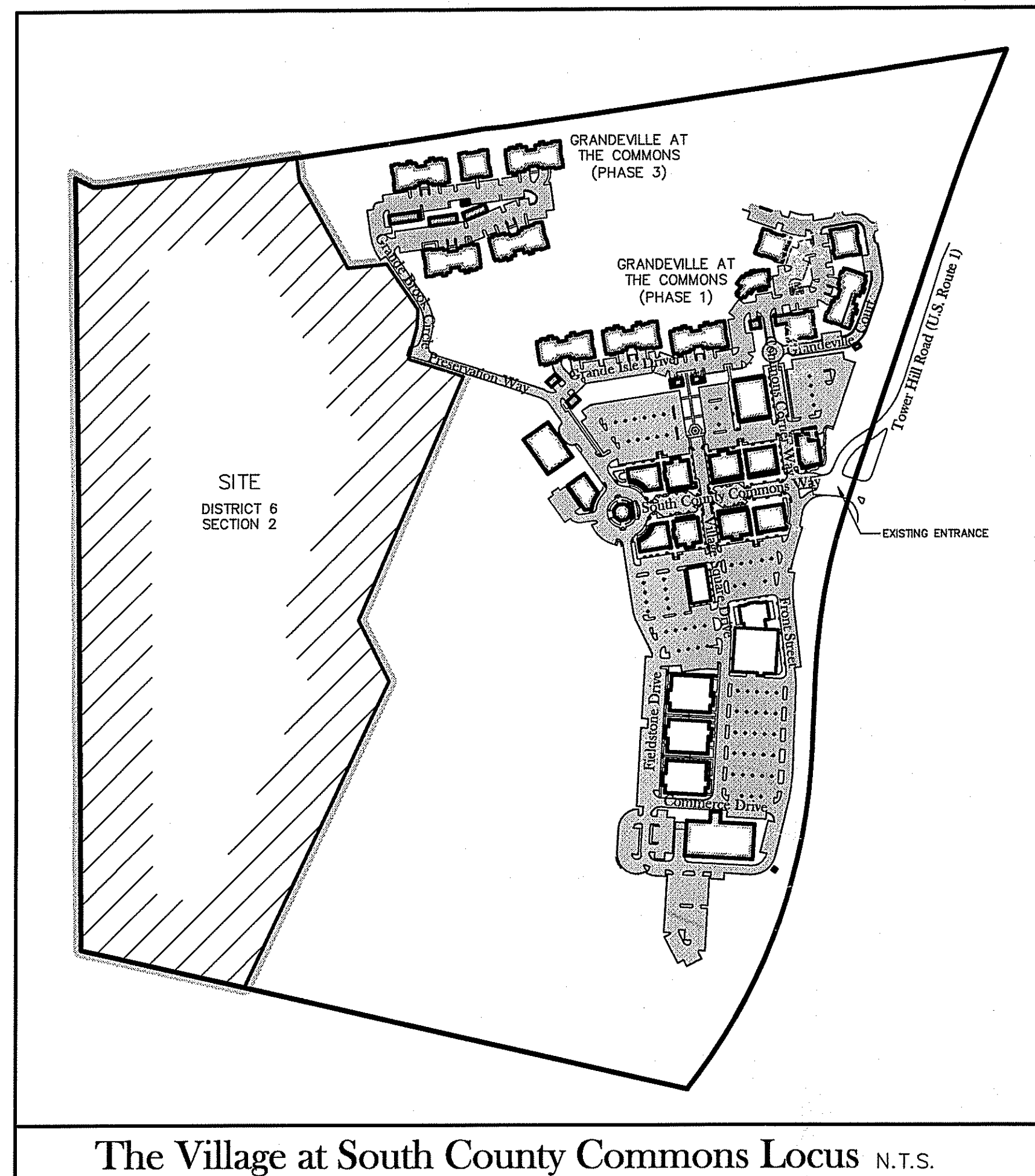


# R.I.D.E.M. Wetlands Submission

## The Village at South County Commons

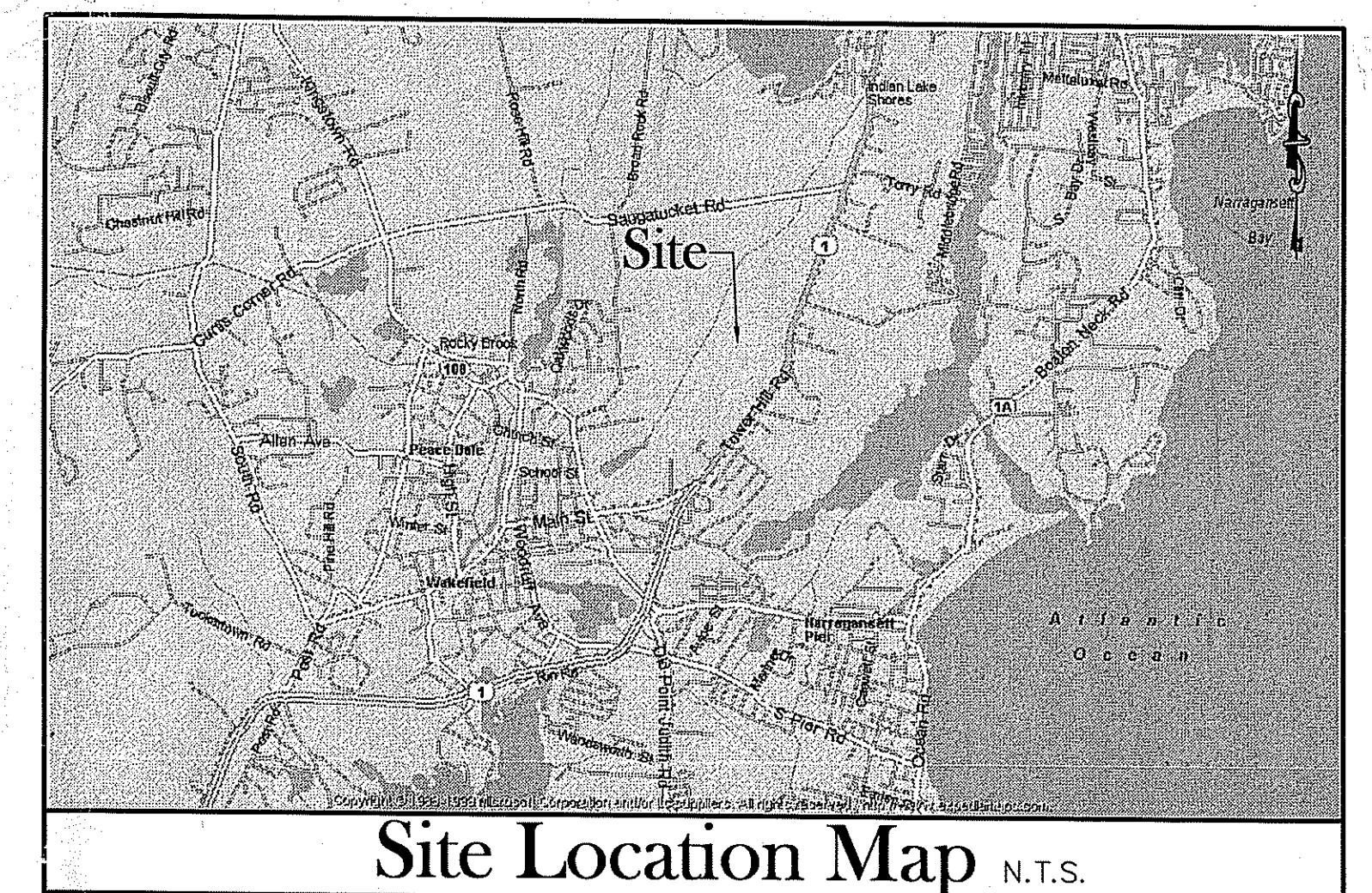
District 6, Section 2 Condominiums  
 South Kingstown, Rhode Island

A.P. 42 Lot 22



### Sheet Index

- |                        |                  |
|------------------------|------------------|
| 1. Cover Sheet         | 7. Utility Plan  |
| 2. Existing Conditions | 8. Profile       |
| 3. Overall Plan        | 9. Detail Sheet  |
| 4. Grading Plan        | 10. Detail Sheet |
| 5. Grading Plan        | 11. Detail Sheet |
| 6. Utility Plan        | 12. Detail Sheet |



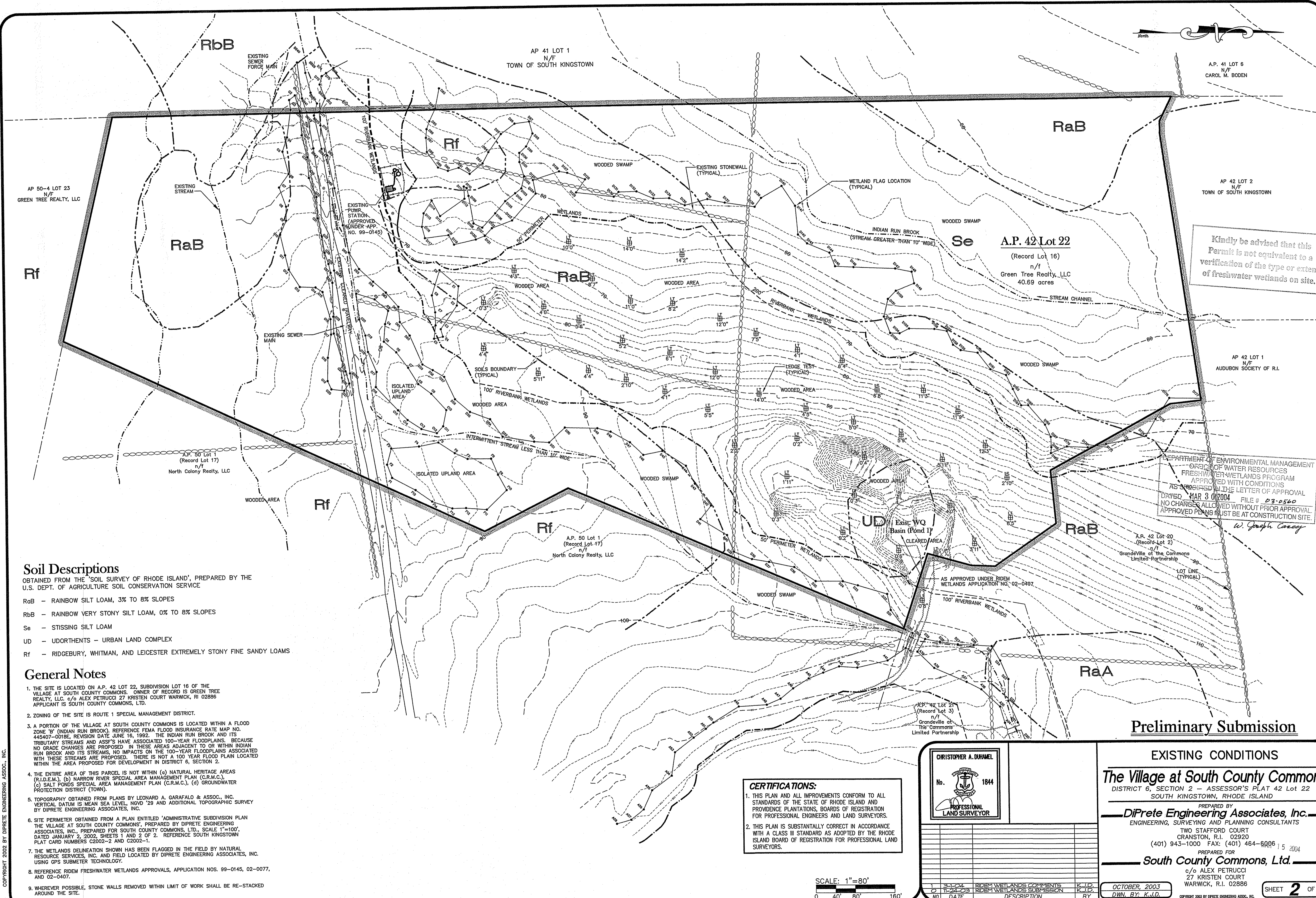
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED MAR 30 2004 FILE # 03-0560  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

*W. Joseph Carey*

Preliminary Submission

CHRISTOPHER A. DURAMEL No. 1844 PROFESSIONAL LAND SURVEYOR		KEVIN C. MORIN No. 7051 REGISTERED PROFESSIONAL ENGINEER CIVIL	
COVER SHEET			
<b>The Village at South County Commons</b>			
DISTRICT 6, SECTION 2- ASSESSOR'S PLAT 42 LOT 22 SOUTH KINGSTOWN, RHODE ISLAND			
PREPARED BY <b>DiPrete Engineering Associates, Inc.</b> ENGINEERING, SURVEYING AND PLANNING CONSULTANTS			
TWO STAFFORD COURT CRANSTON, R.I. 02920		MAR 15 2004	
(401) 943-1000 FAX: (401) 464-6006			
PREPARED FOR <b>South County Commons, Ltd.</b>			
c/o ALEX PETRUCCI 27 KRISTEN COURT WARWICK, R.I. 02886		OCTOBER, 2003 DWN. BY: K.J.D.	
1 3-1-03 RIDEM WETLANDS COMMENTS K.J.D. 2 11-22-03 RIDEM WETLANDS SUBMISSION K.J.D.		SHEET <b>1</b> OF 12 COPYRIGHT 2003 BY DIPRETE ENGINEERING ASSOC., INC.	



Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED MAR 30 2004 FILE # 03-0560  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

*W. Joseph Conroy*

**Soil Descriptions**

OBTAINED FROM THE 'SOIL SURVEY OF RHODE ISLAND', PREPARED BY THE U.S. DEPT. OF AGRICULTURE SOIL CONSERVATION SERVICE

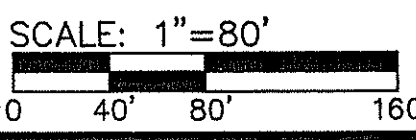
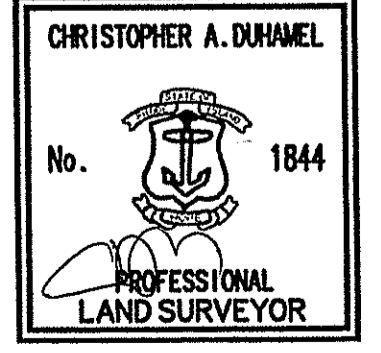
- RaB - RAINBOW SILT LOAM, 3% TO 8% SLOPES
- RbB - RAINBOW VERY STONY SILT LOAM, 0% TO 8% SLOPES
- Se - STISSING SILT LOAM
- UD - UDORTHENTS - URBAN LAND COMPLEX
- Rf - RIDGEBURY, WHITMAN, AND LEICESTER EXTREMELY STONY FINE SANDY LOAMS

**General Notes**

1. THE SITE IS LOCATED ON A.P. 42 LOT 22, SUBDIVISION LOT 16 OF THE VILLAGE AT SOUTH COUNTY COMMONS. OWNER OF RECORD IS GREEN TREE REALTY, LLC. c/o ALEX PETRUCCI 27 KRISTEN COURT WARWICK, RI 02886 APPLICANT IS SOUTH COUNTY COMMONS, LTD.
2. ZONING OF THE SITE IS ROUTE 1 SPECIAL MANAGEMENT DISTRICT.
3. A PORTION OF THE VILLAGE AT SOUTH COUNTY COMMONS IS LOCATED WITHIN A FLOOD ZONE 'B' (INDIAN RUN BROOK), REFERENCE FEMA FLOOD INSURANCE RATE MAP NO. 445407-0018E, REVISION DATE JUNE 16, 1992. THE INDIAN RUN BROOK AND ITS TRIBUTARY STREAMS AND ASS'NS HAVE ASSOCIATED 100-YEAR FLOODPLAINS. BECAUSE NO GRADE CHANGES ARE PROPOSED IN THESE AREAS ADJACENT TO OR WITHIN INDIAN RUN BROOK AND ITS STREAMS, NO IMPACTS ON THE 100-YEAR FLOODPLAINS ASSOCIATED WITH THESE STREAMS ARE PROPOSED. THERE IS NOT A 100 YEAR FLOOD PLAIN LOCATED WITHIN THE AREA PROPOSED FOR DEVELOPMENT IN DISTRICT 6, SECTION 2.
4. THE ENTIRE AREA OF THIS PARCEL IS NOT WITHIN (a) NATURAL HERITAGE AREAS (R.I.D.E.M.), (b) NARROW RIVER SPECIAL AREA MANAGEMENT PLAN (C.R.M.C.), (c) SALT PONDS SPECIAL AREA MANAGEMENT PLAN (C.R.M.C.), (d) GROUNDWATER PROTECTION DISTRICT (TOWN).
5. TOPOGRAPHY OBTAINED FROM PLANS BY LEONARD A. GARAFALO & ASSOC., INC. VERTICAL DATUM IS MEAN SEA LEVEL, NGVD '29 AND ADDITIONAL TOPOGRAPHIC SURVEY BY DIPRETE ENGINEERING ASSOCIATES, INC.
6. SITE PERIMETER OBTAINED FROM A PLAN ENTITLED 'ADMINISTRATIVE SUBDIVISION PLAN THE VILLAGE AT SOUTH COUNTY COMMONS', PREPARED BY DIPRETE ENGINEERING ASSOCIATES, INC., PREPARED FOR SOUTH COUNTY COMMONS, LTD., SCALE 1"=100', DATED JANUARY 2, 2002, SHEETS 1 AND 2 OF 2. REFERENCE SOUTH KINGSTOWN PLAT CARD NUMBERS C2002-2 AND C2002-1.
7. THE WETLANDS DELINEATION SHOWN HAS BEEN FLAGGED IN THE FIELD BY NATURAL RESOURCE SERVICES, INC. AND FIELD LOCATED BY DIPRETE ENGINEERING ASSOCIATES, INC. USING GPS SUBMETER TECHNOLOGY.
8. REFERENCE RIDEM FRESHWATER WETLANDS APPROVALS, APPLICATION NOS. 99-0145, 02-0077, AND 02-0407.
9. WHEREVER POSSIBLE, STONE WALLS REMOVED WITHIN LIMIT OF WORK SHALL BE RE-STACKED AROUND THE SITE.

**CERTIFICATIONS:**

1. THIS PLAN AND ALL IMPROVEMENTS CONFORM TO ALL STANDARDS OF THE STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS, BOARDS OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.
2. THIS PLAN IS SUBSTANTIALLY CORRECT IN ACCORDANCE WITH A CLASS III STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.



**Preliminary Submission**

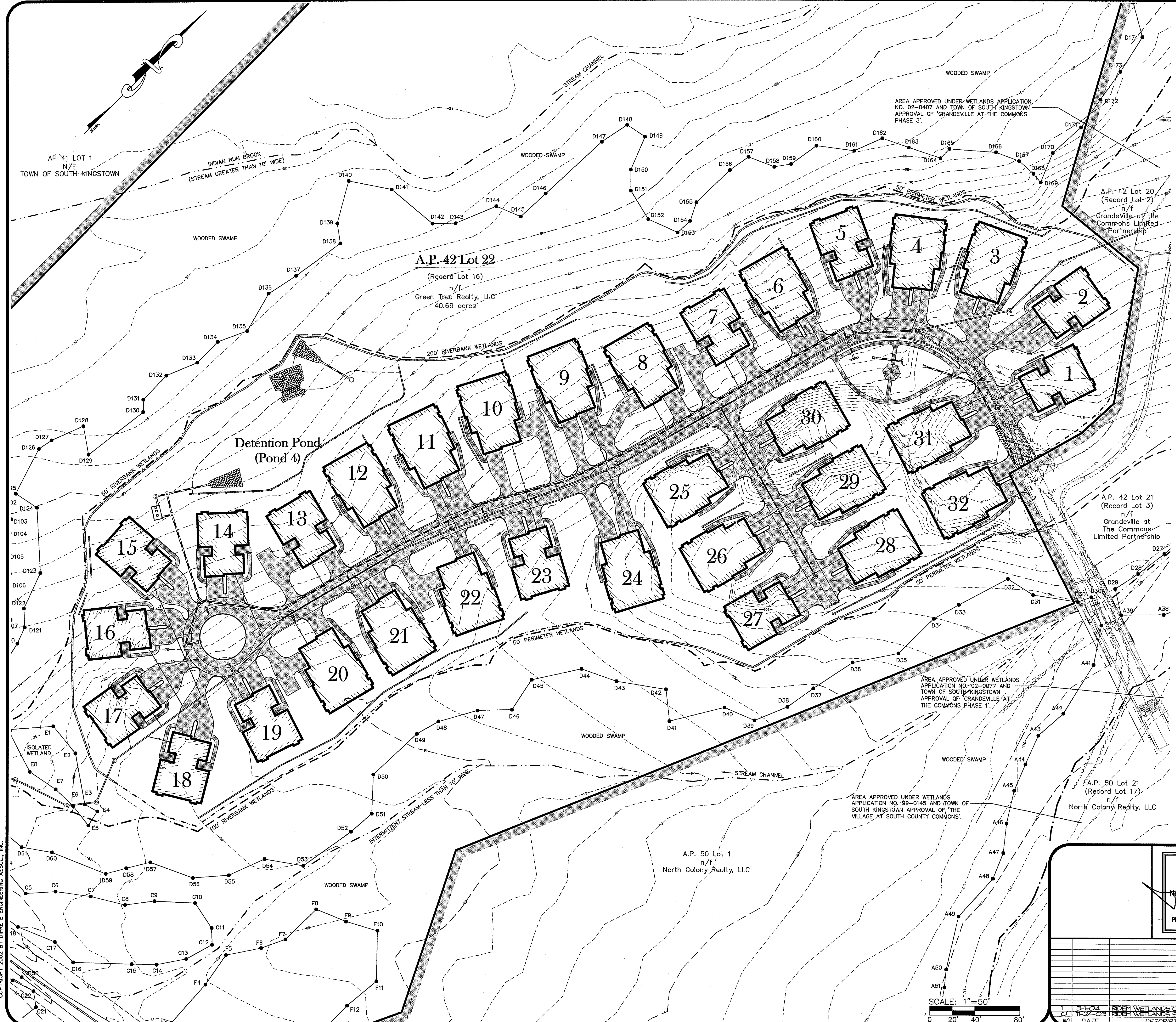
**EXISTING CONDITIONS**  
**The Village at South County Commons**  
 DISTRICT 6, SECTION 2 - ASSESSOR'S PLAT 42 Lot 22  
 SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY  
**DiPrete Engineering Associates, Inc.**  
 ENGINEERING, SURVEYING AND PLANNING CONSULTANTS  
 TWO STAFFORD COURT  
 CRANSTON, R.I. 02920  
 (401) 943-1000 FAX: (401) 464-6006 15 2004

PREPARED FOR  
**South County Commons, Ltd.**  
 c/o ALEX PETRUCCI  
 27 KRISTEN COURT  
 WARWICK, R.I. 02886

OCTOBER, 2003  
 DWN. BY: K.J.D.

