

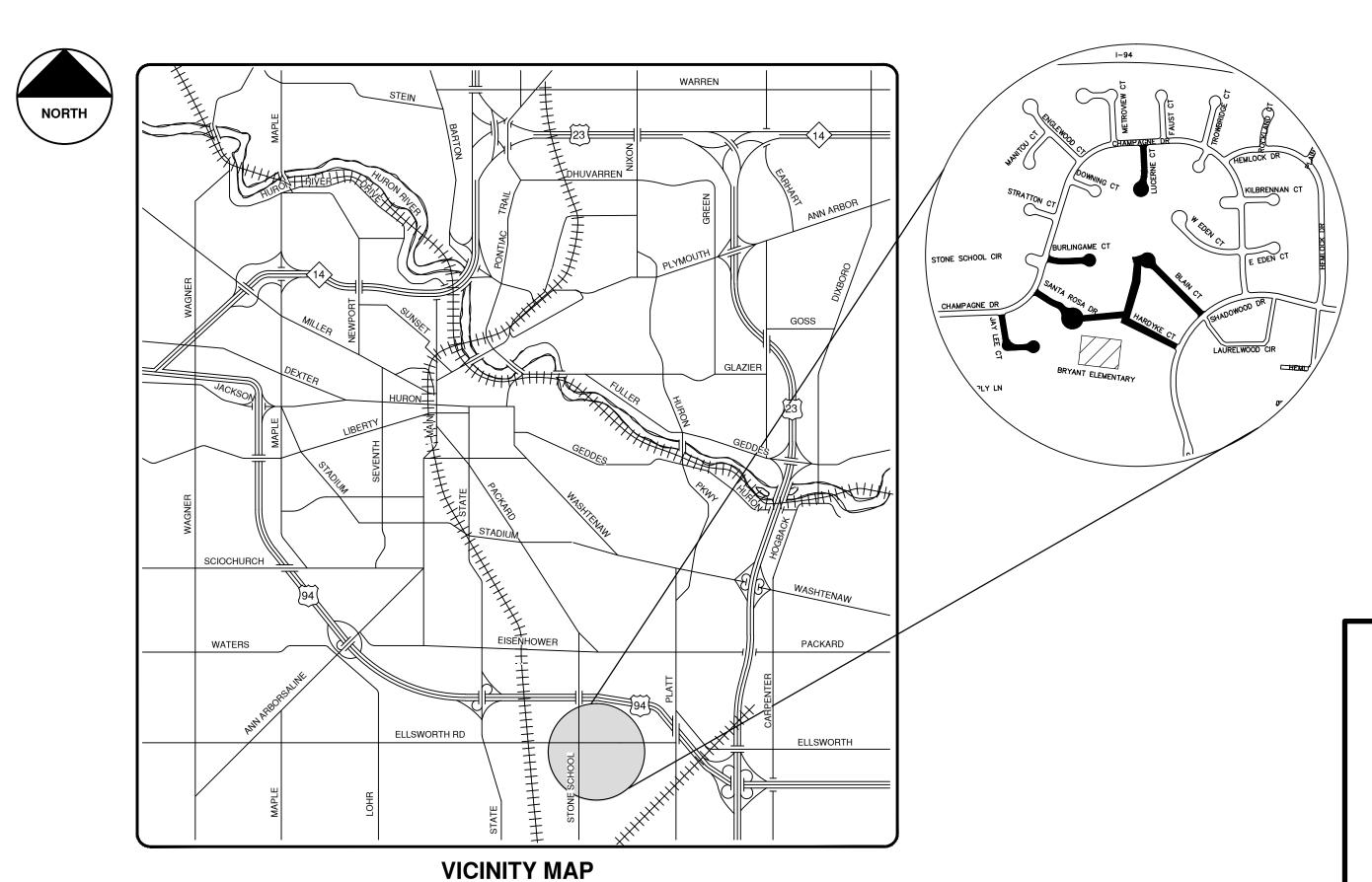
# CITY OF ANN ARBOR PROJECT MANAGEMENT

## ARBOR OAKS PHASE II

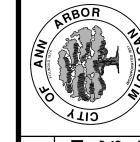
BID No. ITB-4333, FILE No. 2013033

**APRIL 2014** 

SHEET	
LIST	
TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	NOTES AND CASTING SCHEDULES
3	NOTES, LEGENDS, BENCHMARKS AND CONTACTS
4	ROAD SECTION, TRENCH DETAIL AND INLET FILTER DETAIL
5	TRAFFIC CONTROL
6-10	REMOVALS
11-19	WATERMAIN PLAN & PROFILE
20-25	ROAD REPLACEMENT



ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE



PROJECT MANAGEMENT SERVICE UNIT

OF ANN PRBOR	
NICHOLAS HUTCHINSON, P.E MI LICENSE No. 46789 CITY ENGINEER	ENGINEER'S SEAL
DATE	
PREPARED UNDER THE SUPERVISION OF	SEAL
IGOR V. KOTLYAR, P.E MI LICENSE No. 43287 PROJECT ENGINEER	GINEER'S

#### **SOIL EROSION CONTROL NOTES:**

NOTIFY THE CITY OF ANN ARBOR SOIL EROSION CONTROL OFFICE 48 HOURS PRIOR TO BEGINNING WORK ON THE PROJECT. PHONE: 734-794-6265.

- 1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.
- 2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR. CITY ORDINANCE CHAPTER 63. CITY OF ANN ARBOR STANDARDS DIVISION VII. THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- 3. DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
- 4. EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
- 5. ALL MUD/DIRT TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR, WITHIN FOUR (4) HOURS OF BEING SO ORDERED.
- 6. RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
- 7. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
- 8. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS
- 9. PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLATIVE AS REQUIRED.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
- 11. THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
- 12. TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

<u>SEQUENCE OF EROSION CONTROL MEASURES:</u>

BM# ELEV DESCRIPTION

THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER, A SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION CONTROL MEASURES FOR REVIEW, COMMENT AND APPROVAL. THIS SCHEDULE IS TO INCLUDE INSPECTION AND REPAIR OF ALL TEMPORARY EROSION CONTROL MEASURES DAILY AND WITHIN 24 HOURS OF A STORM EVENT.

<u>SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS</u> 1.1. INSTALL SILT FENCE, TREE PROTECTION FENCING, AND INLET FILTERS ON EXISTING DRAINAGE FEATURES

- PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION. INSTALL WATER MAINS, STORM, SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE FEATURES. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.
- 1.3. PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES,
- 1.4. CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW

826.89 SE BOLT ON LIGHTPOLE AT NW CORNER OF SHADOWOOD AND CHAMPAGNE

6 817.03 SE BOLT ON LIGHTPOLE AT NW CORNER OF CHAMPAGNE AND FAUST

7 817.48 SE BOLT ON LIGHTPOLE AT NW CORNER OF CHAMPAGNE AND METROVIEW

11 819.50 SW BOLT ON LIGHTPOLE AT NW CORNER OF CHAMPAGNE AND BURLINGAME

12 821.50 SW BOLT ON LIGHTPOLE ON THE W. SIDE OF CHAMPAGNE AT HOUSE # 2061

13 819.99 SW BOLT ON LIGHTPOLE ON THE N. SIDE OF CHAMPAGNE AT HOUSE # 2055

14 817.96 SW BOLT ON LIGHTPOLE ON THE N. SIDE OF CHAMPAGNE AT HOUSE # 2049

33 817.53 SE BOLT ON LIGHTPOLE ON FAUST CT. AT HOUSE #9

53 821.33 SE BOLT FOR LIGHTPOLE @ END OF BLAIN CT.

34 818.70 SW BOLT ON LIGHTPOLE ON CHAMPAGNE ADJACENT TO LUCERNE

15 817.29 STEAMER VALVE ON HYDRANT AT NE CORNER OF CHAMPAGNE AND STONE SCHOOL

24 | 816.95 | NE BOLT ON LIGHTPOLE ON THE W. SIDE OF METROVIEW OPPOSITE HOUSE #6

40 828.86 SE BOLT FOR LIGHTPOLE ON W. SIDE OF JAY LEE CT. BETWEEN HOUSE #2 AND #4

43 830.83 NW BOLT FOR L.P. IN BRYANT SCHOOL P. LOT 100'. +/- NORTH OF BLDG. ENTRANCE

45 818.75 NW BOLT FOR L.P. ON E. SIDE OF BURLINGAME CT. 100' +/- SOUTH. OF CHAMPAGNE

47 816.98 SE BOLT FOR L.P. ON NLY SIDE OF CHAMPAGNE BEWTEEN FAUST AND TROWBRIDGE

822.56 NW BOLT FOR LIGHTPOLE @ END OF LUCERNE CT. FRONT OF HOUSE #11

826.80 NW BOLT FOR LIGHTPOLE @ NE CORNER OF SHADOWOOD AND BLAIN CT.

828.56 SE BOLT FOR LIGHTPOLE @ NW CORNER OF SHADOWOOD AND BLAIN CT

54 847.30 NE BOLT FOR L.P. NLY SIDE OF SHADOWOOD FRONT OF COMMUNITY OFFICE BLDG.

55 831.47 CORNER OF BACK/ CURB @ NE CORNER OF P. LOT FRONT OF 2269 HARDYKE CT.

52 823.91 SE BOLT FOR L.P. ON WLY SIDE OF BLAIN CT. BETWEEN HOUSE #9 AND #11

44 830.20 SW BOLT FOR LIGHTPOLE THAT IS LONE POLE IN SCHOOL PLAYGROUND

46 821.09 WESTERYLY BOLT ON L.P. AT DRIVE FOR HOUSE #5 BURLINGAME COURT

48 820.23 SE BOLT FOR L.P. ON WLY SIDE OF LUCERNE BETWEEN #2 AND #4.

825.39 NW BOLT FOR LIGHTPOLE ON S. SIDE OF JAY LEE CT. BETWEEN HOUSE #12 AND #14

822.90 NE BOLT FOR LIGHTPOLE ON W. SIDE OF SANTA ROSA DR. FRONT OF HOUSE #2

10 818.77 SW BOLT ON LIGHTPOLE AT SW CORNER OF CHAMPAGNE AND STRATTON

DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.

- 1.5. COMPLETE ALL FINE GRADING.
- 1.6. SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.
- 1.7. CLEAN OUT STORM SEWER SYSTEMS.
- 1.8. REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES UPON FINAL INSPECTION AND APPROVAL BY THE ENGINEER.
- 1.9. REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.

THIS SEQUENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE ENGINEER FOR REVIEW, COMMENT, AND APPROVAL.

Arbor Oaks	II Manhole S	Schedule			
Luceme	Court				
Water Main	Stationing				
Structure/	Top-of	Invert Elevation	Depth	Size	Application/
Station	Casting	Pipe Size			Construction
	Elevation	Direction			
s-31	818.52	15" E 802.57		4 M/H	
Sta 0-10		15" W 802.57			
		8" S 803.17			
s-32	820.33	8" E 812.58	7.75	4 M/H	New Casting/ Adjust
Sta 1+78		8" W 812.58			
s-33	822.25	8" W 814.02	8.23	4 M/H	New Casting/ Adjust
Sta 2+825					
r-31	818.45	48" W 809.09	9.36	4 M/H	
Sta 0-19		48" E 809.19			
		12" SW 811.59			
r-32	818.47	12" N 814.46	4.01	2 Inlet	Adjust
Sta 0+14		12" E 814.46			
r-32a	818.33	12" W 814.83	3.5	2 Inlet	Adjust
Sta 0+14					
02-04533					Hydrant
Sta 0±17					To remain in place

Arbor Oaks II Casting Schedule

Casting Pipe Size

Elevation Direction

820.84

Top-of Invert Elevation Depth Size

820.61 12" N 803.87 16.74 4 M/H

820.30 | 12" NE | 804.15 | 16.15 | 4 M/H

12" N 804.06 | 16.78

821.92 8" W 810.87 11.05 4 M/H

822.89 8" E 811.51 | 11.38 | 4 M/H

831.09 8" NW 816.19 14.90 4 M/H

820.79 24" N 813.31 7.48 4 M/H

820.87 | 12" W | 816.77 | 4.10 | 2 Inlet

12" NW 816.42 4.29

822.93 24" W 814.13 8.80 4 M/H

830.80 | 12" W | 821.80 | 9.00 | 4 M/H

12" S 803.87

12"SW 804.25

8" E 804,56

12" SW 804.16

8" E 810.87

8" W 811.51

8" S 819.19

24" E 813.41

12" E 815.61

12" S 815.61

12" E 816.13

12" E 817.43

12" S 823.45

820.70

823.06

830.73

Santa Rosa Dr.

Structure/

Sta 0+17L

Sta 0+06R

Sta 0+13

Sta 0+97

Sta 1+85

Sta 4+00

Sta 0+01

Sta 0+45

Sta 0+44

Sta 1+75

Sta 4+10 w-26

Sta 0+00

Sta 1+90 02-01909 Sta 2+90 02-01908 Sta 5+75

Sta 5+65

s-10

Station

s-19

s-20

Water Main Stationing

					Haluyke	Court				
					Water Main	Stationing				
t Elevation	Depth	Size	Application	n/	Station	Casting	Pipe Si	ze	Depth	Size
Size			Constructi	on		Elevation	Directio	n		
ction					s-50	840.71	8" N	826.16	14.55	4 M/H
E 802.57		4 M/H			Sta 7+98		8" S	826,26		
W 802.57							8" W	826.71		
S 803.17					s-51	841.95	8" E	827.85	14.10	4 M/H
812.58	7.75	4 M/H	New Casti	ng/ Adjust	Sta 6+87					
812.58					r-60	838.75	15" SE	826.55	12.20	4 M/H
814.02	8.23	4 M/H	New Casti	ng/ Adjust	Sta 7+91		15" NW	826.65		
							12" NW	833.55		
W 809.09	9.36	4 M/H					12" SE	832.05		
E 809.19					r-62	837.77	12" SW	832.67	5.10	INLET
SW 811.59					Sta 7+75					
N 814.46	4.01	2 Inlet	Adjust		R-61	837.68	12" E	833.18	4.50	
E 814.46					Sta 8+06					
W 814.83	3.5	2 Inlet	Adjust		r-63	830.96	15" E	827.66	3.30	INLET
					Sta 5+20					
			Hydrant		w-23	838.40			5.00	
			To remain	in place	Sta 7+58					
		·			w-24	830.73			5.00	8" W/M
					Sta 5+65					

Luceme	Court					
Water Main	Stationing					
Structure/	Top-of	Invert Elevation	Depth	Size	Application/	
Station	Casting	Pipe Size			Construction	
	Elevation	Direction				
s-31	818.52	15" E 802.57		4 M/H		
Sta 0-10		15" W 802.57				
		8" S 803.17				
s-32	820.33	8" E 812.58	7.75	4 M/H	New Casting/ Adjust	
Sta 1+78		8" W 812.58				
s-33	822.25	8" W 814.02	8.23	4 M/H	New Casting/ Adjust	
Sta 2+825						
r-31	818.45	48" W 809.09	9.36	4 M/H		
Sta 0-19		48" E 809.19				
		12" SW 811.59				
r-32	818.47	12" N 814.46	4.01	2 Inlet	Adjust	
Sta 0+14		12" E 814.46				
r-32a	818.33	12" W 814.83	3.5	2 Inlet	Adjust	
Sta 0+14						
02-04533					Hydrant	
Sta 0+17					To remain in place	

Application/

		Construction								
16.74	4 M/H									
10.74	4 101/ 🗆									
16.15	4 M/H									
	4 M/H	Adjust	Arbor Oaks	ll Manhole S	chedule					
			Burlingame	Court						
16.78			Water Main	Stationing						
11.05	4 M/H	New Casting/ Adjust	Structure/	Top-of	Invert E	levation	Depth	Size	Application	/
			Station	Casting	Pipe S	ize			Construction	on
11.38	4 M/H	New Casting/ Adjust		Elevation	Direction	on				
			s-12	818.96	12" N	803.56	15.40	4 M/H		
14.90	4 M/H	New Casting/ Adjust	Sta 0-8		12" S	803.66			Adjust	
		7000			8" E	804.56				
7.48	4 M/H	Adjust			8" W	804.16				
			s-14	818.22	8" E	807.02	11.20	4 M/H	New Castir	ng/ Adjus
			Sta 0+78		8" W	807.02				
			s-15	820.68	8" W	810.98	9.70	4 M/H	New Castin	ng/ Adjus
4.10	2 Inlet	Adjust	Sta 2+70							
			r-10	819.27	30"N	811.79	7.48	4 M/H	Adjust	
4.29	2 inlet	Adjust	Sta 0-19		24"S	812.09				
					12" NE	813.89				
8.80	4 M/H	New Casting/ Adjust			12" W	813.59				
					12" S	813.59				
					12" SV	V 813.89				
9.00	4 M/H	New Casting/ Adjust	r-10c	819.08	12" W	814.10	4.98	2 Inlet		
			Sta 0+03							
5.50	12" W/M	Gvib	r-10d	817.47	12" W	813.84	3.63	2 Inlet	New Castin	ng/ Adjus
		Adjust	Sta 0+41		12" N	813.84				
6.65	8" W/M	Gviw	r-10e	817.73	12" S	814.93	2.80	Drop	Remove, P	lace
		Abandon	Sta 0+41						2 Ft. Inlet	
		Hydrant	w-21	818.56			5.50	8" W/M	GVIB	
		Abandon	Sta 0+05						Adjust Box	
		Hydrant	w-19	819.24			5.50	12" W/M	GVIB	
		Abandon	Sta 0+00							
5.00	8" W/M	Gvib	02-04542						Hydrant	
		Abandon	Sta 0+40						To remain	n place

