

### Woods Hole Oceanographic Institution

Laboratory of Ocean Sensors and Observing Systems (LOSOS)

Quissett Campus - Woods Hole, MA 02543



Ellenzweig

1280 Massachusetts Avenue Cambridge, MA 02138 (617) 491-5575

Stephen Stimson Associates 15 Depot Avenue Landscape Architect

Falmouth, MA 02540 (508) 548-8119

Holmes and McGrath, Inc. Civil Engineer

362 Gifford Street Falmouth, MA 02540 (508) 548-3564

LeMessurier Consultants Structural Engineer

675 Massachusetts Avenue Cambridge, MA 02139 (617) 868-1200

**BR+A Consulting Engineers** Mechanical/Electrical/ Plumbing Engineer

The Arsenal on the Charles 311 Arsenal Street Watertown, MA 02472 (617) 254-0016

Columbia Construction Co. Construction Manager

100 Riverpark Drive P.O. Box 220 North Reading, MA 01864

(978) 664-9500

Notes:



Keyplan

Job Number Drawing By Checked By Filename

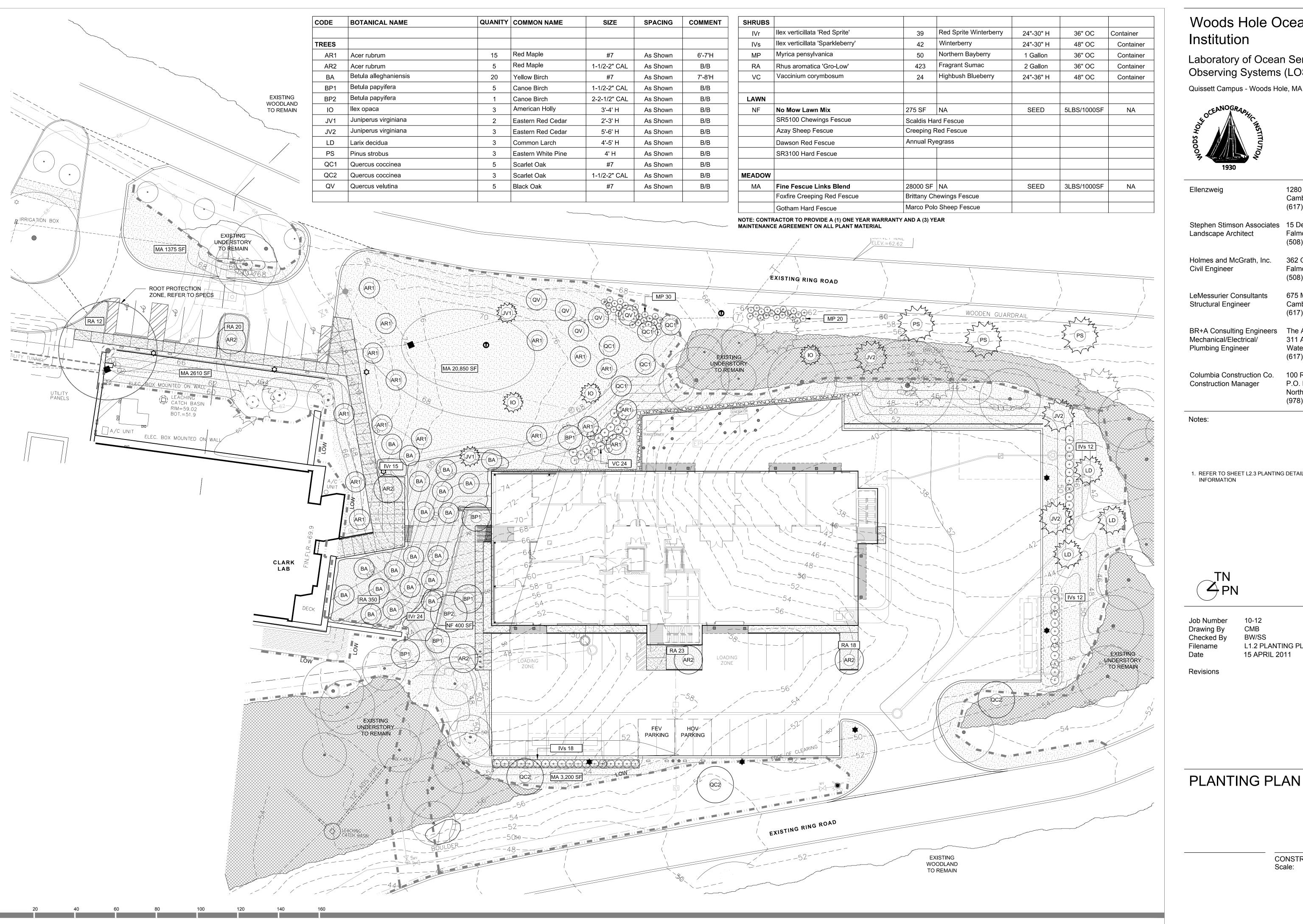
BW/SS

L1.1 LAYOUT AND MATERIALS PLAN 15 APRIL 2011

Revisions

### LAYOUT AND MATERIALS PLAN

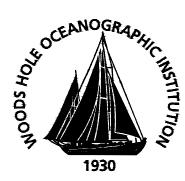
CONSTRUCTION DOCUMENTS Scale: 1" = 20'-0"



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Notes:

1. REFER TO SHEET L2.3 PLANTING DETAILS FOR ADDITIONAL INFORMATION

Checked By

Revisions

BW/SS L1.2 PLANTING PLAN

15 APRIL 2011

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Notes:

REFER TO SHEET L2.4 PLANTING
 DETAILS FOR ADDITIONAL INFORMATION



Keyplan

Job Number
Drawing By
Checked By
Filename
Date

10-12 CMB BW/SS L1.3 SOILS PLAN

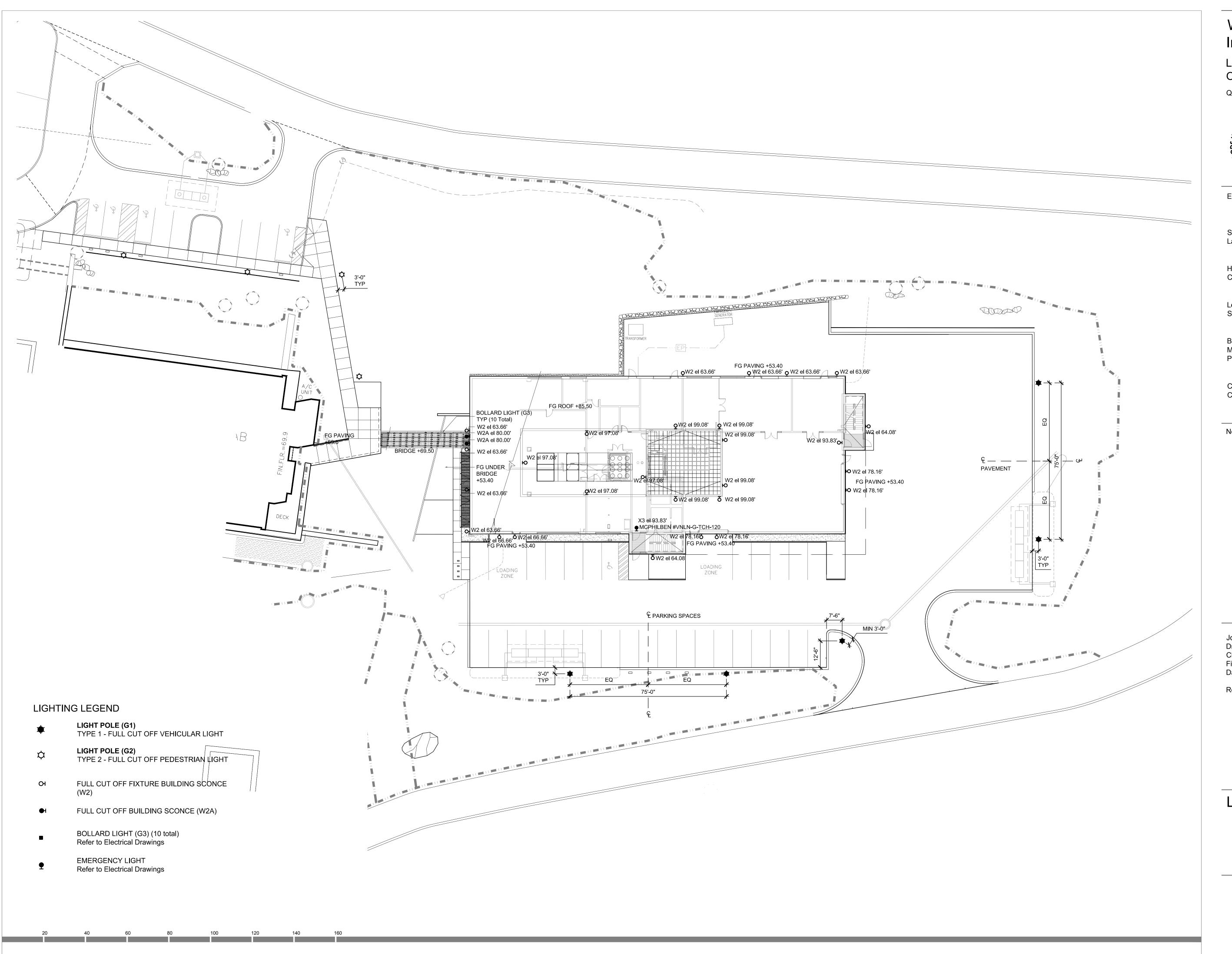
15 APRIL 2011

Revisions

**SOILS PLAN** 

CONSTRUCTION DOCUMENTS Scale: 1" = 20'-0"

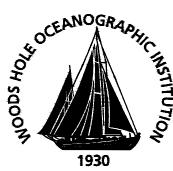
11.3



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Keyplan

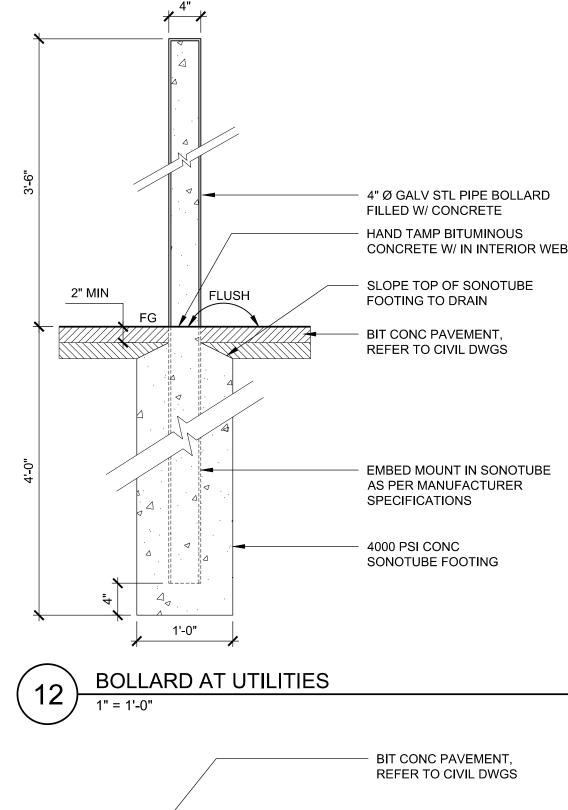
Job Number Drawing By Checked By Filename Date 10-12 CMB BW/SS L1.4 LIGHTING PLAN 15 APRIL 2011