COPYRIGHT 2002 BY DIPRETE ENGINEERING ASSOC., INC.  
 C:\Kevin D Loria Projects\0207-0209 Phase 4 Dwg\0207-0209 Phase 4 Prelim K.J.D. Bl.dwg, 2sk, 3/18/2004, 6:46:45 PM



### Symbol Legend

- - - 138	Existing 2' contour	⊕	CI & station marker
- - - 140	Existing 10' contour	⊖	Existing stone wall
- - - 142	Proposed 2' contour	⊗	Wetland flag
—	Tree line	⊘	Proposed haybale line with silt fence
—	Proposed retaining wall	—	Proposed watermain
—	Drainage flow direction	—	Proposed water service
—	Proposed sewer main	⊙	Proposed hydrant
—	Proposed sewer lateral	⊚	Proposed gatevalve
—	Proposed drainage line	⊛	Proposed thrustblock
—	Proposed closed drainage line from foundation drains	⊜	Proposed top/bottom curb elevation
⊙	Proposed catch basin	⊝	Proposed top/bottom wall elevation
⊖	Proposed manhole	⊞	Proposed top/bottom berm elevation
⊗	Proposed flared end	⊟	Proposed bottom step elevation
⊘	Proposed rip-rap	⊠	Top fence elevation

**Construction Schedule**  
 THE SITE WILL BEGIN CONSTRUCTION IN SUMMER 2004 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.

**Construction Notes**

1. THE SITE IS TO BE SERVICED BY PUBLIC WATER AND PUBLIC SEWER.
2. THE DRAINAGE SYSTEM IS DESIGNED TO MEET THE TOWN OF SOUTH KINGSTOWN SUBDIVISION REGULATIONS WITH THE USE OF CATCH BASINS, CULVERTS, RAIN GARDENS, AND A DRAINAGE DETENTION BASIN. THE BASIN IS SIZED TO CONTROL THE DISCHARGE OF STORMWATER TO LEVELS WHICH PRESENTLY EXIST FOR THE 2-100 YEAR STORMS. THE STORMWATER MANAGEMENT MEETS THE BEST MANAGEMENT PRACTICES OF THE R.I.D.E.M.
3. ALL RETAINING WALLS (WITH THE EXCEPTION OF BUILDING WALKWAYS) SHALL BE TOPPED WITH A FENCE.

**Residential Development Data**  
 TOTAL LOT AREA = 40.69 ACRES  
 TOTAL USEABLE AREA = 18.94 ACRES

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

**Density Calculations**  
 64 2-BEDROOM / 4 UNITS/ACRE = 16.00 ACRES REQUIRED  
 (64 UNITS PROPOSED) (16.00 MIN. USEABLE AC. REQ., 18.94 AC. PROP.)  
 75 UNITS MAX. AS PER DENSITY CALCULATIONS

**Parking Calculations**  
 64 UNITS X 2.0 SPACES/UNIT = 128 SPACES MIN. (256 SPACES PROPOSED)  
 128 SPACES IN FRONT OF GARAGES,  
 128 GARAGE SPACES

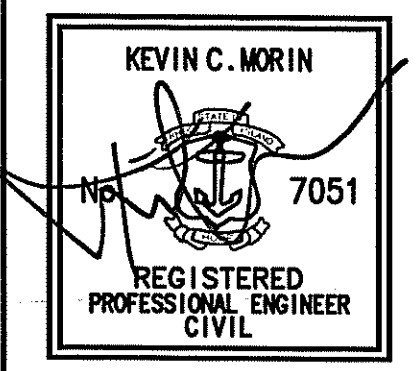
**Trash Disposal**  
 TRASH DISPOSAL WILL BE COORDINATED BY A PRIVATE TRASH COLLECTION COMPANY AND PICKED UP AT EACH INDIVIDUAL UNIT ON A WEEKLY OR BI-WEEKLY BASIS.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED MAR 30 2004 FILE # 03-0560  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE.  
*W. Joseph Corney*

**DIMENSIONAL REGULATIONS**

ZONING:	ROUTE 1 SPECIAL MANAGEMENT DISTRICT
MINIMUM LOT AREA	5,000 S.F.
MINIMUM FRONTAGE	50 FT.
MINIMUM FRONT YARD SETBACK	10 FT.
MINIMUM SIDE YARD SETBACK	10 FT.
MINIMUM REAR YARD SETBACK	25 FT.
MINIMUM SPACING BETWEEN	20 FT.
HABITABLE UNITS WITH WINDOWS	

**Preliminary Submission**



**OVERALL PLAN**  
**The Village at South County Commons**  
 DISTRICT 6, SECTION 2 - ASSESSOR'S PLAT 42 Lot 22  
 SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY  
**DiPrete Engineering Associates, Inc.**  
 WOODENHUBBERING, SURVEYING AND PLANNING CONSULTANTS  
 TWO STAFFORD COURT  
 CRANSTON, R.I. 02920  
 (401) 943-1000 FAX: (401) 464-6006 MAR 15 2004

PREPARED FOR  
**South County Commons, Ltd.**  
 c/o ALEX PETRUCCI  
 27 KRISTEN COURT  
 WARWICK, R.I. 02886

SCALE: 1" = 50'

NO.	DATE	DESCRIPTION	BY
1	3-1-04	RIDER WETLANDS COMMENTS	K.J.D.
2	3-22-03	RIDER WETLANDS SUBMISSION	K.J.D.

OCTOBER, 2003  
 DWN. BY: K.J.D.

SHEET **3** OF 12

COPYRIGHT 2002 BY DIPRETE ENGINEERING ASSOC., INC.

C:\Kevin D Land Projects\0267-059 Phase 4.Dwg\367-059 Phase 4 Prelim KJD Rd.dwg, 3/18/2004, 6:46:57 PM

**Construction Notes**

1. ALL RETAINING WALLS AND STEEP SLOPES ARE SHOWN SCHEMATICALLY ONLY AND DIPRETE ENGINEERING ASSOCIATES, INC. IS NOT PROVIDING THE DESIGN OF THESE ITEMS. THE ACTUAL WALLS AND SLOPES ARE TO BE BUILT UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER AND CERTIFIED TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT.
2. ALL CUT AND FILL AREAS ARE TO BE DONE UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER WITH TESTING AND CERTIFICATION TO BE PROVIDED TO THE OWNER AT THE COMPLETION OF THE PROJECT. DIPRETE ENGINEERING ASSOCIATES, INC. HAS NOT PROVIDED THE FULL SPECIFICATION, GEOTECHNICAL ENGINEERING, STRUCTURAL ENGINEERING SERVICES, OR SUPERVISION AS PART OF THESE DRAWINGS.
3. ADDITIONAL SUBDRAINS MAY BE REQUIRED IN THE AREAS OF THE CUT SLOPES TO CONTROL GROUNDWATER.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED MAR 30 2004 FILE # 03-0560  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.  
*W. Joseph Carney*

PROP. LIMIT OF CLEARING TO MATCH LIMIT OF CLEARING APPROVED UNDER RIDEM WETLANDS PERMIT NO. 02-0407  
AREA APPROVED UNDER WETLANDS APPLICATION NO. 02-0407 AND TOWN OF SOUTH KINGSTOWN APPROVAL OF "GRANDEVILLE AT THE COMMONS" PHASE 3.

A.P. 42 Lot 20 (Record Lot 2) n/f Grandeville at the Commons Limited Partnership  
**Preliminary Submission**

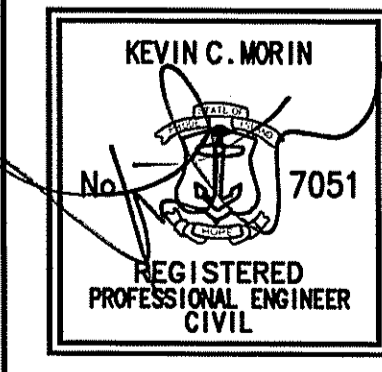
**GRADING PLAN**

**The Village at South County Commons**  
DISTRICT 6, SECTION 2 - ASSESSOR'S PLAT 42 Lot 22 SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY  
**DiPrete Engineering Associates, Inc.**  
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS  
TWO STAFFORD COURT  
CRANSTON, R.I. 02920  
(401) 943-1000 FAX: (401) 464-8006

PREPARED FOR  
**South County Commons, Ltd.**  
c/o ALEX PETRUCCI  
27 KRISTEN COURT  
WARWICK, R.I. 02886

OCTOBER, 2003  
DWN. BY: K.J.D.  
SHEET 4 OF 12



NO.	DATE	DESCRIPTION	BY
1	3-1-04	RIDER WETLANDS COMMENTS	K.J.D.
2	11-24-03	RIDER WETLANDS SUBMISSION	K.J.D.

SCALE: 1" = 30'  
0 30' 60' 120'

TEMPORARY DRAINAGE FOR TEMPORARY WATER QUALITY BASIN (SEE APP. NO. 02-0407) SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL/STATE LAWS.



C:\Kevin D Land Projects\0267-059 Phase 4 Dwg\0267-059 Phase 4 Prelim KJD Ridwg. Agr. 3/6/2004 @4715 PM

**Construction Notes**

1. ALL RETAINING WALLS AND STEEP SLOPES ARE SHOWN SCHEMATICALLY ONLY AND DIPRETE ENGINEERING ASSOCIATES, INC. IS NOT PROVIDING THE DESIGN OF THESE ITEMS. THE ACTUAL WALLS AND SLOPES ARE TO BE BUILT UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER AND CERTIFIED TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT.
2. ALL CUT AND FILL AREAS ARE TO BE DONE UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER WITH TESTING AND CERTIFICATION TO BE PROVIDED TO THE OWNER AT THE COMPLETION OF THE PROJECT. DIPRETE ENGINEERING ASSOCIATES, INC. HAS NOT PROVIDED THE FILL SPECIFICATION, GEOTECHNICAL ENGINEERING, STRUCTURAL ENGINEERING SERVICES, OR SUPERVISION AS PART OF THESE DRAWINGS.
3. ADDITIONAL SUBDRAINS MAY BE REQUIRED IN THE AREAS OF THE CUT SLOPES TO CONTROL GROUNDWATER.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: MAR 30 2004 FILE # 03-0560  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITES

*W. Joseph Carey*

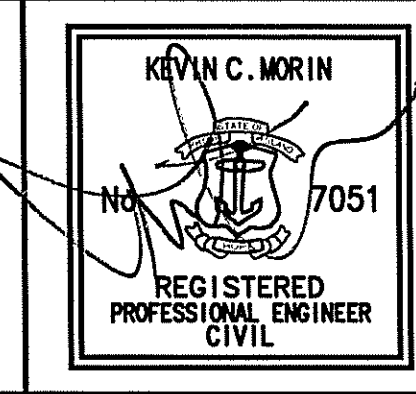
**Preliminary Submission**

**GRADING PLAN**

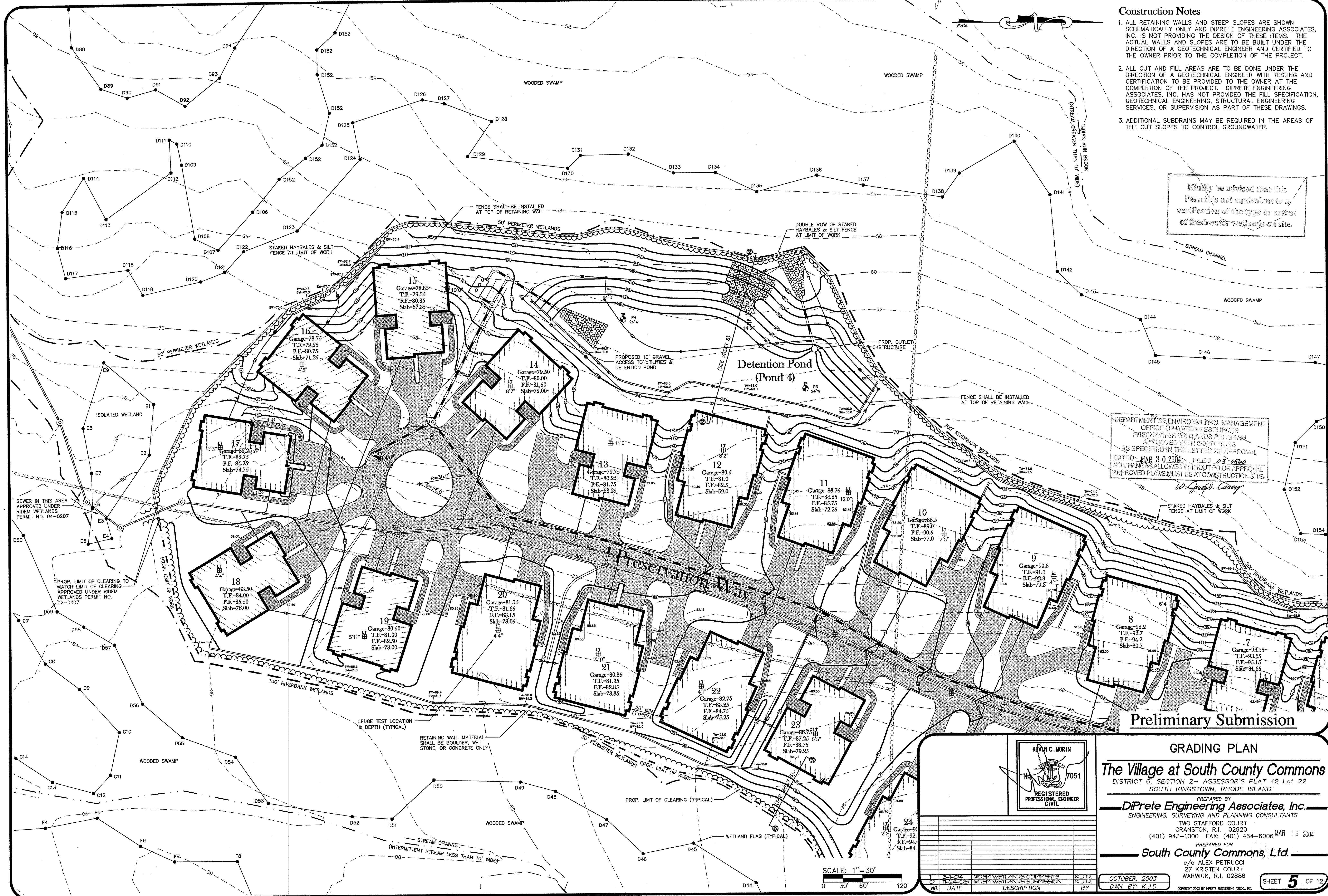
**The Village at South County Commons**  
DISTRICT 6, SECTION 2 - ASSESSOR'S PLAT 42 Lot 22  
SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY  
**DiPrete Engineering Associates, Inc.**  
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS  
TWO STAFFORD COURT  
CRANSTON, R.I. 02920  
(401) 943-1000 FAX: (401) 464-6006 MAR 15 2004

PREPARED FOR  
**South County Commons, Ltd.**  
c/o ALEX PETRUCCI  
27 KRISTEN COURT  
WARWICK, R.I. 02886



NO.	DATE	DESCRIPTION	BY
1	3-1-04	RIDEM WETLANDS COMMENTS	K.J.D.
2	11-24-03	RIDEM WETLANDS SUBMISSION	K.J.D.



C:\Kevin D Land Projects\0267-059 Phase 4 Prelim\KJD RLdwg 59r 3/16/2004 6:47:40 PM

**Utility Notes:**

- SEWER MANHOLES NOTED WITH A "\*" INDICATE ALREADY APPROVED STRUCTURES UNDER PREVIOUS RIDEM WETLANDS APPROVAL NO. 02-0407 DATED JANUARY 9, 2003.
- DOWNSPOUT LOCATIONS (NOT SHOWN) SHALL BE PROVIDED BY ARCHITECT PRIOR TO CONSTRUCTION. ROOF DRAINS SHALL BE DISCONNECTED FROM THE STORM SEWER WHEREVER POSSIBLE BY USE OF SPLASH BLOCKS AND OVERLAND FLOW. ALL ROOF RUNOFF WILL BE CONTAINED IN THE DETENTION POND WATERSHED, EXCEPT WHERE SHOWN ON THE WATERSHED MAPS.
- ONLY EXTERNAL SUBDRAINS ARE SHOWN ON THIS PLAN. INTERNAL SUBDRAINS TO BE INCORPORATED BENEATH SLAB. THIS SCHEMATIC SHALL BE PROVIDED BY ARCHITECT.
- ALL DRAINAGE PIPES NOTED AS "ADS" SHALL BE PERFORMED COMBINATION DRAINS UNLESS OTHERWISE NOTED.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED MAR 30 2004 FILE # 03-0510  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

*W. Joseph (signature)*

Kindly be advised that this  
Permit is not equivalent to a  
verification of the type or extent  
of freshwater wetlands on site.



**Preliminary Submission**

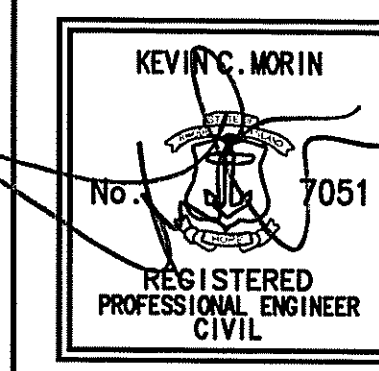
**UTILITY PLAN**

**The Village at South County Commons**  
DISTRICT 6, SECTION 2- ASSESSOR'S PLAT 42 Lot 22  
SOUTH KINGSTOWN, RHODE ISLAND

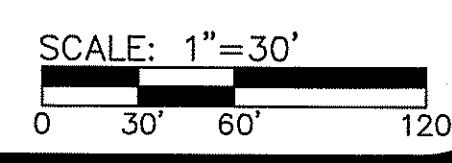
PREPARED BY  
**DiPrete Engineering Associates, Inc.**  
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS  
TWO STAFFORD COURT  
CRANSTON, R.I. 02920  
(401) 943-1000 FAX: (401) 464-6006

PREPARED FOR  
**South County Commons, Ltd.**  
c/o ALEX PETRUCCI  
27 KRISTEN COURT  
WARWICK, R.I. 02886

OCTOBER, 2003  
DWN. BY: K.J.D. SHEET **6** OF 12



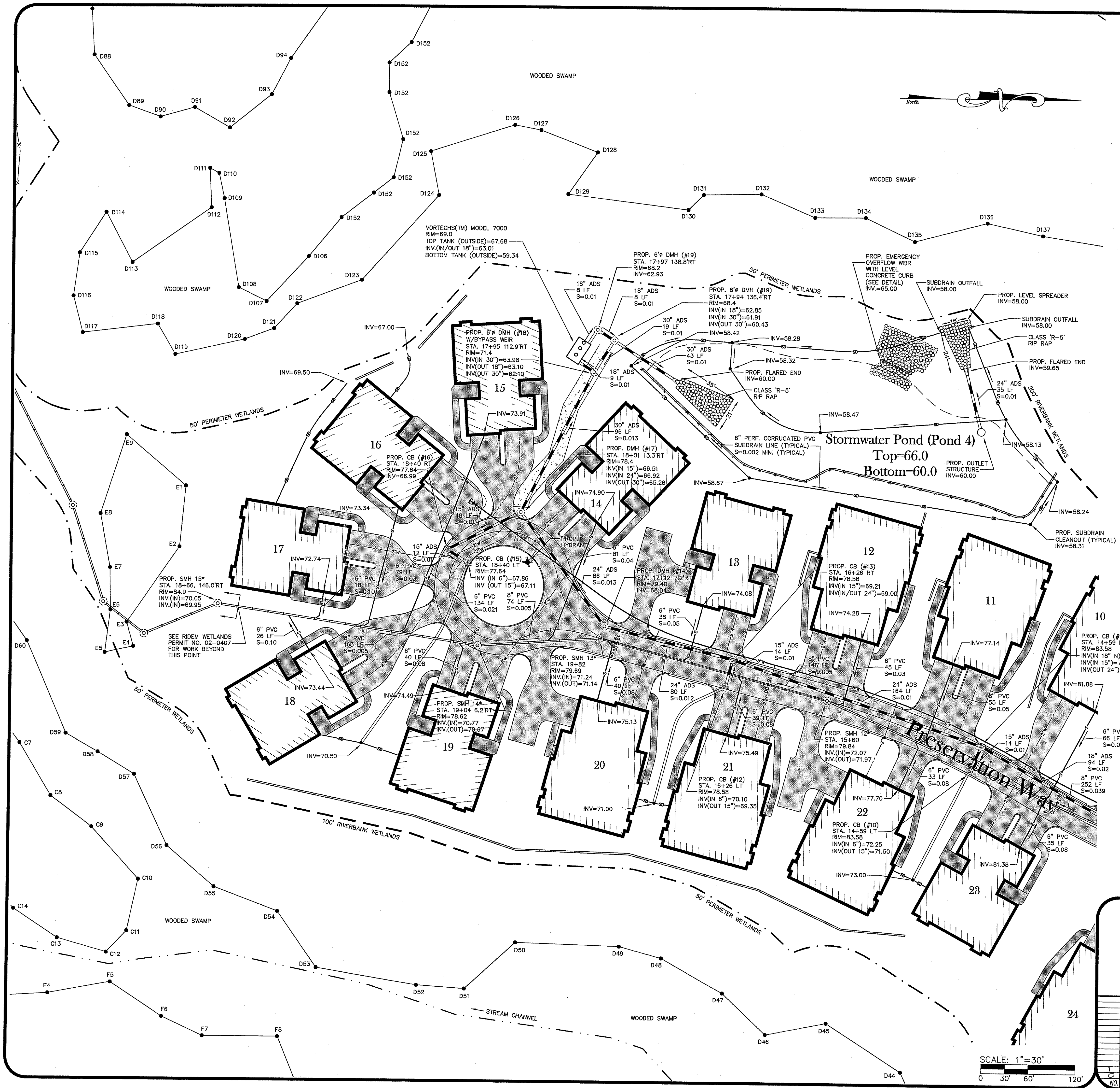
NO.	DATE	DESCRIPTION	BY
1	9-1-04	RIDEM WETLANDS COMMENTS	K.J.D.
2	11-24-03	RIDEM WETLANDS SUBMISSION	K.J.D.