Arbor Oaks II Manhole Schedule

Court

5.00 8" W/M

Construction

Abandon

Hardyke

#### **CONSTRUCTION SEQUENCE:**

PROJECT INVOLVES REPLACEMENT OF EXISTING WATER MAINS AND ROAD CONSTRUCTION WORK AS PRESENTED ON PLANS. PROJECT IS BROKEN DOWN INTO TWO AREAS. STAGE 1 CONSISTS OF REPLACEMENT OF WATER MAIN, ROAD ITEMS AND COMPLETE RESTORATION OF AREA ON SANTA ROSA DR., BRYANT ELEMENTARY SCHOOL PROPERTY, HARDYKE COURT, AND TO STA. 1+00 ON BLAIN COURT. WORK IN THIS AREA CAN START JUNE 16 2014 AND MUST BE COMPLETED BY AUGUST 29, 2014 WHILE BRYANT ELEMENTARY SCHOOL IS CLOSED FOR SUMMER VACATION. STAGE 2 WORK CONSISTS OF REPLACEMENT OF WATER MAINS AND ROAD WORK ITEMS ON LUCERNE, JAY LEE, BURLINGAME COURTS AND FINISHING BLAIN COURT FROM STATION 1+00 TO SHADOWOOD. PHASE 2 ALONG WITH ANY ITEMS REMAINING IN PHASE 1 TO BE COMPLETED BY OCTOBER 24TH 2014. THE EXISTING HMA SURFACE TO REMAIN IN PLACE UNTIL ALL UTILITY, STRUCTURE, AND CONCRETE WORK IS COMPLETE. PRIOR TO MOBILZATION OF EQUIPMENT AND SUPPLIES CONTRACTOR TO SUBMIT CONSTRUCTION PLAN FOR APPROVAL OUTLINING CONSTRUCTION EVENTS AND INDICATE STAGING AREA. CITIES INTENT TO HAVE PROJECT ORGANIZED AND IMPLEMENTED TO MAINTAIN RESIDENT TRAFFIC AS MUCH AS POSSIBLE.

#### CONSTRUCTION SEQUENCE

- 1. INSTALLATION OF TRAFFIC CONTROL, SOIL EROSION CONTROL DEVICES, AND PLACEMENT OF NO PARKING SIGNS.
- 2. REMOVE ONLY THE PAVEMENT NEEDED TO PLACE WATER MAIN. COMPLETE PAVEMENT REMOVAL AFTER WATER MAIN INSTALLATION AS DIRECTED BY ENGINEER.
- 3.INSTALL 12 AND 8 INCH WATER MAIN PER PLAN, REMOVE 8 INCH AND 12 INCH AQUA SWABS WITH 2 INCH JUMPER, AND PRESSURE TEST WATER MAIN. PLACE TEMPORARY BLOW OFF AT STA. 1+00+/- ON BLAIN COURT TO BE USED IN STAGE 2. 4.WITH PASSING PRESSURE TEST SCHEDULE SHUTDOWN AND MAKE CONNECTION TO EXISTING WATER MAIN VIA GATE VALVE IN
- WELL AT HARDYKE/SHADOWOOD; AT HARDYKE/SHADOWOOD ABANDON EXISTING CONNECTION AS DIRECTED BY ENGINEER AT 5.SCHEDULE CITY FIELD OPERATIONS TO PLACE 1 INCH TESTING CORPORATION IN GATE VALVE AND WELL. CHLORINATE,
- FLUSH, AND HAVE CITY TAKE BACTERIOLOGICAL SAMPLES. WATER MAIN TO BE TESTED PER CITY DETAIL SPECIFICATION FOR WATER MAIN TESTING.
- 6.WITH PASSING BACTERIOLOGICAL SAMPLES SCHEDULE FIELD OPERATIONS AND TRANSFER ALL SERVICES TO NEW WATER MAIN. 7.SCHEDULE WATER MAIN SHUT DOWNS AND MAKE FINAL CONNECTIONS TO EXISTING WATER MAINS. DURING FINAL CONNECTIONS ABANDON EXISTING CONNECTIONS AS INDICATED ON PLANS OR AS DIRECTED BY ENGINEER. PLACE WATER
- MAIN IN SERVICE. 8.REMOVE REMAINDER OF PAVEMENT, CURB AND DRIVE APPROACHES AS SHOWN ON PLANS AND AS DIRECTED BY ENGINEER. 9.INSTALL EDGE DRAIN AND STORM ITEMS AS OUTLINED ON PLANS AND AS DIRECTED BY ENGINEER.
- 10. PLACE CURB AND DRIVE APPROACHES 11. GRADE, SHAPE, UNDERCUT IF NECESSARY, AND RE COMPACT EXISTING ROAD BASE AS REQUIRED AND AS DIRECTED BY
- ENGINEER. 12. SCHEDULE PRE-PAVE MEETING AND ONCE PERMIT TO PLACE IS GIVEN BY CITY ENGINEER, PAVE BACK AREAS PER CROSS
- SECTIONS SHOWN ON PLANS. 13. COMPLETE GREEN BELT RESTORATION AND FINAL CLEAN UP. PLACE PAVEMENT MARKINGS AS DIRECTED BY ENGINEER. REMOVE SOIL EROSION CONTROL DEVICES AND TRAFFIC CONTROL.

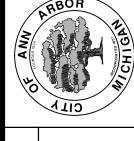
#### STAGE 2

Arbor Oaks II Manhole Schedule

- 1. INSTALLATION OF TRAFFIC CONTROL, SOIL EROSION CONTROL DEVICES, AND PLACEMENT OF NO PARKING SIGNS. 2.REMOVE ONLY THE PAVEMENT NEEDED TO PLACE WATER MAIN. COMPLETE PAVEMENT REMOVAL AFTER WATER MAIN
- INSTALLATION OR AS DIRECTED BY ENGINEER. 3.INSTALL 8 INCH WATER MAIN PER SCHEDULE SUBMITTED BY CONTRACTOR. REMOVE 8 INCH AQUA SWABS WITH 2 INCH JUMPER, AND PRESSURE TEST WATER MAIN.
- \*\*STAGE 2 COURTS HAVE EXISTING DEAD END WATER MAINS. WATER SUPPLY FOR TESTING WILL NEED TO COME FROM ADJACENT HYDRANT WITH PRESSURE REDUCING BACK FLOW PREVENTER SUPPLIED BY CITY OR PLACEMENT OF 2 INCH CORPORATION BY CITY IN EXISTING MAIN TO BE ABANDONED. RESIDENTS WILL BE TRANSFERRED TO NEW MAIN PRIOR TO FINAL CONNECTION. CONTRACTOR WILL BE REQUIRED TO USE 2 INCH COPPER AS JUMPER WHICH IS TO BE PROPERLY DISINFECTED AND FLUSHED OUT TO MAINTAIN WATER SERVICE TO RESIDENTS. JUMPER WILL BE REQUIRED ON EACH COURT AND USED FOR AS LONG AS IT TAKES TO TRANSFER SERVICES TO NEW MAIN AND MAKE FINAL CONNECTION. RESIDENTS WILL BE NOTIFIED CITY OF POSSIBLE LOW PRESSURE DURING THIS PHASE OF CONSTRUCTION.
- 4.CHLORINATE, FLUSH, AND HAVE CITY TAKE SEQUENTIAL BACTERIOLOGICAL SAMPLES. WATER MAIN TO BE TESTED PER CITY DETAIL SPECIFICATION FOR WATER MAIN TESTING.
- 5.WITH PASSING BACTERIOLOGICAL SAMPLES. SCHEDULE FIELD OPERATIONS AND TRANSFER ALL SERVICES TO NEW WATER
- 6.SCHEDULE SHUTDOWN AND MAKE CONNECTION TO EXISTING WATER MAIN. PLACE WATER NEW MAIN IN SERVICE.
- 7. REMOVE REMAINDER OF PAVEMENT, AND CURB AND DRIVE APPROACHES.
- 8.INSTALL EDGE DRAIN AND STORM ITEMS AS DIRECTED BY ENGINEER.
- 9.PLACE CURB AND DRIVE APPROACHES
- 10. GRADE, SHAPE, UNDERCUT IF NECESSARY, AND RE COMPACT EXISTING ROAD BASE AS REQUIRED AND AS DIRECTED BY ENGINEER.
- 11. SCHEDULE PRE—PAVE MEETING AND ONCE PERMIT TO PLACE IS GIVEN BY THE CITY ENGINEER, PAVE BACK AREAS PER CROSS SECTIONS SHOWN ON PLANS.
- 12. COMPLETE GREEN BELT RESTORATION AND FINAL CLEAN UP. PLACE PAVEMENT MARKINGS AS DIRECTED BY ENGINEER. REMOVE SOIL EROSION CONTROL DEVICES AND TRAFFIC CONTROL.

Structure   Top-of   Intert Elevation   Depth   Size   Application   Construction   Depth   Size   Construction   Depth   Size   Direction   Depth   Size   Size   Direction   Depth   Size   Depth   Direction   Depth   Size   Depth   Dept													
Structure	Blain Court												
Casting   Elevation   Casting   Elevation   Direction   Casting   Elevation   Direction   Casting   Casting   Elevation   Direction   Casting	Water Main	Stationing											
Elevation   Casting   Fig. 52   Section   Fig. 52   Section   Fig. 52   Section   Fig. 53   Section   Section   Fig. 54   Se	Structure/	Top-of	Invert Elevation	Depth	Size	Application/							
Second   S	Station	Casting	Pipe Size			Construction			chedule				
State   Stat		Elevation	Direction										
Station   Casting   Adjust   Station   Casting   Adjust   Station   Casting   Direction   Station   Casting	s-52	827.01	10" W 818.61		4 M/H								
Sta 3+72	Sta 6+03		8" S 819.26							Depth	Size		
545 -54	s-53	823.84	10" W 816.06	7.78	4 M/H	New Casting/ Adjust	Station					Construction	1
Sta 0+70	Sta 3+72		10" E 816.06										
167   827.71   15" NW 820.71   7.00   4 M/H	s-54	820.67	10" E 812.67	8.00	4 M/H	New Casting/ Adjust		818.69		13.93	4 M/H		
Sta 5+93	Sta 0+70		10" NW 812.67				Sta 0-18		the second section is a second			Adjust	
12" W   821.81	r-67	827.71	15" NW 820.71	7.00	4 M/H								
12" S 822.71	Sta 5+93		12" E 820.71				s-5	821.26	10; E 811.01	10.25	4 M/H	New Casting	g/Adjust
Sta 5+86   Sta 5+87   Sta 5+85   Sta 5+85			12" W 821.81				Sta 1+40		10" W 811.01				
Sta 5+86   Sta 5+86   Sta 5+86   Sta 5+86   Sta 5+86   Sta 2+95   Sta 2+95   Sta 2+95   Sta 2+95   Sta 2+95   Sta 2+95   Sta 3+08   Sta 3+08   Sta 3+08   Sta 3+05   Sta 3+05   Sta 3+05   Sta 0+45   Sta 5+87   Sta 0+26   Sta 5+86   Sta 5+85   Sta 0+26   Sta 5+85   Sta 0+26   Sta 5+85   Sta 0+25   Sta 0+25			12" S 822.71				s-6	822.98	10" W 812.13	10.85	4 M/H	New Casting	g/Adjust
Section   Sect	r <u>-68</u>	829.12	12 " E 822.52	6.60	DOUBLE		Sta 2+45		8" NE 812.13				
Sta 2+95	Sta 5+86								10 E 812.13				
12" SE 818.04	r-69	822.79	18" NW 817.29	5.50	4 M/H	New Casting/ Adjust	s-7	826.60	8 " SE 815.45	11.15	4 M/H	New Casting	g/Adjust
12" SW 818.04	Sta 2+95		15" SE 817.29				Sta 3+85						
12" E 812.91			12" SE 818.04				r-7	818.47	18" SW 812.21	6.26	4 M/H	Adjust	
Sta 3+08			12" SW 818.04				Sta 0-25		12" W 813.21				
Sta 3+08	r-70	822.64	12" SE 818.89	3.75	DROP	Remove, Place			12"E 812.91				
Sta 3+05	Sta 3+08	Control of the Part of	180-00 - 00 - 00 - 00 - 00 - 00 - 00 - 0		Managed St. (St.) (Mills St.)				12" S 812.81				
Sta 3+05	r-71	822.78	12" SW 818.98	3.80	DROP		r-7a	817.73	12" E 814.06	3.67	2 INLET		
F-72 819.80 18" NW 815.71 4.09 DOUBLE New Casting/ Adjust Sta 0-45	Sta 3+05						Sta 0-38						
Sta 0+45         Sta 0-08         Sta 0-08         Sta 0-08         Sta 0-08         DOUBLE         New Casting/Adjust           N-20         825.78         5.00         12" W/M         Gvib         Sta 0-25         12" NW 813.33         DOUBLE         New Casting/Adjust           Sta 0+25         12" NE 813.43	r-72	819.80	18" NW 815.71	4.09	DOUBLE	New Casting/ Adjust	r-7b	818.57	12" W 813,92	4.65	2 INLET		
N-20         825.78         5.00         12" W/M         Gvib         r-7c         818.33         12" NW 813.33         DOUBLE         New Casting/Adjust           Sta 5+87         w-21         827.72         5.70         12" W/M         Gviw         r-7d         818.46         12" S 812.81         5.65         DOUBLE         New Casting/Adjust           Sta 5+65         Abandon         Sta 0+20         W-28         819.06         5.60         12" W/M         Gvib           Sta 5+85         Adjust         Hydrant         02-01691         Hydrant         Hydrant	Sta 0+45						Sta 0-08						
Sta 5+87     Sta 0+25     12" NE 813.43     DOUBLE New Casting/Adjust       N-21     827.72     5.70     12" W/M Gviw       Sta 5+65     Abandon     Sta 0+20       N-22     828.76     5.00     8" W/M Gvib       Sta 5+85     Adjust       D2-01753     Hydrant	W-20	825.78		5.00	12" W/M	Gvib	r-7c	818.33	12" NW 813.33		DOUBLE	New Casting	g/Adjust
x-21     827.72     5.70     12" W/M     Gviw       Sta 5+65     Abandon       x-22     828.76     5.00     8" W/M     Gvib       Sta 5+85     Adjust       D2-01753     Hydrant         r-7d     818.46     12" S 812.81     5.65     DOUBLE New Casting/Adjust       Sta 0+20     w-28     819.06     5.60     12" W/M     Gvib       Sta 0-32     02-01691     Hydrant	Sta 5+87						Sta 0+25		12" NE 813.43				
Sta 5+65       Abandon       Sta 0+20       Sta 0+20         w-22       828.76       5.00       8" W/M       Gvib         Sta 5+85       Adjust       Sta 0-32       Sta 0-32         02-01753       Hydrant       D2-01691       Hydrant	Stories Inc. 1	827.72		5.70	12" W/M	Gviw	r-7d	818.46	12" S 812.81	5.65	DOUBLE	New Casting	g/Adjust
w-22     828.76     5.00     8" W/M     Gvib     w-28     819.06     5.60     12" W/M     Gvib       Sta 5+85     Adjust     Sta 0-32     U2-01691     Hydrant							Sta 0+20						200
Sta 5+85         Adjust         Sta 0-32         Hydrant           02-01753         Hydrant         02-01691         Hydrant		828.76		5.00	8" W/M		w-28	819.06		5.60	12" W/M	Gvib	
02-01753 Hydrant 02-01691 Hydrant	10.000						Sta 0-32						
							02-01691					Hydrant	
	Sta 5+55						Sta 0+18						
		<u>I</u>			ı						· ·		





SHEET No.

