NEW BEDFORD FISHERMANS MEMORIAL IMPROVEMENTS

CITY OF NEW BEDFORD, MASSACHUSETTS

SEPTEMBER 2014

LOCATION PLAN (NTS)

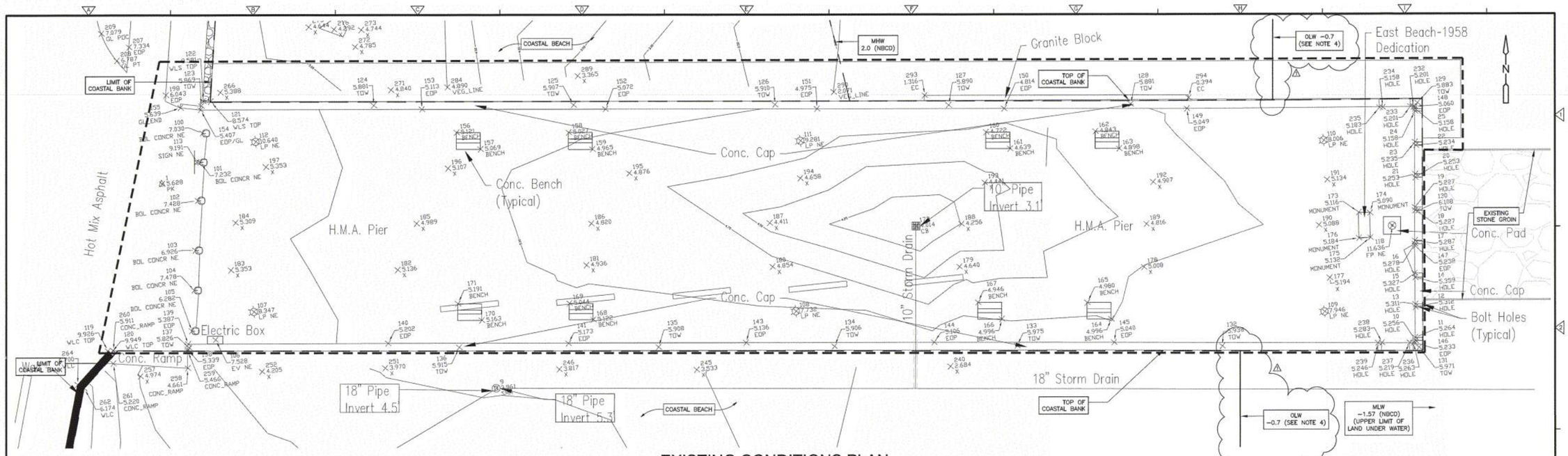
LIST OF DRAWINGS

SHEET NO.	TITLE
L-1	EXISTING CONDITIONS, DEMOLITIONS, REMOVALS
L-2	LAYOUT, MATERIALS, GRADING, AND DRAINAGE
L-3	SITE SECTIONS
L-4	SITE ELEVATIONS
L-5	DETAILS I
L-6	DETAILS II

CDM Smith

CAMBRIDGE, MASSACHUSETTS

Water *Environment* *Transportation* *Energy* *Facilities*



EXISTING CONDITIONS PLAN

LEGEND:

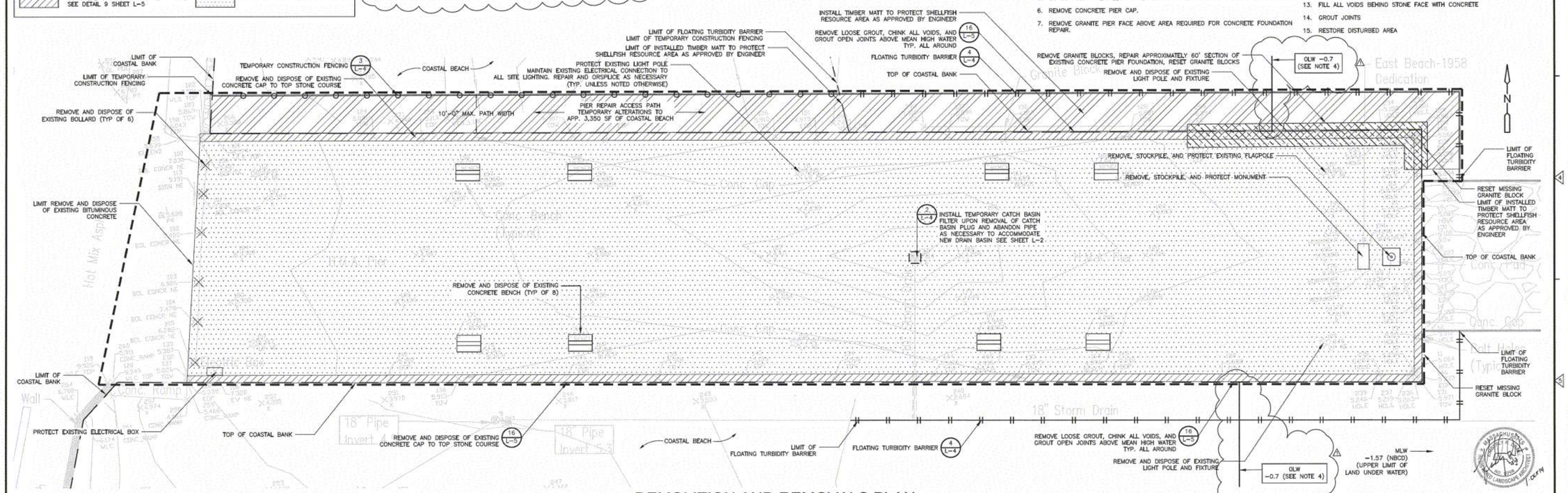
- LIMIT OF WORK
- FLOATING TURBIDITY BARRIER
- TEMPORARY CONSTRUCTION FENCING
- TOP OF COASTAL BANK
- REMOVE AND DISPOSE OF EXISTING CONCRETE CAP TO TOP STONE COURSE SEE DETAIL 9 SHEET L-5
- CONCRETE PIER FOUNDATION REPAIR
- PIER REPAIR ACCESS PATH ON COASTAL BEACH
- REMOVE AND DISPOSE OF EXISTING BITUMINOUS CONCRETE PAVEMENT

NOTE:

1. 100-YR FLOODPLAIN ELEVATION IS LOCATED AT 15.28 FT NBCD
2. MEAN LOW WATER IS LOCATED AT -1.57 FT NBCD
3. MEAN HIGH WATER IS LOCATED AT +2.00 FT NBCD
4. OBSERVED LOW WATER LOCATION (OLW) AT -0.7 @ 1:32 PM AUGUST 9TH 2014.
5. CONSTRUCTION EQUIPMENT FOR PIER FOUNDATION REPAIR SHALL CONSIST OF A RUBBER TRACK EXCAVATOR. PIER REPAIR ACCESS PATH SHALL BE COVERED WITH BOARDS DURING EQUIPMENT OPERATION.

