

AUG 7 2008

- LEGEND:**
- ⊙ SEWER MANHOLE
 - ⊙ DRAIN MANHOLE
 - ⊙ TELEPHONE MANHOLE
 - ⊙ CABLE TV MANHOLE
 - ⊙ MBTA MANHOLE
 - ⊙ STEAM MANHOLE
 - ⊙ ELECTRIC MANHOLE
 - ⊙ WATER MANHOLE
 - ⊙ MANHOLE
 - ♿ HANDICAP RAMP
 - ⊙ GAS SHUT OFF
 - ⊙ WATER SHUT OFF
 - ⊙ BOSTON WATER METER
 - ⊙ CATCH BASIN
 - ⊙ CATCH BASIN-ROUND
 - ⊙ LIGHT POLE
 - ⊙ UTILITY POLE
 - ⊙ GUTTER INLET
 - ⊙ HYDRANT
 - ⊙ SIGN
 - ⊙ MAIL BOX
 - ⊙ WALK LIGHT
 - ⊙ TRAFFIC SIGNAL
 - ⊙ PARKING METER
 - ⊙ ELECTRIC HANDHOLE
 - ⊙ SHUT OFF BOLLARD
 - ⊙ INVERT ELEVATION
 - ⊙ RIM ELEVATION
 - ⊙ TOP
 - ⊙ BOTTOM
 - ⊙ BIT. BITUMINOUS
 - ⊙ CONC. CONCRETE
 - ⊙ A/C AIR CONDITIONING UNIT
 - ⊙ PIV POST INDICATOR VALVE
 - ⊙ VGC VERTICAL GRANITE CURB
 - ⊙ SGC SLOPED GRANITE CURB
 - ⊙ CC CONCRETE CURB
 - ⊙ CLF CHAIN LINK FENCE
 - WF WOOD FENCE
 - SHRUB
 - TREE
 - ENT ENTRANCE
 - BS BOTTOM OF STEPS
 - TS TOP OF STEPS
 - CCB CAPE COD BERM
 - BW BOTTOM OF WALL
 - T.S. TOP SHELF
 - ⊙ F.P. FLAG POLE
 - N/F NOW OR FORMERLY
 - FFE FIRST FLOOR ELEVATION
 - ⊙ OBSERVATION WELL
 - TBM TEMPORARY BENCH MARK
 - F.E.S. FLARED END SECTION
 - TC TOP OF CURB
 - BC BOTTOM OF CURB
 - N.V.P. NO VISIBLE PIPES
 - TW TOP OF WALL
 - T.O.W. TOP OF WATER
 - T.O.D. TOP OF DEBRIS
 - FOW FULL OF WATER
 - WF-## WETLAND FLAG NUMBER
 - ▲ WETLAND FLAG
 - EDGE OF WOODS
 - ST-L GUARD RAIL
 - STREET LIGHTING
 - x FENCE
 - s SEWER
 - d DRAIN
 - CS COMBINED SEWER
 - w WATER
 - g GAS
 - e ELECTRIC
 - m MBTA
 - t TELEPHONE
 - c CABLE TELEVISION
 - STEAM

SOIL TYPE ON SITE
 CEC- CANTON AND CHARLTON FINE SANDY LOAMS,
 VERY ROCKY, 3 TO 15 PERCENT SLOPES.

TEST HOLE NOTE:
 TEST HOLES WERE PERFORMED ON APRIL 10, 2008 BY
 THOMAS J. PRINCE, III, RI CLASS IV SOIL EVALUATOR.
 SOIL LOGS ARE PROVIDED ON SHEETS 19 & 20 OF
 THIS PLAN SET.

- PLAN NOTES:**
- BENCH MARK INFORMATION:
 BENCH MARK USED :
 RIHB STATION 186+27.76, 30' LEFT
 ELEVATION = 147.59
 TEMPORARY BENCH MARKS SET :
 TOP OF HYDRANT SPINDLE AT FRONT
 ENTRANCE OF BUILDING
 ELEVATION = 176.91
 - ELEVATIONS REFER TO MEAN SEA LEVEL
 - CONTOUR INTERVAL EQUALS ONE (1) FOOT.
 - UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND THE LATEST PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUB-SURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL, TOLL-FREE, THE DIG SAFE CALL CENTER AT 1-888-344-7233 SEVENTY-TWO HOURS PRIOR
 ELEVATION = 176.91
 - WETLAND DELINEATION ESTABLISHED BY ECOTONES, Inc. Environmental Consultants (MAY, 2007).
 - WETLAND FLAGS LOCATED BY MARSH SURVEYING, MAY 2007.

PLAN REFERENCE: - CHIMNEY HILL ASSOCIATES CUMBERLAND, RHODE ISLAND LAND DEVELOPMENT PLAN DATED: 8-02-01 REVISED: 8-20-01 PREPARED BY: H.W. MOORE ASSOCIATES, INC. ENGINEERS & PLANNERS BOSTON, MASS.

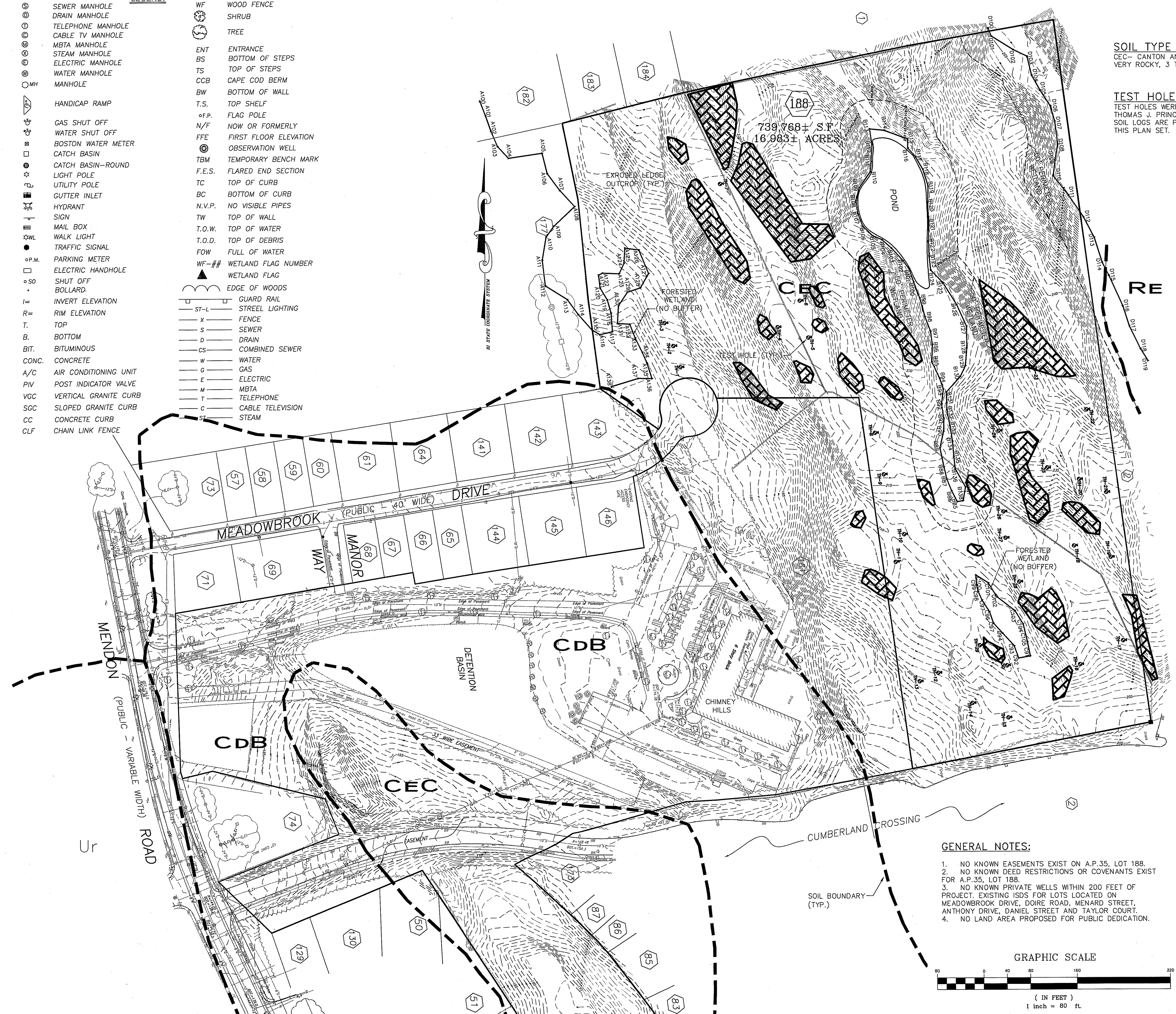
LOT 188
 TOTAL LOT AREA=739,768± S.F.
ZONING
 R-3 (WITH WATER AND SEWER)
 MINIMUM LOT WIDTH = 90'
 MINIMUM LOT FRONTAGE = 40'
 MINIMUM FRONT YARD = 10'
 MINIMUM SIDE YARD = 5'
 MINIMUM REAR YARD = 15'
 MAXIMUM LOT COVERAGE = 40%
 MAXIMUM BLDG. HEIGHT = 35'

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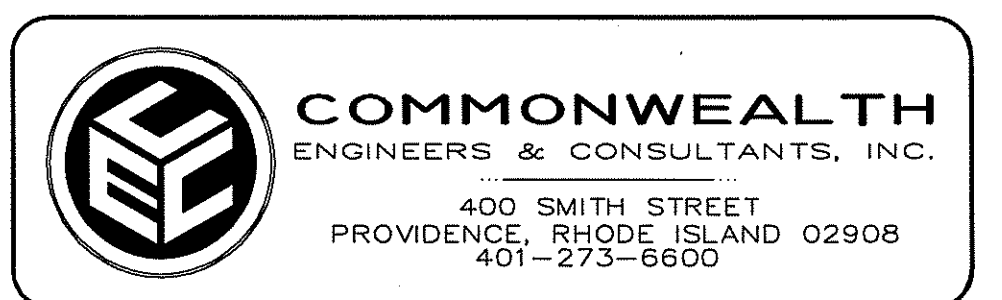
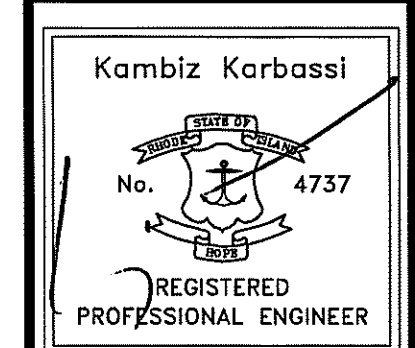
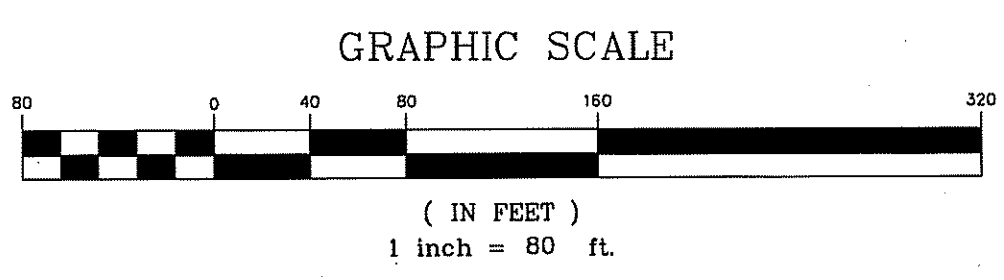
PROVIDED, 180.77' OF DEEPER BROOK ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESHWATER WETLANDS PROGRAM APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL DATED SEP 23 2008 FILE # 08-0247 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL. APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

APPLICANT
 MACKLANDS REALTY, INC.
 573 MENDON ROAD
 CUMBERLAND, RI 02864

OWNER
 CHIMNEY HILL ASSOCIATES
 C/O PEABODY PROPERTIES
 539 GRANITE STREET
 BRAINTREE, MA 02184



- GENERAL NOTES:**
- NO KNOWN EASEMENTS EXIST ON A.P.35, LOT 188.
 - NO KNOWN DEED RESTRICTIONS OR COVENANTS EXIST FOR A.P.35, LOT 188.
 - NO KNOWN PRIVATE WELLS WITHIN 200 FEET OF PROJECT. EXISTING ISDS FOR LOTS LOCATED ON MEADOWBROOK DRIVE, DOIRE ROAD, MENARD STREET, ANTHONY DRIVE, DANIEL STREET AND TAYLOR COURT.
 - NO LAND AREA PROPOSED FOR PUBLIC DEDICATION.

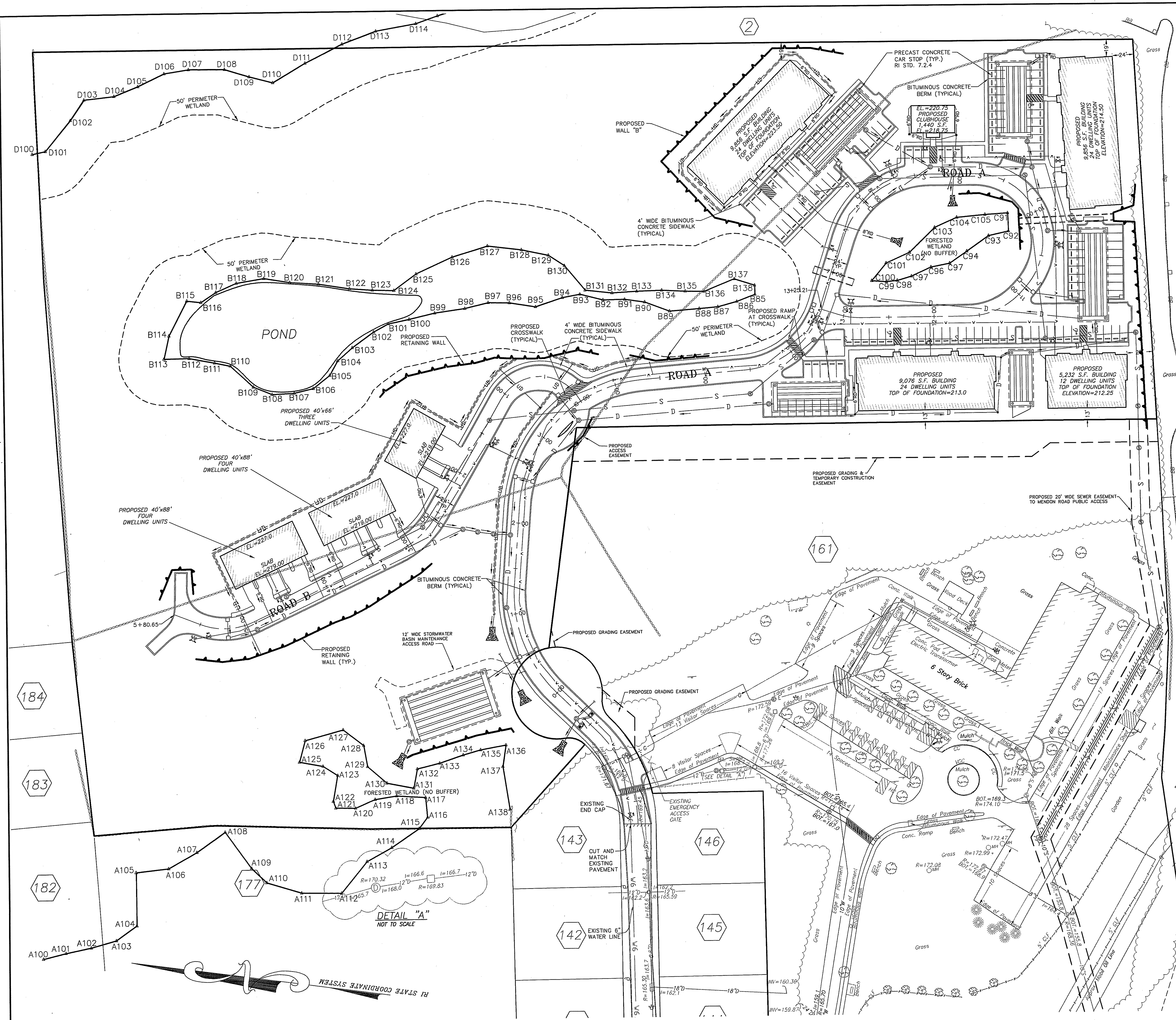


REVISIONS

No.	DATE	DRWN	CHKD

RI DEM SUBMISSION
MAJOR LAND DEVELOPMENT PROJECT
 FOR
AP 35 LOT 188
MEADOWBROOK GREEN
 IN
CUMBERLAND, RHODE ISLAND
EXISTING CONDITIONS & SOILS PLAN

SCALE: 1"=80' SHEET NO: 2 of 20
 DRAWN BY: JP DESIGN BY: JAR CHECKED BY: KK
 DATE: 7/23/08 PROJECT NO.: 07019.00



APARTMENT PARKING
 84 UNITS (APARTMENTS)
 PARKING REQUIRED - 126 SPACES
 (1.5 SPACES / UNIT)
 PARKING PROVIDED - 126 SPACES

TOWN HOUSE PARKING
 11 UNITS (TOWN HOUSES)
 PARKING PROVIDED - 22 SPACES

AUG 7 2008

LEGEND

- PERIMETER LINE
- ABUTTER LINE
- EDGE OF ROAD W/BERM
- ROADWAY CENTERLINE
- ROADWAY STATION
- RETAINING WALL
- EASEMENT
- WETLAND EDGE
- 50FT WETLAND
- CATCH BASIN
- DRAIN MANHOLE
- DRAINLINE
- HYDRANT
- WATERLINE
- SEWER MANHOLE
- SEWERLINE
- PAVEMENT SAW CUT
- PERFORATED UNDERDRAIN
- RIP-RAP PAD
- PROPOSED WATER GATE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED SEP 23 2008 FILE # 28-2247
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE.



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

APPLICANT: MACKLANDS REALTY, INC.
 573 MENDON ROAD
 CUMBERLAND, RI 02864

OWNER: CHIMNEY HILL ASSOCIATES
 C/O PEABODY PROPERTIES
 539 GRANITE STREET
 BRAINTREE, MA 02184

Kambiz Korbassi
 No. 4737
 REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH
 ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RHODE ISLAND 02908
 401-273-6600

