



CITY OF KNOXVILLE
MADELINE ROGERO, MAYOR

STANDARD DRAWINGS

TO BE PRINTED WITH PLANS

CITY OF KNOXVILLE DEPT. OF ENGINEERING

DWG. NO.	REV. DATE	TITLE
COK-2	11-20-01	TRAFFIC BEARING MANHOLE FRAMES AND COVERS
COK-3	11-21-01	REINFORCED CONCRETE PIPE FLARED-END SECTION AND HEADWALL
COK-5	03-22-01	STORM PIPE BEDDING AND BACKFILL
COK-6	03-26-08	CONCRETE SIDEWALKS
COK-10	11-16-01	TYPE 'B' CAST IRON FRAME, GRATE AND INLET FOR COK-9 AND FOR TDOT CATCH BASINS, NOS. 10, 12, 14, 16 AND 17
COK-12	01-16-02	TRENCH CUT REPAIRS
COK-13	01-20-11	CURB CUTS AND TACTILE WARNING SYSTEMS

INDEX

SHEET NO. DESCRIPTION

SITE, CIVIL & UTILITY

C1	TITLE SHEET AND INDEX
C2-C2A	ESTIMATED QUANTITIES
C2B	ESTIMATED UTILITY QUANTITIES
C2C,C2G	TYPICAL SECTIONS
C2H,C2J-C2L,C2N	TABULATED QUANTITIES
C2P-C2O	GENERAL NOTES & SCOPE OF WORK
C2R,C2S,C2V	CIVIL DETAILS
C3-C3A	PROPERTY MAP & ACQUISITION TABLE
C4-C8	PRESENT LAYOUTS
C4A-C8A	PROPOSED LAYOUTS
C4B-C8B	PROPOSED GRADING LAYOUTS
C4C-C8C	UTILITIES LAYOUTS
C14-C14C	WATERFRONT DRIVE PROFILES
C14G, C14L	SIDE STREET PROFILES
C15	DRAINAGE MAP
C17-C17H,C17J	STORM DRAIN PROFILES
C19-C19R	EROSION CONTROL NOTES & LAYOUTS
C20-C20B	TRAFFIC CONTROL NOTES & LAYOUTS
C21-C40	WATERFRONT DRIVE CROSS SECTIONS
C54-C56	DIXIE STREET CROSS SECTIONS
C75-C77	FOGGY BOTTOM STREET CROSS SECTIONS

SUTTREE LANDING PARK ROADWAY IMPROVEMENTS, PHASE 1A

TENNESSEE DEPT. OF TRANSPORTATION
STANDARD ROADWAY DRAWINGS

DWG. NO.	REV. DATE	TITLE
RD01-TS-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
D-PB-1	01-02-13	STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION
D-CB-14RB	08-15-12	PRECAST CIRCULAR NO. 14RB CATCH BASIN
D-CB-42RB	09-24-12	PRECAST CIRCULAR NO. 42 CATCH BASIN
D-CB-99R	09-24-12	MISCELLANEOUS DETAILS FOR ROUND STRUCTURES
D-CB-99RA	08-05-13	BILL OF STEEL FOR ROUND CATCH BASIN LIDS
D-CBB-12A	05-27-01	TYPE "B" CAST IRON FRAME, GRATE & NONMOUNTABLE INLET DETAILS FOR NOS. 10, 12, 14, 16 & 17 TYPE CATCH BASINS
D-CBB-42	05-27-01	CAST IRON GRATE DETAILS FOR NOS. 42, 43 & 44 TYPE CATCH BASINS
D-MH-2	08-01-12	MASONRY & PRECAST NO. 3 MANHOLE
D-MH-3	08-01-12	PRECAST CIRCULAR LID DETAILS FOR NO. 3 MANHOLE
D-MH-4	08-01-12	NO. 3 MANHOLE CASTINGS AND STEPS
T-M-1	11-01-11	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
EC-STR-2	08-01-12	SEDIMENT FILTER BAG
EC-STR-3B	08-01-12	SILT FENCE
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-6	08-01-12	ROCK CHECK DAM
EC-STR-6A	08-01-12	ENHANCED ROCK CHECK DAM
EC-STR-8	08-01-12	FILTER SOCK
EC-STR-11A	08-01-12	CULVERT PROTECTION TYPE 2
EC-STR-19	04-01-12	CATCH BASIN PROTECTION
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	08-01-12	SEDIMENT TUBE
EC-STR-38	08-01-12	FLOATING TURBIDITY CURTAIN

LANDSCAPE ARCHITECTURAL

L0	KEY PLAN
L2-L5	LAYOUT AND MATERIALS PLAN
L10-L13	PLANTING PLAN
L18-L20	ENLARGEMENT PLAN LAYOUT AND MATERIALS
L22	TREATMENT PLANTER TYPICALS
L23	TREATMENT PLANTER-PLANTING TYPICALS
L24-L27	TREATMENT PLANTER SECTIONS
L28-L32	SITE DETAILS
L34	PLANTING DETAILS
L35	TREATMENT PLANTER PLANTING DETAILS
L36	PLANT SCHEDULE

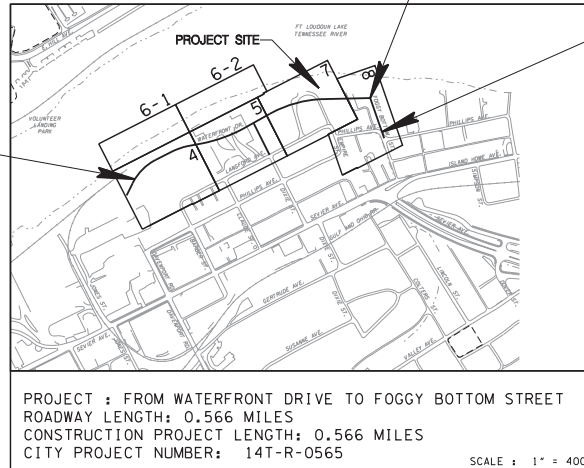
UTILITIES

U0	PROJECT AREA MAP - SEWER & WATER
U1	WASTEWATER GENERAL NOTES
U2-U12	WASTEWATER PLAN AND PROFILES
U13-U15	WATER PLANS
E-1 - E-2	ELECTRICAL PLANS
E-3 - E-5	ELECTRICAL DETAILS
SL-1 - SL-4	STREET LIGHTING PLANS
SL-5 - SL-11	STREET LIGHTING DETAILS

SHEETS NOT USED:

C2D-C2F, C21, C2M, C2O, C2T-C2U, C9-C13, C9A-C13A, C9B-C13B, C9C-C13C, C10AA, C14D-C14F, C14H-C14K, C14M-C14W, C16-C16B, C17I, C17K-C17M, C18-C18G, C19G-C19K, C20C-C20F, C41-C53, C57-C74, C78-C109, L1, L6-L9, L14-L17, L21, L33

BEGIN PROJECT PHASE 1A
STA. 11+24.31 WATERFRONT DRIVE
N 598843.870
E 2587637.112

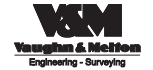


WATERFRONT DRIVE STA. 28+67.28 =
FOGGY BOTTOM STREET STA. 10+00.00
N 599396.875
E 2589241.793

END PROJECT PHASE 1A
STA. 12+44.76
FOGGY BOTTOM STREET
N 599165.608
E 2589321.951

MARCH 14, 2014

CITY OF KNOXVILLE
OFFICE OF REDEVELOPMENT
CITY-COUNTY BUILDING
400 MAIN STREET, SUITE 655
KNOXVILLE, TENNESSEE 37902



1909 ALLOR AVENUE
KNOXVILLE, TENNESSEE 37921
PHONE: (865) 564-5800

ESTIMATED CITY OF KNOXVILLE ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1.1	MOBILIZATION OF FORCES, SUPPLIES AND EQUIPMENT	L.S.	1
2.1	CLEARING AND GRUBBING	L.S.	1
3.1	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.S.	1
3.3	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (CONC. RETAINING WALL)	L.S.	1
3.4	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (CONC. SLABS)	L.S.	1
4.1	EXCAVATION (UNCLASSIFIED)	C.Y.	7982
4.4	BORROW EXCAVATION	C.Y.	9705
5.1	MINERAL AGGREGATE BASE (CLASS A, GRADING D)	TON	5342
5.4	NO. 57 STONE (7" THICK)	TON	150
6.1	PRIME COAT	GAL.	1
7.1	TACK COAT	GAL.	3
9.1	BITUMINOUS PLANT MIX BASE, GRADING B	TON	1738
10.1	ASPHALTIC CONCRETE SURFACE (PG-64-22), GRADING D	TON	699
11.1	8" PERVIOUS CONCRETE PAVEMENT	S.Y.	634
11.2	8" PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN)	S.Y.	117
12.44	4" MOUNTABLE DETACHED CONCRETE CURB, TYPE A	L.F.	95
12.71	6" CONCRETE CURB, SPECIAL (12" WIDTH)	L.F.	1148
12.73	6" DETACHED CONCRETE CURB, SPECIAL (12" WIDTH)	L.F.	999
13.1	CONCRETE SIDEWALKS (4")	S.F.	10636
13.1.1	CONCRETE SIDEWALKS (8")	S.F.	1680
13.2	CONCRETE DRIVEWAYS (6")	S.F.	780
13.3	STAMPED CONCRETE	S.F.	1421
20.14	18" R.C.P. (CLASS III)	L.F.	682
20.16	24" R.C.P. (CLASS III)	L.F.	431
20.18	30" R.C.P. (CLASS III)	L.F.	553
20.20	36" R.C.P. (CLASS III)	L.F.	161
22.14-2.1	NO. 14 CATCH BASIN (6' - 8' DEEP) (8' DIA. CIRCULAR)	EA	1
22.42-1	NO. 42 CATCH BASIN (6' - 6' DEEP) (5' DIA. CIRCULAR)	EA	6
22.42-2	NO. 42 CATCH BASIN (6' - 8' DEEP) (5' DIA. CIRCULAR)	EA	10
22.42-3	NO. 42 CATCH BASIN (8' - 10' DEEP) (5' DIA. CIRCULAR)	EA	4
22.42-1.1	NO. 42 CATCH BASIN (6' - 6' DEEP) (6' DIA. CIRCULAR)	EA	4
22.42-1.2	NO. 42 CATCH BASIN (6' - 6' DEEP) (7' DIA. CIRCULAR)	EA	1
22.19	HW-42 HEADWALL	EA	1
22.22	18" FLARED END SECTION	EA	7
22.23	24" FLARED END SECTION	EA	3
22.24	30" FLARED END SECTION	EA	4
22.52-1.3	STORM MANHOLE (8' - 12' DEEP, 4' DIA.)	EA	1
22.52-2.2	STORM MANHOLE (4' - 8' DEEP, 5' DIA.)	EA	2
22.52-2.3	STORM MANHOLE (8' - 12' DEEP, 5' DIA.)	EA	1
22.52-3.2	STORM MANHOLE (4' - 8' DEEP, 6' DIA.)	EA	1
22.63	CONCRETE WATER QUALITY UNIT (CDS3025) (6' DIA. CIRCULAR)	EA	2
22.66	CONCRETE WATER QUALITY UNIT (CDS4030) (8' DIA. CIRCULAR)	EA	3
25.2	MACHINED R/P RAP CLASS A-1	TON	511
25.4	MACHINED R/P RAP CLASS C	TON	120

FOOTNOTES

- MAY INCLUDE, BUT NOT LIMITED TO APPROXIMATELY: 616 S.Y. CONCRETE DRIVEWAYS AND PARKING LOTS, 141 S.Y. CONCRETE PAD, 5 S.Y. CONCRETE STEPS, 425 L.F. CONCRETE CURB, 3 EACH GATES, 5 EACH SIGNS, 610 L.F. FENCE, 3 EACH UTILITY POLES, 2 EACH GUY ANCHORS, 1 EACH CATCH BASIN, 91 L.F. 1" TRENCH DRAIN, 57 L.F. 4" TRENCH DRAIN, 70 L.F. 12" CMP AND 13 L.F. 15" CMP.
- INCLUDES CONCRETE RETAINING WALL ON DMX STREET, STATION 12+22, APPROXIMATELY 78 L.F. AT LOCATION OF FORMER BUILDING.
- INCLUDES REMAINING CONCRETE SLABS AND FOUNDATIONS OF BUILDINGS PREVIOUSLY REMOVED BY OTHERS.
- SEE SHEET NO. C2K FOR TABULATED QUANTITIES. SEE TECHNICAL SPECIFICATIONS FOR DETAILS.
- FOR USE IN SPECIAL DITCHES. SEE DETAIL SHEET C2G.
- FOR USE AT 5 EACH CULVERT OUTLETS TO THE FT. LOUDOUN LAKE (TENNESSEE RIVER). SEE DETAIL SHEET C2G AND TABULATED QUANTITIES SHEET C2J.

NO.	DATE	REVISIONS DESCRIPTION



**SUTTREE LANDING PARK
ROADWAY IMPROVEMENTS, PHASE 1A**

VAUGHN & MELTON
KNOXVILLE, TN.

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DRAWN: J.E.B.
CHECKED: D.A.J.
JOB NO: 147-R-0565
SCALE: NO SCALE
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE:
ESTIMATED
QUANTITIES

DWG OF DRAWING NO: C2

ESTIMATED CITY OF KNOXVILLE ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
26.00	PLANTING SOIL	C.Y.	537
26.01	HORTICULTURAL TREATMENT SOIL	C.Y.	438
26.02	TOPSOIL FOR LAWN	C.Y.	65
27.10	SEEDING	S.Y.	8031
27.11	EROSION CONTROL MATTING	S.Y.	7413
7 28.1	SODDING	S.Y.	1956
29.28	4" PVC PIPE (RIGID & PERFORATED)	L.F.	20
30.00	DECIDUOUS SHADE TREE 4" CALIPER	EA	34
30.01	ORNAMENTAL SHRUBS	EA	249
30.02	PERENNIALS 1 GAL.	EA	1337
30.03	GROUNDCOVER	EA	979
30.04	BARK MULCH	C.Y.	38
30.05	CAST-IN-PLACE CONCRETE CURB	L.F.	1150
30.07	RIVER STONE DISSIPATORS	TON	23
30.08	FILTER FABRIC	S.F.	2050
30.09	12" FLAT DRAIN PIPE	L.F.	1135
30.10	PEASTONE	C.Y.	30
30.11	SCUPPER	EA	18
30.12	STEEL INLET AT WALKWAY CONNECTION	EA	18
30.13	FILTER SAND	C.Y.	64
8, 9 31.0	TEMPORARY WATER POLLUTION CONTROL	L.S.	1
33.10	POWDERCOATED PLANTER GUARDS	L.F.	1450
10 34.1	CONSTRUCTION AREA TRAFFIC CONTROL	L.S.	1
36.13	IMPERMEABLE GEOMEMBRANE	S.Y.	730
36.14	TENSAR GEOGRID OR APPROVED EQUAL	S.Y.	536
39.10	THERMOPLASTIC COATINGS FOR CROSSWALKS AND SPEED TABLES	S.F.	3586
39.11	THERMOPLASTIC COATINGS FOR CROSSWALKS AND SPEED TABLES	L.F.	690
11 41.1	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	2.1
11 41.3	PAINTED PAVEMENT MARKING (24" STOP LINE)	L.F.	83
11 41.4	PAINTED PAVEMENT MARKING (CHANNELIZATION STRIPING)	S.Y.	45
11 41.5	PAINTED PAVEMENT MARKING (HANDICAP SYMBOL)	EA	3
11 41.61	PAINTED PAVEMENT MARKING (SPEED TABLE SYMBOL - CHEVRON)	EA	8
49.01	6" BENCH	EA	12
49.10	BICYCLE RACK	EA	3
12 63.1	SIGNAGE	L.S.	1
13 70.1	ENCASED CONDUIT (2" PVC, SCHEDULE 80)	L.F.	550
70.2	DIRECT BURIAL CONDUIT (2" PVC, SCHEDULE 40)	L.F.	1850
70.3	PULL BOXES	EACH	11
70.4	CABLE (11C # 6 AWG - TYPE "XHHW")	L.F.	5675
70.5	CABLE (11C # 4 AWG - TYPE "XHHW")	L.F.	7050
70.6	CABLE (11C # 2 AWG - TYPE "XHHW")	L.F.	75
14 70.7	G2 LIGHTING ASSEMBLY	EACH	10
15 70.8	G3 LIGHTING ASSEMBLY	EACH	11
16 70.9	G4 LIGHTING ASSEMBLY	EACH	2
17 70.10	G5 LIGHTING ASSEMBLY	EACH	4
18 70.11	OVERHEAD CONDUCTORS (#6 DUPLEX)	L.F.	89
19 70.12	CONTROL CENTER	EACH	2
70.13	ELECTRICAL CONNECTION	EACH	2
20 70.14	INSTALL SVC RISER	EACH	1
70.20	TACTILE WARNING SYSTEMS, CAST IN PLACE	EACH	12

FOOTNOTES

- 7 INCLUDES 1371 S.Y. FOR DITCHES AND 585 S.Y. FOR LANDSCAPING.
- 8 SEE CITY OF KNOXVILLE BEST MANAGEMENT PRACTICES MANUAL, TENNESSEE DEPARTMENT OF TRANSPORTATION DRAINAGE MANUAL, EROSION PREVENTION AND SEDIMENT CONTROL SECTION, AND TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION EROSION AND SEDIMENT CONTROL HANDBOOK FOR MAINTENANCE REPLACEMENT.
- 9 SEE SHEET NO. C19C FOR TABULATED QUANTITIES.
- 10 SEE SHEET NO. C20A FOR TABULATED QUANTITIES.
- 11 SEE SHEET NO. C2N FOR TABULATED QUANTITIES.
- 12 SEE SHEET NO. C2N FOR TABULATED QUANTITIES.
- 13 INCLUDES CONCRETE FOOTINGS AND FOUNDATIONS.
- 14 ITEM INCLUDES CONCRETE ENCASEMENT UNDER ROADWAY PER KUB STANDARDS.
- 15 ITEM INCLUDES COOPER LIGHTING NAVION LED LUMINAIRE (NVN-AA-01-E-U-T3A-BK-10K-4), 16.5' LUMEC APR-85 POLE (APR85-16.5-GFII-BAS24(2)-BKT), TRANSITION BASE (BT13C2-G-BKT), LUMEC BRACKET ARM (RLAR-1A-BKT), BANNER ARMS, GFI DUPLEX RECEPTACLE WITH WEATHERPROFF COVER, POLE FOUNDATION, AND ASSOCIATED WIRING INSIDE POLE FROM BASE TO LUMINAIRE.
- 16 ITEM INCLUDES COOPER LIGHTING NAVION LED LUMINAIRE (NVN-AA-01-E-U-T3A-BK-10K-4) WITH LUMEC BRACKET ARM (RLAR-1A-BKT), NAVION LED LUMINAIRE (NVN-AA-03-E-U-T3A-BK-10K-4) WITH HAPCO 6" TAPERED BRACKET ARM IN BLACK, 27.5' LUMEC APR-85 POLE (APR85-27.5-GFII-BKT), TRANSITION BASE (BT13C2-G-BKT), GFI DUPLEX RECEPTACLE WITH WEATHERPROFF COVER, POLE FOUNDATION, AND ASSOCIATED WIRING INSIDE POLE FROM BASE TO LUMINAIRE.
- 17 ITEM INCLUDES COOPER LIGHTING NAVION LED LUMINAIRE (NVN-AA-03-E-U-T3A-BK-10K-4) WITH HAPCO 6" TAPERED BRACKET ARM IN BLACK AND WOOD POLE.
- 18 ITEM INCLUDES COOPER LIGHTING NAVION LED LUMINAIRE (NVN-AA-03-E-U-T3A-BK-10K-4) WITH HAPCO 6" TAPERED BRACKET ARM IN BLACK TO BE INSTALLED ON EXISTING WOOD POLE.
- 19 ITEM SHALL INCLUDE COMPLETE CONTROL CENTER. SEE SHEET SL-2 AND SL-4.
- 20 TO BE INSTALLED ON G4-1, SHEET SL-1.

REVISIONS	
NO.	DATE



SUTTREE LANDING PARK
ROADWAY IMPROVEMENTS, PHASE 1A

VAUGHN & MELTON
KNOXVILLE, TN.

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Engineering - Surveying

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DRAWN: J.E.B.
CHECKED: D.A.J.
JOB NO: 147-R-0565
SCALE: NO SCALE
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE:
ESTIMATED
QUANTITIES

DWG OF DRAWING NO: C2A

ESTIMATED KNOXVILLE UTILITIES BOARD QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1.0	WATER LINE ITEMS		
1.01	OPEN CUT WATER LINE INSTALLATION		
A.	8" WATER LINE IN STREET	L.F.	2201
C.	6" WATER LINE TO FIRE HYDRANT	L.F.	61
1.02	WATER VALVES		
A.	GATE VALVES 6"	EA	5
B.	GATE VALVES 8"	EA	11
1.03	WATER SERVICE LINE TO DEVELOPMENT		
A.	2" WATER LINE & CAP	EA	346
1.05	CONNECT TO EXISTING WATER MAINS		
B.	PROPOSED 8-INCH TO EXISTING 10-INCH PIPE	EA	2
1.06	ABANDONMENT ACTIVITIES		
A.	ABANDONMENT OR REMOVAL OF EXISTING WATER LINE	L.S.	1
1.07	ASSEMBLIES		
A.	FIRE HYDRANT	EA	5
B.	8" BLOW-OFF VALVE	EA	3
C.	AIR RELEASE VALVE	EA	4
1.08	WATER MISCELLANEOUS		
A.	MOBILIZATION FOR WATER UTILITY CONSTRUCTION	L.S.	1
B.	NO. 57 STONE FOR BEDDING	TON	544
C.	TEMPORARY ASPHALT PAVEMENT REPAIR	S.Y.	6
2.0	SANITARY SEWER LINE ITEMS		
2.01	PRECAST 4-FOOT DIAMETER MANHOLE		
A.	0'-8" DEPTH	EA	1
B.	6'-10" DEPTH	EA	3
C.	10'-14" DEPTH	EA	6
D.	14'-18" DEPTH	EA	1
2.02	PRECAST 5-FOOT DIAMETER MANHOLE		
A.	0'-8" DEPTH	EA	0
B.	6'-10" DEPTH	EA	2
C.	10'-14" DEPTH	EA	2
D.	14'-18" DEPTH	EA	0
2.03	8" PVC SDR 26 GRAVITY SEWER LINE		
A.	0'-8" DEPTH	L.F.	533
B.	8.1'-12" DEPTH	L.F.	19
C.	12.1'-16" DEPTH	L.F.	0
2.04	8" DIP CLASS 150 DUCTILE IRON WITH PROTECTO 401 COATING GRAVITY SEWER LINE		
A.	0'-8" DEPTH	L.F.	466
B.	8.1'-12" DEPTH	L.F.	48
C.	12.1'-16" DEPTH	L.F.	0
2.05	14" CIP GRAVITY SEWER LINE		
A.	0'-8" DEPTH	L.F.	3
B.	8.1'-12" DEPTH	L.F.	0
2.06	21" PVC SDR 26 GRAVITY SEWER LINE		
A.	0'-8" DEPTH	L.F.	0
B.	8.1'-12" DEPTH	L.F.	296
C.	12.1'-16" DEPTH	L.F.	0
2.07	21" DIP CLASS 150 DUCTILE IRON WITH PROTECTO 401 COATING GRAVITY SEWER LINE		
A.	0'-8" DEPTH	L.F.	0
B.	8.1'-12" DEPTH	L.F.	197
C.	12.1'-16" DEPTH	L.F.	20
2.08	CONNECTIONS		
A.	CONNECT TO NEW MANHOLE TO EXISTING 21" GRAVITY SEWER LINE	EA	1
B.	CONNECT TO NEW MANHOLE TO EXISTING 8" AND 21" GRAVITY SEWER LINE	EA	1
C.	CONNECT TO EXISTING 14" CIP GRAVITY SEWER LINE	EA	1
D.	6" SEWER LATERAL INSTALLATION (3 EA)	L.F.	0
E.	8" SEWER LATERAL INSTALLATION (1 EA)	L.F.	0
F.	8" CLEANOUT	EA	0
2.09	ABANDONMENT ACTIVITIES		
A.	"GEO GROUT" OR APPROVED EQUAL	C.Y.	85
B.	ABANDONMENT OR REMOVAL OF SANITARY SEWER MANHOLES	EA	5
C.	REMOVAL OF EXISTING 21" GRAVITY SEWER LINE	L.F.	113
2.10	ASSOCIATED SEWER WORK		
A.	REHABILITATE EXISTING MANHOLE	EA	1
B.	ADJUST EXISTING MANHOLE TOP	EA	3
C.	ABOVE GROUND KUB MARKER AND BURIED BALL MARKERS	EA	0
2.11	SANITARY SEWER MISCELLANEOUS		
A.	MOBILIZATION FOR SANITARY SEWER UTILITY CONSTRUCTION	L.S.	1
B.	NO. 57 STONE FOR BEDDING	TON	407
C.	TEMPORARY ASPHALT PAVEMENT REPAIR	S.Y.	14

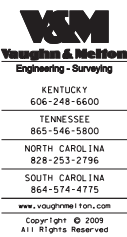
ESTIMATED ELECTRIC QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
E1	40'-4 Wood Pole	each	3
E2	45'-3 Wood Pole	each	1
E3	50'-2 Wood Pole	each	1
E4	C1-NO/C-1/0ACSR	each	1
E5	C1A-1/0ACSR	each	1
E6	C1-STR-1/0ACSR	each	1
E7	DE-1/0ACSR	each	1
E8	DDE-4CU	each	1
E9	LL-6CU	each	1
E10	Rod Ground	each	4
E11	Butt Ground	each	1
E12	DG-3/8-G	each	7
E13	A-10-SH	each	1
E14	A-8-SH	each	5
E15	PAD3	each	1
E16	Pad1R	each	1
E17	TP3S1	each	1
E18	TP1S	each	1
E19	150KVA 208/120V Three Phase Padmount Transformer	each	1
E20	50KVA 120/240V Single Phase Padmount Transformer	each	1
E21	1TR-15KVA	each	1
E22	Primary Handhole 3'x5'x4'	each	1
E23	2" Schedule 40 PVC Conduit	foot	520
E24	4" Schedule 40 PVC Conduit	foot	258
E25	2" PVC Stub Out	each	5
E26	4" PVC Stub Out	each	2
E27	TREN2	foot	389
E28	Concrete Encasement	foot	100
E29	1/0 Aluminum 15 kV Underground Primary Conductor	foot	909
E30	1/0 ACSR Overhead Conductor	foot	1150
E40	#6 Duplex Overhead Conductor	foot	158

REV	DATE	DESCRIPTION



SUTTREE LANDING PARK
ROADWAY IMPROVEMENTS, PHASE 1A

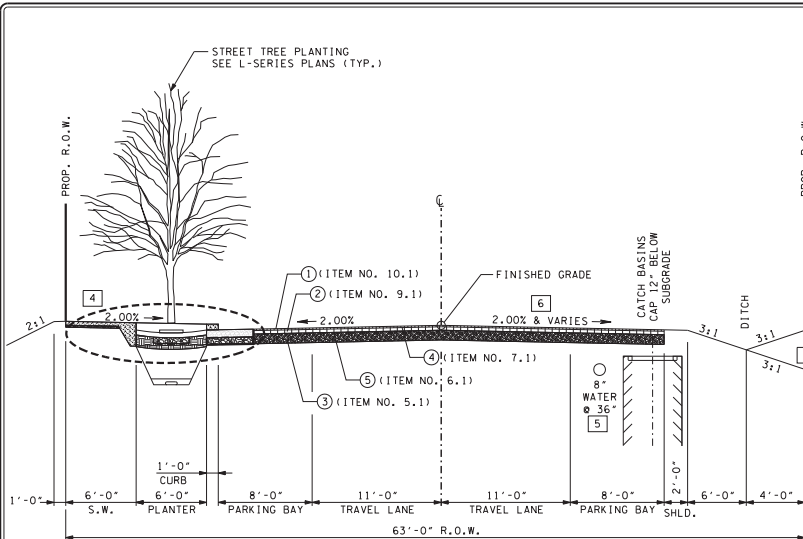
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DRAWN: J.E.B.
CHECKED: D.A.J.
JOB NO: 147-R-0565
SCALE: NO SCALE
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE:
ESTIMATED
UTILITY
QUANTITIES

DWG: DRAWING NO:
OF: C2B

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WATERFRONT DRIVE LOOKING EAST
FROM STA. 11+67.94 TO STA. 28+67.28

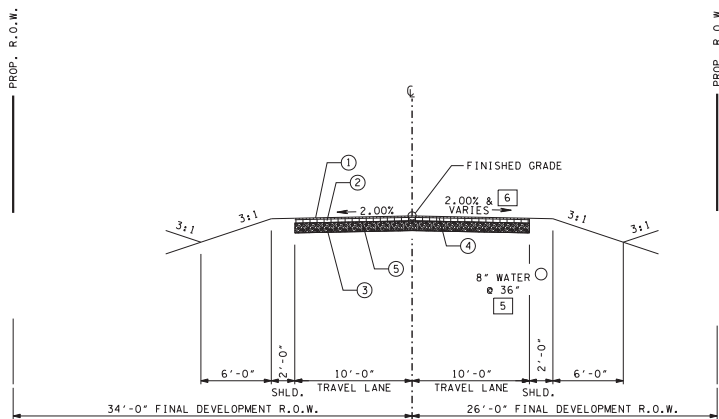
NOTES:

- 1 SLOPES FROM RIGHT-OF-WAY IN AREAS OF PLANNED FUTURE DEVELOPMENT ARE CONTINGENT UPON COORDINATION WITH DEVELOPERS.
- 2 THE BLOCK BETWEEN WATERFRONT DRIVE, DIXIE STREET AND FOGGY BOTTOM STREET HAS BEEN GRADED AT 3:1 TO EX. GROUND UNTIL A DEVELOPMENT PLAN IS CREATED.
- 3 PVMT. SCHEDULE CALL OUTS ARE TYPICAL FOR ALL STREETS UNLESS OTHERWISE NOTED.
- 4 2% IS THE ABSOLUTE MAXIMUM FOR S.W. CROSSFALL.
- 5 UTILITY DEPTHS ARE MEASURED TO TOP OF UTILITIES.
- 6 SE VARIES AT THE TRAFFIC CIRCLE. SEE PROFILE AND CROSS SECTIONS.

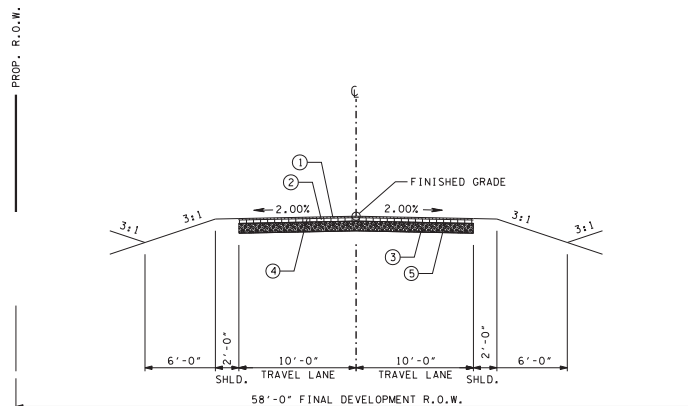
JOINTS NOTES:

1. CONTROL AND EXPANSION JOINTS IN THE CURB, CURB & GUTTER, AND PERVIOUS CONCRETE ARE TO BE CONSTRUCTED SO AS TO ALIGN WITH THE SIDEWALK JOINTS (SEE L SERIES PLANS FOR JOINT SPACING AND DETAILS). CONTROL JOINTS IN THE CURB, AND CURB & GUTTER SHOULD BE EVERY 10 FEET MAX.
2. EXPANSION JOINTS ARE ALSO TO BE PLACED AS FOLLOWS:
 - AT TANGENT POINTS OF CIRCULAR CURBS
 - BETWEEN CURBS AND ABUTTING RIGID OBJECTS
 - AT OTHER PLACES WHERE STRESSES MAY DEVELOP
3. ALL EXPANSION AND CONTROL JOINTS ARE TO BE PLACED SO AS TO LINE UP WITH ADJACENT JOINTS WHERE THE ADJACENT PVMT. IS CONCRETE.

NOTE:
SEE PAVEMENT SCHEDULE, SHEET C2G FOR PAVEMENT, SIDEWALK AND CURB CODE AND ITEM NOS.



TEMPORARY TYPICAL FOGGY BOTTOM STREET LOOKING SOUTH
FROM WATERFRONT DRIVE TO PHILLIPS AVENUE
(SEE PROP. LAYOUT FOR TRAFFIC CIRCLE)
FROM STA. 10+73.00 TO STA. 12+35.5



TEMPORARY TYPICAL DIXIE STREET LOOKING SOUTH
FROM STA. 10+11.01 TO STA. 12+39.74

NO.	DATE	REVISIONS DESCRIPTION



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ROADWAY IMPROVEMENTS, PHASE 1A

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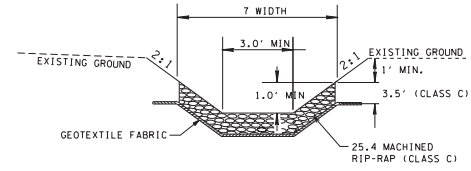
DRAWN: D.R.F.	CHECKED: J.E.K.
JOB NO: 147-R-0565	SCALE: 1" = 5'
DATE: 03-14-2014	FILE NAME: 50820-12
DRAWING TITLE: TYPICAL SECTIONS	
DWG NO:	DRAWING NO:
OF	C2C

3/26/2014
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PROPOSED PAVEMENT SCHEDULE

① ASPHALTIC CONCRETE SURFACE (1½" THICK) ITEM NO. 10.1 (GRADING D)	⑨ 6" CONCRETE CURB, SPECIAL (12" WIDTH) ITEM NO. 12.71 (SEE CIVIL DETAILS)
② BITUMINOUS PLANT MIX BASE (3½" THICK) ITEM NO. 9.1 (GRADING B)	⑩ 6" CONCRETE DETACHED CURB, SPECIAL (12" WIDTH) ITEM NO. 12.73 (SEE CIVIL DETAILS)
③ MINERAL AGGREGATE BASE (10" THICK)	⑪ CONCRETE SIDEWALK (4" THICK) ITEM NO. 13.1
③A MINERAL AGGREGATE BASE (7" THICK) ITEM NO. 5.1 (CLASS A, GRADING D)	⑫ CONCRETE SIDEWALK (8" THICK) ITEM NO. 13.1-1 (SEE L-SERIES PLANS FOR LOCATION)
④ TACK COAT ITEM NO. 7.1 (RATE = 0.07 GAL./SQ. YD.)	⑬ CONCRETE DRIVEWAY (6" THICK) ITEM NO. 13.2
⑤ PRIME COAT ITEM NO. 6.1 (RATE = 0.02 GAL./SQ. YD.)	⑭ CONCRETE PAVEMENT (8" THICK) ITEM NO. 11.2
⑥ PERVIOUS CONCRETE PAVEMENT (8" THICK) ITEM NO. 11.1 (SEE CIVIL DETAILS)	
⑦ NUMBER 57 STONE (7" THICK) ITEM NO. 5.4 (SEE CIVIL DETAILS)	
⑧ 4" MOUNTABLE DETACHED CONCRETE CURB, TYPE A ITEM NO. 12.44 (SEE CIVIL DETAILS)	

FOR DETAILS NOT SHOWN, SEE TDOT STD. DWG. RD01-S-11A.



DETAIL OF RIP-RAP T-DITCH

(AT STORM DRAIN OUTLETS TO THE FT. LOUDOUN LAKE)

GEOTEXTILE FABRIC FOR BASE REINFORCEMENT SHALL BE INCLUDED IN THE COST OF RIP-RAP

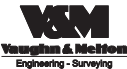
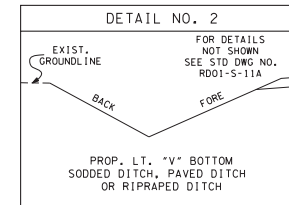
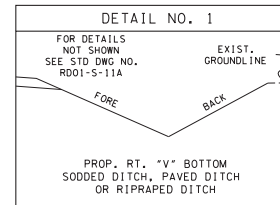
NO.	DATE	REVISIONS DESCRIPTION



SUTTREE LANDING PARK
ROADWAY IMPROVEMENTS, PHASE 1A
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KNOXVILLE, TN.

SPECIAL DITCHES

ROAD	STATION		SLOPE			DETAIL NO.	TYPE
	FROM	TO	FORE (H/V)	BOTTOM WIDTH (FT.)	BACK (H/V)		
WATERFRONT DR.	11+25.00	13+12.13	3	0	3	1	SOD
WATERFRONT DR.	13+72.70	16+46.16	3	0	3	1	SOD
WATERFRONT DR.	17+28.00	18+00.00	3	0	3	1	RIP-RAP
WATERFRONT DR.	18+00.00	18+50.00	3	0	3	1	SOD
WATERFRONT DR.	18+50.00	19+25.00	3	0	3	1	RIP-RAP
WATERFRONT DR.	19+25.00	19+75.00	3	0	3	1	SOD
WATERFRONT DR.	19+75.00	19+88.99	3	0	3	1	RIP-RAP
WATERFRONT DR.	20+77.20	21+00.00	3	0	3	1	RIP-RAP
WATERFRONT DR.	22+75.00	24+75.00	3	0	3	1	SOD
WATERFRONT DR.	24+75.00	25+00.00	3	0	3	1	RIP-RAP
WATERFRONT DR.	25+32.86	25+75.00	3	0	3	1	SOD
WATERFRONT DR.	27+25.00	28+44.46	3	0	3	1	RIP-RAP
WATERFRONT DR.	27+80.11	27+93.56	3	0	3	1	RIP-RAP
DIXIE STREET	10+41.21	12+25.00	3	0	3	1	RIP-RAP
DIXIE STREET	10+37.26	12+25.00	3	0	3	2	RIP-RAP
FOGGY BOTTOM ST.	10+30.54	11+00.00	3	0	3	1	RIP-RAP
FOGGY BOTTOM ST.	10+84.58	11+00.00	3	0	3	2	RIP-RAP



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CHECKED: D.A.J.
JOB NO: 147-R-0565
SCALE: NO SCALE
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE:
TYPICAL SECTIONS

DWG DRAWING NO:
OF C2G

3/26/2014
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CATCH BASINS															
SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE / TOP ELEV.	STRUCTURE TYPE	DEPTH (FT.)	PAY ITEMS						REMARKS	
								TYPE 14 22.14-2.1 6' - 8'	TYPE 42 22.42-1 0' - 6'	TYPE 42 22.42-2 6' - 8'	TYPE 42 22.42-3 8' - 10'	TYPE 42 22.42-1.1 0' - 6'	TYPE 42 22.42-1.2 0' - 6'		
C4A	WATERFRONT DRIVE	13+72.69	18.40' RT	A-2	825.40	NO. 42 CB	7.02			1				D-CB-42RB (5' DIA.) ②	
C4A	WATERFRONT DRIVE	13+49.87	35.36' RT	A-3	823.16	NO. 42 CB	4.64		1					D-CB-42RB (5' DIA.) ②	
C4A	WATERFRONT DRIVE	13+12.95	36.15' RT	A-4	822.60	NO. 42 CB	3.90		1					D-CB-42RB (5' DIA.) ②	
C4A	WATERFRONT DRIVE	12+96.12	18.00' RT.	A-4.1	826.53	NO. 42 CB	7.73			1				D-CB-42RB (5' DIA.) ②	
C4A	WATERFRONT DRIVE	12+95.10	18.00' LT.	A-4.1.1	827.70	NO. 42 CB	8.70				1			D-CB-42RB (5' DIA.)	
C4A	WATERFRONT DRIVE	11+78.14	23.00' RT.	A-4.3	827.79	NO. 42 CB	8.27				1			D-CB-42RB (5' DIA.)	
C5A	WATERFRONT DRIVE	16+53.39	18.00' RT.	B-2	826.49	NO. 42 CB	8.12				1			D-CB-42RB (5' DIA.) ②	
C5A	WATERFRONT DRIVE	16+70.40	36.20' RT.	B-3	823.16	NO. 42 CB	4.66					1		D-CB-42RB (5' DIA.) ②	
C5A	WATERFRONT DRIVE	17+04.69	35.16' RT.	B-3.1	823.10	NO. 42 CB	4.42		1					D-CB-42RB (5' DIA.) ②	
C5A	WATERFRONT DRIVE	17+26.10	18.00' RT.	B-3.2	825.09	NO. 42 CB	6.27				1			D-CB-42RB (5' DIA.) ②	
C5A	WATERFRONT DRIVE	17+27.95	18.00' LT.	B-3.3	826.92	NO. 42 CB	7.92				1			D-CB-42RB (5' DIA.)	
C5A	WATERFRONT DRIVE	20+77.27	17.60' RT.	C-3	826.49	NO. 42 CB	8.28				1			D-CB-42RB (5' DIA.) ②	
C5A	WATERFRONT DRIVE	21+21.11	17.60' RT.	C-3.1	826.49	NO. 42 CB	7.62				1			D-CB-42RB (5' DIA.) ②	
C5A	WATERFRONT DRIVE	20+53.41	35.72' LT.	C-4	826.54	NO. 42 CB	6.67				1			D-CB-42RB (5' DIA.) ②	
C5A	WATERFRONT DRIVE	20+19.40	35.21' RT.	C-4.1	826.51	NO. 42 CB	6.34				1			D-CB-42RB (5' DIA.) ②	
C5A	WATERFRONT DRIVE	20+03.58	18.00' RT.	C-4.2	826.39	NO. 42 CB	6.61				1			D-CB-42RB (5' DIA.) ②	
C5A	WATERFRONT DRIVE	20+02.00	18.00' LT.	C-4.3	827.49	NO. 42 CB	7.02				1			D-CB-42RB (5' DIA.)	
C7A	WATERFRONT DRIVE	25+00.00	19.10' RT.	D-2	823.45	NO. 42 CB	5.97					1		D-CB-42RB (5' DIA.) ②	
C7A	WATERFRONT DRIVE	25+18.25	34.81' RT.	D-3	822.86	NO. 42 CB	5.26						1	D-CB-42RB (5' DIA.) ②	
C7A	WATERFRONT DRIVE	25+50.94	35.65' LT.	D-3.1	823.59	NO. 42 CB	5.33					1		D-CB-42RB (5' DIA.) ②	
C7A	WATERFRONT DRIVE	26+68.24	21.55' LT	E-A.1	823.95	NO. 42 CB	5.90				1			D-CB-42RB (5' DIA.)	
C8A	WATERFRONT DRIVE	27+71.47	39.64' LT	E-1	819.45	NO. 42 CB	5.21				1			D-CB-42RB (5' DIA.) ②	
C8A	WATERFRONT DRIVE	27+80.15	18.00' RT	E-2.1	821.39	NO. 42 CB	5.89					1		D-CB-42RB (5' DIA.) ②	
C8A	WATERFRONT DRIVE	28+90.43	24.41' LT	E-3	821.40	NO. 14 CB	6.51	1						D-CB-14RB (5' DIA.)	
C8A	FOGGY BOTTOM ROAD	10+70.24	22.00' LT.	E-4	822.68	NO. 42 CB	7.35				1			D-CB-42RB (5' DIA.)	
C8A	FOGGY BOTTOM ROAD	10+69.74	18.50' RT	E-4.1	821.58	NO. 42 CB	5.54				1			D-CB-42RB (5' DIA.) ②	
TOTALS								1	6	10	4	4	1	0	

- ① STATION AND OFFSET IS OBTAINED BY PROJECTING WATERFRONT DRIVE ALIGNMENT.
- ② A TEMPORARY 8" CONCRETE SLAB TO BE PLACED ON TOP OF THE CATCH BASIN INSTEAD OF THE GRATE ASSEMBLY. COST TO BE INCLUDED IN PRICE OF OTHER ITEMS.