SUGGESTED SEQUENCE OF CONSTRUCTION:

1. WORK ON BEACH TO BE PERFORMED DURING THE LOW TIDE CYCLE ONLY.
2. INSTALL TURBIDITY CURTAINS PRIOR TO WALL REPAIR.
3. ALL WALL REPAIR WORK TO BE PERFORMED FROM TOP OF PIER TO EXTENT POSSIBLE.
4. WOODEN BOARDS TO BE SET ON THE BEACH ACCESS AREA TO PROTECT ANY EXISTING VEGETATION FROM CONSTRUCTION TRAFFIC AND REMOVED DURING EACH TIDE CYCLE.
5. CONSTRUCTION VEHICLES ON BEACH TO CONSIST OF RUBBER TRACK EXCAVATOR.
6. REMOVE CONCRETE PIER CAP.
7. REMOVE GRANITE PIER FACE ABOVE AREA REQUIRED FOR CONCRETE FOUNDATION REPAIR.
8. SAW CUT AND REMOVE DAMAGED/ DETERIORATED CONCRETE.
9. EXCAVATE AREA, PLACE FILTER FABRIC AND STONE, FORM NEW CONCRETE FOUNDATION.
10. POUR NEW QUICK CURE CONCRETE FOUNDATION (WILL BE SUFFICIENTLY CURED TO WITHSTAND NEXT TIDE CYCLE)
11. RE-SET GRANITE BLOCKS ABOVE NEW CONCRETE FOUNDATION.
12. POUR NEW CONCRETE PIER CAP.
13. FILL ALL VOIDS BEHIND STONE FACE WITH CONCRETE
14. GROUT JOINTS
15. RESTORE DISTURBED AREA



DEMOLITION AND REMOVALS PLAN

1" = 10'

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	8/29/14	NW	KO	OBSERVED LOW WATER

DESIGNED BY: N.WATKINS
DRAWN BY: N.WATKINS
SHEET CHK'D BY: K.DRAKE
CROSS CHK'D BY:
APPROVED BY: K.DRAKE
DATE: JUNE 2014

CDM Smith
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Cambridge, MA 02139
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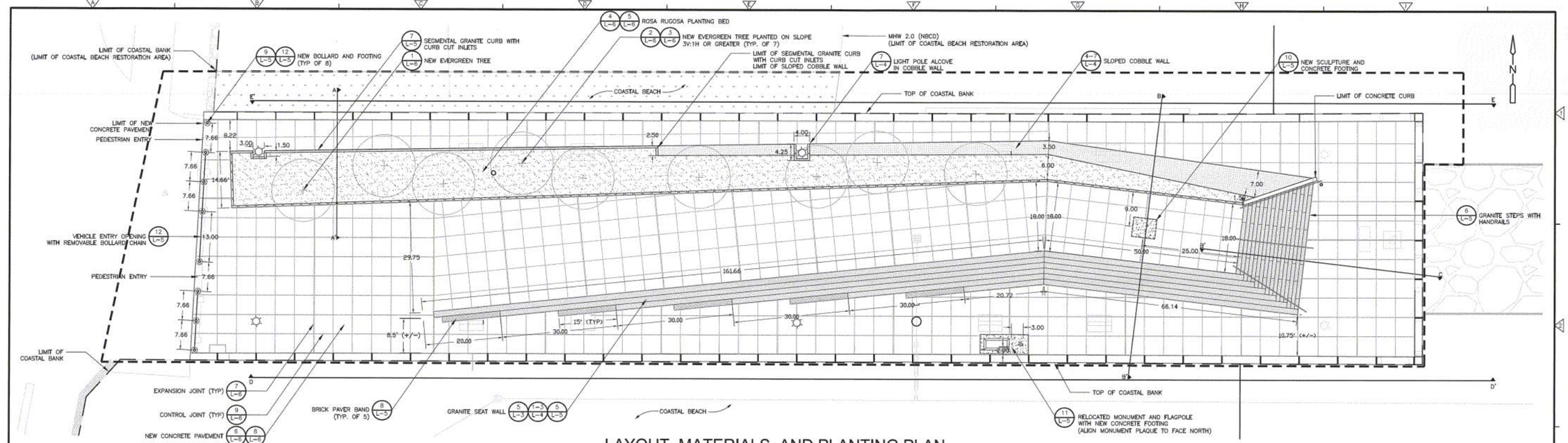
CITY OF NEW BEDFORD MASSACHUSETTS

FISHERMANS MEMORIAL

EXISTING CONDITIONS, DEMOLITION, AND REMOVALS PLAN

PROJECT NO. 0309-101012
FILE NAME: CSTPLOO1
SHEET NO. L-1



LAYOUT, MATERIALS, AND PLANTING PLAN

LEGEND:

- LIMIT OF WORK
- CONCRETE PAVEMENT
- CONCRETE PAD
- COBBLE SLOPE
- GRANITE SEATWALL/STAIRS
- ROSA RUGOSA GROUND COVER (3'-6" ON CENTER)
- COASTAL BEACH RESTORATION AREA
- NEW TREE

NOTE:

1. 100-YR FLOODPLAIN ELEVATION IS LOCATED AT 15.28 FT NBCD
2. COASTAL BEACH RESTORATION PLAN:

   COLLECT SPOT ELEVATIONS TO DEFINE THE SLOPE OF THE COASTAL BEACH PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALTERED COASTAL BEACH SHALL BE RESTORED TO PRE-CONSTRUCTION SLOPE USING EXISTING BEACH SAND AND PLANTED WITH 2 TO 3 STEMS (CULMS) OF AMERICAN BEACH GRASS (AMMOPHILA BREVILIGULATA) AT A SPACING OF 18-IN BY 18-IN. THE PLANTINGS WILL BE STAGGERED IN ALTERNATE ROWS TO PROVIDE FOR MAXIMUM EROSION CONTROL POTENTIAL AND PLANTED AT A DEPTH OF 8-IN.

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND
TREE					
PT	9	PINUS THUNBERGII	JAPANESE BLACK PINE	8' HEIGHT	B&B
SHRUB					
RR	145	ROSA RUGOSA	RUGOSA ROSE	1 GAL	CONTAINER
GRASS					
AB	2250	AMMOPHILA BREVIGULATA	AMERICAN BEACH GRASS	STEM	BARE ROOT

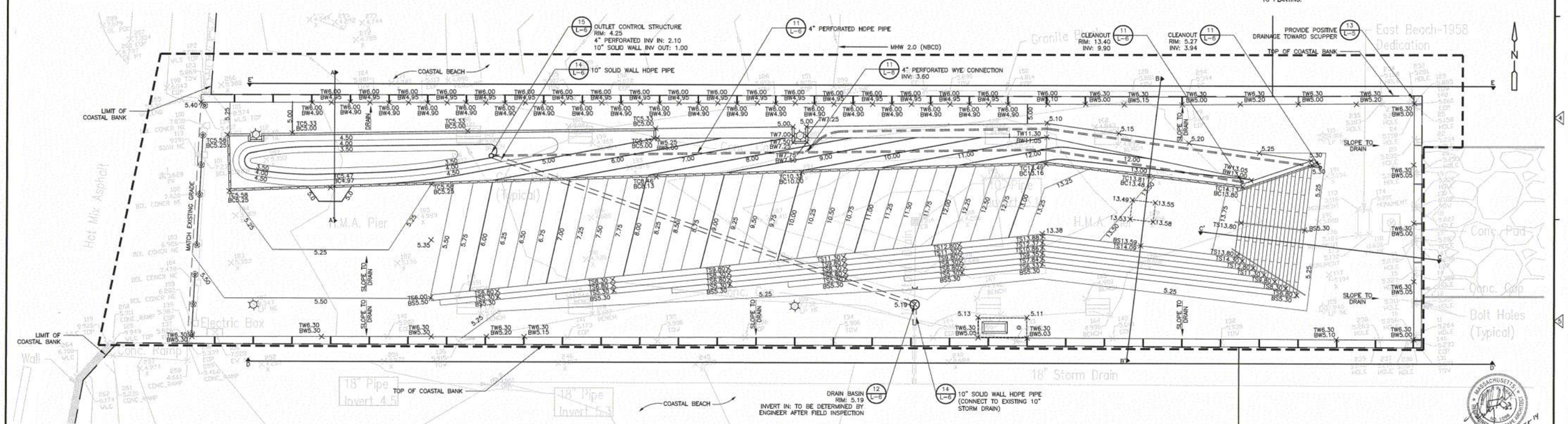
PLANTING NOTES:

P-1. ALL TREES SHALL BE UNIFORM AND WELL-BRANCHED SPECIMENS.