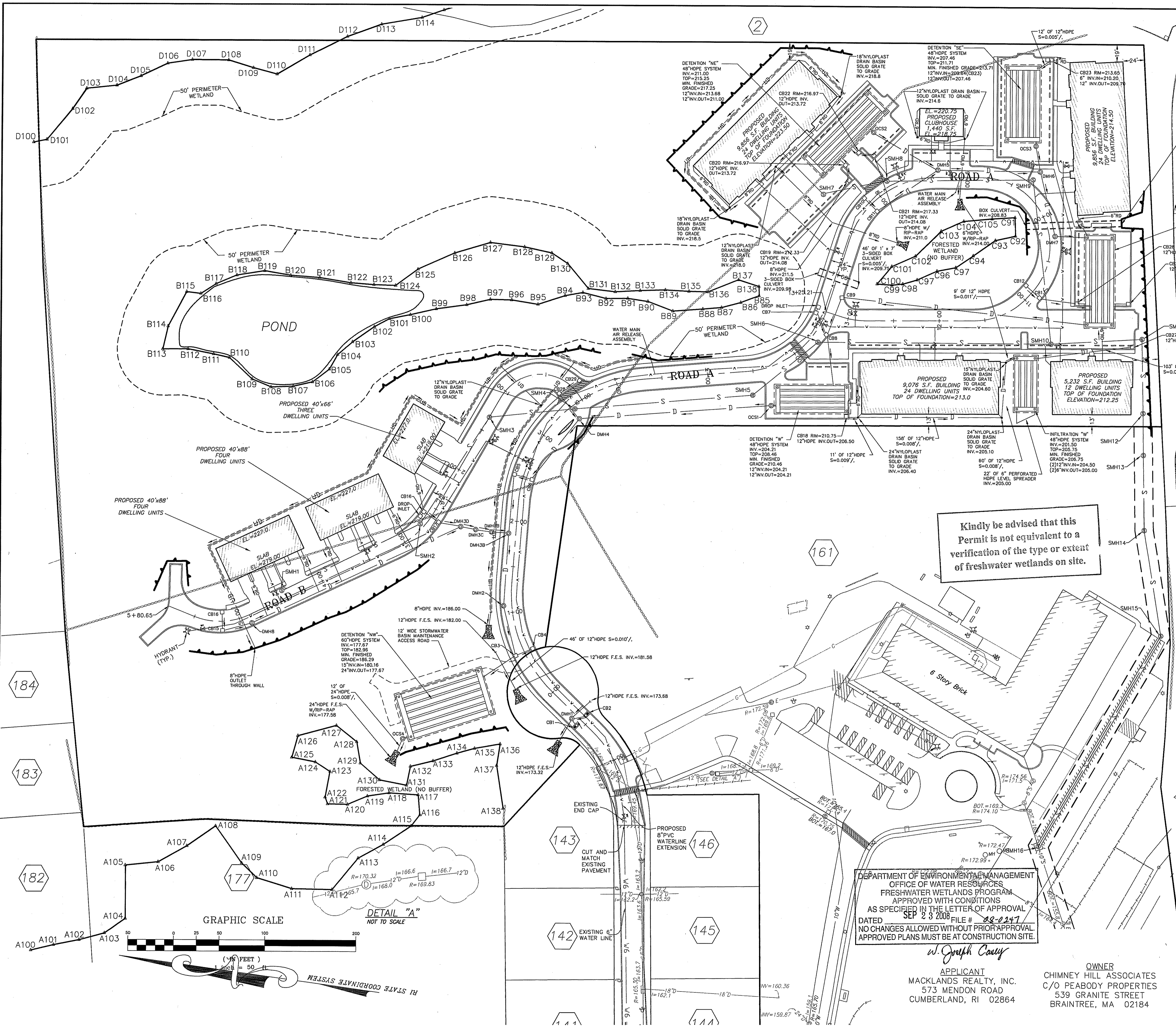
REVISIONS

No.	DATE	DRWN	CHKD

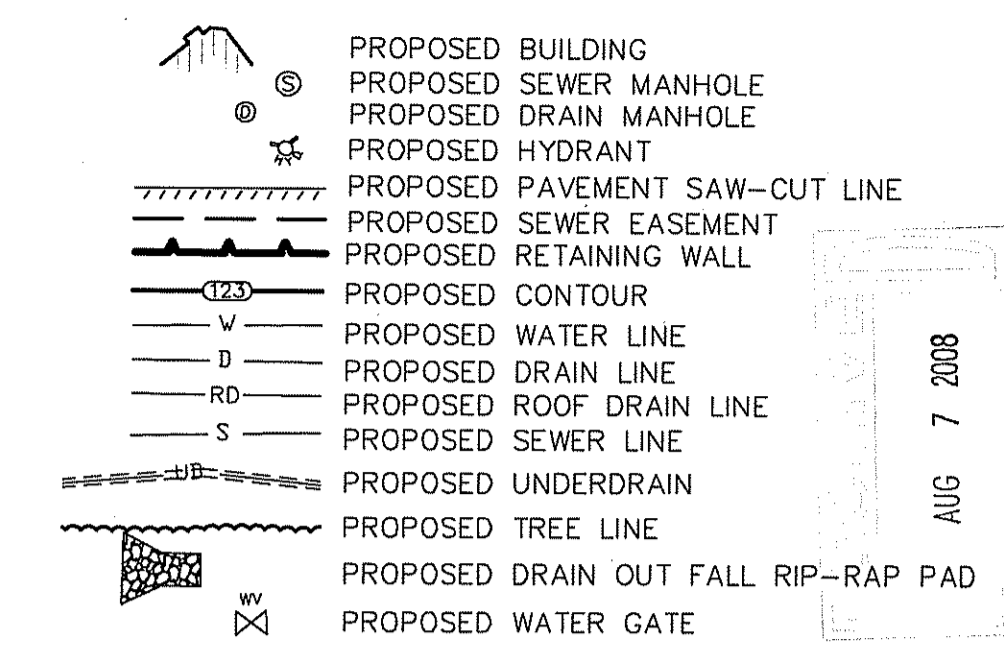
RI DEM SUBMISSION
 MAJOR LAND DEVELOPMENT PROJECT
 FOR
 AP 35 LOT 188
 MEADOWBROOK GREEN
 IN
 CUMBERLAND, RHODE ISLAND
 SITE DEVELOPMENT PLAN

SCALE: 1"=50' SHEET NO: 3 of 20
 DRAWN BY: JP DESIGN BY: JAR CHECKED BY: KK
 DATE: 7/23/08 PROJECT NO.: 07019.00

P:\07019\07019.dwg - Cumberland Development - Drawings - 2/24/08 - 9:24:27 AM



LEGEND



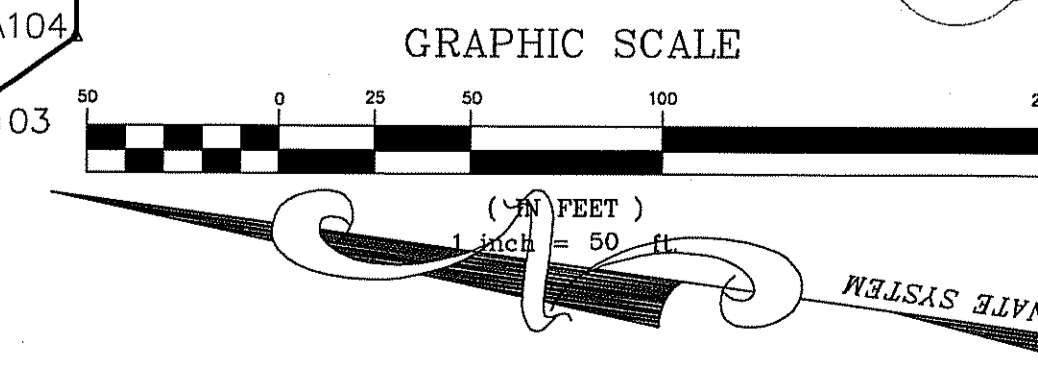
DRAINAGE AND UTILITY NOTES:

1. THE LOCATION OF EXISTING UTILITIES IS BASED UPON THE BEST AVAILABLE INFORMATION. THE LOCATIONS AND ELEVATIONS SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION.
2. UTILITY LOCATION VERIFICATION IS TO INCLUDE TEST HOLES AS NEEDED.
3. ALL WATER LINE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL MUNICIPAL WATER AUTHORITY. WATER AUTHORITY REQUIREMENTS FOR PIPE MATERIALS, INSTALLATION, TESTING AND AS-BUILT DOCUMENTATION ARE APPLICABLE TO THIS PROJECT.
4. ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL MUNICIPAL SEWER AUTHORITY. SEWER AUTHORITY REQUIREMENTS FOR PIPE MATERIALS, INSTALLATION, TESTING AND AS-BUILT DOCUMENTATION ARE APPLICABLE TO THIS PROJECT.
5. UNDERGROUND UTILITIES, ELECTRIC, TELEPHONE, FIRE ALARM CABLE TELEVISION AND GAS SERVICES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE APPLICABLE SITE UTILITY PROVIDER.
6. ALL ON SITE STORM WATER DRAINAGE PIPE SHALL BE ADS N-12, HDPE BY HANCOR OR AN APPROVED EQUAL UNLESS NOTED OTHERWISE ON THE PLANS.
7. ALL INLINE DRAIN STRUCTURES AND RELATED APPURTENANCES SHALL BE AS MANUFACTURED BY "NYLOPLAST" OR "DRAIN-RITE" AS MANUFACTURED BY "HANCOR" OR AN APPROVED EQUAL.
8. METALLIC WARNING TAPE SHALL BE INSTALLED 12" ABOVE ALL STORM DRAIN AND OTHER UTILITIES.

GENERAL NOTES:

1. THE LOCATION AND ELEVATION FOR ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL CROSSINGS OF PROPOSED UTILITIES AND EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATION AND ELEVATION OF THEIR FACILITIES AND ANY DISCREPANCIES IN THE LOCATION OF ANY UTILITY SHOWN OR ENCOUNTERED DURING CONSTRUCTION SHALL BE REPORTED TO COMMONWEALTH ENGINEERS & CONSULTANTS, INC. 400 SMITH STREET, PROVIDENCE, RHODE ISLAND 02908; (401) 273-6600.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING "DIG- SAFE" AT 1-888-344-7233 TO COMPLY WITH STATE LAW PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITY.
3. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH ANY APPLICABLE LOCAL, STATE AND FEDERAL LAWS GOVERNING HIS INTENDED ACTIVITIES.
4. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITIES, STRUCTURES, AND ADJUTING PROPERTIES. THE COST OF ANY REPAIR OR REPLACEMENT OF DAMAGED ITEMS SHALL BE BORNE BY THE CONTRACTOR.
5. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE APPROPRIATE STATE AND MUNICIPALITY PRIOR TO COMMENCING ANY WORK.
6. IF CEMENT CONCRETE MIX TRUCKS ARE TO BE WASHED OUT ON SITE, THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A WASH OUT AREA WITH APPROPRIATE PROTECTION CONTROLS.
7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING COLLECTION AND STORAGE LOCATIONS ON SITE FOR ALL CONSTRUCTION DEBRIS AND TRASH SO THAT THIS MATERIAL DOES NOT BECOME A NEIGHBORHOOD NUISANCE.

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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 SEP 23 2008 FILE # 22-0247
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

W. Joseph Coyle
APPLICANT
MACKLANDS REALTY, INC.
573 MENDON ROAD
CUMBERLAND, RI 02864

OWNER
CHIMNEY HILL ASSOCIATES
C/O PEABODY PROPERTIES
539 GRANITE STREET
BRAINTREE, MA 02184

Kambiz Karbassi
No. 4737
REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
401-273-6600

REVISIONS

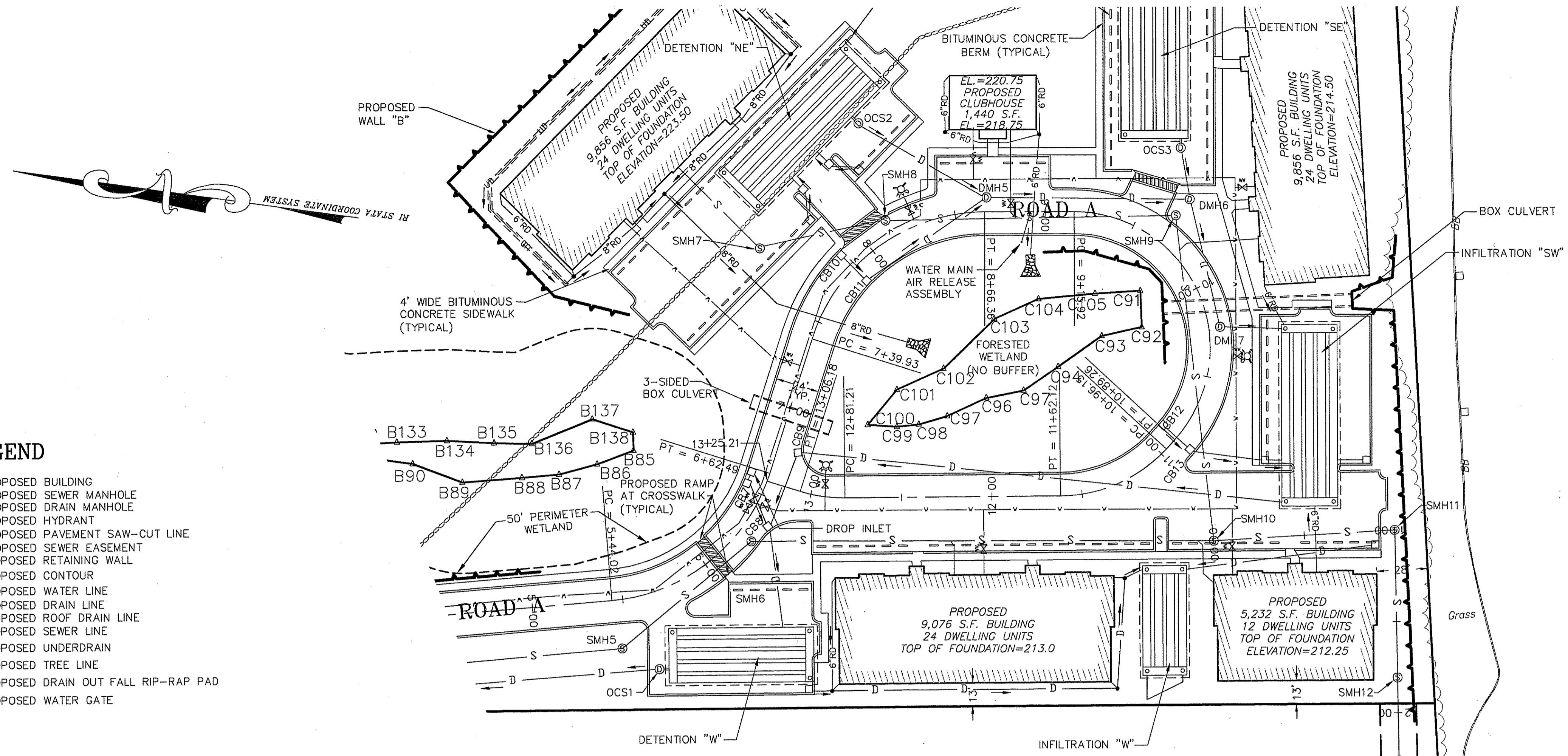
No.	DATE	DRWN	CHKD

RI DEM SUBMISSION
MAJOR LAND DEVELOPMENT PROJECT
FOR
AP 35 LOT 188
MEADOWBROOK GREEN
IN
CUMBERLAND, RHODE ISLAND
DRAINAGE AND UTILITIES PLAN

SCALE: 1"=50'	SHEET NO: 5 of 20
DRAWN BY: JP	DESIGN BY: JAR
DATE: 7/23/08	CHECKED BY: KK
PROJECT NO.: 07019.00	

AUG 7 2008

AUG 7 2008



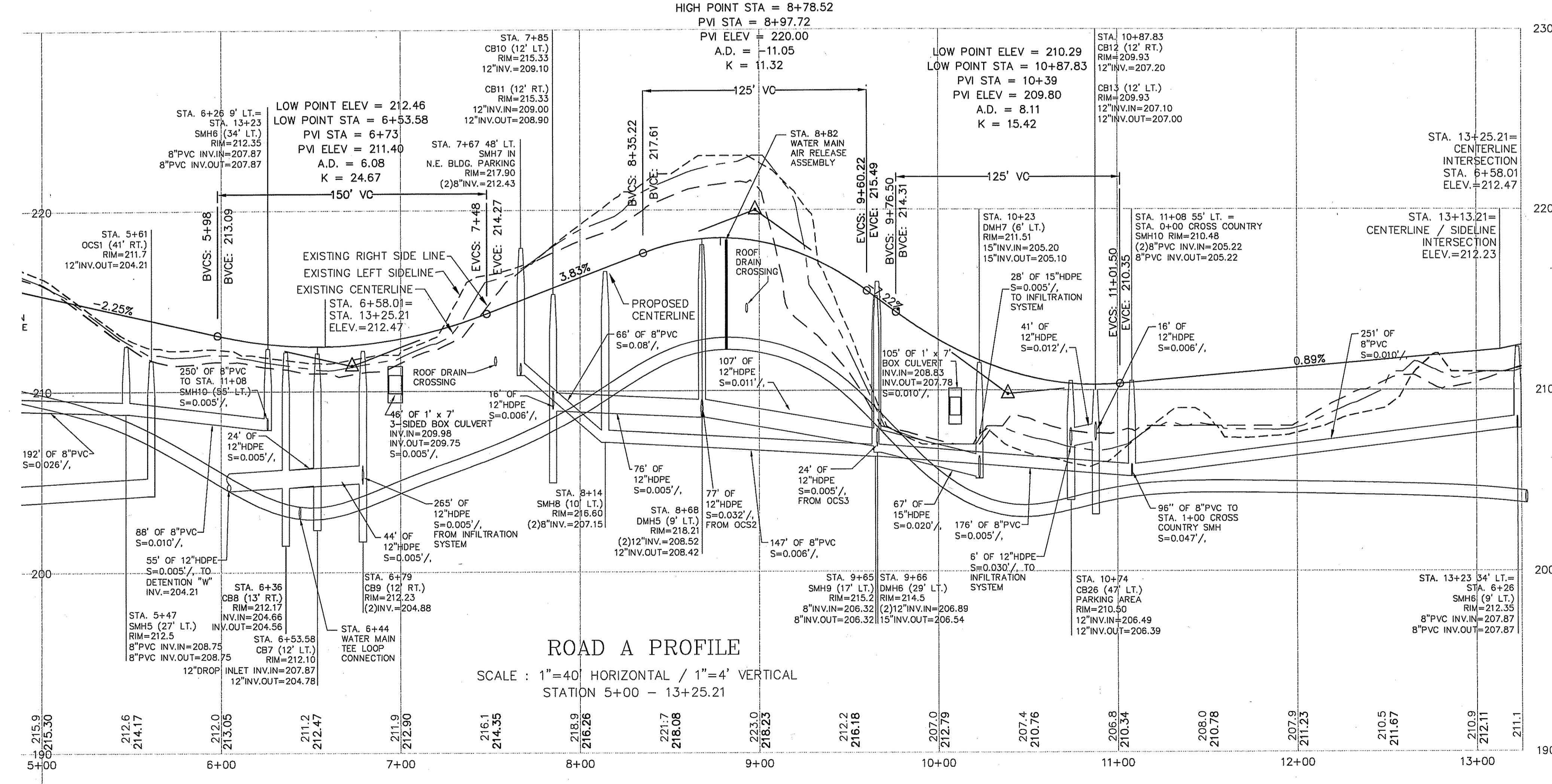
LEGEND

- PROPOSED BUILDING
- PROPOSED SEWER MANHOLE
- PROPOSED DRAIN MANHOLE
- PROPOSED HYDRANT
- PROPOSED PAVEMENT SAW-CUT LINE
- PROPOSED SEWER EASEMENT
- PROPOSED RETAINING WALL
- PROPOSED CONTOUR
- PROPOSED WATER LINE
- PROPOSED DRAIN LINE
- PROPOSED ROOF DRAIN LINE
- PROPOSED SEWER LINE
- PROPOSED UNDERDRAIN
- PROPOSED TREE LINE
- PROPOSED DRAIN OUT FALL RIP-RAP PAD
- PROPOSED WATER GATE

DRAINAGE STRUCTURE SUMMARY
JOB 7019

Name	Structure	Frame & Cover	Frame & Grate	Notes/Modifications
CB-1	Contech Storm Filter	-	-	-
CB-2	Contech Storm Filter	-	-	-
CB-3	4.4.0 (5')	-	6.3.4	4' Sump, Oil/Water Separator
CB-4	4.4.0 (4')	-	6.3.4	-
CB-5	4.4.0 (5')	-	6.3.4	-
CB-6	4.4.0 (4')	-	6.3.4	-
CB-7	4.4.0 (4')	-	6.3.2	w/4.5.0
CB-8	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-9	4.4.0 (4')	-	6.3.2	-
CB-10	4.4.0 (4')	-	6.3.2	-
CB-11	4.4.0 (4')	-	6.3.2	-
CB-12	4.4.0 (4')	-	LF 244 (LeBaron)	12" Top Cone Section
CB-13	4.4.0 (4')	-	LF 244 (LeBaron)	12" Top Cone Section
CB-14	4.4.0 (4')	-	6.3.2	-
CB-15	4.4.0 (4')	-	6.3.2	w/4.5.0
CB-16	4.4.0 (4')	-	6.3.2	-
CB-17	4.4.0 (4')	-	6.3.2	-
CB-18	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-19	4.4.0 (4')	-	6.3.2	12" Top Cone Section
CB-20	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-21	4.4.0 (4')	-	6.3.2	12" Top Cone Section
CB-22	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-23	4.4.0 (5')	-	6.3.2	Double Grate, 4' Sump, Oil/Water Separator
CB-25	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-26	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-27	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-28	4.4.0 (4')	-	6.3.2	Depth > 12'
CB-29	4.4.0 (4')	-	6.3.2	-
DMH-1	4.4.0	6.2.1	-	w/4.6.0
DMH-2	4.2.1	6.2.1	-	-
DMH-3A	4.2.1	6.2.0	-	-
DMH-3B	4.2.1	6.2.0	-	-
DMH-3C	4.2.1	6.2.0	-	-
DMH-3D	4.2.1	6.2.1	-	-
DMH-4	4.2.1	6.2.1	-	-
DMH-5	4.2.0	6.2.1	-	-
DMH-6	4.2.0	6.2.1	-	-
DMH-7	4.2.1	6.2.1	-	4' Sump, Oil/Water Separator
DMH-8	4.2.0	6.2.1	-	-

ROAD A PLAN
STATION 5+00 - 13+25.21
SCALE : 1"=40'



ROAD A PROFILE
SCALE : 1"=40' HORIZONTAL / 1"=4' VERTICAL
STATION 5+00 - 13+25.21

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 23 2008 FILE # 08-2247
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

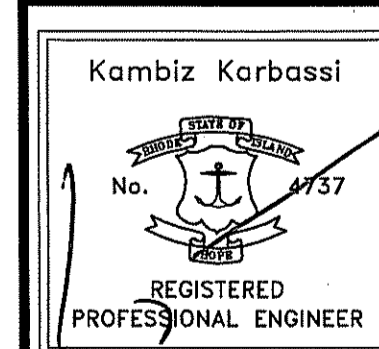
W. Joseph Conroy
GRAPHIC SCALE



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APPLICANT: MACKLANDS REALTY, INC.
573 MENDON ROAD
CUMBERLAND, RI 02864