NO.	DATE	DESCRIPTION



**SUTTREE LANDING PARK
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 DATE: 03-14-2014
 FILE NAME: 50820-12
 DRAWING TITLE:
 TABULATED
 QUANTITIES

DWG: DRAWING NO:
 OF: C2H

STORM SEWER ENDWALLS												
SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	STRUCTURE TYPE	STANDARD DRAWING	TYPE HW-42 HEADWALL 36" 22.19 (EACH)	18" FLARED END SECTION 22.22 (EACH)	24" FLARED END SECTION 22.23 (EACH)	30" FLARED END SECTION 22.24 (EACH)	CLASS C RIP-RAP 25.3 TONS	REMARKS
C6A	WATERFRONT DRIVE	14+04.88	114.82' LT.	A-0	FLARED END SECTION	COK-3				1	19	OUTLET
C4A	WATERFRONT DRIVE	13+12.93	42.65' RT.	A-4.0.1	FLARED END SECTION	COK-3			1			INLET
C4A	WATERFRONT DRIVE	13+72.69	39.90' RT.	A-2.1	FLARED END SECTION	COK-3			1			INLET
C6A	WATERFRONT DRIVE	16+42.67	186.14' LT.	B-0	FLARED END SECTION	COK-3				1	23	OUTLET
C5A	WATERFRONT DRIVE	16+48.66	33.77' RT.	B-2.1	FLARED END SECTION	COK-3			1			INLET
C5A	WATERFRONT DRIVE	17+28.18	38.50' RT.	B-3.2.1	FLARED END SECTION	COK-3	1					INLET
C6A	WATERFRONT DRIVE	21+18.33	175.78' LT.	C-0	FLARED END SECTION	COK-3				1	30	OUTLET
C5A	WATERFRONT DRIVE	20+05.12	37.72' RT.	C-4.1.1	FLARED END SECTION	COK-3		1				INLET
C5A	WATERFRONT DRIVE	20+77.27	31.78' RT.	C-3.2	FLARED END SECTION	COK-3		1				INLET
C7A	WATERFRONT DRIVE	24+96.20	131.69' LT.	D-0	TYPE HW-42 HEADWALL	COK-3	1				27	OUTLET
C7A	WATERFRONT DRIVE	24+95.05	28.94' RT.	D-2.1	FLARED END SECTION	COK-3		1				INLET SKEWED
C7A	WATERFRONT DRIVE	25+26.64	33.29' RT.	D-3.2	FLARED END SECTION	COK-3		1				INLET
C8A	WATERFRONT DRIVE	27+08.33	144.50' LT.	E-0	FLARED END SECTION	COK-3			1		21	OUTLET
C8A	WATERFRONT DRIVE	27+80.14	28.52' RT.	E-2.2	FLARED END SECTION	COK-3		1				INLET
C8A	FOGGY BOTTOM ST	10+80.73	21.72' LT.	E-4.1.1	FLARED END SECTION	COK-3		1				INLET
TOTALS							1	7	3	4	120	

NO.	DATE	DESCRIPTION



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DWG OF DRAWING NO: C2J

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STORM SEWER MANHOLES												
SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	COVER / TOP ELEV.	STRUCTURE TYPE	DEPTH (FT.)	TYPE 3				REMARKS
								22.52-1.3 8' - 12"	22.52-2.2 4' - 8'	22.52-2.3 8' - 12"	22.52-3.2 4' - 8'	
C4A	WATERFRONT DRIVE	11+91.55	14.69' RT	A-4.2	827.98	NO. 3 MH	8.66	1				4' DIA.
C5A	WATERFRONT DRIVE	16+50.12	46.96' LT	B-A	822.78	NO. 3 MH	4.73		1			5' DIA.
C5A	WATERFRONT DRIVE	20+86.73	54.04' LT.	C-1	820.50	NO. 3 MH	6.22		1			5' DIA.
C7A	WATERFRONT DRIVE	25+17.48	21.90' LT.	D-A	826.03	NO. 3 MH	8.79			1		5' DIA.
C8A	WATERFRONT DRIVE	27+05.43	93.21' LT.	E-A	821.00	NO. 3 MH	7.50				1	6' DIA. ①
TOTALS								1	2	1	1	

① A TEMPORARY 8" CONCRETE SLAB TO BE PLACED ON TOP OF THE MANHOLE INSTEAD OF THE COVER ASSEMBLY.

WATER QUALITY UNITS															
SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	COVER / TOP ELEV.	STRUCTURE TYPE	① DEPTH (FT.)	PAY ITEMS						REMARKS	
								CDS2015-4 22.60	CDS2020 22.61	CDS2025 22.62	CDS3025 22.63	CDS3030 22.64	CDS3035 22.65		CDS4030 22.66
C4A	WATERFRONT DRIVE	13+72.69	18.40' LT.	A-1	826.57	WQU	14.63					1			6' DIA. ②
C5A	WATERFRONT DRIVE	16+51.63	18.00' LT.	B-1	827.59	WQU	16.61						1		6' DIA. ②
C5A	WATERFRONT DRIVE	20+77.27	17.60' LT.	C-2	827.59	WQU	18.63						1		6' DIA. ②
C7A	WATERFRONT DRIVE	24+96.65	19.10' LT	D-1	824.62	WQU	11.95				1				6' DIA. ②
C8A	WATERFRONT DRIVE	27+92.60	22.50' LT.	E-2	822.56	WQU	15.37						1		6' DIA. ②
TOTALS								0	0	0	2	0	0	3	

WATER QUALITY UNIT NOTES:

- ① DEPTH OF WATER QUALITY UNIT MEASURED FROM GRATE ELEVATION TO THE INVERT BASE OF THE UNIT.
- ② USE TYPE 42 GRATE FOR THE INLET. COST OF THE TYPE 42 GRATE SHALL BE INCLUDED IN THE BID PRICE OF THE WATER QUALITY UNIT.

NO.	DATE	REVISIONS DESCRIPTION



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DWG OF DRAWING NO: C2K

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STORM SEWER PIPES												
SHEET NO.	FROM		TO		% GRADE	REINFORCED CONC. PIPE - CLASS III SIZE & LENGTH (L.F.)					BEDDING MATERIAL (C.Y.)	REMARKS
	CODE	OUTLET ELEV.	CODE	INLET ELEV.		18"	24"	30"	36"	42"		
						20.14	20.16	20.18	20.20	20.22		
C6A, C4A	A-0	817.70	A-1	818.19	0.500			98.65			31.67	
C4A	A-1	818.22	A-2	818.38	0.500		31.31				8.33	
C4A	A-2	818.41	A-3	818.52	0.500		23.44				6.24	
C4A	A-3	818.55	A-4	818.70	0.500		30.98				8.24	
C4A	A-4	818.73	A-4.0.1	818.77	0.500		8.00				2.13	
C4A	A-2	818.41	A-2.1	818.69	1.500		19.00				5.05	
C4A	A-4	818.73	A-4.1	818.82	0.500	18.90					4.01	
C4A	A-4.1	818.85	A-4.2	819.32	0.500	95.00					20.14	
C4A	A-4.2	819.34	A-4.3	819.52	0.500	35.55					7.54	
C4A	A-4.1	818.85	A-4.1.1	819.00	0.500	31.01					6.57	
C5A, C6A	B-0	817.36	B-A	818.05	0.500			136.87			43.94	
C5A	B-A	818.07	B-1	818.18	0.500			22.50			7.22	
C5A	B-1	818.22	B-2	818.37	0.500			29.04			9.32	
C5A	B-2	818.40	B-3	818.50	0.500			19.22			6.17	
C5A	B-3	818.53	B-3.0.1	818.57	0.500			8.00			2.57	STUB & CAP
C5A	B-2	820.54	B-2.1	820.61	0.500			14.00			4.49	
C5A	B-3	818.53	B-3.1	818.68	0.500	30.53					6.47	
C5A	B-3.1	818.70	B-3.2	818.82	0.500	25.03					5.31	
C5A	B-3.2	818.85	B-3.3	819.00	0.500	31.00					6.57	
C5A	B-3.2	818.85	B-3.2.1	819.21	2.000	18.00					3.82	
C5A, C6A	C-0	813.42	C-1	814.28	0.700			123.27			39.57	
C5A	C-1	814.44	C-2	816.17	5.559			31.15			10.00	
C5A	C-2	816.61	C-3	818.21	5.559			28.70			9.21	
C5A	C-3	818.49	C-4	819.87	5.559			24.96			8.01	
C5A	C-4	820.02	C-4.0.1	820.06	0.500			8.00			2.57	STUB & CAP
C5A	C-3	818.49	C-3.1	818.67	1.000	38.84					8.23	
C5A	C-3	820.77	C-3.2	821.24	4.000	11.68					2.48	
C5A	C-4	820.02	C-4.1	820.17	0.500	29.01					6.15	
C5A	C-4.1	820.19	C-4.2	820.29	0.500	18.37					3.89	
C5A	C-4.2	820.31	C-4.3	820.47	0.500	31.04					6.58	
C5A	C-4.1	820.19	C-4.1.1	820.67	4.000	12.00					2.54	
C7A	D-0	813.58	D-A	817.24	3.337				109.73		48.50	
C7A	D-A	817.34	D-3	817.59	0.500				50.71		22.41	
C7A	D-3	817.63	D-3.0.1	817.67	0.500			8.00			2.57	STUB & CAP
C7A	D-A	818.64	D-1	818.92	0.500	15.55					3.30	
C7A	D-1	818.95	D-2	819.11	0.500	32.35					6.86	
C7A	D-2	819.15	D-2.1	819.20	0.670	7.95					1.69	
C7A	D-3	818.13	D-3.1	818.26	0.500	25.74					5.46	
C7A	D-3	820.75	D-3.2	820.99	6.000	4.00					0.85	
C8A	E-0	813.06	E-A	813.50	1.400		48.37				12.87	
C8A	E-A	813.55	E-1	814.24	1.400		79.04				21.02	
C8A	E-1	814.30	E-2	814.40	0.500		20.21				5.38	
C8A	E-2	814.44	E-3	814.89	0.500		90.39				24.04	
C8A	E-3	814.93	E-4	815.33	0.500		80.09				21.30	
C8A	E-4	815.93	E-4.0.1	816.19	3.235	8.00					1.70	STUB & CAP
C8A	E-4	819.73	E-4.1.1	820.05	4.000	8.00					1.70	
C7A, C8A	E-A	814.04	E-A.1	818.07	5.862	75.23					15.95	
C8A	E-2	814.95	E-2.1	815.50	1.540	35.37					7.50	
C8A	E-2.1	818.53	E-2.2	818.68	2.000	7.52					1.59	
C8A	E-4	815.86	E-4.1	816.04	0.500	35.50					7.53	
TOTALS						681.17	430.83	552.36	160.44	0.00	507.23	

NOTE: BEDDING MATERIAL SHALL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE COST OF THE PROPOSED PIPE.

NO.	DATE	REVISIONS DESCRIPTION



**SUTTREE LANDING PARK
ROADWAY IMPROVEMENTS, PHASE 1A**

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KNOXVILLE, TN.

VM
Vaughn & Melton
Engineering - Surveying

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DRAWN: J.E.V.
CHECKED: D.A.J.
JOB NO: 147-R-0565
SCALE: NO SCALE
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE:
TABULATED
QUANTITIES

DWG OF DRAWING NO: C2L

CURB AND SIDEWALK QUANTITIES						
LOCATION	PAY ITEMS					
	4" MT. DET. CURB TYPE A 12.44 (L.F.)	6" CURB, SPEC. (12"W) 12.71 (L.F.)	6" DET. CURB, SPEC. (12"W) 12.73 (L.F.)	CONC. SIDEWALK (4") 13.1 (S.F.)	CONC. SIDEWALK (8") 13.1-1 (S.F.)	STAMPED CONC. (6") 13.3 (S.F.)
ROADWAY	94.25	1147.70	998.58	10636.00	1680.00	1421.00
TOTALS	94.25	1147.70	998.58	10636.00	1680.00	1421.00

EARTHWORK BALANCES		
DESCRIPTION	EXCAVATION C.Y.	EMBANKMENT C.Y.
TOTALS	7954	16011
TOPSOIL STRIPPED FROM EMB. AREAS	0	28
TOTAL TOPSOIL STRIPPED	16	28
MATERIAL AVAILABLE FOR BALANCE	7938	16039
ADJUSTED VOLUMES (10%) SHRINKAGE	7216	16039
BALANCE 10% SHRINKAGE INCLUDED	0	9705 BORROW

ESTIMATED GRADING QUANTITIES				
STATION TO STATION	ROAD AND DRAINAGE EXC. (UNCL.) C.Y.	BORROW EXCAVATION		EMB. (C.Y.)
		COMMON C.Y.	ROCK - C.Y.	
WATERFRONT DRIVE	3962	9705		15770
DIXIE STREET	1589			241
FOGGY BOTTOM STREET	878			0
LANDSCAPE	1525			0
TOTALS	7954	9705	0	16011

SHRINKAGE FACTOR = 10%

NOTE: THE ABOVE GRADING QUANTITIES HAVE ALL PAVEMENT AND SIDEWALK VOLUMES ACCOUNTED FOR EXCEPT THE PLANTER AREAS AND THE SIDEWALK TURNDOWNS.

PAVEMENT QUANTITIES									
LOCATION	PAY ITEMS								
	MIN. AGG. 5.1 (TON)	NO. 57 STONE 5.4 (TON)	PRIME COAT 6.1 (GAL.)	TACK COAT 7.1 (GAL.)	BINDER GR. B 9.1 (TON)	ASP. SURFACE GR. D 10.1 (TON)	PERVIOUS CONC. PVMT. (8") 11.1 (S.Y.)	PORT. CEM. CONC. PVMT. (8") 11.2 (S.Y.)	CONC. DRIVEWAY (6") 13.2 (S.F.)
ROADWAY	5005.34	149.14	0.83	2.70	1737.51	698.52	521.00	116.93	
DRIVEWAYS									780.00
LANDSCAPE	236.50						113.00		
MAINTENANCE	100.00								
TOTALS	5341.84	149.14	0.83	2.70	1737.51	698.52	634.00	116.93	780.00

TABULATED QUANTITIES - SIGNAGE - 63.1								
M.U.T.C.D. NO.	DESCRIPTION	SHEET NO.				TOTAL NO. OF SIGNS	AREA PER SIGN (S.F.)	TOTAL AREA (S.F.)
		4A	5A	7A	8A			
R1-1	STOP		2		2	4	6.25	25.00
W2-6	TRAFFIC CIRCLE SYMBOL			1	1	2	6.25	12.50
W13-1	15 M.P.H.			1	1	2	2.25	4.50
SPECIAL	TRAFFIC CIRCLE AHEAD			1	1	2	3.75	7.50
W14-2	NO OUTLET		1			1	6.25	6.25
TOTAL						11		55.75

ESTIMATED PAVEMENT MARKINGS		
DESCRIPTION	UNIT	QUANTITY
PAINTED PAVEMENT MARKING (4" LINE)	L.M.	2,092
PAINTED PAVEMENT MARKING (24" STOP BAR)	L.F.	83
PAINTED PAVEMENT MARKING (CHANNELIZATION STRIPING)	S.Y.	45
HANDICAP SYMBOL	EA	3
SPEED TABLE SYMBOL - CHEVRON	EA	8

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GENERAL NOTES

GRADING

- (1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- (2) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE OR CITY-OWNED RIGHT OF WAY IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.
- (3) ALL EXISTING PAVEMENTS RENDERED OBSOLETE BY RELOCATION OR NEW CONSTRUCTION AND LYING WITHIN THE RIGHT OF WAY AND/OR EASEMENTS SHALL BE REMOVED TO THE LIMITS AND DEPTHS SPECIFIED BY THE ENGINEER AND THE AREA RESHAPED IN A MANNER THAT WILL BLEND WITH THE ADJACENT TERRAIN AND BE SODDED. ALL COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 4.1, EXCAVATION (UNCLASSIFIED) AND ITEM NO. 28.1, SODDING. THE COST OF REMOVAL OF ITEMS ENCOUNTERED IN THE PROGRESS OF THE WORK NOT INCLUDED IN OTHER BID ITEMS SHALL ALSO BE INCLUDED IN ITEM NO. 4.1, EXCAVATION (UNCLASSIFIED).
- (4) THE CONTRACTOR SHALL DISPOSE OF ALL MATERIAL THAT IS NOT SUITABLE FOR BACKFILL AT AN APPROPRIATE LANDFILL. THIS INCLUDES BUT IS NOT LIMITED TO CONCRETE SIDEWALK AND PAVEMENT, FOOTINGS FOR LIGHT POLES, OTHER CONCRETE STRUCTURES, ETC.
- (5) A GEOTECHNICAL ENGINEER SHALL INSPECT AND APPROVE ALL BORROW PITS AND CERTIFY THE MATERIAL AS SUITABLE FOR CONSTRUCTION PRIOR TO PLACEMENT. BORROW PITS SHALL BE CROSS SECTIONED BEFORE AND AFTER THEIR USE IN ORDER TO DETERMINE FINAL BORROW QUANTITIES.
- (6) GRADE ON PROFILE IS THE SAME AS GRADE ON CROSS SECTIONS AND SAME AS FINISHED GRADE ON TYPICAL SECTIONS.

SEEDING AND SODDING

- (1) ALL EXISTING ROADS WITHIN THE RIGHT-OF-WAY AND/OR EASEMENTS, BUT NOT IN THE GRADED AREA THAT ARE TO BE ABANDONED SHALL BE SCARIFIED, OBLITERATED, AND SODDED. SCARIFYING AND OBLITERATING THE PAVEMENT WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS. SEE TECHNICAL SPECIFICATION 28.0.
- (2) ALL NEWLY GRADED EARTHEN AREAS ON THE PROJECT THAT ARE NOT TO BE PAVED OR LANDSCAPED SHALL BE SODDED IN ACCORDANCE WITH SECTION 28.0 OF THE TECHNICAL SPECIFICATIONS.
- (3) TOPSOIL, IN ACCORDANCE WITH SECTION 28.0 OF THE SPECIAL PROVISIONS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 28.00. SEEDING, IN ACCORDANCE WITH SECTION 27.0 OF THE TECHNICAL SPECIFICATION, WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 27.10. SODDING, IN ACCORDANCE WITH SECTION 28.0 OF THE TECHNICAL SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 28.1.
- (4) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.

DRAINAGE

- (1) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.
- (2) EXCAVATION FOR PIPE CULVERTS, SEWERS, CONDUITS, ALL MINOR STRUCTURES OF ANY TYPE AND DESCRIPTION WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES).
- (3) THE CUTTING OF INLET AND OUTLET DITCHES WHEN SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS ITEM NO. 4.1, EXCAVATION (UNCLASSIFIED).
- (4) WHERE A CULVERT (PIPE, SLAB OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASE OR DECREASE THE AMOUNT OF CULVERT EXCAVATION, NO INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT WILL BE MADE DUE TO SUCH CHANGE.

- (5) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND CONSTRUCTION AREA TRAFFIC CONTROL.

UTILITIES

- (1) SEE KUB SHEET U1 FOR WASTEWATER GENERAL NOTES AND SHEETS U13 THROUGH U15 FOR WATER CONSTRUCTION NOTES.

MISCELLANEOUS

- (1) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCH SAFETY AND SHALL SHORE AND BRACE ALL OPEN TRENCHES AS REQUIRED BY STATE AND FEDERAL LAWS AND LOCAL ORDINANCES. THIS WORK SHALL CONFORM WITH RECOMMENDATIONS SET FORTH IN AGC MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION TO PROTECT LIFE, PROPERTY AND/OR WORK, AND TO AVOID EXCESSIVELY WIDE CUTS IN UNSTABLE MATERIAL. OSHA RULES SHALL BE ABIDED BY.
- (2) THE LOCATIONS OF UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS ARE APPROXIMATE, AND THOSE SHOWN ARE NOT NECESSARILY ALL OF THE STRUCTURES ACTUALLY EXISTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXISTENCE AND EXACT LOCATIONS OF ALL UNDERGROUND STRUCTURES.
- (3) A BASE OF OPERATIONS IS TO BE ESTABLISHED ON THE PROJECT. ALL MATERIAL STOCKPILED ON THE JOB BY THE CONTRACTOR IS TO REMAIN AT THIS BASE UNTIL 48 HOURS BEFORE SCHEDULED PLACEMENT ON THE JOB.
- (4) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TAKE ADEQUATE MEASURES TO PROTECT PEDESTRIAN AND VEHICULAR TRAFFIC FROM TRENCHES REMAINING OPEN AT THE END OF ANY WORK DAY. THESE MEASURES ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- (5) OVERTIGHT STORAGE OF MACHINERY OR EQUIPMENT IS TO BE AT THE BASE OF OPERATIONS OR AT A SITE APPROVED IN WRITING BY THE ENGINEER.
- (6) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AT HIS OWN EXPENSE ALL DAMAGE CAUSED BY MOVEMENT OF HIS MACHINERY.
- (7) NOTHING IN THE GENERAL NOTES OR TECHNICAL AND SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.
- (8) ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEMS WILL BE PAID FOR. COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE BID FOR PAY ITEMS. NO ADDITIONAL PAY ITEMS SHALL BE ADDED.
- (9) ALL DETOUR, LANE AND STREET CLOSURES ARE TO BE APPROVED BY THE CITY OF KNOXVILLE ENGINEERING DEPARTMENT.
- (10) COMPACTION OF ALL MATERIALS SHALL MEET THE REQUIREMENTS OF THE APPROPRIATE SPECIFICATION OR THE SOILS REPORT, WHICHEVER IS MORE STRINGENT. THE SOILS REPORT IS AVAILABLE FOR REVIEW AT VAUGHN & MELTON'S KNOXVILLE OFFICE AT 1909 AILOR AVENUE, KNOXVILLE, TN 37921. WHERE LIMITED BY SPACE, COMPACTION SHALL BE OBTAINED BY USING AN APPROPRIATE MECHANICAL DEVICE OPERATED BY HAND.
- (11) CHANNEL WORK IS TO PROCEED UPSTREAM THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.
- (12) ALL TEMPORARY WORK ACCESS LOCATIONS (CONSTRUCTION ENTRANCE / EXIT) ARE TO BE APPROVED IN WRITING BY THE CITY ENGINEER IN ADVANCE OF CONSTRUCTION.
- (13) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TAKE APPROPRIATE MEASURES TO PROTECT ALL EXISTING STRUCTURES TO REMAIN DURING CONSTRUCTION OF THIS PROJECT. ALL COSTS INVOLVED IN THE REPAIR OR REPLACEMENT OF SUCH STRUCTURES DUE TO THE CONSTRUCTION OF THIS PROJECT WILL BE AT THE CONTRACTOR'S EXPENSE.
- (14) THE CONTRACTOR SHALL FURNISH ALL WORKMANSHIP AND MATERIALS NECESSARY TO MAINTAIN EXCAVATIONS FOR DRAINAGE STRUCTURES UNTIL CONSTRUCTION WITHIN THE EXCAVATION IS COMPLETE. THE COST SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.

- (15) ANY WORK WITHIN A STREAM CHANNEL AREA SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED LOW FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.

- (16) DITCH LINING, WHETHER ROCK OR SOD, IS TO BE PLACED NO MORE THAN 300 FEET OR TWO WORKING DAYS, WHICHEVER COMES FIRST, BEHIND THE EXCAVATION UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.

- (17) THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES WHERE AND AS DIRECTED BY THE CITY ENGINEER.

- (18) BLASTING IS NOT ANTICIPATED FOR THIS PROJECT. HOWEVER, WITH THE PRIOR APPROVAL OF THE CITY OF KNOXVILLE ENGINEERING DEPARTMENT AND THE CONTRACTOR'S GEOTECHNICAL REPRESENTATIVE, IF BLASTING IS REQUIRED, THE CONTRACTOR SHALL CONDUCT A PRE-PROJECT CONDITION SURVEY. APPROPRIATE SIGNAGE THAT IS REQUIRED BY THE M.U.T.C.D. AND BLASTING MATS SHALL ALSO BE PROVIDED BY THE CONTRACTOR.

ROAD CLOSURE NOTES

- (1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF ANY ROAD THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION. THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.
- (2) ALL ROAD CLOSURES WILL REQUIRE A TEMPORARY TRAFFIC CONTROL PERMIT FROM CITY OF KNOXVILLE ENGINEERING DEPARTMENT. CONTACT TONY VANDERGRIF AT 865-215-6136.

PAVEMENT MARKINGS

- (1) PERMANENT PAVEMENT LINE MARKINGS ON ASPHALT AND CONCRETE PAVEMENT SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NOS. 41.1 THROUGH 41.61, PAINTED PAVEMENT MARKING, WITH THE APPROPRIATE LINE TYPE.
- (2) BEFORE OPENING A LANE SHIFT TO TRAFFIC, THE TEMPORARY TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 34.1, CONSTRUCTION AREA TRAFFIC CONTROL. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED TO ELIMINATE CONFLICTING MARKINGS.

PAVING

- (1) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.
- (2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.
- (3) WHERE DIRECTED BY THE CITY ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SHAPE PUBLIC SIDE ROADS, BUSINESS ENTRANCES, AND PRIVATE DRIVES, AS WELL AS CLEAN EXISTING DRAINS BEFORE PLACING MATERIALS. ALL COSTS ARE TO BE INCLUDED IN THE COST OF OTHER ITEMS.

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DWG DRAWING NO:
OF C2P

GENERAL NOTES (continued)

LANDSCAPING

- (1) SEE LANDSCAPE SHEET NOS. L-0, L-2 AND L-10 FOR GENERAL NOTES.

ELECTRICAL

- (1) SEE ELECTRICAL SHEET NOS. E-4 THROUGH E-5 FOR ELECTRICAL GENERAL NOTES.
 (2) SEE LIGHTING SHEET NOS. SL-5 AND SL-8 THROUGH SL-11 FOR LIGHTING GENERAL NOTES.

SPECIAL NOTES

- (1) FOR THE FIRST MONTH OF THE PROJECT, THE CONTRACTOR AND K.U.B. REPRESENTATIVES SHALL HAVE WEEKLY MEETINGS TO COORDINATE CONSTRUCTION ACTIVITIES. THEREAFTER MEETINGS SHALL BE AS NEEDED.

GRADING

- (1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.
- (2) BORING DEPICTIONS SHOWN ON THE FOUNDATION DATA SHEETS, SOILS SHEETS, PLANS, AND CROSS-SECTIONS INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER/GEOLOGIST. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.
- (3) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.
- (4) EARTHWORK IS PAID FOR UNDER ITEM 4.1, EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

SCOPE OF WORK

UNDER DIRECTION OF THE ENGINEER AND IN CONFORMANCE WITH THE SPECIAL CONDITIONS, SPECIFICATIONS, AND PLANS, THE CONSTRUCTION OF THIS PROJECT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- (1) COORDINATION WITH ALL UTILITY PROVIDERS REGARDING EXISTING SERVICE CONNECTS AND DISCONNECTS, REMOVALS AND ABANDONMENT, AND NEW LINE INSTALLATION, INSPECTION, TESTING, AND CONNECTIONS
- (2) INSTALLATION AND MAINTENANCE OF SITE ACCESS AND EROSION CONTROL MEASURES
- (3) INSTALLATION OF SANITARY SEWER LINES, MANHOLES, AND CONNECTIONS
- (4) INSTALLATION OF STORM DRAIN LINES, STRUCTURES, AND RIP-RAP
- (5) GRADING AND LINING OF DITCHES
- (6) REMOVAL OF STRUCTURES AND OBSTRUCTIONS
- (7) CLEARING AND GRUBBING
- (8) ROADWAY GRADING
- (9) INSTALLATION OF WATER LINES, APPURTENANCES, AND CONNECTIONS
- (10) INSTALLATION OF OVERHEAD AND UNDERGROUND ELECTRIC, TELEPHONE, AND LIGHTING CONDUITS, FOUNDATIONS, POLES, STRUCTURES, EQUIPMENT, AND WIRING
- (11) INSTALLATION OF MINERAL AGGREGATE BASE, SIDEWALK, CURB, PAVEMENT, AND STABILIZED SHOULDER
- (12) INSTALLATION OF LANDSCAPING PLANTERS, APPURTENANCES, PLANTINGS, STREET FURNITURE, AND GROUND COVER
- (13) INSTALLATION OF SIGNS, PAVEMENT STAMPING, AND PAVEMENT MARKINGS
- (14) CLEAN UP, FINAL DRESSING, AND REMOVAL OF EROSION CONTROL MEASURES ONCE PERMANENT GROUND COVER IS ESTABLISHED
- (15) ALL ADDITIONAL ITEMS OF WORK REQUIRED BY THE PLANS, SPECIFICATIONS, ENGINEER, INSPECTOR, OR PERMITS TO SATISFACTORILY COMPLETE THE PROJECT

NO.	DATE	REVISIONS DESCRIPTION



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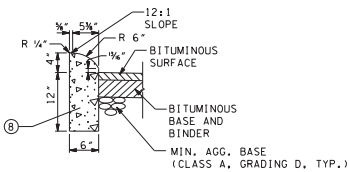
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CHECKED:	J.E.K.
JOB NO:	147-R-0565
SCALE:	NO SCALE
DATE:	03-14-2014
FILE NAME:	50820-12
DRAWING TITLE:	GENERAL NOTES & SCOPE OF WORK
DWG	DRAWING NO:
OF	C20



DETAIL A
4\"/>

N. I. C.

DETAIL E
LOWERED DETACHED
CONCRETE CURB, TYPE A
 SCALE: 1\"/>

N. I. C.

DETAIL B
6\"/>

N. I. C.

DETAIL F
6\"/>

N. I. C.

DETAIL C
6\"/>

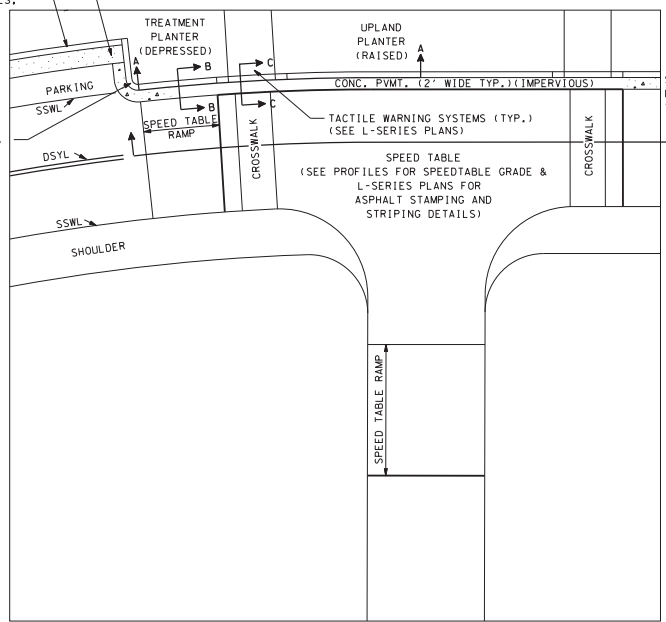
N. I. C.

DETAIL G
4\"/>

N. I. C.

DETAIL D
6\"/>

PERVIOUS CONC. (SEE CIVIL
 DETAILS FOR DETAILS OF
 CONC. AND 6\"/>



DETAIL H
CURB, SIDEWALK, & SPEED TABLE
 SCALE: 1\"/>

NOTE:
 SEE PAVEMENT SCHEDULE, SHEET C2G
 FOR PAVEMENT, SIDEWALK AND CURB
 CODE AND ITEM NOS.

SEE L-SERIES PLANS
 FOR THIS SECTION
 THROUGH PVMT.

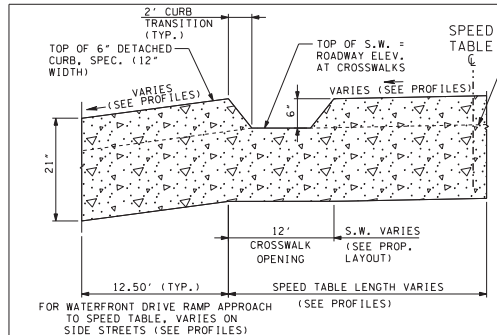
THE TYPE OF CURB AND CONCRETE PAVEMENT
 ALSO APPLIES AT INTERSECTIONS WITHOUT
 SPEED TABLES WITH BOTH RAISED AND
 DEPRESSED PLANTERS.

IN PARKING AREAS THE TYPE OF CONCRETE
 PAVEMENT AND CURB CHANGES AS SHOWN IN
 THIS DETAIL.

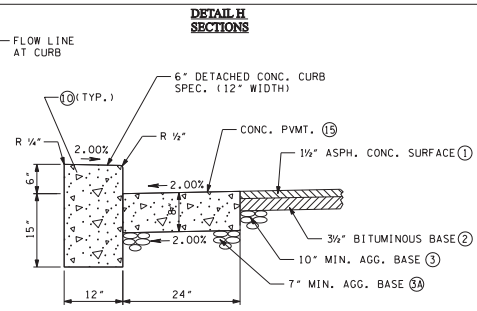
TYPICALLY, WHEN PLANTERS ARE DEPRESSED
 THE ADJACENT PAVEMENT IS IMPERVIOUS
 CONCRETE AND THE CURB IS 6\"/>

LEGEND

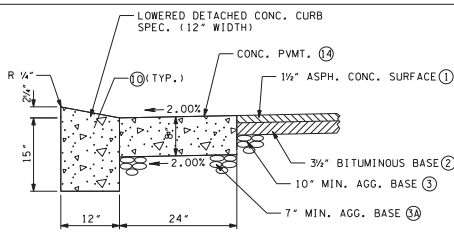
- PERVIOUS CONC.
- IMPERVIOUS CONC.



SECTION A-A
SECTION THROUGH FACE OF CURB AT SPEED TABLE
 NOTE: OTHER END OF SPEED TABLE IS MIRROR IMAGE
 SCALE: 1\"/>



SECTION B-B
6\"/>



SECTION C-C
LOWERED DETACHED CONCRETE CURB, SPECIAL
AND CONCRETE PAVEMENT
 SCALE: 1\"/>

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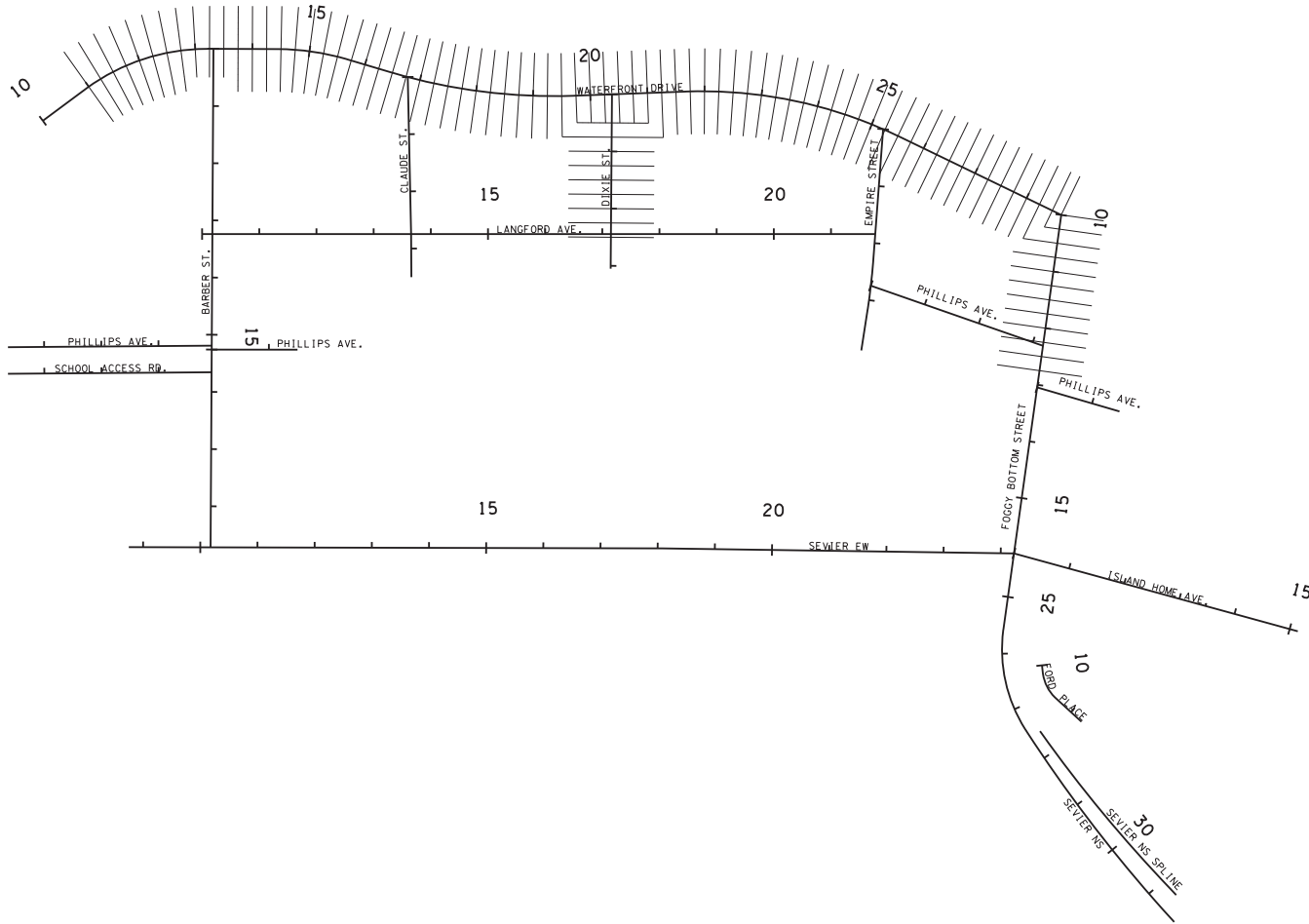
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 SCALE: AS NOTED
 DATE: 03-14-2014
 FILE NAME: 50820-12
 DRAWING TITLE:
 CIVIL
 DETAILS

DWG OF DRAWING NO: C2R

3/26/2014 14:51:33 50820_12.dwg 10:02:02 Detail.dwg

3/26/2014
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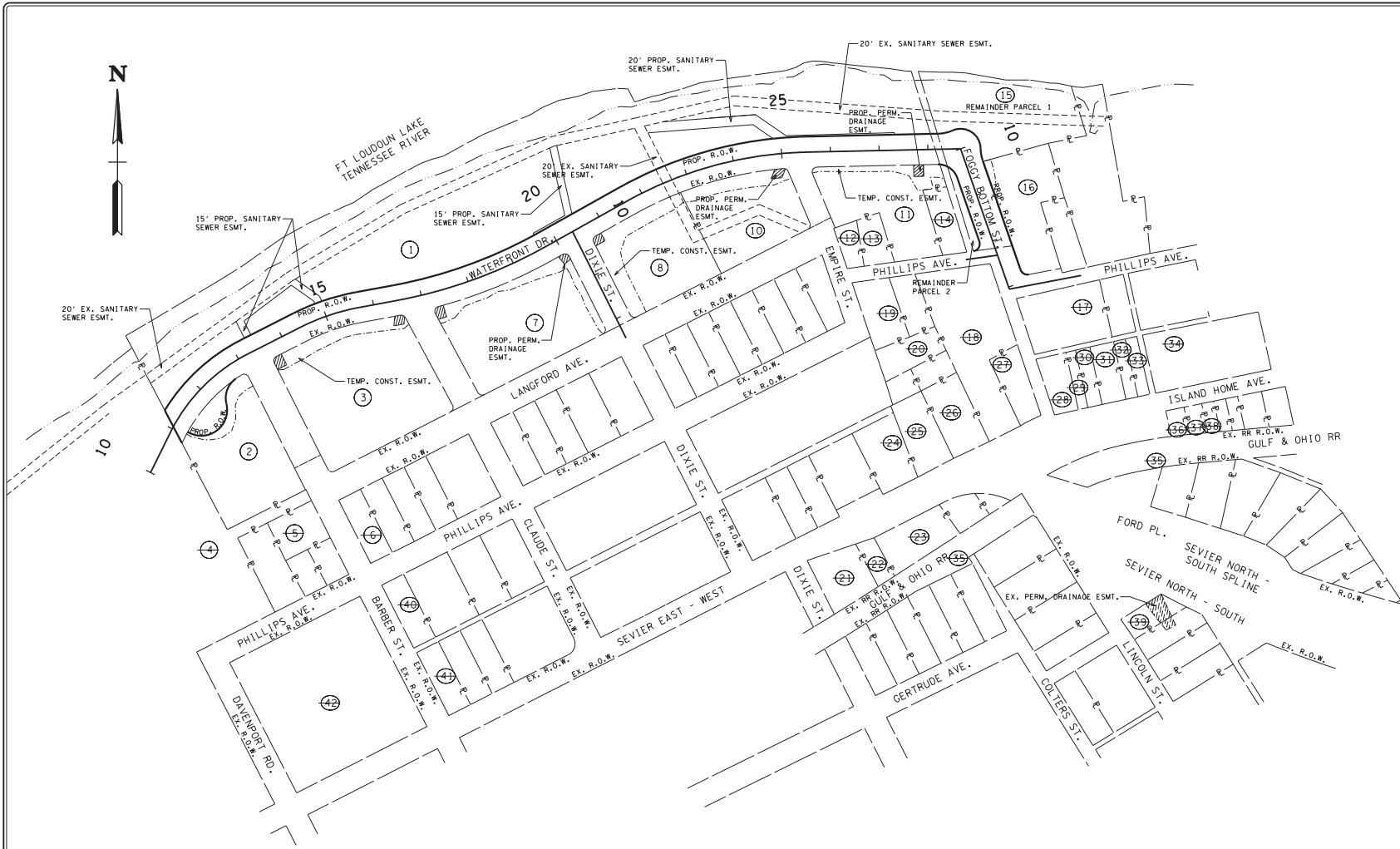
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DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE: CROSS SECTION PATTERN DETAIL
DWG OF DRAWING NO: C2V

4/1/2014
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OWNERS OF UTILITIES				
TYPE	OWNER	CONTACT	OWNER'S ADDRESS	PHONE
ELECTRIC (EG and CG), GAS, SEWER and WATER	KNOXVILLE UTILITIES BOARD	GABRIEL BOJAS	P.O. Box 9907 Knoxville, TN 37960	865-588-3100
TELEPHONE	AT&T	DAVID OBERMAN	9733 Peabody Drive Knoxville, TN 37922	865-539-4879
CABLE TELEVISION	XFINITY (COMCAST)	JOSH JONES	5720 Ashville Highway Knoxville, TN 37924	865-643-0041
CABLE TELEVISION	WOW!	DREW MCCAWLEY	1015 Sherrill Boulevard Knoxville, TN 37922	865-387-4071
PETROLEUM	COLONIAL PIPELINE COMPANY	KARL KENNEDY	8033 N. Middlebrook Pike Knoxville, TN 37921	865-384-1817 865-389-8903 ROW DEPT.

