

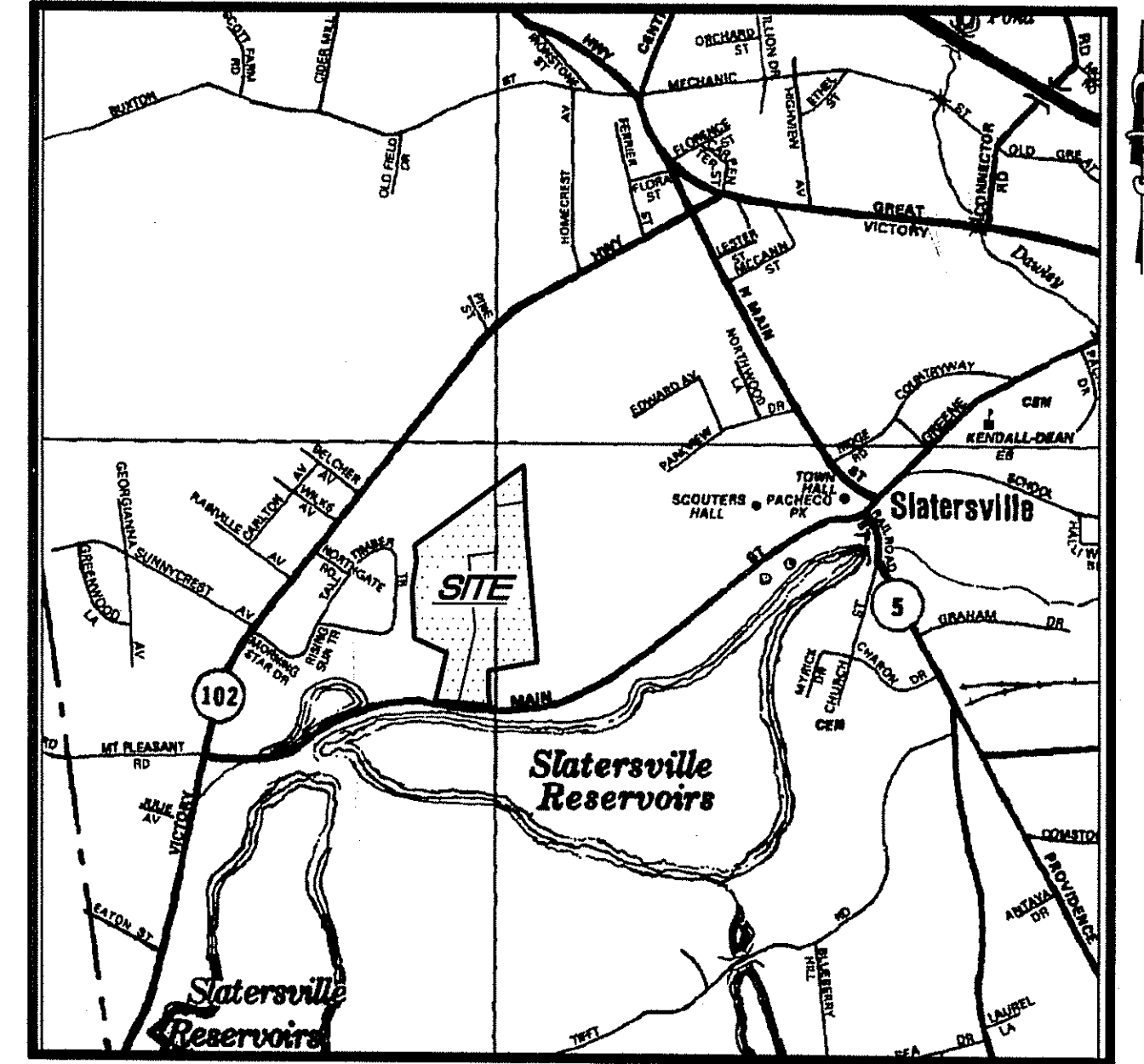
1094-COVER\_Phase2-R2.dwg (DISK: 21024)

# CONSTRUCTION PLANS

## SILVER PINES - PHASE 2

A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 436  
 MAIN STREET  
 NORTH SMITHFIELD, RHODE ISLAND

PREPARED FOR  
**D.A.S. CONTRACTING CORPORATION**  
 SEPTEMBER, 2003



LOCATION MAP  
 NOT TO SCALE



AERIAL PHOTOGRAPH  
 SCALE: 1" = 200'

REFERENCE: AERIAL PHOTOGRAPH PROVIDED BY EASTERN TOPOGRAPHICS  
 FILE: B136/31027, DATE TAKEN: MAY 4, 1992.

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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED OCT 21 2004 FILE # 03-0473  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLAN MUST BE AT CONSTRUCTION SITE

PREPARED BY

**CAITO CORPORATION**  
 CIVIL ENGINEERS  
 LAND PLANNERS

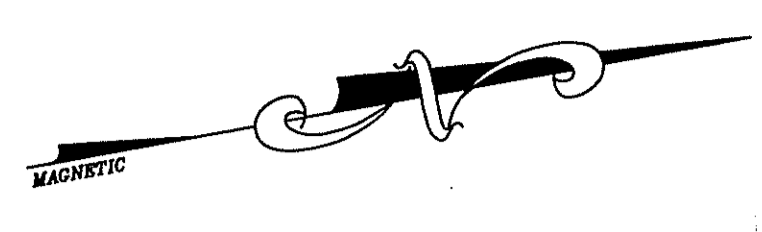
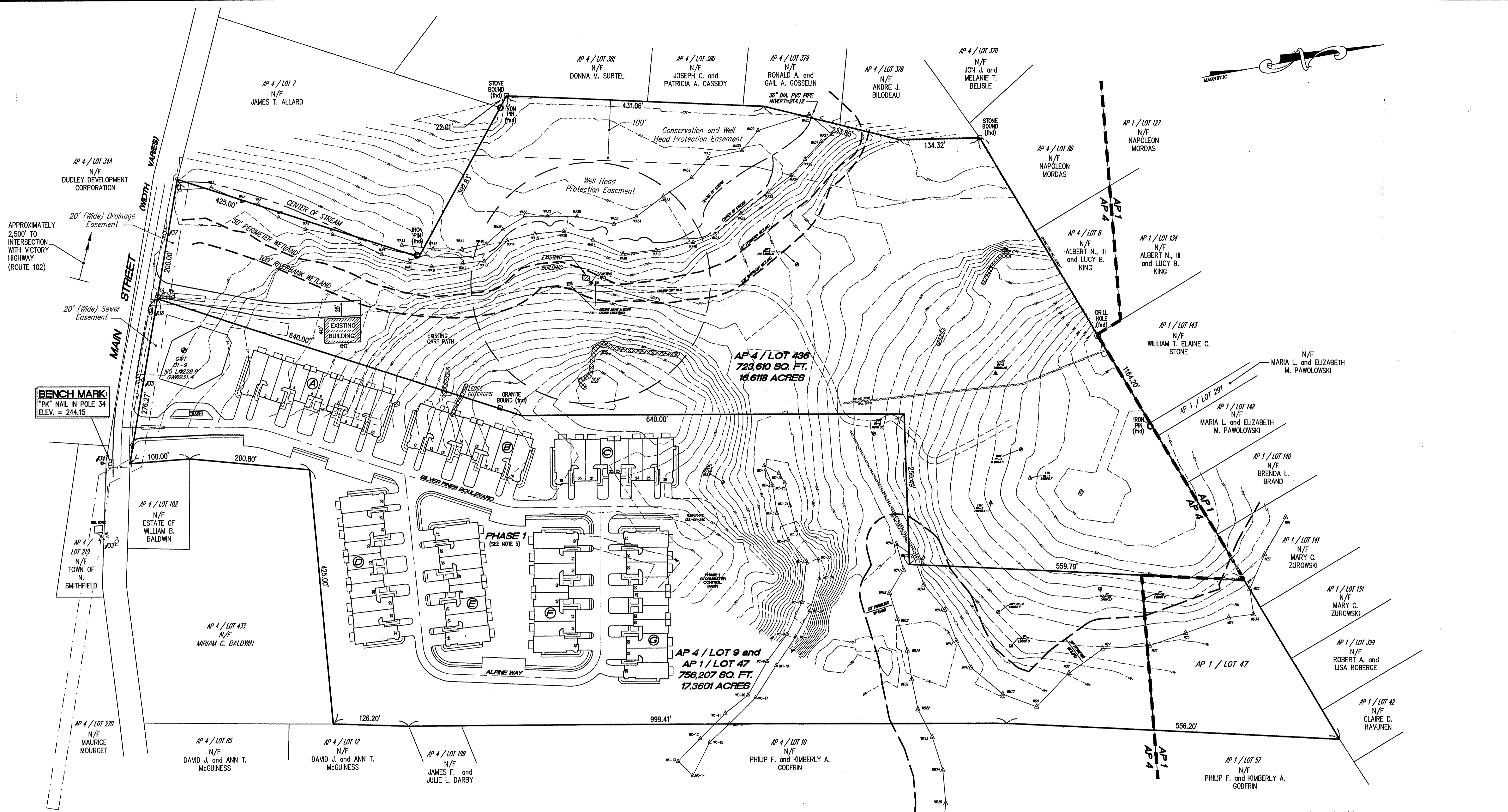
JOHN P. CAITO  
 95 SHARPE DRIVE  
 CRANSTON, RHODE ISLAND  
 02990-4402  
 401-946-0300  
 fax: 401-944-6009

JOHN P. CAITO  
 No. 4398  
 REGISTERED PROFESSIONAL ENGINEER

OWNER/APPLICANT:  
 D.A.S. CONTRACTING CORPORATION  
 645 PATCHOGUE YAPHANK ROAD  
 MEDFORD, N.Y. 11763-2211

NO.	DATE	SHEETS	REVISION
1	7/26/04	4-8 & 10-13	DEM COMMENTS
2	9/29/04	2, 6, 12	TEST PIT LOCATIONS

© 2003 JOHN P. CAITO CORPORATION



**BENCH MARK:**  
"PK" NAIL IN POLE 34  
ELEV. = 244.15

**REFERENCE:**

1. PROPERTY LINE, TOPOGRAPHIC AND PLANIMETRIC FEATURES TAKEN FROM PLAN ENTITLED "TOPOGRAPHIC SITE PLAN FOR D.A.S. CONTRACTING CORPORATION AP 4 LOT 436 MAIN STREET NORTH SMITHFIELD, RHODE ISLAND NOVEMBER, 2000 SCALE: 1"=100'" LAST REVISED 11-5-02, PREPARED BY NATIONAL LAND SURVEYORS-DEVELOPERS INC. (PLAN NOT RECORDED)

**FLOOD NOTE:**

THIS AREA LIES WITHIN ZONE "X" OF THE NATIONAL FLOOD INSURANCE RATE MAPS - AREA OUTSIDE OF THE 500 YEAR FLOOD PLAIN, TOWN OF NORTH SMITHFIELD, RHODE ISLAND, PROVIDENCE COUNTY COMMUNITY PANEL NUMBER 440021-0005C, DATED 12/3/1993.

**OWNER:**

ASSESSOR'S PLAT 1, LOT 47 AND ASSESSOR'S PLAT 4, LOTS 9 & 436  
  
D.A.S. CONTRACTING CORPORATION  
645 PATCHOGUE YAPHANK ROAD  
MEDFORD, N.Y. 11763-2211

**APPLICANT:**

(MAJOR LAND DEVELOPMENT-PRELIMINARY REVIEW)  
  
D.A.S. CONTRACTING CORPORATION  
645 PATCHOGUE YAPHANK ROAD  
MEDFORD, N.Y. 11763-2211

**ZONING DISTRICT: RU-20**  
URBAN RESIDENTIAL

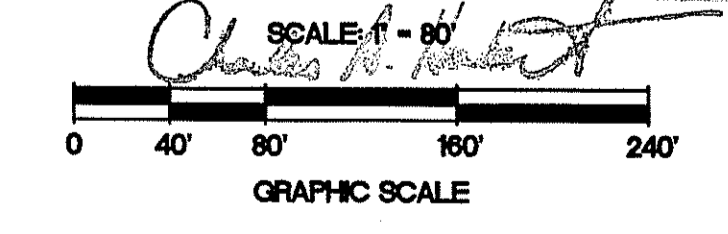
**NOTES:**

1. WETLAND EDGES WERE FLAGGED BY FJA ENVIRONMENTAL ASSOCIATES AND SURVEY LOCATED BY NATIONAL LAND SURVEYORS INC.
2. WETLAND FLAGGING WITH THE PREFIXES "WA & WB" HAVE BEEN VERIFIED BY RIDEM UNDER APPLICATION NUMBER 01-0271. WETLAND FLAGS WITH THE PREFIX "WC" WERE NOT VERIFIED BUT WERE REVIEWED UNDER RIDEM PERMIT NUMBER 03-0045.
3. TOPOGRAPHY SHOWN ON THIS PLAN HAS BEEN ADJUSTED TO REFLECT THE NGVD 29 DADUM.
4. THE ENTIRE SITE IS A WOODED COVER WITH LIGHT UNDERBRUSH.
5. THE PHASE 1 DEVELOPMENT SHOWN IS NOT CONSTRUCTED BUT IS APPROVED AND WILL BE CONSTRUCTED PRIOR TO THE CONSTRUCTION OF PHASE 2.
6. AS PART OF PHASE 1, UTILITY IMPROVEMENTS TO WATER, SEWER AND GAS WILL BE PERFORMED WITHIN MAIN STREET. EACH UTILITY WILL BE AVAILABLE TO BOTH PHASE 1 AND PHASE 2.

**LEGEND:**

- ASSESSOR'S PLAT LINE
- PROPERTY LINE
- AP 1 / LOT 47 ASSESSOR'S PLAT / LOT NO.
- - - EASEMENT LINES
- - - EXISTING CONTOUR
- ABUTTING PROPERTY LINE
- CENTER LINE STREAM
- WETLAND EDGE
- ○ ○ ○ ○ STONE WALL
- STONE BOUND
- IRON PIN
- UTILITY POLE
- TEST HOLE LOCATION
- △ LEDGE TEST LOCATION
- △ LEDGE ELEVATION
- TEST PIT

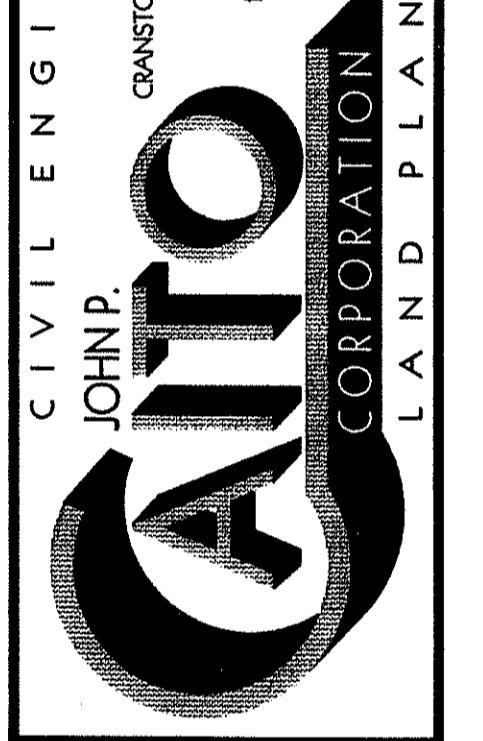
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED 10-21-2004 FILE # 03-04173  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.



NO.	DATE	REVISION
		TEST PIT LOCATIONS

**JOHN P. CAITO**  
PROFESSIONAL ENGINEER  
REG. NO. 4388  
STATE OF RHODE ISLAND

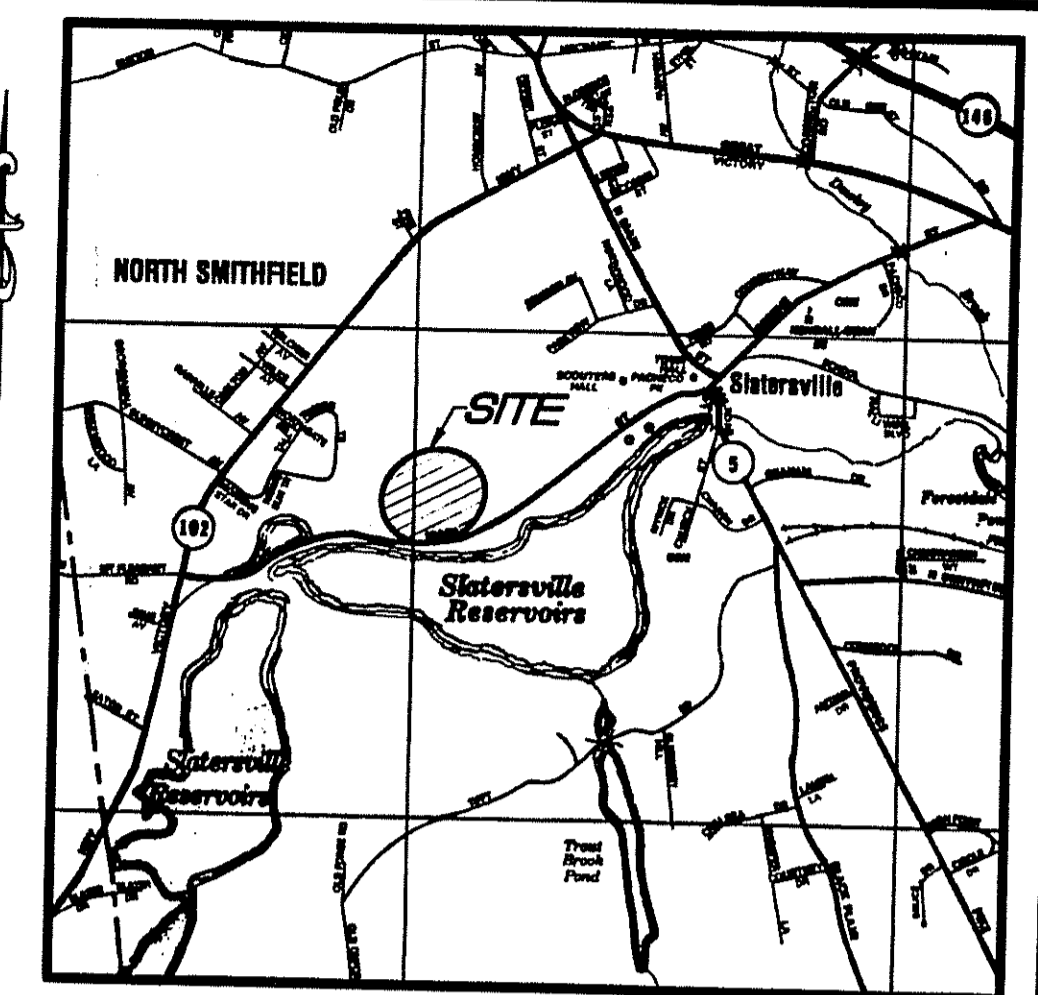
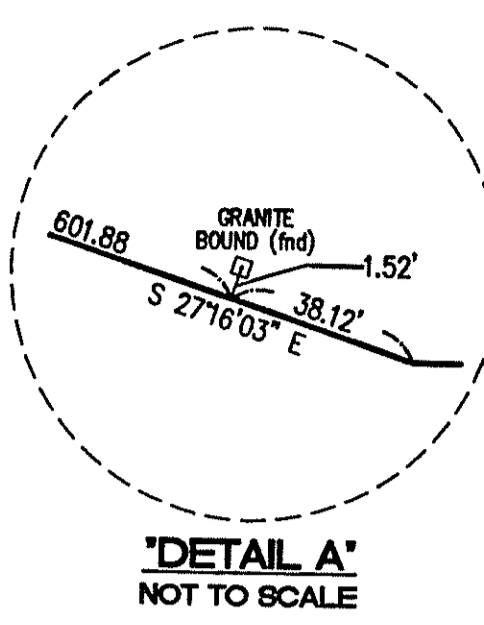
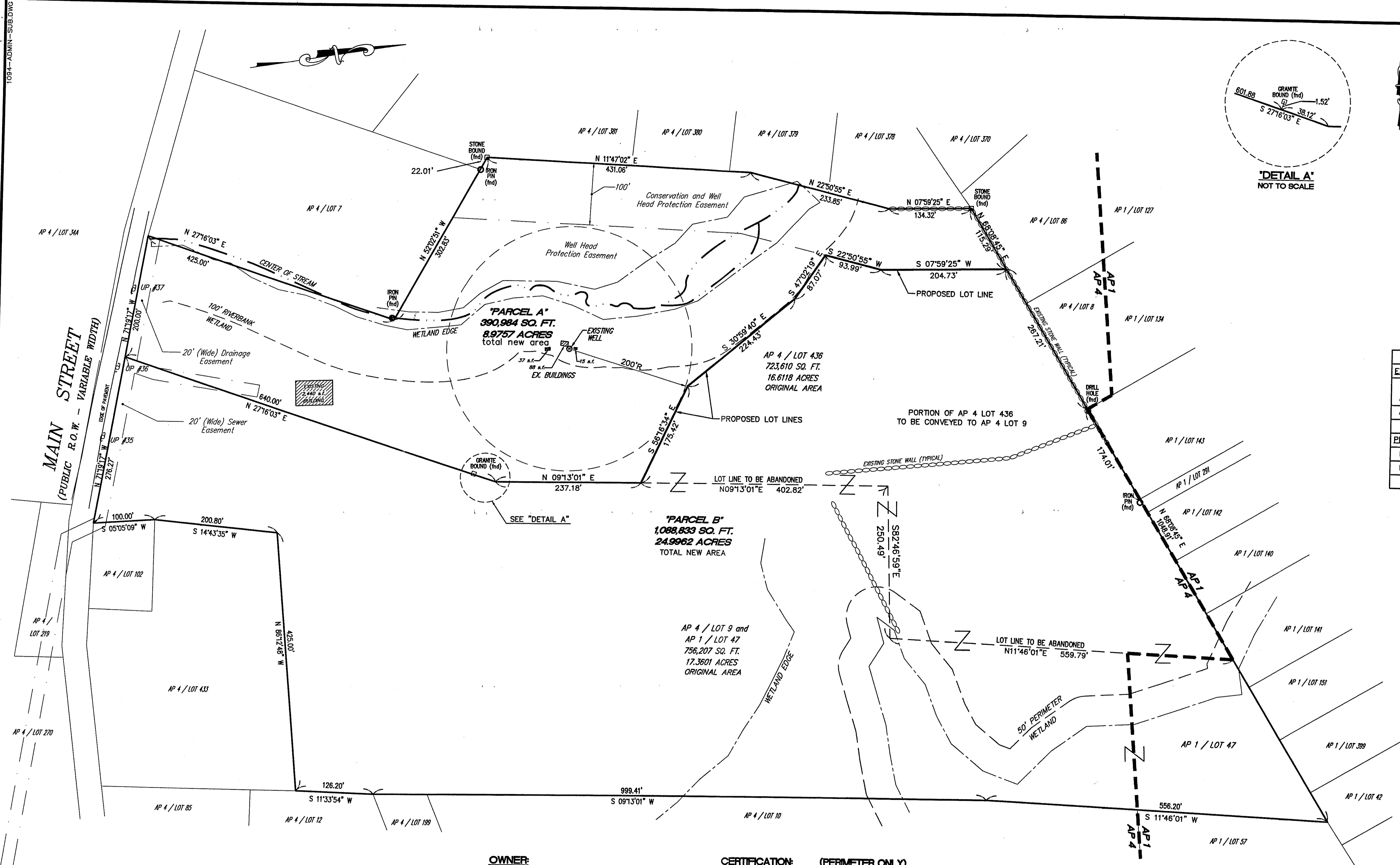
CIVIL ENGINEERS  
55 SHARPE DRIVE  
CRANSTON, RHODE ISLAND  
02920-4409  
401-946-0300  
FAX: 401-944-6005



PROJECT NO: 589.1094  
DATE: SEPTEMBER, 2003  
SCALE: 1" = 80'  
DESIGNED BY: J.C.H., M.J.V.  
DRAWN BY: M.J.V., G.A.  
CHECKED BY: J.P.C.

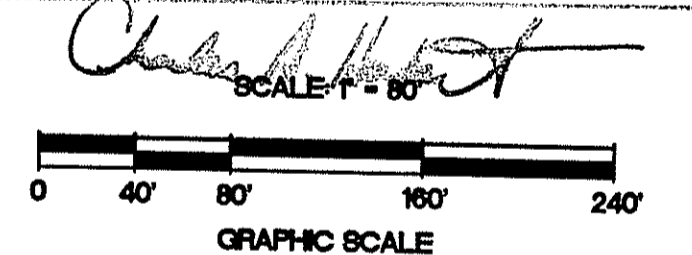
EXISTING CONDITIONS PLAN  
**SILVER PINES - PHASE 2**  
**A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 436**  
NORTH SMITHFIELD  
MAIN STREET  
PREPARED FOR  
D.A.S. CONTRACTING CORPORATION  
RHODE ISLAND

DRAWING NUMBER  
**2**  
SHEET 2 OF 15



TABULATED AREAS		
EXISTING:	AREA (S.F.)	AREA (Ac.)
A.P. 4, LOT 9		
A.P. 1, LOT 47	756,207	17.3601
A.P. 4, LOT 436	723,610	16.6118
TOTALS =	1,479,817	33.9719
PROPOSED:		
AREA (S.F.)	AREA (Ac.)	
PARCEL "A"	390,984	8.9757
PARCEL "B"	1,088,833	24.9962
TOTALS =	1,479,817	33.9719

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
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DATED 10/9/2001 FILE # 03-0413  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
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**ADMINISTRATIVE  
SUBDIVISION PLAN**  
**SILVER PINES**  
ASSESSOR'S PLAT 4, LOTS 9, 436 and  
ASSESSOR'S PLAT 1, LOT 47  
SITUATED IN  
NORTH SMITHFIELD, RHODE ISLAND

PREPARED FOR  
**D.A.S. CONTRACTING CORPORATION**  
PREPARED BY

CIVIL ENGINEERS  
**CAITO CORPORATION**  
LAND PLANNERS  
935 PHENIX AVENUE  
CRANSTON, RHODE ISLAND  
02921-1107  
401-946-0300  
FAX: 401-944-6009  
OCT - 1 2002

**REFERENCES:**  
PLAN ENTITLED: "DIVISION OF LAND OWNED BY ANTONIO PACHECO NORTH SMITHFIELD, RHODE ISLAND JANUARY, 1986 SCALE: 1 INCH EQUALS 40 FEET PREPARED BY NATIONAL ENGINEER-LAND SURVEYORS, INC."

**FLOOD NOTE:**  
THIS AREA LIES WITHIN ZONE "X" OF THE NATIONAL FLOOD INSURANCE RATE MAPS - AREA OUTSIDE OF THE 500 YEAR FLOOD PLAIN, TOWN OF NORTH SMITHFIELD, RHODE ISLAND, PROVIDENCE COUNTY COMMUNITY PANEL NUMBER 440021-0005C, DATED 12/3/1993.