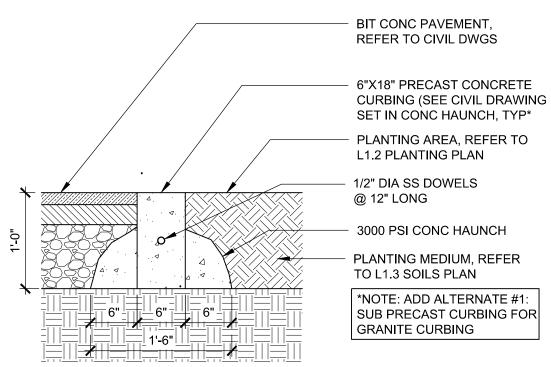
Revisions

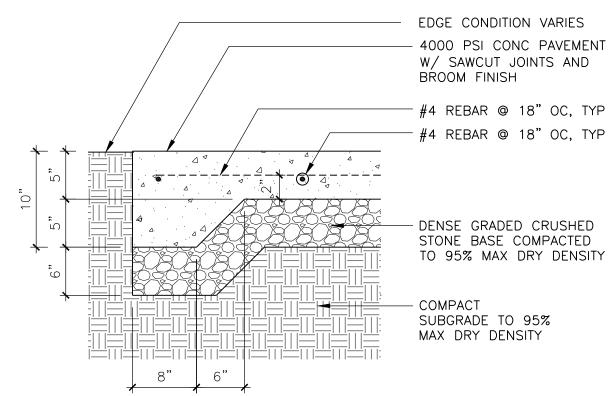
LIGHTING PLAN

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L1.4



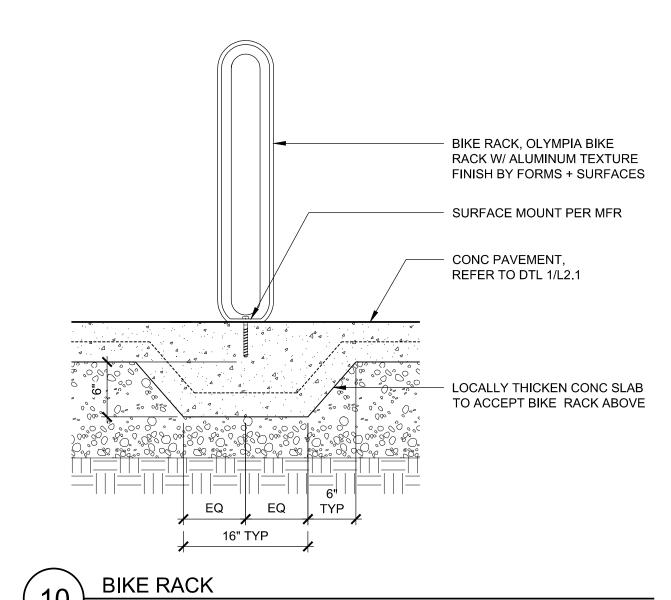


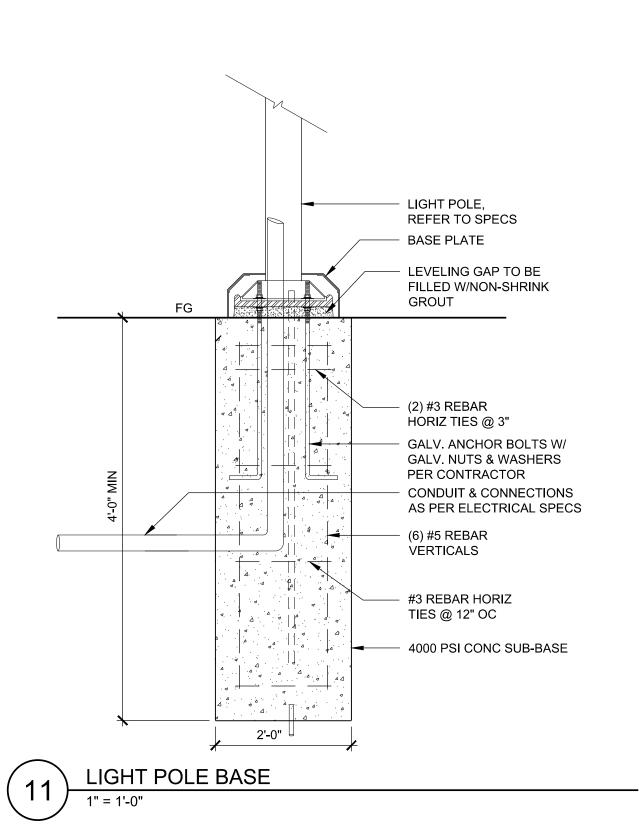


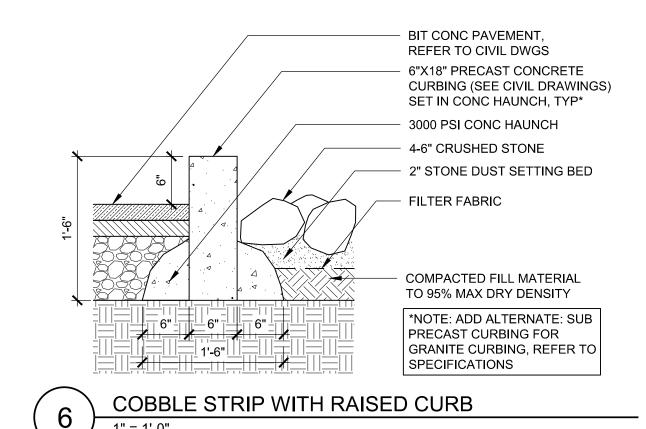