OWNER: CHIMNEY HILL ASSOCIATES
C/O PEABODY PROPERTIES
539 GRANITE STREET
BRAINTREE, MA 02184



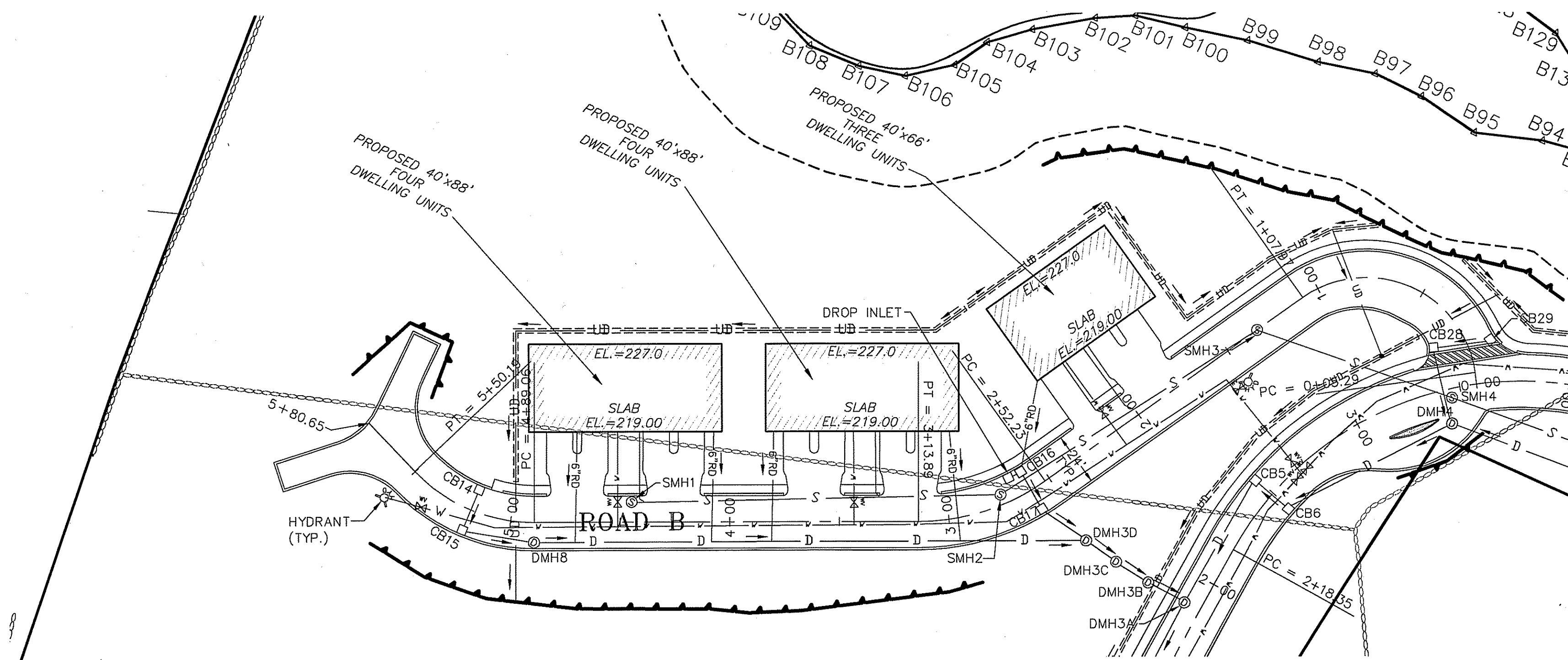
REVISIONS

No.	DATE	DRWN	CHKD

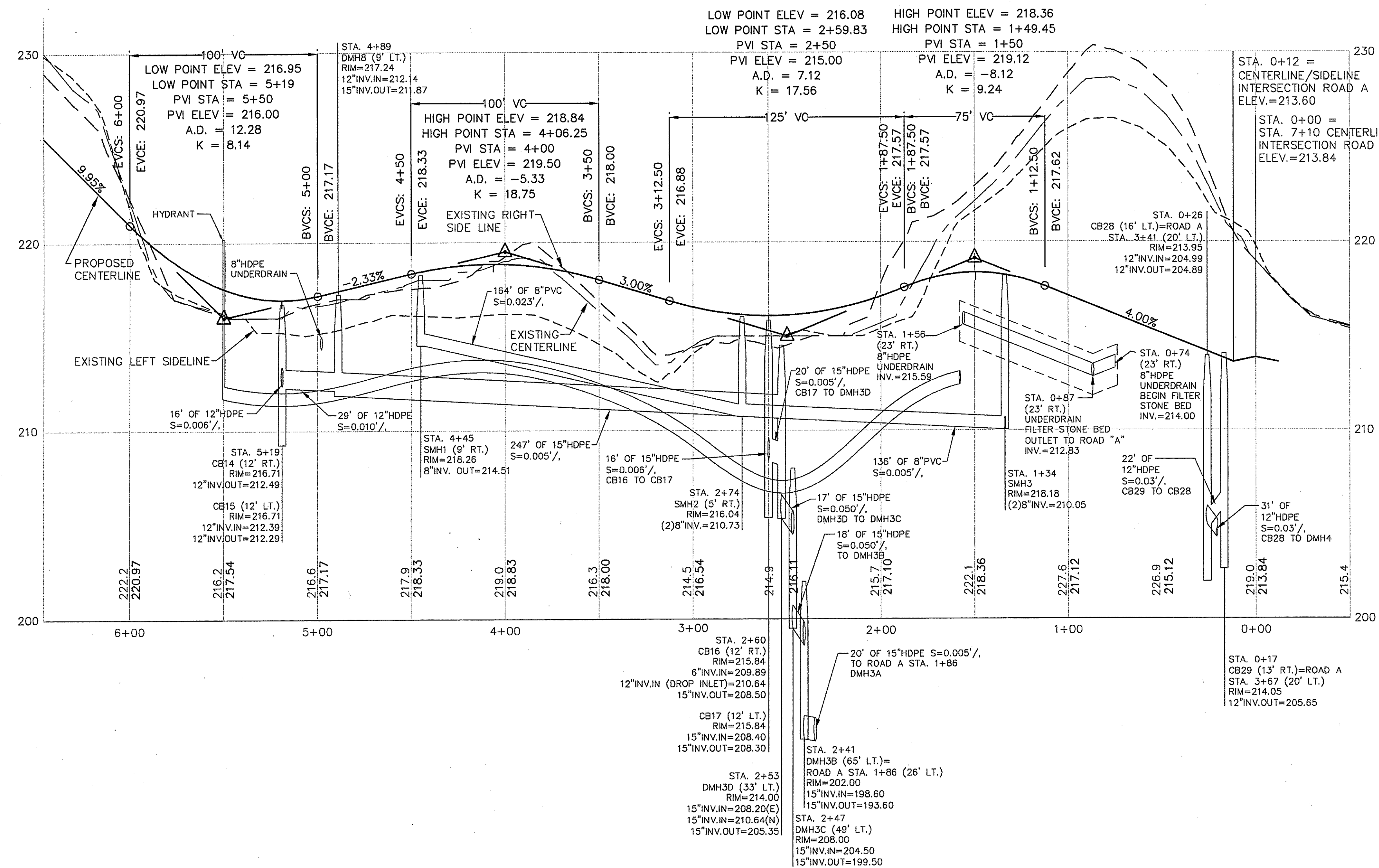
RI DEM SUBMISSION
MAJOR LAND DEVELOPMENT PROJECT
FOR
AP 35 LOT 188
MEADOWBROOK GREEN
IN
CUMBERLAND, RHODE ISLAND
ROADWAY PLAN & ROAD A

SCALE: 1"=40' SHEET NO: 7 of 20
DRAWN BY: JP DESIGN BY: JAR CHECKED BY: KK
DATE: 7/23/08 PROJECT NO.: 07019.00

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ROAD B PLAN
SCALE : 1"=40'



ROAD B PROFILE
SCALE : 1"=40' HORIZONTAL / 1"=4' VERTICAL

DRAINAGE STRUCTURE SUMMARY JOB 7019				
Name	Structure	Frame & Cover	Frame & Grate	Notes/Modifications
CB-1	Contech Storm Filter	-	-	-
CB-2	Contech Storm Filter	-	-	-
CB-3	4.4.0 (5')	-	6.3.4	4' Sump, Oil/Water Separator
CB-4	4.4.0 (4')	-	6.3.4	-
CB-5	4.4.0 (5')	-	6.3.4	-
CB-6	4.4.0 (4')	-	6.3.4	w/4.5.0
CB-7	4.4.0 (4')	-	6.3.2	-
CB-8	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-9	4.4.0 (4')	-	6.3.2	-
CB-10	4.4.0 (4')	-	6.3.2	-
CB-11	4.4.0 (4')	-	6.3.2	12" Top Cone Section
CB-12	4.4.0 (4')	-	6.3.2 (LeBaron)	-
CB-13	4.4.0 (4')	-	6.3.2 (LeBaron)	12" Top Cone Section
CB-14	4.4.0 (4')	-	6.3.2	-
CB-15	4.4.0 (4')	-	6.3.2	w/4.5.0
CB-16	4.4.0 (4')	-	6.3.2	-
CB-17	4.4.0 (4')	-	6.3.2	-
CB-18	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-19	4.4.0 (4')	-	6.3.2	12" Top Cone Section
CB-20	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-21	4.4.0 (4')	-	6.3.2	12" Top Cone Section
CB-22	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-23	4.4.0 (5')	-	6.3.2	Double Gate, 4' Sump, Oil/Water Separator
CB-25	4.4.0 (5')	-	6.3.2	12" Top Cone Section
CB-26	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-27	4.4.0 (5')	-	6.3.2	4' Sump, Oil/Water Separator
CB-28	4.4.0 (4')	-	6.3.2	Depth >12"
CB-29	4.4.0 (4')	-	6.3.2	-
DMH-1	4.4.0	6.2.1	-	w/4.6.0
DMH-2	4.2.1	6.2.1	-	-
DMH-3A	4.2.1	6.2.0	-	-
DMH-3B	4.2.1	6.2.0	-	-
DMH-3C	4.2.1	6.2.0	-	-
DMH-3D	4.2.1	6.2.1	-	-
DMH-4	4.2.1	6.2.1	-	-
DMH-5	4.2.0	6.2.1	-	-
DMH-6	4.2.0	6.2.1	-	-
DMH-7	4.2.1	6.2.1	-	4' Sump, Oil/Water Separator
DMH-8	4.2.0	6.2.1	-	-

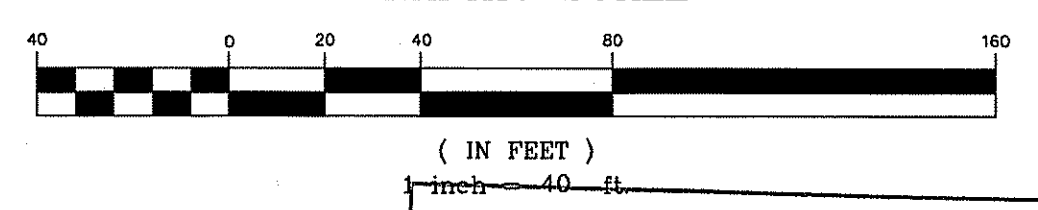
AUG 7 2008

LEGEND

- PROPOSED BUILDING
- PROPOSED SEWER MANHOLE
- PROPOSED DRAIN MANHOLE
- PROPOSED HYDRANT
- PROPOSED PAVEMENT SAW-CUT LINE
- PROPOSED SEWER EASEMENT
- PROPOSED RETAINING WALL
- PROPOSED CONTOUR
- PROPOSED WATER LINE
- PROPOSED DRAIN LINE
- PROPOSED ROOF DRAIN LINE
- PROPOSED SEWER LINE
- PROPOSED UNDERDRAIN
- PROPOSED TREE LINE
- PROPOSED DRAIN OUT FALL RIP-RAP PAD
- PROPOSED WATER GATE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED SEP 23 2008 FILE # 08-2147
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

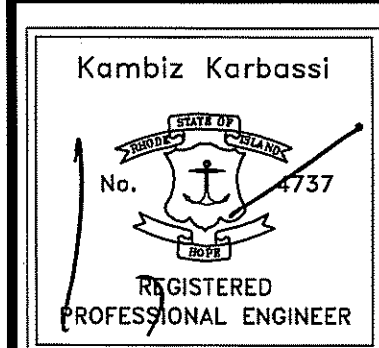
W. Joseph Conroy
 GRAPHIC SCALE



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

APPLICANT
 MACKLANDS REALTY, INC.
 573 MENDON ROAD
 CUMBERLAND, RI 02864

OWNER
 CHIMNEY HILL ASSOCIATES
 C/O PEABODY PROPERTIES
 539 GRANITE STREET
 BRAINTREE, MA 02184

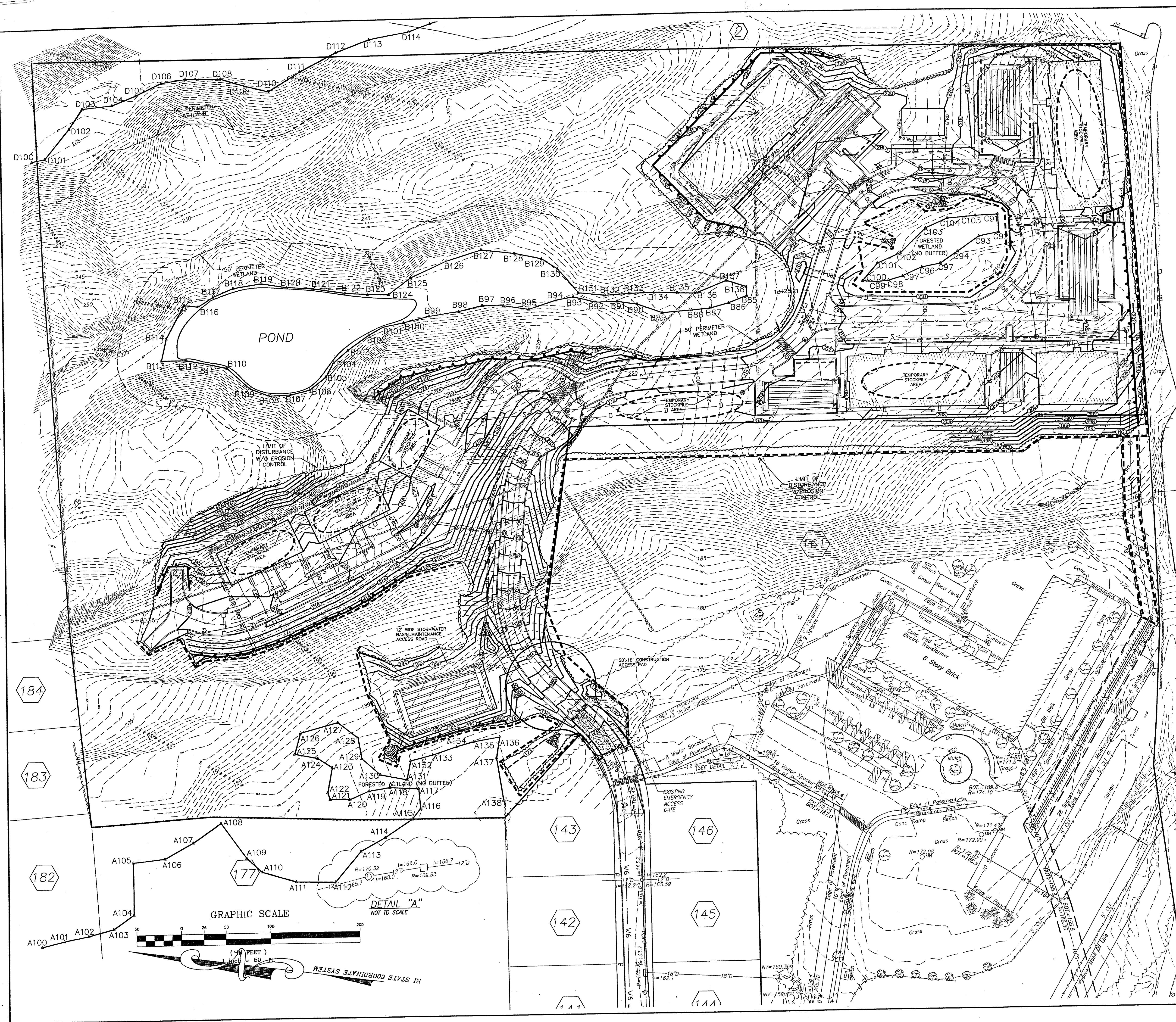


REVISIONS			
No.	DATE	DRWN	CHKD

RI DEM SUBMISSION
 MAJOR LAND DEVELOPMENT PROJECT
 FOR
 AP 35 LOT 188
 MEADOWBROOK GREEN
 IN
 CUMBERLAND, RHODE ISLAND
 ROADWAY PLAN & PROFILE ROAD B

SCALE: 1"=40'	SHEET NO: 8 of 20
DRAWN BY: JP	DESIGN BY: JAR
DATE: 7/23/08	CHECKED BY: KK
PROJECT NO.: 07019.00	

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LEGEND

- PROPOSED BUILDING
- PROPOSED SEWER MANHOLE
- PROPOSED DRAIN MANHOLE
- PROPOSED HYDRANT
- PROPOSED PAVEMENT SAW-CUT LINE
- PROPOSED SEWER EASEMENT
- PROPOSED RETAINING WALL
- PROPOSED CONTOUR
- PROPOSED WATER LINE
- PROPOSED DRAIN LINE
- PROPOSED ROOF DRAIN LINE
- PROPOSED SEWER LINE
- PROPOSED UNDERDRAIN
- PROPOSED TREE LINE
- PROPOSED DRAIN OUT FALL RIP-RAP PAD
- PROPOSED WATER GATE
- PROPOSED LIMIT OF DISTURBANCE (NO HAY BALE)
- PROPOSED LIMIT OF DISTURBANCE (W/HAY BALE)

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 SEP 23 2008 FILE # 18-0247
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

W. Joseph Cray

APPLICANT
 MACKLANDS REALTY, INC.
 573 MENDON ROAD
 CUMBERLAND, RI 02864

OWNER
 CHIMNEY HILL ASSOCIATES
 C/O PEABODY PROPERTIES
 539 GRANITE STREET
 BRAINTREE, MA 02184

Kambiz Korbassi

 REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH
 ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RHODE ISLAND 02908
 401-273-6600

