

MINNESOTA DEPARTMENT OF TRANSPORTATION

CITY OF BROOKLYN PARK, MINNESOTA

CAPITAL IMPROVEMENT 4002-16

CONSTRUCTION PLANS FOR:

BITUMINOUS MILL & OVERLAY, CONCRETE REHABILITATION, STORM SEWER WORK AND MISC. UTILITY WORK ON
 SAP 110-102-014 ZANE AVE FROM 63RD AVE TO 360 FEET NORTH OF 65TH AVE
 SAP 110-102-015 ZANE AVE FROM 69TH AVE TO 200 FEET NORTH OF 73RD AVE
 SAP 110-137-004 JEFFERSON HIGHWAY FROM TH 610 TO 700 FEET SOUTH OF 109TH AVE
 SAP 189-128-002 JEFFERSON HIGHWAY FROM TH 610 TO 101ST AVE

THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE 2014 EDITION OF THE "MATERIALS LAB SUPPLEMENTAL SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

INDEX

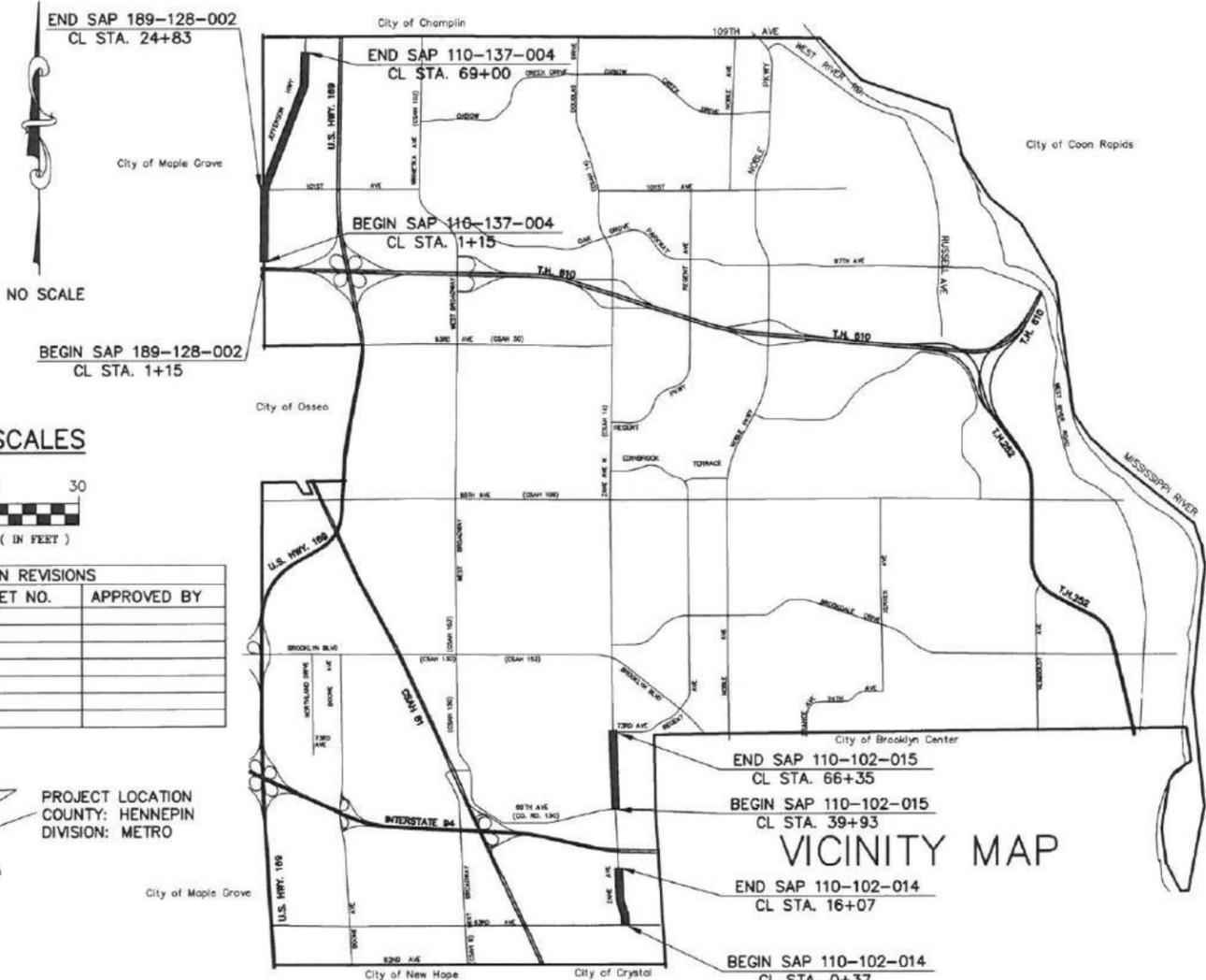
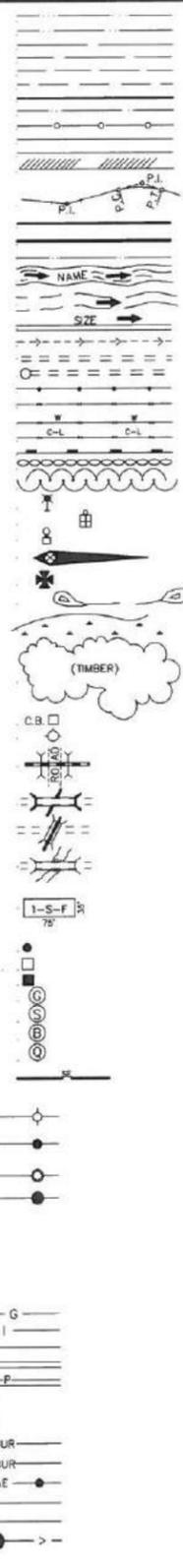
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	STATEMENT OF ESTIMATED QUANTITIES
4-5	STANDARD PLATES & STRUCTURE SCHEDULE
6-14	DETAIL SHEETS
15-21	CONSTRUCTION PLAN
22	ZANE AVE SIGNING AND STRIPING DETAILS (63RD AVE-65TH AVE)
23	ZANE AVE SIGNING AND STRIPING PLAN (63RD AVE-65TH AVE)
24-26	ZANE AVE TRAFFIC CONTROL PLAN (63RD AVE-65TH AVE)
27	ZANE AVE DETOUR ROUTE (63RD AVE-65TH AVE)
28	ZANE AVE SIGNING AND STRIPING DETAILS (69TH AVE-73RD AVE)
29-30	ZANE AVE SIGNING AND STRIPING PLAN (69TH AVE-73RD AVE)
31-38	ZANE AVE TRAFFIC CONTROL PLAN (69TH AVE-73RD AVE)
39	JEFFERSON HIGHWAY SIGNING AND STRIPING DETAILS
40-44	JEFFERSON HIGHWAY SIGNING AND STRIPING PLAN
45-55	JEFFERSON HIGHWAY TRAFFIC CONTROL PLAN

THIS PLAN CONTAINS 55 SHEETS

DESIGN DESIGNATION

PRESENT ADT (2015) 11,300
 PROJECT ADT. (2035) 13,000
 ESAL's 6,170,000
 FUNCTIONAL CLASSIFICATION MINOR ARTERIAL
 NO. OF TRAFFIC LANES 4
 NO. OF PARKING LANES 0
 TON DESIGN 9
 SOIL FACTOR
 PROJ. HCADT (YEAR) 30
 R-VALUE 35
 DESIGN SPEED 35
 DESIGN SPEED NOT ACHIEVED AT (STA. TO STA.,M.P.H.) NA
 STOPPING SIGHT DISTANCE BASED ON:
 HEIGHT OF EYE 3.5FT
 HEIGHT OF OBJECT 2.0FT

SAP	SAP	SAP	SAP
110-102-014	110-102-015	110-137-004	189-128-002
ZANE AVE	ZANE AVE	JEFFERSON HWY	JEFFERSON HWY
11,300	9,000	6,600	6,600
13,000	10,000	15,000	15,000
6,170,000	5,360,000	5,500,000	5,500,000
MINOR ARTERIAL	MINOR ARTERIAL	MINOR ARTERIAL	MINOR ARTERIAL
4	4	3	3
0	0	0	0
9	9	10	10
30	40	62	62
35	35	50	50
NA	NA	NA	NA
3.5FT	3.5FT	3.5FT	3.5FT
2.0FT	2.0FT	2.0FT	2.0FT



PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY



**PLANS PREPARED BY
 ENGINEERING SERVICES DIVISION
 CITY OF BROOKLYN PARK**

ZANE AVE			
From 63RD AVE (STA 0+37)			
To 360 FEET NORTH OF 65TH AVE (STA 16+07)			
Gross Length	1570	Feet	0.30 Miles
Bridges Length	0	Feet	0 Miles
Exceptions Length	0	Feet	0 Miles
Net Length	1570	Feet	0.30 Miles

ZANE AVE			
From 69TH AVE (STA 39+93)			
To 200 FEET NORTH OF 73RD AVE (STA 66+35)			
Gross Length	2642	Feet	0.50 Miles
Bridges Length	0	Feet	0 Miles
Exceptions Length	0	Feet	0 Miles
Net Length	2642	Feet	0.50 Miles

JEFFERSON HIGHWAY			
From TH 610 (STA 1+15)			
To 700 FEET SOUTH OF 109TH AVE (STA 69+00)			
Gross Length	6785	Feet	1.29 Miles
Bridges Length	0	Feet	0 Miles
Exceptions Length	0	Feet	0 Miles
Net Length	6785	Feet	1.29 Miles

JEFFERSON HIGHWAY			
From TH 610 (STA 1+15)			
To 101ST AVE (STA 24+83)			
Gross Length	2368	Feet	0.45 Miles
Bridges Length	0	Feet	0 Miles
Exceptions Length	0	Feet	0 Miles
Net Length	2368	Feet	0.45 Miles

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME CRAIG RUNNAKKO
 DATE 1-25-2016 LIC. NO. MN 26155
 _____ DATE _____
 JESSE STRUVE, P.E., CITY ENGINEER (CITY OF BROOKLYN PARK)
 _____ DATE _____
 KEN ASHFELD, P.E., CITY ENGINEER (CITY OF MAPLE GROVE)
 _____ DATE _____
 HENNEPIN COUNTY: DIRECTOR, TRANSPORTATION DEPARTMENT AND COUNTY ENGINEER
 _____ DATE _____
 RECOMMENDED FOR APPROVAL HENNEPIN COUNTY: DESIGN DIVISION ENGINEER
 _____ DATE _____
 DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE-AID RULES/POLICY
 _____ DATE _____
 STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

