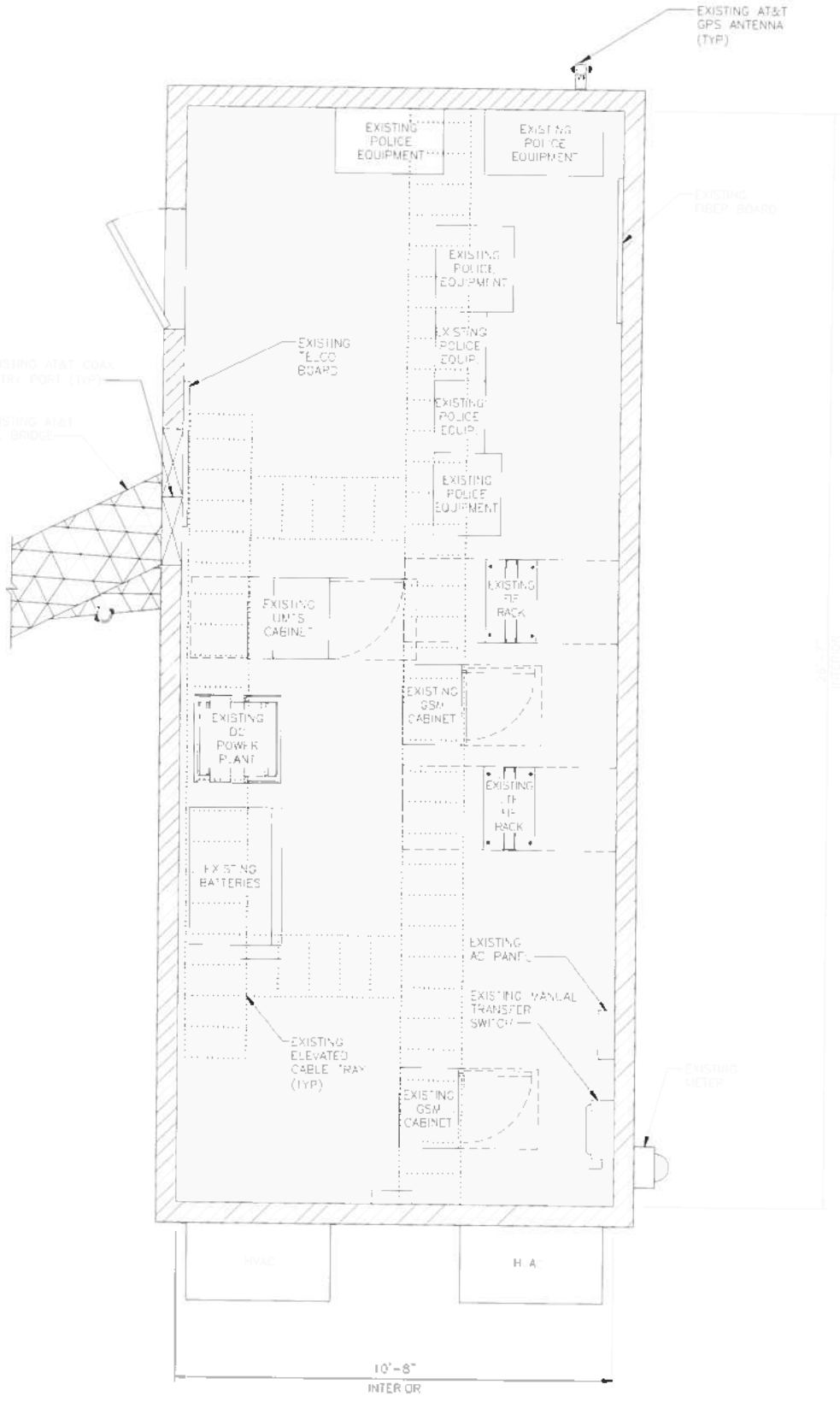
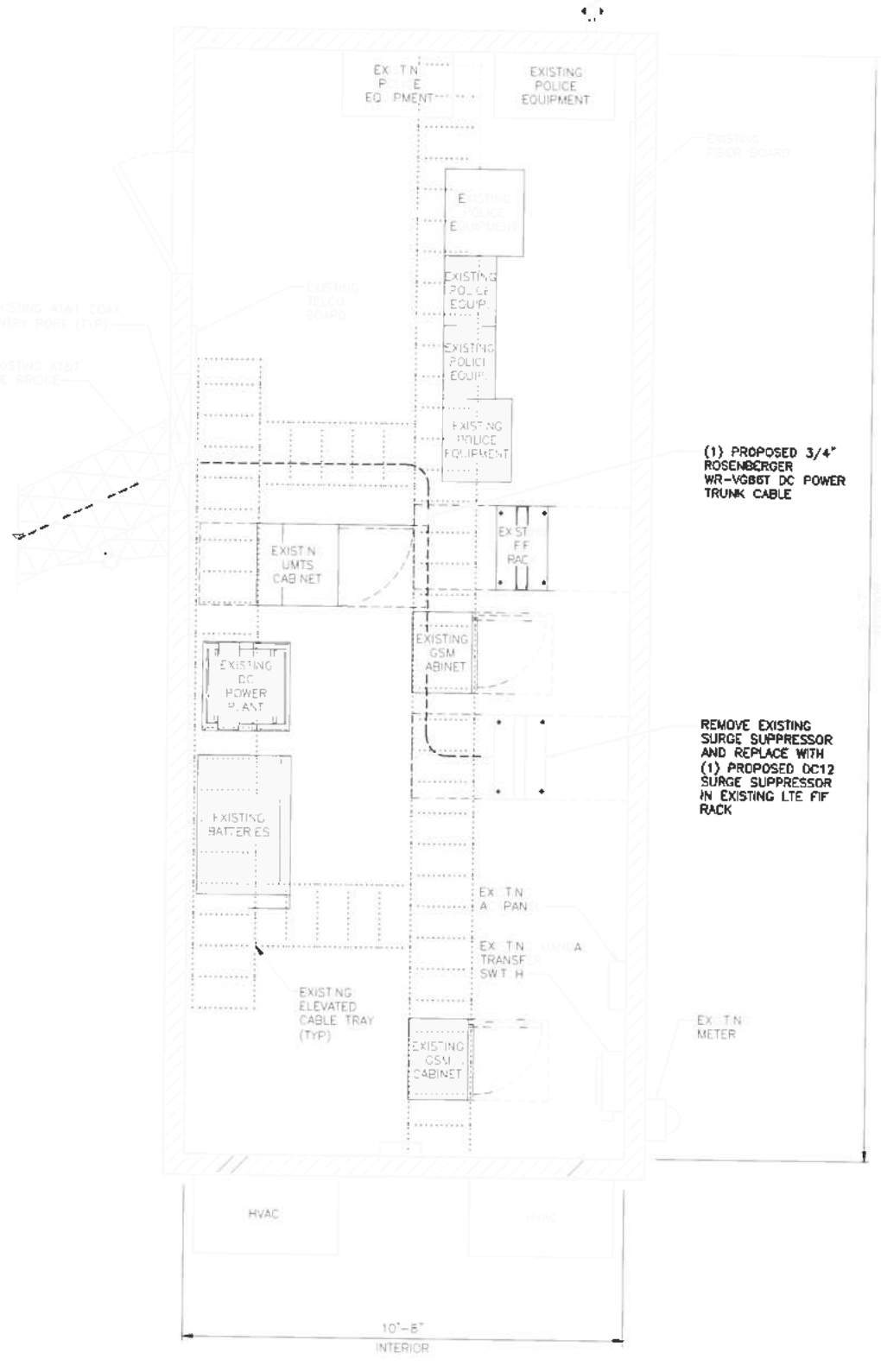
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

NOTES



EXISTING EQUIPMENT LAYOUT

12" 6" 0 1' 2' 3' 4' 5'
1/2"=1'-0"



PROPOSED EQUIPMENT LAYOUT

12" 6" 0 1' 2' 3' 4' 5'
1/2"=1'-0"

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7801 FARLEY
OVERLAND PARK, KS 66204

BLACK & VEATCH

6800 W. 115TH ST. SUITE 2292
OVERLAND PARK, KS 66211
(913) 458-2000

PROJECT NO:	129037
DRAWN BY:	MBS
CHECKED BY:	LIN

REV	DATE	DESCRIPTION
A	02/29/16	ISSUED FOR REVIEW

PRELIMINARY

PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

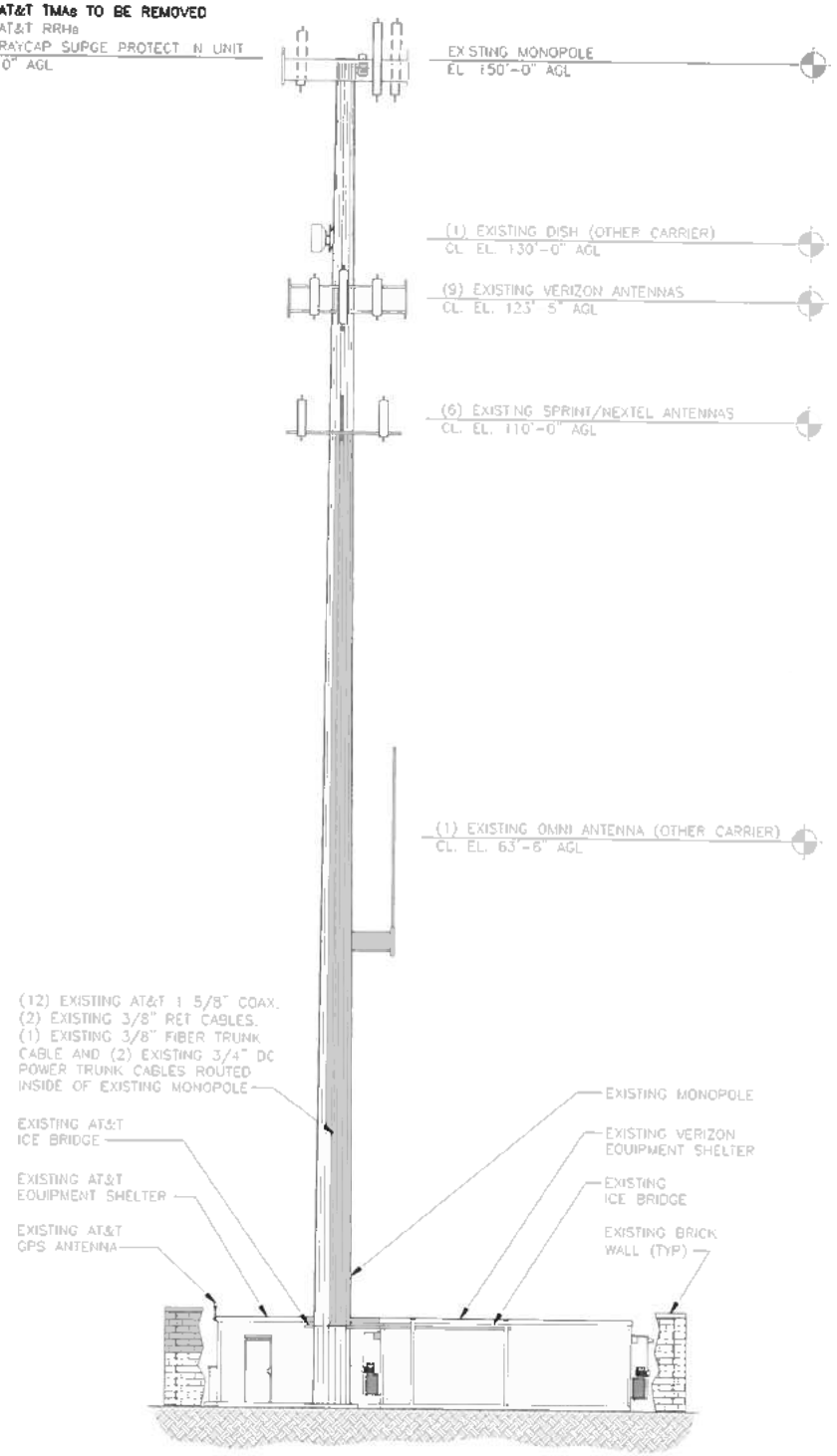
SHEET TITLE
EQUIPMENT LAYOUT

SHEET NUMBER
C-1.1

NOTES

1. FENCE NOT ENTIRELY SHOWN FOR CLARITY.
2. THE PASSING STRUCTURAL ANALYSIS FOR THE EXISTING STRUCTURE WAS COMPLETED BY BLACK & VEATCH ON 02/26/2016.

(9) EXISTING AT&T ANTENNAS
(6) EXISTING AT&T ANTENNAS TO BE REMOVED
(12) EXISTING AT&T TMAs
(6) EXISTING AT&T TMAs TO BE REMOVED
(6) EXISTING AT&T RRHs
(1) EXISTING RAYCAP SURGE PROTECT N UNIT
CL EL. 150'-0" AGL

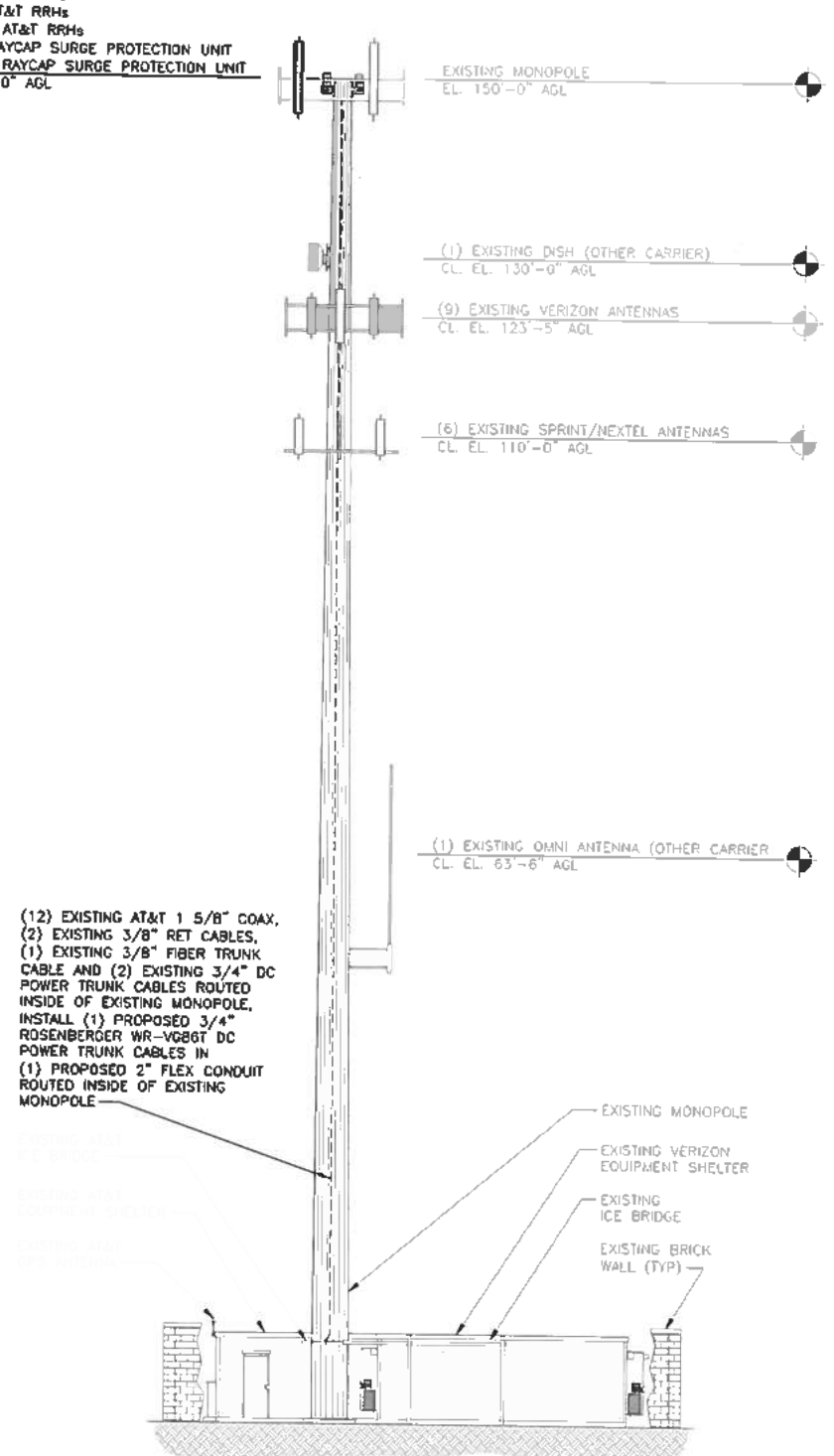


EXISTING ELEVATION
SEE DRAWING C-1

12' 8' 4' 0 10' 20'
3/32"=1'-0"

A

(3) EXISTING AT&T ANTENNAS
(3) PROPOSED AT&T ANTENNAS
(6) EXISTING AT&T TMAs
(6) EXISTING AT&T RRHs
(3) PROPOSED AT&T RRHs
(1) EXISTING RAYCAP SURGE PROTECTION UNIT
(1) PROPOSED RAYCAP SURGE PROTECTION UNIT
CL EL. 150'-0" AGL



PROPOSED ELEVATION
SEE DRAWING C-1

12' 8' 4' 0 10' 20'
3/32"=1'-0"

B

at&t
7801 FARLEY
OVERLAND PARK, KS 66204

BLACK & VEATCH
6800 W. 115TH ST. SUITE 2292
OVERLAND PARK, KS 66211
(913) 458-2000

PROJECT NO:	12903
DRAWN BY:	MBS
CHECKED BY:	LK

REV	DATE	DESCRIPTION
A	02/29/16	ISSUED FOR REVIEW

PRELIMINARY

PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE
ELEVATIONS

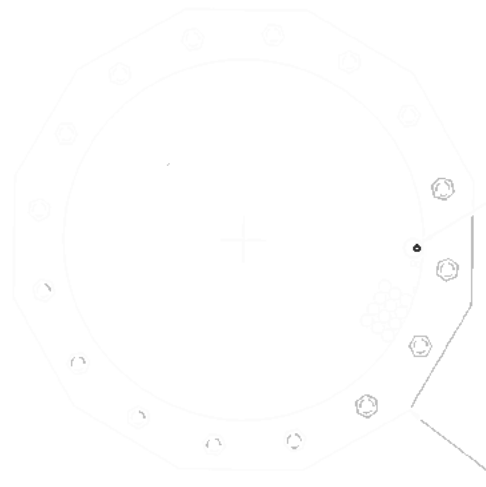
SHEET NUMBER
C-2

SECTOR	EXISTING ANTENNA MODEL NUMBER	EXISTING TECHNOLOGY	EXISTING AZIMUTH	FINAL ANTENNA MODEL NUMBER	FINAL TECHNOLOGY	FINAL AZIMUTH	DOWNTILT ELECTRICAL 700/850	DOWNTILT ELECTRICAL AWS/1900/WCS	DOWNTILT MECHANICAL	RAD CENTER, AGL	TMA MODEL NUMBER	RRH MODEL NUMBER
A1	* POWERWAVE P65-17 XLH-RR	LTE	4									
A2	ANDREW SBNH-1D65A5C	UMTS	4	ANDREW SBNH-1D65B5C	UMTS	4	–	–	–	150'	(2) POWERWAVE LGP 17201	–
A3	–	–	–	–	–	–	–	–	–	–	–	–
A4	–	–	–	–	–	–	–	–	–	–	–	–
A5	* CSS XDU06-80-R	GSM	4	ANDREW SBJAH4-1D65C-DL	LTE/GSM	4	–	1	0	150'	–	ALCATEL-LUCENT RRH4x25-WCS-4R ALCATEL-LUCENT 9442 RRH2x40W-07-L ALCATEL-LUCENT RRH2x60-150UA-4R
B1	* KATHREIN 800-10765	LTE	124									
B2	ANDREW SBNH-1D65B5C	UMTS	124	ANDREW SBNH-1D65B5C	UMTS	124	–	–	–	150'	(2) POWERWAVE LGP 17201	–
B3	–	–	–	–	–	–	–	–	–	–	–	–
B4	–	–	–	–	–	–	–	–	–	–	–	–
B5	* CSS XDU06-80-R	GSM	124	ANDREW SBJAH4-1D65B-DL	LTE/GSM	124	–	1	0	150'	–	ALCATEL-LUCENT RRH4x25-WCS-4R ALCATEL-LUCENT 9442 RRH2x40W-07-L ALCATEL-LUCENT RRH2x60-19DDA-4R
C1	* KATHREIN 800-10765	LTE	244									
C2	ANDREW SBNH-1D65B5C	UMTS	244	ANDREW SBNH-1D65B5C	UMTS	244	–	–	–	150'	(2) POWERWAVE LGP 17201	–
C3	–	–	–	–	–	–	–	–	–	–	–	–
C4	–	–	–	–	–	–	–	–	–	–	–	–
C5	* CSS XDU06-80-R	GSM	244	ANDREW SBJAH4-1D65C-DL	LTE/GSM	244	–	4	2	150'	–	ALCATEL-LUCENT RRH4x25-WCS-4R ALCATEL-LUCENT 9442 RRH2x40W-07-L ALCATEL-LUCENT RRH2x60-19DDA-4R

RFDS VERSION: CONTRACTOR IS TO REFER TO AT&T'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION.
* EXISTING ANTENNA TO BE REMOVED.

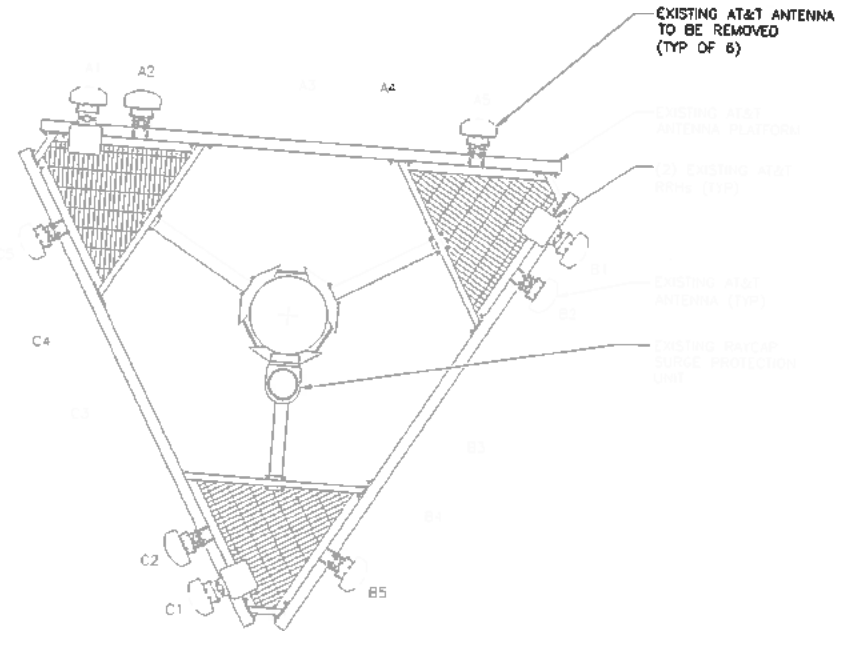
ANTENNA CONFIGURATION

NO SCALE | A



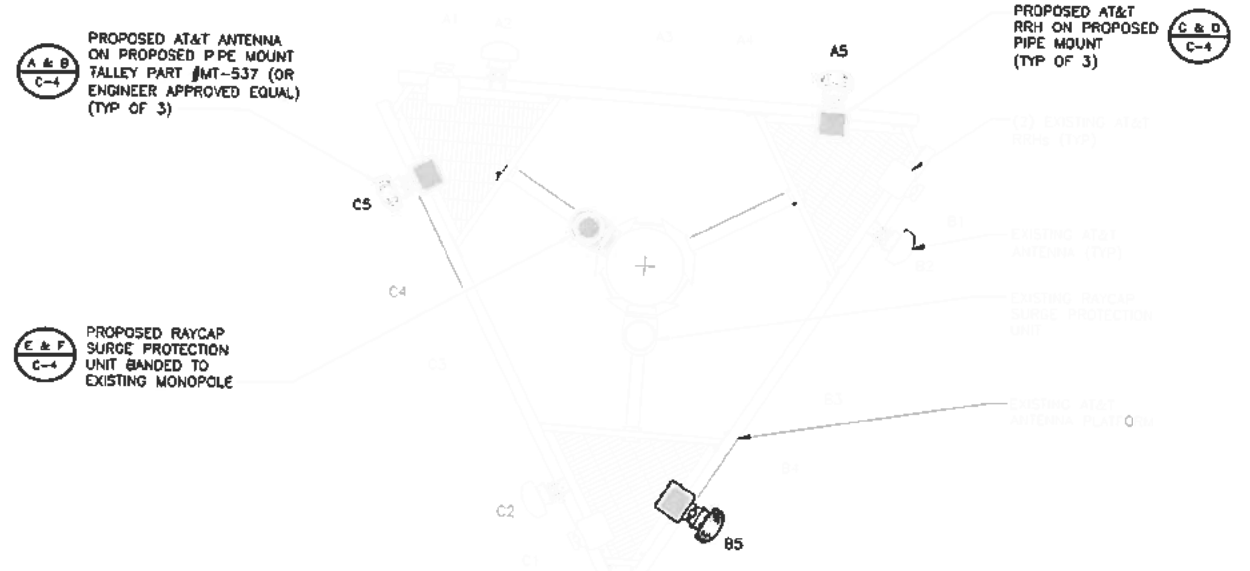
PROPOSED COAX ROUTING LAYOUT

NO SCALE | B



EXISTING ANTENNA LAYOUT

NO SCALE | C



NOTES

1. SEE ANTENNA CONFIGURATION FOR MODEL NUMBERS AND AZIMUTHS.
2. EXACT PLACEMENT OF RRHs TO BE FIELD VERIFIED AND NOT EXCEED ANTENNA DIMENSIONS ON TOWER.
3. PROPOSED EQUIPMENT MOUNTED TO THE TOWER LEG TO BE INSTALLED IN A MANNER THAT DOES NOT INTERFERE WITH CLIMBING APPARATUS.
4. ANTENNAS SHALL BE LOCATED SPECIFICALLY AS SHOWN, PER THE ANTENNA MOUNT ANALYSIS, FOR LOAD DISTRIBUTION

PROPOSED ANTENNA LAYOUT

NO SCALE | D

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BLACK & VEATCH
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PROJECT NO:	12903
DRAWN BY:	MBS
CHECKED BY:	LH

REV	DATE	DESCRIPTION
A	02/28/18	ISSUED FOR REVIEW

PRELIMINARY

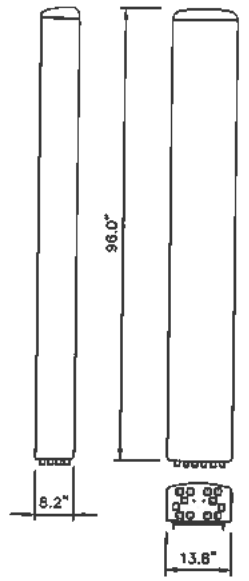
PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE
ANTENNA LAYOUT AND SCHEDULE

SHEET NUMBER
C-3

ANDREW SBJAH4-1D65C-DL

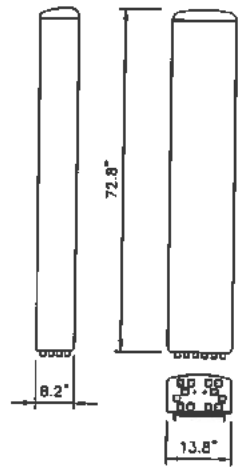
WIDTH:	13.8" (350mm)
DEPTH:	8.2" (208mm)
HEIGHT:	96.0" (2438mm)
TOTAL WEIGHT (WITHOUT BRACKETS):	74.3 LBS (33.7 Kg)
CONNECTOR INTERFACE:	4.3-10 FEMALE
RF CONNECTOR LOCATION:	BOTTOM
RF CONNECTOR QUANTITY:	12



ALPHA SECTOR

ANDREW SBJAH4-1D65B-DL

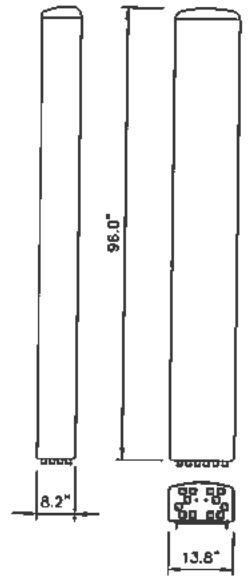
WIDTH:	13.8" (350mm)
DEPTH:	8.2" (208mm)
HEIGHT:	72.8" (1850mm)
TOTAL WEIGHT (WITHOUT BRACKETS):	58.0 LBS (26.3 Kg)
CONNECTOR INTERFACE:	4.3-10 FEMALE
RF CONNECTOR LOCATION:	BOTTOM
RF CONNECTOR QUANTITY:	12



BETA SECTOR

ANDREW SBJAH4-1D65C-DL

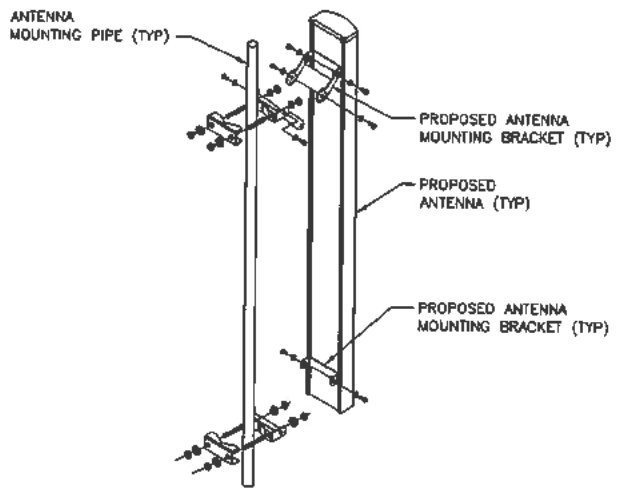
WIDTH:	13.8" (350mm)
DEPTH:	8.2" (208mm)
HEIGHT:	96.0" (2438mm)
TOTAL WEIGHT (WITHOUT BRACKETS):	74.3 LBS (33.7 Kg)
CONNECTOR INTERFACE:	4.3-10 FEMALE
RF CONNECTOR LOCATION:	BOTTOM
RF CONNECTOR QUANTITY:	12



GAMMA SECTOR

PROPOSED LTE ANTENNA SPECIFICATIONS

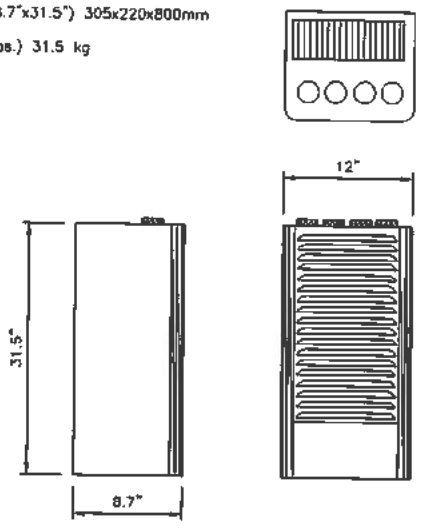
NO SCALE | A



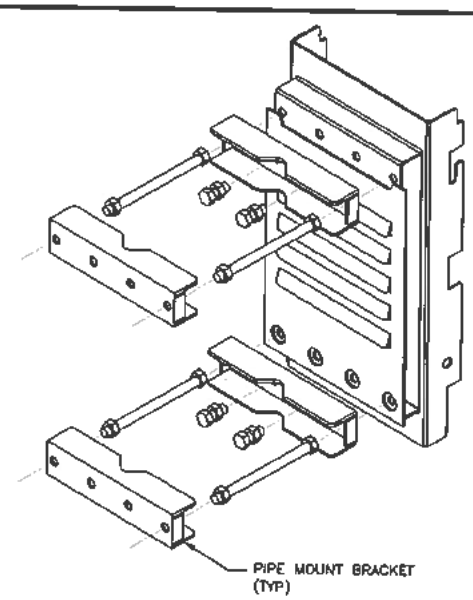
ANTENNA PIPE MOUNTING DETAIL | NO SCALE | B

ALCATEL-LUCENT RRH4x25-WCS-4R

DIMENSIONS, WxDxH:	(12"x8.7"x31.5") 305x220x800mm
WEIGHT, WITHOUT MOUNTING KIT:	(70 lbs.) 31.5 kg



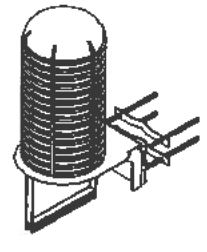
RRH SPECIFICATIONS (WCS) | NO SCALE | C

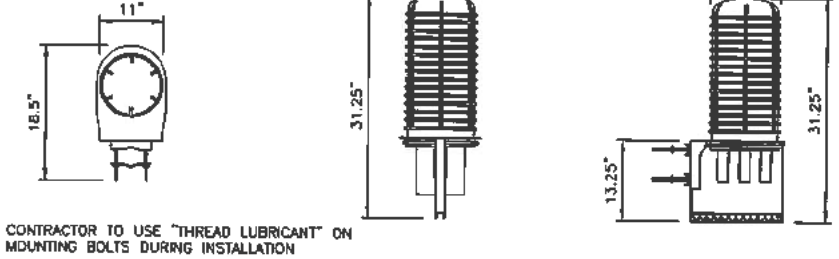


SINGLE RRH MOUNTING PLATE DETAIL | NO SCALE | D

RAYCAP DC6-48-60-0-8F

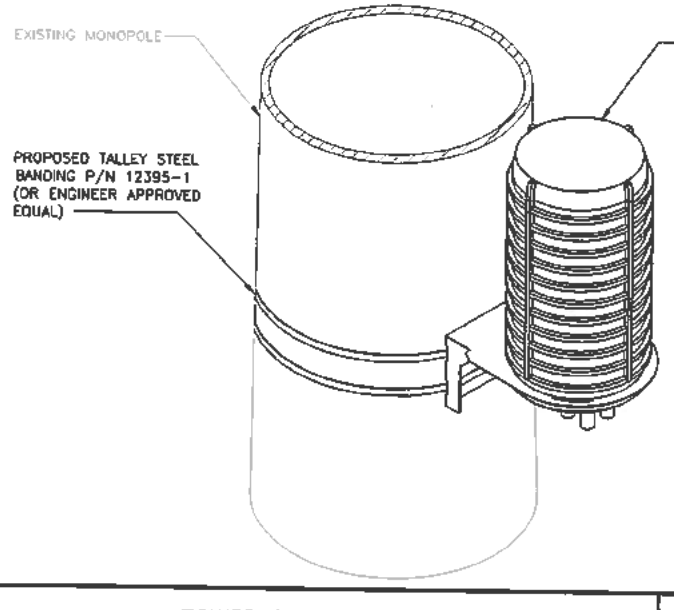
DIMENSIONS, DxH:	280x794mm (11"x31.25")
NOMINAL OPERATING VOLTAGE:	48 VDC
NOMINAL DISCHARGE CURRENT:	20 kA 8/20µs
MAXIMUM DISCHARGE CURRENT:	60 kA 8/20µs
MAXIMUM CONTINUOUS OPERATING VOLTAGE:	75 VDC
VOLTAGE PROTECTION RATING:	400 V
WIND LOADING:	150 MPH SUSTAINED (105.7 lbs) 195 MPH GUST (213.6 lbs)
TOTAL WEIGHT:	32.8 lbs





CONTRACTOR TO USE "THREAD LUBRICANT" ON MOUNTING BOLTS DURING INSTALLATION

DC ONLY SURGE SUPPRESSOR DETAIL | NO SCALE | E



TOWER BANDING DETAIL | NO SCALE | F

NOTE

1. CLOSEOUT DELIVERABLE SHALL INCLUDE PHOTOS OF ALL MOUNTING HARDWARE INSTALLED TIGHT AND MARKED.

G

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7801 FARLEY
OVERLAND PARK, KS 66204

BLACK & VEATCH

6800 W. 115TH ST. SUITE 2292
OVERLAND PARK, KS 66211
(913) 458-2000

PROJECT NO:	12903
DRAWN BY:	MB
CHECKED BY:	LI

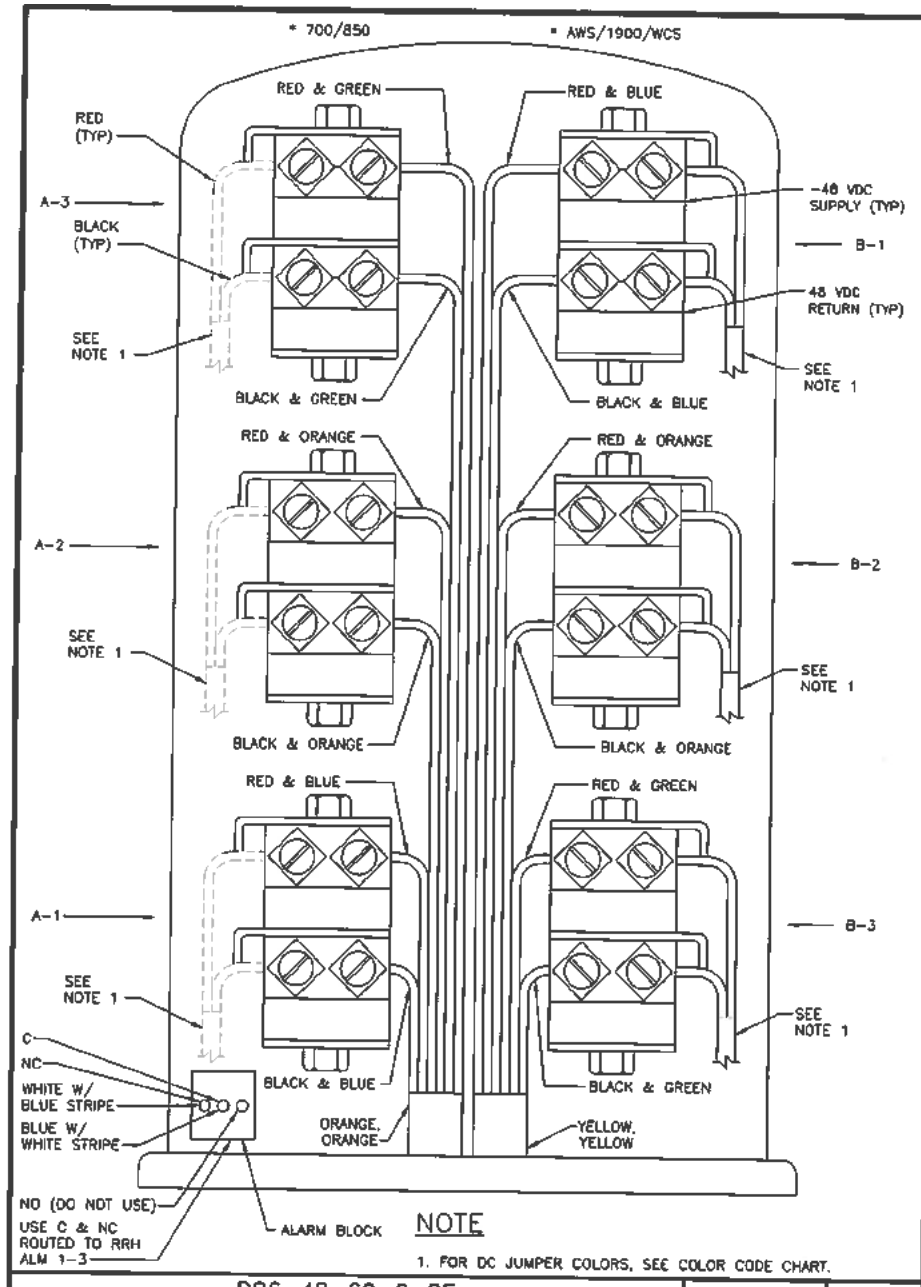
REV	DATE	DESCRIPTION
A	02/29/18	ISSUED FOR REVIEW

PRELIMINARY

PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
C-4



DC6-48-60-0-8F
DC SURGE SUPPRESSION SOLUTION

NO SCALE	A

NOT USED

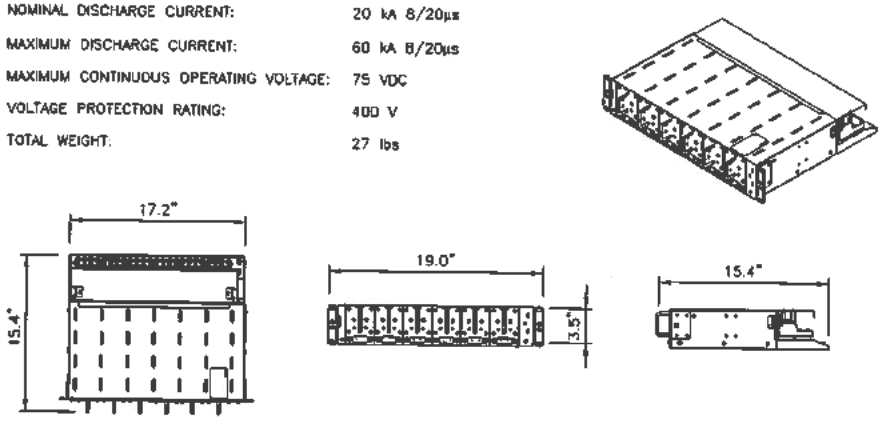
NO SCALE	B

NOT USED

NO SCALE	C

RAYCAP DC12-48-60-RM

DIMENSIONS, WxDxH:	483x89x392mm (19.0"x3.5"x15.4")
NOMINAL OPERATING VOLTAGE:	48 VDC
NOMINAL DISCHARGE CURRENT:	20 kA 8/20µs
MAXIMUM DISCHARGE CURRENT:	60 kA 8/20µs
MAXIMUM CONTINUOUS OPERATING VOLTAGE:	75 VDC
VOLTAGE PROTECTION RATING:	400 V
TOTAL WEIGHT:	27 lbs



DC SURGE SUPPRESSOR DETAIL

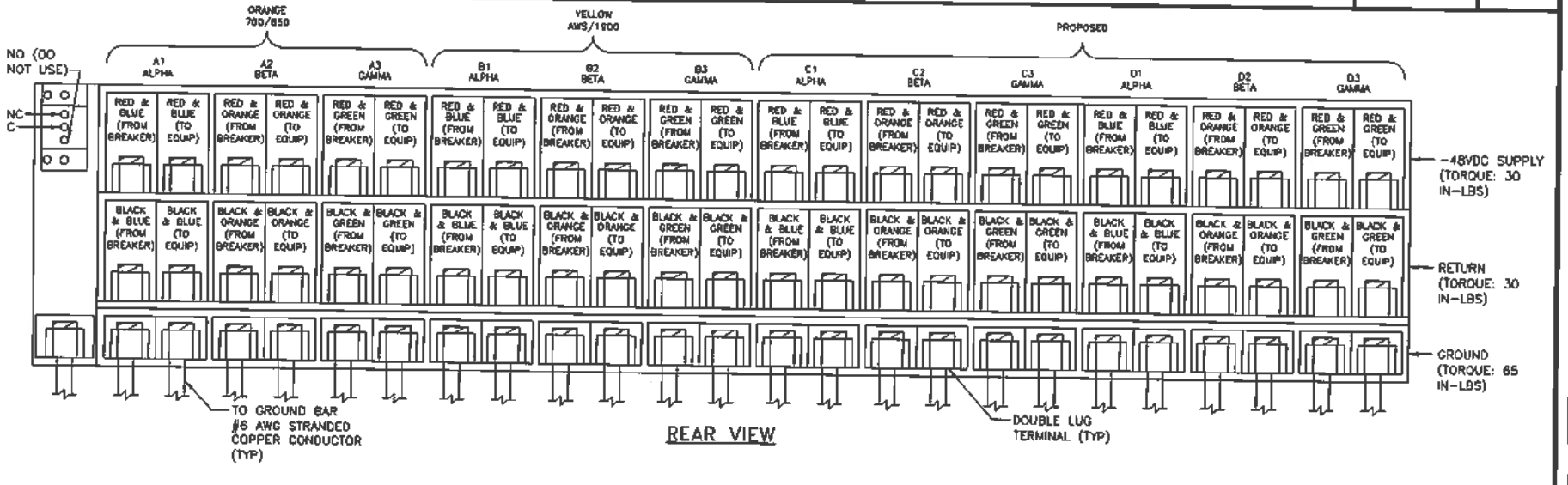
NO SCALE	F

NOT USED

NO SCALE	D

NOT USED

NO SCALE	E



REAR VIEW

DC12-48-60-RM DC SURGE SUPPRESSION SOLUTION WIRE DIAGRAM

NO SCALE	G

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7801 FARLEY
OVERLAND PARK, KS 66204

BLACK & VEATCH

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OVERLAND PARK, KS 66211
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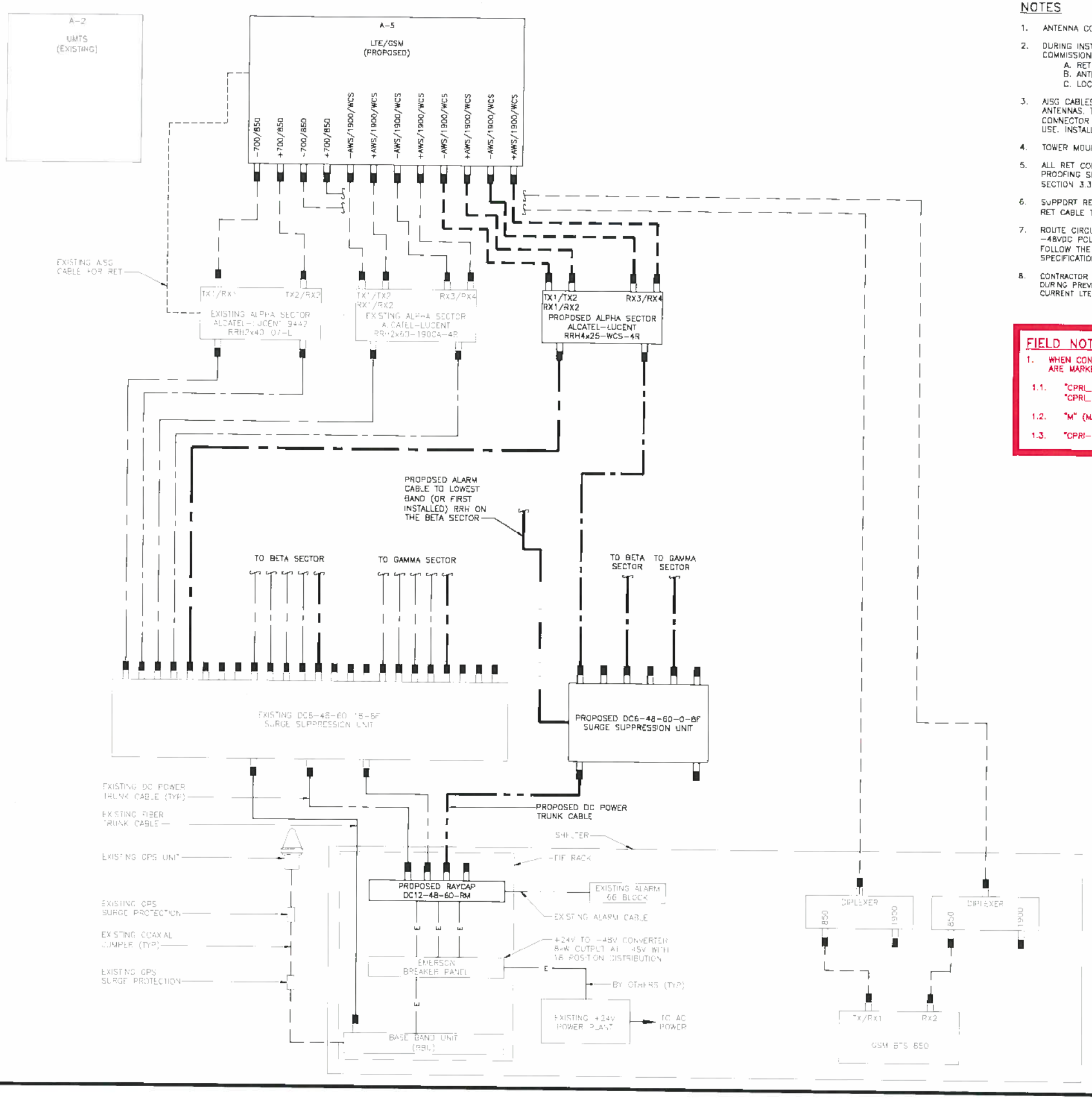
PRELIMINARY

PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
C-5

TYPICAL CONFIGURATION AS VIEWED FROM REAR OF ANTENNA



NOTES

1. ANTENNA CONFIGURATION IS SHOWN DIAGRAMMATICALLY ONLY AS A REPRESENTATION.
2. DURING INSTALLATION, RECORD THE FOLLOWING INFORMATION FOR USE DURING THE COMMISSIONING PHASE:
   A. RET ACTUATOR/MOTOR SERIAL NUMBER
   B. ANTENNA SERIAL NUMBER
   C. LOCATION (SECTOR IN WHICH THE ANTENNA WILL OPERATE)
3. AISG CABLES PROVIDE CONTROL AND POWER TO ELECTRICAL DOWN TILT DRIVES ON THE ANTENNAS. THE CABLES ARE FACTORY ASSEMBLED WITH ONE MALE AND ONE FEMALE CONNECTOR ON EACH END. SUPPORT EVERY 18" USING TIE WRAPS SUITABLE FOR OUTDOOR USE. INSTALL DRIP LOOPS AT EVERY LOCATION WHERE WATER MAY ACCUMULATE.
4. TOWER MOUNT APPLICATION WILL DICTATE THE LENGTH OF CABLE TO BE USED.
5. ALL RET CONNECTIONS SHALL BE WEATHERPROOFED. PREFERRED METHOD OF WEATHER PROOFING SHALL BE TO HEAT SHRINK ALL RET CONNECTIONS PER NO-135 RET GUIDELINES SECTION 3.3 AISG (RS 485) CABLE – "ALL CABLE CONNECTORS REQUIRE WEATHERPROOFING."
6. SUPPORT RET AISG COMM CABLE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. RET CABLE TO BE SUPPORTED USING 1/2" CLIPS WITH 3/8" RUBBER INSERT GROMMETS.
7. ROUTE CIRCUITS IN CABLE TRAY OR EMT CONDUITS TO THE EXISTING +24VDC PDU OR -48VDC PCU PANELS. PROVIDE THE APPROPRIATE SIZE OF OVERCURRENT PROTECTION AND FOLLOW THE TERMINATION PROCEDURES IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. CONTRACTOR TO FIELD VERIFY IF CROSS SECTOR REDUNDANCY FEATURE (CSRF) WAS INSTALLED DURING PREVIOUS APPLICATIONS, IF CSRF WAS INSTALLED, CONTRACTOR TO REMOVE AND FOLLOW CURRENT LTE CONFIGURATION.

FIELD NOTE

1. WHEN CONNECTING FIBER JUMPERS TO THE BOTTOM OF THE RRH, IF CONNECTION PORTS ARE MARKED AS FOLLOWS CONNECT TO THE APPROPRIATE PORT LISTED BELOW:
   - 1.1. "CPRI_PRI" (PRIMARY PORT) AND "CPRI_SEC" (SECONDARY PORT)–CONNECT TO THE "CPRI_PRI" PORT.
   - 1.2. "M" (MASTER PORT) AND "S" (SLAVE PORT)–CONNECT TO THE "S" PORT.
   - 1.3. "CPRI-1" AND "CPRI-2" – CONNECT TO THE "CPRI-1" PORT.

LEGEND

- DIN MALE
- DIN FEMALE
- PROPOSED COAXIAL JUMPER
- EXISTING COAXIAL JUMPER
- PROPOSED FIBER JUMPER
- EXISTING FIBER JUMPER
- PROPOSED DC JUMPER
- EXISTING DC JUMPER
- PROPOSED FIBER TRUNK
- EXISTING FIBER TRUNK
- PROPOSED DC TRUNK
- EXISTING DC TRUNK
- ALARM CABLE
- EXISTING ALARM CABLE
- PROPOSED RET CABLE
- EXISTING RET CABLE
- BY OTHERS
- FUTURE CABLES

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6800 W. 115TH ST, SUITE 2292
OVERLAND PARK, KS 66211
(913) 458-2000

PROJECT NO:	129033
DRAWN BY:	MB
CHECKED BY:	LI

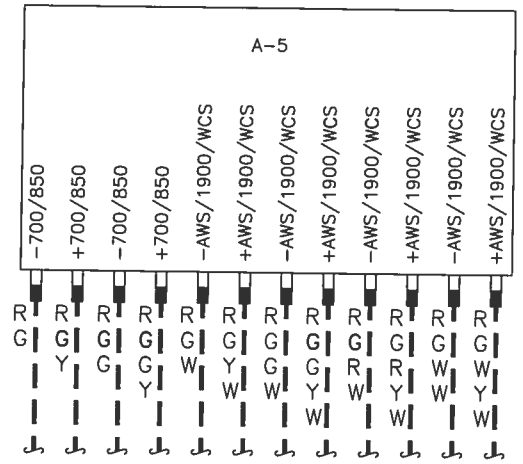
REV	DATE	DESCRIPTION
A	02/29/16	ISSUED FOR REVIEW

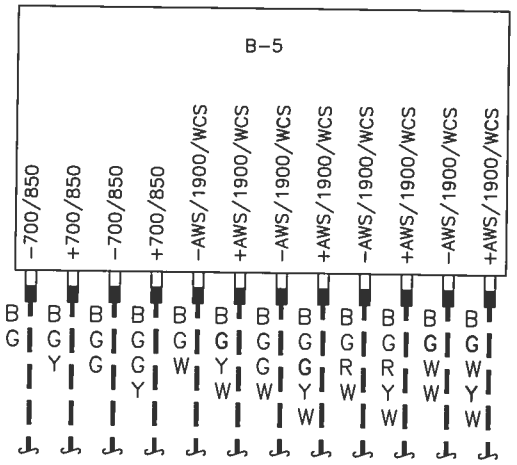
PRELIMINARY

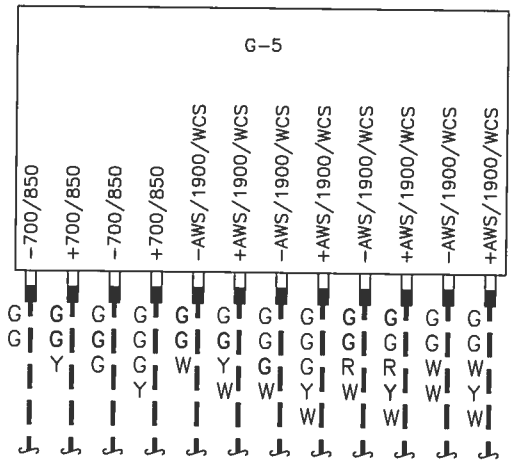
PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE
LTE CONFIGURATION

SHEET NUMBER
RF-1







LEGEND

R	RED
B	BLUE
S	SLATE
O	ORANGE
Br	BROWN
Y	YELLOW
W	WHITE

12-PORT LTE ANTENNA COLOR CODING — NO SCALE — A

NOT USED — NO SCALE — B

NOT USED — NO SCALE — C

at&t

7801 FARLEY
OVERLAND PARK, KS 66204

BLACK & VEATCH

6800 W. 115TH ST, SUITE 2292
OVERLAND PARK, KS 66211
(913) 458-2000

PROJECT NO:	12903
DRAWN BY:	MB
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PRELIMINARY

PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE
CABLE COLOR CODING

SHEET NUMBER
RF-2

COAX JUMPER COLOR CODE

SECTOR	POS	BAND	1ST COLOR	2ND COLOR	3RD COLOR	4TH COLOR	5TH COLOR
ALPHA	1	-700/850	RED	BLUE			
ALPHA	1	+700/850	RED	BLUE	YELLOW		
ALPHA	1	-700/850	RED	BLUE	BLUE		
ALPHA	1	+700/850	RED	BLUE	BLUE	YELLOW	
ALPHA	1	-1900/AWS/PCS/WCS	RED	BLUE	WHITE		
ALPHA	1	+1900/AWS/PCS/WCS	RED	BLUE	YELLOW	WHITE	
ALPHA	1	-1900/AWS/PCS/WCS	RED	BLUE	BLUE	WHITE	
ALPHA	1	+1900/AWS/PCS/WCS	RED	BLUE	BLUE	YELLOW	WHITE
ALPHA	1	-1900/AWS/PCS/WCS	RED	BLUE	RED	WHITE	
ALPHA	1	+1900/AWS/PCS/WCS	RED	BLUE	RED	YELLOW	WHITE
ALPHA	1	-1900/AWS/PCS/WCS	RED	BLUE	WHITE	WHITE	
ALPHA	1	+1900/AWS/PCS/WCS	RED	BLUE	WHITE	YELLOW	WHITE
ALPHA	2	-700/850	RED	SLATE			
ALPHA	2	+700/850	RED	SLATE	YELLOW		
ALPHA	2	-700/850	RED	SLATE	SLATE		
ALPHA	2	+700/850	RED	SLATE	SLATE	YELLOW	
ALPHA	2	-1900/AWS/PCS/WCS	RED	SLATE	WHITE		
ALPHA	2	+1900/AWS/PCS/WCS	RED	SLATE	YELLOW	WHITE	
ALPHA	2	-1900/AWS/PCS/WCS	RED	SLATE	SLATE	WHITE	
ALPHA	2	+1900/AWS/PCS/WCS	RED	SLATE	SLATE	YELLOW	WHITE
ALPHA	2	-1900/AWS/PCS/WCS	RED	SLATE	RED	WHITE	
ALPHA	2	+1900/AWS/PCS/WCS	RED	SLATE	RED	YELLOW	WHITE
ALPHA	2	-1900/AWS/PCS/WCS	RED	SLATE	WHITE	WHITE	
ALPHA	2	+1900/AWS/PCS/WCS	RED	SLATE	WHITE	YELLOW	WHITE
ALPHA	3	-700/850	RED	ORANGE			
ALPHA	3	+700/850	RED	ORANGE	YELLOW		
ALPHA	3	-700/850	RED	ORANGE	ORANGE		
ALPHA	3	+700/850	RED	ORANGE	ORANGE	YELLOW	
ALPHA	3	-1900/AWS/PCS/WCS	RED	ORANGE	WHITE		
ALPHA	3	+1900/AWS/PCS/WCS	RED	ORANGE	YELLOW	WHITE	
ALPHA	3	-1900/AWS/PCS/WCS	RED	ORANGE	ORANGE	WHITE	
ALPHA	3	+1900/AWS/PCS/WCS	RED	ORANGE	ORANGE	YELLOW	WHITE
ALPHA	3	-1900/AWS/PCS/WCS	RED	ORANGE	RED	WHITE	
ALPHA	3	+1900/AWS/PCS/WCS	RED	ORANGE	RED	YELLOW	WHITE
ALPHA	3	-1900/AWS/PCS/WCS	RED	ORANGE	WHITE	WHITE	
ALPHA	3	+1900/AWS/PCS/WCS	RED	ORANGE	WHITE	YELLOW	WHITE
ALPHA	4	-700/850	RED	BROWN			
ALPHA	4	+700/850	RED	BROWN	YELLOW		
ALPHA	4	-700/850	RED	BROWN	BROWN		
ALPHA	4	+700/850	RED	BROWN	BROWN	YELLOW	
ALPHA	4	-1900/AWS/PCS/WCS	RED	BROWN	WHITE		
ALPHA	4	+1900/AWS/PCS/WCS	RED	BROWN	YELLOW	WHITE	
ALPHA	4	-1900/AWS/PCS/WCS	RED	BROWN	BROWN	WHITE	
ALPHA	4	+1900/AWS/PCS/WCS	RED	BROWN	BROWN	YELLOW	WHITE
ALPHA	4	-1900/AWS/PCS/WCS	RED	BROWN	RED	WHITE	
ALPHA	4	+1900/AWS/PCS/WCS	RED	BROWN	RED	YELLOW	WHITE
ALPHA	4	-1900/AWS/PCS/WCS	RED	BROWN	WHITE	WHITE	
ALPHA	4	+1900/AWS/PCS/WCS	RED	BROWN	WHITE	YELLOW	WHITE
ALPHA	5	-700/850	RED	GREEN			
ALPHA	5	+700/850	RED	GREEN	YELLOW		
ALPHA	5	-700/850	RED	GREEN	GREEN		
ALPHA	5	+700/850	RED	GREEN	GREEN	YELLOW	
ALPHA	5	-1900/AWS/PCS/WCS	RED	GREEN	WHITE		
ALPHA	5	+1900/AWS/PCS/WCS	RED	GREEN	YELLOW	WHITE	
ALPHA	5	-1900/AWS/PCS/WCS	RED	GREEN	GREEN	WHITE	
ALPHA	5	+1900/AWS/PCS/WCS	RED	GREEN	GREEN	YELLOW	WHITE
ALPHA	5	-1900/AWS/PCS/WCS	RED	GREEN	RED	WHITE	
ALPHA	5	+1900/AWS/PCS/WCS	RED	GREEN	RED	YELLOW	WHITE
ALPHA	5	-1900/AWS/PCS/WCS	RED	GREEN	WHITE	WHITE	
ALPHA	5	+1900/AWS/PCS/WCS	RED	GREEN	WHITE	YELLOW	WHITE
BETA	1	-700/850	BLUE	BLUE			
BETA	1	+700/850	BLUE	BLUE	YELLOW		
BETA	1	-700/850	BLUE	BLUE	BLUE		
BETA	1	+700/850	BLUE	BLUE	BLUE	YELLOW	
BETA	1	-1900/AWS/PCS/WCS	BLUE	BLUE	WHITE		
BETA	1	+1900/AWS/PCS/WCS	BLUE	BLUE	YELLOW	WHITE	
BETA	1	-1900/AWS/PCS/WCS	BLUE	BLUE	BLUE	WHITE	
BETA	1	+1900/AWS/PCS/WCS	BLUE	BLUE	BLUE	YELLOW	WHITE
BETA	1	-1900/AWS/PCS/WCS	BLUE	BLUE	RED	WHITE	
BETA	1	+1900/AWS/PCS/WCS	BLUE	BLUE	RED	YELLOW	WHITE
BETA	1	-1900/AWS/PCS/WCS	BLUE	BLUE	WHITE	WHITE	
BETA	1	+1900/AWS/PCS/WCS	BLUE	BLUE	WHITE	YELLOW	WHITE
BETA	2	-700/850	BLUE	SLATE			
BETA	2	+700/850	BLUE	SLATE	YELLOW		
BETA	2	-700/850	BLUE	SLATE	SLATE		
BETA	2	+700/850	BLUE	SLATE	SLATE	YELLOW	
BETA	2	-1900/AWS/PCS/WCS	BLUE	SLATE	WHITE		
BETA	2	+1900/AWS/PCS/WCS	BLUE	SLATE	YELLOW	WHITE	
BETA	2	-1900/AWS/PCS/WCS	BLUE	SLATE	SLATE	WHITE	
BETA	2	+1900/AWS/PCS/WCS	BLUE	SLATE	SLATE	YELLOW	WHITE
BETA	2	-1900/AWS/PCS/WCS	BLUE	SLATE	RED	WHITE	
BETA	2	+1900/AWS/PCS/WCS	BLUE	SLATE	RED	YELLOW	WHITE
BETA	2	-1900/AWS/PCS/WCS	BLUE	SLATE	WHITE	WHITE	
BETA	2	+1900/AWS/PCS/WCS	BLUE	SLATE	WHITE	YELLOW	WHITE
BETA	3	-700/850	BLUE	ORANGE			
BETA	3	+700/850	BLUE	ORANGE	YELLOW		
BETA	3	-700/850	BLUE	ORANGE	ORANGE		
BETA	3	+700/850	BLUE	ORANGE	ORANGE	YELLOW	
BETA	3	-1900/AWS/PCS/WCS	BLUE	ORANGE	WHITE		
BETA	3	+1900/AWS/PCS/WCS	BLUE	ORANGE	YELLOW	WHITE	