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 JOB NO: 147-R-0565
 SCALE: 1" = 100'
 DATE: 03-14-2014
 FILE NAME: 50820-12
 DRAWING TITLE:
 PROPERTY
 MAP

DWG DRAWING NO:
 OF C3

3/26/2014
 K:\CADD\30860_01.dwg\phase_1a_50820_02_001.dwg

NO.	DATE	REVISIONS DESCRIPTION



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 JOB NO: 147-R-0565
 SCALE: 1" = 20'
 DATE: 03-14-2014
 FILE NAME: 50820-12
 DRAWING TITLE:
 RIGHT OF WAY
 ACQUISITION
 TABLE

DWG OF DRAWING NO: C3A

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA (ACRES)	AREA TO BE ACQUIRED (ACRES)	AREA REMAINING (ACRES)	EASEMENT (ACRES)				
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE		TOTAL	TOTAL	TOTAL	PERM. DRAINAGE	SLOPE	CONST.	SANITARY SEWER	RAILROAD
				BK.	PAGE								
1	KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION	95-O	B-27.03	20111014	0020212	10.086	3.438 (1)	6.648					
2	REGAL CORPORATION	95-O	B-30.02	20090102	0040816	1.026	4308 S.F.	0.927			3882 S.F.		
3	REGAL CORPORATION	95-O	B-30.03	20090102	0040816	1.645		1.645	883 S.F.		0.152		
4	MARATHON ASHLAND PETROLEUM LLC	95-P	C-6	2277	621	11.690		11.690			570 S.F.		
5	WILLIAM MARK MORSE	95-P	C-1	2173	122	0.201		0.201			836 S.F.		
6	DAVID & WANDA McDANIEL	95-P	D-1	20050520	0093565	0.167	122 S.F.	0.164			1477 S.F.		
7	REGAL CORPORATION	95-O	B-30.04	20090102	0040816	1.269		1.269	769 S.F.		0.173		
8	REGAL CORPORATION	95-O	B-28.01	20090102	0040816	0.884		0.884	374 S.F.		0.258 (3)		
9	NOT USED												
10	KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION	95-O	B-27.01	20090518	0074547	0.804		0.804	410 S.F.		0.132		
11	KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION	95-O	B-27.02	20090518	0074547	0.781	0.25 S.F. (4)	0.781	476 S.F.		0.104		
12	H.L. & NANCY DUNLAP	95-O	B-25	1679	1052	3842 S.F.	31 S.F.	3811 S.F.			1294 S.F.		
13	HERCHELL L. & NANCY DUNLAP	95-O	B-24	1400	878	0.128		0.128			621 S.F.		
14	THOMAS D. & REGINA L. BROWNING	95-O	B-20	20130614	0083622	0.158		0.158			129 S.F.		
15	KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION	95-O	B-16.04	20090518	0074547	1.379	0.376	1.003 (5)			835 S.F.		
16	KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION	95-O	B-16.03	20090518	0074547	0.618	238 S.F.	0.613			3134 S.F.		
17	RIVERVIEW PROPERTIES INC	95-O	C-1	20080707	0001582	0.466	3418 S.F.	0.388			0.124		
18	TOMMY HESTER D/B/A THE CLANCY GROUP	95-O	A-31	20101220	0037570	0.922	1484 S.F.	0.888					
19	FRED H. & HATTIE L. JONES	95-O	A-29	2178	144	0.240	74 S.F.	0.238	1920 S.F.		930 S.F.		
20	RONNIE E. & MARY ANN JONES	95-O	A-38	19990702	0000761	0.189		0.189			893 S.F.		
21	CARROLL R. REAGAN	95-O	N-1	20040820	0015731	0.269	450 S.F.	0.259			808 S.F.		
22	JACK & PEGGY PICKENS	95-O	N-2	1966	583	3728 S.F.		3728 S.F.			103 S.F.		
23	JACK & PEGGY PICKENS	95-O	N-3	2168	594	0.288		0.288			267 S.F.		
24	CARROLL R. REAGAN	95-O	A-39	20040820	0015749	0.169		0.169			181 S.F.		
25	TERRY DWAIN HIBDON	95-O	A-35	20121121	0033482	0.269		0.269			289 S.F.		
26	RONNIE E. & MARY ANN JONES	95-O	A-34	19990702	0000761	0.291		0.291			213 S.F.		
27	GARY H. BAYLESS	95-O	A-32	20050930	0029515	0.194	2036 S.F.	0.147			3548 S.F.		
28	RIVERVIEW PROPERTIES INC	95-O	C-28	20080707	0001582	0.156	0.109	2061 S.F.			2057 S.F.		
29	RIVERVIEW PROPERTIES INC	95-O	C-27	20080707	0001582	2407 S.F.	547 S.F.	1860 S.F.			1268 S.F.		
30	RIVERVIEW PROPERTIES INC	95-O	C-26	20080707	0001582	3614 S.F.	514 S.F.	3100 S.F.			1482 S.F.		
31	FRED H. JONES	95-O	C-25	19990827	0017023	0.139	710 S.F.	0.123			2077 S.F.		
32	SYCAMORES LLC	95-O	C-24	20081205	0036066	2986 S.F.	351 S.F.	2645 S.F.			916 S.F.		
33	SYCAMORES LLC	95-O	C-23	20081205	0036066	3000 S.F.	350 S.F.	2650 S.F.			840 S.F.		
34	RIVERVIEW PROPERTIES INC	95-O	C-20	20080707	0001582	0.675	1363 S.F.	0.644	406 S.F.		2736 S.F.		
35	GULF & OHIO RAILROAD						3086 S.F.				0.115		0.128
36	WILLIAM EUGENE MONDAY III	95-O	F-3	19991216	0045030	2088 S.F.	608 S.F.	1480 S.F.			596 S.F.		
37	SYCAMORES LLC	95-O	F-4	20081205	0036066	2181 S.F.	559 S.F.	1622 S.F.			516 S.F.		
38	SYCAMORES LLC	95-O	F-5	20081205	0036066	1561 S.F.	140 S.F.	1421 S.F.			569 S.F.		
39	MARY JOANNE WOLAK	95-O	G-26	20111201	0029727	0.126	189 S.F.	0.124	477 S.F.				
40	RIVERVIEW PROPERTIES INC	95-P	D-12	20080707	0001582	0.167	1200 S.F.	0.139			1699 S.F.		
41	RIVERVIEW PROPERTIES INC	95-P	D-10	20080707	0001582	0.166	930 S.F.	0.145			1649 S.F.		
42	KNOX COUNTY	95-P	D-11	2114	882	2.069	944 S.F.	2.047			0.402		

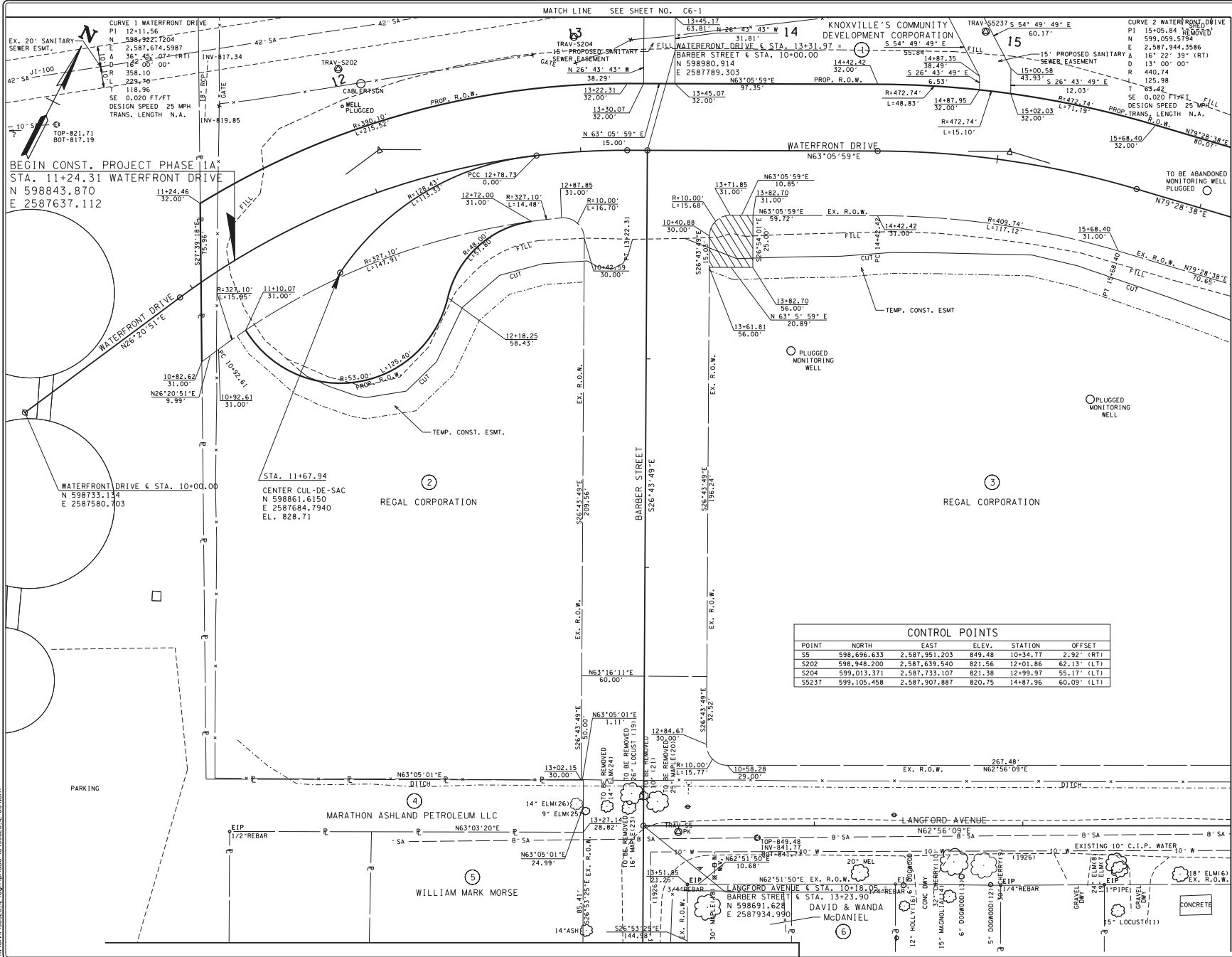
NOTE: ALL AREAS IN ACRES UNLESS OTHERWISE NOTED.

- (1) AREA INCLUDES 1283.95 S.F. EXISTING SANITARY SEWER EASEMENT.
- (2) AREA INCLUDES 211.42 S.F. EXISTING SANITARY SEWER EASEMENT.
- (3) AREA INCLUDES 473.35 SF EXISTING SANITARY SEWER EASEMENT.
- (4) AREA TO BE ACQUIRED EQUALS 0.25 SF.
- (5) AREA INCLUDES 0.946 AC PARCEL 1 AND 2515.70 SF PARCEL 2.
- (6) AREA INCLUDES 973.67 SF PARCEL 1 AND 510.61 SF PARCEL 2.
- (7) AREA INCLUDES 1621.81 SF EXISTING DRAINAGE EASEMENT.

N.I.C.

3/26/2014

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POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S5	598,696.633	2,587,951.203	849.48	10+34.77	2.92' (RT)
S202	598,948.200	2,587,639.540	821.56	12+01.86	62.13' (LT)
S204	599,013.371	2,587,733.107	821.38	12+99.97	55.17' (LT)
S5237	599,105.458	2,587,907.887	820.75	14+87.96	60.09' (LT)

NO.	DATE	REVISIONS	DESCRIPTION



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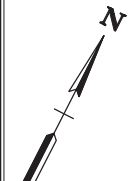
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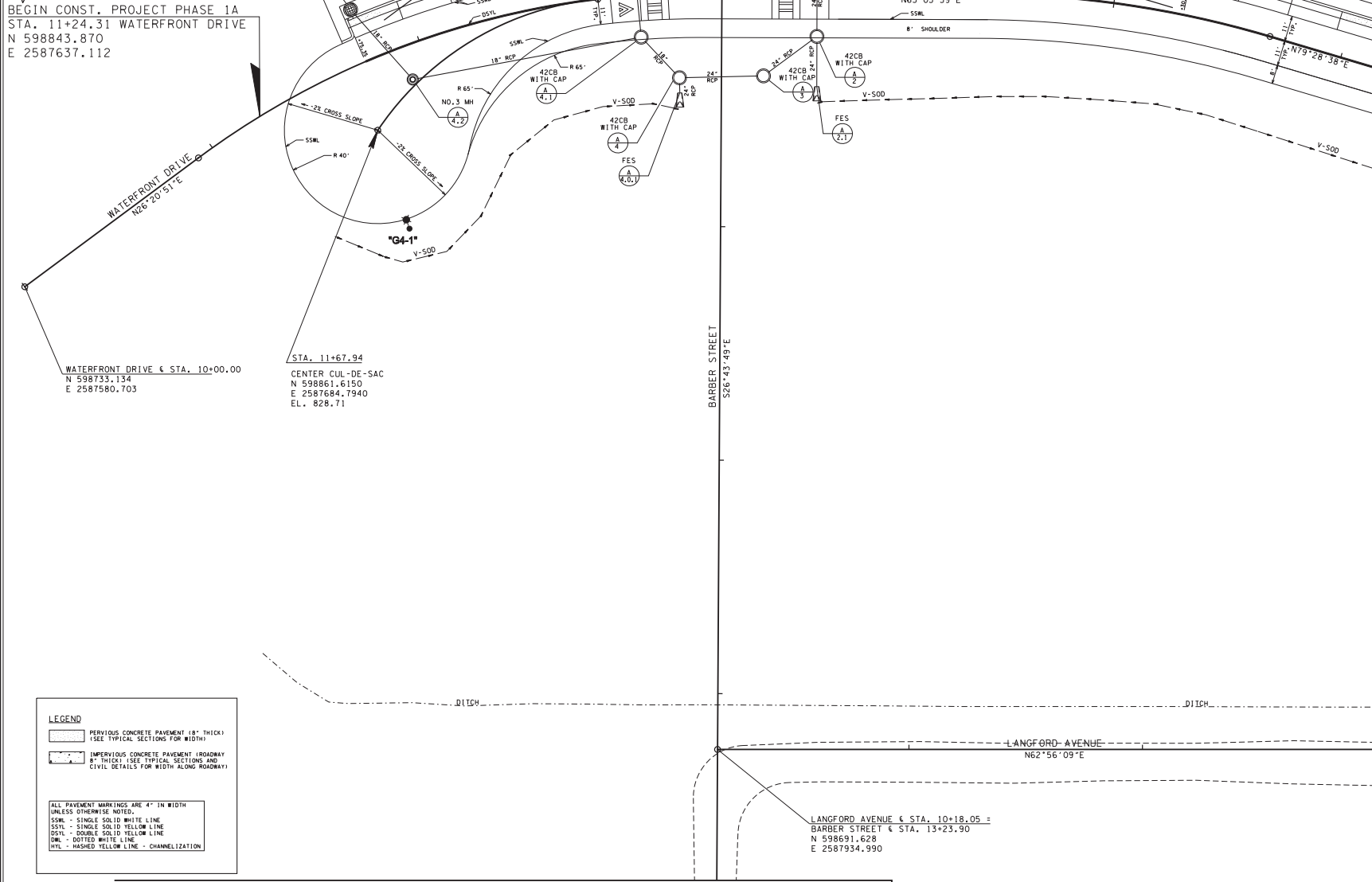
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JOB NO: 147-R-0565
SCALE: 1" = 20'
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE:
PRESENT LAYOUT

DWG: DRAWING NO:
OF: C4

MATCH LINE SEE SHEET NO. C6A



BEGIN CONST. PROJECT PHASE 1A
 STA. 11+24.31 WATERFRONT DRIVE
 N 598843.870
 E 2587637.112



WATERFRONT DRIVE & STA. 10+00.00
 N 598733.134
 E 2587580.703

STA. 11+67.94
 CENTER CUL-DE-SAC
 N 598861.6150
 E 2587684.7940
 EL. 828.71

BARBER STREET
 S26°43'49\"/>

LANGFORD AVENUE & STA. 10+18.05 =
 BARBER STREET & STA. 13+23.90
 N 598691.628
 E 2587934.990

MATCH LINE SEE SHEET NO. C5A

LEGEND

- PREVIOUS CONCRETE PAVEMENT (8\"/>
- IMPERVIOUS CONCRETE PAVEMENT (ROADWAY 8\"/>

ALL PAVEMENT MARKINGS ARE 4\"/>

- SSWL - SINGLE SOLID WHITE LINE
- SSYL - SINGLE SOLID YELLOW LINE
- DSYL - DOUBLE SOLID YELLOW LINE
- DWL - DOTTED WHITE LINE
- HYL - HASHED YELLOW LINE - CHANNELIZATION

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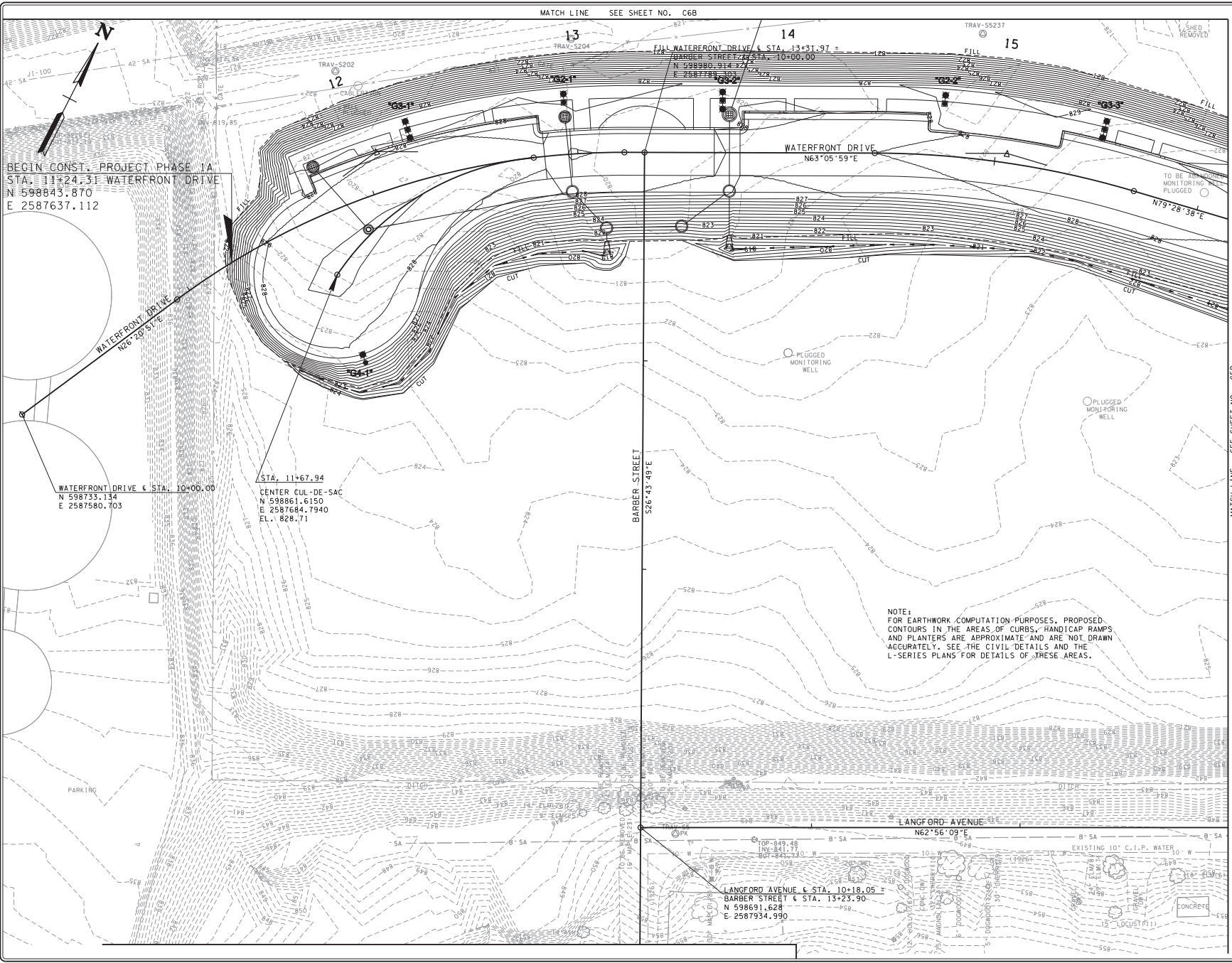
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 DRAWING TITLE:
 PROPOSED
 LAYOUT

DWG OF DRAWING NO: C4A

4/1/2014 14:51:03 50820-12.dwg Phase 1A 50820-12.dwg

MATCH LINE SEE SHEET NO. C6B



BEGIN CONST. PROJECT PHASE 1A
 STA. 11+24.31 WATERFRONT DRIVE
 N 598843.870
 E 2587637.112

WATERFRONT DRIVE & STA. 10+00.00
 N 598733.134
 E 2587580.703

STA. 11+67.94
 CENTER CUL-DE-SAC
 N 598861.6150
 E 2587684.7940
 EL. 828.71

BARBER STREET
 S26°43'49"E

LANGFORD AVENUE & STA. 10+18.05 =
 BARBER STREET & STA. 13+23.90
 N 598691.628
 E 2587934.990

NOTE:
 FOR EARTHWORK COMPUTATION PURPOSES, PROPOSED
 CONTOURS IN THE AREAS OF CURBS, HANDICAP RAMPS,
 AND PLANTERS ARE APPROXIMATE AND ARE NOT DRAWN
 ACCURATELY. SEE THE CIVIL DETAILS AND THE
 L-SERIES PLANS FOR DETAILS OF THESE AREAS.

MATCH LINE SEE SHEET NO. C5B

NO.	DATE	REVISIONS	DESCRIPTION



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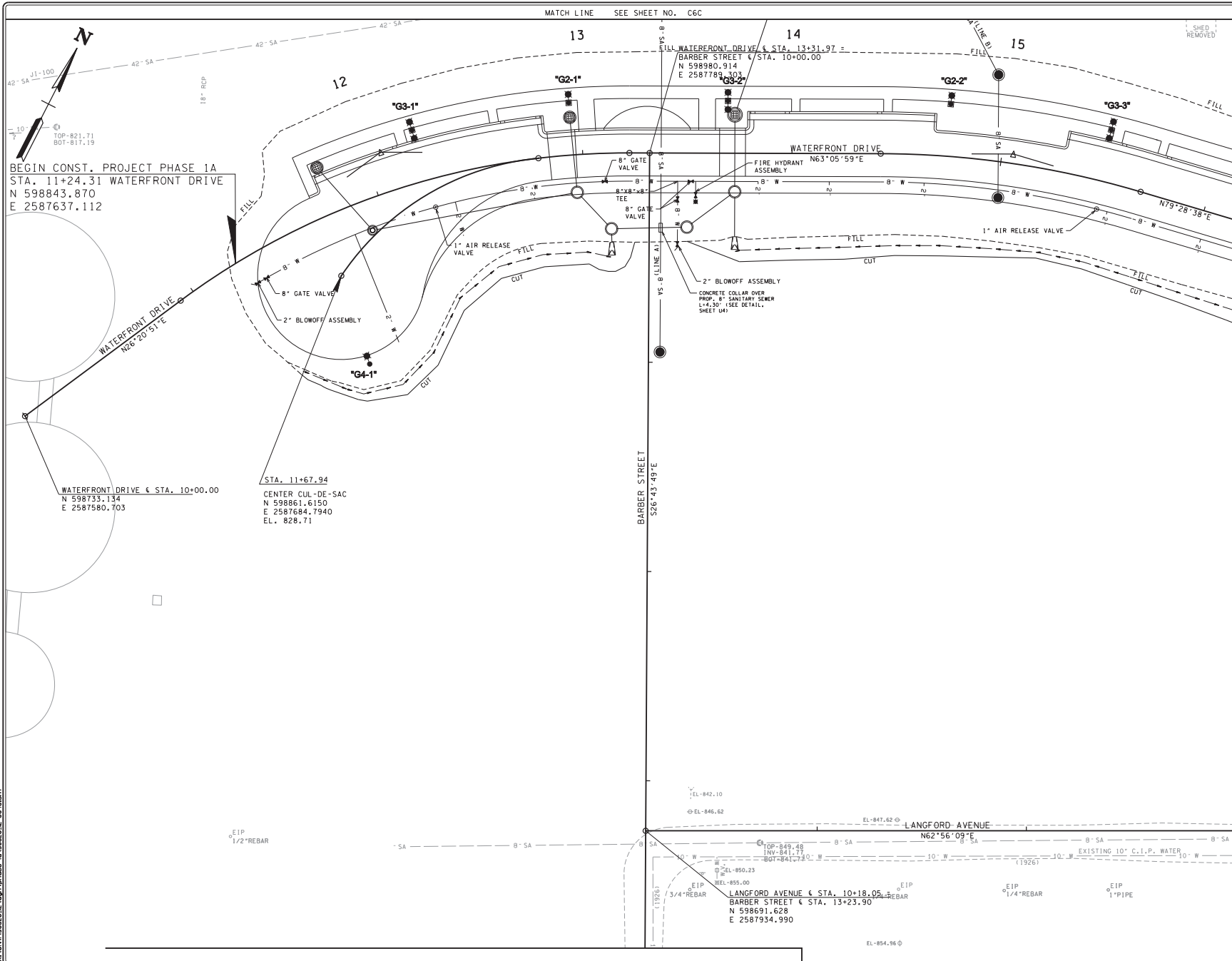
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JOB NO.:	147-R-0565
SCALE:	1" = 20'
DATE:	03-14-2014
FILE NAME:	50820-12
DRAWING TITLE:	PROPOSED GRADING LAYOUT
DWG NO.:	C4B
OF	

4/7/2014 14:51:03 50820-12.dwg phase 1a 50820-12.dwg

4/7/2014
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MATCH LINE SEE SHEET NO. C6C

1' SHED
 REMOVED

BEGIN CONST. PROJECT PHASE 1A
 STA. 11+24.31 WATERFRONT DRIVE
 N 598843.870
 E 2587637.112

WATERFRONT DRIVE & STA. 10+00.00
 N 598733.134
 E 2587580.703

STA. 11+67.94
 CENTER CUL-DE-SAC
 N 598861.6150
 E 2587684.7940
 EL. 828.71

BARBER STREET
 S26°43'49"E

FILL WATERFRONT DRIVE & STA. 13+31.97 =
 BARBER STREET & STA. 10+00.00
 N 598980.914
 E 2587789.303

WATERFRONT DRIVE
 FIRE HYDRANT N63°05'59"E
 ASSEMBLY

2" BLOWOFF ASSEMBLY
 CONCRETE COLLAR OVER
 PROP. 8" SANITARY SINKER
 L=4.30' (SEE DETAIL,
 SHEET 14A)

LANGFORD AVENUE
 N62°56'09"E

LANGFORD AVENUE & STA. 10+18.05 =
 BARBER STREET & STA. 13+23.90
 N 598691.628
 E 2587934.990

MATCH LINE SEE SHEET NO. C5C

NO.	DATE	REVISIONS DESCRIPTION



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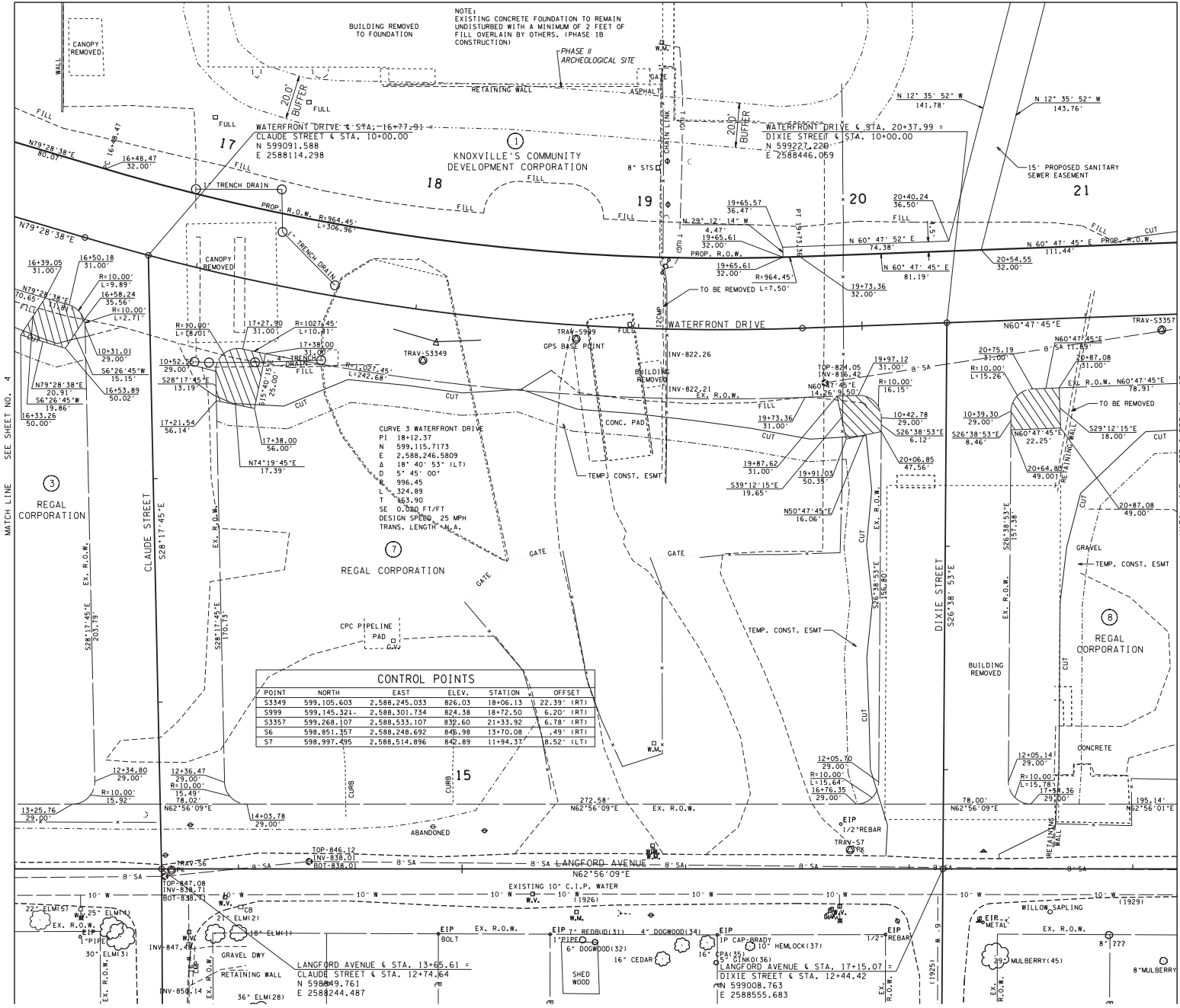
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 SCALE: 1" = 20'
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 FILE NAME: 50820-12
 DRAWING TITLE:
 UTILITIES
 LAYOUT

DWG NO: C4C
 OF

MATCH LINE SEE SHEET NO. C6

NOTE:
EXISTING CONCRETE FOUNDATION TO REMAIN
UNDISTURBED WITH A MINIMUM OF 2 FEET OF
FILL OVERLAIN BY OTHERS. (PHASE 1B
CONSTRUCTION)



CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S3349	599,105.603	2,588,245.033	826.03	18+06.13	22.39' (RT)
S999	599,145.321	2,588,301.734	824.38	18+72.50	6.20' (RT)
S3357	599,268.107	2,588,533.107	832.60	21+33.92	6.78' (RT)
S6	598,851.357	2,588,248.692	848.98	13+70.08	6.49' (RT)
S7	598,997.495	2,588,514.896	842.89	11+94.37	8.52' (LT)

MATCH LINE SEE SHEET NO. 4

MATCH LINE SEE SHEET NO. C7

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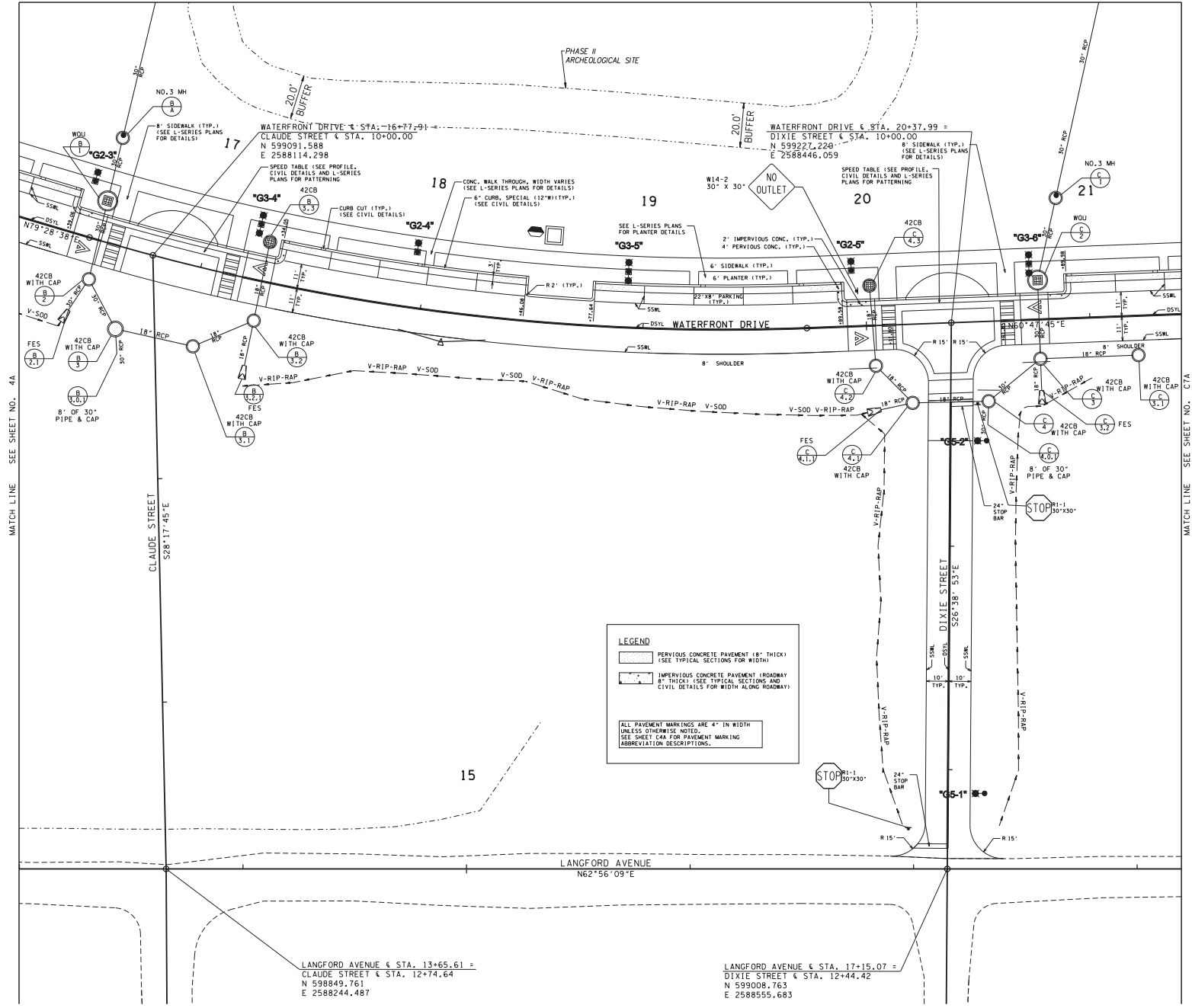
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DRAWING TITLE:
PRESENT LAYOUT

DWG DRAWING NO:
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MATCH LINE SEE SHEET NO. C6A



LEGEND

- PERVIOUS CONCRETE PAVEMENT (8" THICK)
(SEE TYPICAL SECTIONS FOR WIDTH)
- IMPERVIOUS CONCRETE PAVEMENT (ROADWAY 8" THICK)
(SEE TYPICAL SECTIONS AND CIVIL DETAILS FOR WIDTH ALONG ROADWAY)

ALL PAVEMENT MARKINGS ARE 4" IN WIDTH UNLESS OTHERWISE NOTED. SEE SHEET C6A FOR PAVEMENT MARKING ABBREVIATION DESCRIPTIONS.

MATCH LINE SEE SHEET NO. 4A

MATCH LINE SEE SHEET NO. C7A

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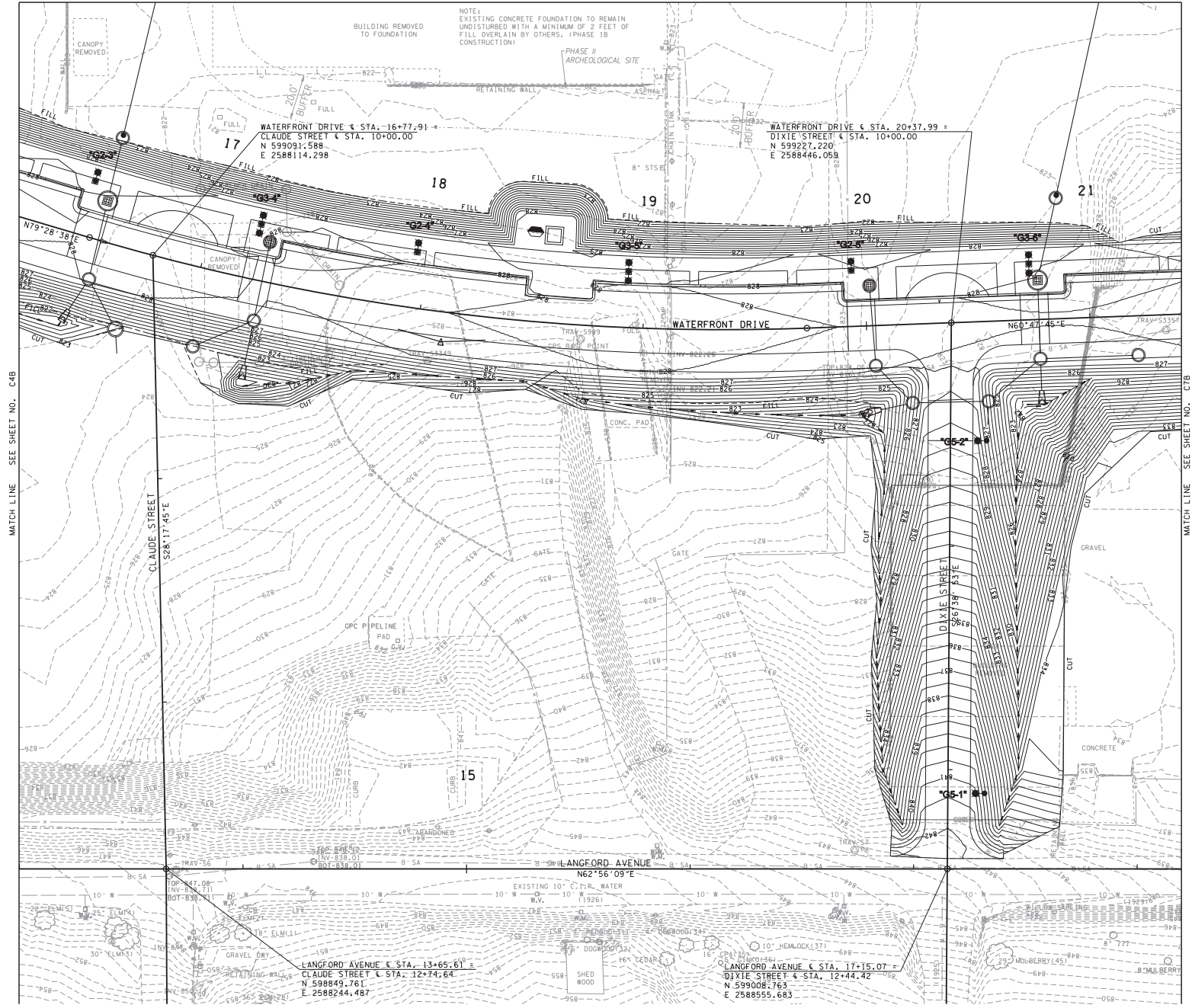
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DATE:	03-14-2014
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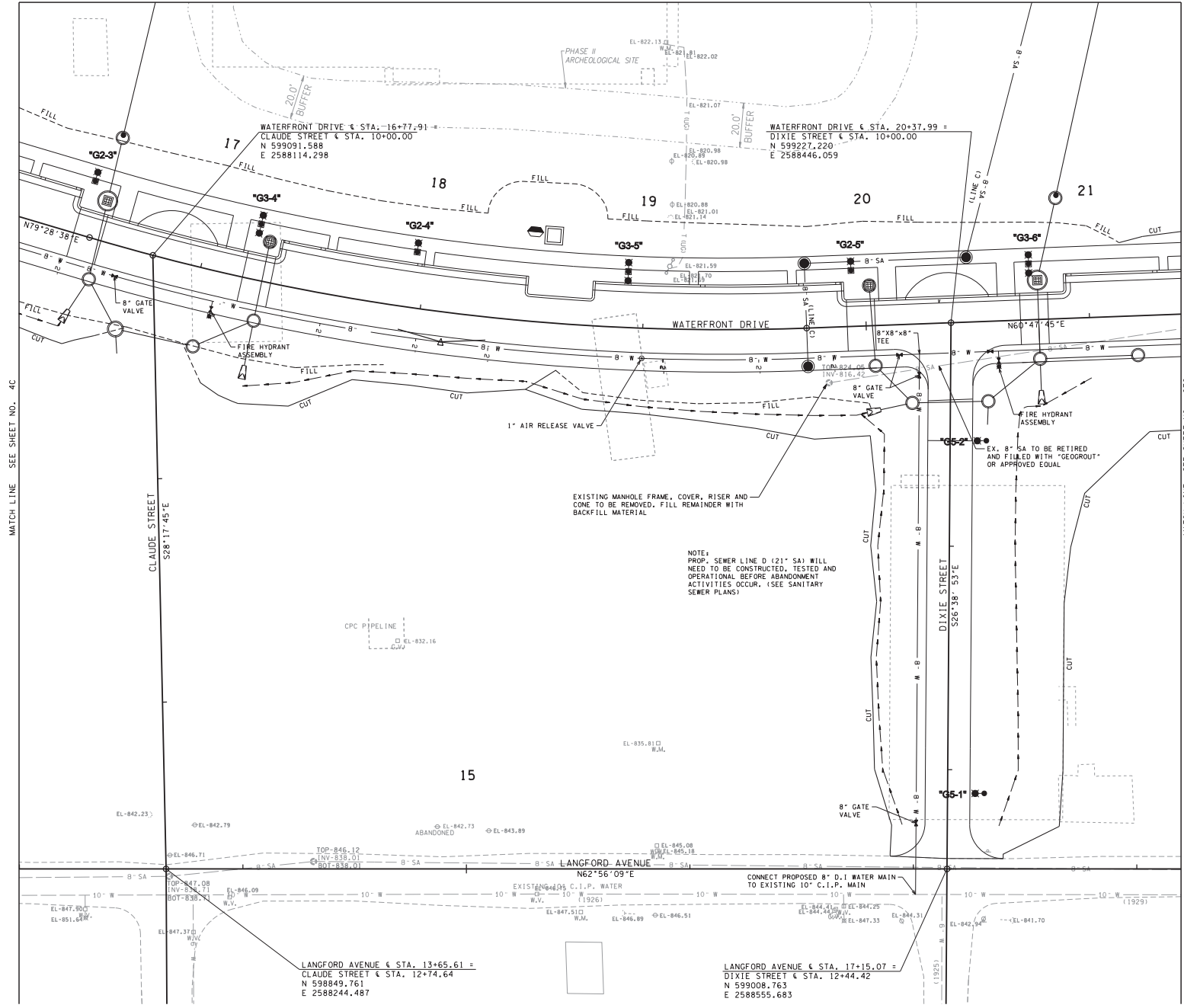
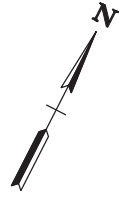
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DATE: 03-14-2014	FILE NAME: 50820-12
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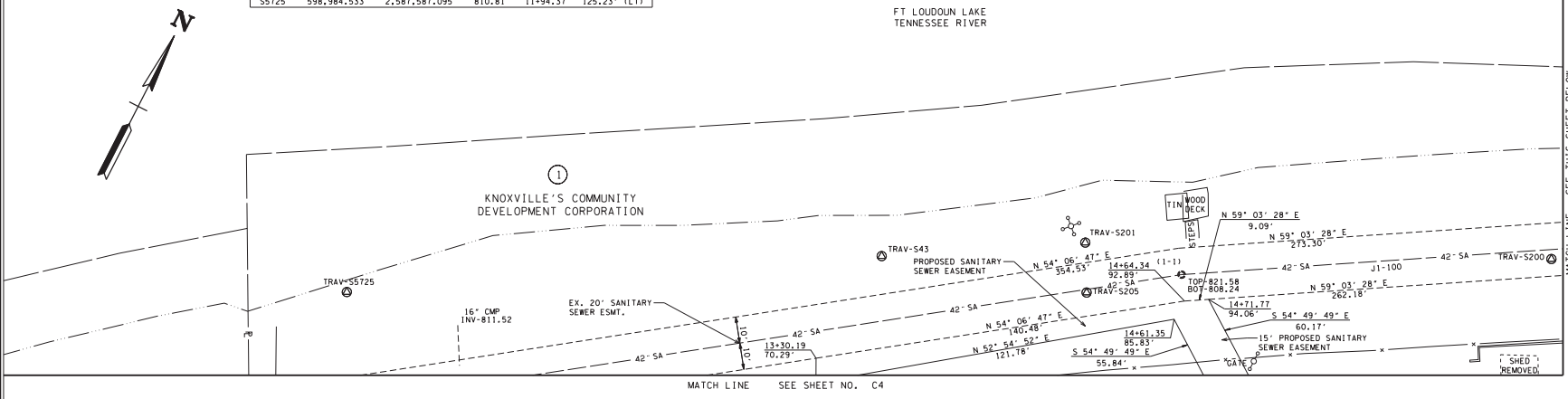
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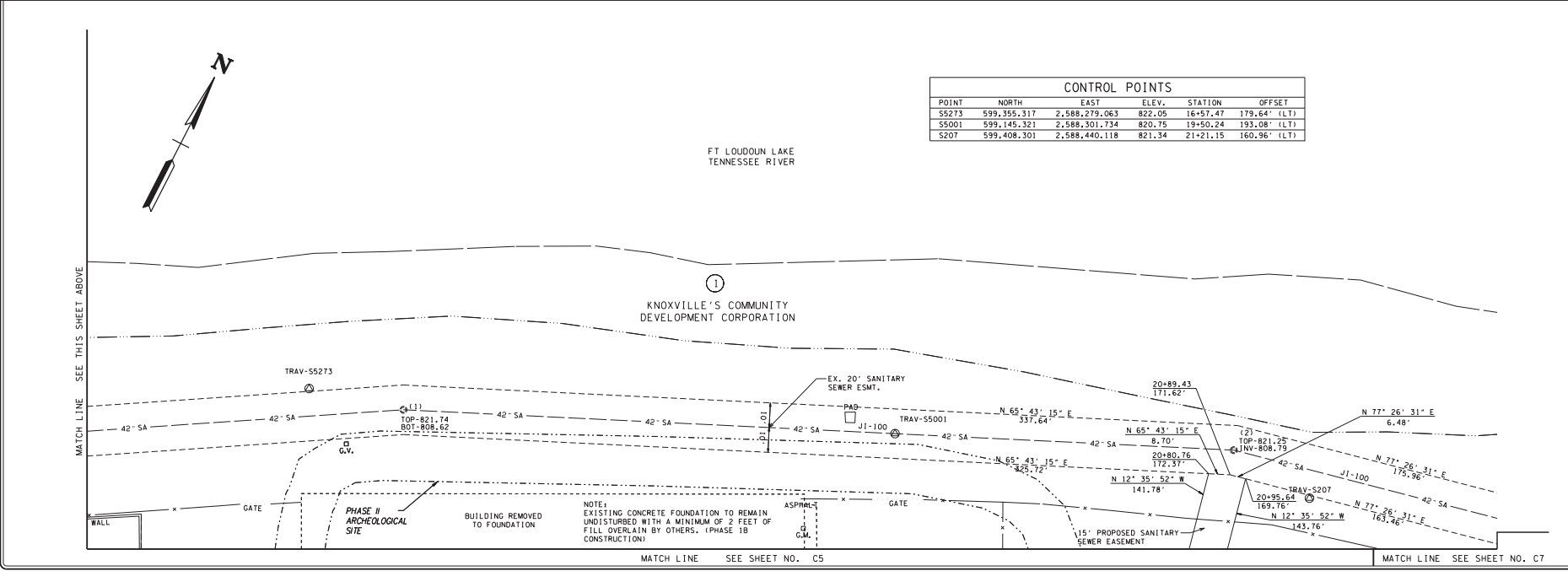
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FILE NAME: 50820-12
DRAWING TITLE: UTILITIES LAYOUT
DWG OF
DRAWING NO: C5C

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S43	599,088.295	2,587,760.404	819.90	13+54.78	108.84' (LT)
S200	599,202.125	2,587,985.635	821.80	14+32.04	132.61' (LT)
S201	599,127.734	2,587,826.413	820.96	14+31.49	114.14' (LT)
S205	599,111.204	2,587,835.412	821.04	14+32.04	95.33' (LT)
S5725	598,984.533	2,587,587.095	810.81	11+94.37	125.23' (LT)



POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S5273	599,355.317	2,588,279.063	822.05	16+57.47	179.64' (LT)
S5001	599,145.321	2,588,301.734	820.75	19+50.24	193.08' (LT)
S207	599,408.301	2,588,440.118	821.34	21+21.15	160.96' (LT)



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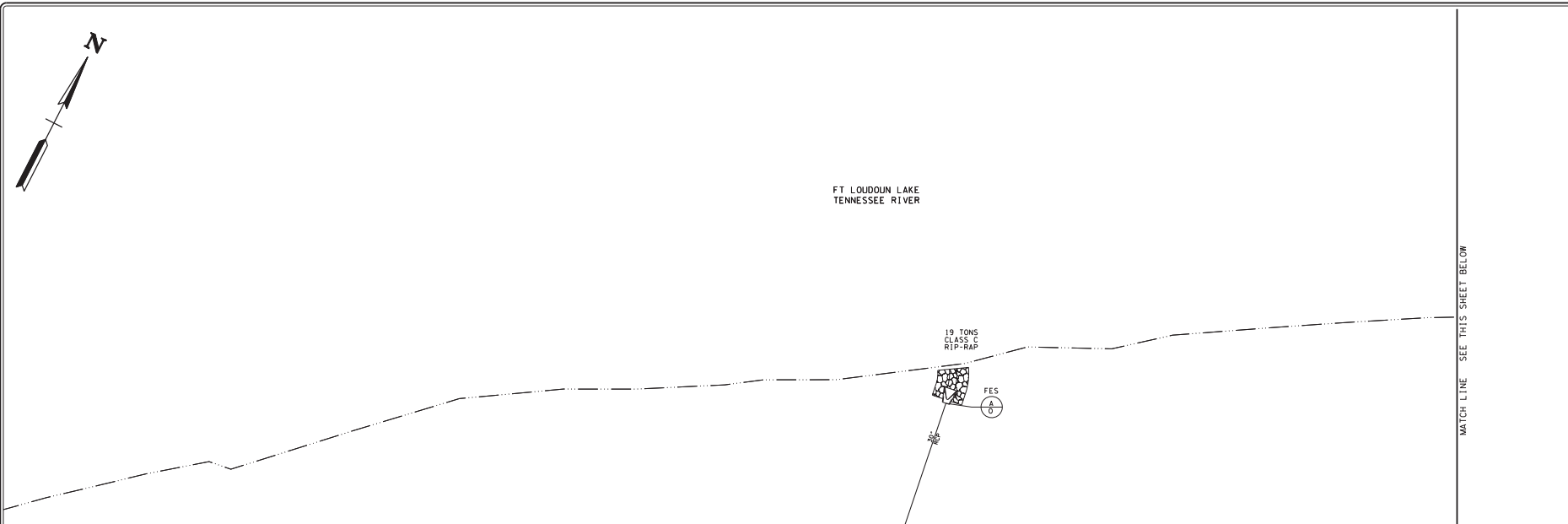
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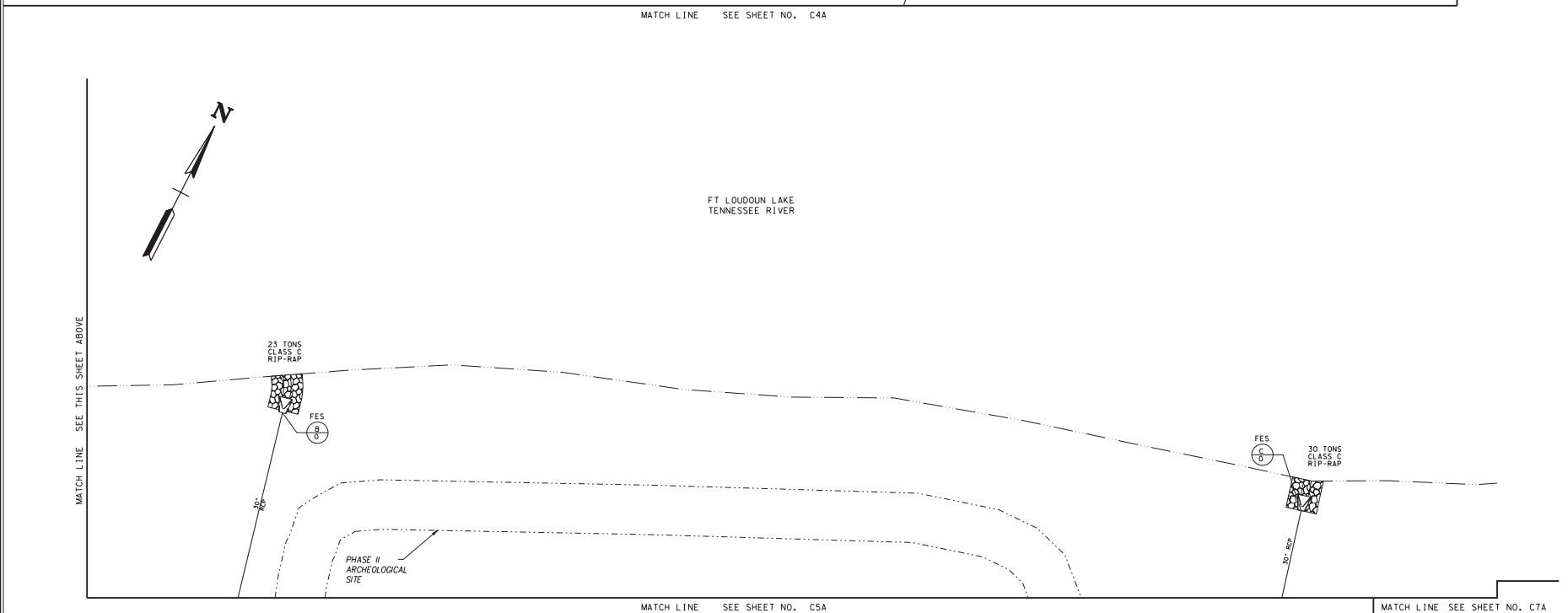
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DRAWING TITLE:	PRESENT LAYOUT
DWG NO:	C6

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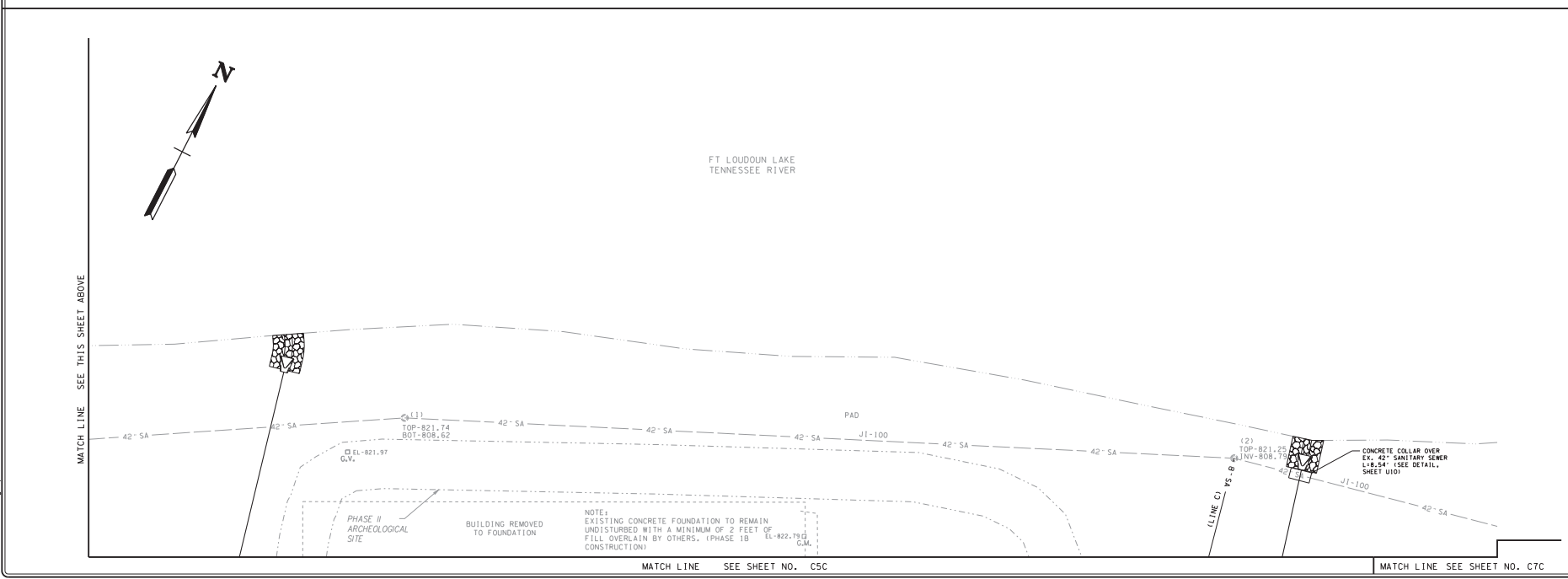
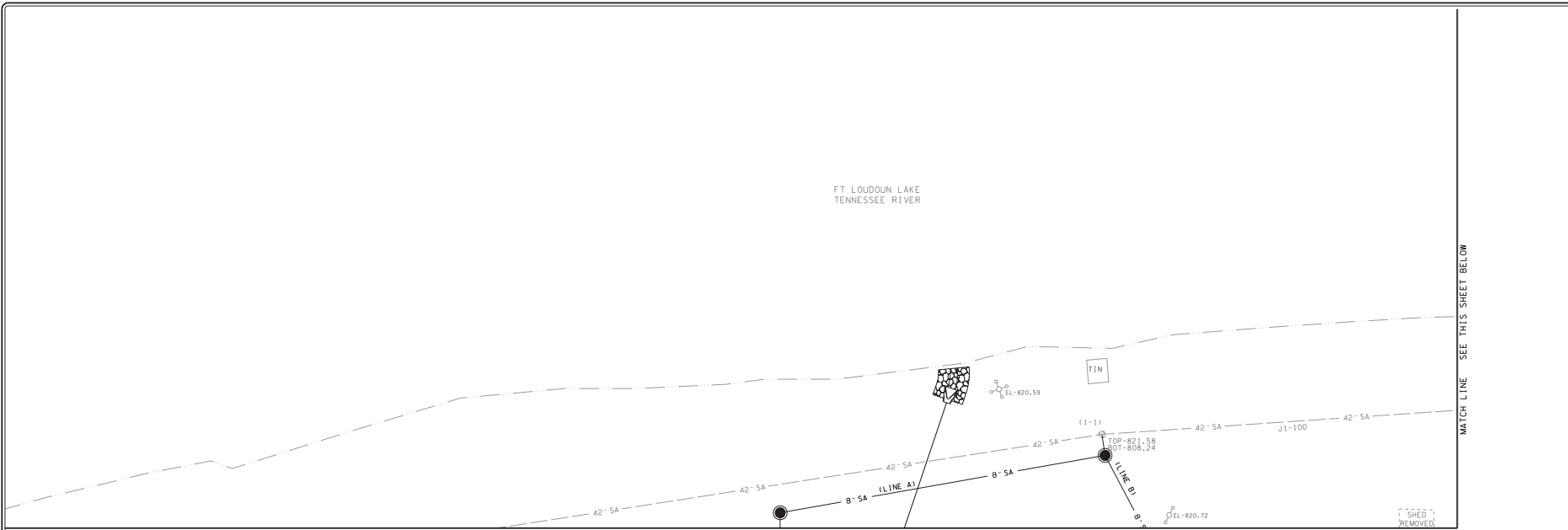
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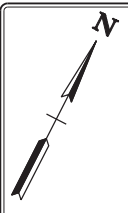
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DRAWING TITLE: UTILITIES LAYOUT
DWG OF: C6C



CONTROL POINTS					
POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S5320	599,506.889	2,588,872.577	819.70	25+07.23	119.52' (LT)
S8	599,134.374	2,588,786.140	831.39	19+77.45	7.00' (LT)

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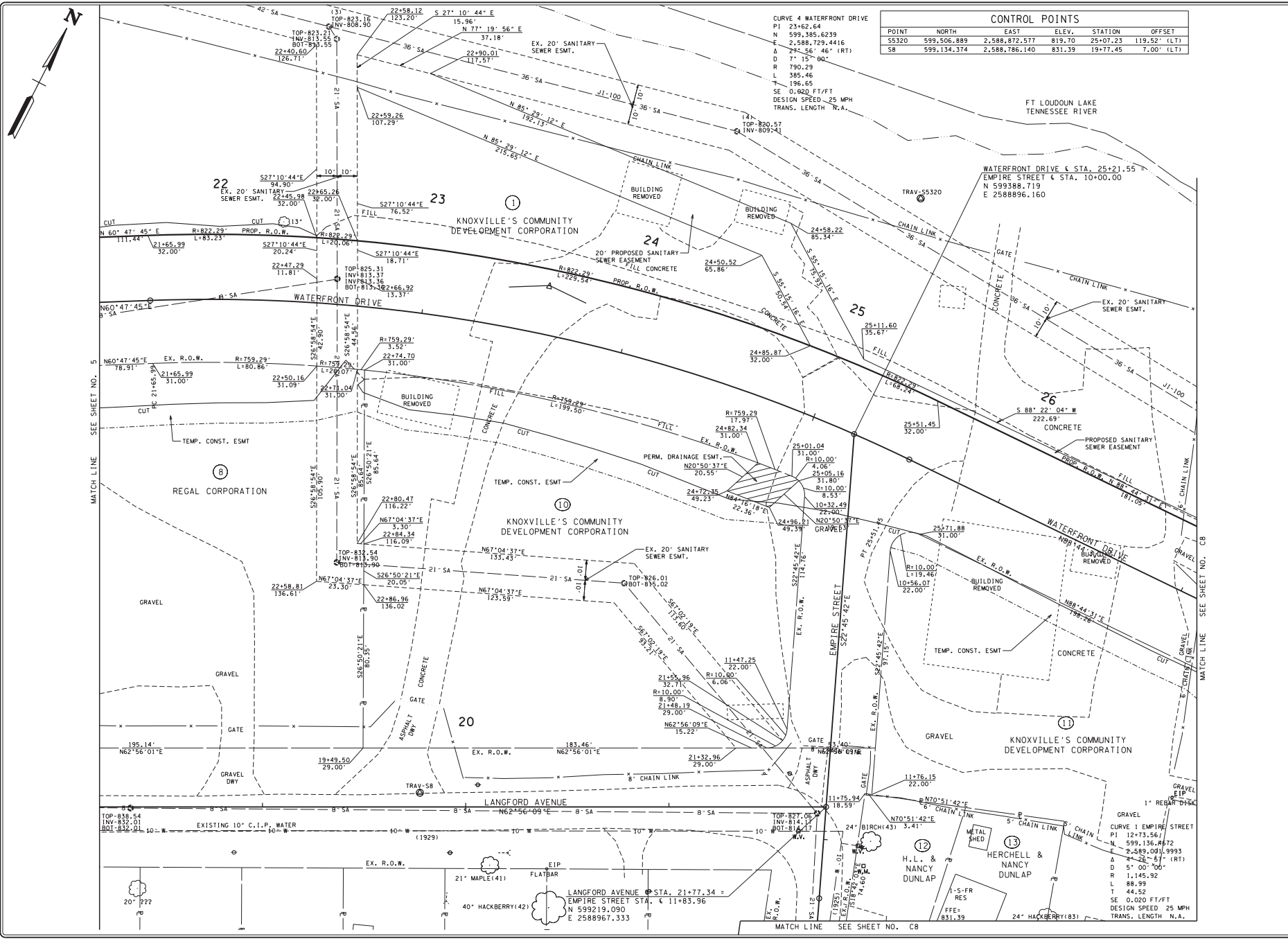
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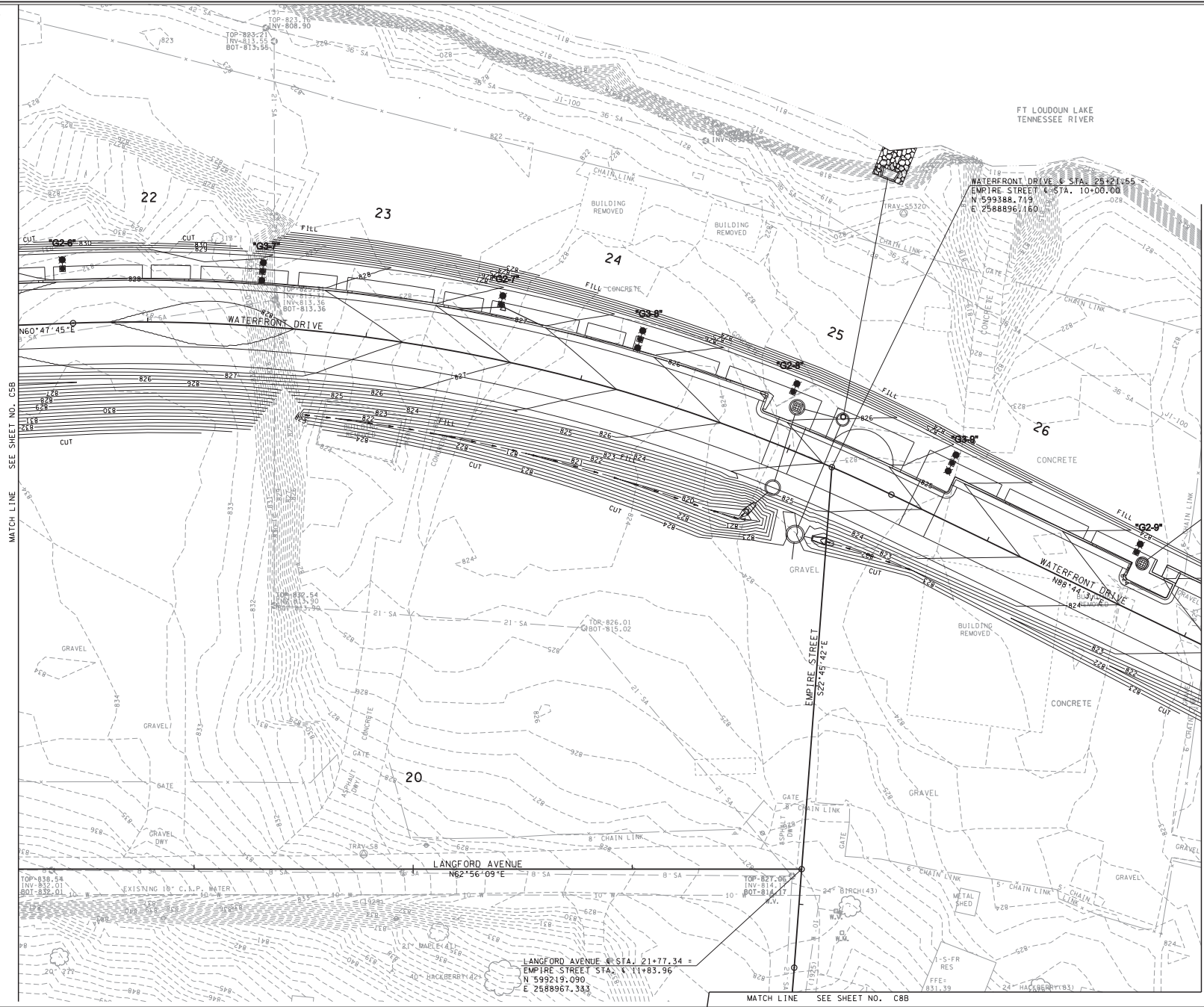
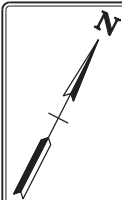
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JOB NO: 147-R-0565
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FILE NAME: 50820-12
DRAWING TITLE:
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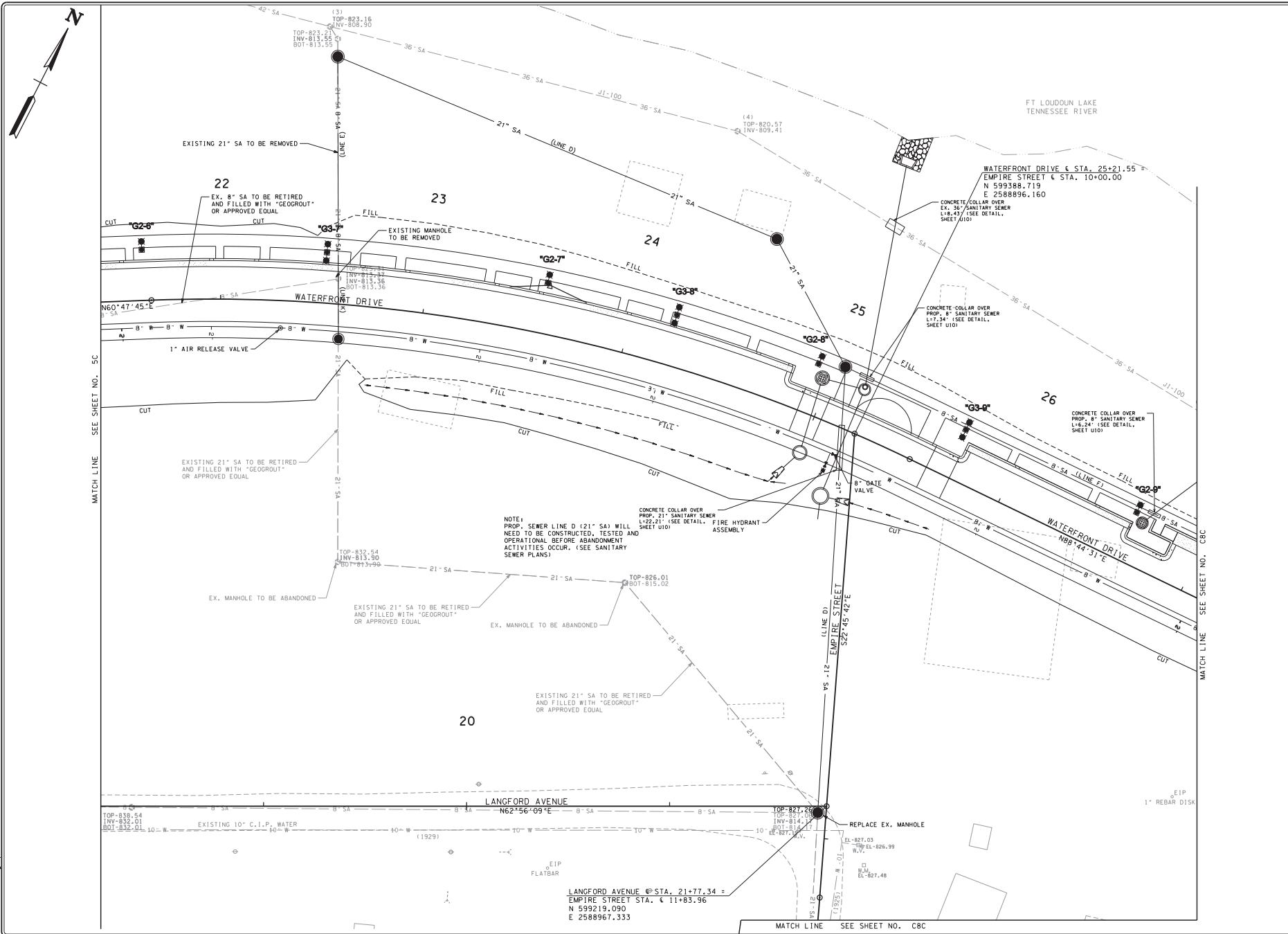
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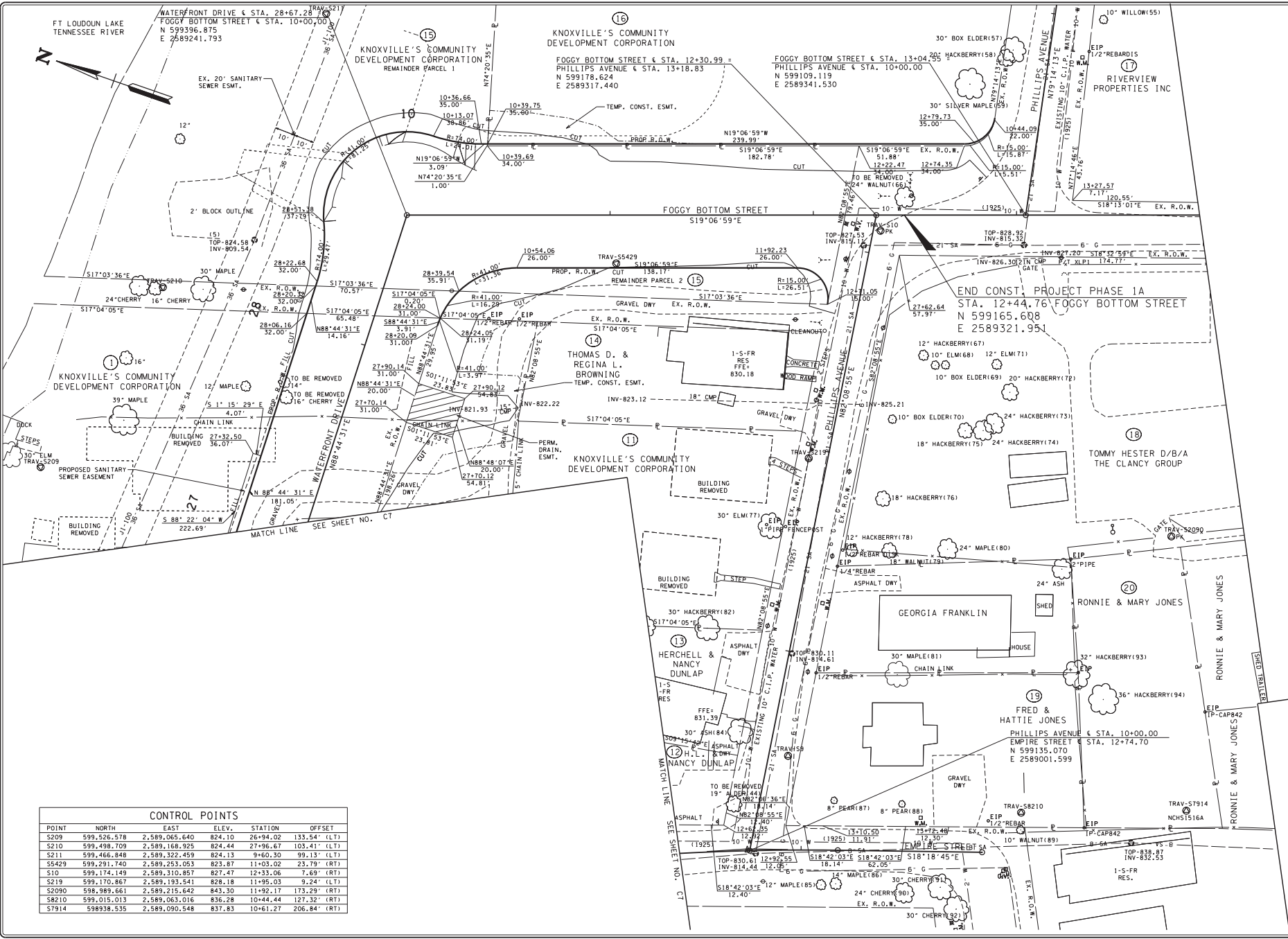
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DRAWING TITLES:	UTILITIES LAYOUT
DWG NO.:	C7C

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CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S209	599,526.978	2,589,065.640	824.10	26+94.02	133.54' (LT)
S210	599,498.709	2,589,168.925	824.44	27+96.67	103.41' (LT)
S211	599,466.848	2,589,322.459	824.13	9+60.30	99.13' (LT)
S5429	599,291.740	2,589,253.053	823.87	11+03.02	23.79' (RT)
S10	599,174.149	2,589,310.857	827.47	12+33.06	7.69' (RT)
S219	599,170.867	2,589,193.541	828.18	11+95.03	9.24' (LT)
S2090	598,989.661	2,589,215.642	843.30	11+92.17	173.29' (RT)
S8210	599,015.013	2,589,063.016	836.28	10+44.44	127.32' (RT)
S7914	598938.535	2,589,090.548	837.83	10+61.27	206.84' (RT)

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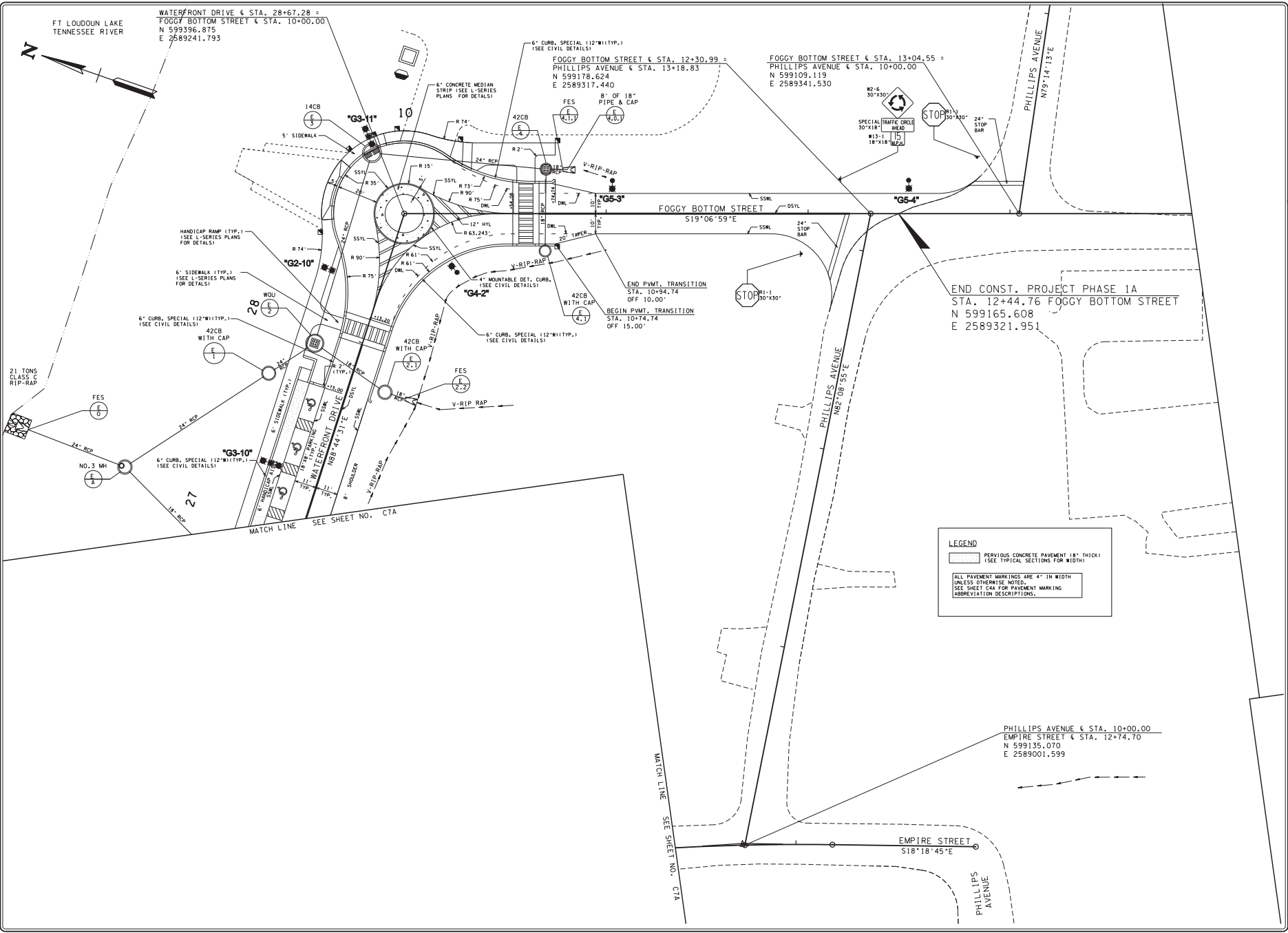
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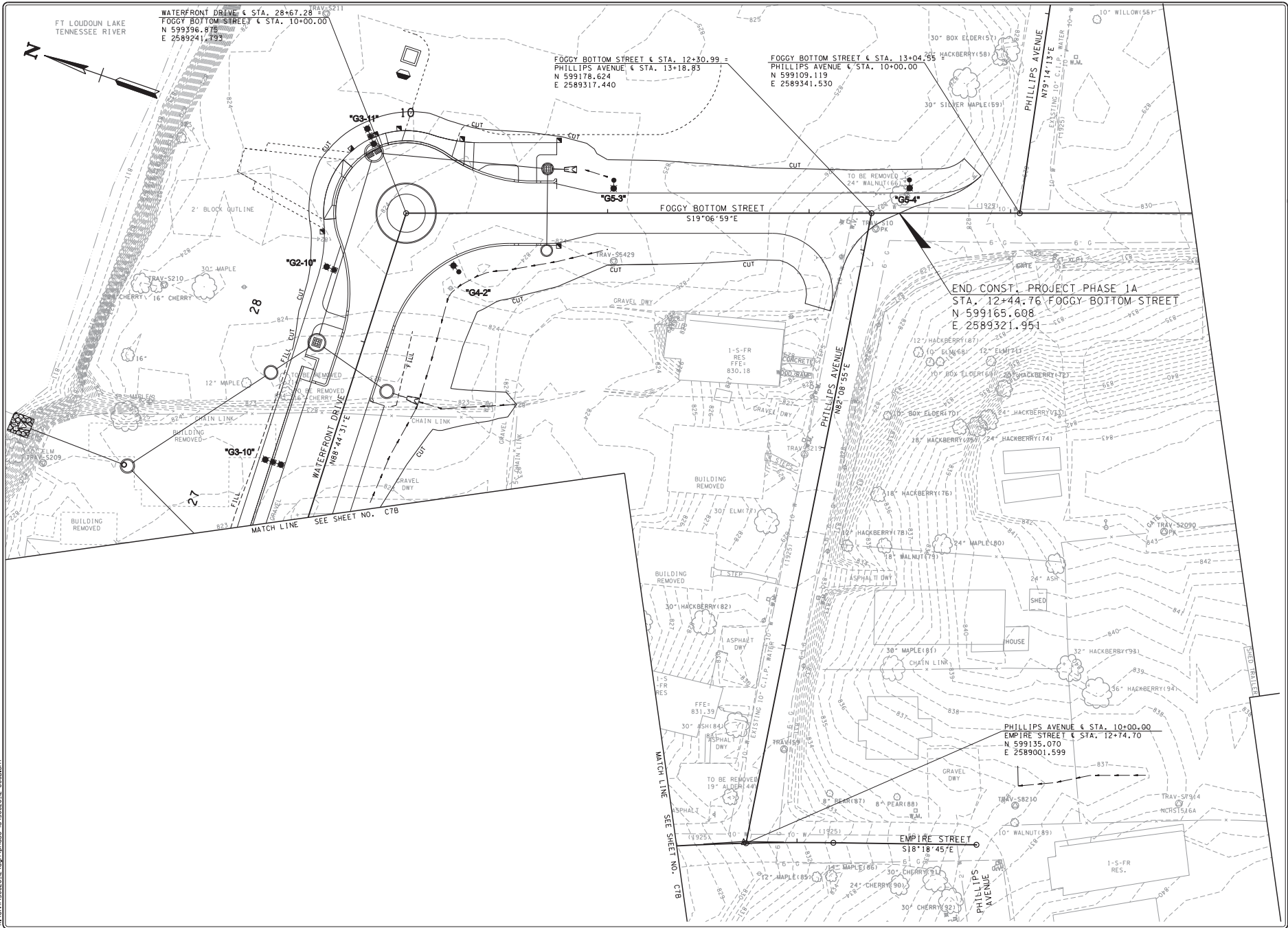
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DRAWING NO:	C8A

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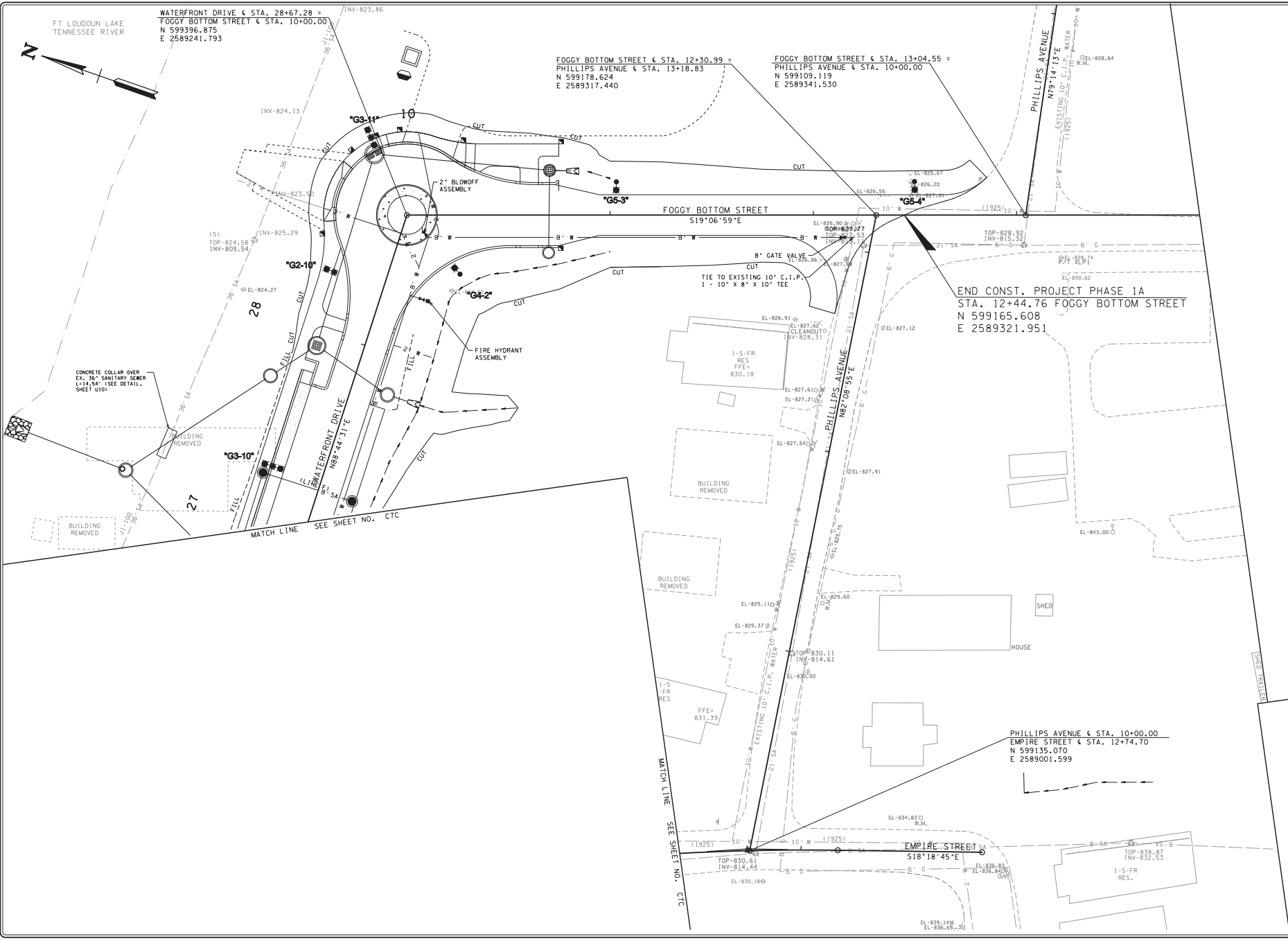
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DATE: 03-14-2014	FILE NAME: 50820-12
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DWG NO: C8B	DRAWING NO: C8B