**CONCRETE PAVEMENT - VEHICULAR** 

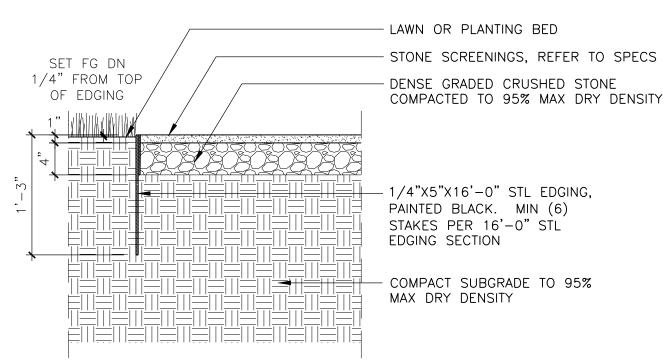
FLUSH CURB



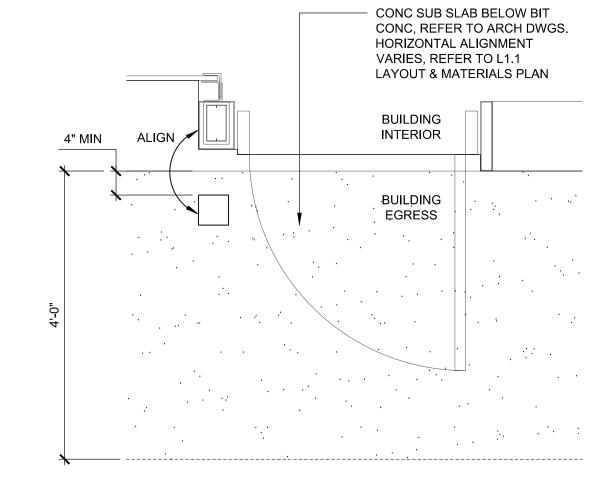




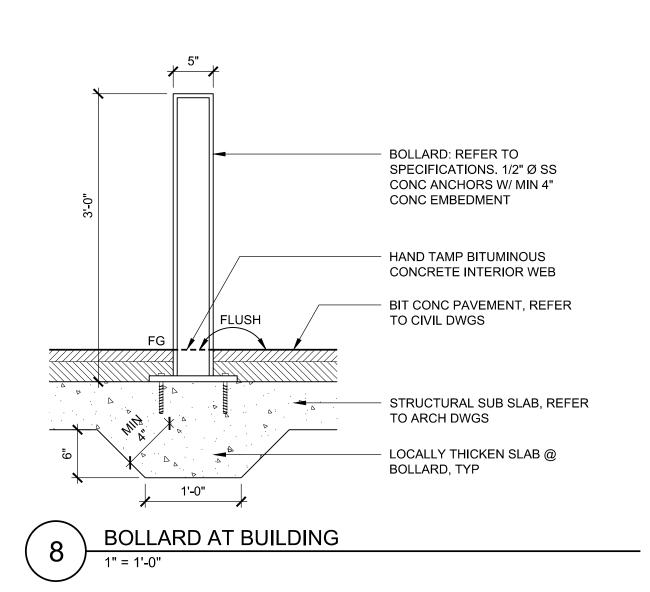


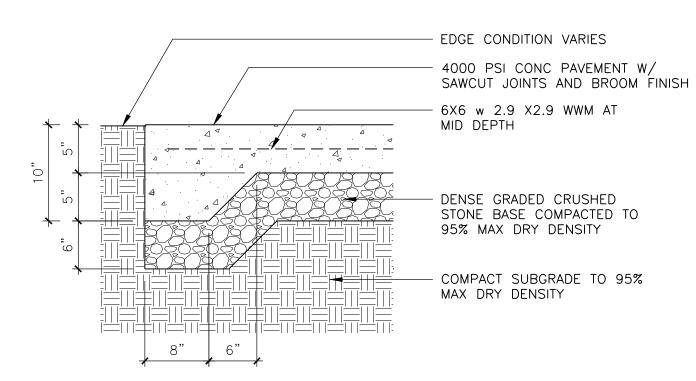




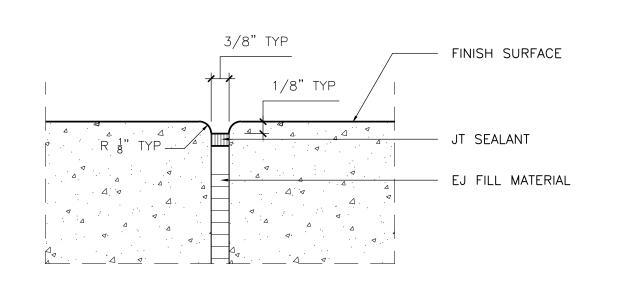


BOLLARD AT BUILDING PLAN 1" = 1'-0"