COAX JUMPER COLOR CODE

SECTOR	POS	BAND	1ST COLOR	2ND COLOR	3RD COLOR	4TH COLOR	5TH COLOR
BETA	3	-1900/AWS/PCS/WCS	BLUE	ORANGE	ORANGE	WHITE	
BETA	3	+1900/AWS/PCS/WCS	BLUE	ORANGE	ORANGE	YELLOW	WHITE
BETA	3	-1900/AWS/PCS/WCS	BLUE	ORANGE	RED	WHITE	
BETA	3	+1900/AWS/PCS/WCS	BLUE	ORANGE	RED	YELLOW	WHITE
BETA	3	-1900/AWS/PCS/WCS	BLUE	ORANGE	WHITE	WHITE	
BETA	3	+1900/AWS/PCS/WCS	BLUE	ORANGE	WHITE	YELLOW	WHITE
BETA	4	-700/850	BLUE	BROWN			
BETA	4	+700/850	BLUE	BROWN	YELLOW		
BETA	4	-700/850	BLUE	BROWN	BROWN		
BETA	4	+700/850	BLUE	BROWN	BROWN	YELLOW	
BETA	4	-1900/AWS/PCS/WCS	BLUE	BROWN	WHITE		
BETA	4	+1900/AWS/PCS/WCS	BLUE	BROWN	YELLOW	WHITE	
BETA	4	-1900/AWS/PCS/WCS	BLUE	BROWN	BROWN	WHITE	
BETA	4	+1900/AWS/PCS/WCS	BLUE	BROWN	BROWN	YELLOW	WHITE
BETA	4	-1900/AWS/PCS/WCS	BLUE	BROWN	RED	WHITE	
BETA	4	+1900/AWS/PCS/WCS	BLUE	BROWN	RED	YELLOW	WHITE
BETA	4	-1900/AWS/PCS/WCS	BLUE	BROWN	WHITE	WHITE	
BETA	4	+1900/AWS/PCS/WCS	BLUE	BROWN	WHITE	YELLOW	WHITE
BETA	5	-700/850	BLUE	GREEN			
BETA	5	+700/850	BLUE	GREEN	YELLOW		
BETA	5	-700/850	BLUE	GREEN	GREEN		
BETA	5	+700/850	BLUE	GREEN	GREEN	YELLOW	
BETA	5	-1900/AWS/PCS/WCS	BLUE	GREEN	WHITE		
BETA	5	+1900/AWS/PCS/WCS	BLUE	GREEN	YELLOW	WHITE	
BETA	5	-1900/AWS/PCS/WCS	BLUE	GREEN	GREEN	WHITE	
BETA	5	+1900/AWS/PCS/WCS	BLUE	GREEN	GREEN	YELLOW	WHITE
BETA	5	-1900/AWS/PCS/WCS	BLUE	GREEN	RED	WHITE	
BETA	5	+1900/AWS/PCS/WCS	BLUE	GREEN	RED	YELLOW	WHITE
BETA	5	-1900/AWS/PCS/WCS	BLUE	GREEN	WHITE	WHITE	
BETA	5	+1900/AWS/PCS/WCS	BLUE	GREEN	WHITE	YELLOW	WHITE
GAMMA	1	-700/850	GREEN	BLUE			
GAMMA	1	+700/850	GREEN	BLUE	YELLOW		
GAMMA	1	-700/850	GREEN	BLUE	BLUE		
GAMMA	1	+700/850	GREEN	BLUE	BLUE	YELLOW	
GAMMA	1	-1900/AWS/PCS/WCS	GREEN	BLUE	WHITE		
GAMMA	1	+1900/AWS/PCS/WCS	GREEN	BLUE	YELLOW	WHITE	
GAMMA	1	-1900/AWS/PCS/WCS	GREEN	BLUE	BLUE	WHITE	
GAMMA	1	+1900/AWS/PCS/WCS	GREEN	BLUE	BLUE	YELLOW	WHITE
GAMMA	1	-1900/AWS/PCS/WCS	GREEN	BLUE	RED	WHITE	
GAMMA	1	+1900/AWS/PCS/WCS	GREEN	BLUE	RED	YELLOW	WHITE
GAMMA	1	-1900/AWS/PCS/WCS	GREEN	BLUE	WHITE	WHITE	
GAMMA	1	+1900/AWS/PCS/WCS	GREEN	BLUE	WHITE	YELLOW	WHITE
GAMMA	2	-700/850	GREEN	SLATE			
GAMMA	2	+700/850	GREEN	SLATE	YELLOW		
GAMMA	2	-700/850	GREEN	SLATE	SLATE		
GAMMA	2	+700/850	GREEN	SLATE	SLATE	YELLOW	
GAMMA	2	-1900/AWS/PCS/WCS	GREEN	SLATE	WHITE		
GAMMA	2	+1900/AWS/PCS/WCS	GREEN	SLATE	YELLOW	WHITE	
GAMMA	2	-1900/AWS/PCS/WCS	GREEN	SLATE	WHITE		
GAMMA	2	+1900/AWS/PCS/WCS	GREEN	SLATE	SLATE	WHITE	
GAMMA	2	-1900/AWS/PCS/WCS	GREEN	SLATE	RED	WHITE	
GAMMA	2	+1900/AWS/PCS/WCS	GREEN	SLATE	RED	YELLOW	WHITE
GAMMA	2	-1900/AWS/PCS/WCS	GREEN	SLATE	WHITE	WHITE	
GAMMA	2	+1900/AWS/PCS/WCS	GREEN	SLATE	WHITE	YELLOW	WHITE
GAMMA	3	-700/850	GREEN	ORANGE			
GAMMA	3	+700/850	GREEN	ORANGE	YELLOW		
GAMMA	3	-700/850	GREEN	ORANGE	ORANGE		
GAMMA	3	+700/850	GREEN	ORANGE	ORANGE	YELLOW	
GAMMA	3	-1900/AWS/PCS/WCS	GREEN	ORANGE	WHITE		
GAMMA	3	+1900/AWS/PCS/WCS	GREEN	ORANGE	YELLOW	WHITE	
GAMMA	3	-1900/AWS/PCS/WCS	GREEN	ORANGE	ORANGE	WHITE	
GAMMA	3	+1900/AWS/PCS/WCS	GREEN	ORANGE	ORANGE	YELLOW	WHITE
GAMMA	3	-1900/AWS/PCS/WCS	GREEN	ORANGE	RED	WHITE	
GAMMA	3	+1900/AWS/PCS/WCS	GREEN	ORANGE	RED	YELLOW	WHITE
GAMMA	3	-1900/AWS/PCS/WCS	GREEN	ORANGE	WHITE	WHITE	
GAMMA	3	+1900/AWS/PCS/WCS	GREEN	ORANGE	WHITE	YELLOW	WHITE
GAMMA	4	-700/850	GREEN	BROWN			
GAMMA	4	+700/850	GREEN	BROWN	YELLOW		
GAMMA	4	-700/850	GREEN	BROWN	BROWN		
GAMMA	4	+700/850	GREEN	BROWN	BROWN	YELLOW	
GAMMA	4	-1900/AWS/PCS/WCS	GREEN	BROWN	WHITE		
GAMMA	4	+1900/AWS/PCS/WCS	GREEN	BROWN	YELLOW	WHITE	
GAMMA	4	-1900/AWS/PCS/WCS	GREEN	BROWN	BROWN	WHITE	
GAMMA	4	+1900/AWS/PCS/WCS	GREEN	BROWN	BROWN	YELLOW	WHITE
GAMMA	4	-1900/AWS/PCS/WCS	GREEN	BROWN	RED	WHITE	
GAMMA	4	+1900/AWS/PCS/WCS	GREEN	BROWN	RED	YELLOW	WHITE
GAMMA	4	-1900/AWS/PCS/WCS	GREEN	BROWN	WHITE	WHITE	
GAMMA	4	+1900/AWS/PCS/WCS	GREEN	BROWN	WHITE	YELLOW	WHITE
GAMMA	5	-700/850	GREEN	GREEN			
GAMMA	5	+700/850	GREEN	GREEN	YELLOW		
GAMMA	5	-700/850	GREEN	GREEN	GREEN		
GAMMA	5	+700/850	GREEN	GREEN	GREEN	YELLOW	
GAMMA	5	-1900/AWS/PCS/WCS	GREEN	GREEN	WHITE		
GAMMA	5	+1900/AWS/PCS/WCS	GREEN	GREEN	YELLOW	WHITE	
GAMMA	5	-1900/AWS/PCS/WCS	GREEN	GREEN	GREEN	WHITE	
GAMMA	5	+1900/AWS/PCS/WCS	GREEN	GREEN	GREEN	YELLOW	WHITE
GAMMA	5	-1900/AWS/PCS/WCS	GREEN	GREEN	RED	WHITE	
GAMMA	5	+1900/AWS/PCS/WCS	GREEN	GREEN	RED	YELLOW	WHITE
GAMMA	5	-1900/AWS/PCS/WCS	GREEN	GREEN	WHITE	WHITE	
GAMMA	5	+1900/AWS/PCS/WCS	GREEN	GREEN	WHITE	YELLOW	WHITE

DC/FIBER JUMPER/NUMERICAL COLOR CODE

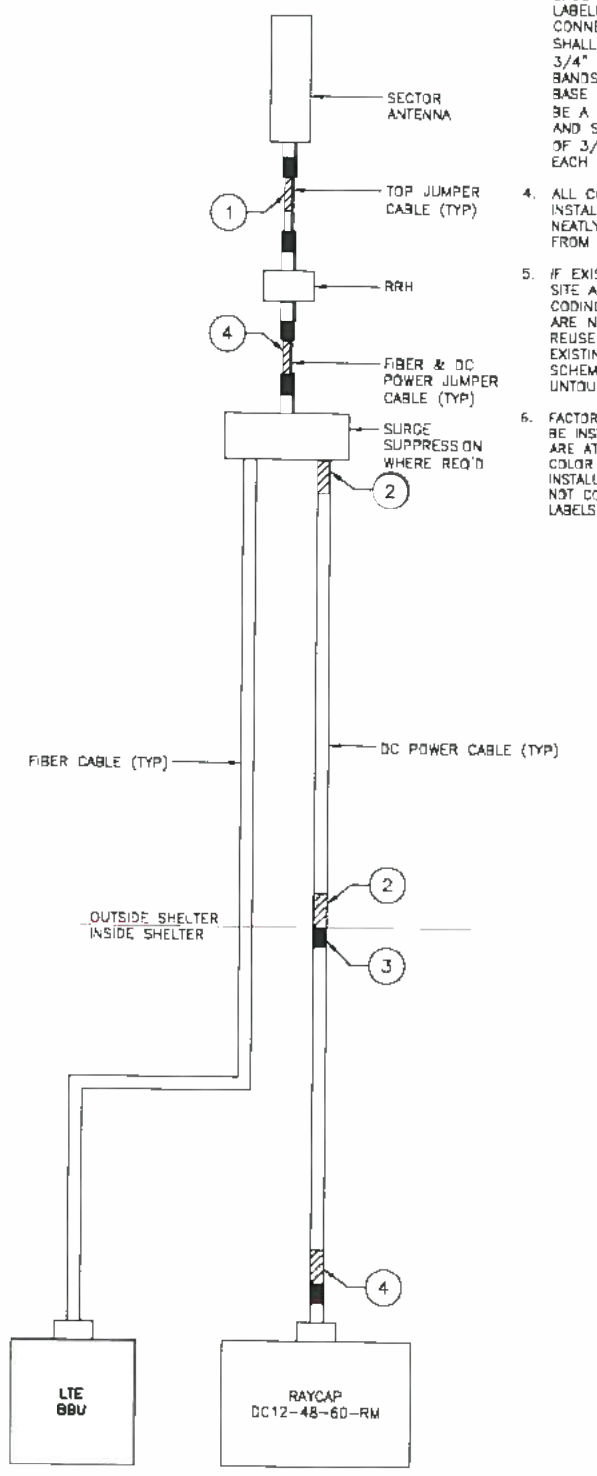
SECTOR	RRH	FIBER NUMBER	DC				
ALPHA	1st LB RRH	1	RED	ORANGE			
ALPHA	1st HB RRH		RED	YELLOW			
ALPHA	2nd LB RRH	2	RED	ORANGE	ORANGE		
ALPHA	2nd HB RRH		RED	YELLOW	YELLOW		
ALPHA	3rd LB RRH	3	RED	ORANGE	ORANGE	ORANGE	
ALPHA	3rd HB RRH		RED	YELLOW	YELLOW	YELLOW	
ALPHA	4th LB RRH	4	RED	ORANGE	ORANGE	ORANGE	ORANGE
ALPHA	4th HB RRH		RED	YELLOW	YELLOW	YELLOW	YELLOW
ALPHA	5th LB RRH	–	RED	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE
ALPHA	5th HB RRH		RED	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW
BETA	1st LB RRH	5	BLUE	ORANGE			
BETA	1st HB RRH		BLUE	YELLOW			
BETA	2nd LB RRH	6	BLUE	ORANGE	ORANGE		
BETA	2nd HB RRH		BLUE	YELLOW	YELLOW		
BETA	3rd LB RRH	7	BLUE	ORANGE	ORANGE	ORANGE	
BETA	3rd HB RRH		BLUE	YELLOW	YELLOW	YELLOW	
BETA	4th LB RRH	8	BLUE	ORANGE	ORANGE	ORANGE	ORANGE
BETA	4th HB RRH		BLUE	YELLOW	YELLOW	YELLOW	YELLOW
BETA	5th LB RRH	–	BLUE	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE
BETA	5th HB RRH		BLUE	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW
GAMMA	1st LB RRH	9	GREEN	ORANGE			
GAMMA	1st HB RRH		GREEN	YELLOW			
GAMMA	2nd LB RRH	10	GREEN	ORANGE	ORANGE		
GAMMA	2nd HB RRH		GREEN	YELLOW	YELLOW		
GAMMA	3rd LB RRH	11	GREEN	ORANGE	ORANGE	ORANGE	
GAMMA	3rd HB RRH		GREEN	YELLOW	YELLOW	YELLOW	
GAMMA	4th LB RRH	12	GREEN	ORANGE	ORANGE	ORANGE	ORANGE
GAMMA	4th HB RRH		GREEN	YELLOW	YELLOW	YELLOW	YELLOW
GAMMA	5th LB RRH	–	GREEN	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE
GAMMA	5th HB RRH		GREEN	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW

CABLE MARKING LOCATIONS TABLE

NO	LOCATIONS
1	EACH TOP-JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
2	EACH CABLE SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS NEAR THE TOP OF MAIN LINE AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE SHELTER/OUTDOOR EQUIPMENT
3	EACH CABLE SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS JUST WITHIN THE SHELTER NEAR THE HATCH PLATE (ONLY INDOOR SITES)
4	EACH CABLE SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS AT THE ENTRANCE OF THE EQUIPMENT

NOTES

1. COLORED TAPES MUST BE 3/4" WIDE & UV RESISTANT VINYL ELECTRICAL COLOR CODING TAPE AND SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR CONTRACTOR ON SITE.
2. ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) THREE WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
3. ALL COLOR BANDS INSTALLED AT THE TOP OF THE TOWER SHALL BE A MINIMUM OF 3" WIDE, AND SHALL HAVE A MINIMUM OF 1" OF SPACE BETWEEN EACH COLOR, EXCEPT, AT RRH WHERE LABELED END OF JUMPERS CONNECTS. COLOR BANDS SHALL BE 3/4" WIDE WITH 3/4" SPACE. ALL COLOR BANDS INSTALLED AT THE BASE OF THE TOWER SHALL BE A MINIMUM OF 3/4" WIDE, AND SHALL HAVE A MINIMUM OF 3/4" OF SPACE BETWEEN EACH COLOR.
4. ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE-TO-SIDE.
5. IF EXISTING CABLES AT THE SITE ALREADY HAVE A COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.
6. FACTORY MADE JUMPERS SHALL BE INSTALLED SO THE LABELS ARE AT THE RADIO END AND COLOR CODE TAPE SHALL BE INSTALLED SUCH THAT IT DOES NOT COVER THE FACTORY LABELS.



COLOR CODE TABLES

LTE DIAGRAM

at&t

7801 FARLEY
OVERLAND PARK, KS 66204

BLACK & VEATCH

6800 W. 115TH ST, SUITE 2292
OVERLAND PARK, KS 66211
(913) 458-2000

PROJECT NO:	129035
DRAWN BY:	MBS
CHECKED BY:	LH

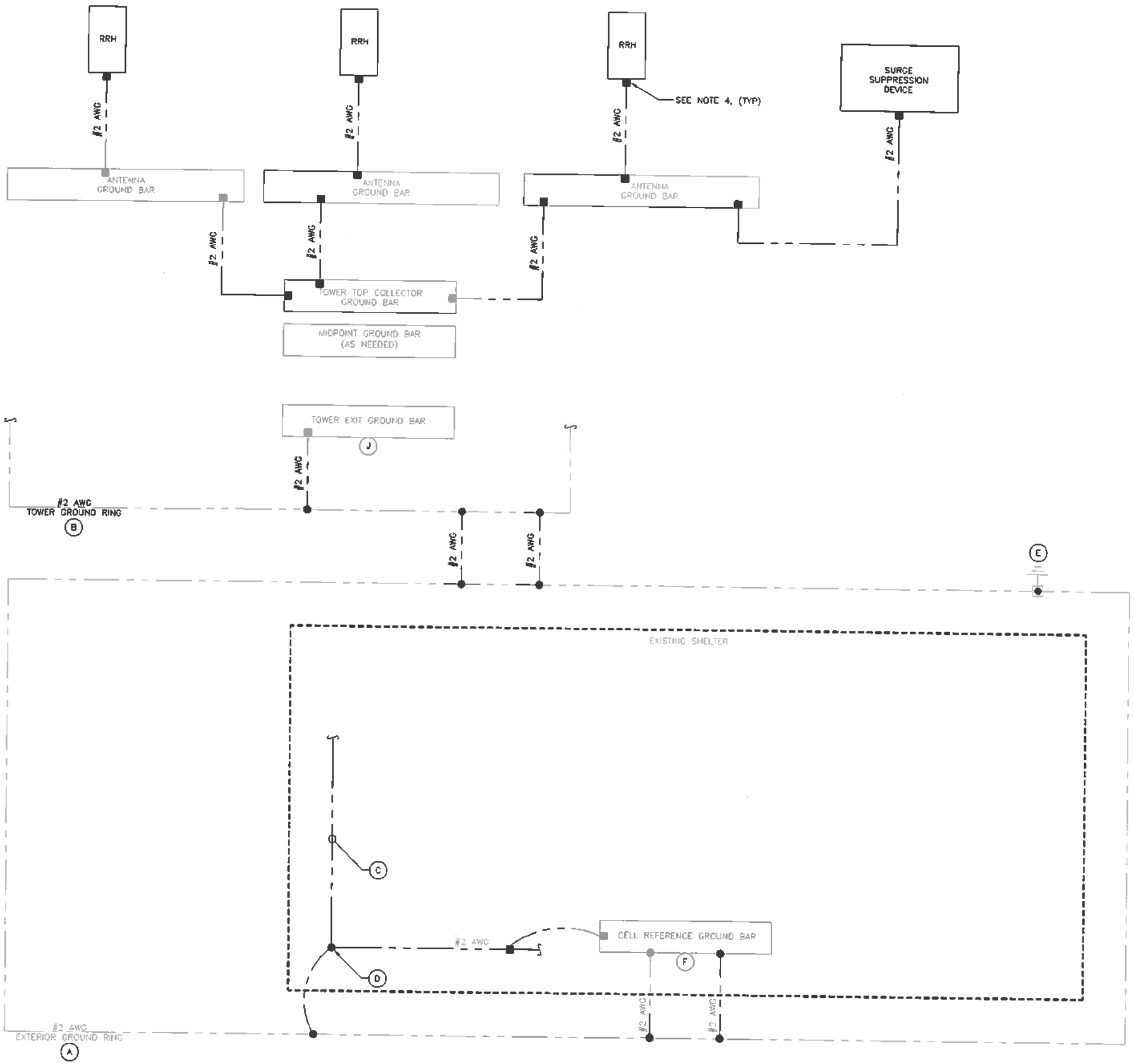
REV	DATE	DESCRIPTION
A	02/29/16	ISSUED FOR REVIEW

PRELIMINARY

PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE
CABLE COLOR CODING

SHEET NUMBER
RF-3



TOWER ANTENNA EQUIPMENT GROUNDING ONE-LINE

NO SCALE

A

- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- GROUND ROD
- T TEST GROUND ROD WITH INSPECTION SLEEVE

LEGEND

1. GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
2. CONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE IN COMPLIANCE WITH NEC SECTION 250 AND AT&T GROUNDING AND BONDING REQUIREMENTS (ATT-TP-76416) AND MANUFACTURER'S SPECIFICATIONS.
3. ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.
4. FOR ALCATEL-LUCENT 850 AND 1900 RRH's, TWO GROUNDS ARE REQUIRED (TOP AND BOTTOM).

NOTES

(A) EXTERIOR GROUND RING: #2 AWG SOLID COPPER, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING. (ATT-TP-76416 2.2.3.5/7.5.1)

(B) TOWER GROUND RING: THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS. WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING, AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS. (ATT-TP-76416 7.5.1)

(C) INTERIOR GROUND RING: #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUNDED TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR. (ATT-TP-76416 7.6.4)

(D) BOND TO INTERIOR GROUND RING: #2 AWG SOLID TINNED COPPER WIRE PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING. (ATT-TP-76416 7.5.2.2)

(E) GROUND ROD: UL LISTED COPPER CLAD STEEL, MINIMUM 5/8" DIAMETER BY EIGHT FEET LONG. ALL GROUND RODS MAY BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO THE DEPTH OF GROUND RING CONDUCTOR. (ATT-TP-76416 1.4 / 2.2.3.10)

(F) CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS. (ATT-TP-76416 7.8.7)

(G) HATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CRGB MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS.

(H) EXTERIOR CABLE ENTRY PORT GROUND BARS: LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE. (ATT-TP-76416 7.6.7.2)

(J) TOWER EXIT GROUND BAR: #2 AWG SOLID TINNED COPPER BOND TO THE TOWER GROUND RING. (ATT-TP-76416 7.5.5)

(K) TELCO GROUND BAR: BOND TO BOTH CELL REFERENCE GROUND BAR AND EXTERIOR GROUND RING. (ATT-TP-76416 7.6.8)

(L) FRAME BONDING: THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE EQUIPMENTS METAL FRAMEWORK. BOND THE FRAME GROUND BUS TO THE "I" SECTION OF THE CELL REFERENCE GROUND BAR. (ATT-TP-76416 7.8)

(M) INTERIOR UNIT BONDS: METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITHIN THE AREA OF THE INTERIOR GROUND RING REQUIRE A #6 AWG STRANDED GREEN INSULATED COPPER BOND TO THE INTERIOR GROUND RING. (ATT-TP-76416 7.12.3.1)

(N) FENCE AND GATE GROUNDING: METAL FENCES WITHIN 7 FEET OF THE EXTERIOR GROUND RING OR OBJECTS BONDED TO THE EXTERIOR GROUND RING SHALL BE BONDED TO THE GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR AT AN INTERVAL NOT EXCEEDING 25 FEET. BONDS SHALL BE MADE AT EACH GATE POST AND ACROSS GATE OPENINGS. (ATT-TP-76416 7.12.2.2)

(P) EXTERIOR UNIT BONDS: METALLIC OBJECTS, EXTERNAL TO OR MOUNTED TO THE BUILDING, SHALL BE BONDED TO THE EXTERIOR GROUND RING. (ATT-TP-76416 7.12.2)

(Q) ICE BRIDGE SUPPORTS: EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE TINNED COPPER CONDUCTOR. PROVIDE EXOTHERMIC WELDS AT BOTH THE ICE BRIDGE LEG AND BURIED GROUND RING. (ATT-TP-76416 7.4.2.6)

(R) DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICES CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH A MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR (CRGB) PER TP76300 SECTION H 6 AND TP76416 FIGURE 7-11 REQUIREMENTS.

GROUNDING KEY NOTES

at&t

7801 FARLEY
OVERLAND PARK, KS 66204

BLACK & VEATCH

6800 W. 115TH ST, SUITE 2292
OVERLAND PARK, KS 66211
(913) 458-2000

PROJECT NO:	12903
DRAWN BY:	MBS
CHECKED BY:	LH

REV	DATE	DESCRIPTION
A	02/29/16	ISSUED FOR REVIEW

PRELIMINARY

PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE

GROUNDING ONE-LINE
ANTENNA EQUIPMENT

SHEET NUMBER

G-1

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C.			
NO	REQUIRED	PART NUMBER	DESCRIPTION
(1)	1	1/4"x4"x30"	SOLID GROUND BAR
(2)	2	A-6056	WALL MOUNTING BRACKET
(3)	2	3061-4	INSULATORS
(4)	4	3012-1	5/8"-11x1" H.H.C.S.
(5)	4	3015-8	5/8" LOCKWASHER

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION

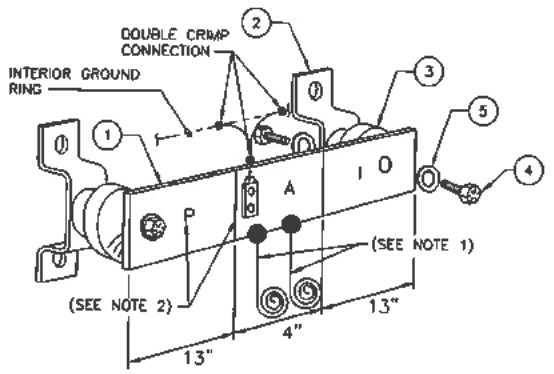
SECTION "P" – SURGE PROTECTORS
(EC) CABLE ENTRY PORTS (HATCH PLATES) (#2)
(EC) TELCO GROUND BAR (#2)
(EC) COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
(AT&T) CELL SITE +24V POWER SUPPLY RETURN BAR (#2)
(AT&T) CELL SITE -48V POWER SUPPLY RETURN BAR (#2)
(EC) GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
(AT&T) RECTIFIER FRAMES
(AT&T) ANTENNA SUPPRESSION

SECTION "A" – SURGE ABSORBERS
(EC) INTERIOR GROUND RING (#2)
(EC) EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
(EC) METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
(EC) BUILDING STEEL (IF AVAILABLE) (#2)

SECTION "I" – ISOLATED GROUNDING ZONE
(AT&T) ALL CELL SITE COMMUNICATIONS EQUIPMENT FRAMES

DETAIL NOTES:

1. EXOTHERMICALLY WELD #2 AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR. ROUTE CONDUCTOR TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. EC SHALL PERMANENTLY MARK THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.
3. GROUND BAR SHALL BE ENGRAVED PER AT&T SPECIFICATIONS TO PREVENT THEFT.

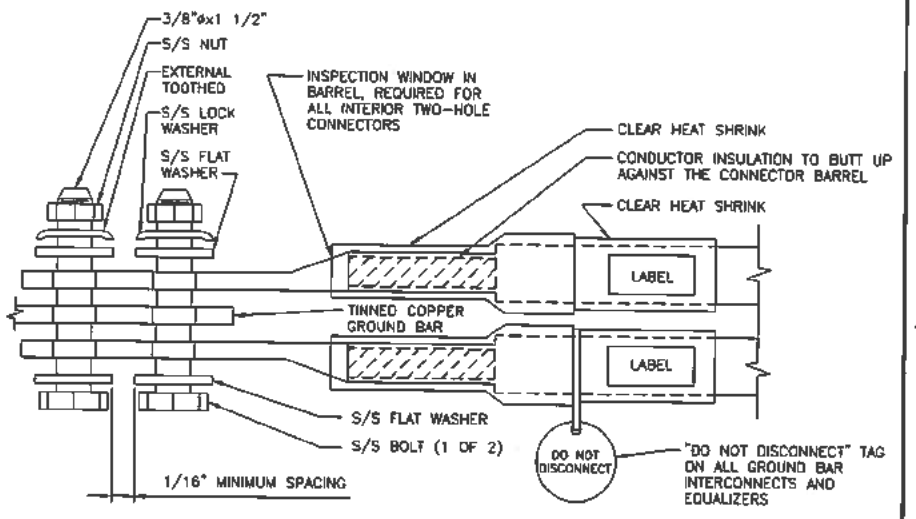


NOTES

1. EXOTHERMIC WELD (2) TWO, #2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUND BAR. ROUTE CONDUCTORS TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. ALL GROUND BARS SHALL BE STAMPED IN TO THE METAL "IF STOLEN DO NOT RECYCLE." THE CONTRACTOR SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.
3. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTIOXIDANT COMPOUND BEFORE MATING.
4. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH AN ANTIOXIDANT COMPOUND BEFORE MATING.
5. DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUNDING CONDUCTOR DOWN TO GROUNDING BUS.
6. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE. INSTALL BLACK HEAT-SHRINKING TUBE, 600 VOLT INSULATION, ON ALL GROUNDING TERMINATIONS. THE INTENT IS TO WEATHERPROOF THE COMPRESSION CONNECTION.
7. SUPPLIED AND INSTALLED BY CONTRACTOR.
8. GROUND LUGS SHALL BE TWO-HOLE, LONG BARREL, AND BE SIZED FOR GROUND WIRE. DO NOT BREAK WIRE STANDS OR DEEPLY NICK GROUND WIRE WHEN CRIMPING.
9. ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED, PROVIDING 50% SPARE CONNECTION POINTS.
11. INSPECTION WINDOWS REQUIRED ON ALL LUGS INSTALLED INDOORS.
12. LUGS WITH INSPECTION WINDOWS ARE NOT ALLOWED IN OUTDOOR APPLICATIONS.

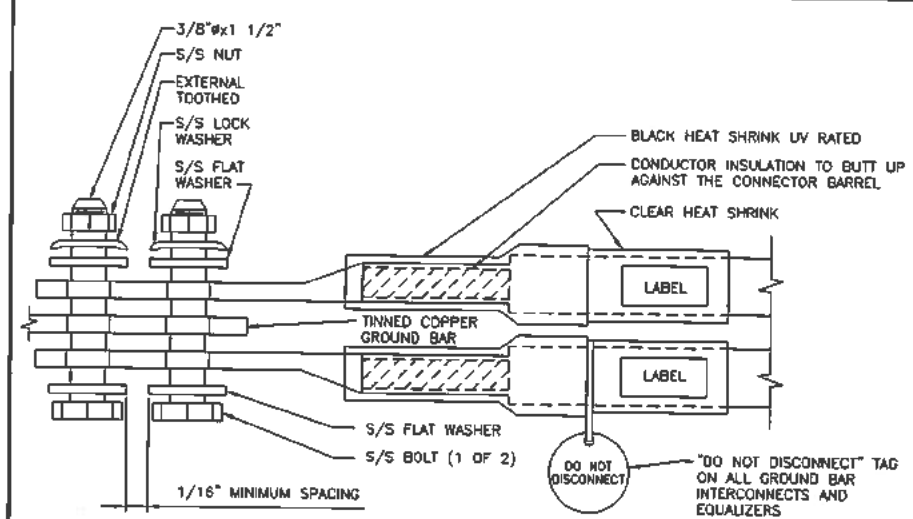
(CRGB) CELL REFERENCE GROUND BAR

NO SCALE | A



INTERIOR TWO HOLE LUG

NO SCALE | B

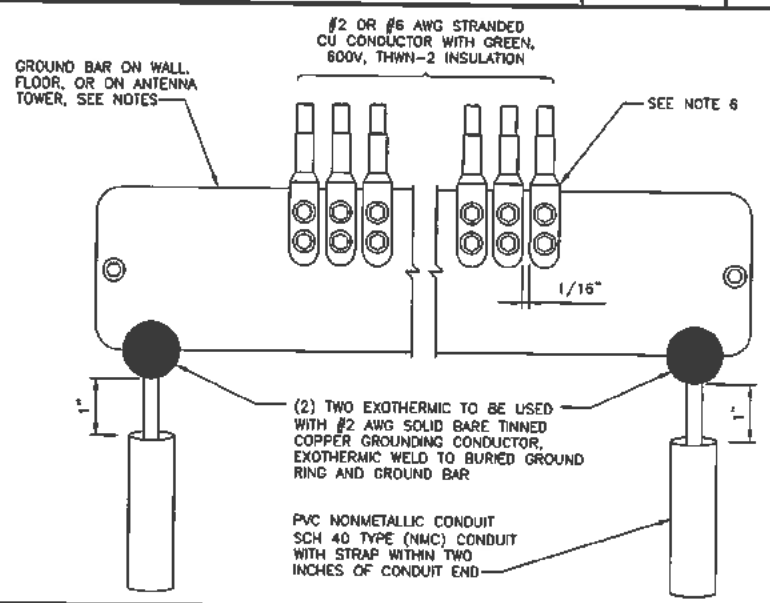


EXTERIOR TWO HOLE LUG

NO SCALE | C

NOT USED

NO SCALE | D



INSTALLATION OF GROUNDING CONDUCTOR TO GROUND BAR

NO SCALE | E

NOT USED

NO SCALE | F

NOT USED

NO SCALE | G

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SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-2

LEGEND

EXOTHERMIC CONNECTION

MECHANICAL CONNECTION

CHEMICAL ELECTROLYTIC GROUNDING SYSTEM

TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM

EXOTHERMIC WITH INSPECTION SLEEVE

GROUNDING BAR

GROUND ROD

TEST GROUND ROD WITH INSPECTION SLEEVE

SINGLE POLE SWITCH

DUPLEX RECEPTACLE

DUPLEX GFCI RECEPTACLE

FLUORESCENT LIGHTING FIXTURE
(2) TWO LAMPS 48-T8

SMOKE DETECTION (DC)

EMERGENCY LIGHTING (DC)

SECURITY LIGHT W/PHOTOCELL LITHONIA ALXW
LED-1-25A400/51K-SR4-120-PE-DDBTXD

CHAINLINK FENCE

WOOD/WROUGHT IRON FENCE

WALL STRUCTURE

LEASE AREA

PROPERTY LINE (PL)

SETBACKS

ICE BRIDGE

CABLE TRAY

WATER LINE

UNDERGROUND POWER

UNDERGROUND TELCO

OVERHEAD POWER

OVERHEAD TELCO

UNDERGROUND TELCO/POWER

ABOVE GROUND POWER

ABOVE GROUND TELCO

ABOVE GROUND TELCO/POWER

WORKPOINT

SECTION REFERENCE

DETAIL REFERENCE

ABBREVIATIONS

AB	ANCHOR BOLT
ABV	ABOVE
AC	ALTERNATING CURRENT
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERAGE INTERRUPTION CAPACITY
ALUM	ALUMINUM
ALT	ALTERNATE
ANT	ANTENNA
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BTC	BARE TINNED COPPER CONDUCTOR
BOF	BOTTOM OF FOOTING
CAB	CABINET
CANT	CANTILEVERED
CHG	CHARGING
CLG	CEILING
CLR	CLEAR
COL	COLUMN
COMM	COMMON
CONC	CONCRETE
CONSTR	CONSTRUCTION
DBL	DOUBLE
DC	DIRECT CURRENT
DEPT	DEPARTMENT
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DWG	DRAWING
DWL	DOWEL
(E)	EXISTING
EA	EACH
EC	ELECTRICAL CONDUCTOR
EL	ELEVATION
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
ENG	ENGINEER
EQ	EQUAL
EXP	EXPANSION
EXT	EXTERIOR
FAB	FABRICATION
FF	FINISH FLOOR
FG	FINISH GRADE
FIF	FACILITY INTERFACE FRAME
FIN	FINISH(ED)
FLR	FLOOR
FDN	FOUNDATION
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FOW	FACE OF WALL
FS	FINISH SURFACE
FT	FOOT
FTG	FOOTING
GA	GAUGE
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GLB	GLUE LAMINATED BEAM
GLV	GALVANIZED
GPS	GLOBAL POSITIONING SYSTEM
GND	GROUND
GSM	GLOBAL SYSTEM FOR MOBILE
HDR	HEADER
HGR	HANGER
HVAC	HEAT/VENTILATION/AIR CONDITIONING
HT	HEIGHT
IGR	INTERIOR GROUND RING
IN	INCH
INT	INTERIOR
LB(S)	POUND(S)
LF	LINEAR FEET
LTE	LONG TERM EVOLUTION
MAS	MASONRY
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
MTS	MANUAL TRANSFER SWITCH
MW	MICROWAVE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
NO.(#)	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OPNG	OPENING
(P)	PROPOSED
P/C	PRECAST CONCRETE
PCS	PERSONAL COMMUNICATION SERVICES
PCU	PRIMARY CONTROL UNIT
PRC	PRIMARY RADIO CABINET
PP	POLARIZING PRESERVING
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PWR	POWER CABINET
QTY	QUANTITY
RAD	RADIUS
RECT	RECTIFIER
REF	REFERENCE
REINF	REINFORCEMENT
REQ'D	REQUIRED
RET	REMOTE ELECTRIC TILT
RMC	RIGID METALLIC CONDUIT
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
RWY	RACEWAY
SCH	SCHEDULE
SHT	SHEET
SIAD	SMART INTEGRATED DEVICE
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
TEMP	TEMPORARY
THK	THICKNESS
TMA	TOWER MOUNTED AMPLIFIER
TN	TOE NAIL
TOA	TOP OF ANTENNA
TOC	TOP OF CURB
TOF	TOP OF FOUNDATION
TOP	TOP OF PLATE (PARAPET)
TOS	TOP OF STEEL
TOW	TOP OF WALL
TVSS	TRANSIENT VOLTAGE SUPPRESSION SYSTEM
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
UPS	UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
VIF	VERIFIED IN FIELD
W	WIDE
W/	WITH
WD	WOOD
W.P.	WORK POINT
WP	WEATHERPROOF
WT	WEIGHT

at&t

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7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE

LEGEND &
ABBREVIATIONS

SHEET NUMBER

GN-1

GENERAL CONSTRUCTION NOTES

GENERAL CONSTRUCTION

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
   GENERAL CONTRACTOR – OVERLAND CONTRACTING INC. (B&V)
   CONTRACTOR: (CONSTRUCTION)
   OWNER – AT&T
2. ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
3. GENERAL CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
10. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFIRM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
11. GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
12. ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
13. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. CONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
14. WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
15. CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
16. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
17. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
18. GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND CONTRACTORS TO THE SITE AND/OR BUILDING.
19. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
20. THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
21. THE GENERAL CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OT 2-A:10-B:C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
22. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.
23. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
24. THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
25. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
26. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
27. THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
28. ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
29. ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
30. CONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
31. CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
32. THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
33. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
34. NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
35. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION AT&T MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING". IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
36. CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF CONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
37. CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
38. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
39. NO WHITE STROBE LIGHTS ARE PERMITTED. LIGHTING IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.
40. ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

ANTENNA MOUNTING

41. DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.
42. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.
43. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS NOTED OTHERWISE.
44. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
45. ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
46. CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.
47. ALL UNUSED PORTS ON ANY ANTENNAS SHALL BE TERMINATED WITH A 50-OHM LOAD TO ENSURE ANTENNAS PERFORM AS DESIGNED. ONCE TERMINATED, APPLY A SINGLE LAYER OF BUTYL OR TWO WRAPS OF SELF-FUSING TAPE OVER THE CAP/NUT AND CONNECTOR NECK FOLLOWED BY A MINIMUM OF 2 WRAPS OF QUALITY BLACK VINYL TAPE OVER THE BUTYL OR SELF-FUSING TAPE. DO NOT COVER AND HEAT DISSIPATING SURFACES WITH WEATHERPROOFING.
48. PRIOR TO SETTING ANTENNA AZIMUTHS AND DOWNTILTS, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNT FOR TIGHTNESS AND ENSURE THAT THEY ARE PLUMB. ANTENNA AZIMUTHS SHALL BE SET FROM TRUE NORTH AND BE ORIENTED WITHIN +/- 5% AS DEFINED BY THE RFDS. ANTENNA DOWNTILTS SHALL BE WITHIN +/- 0.5% AS DEFINED BY THE RFDS. REFER TO ND-00245.
49. JUMPERS FROM THE TMA'S MUST TERMINATE TO OPPOSITE POLARIZATION'S IN EACH SECTOR.
50. CONTRACTOR SHALL RECORD THE SERIAL #, SECTOR, AND POSITION OF EACH ACTUATOR INSTALLED AT THE ANTENNAS AND PROVIDE THE INFORMATION TO AT&T.
51. TMA'S SHALL BE MOUNTED ON PIPE DIRECTLY BEHIND ANTENNAS AS CLOSE TO ANTENNA AS FEASIBLE IN A VERTICAL POSITION.
52. ANTENNAS SHALL HAVE A 4'-0" MIN CENTER TO CENTER HORIZONTAL SEPARATION.

TORQUE REQUIREMENTS

53. ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH.
54. ALL RF CONNECTIONS, GROUNDING HARDWARE AND ANTENNA HARDWARE SHALL HAVE A TORQUE MARK INSTALLED IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION.
    A. RF CONNECTION BOTH SIDES OF THE CONNECTOR.
    B. GROUNDING AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE THREADS TO THE SOLID SURFACE. EXAMPLE OF SOLID SURFACE: GROUND BAR, ANTENNA BRACKET METAL.
55. ALL 8M ANTENNA HARDWARE SHALL BE TIGHTENED TO 9 LB-FT (12 NM).
56. ALL 12M ANTENNA HARDWARE SHALL BE TIGHTENED TO 43 LB-FT (58 NM).
57. ALL GROUNDING HARDWARE SHALL BE TIGHTENED UNTIL THE LOCK WASHER COLLAPSES AND THE GROUNDING HARDWARE IS NO LONGER LOOSE.
58. ALL DIN TYPE CONNECTIONS SHALL BE TIGHTENED TO 18-22 LB-FT (24.4 – 29.8 NM).
59. ALL N TYPE CONNECTIONS SHALL BE TIGHTENED TO 15-20 LB-IN (1.7 – 2.3 NM).

FIBER & POWER CABLE MOUNTING

60. THE FIBER OPTIC TRUNK CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY. WHEN INSTALLING FIBER OPTIC TRUNK CABLES INTO A CABLE TRAY SYSTEM, THEY SHALL BE INSTALLED INTO AN INTER DUCT AND A PARTITION BARRIER SHALL BE INSTALLED BETWEEN THE 600 VOLT CABLES AND THE INTER DUCT IN ORDER TO SEGREGATE CABLE TYPES. OPTIC FIBER TRUNK CABLES SHALL HAVE APPROVED CABLE RESTRAINTS EVERY (60) SIXTY FEET AND SECURELY FASTENED TO THE CABLE TRAY SYSTEM. NFPA 70 (NEC) ARTICLE 770 RULES SHALL APPLY.
61. THE TYPE TC-ER CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY AND SHALL BE SECURED AT INTERVALS NOT EXCEEDING (6) SIX FEET. AN EXCEPTION; WHERE TYPE TC-ER CABLES ARE NOT SUBJECT TO PHYSICAL DAMAGE, CABLES SHALL BE PERMITTED TO MAKE A TRANSITION BETWEEN CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY WHICH ARE SERVING UTILIZATION EQUIPMENT OR DEVICES, A DISTANCE (6) SIX FEET SHALL NOT BE EXCEEDED WITHOUT CONTINUOUS SUPPORTING. NFPA 70 (NEC) ARTICLES 336 AND 392 RULES SHALL APPLY.
62. WHEN INSTALLING OPTIC FIBER TRUNK CABLES OR TYPE TC-ER CABLES INTO CONDUITS, NFPA 70 (NEC) ARTICLE 300 RULES SHALL APPLY.

COAXIAL CABLE NOTES

63. TYPES AND SIZES OF THE ANTENNA CABLE ARE BASED ON ESTIMATED LENGTHS. PRIOR TO ORDERING CABLE, CONTRACTOR SHALL VERIFY ACTUAL LENGTH BASED ON CONSTRUCTION LAYOUT AND NOTIFY THE PROJECT MANAGER IF ACTUAL LENGTHS EXCEED ESTIMATED LENGTHS.
64. CONTRACTOR SHALL VERIFY THE DOWN-TILT OF EACH ANTENNA WITH A DIGITAL LEVEL.
65. CONTRACTOR SHALL CONFIRM COAX COLOR CODING PRIOR TO CONSTRUCTION. REFER TO "ANTENNA SYSTEM LABELING STANDARD" ND-00027 LATEST VERSION.
66. ALL JUMPERS TO THE ANTENNAS FROM THE MAIN TRANSMISSION LINE SHALL BE 1/2" DIA. LDF AND SHALL NOT EXCEED 5'-0".
67. ALL COAXIAL CABLE SHALL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE, IN AN APPROVED MANNER, AT DISTANCES NOT TO EXCEED 4'-0" OC.
68. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS REGARDING BOTH THE INSTALLATION AND GROUNDING OF ALL COAXIAL CABLES, CONNECTORS, ANTENNAS, AND ALL OTHER EQUIPMENT.
69. CONTRACTOR SHALL WEATHERPROOF ALL ANTENNA CONNECTORS WITH SELF AMALGAMATING TAPE. WEATHERPROOFING SHALL BE COMPLETED IN STRICT ACCORDANCE WITH AT&T STANDARDS.

GENERAL CABLE AND EQUIPMENT NOTES

70. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ANTENNA, TMAS, DIPLEXERS, AND COAX CONFIGURATION, MAKE AND MODELS PRIOR TO INSTALLATION.
71. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER TOWER MANUFACTURER'S RECOMMENDATIONS.
72. CONTRACTOR SHALL REFERENCE THE TOWER STRUCTURAL ANALYSIS/DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION/ROUTING.
73. ALL OUTDOOR RF CONNECTORS/CONNECTIONS SHALL BE WEATHERPROOFED, EXCEPT THE RET CONNECTORS, USING BUTYL TAPE AFTER INSTALLATION AND FINAL CONNECTIONS ARE MADE. BUTYL TAPE SHALL HAVE A MINIMUM OF ONE-HALF TAPE WIDTH OVERLAP ON EACH TURN AND EACH LAYER SHALL BE WRAPPED THREE TIMES. WEATHERPROOFING SHALL BE SMOOTH WITHOUT BUCKLING. BUTYL BLEEDING IS NOT ALLOWED.
74. IF REQUIRED TO PAINT ANTENNAS AND/OR COAX:
    A. TEMPERATURE SHALL BE ABOVE 50° F.
    B. PAINT COLOR MUST BE APPROVED BY BUILDING OWNER/LANDLORD.
    C. FOR REGULATED TOWERS, FAA/FCC APPROVED PAINT IS REQUIRED.
    D. DO NOT PAINT OVER COLOR CODING OR ON EQUIPMENT MODEL NUMBERS.
75. ALL CABLES SHALL BE GROUNDED WITH COAXIAL CABLE GROUND KITS. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.
    A. GROUNDING AT THE ANTENNA LEVEL.
    B. GROUNDING AT MID LEVEL, TOWERS WHICH ARE OVER 200'-0", ADDITIONAL CABLE GROUNDING REQUIRED.
    C. GROUNDING AT BASE OF TOWER PRIOR TO TURNING HORIZONTAL.
    D. GROUNDING OUTSIDE THE EQUIPMENT SHELTER AT ENTRY PORT.
    E. GROUNDING INSIDE THE EQUIPMENT SHELTER AT THE ENTRY PORT.
76. ALL PROPOSED GROUND BAR DOWNLEADS ARE TO BE TERMINATED TO THE EXISTING ADJACENT GROUND BAR DOWNLEADS A MINIMUM DISTANCE OF 4'-0" BELOW GROUND BAR. TERMINATIONS MAY BE EXOTHERMIC OR COMPRESSION.
77. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ANTENNA AND THE COAX CONFIGURATION IS THE CORRECT MAKE AND MODELS, PRIOR TO INSTALLATION.
78. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER TOWER MANUFACTURER'S SPECIFICATION & RECOMMENDATIONS.
79. ANTENNA CONTRACTOR SHALL FURNISH AND INSTALL A 12'-0" T-BOOM SECTOR ANTENNA MOUNT, IF APPLICABLE, INCLUDING ALL HARDWARE.
80. CLOSEOUT DELIVERABLES SHALL INCLUDE PHOTOS OF ALL MOUNTING HARDWARE INSTALLED TIGHT AND MARKED.
81. INSTALLATION MANUALS FOR RAYCAP REDLINED TO COMPLY WITH AT&T SPECIFICATIONS CAN BE ACCESSED IN THE BLACK & VEATCH TURF SOW LIBRARY VIA THE FOLLOWING URL:

    https://blackandveatch.sharepoint.com/teams/ESS/Telecom/Projects/PublicNetworks/ATT/ATTTurf/ATTTurfScopeofworkdocuments/_layouts/15/start.aspx#/Shared%20Documents/Forms/AllItems.aspx

at&t

7801 FARLEY
OVERLAND PARK, KS 66204

BLACK & VEATCH

6800 W. 115TH ST, SUITE 2292
OVERLAND PARK, KS 66211
(913) 458-2000

PROJECT NO:	12903
DRAWN BY:	MB
CHECKED BY:	LH

REV	DATE	DESCRIPTION
A	02/29/16	ISSUED FOR REVIEW

PRELIMINARY

PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE

GENERAL CONSTRUCTION NOTES

SHEET NUMBER

GN-2

GENERAL ELECTRICAL NOTES

PART 1 – GENERAL

1.1 GENERAL CONDITIONS

A. CONTRACTOR SHALL INSPECT THE EXISTING SITE CONDITIONS PRIOR TO SUBMITTING BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTORS FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.

B. THE CONTRACTOR SHALL OBTAIN PERMITS, LICENSES, MAKE ALL DEPOSITS, AND PAY ALL FEES REQUIRED FOR THE CONSTRUCTION PERFORMANCE FOR THE WORK UNDER THIS SECTION.

C. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL SYSTEMS AND COMPONENTS COVERED UNDER THIS SECTION. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. DRAWING SHALL NOT BE SCALED TO DETERMINE DIMENSIONS.

1.2 LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES.

A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL APPLICABLE LOCAL LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES. CONDUIT BENDS SHALL BE THE RADIUS BEND FOR THE TRADE SIZE OF CONDUIT IN COMPLIANCE WITH THE LATEST EDITIONS OF NEC.

1.3 REFERENCES

A. THE PUBLICATIONS LISTED BELOW ARE PART OF THIS SPECIFICATION. EACH PUBLICATION SHALL BE THE LATEST REVISION AND ADDENDUM IN EFFECT ON THE DATE. THIS SPECIFICATION IS ISSUED FOR CONSTRUCTION UNLESS OTHERWISE NOTED. EXCEPT AS MODIFIED BY THE REQUIREMENT SPECIFIED HEREIN OR THE DETAILS OF THE DRAWINGS, WORK INCLUDED IN THIS SPECIFICATION SHALL CONFORM TO THE APPLICABLE PROVISION OF THESE PUBLICATIONS.

1. ANSI/IEEE (AMERICAN NATIONAL STANDARDS INSTITUTE)
2. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)
3. ICE (INSULATED CABLE ENGINEERS ASSOCIATION)
4. NEMA (NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION)
5. NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)
6. OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION)
7. UL (UNDERWRITERS LABORATORIES, INC.)
8. AT&T GROUNDING AND BONDING STANDARDS TP-76416

1.4 SCOPE OF WORK

A. WORK UNDER THIS SECTION SHALL CONSIST OF FURNISHING ALL LABOR, MATERIAL, AND ASSOCIATED SERVICES REQUIRED TO COMPLETE REQUIRED CONSTRUCTION AND BE OPERATIONAL.

B. ALL ELECTRICAL EQUIPMENT UNDER THIS CONTRACT SHALL BE PROPERLY TESTED, ADJUSTED, AND ALIGNED BY THE CONTRACTOR.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATING, DRAINING, TRENCHES, BACKFILLING, AND REMOVAL OF EXCESS DIRT.

D. THE CONTRACTOR SHALL FURNISH TO THE OWNER WITH CERTIFICATES OF A FINAL INSPECTION AND APPROVAL FROM THE INSPECTION AUTHORITIES HAVING JURISDICTION.

E. THE CONTRACTOR SHALL PREPARE A COMPLETE SET OF AS-BUILT DRAWINGS, DOCUMENT ALL WIRING EQUIPMENT CONDITIONS, AND CHANGES WHILE COMPLETING THIS CONTRACT. THE AS-BUILT DRAWINGS SHALL BE SUBMITTED AT COMPLETION OF THE PROJECT.

PART 2 – PRODUCTS

2.1 GENERAL

A. ALL MATERIALS AND EQUIPMENT SHALL BE UL LISTED, NEW, AND FREE FROM DEFECTS.

B. ALL ITEMS OF MATERIALS AND EQUIPMENT SHALL BE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED.

C. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.

D. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED. 10,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PER THE GOVERNING JURISDICTION.

2.2 MATERIALS AND EQUIPMENT

A. CONDUIT

1. RIGID METAL CONDUIT (RMC) SHALL BE HOT-DIPPED GALVANIZED INSIDE AND OUTSIDE INCLUDING ENDS AND THREADS AND ENAMELED OR LACQUERED INSIDE IN ADDITION TO GALVANIZING.
2. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE UL LISTED.
3. CONDUIT CLAMPS, STRAPS AND SUPPORTS SHALL BE STEEL OR MALLEABLE IRON. ALL FITTINGS SHALL BE COMPRESSION AND CONCRETE TIGHT TYPE. GROUNDING BUSHINGS WITH INSULATED THROATS SHALL BE INSTALLED ON ALL CONDUIT TERMINATIONS.
4. NONMETALLIC CONDUIT AND FITTINGS SHALL BE SCHEDULE 40 PVC. INSTALL USING SOLVENT-CEMENT-TYPE JOINTS AS RECOMMENDED BY THE MANUFACTURER.

B. CONDUCTORS AND CABLE

1. AC CONDUCTORS SHALL BE FLAME-RETARDANT, MOISTURE AND HEAT RESISTANT THERMOPLASTIC, SINGLE CONDUCTOR, COPPER, TYPE THHN/THWN-2, 600 VOLT, SIZE AS INDICATED, #12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR USED.
2. #10 AWG AND SMALLER CONDUCTOR SHALL BE SOLID OR STRANDED AND #8 AWG AND LARGER CONDUCTORS SHALL BE STRANDED.
3. SOLDERLESS, COMPRESSION-TYPE CONNECTORS SHALL BE USED FOR TERMINATION OF ALL STRANDED CONDUCTORS.
4. STRAIN-RELIEF SUPPORTS GRIPS SHALL BE HUBBELL KELLEMS OR APPROVED EQUAL. CABLES SHALL BE SUPPORTED IN ACCORDANCE WITH THE NEC AND CABLE MANUFACTURER'S RECOMMENDATIONS.
5. ALL CONDUCTORS SHALL BE TAGGED AT BOTH ENDS OF THE CONDUCTOR, AT ALL PULL BOXES, J-BOXES, EQUIPMENT AND CABINETS AND SHALL BE IDENTIFIED WITH APPROVED PLASTIC TAGS (ACTION CRAFT, BRADY, OR APPROVED EQUAL).

C. DISCONNECT SWITCHES

1. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, DEAD-FRONT, QUICK-MAKE, QUICK-BREAK, EXTERNALLY OPERABLE, HANDLE LOCKABLE AND INTERLOCK WITH COVER IN CLOSED POSITION, RATING AS INDICATED, UL LABELED FURNISHED IN NEMA 3R ENCLOSURE, SQUARE-D OR ENGINEERED APPROVED EQUAL.

D. CHEMICAL ELECTROLYTIC GROUNDING SYSTEM:

1. INSTALL CHEMICAL GROUNDING AS REQUIRED. THE SYSTEM SHALL BE ELECTROLYTIC MAINTENANCE FREE ELECTRODE CONSISTING OF RODS WITH A MINIMUM #2 AWG CU EXOTHERMALLY WELDED PIGTAIL, PROTECTIVE BOXES, AND BACKFILL MATERIAL. MANUFACTURER SHALL BE LYNCOLE XIT GROUNDING ROD TYPES K2-(*)CS OR K2L-(*)CS (*) LENGTH AS REQUIRED.
2. GROUND ACCESS BOX SHALL BE A POLYPLASTIC BOX FOR NON-TRAFFIC APPLICATIONS, INCLUDING BOLT DOWN FLUSH COVER WITH "BREATHER" HOLES, XIT MODEL #XB-22. ALL DISCONNECT SWITCHES AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED LAMICOID NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS ID NUMBERING, AND THE ELECTRICAL POWER SOURCE.
3. BACKFILL MATERIAL SHALL BE LYNCONITE AND LYNCOLE GROUNDING GRAVEL.

E. SYSTEM GROUNDING:

1. ALL GROUNDING COMPONENTS SHALL BE TINNED AND GROUNDING CONDUCTOR SHALL BE #2 AWG BARE, SOLID, TINNED, COPPER. ABOVE GRADE GROUNDING CONDUCTORS SHALL BE SUNLIGHT RESISTANT TINNED STRANDED COPPER AND INSULATED WHERE NOTED.
2. GROUNDING BUSES SHALL BE BARE, TINNED, ANNEALED COPPER BARS OF RECTANGULAR CROSS SECTION. STANDARD BUS BARS MGB, SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THEY SHALL NOT BE FABRICATED OR MODIFIED IN THE FIELD. ALL GROUNDING BUSES SHALL BE IDENTIFIED WITH MINIMUM 3/4" LETTERS BY WAY OF STENCILING OR DESIGNATION PLATE.
3. CONNECTORS SHALL BE HIGH-CONDUCTIVITY, HEAVY DUTY, LISTED AND LABELED AS GROUNDING CONNECTORS FOR THE MATERIALS USED. USE TWO-HOLE COMPRESSION LUGS WITH HEAT SHRINK FOR MECHANICAL CONNECTIONS. INTERIOR CONNECTIONS USE TWO-HOLE COMPRESSION LUGS WITH INSPECTION WINDOW AND CLEAR HEAT SHRINK.
4. EXOTHERMIC WELDED CONNECTIONS SHALL BE PROVIDED IN KIT FORM AND SELECTED FOR THE SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND OTHER ITEMS TO BE CONNECTED.
5. GROUND RODS SHALL BE ERICO #615800, COPPER-CLAD STEEL WITH HIGH-STRENGTH STEEL CORE AND ELECTROLYTIC-GRADE COPPER OUTER SHEATH, MOLTEN WELDED TO CORE, 5/8"x10'-0". ALL GROUNDING RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES.
6. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS IN COMPLIANCE WITH THE AT&T SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULLBOXES, DISCONNECT SWITCHES, STARTERS, AND EQUIPMENT CABINETS.

F. OTHER MATERIALS:

1. THE CONTRACTOR SHALL PROVIDE OTHER MATERIALS, THOUGH NOT SPECIFICALLY DESCRIBED, WHICH ARE REQUIRED FOR A COMPLETELY OPERATIONAL SYSTEM AND PROPER INSTALLATION OF THE WORK.
2. PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC.

G. PANELS AND LOAD CENTERS:

1. ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN.

PART 3 – EXECUTION

3.1 GENERAL:

A. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

B. EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT OR WATER, AND AGAINST CHEMICAL OR MECHANICAL INJURY DURING INSTALLATION AND CONSTRUCTION PERIODS.

3.2 LABOR AND WORKMANSHIP:

A. ALL LABOR FOR THE INSTALLATION OF MATERIALS AND EQUIPMENT FURNISHED FOR THE ELECTRICAL SYSTEM SHALL BE INSTALLED BY EXPERIENCED WIREMEN, IN A NEAT AND WORKMAN-LIKE MANNER.

B. ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED, ALIGNED AND TESTED BY THE CONTRACTOR AS REQUIRED TO PRODUCE THE INTENDED PERFORMANCE.

C. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, REMOVE ALL LABELS AND ANY DEBRIS, CRATING OR CARTONS AND LEAVE THE INSTALLATION FINISHED AND READY FOR OPERATION.

3.3 COORDINATION:

A. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRICAL ITEMS WITH THE OWNER-FURNISHED EQUIPMENT DELIVERY SCHEDULE TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.

3.4 INSTALLATION:

A. CONDUIT:

1. ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT AS SPECIFIED. NO CONDUIT OR TUBING OF LESS THAN 3/4 INCH TRADE SIZE.
2. PROVIDE RIGID PVC SCHEDULE 80 CONDUITS FOR ALL RISERS, RMC OTHERWISE NOTED. EMT MAY BE INSTALLED FOR EXTERIOR CONDUITS WHERE NOT SUBJECT TO PHYSICAL DAMAGE.
3. INSTALL SCH. 40 PVC CONDUIT WITH A MINIMUM COVER OF 24" UNDER ROADWAYS, PARKING LOTS, STREETS, AND ALLEYS. CONDUIT SHALL HAVE A MINIMUM COVER OF 18" IN ALL OTHER NON-TRAFFIC APPLICATIONS (REFER TO 2008 NEC, TABLE 300.5).
4. USE GALVANIZED FLEXIBLE STEEL CONDUIT WHERE DIRECT CONNECTION TO EQUIPMENT WITH MOVEMENT, VIBRATION, OR FOR EASE OF MAINTENANCE. USE LIQUID TIGHT, FLEXIBLE METAL CONDUIT FOR OUTDOOR APPLICATIONS. INSTALL GALVANIZED FLEXIBLE STEEL CONDUIT AT ALL POINTS OF CONNECTION TO EQUIPMENT MOUNTED ON SUPPORT TO ALLOW FOR EXPANSION AND CONTRACTION.
5. A RUN OF CONDUIT BETWEEN BOXES OR EQUIPMENT SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF THREE QUARTER-BENDS. CONDUIT BEND SHALL BE MADE WITH THE UL LISTED BENDER OR FACTORY 90 DEGREE ELBOWS MAY BE USED.
6. FIELD FABRICATED CONDUITS SHALL BE CUT SQUARE WITH A CONDUIT CUTTING TOOL AND REAMED TO PROVIDE A SMOOTH INSIDE SURFACE.
7. PROVIDE INSULATED GROUNDING BUSHING FOR ALL CONDUITS.
8. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL CONDUITS DURING CONSTRUCTION. TEMPORARY OPENINGS IN THE CONDUIT SYSTEM SHALL BE PLUGGED OR CAPPED TO PREVENT ENTRANCE OF MOISTURE OR FOREIGN MATTER. CONTRACTOR SHALL REPLACE ANY CONDUITS CONTAINING FOREIGN MATERIALS THAT CANNOT BE REMOVED.
9. ALL CONDUITS SHALL BE SWABBED CLEAN BY PULLING AN APPROPRIATE SIZE MANDREL THROUGH THE CONDUIT BEFORE INSTALLATION OF CONDUCTORS OR CABLES. CONDUIT SHALL BE FREE OF DIRT AND DEBRIS.
10. INSTALL PULL STRINGS IN ALL CLEAN EMPTY CONDUITS. IDENTIFY PULL STRINGS AT EACH END.
11. INSTALL 2" HIGHLY VISIBLE AND DETECTABLE TAPE 12" ABOVE ALL UNDERGROUND CONDUITS AND CONDUCTORS.
12. CONDUITS SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE AGAINST COLLECTION OF TRAPPED CONDENSATION.
13. PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS TO ALLOW FOR RACEWAYS AND CABLES TO BE ROUTED THROUGH THE BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS. SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE EFFECTIVELY SEALED WITH FIRE RATED MATERIAL WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FIRE STOPS AT FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE, AND FUMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS PURPOSE.