SAP 110-102-014
 SAP 110-102-015
 SAP 110-137-004
 SAP 189-128-002
SHEET ONE OF 55 SHEETS

STATEMENT OF ESTIMATED QUANTITIES

MNDOT ITEM NO.	ITEM	UNITS	ZANE AVE		ZANE AVE		JEFFERSON HIGHWAY		JEFFERSON HIGHWAY		NON PARTICIPATING		TOTAL
			SAP 110-102-014		SAP 110-102-015		SAP 110-137-004		SAP 189-128-002		ROADWAY	STORM SEWER	
			ROADWAY	STORM SEWER	ROADWAY	STORM SEWER	ROADWAY	STORM SEWER	ROADWAY	STORM SEWER			
2021.501	MOBILIZATION	LS	0.18		0.31		0.35		0.09		0.07		1
2101.511	CLEAR & GRUB TREE	EACH									1		1
2104.501	REMOVE & DISPOSE OF RAILING	LF									52		52
3 2104.501	REMOVE CONCRETE C&G ALL TYPES	LF	860		3751		723		333				5667
2104.501	REMOVE STORM SEWER PIPE ALL SIZES	LF										221	221
2104.501	REMOVE WATERMAIN PIPE	LF									270		270
3 2104.505	REMOVE CONCRETE SIDEWALK	SQ YD	306		335								622
3 2104.505	REMOVE BITUMINOUS DRIVEWAY	SQ YD	31		24								55
2104.505	REMOVE BITUMINOUS TRAIL	SQ YD					44		67				111
2104.505	REMOVE BITUMINOUS ROADWAY	SQ YD	938		834		161		74				2007
2104.505	REMOVE AGGREGATE CLASS 5	SQ YD											?
2104.505	REMOVE CONCRETE MEDIAN	SQ YD	2		9		10		7				28
2104.505	REMOVE CONCRETE APRON	SQ YD	258		221								584
2104.509	REMOVE CONCRETE CROSS GUTTER	EACH			3								3
2104.509	REMOVE CATCH BASIN	EACH									2		2
2104.509	REMOVE GATE VALVE	EACH									2		2
2104.509	REMOVE HYDRANT AND GATE VALVE	EACH									1		1
2104.513	SAWING BIT PAVEMENT ALL DEPTHS	LF	912		4475		1186		564				7137
2104.523	SALVAGE & REINSTALL FENCE ALL TYPES	LF									63		63
2104.523	SALVAGE SIGN ASSEMBLY	EACH	12		32		7		3				54
2104.523	REMOVE & DISPOSE OF SIGNS	EACH	19		40		21		12				92
2105.501	COMMON EX	CU YD											?
2123.610	STREET SWEEPER WITH PICKUP BROOM	HOUR	16		16		28		12				72
2123.610	TRACTOR MOUNTED BACKHOE	HOUR									8		8
2211.503	AGGREGATE BASE CLASS 5	CU YD	14										14
6 2231.501	BITUMINOUS PATCHING MIXTURE	TON	400		430		30		14				874
2232.501	MILL BITUMINOUS SURFACE 2"	SQ YD	8158		13141		33630		6876				61805
2301.602	DRILL & GROUT REINFORCEMENT BAR	EACH	60		64		28		36				188
2331.603	JOINT ADHESIVE	LF	8516		13785		26544		7003				55848
1 2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	897		1446		3699		756				6798
2360.503	MNDOT 2360 TYPE SP 12.5 (4,E) (SPWEA 430 E) 2"	SQ YD	8158		13141		33630		6876				61805
5 2360.503	MNDOT 2360 TYPE SP 12.5 (3,B) (SPWEA 230 B) (DRIVEWAY) 2" LIFT	SQ YD	31		24								55
2360.503	MNDOT 2360 TYPE SP 9.5 (2,B) (SPWEA 240 B) (TRAIL) 3"	SQ YD					44		67				111
2451.607	PIPE BEDDING	CU YD										85	85
2501.515	27" RC PIPE APRON	EACH									1		1
2501.515	36" RC PIPE APRON	EACH									2		2
2503.511	27" RC PIPE SEWER CLASS III	LF									40		40
2503.511	36" RC PIPE SEWER CLASS III	LF									112		112
2504.602	CONNECT TO EXISTING WATERMAIN	EACH											?
2504.602	HYDRANT AND GATE VALVE	EACH									1		1
2504.602	GATE VALVE REPAIR TYPE 1	EACH									4		4
2504.602	8" GATE VALVE & BOX	EACH									2		2
2504.603	6" DIP WATERMAIN	LF									61		61
2504.603	8" DIP WATERMAIN	LF									200		200
2504.604	4" THICK INSULATION	SQ YD									12		12

POLLUTION PREVENTATIVE MEASURES

POLLUTION PREVENTATIVE MANAGEMENT MEASURES ARE INCLUDED IN THE SPECIAL PROVISIONS OF THE PROJECT

THE CONTRACTOR WILL COMPLY WITH THE REQUIREMENTS REGARDING POLLUTION PREVENTATIVE MANAGEMENT DURING CONSTRUCTION, WHICH WILL INCLUDE THE FOLLOWING:

A. CONCRETE WASHOUT AREAS (AREAS MUST BE PRE-APPROVED BY ENGINEER)
 B. SOLID WASTE COLLECTION AND REMOVAL
 C. SECONDARY CONTAINMENT
 D. HAZARDOUS WASTE STORAGE CONTAINERS AND SPILL KITS

A CHEMICAL SPILL OF ANY KIND (OIL, FUEL, FERTILIZER, ETC.) MUST BE CLEANED UP AND REMOVED FROM THE SITE IMMEDIATELY. THE CONTRACTOR MUST HAVE A SPILL KIT ON SITE AT ALL TIMES.

BEST MANAGEMENT PRACTICES (BMP) & DEVICES INCLUDING INLET DIAPERS, FILTER LOGS AND SEDIMENT MATS SHALL BE INSTALLED ON ALL DRAINAGE INLETS WITHIN 299 LINEAL FEET DOWNSTREAM OF ANY DISTURBANCE SHALL BE PROVIDED WITH INLET PROTECTION PRIOR TO UP-GRADE DISTURBANCE, TO PROTECT SEDIMENTATION INTO & THROUGH UNDERGROUND DRAINAGE SYSTEMS.

TOPSOIL IN REGRADING AREAS SHALL BE SALVAGED TO THE MAXIMUM EXTENT PRACTICABLE, WITH THE EXCEPTION THAT TOPSOIL AT CURB & GUTTER TO BE CONSTRUCTED LOCATIONS NEED NOT BE SALVAGED.

ALL EXCAVATED MATERIALS, INCLUDING BUT NOT LIMITED TO MATERIALS EXCAVATED FROM DRAINAGE STRUCTURES & STORM SEWER EXCAVATIONS, SHALL BE REMOVED WITHIN 4 HOURS OF EXCAVATION OR PRIOR TO ANY RAIN OR SNOW MELT EVENT (WHICHEVER COMES FIRST) AND DISPOSED OF PROPERLY OUTSIDE OF THE RIGHT-OF-WAY. SPREADING EXCAVATED MATERIALS WILL NOT BE PERMITTED.

EXCESS CONCRETE RESIDUE (UNCURED OR CURED) MUST BE REMOVED WITHIN 24 HOURS OF SOIL CONTACT AND PLACED IN APPROVED LINED SYSTEMS. NO CONCRETE WASHOUT WILL BE ALLOWED ANYWHERE IN THE R.O.W. UNLESS PERFORMED IN CHUTE WASHOUT SYSTEM.

LEFT OVER WASHOUT MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OUTSIDE THE RIGHT-OF-WAY IN AN APPROVED MANNER.

ROADS SHALL BE KEPT CLEAN OF SEDIMENTS, AND SWEEPED WITH A PICK-UP, NON-DUST GENERATING BROOM AS OFTEN AS NECESSARY TO KEEP ROADS VISIBLY CLEAN EVERY 24 HOURS OF ACTIVITY THAT GENERATES SEDIMENT TRACKING OR BEFORE OPENING TO TRAFFIC, WHICHEVER COMES FIRST.

THE INSPECTORS LOG AND MAINTENANCE NEEDED WILL BE COMPLETED ACCORDING TO THE NPDES II RULES. BROOKLYN PARK ENGINEERING SERVICES SHOULD RECEIVE A COPY OF THE INSPECTOR'S LOG AND ANY FIELD CHANGES. THE CITY OF BROOKLYN PARK IS THE RESPONSIBLE PARTY FOR THE MAINTENANCE OF HENNEPIN COUNTY RIGHT-OF-WAY ON THIS PROJECT.

TIMING OF EROSION CONTROL

GENERAL EROSION CONTROL IMPLEMENTATION:
 STORM DRAIN INLET CONTROL SHALL BE FURNISHED & INSTALLED PRIOR TO CONSTRUCTION. STREET SWEEPING WILL BE DONE AS NEEDED THROUGHOUT THE JOB. THE DISTURBED SOILS WILL BE STABILIZED/SODDED, WITHIN A MAXIMUM OF 14 CALENDAR DAYS, 3 DAYS FOR 1:3 OR STEEPER SLOPES, OR AS OTHERWISE REQUIRED IN THE ALLOTMENT GIVEN BY THE NPDES PERMIT.

THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE DISTURBED AREA UNTIL VEGETATION IS ESTABLISHED. ONCE VEGETATION IS ESTABLISHED AND CONSTRUCTION IS FINISHED IN THE AREA, THE SILT FENCE AND ANY OTHER TEMPORARY EROSION CONTROL THAT WILL NOT BIODEGRADE WILL BE REMOVED, AND ANY ADDITIONAL PERMANENT EROSION CONTROL WILL BE PLACED. ALL TOP SOIL SHALL BE REMOVED AND DISPOSED OF PROPERLY.

AREAS WITHIN 10' OF ANY POND DISTURBED BY THE WORK SHALL BE PLANTED & MULCHED WITHIN 24 HOURS.

NOTICE OF TERMINATION

THE MINNESOTA CITY OF BROOKLYN PARK WILL FILE THE FORM, PER REGULATIONS LISTED.

CONTACTS

THE RESPONSIBLE PARTIES FOR IMPLEMENTATION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) ARE INCLUDED IN THE TABLE BELOW.

AGENCY	PHONE NUMBER
CONTRACTOR	x
CITY OF BROOKLYN PARK (ENGINEERING) - CRAIG RUNNAKKO	763-493-8109
CITY OF BROOKLYN PARK (ENGINEERING) - JASON IVES	763-493-8118
CITY OF BROOKLYN PARK (STREET DEPT) - STEVE NAUER	763-493-8009
CITY OF BROOKLYN PARK (SEWER & WATER DEPT) - JON WATSON	763-493-8008
- DOUG NEID	763-493-8099
CITY OF BROOKLYN PARK (SEWER & WATER DEPT) - ON-CALL	763-493-8222 (POLICE RECEPT.)
CENTERPOINT ENERGY MINNESOTA GAS - ANDREW BALGOBIN	612-321-5426
COMCAST, INC. - DOUG ZAHN	651-755-2602
XCEL ENERGY - GREG PLUMEDAHL	763-493-1659
ACCESS COMMUNICATIONS - MIKE DAHLE	763-545-9998
CENTURY LINK - BEN SNOOK	763-424-6400

- TACK COAT IS BASED ON 0.05 GALLONS PER SQUARE YARD
- WATER FOR SOD TURF ESTABLISHMENT IS 50 GALLONS PER SQUARE YARD
- SAWCUTTING IS INCIDENTAL TO THE REMOVAL QUANTITY
- SODDING TO INCLUDE 3" TOPSOIL
- PAVE WITH MINIMUM OF 2 LIFTS
- THICKNESS VARIES
- FERTILIZER MIX OF 10-10-10 - APPLICATION RATE OF 400 LBS PER ACRE
- USE AT ADA PED RAMPS
- MAY INCLUDE SIDEWALK THROUGH APRON
- MEASURED FROM INVERT TO FLOWLINE, STRUCTURE DIAMETERS VARY.

NO	DATE	BY	CKD	REVISION

**CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION**

Brooklyn Park

5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME CRAIG RUNNAKKO

DATE 1-25-2016 LIC. NO. 26155

JESSE STRUVE, P.E. CITY ENGINEER

ESTIMATED QUANTITIES

CAPITAL IMPROV. NO. 4002-16	DRAWN BY IDS	DATE APPROVED 1-25-2016	SHEET 2
STATE AID PROJ. NO. 110-102-014	DESIGNED BY CER	HORIZ. SCALE	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE	
110-137-004			
189-128-002			

STATEMENT OF ESTIMATED QUANTITIES

MNDOT ITEM NO.	ITEM	UNITS	ZANE AVE		ZANE AVE		JEFFERSON HIGHWAY		JEFFERSON HIGHWAY		NON PARTICIPATING		TOTAL
			SAP 110-102-014		SAP 110-102-015		SAP 110-137-004		SAP 189-128-002		ROADWAY	STORM SEWER	
			ROADWAY	STORM SEWER	ROADWAY	STORM SEWER	ROADWAY	STORM SEWER	ROADWAY	STORM SEWER			
2504.608	FITTINGS	LB									504		504
2506.501	CONST DRAINAGE STRUCTURE 60-4020	EACH										2	2
2506.602	STRUCTURE REPAIR TYPE A	EACH		9		22		32		8			71
2506.602	STRUCTURE REPAIR TYPE B	EACH						5					5
10 2506.603	STRUCTURE REPAIR TYPE C	LF		6.5		18.5		23.9		3.9			52.8
2511.501	RANDOM RIPRAP CLASS III	CU YD										63	63
2511.515	GEOTEXTILE FILTER TYPE IV	SQ YD										95	95
2521.501	4" CONCRETE WALK	SQ FT	2094		2387								4308
8 2521.501	6" CONCRETE WALK	SQ FT	818		815		442		1046				3121
2531.501	CON CURB & GUTTER, DESIGN B-612	LF	35										35
2531.501	CON CURB & GUTTER, DESIGN B-618	LF	825		3751								4576
2531.501	CON CURB & GUTTER, DESIGN B-624 (HAND FORMED)	LF					723		333				1056
2531.503	4" CONCRETE MEDIAN	SQ YD											?
2531.503	8" CONCRETE MEDIAN NOSE	SQ FT	18		79		93		61				251
9 2531.507	8" CONCRETE APRON	SQ YD	275		221								496
2531.507	8" CONCRETE CROSS GUTTER	SQ YD											?
2531.618	TRUNCATED DOMES	SQ FT	48		88		32		64				232
2531.618	RADIAL TRUNCATED DOMES	SQ FT	148		36		64		64				312
2550.602	ADJUST HANDHOLE	EACH	4		1								5
2557.603	FURNISH & INSTALL CHAIN LINK FENCE	LF									40		40
2563.601	TRAFFIC CONTROL PLAN	EACH	0.18		0.31		0.35		0.09		0.07		1
2564.531	F&I SIGN PANELS TYPE C	SQ FT	62.75		206.5		39.25		28.5				325
2564.537	INSTALL SIGN ASSEMBLY	EACH	12		32		7		3				54
2573.505	SILT CURTAIN TYPE MOVING WATER	LF										12	12
2573.530	STORM DRAIN INLET PROTECTION	EACH		6		15		44		12			77
7 2574.508	FERTILIZER, TYPE 1	LB	54		197								251
2575.501	SEEDING	ACRE					0.08		0.06				.14
2575.502	SEEDING MIXTURE 25-131	LB					18		12				30
4 2575.505	SODDING TYPE LAWN	SQ YD	656		2382								3038
2 2575.535	WATER (TURF ESTABLISHMENT)	M GAL	33		119								152
2575.562	HYDRAULIC MATRIX TYPE MULCH	LB					207		138				345
2582.501	PAVEMENT MSG RIGHT ARROW EPOXY	EACH	2				4						6
2582.501	PAVEMENT MSG LEFT ARROW EPOXY	EACH			17		5						22
2582.501	PAVEMENT MSG BIKE SYMBOL EPOXY	EACH											?
2582.502	4" SOLID WHITE LANE LINE EPOXY	LF	120		310		1080		270				1780
2582.502	4" BROKEN WHITE LINE EPOXY	LF	740		100		2608		652				4100
2582.502	4" SOLID DOUBLE YELLOW LINE EPOXY	LF	1010		530		4256		1064				6860
2582.502	4" BROKEN YELLOW LINE EPOXY	LF			900								900
2582.502	4" SOLID YELLOW LANE LINE EPOXY	LF			2940								2940
2582.503	24" SOLID LINE EPOXY (STOP LINE)	SQ FT	200		320		110		110				740
2582.503	WHITE 3'x6' CROSSWALK BLOCKS EPOXY	SQ FT	504		1260		243		243				2250