C:\Kevin D Land Projects\0207-0259 Phase 4 Prelim KJD R.dwg, Cur. 3/18/2004, 6:47:58 PM

**Utility Notes:**

- SEWER MANHOLES NOTED WITH A "\*" INDICATE ALREADY APPROVED STRUCTURES UNDER PREVIOUS RIDEM WETLANDS APPROVAL NO. 02-0407 DATED JANUARY 9, 2003.
- DOWNSPOUT LOCATIONS (NOT SHOWN) SHALL BE PROVIDED BY ARCHITECT PRIOR TO CONSTRUCTION. ROOF DRAINS SHALL BE DISCONNECTED FROM THE STORM SEWER WHEREVER POSSIBLE BY USE OF SPLASH BLOCKS AND OVERLAND FLOW. ALL ROOF RUNOFF WILL BE CONTAINED IN THE DETENTION POND WATERSHED, EXCEPT WHERE SHOWN ON THE WATERSHED MAPS.
- ONLY EXTERNAL SUBDRAINS ARE SHOWN ON THIS PLAN. INTERNAL SUBDRAINS TO BE INCORPORATED BENEATH SLAB. THIS SCHEMATIC SHALL BE PROVIDED BY ARCHITECT PRIOR TO CONSTRUCTION.
- ALL DRAINAGE PIPES NOTED AS 'ADS' SHALL BE PERFORATED COMBINATION DRAINS UNLESS OTHERWISE NOTED.

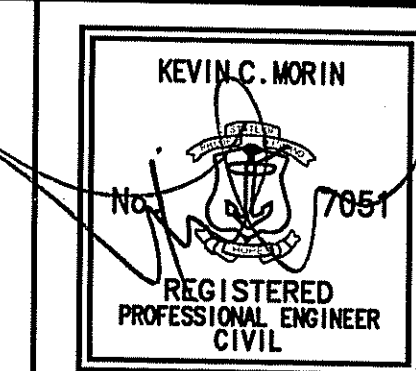


Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED MAR 3 0 2004 FILE # 03-2560  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

*W. Joseph C. Conway*

**Preliminary Submission**

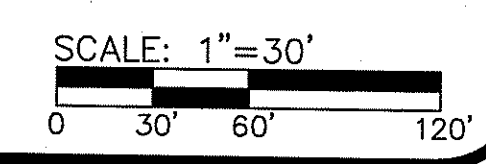


**UTILITY PLAN**  
**The Village at South County Commons**  
DISTRICT 6, SECTION 2 - ASSESSOR'S PLAT 42 Lot 22  
SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY  
**DiPrete Engineering Associates, Inc.**  
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS  
TWO STAFFORD COURT  
CRANSTON, R.I. 02920  
(401) 943-1000 FAX: (401) 464-6006 MAR 15 2004

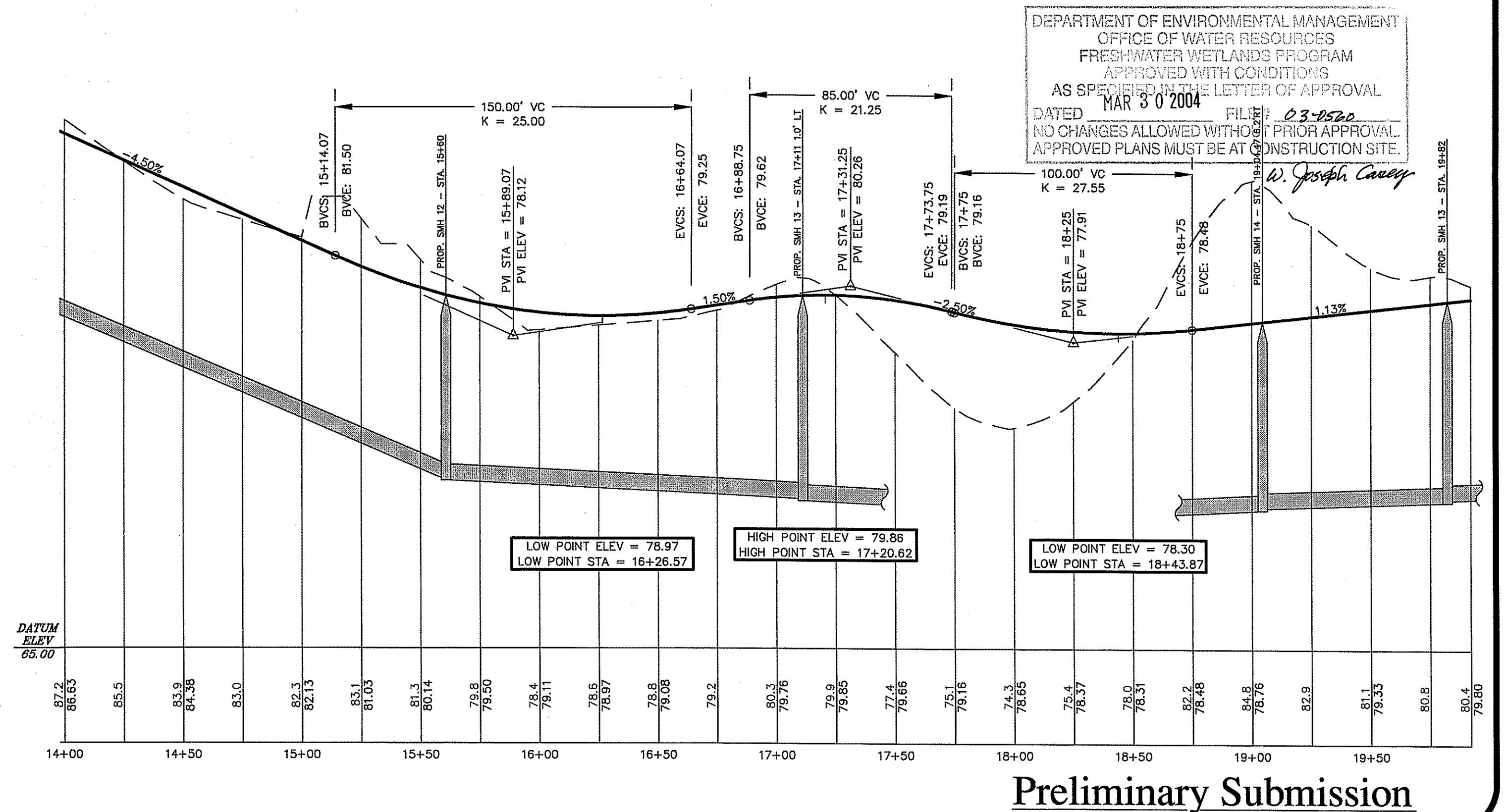
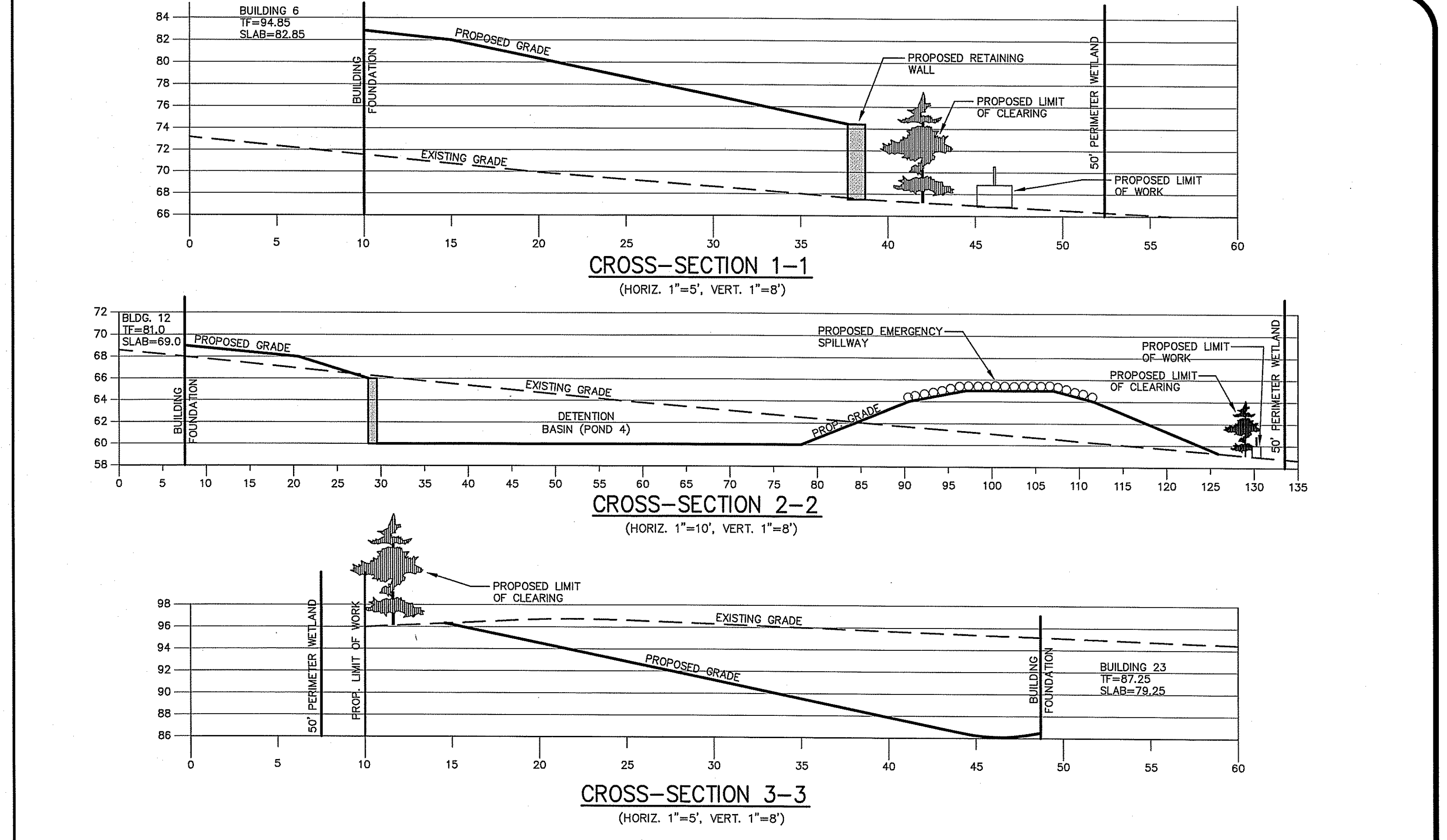
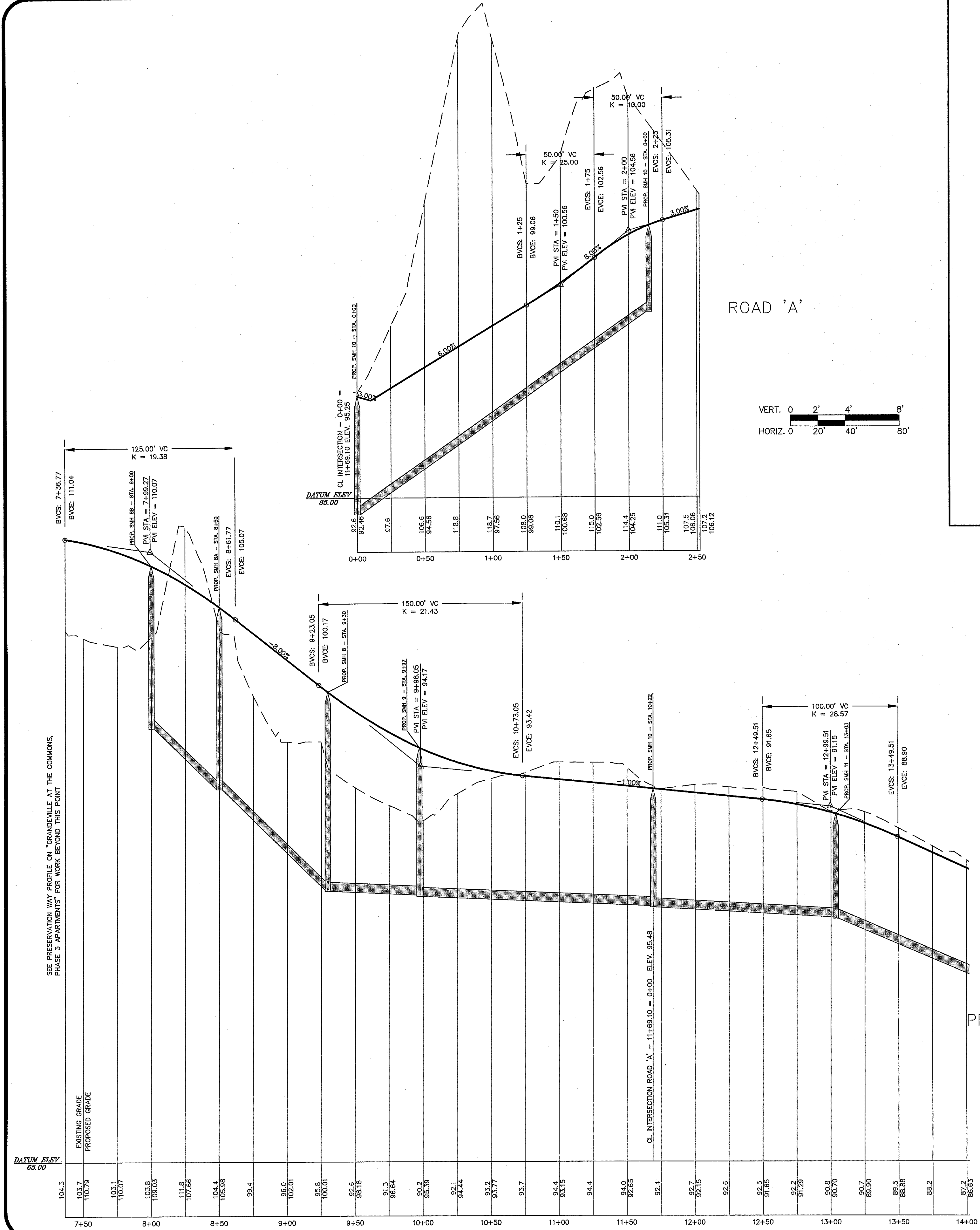
PREPARED FOR  
**South County Commons, Ltd.**

c/o ALEX PETRUCCI  
27 KRISTEN COURT  
WARWICK, R.I. 02886



NO.	DATE	DESCRIPTION	BY
1	3-1-04	RIDEM WETLANDS COMMENTS	K.J.D.
2	11-24-03	RIDEM WETLANDS SUBMISSION	K.J.D.

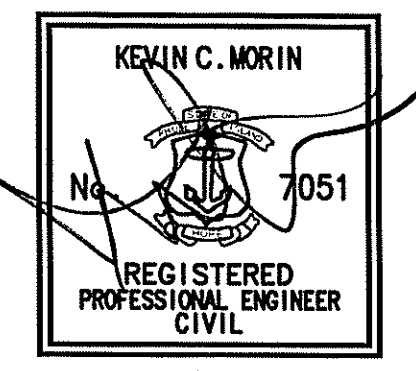
C:\New\1 Land Projects\0267-059 Phase 4 Dwg\0267-059 Phase 4 Prelim\_KJD Rdwg.dwg, Apr. 3/9/2004 6:48:51 PM



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED **MAR 30 2004**  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

*W. Joseph Casey*

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.



**PROFILE**

**The Village at South County Commons**  
DISTRICT 6, SECTION 2- ASSESSOR'S PLAT 42 Lot 22  
SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY  
**DiPrete Engineering Associates, Inc.**  
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS  
TWO STAFFORD COURT  
CRANSTON, R.I. 02920  
(401) 943-1000 FAX: (401) 464-6006

PREPARED FOR  
**South County Commons, Ltd.**  
c/o ALEX PETRUCCI  
27 KRISTEN COURT  
WARWICK, R.I. 02886

OCTOBER, 2003  
DWN. BY: K.J.D.

MAR 15 2004

SHEET **8** OF 12

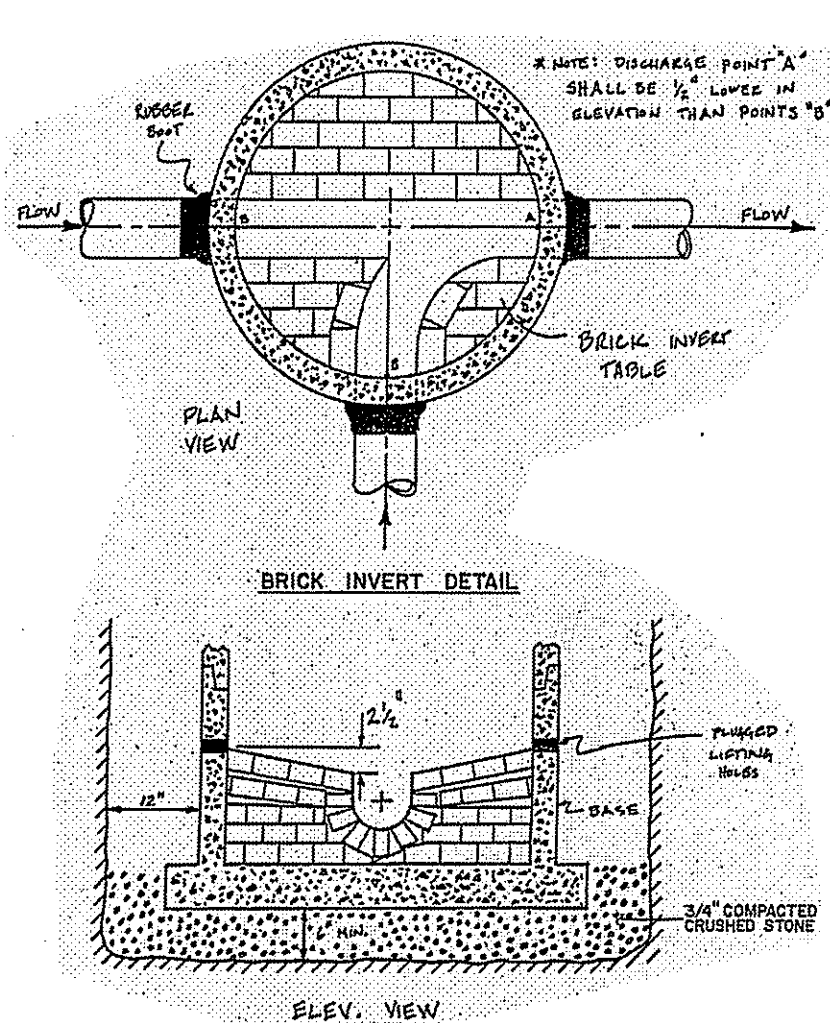
NO.	DATE	DESCRIPTION	BY
1	3-1-04	RIDEW WETLANDS COMMENTS	KJD
2	11-24-03	RIDEW WETLANDS SUBMISSION	KJD

