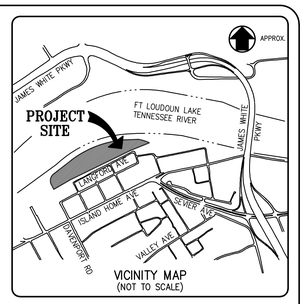
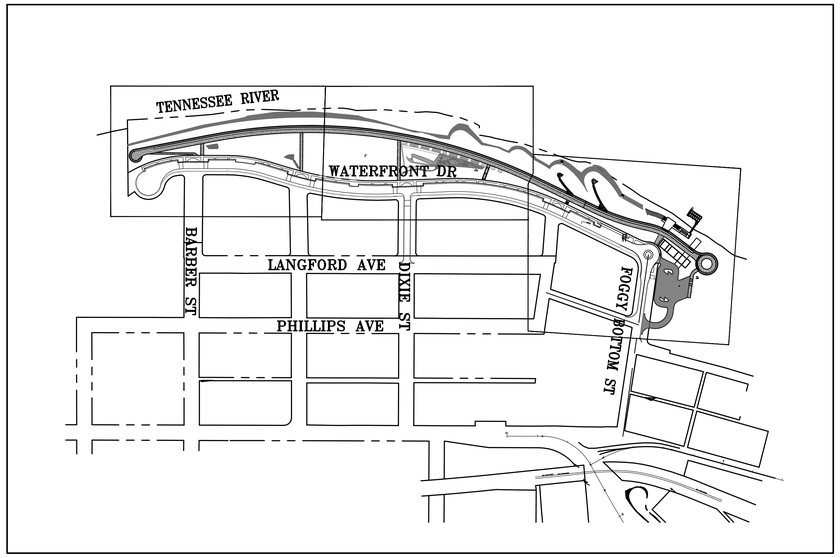
CITY OF KNOXVILLE

MADELINE ROGERO, MAYOR

SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS
ADDENDUM #1



VICINITY MAP
(NOT TO SCALE)



LOCATION MAP
0 100 200
SCALE: 1" = 100'

1. GENERAL

CANNON & CANNON, INC.

G001-A1	COVER SHEET

2. LANDSCAPE

BENEFIELD RICHTERS AND CANNON & CANNON, INC.

L002-A1	PLANT SCHEDULE & LANDSCAPE NOTES
L101.1-A1	PRESENT LAYOUT
L102.1-A1	PRESENT LAYOUT
L103.1-A1	PRESENT LAYOUT
L101.2-A1	PROPOSED LAYOUT PLAN
L102.2-A1	PROPOSED LAYOUT PLAN
L103.2-A1	PROPOSED LAYOUT PLAN
L101.3-A1	PROPOSED GRADING AND DRAINAGE PLAN
L102.3-A1	PROPOSED GRADING AND DRAINAGE PLAN
L103.3-A1	PROPOSED GRADING AND DRAINAGE PLAN
L111-A1	PAVEMENTS/LIGHTING/FURNITURE SITE PLAN - WEST END
L112-A1	PAVEMENTS/LIGHTING/FURNITURE SITE PLAN - MIDDLE
L113-A1	PAVEMENTS/LIGHTING/FURNITURE SITE PLAN - EAST END
L120-A1	OVERALL LANDSCAPE PLAN
L121-A1	LANDSCAPE PLAN - SECTION 1
L122-A1	LANDSCAPE PLAN - SECTION 2
L123-A1	LANDSCAPE PLAN - SECTION 3
L131-A1	ENLARGED AREA - WEST END
L132-A1	ENLARGED AREA - MIDDLE SECTION
L133-A1	ENLARGED AREA - EAST END
L134-A1	PUMP/DETAILS
L135-A1	PUMP/DETAILS
L301-A1	STAIR/RAMP ENLARGEMENTS
L304-A1	PLAYGROUND LAYOUT ENLARGEMENT
L307-A1	RIVERWALK FURNITURE LAYOUTS
L403-A1	SITE IMPROVEMENT DETAILS
L404-A1	SITE IMPROVEMENT DETAILS
L405-A1	SEATWALL & RETAINING WALL DETAILS
L409-A1	PLANTING DETAILS
L410-A1	PLANTING DETAILS

3. ARCHITECTURAL

STUDIO 4

A2.1.A-1	PLAN
A4.1.A-1	ELEVATIONS AND DETAILS

4. STRUCTURAL & MARINE

CSA, INC.

S1.0-A1	GENERAL NOTES
S1.1-A1	TYPICAL DETAILS
S2.1-A1	FOUNDATION PLAN
S2.2-A1	ENLARGED FOUNDATION PLAN
S2.3-A1	ENLARGED FLOATING DOCK PLAN
S3.1-A1	SECTIONS & DETAILS
S3.2-A1	SECTIONS & DETAILS

5. MEP

FACILITY SYSTEM CONSULTANTS LLC

E100-A1	LEGEND, SCHEDULE & DETAILS
E101-A1	SITE ELECTRICAL PLAN - SECTION A
E102-A1	SITE ELECTRICAL PLAN - SECTION B
E103-A1	SITE ELECTRICAL PLAN - SECTION C
E104-A1	PAVILION LIGHTING PLAN

6. CIVIL

CANNON & CANNON, INC.

C101.1-A1	INITIAL EROSION CONTROL PLAN
C102.1-A1	INITIAL EROSION CONTROL PLAN
C103.1-A1	INITIAL EROSION CONTROL PLAN
C101.2-A1	INTERMEDIATE EROSION CONTROL PLAN
C102.2-A1	INTERMEDIATE EROSION CONTROL PLAN
C103.2-A1	INTERMEDIATE EROSION CONTROL PLAN
C101.3-A1	FINAL EROSION CONTROL PLAN
C102.3-A1	FINAL EROSION CONTROL PLAN
C103.3-A1	FINAL EROSION CONTROL PLAN
C401-A1	EROSION CONTROL DETAILS
SA101-A1	SANITARY PLAN AND PROFILE

PROJECT DATA	
CITY OF KNOXVILLE OFFICE OF REDEVELOPMENT CITY–COUNTY BUILDING 400 MAIN STREET, SUITE 655, KNOXVILLE, TN 37902	
KNOXVILLE CLT. MAP NO.	*95*
PARCEL NUMBERS	*16.03, 16.04, AND 27.03*
JURISDICTION	*CITY OF KNOXVILLE: WARD 26, CITY BLOCK #26032*
ZONING	*FD–SW–2, "SOUTH WATER FRONT FORM DISTRICT"*
AREA	*8.25± AC. TOTAL*
CITY PROJECT #	*14T–G–0566*

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215–2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

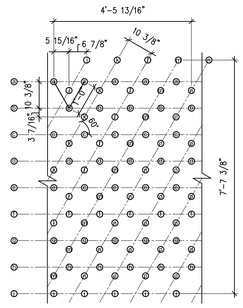
COVER SHEET

JEFF RECKER LICENSED PROFESSIONAL ENGINEER STATE OF TENNESSEE
1-7-15

CCI PROJECT NO.	00244–0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

G001–A1

811
Know what's below
Call before you dig



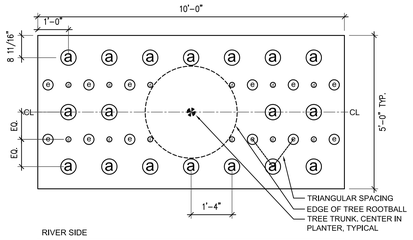
TYPE W4
RAIN GARDEN RUSHES & SEDGES

- a SCOURING RUSH — Equisetum hyemale — 2" Plugs @ 12" O.C.
- b BLUNT SPIKE RUSH — Eleocharis ovata — 2" Plugs @ 12" O.C.
- c COMMON RUSH — Juncus effusus — 2" Plugs @ 12" O.C.
- d CRESTED OVAL SEDGE — Carex cristatella — 2" Plugs @ 12" O.C.
- e TUSSOCK SEDGE — Carex stricata — 2" Plugs @ 12" O.C.
- f GRAY'S SEDGE — Carex grayi — 2" Plugs @ 12" O.C.
- g SHALLOW SEDGE — Carex lurida — 2" Plugs @ 12" O.C.
- h PENNSYLVANIA SEDGE — Carex pennsylvania — 2" Plugs @ 12" O.C.
- i INLAND SEA OATS — Chasmanthium latifolium — 2" Plugs @ 12" O.C.

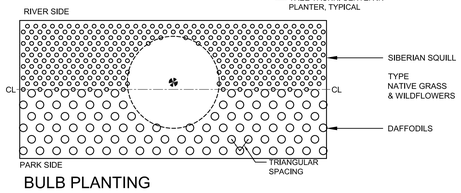
TYPE W4
RAIN GARDEN PERENNIALS

- j SWAMP MILKWEED — Asclepias incarnata — 2" Plugs @ 12" O.C.
- k FRIKART'S ASTER var. Monch — Asclepias x frikartii 'Monch' — 2" Plugs @ 12" O.C.
- l NEW ENGLAND ASTER var. Purple Dome — Aster novae angliae 'Purple Dome' — 2" Plugs @ 12" O.C.
- m RATTLESNAKE MASTER — Eryngium yuccifolium — 2" Plugs @ 12" O.C.
- n BLUE FLAG IRIS — Iris versicolor — 2" Plugs @ 12" O.C.
- o DENSE BLAZING STAR — Liatris spicata — 2" Plugs @ 12" O.C.
- p GREAT BLUE LOBELIA — Lobelia siphilitica — 2" Plugs @ 12" O.C.
- q PENSTEMON var. Husker Road — Penstemon digitalis 'Husker Road' — 2" Plugs @ 12" O.C.
- r VIRGINIA MOUNTAIN MINT — Pycanthemum virginianum — 2" Plugs @ 12" O.C.

1 / L002-A1 W4 - RAIN GARDEN PLANTING
SCALE: NOT TO SCALE

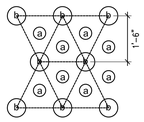


G2
- a LITTLE BLUESTEM — Andropoyon scoparias — 1 gal containers @ 16" O.C.
- b DAFFODILS — Narcissus spp. — Bulbs @ 6" O.C. Triangular Spacing
- c SIBERIAN SQUIL — Scilla siberica 'Spring Beauty' — Bulbs @ 3" O.C. Triangular Spacing
- d WILD COLUMNBINE — Aquilegia canadensis — Plugs @ 16" O.C.
- e AROMATIC ASTER — Aster oblongifolius — 1 quart containers @ 16" O.C.



BULB PLANTING

2 / L002-A1 G2 - RIVERWALK PLANTERS
SCALE: NOT TO SCALE



W1
- a SOFT RUSH — Juncus effusus — 4" Pots, Centered between Iris
- b SOUTHERN BLUE FLAG IRIS — Iris virginica — 4" Pots @ 18" Triangular Spacing

3 / L002-A1 W1- WATER QUALITY FEATURE FLOOR PLANTING
SCALE: NOT TO SCALE

LANDSCAPE NOTES

1. EXAMINE SITE UPON WHICH WORK IS TO BE PERFORMED. PROVIDE PERCOLATION TESTS, PH TESTS AND OTHER TESTS NECESSARY TO ASCERTAIN THAT ADEQUATE GROWING CONDITIONS WILL BE PROVIDED FOR THE PLANTS. IF PERCOLATION TEST OR SUBSOIL CONDITIONS INDICATE RETENTION OF WATER IN PLANTING AREAS, AS SHOWN BY SEEPAGE OR OTHER EVIDENCE INDICATING PRESENCE OF UNDERGROUND WATER, RECTIFY UNSATISFACTORY CONDITIONS BEFORE BACKFILLING. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. COMMENCEMENT OF PLANTING WORK INDICATES SITE CONDITIONS HAVE BEEN ACCEPTED BY CONTRACTOR. SEE SPECIFICATION 32 93 00.

2. UNDERGROUND UTILITIES EXIST ON SITE. VERIFY LOCATIONS AND DEPTHS BEFORE COMMENCING WITH PLANTING WORK.

3. FOR LANDSCAPING BEDS (AREAS OF MASS PLANTING OF SHRUBS AND/OR GROUNDCOVERS) TO BE ESTABLISHED IN AREAS THAT HAVE NOT BEEN ALTERED OR DISTURBED BY EXCAVATION, GRADING, OR STRIPPING OPERATIONS, PREPARE SOIL BY TILLING TO A HOMOGENOUS MIXTURE OF FINE TEXTURE, FREE OF LUMPS, CLODS OR STONES LARGER THAN 1" IN GREATEST DIMENSION, ROOTS AND OTHER EXTRANEOUS MATERIAL TO A DEPTH OF NOT LESS THAN 6"; ELIMINATING UNEVEN AREAS AND LOWSPOTS; REMOVING FOREIGN MATERIALS; SPREADING TOPSOIL AT DEPTHS SPECIFIED. DEFINE BED WITH METAL EDGING AT LAWNS.

4. IF QUANTITY OF STOCKPILED TOPSOIL IS INSUFFICIENT, PROVIDE ADDITIONAL TOPSOIL AS REQUIRED TO ACHIEVE A MINIMUM 8" DEPTH AT PLANTING BEDS. ENSURE THAT TOPSOIL IS STERILE, FERTILE, FRIABLE, NATURAL LOAM, TYPICAL FOR LOCALITY; CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH; TAKEN FROM WELL-DRAINED SITE; FREE OF SUBSOIL, CLAY LUMPS OR STONES LARGER THAN 1" IN GREATEST DIMENSION, PLANTS, WEEDS, AND ROOTS; HAVING PH VALUE OF 5.5 MINIMUM AND 7.0 MAXIMUM; CONTAINING 4 PERCENT MINIMUM ORGANIC MATTER. AMEND TOPSOIL WITH FERTILIZER AND/OR LIME AS REQUIRED TO PROMOTE VIGOROUS PLANT GROWTH. SEE SPECIFICATIONS.

5. ASSURE THAT BEDS DRAIN AWAY FROM STRUCTURES.

6. PROVIDE AND INSTALL ONLY PLANTS THAT ARE FREE FROM DISEASE AND PESTS, AND THAT COMPLY WITH THE LATEST EDITION OF PUBLICATION ANSI Z60.1, "AMERICAN STANDARDS FOR NURSERY STOCK," BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

7. ADD PRE-EMERGENT HERBICIDE UNDERNEATH AND ON TOP OF MULCH IN LANDSCAPE BEDS.

8. TOP DRESS BEDS WITH 3" DARK HARDWOOD MULCH. PROVIDE 3" DEEP LAYER IN A FOUR FOOT DIAMETER RING AROUND TREES IN LAWN AREAS. HARDWOOD MULCH IS REQUIRED FOR W2, W3, W4, W5 AND G2. DO NOT MULCH W1, G1 OR G3.

9. PLANT GROUND COVERS THROUGH MULCH.

10. REMOVE STRINGS AND OTHER TIES FROM PLANT MATERIAL.

11. REMOVE UPPER 1/3 OF BURLAP FROM PLANT ROOT BALLS.

12. DO NOT PIERCE TREE ROOT BALLS WITH SUPPORT STAKES.

13. ADD FERTILIZER AS REQUIRED FOR OPTIMUM PLANT PERFORMANCE AND PRE-EMERGENT HERBICIDE.

14. DO NOT MAKE SUBSTITUTIONS REGARDING PLANT SIZES OR SPECIES WITHOUT WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT. SEE SPECIFICATION 32 93 00.

15. PLANT MATERIAL, MULCH, AND OTHER RELATED LANDSCAPE PRODUCTS MUST BE PRE-TREATED FOR FIRE ANTS.

16. WARRANTY MATERIALS AND WORKMANSHIP FOR TWELVE MONTHS FROM THE DATE OF SUBSTANTIAL COMPLETION.

17. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR MAKING REPAIRS NECESSITATED BY DAMAGE OCCURRING DURING THE PERFORMANCE OF THEIR WORK.

18. FOR SPECIMEN PLANT MATERIAL, SUBMIT TWO (2) COLOR PHOTOS OF EACH SPECIMEN PLANT FOR APPROVAL. APPROVAL OF SPECIMEN PLANT PHOTOGRAPHY DOES NOT IMPAIR THE RIGHT OF REJECTION DURING OR AFTER INSTALLATION (IN THE EVENT PLANTS WERE DAMAGED DURING TRANSIT, STORAGE, AND/OR INSTALLATION.) SEE SPECIFICATION 32 93 00.

19. SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL LANDSCAPE REQUIREMENTS.

20. SEE IRRIGATION PLANS, DETAILS AND SPECIFICATIONS. COORDINATE AS REQUIRED.

811 Know what's below Call before you dig

SUTTREE LANDING PARK PLANT LIST

QUANTITY	SYMBOL	COMMON NAME	BOTANICAL NAME	LOCATION	ROOTS	SIZE	REMARKS
RIVERWALK TREES							
43	QlH	Highbeam Overcup Oak	*Quercus lyrata 'QLFTB'*	Riverwalk Planters	B&B	3.5" Cal.	Matched Specimen
SCREENING TREES AND SHRUBS							
32	Ca	Summersweet	*Clethra alnifolia*	Parking Lot	Cont.	3 Gal.	48" O.C. Triangular Spacing
13	Hq	Oakleaf Hydrangea	*Hydrangea quercifolia*	Parking Lot	Cont.	36" Ht.	60" O.C.
19	In	Nellie R. Stevens Holly	*Ixex x Nelly R. Stevens*	Parking Lot	B&B	6'-8' Ht.	Full to Ground, Matched Specimen @ 12'O.C.
12	IvW	Winter Red Winterberry	*Ilex verticulata'Winter Red'*	Parking Lot	Cont.	4'-5' Ht.	72" O.C. Triangular Spacing
2	IvS	Jim Dandy Winterberry (Male Pollenizer)	*Ilex verticulata'Southern Gentleman'*	Parking Lot	Cont.	4'-5' Ht.	1 per every 9 female plants
67	IvM	Dwarf Virginia Sweetspire	*Itea virginica 'Merlot'*	Parking Lot	Cont.	3 Gal.	36" O.C. Triangular Spacing
6	Mg	Bracken's Brown Beauty Sothern Magnolia	Magnolia grandiflor 'Brackens Brown Beauty'	Parking Lot	B&B	8'-10' Ht.	Full to Ground, Matched Specimen @ 15' O.C.
68	Vr	Leatherleaf Viburnum	*Viburnum rhytidophyllum*	Transformers	B&B	48" Ht.	Heavy Plants, Full to Ground @ 60" O.C.
FESTIVAL LAWN, WATER QUALITY FEATURE AND PARKING AREA TREES							
5	ArO	October Glory Red Maple	*Acer rubrum 'October Glory'*	Festival Lawn	B&B	2" Cal.	Specimen
6	Lt	Tulip Poplar	*Liriodendron tulipifera*	Festival Lawn	B&B	2" Cal.	Full Crown
3	Qm	Swamp Chestnut Oak	*Quercus michauxii*	Water Quality Feature	B&B	1.5" Cal.	Matched Specimen
16	Td	Bald Cypress	*Taxodium distichum*	Water Quality Feature	Cont.	25 Gal.	Full Crown
DRIFT TREES							
18	ArO	October Glory Red Maple	*Acer rubrum 'October Glory'*	River Bank	B&B	2" Cal.	Specimen
33	Bn	Dura-Heat River Birch	*Betula nigra'Dura Heat'*	River Bank	B&B	10'-12' Ht.	3 Canes, 1@1.5", 2@1"
23	Ls	Fruitless Sweetgum	*Liquidambar styraciflua 'Rotundiloba'*	River Bank	B&B	2" Cal.	Specimen
4	Mv	Sweetbay Magnolia	*Magnolia virginiana*	River Bank	B&B	7'-8' Ht.	Clump, pruned to 36", Full Crown
19	Qa	Swamp White Oak	*Quercus bicolor*	River Bank	B&B	2" Cal.	Specimen
ARBORETUM TREES							
11	Ab	Aeryn Trident Maple	*Acer buergerianum 'Aeryn'*	Play Alcoves, Picnic Areas	B&B	2" Cal.	Matched Specimen, Single Leader
11	Aa	Serviceberry	*Amelanchier arborea*	Sloped Planting Areas	B&B	8' Ht.	Specimen
4	Cc	Redbud	*Cercis canadensis*	Sloped Planting Areas	B&B	2" Cal.	Specimen
5	Fa	Pagoda Dogwood	*Cornus alternifilia*	Sloped Planting Areas	B&B	2" Cal.	Specimen
8	CfC	Cherokee Princess Flowering Dogwood	*Cornus florida 'Cherokee Princess'*	Sloped Planting Areas	B&B	2" Cal.	Specimen
3	CfR	Pink Flowering Dogwood	*Cornus florida 'Rubra'*	Sloped Planting Areas	B&B	2" Cal.	Specimen
2	Ma	Cucumber Magnolia	*Magnolia acuminata*	Play Alcoves, Picnic Areas	B&B	8'-10' Ht.	Matched Specimen
5	Ns	Blackgum	*Nysso sylvatica*	Play Alcoves, Picnic Areas	B&B	2" Cal.	Matched Specimen
7	Oa	Eastern Hophornbeam	*Ostrya virginiana*	Play Alcoves, Picnic Areas	B&B	2" Cal.	Matched Specimen
W1 - WATER QUALITY FEATURE FLOOR							
4,020	Iv	Southern Blue Flag Iris	*Iris virginica*	Water Quality Feature Floor	Plugs	2"	18" O.C. Triangular Spacing
4,020	Je	Soft Rush	*Juncus effusus*	Water Quality Feature Floor	Plugs	2"	Centered Between Iris
W2 - WATER QUALITY FEATURE MOUNTS							
302	IvM	Dwarf Virginia Sweetspire	*Itea virginica 'Merlot'*	Water Quality Feature Mounds	Cont.	3 Gal.	24" O.C. Triangular Spacing
W3 - WATER QUALITY FEATURE FRINGE							
139	Ca	Summersweet	*Clethra alnifolia*	Water Quality Feature Fringe	Cont.	3 Gal.	48" O.C. Triangular Spacing
63	Cs	Redosier Dogwood	*Corunus sericea*	Water Quality Feature Fringe	Cont.	5 Gal.	60" O.C. Triangular Spacing
68	Hq	Oakleaf Hydrangea	*Hydrangea quercifolia*	Water Quality Feature Fringe	Cont.	36" Ht.	60" O.C. Triangular Spacing
62	IvW	Winter Red Winterberry	*Ilex verticulata'Winter Red'*	Water Quality Feature Fringe	Cont.	2'-3' Ht.	72" O.C. Triangular Spacing
8	IvS	Jim Dandy Winterberry (Male Pollenizer)	*Ilex verticulata'Southern Gentleman'*	Water Quality Feature Fringe	Cont.	2'-3' Ht.	1 per every 9 female plants
W4 - RAIN GARDEN							
480	a	Horsetail Rush / Scouring Rush	*Equisetum hymale*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	b	Blunt Spike Rush	*Eleocharis ovata*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	c	Soft Rush	*Junus effusus*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	d	Crested Oval Sedge	*Carex cristatella*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	e	Tussock Sedge	*Carex stricata*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	f	Gray's Sedge	*Carex grayi*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	g	Shallow Sedge	*Carex lurida*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	h	Pennsylvania Sedge	*Carex pennsylvanica*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	i	River Oats / Inland Sea Oats	*Chasmanthium latifolium*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	j	Swamp Milkweed	*Asclepias incarnata*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	k	Frikart's Aster	*Asclepias x frikartii 'Monch'*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	l	New England Aster var. Purple Dome	*Aster novae angliae 'Purple Dome'*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	m	Rattlesnake Aster	*Eryngium yuccifolium*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	n	Blue Flag Iris	*Iris versicolor*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	n	Dense Blazing Star	*Liatris spicata*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	o	Great Blue Lobelia	*Lobelia silphilitica*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	p	Penstemon var. Husker Road	*Penstemon digitalis'Husker Road'*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
480	q	Virginia Mountain Mint	*Pycanthemum virginianum*	Rain Garden	Plugs	2"	2" plugs @ 12" O.C.
W5 - RAIN GARDEN FRINGE							
1,933							
LIVE STAKES							
661	Cam	Live Stakes - Silky Dogwood	*Cornus amomum*	Above top of Rip-Rap	Live Stakes	.5"-2" Dia. 2'-3' Length	36" Triangular Spacing, Alternate Species Every Other Plant
661	Ssa	Live Stakes - Silky Willow	*Salix sericea*	Above top of Rip-Rap	Live Stakes	.5"-2" Dia. 2'-3' Length	36" Triangular Spacing, Alternate Species Every Other Plant
G1 - SEEDED GRASSES (UPLAND MEADOW)							
		Upland Meadow Native Seed Mix		Upland Slopes	Seed	Seed	See Specs. Application Rate: 40.19 lbs/acre PLS including Nurse Crop of Oats. Cover crop required in advance.
G2 - RIVERWALK PLANTERS							
774	a	Little Bluestem	*Andropogon scoparias*	Riverwalk Planters	Cont.	1 Gal.	containers @ 16" O.C.
8,170	b	Daffodils	*Narcissus spp.*	Riverwalk Planters	Bulbs	Bulbs	bulbs @ 6" O.C. Triangular Spacing
28,509	c	Siberian Squil	*Scilla siberica 'Spring Beauty'*	Riverwalk Planters	Bulbs	Bulbs	bulbs @ 3" O.C. Triangular Spacing
516	d	Wild Columbine	*Aquilegia canadensis*	Riverwalk Planters	Plugs	Plugs	plugs @ 16" O.C.
516	e	Aromatic Aster	*Aster oblongifolius*	Riverwalk Planters	Cont.	1 Qt.	containers @ 18" O.C.
G3 - SEEDED GRASSES (RIPARIAN GRASSES)							
		Riparian Native Seed Mix		Riparian Slopes	Seed	Seed	See Specs. Application Rate: 41.19 lbs/acre PLS including Nurse Crop of Oats. Cover crop required in advance.
L1 - SODDED LAWN (REINFORCED)							
		Fescue Sod		High Use Areas/Slopes	Sod	Sod	
		Fiber Reinforcement		High Use Areas/Slopes	Bag	Bag	1 lb/ 8 SF
L2 - SODDED LAWN (NON-REINFORCED)							
		Fescue Sod		Lawns	Sod	Sod	

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

PLANT SCHEDULE & LANDSCAPE NOTES

BENJAMIN JOSEPH ETTER REGISTERED AGRICULTURAL COMMERCE NO. 00000000 LANDSCAPE ARCHITECT

CCI PROJECT NO:	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	C.K.
DRAWN	

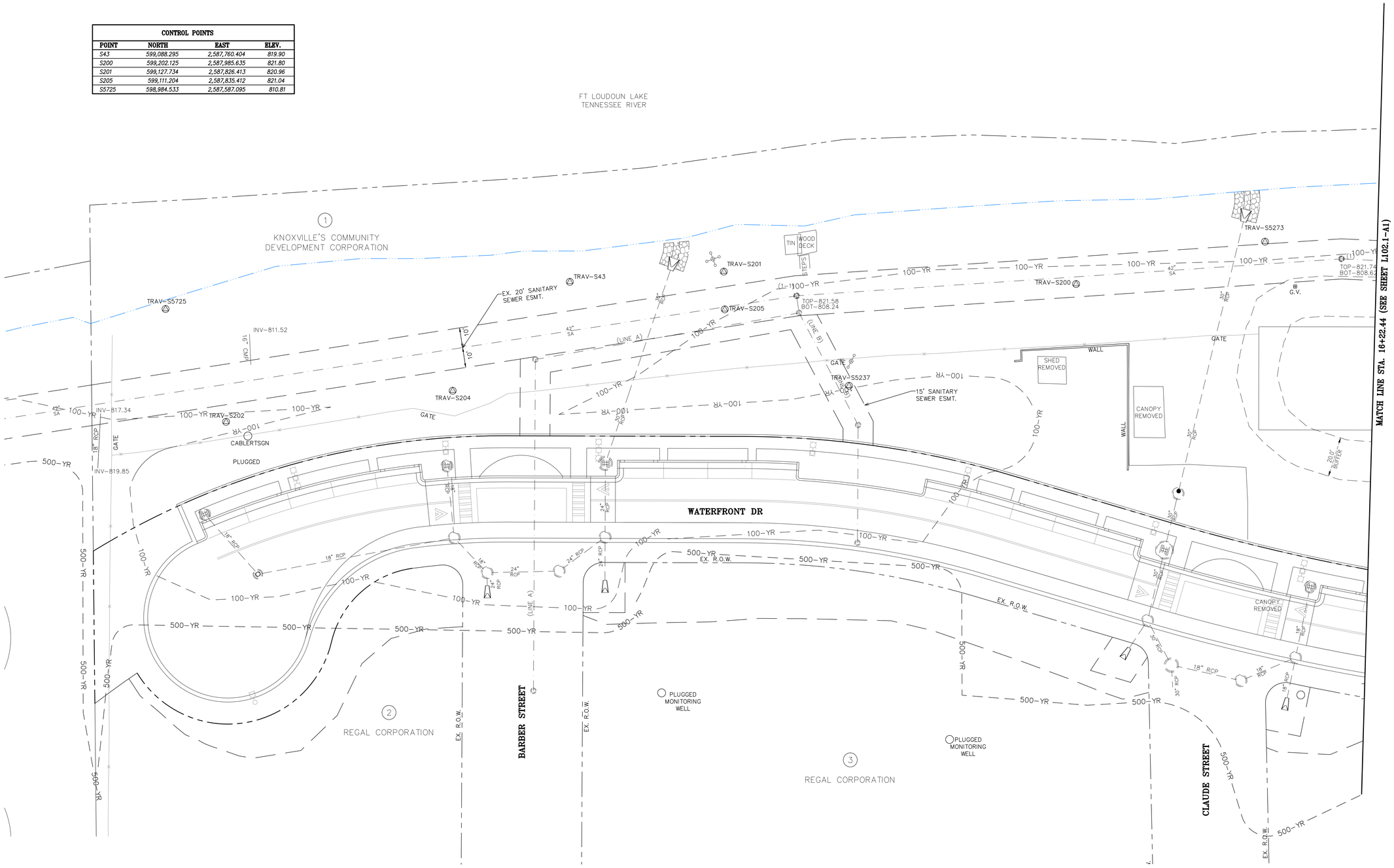
L002-A1

NOTES:

1. THE BOUNDARY AND TOPOGRAPHIC DATA SHOWN WAS PROVIDED BY PROVIDED BY VAUGHN & MELTON.
2. PROPERTY CONCERNED REFLECTS PARCELS 27.03 AS SHOWN ON KNOX COUNTY CLT TAX MAP NO. 95. ZONING FOR THE PROPERTY IS FD-SW-2 "SOUTH WATERFRONT DISTRIC 2". TOTAL AREA IS 8.25± ACRES. THE TOTAL DISTURBED AREA IS APPROXIMATELY 7.4± ACRES. CITY BLOCK NUMBER IS 26032.
3. OWNER:
   KNOXVILLE COMMUNITY
   DEVELOPMENT CORPORATION
   901 LANGFORD AVENUE.
   KNOXVILLE, TN 37920

0 20 40
SCALE: 1" = 20'

CONTROL POINTS			
POINT	NORTH	EAST	ELEV.
S43	599,088.295	2,587,760.404	819.90
S200	599,202.125	2,587,985.635	821.80
S201	599,127.734	2,587,826.413	820.96
S205	599,111.204	2,587,835.412	821.04
S5725	598,984.533	2,587,587.095	810.81



LEGEND

- 813 — NORMAL POOL LINE
- 500 — 500 YEAR FLOOD LINE
- 100 — 100 YEAR FLOOD LINE
- EXIST. PROPERTY
- EXIST. R.O.W.
- SA — EXIST. SANITARY SEWER
- 18" RCP — EXIST. STORM SEWER
- EXIST. EASEMENT LINE
- PROPOSED CENTERLINE

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

PRESENT LAYOUT

JEFF BECKETT
REGISTERED ENGINEER
1-7-15
STATE OF TENNESSEE

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

L101.1-A1

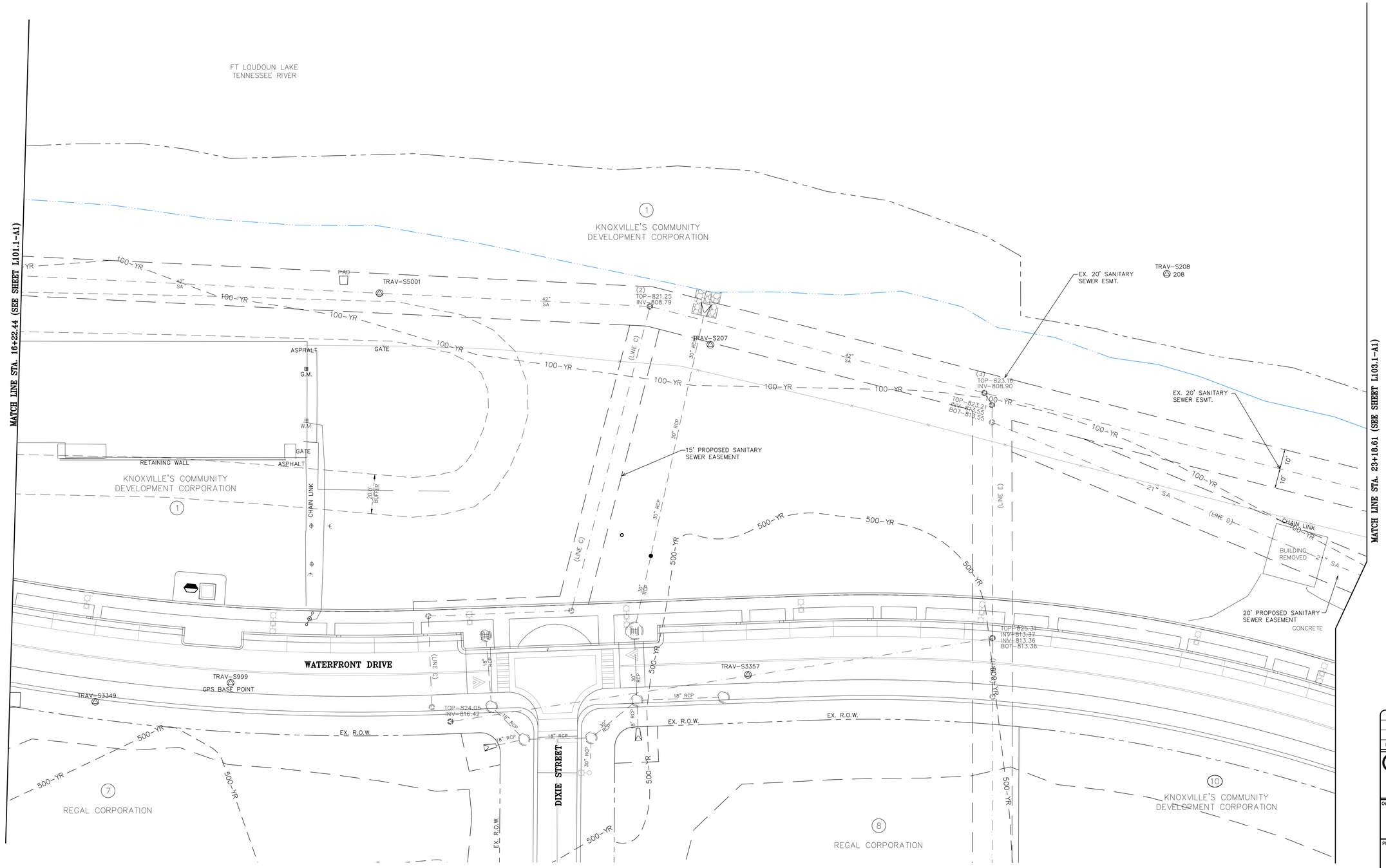
811
Know what's below
Call before you dig

CONTROL POINTS			
POINT	NORTH	EAST	ELEV.
S5273	599,355.317	2,588,279.063	822.05
S5001	599,145.321	2,588,301.734	820.75
S207	599,408.301	2,588,440.118	821.34

NOTES:

1. REFER TO SHEET L101.1-A1 FOR GENERAL NOTES.

0 20 40
SCALE: 1" = 20'



LEGEND

- 813 — NORMAL POOL LINE
- 500 — 500 YEAR FLOOD LINE
- 100 — 100 YEAR FLOOD LINE
- EXIST. PROPERTY
- EXIST. R.O.W.
- EXIST. SANITARY SEWER
- EXIST. STORM SEWER
- EXIST. EASEMENT LINE
- PROPOSED CENTERLINE

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

PRESENT LAYOUT

JEFF BECKETT
1-7-15
STATE OF TENNESSEE

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

L102.1-A1

811
Know what's below
Call before you dig

NOTES:

1. REFER TO SHEET L101.1-A1 FOR GENERAL NOTES.

SCALE: 1" = 20'

CONTROL POINTS			
POINT	NORTH	EAST	ELEV.
5209	599,526.578	2,589,065.640	824.10
5210	599,498.709	2,589,168.925	824.44
5211	599,466.848	2,589,322.459	824.13
55429	599,291.740	2,589,253.053	823.87
510	599,174.149	2,589,310.857	827.47
5219	599,170.867	2,589,193.541	828.18
52090	598,989.661	2,589,215.642	843.30
58210	599,015.013	2,589,063.016	836.28
57914	5989.38.535	2,589,090.548	837.83

LEGEND

- 813 — NORMAL POOL LINE
- 500 — 500 YEAR FLOOD LINE
- 100 — 100 YEAR FLOOD LINE
- EXIST. PROPERTY
- EXIST. R.O.W.
- JI-100 — EXIST. SANITARY SEWER
- 18" RCP — EXIST. STORM SEWER
- EXIST. EASEMENT LINE
- PROPOSED CENTERLINE

MATCH LINE STA. 23+19.61 (SEE SHEET L102.1-A1)

FT LOUDOUN LAKE
TENNESSEE RIVER

KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION

WATERFRONT DRIVE

PHILLIPS AVENUE

FOGGY BOTTOM STREET

H.L. & NANCY DUNLAP

HERCHELL & NANCY DUNLAP

THOMAS D. & REGINA L. BROWNING

JOHN D WILLIS ET AL

GEORGIA FRANKLIN

811 Know what's below Call before you dig

REVISIONS | DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

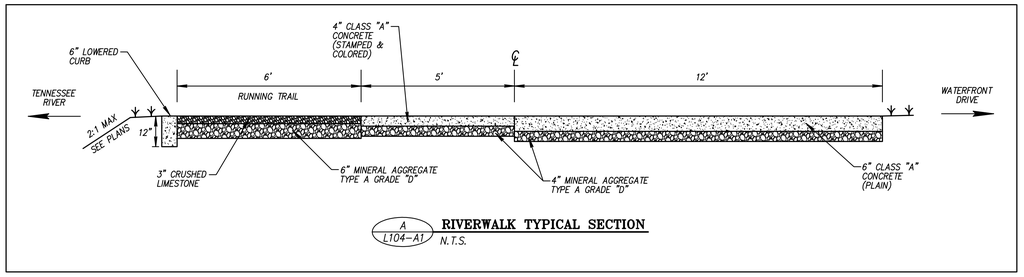
PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

PRESENT LAYOUT

JEFF RECKER — STATE OF TENNESSEE — 1-7-15

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

L103.1-A1

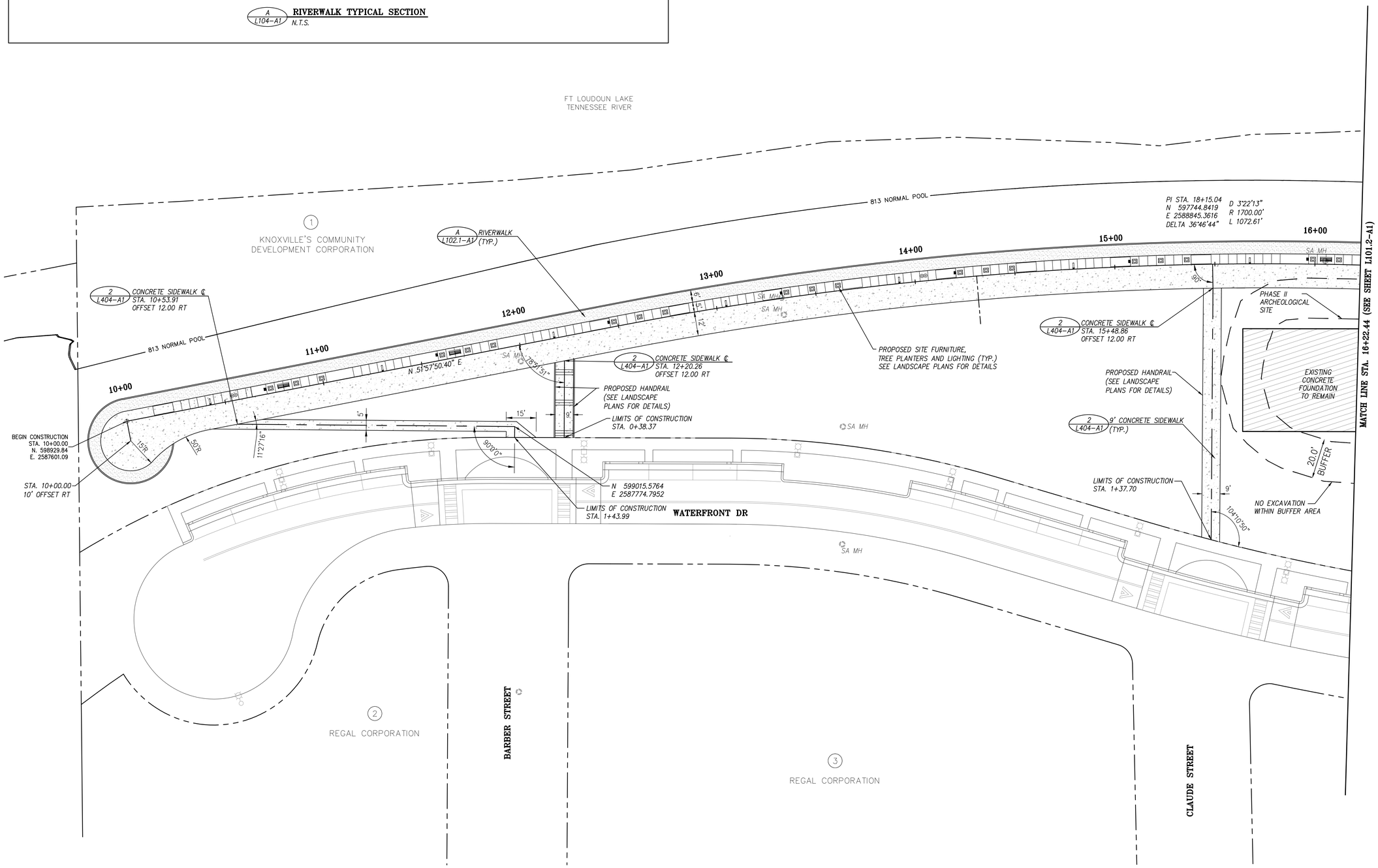


A / L104-A1 **RIVERWALK TYPICAL SECTION**
N.T.S.

NOTES:

1. THE BOUNDARY AND TOPOGRAPHIC DATA SHOWN WAS PROVIDED BY PROVIDED BY VAUGHN & MELTON.
2. UNLESS NOTED OTHERWISE, DIMENSIONS ARE TAKEN FROM OUTSIDE FACE OF BUILDING AND/OR FACE OF CURB.
3. PROPERTY CONCERNED REFLECTS PARCELS 27.03 AS SHOWN ON KNOX COUNTY CLT TAX MAP NO. 95. ZONING FOR THE PROPERTY IS FD-SW-2 "SOUTH WATERFRONT DISTRICT 2". TOTAL AREA IS 8.25± ACRES. THE TOTAL DISTURBED AREA IS APPROXIMATELY 7.4± ACRES. CITY BLOCK NUMBER IS 26032.
4. ALL SETBACKS SHALL BE IN ACCORDANCE WITH THE CITY OF KNOXVILLE ZONING ORDINANCE.
5. OWNER: 901 LANGFORD AVENUE. KNOXVILLE, TN 37920
6. PERIMETER SLOPES SHALL BE LANDSCAPED AND ARE NOT TO EXCEED 2:1 (H:V) UNLESS PROPER STABILIZATION IS PROPOSED BY A GEOTECHNICAL ENGINEER.
7. REFER TO SHEET L101.1-A1, L102.1-A1, & L103.1-A1 FOR HORIZONTAL CONTROL INFORMATION.