P-2. ALL PLANTS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY The American Standards for Nursery Stock, LATEST EDITION

P-3. ALL PLANTING BEDS AND SAUCERS SHALL HAVE 3" DEPTH SHREDDED BARK MULCH AS SPECIFIED.

P-4. ALL PLANT LOCATIONS AND BOUNDARIES OF PLANTING AREAS SHALL BE STAKED IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.



GRADING AND DRAINAGE PLAN

1" = 10'

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: N.WATKINS
DRAWN BY: N.WATKINS
SHEET CHK'D BY: K.DRAKE
CROSS CHK'D BY:
APPROVED BY: K.DRAKE
DATE: JUNE 2014

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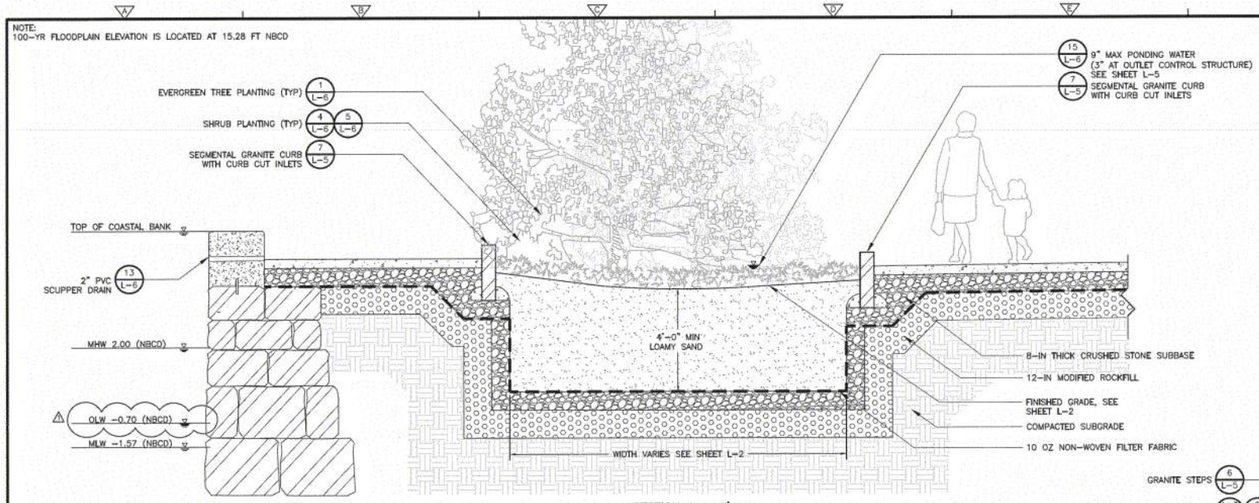
CITY OF NEW BEDFORD MASSACHUSETTS

FISHERMANS MEMORIAL

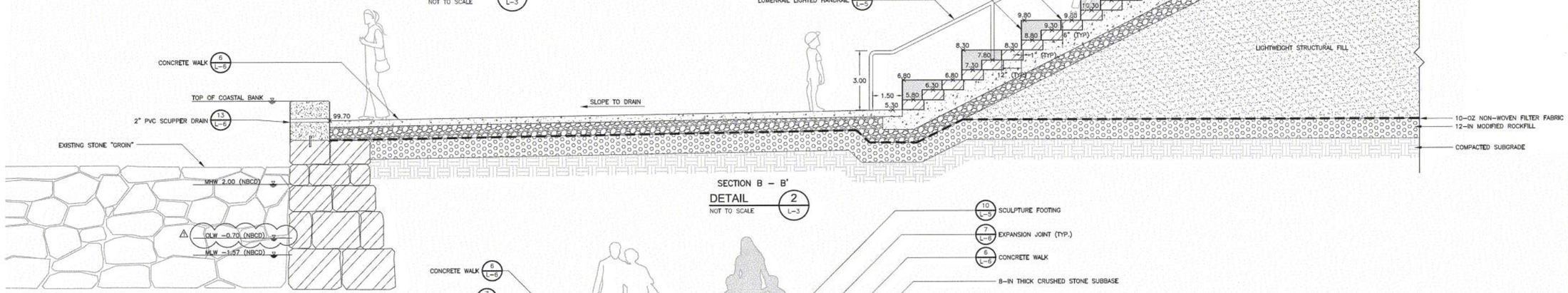
LAYOUT, MATERIALS, PLANTING, GRADING, AND DRAINAGE PLAN

PROJECT NO. 0309-101012
FILE NAME: CSTPL002
SHEET NO.
L-2

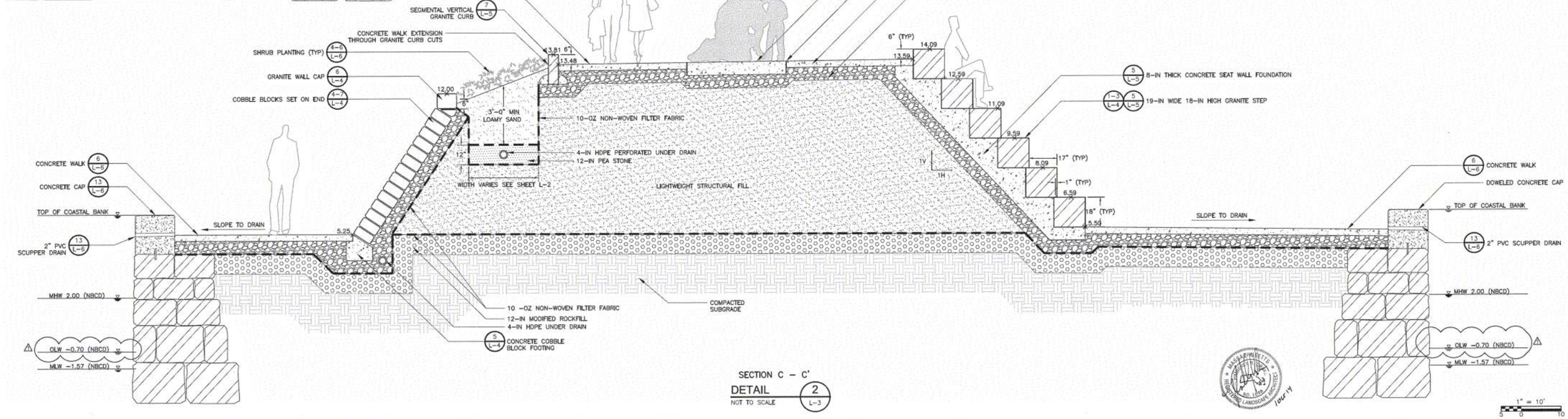
NOTE:
100-YR FLOODPLAIN ELEVATION IS LOCATED AT 15.28 FT NBCD



SECTION A – A'
DETAIL 1 / L-3
NOT TO SCALE



SECTION B – B'
DETAIL 2 / L-3
NOT TO SCALE



SECTION C – C'
DETAIL 2 / L-3
NOT TO SCALE

MODIFIED ROCKFILL:

1. MODIFIED ROCKFILL AS THE LEVELING COURSE FOR IN-FILLING VOIDS AND GAPS IN THE EXPOSED STONE AND ROCKFILL SUBGRADE SHALL BE SOUND, DURABLE CRUSHED ROCK CONSISTING OF ANGULAR FRAGMENTS WHICH ARE THE PRODUCT OF THE PRIMARY CRUSHING OF A STONE CRUSHER, AND FREE FROM OVERBURDEN, SPOIL, SHALE, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. ROUNDED STONES, BOULDERS, SANDSTONE, AND SIMILAR SOFT STONE OR RELATIVELY THIN SLABS SHALL NOT BE PERMITTED. MATERIALS THAT BREAK UP WHEN ALTERNATELY FROZEN AND THAWED OR WETTED AND DRIED SHALL NOT BE USED. MODIFIED ROCK FILL SHALL BE IN ACCORDANCE WITH MASSACHUSETTS HIGHWAY DEPARTMENT 1995 STANDARD SPECIFICATIONS M2.02.4 AND HAVE THE PARTICLE SIZE GRADATION WITHIN THE FOLLOWING LIMITS:

SIEVE SIZE:	PERCENT PASSING BY WEIGHT:
200 MM (8-IN.)	95 TO 100
100 MM (4-IN.)	0 TO 25
63 MM (2½-IN.)	0 TO 5

FILTER FABRIC:

1. NON-WOVEN FILTER FABRIC SHALL BE MIRAFI, TYPE 110ON, HAVING A MASS PER UNIT AREA OF 10 OZ. PER SQ. YD AND A MINIMUM GRAB TENSILE STRENGTH OF 250 LBS, OR EQUAL PRODUCT.
2. FILTER FABRIC SHALL BE PLACED UNIFORMLY AND FLAT ON THE PREPARED SUB GRADE. FABRIC PANELS SHALL BE OVERLAPPED WITH A MINIMUM OF 2 FEET OVERLAP.

LIGHTWEIGHT FILL:

1. LIGHTWEIGHT AGGREGATE FILL SHALL BE ROTARY KILN EXPANDED SHALE, AS MANUFACTURED BY NORLITE CORPORATION, COHOES, NEW YORK, OR APPROVED ROTARY KILN SUBSTITUTE, MEETING ALL THE REQUIREMENTS OF ASTM C330. NO BY-PRODUCT SLAGS, CINDERS, OR BY-PRODUCTS OF COAL COMBUSTION SHALL BE PERMITTED. PARTICLES SHALL BE TOUGH, DURABLE, NON-COROSIVE, AND HAVE THE FOLLOWING PHYSICAL PROPERTIES:

SIEVE:	PERCENT PASSING:
1-IN	100
¾-IN	90 TO 100
⅜-IN	10 TO 50
NO.4	0 TO 15

2. THE DRY, LOOSE UNIT WEIGHT SHALL BE LESS THAN 50 POUNDS PER CUBIC FOOT (PCF)
3. THE COMPACTED DENSITY SHALL BE NO MORE THAN 65 PCF
4. THE MAXIMUM SOUNDNESS LOSS WHEN TESTED WITH 5 CYCLES OF MAGNESIUM SULFATE SHALL BE 10 PERCENT IN ACCORDANCE WITH ASTM C-88
5. THE MAXIMUM CHLORIDE CONTENT (AASHTO T291) SHALL BE LESS THAN 70 PPM.
6. LIGHTWEIGHT AGGREGATE FILL SHALL BE PLACED IN UNIFORM LAYERS HAVING A LOOSE THICKNESS OF 8 INCHES. EACH LAYER SHALL BE COMPACTED USING HAND-GUIDED VIBRATORY COMPACTION EQUIPMENT. EACH LIFT OF LIGHTWEIGHT AGGREGATE FILL SHALL BE COMPACTED WITH NO MORE THAN TWO COVERAGES OF THE SPECIFIED EQUIPMENT. TAKE ALL NECESSARY PRECAUTIONS DURING CONSTRUCTION ACTIVITIES TO ENSURE THAT THE MATERIAL IS NOT OVER COMPACTED. CONSTRUCTION EQUIPMENT, OTHER THAN FOR COMPACTION, SHALL NOT OPERATE ON THE EXPOSED LIGHTWEIGHT FILL.

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1	8/29/14	NW	KD	OBSERVED LOW WATER

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SHEET CHK'D BY: K.DRAKE
CROSS CHK'D BY:
APPROVED BY: K.DRAKE
DATE: JUNE 2014

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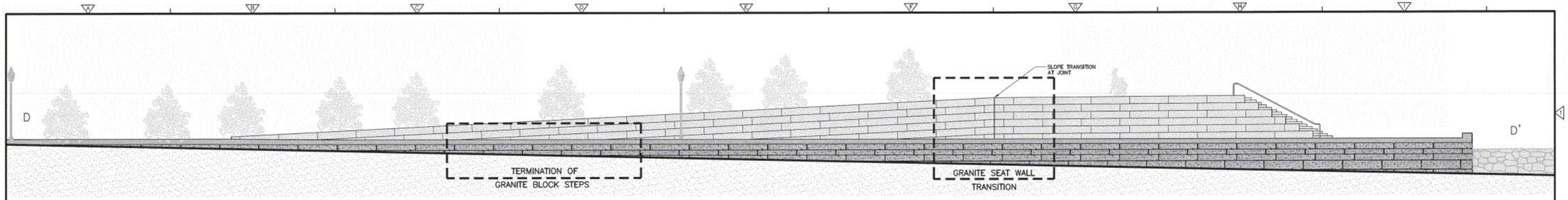
CITY OF NEW BEDFORD MASSACHUSETTS

FISHERMANS MEMORIAL

SITE SECTIONS

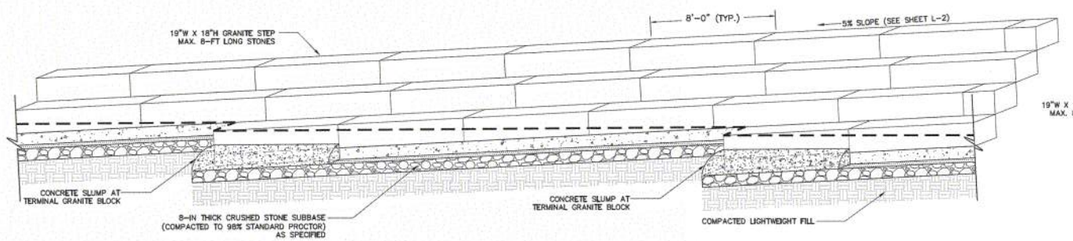
PROJECT NO. 0309-101012
FILE NAME: CSTPL003
SHEET NO.
L-3



ELEVATION D – D'

DETAIL 1 / L-4

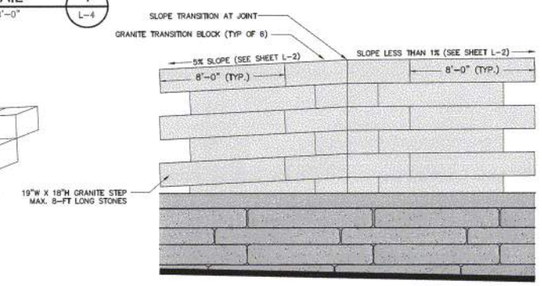
1" = 8'-0"



