-BUNA N RUBBER AND CONDUCTIVITY RING ST LEAD FREE "ENVIROBRASSII" UNS ALLOY NUMBER C89520 ASTM B584-98A AND/OR AWWA C800/ASTM B-62 MEETING OR EXCEEDING THE HING PERFORMANCE SPECIFICATIONS OF ANSI/NSF 61 STANDARD.

JFACTURED IN NORTH AMERICA OR SELECTED FOREIGN MADE. SELECTED FOREIGN MADE BOXES MUST RECEIVE PRIOR APPROVAL BASED ON ES TO BE PROVIDED FOR REVIEW. THEY SHALL BE HEAVY PATTERN CAST IRON, BUFFALO STYLE, SLIP ADJUSTABLE TYPE WITH HEAVY CAST DLT FASTENER TYPE LOCK. THE WORD "WATER" SHALL BE CAST UPON THE COVER IN HEAVY PATTERN RAISED LETTERS. COVERS SHALL BE INS SOLID RING. BOXES SHALL HAVE A BITUMINOUS INTERNAL AND EXTERNAL COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 1.53 RESPECTIVELY. BOXES SHALL HAVE BARRELS OF NOT LESS THAN 2 ½ INCH IN DIAMETER. THE UPPER SECTION OF EACH BOX SHALL OF SUFFICIENT BEARING AREA TO PREVENT SETTLING. THE BASE OF THE LOWER SECTION SHALL BE A REINFORCED ARCH CONFIGURATION E CURB STOP. BOX SECTIONS SHALL BE OF SUFFICIENT LENGTH TO PROVIDE COMPLETE COVERAGE FOR THE DEPTH OF BURY. BE EITHER MANUFACTURED IN NORTH AMERICA OR SELECTED FOREIGN MADE. SELECTED FOREIGN MADE BOXES MUST RECEIVE PRIOR IN AND STYLE SAMPLES TO BE PROVIDED FOR REVIEW. THEY SHALL BE HEAVY PATTERN CAST IRON, SLIP ADJUSTABLE TYPE AND PROVIDED OVER. COVER SHALL HAVE THE WORD "WATER" CAST UPON IN HEAVY PATTERN RAISED LETTERS 5 1/4 INCH DIAMETER. COVER SHALL BE INS SOLID RING. BOXES SHALL HAVE A BITUMINOUS INTERNAL AND EXTERNAL COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 21.53 RESPECTIVELY. THE UPPER SECTION OF EACH BOX SHALL HAVE A BOTTOM FLANGE OF SUFFICIENT BEARING AREA TO PREVENT OF THE LOWER SECTION SHALL BE BELL SHAPED AND SIZED TO ENCLOSE THE STUFFING BOX AND OPERATING NUT OF THE VALVE. BOXES NOT LESS THAN 5" IN DIAMETER. BOX SECTIONS SHALL BE OF SUFFICIENT LENGTH TO PROVIDE COMPLETE COVERAGE FOR THE DEPTH OF ALL BE 26" LONG AND THE BOTTOM SECTION 48" (MIN) IN LENGTH.

ADDLES SHALL BE DUCTILE IRON OR TYPE 304 STAINLESS STEEL, WITH STAINLESS STEEL BOLTS, WASHERS, NUTS AND BANDS. DUCTILE IRON H FUSION BONDED EPOXY MINIMUM 8 MILS THICKNESS MEETING OR EXCEEDING AWWA C550 OR NYLON COATED. SADDLES SHALL BI THE DESIGN AND OPERATING CHARACTERISTICS OF FOLLOWING:

RADE 18-8 TYPE 304 STAINLESS STEEL. PONENTS SHALL BE EPOXY COATED AWWA C 500 OR NYLON COATED. 04 STAINLESS STEEL DOUBLE BAND. EL STUD, NUT & WASHERS.

TAPPED TO AWWA C 800 FOR THE APPROPRIATE SERVICE SIZE.

RON OR GRADE 18-8 TYPE 304 STAINLESS STEEL. PONENTS SHALL BE EPOXY COATED AWWA C 500 OR NYLON COATED. 8 TYPE 304 STAINLESS STEEL DOUBLE BAND. EL STUD, NUT & WASHERS.

BBER ASTM 2000. OUTLET TAPPED TO AWWA C 800 FOR THE APPROPRIATE SERVICE SIZE.