- LEGEND:**
- EXISTING ASSESSOR'S PLAT LINE
  - EXISTING PROPERTY LINE
  - - - PROPOSED LOT LINE
  - - - EASEMENT LINES
  - - - LOT LINE TO BE ABANDONED
  - - - ABUTTING PROPERTY LINE
  - - - CENTER LINE STREAM
  - - - WETLAND EDGE
  - STONE WALL
  - STONE BOUND
  - IRON PIN
  - ⊕ EXISTING UTILITY POLE

**OWNER:**  
ASSESSOR'S PLAT 1, LOT 47  
D.A.S. CONTRACTING CORPORATION  
645 PATCHOGUE YAPHANK ROAD  
MEDFORD, N.Y. 11763-2211

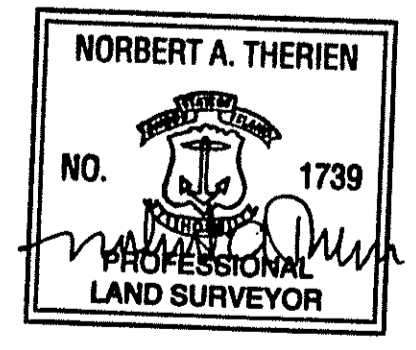
**ASSESSOR'S PLAT 4, LOT 436**  
D.A.S. CONTRACTING CORPORATION  
645 PATCHOGUE YAPHANK ROAD  
MEDFORD, N.Y. 11763-2211

**ASSESSOR'S PLAT 4, LOT 9**  
D.A.S. CONTRACTING CORPORATION  
645 PATCHOGUE YAPHANK ROAD  
MEDFORD, N.Y. 11763-2211

**APPLICANT:**  
D.A.S. CONTRACTING CORPORATION  
645 PATCHOGUE YAPHANK ROAD  
MEDFORD, N.Y. 11763-2211

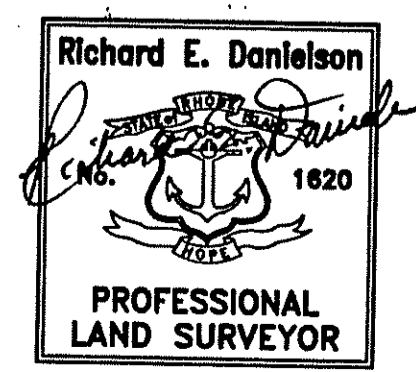
**CERTIFICATION: (PERIMETER ONLY)**  
THIS SURVEY AND PLAN CONFORM TO A CLASS I STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.

BY *Norbert A. Therien* 9/10/02  
PROFESSIONAL LAND SURVEYOR DATE



**CERTIFICATION: (SUBDIVISION ONLY)**  
THIS SURVEY AND PLAN CONFORM TO A CLASS I STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.

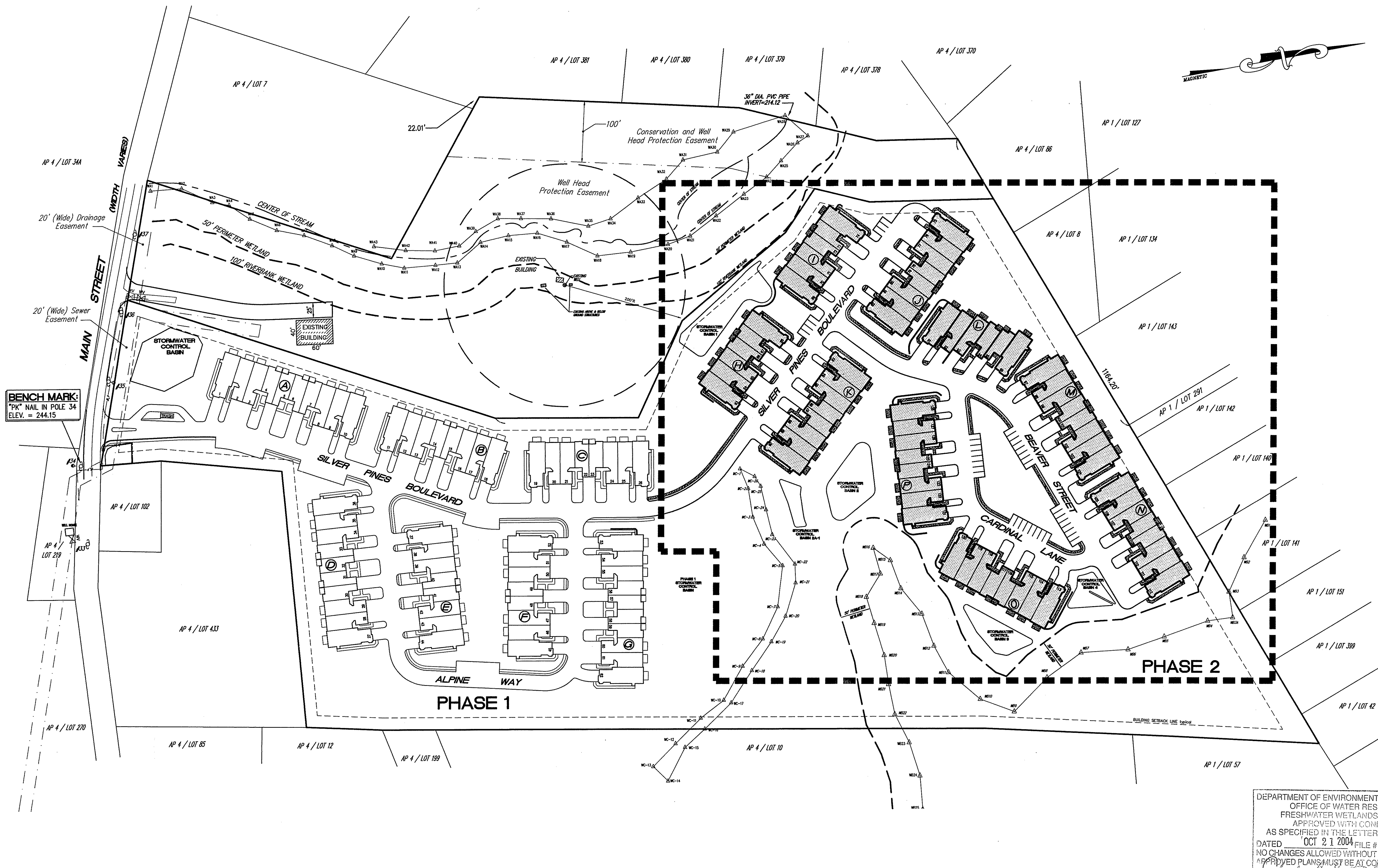
BY *Richard E. Danielson* 9/10/02  
PROFESSIONAL LAND SURVEYOR DATE



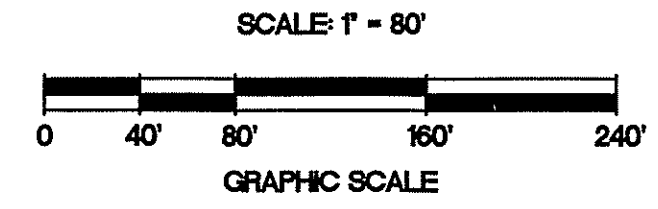
**ZONING DISTRICT: RU-20**  
URBAN RESIDENTIAL

THIS PLAT SHALL BE INDEXED BY  
THE FOLLOWING STREET NAME:  
**MAIN STREET**

AUGUST, 2002



**BENCH MARK:**  
 "PK" NAIL IN POLE 34  
 ELEV. = 244.15



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED OCT 21 2004 FILE # 03-0473  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

*Charles H. Smith*

NO.	DATE	REVISION	BY
1	11/27/04	DEBT COMMENTS	

**JOHN P. CAITO**  
 PROFESSIONAL ENGINEER  
 No. 0399  
 REGISTERED

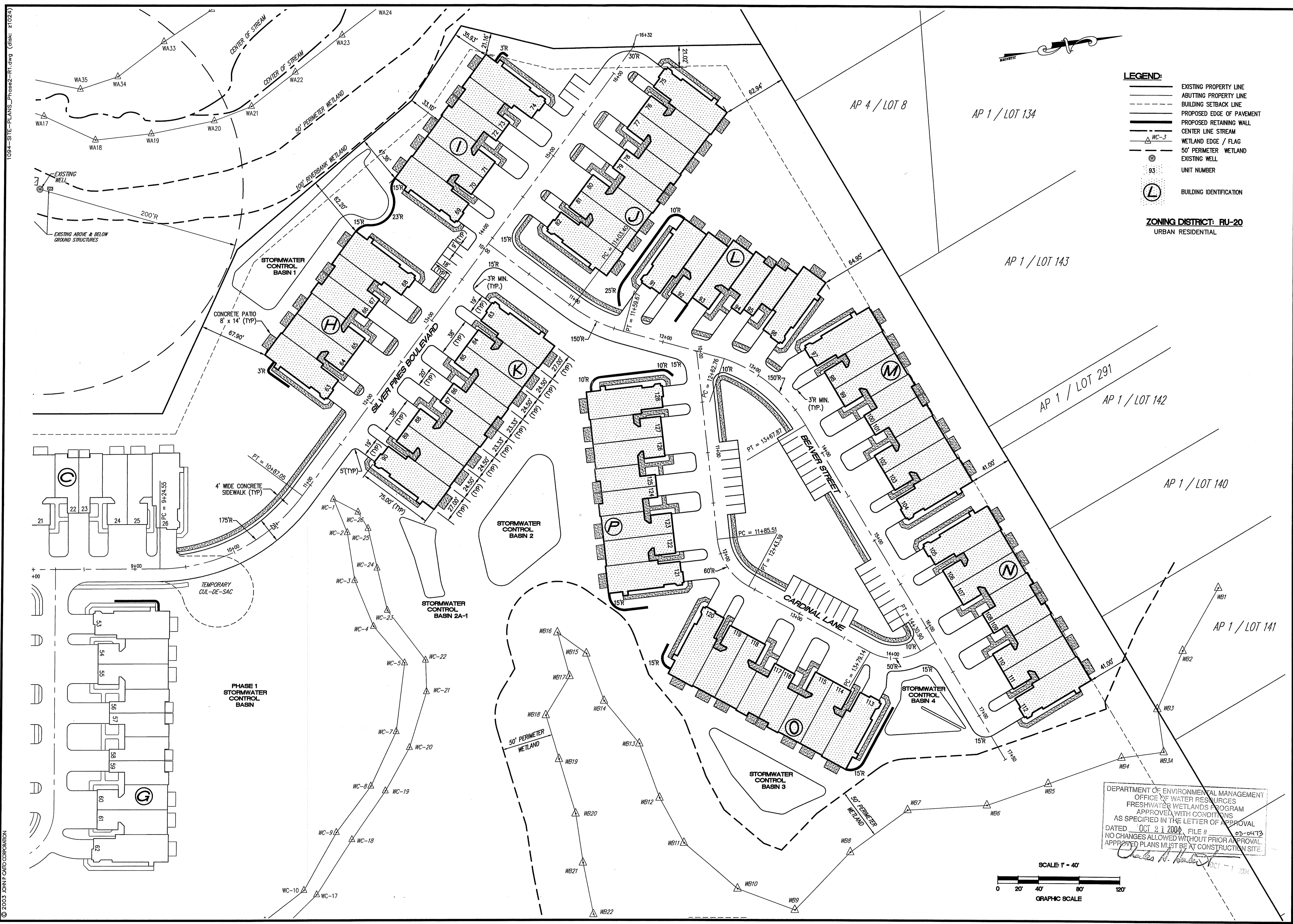
**CAITO CORPORATION**  
 CIVIL ENGINEERS  
 JOHN P. CAITO  
 95 SHARPE DRIVE  
 CRANSTON, RHODE ISLAND 02910-4402  
 401-946-0300  
 401-944-6099  
 FAX: 401-944-6099  
 LAND PLANNERS

PROJECT NO: 589.1094  
 DATE: SEPTEMBER, 2003  
 SCALE: 1" = 80'  
 DESIGNED BY: M.J.V., J.C.H.  
 DRAWN BY: G.A., M.A.D.  
 CHECKED BY: J.P.C.

**KEY PLAN**  
**SILVER PINES - PHASE 2**  
**A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 436**  
 NORTH SMITHFIELD  
 MAIN STREET  
 RHODE ISLAND  
 PREPARED FOR  
**D.A.S. CONTRACTING CORPORATION**

DRAWING NUMBER  
**4**  
 SHEET 4 OF 15

OCT 11 2004



- LEGEND:**
- EXISTING PROPERTY LINE
  - ABUTTING PROPERTY LINE
  - BUILDING SETBACK LINE
  - PROPOSED EDGE OF PAVEMENT
  - PROPOSED RETAINING WALL
  - CENTER LINE STREAM
  - WETLAND EDGE / FLAG
  - 50' PERIMETER WETLAND
  - ⊕ EXISTING WELL
  - ⊙ UNIT NUMBER
  - Ⓛ BUILDING IDENTIFICATION

**ZONING DISTRICT: RU-20**  
URBAN RESIDENTIAL

NO.	DATE	REVISION	DESCRIPTION

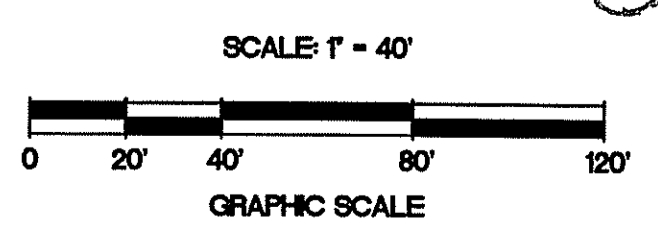
JOHN P. CAITO  
Professional Engineer  
No. 4398  
R.I. REG. ENG. 4398

CIVIL ENGINEERS  
JOHN P. CAITO CORPORATION  
LAND PLANNERS

PROJECT NO: 589.1094  
DATE: SEPTEMBER, 2003  
SCALE: 1" = 40'  
DESIGNED BY: M.J.V., J.A.  
DRAWN BY: G.A., M.A.D.  
CHECKED BY: J.P.C.

SITE LAYOUT PLAN  
SILVER PINES - PHASE 2  
A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 496  
NORTH SMITHFIELD  
RHODE ISLAND  
PREPARED FOR  
D.A.S. CONTRACTING CORPORATION

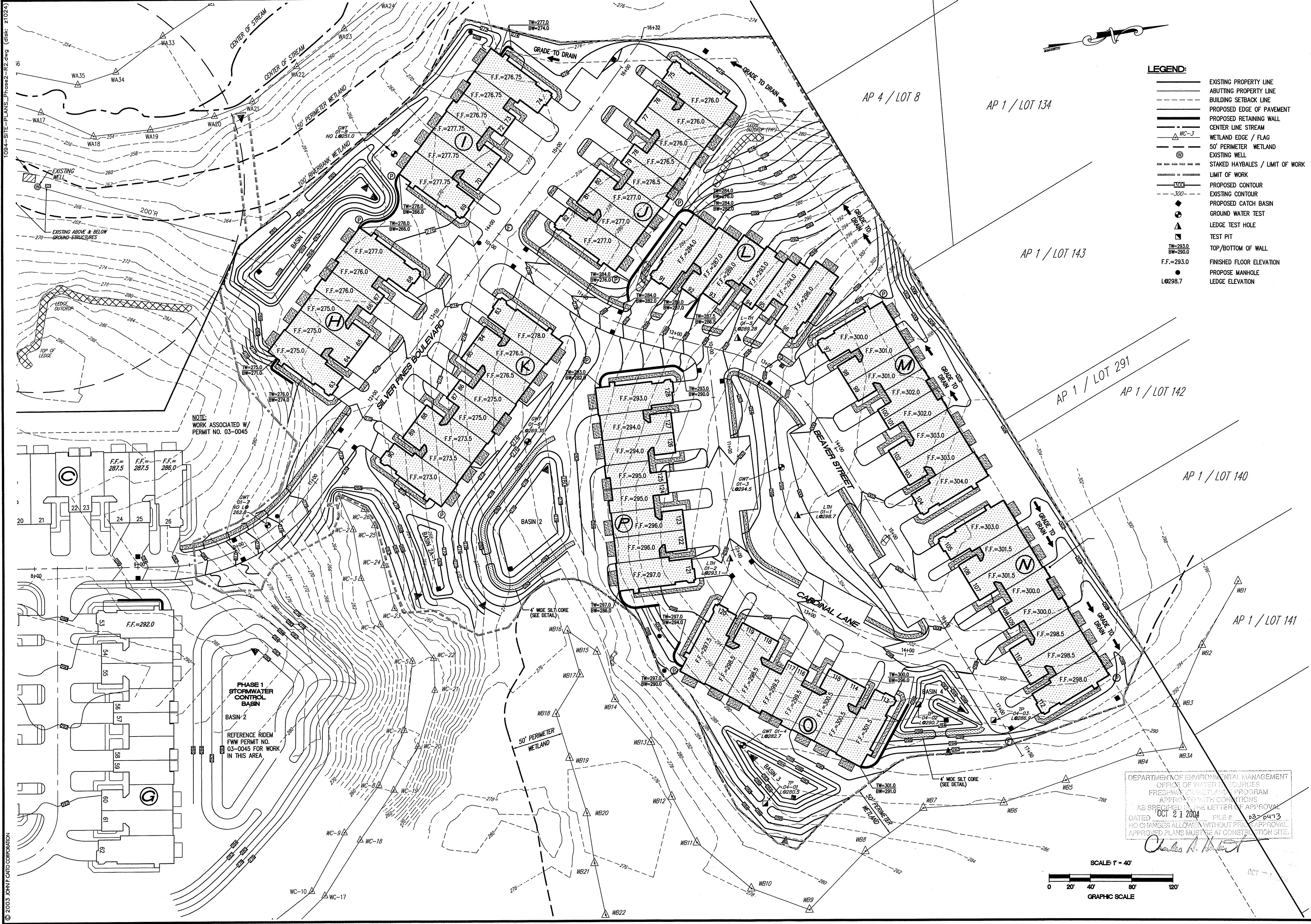
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
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AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED OCT 21 2003 FILE # 02-0413  
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Charles R. ...



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DRAWING NUMBER  
**5**  
SHEET 5 OF 15

1094-SITE-PLANS-Phase2-R2.dwg (Date: 2/02/04)



**LEGEND:**

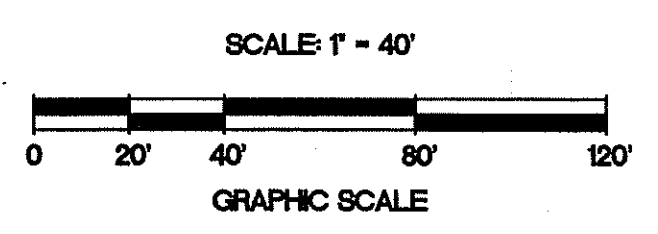
- EXISTING PROPERTY LINE
- - - ABUTTING PROPERTY LINE
- BUILDING SETBACK LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED RETAINING WALL
- CENTER LINE STREAM
- WETLAND EDGE / FLAG
- 50' PERIMETER WETLAND
- EXISTING WELL
- STAKED HAYBALES / LIMIT OF WORK
- LIMIT OF WORK
- PROPOSED CONTOUR
- EXISTING CONTOUR
- PROPOSED CATCH BASIN
- GROUND WATER TEST
- LEDGE TEST HOLE
- TEST PIT
- TOP/BOTTOM OF WALL
- F.F.=293.0 FINISHED FLOOR ELEVATION
- PROPOSE MANHOLE
- LEDGE ELEVATION

NOTE:  
WORK ASSOCIATED W/  
PERMIT NO. 03-0045

PHASE 1  
STORMWATER  
CONTROL  
BASIN  
BASIN 2  
REFERENCE RIDEM  
TWM PERMIT NO.  
03-0045 FOR WORK  
IN THIS AREA

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLAND PROGRAM  
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NO CHANGES ALLOWED WITHOUT PRE-APPROVAL.  
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*Charles R. [Signature]*



NO.	DATE	REVISION
1	7/26/04	DESI COMMENTS
2	8/29/04	TEST PIT LOCATIONS

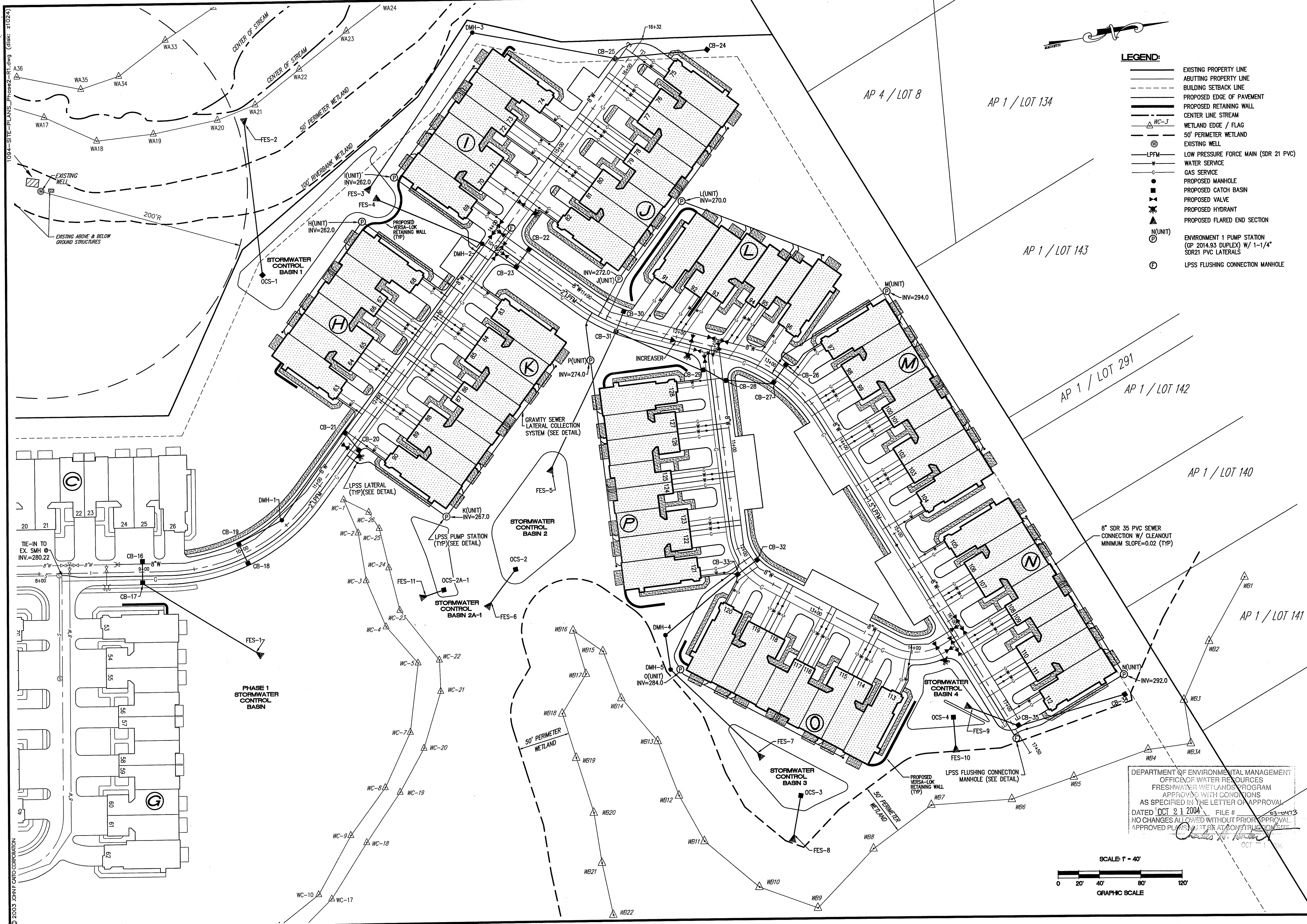
**JOHN P. CAITO**  
 CIVIL ENGINEER  
 95 SHARPE DRIVE  
 GRANSTON RHODE ISLAND  
 02900-4402  
 401-946-0300  
 401-944-6007  
 No. 4388  
 REGISTERED PROFESSIONAL ENGINEER

**CAITO CORPORATION**  
 CIVIL ENGINEERS  
 LAND PLANNERS

PROJECT NO: 5891094  
 DATE: SEPTEMBER, 2003  
 SCALE: 1" = 40'  
 DESIGNED BY: M.J.V. J.A.  
 DRAWN BY: G.A. M.D.  
 CHECKED BY: J.P.C.

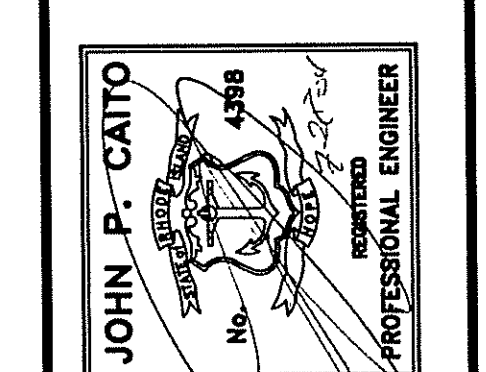
**SITE GRADING PLAN**  
**SILVER PINES - PHASE 2**  
**A.P. 1 LOT 47 and A.P. 4 LOTS 9 and 436**  
 NORTH SMITHFIELD  
 MAIN STREET  
 PREPARED FOR  
**D.A.S. CONTRACTING CORPORATION**

DRAWING NUMBER  
**6**  
 SHEET 6 OF 15

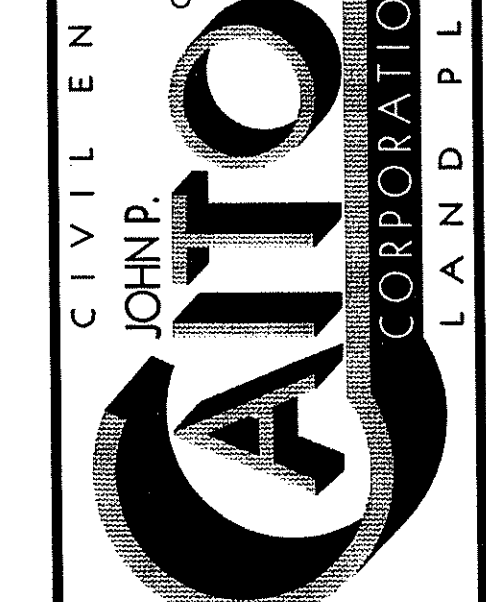


- LEGEND:**
- EXISTING PROPERTY LINE
  - - - ABUTTING PROPERTY LINE
  - - - BUILDING SETBACK LINE
  - - - PROPOSED EDGE OF PAVEMENT
  - - - PROPOSED RETAINING WALL
  - - - CENTER LINE STREAM
  - △ WC-3 WETLAND EDGE / FLAG
  - △ 50' PERIMETER WETLAND
  - ⊙ EXISTING WELL
  - LPFM LOW PRESSURE FORCE MAIN (SDR 21 PVC)
  - WATER SERVICE
  - GAS SERVICE
  - ⊙ PROPOSED MANHOLE
  - ⊙ PROPOSED CATCH BASIN
  - ⊙ PROPOSED VALVE
  - ⊙ PROPOSED HYDRANT
  - ⊙ PROPOSED FLARED END SECTION
  - ⊙ (N/UNIT) ENVIRONMENT 1 PUMP STATION (GP 2014.93 DUPLEX) W/ 1-1/4" SDR21 PVC LATERALS
  - ⊙ LPSS FLUSHING CONNECTION MANHOLE

NO.	DATE	REVISION	DESK COMMENTS
1	7/25/04		



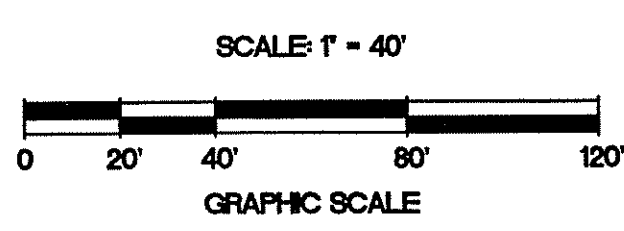
JOHN P. CAITO  
 CIVIL ENGINEERS  
 95 SHARPE DRIVE  
 GRANSTON, RHODE ISLAND 02909-4409  
 401-944-0300  
 401-944-0300  
 Fax: 401-944-0009



PROJECT NO.: 589.1094  
 DATE: SEPTEMBER, 2003  
 SCALE: 1" = 40'  
 DESIGNED BY: M.J.V. J.A.  
 DRAWN BY: G.A., M.A.D.  
 CHECKED BY: J.P.C.

