ADDENDUM NO. 1

FOR

BARNEY POND DAM – PEDESTRIAN BRIDGE
RFP 2013-22
JUNE 3, 2013

NOTICE TO PROSPECTIVE BIDDERS

Prospective bidders are hereby informed of the following corrections, additions, deletions, and/or modifications to the bidding documents for the Barney Pond Dam – Pedestrian Bridge project. This Addendum No. 1 forms a part of the bidding documents and all changes shall be incorporated into the Bid Proposals. This Addendum No. 1 shall be noted as acknowledged by returning the Addendum Acknowledgment Receipt provided at the end of this Addendum. Bidders shall also acknowledge receipt of this addendum on the line provided on the revised Bid Form provided as Exhibit A to this Addendum No. 1. **Bidders who fail to acknowledge receipt of this Addendum No. 1 on the revised Bid Form provided as Exhibit A to this Addendum No. 1 will not be considered for award.**

Part 1 – Responses to Questions

The following questions were received in writing, or verbally during the pre-bid meeting, from prospective bidders by end of day on May 30, 2013. The questions are italicized and the answers follow.

1. *The Measurement and Payment Specifications lists the unit of measure as lump sum for the Pedestrian Bridge. The Bid Form lists the unit of measure as linear foot. Please clarify.*

   The unit of measure for the Pedestrian Bridge is lump sum. The lump sum cost shall cover a bridge span ranging from 56 feet to 60 feet. A revised Bid Form is provided as Exhibit A to this Addendum No. 1.

2. *Is there a completion date?*

   The completion date shall be August 30, 2013. The start date shall be July 1, 2013.

3. *Are there any liquidated damages?*

   No.

4. *Are any permits required?*

   To the best of our knowledge, no permits are required.

5. *Are there any quality control testing requirements?*

   Concrete shall be tested by an independent testing agency qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program. The required concrete tests are as follows:

   - Slump Test in accordance with ASTM C 143. One test at each point of placement. One additional test for each pour exceeding 50 cubic yards.
   - Air Content Test in accordance with AASHTO T 199-00 or ASTM C231, pressure method. One test at each point of placement. One additional test for each pour exceeding 50 cubic yards.
   - Concrete Temperature Test in accordance with ASTM C 1064. One test hourly when air temperature is 40°F and below or when 80°F and above. One test at each point of placement.
   - Compression Test Specimens shall be in accordance with ASTM C 31/C 31M; cast and laboratory cure one set of four standard cylinder specimens for each day of placement.
     - Cast and field cure one set of four standard cylinder specimens for each day of placement.
   - Compressive Strength Test in accordance with ASTM C39.
     - Test two laboratory-cured specimens at 7 days and two at 28 days.
     - Test two field-cured specimens at 7 days and two at 28 days.
     - A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at age indicated.

   The existing subgrade and/or gravel borrow below the concrete footings and landing shall be tested as follows by a an independent testing agency holding current certification with the State of Rhode Island:

   - Sieve analysis in accordance with ASTM D422
   - Modified proctor analysis in accordance with ASTM D 1557
   - Soil compaction tests (nuclear density) in accordance with ASTM D 6938

6. *Is there a concrete strength requirement for the concrete footings?*

   The licensed professional engineer designing the concrete footings is responsible for specifying the minimum concrete strength.

7. *Is funding in place for this project?*

   Yes.

8. *Is there an engineer's estimate for this project?*

   No.

9. *Are there any physical restrictions at the site? Do trees need to be cleared to access the site?*

   All bidders should visit the site to evaluate physical restrictions at the site. Trees should not need to be cleared. There is a temporary guardrail along the edges of the dam that will be removed prior to construction.

10. *What will the working hours be?*

    Weekday working hours shall be 7:30am to 4:00pm.

11. *Will construction be allowed during the weekend?*

    Weekend work will only be allowed if preapproved by the Town. It will not be allowed on a regular basis.

12. *Is there any geotechnical information available for use to design the footings?*

    Subsurface boring logs are provided as Exhibit C to this Addendum No. 1. The provided boring information was specific to a separate project at Barney Pond Dam and were not completed for this project. Bidders shall verify the applicability of the provided information. The cost of additional geotechnical evaluations shall be incorporated into the lump sum bid price for the Pedestrian Bridge (Bid Item 2) if deemed necessary by the bidder.

13. *Is the existing concrete along the edge of the dam sufficient to act as the footing?*

    The existing concrete has not been evaluated to determine if it is sufficient.

14. *The bid documents list a bridge span of 56 feet. Will the concrete footings be on top of or beyond the existing concrete along the edge of the dam?*

The length listed in the bidding documents assumes the footings will be located beyond the concrete wall; however the final location of the footings shall be determined by the selected bidders. The span of the dam (measured from the inside of the concrete on both sides) is approximately 50 feet. As stated in the response question 1, the lump sum cost for the pedestrian bridge shall cover a bridge span ranging from 56 feet to 60 feet.

15. *Would the Town consider driving piles with a concrete cap rather than a concrete footing?*

    No.

16. *Will the existing building remain?*

    Yes, the existing building is the gatehouse for the dam. The building must remain in place and not be damaged. The Contractor shall be responsible for any damage that occurs to the building as a result of construction.

17. *What elevation do you want the bridge to be at on each side of the dam?*

    As shown on the plans, the existing elevation at both sides of the dam is approximately 76.5. The bridge shall match into this grade.

18. *Are onsite staging and stockpile areas available?*

    Yes, onsite staging and stockpiling areas are available. The locations for staging and stockpiling will be determined during the pre-construction meeting.

19. *Is traffic control required?*

    Bidders shall evaluate the work and determine if flaggers and/or a police detail is required. Cost for traffic control, if determined necessary, shall be included in the Mobilization and Demobilization bid item.

20. *The bid form includes a $20,000 allowance. What is the allowance for?*

    The allowance is a contingency allowance for work that the Owner may want to add to the contract. The allowance shall only be used at the Owner's sole discretion, in whole or in part. Work authorizing expenditures from the allowance shall only be executed by a Change Order. At contract closeout, any funds remaining in the allowance shall be credited to the Owner by a balancing Change Order.

21. *Will any other contractors be onsite during construction?*

    No.

22. *What will the elevation of the concrete landing be?*

    The finish elevation of the concrete landing shall match existing grade. Minor changes to the elevation may be made to ensure adequate drainage.

23. *What is to happen to the concrete wall near the northern edge of the concrete landing, in the area where the existing timber guardrail is to be removed?*

    The wall, which consists of blocks and mortar, shall be removed by the contractor to create a flush surface for the concrete landing.

24. *How close will the bridge be to the existing building?*

    The final location of the bridge will be determined in the field prior to construction. We intend for the bridge to be located very close to the building.

25. *Will the bridge be placed perpendicular to the walls or will it be angled? It appears that the bridge would need to be angled to avoid grading on the southern side of the dam.*

    The bridge will be placed perpendicular with the final location to be determined in the field prior to construction. Earthwork will be required on the southern side of the dam to allow for the perpendicular installation and connection to the existing access path. Bidders shall assume an earthwork quantity of 60 cubic feet and include the cost of this in the lump sum bid price for the Pedestrian Bridge (Bid Item 2). A revised Measurement and Payment section is provided as Exhibit B to this Addendum No. 1.

26. *Will alternate bridges be considered?*

    While the original bid documents stated that approved equals are acceptable, this Addendum removes the approved equal option. The bridge must be the Gatorbridge as specified on the plans and in the specifications.

27. *Has GatorBridge provided the Town with a price quote to be used for bidding?*

    No. Bidders shall contact GatorBridge for pricing.

28. *Was hydropower considered for this bridge?*

    No.

Part 2 – Amendments to Bid Documents

The following corrections, additions, deletions, and/or modifications shall be incorporated into the bidding documents and bid proposals.

1. As stated above, the lump sum bid price for the Pedestrian Bridge (Bid Item 2) shall include the cost for a bridge with a span ranging from 56 feet to 60 feet. A revised Measurement and Payment section is provided as Exhibit B to this Addendum No. 1.

2. As-Built Plans for the recently improved Dam Improvements are provided as Exhibit D to this Addendum No. 1.

EXHIBIT A

BID FORM

BARNEY POND DAM – PEDESTRIAN BRIDGE
RFP #2013-22
ADDENDUM NO. 1

BID FORM

BASE BID ITEMS

Bid Item No.	Description	Unit	Quantity	Unit Price (Figures)	Extended Bid Price (Figures)
1.	Mobilization and Demobilization	LS	1	$	$
Extended Bid Price in Words:					
2.	Pedestrian Bridge	LS	1	$	$
Extended Bid Price in Words:					
3.	Concrete Landing	SY	38	$	$
Extended Bid Price in Words:					
4.	Railing	LF	24	$	$
Extended Bid Price in Words:					
5.	Stone Dust Parking Area	SY	40	$	$
Extended Bid Price in Words:					
6.	Owner's Allowance	LS	1	$20,000	$20,000
Extended Bid Price in Words:					

FOR PURPOSES OF BID COMPARION, TOTAL BASE BID PRICE FOR BID ITEMS 1 THROUGH 6:

$_____ (Amount in Figures)

$_____ (Amount in Words)

Base Bid Item 6 is a stated allowance to be carried by all bidders and shall be utilized solely at the discretion and authorization of the Owner. There shall be no markup for profit or overhead for items covered under the allowance. Any and all unused portions of the monies allocated to the allowance shall be refunded to the Owner via change order.

In submitting this Bid, Bidder represents the following:

A. The above prices include all labor, materials, tools, equipment, overhead, profit, insurances, etc. to cover the finished work of the several kinds called for.

B. Bidder has examined and carefully studied the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____
_____	_____

C. Bidder does not consider that any further examinations or information are necessary for the determination of this Bid.

D. Bidder is aware of the general nature of work to be performed by the Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

E. Bidder has given the Owner notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution from the Owner is acceptable to Bidder.

F. The Bidding Documents are sufficient to convey understanding of the performance of the Work for which this Bid is submitted.

G. Bidder represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation.

H. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid

I. Bidder has not solicited or induced any individual or entity to refrain from bidding.

J. Bidder has not sought by collusion to obtain for itself any advantage over any other.

This Bid is submitted by:

Name of Authorized Representative_____

Title of Authorized Representative:_____

Signature of Authorized Representative:_____

Business Name_____

Business address:_____

Phone No.: _____FAX No.:_____

State Contractor License No._____

Seal (if bid is by Corporation):

SUBMITTED on_____, 2013 .

EXHIBIT B

MEASUREMENT AND PAYMENT

BARNEY POND DAM – PEDESTRIAN BRIDGE
RFP #2013-22
ADDENDUM NO. 1

MEASUREMENT AND PAYMENT

SUMMARY

This Section includes measurement and payment paragraphs for:

A. Base Bid Payment Items

DEFINITIONS

A. Payment Items: The Owner's distribution of the Contract Sum through listed work items.
    1. Each item is specified to include a defined scope of services. However, not all materials, labor, equipment, or services of a payment item are guaranteed to be listed or specified.
    2. Include costs associated with items of work required to complete the defined scope of services within the appropriately specified payment item.
    3. Payment items include furnishing all necessary material, plus cost for delivery, installation, applicable taxes and fees, administrative over-site, tools, labor, incidentals, overhead, and profit.
    4. All work described in the Contract Documents shall be included in the payment items described herein.
    5. Unit bid alternate price items will only be incorporated into the project if selected and authorized in writing by the Owner.
B. Unit Price: An amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.
C. Lump Sum: When used as an item of payment, means complete payment for the work prescribed for that portion of the Work under the item, or all work prescribed in the Contract, as the case may be.
D. Complete In Place: When used in the measurement and payment provisions, means the completion of the contract item, including the furnishing of all materials, equipment, tools, labor, health and safety requirements, and work incidental thereto
E. Payment for Work associated with individual Work Segments will not be released until such Work Segment is Substantially Complete, including site restoration and site improvements of that Work Segment and has been approved as such by the Owner or Engineer.

PROCEDURES

A. Unit prices and lump sum items include furnishing all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
B. Measurement: Notify Owner at least 48 working hours prior to the time at which necessary measurements must be taken. Notification must be in advance of obscuring pay item; do not proceed until such measurements have been taken in the presence of the Owner.

LIST OF BASE BID PAYMENT ITEMS

A. The payment items listed below identify the major components of work identified and specified in the Contract Documents. Work that is not specifically called out within an individual payment item but is inherently required to complete the Work shall be considered as a part of that payment item

Bid Item 1: Mobilization and Demobilization

1. Mobilization and Demobilization includes, but is not limited to, the following:
    a. Mobilization of all equipment, materials, temporary facilities/controls, and other items necessary to complete the Work to the Site.
    b. Installation, maintenance, and removal of sediment and erosion controls.
    c. Site restoration including furnishing loam and seed in all disturbed areas.
    d. Demobilization of all equipment, materials, temporary facilities/controls.
    e. Other items mobilized to the site for execution of the Work.
    f. Bonds and General Condition requirements.
2. Measurement: As measured by the Owner. Contractor will be paid 50% upon completion of mobilization, which includes the installation of sediment and erosion controls, and the remaining 50% upon completion of demobilization from the site, which includes the removal and disposal of sediment and erosion controls and establishment of vegetation.
3. Payment: Mobilization and Demobilization will be paid for on a Lump Sum basis, complete in place.

Bid Item 2: Pedestrian Bridge

1. Pedestrian Bridge includes, but is not limited to, the following:
    a. Removing and stockpiling existing timber guard rail.
    b. Designing and constructing footings for Pedestrian Bridge.
    c. Furnishing and installing Pedestrian Bridge with railing. Span of pedestrian bridge shall be between 56 feet and 60 feet with the final length determined in the field.
    d. 60 cubic yards of earthwork on the southern side of the dam to extend the existing access path to the east for connection to the pedestrian bridge.

2. Measurement: As measured by the Owner, pro-rated with the Contractor's progress of installing the pedestrian bridge, complete in place.
3. Payment: Pedestrian Bridge will be paid for on a Lump Sum basis, complete in place.

Bid Item 3: Concrete Landing

1. Concrete Landing includes, but is not limited to, the following:
    a. Excavating and fine grading
    b. Furnishing, placing, fine grading, and compacting gravel borrow.
    c. Furnishing and installing concrete landing including forms, concrete, expansion joints, and finishing the concrete.
    d. Removing & disposing of surplus material.
2. Measurement: As measured by the Owner, per square yard of constructed concrete landing.
3. Payment: Concrete Landing will be paid for per square yard of constructed concrete landing, as shown on the Contract Drawings, or as directed and approved in the field.

Bid Item 4: Railing

1. Railing includes, but is not limited to, the following:
    a. Furnishing and installing posts, rails, hasps, hardware, and appurtenances.
    b. Attaching railing to concrete landing with manufacturer provided base plates.
    c. Backfilling excavations.
2. Measurement: As measured by the Owner per linear foot of railing installed, complete in place.
3. Payment: Railing will be paid per linear foot of perimeter railing installed, as shown on the Contract Drawings, or as directed and approved in the field.

Bid Item 5: Stone Dust Parking Area

1. Stone Dust Parking Area includes, but is not limited to, the following:
    a. Furnishing, placing, shaping, and compacting gravel borrow.
    b. Furnishing, placing, shaping, and compacting stone dust.
2. Measurement: As measured by the Owner per square yard of stone dust installed, complete in place.
3. Payment: Stone Dust Parking Area will be paid per square yard of stone dust installed, as shown on the Contract Drawings, or as directed and approved in the field.

EXHIBIT C

GEOTECHNICAL INFORMATION

PARE CORPORATION

10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS

ENGINEERS *** PLANNERS *** CONSULTANTS

BORING NO. **B12-1**

SHEET 1 OF 2

PROJECT	Barney Pond Dam Lincoln, RI	PROJECT NO. CHKD. BY	8194.01 DMM

BORING CO.	New Hampshire Boring	BORING LOCATION	SEE EXPLORATION LOCATION PLAN		
FOREMAN	Chris Knight	GROUND SURFACE ELEVATION	76	DATUM	NGVD 29
INSPECTOR	J. Rosenberg	DATE START	1/24/2012	DATE END	1/24/2012

SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.

CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN.

CASING SIZE: 4" OTHER:

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
1/23/12	12:30	13'	40'	

DEPTH (ft)	CASING (b/ft)	SAMPLE NO.	SAMPLE PEN. (in.)/ REC.	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE TONS/FT² OR KG/CM²	SAMPLE DESCRIPTION Burmister CLASSIFICATION	REMARKS	STRATUM DESCRIPTION
								1.	
5									
10								2	
15									
20		S-1	24/8	19-21	4 4 4 4		Wet, loose, tan, fine to medium SAND, trace coarse sand and fine gravel, trace silt.		
25		S-2	24/12	24-26	3 6 16 18		Wet, medium dense, gray/tan, fine to medium SAND, trace coarse sand, trace silt.		SAND
30		S-3	24/16	29-31	12 15 12 15		Wet, medium dense, gray, fine SAND, trace silt.	3.	

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0 - 4	V. LOOSE	<2	V.SOFT
4 - 10	LOOSE	2 - 4	SOFT
10 - 30	M.DENSE	4 - 8	M.STIFF
30 - 50	DENSE	8 - 15	STIFF
>50	V.DENSE	15 - 30	V.STIFF
		>30	HARD

REMARKS:

1. Safety hammer.
2. No sampling was completed from the surface to 19 feet.
3. 28' possible small boulders/cobbles above fine sand.

BURMISTER CLASSIFICATION	
TRACE	0 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
AND	35 - 50%
PERCENT BY WEIGHT	

NOTES:

1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

PARE CORPORATION

10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS

ENGINEERS *** PLANNERS *** CONSULTANTS

BORING NO. B12-1

SHEET 2 OF 2

PROJECT Barney Pond Dam
Lincoln, RI

PROJECT NO. 8194:01

CHKD. BY DMM

DEPTH (ft)	CASING (b/ft)	SAMPLE NO.	SAMPLE PEN. (in.)/ REC.	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE TONS/FT² OR KG/CM²	SAMPLE DESCRIPTION Burmister CLASSIFICATION	REMARKS	STRATUM DESCRIPTION
									SAND
35		S-4	24/20	34-36	8 11		Wet, medium dense, gray/tan, SILT, some clay, trace to little fine sand.		
					13 17				
40		S-5	24/15	39-41	9 13		Wet, medium dense, gray, SILT, some fine SAND.		SILT
					10 12				
45		S-6	24/16	44-46	14 15		Wet, dense, tan, SILT, some fine SAND.		
					20 28				
50		S-7	24/0	49-51	50 90		No recovery.	3.	
					100/4"		END OF EXPLORATION @ 50'4".		
55									
60									
65									
70									

GRANULAR SOILS	
BLOWS/FT	DENSITY
0 - 4	V. LOOSE
4 - 10	LOOSE
10 - 30	M.DENSE
30 - 50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT	DENSITY
<2	V.SOFT
2 - 4	SOFT
4 - 8	M.STIFF
8 - 15	STIFF
15 - 30	V.STIFF
>30	HARD

REMARKS:

3. Possible pushing cobble.

BURMISTER CLASSIFICATION	
TRACE	0 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
AND	35 - 50%
PERCENT BY WEIGHT	

NOTES:

1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

PARE CORPORATION

10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS

ENGINEERS *** PLANNERS *** CONSULTANTS

BORING NO. **B12-2**

SHEET 1 OF 2

PROJECT	Barney Pond Dam Lincoln, RI	PROJECT NO. CHKD. BY	8194.01 DMM

BORING CO.	New Hampshire Boring	BORING LOCATION	SEE EXPLORATION LOCATION PLAN		
FOREMAN	Chris Knight	GROUND SURFACE ELEVATION	76.7	DATUM	NGVD 29
INSPECTOR	J. Rosenberg	DATE START	1/24/2012	DATE END	1/24/2012

SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.

CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN.