B. CONDUCTORS AND CABLE

1. ALL POWER WIRING SHALL BE COLOR CODED AS FOLLOWS:

DESCRIPTION	208/240/120 VOLT SYSTEMS
PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUNDING	GREEN

2. SPLICES SHALL BE MADE ONLY AT OUTLETS, JUNCTION BOXES, OR ACCESSIBLE RACEWAY CONDULETS APPROVED FOR THIS PURPOSE.
3. PULLING LUBRICANTS SHALL BE UL APPROVED. CONTRACTOR SHALL USE NYLON OR HEMP ROPE FOR PULLING CONDUCTOR AND CABLES INTO THE CONDUIT.
4. CABLES SHALL BE NEATLY TRAINED, WITHOUT INTERLACING, AND BE OF SUFFICIENT LENGTH IN ALL BOXES & EQUIPMENT TO PERMIT MAKING A NEAT ARRANGEMENT. CABLES SHALL BE SECURED IN A MANNER TO AVOID TENSION ON CONDUCTORS OR TERMINALS. CONDUCTORS SHALL BE PROTECTED FROM MECHANICAL INJURY AND MOISTURE. SHARP BENDS OVER CONDUIT BUSHINGS IS PROHIBITED. DAMAGED CABLES SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

C. DISCONNECT SWITCHES

1. INSTALL DISCONNECT SWITCHES LEVEL AND PLUMB. CONNECT TO WIRING SYSTEM AND GROUNDING SYSTEM AS INDICATED.

D. GROUNDING

1. ALL METALLIC PARTS OF ELECTRICAL EQUIPMENT WHICH DO NOT CARRY CURRENT SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING MANUFACTURER, AT&T GROUNDING AND BONDING STANDARDS TP-76416, ND-00135, AND THE NATIONAL ELECTRICAL CODE.
2. PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEM INDICATED WITH ASSEMBLY OF MATERIALS, INCLUDING GROUNDING ELECTRODES, BONDING JUMPERS AND ADDITIONAL ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.
3. ALL GROUNDING CONDUCTORS SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BEND AS REQUIRED. GROUNDING CONDUCTORS SHALL NOT BE LOOPED OR SHARPLY BENT. ROUTE GROUNDING CONNECTIONS AND CONDUCTORS TO GROUND IN THE SHORTEST AND STRAIGHTEST PATHS POSSIBLE TO MINIMIZE TRANSIENT VOLTAGE RISES.
4. BUILDINGS AND/OR NEW TOWERS GREATER THAN 75 FEET IN HEIGHT AND WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUND RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 AWG COPPER. ROOFTOP GROUND RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY). SEE STANDARD 6.3.2.2.
5. TIGHTEN GROUNDING AND BONDING CONNECTORS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTORS AND BOLTS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT AVAILABLE, TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUE VALUES SPECIFIED IN UL TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
6. CONTRACTOR SHALL VERIFY THE LOCATIONS OF GROUNDING TIE-IN-POINTS TO THE EXISTING GROUNDING SYSTEM. ALL UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
7. ALL GROUNDING CONNECTIONS SHALL BE INSPECTED FOR TIGHTNESS. EXOTHERMIC WELDED CONNECTIONS SHALL BE APPROVED BY THE INSPECTOR HAVING JURISDICTION BEFORE BEING PERMANENTLY CONCEALED.
8. APPLY CORROSION-RESISTANCE FINISH TO FIELD CONNECTIONS AND PLACES WHERE FACTORY APPLIED PROTECTIVE COATINGS HAVE BEEN DESTROYED. USE KOPR-SHIELD ANTI-OXIDATION COMPOUND ON ALL COMPRESSION GROUNDING CONNECTIONS.
9. A SEPARATE, CONTINUOUS, INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS.
10. BOND ALL INSULATED GROUNDING BUSHINGS WITH A BARE 6 AWG GROUNDING CONDUCTOR TO A GROUND BUS.
11. DIRECT BURIED GROUNDING CONDUCTORS SHALL BE INSTALLED AT A NOMINAL DEPTH OF 36" MINIMUM BELOW GRADE, OR 6" BELOW THE FROST LINE, USE THE GREATER OF THE TWO DISTANCES.
12. ALL GROUNDING CONDUCTORS EMBEDDED IN OR PENETRATING CONCRETE SHALL BE INSTALLED IN SCHEDULE 40 PVC CONDUIT.
13. THE INSTALLATION OF CHEMICAL ELECTROLYTIC GROUNDING SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REMOVE SEALING TAPE FROM LEACHING AND BREATHER HOLES. INSTALL PROTECTIVE BOX FLUSH WITH GRADE.
14. DRIVE GROUND RODS UNTIL TOPS ARE A MINIMUM DISTANCE OF 36" DEPTH OR 6" BELOW FROST LINE, USING THE GREATER OF THE TWO DISTANCES.
15. IF COAX ON THE ICE BRIDGE IS MORE THAN 6 FT. FROM THE GROUND BAR AT THE BASE OF THE TOWER, A SECOND GROUND BAR WILL BE NEEDED AT THE END OF THE ICE BRIDGE, TO GROUND THE COAX CABLE GROUNDING KITS AND IN-LINE ARRESTORS
16. CONTRACTOR SHALL REPAIR, AND/OR REPLACE, EXISTING GROUNDING SYSTEM COMPONENTS DAMAGED DURING CONSTRUCTION AT THE CONTRACTORS EXPENSE.

3.5 ACCEPTANCE TESTING

A. CERTIFIED PERSONNEL USING CERTIFIED EQUIPMENT SHALL PERFORM REQUIRED TESTS AND SUBMIT WRITTEN TEST REPORTS UPON COMPLETION.

B. WHEN MATERIAL AND/OR WORKMANSHIP IS FOUND NOT TO COMPLY WITH THE SPECIFIED REQUIREMENTS, THE NON-COMPLYING ITEMS SHALL BE REMOVED FROM THE PROJECT SITE AND REPLACED WITH ITEMS COMPLYING WITH THE SPECIFIED REQUIREMENTS PROMPTLY AFTER RECEIPT OF NOTICE FOR NON-COMPLIANCE.

C. TEST PROCEDURES

1. ALL FEEDERS SHALL HAVE INSULATION TESTED AFTER INSTALLATION, BEFORE CONNECTION TO DEVICES. THE CONDUCTORS SHALL TEST FREE FROM SHORT CIRCUITS AND GROUNDS. TESTING SHALL BE FOR ONE MINUTE USING 1000V DC. PROVIDE WRITTEN DOCUMENTATION FOR ALL TEST RESULTS.
2. PRIOR TO ENERGIZING CIRCUITRY, TEST WIRING DEVICES FOR ELECTRICAL CONTINUITY AND PROPER POLARITY CONNECTIONS.
3. MEASURE AND RECORD VOLTAGES BETWEEN PHASES AND BETWEEN PHASE CONDUCTORS AND NEUTRALS. SUBMIT A REPORT OF MAXIMUM AND MINIMUM VOLTAGES
4. PERFORM GROUNDING TEST TO MEASURE GROUNDING RESISTANCE OF GROUNDING SYSTEM USING THE IEEE STANDARD 3-POINT "FALL-OF-POTENTIAL" METHOD. PROVIDE PLOTTED TEST VALUES AND LOCATION SKETCH. NOTIFY THE ENGINEER IMMEDIATELY IF MEASURED VALUE IS OVER 5 OHMS.

at&t

7801 FARLEY
OVERLAND PARK, KS 66204

BLACK & VEATCH

6800 W. 115TH ST, SUITE 2292
OVERLAND PARK, KS 66211
(913) 458-2000

PROJECT NO:	12903
DRAWN BY:	MB
CHECKED BY:	LI

REV	DATE	DESCRIPTION
A	02/29/16	ISSUED FOR REVIEW

PRELIMINARY

PRAIRIE VILLAGE
KS5025
7701 MISSION ROAD
PRAIRIE VILLAGE, KS 66208
3C LTE

SHEET TITLE

GENERAL
ELECTRICAL NOTES

SHEET NUMBER

GN-3

417 DELAWARE STREET KANSAS CITY, MO 64105
TEL 816-531-7227 FAX 816-531-7229 WWW.THINKCONFLUENCE.COM

CONFLUENCE

STAFF REPORT

TO: Prairie Village Planning Commission
FROM: Confluence, Kansas City, Kansas
- Christopher Shires, AICP, Principal
- PJ Novick, ASLA, LEED GA, Principal

DATE: April 5, 2016, Planning Commission Meeting (Confluence Project # 15018KC)

APPLICATION: PC2016-112; PC2016-113 & PC2016-114

REQUEST: Approval of a Final Development Plan and Final Plat.

PROPERTY ADDRESS: 9101 Nall Avenue

APPLICANT: VanTrust Real Estate
Justin Duff, Development Director,
4900 Main Street, STE 400
Kansas City, MO 64112

CURRENT ZONING AND LAND USE: MXD (Mixed Use District) - Meadowbrook Country Club

SURROUNDING ZONING & LAND USE:
North: R-1A – Single Family Residential Dwellings
East: R-1A – Single Family Residential Dwellings
South: CP-1 and CP-O – Office and Retail and Overland Park Zoning: R-1 Single Family Residential – Single Family Dwellings

West: Overland Park Zoning: R-1 Single Family Residential – Single Family Dwellings and Church

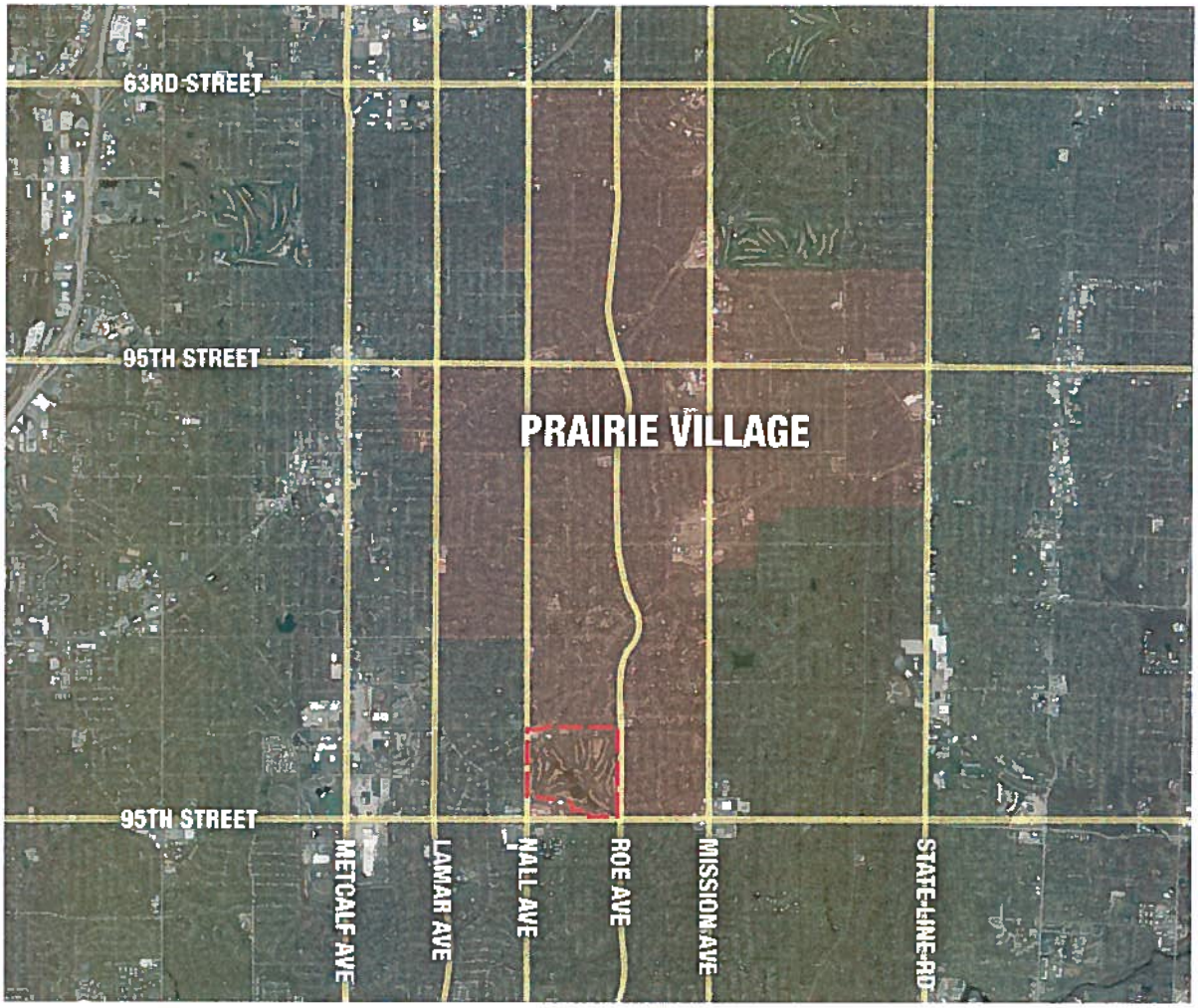
LEGAL DESCRIPTION: (see attachment)

PROPERTY AREA: 135.9 acres

RELATED CASE FILES: PC 2015-09, PC 2015-118, PC 2015-119, PC 2015-002, PC 2016-101, PC 2016-102

ATTACHMENTS: Applications, Final Development Plans, Updated Vision Book, Final Plat

GENERAL LOCATION MAP:


63RD STREET
95TH STREET
PRAIRIE VILLAGE
95TH STREET
METCALF AVE
LAMAR AVE
NALL AVE
ROE AVE
MISSION AVE
STATE LINE RD

AERIAL MAP:

COMMENTS:

The subject property is the approximate 136 acre Meadowbrook County Club site that is generally bound by Nall Avenue on the west, W. 90th Street on the north, Roe Avenue on the east, and W. 95th Street and the Meadowbrook Village Shopping Center on the south.

The applicant, Van Trust Real Estate, represented by Justin Duff, is requesting approval of a Final Development Plan for the Meadowbrook Park residential lots and apartment complex. Final Development Plans for the senior living center and the hotel will be submitted at a future date for review and consideration of approval. The design and development of the approximate 80 acres of land to be dedicated to the Johnson County Park and Rec District as a public park are not detailed on this Final Development Plan and will be determined as part of a separate process of the County Park and Rec Board. The application is further requesting approval of a Final Plat for the entire Meadowbrook Park site.

Consistent with the approved Preliminary Development Plan, the updated Vision Book for the site proposes the creation of a mixed use development that includes:

- Detached Single Family Homes - 53 homes composed of 20 Cottage Lots, 13 Village Lots and 20 Manor Lots
- Attached Homes - 70 units
- Luxury Apartments - 280 residences
- Inn - 50 rooms with a 5,000 square feet commercial floor area
- Senior Living - 120 units of Independent Living, 120 units of Assisted Living / Memory Care, 90 units of Skilled Nursing Living, with restaurant and ancillary service and amenity space, totaling approximately 8,000 square feet and exterior grand terrace and pool.

The Final Development Plan does not include the hotel or the senior living development. It is intended that Final Development Plans for those projects will be submitted at a future date for review and approval.

On November 12, 2015, the Planning Commission held a public hearing on the requested rezoning of the subject property to MXD (Mixed Use District) including the related Preliminary Development Plan and Preliminary Plat. The Commission adopted a motion to find favorably the findings of fact based on the "golden factors" as detailed in the Commission report dated November 12, 2015, and recommended to the City Council approval of the requested rezoning and proposed Preliminary Development Plan subject to a set of conditions of approval. As part of this action, the Commission also approved the Preliminary Plat for the site.

Following the Commission hearing, on December 7, 2015, the City Council reviewed the applications and the Commission recommendation and approved the rezoning and the Preliminary Development, subject to the following conditions of approval:

1. The applicant addressing the comments from the traffic impact study review conducted by TranSystems.

2. The applicant providing revised plans that identify the necessary improvements to the proposed intersection of Nall Avenue at W. 92nd Terrace to accommodate the proposed boulevard entrance drive including a center left-turn lane on Nall Avenue, verification of sight lines, and adjusting the intersection design to accommodate adequate travel lane alignments.

3. The connection to Roe Avenue shown on the Preliminary Development Plan approved by the Planning Commission as an emergency access road (not open to general public vehicular use) be changed to a public street connecting to Roe Avenue as far north as possible, and that applicant work with the City and with Johnson County Parks and Recreation District in the design of the public street.

4. The applicant finalizing the acquisition of the right-of-way necessary for and constructing the public street connect to 94th Terrace/Rosewood Avenue as proposed, otherwise the Preliminary Development Plan must be brought back to the Commission and Council for review and reconsideration.

5. The applicant agreeing that all major service vehicles for the Senior Living and Inn shall use only the entrance at 94th Terrace/Rosewood Avenue. The applicant shall direct their vendors to avoid am and pm peak traffic hours.

6. The applicant designing the proposed gate at the entrance to the single family area to accommodate emergency vehicle access and include a 'Knox-Box' and a 'yelp' sensor for emergency vehicles to open the gate. The final design of the gated access must be reviewed and approved by the Fire Department and Police Department.

7. The applicant developing pedestrian crossings at the proposed Nall Avenue entrance and the proposed Roe Avenue park entry.

8. The applicant providing detailed elevations and materials for all proposed signage as part of each Final Development Plan and ensuring that all proposed monument signs, structures and landscaping are located outside of any sight visibility zones necessary to accommodate safe vehicular and pedestrian movements at all street intersections. The final signage submittal for the apartment portion of the project shall include all signage within the apartment development as well as all signage within the "public areas" of the entire project.

9. The applicant updating the Preliminary Development Plan to designate that the retaining walls proposed along Nall Avenue to be constructed of or faced with natural stone and labeled as Type A retaining walls.

10. The Planning Commission approving an exception from the retaining wall setback requirement for the retaining wall as proposed along the south property line of the senior living center.

11. Prior to construction, the applicant providing engineered design calculations and plans for all retaining walls exceeding 4 ft. in height.

12. The applicant providing with the Final Development Plan, detailed plans for all trash enclosures and HVAC/building mechanical equipment screening to ensure that all trash

dumpsters, recycling bins, HVAC and building mechanical equipment, etc., is fully screened from view. All screening shall be designed and constructed of materials that are durable and consistent and compatible with the building architecture.

13. The applicant providing details for calculating the parking required for the apartment complex with the Final Development Plan and providing an amount of parking that is acceptable to the City. At a minimum the applicant shall design to provide apartment parking at a rate of 1 stall per bedroom plus guest parking at 15% of total dwelling unit count; and, staff shall work with the applicant throughout the development of the Final Development Plan to verify that the parking total is appropriate and bring a final recommendation to the planning commission.

14. The applicant ensuring that the minimum tree sizes for this project be defined as follows: Large Trees – 3 inch minimum caliper, Ornamental Trees – 3 inch minimum caliper, and Evergreen/Coniferous Trees – 8 ft. minimum height.

15. The applicant updating the Preliminary Development Plan by showing street trees along the streets to the north and south of the open space island that is east of the senior living center; adding trees to the open lawn area of the senor living center building; and additional landscaping in the open space that is west of the Inn.

16. The applicant updating in the Preliminary Development Plan the exterior building material labels for the senior living center building to define "composite material" and "masonry base" consistent with the labeling shown for the Inn and the apartment building.

17. The applicant providing elevations and proposed materials for all pool structures including; restroom structure, shade structure, pump house, trellis, ornamental fencing and landscaping at the Final Development Plan submittal.

18. The applicant addressing all Public Works comments and detailing on the Final Development Plan, the Final Plat(s), and the utility improvement plan(s) all of the existing and proposed storm, sanitary sewer, and water mains, labeling them as public or private,

and labeling the required public or private easements including all other necessary utility easements.

19. Prior to obtaining any permit for construction, the applicant shall submit a Final Development Plan for review and approval by the Planning Commission. Public improvement plans and Final Plat(s) as necessary shall also be submitted by the applicant for review and approval prior to issuance of any permits and start of any construction. It is understood that this development will have multiple Final Development Plan submittals.

20. The applicant shall work with the school district to ensure school bus access to the gated residential development and include this in the Final Development Plan.

21. Staff shall work with the traffic consultant to further review the need for a traffic signal at the Nall Avenue intersection and work towards its installation. This includes working with the City of Overland Park to gain their input and concurrence.

22. All landscaping shown on the Final Development Plan shall be maintained including the replacement of all plant materials lost due to plant death or damage.

23. Maximum height of single family residential structures shall be 45' with an additional 10' allowed for chimneys.

24. Building height for the single family residential structures shall be defined as the dimension from the top of the foundation at the main entry to the ridgeline of the structure.

25. Building height for the apartment and Inn structures shall be defined as the dimension from the FFE (finished floor elevation) at the main entry to the ridgeline of the structure.

26. Building height for the senior housing structures shall be a maximum of 90' from the FFE of the parking garage at the location being measured.

27. Lot widths shown on the Preliminary Plat shall govern and the Vision Book shall be revised at Final Development Plan to reflect the correct dimensions.

Subsequent to the Council approval, the boundary of the Preliminary Development Plan for the Meadowbrook Park was expanded to include the existing office building at 5200 West 94th Terrace in response to the planned platting and construction of a public street through this property that will connect Meadowbrook Park to Rosewood Drive. The plan also includes the construction of a 3-story tall, 6-unit residential condominium building on the remnant parcel that will be on the east side of this new roadway. A separate Final Development Plan is anticipated to be submitted for the condo building at a future date.

STAFF COMMENTS:

There are no outstanding issues. The applicant has updated the Vision Book to address the previous conditions of approval and the Final Development Plans for the residential lots and for the apartment complex are consistent with the approved Preliminary Development Plan. The proposed Final Plat is also consistent with the previously approved Preliminary Plat.

STAFF RECOMMENDATION:

Staff recommends the Commission approve the Final Development Plan (including the updated Vision Book), and the Final Plat, subject to the following conditions of approval:

1. Prior to filing the Final Plat with the County, the applicant providing all necessary legal documents and easements for dedication.

2. Prior to start of any construction, the applicant providing and receiving approval for the necessary public improvement plans.

3. Consistent with the conditions of approval for the Preliminary Development Plan, the applicant agreeing to maintain and keep clear of snow the emergency vehicle road to be installed along the east end of the apartment complex and agreeing to install a 'Knox-Box' and a 'yelp' sensor for emergency vehicles to open the gate planned at the entrance to the single family area to accommodate emergency vehicle access.

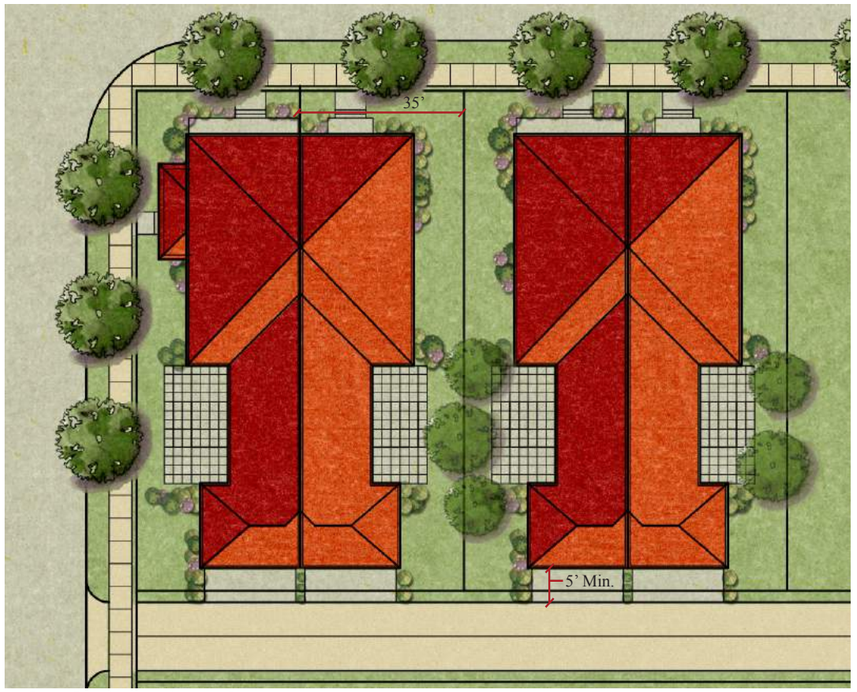
MEADOWBROOK PARK

Vision Book

November 5, 2015
REVISED March 31, 2016

LOT TYPES

ATTACHED HOME LOTS



LOT STANDARDS

Min. Lot Area: 4,000 sq. ft.
Min. Lot Width at Front Setback: 35 ft.
Min. Front Yard Setback: 5 ft. (to any yard bordering a street or open space)
Min. Side Yard Setback: 0 ft. (where attached) / 5 ft. (to an interior lot line)
Min. Rear Yard Setback: 5 ft.
Min. Rear Yard Setback to Garage: 5 ft. (to alley) or 18 ft. (to alley with tandem parking)
Maximum Building Height: 45 ft.
Vehicular Access: Rear-load from alley

Permitted Yard Projections: Awnings, canopies, stoops, porches, verandas, balconies, terraces and similar projections are permitted to extend from a building into a minimum yard, but not closer than 3 feet to a lot line. Such projections may be open, roofed and/or screened. Steps are permitted to extend from a building into a minimum yard with no setback required from a lot line. Window wells providing light and access for basements are permitted to project up to a lot line. Yard areas may contain fencing and/or masonry walls designed to be compatible with the architectural design of the associated home(s) and that serve to define, separate or enclose yards, patios or other private or semi-private outdoor spaces.

Permitted Building Height and Projections: Maximum height of single family attached residential structure shall be 45 feet with an additional 10 feet allowed for chimneys. Building height shall be defined as the dimension from the top of the foundation at the main entry to the ridgeline of the structure.

Accessory Living Quarter: On any Attached Home Lot, an Accessory Living Quarter (ALQ) may be provided as a subordinate dwelling unit that provides basic requirements for cooking, living, sleeping, eating and sanitation. An ALQ may not be subdivided or otherwise segregated in ownership from the primary dwelling unit.

*Landscaping shown is illustrative and will be further details at final approval

COTTAGE LOTS

LOT STANDARDS

Min. Lot Area: 5,600 sq. ft.
Min. Lot Width at Front Setback: 43 ft. (typical 48 ft.)
Min. Front Yard Setback: 5 ft. (to any yard bordering a street or open space)
Min. Side Yard Setback: 0 ft. (one side) / 5 ft. (one side)
Min. Rear Yard Setback: 5 ft.
Min. Rear Yard Setback: 5 ft. (to alley) or 18 ft. (to alley with tandem parking)
Maximum Building Height: 45 ft.
Vehicular Access: Rear-load from alley

Permitted Yard Projections: Awnings, canopies, stoops, porches, verandas, balconies, terraces and similar projections are permitted to extend from a building into a minimum yard, but not closer than 3 feet to a lot line. Such projections may be open, roofed and/or screened. Steps are permitted to extend from a building into a minimum yard with no setback required from a lot line. Window wells providing light and access for basements are permitted to project up to a lot line. Yard areas may contain fencing and/or masonry walls designed to be compatible with the architectural design of the associated home(s) and that serve to define, separate or enclose yards, patios or other private or semi-private outdoor spaces.

Permitted Building Height and Projections: Maximum height of single family residential structure shall be 45 feet with an additional 10 feet allowed for chimneys. Building height shall be defined as the dimension from the top of the foundation at the main entry to the ridgeline of the structure.

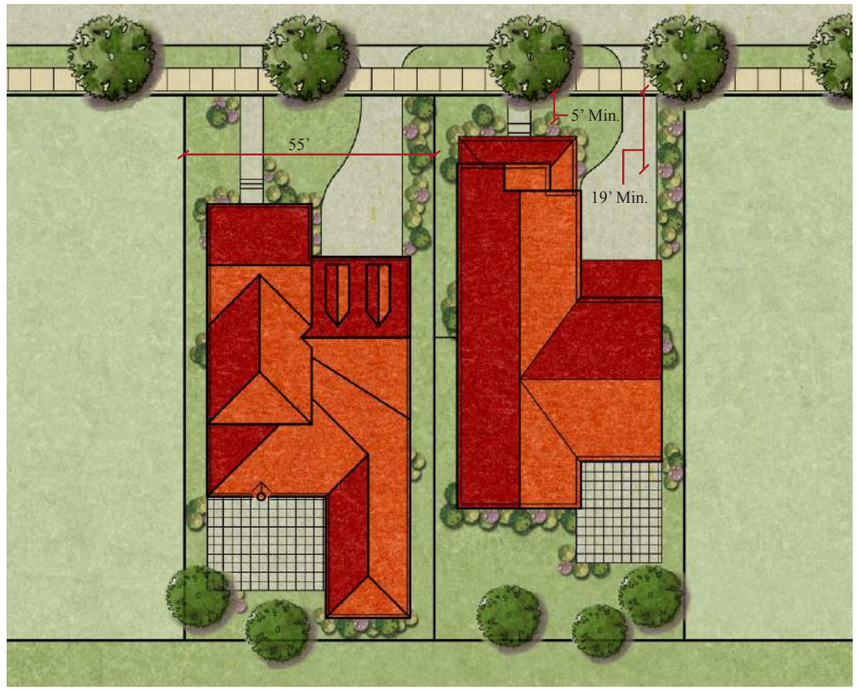
Accessory Living Quarter: On any Cottage Lot, an Accessory Living Quarter (ALQ) may be provided as a subordinate dwelling unit that provides basic requirements for cooking, living, sleeping, eating and sanitation. An ALQ may not be subdivided or otherwise segregated in ownership from the primary dwelling unit.

*Landscaping shown is illustrative and will be further details at final approval

LOT OPTIONS

Any Attached Home Lot may be reassigned as a Cottage Lot, and vice versa. Any Attached Home or Cottage Lot may be "split" in such a manner to enlarge the adjacent lots on both sides.

VILLAGE LOTS



LOT STANDARDS

Min. Lot Area: 6,000 sq. ft.
Min. Lot Width at front setback: 55 ft.
Min. Front Yard Setback: 5 ft.
Min. Front Yard Setback to Garage: 19 ft. (from edge or sidewalk)
Min. Side Yard Setback: 0 ft. (one side) / 5 ft. (one side)
Min. Rear Yard Setback: 5 ft.
Maximum Building Height: 45 ft.
Vehicular Access: Front-load from street

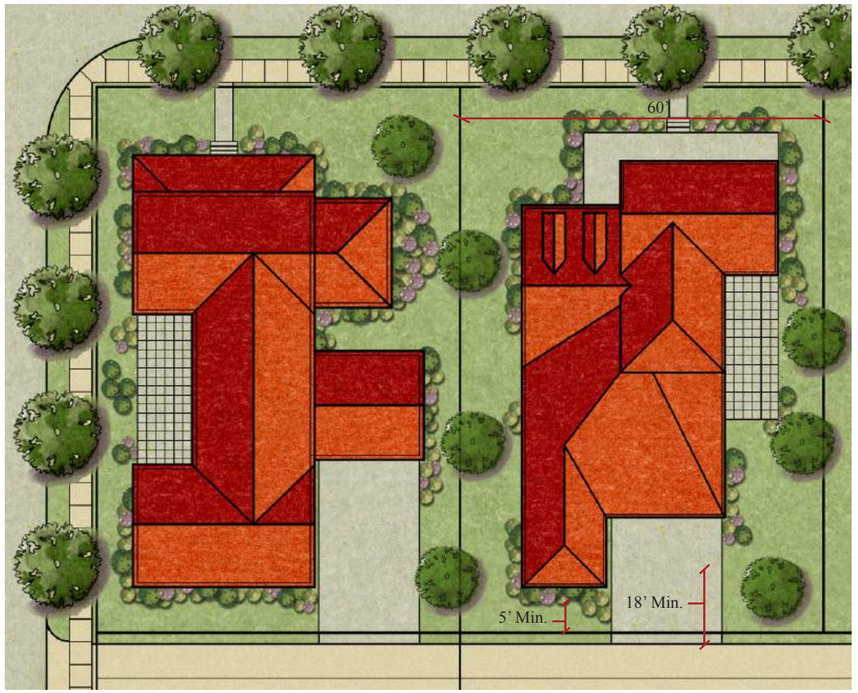
Permitted Yard Projections: Awnings, canopies, stoops, porches, verandas, balconies, terraces and similar projections are permitted to extend from a building into a minimum yard, but not closer than 3 feet to a lot line. Such projections may be open, roofed and/or screened. Steps are permitted to extend from a building into a minimum yard with no setback required from a lot line. Window wells providing light and access for basements are permitted to project up to a lot line. Yard areas may contain fencing and/or masonry walls designed to be compatible with the architectural design of the associated home(s) and that serve to define, separate or enclose yards, patios or other private or semi-private outdoor spaces.

Permitted Building Height and Projections: Maximum height of single family residential structure shall be 45 feet with an additional 10 feet allowed for chimneys. Building height shall be defined as the dimension from the top of the foundation at the main entry to the ridgeline of the structure.

Accessory Living Quarter: On any Village Lot, an Accessory Living Quarter (ALQ) may be provided as a subordinate dwelling unit that provides basic requirements for cooking, living, sleeping, eating and sanitation. An ALQ may not be subdivided or otherwise segregated in ownership from the primary dwelling unit.

*Landscaping shown is illustrative and will be further details at final approval

MANOR LOTS



LOT STANDARDS

Min. Lot Area: 6,500 sq. ft.
Min. Lot Width at Front Setback: 60 ft.
Min. Front Yard Setback: 10 ft.(to any yard bordering a street or open space)
Min. Side Yard Setback: 5 ft.
Min. Rear Yard Setback: 5 ft.
Min. Rear Yard Setback to Garage: 5 ft. (to alley) or 18 ft. (to alley with tandem parking)
Maximum Building Height: 45 ft.
Vehicular Access: Rear-load from alley

Permitted Yard Projections: Awnings, canopies, stoops, porches, verandas, balconies, terraces and similar projections are permitted to extend from a building into a minimum yard, but not closer than 3 feet to a lot line. Such projections may be open, roofed and/or screened. Steps are permitted to extend from a building into a minimum yard with no setback required from a lot line. Window wells providing light and access for basements are permitted to project up to a lot line. Yard areas may contain fencing and/or masonry walls designed to be compatible with the architectural design of the associated home(s) and that serve to define, separate or enclose yards, patios or other private or semi-private outdoor spaces.

Permitted Building Height and Projections: Maximum height of single family residential structure shall be 45 feet with an additional 10 feet allowed for chimneys. Building height shall be defined as the dimension from the top of the foundation at the main entry to the ridgeline of the structure.

Accessory Living Quarter: On any Manor Lot, an Accessory Living Quarter (ALQ) may be provided as a subordinate dwelling unit that provides basic requirements for cooking, living, sleeping, eating and sanitation. An ALQ may not be subdivided or otherwise segregated in ownership from the primary dwelling unit.

*Landscaping shown is illustrative and will be further details at final approval

EXTERIOR MATERIALS AND COLORS

Appropriate exterior wall finish materials will be brick, stone, stucco, wood siding, wood shakes and fiber-cement siding or shakes. Every structure will have a brick or stone masonry base.

Synthetic stucco, E.I.F.S., 'softcoat stucco', thin brick and cultured stone are not allowed.

The use of brick or stone including any patterns, must be appropriate to the architectural design of the building. When appropriate to the design, the brick may be painted.

Materials may be combined on a single building, but a single material should cover the majority of any attached or detached single family building. Any change in materials should occur at an appropriate inside corner or where appropriate to the style such as at a belt course.

Roof materials shall consist of standing seam, pre-finished metal or copper, slate or synthetic slate, wood shakes, dimensional asphalt or dimensional fiberglass shingles. Low-pitched porch and bay roofs will be standing seam, pre-finished metal or copper unless located on the fourth floor or higher.

All entry door and window trim, soffits, fascias, cornices and similar architectural trim elements shall be painted wood, fiber-cement, cellular PVC or an alternate synthetic wood material. Metal and hollow back vinyl trim are prohibited, metal trim is only allowed when adjacent to metal roofing.

The palette of materials and colors for the luxury apartment and senior living buildings is the following:

- A brick or stone base course will be provided which includes the first floor and may extend to the top of the second floor. Appropriate exterior wall finish materials will be wood siding, wood shakes, and fiber-cement siding or shakes.
- The color schemes will be medium tone-on-tone with deep color usage provided on doors, windows, shutters, awnings and railings.

The palette of materials and colors for the inn is the following:

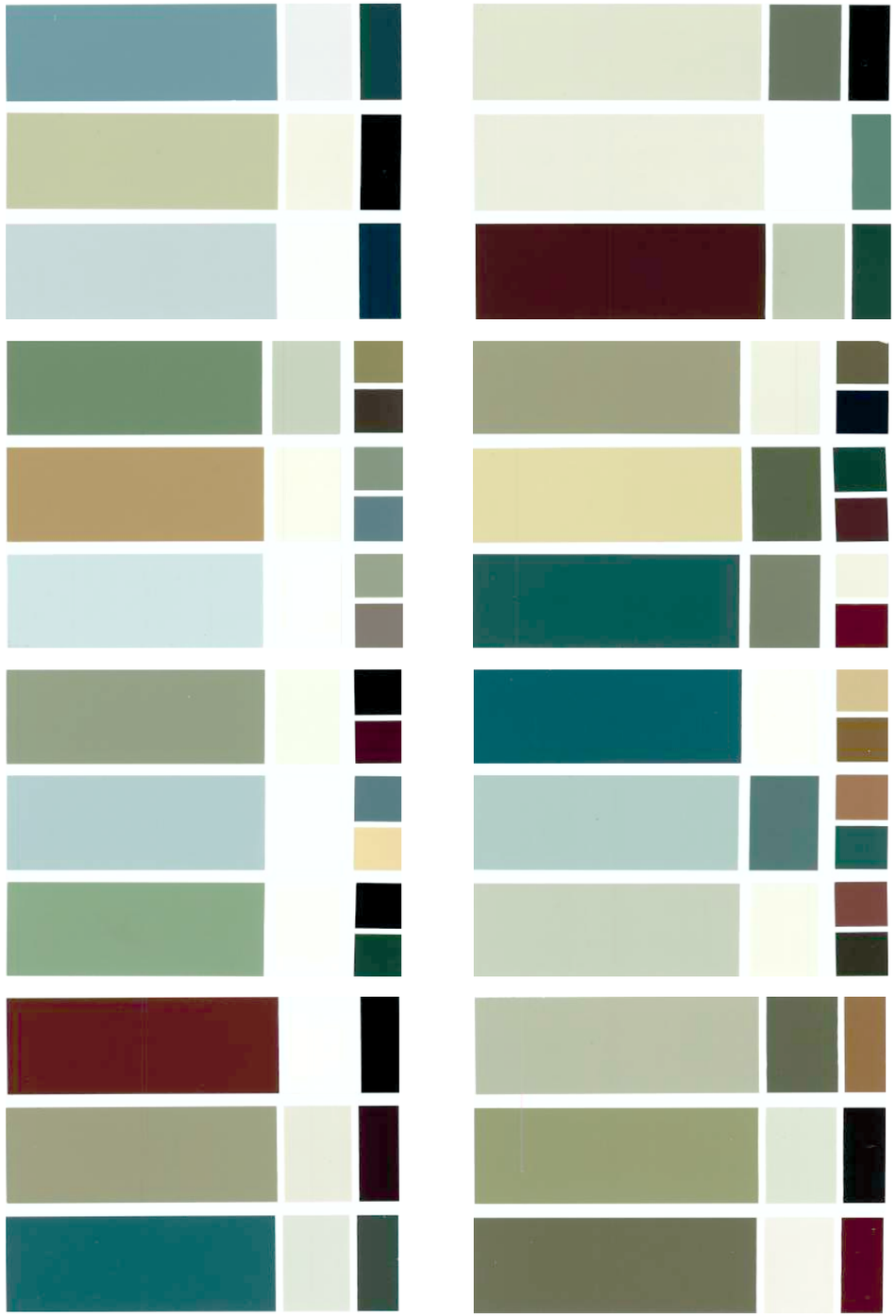
- A brick or stone base course will be provided which may include the first floor. Appropriate exterior wall finish materials will be brick, stone, stucco, wood siding, wood shakes, and fiber-cement siding or shakes.
- The color scheme will be white or a light-tone neutral color with deep color usage provided on doors, windows, shutters, awnings and railings.

The palette of materials and colors for the attached homes is the following:

- A brick or stone base course will be provided along all facades. The brick or stone base shall extend to the first finished floor height. In any location where the foundation wall is fully screened by, foundation plantings or a wall, the brick or stone base course shall not be required, however, there shall be a minimal exposure of the foundation wall and it shall be covered with a parge coating.
- The color schemes will be light-tone or medium-tone neutral colors with deep color usage limited to on doors, windows, shutters, projecting bays, awnings & railings or the color schemes will be medium-tone to dark-tone colors with medium to light color usage limited to on doors, windows, shutters, projecting bays, awnings & railings.

The palette of materials and colors for the detached homes is the following:

- A brick or stone base course will be provided along all facades. The brick or stone base shall extend to the first finished floor height. In any location where the foundation wall is fully screened by, foundation plantings or a wall, the brick or stone base course shall not be required, however, there shall be a minimal exposure of the foundation wall and it shall be covered with a parge coating.
- The color schemes will be light-tone or medium-tone neutral colors with deep color usage limited to on doors, windows, shutters, projecting bays, awnings & railings or the color schemes will be medium-tone to dark-tone colors with medium to light color usage limited to on doors, windows, shutters, projecting bays, awnings & railings.



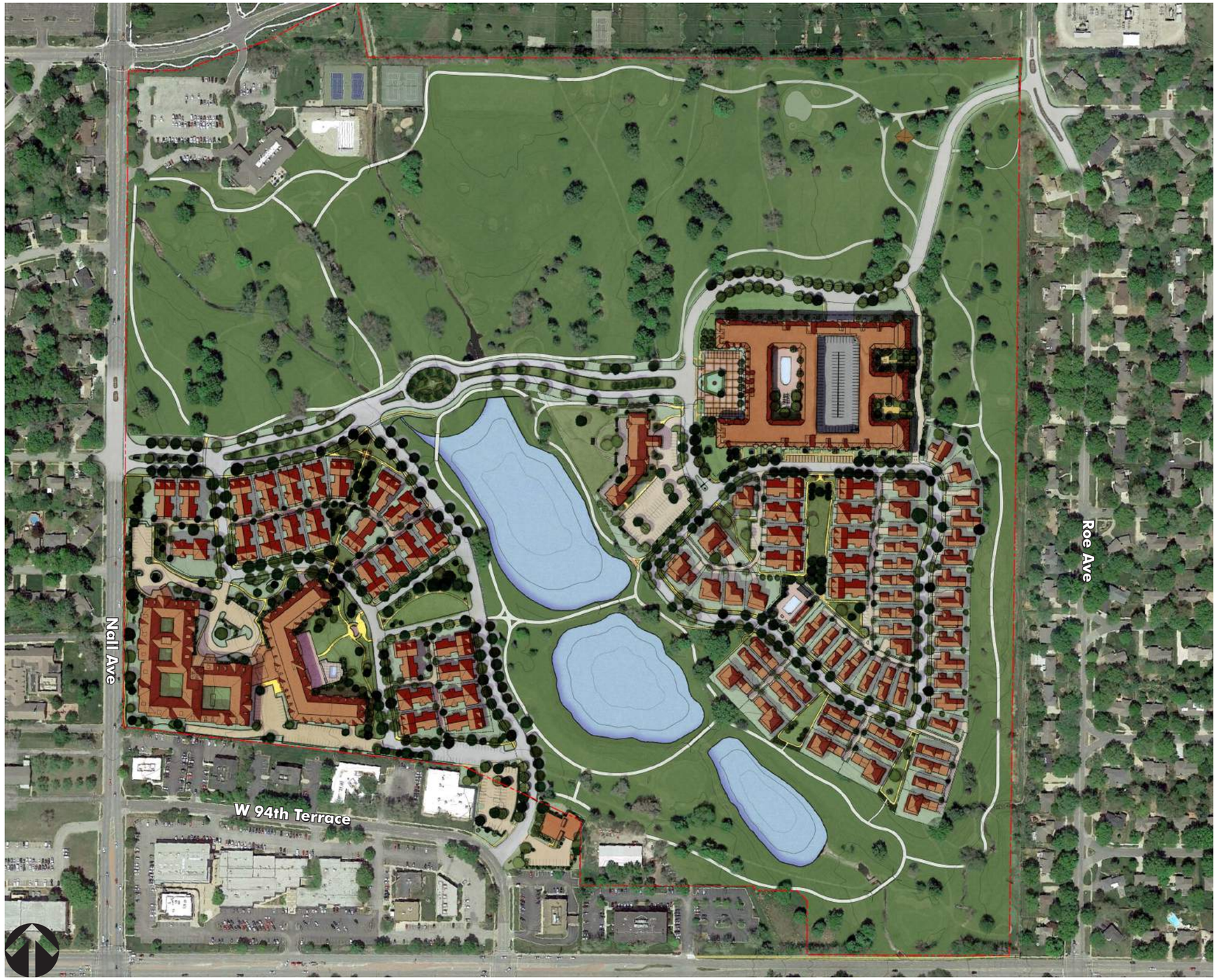
The above color palettes are illustrative of the range of color schemes proposed to be used.

DEVELOPMENT PROGRAM

The development program includes the following components:

- Detached Single Family Homes – 53 homes composed of 20 Cottage Lots, 13 Village Lots and 20 Manor Lots
- Attached Homes - 70
- Luxury Apartments - 280 residences
- Inn - 50 rooms with a 5,000 square feet commercial area
- Senior Living - 120 units of Independent Living, 120 units of Assisted Living / Memory Care, 90 units of Skilled Nursing Living, with restaurant and ancillary service and amenity space, totaling approximately 8,000 square feet and exterior grand terrace and pool.

The site is proposed to be developed in one single phase lasting a total of approximately 40 months following final approval



Legend

- Park Space
- Single Family Residential
- Attached Homes
- Luxury Apartments
- Inn
- Senior Living

FINAL DEVELOPMENT PLAN

CIVIL & LANDSCAPE

MEADOWBROOK PARK

IN THE CITY OF PRAIRIE VILLAGE, JOHNSON COUNTY, KANSAS

VanTrust

REAL ESTATE LLC

VanTrust Real Estate LLC
4900 Main Street, Suite 400
Kansas City, Missouri 64112
(816) 569–1441

LRK

Looney Ricks Kiss

Looney Ricks Kiss
182 Nassau Street, Suite 302
Princeton, New Jersey 08542
(609) 683–3600

PEI

PLANNING
ENGINEERING
IMPLEMENTATION

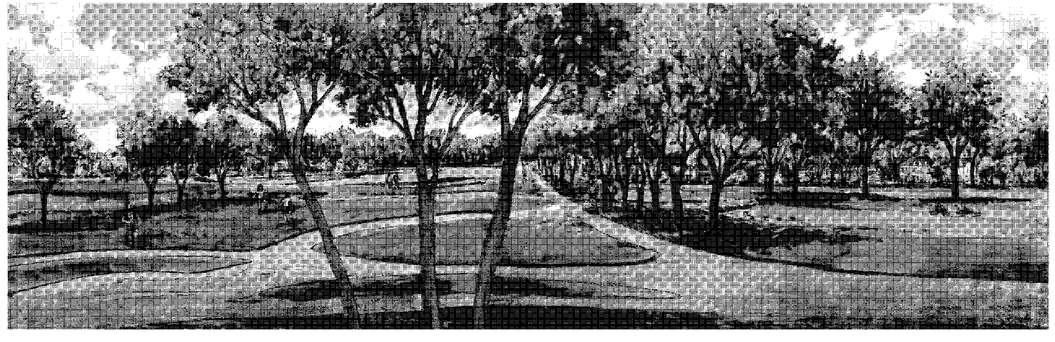
PHELPS ENGINEERING, INC

Phelps Engineering Inc.
1270 North Winchester Street
Olathe, Kansas 66061
(913) 393–1155

BBN

ARCHITECTS
INC

BBN Architects Inc.
411 Nichols Road, Suite 246
Kansas City, Missouri 64112
(816) 753–2550



ISSUE DATES:

MARCH 4, 2016	FINAL DEVELOPMENT PLAN SUBMITTAL
MARCH 30, 2016	FINAL DEVELOPMENT PLAN RESUBMITTAL

INDEX

SITE PLAN NOTES:

1. All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference:
   A) City ordinances & O.S.H.A. Regulations.
   B) The City of Prairie Village Technical Specifications and Municipal Code.
   C) Project Technical Specifications.
2. The contractor shall have one (1) signed copy of the plans (approved by the City) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.
3. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Prairie Village, Kansas, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
4. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall assume all responsibility for protecting and maintaining his work during the construction period and between the various trades/sub-contractors constructing the work.
5. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction including excess soil, unsuitable materials, or other shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste or excess material. The disposal of waste or excess material shall be in accordance with all local, state and federal regulations.
6. Contractor shall be responsible for all relocations, including but not limited to, all utilities, storm drainage, sanitary sewer services, signs, traffic signals & poles, etc. as required. All work shall be in accordance with governing authorities specifications and shall be approved by such. All cost shall be included in base bid.
7. All existing utilities indicated on the drawings are according to the best information available to the Engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All utilities, shown and unshown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.
8. The contractor will be responsible for all damage to existing utilities, pavement, fences, structures and other features not designated for removal. The contractor shall repair all damages at his expense.
9. The contractor shall verify the flow lines of all existing storm or sanitary sewer connections and utility crossings prior to the start of construction. Notify the engineer of any discrepancies.
10. SAFETY NOTICE TO CONTRACTOR: In accordance with generally accepted construction practices, the contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuousiy and not be limited to normal working hours. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on or near the construction site.
11. WARRANTY/DISCLAIMER: The designs represented in these plans are in accordance with established practices of civil engineering for the design functions and uses intended by the owner at this time. However, neither the Engineer nor its personnel can or do warrant these designs or plans as constructed except in the specific cases where the Engineer observes the physical construction on a continual basis at the site.
12. No work is to be allowed within the public right-of-way or easements without a right of way work permit.
13. All paving construction and earthwork grading/compaction shall conform to the requirements of the geotechnical engineering report prepared for this project.
14. Within forty-eight hours prior to any asphalt or concrete paving, the subgrade shall be proof rolled with a fully loaded tandem wheeled dump truck and observed by the on-site geotechnical engineer. Areas of the subgrade with excessive rutting and or pumping shall be re-worked or removed in accordance with the project specifications. Flyash or granular material may be added by the contractor to stabilize the subgrade. See project specifications.
15. All curb shall be sloped for positive drainage. Contractor shall use "dry curb and gutter" as needed in localized paved areas that drain away from the curb and gutter. See paving details.
16. The Contractor is responsible for the protection of all property corners and section corners. Any property corners and/or section corners disturbed or damaged by construction activities shall be reset by a Registered Land Surveyor licensed in the State of Kansas, at the contractor's expense.
17. The contractor shall be responsible for the restoration of the right-of-way and for damaged improvements such as curbs, sidewalks, street light and traffic signal junction boxes, traffic signal loop lead ins, signal poles, etc. Damaged improvements shall be repaired in conformance with the latest city standards and to the City's satisfaction.
18. The contractor is responsible for providing berms, silt fences, or other means to prevent eroded materials from reaching the public right-of-way and adjacent properties. In the event the prevention measures are not effective, the contractor shall remove any debris, silt or mud and restore the right-of-way or adjacent property to original or better condition.
19. All disturbed areas are to receive 4" min. topsoil, sod, mulch and water until a healthy stand of grass is established. See the landscaping plans for requirements.
20. The contractor shall sod all disturbed areas within the public street right-of-way.
21. Contractor shall refer to the architectural building plans for exact locations and dimensions of vestibules, slope paving, sidewalks, exit porches, precise building dimensions and exact building utility entrance locations. All dimensions are to outside wall of building(s) or to back of curbs.
22. Provide "fire lane" pavement marking and signing as required by local authority.
23. Refer to building plans for site lighting electrical plan.

PAVEMENT MARKING AND SIGNAGE NOTES:

1. Parking stall marking stripes shall be four inch (4") wide white stripes. Directional arrow and handicap stall markings shall be furnished at locations shown on plans.
2. Handicap pavement markings and signs shall conform to all federal (Americans with Disabilities Act) and state laws and regulations.
3. Traffic control devices and pavement markings shall conform to the requirements of the "Manual of Uniform Traffic Control Devices".
4. Stop signs shall be provided at all locations as shown on plans and shall conform to the "Manual of Uniform Traffic Control Devices". Signs shall be 18" x 12", 18 gauge steel and shall be engineer grade reflective.
5. Traffic control and pavement markings shall be painted with a white Sherwin Williams S-W traffic marking series B-29Y2 or approved equal. The pavement marking shall be applied in accordance with manufacturers recommendations. Apply on a clean, dry surface and at a surface temperature of not less than 70°F and the ambient air temperature shall not be less than 60°F and rising. Two coats shall be applied.

SITE GRADING NOTES:

1. CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one foot (1') contour intervals, unless otherwise noted, proposed contours and elevations shown represent approximate finish grade. Contractor shall hold down subgrades to allow for building slabs, pavements, and sub-base thicknesses.
2. If the contractor does not accept existing topography as shown on the plans, without exception, he shall have made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.
3. CLEARING AND GRUBBING: Prior to beginning preparation of subgrade, all areas under pavements or building shall be stripped of all topsoil, vegetation, large rock fragments (greater than 6 inches in any dimension) and any other deleterious material. The actual stripping depth should be based on visual examination during construction and the results of proof-rolling operations. The root systems of all trees (not designated to remain) shall be removed in their entirety. Stripping materials shall not be incorporated into structural fills.
4. TOPSOIL STRIPPING: Prior to the start of site grading, the contractor shall strip all topsoil from areas to be graded and stockpile at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. At that time and prior to the installation of landscaping or irrigation, all topsoil graded areas shall be visually inspected and accepted by the owner and ITL.
5. Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade. Contractor shall assure positive drainage away from buildings for all natural and paved areas.
6. SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.
7. PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and pavement areas to receive engineered fill should be systematically proof-rolled using a tandem axle dump truck loaded to approximately 9 tons per axle. Also, any finished subgrade areas to receive paving shall be proof-rolled within 48 hours of paving. Unsuitable soils that are detected and that can not be recompacted should be over-excavated and replaced with controlled structural fill.
8. EARTHWORK:
   A) GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report. Said report and its recommendations are herein incorporated into the project requirements by reference. Prior to beginning construction, the contractor shall obtain a copy of and become familiar with the geotechnical report. Unless specifically noted on the plans, the recommendations in the geotechnical report are hereby incorporated into the project requirements and specifications.
   B) SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.
   C) FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil and debris. In areas where the thickness of the engineered fill is greater than five, feet building and pavement construction should not commence until so authorized by the on-site geotechnical engineer to allow for consolidation.
   D) BUILDING SUBGRADE: Refer to geotechnical report for requirements.
   E) EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). The benches should be cut wide enough to accommodate the compaction equipment. Fill material shall be placed and compacted in horizontal lifts not exceeding nine inches (8") (loose lift measurement), unless otherwise approved by the Geotechnical Engineer.
   F) COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall within a range of -2% below to +3% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.
9. All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 8" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.
10. TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.
11. CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock excavation.
12. RESTORATION: All areas disturbed by earthwork operations shall be fertilized, seeded or sodded and mulched, unless shown otherwise by the landscaping plan or erosion control plan.
13. LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P.P. requirements.

LEGEND

- ASPHALT PAVEMENT
- ON-STREET PARKING
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- STREET LIGHTING (SL1)
- STREET LIGHTING (SL2)
- STREET LIGHTING (SL3)

SITE UTILITY NOTES:

1. The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate &/or remove all existing utilities which conflict with the proposed improvements shown on the plans.
2. The contractor shall field verify the exact location and elevation of the existing storm sewer lines and the existing elevation at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans, the contractor shall contact the design engineer. No pipes shall be laid until direction or confirmation is received from the design engineer.
3. It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.
4. Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. Spacing and at all bend points. Do not connect roof drains directly to storm sewer pipe.
5. The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, backflow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the buildings shall be the responsibility of the contractor. All work shall conform to the requirements of City of Prairie Village, Kansas and Waterone.
6. The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the buildings to the public line. The contractor shall refer to the building plumbing plans for specific locations and elevations of the service lines of the building connection. All work shall conform to the requirements of the City of Prairie Village Kansas and the Johnson County Unified Wastewater District.
7. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Prairie Village, Kansas, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
8. The Contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structures. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.
9. All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
10. Contractor shall notify the utility authorities inspectors 48 hours before connecting to any existing line.
11. Storm sewer roof drains (st) shall be as follows (unless otherwise shown on plans).
    - PVC SDR 35 per ASTM D 3034, for pipes less than 12' deep.
    - PVC SDR 26 per ASTM D 3034, for pipes 12' to 20' deep.
    - High Density Polyethylene Pipe (HDPE) may also be used for storm sewer pipe is 24 inches in diameter or less allowed on private storm sewers. HDPE is not permitted for use within Public Right of Way.
12. Water lines shall be as follows (unless otherwise shown on plans):
    for 6" and larger: ductile iron pipe per AWWA C150
    between 2" and 6": copper tube Type "K" per ANSI 816.22 or ductile iron pipe per AWWA C150.
    For smaller than 2": copper tube Type "K" per ANSI 816.22.
13. Minimum trench width shall be 2 feet.
14. Contractor shall maintain a minimum of 42" cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to Waterone's specifications for commercial services.
15. All waterlines shall be kept ten (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 2'vertical clearance (outside edge of pipe to outside edge of pipe) of the water line above the sewer line is required.
16. In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be encased in concrete 10 feet on both sides of the water line. The waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 24" clearance, meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C-151) (CLASS 50).
17. All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.
18. All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
19. Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place & tested prior to paving.
20. When a building utility connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such site utility terminations.

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PLANNING
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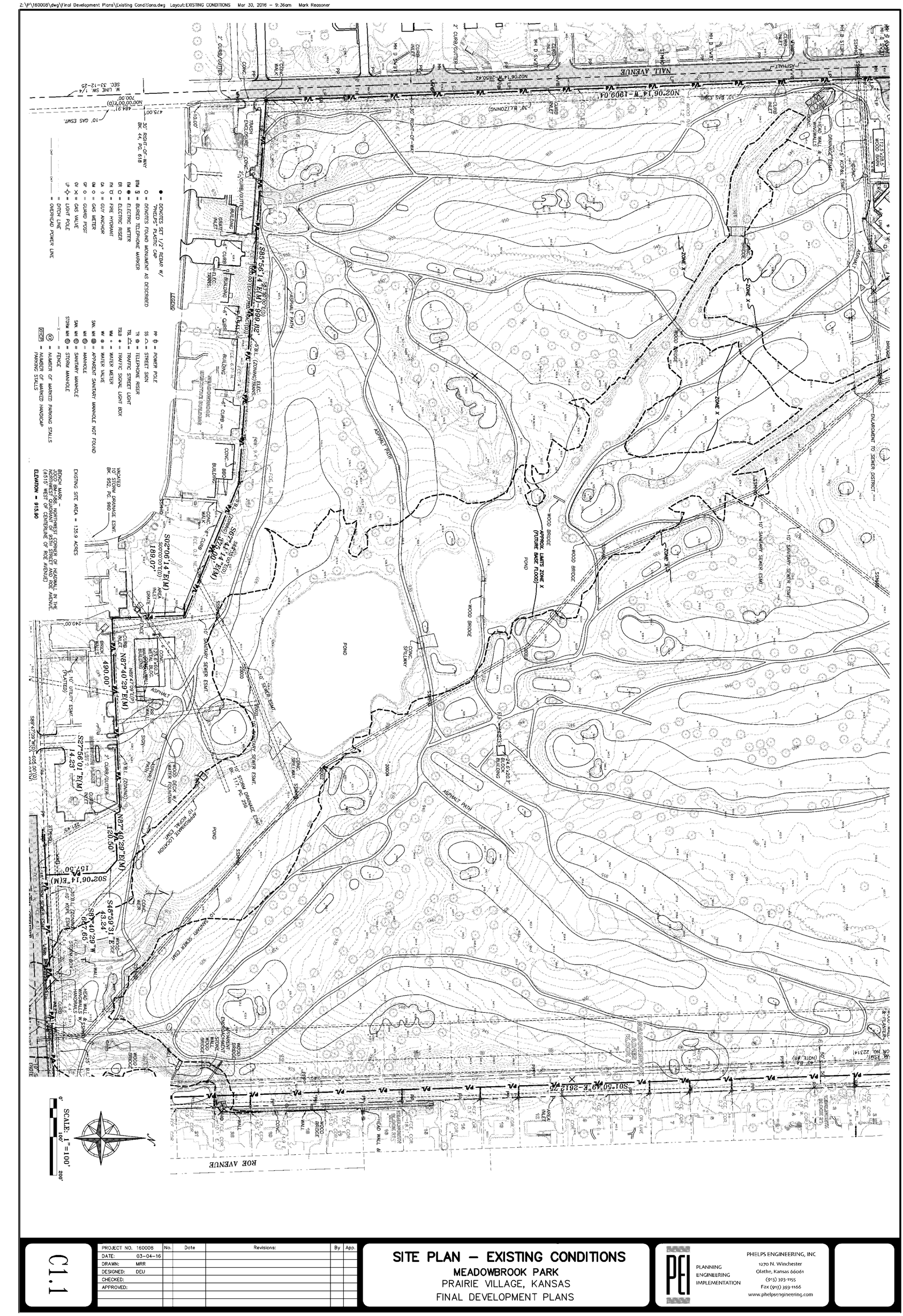
IMPLEMENTATION

GENERAL NOTES
MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Date	Revisions:	By	App.

PROJECT NO. 160008
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DEU
CHECKED:
APPROVED:

C1.0



C1.1

PROJECT NO. 160008	No.	Date	Revisions:	By	App.
DATE: 03-04-16					
DRAWN: MRR					
DESIGNED: DEU					
CHECKED:					
APPROVED:					

SITE PLAN – EXISTING CONDITIONS

MEADOWBROOK PARK

PRAIRIE VILLAGE, KANSAS

FINAL DEVELOPMENT PLANS

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SITE PLAN – OVERALL

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

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PLANNING
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IMPLEMENTATION

PARK

TRAIL (PER PARK PLAN)

SIDEWALK CONNECTS TO PARK TRAIL

NEW SIDEWALK (PER PARK PLAN)

MEADOWBROOK PARKWAY

FUTURE LUXURY APARTMENTS (BY OTHERS) LOT 55

MXD ZONING BOUNDARY

ASPHALT EMERGENCY ACCESS ROAD

LOT 54

FUTURE INN (BY OTHERS)

POND

VEHICULAR GATE ACCESS

ATTACHED HOMES

POOL

FUTURE ASSISTED SENIOR LIVING COMMUNITY (BY OTHERS) LOT 1

FUTURE INDEPENDENT SENIOR LIVING COMMUNITY (BY OTHERS)

EXISTING MAINTENANCE BUILDING

MB-15 LLC
4900 MAIN ST APT 300
KANSAS CITY, MO 64112
ZONING: R-1A

RESIDENTIAL LOT TYPE LEGEND:

(C) - COTTAGE LOT

(V) - VILLAGE LOT

(M) - MANOR LOT

SCALE: 1"=2000'

VICINITY MAP
SEC. 33-12-25

87TH STREET
95TH STREET
NALL AVENUE
MISSION ROAD
NW1/4
NE1/4
SW1/4
SE1/4

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

LEGAL DESCRIPTION:

ALL OF LOTS 2 - 53, ALL OF LOTS 56 - 126, ALL OF TRACTS A - S, ALL OF TRACTS U - X, AND ALL OF TRACT Z, AS DEFINED ON THE FINAL PLAT OF MEADOWBROOK PARK, A SUBDIVISION IN THE CITY OF PRAIRIE VILLAGE, JOHNSON COUNTY, KANSAS.