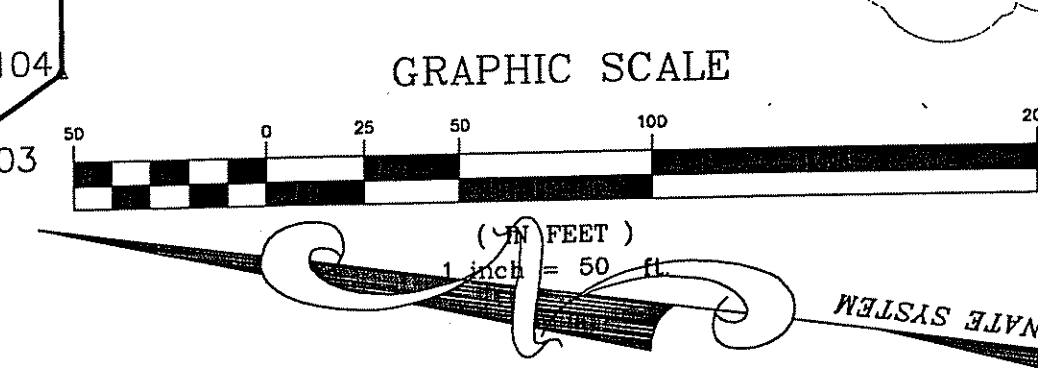
REVISIONS

No.	DATE	DRWN	CHKD

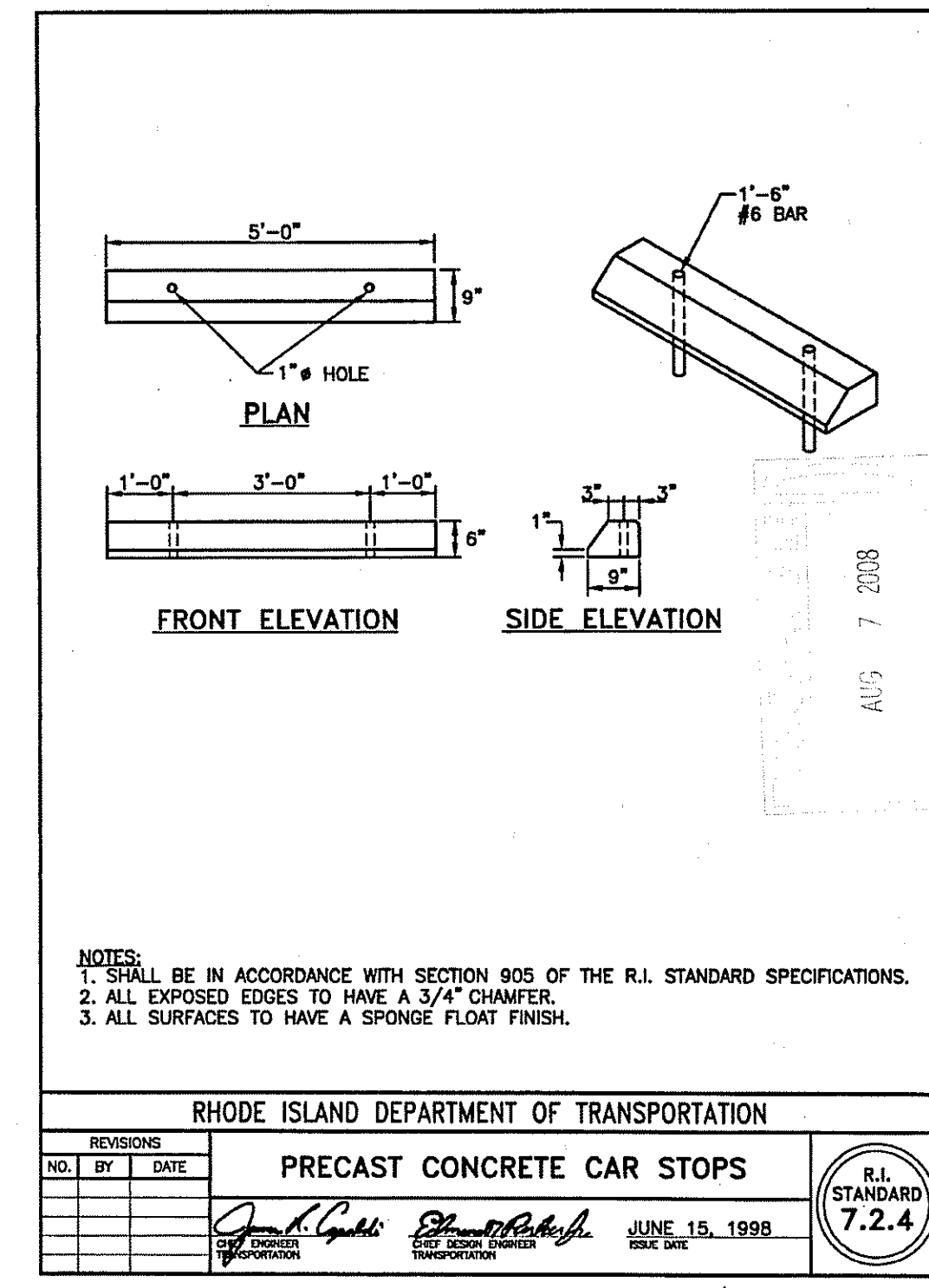
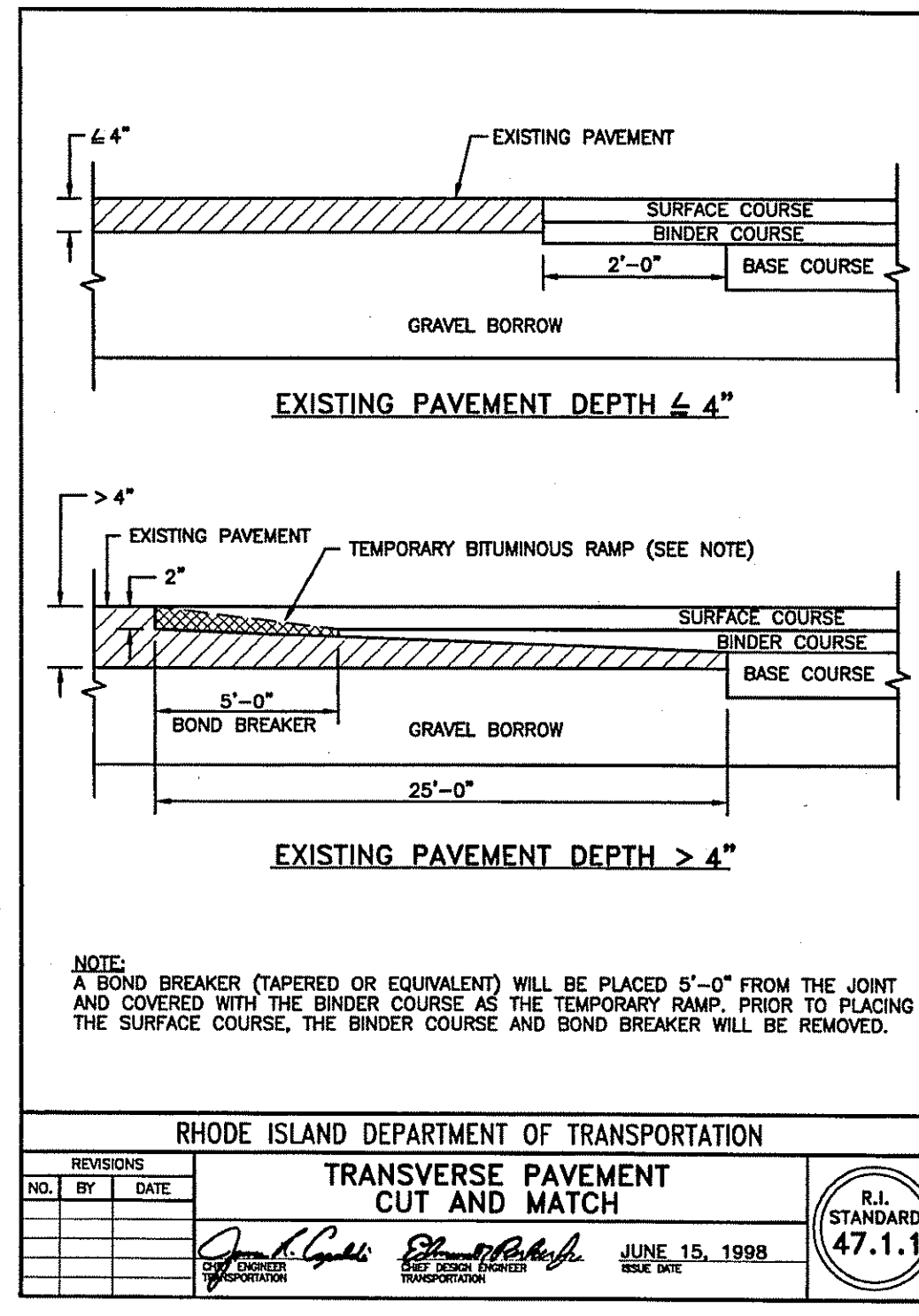
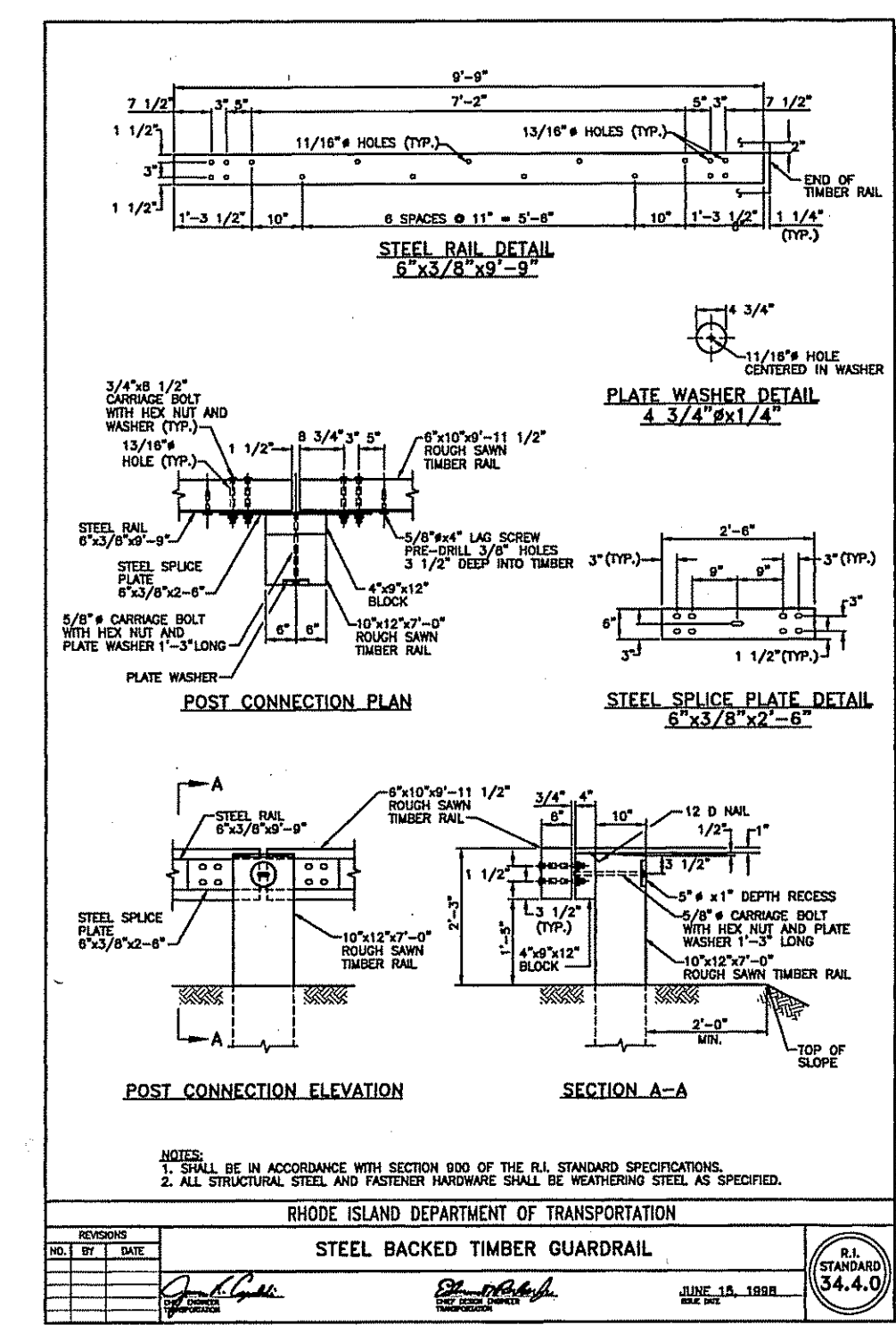
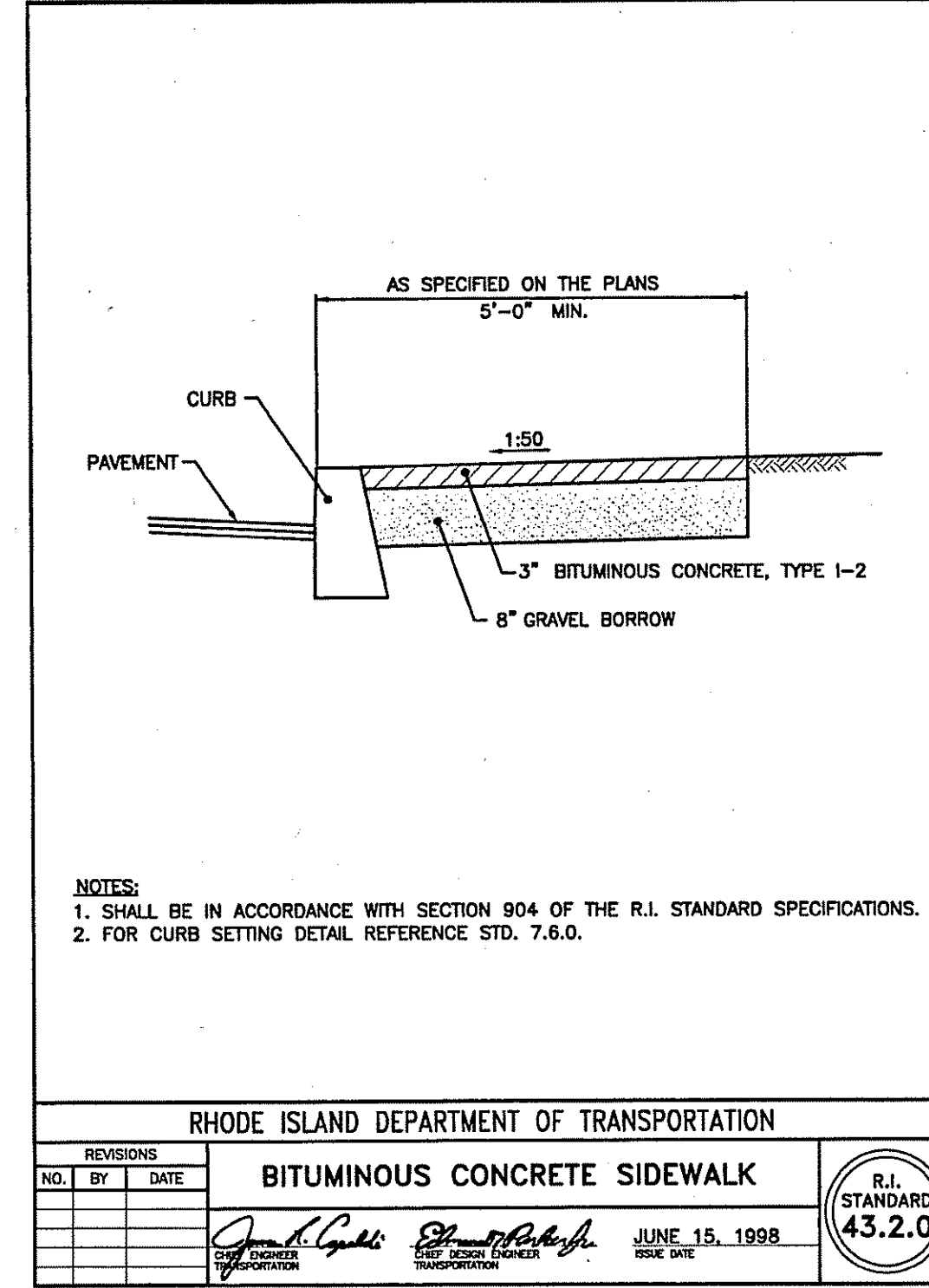
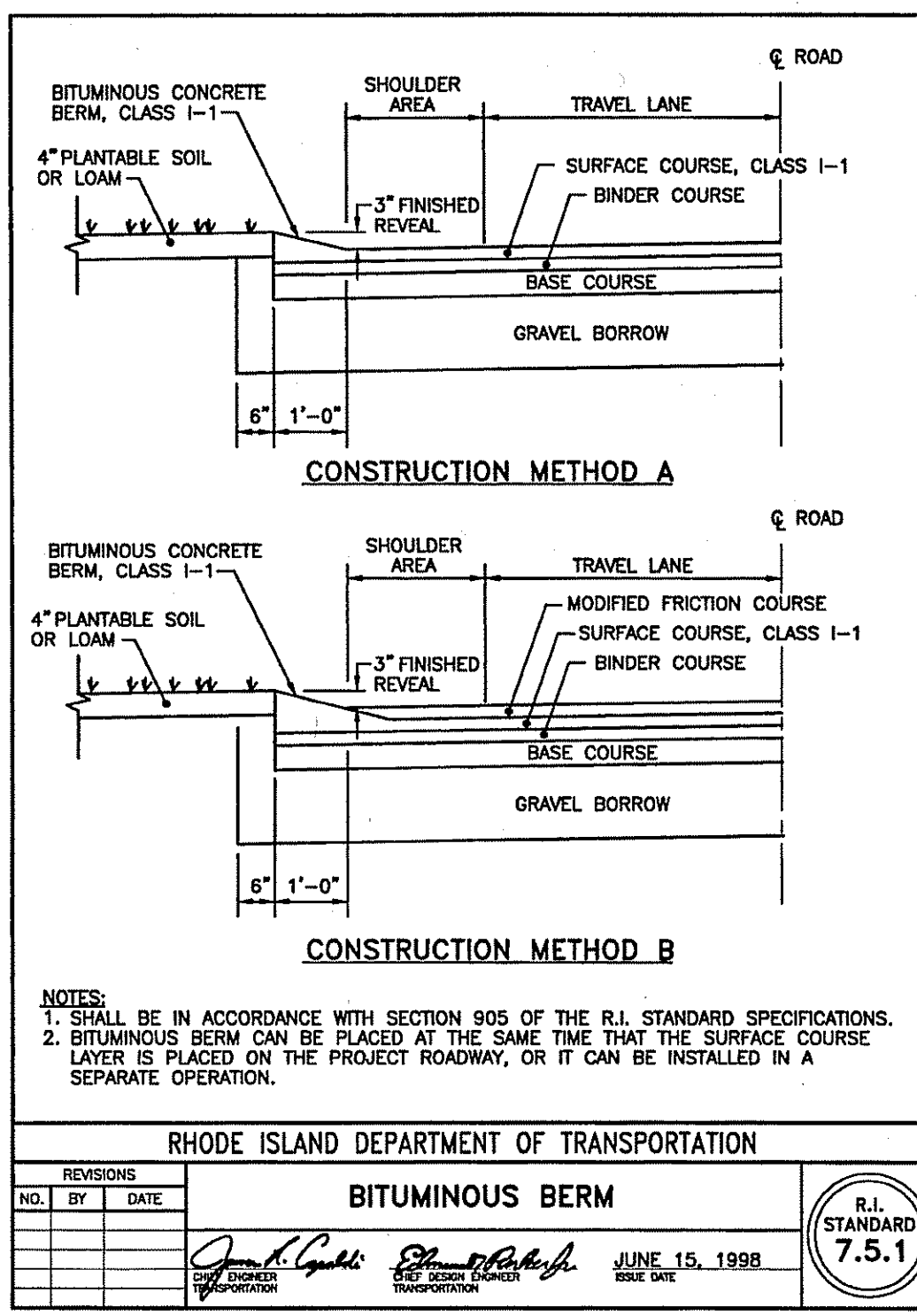
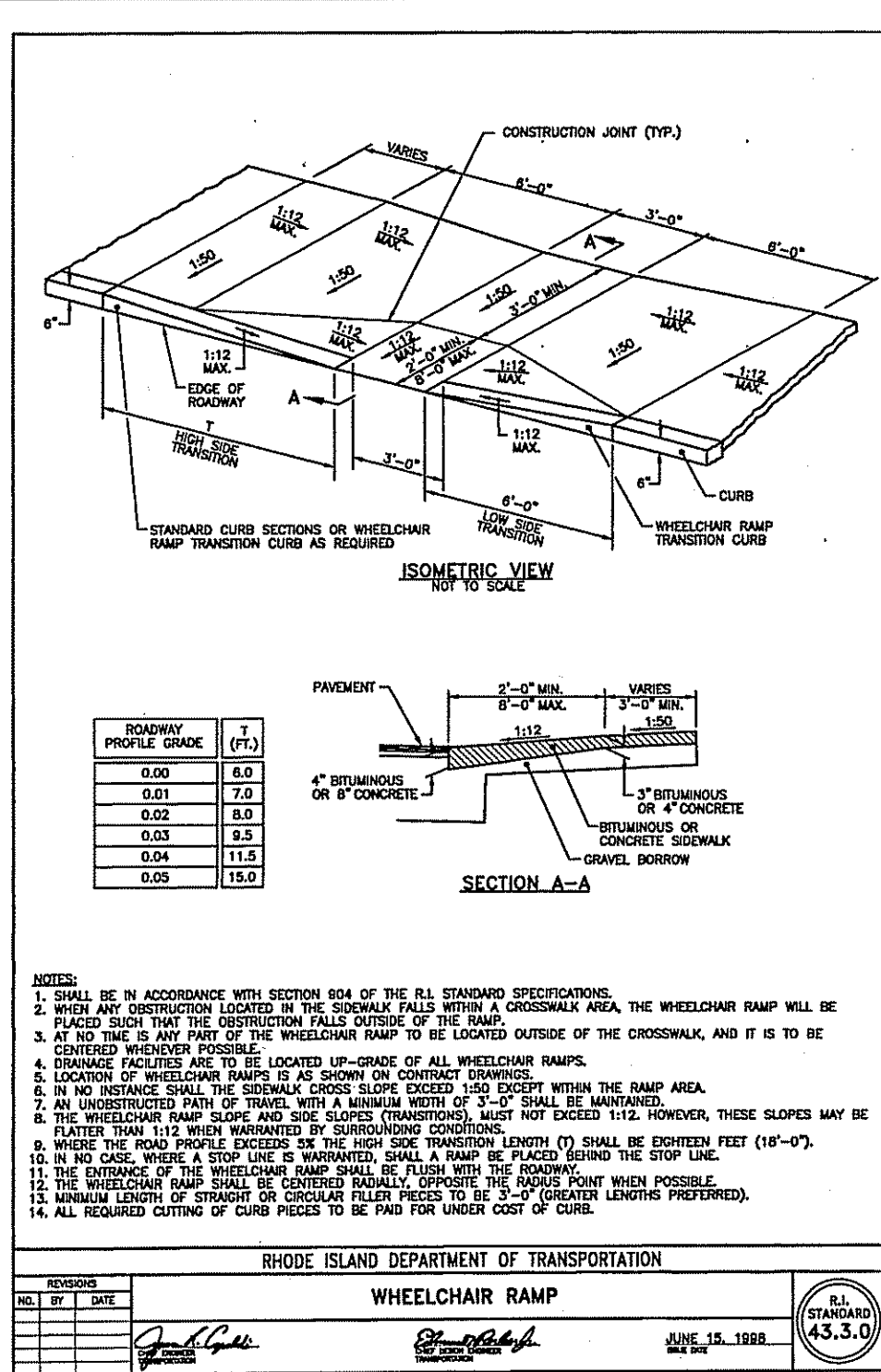
RI DEM SUBMISSION
 MAJOR LAND DEVELOPMENT PROJECT
 FOR
 AP 35 LOT 188
 MEADOWBROOK GREEN
 IN
 CUMBERLAND, RHODE ISLAND
 EROSION CONTROL PLAN