CASING SIZE: 4" OTHER:

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
1/24/12	1:00	9'	34'	

DEPTH (ft)	CASING (b/ft)	SAMPLE NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT² OR KG/CM²	SAMPLE DESCRIPTION (Burmister CLASSIFICATION)	REMARKS	STRATUM DESCRIPTION
5								1.	
10								2.	
15									
20		S-1	24/4	19-21	13 4 5 8		Wet, loose, tan, fine to medium SAND, trace silt, trace coarse sand and gravel.		SAND
25		S-2	24/12	24-26	20 25 32 42		Wet, very dense, tan, fine to medium SAND, some silt, trace fine gravel.	3 4.	
30		S-3	24/16	29-31	44 45 43 37		Moist/wet, very dense, light brown/orange SILT, some fine to medium sand, trace coarse sand and gravel.	5.	SILT

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0 - 4	V. LOOSE	<2	V.SOFT
4 - 10	LOOSE	2 - 4	SOFT
10 - 30	M.DENSE	4 - 8	M.STIFF
30 - 50	DENSE	8 - 15	STIFF
>50	V.DENSE	15 - 30	V.STIFF
		>30	HARD

REMARKS:

1. Safety hammer.
2. No sampling was performed from the surface to 19 feet.
3. Possible boulder 25'-26', mottling/orange staining @ tip.
4. Hard drilling 26-'27' (smooth),
5. Difficult to remove spoon from hole.

BURMISTER CLASSIFICATION	
TRACE	0 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
AND	35 - 50%
PERCENT BY WEIGHT	

NOTES:

1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

PARE CORPORATION

10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS

ENGINEERS *** PLANNERS *** CONSULTANTS

BORING NO. **B12-2**

SHEET 2 OF 2

PROJECT: Barney Pond Dam, Lincoln, RI

PROJECT NO. 8194.01

CHKD. BY DMM

DEPTH (ft)	CASING (b/ft)	SAMPLE NO.	PEN. (in.)/ REC.	SAMPLE DEPTH (FT)	BLOWS/6"	TONS/FT² OR KG/CM²	SAMPLE DESCRIPTION (Burmister CLASSIFICATION)	REMARKS	STRATUM DESCRIPTION
35		S-4	16/12	34-36	60 90		Moist, very dense, white/gray, SILT and WEATHERED ROCK.	6.	SILT AND WEATHERED ROCK
					100/4"				
40		S-5	24/12	39-41	25 27		Wet, dense, fine to medium SAND and SILT, trace fine gravel.	7.	SAND AND SILT
					26 100/5"				
		S-6	0/0	41	100/0		No recovery.	8.	
45									
		C-1	60/60	46.	8 Min		RQD = 56%.	9.	
					8 Min		Light gray Granite BEDROCK		GRANITE BEDROCK
					6.5 Min				
					6 Min				
50					6 Min				
							END OF EXPLORATION @ 51.5'.		
55									
60									
65									
70									

GRANULAR SOILS	
BLOWS/FT	DENSITY
0 - 4	V. LOOSE
4 - 10	LOOSE
10 - 30	M.DENSE
30 - 50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT	DENSITY
<2	V.SOFT
2 - 4	SOFT
4 - 8	M.STIFF
8 - 15	STIFF
15 - 30	V.STIFF
>30	HARD

REMARKS:

6. Cobbles at top.
7. Cobble in tip.
8. Very fine @43', boulder seam,
9. 46'5 very hard

BURMISTER CLASSIFICATION	
TRACE	0 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
AND	35 - 50%

PERCENT BY WEIGHT

NOTES:

1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

PARE CORPORATION

10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS

ENGINEERS *** PLANNERS *** CONSULTANTS

BORING NO. B-1

SHEET 1 OF 1

PROJECT	Barney's Pond Dam Lincoln, RI	PROJECT NO. CHKD. BY	06145.01
BORING CO.	Soil Exploration Corp.	BORING LOCATION	SEE EXPLORATION LOCATION PLAN
FOREMAN	Don Ledger	GROUND SURFACE ELEVATION	76.0' DATUM
ENGINEER	V. Luzzi	DATE START	1/19/2007 DATE END 1/19/2007

SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.

CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN.

CASING SIZE: OTHER: 4 1/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
1/19	10:30	6'	Out	End of Boring

DEPTH (ft)	CASING (bl/ft)	SAMPLE NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT² OR KG/CM²	SAMPLE DESCRIPTION Burmister CLASSIFICATION	REMARKS	STRATUM DESCRIPTION
		S-1	24/5	0-2	5 4		Moist, loose, tan, fine to medium SAND, trace (+) silt, trace gravel.		
					4 4				
		S-2	24/12	2-4	6 8		Moist, medium dense, tan, fine to medium SAND, trace (+) silt.		
					6 8				
5		S-3	24/12	4-6	5 4		Moist to wet, loose, tan, fine to medium SAND, trace (+) silt, trace (-) gravel.		MISCELLANEOUS GRANULAR FILL
					3 4				
		S-4	24/18	6-8	7 2		Wet, very loose, tan, fine to medium SAND, trace (+) silt.		
					1 6				
		S-5	24/2	8-10	3 11		Wet, medium dense, gray, fine SAND, some silt.		
10					7 2				SILTY SAND FILL
		S-6	24/10	10-12	2 1		Wet, very loose, gray, fine SAND, some silt, trace (-) fine angular gravel.		
					2 1				
		S-7	24/22	12-14	7 10		Wet, medium dense, gray, fine SAND, little silt, little angular gravel.		
					14 14				
15									FINE SAND
		S-8	13/6	15-16'1"	12 19		Wet, very dense, gray, fine SAND, little angular gravel, trace (+) silt.		
					100/1"				
20									
		S-9	24/18	20-22	35 28		Wet, very dense, gray, fine SAND, little angular gravel, trace (+) silt.		
					39 37				
								1.	
25							END OF EXPLORATION AUGER REFUSAL @ 24'.		
30									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0 - 4	V. LOOSE	<2	V.SOFT
4 - 10	LOOSE	2 - 4	SOFT
10 - 30	M.DENSE	4 - 8	M.STIFF
30 - 50	DENSE	8 - 15	STIFF
>50	V.DENSE	15 - 30	V.STIFF
		>30	HARD

REMARKS:

1. Auger refusal @ 24'.
2. Boring grouted to surface upon completion.

BURMISTER CLASSIFICATION	
TRACE	0 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
AND	35 - 50%
PERCENT BY WEIGHT	

NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

PARE CORPORATION

10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS

ENGINEERS *** PLANNERS *** CONSULTANTS

BORING NO. B-2

SHEET 1 OF 1

PROJECT: Barney's Pond Dam, Lincoln, RI — PROJECT NO. 06145.01 — CHKD. BY

BORING CO. Soil Exploration Corp. — BORING LOCATION SEE EXPLORATION LOCATION PLAN

FOREMAN George Guinto — GROUND SURFACE ELEVATION 76.0' DATUM

ENGINEER P. Manor — DATE START 1/19/2007 DATE END 1/19/2007

SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.

CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN.

CASING SIZE: OTHER: 4 1/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
1/19	9:30	6.0'±	Out	End of Boring

DEPTH (ft)	CASING (lb/ft)	SAMPLE NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT² OR KG/CM²	SAMPLE DESCRIPTION (Burmister CLASSIFICATION)	REMARKS	STRATUM DESCRIPTION
		S-1	24/6	0-2	5 5		Moist, medium dense, brown fine to medium SAND, little silt, trace gravel.		MISCELLANEOUS GRANULAR FILL
					5 5				
		S-2	24/10	2-4	5 5		Moist, medium dense, tan fine to medium SAND, trace gravel, trace silt.		
					5 5				
5		S-3	24/15	4-6	3 4		Moist, loose, tan fine to medium SAND, trace gravel, trace silt.		
					5 5				
		S-4	24/15	6-8	4 4		Wet, loose, tan fine to medium SAND, some silt, trace fine gravel.		SILTY SAND FILL
					4 6				
		S-5	24/6	8-10	5 5		Wet, medium dense, tan fine to medium SAND, little silt, trace gravel.		
10					7 7				
		S-6	24/20	10-12	6 6		Wet, medium dense, tan fine to medium SAND, little silt, trace gravel.		
					5 5				
		S-7	24/15	12-14	5 5		Wet, medium dense, tan fine to medium SAND, little silt, trace gravel.		
					6 6				
15		S-8	24/14	14-16	4 4		Wet, loose, gray/tan fine to medium SAND, little silt.		FINE TO MEDIUM SAND
					5 6				
20									
		S-9	24/18	20-22	2 2		Wet, very loose, gray fine to medium SAND, trace fine gravel, trace silt.		
					2 2				
25									
		S-10	24/20	25-27	5 6		Wet, medium dense, gray fine to medium SAND, trace fine gravel, trace silt.		
					6 6				
30									
		S-11	24/24	30-32	5 6		Wet, medium dense, gray fine SAND, trace silt.		FINE SAND
					10 11		END OF EXPLORATION @ 32'.	1.	

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0 - 4	V. LOOSE	<2	V.SOFT
4 - 10	LOOSE	2 - 4	SOFT
10 - 30	M.DENSE	4 - 8	M.STIFF
30 - 50	DENSE	8 - 15	STIFF
>50	V.DENSE	15 - 30	V.STIFF
		>30	HARD

REMARKS:

1. Boring grouted to surface upon completion.

BURMISTER CLASSIFICATION	
TRACE	0 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
AND	35 - 50%
PERCENT BY WEIGHT	

NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

PARE CORPORATION

10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS

ENGINEERS *** PLANNERS *** CONSULTANTS

BORING NO. B-3

SHEET 1 OF 2

PROJECT: Barney's Pond Dam, Lincoln, RI — PROJECT NO.: 06145.01 — CHKD. BY:

BORING CO.: Soil Exploration Corp. — BORING LOCATION: SEE EXPLORATION LOCATION PLAN

FOREMAN: George Guinto — GROUND SURFACE ELEVATION: 76.12' — DATUM:

ENGINEER: P. Manor — DATE START: 1/19/2007 — DATE END: 1/19/2007

SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 In.

CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN.

CASING SIZE: — OTHER: 4 1/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
1/19	12:45	6.0'±	Out	End of Boring

DEPTH (ft)	CASING (b/ft)	SAMPLE NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT² OR KG/CM²	SAMPLE DESCRIPTION (Burmister CLASSIFICATION)	REMARKS	STRATUM DESCRIPTION
		S-1	24/6	0-2	11 12		Moist, medium dense, brown fine to medium SAND, little gravel, little silt.		MISCELLANEOUS GRANULAR FILL
					13 15				
		S-2	24/2	2-4	22 16		Moist, medium dense, brown fine to medium SAND, little silt, trace gravel.		
					14 15				
5		S-3	24/19	4-6	5 4		Moist, loose, tan fine to medium SAND, little gravel, trace silt.		
					4 7				
		S-4	24/16	6-8	5 2		Wet, very loose, tan fine to medium SAND and SILT, some gravel.		SILTY SAND FILL
					2 7				
		S-5	24/5	8-10	3 7		Wet, medium dense, tan fine SAND and SILT, trace gravel.		
10					9 10				
		S-6	24/1	10-12	2 4		Wet, medium dense, cobble in tip.		
					6 4				
		S-7	24/14	12-14	4 5		Wet, loose, tan fine SAND and SILT, trace gravel, changing to gray fine SAND and SILT, trace organics.		ORGANIC SAND & SILT
					4 3				
15									
		S-8	24/10	15-17	3 4		Wet, medium dense, gray fine SAND and SILT, trace organics.		
					6 7				
									FINE TO MEDIUM SAND
20									
		S-9	24/20	20-22	3 2		Wet, very loose, gray fine to medium SAND, little silt.		
					2 3				
25									
		S-10	24/10	25-27	8 8		Wet, medium dense, gray fine to medium SAND, little coarse sand, trace silt.		
					10 9				
30									
		S-11	24/12	30-32	17 10		Wet, medium dense, gray fine SAND, trace silt.		FINE SAND
					8 17				

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0 - 4	V. LOOSE	<2	V.SOFT
4 - 10	LOOSE	2 - 4	SOFT
10 - 30	M.DENSE	4 - 8	M.STIFF
30 - 50	DENSE	8 - 15	STIFF
>50	V.DENSE	15 - 30	V.STIFF
		>30	HARD

REMARKS:

BURMISTER CLASSIFICATION	
TRACE	0 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
AND	35 - 50%
PERCENT BY WEIGHT	

NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

PARE CORPORATION

10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS

ENGINEERS *** PLANNERS *** CONSULTANTS

BORING NO. B-3

SHEET 2 OF 2

PROJECT Barney's Pond Dam
Lincoln, RI

PROJECT NO. 06145.01

CHKD. BY

DEPTH (ft)	CASING (b/ft)	SAMPLE NO.	SAMPLE PEN. (in.)/ REC.	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE TONS/FT² OR KG/CM²	SAMPLE DESCRIPTION Burmister CLASSIFICATION	REMARKS	STRATUM DESCRIPTION
35		S-12	24/13	35-37	6 7 7 8		Wet, medium dense, gray fine SAND, trace silt.	1.	FINE SAND
							END OF EXPLORATION @ 37'.		
40									
45									
50									
55									
60									
65									
70									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0 - 4	V. LOOSE	<2	V.SOFT
4 - 10	LOOSE	2 - 4	SOFT
10 - 30	M.DENSE	4 - 8	M.STIFF
30 - 50	DENSE	8 - 15	STIFF
>50	V.DENSE	15 - 30	V.STIFF
		>30	HARD

REMARKS:

1. 2" dia. Pvc monitoring well installed to a depth of 15', 5' screen, 10' riser, 2' bentonite seal, grouted to surface and roadway box installed.

BURMISTER CLASSIFICATION	
TRACE	0 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
AND	35 - 50%
PERCENT BY WEIGHT	

NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

PARE CORPORATION

10 LINCOLN ROAD, SUITE 103, FOXBORO, MASSACHUSETTS

ENGINEERS *** PLANNERS *** CONSULTANTS

BORING NO. B-4

SHEET 1 OF 1

PROJECT	Barney's Pond Dam Lincoln, RI	PROJECT NO. CHKD. BY	06145.01
BORING CO.	Soil Exploration Corp.	BORING LOCATION	SEE EXPLORATION LOCATION PLAN
FOREMAN	Don Ledger	GROUND SURFACE ELEVATION	75.40' DATUM
ENGINEER	V. Luzzi	DATE START	1/19/2007 DATE END 1/19/2007

SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 In.

CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN.

CASING SIZE: OTHER: 4 1/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
1/19	8:30	6'	Out	End of Boring

DEPTH (ft)	CASING (b/ft)	SAMPLE NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT² OR KG/CM²	SAMPLE DESCRIPTION Burmister CLASSIFICATION	REMARKS	STRATUM DESCRIPTION
		S-1	24/18	0-2	10 13		Loose, medium dense, brown/tan, fine to medium SAND, trace (+) silt, trace (+) gravel.		
					4 7				
		S-2	24/12	2-4	7 6		Moist, medium dense, tan, fine to medium SAND, trace (+) silt.		MISCELLANEOUS GRANULAR FILL
					7 7				
5		S-3	24/8	4-6	14 8		Moist to wet, medium dense, tan, fine to medium SAND, some gravel, trace (+) silt.		
					7 6				
		S-4	24/12	6-8	5 5		Wet, medium dense, gray, fine to medium SAND, trace (+) silt.		
					6 5				
		S-5	24/5	8-10	5 5		Wet, medium dense, gray, fine to medium SAND, trace (+) silt.		
10					6 5				
		S-6	24/15	10-12	5 6		Wet, medium dense, gray, fine to medium SAND, trace (+) silt.		
					5 6				
		S-7	24/4	12-14	4 6		Wet, loose, gray, fine to medium SAND, trace (+) silt, trace (-) gravel.		
					3 3				
15		S-8	24/24	14-16	1 2		Wet, very loose, gray, fine to medium SAND, trace (+) silt.		
					1 2				
		S-9	24/24	16-18	3 3		Wet, loose, gray, fine to medium SAND, trace (+) gravel, trace (+) silt.		
					6 6				FINE TO MEDIUM SAND
20									
		S-10	24/6	20-22	1 4		Wet, medium dense, gray, fine to medium SAND, trace (-) gravel, trace (+) silt.		
					7 5				
25									
		S-11	24/24	25-27	7 14		Wet, dense, gray, fine to medium SAND, little (+) angular gravel, trace (-) gravel.		
					22 46				
30									
		S-12	24/24	30-32	10 6		Wet, medium dense, gray, fine SAND, trace silt.		FINE SAND
					6 7		END OF EXPLORATION @ 32'.	1.	

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0 - 4	V. LOOSE	<2	V.SOFT
4 - 10	LOOSE	2 - 4	SOFT
10 - 30	M.DENSE	4 - 8	M.STIFF
30 - 50	DENSE	8 - 15	STIFF
>50	V.DENSE	15 - 30	V.STIFF
		>30	HARD

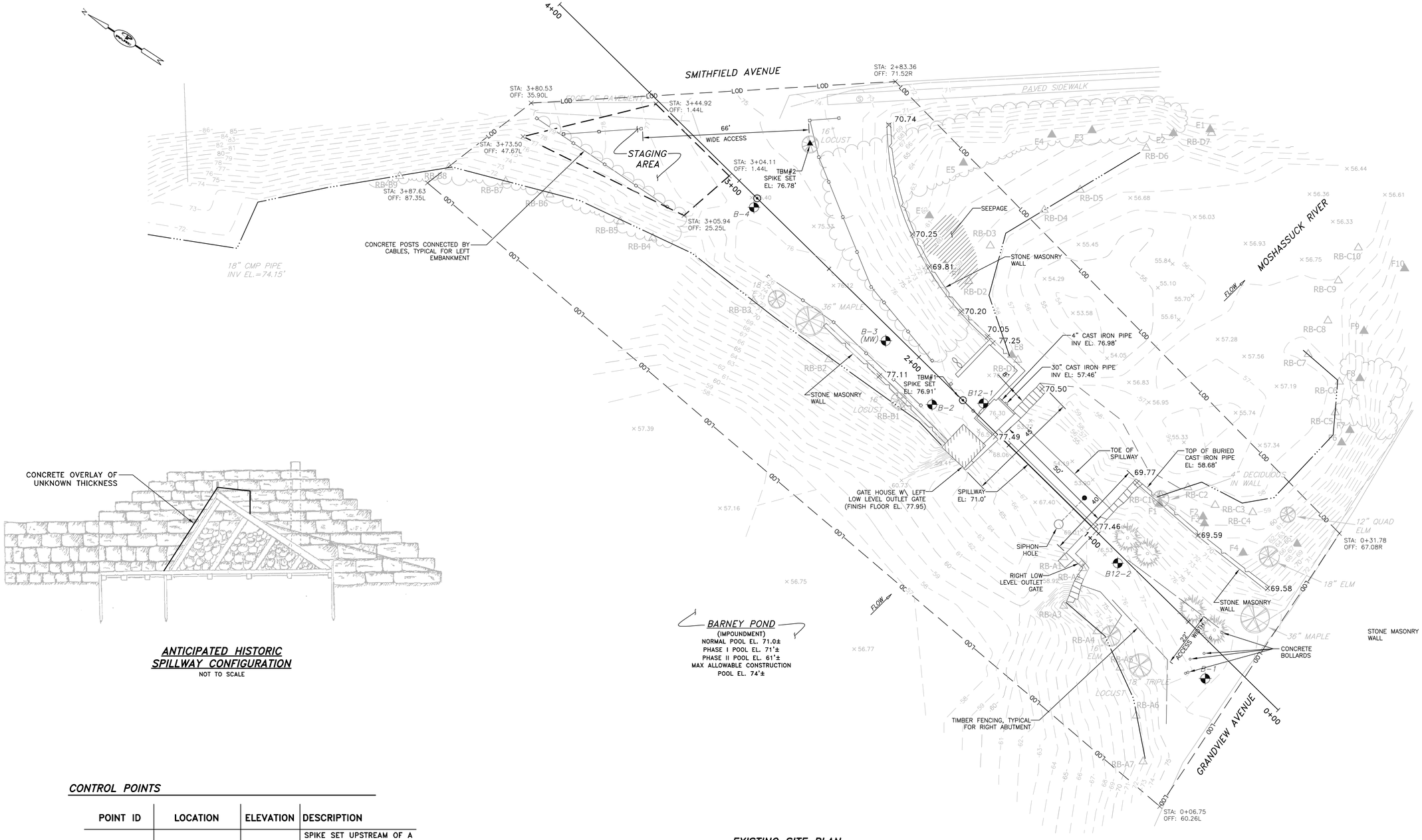
REMARKS:

1. Boring grouted to surface upon completion.

BURMISTER CLASSIFICATION	
TRACE	0 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
AND	35 - 50%
PERCENT BY WEIGHT	

NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.