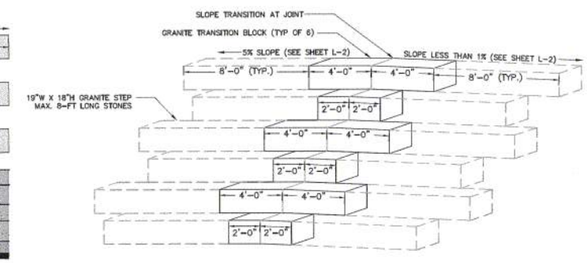
TERMINATION OF GRANITE BLOCK STEPS

DETAIL 2 / L-4

NOT TO SCALE



GRANITE SEAT WALL TRANSITION ELEVATION

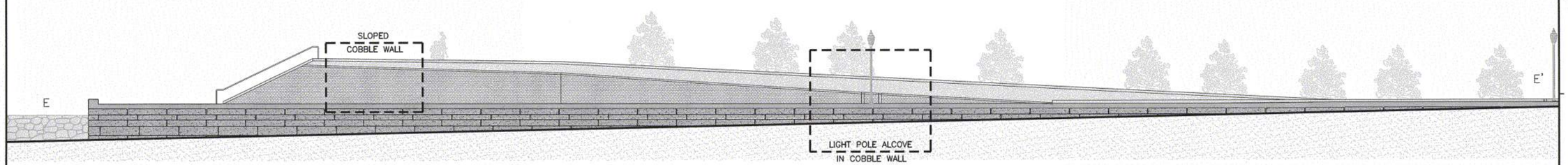


GRANITE SEAT WALL TRANSITION BLOCKS

GRANITE SEAT WALL TRANSITION

DETAIL 3 / L-4

NOT TO SCALE



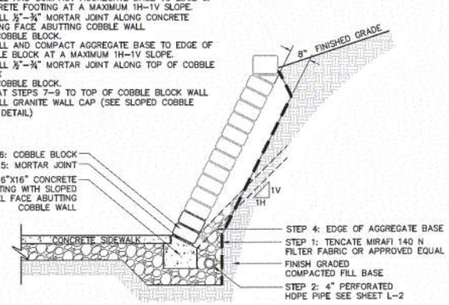
ELEVATION E – E'

DETAIL 4 / L-4

1" = 8'-0"

CONSTRUCTION SEQUENCE:

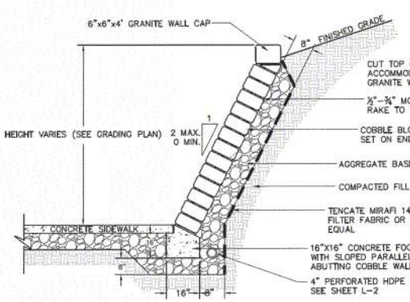
1. INSTALL FILTER FABRIC ALONG FINSHED GRADED COMPACTED FILL BASE.
2. INSTALL 4" PERFORATED HDPE PIPE.
3. INSTALL 16"x16" CONCRETE FOOTING ON COMPACTED AGGREGATE BASE WITH SLOPED PARALLEL FACE ABUTTING COBBLE WALL.
4. INSTALL AND COMPACT AGGREGATE BASE TO EDGE OF CONCRETE FOOTING AT A MAXIMUM 1H–1V SLOPE.
5. INSTALL ½"–¾" MORTAR JOINT ALONG CONCRETE FOOTING FACE ABUTTING COBBLE WALL
6. SET COBBLE BLOCK.
7. INSTALL AND COMPACT AGGREGATE BASE TO EDGE OF COBBLE BLOCK AT A MAXIMUM 1H–1V SLOPE.
8. INSTALL ½"–¾" MORTAR JOINT ALONG TOP OF COBBLE BLOCK
9. SET COBBLE BLOCK.
10. REPEAT STEPS 7–9 TO TOP OF COBBLE BLOCK WALL
11. INSTALL GRANITE WALL CAP (SEE SLOPED COBBLE WALL DETAIL)



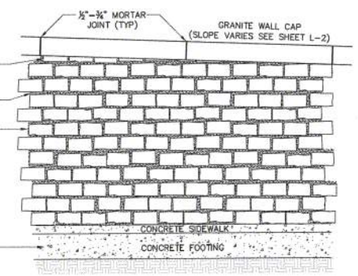
COBBLE WALL CONSTRUCTION SEQUENCE

DETAIL 5 / L-4

NOT TO SCALE



COBBLE WALL SECTION

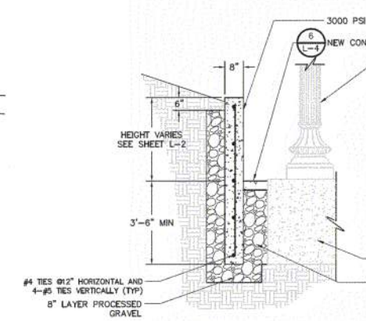


COBBLE WALL ELEVATION

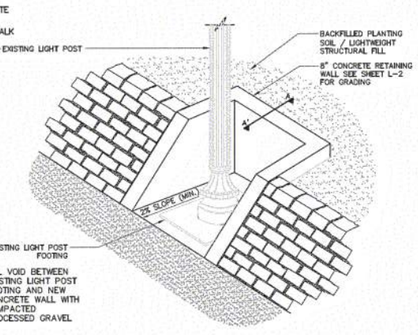
SLOPED COBBLE WALL

DETAIL 6 / L-4

NOT TO SCALE



CONCRETE RETAINING WALL SECTION A–A'



LIGHT POLE ALCOVE IN COBBLE WALL

DETAIL 7 / L-4

NOT TO SCALE

NOTE:

1. SEE SHEET L-2 FOR TOP OF WALL AND BACKFILL ELEVATIONS.
2. HEIGHT OF WALL VARIES FROM 3' TO 0" SEE SHEET L-2.

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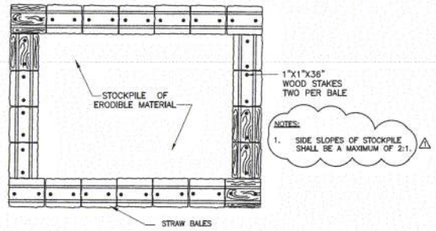
CITY OF NEW BEDFORD MASSACHUSETTS

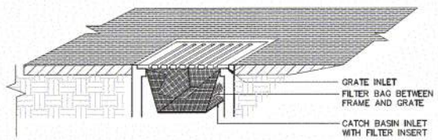
FISHERMANS MEMORIAL

SITE ELEVATIONS

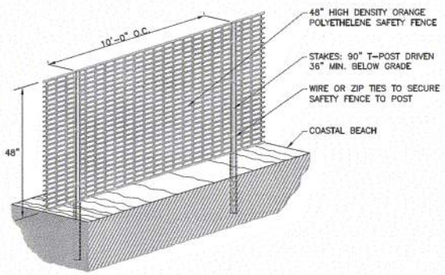
PROJECT NO. 0309-101012
FILE NAME: CSTPL004
SHEET NO.
L-4



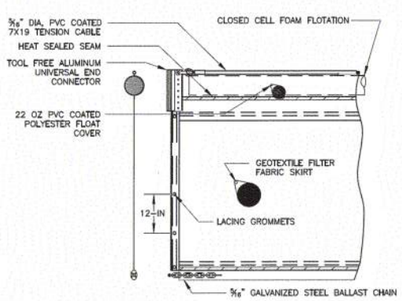
STAGING/STORAGE AREA
DETAIL 1 (L-5)
NOT TO SCALE