<u>GENERAL NOTES</u>

1. DRIVEWAYS AND ENTRANCES TO BUILDINGS, REAL PROPERTY, AND THE LIKE SHALL NOT BE BLOCKED EXCEPT FOR SHORT DURATIONS AND ONLY WHEN APPROVED BY THE ENGINEER. VEHICULAR AND PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL NECESSARY DRIVEWAY CLOSURES WITH THE PROPERTY OWNER(S) AND RESIDENT(S) IN THE AREAS OF CONSTRUCTION.

2. THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND SERVICE LEADS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

3.DURING NON-WORKING HOURS NO MORE THAN TEN (10) FEET OF TRENCH SHALL REMAIN OPEN; ANY OPEN TRENCH SHALL BE PROPERLY SECURED WITH PROTECTIVE FENCING. THIS WORK SHALL BE INCLUDED IN THE ITEMS OF WORK BEING UNDERTAKEN AND WILL NOT BE PAID FOR SEPARATELY.

4. THE LOCATION OF MATERIAL STOCK PILES AND ON-SITE STAGING AREAS SHALL BE APPROVED BY THE ENGINEER.

5.FOR MAINLINE HMA PAVING, THE WIDTH OF THE MAT FOR EACH PASS OF THE PAVER SHALL BE NOT LESS THAN 10.5', NOR GREATER THAN 16', EXCEPT AS NOTED IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THE ENGINEER WILL DIRECT THE LAYOUT OF ALL HMA LONGITUDINAL JOINTS DURING CONSTRUCTION.

6.TRENCHES FOR TRANSFERRING WATER SERVICES SHALL BE EXCAVATED BY CONTRACTOR TO MIOSHA AND CITY OF ANN ARBOR FIELD SERVICES REQUIREMENTS.

7.CITY OF ANN ARBOR FIELD SERVICES WILL INSTALL THE CORPORATIONS AND COPPER SERVICE LEAD(S) TO TRANSFER THE CONNECTION(S). IF AN EXISTING WATER SERVICE IS FOUND TO BE FAILING OR IS NOT COPPER, THE LEAD WILL BE REPLACED TO THE CURB BOX BY FIELD SERVICES.

8.FOR THE INSTALLATION OF CORPORATIONS, OR ANY OTHER RELATED ACTIVITIES, THE CONTRACTOR SHALL NOT RECEIVE ADDITIONAL COMPENSATION FOR DELAYS DUE TO

9.COR-BLU BOLTS TO BE USED AT ALL MECHANICAL WATER MAIN JOINTS AT HYDRANTS AND MEGALUG FITTINGS.

THE SCHEDULING OF, OR COORDINATION WITH, CITY OF ANN ARBOR FIELD SERVICES.

10. SOME STORM SEWER MAY UNAVOIDABLY BECOME DAMAGED DURING CONSTRUCTION, OR IT MAY BE DETERMINED BY THE ENGINEER THAT EXISTING STORM SEWER NEEDS TO BE REPLACED. IN EITHER CASE, THE ENGINEER MAY DIRECT THE SEWER TO BE REMOVED AND REPLACED. THE REMOVAL OF THE EXISTING SEWER AND/OR DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE CONTRACT PAYS.

11. WHERE EXISTING SEWER AND/OR DRAINAGE STRUCTURES ARE TO BE REMOVED, THEY SHALL BE PROPERLY DISPOSED OF OFF-SITE AND THE EXCAVATION SHALL BE BACKFILLED WITH CLASS II GRÁNULAR MATERIAL COMPACTED TO 95% OF ITS MAX. DRY DENSITY. THIS WORK SHALL BE INCLUDED IN THE CONTRACT PAY ITEMS.

12. ALL STRUCTURES SHALL RECEIVE NEW CASTINGS AS DIRECTED BY THE ENGINEER; EITHER TYPE B, TYPE K, OR AS SPECIFIED ON THE STANDARD CASTING SCHEDULE THE EXISTING CASTINGS ARE THE PROPERTY OF THE CITY OF ANN ARBOR. THE CONTRACTOR SHALL DELIVER CASTINGS, VALVES, AND HYDRANTS TO CITY OF ANN ARBOR FIELD OPERATIONS AND MAINTENANCE FACILITY AT THE W.R. WHEELER SERVICE CENTER LOCATED AT 4251 STONE SCHOOL ROAD.

13. ALL FITTINGS, HYDRANTS, VALVES, AND CASTINGS REMOVED DURING CONSTRUCTION ARE THE PROPERTY OF THE CITY OF ANN ARBOR. THE CONTRACTOR SHALL DELIVER TO THE CITY OF ANN ARBOR FIELD OPERATIONS AND MAINTENANCE FACILITY AT THE W.R. WHEELER SERVICE CENTER LOCATED AT 4251 STONE SCHOOL ROAD.

14. PAYMENT FOR DRAINAGE STRUCTURE SUMPS WHERE SPECIFIED SHALL BE INCLUDED IN THE PAYMENT FOR THE VARIOUS DRAINAGE STRUCTURES SIZES AND/OR TYPES.

15. WHERE SEWER PIPES OF DIFFERENT SIZES OR MATERIALS ARE JOINED, FERNCO FLEXIBLE COUPLINGS WITH STAINLESS STEEL SHEAR RINGS SHALL BE USED. THE CONTRACTOR'S PURCHASE PRICE FOR THESE DEVICES, INCLUDING SHIPPING, SHALL BE PAID AS AN EXTRA. PRIOR TO PAYMENT FOR THIS ITEM, THE CONTRACTOR SHALL SUBMIT RECEIPTS FOR THE ENGINEER'S REVIEW AND APPROVAL. ALL OTHER COSTS ASSOCIATED WITH THE INSTALLATION OF THESE DEVICES SHALL BE INCLUDED IN THE PAYMENT FOR THE SEWER.

16. WHERE STORM SEWER IS TO BE REMOVED AND REPLACED OR ADDED, ALL PIPE SHALL BE INSTALLED USING THE UTILITY TRENCH DETAILS SHOWN ELSEWHERE IN THE PLAN SHEETS AND/OR DETAILED IN THE SPECIFICATIONS. TRENCH DETAILS I MODIFIED AND VI MODIFIED REQUIRE THE USE OF MDOT CLASS II GRANULAR MATERIAL.

17. IF THE CONTRACTOR ENCOUNTERS EXISTING EDGE DRAIN(S) DURING CONSTRUCTION OF THE PROPOSED EDGE DRAINS, INLET LEADS, OR CATCH BASINS, IT SHALL BE CAPPED AT EACH END TO PREVENT MATERIAL FROM ENTERING THE PIPE. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE PARTICULAR ITEM OF WORK BEING PERFORMED WHEN EXISTING EDGE DRAIN(S) ARE ENCOUNTERED.

18.IN AREAS WHERE EDGE DRAIN CANNOT BE INSTALLED IN ACCORDANCE WITH THE DETAILS, THE EDGE DRAIN SHALL BE INSTALLED AT THE DEPTH AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. IN NO CASE SHALL THE EDGE DRAIN BE INSTALLED AT A GRADE LESS THAN 0.50% OR AT A DEPTH LESS THAN 3.25' BELOW THE TOP OF PAVEMENT.

19. "NO PARKING" SIGNS SHALL BE INSTALLED BY THE CONTRACTOR AT LOCATIONS AS APPROVED OR DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

20.EXISTING STREET NAME SIGNS, GUIDE, BUS STOP, AND REGULATORY SIGNS WHICH CONFLICT WITH THE PROPOSED CONSTRUCTION SHALL BE REMOVED PRIOR TO CONSTRUCTION, STORED IN A MANNER WHICH WILL PREVENT DAMAGE, AND RE-SET IN LOCATIONS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN "MINOR TRAFFIC CONTROL, MODIFIED.

21. ALL CURB, SIDEWALK, DRIVEWAY APPROACH REMOVALS SHALL BE APPROVED BY THE ENGINEER BEFORE THE WORK IS PERFORMED.

22.PLACE 4" (MINIMUM) THICKNESS CLASS II GRANULAR MATERIAL COMPACTED TO 95% OF ITS MAX. DRY DENSITY UNDER CONCRETE SIDEWALK AS SHOWN ON THE DETAILS. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN "4" CONCRETE SIDEWALK."

23.PLACE 6" (MINIMUM) CLASS II GRANULAR MATERIAL COMPACTED TO 95% OF ITS MAX. DRY DENSITY UNDER DRIVE APPROACHES. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN "6" CONCRETE SIDEWALK, RAMP, DRIVE APPROACH."

24.A UNIFORM COAT(S) OF CURING COMPOUND SHALL BE APPLIED ACCORDING TO THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS REGARDLESS OF THE DIFFICULTY INVOLVED. THE CONTRACTOR SHALL TAKE CARE TO PREVENT OVERSPRAY WHEN APPLYING CURING COMPOUND. SEVERAL DIFFERENT METHODS MAY NEED TO BE DEVELOPED TO PROTECT VARIOUS SITUATIONS, BUT ALL METHODS USED TO PREVENT OVERSPRAY OF THE CURING COMPOUND SHALL BE COMPLETELY EFFECTIVE METHODS USED SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE, HOWEVER APPROVAL OF A METHOD DOES NOT GUARANTEE SUCCESS OR ACCEPTABILITY. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR COMPLYING WITH THESE REQUIREMENTS.

25.ALL RIGHT-OF-WAY (ROW) TREES NEED TREE PROTECTION FENCE AT THE EDGE OF THE CRITICAL ROOT ZONE (CRITICAL ROOT ZONE IS 1 FOOT FOR EVERY 1" IN DIAMETER). WHERE THE CRITICAL ROOT ZONE MEETS SIDEWALK OR CURB, THE TREE PROTECTION FENCE SHOULD BE LOCATED AT THE EDGE OF SIDEWALK AND THE EDGE OF THE CURB LINE.

26.NO EQUIPMENT, SUPPLIES OR DEBRIS MAY BE PLACED WITHIN THE CRITICAL ROOT ZONE OF ANY ROW TREE.

27.NO ROOT GREATER THAN 2" IN DIAMETER SHALL BE CUT. IF CONTRACTOR ENCOUNTERS A ROOT GREATER THEN 2" IN DIAMETER THEY MUST CONTACT CITY OF ANN ARBOR FORESTRY FIELD OPERATIONS AS 734.794.6364 FOR EVALUATION. WORK AT THE SITE WHERE THE TREE ROOT IS LOCATED MUST BE SUSPENDED UNTIL FORESTRY HAS COMPLETED THE EVALUATION.

28.IF A TREE IS DAMAGED (INCLUDING ROOTS) DUE TO CONSTRUCTION, A CANOPY LOSS FEE MUST BE PAID WHICH IS EQUAL TO 190 DOLLARS PER DIAMETER INCH OF THE

29.ALL TREE ROOTS THAT ARE APPROVED BY CITY FORESTER TO BE CUT MUST BE FLUSH CUT. ROOTS THAT ARE RIPPED, TORN OR JAGGED ARE NOT ACCEPTABLE.

### PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR IPRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
LANE CLOSURE PERMIT*	CITY OF ANN ARBOR PROJECT MANAGEMENT UNIT
"NO PARKING" SIGNS PERMIT*	CITY OF ANN ARBOR PROJECT MANAGEMENT UNIT
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT	CITY OF ANN ARBOR CUSTOMER SERVICE
RIGHT-OF-WAY PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE

\* NO COST TO CONTRACTOR

### IPERMITS REQUIRED TO BE OBTAINED BY THE CITY OF ANN ARBOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
M.D.E.Q. WATER MAIN CONSTRUCTION PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

#### CONTACT INFORMATION PUBLIC UTILITIES **OWNER** CONTACT WATER DAN WOODEN (734) 794–6350 SANITARY MARK COZART (734) 794–6350 CITY OF ANN ARBOR FIELD OPERATIONS SERVICE UNIT KEVIN ERNST W.R. WHEELER SERVICE CENTER (734) 794–6350 4251 STONE SCHOOL ROAD STEVEN GOEBEL |FORESTRY ANN ARBOR, MI 48108 (734) 794–6350 CHUCK FOJTIK SIGNALS (734) 794-6361 STREET LIGHTS **OWNER** PRIVATE UTILITIES CONTACT ROBERT CZAPIEWS DIE ENERGT 3150 E. MICHIGAN AVE. (734)-544-7818 YPSILANTI TOWNSHIP. MI 48198 ELECTRIC DTE ENERGY CLAY COMBEE WESTERN WAYNE SERVICE CENTER (734) 397-4112 8001 HAGGERTY ROAD BELLEVILLE, MI 48111 RON SUTHERLAND CABLE COMCAST 27800 FRANLKIN ROAD (313) 999-8300 SOUTHFIELD, MI 48034 PHONE ANDREW JOHNSON

550 S. MAPLE ROAD

FIBER OPTIC

ANN ARBOR, MI 48103

2800 N. GLENFILLE ROAD

RICHARDSON, TX 75082

(734) 996-2135

DEAN BOYERS

(972) 729-6016

#### EXISTING LEGEND

EX	ISTING LEGEND		
- <b>ċ</b> +	FIRE HYDRANT		WATER MAIN
1	GATE VALVE IN BOX		STORM SEWER
8	GATE VALVE IN WELL	<u>s</u>	SANITARY SEWER
<b>(W</b> )	STOP BOX		GAS MAIN
W	WATER VAULT		ELECTRICAL OVER HEAD
0	WELL	<del></del>	ELECTRICAL UNDER GROUN
	CATCH BASIN (SQ)		BOUNDARY
<b>#</b>	CATCH BASIN (RD)	_/////////////	BUILDING
Ø	STORM MANHOLE		CENTERLINE OF DITCH
	NON-CURB CATCH BASIN (SQ)		CENTERLINE/CROWN OF RO
<b>③</b>	SANITARY MANHOLE		EDGE OF WATER
<u>@</u>	CLEAN-OUT	//////	FENCE
•	POST	:::	<i>GRA VEL</i>
ф	PEDESTRIAN SIGNAL		STONE WALL
•	SIGN		R.O.W.
	HAND HOLE	$\bigcirc \bigcirc $	TREELINE
쓪	ORNAMENTAL LIGHT		WETLAND
뀪	FLOOD LIGHT		
?	UNKNOWN MANHOLE		
(P)	TELEPHONE MANHOLE	•	TREE (DECIDUOUS)
⊠ī	TELEPHONE RISER		
9	GAS VALVE	Ν Λ 4	
8	GAS VENT	My	
Ø	GAS BOX	5 • 5	TREE (CONIFEROUS)
⊠E	ELECTRICAL RISER	Z	
$\boxtimes$	TRANSFORMER	V V V	
Ø	UTILITY POLE		STUMP
0	LAMP POLE	ربي	
Δ	GUY ANCHOR	(کر کر)	SHRUB (DECIDUOUS)
_	01114 501 5	900	

Q GUY POLE

■ MAILBOX

SOIL BORING

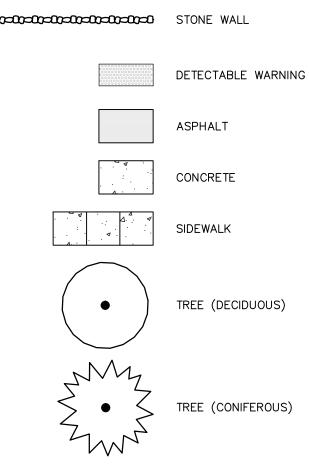
→ BENCH MARK

O IRON PIPE

MON BOX

MONITORING WELL

PR	OPOSED LEGEND		
+ ← + + + + + + + + + + + + + + + + + +	HYDRANT (PLAN) WATER GATE WELL REDUCER WATER GATE VALVE WATER STOP BOX WATER VAULT	W R S	WATER MAIN STORM SEWER SANITARY SEWER CENTERLINE OF DITCH CENTERLINE OF ROAD FENCE
	INLET  DOUBLE INLET  INLET JUNCTION CHAMBER  ROUND CATCH BASIN		SILT FENCE LOT/UNIT STAGE LINE
<ul><li><b>⊙</b></li><li><b>▽</b></li><li><b>▽</b></li></ul>	STORM MANHOLE  DRAIN ARROW  FLARED END SECTION		CURB TEMPORARY GRADING PERMIT WATER EASMENT STORM EASEMENT
© •	SANITARY MANHOLE CLEAN-OUT BARREL		SANITARY EASEMENT R.O.W. LIMITS OF CONSTRUCTION
	SIGN PUSH BUTTON		STONE WALL  DETECTABLE WARNING
			ASPHALT



MANAGEMENT

SHEET No.