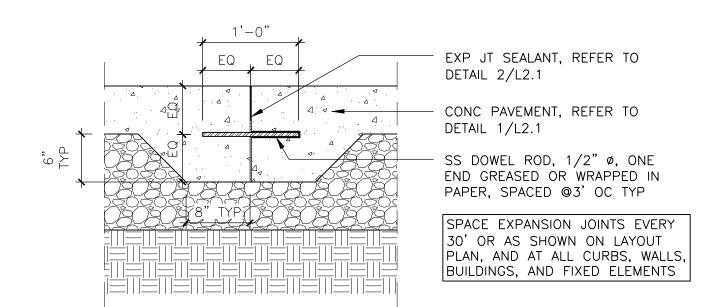




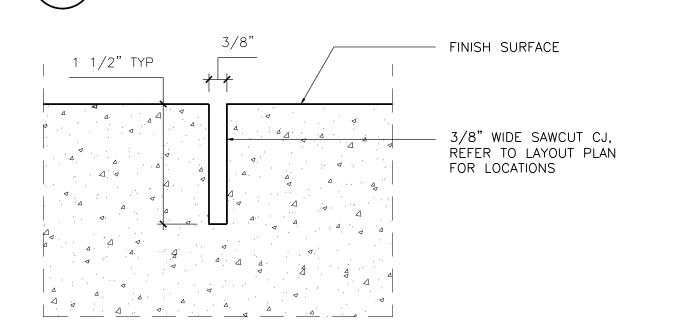


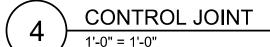


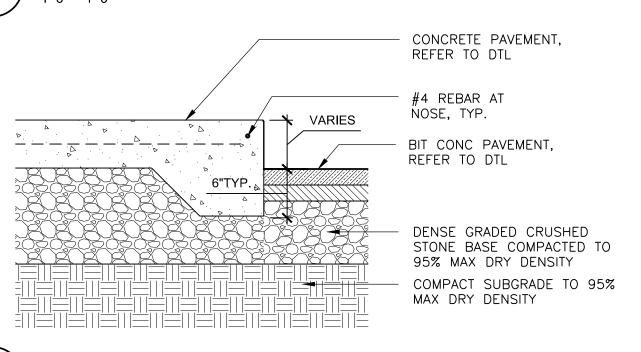
2 EXPANSION JOINT SEALANT
1'-0" = 1'-0"









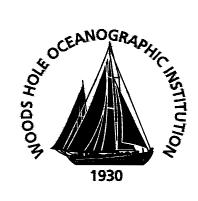


5 RAISED CONCRETE PAVEMENT

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Notes:

TN PN

Keyplan

Job Number 10
Drawing By C
Checked By B
Filename L2

CMB BW/SS L2.1 SITE DETAILS 15 APRIL 2011

Revisions

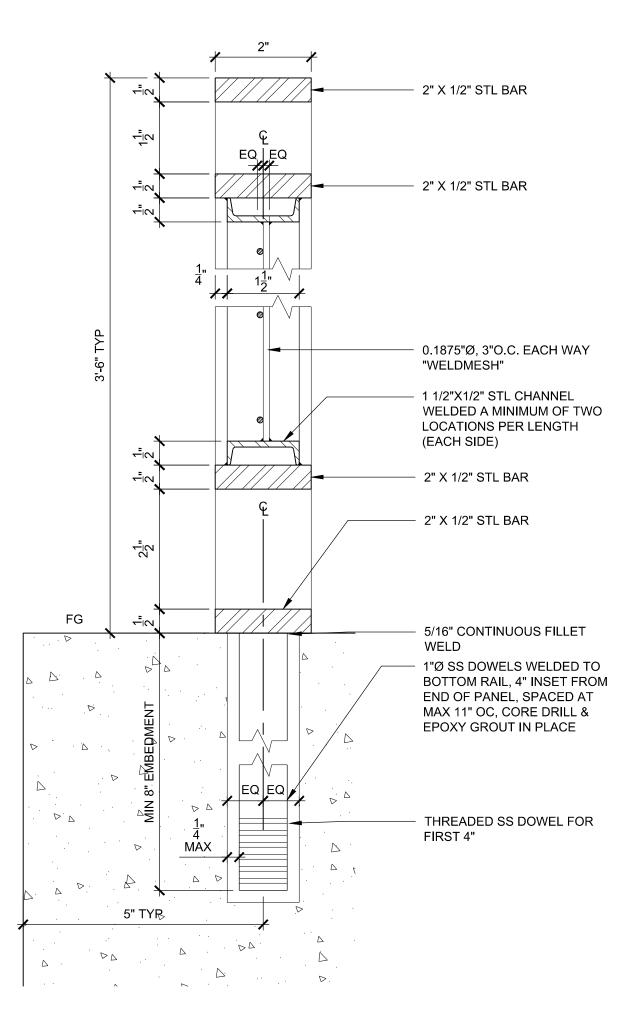
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SITE DETAILS

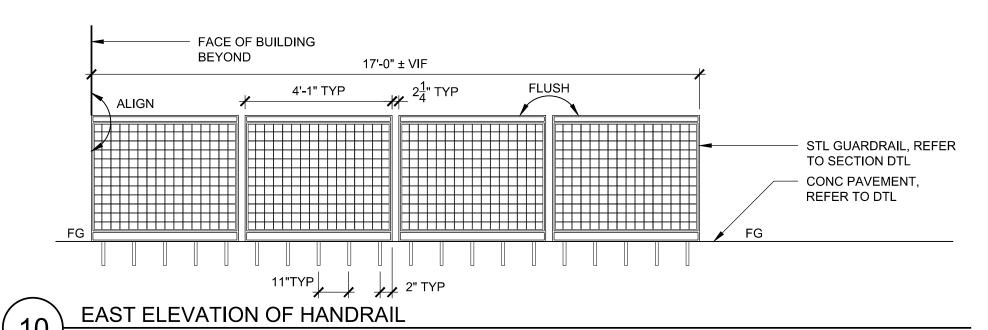
CONSTRUCTION DOCUMENTS Scale: 1" = 20'-0"