SCALE: 1" = 20'



LEGEND

- CONCRETE SIDEWALK
- GRAVEL RUNNING TRAIL
- PROPOSED STAMPED CONCRETE
- A / L104-A1 DETAIL REFERENCE (DETAIL NO./SHEET NO.)
- EXIST. PROPERTY
- EXIST. R.O.W.
- PROPOSED CENTERLINE

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

PROPOSED LAYOUT PLAN

JEFF BECKER REGISTERED ENGINEER STATE OF TENNESSEE 1-7-15

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

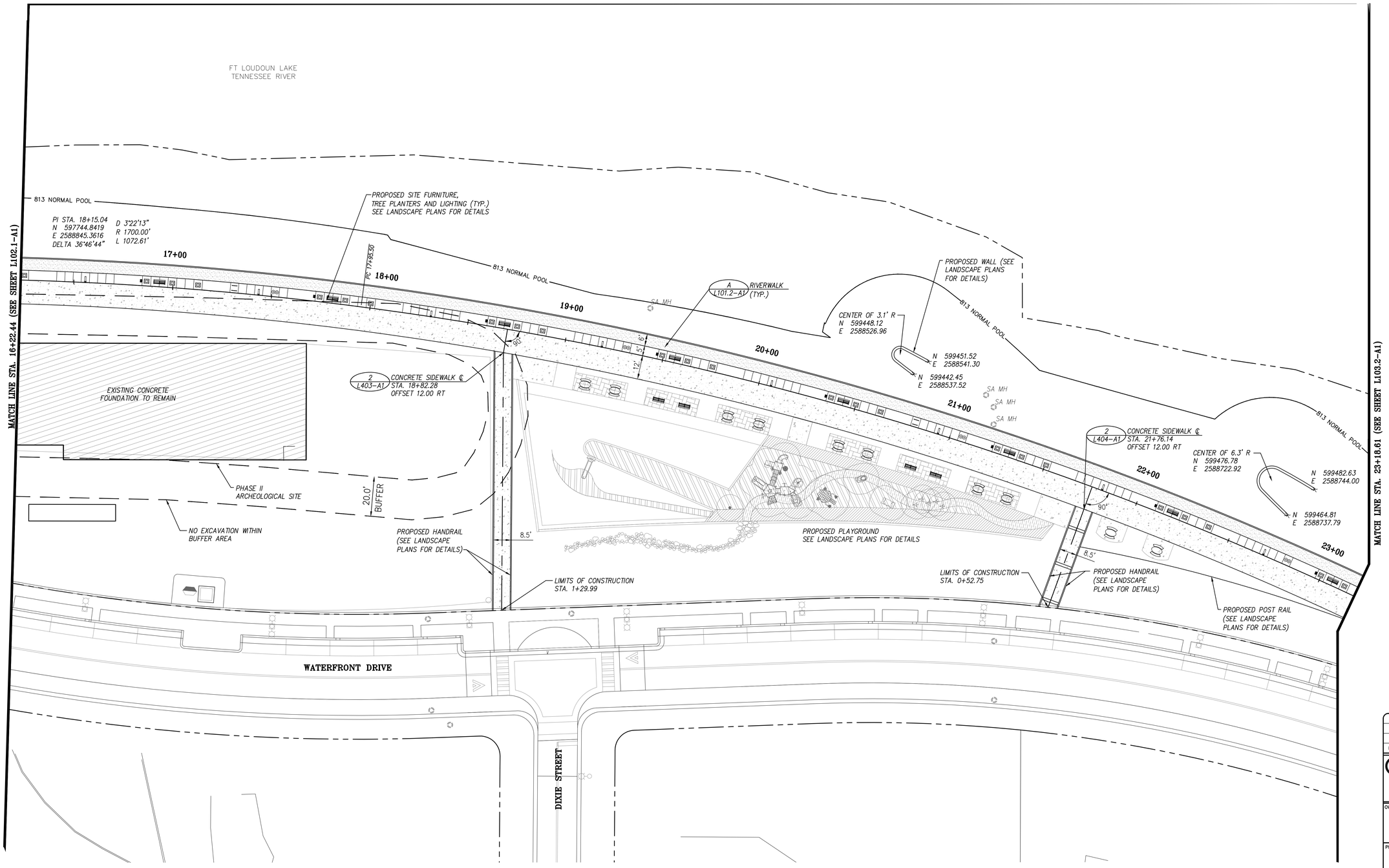
L101.2-A1

811 Know what's below Call before you dig

NOTES:

1. REFER TO SHEET L101.2–A1 FOR GENERAL NOTES.

0 20 40
SCALE: 1" = 20'



LEGEND

- CONCRETE SIDEWALK
- GRAVEL RUNNING TRAIL
- PROPOSED STAMPED CONCRETE
- A / L104–A1 — DETAIL REFERENCE (DETAIL NO./SHEET NO.)
- EXIST. PROPERTY
- EXIST. R.O.W.
- PROPOSED CENTERLINE

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215–2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

PROPOSED LAYOUT PLAN

JEFF BECKETT
STATE OF TENNESSEE
1-7-15

CCI PROJECT NO.	00244–0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

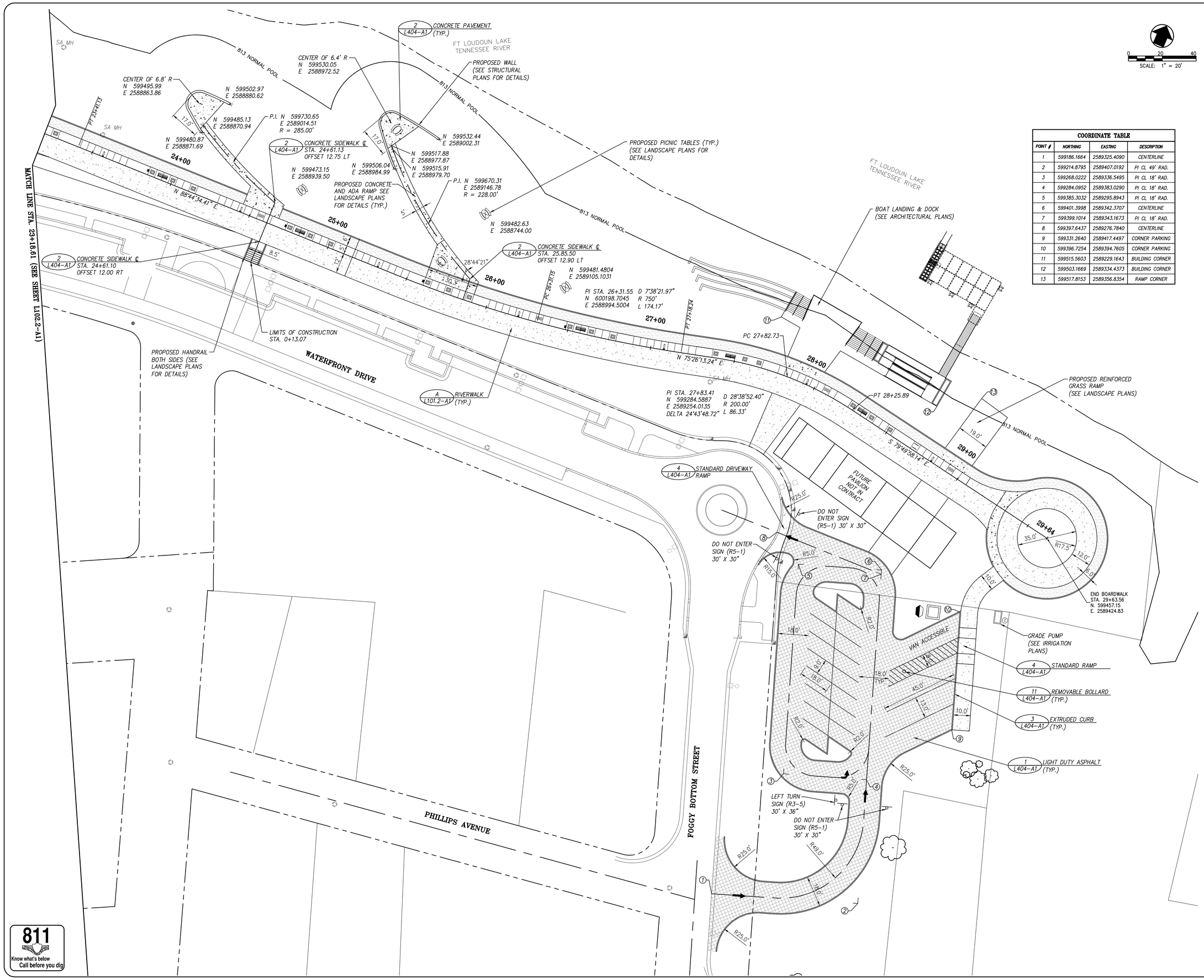
L102.2–A1

811
Know what's below
Call before you dig

NOTES:

1. REFER TO SHEET L101.2–A1 FOR GENERAL NOTES.

SCALE: 1" = 20'



COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
1	599186.1664	2589325.4090	CENTERLINE
2	599214.8795	2589407.0192	PI CL 49' RAD.
3	599268.0222	2589336.5495	PI CL 18' RAD.
4	599284.0952	2589383.0290	PI CL 18' RAD.
5	599385.3032	2589295.8943	PI CL 18' RAD.
6	599401.3998	2589342.3707	CENTERLINE
7	599399.1014	2589343.1673	PI CL 18' RAD.
8	599397.6437	2589276.7840	CENTERLINE
9	599331.2640	2589417.4497	CORNER PARKING
10	599396.7254	2589394.7605	CORNER PARKING
11	599515.5603	2589229.1643	BUILDING CORNER
12	599503.1669	2589334.4373	BUILDING CORNER
13	599517.8153	2589356.8354	RAMP CORNER

LEGEND

- CONCRETE SIDEWALK
- GRAVEL RUNNING TRAIL
- PROPOSED STAMPED CONCRETE
- A / L104–A1 — DETAIL REFERENCE (DETAIL NO./SHEET NO.)
- EXIST. PROPERTY
- EXIST. R.O.W.
- PROPOSED CENTERLINE
- 1 — COORDINATE POINT

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215–2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

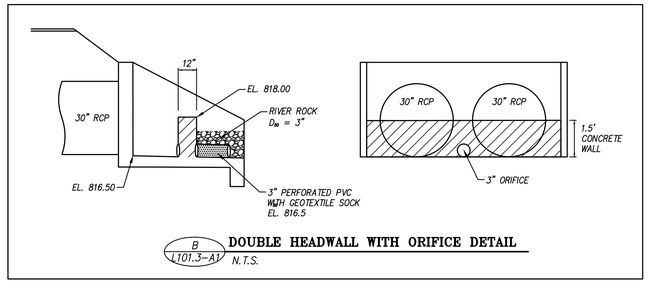
PROPOSED LAYOUT PLAN

JEFF BECKETT REGISTERED ENGINEER TENNESSEE 1-7-15

CCI PROJECT NO. 00244–0014
DRAWING DATE JANUARY 7, 2015
P.I.C. RJB
DRAWN AWG

L103.2–A1

811 Know what's below Call before you dig



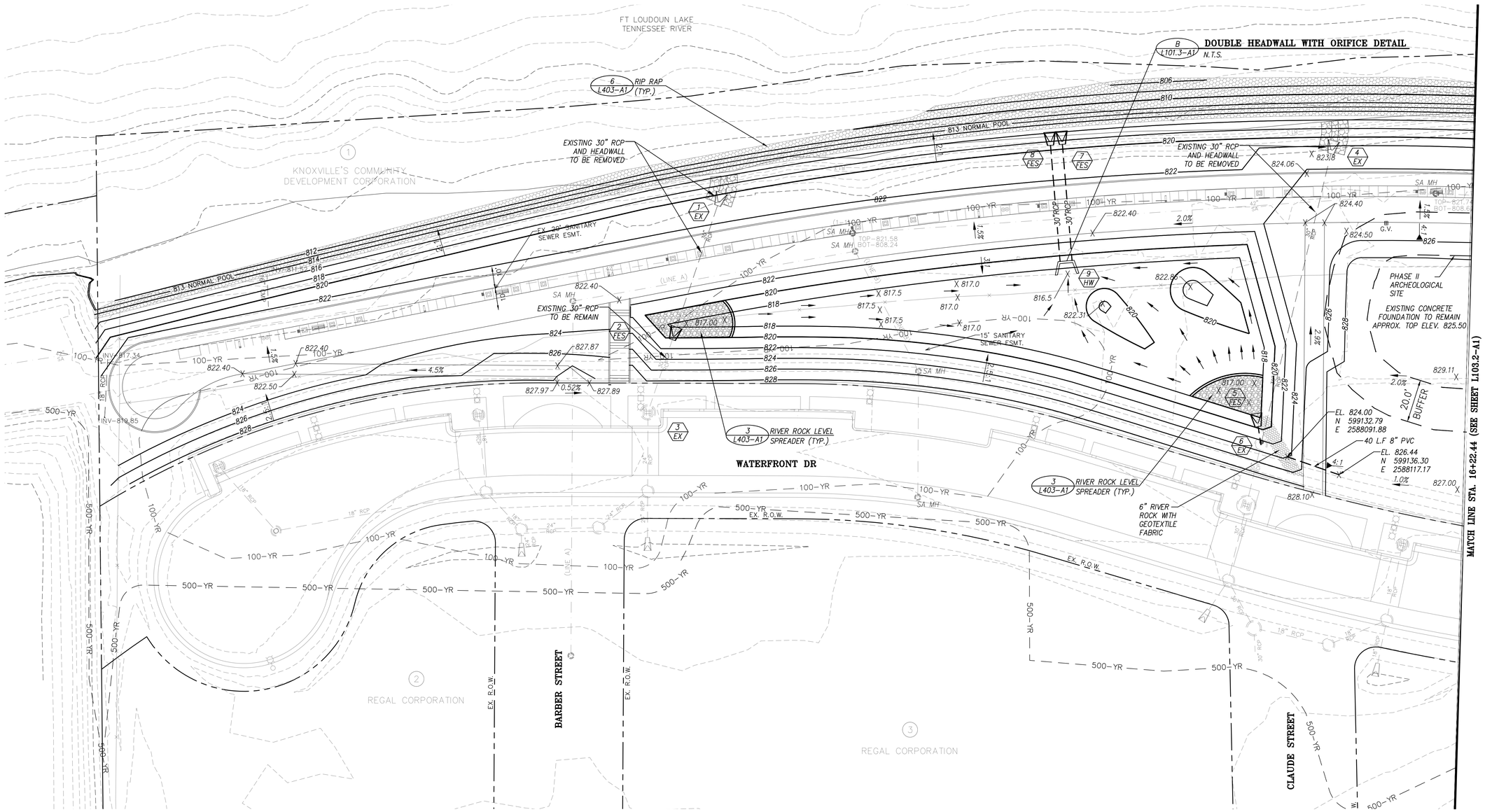
B L101.3–A1 **DOUBLE HEADWALL WITH ORIFICE DETAIL**
N.T.S.

SPECIAL NOTES:
1. RIPRAP SHALL BE PLACED TO ELEVATION 815.00.

0 20 40
SCALE: 1" = 20'

GRADING NOTES:

1. THE BOUNDARY AND TOPOGRAPHIC DATA SHOWN WAS PROVIDED BY PROVIDED BY VAUGHN & MELTON.
2. THE DISTURBED AREA IS APPROXIMATELY 8.25± ACRES. THE TOTAL SITE AREA IS APPROXIMATELY 7.4± ACRES.
3. UNLESS NOTED OTHERWISE, THE PROPOSED GRADES SHOWN ON THESE DRAWINGS ARE FINISH GRADE. EXISTING AND PROPOSED CONTOURS ARE SHOWN AT 2 FT. INTERVALS.
4. EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK AND THE STORMWATER POLLUTION PREVENTION PLAN. THE DEVICES SHOWN ON THE DRAWINGS ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED.
5. THE SITE SHALL BE CLEARED AND GRUBBED WITHIN THE LIMITS OF EXCAVATION. COMPLETELY DISPOSE OF ALL MATERIALS RESULTING FROM CLEARING AND GRUBBING OFF–SITE OR ON–SITE AT A LOCATION DETERMINED BY THE OWNER.
6. SHALL BE REMOVED TO A DEPTH OF 2 FT BELOW THE SUBGRADE. ROCK SHALL BE SCARIFIED TO A DEPTH OF 1 FT BELOW SUBGRADE.
7. STRIP TOPSOIL TO A MINIMUM DEPTH OF 8–IN. AND TEMPORARILY STOCKPILE EXCAVATED MATERIALS. INSTALL SILT FENCE OR OTHER APPROPRIATE EROSION CONTROL STRUCTURES ON THE DOWN HILL SIDE OF THE STOCKPILE.
8. PROOF ROLL AREAS TO RECEIVE FILL AND PLACE FILL IN ACCORDANCE WITH THE SITE SPECIFIC REPORT OF GEOTECHNICAL EXPLORATION.
9. ALL NEWLY GRADED EARTHEN AREAS THAT ARE NOT TO BE PAVED, STABILIZED, OR SODDED SHALL BE SEEDED, FERTILIZED, AND MULCHED WITHIN 30 DAYS OF ATTAINMENT OF FINAL GRADE.
10. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS OR POND ON–SITE. PROVIDE NECESSARY MEASURES TO KEEP THE SITE FREE–DRAINING.
11. NO SLOPE SHALL EXCEED 2:1 (H:V). ALL SLOPES STEEPER THAN 3:1 TO RECEIVE EXTENDED TERM EROSION CONTROL BLANKET.
12. TO PREVENT EROSION, ALL SLOPES 2:1 OR GREATER ARE TO BE TRACKED WITH A DOZER TO FORM CLEAT MARKS PARALLEL TO THE CONTOUR.
13. APPLY TEMPORARY SEEDING WHENEVER GRADING OPERATIONS ARE HALTED FOR OVER 14 DAYS AND FINAL GRADING OF EXPOSED SURFACE IS TO BE COMPLETED WITHIN ONE YEAR. APPLY TEMPORARY SEEDING TO ALL SOIL STOCKPILES.
14. APPLY PERMANENT SEEDING WHENEVER GRADING OPERATIONS ARE COMPLETED AND ALL CONSTRUCTION OPERATIONS WILL NOT IMPACT THE DISTURBED AREA. APPLY PERMANENT SEEDING TO ALL NON–CONSTRUCTION AREAS WHICH SHOW SIGNS OF EXCESSIVE EROSION.



LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
897.50 +	PROPOSED SPOT ELEVATION
A L104–A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
813	NORMAL POOL LINE
500	500 YEAR FLOOD LINE
100	100 YEAR FLOOD LINE
	EXIST. PROPERTY
	EXIST. R.O.W.
J1–100	EXIST. SANITARY SEWER
18" RCP	EXIST. STORM SEWER
	EXIST. EASEMENT LINE

STORM DRAINAGE STRUCTURES

NO.	DESCRIPTION	LOCATION	TOP OF CASTING	INVERT EL. (IN)	INVERT EL. (OUT)	NO.	DESCRIPTION	LOCATION	TOP OF CASTING	INVERT EL. (IN)	INVERT EL. (OUT)
1 EX	EXISTING FLARED END SECTION	STA. 12+73.10 28.00' LT.	–	–	–	6 EX	EXISTING MANHOLE	STA. 15+19.95 114.72' RT.	822.78	–	818.50
2 FES	PROPOSED FLARED END SECTION DETAIL 8, SHT L404–A1	STA. 12+43.90 29.15' RT.	–	818.03	–	7 FES	PROPOSED FLARED END SECTION DETAIL 8, SHT L404–A1	STA. 14+33.66 36.49' LT.	–	815.85	–
3 EX	EXISTING WATER QUALITY UNIT	STA. 12+23.22 65.55' RT.	826.57	–	818.19	9 HW	DOUBLE HEADWALL THIS SHEET	STA. 14+30.80 24.00' RT.	–	–	816.50
4 EX	EXISTING FLARED END SECTION	STA. 15+57.96 26.02' LT.	–	–	–	8 FES	PROPOSED FLARED END SECTION DETAIL 8, SHT L404–A1	STA. 14+28.23 36.50' LT.	–	815.85	–
5 FES	PROPOSED FLARED END SECTION DETAIL 8, SHT L404–A1	STA. 15+18.06 100.20' RT.	–	818.00	–						

STORM PIPE TABLE

FROM	TO	PIPE INFORMATION		
		NOTE	30" RCP	SLOPE (%)
2 FES	1 EX	PIPE TO BE REMOVED	–	–
3 EX	2 FES	EXISTING PIPE TO REMAIN	–	0.5
6 EX	4 EX	PIPE TO BE REMOVED	–	–
8 EX	5 FES	NEW PIPE	10	0.5
9 HW	7 FES	NEW PIPE	67	1.0
9 HW	8 FES	NEW PIPE	67	1.0

PROPOSED PIPES INCLUDE FLARED END SECTION LENGTHS

STORM PIPE NOTES:
1. INSTALL STORM SEWER PIPING AND APPURTENANCES TO MEET THE MATERIALS, EQUIPMENT, AND CONSTRUCTION REQUIREMENTS OF TDOT AND THE CITY OF KNOXVILLE STANDARD SPECIFICATIONS.
2. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
3. STORM SEWER PIPE SHALL BE CLASS III REINFORCED CONCRETE PIPE AS SHOWN IN THE STORM PIPE TABLE IN ACCORDANCE WITH AASHTO M294 OR EQUAL UNLESS NOTED OTHERWISE. ALL PIPE WITHIN THE RIGHT–OF–WAY SHALL BE RCP.
4. PIPE DEFLECTION AND ALIGNMENT SHALL BE CHECKED AFTER BACKFILLING & COMPACTION ARE COMPLETE & PRIOR TO PLACING THE BASE. TEST DEFLECTION WITH A MANDREL OR OTHER APPROVED METHOD.
5. PIPE WITH DEFLECTION 5% OR GREATER OR WITH UNDUE MISALIGNMENT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

SPECIAL NOTES:
1. COORDINATES FOR CURB INLETS ARE TAKEN AT THE CENTER OF THE STRUCTURE AT THE FACE OF CURB.

811 Know what's below Call before you dig

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215–2029

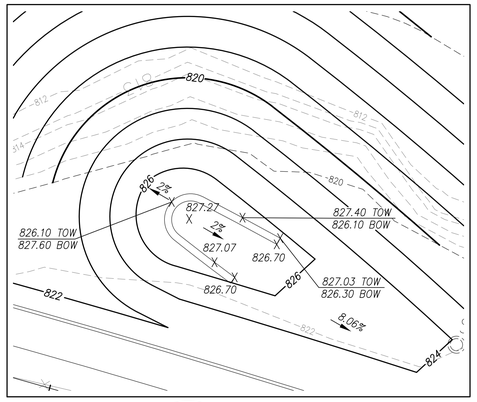
PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

PROPOSED GRADING AND DRAINAGE PLAN

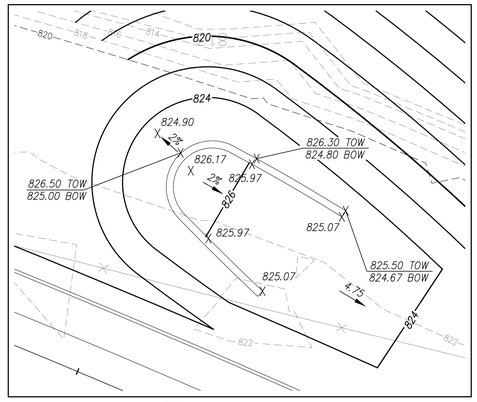
JEFFREY R. BECKER REGISTERED ENGINEER NO. 112890 STATE OF TENNESSEE
1-7-15

CCI PROJECT NO.	00244–0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

L101.3–A1



A L108-A1 SEATING WALL



B L108-A1 SEATING WALL

GRADING NOTES:

1. REFER TO SHEET L101.3-A1 FOR GENERAL GRADING AND DRAINAGE NOTES.

0 20 40
SCALE: 1" = 20'

STORM DRAINAGE STRUCTURES

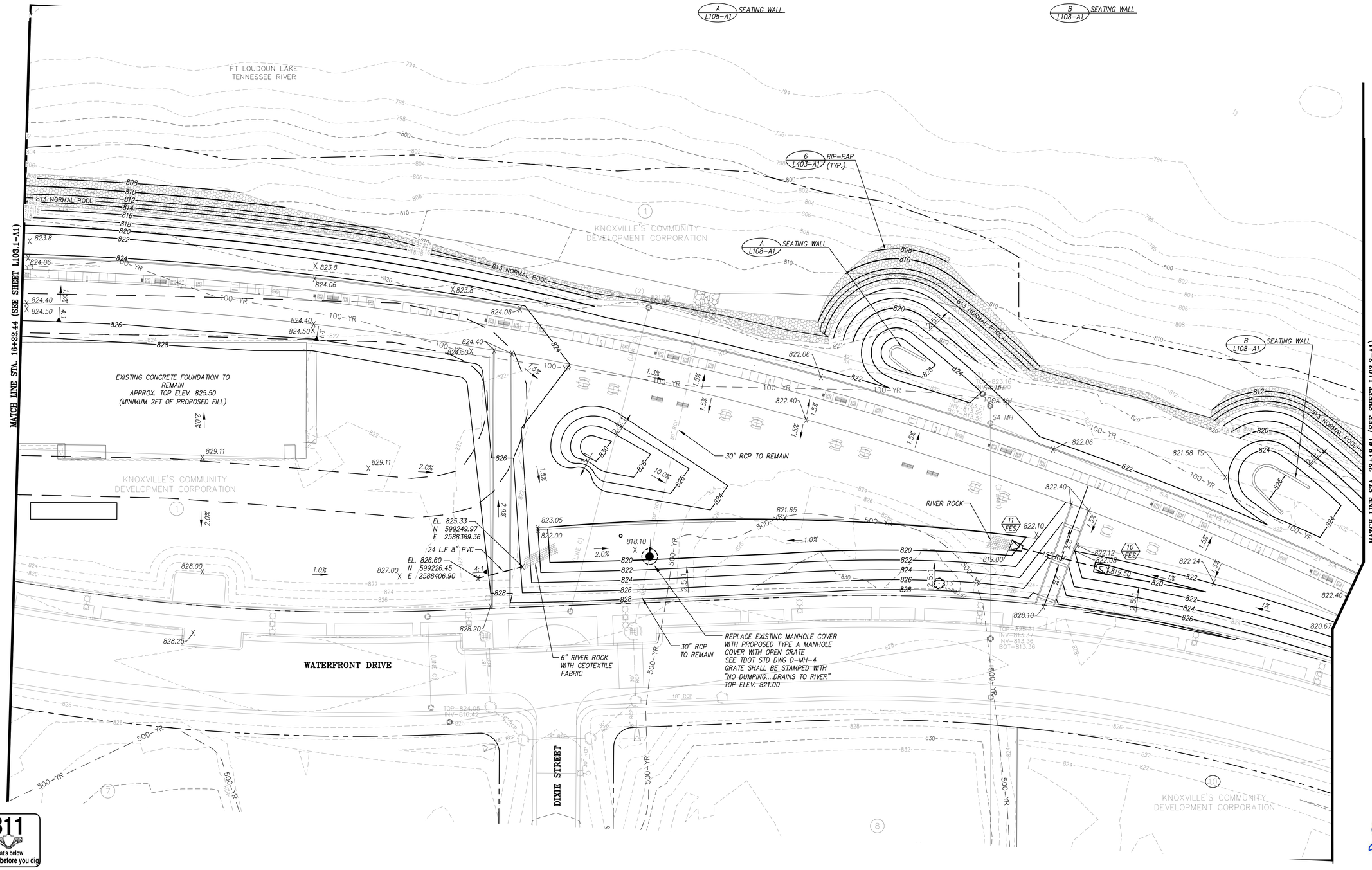
NO.	DESCRIPTION	LOCATION	TOP OF CASTING	INVERT EL. (IN)	INVERT EL. (OUT)
10 YES	PROPOSED FLARED END SECTION DETAIL 8, SHT L404-A1	STA. 21+49.06 42.26' RT.	–	819.50	–
11 YES	PROPOSED FLARED END SECTION DETAIL 8, SHT L404-A1	STA. 22+00.93 36.69' LT.	–	–	819.00

STORM PIPE TABLE

FROM	TO	15" RCP	SLOPE %
10 YES	11 YES	40	1.25

PROPOSED PIPES INCLUDE FLARED END SECTION LENGTHS.

SPECIAL NOTES:
1. RIPRAP SHALL BE PLACED TO ELEVATION 815.00.



LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
897.50 +	PROPOSED SPOT ELEVATION
A L104-A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
813	NORMAL POOL LINE
500	500 YEAR FLOOD LINE
100	100 YEAR FLOOD LINE
	EXIST. PROPERTY
	EXIST. R.O.W.
J1-100	EXIST. SANITARY SEWER
18" RCP	EXIST. STORM SEWER
	EXIST. EASEMENT LINE

REVISIONS | DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

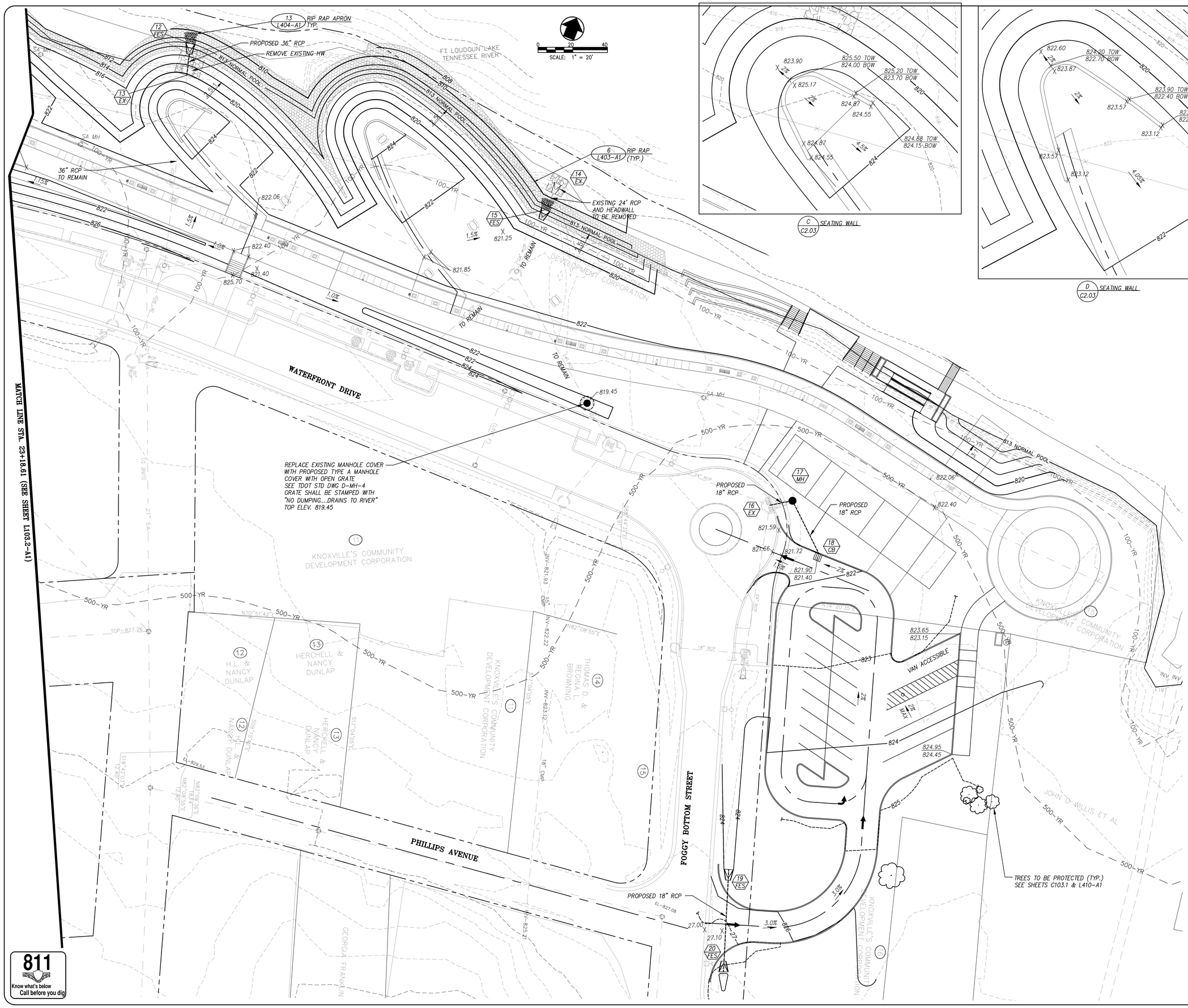
PROPOSED GRADING AND DRAINAGE PLAN

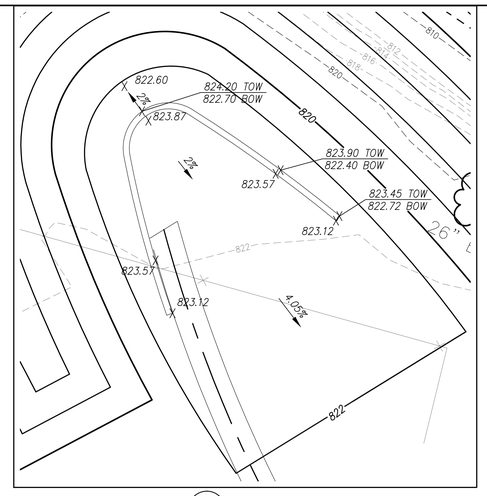
JEFF BECKETT
STATE OF TENNESSEE
1-7-15

CCI PROJECT NO. 00244-0014
DRAWING DATE JANUARY 7, 2015
P.I.C. RJB
DRAWN AWG

L102.3-A1

811
Know what's below
Call before you dig





GRADING NOTES:

1. REFER TO SHEET L101.3-A1 FOR GENERAL GRADING AND DRAINAGE NOTES.

STORM PIPE TABLE

FROM	TO	PIPE INFORMATION			
		18" RCP	24" RCP	36" RCP	SLOPE (%)
12 FES	13 EX	–	–	18.4	3.15
14 EX	15 FES	–	16.5	–	–
16 EX	17 MH	14	–	–	5.00
17 MH	18 CB	35	–	–	.90
19 FES	20 FES	60	–	–	2.10

PROPOSED PIPES INCLUDE FLARED END SECTION LENGTHS. PIPE TO BE REMOVED INCLUDES LENGTH OF EXISTING FLARED END SECTION (PER V&M PHASE 1A CONSTRUCTION DRAWINGS).

STORM DRAINAGE STRUCTURES

NO.	DESCRIPTION	LOCATION	TOP OF CASTING	INVERT EL. (IN)	INVERT EL. (OUT)
12 FES	PROPOSED FLARED END SECTION DETAIL 8, SHT L404-A1	STA. 23.88.79 89.46' LT.	–	–	813.00
13 EX	EXISTING FLARED END SECTION	– –	–	–	813.58
14 EX	EXISTING FLARED END SECTION	– –	–	–	813.06
15 FES	PROPOSED FLARED END SECTION DETAIL 8, SHT L404-A1	STA. 26+21.93 73.36' LT.	–	–	813.16
16 EX	EXISTING CATCH BASIN	– –	–	816.46	–
17 MH	PROPOSED MANHOLE DETAIL 10, SHT L404-A1	STA. 28+19.92 53.62' RT.	822.10	817.26	817.16
18 CB	PROPOSED SINGLE CATCH BASIN DETAIL 9, SHT L404-A1	STA. 28+51.52 70.87' RT.	821.40	–	817.40
19 FES	PROPOSED FLARED END SECTION DETAIL 8, SHT L404-A1	N 2589329.97 E 599208.12	–	–	824.51
20 FES	PROPOSED FLARED END SECTION DETAIL 8, SHT L404-A1	N 2589346.23 E 599164.32	–	825.77	–

SPECIAL NOTES:
1. RIPRAP SHALL BE PLACED TO ELEVATION 815.00.

LEGEND

- 884 — EXISTING CONTOUR
- 884 — PROPOSED CONTOUR
- 897.50 + — PROPOSED SPOT ELEVATION
- A C3.01 — DETAIL REFERENCE (DETAIL NO./SHEET NO.)
- 813 — NORMAL POOL LINE
- 500 — 500 YEAR FLOOD LINE
- 100 — 100 YEAR FLOOD LINE
- EXIST. PROPERTY
- EXIST. R.O.W.
- J1-100 — EXIST. SANITARY SEWER
- 18" RCP — EXIST. STORM SEWER
- EXIST. EASEMENT LINE

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

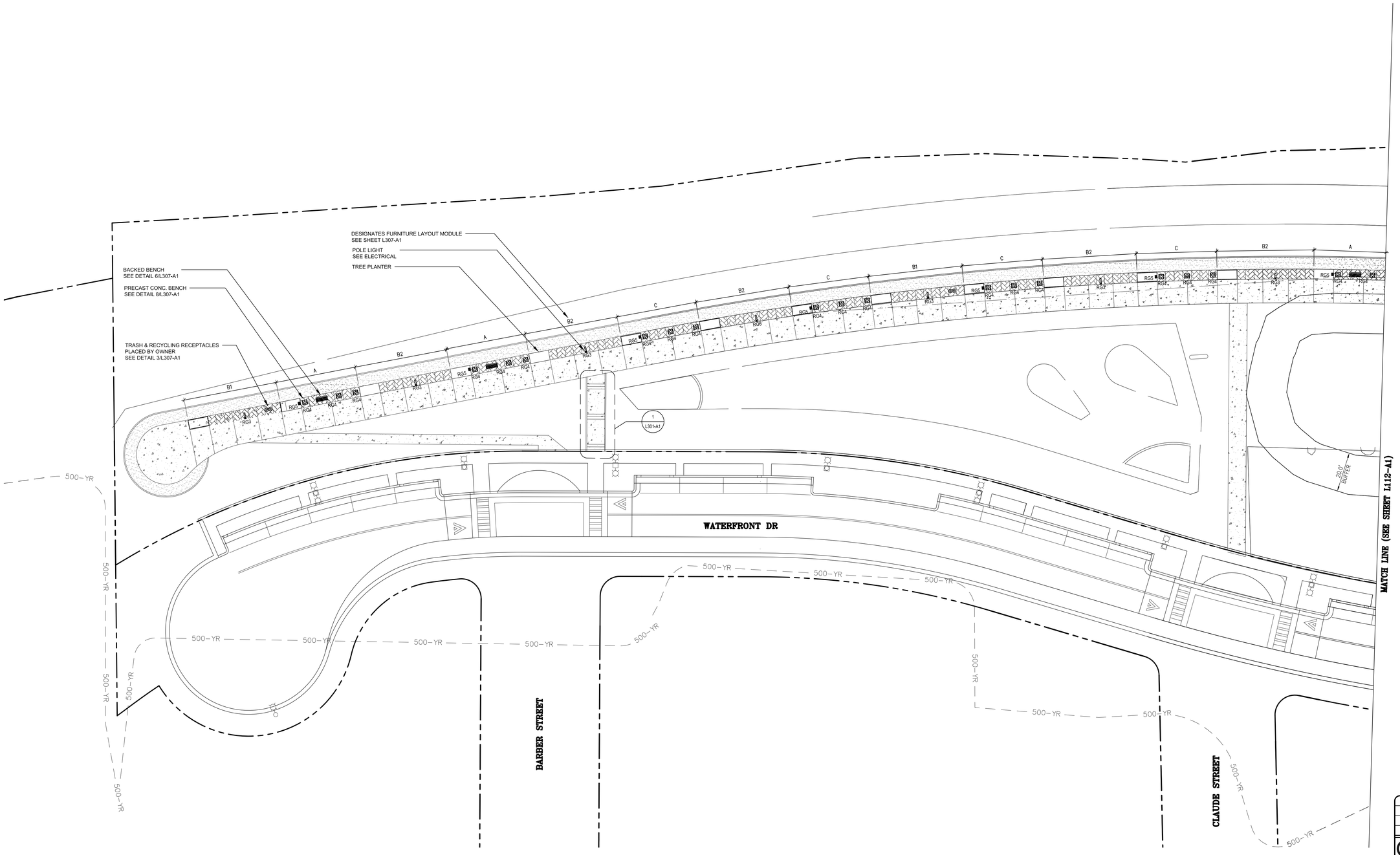
PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

PROPOSED GRADING AND DRAINAGE PLAN

JEFF BECKETT REGISTERED ENGINEER 101011 STATE OF TENNESSEE 1-7-15

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

L103.3-A1



1 WEST PLAN
L111-A1 SCALE: 1"= 20'-0"

FURNITURE LEGEND

- B — BIKE RACK
- TR — TRASH AND RECYCLING RECEPTACLE
- PB — PARK BENCH
- PT — PICNIC TABLE
- PCB — PRECAST CONCRETE BENCH

LIGHTING LEGEND

- RG3 — RIVERWALK POLE LIGHT
- RG4 — RIVERWALK PRECAST BENCH LIGHTS
- RG5 — LED DRIVER BOX

MATERIALS LEGEND

- CONCRETE
- STAMPED CONCRETE
- GRAVEL RUNNING TRAIL
- POURED RUBBER COLOR 1
- POURED RUBBER COLOR 2
- POURED RUBBER COLOR 3

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

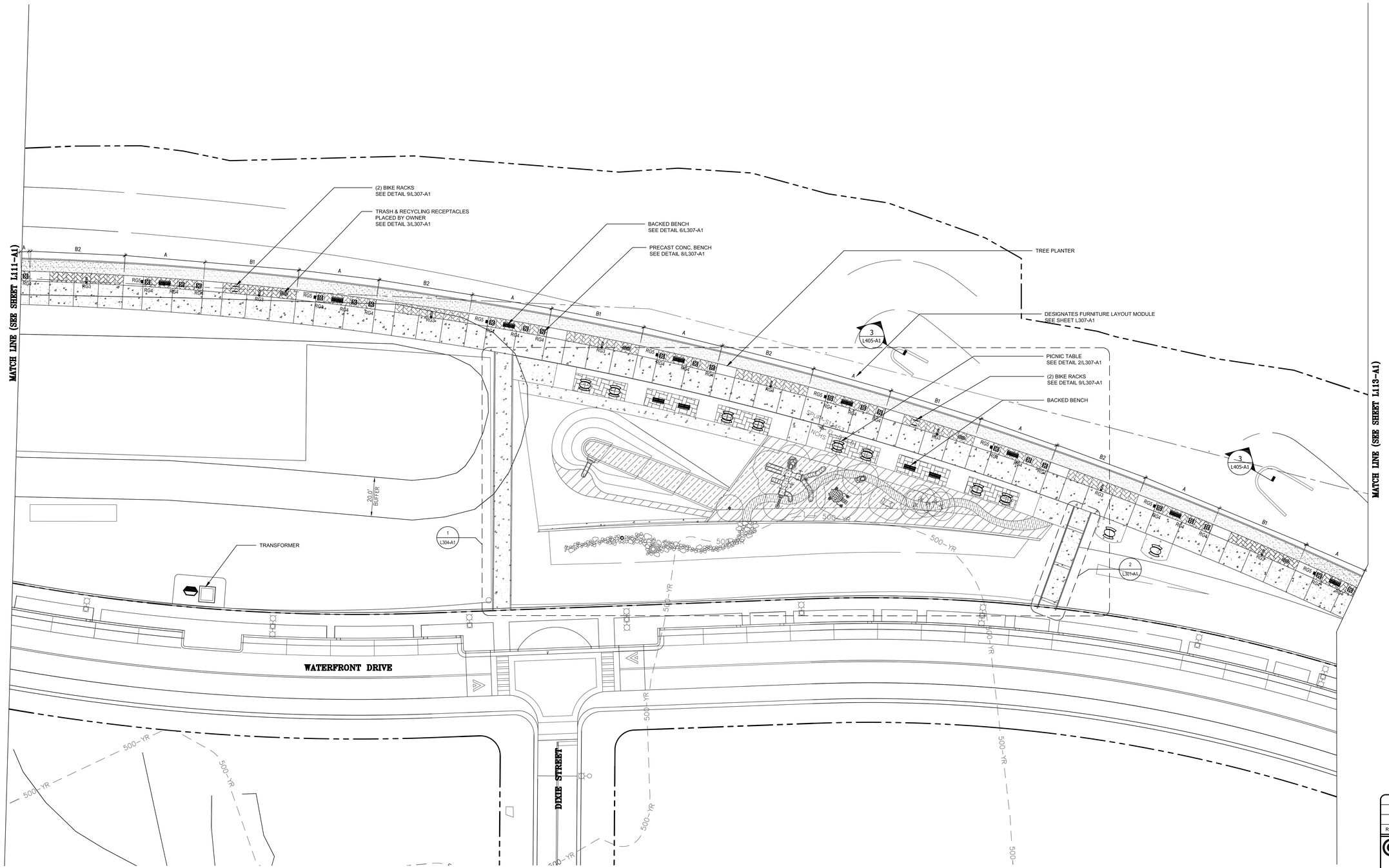
PAVEMENTS/LIGHTING/FURNITURE
SITE PLAN – WEST END

CCI PROJECT NO. 00244-0014
DRAWING DATE January 7, 2015
DESIGN –
DRAWN –
C.R.

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

L111-A1

811
Know what's below
Call before you dig



1 MIDDLE PLAN
L112-A1 SCALE: 1"= 20'-0"

FURNITURE LEGEND

- B — BIKE RACK
- T/R — TRASH AND RECYCLING RECEPTACLE
- PB — PARK BENCH
- PT — PICNIC TABLE
- PCB — PRECAST CONCRETE BENCH

LIGHTING LEGEND

- RG3 — RIVERWALK POLE LIGHT
- RG4 — RIVERWALK PRECAST BENCH LIGHTS
- RG5 — LED DRIVER BOX

MATERIALS LEGEND

- CONCRETE
- STAMPED CONCRETE
- GRAVEL RUNNING TRAIL
- POURED RUBBER COLOR 1
- POURED RUBBER COLOR 2
- POURED RUBBER COLOR 3

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

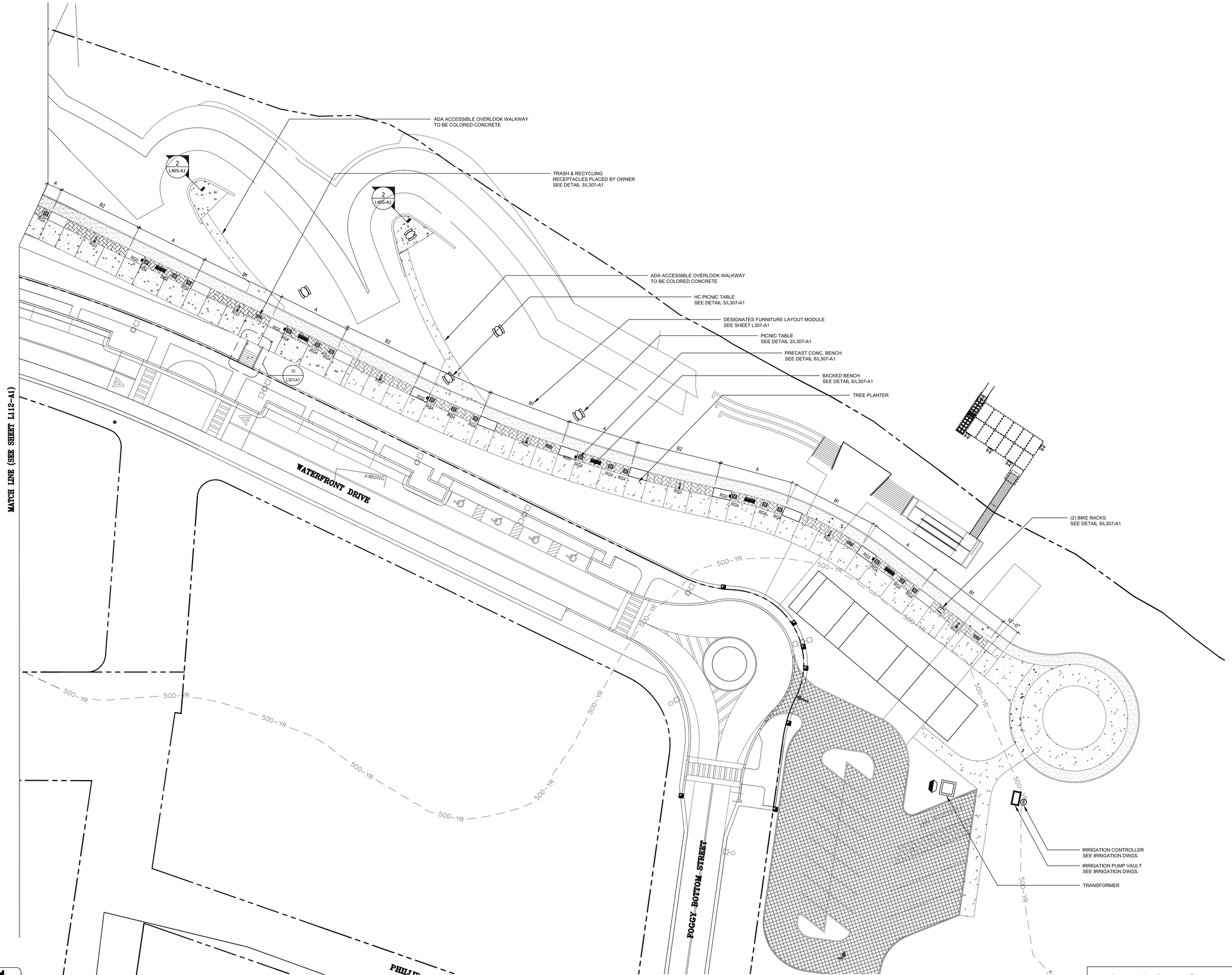
PAVEMENTS/LIGHTING/FURNITURE
SITE PLAN - MIDDLE

CCI PROJECT NO. 00244-0014
DRAWING DATE January 7, 2015
DRAWN –
C.R.

L112-A1

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

811
Know what's below
Call before you dig



FURNITURE LEGEND

- B — BIKE RACK
- T/R — TRASH AND RECYCLING RECEPTACLE
- PB — PARK BENCH
- PT — PICNIC TABLE
- PCB — PRECAST CONCRETE BENCH

LIGHTING LEGEND

- RG3 — RIVERWALK POLE LIGHT
- RG4 — RIVERWALK PRECAST BENCH LIGHTS
- RG5 — LED DRIVER BOX

MATERIALS LEGEND

- CONCRETE
- STAMPED CONCRETE
- GRAVEL RUNNING TRAIL
- POURED RUBBER COLOR 1
- POURED RUBBER COLOR 2
- POURED RUBBER COLOR 3

811 Know what's below Call before you dig

1 L113-A1 EAST PLAN
SCALE: 1"= 20'-0"

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

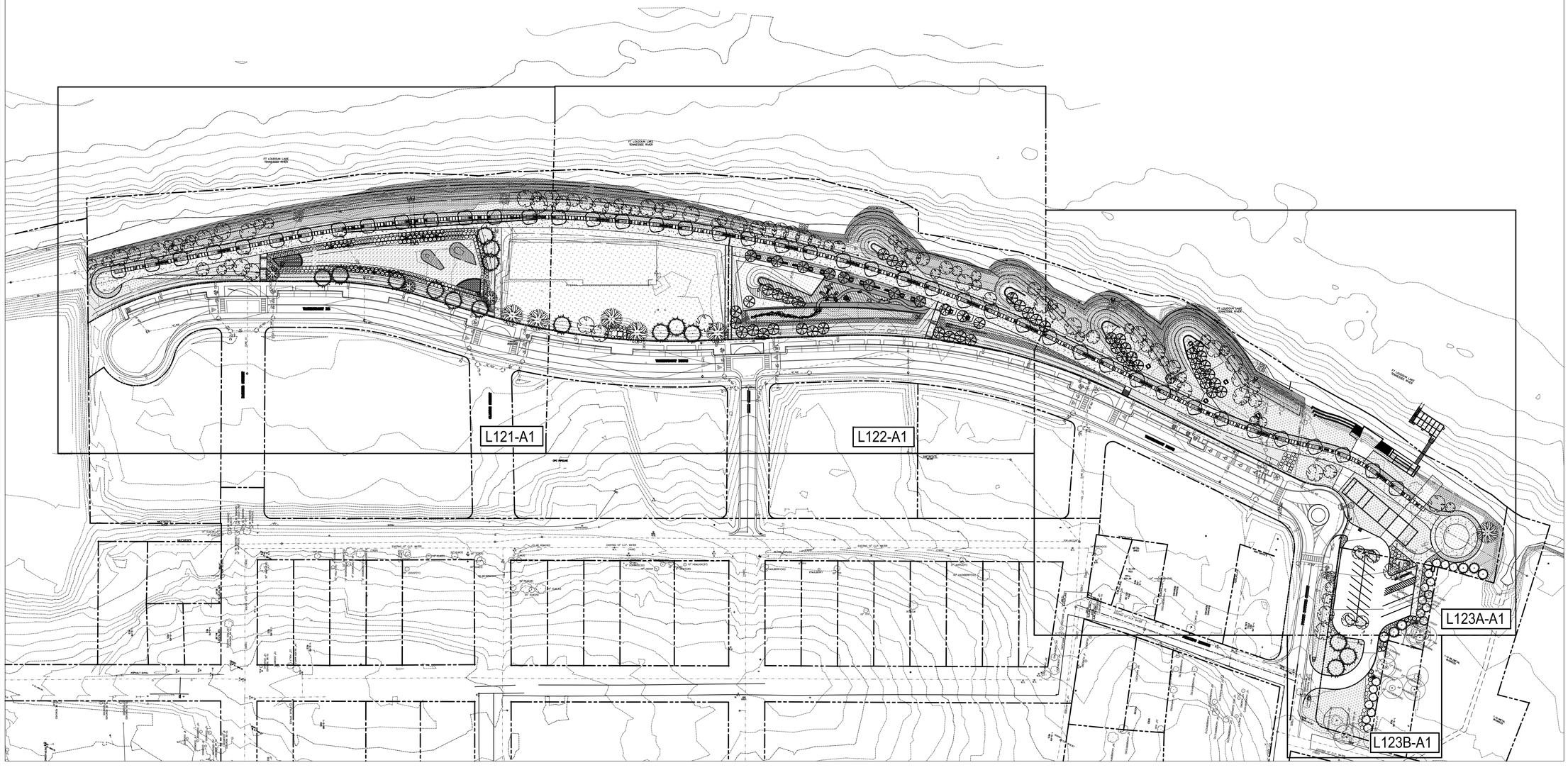
PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

PAVEMENTS/LIGHTING/FURNITURE
SITE PLAN - EAST END

CCI PROJECT NO. 00244-0014
DRAWING DATE January 7, 2015
DESIGN -
DRAWN -
C.R.