PROPOSED TYPICAL ROADWAY SECTION

SANTA ROSA DRIVE AND

BRYANT ELEMENTARY SCHOOL (WIDTH VARIES ON BRYANT ELEMENTARY SCHOOL PARKING LOT)

## HMA PEDESTRIAN PATH TYPICAL SECTION

6" 21AA

LIMESTONE

−1−1/2" 13A

\*BINDER GRADE IS TO

BE 58-28 FOR ALL HMA BIKE PATH.

	PEDEST	RIAN PATH - H	IMA APPLI	CATION TABLE	
HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN)	BINDER	LOCATION/NOTES
13A	165/220 LB/SYD	3.5	220 (TOP)	PG 58-28	TWO LIFTS
Bond Coat SS-1h	0.05 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM

COMPACT -SUBGRADE AS

APPROVED BY

THE ENGINEER

COMPACT AGGREGATE -

BASE TO 98% OF IT'S

MAX. DRY DENSITY

- CENTERLINE/CROWN 60' R.O.W. 15' E/M TO E/M 15' E/M TO E/M CITY OF ANN ARBOR STANDARD— CURB & GUTTER, DETAIL SD—R—1. CITY OF ANN ARBOR STANDARD CURB & GUTTER, DETAIL SD-R-1. -HMA PAVEMENT WEARING COURSE, 13A, 1-1/2" -HMA PAVEMENT, BASE COURSE, 13A 2" EXISITNG 5'S/W — -EXISITNG 5' S/W 2% SLOPE \_\_ → 2% SLOPE -GRADE, SHAPE AND RECOMPACT EXISTING ROAD BASE AS REQUIRED, AND AS DIRECTED BY THE ENGINEER. 6" SUBBASE UNDERDRAIN CONSTRUCT PER CITY OF ANN ARBOR— 6" SUBBASE UNDERDRAIN STANDARD DETAIL, SD-TD-10.

> ROAD CROSS SECTION APPLICATION TABLE **THICKNESS RATE OF BINDER** LOCATION/NOTES (INCHES) **APPLICATION** HMA, 13A 165 LB/SYD PG 64-28 **WEARING COURSE 1.5 INCH** 260 HMA, 13A 220 LB/SYD **2.0 INCH** PG-64-28 **BASE COURSE**

> > PROPOSED TYPICAL ROADWAY SECTION

AS DIRECTED BY ÉNGINEER

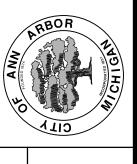
LUCERNE CT., BURLINGAME CT., JAY LEE CT., BLAIN CT., AND HARDYKE CT.

N.T.S.

1" REBAR FOR BAG-REMOVAL FROM INLET (REBAR NOT INCLUDED)	
OPTIONAL OVERFLOW  SILTSACK  FOAM	
DUMP LOOPS (REBAR NOT INCLUDED)	ODE WEW NOTALLED
EXPANSION A A A A A A A A A A A A A A A A A A A	RESTRAINT  A  A  A  A  A  A  A  A  A  A  A  A  A
<b>*</b>	INSTALLATION DETAIL

**INLET FILTER (MODIFIED)** 

NOT TO SCALE

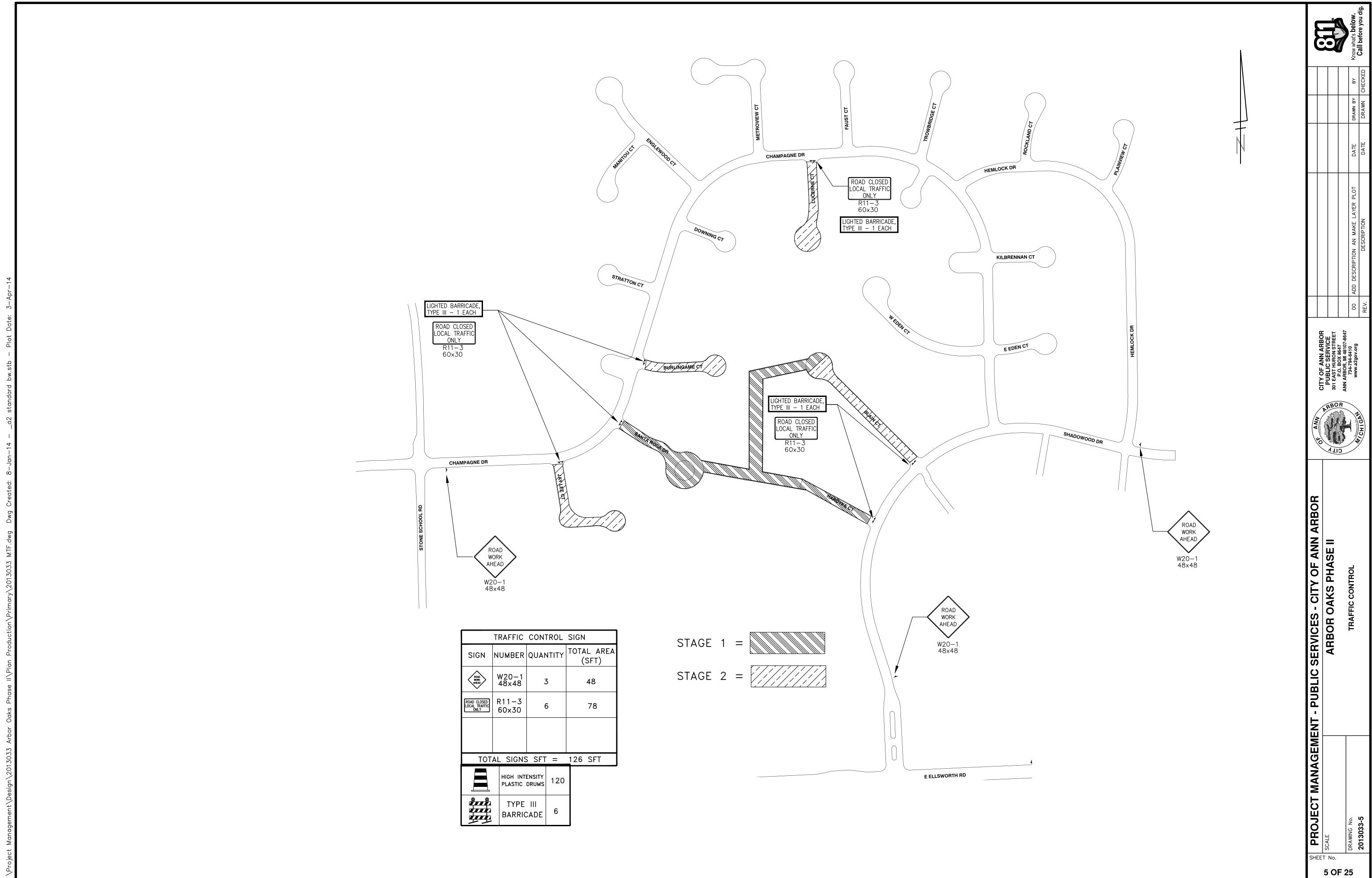


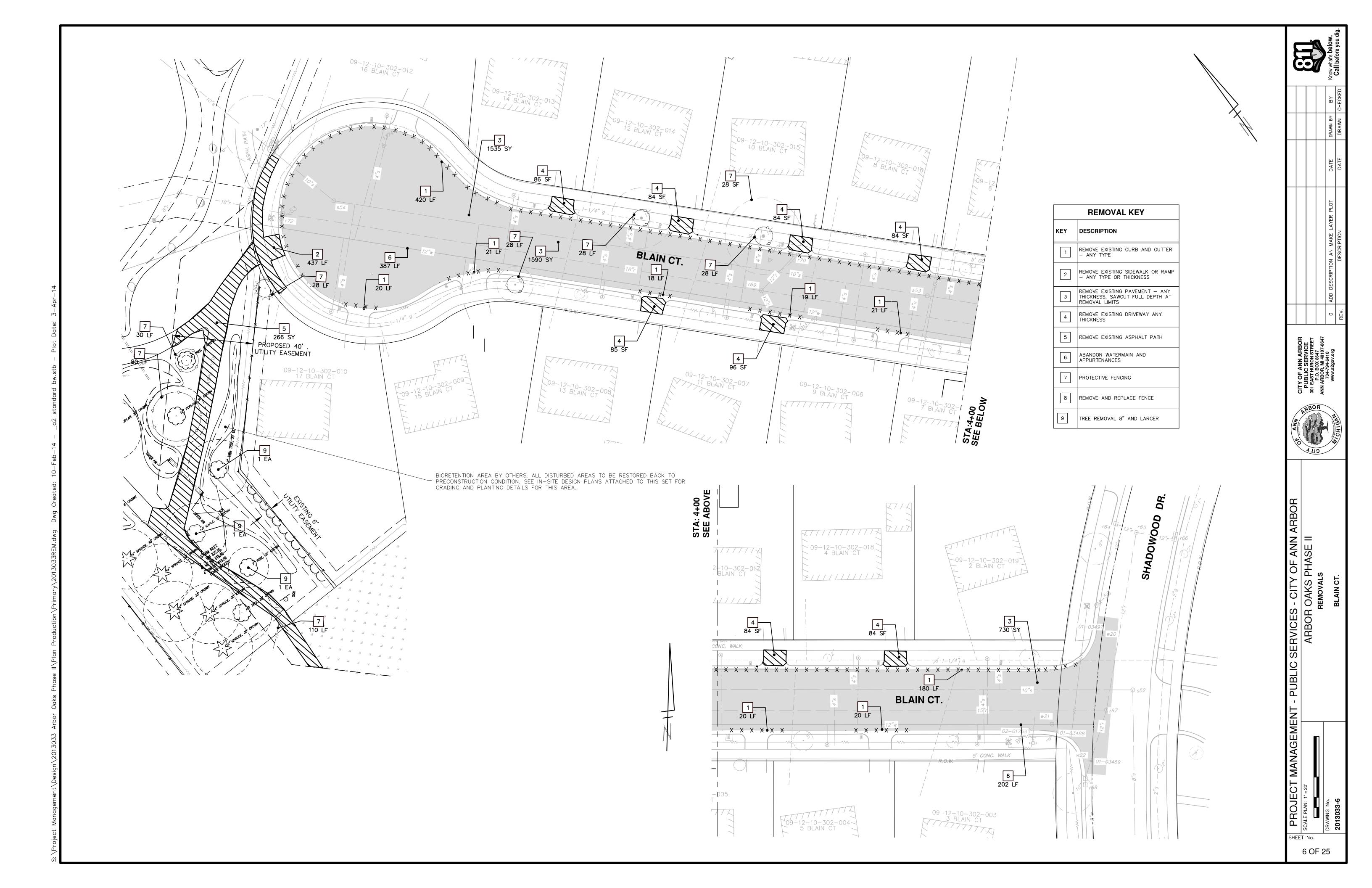
CONSTRUCT PER CITY OF ANN ARBOR

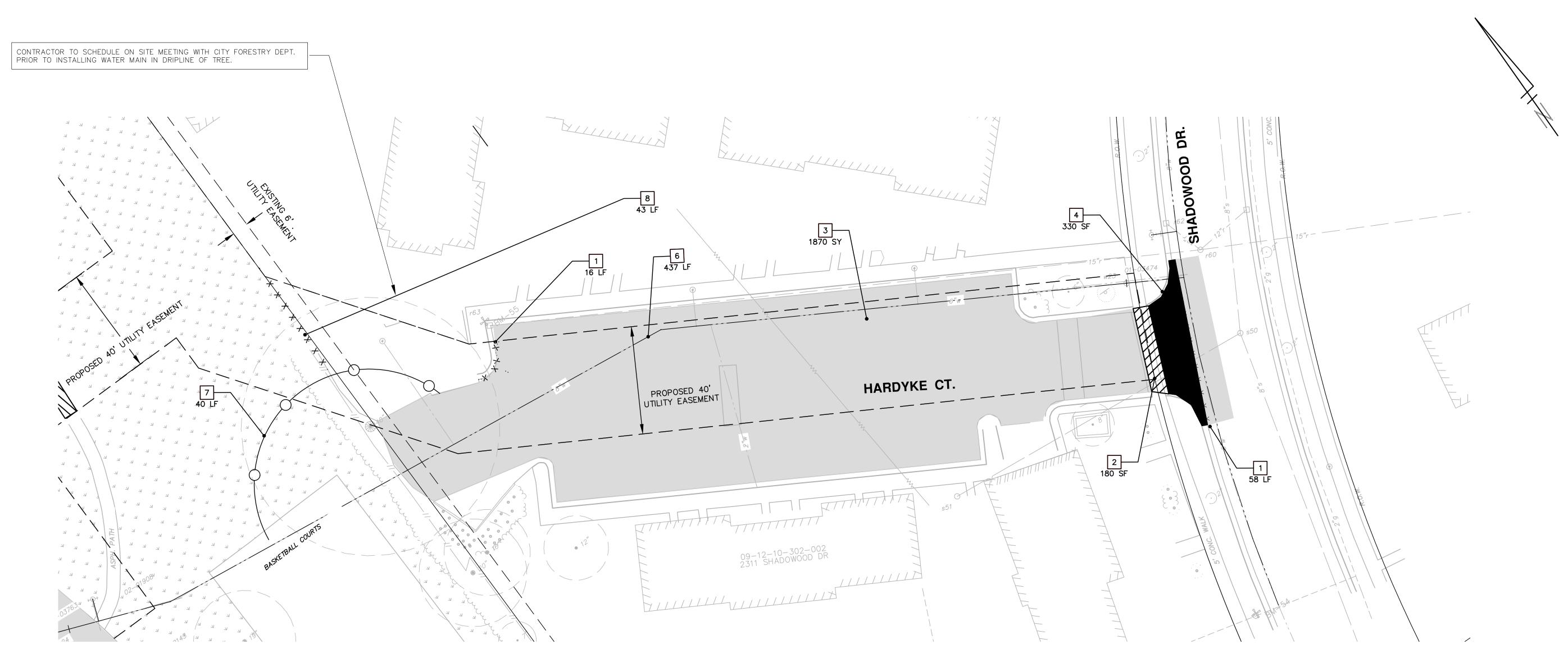
STANDARD DETAIL, SD-TD-10. AS DIRECTED BY ENGINEER

PROJECT MANAGEMENT - PUBLIC

SHEET No.