No.	Date	Revisions:	By	App.

PROJECT NO.: 160008
DATE: 03-04-16
DRAWN: MRR
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CHECKED:
APPROVED:

C1.2

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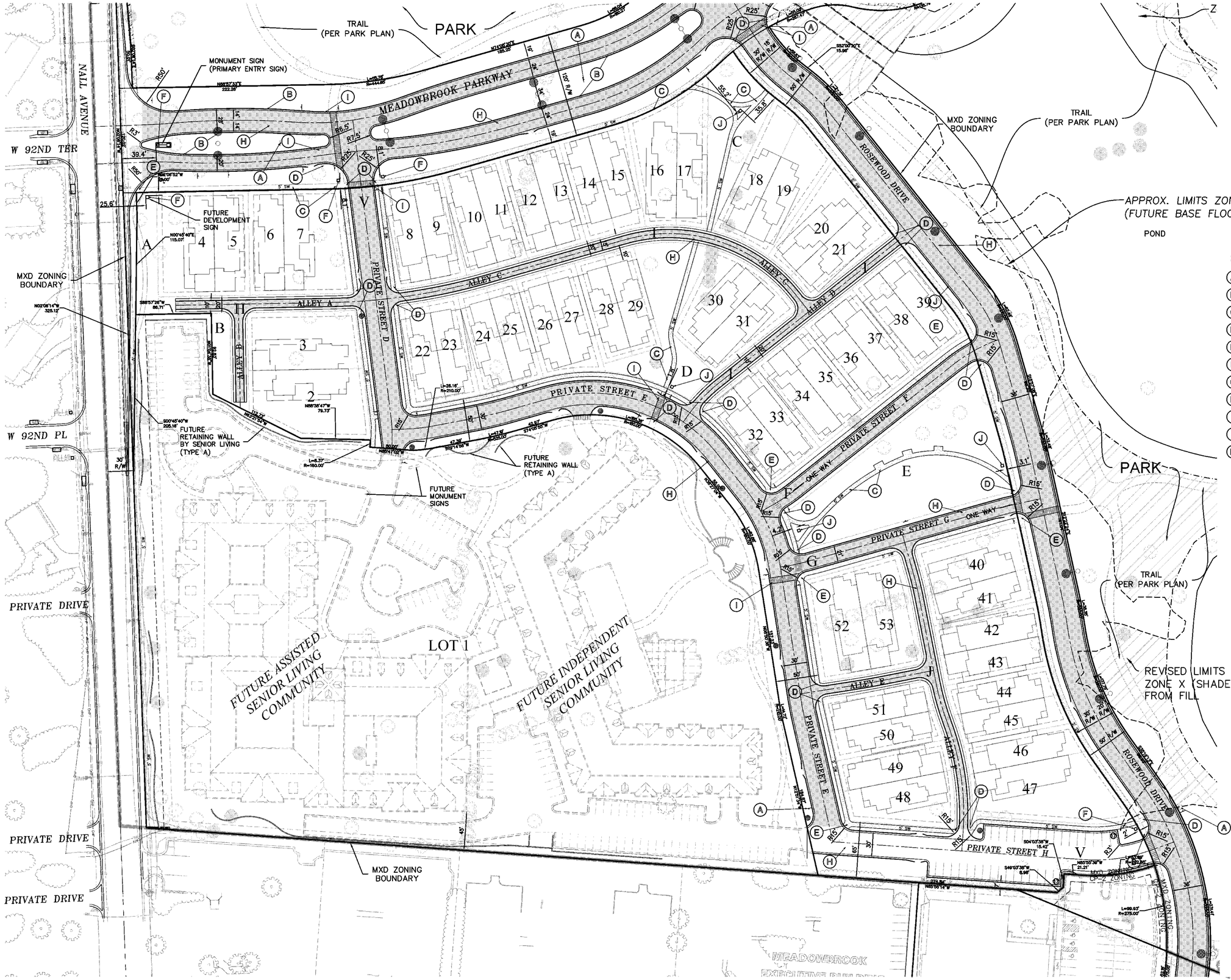

SITE KEY NOTES:

- (A) INSTALL WAYFINDING SIGNS
- (B) CONSTRUCT CURB & GUTTER
- (C) CONSTRUCT CONCRETE SIDEWALK
- (D) CONSTRUCT TYPE A SIDEWALK RAMP
- (E) CONSTRUCT TYPE B SIDEWALK RAMP
- (F) INSTALL NEIGHBORHOOD ENTRY SIGN
- (G) CONSTRUCT CONCRETE DRIVEWAY
- (H) CONSTRUCT ASPHALT PAVEMENT (TYP.)
- (I) STRIPE PEDESTRIAN CROSSING
- (J) INSTALL GREEN SPACE MARKER
- (K) PAVEMENT MARKINGS

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PLANNING
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SITE PLAN – WEST RESIDENTIAL LOTS

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Date	Revisions:	By	App.

PROJECT NO. 160008
DATE: 03-04-16
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DESIGNED: DEU
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APPROVED:

C1.3

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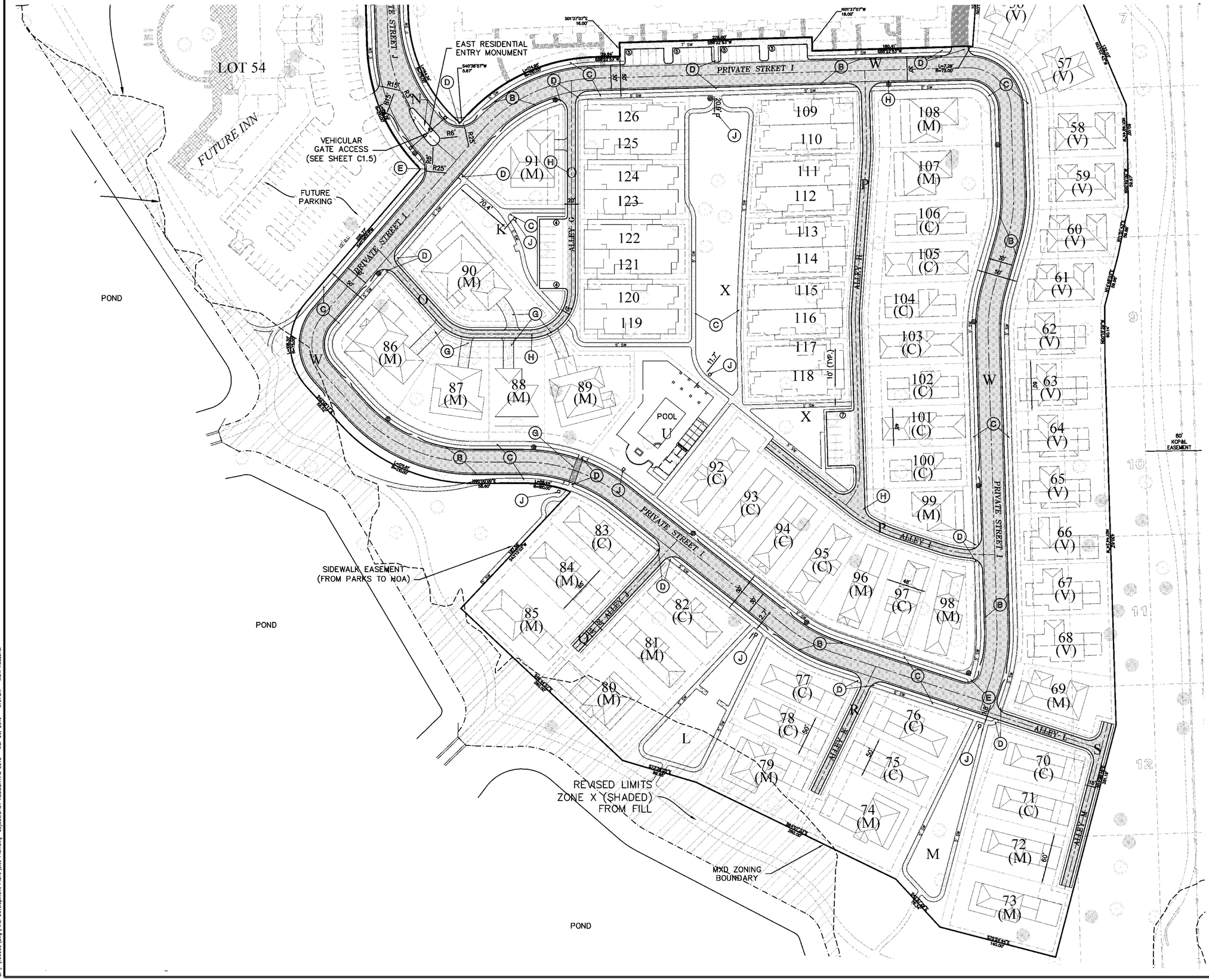

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- (K) PAVEMENT MARKINGS

SCALE: 1"=50'

SITE PLAN – EAST RESIDENTIAL LOTS

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

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C1.4

PRIVATE STREET J

PRIVATE STREET I

5' SW

10' B.L.

CALL BOX LOCATION

PROPOSED GATE

STONE COLUMN

NEIGHBORHOOD ENTRY MONUMENT

FUTURE PARKING LOT

R15'

R3'

R25'

R6'

18.2'

18.1'

5'

30'

N

SCALE: 1"=10'

0' 10' 20'

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PLANNING
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SITE PLAN – GATE

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

Revisions:	No.	Date	By	App.

PROJECT NO. 160008
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DESIGNED: DCU
CHECKED:
APPROVED:

C1.5

SITE KEY NOTES:

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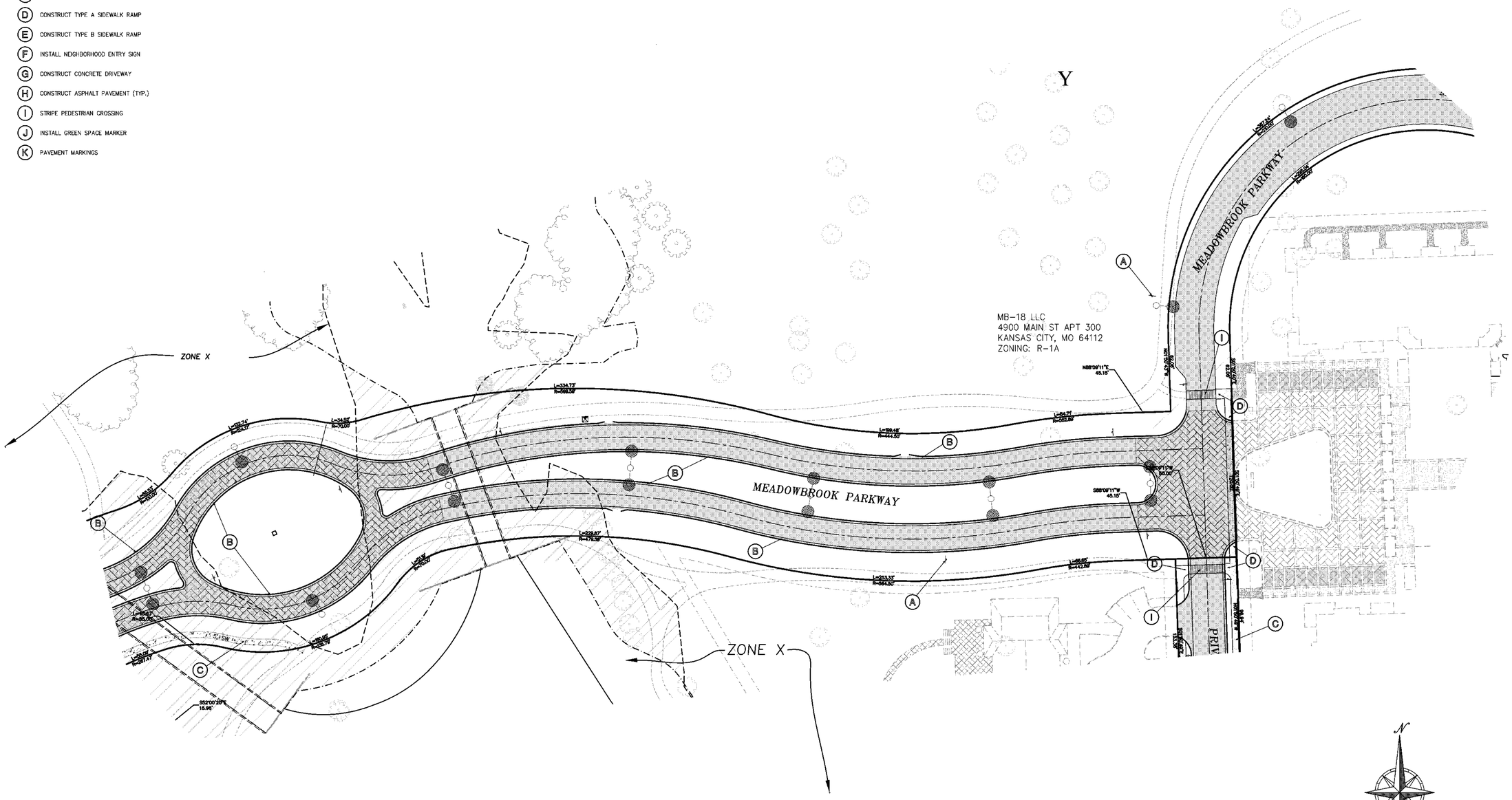

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PLANNING
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SITE PLAN – MEADOWBROOK PARKWAY

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

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DATE: 03-04-16
DRAWN: MRR
DESIGNED: DCU
CHECKED:
APPROVED:

C1.6

MCFARLAND, GISELA
4869 W 90TH ST
PRAIRIE VILLAGE,
KS 66207
ZONING: R-1A

MILLARD,
LOU ANN & JOHN
4865 W 90TH ST
PRAIRIE VILLAGE,
KS 66207
ZONING: R-1A

GREENBAUM,
FREDERICK & CHRISTINA
4861 W 90TH ST
PRAIRIE VILLAGE,
KS 66207
ZONING: R-1A

PATTON,
JOSEPH & CONSTANCE
4857 W 90TH ST
PRAIRIE VILLAGE,
KS 66207
ZONING: R-1A

DONNELLY,
CHARLES & LINDA
4853 W 90TH ST
PRAIRIE VILLAGE,
KS 66207
ZONING: R-1A

BISHOP LIVING TRUST
BISHOP, ROBERT & KRISTIN
4849 W 90TH ST
PRAIRIE VILLAGE,
KS 66207
ZONING: R-1A

GARDNER, IRVILENE
4845 W 90TH ST
PRAIRIE VILLAGE, KS 66207
ZONING: R-1A

WEBSTER, SUSAN
4841 W 90TH ST
PRAIRIE VILLAGE, KS 66207
ZONING: R-1A

PRAIRIE VILLAGE,
KS 66207
ZONING: R-1A

WEST RIDING
2ND PLAT

SITE KEY NOTES:

- (A) INSTALL WAYFINDING SIGNS
- (B) CONSTRUCT CURB & GUTTER
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- (J) INSTALL GREEN SPACE MARKER
- (K) PAVEMENT MARKINGS

PARK

TRAIL
(PER PARK PLANS)

MEADOWBROOK PARKWAY

MEADOWBROOK PARKWAY

MEADOWBROOK PARKWAY

ASPHALT EMERGENCY ACCESS ROAD

MXD ZONING BOUNDARY

(F) SECONDARY ENTRY SIGN

TELEPHONE VAULT

ROE AVENUE

91ST STREET

SITE TRIANGLE – ROE AVENUE

EX 8 W/M

KENILWORTH HOMES ASSOC.
222 W GREGORY BLVD APT 201
KANSAS CITY, MO 64114
ZONING: R-1A

DUNN, EDWARD & RUTHANNE
9100 ROE AVE
PRAIRIE VILLAGE, KS 66207
ZONING: R1-A

TALIAFERRO, WILL & BETTY
9104 ROE AVE
PRAIRIE VILLAGE, KS 66207
ZONING: R1-A

DAVIS, TODD A.
9108 ROE AVE
PRAIRIE VILLAGE, KS 66207
ZONING: R1-A

KENILWORTH
BLOCK 21

SCHRADER, JOHN & RONDA
91012 ROE AV
PRAIRIE VIL
ZONING: R

MB-18 LLC
4900 MAIN ST APT 300
KANSAS CITY, MO 64112
ZONING: R-1A

MB-18 LLC
4900 MAIN ST APT 300
KANSAS CITY, MO 64112
ZONING: R-1A

N

SCALE: 1"=40'
0' 40' 80'

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SITEPLAN – MEADOWBROOK PARKWAY

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Date	Revisions:	By	App.

PROJECT NO. 160008
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DRAWN: MRR
DESIGNED: DCU
CHECKED:
APPROVED:

C1.7

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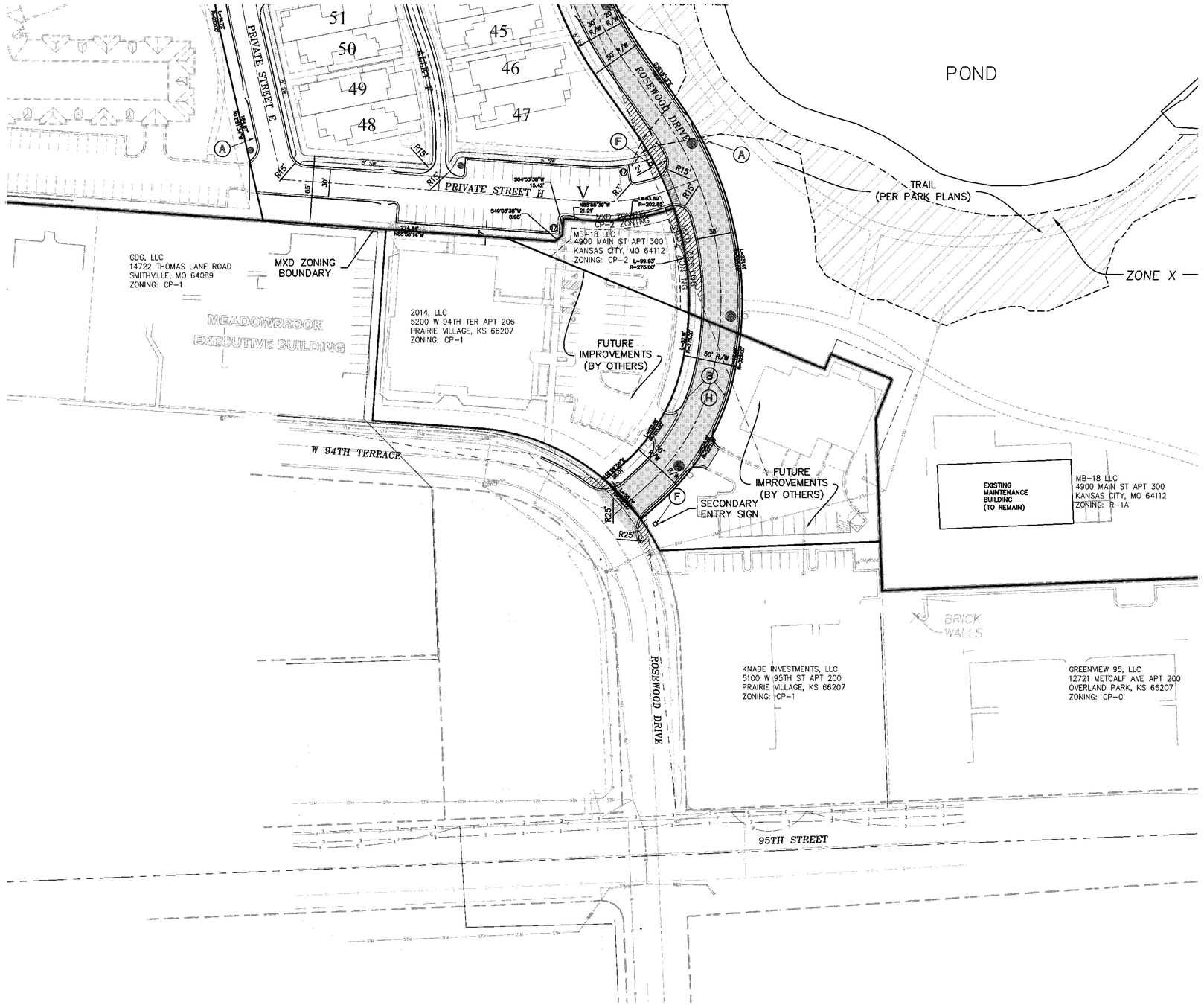

SITE KEY NOTES:

- (A) INSTALL WAYFINDING SIGNS
- (B) CONSTRUCT CURB & GUTTER
- (C) CONSTRUCT CONCRETE SIDEWALK
- (D) CONSTRUCT TYPE A SIDEWALK RAMP
- (E) CONSTRUCT TYPE B SIDEWALK RAMP
- (F) INSTALL NEIGHBORHOOD ENTRY SIGN
- (G) CONSTRUCT CONCRETE DRIVEWAY
- (H) CONSTRUCT ASPHALT PAVEMENT (TYP.)
- (I) STRIPE PEDESTRIAN CROSSING
- (J) INSTALL GREEN SPACE MARKER
- (K) PAVEMENT MARKINGS

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SITE PLAN – LEDOM

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

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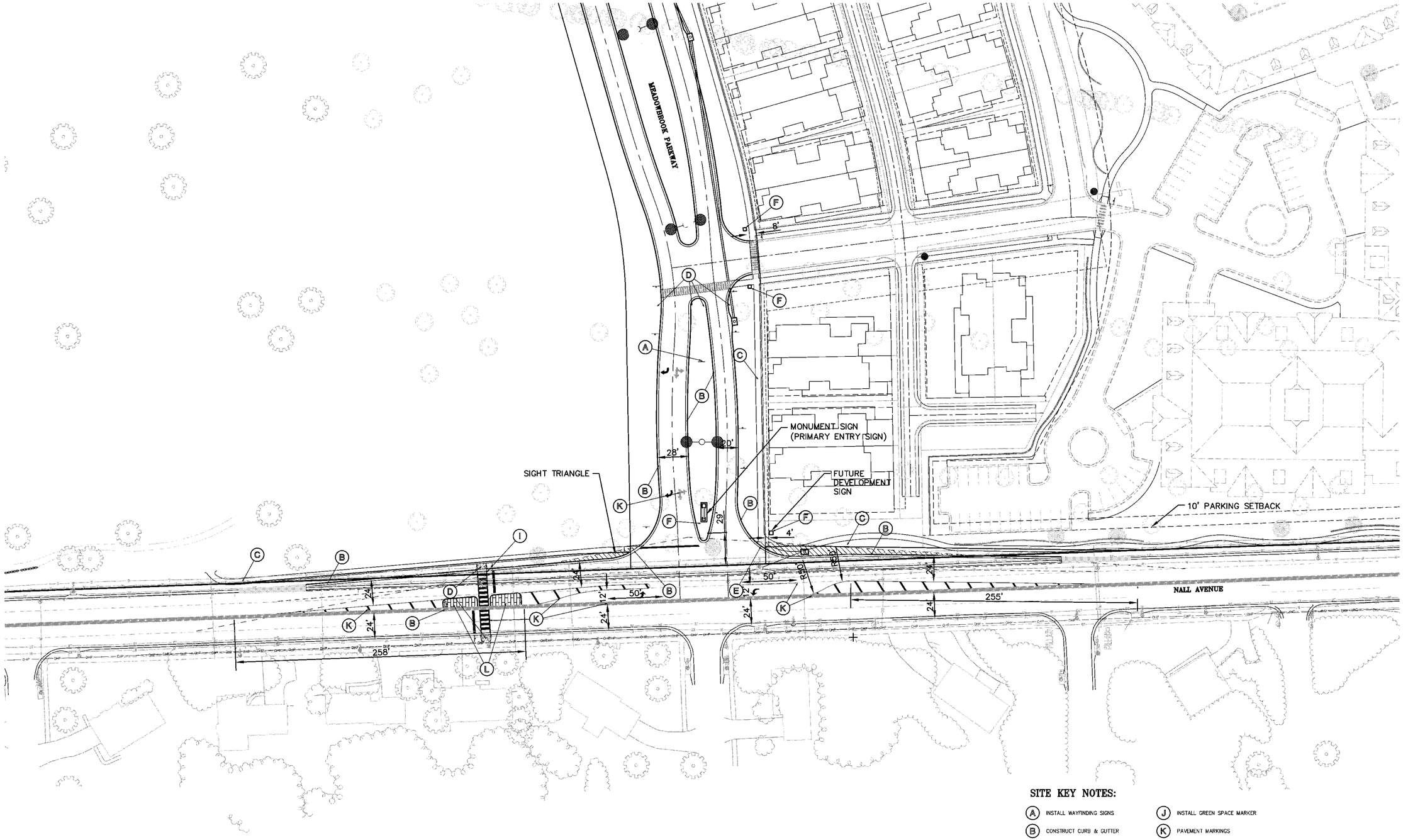

SITE KEY NOTES:

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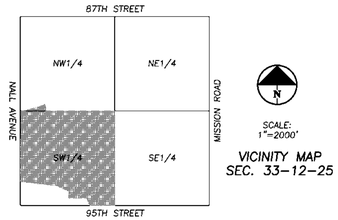
- (K) PAVEMENT MARKINGS
- (L) STAMPED/COLORED CONCRETE

SCALE: 1"=20'
0' 20' 40'



SCALE: 1"=2000'

VICINITY MAP
SEC. 33-12-25

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SITE PLAN – NALL INTERSECTION
MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

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APPROVED:

SHEET
C1.9

SITE KEY NOTES:

- (A) INSTALL WAYFINDING SIGNS
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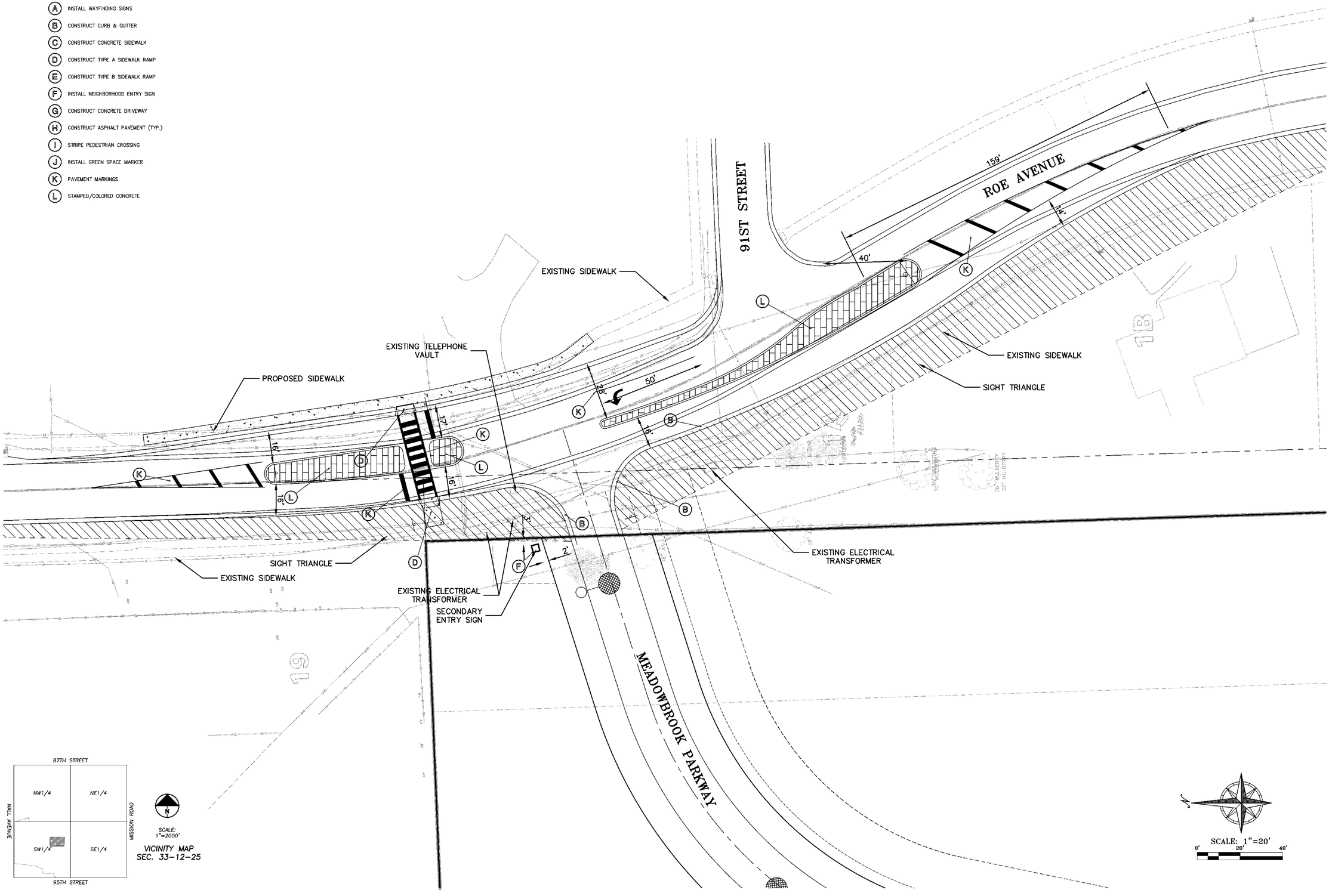

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SITE PLAN – ROE INTERSECTION

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
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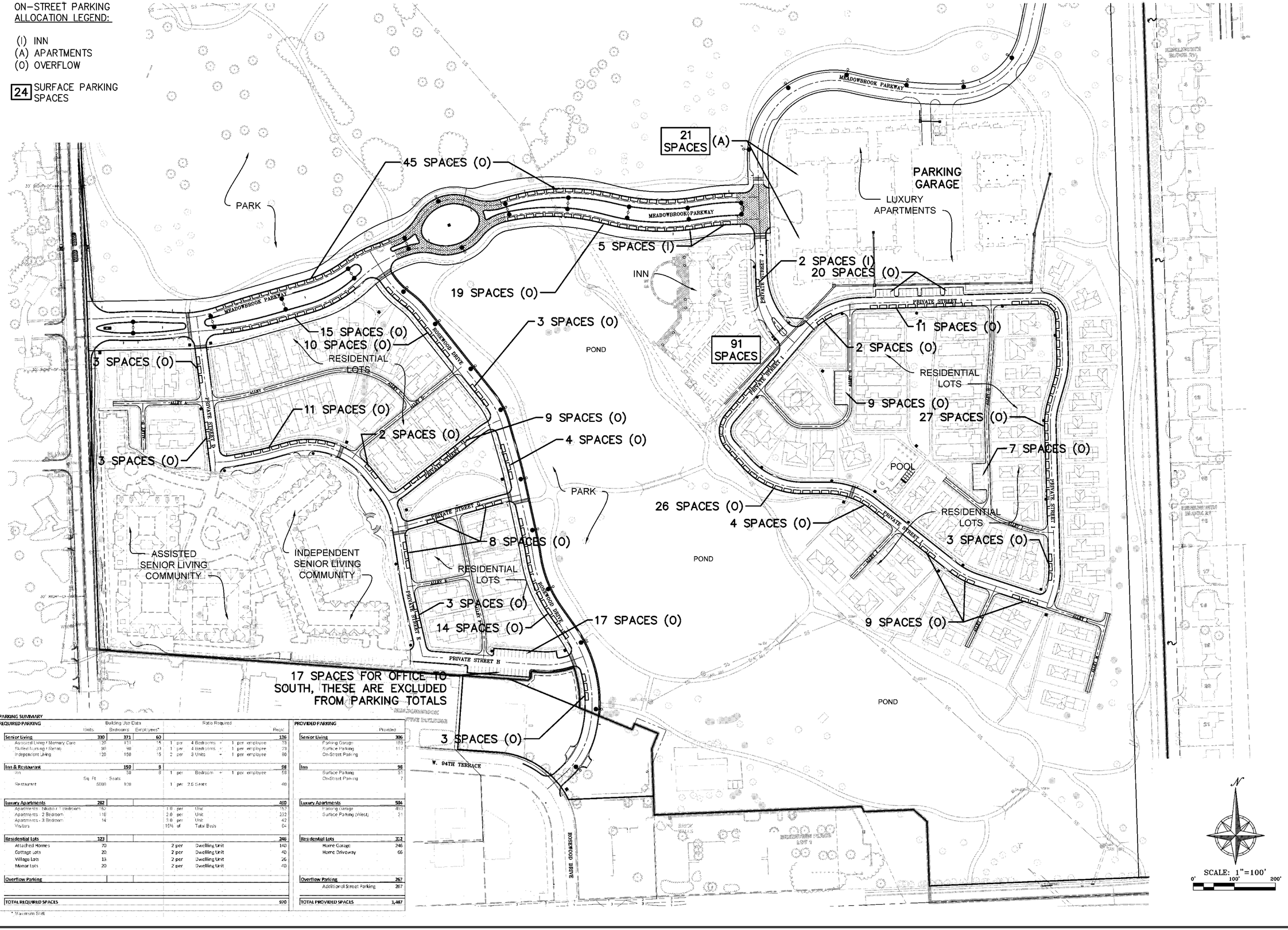
C1.10

ON-STREET PARKING
ALLOCATION LEGEND:

(I) INN
(A) APARTMENTS
(O) OVERFLOW

24 SURFACE PARKING SPACES



PARKING SUMMARY

REQUIRED PARKING	Units	Bedrooms	Employees*	Ratio Required	Req'd
Senior Living	**330**	**371**	**60**		**136**
Assisted Living / Memory Care	120	151	15	1 per 4 Bedrooms + 1 per employee	53
Skilled Nursing / Rehab	90	90	30	1 per 4 Bedrooms + 1 per employee	23
Independent Living	120	150	15	2 per 3 Units + 1 per employee	60
Inn & Restaurant		**150**	**8**		**98**
Inn		50	8	1 per Bedroom + 1 per employee	58
	Sq. Ft	Seats			
Restaurant	5000	100		1 per 2.5 Seats	40
Luxury Apartments	**282**				**498**
Apartments - Studio / 1 Bedroom	162			1.0 per Unit	162
Apartments - 2 Bedroom	116			2.0 per Unit	232
Apartments - 3 Bedroom	14			3.0 per Unit	42
Visitors				10% of Total Beds	64
Residential Lots	**123**				**246**
Attached Homes	70			2 per Dwelling Unit	140
Cottage Lots	20			2 per Dwelling Unit	40
Village Lots	13			2 per Dwelling Unit	26
Manor Lots	20			2 per Dwelling Unit	40
Overflow Parking					
TOTAL REQUIRED SPACES					**970**

* Maximum Shift

PROVIDED PARKING	Provided
Senior Living	**306**
Parking Garage	189
Surface Parking	117
On-Street Parking	
Inn	**98**
Surface Parking	91
On-Street Parking	7
Luxury Apartments	**504**
Parking Garage	483
Surface Parking (West)	21
Residential Lots	**312**
Home Garage	246
Home Driveway	66
Overflow Parking	**267**
Additional Street Parking	267
TOTAL PROVIDED SPACES	**1,487**

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PARKING PLAN

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
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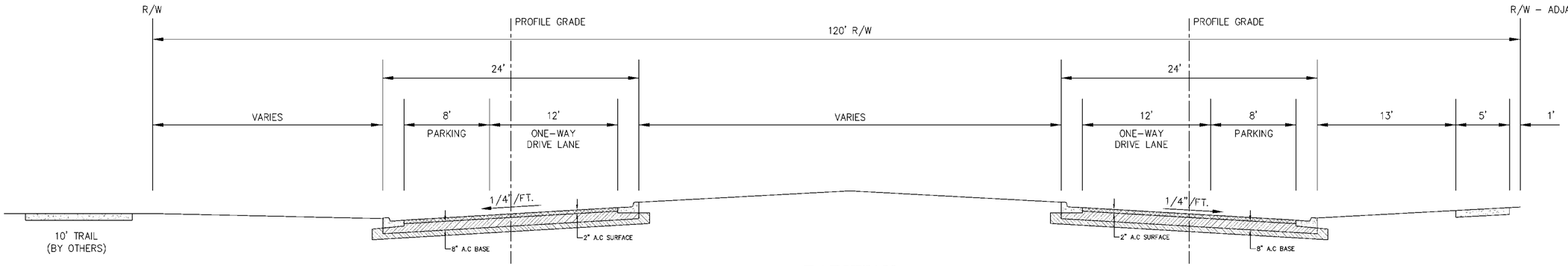
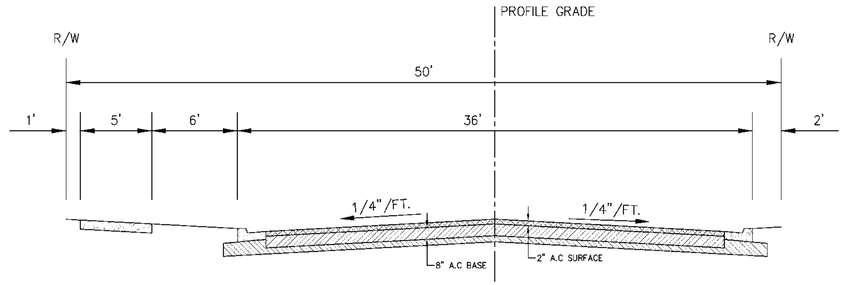
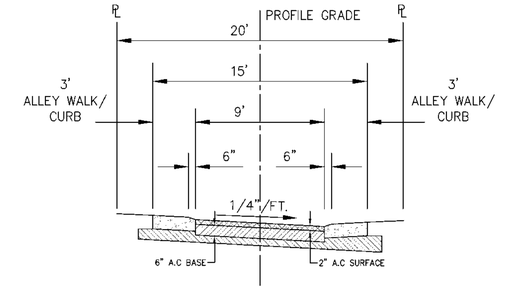


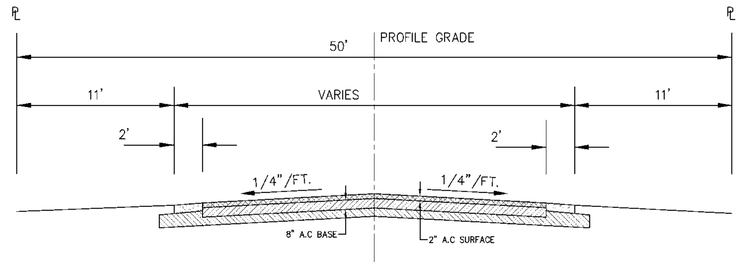
PARKWAY
(MEADOWBROOK PARKWAY)



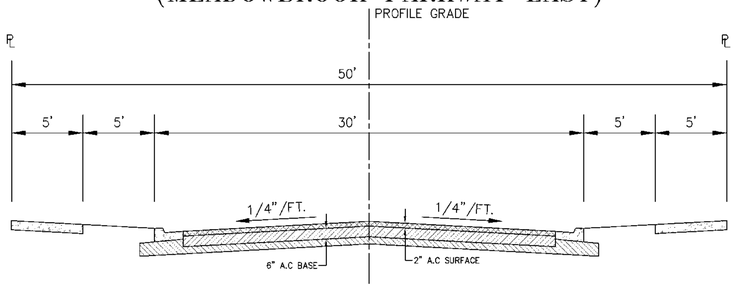
PARK EDGE CONNECTOR STREET
(ROSEWOOD DRIVE)



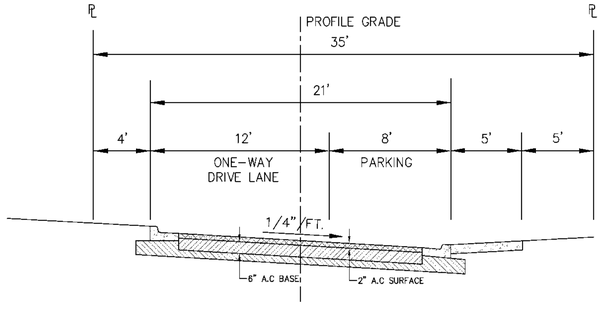
ALLEY
(ALLEYS A–M)



PARK ACCESS ROAD
(MEADOWBROOK PARKWAY EAST)



RESIDENTIAL STREET
(PRIVATE STREETS D–E,H–J)



RESIDENTIAL STREET – ONE WAY
(PRIVATE STREETS F–G)

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TYPICAL SECTIONS
MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

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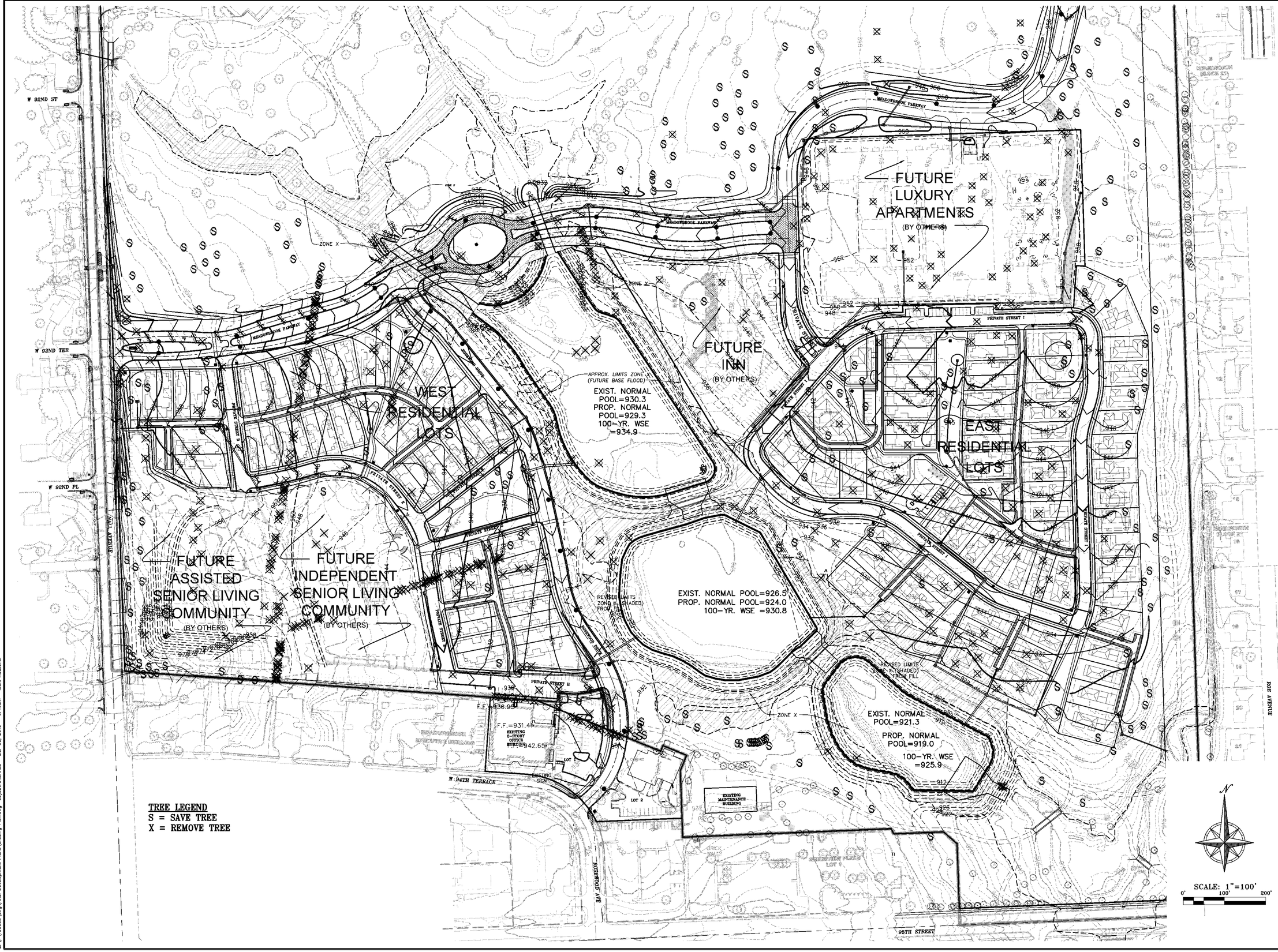

GRADING PLAN – OVERALL

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

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MEADOWBROOK PARKWAY

PRIVATE STREET D

PRIVATE STREET E

PRIVATE STREET G

PRIVATE STREET H

ROSEWOOD DRIVE

NALL AVENUE

ZONE X

APPROX. LIMITS ZONE X
(FUTURE BASE FLOOD)

EXIST. NORMAL POOL=930.3
PROP. NORMAL POOL=929.3
100-YR. WSE=934.9

EXIST. NORMAL POOL=926.5
PROP. NORMAL POOL=924.0
100-YR. WSE =930.8

REVISED LIMITS
ZONE X (SHADED)
FROM FIS

FUTURE ASSISTED
SENIOR LIVING
COMMUNITY

FUTURE INDEPENDENT
SENIOR LIVING
COMMUNITY

F.F.=936.93

F.F.=931.41

EXISTING

TREE LEGEND
S = SAVE TREE
X = REMOVE TREE

N

SCALE: 1"=50'
0' 50' 100'

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GRADING PLAN – WEST RESIDENTIAL LOTS

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

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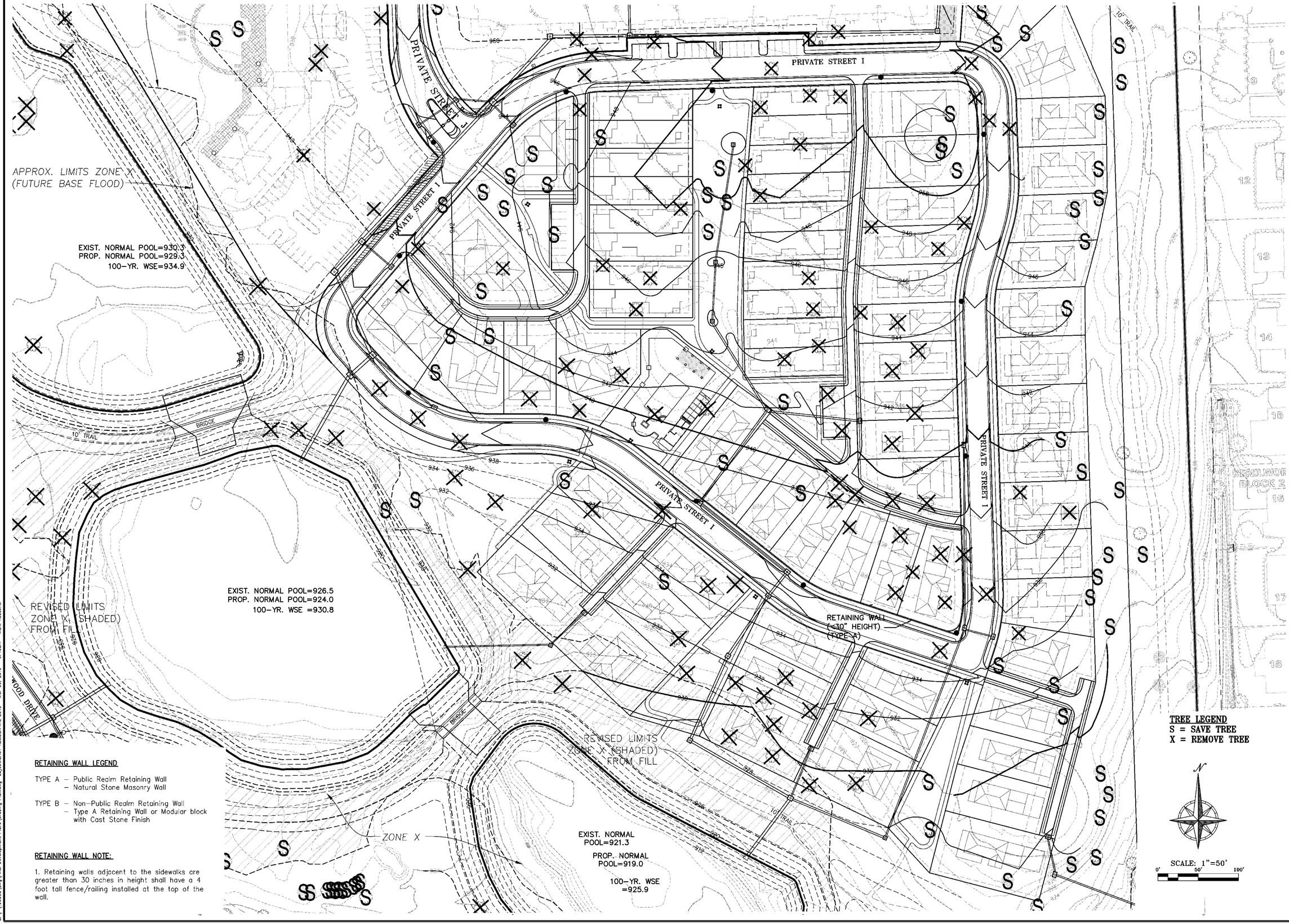

RETAINING WALL LEGEND

TYPE A – Public Realm Retaining Wall
– Natural Stone Masonry Wall

TYPE B – Non-Public Realm Retaining Wall
– Type A Retaining Wall or Modular block with Cast Stone Finish

RETAINING WALL NOTE:

1. Retaining walls adjacent to the sidewalks are greater than 30 inches in height shall have a 4 foot tall fence/railing installed at the top of the wall.

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GRADING PLAN – EAST RESIDENTIAL LOTS

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
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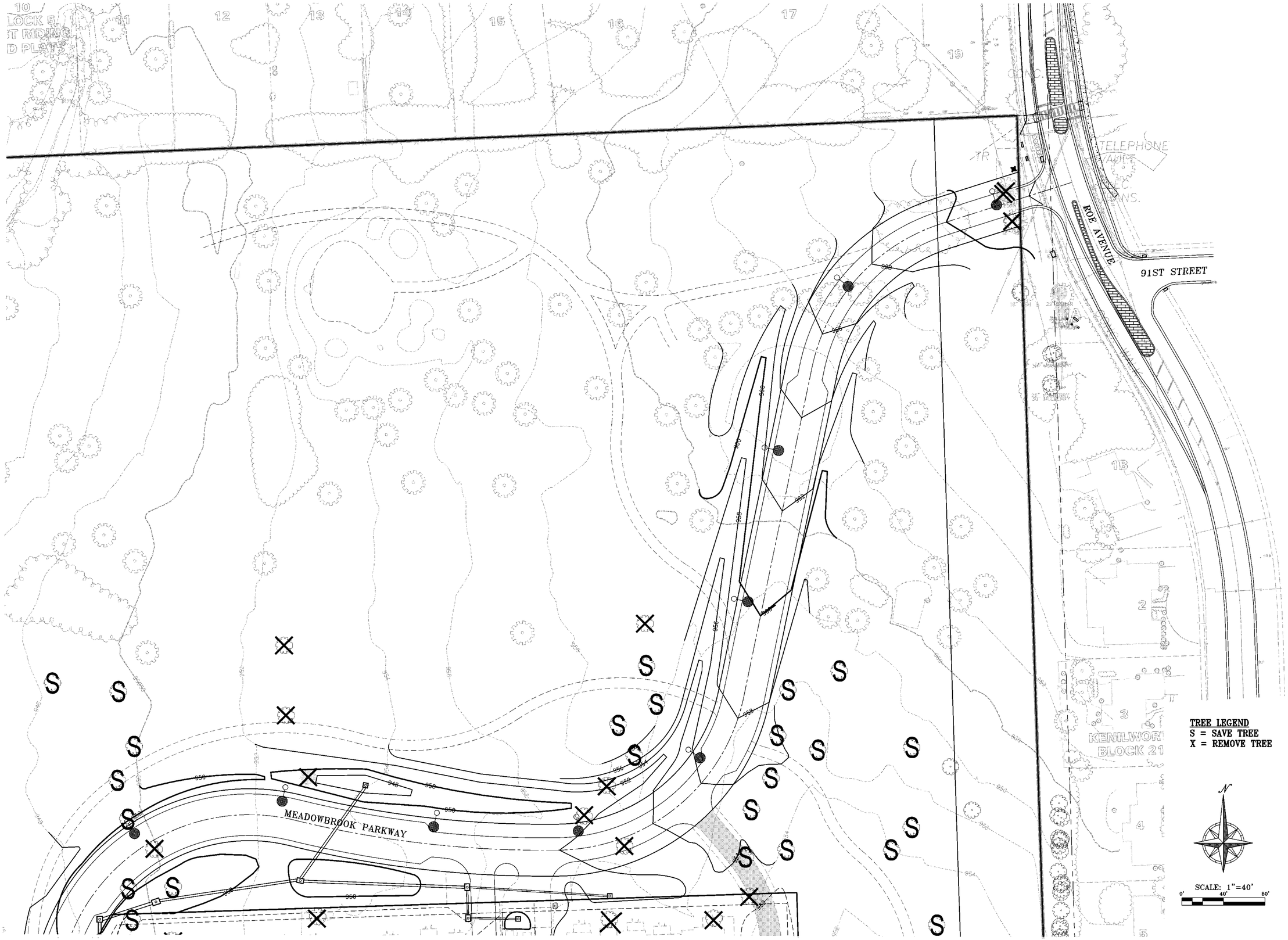

GRADING PLAN – MEADOWBROOK PARKWAY

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

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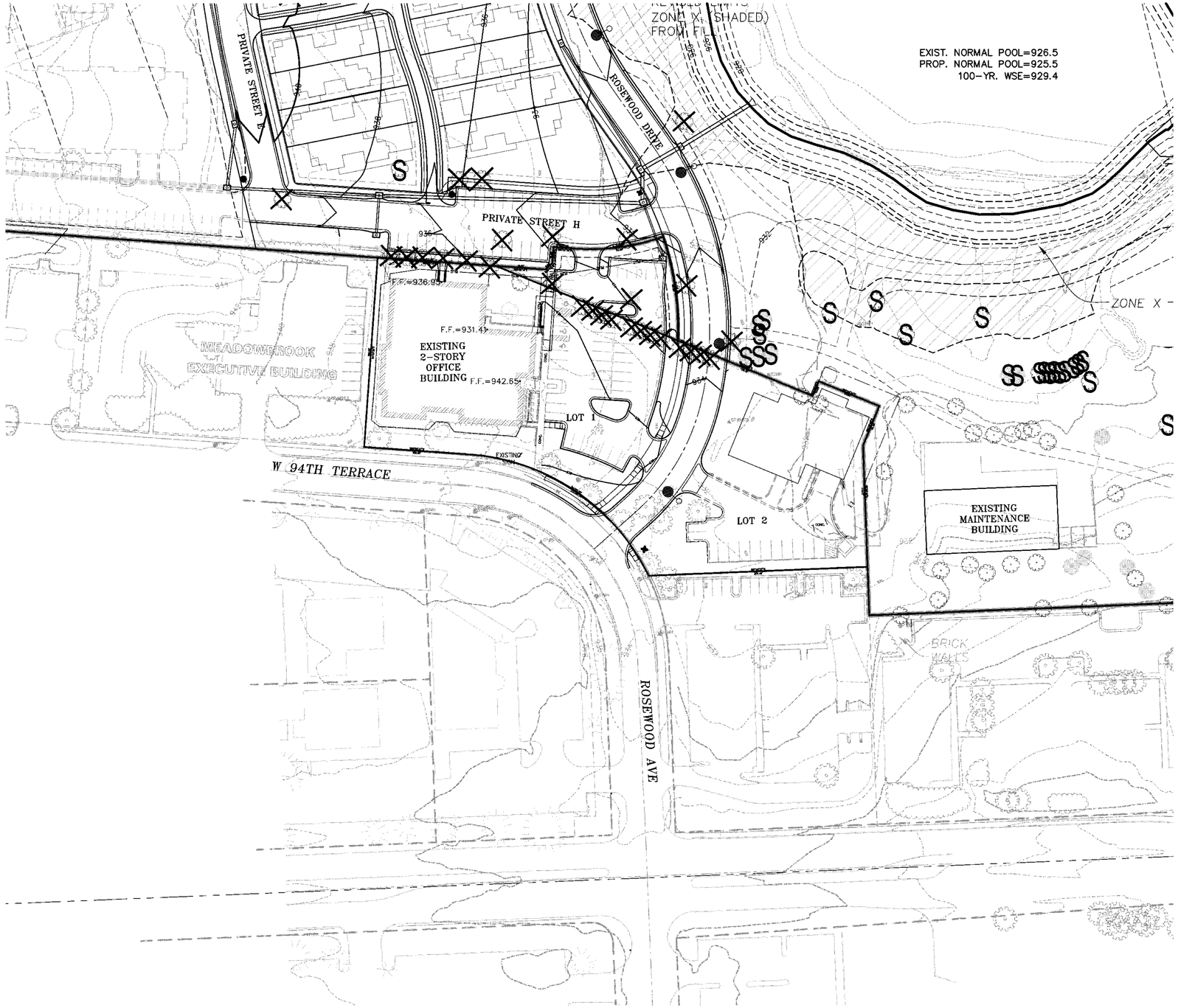

TREE LEGEND
S = SAVE TREE
X = REMOVE TREE

N

SCALE: 1"=30'
0' 30' 60'

GRADING PLAN - LEDOM

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

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C2.5

PARK

PARK

PARK

FUTURE
LUXURY
APARTMENTS

FUTURE
INN

FUTURE
ASSISTED
SENIOR LIVING
COMMUNITY

FUTURE
INDEPENDENT
SENIOR LIVING
COMMUNITY

5' KCP&L ESMT.

DRAINAGE ESMT.

10' GAS ESMT.

10' SANITARY SEWER ESMT.

10' SANITARY SEWER ESMT.

STREET LIGHT (TYP)

STREET LIGHT (TYP)

STREET LIGHT (TYP)

MEADOWBROOK PARKWAY

MEADOWBROOK PARKWAY

MEADOWBROOK PARKWAY

PRIVATE STREET A

PRIVATE STREET B

PRIVATE STREET C

PRIVATE STREET D

PRIVATE STREET E

PRIVATE STREET F

PRIVATE STREET G

PRIVATE STREET H

PRIVATE STREET I

MEADOWBROOK DRIVE

SANITARY SEWER
TO BE REPLACED

5'B.L. (ZONING)

30'B.L. (ZONING)

10' SEWER ESMT.

10' SANITARY SEWER ESMT.

10' STORM DRAINAGE ESMT.
BK. 117, PG. 256

10' SANITARY SEWER ESMT.
EASEMENT

APPROXIMATE LOCATION
10' KCP&L ESMT.

10' SANITARY SEWER ESMT.

EXISTING
2-STORY
OFFICE
BUILDING

EXISTING
MAINTENANCE
BUILDING

LOT 1

LOT 2

VACATED
10' STORM DRAINAGE ESMT.
BK. 952, PG. 960

10' UTILITY ESMT.
(PLATTED)

15' STORM SEWER ESMT.

30'B.L. (ZONING)
10' KCPL ESMT.

25' B.L.

10' SANITARY SEWER ESMT.

10' KCP&L ESMT

22' STORM DRAINAGE ESMT.
BK. 117, PG. 256

11' STORM DRAINAGE ESMT.
BK. 117, PG. 256

50TH STREET

BRICK WALLS

LEGEND

- EXISTING WATERLINE
- EXISTING GAS LINE
- EXISTING BURIED ELECTRICAL
- EXISTING BURIED TELEPHONE
- EXISTING TIME WARNER CABLE LINES
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING PROPERTY LINE
- PROPOSED ROOF OR FOUNDATION DRAIN LINE
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED GAS LINE
- PROPOSED BURIED ELECTRICAL
- PROPOSED BURIED TELEPHONE
- PROPOSED TIME WARNER CABLE LINES
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED STREET LIGHT
- PROPOSED PROPERTY LINE
- PROPOSED LOT LINE
- PROPOSED PLAT LINE
- SANITARY SEWER EASEMENT
- DRAINAGE EASEMENT
- PROPOSED STAMPED CONCRETE PAVING

NOTE:

NO PUBLIC UTILITY EASEMENTS WILL BE PROVIDED WITH THIS DEVELOPMENT.

EASEMENTS FOR POWER, WATER, GAS, PHONE, AND CABLE WILL BE RECORDED BY SEPARATE DOCUMENTS AT A LATER DATE WITH EACH UTILITY COMPANY AFTER THE FACILITIES ARE INSTALLED AND THE LIMITS OF THE EASEMENTS WILL BE DEFINED FROM AS-BUILT LOCATIONS OF THE FACILITIES FOR EACH UTILITY.

N

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

Z:\P\160008\dwg\Final Development Plans\Utility Plan.dwg Layout: OVERALL Mar 30, 2016 - 9:41am Mark Reasoner

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UTILITY PLAN – OVERALL

MEADOWBROOK PARK

PRAIRIE VILLAGE, KANSAS

FINAL DEVELOPMENT PLANS

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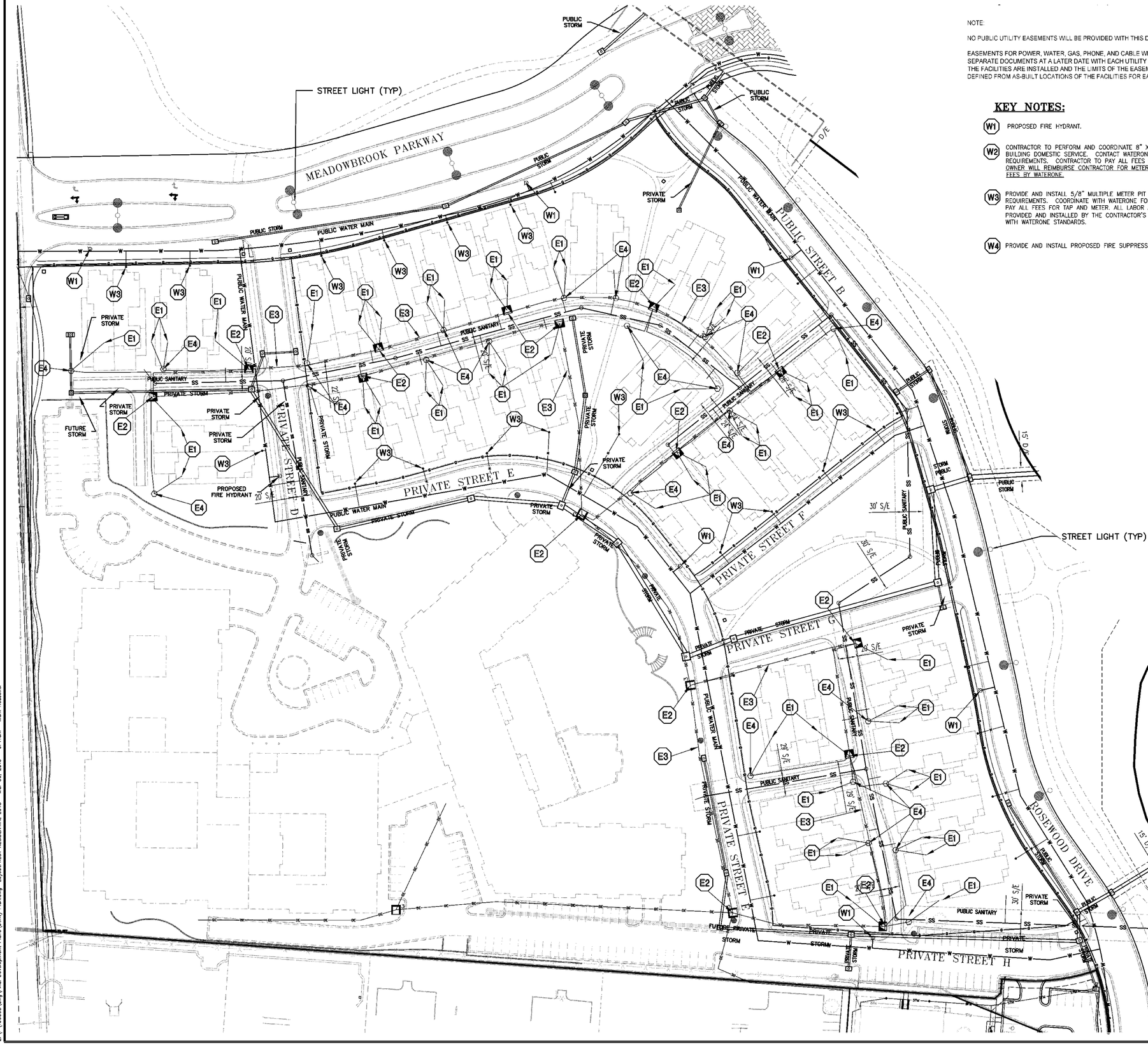

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KEY NOTES:

W1 PROPOSED FIRE HYDRANT.