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

L113-A1



1 / L1.01-A1 OVERALL LANDSCAPE PLAN
SCALE: 1"= 60'-0"

811
Know what's below
Call before you dig

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

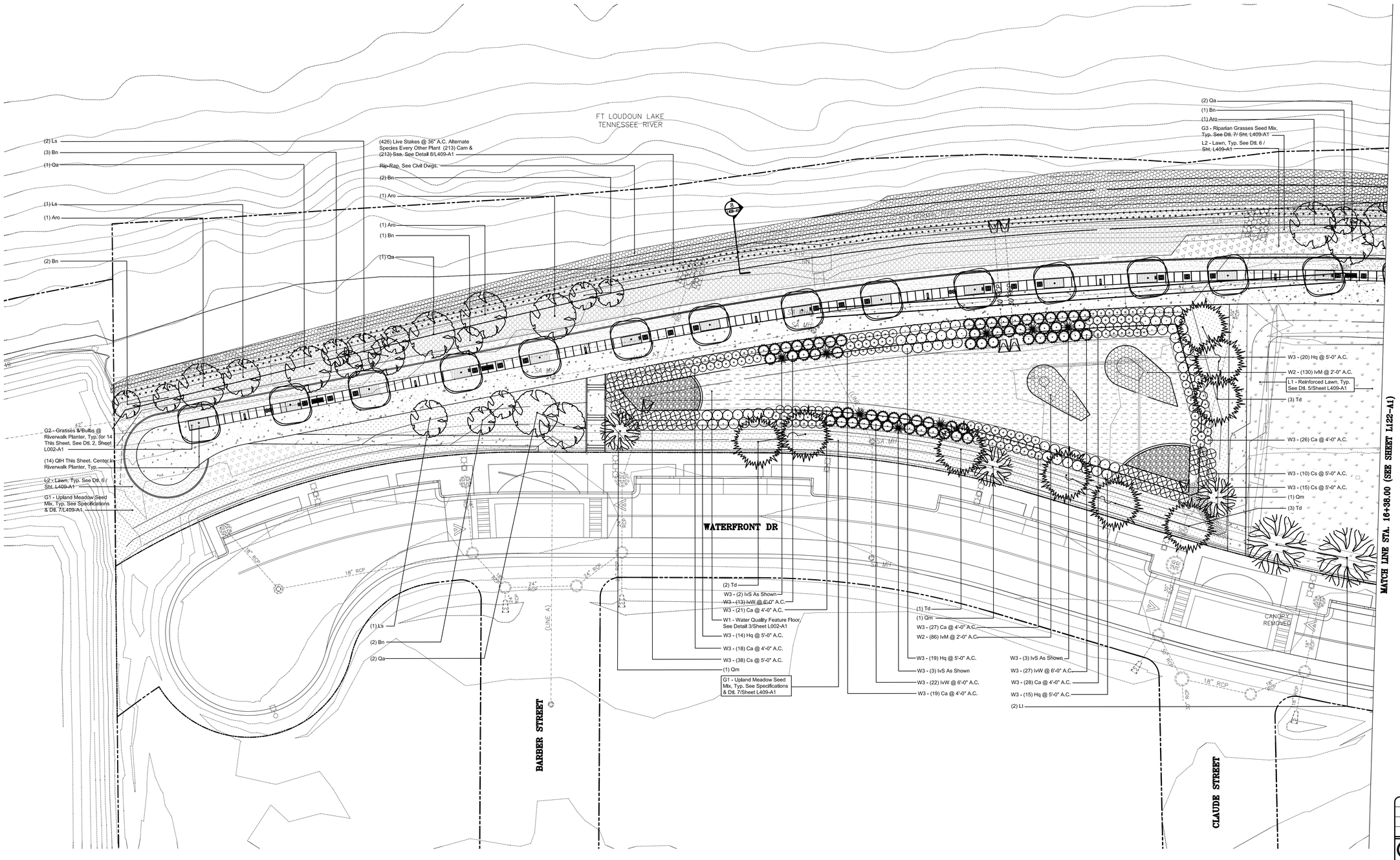
PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

OVERALL LANDSCAPE PLAN

BENJAMIN JOSEPH ZETTLER
REGISTERED
AGRICULTURAL
COMMERCIAL
NO. 00000055
LANDSCAPE ARCHITECT

CCI PROJECT NO:	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	C.R.
DRAWN	

L120-A1



1 / L121-A1 LANDSCAPE PLAN – SECTION 1

SCALE: 1"= 20'-0"

811
Know what's below
Call before you dig

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

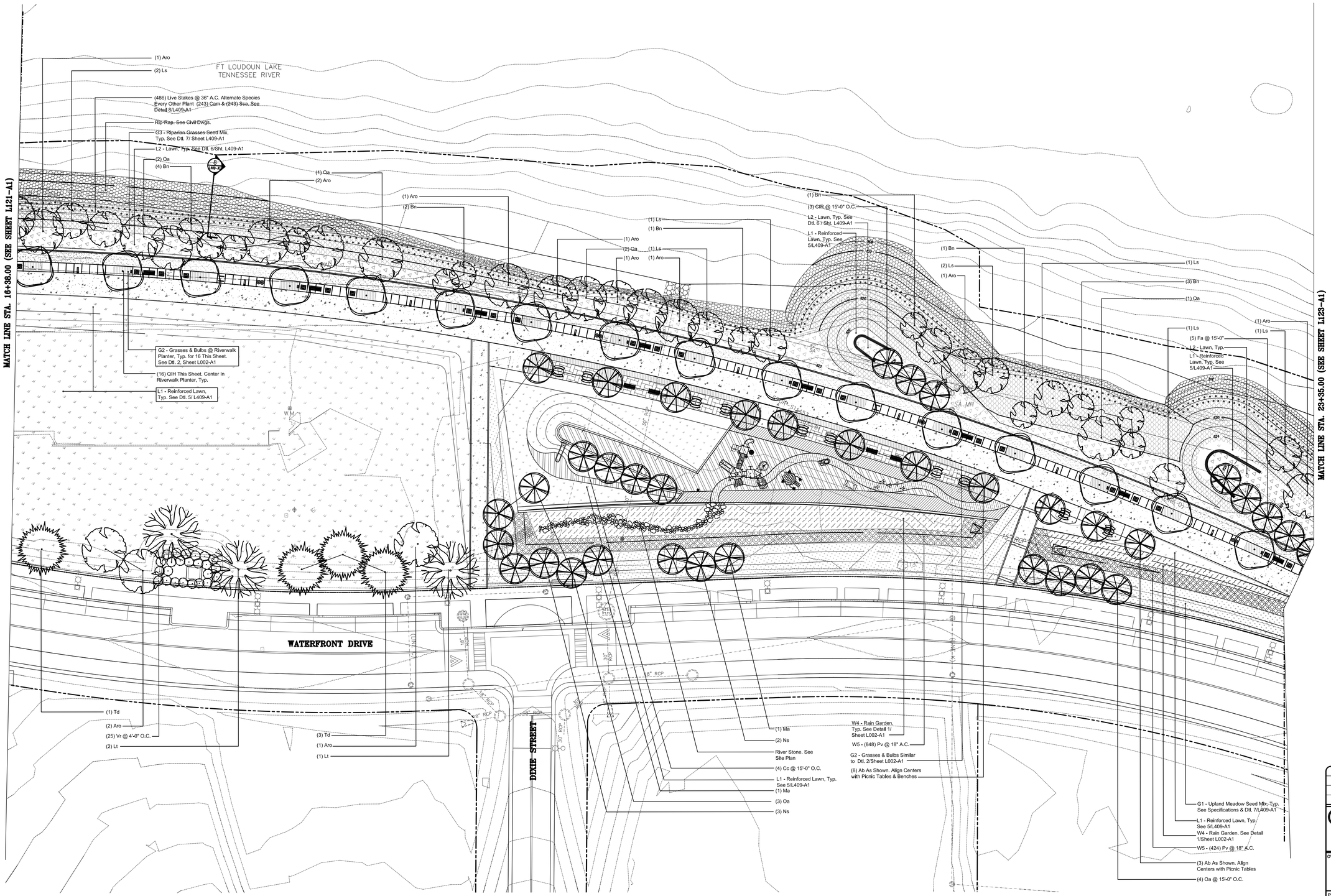
PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

LANDSCAPE PLAN – SECTION 1

BENJAMIN JOSEPH ETMER REGISTERED AGRICULTURAL COMMERCIAL LANDSCAPE ARCHITECT NO. 00000000

CCI PROJECT NO: 00244-0014	
DRAWING DATE JANUARY 7, 2015	
P.I.C.	C.R.
DRAWN	

L121-A1



1 / L122-A1 LANDSCAPE PLAN – SECTION 2
SCALE: 1"= 20'-0"

811
Know what's below
Call before you dig

benefield•richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

LANDSCAPE PLAN – SECTION 2

BENJAMIN JOSEPH PETTIT
REGISTERED
AGRICULTURAL
AMERICA
No. 00000025
LANDSCAPE ARCHITECT
7-15

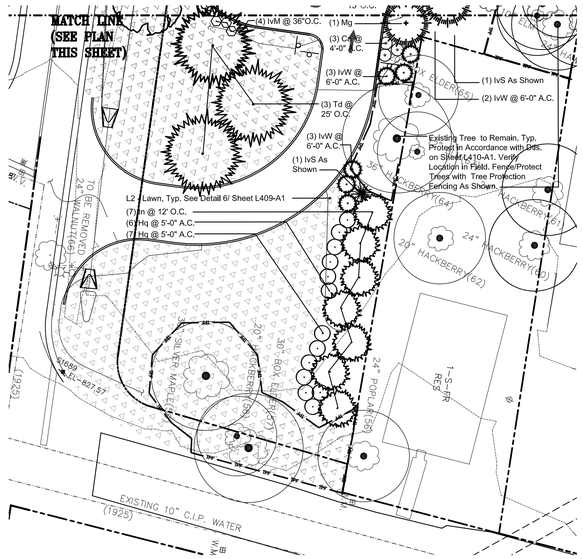
CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	C.R.
DRAWN	

L122-A1

MATCH LINE STA. 23+35.00 (SEE SHEET L122-A1)

Rip-Rap. See Civil Dwgs.
(1) Bn
(1) Aro
(324) Live Stakes @ 36" A.C. Alternate Species Every Other Plant (162) Cam & (162) Ssa. See Detail 8/L409-A1
(1) Qa
G3 - Riparian Grasses Seed Mix, Typ. See 7/L409-A1
L1 - Reinforced Lawn, Typ. See 5/L409-A1
(1) Bn
(1) Ls
(8) CIC @ 12'-6" A.C.
L2 - Lawn, Typ. See 6/L409-A1
(1) Bn
(1) Qa
(1) Ls
(3) Bn
(1) Ls
L1 - Reinforced Lawn, Typ. See 5/L409-A1
(11) AA @ 12'-16" A.C.
(2) Bn
FT. LOUDOUN LAKE
TENNESSEE RIVER
(2) Aro
(1) Qa
(2) Ls
(2) Bn
L2 - Lawn, Typ. See Detail 6/ Sheet L409-A1
Future Building - Location and Footprint are Subject to Change.
L2 - Lawn, Typ. See Detail 6/ Sheet L409-A1
Irrigation Pump Vault. See Irrigation Drawings
(1) ArO
G3 - Riparian Grasses Seed Mix, Typ. See 7/L409-A1
(1) Mv
(24) Live Stakes @ 36" A.C. Alternate Species Every Other Plant (12) Cam & (12) Ssa. See Dtl. 8/L409-A1
L1 - Reinforced Lawn, Typ. See 5/L409-A1
(1) Ll
(62) Live Stakes @ 36" A.C. Alternate Species Every Other Plant (31) Cam & (31) Ssa. See Detail 8/L409-A1
W4 - Rain Garden. See Detail 1/Sheet L002-A1
W5 - (292) Pv @ 18" A.C.
(1) Sb
(1) Qa
G1 - Upland Meadow Seed Mix, Typ. See Specifications & Dtl. 7/L409-A1
G2 - Grasses & Bulbs @ Riverwalk Planter, Typ. for 13 This Sheet. See Detail 2, Sheet L002-A1
(13) QIH This Sheet. Center in Riverwalk Planter, Typ.
L2 - Lawn, Typ. See Detail 6/ Sheet L409-A1
(18) Vr @ 4'-0" O.C.
(1) Qa
(1) Ls
WATERFRONT DRIVE
FOGGY BOTTOM STREET
MATCH LINE (SEE INSET THIS SHEET)
(7) IvM @ 36"O.C.
(2) Ls
(14) IvM @ 36"O.C.
(1) Qa
(25) Vr @ 4'-0" O.C.
(8) Ca @ 4'-0" A.C.
(3) Ca @ 4'-0" A.C.
(3) Ca @ 4'-0" A.C.
(3) Mv @ 36" O.C.
(24) IvM @ 36"O.C.
(7) Ca @ 4'-0" A.C.
Existing Tree To Be Removed, Typical
(2) Ls
(6) IvW @ 6'-0" A.C.
(1) IvS As Shown
(11) IvM @ 36"O.C.
(2) Mg @ 15' O.C.
(2) ArO
(7) IvM @ 36"O.C.
(8) Ca @ 4'-0" A.C.
(3) Mg @ 15' O.C.
(12) In @ 12' O.C.
VAN ACCESSIBLE
METAL SHED
1-S-FR RES FFE= 831.39
24" BIRCH(43)
24" HACKBERRY(83)
30" HACKBERRY(82)
BUILDING REMOVED
30" ELM(7)
EXISTING 10" C.I.P. WATER
1-S-FR RES FFE= 830.18
TOP-827.26
N70°51'42"E
N82°08'55"E
S17°04'05"E
S18°42'03"E 12'-0"
N82°08'55"E 7.40'
S88°44'31"E
18" RCP
24" RCP
21" S.A.
(LINE D)
(LINE E)
(LINE F)

1 L123-A1 LANDSCAPE PLAN – SECTION 3A
SCALE: 1"= 20'-0"



2 L123-A1 LANDSCAPE PLAN – SECTION 3B
SCALE: 1"= 20'-0"

811 Know what's below Call before you dig

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

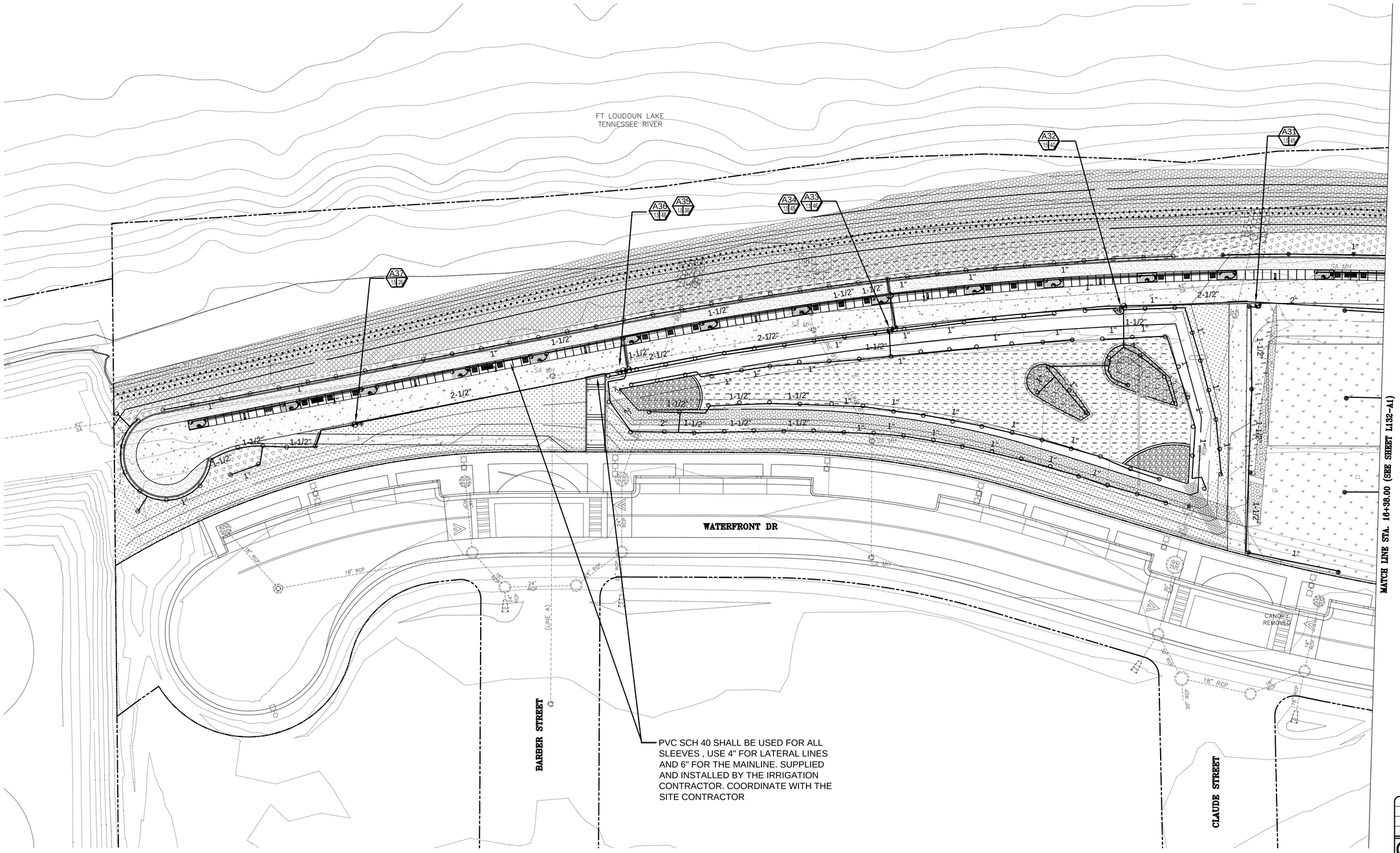
PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

LANDSCAPE PLAN – SECTION 3

BENJAMIN JOSEPH ETIER REGISTERED AGRICULTURE COMMERCE NO. 000000 LANDSCAPE ARCHITECT

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	C.K.
DRAWN	

L123-A1



1 / L131 IRRIGATION PLAN – WEST END
SCALE: 1"= 20'-0"

IRRIGATION LEGEND:

- RAINBIRD, 1804SAMPRS 4" POP UP FOR ALL TURF AREAS USE 8,10,12,15,SST OR EST NOZZLES
- RAINBIRD, 1812SAMPRS 12" POP UP FOR SHRUB AREAS USE 8,10,12,15,SST OR EST NOZZLES
- RAINBIRD, 1806SAMPRS 6" POP UP FOR SHRUB AREAS USE 12VAN NOZZLES INSTALL 6" FROM SHRUBS IN GROUND COVER BED IF POSSIBLE
- RAINBIRD RVAN 13-18, RVAN 17-24 ROTATOR NOZZLE ON 1812SAM-P45 12" POP UP SPRINKLER
- RAINBIRD MINI ROTOR 3504PC-SAM WITH .75 AND 1.0 NOZZLE
- RAINBIRD ROTOR 5004-PC(90)-SAM-R (NOZ.-1.5) 5004-PC(135)-SAM-R (NOZ.-2.0) 5004-PC(180)-SAM-R (NOZ.-3.0) 5004-PC(360)-SAM-R (NOZ.-4.0)
- RAINBIRD LARGE TURF ROTOR 6504 ON SWING JOINT W/#8 OR #10 NOZZLE
- RAINBIRD, PESB SERIES, 1" AND 1 1/2" EL. REMOTE CONTROL SCRUBBER VALVE FOR DIRTY WATER APPLICATION. IN MIN. 12" STANDARD VALVE BOX. FILL BOTTOM W/PEA GRAVEL. (SEE DETAIL)
- (C) RAINBIRD ESP-LXD TWO WIRE CONTROLLER 50 BASE MODEL WITH FLO MASTER AND ET CARTRIDGE, MASTER VALVE AND FLOW SENSOR INSTALL WITH PROPER GROUNDING EVERY 500' OR TERMINATION OF THE WIRE INSTALL ON POST OR PEDISTAL AS DIRECTED BY LAND. ARCH.
- RAINBIRD ETM-RG RAINGAUGE WITH ETMRMK REMOTE MOUNTING KIT FOR THE ANTENNA.
- ISOLATION VALVE - (MAIN SIZE), 125# W.O.G., BRASS BALL VALVE IN AMETEK 10" ROUND BOX. FILL BOTTOM WITH PEA GRAVEL (SIMILAR TO CONTROL VALVE) ISOLATION VALVES SHALL BE IN A LOCKABLE BOX.
- RAINBIRD 5RC 1" QUICK COUPLER VALVE FOR HAND WATERING IORRIGATION CONT. TO SUPPLY 3 QC KEYS AND HOSE SWIVELS TO OWNER INCLUDED IN THE BID. QUICK COUPLER VALVES SHALL BE IN A LOCKABLE BOX.
- 2.5" IRRIGATION MAINLINE, PVC SDR 21, CLASS 200BE
- IRRIGATION LATERAL PIPE, PVC SDR 21, CLASS 200BE
- SCHEDULE 40 PVC SLEEVE UNDER DRIVE, HARDSCAPE AND WHERE SHOWN. EXTEND ENDS MIN. 8-12" PAST EDGE OF DRIVE, HARDSCAPE AND CAP W/NO SOLVENT. REMOVE CAPS WHEN IRRIGATION IS TO BE INSTALLED

SIZE OF ELECTRIC REMOTE CONTROL VALVE — A3 / 1 1/2 — CIRCUIT/STATION NUMBER — TOTAL GPM'S FOR CIRCUIT/STATION

EACH CIRCUIT/STATION SHOWN HEREIN HAS THE NUMBER OF GPMS REQ'D. FOR THAT CIRCUIT/STATION. EACH CIRCUIT/STATION IS DESIGNED BASED ON 50-55PSI AT THE VALVE.

IRRIGATION SYSTEM IS DESIGNED FOR 60 GPM AT 90 PSI SUPPLIED BY THE PUMP STATION AS SHOWN IN DETAILS.

PIPE SIZING CHART:

CONTRACTOR TO SIZE EACH CIRCUIT/STATION LATERAL PIPING USING THE FOLLOWING:

PIPE SIZE	MAX. GPM'S
1/2"	6
3/4"	10
1"	16
1 1/4"	28
1 1/2"	35
2"	55
3"	120

811 Know what's below Call before you dig

benefield-richters architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.9555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

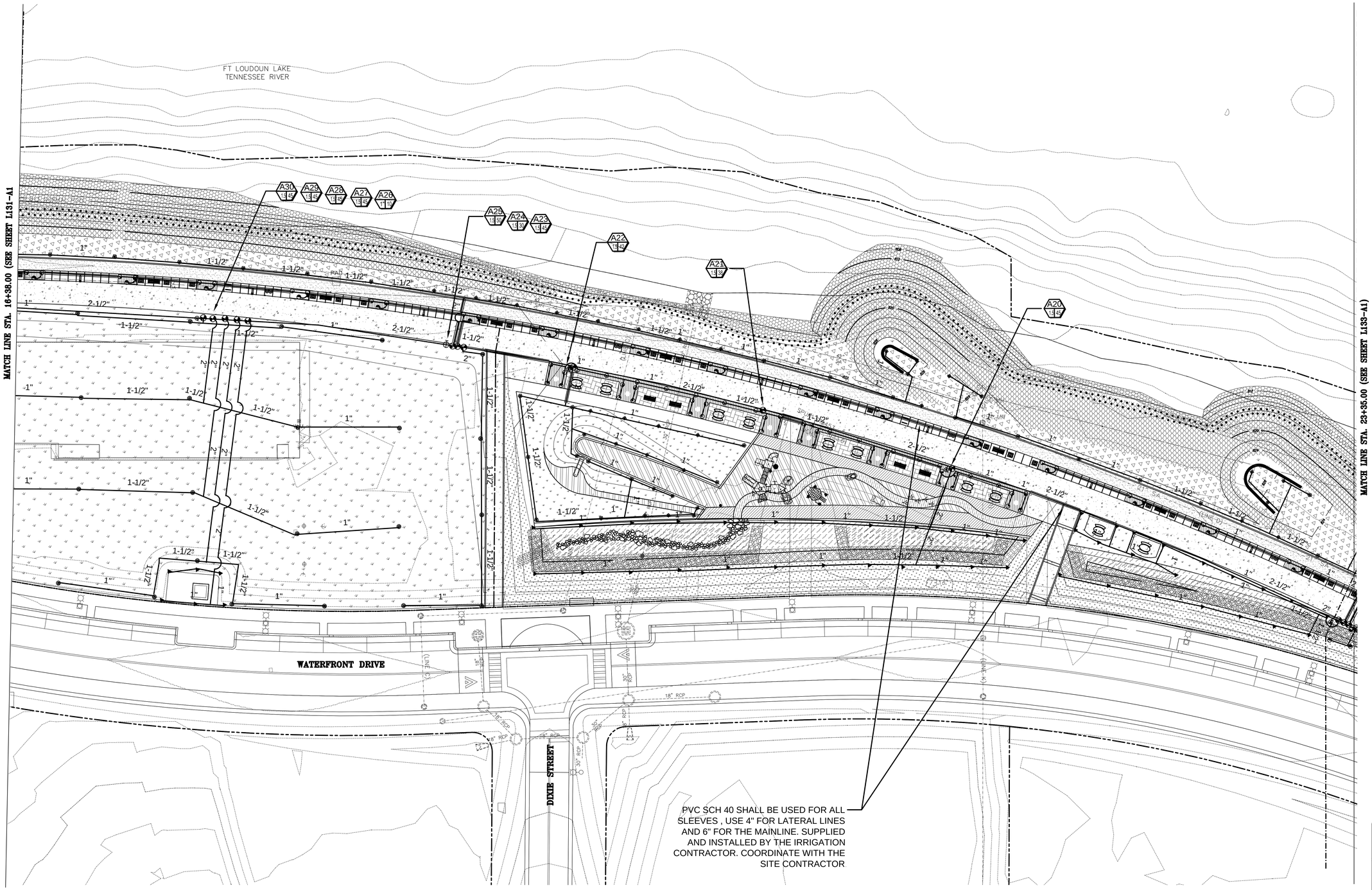
OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

ENLARGED AREA-WEST END

CCI PROJECT NO. 00244-0014
DRAWING DATE January 7, 2015
P.I.C. – C.R.
DRAWN – DLB

L131-A1



1 / L132 IRRIGATION PLAN – MIDDLE SECTION

SCALE: 1"= 20'-0"

IRRIGATION LEGEND:

- RAINBIRD, 1804SAMPRS 4" POP UP FOR ALL TURF AREAS USE 8,10,12,15,SST OR EST NOZZLES
- RAINBIRD, 1812SAMPRS 12" POP UP FOR SHRUB AREAS USE 8,10,12,15,SST OR EST NOZZLES
- RAINBIRD, 1806SAMPRS 6" POP UP FOR SHRUB AREAS USE 12VAN NOZZLES INSTALL 6" FROM SHRUBS IN GROUND COVER BED IF POSSIBLE
- RAINBIRD RVAN 13-18, RVAN 17-24 ROTATOR NOZZLE ON 1812SAM-P45 12" POP UP SPRINKLER
- RAINBIRD MINI ROTOR 3504PC-SAM WITH .75 AND 1.0 NOZZLE
- RAINBIRD ROTOR 5004-PC(90)-SAM-R (NOZ.-1.5) 5004-PC(135)-SAM-R (NOZ.-2.0) 5004-PC(180)-SAM-R (NOZ.-3.0) 5004-PC(360)-SAM-R (NOZ.-4.0)
- RAINBIRD LARGE TURF ROTOR 6504 ON SWING JOINT W/#8 OR #10 NOZZLE
- RAINBIRD, PESB SERIES, 1" AND 1 1/2" EL. REMOTE CONTROL SCRUBBER VALVE FOR DIRTY WATER APPLICATION IN MIN. 12" STANDARD VALVE BOX, FILL BOTTOM W/PEA GRAVEL, (SEE DETAIL)
- RAINBIRD ESP-LXD TWO WIRE CONTROLLER 50 BASE MODEL WITH FLO MASTER AND ET CARTRIDGE, MASTER VALVE AND FLOW SENSOR INSTALL WITH PROPER GROUNDING EVERY 500' OR TERMINATION OF THE WIRE. INSTALL ON POST OR PEDISTAL AS DIRECTED BY LAND. ARCH.
- RAINBIRD ETM-RG RAINGAUGE WITH ETMRMK REMOTE MOUNTING KIT FOR THE ANTENNA.
- ISOLATION VALVE - (MAIN SIZE), 125# W.O.G., BRASS BALL VALVE IN AMETEK 10" ROUND BOX, FILL BOTTOM WITH PEA GRAVEL, (SIMILAR TO CONTROL VALVE) ISOLATION VALVES SHALL BE IN A LOCKABLE BOX.
- RAINBIRD 5RC 1" QUICK COUPLER VALVE FOR HAND WATERING IORRIGATION CONT. TO SUPPLY 3 QC KEYS AND HOSE SWIVELS TO OWNER INCLUDED IN THE BID. QUICK COUPLER VALVES SHALL BE IN A LOCKABLE BOX.
- 2.5" IRRIGATION MAINLINE, PVC SDR 21, CLASS 200BE
- IRRIGATION LATERAL PIPE, PVC SDR 21, CLASS 200BE
- SCHEDULE 40 PVC SLEEVE UNDER DRIVE, HARDSCAPE AND WHERE SHOWN. EXTEND ENDS MIN. 8-12" PAST EDGE OF DRIVE, HARDSCAPE AND CAP W/NO SOLVENT. REMOVE CAPS WHEN IRRIGATION IS TO BE INSTALLED

PIPE SIZING CHART:

CONTRACTOR TO SIZE EACH CIRCUIT/STATION LATERAL PIPING USING THE FOLLOWING:

PIPE SIZE	MAX. GPM'S
1/2"	6
3/4"	10
1"	16
1 1/4"	28
1 1/2"	35
2"	55
3"	120

SIZE OF ELECTRIC REMOTE CONTROL VALVE — A3 (CIRCUIT/STATION NUMBER) — 1" (TOTAL GPM'S FOR CIRCUIT/STATION)

EACH CIRCUIT/STATION SHOWN HEREIN HAS THE NUMBER OF GPMS REQ'D. FOR THAT CIRCUIT/STATION. EACH CIRCUIT/STATION IS DESIGNED BASED ON 50-55PSI AT THE VALVE.

IRRIGATION SYSTEM IS DESIGNED FOR 60 GPM AT 90 PSI SUPPLIED BY THE PUMP STATION AS SHOWN IN DETAILS.

811 Know what's below Call before you dig.

benefield-richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

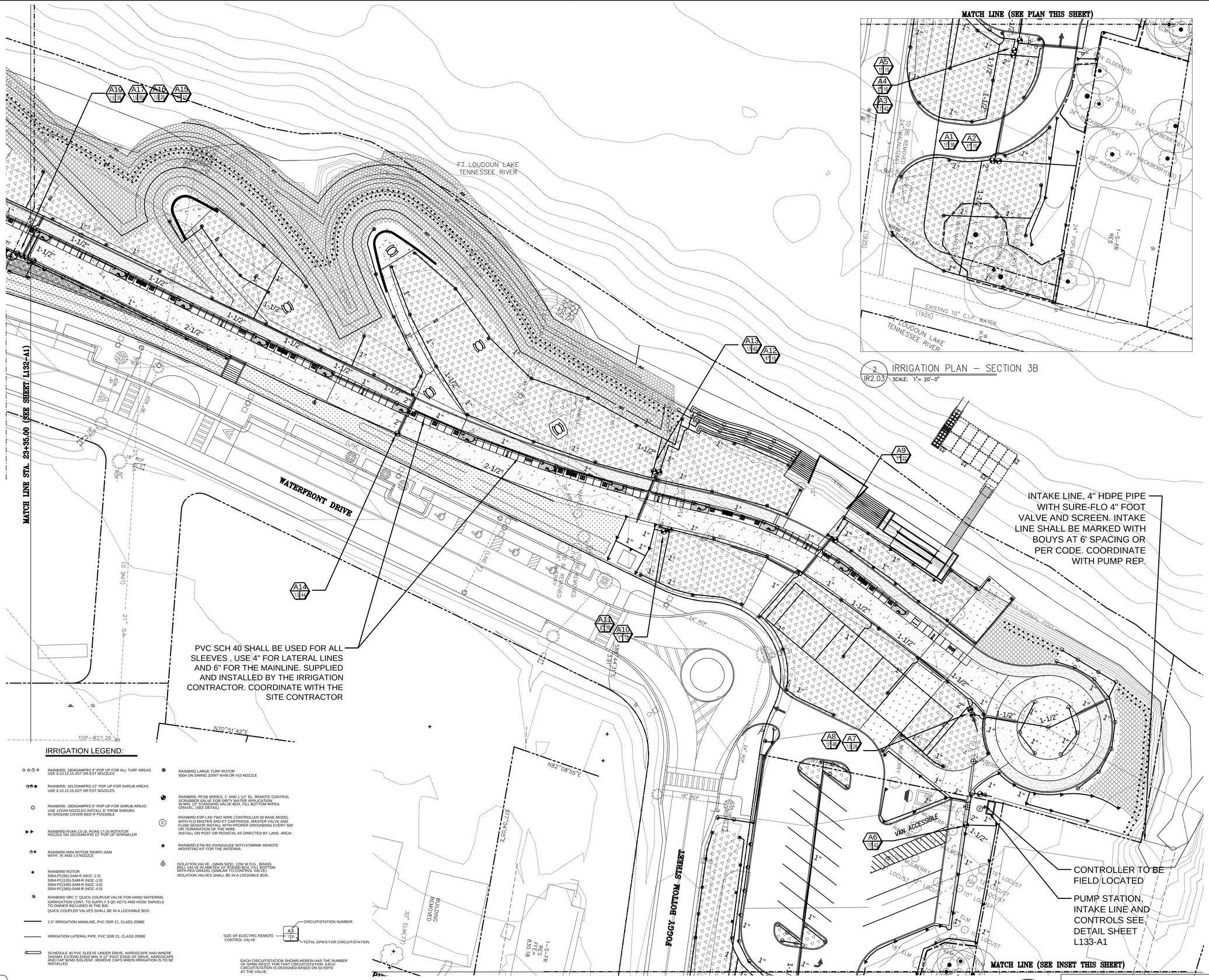
ENLARGED AREA-MIDDLE SECTION

CCI PROJECT NO.	00244-0014
DRAWING DATE	January 7, 2015
P.I.C.	–
C.R.	
DRAWN	– BLB

L132-A1

MATCH LINE (SEE PLAN THIS SHEET)

2 IR2.03 IRRIGATION PLAN – SECTION 3B
SCALE: 1"= 20'-0"



IRRIGATION LEGEND:

- RAINBIRD, 1804SAMPRS 4" POP UP FOR ALL TURF AREAS USE 8,10,12,15,SST OR EST NOZZLES
- RAINBIRD, 1812SAMPRS 12" POP UP FOR SHRUB AREAS USE 8,10,12,15,SST OR EST NOZZLES
- RAINBIRD, 1806SAMPRS 6" POP UP FOR SHRUB AREAS USE 12VAN NOZZLES INSTALL 6" FROM SHRUBS IN GROUND COVER BED IF POSSIBLE
- RAINBIRD RVAN 13-18, RVAN 17-24 ROTATOR NOZZLE ON 1812SAM-PAS 12" POP UP SPRINKLER
- RAINBIRD MINI ROTOR 3504PC-SAM WITH .75 AND 1.0 NOZZLE
- RAINBIRD ROTOR
  5004-PC(90)-SAM-R (NOZ.-1.5)
  5004-PC(135)-SAM-R (NOZ.-2.0)
  5004-PC(180)-SAM-R (NOZ.-3.0)
  5004-PC(360)-SAM-R (NOZ.-4.0)
- RAINBIRD 5RC 1" QUICK COUPLER VALVE FOR HAND WATERING. IORRIGATION CONT. TO SUPPLY 3 QC KEYS AND HOSE SWIVELS TO OWNER INCLUDED IN THE BID.
  QUICK COUPLER VALVES SHALL BE IN A LOCKABLE BOX.
- 2.5" IRRIGATION MAINLINE, PVC SDR 21, CLASS 200BE
- IRRIGATION LATERAL PIPE, PVC SDR 21, CLASS 200BE
- SCHEDULE 40 PVC SLEEVE UNDER DRIVE, HARDSCAPE AND WHERE SHOWN. EXTEND ENDS MIN. 8-12" PAST EDGE OF DRIVE, HARDSCAPE AND CAP W/NO SOLVENT. REMOVE CAPS WHEN IRRIGATION IS TO BE INSTALLED
- RAINBIRD LARGE TURF ROTOR 6504 ON SWING JOINT W/#8 OR #10 NOZZLE
- RAINBIRD, PESB SERIES, 1" AND 1 1/2" EL. REMOTE CONTROL SCRUBBER VALVE FOR DIRTY WATER APPLICATION. IN MIN. 12" STANDARD VALVE BOX, FILL BOTTOM W/PEA GRAVEL, (SEE DETAIL)
- (C) RAINBIRD ESP-LXD TWO WIRE CONTROLLER 50 BASE MODEL WITH FLO MASTER AND ET CARTRIDGE, MASTER VALVE AND FLOW SENSOR INSTALL WITH PROPER GROUNDING EVERY 500' OR TERMINATION OF THE WIRE.
  INSTALL ON POST OR PEDISTAL AS DIRECTED BY LAND. ARCH.
- RAINBIRD ETM-RG RAINGAUGE WITH ETMRMK REMOTE MOUNTING KIT FOR THE ANTENNA.
- ISOLATION VALVE - (MAIN SIZE), 125# W.O.G., BRASS BALL VALVE IN AMETEK 10" ROUND BOX, FILL BOTTOM WITH PEA GRAVEL (SIMILAR TO CONTROL VALVE)
  ISOLATION VALVES SHALL BE IN A LOCKABLE BOX.

A3 — CIRCUIT/STATION NUMBER
SIZE OF ELECTRIC REMOTE CONTROL VALVE — TOTAL GPM'S FOR CIRCUIT/STATION

EACH CIRCUIT/STATION SHOWN HEREIN HAS THE NUMBER OF GPMS REQ'D. FOR THAT CIRCUIT/STATION. EACH CIRCUIT/STATION IS DESIGNED BASED ON 50-55PSI AT THE VALVE.

1 L133 IRRIGATION PLAN – EAST END
SCALE: 1"= 20'-0"

811 Know what's below Call before you dig

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2807

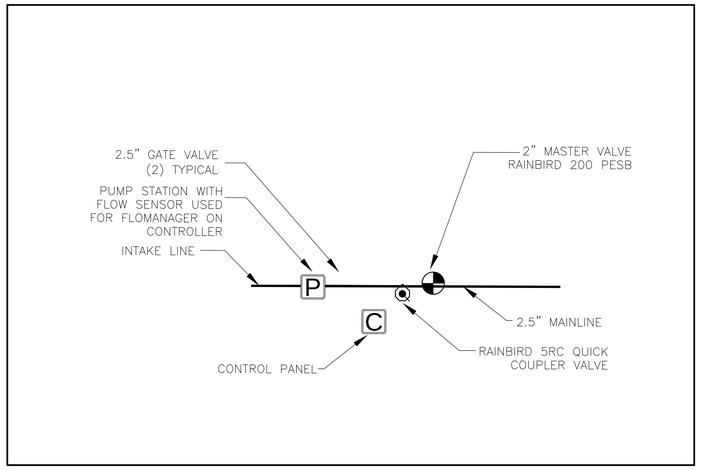
PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

ENLARGED AREA EAST END

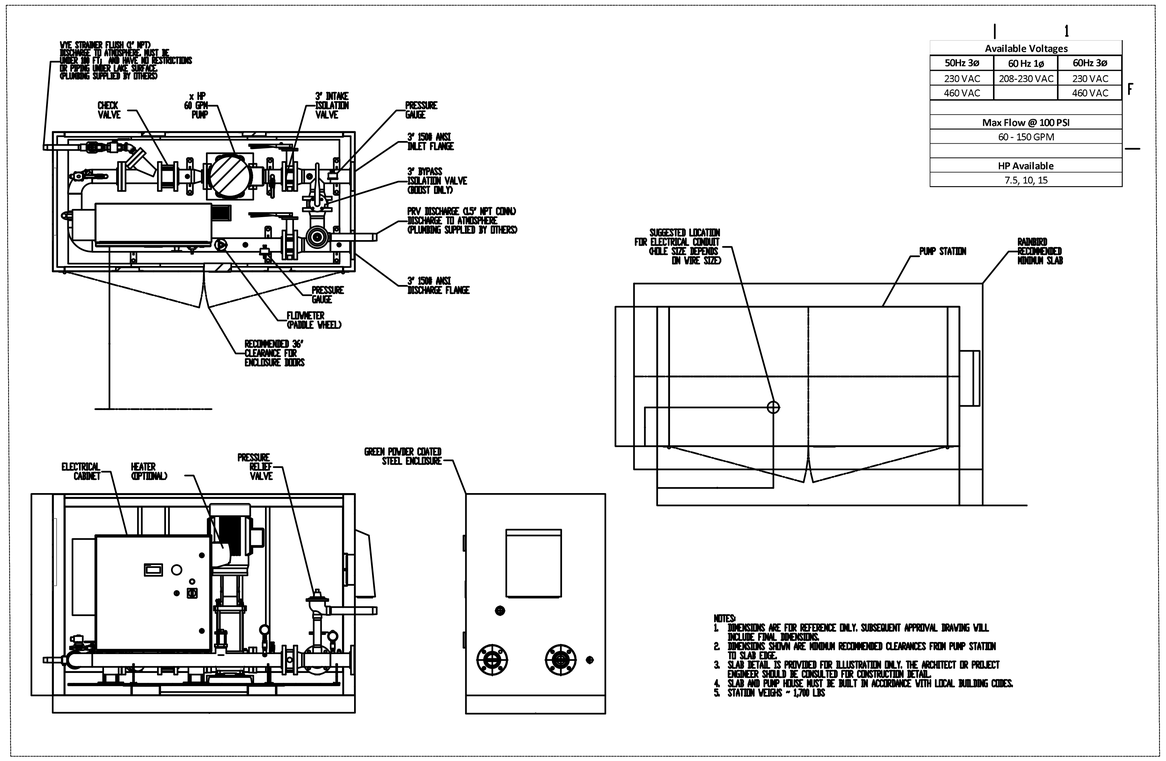
CCI PROJECT NO. 00244-0014
DRAWING DATE January 7, 2015
P.I.C. – C.R.
DRAWN – DLB

L133-A1

benefield-richters
architecture • planning
516 union avenue, knoxville, tn 37902 865.637.7009



1 / L134 IRRIGATION POINT OF CONNECTION
SCALE: NTS

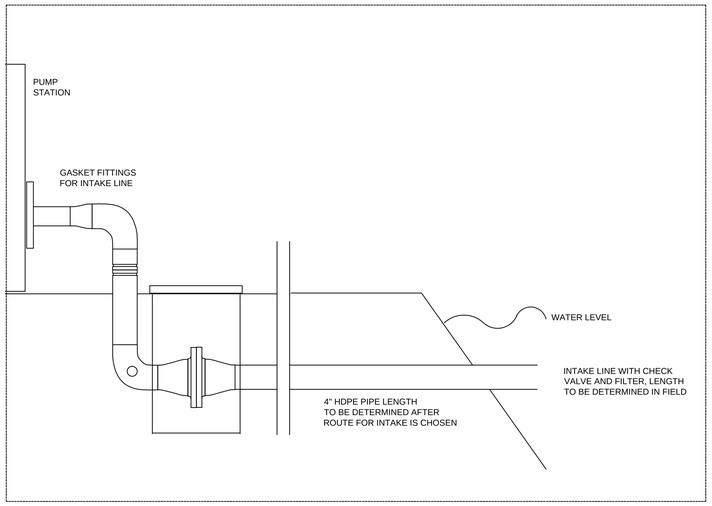


Available Voltages		
50Hz 3ø	60 Hz 1ø	60Hz 3ø
230 VAC	208-230 VAC	230 VAC
460 VAC		460 VAC
Max Flow @ 100 PSI		
60 - 150 GPM		
HP Available		
7.5, 10, 15		

2 / L134 RAINBIRD MODEL #M1D010N0000230S3 230/1/60
SCALE: NTS

Station Details			
Pump Platform:	M1D010N0N0000230S3	Power Requirement:	230/1/60
Dyn. Inlet Pressure (PS	0	Pump Scenario:	Suction Lift
Lift Height (ft.):	16 ft.	Max Flow Rate (GPM)	85
Boost Pressure (PSI):	70	Min Flow Rate (GPM)	15
Discharge Pressure:	70	Full Load Amps:	63
Site Conditions			
Water Source:	Pond	Site Elevation:	0-3300
Water Type:	Fresh	Intake Pipe Dia:	3 in.
Wet Well Diameter:	N/A	Discharge Pipe Dia.:	3 in.
Wet Well Depth:	N/A	Slab Dimensions:	Recommend: 90 in. x 48 in.
Exhaust Fan Req. (CFI	240		

3 / L134 PUMP INFORMATION
SCALE: NTS



4 / L134 INTAKE LINE W/FILTER
SCALE: NTS

811
Know what's below
Call before you dig

benefield-richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2807

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

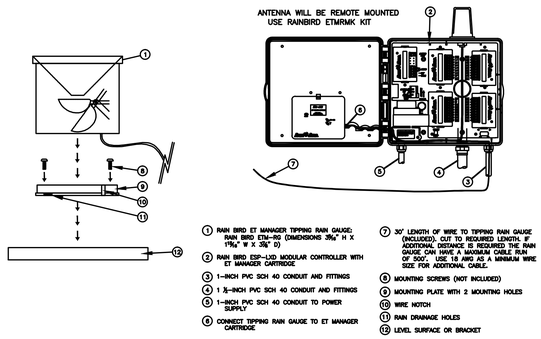
PUMP/DETAILS

CCI PROJECT NO. 00244-0014
DRAWING DATE January 7, 2015
P.I.C. –
C.R.
DRAWN – DLB

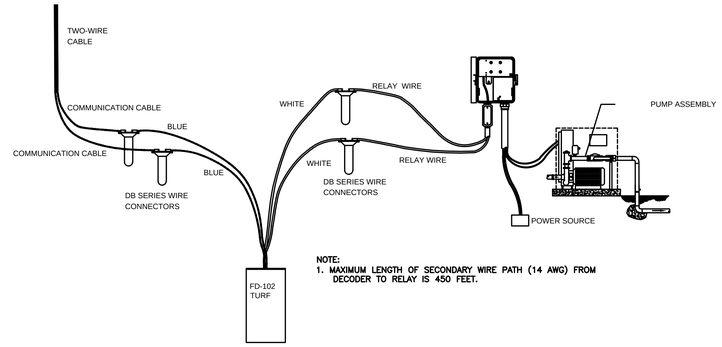
L134-A1

IRRIGATION NOTES

1. THE IRRIGATION SYSTEM DESIGN IS BASED ON 70 STATIC PRESSURE (PSI) AND MAXIMUM FLOW OF 15-85 GALLONS PER MINUTE(GPM). THE IRRIGATION CONTRACTOR SHALL VERIFY THE PRESSURE AND FLOW PRIOR TO COMMENCEMENT OF CONSTRUCTION. REPORT TO THE OWNER OR OWNER'S REPRESENTATIVE ANY DIFFERENCES BETWEEN THE PRESSURE INDICATED AND THE ACTUAL PRESSURE READING AT THE PUMP STATION. DESIGN PRESSURE AT THE SPRINKLER IS 50 PSI.
2. THE PIPE ROUTING SHOWN IS DIAGRAMMATIC ONLY. ALL PIPING, VALVES, HEADS, ETC SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY. PRESSURE LOSS CALCULATIONS ARE BASED ON THE PIPE ROUTING AS SHOWN. SIGNIFICANT DEVIATIONS FROM THE ROUTING SHOWN SHOULD BE AVOIDED.
3. DO NOT WILLINGLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DIFFERENCES IN THE DIMENSIONS OF THE CONSTRUCTED AREAS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE IRRIGATION DESIGN OR CHANGES HAVE OCCURRED IN THE SITE PLAN. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE IRRIGATION DESIGNER AND THE GENERAL CONTRACTOR IMMEDIATELY. SHOULD THE IRRIGATION CONTRACTOR PROCEED WITH THE INSTALLATION WITHOUT NOTIFYING THE IRRIGATION DESIGNER AND THE GENERAL CONTRACTOR, THE IRRIGATION CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ANY AND ALL REVISIONS / RECONSTRUCTION NECESSARY.
4. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF/HERSELF WITH THE SITE, ALL GRADE DIFFERENCES, LOCATIONS OF WALLS, AND INSTALLED UTILITIES. COORDINATE WORK WITH THE OWNER OR GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES UNDERNEATH PAVEMENT AND THROUGH WALLS.
5. DUE TO THE SCALE OF THE DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, JOINTS, ETC. WHICH MAY BE REQUIRED. THE IRRIGATION CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF HIS/HER WORK AND PLAN HIS/HER WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC. AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. ALL WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEM COMPONENTS, LANDSCAPE PLANTING, AND ARCHITECTURAL FEATURES.
6. FLUSH ALL LINES AND HEADS PRIOR TO INSTALLING NOZZLES. ADJUST NOZZLE SPRAY ARC AND RADIUS FOR OPTIMUM PERFORMANCE TO PREVENT OVERSPRAY ONTO PAVED SURFACES OR FACE OF BUILDING AS MUCH AS POSSIBLE TO FIT THE SITE CONDITIONS. THROTTLE FLOW CONTROL AT EACH VALVE FOR OPTIMUM OPERATING PRESSURE FOR EACH ZONE.
7. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISHED GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE NOTED.
8. WHEN VERTICAL OBSTRUCTIONS (POLES, SIGNS, TREES, HYDRANTS, ETC) INTERFERE WITH THE SPRAY PATTERN OF THE HEADS SO AS TO PREVENT PROPER COVERAGE, THE CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER, THIRD, OR HALF CIRCLE HEAD AT THE SIDES OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST.
9. USE TEFLON TAPE ON ALL MALE PIPE THREADS ON PVC PIPE, SWING JOINTS, AND VALVE ASSEMBLIES.
10. INSTALL VALVE BOXES 18-INCHES FROM AND PERPENDICULAR TO WALKS, CURBS, BUILDING, OR LANDSCAPE FEATURES. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE INSTALLED A MINIMUM OF 12-INCHES APART.
11. ALL VALVES SHALL BE PLACED IN VALVE BOXES AS SHOWN IN THE DETAILS AND ALL ELECTRICAL CONNECTIONS SHALL BE SEALED WITH WATERPROOF CONNECTORS.
12. 120-VOLT ELECTRICAL POWER AT THE CONTROLLER SHALL BE PROVIDED BY SITE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE THE FINAL HOOK-UP FROM THE POWER PROVIDED TO THE CONTROLLER AND PUMP STATION. POWER TO THE PUMP STATION BY SITE CONTRACTOR.
13. PROVIDE AS-BUILT DRAWINGS PROMPTLY UPON COMPLETION OF THE IRRIGATION INSTALLATION. AS BUILT DRAWINGS ARE TO BE GIVEN TO THE OWNER WITHIN 14 DAYS OF COMPLETION.
14. THERE SHALL BE NO SUBSTITUTIONS OR CHANGES TO THE IRRIGATION DESIGN ALLOWED WITHOUT DIRECT, WRITTEN APPROVAL FROM THE IRRIGATION CONSULTANT OR THE LANDSCAPE ARCHITECT.
15. IRRIGATION CONTRACTOR SHALL PROVIDE THE FIRST WINTERIZATION, SPRING TURN ON HEAD ADJUSTMENTS AND CONTROLLER MAINTENANCE FOR THE FIRST YEAR. IT SHALL BE INCLUDED IN THE BID.

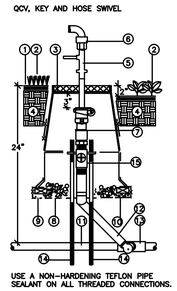


1 / L135 CONTROLLER INSTALLATION
SCALE: NTS



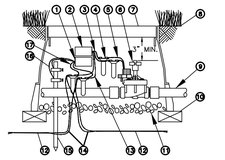
NOTE:
1. MAXIMUM LENGTH OF SECONDARY WIRE PATH (14 AWG) FROM DECODER TO RELAY IS 450 FEET.

2 / L135 PUMP WIRING/DECODERS
SCALE: NTS



1. FINISH GRADE OR TOP OF MULCH
2. PLANT MATERIAL (TURF, SHRUB OR GROUND COVER)
3. VALVE BOX, 10" RND, LOCKING COVER MARKED "QCV".
4. CLEAN SOIL, AMENDED/NATIVE FREE OF ROCK AND DEBRIS
5. QUICK COUPLER KEY,
6. Q.C. HOSE SWIVEL,
7. QUICK COUPLER VALVE
8. 3/4" CRUSHED ROCK
9. BRICK SUPPORTS 1 OF 4
10. 1/2" WIRE CLOTH GOPHER SCREEN, WRAP UP ALL SIDES.
11. MAINLINE, CL200 PVC PRESSURE PIPE, SIZE PER PLAN.
12. SWING JOINT 1", SIZE PER QUICK COUPLER VALVE INLET. DURA MODEL# 1-A101-11-18.
13. TEE OR ELBOW, PVC SCH 40, SIZE PER PLAN.
14. REBAR, 1/2"x30".
15. 1" GATE VALVE THREADED INTO SWING JOINT AND INTO QCV FOR SHUT OFF.