ANTICIPATED HISTORIC SPILLWAY CONFIGURATION

NOT TO SCALE

EXISTING SITE PLAN

SCALE: 1"=20'

CONTROL POINTS

POINT ID	LOCATION	ELEVATION	DESCRIPTION
⊙ TBM#1	STA: 1+76	76.91'	SPIKE SET UPSTREAM OF A CONCRETE PAD LOCATED TO THE LEFT (I.E. NORTHWEST) OF THE SPILLWAY
⊙ TBM#2	STATION 2+90	76.78'	SPIKE SET SHOWN ON PLAN

BID DOCUMENTS

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE

0" 1"

BAR IS ONE INCH ON ORIGINAL DRAWING.

BARNEY POND DAM IMPROVEMENTS

RI DEM ID: 0101

LINCON, RHODE ISLAND

TOWN OF LINCOLN

REVISIONS:		

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	1"=20'
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	JHG
APPROVED BY:	JMB

EXISTING SITE PLAN

SHEET NO.:

2.0

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EXHIBIT D

AS-BUILT PLANS FOR DAM IMPROVEMENT PROJECT

BID DOCUMENTS

Prepared for the:

TOWN OF LINCOLN

BARNEY POND DAM IMPROVEMENTS

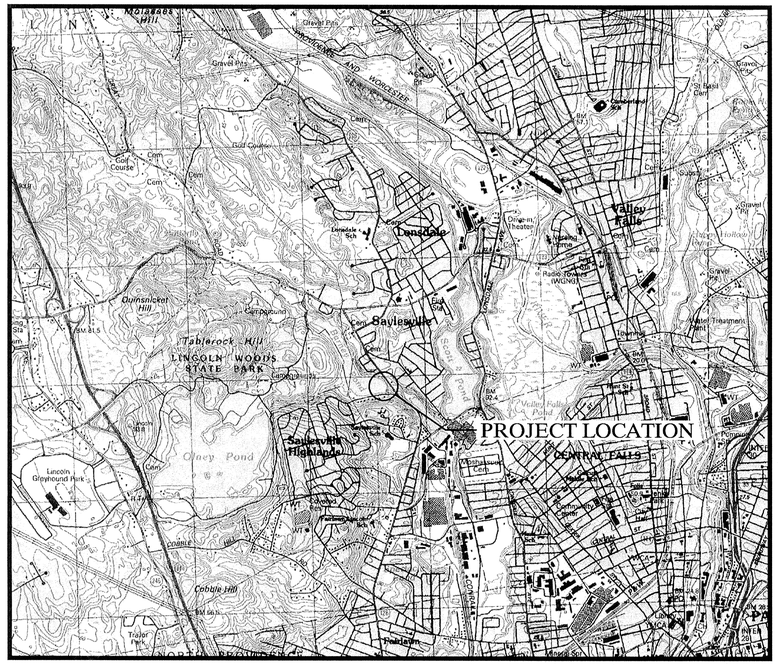
RI DAM No: 101

LINCOLN, RHODE ISLAND

MARCH 2012

AS-BUILTS

Drawing Index



LOCUS PLAN

SCALE: 1" = 2000'

AERIAL PLAN

SCALE: 1" = 400'

Prepared by:

PARE CORPORATION

Foxboro, Massachusetts

PARE CORPORATION

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GENERAL NOTES:

1. FOR THE PURPOSE OF THIS PROJECT:

   OWNER – TOWN OF LINCOLN
   100 OLD RIVER ROAD/P.O. BOX 100
   LINCOLN, RI 02865
   CONTACT: MR. LASZLO SIEGMUND, P.E, TOWN ENGINEER

   ENGINEER – PARE CORPORATION
   10 LINCOLN RD., SUITE 103
   FOXBORO MA 02035
   CONTACT: MR. J. MATTHEW BELLISLE, P.E.

2. ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE RHODE ISLAND BUILDING CODE, THE SPECIFICATIONS INCLUDED IN THIS CONTRACT, AND RIDEM DAM SAFETY REGULATIONS.

3. THESE PLANS ARE INCOMPLETE UNLESS ACCOMPANIED BY THE SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS.

4. TOPOGRAPHIC AND BATHYMETRIC SURVEY INFORMATION OBTAINED FROM A SURVEY PLAN, TITLED "EXISTING CONDITIONS IN THE TOWN OF LINCOLN, RI", DATED MARCH 8, 2007 BY HERITAGE DESIGN GROUP. CONTRACTOR SHALL NOTE THAT ADDITIONAL SCOURING AND/OR DEPOSITION MAY HAVE OCCURRED WITHIN THE WATER COURSES SINCE THE TIME OF THE SURVEY.

5. INFORMATION REGARDING THE LOCATION OF SURROUNDING STRUCTURES, UTILITIES, AND THE AS–BUILT CONFIGURATION AND CONDITION OF THE EXISTING DAM AND SPILLWAY IS FURNISHED SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR AND SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL CONDUCT ITS OWN INDEPENDENT EXAMINATION OF SITE CONDITIONS FOR THE PURPOSE OF BIDDING, FABRICATION, AND CONSTRUCTION ASSOCIATED WITH THE PROJECT. ANY RELIANCE UPON INFORMATION MADE AVAILABLE BY THE TOWN OF LINCOLN OR THE ENGINEER SHALL BE AT THE CONTRACTOR'S RISK.

6. DEPTHS AND THICKNESS OF THE SUBSURFACE STRATA INDICATED HEREIN ARE GENERALIZED FROM THE SUBSURFACE DATA COLLECTED BY PARE. INFORMATION SHOWN FOR THE DAM IS INTERPOLATED AND MAY DIFFER DUE TO THE VARYING NATURE OF GLACIAL DEPOSITS AND MANMADE FILL.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS. PLANS SHALL NOT BE SCALED FOR DIMENSIONS.

8. THE DATUM FOR THE PROJECT IS THE NAUTICAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29). THE BENCHMARK ELEVATION OF 76.78 IS LOCATED ON A SPIKE SET UPSTREAM OF A CONCRETE PAD LOCATED TO THE LEFT (I.E. NORTHWEST) OF THE SPILLWAY. CONTRACTOR SHALL ESTABLISH HORIZONTAL AND VERTICAL CONTROL AS REQUIRED TO ENABLE COMPLETION OF WORK THROUGHOUT THE DURATION OF THE PROJECT.

9. CONSTRUCTION SHALL BE MADE FROM APPROVED SHOP DRAWINGS ONLY.

10. NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL WORK UNLESS OTHERWISE NOTED. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS FOR REVIEW.

11. WHERE REFERENCE IS MADE TO ANY SPECIFICATION, CODE, STANDARD, OR INTERIM SPECIFICATIONS OF THE ORGANIZATION REFERRED TO AND SHALL BE CONSIDERED A PART OF THESE CONTRACT DOCUMENTS TO THE EXTENT INDICATED. IN CASE OF CONFLICT, THE MORE RIGID REQUIREMENTS AND CODES SHALL GOVERN.

12. CONTRACTOR WILL BE REQUIRED TO SUBMIT A CONSTRUCTION SCHEDULE TO THE OWNER WITHIN 3 DAYS OF THE NOTICE OF AWARD. THE CONTRACTOR SHALL UPDATE THE SCHEDULE AS NEEDED THROUGHOUT THE COURSE OF WORK.

13. CONTRACTOR SHALL STAGE ALL EQUIPMENT IN THE DESIGNATED STAGING AREA. ALL GREASING AND REFUELING ACTIVITIES SHALL OCCUR IN THE STAGING AREA(S).

14. CONTRACTOR SHALL PROVIDE A MINIMUM OF 24 HOURS NOTICE PRIOR TO INCREASING FLOW IN THE DOWNSTREAM AREA DUE TO ADJUSTMENT OF POSSIBLE OUTLETS.

15. UPON COMPLETION OF THE PROJECT, CONTRACTOR IS TO PROVIDE TWO AS–BUILT PLAN SETS TO THE OWNER DEPICTING ANY FIELD CHANGES OF DIMENSIONING OR DETAIL, LOCATION OF UNDERGROUND STRUCTURES AND/OR UTILITIES, CONSTRUCTION DEVIATIONS, CHANGES DUE TO FIELD OR CHANGE ORDER, AND DETAILS NOT ON THE ORIGINAL DRAWINGS.

16. CONTRACTOR WILL BE REQUIRED TO ATTEND WEEKLY PROGRESS MEETINGS AS REQUESTED BY THE OWNER.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL PROJECT DEMOLITION AND EXCESS MATERIAL IN ACCORDANCE WITH RHODE ISLAND, LOCAL, AND FEDERAL LAWS.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ADJACENT STRUCTURES AND UTILITIES AT NO ADDITIONAL COST TO THE OWNER.

19. THE CONTRACTOR SHALL FOLLOW ALL OSHA AND OTHER APPLICABLE FEDERAL, STATE AND LOCAL STANDARDS FOR ALL PROJECT COMPONENTS AND ACTIVITIES.

20. ALL CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE LIMITS OF WORK AND TEMPORARY EASEMENTS DEFINED HEREIN.

21. IMPOUNDMENT BATHYMETRIC CONTOURS SHALL NOT BE CONSIDERED THE TOP OF A FIRM IMPOUNDMENT BOTTOM. THE CONTRACTOR SHALL FIELD VERIFY THIS IN PROPOSED COFFERDAM AREAS THROUGH PROBING, IF DEEMED NECESSARY, FOR THE CONTRACTOR'S COFFERDAM SUBMITTAL AT NO EXTRA COST TO THE OWNER.

22. CONTRACTOR SHALL MAINTAIN A SECURE SITE AND PROVIDE APPROPRIATE SAFETY MEASURES TO PREVENT ACCIDENTS. THE SAFETY MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FENCES, FLASHING WARNING LIGHTS, AND POLICING IF NECESSARY.

23. THE CONTRACTOR WILL BE RESPONSIBLE FOR RETURNING ALL PORTIONS OF DISTURBED AREAS, AND ANY OTHER PROPERTY TO PRE CONSTRUCTION CONDITIONS.

24. ANY UTILITIES, INCLUDING, BUT NOT LIMITED TO, WATER, GAS, AND OVERHEAD WIRES THAT MAY BE LOCATED WITHIN THE SITE SHALL BE PROTECTED DURING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT DIG SAFE PRIOR TO UNDERTAKING ANY EXCAVATION.

25. CONTRACTOR SHALL SUPPORT AND PROTECT ALL UTILITIES WITHIN THE LIMITS OF WORK.

ANTICIPATED CONSTRUCTION SEQUENCE:

THE FOLLOWING SEQUENCE IS INTENDED TO BE GENERAL IN NATURE AND SHALL NOT BE CONSIDERED DIRECTION BY THE ENGINEER OR THE OWNER. ALTHOUGH IT IS LIKELY THAT SOME OF THE WORK ITEMS WILL OVERLAP, CONSTRUCTION SEQUENCES FOR THE VARIOUS PROJECT COMPONENTS ARE DESCRIBED SEPARATELY AND MAY NOT NECESSARILY PROCEED IN CONSECUTIVE ORDER. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.

GENERAL

1. CONTRACTOR MOBILIZATION
2. INSTALL SIGNAGE
3. INSTALL PERIMETER EROSION CONTROLS (PHASE 1 AND PHASE 2) INCLUDING TURBIDITY BARRIER.
4. REMOVE AND STOCKPILE EXISTING SITE FEATURES AS NECESSARY TO FACILITATE SITE ACCESS.
5. INSTALL/CONSTRUCT TEMPORARY SITE ACCESS WAYS (PHASE 1 AND PHASE 2).
6. INSTALL WATER DIVERSION AND WATER CONTROL DEVICES AS NECESSARY AND REQUIRED (SEE DIVERSION OF WATER NOTES).

LOW LEVEL OUTLET

1. REHABILITATE THE LEFT LOW LEVEL OUTLET STRUCTURE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, INCLUDING THE REMOVAL AND REPLACEMENT OF THE CONTROL HOUSE'S ROOF.
2. REMORTAR THE STONE MASONRY WALL BETWEEN THE SPILLWAY AND LEFT OUTLET DISCHARGE CHANNEL.

TREE AND STUMP REMOVAL

1. CUT AND REMOVE ALL TREES, SHRUBS, AND BRUSH FROM THE UPSTREAM SLOPE, THE CREST AND BEYOND THE DOWNSTREAM WALLS WITHIN THE LIMITS OF WORK AS INDICATED.
2. REMOVE ALL STUMPS AND OTHER UNDESIRABLE MATERIAL FROM EMBANKMENTS.
3. REMOVE AND BACKFILL ROOT SYSTEMS AND BACKFILL EMBANKMENT WITH SELECT COMPACTED MATERIAL
4. EXCAVATE EMBANKMENT SOILS TO LIMITS INDICATED.
5. FILL RESULTING HOLES WITH SELECT COMPACTED MATERIAL.

SPILLWAY AND LOW LEVEL OUTLET STRUCTURES AND ASSOCIATED WALLS

1. ABANDON THE RIGHT LOW LEVEL OUTLET STRUCTURE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. FILL SIPHON HOLE AT UPSTREAM EDGE OF EXISTING SPILLWAY.
3. DEMOLISH AND DISPOSE OF EXISTING SPLASH PAD AND TOE OF EXISTING SPILLWAY AS INDICATED ON THE PLANS.
4. INSTALL NEW SHEET PILE CUTOFF WALL AND PERFORM PERMEATION GROUTING IN FRONT OF AND BELOW THE SPILLWAY TRAINING WALLS.
5. CONSTRUCT NEW REINFORCED CONCRETE SPILLWAY.
6. INSTALL, TENSION, AND TEST TIE DOWN ANCHORS AS INDICATED IN THE CONTRACT DOCUMENTS.
7. INSTALL SCOUR PAD.
8. INSTALL UPSTREAM AND DOWNSTREAM CHANNEL RIPRAP.

SEEPAGE MITIGATION

1. INSTALL SHEET PILE CUTOFF WALL THROUGH THE LEFT EARTHEN EMBANKMENT AS INDICATED ON THE CONTRACT DOCUMENTS.
2. PERFORM ISOLATED PERMEATION GROUTING IN THE AREA OF THE LEFT LOW LEVEL OUTLET PIPE AND TOWARDS THE BACKSIDE OF THE LEFT SPILLWAY TRAINING WALL.

DOWNSTREAM WALL REPAIRS

1. REPAIR AND REPOINT THE UPPER PORTION OF THE DOWNSTREAM WALL IN THE AREA TO THE LEFT OF THE CHANNEL FOR THE LOW LEVEL OUTLET (LOCATED LEFT OF THE SPILLWAY).

SLOPE AND GRADING STABILIZATION

1. PLACE, GRADE, AND COMPACT SUITABLE FILL MATERIAL TO THE LINES AND GRADES SHOWN ON THE PROJECT PLANS.
2. IN AREAS TO BE STABILIZED WITH RIPRAP INSTALL TOE STONES (WHERE INDICATED), GEOTEXTILE FABRIC, BEDDING STONE, AND RIPRAP ARMOR STONE
3. IN AREAS TO BE STABILIZED WITH VEGETATION, PLACE AND GRADE LOAM AND SEED.

DRAINAGE SYSTEM

1. UPGRADE DRAINAGE SWALES AS INDICATED ON PLANS.

STABILIZE THE DOWNSTREAM WALLS

1. INSTALL STONE RIPRAP BUTTRESS ALONG THE TOE OF THE DOWNSTREAM WALLS AS INDICATED ON THE PLANS. (ADD ALT. 1)

SAFETY RAILINGS

1. INSTALL TIMBER SPLIT RAIL FENCING BEHIND THE TOP OF THE TRAINING WALLS AND DOWNSTREAM WALLS AS INDICATED ON THE PLANS.

PROJECT COMPLETION

1. PLACEMENT OF LOAM AND SEED ON THE UPSTREAM SLOPE, DOWNSTREAM SLOPE, AND ALL AREAS DISTURBED BY THE CONSTRUCTION ACTIVITIES.
2. PLACEMENT OF ROADWAY MATERIAL AND SHOULDER FILL ON DAM CREST.
3. LOAM AND SEED DAM CREST.
4. NOTIFY ENGINEER / OWNER OF SUBSTANTIAL PROJECT COMPLETION.
5. DEMOBILIZE AND RETURN DISTURBED AREAS OF THE SITE TO PRECONSTRUCTION CONDITIONS.

CONCRETE NOTES:

1. CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 318–08 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE OR LATEST EDITION.
2. UNLESS NOTED OTHERWISE CONCRETE SHALL BE NORMAL WEIGHT WITH TYPE II CEMENT AND AS FOLLOWS:
   4,000 PSI AT 28 DAYS 1 1/2" AGGREGATE – TYPICAL
   2,500 PSI AT 56 DAYS 1 1/2" AGGREGATE – MASS CONCRETE
3. CONCRETE SHALL BE AIR–ENTRAINED. PERCENTAGE OF ENTRAINED AIR SHALL BE 6%±1%.
4. THE MAXIMUM WATER CEMENT RATIO SHALL BE AS FOLLOWS:
   – 0.45 MAX – TYPICAL CONCRETE (4,000 PSI)
   – 0.48 MAX – MASS CONCRETE (2,500 PSI)
5. THE TRICALCIUM ALUMINATE (C3A) SHALL BE LESS THAN 4%.
6. CALCIUM CHLORIDE SHALL NOT BE USED.
7. ALL CONCRETE SHALL BE PLACED IN THE DRY.
8. THE CONCRETE SLUMP SHALL NOT EXCEED 3 INCHES.
9. REINFORCING STEEL SHALL CONFORM TO ASTM A–615 OR A–706 (WELDABLE) GRADE 60.
10. COMPLETE SHOP DRAWINGS AND SCHEDULES OF ALL REINFORCING STEEL SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF THAT PORTION OF THE WORK. ALL ACCESSORIES MUST BE SHOWN ON THE SHOP DRAWINGS.
11. ALL REINFORCING STEEL SHALL BE EPOXY COATED. ALL SUPPORTS SUCH AS CHAIRS, BOLSTERS, SPACERS, BLOCKS AND HANGERS SHALL BE OF NON–CORROSIVE MATERIAL.
12. DETAILING OF CONCRETE REINFORCING AND ACCESSORIES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI PUBLICATION 315.
13. WHEN REINFORCEMENT IS LAP SPLICED CLASS B SPLICES SHALL BE PROVIDED IN ACCORDANCE WITH ACI–318.
14. UNLESS OTHERWISE NOTED, MINIMUM CONCRETE COVER FOR THE SPILLWAY AND SCOUR PAD REINFORCING STEEL SHALL BE AS SPECIFIED IN ACI 318–08 SECTION 7.7 CORROSIVE ENVIRONMENTS.
15. THE EXPOSED SURFACE OF THE SPILLWAY SHALL BE RUBBED AND ALL VOIDS, AIR POCKETS, DEFORMATIONS FILLED WITH EPOXY FILLER.
16. THE TOP SURFACE OF THE SCOUR PAD SHALL BE HAND FLOATED TO A SMOOTH FINISH.
17. PROVIDE A 3/4" CHAMFER ON ALL EXPOSED EDGES OF CONCRETE.
18. CONCRETE SHALL BE SAW CUT NO MORE THAN 12 HOURS AFTER PLACEMENT OF THE CONCRETE.