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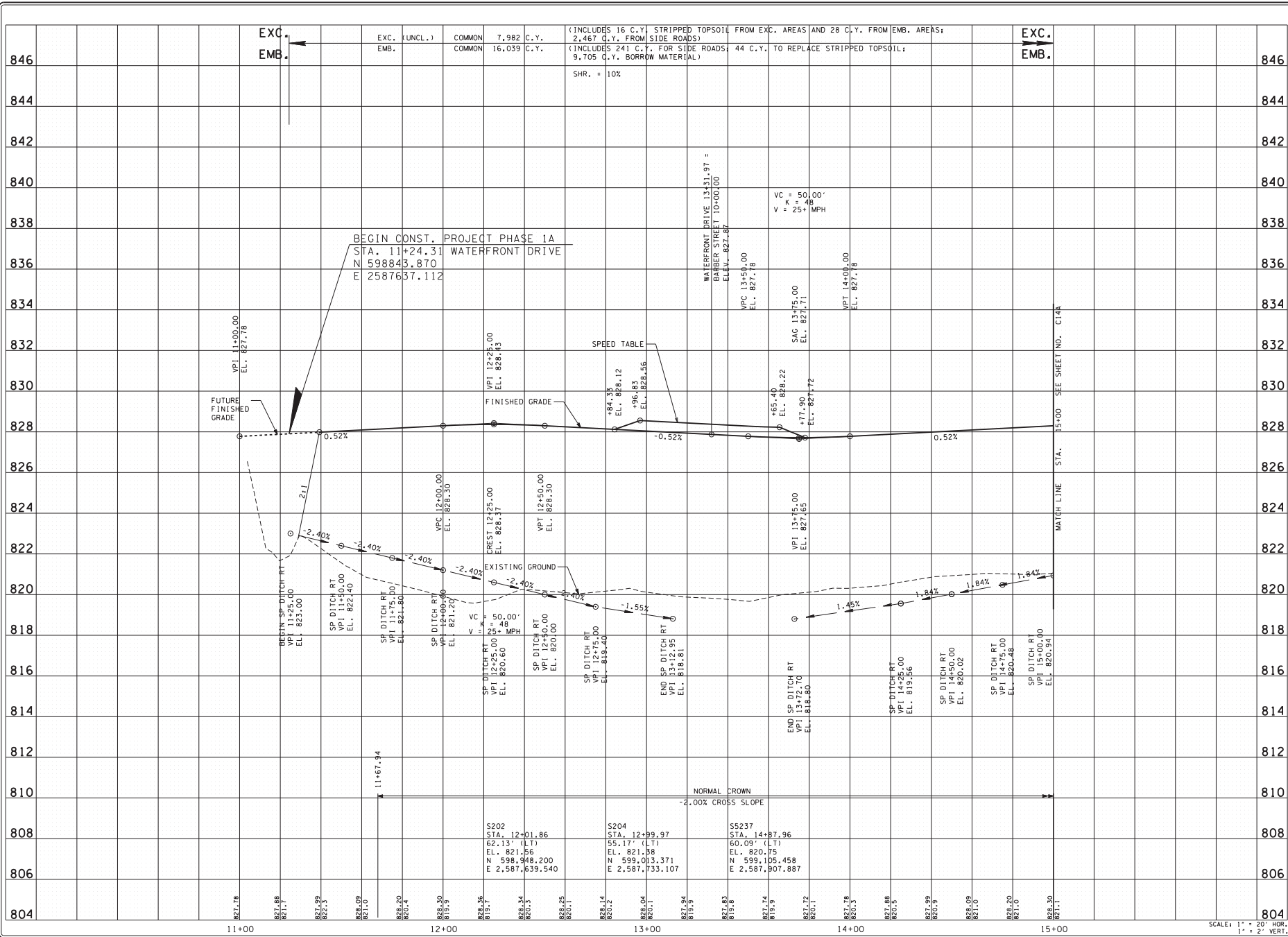
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DATE:	03-14-2014
FILE NAME:	50820-12
DRAWING TITLE:	UTILITIES LAYOUT
DWG NO.:	C8C
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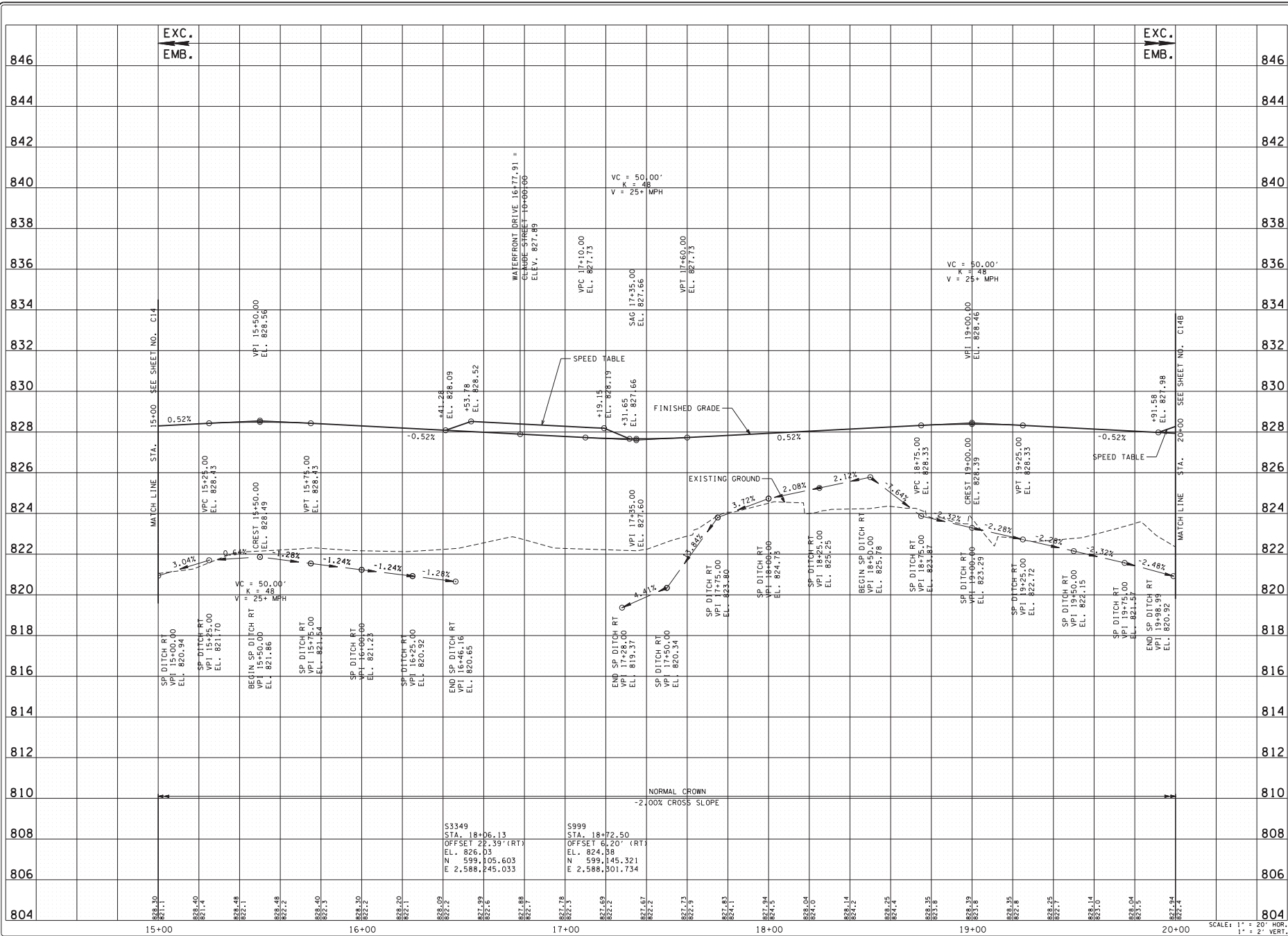
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JOB NO: 147-R-0565	FILE NAME: 30820-12
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SCALE: 1" = 20' HOR.
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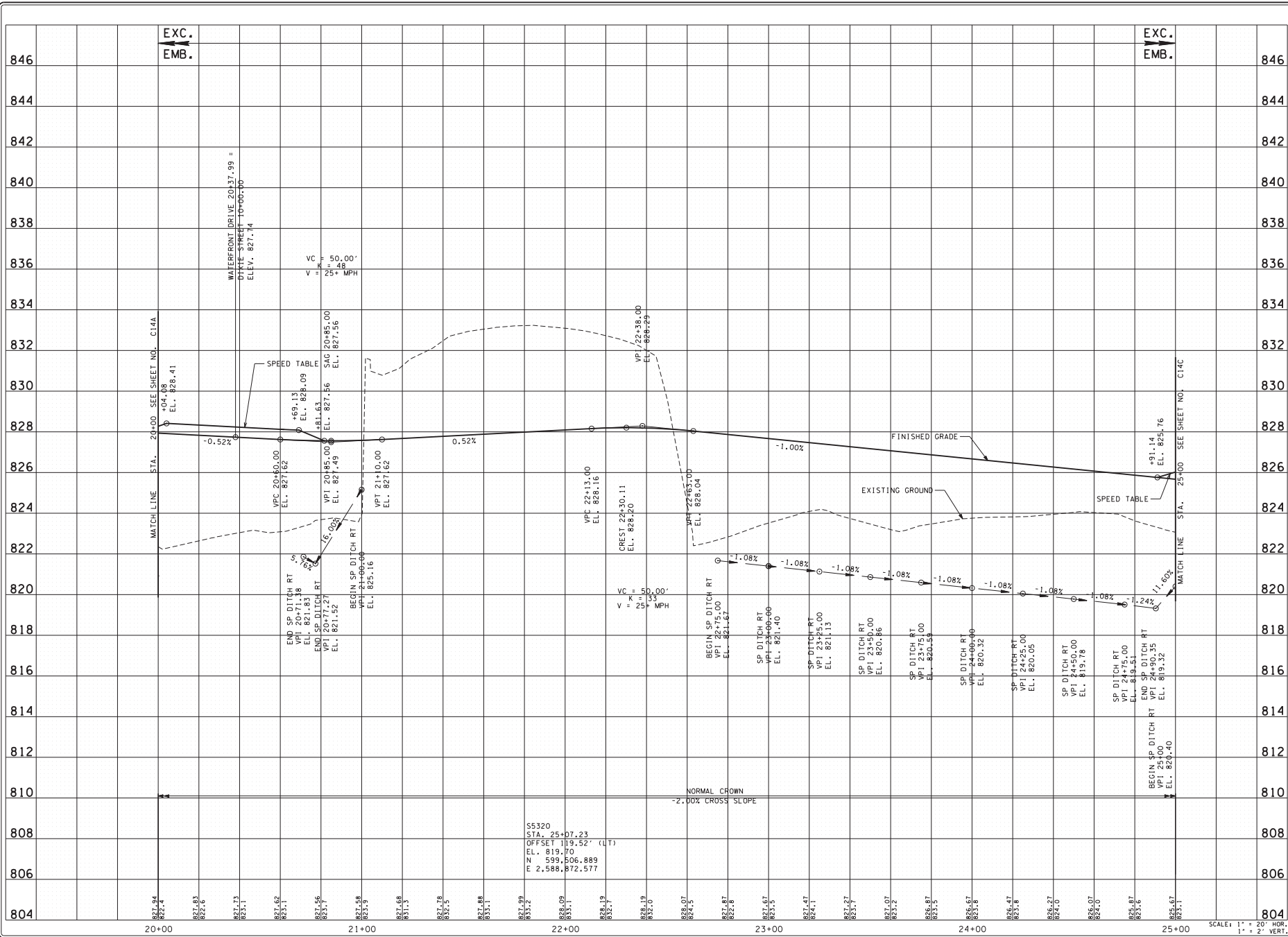
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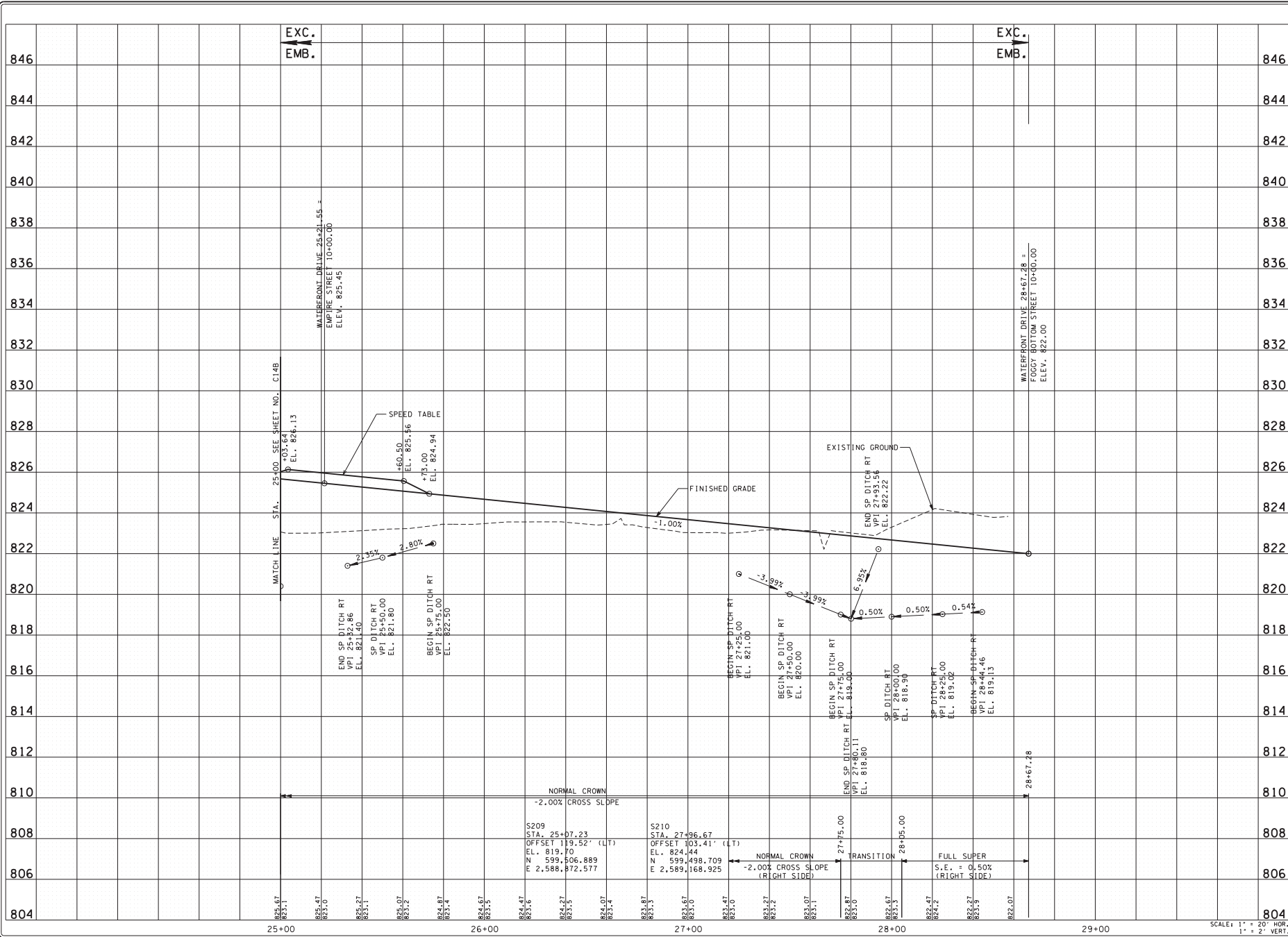
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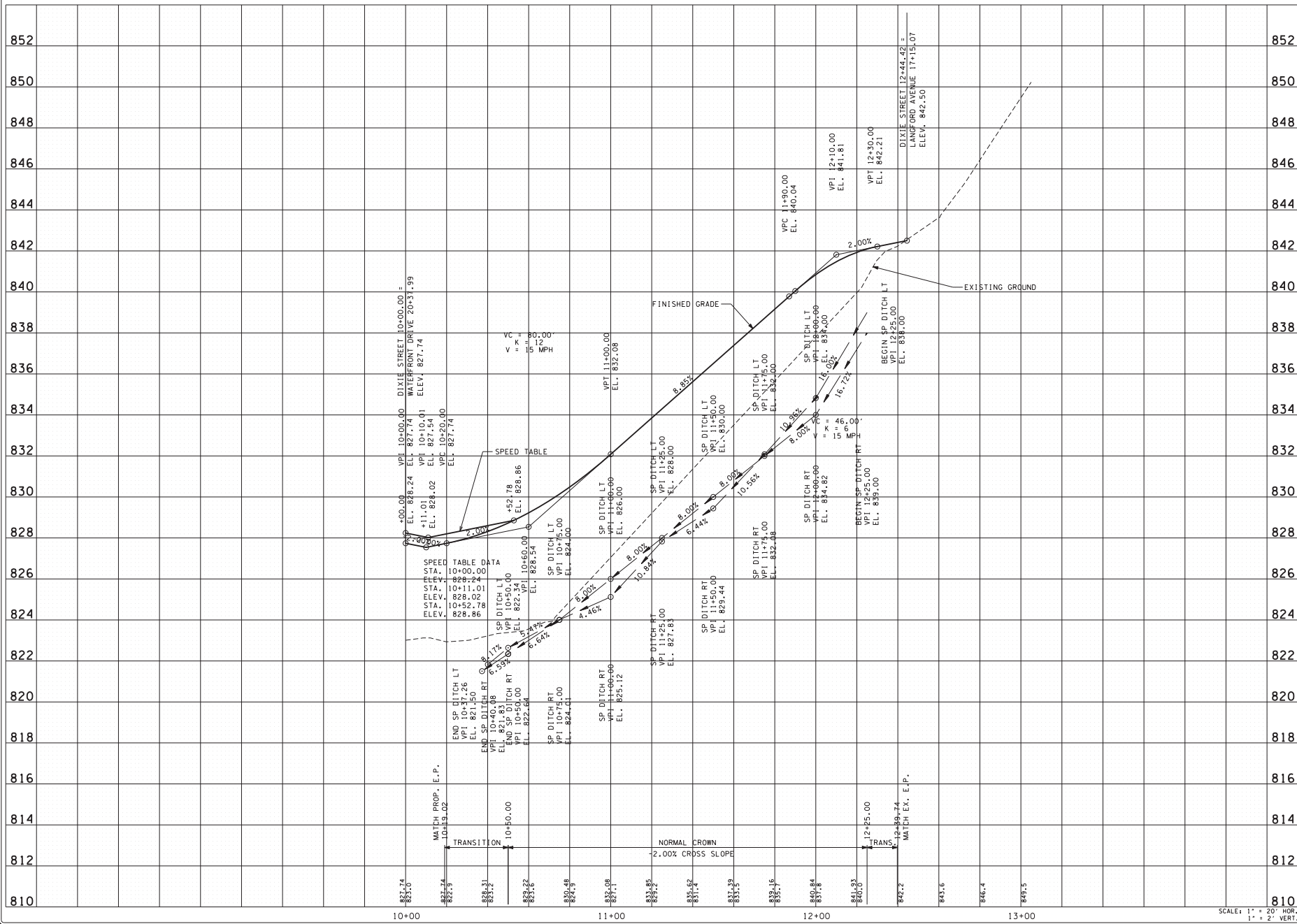
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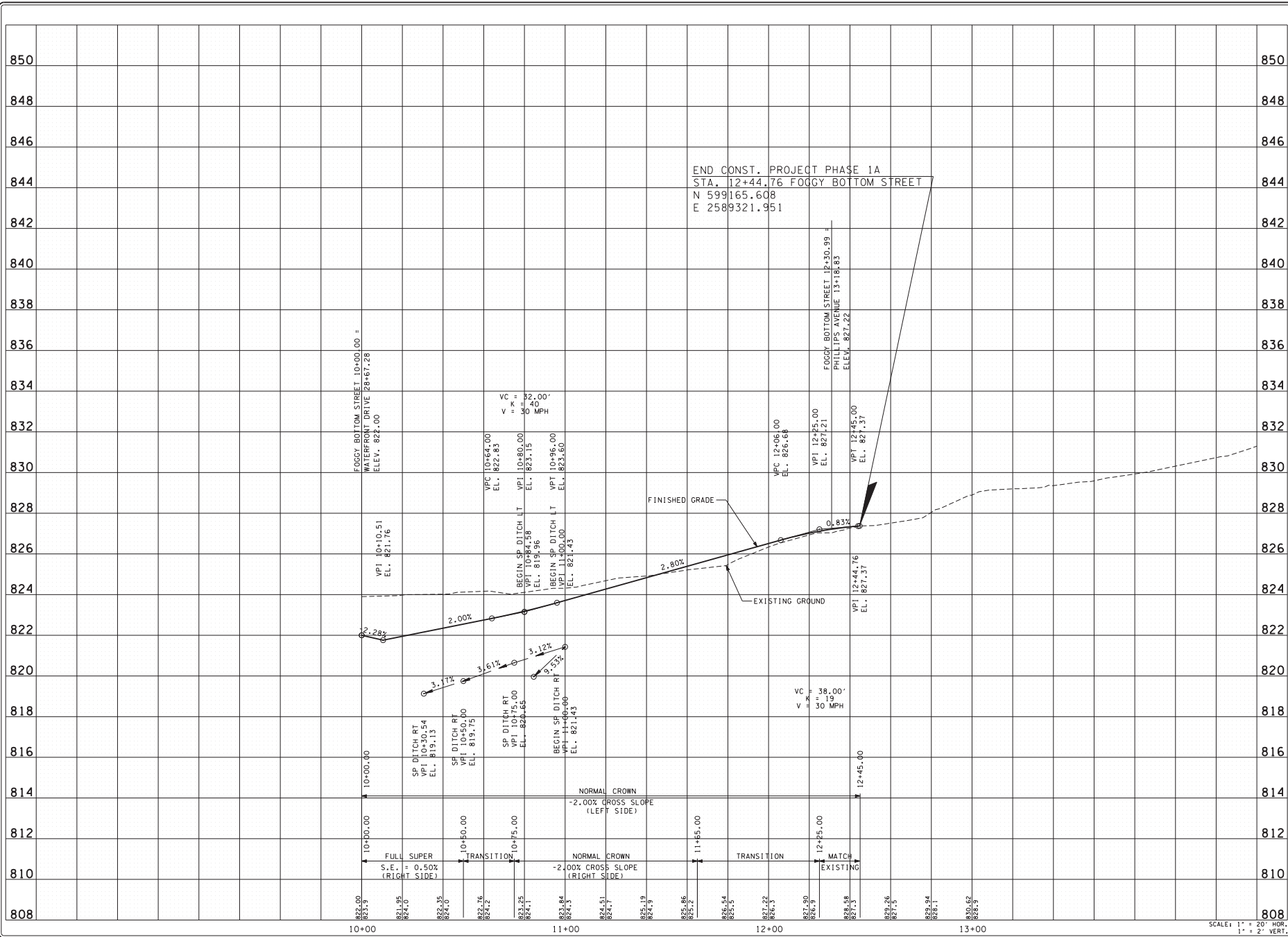
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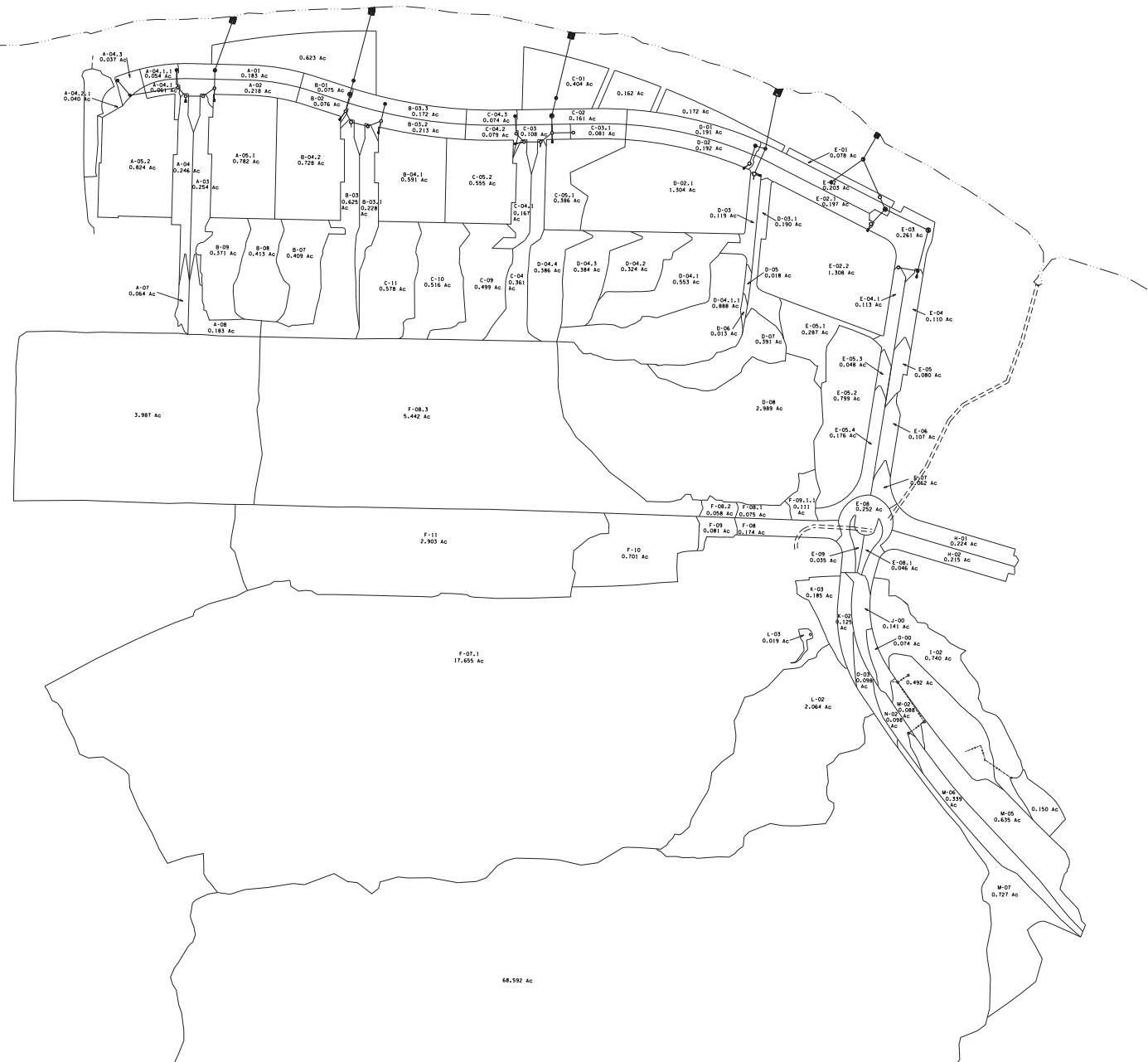
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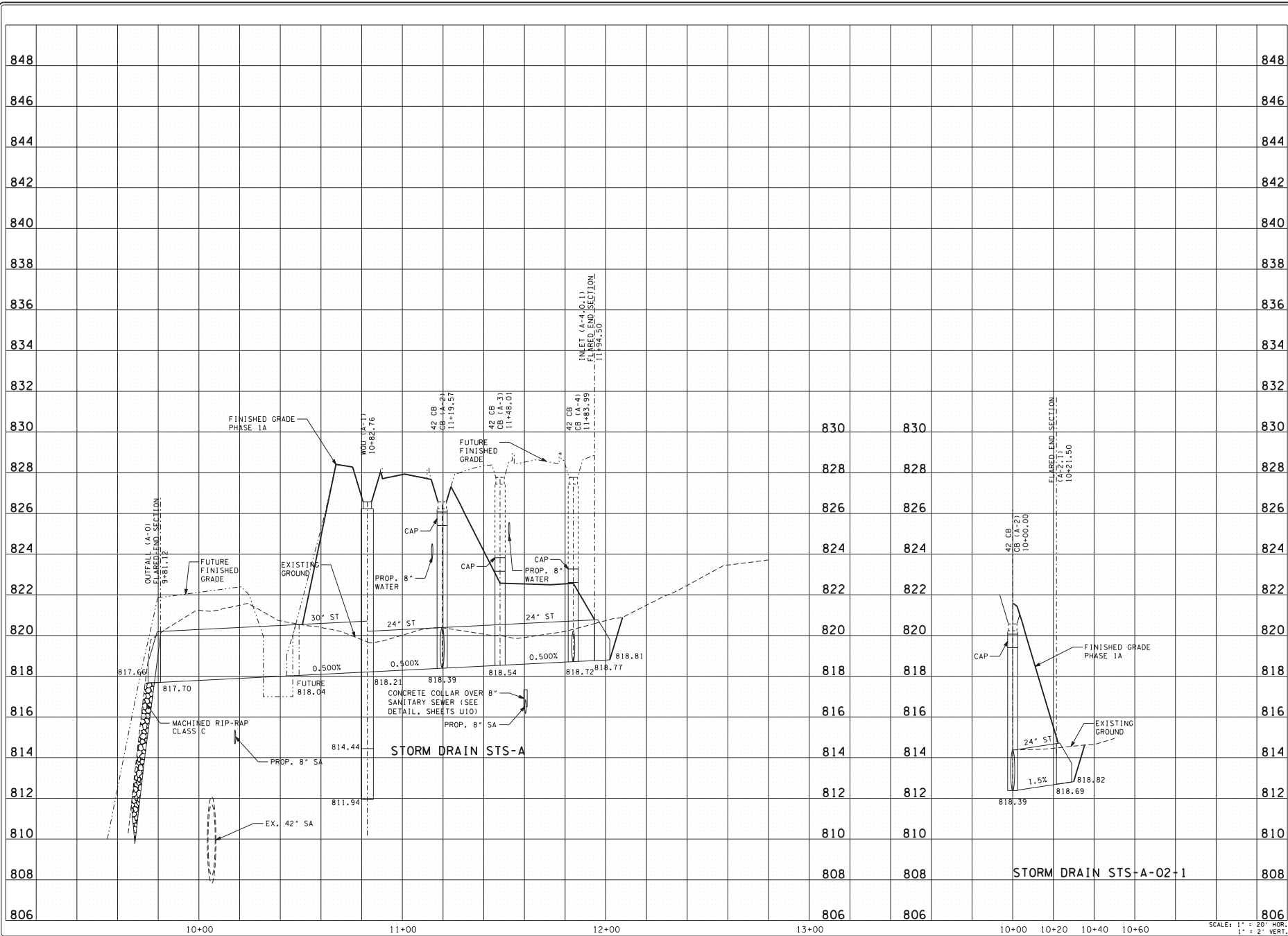
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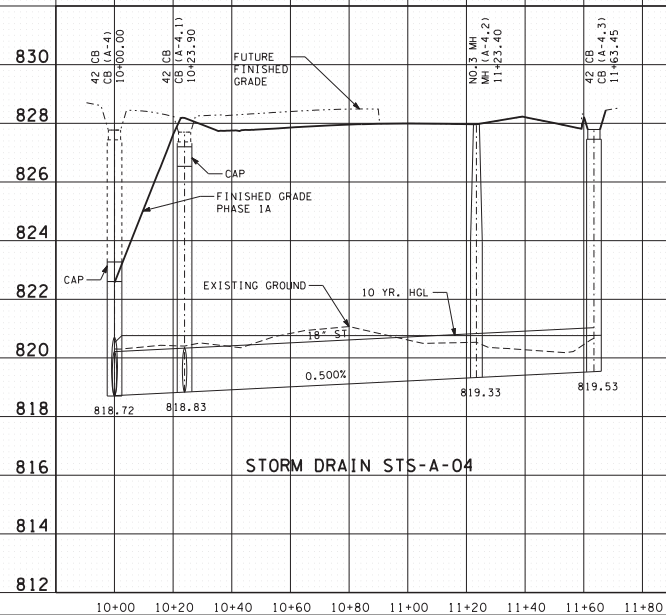
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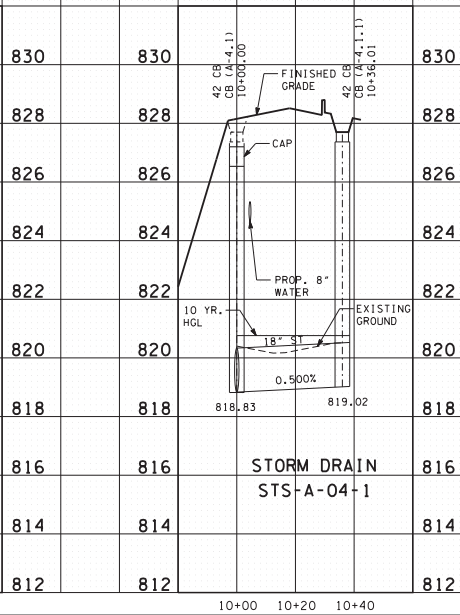
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STORM DRAIN STS-A-04-1

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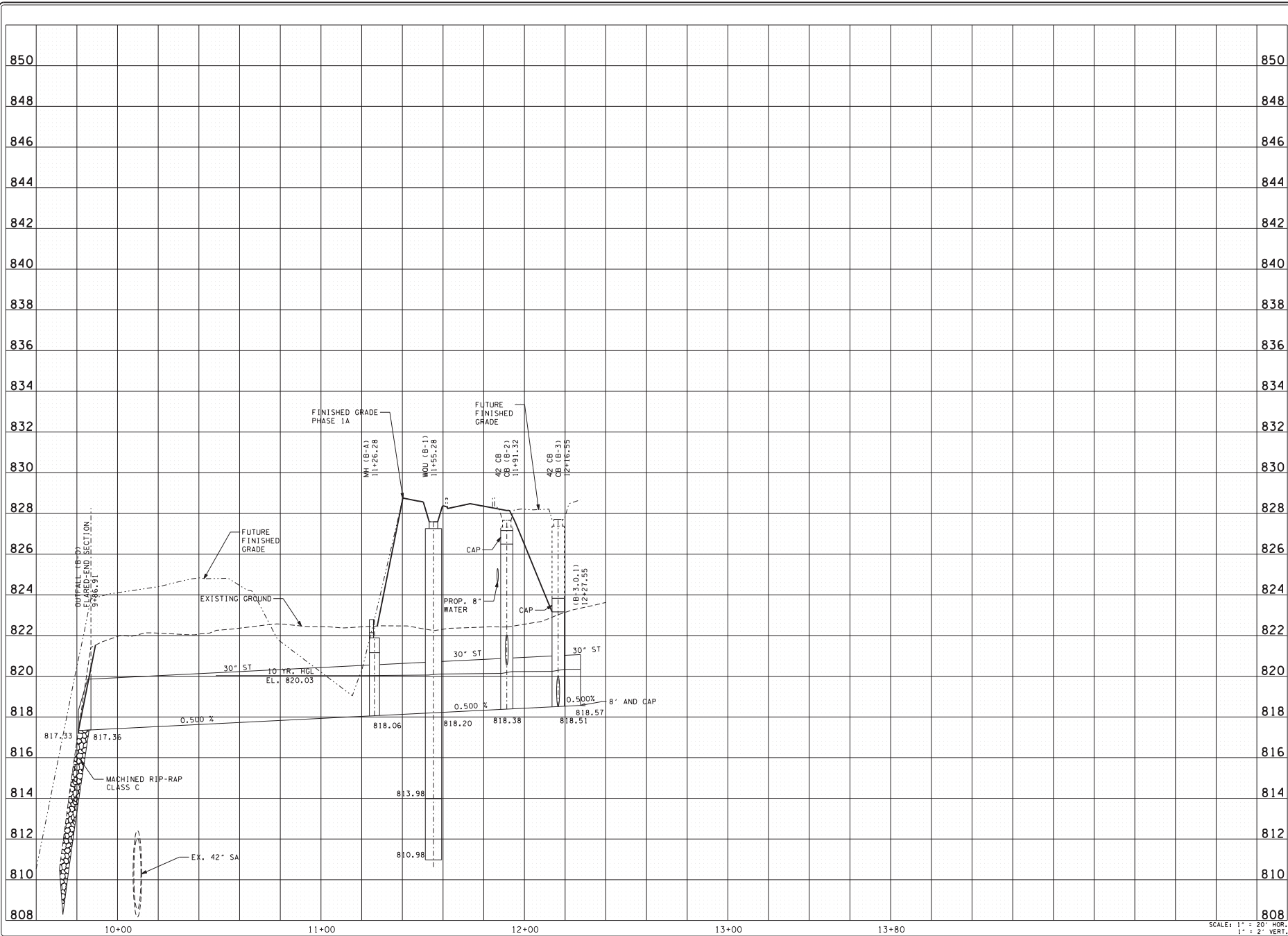
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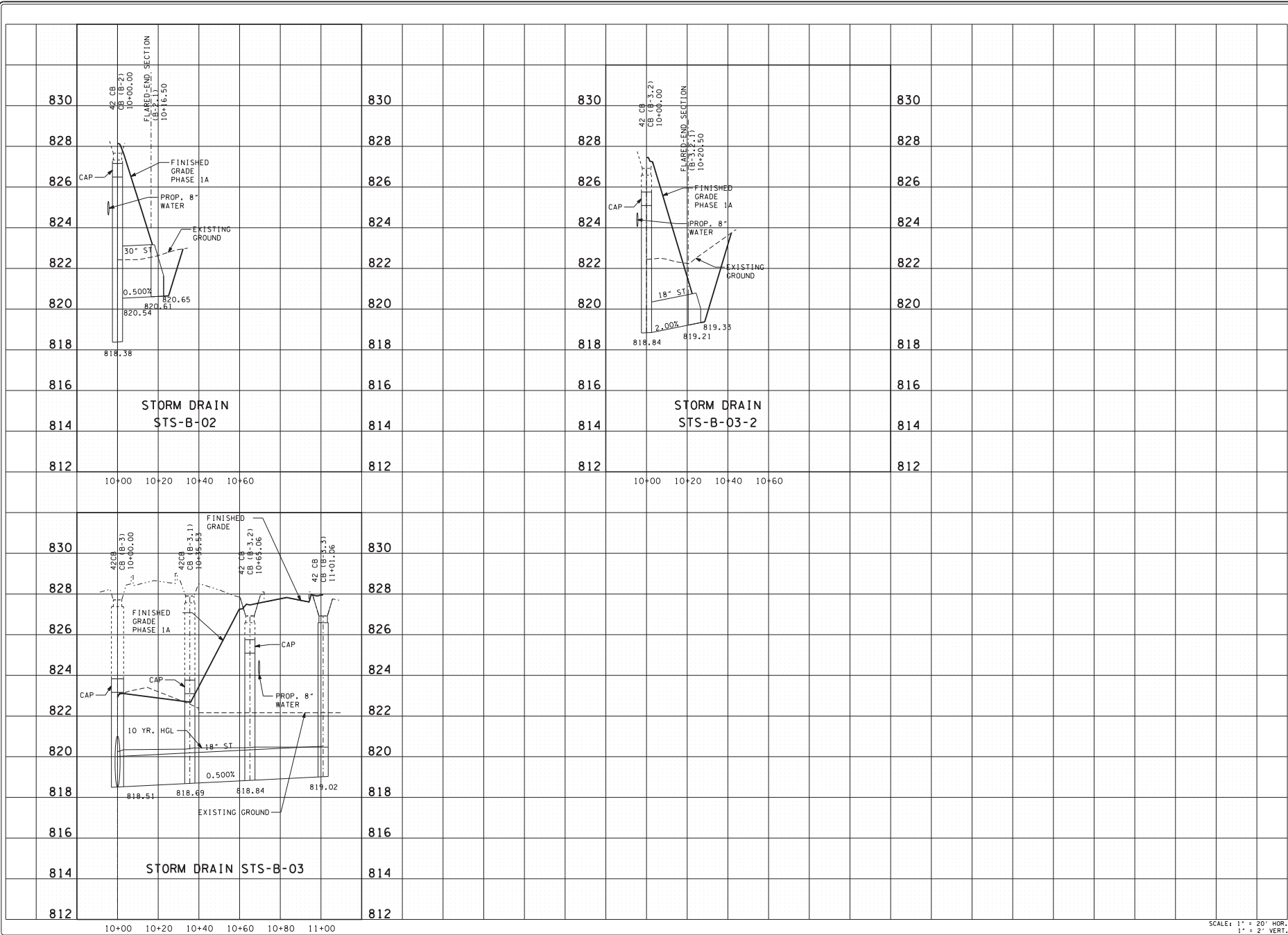
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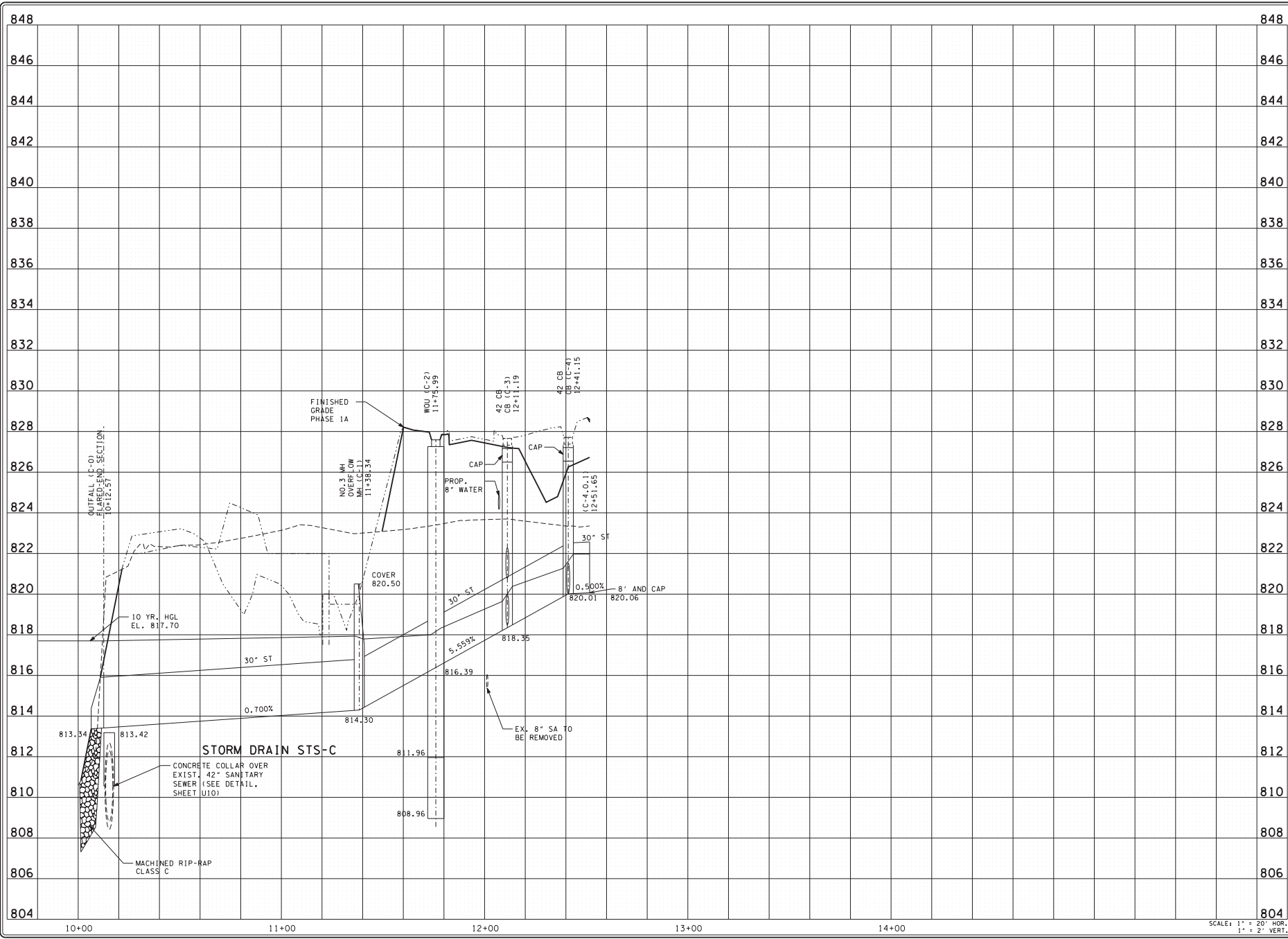
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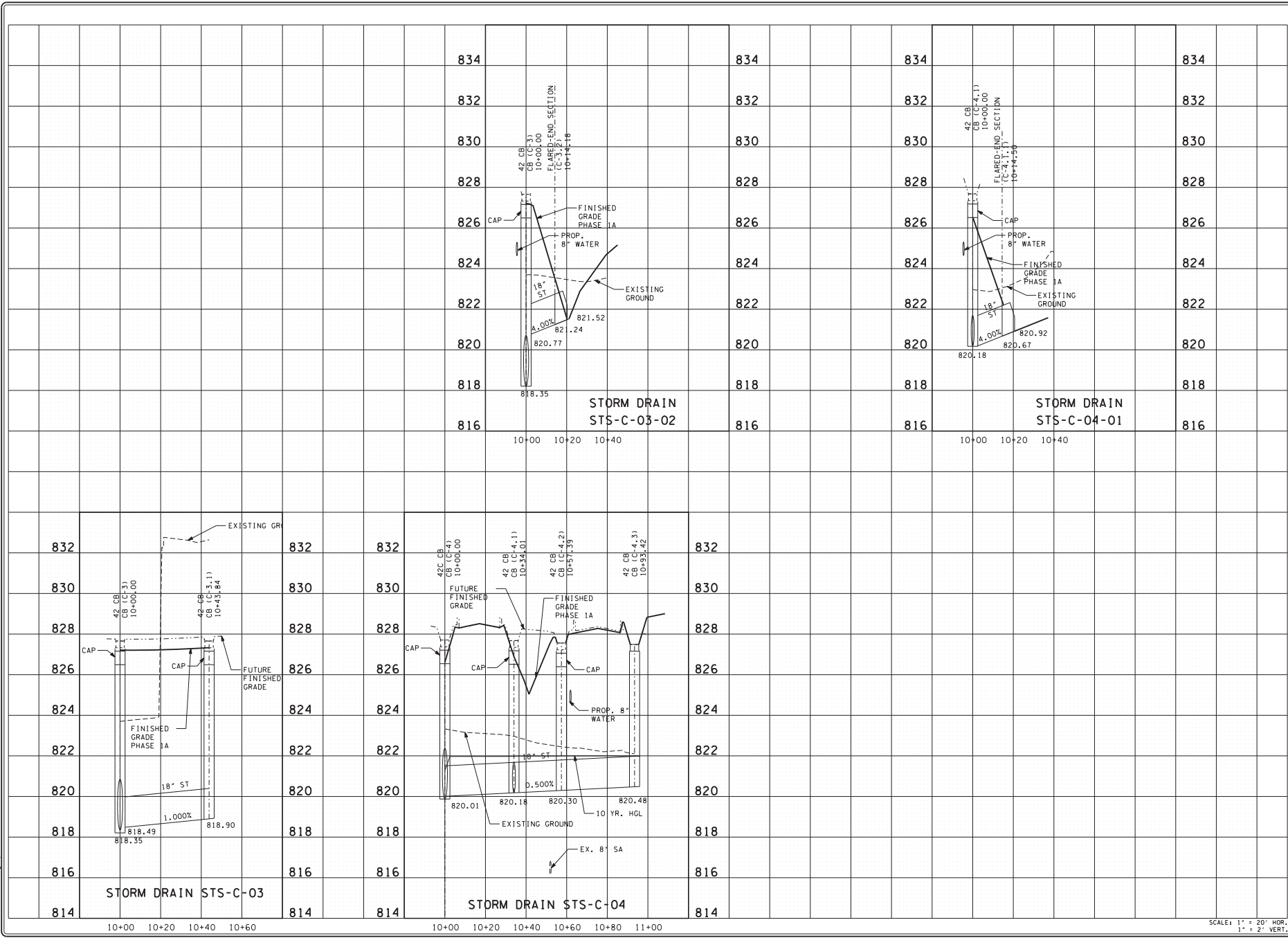
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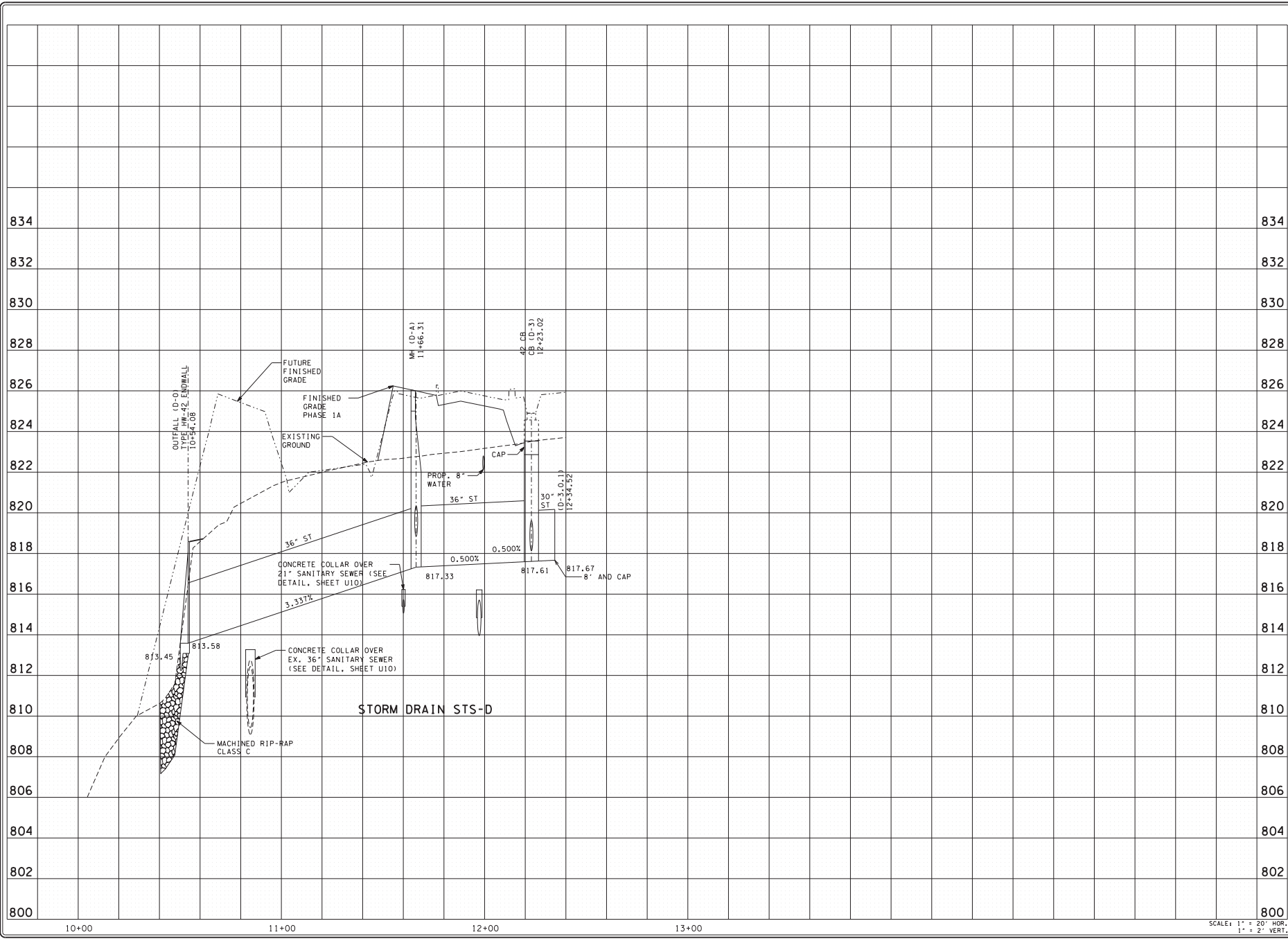
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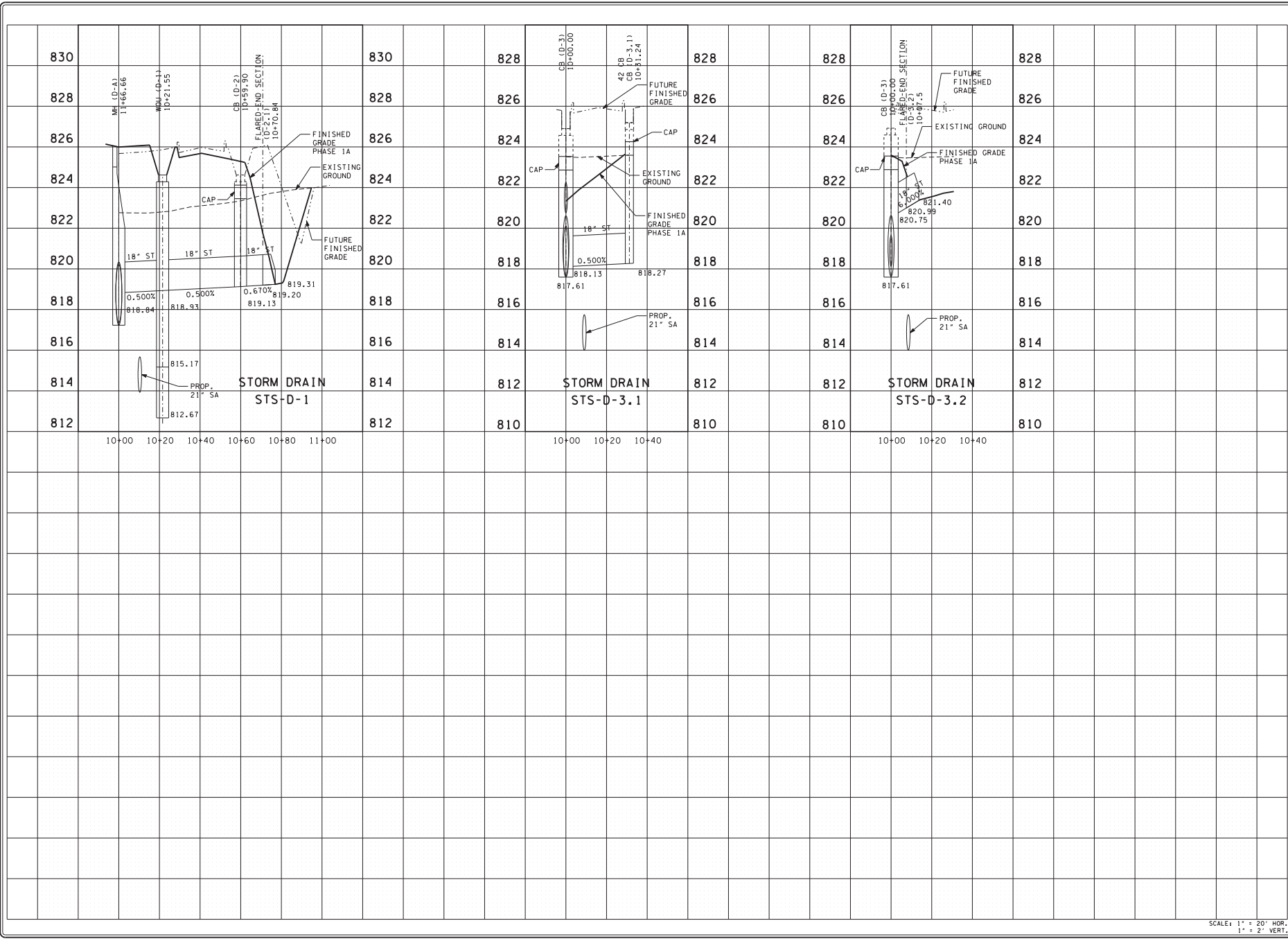
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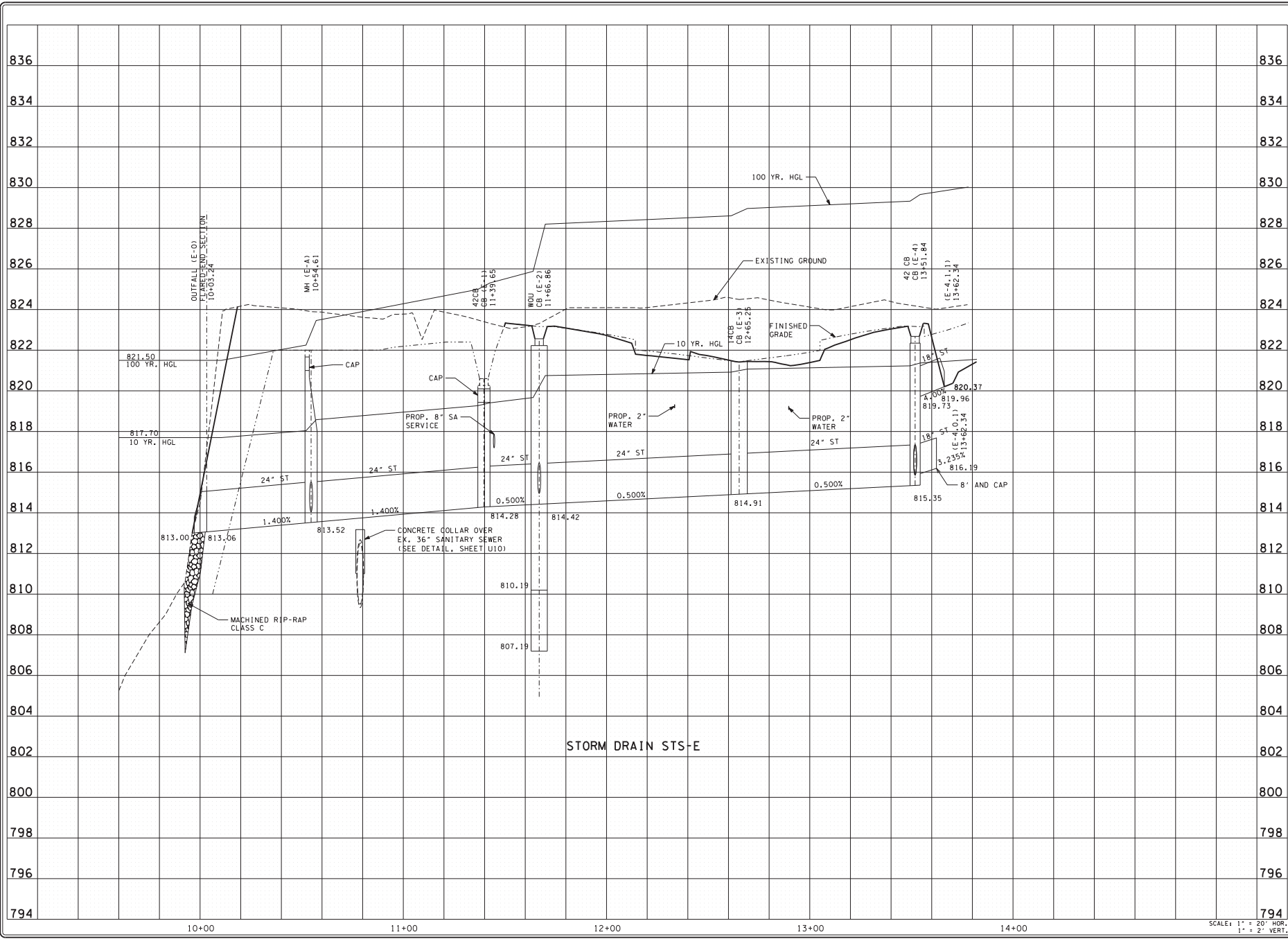
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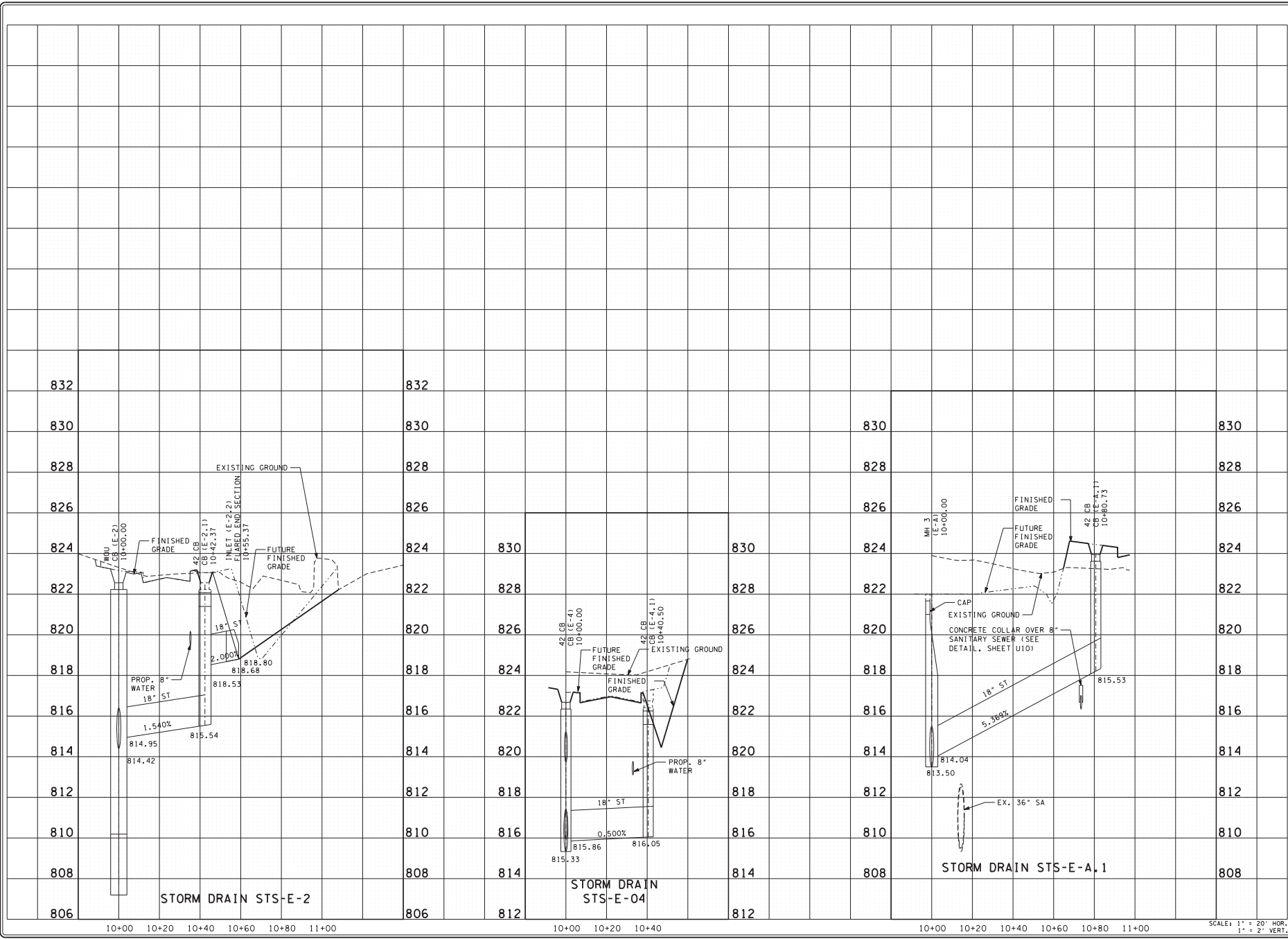
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EROSION CONTROL NOTES