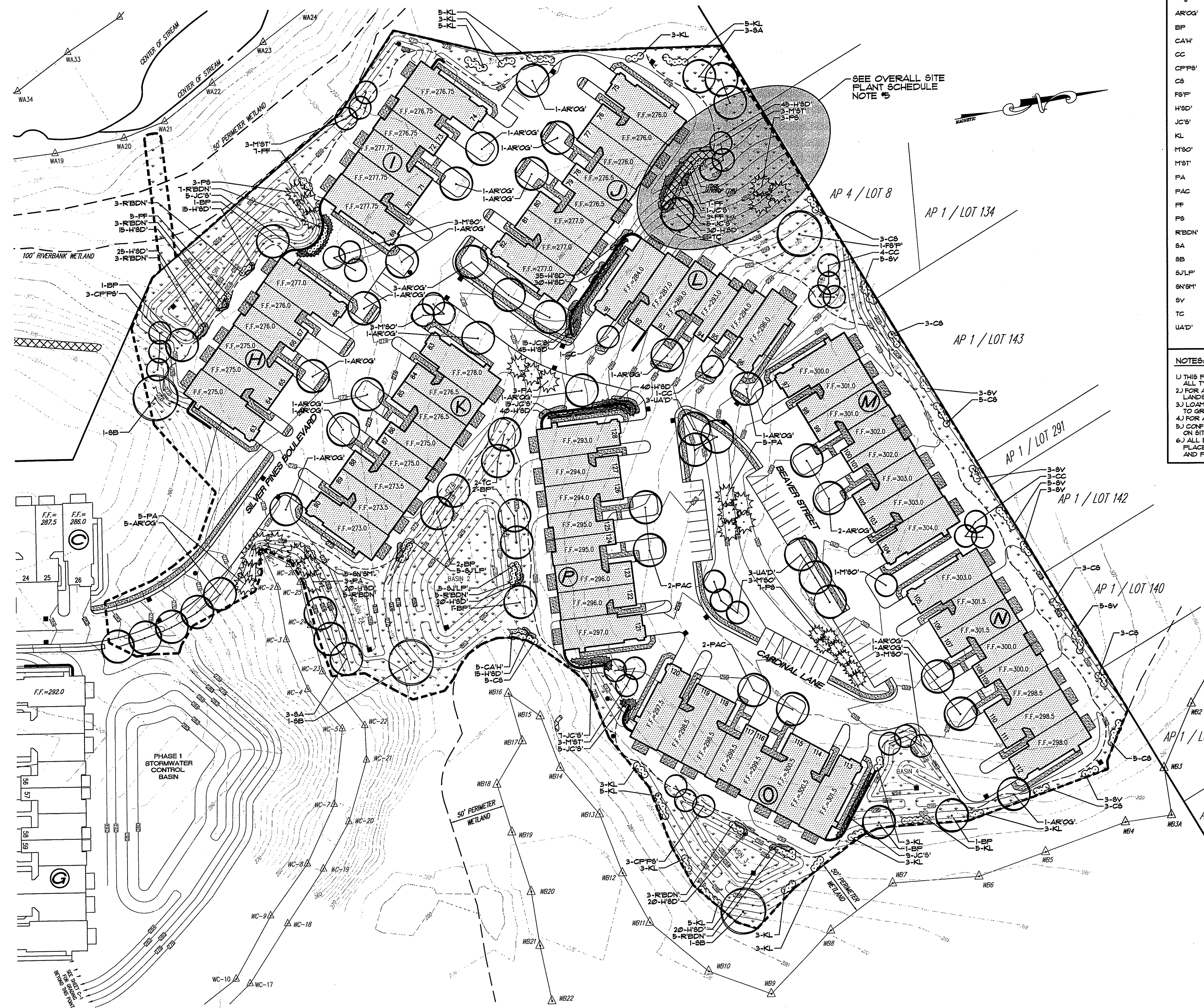
SITE UTILITY PLAN  
**SILVER PINES - PHASE 2**  
 A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 436  
 MAIN STREET  
 NORTH SMITHFIELD  
 RHODE ISLAND  
 PREPARED FOR  
**D.A.S. CONTRACTING CORPORATION**

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
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DRAWING NUMBER  
**7**  
 SHEET 7 OF 15

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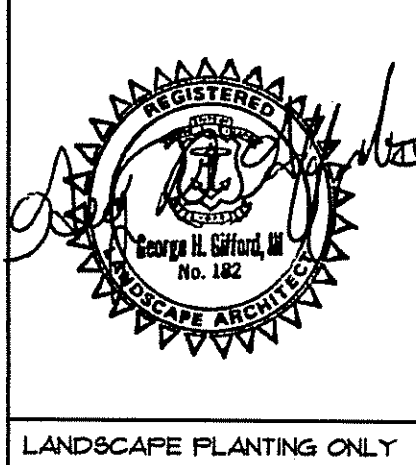
**OVERALL SITE PLANT SCHEDULE:**

Key	Botanical Name/ Common Name	Size	Qty	Comment
AR'OG	ACER RUBRUM 'October Glory' October Glory Swamp Maple	2"-2.5" Cal.	28	B4B
BP	BETULA PENDULA European Birch	2"-2.5" Cal.	9	B4B
CAH	CLETHRA ALNIFOLIA 'Hummingbird' White Copsal Sumacswast	3" (3 Gal)	5	Container
CC	CERCIS CANADENSIS Eastern Redbud	2"-2.5" Cal.	9	B4B
CP'PS	CRATAEGUS PHAENOPYRUM 'Princeton Sentry' Princeton Sentry Washington Hawthorn	2"-2.5" Cal.	6	B4B
CS	CORNUS SERICEA Red Twig Dogwood	3" (3 Gal)	30	Container
FS'P	FAGUS SYLVATICA 'Purpurea' Purple European Beech	3"-3.5" Cal.	1	B4B
HSD	HEBEROCALLIS 'Stella D'Oro' Continuous Bloom Daylily	4" (1 Gal)	418	Container Plant 6" O.C.
JC'S	JUNIFERUS CHINENSIS 'Sargentii' Green Sargent Juniper	3" (3 Gal)	62	Container Plant 6" O.C.
KL	KALMIA LATIFOLIA Mountain Laurel	24"-30"	57	B4B
M'SO	MAGNOLIA SOULANGEANA Saucer Magnolia	1"-8"	13	B4B
MST	MAGNOLIA STELLATA Star Magnolia	1"-8"	9	B4B
PA	PICEA ABIES Norway Spruce	8"-10"	16	B4B
PAC	PLATANUS ACERIFOLIA London Planetree	2"-2.5" Cal.	4	B4B
FF	PIERIS FLORIBUNDA Mountain Andromeda	24"-30"	22	B4B
PS	PRUNUS SYLVESTRIS Scotch Pine	8"-10"	13	B4B
RBDN	RHODODENDRON 'Boule De Neige' White Rhododendron	24"-30"	34	B4B
SA	SASSAPARILLA ALBIDUM Sassafras Tree	2"-2.5"	6	B4B
SB	SALIX BABYRONICA Weeping Willow	3"-3.5"	3	B4B
SJLP	SPIRAEA JAPONICA 'Little Princess' Dwarf Deep Pink Spiraea	24"-30"	10	B4B
SN'SH	SPIRAEA NIPPONICA 'Snowmound' Compact White Spiraea	24"-30"	5	B4B
SV	SYRINGA VILGARIS Common Lilac	24"-30"	21	B4B
TC	TILIA CORDATA Little Leaf Linden	2"-2.5"	3	B4B
UAD	ULMUS AMERICANA 'Delaware 7' Resistant Princeton American Elm	2"-2.5"	6	B4B

**NOTES:**

- THIS PLANT SCHEDULE DOES NOT INCLUDE PLANTINGS IMMEDIATELY AROUND THE PROPOSED BUILDINGS. FOR ALL TYPICAL BUILDING LANDSCAPE PLANS SEE SHEET 9 OF 15.
- FOR ALL GENERAL LANDSCAPE NOTES, SEE SHEET 9 OF 15. LOAM AND SEED ALL DISTURBED AREAS AS PER LANDSCAPE NOTES 14 & 15.
- LOAM AND SEED ALL FIELD GRASS AREAS AS PER LANDSCAPE NOTE 15, AND ALLOW NATIVE WILD FLOWERS TO GROW NATURALLY.
- FOR ALL PLANTING DETAILS, SEE SHEET 9 OF 15.
- CONFIGURATION OF THIS LEDGE CUT IS NOT FINAL. CONTRACTOR TO BUDGET THESE PLANTS AND DETERMINE ON SITE THE FINAL NEED AND LOCATIONS. THE PLANTS NOT USED ARE TO BE CREDITED TO OWNER.
- ALL EXISTING VEGETATION THAT CAN BE MAINTAINED, SHALL BE, SUBJECT TO FINAL SITE GRADING, FINAL PLACEMENT OF PROPOSED PLANTINGS TO BE DETERMINED ON SITE ACCORDING TO LOCATION OF RETAINED AND PRESERVED EXISTING TREES.

**THE GIFFORD  
DESIGN GROUP, Inc.**  
LANDSCAPE ARCHITECTURE  
ENVIRONMENTAL PLANNING  
1821 MENDON ROAD, CUMBERLAND, RHODE ISLAND 02864  
PHONE (401) 335-4400 FAX (401) 335-4411



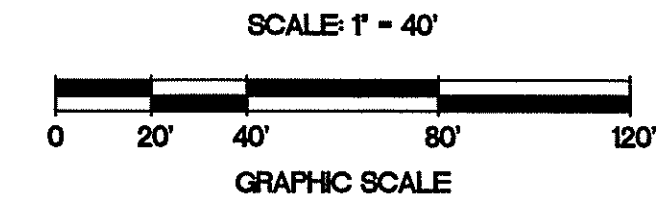
**LEGEND:**

- PROPERTY LINE
- ASSESSOR'S PLAT / LOT NO.
- EASEMENT LINES
- EXISTING CONTOUR
- ABUTTING PROPERTY LINE
- CENTER LINE STREAM
- FERMIER WETLAND EDGE
- STONE WALL
- PROPOSED CONTOUR
- PROPOSED RETAINING WALL
- PROPOSED SIDEWALK
- PROPOSED LIMIT OF EXISTING VEGETATION COMPRISED OF EVERGREEN AND DECIDUOUS FOREST
- MANGICURED LAWN AREAS (TYPICAL)
- FIELD GRASS AREAS (TYPICAL)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
PROPOSED MAINTAINABLE  
AS PROPOSED DRAINAGE STRUCTURE APPROVAL  
DATED OCT 21 2004 FILE # 03-0473  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Charles H. Gifford*  
OCT 21 2004

**OVERALL SITE LANDSCAPE PLAN**



REVISION  
NO. DATE  
1 11/26/04

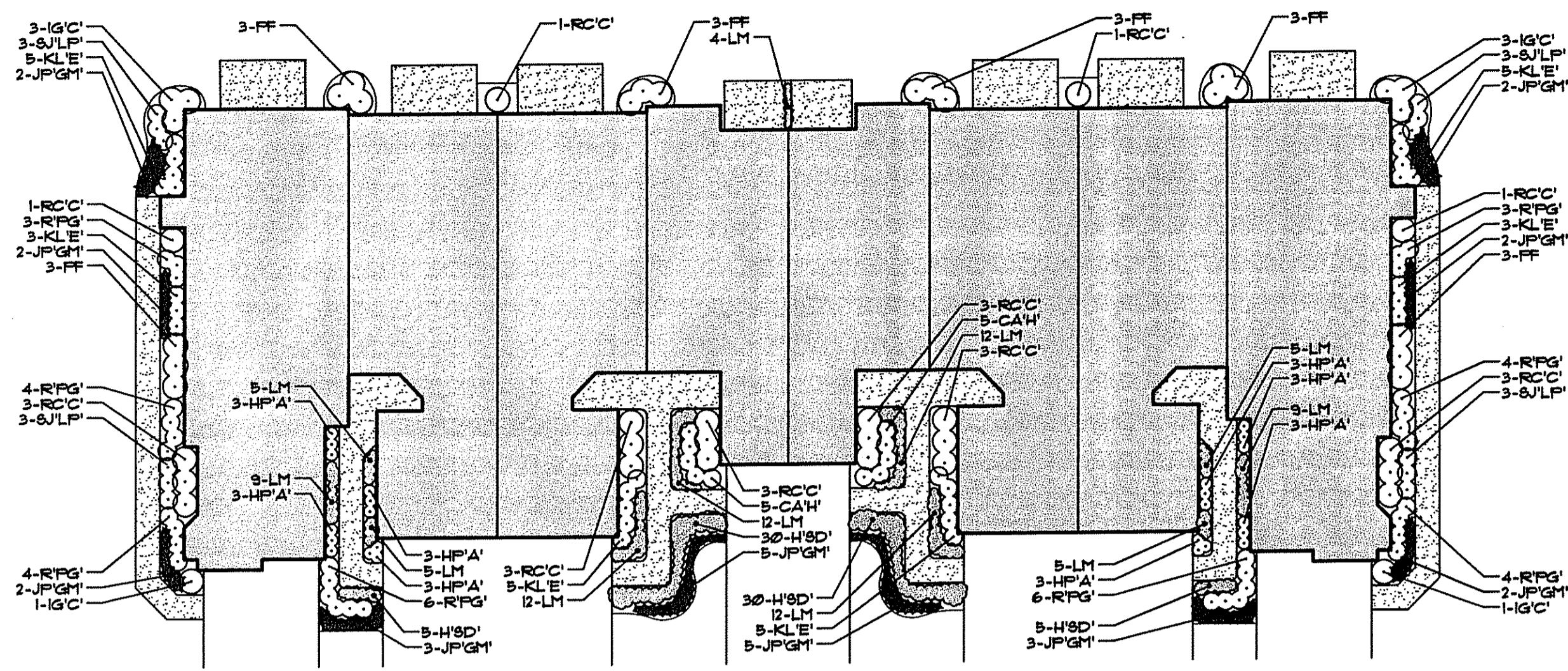
CIVIL ENGINEERS  
JOHN P. CAYTO CORPORATION  
LAND PLANNERS

PROJECT NO: 589.1094  
DATE: SEPTEMBER, 2003  
SCALE: 1" = 40'  
DESIGNED BY: K.M.A.  
DRAWN BY: K.M.A.  
CHECKED BY: G.H.G.

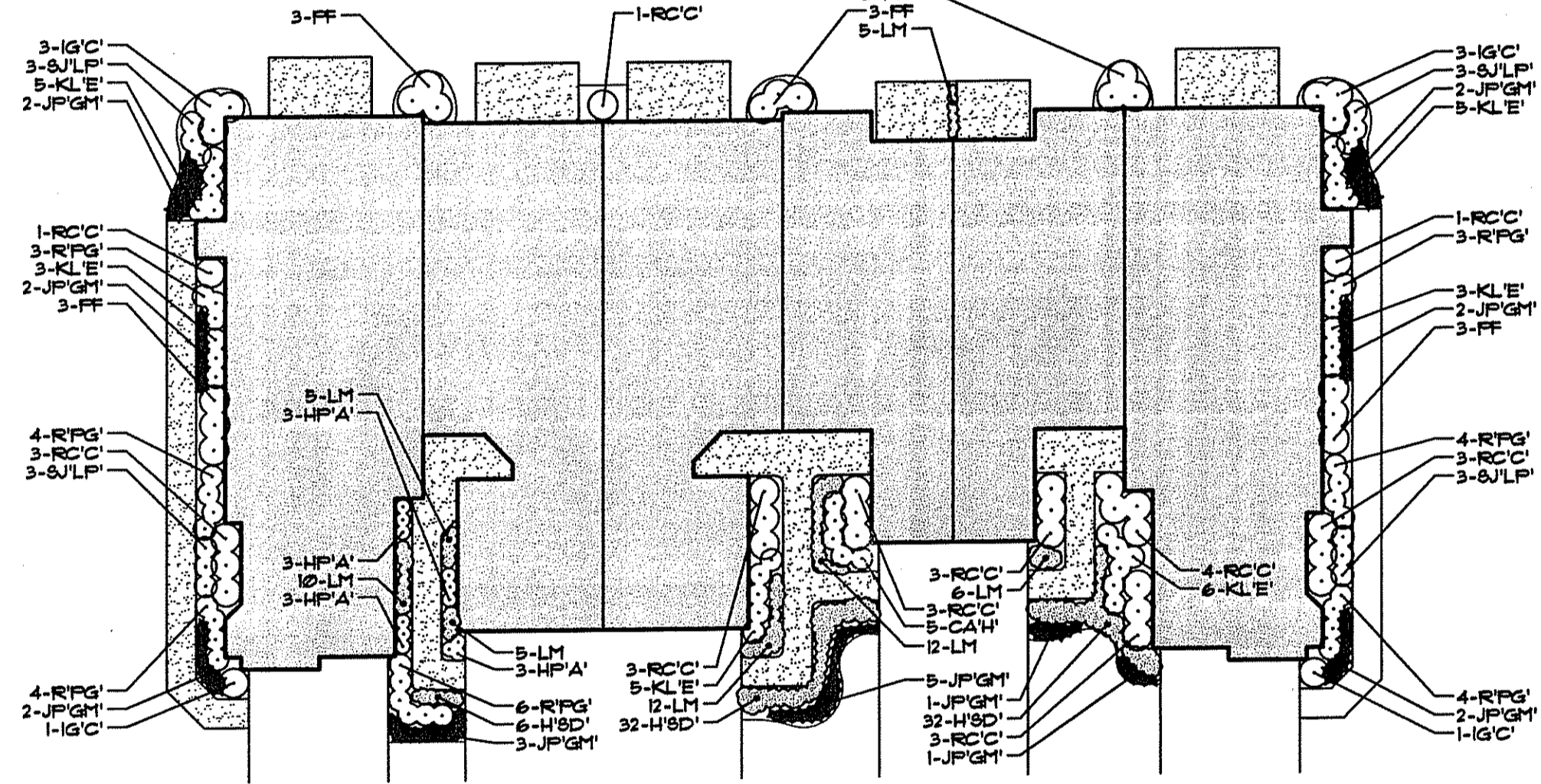
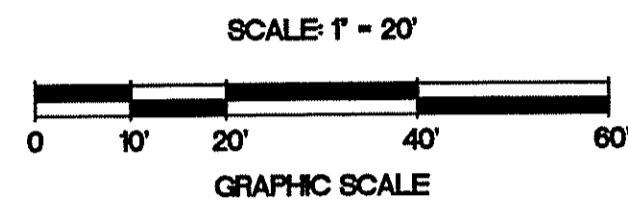
OVERALL SITE LANDSCAPE PLAN  
SILVER PINES - PHASE 2  
A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 436  
NORTH SMITHFIELD  
MAIN STREET  
PREPARED FOR  
D.A.S. CONTRACTING CORPORATION  
RHODE ISLAND

DRAWING NUMBER  
**8**  
SHEET 8 OF 15

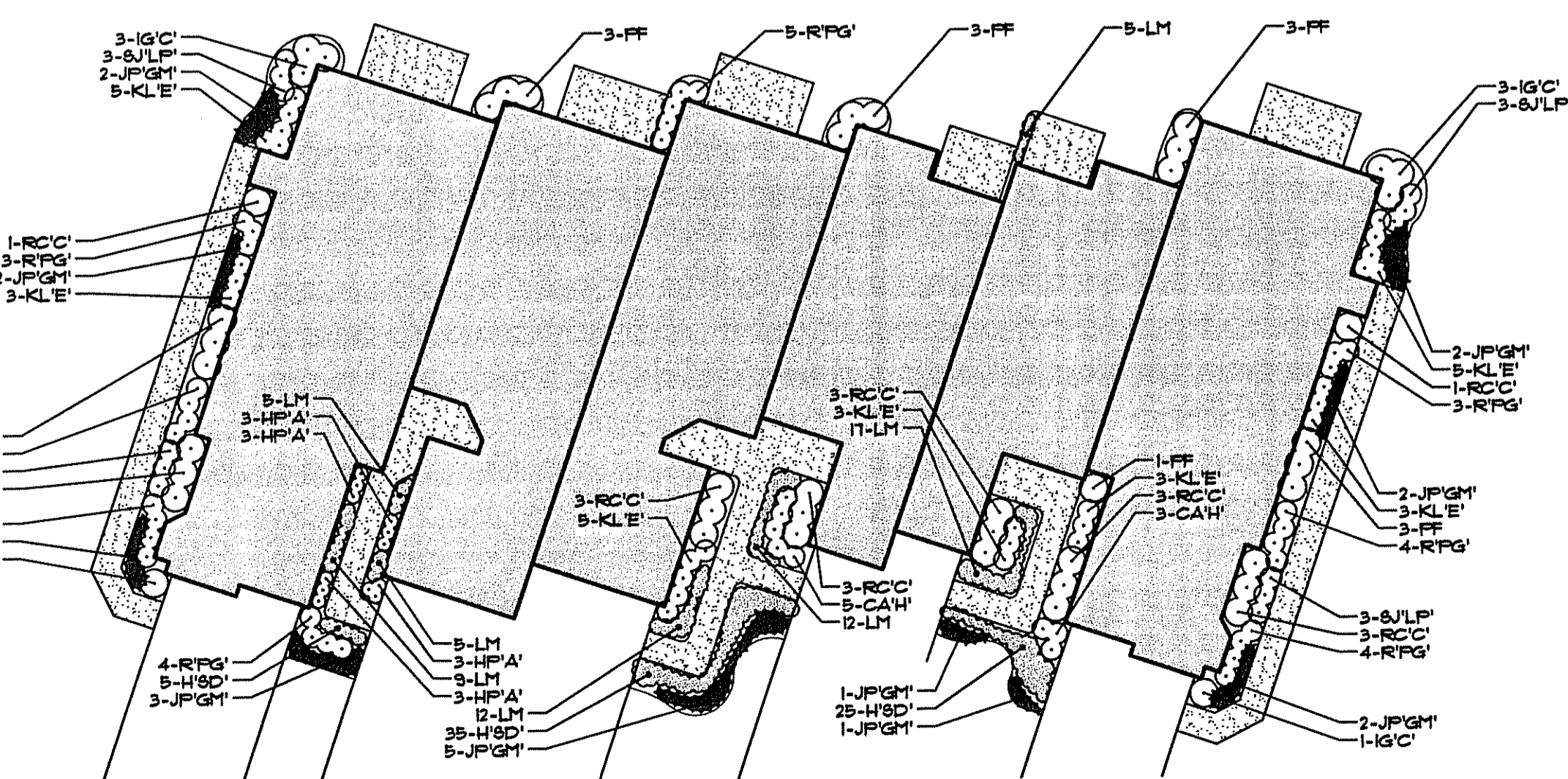
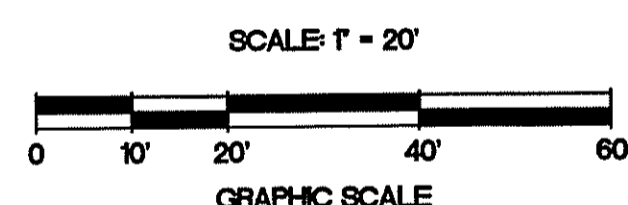
11.589.1094 Landscape Plan.dwg



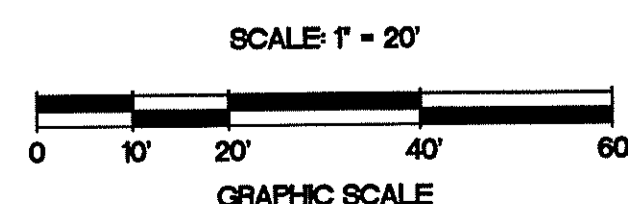
TYPICAL LANDSCAPE PLAN 1  
BUILDINGS 'U', 'K', 'M', 'N', 'O', & 'P'



TYPICAL LANDSCAPE PLAN 2  
BUILDINGS 'H' & 'I'



LANDSCAPE PLAN 3  
BUILDING 'L'