POLLUTION PREVENTATIVE MEASURES

POLLUTION PREVENTATIVE MEASURES ARE INCLUDED IN THE SPECIAL PROVISIONS OF THE PROJECT

THE CONTRACTOR WILL COMPLY WITH THE REQUIREMENTS REGARDING POLLUTION PREVENTATIVE MANAGEMENT DURING CONSTRUCTION, WHICH WILL INCLUDE THE FOLLOWING:

A. CONCRETE WASHOUT AREAS (AREAS MUST BE PRE-APPROVED BY ENGINEER)

B. SOLID WASTE COLLECTION AND REMOVAL

C. SECONDARY CONTAINMENT

D. HAZARDOUS WASTE STORAGE CONTAINERS AND SPILL KITS

A CHEMICAL SPILL OF ANY KIND (OIL, FUEL, FERTILIZER, ETC.) MUST BE CLEANED UP AND REMOVED FROM THE SITE IMMEDIATELY. THE CONTRACTOR MUST HAVE A SPILL KIT ON SITE AT ALL TIMES.

BEST MANAGEMENT PRACTICES (BMP) & DEVICES INCLUDING INLET DIAPERS, FILTER LOGS AND SEDIMENT MATS SHALL BE INSTALLED ON ALL DRAINAGE INLETS WITHIN 299 LINEAL FEET DOWNSTREAM OF ANY DISTURBANCE SHALL BE PROVIDED WITH INLET PROTECTION PRIOR TO UP-GRADE DISTURBANCE, TO PROTECT SEDIMENTATION INTO & THROUGH UNDERGROUND DRAINAGE SYSTEMS.

TOPSOIL IN REGRADING AREAS SHALL BE SALVAGED TO THE MAXIMUM EXTENT PRACTICABLE, WITH THE EXCEPTION THAT TOPSOIL AT CURB & GUTTER TO BE CONSTRUCTED LOCATIONS NEED NOT BE SALVAGED.

ALL EXCAVATED MATERIALS, INCLUDING BUT NOT LIMITED TO MATERIALS EXCAVATED FROM DRAINAGE STRUCTURES & STORM SEWER EXCAVATIONS, SHALL BE REMOVED WITHIN 4 HOURS OF EXCAVATION OR PRIOR TO ANY RAIN OR SNOW MELT EVENT (WHICHEVER COMES FIRST) AND DISPOSED OF PROPERLY OUTSIDE OF THE RIGHT-OF-WAY. SPREADING EXCAVATED MATERIALS WILL NOT BE PERMITTED.

EXCESS CONCRETE RESIDUE (UNCURED OR CURED) MUST BE REMOVED WITHIN 24 HOURS OF SOIL CONTACT AND PLACED IN APPROVED LINED SYSTEMS. NO CONCRETE WASHOUT WILL BE ALLOWED ANYWHERE IN THE R.O.W. UNLESS PERFORMED IN CHUTE WASHOUT SYSTEM.

LEFT OVER WASHOUT MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OUTSIDE THE RIGHT-OF-WAY IN AN APPROVED MANNER.

ROADS SHALL BE KEPT CLEAN OF SEDIMENTS, AND SWEEPED WITH A PICK-UP, NON-DUST GENERATING BROOM AS OFTEN AS NECESSARY TO KEEP ROADS VISIBLY CLEAN EVERY 24 HOURS OF ACTIVITY THAT GENERATES SEDIMENT TRACKING OR BEFORE OPENING TO TRAFFIC, WHICHEVER COMES FIRST.

THE INSPECTORS LOG AND MAINTENANCE NEEDED WILL BE COMPLETED ACCORDING TO THE NPDES II RULES. BROOKLYN PARK ENGINEERING SERVICES SHOULD RECEIVE A COPY OF THE INSPECTOR'S LOG AND ANY FIELD CHANGES. THE CITY OF BROOKLYN PARK IS THE RESPONSIBLE PARTY FOR THE MAINTENANCE OF HENNEPIN COUNTY RIGHT-OF-WAY ON THIS PROJECT.

TIMING OF EROSION CONTROL

GENERAL EROSION CONTROL IMPLEMENTATION:

STORM DRAIN INLET CONTROL SHALL BE FURNISHED & INSTALLED PRIOR TO CONSTRUCTION. STREET SWEEPING WILL BE DONE AS NEEDED THROUGHOUT THE JOB. THE DISTURBED SOILS WILL BE STABILIZED/SODDED, WITHIN A MAXIMUM OF 14 CALENDAR DAYS, 3 DAYS FOR 1:3 OR STEEPER SLOPES, OR AS OTHERWISE REQUIRED IN THE ALLOTMENT GIVEN BY THE NPDES PERMIT.

THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE DISTURBED AREA UNTIL VEGETATION IS ESTABLISHED. ONCE VEGETATION IS ESTABLISHED AND CONSTRUCTION IS FINISHED IN THE AREA, THE SILT FENCE AND ANY OTHER TEMPORARY EROSION CONTROL THAT WILL NOT BIODEGRADE WILL BE REMOVED, AND ANY ADDITIONAL PERMANENT EROSION CONTROL WILL BE PLACED. ALL TOP SOIL SHALL BE REMOVED AND DISPOSED OF PROPERLY.

AREAS WITHIN 10' OF ANY POND DISTURBED BY THE WORK SHALL BE PLANTED & MULCHED WITHIN 24 HOURS.

NOTICE OF TERMINATION

THE MINNESOTA CITY OF BROOKLYN PARK WILL FILE THE FORM, PER REGULATIONS LISTED.

CONTACTS

THE RESPONSIBLE PARTIES FOR IMPLEMENTATION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) ARE INCLUDED IN THE TABLE BELOW.

AGENCY	PHONE NUMBER
CONTRACTOR	X
CITY OF BROOKLYN PARK (ENGINEERING) - CRAIG RUNNAKKO	763-493-8109
CITY OF BROOKLYN PARK (ENGINEERING) - JASON IVES	763-493-8118
CITY OF BROOKLYN PARK (STREET DEPT) - STEVE NAUER	763-493-8009
CITY OF BROOKLYN PARK (SEWER & WATER DEPT) - JON WATSON	763-493-8008
- DOUG NEID	763-493-8099
CITY OF BROOKLYN PARK (SEWER & WATER DEPT) - ON-CALL	763-493-8222 (POLICE RECEIPT.)
CENTERPOINT ENERGY MINNESOTA GAS - ANDREW BALGOBIN	612-321-5426
COMCAST, INC. - DOUG ZAHN	651-755-2602
XCEL ENERGY - GREG PLUMEDAHL	763-493-1659
ACCESS COMMUNICATIONS - MIKE DAHLE	763-545-9998
CENTURY LINK - BEN SNOOK	763-424-8400

- TACK COAT IS BASED ON 0.05 GALLONS PER SQUARE YARD
- WATER FOR SOD TURF ESTABLISHMENT IS 50 GALLONS PER SQUARE YARD
- SAWCUTTING IS INCIDENTAL TO THE REMOVAL QUANTITY
- SODDING TO INCLUDE 3" TOPSOIL
- PAVE WITH MINIMUM OF 2 LIFTS
- THICKNESS VARIES
- FERTILIZER MIX OF 10-10-10 - APPLICATION RATE OF 400 LBS PER ACRE
- USE AT ADA PED RAMPS
- MAY INCLUDE SIDEWALK THROUGH APRON
- MEASURED FROM INVERT TO FLOWLINE, STRUCTURE DIAMETERS VARY.

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION

Brooklyn Park 5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME CRAIG RUNNAKKO

DATE 1-25-2016 LIC. NO. 26155

JESSE STRUVE, P.E. CITY ENGINEER

ESTIMATED QUANTITIES

CAPITAL IMPROV. NO. <u>4002-16</u>	DRAWN BY <u>IDS</u>	DATE APPROVED <u>1-25-2016</u>	SHEET <u>3</u>
STATE AID PROJ. NO. <u>110-102-014</u>	DESIGNED BY <u>CER</u>	HORIZ. SCALE	OF <u>55</u>
<u>110-102-015</u>	CHECKED BY <u>JMS</u>	VERT. SCALE	
<u>110-137-004</u>			

STORM & SAN SEWER STRUCTURE SCHEDULE-ZANE AVE

STRUCTURE NO.	STATION	LEFT/RIGHT	OFFSET (FT.)	STRUCTURE TYPE	CASTING TYPE	REMARKS
CB*A	7+44	RIGHT	25	OTHER CATCH BASIN	R-3250-A	REMOVE
CB*B	7+64	LEFT	21	OTHER CATCH BASIN	R-3250-A	REMOVE
MH*C	7+82	RIGHT	28	STANDARD MANHOLE	R-1733	TYPE C
MH*D	11+07	RIGHT	26	STANDARD MANHOLE	R-1733	TYPE A
CB*E	13+63	RIGHT	28	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*F	13+86	LEFT	22	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*G	16+08	LEFT	22	SHALLOW CATCH BASIN	R-3250-A	OK
CB*H	16+08	RIGHT	22	STANDARD CATCH BASIN	R-3250-A	OK
CB*GG	7+47	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	NEW
CB*HH	7+71	LEFT	23	STANDARD CATCH BASIN	R-3250-A	NEW
SAN MH*1	1+71	CL	0	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*2	2+39	RIGHT	3	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*3	5+06	LEFT	2	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*4	7+32	LEFT	1	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*5	9+44	RIGHT	1	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*6	13+43	CL	0	STANDARD MANHOLE	R-1733	TYPE A

TOTALS:
TYPE A REPAIRS: 9
TYPE B REPAIRS: 0
TYPE C REPAIRS: 1

TYPE C V.F.=6.5

THE FOLLOWING Mn/DOT STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:

STANDARD PLATES

PLATE NO.	DESCRIPTION
3000 L	REINFORCED CONCRETE PIPE (5 SHEETS)
3006 G	GASKET JOINT FOR R.C.P. (2 SHEETS)
3007 E	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURE
4006 L	MANHOLE OR CATCH BASIN PRECAST DESIGN H
4010 H	CONCRETE SHORT CONE & ADJUSTING RING
4011 E	PRECAST CONCRETE BASE
4020 J	MANHOLE OR CATCH BASIN COVER (2 SHEETS)
4028 A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4101 D	RING CASTING FOR MANHOLE OR CATCH BASIN
4110 F	COVER CASTING FOR MANHOLE (CASTING NO. 715 & 716)
4129 G	CATCH BASIN FRAME CASTING (SQUARE GRATE) CASTING NO. 805
4154 B	CATCH BASIN GRATE CASTING (CASTING NO. 816)
4160 D	CURB BOX CASTING FOR CATCH BASIN
4180 J	MANHOLE OR CATCH BASIN STEP
7038A	DETECTABLE WARNING SURFACE
7100 H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
7111 J	INSTALLATION OF CATCH BASIN CASTING (CONCRETE CURB & GUTTER)
8000 I	STANDARD BARRICADES

UTILITIES

PLAN SYMBOL	ITEM	OWNER
— T —	UNDERGROUND TELEPHONE	CENTURY LINK
— G —	UNDERGROUND GAS	CENTERPOINT ENERGY MINNESOTA GAS
— TV —	UNDERGROUND CATV	COMCAST CABLE COMMUNICATIONS, INC.
— E —	UNDERGROUND ELECTRIC	XCEL ENERGY
— FO —	UNDERGROUND FIBER OPTIC	ACCESS COMMUNICATIONS

NOTE: PLEASE NOTE THAT THE INFORMATION INCLUDED IN THIS TABULATION HAS BEEN TAKEN FROM RECORDS OF PREVIOUS CONSTRUCTION. THE CONTRACTOR IS ENCOURAGED TO VERIFY ALL INFORMATION PROVIDED.