W2 CONTRACTOR TO PERFORM AND COORDINATE 8" X 1" TAP FOR PROPOSED BUILDING DOMESTIC SERVICE. CONTACT WATERONE FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR METER OR SYSTEM DEVELOPMENT FEES BY WATERONE.

W3 PROVIDE AND INSTALL 5/8" MULTIPLE METER PIT PER WATERONE REQUIREMENTS. COORDINATE WITH WATERONE FOR MAIN TAP. OWNER SHALL PAY ALL FEES FOR TAP AND METER. ALL LABOR AND MATERIALS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR'S PLUMBER IN ACCORDANCE WITH WATERONE STANDARDS.

W4 PROVIDE AND INSTALL PROPOSED FIRE SUPPRESSION LINE

LEGEND

W	EXISTING WATERLINE
G	EXISTING GAS LINE
BE	EXISTING BURIED ELECTRICAL
BT	EXISTING BURIED TELEPHONE
TWC	EXISTING TIME WARNER CABLE LINES
SS	EXISTING SANITARY SEWER
STM	EXISTING STORM SEWER
	EXISTING PROPERTY LINE
ST	PROPOSED ROOF OR FOUNDATION DRAIN LINE
W	PROPOSED WATER LINE
	PROPOSED FIRE HYDRANT
G	PROPOSED GAS LINE
BE	PROPOSED BURIED ELECTRICAL
BT	PROPOSED BURIED TELEPHONE
TWC	PROPOSED TIME WARNER CABLE LINES
SS	PROPOSED SANITARY SEWER
STM	PROPOSED STORM SEWER
	PROPOSED STREET LIGHT
	PROPOSED PROPERTY LINE
	PROPOSED LOT LINE
	PROPOSED PLAT LINE
S/E	SANITARY SEWER EASEMENT
D/E	DRAINAGE EASEMENT

E1 ELECTRIC ENTRY INTO BUILDING. FOLLOW KCPL REQUIREMENTS (RE: BUILDING ELECTRIC PLAN.)

E2 PROPOSED LOCATION OF CONCRETE TRANSFORMER PAD. CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE WITH KCPL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE PAD AND CONDUIT AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.

E3 FOLLOW KCPL WORKORDER AND SPECIFICATIONS FOR PRIMARY ELECTRICAL SERVICE.

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WATER DISTRICT #1 OF JOHNSON COUNTY MR. JOSH VINCENT 10747 RENNER BLVD. LENEXA, KANSAS 66219	(913) 895-5766 (913) 895-1827-FAX
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WATER SERVICE NOTES:

1. All taps to the water main are to be 5' minimum from any pipe joint in the water main or other taps on the water main.
2. All service lines must be installed of 90 degree angle from the water main to the meter pit or valve.
3. 3' minimum separation of meter pits and back flow vaults.

N

SCALE: 1"=50'
0' 50' 100'

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UTILITY PLAN - WEST RESIDENTIAL LOTS

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Date	Revisions:	By	App.

PROJECT NO. 160008
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DEU
CHECKED:
APPROVED:

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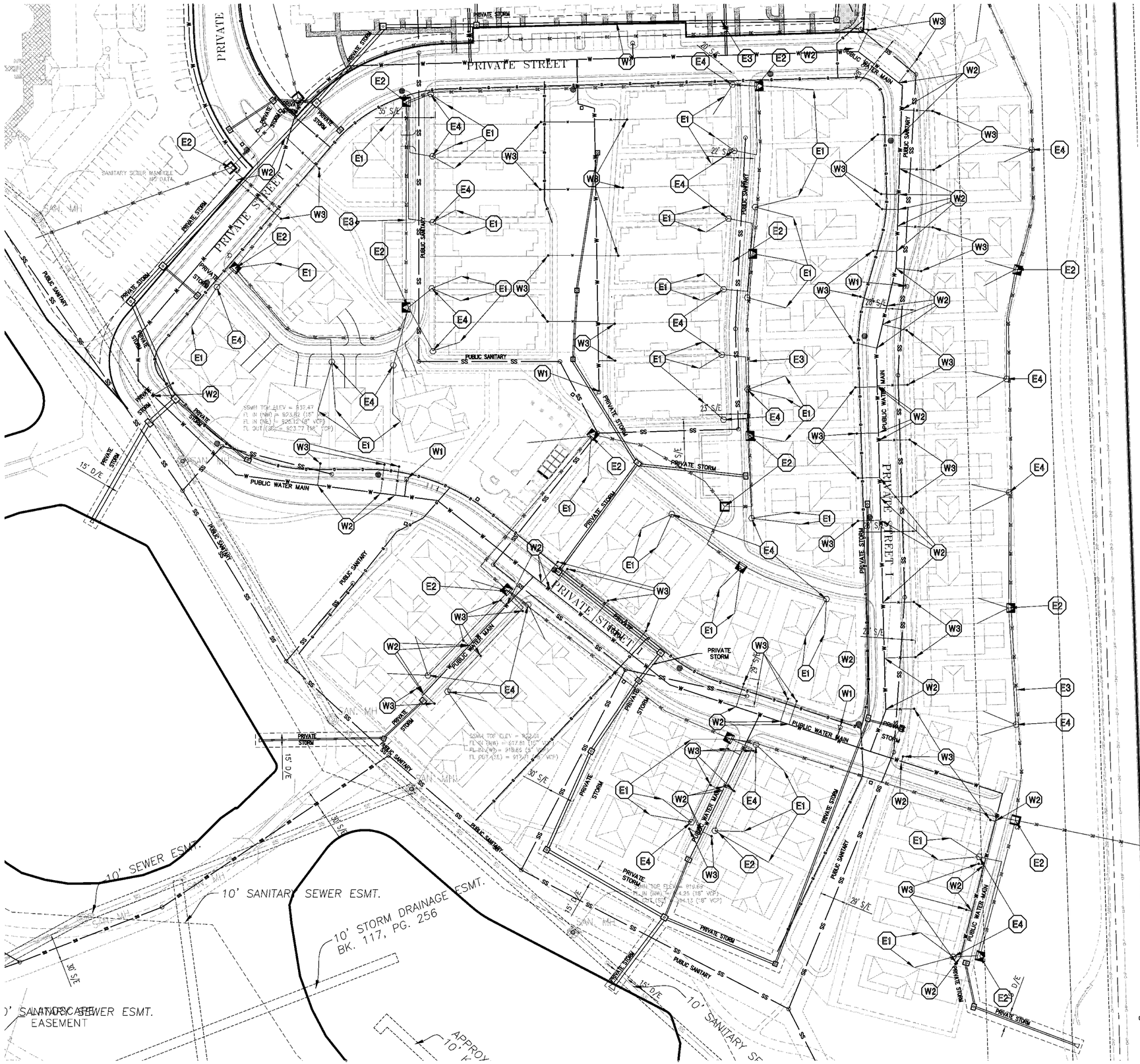

LEGEND

W	EXISTING WATERLINE
G	EXISTING GAS LINE
BE	EXISTING BURIED ELECTRICAL
BT	EXISTING BURIED TELEPHONE
TWC	EXISTING TIME WARNER CABLE LINES
SS	EXISTING SANITARY SEWER
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ST	PROPOSED ROOF OR FOUNDATION DRAIN LINE
W	PROPOSED WATER LINE
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	PROPOSED PLAT LINE
S/E	SANITARY SEWER EASEMENT
D/E	DRAINAGE EASEMENT

NOTE:

NO PUBLIC UTILITY EASEMENTS WILL BE PROVIDED WITH THIS DEVELOPMENT.

EASEMENTS FOR POWER, WATER, GAS, PHONE, AND CABLE WILL BE RECORDED BY SEPARATE DOCUMENTS AT A LATER DATE WITH EACH UTILITY COMPANY AFTER THE FACILITIES ARE INSTALLED AND THE LIMITS OF THE EASEMENTS WILL BE DEFINED FROM AS-BUILT LOCATIONS OF THE FACILITIES FOR EACH UTILITY.

KEY NOTES:

W1 PROPOSED FIRE HYDRANT.

W2 CONTRACTOR TO PERFORM AND COORDINATE 8" X 1" TAP FOR PROPOSED BUILDING DOMESTIC SERVICE. CONTACT WATERONE FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR METER OR SYSTEM DEVELOPMENT FEES BY WATERONE.

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W4 PROVIDE AND INSTALL PROPOSED FIRE SUPPRESSION LINE

E1 ELECTRIC ENTRY INTO BUILDING. FOLLOW KCPL REQUIREMENTS (RE: BUILDING ELECTRIC PLAN.)

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UTILITY PLAN - EAST RESIDENTIAL LOTS

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Date	Revisions:	By	App.

PROJECT NO. 160008
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DEU
CHECKED:
APPROVED:

C3.3

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LENEXA, KANSAS 66219

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LENEXA, KANSAS 66219

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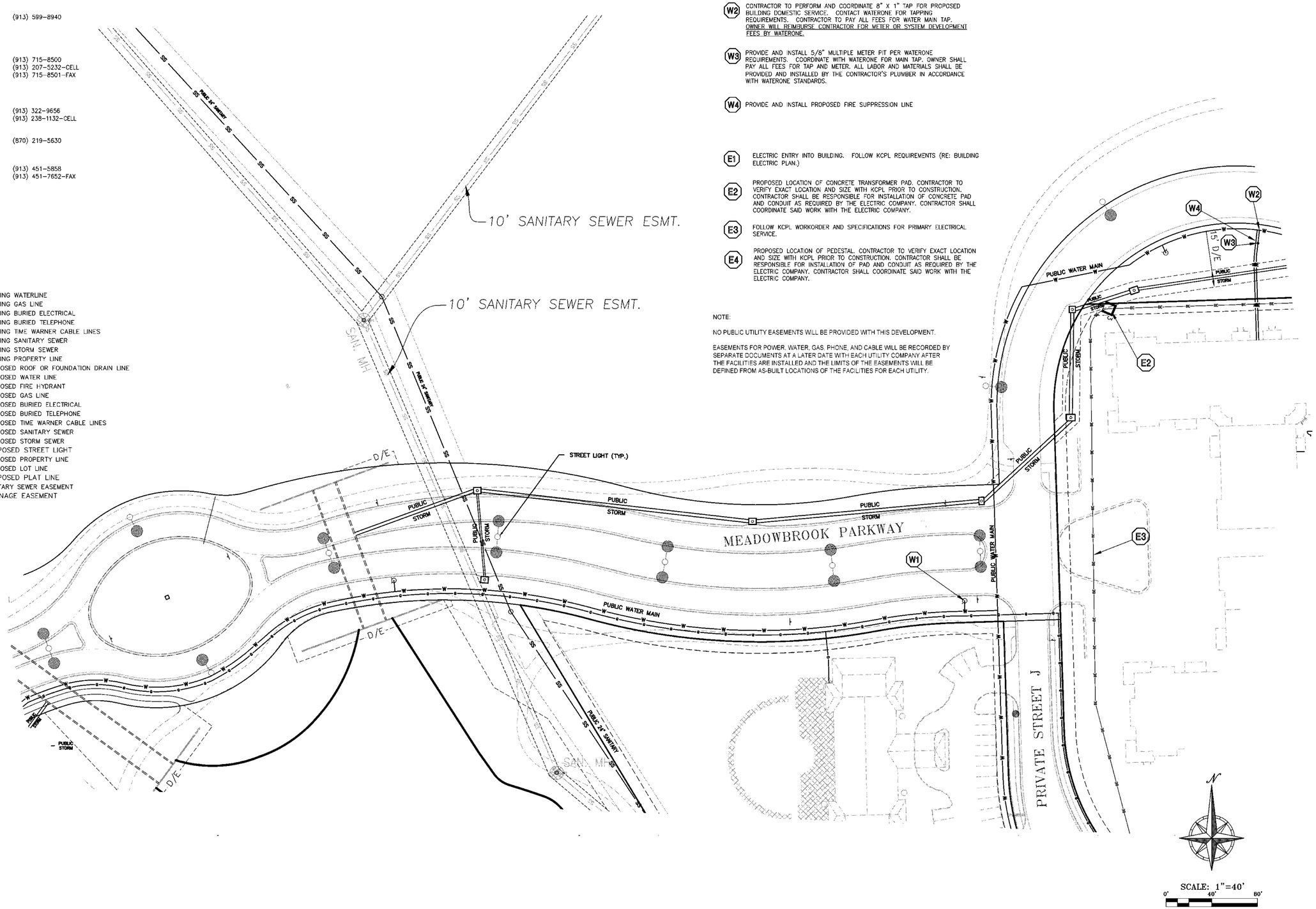

KEY NOTES:

D3 INSTALL ADS HDS HYDRODYNAMIC SEPARATOR. SEE STORMWATER PLAN & PROFILE FOR INVERT ELEVATIONS.

W1 PROPOSED FIRE HYDRANT.

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UTILITY PLAN - MEADOWBROOK PARKWAY

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Date	Revisions:	By	App.

PROJECT NO. 160008
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DCU
CHECKED:
APPROVED:

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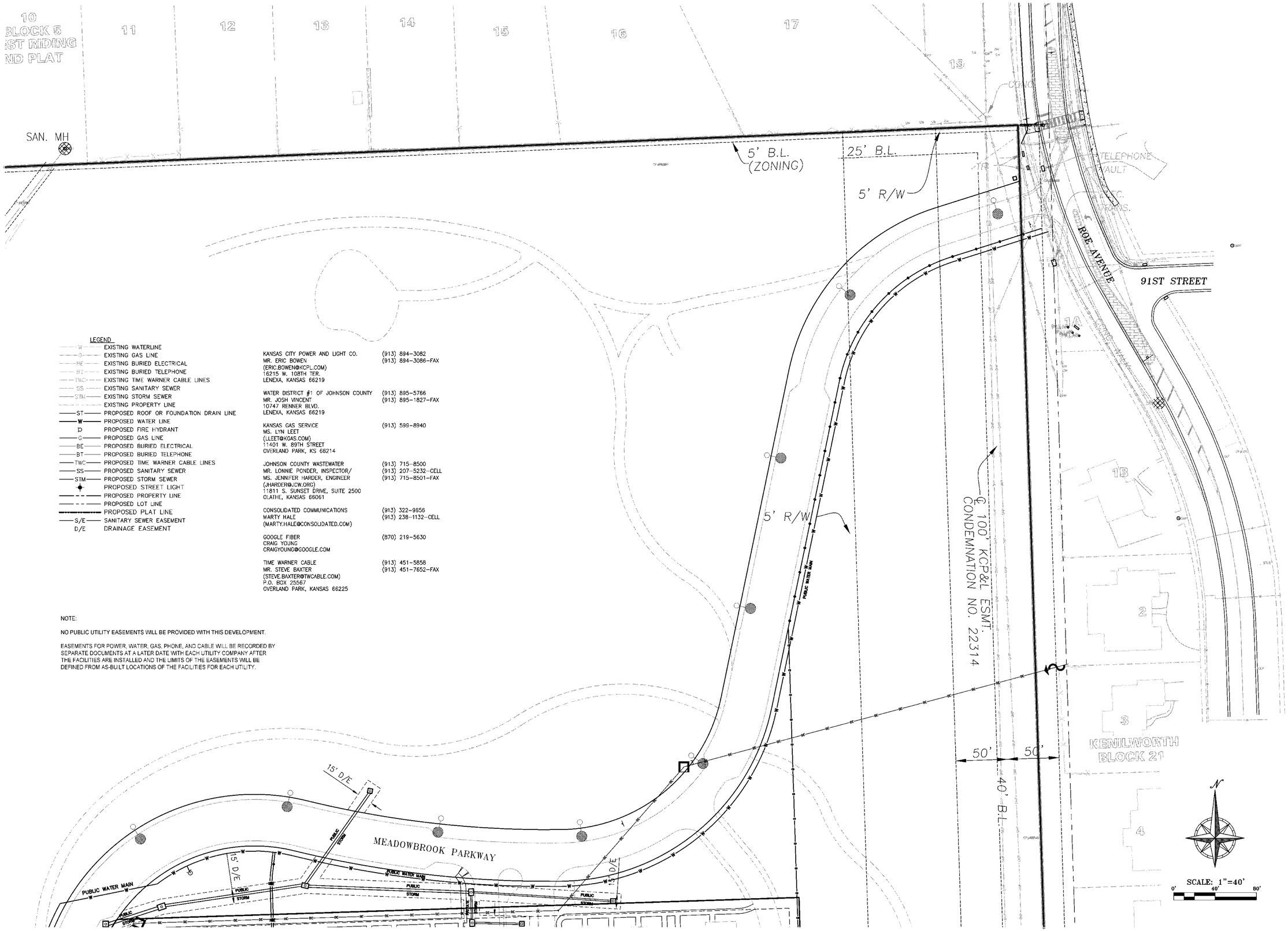

LEGEND

W	EXISTING WATERLINE
G	EXISTING GAS LINE
BE	EXISTING BURIED ELECTRICAL
BT	EXISTING BURIED TELEPHONE
TWC	EXISTING TIME WARNER CABLE LINES
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UTILITY PLAN – MEADOWBROOK PARKWAY

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

Revisions:	No.	Date	By	App.

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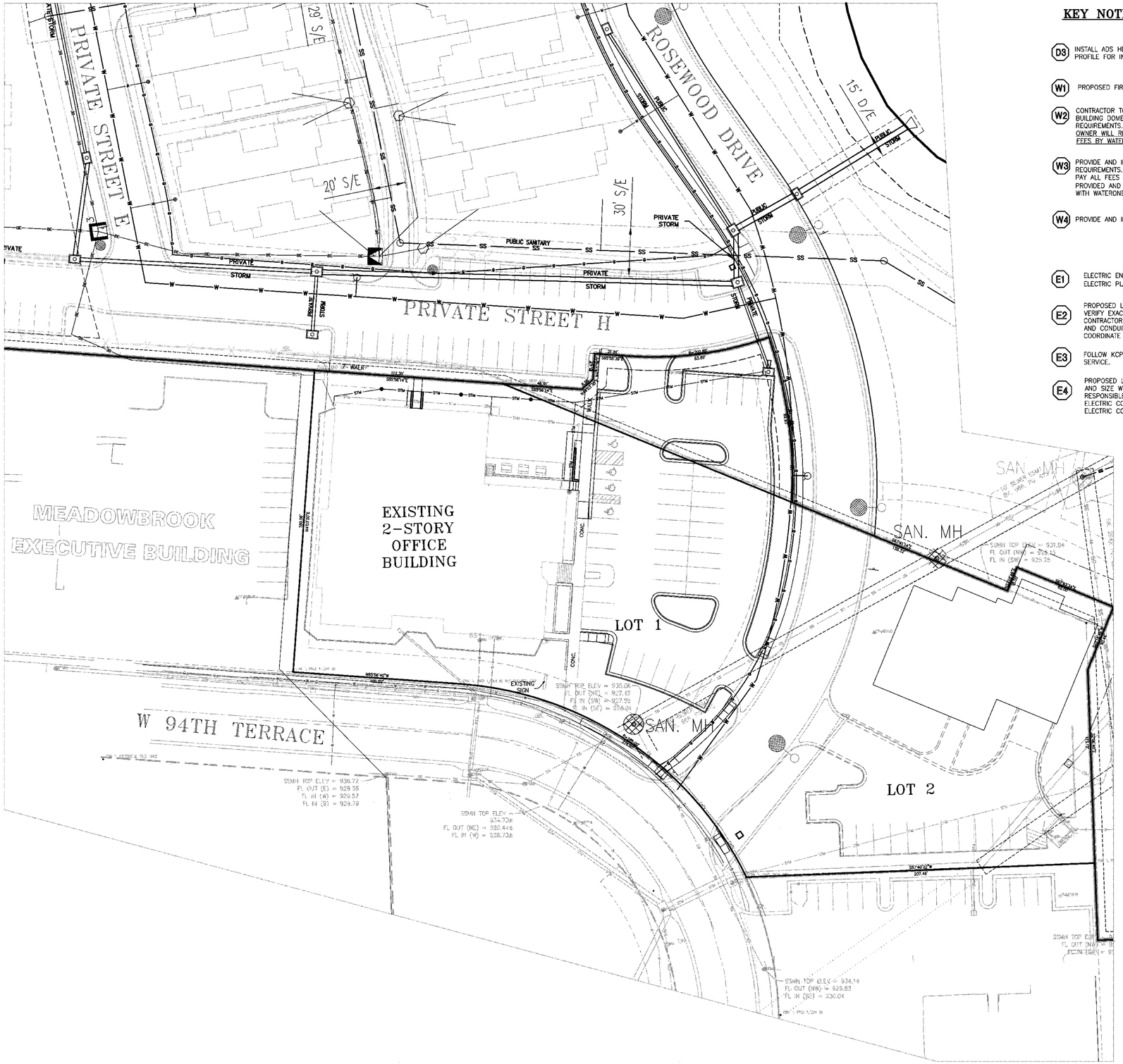

KEY NOTES:

- (D3) INSTALL ADS HDS HYDRODYNAMIC SEPARATOR. SEE STORMWATER PLAN & PROFILE FOR INVERT ELEVATIONS.
- (W1) PROPOSED FIRE HYDRANT.
- (W2) CONTRACTOR TO PERFORM AND COORDINATE 8" X 1" TAP FOR PROPOSED BUILDING DOMESTIC SERVICE. CONTACT WATERONE FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR METER OR SYSTEM DEVELOPMENT FEES BY WATERONE.
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N

SCALE: 1"=30'
0' 30' 60'

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UTILITY PLAN - LEDOM

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Date	Revisions:	By	App.

PROJECT NO. 160008
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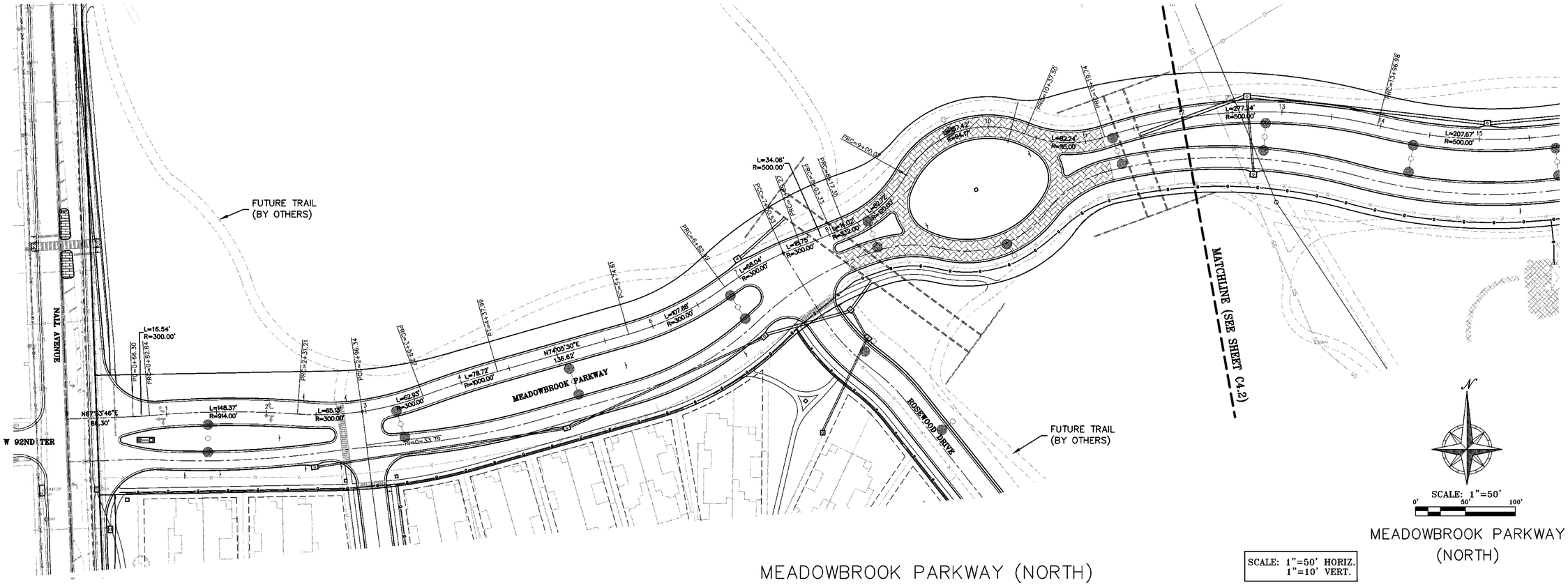
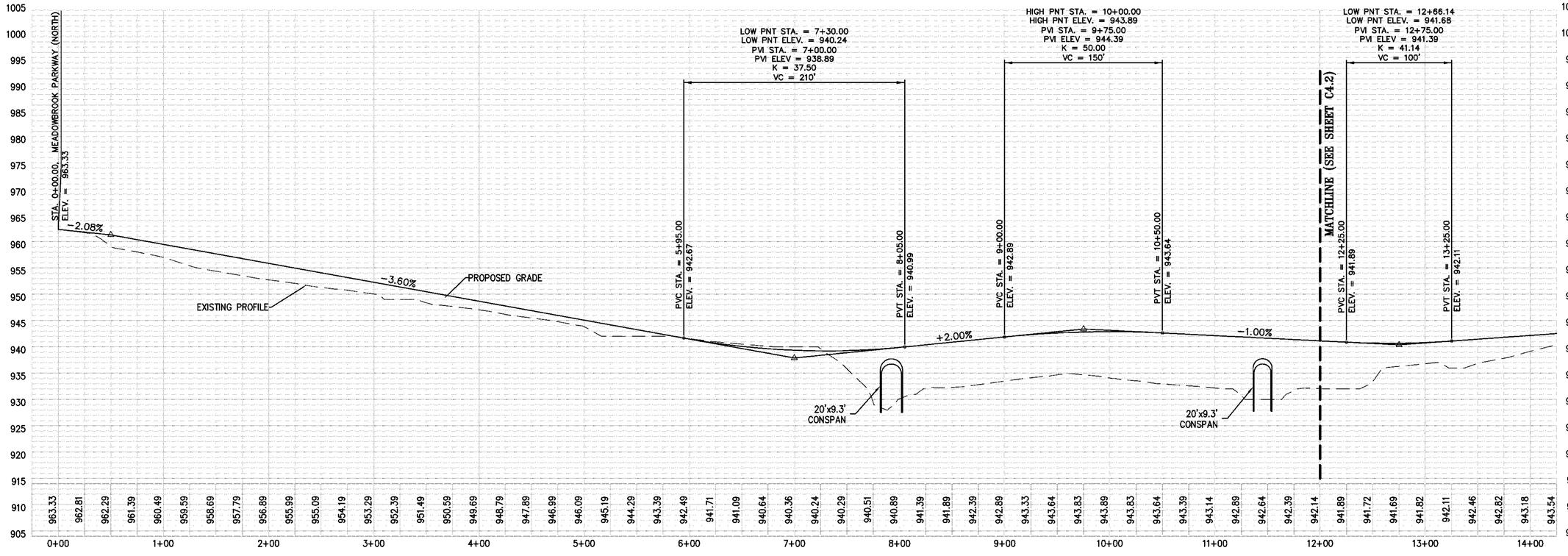


MEADOWBROOK PARKWAY
(NORTH)

MEADOWBROOK PARKWAY (NORTH)

SCALE: 1"=50' HORIZ.
1"=10' VERT.



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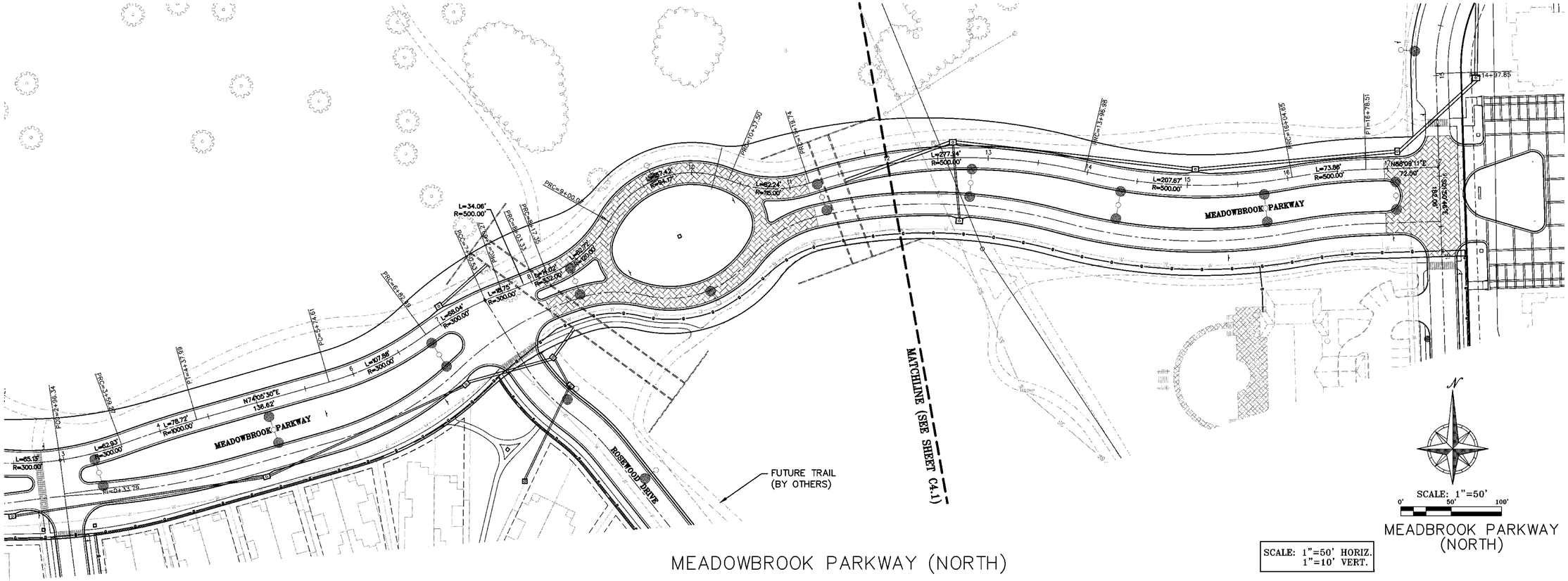
STREET PLAN & PROFILE

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Date	Revisions:	By	App.

PROJECT NO. 160008
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DCU
CHECKED:
APPROVED:

C4.1



MEADOWBROOK PARKWAY (NORTH)

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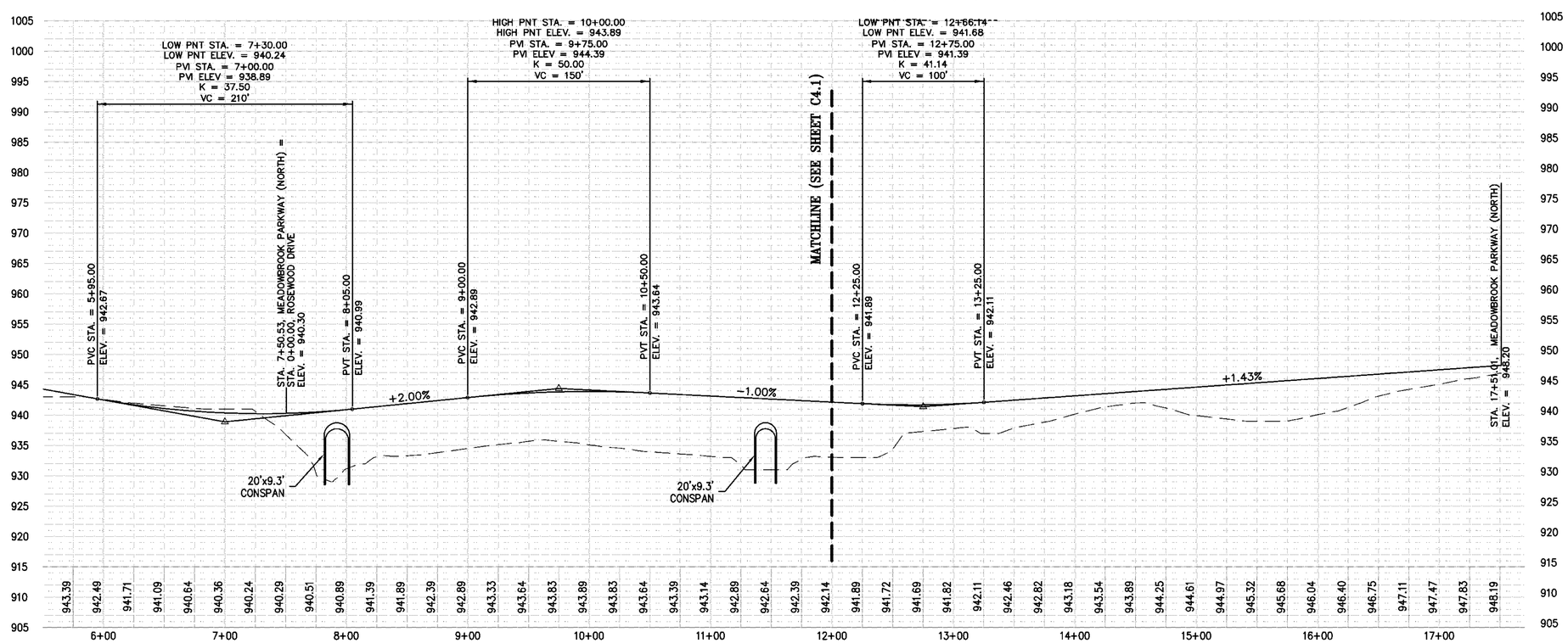
1"=10' VERT.



MEADOWBROOK PARKWAY (NORTH)

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MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Date	Revisions:	By	App.

PROJECT NO. 160008
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DRAWN: MRR
DESIGNED: DCLI
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APPROVED:

C4.2

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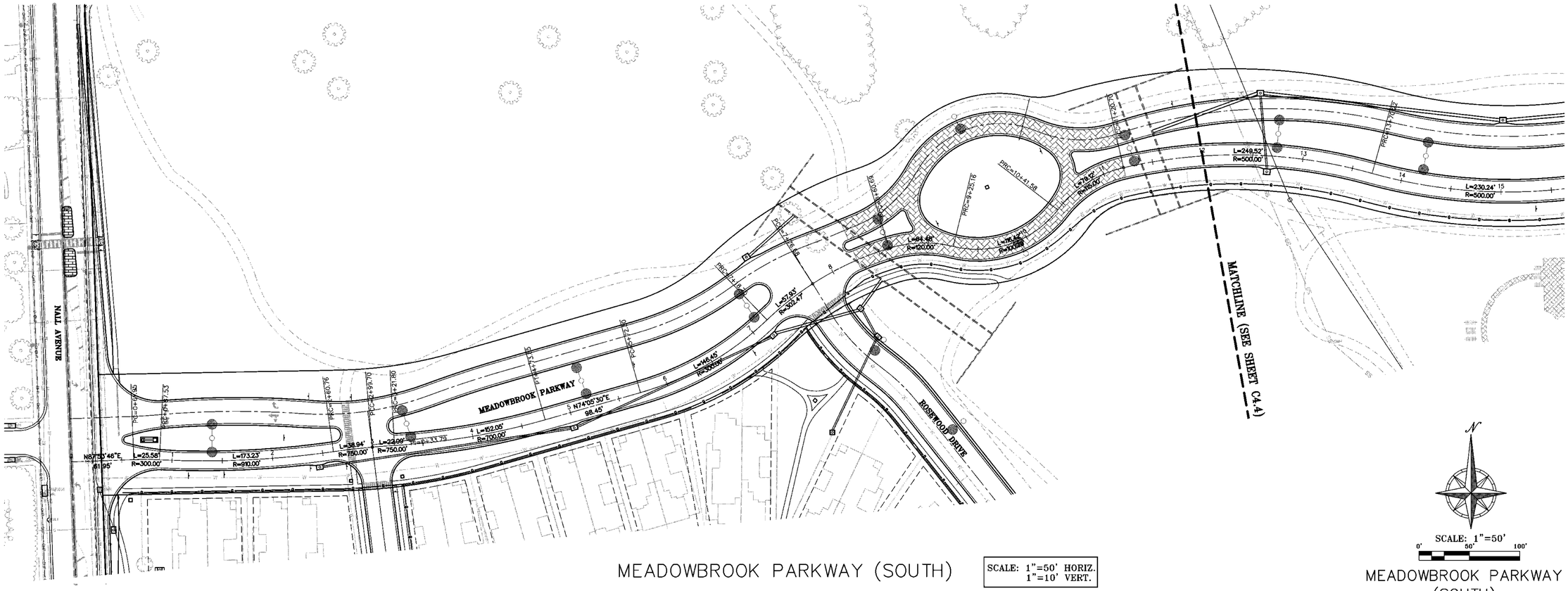
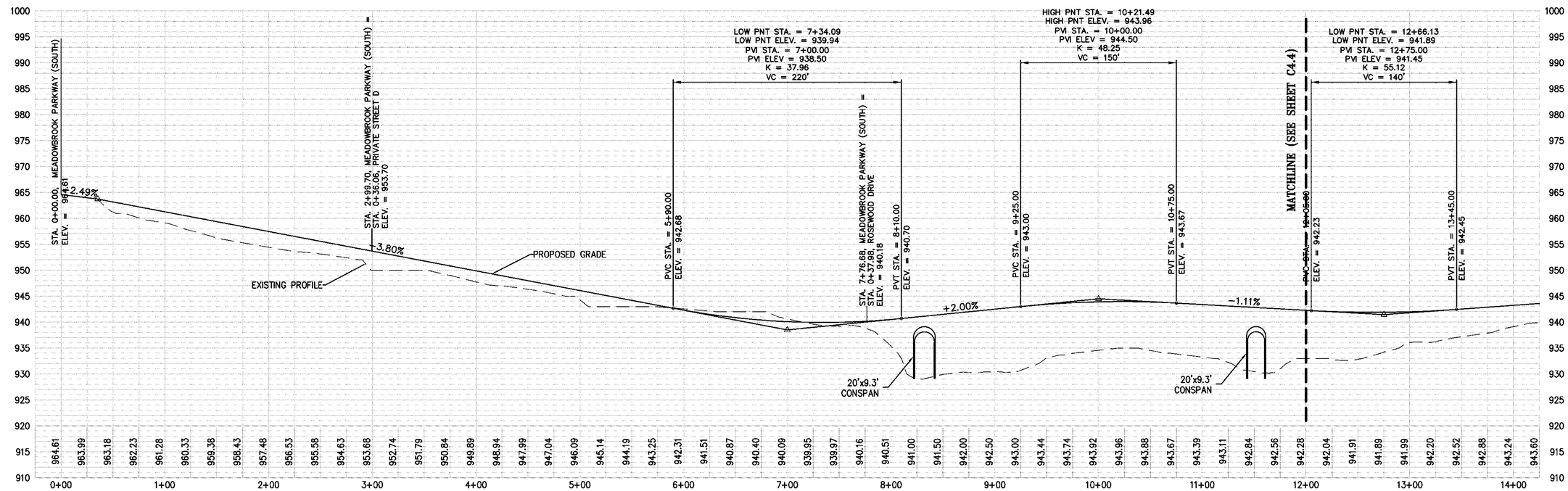


MEADOWBROOK PARKWAY (SOUTH)

SCALE: 1"=50' HORIZ.
1"=10' VERT.

MEADOWBROOK PARKWAY
(SOUTH)



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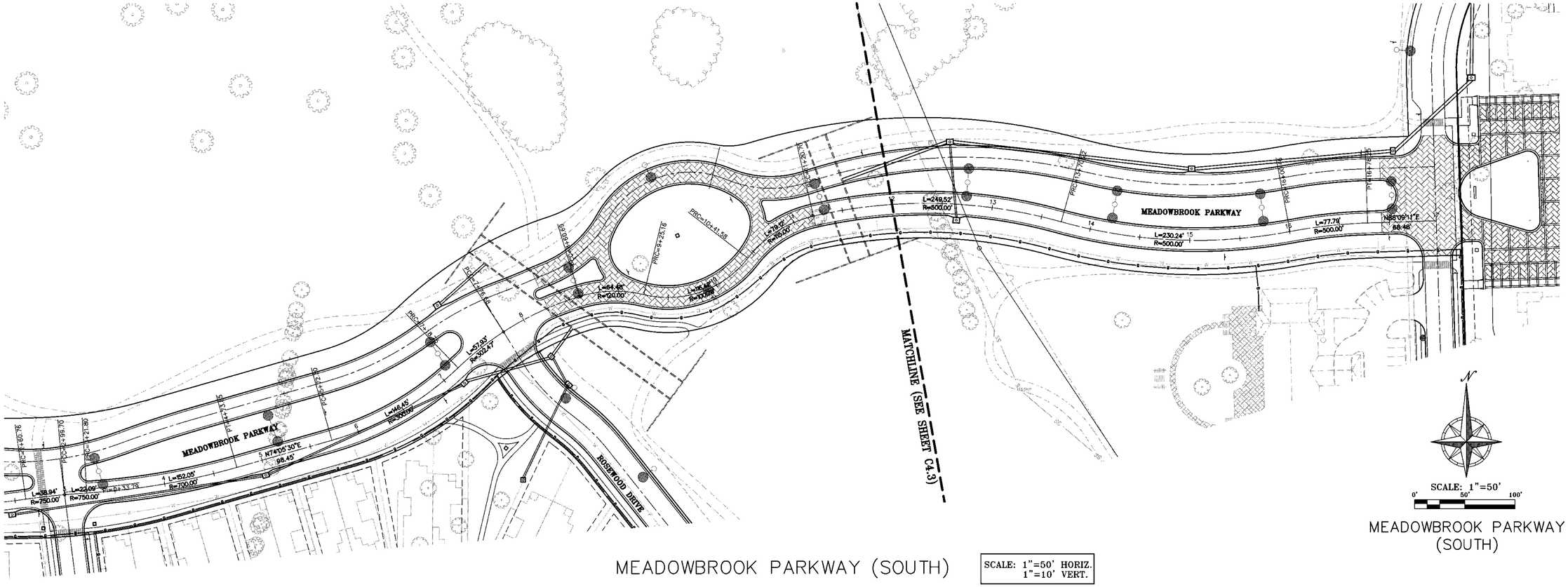
APPROVED:

C4.3



MEADOWBROOK PARKWAY (SOUTH)

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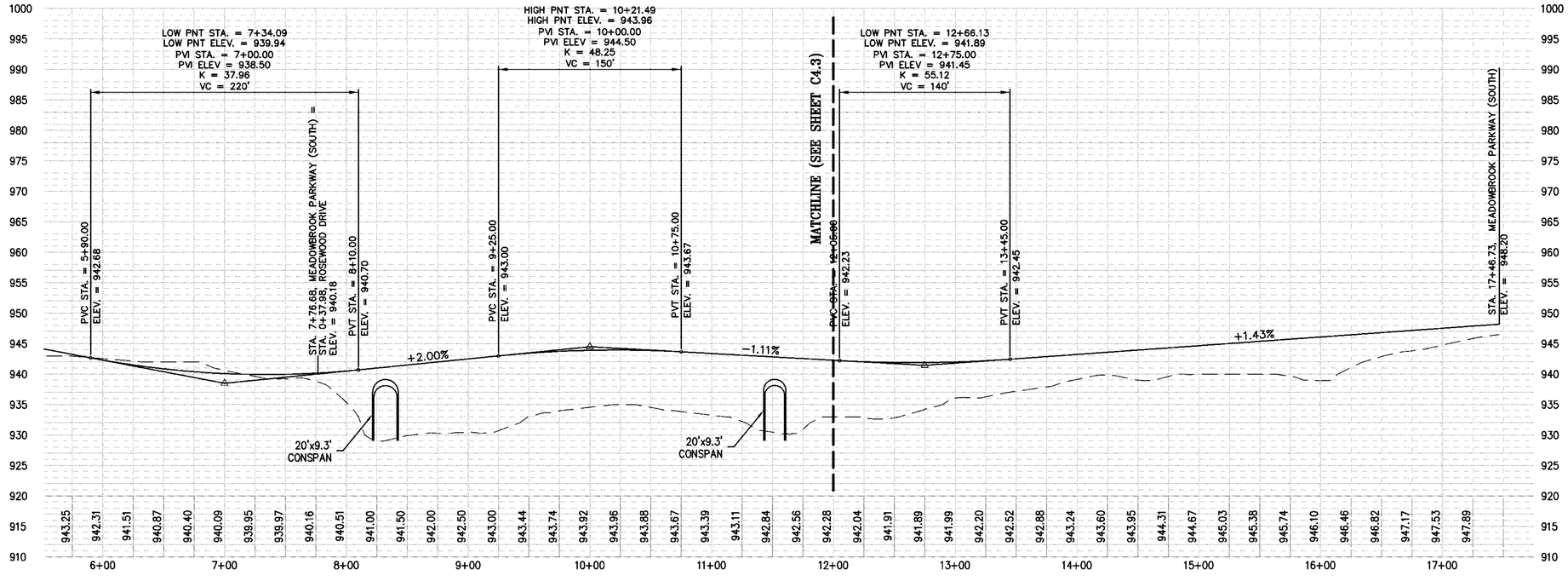

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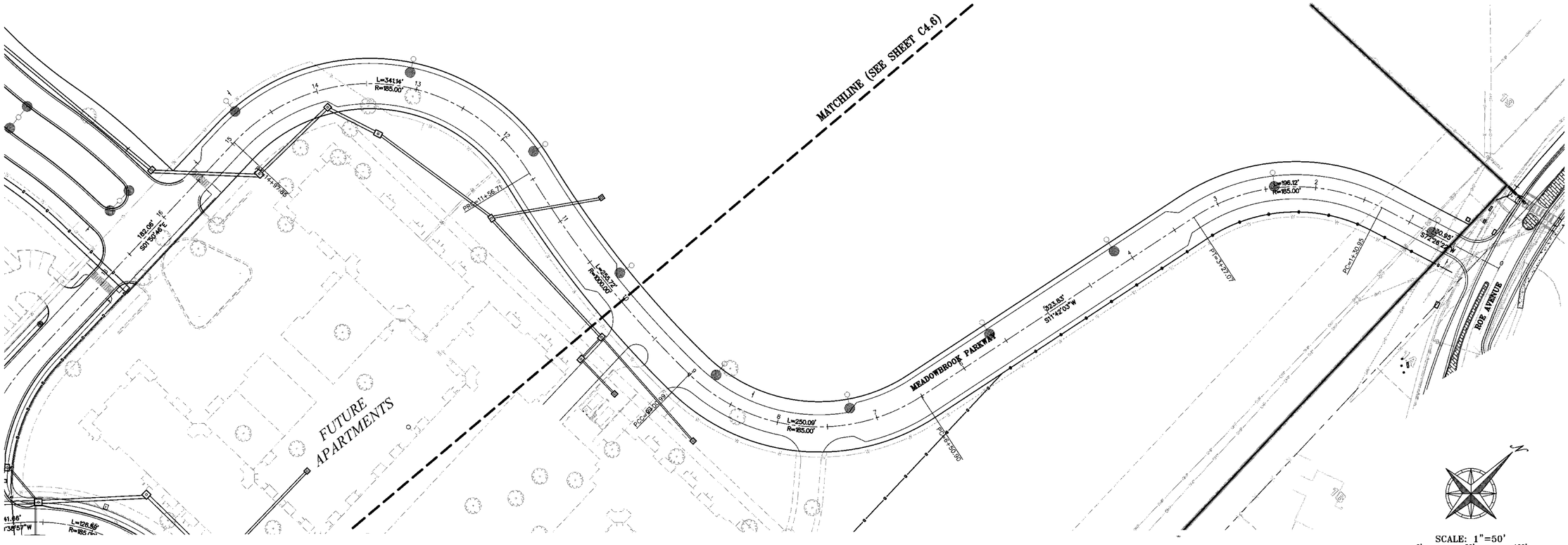
C4.4



PUBLIC STREET C

SCALE: 1"=50' HORIZ.
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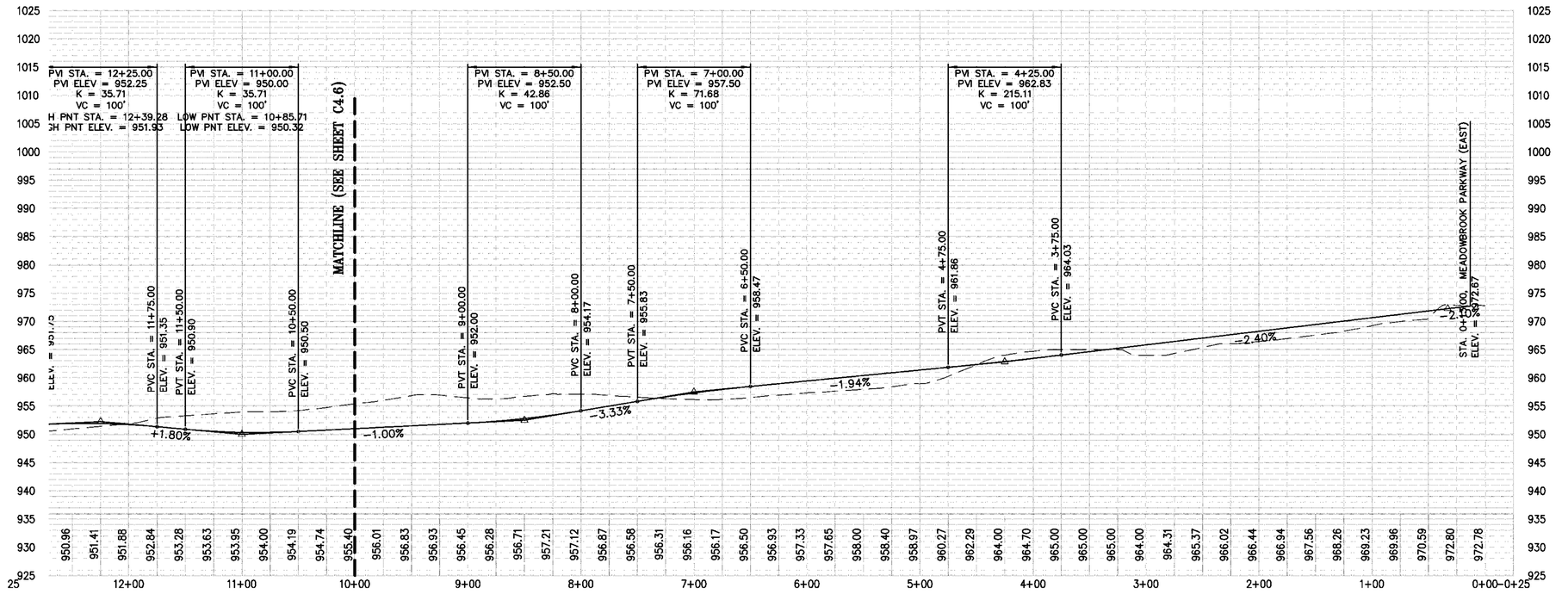
MEADOWBROOK PARKWAY (EAST)



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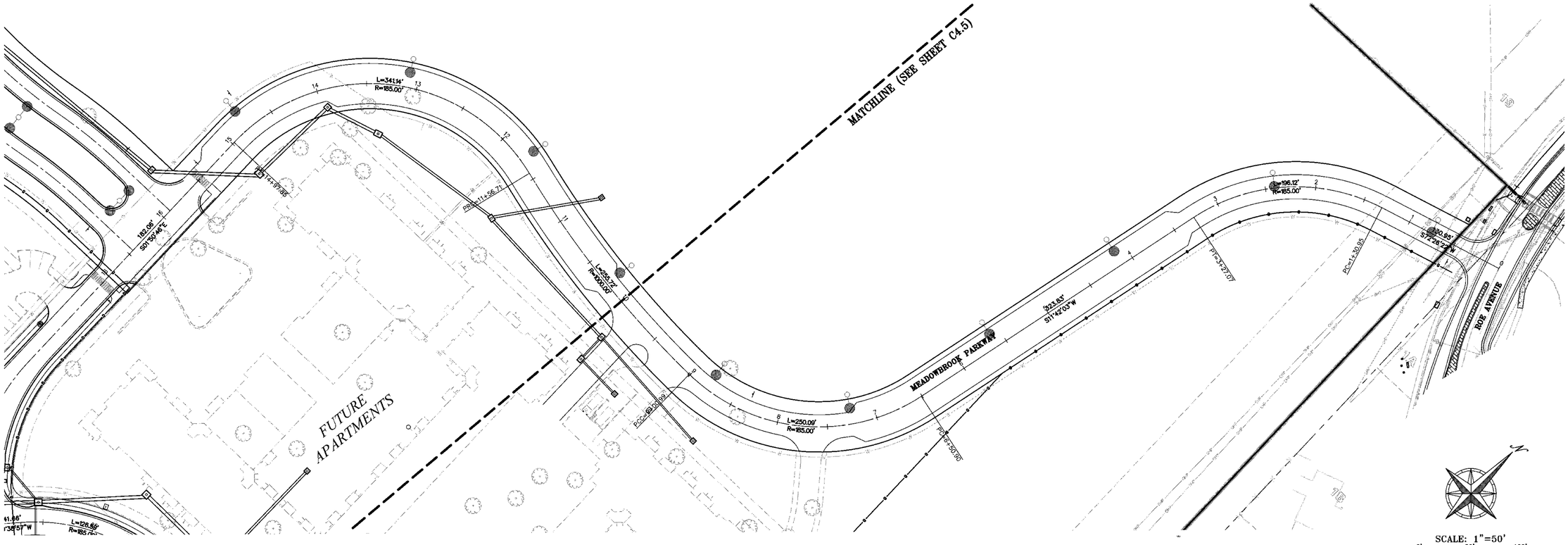
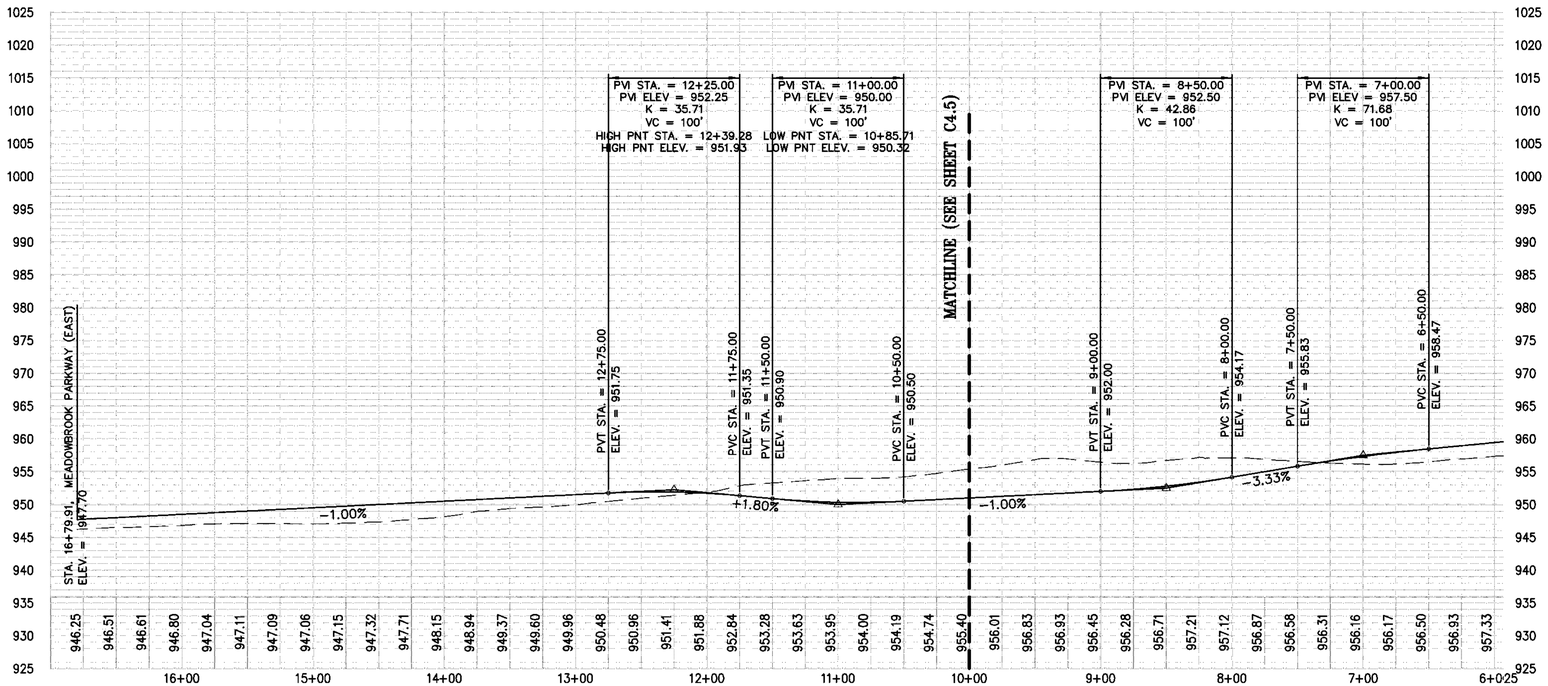
APPROVED:

C4.5



SCALE: 1"=50' HORIZ.
1"=10' VERT.