**Water Details**

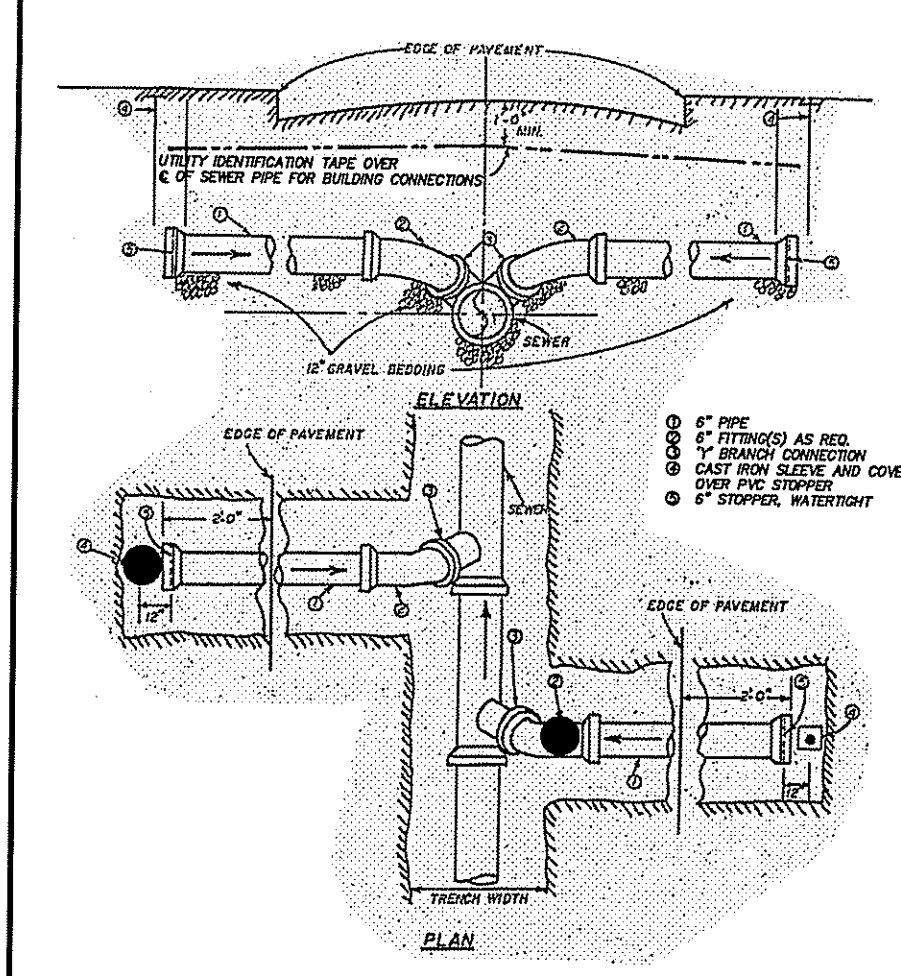
- ALL WORK AND MATERIAL OF WATER LINE SHALL BE IN ACCORDANCE WITH RULES AND REGULATIONS SET FORTH BY THE UNITED WATER BOARD ISLAND INSTALLATION PROCEDURES AND MATERIALS TO CONFORM TO UNITED WATER, R.I. SPECIFICATIONS AND ART. II OF THE SOUTH KINGSTOWN TOWN ORDINANCES. A PRECONSTRUCTION MEETING SHALL BE HELD PRIOR TO ORDER OF MATERIALS AND WATER MAIN INSTALLATION.
- WATER MAIN INSTALLATION SHALL BE INSPECTED BY UNITED WATER, R.I. PRIOR TO BACKFILLING THE TRENCH.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UNITED WATER, R.I. FIVE (5) DAYS PRIOR TO START OF CONSTRUCTION.
- CHLORINATION OF SYSTEM AND SAMPLING SHALL CONFORM TO AWWA REQUIREMENTS FOR SERVICE AND MAIN INSTALLATIONS.
- THE CONTRACTOR SHALL NOTIFY THE DIRECTOR OF WATER SUPPLY AT LEAST TWO WORKING DAYS IN ADVANCE FOR FINAL INSPECTION.
- WHENEVER, IN THESE SPECIFICATIONS, REFERENCE IS MADE TO THE REQUIREMENTS OF AWWA, ANSI, ASTM OR ANY OTHER STANDARD SPECIFICATION, THE REFERENCE IS MADE TO THE LATEST REVISIONS OR MODIFICATIONS OF SUCH REQUIREMENTS AND SPECIFICATIONS.
- ALL PIPE, FITTINGS, AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH AWWA AND ANSI STANDARDS AND THE MANUFACTURER'S SUGGESTED RECOMMENDATIONS FOR INSTALLATIONS.
- PIPELINES SHALL BE CONSTRUCTED IN DRY TRENCHES AND LAID TO THE LINE GRADE. WHENEVER PIPE IS TO BE INSTALLED IN SATURATED SOIL CONDITIONS A BEDDING OF PROCESSED GRANULAR FILTER MATERIAL SHALL BE PROVIDED.
- ALL BENDS, CROSSES, TEES, END CAPS AND PLUGS, VALVES AND ANY OTHER APPURTENANCES SHALL BE RESTRAINED WITH THRUST BLOCKS, STRAPPING OR ANCHORS.
- JOINTING OF MECHANICAL AND PUSH ON TYPE JOINTS SHALL BE PERFORMED IN STRICT ACCORDANCE WITH AWWA STANDARD C-600, UNITED WATER, R.I. AND SOUTH KINGSTOWN SPECIFICATIONS. RUBBER GASKETS AND RINGS SHALL BE SUITABLE FOR USE WITH POTABLE WATER AND THOROUGHLY CLEANED TO REMOVE OIL, GRIT, AND OTHER FOREIGN MATTER PRIOR TO ASSEMBLY. THE GASKETS SHALL BE INSPECTED BY THE DIRECTOR OF WATER SUPPLY OR HIS AGENT TO INSURE THAT THEY ARE ACCEPTABLE.
- ALL FITTINGS USED FOR SERVICE CONNECTIONS SHALL BE IN ACCORDANCE WITH AWWA C-800, UNITED WATER, R.I., AND SOUTH KINGSTOWN SPECIFICATIONS.
- VALVES USED SHALL BE IN ACCORDANCE WITH AWWA C-500 SERIES, UNITED WATER, R.I., AND THE TOWN OF SOUTH KINGSTOWN REGULATIONS. VALVES SHALL BE MECHANICAL JOINT, DOUBLE DISC PARALLEL SEAT OR GATE STYLE AS FOLLOWS:
  - MUELLER CORPORATION STOP DOUBLE DISC PARALLEL SEAT.
  - AMERICAN DARLING VALVE RESILIENT MODEL CRS-80.
- BLOW-OFF ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH AWWA C-800 SERIES, UNITED WATER, R.I., AND THE TOWN OF SOUTH KINGSTOWN.
- FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH MUeller 4421, AWWA C-502 "DRY BARREL FIRE HYDRANTS", UNITED WATER, R.I., AND TOWN SPECIFICATIONS.
- HYDROSTATIC AND LEAKAGE TESTS SHALL BE PERFORMED ON ALL COMPLETED SECTIONS OF NEWLY INSTALLED PIPELINE IN ACCORDANCE WITH AWWA C-600, UNITED WATER, R.I., AND TOWN SPECIFICATIONS.
- ALL PIPE SHALL BE DISINFECTED PRIOR TO BEING ACTIVATED IN ACCORDANCE WITH AWWA B-300, AWWA C-601, UNITED WATER, R.I., AND TOWN SPECIFICATIONS.
- DISTRIBUTION PIPING SHALL BE CL 52 DUCTILE IRON, DOUBLE GEMENT LINED, WITH PUSH ON JOINTS. PIPE SHALL MEET ANSI/AWWA C151 A21.51. JOINTS SHALL MEET ANSI/AWWA C111/A21.11. AMERICAN MANUFACTURER ONLY.
- FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT CL350 CEMENT MORTAR LINED AND MEET ANSI/AWWA/C115/A21.53. MECHANICAL JOINTS SHALL MEET ANSI/AWWA/C111/A21.11 AMERICAN MANUFACTURER ONLY.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL STATE AND TOWN PERMITS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS RELATED TO INSTALLATION OF THE WATER MAIN.
- EXCAVATIONS THAT EXTEND INTO PUBLIC RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN 12" LAYERS. A TEMPORARY BINDER COURSE IS TO BE APPLIED. FINAL BINDER AND FINISH COURSE TO BE PLACED AFTER REMOVAL OF TEMPORARY PAVEMENT AND COMPACTION OF GRAVEL BASE. CONTRACTOR SHALL MAKE ROAD PASSABLE FOR ONE LANE OF TRAFFIC AT ALL TIMES.
- CONTRACTOR SHALL NOTIFY DIG SAFE PRIOR TO DIGGING ANY TRENCHES.
- WHEN WORK IS NOT IN PROGRESS AND AT THE END OF EACH DAY, ALL OPEN ENDS OF THE PIPE AND FITTINGS SHALL BE SECURELY CLOSED.
- DIPRETE ENGINEERING ASSOCIATES, INC. DOES NOT CERTIFY AS TO THE WATER FLOW RATE OR RESIDUAL PRESSURE OF THIS WATER MAIN EXTENSION.

**SEWER LINE / WATER MAIN SEPARATION POLICY FOR DESIGN OF SANITARY SEWERS**

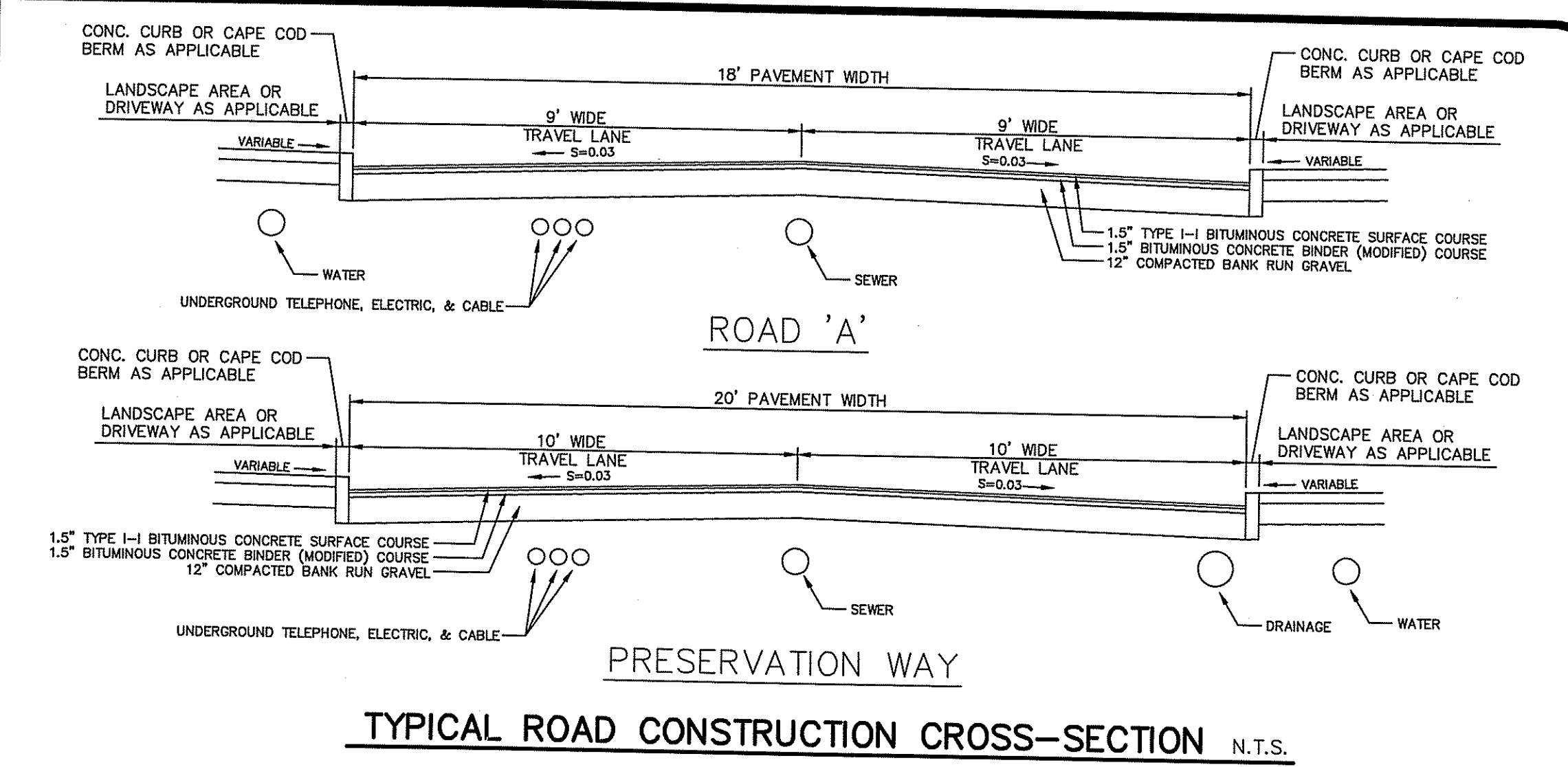
- A. LATERAL PLACEMENT OF SEWERS AND WATER MAINS**
- SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATERMAIN. THE DISTANCE SHALL BE MEASURED EDGE-TO-EDGE. THERE IS NO MINIMUM VERTICAL SEPARATION REQUIRED PROVIDED THE 10 FOOT HORIZONTAL SEPARATION IS MAINTAINED.
- IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE DIVISION MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATERMAIN, PROVIDED THAT:
- THE SEWER AND WATERMAIN ARE LAID IN SEPARATE TRENCHES, OR
  - THE SEWER AND WATERMAIN MAY BE INSTALLED IN THE SAME TRENCH WITH THE WATERMAIN PLACED ON A BENCH OF UNDISTURBED EARTH, AND
  - IN EITHER CASE, THE CROWN OF THE SEWER SHALL BE AT LEAST 18 INCHES BELOW THE INVERT OF THE WATERMAIN.
- IN SITUATIONS WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE FOLLOWING PROTECTION SHALL BE PROVIDED:
- ENCASMENT OF THE SEWER PIPE IN CONCRETE (MIN. 6 INCH THICKNESS) OR A CARRIER PIPE FOR AT LEAST 10 FEET EITHER SIDE OF THE AREA NOT COMPLYING WITH THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION OR
  - DESIGN AND CONSTRUCTION OF THE SEWER EQUAL TO WATERMAIN PIPE (CEMENT-LINED DUCTILE IRON OR OTHER AWWA-APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE), AND PRESSURE TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS.
- B. SEWERS CROSSING WATERMANS**
- SEWERS CROSSING OVER WATERMANS SHOULD BE AVOIDED, BUT IF CONDITIONS WARRANT THIS SITUATION, THEN ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE. SEWERS CROSSING UNDER WATERMANS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN THE INVERT OF THE WATERMAIN AND THE CROWN OF THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATERMAIN JOINTS.
- WHERE CONDITIONS PREVENT AN 18 INCH VERTICAL SEPARATION FROM BEING MAINTAINED, THE FOLLOWING METHODS SHALL BE SPECIFIED:
- THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATERMAIN PIPE (CEMENT-LINED DUCTILE IRON PIPE, PVC OR OTHER AWWA APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE) FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATERMAIN AND PRESSURE TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS, OR
  - EITHER THE WATERMAIN OR THE SEWER MAY BE ENCASED IN CONCRETE (MIN. 6 INCH THICKNESS) OR A CARRIER PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATERMAIN. THE CARRIER PIPE SHALL BE DESIGNED AND CONSTRUCTED OF MATERIALS WHICH ARE SATISFACTORY TO THE DIVISION, OR
  - ANY OTHER METHOD, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER, WHICH ENSURE ADEQUATE WATER TIGHTNESS AND ARE SATISFACTORY TO THE DIVISION.



**TOWN OF SOUTH KINGSTOWN BRICK INVERT DETAIL N.T.S.**



**TOWN OF SOUTH KINGSTOWN SEWER LATERAL CONNECTION DETAIL N.T.S.**



**GRAVITY (NON-PRESSURIZED) SEWER TESTING**

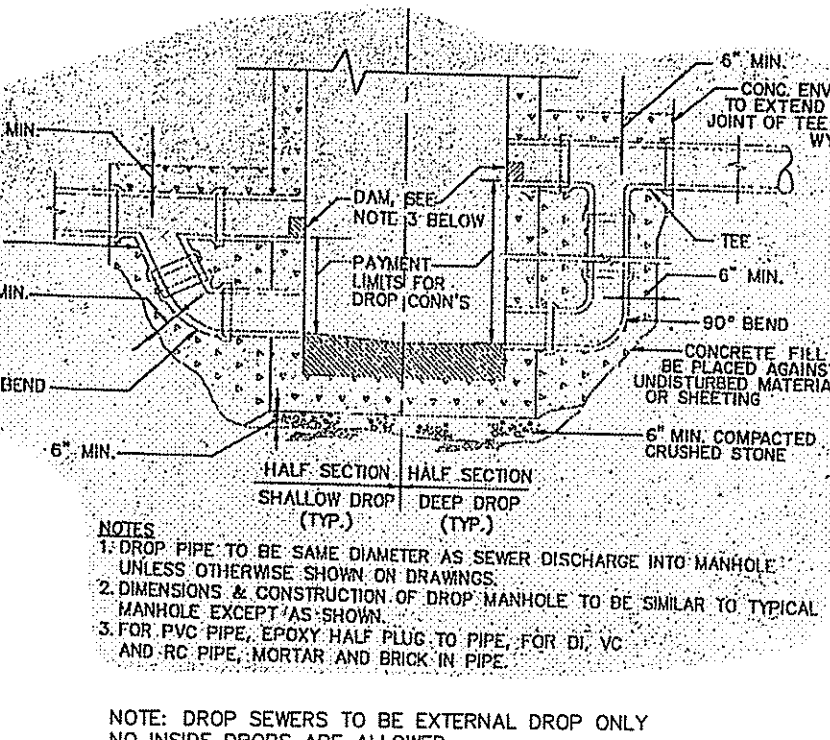
- THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT AND PERSONNEL TO CONDUCT AN ACCEPTANCE TEST USING LOW PRESSURE AIR. THE TEST SHALL BE CONDUCTED UNDER THE SUPERVISION OF THE DESIGN ENGINEER.
- ALL BRANCH FITTINGS AND ENDS OF LATERAL STUBS SHALL BE SECURELY PLUGGED TO WITHSTAND THE INTERNAL TEST PRESSURES. THE SECTION OF LINE BEING TESTED SHALL ALSO BE SECURELY PLUGGED AT EACH MANHOLE. ALL STOPPERS SHALL BE ADEQUATELY BRACED WHEN REQUIRED.
- AIR SHALL BE SLOWLY SUPPLIED TO THE PLUGGED PIPELINES UNTIL THE INTERNAL AIR PRESSURE REACHES 4.0 POUNDS PER SQUARE INCH GREATER THAN THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY SUBMERGE THE PIPE. AT LEAST TWO (2) MINUTES SHALL BE ALLOWED FOR TEMPERATURE STABILIZATION BEFORE PROCEEDING FURTHER.
- THE RATE OF AIR LOSS SHALL BE DETERMINED BY MEASURING THE TIME INTERVAL REQUIRED FOR THE INTERNAL PRESSURE TO DECREASE FROM 3.5 TO 2.5 POUNDS PER SQUARE INCH.
- THE PIPELINE SHALL BE CONSIDERED ACCEPTABLE IF THE TIME INTERVAL FOR THE 1.0 PSI PRESSURE DROP IS NOT LESSER THAN THE HOLDING TIME LISTED IN THE FOLLOWING AIR TEST TABLE.
- MINIMUM HOLDING TIME IN SECONDS REQUIRED FOR PRESSURE TO DROP FROM 3.5 TO 2.5 PSI.

LENGTH (IN FEET)	HOLDING TIME (IN SECONDS)	LENGTH (IN FEET)	HOLDING TIME (IN SECONDS)	LENGTH (IN FEET)	HOLDING TIME (IN SECONDS)
25	18	125	88	225	158
50	35	150	106	250	176
75	53	175	123	275	194
100	70	200	141	300	211

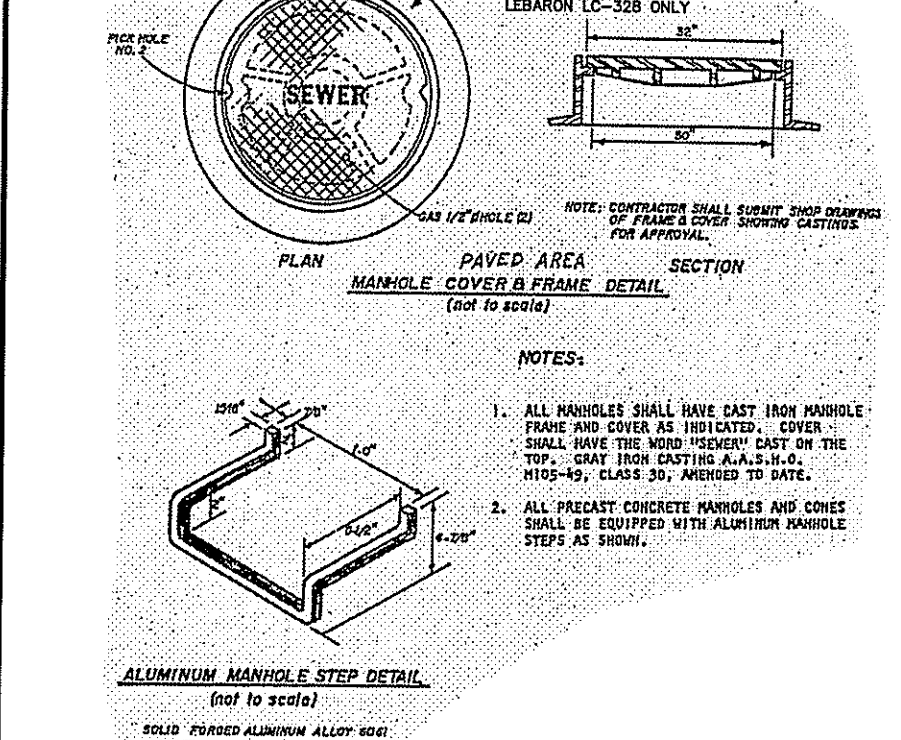
- SHOULD THE INFILTRATION OF EXFILTRATION TEST ON ANY SECTION OF THE SEWERS, INCLUDING MANHOLES, SHOW A RATE OF LEAKAGE INTO OR FROM THE SEWERS EXCEEDING THE MAXIMUM ALLOWABLE RATE OF INFILTRATION OR EXFILTRATION SPECIFIED HEREIN, THE CONTRACTOR SHALL LOCATE, REPAIR OR REPLACE DEFECTIVE JOINTS AND WORK IN A MANNER SATISFACTORY TO THE DESIGN ENGINEER, AND RETEST, UNTIL THE RATE OF INFILTRATION INTO OR EXFILTRATION FROM EACH SECTION OF THE SEWERS BEING TESTED DOES NOT EXCEED THE RATE SPECIFIED HEREIN FOR INFILTRATION OR EXFILTRATION.
- PHYSICAL DEFLECTION TESTING AND MANHOLE LEAKAGE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN OF SO. KINGSTOWN UTILITIES DEPT. WASTEWATER SPECIFICATIONS.