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

- (1) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 10 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.
- (2) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.
- (3) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
- (4) CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS AND SHALL BE PHASED FOR PROJECTS THAT HAVE OVER 50 ACRES OF SOIL DISTURBANCE. NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION PROJECT, UNLESS APPROVED IN WRITING BY THE CITY OF KNOXVILLE.

SEDIMENT CONTROL

- (5) EPSC MEASURES SHALL BE INSTALLED CONCURRENTLY WITH CLEARING OPERATIONS. SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- (6) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G. FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
- (7) WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL-VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT.
- (8) CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.
- (9) FOR AN OUTFALL IN A DRAINAGE AREA OF 10 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURE THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE CITY OF KNOXVILLE MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.
- (10) IF PERMANENT OR TEMPORARY VEGETATION IS TO BE USED AS AN EPSC MEASURE, THEN THE TIMING OF PLANTING OF VEGETATION SHALL BE SHOWN IN THE SWPPP. DELAYING PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.
- (11) OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.

- (12) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

STREAM / WETLAND

- (13) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/ U.S. EPSC MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS IN ACCORDANCE WITH CITY OF KNOXVILLE STANDARDS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
- (14) NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.
- (15) INSTREAM EPSC DEVICES ARE NOT APPROVED, UNLESS SPECIFIED IN WRITING BY THE CITY OF KNOXVILLE.
- (16) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/ U.S., INCLUDING WETLANDS, SHALL BE ONLY AS SHOWN ON THE PROJECT PLANS AND/OR AS SO SPECIFIED IN THE ARAP/401, SECTION 404 PERMIT(S) AND/OR TV26(A), IF APPLICABLE. ANY ADDITIONAL PERMITS REQUIRED BY THE CONTRACTOR'S METHOD OF OPERATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN, AFTER RECEIVING THE APPROVAL OF CITY OF KNOXVILLE.
- (17) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING.
- (18) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CROSSINGS MUST BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES MUST BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK MUST BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS MUST BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO THEIR PRE-EXISTING ELEVATION. ALL TEMPORARY CROSSINGS MUST BE CONSTRUCTED IN ACCORDANCE WITH TDOT STD. DWG. NO. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.
- (19) HEAVY EQUIPMENT WORKING IN WETLANDS MUST BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT MUST BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED.
- (20) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

SPECIES

- (21) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. THE SWPPP SHALL BE MODIFIED TO INCLUDE EPSC MEASURES TO PREVENT NEGATIVE IMPACTS TO LEGALLY PROTECTED STATE OR FEDERAL FAUNA OR FLORA OR AS INDICATED IN THE ECOLOGICAL STUDIES OR ON THE PERMITS(S).

INSPECTION, MAINTENANCE, REPAIR

- (22) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES / STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.

- (23) SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/ U.S. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR ITEM 31.0 TEMPORARY WATER POLLUTION CONTROL.
- (24) THE CONTRACTOR SHALL INSTALL A RAIN GAUGE AT THE CENTER OF THE PROJECT OR AS INDICATED BY THE CITY OF KNOXVILLE INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT THE GAUGE IS MAINTAINED IN GOOD WORKING CONDITION. THE CITY OF KNOXVILLE AND/OR THE CONTRACTOR SHALL RECORD DAILY PRECIPITATION AND FORECASTED PERCENTAGE OF PRECIPITATION IN DETAILED RECORDS OF RAINFALL EVENTS INCLUDING DATES, AMOUNTS OF RAINFALL PER GAUGE, THE ESTIMATED DURATION (OR STARTING AND ENDING TIMES), AND FORECASTED PERCENTAGE OF PRECIPITATION FOR THE PROJECT. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER ON A MONTHLY BASIS. THE COST FOR THE RAIN GAUGES IS TO BE INCLUDED IN THE UNIT BID PRICES FOR OTHER ITEMS. RAIN GAUGES SHALL BE AS SPECIFIED IN THE APPROVED RAINFALL MONITORING PLAN.
- (25) INSPECTION OF EPSC MEASURES SHALL BE DONE AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE/QUALITY CONTROL.
- (26) OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
- (27) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.

MATERIALS

- (28) WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/ U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

SWPPP, PERMITS, PLANS, RECORDS

- (29) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.
- (30) ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE CITY OF KNOXVILLE. THE CITY OF KNOXVILLE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLAN REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
- (31) THE FOLLOWING INFORMATION SHALL BE MAINTAINED ON OR NEAR THE SITE: DATES THAT MAJOR GRADING ACTIVITIES OCCUR, DATES WHERE CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED, EPSC INSPECTION RECORDS AND PRECIPITATION RECORDS.

NO.	DATE	REVISIONS DESCRIPTION



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ROADWAY IMPROVEMENTS, PHASE 1A

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EROSION CONTROL NOTES (continued)

- (32) ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING THE LOCATION OF THE SWPPP SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE.
- (33) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE CITY OF KNOXVILLE SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS ARE NEEDED. THE DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.
- (34) THE SWPPP SHALL BE UPDATED BY CITY OF KNOXVILLE WHENEVER EPSC INSPECTIONS INDICATE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE CITY OF KNOXVILLE SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED. THE CITY OF KNOXVILLE MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS.
- (35) PROJECT INSPECTORS AND SUPERVISORS (INCLUDING CITY OF KNOXVILLE STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1: FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE OR EQUIVALENT COURSE. A COPY OF CERTIFICATION RECORDS FOR THIS COURSE SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.

NPDES

- (36) NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.
- (37) THE EPSC MEASURES AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.
- (38) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS. EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:
 - a. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - b. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - c. NO CULVERT OR BRIDGE CONSTRUCTION SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - d. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
- (39) PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 15 CALENDAR DAYS. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER RUNS WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE.

- (40) EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE GRADING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.

UTILITY RELOCATION

- (41) RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.
- (42) SILT FENCE SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.
- (43) UTILITY CROSSINGS FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLAN STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO UTILITIES IN THIS PROJECT IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC). THE CITY'S CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP).
- (44) IT IS THE RESPONSIBILITY OF THE CITY'S UTILITY CONTRACTOR INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM THEIR OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.
- (45) FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOIL OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDEC EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE CITY'S UTILITY CONTRACTOR UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.
- (46) IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC), TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE CITY'S UTILITY CONTRACTORS IN THIS PROJECT, THEREFORE, THE CITY'S CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTIONS PREVENTION PLANS (SWPPP). THE CITY'S CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE CITY'S CONTRACT WORK.
- (47) TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE CITY'S PROJECT ENGINEER.
- (48) FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE RIGHT-OF-WAY, EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.
- (49) THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS (AS APPROVED BY THE CITY'S PROJECT ENGINEER).
- (50) THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES TO REPLACE IN PLACE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE CITY'S PROJECT ENGINEER BEFORE COMMENCING WORK.

LITTER, DEBRIS, WASTE, PETROLEUM

- (51) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S.
- (52) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFFA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

SPECIAL NOTES

EROSION PREVENTION AND SEDIMENT CONTROL

STREAM/WETLAND

- (1) ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G. RIP-RAP PLACEMENT, CULVERT CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.

HIGH QUALITY WATERS

- (2) FOR PROJECTS THAT DISCHARGE INTO HIGH QUALITY WATERS OR WATERS IMPAIRED BY SILTATION, AN OUTFALL IN A DRAINAGE AREA OF 5 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/ 24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE CITY OF KNOXVILLE MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT.
- (3) FOR PROJECTS THAT DISCHARGE INTO HIGH QUALITY WATERS OR WATERS IMPAIRED BY SILTATION, A 60 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM WITH THIS DESIGNATION SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 25 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPs) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE CITY OF KNOXVILLE SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP / 401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

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**SUTTREE LANDING PARK
ROADWAY IMPROVEMENTS, PHASE 1A**

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EROSION CONTROL NOTES (CONTINUED)

SPECIAL NOTES (CONTINUED)

ENVIRONMENTAL

ECOLOGY

- (4) STAFF FROM THE CITY OF KNOXVILLE OR A DESIGNEE WILL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING CONCERNING WHEN CITY OF KNOXVILLE PERSONNEL OR DESIGNATED CONSULTANT WILL NEED TO BE ON-SITE FOR WORK BEING DONE WHICH COULD AFFECT THE STREAM OR SPECIES.
- (5) STAFF FROM THE CITY OF KNOXVILLE OR A DESIGNEE WILL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS WHICH MUST BE FOLLOWED.

PROJECT-SPECIFIC EPSC NOTES

- (1) EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES FOR CONSTRUCTION OF THE PARK AND STRUCTURES WITHIN THE PARK ARE NOT INCLUDED HEREIN. THEY SHALL BE INCLUDED IN THE CONSTRUCTION PLANS FOR THE PARK.
- (2) REFER TO TDOT STANDARD DRAWING EC-STR-8 FOR SPECIFIC DIRECTION REGARDING SIZE AND SPACING FOR DIFFERENT APPLICATIONS FOR FILTER SOCKS.
- (3) FILTER SOCKS SHALL GENERALLY BE INSTALLED ON CONTOUR FOR SLOPE PROTECTION, AND PERPENDICULAR TO FLOW IN DITCHES AND IN LOW AREAS THAT WILL CONVEY STORMWATER. SEE EPSC PLANS.
- (4) IT IS RECOMMENDED THAT FILTER SOCKS BE USED FOR BOTH CATCH BASIN AND CURB INLET PROTECTION.
- (5) THE MINIMUM INSTALLED HEIGHT FOR CATCH BASIN PROTECTION, (TYPE D) SHALL BE 18". THEREFORE TWO STACKED 12-INCH OR ONE 24-INCH FILTER SOCK SHALL BE USED.
- (6) FOR CURB INLET PROTECTION (TYPE 2), AN 8-INCH FILTER SOCK SHALL BE USED TO MINIMIZE 6-INCH CURB OVERTOPPING.
- (7) SEDIMENT SHALL BE REMOVED FROM BEHIND FILTER SOCKS WHEN IT REACHES ONE-HALF OF IT'S INSTALLED HEIGHT.
- (8) EPSC MEASURES FOR UTILITIES ARE NOT SHOWN IN THESE EPSC PLANS. REFER TO THE PREVIOUS UTILITY NOTES. FOR UTILITY MANHOLE CONSTRUCTION, USE TYPE D CATCH BASIN PROTECTION (FILTER SOCKS).
- (9) SINCE THE ELEVATIONS OF THE TOP OF THE STONE IN THE PLANTERS ARE LOWER THAN THE GRATES OF THE CATCH BASINS, PLACE FILTER SOCKS AS SHOWN IN THE EPSC PLANS TO PREVENT FLOW DIRECTLY INTO THE CATCH BASINS, UNTIL PLANTERS ARE COMPLETED.
- (10) AT NO TIME SHALL DISCHARGE FROM THE WORK AREA CAUSE AN OBJECTIONABLE COLOR CONTRAST IN THE RIVER.

RECOMMENDED SEQUENCE OF CONSTRUCTION

- (1) INSTALL TEMPORARY CONSTRUCTION ENTRANCES AT LANGFORD AVENUE AND DIXIE STREET AND AT PHILLIPS AVENUE AND FOGGY BOTTOM STREET. CONSTRUCT INITIAL SITE ACCESS ALONG THE EXTENSION OF FOGGY BOTTOM STREET FROM PHILLIPS AVENUE
- (2) INSTALL ALL PERIPHERAL SILT FENCE AND CHECK DAMS ADJACENT TO THE TENNESSEE RIVER
- (3) INSTALL ALL SANITARY SEWER LINES BEGINNING JUST UPGRADIENT OF THEIR TIES TO THE EXISTING TRUNK LINE J-100
- (4) INSTALL ALL STORM SEWER LINES BEGINNING WITH SLOPE PROTECTION AT THE TENNESSEE RIVER AND WORKING UPGRADIENT TO THEIR TEMPORARY INLET STRUCTURES. ALL CATCH BASIN STRUCTURES ON THE SOUTH SIDE OF WATERFRONT DRIVE SHALL BE CONSTRUCTED TO TWO FEET BELOW FINISHED GRADE AND CAPPED
- (5) GRADE ROADWAY DITCHES AND INSTALL DITCH CHECK DAMS TO DIRECT OFFSITE STORM WATER TO THE TEMPORARY STORM DRAIN INLETS
- (6) CLEAR AND GRUB, THEN GRADE, INSTALL WATERLINE, AND PAVE THE TEMPORARY EXTENSIONS OF FOGGY BOTTOM STREET AND DIXIE STREET TO WATERFRONT DRIVE
- (7) CLEAR AND GRUB THE WATERFRONT DRIVE AREA AND GRADE WATERFRONT DRIVE TO SUBGRADE
- (8) INSTALL WATERLINE AND APPURTENANCES ALONG WATERFRONT DRIVE
- (9) INSTALL OVERHEAD AND UNDERGROUND ELECTRIC, TELEPHONE, AND LIGHTING CONDUITS, FOUNDATIONS, POLES, STRUCTURES, EQUIPMENT, AND WIRING
- (10) INSTALL MINERAL AGGREGATE BASE, UNDERDRAINS, SIDEWALK, CURB, PERVIOUS CONCRETE, AND PAVEMENT THROUGH BINDER
- (11) INSTALL LANDSCAPE PLANTERS, APPURTENANCES, PLANTINGS, STREET FURNITURE, AND PERMANENT GROUND COVER
- (12) INSTALL TACK COAT AND PAVEMENT SURFACE COURSE
- (13) INSTALL SIGNS, PAVEMENT STAMPING, AND PAVEMENT MARKINGS
- (14) CLEAN UP, FINAL DRESS, AND REMOVE EROSION CONTROL MEASURES ONCE PERMANENT GROUND COVER IS ESTABLISHED
- (15) ADDRESS CHECK LIST COMMENTS AND TERMINATE PERMITS AS REQUIRED

NO.	DATE	REVISIONS DESCRIPTION



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KNOXVILLE, TN.

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DRAWN: D. E. H.
CHECKED: E. B. D.
JOB NO: 147-R-0565
SCALE: NO SCALE
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE: EROSION CONTROL NOTES
DWG: DRAWING NO:
OF: C19B

4/17/2014 14:51:03 30820.dwg Phase 1a 50820.dwg ErosionQuantities.dwg

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
	SEDIMENT FILTER BAG	EC-STR-2
♦ SF ♦ SF ♦ SF ♦	SILT FENCE	EC-STR-3B
♦ SFB ♦ SFB ♦ SFB ♦	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
** SOCK ** SOCK **	FILTER SOCK	EC-STR-8
	CULVERT PROTECTION (TYPE 2)	EC-STR-11A
	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	EROSION CONTROL BLANKET	EC-STR-34
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
	FLOATING TURBIDITY CURTAIN	EC-STR-38

REVISIONS	
NO.	DATE



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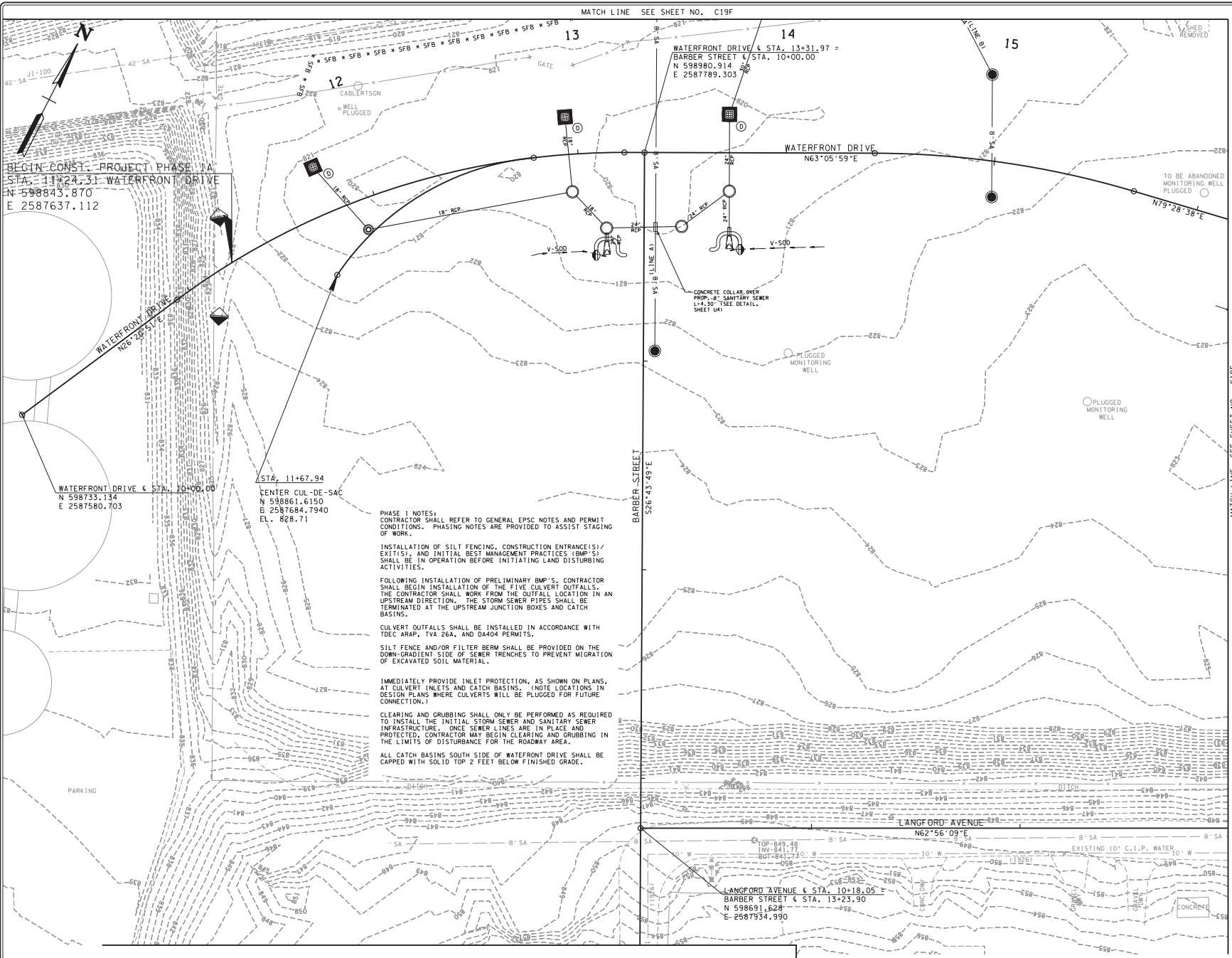
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DRAWN: J.E.W.
CHECKED: E.B.D.
JOB NO: 147-R-0565
SCALE: NO SCALE
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE: EROSION CONTROL TABULATED QUANTITIES
DWG OF DRAWING NO: C19C

TEMPORARY WATER POLLUTION CONTROL QUANTITIES - ITEM NO. 31.0 (LUMP SUM)																					
SHEET NO.	SEDIMENT FILTER BAG				SILT FENCE (WITH BACKING)	SILT FENCE (WITHOUT BACKING)	ROCK CHECK DAMS		ENHANCED ROCK CHECK DAMS		FILTER SOCK		FILTER SOCK CHECK DAMS (12")	FILTER SOCK CHECK DAMS (18")	CULVERT PROTECTION TYPE 2 SEDIMENT TUBE L.F.	CATCH BASIN PROTECTION (TYPE D)	CONSTRUCTION EXIT			SEDIMENT TUBE CHECK DAMS (24")	FLOATING TURBIDITY CURTAIN
	SILT FENCE (W/ BACKING)	SEDIMENT FILTER BAG (15' X 15')	MINERAL AGGREGATE NO. 57	GEOTEXTILE TYPE III			V-DITCH	TRAP DITCH	V	TRAP	18"	24"					EXC. (UNCL.)	MACHINED RIP RAP CLASS A-3	GEOTEXTILE TYPE III		
	L.F.	EACH	TON	S.Y.	L.F.	L.F.	EACH	EACH	EACH	EACH	L.F.	L.F.	EACH	EACH	EACH	C.Y.	TON	S.Y.	EACH	L.F.	
PHASE 1																					
C19C					146.73				2	2					56.00	3					18.00
C19D									1	5					112.00	4	7.15	50.00	85.80		
C19E	258.80	3	14.80	217.60	922.15																36.60
C19F	90.00	1	11.40	82.70	573.67	469.10		4	2	1				56.00	2						18.60
C19G	86.40	1	5.10	72.80	440.92	104.44			3	2				51.00	5	7.15	50.00	85.80			19.00
PHASE 2																					
C19H					146.73	507.77			2	2	499.78	321.14	2		56.00	3				2	18.00
C19I						575.91	20		1	5	344.45	131.65	4		112.00	4		25.00			
C19J					922.15																36.60
C19K					573.67	494.96	5	4	2	1	304.66	26.22	1		56.00	2				2	18.60
C19L					440.92	393.20	8		5	2	120.18	38.27		1	51.00	5		25.00			19.00
PHASE 3																					
C19M					146.73	507.77			2	2	499.78	321.14	2		56.00	3				2	
C19N						575.91	20		1	5	344.45	131.65	4		112.00	4					
C19O					922.15																36.60
C19P					573.67	494.96	5	4	2	1	304.66	26.22	1		56.00	2				2	18.60
C19Q					440.92	393.20	8		5	2	120.18	38.27		1	51.00	5					19.00
SUBTOTALS	435.20	5	31.30	373.10	6250.41	4517.22	66	12	28	30	2538.14	1034.56	14	2	825.00	42	14.30	150.00	171.60	8	184.40
ADJUSTMENT FACTOR	2.00	2	1.00	1.00	2.00	2	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1
TOTALS	870.40	10	31.30	373.10	12500.82	9034.44	66	12	28	30	5076.28	2069.12	28	4	825.00	42	14.30	150.00	171.60	8	184.40

4/7/2014 11:51:03 AM C:\C:\GIS\30820_10.dwg (phase 1a) 10:58:20.2 (99).ent



MATCH LINE SEE SHEET NO. C19F

MATCH LINE SEE SHEET NO. C19E

BEGIN CONST. PROJECT PHASE 1A
 STA. 11+24.31 WATERFRONT DRIVE
 N 598843.870
 E 2587637.112

WATERFRONT DRIVE & STA. 10+00.00
 N 598733.134
 E 2587580.703

STA. 11+67.94
 CENTER CUL-DE-SAC
 N 598861.6150
 E 2587684.7940
 EL. 828.71

WATERFRONT DRIVE & STA. 13+31.97 =
 BARBER STREET & STA. 10+00.00
 N 598980.914
 E 2587789.303

BARBER STREET
 S26°43'49"E

LANGFORD AVENUE
 N62°56'09"E

LANGFORD AVENUE & STA. 10+18.05
 BARBER STREET & STA. 13+23.90
 N 598691.628
 E 2587934.990

PHASE 1 NOTES:
 CONTRACTOR SHALL REFER TO GENERAL EPSC NOTES AND PERMIT CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING OF WORK.

INSTALLATION OF SILT FENCING, CONSTRUCTION ENTRANCE(S)/EXIT(S), AND INITIAL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN OPERATION BEFORE INITIATING LAND DISTURBING ACTIVITIES.

FOLLOWING INSTALLATION OF PRELIMINARY BMP'S, CONTRACTOR SHALL BEGIN INSTALLATION OF THE FIVE CULVERT OUTFALLS. THE CONTRACTOR SHALL WORK FROM THE OUTFALL LOCATION IN AN UPSTREAM DIRECTION. THE STORM SEWER PIPES SHALL BE TERMINATED AT THE UPSTREAM JUNCTION BOXES AND CATCH BASINS.

CULVERT OUTFALLS SHALL BE INSTALLED IN ACCORDANCE WITH TDEC ARAP, TVA 26A, AND DA404 PERMITS.

SILT FENCE AND/OR FILTER BERM SHALL BE PROVIDED ON THE DOWN-GRADIENT SIDE OF SEWER TRENCHES TO PREVENT MIGRATION OF EXCAVATED SOIL MATERIAL.

IMMEDIATELY PROVIDE INLET PROTECTION, AS SHOWN ON PLANS, AT CULVERT INLETS AND CATCH BASINS. (NOTE LOCATIONS IN DESIGN PLANS WHERE CULVERTS WILL BE PLUGGED FOR FUTURE CONNECTION.)

CLEARING AND GRUBBING SHALL ONLY BE PERFORMED AS REQUIRED TO INSTALL THE INITIAL STORM SEWER AND SANITARY SEWER INFRASTRUCTURE ONCE SEWER LINES ARE IN PLACE AND PROTECTED. CONTRACTOR MAY BEGIN CLEARING AND GRUBBING IN THE LIMITS OF DISTURBANCE FOR THE ROADWAY AREA.

ALL CATCH BASINS SOUTH SIDE OF WATERFRONT DRIVE SHALL BE CAPPED WITH SOLID TOP 2 FEET BELOW FINISHED GRADE.

NO.	DATE	REVISIONS DESCRIPTION



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CHECKED: E.B.D.
JOB NO: 147-R-0565
SCALE: 1" = 20'
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE: EROSION CONTROL PLAN PHASE 1
DWG DRAWING NO: OF C19D

PHASE I NOTES:
 CONTRACTOR SHALL REFER TO GENERAL EPSC NOTES AND PERMIT CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING OF WORK.

INSTALLATION OF SILT FENCING, CONSTRUCTION ENTRANCE(S)/EXIT(S), AND INITIAL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE IN OPERATION BEFORE INITIATING LAND DISTURBING ACTIVITIES.

FOLLOWING INSTALLATION OF PRELIMINARY BMPs, CONTRACTOR SHALL BEGIN INSTALLATION OF THE FIVE CULVERT OUTFALLS. THE CONTRACTOR SHALL WORK FROM THE OUTFALL LOCATION IN AN UPSTREAM DIRECTION. THE STORM SEWER PIPES SHALL BE TERMINATED AT THE UPSTREAM JUNCTION BOXES AND CATCH BASINS.

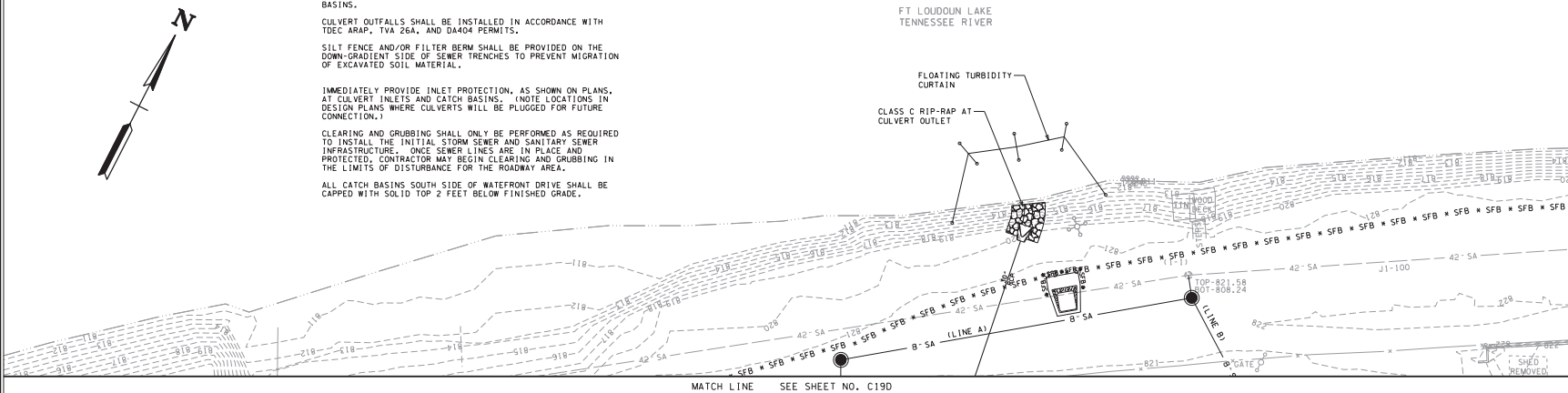
CULVERT OUTFALLS SHALL BE INSTALLED IN ACCORDANCE WITH TDEC ARMP, TVA 26A, AND DA404 PERMITS.

SILT FENCE AND/OR FILTER BERM SHALL BE PROVIDED ON THE DOWN-GRADIENT SIDE OF SEWER TRENCHES TO PREVENT MIGRATION OF EXCAVATED SOIL MATERIAL.

IMMEDIATELY PROVIDE INLET PROTECTION, AS SHOWN ON PLANS, AT CULVERT INLETS AND CATCH BASINS. (NOTE LOCATIONS IN DESIGN PLANS WHERE CULVERTS WILL BE PLUGGED FOR FUTURE CONNECTION.)

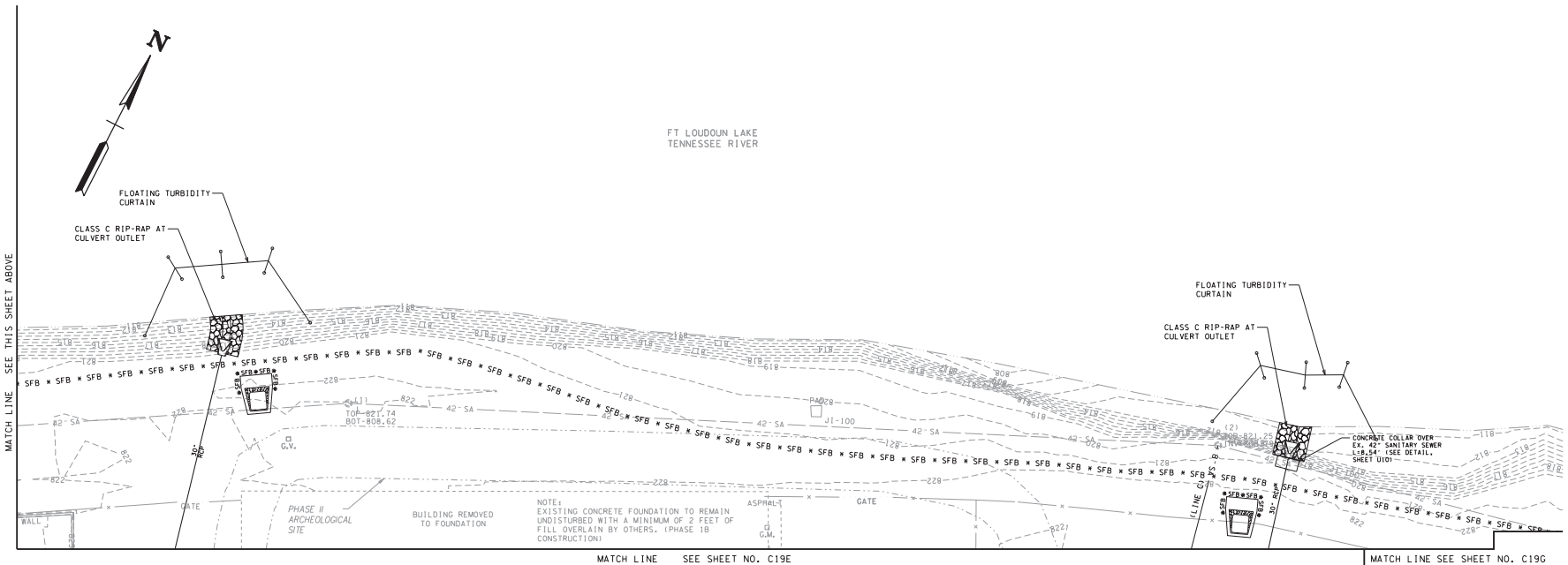
CLEARING AND GRUBBING SHALL ONLY BE PERFORMED AS REQUIRED TO INSTALL THE INITIAL STORM SEWER AND SANITARY SEWER INFRASTRUCTURE. ONCE SEWER LINES ARE IN PLACE AND PROTECTED, CONTRACTOR MAY BEGIN CLEARING AND GRUBBING IN THE LIMITS OF DISTURBANCE FOR THE ROADWAY AREA.

ALL CATCH BASINS SOUTH SIDE OF WATERFRONT DRIVE SHALL BE CAPPED WITH SOLID TOP 2 FEET BELOW FINISHED GRADE.