STORM & SAN SEWER STRUCTURE SCHEDULE-ZANE AVE

STRUCTURE NO.	STATION	LEFT/RIGHT	OFFSET (FT.)	STRUCTURE TYPE	CASTING TYPE	REMARKS
MH*I	43+10	RIGHT	12	STANDARD MANHOLE	R-1733	TYPE A
MH*J	45+13	LEFT	22	SHALLOW CATCH BASIN	R-3250-A	TYPE C
MH*K	45+14	RIGHT	22	STANDARD CATCH BASIN	R-3250-A	TYPE A
MH*L	45+27	RIGHT	10	STANDARD MANHOLE	R-1733	TYPE A
MH*M	45+28	RIGHT	30	STANDARD MANHOLE	R-1733	OK
MH*N	48+32	RIGHT	29	STANDARD MANHOLE	R-1733	TYPE A
MH*O	49+82	LEFT	25	STANDARD MANHOLE	R-1733	TYPE A
CB*P	49+85	LEFT	22	STANDARD CATCH BASIN	R-3250-A	TYPE C
CB*Q	49+84	RIGHT	22	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*R	59+29	LEFT	22	SHALLOW CATCH BASIN	R-3250-A	TYPE C
CB*S	59+29	RIGHT	22	STANDARD CATCH BASIN	R-3250-A	TYPE A
MH*T	59+29	RIGHT	30	STANDARD MANHOLE	R-1733	OK
MH*U	61+44	LEFT	31	STANDARD MANHOLE	R-1733	OK
CB*V	61+34	LEFT	22	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*W	61+33	RIGHT	22	STANDARD CATCH BASIN	R-3250-A	TYPE C
MH*X	61+34	RIGHT	31	STANDARD MANHOLE	R-1733	OK
MH*Y	61+34	RIGHT	41	STANDARD MANHOLE	R-1733	OK
CB*Z	63+04	LEFT	25	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*AA	63+03	LEFT	5	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*BB	63+03	RIGHT	12	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*CC	63+03	RIGHT	36	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*DD	66+32	LEFT	30	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*EE	66+31	RIGHT	5	STANDARD CATCH BASIN	R-3250-A	OK
CB*FF	66+31	RIGHT	37	STANDARD CATCH BASIN	R-3250-A	OK
SAN MH*7	42+95	LEFT	32	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*8	43+28	LEFT	2	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*9	43+22	RIGHT	27	STANDARD MANHOLE	R-1733	REMOVE
SAN MH*10	45+65	CL	0	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*11	48+32	CL	0	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*12	51+54	CL	0	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*13	52+03	LEFT	33	STANDARD MANHOLE	R-1733	OK
SAN MH*14	53+11	CL	0	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*15	56+19	CL	0	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*16	59+38	RIGHT	1	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*17	62+62	CL	0	STANDARD MANHOLE	R-1733	TYPE A
SAN MH*18	65+88	LEFT	1	STANDARD MANHOLE	R-1733	OK

TOTALS:
TYPE A REPAIRS: 22
TYPE B REPAIRS: 0
TYPE C REPAIRS: 4

TYPE C V.F.=18.5

STORM SEWER STRUCTURE SCHEDULE-JEFFERSON HIGHWAY

STRUCTURE NO.	STATION	LEFT/RIGHT	OFFSET (FT.)	STRUCTURE TYPE	CASTING TYPE	REMARKS
CB*A	0+45	LEFT	25	SHALLOW CATCH BASIN	R-3250-A	OK
CB*C	2+57	LEFT	27	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*E	6+58	LEFT	31	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*G	10+59	LEFT	35	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*I	13+86	LEFT	68	SHALLOW CATCH BASIN	R-3250-A	?
CB*J	14+22	LEFT	35	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*L	17+27	LEFT	35	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*M	18+52	LEFT	35	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*O	21+64	LEFT	32	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*P	21+62	LEFT	4	STANDARD CATCH BASIN	R-3250-A	TYPE C
CB*S	23+08	LEFT	48	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*U	24+10	LEFT	71	SHALLOW CATCH BASIN	BEEHIVE	OK

TOTALS:
TYPE A REPAIRS: ?
TYPE B REPAIRS: ?
TYPE C REPAIRS: ?

TYPE C V.F.=3.9

STORM SEWER STRUCTURE SCHEDULE-JEFFERSON HIGHWAY

STRUCTURE NO.	STATION	LEFT/RIGHT	OFFSET (FT.)	STRUCTURE TYPE	CASTING TYPE	REMARKS
CB*B	0+45	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	OK
CB*D	2+57	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*F	6+56	RIGHT	33	STANDARD CATCH BASIN	R-3250-A	TYPE B
CB*H	10+58	RIGHT	38	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*K	14+59	RIGHT	38	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*N	18+53	RIGHT	39	60-4020 CATCH BASIN	R-3250-A	TYPE B
CB*Q	21+78	RIGHT	54	60-4020 CATCH BASIN	R-3250-A	TYPE C
MH*R	21+81	RIGHT	84	STANDARD MANHOLE	R-1733	OK
CB*T	23+29	RIGHT	36	60-4020 CATCH BASIN	R-3250-A	TYPE B
CB*Y	25+20	RIGHT	33	60-4020 CATCH BASIN	R-3250-A	TYPE C
CB*W	26+59	RIGHT	33	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*X	26+59	RIGHT	5	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*Z	27+24	LEFT	13	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*AA	27+79	LEFT	38	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*BB	29+61	RIGHT	33	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*BB	29+59	LEFT	34	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*CC	31+30	LEFT	31	SHALLOW CATCH BASIN	R-3250-A	TYPE C
CB*DD	34+51	LEFT	26	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*EE	34+60	LEFT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*FF	34+60	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*GG	37+51	LEFT	26	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*HH	37+62	LEFT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*II	37+60	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*JJ	39+66	LEFT	26	SHALLOW CATCH BASIN	R-3250-A	TYPE C
CB*KK	39+57	LEFT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*LL	39+60	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*NN	43+61	LEFT	26	STANDARD CATCH BASIN	R-3250-A	TYPE B
CB*OO	43+62	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*PP	50+61	LEFT	26	SHALLOW CATCH BASIN	R-3250-A	TYPE B
CB*QQ	50+62	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*SS	54+71	LEFT	26	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*TT	54+60	LEFT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*UU	54+60	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE C
CB*VV	56+60	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*WW	57+91	LEFT	26	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*XX	57+80	LEFT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*YY	57+79	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*ZZ	60+63	LEFT	26	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*AAA	60+61	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*BBB	62+45	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*CCC	64+60	LEFT	59	SHALLOW CATCH BASIN	BEEHIVE	OK
CB*DDD	64+62	LEFT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*EEE	64+63	RIGHT	26	STANDARD CATCH BASIN	R-3250-A	TYPE A
CB*FFF	67+61	LEFT	28	SHALLOW CATCH BASIN	R-3250-A	TYPE A
CB*GGG	67+63	RIGHT	28	STANDARD CATCH BASIN	R-3250-A	TYPE A

TOTALS:
TYPE A REPAIRS: 32
TYPE B REPAIRS: 5
TYPE C REPAIRS: 5

TYPE C V.F.=23.9

STORM & SANITARY SEWER STRUCTURE REPAIR KEY

TYPE A: REMOVE & REPLACE RINGS & CASTING AND GROUT STRUCTURE AS NEEDED
TYPE B: REMOVE & REPLACE COVER SLAB, RINGS & CASTING AND GROUT STRUCTURE AS NEEDED
TYPE C: RECONSTRUCTION (SEE SPECIAL PROVISIONS), V.F. MEASURED FROM INVERT TO FLOWLINE

STRUCTURE TYPE KEY

"SHALLOW" = 27" DIAMETER = DESIGN H
"STANDARD" = 48" DIAMETER = 48-4020

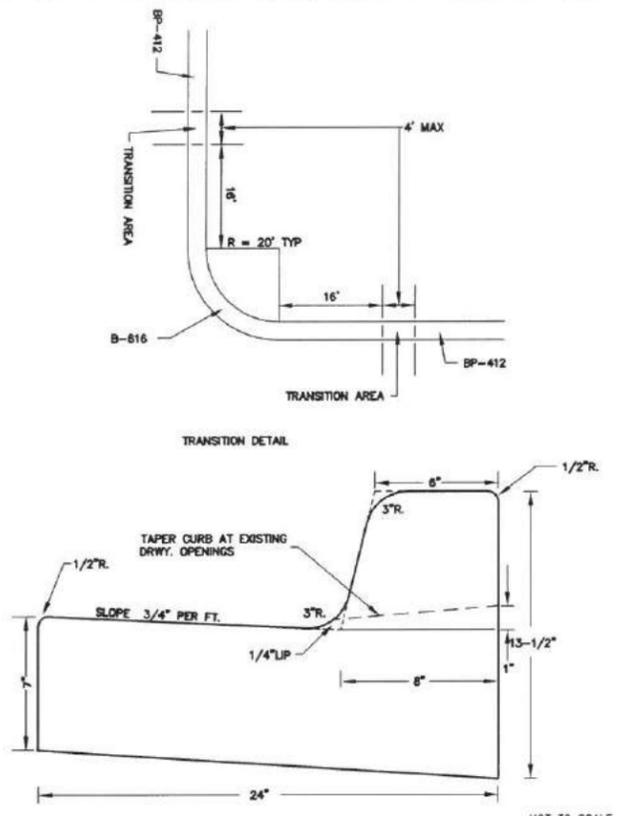
NO.	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
TYPED NAME: CRAIG RUNNAKCO
DATE: 1-25-2016 LIC. NO. 26155
JESSE STRUVE, P.E. CITY ENGINEER

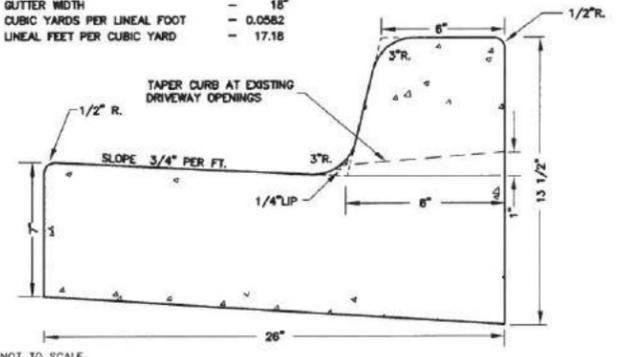
STANDARD PLATES & STRUCTURE SCHEDULE

CAPITAL IMPROV. NO. 4002-16	DRAWN BY IDS	DATE APPROVED 1-25-2016	SHEET 4
STATE AID PROJ. NO. 110-102-014	DESIGNED BY CER	HORIZ. SCALE	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE	
110-137-004			
189-128-002			



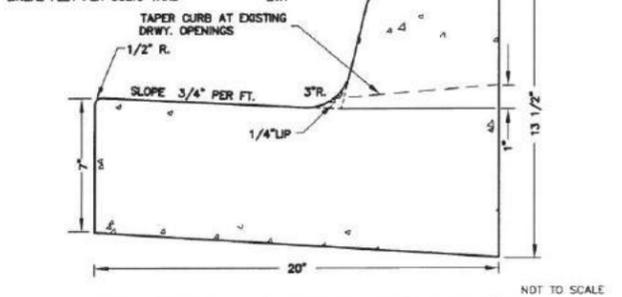
B-616 CONCRETE CURB AND GUTTER

REFERENCE TO MNDOT SPEC. - 2531
 DESIGN NO. - B-618
 GUTTER WIDTH - 18"
 CUBIC YARDS PER LINEAL FOOT - 0.0582
 LINEAL FEET PER CUBIC YARD - 17.18