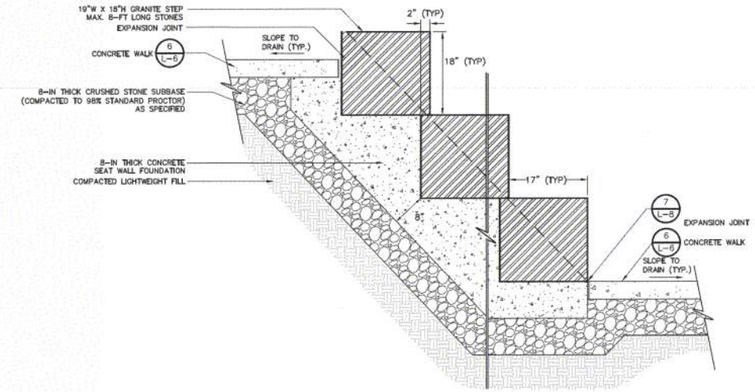
TEMPORARY CATCH BASIN FILTER
DETAIL 2 (L-5)
NOT TO SCALE



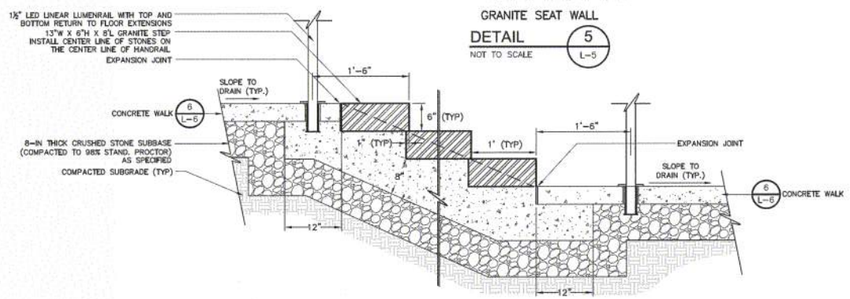
TEMPORARY CONSTRUCTION FENCING
DETAIL 3 (L-5)
NOT TO SCALE



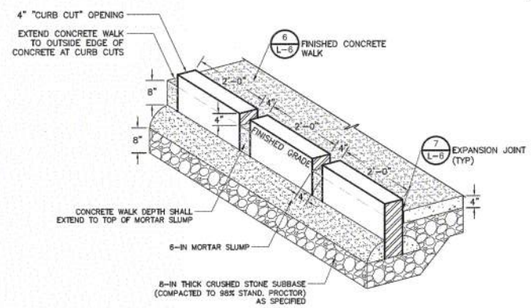
FLOATING TURBIDITY BARRIER
DETAIL 4 (L-5)
NOT TO SCALE



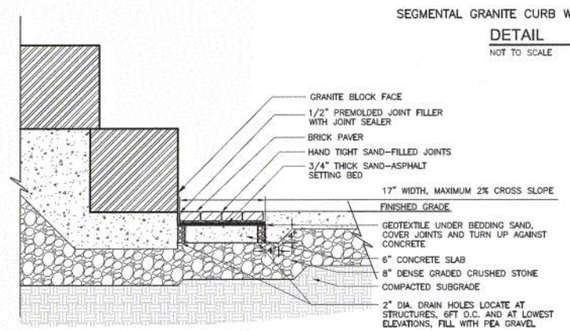
GRANITE SEAT WALL
DETAIL 5 (L-5)
NOT TO SCALE



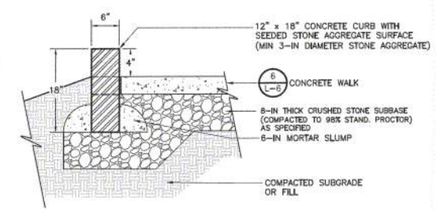
GRANITE STEPS W/HANDRAIL
DETAIL 6 (L-5)
1"=1'-0"

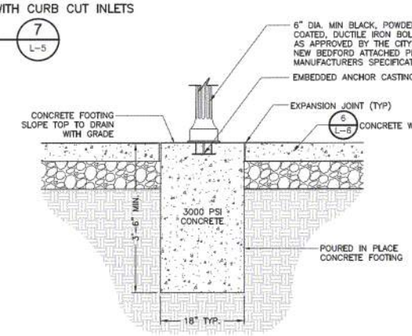


SEGMENTAL GRANITE CURB WITH CURB CUT INLETS
DETAIL 7 (L-5)
NOT TO SCALE

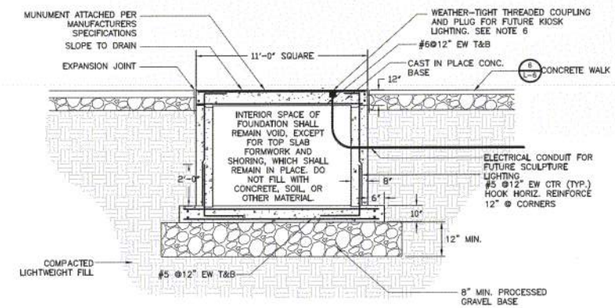


BRICK PAVER BAND
DETAIL 8 (L-5)
NOT TO SCALE





BOLLARD FOOTING
DETAIL 9 (L-5)
NOT TO SCALE



SCULPTURE FOOTING
DETAIL 10 (L-5)
NOT TO SCALE

NOTES

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.

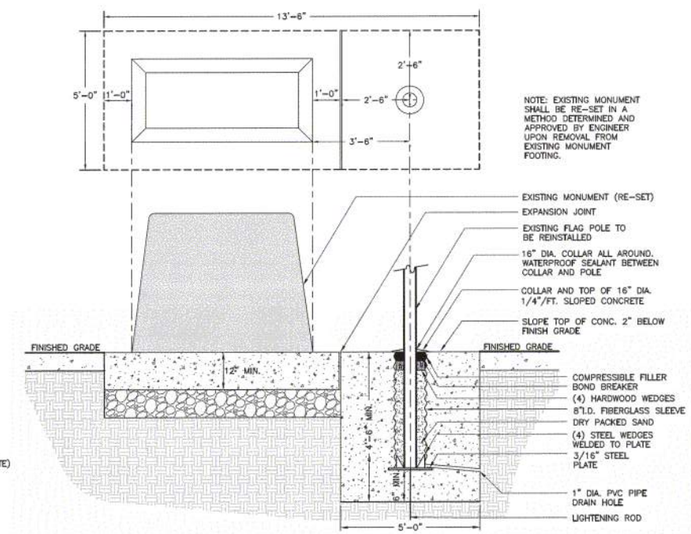
2. REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.

3. REINFORCING STEEL SHALL HAVE A MINIMUM CLEAR COVER OF 3" AT SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH, AND 2" ELSEWHERE.

4. EXTEND REINFORCING BARS 12" BEYOND BEND.

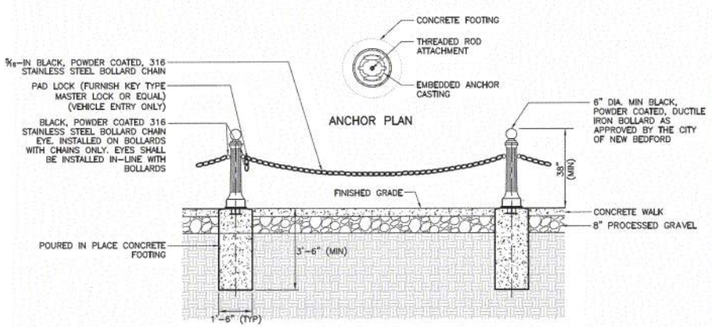
5. PROVIDE ADDITIONAL REINFORCEMENT IN TOP OF TOP SLAB ON EACH SIDE OF HANDHOLE. AREA SHALL BE EQUAL TO ONE HALF OF THE AREA OF REINFORCING INTERRUPTED ON EACH SIDE EXTEND 12" BEYOND HANDHOLE.