TREE REMOVAL NOTES:

1. CONTRACTOR SHALL CUT, REMOVE, GRUB ROOTS, AND DISPOSE ALL TREES AND STUMPS FROM WITHIN THE LIMITS OF WORK.
2. ALL DISPOSAL SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.

MISCELLANEOUS STEEL NOTES:

1. CUTOFF WALL SHEETING SHALL BE AZ 14–770 (OR EQUAL) CONTINUOUSLY INTERLOCKING TYPE AND SHALL CONFORM TO ASTM A572 – GRADE 50 WITH A MINIMUM SECTION MODULUS OF 25.2 CUBIC INCHES PER LINEAR FOOT AND A MINIMUM NOMINAL WEB THICKNESS OF 0.375 INCHES. THE CUTOFF SHEETING SHALL BE NEW AND HOT ROLLED TO MINIMIZE INTERLOCK LEAKAGE. LIFTING HOLES OR OTHER PENETRATIONS IN THE CUTOFF SHEETING SHALL BE SEALED AS DIRECTED BY THE ENGINEER.

LOAM AND SEED NOTES:

1. CONTRACTOR SHALL APPLY FERTILIZER AND LOAM TO PREPARED TOPSOIL SURFACE AT THE RATES INDICATED IN THE PROJECT SPECIFICATIONS.
2. CONTRACTOR SHALL SEED ENTIRE DAM AND DISTURBED AREA AS INDICATED IN THE PROJECT SPECIFICATIONS.
3. CONTRACTOR SHALL MULCH ENTIRE SEEDED AREA WITH STRAW MULCH.
4. CONTRACTOR SHALL INSTALL JUTE MESH OVER ENTIRE SEEDED AREA IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR OVERLAPPING, ANCHORING, AND DIRECTION OF PLACEMENT.
5. CONTRACTOR SHALL ESTABLISH AND MAINTAIN A HEALTHY STAND OF GRASS AS INDICATED IN THE SPECIFICATIONS
6. RETAINAGE WILL BE HELD TILL AN ACCEPTABLE STAND OF GRASS, AS INDICATED IN THE PROJECT SPECIFICATIONS, HAS BEEN ESTABLISHED.

LEGEND

EXISTING		PROPOSED
	TREELINE	
	CONTOUR 1'	52
	CONTOUR 5'	55
	SILT FENCE	
	EDGE OF WATER	
	COFFERDAM	
WF1234	WETLAND FLAGS	

B-2 DENOTES BORINGS COMPLETED BY SOIL EXPLORATION CORPORATION ON JANUARY 19, 2007. BORINGS WERE OBSERVED BY PARE CORPORATION PERSONNEL.

B12-1 DENOTES BORINGS COMPLETED BY NEW HAMPSHIRE BORING OF BROCKTON, MA ON JANUARY 23 & 24, 2012. BORINGS WERE OBSERVED BY PARE CORPORATION PERSONNEL.

ABBREVIATIONS

HAY HAY BALES	SILT SILT FENCE
R&D REMOVE & DISPOSE	TB TURBIDITY BARRIER

DIVERSION OF WATER NOTES:

1. THE CONTRACTOR SHALL MAINTAIN FLOW THROUGHOUT CONSTRUCTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY SOIL OR OTHER MATERIAL FROM ENTERING THE RIVER CHANNEL OR IMPOUNDMENT.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOSS AND DAMAGE DUE TO A FAILURE OF ANY DIVERSION STRUCTURES CONSTRUCTED DURING THE WORK.
4. CONTRACTOR SHALL REGULATE DISCHARGES AND PHASE CONSTRUCTION SO THAT CONSTRUCTION EQUIPMENT DOES NOT PASS THROUGH FLOWING WATER.
5. IN ACCORDANCE TO RIDEM RULE 10, THE DAM IS REQUIRED TO BE CAPABLE OF PASING FLOWS ASSOCIATED WITH A 10–YEAR STORM (I.E., FOR CONSTRUCTION PROJECTS BETWEEN 3 AND 6 MONTHS IN LENGTH). TO ACCOMMODATE THE ESTIMATED VOLUME OF WATER ASSOCIATED WITH THE FLOWS FROM THE 10–YEAR STORM, THE CONTRACTOR SHALL PERFORM THE FOLLOWING
   A. AFTER THE REHABILITATION OF THE LEFT LOW LEVEL OUTLET IS COMPLETED AND BEFORE COMMENCING THE DEMOLITION OF THE SCOUR PAD, THE CONTRACTOR SHALL DRAW DOWN THE IMPOUNDMENT TO EL. 61.0 USING THE REHABILITATED OUTLET.
   B. AFTER THE IMPOUNDMENT IS DRAWN DOWN, THE CONTRACTOR SHALL INSTALL A COFFERDAM UPSTREAM OF THE EXISTING SPILLWAY THAT WOULD ALLOW THE POND TO FILL FROM THE ABOVE MENTIONED DRAW DOWN LEVEL TO A MAXIMUM ELEVATION OF 74.0 AS A RESULT OF STORM FLOW
   C. IN ADDITION TO THE COFFERDAM, THE CONTRACTOR SHALL DESIGN, INSTALL, AND MAINTAIN A BYPASS SYSTEM CAPABLE OF PASSING A MINIMUM FLOW OF 200 CUBIC FEET PER SECOND, INCLUDING FLOWS FROM THE REHABILITATED LEFT LOW LEVEL OUTLET. THE EXISTING RIGHT LOW LEVEL OUTLET (IN ITS CURRENT CONDITION) SHALL NOT BE USED FOR BYPASS PURPOSES.
6. ANY NECESSARY DIVERSIONS AND COFFERDAMS SHALL BE DESIGNED BY THE CONTRACTOR AND SHALL BE APPROVED BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. ALL DIVERSIONS SHALL BE INSTALLED AND REMOVED IN THEIR ENTIRETY AT NO ADDITIONAL COST TO THE OWNER.

BID DOCUMENTS

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING.

BARNEY POND DAM IMPROVEMENTS
RI DEM ID: 0101
LINCOLN, RHODE ISLAND
TOWN OF LINCOLN

REVISIONS:

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	AS NOTED
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	JHG / GLB
APPROVED BY:	JMB

NOTES AND LEGEND

SHEET NO.: 1.0

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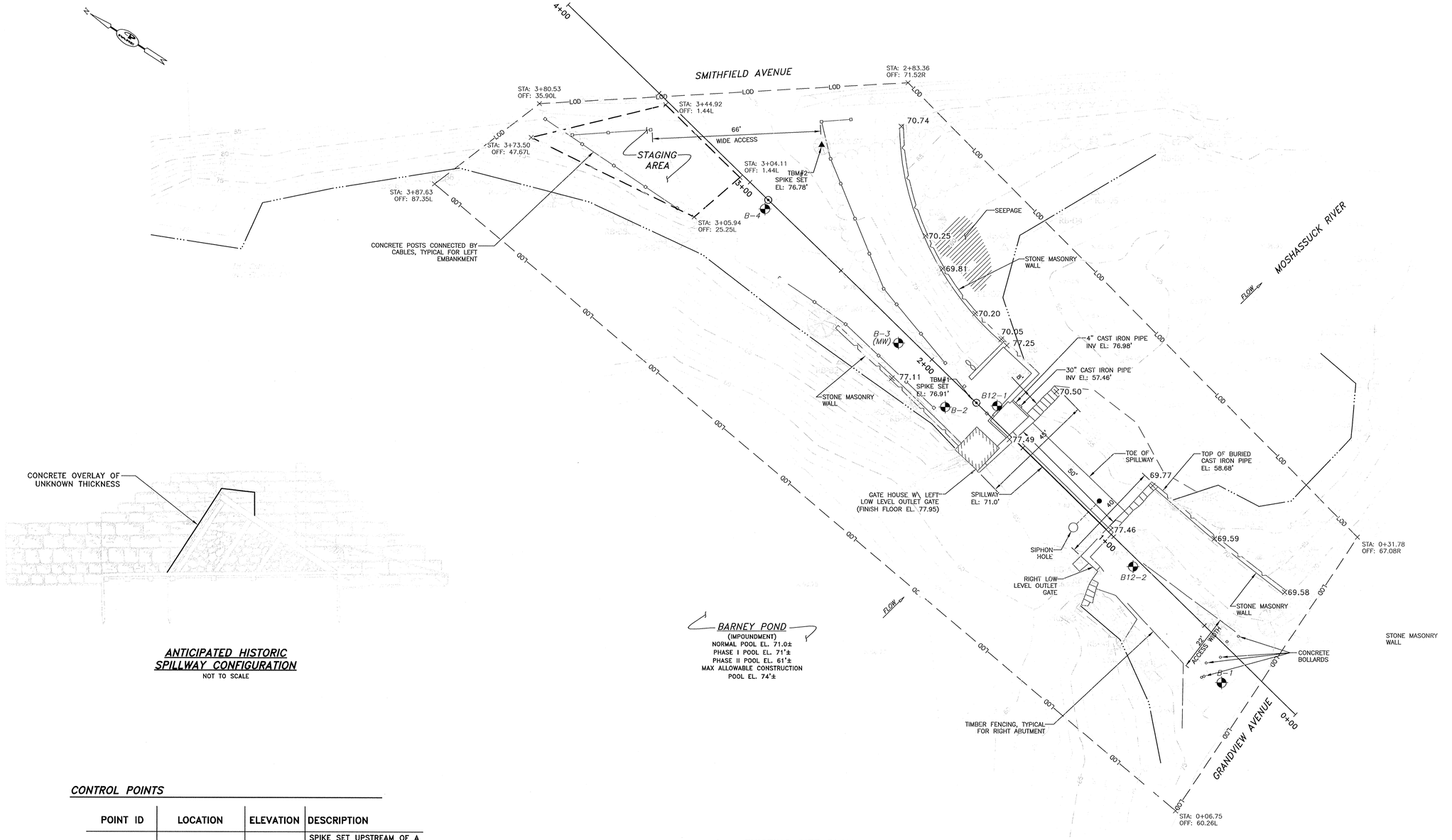

ANTICIPATED HISTORIC SPILLWAY CONFIGURATION
NOT TO SCALE

BARNEY POND
(IMPOUNDMENT)
NORMAL POOL EL. 71.0±
PHASE I POOL EL. 71'±
PHASE II POOL EL. 61'±
MAX ALLOWABLE CONSTRUCTION POOL EL. 74'±

EXISTING SITE PLAN
SCALE: 1"=20'

CONTROL POINTS

POINT ID	LOCATION	ELEVATION	DESCRIPTION
⊙ TBM#1	STA: 1+76	76.91'	SPIKE SET UPSTREAM OF A CONCRETE PAD LOCATED TO THE LEFT (I.E. NORTHWEST) OF THE SPILLWAY
⊙ TBM#2	STATION 2+90	76.78'	SPIKE SET SHOWN ON PLAN

BID DOCUMENTS

Z:\2005\08 Jobs\08194.01 Barney Pond\Drawings\2.0 - Existing Site.dwg

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BARNEY POND DAM IMPROVEMENTS

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LINCON, RHODE ISLAND
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REVISIONS:

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
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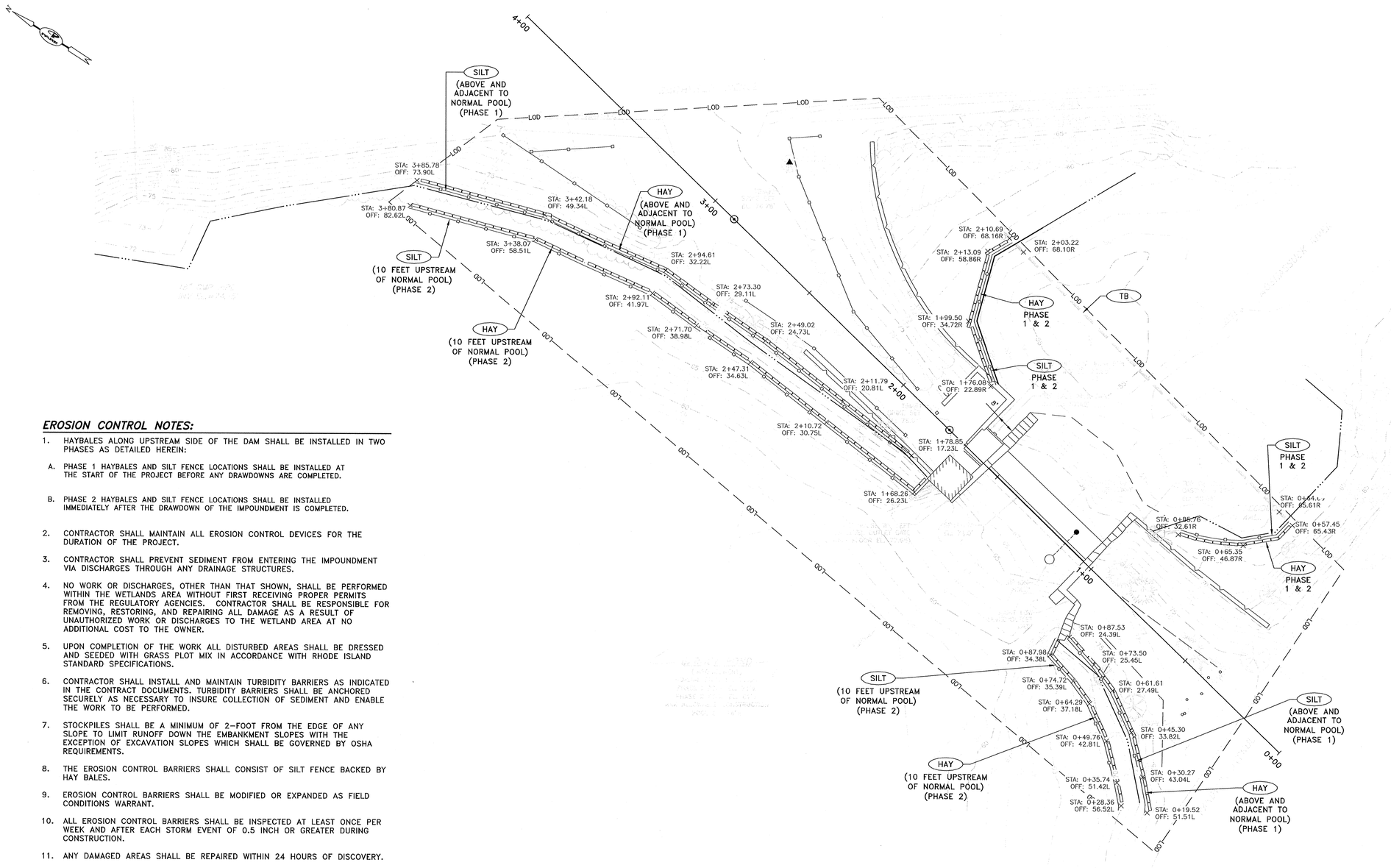
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	JHG
APPROVED BY:	JMB

EXISTING SITE PLAN

SHEET NO.:
2.0



EROSION CONTROL NOTES:

1. HAYBALES ALONG UPSTREAM SIDE OF THE DAM SHALL BE INSTALLED IN TWO PHASES AS DETAILED HEREIN:

   A. PHASE 1 HAYBALES AND SILT FENCE LOCATIONS SHALL BE INSTALLED AT THE START OF THE PROJECT BEFORE ANY DRAWDOWNS ARE COMPLETED.

   B. PHASE 2 HAYBALES AND SILT FENCE LOCATIONS SHALL BE INSTALLED IMMEDIATELY AFTER THE DRAWDOWN OF THE IMPOUNDMENT IS COMPLETED.

2. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT.
3. CONTRACTOR SHALL PREVENT SEDIMENT FROM ENTERING THE IMPOUNDMENT VIA DISCHARGES THROUGH ANY DRAINAGE STRUCTURES.
4. NO WORK OR DISCHARGES, OTHER THAN THAT SHOWN, SHALL BE PERFORMED WITHIN THE WETLANDS AREA WITHOUT FIRST RECEIVING PROPER PERMITS FROM THE REGULATORY AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESTORING, AND REPAIRING ALL DAMAGE AS A RESULT OF UNAUTHORIZED WORK OR DISCHARGES TO THE WETLAND AREA AT NO ADDITIONAL COST TO THE OWNER.
5. UPON COMPLETION OF THE WORK ALL DISTURBED AREAS SHALL BE DRESSED AND SEEDED WITH GRASS PLOT MIX IN ACCORDANCE WITH RHODE ISLAND STANDARD SPECIFICATIONS.
6. CONTRACTOR SHALL INSTALL AND MAINTAIN TURBIDITY BARRIERS AS INDICATED IN THE CONTRACT DOCUMENTS. TURBIDITY BARRIERS SHALL BE ANCHORED SECURELY AS NECESSARY TO INSURE COLLECTION OF SEDIMENT AND ENABLE THE WORK TO BE PERFORMED.
7. STOCKPILES SHALL BE A MINIMUM OF 2–FOOT FROM THE EDGE OF ANY SLOPE TO LIMIT RUNOFF DOWN THE EMBANKMENT SLOPES WITH THE EXCEPTION OF EXCAVATION SLOPES WHICH SHALL BE GOVERNED BY OSHA REQUIREMENTS.
8. THE EROSION CONTROL BARRIERS SHALL CONSIST OF SILT FENCE BACKED BY HAY BALES.
9. EROSION CONTROL BARRIERS SHALL BE MODIFIED OR EXPANDED AS FIELD CONDITIONS WARRANT.
10. ALL EROSION CONTROL BARRIERS SHALL BE INSPECTED AT LEAST ONCE PER WEEK AND AFTER EACH STORM EVENT OF 0.5 INCH OR GREATER DURING CONSTRUCTION.
11. ANY DAMAGED AREAS SHALL BE REPAIRED WITHIN 24 HOURS OF DISCOVERY.
12. DEWATERING BASINS SHALL CONSIST OF HAY BALE ENCLOSURES, TANKS, PERMEABLE BLADDERS, OR OTHER APPROPRIATE METHOD. DEWATERING WASTEWATERS SHALL BE PUMPED TO THE DEWATERING BASINS AND TREATED PRIOR TO DISCHARGE.
13. DISCHARGE OF TURBID WATER TO BARNEY POND, THE MOSHASSUCK RIVER OR ANY WETLAND SHALL BE PROHIBITED.
14. THE TURBIDITY BOOM AND CURTAIN SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF EMBANKMENT EXCAVATION AND SHALL REMAIN IN PLACE UNTIL PERMANENT STABILIZATION OF EMBANKMENT IS ACHIEVED.
14. UPON COMPLETION OF GRADING, ALL EXPOSED SURFACES NOT OTHERWISE TREATED SHALL BE COVERED WITH A MINIMUM OF 6" OF LOAM AND SEEDED. MULCH SHALL BE APPLIED AS NECESSARY TO PROVIDE TEMPORARY STABILIZATION UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED.
15. CONTRACTOR SHALL PREVENT SEDIMENT FROM ENTERING THE IMPOUNDMENT VIA DISCHARGES THROUGH ANY NECESSARY COFFERDAMS UPSTREAM OF ANY WORK.

EROSION CONTROL PLAN

SCALE: 1"=20'

BID DOCUMENTS

Z:\2005\08 Jobs\08194.01 Barney Pond\Drawings\2.1 - Erosion Control Plan.dwg

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FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE

0" 1"

BAR IS ONE INCH ON ORIGINAL DRAWING.

BARNEY POND DAM IMPROVEMENTS

RI DEM ID: 0101
LINCON, RHODE ISLAND
TOWN OF LINCOLN

REVISIONS:		

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	1"=20'
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	JHG
APPROVED BY:	JMB

EROSION CONTROL PLAN

SHEET NO.:

2.1

MAS Building & Bridge, Inc.
Barney Pond Dam Improvements
Lincoln, RI

R.F.I. # Barney-009
DATE: 8/10/12

R.F.I. FORM

Engineer
Pare Corporation
10 Lincoln Road, Suite 103
Foxboro, MA 02035

General Contractor:
MAS Building & Bridge, Inc
P.O. 49
Franklin, MA 02038

Phone: 508-520-2277
Fax: 508-520-2276

This is a Request For Information/Clarification/Interpretation related to the Contract Documents/Specifications.