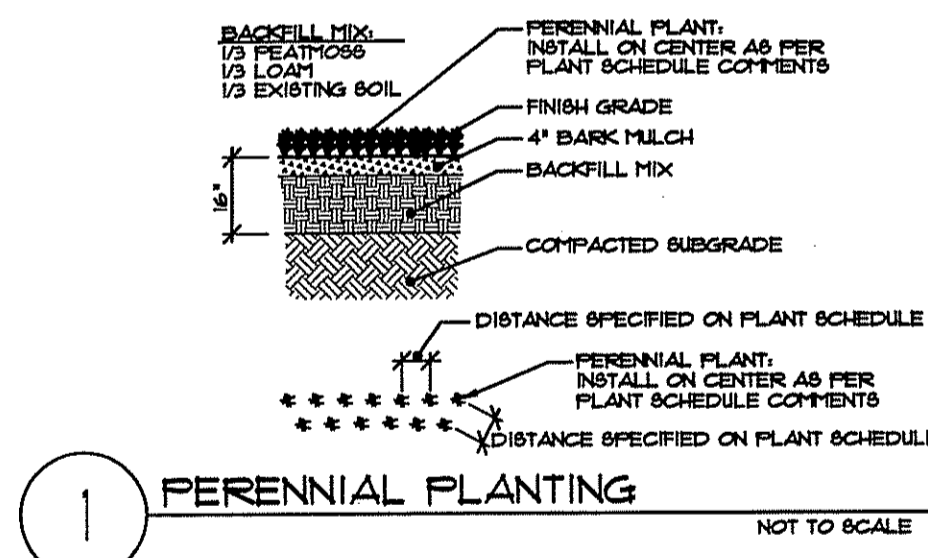
TYPICAL LANDSCAPE PLAN 1 PLANT SCHEDULE:					
Key	Botanical Name/ Common Name	Size	Qty	Comment	
CAH	CLETHRA ALNIFOLIA 'Hummingbird' White Compact Summerweet	3" (3 Gal)	10	Container	
HPA	HOSTA PLANTAGINEA 'Aphrodite' White Flowering August Lily	1" (1 Gal)	24	Container	Plant 30" O.C.
HSD	HEMEROCALLIS 'Stella D'Oro' Continuous Bloom Daylily	1" (1 Gal)	10	Container	Plant 18" O.C.
IGC	ILEX GLABRA 'Compacta' Compact Inkberry	24"-30"	8	B&B	
JPGM	JUNIPERUS PROCEMBENS 'Green Mound' Green Japanese Garden Juniper	3" (3 Gal)	28	Container	Plant 6" O.C.
KL'E	KALMIA LATIFOLIA 'Eif' Compact White Mountain Laurel	3" (3 Gal)	26	Container	
LM	LIRIOPE MISCARII Lily Turf	1" (1 Gal)	90	Container	Plant 18" O.C.
FF	PIERIS FLORIBUNDA Mountain Andromeda	24"-30"	18	B&B	
RCC	RHODODENDRON CATAWBIENSE 'Chiodoides' White Rhododendron	24"-30"	22	B&B	
RPG	RHODODENDRON 'Purple Gem' Dwarf Purple Rhododendron	18"-24"	34	B&B	
SJLP	SPIRAEA JAPONICA 'Little Princess' Dwarf Deep Pink Spiraea	24"-30"	12	B&B	

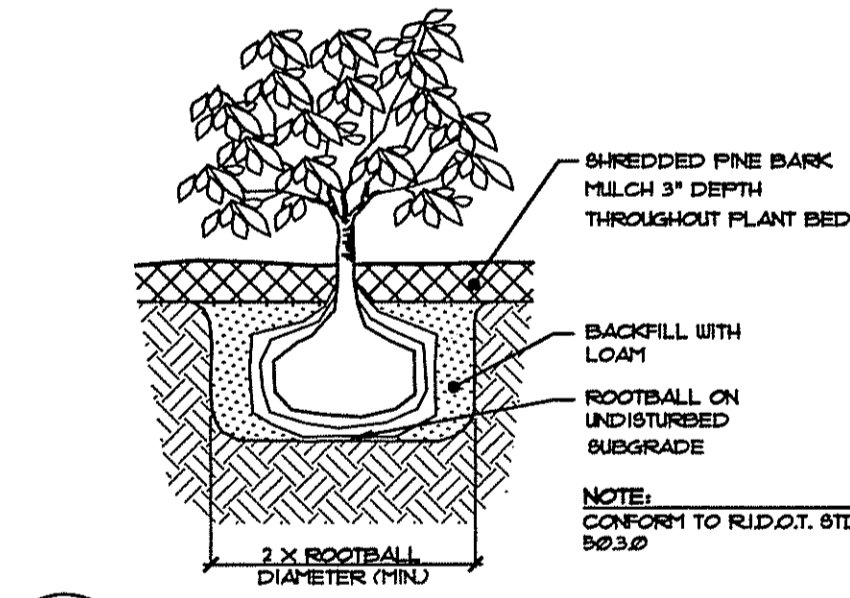
TYPICAL LANDSCAPE PLAN 2 PLANT SCHEDULE:					
Key	Botanical Name/ Common Name	Size	Qty	Comment	
CAH	CLETHRA ALNIFOLIA 'Hummingbird' White Compact Summerweet	3" (3 Gal)	5	Container	
HPA	HOSTA PLANTAGINEA 'Aphrodite' White Flowering August Lily	1" (1 Gal)	12	Container	Plant 30" O.C.
HSD	HEMEROCALLIS 'Stella D'Oro' Continuous Bloom Daylily	1" (1 Gal)	10	Container	Plant 18" O.C.
IGC	ILEX GLABRA 'Compacta' Compact Inkberry	24"-30"	8	B&B	
JPGM	JUNIPERUS PROCEMBENS 'Green Mound' Green Japanese Garden Juniper	3" (3 Gal)	22	Container	Plant 6" O.C.
KL'E	KALMIA LATIFOLIA 'Eif' Compact White Mountain Laurel	3" (3 Gal)	21	Container	
LM	LIRIOPE MISCARII Lily Turf	1" (1 Gal)	55	Container	Plant 18" O.C.
FF	PIERIS FLORIBUNDA Mountain Andromeda	24"-30"	15	B&B	
RCC	RHODODENDRON CATAWBIENSE 'Chiodoides' White Rhododendron	24"-30"	25	B&B	
RPG	RHODODENDRON 'Purple Gem' Dwarf Purple Rhododendron	18"-24"	28	B&B	
SJLP	SPIRAEA JAPONICA 'Little Princess' Dwarf Deep Pink Spiraea	24"-30"	12	B&B	

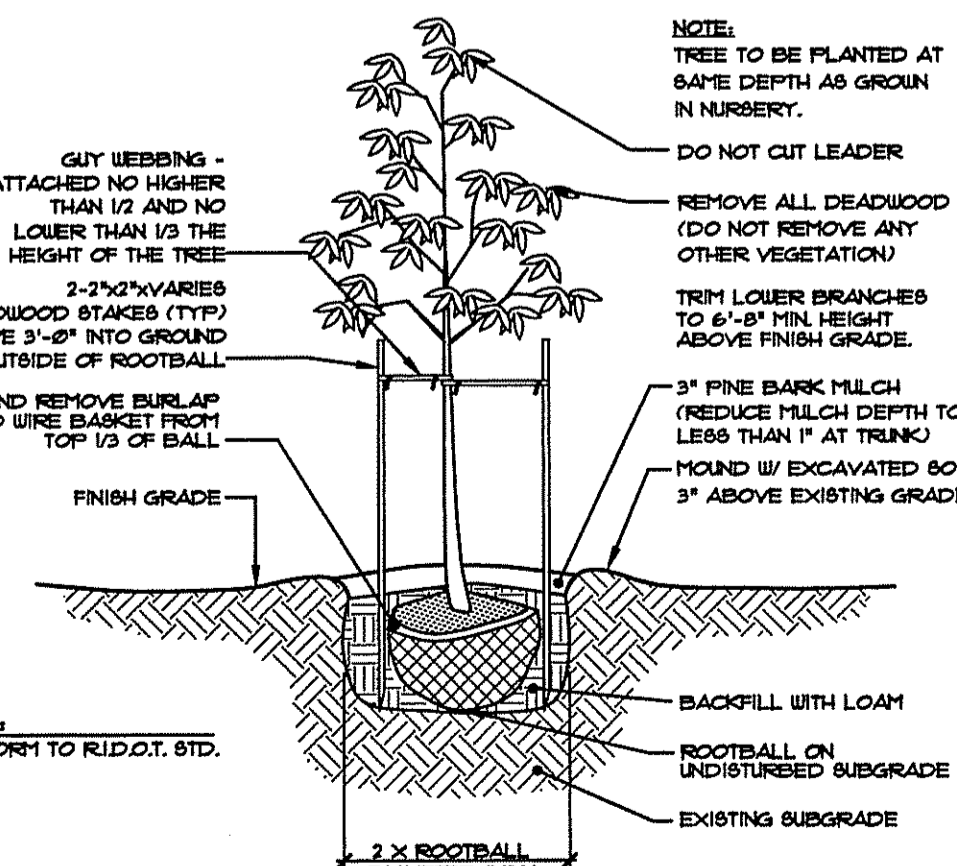
LANDSCAPE PLAN 3 PLANT SCHEDULE:					
Key	Botanical Name/ Common Name	Size	Qty	Comment	
CAH	CLETHRA ALNIFOLIA 'Hummingbird' White Compact Summerweet	3" (3 Gal)	8	Container	
HPA	HOSTA PLANTAGINEA 'Aphrodite' White Flowering August Lily	1" (1 Gal)	12	Container	Plant 30" O.C.
HSD	HEMEROCALLIS 'Stella D'Oro' Continuous Bloom Daylily	1" (1 Gal)	65	Container	Plant 18" O.C.
IGC	ILEX GLABRA 'Compacta' Compact Inkberry	24"-30"	8	B&B	
JPGM	JUNIPERUS PROCEMBENS 'Green Mound' Green Japanese Garden Juniper	3" (3 Gal)	22	Container	Plant 6" O.C.
KL'E	KALMIA LATIFOLIA 'Eif' Compact White Mountain Laurel	3" (3 Gal)	21	Container	
LM	LIRIOPE MISCARII Lily Turf	1" (1 Gal)	65	Container	Plant 18" O.C.
FF	PIERIS FLORIBUNDA Mountain Andromeda	24"-30"	16	B&B	
RCC	RHODODENDRON CATAWBIENSE 'Chiodoides' White Rhododendron	24"-30"	20	B&B	
RPG	RHODODENDRON 'Purple Gem' Dwarf Purple Rhododendron	18"-24"	31	B&B	
SJLP	SPIRAEA JAPONICA 'Little Princess' Dwarf Deep Pink Spiraea	24"-30"	12	B&B	



1 PERENNIAL PLANTING NOT TO SCALE



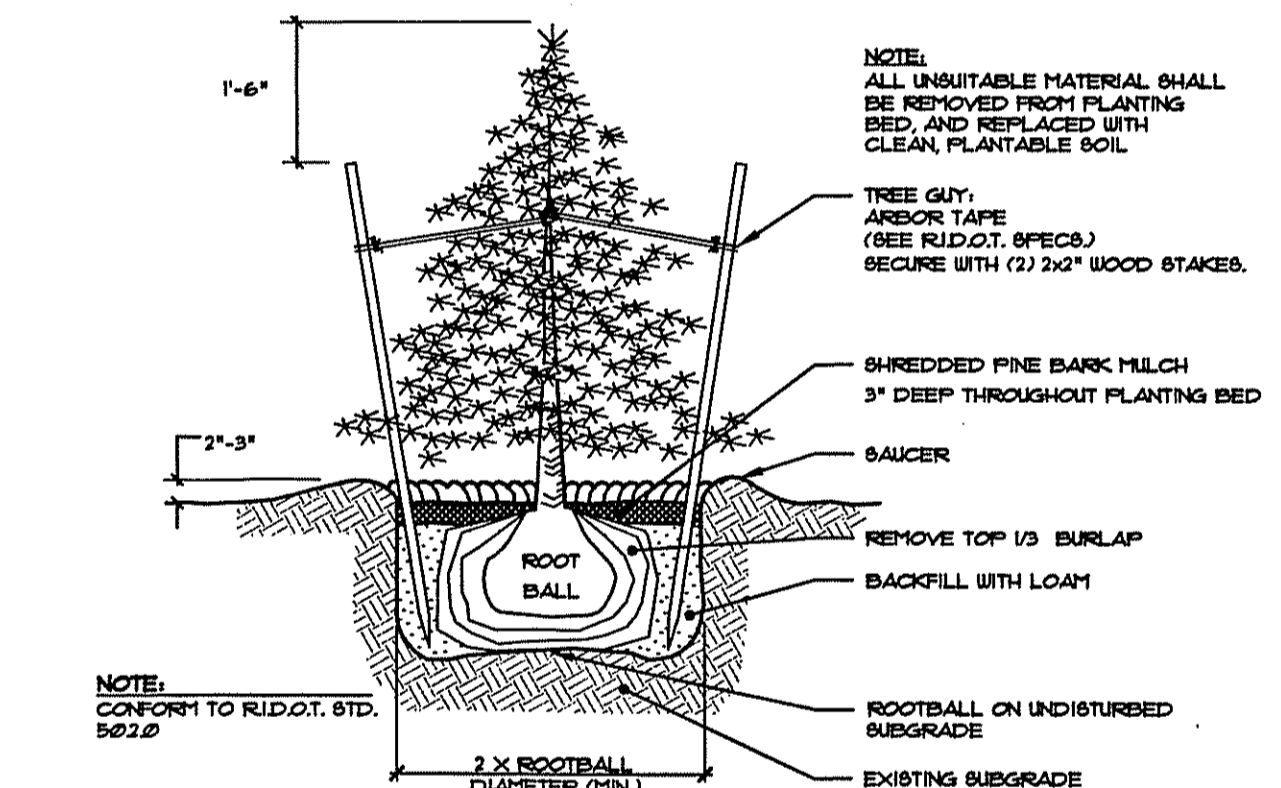
2 SHRUB PLANTING DETAIL NOT TO SCALE



4 TREE PLANTING & STAKING DETAIL NOT TO SCALE

GENERAL LANDSCAPE NOTES:

- PROVIDE A WARRANTY FOR TREE AND SHRUB PLANTINGS FOR A MINIMUM OF ONE (1) YEAR INCLUDING ONE (1) CONTINUOUS GROWING SEASON. COMMENCE WARRANTY ON DATE IDENTIFIED IN THE CERTIFICATE OF FINAL COMPLETION. REPLACEMENTS OF PLANTS OF SAME SIZE AND SPECIES AS SPECIFIED, PLANTED IN THE NEXT GROWING SEASON, WITH NEW WARRANTY AND EXTENDED MAINTENANCE SERVICE COMMENCING ON THE DATE OF REPLACEMENT.
- PLANT MATERIALS SHALL BE OF SIZE AND CALIBER REQUIRED AND COMPLY WITH THE HORTICULTURAL STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN (AAS) 2260-1 IN ALL RESPECTS.
- PLANTS OF OTHER KINDS THAN THOSE NAMED IN THE PLANT SCHEDULE SHALL NOT BE ACCEPTED WITHOUT APPROVAL. REPLACEMENT PLANTS LARGER IN SIZE THAN EXISTING MAY BE USED IF APPROVED BY THE A/E, PROVIDED USE OF LARGER PLANTS DOES NOT INCREASE CONTRACT PRICE.
- UNLESS OTHERWISE APPROVED BY THE A/E, ALL PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES AND SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS.
- SET PLANTS PLUMB AND AT SUCH A LEVEL THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. SETTLE BACKFILL MATERIAL FOR PLANTS THOROUGHLY & PROPERLY BY FIRING OR TAMPING. ACCOMPANY BACKFILLING WITH THOROUGH WATERING UNLESS OTHERWISE APPROVED. FORM SAUCER CAPABLE OF HOLDING WATER AROUND INDIVIDUAL PLANTS.
- FERTILIZE SHRUB BEDS WITH 10-6-4 FERTILIZER AT THE RATE OF 3 POUNDS PER 100 SQUARE FEET OF SURFACE AREA. BROADCAST. APPLY THE FERTILIZER UNIFORMLY TO THE SURFACE BEING AND WORK INTO THE UPPER TWO (2) INCHES OF SOIL. FERTILIZE INDIVIDUAL TREES AT THE RATE OF ONE (1) AGRICULTURAL PELLET PER INCH OF TREE DIAMETER (FOLLOW MANUFACTURER'S WRITTEN INSTRUCTIONS). APPLY A SECOND APPLICATION OF FERTILIZER TO ALL PLANT BEDS AT THE SAME SPECIFIED RATES OVER THE HOLE AT THE END OF AN EIGHT WEEK PERIOD.
- CONTAINER GROWN MATERIALS: REMOVE PLANT FROM CONTAINER AND BUTTERFLY ROOT BALL OR OTHERS SPREAD OUT ROOTS ON SETTING MOUND. BACKFILL SHALL BE SIFTED THROUGH THEM AND SOLIDLY FIRMED.
- AFTER PLANTING PRUNE ONLY BROKEN OR DEFORMED BRANCHES AND IN SUCH MANNER AS TO PRESERVE NATURAL CHARACTER OF PLANT.
- IMMEDIATELY AFTER PLANTING, STAKE TREES OVER FIVE (5) FEET AS INDICATED ON DETAIL DRAWINGS INDICATED OR APPROVED BY THE OWNER REPRESENTATIVE. REMOVE STAKES AT THE END OF GUARANTEE PERIOD.
- MULCH SHALL BE APPLIED A MINIMUM OF THREE (3) INCHES IN DEPTH IN ALL PLANTING BEDS, AS INDICATED ON THE DRAWINGS.
- THE PLANTS SHALL BE WATERED IMMEDIATELY FOLLOWING PLANTING, PREFERABLY WHEN TWO THIRDS OF THE BACKFILL HAS BEEN PLACED. ALL AIR ROCKETS ARE REMOVED AND THE PLANT PROPERLY SET. ADDITIONAL WATERING SHALL BE MADE AT LEAST ONCE EVERY THREE (3) WEEKS UNLESS OTHERWISE DIRECTED UNTIL FINAL ACCEPTANCE OF THE PLANT MATERIAL.
- GUARANTEE THAT, UPON COMPLETION AND FINAL ACCEPTANCE, TREE, SHRUBS AND GROUND COVER PLANTING CONFORMS TO REQUIREMENTS OF CONTRACT DOCUMENTS AND THAT ALL PLANTS ARE HEALTHY AND WILL REMAIN SO FOR A PERIOD OF ONE (1) YEAR. SUCH PERIOD SHALL COMMENCE WITH DATE OF FINAL APPROVAL.
- INSTALL WHITE MESH EROSION CONTROL FABRIC WHERE FINAL GRADES ARE 3:1 (33%) OR GREATER PER MANUFACTURER'S INSTRUCTIONS.
- CONTRACTOR TO LOAM AND SEED ALL DISTURBED AREAS.
- SEEDING NOTES:  
a) USE UNIVERSITY OF RHODE ISLAND SEED MIX NO. 2 OR EQUAL FOR ALL MANICURED LAWN AREAS.  
b) USE FIELD GRASS MIX OR EQUAL FOR ALL FIELD GRASS AREAS:  
20% KENTUCKY BLUEGRASS 10% RED CLOVER  
20% TETRAPOD PERENNIAL RYEGRASS 10% FALFA  
15% CLIMAX TIMOTHY 10% BIRDFOOT TREFLOIL  
10% ORCHARDGRASS 5% LADINO CLOVER



3 EVERGREEN PLANTING & STAKING DETAIL NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED OCT 21 2004 FILE # 03-0473  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT COMPLETION SIGNATURE  
*Charles H. Hurd*

TOPSOIL - NO STONES GREATER THAN 1" DIA. LINE AND FERTILIZE TREE AND FINESGRADE COMPACT WITH A HANDROLLER IN TWO DIRECTIONS & FINERAKE PRIOR TO SEEDING.  
SUBSOIL - COMPACTED AT 90% MAXIMUM DENSITY  
SEED - REFER TO LANDSCAPE NOTE #5 FOR MIXTURE. TOP DRESS W/ 4" HAT MULCH AFTER SEEDING.

OCT 1 2004

5 LOAM & SEED (APPLIES TO MANICURED LAWN AREAS AND FIELD GRASS AREAS) NOT TO SCALE

**THE GIFFORD DESIGN GROUP, Inc.**  
LANDSCAPE ARCHITECTURE  
ENVIRONMENTAL PLANNING  
1621 MENDON ROAD, CUMBERLAND, RHODE ISLAND 02864  
PHONE (401) 335-4400 FAX (401) 335-4411

LANDSCAPE PLANTING ONLY

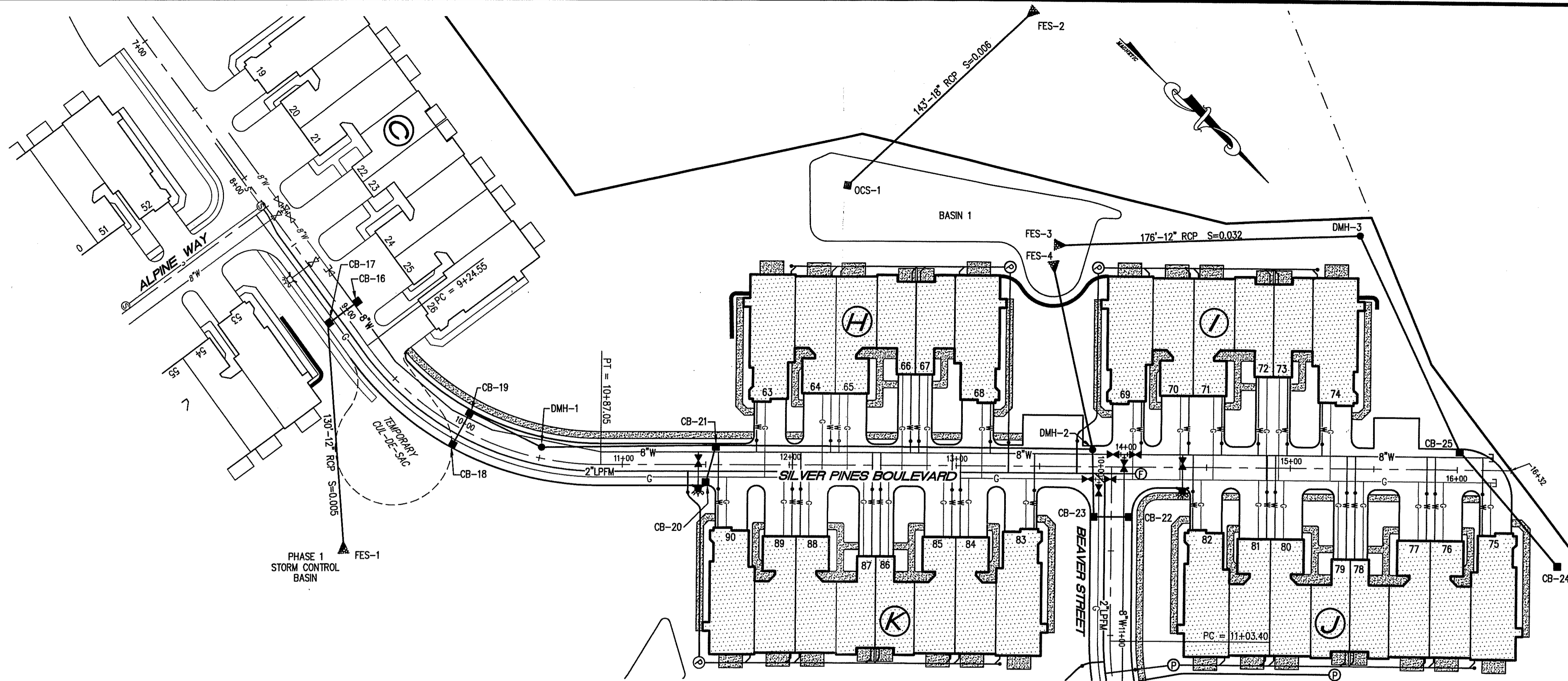
CIVIL ENGINEERS  
JOHN P. CATO CORPORATION  
CORPORATION LAND PLANNERS

PROJECT NO: 589.1094  
DATE: SEPTEMBER, 2003  
SCALE: AS SHOWN  
DESIGNED BY: K.M.A.  
DRAWN BY: K.M.A.  
CHECKED BY: G.H.G.