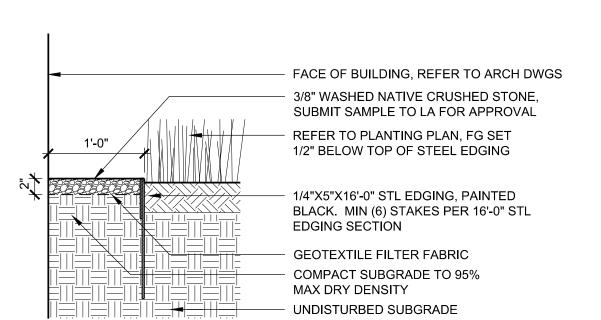
121



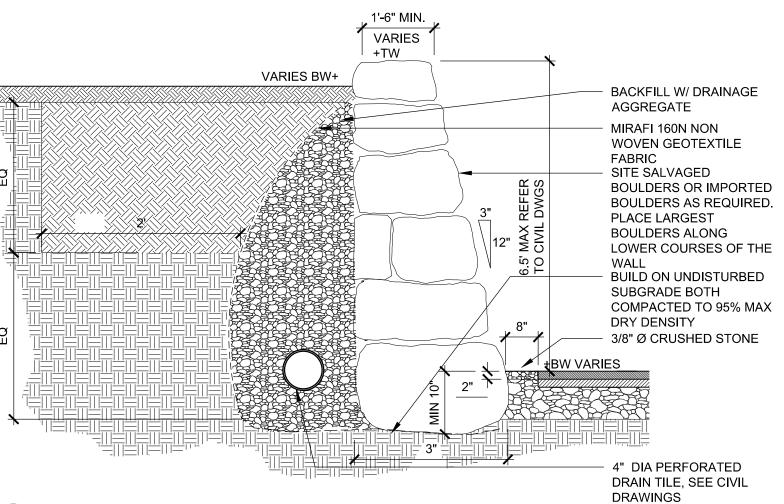




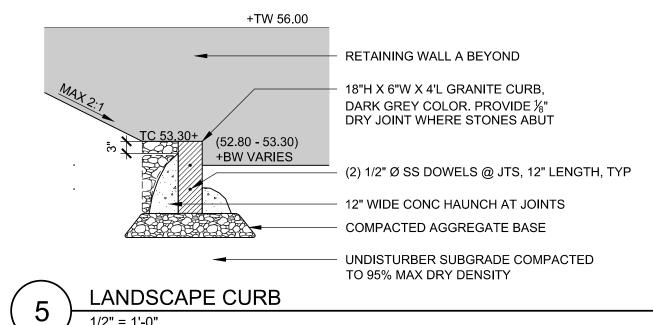




MAINTENANCE STRIP



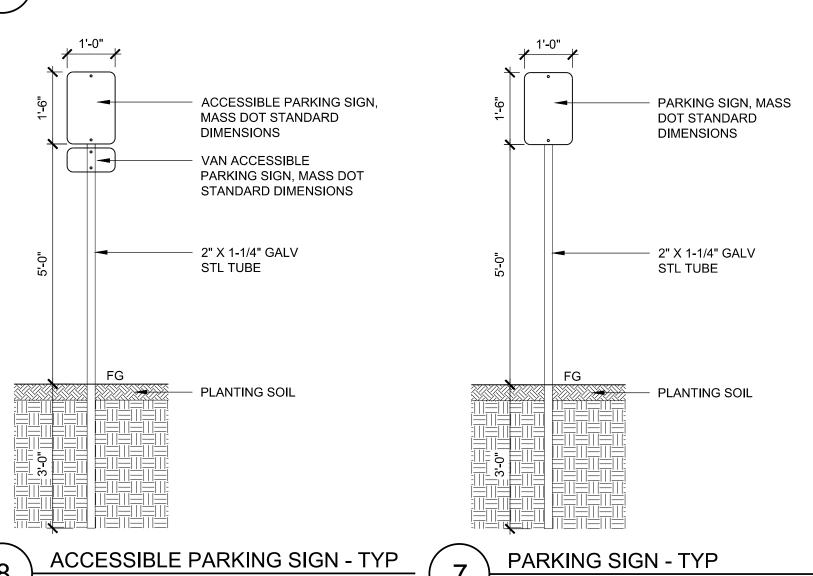
RETAINING WALL D & E - SECTION

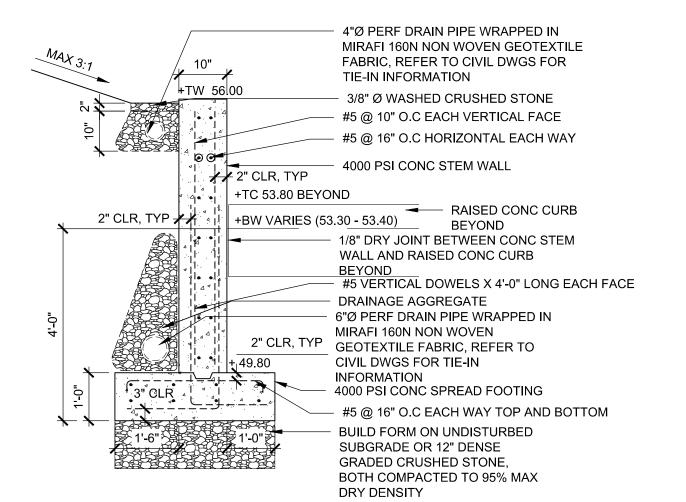




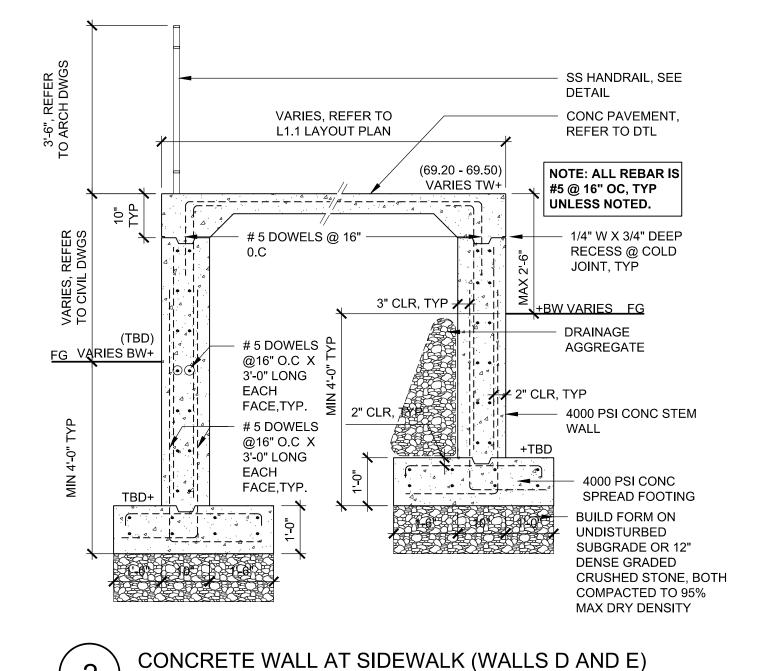
REMOVE EXISTING WEEDS AS DIRECTED BY LA. PLACE 1" OF %" CRUSHED STONE MULCH, GREY COLOR REMOVE WOOD VENEER THIS FACE ONLY AND SEAL CONCRETE BELOW PROPOSED FINISH GRADE WITH ASPHALTIC SEALANT REMOVE EXISITNG STEPS AND RAIL FINISHED GRADE

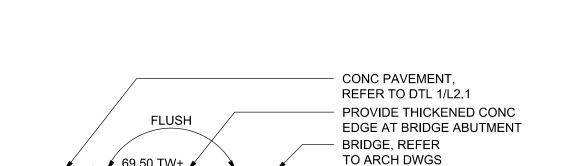
EXISTING WALL AT CLARK SOUTH

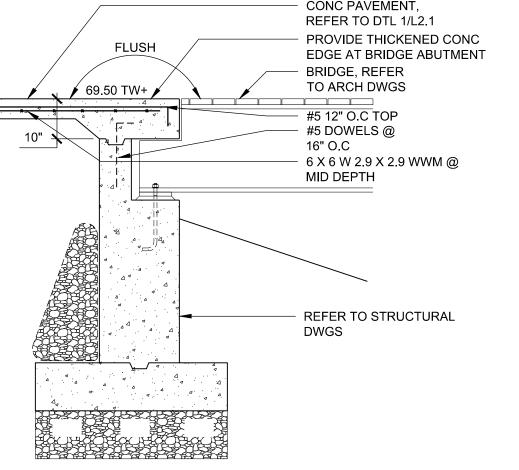




**RETAINING WALL A** 







**BRIDGE ABUTMENT** 1/2" = 1'-0"

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Notes:



Keyplan

Job Number Drawing By Checked By Filename

BW/SS L2.2 SITE DETAILS

15 APRIL 2011

Revisions

SITE DETAILS

CONSTRUCTION DOCUMENTS 1" = 20'-0"