QUESTION:

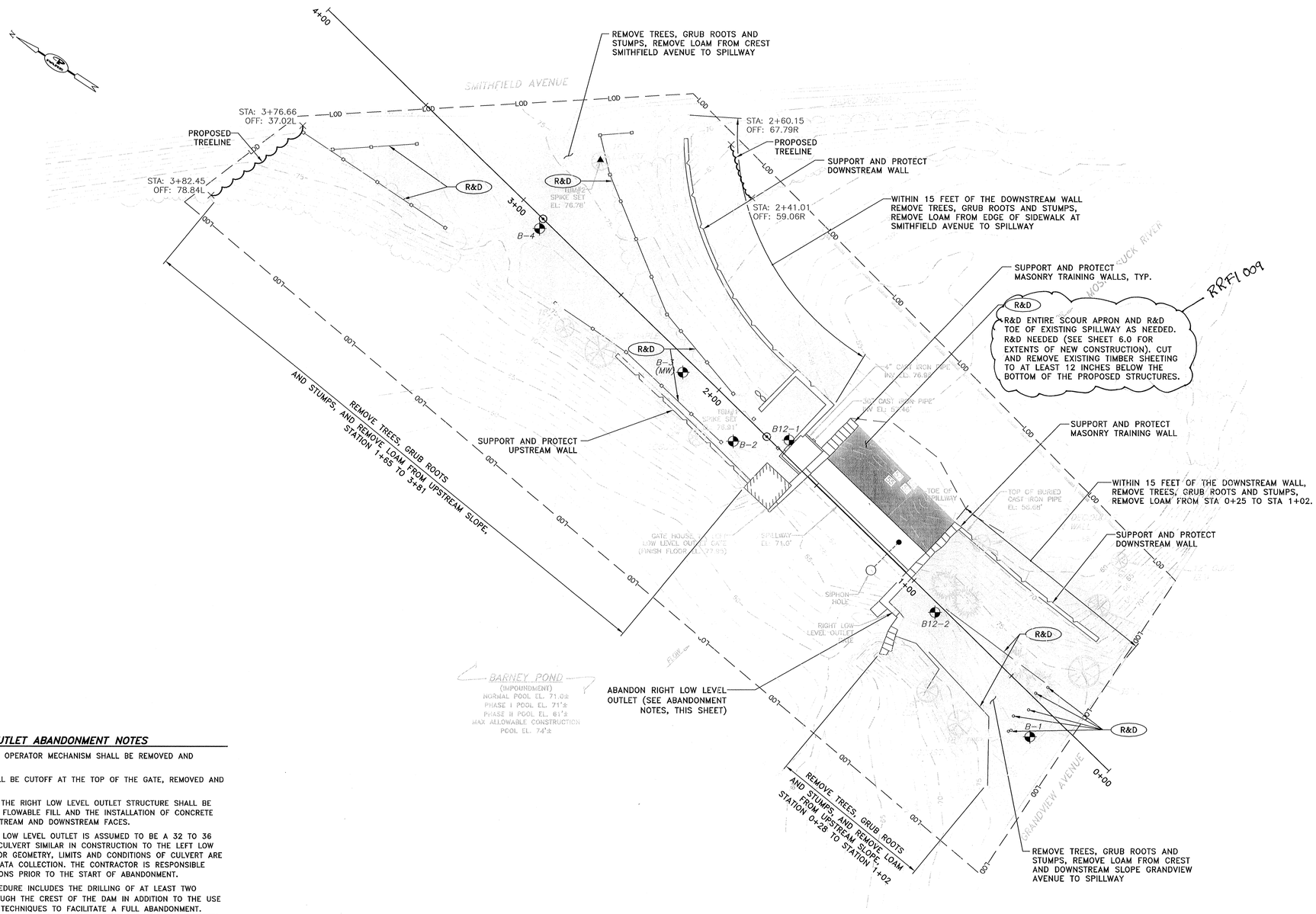
Please refer to section C on drawing 6.0. The 4 corners of the scour pad were set up for control. From there the actual dimension from the scour pad to the existing spillway is 15'-6". At the base there is vertical timber lagging. On drawing 3.0 a note states to "R&D toe of existing spillway as needed." MAS is concerned that demolishing part of the spillway and having to remove the vertical lagging, will compromise the existing structure. MAS proposes to leave the structure as is and decrease the 17'-6" dimension from the scour pad to the spillway to 15'-6". Please confirm this is acceptable.

Originated By: Fred Sorbo **Information Required Not Later Than:** 8/15/2012

REPLY: **Date Received:** 8/10/12

PARE has run through stability analyses of the new spillway considering leaving the existing spillway toe in place and shortening up the upstream side of the proposed spillway base and has determined that the new spillway section satisfies stability requirements. This also taken into consideration the rebooting of the cutoff sheeting per RFI No. 5. Therefore, the existing toe can remain in place with the decrease in spillway base dimension as requested.

Response By: David Matheson **Date:** 8/23/12



SITE SKETCH

SCALE: 1"=20'

RIGHT LOW LEVEL OUTLET ABANDONMENT NOTES

1. THE REMNANTS OF THE OPERATOR MECHANISM SHALL BE REMOVED AND DISPOSED.
2. THE TIMBER STEM SHALL BE CUTOFF AT THE TOP OF THE GATE, REMOVED AND DISPOSED.
3. THE ABANDONMENT OF THE RIGHT LOW LEVEL OUTLET STRUCTURE SHALL BE THROUGH FILLING WITH FLOWABLE FILL AND THE INSTALLATION OF CONCRETE PLUGS ALONG THE UPSTREAM AND DOWNSTREAM FACES.
4. THE CULVERT FOR THE LOW LEVEL OUTLET IS ASSUMED TO BE A 32 TO 36 INCH DIAMETER STEEL CULVERT SIMILAR IN CONSTRUCTION TO THE LEFT LOW LEVEL OUTLET. INTERIOR GEOMETRY, LIMITS AND CONDITIONS OF CULVERT ARE BASED UPON LIMITED DATA COLLECTION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING CONDITIONS PRIOR TO THE START OF ABANDONMENT.
5. THE ANTICIPATED PROCEDURE INCLUDES THE DRILLING OF AT LEAST TWO VENT/FILL HOLES THROUGH THE CREST OF THE DAM IN ADDITION TO THE USE OF TREMIE PLACEMENT TECHNIQUES TO FACILITATE A FULL ABANDONMENT. THE VENT HOLES SHALL BE HELD OPEN WITH CASING AND ABANDONNED WITH A NONSHRINK GROUT OR FLOWABLE FILL AT THE COMPLETION OF THE ABANDONMENT.
6. THE CULVERT ABANDONMENT SHALL BE PERFORMED WITH NO HORIZONTAL COLD JOINTS PERMITTED.
7. THE CULVERT IS TO BE FILLED WITH A NON EXCAVATABLE, NONSHINK, LOW PERMEABILITY FLOWABLE FILL.
8. THE CONTRACTOR SHALL SUBMIT AN ABANDONMENT PROCEDURE AND DESIGN PRIOR TO UNDERTAKING THE WORK.
9. THE FORMWORK AT THE DOWNSTREAM END OF CULVERT SHALL HAVE SUFFICIENT STRENGTH TO RESIST PRESURES ASSOCIATED WITH UNCURRED FLOWABLE FILL.
10. THE EXISITNG GATE ON THE UPSTREAM END OF THE OUTLET SHALL BE LEFT IN PLACE, SEALED, AND SUFFICIENTLY REINFORCED TO RESIST PRESURES ASSOCIATED WITH UNCURRED FLOWABLE FILL.

BID DOCUMENTS

Z:\JOBS\08 Jobs\08194.01 Barney Pond\Drawings\3.0 - Demo Plan.dwg

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SCALE ADJUSTMENT GUIDE
0" 1"
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BARNEY POND DAM IMPROVEMENTS

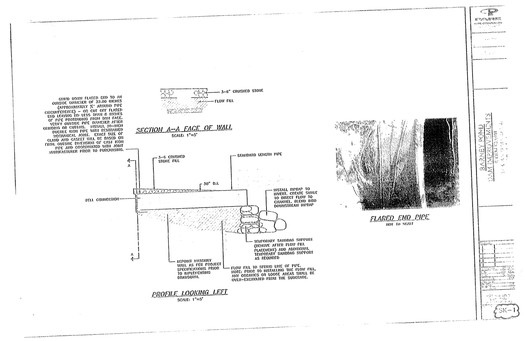
RI DEM ID: 0101
LINCON, RHODE ISLAND
TOWN OF LINCOLN

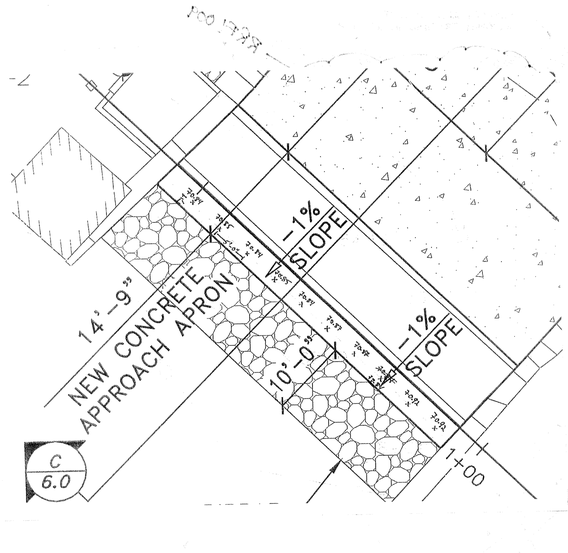
REVISIONS:		

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	1"=20'
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	AWB
APPROVED BY:	JMB

DEMOLITION PLAN

SHEET NO.: 3.0

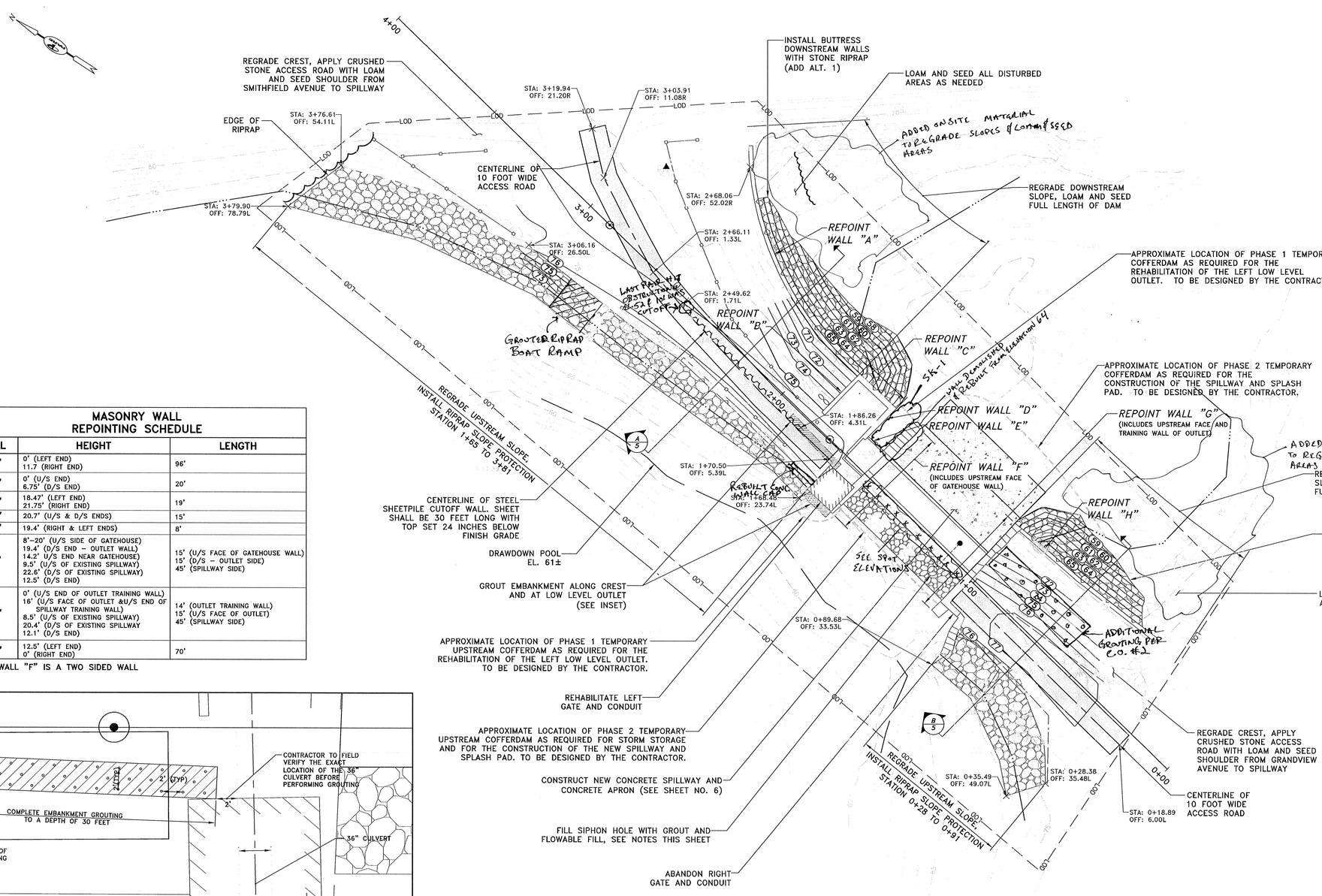

SECTION A–A FACE OF WALL
PROFILE LOOKING LEFT
FLARED END PIPE


14'–9"
NEW CONCRETE
APPROACH APRON
10'–0"
–1%
SLOPE
–1%
SLOPE
1+00
C
6.0

MASONRY WALL REPOINTING SCHEDULE

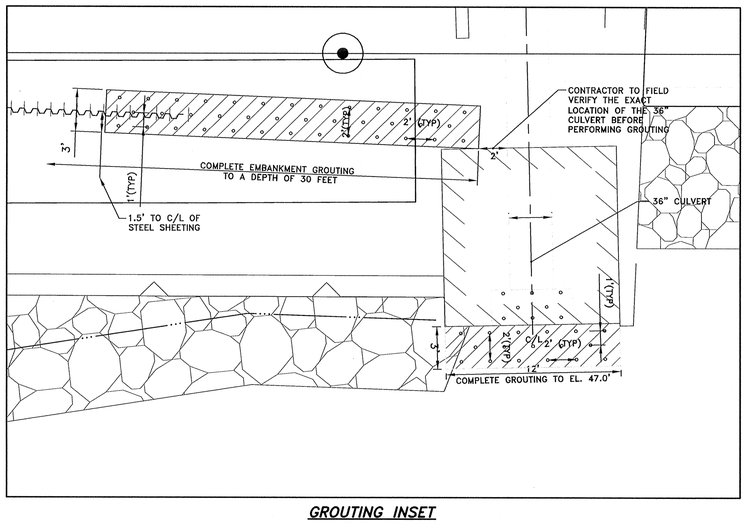
WALL	HEIGHT	LENGTH
"A"	0' (LEFT END) 11.7' (RIGHT END)	96'
"B"	0' (U/S END) 6.75' (D/S END)	20'
"C"	18.47' (LEFT END) 21.75' (RIGHT END)	19'
"D"	20.7' (U/S & D/S ENDS)	15'
"E"	19.4' (RIGHT & LEFT ENDS)	8'
"F"	8'-20' (U/S SIDE OF GATEHOUSE) 19.4' (D/S END – OUTLET WALL) 14.2' U/S END NEAR GATEHOUSE) 9.5' (U/S OF EXISTING SPILLWAY) 22.6' (D/S OF EXISTING SPILLWAY) 12.5' (D/S END)	15' (U/S FACE OF GATEHOUSE WALL) 15' (D/S – OUTLET SIDE) 45' (SPILLWAY SIDE)
"G"	0' (U/S END OF OUTLET TRAINING WALL) 16' (U/S FACE OF OUTLET &U/S END OF SPILLWAY TRAINING WALL) 8.5' (U/S OF EXISTING SPILLWAY) 20.4' (D/S OF EXISTING SPILLWAY 12.1' (D/S END)	14' (OUTLET TRAINING WALL) 15' (U/S FACE OF OUTLET) 45' (SPILLWAY SIDE)
"H"	12.5' (LEFT END) 0' (RIGHT END)	70'

NOTE: WALL "F" IS A TWO SIDED WALL



PROPOSED SITE PLAN

SCALE: 1"=20'



GROUTING INSET

SCALE: 1"=5'

GROUTING AND FLOWABLE FILL AT SIPHON HOLE

1. AFTER THE IMPOUNDMENT IS DRAWN DOWN AND BEFORE THE EXISTING SPLASH PAD IS DEMOLISHED, THE CONTRACTOR SHALL FILL THE SIPHON HOLE ON THE UPSTREAM SIDE OF THE EXISTING SPILLWAY WITH NON-SHRINK GROUT AND/OR FLOWABLE FILL TO THE SAME STRENGTH AND INSTALLATION PROCEDURES PROVIDED FOR PERMEATION GROUTING. A MINIMUM OF 4 HOLES AT 5 FEET SPACING POSITIONED AS DIRECTED BY THE ENGINEER SHALL BE ANTICIPATED.

BID DOCUMENTS

Z:\JOBS\08 Jobs\08194.01 Barney Pond\Drawings\4.0 – Proposed Site.dwg

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING.