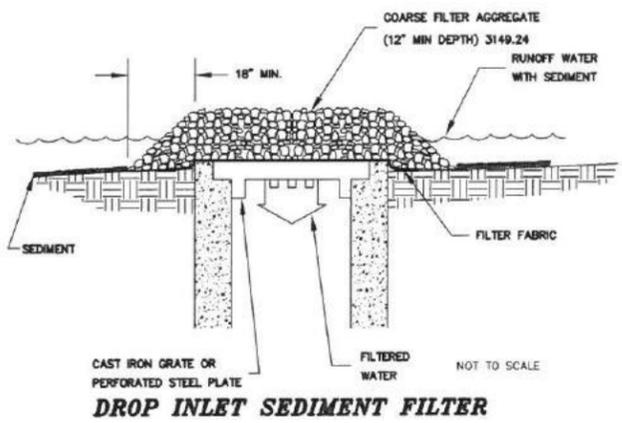


B-618 CONCRETE CURB AND GUTTER

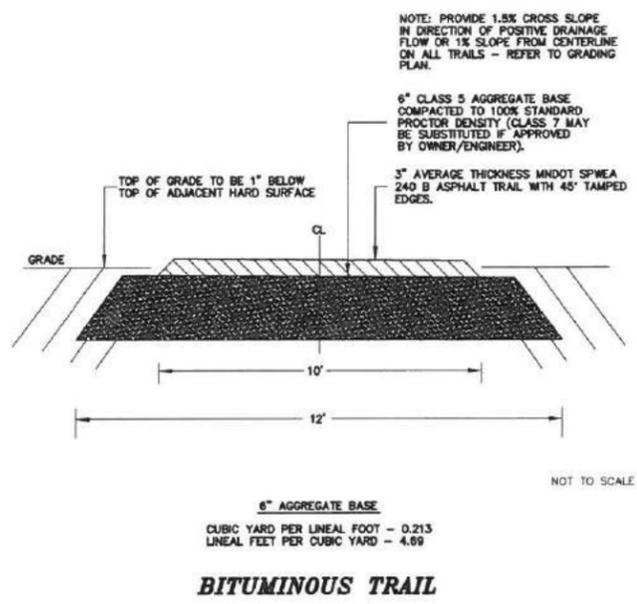
REFERENCE TO MNDOT SPEC. - 2531
 DESIGN NO. - B-612
 GUTTER WIDTH - 12"
 CUBIC YARDS PER LINEAL FOOT - 0.0474
 LINEAL FEET PER CUBIC YARD - 21.1



B-612 CONCRETE CURB AND GUTTER



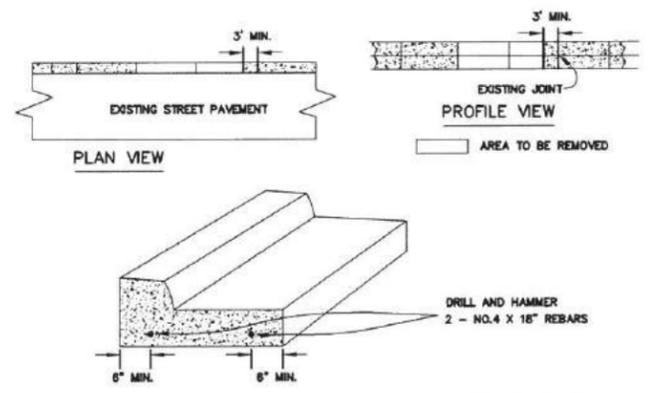
DROP INLET SEDIMENT FILTER



BITUMINOUS TRAIL

CURB AND GUTTER REPAIR TYPE SA-CG

DESCRIPTION: REMOVE CONCRETE, RESTORE BASE, PLACE REINFORCING STEEL, FURNISH AND PLACE CONCRETE, REFORM JOINTS AS NECESSARY.



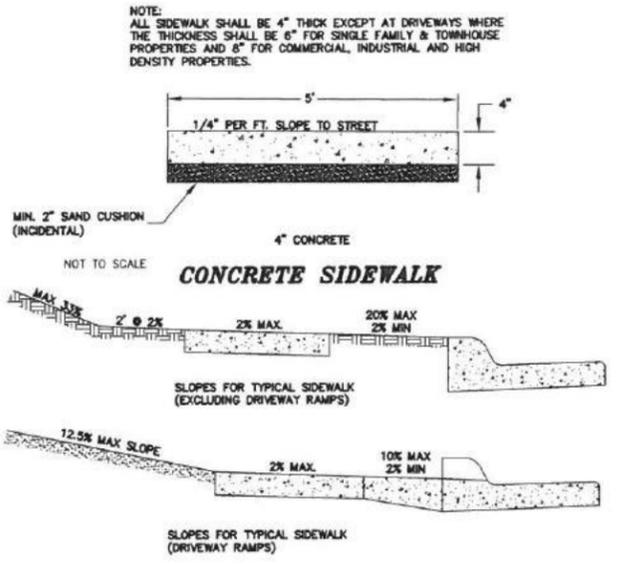
WORK TO BE DONE

1. Define removal area at existing joint or if necessary saw full depth of gutter and as much as possible of curb. Remove concrete curb and gutter sections.
2. Restore load transfer at each end of removal area by the following: At each end of the removal area furnish and install No. 4 reinforcing steel bars 18" long. Drill and hammer bars 9" into existing curb & gutter.
3. If existing Aggregate Base is inadequate, place 4" of Class 5 aggregate. Restore subgrade by compaction with a hand operated vibratory compactor.
4. Place 1/2" isolation material only at ends of city blocks abutting pedestrian ramp areas or to isolate driveway concrete.
5. Clean in-place vertical slab surfaces. Place structural concrete. Finish to grade, slope, and texture. Apply curb.
6. Restore joints by green sawing or hand tooling to match existing joint pattern.

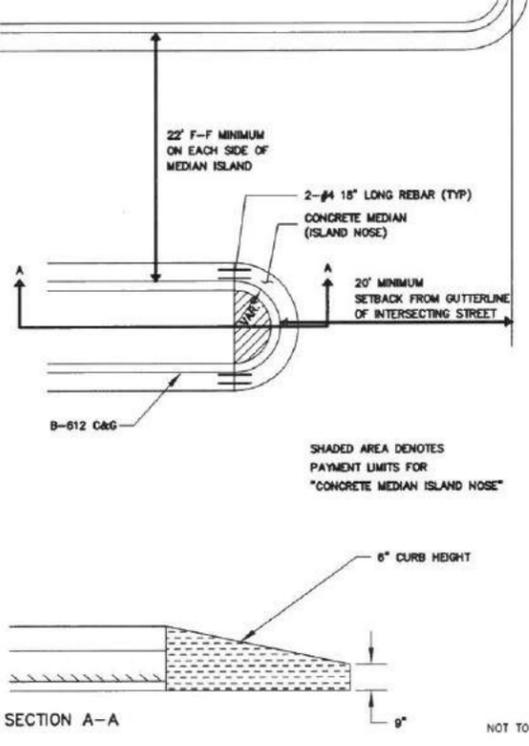
BASIS OF PAYMENT

Measurement and payment shall be incidental to the contract unless otherwise specified in the Special Conditions.

2501 Curb and Gutter Repair Type SA-CG In. Ft.



TYPICAL CROSS SECTIONS FOR SIDEWALKS



TYPICAL CONCRETE MEDIAN ISLAND NOSE

NO	DATE	BY	CKD	REVISION

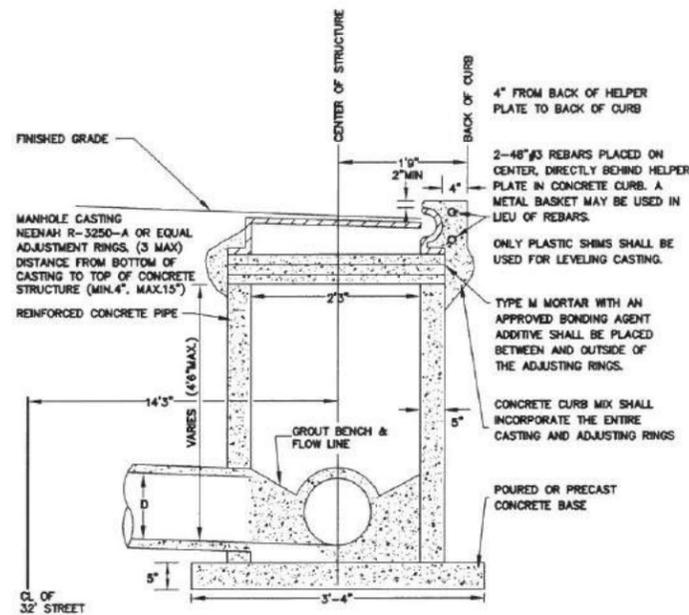
CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

TYPED NAME CRAIG RUNNAKKO
 DATE 1-25-2016 LIC. NO. 26155
 JESSE STRUVE, P.E. CITY ENGINEER

DETAIL SHEET

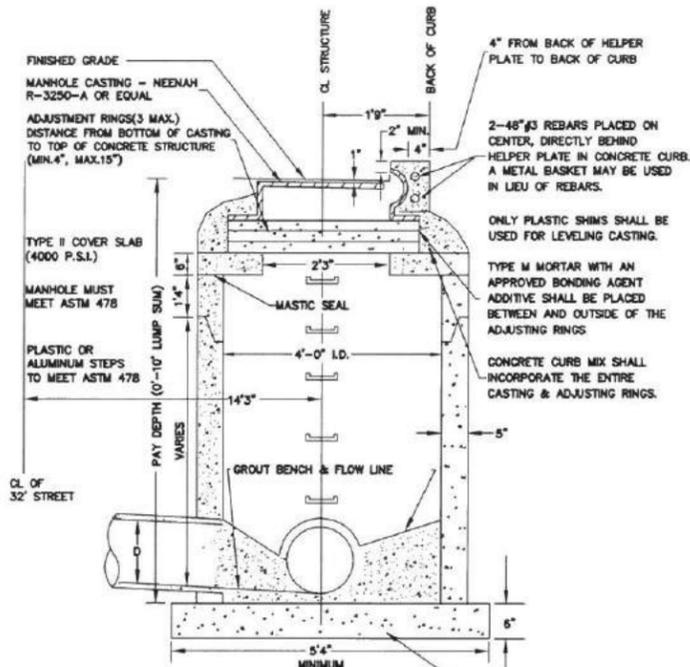
CAPITAL IMPROV. NO. 4002-16	DRAWN BY IDS	DATE APPROVED 1-25-2016	SHEET 6
STATE AID PROJ. NO. 110-102-014	DESIGNED BY CER	HORIZ. SCALE	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE	
110-137-004			
189-128-002			



OPENINGS IN RINGS FOR PURPOSES OF TEMPORARILY DRAINING STREETS CREATED BY THE USE OF A MECHANICAL DRILL. JACKHAMMERING OR CHISELING WILL NOT BE ALLOWED.

SHALLOW CATCH BASIN

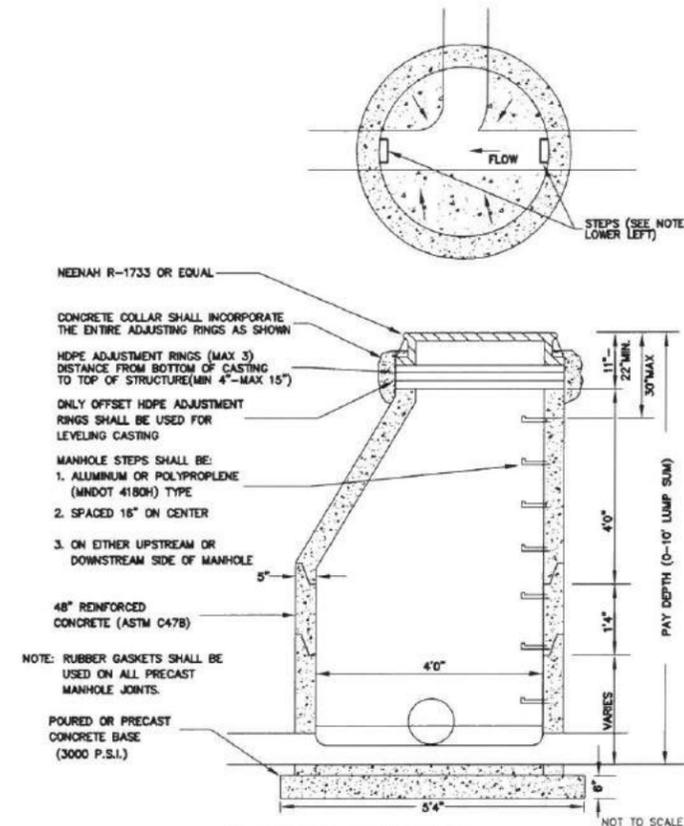
NOT TO SCALE



OPENINGS IN RINGS FOR PURPOSES OF TEMPORARILY DRAINING STREETS CREATED BY THE USE OF A MECHANICAL DRILL. JACKHAMMERING OR CHISELING WILL NOT BE ALLOWED.