**GROUNDCOVER PLANTING & TRIANGULATION** 

**EVERGREEN TREE PLANTING** 

RUN EROSION CONTROL FABRIC MIN 18" ONTO FLAT @ TOP OF SLOPE PLACE & COMPACT FILL IN 6" LIFTS, CREATING BENCHES TO STABILIZE PLANTING SOIL LIGHTLY COMPACT PREMIXED PLANTING SOIL MIN 12" DEPTH PLANT SHRUBS AND LARGER PLANTS @ SLOPE ANGLE, ROUGHEN ROOTBALLS TO IMPROVE CONTACT W/ SOIL PLACE WOVEN JUTE EROSION CONTROL MAT ACROSS SLOPE AND AROUND LARGER PLANTS, SECURE W/ WIRE STAPLES SLICE MAT AND PLANT GROUND COVER PLANTS THROUGH HOLES PLACE MIN 2" DEPTH OF COMPOSTED PINE BARK MULCH OVER SLOPE, TAKING CARE NOT TO BURY PLANTS

**DECIDUOUS TREE PLANTING** 

PLANTED SLOPE

NOTE: REFER TO SHT L1.2 FOR SHRUB SPACING SET CROWN OF ROOTBALL 1" - 2" ABOVE FINISHED SOIL GRADE REMOVE ROPES, WIRES, & NON-BIODEGRADABLE MATERIALS FROM ROOTBALL, CUT BACK TOP  $\frac{1}{3}$ OF BURLAP, LOOSEN ROOT BOUND ROOTBALLS OF CONTAINER **GROWN SHRUBS** 2" DEPTH COMPOSTED BARK MULCH, KEEP FREE OF TRUNK/STEMS PREMIXED PLANTING SOIL BACKFILL, LIGHTLY COMPACTED UNDISTURBED SUBGRADE