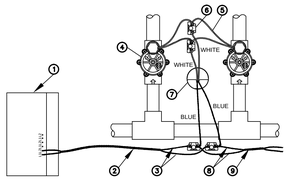
3 / L135 QUICK COUPLER INSTALLATION
SCALE: NTS



NOTES:
1. LSP-1TURF SHOULD BE INSTALLED EVERY 500-FEET OR FOR EVERY EIGHT DECODERS ON TWO-WIRE PATH.
2. MAXIMUM LENGTH OF SECONDARY WIRE PATH (14 AWG) FROM DECODER TO SOLENOID IS 450 FEET.
3. PLACE 3 FEET OF EXTRA WIRE IN EVERY VALVE BOX FOR EASIER SERVICING.
4. RAIN BIRD FD-401TURF AND FD-601TURF FIELD DECODERS COME WITH LSP-1TURF'S BUILT-IN. FD-101TURF, FD-102TURF AND FD-202TURF REQUIRE SEPARATE LSP-1TURF SURGE PROTECTION.

1. LINE SURGE PROTECTOR: RAIN BIRD LSP-1TURF M10008
2. FIELD DECODER (WITHOUT LINE SURGE PROTECTION: RAIN BIRD FD-101TURF, FD-102TURF OR FD-202TURF FIELD DECODER
3. WHITE WIRE FROM FIELD DECODER (1 OF 2)
4. DB SERIES WIRE CONNECTOR: RAIN BIRD DBTWC25 (1 OF 4)
5. SOLENOID WIRE (1 OF 2)
6. RAIN BIRD REMOTE CONTROL VALVE
7. 12-INCH VALVE BOX WITH COVER: RAIN BIRD VB-STD
8. FINISH GRADE OR TOP OF MULCH
9. PVC MAINLINE PIPE
10. BRICK (1 OF 4)
11. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
12. TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)
13. BLUE WIRE FROM FIELD DECODER
14. COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)
15. GROUNDING ROD: 10 OHMS OR LESS
16. GREEN/YELLOW WIRE FROM LSP-1TURF TO BRASS CLAMPS ON GROUNDING ROD (1 OF 2)
17. BLUE WIRE FROM LSP-1TURF

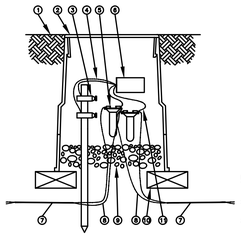
4 / L135 VALVE/DECODER
SCALE: NTS



1. TWO-WIRE DECODER CONTROLLER: RAIN BIRD ESP-LXD CONTROLLER
2. TWO-WIRE CABLE TO ESP-LXD CONTROLLER
3. COMMUNICATION WIRE TO ESP-LXD CONTROLLER
4. SOLENOID VALVE OR MASTER VALVE (1 OF 2)
5. SOLENOID WIRE (1 OF 4)
6. DB SERIES WIRE CONNECTOR: RAIN BIRD DBTWC25 (1 OF 4)
7. FIELD DECODER; RAIN BIRD FD-102TURF M13004 DECODER
8. COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER OR LINE SURGE PROTECTOR)
9. TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER OR LINE SURGE PROTECTOR)

NOTES:
1. MAXIMUM LENGTH OF SECONDARY WIRE PATH (14 AWG) FROM DECODER TO SOLENOID IS 450 FEET.
2. IF OPERATING TWO VALVES PER DECODER ADDRESS, CALCULATE THE DISTANCE OF EACH OF THE TWO VALVES FROM THE DECODER AND ADD THE DISTANCES TOGETHER. THE TOTAL DISTANCE MUST NOT EXCEED 450 FEET.

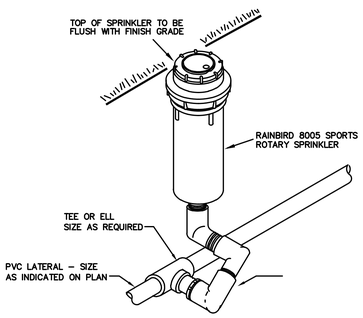
5 / L135 VALVE WIRING
SCALE: NTS



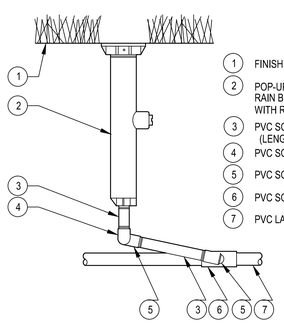
1. FINISH GRADE OR TOP OF MULCH
2. 10-INCH VALVE BOX WITH COVER: RAIN BIRD VB-10RND
3. GROUNDING ROD: 10 OHMS OR LESS
4. GREEN/YELLOW WIRE FROM LSP-1TURF/TURF TO GROUNDING ROD BRASS CLAMPS (1 OF 2)
5. DB SERIES WIRE CONNECTOR: RAIN BIRD DBTWC25 (1 OF 2)
6. LINE SURGE PROTECTOR: RAIN BIRD LSP-1TURF M10008
7. TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)
8. COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)
9. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
10. BRICK (1 OF 2)
11. BLUE WIRE FROM LSP-1TURF TO DB SERIES WIRE CONNECTOR.

NOTES:
1. LSP-1TURF SHOULD BE INSTALLED EVERY 500-FEET OR FOR EVERY EIGHT DECODERS ON TWO-WIRE PATH.
2. LSP-1TURF TO BE INSTALLED AT END OF WIRE RUN THAT TERMINATES IN THE FIELD (STAR CONFIGURATION).
3. RAIN BIRD FD-401TURF AND FD-601TURF FIELD DECODERS COME WITH LSP-1TURF'S BUILT-IN. FD-101TURF, FD-102TURF AND FD-202TURF REQUIRE SEPARATE LSP-1TURF PROTECTION.

6 / L135 SURGE PROTECTION
SCALE: NTS

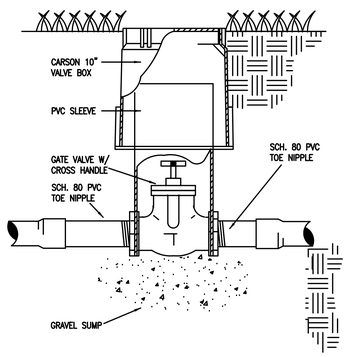


7 / L135 LARGE ROTOR INSTALLATION
SCALE: NTS

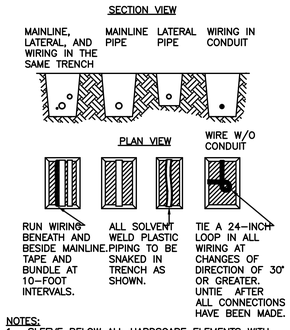


1. FINISH GRADE/TOP OF MULCH
2. POP-UP SPRAY SPRINKLER: RAIN BIRD 1806 -SAM-PRS WITH 1800 VPC WITH RAIN BIRD ROTARY NOZZLE
3. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
4. PVC SCH 40 ELL
5. PVC SCH 40 STREET ELL
6. PVC SCH 40 TEE OR ELL
7. PVC LATERAL PIPE

8 / L135 POP UP SPRAY
SCALE: NTS



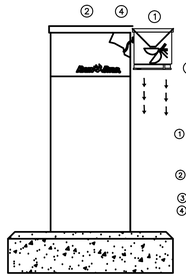
9 / L135 MANUAL VALVE INSTALLATION
SCALE: NTS



NOTES:
1. SLEEVE BELOW ALL HARDSCAPE ELEMENTS WITH CLASS 200 PVC TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
2. FOR PIPE AND WIRE BURIAL DEPTHS SEE SPECIFICATIONS.

10 / L135 PIPE/WIRE TRENCH
SCALE: NTS

NOTES:
1. RAIN GAUGE ETM-RG MAY BE MOUNTED ON A POST NEAR THE CONTROLLER PER DESECRATION OF THE OWNER,
2. FIELD LOCATE RAIN GAUGE AS TO NOT INTERFERE WITH ANY HARDSCAPES OR LANDSCAPING.



1. ET MANAGER TIPPING RAIN GAUGE RAINBIRD ETM-RG DIMENSIONS 3 7/8" (W) x .3 15/16" (H) x 1 15/16" (D)
2. ESP-LXM 32 STATION CONTROLLER WITH ET-MGR CARTAGE ON PEDESTAL
3. RAIN DRAINAGE HOLES
4. LEVEL SURFACE OR BRACKET

11 / L135 PEDISTAL MOUNT CONTROLLER
SCALE: NTS

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2807

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

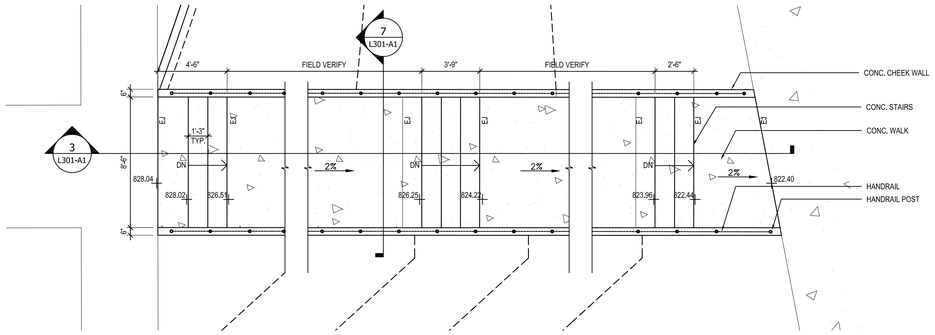
PUMP/DETAILS

CCI PROJECT NO.	00244-0014
DRAWING DATE	January 7, 2015
P.I.C. –	C.R.
DRAWN TMA	

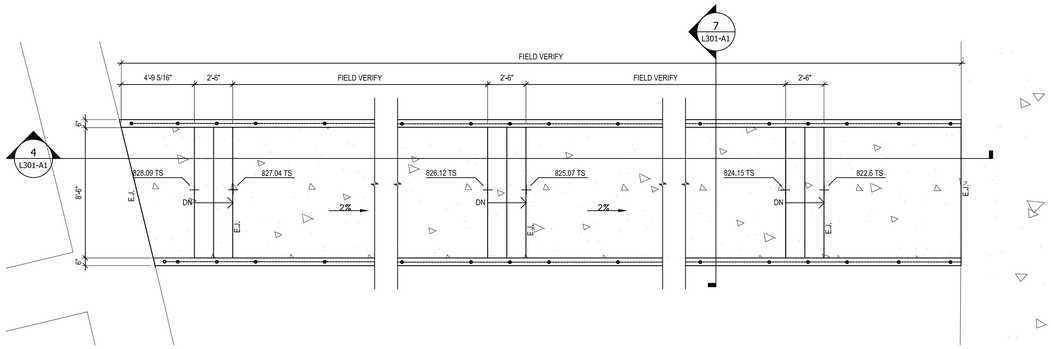
L135-A1

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

811
Know what's below
Call before you dig

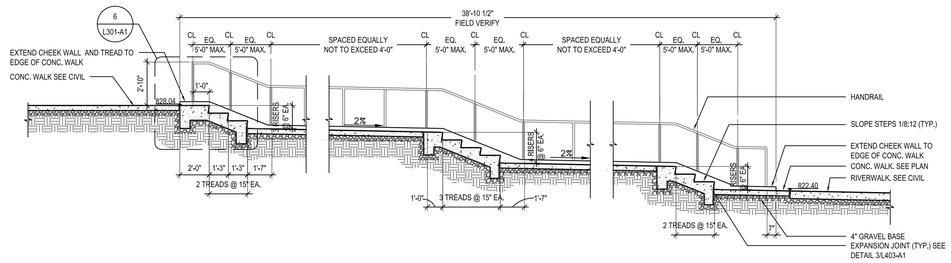


1 L301-A1 ENLARGED PLAN – STAIRS AT BARBER ST.
SCALE: 1/4" = 1'-0"



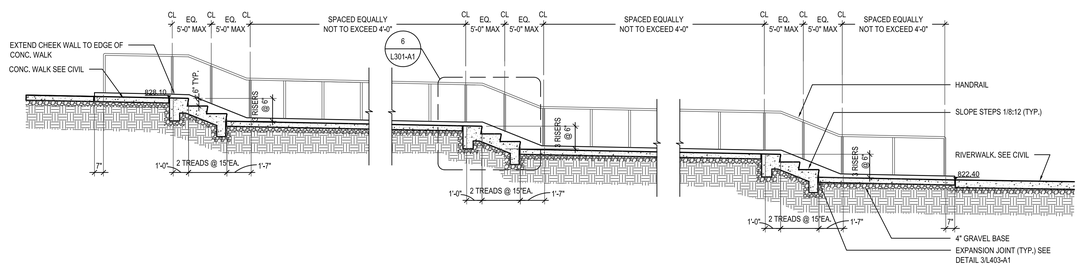
2 L301-A1 ENLARGED PLAN – STAIRS AT PLAYGROUND
SCALE: 1/4" = 1'-0"

NOTE: SEE DETAILS 6/L301-A1 & 7/L301-A1
FOR STAIR AND REINFORCING DETAILS

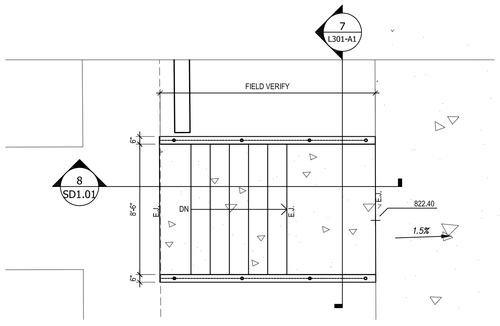


3 L301-A1 SECTION – STAIR AT BARBER ST.
SCALE: 1/4" = 1'-0"

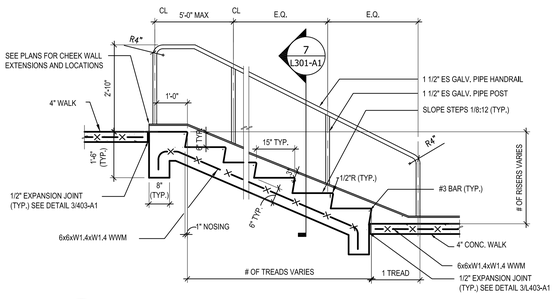
NOTE: SEE DETAILS 6/L301-A1 & 7/L301-A1
FOR STAIR AND REINFORCING DETAILS



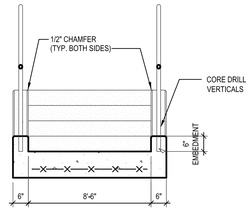
4 L301-A1 SECTION – STAIR AT PLAYGROUND
SCALE: 1/4" = 1'-0"



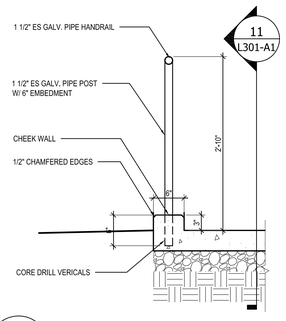
5 L301-A1 ENLARGED PLAN – STAIRS AT E ST.
SCALE: 1/4" = 1'-0"



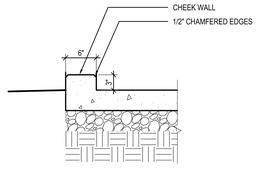
6 L301-A1 EXTERIOR STAIR DETAIL (TYP.)
SCALE: 1/2"=1'-0" 02840-06



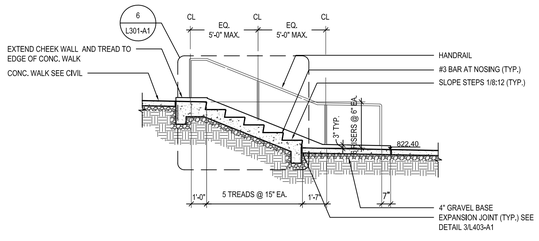
7 L301-A1 EXTERIOR STAIR SECTION DETAIL
SCALE: 1/2" = 1'-0"



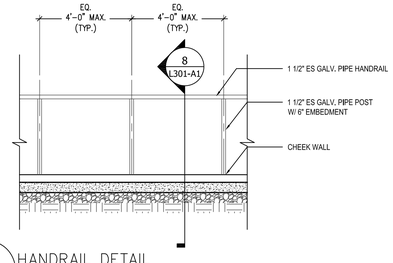
8 L301-A1 HANDRAIL & CHEEKWALL DETAIL
SCALE: 1" = 1'-0"



9 L301-A1 CHEEKWALL DETAIL
SCALE: 1" = 1'-0"



10 L301-A1 SECTION – STAIR AT E ST.
SCALE: 1/4" = 1'-0"



11 L301-A1 HANDRAIL DETAIL
SCALE: 1/2"=1'-0" 02840-06

811
Know what's below
Call before you dig

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike
WWW.CANNON-CANNON.COM | Knoxville, TN 37919

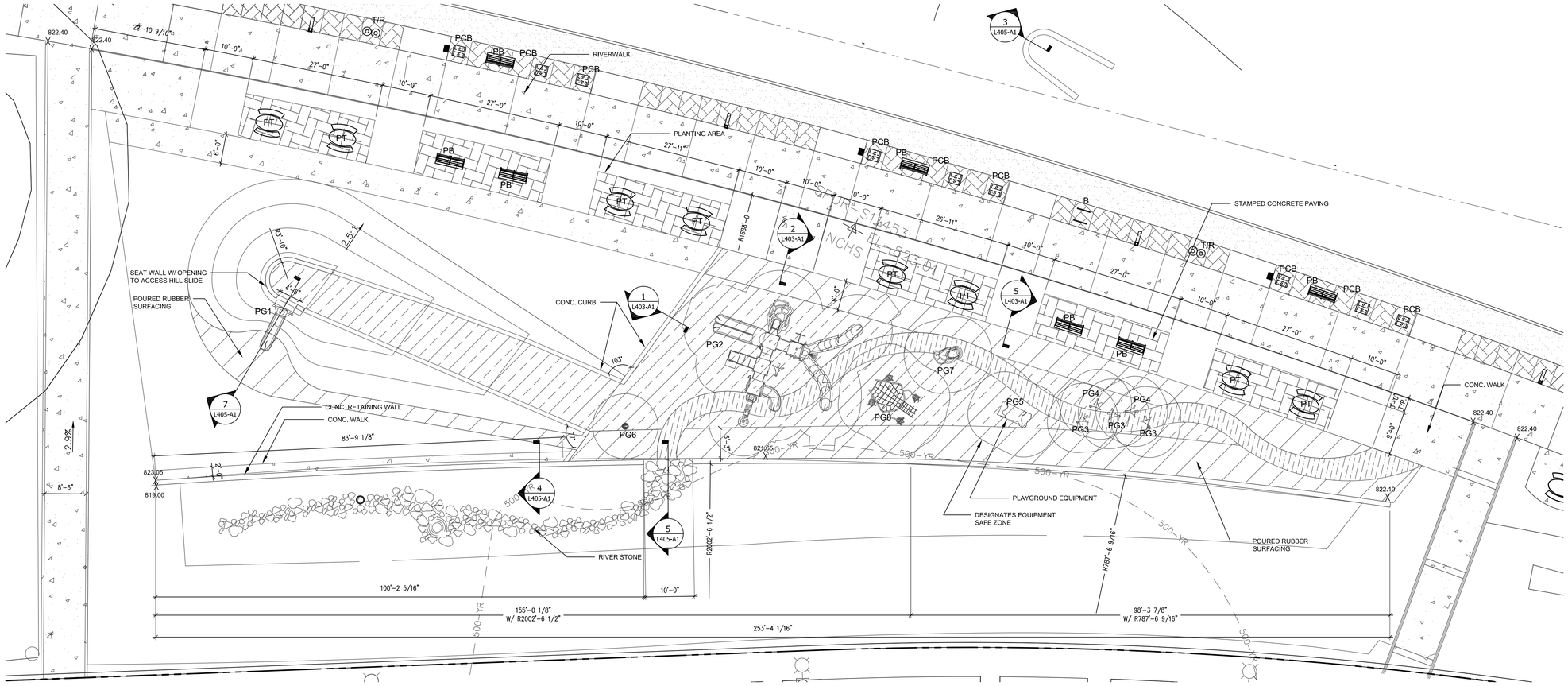
OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2807

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

STAIR/RAMP ENLARGEMENTS

C&C PROJECT NO: 00244-0014
DRAWING DATE: January 7, 2015
DWG. NO. A1 | C.R. –
DRAWN –

L301-A1



1 L304-A1 PLAYGOUND ENLARGED PLAN
SCALE: 1" = 10'-0"

SITE FURNITURE SCHEDULE			
DESIGNATION	DESCRIPTION	SIZE	PRODUCT
T/R	TRASH & RECYCLING RECEPTACLES		PROVIDED BY OWNER
PB	PARK BENCH	69" LENGTH	LANDSCAPE FORMS INC. - 'NEOLIVIANO BENCH' (BACKED BENCH)
PT	PICNIC TABLE	67" OVAL	LANDSCAPE FORMS INC. - 'CHARLIE' PICNIC TABLE
PCB	PRECAST BENCH	30" X 26.5" X 18" TALL	
B	BIKE RACK	33 1/2" WIDE X 35" TALL	MADRAX - GRABER MANUFACTURING INC. - PHOENIX BIKE RACK WITH LEAN BAR - PHX-LB-4
PLAYGROUND EQUIPMENT			
PG1	HILL SLIDE	6' HT.	GAMETIME - 'HILL SLIDE ZIP SLIDE' - MODEL #:91072
PG2	PLAY SYSTEM	8' HT.	GAMETIME - 'MODIFIED SLIDEWAYS' PLAY SYSTEM - MODEL #19545
PG3	SM. CLIMBER	5' HT.	GAMETIME - 'SMALL TREE CLIMBER' - MODEL #: 38019
PG4	LG. CLIMBER	6' HT.	GAMETIME - 'LARGE TREE CLIMBER' - MODEL #: 38031
PG5	LOG CRAWLER	4' HT.	GAMETIME - 'LOG CRAWL THRU' - MODEL #: 38112
PG6	SPINNER	4' HT.	GAMETIME - 'CATTAIL SPINNER' - MODEL #: 38208
PG7	ROCKSCAPE	4' HT.	GAMETIME - 'ROCKSCAPE STRATUM' - MODEL #: 7083
PG8	ROPE CLIMBER	5' HT.	GAMETIME - 'FROG CLIMBER' - MODEL #:38004

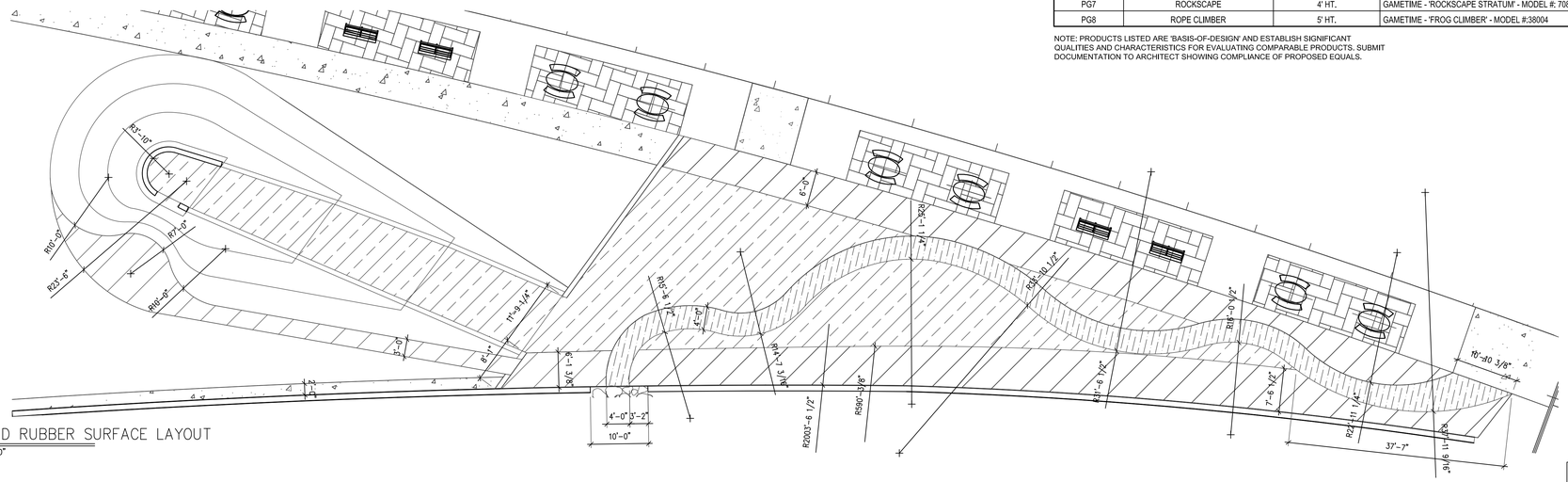
NOTE: PRODUCTS LISTED ARE 'BASIS-OF-DESIGN' AND ESTABLISH SIGNIFICANT QUALITIES AND CHARACTERISTICS FOR EVALUATING COMPARABLE PRODUCTS. SUBMIT DOCUMENTATION TO ARCHITECT SHOWING COMPLIANCE OF PROPOSED EQUALS.

FURNITURE LEGEND

- B — BIKE RACK
- T/R — TRASH AND RECYCLING RECEPTACLE
- PB — PARK BENCH
- PT — PICNIC TABLE
- PCB — PRECAST CONCRETE BENCH

MATERIALS LEGEND

- CONCRETE
- STAMPED CONCRETE
- GRAVEL RUNNING TRAIL
- POURED RUBBER COLOR 1
- POURED RUBBER COLOR 2
- POURED RUBBER COLOR 3



2 L304-A1 PLAYGOUND RUBBER SURFACE LAYOUT
SCALE: 1" = 10'-0"

811
Know what's below
Call before you dig

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike
WWW.CANNON-CANNON.COM | Knoxville, TN 37919

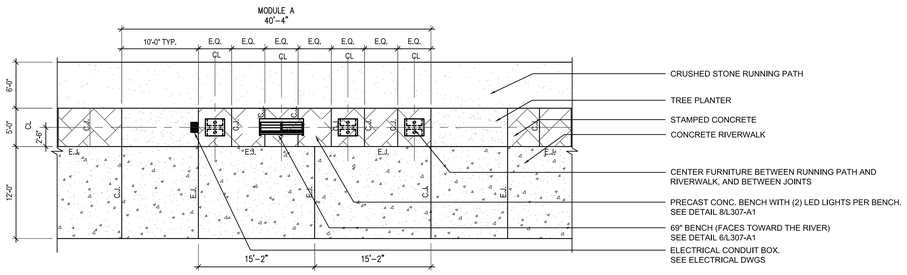
OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

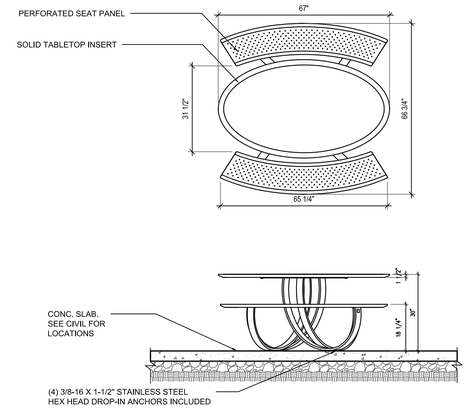
PLAYGROUND LAYOUT ENLARGEMENT

CCI PROJECT NO. 00244-0014
DRAWING DATE January 7, 2015
DRAWN – C.R.

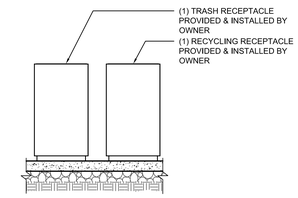
L304-A1



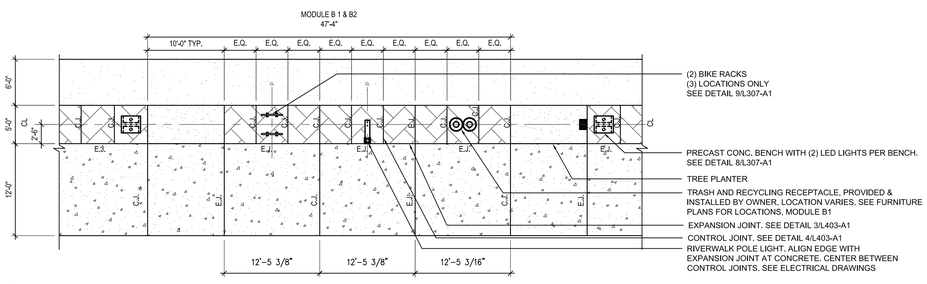
1 L307-A1 FURNITURE LAYOUT BETWEEN PLANTERS – MODULE A
SCALE: 1/8" = 1'-0"



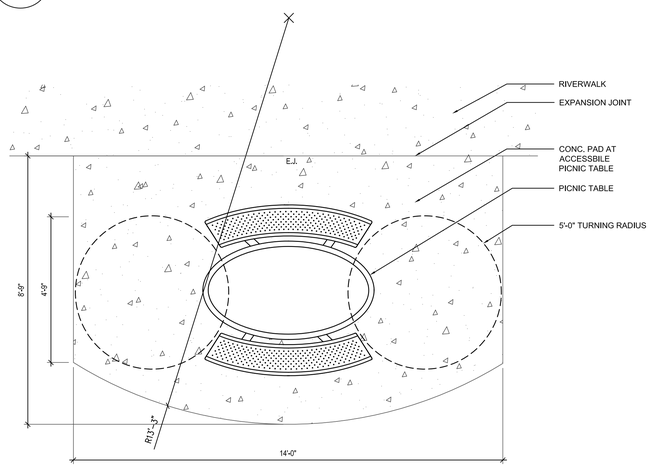
2 L307-A1 SITE FURNITURE – PICNIC TABLE
SCALE: 1/2" = 1'-0"



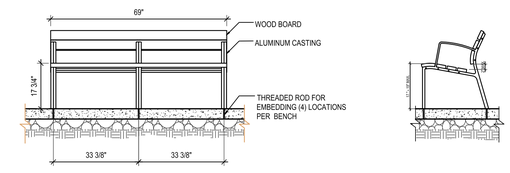
3 L307-A1 SITE FURNITURE – TRASH AND RECYCLING RECEPTACLE
SCALE: 1/2" = 1'-0"



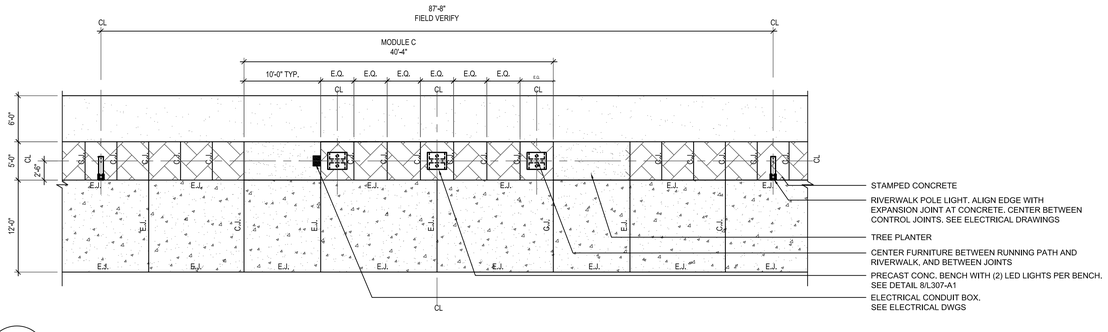
4 L307-A1 FURNITURE LAYOUT – MODULE B
SCALE: 1/8" = 1'-0"



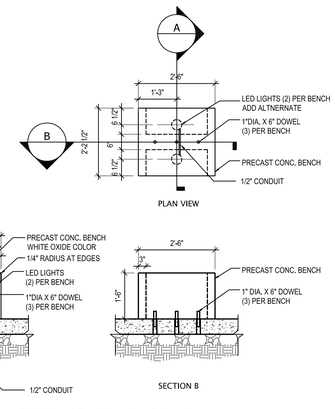
5 L307-A1 SITE FURNITURE – ACCESSIBLE PICNIC TABLE CONC. PAD
SCALE: 1/2" = 1'-0"



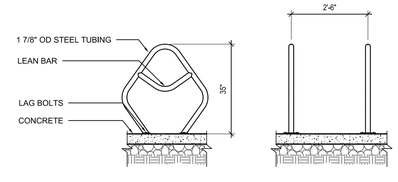
6 L307-A1 SITE FURNITURE – BACKED BENCH
SCALE: 1/2" = 1'-0"



7 L307-A1 FURNITURE LAYOUT ALONG WETLANDS – MODULE C
SCALE: 1/8" = 1'-0"



8 L307-A1 SITE FURNITURE – PRECAST CONC. BENCH
SCALE: 1/2" = 1'-0"



NOTE: SURFACE MOUNT ACCORDING TO MANUFACTURER RECOMMENDATIONS

9 L307-A1 SITE FURNITURE – BIKE RACK
SCALE: 1/2" = 1'-0"

811
Know what's below
Call before you dig

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

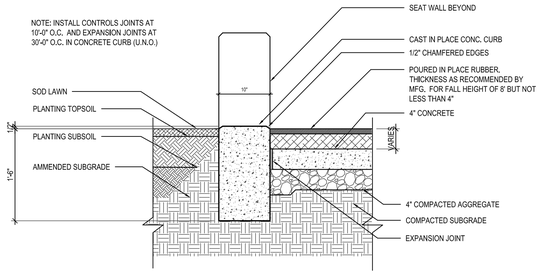
OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

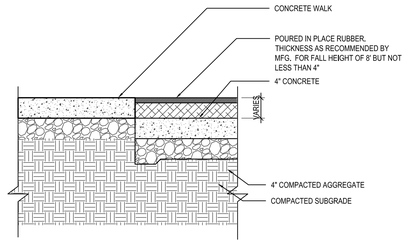
RIVERWALK FURNITURE LAYOUTS

CCI PROJECT NO. 00244-0014
ISSUING DATE January 7, 2015
DWG. –
DRAWN –
C.R.

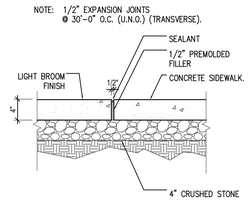
L307-A1



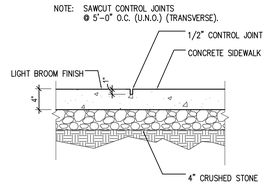
1 L403-A1 POURED RUBBER SURFACE DETAIL AT CURB
SCALE: 1" = 1'-0"



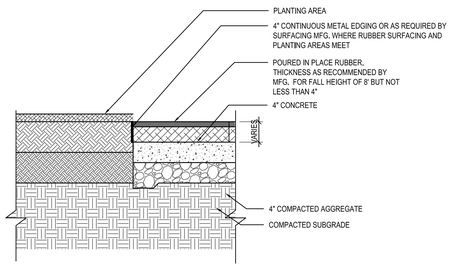
2 L403-A1 POURED RUBBER SURFACE DETAIL AT CONC WALK
SCALE: 1" = 1'-0"



3 L403-A1 SIDEWALK EXPANSION JOINT (E.J.)
SCALE: 1" = 1'-0" 2751-01E



4 L403-A1 SIDEWALK CONTROL JOINT (C.J.)
SCALE: 1" = 1'-0" 2751-01A



5 L403-A1 POURED RUBBER SURFACE DETAIL AT PLANTING AREA
SCALE: 1" = 1'-0"

811
Know what's below
Call before you dig

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

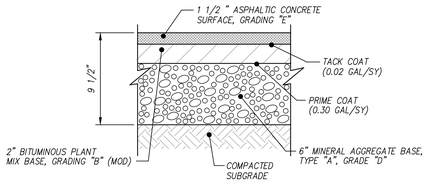
OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2807

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

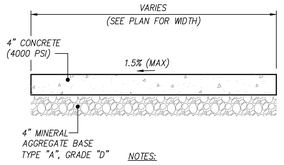
SITE IMPROVEMENT DETAILS

C&C PROJECT NO: 00244-0014
DRAWING DATE: January 7, 2015
DWN: – C.R.
DRAWN: –

L403-A1

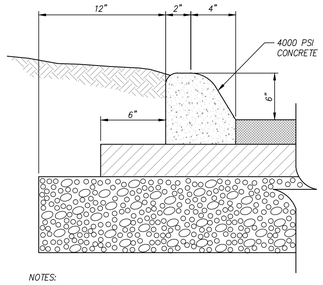


1 / L103.2–A1 **LIGHT DUTY ASPHALT SECTION**
N.T.S.



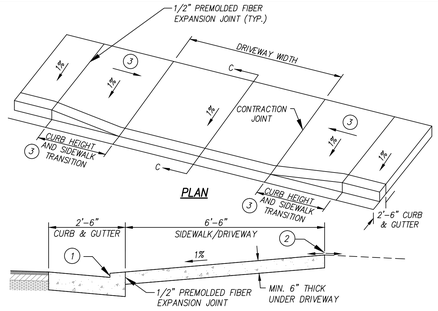
NOTES:
1. PREFORMED 1/2" EXPANSION JOINTS SHALL BE EQUALLY SPACED AT 20' O.C. EQUALLY SPACE 1/4" CONTRACTION JOINTS AT 5' O.C. BETWEEN EXPANSION JOINTS.
2. SIDEWALK SHALL BE SLOPED AWAY FROM BUILDING.
3. CONCRETE SURFACE TO BE MEDIUM BROOM FINISH WITH A 4" TOOLED EDGE AND JOINT.
4. SIDEWALKS WHICH DO NOT MEET ADA STANDARDS WITH REGARD TO RUNNING SLOPE AND CROSS SLOPES WILL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

2 / L101.2–A1 **CONCRETE SIDEWALK (PAVEMENT)**
N.T.S.



NOTES:
1. PREFORMED 1/2" EXPANSION JOINTS SHALL BE EQUALLY SPACED AT 30' MAX. CENTERS. EQUALLY SPACE 1/4" CONTRACTION JOINTS AT 10' MAX. CENTERS BETWEEN EXPANSION JOINTS.
2. EXPANSION JOINT MATERIAL REQUIRED FOR GRASS MEDIANS.
3. EXACT CURB DIMENSIONS MAY BE ALTERED SLIGHTLY TO FIT STANDARD EXTRUDED CURB MACHINES, BUT SUCH VARIANCES MUST BE APPROVED BY THE ENGINEER.

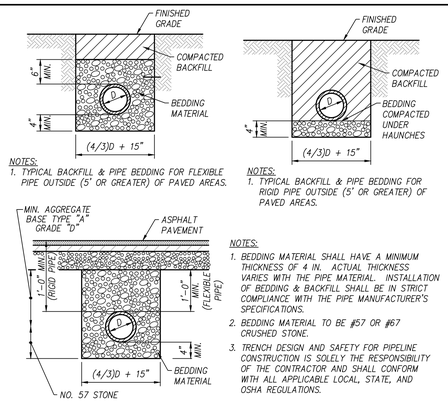
3 / L103.2–A1 **EXTRUDED CURB**
N.T.S.



SECTION C–C

NOTES:
1. HEIGHT OF LOWERED CURB SHALL BE 2.25 INCHES. SEE STD. DWG. RP–NMC–100.
2. ALGEBRAIC DIFFERENCE NOT TO EXCEED 10.0%
3. THE SLOPE OF THE SIDEWALK AND/OR CURB HEIGHT TRANSITION VARIES TO A MAXIMUM OF 8.33% LENGTH OF TRANSITION IS RELATIVE TO THE LONGITUDINAL ROADWAY GRADE.

4 / L103.2–A1 **STANDARD DRIVEWAY RAMP**
N.T.S.

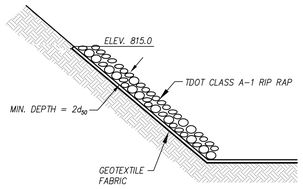


NOTES:
1. TYPICAL BACKFILL & PIPE BEDDING FOR FLEXIBLE PIPE OUTSIDE (5' OR GREATER) OF PAVED AREAS.

NOTES:
1. TYPICAL BACKFILL & PIPE BEDDING FOR RIGID PIPE OUTSIDE (5' OR GREATER) OF PAVED AREAS.

NOTES:
1. BEDDING MATERIAL SHALL HAVE A MINIMUM THICKNESS OF 4 IN. ACTUAL THICKNESS VARIES WITH THE PIPE MATERIAL. INSTALLATION OF BEDDING & BACKFILL SHALL BE IN STRICT COMPLIANCE WITH THE PIPE MANUFACTURER'S SPECIFICATIONS.
2. BEDDING MATERIAL TO BE #57 OR #67 CRUSHED STONE.
3. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.

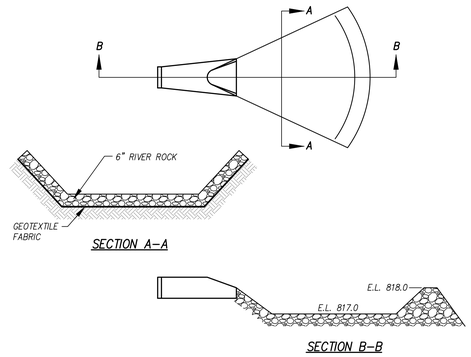
5 / – **PIPE BEDDING & BACKFILL**
N.T.S.



SECTION

NOTES:
1. GEOTEXTILE FABRIC SHALL BE SYNTHETIC INDUSTRIES EROSION XV OR EQUAL.
2. ALL ROCK SHALL BE HANDPLACED AND IN A MANNER TO MINIMIZE VOIDS.
d_{50} = MEDIAN ROCK DIAMETER

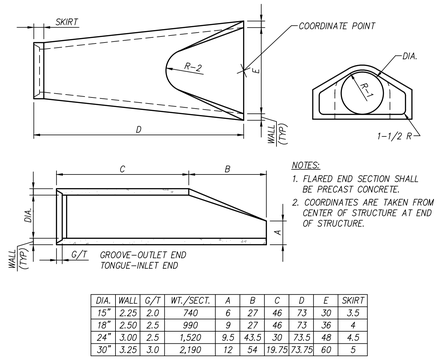
6 / L101.3–A1 **RIP–RAP**
N.T.S.



SECTION A–A

SECTION B–B

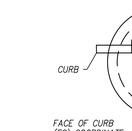
7 / C101.3–A1 **RIVER ROCK LEVEL SPREADER**
N.T.S.

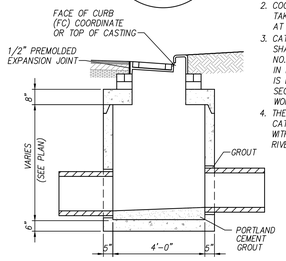


NOTES:
1. FLARED END SECTION SHALL BE PRECAST CONCRETE.
2. COORDINATES ARE TAKEN FROM CENTER OF STRUCTURE AT END OF STRUCTURE.

DIA.	WALL	G/T	WT./SECT.	A	B	C	D	E	SKIRT
15"	2.25	2.0	740	6	27	46	73	30	3.5
18"	2.50	2.5	990	9	27	46	73	36	4
24"	3.00	2.5	1,520	9.5	43.5	30	73.5	48	4.5
30"	3.25	3.0	2,190	12	54	19.75	73.75	60	5

8 / L101.3–A1 **FLARED END SECTION**
N.T.S.

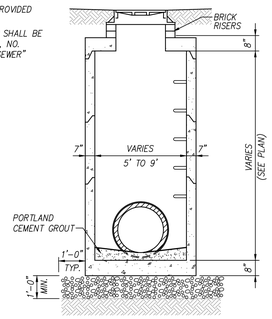




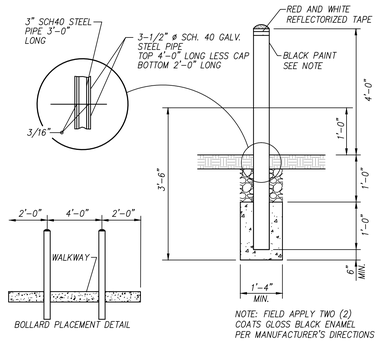
NOTES:
1. CATCH BASINS SHALL BE CIRCULAR PRECAST CONCRETE TDOT NO. 12. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
2. COORDINATES AND TC ELEVATIONS TAKEN ALONG ℄ OF STRUCTURE AT FACE OF CURB.
3. CATCH BASIN FRAME AND GRATE SHALL BE EAST JORDAN IRON WORKS, NO. V–4074 OR EQUAL EXCEPT IN LOCATIONS WHERE CATCH BASIN IS LOCATED ON LOWERED CURB SECTION. USE EAST JORDAN IRON WORKS NO. V–4510 OR EQUAL.
4. THE HOOD AND GRATE OF ALL CATCHBASINS SHALL BE STAMPED WITH "NO DUMPING...DRAINS TO RIVER" OR EQUAL.

9 / L103.3–A1 **SINGLE CATCH BASIN**
N.T.S.

NOTES:
1. MANHOLE TO BE PRECAST CONCRETE.
2. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
3. MANHOLE FRAME & COVER SHALL BE EAST JORDAN IRON WORKS, NO. 1058 OR EQUAL. "STORM SEWER" SHALL BE DESIGNATED ON THE MANHOLE COVER.



10 / L103.3–A1 **STORM SEWER MANHOLE**
N.T.S.

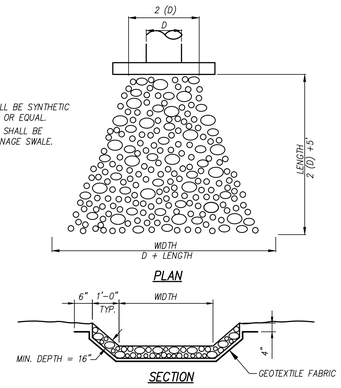


BOLLARD PLACEMENT DETAIL

NOTE: FIELD APPLY TWO (2) COATS GLOSS BLACK ENAMEL PER MANUFACTURER'S DIRECTIONS

11 / L103.2–A1 **REMOVABLE BOLLARD**
N.T.S.

NOTES:
GEOTEXTILE FABRIC SHALL BE SYNTHETIC INDUSTRIES EROSION XV OR EQUAL.
TDOT CLASS C RIP RAP SHALL BE USED TO LINE THE DRAINAGE SWALE.



SECTION

12 / C103.3–A1 **RIP RAP APRON**
N.T.S.