STANDARD CATCH BASIN

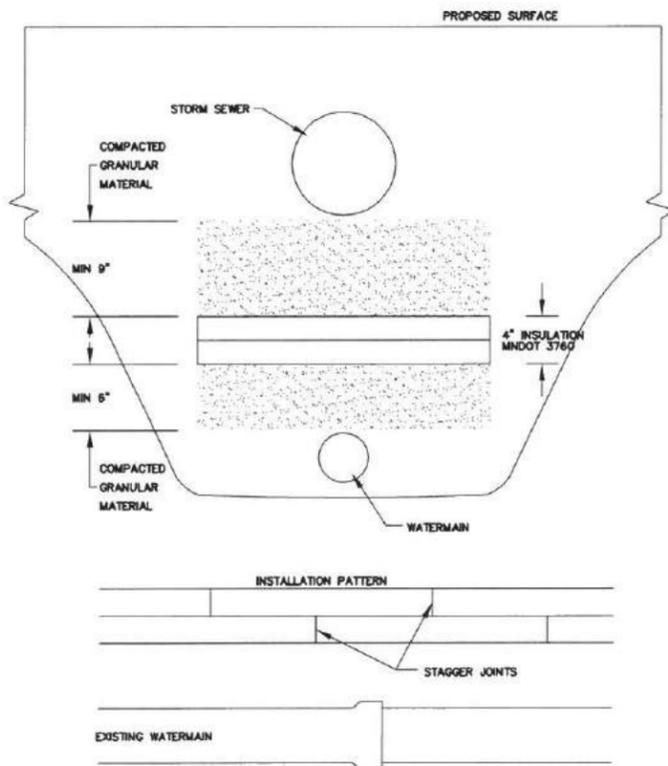
NOT TO SCALE



STANDARD MANHOLE

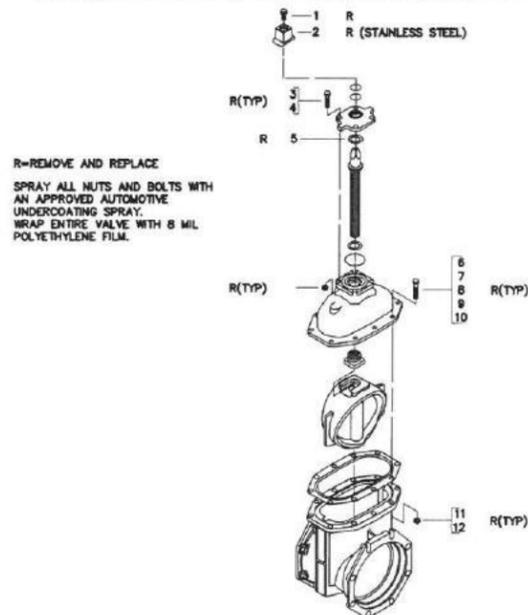
NOT TO SCALE

REF #	DESCRIPTION	DIA (IN)	LENGTH - PITCH (INCH)	REPLACEMENT MATERIAL	TYPICAL QUANTITY				
					4"	6"	8"	10"	12"
1	HEX HEAD BOLT	5/8-11	1	16-8 STAINLESS STEEL	1	1	1	1	1
2	OPERATING NUT, 2" SQUARE	5/8-11	1.75	STAINLESS STEEL	1	1	1	1	1
3	HEX HEAD BOLT	5/8-11	1.75	16-8 STAINLESS STEEL	2	2	2	-	-
4	HEX HEAD BOLT	5/8-11	2	16-8 STAINLESS STEEL	-	-	-	4	4
5	THRUST WASHER	-	-	16-8 STAINLESS STEEL	2	2	2	2	2
6	HEX HEAD BOLT	5/8-11	2	16-8 STAINLESS STEEL	4	-	-	-	-
7	HEX HEAD BOLT	5/8-11	2.25	16-8 STAINLESS STEEL	-	6	-	-	-
8	HEX HEAD BOLT	5/8-11	2.50	16-8 STAINLESS STEEL	-	-	8	-	-
9	HEX HEAD BOLT	5/8-11	2.75	16-8 STAINLESS STEEL	-	-	-	10	-
10	HEX HEAD BOLT	3/4-10	3	16-8 STAINLESS STEEL	-	-	-	-	10
11	HEX NUT	5/8-11	-	16-8 STAINLESS STEEL	6	8	10	14	4
12	HEX NUT	3/4-10	-	16-8 STAINLESS STEEL	-	-	-	-	10



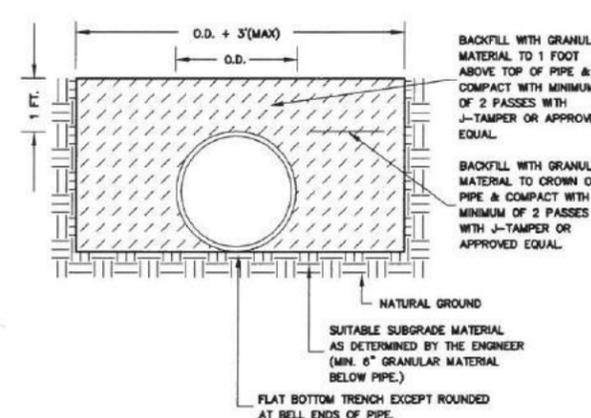
WATERMAIN INSULATION

NOT TO SCALE



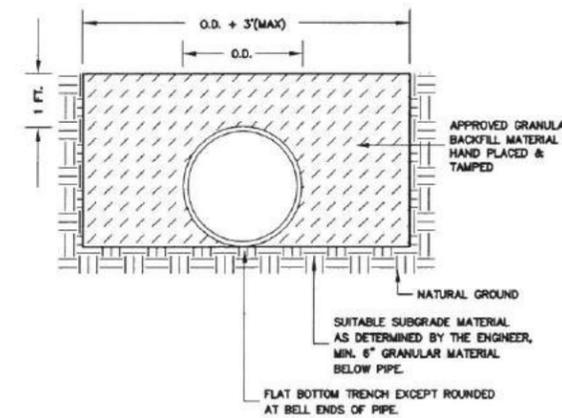
4"-12" GATE VALVE RE-BOLTING DETAIL

NOT TO SCALE



BEDDING FOR 8" PIPE AND LARGER

NOT TO SCALE



BEDDING FOR 4"-6" PIPE

NOT TO SCALE

NO	DATE	BY	CKD	REVISION

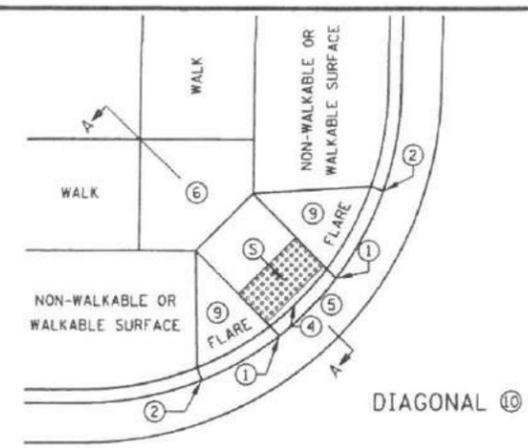
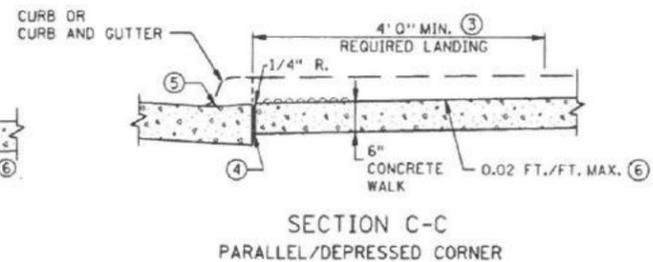
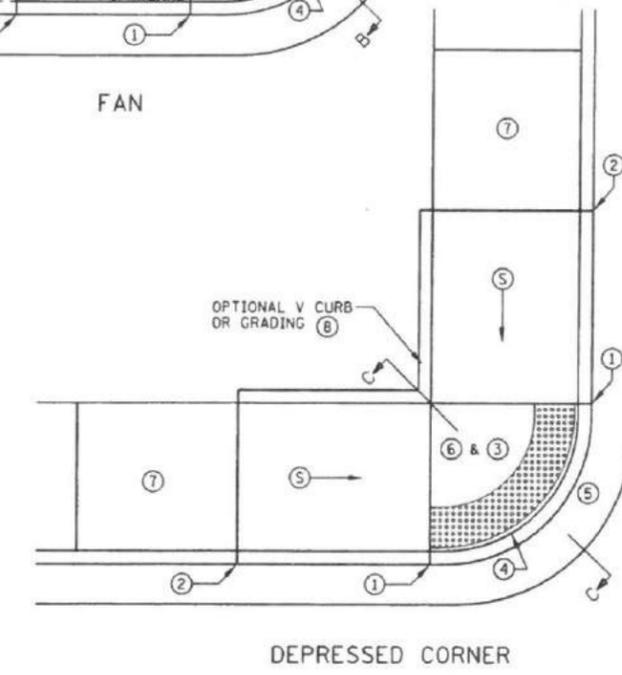
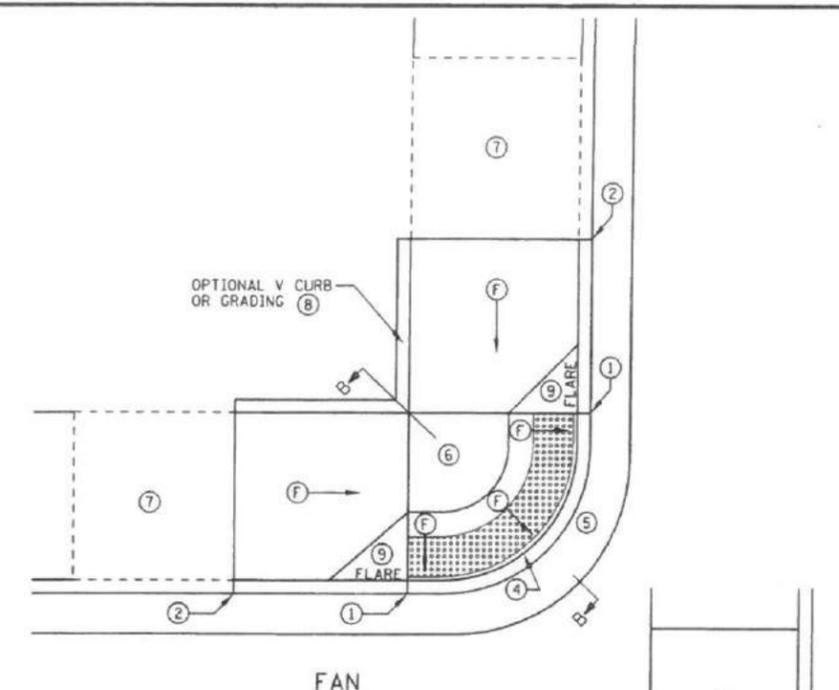
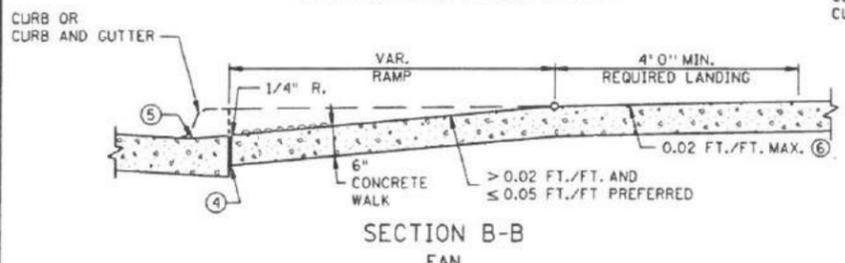
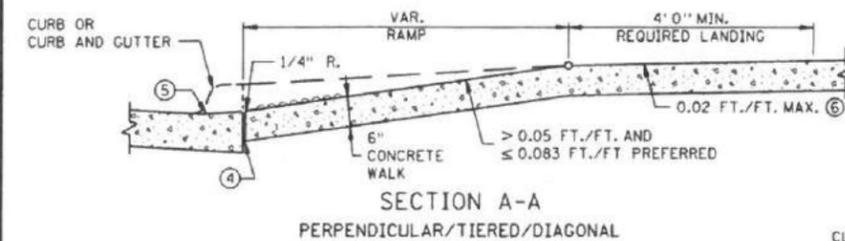
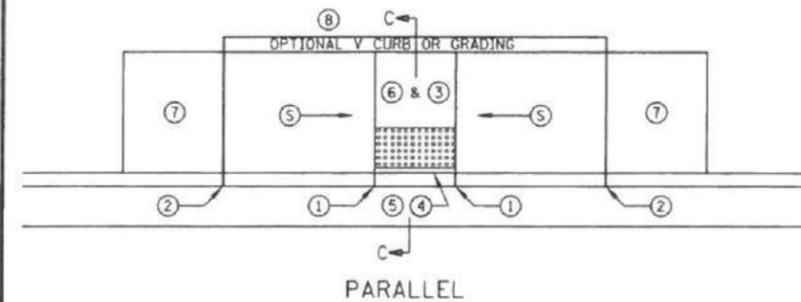
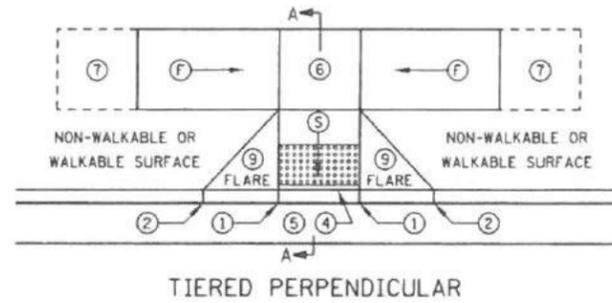
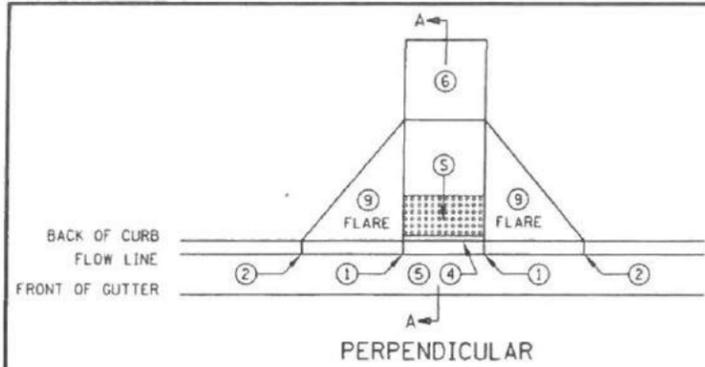
CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME CRAIG RUNNAKKO
 DATE 1-25-2016 LIC. NO. 26155
 JESSE STRUVE, P.E. CITY ENGINEER