IERS SHALL BE TYPE 304 STAINLESS STEEL. GASKET SHALL BE VIRGIN RUBBER FOR WATER SERVICE. ALL REPAIR CLAMPS SHALL BE MATERIAL AND DESIGN REQUIREMENTS THE FOLLOWING:

8 TYPE 304 STAINLESS STEEL. L STUD, NUT & WASHERS. ERN VIRGIN RUBBER ASTM 2000, FULL 360 DEGREE COVERAGE.

JPLINGS SHALL BE DUCTILE IRON MANUFACTURED TO MEET AWWA C 219 AND FITTED WITH STAINLESS STEEL BOLTS WASHERS AND NUTS. BE COATED WITH FUSION BONDED EPOXY MINIMUM 8 MILS THICKNESS MEETING OR EXCEEDING AWWA C550. COUPLINGS SHALL BE THE DESIGN AND OPERATING CHARACTERISTICS OF THE FOLLOWING:

PONENTS SHALL BE EPOXY COATED AWWA C 500. L STUD, NUT & WASHERS.

QUAL. PONENTS SHALL BE EPOXY COATED AWWA C 500.

EL STUD, NUT & WASHERS.

PPROVED BY THE UNIVERSITY OF SOUTHERN CALIFORNIA (FCCCHR, USC), AMERICAN WATER WORKS ASSOCIATION AND AMERICAN SOCIETY. ' DEVICE ASSEMBLIES TESTED WITH MANUFACTURES ISOLATION VALVES TO MEET FCCCHR, USC STANDARDS SHALL BE INSTALLED WITH THE MBLY. BRONZE OR BRASS COMPONENTS SHALL MEET OR EXCEED THE LEAD LEACHING PERFORMANCE SPECIFICATIONS OF ANSI/NSF 61 TH LEAD FREE "ENVIRO BRASS II" USN ALLOY NUMBER C89520, ASTM B584-98A

, BRONZE OR STAINLESS STEEL DEPENDING ON SIZE. SHALL BE EPOXY COATED AWWA C-500.

INIMUM 10 PSI.

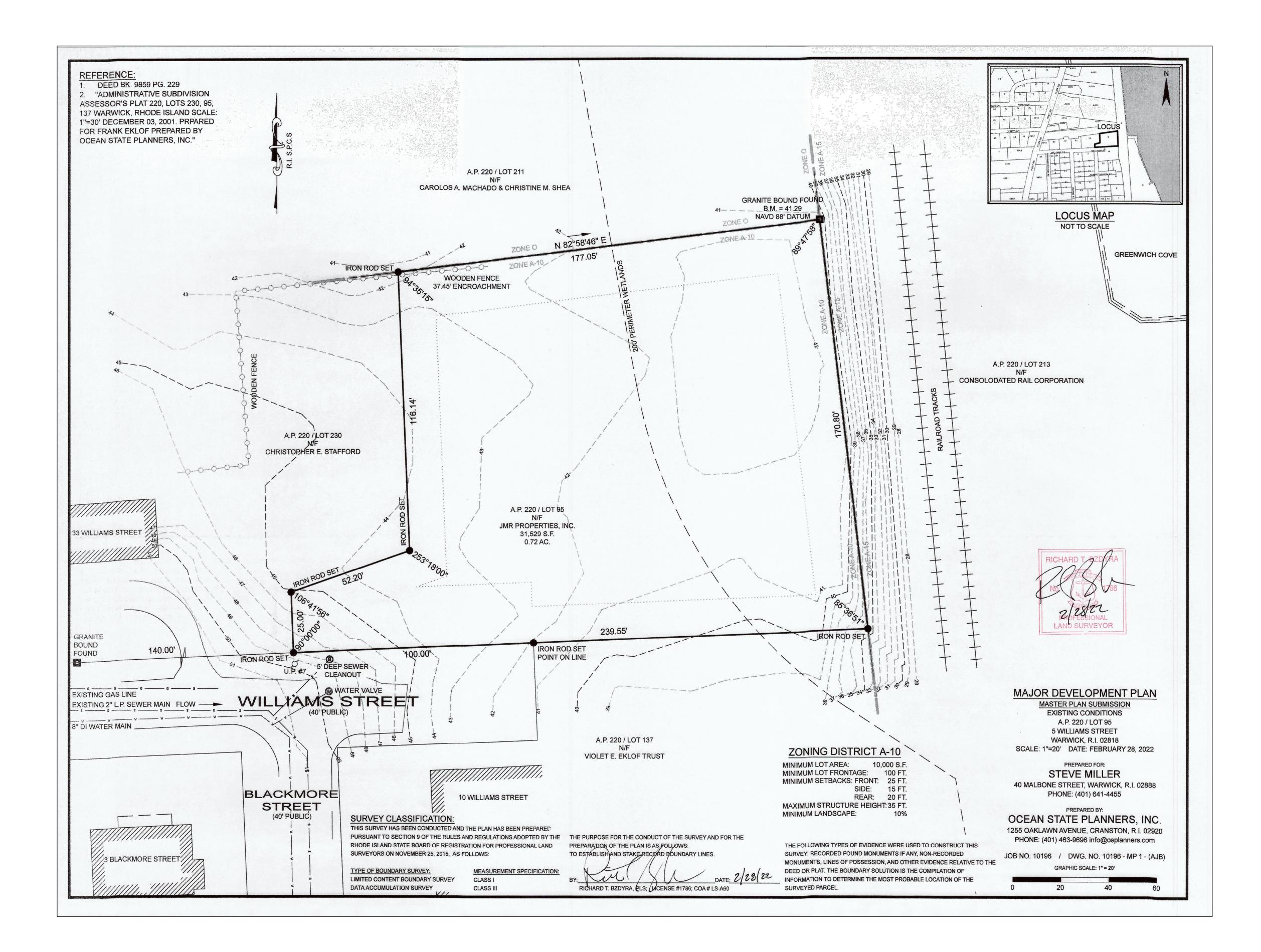
E OR STAINLESS STEEL DEPENDING ON SIZE. SHALL BE EPOXY COATED AWWA C-500.