MATCH LINE SEE SHEET NO. C19D

MATCH LINE SEE THIS SHEET BELOW



MATCH LINE SEE SHEET NO. C19E

MATCH LINE SEE SHEET NO. C19G

NO.	DATE	REVISIONS DESCRIPTION



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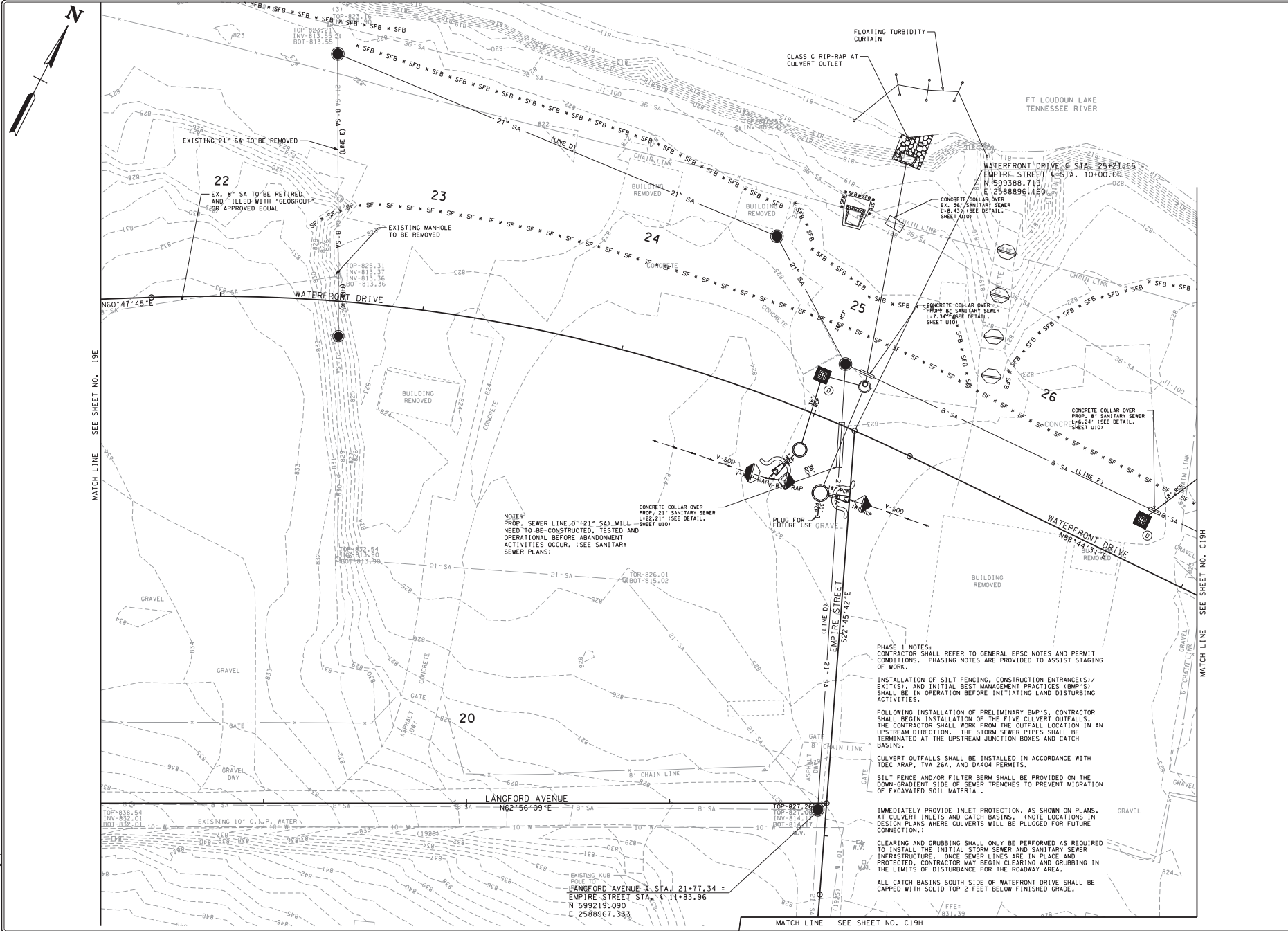
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JOB NO:	147-R-0565
SCALE:	1" = 20'
DATE:	03-14-2014
FILE NAME:	50820-12
DRAWING TITLE:	EROSION CONTROL PLAN PHASE 1
DWG	DRAWING NO:
OF	C19F

4/1/2014 14:51:03 50820-12.dgn Phase 1A 50820-12.dwg ent

4/7/2014

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NO.	DATE	REVISIONS DESCRIPTION



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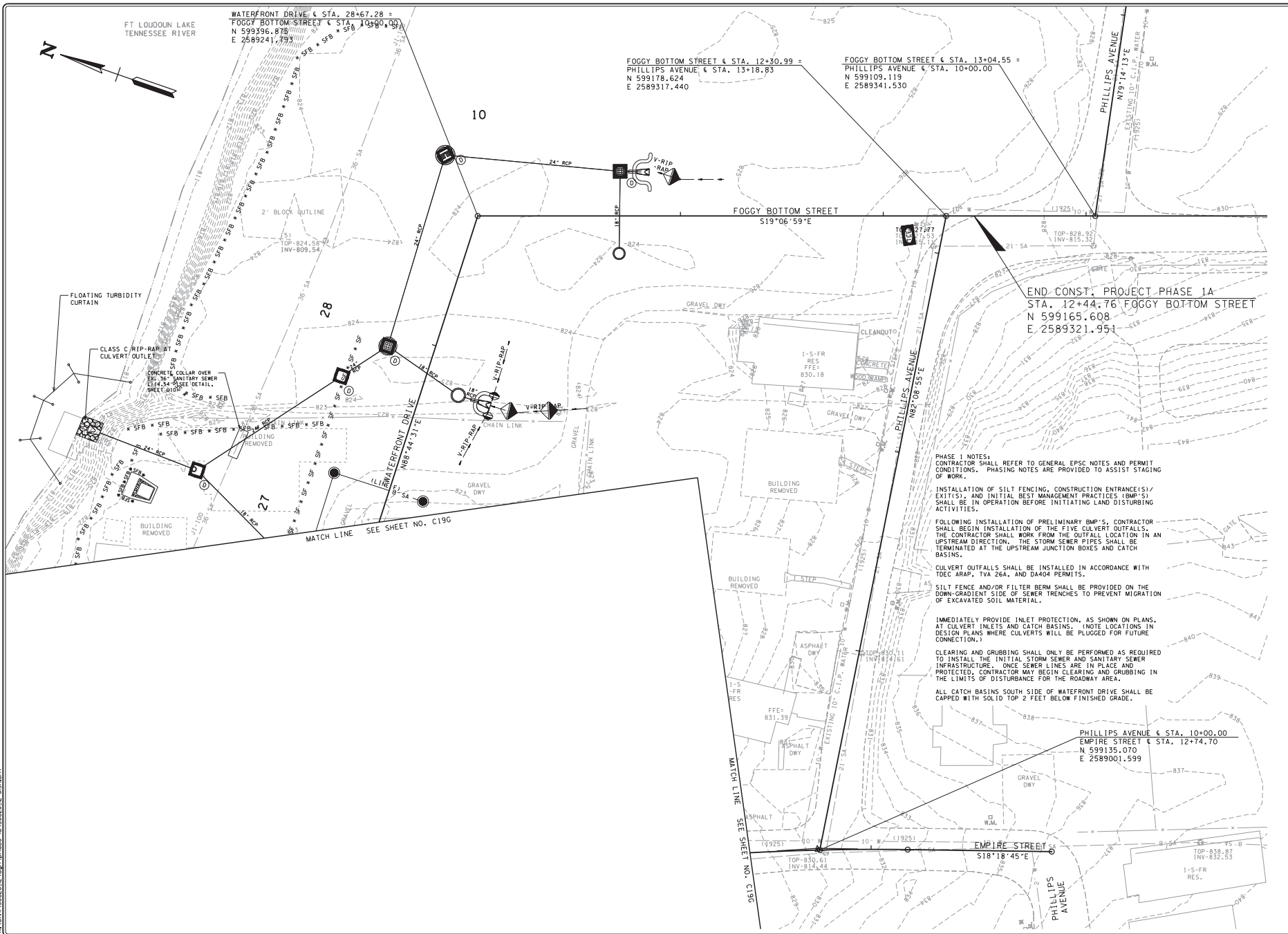
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JOB NO: 147-R-0565	SCALE: 1" = 20'
DATE: 03-14-2014	FILE NAME: 30820-12
DRAWING TITLE:	EROSION CONTROL PLAN
	PHASE 1
DWG NO:	DRAWING NO:
OF	C19G

4/7/2014 14:51:03 50820_01.dgn/phase 1a/50820_02.dwg.plt



NO.	DATE	REVISIONS	DESCRIPTION



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CHECKED: E.B.D.
JOB NO: 147-R-0565
SCALE: 1" = 20'
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE: EROSION CONTROL PLAN PHASE 1
DWG DRAWING NO: OF C19H

PHASE 1 NOTES:
CONTRACTOR SHALL REFER TO GENERAL EPCO NOTES AND PERMIT CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING OF WORK.

INSTALLATION OF SILT FENCING, CONSTRUCTION ENTRANCE(S)/EXIT(S), AND INITIAL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN OPERATION BEFORE INITIATING LAND DISTURBING ACTIVITIES.

FOLLOWING INSTALLATION OF PRELIMINARY BMP'S, CONTRACTOR SHALL BEGIN INSTALLATION OF THE FIVE CULVERT OUTFALLS. THE CONTRACTOR SHALL WORK FROM THE OUTFALL LOCATION IN AN UPSTREAM DIRECTION. THE STORM SEWER PIPES SHALL BE TERMINATED AT THE UPSTREAM JUNCTION BOXES AND CATCH BASINS.

CULVERT OUTFALLS SHALL BE INSTALLED IN ACCORDANCE WITH TDEC ARAP, TVA 26A, AND DA404 PERMITS.

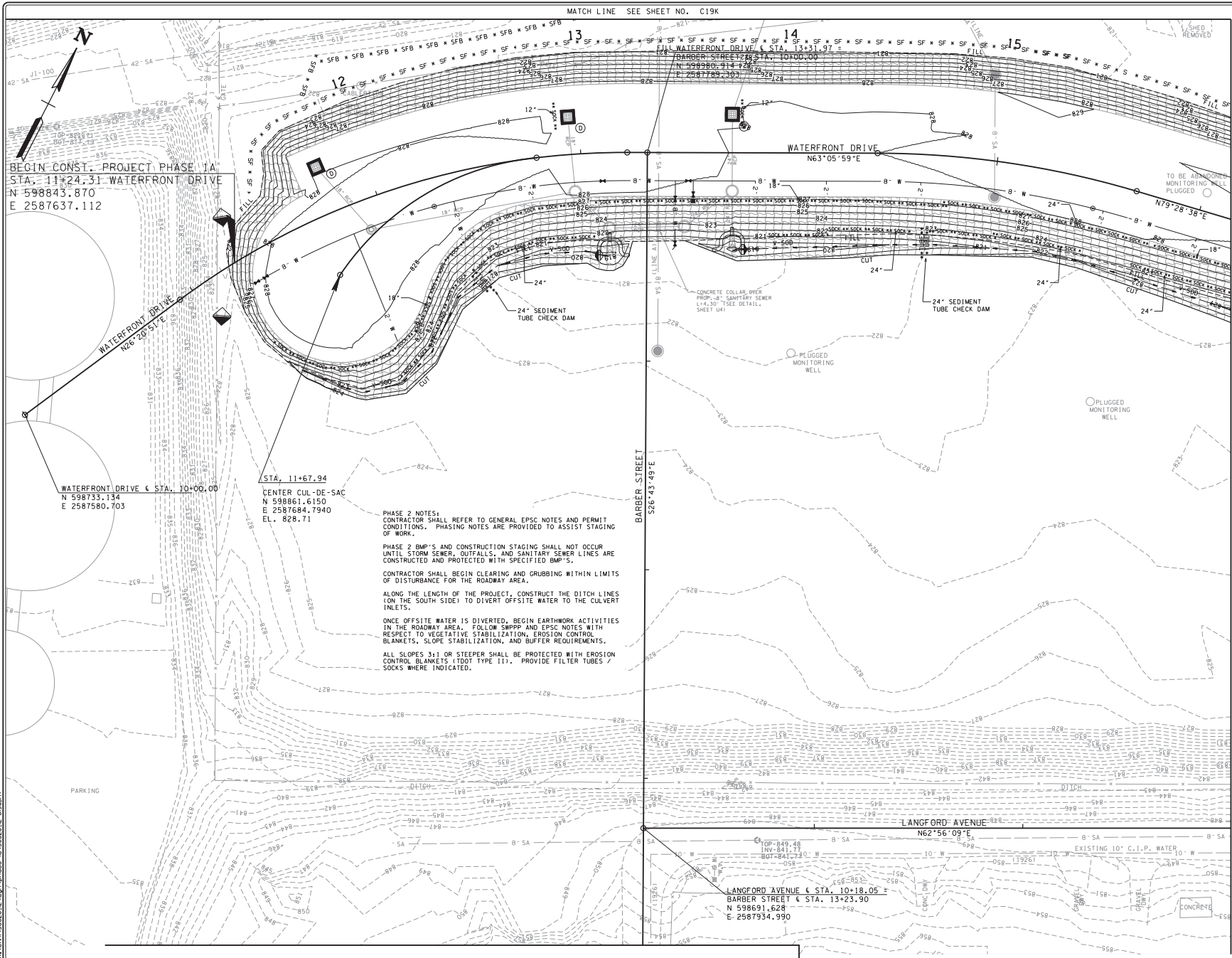
SILT FENCE AND/OR FILTER BERM SHALL BE PROVIDED ON THE DOWN-GRADIENT SIDE OF SEWER TRENCHES TO PREVENT MIGRATION OF EXCAVATED SOIL MATERIAL.

IMMEDIATELY PROVIDE INLET PROTECTION, AS SHOWN ON PLANS, AT CULVERT INLETS AND CATCH BASINS. (INDICATE LOCATIONS IN DESIGN PLANS WHERE CULVERTS WILL BE PLUGGED FOR FUTURE CONNECTION.)

CLEARING AND GRUBBING SHALL ONLY BE PERFORMED AS REQUIRED TO INSTALL THE INITIAL STORM SEWER AND SANITARY SEWER INFRASTRUCTURE. ONCE SEWER LINES ARE IN PLACE AND PROTECTED, CONTRACTOR MAY BEGIN CLEARING AND GRUBBING IN THE LIMITS OF DISTURBANCE FOR THE ROADWAY AREA.

ALL CATCH BASINS SOUTH SIDE OF WATERFRONT DRIVE SHALL BE CAPPED WITH SOLID TOP 2 FEET BELOW FINISHED GRADE.

END CONST. PROJECT PHASE 1A
STA. 12+44.76 FOGGY BOTTOM STREET
N 599165.608
E 2589321.951



MATCH LINE SEE SHEET NO. C19K

MATCH LINE SEE SHEET NO. C19J

BEGIN CONST. PROJECT PHASE 1A
 STA. 11+24.31 WATERFRONT DRIVE
 N 598843.870
 E 2587637.112

WATERFRONT DRIVE & STA. 10+00.00
 N 598733.134
 E 2587580.703

STA. 11+67.94
 CENTER CUL-DE-SAC
 N 598861.6150
 E 2587684.7940
 EL. 828.71

PHASE 2 NOTES:
 CONTRACTOR SHALL REFER TO GENERAL EPSC NOTES AND PERMIT CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING OF WORK.
 PHASE 2 BMP'S AND CONSTRUCTION STAGING SHALL NOT OCCUR UNTIL STORM SEWER, OUTFALLS, AND SANITARY SEWER LINES ARE CONSTRUCTED AND PROTECTED WITH SPECIFIED BMP'S.
 CONTRACTOR SHALL BEGIN CLEARING AND GRUBBING WITHIN LIMITS OF DISTURBANCE FOR THE ROADWAY AREA.
 ALONG THE LENGTH OF THE PROJECT, CONSTRUCT THE DITCH LINES (ON THE SOUTH SIDE) TO DIVERT OFFSITE WATER TO THE CULVERT INLETS.
 ONCE OFFSITE WATER IS DIVERTED, BEGIN EARTHWORK ACTIVITIES IN THE ROADWAY AREA. FOLLOW SWPPP AND EPSC NOTES WITH RESPECT TO VEGETATIVE STABILIZATION, EROSION CONTROL BLANKETS, SLOPE STABILIZATION, AND BUFFER REQUIREMENTS.
 ALL SLOPES 3:1 OR STEEPER SHALL BE PROTECTED WITH EROSION CONTROL BLANKETS (TODT TYPE III). PROVIDE FILTER TUBES / SOCKS WHERE INDICATED.

LANGFORD AVENUE & STA. 10+18.05
 BARBER STREET & STA. 13+23.90
 N 598691.628
 E 2587934.990

NO.	DATE	REVISIONS DESCRIPTION



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 ROADWAY IMPROVEMENTS, PHASE 1A**

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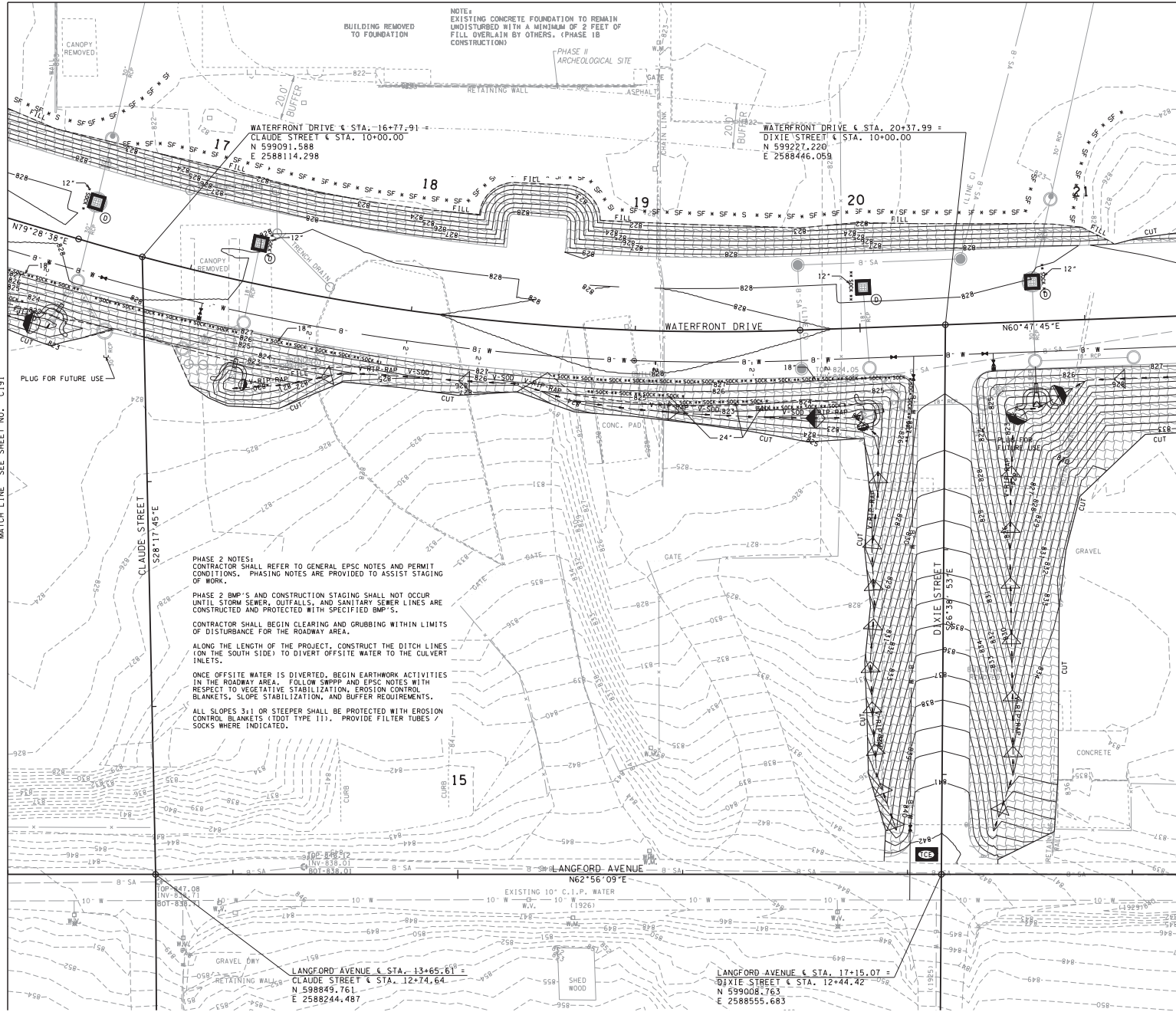
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JOB NO: 147-R-0565
SCALE: 1" = 20'
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE: EROSION CONTROL PLAN PHASE 2
DWG DRAWING NO: OF C19I

4/7/2014 14:51:03 50820_12.dwg phase 1a 50820_2.dwg.rvt

MATCH LINE SEE SHEET NO. C19K



MATCH LINE SEE SHEET NO. C19J

MATCH LINE SEE SHEET NO. C19K

NOTE:
EXISTING CONCRETE FOUNDATION TO REMAIN UNDISTURBED WITH A MINIMUM OF 2 FEET OF FILL OVERLAIN BY OTHERS. (PHASE 1B CONSTRUCTION)

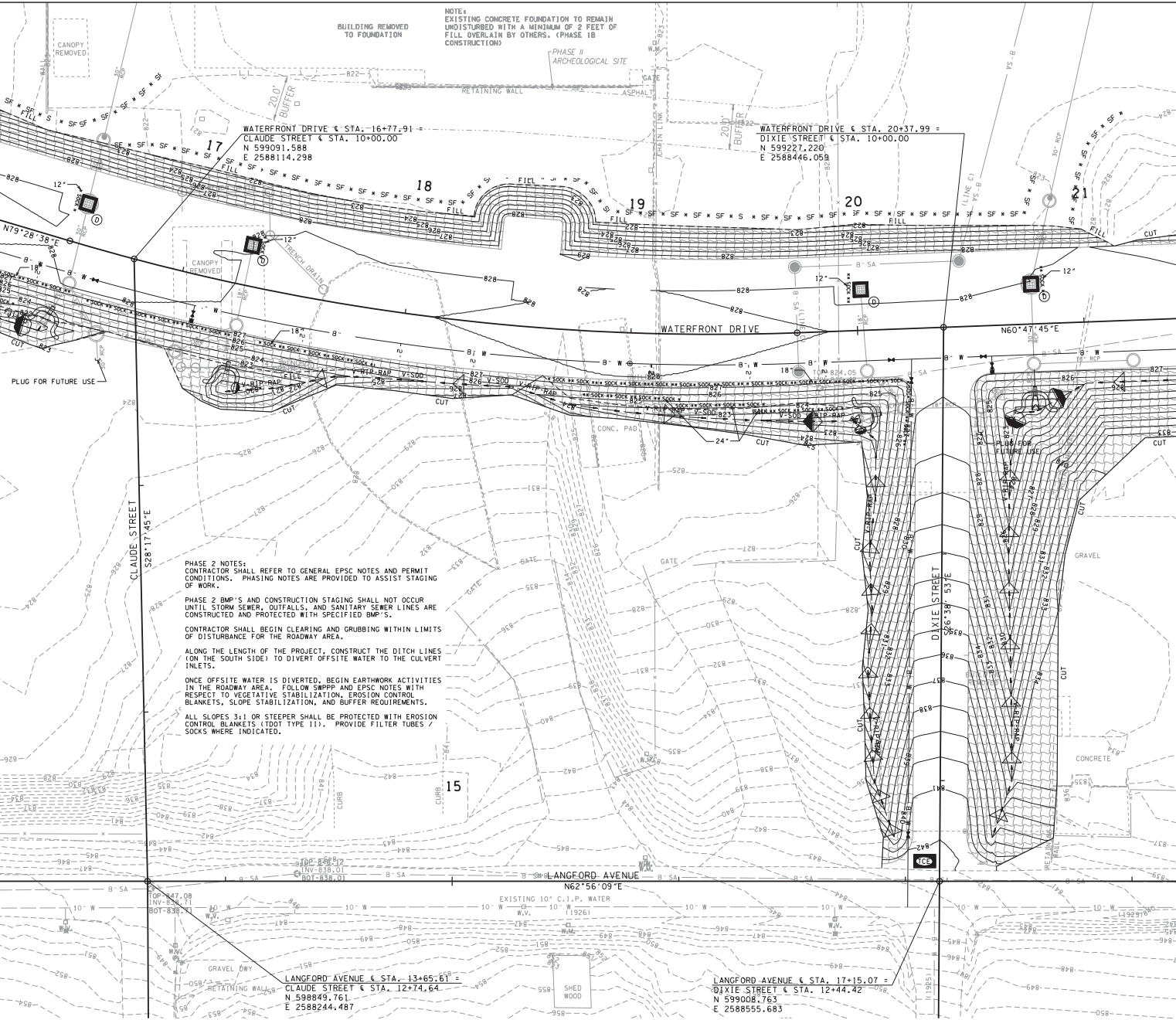
PHASE 2 NOTES:
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PHASE 2 BMP'S AND CONSTRUCTION STAGING SHALL NOT OCCUR UNTIL STORM SEWER, OUTFALLS, AND SANITARY SEWER LINES ARE CONSTRUCTED AND PROTECTED WITH SPECIFIED BMP'S.
CONTRACTOR SHALL BEGIN CLEARING AND GRUBBING WITHIN LIMITS OF DISTURBANCE FOR THE ROADWAY AREA.
ALONG THE LENGTH OF THE PROJECT, CONSTRUCT THE DITCH LINES (ON THE SOUTH SIDE) TO DIVERT OFFSITE WATER TO THE CULVERT INLETS.
ONCE OFFSITE WATER IS DIVERTED, BEGIN EARTHWORK ACTIVITIES IN THE ROADWAY AREA. FOLLOW SWPPP AND EPSC NOTES WITH RESPECT TO VEGETATIVE STABILIZATION, EROSION CONTROL BLANKETS, SLOPE STABILIZATION, AND BUFFER REQUIREMENTS.
ALL SLOPES 3:1 OR STEEPER SHALL BE PROTECTED WITH EROSION CONTROL BLANKETS (TODI TYPE 11). PROVIDE FILTER TUBES / SOCKS WHERE INDICATED.

PLUG FOR FUTURE USE

CANOPY REMOVED

BUILDING REMOVED TO FOUNDATION

PHASE II ARCHEOLOGICAL SITE



MATCH LINE SEE SHEET NO. C19J

MATCH LINE SEE SHEET NO. C19K

NOTE:
EXISTING CONCRETE FOUNDATION TO REMAIN UNDISTURBED WITH A MINIMUM OF 2 FEET OF FILL OVERLAIN BY OTHERS. (PHASE 1B CONSTRUCTION)

PHASE 2 NOTES:
CONTRACTOR SHALL REFER TO GENERAL EPSC NOTES AND PERMIT CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING OF WORK.
PHASE 2 BMP'S AND CONSTRUCTION STAGING SHALL NOT OCCUR UNTIL STORM SEWER, OUTFALLS, AND SANITARY SEWER LINES ARE CONSTRUCTED AND PROTECTED WITH SPECIFIED BMP'S.
CONTRACTOR SHALL BEGIN CLEARING AND GRUBBING WITHIN LIMITS OF DISTURBANCE FOR THE ROADWAY AREA.
ALONG THE LENGTH OF THE PROJECT, CONSTRUCT THE DITCH LINES (ON THE SOUTH SIDE) TO DIVERT OFFSITE WATER TO THE CULVERT INLETS.
ONCE OFFSITE WATER IS DIVERTED, BEGIN EARTHWORK ACTIVITIES IN THE ROADWAY AREA. FOLLOW SWPPP AND EPSC NOTES WITH RESPECT TO VEGETATIVE STABILIZATION, EROSION CONTROL BLANKETS, SLOPE STABILIZATION, AND BUFFER REQUIREMENTS.
ALL SLOPES 3:1 OR STEEPER SHALL BE PROTECTED WITH EROSION CONTROL BLANKETS (TODI TYPE 11). PROVIDE FILTER TUBES / SOCKS WHERE INDICATED.

PLUG FOR FUTURE USE

CANOPY REMOVED

BUILDING REMOVED TO FOUNDATION

PHASE II ARCHEOLOGICAL SITE

NO.	DATE	REVISIONS DESCRIPTION



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CHECKED: E.B.D.
JOB NO: 147-R-0565
SCALE: 1" = 20'
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE: EROSION CONTROL PLAN PHASE 2
DWG DRAWING NO: OF C19J

PHASE 2 NOTES:
 CONTRACTOR SHALL REFER TO GENERAL EPSC NOTES AND PERMIT CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING OF WORK.

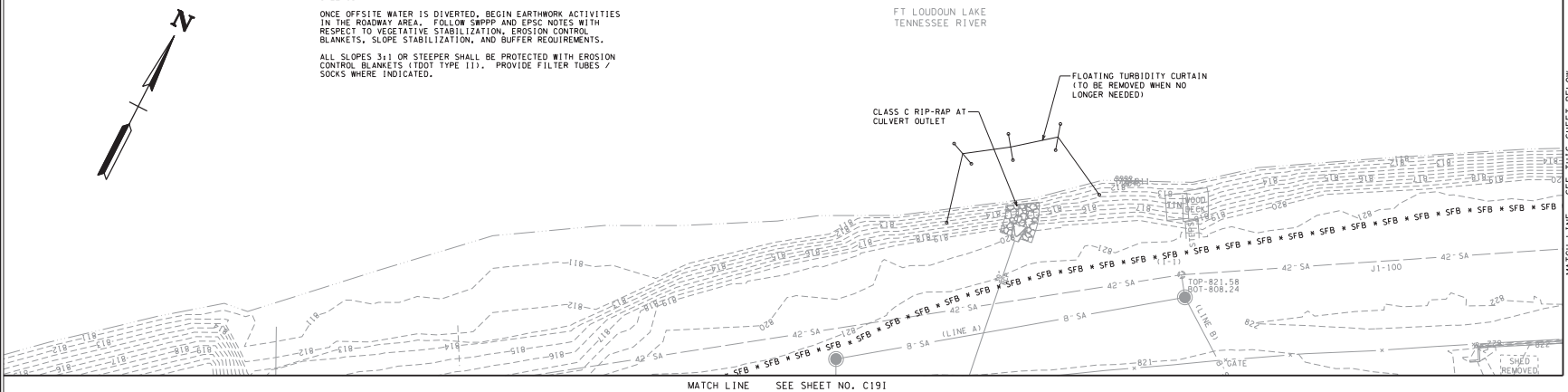
PHASE 2 BMP'S AND CONSTRUCTION STAGING SHALL NOT OCCUR UNTIL STORM SEWER, OUTFALLS, AND SANITARY SEWER LINES ARE CONSTRUCTED AND PROTECTED WITH SPECIFIED BMP'S.

CONTRACTOR SHALL BEGIN CLEARING AND GRUBBING WITHIN LIMITS OF DISTURBANCE FOR THE ROADWAY AREA.

ALONG THE LENGTH OF THE PROJECT, CONSTRUCT THE DITCH LINES (ON THE SOUTH SIDE) TO DIVERT OFFSITE WATER TO THE CULVERT INLETS.

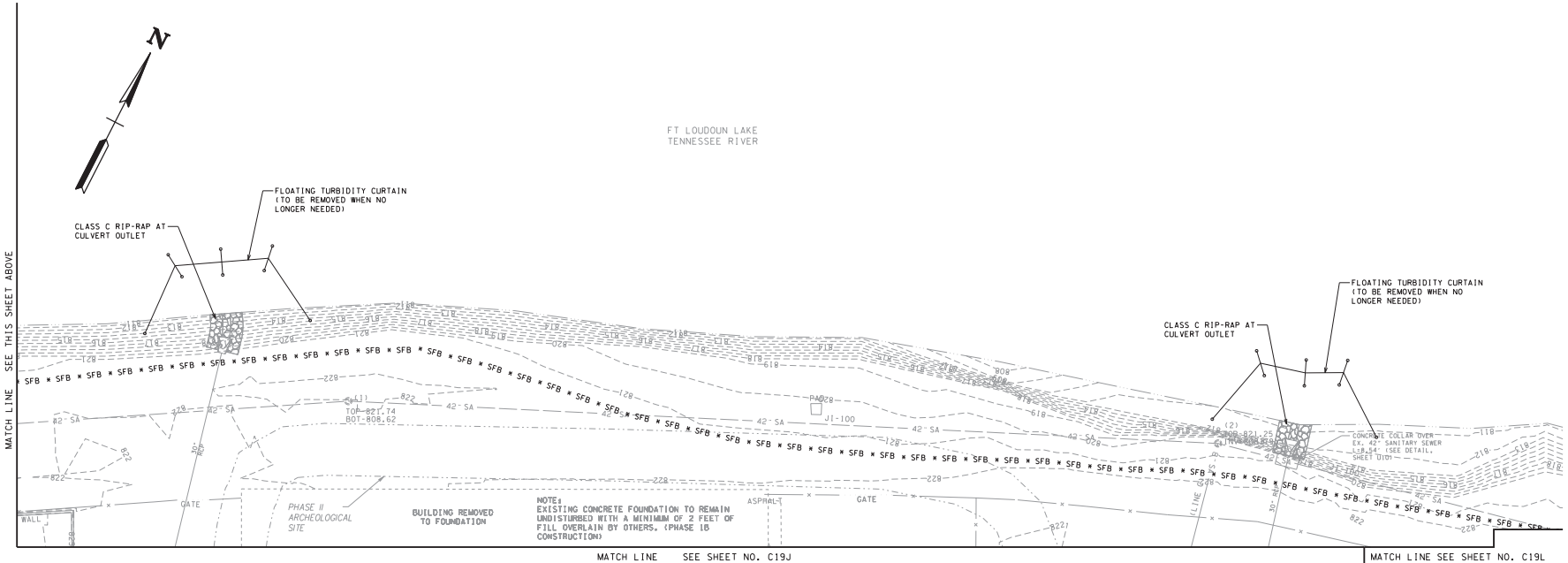
ONCE OFFSITE WATER IS DIVERTED, BEGIN EARTHWORK ACTIVITIES IN THE ROADWAY AREA. FOLLOW SPPPP AND EPSC NOTES WITH RESPECT TO VEGETATIVE STABILIZATION, EROSION CONTROL BLANKETS, SLOPE STABILIZATION, AND BUFFER REQUIREMENTS.

ALL SLOPES 3:1 OR STEEPER SHALL BE PROTECTED WITH EROSION CONTROL BLANKETS (DOT TYPE 11). PROVIDE FILTER TUBES / SOCKS WHERE INDICATED.



MATCH LINE SEE SHEET NO. C191

MATCH LINE SEE THIS SHEET BELOW



MATCH LINE SEE SHEET NO. C19J

MATCH LINE SEE SHEET NO. C19L

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NO.	DATE	REVISIONS DESCRIPTION



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 606-248-6600

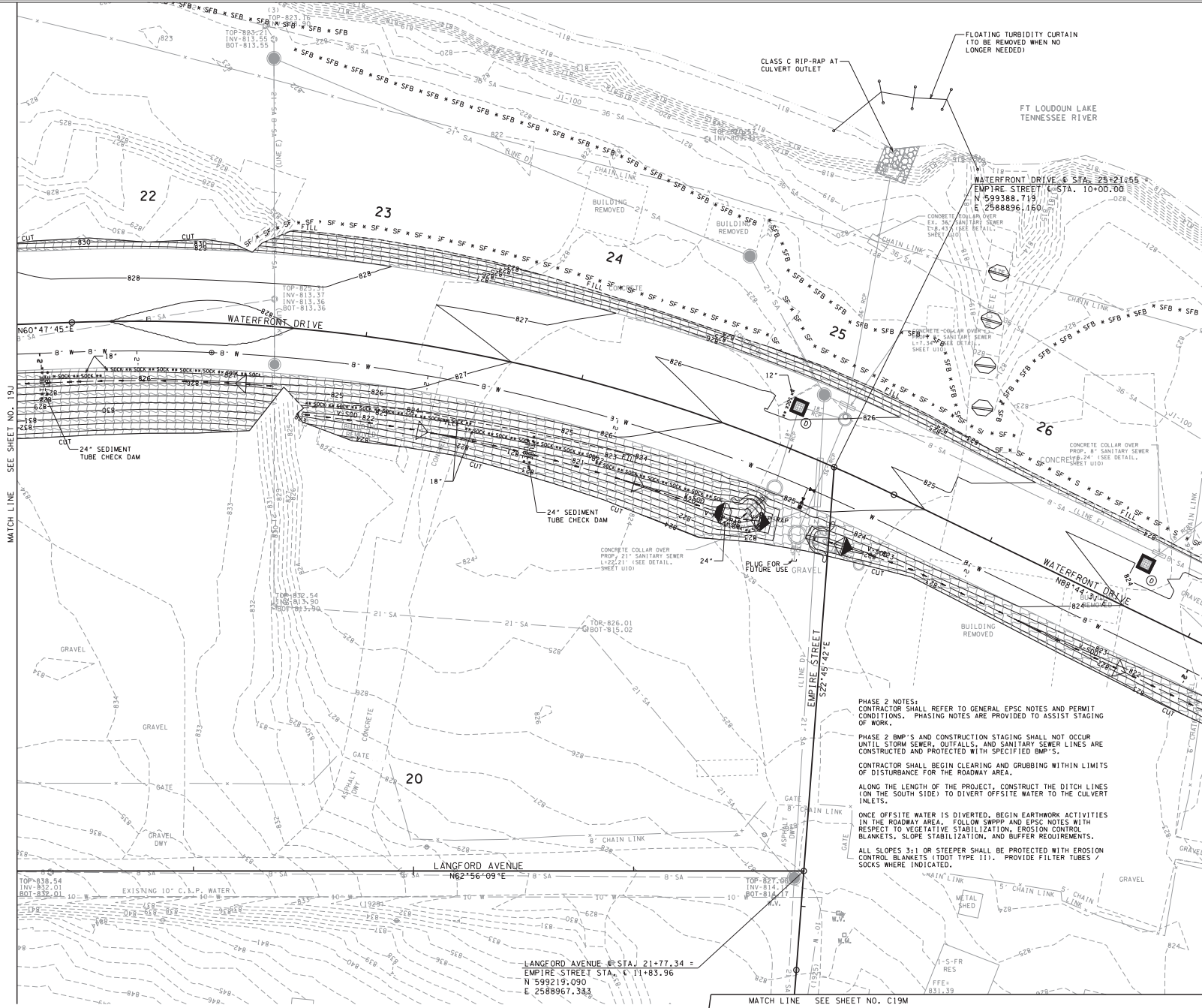
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JOB NO: 147-R-0565
SCALE: 1" = 20'
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE: EROSION CONTROL PLAN PHASE 2
DWG: DRAWING NO: OF: C19K



MATCH LINE SEE SHEET NO. 19J

MATCH LINE SEE SHEET NO. C19M

MATCH LINE SEE SHEET NO. C19M

PHASE 2 NOTES:
 CONTRACTOR SHALL REFER TO GENERAL EPSC NOTES AND PERMIT CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING OF WORK.
 PHASE 2 BMP'S AND CONSTRUCTION STAGING SHALL NOT OCCUR UNTIL STORM SEWER, DITCHES, AND SANITARY SEWER LINES ARE CONSTRUCTED AND PROTECTED WITH SPECIFIED BMP'S.
 CONTRACTOR SHALL BEGIN CLEARING AND GRUBBING WITHIN LIMITS OF DISTURBANCE FOR THE ROADWAY AREA.
 ALONG THE LENGTH OF THE PROJECT, CONSTRUCT THE DITCH LINES (ON THE SOUTH SIDE) TO DIVERT OFFSITE WATER TO THE CULVERT INLETS.
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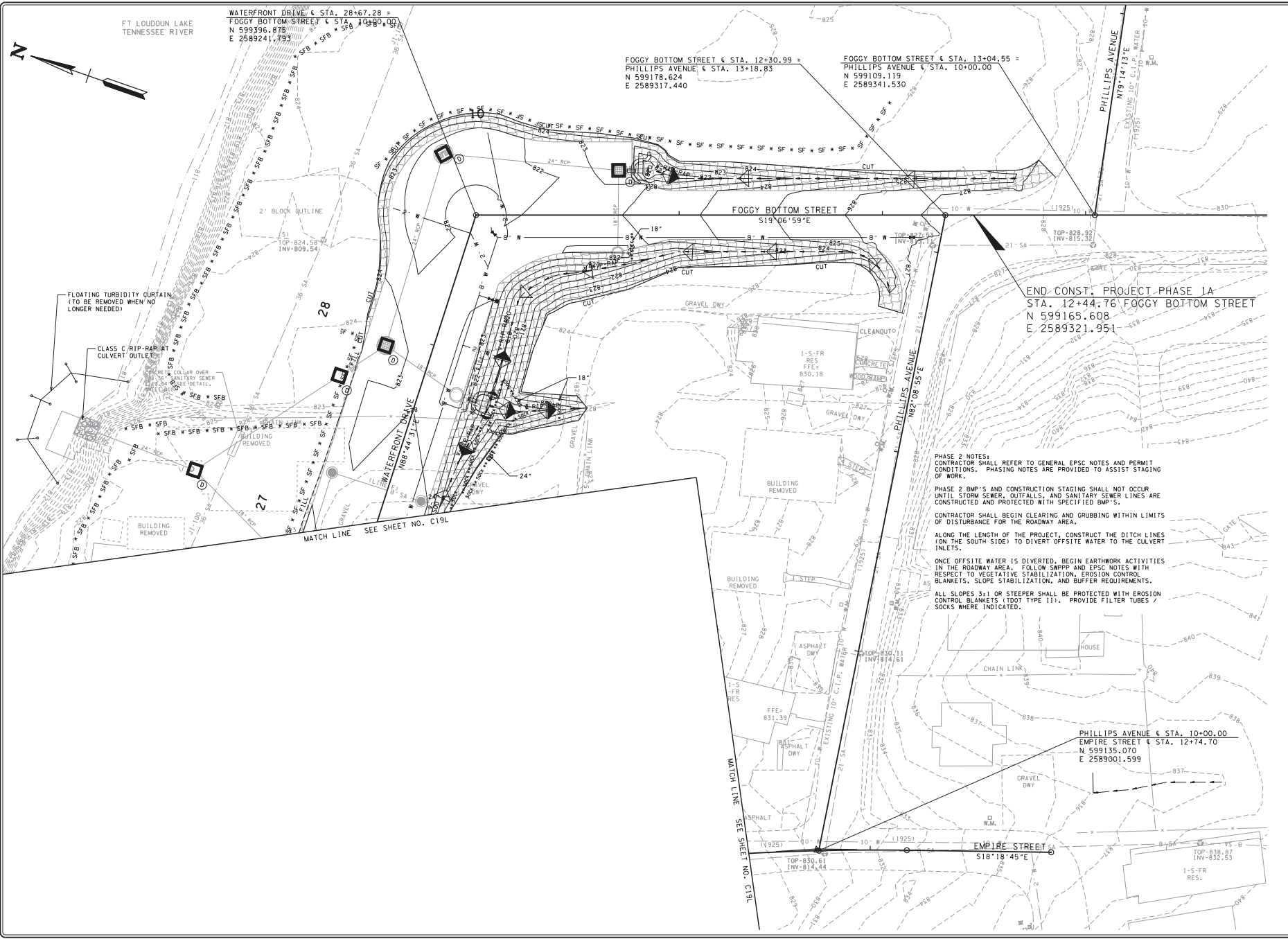
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DATE: 03-14-2014	FILE NAME: 50820-12
DRAWING TITLE: EROSION CONTROL PLAN PHASE 2	
DWG OF	DRAWING NO: C19L

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FT LOUDOUN LAKE
TENNESSEE RIVER

WATERFRONT DRIVE & STA. 28+67.28 =
FOGGY BOTTOM STREET & STA. 10+00.00
N 599396.875
E 2589241.793

FOGGY BOTTOM STREET & STA. 12+30.99 =
PHILLIPS AVENUE & STA. 13+18.83
N 599178.624
E 2589317.440

FOGGY BOTTOM STREET & STA. 13+04.55 =
PHILLIPS AVENUE & STA. 10+00.00
N 599109.119
E 2589341.530

END CONST. PROJECT PHASE 1A
STA. 12+44.76 FOGGY BOTTOM STREET
N 599165.608
E 2589321.951

PHILLIPS AVENUE & STA. 10+00.00
EMPIRE STREET & STA. 12+74.70
N 599135.070
E 2589001.599

PHASE 2 NOTES:
CONTRACTOR SHALL REFER TO GENERAL EPC NOTES AND PERMIT CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING OF WORK.
PHASE 2 BMP'S AND CONSTRUCTION STAGING SHALL NOT OCCUR UNTIL STORM SEWER, OUTFALLS, AND SANITARY SEWER LINES ARE CONSTRUCTED AND PROTECTED WITH SPECIFIED BMP'S.
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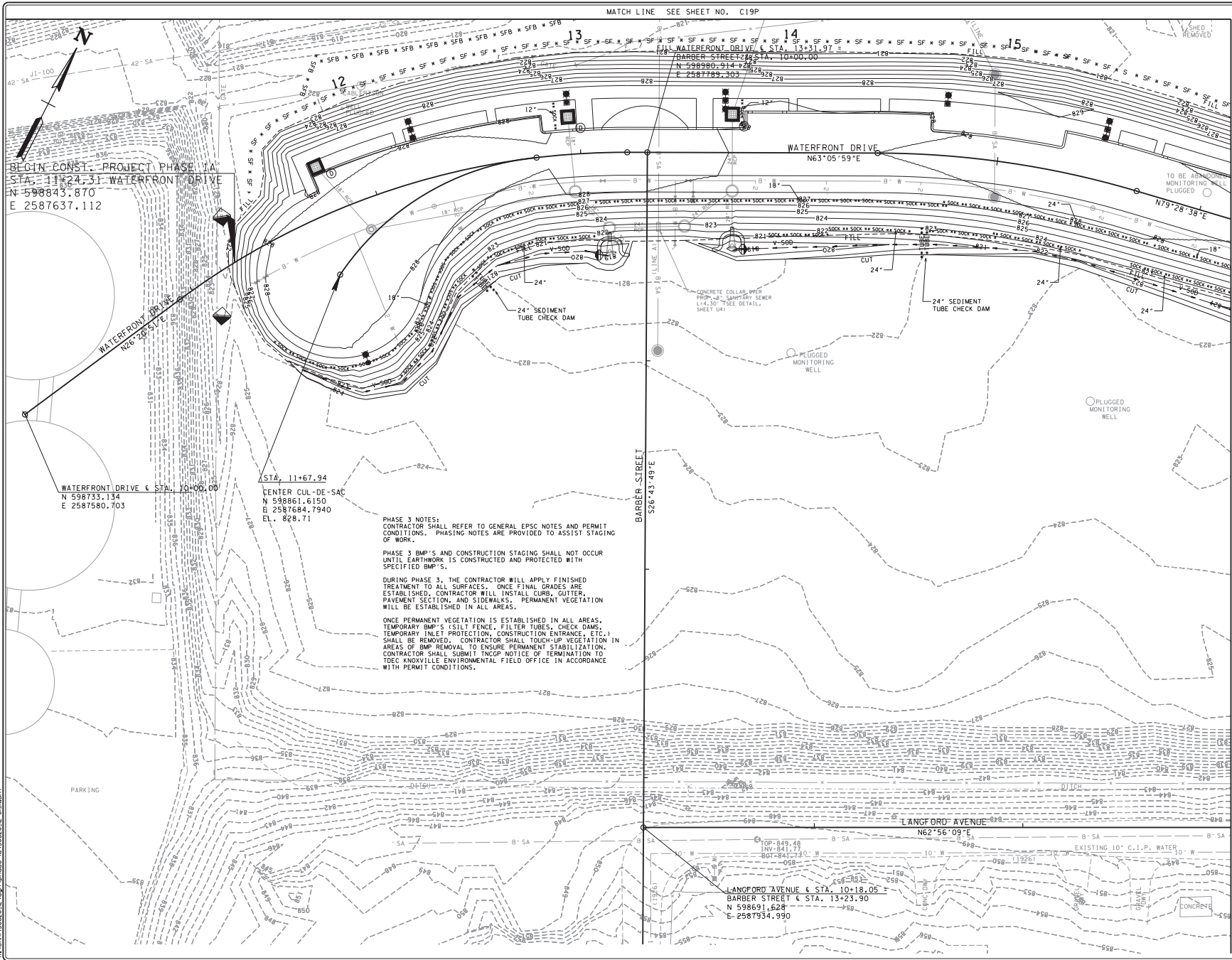
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DRAWING TITLE: EROSION CONTROL PLAN PHASE 2	
DWG NO:	DRAWING NO:
OF	C19M



MATCH LINE SEE SHEET NO. C19P

MATCH LINE SEE SHEET NO. C19N

BEGIN CONST. PROJECT PHASE 1A
 STA. 11+24.31 WATERFRONT DRIVE
 N 598843.870
 E 2587637.112

WATERFRONT DRIVE & STA. 10+00.00
 N 598733.134
 E 2587580.703

STA. 11+67.94
 CENTER CUL-DE-SAC
 N 598861.6150
 E 2587684.7940
 EL. 828.71

PHASE 3 NOTES:
 CONTRACTOR SHALL REFER TO GENERAL EPSC NOTES AND PERMIT CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING OF WORK.