811
Know what's below
Call before you dig

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215–2029

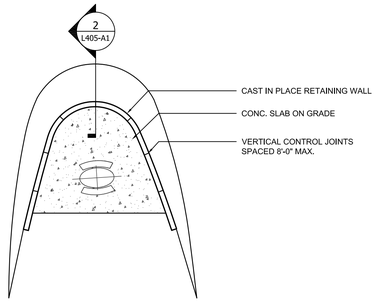
PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

SITE IMPROVEMENT DETAILS

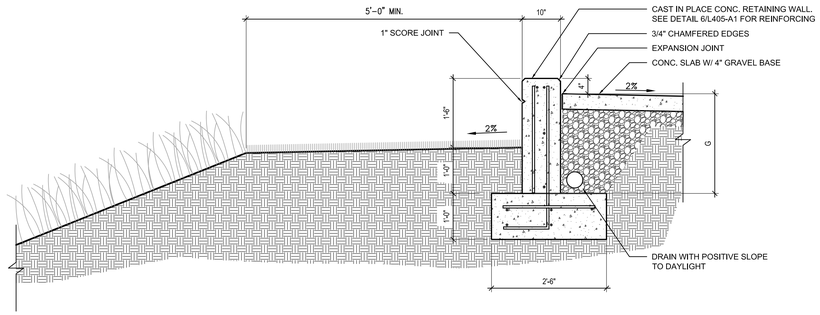
JEFF BECKETT REGISTERED ENGINEER 1-7-15 STATE OF TENNESSEE

CCI PROJECT NO.	00244–0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

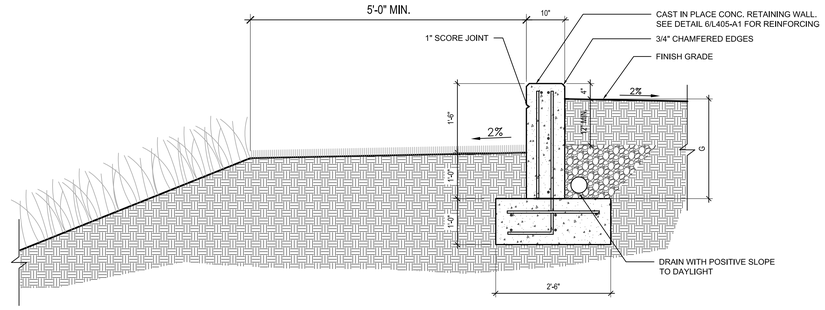
L404–A1



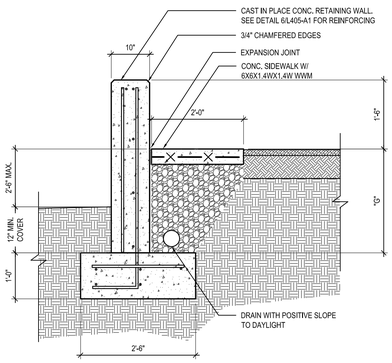
1 L405-A1 RIVER OVERLOOK ENLARGED PLAN
SCALE: 1" = 10'-0"



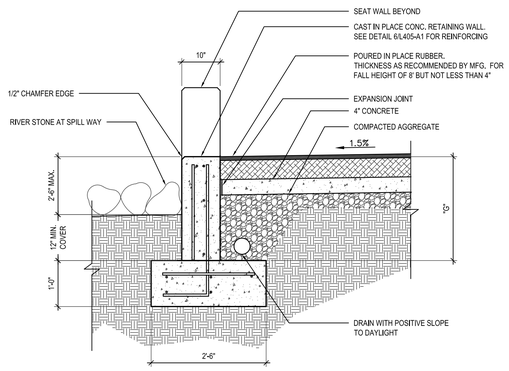
2 L405-A1 RIVER OVERLOOK RETAINING WALL DETAIL
SCALE: 3/4" = 1'-0"



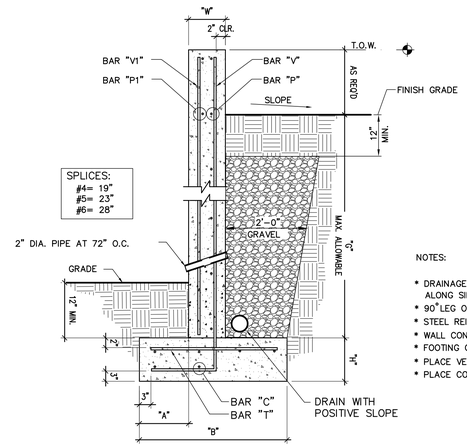
3 L405-A1 RIVER OVERLOOK RETAINING WALL DETAIL
SCALE: 3/4" = 1'-0"



4 L405-A1 PLAYGROUND SEAT WALL DETAIL
SCALE: 3/4" = 1'-0"



5 L405-A1 PLAYGROUND SEAT WALL DETAIL
SCALE: 3/4" = 1'-0"



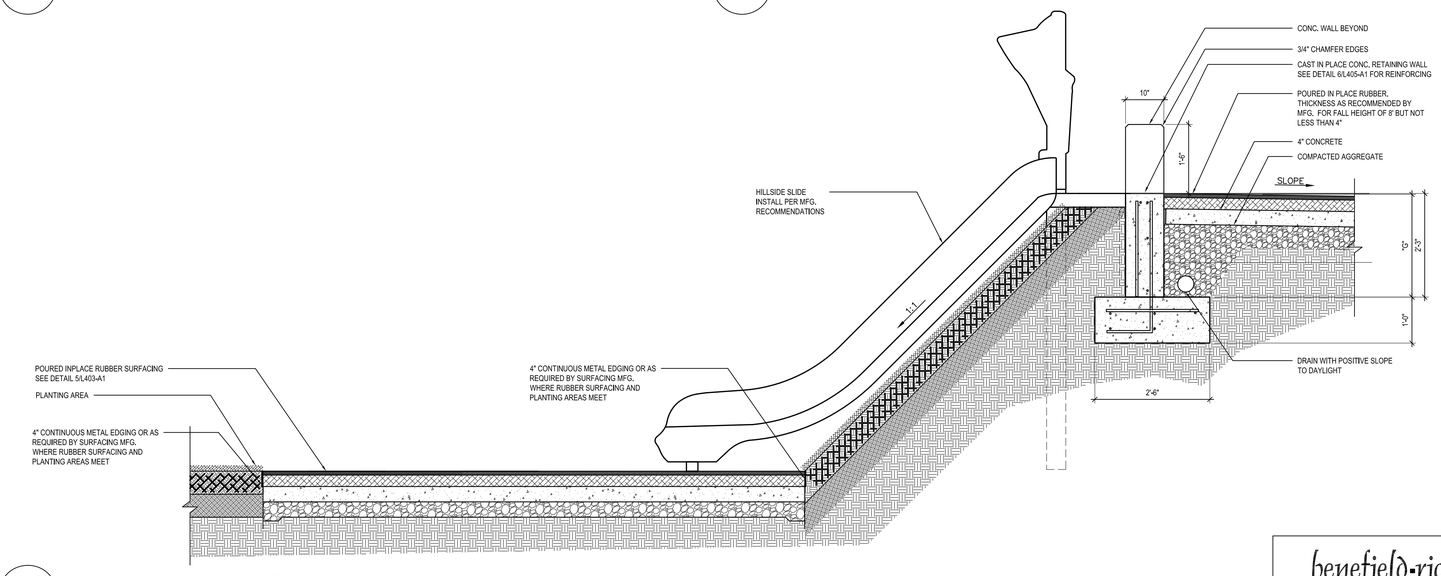
NOTES:

* DRAINAGE TO BE CONTINUOUS AT REAR AND TO DAYLIGHT ALONG SIDE WALLS.
* 90° LEG OF WALL REINF. IN FOOTING= 16 BAR DIAMETERS
* STEEL REINFORCEMENT= GRADE 60
* WALL CONCRETE STRENGTH f'c= 4,000 PSI
* FOOTING CONCRETE STRENGTH f'c= 3,000 PSI
* PLACE VERTICAL CONTROL JOINTS AT 8'-0" O.C.
* PLACE CONSTRUCTION JOINTS PER CONTRACTOR

CANTILEVERED FORMED CONCRETE RETAINING WALL SCHEDULE

FTG MARK	G (MAX)	W	A	B	H	V	V1	P	P1	T	C
x	2'-6"	10"	8"	2'-6"	12"	#3 AT 18"	#3 AT 18"	#5 AT 14"	#5 AT 14"	#3x2'-0" AT 18"	#5 AT 14"
x	3'-0"	10"	8"	2'-6"	12"	#3 AT 18"	#3 AT 18"	#5 AT 14"	#5 AT 14"	#3x2'-6" AT 18"	#5 AT 14"
x	5'-0"	10"	1'-0"	3'-8"	12"	#3 AT 18"	#3 AT 18"	#5 AT 14"	#5 AT 14"	#3x3'-2" AT 18"	#5 AT 14"
x	6'-0"	10"	1'-2"	4'-8"	12"	#5 AT 18"	#5 AT 18"	#5 AT 14"	#5 AT 14"	#5x4'-2" AT 18"	#5 AT 14"

6 L405-A1 C.I.P. CONC. RETAIN WALL
SCALE: 3/4" = 1'-0"



7 L405-A1 PLAYGROUND SEAT WALL AT SLIDE
SCALE: 3/4" = 1'-0"

811
Know what's below
Call before you dig

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

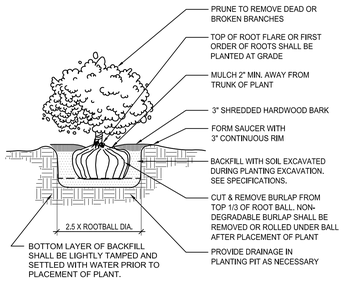
OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

SEATWALL & RETAINING WALL DETAILS

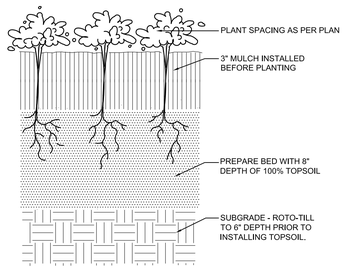
C&C PROJECT NO. 00244-0014
DRAWING DATE January 7, 2015
DWN BY –
C.R.
DRAWN –

L405-A1



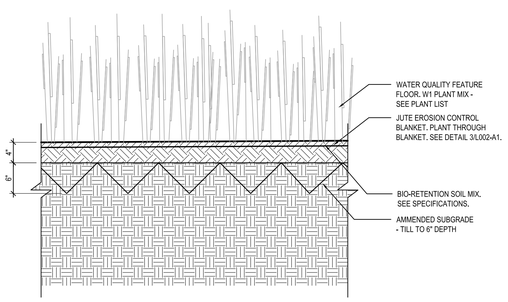
1 L409-A1 SHRUB PLANTING DETAIL

SCALE: NOT TO SCALE 02930-02



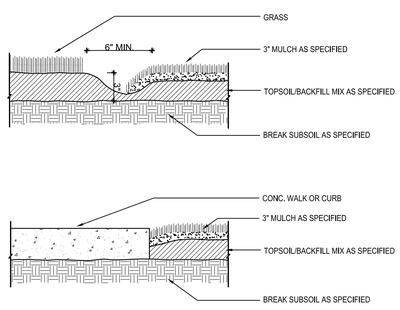
2 L409-A1 GROUNDCOVER PLANTING DETAIL

SCALE: NOT TO SCALE 02930-03



3 L409-A1 WATER QUALITY FEATURE SOIL PROFILE

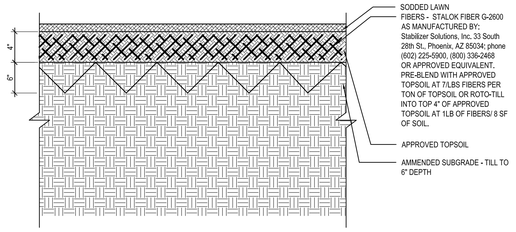
SCALE: 1 1/2" = 1'-0"



4 L409-A1 BED EDGE DETAIL

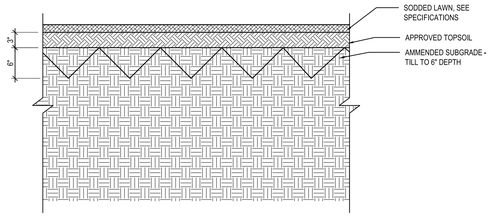
SCALE: NOT TO SCALE

811 Know what's below Call before you dig



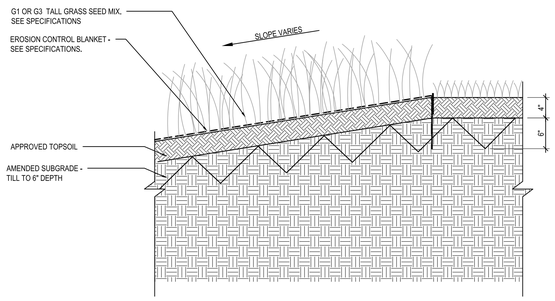
5 L409-A1 L1 - FIBER REINFORCED LAWN DETAIL

SCALE: 1 1/2" = 1'-0"



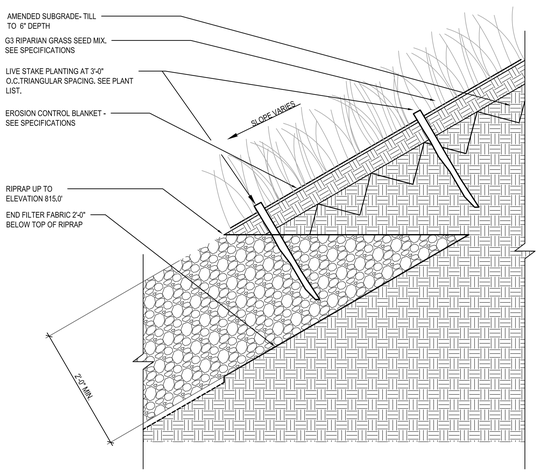
6 L409-A1 L2 - SODDED LAWN DETAIL

SCALE: 1 1/2" = 1'-0"



7 L3.02-A1 G1 & G3 - TALL GRASS ON SLOPE DETAIL

SCALE: 1 1/2" = 1'-0"

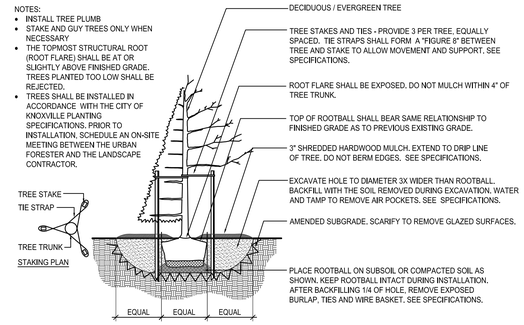


8 L409-A1 TOP OF RIPRAP / LIVE STAKE DETAIL

SCALE: 1 1/2" = 1'-0"

NOTES:

- INSTALL TREE PLUMB
- STAKE AND GUY TREES ONLY WHEN NECESSARY
- THE TOPMOST STRUCTURAL ROOT (ROOT FLARE) SHALL BE AT OR SLIGHTLY ABOVE FINISHED GRADE. TREES PLANTED TOO LOW SHALL BE REJECTED.
- TREES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF KNOXVILLE PLANTING SPECIFICATIONS. PRIOR TO INSTALLATION, SCHEDULE AN ON-SITE MEETING BETWEEN THE URBAN FORESTER AND THE LANDSCAPE CONTRACTOR.



9 L409-A1 TREE PLANTING DETAIL

SCALE: NOT TO SCALE

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:

THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:

SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

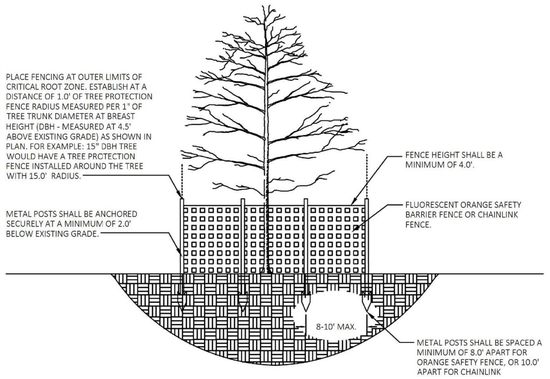
PLANTING DETAILS

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

BENJAMIN JOSEPH PETER REGISTERED AGRICULTURAL COMMERCE LANDSCAPE ARCHITECT TN. 00000325

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
F.I.C.	C.R.
DRAWN	

L409-A1

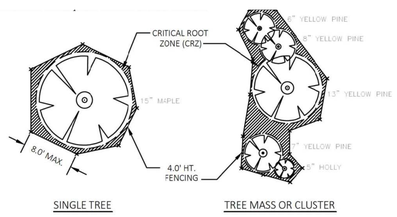


TREE PROTECTION FENCING NOTES:

1. FENCE SHALL BE INSTALLED PRIOR TO THE START OF ANY DEMOLITION, CLEARING, GRADING OR ANY OTHER DEMOLITION OR CONSTRUCTION ACTIVITY. INSTALLATION SHALL BE MONITORED BY THE ENGINEER WITH FINAL INSPECTION AND APPROVAL BY THE URBAN FORESTER BEFORE COMMENCEMENT OF ANY ACTIVITIES.
2. TREE PROTECTION FENCE SHALL BE MINIMUM OF 4.0' TALL AND CONSTRUCTED OF ORANGE SAFETY FABRIC OR CHAINLINK. FENCE SHALL BE MOUNTED ON METAL STAKES OR VERTICAL PIPES DRIVEN 2.0' IN THE GROUND, AT A MAXIMUM OF 8.0' ON CENTER FOR SAFETY FENCE OR 10.0' FOR CHAINLINK.
3. NO STORAGE OR CONSTRUCTION ACTIVITY OF ANY KIND MAY TAKE PLACE WITHIN THE TREE PROTECTION ZONE.
4. CONTRACTOR SHALL MONITOR AND MAINTAIN TREE PROTECTION FENCING THROUGHOUT THE DURATION OF THE PROJECT.

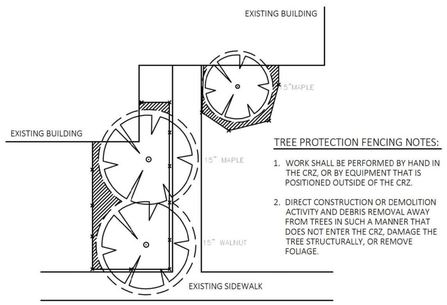
1 / L410-A1 TREE PROTECTION FENCING

SCALE: NOT TO SCALE



SINGLE TREE

TREE MASS OR CLUSTER



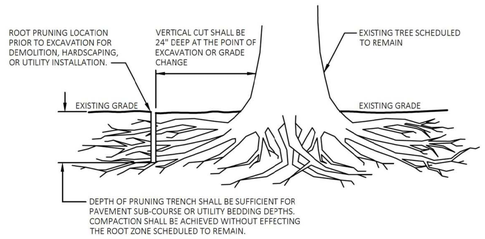
TREE PROTECTION FENCING NOTES:

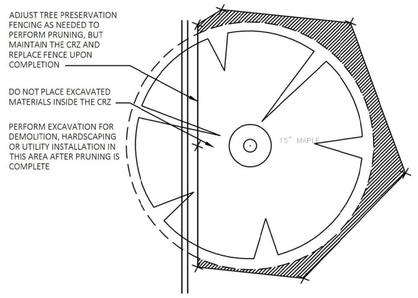
1. WORK SHALL BE PERFORMED BY HAND IN THE CRZ, OR BY EQUIPMENT THAT IS POSITIONED OUTSIDE OF THE CRZ.
2. DIRECT CONSTRUCTION OR DEMOLITION ACTIVITY AND DEBRIS REMOVAL AWAY FROM TREES IN SUCH A MANNER THAT DOES NOT ENTER THE CRZ, DAMAGE THE TREE STRUCTURALLY, OR REMOVE FOLIAGE.

FOR CLOSE PROXIMITY TO BUILDINGS OR HARDSCAPING

2 / L410-A1 TREE PROTECTION FENCING - PLAN

SCALE: NOT TO SCALE





ROOT PRUNING NOTES:

1. VERTICAL CUT SHALL BE MADE WITHIN 2 FEET (61CM) OF THE LIMIT OF THE GRADING OR EXCAVATION.
2. CONTRACTOR SHALL USE A ROCK SAW, VIBRATORY PLOW, CABLE PULLER OR SIMILAR MECHANICAL DEVICE OR A SHARPENED SHOVEL OR SPADE AND HAND PRUNERS IF DONE MANUALLY.
3. CONTRACTOR SHALL HAVE THE BLADE SHARPENED ON MECHANICAL ROOT PRUNERS PRIOR TO THE START OF THE PROJECT.
4. CONTRACTOR SHALL, UPON COMPLETION OF THE CUT, IMMEDIATELY BACKFILL THE CUT WITH SOIL, AVOIDING ANY VOIDS. CONSTRUCTION FENCING SHALL BE INSTALLED NO CLOSER TO THE TRUNK OF THE TREE THAN THE LOCATION WHERE THE ROOT PRUNING TOOK PLACE.
5. ALL ROOT PRUNING WITHIN THE CRZ MUST BE APPROVED BY THE URBAN FORESTER OR ENGINEER.

3 / L410-A1 ROOT PRUNING

SCALE: NOT TO SCALE

811 Know what's below Call before you dig

benefield·richters
architecture + planning
516 union avenue, knoxville, tn 37902 865.637.7009

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2807

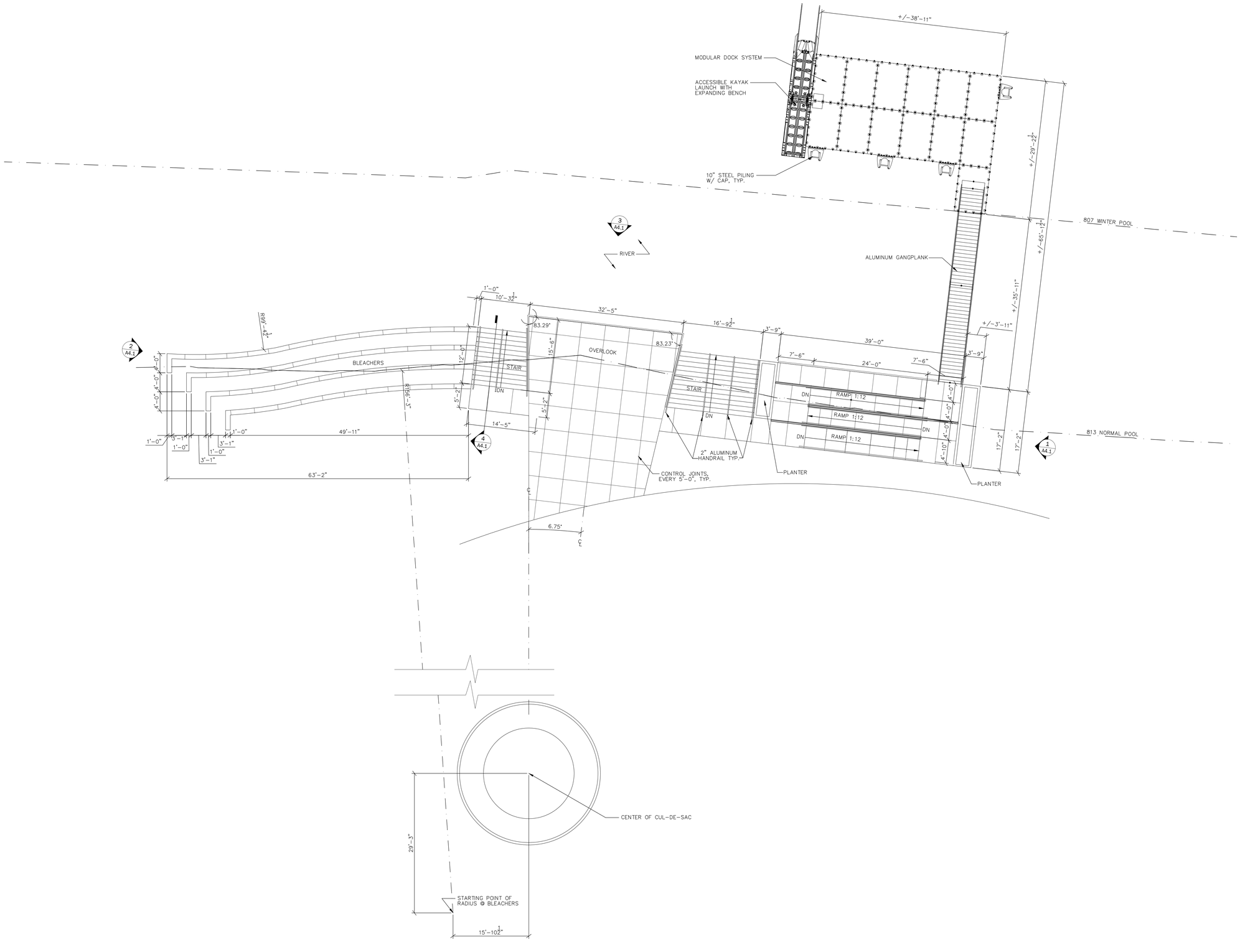
PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

PLANTING DETAILS

BENJAMIN JOSEPH PETRO REGISTERED AGRICULTURAL COMMERCE LANDSCAPE ARCHITECT NO. 00000025 TENNESSEE

CCI PROJECT NO. 00244-0014
DRAWING DATE JANUARY 7, 2015
P.I.C. C.R.
DRAWN

L410-A1



1 **Floor Plan** 1/8" = 1'-0"

STUDIO FOUR DESIGN inc.

Architecture & Interiors
Planning ▪Graphics ▪Consulting

four14 Clinch Ave. Knoxville, TN 37902
t 865 523-5001 f 865 523-5003
studiofourdesign.com

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

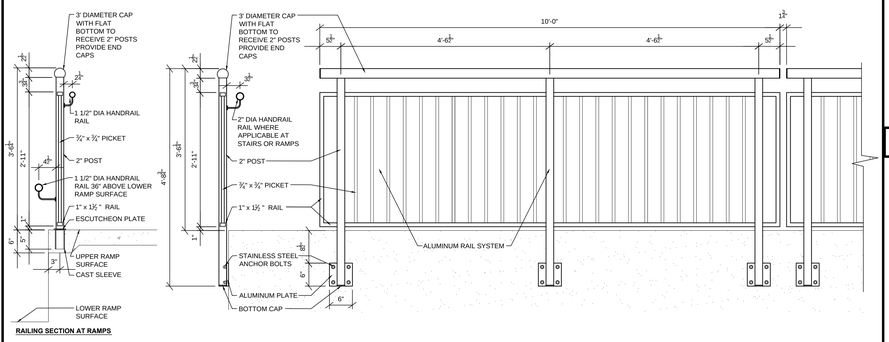
PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

PLAN

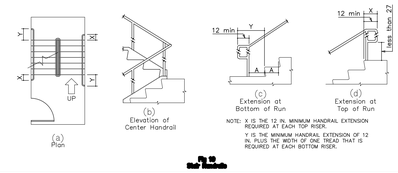
R. MICHAEL KELLER REGISTERED ARCHITECT COMMERCIAL No. 201500485 STATE OF TENNESSEE

CCI PROJECT NO. 00244-0014
DRAWING DATE January 07, 2015
P.I.C.
DRAWN

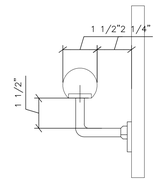
A2.1.A-1



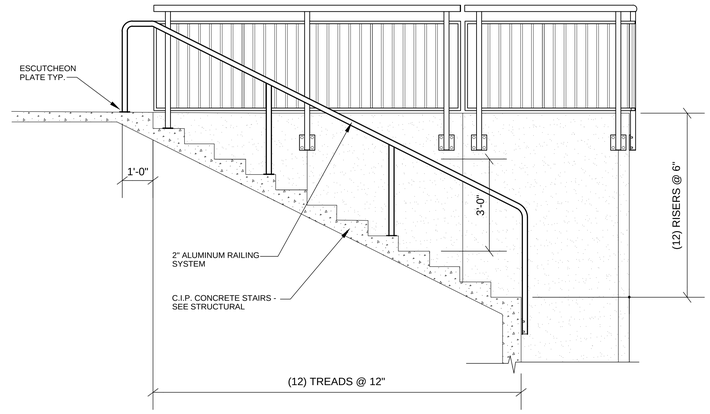
7 Gaurdrail Detail 3/4" = 1'-0"



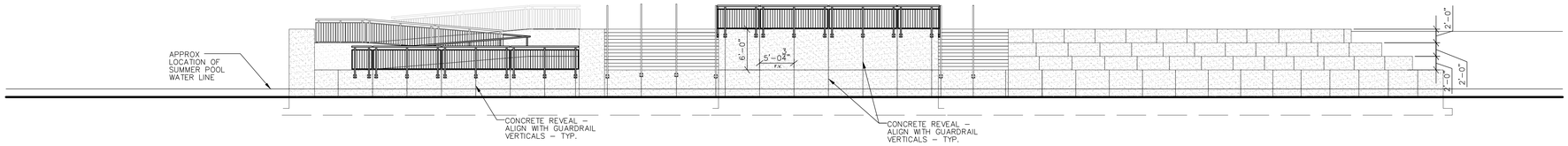
6 Typical Guardrail Detail 1/2" = 1'-0"



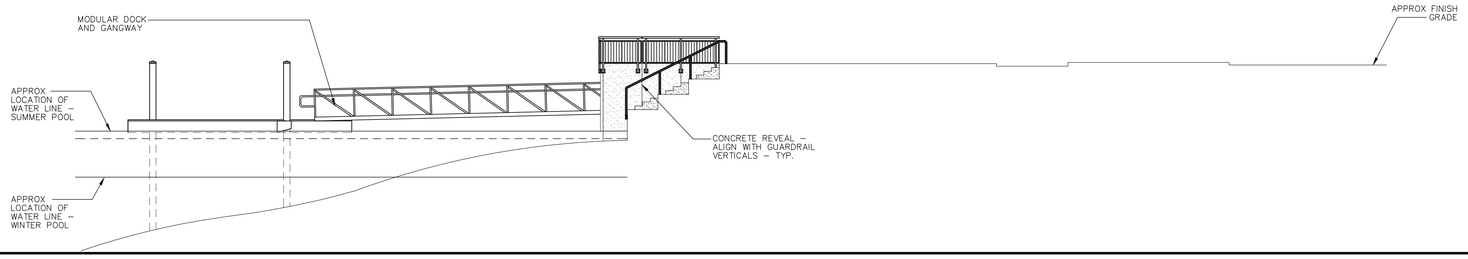
5 Typical Handrail Detail 1/2" = 1'-0"



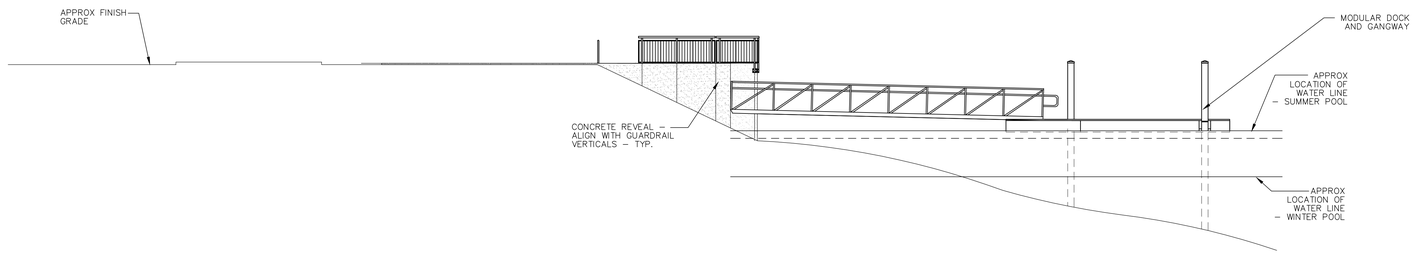
4 Typical Stair Section 1/2" = 1'-0"



3 North Elevation 1/8" = 1'-0"



2 West Elevation 1/8" = 1'-0"



1 East Elevation 1/8" = 1'-0"

STUDIO FOUR DESIGN inc.

Architecture & Interiors
Planning ▪Graphics ▪Consulting

four14 Clinch Ave. Knoxville, TN 37902
t 865 523-5001 f 865 523-5003
studiofourdesign.com

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS - FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

ELEVATIONS AND DETAILS

R. MICHAEL KELLER REGISTERED ARCHITECT No. 00100948 STATE OF TENNESSEE

CCI PROJECT NO. 00244-0014
DRAWING DATE January 07, 2015
P.I.C.
DRAWN

A4.1.A-1

DRAWINGS:

A. CHANGES TO THE CONTRACT DOCUMENTS SHALL BE CLOUDED ON SHOP DRAWINGS OR REQUESTED IN WRITING. THE CONTRACTOR IS LIABLE FOR ANY DEVIATIONS UNLESS REVIEWED AND ACKNOWLEDGED BY THE ENGINEER. SHOP DRAWING SUBMITTALS SHALL BE CHECKED FOR CONFORMANCE WITH THE DESIGN CONCEPT AND THE INFORMATION SHOWN ON THE CONSTRUCTION DOCUMENTS.
B. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
C. ALL STRUCTURAL OPENINGS AROUND OR AFFECTED BY MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT SHALL BE VERIFIED WITH EQUIPMENT PURCHASED BEFORE PROCEEDING WITH STRUCTURAL WORK AFFECTED.
D. CSA ENGINEERING, INC. OR ANY OF ITS EMPLOYEES SHALL NOT HAVE CONTROL OR BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, TECHNIQUES, PROCEDURES, OR SEQUENCES FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR OR ANY OTHER PERSONS PERFORMING THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
E. RE: ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR EMBEDS,OPENINGS, SLEEVES, ETC NOT SHOWN ON THE STRUCTURAL DRAWINGS.

EXISTING CONDITIONS:

A. IN ANY SITUATION WHERE EXISTING CONDITIONS AND/OR STRUCTURES ARE TO BE CONSIDERED, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AND IN THE CASE OF ANY DISCREPANCIES, CONTRACTOR SHALL NOTIFY ARCHITECT OR ENGINEER IMMEDIATELY.

BUILDING SYSTEMS:

A. CONTRACTOR SHALL PROVIDE NECESSARY BRACING & SHORING AS REQ'D. UNTIL BLDG. SYSTEMS HAVE BEEN COMPLETED. STRUCTURE SHALL NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

FOUNDATIONS:

A. THE FOUNDATION DESIGN IS BASED UPON A SUBSURFACE EXPLORATION REPORT DATED AUGUST 7, 2013 BY S&ME, INC. ALLOWABLE SOIL BEARING PRESSURES ARE 2,000 PSF FOR SPREAD & STRIP FOOTINGS. PER S&ME, AN ALLOWABLE GROSS BEARING PRESSURE OF 2500 PSF HAS BEEN UTILIZED FOR BURIED RETAINING WALL FOUNDATIONS.
B. COORDINATE ALL FOOTING STEPS W/ UTILITIES.
C. IF FOOTING ELEVATIONS SHOWN OCCUR IN DISTURBED, UNSTABLE, OR UNSUITABLE SOIL, THE ENGINEER SHALL BE NOTIFIED.

DESIGN CODES & SPECIFICATIONS

PROJECT STATE: TENNESSEE

BUILDING CODE: 2012 INTERNATIONAL BUILDING CODE

DESIGN LOADS: ASCE 7-10
"MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"

CONCRETE CODE: ACI 318-11
"BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"

MASONRY CODE: ACI 530/ASCE 5/TMS 402-11
"BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES"

STEEL CODE: AISC 360-10
"SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"

WOOD CODE: NDS - 2012
"NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH 2012 SUPPLEMENT"

LIGHT GAGE CODE: AISI S100 - 07/SI - 10
"NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS WITH SUPPLEMENT 1, DATED 2010"

A. ADDITIONAL APPLICABLE CODES AND SPECIFICATIONS ARE LISTED IN CHAPTER 35 OF THE 2012 IBC.
B. MATERIAL PROPERTIES, AS STATED IN THESE CONSTRUCTION DOCUMENTS, ARE BASED UPON MATERIALS CURRENTLY AVAILABLE FOR CONSTRUCTION AND MAY NOT CORRESPOND WITH TABLES PROVIDED IN THE CODES AND SPECIFICATIONS LISTED ABOVE. WHERE POSSIBLE, THESE CODES HAVE BEEN USED IN THEIR ENTIRETY. WHERE THESE CODES REFERENCE OBSOLETE INFORMATION, INFORMATION BASED UPON CURRENT INDUSTRY STANDARDS HAS BEEN SUBSTITUTED AS NECESSARY.

DESIGN LOADS:

STRUCTURAL DESIGN CODES: 2012 EDITION OF IBC & ASCE 7-10

LIVE LOAD:	20 psf
FLOOR LOAD:	100 psf
STAIR AND RAMP LOADS:	100 psf
CONCRETE DOCK AND GANGWAY:	100 psf

WATER ELEVATIONS:

SUMMER POOL	EL. 813.0 NGVD
WINTER POOL	EL. 807.0 NGVD
100-YR FLOOD	EL. 822.2 NGVD
500-YR FLOOD	EL. 828.6 NGVD

* ALL ELEVATIONS SHOWN ON DRAWINGS ARE REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM (NGVD 1929 BENCHMARK SYSTEM UNLESS NOTED OTHERWISE.

CURRENT LOADS:

500-YR FLOOD: 7.64 FEET PER SECOND, U.N.O.

SNOW DESIGN INFORMATION
Ground Snow Load: P_g= 10.0 psf

SEISMIC DESIGN INFORMATION:
Seismic accelerations are based upon USGS ground motion parameters and ASCE7-10.

S_S = 0.520 S_1 = 0.118
S_{DS} = 0.480 S_{D1} = 0.183

Importance Factor: I_E = 1.0
Risk Category: II
Seismic Design Category: C
Site Class: D
Analysis Method: Equivalent Lateral Force Procedure
Cs = 0.32
Basic Seismic Resisting Systems:
Intermediate Concrete Moment Frame
R = 1.5 Cd = 1.5 Ω_0 = 1.25
Seismic Base Shear: V=Cs * W= 79 K

WIND DESIGN INFORMATION:
Ultimate Design Wind Speed: V = 115 mph
Nominal Design Wind Speed: V = 89 mph
Exposure Category: B
Risk Category: II
Importance Factor: I_w = 1.0
Height/Exposure Adjustment Factor:λ= 1.40
Internal Pressure Coefficient: +- 0.18
Analysis Method: Method 2 Analytical Procedure
Component & Cladding: RE: Wind Pressure Diagrams this sheet

CONCRETE:

A. UNLESS NOTED OTHERWISE, ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
B. SLAB-ON-GRADE AND ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
C. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE LIMESTONE AGGREGATE AND ENTRAINED AIR.
D. LIMIT AIR CONTENT TO 3% FOR SLAB-ON-GRADE CONCRETE
E. MAXIMUM W/C RATIO FOR SLAB-ON-GRADE SHALL BE 0.50.
F. MAXIMUM W/C RATIO FOR ALL OTHER CONCRETE SHALL BE 0.55
G. CONCRETE SLABS SHALL CONFORM TO ACI 117-90 FOR FLATNESS AND LEVELNESS. ACCORDING TO ASTM E1155, THE SPECIFIED OVERALL VALUE FOR FLOOR FLATNESS (FF) SHALL BE 35 WITH A MINIMUM LOCAL VALUE OF 25 AND THE SPECIFIED OVERALL VALUE FOR FLOOR LEVELNESS (FI) SHALL BE 25 WITH A MINIMUM LOCAL VALUE OF 18.
H. CONTRACTOR TO PROVIDE FLOOR FLATNESS AND LEVELNESS TESTING WITHIN 72 HOURS OF CONCRETE FINISHING. TEST RESULTS TO BE PROVIDED TO ARCHITECT.
I. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALLS, ETC.
J. ALL SLAB-ON-GRADE CONSTRUCTION SHALL FOLLOW THE RECOMMENDATIONS OF "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION, ACI 302.1R-04"
K. CONTROL JOINT LOCATIONS SHOWN ON PLAN ARE THE MINIMUM ALLOWABLE BASED ON ONE SLAB POUR SEQUENCE USING THE SPACING INDICATED ON PLAN. ADDITIONAL JOINTS SHALL BE ADDED BY THE CONTRACTOR AS REQUIRED BASED ON POUR SEQUENCE AND SLAB LAYOUT. CONTROL JOINT SPACING SHALL NOT EXCEED THE MAXIMUM SPACING NOTED ON PLAN. RE: TYPICAL CONTROL JOINT DETAILS FOR ADDITIONAL INFORMATION.
L. A MIN. 10 mil VAPOR BARRIER SHALL BE PROVIDED BELOW SLAB-ON-GRADE AT ALL LOCATIONS. VAPOR BARRIER SHALL BE LAPPED AND TAPED AS REQUIRED BY MANUFACTURER. RE: ARCH FOR ADDITIONAL VAPOR BARRIER REQUIREMENTS.
M. UNLESS NOTED OTHERWISE BY STRUCTURAL DOCUMENTS, MINIMUM COVER FOR REINFORCING SHALL BE AS FOLLOWS:
(a). CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH_____ 3"
(b). EXPOSED TO EARTH OR WEATHER
#5 OR SMALLER_____ 1 1/2"
#6 OR LARGER_____ 2"
(c). NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH GROUND
SLABS, WALLS, JOISTS
#11 OR SMALLER_____ 3/4"
ALL OTHER_____ 1 1/2"
BEAMS, COLUMNS
PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS__ 1 1/2"

REINFORCING STEEL:

A. WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185. WIRE FABRIC LOCATED IN CONCRETE SLABS SHALL BE LOCATED IN THE CENTER OF THE SLAB, U.N.O. BY STRUCTURAL DOCUMENTS. SUPPORTS USED SHALL BE SPACED A MAXIMUM OF 36" O.C. IN ANY DIRECTION. ALL OTHER WIRE FABRIC SHALL MEET THE MINIMUM COVER REQUIREMENTS AS LISTED UNDER THE CONCRETE SECTION OF THIS SHEET. ALL WELDED WIRE FABRIC SHALL BE LAPPED ON CROSS WIRE SPACING PLUS 6" (10", MIN)
B. REINFORCING STEEL SHALL COMPLY WITH ASTM A615 GRADE 60 WITH THE FOLLOWING REQUIREMENTS: (a) ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED 78 ksi. RETESTS SHALL NOT EXCEED THIS VALUE BY MORE THAN ADDITIONAL 3000 psi, (b) Fu / Fy SHALL NOT BE LESS THAN 1.25. (Fy = ACTUAL YIELD TENSILE STRENGTH, Fu = ACTUAL ULTIMATE TENSILE STRENGTH)
C. REINFORCING STEEL SHALL COMPLY WITH ASTM A706 AT ALL LOCATIONS WHERE REBAR MUST BE WELDED.
D. REINFORCING STEEL AND ACCESSORIES SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF THE A.C.I. DETAILING MANUAL.
E. CONCRETE: ALL TENSION REINFORCEMENT LAPS SHALL BE PER THE CONCRETE LAP SCHEDULE. LAP COMPRESSION REINFORCEMENT 22 BAR DIAMETERS (18" MIN.). REINFORCING SHALL BE CONTINUOUS AROUND CORNERS AND INTERSECTIONS.
F. MASONRY: ALL TENSION REINFORCEMENT LAPS SHALL BE PER THE MASONRY LAP SCHEDULE. LAP COMPRESSION REINFORCEMENT 48 BAR DIAMETERS (18" MINIMUM).
G. WELDABLE REBAR AND D.B.A.'S REQUIRED BY CONTRACT DOCUMENTS SHALL COMPLY TO ALL ASTM A706 REQUIREMENTS.
H. ALL REINFORCEMENT SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE AND ACI 315 DURING THE PLACING OF CONCRETE.
I. ALL HOOKS IN REINFORCEMENT SHALL BE AN ACI STANDARD HOOK, UNLESS NOTED OTHERWISE.

BRACING CONCRETE AND MASONRY WALLS

A. CONTRACTOR SHALL PROVIDE ANY NECESSARY TEMPORARY BRACING FOR ALL WALLS BACK FILLING SHALL NOT OCCUR UNTIL PERMANENT LATERAL RESTRAINTS ARE INSTALLED.

MASONRY:

A. CONCRETE BLOCK SHALL BE NORMALWEIGHT AND SHALL CONFORM TO ASTM C-90, TYPE 1. MORTAR SHALL CONFORM TO ASTM C 270 TYPE "S".
B. MINIMUM CONCRETE MASONRY COMPRESSIVE STRENGTH, f'm, SHALL BE f'm = 1,500 psi.
C. FILL REINFORCED BLOCK CORES, BOND BEAMS & LINTELS WITH 2000 PSI GROUT CONFORMING TO THE REQUIREMENTS OF ASTM C476. VERTICAL LIFTS SHALL NOT EXCEED 5 FEET UNLESS APPROVED BY THE STRUCTURAL ENGINEER AND CLEAN OUT HOLES ARE PROVIDED IN EVERY GROUT FILLED CELL ACCORDING TO ACI 530-05.
D. PROVIDE PRE-FABRICATED CORNERS & TEES @ 16" O.C. TO MATCH SIZE & TYPE OF TYPICAL TRUSS OR LADDER REINFORCEMENT IN CMU HORIZONTAL JOINTS.
E. REINFORCE ONE CELL VERTICALLY AT EACH CORNER, EACH SIDE OF OPENINGS AND AT THE END OF MASONRY WALLS WITH 1-#5 (MIN) AND GROUT SOLID.
F. PROVIDE 1-#5 BAR BELOW ALL OPENINGS GREATER THAN 16" WIDE IN A FULLY GROUTED HORIZONTAL BOND BEAM EXTENDING 8" BEYOND EACH SIDE OF OPENING.
G. LADDER OR TRUSS REINFORCEMENT SHALL BE PROVIDED 8" ABOVE AND BELOW ALL OPENINGS GREATER THAN 16" WIDE AND SHALL EXTEND 24", MIN, BEYOND OPENINGS IN EA. DIRECTION.
H. ALL VERTICAL REINFORCING SHALL EXTEND FROM THE FOUNDATION TO THE TOP OF WALL. PROVIDE DOWELS FROM FOUNDATION TO MATCH VERTICALS.
I. WHERE MASONRY ABUTS STEEL COLUMNS, PROVIDE 3/16" DIAMETER WIRE TIES @ 16" HOOKED AROUND 1/4" DIAMETER BY 9" LONG WITH 3/8" OFFSET AND 4" ADJUSTMENT WELDED TO COLUMN.
J. ALL MASONRY CELLS TO BE SOLID GROUTED BELOW GRADE, TYP.
K. VERTICAL CONTROL JOINTS SHALL BE SPACED AT 25'-0" O.C. MAXIMUM, UNLESS NOTED OTHERWISE BY ARCHITECT. VERTICAL JOINTS SHALL NOT BE LESS THAN 1'-4" FROM A JOIST OR BEAM BEARING PLATE. VERTICAL JOINTS MUST BE A MINIMUM OF 0'-8" AWAY FROM CMU OPENINGS LESS THAN 4'-0" WIDE TO ALLOW FOR OPENING REINFORCEMENT AND LINTEL BEARING. VERTICAL JOINTS MUST BE A MINIMUM OF 1'-4" AWAY FROM CMU OPENINGS GREATER THAN 4'-0" WIDE TO ALLOW FOR OPENING REINFORCEMENT AND LINTEL BEARING. AT BUILDING CORNERS, PROVIDE JOINT AT CORNER IN ONE OF THE TWO WALL SIDES. PLACE CORNER JOINTS 5'-0" MAXIMUM, FROM BUILDING CORNER. RE: ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
L. RE: DETAIL {3/S1.1} FOR TYPICAL MASONRY REINFORCEMENT AT WALL OPENINGS, CONTROL JOINTS, AND EXPANSION JOINTS.
M. BOND/TIE BEAM REINFORCEMENT AT ROOF OR FLOOR DIAPHRAGMS SHALL BE CONTINUOUS ACROSS CONTROL JOINTS. WIRE JOINT REINFORCEMENT SHALL BE DISCONTINUOUS ACROSS CONTROL JOINTS.
N. BARS SPECIFIED TO BE EACH FACE SHALL BE HELD IN PLACE WITH SPACERS AND SHALL BE LOCATED 2 3/8" FROM EACH FACE TO THE CENTER OF THE BAR. **{THIS ONLY APPLIES TO MASONRY SHEAR WALLS}**
O. MASONRY WORK SHALL BE INSPECTED IN ACCORDANCE WITH ACI 530 QUALITY ASSURANCE LEVEL A/B/C. **{USE THIS ONLY WHEN INSPECTION IS REQUIRED BY DESIGN}**
P. ALL MASONRY WALLS SHALL BE REINFORCED AS FOLLOWS, UNLESS NOTED OTHERWISE:
8" WALLS: 1-#5 VERTICAL @ 3'-4"
1-#5 HORIZONTAL @ 4'-0" IN SOLID GROUT BOND BEAM
#8 W1.7 (9 GA) TRUSS OR LADDER REINFORCEMENT @ 16"

MECHANICAL AND CHEMICAL ANCHORS:

A. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS.
B. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
C. AT ALL LOCATIONS WHERE ADHESIVE ANCHORS OR ADHESIVE DOWELS ARE CALLED OUT, THE MANUFACTURERS LISTED BELOW SHALL BE ACCEPTABLE. ALTERNATE MANUFACTURERS MUST BE APPROVED BY E.O.R PRIOR TO USE.
D. EXPANSION ANCHORS MAY BE USED AS NOTED ON THE DRAWINGS. THE MANUFACTURERS LISTED BELOW SHALL BE ACCEPTABLE. ALTERNATE MANUFACTURERS MUST BE APPROVED BY E.O.R PRIOR TO USE.
E. MECHANICAL SCREW ANCHORS MAY BE USED AS NOTED ON THE DRAWINGS. THE MANUFACTURERS LISTED BELOW SHALL BE ACCEPTABLE. ALTERNATE MANUFACTURERS MUST BE APPROVED BY E.O.R PRIOR TO USE.

ADHESIVE ANCHORS
1. HILTI-HY150 MAX-SD FOR CONCRETE OR GROUTED MASONRY W/ HILTI HAS-E RODS OR REBAR (CONCRETE OR GROUTED MASONRY)
2. HILTI-HY 70 FOR HOLLOW MASONRY W/ HILTI HAS-E RODS & APPROPRIATE SIZE SCREEN TUBE PER MANUFACTURER'S RECOMMENDATION
3. SIMPSON SET-XP FOR CONCRETE OR GROUTED MASONRY W/ A307 THREADED RODS OR REBAR

EXPANSION ANCHORS
1. HILTI KWIK BOLT TZ
2. SIMPSON STRONG BOLT 2

SCREW ANCHORS
1. HILTI KWIK HUS-EZ SCREW ANCHOR
2. SIMPSON TITEN HD SCREW ANCHOR

STRUCTURAL STEEL:

A. ALL ANCHOR BOLTS SHALL BE ASTM F1554-GR36, UNLESS NOTED OTHERWISE.
B. PROVIDE MIN. 1" NON-SHRINK GROUT UNDER COLUMN BASE PLATES, U.N.O. FABRICATOR SHALL SUPPLY ADEQUATE GROUT BED FOR INSTALLATION AND ADJUSTMENT OF LEVELING NUTS.
C. ALL PLATES AND ANGLES SHALL CONFORM TO ASTM A36. ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A992, GRADE 50. RECTANGULAR HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500, GRADE B WITH YIELD STRENGTH = 46 KSI. ROUND HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500, GRADE B WITH YIELD STRENGTH = 42 KSI.
D. ALL SHEAR CONNECTIONS NOT DETAILED OR OTHERWISE NOTED SHALL BE STANDARD AISC WELDED OR BOLTED CONNECTIONS AND SHALL HAVE SUFFICIENT CAPACITY TO DEVELOP AN END REACTION EQUAL TO HALF THE GIVEN VALUE IN THE TABLE "ALLOWABLE UNIFORM LOADS IN KIPS FOR BEAMS LATERALLY SUPPORTED" IN PART 2 OF THE THIRTEENTH EDITION OF THE AISC MANUAL.
E. ALL BOLTS FOR BEAM CONNECTIONS SHALL BE ASTM A325 WITH A MINIMUM DIAMETER OF 3/4 INCH, UNLESS NOTED OTHERWISE. ALL BOLTED CONNECTIONS NOT DETAILED SHALL BE DESIGNED AS BEARING TYPE CONNECTIONS. WASHERS SHALL BE INSTALLED UNDER NUTS AND FASTENERS WHEN REQUIRED BY THE SPECIFICATION FOR STRUCTURAL JOINTS.
F. ALL WELDS SHALL BE MADE IN ACCORDANCE WITH THE LATEST PRACTICES OF A.W.S. USE E-70XX SERIES ELECTRODES.
G. CAP PLATES FOR COLUMNS SHALL BE 5/8" THICK UNLESS NOTED OTHERWISE.
H. DIAGONAL ANGLE SUPPORTS AT COLUMNS AND ANY OTHER MISCELLANEOUS SUPPORTS REQUIRED TO CARRY STEEL DECK SHALL BE FURNISHED AND INSTALLED BY THE STEEL FABRICATOR. WHERE OPENINGS OCCUR AND FRAMING IS NOT SHOWN, CONTRACTOR SHALL PROVIDE ADEQUATE SUPPORT IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE.
I. ALL HOT-ROLLED STEEL BEARING ON MASONRY BLOCK WALLS SHALL HAVE A MINIMUM 6" BEARING, TYP. U.N.O.
J. WHERE STEEL BEAMS BEAR ON MASONRY AT EACH END, ONE BEAM END SHALL BE A SLIP CONNECTION W/ SLOTTED HOLES AND THE OPPOSITE END SHALL BE A TYPICAL BEAM CONNECTION FASTENED TO EMBED PLATE AS SHOWN ON DETAIL S/S1.2.

WOOD TRUSSES:

A. RE: DESIGN LOAD SECTION OF THIS SPECIFICATION FOR TRUSS DESIGN LOADS.
B. DESIGN LOADS FOR FLOOR TRUSSES SHALL NOT TO BE LESS THAN THE FOLLOWING: DEAD LOAD = 25 PSF, LIVE LOAD = 40 PSF
C. DESIGN LOADS FOR ROOF TRUSSES SHALL NOT TO BE LESS THAN THE FOLLOWING: DEAD LOAD = 20 PSF, LIVE LOAD = 20 PSF
D. WOOD TRUSS DESIGN AND MATERIALS SHALL CONFORM TO CHAPTER 23 OF THE BUILDING CODE. MATERIALS INCLUDE: NAILS, STAPLES, METAL CONNECTOR PLATES, TRUSS BRACING, AND OTHER MISCELLANEOUS ITEMS USED DURING TRUSS FABRICATION.
E. TRUSS ERECTOR SHALL PROVIDE BRACING AND MISC. FRAMING FOR THE ERECTION OF TRUSSES & FOR PERMANENT CONDITIONS AS SHOWN IN THESE DOCUMENTS AND AS REQ'D BY TRUSS MFR. TRUSSES TO BE ENGINEERED BY TRUSS MFR. AND SHOP DRAWINGS PROVIDED FOR REVIEW AS OUTLINED BELOW.
F. PRIOR TO FABRICATION OF TRUSSES, TRUSS SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD. TRUSS SHOP DRAWINGS SHALL INCLUDE INFORMATION AS REQUIRED BY CHAPTER 23 OF THE BUILDING CODE AND AS LISTED UNDER THE TRUSS SUBMITTALS SECTION OF THIS SPECIFICATION.
G. TRUSS SUBMITTALS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE PROJECT STATE.
H. RE: WOOD FRAMING SECTION OF THIS SPECIFICATION FOR ADDITIONAL REQUIREMENTS, WHERE APPLICABLE.
I. WHERE LIGHT GAGE STUD WALLS ARE USED TO SUPPORT FLOOR OR ROOF TRUSSES, TRUSSES SHALL BEAR DIRECTLY OVER A STUD AND SHALL NOT BE SUPPORTED SOLELY BY THE TOP TRACK. WHERE STUD AND TRUSS SPACING CONFLICT, THE SMALLEST SPACING SHALL CONTROL FOR BOTH STUDS AND TRUSSES.
J. CONTRACTOR TO VERIFY COORDINATION OF ROOF AND FLOOR TRUSS LOCATIONS/CONFIGURATION WITH PLUMBING AND HVAC PENETRATIONS SO AS TO AVOID CONFLICTS. RE: MECHANICAL DRAWINGS FOR EXACT LOCATIONS OF DUCTS, STACKS, PIPES, ETC.
K. BRACE BOTTOM CHORD AS REQUIRED FOR UPLIFT.
L. TRUSSES SHALL BE FASTENED TO BEARING WALLS, BEAMS, ETC WITH NAILS AND HOLD DOWN CLIPS ACCORDING TO THE FASTENER SCHEDULE.