6. CONTRACTOR TO COORDINATE ALL ELEVATIONS SUCH THAT NO PART OF THE RACEWAY, COUPLING, OR PLUG IS AT AN ELEVATION HIGHER THAN THE FINISH GRADE OF THE CONCRETE BASE



NOTE: EXISTING MONUMENT SHALL BE RE-SET IN A METHOD DETERMINED AND APPROVED BY ENGINEER UPON REMOVAL FROM EXISTING MONUMENT FOOTING.

FLAGPOLE/MONUMENT FOOTING
DETAIL 11 (L-5)
NOT TO SCALE



NOTE:

1. AT PAVEMENT EDGE WITH NO CURB SET TOP OF FOOTING 1 IN. ABOVE FINISHED PAVEMENT GRADE AS SPECIFIED.

DECORATIVE BOLLARD AND CHAIN
DETAIL 12 (L-5)
NOT TO SCALE

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	8/29/14	NW	KD	REVISE NOTES

DESIGNED BY: N.WATKINS
DRAWN BY: N.WATKINS
SHEET CHK'D BY: K.DRAKE
CROSS CHK'D BY:
APPROVED BY: K.DRAKE
DATE: JUNE 2014

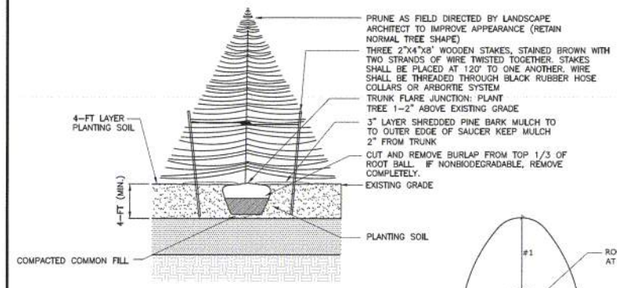
CDM Smith
50 Hampshire Street
Cambridge, MA 02139
Tel: (617) 452-6000

CITY OF NEW BEDFORD MASSACHUSETTS

FISHERMANS MEMORIAL

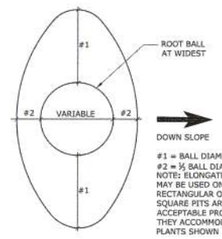
DETAILS I

PROJECT NO. 0309-101012
FILE NAME: CSTPL004
SHEET NO. L-5



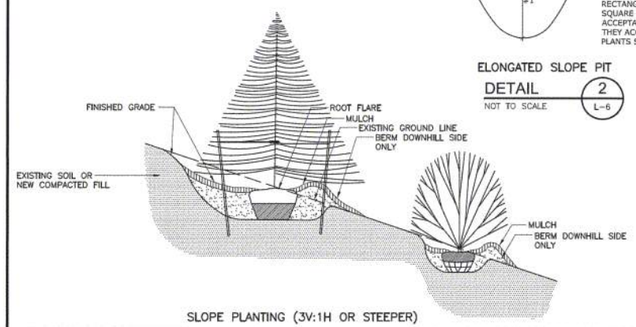
EVERGREEN TREE PLANTING

DETAIL 1 (L-6)
NOT TO SCALE



ELONGATED SLOPE PIT

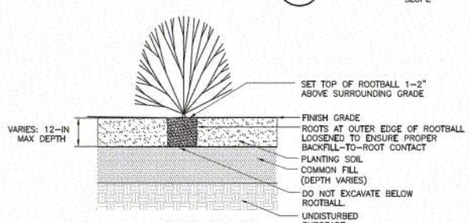
DETAIL 2 (L-6)
NOT TO SCALE



SLOPE PLANTING (3V:1H OR STEEPER)

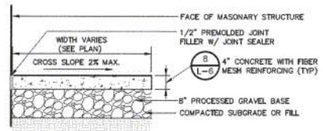
DETAIL 3 (L-6)
NOT TO SCALE

NOTE: PLANTS SET VERTICALLY, NOT PERPENDICULAR TO SLOPE



SHRUB PLANTING

DETAIL 4 (L-6)
NOT TO SCALE



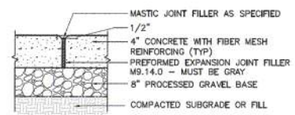
SIDEWALK AT VERTICAL STRUCTURE

NOTES:

1. SURFACE SHALL BE SLOPED FOR POSITIVE DRAINAGE.
2. SURFACE SHALL SLOPE AWAY FROM STRUCTURES.
3. EXPANSION JOINTS SHALL NOT EXCEED 30' O.C. AND SHALL BE PLACED AT ALL STRUCTURE AND WALL ABUTMENTS. CONTROL JOINTS SHALL NOT EXCEED 36 S.F. SEE SIDEWALK & CONCRETE SCORING PATTERN.
4. CONCRETE SHALL BE AIR ENTRAINED CLASS D, 4,000 PSI, 3/4", 610