MINIMUM 10 PSI.

4.18.1 PIPE BEDDING SHALL BE PROCESSED BORROW GRAVEL, GRANULAR IN NATURE, THE MAJOR PORTION OF WHICH MAY BE SAND OR GRAVEL. IT SHALL BE FREE FROM

JOSTROPLAN SOLOSTROPLAN JOST	
JOSEPH A. CASALI No. 7250 REGISTERED PROFESSIONAL PRGINEER CHVIL	
GREENWICH BAY TOWNHOUSES 5 WILLIAMS STREET 5 WILLIAMS STREET WARWICK, RHODE ISLAND AP 220, LOT 95	
NO. DATE.       DESCRIPTION         R1       1/9/22       REV. SETBACKS         R2       7/2023       PERMIT SET	
DESIGNED BY: WMLJR DRAWN BY: SEP CHECKED BY: JAC DATE: 20-10b PROJECT NO: NOV. 2022 PRELIMINARY, NOT FOR	
CONSTRUCTION KCWA NOTES	

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RITERIA		quirements for nonres	REGULATION
5.1 MINIMUM LANDSCAPED IFFER.		10' LANDSCAPED BUFFER ALONG WLLIAMS STREET	505.1 (A)
	20 FOOT WIDE LANDSCAPE BORDER REQUIRED ALONG ANY PROPERTY LINE THAT ABUT A RESIDENTIAL DISTRICT (PERTAINS TO LOTS AT LEAST 5,000 SQUARE FEET) AND BE SCREENED WITH A 6 FOOT TALL WALL OR FENCE OR EVERGREEN HEDGE.	20 FOOT WIDE LANDSCAPE BORDER AND 6' TALL STOCKADE FENCE ALONG PROPERTY LINES	505.1 (B, C)
	ALL OUTDOOR TRASH RECEPTACLES, DUMPSTER AND ELECTRICAL BOXES SHALL BE SCREENED BY A FENCE OR TIGHT EVERGREEN HEDGE	HOT BOX SCREENED WITH TIGHT EVERGREEN HEDGE % DUMPSTER SCREENED WITH 6' OPAQUE FENCE AND GATES	505.1 (D)
05.4 PLANT EQUIREMENTS AND SIZES.	SHRUBS SHALL FORM A CONTINUOUS VISUAL SCREEN AND SATISFY THE SIZE REQUIREMENTS OF THIS SECTION.	VISUAL SCREEN PROVIDED WITHIN REQUIREMENTS OF 505.4 (A.2) AND 505.4 (G.5)	505.4 (A.1)
	APPROX. EVERY 35 LIN. FT. OF LANDSCAPING SHALL CONTAIN 1 SHADE TREE AND 5 SHRUBS (EXCLUDING CURB CUTS)		505.4 (A.2)
	<u>WILLIAMS STREET:</u> 50 LIN. FT. OR 2 TREES & 50 LIN. FT. OR 5 SHRUBS	2 TREES & 8 SHRUBS	
	MINIMUM SIZE FOR SHADE TREES	2 ½" CALIPER	505.4 (G.3)
	SHALL BE BETWEEN 2 ½" AND 3" CALIPER AND 12-14 FT. IN HEIGHT.	2	000.4 (0.0)
	MINIMUM SIZE FOR EVERGREEN TREES SHALL BE BETWEEN 5 TO 8 FEET HEIGHT.	N/A	505.4 (G.4)
	MINIMUM SIZE FOR SHRUBS SHALL BE 3 FEET IN HEIGHT (B&B) OR 3 GALLON CONTAINERIZED.	3 GALLON	505.4 (G.5)
05.6 PARKING LOT UFFERS.	PROVIDE A 10 FOOT LANDSCAPED SETBACK BETWEEN THE STREET AND PARKING LOT TO BE PLANTED WITH TREES AND SHRUBS (WHEN PARKING IS DIRECTLY ADJACENT TO STREET)	N/A	505.6 (A.1)
	PROVIDE MINIMUM 5% INTERIOR PARKING LOT LANDSCAPING 6,177 SQ. FT. PARKING X 5%=309 SQ. FT. REQ'D	N/A	505.6 (B)
	PROVIDE CONTINUOUS LANDSCAPE STRIP BETWEEN EVERY 4 ROWS OF PARKING WITH MINIMUM OF 8 FT. WIDE	N/A	505.6 (B.1)
	CREATE LARGE PLANTING ISLANDS OVER 600 SF	N/A	505.6 (B.2)
	PROVIDE PLANTING ISLANDS (MIN. 9 FT WIDE) BETWEEN EVERY 10 TO 15 SPACES WITH 1 SHADE TREE	N/A	505.6 (B.3)