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ONCE PERMANENT VEGETATION IS ESTABLISHED IN ALL AREAS, TEMPORARY BMP'S (SILT FENCE, FILTER TUBES, CHECK DAMS, TEMPORARY INLET PROTECTION, CONSTRUCTION ENTRANCE, ETC.) SHALL BE REMOVED. CONTRACTOR SHALL TOUCH-UP VEGETATION IN AREAS OF BMP REMOVAL TO ENSURE PERMANENT STABILIZATION. CONTRACTOR SHALL SUBMIT TNCUP NOTICE OF TERMINATION TO TDEC KNOWVILLE ENVIRONMENTAL FIELD OFFICE IN ACCORDANCE WITH PERMIT CONDITIONS.

LANGFORD AVENUE & STA. 10+18.05
 BARBER STREET & STA. 13+23.90
 N 598691.628
 E 2587934.990

NO.	DATE	REVISIONS	DESCRIPTION



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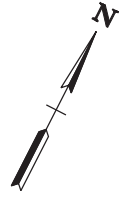
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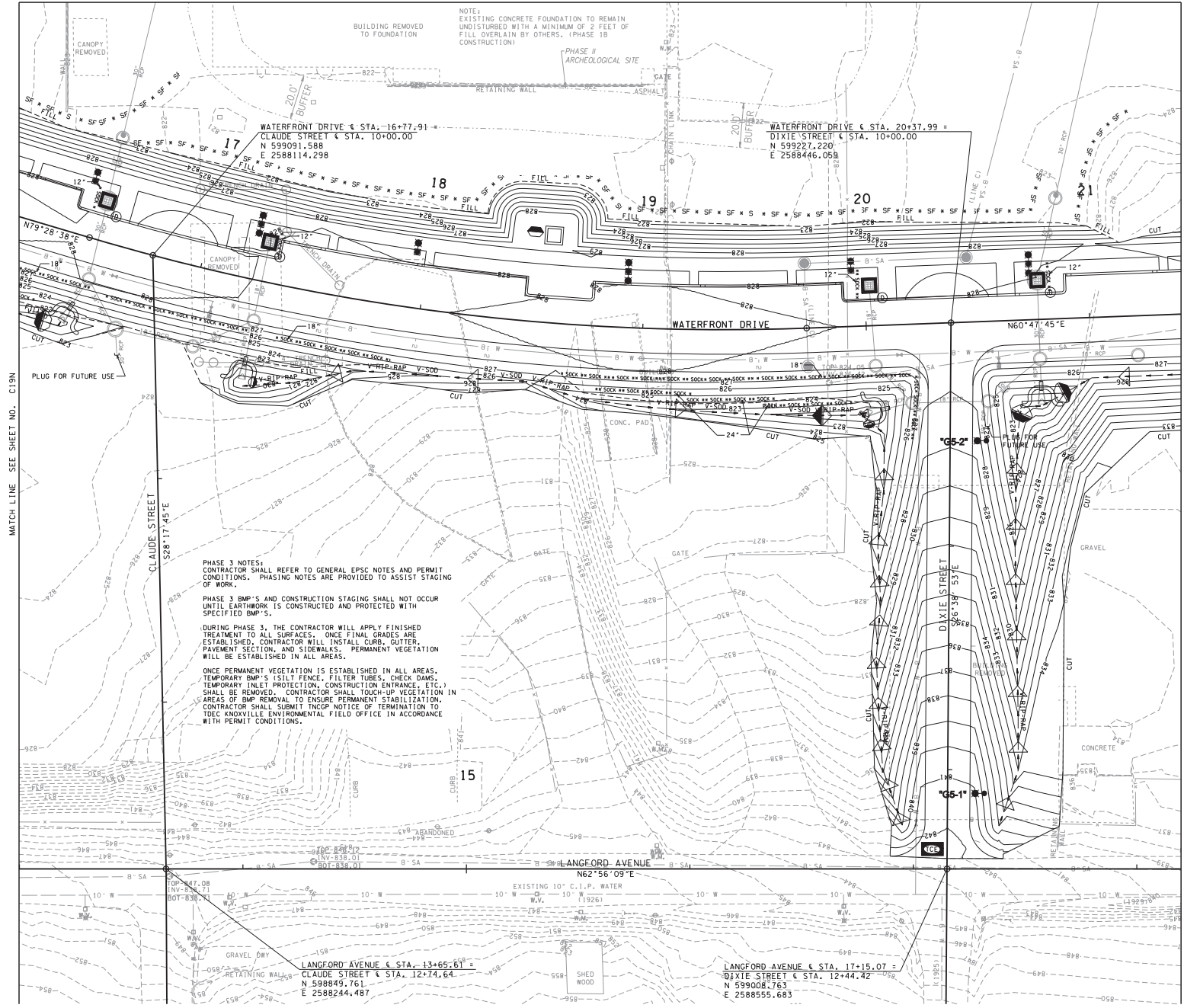
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CHECKED: E.B.D.
JOB NO: 147-R-0565
SCALE: 1" = 20'
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE: EROSION CONTROL PLAN PHASE 3
DWG DRAWING NO: OF C19N

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4/17/2014 11:51:03 AM C:\GIS\30820_01.dwg phase 1a 150820_02.dwg.dwg



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NOTE:
EXISTING CONCRETE FOUNDATION TO REMAIN UNDISTURBED WITH A MINIMUM OF 2 FEET OF FILL OVERLAIN BY OTHERS. (PHASE 1B CONSTRUCTION)

MATCH LINE SEE SHEET NO. C19N

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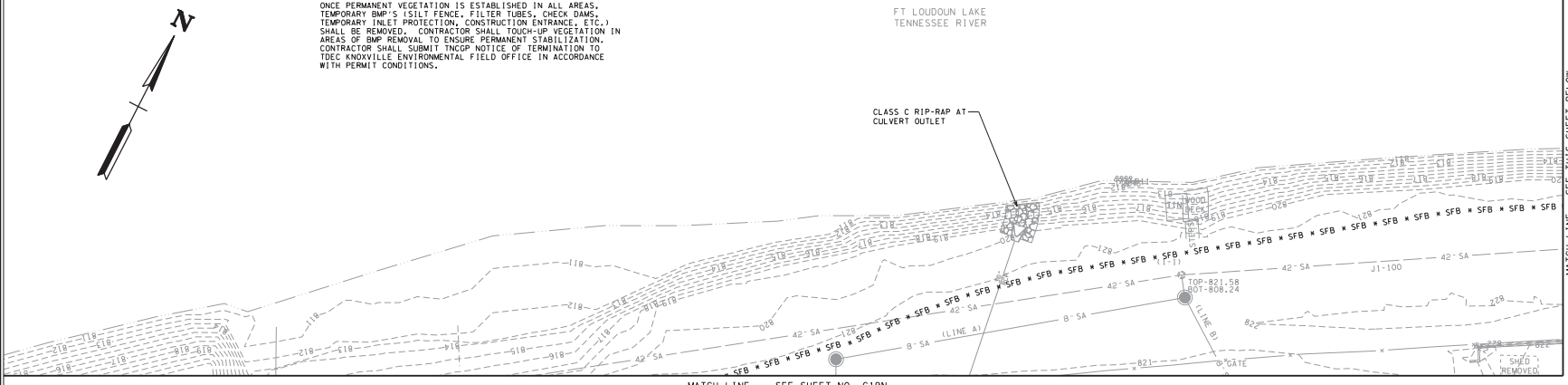
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JOB NO: 147-R-0565
SCALE: 1" = 20'
DATE: 03-14-2014
FILE NAME: 30820-12
DRAWING TITLE: EROSION CONTROL PLAN PHASE 3
DWG DRAWING NO: OF C190

PHASE 3 NOTES:
 CONTRACTOR SHALL REFER TO GENERAL EPSC NOTES AND PERMIT CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING OF WORK.

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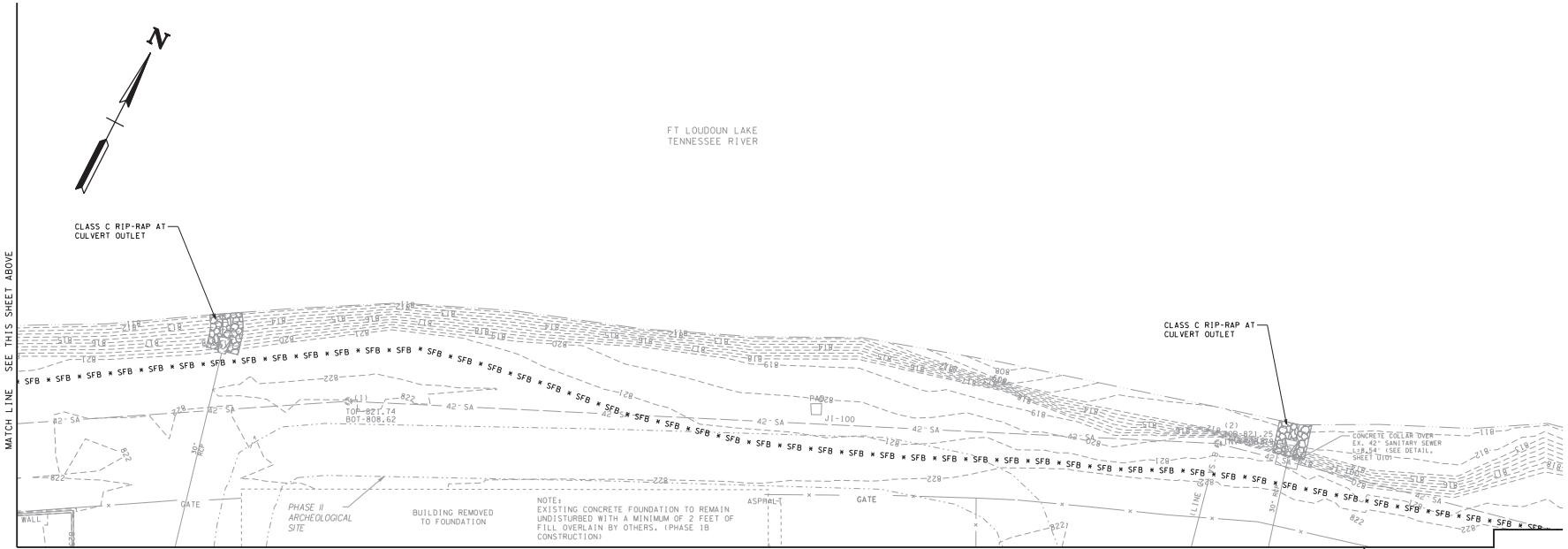
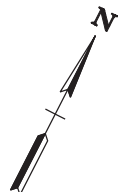
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MATCH LINE SEE SHEET NO. C19N

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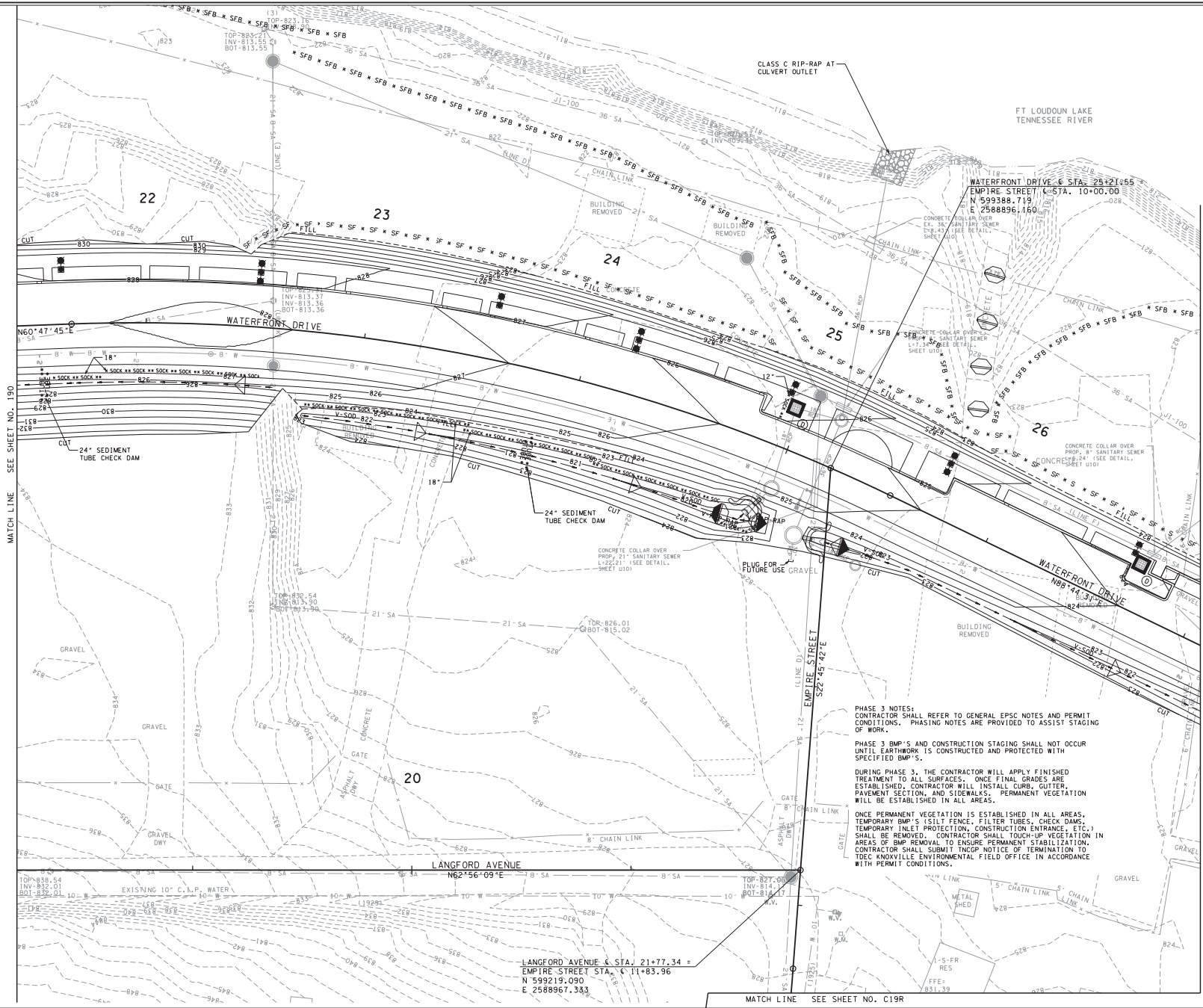
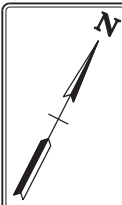
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JOB NO.:	147-R-0565
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DATE:	03-14-2014
FILE NAME:	50820-12
DRAWING TITLE:	EROSION CONTROL PLAN PHASE 3
DWG. NO.:	C19P
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CLASS C RIP-RAP AT
CULVERT OUTLET

FT LOUDOUN LAKE
TENNESSEE RIVER

WATERFRONT DRIVE & STA. 28+21.55
EMPIRE STREET (STA. 10+00.00)
N 599388.719
E 2588896.160

22

23

24

25

26

WATERFRONT DRIVE
N60°47'45"E

LANGFORD AVENUE
N62°56'09"E

LANGFORD AVENUE & STA. 21+77.34 =
EMPIRE STREET STA. 6+11+83.96
N 599219.090
E 2588897.333

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CONDITIONS. PHASING NOTES ARE PROVIDED TO ASSIST STAGING
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PAVEMENT SECTION, AND SIDEWALKS. PERMANENT VEGETATION
WILL BE ESTABLISHED IN ALL AREAS.

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TEMPORARY BMP'S (SILT FENCE, FILTER TUBES, CHECK DAMS,
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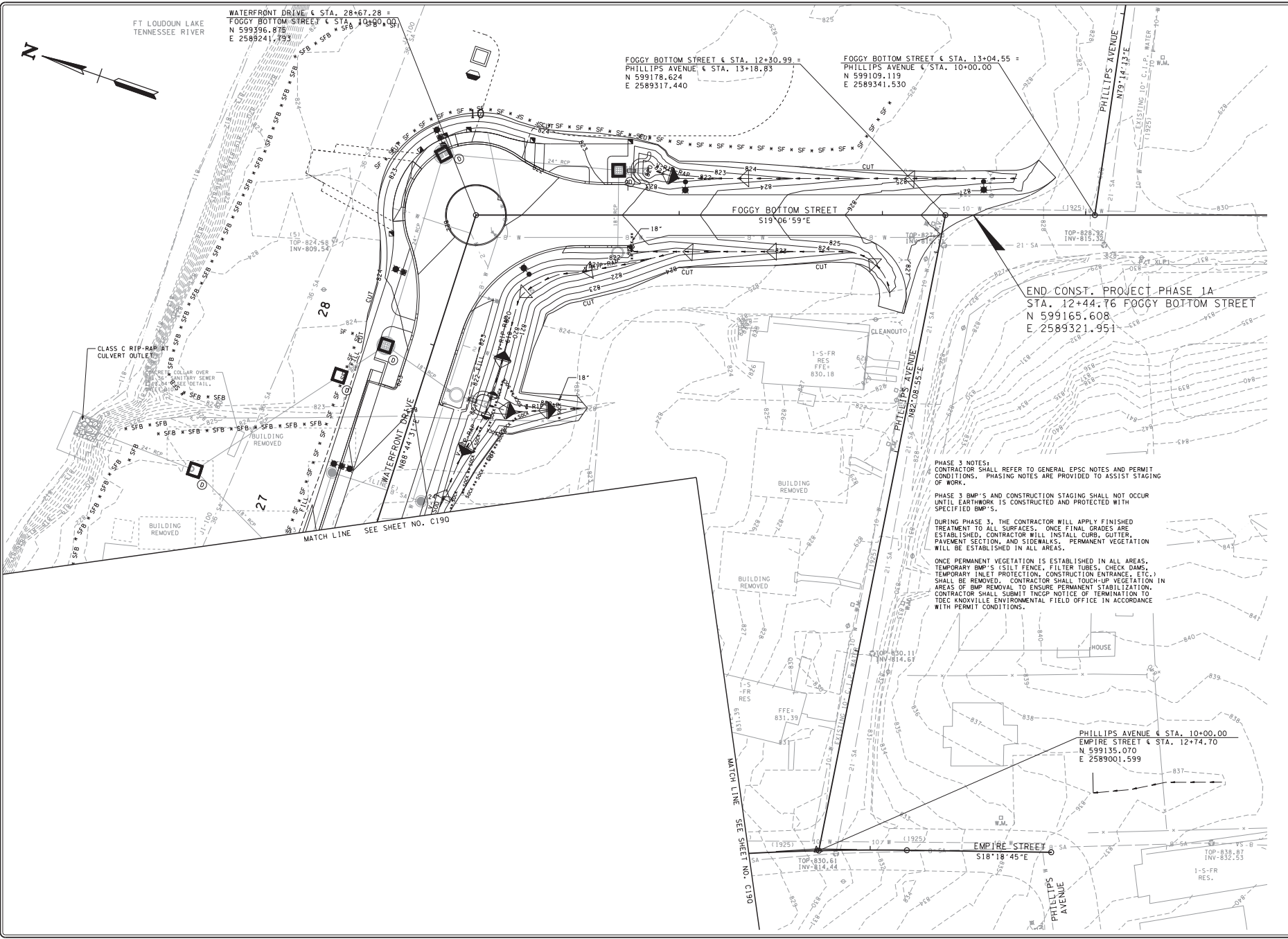
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DRAWING TITLE: EROSION CONTROL PLAN PHASE 3	DWG DRAWING NO: OF C190

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TENNESSEE RIVER

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N 599396.875
E 2589241.793

FOGGY BOTTOM STREET & STA. 12+30.99 =
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DATE: 03-14-2014	FILE NAME: 50820-12
DRAWING TITLE: EROSION CONTROL PLAN PHASE 3	
DWG OF	DRAWING NO: C19R

TRAFFIC CONTROL GENERAL NOTES

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL NOTES

- (1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERRECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- (2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COST OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 34.1, CONSTRUCTION AREA TRAFFIC CONTROL.
- (3) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERRECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- (4) ALL DETOUR AND CONSTRUCTION SIGNING AND TRAFFIC CONTROL DEVICES SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- (5) ALL LANE SHIFTS AND DETOURS SHALL BE PAVED, STRIPED, SIGNED AND VERTICAL PANELS AND/OR DRUMS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THIS TRAFFIC CONTROL PLAN REVIEWED AND APPROVED BY THE DIRECTOR OF ENGINEERING OR HIS DESIGNEE, FOR SUPPLYING TO THE DEPARTMENT OF ENGINEERING BEGIN WORK AND WORK COMPLETION DATES, AND FOR MEDIA NOTIFICATION THROUGH THE DEPARTMENT OF ENGINEERING AS REQUIRED BY "POLICY ON WORK ZONE TRAFFIC CONTROL", CITY OF KNOXVILLE, TENNESSEE, DATED JULY 24, 2004 OR LATEST EDITION.
- (7) THE LOCATIONS OF SIGNS SHOWN IN THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE LOCATIONS AND BEST MEANS OF INSTALLATION. SIGNS MAY BE PLACED ON SKID MOUNTS OR OTHER TEMPORARY SUPPORTS AS LONG AS THEY ARE FRANGIBLE AND MEET THE REQUIREMENTS OF THE MUTCD.
- (8) ALL PRIVATE DRIVES AND BUSINESS ENTRANCES WITHIN THE PROJECT AREA ARE TO REMAIN OPEN FOR THE DURATION OF THE PROJECT. DRUMS ARE TO BE PLACED AROUND DRIVEWAYS AND ENTRANCES IN A MANNER THAT WILL NOT HINDER ACCESS TO THE PROPERTIES.
- (9) USE TEMPORARY PAVEMENT TO ELIMINATE DROPOFFS BETWEEN AREAS OF EXISTING AND PROPOSED PAVEMENT TO BE USED FOR TRAFFIC.
- (10) THE CONTRACTOR SHALL MAINTAIN ALL TRAFFIC CONTROL DEVICES IN A SAFE AND OPERATIONAL CONDITION FOR THE DURATION OF THE CONTRACT WITH NO ADDITIONAL COST TO THE OWNER.
- (11) THE COST OF ALL TRAFFIC CONTROL SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 34.1. THE TABULATED TRAFFIC CONTROL QUANTITIES ARE APPROXIMATE. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY DISCREPANCIES FROM THESE QUANTITIES OR ANY ADDITIONAL ITEMS THAT THE CONTRACTOR DEEMS NECESSARY.
- (12) THE CONTRACTOR SHALL VERIFY ALL SIGN SUPPORT LENGTHS AT THE SITE PRIOR TO ORDERING MATERIAL.
- (13) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS.
- (14) WHEN MAINTAINING ONLY ONE LANE OF TRAFFIC ON A STREET WHERE CONSTRUCTION IS BEING DONE, USE FLAGMEN, ADVANCE WARNING SIGNS, AND DRUMS WITH TYPE C LIGHTS TO SEPARATE THE WORK ZONE FROM TRAFFIC. DRUMS SHALL ALSO BE USED TO SEPARATE TRAFFIC IN AREAS WHERE THERE ARE NO ACTIVE CONSTRUCTION ACTIVITIES TAKING PLACE.
- (15) PORTABLE BARRIER RAIL WITH VERTICAL PANELS WITH AN ATTENUATOR MAY BE USED TO SEPARATE THE WORK ZONE FROM TRAFFIC WHEN WORKING IN VERY CLOSE PROXIMITY TO TRAFFIC, OR WHERE SIGNIFICANT DROPOFFS EXIST.
- (16) WHEN POSSIBLE, THE PORTABLE BARRIER RAIL SHOULD BE EXTENDED BEYOND THE CLEAR ZONE TO ELIMINATE THE NEED FOR AN ATTENUATOR.
- (17) PAVEMENT MARKINGS SHALL BE 8 INCHES WIDE ON THE RIGHT EDGE OF A LANE MERGE OR SHIFT, AND WHEN ADJACENT TO A PORTABLE BARRIER RAIL.
- (18) DURING CONSTRUCTION, REDUCE THE SPEED LIMIT TO 25 MPH UNLESS OTHERWISE NOTED ON ALL ROADS WITHIN THE WORK ZONE.
- (19) STORM DRAINAGE SYSTEMS ARE TO BE BUILT FROM THE DOWNSTREAM END WORKING UPSTREAM. MAINTAIN DRAINAGE AT ALL TIMES.
- (20) UNLESS OTHERWISE STATED, WORK IN EACH PHASE SHALL INCLUDE BUILDING THE COMPLETE ROADWAY SECTION (INCLUDING DRAINAGE PIPES AND STRUCTURES, PLANTERS, SIDEWALK, ETC.) AND THE UTILITIES.
- (21) SEE EROSION CONTROL NOTES, SHT. NO. C19B, FOR RECOMMENDED SEQUENCE OF CONSTRUCTION.

NO.	DATE	DESCRIPTION



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ROADWAY IMPROVEMENTS, PHASE 1A

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KNOXVILLE, TN.



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DRAWN: M.D.G.
CHECKED: J.E.K.
JOB NO: 147-R-0565
SCALE: NO SCALE
DATE: 03-14-2014
FILE NAME: 50820-12
DRAWING TITLE:
TRAFFIC
CONTROL
NOTES

DWG DRAWING NO:
OF C20

TRAFFIC CONTROL TABULATED QUANTITIES - CONSTRUCTION SIGNS

M.U.T.C.D. NO.	DESCRIPTION	NO. OF SIGNS (EACH)	AREA PER SIGN (S.F.)	TOTAL AREA (S.F.)
G20-2	END ROAD WORK	2	4.50	9.00
R11-2	ROAD CLOSED	2	10.00	20.00
W11-10	TRUCK SYMBOL	2	9.00	18.00
W20-1	ROAD WORK AHEAD	2	9.00	18.00
TOTAL				65.00

ESTIMATED TRAFFIC CONTROL TABULATED QUANTITIES

M.U.T.C.D. NO.	DESCRIPTION	UNIT	QUANTITY
	TYPE A WARNING LIGHT	EACH	4
	TYPE III BARRICADE	L.F.	40

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK AREA
	TEMPORARY BARRICADE (TYPE III)
	WARNING LIGHT (TYPE A) (LOW-INTENSITY FLASHING)
	SIGN (CONSTRUCTION)
	TRAFFIC FLOW

- NOTES:
1. COSTS BID FOR ALL TRAFFIC CONTROL NOT PAID FOR UNDER SEPARATE PAY ITEM NO., SHALL BE INCLUDED IN THE COST OF ITEM NO. 341 CONSTRUCTION AREA TRAFFIC CONTROL, LUMP SUM.
 2. TYPE III BARRICADES MAY VARY IN LENGTH ACCORDING TO THE SPECIFIC NEEDS OF EACH LOCATION. APPROXIMATE LENGTHS ARE INDICATED FOR EACH BARRICADE IN THE TRAFFIC CONTROL PLANS.

NO.	DATE	DESCRIPTION



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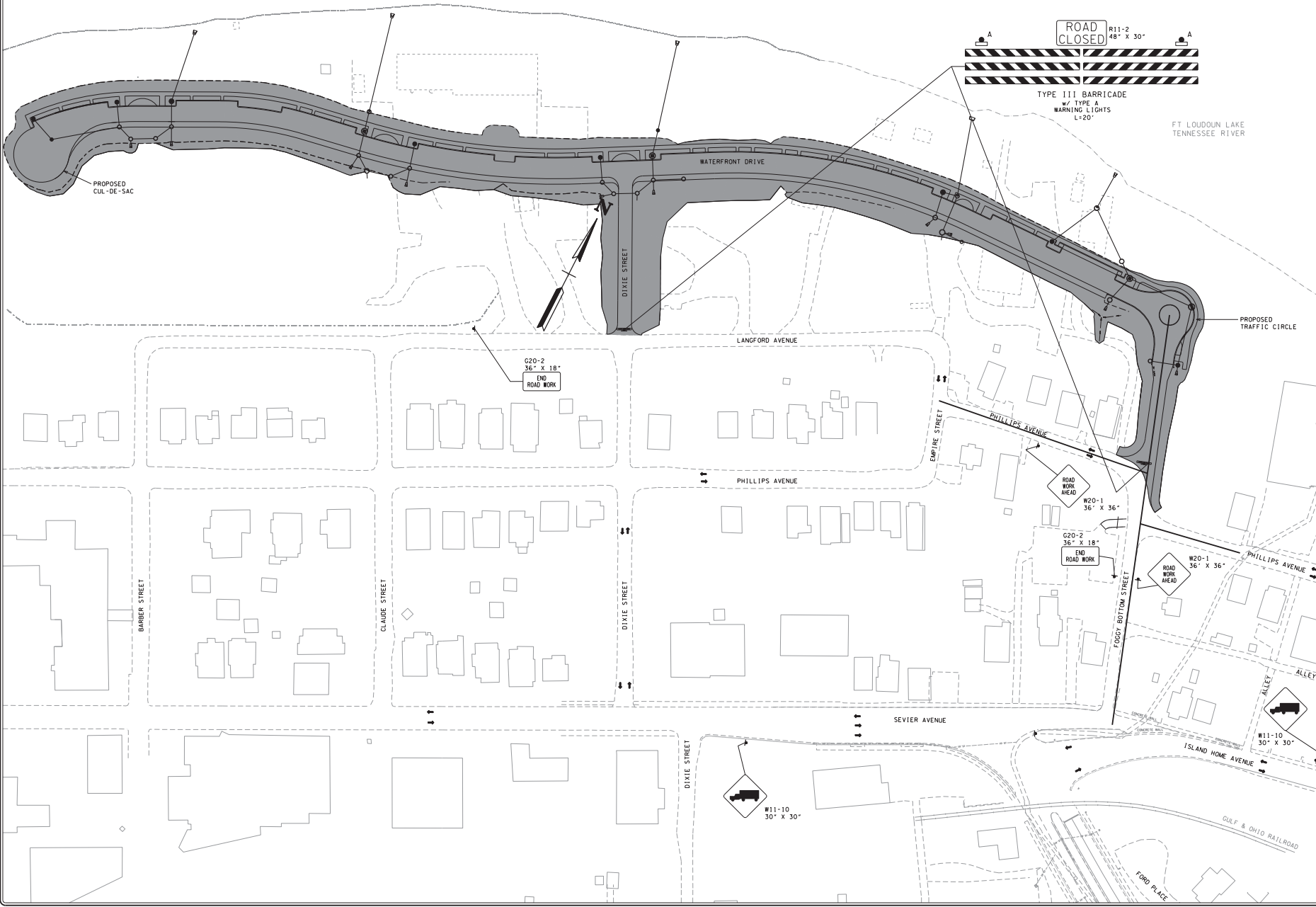
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CHECKED: J.E.K.	OF
JOB NO: 147-R-0565	C20A
SCALE: NO SCALE	
DATE: 03-14-2014	
FILE NAME: 50820-12	
DRAWING TITLE:	
TRAFFIC CONTROL QUANTITIES	

FT LOUDOUN LAKE
TENNESSEE RIVER

LEGEND
 WORK ZONE SHADING



FT LOUDOUN LAKE
TENNESSEE RIVER



NO.	DATE	REVISIONS DESCRIPTION



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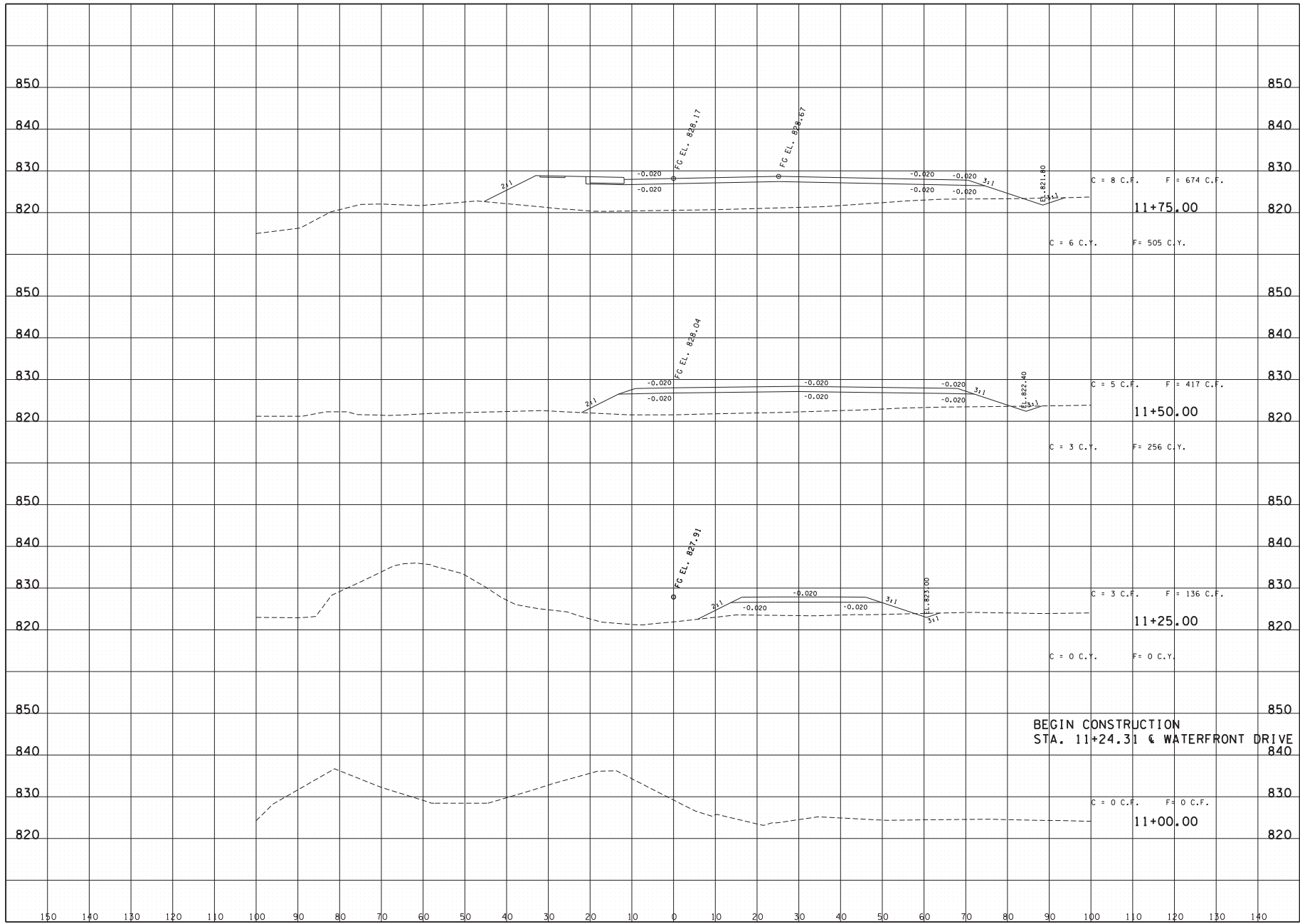
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 DRAWING TITLE:
 ADVANCE
 WARNING AND
 TRAFFIC CONTROL
 PLAN

DWG OF DRAWING NO: C20B

4/2/2014 14:51:03 50820-12.dwg phase 1a.dwg phase 1a.dwg

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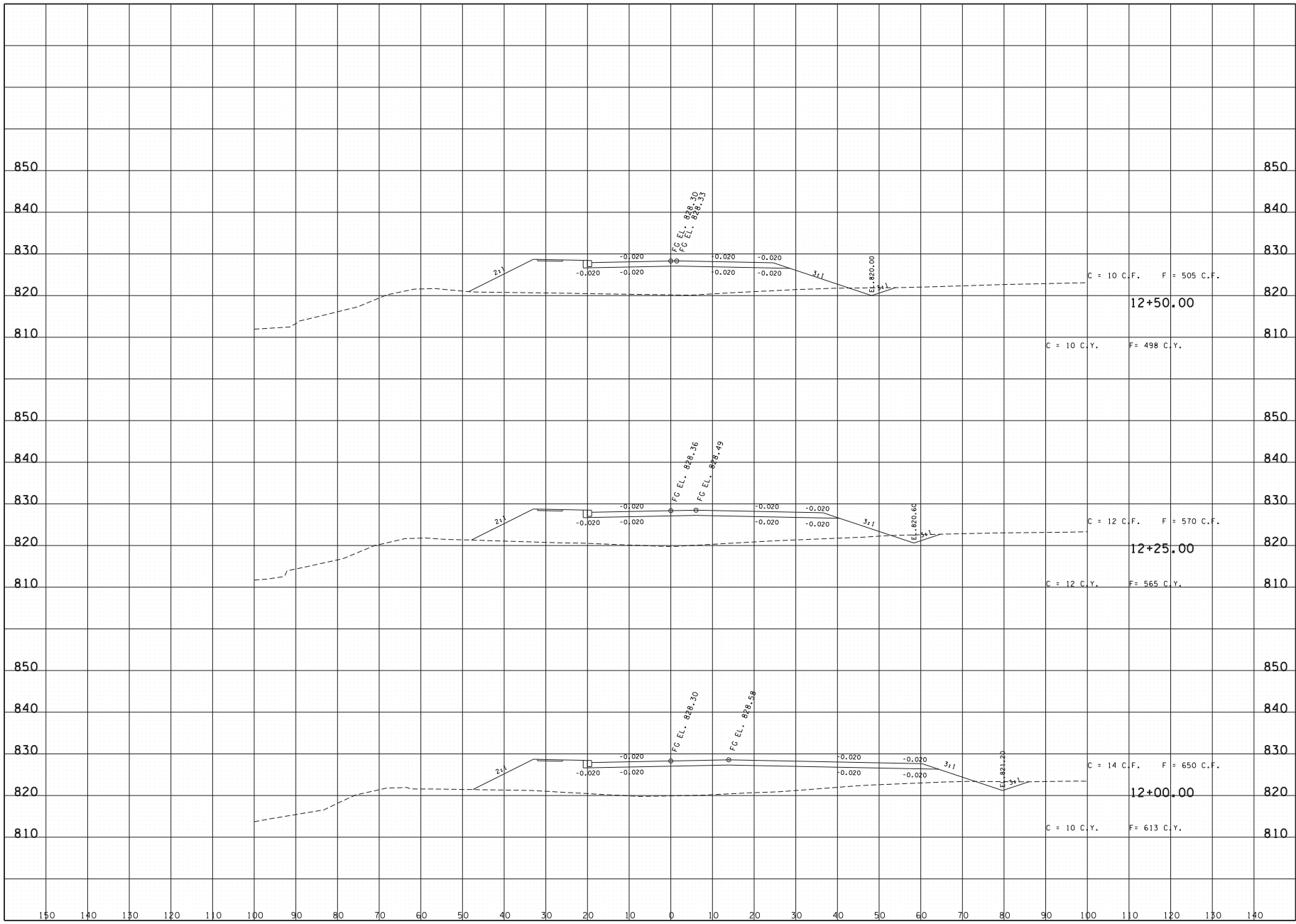
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FILE NAME:	50820-12
DRAWING TITLE:	WATERFRONT DRIVE CROSS SECTIONS
DWG OF	DRAWING NO: C21

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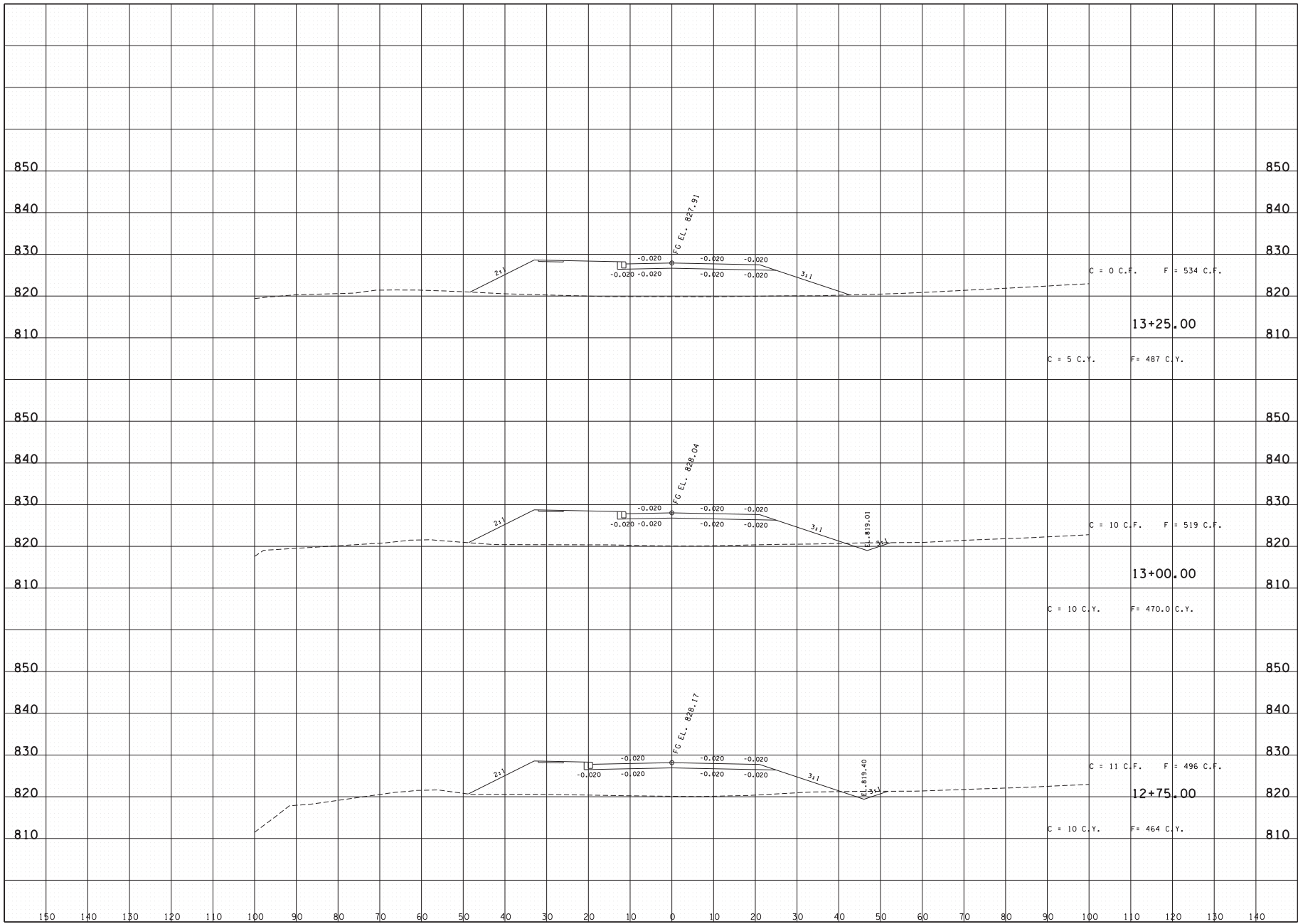
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FILE NAME:	50820-12
DRAWING TITLE:	WATERFRONT DRIVE CROSS SECTIONS
DWG OF:	DRAWING NO: C22

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FILE NAME:	50820-12
DRAWING TITLE:	WATERFRONT DRIVE CROSS SECTIONS
DWG OF	DRAWING NO: C23