TRUSS SUBMITTALS:

CONTRACTOR SHALL SUPPLY THE FOLLOWING ON ALL TRUSS SUBMITTALS:
A. TRUSS ELEVATION AND LOADING DIAGRAM
B. SLOPE, SPAN, AND SPACING OF TRUSSES. (TRUSSES TO BE SPACED 24" O.C. MAX.)
C. DESIGN FORCE OR ANALYSIS SHOWING MAGNITUDE AND CHARACTER OF THE FORCES INDUCED IN EACH MEMBER BY THE DESIGN LOAD.
D. SIZE, GRADE, AND SPECIES OF LUMBER FOR EACH TRUSS MEMBER. (PROVIDE EQUIVALENT INFORMATION FOR LIGHT GAGE MEMBERS:SIZE, GAGE, MATERIAL STRESS.)
E. TYPE, SIZE, AND LOCATION OF EACH JOINT CONNECTOR OR GUSSET PLATE.
F. STRESS INCREASE FOR SHORT TIME LOADING FOR LUMBER AND FASTENINGS USED IN THE DESIGN.
G. ADDITIONAL INFORMATION AS REQUIRED IN THE APPLICABLE BUILDING CODE.
H. TRUSS SUBMITTALS DENOTED ABOVE SHALL BE SIGNED AND SEALED BY AND ENGINEER REGISTERED IN THE PROJECT STATE.

WOOD FRAMING:

A. THE FOLLOWING NOTES SHALL APPLY TO ALL WOOD FRAME APPLICATIONS, U.N.O. ELSEWHERE IN THESE CONSTRUCTION DOCUMENTS.
B. ALL SHEARWALL, BEARING WALL, AND OTHER STRUCTURAL WOOD FRAMING (INCLUDING HEADERS) SHALL BE NO. 2 K.D. D.Fir-Larch OR EQUAL. ALLOWABLE WOOD STRESSES AS PROVIDED IN THE NATIONAL DESIGN STANDARD FOR WOOD CONSTRUCTION (NDS), SUPPLEMENT, TABLE 4A. ALL REMAINING WOOD FRAMING SHALL BE CONTRACTOR'S CHOICE, U.N.O.
C. FRAMING CONNECTIONS FOR 2x WOOD FRAMING SHALL USE SIMPSON FRAMING FASTENERS OR EQUAL. WHERE FRAMING CONNECTORS ARE NOT SHOWN USE THE MINIMUM FASTENERS AND NAILING PATTERNS SHOWN ON THE GENERAL NOTES SHEET AND IN ACCORDANCE WITH CHAPTER 23 OF THE BUILDING CODE. IN THE EVENT OF ANY DISCREPANCIES WITH BETWEEN THE BUILDING CODE AND THE GENERAL NOTES SHEET, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
D. PLYWOOD AND OSB CAN BE USED INTERCHANGEABLY PROVIDED THEY ARE APA RATED FOR EQUIVALENT SPANS.
E. PLYWOOD ROOF SHEATHING SHALL BE APA RATED SHEATHING, MIN. 5/8" THICKNESS, TYP. U.N.O. ALL ROOF SHEATHING SHALL BE CLASSIFIED EXTERIOR. RE: ARCH FOR FIRE-TREATMENT REQUIREMENTS AND LOCATIONS.
F. PLYWOOD WALL SHEATHING SHALL BE APA RATED SHEATHING, MIN. 7/16" THICKNESS, TYP. U.N.O. RE: ARCH FOR FIRE-TREATMENT REQUIREMENTS AND LOCATIONS.
G. ALL EXTERIOR WALL AND ROOF SHEATHING SHALL BE EXPOSURE I OR EXTERIOR GRADE
H. PLYWOOD FLOOR SHEATHING SHALL BE APA RATED STURD-I-FLOOR SHEATHING, MIN. 23/32" THICKNESS, TYP. U.N.O. FLOOR SHEATHING SHALL BE CLASSIFIED EXTERIOR IF A CYPCRETE TOPPING IS USED. OTHERWISE FLOOR SHEATHING SHALL BE CLASSIFIED EXPOSURE I. RE: ARCH FOR FIRE-TREATMENT REQUIREMENTS AND LOCATIONS.
I. PLYWOOD ROOF SHEATHING SHALL BE FASTENED TO WOOD FRAMING MEMBERS TO ACT AS AN UNBLOCKED PLYWOOD DIAPHRAGM. FASTEN PLYWOOD TO FRAMING MEMBERS WITH 8d NAILS SPACED AT 6" ON CENTER MAXIMUM AT ALL SUPPORTED EDGES AND 12" O.C. WITHIN THE FIELD OF THE PANEL, U.N.O. FASTENER PENETRATION INTO WOOD FRAMING SHALL BE 1 1/2" MINIMUM. FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO THE FRAMING MEMBERS, U.N.O.
J. ALL WOOD FRAMING AND RELATED COMPONENTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.
K. WOOD COLUMNS AND POSTS SHALL BE FRAMED TO PROVIDE FULL END BEARING.
L. ALL FOUNDATION PLATES/SILLS SHALL BE BOLTED TO THE FOUNDATION w/ 1/2" DIA. BOLTS @ 4'-0" O.C. MAX. SIMPSON MASA MUDSILL ANCHORS @ 3'-0" O.C., OR EQ., MAY BE SUBSTITUTED @ EXTERIOR WALLS. MINIMUM OF 2 ANCHORS PER WALL. NOTE: NON-STRUCTURAL PARTITION WALL SILL PLATES MAY BE ANCHORED TO THE SLAB WITH PAF'S @ 8" O.C. STAGGERED, TYP.
M. SILL PLATES SHALL OVERLAP AT CORNERS AND WALL INTERSECTIONS.
N. ALL SLEEPERS AND SILLS SHALL BE MADE OF PRESSURE TREATED WOOD.
O. JOISTS AS USED IN THIS SECTION REFERS TO 2X FRAMING MEMBERS USED AS ROOF RAFTERS OR FLOOR JOISTS. NOTCHES AT JOIST BOLTS NOT EXCEED ONE FOURTH THE DEPTH OF JOIST. HOLES BORED FOR PIPE OR CABLE SHALL BE WITHIN THE MIDDLE THIRD OF THE JOIST DEPTH AND THE DIAMETER OF SUCH HOLES SHALL NOT EXCEED ONE THIRD THE JOIST DEPTH OR 1", WHICHEVER IS GREATER. ALL OTHER REQUIRED HOLES OR NOTCHES MUST BE APPROVED BY STRUCTURAL ENGINEER. **CONTRACTOR NOTE:** THIS SECTION DOES NOT APPLY TO ENGINEERED WOOD MEMBERS: LVL OR PSL. CONTACT ENGINEER PRIOR TO NOTCHING OR DRILLING IN ENGINEERED WOOD MEMBERS.
P. POST BASES AND CAPS FOR 4X4 AND 6X6 POSTS SHALL BE SIMPSON ABX SERIES AT BASE AND PCX SERIES AT CAP, TYP. U.N.O. EQUIVALENT MANUFACTURERS MAY BE USED.
Q. PRESSURE TREAT LUMBER IN ACCORDANCE WITH THE MANUAL OF RECOMMENDED PRACTICE OF THE AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA).
R. ALL NAILS SUBJECT TO WEATHERING TO BE GALVANIZED (TYP. U.N.O.). ALL SHEARWALL NAILS TO BE GALVANIZED, TYP.
S. ALL NAILS SPECIFIED WITHIN DRAWINGS SHALL BE COMMON NAILS (TYP, U.N.O.).

SUBMITTALS:

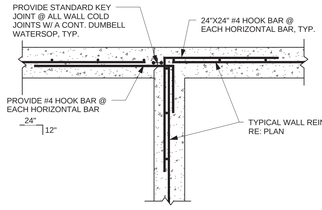
A. PRIOR TO FABRICATION OF STRUCTURAL ELEMENTS, SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD. SHOP DRAWINGS SHALL INCLUDE INFORMATION AS REQUIRED BY THE BUILDING CODE AND AS LISTED ELSEWHERE IN THESE SPECIFICATIONS. SUBMITTALS FOR THE FOLLOWING STRUCTURAL ELEMENTS ARE TO BE PROVIDED FOR REVIEW (THIS LIST DOES NOT PRECLUDE SUBMITTAL OF ADDITIONAL STRUCTURAL ITEMS NOT LISTED, AS APPLICABLE.)

CONTRACTOR NOTE: COPIES OF STRUCTURAL DRAWINGS (PLANS AND/OR DETAILS) WILL NOT BE ACCEPTED BY CSA AS SHOP DRAWINGS. ALL SHOP DRAWINGS MUST BE REPRODUCED BY THE RESPECTIVE SUPPLIERS AND DETAILED AS NECESSARY.

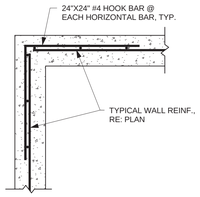
A. CAST-IN-PLACE CONCRETE
B. CONCRETE MASONRY UNITS
C. REINFORCEMENT
D. HOT ROLLED STEEL
E. OPEN WEB METAL JOISTS
F. ELEVATED CONCRETE
G. TRUSSES

COMPONENTS AND CLADDING DESIGN WIND PRESSURES (PSF)			
ROOF			
ZONE	10 SF	50 SF	100 SF
ALL ZONES	+10.0	+10.0	+10.0
1	-10.0	-10.0	-10.0
2	-10.0	-10.0	-10.0
3	-10.0	-10.0	-10.0
1o & 2o	-10.0	-10.0	-10.0
3o	-10.0	-10.0	-10.0
WALLS			
ZONE	10 SF	100 SF	500 SF
4	-15.8 +14.6	-13.6 +12.4	-12.1 +10.9
4p	N/A	N/A	N/A
5	-19.5 +14.6	-15.1 +12.4	-12.1 +10.9
5p	N/A	N/A	N/A

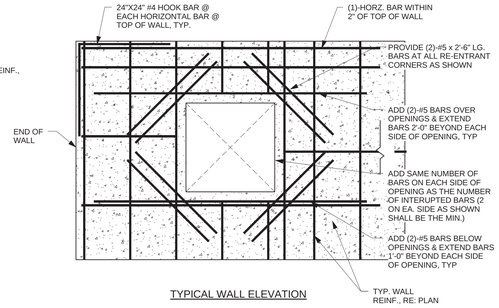
NOTES:
1. TABLE PRESSURES ARE FOR THE SQUARE FOOT TRIBUTARY AREA SHOWN. FOR OTHER TRIBUTARY AREAS, LINEARLY INTERPOLATE BETWEEN VALUES SHOWN ABOVE.
2. POSITIVE PRESSUR



TYPICAL WALL INTERSECTION



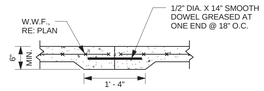
TYPICAL WALL CORNER



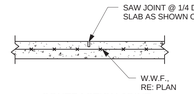
TYPICAL WALL ELEVATION

NOTES:
1. PROVIDE ADDITIONAL REINFORCMENT AS SHOWN AROUND ALL PENETRATIONS IN WALLS AS REQUIRED.
2. PROVIDE ADDITIONAL VERTICAL REINFORCMENT AS REQUIRED AT ALL WALL ENDS, CORNERS, AND INTERSECTIONS SO THAT A VERTICAL BAR IS WITHIN 2" OF THE END OF THE WALLS.
3. WHERE TWO LAYERS OF REINFORCEMENT ARE REQUIRED IN A CONCRETE WALL, ALL ADDITIONAL REINFORCEMENT IN THIS DETAIL SHALL BE DOUBLED (APPLIED TO EACH LAYER).

1 / S1.1 TYPICAL CONCRETE WALL DETAILS
3/4" = 1'-0"



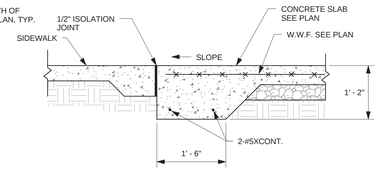
CONSTRUCTION JOINT



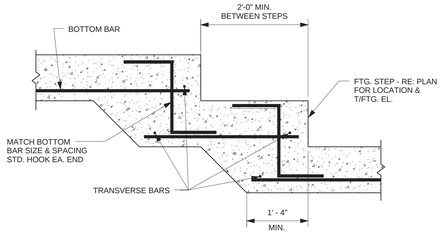
CONTRACTION JOINT

TYPICAL CONTROL JOINT DETAILS
3/4" = 1'-0"

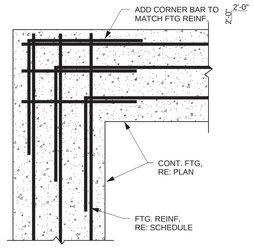
2 / S1.1 TYPICAL CONTROL JOINT DETAILS
3/4" = 1'-0"



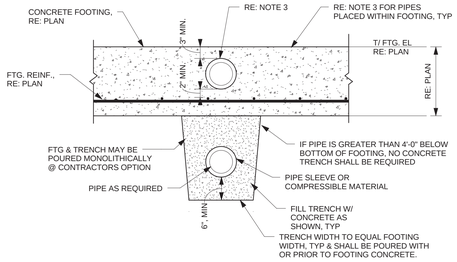
3 / S1.1 TYPICAL EQUIPMENT PAD
3/4" = 1'-0"



4 / S1.1 TYPICAL FOOTING STEP
3/4" = 1'-0"

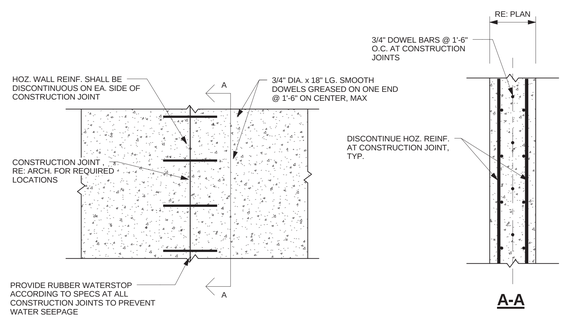


5 / S1.1 TYPICAL FOOTING CORNER BARS
3/4" = 1'-0"



NOTES:
1. FOR PIPES RUNNING PARALLEL TO STRIP FOOTINGS, FOOTING DEPTH AND PIPE LOCATION SHALL BE COORDINATED SO THAT THE PIPE IS NOT WITHIN THE FTG. LOAD DISTRIBUTION THAT EXTENDS AT 45 DEGREE ANGLE OUT FROM THE BOTTOM EDGE OF THE FOOTING.
2. PIPES MAY BE PLACED BETWEEN THE FOOTING AND THE SLAB ON GRADE THROUGH THE STEM WALL AS LONG AS A PROPER PIPE SLEEVE IS PROVIDED TO ACCOUNT FOR 1", MIN VERTICAL MOVEMENT.
3. FOR PIPES RUNNING THROUGH FOOTING: PIPE SHALL PASS ABOVE FOOTING REINF., DO NOT BREAK FOOTING REINF. AND MAINTAIN 3" MIN. CONCRETE COVER. MAINTAIN 2" OF CONCRETE BETWEEN PIPE SLEEVE AND REINFORCEMENT, MIN.

6 / S1.1 PIPE PENETRATION DETAIL
3/4" = 1'-0"



7 / S1.1 TYPICAL VERTICAL CONTROL JOINT DETAILS
3/4" = 1'-0"

four

STUDIO FOUR DESIGN inc.

Architecture & Interiors
Planning • Graphics • Consulting

four14 Clinch Ave. Knoxville, TN 37902
t 865 523-5001 f 865 523-5003
studiofourdesign.com

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

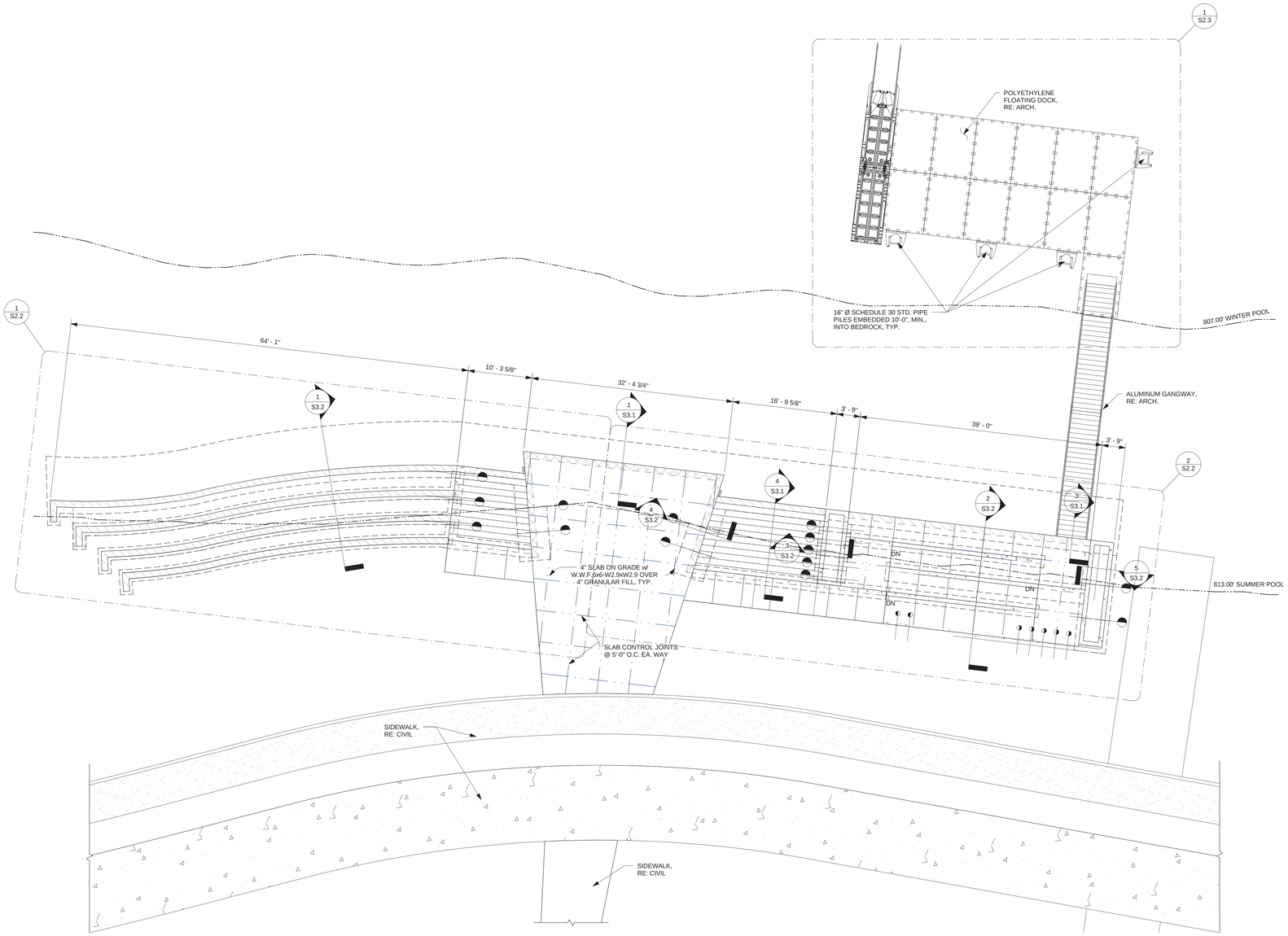
PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

TYPICAL DETAILS

ROBERT A. HAINES
REGISTERED ENGINEER
No. 112284
STATE OF TENNESSEE
01/07/2014

CSA ENGINEERING
PROJECT NO: 2013202-01
Chad Stewart & Associates, Inc.
2607 Kingston Pike, Suite 2 Knoxville, TN 37919
Phone 865-329-9920 Fax 865-329-9921
Lakeland, TN CSAstructures.com Knoxville, TN

100%CD	C.C.I. PROJECT NO. 05244-2014
	DRAWING DATE DECEMBER 19, 2014
	F.C.C.
	DRAWN GG
	S1.1.A-1



1 S2.1 **FOUNDATION PLAN**

1/8" = 1'-0"

PROJECT NORTH

FOUNDATION PLAN NOTES:

1. TOP OF SLAB ELEVATION IS TO BE 821.80'.

2. FOR DESIGN CRITERIA, GENERAL NOTES, AND TYPICAL DETAILS, RE: GENERAL NOTES SHEET.

3. FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, RE: ARCHITECTURAL DRAWINGS.

4. TE DENOTES TURN-DOWN SLAB EDGE. RE: 7/S3.2 FOR DETAILS.

5. RE: S1.2 FOR TYPICAL SLAB-ON-GRADE CONTROL & CONSTRUCTION JOINT DETAILS.

6. RE: S1.2 FOR TYPICAL FOOTING CORNER BAR REQUIRMENTS

7. RE: S1.2 FOR TYPICAL FOOTING STEP REQUIREMENTS

8. DENOTES 8" CONCRETE RETAINING WALL W/ #5 BARS @ 12" O.C. VERTICAL AND HORIZONTAL, CENTERED.

9. DENOTES 12" CONCRETE RETAINING WALL W/ #6 BARS @ 12" O.C. VERTICAL AND HORIZONTAL, EACH FACE.

10. DENOTES 12" CONCRETE RETAINING WALL W/ #8 BARS @ 8" O.C. VERTICAL AND #6 BARS @ 12" O.C. HORIZONTAL, EACH FACE.

STUDIO FOUR DESIGN inc.

Architecture & Interiors
Planning • Graphics • Consulting

four14 Clinch Ave. Knoxville, TN 37902
t 865 523-5001 f 865 523-5003
studiofourdesign.com

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

FOUNDATION PLAN

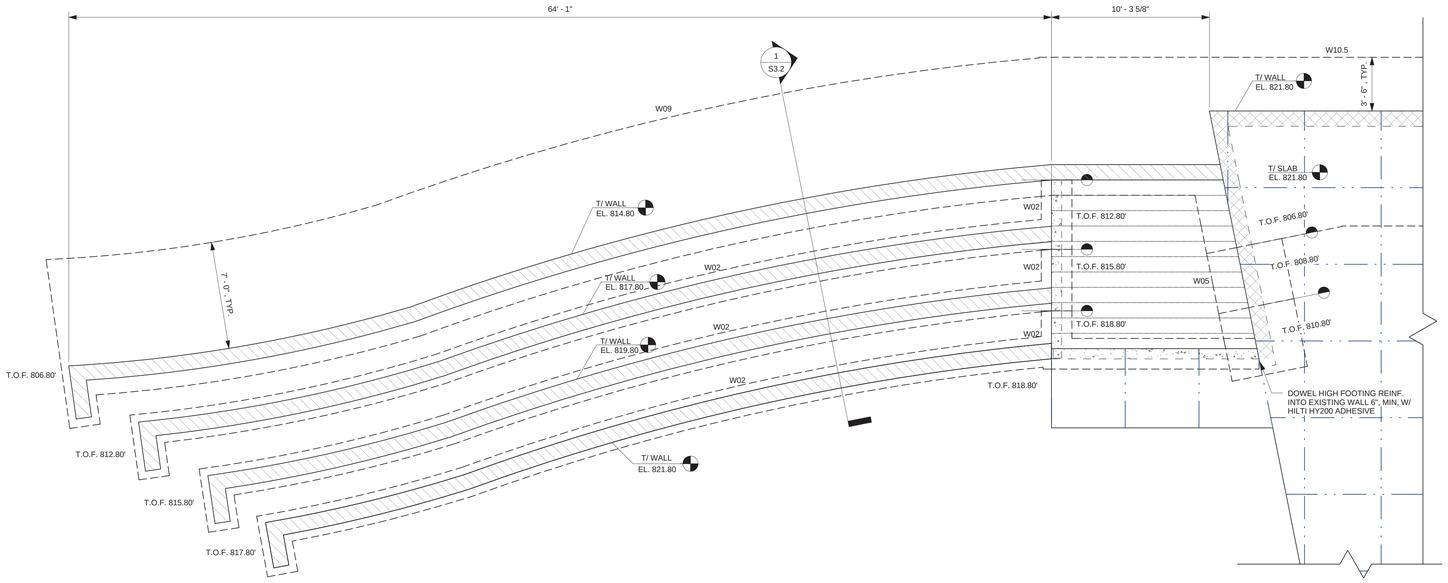
100%CD

C.C.I. PROJECT NO: 06244-0014
DRAWING DATE: DECEMBER 19, 2014
SCALE:
DRAWN: GG

S2.1.A-1

ROBERT A. HAINES
REGISTERED ENGINEER
No. 112284
STATE OF TENNESSEE
01/07/2014

CSA ENGINEERING
PROJECT NO: 2013/202-01
Chad Stewart & Associates, Inc.
26017 Kingston Pike, Suite 2 Knoxville, TN 37919
Phone 865-523-9920 Fax 865-523-9921
Lakeland, TN CSAstructures.com Knoxville, TN



1 S2.2 **ENLARGED FOUNDATION PLAN - WEST**

1/4" = 1'-0"

PROJECT NORTH

FOUNDATION PLAN NOTES:

1. TOP OF SLAB ELEVATION IS TO BE 821.80'.
2. FOR DESIGN CRITERIA, GENERAL NOTES, AND TYPICAL DETAILS, RE: GENERAL NOTES SHEET.
3. FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, RE: ARCHITECTURAL DRAWINGS.
4. TE DENOTES TURN-DOWN SLAB EDGE. RE: 7/S3.2 FOR DETAILS.
5. RE: S1.2 FOR TYPICAL SLAB-ON-GRADE CONTROL & CONSTRUCTION JOINT DETAILS.
6. RE: S1.2 FOR TYPICAL FOOTING CORNER BAR REQUIRMENTS
7. RE: S1.2 FOR TYPICAL FOOTING STEP REQUIREMENTS
8. DENOTES 8" CONCRETE RETAINING WALL W/ #5 BARS @ 12" O.C. VERTICAL AND HORIZONTAL, CENTERED.
9. DENOTES 12" CONCRETE RETAINING WALL W/ #6 BARS @ 12" O.C. VERTICAL AND HORIZONTAL, EACH FACE.
10. DENOTES 12" CONCRETE RETAINING WALL W/ #8 BARS @ 8" O.C. VERTICAL AND #6 BARS @ 12" O.C. HORIZONTAL, EACH FACE.

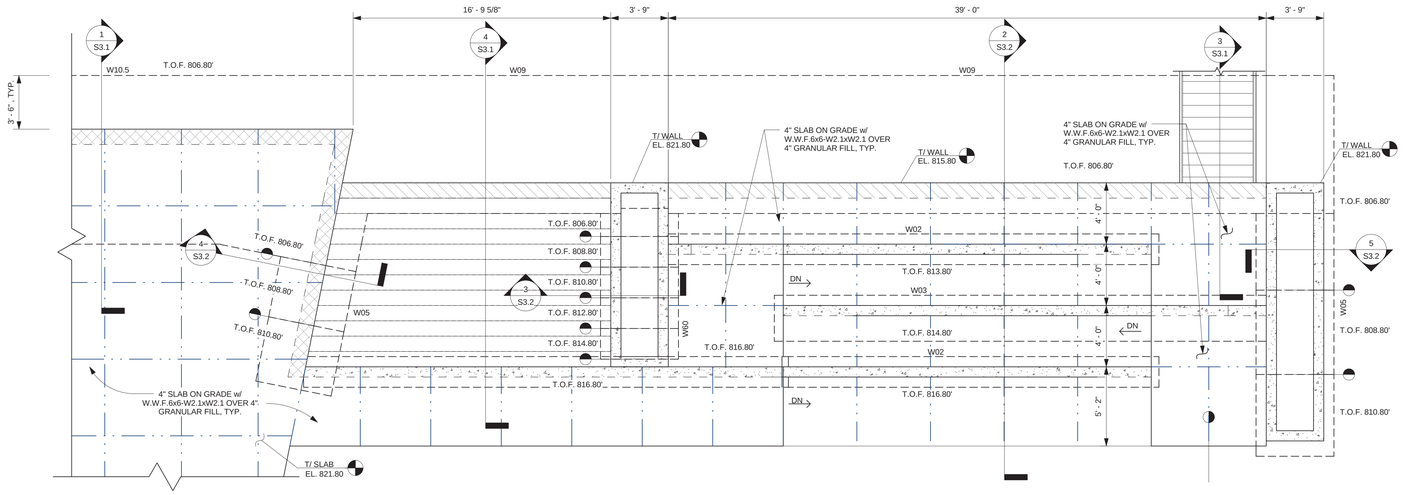
FOOTING SCHEDULE

MARK	SIZE	REINFORCING
W02	2'-0"X1'-0"XCONT.	#5 @ 10" O.C.CONT., #5 @ 1'-6" O.C. TRANS. (TOP & BOTTOM)
W03	3'-0"X1'-0"XCONT.	#5 @ 10" O.C. CONT., #5 @ 1'-6" O.C. TRANS. (TOP & BOTTOM)
W05	5'-0"X1'-0"XCONT.	#5 @ 10" O.C. CONT., #5 @ 1'-6" O.C. TRANS (TOP & BOTTOM)
W09	9'-0"X1'-8"XCONT.	#7 @ 10" O.C. CONT., #7 @ 12" O.C. TRANS. (TOP & BOTTOM)
W10.5	10'-6"X1'-8"XCONT.	#7 @ 10" O.C. CONT., #7 @ 8" O.C. TRANS. (TOP & BOTTOM)

W06

FOOTING WIDTH IN FT.

FOOTING TYPE: W = STRIP FOOTING



2 S2.2 **ENLARGED FOUNDATION PLAN - EAST**

1/4" = 1'-0"

PROJECT NORTH

STUDIO FOUR DESIGN inc.

Architecture & Interiors
Planning • Graphics • Consulting

four14 Clinch Ave. Knoxville, TN 37902
t 865 523-5001 f 865 523-5003
studiofourdesign.com

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:

THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:

SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

ENLARGED FOUNDATION PLANS

100%CD

CCI PROJECT NO. 00244 -0014

DRAWING DATE DECEMBER 03, 2014

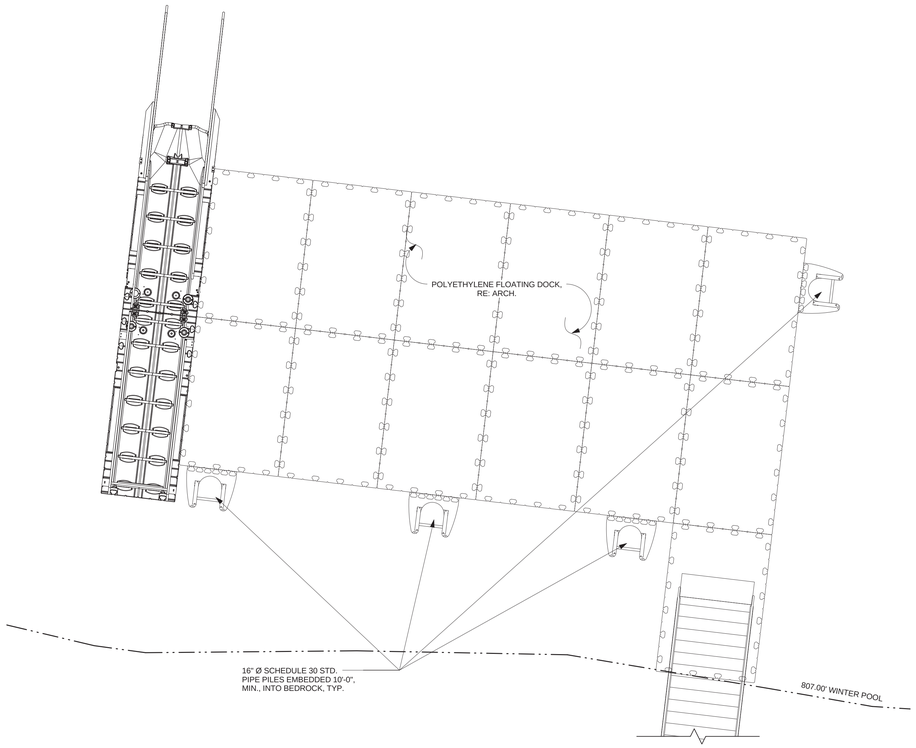
SCALE

DRAWN GG

S2.2.A-1

ROBERT A. HAINES REGISTERED ENGINEER No. 112284 STATE OF TENNESSEE 01/07/2014

CSA ENGINEERING
PROJECT NO: 2013/202-01
Chad Stewart & Associates, Inc.
2607 Kingston Pike, Suite 2 Knoxville, TN 37919
Phone 865-329-9920 Fax 865-329-9921
Lakeland, TN CSAstructures.com Knoxville, TN



1 / S2.3 **ENLARGED FLOATING DOCK PLAN**

1/4" = 1'-0"

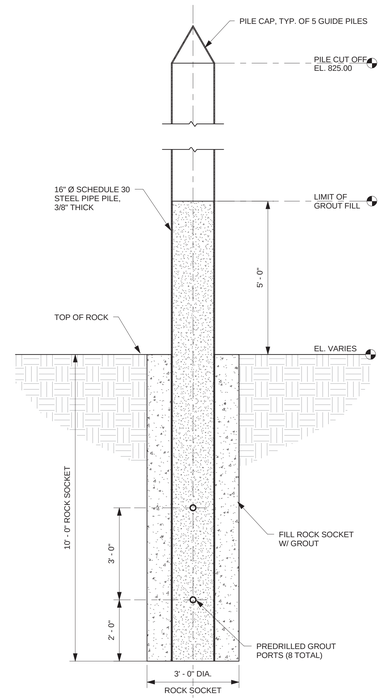
PROJECT NORTH

FLOATING DOCK PLAN NOTES:

1. TOP OF SLAB ELEVATION IS TO BE 821.80'.

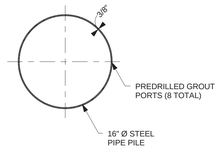
2. FOR DESIGN CRITERIA, GENERAL NOTES, AND TYPICAL DETAILS, RE: GENERAL NOTES SHEET.

3. FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN, RE: ARCHITECTURAL DRAWINGS.



2 / S2.3 **GUIDE PILE DETAIL**

1/2" = 1'-0"



SECTION

STEEL PIPE SCHEDULE

PILE LOCATION	PILE TYPE	PILE CUTOFF EL. (MLLW)	EXTIMATED PILE TIP EL. (MLLW)	BID LENGTH (VLF)
GP#1	16" Ø STEEL	825.00	775.00	50.00
GP#2	16" Ø STEEL	825.00	775.00	50.00
GP#3	16" Ø STEEL	825.00	775.00	50.00
GP#4	16" Ø STEEL	825.00	775.00	50.00
GP#5	16" Ø STEEL	825.00	775.00	50.00

STUDIO FOUR DESIGN inc.

Architecture & Interiors
Planning • Graphics • Consulting

four14 Clinch Ave. Knoxville, TN 37902
t 865 523-5001 f 865 523-5003
studiofourdesign.com

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

ENLARGED FLOATING DOCK PLAN

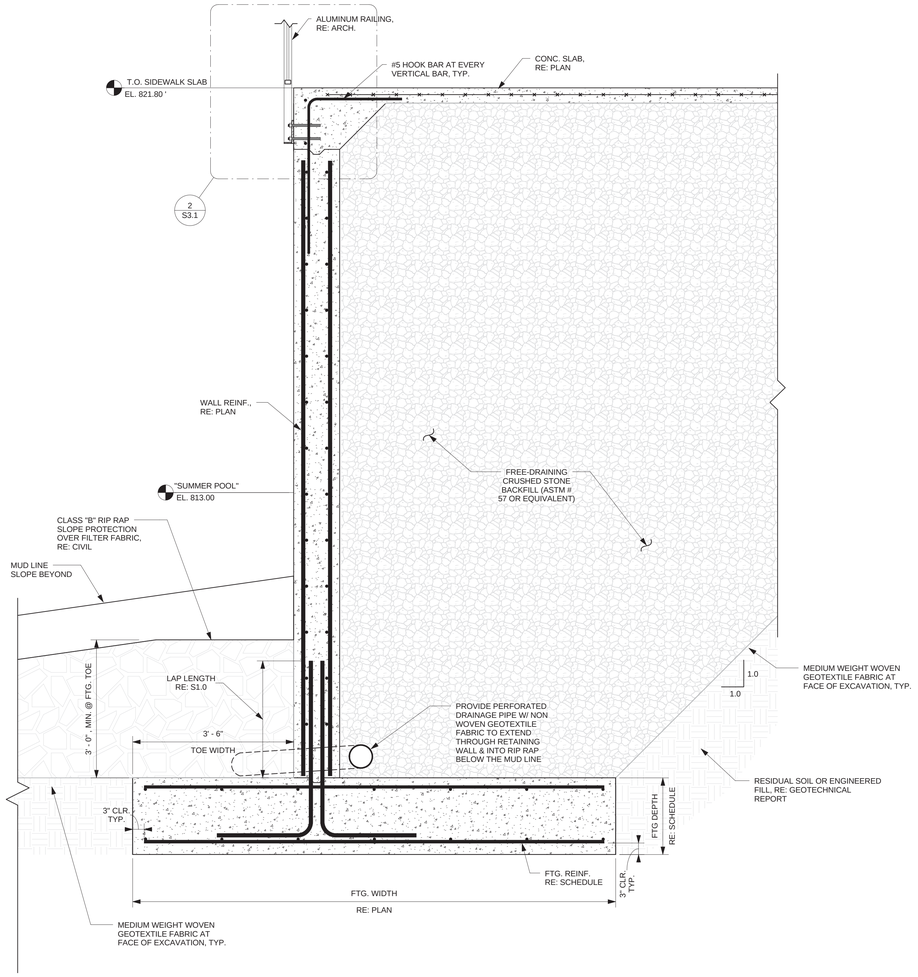
100%CD

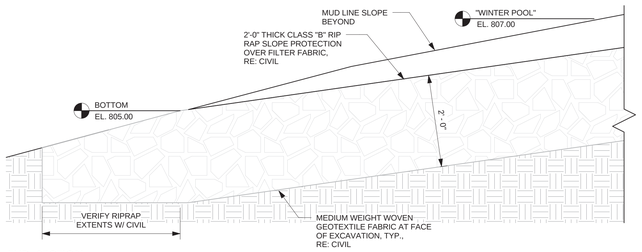
CSA PROJECT NO. 00244-0014
DRAWING DATE DECEMBER 03, 2014
SCALE
DRAWN GG

S2.3.A-1

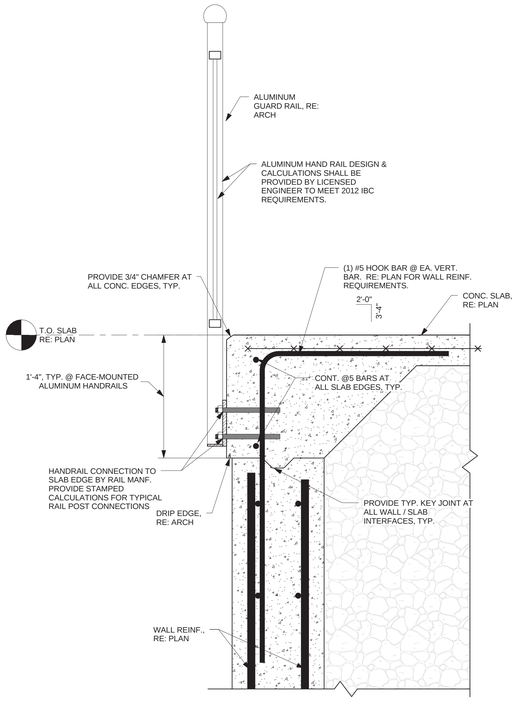
ROBERT A. HAINES REGISTERED ENGINEER No. 112398 STATE OF TENNESSEE 01/07/2014

CSA ENGINEERING
PROJECT NO. 2013/202-01
Chad Stewart & Associates, Inc.
2607 Kingston Pike, Suite 2 Knoxville, TN 37919
Phone 865-529-9920 Fax 865-529-9921
Lakeland, TN CSAstructures.com Knoxville, TN

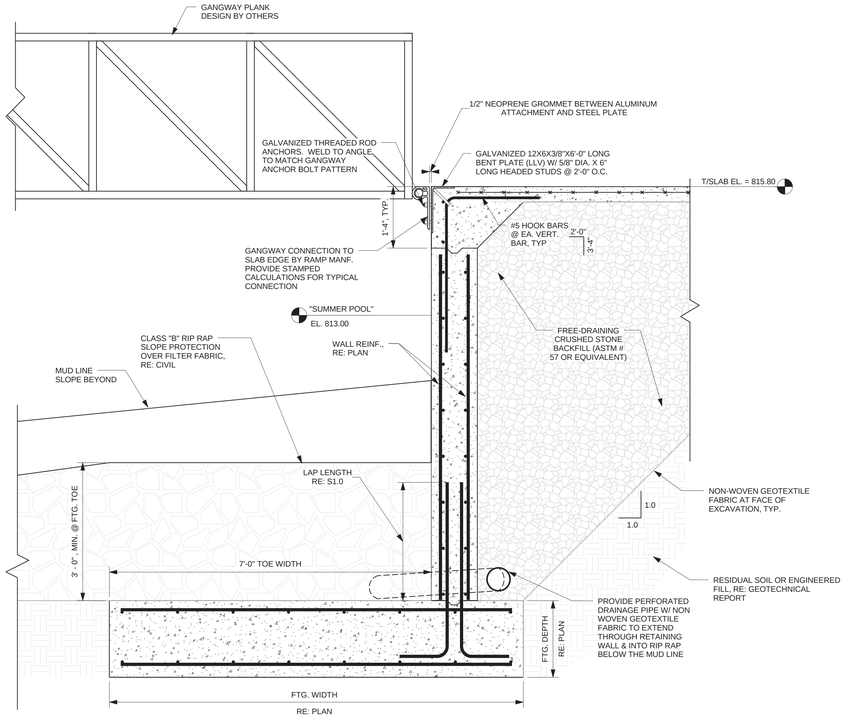




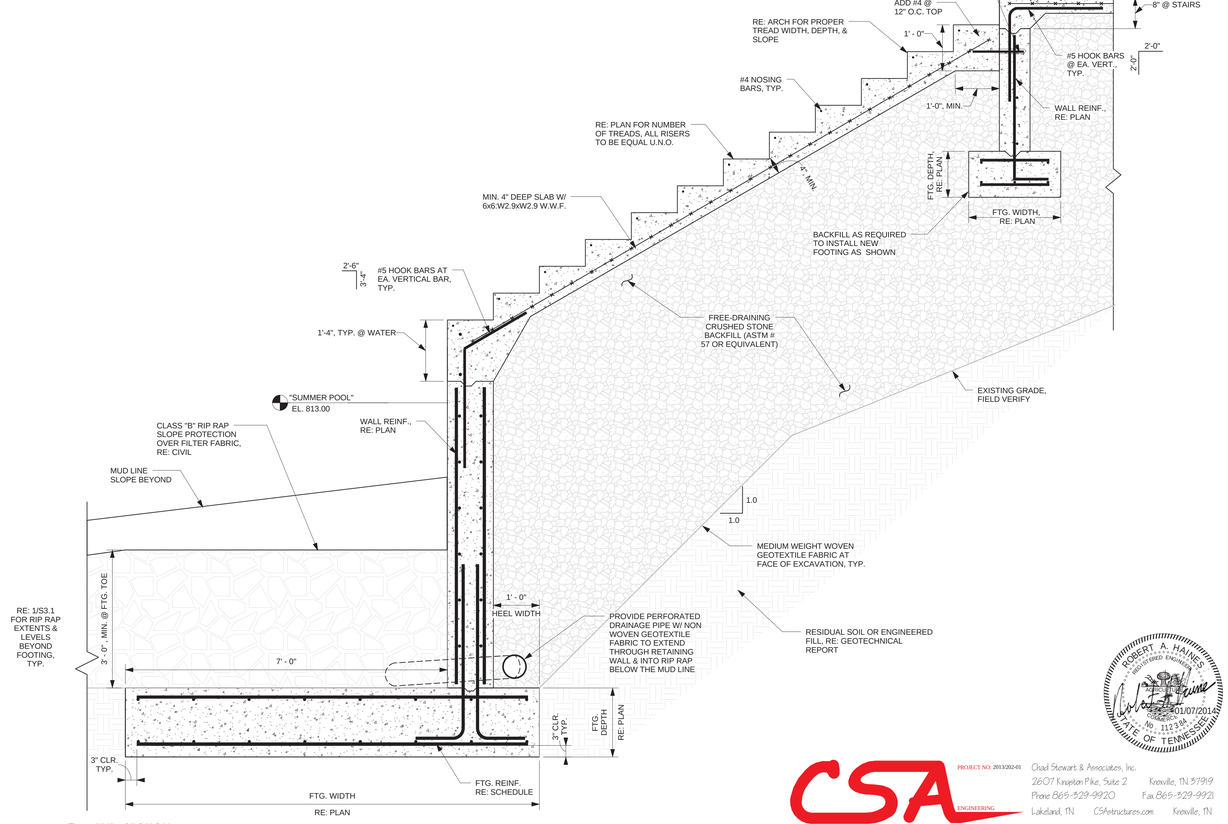
1 S3.1 **FND. SECTION**
3/4" = 1'-0"



2 S3.1 **FACE-MOUNTED ALUMINUM RAILING ANCHORAGE DETAIL**
1 1/2" = 1'-0"



3 S3.1 **FND. SECTION**
3/4" = 1'-0"



4 S3.1 **FND. SECTION**
3/4" = 1'-0"

STUDIO FOUR DESIGN inc.