**GENERAL SEWER NOTES**

- SEWER MAIN AND SERVICE CONSTRUCTION SHALL CONFORM TO TOWN OF SOUTH KINGSTOWN STANDARDS AND SPECIFICATIONS.
- DESIGN ENGINEER SHALL SUBMIT AS-BUILT MYLARS FOR SEWER MAIN CONSTRUCTION TO THE TOWN OF SOUTH KINGSTOWN DIRECTOR OF PUBLIC SERVICES WITHIN 30 DAYS OF CONSTRUCTION COMPLETENESS.

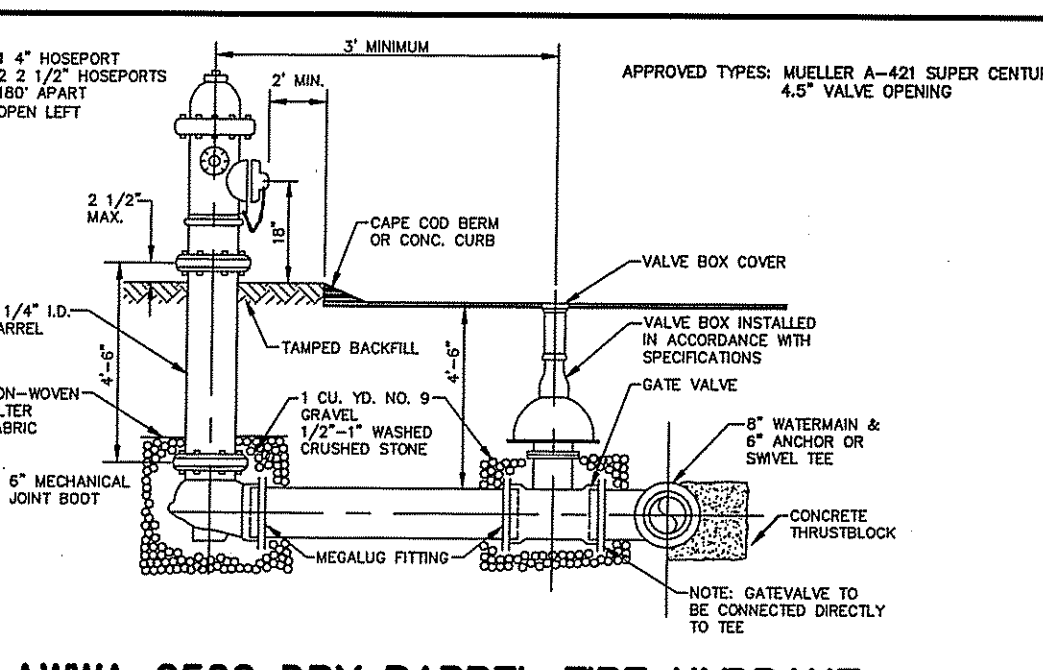


**TOWN OF SOUTH KINGSTOWN DROP SEWER DETAIL N.T.S.**

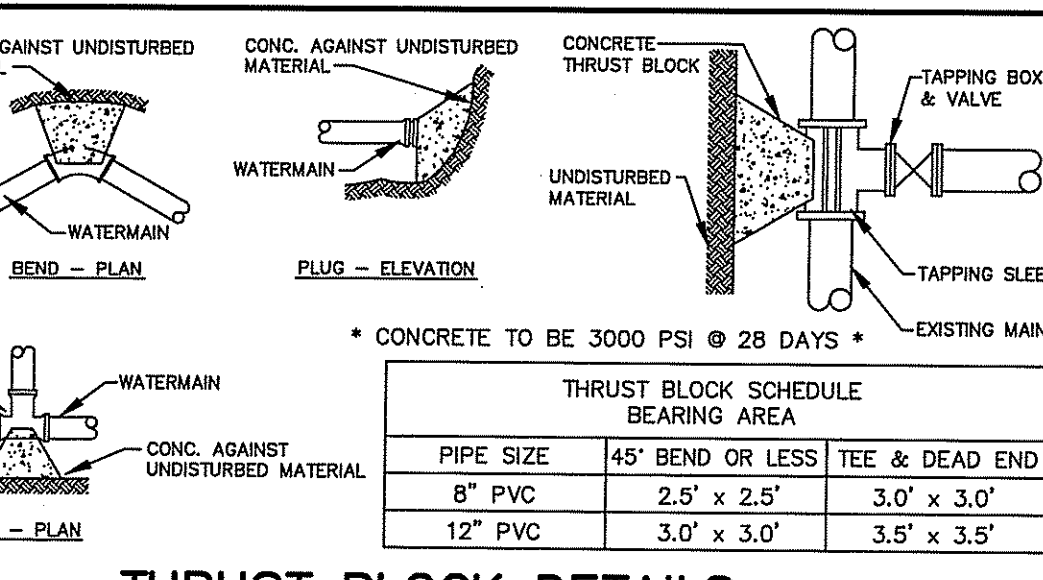


**TOWN OF SOUTH KINGSTOWN MANHOLE AND STEP DETAIL N.T.S.**

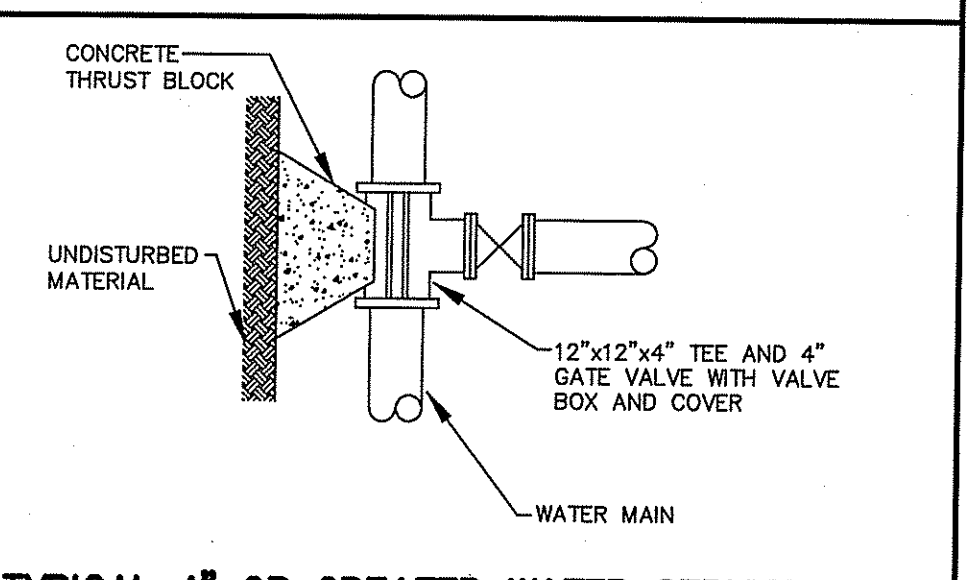
**WATER TRENCH DETAIL N.T.S.**



**AWWA C502 DRY BARREL FIRE HYDRANT N.T.S.**



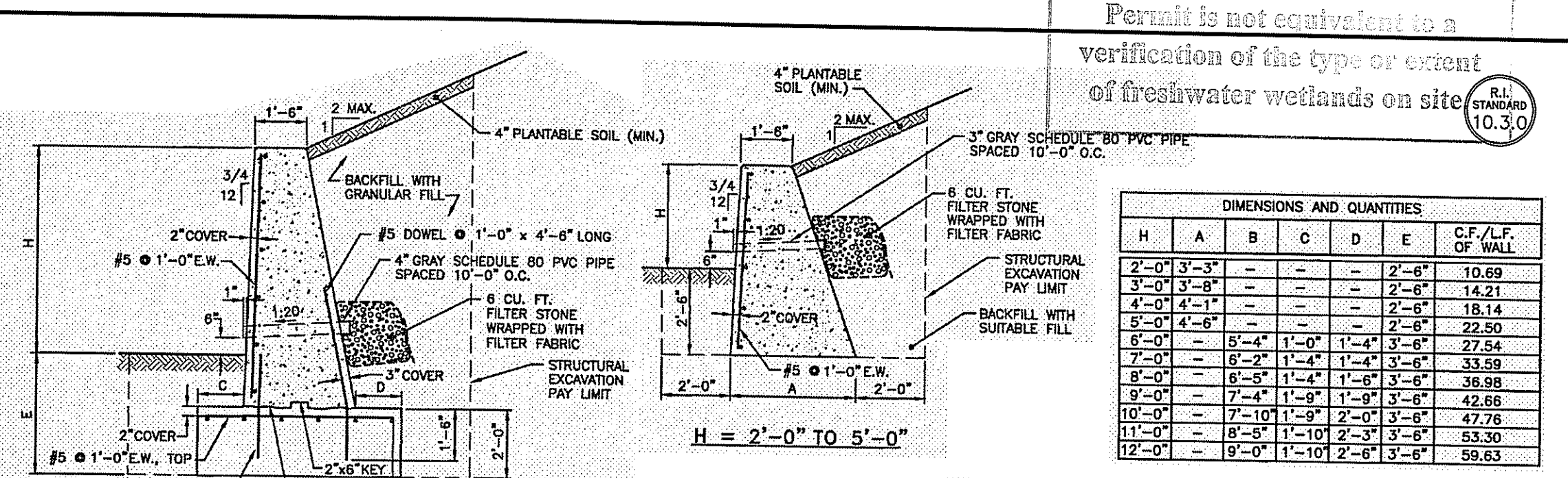
**TYPICAL 2" OR SMALLER WATER SERVICE N.T.S.**



**TOWN OF SOUTH KINGSTOWN SEWER TRENCH DETAIL N.T.S.**

**TOWN OF SOUTH KINGSTOWN SEWER MANHOLE DETAIL N.T.S.**

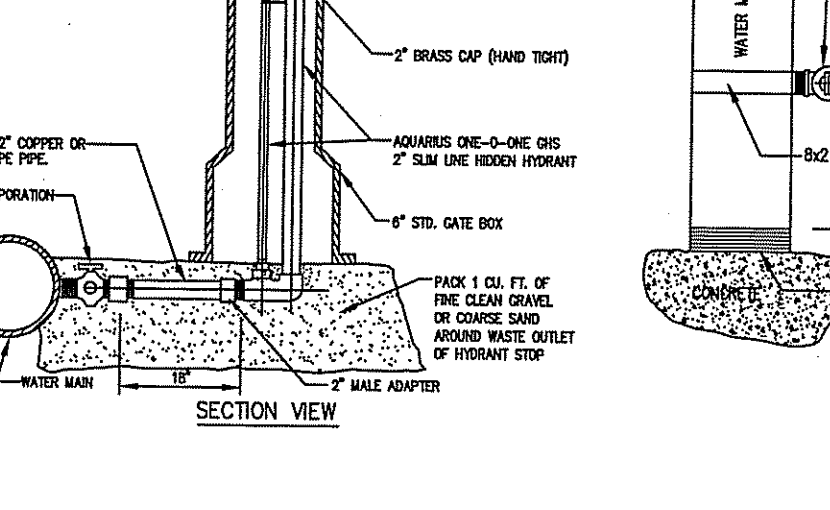
**WET STONE MASONRY RETAINING WALL N.T.S.**



**CONCRETE RETAINING WALL N.T.S.**

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED MAR 30 2004 FILE # 03-0560  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.  
W. Joseph Carey

**MANUAL BLOWOFF AIR RELEASE ASSEMBLY N.T.S.**

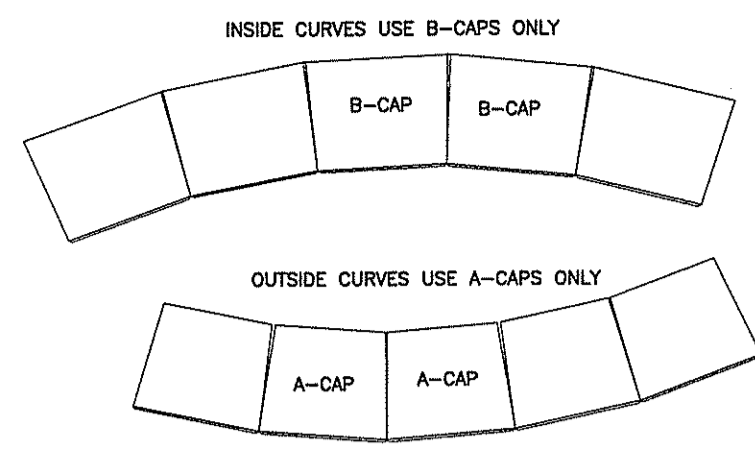


**LEAKAGE AND PRESSURE TESTING FOR WATERMANS**

- GENERAL HYDROSTATIC AND LEAKAGE TESTS SHALL BE PERFORMED ON ALL COMPLETED SECTIONS OF NEWLY INSTALLED WATERMAIN PIPELINE IN ACCORDANCE WITH AWWA C600, UNITED WATER, THE TOWN OF SOUTH KINGSTOWN, AND AS SPECIFIED BELOW.
- THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL LABOR, TOOLS AND EQUIPMENT NECESSARY FOR TESTING.
- TESTING PROCEDURES  
ALL AIR SHALL BE EXPELLED AT THE HIGH POINTS AND THE PIPELINE SLOWLY FILLED WITH POTABLE WATER.  
THE INTERNAL PRESSURE SHALL BE BUILT UP TO 150 PSI AND MAINTAINED FOR A PERIOD OF NOT LESSER THAN ONE (1) HOUR.  
ALL LEAKS IN THE PIPELINE SHALL BE STOPPED, REPAIRED OR DEFECTIVE PIPE, FITTINGS OR ACCESSORIES SHALL BE REMOVED AND CRACKED WITH NEW BY THE CONTRACTOR.  
THE PIPELINE SHALL BE RETESTED AS MAY BE REQUIRED AND NECESSARY UNTIL THE LEAKAGE FALLS WITHIN THE ALLOWABLE DETERMINED FOR THE PIPE NETWORK, o. WATERMANS - DISINFECTING STEP

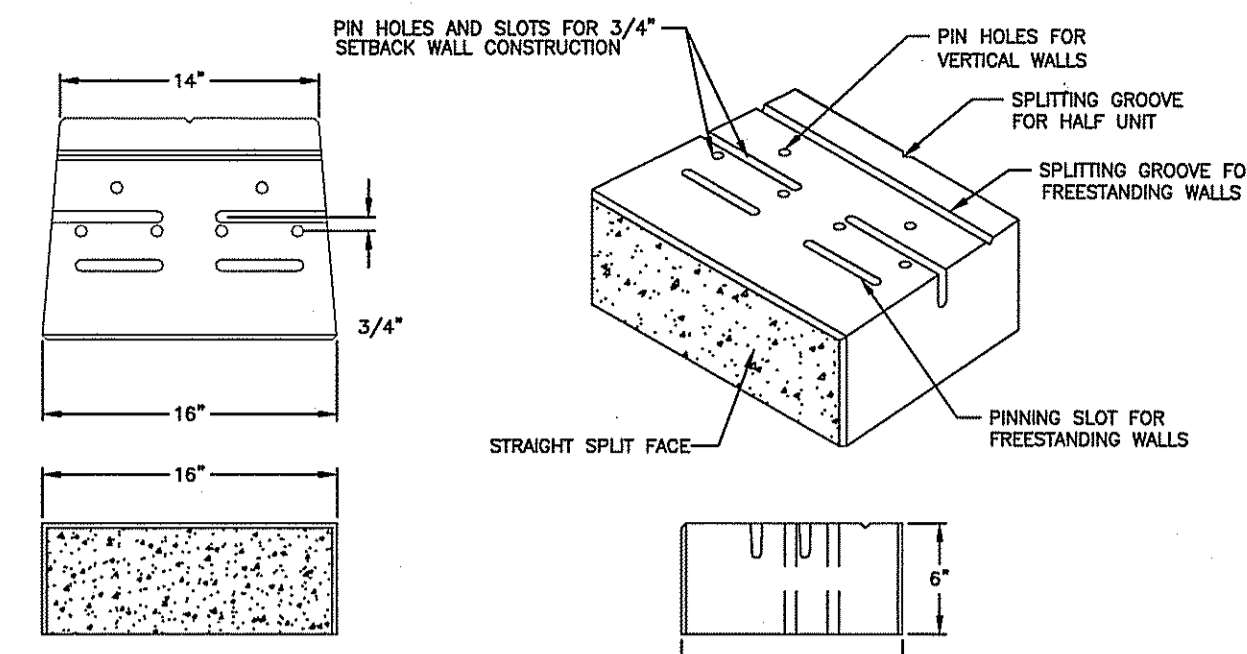
**Preliminary Submission**

**DETAIL SHEET**  
**The Village at South County Commons**  
DISTRICT 6, SECTION 2 - ASSESSOR'S PLAT 42 Lot 22  
SOUTH KINGSTOWN, RHODE ISLAND  
PREPARED BY  
**DIPrete Engineering Associates, Inc.**  
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS  
TWO STAFFORD COURT  
CRANSTON, R.I. 02920  
(401) 943-1000 FAX: (401) 464-6006  
PREPARED FOR  
**South County Commons, Ltd.**  
c/o ALEX PETRUCCI  
27 KRISTEN COURT  
WARWICK, R.I. 02886  
MAR 15 2004

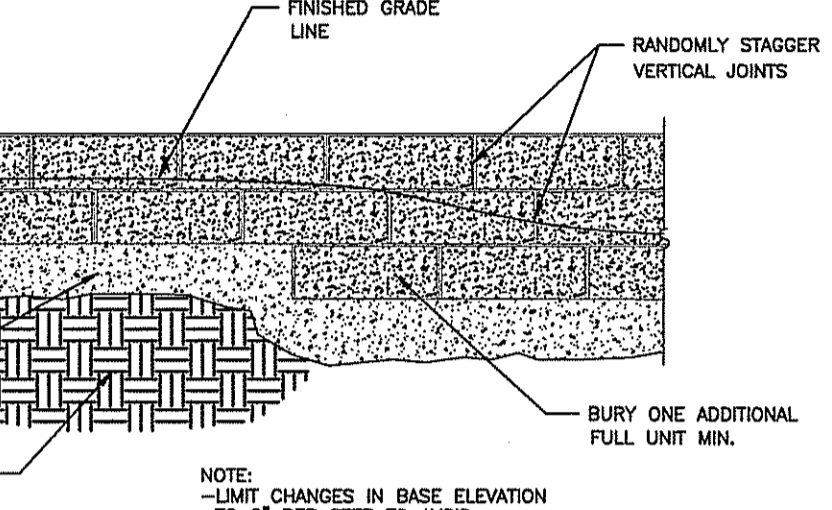


**GENERAL NOTES**

- STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
- BENCH OUT ALL EXCAVATED SLOPES.
- DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
- SITE SOILS ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
- LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN.
- CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
- MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6" FOR WALL HEIGHTS UNDER 4 FT. AND 12" FOR WALLS OVER 4 FT. UNLESS SHOWN DIFFERENTLY.
- FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
- DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
- COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY (ASTM D-998)
- COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
- COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
- SEE ELEVATION DRAWINGS FOR GEOSYNTHETIC TYPE, LENGTH AND LOCATION REQUIRED.
- GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
- CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
- ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
- FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
- VERSA-LOK RETAINING WALL OVER 5' IN HEIGHT OR WITHIN 20' OF A PROPOSED BUILDING TO BE DESIGNED BY A PROFESSIONAL ENGINEER IN THE STATE OF RHODE ISLAND, INSTALLATION SUPERVISED, AND INSTALLATION CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN RHODE ISLAND. THESE DETAILS ARE PROVIDED FOR REFERENCE ONLY. SHOP DRAWINGS TO BE SUBMITTED BY A PROFESSIONAL ENGINEER LICENSED IN RHODE ISLAND PRIOR TO CONSTRUCTION ON ALL WALLS OVER 5'. SHOP DRAWINGS TO BE DONE BY A R.I. PROFESSIONAL ENGINEER.