### CITY OF WARWICK LANDSCAPE PLANNING DATA-PDR Appendix A Zoning Section 300-Establishment and Classification of Districts

CRITERIA	REQUIRED	PROPOSED	REGULATION
308.2 OFF-STREET PARKING AND LANDSCAPING	A TEN-FOOT-WIDE BORDER OF GRASS, VEGETATION, OR OTHER LIVE GROUND COVER IS REQUIRED AROUND THE ENTIRE PERIMETER OF THE SITE, EXCEPT FOR ANY CURB CUTS.	10 FEET MDE WITH GRASS AND VEGETATION	308.2 (E)

PLANT	SCHE	

PLANT SCH	EDULE	_				- 33 WILL
	CODE	<u>QTY</u>	BOTANICAL / COMMON NAME	<u>B&amp;B</u>	CALIPER	- 33 WILL SINGLE-FAJ
	ZS	2	Zelkova serrata `Green Vase` / Green Vase Zelkova	B & B	2.5"Cal	
EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	<u>B&amp;B</u>	CALIPER	
A WINN MAN	TOE4	6	Thuja occidentalis `Emerald` / Emerald Arborvitae	B&B 5`-6` HT.		
FLOWERING TREES	<u>CODE</u>	<u>QTY</u>	BOTANICAL / COMMON NAME	<u>B&amp;B</u>	CALIPER	
$\bigcirc$	PC5	4	Prunus sargentii `Columnaris` / Columnar Sargent Cherry	B & B;	2"Cal	
<u>SHRUBS</u>	CODE	<u>QTY</u>	BOTANICAL / COMMON NAME	CONT/B&B	SIZE	
$\bigcirc \bigcirc$	СН	8	Clethra alnifolia `Hummingbird` / Summersweet	CONT	3 gal	EXISTING GAS LINE
	CI	7	Cornus sericea `Ivory Halo` / Variegated Redtwig Dogwood	CONT	3 gal	—S ————S —————————————————————————————
	HMNB	11	Hydrangea macrophylla `Nikko Blue` / Nikko Blue Hydrangea Mature Height: `-6`	CONT	3 gal	-WWW
$\bigcirc$	IH2	6	llex crenata `Hoogendoorn` / Hoogendoorn Japanese Holly	CONT	3 gal	
$\bigcirc$	IN2	7	llex glabra `Nordic` / Nordic Inkberry	CONT	3 gal	
٢	IGS2	6	llex glabra `Shamrock` / Inkberry	CONT	3 gal	
$\odot$	PO	16	Potentilla fruticosa `McKay`s White` / McKay`s White Bush Cinquefoil	CONT	2 gal	
$\bigcirc$	RN	3	Rhododendron catawbiense `Nova Zembla` / Catawba Rhododendron Mature Height: 5`	CONT	5 gal	
	WFM	5	Weigela florida `Minuet` / Minuet Weigela Mature Height: to 3`	CONT	3 gal	
PERENNIALS	CODE	QTY	BOTANICAL / COMMON NAME	CONT/B&B	SIZE	
	ACF	22	Astilbe chinensis `Finale` / Chinese Astilbe	CONT	1 gal	
₩	SA2	12	Sedum x `Autumn Fire` / Autumn Fire Sedum	CONT	1 gal	
		0				

NOTE: LOAM AND SEED ALL DISTURBED AREAS UNLESS OTHERWISE NOTED.