Architecture & Interiors
Planning • Graphics • Consulting

four14 Clinch Ave. Knoxville, TN 37902
t 865 523-5001 f 865 523-5003
studiofourdesign.com

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

SECTIONS & DETAILS

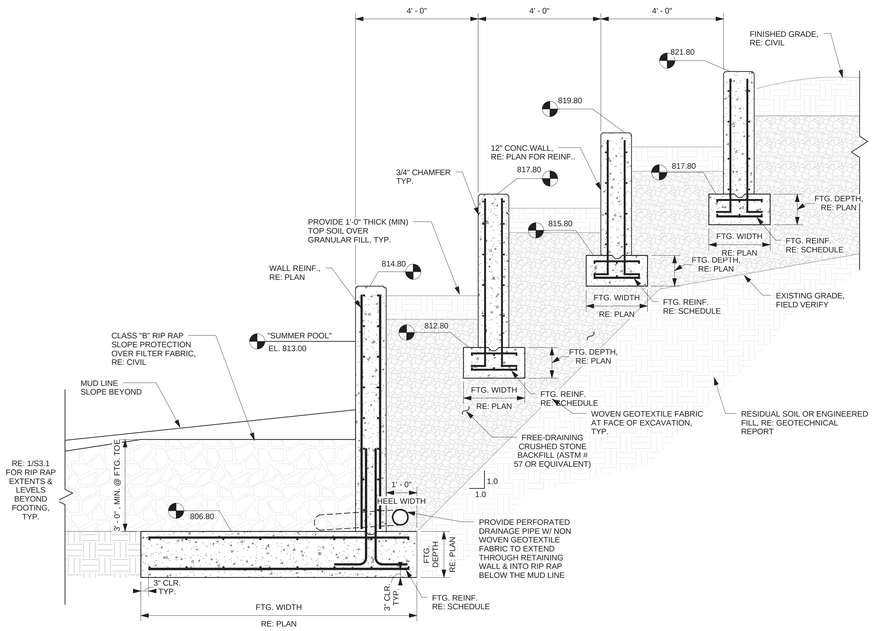
ROBERT A. HAINES REGISTERED ENGINEER No. 112284 STATE OF TENNESSEE 01/07/2014

CSA ENGINEERING
PROJECT NO. 2013/202-01
Chad Stewart & Associates, Inc.
2607 Kingston Pike, Suite 2 Knoxville, TN 37919
Phone 865-529-9920 Fax 865-529-9921
Lakeland, TN CSAstructures.com Knoxville, TN

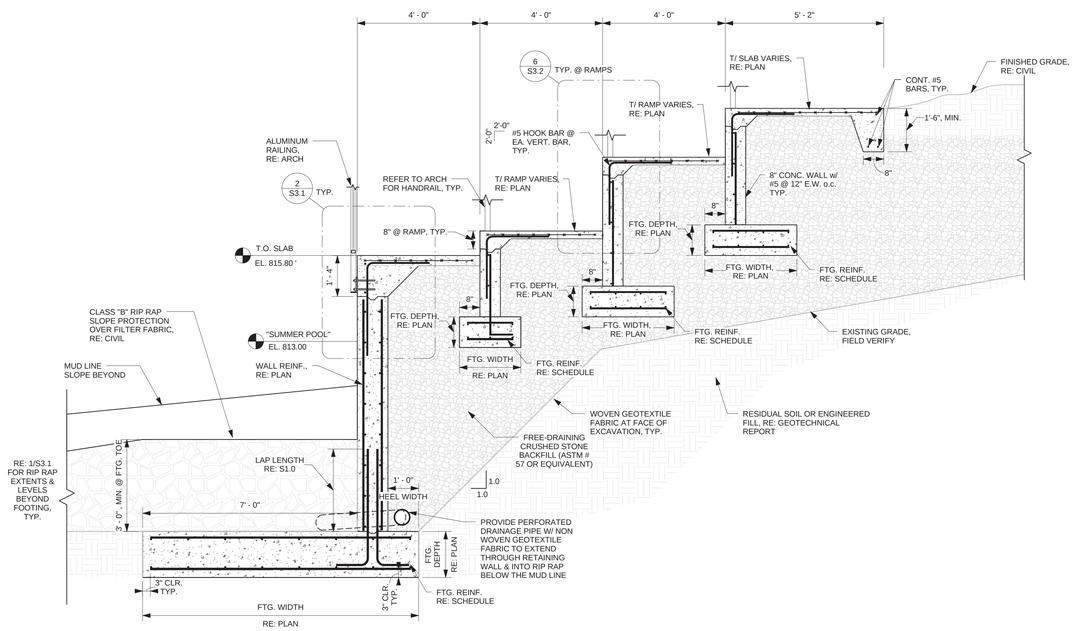
100%CD

CCI PROJECT NO. 00244-0014
DRAWING DATE DECEMBER 03, 2014
SCALE
DRAWN GG

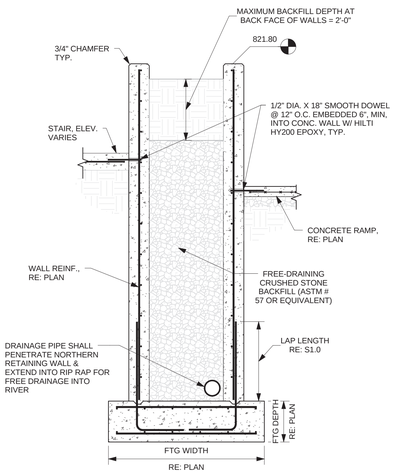
S3.1.A-1



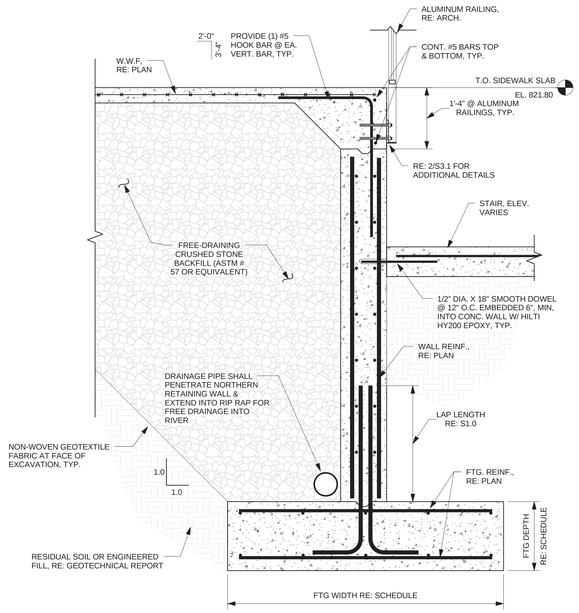
1 / S3.2 FND SECTION
1/2" = 1'-0"



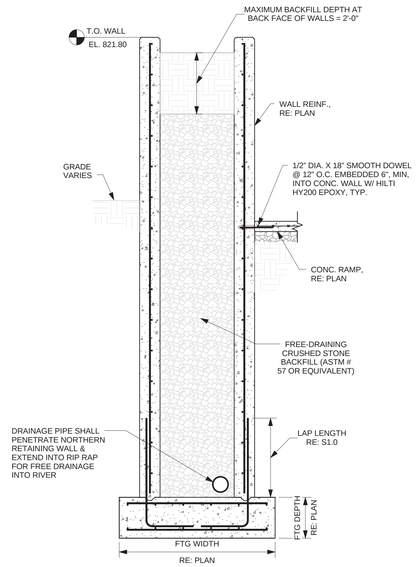
2 / S3.2 FND SECTION
1/2" = 1'-0"



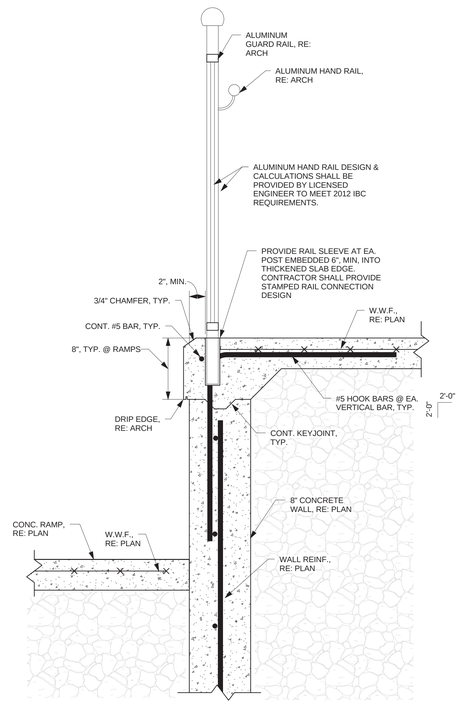
3 / S3.2 FND SECTION
1/2" = 1'-0"



4 / S3.2 FND. SECTION
3/4" = 1'-0"



5 / S3.2 FND SECTION
1/2" = 1'-0"



6 / S3.2 EMBEDDED ALUMINUM RAILING ANCHORAGE DETAIL
1 1/2" = 1'-0"

four

STUDIO FOUR DESIGN inc.

Architecture & Interiors
Planning • Graphics • Consulting

four14 Clinch Ave. Knoxville, TN 37902
t 865 523-5001 f 865 523-5003
studiofourdesign.com

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.9555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2607

PROJECT T:
SUTTREE LANDING PARK
PARK IMPROVEMENTS
PHASE 1B

SECTIONS & DETAILS

100%CD

C&C PROJECT NO. 00244-0014
DRAWING DATE DECEMBER 03, 2014
SCALE
DRAWN GG

S3.2.A-1

ROBERT A. HAINES REGISTERED ENGINEER No. 112398 STATE OF TENNESSEE 01/07/2014

CSA ENGINEERING
PROJECT NO. 2013/202-01
Chad Stewart & Associates, Inc.
2607 Kingston Pike, Suite 2 Knoxville, TN 37919
Phone 865-529-9920 Fax 865-529-9921
Lakeland, TN CSAstructures.com Knoxville, TN

LEGEND

SYMBOL:	DESCRIPTION:
"RG12" b	FLUORESCENT LIGHTING FIXTURE; "RG12" INDICATES TYPE, REFER TO LIGHTING FIXTURE SCHEDULE. "b" CORRESPONDS TO CONTROLLING SWITCH.
"RG2" b	HID, INCANDESCENT OR COMPACT FLORESCENT LIGHTING FIXTURE; "RG2" INDICATES TYPE, REFER TO LIGHTING FIXTURE SCHEDULE. "b" CORRESPONDS TO CONTROLLING SWITCH.
J	JUNCTION BOX, SIZE AND USE AS REQUIRED
A-1	HOME RUN TO PANEL WITH CIRCUIT SHOWN, CROSS MARKS INDICATE NUMBER OF CONDUCTORS WHERE MORE THAN, NOT INCLUDING GROUND, MINIMUM #12 AWG.
	OVERHEAD WIRING
	UNDERGROUND WIRING
	PANELBOARD, MOUNT TOP 6'-0" AFF, REFER TO PANELBOARD SCHEDULES FOR REQUIREMENTS
TTB	TELEPHONE/SECURITY TERMINAL BOARD. PROVIDE ¾"x 4'x 4' PLYWOOD BACKBOARD PAINTED WITH GRAY FIRE RETARDANT PAINT. MOUNT TOP 8'-0" AFF.
WP	INDICATES WEATHERPROOF, PROVIDE "IN-USE" COVER PER NEC.
GF	INDICATES DEVICE IS A GROUND FAULT CIRCUIT INTERRUPTING TYPE RECEPTACLE.
PCS	PHOTOCELL SENSOR
	LAMP POST STYLE FIXTURE, REFER TO SITE LIGHT FIXTURE SCHEDULE

GENERAL ELECTRICAL NOTES:

1. THE CONTRACTOR SHALL VISIT THE JOB SITE AND CAREFULLY EXAMINE THOSE PORTIONS OF THE SITE AFFECTED BY THIS WORK SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS THAT WILL AFFECT EXECUTION OF THE WORK.
2. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND PAYING ALL UTILITY CO. AID TO CONSTRUCTION FEES.
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT/APPLICABLE NATIONAL ELECTRICAL CODE, NFPA 70, LOCAL CODES/ORDINANCES AND THE APPLICABLE ACCESSIBILITY CODE. SHOULD PLANS AND CODES CONFLICT, THE CODE TAKES PRECEDENCE. MAKE NO CHANGES, EVEN IN THE CASE OF CONFLICT, WITHOUT FIRST OBTAINING APPROVAL OF THE ENGINEER.
4. "PROVIDE" AS USED HERE AND ON THE DRAWINGS, IS AN ALL-INCLUSIVE TERM REQUIRING CONTRACTOR TO FURNISH, INSTALL, WIRE, AND CONNECT ALL SPECIFIED EQUIPMENT AS WELL AS COMPONENTS, ACCESSORIES, AND MOUNTING HARDWARE TO INSURE THAT SPECIFIED EQUIPMENT FUNCTIONS TO MEET SYSTEM REQUIREMENTS.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT OTHER FACILITIES AND EQUIPMENT FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE FOR REPAIR OR REPLACEMENT OF FACILITIES, EQUIPMENT, OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE COMPLETION OF THIS WORK. ELECTRICAL CONTRACTOR SHALL GIVE ADEQUATE NOTIFICATION TO TENNESSEE ONE CALL, (800) 351-1111, PRIOR TO COMMENCEMENT OF ANY EXCAVATION.
6. INSTALL SPECIFIED EQUIPMENT, AS NOTED ON DRAWINGS, OR APPROVED EQUAL. ADDITIONAL EQUIPMENT AND MATERIAL MAY BE REQUIRED OTHER THAN THAT SHOWN ON DRAWINGS. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR, AND EQUIPMENT REQUIRED.
7. THE CONTRACTOR SHALL VERIFY THAT THE ACTUAL EQUIPMENT SUPPLIED HAS THE SAME ELECTRICAL SPECIFICATIONS AS THE EQUIPMENT USED AS THE BASIS OF DESIGN. IF THE EQUIPMENT IS DIFFERENT, THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO THE PANELS AND CIRCUITS AND INCLUDE THEM IN SUBMITTALS.
8. ALL MATERIALS SHALL BE LISTED AND LABELED BY UNDERWRITERS LABORATORY, INC.
9. DESIGN IS BASED ON A 208Y/120 VOLT, THREE PHASE, FOUR WIRE, SOLIDLY GROUNDED WYE AND 120/240 VOLT, SINGLE PHASE, THREE WIRE SERVICE. THIS DESIGN ASSUMES AN UNDERGROUND SERVICE WITH SERVICE CONDUITS AND CONDUCTORS BY ELECTRICAL CONTRACTOR.
10. ALL WIRES SHALL BE TERMINATED AND LABELED. ALL JUNCTION BOXES SHALL BE LABELED TO INDICATED THE CIRCUITS CONTAINED IN THE BOX.
11. PANELBOARD LEGENDS SHALL BE TYPED.
12. ALL FEEDERS #4 AND LARGER SHALL BE MEGGER TESTED AFTER INSTALLATION.
13. UNLESS OTHERWISE NOTED, ALL CONDUCTORS SHALL BE COPPER AND #12 AWG MINIMUM WITH THHN/THWN, 600 VOLT INSULATION.
14. PROVIDE A DEDICATED NEUTRAL, COLOR CODED, FOR EACH UNGROUNDED CONDUCTOR. SHARING OF NEUTRALS IS PROHIBITED.
15. DO NOT INSTALL MORE THAN THREE CIRCUITS (SIX CURRENT CARRYING CONDUCTORS) IN A CONDUIT.
16. THE MINIMUM CONDUIT SIZE SHALL BE 1/2". INTERIOR CONDUITS SHALL BE EMT; UNDERGROUND CONDUIT AND CONCRETE ENCASED CONDUIT SHALL BE SCHEDULE 40 PVC. EXTERIOR EXPOSED CONDUIT SHALL BE SCHEDULE 80 PVC.
17. MC CABLE SHALL NOT BE USED.
18. A GREEN, COPPER GROUND WIRE SHALL BE INSTALLED IN ALL CONDUIT SYSTEMS AND SHALL BE BONDED TO ALL ENCLOSURES, BOXES, AND EQUIPMENT.
19. BONDING JUMPERS SHALL BE USED TO BOND CONDUIT TO ENCLOSURES, BOXES, AND EQUIPMENT WHERE KNOCKOUTS ARE USED.
20. THE CONTRACTOR SHALL GUARANTY ALL WORK TO BE FREE OF DEFECTS IN WORKMANSHIP AND MATERIALS FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION.

ELECTRICAL ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION:
A	AMPERE
AFF	ABOVE FINISHED FLOOR – MEASURED FROM FLOOR TO CENTER OF DEVICE, EXCEPT AS OTHERWISE SPECIFICALLY NOTED.
ADA	AMERICANS WITH DISABILITIES ACT OF 1990
AFG	ABOVE FINAL GRADE
C	CONDUIT
F	FUSE
FPN	FUSE PER NAMEPLATE REQUIREMENTS
G	GROUND
GF	INDICATES RECEPTACLE OR CIRCUIT BREAKER, AS APPLICABLE, TO HAVE GROUND FAULT PROTECTION
MCM	Kcmil (THOUSAND CIRCULAR MILS)
NEC	NATIONAL ELECTRICAL CODE
N	NEUTRAL
WG	INDICATES ITEM IS SUBJECT TO PHYSICAL DAMAGE: PROVIDE WIRE GUARD PROTECTION.
WP	INDICATES DEVICE TO HAVE WEATHERPROOF COVER

LIGHTING FIXTURE SCHEDULE

RG1	NOT USED			
RG1A	NOT USED			
RG1W	NOT USED			
RG1AW	NOT USED			
RG2	NOT USED			
RG3	Pole Mounted Area Light, Type 5 Distribution, 17.5' Spun Aluminum Pole, Heavy Duty Roadway Luminare.	Cooper Lighting Fixture – NVN-AE-02-E-5WQ-BK Lumec Pole – RLAR-1A-ATR85V-17.5-BASE24(2)-CAP1-GFII-1X36-11 ½-DEC-BT13C2-G-BKTX	2 LED BAR FOR TOTAL 107W	Handhole shall be 12" from top of pole and conduit shall be extended to bottom of hand hole for flood resistance
RG4	3"x18" RECESSED BENCH LIGHT W/BACKBOX, IP67 RATED.	SPI Lighting – ERC11611-L6-4WC 120-277V 3500K RHB ???	1 LED TOTAL 6-4W	Provide backbox to precast bench supplier. All connections to type RG4 Fixtures shall be submersible. Include Type RG4 Fixtures and associated wiring in Alternate.
RG5	12" SQ. BY 12" DEEP PULLBOX			All connections to type RG5 Fixtures shall be submersible. Include Type RG5 Fixtures and associated wiring in Alternate.
RG6	NOT USED			
RG7	NOT USED			
RG8	NOT USED			
RG9	NOT USED			
RG10	NOT USED			
RG11	NOT USED			
RG12	NOT USED			
RG13	18" RECESSED WALL/STEP LIGHT	WE-EF 615-6320-STI279	(1) 9W LED	STEPLIGHT
RG14	POLE MOUNTED AREA LIGHT WITH TYPE V DISTRIBUTION	Cooper Lighting Fixture – (2) NVN-AE-03-E-T3-BK Hapco Pole – 31284	4 LED BAR FOR TOTAL OF 213W	POLE SHALL BE 27'6", BLACK, WITH BANNER ARMS, BRACKET ARM FOR FIXTURE AND TRANSFORMER BASE WITH BOLT ON COVER
RG15	Pole Mounted Area Light, Type 4 Distribution, 17.5' Spun Aluminum Pole, Heavy Duty Roadway Luminare.	Cooper Lighting Fixture – NVN-AE-T4FT-E-5WQ-BK Lumec Pole – RLAR-1A-ATR85V-17.5-BASE24(2)-CAP1-GFII-1X36-11 ½-DEC-BT13C2-G-BKTX	2 LED BAR FOR TOTAL 107W	Handhole shall be 12" from top of pole and conduit shall be extended to bottom of hand hole for flood resistance

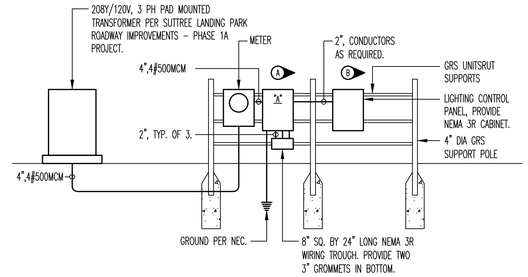
This information is provided for the use of the Architect and their consultants in the production of their detailed drawings and specifications. Assurances of code compliance, conformity with environmental conditions and other building systems, voltage selection, design of wiring, supports, switching, emergency and exit lighting, engineering calculations or details, and preperation of cost and power consumption estimates are the responsibility of others. Information provided by Lam Partners Inc may require coordination and development by others to a level of detail suitable for incorporation into contract documents. Lam Partners Inc's documents are not intended or represented to be suitable for reuse on extensions of the Project or on any other project, nor are they to be relied upon by anyone other than the Architect and the Architect's consultants for the Project. Lam Partners Inc is not responsible for construction means, methods, sequences, techniques, safety programs, or procedures, or the failure of any contractor to comply with the requirements of the contract documents. There are no warranties of merchantability or fitness for a particular purpose or any other warranties or guarantees whatsoever, express or implied, with respect to any materials, documents, or designs provided by Lam Partners Inc.

PANEL: A | VOLTAGE: 120/208 | PHASE: 3 | WIRE: 4 | BUS: CU
BUS RATING: 400 AMP | MAIN: YES - 400/3 | ENCLOSURE: NEMA 3R
LUGS/PHASE: #500 MCM | ENTRY: TOP | AIC: 10,000 | MOUNTING: SURFACE

#	AMP	POLE	DESCRIPTION	LOAD	A	B	C	LOAD	DESCRIPTION	POLE	AMP	#
1	20	1	POLE LIGHTING	500.0	500.0	-	-	0.0	SPARE	1	20	2
3	20	1	POLE LIGHTING	500.0	-	500.0	-	0.0	SPARE	1	20	4
5	20	1	POLE LIGHTING	500.0	-	-	500.0	0.0	SPARE	1	20	6
7	20	3	BENCH LIGHTING	500.0	500.0	-	-	0.0	SPARE	1	20	8
9	|	|	BENCH LIGHTING	500.0	-	500.0	-	0.0	SPARE	1	20	10
11	|	|	BENCH LIGHTING	500.0	-	-	500.0	0.0	SPARE	1	20	12
13	20	1	SPARE	0.0	0.0	-	-	0.0	SPARE	1	20	14
15	20	1	SPARE	0.0	-	0.0	-	0.0	SPARE	1	20	16
17	20	1	SPARE	0.0	-	-	0.0	0.0	SPARE	1	20	18
19	20	1	SPARE	0.0	0.0	-	-	0.0	SPARE	1	20	20
21	20	1	SPARE	0.0	-	0.0	-	0.0	SPARE	1	20	22
23	20	1	SPARE	0.0	-	-	0.0	0.0	SPARE	1	20	24
25	20	1	SPARE	0.0	0.0	-	-	0.0	SPARE	1	20	26
27	20	1	SPARE	0.0	-	0.0	-	0.0	SPARE	1	20	28
29	20	1	SPARE	0.0	-	-	0.0	0.0	SPARE	1	20	30
31	100	3	SPARE	0.0	0.0	-	-	0.0	SPARE	3	200	32
33	|	|		0.0	-	0.0	-	0.0		|	|	34
35	|	|		0.0	-	-	0.0	0.0		|	|	36
37	60	3	SPARE	0.0	0.0	-	-	0.0	SPARE	3	200	38
39	|	|		0.0	-	0.0	-	0.0		|	|	40
41	|	|		0.0	-	-	0.0	0.0		|	|	42
				TOTAL	1,000.0	1,000.0	1,000.0	VA	1. PANEL SHALL BE SUSE RATED.			
				TOTAL CONNECTED			3,000.0	VA				

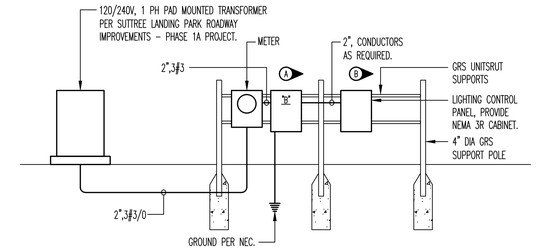
PANEL: B | VOLTAGE: 120/240 | PHASE: 1 | WIRE: 3 | BUS: CU
BUS RATING: 200 AMP | MAIN: YES - 200/2 | ENCLOSURE: NEMA 3R
LUGS/PHASE: #3/0 | ENTRY: TOP | AIC: 10,000 | MOUNTING: SURFACE

#	AMP	POLE	DESCRIPTION	LOAD	A	B	LOAD	DESCRIPTION	POLE	AMP	#
1	20	1	SITE LIGHTING	800.0	5,600.0	-	-	4,800.0	IRRIGATION PUMP	2	80	2
3	20	1	SITE LIGHTING	800.0	-	-	5,600.0	4,800.0		|	|	4
5	20	1	SITE LIGHTING	500.0	500.0	-	-	0.0	SPARE	1	20	6
7	20	2	BENCH LIGHTING	500.0	-	-	500.0	0.0	SPARE	1	20	8
9	|	|	BENCH LIGHTING	500.0	500.0	-	-	0.0	SPARE	1	20	10
11	20	1	SPARE	0.0	-	-	0.0	0.0	SPARE	1	20	12
13	20	1	SPARE	0.0	0.0	-	-	0.0	SPARE	1	20	14
15	20	1	SPARE	0.0	-	-	0.0	0.0	SPARE	1	20	16
17	20	1	SPARE	0.0	0.0	-	-	0.0	SPARE	1	20	18
19	20	1	SPARE	0.0	-	-	0.0	0.0	SPARE	1	20	20
21	20	1	SPARE	0.0	0.0	-	-	0.0	SPARE	1	20	22
23	20	1	SPARE	0.0	-	-	0.0	0.0	SPARE	1	20	24
25	20	1	SPARE	0.0	0.0	-	-	0.0	SPARE	1	20	26
27	20	1	SPARE	0.0	-	-	0.0	0.0	SPARE	1	20	28
29	20	1	SPARE	0.0	0.0	-	-	0.0	SPARE	1	20	30
31	20	1	SPARE	0.0	-	-	0.0	0.0	SPARE	1	20	32
33	20	1	SPARE	0.0	0.0	-	-	0.0	SPARE	1	20	34
35	20	1	SPARE	0.0	-	0.0	-	0.0	SPARE	1	20	36
37	20	1	SPARE	0.0	0.0	-	-	0.0	SPARE	1	20	38
39	20	1	SPARE	0.0	-	-	0.0	0.0	SPARE	2	80	40
41	20	1	SPARE	0.0	0.0	-	-	0.0		|	|	42
				TOTAL	6,600.0	-	6,100.0	VA	1. PANEL SHALL BE SUSE RATED.			
				TOTAL CONNECTED			12,700.0	VA				



SITE RISER "A" DIAGRAM

N.T.S.

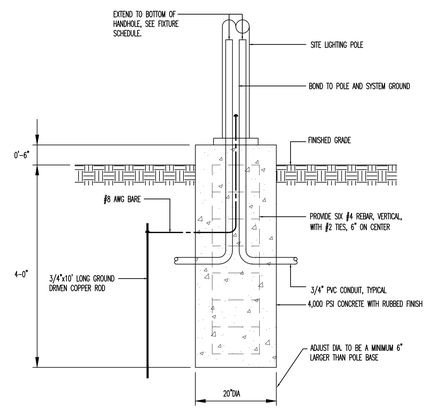


SITE RISER "B" DIAGRAM

N.T.S.

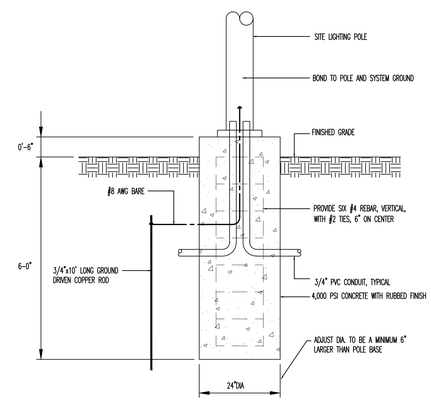
GENERAL NOTES:

1. LIGHTING CONTROL PANEL SHALL BE 8 CIRCUIT WITH BUILT-IN ASTRONOMICAL TIMECLOCK, 32-CHANNEL. USE LC&D CO. MODEL NO. GR1416-1400DTC OR EQUAL.



POLE BASE DETAIL

NO SCALE USE "RG13" & "RG15"



POLE BASE DETAIL

NO SCALE USE "RG14"

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike
WWW.CANNON-CANNON.COM | Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

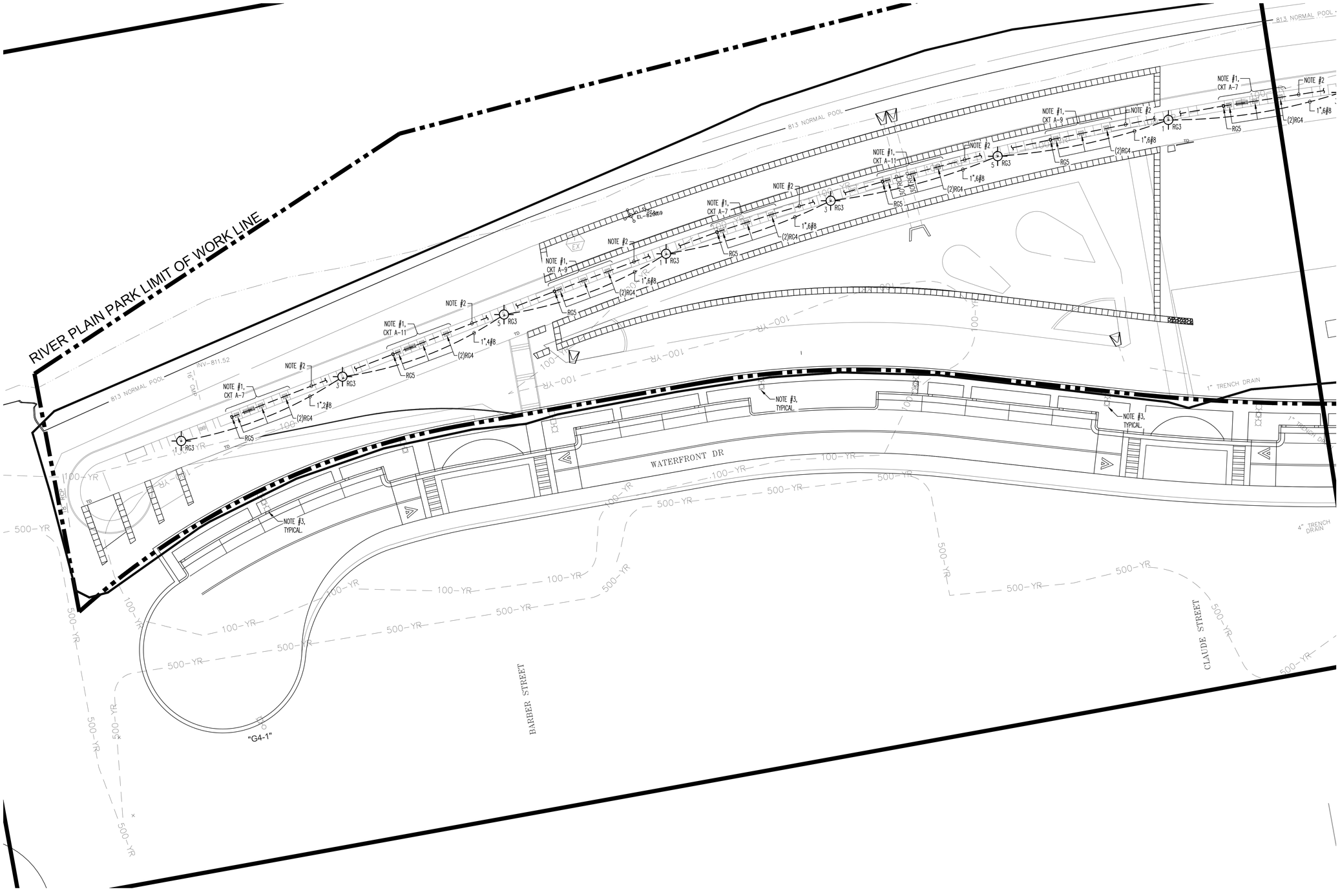
LEGEND, SCHEDULES & DETAILS

FACILITY SYSTEMS CONSULTANTS, LLC
713 South Central Street, Suite 101
Knoxville, Tennessee 37902
Phone: (865) 246-0144
Fax: (865) 246-1084

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C. L.T.H.	C.R.
DRAWN S.A.H.	

E100-A1

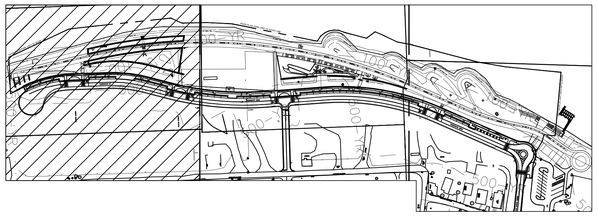
811 Know what's below Call before you dig



SITE ELECTRICAL PLAN – SECTION A

SCALE: 1"=20'-0"

REFERENCE NOTES:
1. SEE ENLARGED PLAN ON SHEET E104 FOR WIRING. TYPICAL OF ALL BENCH AREAS.
2. 1",4#10.
3. LIGHTING ALONG THIS WALKWAY INCLUDED IN SUTTREE LANDING PARK ROADWAY IMPROVEMENTS, PHASE 1A.



KEY PLAN

811
Know what's below
Call before you dig

FACILITY SYSTEMS CONSULTANTS, LLC
713 South Central Street, Suite 101
Knoxville, Tennessee 37902
Phone: (865) 246-0144
Fax: (865) 246-1064

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

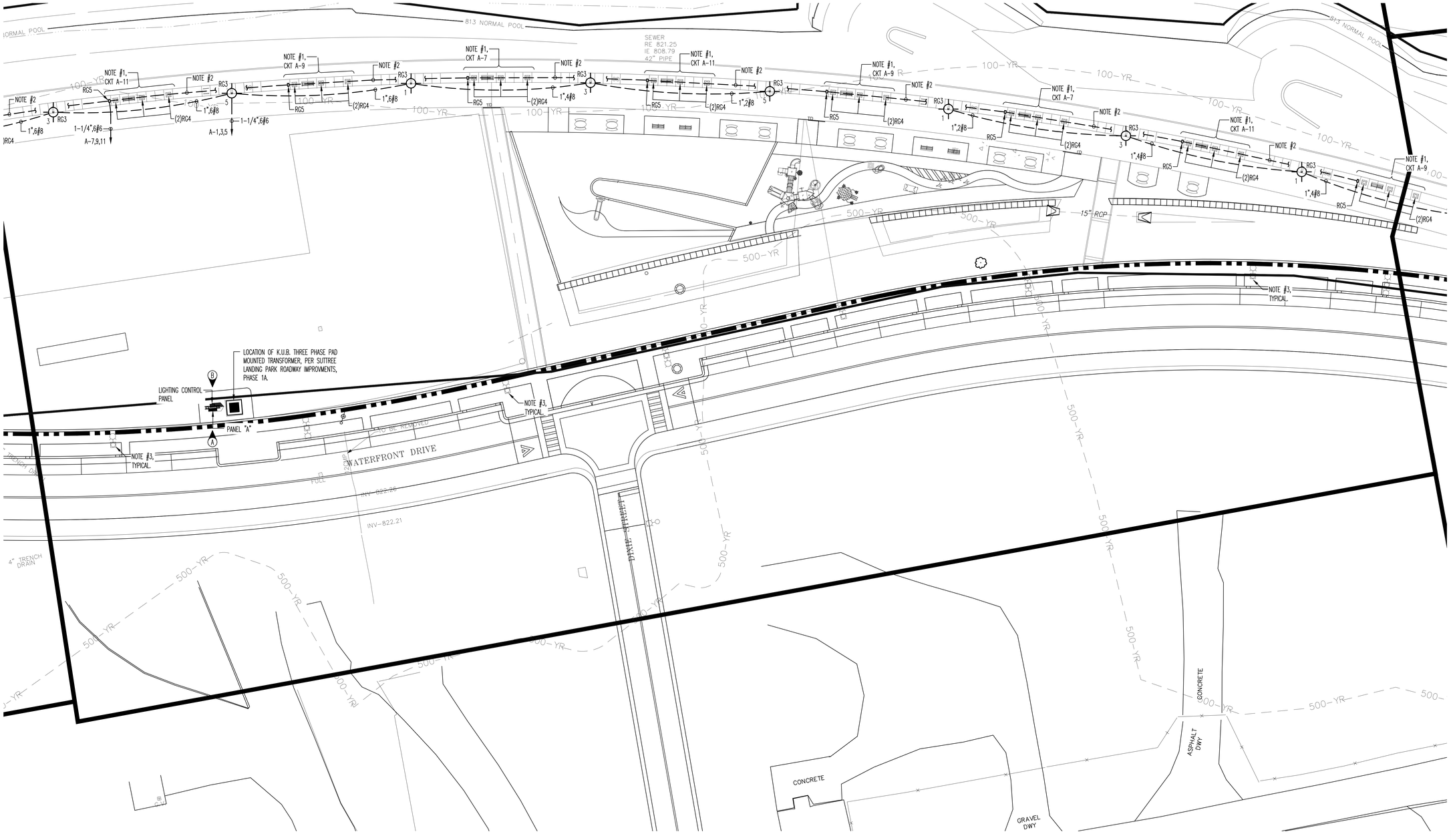
PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

SITE ELECTRICAL PLAN – SECTION A

LARRY T. HEADLEY REGISTERED ENGINEER NO. 102 STATE OF TENNESSEE

CCI PROJECT NO.	00244-0014	
DRAWING DATE	JANUARY 7, 2015	
P.I.C.	L.T.H.	C.R.
DRAWN	S.A.H.	

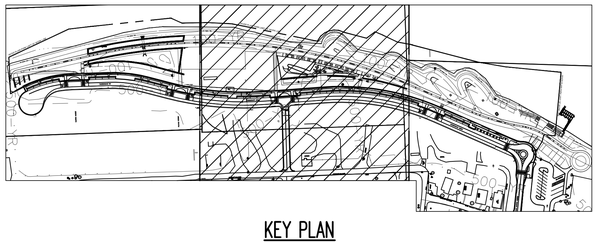
E101-A1



SITE ELECTRICAL PLAN – SECTION B

SCALE: 1"=20'-0"

REFERENCE NOTES:
1. SEE ENLARGED PLAN ON SHEET E104 FOR WIRING. TYPICAL OF ALL BENCH AREAS.
2. 1",4#10
3. LIGHTING ALONG THIS WALKWAY INCLUDED IN SUTTREE LANDING PARK ROADWAY IMPROVEMENTS, PHASE 1A.



KEY PLAN

811
Know what's below
Call before you dig

FACILITY SYSTEMS CONSULTANTS, LLC
713 South Central Street, Suite 101
Knoxville, Tennessee 37902
Phone: (865) 246-0164
Fax: (865) 246-1084

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

SITE ELECTRICAL PLAN – SECTION B

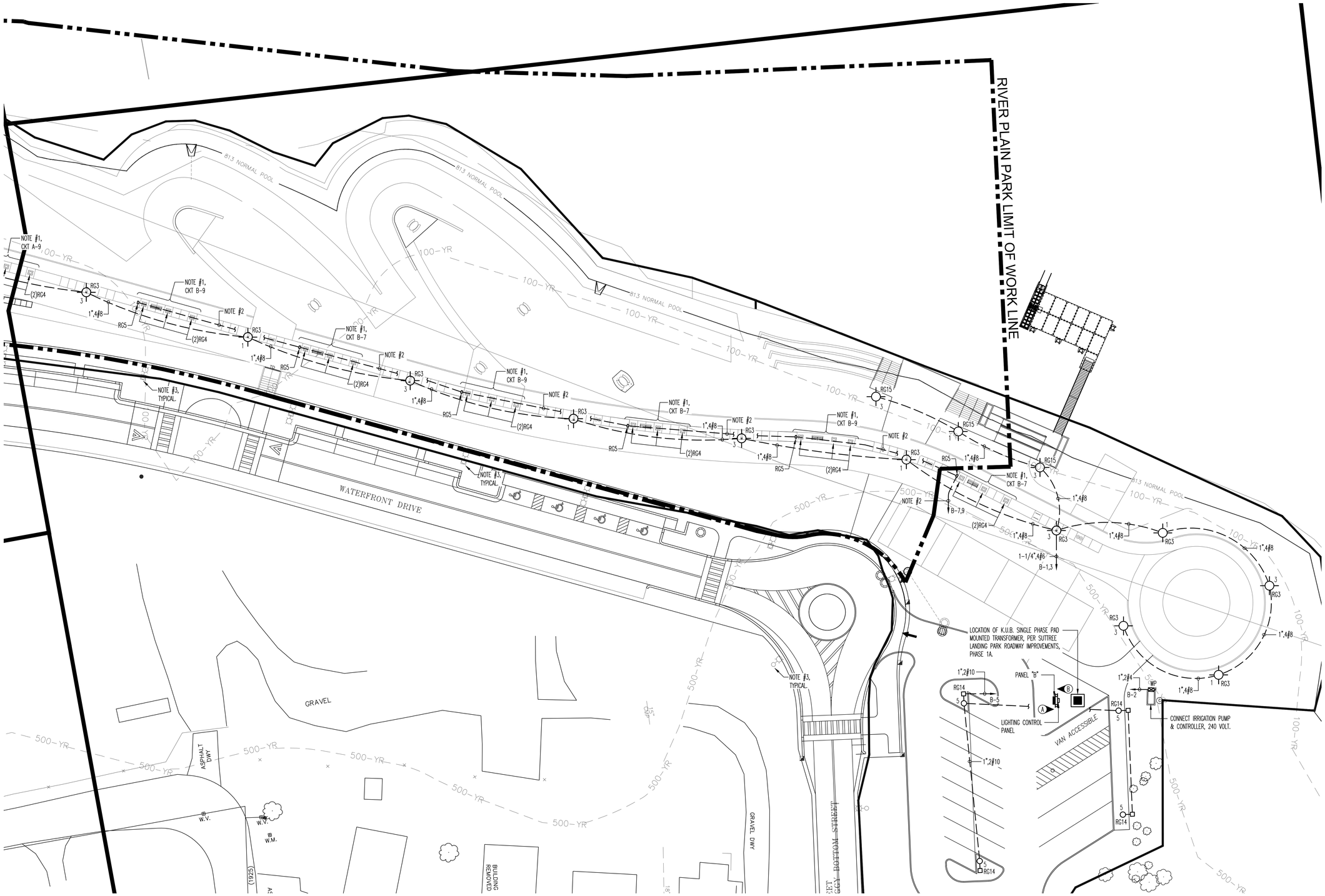
LARRY T. HEDDLE REGISTERED ENGINEER AGRICULTURE STATE OF TENNESSEE

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C. L.T.H.	C.R.
DRAWN S.A.H.	

E102-A1

SITE ELECTRICAL NOTES

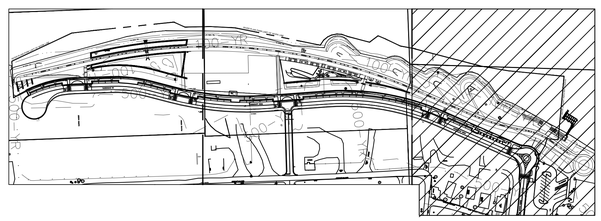
1. PROPOSED LOCATION OF NW UTILITY CO. POWER POLE
2. PROVIDE CONDUIT FOR UNDERGROUND SINGLE PHASE PRIMARY AS DIRECTED BY K.U.B. TO AND UP POLE.
3. PROPOSE LOCATION OF NEW K.U.B. SINGLE PHASE PAD MOUNTED TRANSFORMER. PROVIDE VAULT AS DIRECTED.
4. UNDERGROUND SECONDARY, SEE PAVILION RISER DIAGRAM.
5. 4" FOR TELEPHONE.



SITE ELECTRICAL PLAN – SECTION C

SCALE: 1"=20'-0"

REFERENCE NOTES:
1. SEE ENLARGED PLAN ON SHEET E104 FOR WIRING. TYPICAL OF ALL BENCH AREAS.
2. 1"3#10.
3. LIGHTING ALONG THIS WALKWAY INCLUDED IN SUTTREE LANDING PARK ROADWAY IMPROVEMENTS, PHASE 1A.



KEY PLAN

811 Know what's below Call before you dig

FACILITY SYSTEMS CONSULTANTS, LLC
710 South Central Street, Suite 101
Knoxville, Tennessee 37902
Phone: (865) 246-0144
Fax: (865) 246-1084

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

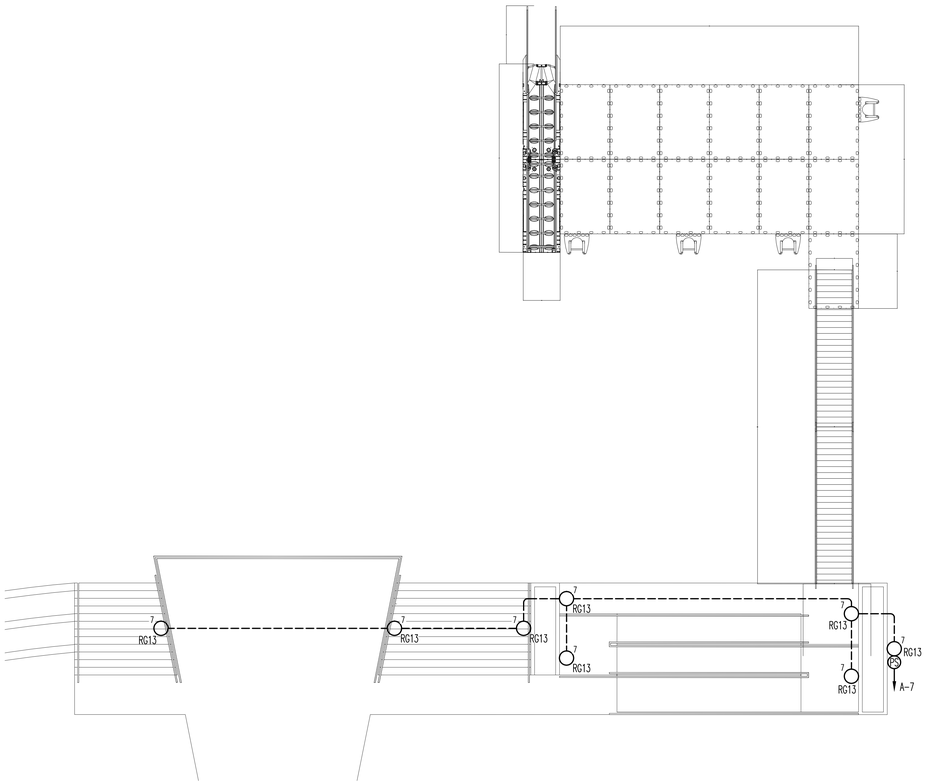
PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

SITE ELECTRICAL PLAN – SECTION C

LARRY T. HEADLEY REGISTERED ENGINEER STATE OF TENNESSEE 101 19

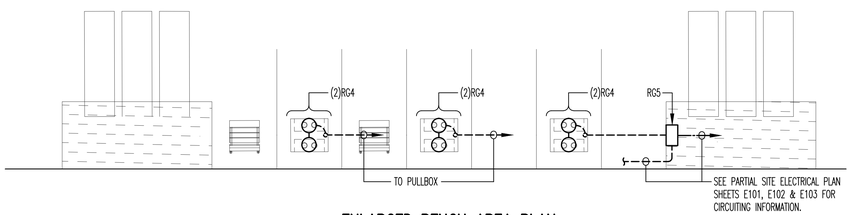
CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C. L.T.H.	C.R.
DRAWN S.A.H.	

E103-A1



RAMP LIGHTING PLAN

SCALE: 1/8"=1'-0"



ENLARGED BENCH AREA PLAN

SCALE: 1/8"=1'-0"

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:

THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:

SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

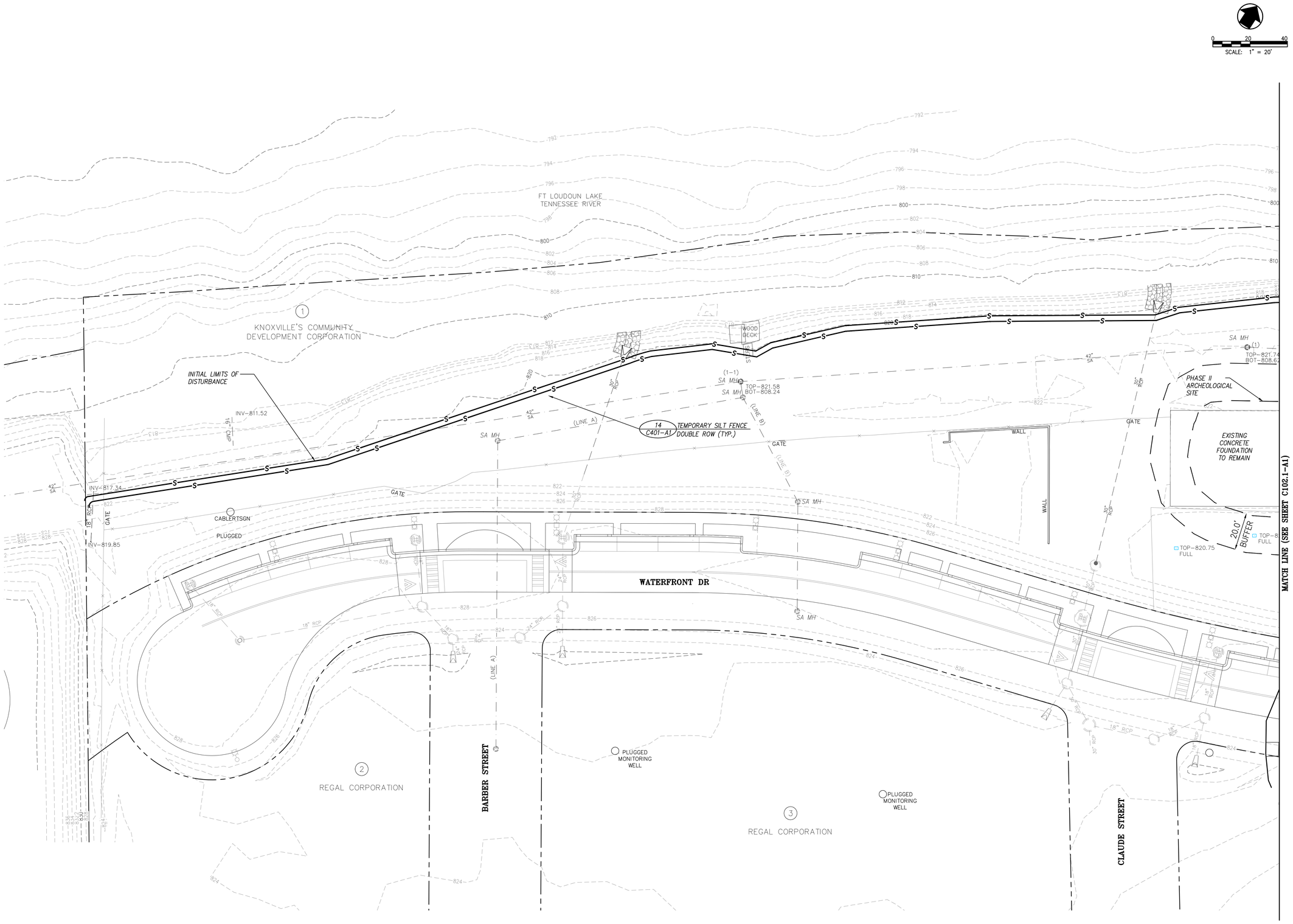
PAVILION LIGHTING PLAN

FACILITY SYSTEMS CONSULTANTS, LLC
713 South Central Street, Suite 101
Knoxville, Tennessee 37902
Phone: (865) 246-0164
Fax: (865) 246-1084

CCI PROJECT NO.	00244-0014	
DRAWING DATE	JANUARY 7, 2015	
P.I.C.	L.T.H.	C.R.
DRAWN	S.A.H.	

E104-A1

811
Know what's below
Call before you dig



NOTES:

1. THE BOUNDARY AND TOPOGRAPHIC DATA SHOWN WAS PROVIDED BY PROVIDED BY VAUGHN & MELTON.
2. THE DISTURBED AREA IS APPROXIMATELY 8.25± ACRES. THE TOTAL SITE AREA IS APPROXIMATELY 7.4± ACRES.
3. UNLESS NOTED OTHERWISE. THE PROPOSED GRADES SHOWN ON THESE DRAWINGS ARE FINISH GRADE. EXISTING AND PROPOSED CONTOURS ARE SHOWN AT 2 FT. INTERVALS.
4. EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK AND THE STORMWATER POLLUTION PREVENTION PLAN. THE DEVICES SHOWN ON THE DRAWINGS ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED.
5. THE SITE SHALL BE CLEARED AND GRUBBED WITHIN THE LIMITS OF EXCAVATION. COMPLETELY DISPOSE OF ALL MATERIALS RESULTING FROM CLEARING AND GRUBBING OFF-SITE OR ON-SITE AT A LOCATION DETERMINED BY THE OWNER.
6. SHALL BE REMOVED TO A DEPTH OF 2 FT BELOW THE SUBGRADE. ROCK SHALL BE SCARIFIED TO A DEPTH OF 1 FT BELOW SUBGRADE.
7. STRIP TOPSOIL TO A MINIMUM DEPTH OF 8-IN. AND TEMPORARILY STOCKPILE EXCAVATED MATERIALS. INSTALL SILT FENCE OR OTHER APPROPRIATE EROSION CONTROL STRUCTURES ON THE DOWN HILL SIDE OF THE STOCKPILE.
8. PROOF ROLL AREAS TO RECEIVE FILL AND PLACE FILL IN ACCORDANCE WITH THE SITE SPECIFIC REPORT OF GEOTECHNICAL EXPLORATION.
9. ALL NEWLY GRADED EARTHEN AREAS THAT ARE NOT TO BE PAVED, STABILIZED, OR SODDED SHALL BE SEEDED, FERTILIZED, AND MULCHED WITHIN 30 DAYS OF ATTAINMENT OF FINAL GRADE.
10. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS OR POND ON-SITE. PROVIDE NECESSARY MEASURES TO KEEP THE SITE FREE-DRAINING.
11. NO SLOPE SHALL EXCEED 2:1 (H:V). ALL SLOPES STEEPER THAN 3:1 TO RECEIVE EXTENDED TERM EROSION CONTROL BLANKET.
12. TO PREVENT EROSION, ALL SLOPES 2:1 OR GREATER ARE TO BE TRACKED WITH A DOZER TO FORM CLEAT MARKS PARALLEL TO THE CONTOUR.
13. APPLY TEMPORARY SEEDING WHENEVER GRADING OPERATIONS ARE HALTED FOR OVER 14 DAYS AND FINAL GRADING OF EXPOSED SURFACE IS TO BE COMPLETED WITHIN ONE YEAR. APPLY TEMPORARY SEEDING TO ALL SOIL STOCKPILES.
14. APPLY PERMANENT SEEDING WHENEVER GRADING OPERATIONS ARE COMPLETED AND ALL CONSTRUCTION OPERATIONS WILL NOT IMPACT THE DISTURBED AREA. APPLY PERMANENT SEEDING TO ALL NON-CONSTRUCTION AREAS WHICH SHOW SIGNS OF EXCESSIVE EROSION.

LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
885	PROPOSED CONTOUR (1 FT.)
897.50 +	PROPOSED SPOT ELEVATION
A / L104-A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
	DIVERSION BERM
	DIRECTIONAL FLOW ARROW
	TEMPORARY INLET PROTECTION
CD	TEMPORARY ROCK CHECK DAM
S	TEMPORARY SEDIMENT BARRIER

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

INITIAL EROSION CONTROL PLAN

JEFF BECKETT REGISTERED ENGINEER NO. 101890 STATE OF TENNESSEE
1-7-15

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

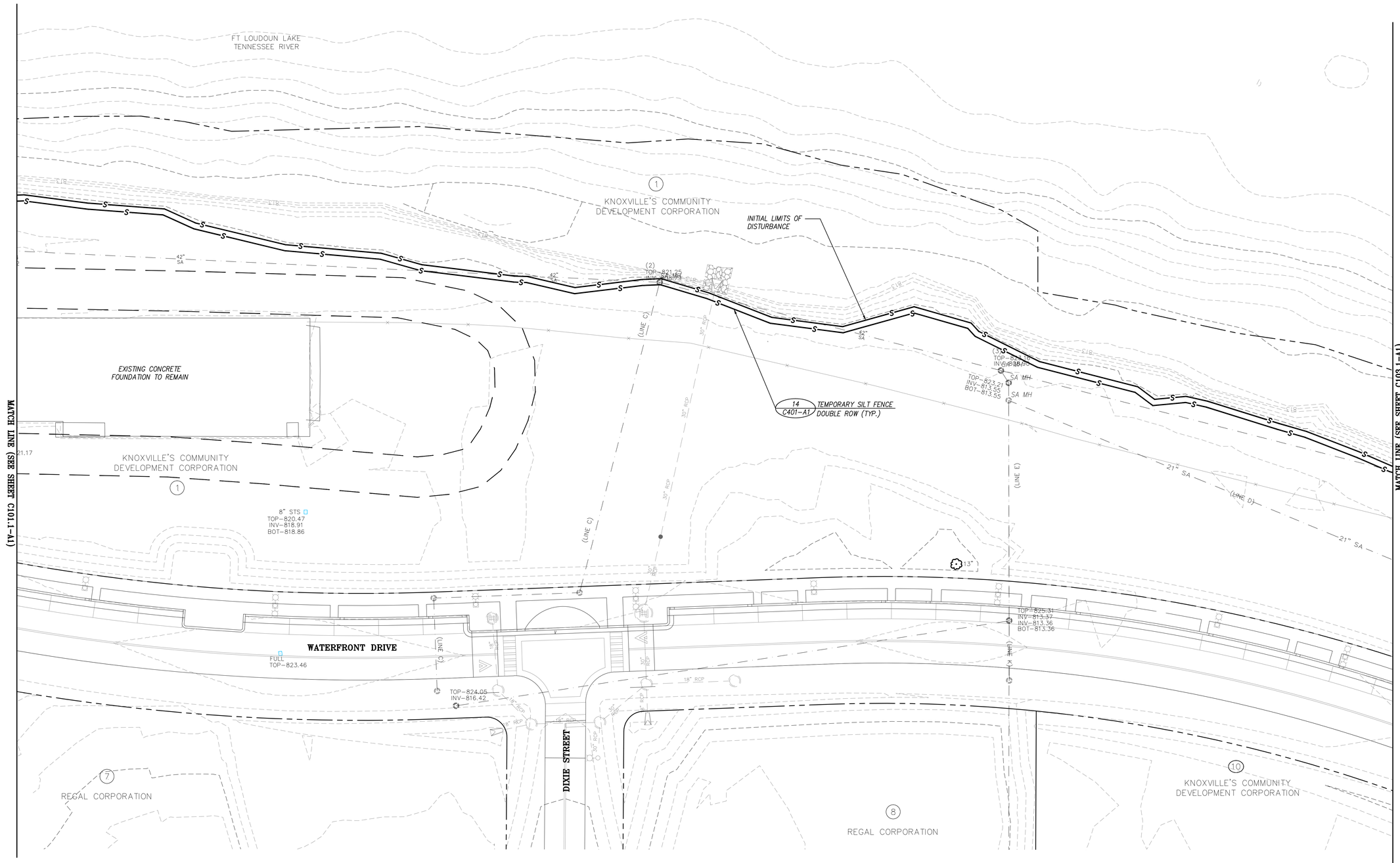
C101.1-A1

811
Know what's below
Call before you dig

NOTES:

1. REFER TO SHEET C101.1-A1 FOR GENERAL NOTES.

0 20 40
SCALE: 1" = 20'



LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
885	PROPOSED CONTOUR (1 FT.)
897.50 +	PROPOSED SPOT ELEVATION
A / L104-A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
	DIVERSION BERM
	DIRECTIONAL FLOW ARROW
	TEMPORARY INLET PROTECTION
CDF	TEMPORARY ROCK CHECK DAM
S	TEMPORARY SEDIMENT BARRIER

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

INITIAL EROSION CONTROL PLAN

STATE OF TENNESSEE
JEFF BECKER
REGISTERED ENGINEER
No. 107320
1-7-15

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

C102.1-A1

811
Know what's below
Call before you dig

NOTES:

1. REFER TO SHEET C101.1-A1 FOR GENERAL NOTES.

0 20 40
SCALE: 1" = 20'

MATCH LINE (SEE SHEET C103.1-A1)

FT LOUDOUN LAKE
TENNESSEE RIVER

LIMITS OF DISTURBANCE

SA MH

21" SA

KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION

WATERFRONT DRIVE

(LINE F)

(5) TOP-824.58 INV-809.54

SA MH

INV-825.29

INV-823.50

INV-824.13

INV-823.86

INV-823.44

INV-823.71

INV-821.63

TO BE REMOVED 14" CHERRY

TO BE REMOVED 16" CHERRY

S38°44'31"E 5.91'

INV-821.93

S1544 EL-823.71

(3 INV)

GRAVEL

KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION

N74°20'35"E

S1038 EL-823.64

KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION

EXPOSED

14 C401-A1 TEMPORARY SILT FENCE DOUBLE ROW (TYP.)

MATCH LINE (THIS SHEET)

MATCH LINE (THIS SHEET)

FOGGY BOTTOM STREET

– L410-A1 TREE PROTECTION FENCE (TYP.)

15 C401-A1 TEMPORARY CONSTRUCTION ENTRANCE (TYP.)

S1040 EL-825.16

S1039 EL-824.74

KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION

TOP-827.58 INV-817.53

S1690 EL-827.57

TOP-828.92 INV-815.32

S1041 EL-826.79

BUS PARKING

JOHN

811
Know what's below
Call before you dig

LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
885	PROPOSED CONTOUR (1 FT.)
897.50 +	PROPOSED SPOT ELEVATION
A L104-A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
	DIVERSION BERM
	DIRECTIONAL FLOW ARROW
	TEMPORARY INLET PROTECTION
	TEMPORARY ROCK CHECK DAM
S	TEMPORARY SEDIMENT BARRIER

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

INITIAL EROSION CONTROL PLAN

JEFF RECKER
LICENSED
1-7-15
STATE OF TENNESSEE

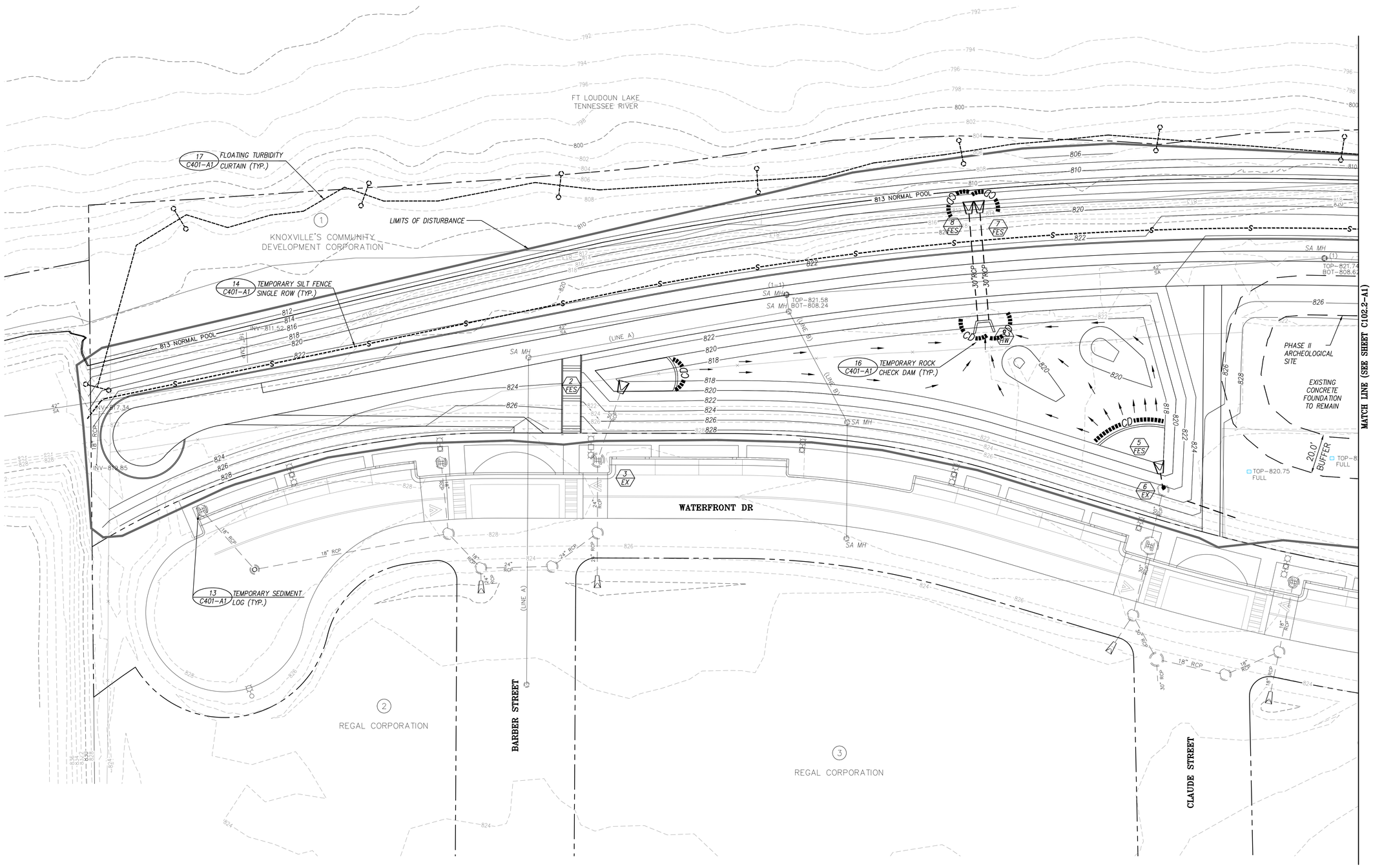
CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

C103.1-A1

NOTES:

1. REFER TO SHEET C101.1-A1 FOR GENERAL NOTES.

0 20 40
SCALE: 1" = 20'



LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
885	PROPOSED CONTOUR (1 FT.)
897.50 +	PROPOSED SPOT ELEVATION
A L104-A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
	DIVERSION BERM
	DIRECTIONAL FLOW ARROW
	TEMPORARY INLET PROTECTION
CD	TEMPORARY ROCK CHECK DAM
S	TEMPORARY SEDIMENT BARRIER

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

INTERMEDIATE EROSION CONTROL PLAN

JEFF BECKETT REGISTERED ENGINEER 1-7-15 STATE OF TENNESSEE

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

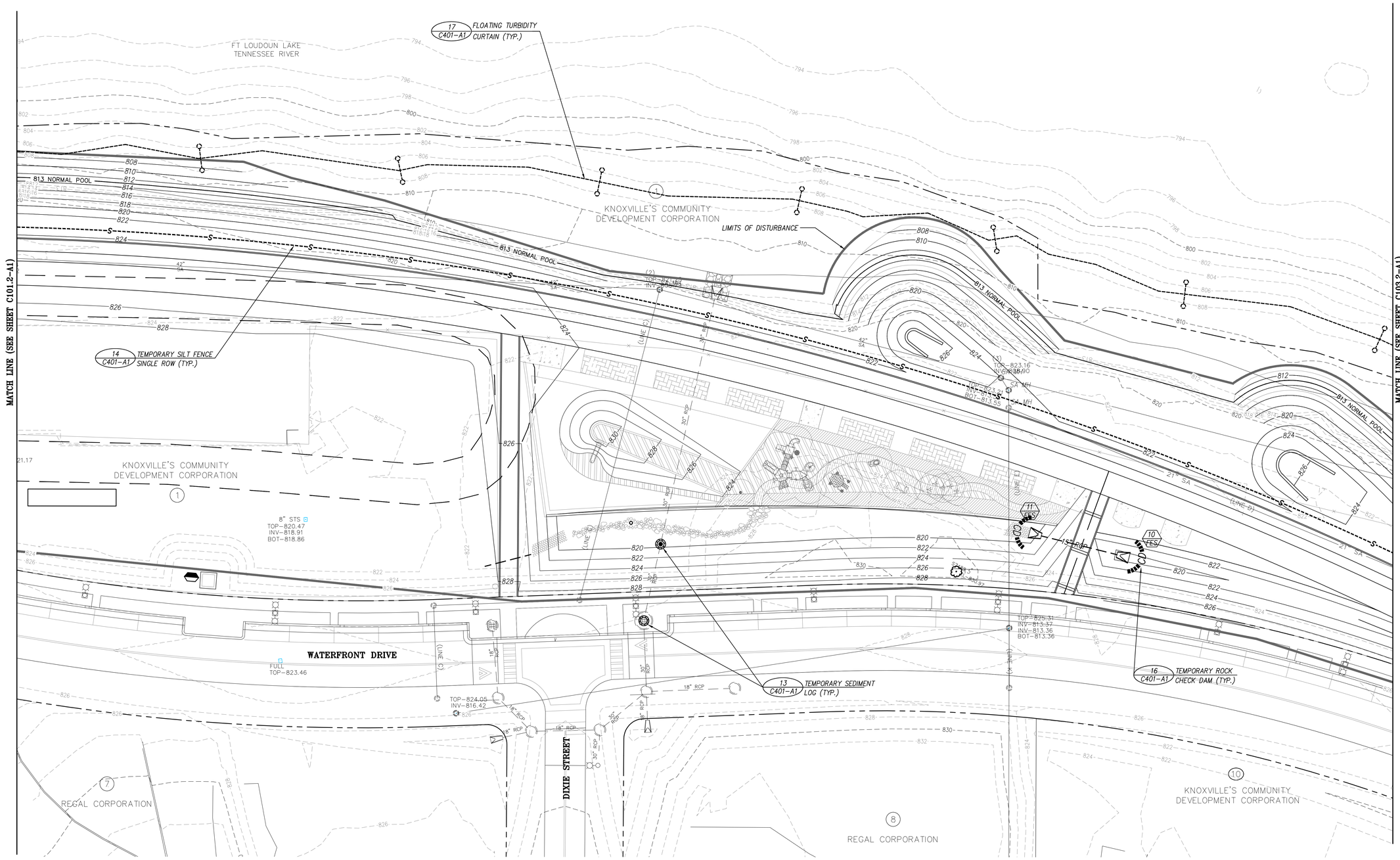
C101.2-A1

811 Know what's below Call before you dig

NOTES:

1. REFER TO SHEET C101.1–A1 FOR GENERAL NOTES.

0 20 40
SCALE: 1" = 20'



LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
885	PROPOSED CONTOUR (1 FT.)
897.50 +	PROPOSED SPOT ELEVATION
A L104–A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
	DIVERSION BERM
	DIRECTIONAL FLOW ARROW
	TEMPORARY INLET PROTECTION
	TEMPORARY ROCK CHECK DAM
—S—	TEMPORARY SEDIMENT BARRIER

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215–2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

INTERMEDIATE EROSION CONTROL PLAN

JEFF BELCHER REGISTERED ENGINEER STATE OF TENNESSEE 1-7-15

CCI PROJECT NO.	00244–0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

C102.2–A1

811 Know what's below Call before you dig

NOTES:

1. REFER TO SHEET C101.1–A1 FOR GENERAL NOTES.

SCALE: 1" = 20'

LIMITS OF DISTURBANCE

17 C401–A1 FLOATING TURBIDITY CURTAIN (TYP.)

16 C401–A1 TEMPORARY ROCK CHECK DAM (TYP.)

14 C401–A1 TEMPORARY SILT FENCE SINGLE ROW (TYP.)

13 C401–A1 TEMPORARY SEDIMENT LOG (TYP.)

FT LOUDOUN LAKE
TENNESSEE RIVER

813 NORMAL POOL

WATERFRONT DRIVE

PHILLIPS AVENUE

FOGGY BOTTOM STREET

GRAVEL

TREE PROTECTION (TYP.)
SEE LANDSCAPE PLANS

MATCH LINE (SEE SHEET C101.2–A1)

LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
885	PROPOSED CONTOUR (1 FT.)
897.50 +	PROPOSED SPOT ELEVATION
A L104–A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
	DIVERSION BERM
	DIRECTIONAL FLOW ARROW
	TEMPORARY INLET PROTECTION
CD	TEMPORARY ROCK CHECK DAM
S	TEMPORARY SEDIMENT BARRIER

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215–2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

INTERMEDIATE EROSION CONTROL PLAN

JEFF BECKETT REGISTERED ENGINEER 1-7-15 STATE OF TENNESSEE

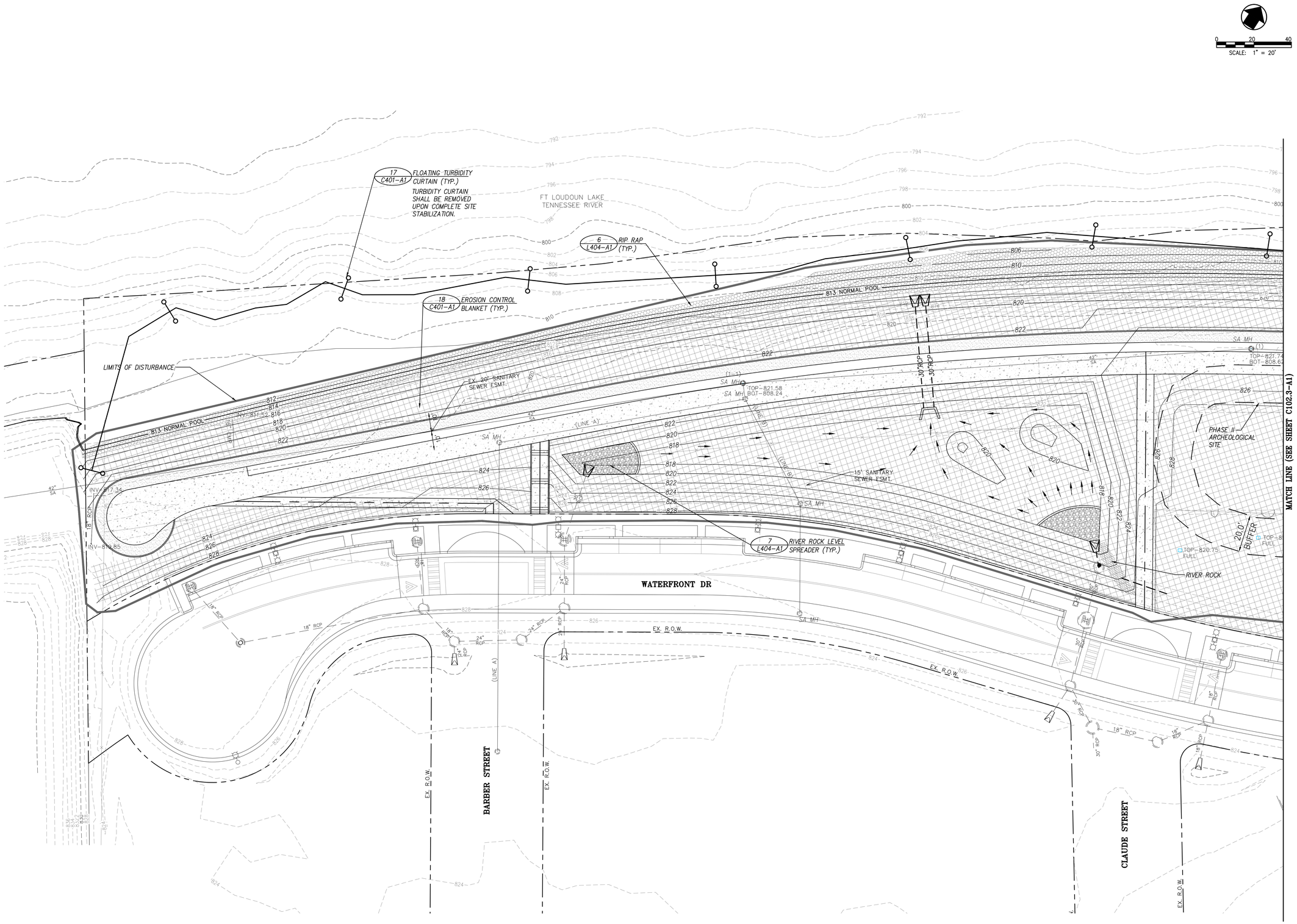
CCI PROJECT NO.	00244–0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

C103.2–A1

811 Know what's below Call before you dig

NOTES:

1. REFER TO SHEET C101.1–A1 FOR GENERAL NOTES.



LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
885	PROPOSED CONTOUR (1 FT.)
897.50 +	PROPOSED SPOT ELEVATION
A L104–A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
	DIVERSION BERM
	DIRECTIONAL FLOW ARROW
	TEMPORARY INLET PROTECTION
CD	TEMPORARY ROCK CHECK DAM
S	TEMPORARY SEDIMENT BARRIER
	EROSION CONTROL BLANKET
	RIP RAP

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215–2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

FINAL EROSION CONTROL PLAN

JEFF BECKETT
LICENSED
PROFESSIONAL ENGINEER
STATE OF TENNESSEE
1-7-15

CCI PROJECT NO.	00244–0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

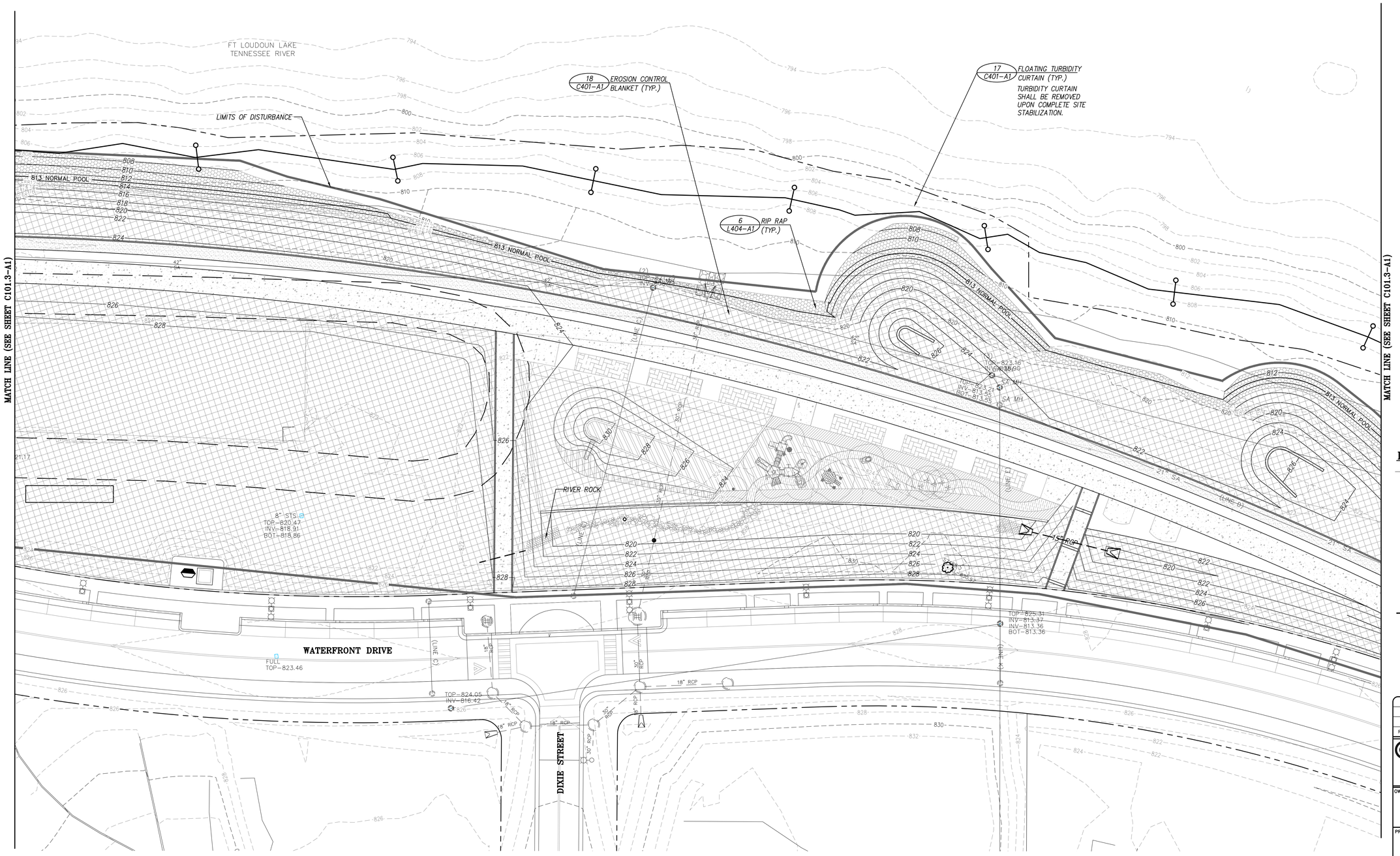
C101.3–A1

811
Know what's below
Call before you dig

NOTES:

1. REFER TO SHEET C101.1–A1 FOR GENERAL NOTES.

0 20 40
SCALE: 1" = 20'



MATCH LINE (SEE SHEET C101.3–A1)

LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
885	PROPOSED CONTOUR (1 FT.)
897.50	PROPOSED SPOT ELEVATION
A / L104–A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
	DIVERSION BERM
	DIRECTIONAL FLOW ARROW
	TEMPORARY INLET PROTECTION
CD	TEMPORARY ROCK CHECK DAM
S	TEMPORARY SEDIMENT BARRIER
	EROSION CONTROL BLANKET
	RIP RAP

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.9555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215–2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

FINAL EROSION CONTROL PLAN

JEFF BECKER
REGISTERED ENGINEER
No. 110 STATE OF TENNESSEE
1-7-15

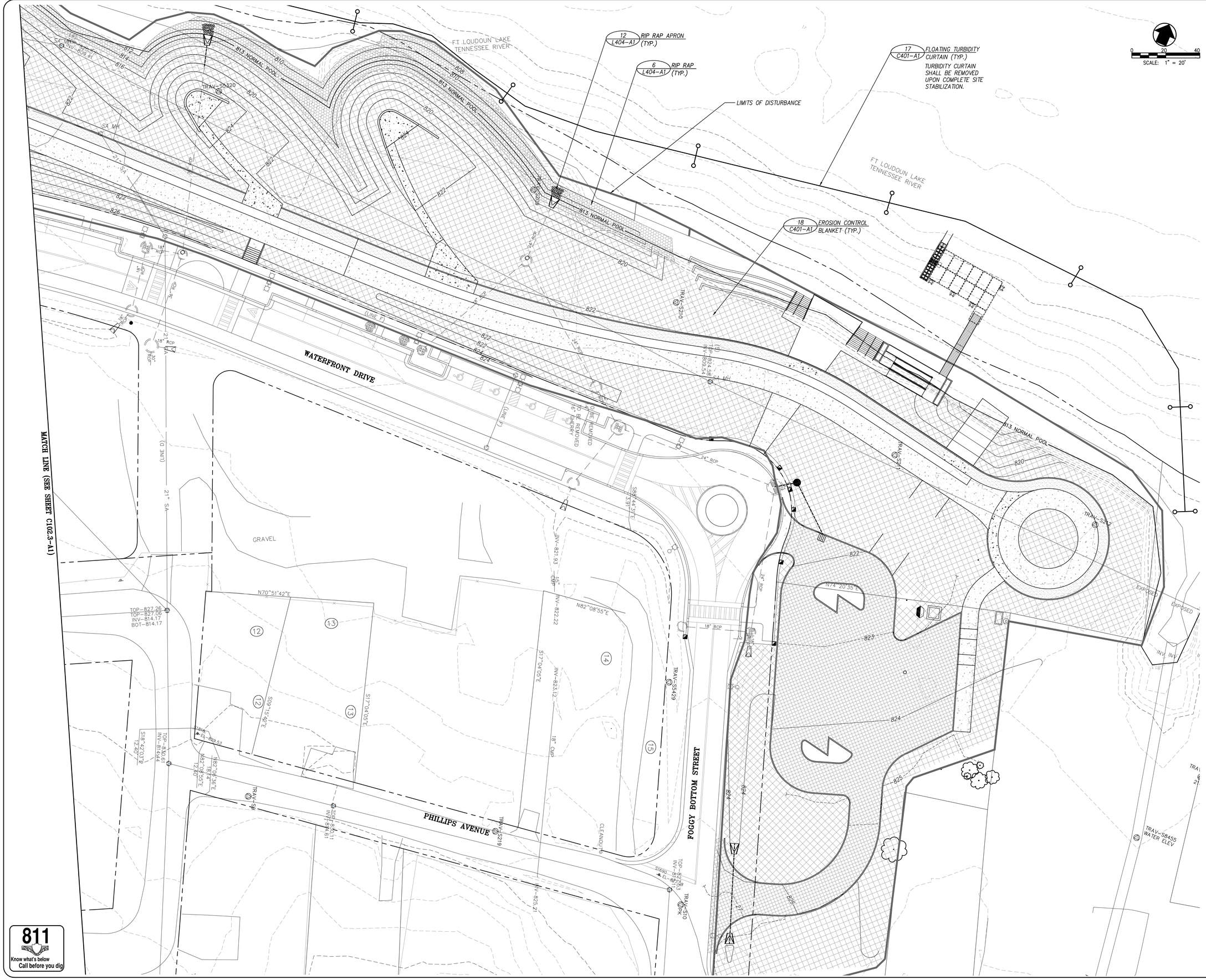
CCI PROJECT NO.	00244–0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

C102.3–A1

811
Know what's below
Call before you dig

NOTES:

1. REFER TO SHEET C101.1-A1 FOR GENERAL NOTES.



LEGEND

884	EXISTING CONTOUR
884	PROPOSED CONTOUR
885	PROPOSED CONTOUR (1 FT.)
897.50	PROPOSED SPOT ELEVATION
A L104-A1	DETAIL REFERENCE (DETAIL NO./SHEET NO.)
	DIVERSION BERM
	DIRECTIONAL FLOW ARROW
	TEMPORARY INLET PROTECTION
	TEMPORARY ROCK CHECK DAM
S	TEMPORARY SEDIMENT BARRIER
	EROSION CONTROL BLANKET
	RIP RAP

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

FINAL EROSION CONTROL PLAN

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

1-7-15

C103.3-A1

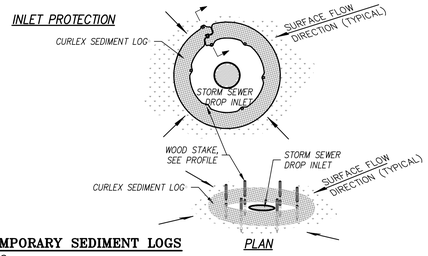
811 Know what's below Call before you dig

NOTES:

1. SEDIMENT CONTROL DEVICES SHALL BE CURLEX SEDIMENT LOG, AS MANUFACTURED BY AMERICAN EXCELSIOR COMPANY, OR EQUAL.
2. WHERE EROSION CONTROL IS NEEDED BUT STAKING IS NOT PRACTICAL, SECURE ROLL USING SANDBAGS AT 2' C-C SPACING.

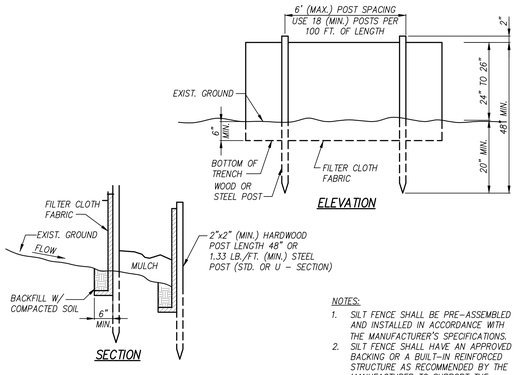
	TYPE I	TYPE II	TYPE III	TYPE IV
NORMAL DIAMETER	50 CM (20 IN)	30 CM (12 IN)	23 CM 9 IN)	15 CM (6 IN)
LENGTH	3.05 M (10 FT.)	3.05 M (10 FT.)	7.62 M (25 FT.)	7.62 M (25 FT.)
WEIGHT (±10%)	13.62 KG (30 LB)	9.08 KG (20 LB)	11.35 KG (25 LB)	5.45 KG (12 LB)
NET OPENING (HEXAGONAL-SHAPED)	2.5 CM (1 IN)	2.5 CM (1 IN)	1.9 CM (.75 IN)	1.3 CM (.5 IN)

INLET PROTECTION



PLAN

13 / C101-A1 **TEMPORARY SEDIMENT LOGS**
N.T.S.



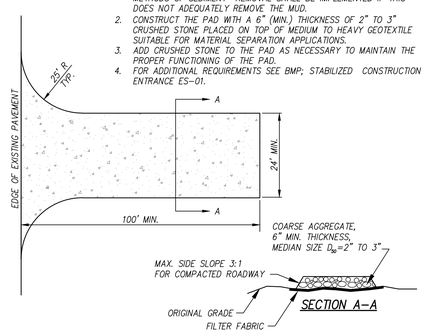
NOTES:

1. SILT FENCE SHALL BE PRE-ASSEMBLED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
2. SILT FENCE SHALL HAVE AN APPROVED BACKING OR A BUILT-IN REINFORCED STRUCTURE AS RECOMMENDED BY THE MANUFACTURER TO SUPPORT THE GEOTEXTILE FABRIC.
3. FOR ADDITIONAL REQUIREMENTS SEE BMP; SILT FENCE ES-14-1.

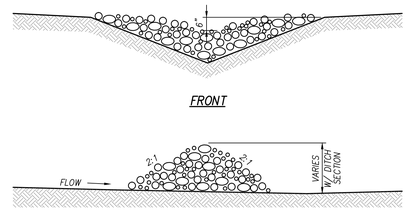
14 / C101-A1 **TEMPORARY SILT FENCE**
N.T.S.

NOTES:

1. THE PURPOSE OF THE STABILIZED CONSTRUCTION ENTRANCE IS TO AID THE CONTRACTOR IN ELIMINATING TRACKING OF MUD ONTO PUBLIC STREETS. THIS DETAIL DOES NOT LIMIT THIS RESPONSIBILITY. OTHER METHODS OF SEDIMENT REMOVAL SHALL BE IMPLEMENTED IF THIS DOES NOT ADEQUATELY REMOVE THE MUD.
2. CONSTRUCT THE PAD WITH A 6" (MIN.) THICKNESS OF 2" TO 3" CRUSHED STONE PLACED ON TOP OF MEDIUM TO HEAVY GEOTEXTILE SUITABLE FOR MATERIAL SEPARATION APPLICATIONS.
3. ADD CRUSHED STONE TO THE PAD AS NECESSARY TO MAINTAIN THE PROPER FUNCTIONING OF THE PAD.
4. FOR ADDITIONAL REQUIREMENTS SEE BMP; STABILIZED CONSTRUCTION ENTRANCE ES-01.



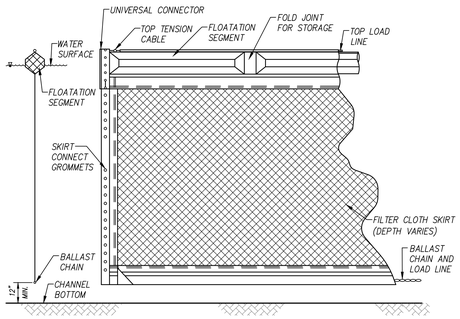
15 / C101-A1 **TEMPORARY CONSTRUCTION ENTRANCE**
N.T.S.



NOTES:

1. STONE SHALL BE 2"-3".
2. CONSTRUCT, MAINTAIN, AND REMOVE IN ACCORDANCE WITH THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK.

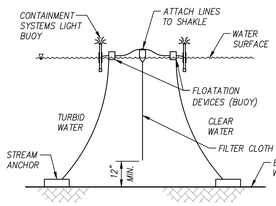
16 / C201-A1 **TEMPORARY ROCK CHECK DAM**
N.T.S.



FLOATING TURBIDITY CURTAIN

TYPICAL ANCHOR SECTION NOTES:

1. AUTOMATIC FLASHING LIGHT BUOY TO BE ON AT DUSK AND OFF AT DAWN, USED IN NAVIGABLE CHANNELS ONLY, AND SPACED 100' ON CENTER.
2. FABRIC SECTIONS SHALL BE CONNECTED END TO END WITH A MINIMAL 5/8 INCH DIAMETER POLYPROPYLENE ROPE. FABRIC SHALL BE SEAMED TOGETHER IN A MANNER THAT RETAINS THE OVERALL TENSILE STRENGTH.



TYPICAL ANCHORING SECTION

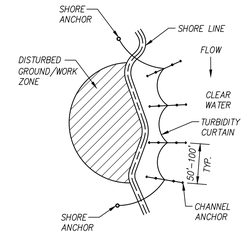
17 / C201-A1 **FLOATING TURBIDITY CURTAIN**
N.T.S.

PHYSICAL PROPERTIES OF TURBIDITY CURTAIN FABRIC

PHYSICAL PROPERTY	MINIMAL REQUIREMENT
THICKNESS, MILS	45
WEIGHT, OZ./SQ. YD	18
GRAB TENSILE STR, LBS	300
UV INHIBITOR	MUST BE INCLUDED
APPARENT OPENING SIZE (AOS)	FINER THAN OR EQUAL TO #70 US SS

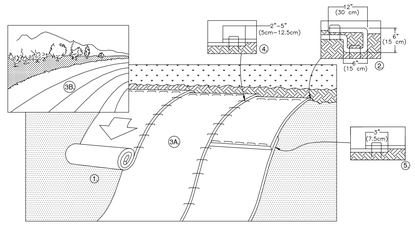
FLOATING TURBIDITY CURTAIN (FTC) GENERAL NOTES:

1. FTC'S SHOULD BE USED TO ISOLATE ACTIVE CONSTRUCTION AREAS WITHIN OR ADJACENT TO A BODY OF WATER TO MINIMIZE THE MIGRATION OF SILT LADEN WATER OUT OF THE CONSTRUCTION ZONE.
2. FTC'S SHALL NOT BE INSTALLED PERPENDICULAR ACROSS THE MAIN FLOW OF A BODY OF MOVING WATER.
3. FTC'S SHALL NOT BE USED WHERE THE ANTICIPATED FLOW VELOCITIES WILL EXCEED 5 FT/SEC.
4. FTC'S SHALL BE ANCHORED TO PREVENT DRIFT SHOREWARD AND DOWNSTREAM. ANCHORAGE SHALL BE INSTALLED ON BOTH SHORE AND STREAM SIDE. CURTAINS SHALL BE INSTALLED AS CLOSE TO PROJECT SITE AS POSSIBLE. BARRIERS SHOULD BE A BRIGHT COLOR (YELLOW OR ORANGE) THAT WILL ATTRACT THE ATTENTION OF NEARBY BOATERS.
5. SHALL ANCHORS SHALL CONSIST OF A POST WITH DEADMAN OR APPROVED. EQUAL. STREAM ANCHORS SHALL BE OF SUFFICIENT SIZE TO STABILIZE THE BARRIER WITH NUMBER AND SPACING DEPENDENT ON WATERWAY VELOCITIES AND MANUFACTURER'S RECOMMENDATIONS.
6. IN SHALLOW WATER (2 FEET OF DEPTH OR LESS) A TURBIDITY CURTAIL MAY BE INSTALLED ON STAKES DRIVEN INTO THE BED OF THE WATER BODY.
7. DESIGN OF CURTAIN AND ANCHORAGE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. FILTER CLOTH SKIRT SHOULD BE ABLE TO WITHSTAND THE FORCES IMPARTED ON IT; WIND/STREAM VELOCITY. FABRIC SHALL BE MADE OF A NON DETERIORATING MATERIAL WHICH ALLOWS WATER TO PASS WHILE STILL RETAINING SEDIMENT.
8. THE FTC AND ADJACENT WORK AREAS SHALL NOT BE DISTURBED 12 HOURS PRIOR TO REMOVAL FROM WATER BODY. MAINTENANCE SHALL BE PERFORMED AS NEEDED. CONTRACTOR SHALL REMOVE THE CURTAIN AT COMPLETION OF WORK IN A MANNER THAT WILL PREVENT SILTATION OF THE WATERWAY. DURING REMOVAL, EXTREME CARE SHOULD BE TAKEN NOT TO DISTURB ANY SEDIMENT DEPOSITS.
9. IN WIND AND WAVE ACTION SITUATIONS, THE MAX. DEPTH OF THE CURTAIN SHALL BE 12 FEET.



TYPICAL ANCHORING PLAN FOR SHORELINE/RIVER EDGE WORK

SLOPE INSTALLATION



SLOPE INSTALLATION NOTES

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.

2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.

3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES TM IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.

5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH. NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

6. FOR ADDITIONAL REQUIREMENTS SEE BMP; EROSION CONTROL MATTING BMP, ES-11.

7. THE EROSION CONTROL BLANKET SHALL BE TDOT STD. DWG. EC-STR-34.

18 / C301-A1 **EROSION CONTROL BLANKET**
N.T.S.

811 Know what's below Call before you dig

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.0555 WWW.CANNON-CANNON.COM
8550 Kingston Pike Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

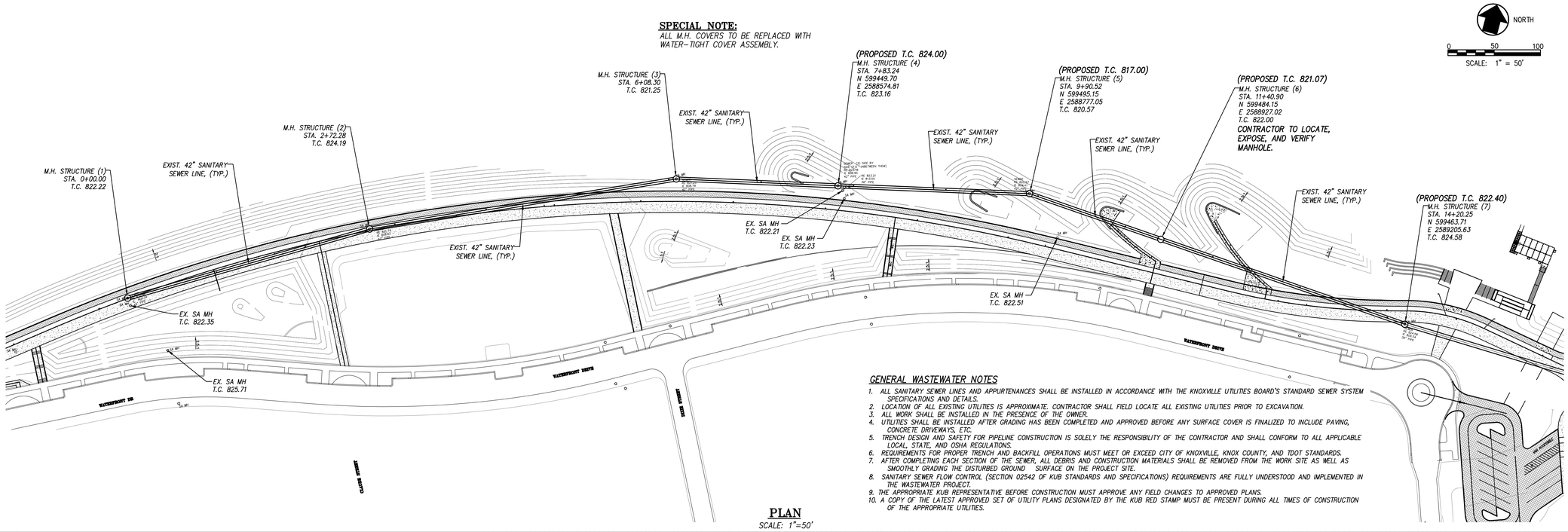
EROSION CONTROL DETAILS

JEFF REECE REGISTERED ENGINEER 1-7-15 TENNESSEE

CCI PROJECT NO. 00244-0014
DRAWING DATE JANUARY 7, 2015
P.I.C. RJB
DRAWN AWG

C401-A1

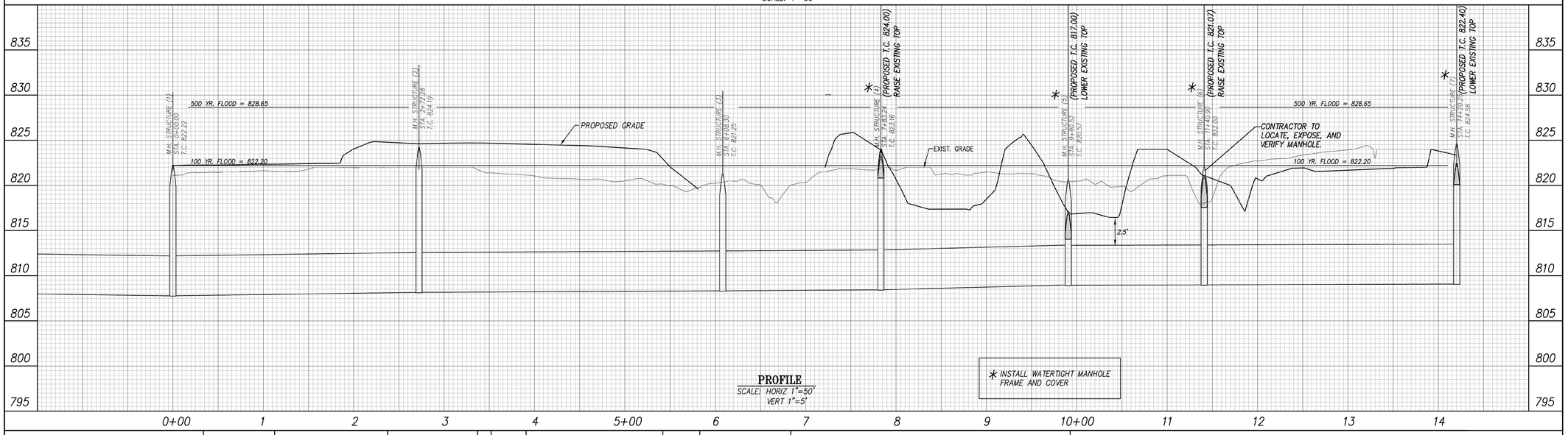
SPECIAL NOTE:
ALL M.H. COVERS TO BE REPLACED WITH WATER-TIGHT COVER ASSEMBLY.



GENERAL WASTEWATER NOTES

1. ALL SANITARY SEWER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE KNOXVILLE UTILITIES BOARD'S STANDARD SEWER SYSTEM SPECIFICATIONS AND DETAILS.
2. LOCATION OF ALL EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION.
3. ALL WORK SHALL BE INSTALLED IN THE PRESENCE OF THE OWNER.
4. UTILITIES SHALL BE INSTALLED AFTER GRADING HAS BEEN COMPLETED AND APPROVED BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING, CONCRETE DRIVEWAYS, ETC.
5. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
6. REQUIREMENTS FOR PROPER TRENCH AND BACKFILL OPERATIONS MUST MEET OR EXCEED CITY OF KNOXVILLE, KNOX COUNTY, AND TDOT STANDARDS.
7. AFTER COMPLETING EACH SECTION OF THE SEWER, ALL DEBRIS AND CONSTRUCTION MATERIALS SHALL BE REMOVED FROM THE WORK SITE AS WELL AS SMOOTHLY GRADING THE DISTURBED GROUND SURFACE ON THE PROJECT SITE.
8. SANITARY SEWER FLOW CONTROL (SECTION 02542 OF KUB STANDARDS AND SPECIFICATIONS) REQUIREMENTS ARE FULLY UNDERSTOOD AND IMPLEMENTED IN THE WASTEWATER PROJECT.
9. THE APPROPRIATE KUB REPRESENTATIVE BEFORE CONSTRUCTION MUST APPROVE ANY FIELD CHANGES TO APPROVED PLANS.
10. A COPY OF THE LATEST APPROVED SET OF UTILITY PLANS DESIGNATED BY THE KUB RED STAMP MUST BE PRESENT DURING ALL TIMES OF CONSTRUCTION OF THE APPROPRIATE UTILITIES.

PLAN
SCALE: 1"=50'



PROFILE
SCALE: HORIZ 1"=50'
VERT 1"=5'

Cannon&Cannon, Inc.
Consulting Engineers • Field Surveyors
8550 Kingston Pike
Knoxville, Tennessee 37919
Telephone: (865) 670-8555 • Fax: (865) 670-8866
www.cannon-cannon.com

DESIGNED	RJB
DRAWN	AWG
CHECKED	RJB

APPROVED	
ENGINEER	
SEWER	

NO.	DATE	REVISION	APPR.

SCALE
AS SHOWN

DATE
01-15-2015

KUB
ENGINEERING DIVISION

SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS ADDENDUM #1
SANITARY SEWER
PLAN VIEW AND PROFILE
(STA. 0+00 TO STA. 14+20.25)

REVISIONS	DATE

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

OWNER:
THE CITY OF KNOXVILLE
400 MAIN SUITE 655
KNOXVILLE, TENNESSEE 37902
TEL NO. (865) 215-2029

PROJECT:
SUTTREE LANDING PARK: PHASE 1B
PROPOSED PARK IMPROVEMENTS

SANITARY SEWER PLAN
AND PROFILE

JEFF BECKETT
LICENSED
1-7-15
REGISTERED ENGINEER
STATE OF TENNESSEE

CCI PROJECT NO.	00244-0014
DRAWING DATE	JANUARY 7, 2015
P.I.C.	RJB
DRAWN	AWG

SA101-A1

811
Know what's below
Call before you dig