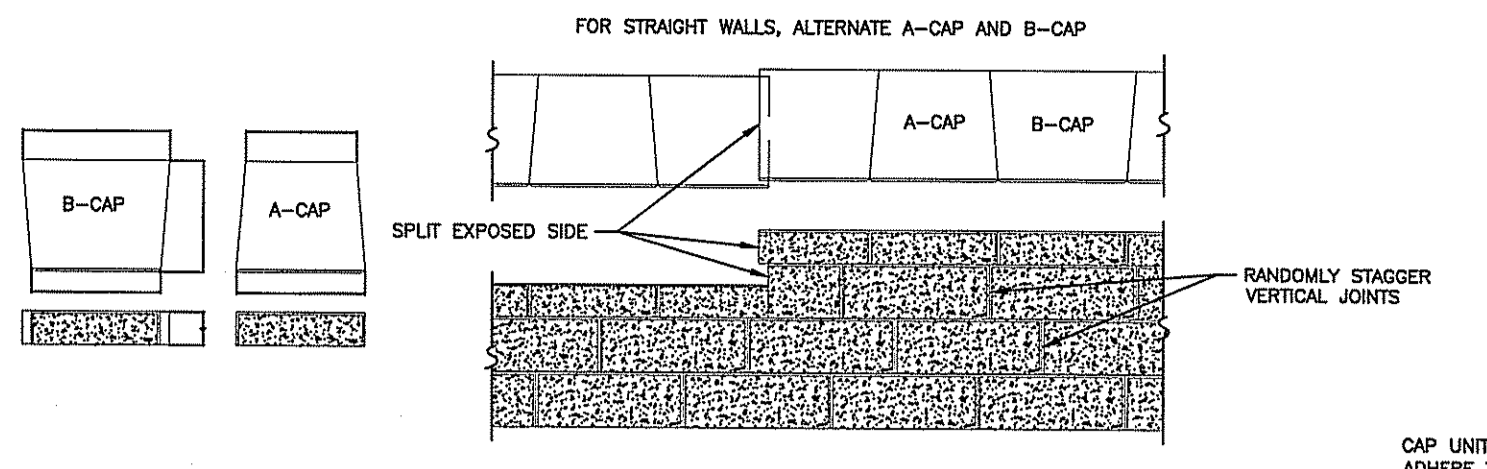
**VERSA-LOK UNIT**  
UNIT DIMENSIONS  
SCALE: NONE



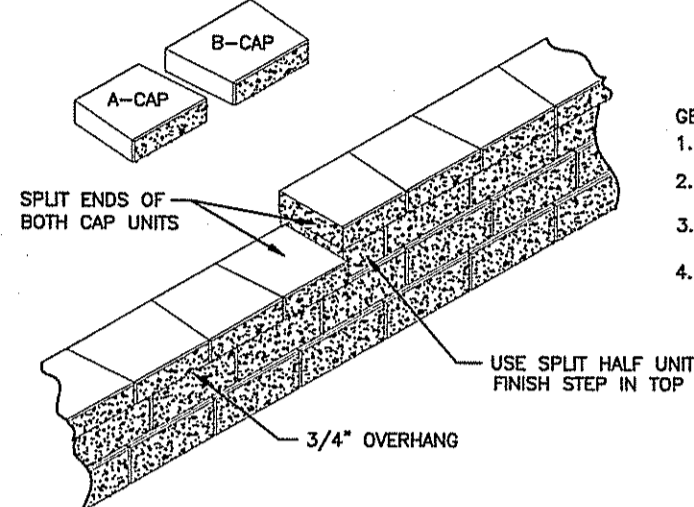
**STEPPING BASE DETAIL**  
SCALE: NONE

**VERSA-TUFF PIN**  
PIN DIMENSIONS  
SCALE: NONE

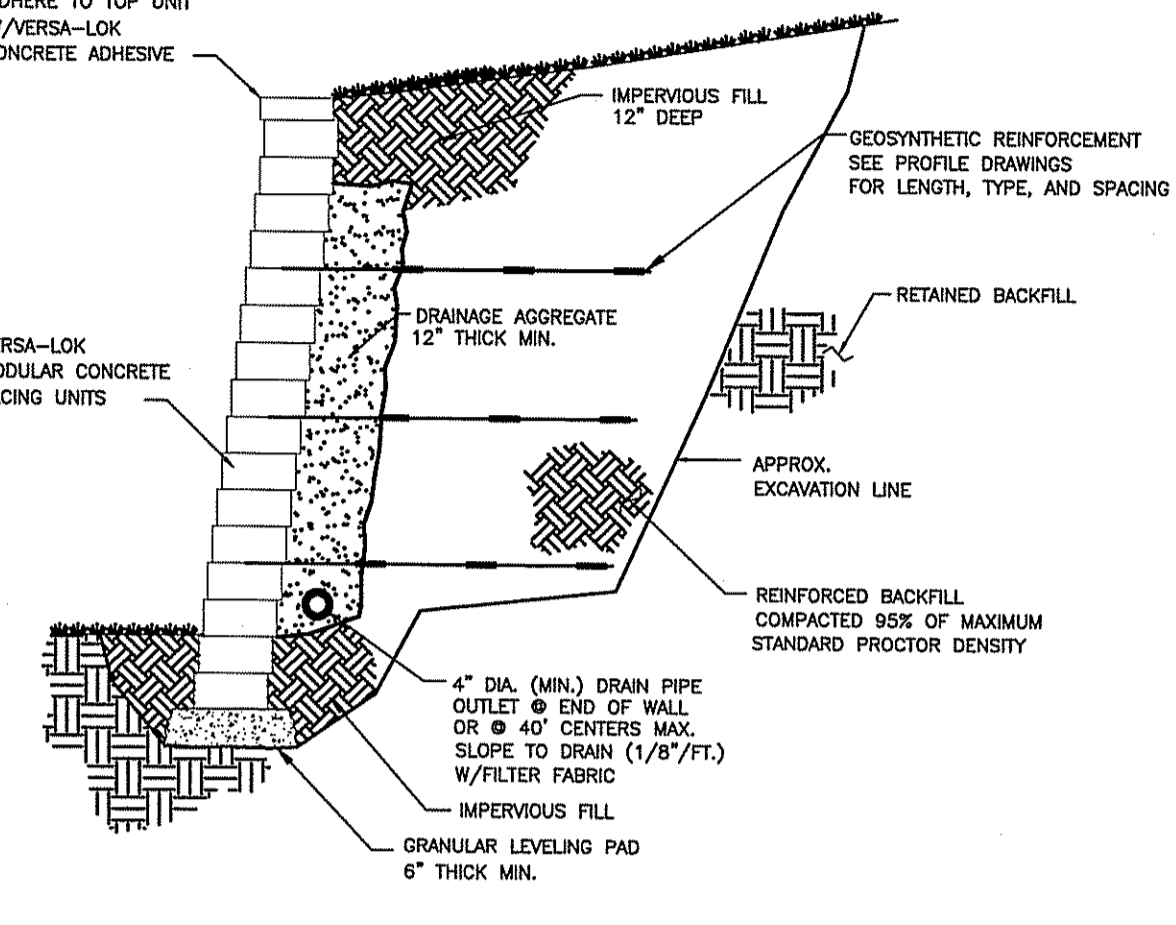
- SHOP DRAWINGS TO BE SUBMITTED FOR ALL WALLS OVER 5' IN HEIGHT OR WITHIN 20' OF A BUILDING.
- ALL 4 WALLS ARE APPROVED ALTERNATES (CONCRETE, VERSA-LOK, WET STONE MASONRY, OR BOULDER) UNLESS NOTED OTHERWISE.



**CAPPING DETAIL-PROFILE**  
STEP AT TOP OF WALL  
SCALE: NONE



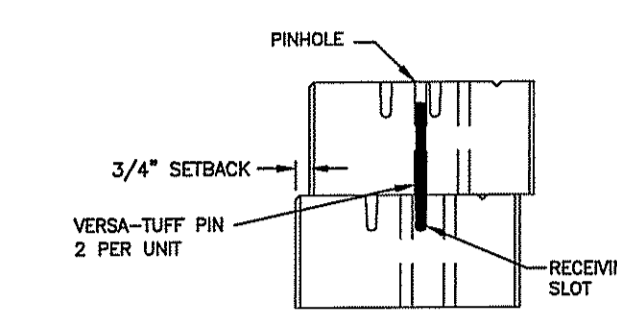
- GENERAL NOTES FOR CAPPING:
- CAPS SHALL BE PLACED WITH A 1/2" TO 3/4" OVERHANG OF TOP COURSE.
  - CAPS MAY BE ADHERED WITH A 1/2" TO 3/4" OVERHANG OF TOP COURSE.
  - WHEN SPLITTING CAP UNIT FOR WALL END DO NOT USE A CAP SECTION LESS THAN 6" WIDE.
  - DO NOT OVERHANG CAP AT END OF COURSE MORE THAN 1"



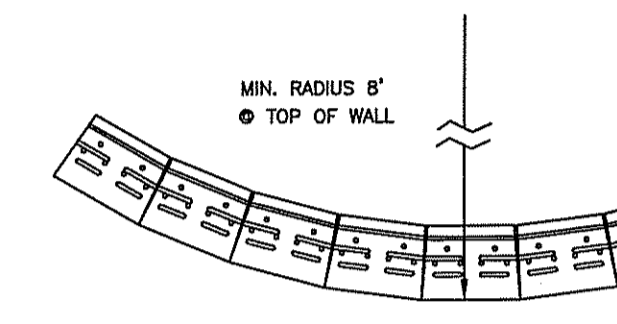
**TYPICAL SECTION-REINFORCED RETAINING WALL**  
MODULAR CONCRETE UNIT  
SCALE: NONE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

**CAPPING DETAIL-PLAN VIEW**  
CURVES  
SCALE: NONE



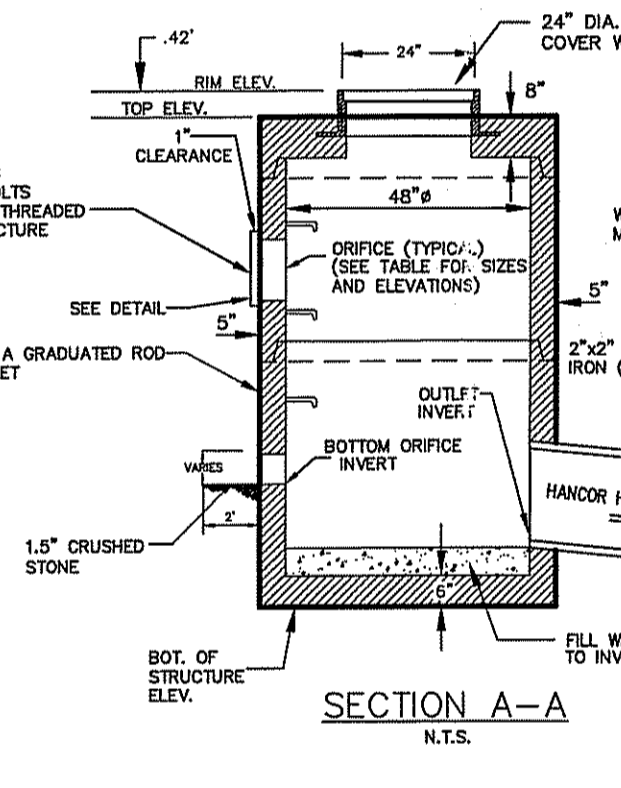
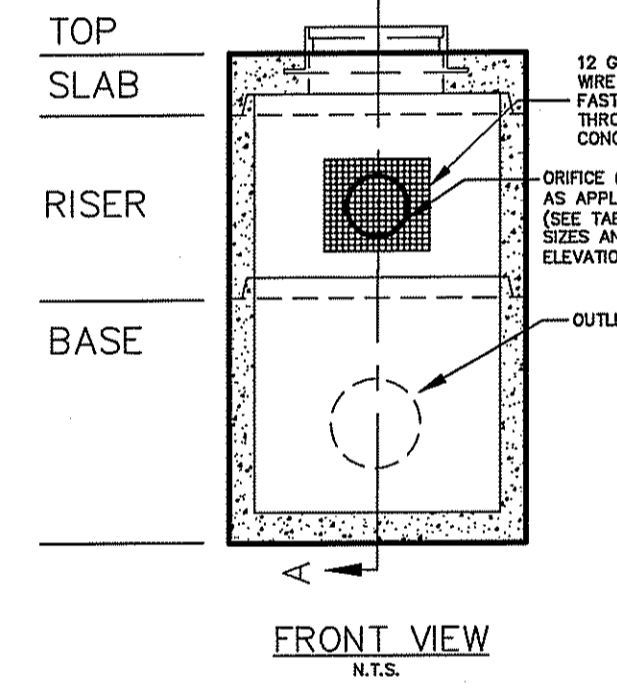
**PINNING DETAIL**  
CROSS SECTION  
SCALE: NONE



**CURVE DETAIL**  
TYPICAL CURVES  
SCALE: NONE

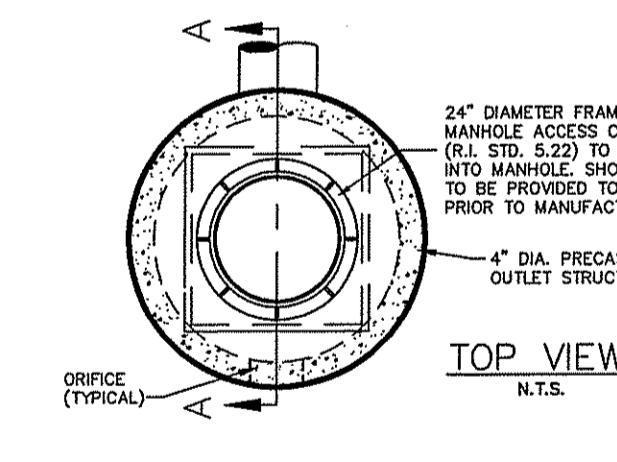


NOTE: FOLLOW GEORIG MANUFACTURER'S INSTRUCTIONS FOR REINFORCEMENT PLACEMENT AT CURVES AND CORNERS. DO NOT PLACE OVERLAPPING GEOSYNTHETIC LAYERS DIRECTLY ON TOP OF EACH OTHER. PROVIDE 3" (MIN.) OF SOIL FILL BETWEEN OVERLAPPING LAYERS.



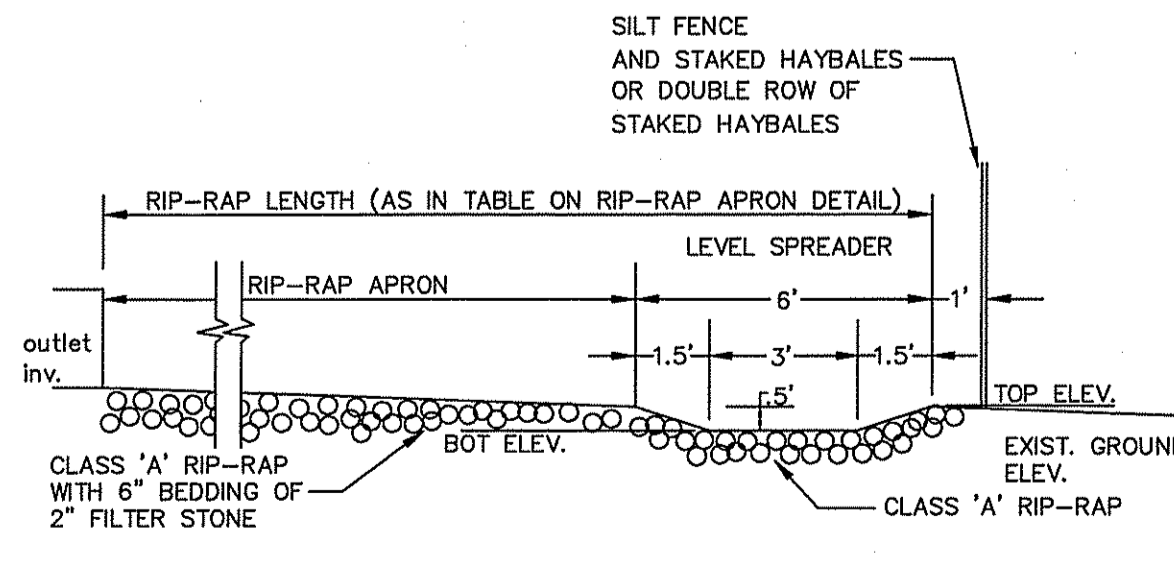
Description	Pond #4
Rim Elevation	65.75
Top Elevation	65.33
Orifice #1 Size & Invert	5", 60.0'
Orifice #2 Size & Invert	8"(x2), 61.5'
Orifice #3 Size & Invert	10"(x2), 63.0'
Orifice #4 Size & Invert	6"(x4), 64.0'
Outlet Size & Invert	24", 60.00
Fill With Concrete to Elevation	60.00
Bottom of Structure	59.00

**4" DIA. OUTLET STRUCTURE** N.T.S.



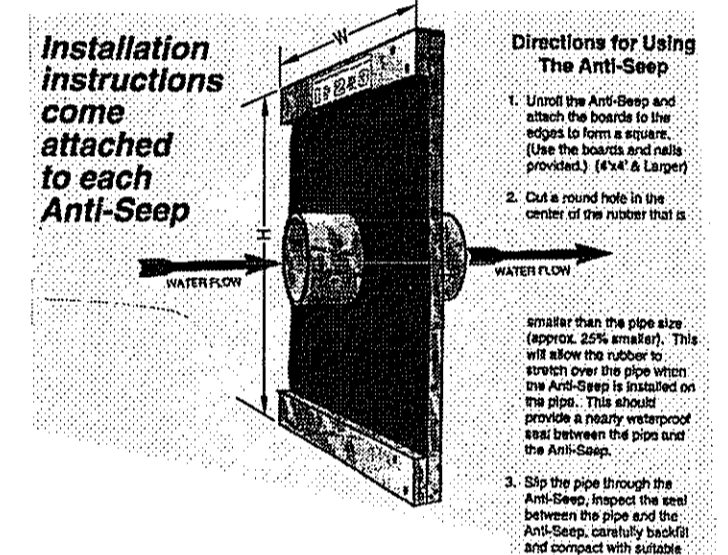
LOCATION	LENGTH	WIDTH	CLASS
POND #4 INLET	35'	21'	R-5
POND #4 OUTLET	24'	16'	R-5

**RIP-RAP APRON DETAIL** N.T.S.



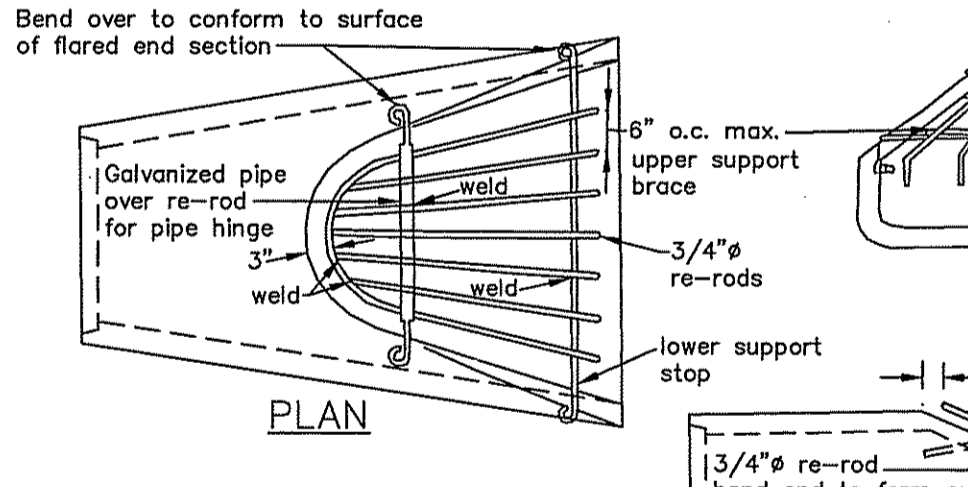
location	outlet invert	level spreader width	top elev.	bottom elev.	exist. grade
Pond #4	59.65	20'	58.50	58.00	58.5±

**LEVEL SPREADER DETAIL** N.T.S.



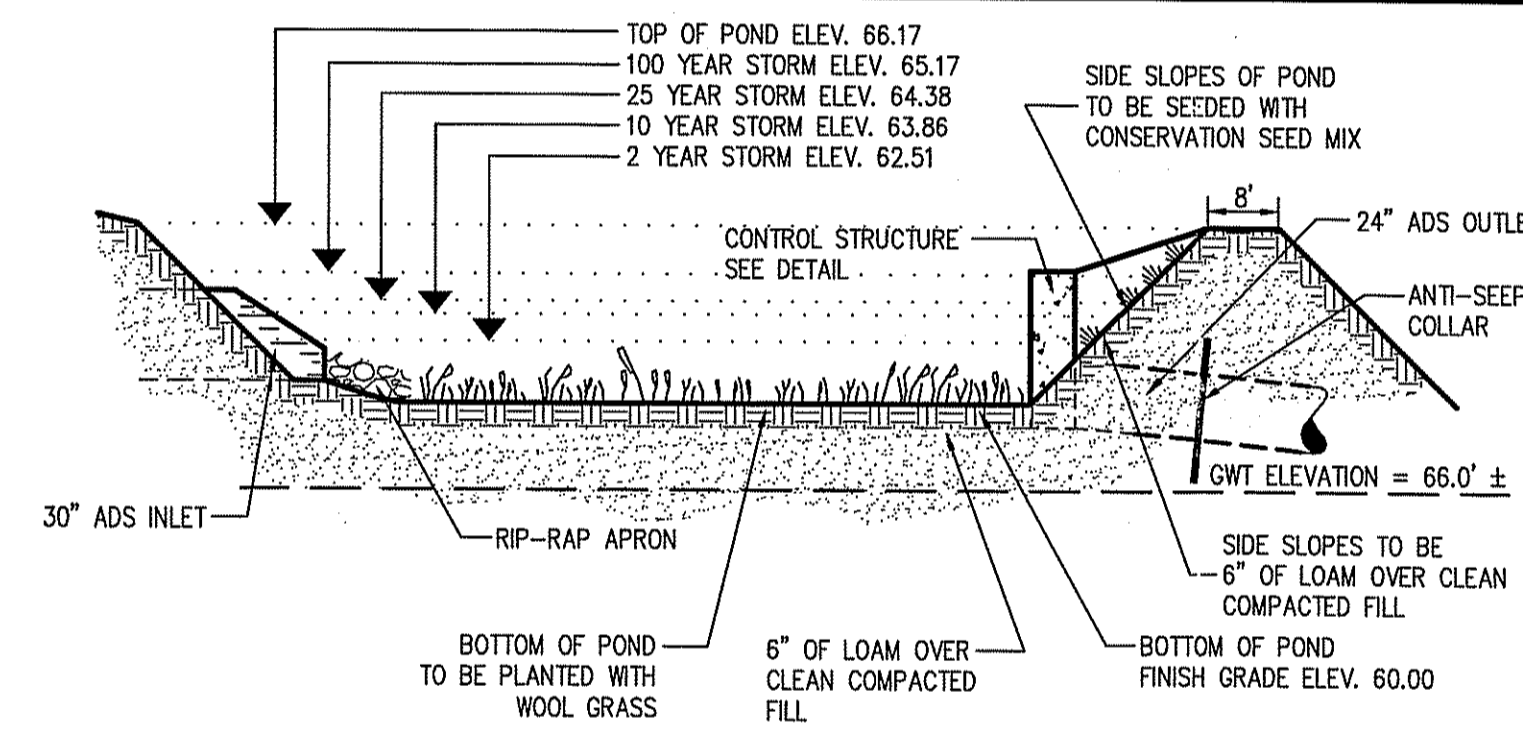
Location	W	H	Quantity
Pond #1	4.0'	4.0'	1