TYPICAL LANDSCAPE PLANS, NOTES AND DETAILS  
SILVER PINES - PHASE 2  
A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 436  
MAIN STREET  
RHODE ISLAND  
PREPARED FOR  
D.A.S. CONTRACTING CORPORATION

DRAWING NUMBER  
**9**  
SHEET 9 OF 15

1094-SITE-PLANS\_Phase2-R1.dwg (disk: 21024)



**PHASE 1 DRAINAGE NETWORK**

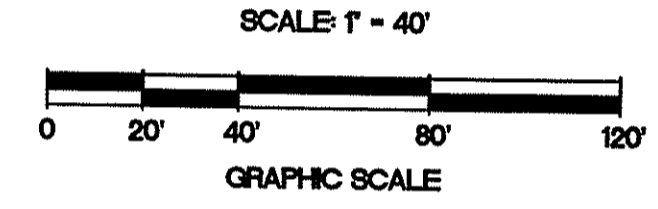
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CB-16	284.79	---	12" 280.75
CB-17	284.79	12" 280.65	12" 280.65

**BASIN 1 DRAINAGE NETWORK**

STRUCTURE ID	RIM	INVERT IN	INVERT IN	INVERT OUT
CB-18	277.26	---	---	12" 273.41
CB-19	277.26	12" 273.21	---	12" 273.21
CB-20	269.25	---	---	12" 265.02
CB-21	269.25	12" 264.82	12" 264.82	18" 264.32
CB-22	275.63	---	---	12" 271.43
CB-23	275.63	12" 271.23	---	12" 271.23
CB-24	273.50	---	---	15" 268.65
CB-25	273.40	15" 269.20	---	12" 269.20
DMH-1	273.55	12" 269.25	---	12" 269.25
DMH-2	275.30	12" 270.43	18" 263.20	18" 263.20
DMH-3	270.00	12" 264.68	---	12" 264.68

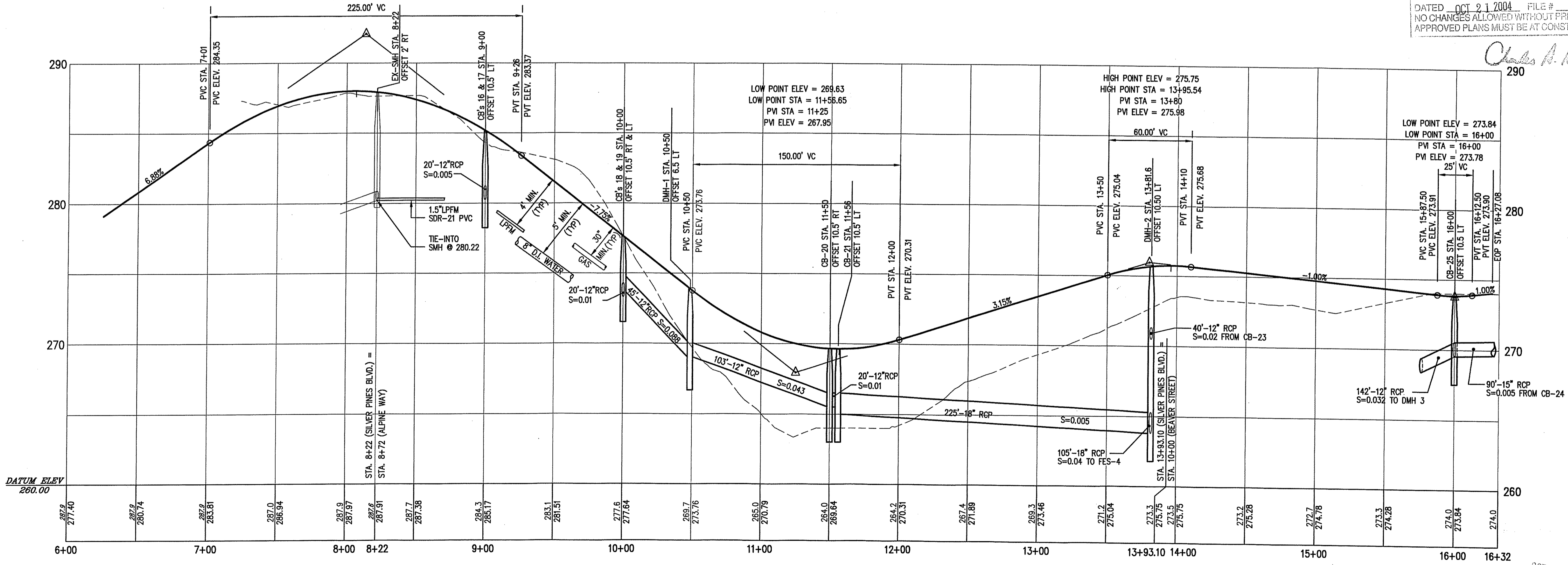
**FES DATA:**

STRUCTURE ID	DIA.	INVERT	RFRAP SIZE
FES-1	12"	280.00	R-4
FES-2	18"	258.00	R-4
FES-3	12"	259.00	R-4
FES-4	18"	259.00	R-4



**PLAN - SILVER PINES BOULEVARD**  
SCALE 1"=40'

HIGH POINT ELEV = 287.99  
HIGH POINT STA = 8+06.81  
PVI STA = 8+13.50  
PVI ELEV = 292.09  
225.00' VC



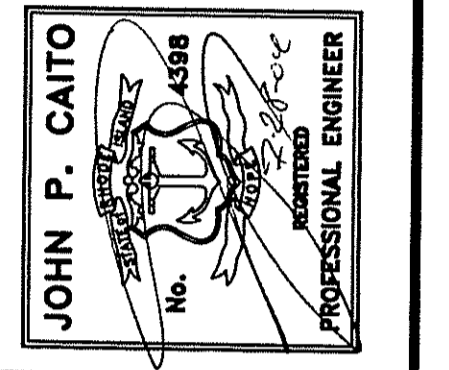
**PROFILE - SILVER PINES BOULEVARD**  
SCALE: HORIZ. 1"=40'  
VERT. 1"=4'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED OCT 21 2004 FILE # 03-0413  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

*Charles A. Hester*

REVISION

NO.	DATE	DESCRIPTION
1	7/28/04	DEM COMMENTS

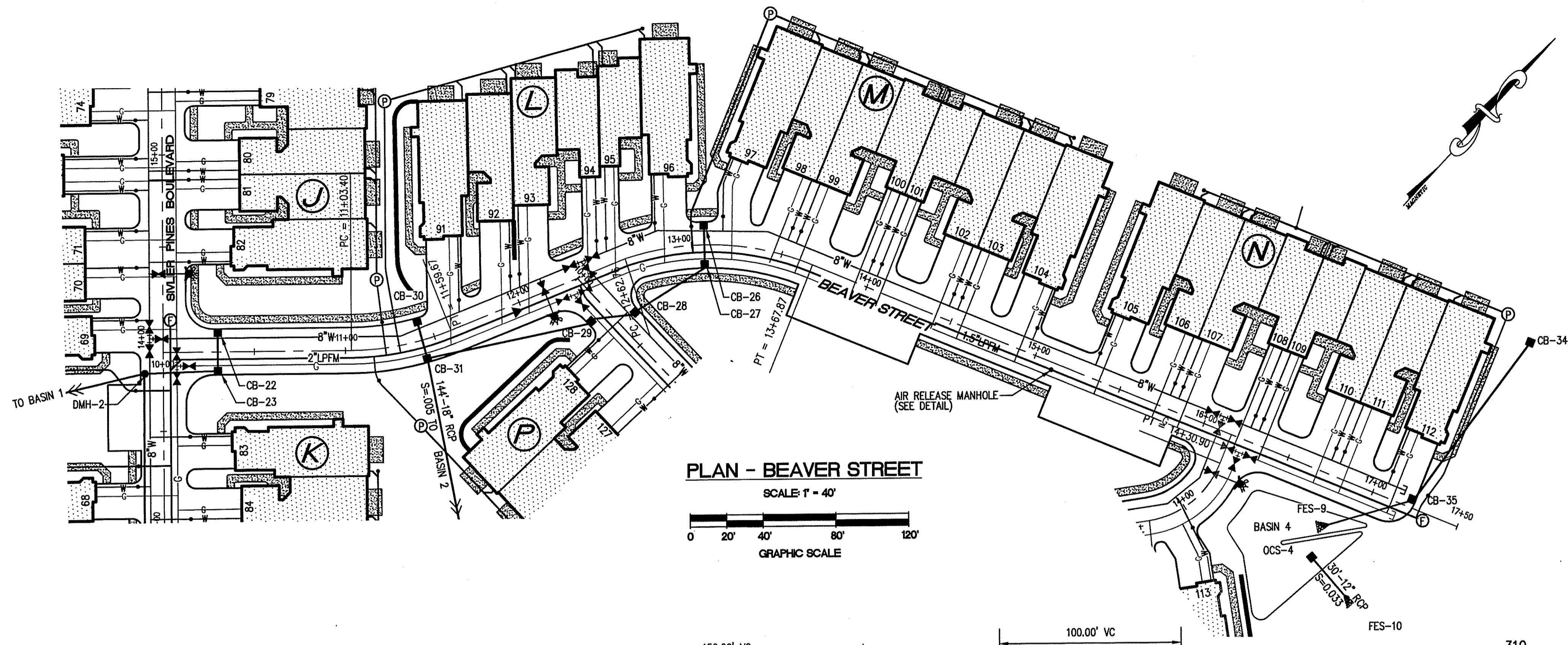


**Caito CORPORATION**  
CIVIL ENGINEERS  
LAND PLANNERS  
25 SHARPE DRIVE  
CRANSTON, RHODE ISLAND 02910-4402  
401-946-0300  
FAX: 401-944-0009

PROJECT NO: 589.1094  
DATE: SEPTEMBER, 2003  
SCALE: AS NOTED  
DESIGNED BY: M.J.V. J.A.  
DRAWN BY: G.A. MAD.  
CHECKED BY: J.P.C.

PLAN AND PROFILE - SILVER PINES BOULEVARD  
SILVER PINES - PHASE 2  
A.P. 1 LOT 47 and A.P. 4 LOTS 9 and 436  
NORTH SMITH-FIELD MAIN STREET  
PREPARED FOR  
D.A.S. CONTRACTING CORPORATION  
RHODE ISLAND

DRAWING NUMBER  
**10**  
SHEET 10 OF 15  
OCT 1 2004



**BASIN 2 DRAINAGE NETWORK**

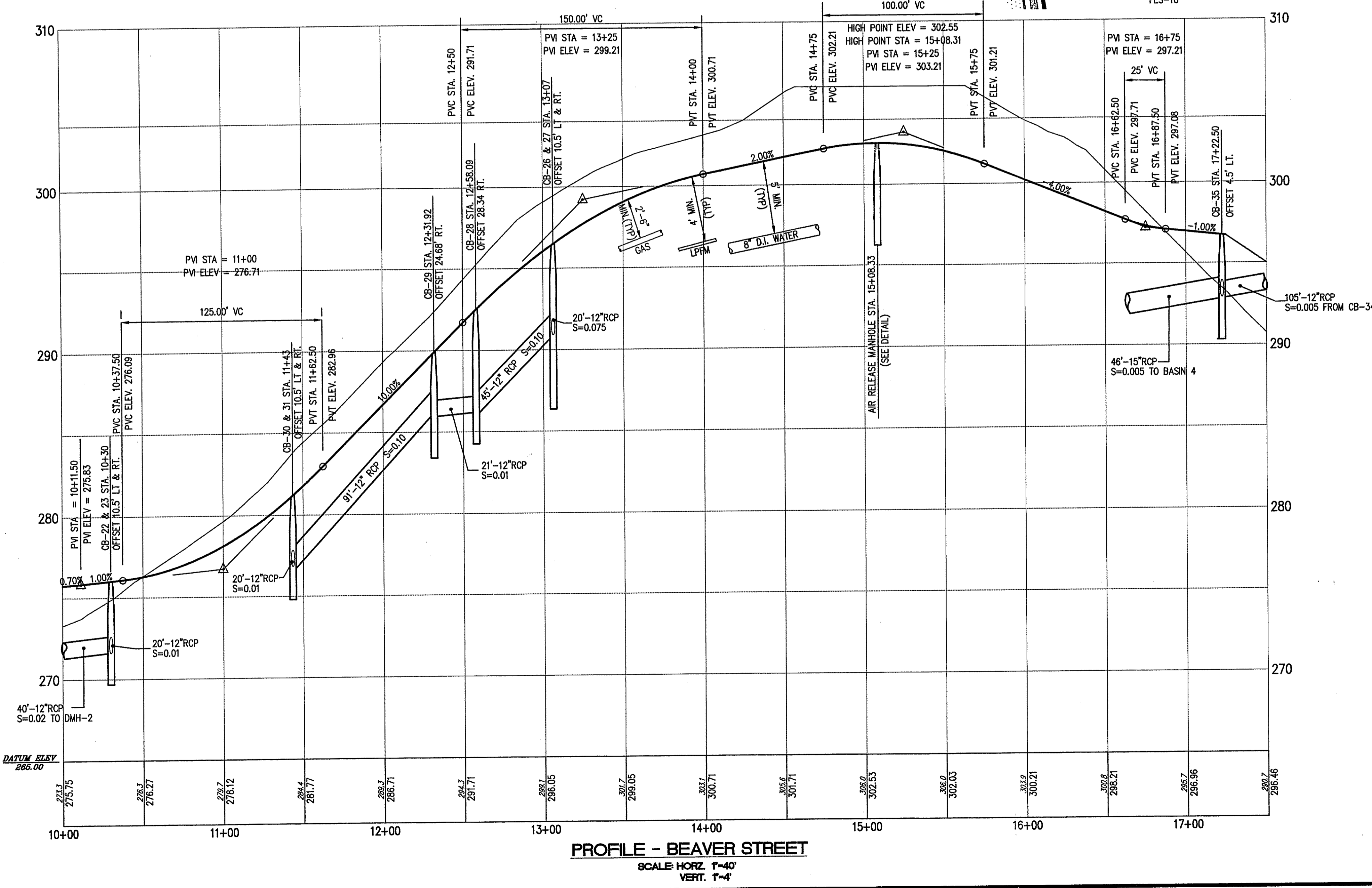
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CB-26	296.17	-----	-----	12" 292.18
CB-27	296.17	12" 290.68	-----	12" 290.68
CB-28	290.28	12" 286.18	-----	12" 286.18
CB-29	289.99	12" 285.97	-----	12" 285.97
CB-30	280.77	-----	-----	12" 277.17
CB-31	280.77	12" 276.97	12" 276.97	18" 276.72

**BASIN 4 DRAINAGE NETWORK**

STRUCTURE ID	RIM	INVERT IN	INVERT OUT
CB-34	296.00	-----	12" 293.46
CB-35	296.73	12" 292.93	15" 292.93

**FES DATA:**

STRUCTURE ID	DIA.	INVERT	RIFRAP SIZE
FES-9	15"	292.70	R-4
FES-10	12"	291.00	R-4



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED OCT 21 2004 FILE # 03-0473  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

*Charles A. Harter*

NO.	DATE	REVISION	BY
1	11/20/04	DEM COMMENTS	

**JOHN P. CAITO**  
 No. 00920-4-0208  
 No. 401-946-0300  
 Fax: 401-944-6009  
 PROFESSIONAL ENGINEER

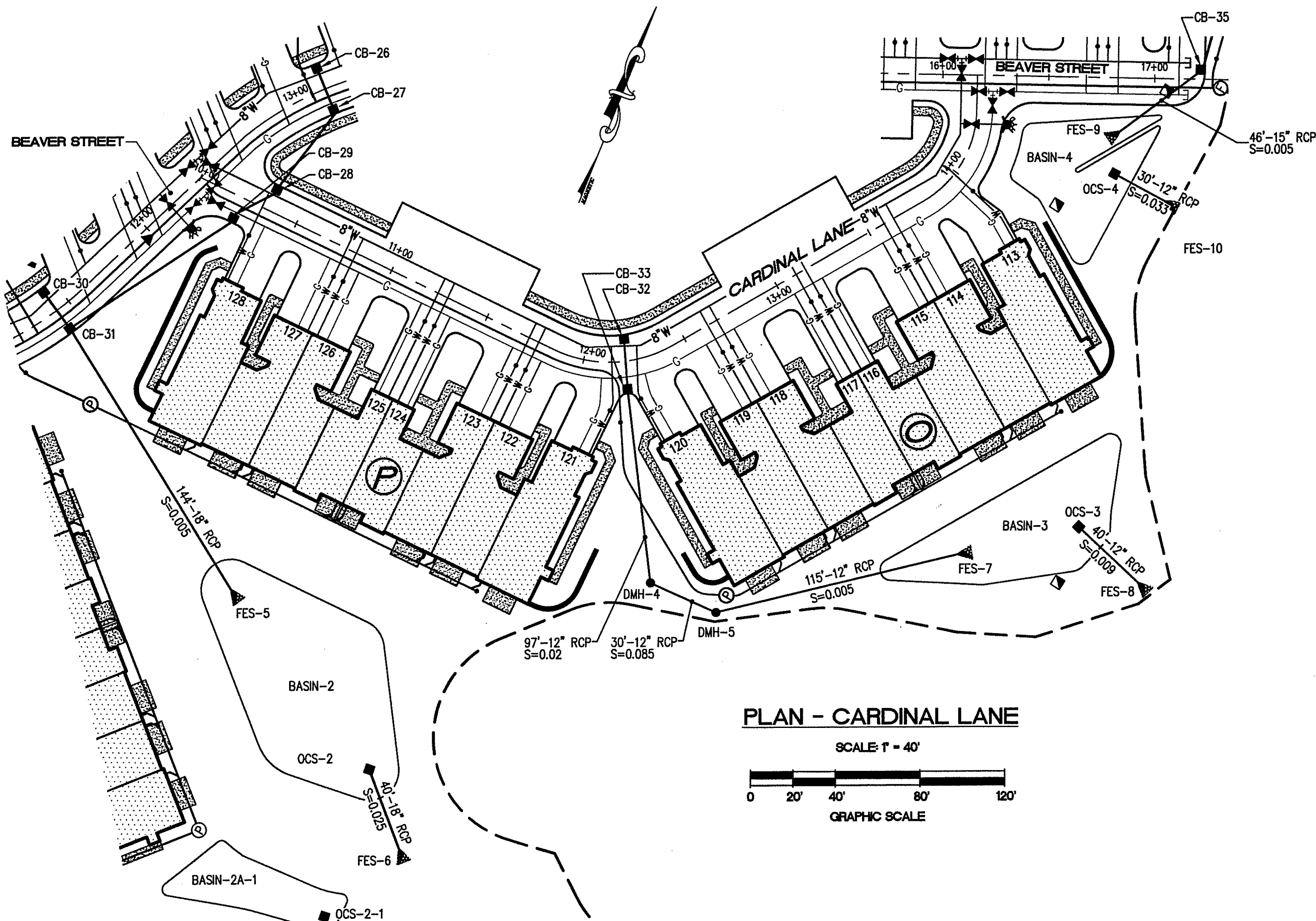
**CAITO CORPORATION**  
 CIVIL ENGINEERS  
 25 SHARPE DRIVE  
 CRANSTON, RHODE ISLAND 02920-4162  
 LAND PLANNERS

PROJECT NO: 589.1094  
 DATE: SEPTEMBER, 2003  
 SCALE: AS NOTED  
 DESIGNED BY: M.J.V, J.A.  
 DRAWN BY: G.A. M.A.D.  
 CHECKED BY: J.P.C.

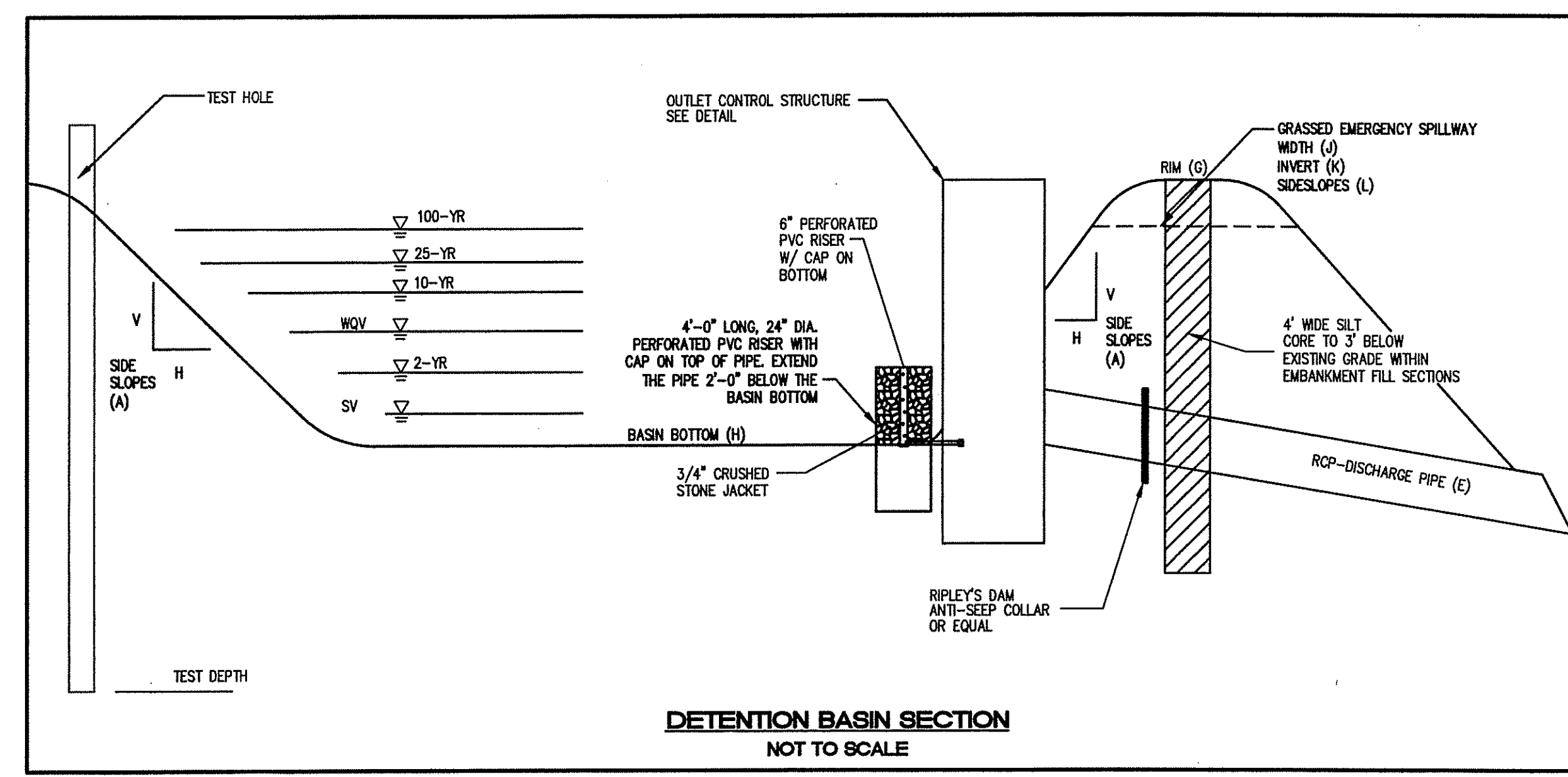
PLAN AND PROFILE - BEAVER STREET  
**SILVER PINES - PHASE 2**  
 A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 436  
 NORTH SMITHFIELD  
 MAIN STREET  
 RHODE ISLAND  
 PREPARED FOR  
**D.A.S. CONTRACTING CORPORATION**

DRAWING NUMBER  
**11**  
 SHEET 11 OF 15

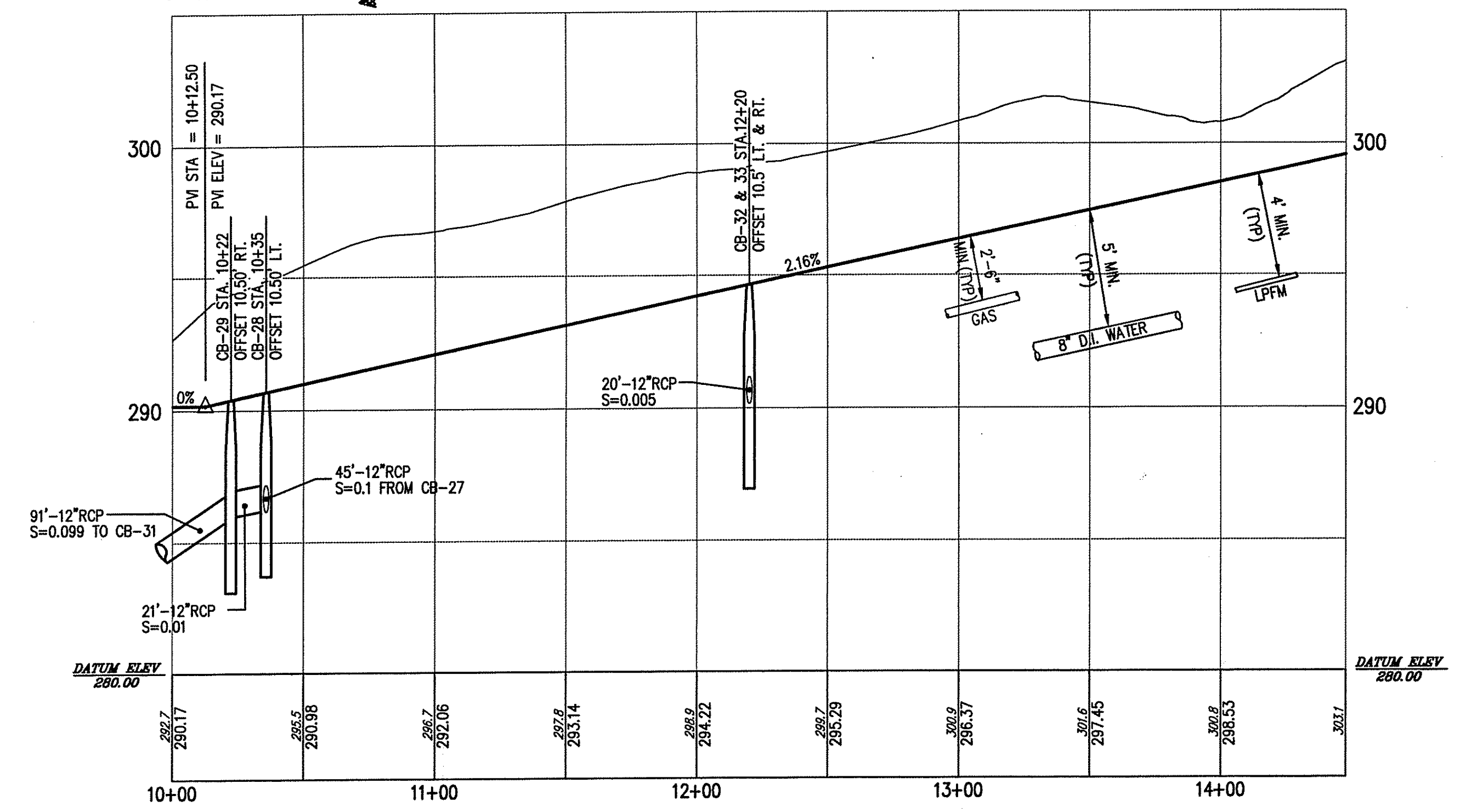
CB-4-SITE-PLANS-Phase2-R2.dwg (dwg: 2/02/04)



**PLAN - CARDINAL LANE**  
SCALE: 1" = 40'  
GRAPHIC SCALE



**DETENTION BASIN SECTION**  
NOT TO SCALE



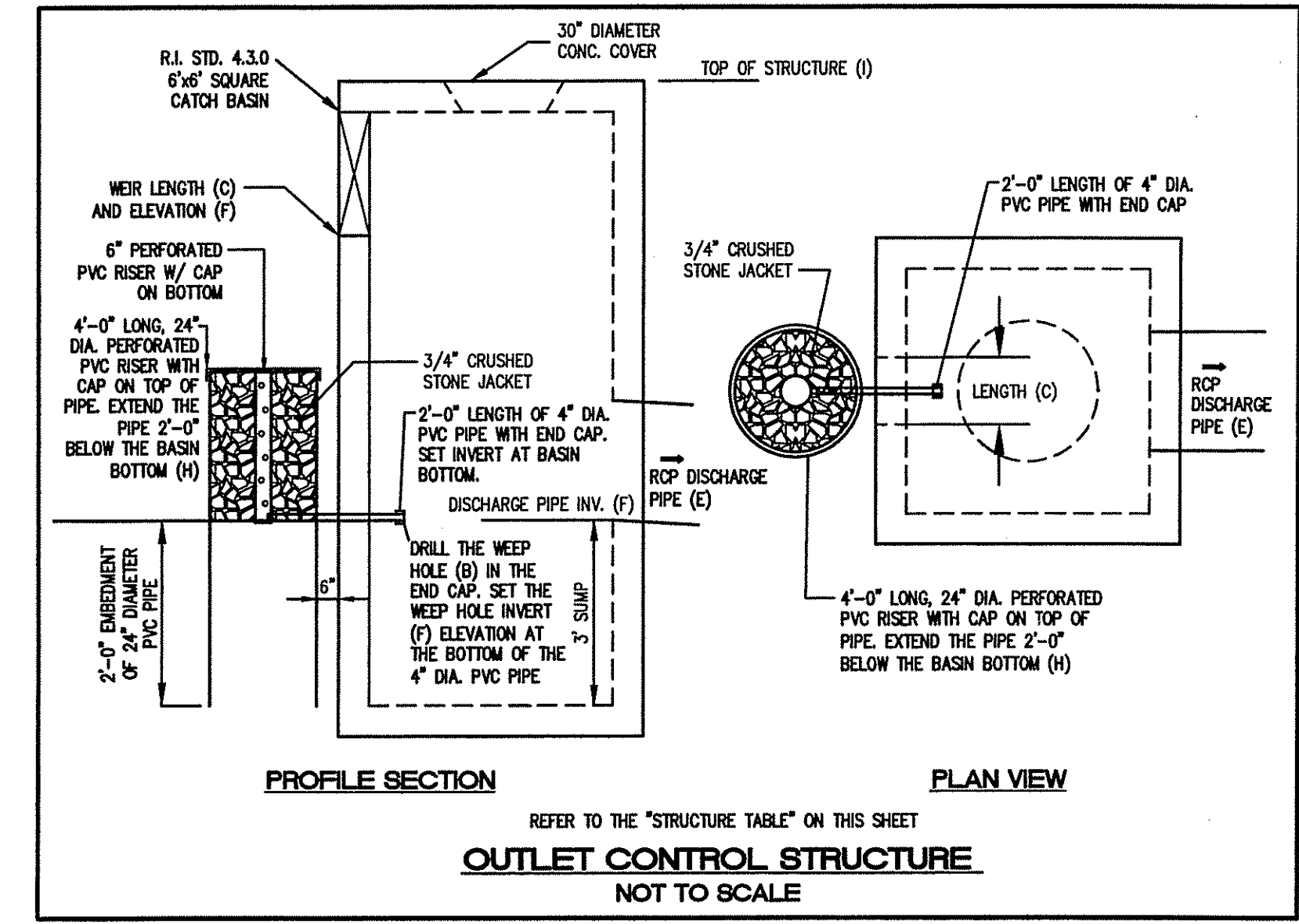
**PROFILE - CARDINAL LANE**  
SCALE: HORIZ. 1"=40'  
VERT. 1"=4'