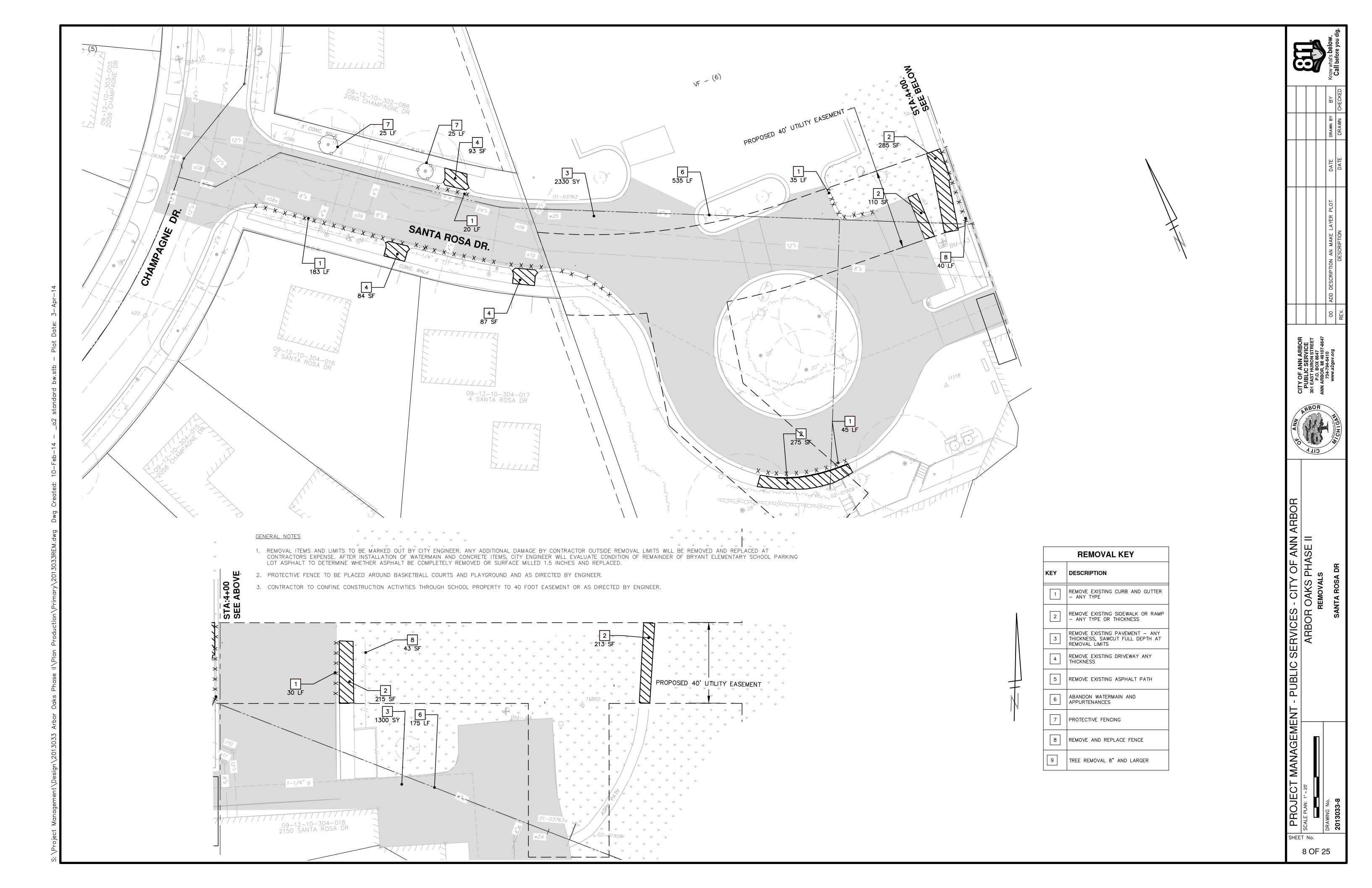


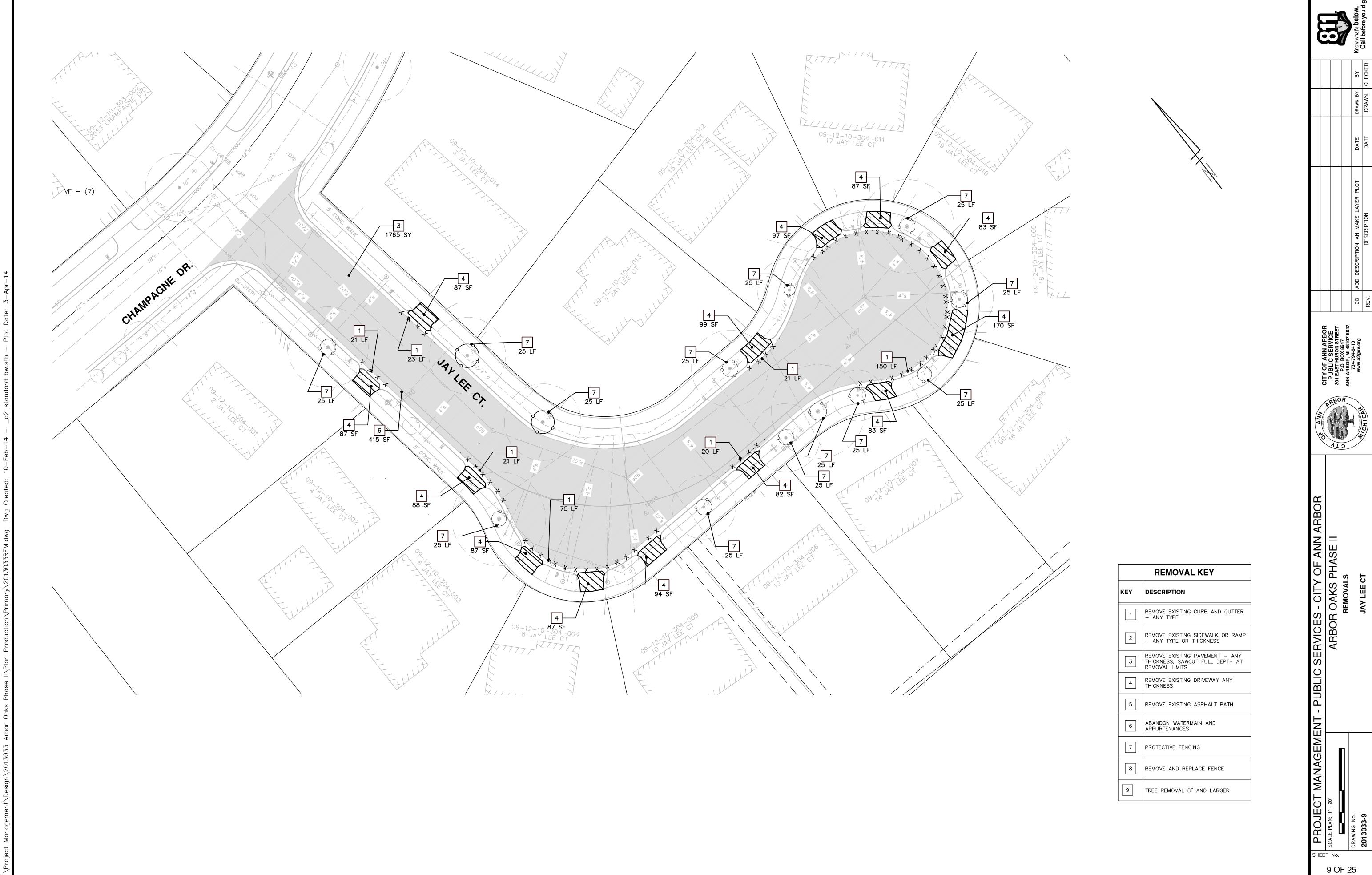


## GENERAL NOTES

- 1. DRIVEWAYS AND ENTRANCES TO BUILDINGS, REAL PROPERTY, AND THE LIKE SHALL NOT BE BLOCKED EXCEPT FOR SHORT DURATIONS AND ONLY WHEN APPROVED BY THE ENGINEER. VEHICULAR AND PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL NECESSARY DRIVEWAY CLOSURES WITH THE PROPERTY OWNER(S) AND RESIDENT(S) IN THE AREAS OF CONSTRUCTION.
- 2. REMOVAL ITEMS AND LIMITS TO BE MARKED OUT BY CITY ENGINEER. ANY ADDITIONAL DAMAGE BY CONTRACTOR OUTSIDE REMOVAL LIMITS WILL BE REMOVED AND REPLACED AT CONTRACTORS EXPENSE. AFTER INSTALLATION OF WATERMAIN AND CONCRETE ITEMS, CITY ENGINEER WILL EVALUATE CONDITION OF REMAINDER OF HARDYKE PARKING LOT ASPHALT TO DETERMINE WHETHER ASPHALT BE COMPLETELY REMOVED OR SURFACE MILLED 1.5 INCHES AND REPLACED.

REMOVAL KEY				
KEY	DESCRIPTION			
1	REMOVE EXISTING CURB AND GUTTER  - ANY TYPE			
2	REMOVE EXISTING SIDEWALK OR RAMP  - ANY TYPE OR THICKNESS			
3	REMOVE EXISTING PAVEMENT — ANY THICKNESS, SAWCUT FULL DEPTH AT REMOVAL LIMITS			
4	REMOVE EXISTING DRIVEWAY ANY THICKNESS			
5	REMOVE EXISTING ASPHALT PATH			
6	ABANDON WATERMAIN AND APPURTENANCES			
7	PROTECTIVE FENCING			
8	REMOVE AND REPLACE FENCE			
9	TREE REMOVAL 8" AND LARGER			







	ВҮ	DRAWN CHECKED	
	DRAWN BY	DRAWN	
	DATE	DATE	
	00 ADD DESCRIPTION AN MAKE LAYER PLOT	DESCRIPTION	
	00	REV.	

CHAMPAGNE DR. 0+00

STONEYBROOK PARK

SHEET 18 BURLINGAME CT.

SHEET 16

BRYANT ELEMENTARY

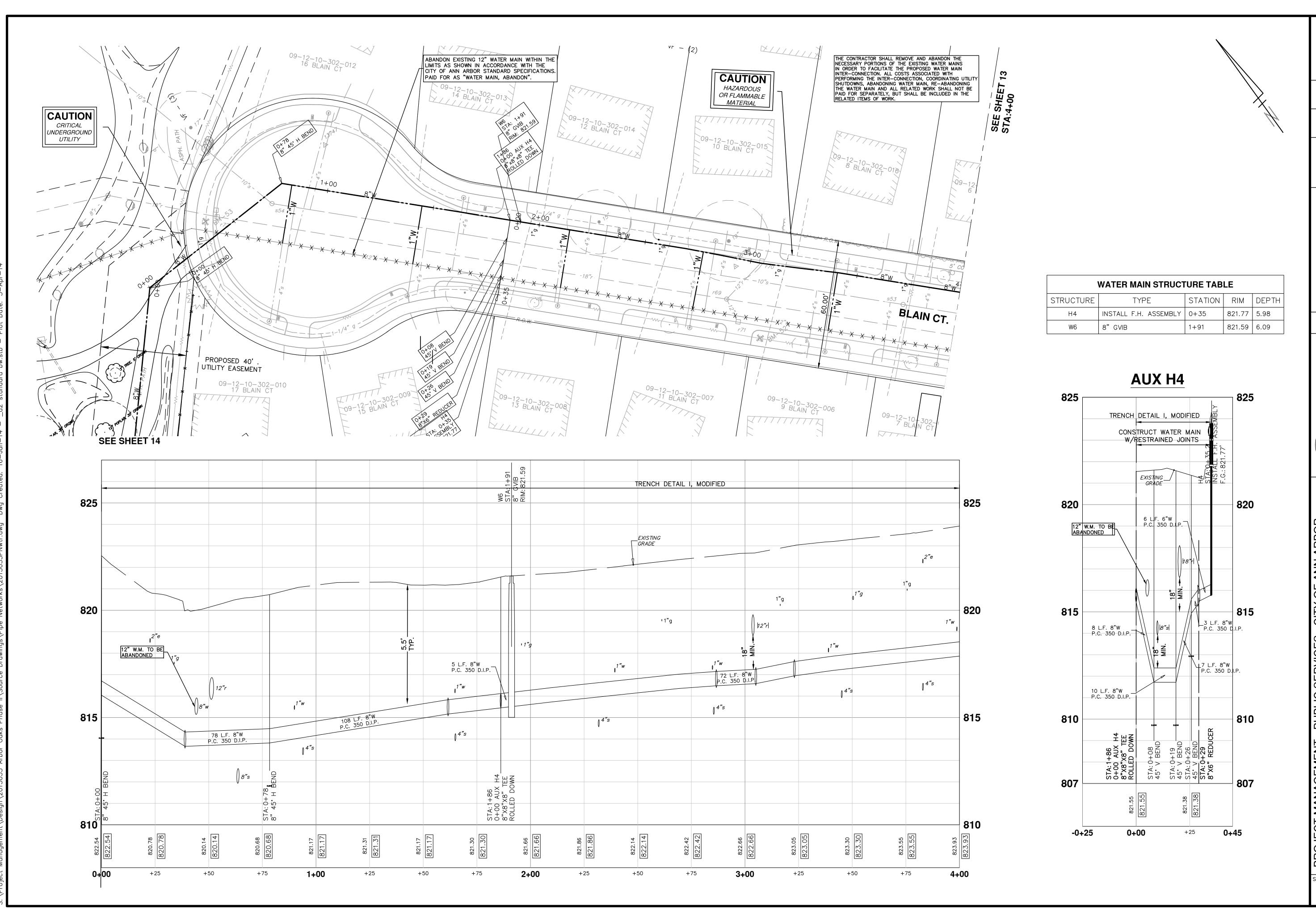
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOF SCALE PLAN: 1:100 PROFILE: 1" = x