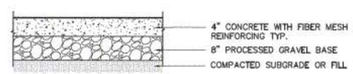
CONCRETE WALK

DETAIL 6 (L-6)
NOT TO SCALE



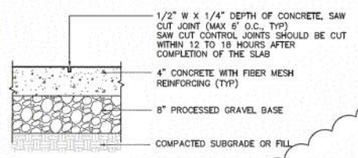
TYPICAL CONCRETE WALK EXPANSION JOINT

DETAIL 7 (L-6)
NOT TO SCALE



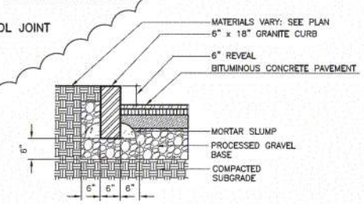
TYPICAL CONCRETE PAVEMENT

DETAIL 8 (L-6)
NOT TO SCALE



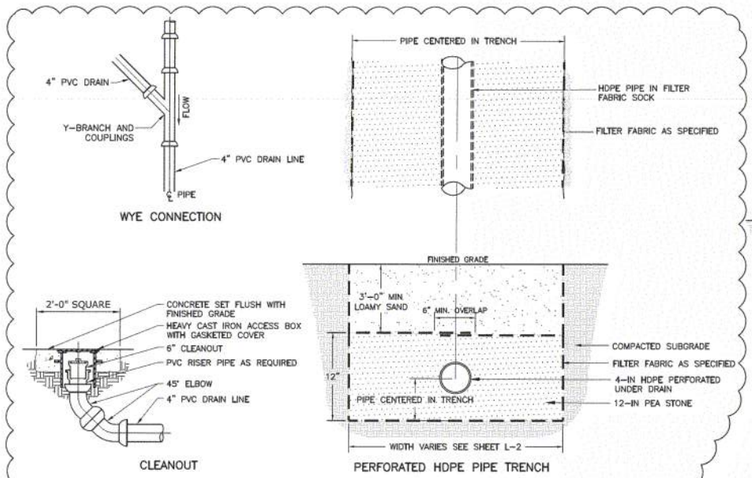
TYPICAL CONCRETE WALK CONTROL JOINT

DETAIL 9 (L-6)
NOT TO SCALE



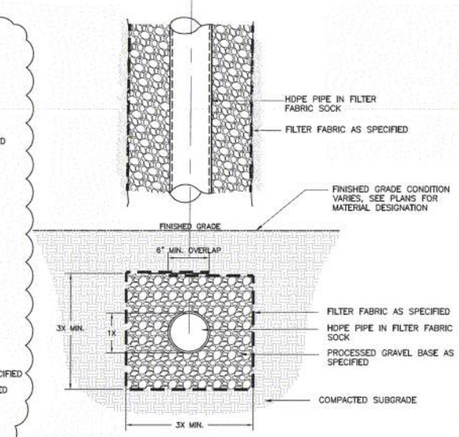
6" X 18" VERTICAL GRANITE CURB

DETAIL 10 (L-6)
NOT TO SCALE



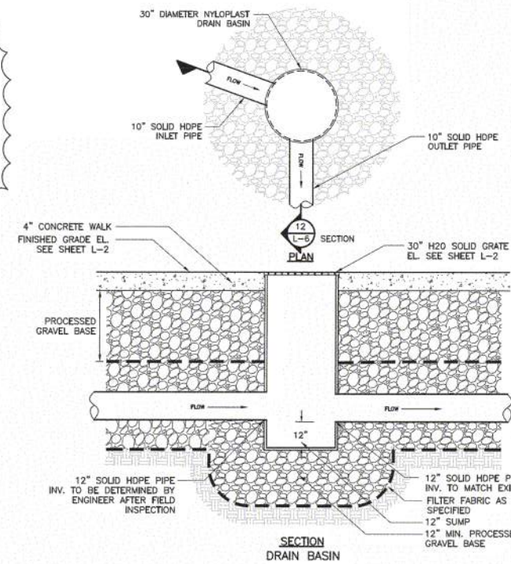
4" PERFORATED HDPE PIPE TRENCH, WYE CONNECTION, AND CLEANOUT

DETAIL 11 (L-6)
NOT TO SCALE

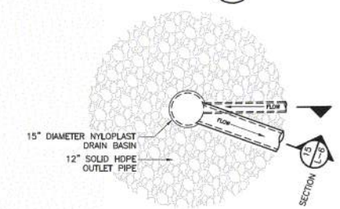


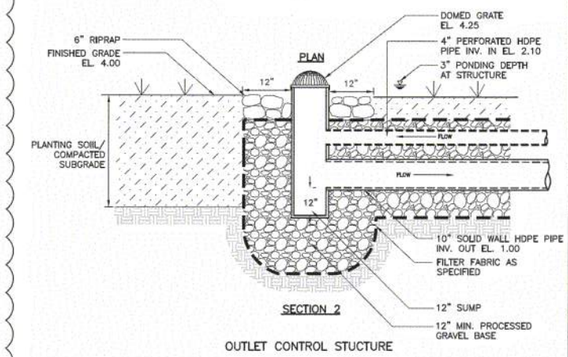
HDPE PIPE TRENCH

DETAIL 14 (L-6)
NOT TO SCALE



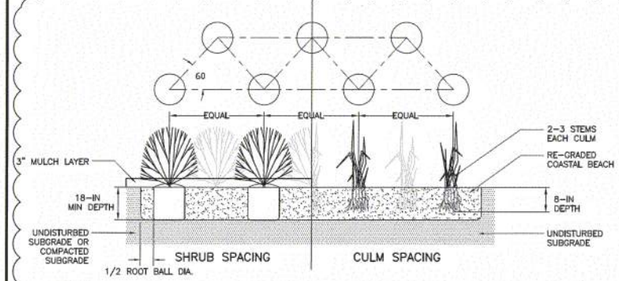
DETAIL 12 (L-6)
NTS





OUTLET CONTROL STUCTURE

DETAIL 15 (L-6)
NTS

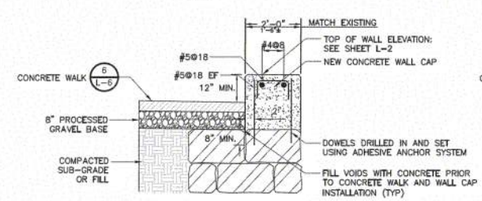


NOTE:

1. FOR SHRUB SPACING DIMENSIONS SEE PLANT LIST.
2. COLLECT SPOT ELEVATIONS TO DEFINE THE SLOPE OF THE COASTAL BEACH PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALTERED COASTAL BEACH SHALL BE RESTORED TO PRE-CONSTRUCTION SLOPE USING EXISTING BEACH SAND AND PLANTED WITH 2 TO 3 STEMS (CULMS) OF AMERICAN BEACH GRASS (AMMOPHILA BREVILIGULATA) AT A SPACING OF 18-IN BY 18-IN. THE PLANTINGS WILL BE STAGGERED IN ALTERNATE ROWS TO PROVIDE FOR MAXIMUM EROSION CONTROL POTENTIAL AND PLANTED AT A DEPTH OF 8-IN.

SHRUB/CULM SPACING

DETAIL 5 (L-6)
NOT TO SCALE

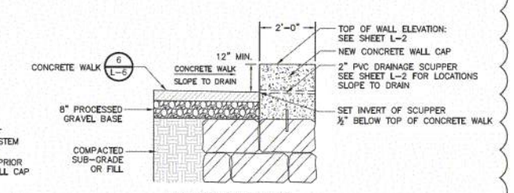


CONCRETE WALL CAP

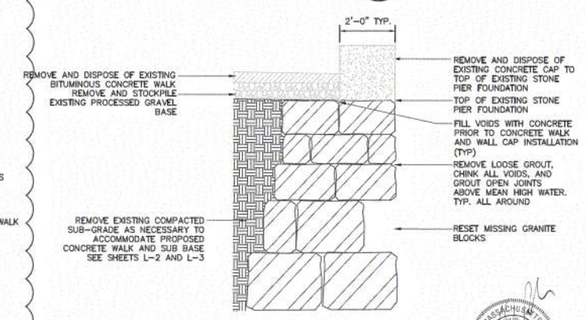
NOTE:
REMOVE EXISTING CONCRETE WALL CAP. REMOVE MORTAR AND ANY DETERIORATED CONCRETE. SATURATE THE SURFACE WITH POTABLE WATER FOR ONE HOUR BEFORE THE CAP PLACEMENT AND APPLY A SLUSH COAT OF PORTLAND CEMENT PASTE IMMEDIATELY PRIOR TO THE PLACEMENT.

CONCRETE WALL CAP

DETAIL 13 (L-6)
NOT TO SCALE



PVC SCUPPER DRAIN



EXISTING PIER REMOVALS AND REPAIRS

DETAIL 16 (L-6)
NOT TO SCALE

MASSACHUSETTS BOARD OF REGISTRATION OF REGISTERED LANDSCAPE ARCHITECTS NO. 1028
1-02-14

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	11/29/14	NW	KD	REVISE DETAILS

DESIGNED BY: N.WATKINS
DRAWN BY: N.WATKINS
SHEET CHK'D BY: K.DRAKE
CROSS CHK'D BY:
APPROVED BY: K.DRAKE
DATE: JUNE 2014

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Tel: (617) 452-6000

CITY OF NEW BEDFORD MASSACHUSETTS

FISHERMANS MEMORIAL

DETAILS II

PROJECT NO. 0309-101012
FILE NAME: CSTPL005
SHEET NO.
L-6