**BASIN 3 DRAINAGE NETWORK**

STRUCTURE ID	RIM	INVERT IN	INVERT OUT
CB-32	294.27	-----	12" @ 290.27
CB-33	294.27	12" @ 290.17	12" @ 290.17
DMH-4	291.00	12" @ 288.23	12" @ 288.23
DMH-5	288.00	12" @ 285.68	12" @ 285.68

**FES DATA:**

STRUCTURE ID	DIA.	INVERT	RIPRAP SIZE
FES-5	15"	276.00	R-4
FES-6	18"	275.00	R-4
FES-7	12"	285.10	R-4
FES-8	12"	281.60	R-4
FES-11	12"	267.00	R-4



**OUTLET CONTROL STRUCTURE**  
NOT TO SCALE

**TEST HOLE DATA**

DETENTION BASIN	TEST HOLE ID	GROUND ELEVATION	TEST HOLE DEPTH	GROUNDWATER ELEVATION	LEDGE ELEVATION	PERCOLATION TEST (M/HR)
1	01-8	287±	15±	NONE @ 282	NONE @ 282	6
2	01-6	278±	9	NONE @ 269	269	6
2A-1	01-7 & 01-8	271±	11±	NONE @ 282	NONE @ 280	4
3	01-4	287±	5.5	NONE @ 281.5	281.5	4
4	01-4	287±	5.5	NONE @ 281.5	281.5	4

**TEST PIT DATA**

DETENTION BASIN	TEST PIT ID	GROUND ELEVATION	TEST HOLE DEPTH	GROUNDWATER ELEVATION	LEDGE ELEVATION
3	04-01	285±	4.5±	NONE @ 280.5	280.5
4	04-02	297.5±	6.8±	NONE @ 290.7	290.7
4	04-03	294±	7.1±	NONE @ 286.9	286.9

**STRUCTURE TABLE**

DETENTION BASIN	SIDE SLOPES (A) (H:V)	WEIR LENGTH (C) (FEET)	ORIFICE DIAMETER (D) (FEET)	DISCHARGE PIPE (E) DIA. (INCHES)	INVERT (F) ELEVATION (FEET)	BASIN RIM (G) ELEVATION (FEET)	BASIN BOTTOM (H) ELEVATION (FEET)	TOP OF STRUCTURE (I) ELEVATION (FEET)	2-YEAR W.S. ELEV. (FEET)	10-YEAR W.S. ELEV. (FEET)	25-YEAR W.S. ELEV. (FEET)	100-YEAR W.S. ELEV. (FEET)	EMERGENCY SPILLWAY WIDTH (J) (IN/FT)	EMERGENCY SPILLWAY (L) SIDE SLOPES
1	2.5:1	1.3	0.633	18	259.0	285.0	258.0	265.5	282.01	283.36	283.92	284.90	10/284.75	3:1
2	3:1	1.2	2.0	18	278.0	280.0	278.0	280.5	277.14	278.16	278.55	278.96	10/278.5	3:1
2A-1	3:1	0.5	5	12	268.0	270.0	268.0	270.5	269.51	269.64	269.71	269.77	---	---
3	2:1	0.42	0.5	12	282.0	288.0	282.0	288.5	285.26	286.51	286.71	287.18	10/287.5	3:1
4	2:1	0.75	0.8	12	292.0	296.0	292.0	296.5	294.55	295.08	295.36	295.60	10/295.75	3:1

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: OCT 21 2004. FILE # 03-0473  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

*Charles A. Hester*

NO.	DATE	REVISION
1	7/25/04	DEM COMMENTS
2	9/29/04	DEM COMMENTS

**JOHN P. CAITO**  
PROFESSIONAL ENGINEER  
No. 401-94-0000  
Exp. 4/1/04

**Alto Corporation**  
CIVIL ENGINEERS  
25 SHARPE DRIVE  
CRANSTON, RHODE ISLAND 02910  
TEL: 401-946-0000  
FAX: 401-944-6009

PROJECT NO: 589.1064  
DATE: SEPTEMBER, 2003  
SCALE: AS NOTED  
DESIGNED BY: M.J.V., J.A.  
DRAWN BY: G.A., M.A.D.  
CHECKED BY: J.P.C.

PLAN AND PROFILE - CARDINAL LANE  
SILVER PINES - PHASE 2  
A.P. 1, LOT 47 and A.P. 4 LOTS 9 and 436  
NORTH SMITHFIELD  
MAIN STREET  
RHODE ISLAND  
PREPARED FOR  
D.A.S. CONTRACTING CORPORATION

DRAWING NUMBER  
**12**  
SHEET 12 OF 15

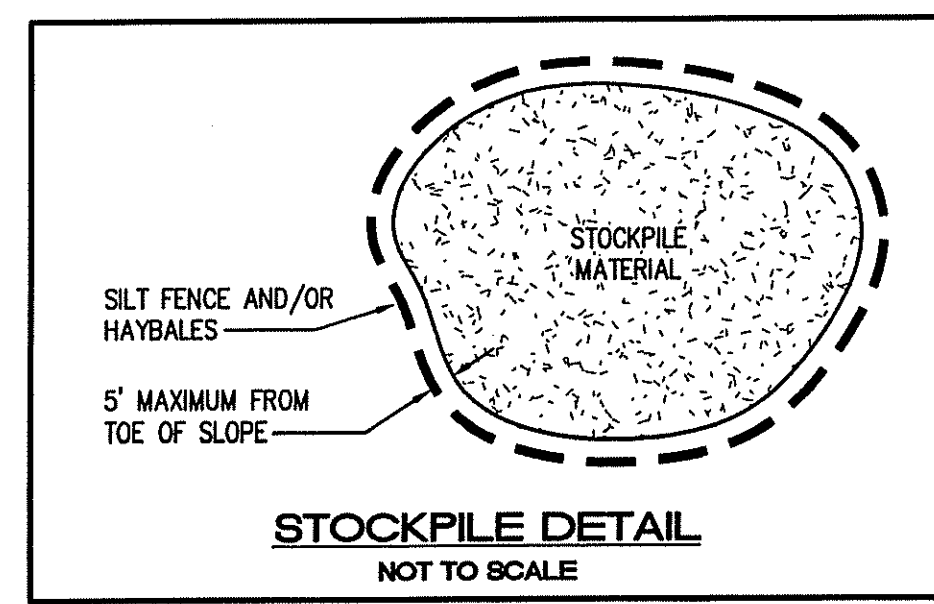
OCT - 1 2004

GENERAL NOTES:

- 1. THE STATE OF RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1997 EDITION, AND THE RHODE ISLAND STANDARD DETAILS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO. THE 1997 REVISION OF THE STANDARD SPECIFICATIONS MAY BE OBTAINED AT THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC WORKS. IN ADDITION, THE TOWN OF NORTH SMITHFIELD STANDARD SPECIFICATIONS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO.
2. ALL REQUIRED SITE IMPROVEMENTS SHALL BE INSPECTED BY THE TOWN ENGINEER TO ENSURE SATISFACTORY COMPLETION. IN NO CASE SHALL THE INSTALLATION OF ANY IMPROVEMENTS BE STARTED UNTIL PRIOR NOTIFICATION IS GIVEN TO THE TOWN ENGINEER. AT LEAST A 48-HOUR NOTICE SHALL BE GIVEN TO THE TOWN ENGINEER PRIOR TO ANY SUCH START OF CONSTRUCTION. A FINAL INSPECTION OF ALL SITE IMPROVEMENTS, UTILITIES AND GRADING WILL BE MADE TO DETERMINE WHETHER THE WORK IS SATISFACTORY AND IN SUBSTANTIAL AGREEMENT WITH THE APPROVED FINAL CONSTRUCTION DRAWING AND THE TOWN SPECIFICATIONS.
3. LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY LOCATIONS OF ALL EXISTING UTILITIES BOTH UNDERGROUND AND OVERHEAD. ANY DAMAGE TO EXISTING UTILITIES AS SHOWN OR NOT SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE BORNE BY THE CONTRACTOR. NO EXCAVATION SHALL BE DONE UNTIL ALL INVOLVED UTILITY COMPANIES ARE NOTIFIED 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY DIG-SAFE (1-888-344-7233) A MINIMUM OF 48 WORKING HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF ANY EXCAVATION AND/OR BLASTING WORK. THE NAME OF THE COMPANY PERFORMING THE EXCAVATION AND/OR BLASTING WORK MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
4. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE STATE OF RHODE ISLAND, FEDERAL GOVERNMENT, TOWN OF NORTH SMITHFIELD PRIOR TO COMMENCING ANY WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
6. STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS, WETLAND, OR ADJACENT TO DRAINAGE STRUCTURES.
7. ALL MATERIAL FOR FILL SHALL BE CLEAN AND FREE OF WATER WHICH COULD POLLUTE ANY DOWN STREAM WATERCOURSE.
8. FILL MATERIAL SHALL BE COMPACTED IN ONE FOOT (MAXIMUM) LIFTS TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-1557 (MODIFIED PROCTOR TEST).
9. CONTRACTOR TO PROVIDE TO THE OWNER "AS-BUILT" DRAWINGS OF ALL UTILITIES INSTALLED.

WATER NOTES:

- 1. THE NORTH SMITHFIELD REQUIREMENTS FOR SERVICE AND MAIN INSTALLATION SHALL BE STRICTLY ADHERED TO.
2. ALL DISTRIBUTION SYSTEM PIPING SHALL BE CLASS 52 DUCTILE IRON, DOUBLE CEMENT MORTAR LINES, PUSH ON STYLE JOINTS EXCEPT AS REQUIRED BY THE NORTH SMITHFIELD WATER DEPARTMENT. PIPE SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C151/A21.51. JOINTS SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C111/A21.11.
3. FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT CLASS 350 CEMENT MORTAR LINED COMPACT STYLE AMERICAN MANUFACTURED ONLY. FITTINGS SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C153/A21.53. MECHANICAL JOINTS SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C111/A21.11.
4. COATINGS USED FOR BOTH PIPES AND FITTINGS SHALL BE APPROVED FOR WATER SERVICE BY THE AMERICAN WATER WORKS ASSOCIATION AND THE ENVIRONMENTAL PROTECTION AGENCY. COATINGS SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C104/A21.4.
5. ANY INSTALLATION, JOINTS, CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, NORTH SMITHFIELD WATER AUTHORITY RECOMMENDATIONS, AWWA STANDARDS AND GOVERNMENTAL REQUIREMENTS.
6. CONSTRUCTION SHALL INCLUDE ALL PIPE, JOINTS, TEES, FITTINGS, GATE VALVES, GATE BOXES AND ALL MISCELLANEOUS ITEMS REQUIRED TO CONSTRUCT THE PROPOSED SYSTEM.
7. MEGALUG ANCHORS SHALL BE INSTALLED AT ALL FITTINGS. SEE RESTRAINED LENGTH TABLE IN THIS PLAN SET.
8. LEAKAGE TESTS AND THE CHLORINATION OF THE WATER DISTRIBUTION SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN CONFORMANCE TO AMERICAN WATER WORKS ASSOCIATION (AWWA) RECOMMENDATIONS, NORTH SMITHFIELD WATER DEPARTMENT REQUIREMENTS AND GOVERNMENTAL AGENCIES HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FEES ASSOCIATED WITH SAID TESTING.
9. ALL GATE VALVES, FITTINGS, PIPE, JOINTS, ETC., SHALL BE DESIGNED FOR A CONSTANT WORKING PRESSURE OF NO LESS THAN 250 PSI.
10. WATER PIPE SHALL TYPICALLY BE LOCATED AT LEAST TEN (10) FEET HORIZONTALLY FROM SEWER PIPE AND AT A DEPTH OF COVER EQUAL TO 5' MINIMUM.
11. ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS, SUCH AS GATE VALVES, PIPES, FITTINGS, AIR RELEASE ASSEMBLIES, CASTINGS, ETC. SHALL BE SUBMITTED TO THE NORTH SMITHFIELD WATER DEPARTMENT AND ENGINEER APPROVAL PRIOR TO PURCHASE AND INSTALLATION. THIS SUBMISSION SHALL INCLUDE MANUFACTURER'S LITERATURE, SHOP DRAWINGS, PROPOSED CONSTRUCTION METHODS, ETC.
12. BEDDING FOR WATER UTILITY SHALL BE TYPE V AWWA BEDDING.
13. THE CONTRACTOR SHALL NOTIFY THE NORTH SMITHFIELD WATER DEPARTMENT TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK ASSOCIATED WITH THE WATER DISTRIBUTION SYSTEM.
14. A 3/4" WATER SERVICE AND SHUT OFF SHALL BE INSTALLED IN EACH UNIT CONNECTION.
15. NEW HYDRANTS SHALL BE A MUELLER SUPER CENTURION 200, OPEN RIGHT



EROSION CONTROL AND SOIL STABILIZATION PROGRAM:

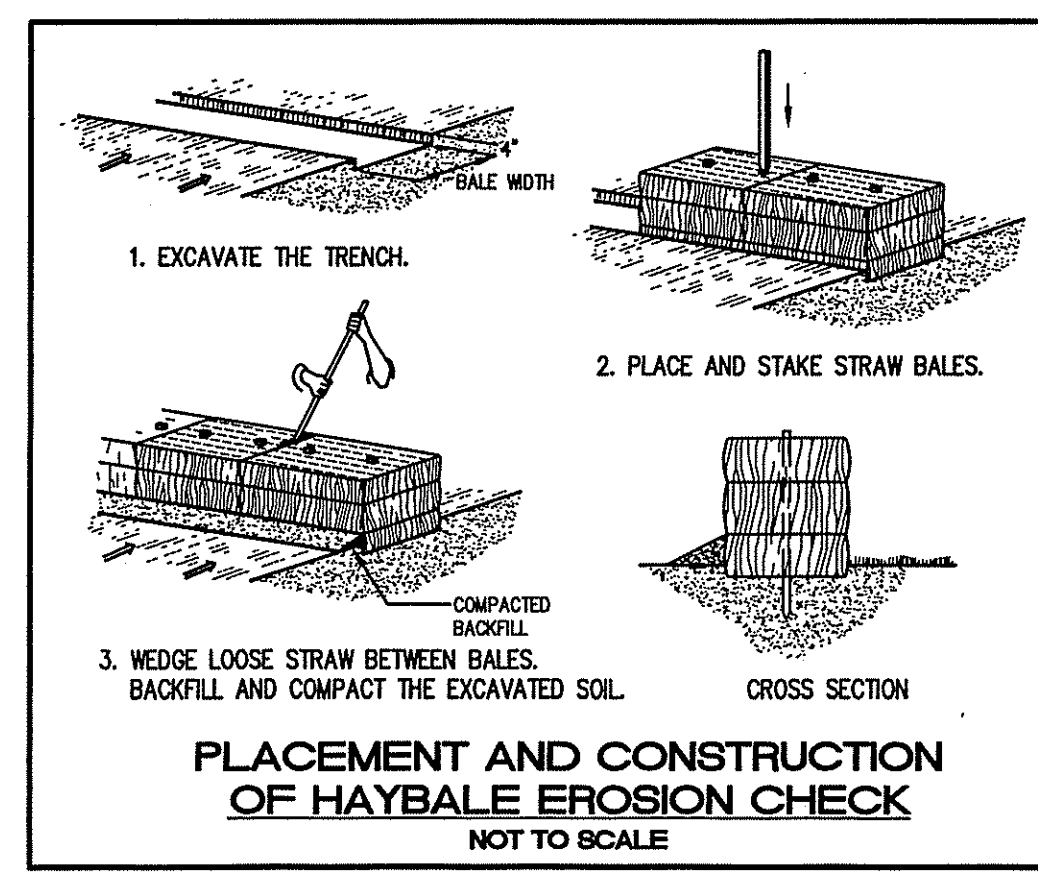
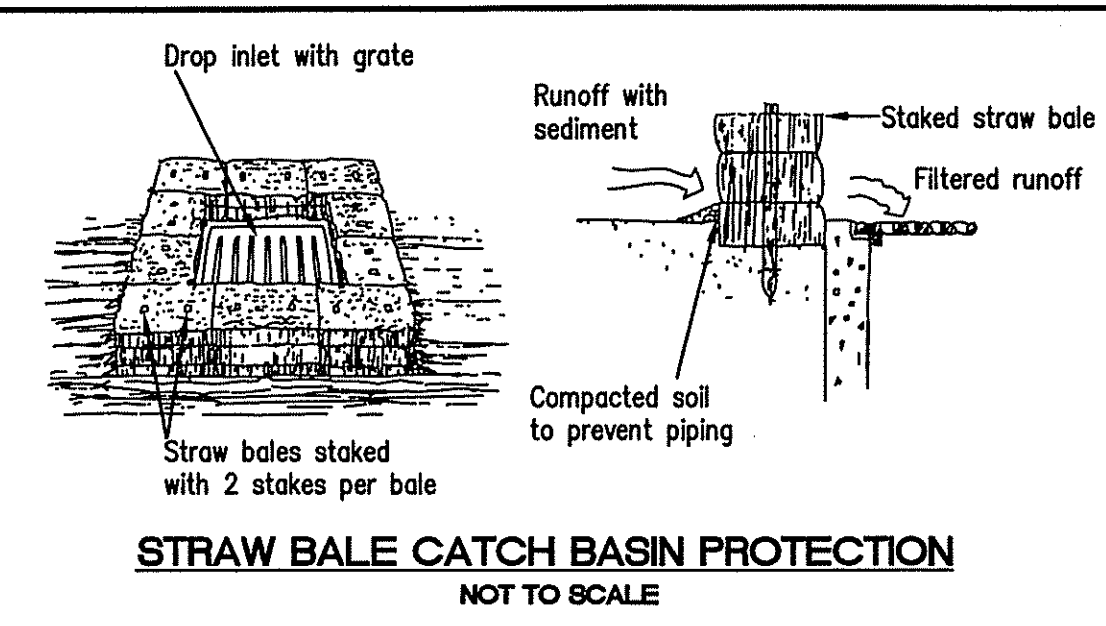
- 1. DENUDED SLOPES SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME, SUCH AS THE INACTIVE WINTER SEASONS.
2. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELISOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
3. HAY OR STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 2000 LBS/ACRE.
4. ALL HAYBALES OR TEMPORARY PROTECTION SHALL REMAIN IN-PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
5. THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH RHODE ISLAND STANDARD SPECIFICATION M.20.01.
6. THE SEED MIX SHALL BE INOCULATED WITHIN 24-HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
7. THE SEED MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEEDED SHALL BE COMPRISED OF THE FOLLOWING:
Table:
TYPE % BY WEIGHT
CREeping REED FESCUE 70
ASTORIA BENTGRASS 5
BIRDFOOT TREFOIL 15
PERENNIAL RYEGRASS 10
APPLICATION RATE 100 LBS/ACRE
LIMING AND FERTILIZING AS REQUIRED TO COMPLIMENT OR UPGRADE EXISTING CONDITIONS.
8. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR, AND SHALL DO SO AT AN ADDITIONAL EXPENSE.
9. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
10. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
11. STOCKPILES OF TOPSOIL AND EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%), SHALL ALSO BE SEEDED AND/OR STABILIZED AND SHALL BE COMPLETELY ENCLOSED WITH STAKED HAY BALES AND/OR SILT FENCE. (SEE DETAIL)
12. ON BOTH STEEP AND LONG SLOPES, CONSIDERATION SHOULD BE GIVEN TO "CRIMPING" OR "TRACKING" TO TACK DOWN MULCH APPLICATIONS.
13. TREES TO BE RETAINED SHALL BE FENCED OR ROPED OFF TO PROTECT THEM FROM CONSTRUCTION EQUIPMENT.
14. ALL PROPOSED PLANTINGS MUST BE ACCOMPLISHED AS EARLY AS POSSIBLE UPON COMPLETION OF GRADING AND CONSTRUCTION, AND AT LEAST PRIOR TO ANY ON-SITE OCCUPANCY.
15. ALL PROPOSED PLANTINGS MUST BE MAINTAINED BY THE PROPERTY OWNER TO ENSURE SURVIVAL.
16. SHOULD ANY OR ALL OF THE PROPOSED PLANTS FAIL TO SURVIVE AT LEAST ONE (1) FULL GROWING SEASON FROM THE TIME THEY HAVE BEEN PLANTED, THE OWNER SHALL BE FULLY RESPONSIBLE FOR REPLACING AND MAINTAINING THE SAME PLANT SPECIES FOR ONE (1) ADDITIONAL GROWING SEASON.
17. ALL DISTURBED AREAS MUST BE SEEDED OR PLANTED WITHIN THE CONSTRUCTION SEASON.
18. TEMPORARY SEEDING MUST BE DONE WITHIN ONE (1) MONTH AFTER DISTURBANCE.
19. ALL DISTURBED AREAS MUST BE PERMANENTLY SEEDED OR PLANTED BEFORE OCTOBER 1ST, IF NOT THEY MUST BE TEMPORARILY SEEDED.
20. THE CONTRACTOR SHOULD INITIATE APPROPRIATE VEGETATIVE PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN 21 DAYS.

SEWER NOTES:

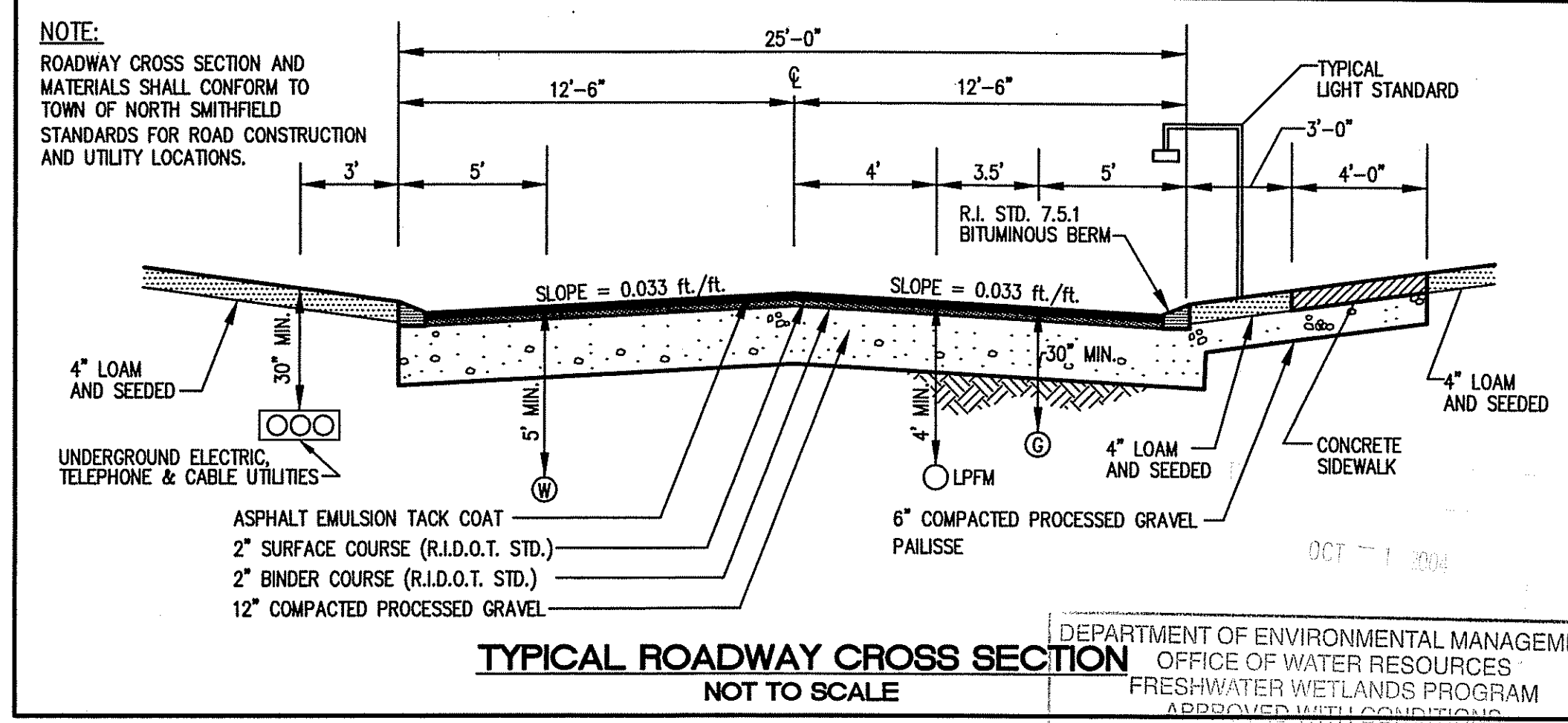
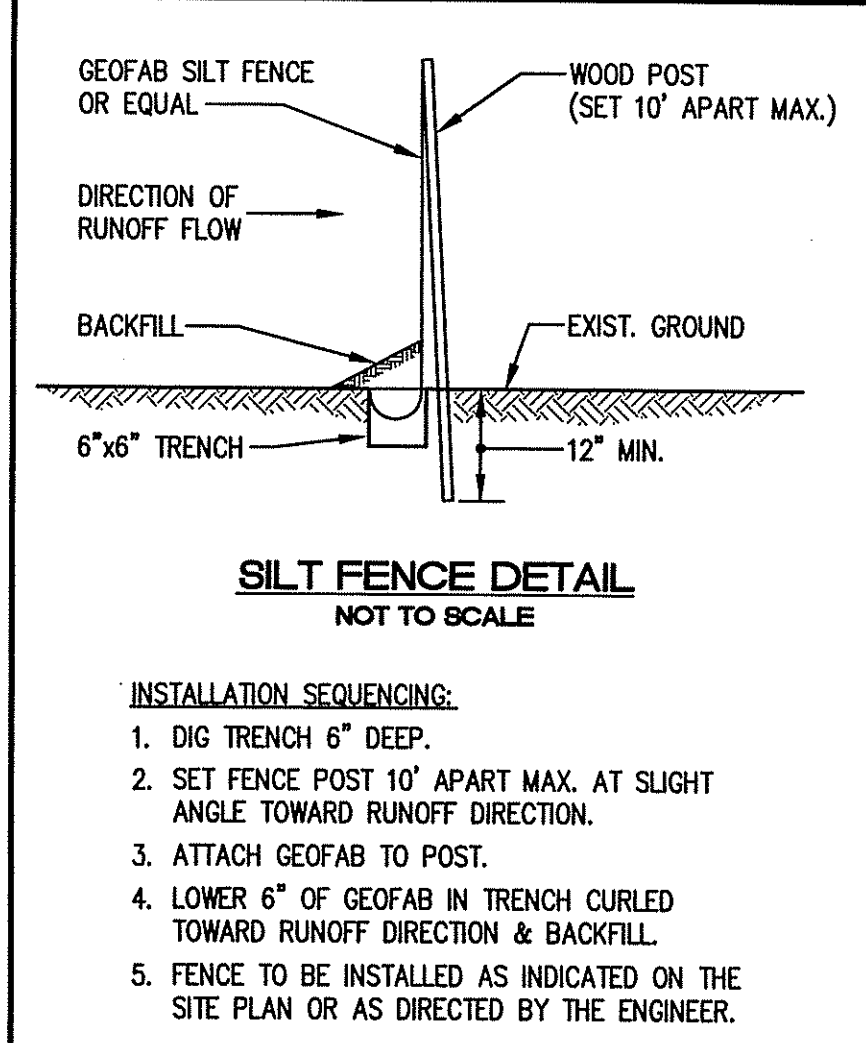
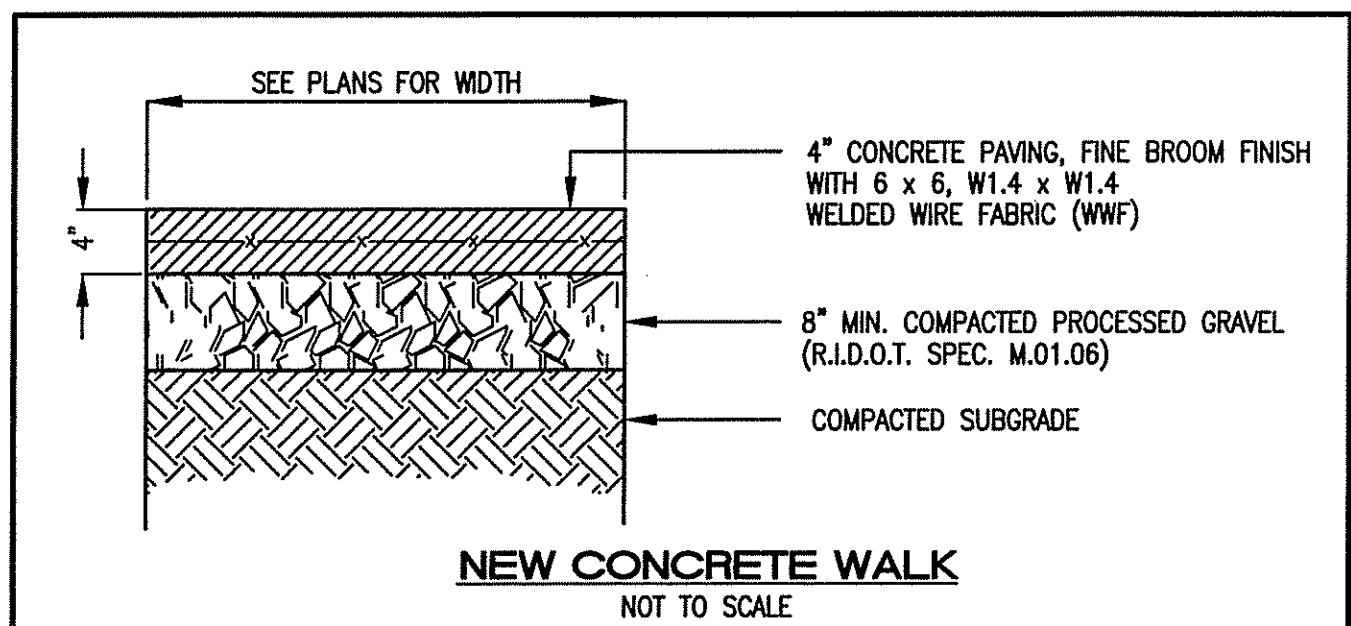
- 1. THE INSTALLATION OF THE SANITARY SEWER SHALL BE IN COMPLETE CONFORMANCE WITH THE CONSTRUCTION DETAILS AND THE STANDARD SANITARY SEWER REQUIREMENTS OF THE TOWN OF NORTH SMITHFIELD.
2. ALL GRAVITY SEWER PIPE AND FITTINGS SHALL MEET THE REQUIREMENTS OF ASTM SPECIFICATION D3034, SDR 35.
3. ALL PRESSURE SEWER PIPE AND FITTINGS SHALL BE SDR-21 PVC.
4. WATER OR LOW PRESSURE AIR TESTING SHALL BE CONDUCTED TO ASSURE LEAKAGE DOES NOT EXCEED 100 GALLONS/DAY/INCH DIAMETER/MILE OF PIPE. (GRAVITY)
5. AFTER THE PIPES OF THE FORCE MAIN SEWER HAVE BEEN LAID, SECURED IN PLACE AND JOINTED AS HEREIN BEFORE SPECIFIED, THE FORCE MAIN SEWERS SHALL BE TESTED FOR STRENGTH AND LEAKAGE.
- THE CONTRACTOR SHALL FURNISH ALL APPARATUS MATERIAL AND LABOR AND THE NECESSARY WATER FOR MAKING THE TESTS.
- BEFORE TESTING PIPE LINES HAVING FLEXIBLE JOINTS, THE CONTRACTOR MUST MAKE CERTAIN THAT THE PIPE LINES ARE SECURELY HELD TO PREVENT MOVEMENT.
- THE ENDS OF THE SECTIONS OF FORCE MAIN TO BE TESTED SHALL BE TIGHTLY CLOSED BY BLANK FLANGES OR OTHERWISE FOR THE DURATION OF EACH TEST.
- STRENGTH SHALL BE TESTED AT A PRESSURE BETWEEN 125 AND 150 PSI. THE PRESSURE FOR STRENGTH TEST SHALL BE MAINTAINED FOR AT LEAST ONE HOUR BY PUMPING ADDITIONAL WATER INTO THE PIPE LINE.
- LEAKAGE SHALL BE TESTED AT 150 PSI. THE TEST FOR LEAKAGE SHALL BE FOR AT LEAST ONE HOUR AND MAY BE REQUIRED TO LAST FOR TWO HOURS. THE ADDITIONAL WATER NEEDED TO MAINTAIN THE REQUIRED PRESSURE SHALL BE MEASURED ACCURATELY IN A MANNER APPROVED BY THE ENGINEER.
1. THE RATE OF LEAKAGE FOR FORCE MAIN SEWERS SHALL NOT EXCEED 50 GAL./DAY/MILE OF PIPE/INCH DIA.
2. THE CONTRACTOR SHALL REPAIR ALL LEAKS DISCOVERED.
- AIR TESTING OF FORCE MAIN WILL NOT BE ALLOWED.
6. ALL CONSTRUCTION AND MATERIALS SHALL BE IN STRICT CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND APPROVED SHOP DRAWINGS.

STORM DRAINAGE SYSTEM MAINTENANCE PLAN:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL ELEMENTS OF THE STORMWATER INFRASTRUCTURE PRIOR TO AND UPON COMPLETION OF CONSTRUCTION OF THE ROADWAYS AND STORMWATER DRAINAGE SYSTEM. ALL CATCH BASINS AND STORM DRAIN PIPES SHALL BE CLEANED OF SEDIMENT, STORMWATER CONTROL BASINS AND GRASSED SWALES SHALL BE CLEANED OF SEDIMENT TO THE DESIGN GRADES INDICATED ON THE CONSTRUCTION DRAWINGS. MAINTENANCE SHALL BE IN ACCORDANCE WITH THE STATE OF RHODE ISLAND, STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, WRITTEN BY THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL, SEPTEMBER 1, 1993, AS AMENDED.
2. DURING CONSTRUCTION ACTIVITIES ALL EROSION CONTROLS ON THE SITE SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY FOUR (24) HOURS AFTER AN EVENT WHICH GENERATES AT LEAST 0.25 INCHES OF RAIN IN A TWENTY FOUR (24) HOUR PERIOD.
3. ACCUMULATED SEDIMENTS SHALL BE REMOVED FROM ALL CATCH BASINS AND STORMWATER CONTROL BASINS IMMEDIATELY AFTER SITE STABILIZATION.
4. GRASSES MUST BE PLANTED AROUND AND WITHIN THE BASIN IMMEDIATELY FOLLOWING CONSTRUCTION TO STABILIZE THE SLOPES AND PREVENT EROSION. TREE AND SHRUBS SHOULD NOT BE PLANTED ON ANY IMPOUNDING EMBANKMENTS, TO PREVENT POTENTIAL SUBSURFACE DISTURBANCE AND POSSIBLE FAILURE OF THE STRUCTURE.
5. ALL TRASH, LITTER AND OTHER DEBRIS SHALL BE REMOVED FROM ALL STORMWATER INLET AND OUTLET STRUCTURES A MINIMUM OF TWICE PER YEAR. THESE STRUCTURES SHALL ALSO BE INSPECTED TWICE PER YEAR. INSPECTIONS SHALL BE PERFORMED SEVERAL TIMES WITHIN THE FIRST SIX MONTHS OF OPERATION.
6. SIDE SLOPES AND EMBANKMENTS OF THE BASIN SHOULD BE MOWED AT LEAST ONCE DURING THE GROWING SEASON (PREFERABLY AFTER AUGUST 15TH), TO PREVENT UNWANTED WOODY GROWTH. MOWING CAN BE MORE FREQUENT IF A MORE GROOMED APPEARANCE IS DESIRED AND THE BASIN IS NOT MANAGED FOR WILDLIFE HABITAT. ALL TRASH AND LITTER SHALL BE REMOVED FROM THE BASINS DURING MOWING OPERATIONS.
7. INSPECTIONS OF ALL CATCH BASINS AND OUTLET STRUCTURES SHALL OCCUR ON AN ANNUAL BASIS TO CHECK FOR DEBRIS REMOVAL AND STRUCTURAL INTEGRITY OR DAMAGE. SUCH DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY.
8. REPAIRS OR REPLACEMENT OF INLET/OUTLET STRUCTURES OR ANY ELEMENT OF THE FACILITY SHALL BE DONE WITHIN THIRTY (30) DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT SHALL BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
9. SEDIMENTS SHOULD BE REMOVED FROM DRAINAGE STRUCTURES AND THE STORMWATER CONTROL BASINS IMMEDIATELY FOLLOWING SITE STABILIZATION AND DURING THE FIRST (INITIAL) YEAR OF OPERATION.
10. ALL CATCH BASINS SHALL HAVE ALL TRASH, SEDIMENTS AND HYDROCARBONS REMOVED ON A BI-ANNUAL BASIS.
11. STORMWATER CONTROL BASINS 1 AND 2 PROVIDE FOR INFILTRATION FOR STORMWATER REMOVAL. EVENTUALLY, THE INFILTRATION CAPACITY OF THESE BASINS WILL DECREASE. THIS REQUIRES DEEP TILLING OF THE BASIN FLOORS BY A ROTARY TILLER OR DISC HARROW. THIS SHOULD BE PERFORMED EVERY 5-10 YEARS OR WHEN STANDING WATER IS VISIBLE FOR MORE THAN 72 HOURS.
12. STORMWATER CONTROL BASINS 2A-1, 3 AND 4 SHALL HAVE SEDIMENTS REMOVED FROM THEM ONCE EVERY 10 YEARS OR WHEN THE SEDIMENT STORAGE CAPACITY IS WITHIN 80% OF ITS MAXIMUM.
13. ALL COSTS INCURRED FOR MAINTENANCE, CLEANING, AND INSPECTION ARE THE RESPONSIBILITY OF THE PROPERTY OWNER AND/OR RESPONSIBLE PARTY. IN CERTAIN CASES, THE APPROPRIATE DEM PROGRAM MAY REQUIRE DOCUMENTATION OF MAINTENANCE.
14. ANY INADVERTENT OR DELIBERATE DISCHARGE OF WASTE OIL OR ANY OTHER POLLUTANT TO THE STORMWATER DISPOSAL SYSTEM REQUIRES IMMEDIATE NOTIFICATION OF THE DEM OIL POLLUTION CONTROL PROGRAM AT 222-2284, AS PER OIL POLLUTION CONTROL REGULATIONS. DURING NON-WORKING HOURS, NOTIFICATION OF SPILLS CAN BE MADE TO THE DEM DIVISION OF ENFORCEMENT AT 222-3070, THE 24-HOUR EMERGENCY RESPONSE PHONE NUMBER.



Department of Environmental Management Division of Water Resources (OWR) SEWER LINE/WATER LINE SEPARATION POLICY FOR DESIGN OF SANITARY SEWERS. A. Lateral placement of sewers and water lines. Sewers shall be laid at least 10 feet horizontally from any existing or proposed water line. B. Sewers crossing water lines. Sewers crossing over water lines should be avoided, but if conditions warrant this situation, then adequate structural support shall be provided for the sewer to maintain line and grade. C. Water lines shall be defined as any conduits or pipelines that convey potable water.



Professional Engineer JOHN P. CAFTO. CIVIL ENGINEERS JOHN P. CAFTO CORPORATION LAND PLANNERS. PROJECT NO: 589.1094. DATE: SEPTEMBER, 2008. SCALE: AS SHOWN. DESIGNED BY: M.J.V. DRAWN BY: M.J.V., G.A. CHECKED BY: J.P.C. NOTES and DETAILS SILVER PINES - PHASE 2 A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 436 MAIN STREET NORTH SMITHFIELD, RHODE ISLAND PREPARED FOR D.A.S. CONTRACTING CORPORATION. DRAWING NUMBER 13 SHEET 13 OF 15. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESHWATER WETLANDS PROGRAM APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL. DATE: 08-24-2008. NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL. APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

**SECTION A-A** **END ELEVATION**

DIMENSIONS										REINFORCEMENT		
NO.	A	B	C	D	E	F	G	H	I	J	BAR	SPACING
1-0"	4"	2'-2"	1'-0"	7/8"	6"	7/8"	2'-0"	8"	2'	2'	0.040	12"
1-0"	4"	2'-2"	2'-10"	2'-10"	8'-1"	2'-0"	12'	2 1/2"	2'	2'	0.040	12"
1-0"	4"	2'-2"	2'-10"	2'-10"	8'-1"	2'-0"	12'	2 1/2"	2'	2'	0.040	12"
1-0"	4"	2'-2"	2'-10"	2'-10"	8'-1"	2'-0"	12'	2 1/2"	2'	2'	0.040	12"
1-0"	4"	2'-2"	2'-10"	2'-10"	8'-1"	2'-0"	12'	2 1/2"	2'	2'	0.040	12"
1-0"	4"	2'-2"	2'-10"	2'-10"	8'-1"	2'-0"	12'	2 1/2"	2'	2'	0.040	12"
1-0"	4"	2'-2"	2'-10"	2'-10"	8'-1"	2'-0"	12'	2 1/2"	2'	2'	0.040	12"
1-0"	4"	2'-2"	2'-10"	2'-10"	8'-1"	2'-0"	12'	2 1/2"	2'	2'	0.040	12"
1-0"	4"	2'-2"	2'-10"	2'-10"	8'-1"	2'-0"	12'	2 1/2"	2'	2'	0.040	12"
1-0"	4"	2'-2"	2'-10"	2'-10"	8'-1"	2'-0"	12'	2 1/2"	2'	2'	0.040	12"

NOTE: SHALL BE IN ACCORDANCE WITH SECTION 701 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**PRECAST CONCRETE FLARED END SECTION**  
 R.I. STANDARD 6.3.0  
 DATE: JUNE 15, 1998

**SECTION B-B** **SECTION A-A**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN**  
 R.I. STANDARD 6.3.1  
 DATE: JUNE 15, 1998

**COVER** **FRAME**

**SECTION A-A**

NOTE: 1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.  
 2. FRAME AND COVER SEATS TO BE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**HEAVY-DUTY SQUARE FRAME AND ROUND COVER**  
 R.I. STANDARD 6.1.1  
 DATE: JUNE 15, 1998

**SECTION A-A** **SECTION B-B** **SECTION C-C**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**SQUARE FRAME AND GRATE (BICYCLE SAFE)**  
 R.I. STANDARD 6.3.2  
 DATE: JUNE 15, 1998

**SECTION A-A**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)**  
 R.I. STANDARD 6.3.4  
 DATE: JUNE 15, 1998

**CONSTRUCTION METHOD A** **CONSTRUCTION METHOD B**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**BITUMINOUS BERM**  
 R.I. STANDARD 7.5.1  
 DATE: JUNE 15, 1998

**SEWER LINE ENCASEMENT DETAIL**  
 NOT TO SCALE

**TYPICAL WATER TRENCH DETAIL**  
 NOT TO SCALE

**RESTRAINED LENGTH TABLE FOR VARIOUS D.I. FITTINGS**

PIPE DIA.	PRESSURE	ENDCAP	90°	45°	22.5°	1/2"	TEE**
8"	250 psi	42'	18'	7'	4'	2'	2' (8x8x8)
8" to 6"							18'

\*\* RESTRAINED LENGTHS GIVEN FOR REDUCERS ARE ALONG THE LARGER DIA. PIPE.  
 \*\* RESTRAINED LENGTHS GIVEN IN THIS TABLE ARE ALONG THE BRANCH OF THE TEE AND ARE BASED UPON A 10' STANDARD RESTRAINED LENGTH ALONG THE MAIN IN BOTH DIRECTIONS FROM THE BRANCH.

**NEW HYDRANT and VALVE ASSEMBLY DETAIL**  
 NOT TO SCALE

**WATER SERVICE INSTALLATION DETAIL**  
 NOT TO SCALE

**SECTION A-A** **SECTION B-B**

**OIL WATER SEPARATOR DETAIL**  
 NOT TO SCALE

**SECTION A-A** **SECTION B-B** **SECTION C-C**

**ROCKFILL RIP-RAP AT FLARED END SECTION**  
 NOT TO SCALE

**FILTER STONE CHART**

RIPRAP	FILTER STONE	DEPTH
R-4	FS-3	7.5"
R-5	FS-3	7.5"
R-6	FS-2 and R-2	6" / 6"
R-7	FS-3 and R-4	7.5" / 21"

OCT 1, 2004

REVISION NO. DATE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 DATE: 03-03-2003  
 FILE # 03-0473  
 ALLOWED WITH PRIOR APPROVAL  
 AS SPECIFIED IN THE PERMIT