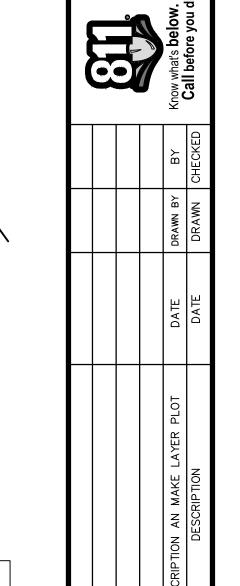
SCALE PLAN: 1:100 PROFILE: 1" = x

SCALE PLAN: 1:100 PROFILE: 1" = x

ARBOR OAKS PHASE II

WATER MAIN

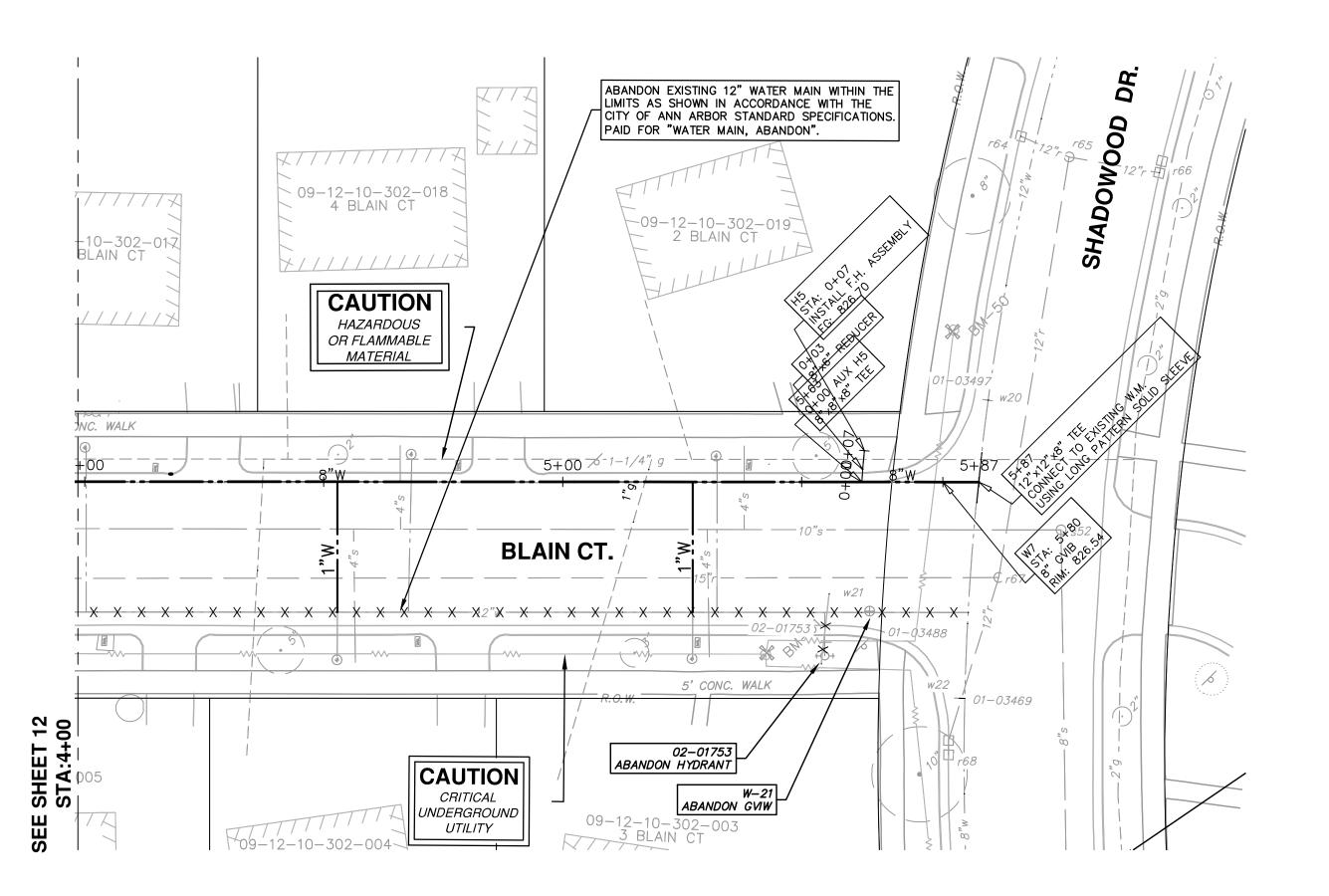


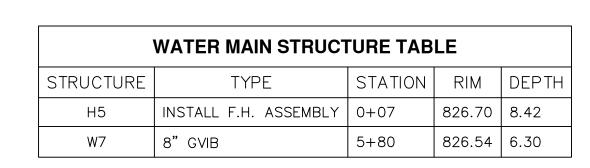


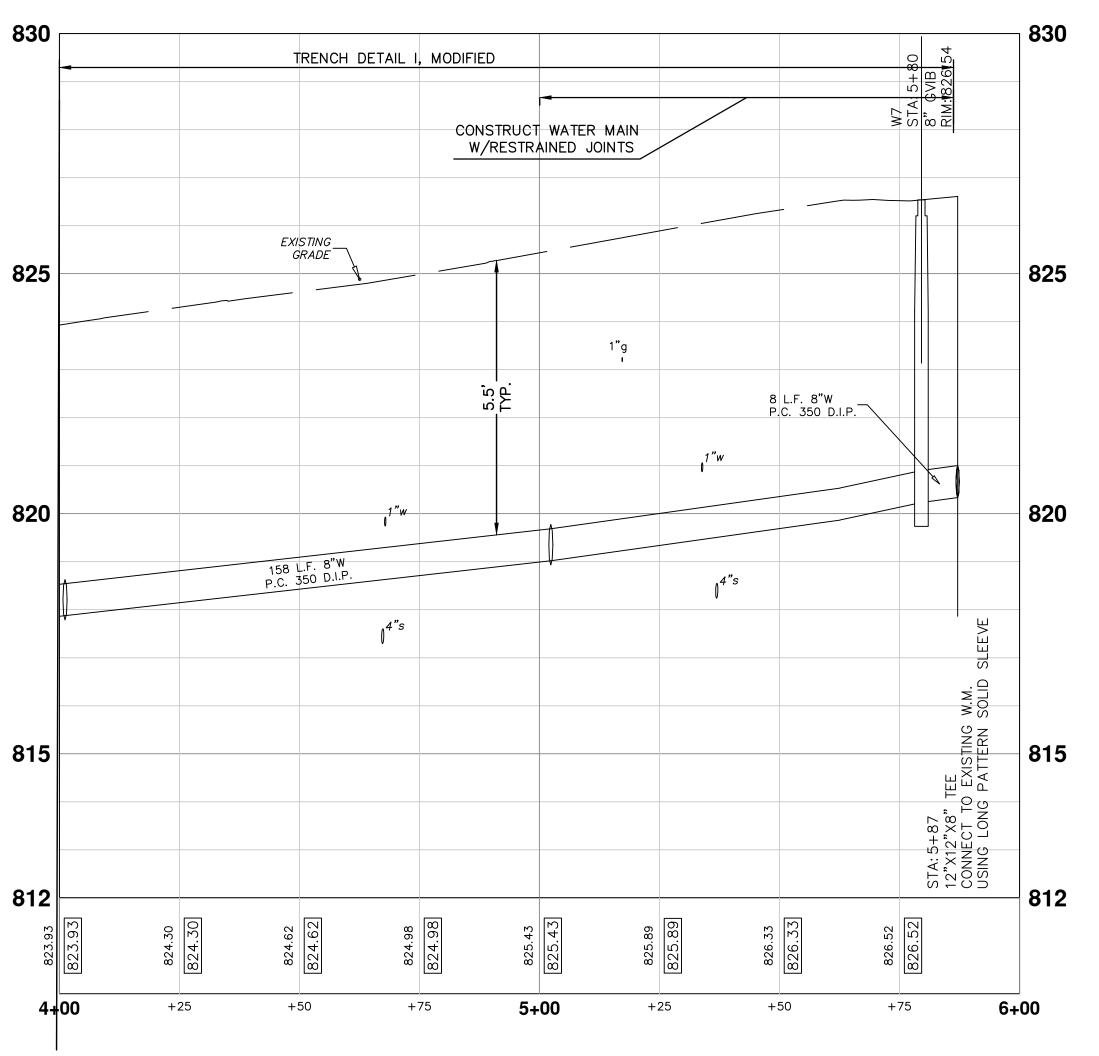


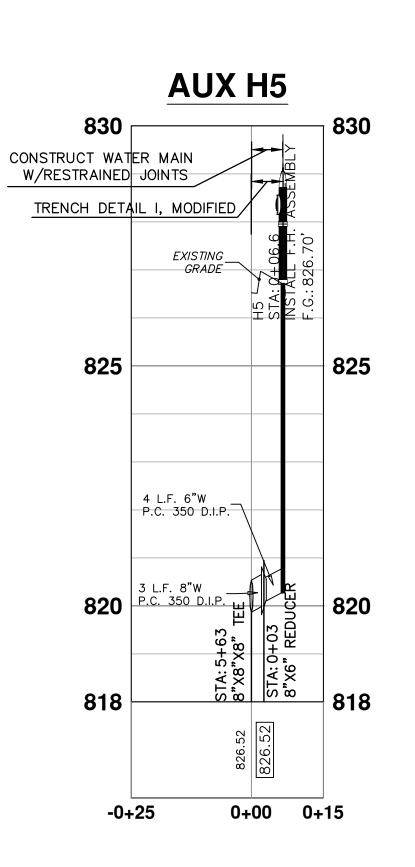


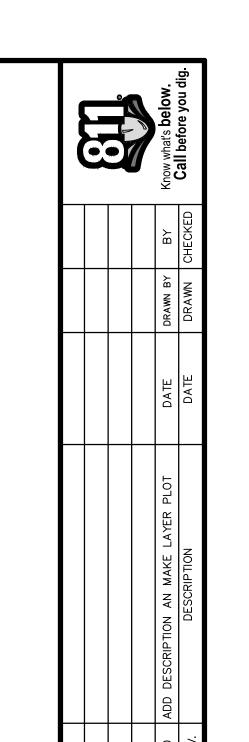
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR SCALE PLAN: 1" = 20 PROFILE: 1" = 2 P













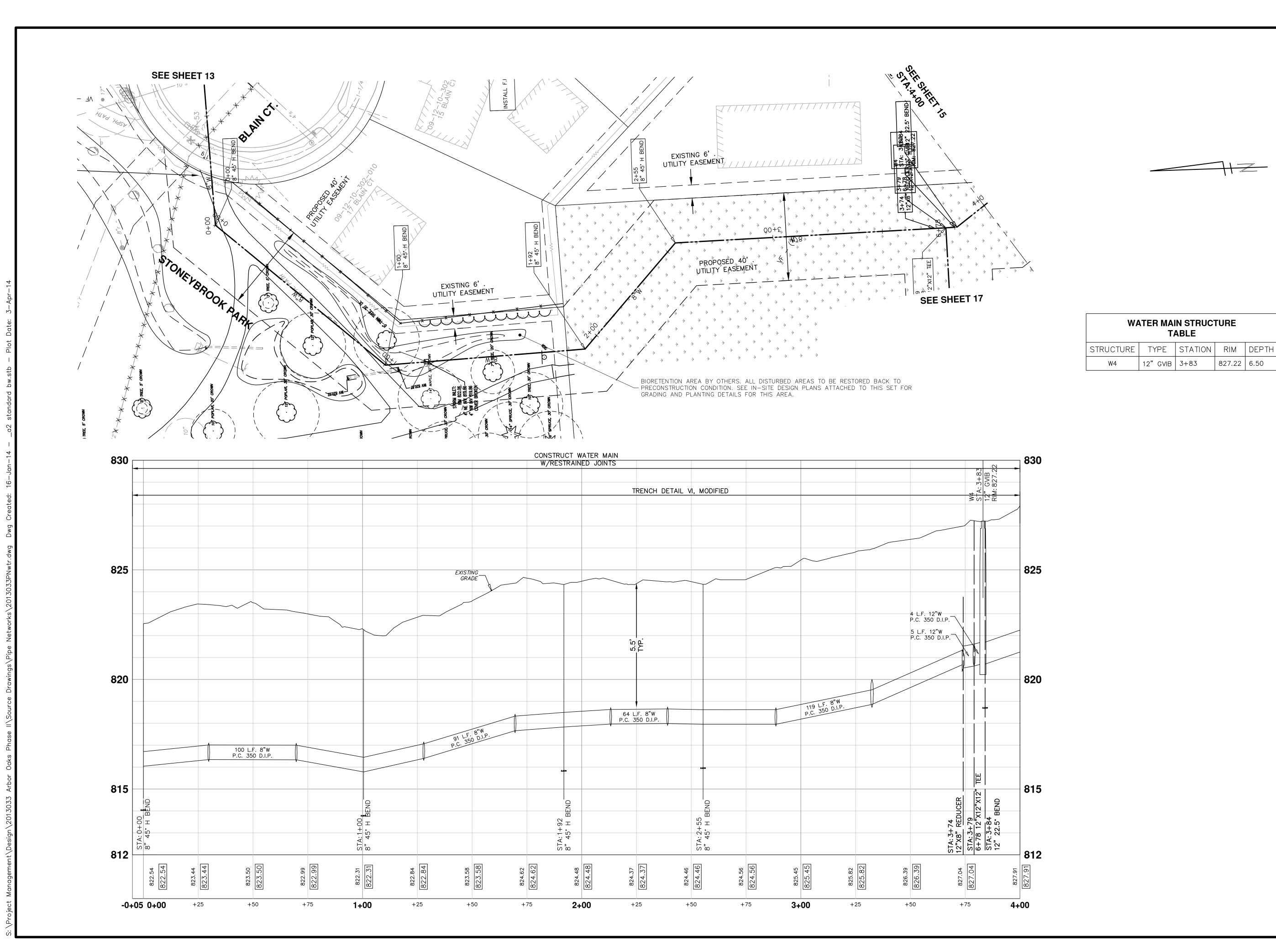


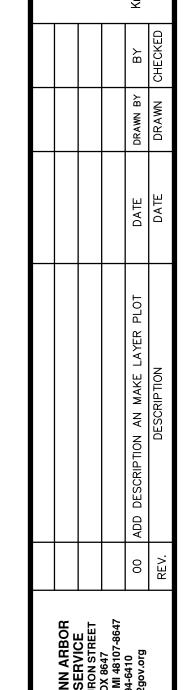
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

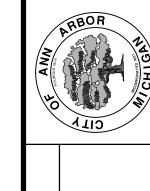
SCALE PLAN: 1" = 20 PROFILE: 1" = 2 ARBOR OAKS PHASE II

DRAWING No.