DETAIL SHEET

CAPITAL IMPROV. NO. 4002-16	DRAWN BY IDS	DATE APPROVED 1-25-2016	SHEET 7
STATE AID PROJ. NO. 110-102-014	DESIGNED BY CER	HORIZ. SCALE	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE	
110-137-004			
189-128-002			



- NOTES:
- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.
 - INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.
 - SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.
 - CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS.
 - ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL.
 - TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 5 WHEN LANDINGS ARE CAST SEPARATELY.
 - ALL SLOPES ARE ABSOLUTE, RATHER THAN RELATIVE TO SIDEWALK/ROADWAY GRADES.
 - TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
 - 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MINIMUM OF 24" IN THE PATH OF TRAVEL. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.
 - SEE STANDARD PLATE 703B AND SHEET 4 OF 5 FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.
 - ① 0" CURB HEIGHT.
 - ② FULL CURB HEIGHT.
 - ③ DETECTABLE WARNINGS MAY BE PART OF 4' X 4' LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
 - ④ 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.
 - ⑤ SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.
 - ⑥ 4' BY 4' MIN. LANDING WITH MAX. 2.0% SLOPE IN ALL DIRECTIONS.
 - ⑦ IF LONGITUDINAL SLOPE IS GREATER THAN 5.0%, 4' X 4' MIN. LANDING WITH MAX 2.0% SLOPE IN ALL DIRECTIONS REQUIRED.
 - ⑧ V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. SEE SHEET 5 OF 5.
 - ⑨ SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
 - ⑩ DIAGONAL RAMPS SHOULD ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.

LEGEND	
⑤	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%
⑦	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%

REVISION:

APPROVED: B-E-2014

Mark Johnson
OPERATIONS ENGINEER

REVISION:

APPROVED: 8-6-2014

Christina By
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

STANDARD PLAN 5-297.250

1 OF 5

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION

Brooklyn Park

5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

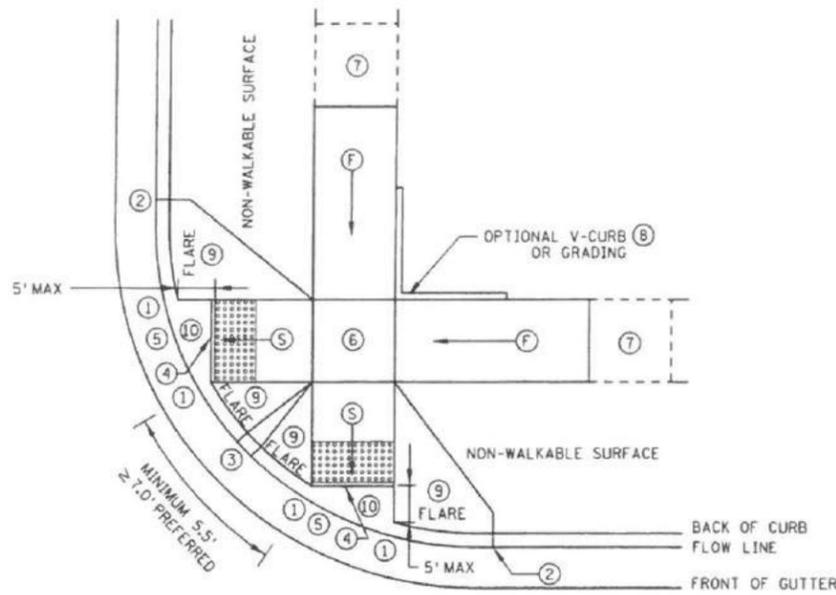
TYPED NAME: CRAIG RUNNAKKO

DATE: 1-25-2015 LIC. NO. 28155

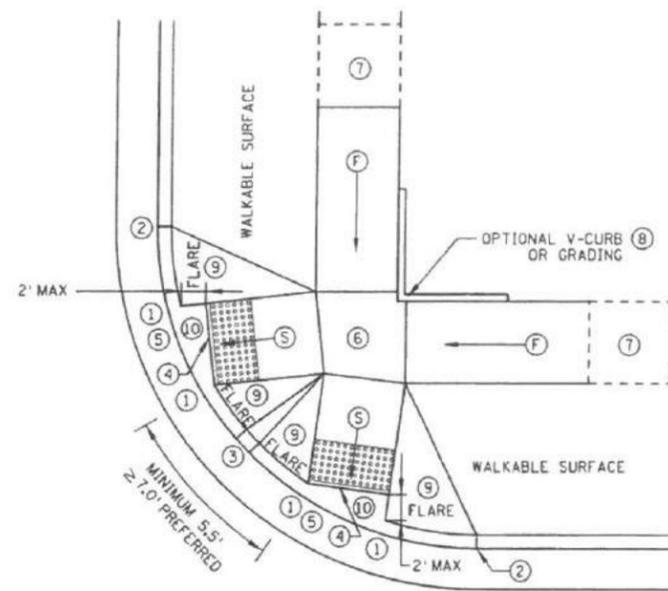
JESSE STRUVE, P.E. CITY ENGINEER

PEDESTRIAN CURB RAMP DETAILS

CAPITAL IMPROV. NO. 4002-16	DRAWN BY IDS	DATE APPROVED 1-25-2016	SHEET 8
STATE AID PROJ. NO. 110-102-014	DESIGNED BY CER	HORIZ. SCALE	OF 55
110-102-115	CHECKED BY CER	VERT. SCALE	
110-137-004			
189-128-002			

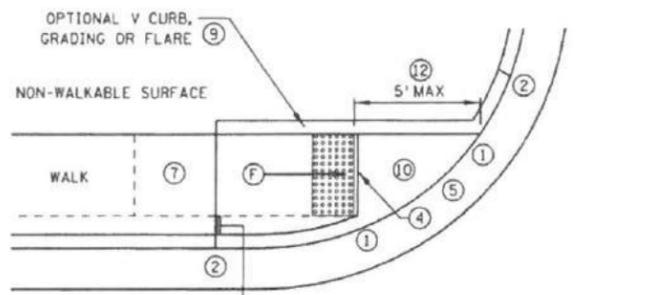


ADJACENT TO NON-WALKABLE SURFACE



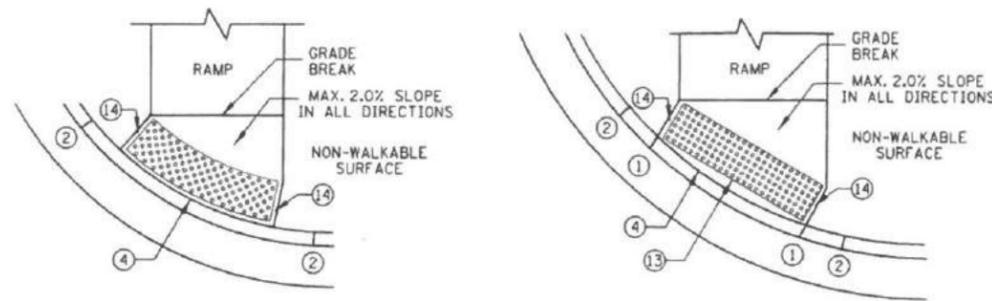
ADJACENT TO WALKABLE SURFACE

COMBINED DIRECTIONAL 15

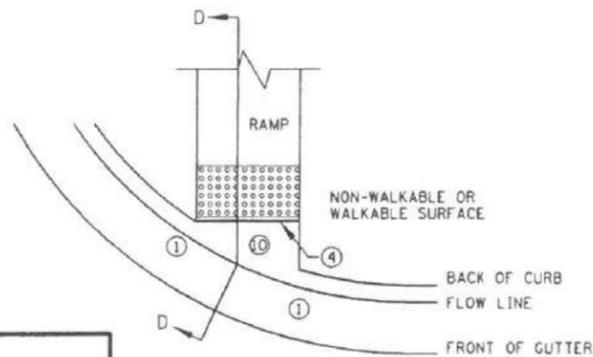


ONE-WAY DIRECTIONAL

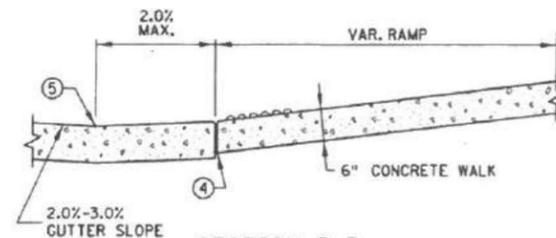
IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.



DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED



CURB FOR DIRECTIONAL RAMPS 11



SECTION D-D

NOTES:

- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.
- INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.
- SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS.
- ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL.
- TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 5 WHEN LANDINGS ARE CAST SEPARATELY.
- ALL SLOPES ARE ABSOLUTE, RATHER THAN RELATIVE TO SIDEWALK/ROADWAY GRADES.
- TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
- 4" MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MINIMUM OF 24" IN THE PATH OF TRAVEL. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.
- SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.
- 1 0" CURB HEIGHT.
- 2 FULL CURB HEIGHT.
- 3 3" MINIMUM CURB HEIGHT, 4" PREFERRED.
- 4 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MIN. TO 6" MAX. FROM THE BACK OF CURB.
- 5 SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.
- 6 4' BY 4' MIN. LANDING WITH MAX. 2.0% SLOPE IN ALL DIRECTIONS.
- 7 IF LONGITUDINAL SLOPE IS GREATER THAN 5.0%, 4' X 4' MIN. LANDING WITH MAX 2.0% SLOPE IN ALL DIRECTIONS REQUIRED.
- 8 V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
- 9 SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
- 10 MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
- 11 TO BE USED FOR ALL DIRECTIONAL RAMPS.
- 12 PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
- 13 RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.
- 14 WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- 15 FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER.