**ANTI-SEEP COLLAR** N.T.S.

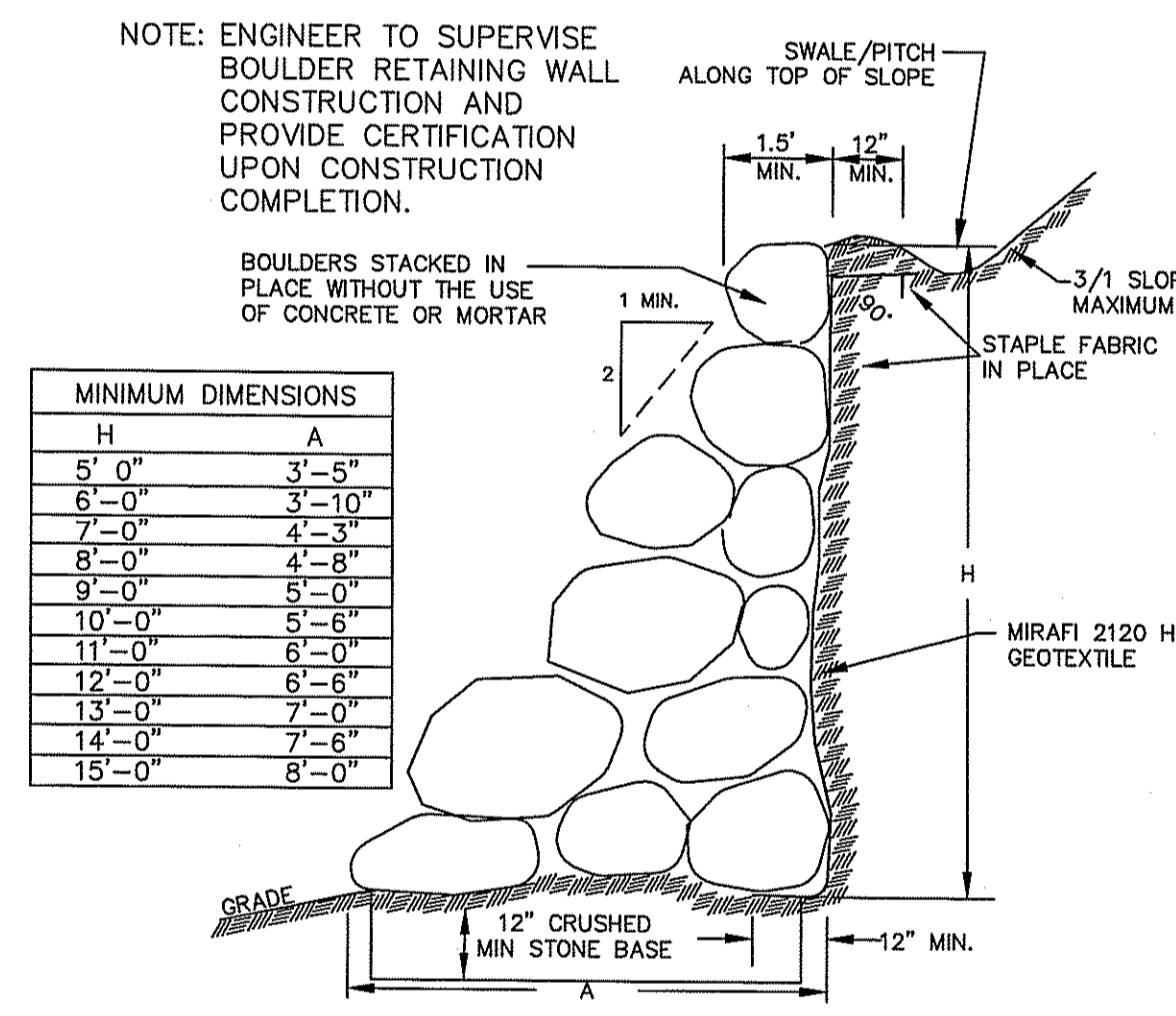


- NOTE
- All re-rods are to be welded
  - All rods are to be galvanized

**FLARED END DETAIL - HANCOR OR EQUAL**

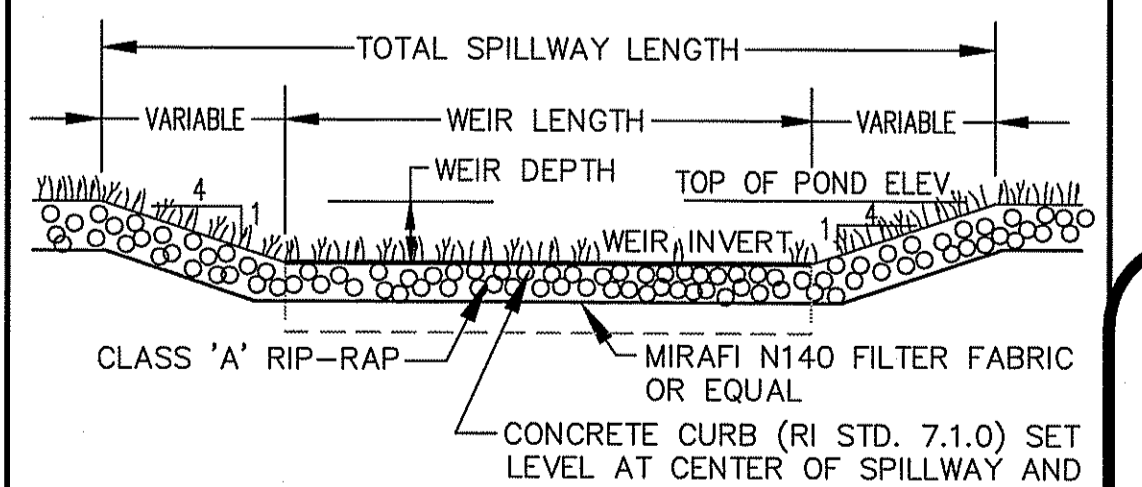


**STORMWATER POND CROSS-SECTION** N.T.S.



- NOTE: LOCATION OF BOULDER RETAINING WALLS TO BE APPROVED BY DESIGN ENGINEER PRIOR TO CONSTRUCTION.
- SHOP DRAWINGS TO BE SUBMITTED FOR ALL WALLS OVER 5' IN HEIGHT OR WITHIN 20' OF A BUILDING.
  - ALL 4 WALLS ARE APPROVED ALTERNATES (CONCRETE, VERSA-LOK, WET STONE MASONRY, OR BOULDER) UNLESS NOTED OTHERWISE.

**BOULDER RETAINING WALL DETAIL** N.T.S.

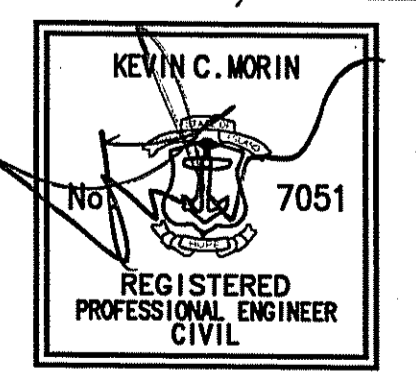


- NOTES:
- FOLLOWING PLACEMENT OF FILTER FABRIC AND RIP-RAP, VOIDS SHALL BE FILLED WITH LOAM AND SEEDED ALONG WITH DETENTION BASIN.
  - CONTRACTOR TO VERIFY ELEVATIONS ALONG TOP OF CURB AFTER SPILLWAY AREA IS COMPACTED TO 95% PROCTOR.

LOCATION	TOP OF POND ELEV.	WEIR INVERT	WEIR DEPTH	TOTAL SPILLWAY LENGTH	WEIR LENGTH
POND #4	66.17	65.0	1.17'	23.0'	15'

**EMERGENCY SPILLWAY DETAIL** N.T.S.

FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED MAR 30 2004 FILE # 03-0560  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
W. Joseph Casey



**Preliminary Submission**

**DETAIL SHEET**

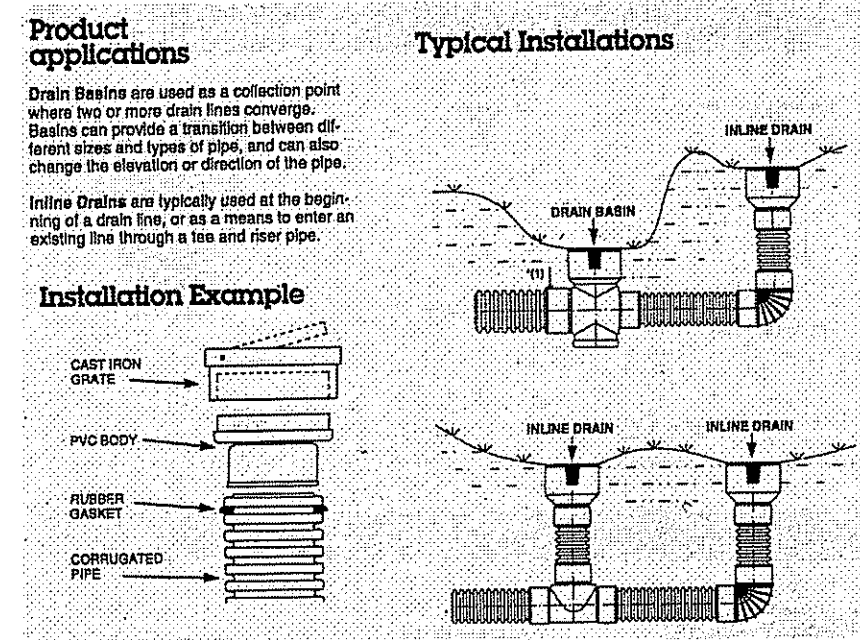
**The Village at South County Commons**  
DISTRICT 6, SECTION 2- ASSESSOR'S PLAT 42 Lot 22  
SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY  
**DiPrete Engineering Associates, Inc.**  
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS  
TWO STAFFORD COURT  
CRANSTON, R.I. 02920  
(401) 943-1000 FAX: (401) 464-6000

PREPARED FOR  
**South County Commons, Ltd.**  
c/o ALEX PETRUCCI  
27 KRISTEN COURT  
WARWICK, R.I. 02886  
MAR 15 2004

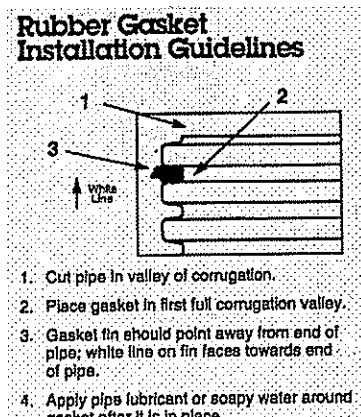
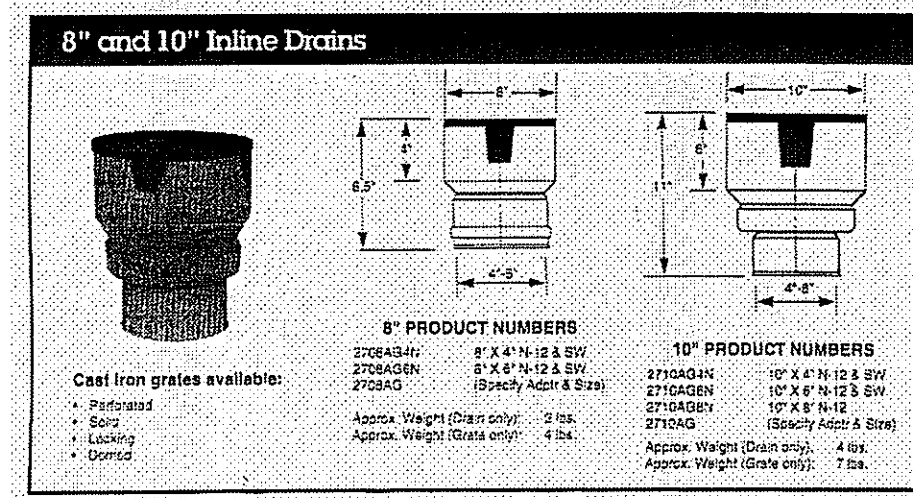
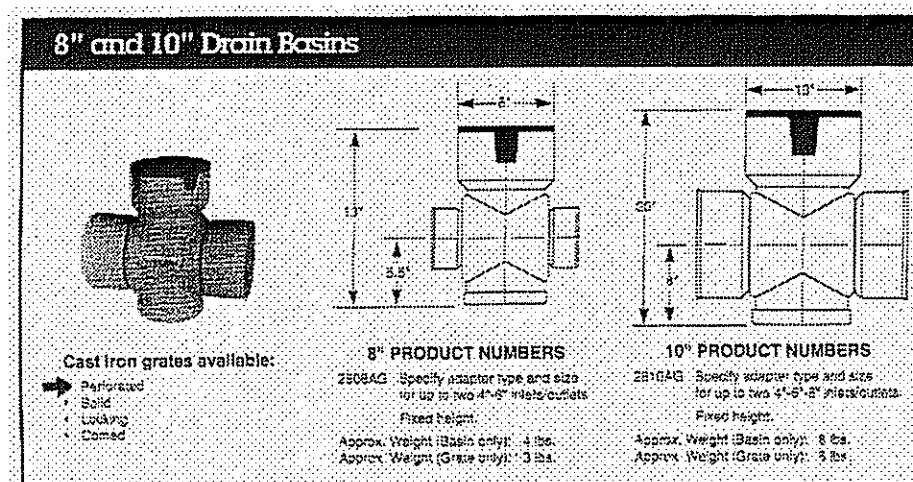
OCTOBER, 2003  
DWN. BY: K.J.D.  
SHEET 10 OF 12





- NOTES:**
- YARD DRAINS TO BE INCORPORATED BY CONTRACTOR AS NEEDED DURING CONSTRUCTION TO RESOLVE ISOLATED DRAINAGE AREAS AND PREVENT ISOLATED PONDING.
  - ALL YARD DRAIN COMPONENTS ARE MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS, INC. (ADS) AND ARE TO BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS.

**YARD DRAIN DETAILS N.T.S.**



**RAIN GARDEN INSTALLATION NOTES:**

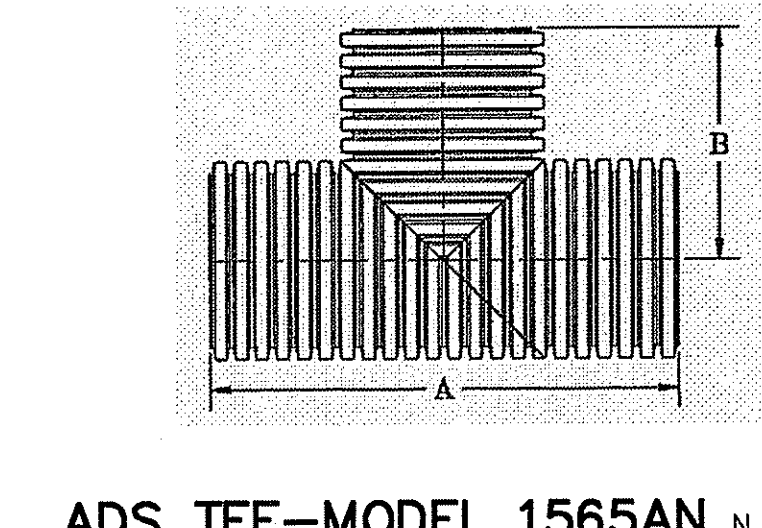
- ENGINEERED SOIL MIX SHALL CONSIST OF A 2' TOP LAYER CONSISTING OF 65% SAND, 20% SANDY LOAM, AND 15% COMPOST; AND A 1' BOTTOM LAYER CONSISTING OF A SAND BED. GROUND COVER OR MULCH SHALL BE INSTALLED AT THE SURFACE.
- REFER TO LANDSCAPE PLANS FOR PLANTINGS AND SPACING WITHIN THE RAIN GARDEN. LANDSCAPE SHRUBS/TREES SHOULD BE DENSE ENOUGH TO IMPROVE WATER QUALITY THROUGH PLANT UPTAKE, BUT NOT SO DENSE AS TO LIMIT ABILITY TO MAINTAIN AREA.
- EMERGENCY OVERFLOW PIPE SHALL BE SET AS SHOWN ON PLANS. IN NO INSTANCE SHALL THE OVERFLOW PIPE BE SET GREATER THAN 6 INCHES FROM THE LOWEST FINISH GRADE OF THE RAIN GARDEN.
- THE SOIL SHALL NOT BE OVERLY COMPACTED IN SUCH A WAY AS TO LIMIT STORMWATER INFILTRATION.

**RAIN GARDEN MAINTENANCE NOTES:**

- THIS RAIN GARDEN IS DESIGNED AS AN UPLAND TERRESTRIAL HABITAT WITH A LONG, LOW-MAINTENANCE LIFE. HOWEVER, IF STANDING WATER PERSISTS 48 HOURS AFTER A STORM EVENT, THE GARDEN SHALL UNDERGO MAINTENANCE IMMEDIATELY AND NON-IMPROVEMENT OF CONDITIONS THEREAFTER WILL CALL FOR REPLACEMENT OF SYSTEM OR IMPROVEMENT OF SUBDRAIN SYSTEM.
- THE RAIN GARDEN SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. SEDIMENT REMOVAL FROM THE RAIN GARDEN SHALL COINCIDE WITH STREET SWEEPING IN THE SPRINGTIME. ANY DEAD AND/OR FALLEN BRANCHES AND BUILD-UP OF DEBRIS INSIDE THE SYSTEM SHALL BE REMOVED AT YEARLY INSPECTION.
- ANY DEAD PLANTINGS OBSERVED DURING INSPECTION SHALL BE REMOVED AND NEW PLANTINGS SHALL BE INSTALLED IN THESE AREAS. IF PLANTINGS ARE OBSERVED TO NOT GROW IN A SPECIFIC AREA, THIS AREA SHALL BE REGRADED IF NOT AT GRADE WITH REMAINDER OF GARDEN OR SOIL SHALL BE REPLACED AS APPLICABLE.
- OBSTRUCTIONS OF OVERFLOW PIPE OBSERVED DURING INSPECTION SHALL BE REMOVED.

**DESIGN FEATURES OF RAIN GARDENS:**

- UPLAND TERRESTRIAL FOREST/MEADOW
- SHALLOW PONDING AREA
- FACULTATIVE PLANTS
- MULCH & FERTILE, SANDY TOP SOIL
- UTILIZING OVERFLOW OUTLET TO PROMOTE GOOD DRAINAGE



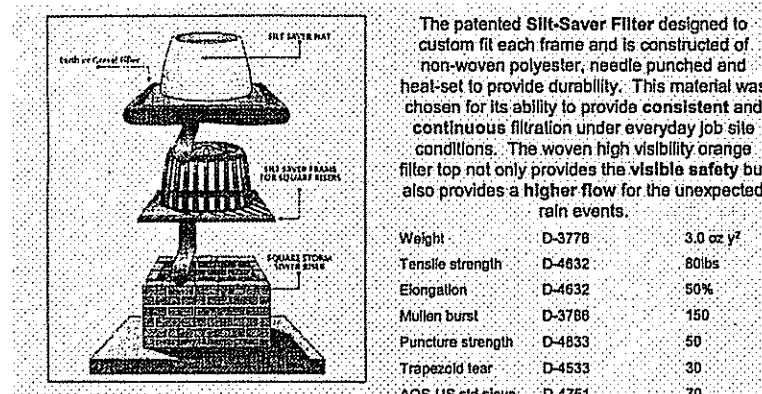
PART NO.	PIPE SIZE	A	B
0460AN	4"	12.46"	6.23"
0661AN	6"	16.25"	8.13"
0862AN	8"	21.12"	10.66"
1063AN	10"	25.20"	12.60"
1264AN	12"	31.29"	15.64"
1565AN	15"	36.25"	18.13"

**ADS TEE-MODEL 1565AN N.T.S.**

**Specifications**

The patented Silt-Saver Frame is constructed of partially recycled, high molecular weight, high-density polyethylene copolymer (HDPE). This material has superior stress crack resistance combined with high impact strength and rigidity. Frames are currently available in 2 models: SS-100A - Round Base to fit the 60" D. precast frame as used in most residential and light commercial applications and SS-200A - Square Base to fit the 60" O.D. brick or precast design as used in most D.O.T. Highway application.

Silt-Saver Frame and Filter Assembly will also accommodate drainage situations similar to those listed with no special design required.



The patented Silt-Saver Filter designed to custom fit each frame and is constructed of non-woven polyester, media granulated and heat-set to provide durability. This material was chosen for its ability to provide consistent and continuous filtration under everyday job site conditions. The woven high visibility orange filter top not only provides the visible safety but also provides a higher flow for the unexpected rain events.