BLAIN CT. STA. 4+00 TO STA. 5+89

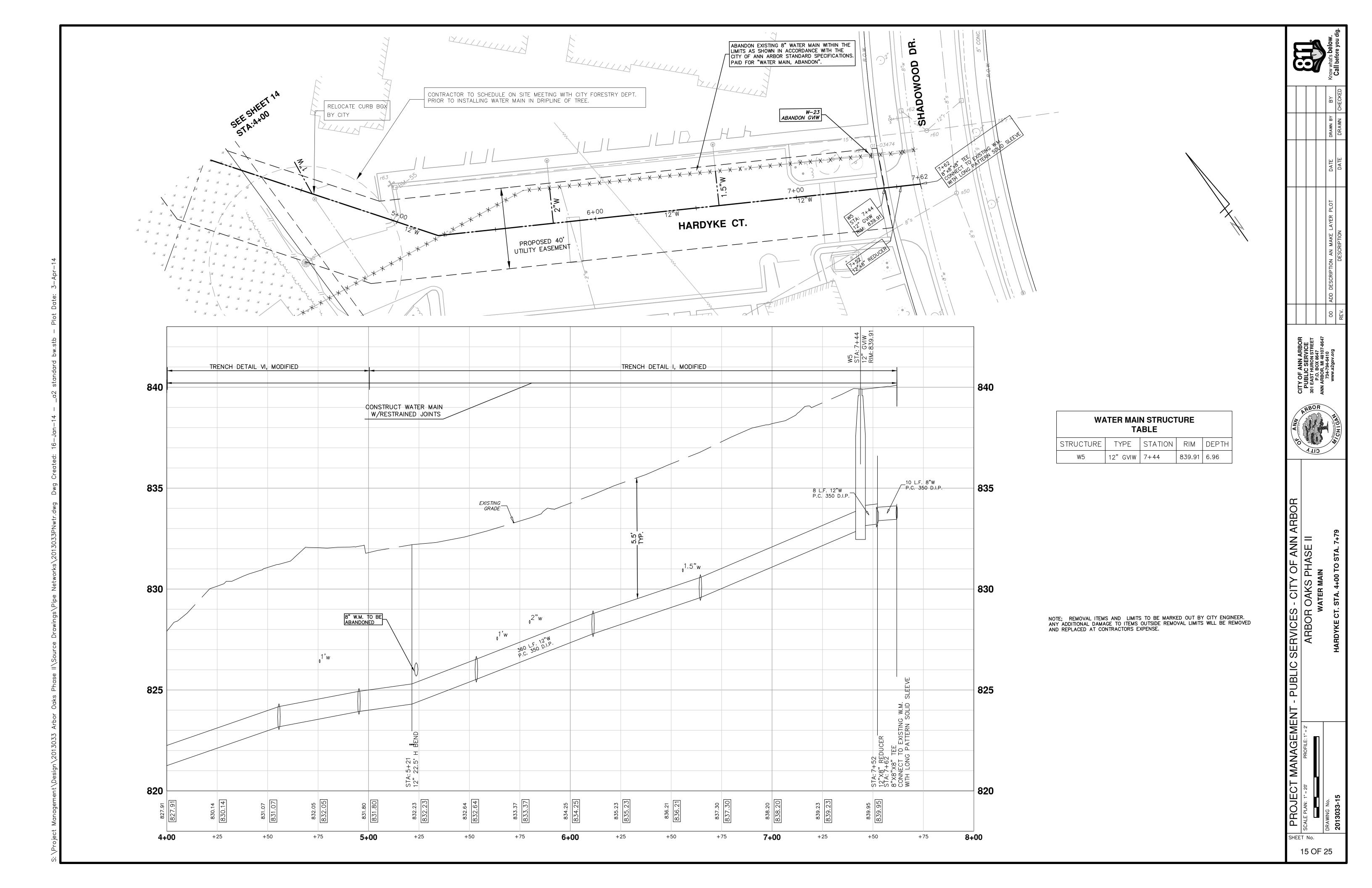


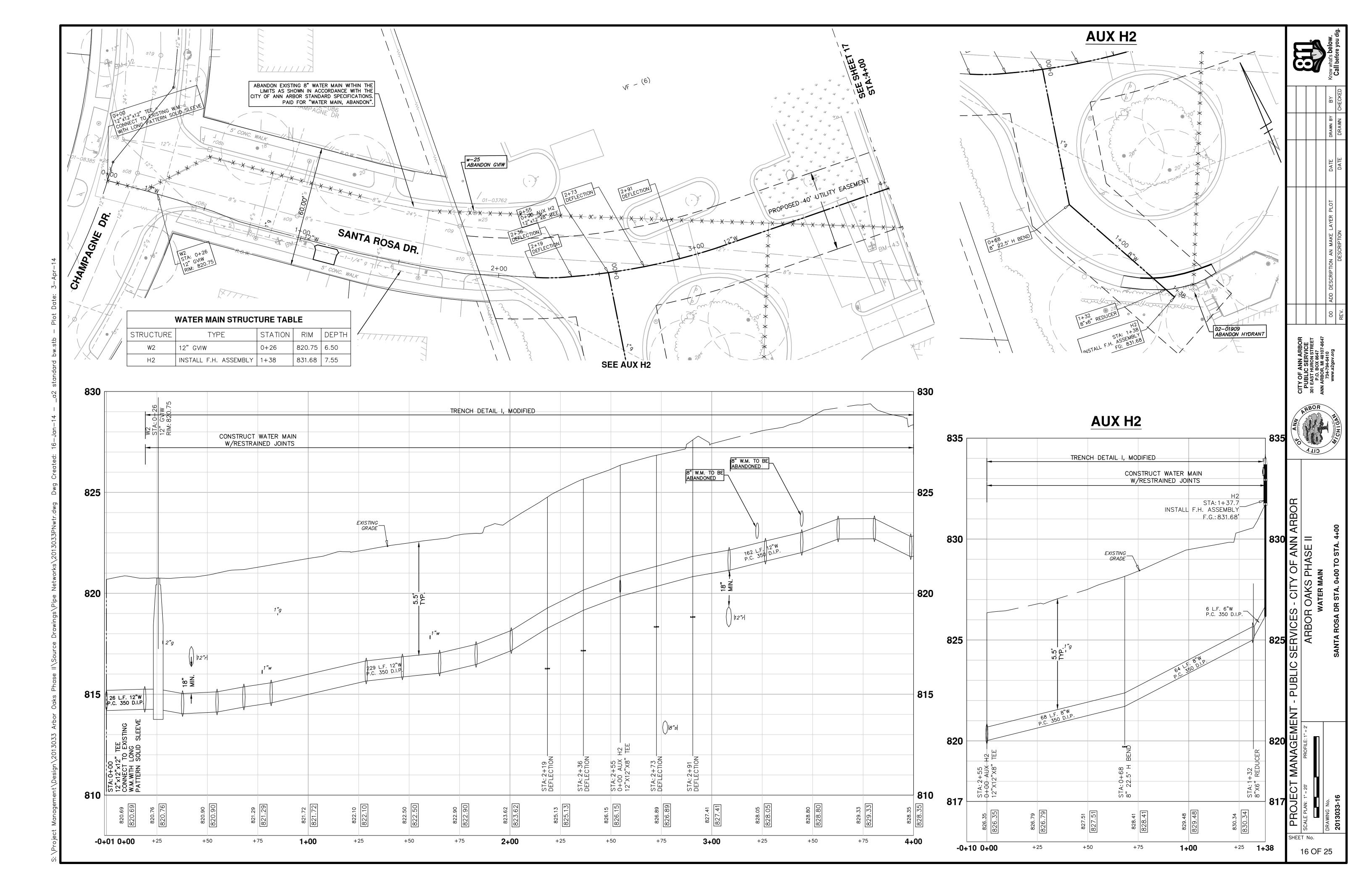


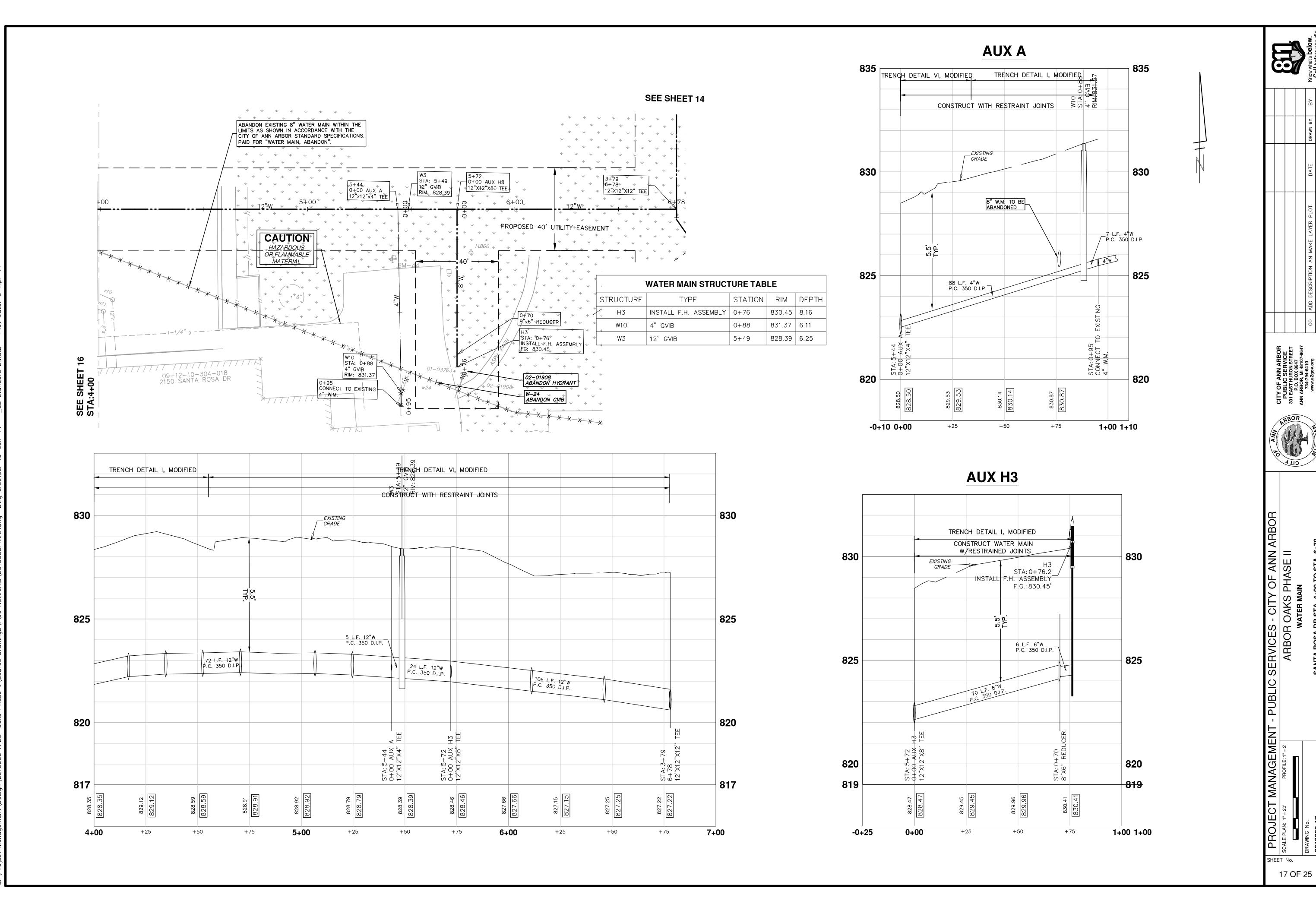


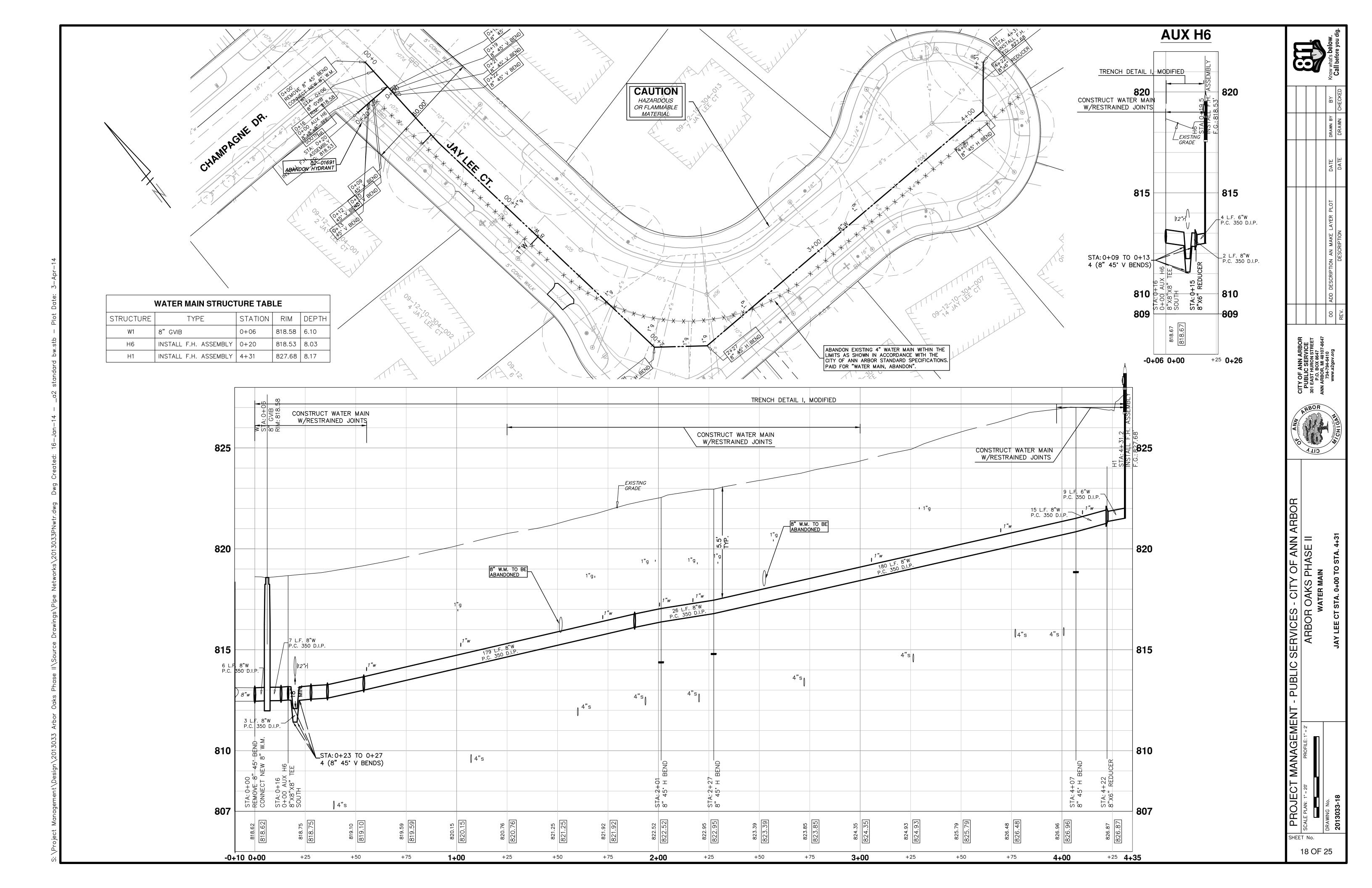
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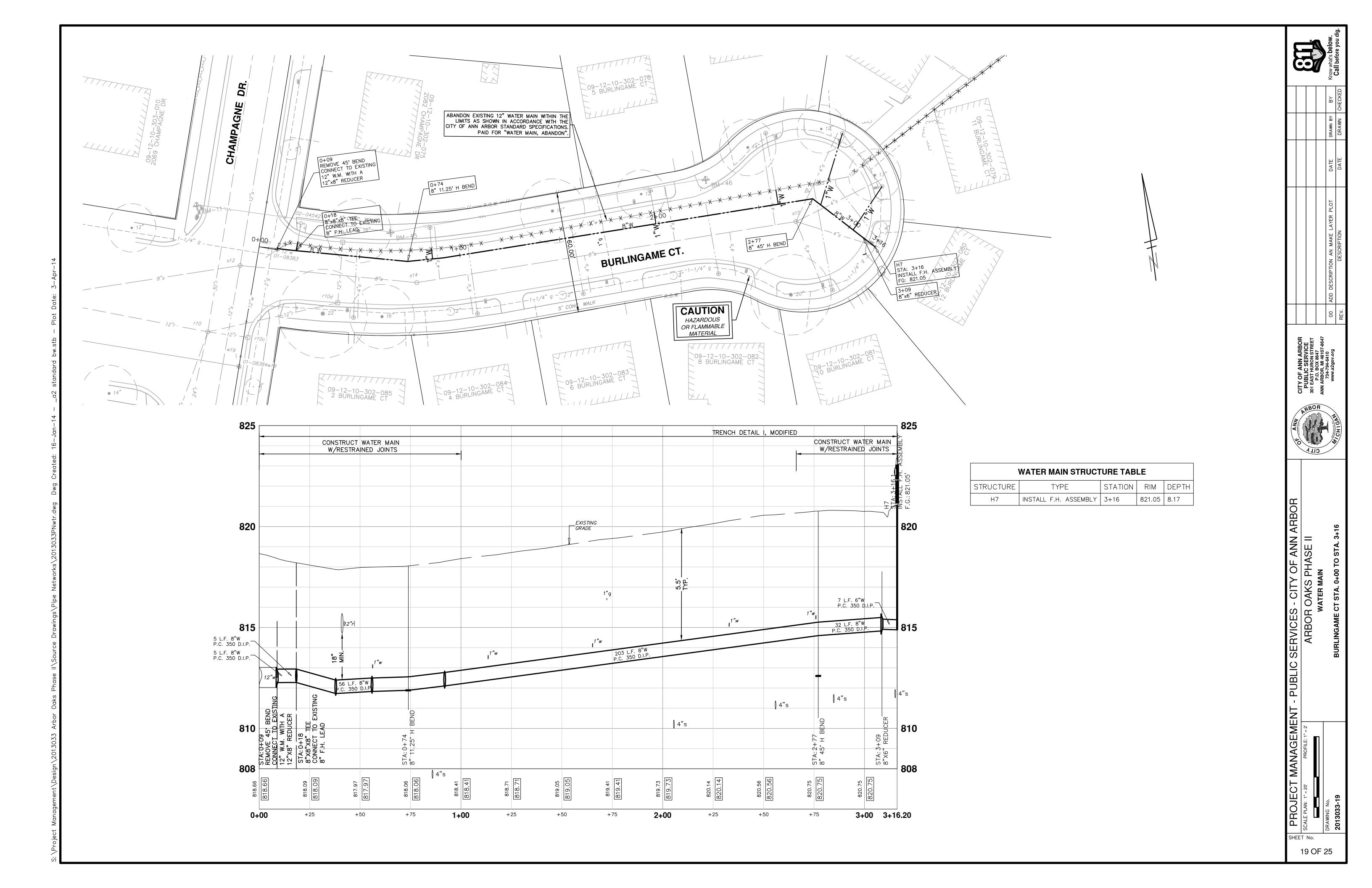
| PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOI | SCALE PLAN: 1"=20" | PROFILE: 1"=2" | ARBOR OAKS PHASE II | NRAWING NO