SCALE: 1"=50' SHEET NO: 10 of 20
 DRAWN BY: JP DESIGN BY: JAR CHECKED BY: KK
 DATE: 7/23/08 PROJECT NO.: 07019.00

184
183
182



DETAIL "A"
 NOT TO SCALE



NO.	BY	DATE	REVISIONS
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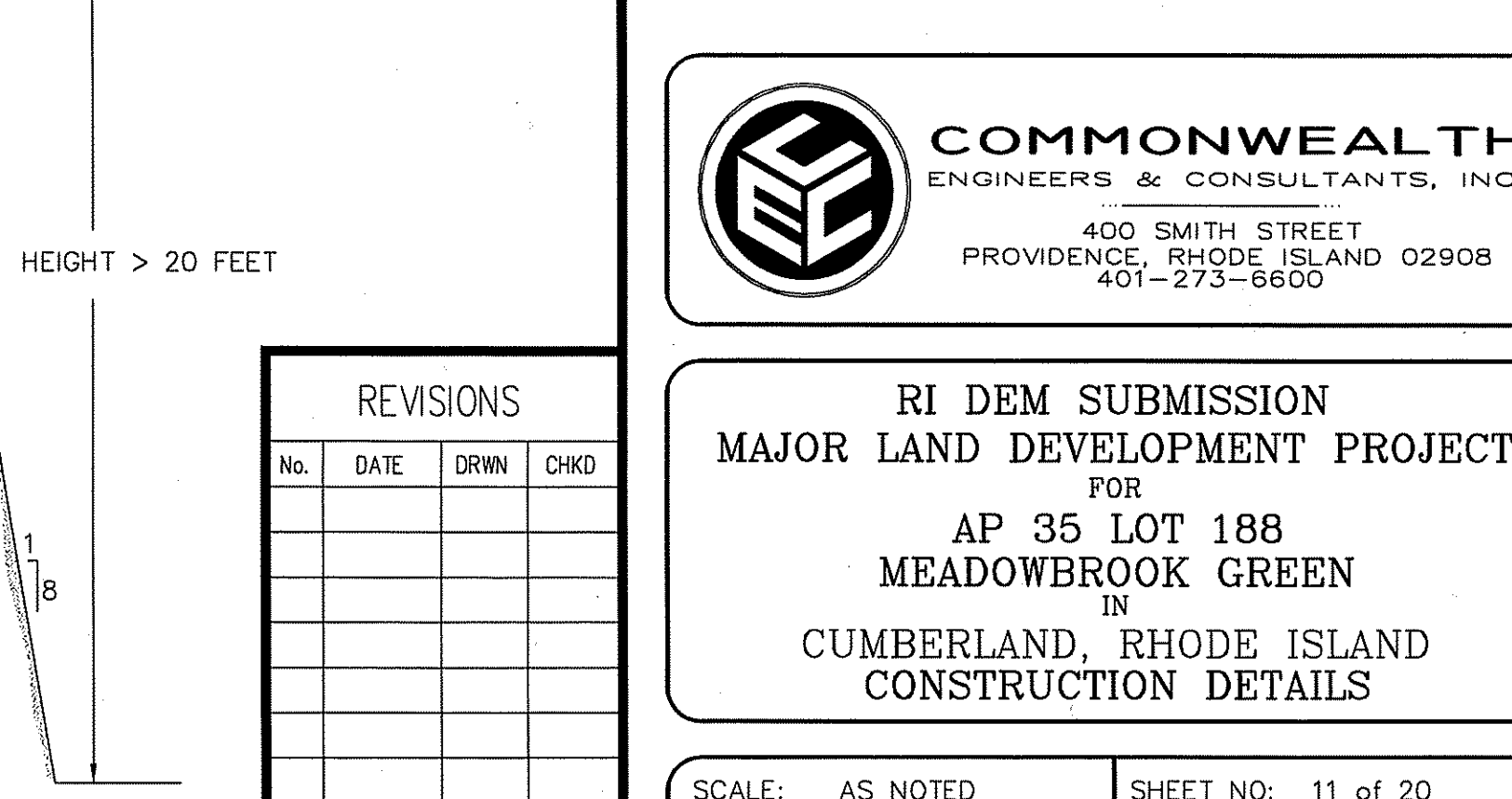
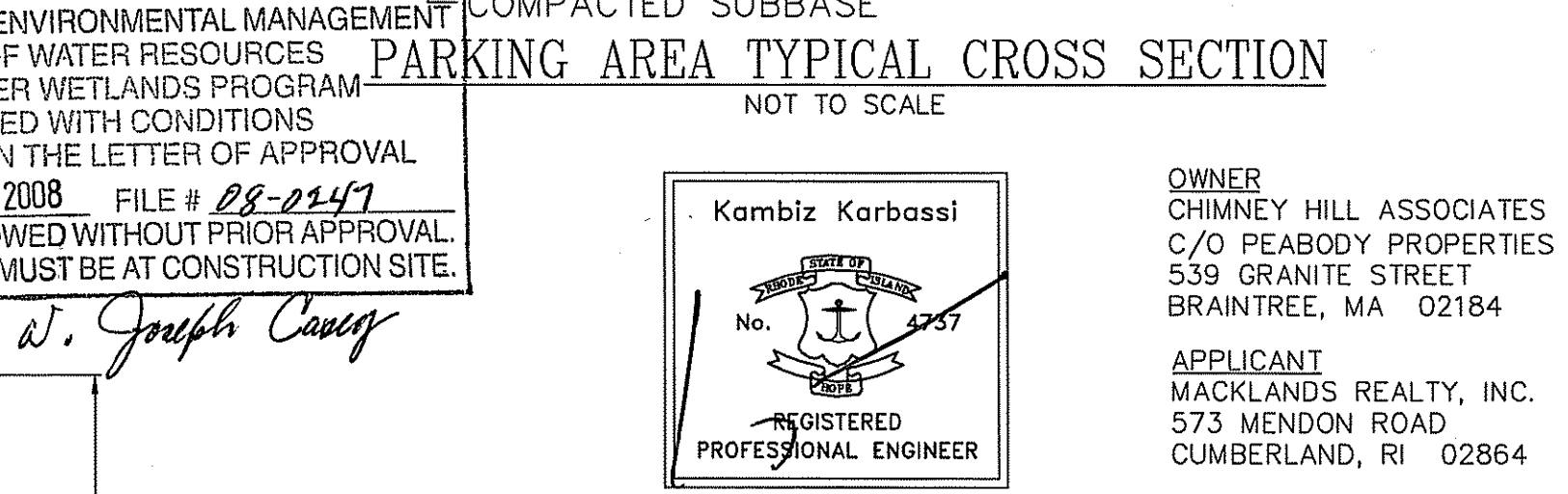
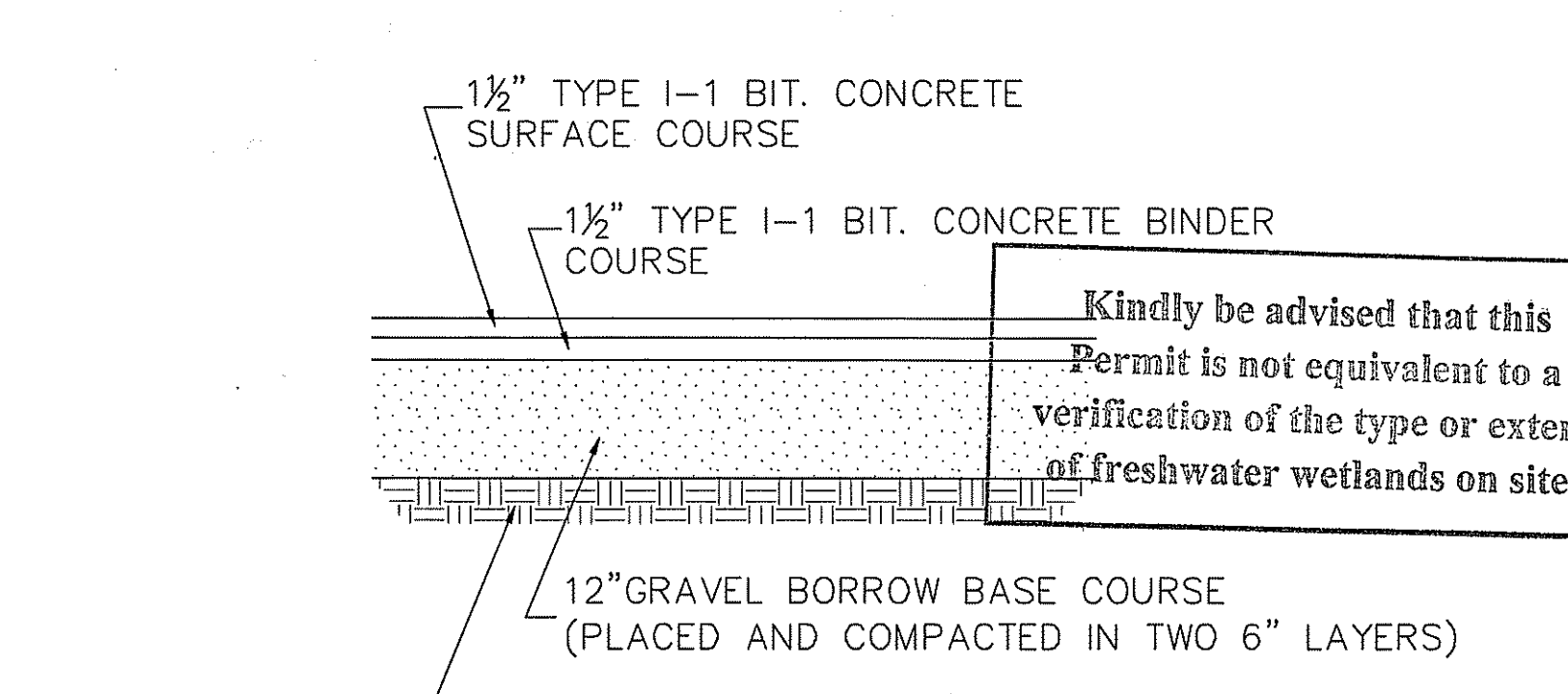
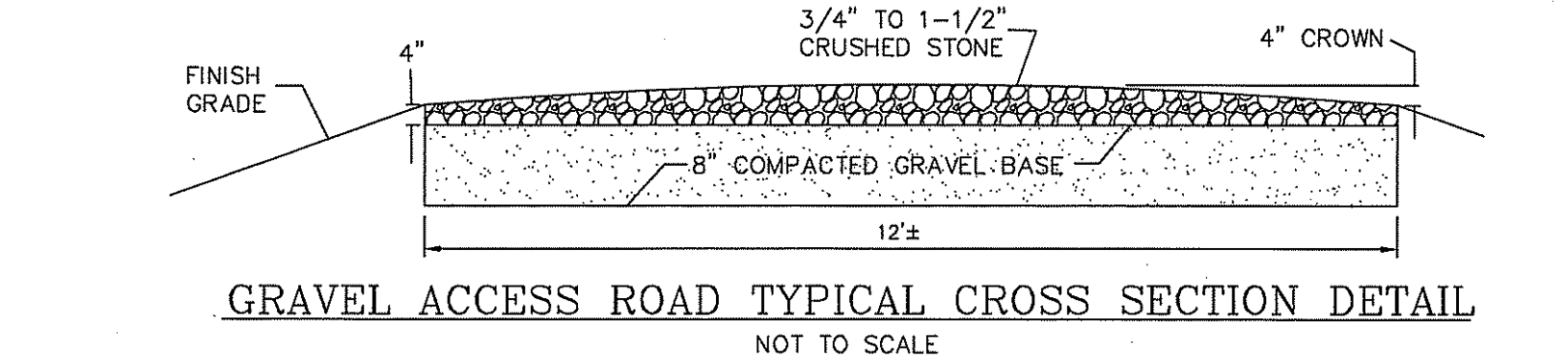
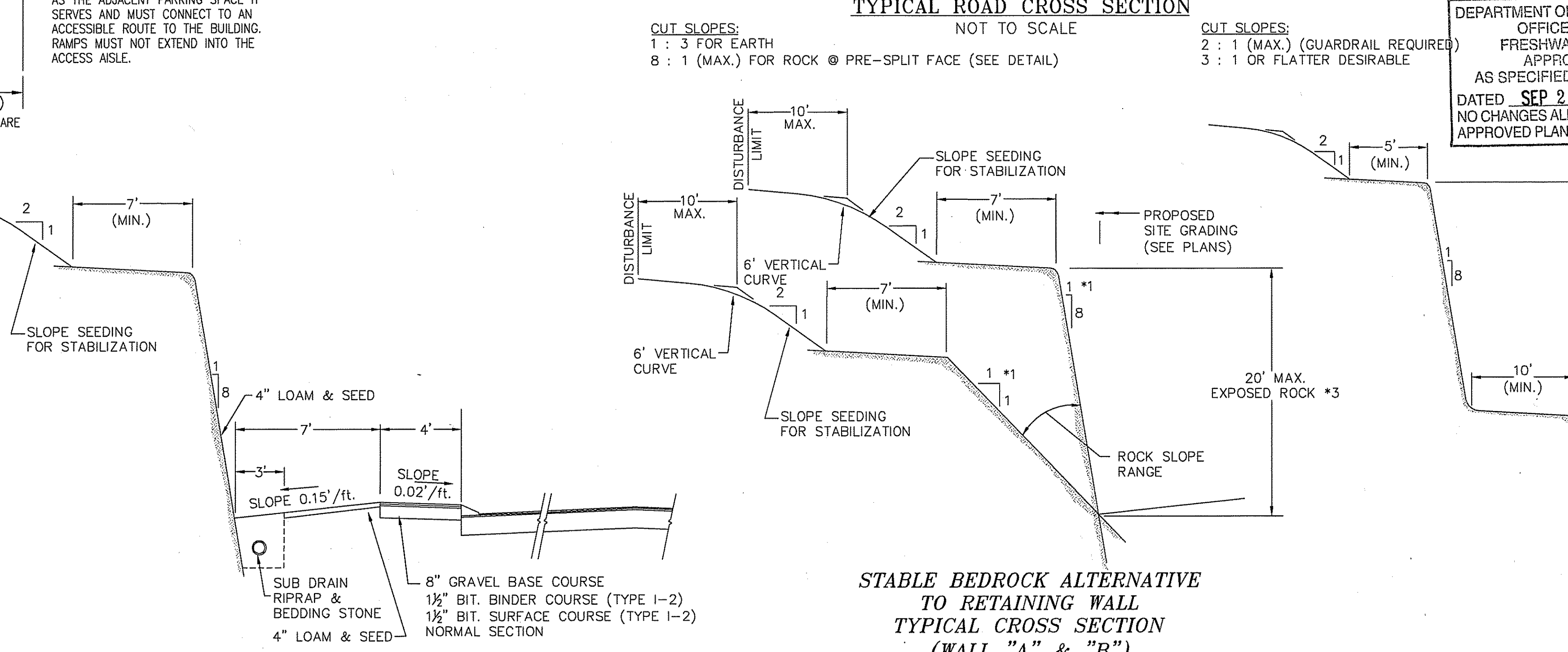
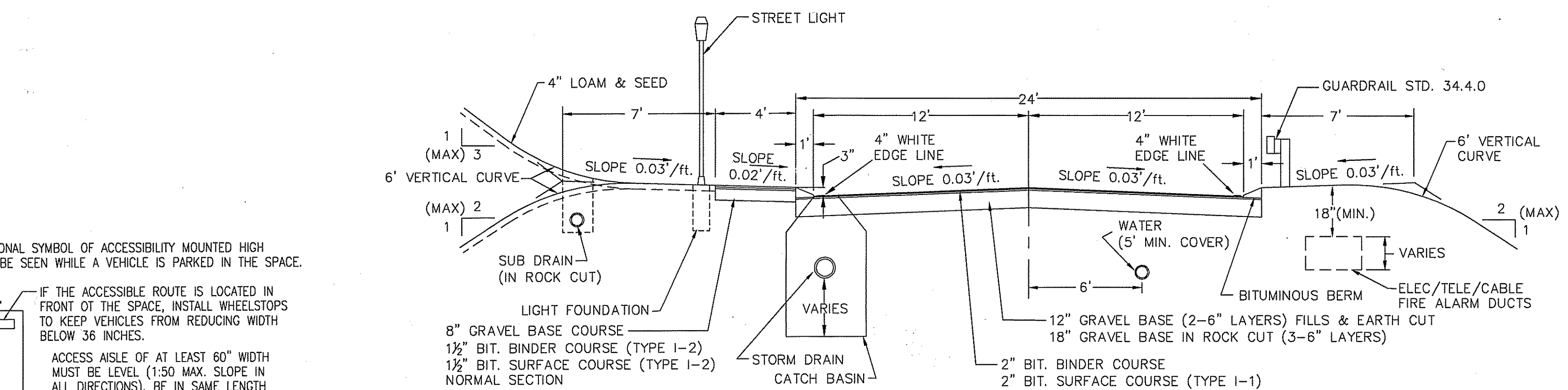
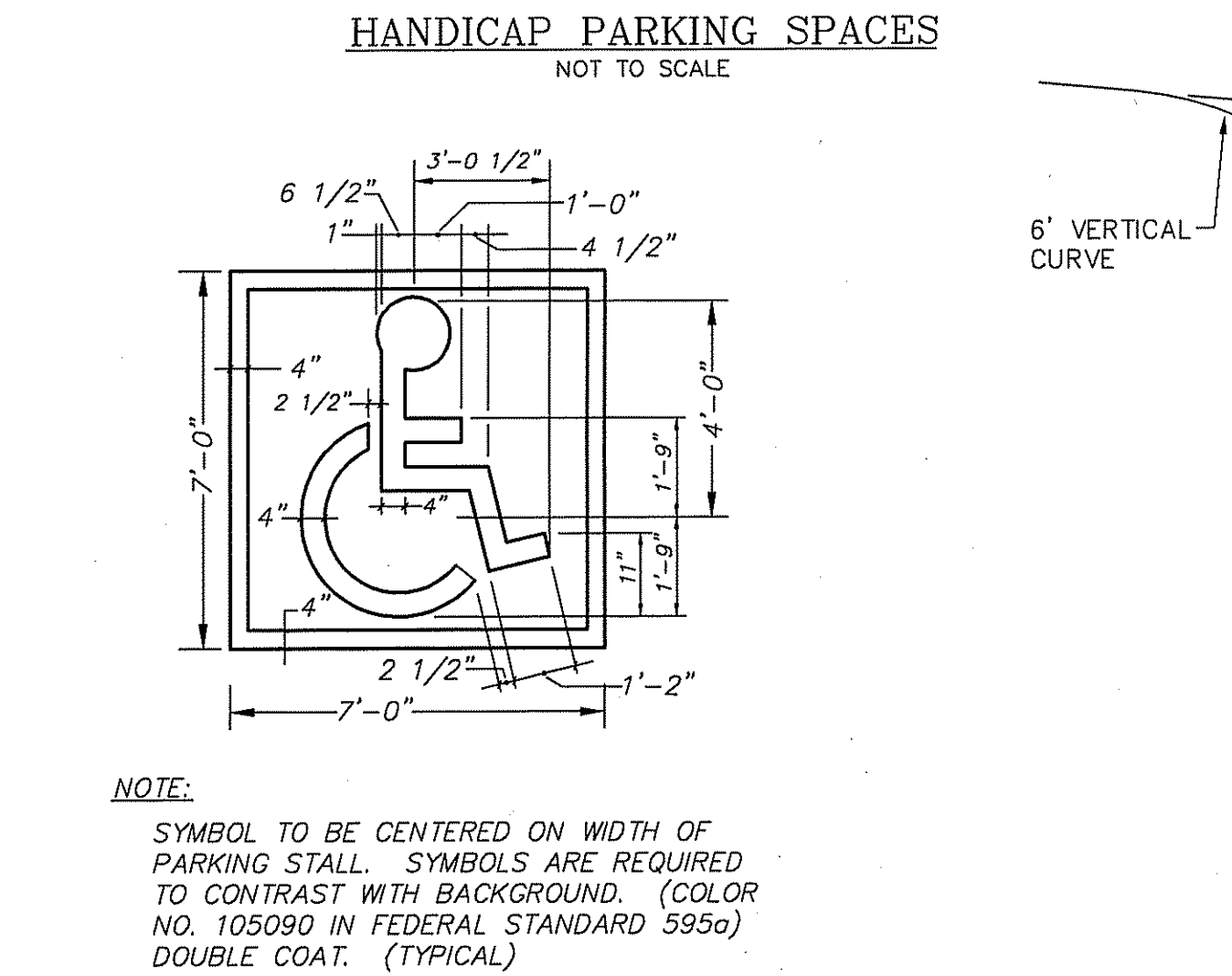
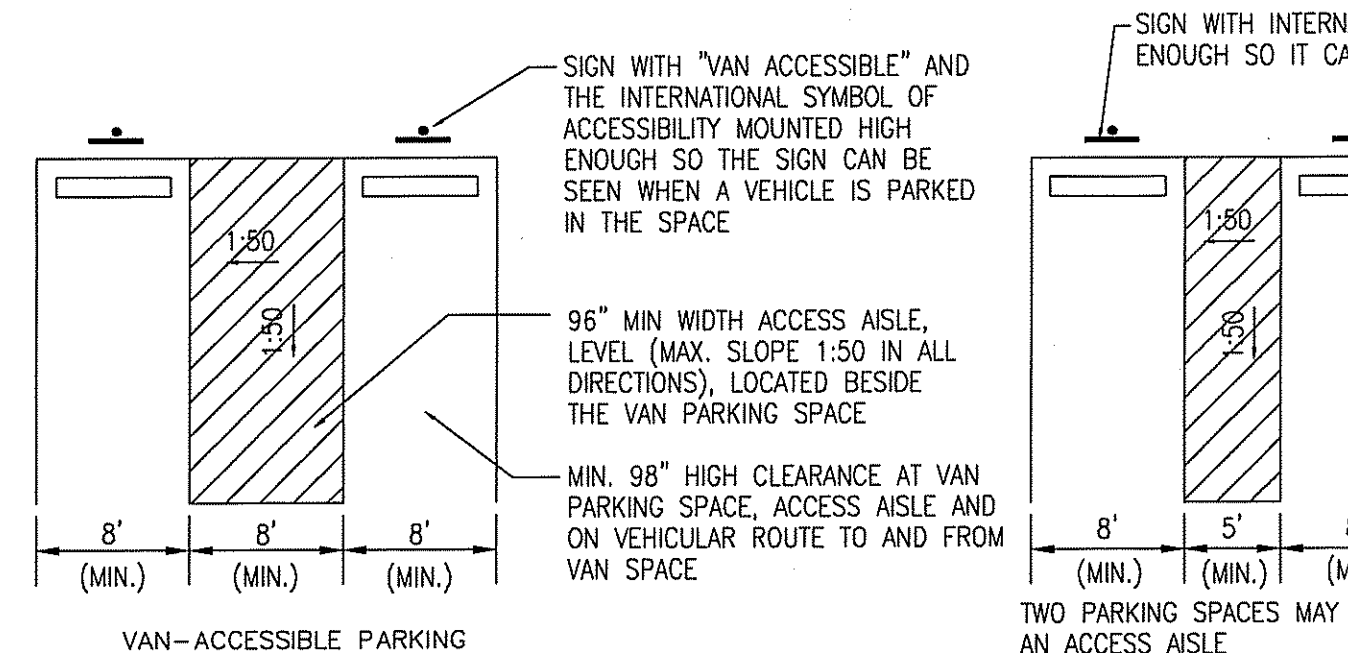
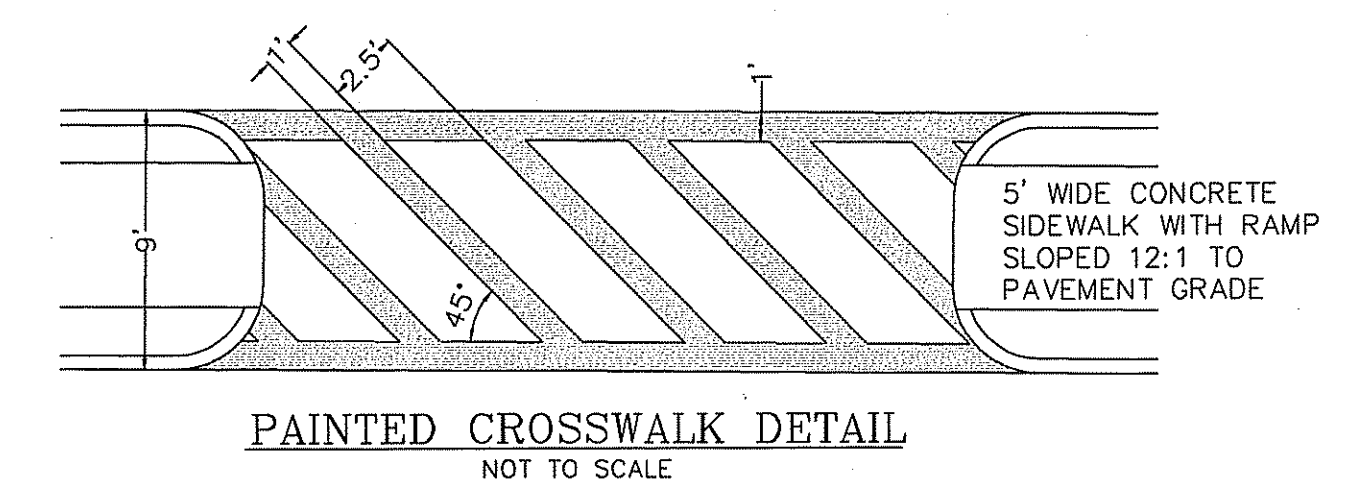
NO.	BY	DATE	REVISIONS
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1	J.P.	JUN 15, 1998	ISSUE FOR PERMIT