MEADOWBROOK PARKWAY EAST



MEADOWBROOK PARKWAY (EAST)

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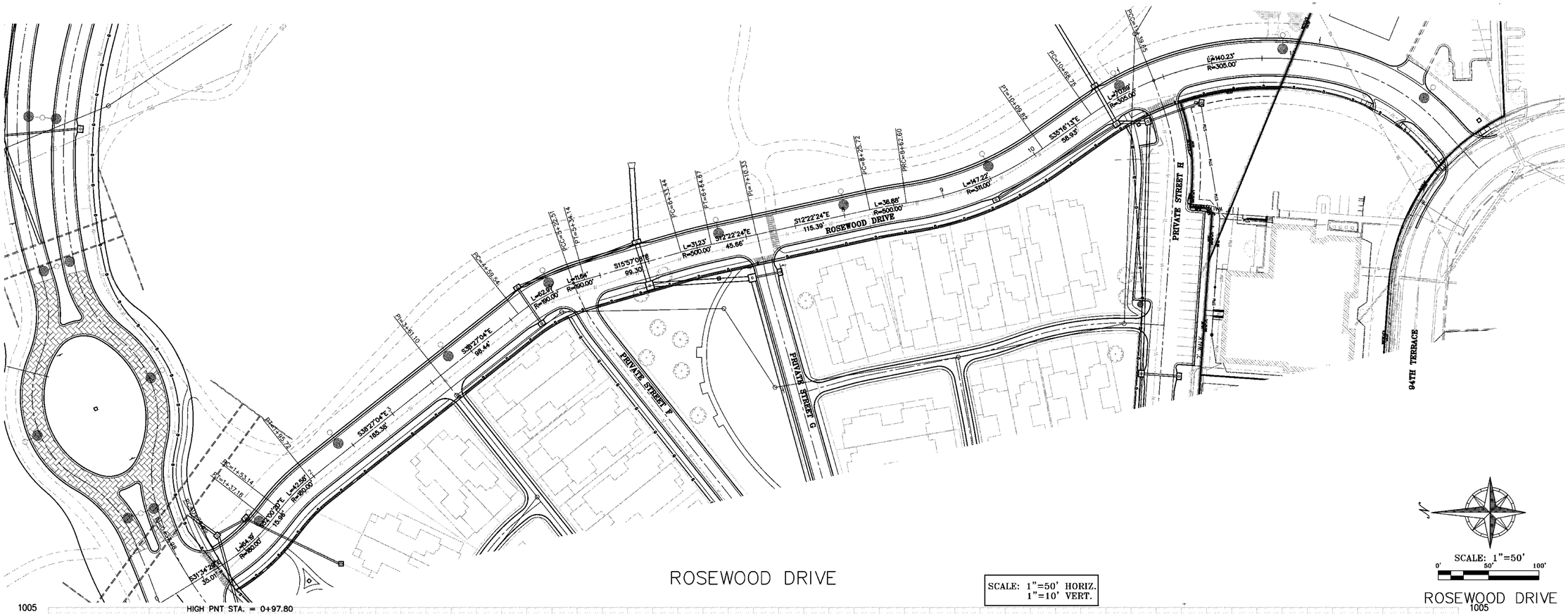

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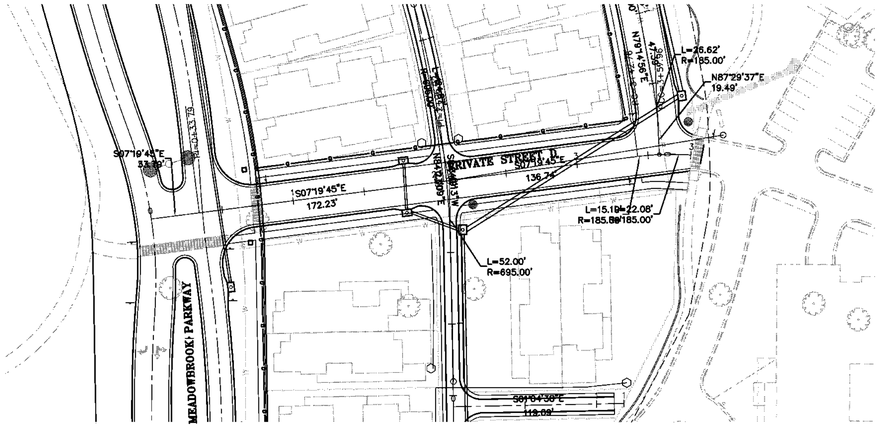
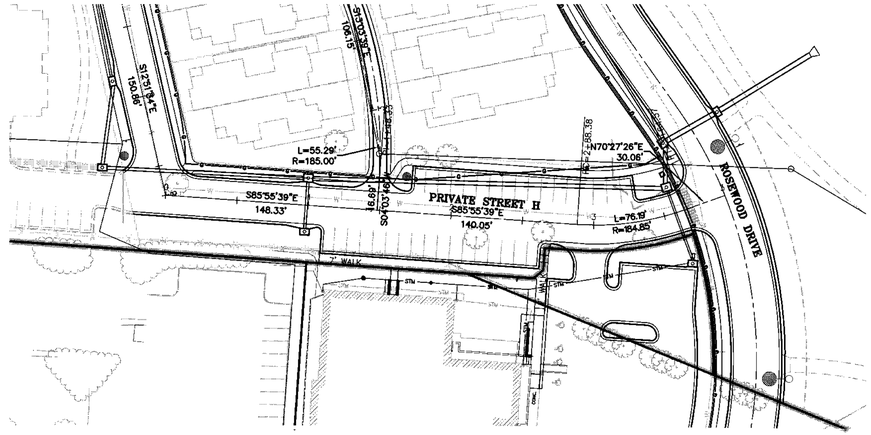
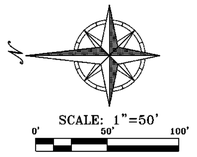
C4.7







PRIVATE STREET D

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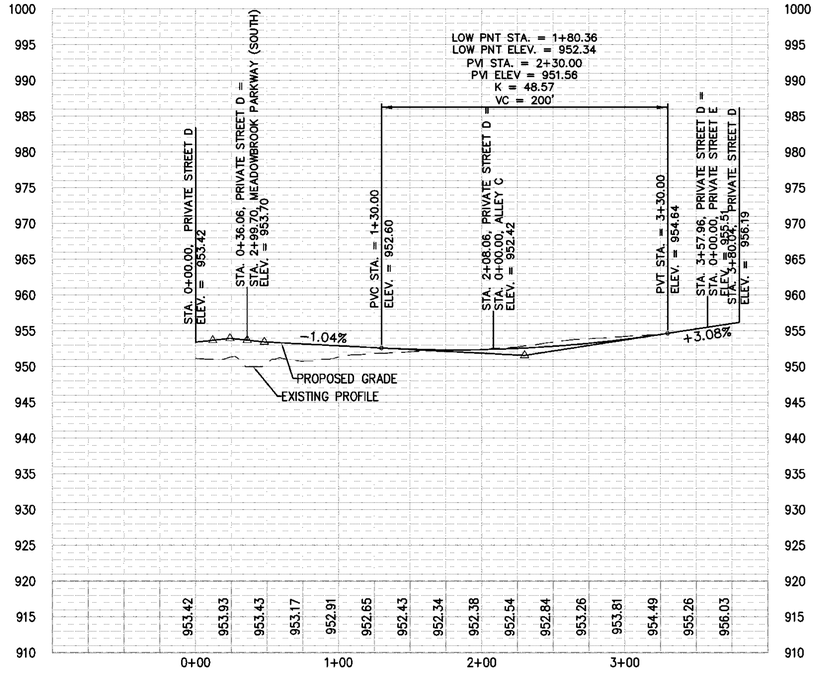
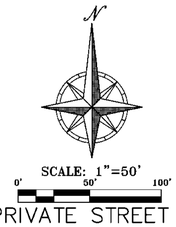
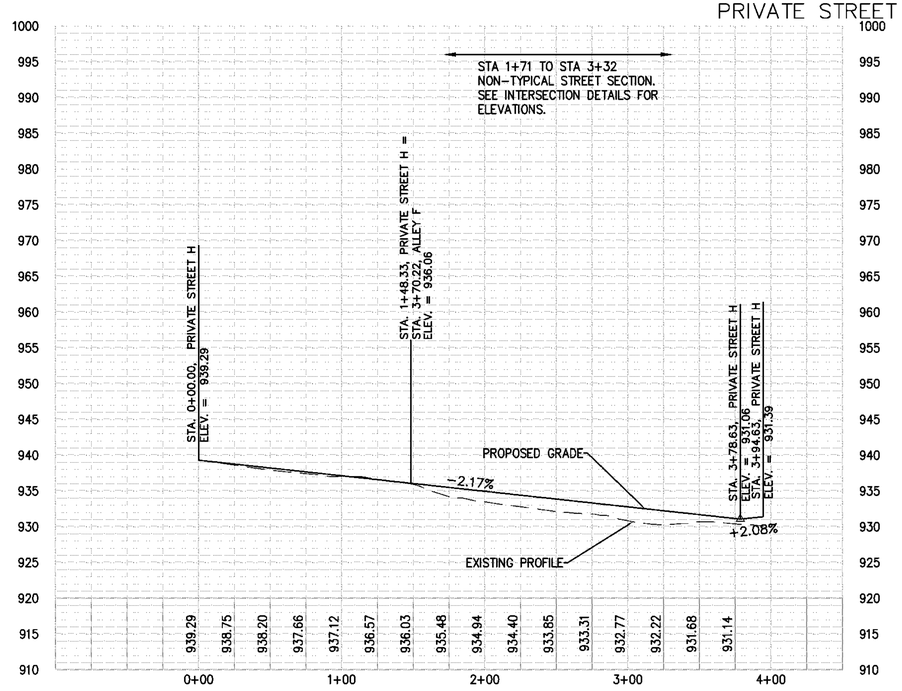




PRIVATE STREET H

SCALE: 1"=50' HORIZ.
1"=10' VERT.

PRIVATE STREET D
PRIVATE STREET H



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C4.8

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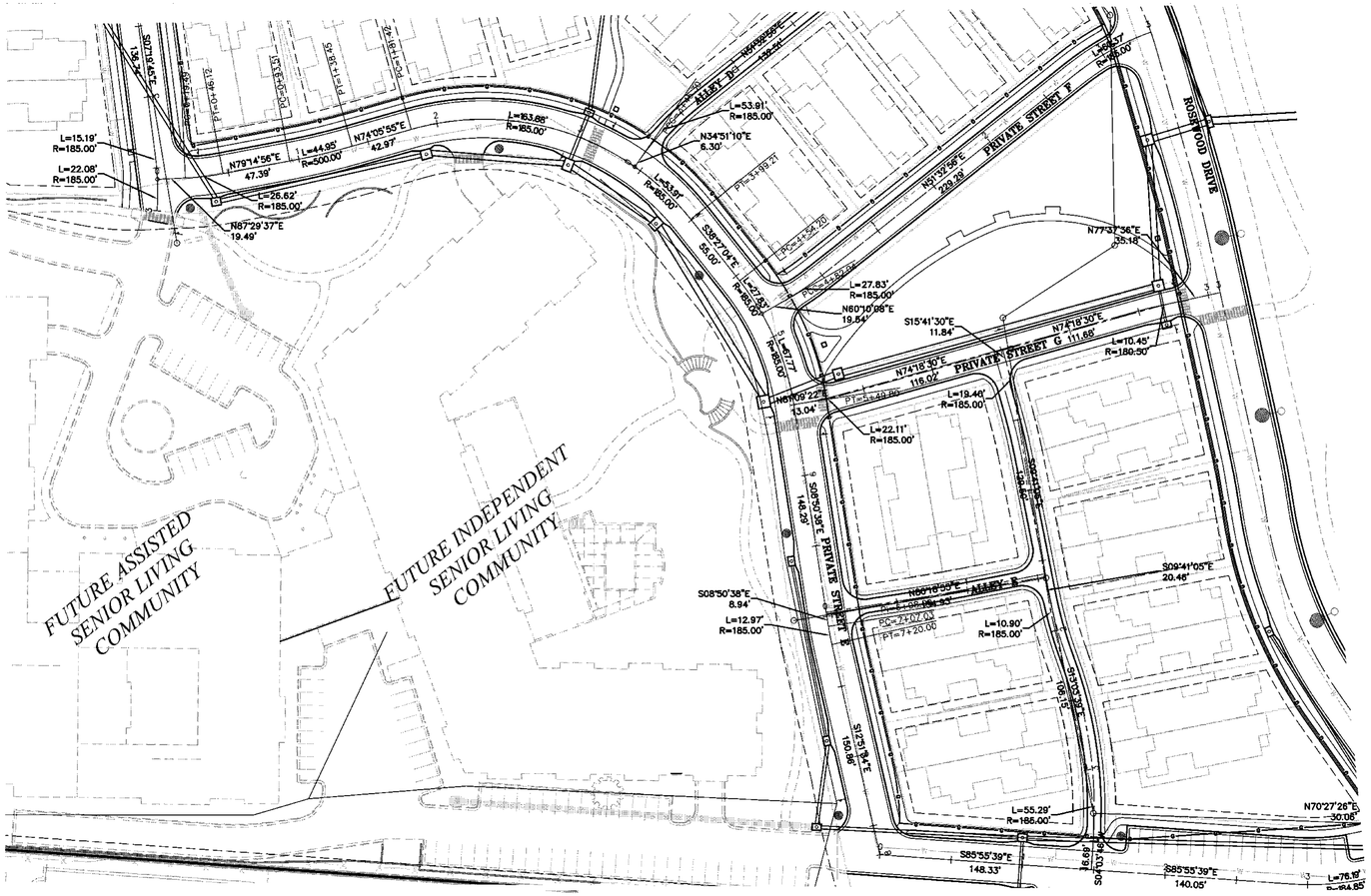

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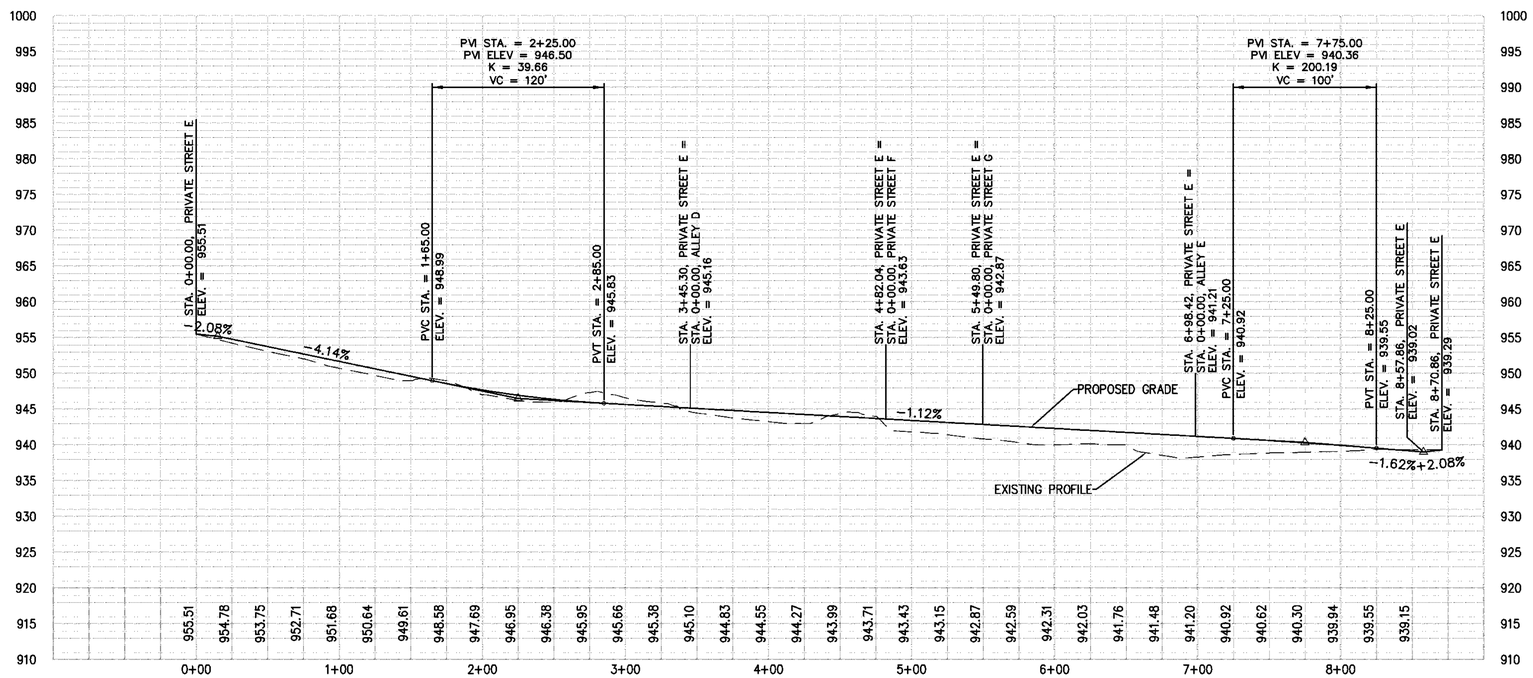

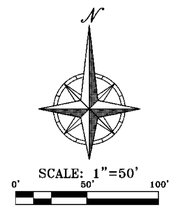

PRIVATE STREET E

SCALE: 1"=50' HORIZ.
1"=10' VERT.

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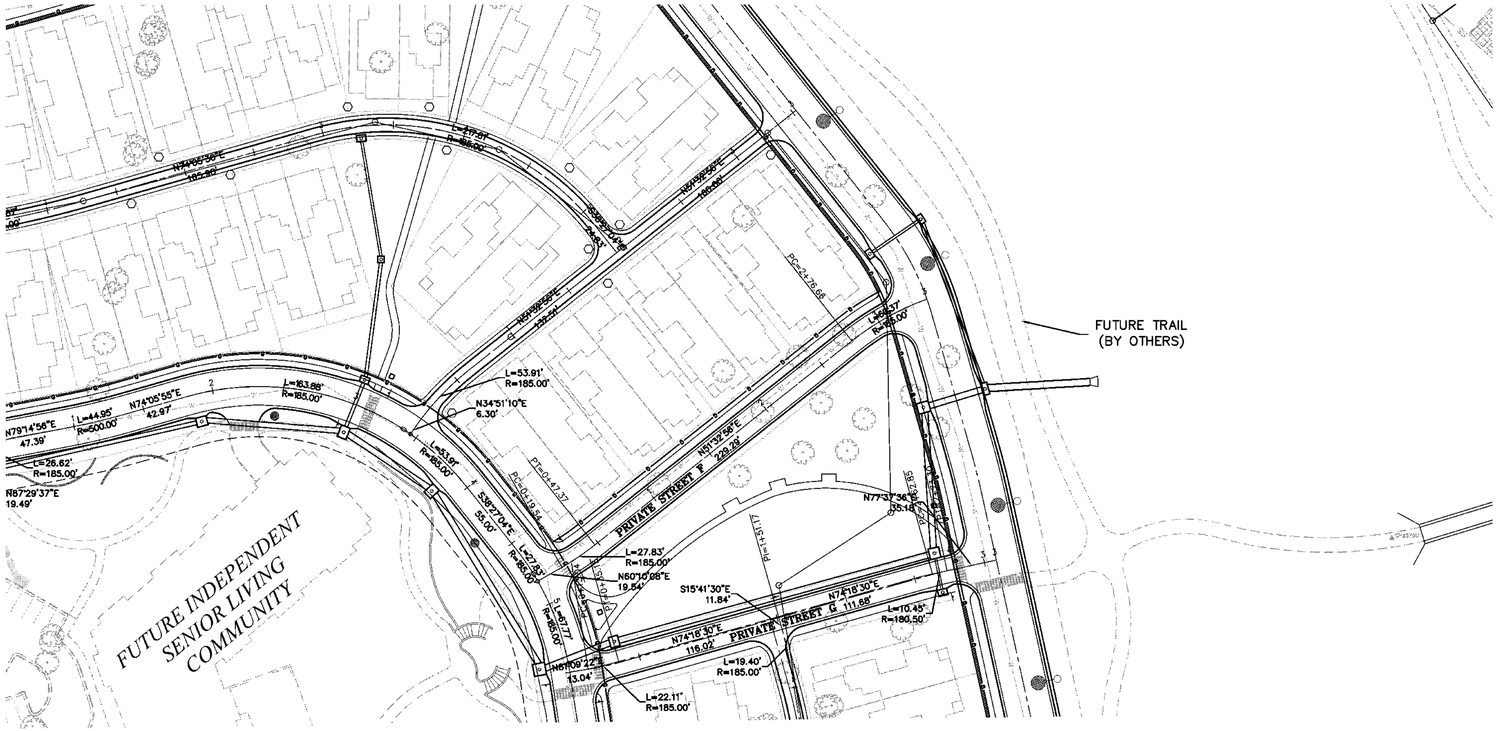
C4.9



SCALE: 1"=50'

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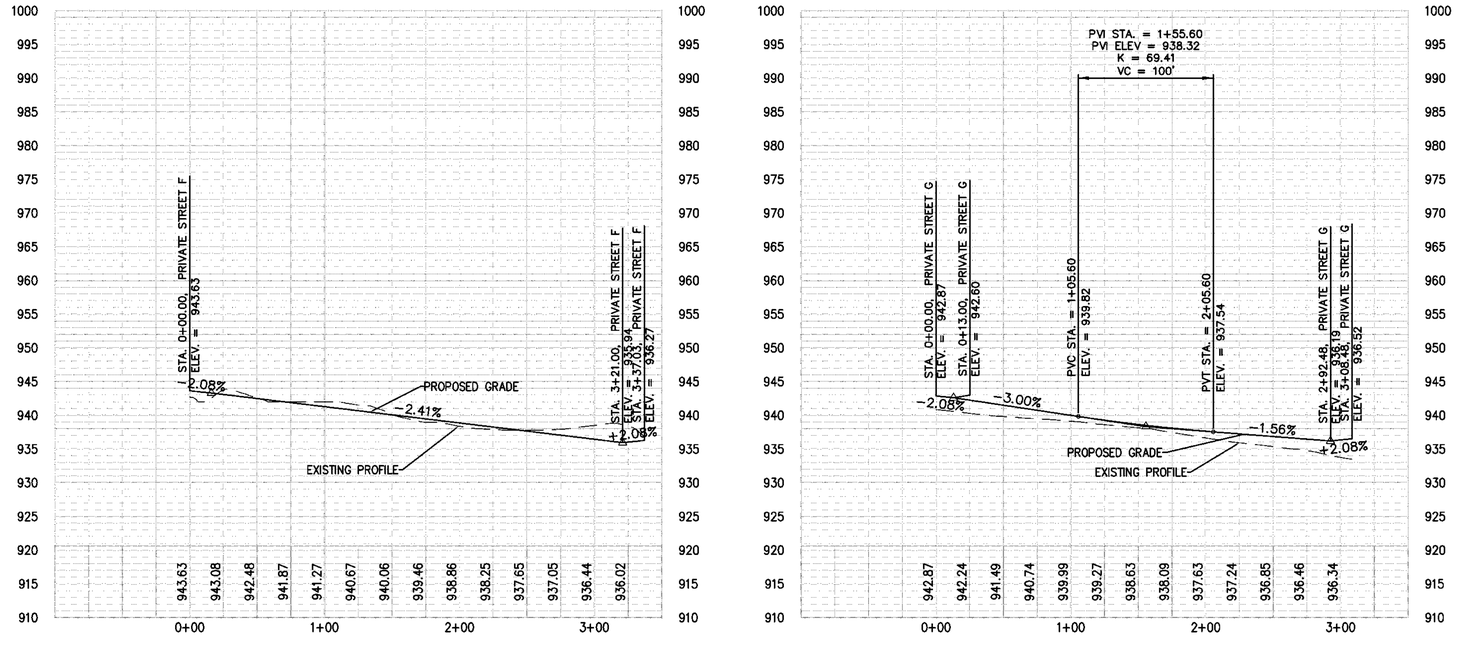
PRIVATE STREET F & G

PRIVATE STREET F

SCALE: 1"=50' HORIZ.
1"=10' VERT.

PRIVATE STREET G



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C4.10

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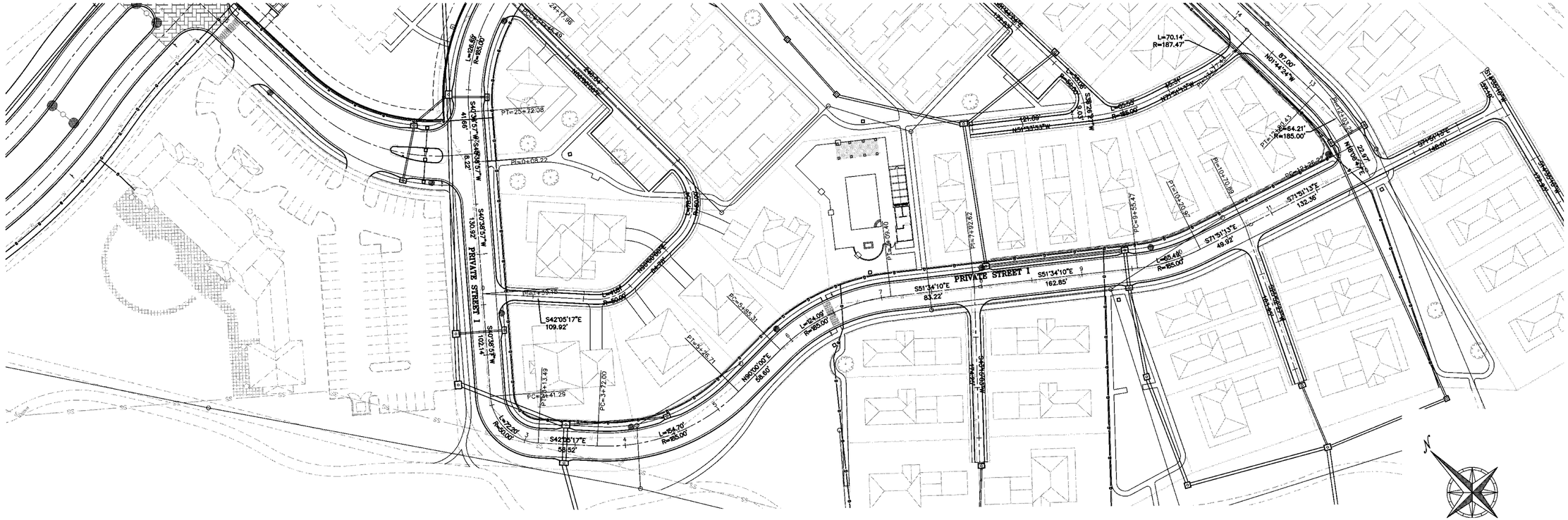

PRIVATE STREET I

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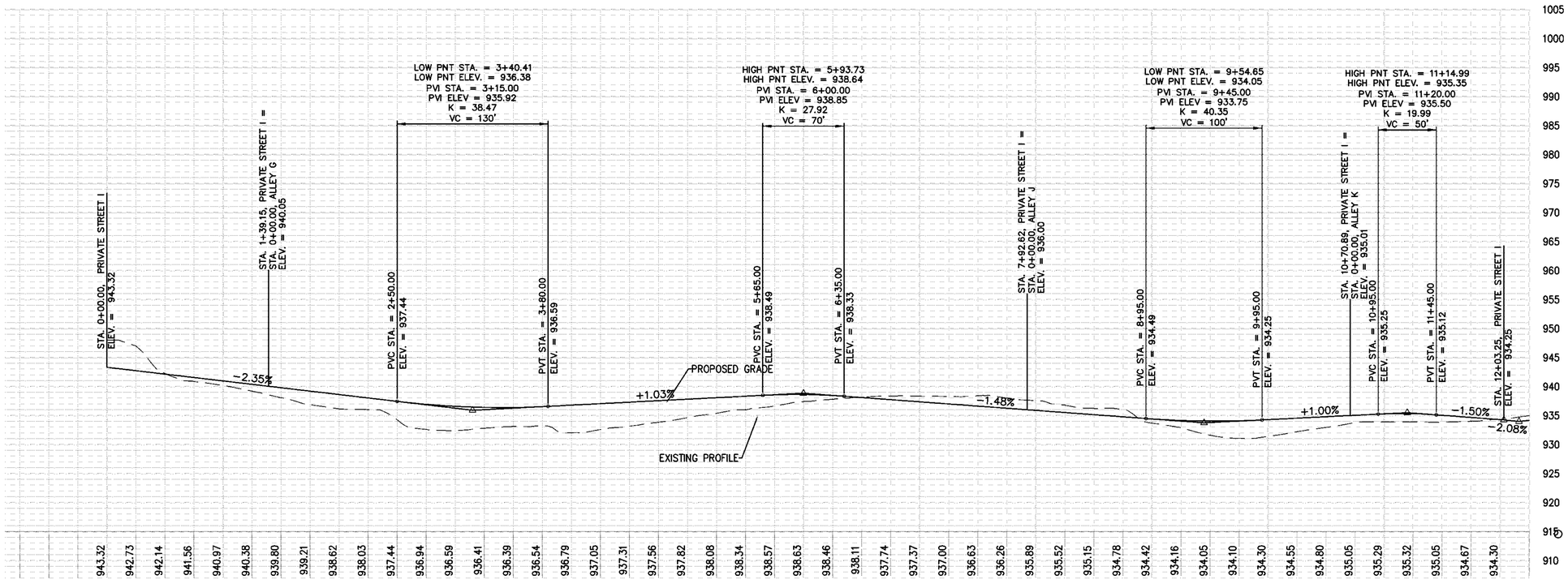

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C4.11

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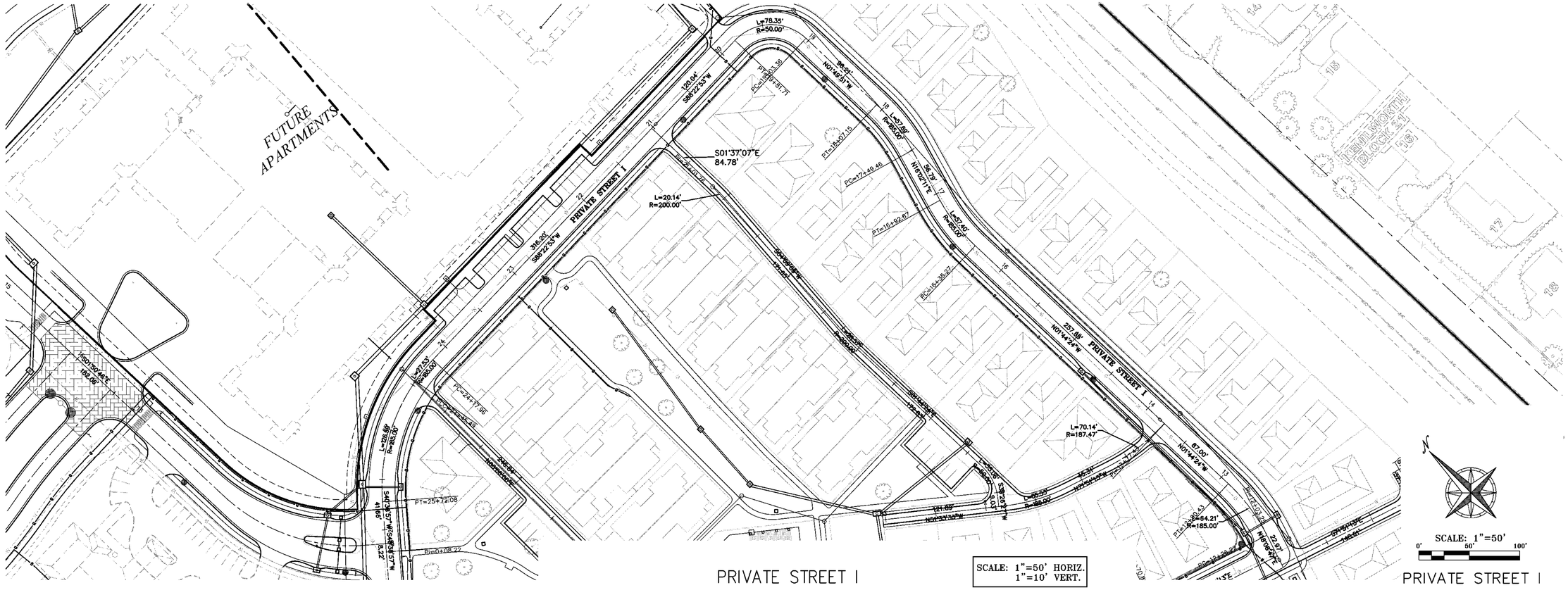

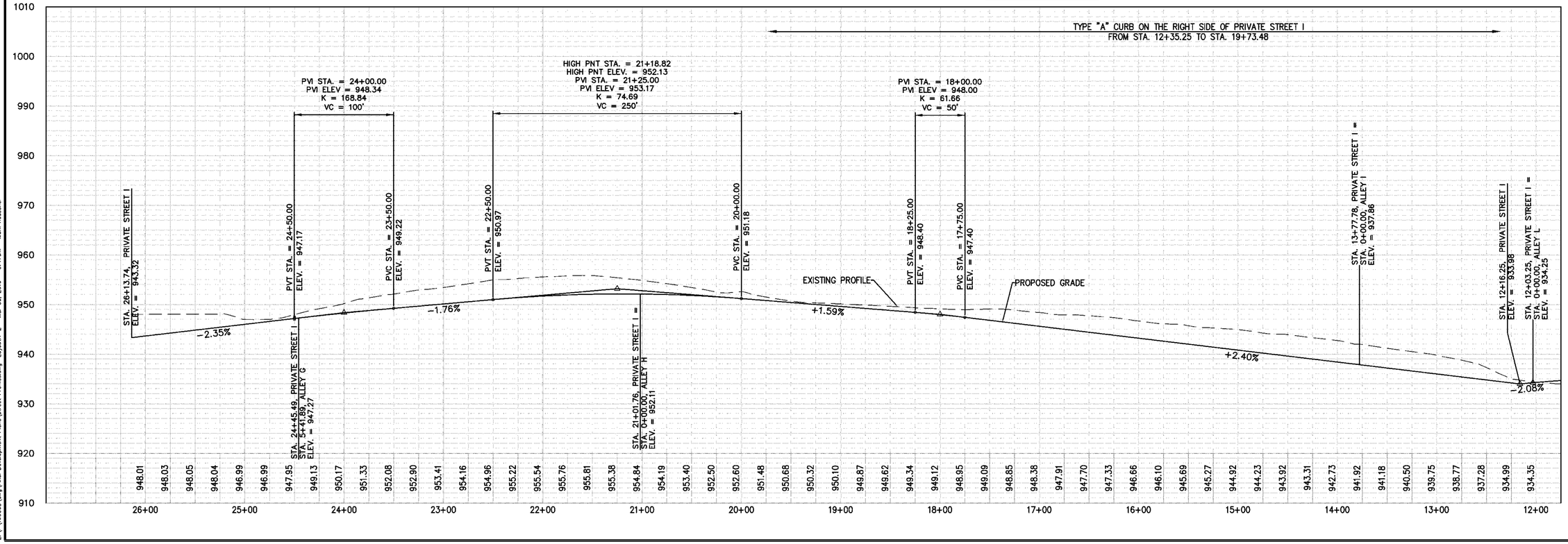

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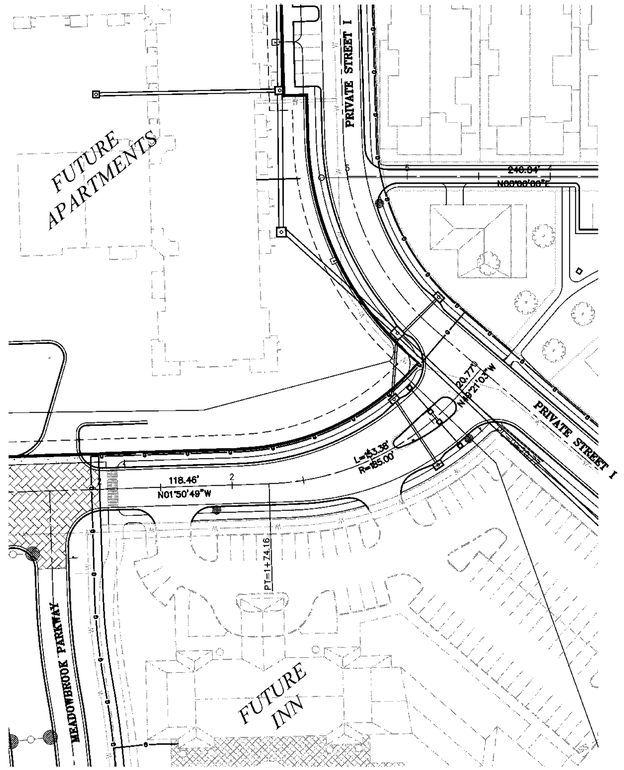
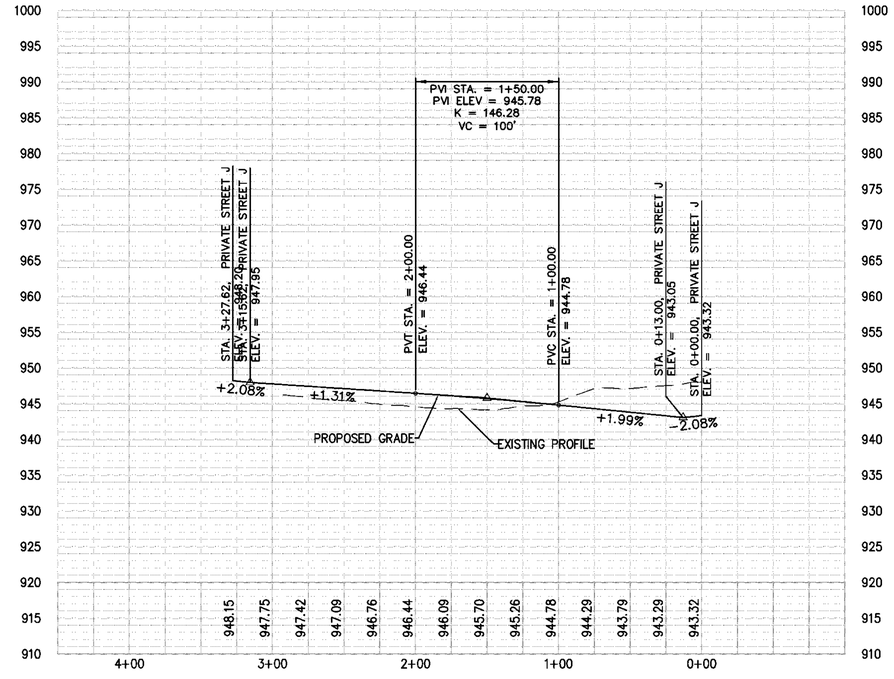
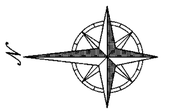


SCALE: 1"=50' HORIZ.
1"=10' VERT.

Private Street J





SCALE: 1"=50'
0' 50' 100'

PRIVATE STREET J

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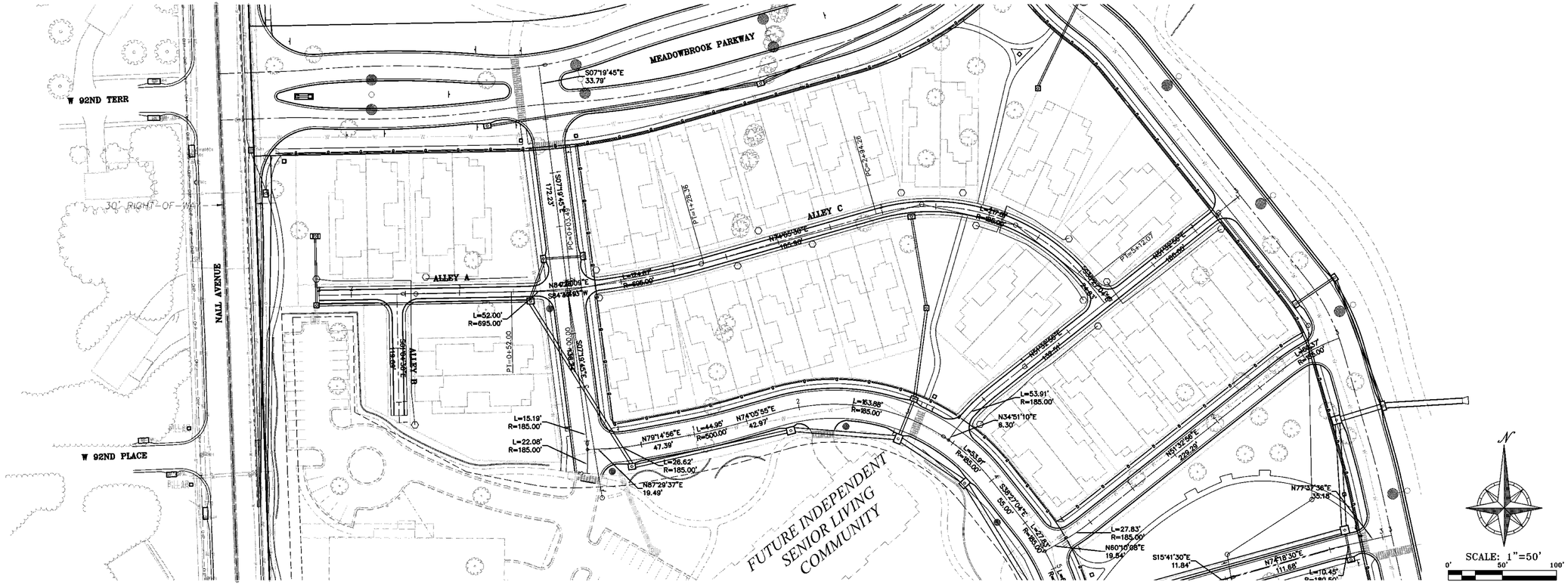

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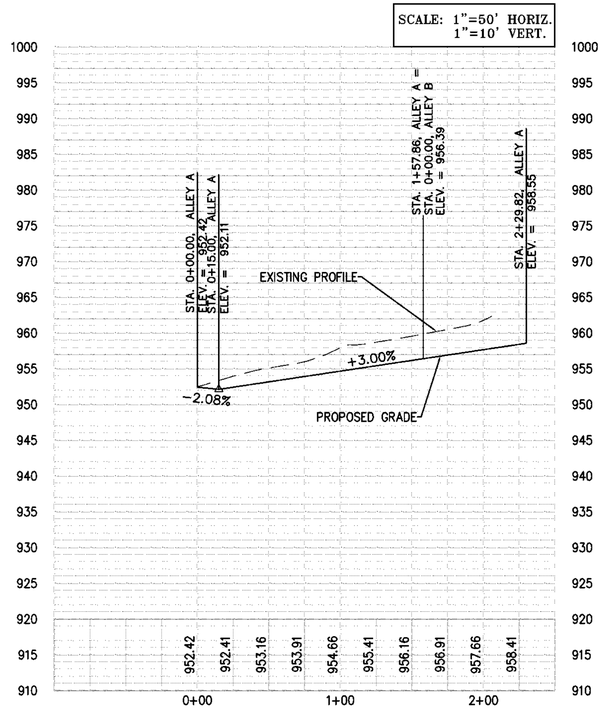
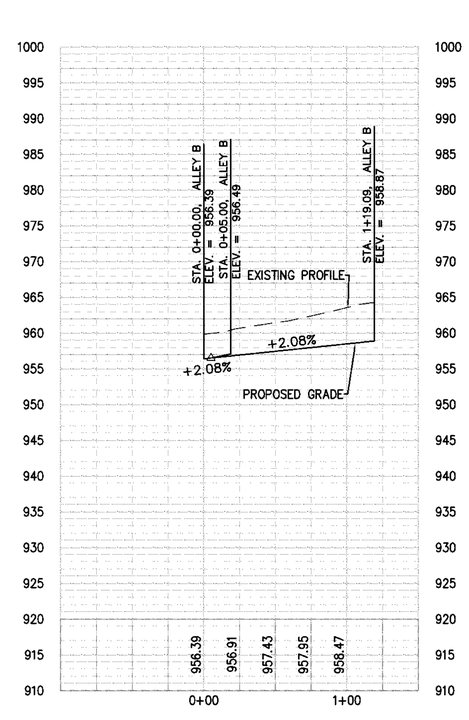


ALLEY B



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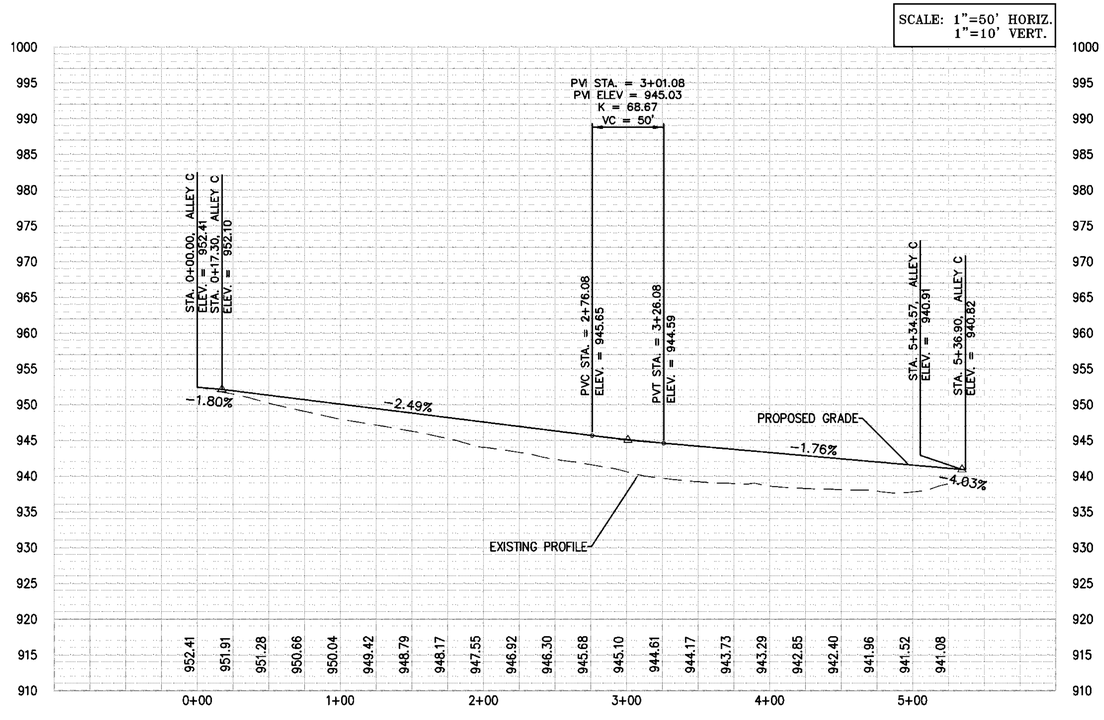

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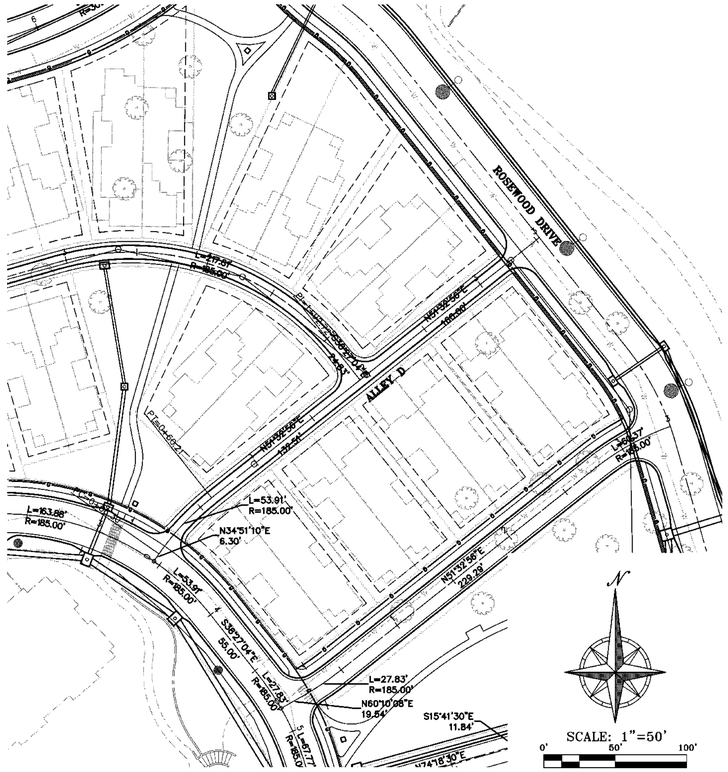
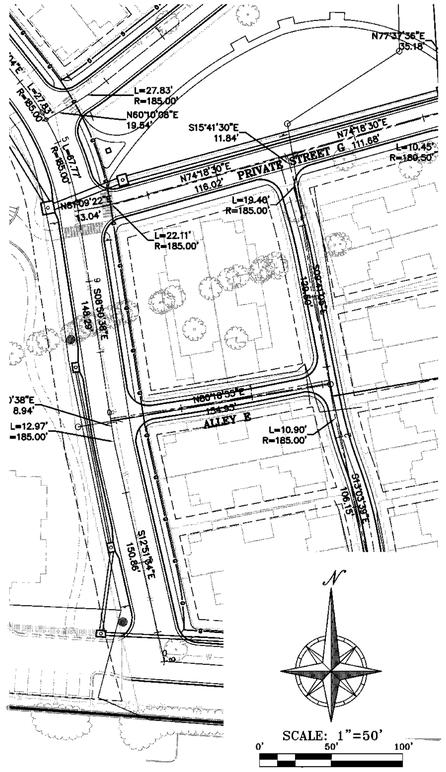
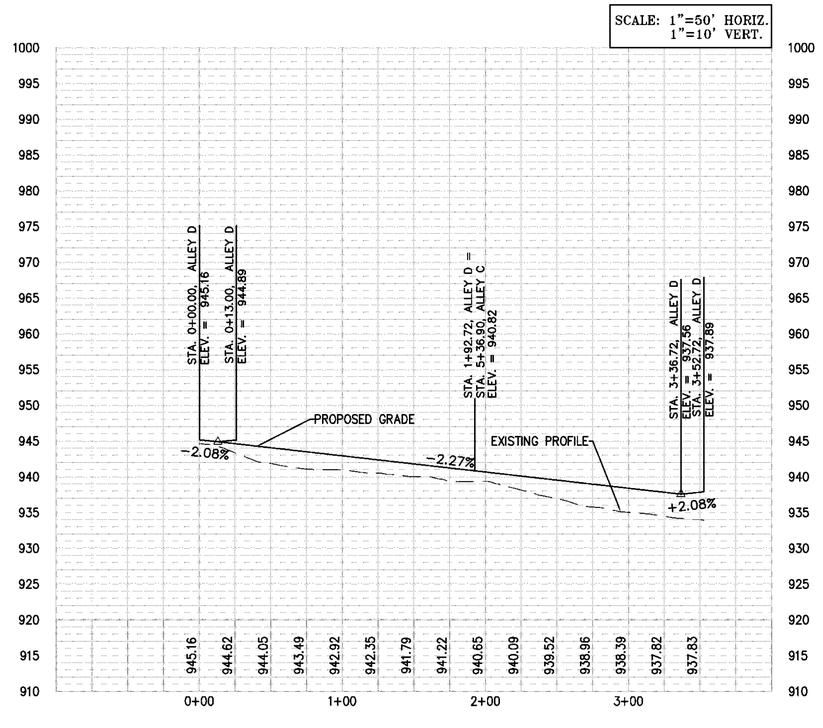


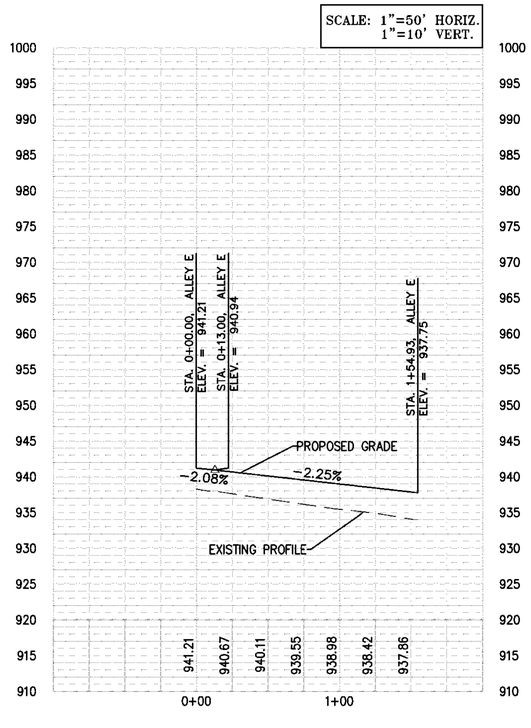
ALLEY D



ALLEY E



ALLEY D



ALLEY E

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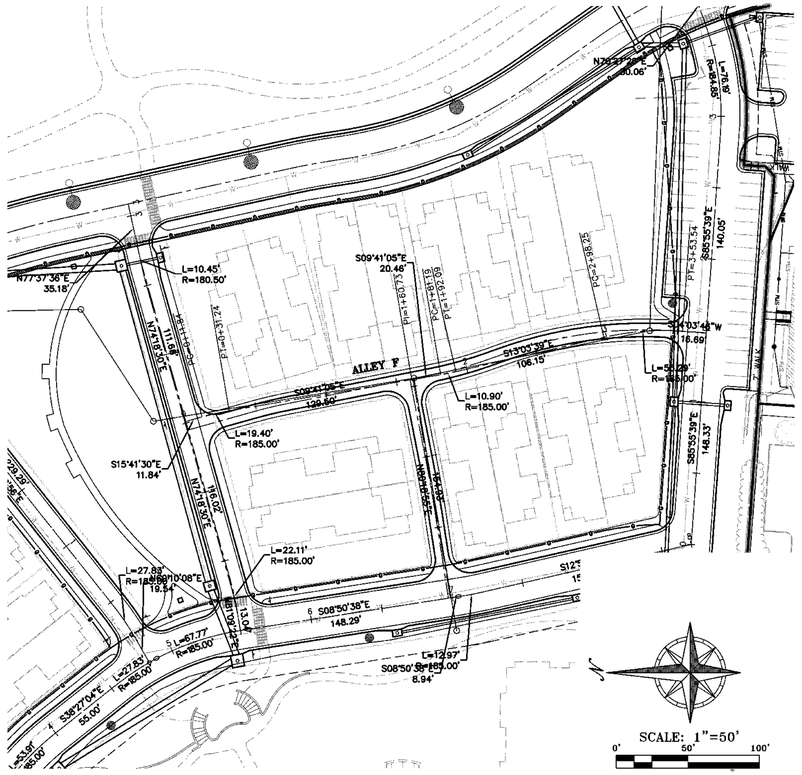
STREET PLAN & PROFILE

MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

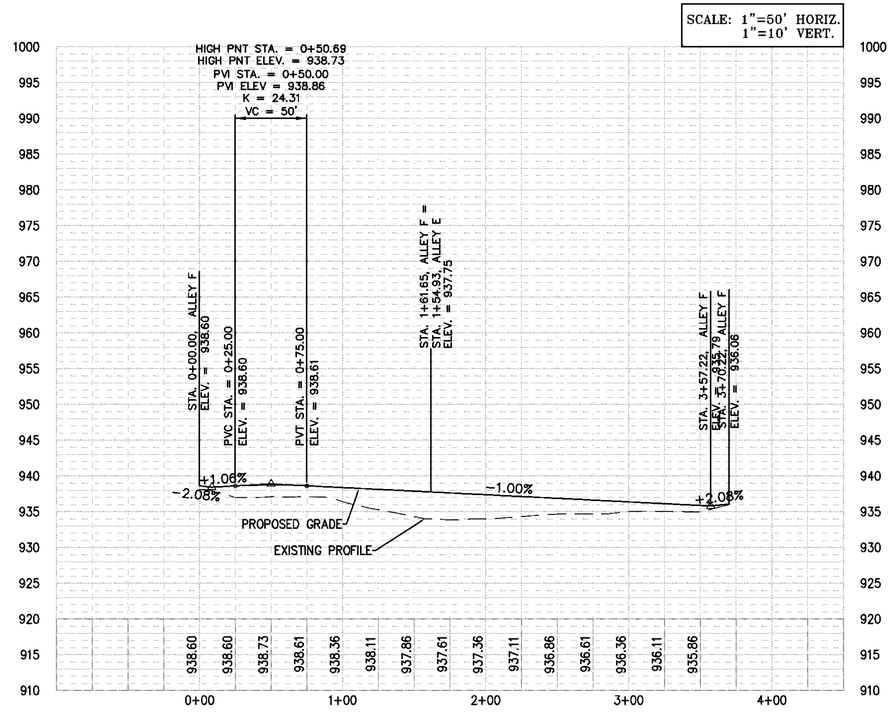
No.	Date	Revisions:	By	App.

PROJECT NO. 150008
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DCU
CHECKED:
APPROVED:

C4.15



ALLEY F



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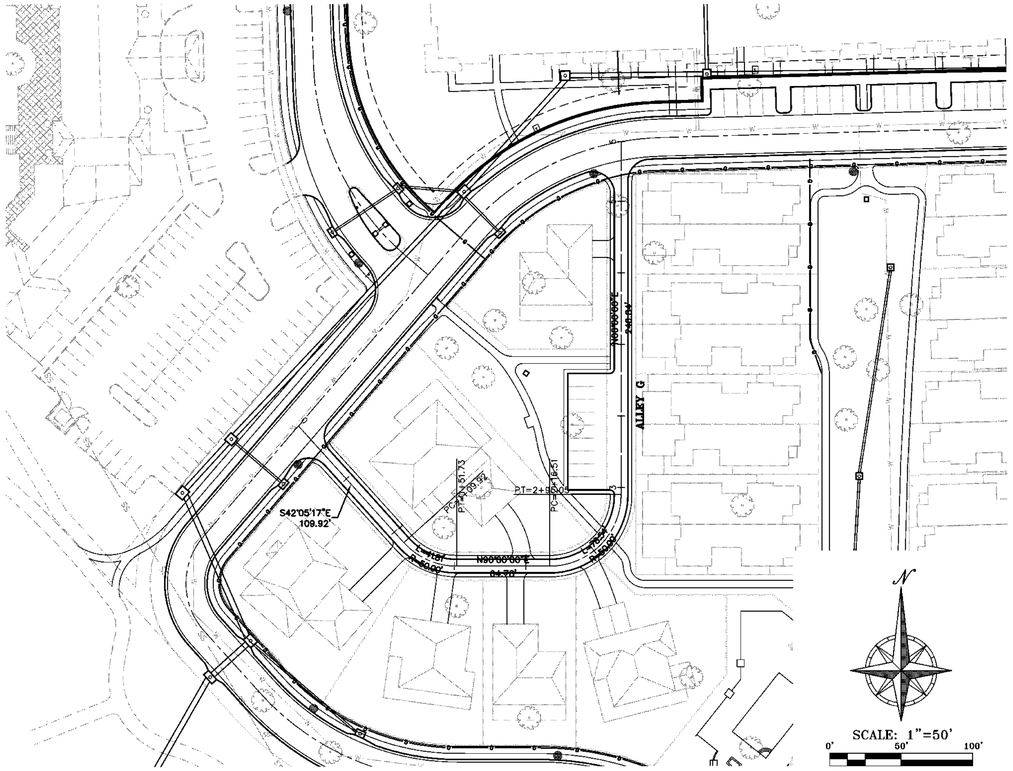
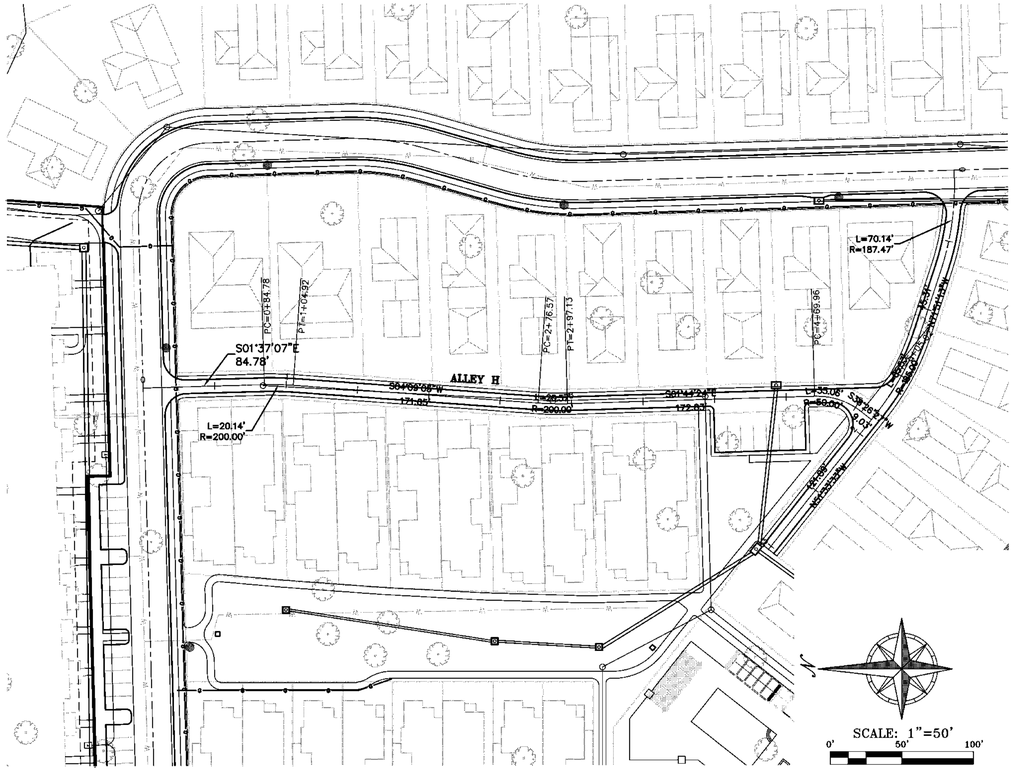
Z:\P\150009\dwg\Final Development Plans\Street Profiles.dwg Layout:Alley F Mar 30, 2016 - 9:48am Mark Reasoner



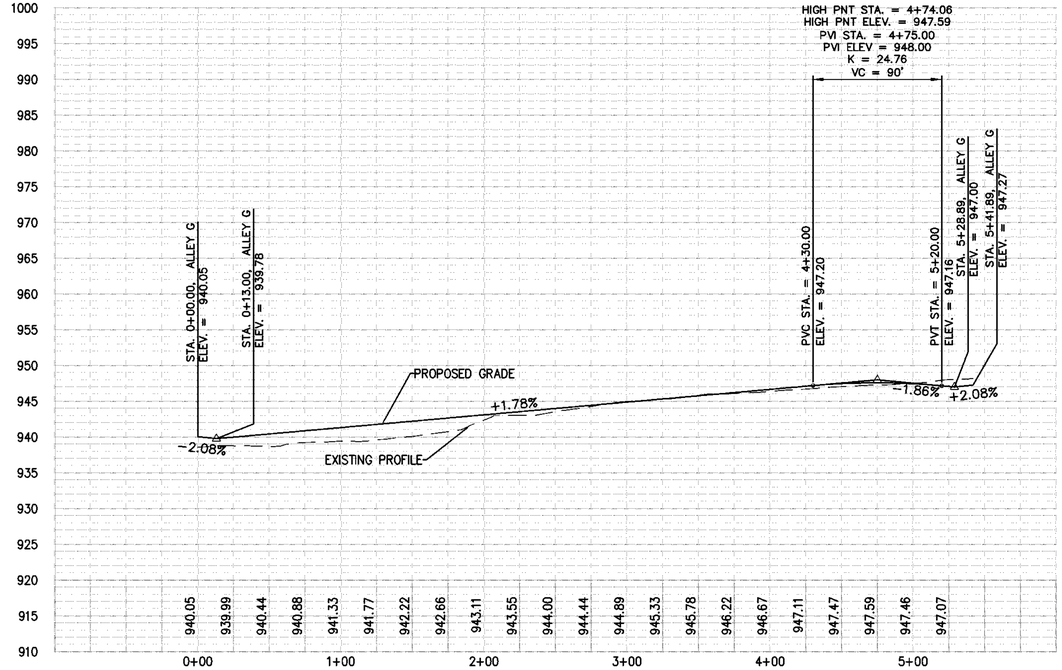
SCALE: 1"=50' HORIZ.
1"=10' VERT.

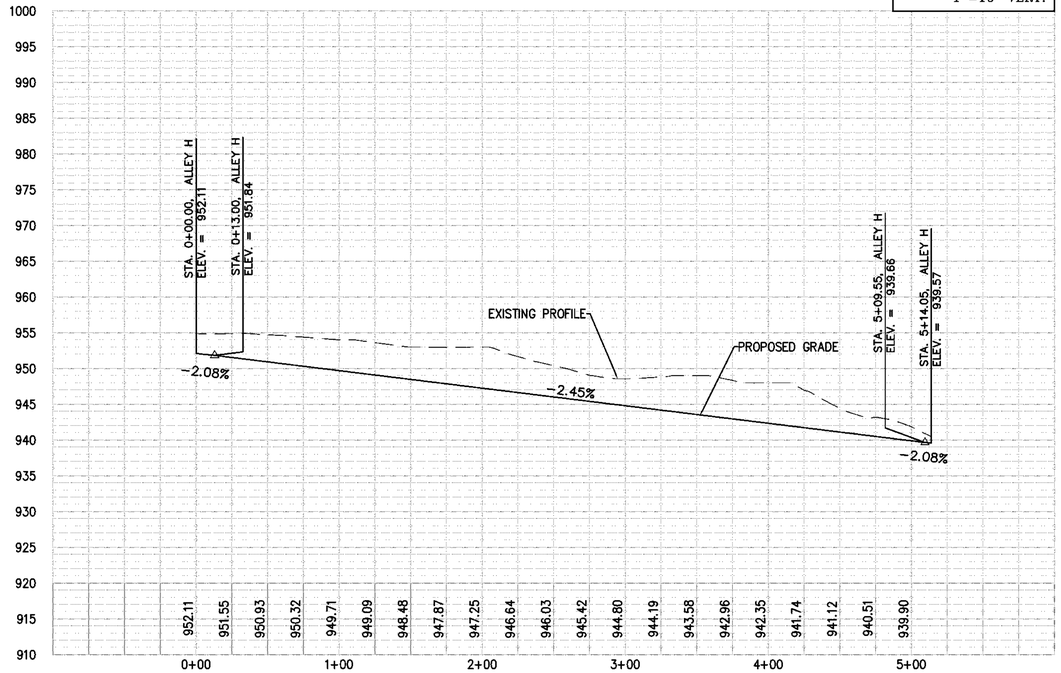


ALLEY G

ALLEY H

SCALE: 1"=50' HORIZ.
1"=10' VERT.