3 SHRUB PLANTING

PRUNE BROKEN, CROSSING OR RUBBING BRANCHES <sup>1</sup>" Ø BLACK RUBBER HOSE TO PROTECT BARK LOCATE HOSES/GUY WIRES @ **BRANCH NODE** STAKE TREES UP TO 4" CAL, GUY WIRE TREES GREATER THAN 4" CAL, AS DIRECTED BY LAND ARCH 12 GAUGE GALV WIRE W/TURNBUCKLE, OR TWISTED TO TIGHTEN IF STAKED (3) 2"x4"x10' STAKES STAINED DARK BROWN, NOTCHED TO HOLD WIRE, DRIVE 12" MIN INTO UNDISTURBED GRADE OUTSIDE ROOTBALL SET CROWN OF TREE 1" - 2" ABOVE FINISHED SOIL GRADE REMOVE BURLAP/ROP/WIRE FROM TOP 1/3 OF ROOTBALL, REMOVE ALL NON-BIODEGRADABLE ROPES/FABRICS 2" - 3" DEEP LOAM WATERING BERM @ EDGE OF ROOTBALL, REMOVE AFTER ONE YEAR 2" COMPOSTED PINE BARK MULCH OVER FULL TREE PIT, HOLD BACK FROM TRUNK @ 6" PERIMETER PLANTING PIT Ø 3x ROOTBALL FOR POOR SOIL SITES, OTHERWISE 2x @ DIRECTION OF LAND ARCH PREMIXED PLANTING SOIL BACKFILL, LIGHTLY COMPACTED EXCAVATE PIT 8" - 12" DEEPER THAN ROOTBALL FOR DRAINAGE UNDISTURBED GRADE OR COMPACTED FILL BELOW BALL TO PREVENT SETTLING ROOTBALL DIAMETER 3x ROOTBALL DIAMETER

PRUNE BROKEN, CROSSING OR RUBBING BRANCHES 1/2" Ø BLACK RUBBER HOSE TO PROTECT BARK LOCATE HOSES @ FIRST BRANCH STAKE TREES UP TO 4" CAL, GUY WIRE TREES GREATER THAN 4" CAL, AS DIRECTED BY LAND ARCH 12 GAUGE GALV WIRE W/TURNBUCKLE OR TWISTED TO TIGHTEN IF STAKED (3) 2"x4"x10' STAKES STAINED DARK BROWN, NOTCHED TO HOLD WIRE, DRIVE 12" MIN INTO UNDISTURBED GRADE OUTSIDE ROOTBALL SET CROWN OF TREE 1" - 2" ABOVE FINISHED SOIL GRADE REMOVE BURLAP/ROP/WIRE FROM TOP 1/3 OF ROOTBALL, REMOVE ALL NON-BIODEGRADABLE ROPES/FABRICS 2" - 3" DEEP LOAM WATERING BERM @ EDGE OF ROOTBALL, REMOVE AFTER ONE YEAR 2" COMPOSTED PINE BARK MULCH OVER FULL TREE PIT, HOLD BACK FROM TRUNK @ 6" PERIMETER PLANTING PIT Ø 3x ROOTBALL FOR POOR SOIL SITES, OTHERWISE 2x @ DIRECTION OF LAND ARCH PREMIXED PLANTING SOIL BACKFILL, LIGHTLY COMPACTED EXCAVATE PIT 8" - 12" DEEPER THAN ROOTBALL FOR DRAINAGE UNDISTURBED GRADE OR COMPACTED FILL BELOW BALL TO PREVENT SETTLING ROOTBALL DIAMETER 3x ROOTBALL DIAMETER

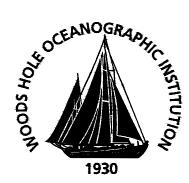
#### PLANTING NOTES

- 1. Planting contractor shall visit site prior to submitting bid to become completely familiar with site conditions.
- 2. No planting will be installed until all grading and construction has been completed in immediate
- 3. Contractor to verify all utilities on property and to protect all utilities during excavation for plants.
- 4. If there is a discrepancy between the number of plants shown on the plan and the number of plants shown in plant list, the number of plants shown on plan will take precedence.
- 5. All container material to be grown in container a minimum of 6 months.
- All material shall comply with the latest edition of the American Standard for Nursery Stock, American Association of Nurseryman.
- Contractor shall repair all damage to property from planting operations at no cost to the owner.
- 8. Contractor shall guarantee new plant material through one calendar year from time of provisional acceptance.
- 9. The Landscape Architect will tag all plants at the nursery and inspect them after delivery to the site. All plant materials shall be inspected by the Landscape Architect on site prior to installation.
- 10. All proposed plants shall be located carefully as shown on the plans and the placements shall be approved by Landscape Architect before the plants are installed.
- 11. Spacing of plants is to be based on measurements taken parallel to the ground
- 12. All disturbed areas not to be paved or planted shall be loamed and seeded. See specifications for seed mix.
- 13. Staking and guying shall be determined by the Landscape Architect on a tree by tree basis. For pricing purposes, provide a per tree unit cost for staking and guying. If staking and guying is required, remove tree wrap, stakes, and guy wires at end of first growing season.
- 14. For tree planting in lawn areas, any disturbed lawn shall be loamed and seeded as necessary.
- 15. Landscape Architect to flag trees to be protected on site.

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L2.3 PLANTING DETAILS 15 APRIL 2011

Revisions

Date

PLANTING DETAILS

CONSTRUCTION DOCUMENTS
Scale: AS SHOWN

L2.3

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