HANDICAPPED PARKING SYMBOL
NOT TO SCALE

TYPICAL ROCK CUT CROSS SECTION AT ROADWAYS
NOT TO SCALE

STABLE BEDROCK ALTERNATIVE TO RETAINING WALL TYPICAL CROSS SECTION (WALL "A" & "B")
NOT TO SCALE

ROCK BENCH TYPICAL CROSS SECTION
NOT TO SCALE

REVISIONS			
No.	DATE	DRWN	CHKD

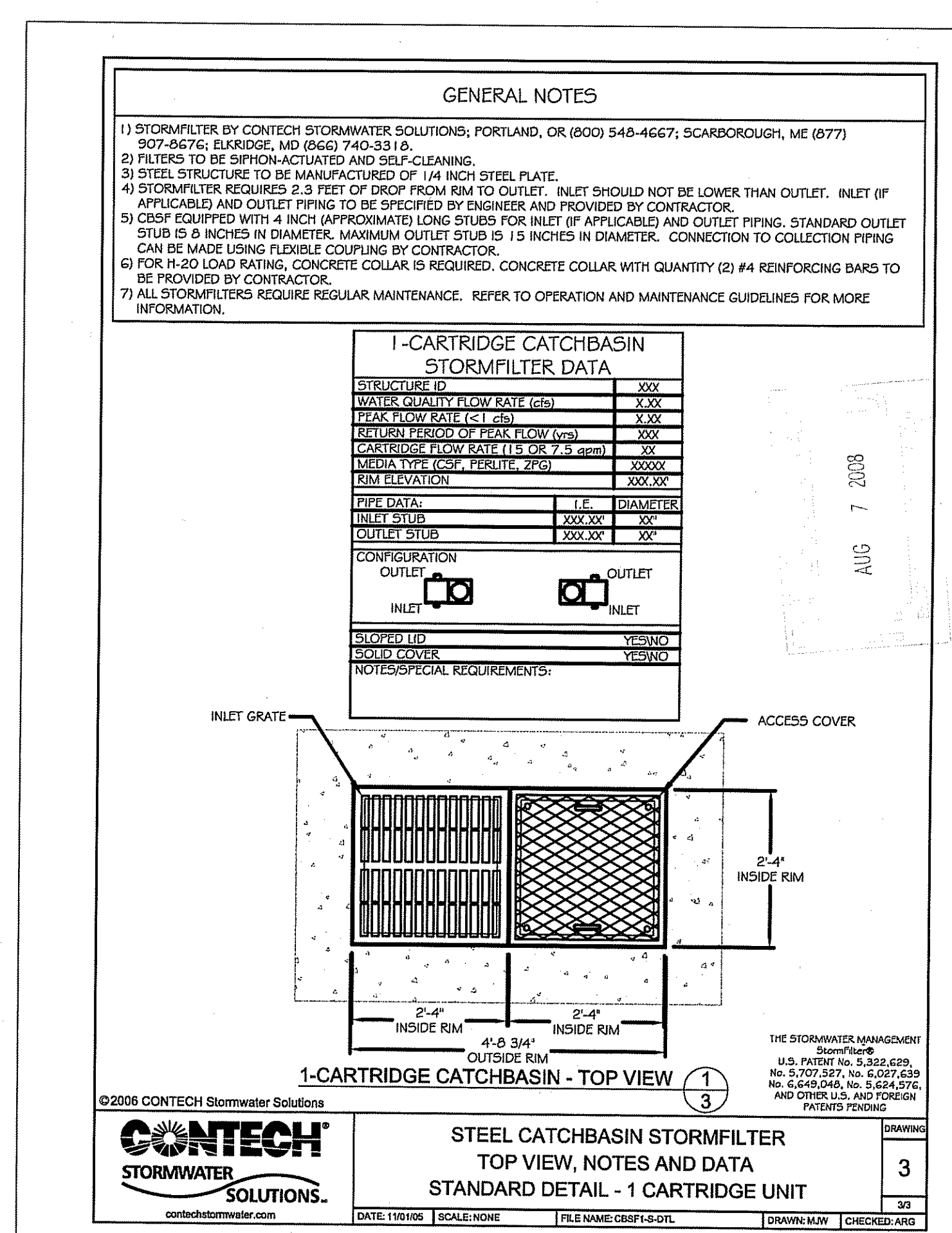
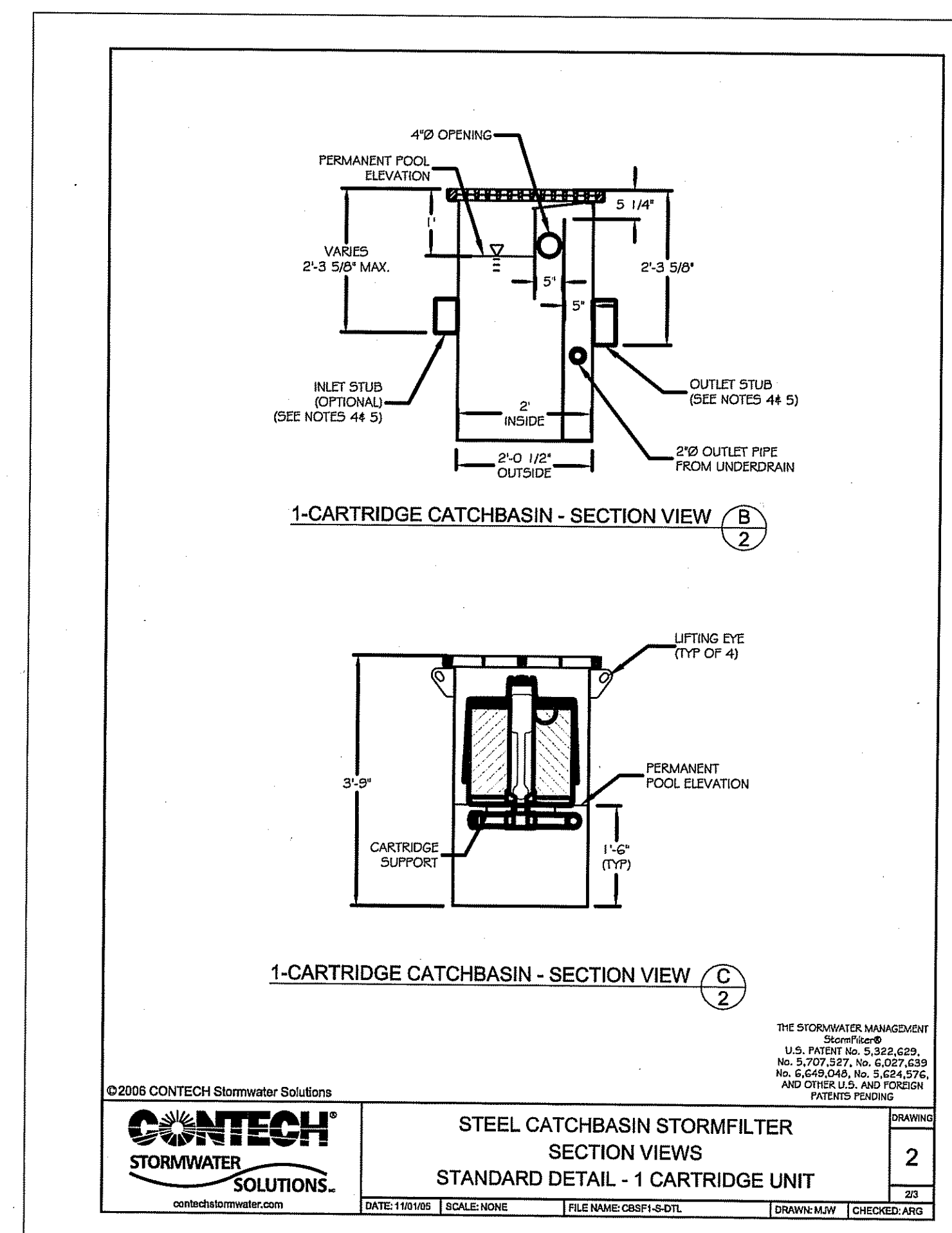
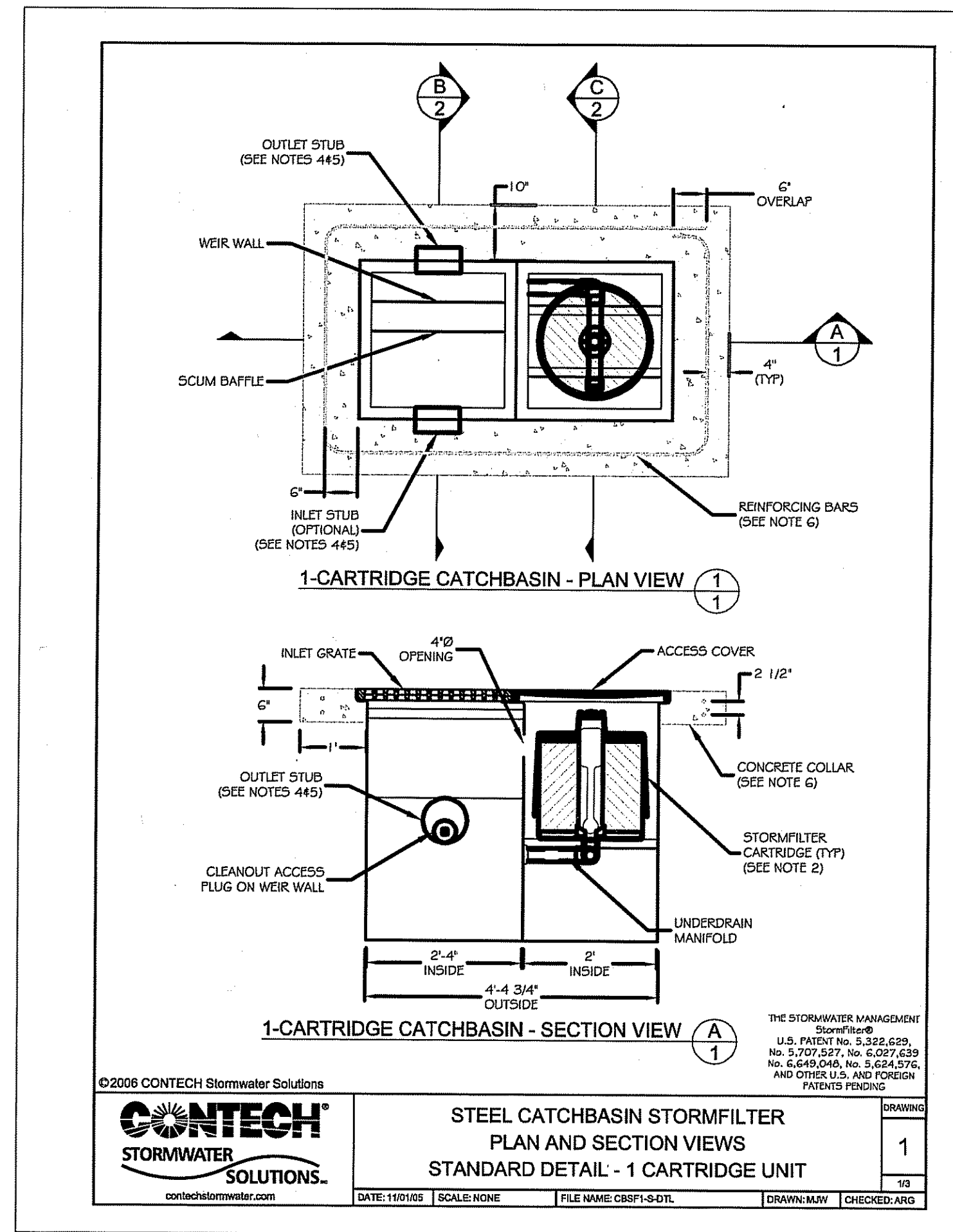
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 23 2008 FILE # 08-0247
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J. Joseph Cury

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
401-273-6600

RI DEM SUBMISSION
MAJOR LAND DEVELOPMENT PROJECT
FOR
AP 35 LOT 188
MEADOWBROOK GREEN
IN
CUMBERLAND, RHODE ISLAND
CONSTRUCTION DETAILS

SCALE: AS NOTED SHEET NO: 11 of 20
DRAWN BY: JP DESIGN BY: JAR CHECKED BY: KK
DATE: 7/23/08 PROJECT NO.: 07019.00



CONTECH Stormwater SOLUTIONS Operation and Maintenance

CatchBasin StormFilter™

Important: These guidelines should be used as a part of your site stormwater plan.

Overview

The CatchBasin StormFilter™ (CBSF) consists of a multi-chamber steel, concrete, or plastic catch basin unit that can contain up to four StormFilter cartridges. The steel CBSF is offered both as a standard and as a deep unit.

The CBSF is installed flush with the finished grade and is applicable for both constrained lot and retrofit applications. It can also be fitted with an inlet pipe for roof leaders or similar applications.

The CBSF unit treats peak water quality design flows up to 0.13 cfs, coupled with an internal weir overflow capacity of 1.0 cfs for the standard unit, and 1.8 cfs for the deep steel and concrete units. Plastic units have an internal weir overflow capacity of 0.5 cfs.

Design Operation

The CBSF is installed as the primary receiver of runoff, similar to a standard, graded catch basin. The steel and concrete CBSF units have an H-20 rated, traffic-bearing lid that allows the filter to be installed in parking lots, and for all practical purposes, takes up no land area. Plastic units can be used in landscaped areas and for other non-traffic-bearing applications.

The CBSF consists of a sumped inlet chamber and a cartridge chamber(s). Runoff enters the sumped inlet chamber either by sheet flow from a paved surface or from an inlet pipe discharging directly to

the unit vault. The inlet chamber is equipped with an internal baffle, which traps debris and floating oil and grease, and an overflow weir. While in the inlet chamber, heavier solids are allowed to settle into the deep sump, while lighter solids and soluble pollutants are directed under the baffle and into the cartridge chamber through a port between the baffle and the overflow weir. Once in the cartridge chamber, polluted water ponds and percolates horizontally through the media in the filter cartridges. Treated water collects in the cartridge's center tube from where it is directed by an under-drain manifold to the outlet pipe on the downstream side of the overflow weir and discharged.

When flows into the CBSF exceed the water quality design value, excess water spills over the overflow weir, bypassing the cartridge bay, and discharges to the outlet pipe.

Applications

The CBSF is particularly useful where small flows are being treated or for sites that are flat and have little available hydraulic head to spare. The unit is ideal for applications in which standard catch basins are to be used. Both water quality and catchment issues can be resolved with the use of the CBSF.

Retrofit-Fit

The retrofit market has many possible applications for the CBSF. The CBSF can be installed by replacing an existing catch basin without having to "chase the grade," thus reducing the high cost of re-piping the storm system.

Maintenance Guidelines

Maintenance procedures for typical catch basins can be applied to the CatchBasin StormFilter (CBSF). The filter cartridges contained in the CBSF are easily removed and replaced during maintenance activities according to the following guidelines.

1. Establish a safe working area as per typical catch basin service activity.
2. Remove steel grate and diamond plate cover (weight ≈ 100 lbs. each).
3. Turn cartridge(s) counter-clockwise to disconnect from pipe manifold.
4. Remove 4" center cap from cartridge and replace with lifting cap.
5. Remove cartridge(s) from catch basin by hand or with vactor truck boom.
6. Remove accumulated sediment via vactor truck (min. clearance 13" x 24").
7. Remove accumulated sediment from cartridge bay. (min. clearance 9.25" x 11")
8. Rinse interior of both bays and vactor remaining water and sediment.
9. Install fresh cartridge(s) threading clockwise to pipe manifold.
10. Replace cover and grate.
11. Return original cartridges to CONTECH Stormwater Solutions for cleaning and media disposal.

Media may be removed from the filter cartridges using the vactor truck before the cartridges are removed from the catch basin structure. Empty cartridges can be easily removed from the catch basin structure by hand. Empty cartridges should be reassembled and returned to CONTECH Stormwater Solutions, as appropriate.