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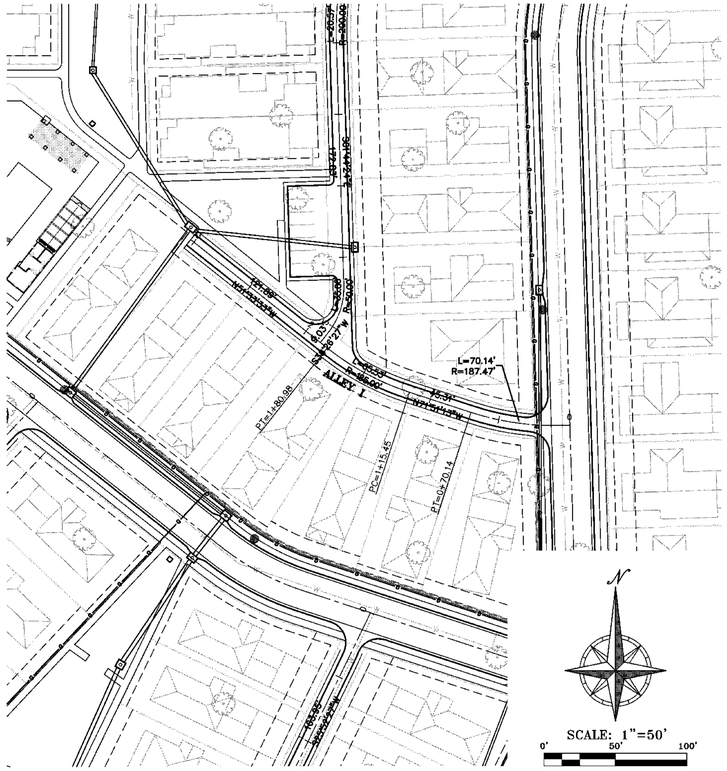

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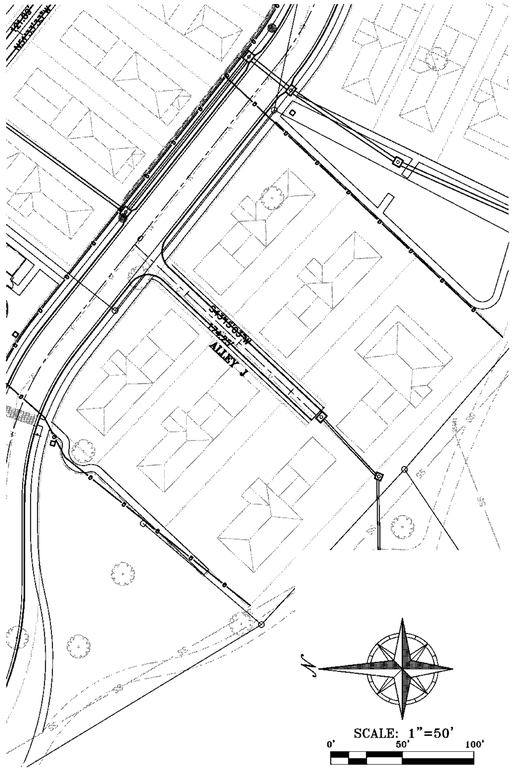

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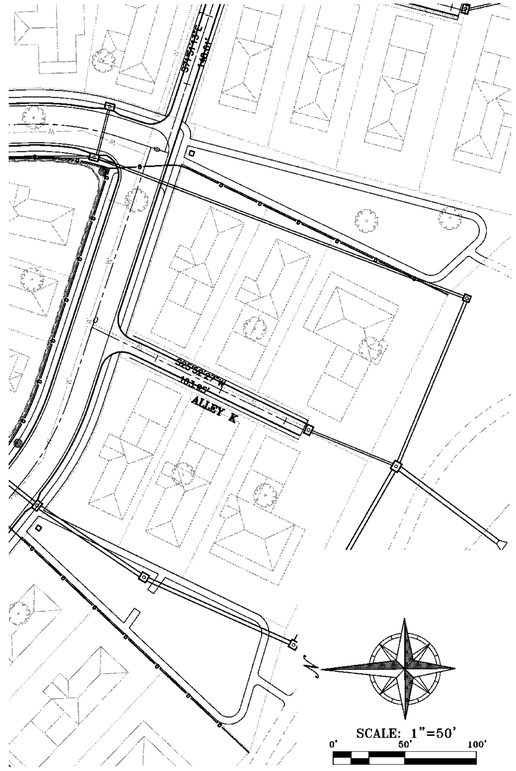

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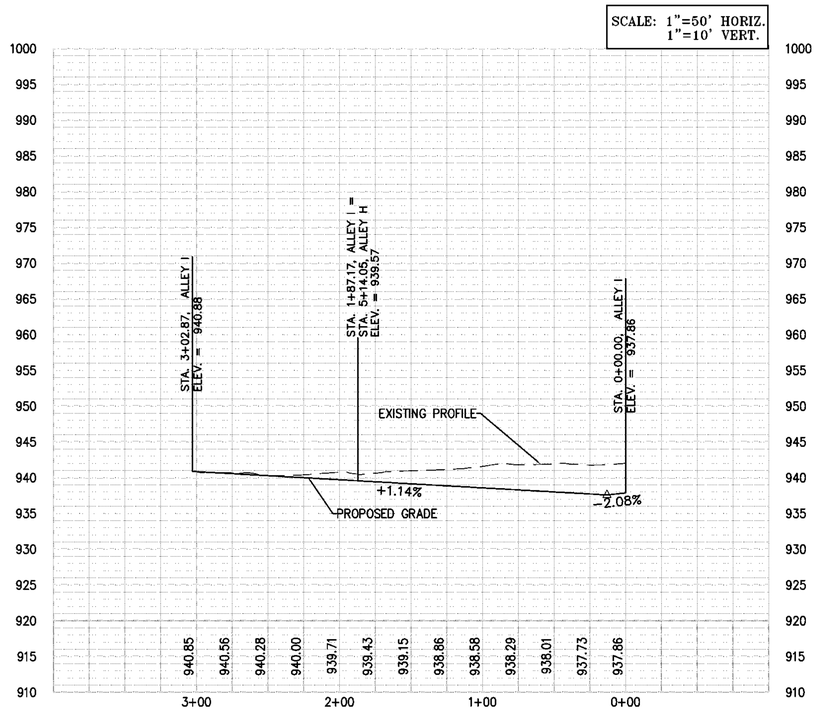

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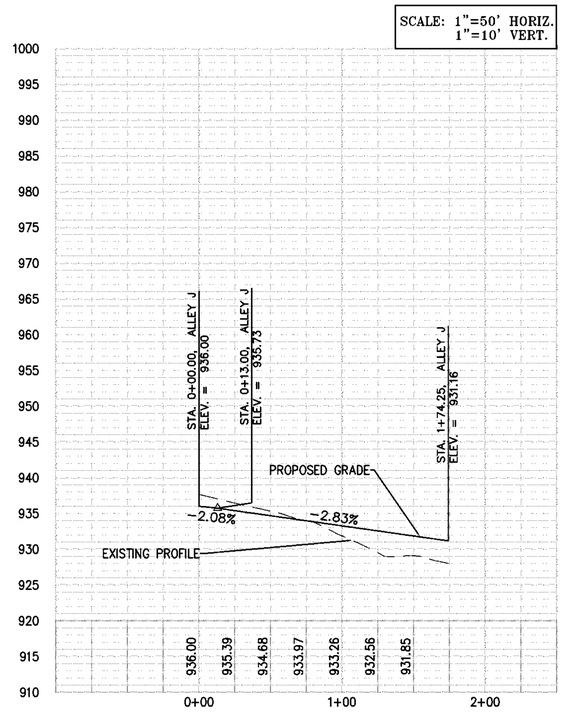

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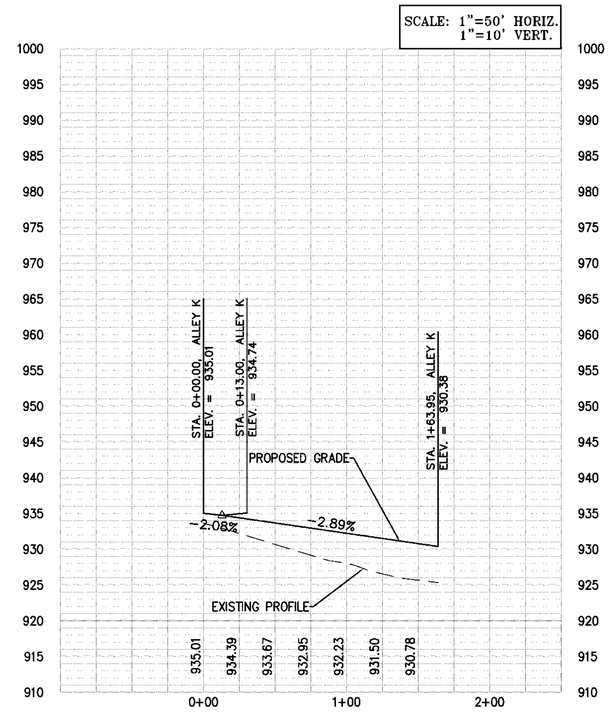

ALLEY K

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PRAIRIE VILLAGE, KANSAS

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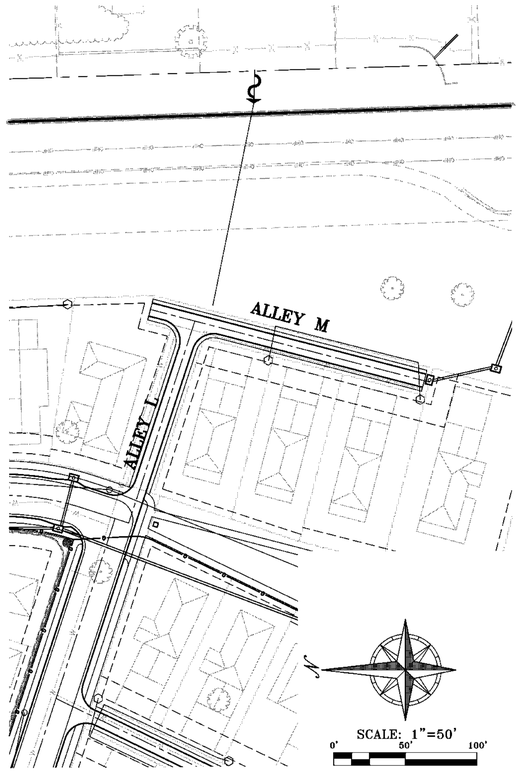
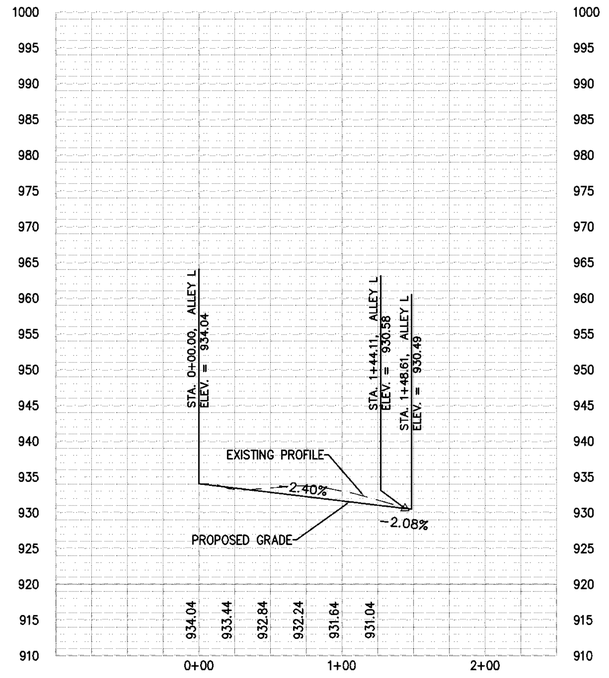
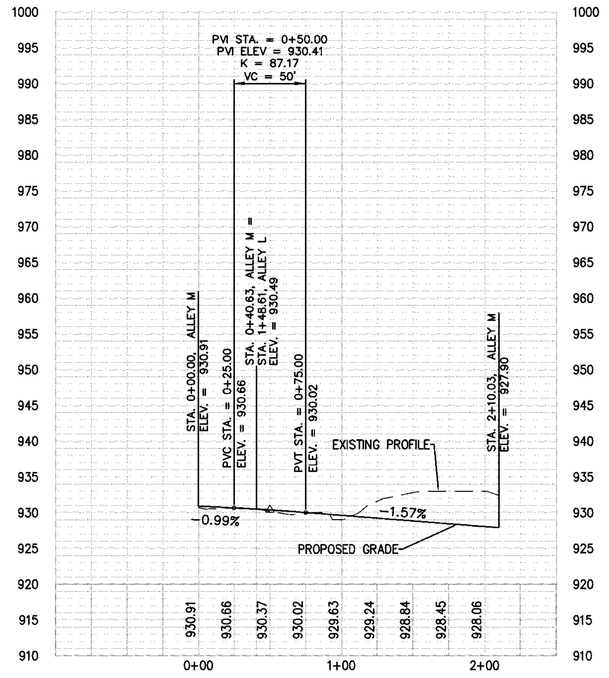


ALLEY L

SCALE: 1"=50' HORIZ.
1"=10' VERT.

ALLEY M





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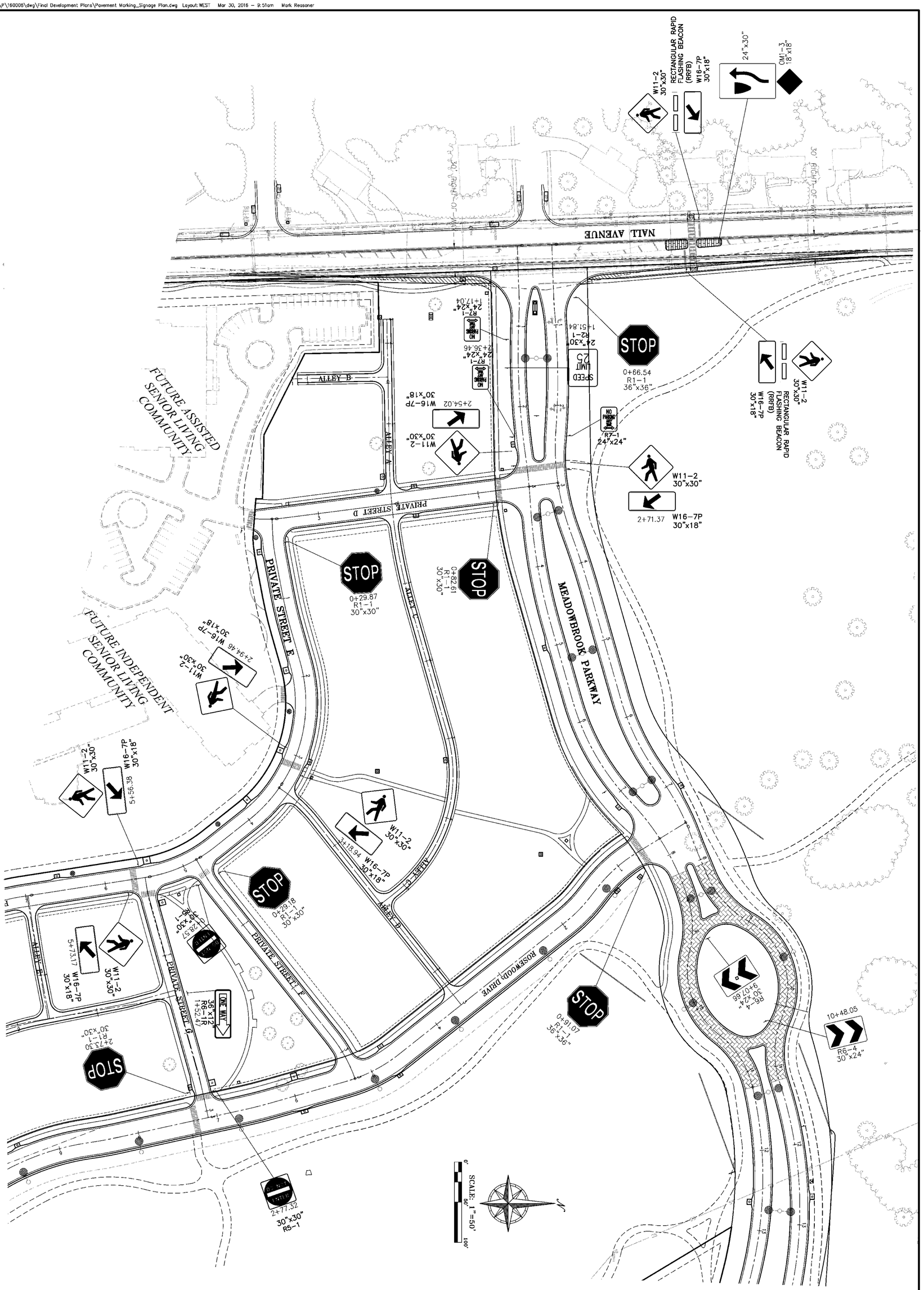

C4.20

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SIGNAGE PLAN – WEST RESIDENTIAL LOTS

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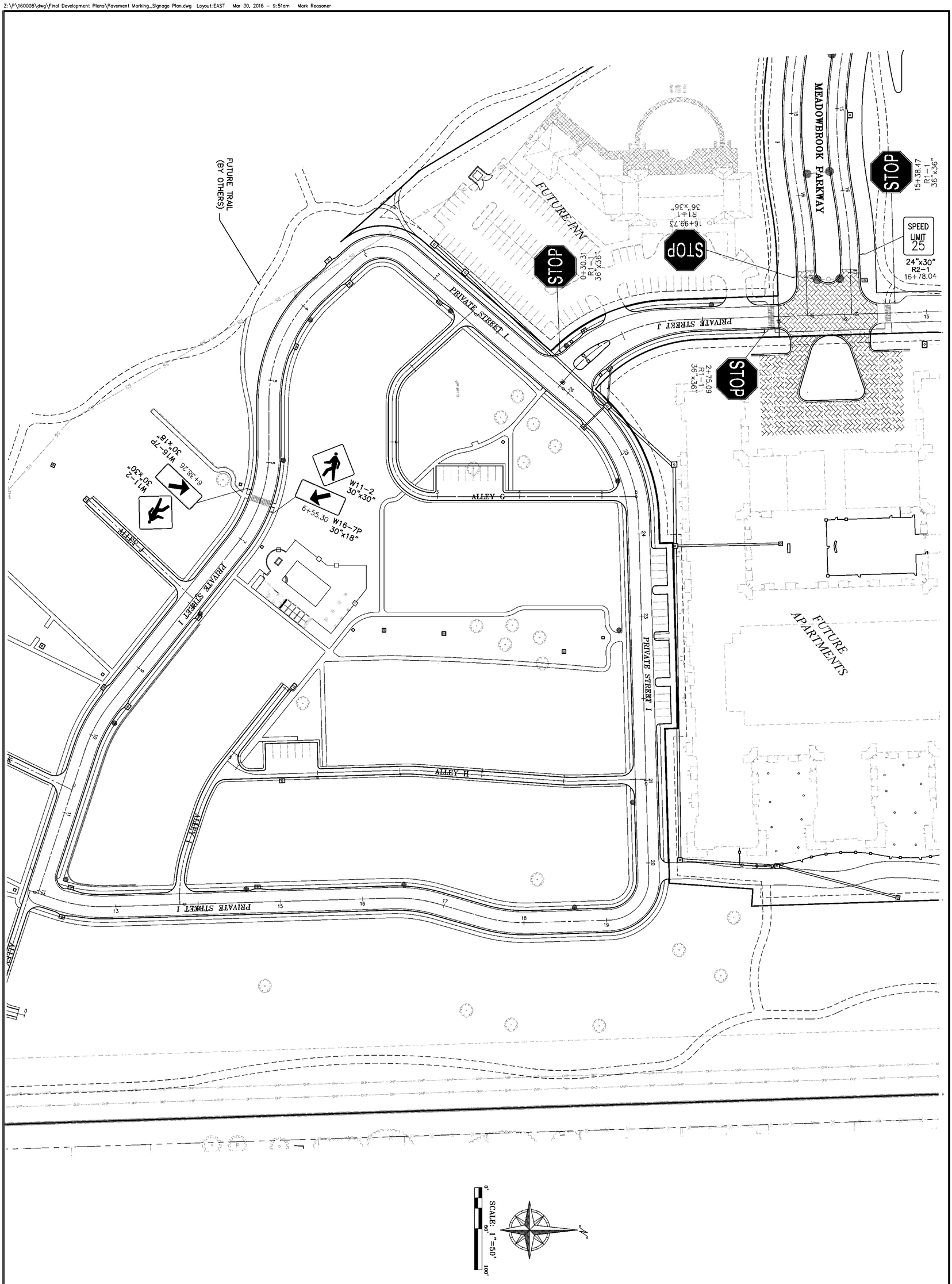

C4.21

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SIGNAGE PLAN - EAST RESIDENTIAL LOTS

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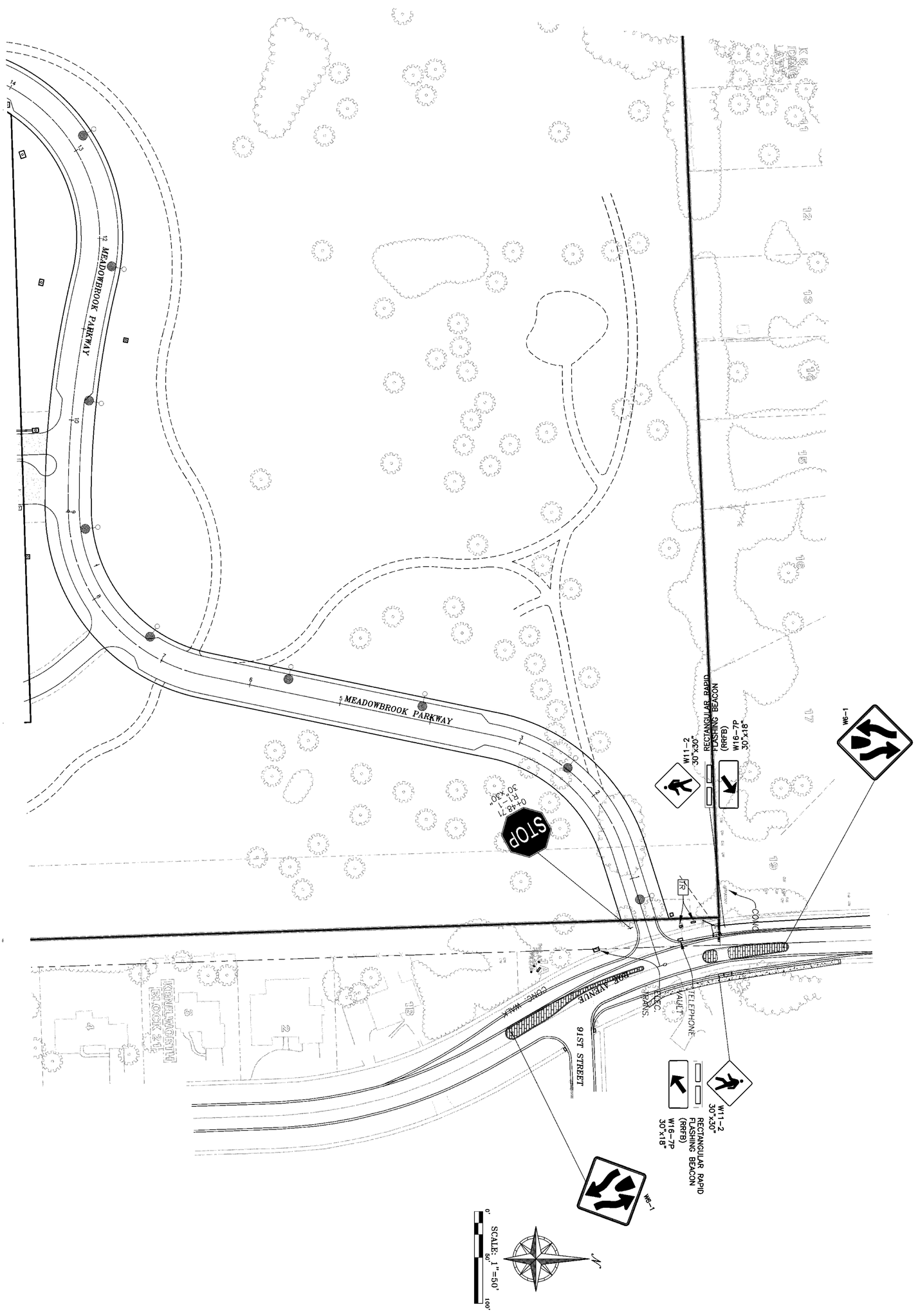

C4.22

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SIGNAGE PLAN - MEADOWBROOK PARKWAY EAST

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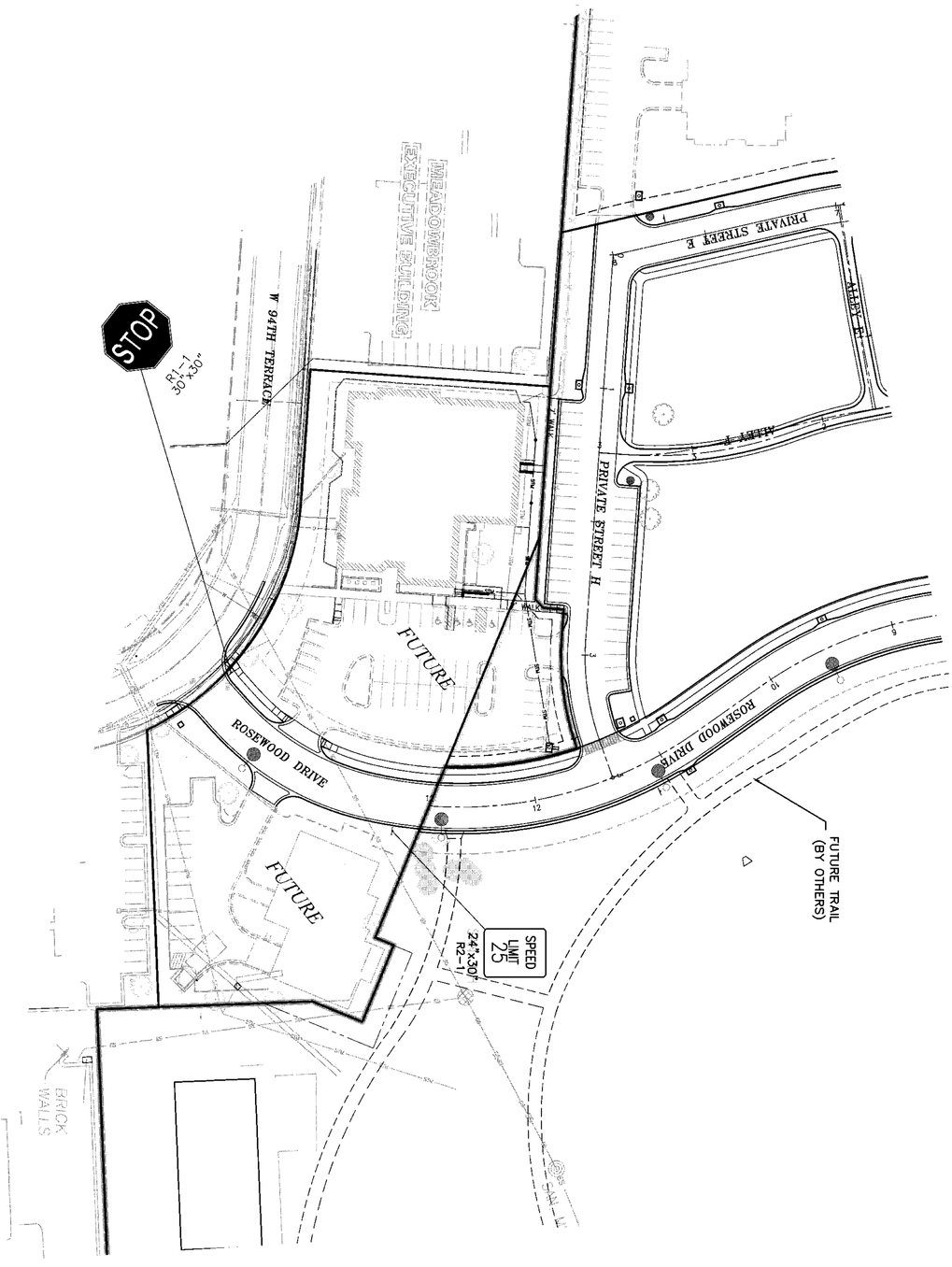

C4.23

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SIGNAGE PLAN - ROSEWOOD CONNECTION

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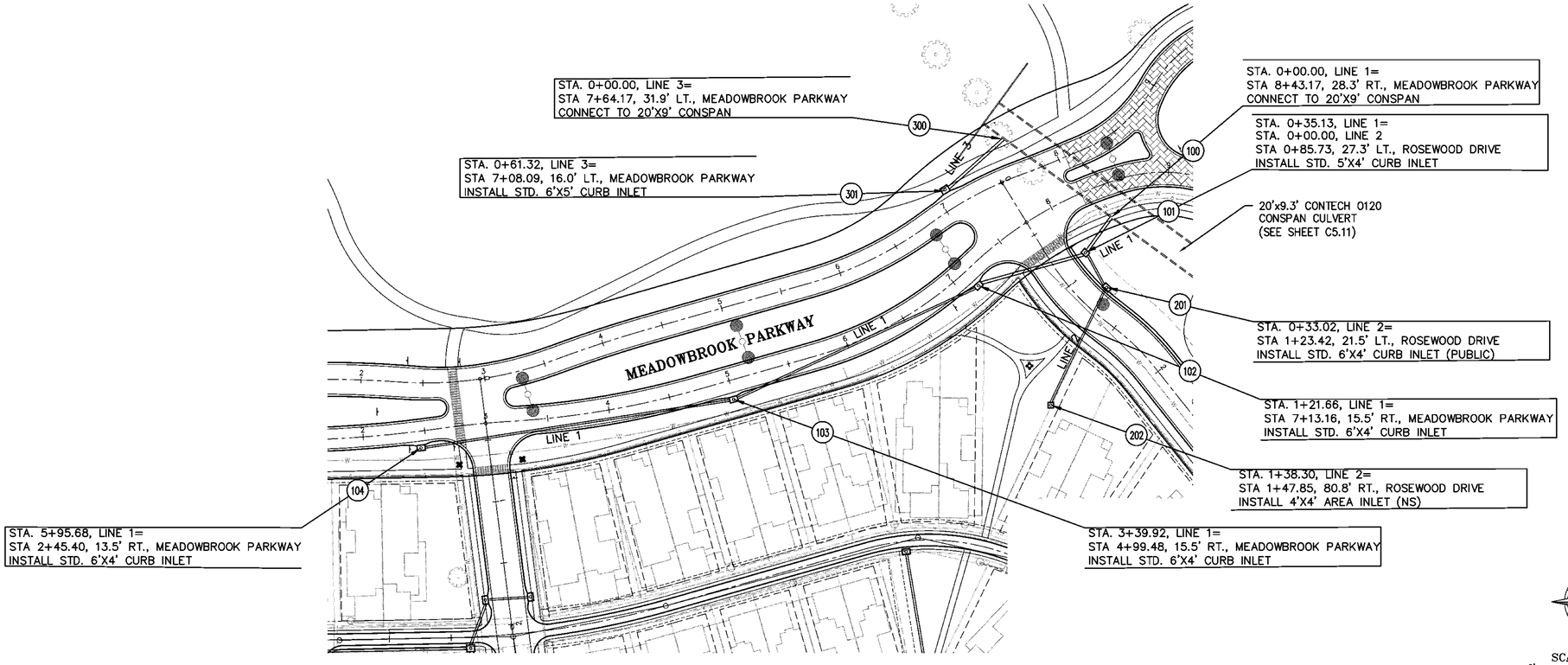

SCALE: 1"=50' HORIZ.
1"=10' VERT.

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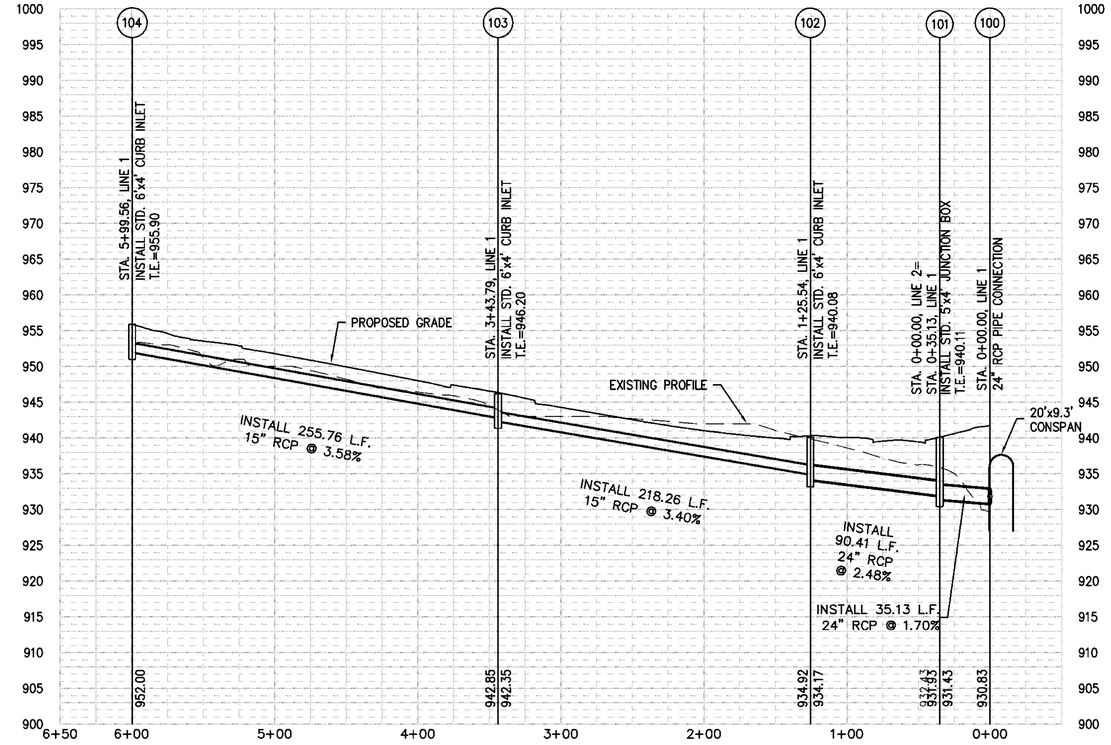

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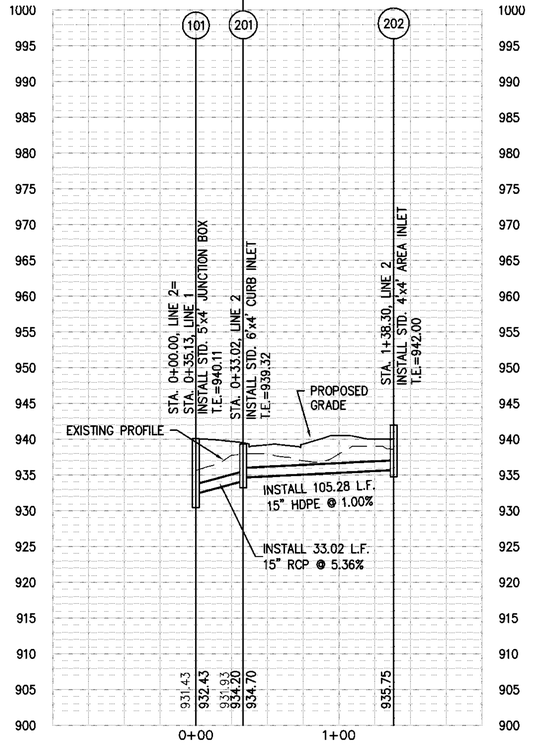

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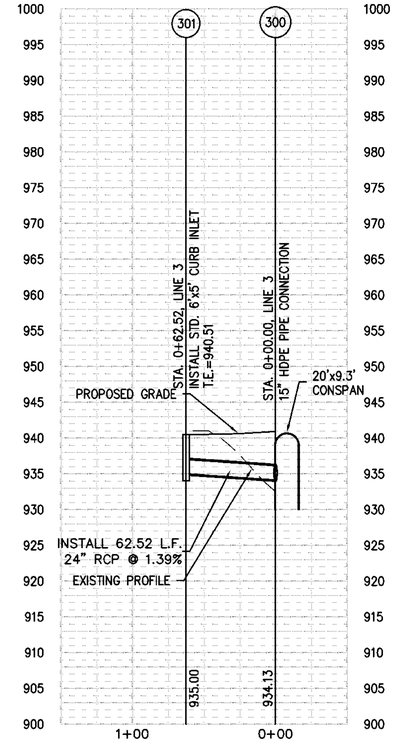

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C5.1

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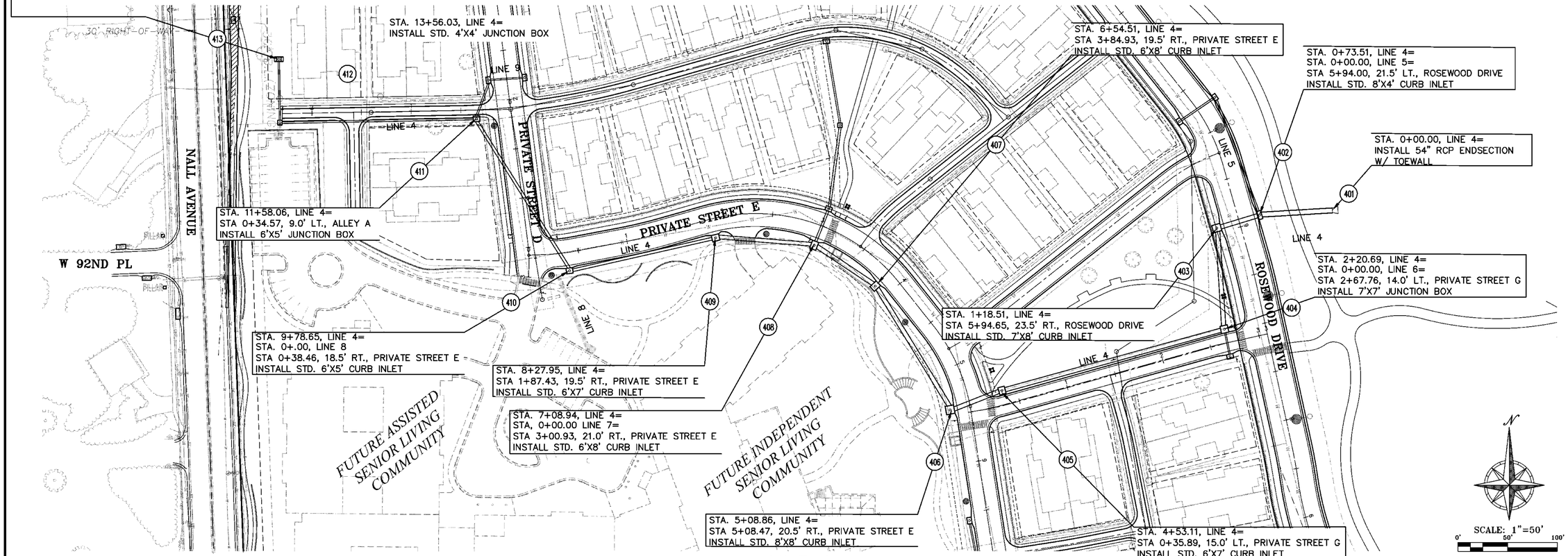

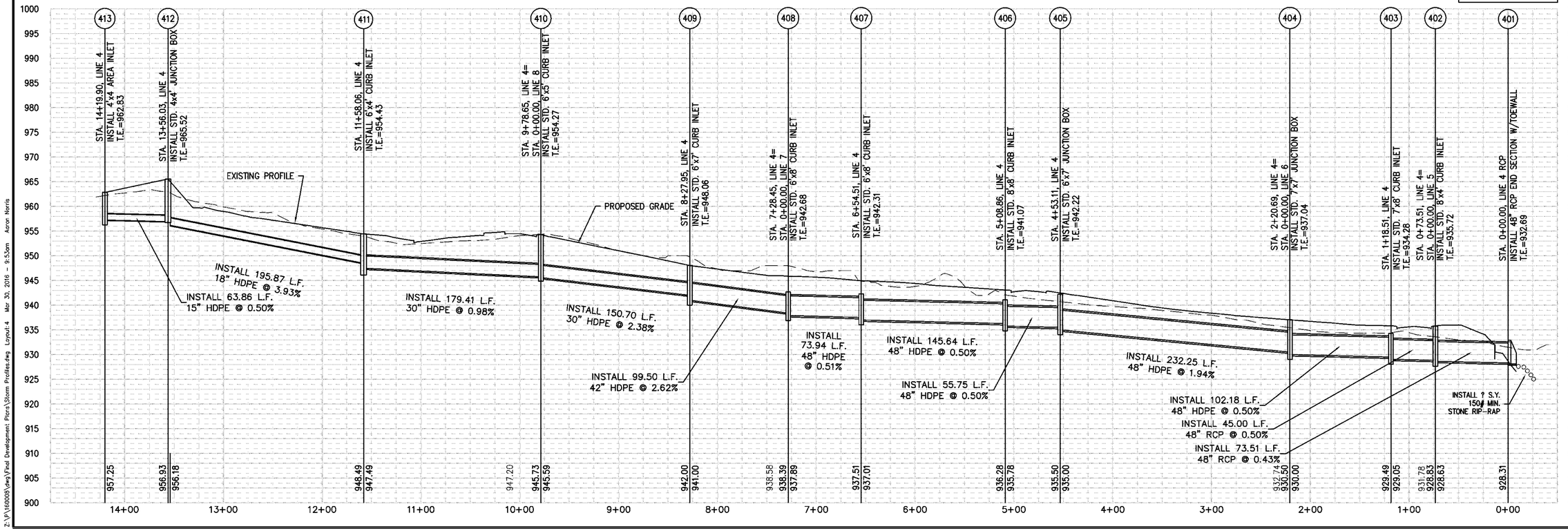

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C5.2

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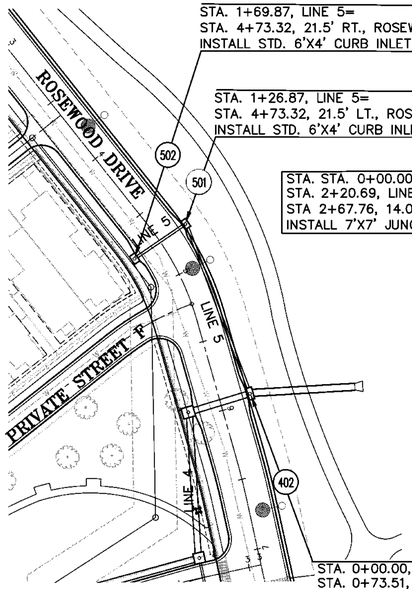
STA. 1+69.87, LINE 5=
STA. 4+73.32, 21.5' RT., ROSEWOOD DRIVE
INSTALL STD. 6'X4' CURB INLET

STA. 1+26.87, LINE 5=
STA. 4+73.32, 21.5' LT., ROSEWOOD DRIVE
INSTALL STD. 6'X4' CURB INLET

STA. STA. 0+00.00, LINE 6=
STA. 2+20.69, LINE 4=
STA 2+67.76, 14.0' LT., PRIVATE STREET G
INSTALL 7'X7' JUNCTION BOX

STA. 0+00.00, LINE 5=
STA. 0+73.51, LINE 4=
STA 5+94.00, 21.5' LT., ROSEWOOD DRIVE
INSTALL STD. 8'X4' CURB INLET



SCALE: 1"=50'

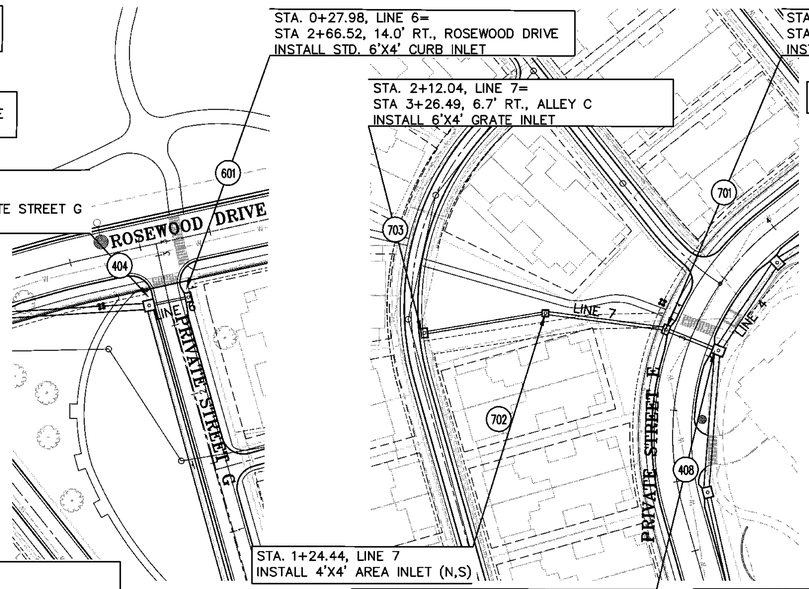
LINE 5

STA. 0+27.98, LINE 6=
STA 2+66.52, 14.0' RT., ROSEWOOD DRIVE
INSTALL STD. 6'X4' CURB INLET

STA. 2+12.04, LINE 7=
STA 3+26.49, 6.7' RT., ALLEY C
INSTALL 6'X4' GRATE INLET

STA. 1+24.44, LINE 7
INSTALL 4'X4' AREA INLET (N,S)

STA. 0+00.00, LINE 7=
STA. 7+08.94, LINE 4=
STA 3+00.84, 18.5' RT., PRIVATE STREET E
INSTALL STD. 6'X8' CURB INLET



SCALE: 1"=50'

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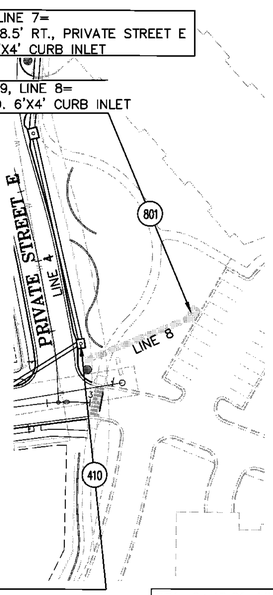
STA. 0+39.50, LINE 7=
STA 3+01.32, 18.5' RT., PRIVATE STREET E
INSTALL STD. 6'X4' CURB INLET

STA. 0+81.29, LINE 8=
INSTALL STD. 6'X4' CURB INLET

STA. 0+00.00, LINE 8=
STA. 9+78.65, LINE 4=
STA 0+38.46, 18.5' RT., PRIVATE STREET E
INSTALL STD. 6'X5' CURB INLET



SCALE: 1"=50'

LINE 7

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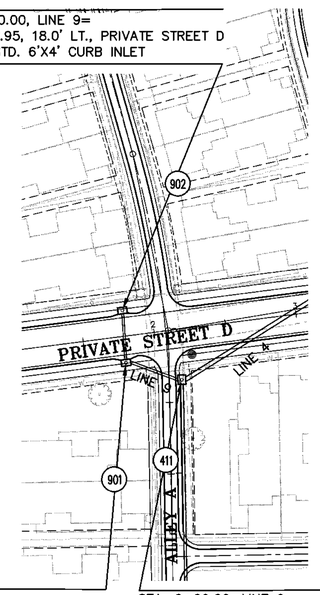
STA 1+79.95, 18.0' LT., PRIVATE STREET D
INSTALL STD. 6'X4' CURB INLET

STA. 0+48.21, LINE 9=
STA 1+77.80, 18.5' RT., PRIVATE STREET D
INSTALL STD. 6'X4' CURB INLET

STA. 0+00.00, LINE 9=
STA. 11+58.06, LINE 4=
STA 0+34.57, 9.0' LT., ALLEY A
INSTALL 6'X4' GRATE INLET



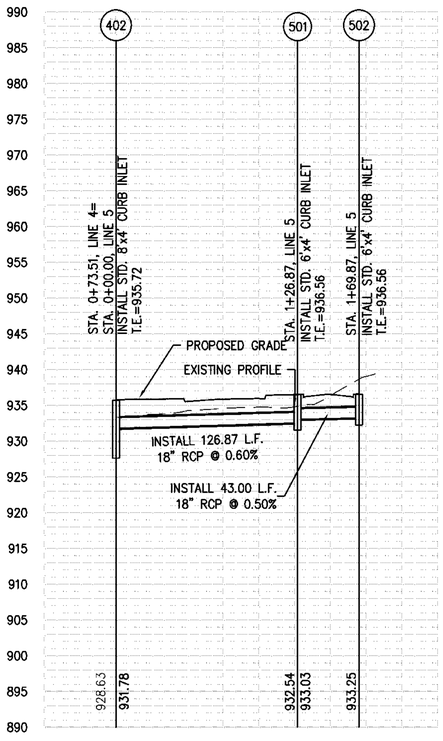
SCALE: 1"=50'

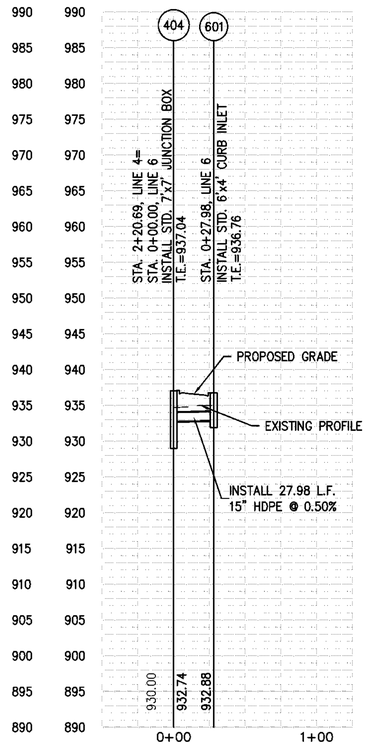
LINE 8

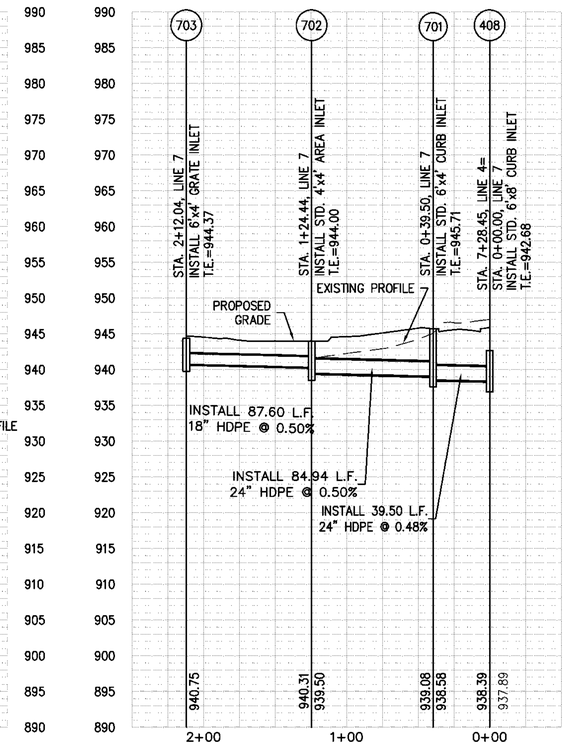
SCALE: 1"=50'

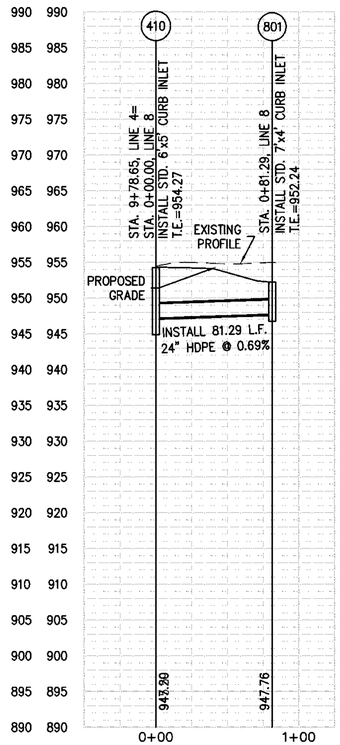
LINE 9

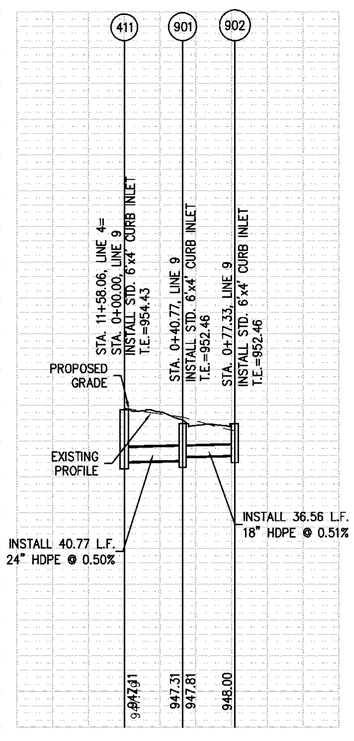
SCALE: 1"=50' HORIZ.
1"=10' VERT.











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C5.3

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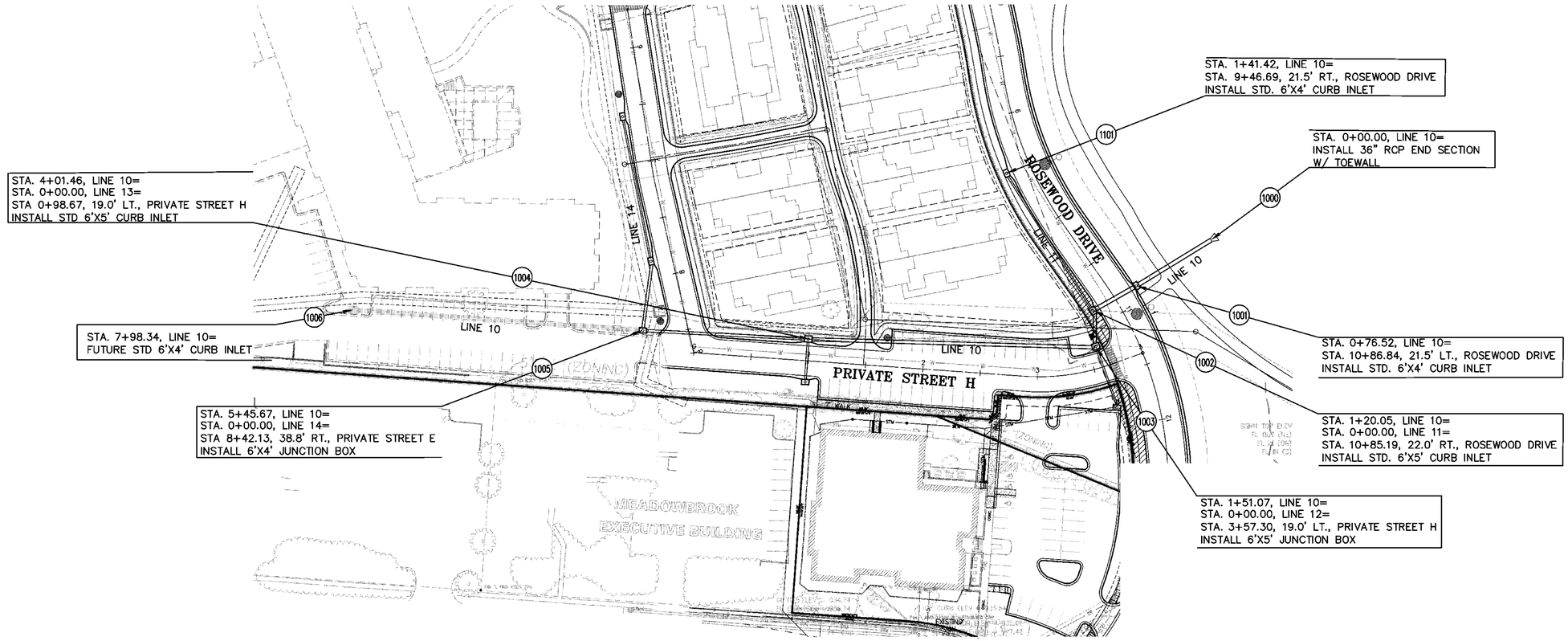

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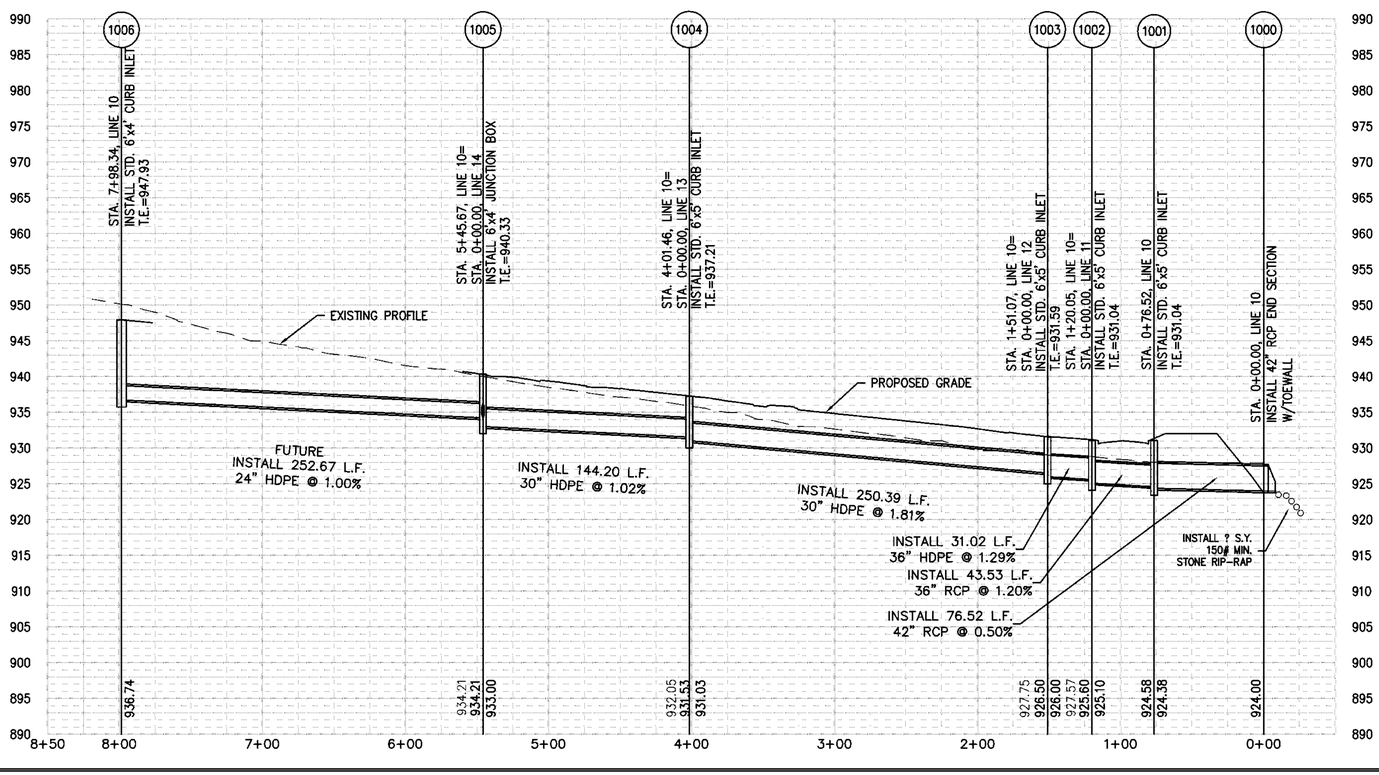
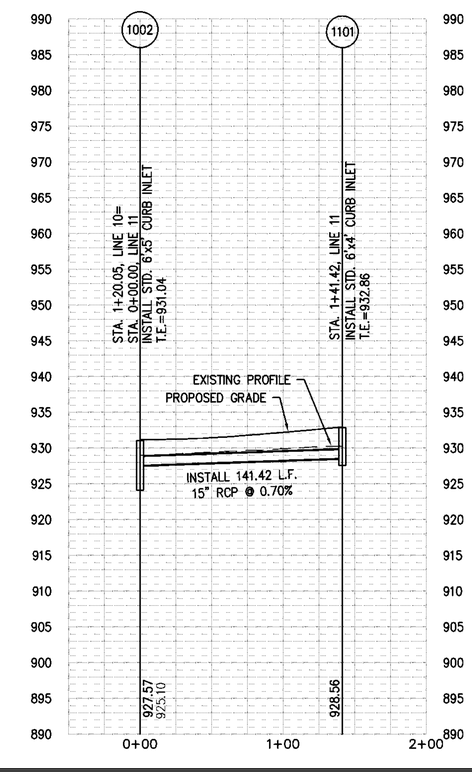


LINE 11



SCALE: 1"=50' HORIZ.
1"=10' VERT.

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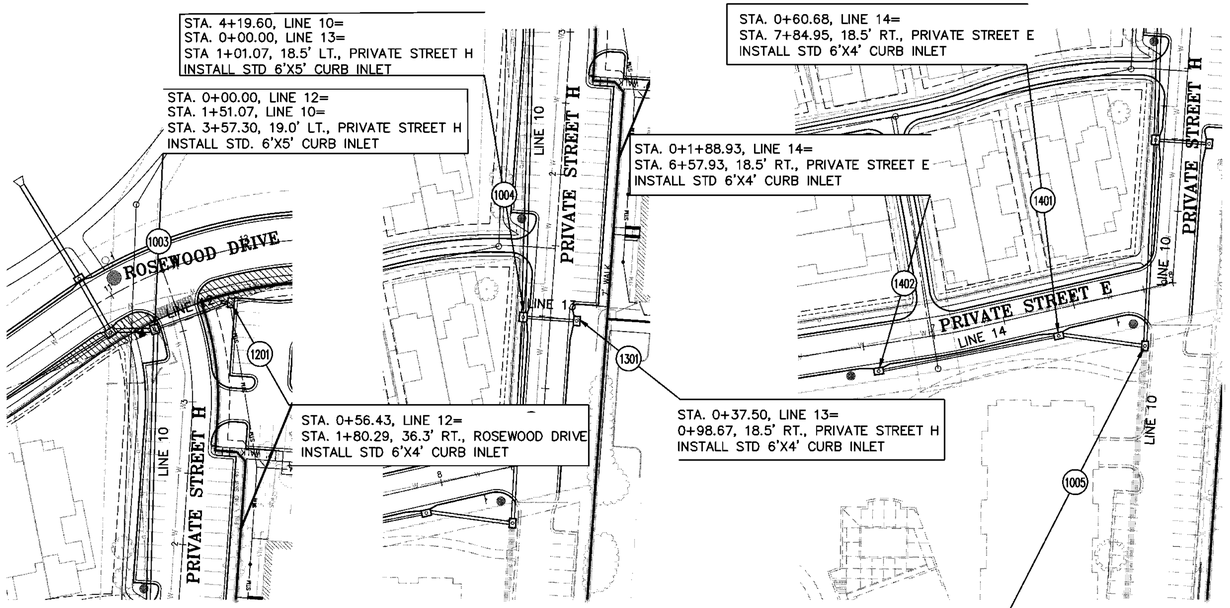
STORM SEWER PLAN & PROFILE

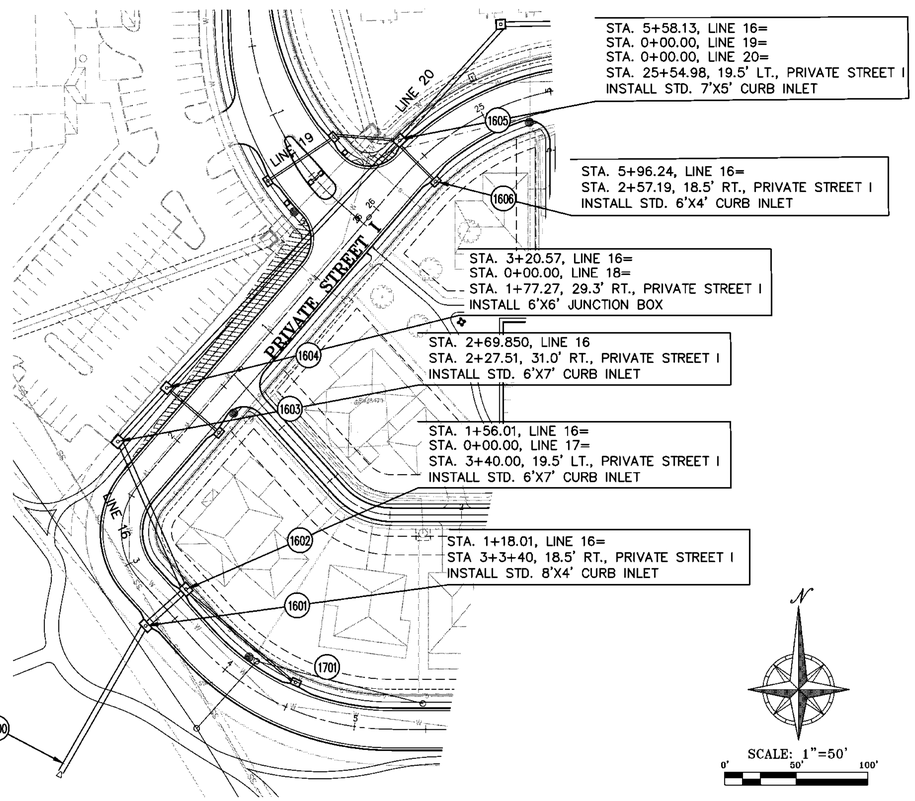
MEADOWBROOK PARK
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Revisions:	Date	By	App.