BARNEY POND DAM IMPROVEMENTS

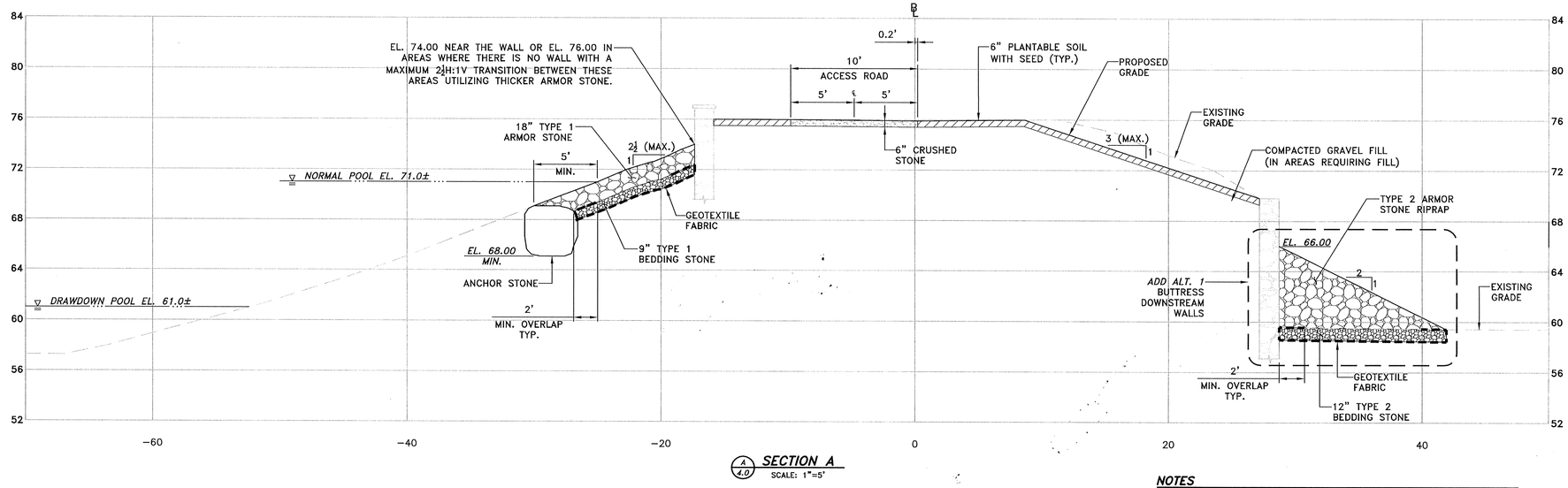
RI DEM ID: 0101
LINCOLN, RHODE ISLAND
TOWN OF LINCOLN

REVISIONS:

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	1"=20'
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	AWB
APPROVED BY:	JMB

PROPOSED SITE PLAN

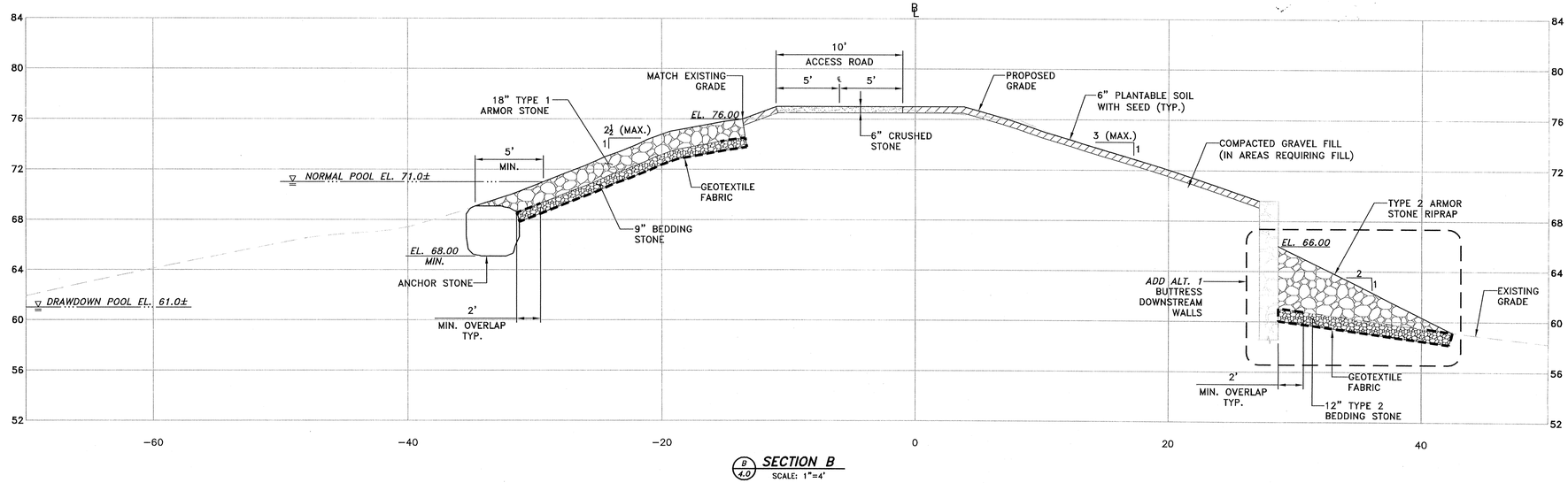
SHEET NO.: 4.0



A/4.0 **SECTION A**
SCALE: 1"=5'

NOTES

1. STRIP TOPSOIL PRIOR TO PLACEMENT OF BUTTRESS.
2. BUTTRESS RIPRAP SHALL BE PLACED IN A TIGHT MATRIX.
3. SHOULD BUTTRESS NOT BE INSTALLED, CONTRACTOR SHALL INSTALL MINIMUM 6" OF LOAM AND SEED.
4. EXTEND LOAM AND SEED FROM EDGE OF WALL, OR EDGE OF BUTTRESS (ADD ALT. 1) DOWNSTREAM AT LEAST 15 FT OR LIMITS OF DISTURBANCE, WHICHEVER IS GREATER.
5. SHOULD THE BUTTRESS BE INSTALLED, FULLY REPOINT THE EXISTING WALL FROM EL. 65.00 TO TOP OF WALL. MORTAR WORK FROM EL. 65.00 TO THE BOTTOM OF THE WALLS SHALL BE LIMITED TO FILLING THE GAPS BETWEEN THE STONES.
6. SHOULD THE BUTTRESS NOT BE INSTALLED, FULLY REPOINT THE EXISTING WALL ACROSS ITS FULL EXPOSED HEIGHT.



B/4.0 **SECTION B**
SCALE: 1"=4'

BID DOCUMENTS

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PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING.

BARNEY POND DAM IMPROVEMENTS

RI DEM ID: 0101
LINCON, RHODE ISLAND
TOWN OF LINCOLN

REVISIONS:	

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	AS NOTED
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	AWB
APPROVED BY:	JMB

PROPOSED SECTIONS

SHEET NO.:
5.0

Z:\JOBS\08 Jobs\08194.01 Barney Pond\Drawings\5.0 - Proposed Sections.dwg

MAS Building & Bridge, Inc.
West Dudley Bridge Replacement
Dudley, MA

R.F.I. # Barney-003
DATE: 7/24/12

R.F.I. FORM

Engineer
Pare Corporation
10 Lincoln Road, Suite 103
Foxboro, MA 02035

General Contractor:
MAS Building & Bridge, Inc
P.O. 49
Franklin, MA 02038

Phone: 508-520-2277
Fax: 508-520-2276

This is a Request For Information/Clarification/Interpretation related to the Contract Documents/Specifications.

QUESTION:

Please refer to Section C on Sheet 6.0. MAS laid out the upstream apron and noticed an issue. The orignal dam structure is in conflict with the new 4'-0" x 2'-0" foundation wall. All but 6" of the width of the wall will land on the original dam structure. MAS would like the move the wall and apron upstream. Please advise.

Originated By: Fred Sorbo **Information Required Not Later Than:** 7/25/2012

REPLY: **Date Received:**

The proposed upstream vertical wall may be constructed immediately upstream of the existing upstream face of the spillway. A bond breaker shall be provided are indicated on the plans and the reinforcing steel shall be adjusted accordingly. The proposed spillway apron shall be elongated in the upstream direction to accomodate this change. The configuration of the downstream side of the spillway shall remain the same.

Response By: Andrea Judge **Date:** 7/24/12

MAS Building & Bridge, Inc.
Barney Pond Dam Improvements
Lincoln, RI

R.F.I. # Barney-005
DATE: 8/2/12

R.F.I. FORM

Engineer
Pare Corporation
10 Lincoln Road, Suite 103
Foxboro, MA 02035

General Contractor:
MAS Building & Bridge, Inc
P.O. 49
Franklin, MA 02038

Phone: 508-520-2277
Fax: 508-520-2276

This is a Request For Information/Clarification/Interpretation related to the Contract Documents/Specifications.

QUESTION:

Please refer to section C on drawing 6.0 and the attached sketch. MAS would like to move the vertical construction joint in the first lift of unreinforced concrete. The joint would be moved from the downstream expansion joint to where the height of the concrete jumps from 2'-6" to 4'-0". This is for constructability purposes, moving the joint would make the forming more efficient. Also, MAS would propose moving the steel sheeting cutoff wall 1'-0" upstream, in order to keep it away from the joint. Please confirm this is acceptable.

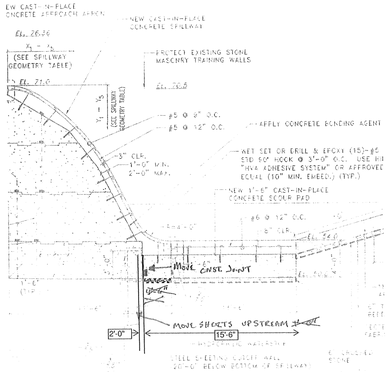
Originated By: Fred Sorbo **Information Required Not Later Than:** 8/10/2012

REPLY: **Date Received:**

The joint can be shifted as requested with modifications to the RFI as follows:
1. Extend the bedding stone layer to the relocated joint as indicated on the marked up sketch (See Attached).
2. Relocate the cutoff sheeting such that the downstream face is 2 feet upstream of the relocated joint as indicated on the marked up sketch (See Attached).

Response By: D.Matheson **Date:** 8/3/12

RFI #005 Response



MAS Building & Bridge, Inc.
Barney Pond Dam Improvements
Lincoln, RI

R.F.I. # Barney-009
DATE: 8/10/12

R.F.I. FORM

Engineer
Pare Corporation
10 Lincoln Road, Suite 103
Foxboro, MA 02035

General Contractor:
MAS Building & Bridge, Inc
P.O. 49
Franklin, MA 02038

Phone: 508-520-2277
Fax: 508-520-2276

This is a Request For Information/Clarification/Interpretation related to the Contract Documents/Specifications.

QUESTION:

Please refer to section C on drawing 6.0. The 4 corners of the scour pad were set up for control. From there the actual dimension from the scour pad to the existing spillway is 15'-6". At the base there is vertical timber lagging. On drawing 3.0 a note states to "R&D toe of existing spillway as needed." MAS is concerned that demolishing part of the spillway and having to remove the vertical lagging, will compromise the existing structure. MAS proposes to leave the structure as is and decrease the 17'-6" dimension from the scour pad to the spillway to 15'-6". Please confirm this is acceptable.

Originated By: Fred Sorbo **Information Required Not Later Than:** 8/15/2012

REPLY: **Date Received:** 8/10/12

PARE has run theough stability analyses of the new spillway considering leaving the existing spillway toe in place and shortening up the upstream side of the proposed spillway base and has determined that the new spillway section satisfies stability requirements. This also takes into consideration the relocating of the cutoff sheeting per RFI No. 5. Therefore, the existing toe can remain in place with the decrease in spillway base dimension as requested.

Response By: David Matheson **Date:** 8/23/12

MAS Building & Bridge, Inc.
West Dudley Bridge Replacement
Dudley, MA

R.F.I. # Barney-002
DATE: 7/9/12

R.F.I. FORM

Engineer
Pare Corporation
10 Lincoln Road, Suite 103
Foxboro, MA 02035

General Contractor:
MAS Building & Bridge, Inc
P.O. 49
Franklin, MA 02038

Phone: 508-520-2277
Fax: 508-520-2276

This is a Request For Information/Clarification/Interpretation related to the Contract Documents/Specifications.

QUESTION:

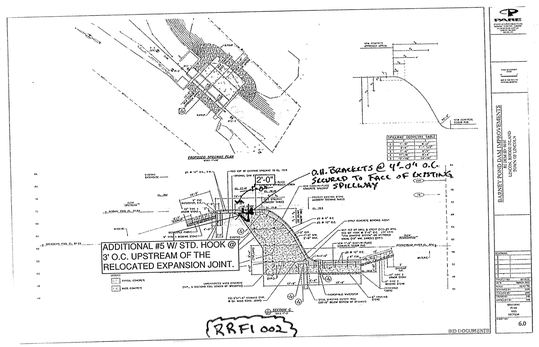
Please refer to Section C on Sheet 6.0 and the attached sketch. MAS proposes to move the expansion joint at the crest of the spillway back up the apron to 1'-0" before the crest of the existing spillway. MAS would also like to remove the construction joint at the top of the apron and pour the apron and the 4'-0" foundation wall monolithically. MAS will use the following steps for theis procedure: 1) Apply bond breaker to existing spillway. 2) Install overhangs on existing spillway at 4'-0" on center for 1'-0" overhang. 3) The overhang will remain and not be removed until MAS forms the top lift of unreinforced concrete. Once the overhangs are removed the bond breaker will be repaired. Please confirm this is acceptable.

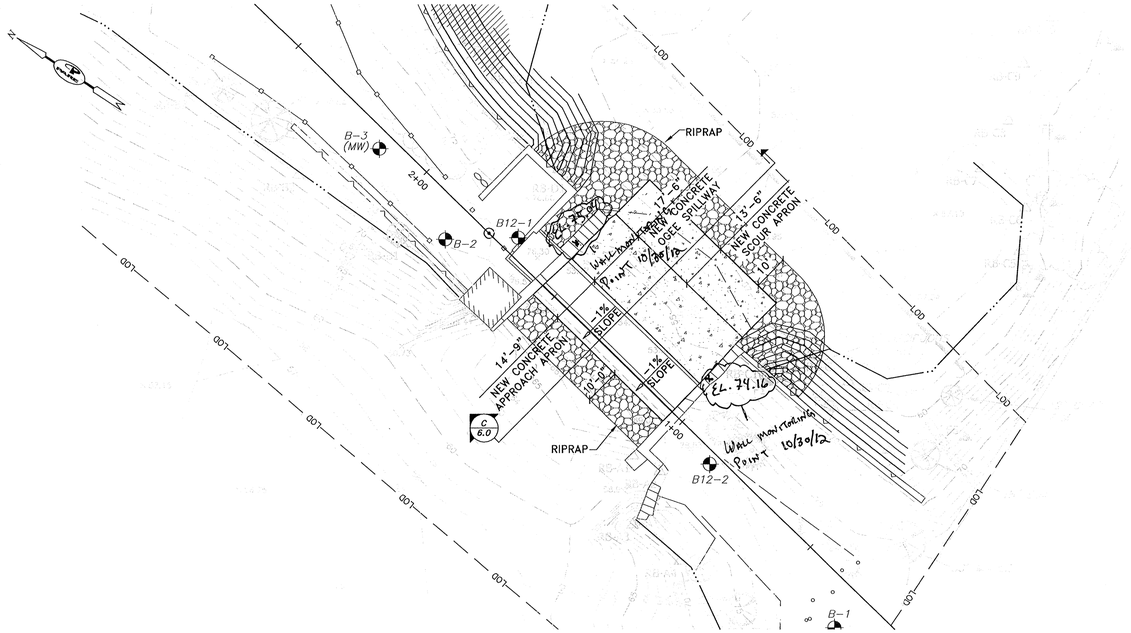
Originated By: Fred Sorbo **Information Required Not Later Than:** 7/12/2012

REPLY: **Date Received:** 7/9/2012

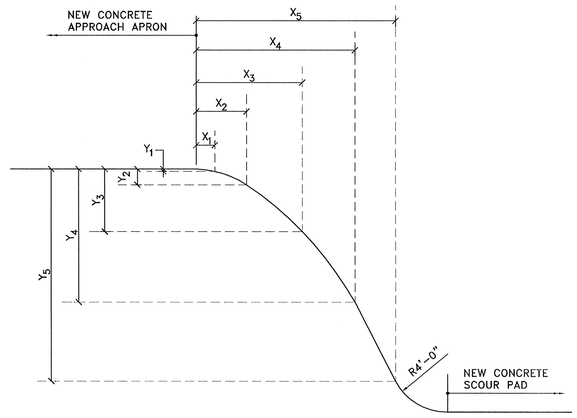
The alternative approach is acceptable given the following:
1. The expansion joint is relocated providing a minimum bearing of 2'-0" on the mass concrete, as indicated on the attached sketch.
2. An additional #5 hooked bar @ 3'-0" O.C. is provided upstream of the relocated expansion joint, as indicated on the attached sketch.

Response By: Adam D. Cabral, P.E. Digitally signed by Adam D. Cabral, P.E. DN: cn=Adam D. Cabral, P.E., o=PARE Corporation, ou=Senior Engineer, email=acabral@pare.com, c=US Date: 2012.07.10 13:18:51 -04'00' **Date:** 7/10/2012

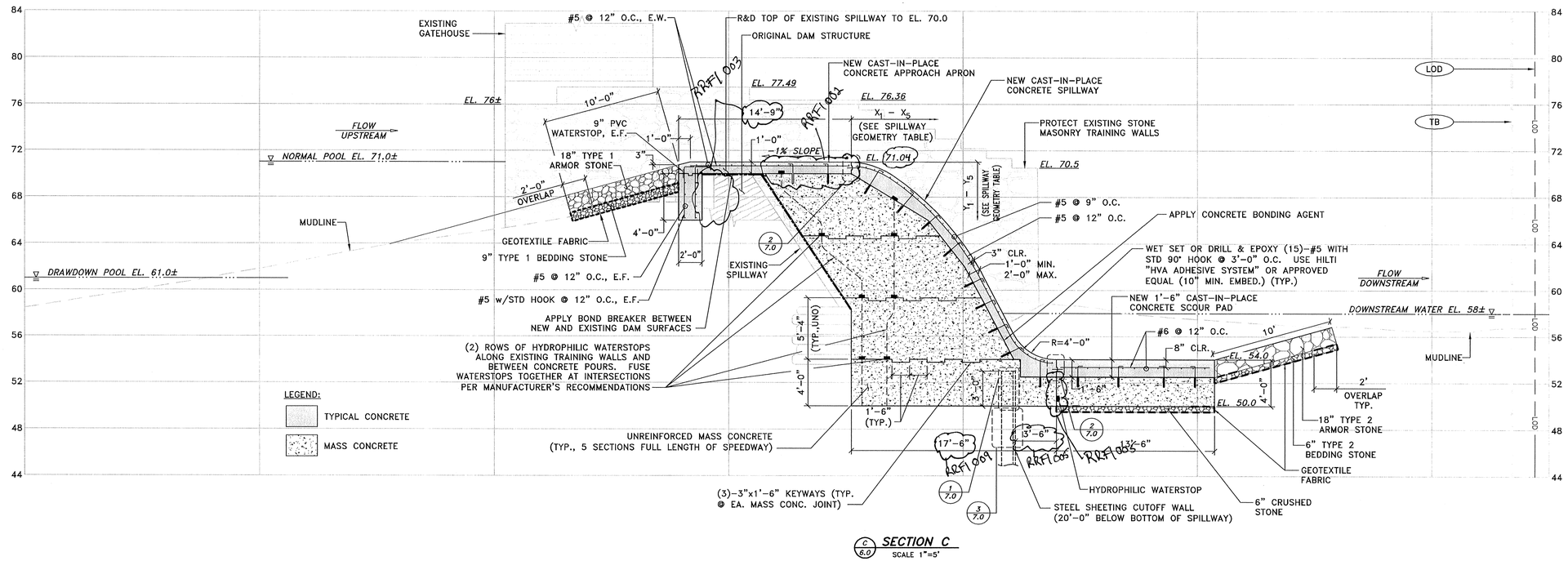




PROPOSED SPILLWAY PLAN
SCALE: 1"=20'



SPILLWAY GEOMETRY TABLE		
	X	Y
1	1'-3½"	0'-2"
2	3'-6"	1'-1 1/2"
3	7'-4½"	4'-5"
4	11'-0½"	9'-4"
5	13'-10½"	14'-10"



SECTION C
SCALE 1"=5'

BID DOCUMENTS

Z:\0005\08 Jobs\08194.01 Barney Pond\Drawings\6.0 - Spillway Plan and Sections.dwg

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING.

BARNEY POND DAM IMPROVEMENTS
RI DEM ID: 0101
LINCON, RHODE ISLAND
TOWN OF LINCOLN

REVISIONS:

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	AS NOTED
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	JHG
APPROVED BY:	JMB

SPILLWAY PLAN AND SECTION

SHEET NO.:
6.0

MAS Building & Bridge, Inc.
Barney Pond Dam Improvements
Lincoln, RI

R.F.I. # Barney-004
DATE: 7/31/12

R.F.I. FORM

Engineer
Pare Corporation
10 Lincoln Road, Suite 103
Foxboro, MA 02035

General Contractor:
MAS Building & Bridge, Inc
P.O. 49
Franklin, MA 02038

Phone: 508-520-2277
Fax: 508-520-2276

This is a Request For Information/Clarification/Interpretation related to the Contract Documents/Specifications.

QUESTION:

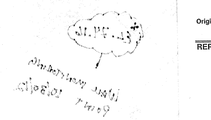
Please refer to Detail 2/6.0 on Sheet 7.0. When looking at the detail it shows a 9" water stop at 1/5L down from the top of concrete. At the upstream expansion joint L=12", therefore the 9" water stop will be 2.4 inches from the surface. MAS has concern that this will create spalling at this area. Please advise.