Materials required include a lifting cap, vactor truck, and fresh filter cartridges. Contact CONTECH Stormwater Solutions for specifications and availability of the lifting cap. The vactor truck must be equipped with a hose capable of reaching areas of restricted clearance. The owner may refresh spent cartridges. Refreshed cartridges are also available from CONTECH Stormwater Solutions on an exchange basis. Contact the maintenance department of CONTECH Stormwater Solutions at (503) 240-3393 for more information.

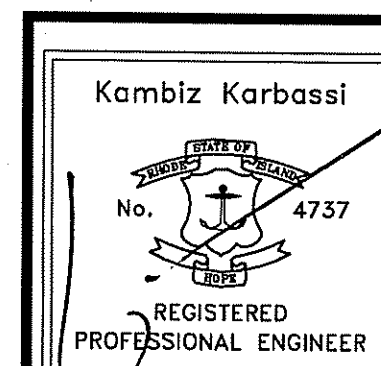
Maintenance is estimated at 26 minutes of site time. For units with more than one cartridge, add approximately 5 minutes for each additional cartridge. Add travel time as required.

NOTE:
CATCH BASIN STORM FILTER
UTILIZED FOR CB1 & CB2
AS SHOWN ON PLANS HEREIN
(ROADWAY STATION -0+43)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
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DATED SEP 23 2008 FILE # 08-0247
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

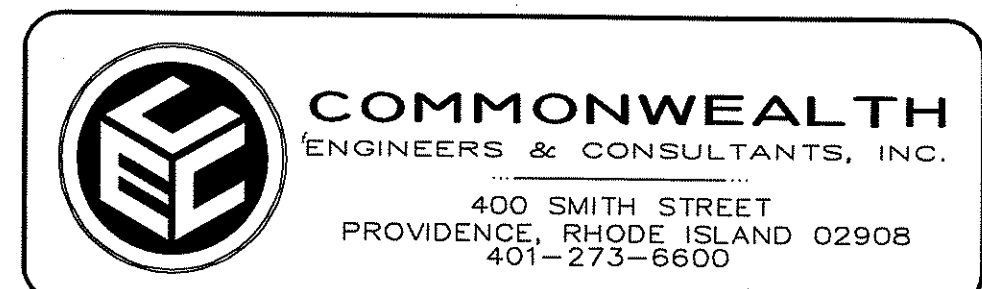
OWNER
CHIMNEY HILL ASSOCIATES
C/O PEABODY PROPERTIES
539 GRANITE STREET
BRAintree, MA 02184

APPLICANT
MACKLANDS REALTY, INC.
573 MENDON ROAD
CUMBERLAND, RI 02864



REVISIONS

No.	DATE	DRWN	CHKD



RI DEM SUBMISSION
MAJOR LAND DEVELOPMENT PROJECT
FOR
AP 35 LOT 188
MEADOWBROOK GREEN
IN
CUMBERLAND, RHODE ISLAND
CONSTRUCTION DETAILS

SCALE: AS NOTED SHEET NO: 13 of 20
DRAWN BY: JP DESIGN BY: JAR CHECKED BY: KK
DATE: 7/23/08 PROJECT NO.: 07019.00

AUG 7 2008

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

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STORM DRAINAGE SYSTEM MAINTENANCE PLAN:

THE FOLLOWING LIST OF MAINTENANCE TASKS AND FREQUENCIES MUST BE ADHERED TO IN ORDER TO INSURE A SUCCESSFUL LONG TERM OPERATION OF THE STORM DRAINAGE SYSTEM.

NOTE: THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE LONG TERM MAINTENANCE OF THE DRAINAGE SYSTEM.

1. 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.
2. SEDIMENTS SHALL BE REMOVED FROM THE ALL BASINS IMMEDIATELY AFTER SITE STABILIZATION.
3. ALL TRASH, LITTER AND OTHER DEBRIS SHALL BE REMOVED FROM ALL STORM WATER 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.
4. INSPECTIONS OF ALL CATCH BASINS SHALL OCCUR ON AN ANNUAL BASIS TO CHECK FOR DEBRIS REMOVAL (SEDIMENT AND HYDROCARBONS) AND STRUCTURAL INTEGRITY OR DAMAGE. SUCH DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY.
5. REPAIRS OR REPLACEMENT OF INLET/OUTLET STRUCTURES, RIP-RAP CHANNELS, FENCES, OR OTHER ELEMENTS OF THE FACILITY WILL BE DONE WITHIN 30 DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
6. ALL REMOVED SEDIMENTS AND DEBRIS SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
7. ALL OUTLET STRUCTURES AND OUTFLOW CHANNELS WILL BE INSPECTED ANNUALLY. INSPECTIONS WILL BE ACCOMPLISHED SEVERAL TIMES DURING THE FIRST SIX MONTHS OF OPERATION, ESPECIALLY AFTER RAINFALL EVENTS TO CHECK FOR CLOGGING OR, CONVERSELY, TOO RAPID OF A RELEASE.
8. REPAIRS OR REPLACEMENT OF INLET/OUTLET STRUCTURES, RIP-RAP CHANNELS, FENCES, OR OTHER ELEMENTS OF THE FACILITY WILL BE DONE WITHIN 30 DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
9. ALL SEDIMENT GENERATED DURING CONSTRUCTION AND AS A RESULT OF MAINTENANCE OF THE DRAINAGE SYSTEM MUST BE DISPOSED OF PROPERLY. SEDIMENT SHALL NOT BE DISPOSED OF IN OR NEAR STATE OR FEDERAL REGULATED WATERS.
10. RECORDS OF THE FIRST TWO YEARS OF MAINTENANCE FOLLOWING CONSTRUCTION SHALL BE SUBMITTED TO RIDEM DIVISION OF WATER RESOURCES. MAINTENANCE RECORDS FOR SUBSEQUENT YEARS SHALL BE KEPT ON FILE AND SUBMITTED TO RIDEM, DIVISION OF WATER RESOURCES, UPON REQUEST.

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, EXCELSIOR 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 HAY BALES 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 DESIGN MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEEDED SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	% BY WEIGHT	SEEDING DATE
CREeping RED FESCUE	70	APRIL 1 - JUNE 15
ASTORIA BENTGRASS	5	AUGUST 15 - OCTOBER
BIRDFOOT TREFFOIL	15	
PERENNIAL RYEGRASS	10	

8. APPLICATION RATE 100 LBS./ACRE
LIMING AND FERTILIZING AS REQUIRED TO COMPLIMENT OR UPGRADE EXISTING CONDITIONS.
9. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR, AND SHALL DO SO AT NO ADDITIONAL EXPENSE.
10. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
11. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
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.

SEDIMENTATION CONTROL PROGRAM:

1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING DOWNSTREAM WATERCOURSES AND STORMWATER DRAINAGE SYSTEMS.
2. DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUN-OFF FLOW DURING STORMS AND PERIODS OF HEAVY RAINFALL.
3. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL.
4. CARE SHALL BE TAKEN SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECT TO STORMWATER FLOWAGE.
5. ADDITIONAL HAYBALES OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
6. SEDIMENTATION TRAPS SHALL BE PROVIDED AT ALL DRAINAGE STRUCTURES DURING CONSTRUCTION.
7. EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AT THE SITE PRIOR TO THE START OF CONSTRUCTION AND BE PROPERLY MAINTAINED UNTIL ALL DISTURBED AREAS ARE STABILIZED INCLUDING:
 - A) THE INSTALLATION OF A CONTINUOUS LINE OF STAKED HAYBALES IN ALL LOCATIONS SHOWN ON THE APPROVED SITE PLANS AND WHERE OTHERWISE NECESSARY TO PREVENT SEDIMENTS FROM ENTERING DOWNSTREAM WATERCOURSES AND STORMWATER DRAINAGE SYSTEMS.
 - B) ALL DISTURBED AREAS ARE TO BE PERMANENTLY STABILIZED WITH APPROVED GROUND COVER PRIOR TO THE COMPLETION OF THE PROJECT. AREAS EXPOSED FOR EXTENDED PERIODS ARE TO BE COMPLETELY COVERED WITH SPREAD HAY MULCH.
 - C) CATCH BASINS WILL BE PROTECTED WITH HAYBALE FILTERS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED. SUMPS ARE TO BE CLEANED IMMEDIATELY FOLLOWING INSTALLATION OF PERMANENT PAVEMENT.
 - D) OUTFALLS ARE TO BE PROTECTED BY HAYBALE FILTERS UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH APPROVED GROUND COVER.
 - E) ALL CONTROL MEASURES WILL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.

8. THE LIMITS OF ALL CLEARING, GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE SHALL REMAIN TOTALLY UNDISTURBED.
9. UPON COMPLETION OF CONSTRUCTION OF SITE IMPROVEMENTS AND THE STORMWATER DRAINAGE SYSTEM, ALL CATCH BASINS AND STORM DRAIN PIPING SHALL BE CLEANED OF SEDIMENT. DETENTION BASINS SHALL BE CLEANED OF SEDIMENT TO THE DESIGN GRADES INDICATED.
10. AT NO TIME DURING CONSTRUCTION SHALL THE SUBGRADE OF THE SITE BE SUCH THAT SURFACE RUNOFF WILL BE PERMITTED TO DIRECTLY ENTER ANY DRAINAGE STRUCTURE. A TEMPORARY DEPRESSED AREA AROUND THE STRUCTURE SHALL BE INCORPORATED AS A SEDIMENTATION TRAP. THE MOUTH OF THE TRAP SHALL BE LINED WITH HAYBALES AROUND THE COMPLETE PERIMETER. DURING ALL PRELIMINARY STAGES, THE TOP OF THE STRUCTURE SHALL ALWAYS BE HIGHER THAN THE SUBGRADE.
11. HAYBALE EROSION CHECKS SHALL BE MAINTAINED AROUND ALL CATCH BASINS UNTIL ALL UPGRADIENT DISTURBED AREAS ARE STABILIZED BY PAVEMENT OR VEGETATION.
12. ALL COMPONENTS OF THE DRAINAGE SYSTEM MUST BE CLEANED OF SEDIMENT BY THE APPLICANT OR HIS REPRESENTATIVE IMMEDIATELY AFTER CONSTRUCTION IS COMPLETED.
13. INSPECT TEMPORARY DIVERSIONS AND THEIR COMPONENTS ONCE A WEEK AND AFTER EVERY RAINFALL. DAMAGE CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY SHOULD BE REPAIRED BEFORE THE END OF EACH WORKING DAY. A SEDIMENTATION TRAP. THE MOUTH OF THE TRAP SHALL BE LINED WITH HAYBALES AROUND THE COMPLETE PERIMETER. DURING ALL PRELIMINARY STAGES, THE TOP OF THE STRUCTURE SHALL ALWAYS BE HIGHER THAN THE SUBGRADE.
14. CHECK DAMS SHALL BE INSTALLED EVERY 300 FEET FOR SLOPES OF 1% OR LESS, EVERY 200 FEET FOR SLOPES OF 2%, EVERY 150 FEET FOR SLOPES OF 3% TO 5%, AND EVERY 100 FEET FOR SLOPES OF 5% OR GREATER.