PROJECT NO. 160008
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DEU
CHECKED:
APPROVED:

C5.4

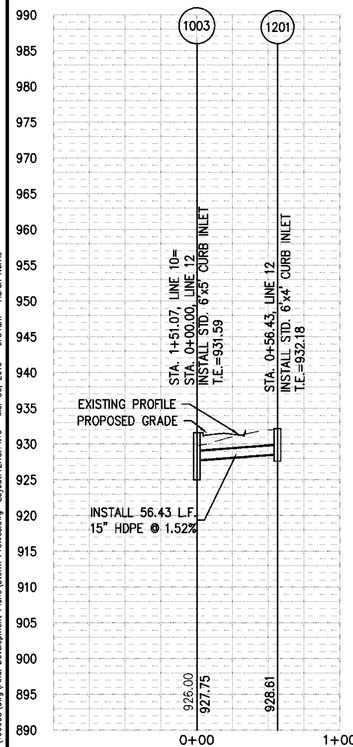




SCALE: 1"=50'

SCALE: 1"=50' HORIZ.
1"=10' VERT.

LINE 12



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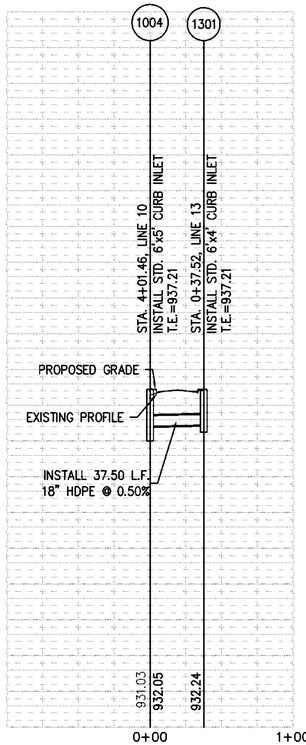

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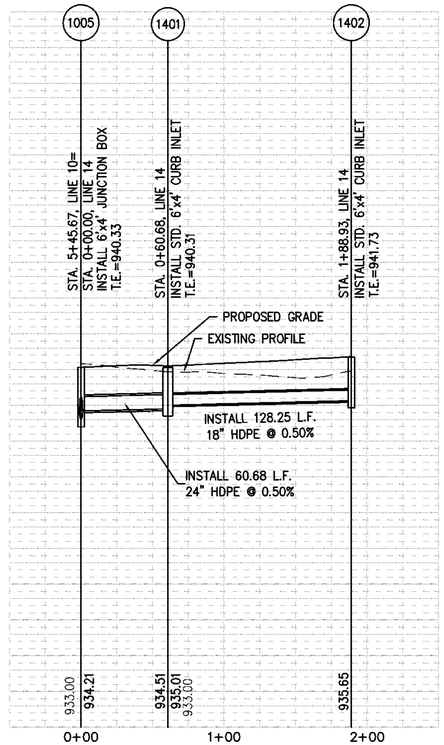

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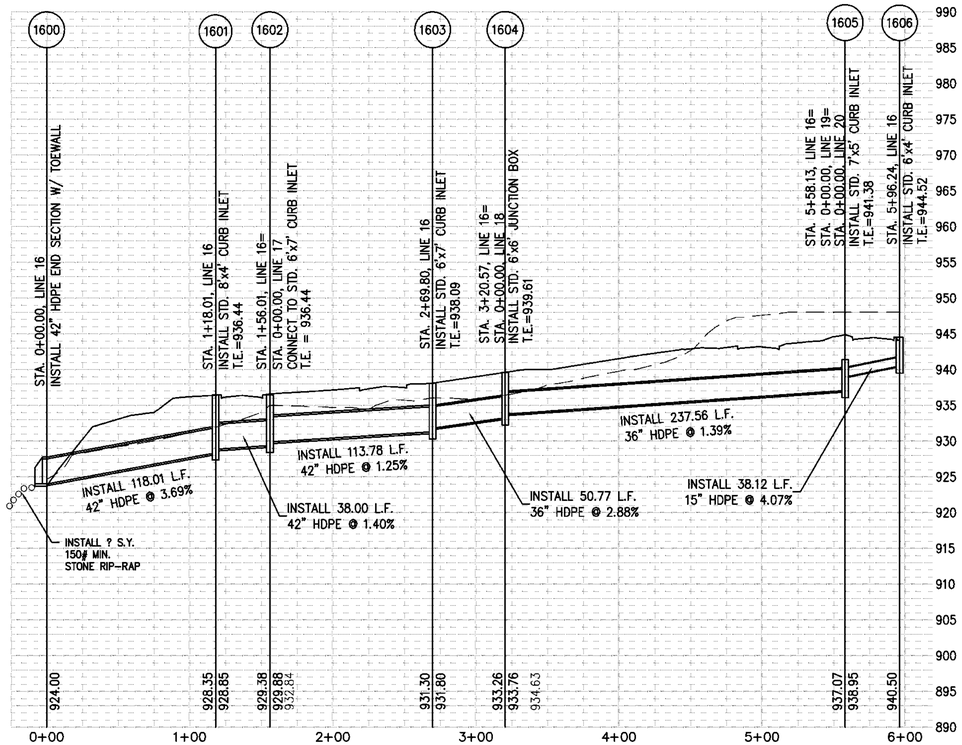

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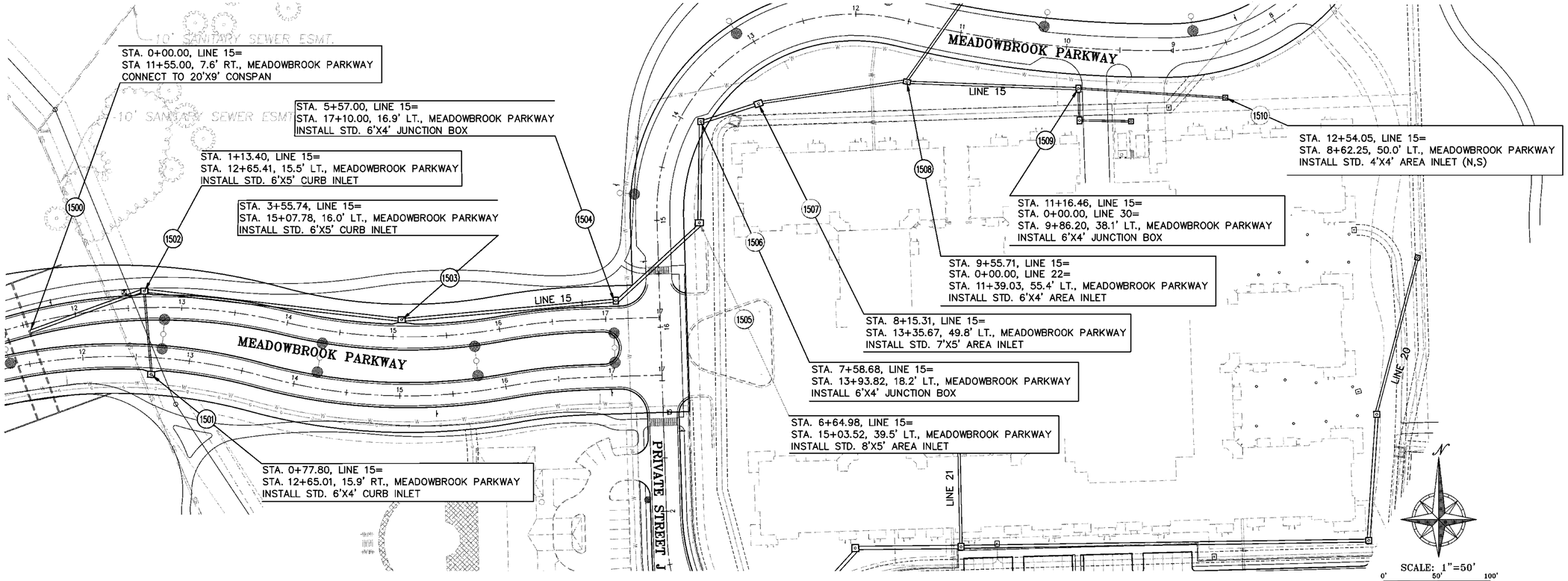
PRAIRIE VILLAGE, KANSAS
FINAL DEVELOPMENT PLANS

No.	Date	Revisions:	By	App.

PROJECT NO. 160008
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DEU
CHECKED:
APPROVED:

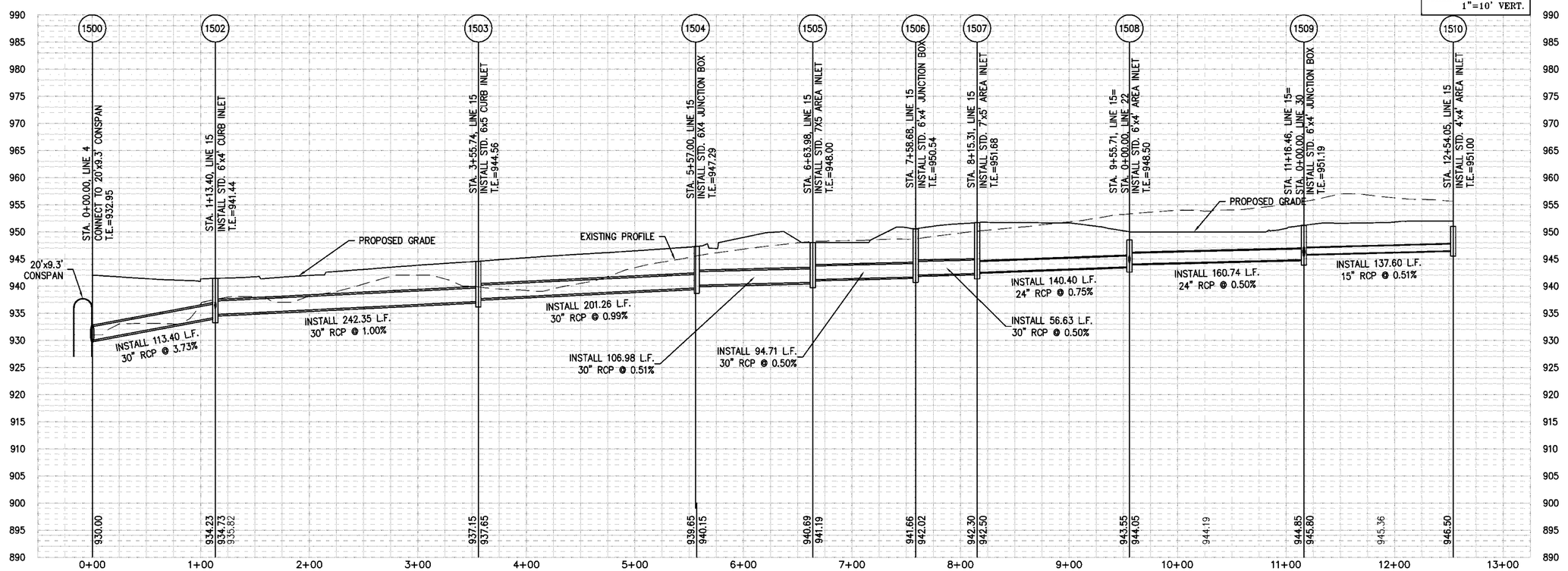
C5.5

Z:\P\160008\dwg\Final Development Plans\Storm Profiles.dwg Layout:12,13,14,16 Mar 30, 2016 - 9:54am Aaron Norris



LINE 15

SCALE: 1"=50' HORIZ.
1"=10' VERT.



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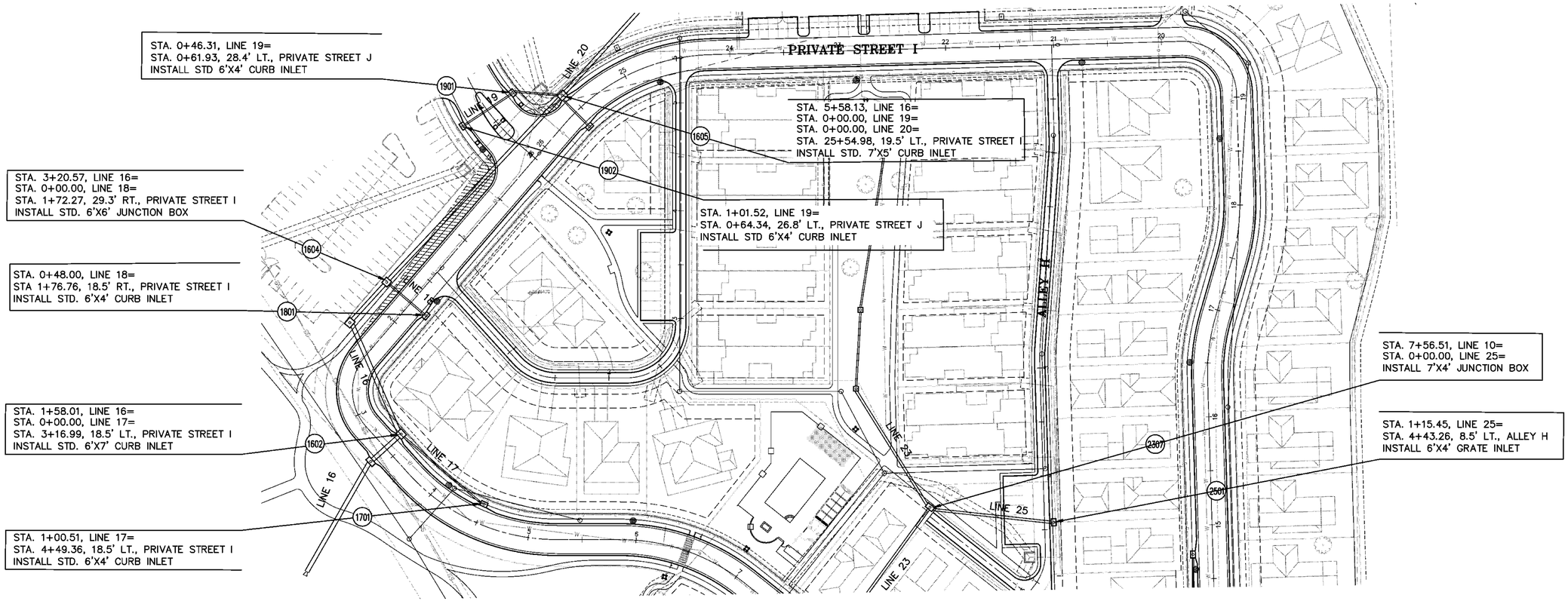
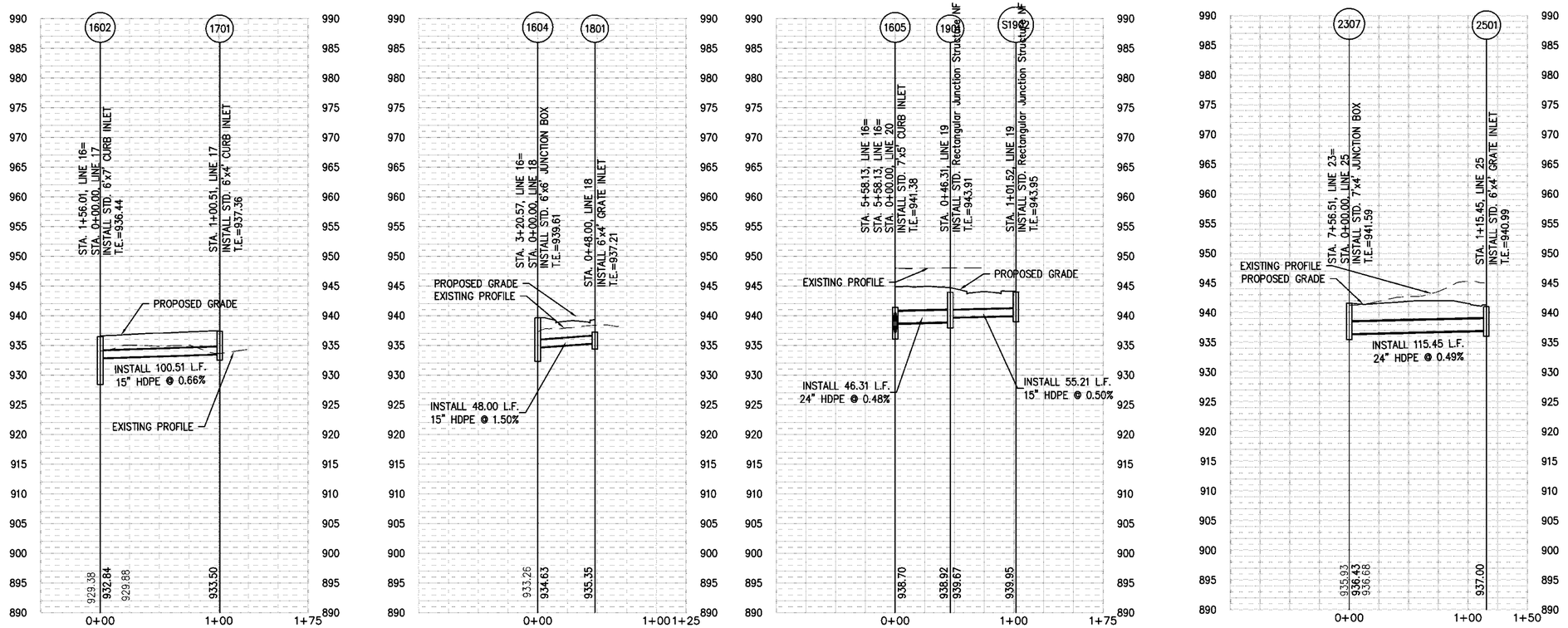
No.	Date	Revisions:	By	App.

PROJECT NO. 160095
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DCU
CHECKED:
APPROVED:

C5.6





SCALE: 1"=50'

SCALE: 1"=50' HORIZ.
1"=10' VERT.

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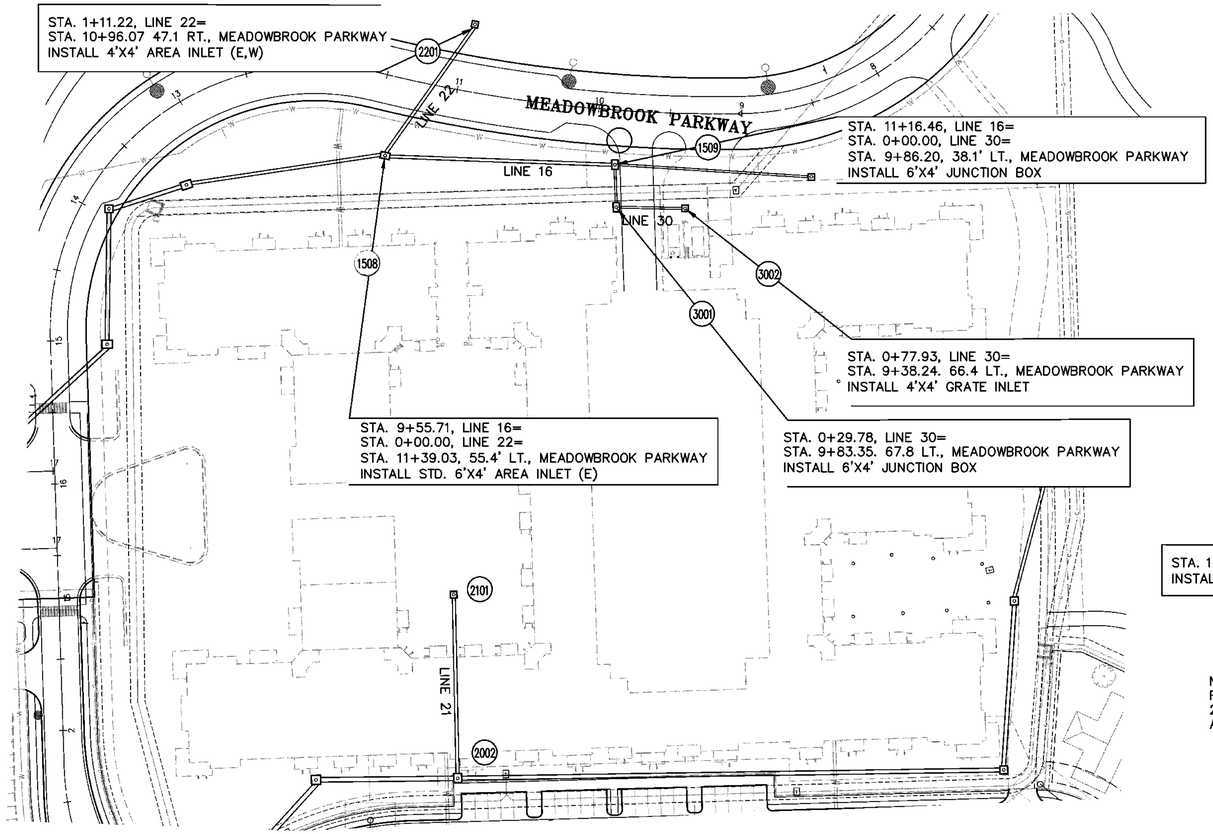
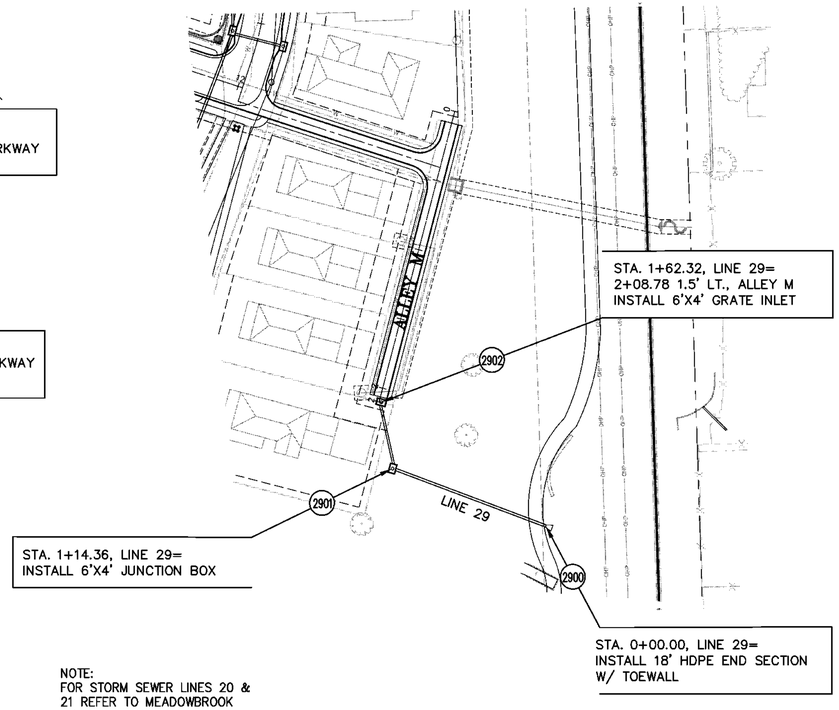
No.	Date	Revisions:	By	App.

PROJECT NO. 160009
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DCU
CHECKED:
APPROVED:

C5.7



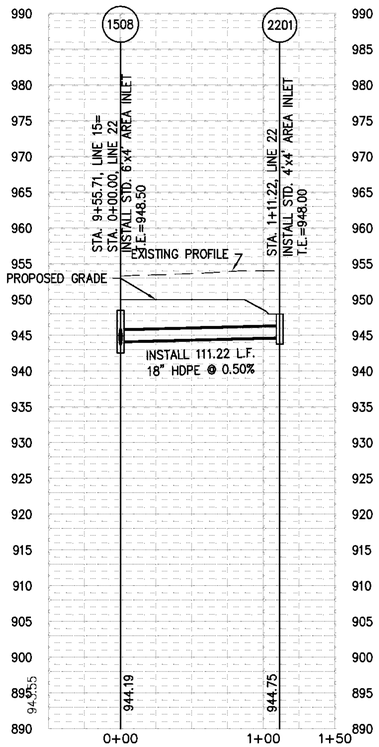


NOTE:
FOR STORM SEWER LINES 20 & 21 REFER TO MEADOWBROOK APARTMENT PLANS

SCALE: 1"=50'
0' 50' 100'

SCALE: 1"=50' HORIZ.
1"=10' VERT.

LINE 22



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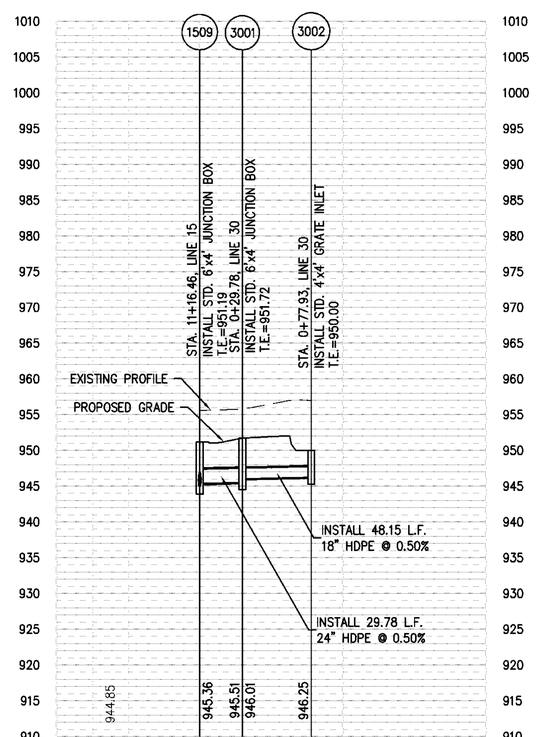

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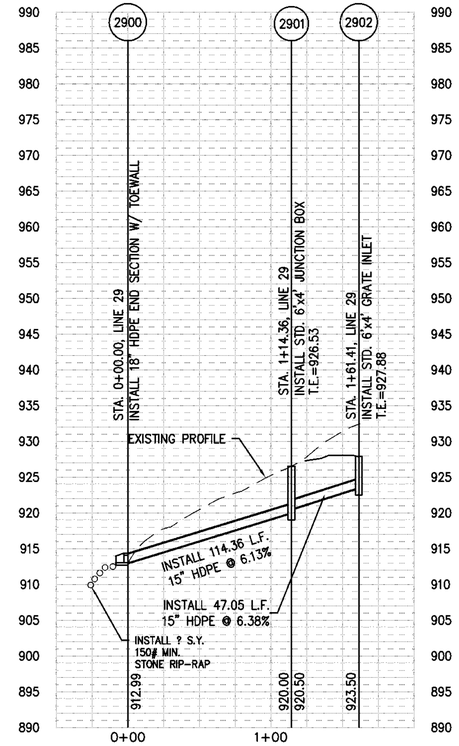

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Revisions:	No.	Date	By	App.

PROJECT NO. 150008
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DCU
CHECKED:
APPROVED:

C5.8

MATCH LINE

STA. 6+13.50, LINE 23=
STA. 8+06.36, 19.0' LT., PRIVATE STREET I
INSTALL STD. 6'X4' CURB INLET

STA. 4+37.39, LINE 23=
STA. 9+44.97, 18.5' RT., PRIVATE STREET I
INSTALL STD. 6'X4' CURB INLET

STA. 3+47.33, LINE 23
INSTALL 5'X5' AREA INLET (E)

STA. 2+32.55, LINE 23
INSTALL 4'X4' JUNCTION BOX

STA. 0+66.33, LINE 27
INSTALL 6'X4' GRATE INLET

STA. 0+00.00, LINE 23=
INSTALL 36' HDPE END SECTION
W/ TOEWALL

STA. 0+88.65, LINE 23=
STA. 0+00.00, LINE 24=
STA. 0+00.00, LINE 27=
INSTALL STD. 6'X4' JUNCTION BOX

STA. 4+74.89, LINE 23=
STA. 9+44.97, 19.0' LT., PRIVATE STREET I
INSTALL STD. 6'X4' CURB INLET

STA. 7+56.51, LINE 10=
STA. 0+00.00, LINE 25=
INSTALL 7'X4' JUNCTION BOX

STA. 11+06.66, LINE 23
INSTALL 4'X4' AREA INLET (N)

STA. 9+59.03, LINE 23
INSTALL 4'X4' AREA INLET (N)

STA. 8+85.93, LINE 23
INSTALL 4'X4' AREA INLET (N)

MATCH LINE

LINE 23 LINE 24 LINE 25 LINE 27

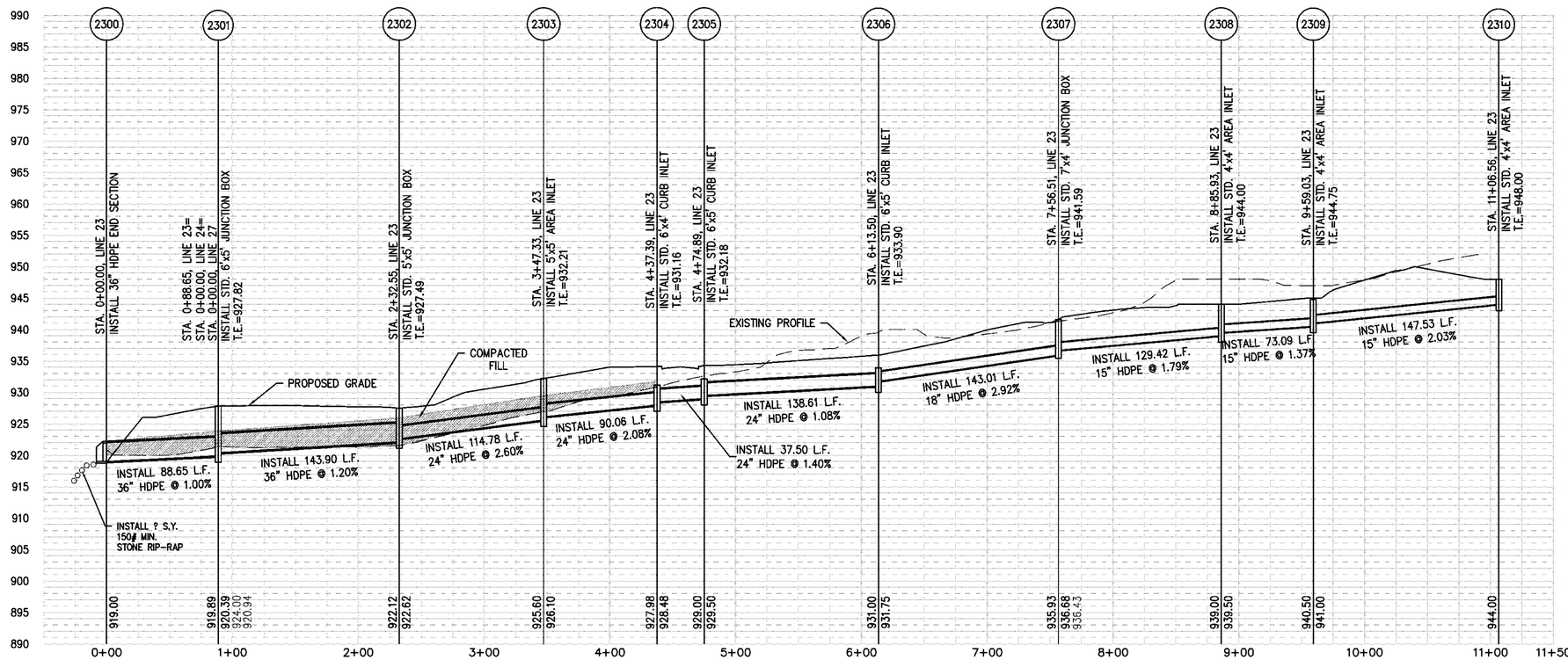
PRIVATE STREET I

KERRIN BLOCK

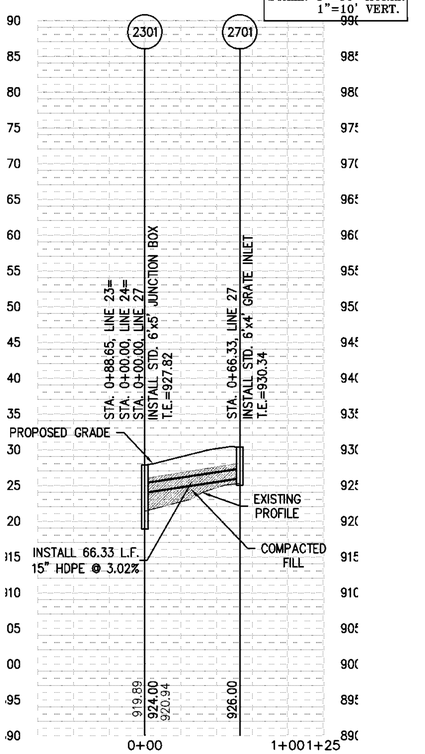
SCALE: 1"=50'

SCALE: 1"=50' HORIZ.
1"=10' VERT.

LINE 23



LINE 27



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PROJECT NO. 160008
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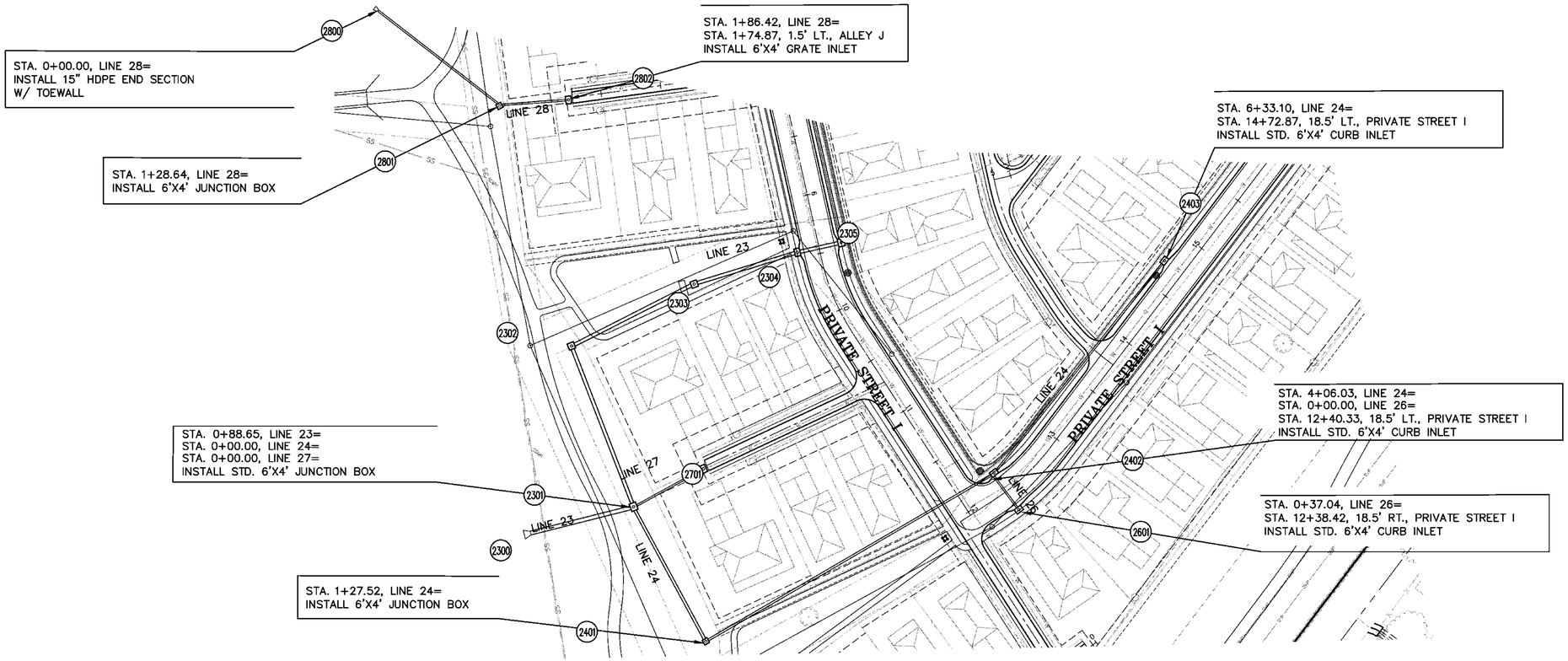
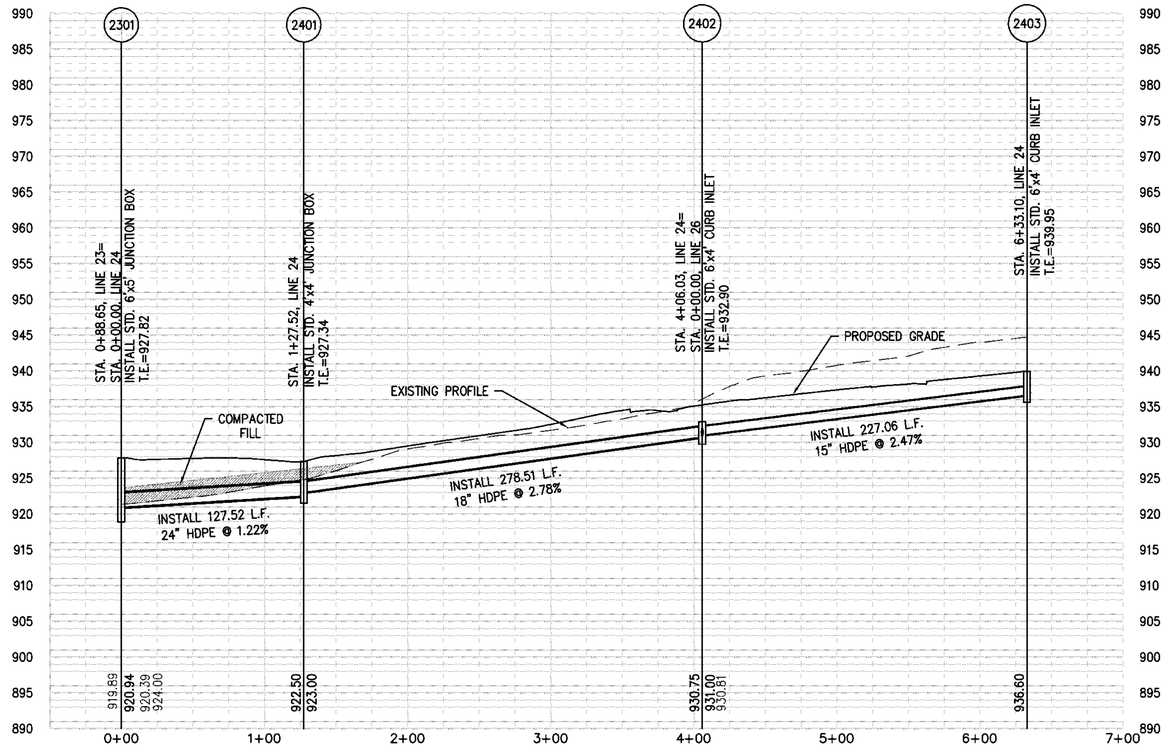
DRAWN: MRR
DESIGNED: DEU
CHECKED:
APPROVED:

C5.9

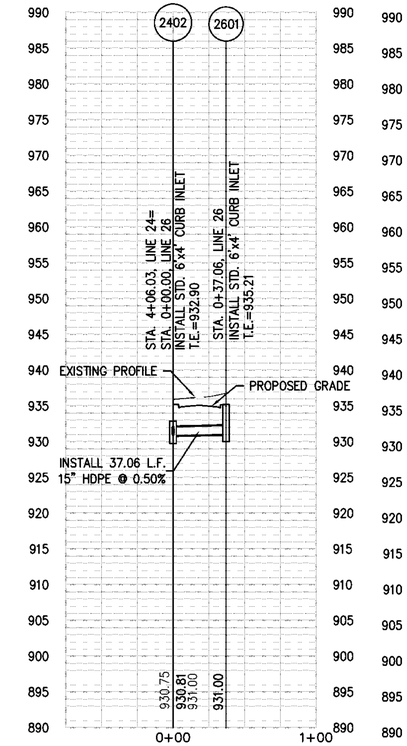
Z:\P\160008\dwg\Final Development Plans\Storm Profiles.dwg Layout:23.27 Mar 30, 2016 - 9:55am Aaron Norris



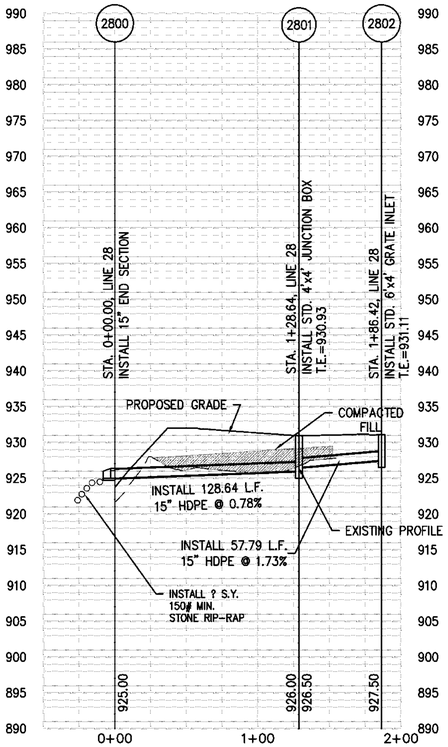
LINE 24



LINE 26



LINE 28



SCALE: 1"=50' HORIZ.
1"=10' VERT.

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DATE: 03-04-16
DRAWN: MRR
DESIGNED: DCU
CHECKED:
APPROVED:

C5.10

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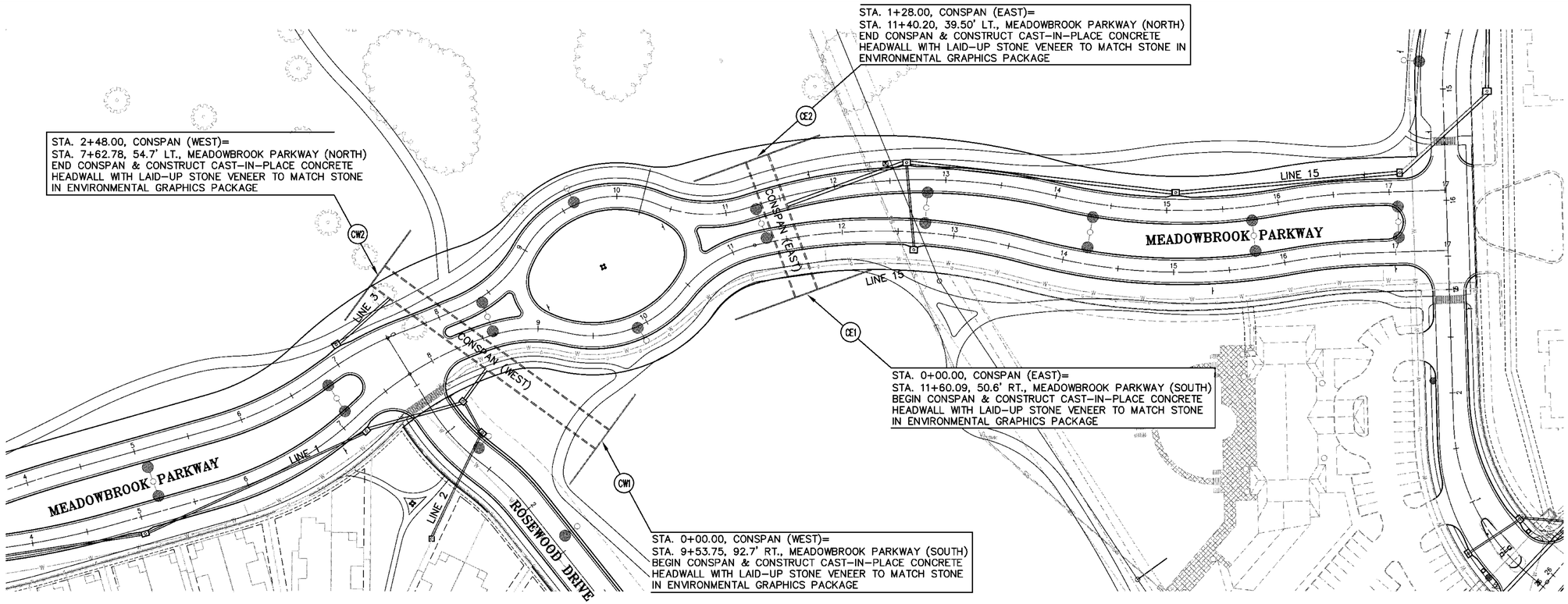
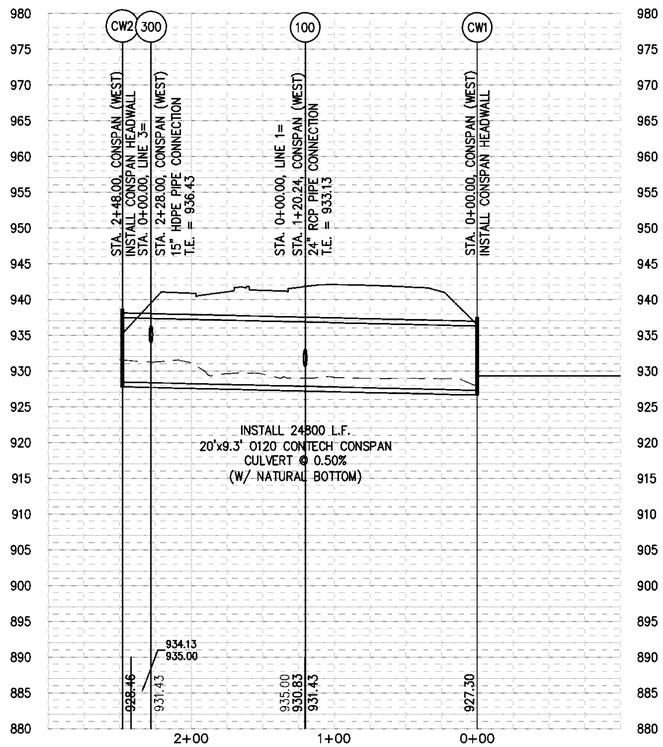


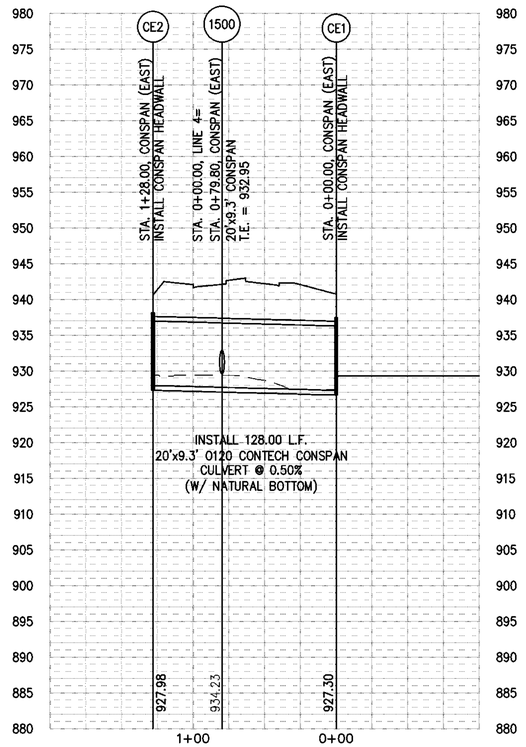
SCALE: 1"=50'
0' 50' 100'

SCALE: 1"=50' HORIZ.
1"=10' VERT.

CONSPAN (WEST)



CONSPAN (EAST)



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DATE: 03-04-16
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APPROVED:

C5.11

Z:\P\160008\dwg\Final Development Plans\Storm Profiles.dwg Layout: CONSPAN Mar 30, 2016 - 10:04am Aaron Norris

Point	Distance (ft)	Grade (%)	Size (in.)	Mannings "n"	Cap (cfs)	Vel (fps)	Trav. Time	C	A (Acres)	AC	Accum AC	Tc	25-YR Storm (K=1.1) I (in/hr)	25-YR Storm (K=1.1) Runoff (cfs)	100-YR STORM (K=1.25) I (in/hr)	100-YR STORM (K=1.25) Runoff (cfs)
104								0.9	0.31	0.28	0.28	5.0	9.53	2.6	10.32	3.6
103	255.76	3.58%	15	0.013	12.2	7.9	0.5	0.9	0.49	0.44	0.72	5.4	9.39	6.6	10.16	9.1
102	218.26	3.40%	15	0.013	11.9	10.0	0.4	0.9	0.57	0.51	1.84	5.5	9.35	16.9	10.12	23.3
101	90.41	2.48%	24	0.013	35.6	10.5	0.1	0.9	0.00	0.00	2.45	5.6	9.32	22.4	10.08	30.9
100	35.13	1.70%	24	0.013	29.5	9.8	0.1									
201	105.28	1.00%	15	0.013	6.5	3.1	0.6	0.51	0.57	0.29	0.29	5.0	9.53	2.7	10.32	3.7
200	33.02	5.36%	15	0.013	15.0	5.9	0.1	0.9	0.35	0.32	0.61	5.1	9.49	5.7	10.28	7.8
101																
301	62.52	1.39%	24	0.013	26.7	4.7	0.2	0.9	1.43	1.29	1.29	5.0	9.53	12.1	10.32	16.6
300																
413	63.86	0.50%	15	0.013	4.6	5.5	0.2	0.75	0.21	0.16	0.16	5.0	9.53	1.5	10.32	2.1
412	195.87	3.93%	18	0.013	20.8	4.8	0.7	0.75	1.38	1.04	1.20	5.7	9.29	10.9	10.04	15.1
411	179.41	0.98%	30	0.013	40.6	5.3	0.6	0.75	0.00	0.00	1.91	6.3	9.09	17.0	9.81	23.4
410	150.70	2.38%	30	0.013	63.3	9.6	0.3	0.75	0.26	0.20	3.53	6.6	7.99	31.0	9.70	42.8
409	99.50	2.62%	42	0.013	162.9	6.9	0.2	0.9	0.13	0.12	5.07	6.8	7.93	44.2	9.62	61.0
408	73.94	0.51%	48	0.013	102.6	7.2	0.2	0.9	0.62	0.56	6.59	7.0	7.87	57.0	9.55	78.7
407	145.64	0.50%	48	0.013	101.6	7.2	0.3	0.9	0.00	0.00	6.59	7.3	7.78	56.4	9.45	77.8
406	55.75	0.50%	48	0.013	101.6	7.8	0.1	0.51	0.93	0.47	7.06	7.4	7.75	60.2	9.41	83.1
405	232.25	1.90%	48	0.013	188.0	7.6	0.5	0.9	0.11	0.10	7.16	7.9	7.60	59.9	9.24	82.7
404	102.18	0.50%	48	0.013	101.6	6.3	0.3	0.9	0.00	0.00	7.39	8.2	7.52	61.1	9.14	84.5
403	45.00	0.50%	48	0.013	101.6	6.8	0.1	0.51	1.45	0.74	8.13	8.3	7.49	67.0	9.11	92.6
402	73.51	0.43%	48	0.013	94.2	7.3	0.2	0.9	0.10	0.09	8.83	8.5	7.44	72.2	9.05	99.8
401																
502	43.00	0.50%	18	0.013	7.4	3.5	0.2	0.75	0.61	0.46	0.46	5.0	9.53	4.3	10.32	5.9
501	126.87	0.60%	18	0.013	8.1	3.2	0.7	0.9	0.17	0.15	0.61	5.7	9.29	5.6	10.04	7.7
402																
601	27.98	0.51%	15	0.013	4.6	3.7	0.1	0.51	0.46	0.23	0.23	5.0	9.53	2.2	10.32	3.0
404																
703	87.60	0.50%	18	0.013	7.4	2.1	0.7	0.51	1.07	0.55	0.55	5.0	9.53	5.2	10.32	7.1
702	84.94	0.50%	24	0.013	16.0	3.1	0.5	0.51	0.42	0.21	0.76	5.5	9.35	7.0	10.12	9.6
701	39.50	0.51%	24	0.013	16.2	3.9	0.2	0.51	0.39	0.20	0.96	5.7	9.29	8.7	10.04	12.0
408																
801	81.29	0.69%	24	0.013	18.8	5.8	0.2	0.75	1.89	1.42	1.42	5.0	9.53	13.5	10.32	18.3
410																
902	36.56	0.50%	18	0.013	7.4	2.8	0.2	0.9	0.25	0.23	0.23	5.0	9.53	2.2	10.32	3.0
901	40.77	0.50%	24	0.013	16.0	2.8	0.2	0.51	0.94	0.48	0.71	5.2	9.46	6.6	10.24	9.1
411																
1006	252.67	1.00%	24	0.013	22.6	5.3	0.8	0.75	1.71	1.28	1.28	5.0	9.53	12.0	10.32	16.5
1005	144.20	1.02%	30	0.013	41.4	7.5	0.3	0.75	0.56	0.42	2.56	5.3	9.42	23.7	10.20	32.6
1004	250.39	1.81%	30	0.013	55.2	9.0	0.5	0.51	0.58	0.30	3.22	5.8	9.25	29.2	10.00	40.3
1003	31.02	1.29%	36	0.013	75.8	8.8	0.1	0.9	1.49	1.34	4.94	5.9	9.22	44.7	9.96	61.5
1002	43.53	1.20%	36	0.013	73.1	9.5	0.1	0.75	0.63	0.47	5.63	6.0	9.19	50.7	9.92	69.8
1001	76.52	0.50%	42	0.013	71.1	7.2	0.2	0.9	0.29	0.26	5.89	6.2	9.12	52.6	9.85	72.5
1000																
1101	141.42	0.70%	15	0.013	5.4	3.9	0.6	0.51	0.44	0.22	0.22	5.0	9.53	2.1	10.32	2.8
1002																
1201	56.43	1.52%	15	0.013	8.0	5.9	0.2	0.9	0.42	0.38	0.38	5.0	9.53	3.6	10.32	4.9
1003																
1301	37.50	0.51%	18	0.013	7.5	3.8	0.2	0.75	0.48	0.36	0.36	5.0	9.53	3.4	10.32	4.6
1004																
1402	128.25	0.50%	18	0.013	7.4	5.2	0.4	0.75	0.48	0.36	0.36	5.0	9.53	3.4	10.32	4.6
1401	60.68	0.50%	24	0.013	16.0	4.7	0.2	0.75	0.67	0.50	0.86	5.2	9.46	8.0	10.24	11.0
1005																
1510	137.60	0.51%	15	0.013	4.6	9.4	0.2	0.75	0.45	0.34	0.34	5.0	9.53	3.2	10.32	4.4
1509	160.74	0.50%	24	0.013	16.0	8.4	0.3	0.9	0.26	0.23	0.57	5.3	9.42	5.3	10.20	7.3
1508	140.40	0.75%	24	0.013	19.6	8.0	0.3	0.75	0.59	0.44	1.55	5.6	9.32	14.2	10.08	19.5
1507	56.63	0.50%	30	0.013	29.0	8.0	0.1	0.75	0.51	0.38	1.93	5.7	9.29	17.6	10.04	24.2
1506	94.71	0.50%	30	0.013	29.0	4.0	0.4	0.75	0.26	0.20	2.13	6.1	9.15	19.1	9.88	26.3
1505	106.98	0.50%	30	0.013	29.0	4.6	0.4	0.9	0.00	0.00	2.13	6.5	9.02	18.9	9.73	25.9
1504	201.26	1.00%	30	0.013	41.0	6.9	0.5	0.9	0.00	0.00	2.13	7.0	7.87	18.4	9.55	25.4
1503	242.35	1.00%	30	0.013	41.0	6.5	0.6	0.9	0.89	0.80	2.93	7.6	7.69	24.8	9.34	34.2
1502	113.24	3.53%	30	0.013	77.1	6.6	0.3	0.9	0.71	0.64	3.57	7.9	7.60	29.9	9.24	41.2
1500																
1501	77.80	1.00%	18	0.013	10.5	3.0	0.4	0.9	0.96	0.86	0.86	5.0	9.53	8.1	10.32	11.1
1502																

Point	Distance (ft)	Grade (%)	Size (in.)	Mannings "n"	Cap (cfs)	Vel (fps)	Trav. Time	C	A (Acres)	AC	Accum AC	Tc	25-YR Storm (K=1.1) I (in/hr)	25-YR Storm (K=1.1) Runoff (cfs)	100-YR STORM (K=1.25) I (in/hr)	100-YR STORM (K=1.25) Runoff (cfs)
1606								0.75	0.74	0.56	0.56	5.0	9.53	5.3	10.32	7.2
1605	38.12	4.07%	15	0.013	13.0	10.5	0.1	0.75	1.05	0.79	6.11	5.4	9.39	56.4	10.16	77.6
1604	237.56	1.39%	36	0.013	78.6	10.3	0.4	0.75	0.00	0.00	6.72	5.5	9.35	61.8	10.12	85.0
1603	50.77	2.89%	36	0.013	113.2	11.1	0.1	0.9	1.30	1.17	7.89	5.7	9.29	71.9	10.04	99.0
1602	113.78	1.25%	42	0.013	112.5	12.1	0.2	0.51	0.52	0.27	8.35	5.9	9.25	75.9	10.00	104.4
1601	38.00	1.40%	42	0.013	119.0	9.2	0.1	0.9	0.42	0.38	8.73	6.0	9.19	78.6	9.92	108.3
1600	118.01	3.69%	42	0.013	183.3	10.2	0.2									
1701	100.51	0.66%	15	0.013	5.2	3.6	0.0	0.51	0.38	0.19	0.19	5.0	9.53	1.8	10.32	2.5
1602																
1801	48.00	1.50%	15	0.013	7.9	7.3	0.0	0.51	1.19	0.61	0.61	5.0	9.53	5.7	10.32	7.9
1604																
1902	55.21	0.50%	15	0.013	4.6	9.0	0.0	0.75	0.21	0.16	0.16	5.0	9.53	1.5	10.32	2.1
1901	46.31	0.50%	24	0.013	16.0	6.7	0.0	0.75	0.96	1.05	1.21	5.0	9.52	11.3	10.32	15.6
1605																
2005	151.57	0.56%	24	0.013	16.9	5.8	0.0	0.75	1.65	1.24	1.24	5.0	9.53	11.8	10.32	16.0
2004	118.33	0.50%	30	0.013	29.0	6.0	0.1	0.75	0.86	0.65	1.89	5.1	9.50	17.7	10.28	24.3
2003	383.06	0.50%	30	0.013	29.0	6.0	0.1	0.75	0.00	0.00	1.89	5.2	9.46	17.6	10.25	24.2
2002	98.44	0.50%	36	0.013	47.2	5.9	0.3	0.75	1.11	0.83	3.55	5.5	9.34	32.6	10.11	44.9
2001	115.18	0.50%	36	0.013	47.2	6.0	0.3	0.75	0.00	0.00	3.55	5.9	9.23	32.1	9.97	44.3
1605																
2101	131.61	0.50%	24	0.013	16.0	6.7	0.0	0.75	1.11	0.83	0.83	5.0	9.53	7.8	10.32	10.7
2002																
2201	111.22	0.50%	18	0.013	7.4	4.7	0.0	0.3	1.80	0.54	0.54	5.0	9.53	5.1	10.32	7.0
1508																
2310	147.53	2.03%	15	0.013	9.2	8.0	0.0	0.51	0.25	0.13	0.13	5.0	9.53	1.2	10.32	1.7
2309	73.09	1.37%	15	0.013	7.6	8.0	0.0	0.51	0.45	0.23	0.36	5.0	9.53	3.4	10.32	4.6
2308	129.42	1.79%	15	0.013	8.6	8.0	0.0	0.51	0.47	0.24	0.60	5.0	9.53	5.6	10.32	7.7
2307	143.01	2.92%	18	0.013	17.9	11.3	0.0	0.51	0.00	0.00	1.27	5.0	9.52	11.9	10.31	16.4
2306	138.61	1.09%	24	0.013	23.5	7.6	0.0	0.51	0.46	0.23	1.50	5.1	9.51	14.0	10.30	19.3
2305	37.50	1.48%	24	0.013	27.6	10.0	0.0	0.51	0.90	0.46	1.96	5.1	9.49	18.3	10.28	25.2
2304	91.06	2.06%	24	0.013	32.5	10.5	0.1	0.51	0.44	0.22	2.18	5.2	9.47	20.3	10.25	27.9
2303	114.78	2.60%	24	0.013	36.5	12.0	0.1	0.51	0.23	0.12	2.30	5.3	9.44	21.3	10.21	29.4
2302	143.90	1.20%	36	0.013	73.1	11.3	0.6	0.51	0.00	0.00	3.65	5.8	9.24	33.1	9.98	45.5
2301	88.65	1.00%	36	0.013	66.7	7.6	0.7	0.51	0.00	0.00	5.22	6.5	9.02	46.0	9.73	63.5
2300																
2403	228.72	2.45%	15	0.013	10.1	8.0	0.0	0.51	0.93	0.47	0.47	5.0	9.53	4.4	10.32	6.1
2402	276.81	2.80%	18	0.013	17.6	10.2	0.0	0.51	1.15	0.59	1.35	5.0	9.52	12.7	10.32	17.4
2401	127.52	1.22%	24	0.013	25.0	9.4	0.0	0.51	0.00	0.00	1.35	5.1	9.51	12.6	10.30	17.4
2301																
2501	115.45	0.50%	24	0.013	16.0	4.7	0.0	0.51	1.32	0.67	0.67	5.0	9.53	6.3	10.32	8.6
2307																
2601	37.04	0.50%	15	0.013	4.6	3.9	0.0	0.51	0.57	0.29	0.29	5.0	9.53	2.7	10.32	3.7
2402																
2701	66.33	3.02%	15	0.013	11.2	7.7	0.0	0.51	0.44	0.22	0.22	5.0	9.53	2.1	10.32	2.8
2301																
2802	57.79	1.73%	15	0.013	6.5	6.0	0.0	0.51	0.83	0.42	0.42	5.0	9.53	3.9	10.32	5.4
2801	128.64	0.78%	15	0.013	5.7	5.0	0.0	0.51	0.00	0.00	0.42	5.0	9.53	3.9	10.32	5.4
2800																
2902	47.96	6.25%	15	0.013	16.1	7.9	0.0	0.51	0.83	0.42	0.42	5.0	9.53	3.9	10.32	5.4
2901	114.36	6.13%	15	0.013	16.0	11.7	0.0	0.51	0.00	0.00	0.42	5.0	9.53	3.9	10.32	5.4
2900																
3002	48.15	0.50%	18	0.013	7.4	4.8	0.0	0.51	1.11	0.57	0.57	5.0	9.53	5.3	10.32	7.4
3001	29.78	0.50%	24	0.013	16.0	8.0	0.0	0.51	1.11	0.57	1.14	5.0	9.52	10.7	10.32	14.7
1509																

SCALE: 1"=50' HORIZ.
1"=10' VERT.

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FINAL DEVELOPMENT PLANS

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PROJECT NO. 160008
DATE: 03-04-16
DRAWN: MRR
DESIGNED: DCU
CHECKED:
APPROVED:

C5.12