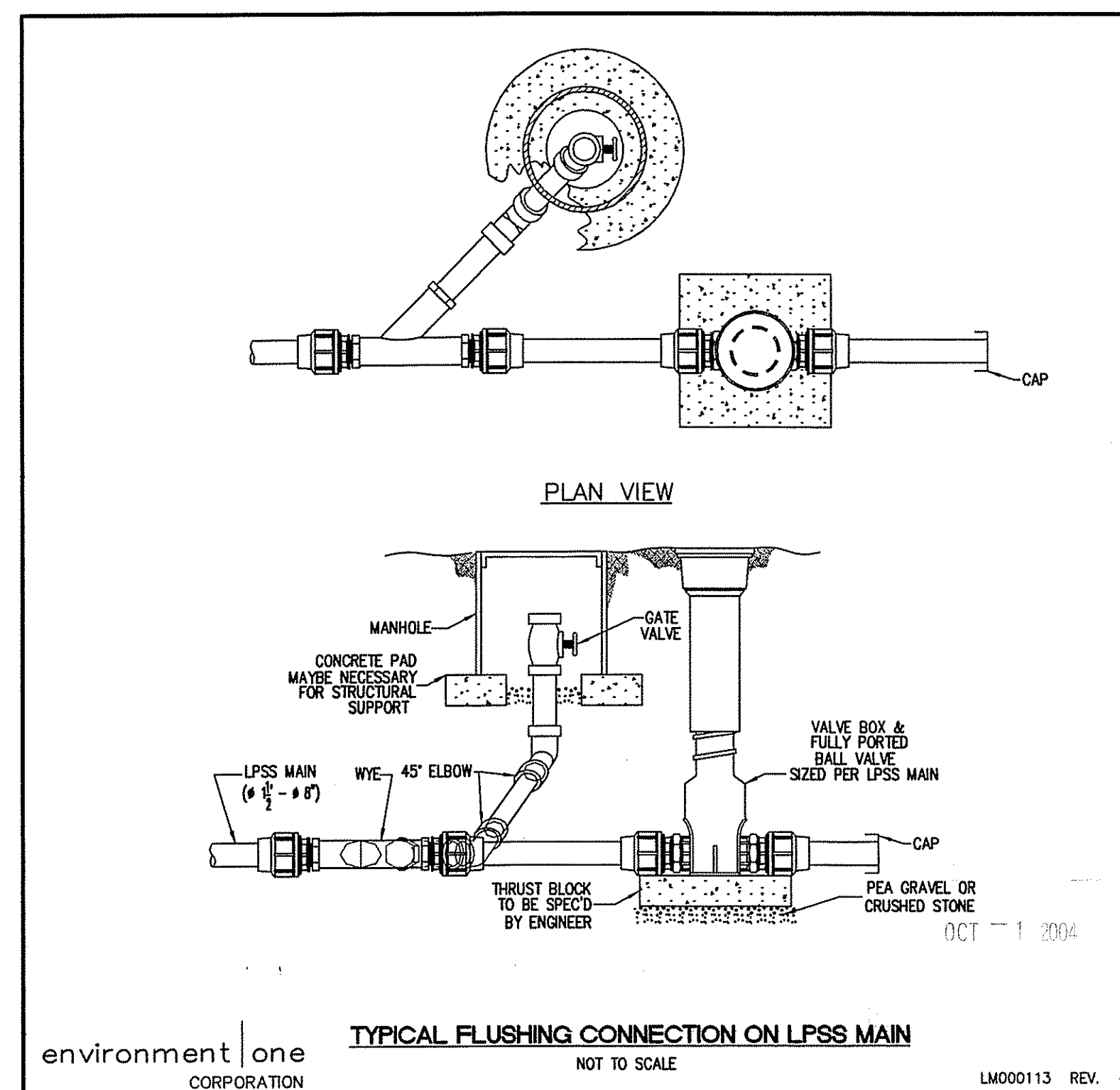
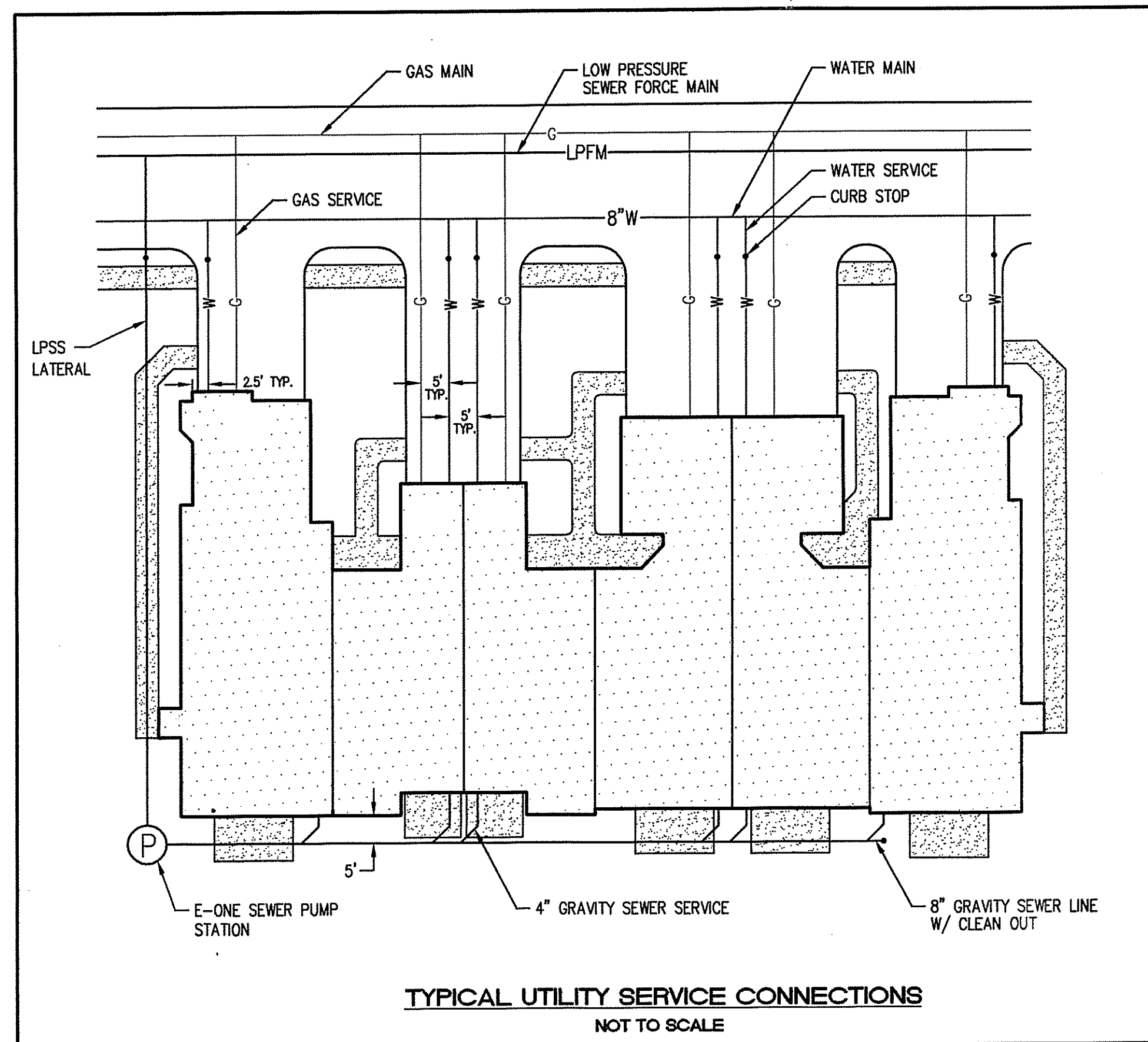
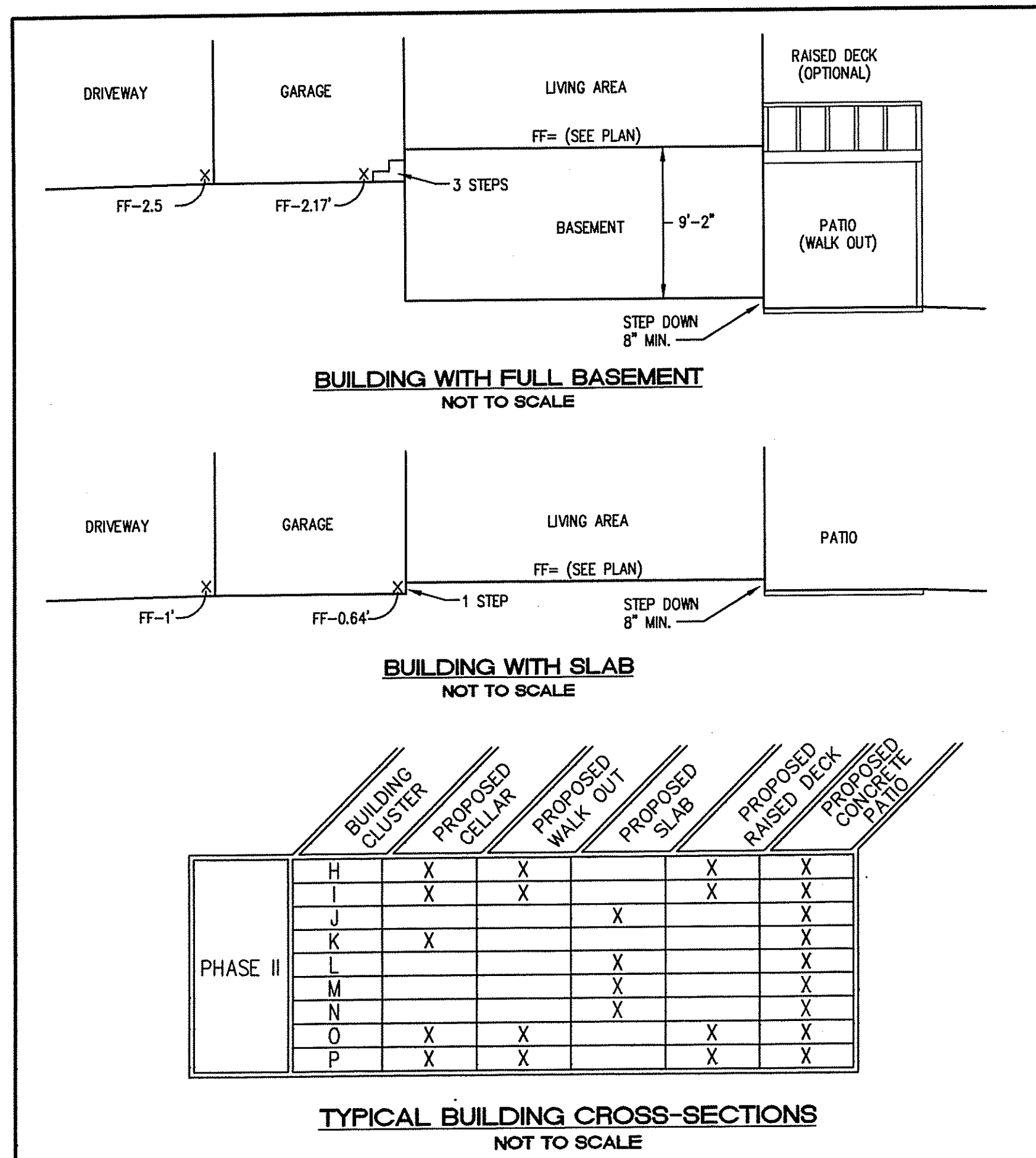
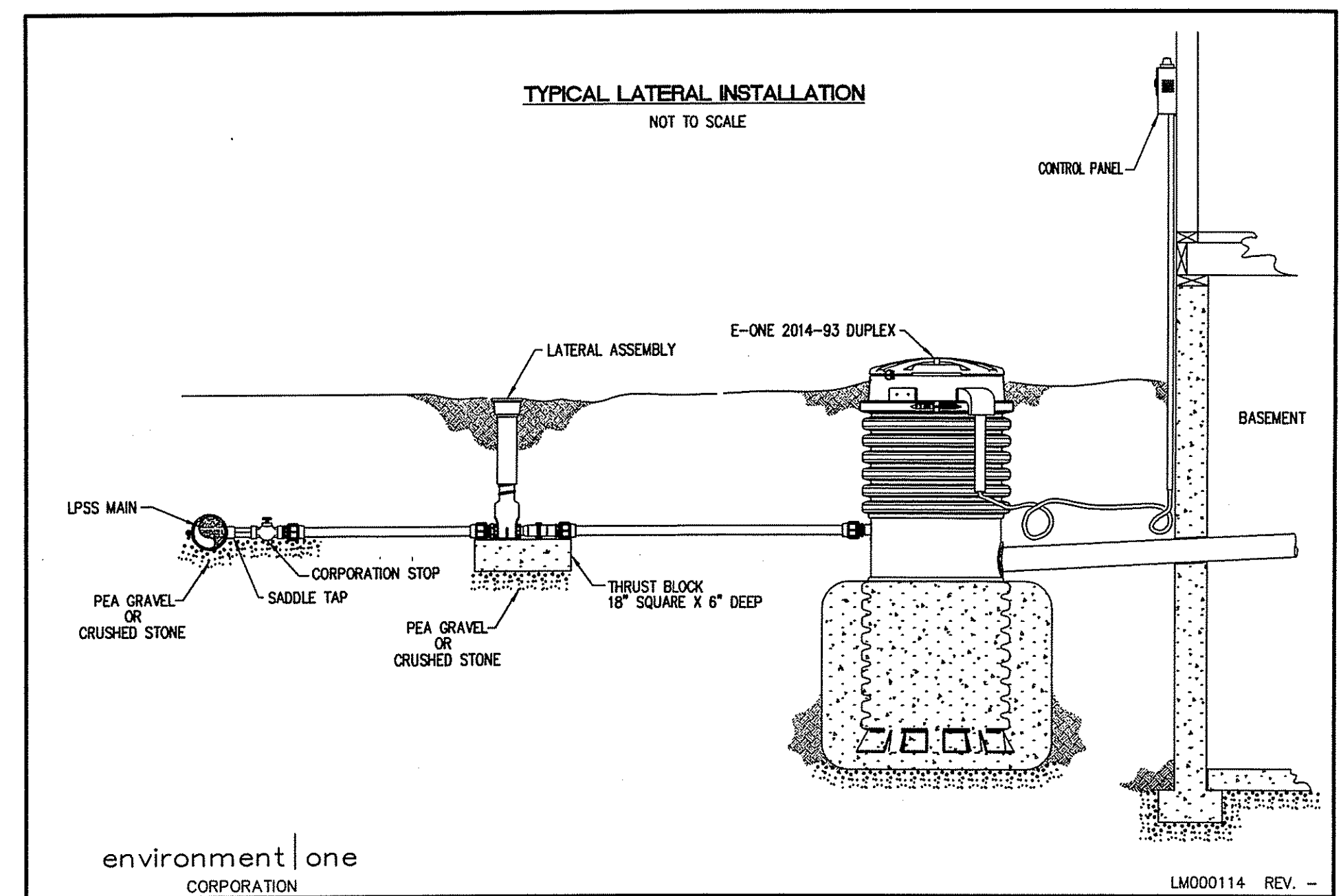
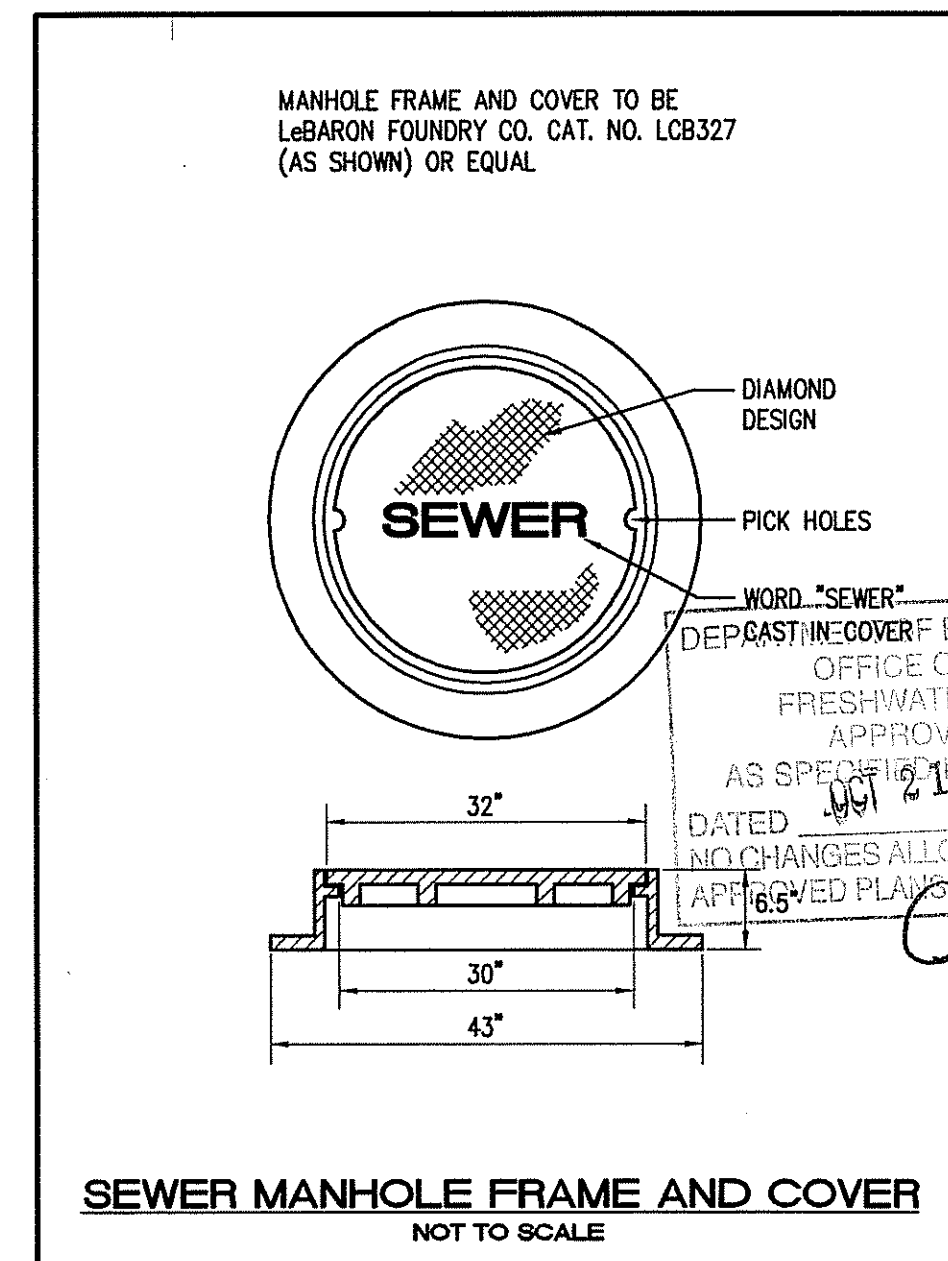
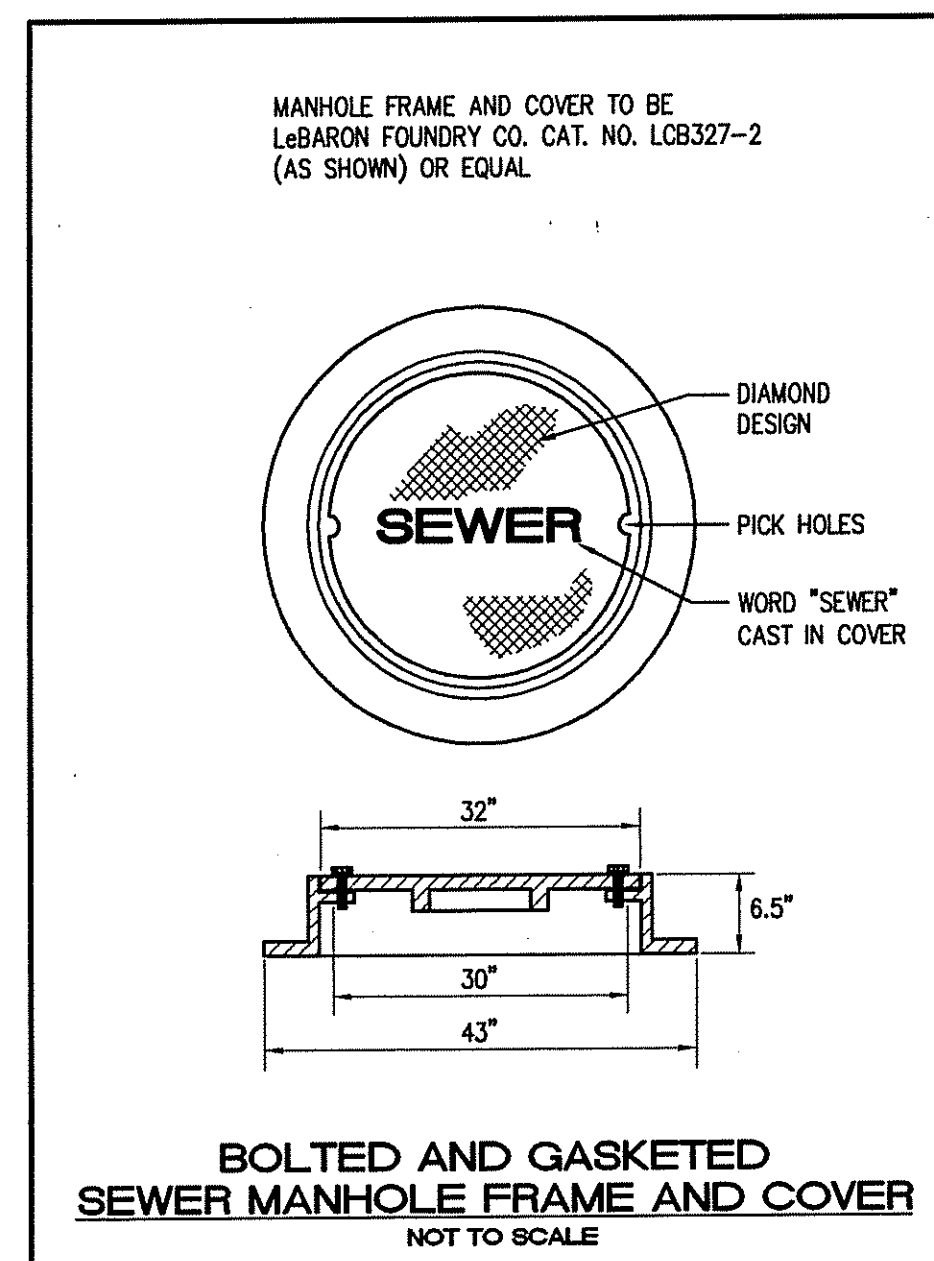
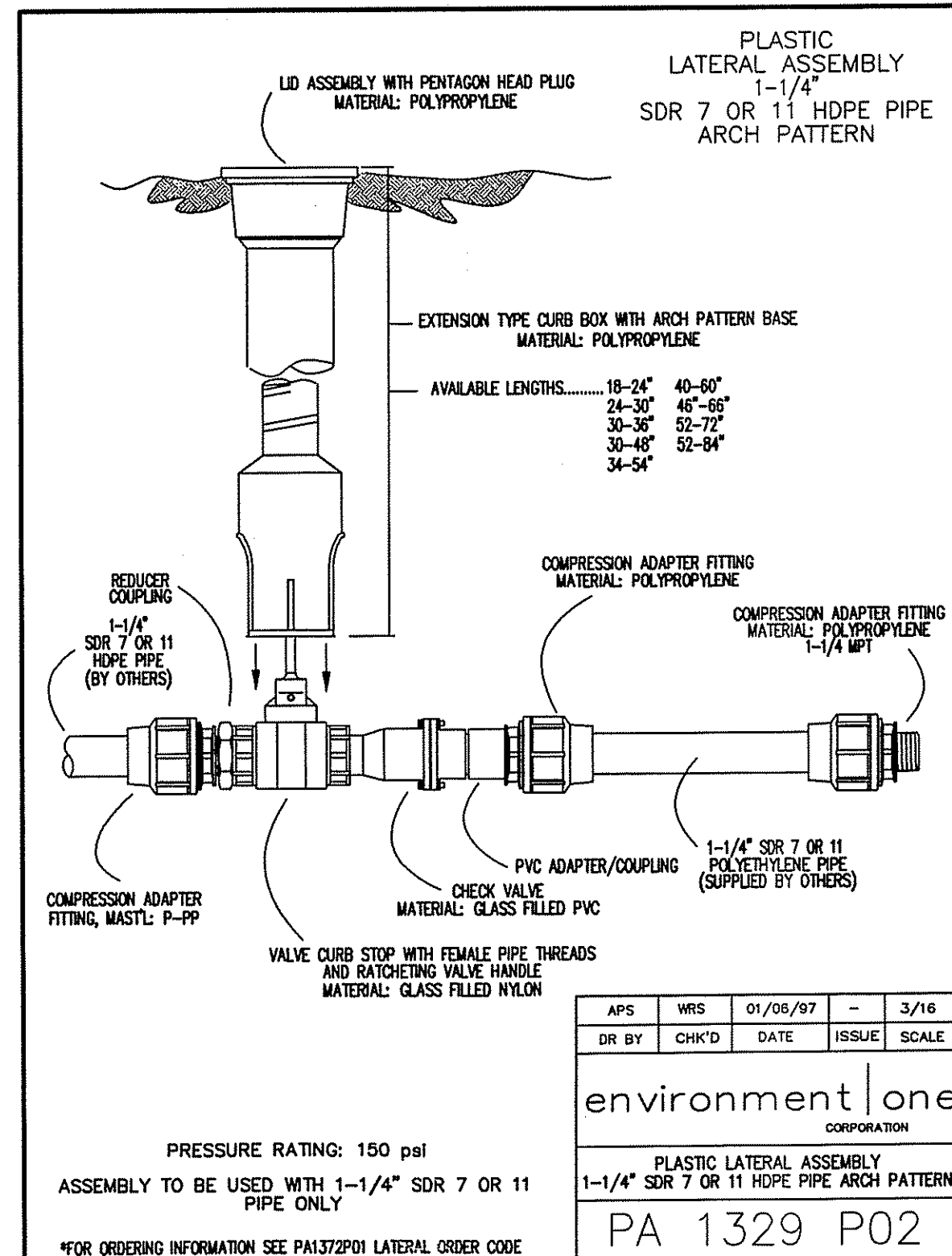
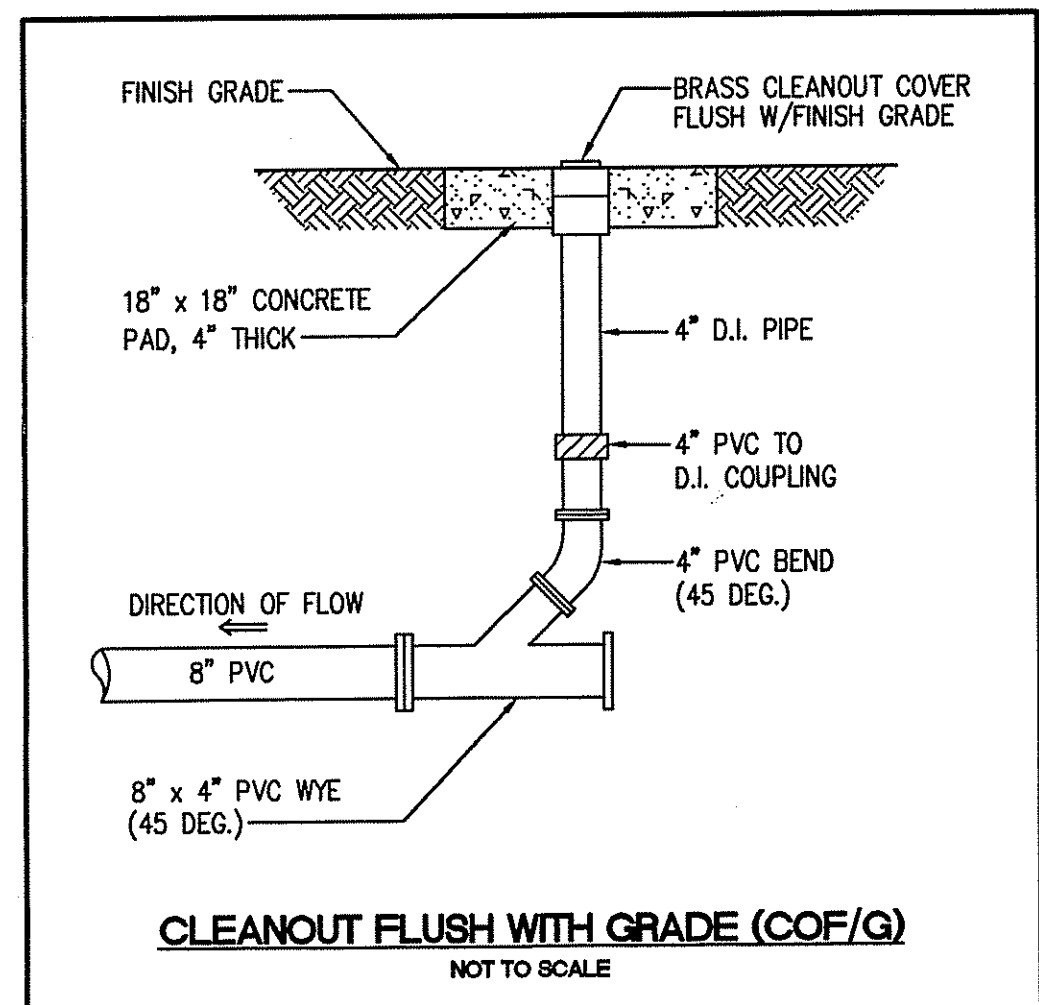
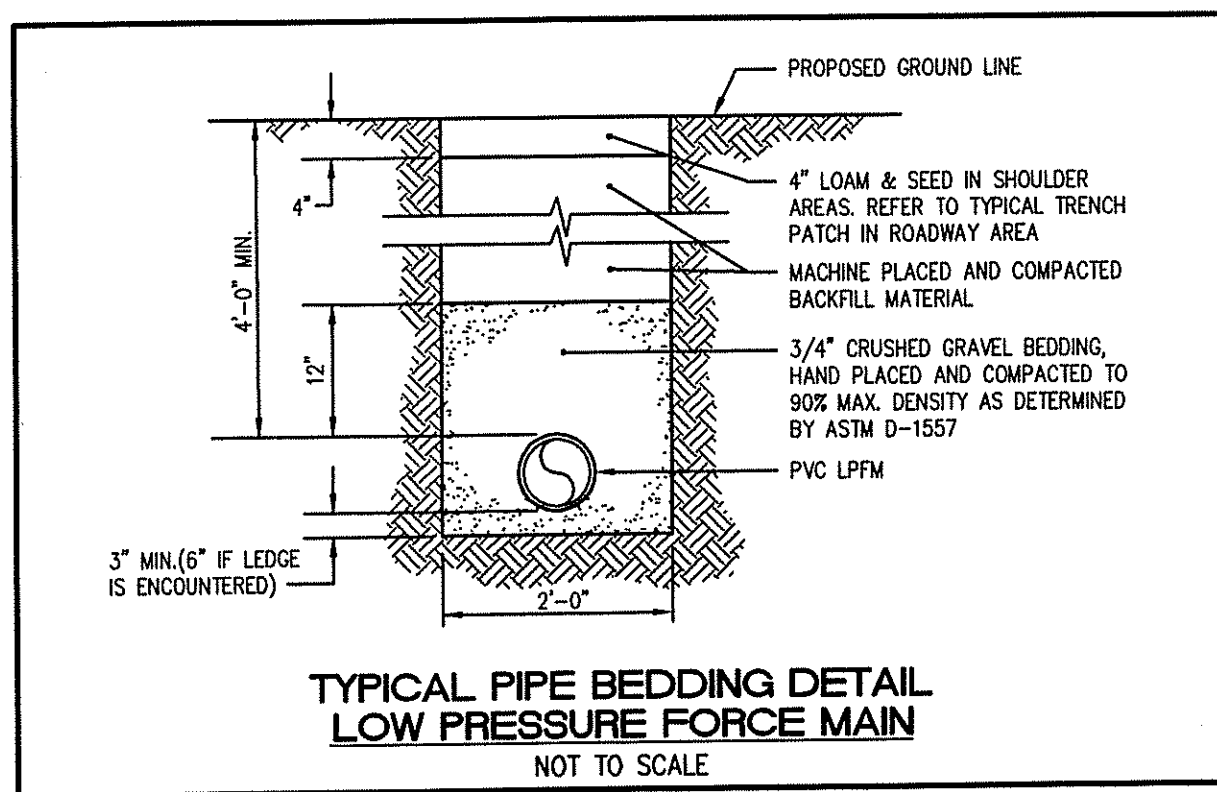
JOHN P. CAITO  
 PROFESSIONAL ENGINEER

CIVIL ENGINEERS  
 JOHN P. CAITO CORPORATION  
 LAND PLANNERS

PROJECT NO: 589.094  
 DATE: SEPTEMBER, 2003  
 SCALE: AS SHOWN  
 DESIGNED BY: M.J.V.  
 DRAWN BY: J.A.  
 CHECKED BY: J.P.C.

DETAILS - 1  
**SILVER PINES - PHASE 2**  
**A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 436**  
 NORTH SMITHFIELD  
 MAIN STREET  
 RHODE ISLAND  
 PREPARED FOR  
**D.A.S. CONTRACTING CORPORATION**

DRAWING NUMBER  
**14**  
 SHEET 14 OF 15



NO.	DATE	REVISION

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER AND FRESHWATER RESOURCES  
APPROVED WITH LETTER OF APPROVAL  
AS SPECIFIED IN PERMITS  
DATED 09/21/2003  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSULTANT'S OFFICE

JOHN P. CAITO  
PROFESSIONAL ENGINEER  
STATE OF RHODE ISLAND  
CRANSTON, RHODE ISLAND 02904  
401-946-0300  
FAX: 401-944-6009

**environment one CORPORATION**  
LAND PLANNERS  
CIVIL ENGINEERS

PROJECT NO: 589.1094  
DATE: SEPTEMBER, 2003  
SCALE: AS SHOWN  
DESIGNED BY: M.J.V.  
DRAWN BY: M.J.V., G.A.  
CHECKED BY: J.P.C.

**DETAILS - 2**  
SILVER PINES - PHASE 2  
A.P. 1, LOT 47 and A.P. 4, LOTS 9 and 436  
NORTH SMITHFIELD  
RHODE ISLAND  
PREPARED FOR  
D.S. CONTRACTING CORPORATION

DRAWING NUMBER  
**15**  
SHEET 15 OF 15