15. SEDIMENTS SHOULD BE REMOVED FROM THE CHECK DAM WHEN IT REACHES ONE-HALF THE DAM HEIGHT.

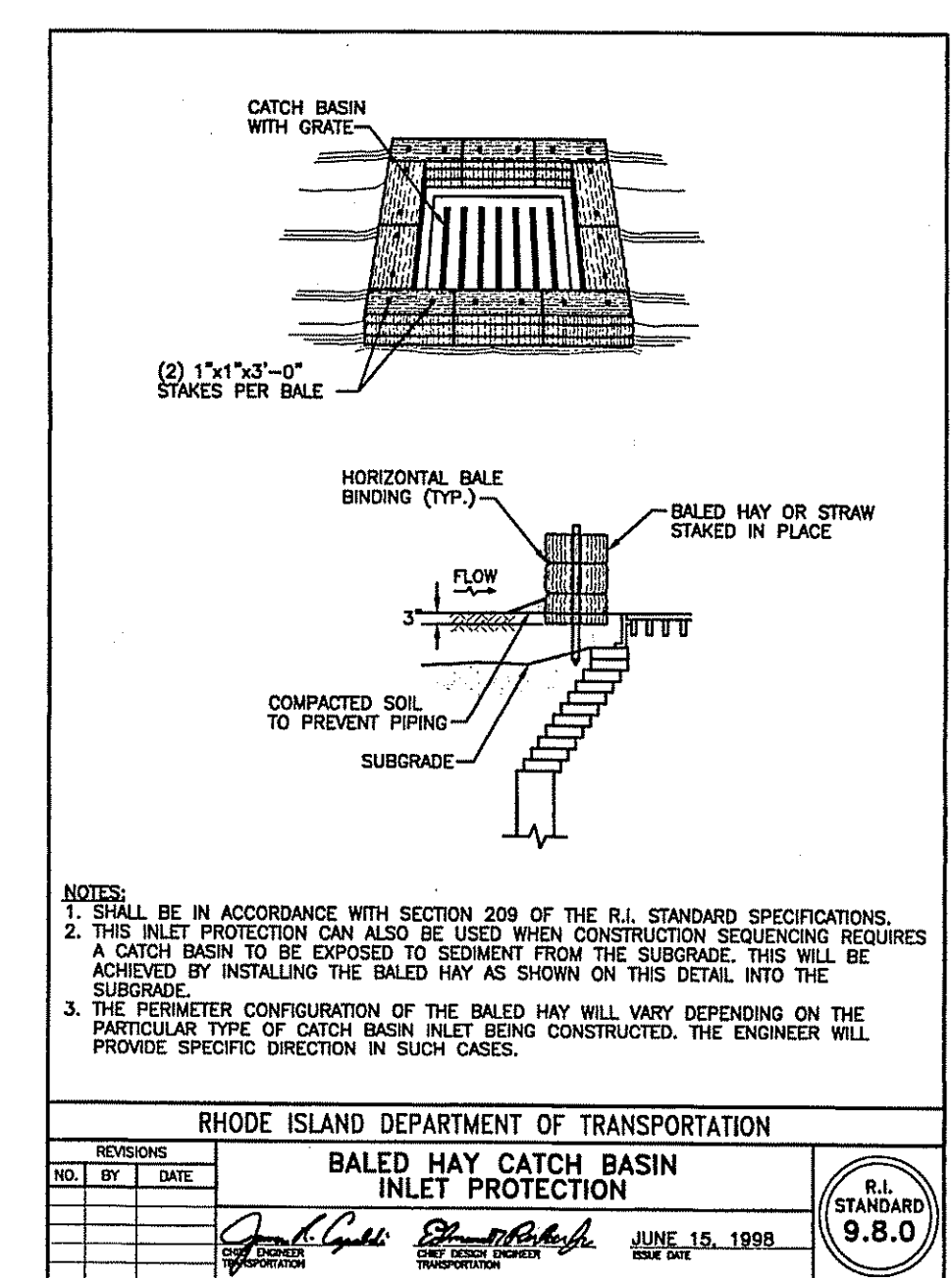
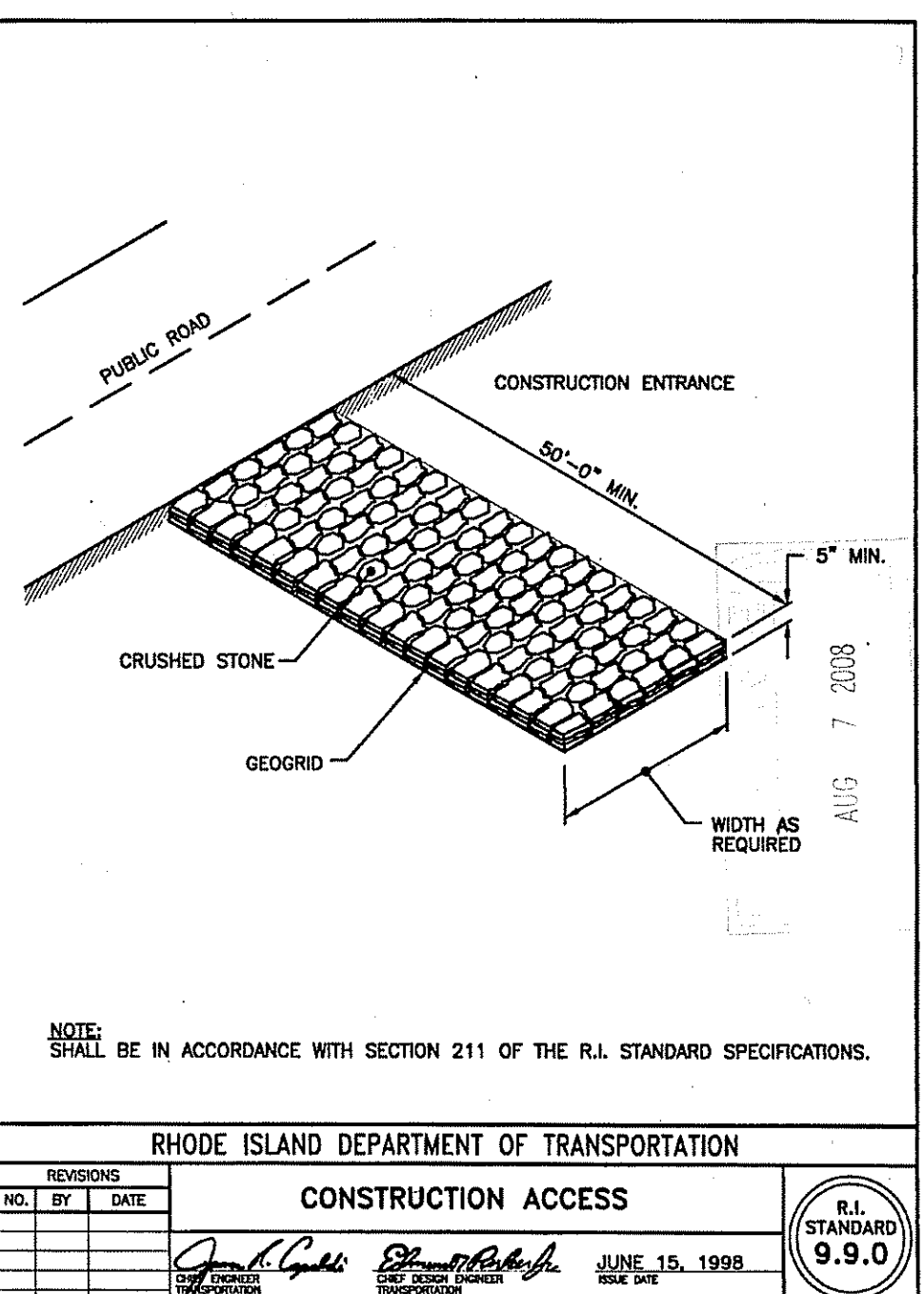
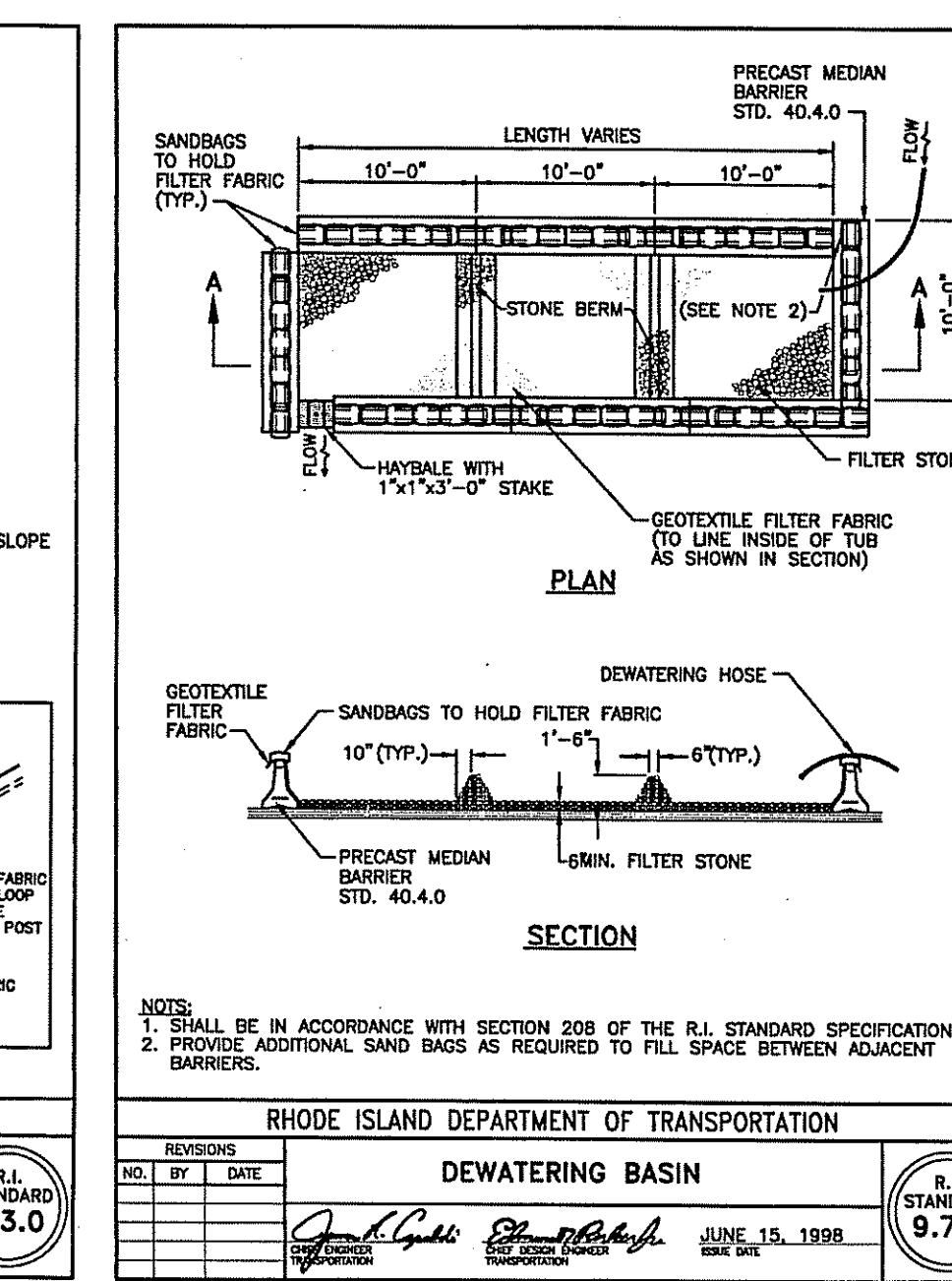
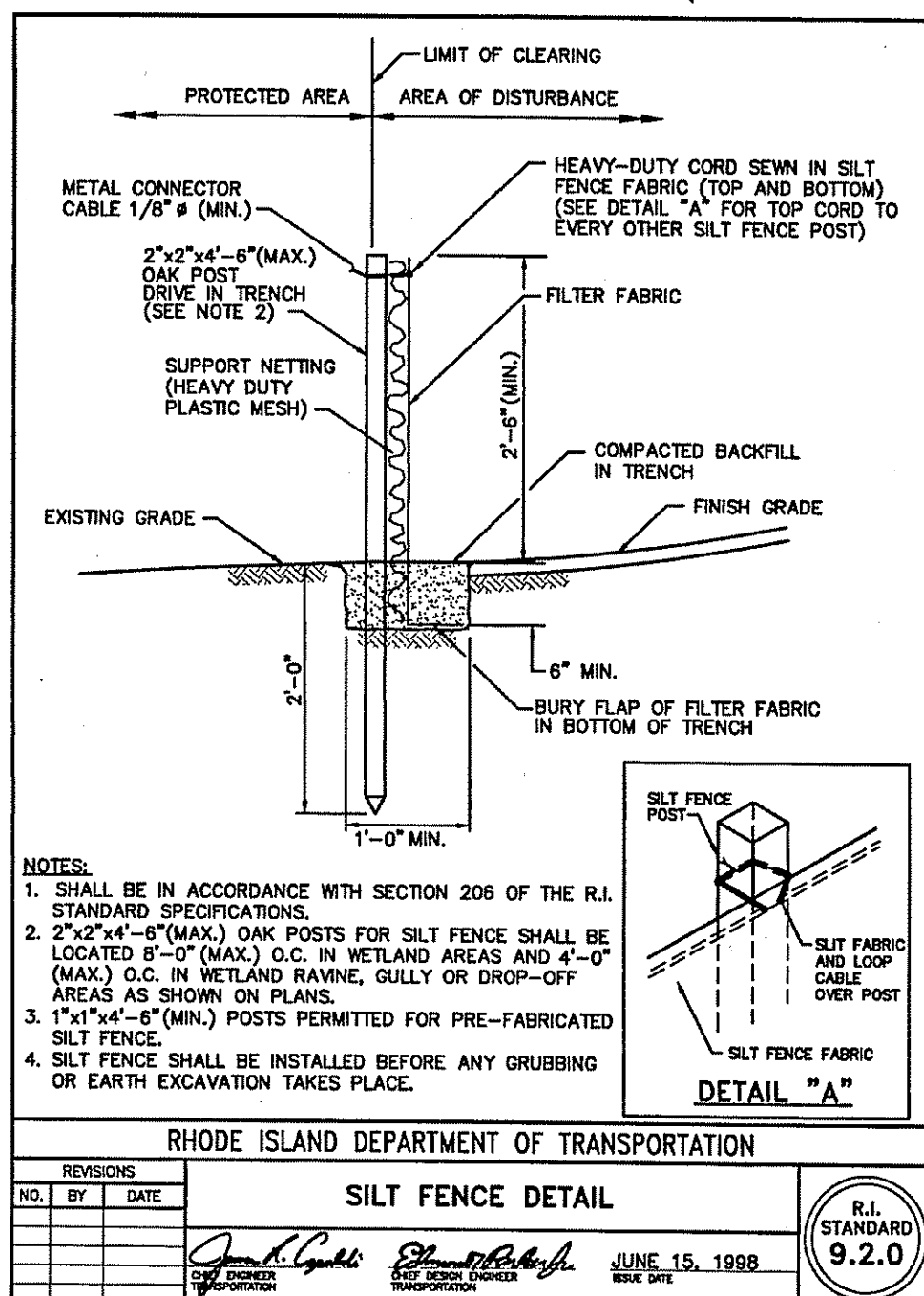
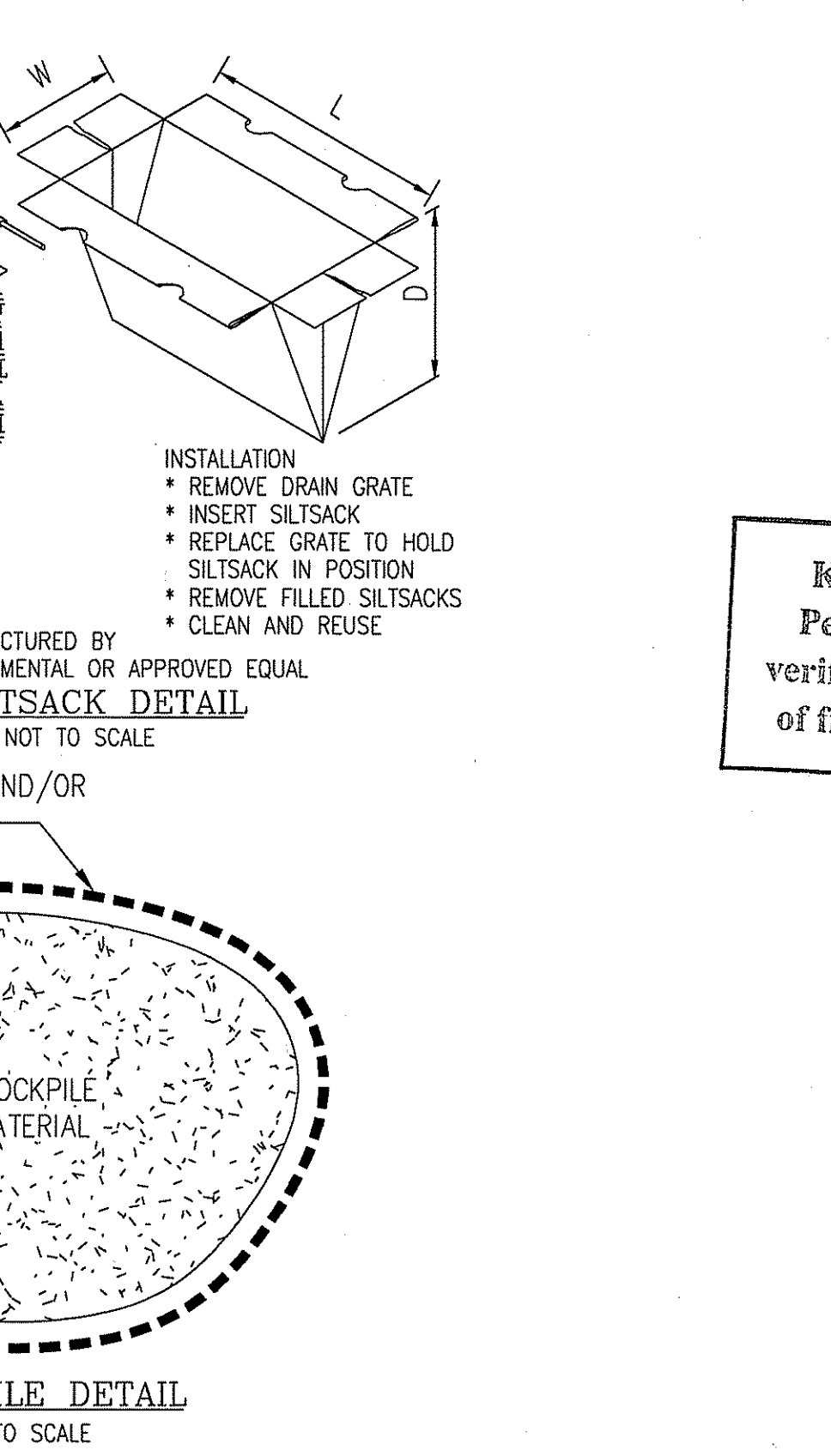
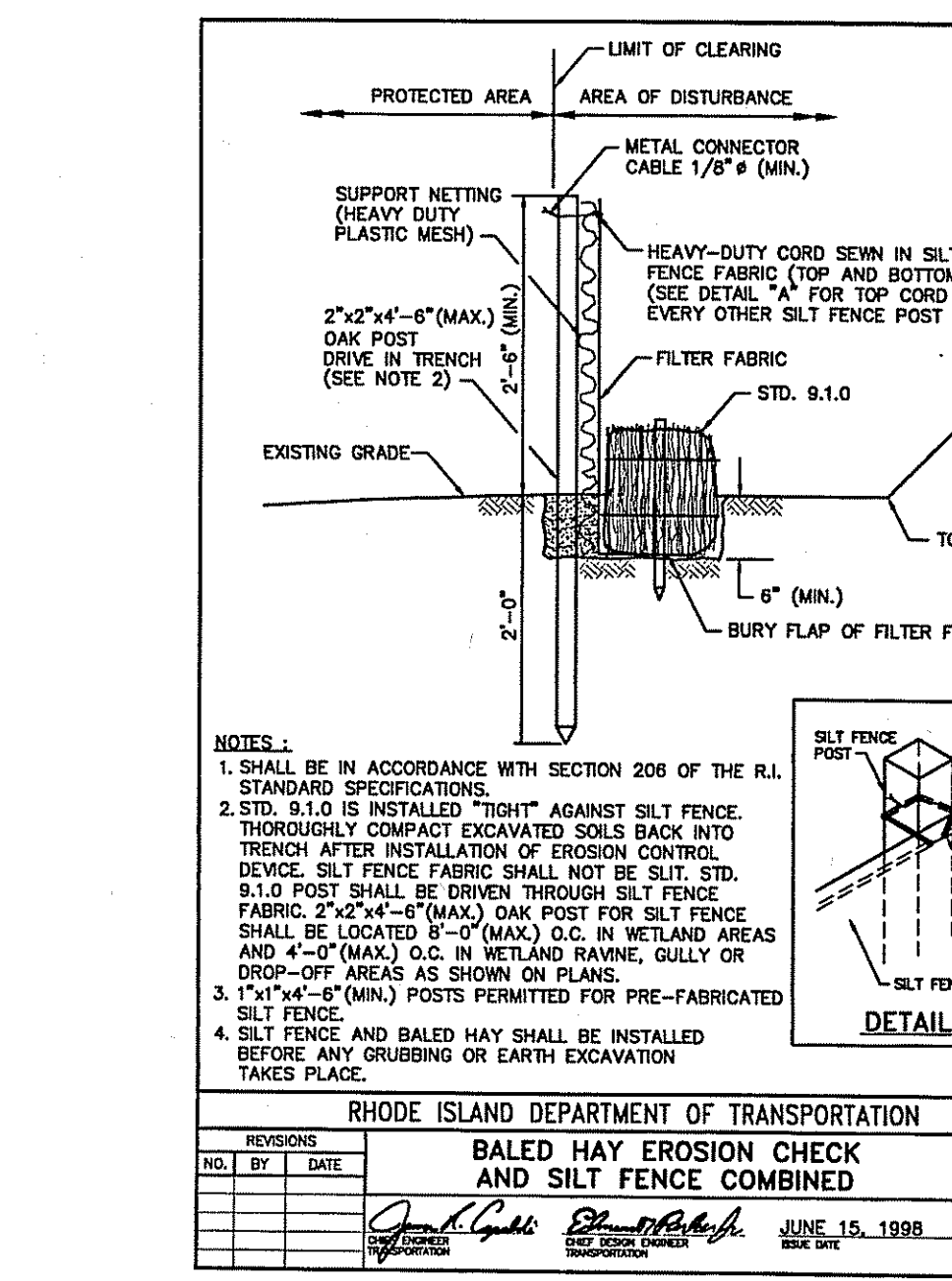
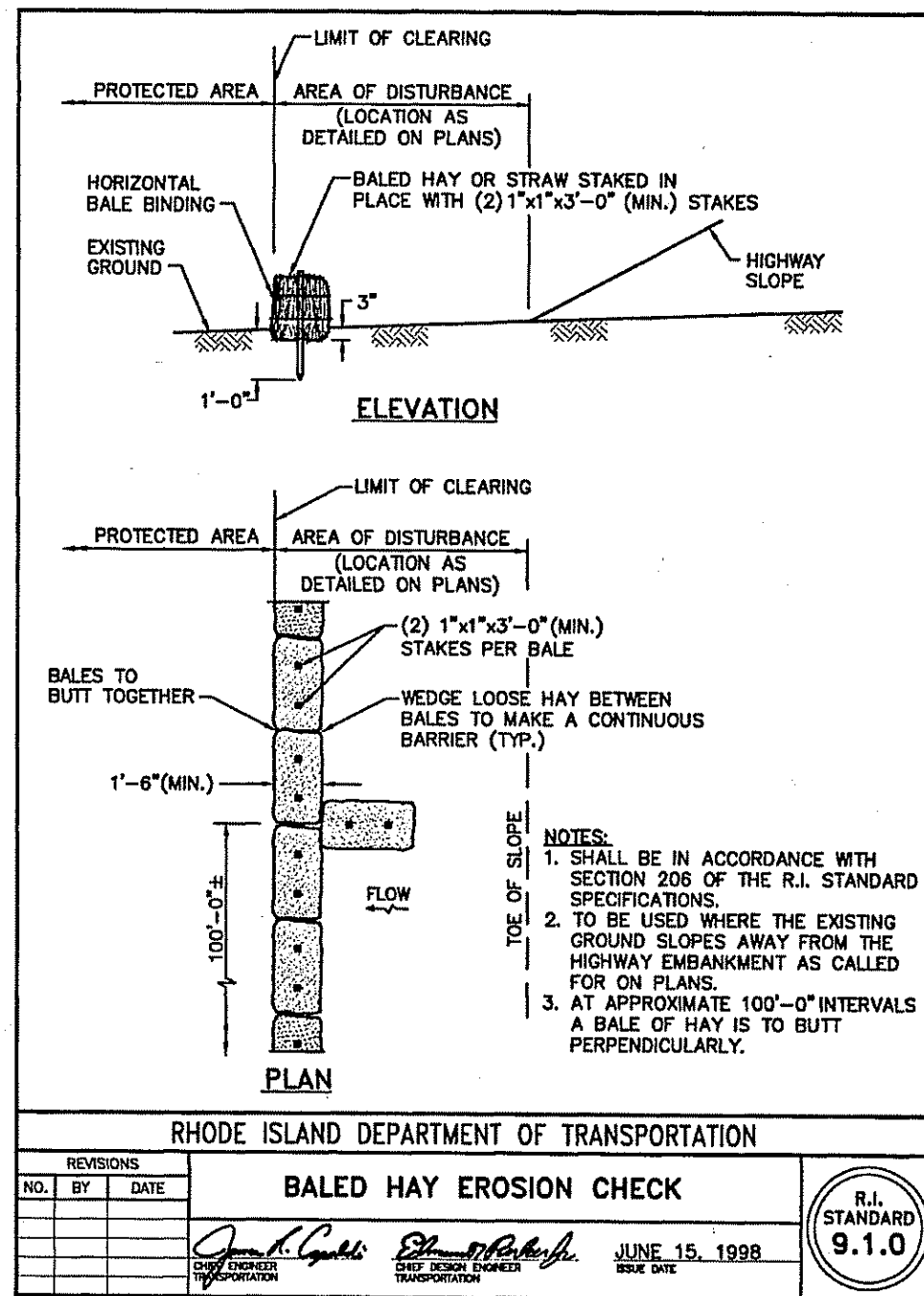
DRAINAGE AND UTILITY NOTES:

1. THE LOCATION OF EXISTING UTILITIES IS BASED UPON THE BEST AVAILABLE INFORMATION. THE LOCATIONS AND ELEVATIONS SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION.
2. UTILITY LOCATION VERIFICATION IS TO INCLUDE TEST HOLES AS NEEDED.
3. ALL WATER LINE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL MUNICIPAL WATER AUTHORITY. WATER AUTHORITY REQUIREMENTS FOR PIPE MATERIALS, INSTALLATION, TESTING AND AS-BUILT DOCUMENTATION ARE APPLICABLE TO THIS PROJECT.
4. ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL MUNICIPAL SEWER AUTHORITY. SEWER AUTHORITY REQUIREMENTS FOR PIPE MATERIALS, INSTALLATION, TESTING AND AS-BUILT DOCUMENTATION ARE APPLICABLE TO THIS PROJECT.

5. UNDERGROUND UTILITIES, ELECTRIC, TELEPHONE, FIRE ALARM CABLE TELEVISION AND GAS SERVICES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE APPLICABLE SITE UTILITY PROVIDER.
6. ALL ON SITE STORM WATER DRAINAGE PIPE SHALL BE ADS N-12, HDPE BY HANCOR OR AN APPROVED EQUAL UNLESS NOTED OTHERWISE ON THE PLANS.
7. ALL INLINE DRAIN STRUCTURES AND RELATED APPURTENANCES SHALL BE AS MANUFACTURED BY "NYLOPLAST" OR "DRAIN-RITE" AS MANUFACTURED BY "HANCOR" OR AN APPROVED EQUAL.
8. METALLIC WARNING TAPE SHALL BE INSTALLED 12" ABOVE ALL STORM DRAIN AND OTHER UTILITIES.

GENERAL NOTES:

1. THE LOCATION AND ELEVATION FOR ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ANY CROSSINGS OF PROPOSED UTILITIES AND EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATION AND ELEVATION OF THEIR FACILITIES AND ANY DISCREPANCIES IN THE LOCATION OF ANY UTILITY SHOWN OR ENCOUNTERED DURING CONSTRUCTION SHALL BE REPORTED TO COMMONWEALTH ENGINEERS & CONSULTANTS, INC. 400 SMITH STREET, PROVIDENCE, RHODE ISLAND 02908; (401) 273-6600.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING "DIG- SAFE" AT 1-888-344-7233 TO COMPLY WITH STATE LAW PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITY.
3. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH ANY APPLICABLE LOCAL, STATE AND FEDERAL LAWS GOVERNING HIS INTENDED ACTIVITIES.
4. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITIES, STRUCTURES, AND ABUTTING PROPERTIES. THE COST OF ANY REPAIR OR REPLACEMENT OF DAMAGED ITEMS SHALL BE BORNE BY THE CONTRACTOR.
5. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE APPROPRIATE STATE AND MUNICIPALITY PRIOR TO COMMENCING ANY WORK.
6. IF CEMENT CONCRETE MIX TRUCKS ARE TO BE WASHED OUT ON SITE, THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A WASH OUT AREA WITH APPROPRIATE PROTECTION CONTROLS.
7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING COLLECTION AND STORAGE LOCATIONS ON SITE FOR ALL CONSTRUCTION DEBRIS AND TRASH SO THAT THIS MATERIAL DOES NOT BECOME A NEIGHBORHOOD NUISANCE.



ALTERNATES TO BE CONSIDERED BASED UPON SHOP DRAWING SUBMITTAL AND APPROVAL

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 23 2008 FILE # 08-0447
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.
W. Joseph Conroy

OWNER
CHIMNEY HILL ASSOCIATES
C/O PEABODY PROPERTIES
539 GRANITE STREET
BRAINTREE, MA 02184

APPLICANT
MACKLANDS REALTY, INC.
573 MENDON ROAD
CUMBERLAND, RI 02864

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

Kambiz Karbassi
REGISTERED PROFESSIONAL ENGINEER
No. 4737

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
401-273-6600

REVISIONS			
No.	DATE	DRWN	CHKD

RI DEM SUBMISSION
MAJOR LAND DEVELOPMENT PROJECT
FOR
AP 35 LOT 188
MEADOWBROOK GREEN
IN
CUMBERLAND, RHODE ISLAND
CONSTRUCTION DETAILS

SCALE: AS NOTED	SHEET NO: 18 of 20
DRAWN BY: JP	DESIGN BY: JAR
DATE: 7/23/08	CHECKED BY: KK
PROJECT NO.: 07019.00	