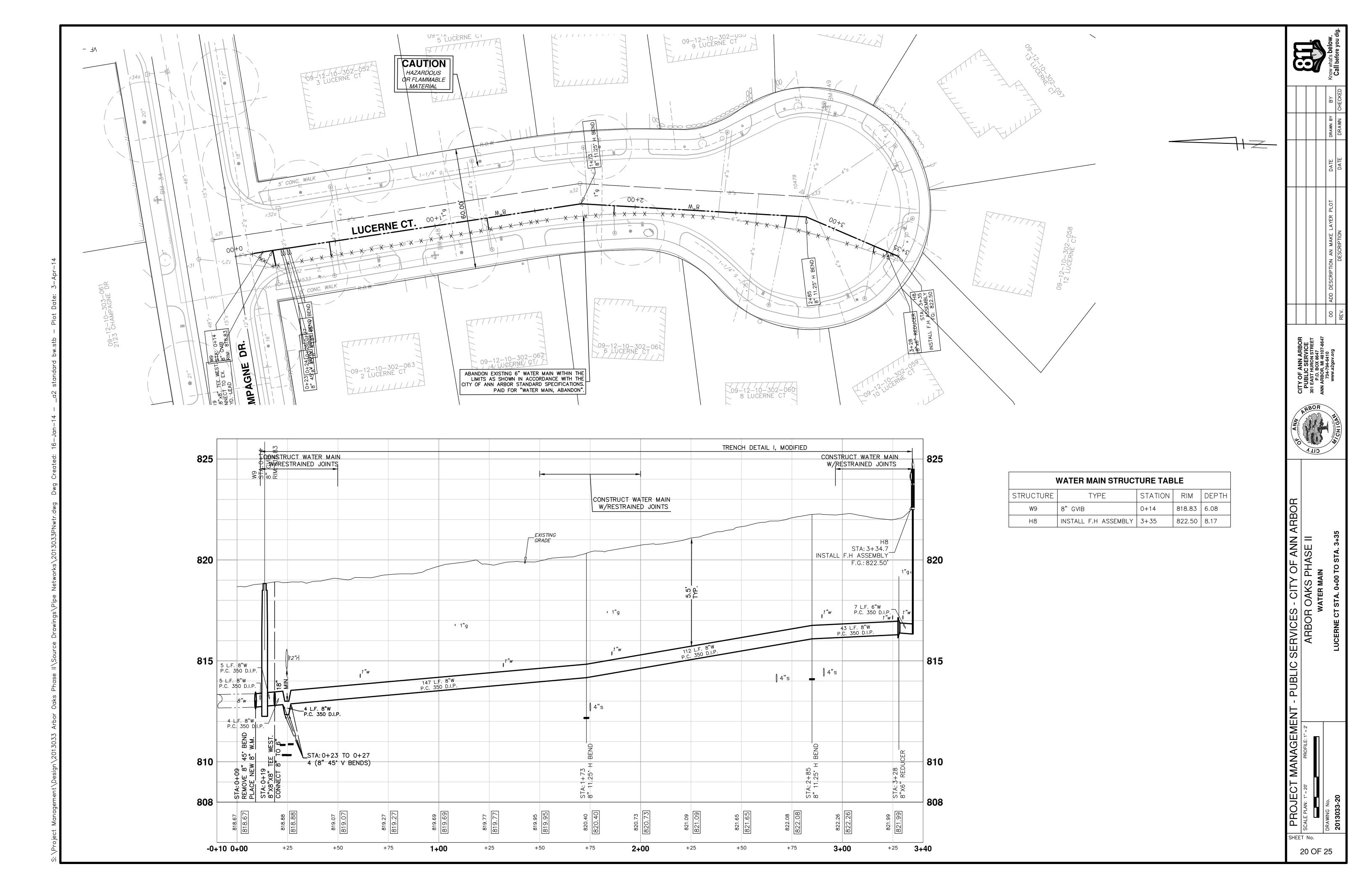


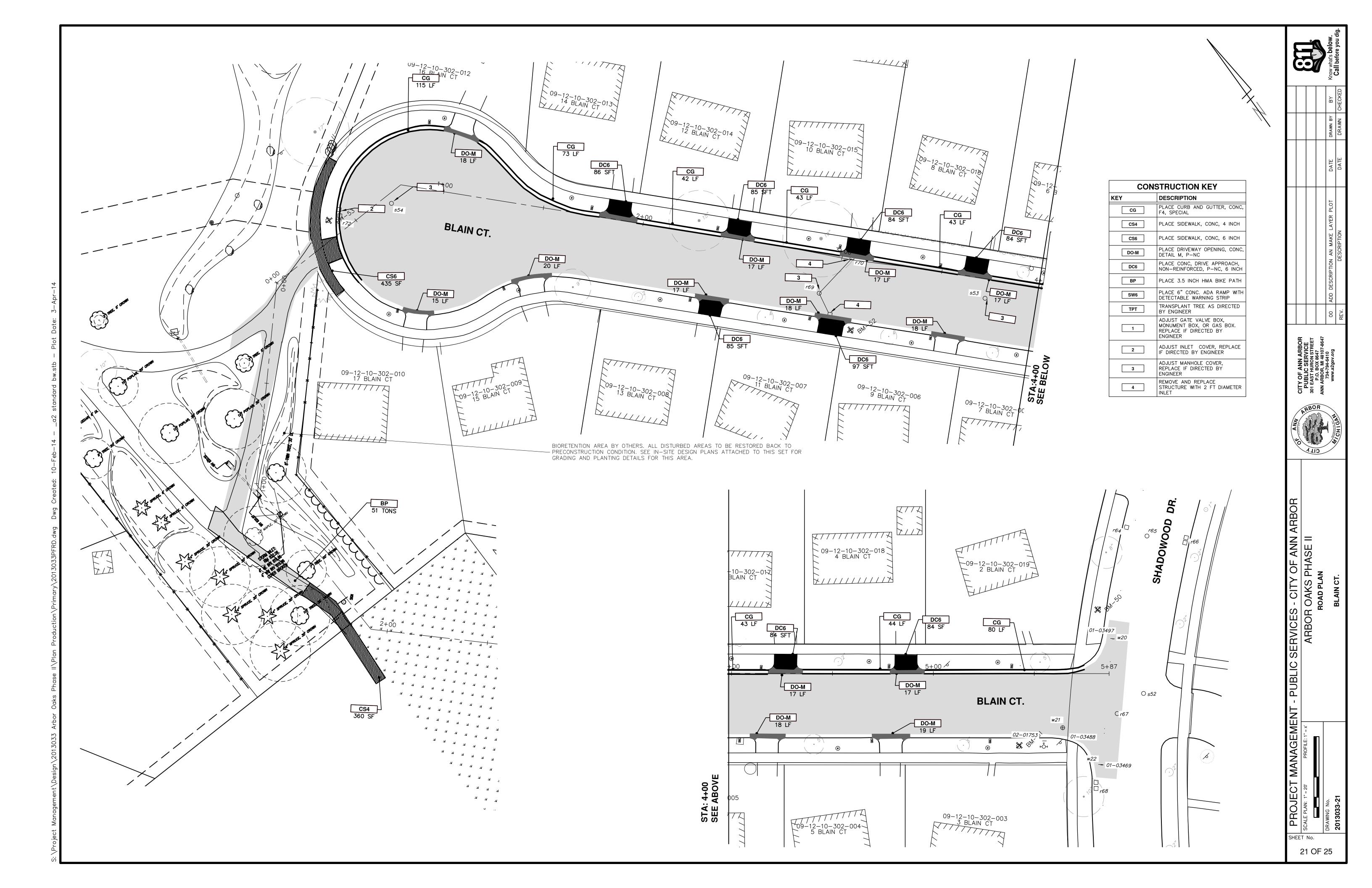


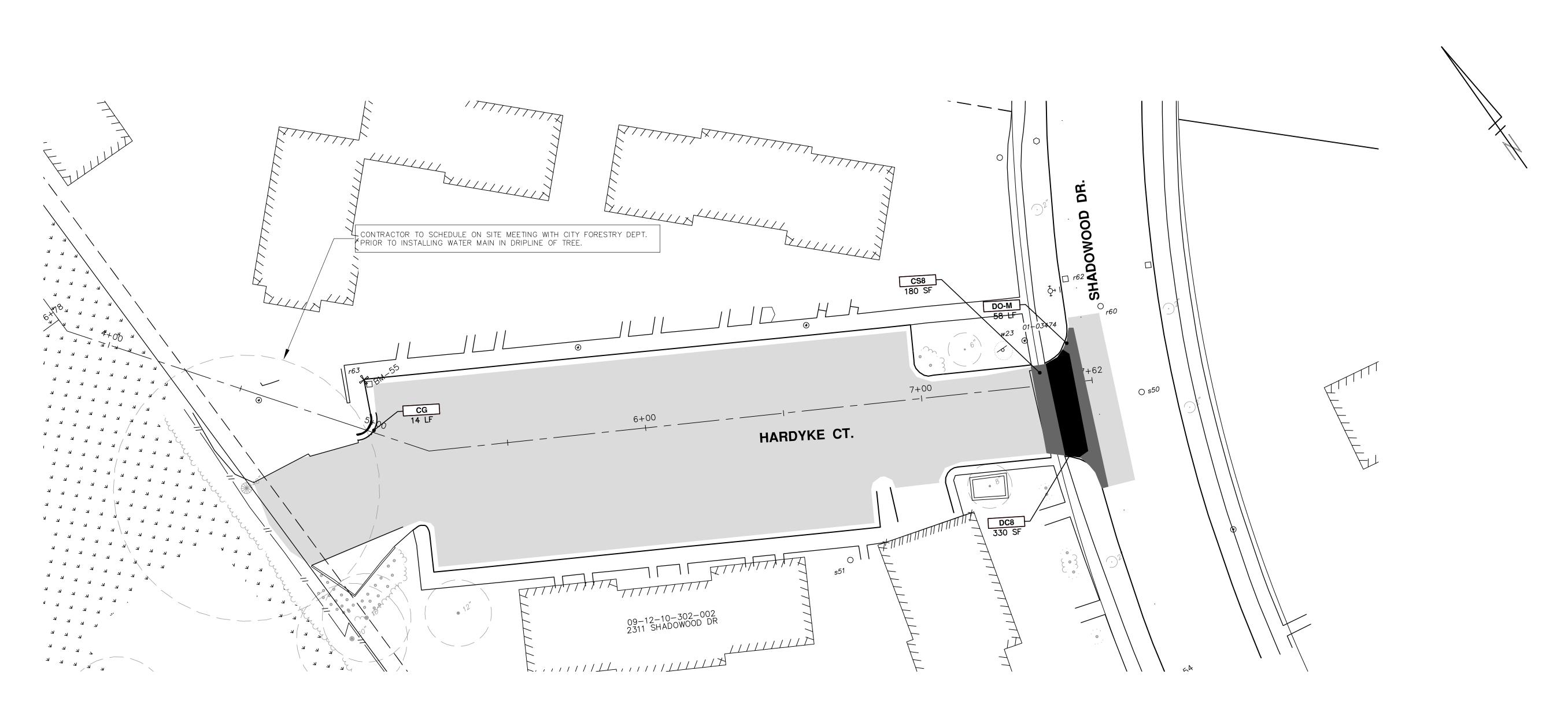










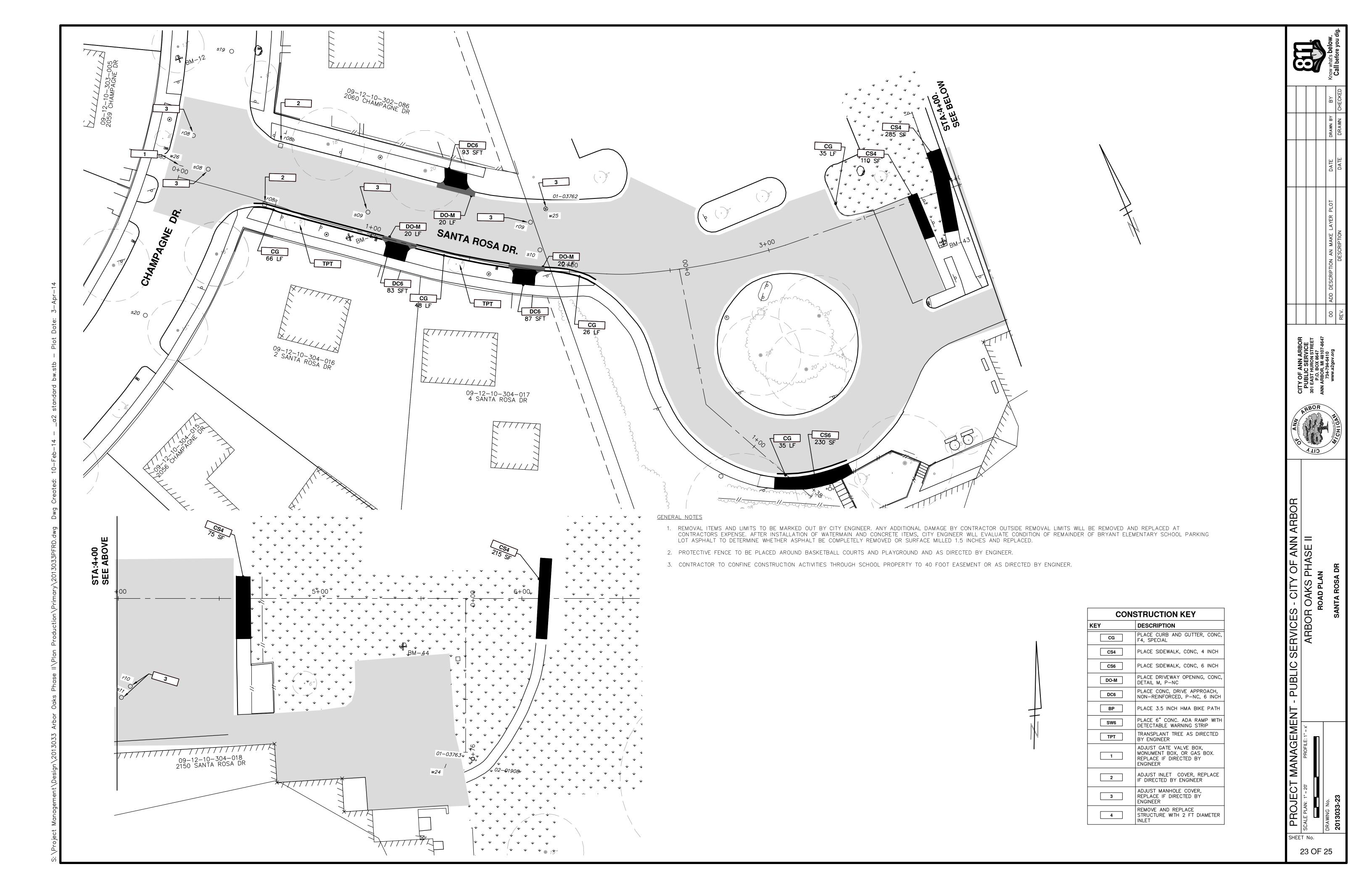


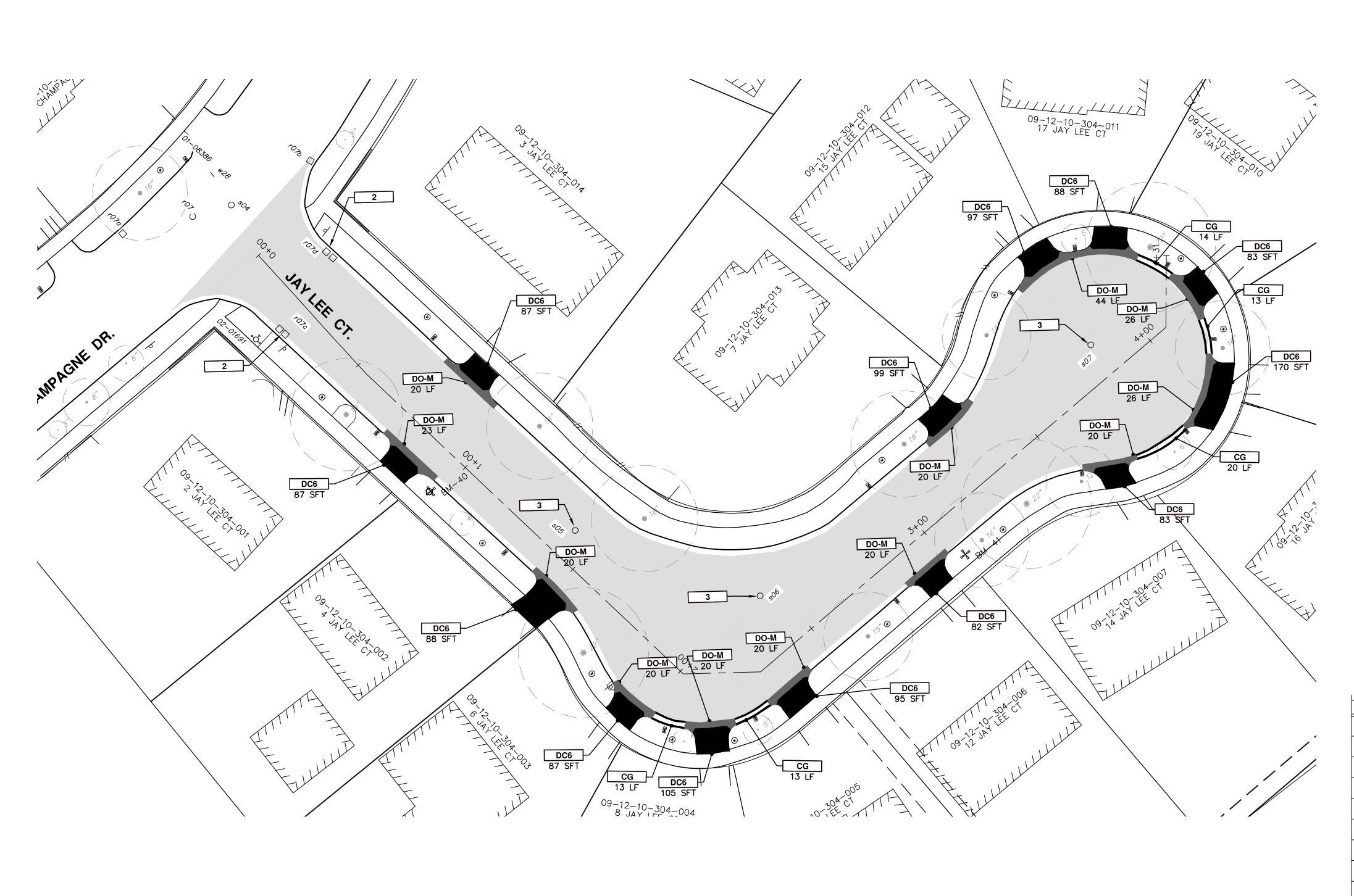
## GENERAL NOTES

- 1. DRIVEWAYS AND ENTRANCES TO BUILDINGS, REAL PROPERTY, AND THE LIKE SHALL NOT BE BLOCKED EXCEPT FOR SHORT DURATIONS AND ONLY WHEN APPROVED BY THE ENGINEER. VEHICULAR AND PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL NECESSARY DRIVEWAY CLOSURES WITH THE PROPERTY OWNER(S) AND RESIDENT(S) IN THE AREAS OF CONSTRUCTION.
- 2. REMOVAL ITEMS AND LIMITS TO BE MARKED OUT BY CITY ENGINEER. ANY ADDITIONAL DAMAGE BY CONTRACTOR OUTSIDE REMOVAL LIMITS WILL BE REMOVED AND REPLACED AT CONTRACTORS EXPENSE. AFTER INSTALLATION OF WATERMAIN AND CONCRETE ITEMS, CITY ENGINEER WILL EVALUATE CONDITION OF REMAINDER OF HARDYKE PARKING LOT ASPHALT TO DETERMINE WHETHER ASPHALT BE COMPLETELY REMOVED OR SURFACE MILLED 1.5 INCHES AND REPLACED.

<b>CONSTRUCTION KEY</b>			
KEY	DESCRIPTION		
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL		
CS4	PLACE SIDEWALK, CONC, 4 INCH		
CS6	PLACE SIDEWALK, CONC, 6 INCH		
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P-NC		
DC6	PLACE CONC, DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH		
ВР	PLACE 3.5 INCH HMA BIKE PATH		
SW6	PLACE 6" CONC. ADA RAMP WITH DETECTABLE WARNING STRIP		
TPT	TRANSPLANT TREE AS DIRECTED BY ENGINEER		
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX. REPLACE IF DIRECTED BY ENGINEER		
2	ADJUST INLET COVER, REPLACE IF DIRECTED BY ENGINEER		
3	ADJUST MANHOLE COVER, REPLACE IF DIRECTED BY ENGINEER		
4	REMOVE AND REPLACE STRUCTURE WITH 2 FT DIAMETER INLET		

SHEET No.





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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOI SCALE PLAN: 1" = 20

SCALE PLAN: 1" = 20

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