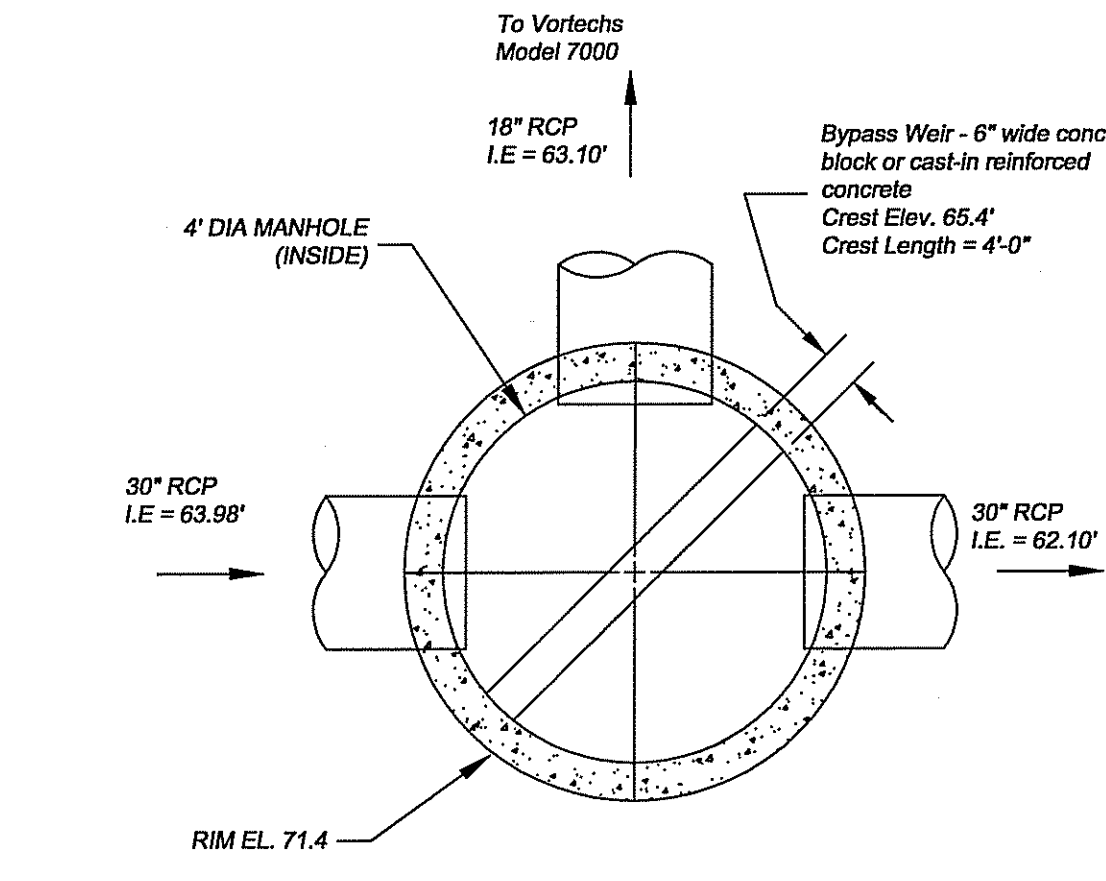
**Weight** D-3778 3.0 sq ft  
**Tensile strength** D-4832 800lb  
 **elongation** D-4832 50%  
**Mullen burst** D-3786 150  
**Puncture strength** D-4832 50  
**Tripod test** D-4832 30  
**Acid test value** D-4751 70  
**Permeability, <math>1''</math>** D-4491 100 gpm/hr  
**Flow <math>1''</math>** D-4491 100 gpm/hr

UV Resistance: D-4892 (500 hrs)

All dimensions and tolerances are based on the standard and shall be subject to change. It is a customer's responsibility to verify the accuracy and any long term use of these products in the field.

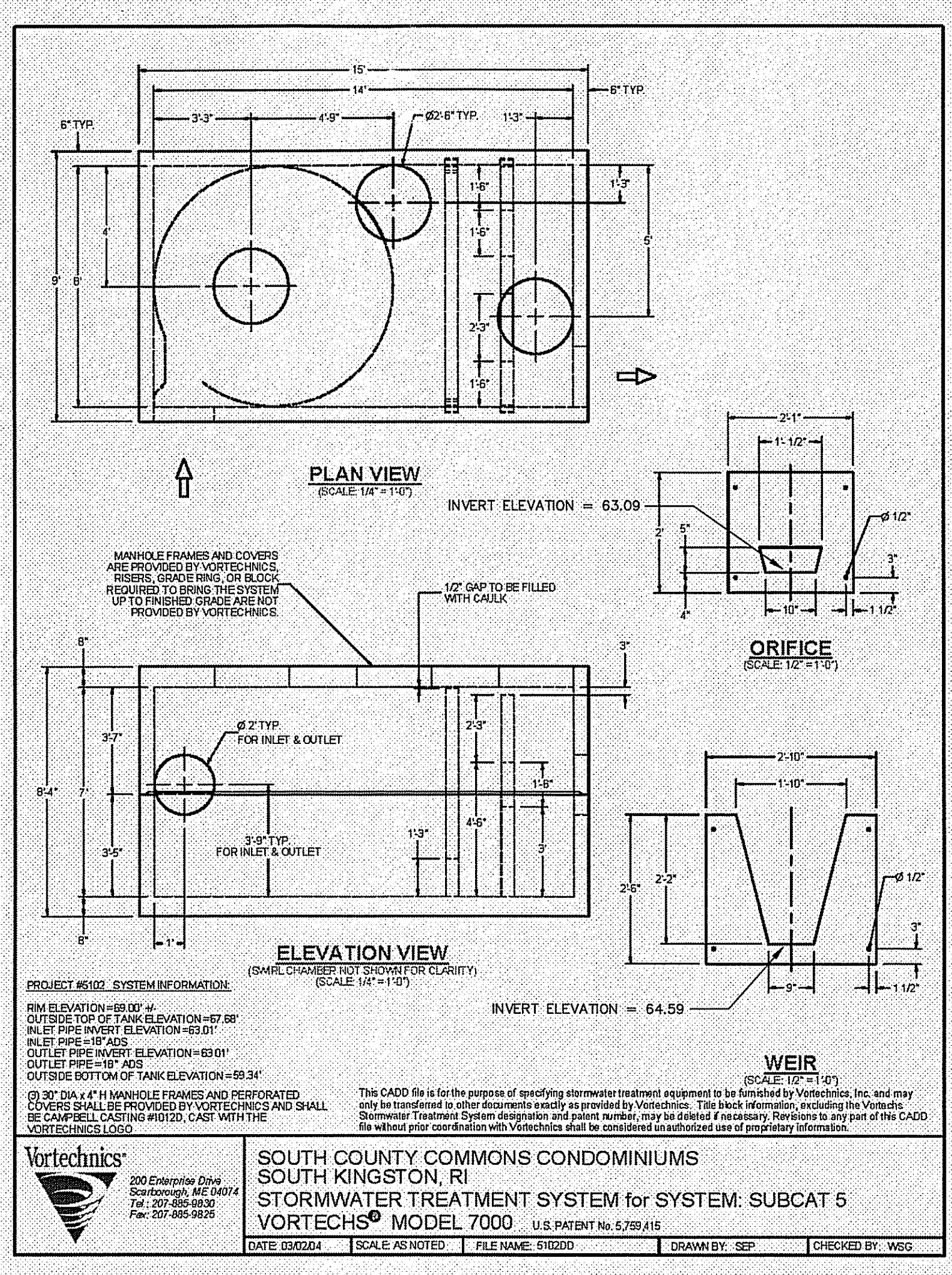
For Product Information Contact Your Local Distributor or Silt-Saver, Inc.  
(703) 248-7818 or Toll Free (888) 392-5147 (TX)  
Web: www.silt-saver.com Email: silt@silt-saver.com

**SILT SAVER (TM) N.T.S.**

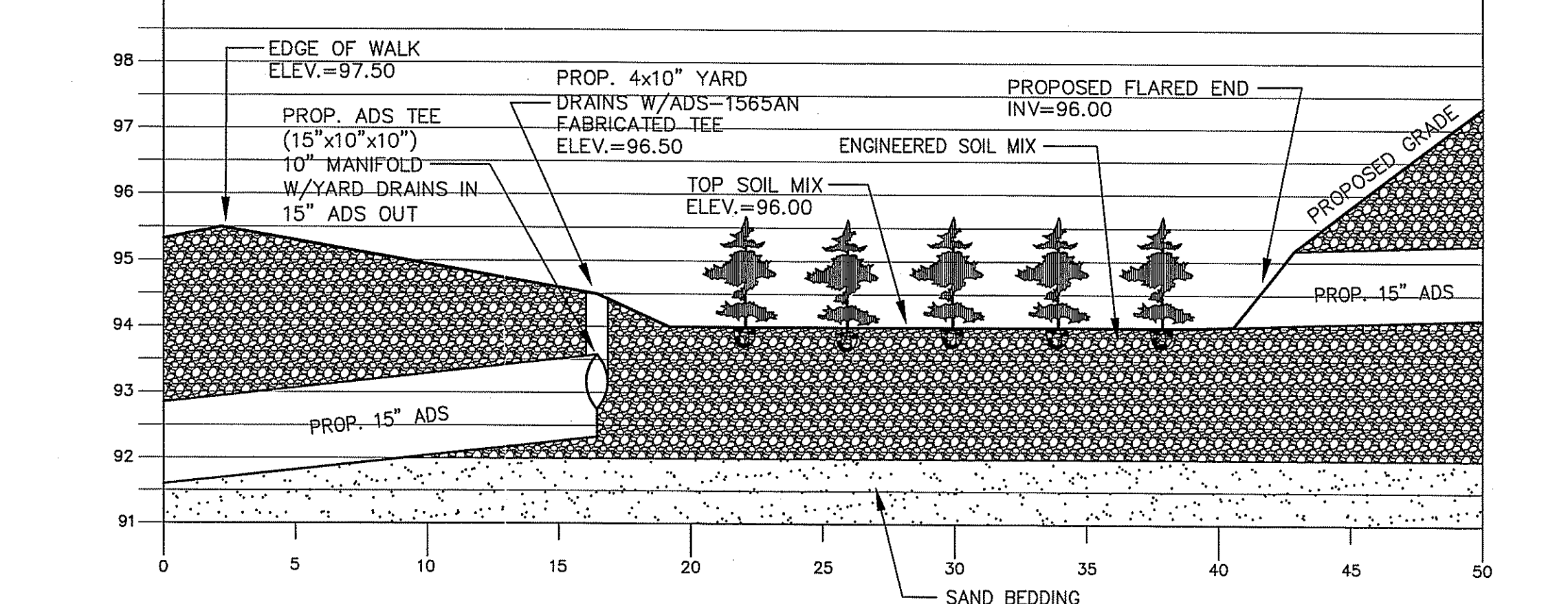
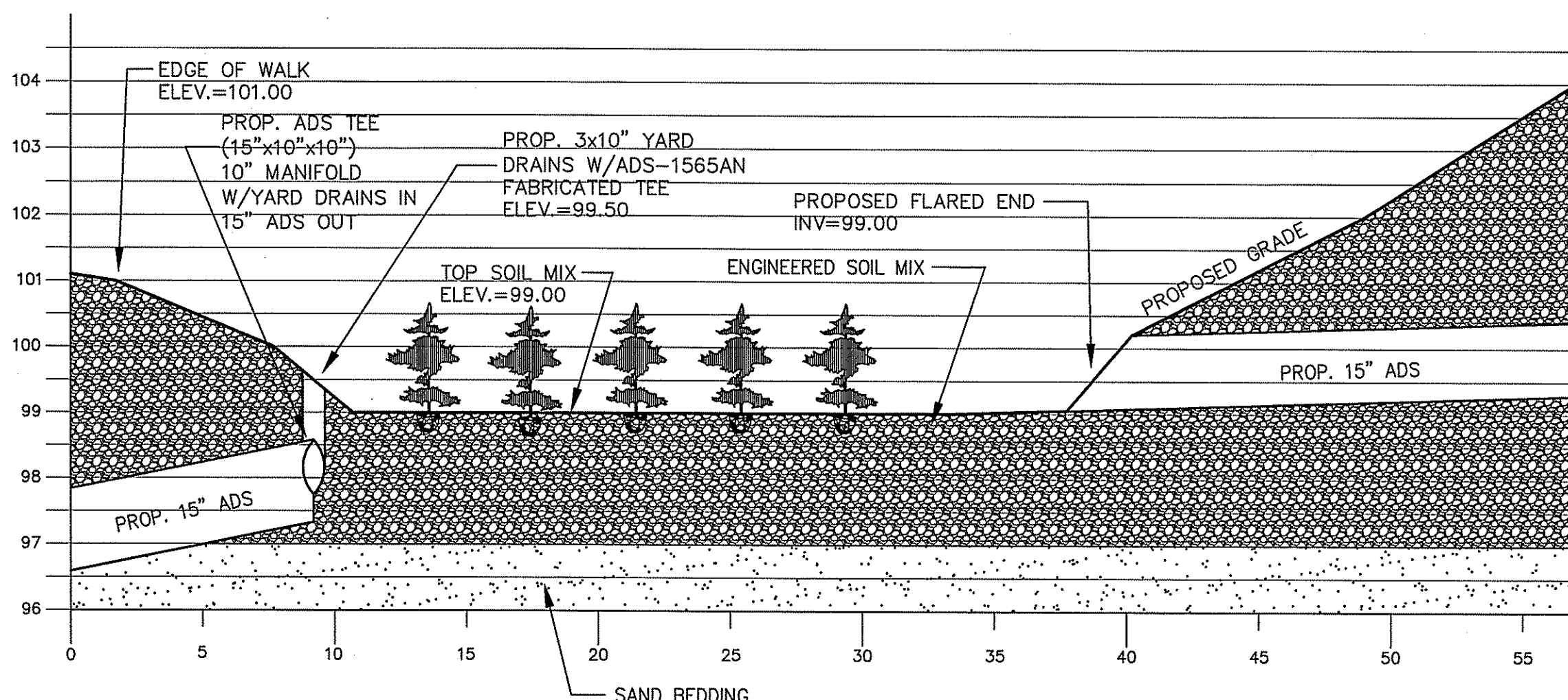


- NOTES:**
- Bypass structure shall be manufactured by others in accordance with all applicable local standards.
  - This bypass structure has been designed to work with the Vortechs unit. If the structure differs from what is shown Vortechs must be advised so that all lengths and elevations can be recalculated if necessary.

**BYPASS WEIR (DMH STRUCTURE #18) N.T.S.**



**VORTECHS (TM) MODEL 7000 (SCALE AS NOTED)**



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESH WATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED MAR 30 2004 FILE # 03-0580  
NO CHANGES ALLOWED WITHOUT TWO APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
W. Joseph Casey

**MAINTENANCE: Vortechs Stormwater Treatment System:**

THE VORTECHS SYSTEM REQUIRES MINIMAL ROUTINE MAINTENANCE; HOWEVER, IT IS IMPORTANT THAT THE SYSTEM BE PROPERLY INSPECTED AND CLEANED WHEN NECESSARY IN ORDER TO FUNCTION AT ITS BEST. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE HEAVILY ON SITE ACTIVITIES THAN THE SIZE OF THE UNIT, E.G., HEAVY WINTER SANDING WILL CAUSE THE GRIT CHAMBER TO FILL MORE QUICKLY, BUT REGULAR SWEEPING WILL SLOW ACCUMULATION.

**INSPECTION**  
INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE AND IT IS EASILY PERFORMED. IN THE FIRST YEAR OF OPERATION, FREQUENT INSPECTIONS OF THE ACCUMULATED SEDIMENT VOLUME WITHIN THE GRIT CHAMBER ARE NECESSARY TO ESTABLISH AN APPROPRIATE MAINTENANCE PLAN. VORTECHS RECOMMENDS QUARTERLY (E.G. SEASONAL) INSPECTIONS DURING THE FIRST YEAR OF SYSTEM OPERATION. INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN THE WINTER MONTHS IN CLIMATES WHERE STREET SANDING OPERATIONS MAY LEAD TO RAPID ACCUMULATIONS, OR IN EQUIPMENT WASHDOWN AREAS. AFTER THE FIRST YEAR, THE INSPECTION SCHEDULE SHOULD BE REVIEWED AND MODIFIED ACCORDING TO EXPERIENCE. IT IS VERY USEFUL TO KEEP A RECORD OF EACH INSPECTION. A SIMPLE FORM FOR DOING SO IS PROVIDED.

FOR SEDIMENT, THE VORTECHS SYSTEM ONLY NEEDS TO BE CLEANED WHEN INSPECTION REVEALS THAT IT IS NEARLY FULL SPECIFICALLY, WHEN SEDIMENT DEPTH HAS ACCUMULATED TO WITHIN SIX INCHES OF THE DRY-WEATHER WATER LEVEL. THIS DETERMINATION CAN BE MADE BY TAKING 2 MEASUREMENTS WITH A STADIA ROD OR SIMILAR MEASURING DEVICE: ONE MEASUREMENT IS THE DISTANCE FROM THE MANHOLE OPENING TO THE WATER SURFACE, AND THE OTHER IS THE DISTANCE FROM THE MANHOLE OPENING TO THE TOP OF THE SEDIMENT PILE. IF THE DIFFERENCE BETWEEN THE TWO MEASUREMENTS IS LESS THAN SIX INCHES, THE SYSTEM SHOULD BE CLEANED OUT. NOTE: TO AVOID UNDERESTIMATING THE VOLUME OF SEDIMENT IN THE CHAMBER, THE MEASURING DEVICE MUST BE LOWERED TO THE TOP OF THE SEDIMENT PILE CAREFULLY. FINER, SILT PARTICLES AT THE TOP OF THE PILE TYPICALLY OFFER LESS RESISTANCE TO THE END OF THE ROD THAN LARGER PARTICLES TOWARD THE BOTTOM OF THE PILE.

IN VORTECHS INSTALLATIONS WHERE THE RISK OF LARGE PETROLEUM SPILLS IS SMALL, LIQUID CONTAMINANTS ARE NOT LIKELY TO ACCUMULATE AS QUICKLY AS SEDIMENT. FOR OIL AND GREASE UNDER NORMAL CONDITIONS, VORTECHS SYSTEMS SHOULD BE PUMPED OUT WHEN AN APPRECIABLE LAYER OF OIL HAS ACCUMULATED. VORTECHS SYSTEMS CAN BE DESIGNED TO TRAP CATASTROPHIC SPILL EVENTS, PROVIDING FOR OIL STORAGE OF UP TO 3 FEET.

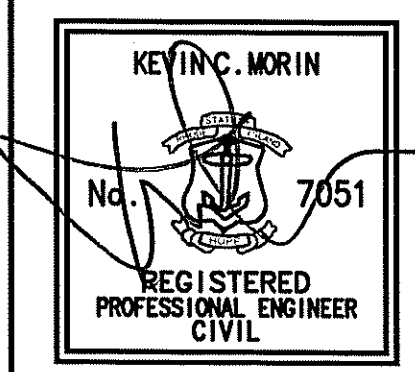
**CLEANING**  
CLEANOUT OF THE VORTECHS SYSTEM WITH A VACUUM TRUCK IS GENERALLY THE MOST EFFECTIVE AND CONVENIENT METHOD. ALTERNATE CLEANOUT METHODS INCLUDE THE USE OF ABSORBENT MATERIALS FOR OIL REMOVAL OR A 'CLAMSHELL' DEVICE FOR SEDIMENT REMOVAL. CLEANOUT SHOULD NOT OCCUR WITHIN 4 HOURS OF A SIGNIFICANT RAIN EVENT, TO ALLOW FOR THE ENTIRE COLLECTION SYSTEM TO DRAIN DOWN.

PROPERLY MAINTAINED VORTECHS SYSTEMS WILL ONLY REQUIRE EVALUATION OF SEDIMENT AND OIL/GREASE FROM THE GRIT CHAMBER PORTION OF THE SYSTEM, IN WHICH CASE IT IS NECESSARY TO REMOVE ONLY THE MANHOLE COVER NEAREST TO THE SYSTEM INLET TO REMOVE WATER AND CONTAMINANTS. HOWEVER, ALL CHAMBERS SHOULD BE CHECKED TO ENSURE THE INTEGRITY OF THE SYSTEM. IN CASES WHERE A 'CLAMSHELL' IS BEING UTILIZED, PRIOR TO REMOVING THE GRIT (AS DESCRIBED ABOVE), ABSORBENT PADS OR PILLOWS CAN BE PLACED IN THE OIL CHAMBER THROUGH THE CENTER ACCESS MANHOLE. ONCE THE OIL HAS BEEN ABSORBED, THE ABSORBENT MATERIALS CAN BE TAKEN OUT OF THE SYSTEM FOR DISPOSAL.

IN SOME CASES, IT MAY BE NECESSARY TO PUMP OUT ALL VORTECHS SYSTEM CHAMBERS, AN IMPORTANT MAINTENANCE FEATURE BUILT INTO VORTECHS SYSTEMS IS THAT FLOATABLES REMAIN TRAPPED AFTER A CLEANING. DUE TO A WATERLOCK MAINTAINED BETWEEN THE GRIT CHAMBER AND THE OUTLET PANEL, WHICH KEEPS THE BOTTOM OF THE MANHOLE SUBMERGED. THEREFORE, IN THE EVENT OF CLEANING ALL CHAMBERS, IT IS IMPERATIVE THAT THE GRIT CHAMBER BE DRAINED FIRST. IT IS IMPORTANT THAT THE VORTECHS SYSTEM BE FILLED TO THE OUTLET PIPE WITH CLEAN WATER TO RE-ESTABLISH THE WATER LOCK.

OWNER IS RESPONSIBLE FOR ALL MAINTENANCE AFTER ACCEPTANCE OF CONSTRUCTION UNTIL TRANSFERRED TO THE CONDOMINIUM ASSOCIATION (C.A.).

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.



**Preliminary Submission**

**DETAIL SHEET**

**The Village at South County Commons**  
DISTRICT 6, SECTION 2 - ASSESSOR'S PLAT 42 Lot 22  
SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY  
**DiPrete Engineering Associates, Inc.**  
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS  
TWO STAFFORD COURT  
CRANSTON, R.I. 02920  
(401) 943-1000 FAX: (401) 464-6006

PREPARED FOR  
**South County Commons, Ltd.**  
c/o ALEX PETRUCCI  
27 KRISTEN COURT  
WARWICK, R.I. 02886

DATE: OCTOBER, 2003  
DWN. BY: K.J.D.  
SHEET 12 OF 12