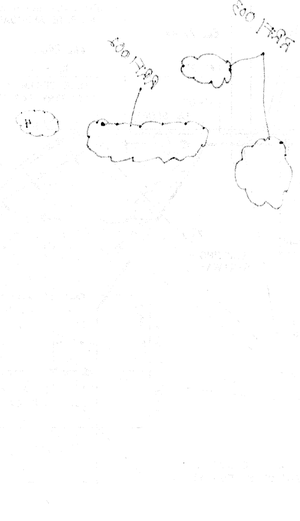
Originated By: Fred Sorbo **Information Required Not Later Than:** 7/31/2012

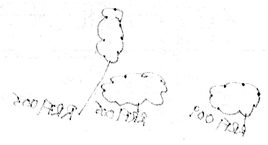
REPLY: **Date Received:** 7/31/2012

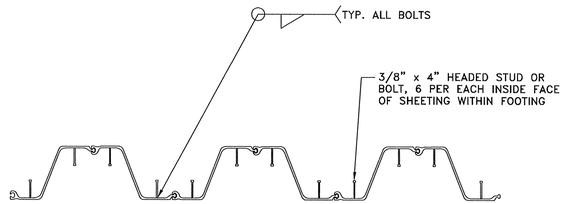
The location of the water stop can be shifted down so that it is 4 inches below the top of the approach slab. In turn, the dowels can also be shifted down as well but no greater than 4 inches from the bottom of the slab.

Response By: David Matheson **Date:** 7/31/2012

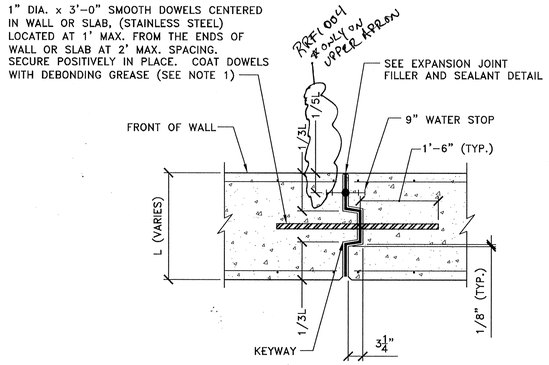








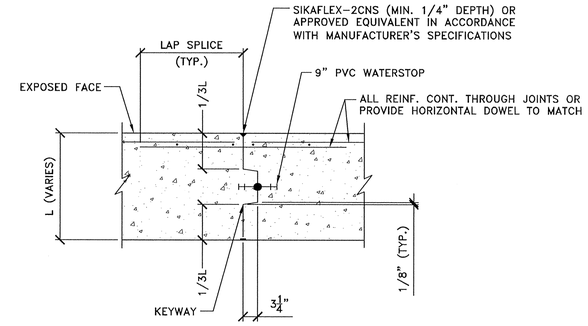
1 / 6.0 **SHEETPILE SHEAR TABS IN SPILLWAY BASE**
SCALE 1"=2'



NOTE:

1. STAINLESS STEEL BARS SHALL BE AUSTENITIC GRADE 316 IN ACCORDANCE WITH ASTM A276 WITH A MINIMUM YIELD STRENGTH OF 30 KSI.

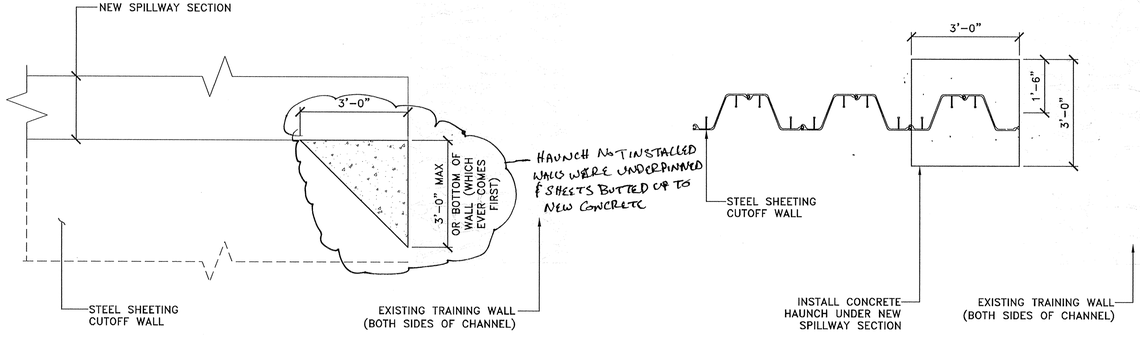
2 / 6.0 **EXPANSION JOINT DETAIL**
SCALE 3/4"=1'-0"



NOTES:

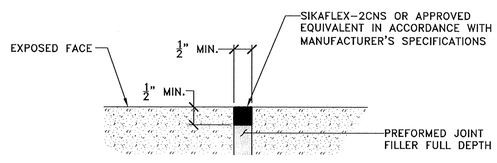
1. SPACE 25'-0" CENTER TO CENTER MAX.
2. 3/4" DEEP V-GROOVE CONTROL JOINT MAY BE SUBSTITUTED FOR A CONSTRUCTION JOINT.
3. CONTRACTOR TO SUBMIT JOINT LAYOUT PRIOR TO CONCRETE PLACEMENT,

TYPICAL CONSTRUCTION JOINT
SCALE 3/4"=1'-0"



SECTION ***PLAN VIEW***

3 / 6.0 **SHEETPILE SHEAR TABS IN SPILLWAY BASE**
SCALE 1/2"=1'-0"



EXPANSION JOINT FILLER AND SEALANT DETAIL
SCALE 3/4"=1'-0"

BID DOCUMENTS

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING.

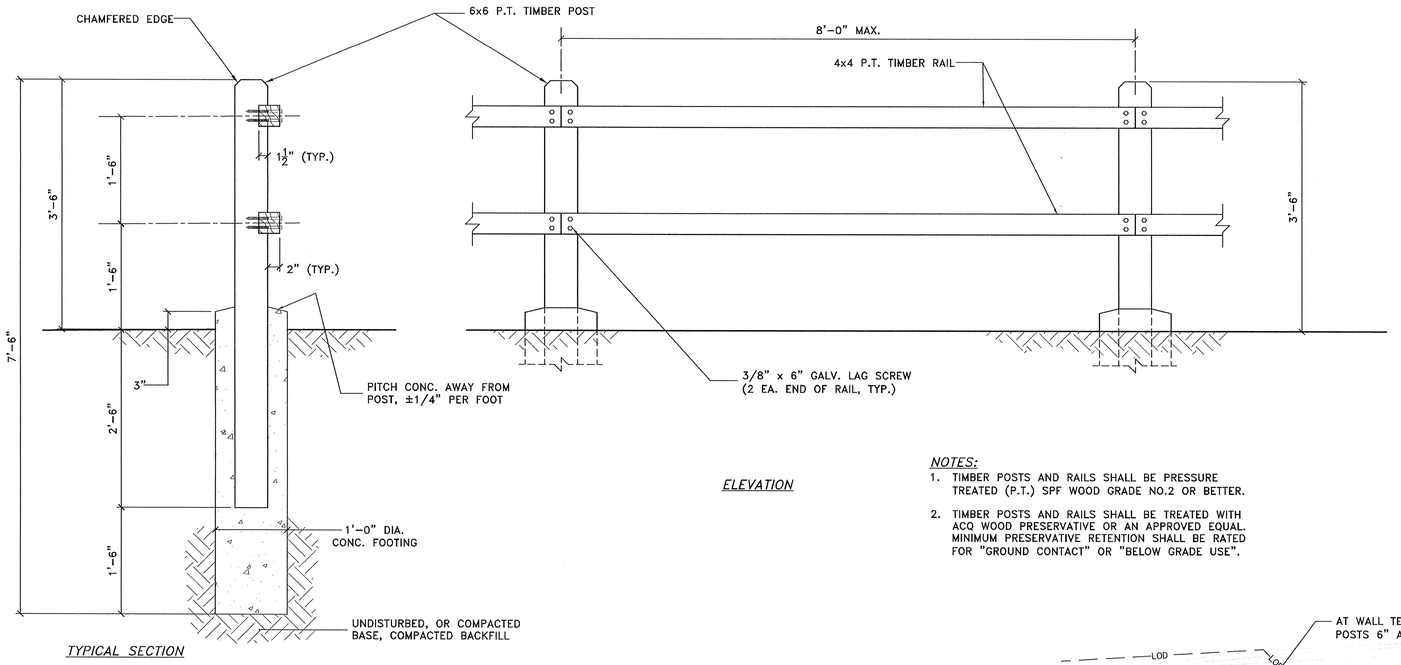
BARNEY POND DAM IMPROVEMENTS
RI DEM ID: 0101
LINCON, RHODE ISLAND
TOWN OF LINCOLN

REVISIONS:

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	AS NOTED
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	JHG
APPROVED BY:	JMB

SPILLWAY DETAILS

SHEET NO.: 7.0



TYPICAL SECTION

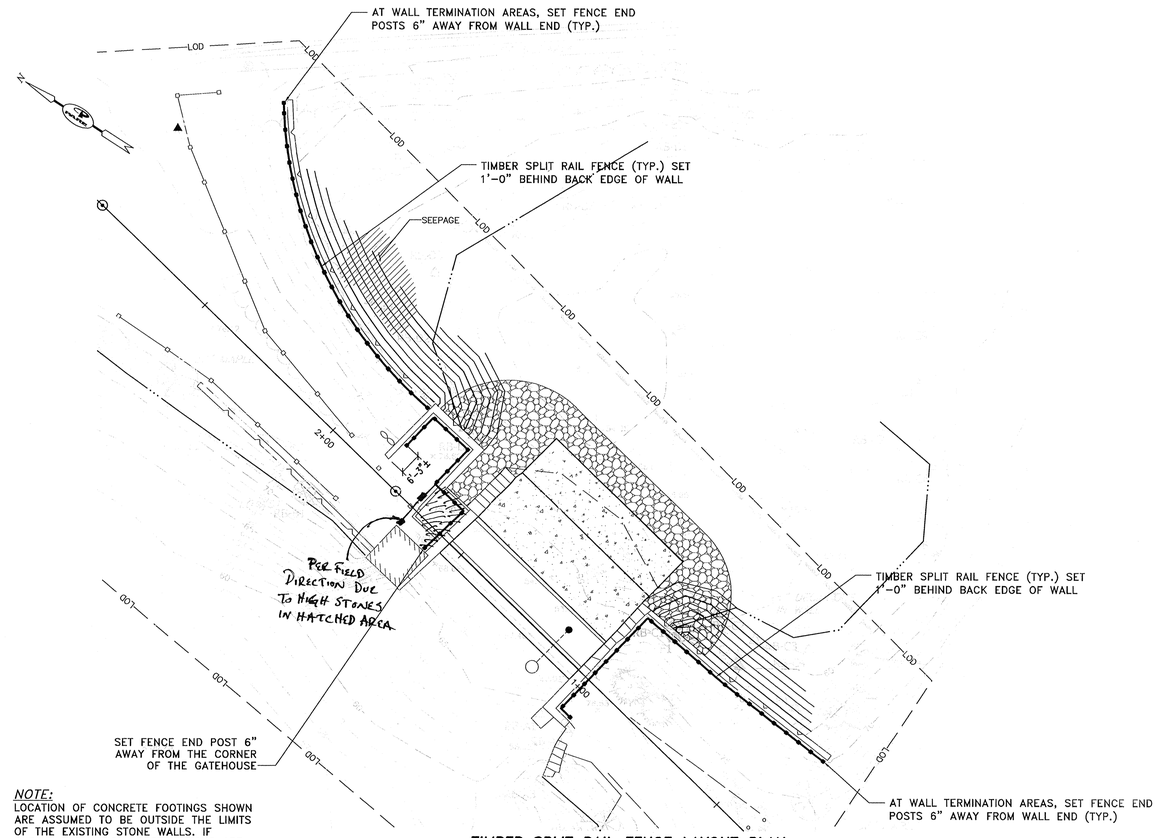
ELEVATION

NOTES:

1. TIMBER POSTS AND RAILS SHALL BE PRESSURE TREATED (P.T.) SPF WOOD GRADE NO.2 OR BETTER.
2. TIMBER POSTS AND RAILS SHALL BE TREATED WITH ACQ WOOD PRESERVATIVE OR AN APPROVED EQUAL. MINIMUM PRESERVATIVE RETENTION SHALL BE RATED FOR "GROUND CONTACT" OR "BELOW GRADE USE".

TIMBER SPLIT RAIL FENCE DETAILS

SCALE 1"=1'-0"



NOTE:
LOCATION OF CONCRETE FOOTINGS SHOWN ARE ASSUMED TO BE OUTSIDE THE LIMITS OF THE EXISTING STONE WALLS. IF DURING EXCAVATION, OBSTRUCTIONS ARE ENCOUNTERED, NOTIFY THE ENGINEER.

TIMBER SPLIT RAIL FENCE LAYOUT PLAN

SCALE: 1"=20'

BID DOCUMENTS

Z:\JOBS\08 Jobs\08194.01 Barney Pond\Drawings\8.0 - Timber Split Rail Fence Plan & Details.dwg

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
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508-543-1755

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING.

BARNEY POND DAM IMPROVEMENTS

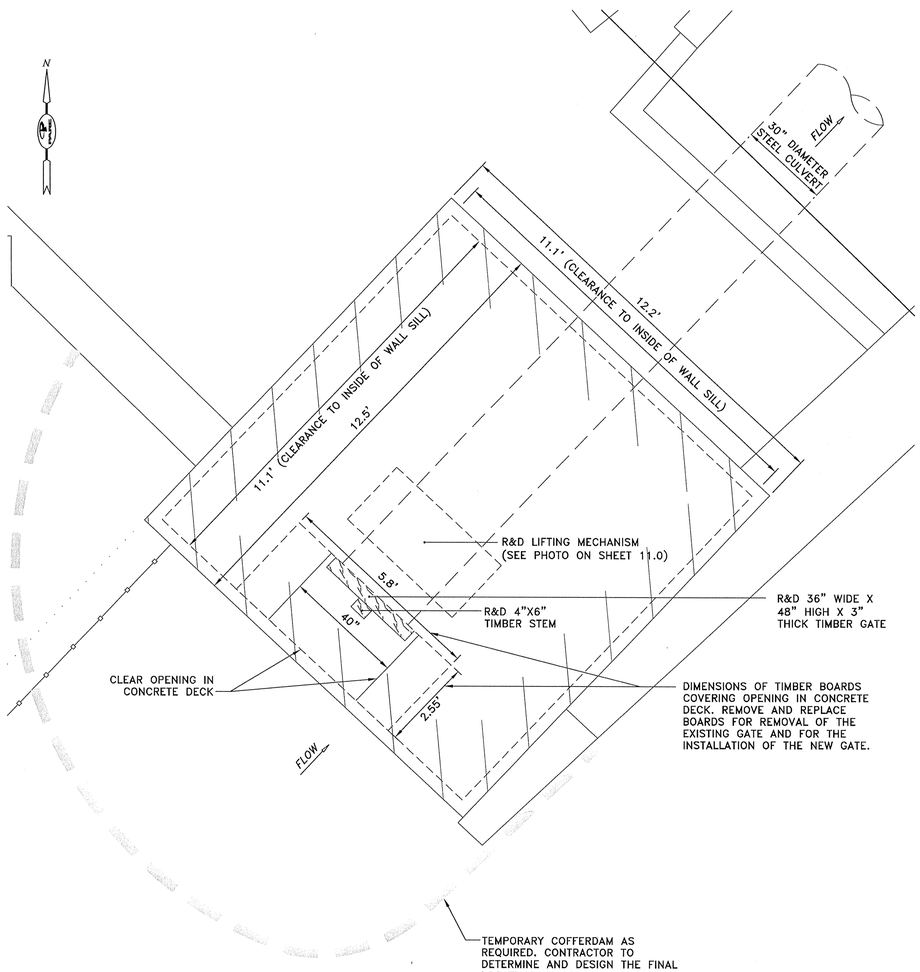
RI DEM ID: 0101
LINCOLN, RHODE ISLAND
TOWN OF LINCOLN

REVISIONS:

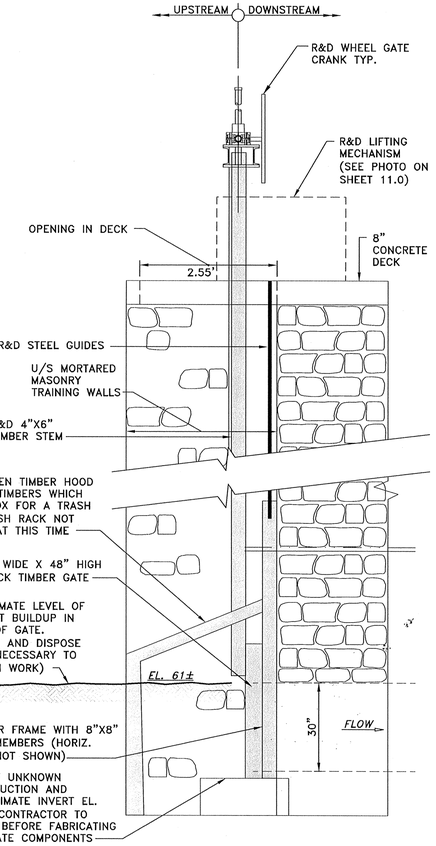
PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	AS NOTED
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	JHG
APPROVED BY:	JMB

TIMBER SPLIT RAIL FENCE LAYOUT PLAN AND DETAILS

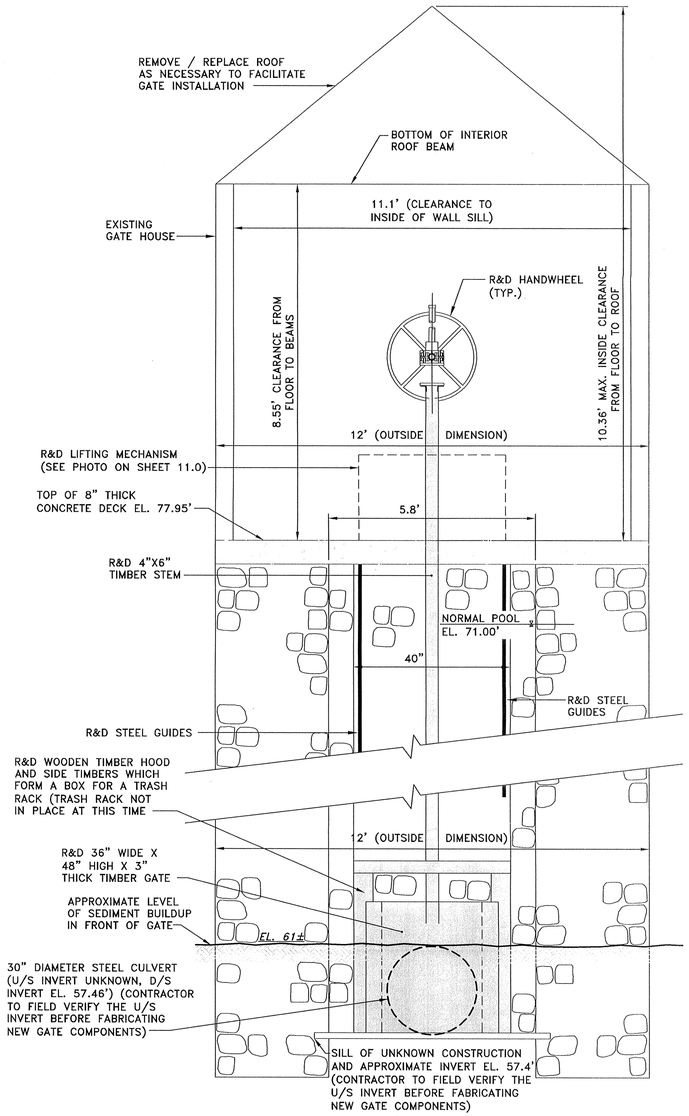
SHEET NO.: 8.0



GATE HOUSE PLAN
NOT TO SCALE



GATE HOUSE SECTION
NOT TO SCALE



GATE HOUSE ELEVATION
(UPSTREAM FACE)
NOT TO SCALE

BID DOCUMENTS

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING.

BARNEY POND DAM IMPROVEMENTS
RI DEM ID: 0101
LINCON, RHODE ISLAND
TOWN OF LINCOLN

REVISIONS:

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	AS NOTED
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	JHG
APPROVED BY:	JMB

LEFT
LOW LEVEL OUTLET
GATE
EXISTING CONDITIONS

SHEET NO.:
9.0

Z:\J0095\08 Jobs\08194.01 Barney Pond\Drawings\9.0 - Gate Details and Right Outlet.dwg

MAS Building & Bridge, Inc.
Barney Pond Dam Improvements
Lincoln, RI

R.F.I. # Barney-011
DATE: 9/6/12

R.F.I. FORM

Engineer
Pare Corporation
10 Lincoln Road, Suite 103
Foxboro, MA 02035

General Contractor:
MAS Building & Bridge, Inc
P.O. 49
Franklin, MA 02038

Phone: 508-520-2277
Fax: 508-520-2276

This is a Request For Information/Clarification/Interpretation related to the Contract Documents/Specifications.

QUESTION:

Please refer to the attached drawing. MAS has as built the gate and the attached sheet will show this. The acutal invert is at elevation 57.67' instead of 57.4' as shown on the plans. The sill will be set into place by using 6 to 10 inches of grout to lock it into place. Also, the existing finish floor elevation of the gate house is 77.89' instead of 77.95' as shown on the plans. Therefore, the approved gate that will be on site shortly is 4 inches taller than what the drawing shows. Please confirm that it is ok that the wheel for the gate sits 40" above finished floor, instead of the 36" shown on the plans.

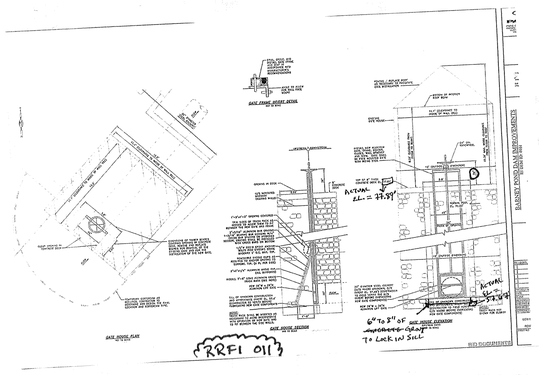
Originated By: Fred Sorbo **Information Required Not Later Than:** 9/7/2012

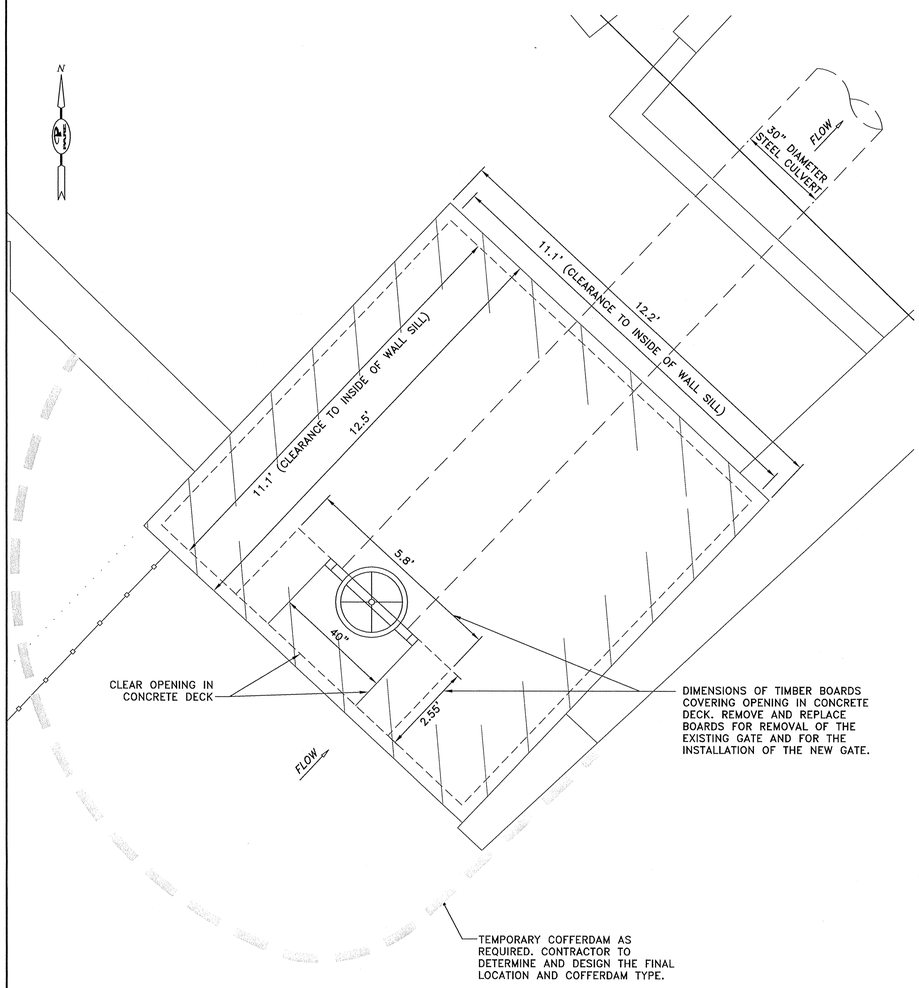
Date Received:

REPLY:

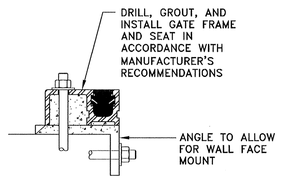
Per Item 12.003 of Progress Meeting No. 13 minutes, the Town does not have an issue with the new gate wheel being set 4 inches higher than shown on the Contract Documents.

Response By: David Matheson **Date:** 9/17/12

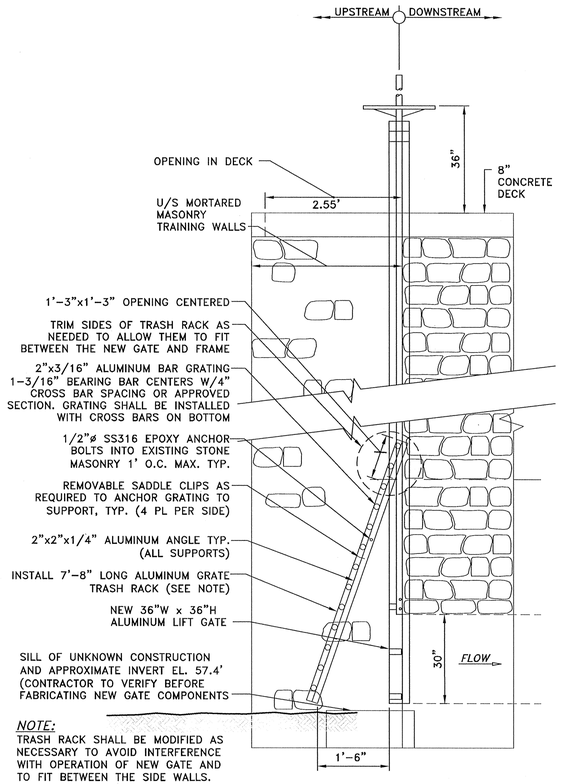




GATE HOUSE PLAN
NOT TO SCALE

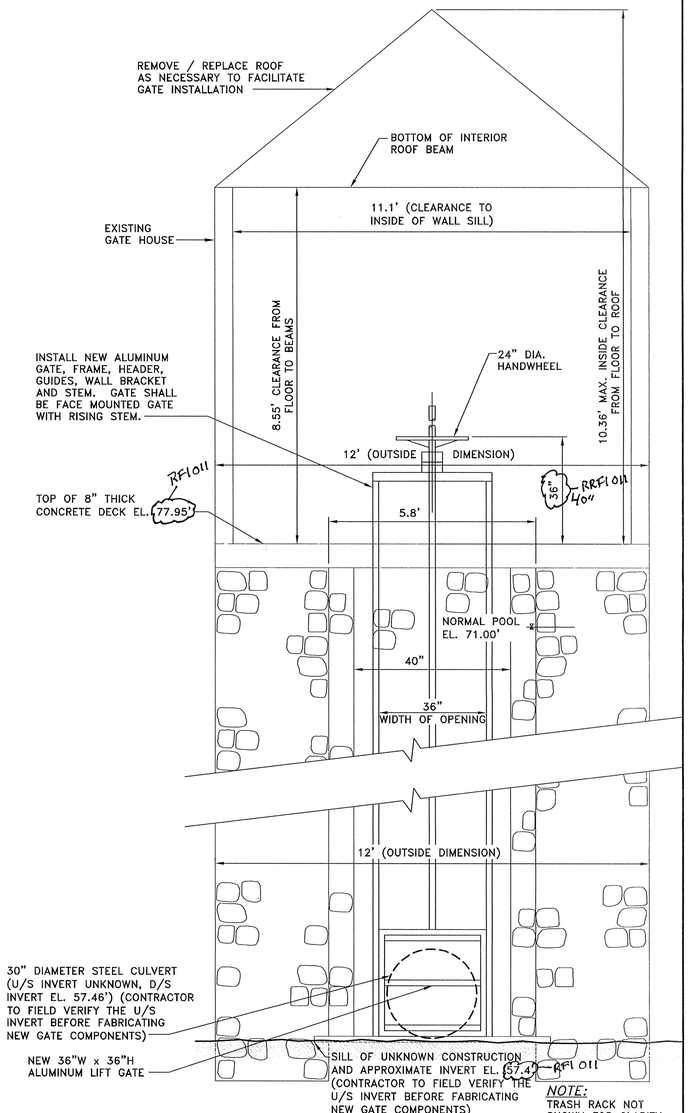


GATE FRAME INVERT DETAIL
NOT TO SCALE



NOTE:
TRASH RACK SHALL BE MODIFIED AS NECESSARY TO AVOID INTERFERENCE WITH OPERATION OF NEW GATE AND TO FIT BETWEEN THE SIDE WALLS.

GATE HOUSE SECTION
NOT TO SCALE



NOTE:
TRASH RACK NOT SHOWN FOR CLARITY

GATE HOUSE ELEVATION
(UPSTREAM FACE)
NOT TO SCALE

BID DOCUMENTS

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING.

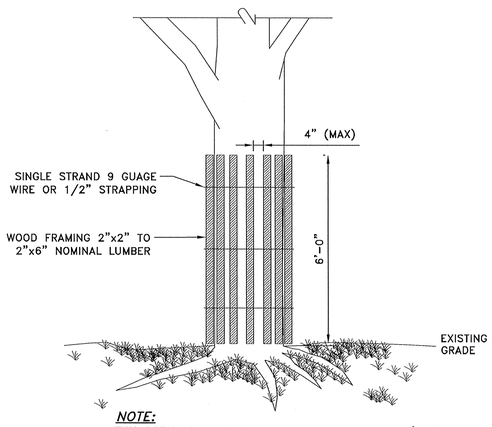
BARNEY POND DAM IMPROVEMENTS
RI DEM ID: 0101
LINCON, RHODE ISLAND
TOWN OF LINCOLN

REVISIONS:

PROJECT NO.:	08194.01
DATE:	MARCH, 2012
SCALE:	AS NOTED
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	JHG
APPROVED BY:	JMB

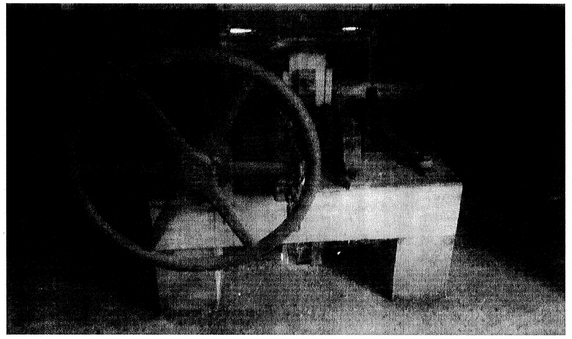
LEFT
LOW LEVEL OUTLET
GATE
REHABILITATION

SHEET NO.:
10.0

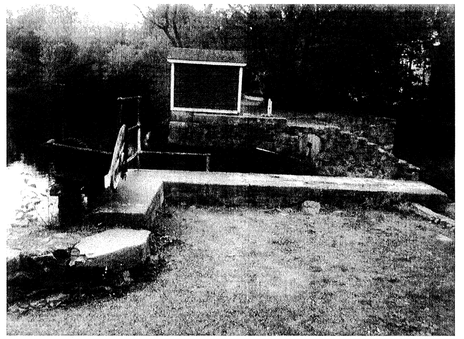


NOTE:
THIS DETAIL SHALL BE USED TO PROTECT THE TREE'S TRUNK IN SITUATIONS WHERE CONSTRUCTION IS IN CLOSE PROXIMITY.

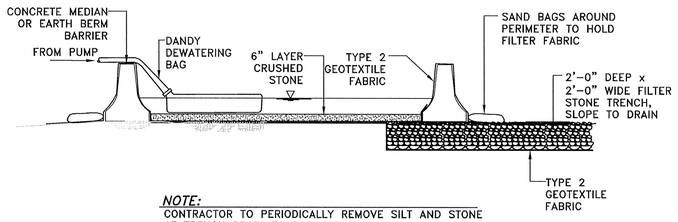
TREE PROTECTION DEVICE
NOT TO SCALE



EXISTING GATEHOUSE CONTROLS

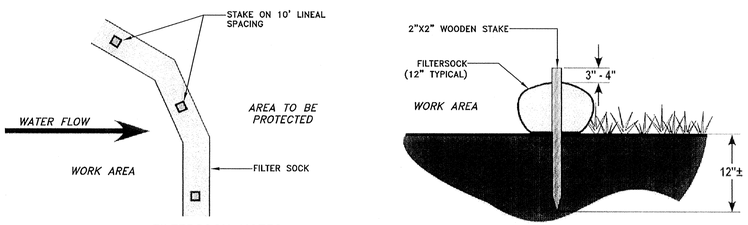


LOW LEVEL OUTLET CONTROLS



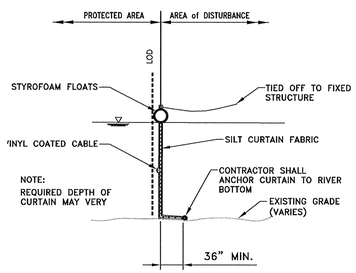
NOTE:
CONTRACTOR TO PERIODICALLY REMOVE SILT AND STONE AT TRENCH DRAIN TO PROMOTE FLOW OF WATER FROM BASIN. ALTERNATIVELY AN OUTFLOW WEIR MAY BE SUBMITTED FOR APPROVAL.

FILTER FABRIC DEWATERING BASIN
NOT TO SCALE

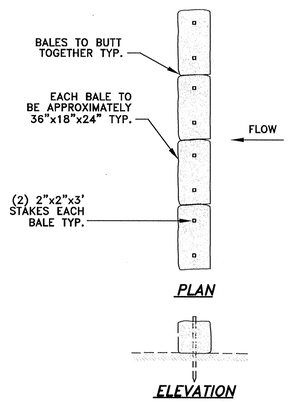


FILTERSOCK NOTES
1. COMPOST / SOIL / ROCK / SEED FILL TO MEET APPLICATION REQUIREMENTS
2. COMPOST MATERIAL TO BE REMOVED OR DISPERSED ON SITE AS DETERMINED BY ENGINEER.

FILTERSOCK DETAIL
NOT TO SCALE



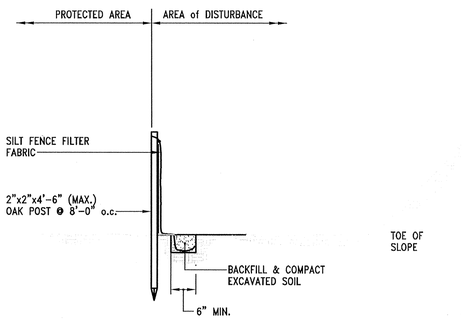
TYPICAL TURBIDITY BARRIER
NOT TO SCALE



PLAN

ELEVATION

HAY BALE DETAIL
NOT TO SCALE



NOTE:
SILT FENCE FABRIC SHALL NOT BE SLIT. STRAW BALE POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC.

SILT FENCE DETAIL
NOT TO SCALE

BID DOCUMENTS

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
10 LINCOLN ROAD, SUITE 103
FOXBORO, MA 02035
508-543-1755

SCALE ADJUSTMENT GUIDE
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SCALE:	AS NOTED
DESIGNED BY:	DMM
CHECKED BY:	DMM
DRAWN BY:	JHG
APPROVED BY:	JMB

MISCELLANEOUS DETAILS

SHEET NO.:
11.0

EXHIBIT E

PRE-BID MEETING SIGN IN SHEET

Barney Pond Dam Pedestrian Bridge RFP #2013-22 Mandatory Pre-Bid Meeting May 23, 2013

Name	Company Name	Address	Phone #	Email Address
Gregory Kornichuk	JH Lynch & Sons	50 Lynch Place Cumberland, RI	401-333-4300	sales@jhlynch.com
DAVID NICODEMUS	HK+S CONSTRUCTION HOLDING CORP	51 AMERICAS CUP NEWPORT, RI 02840	401-847-7350	INFO@HKANDS.COM
William Tyrrell	Northeast Construction Service, LLC	775 Pleasant St, unit 11 Weymouth, MA 02189	781-340-9440	wtyrrell@northeastconstruction.com
Dave Allan	Chesterfield Assocs.	123 W. Shore Road 04578 Westport Island ME	207-882-5400	boathouse@gwi.net
David Courtois	Adamsdale Concrete	551 Weeden St, Pawtucket	401-722-6725	d.courtois@verizon.net
Wendy KerKhoff	Thielsch Engineering	195 Frances Ave. Cranston, RI 02910	401-996-3514	WKerKhoff@Thielsch.com
GAELEN MAGEE	MAS BUILDING & BRIDGE	18 SHARON AVE NORFOLK, MA 02056	508 520 2277	GMAGEE@MASBUILDINGANDBRIDGE.COM
SAL TORRISI	Tower Const Corp	2158 Painted Pin CRANSTON RI 02905	401-943-0110	ESTIMATING@towerconstcorp.com
BRIAN G. IANNUCCILLO	RP IANNUCCILLO & Sons Const	70 CALVERLEY ST PROVIDENCE, RI 02908	401-351-8877	brian@rpiannuccillo.com
Rich LeBlanc	S&R Corp	Lowell MA	978-441-2000	RLeBlanc@sandrcorp.com
David Matheson	Pare Corporation	10 Lincoln Rd., Suite 103 Foxboro, MA 02035	508-543-1755	DMatheson@Parecorp.com

Barney Pond Dam Pedestrian Bridge RFP #2013-22 Mandatory Pre-Bid Meeting May 23, 2013

Name	Company Name	Address	Phone #	Email Address
HUGH DEERY	NEW ENGLAND INFRASTRUCTURE	13 BRENT DRIVE HUDSON MA 01749	978-293-3535	JMAURO@neinfrastructure.com
Peter Donatelli	New England Building & Bridge Co	100 Belvidere Blvd N. Prov RI 02911	401-641-5386	donstl04@hotmail.com
Mike Rocchio	John Rocchio Corp	20 Lark Industrial Pkwy, Smithfield, RI 02828	401-949-5565	mRocchio@JohnRocchiocorp.com
WAYNE CLARKE	CARDI CORP	400 LINCOLN AVE WARWICK, RI 02888	401 739 8300	WCLARKE@CARDI.COM

Addendum Acknowledgement Receipt

Barney Pond Dam – Pedestrian Bridge
RFP 2013-22

Instructions: Return signed Addendum Acknowledgement Receipt to the following:

Leslie C. Quish
lquish@lincolnri.org
Fax: 401-753-7119

I hereby acknowledge receipt of Addendum Number 1

_____
LEGAL NAME OF BIDDER

_____
ACKNOWLEDGED BY (SIGNATURE)

_____
ACKNOWLEDGED BY (PRINTED NAME)

_____
DATE