LEGEND

- THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.
- S INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%
- F INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%

REVISION:
APPROVED: 8-6-2014
[Signature]
OPERATIONS ENGINEER

REVISOR:
[Signature]
APPROVED:
8-6-2014
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS
STANDARD PLAN 5-297.250 2 OF 5

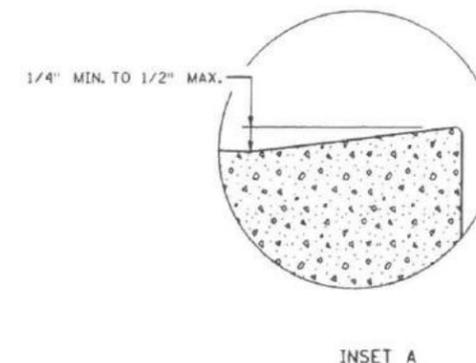
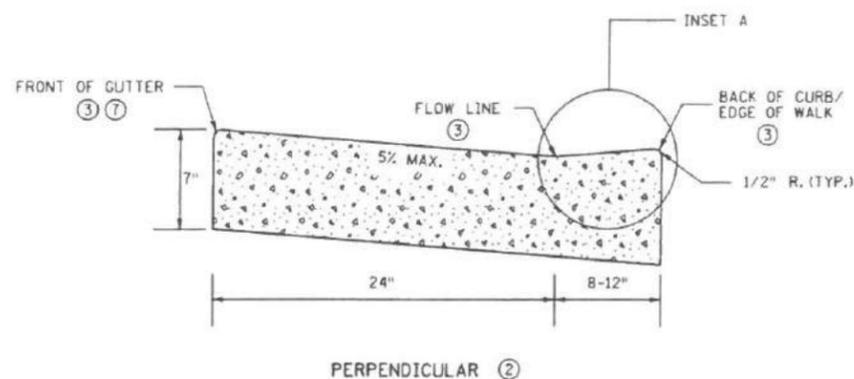
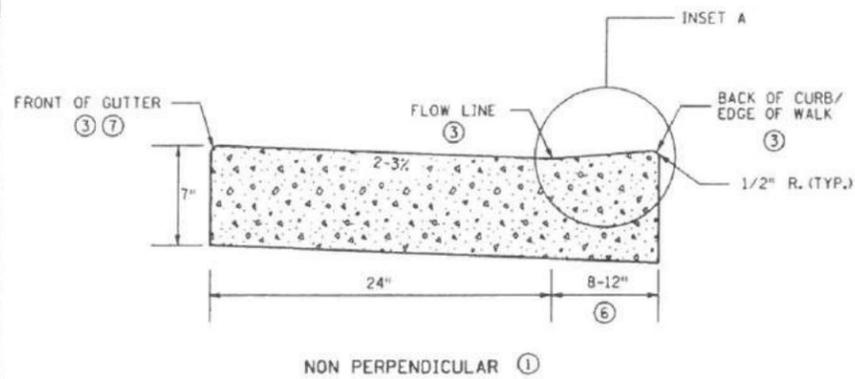
NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

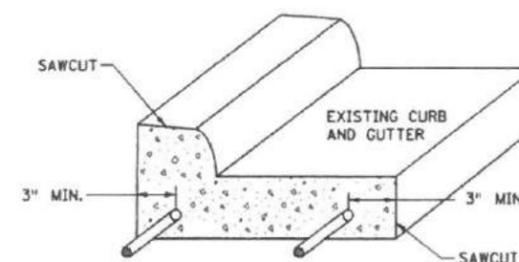
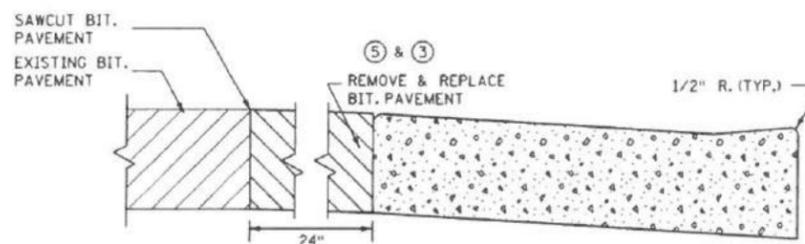
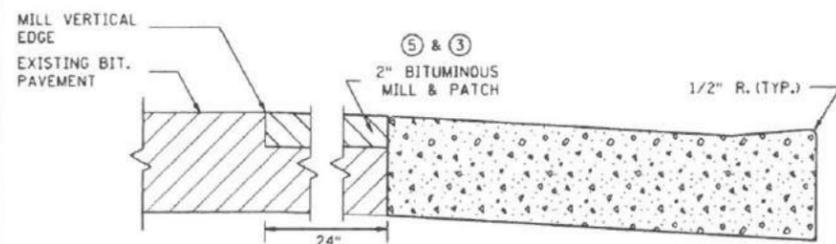
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
TYPED NAME: CRAIG RUNNAKKO
DATE: 1-25-2016 LIC. NO. 26155
JESSE STRUVE, P.E. CITY ENGINEER

PEDESTRIAN CURB RAMP DETAILS

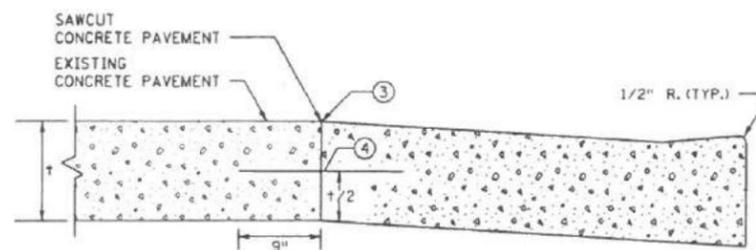
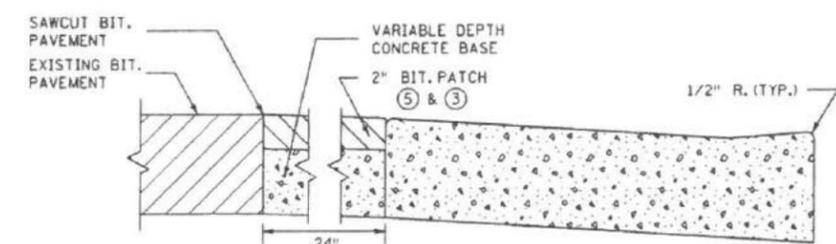
CAPITAL IMPROV. NO. 4002-16	DRAWN BY IDS	DATE APPROVED 1-25-2016	SHEET 9
STATE AID PROJ. NO. 110-102-014	DESIGNED BY CER	HORIZ. SCALE	OF 55
110-102-115	CHECKED BY CER	VERT. SCALE	
110-137-004			
189-128-002			



PEDESTRIAN ACCESS ROUTE
CURB & GUTTER DETAIL



CURB AND GUTTER
REINFORCEMENT
FOR USE ON CURB RAMP RETROFITS



PAVEMENT TREATMENT OPTIONS
IN FRONT OF CURB & GUTTER
FOR USE ON CURB RAMP RETROFITS

NOTES:

- POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM.
- NO PONDING SHALL BE PRESENT IN THE PAR.
- ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.
- ① FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS, DEPRESSED CORNERS, & ONE WAY AND COMBINED DIRECTIONALS.
- ② FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMPS.
- ③ THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4\".
- ④ DRILL AND GROUT NO. 4 EPOXY-COATED 18\" LONG TIE BARS AT 30\" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT.
- ⑤ ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.
- ⑥ VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS.
- ⑦ TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. PAR GUTTER SHALL NOT BE OVERLAID.
- ⑧ WHERE PLAN SPECIFIES, DRILL AND GROUT 2 - NO. 4 X 12\" LONG REINFORCEMENT BARS (EPOXY COATED).

REVISION:
APPROVED: 8-6-2014
[Signature]
OPERATIONS ENGINEER

REVISION:
APPROVED: 8-6-2014
[Signature]
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS
STANDARD PLAN 5-297.250 3 OF 5

NO	DATE	BY	CKD	REVISION

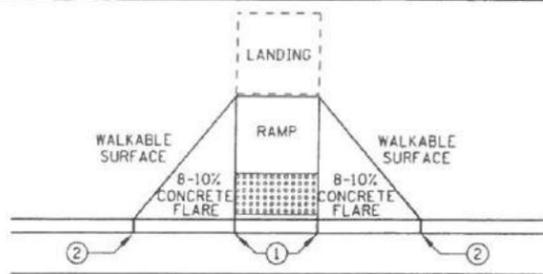
CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
TYPED NAME: CRAIG RUNNAKKO
DATE: 1-25-2016 LIC. NO. 26155
JESSE STRUVE, P.E. CITY ENGINEER

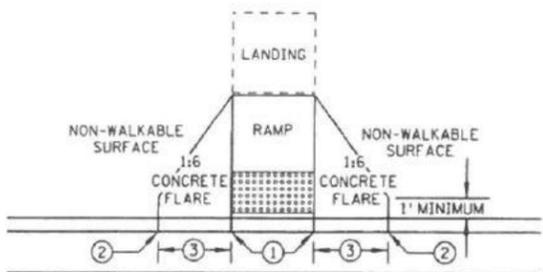
PEDESTRIAN CURB RAMP DETAILS

CAPITAL IMPROV. NO. 4002-16
STATE AID PROJ. NO. 110-102-014
110-102-115
110-137-004
189-128-002
DRAWN BY: IDS
DESIGNED BY: CER
CHECKED BY: CER
DATE APPROVED: 1-25-2016
HORIZ. SCALE
VERT. SCALE

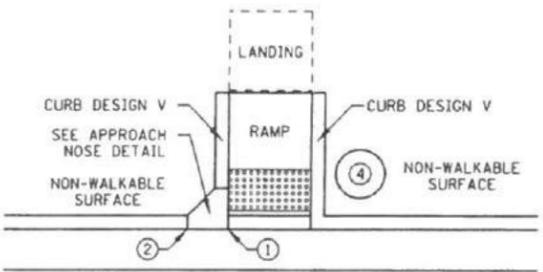
SHEET 10 OF 55



PAVED FLARES ADJACENT TO WALKABLE SURFACE

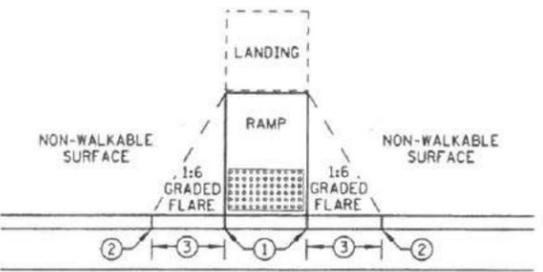


PAVED FLARES ADJACENT TO NON-WALKABLE SURFACE



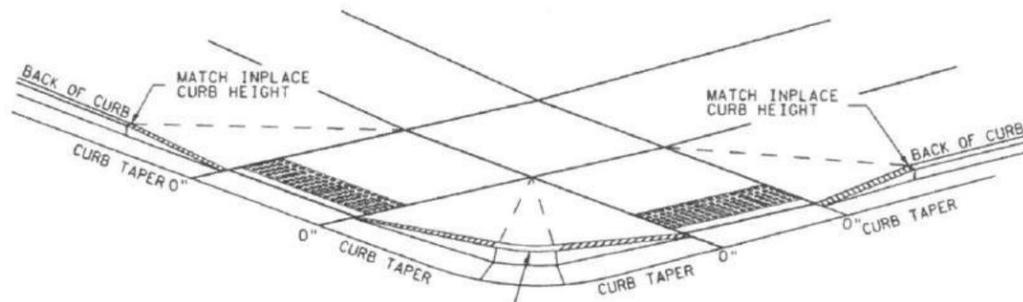
DIRECTION OF TRAFFIC

RETURNED CURB



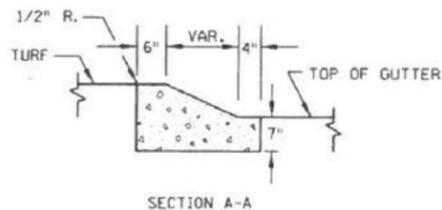
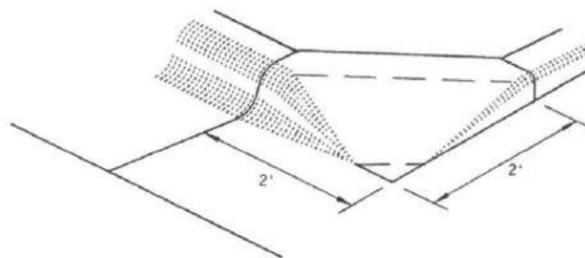
GRADED FLARES

TYPICAL SIDE TREATMENT OPTIONS ⑤

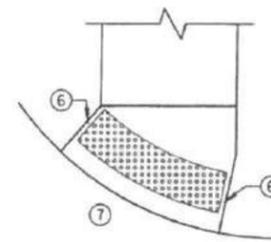
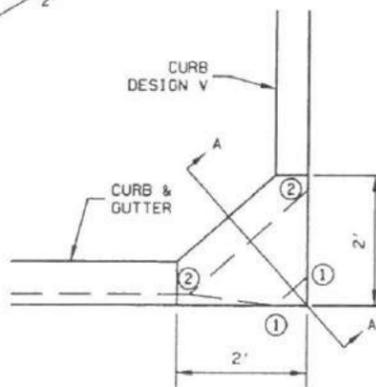


3" MINIMUM CURB HEIGHT, 4" PREFERRED (MEASURED AT FRONT FACE OF CURB) FOR A MIN. 6" LENGTH (MEASURED ALONG FLOW LINE)

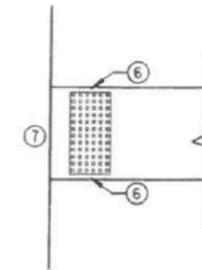
DETECTABLE EDGE WITH CURB AND GUTTER ⑧



APPROACH NOSE DETAIL FOR DOWNSTREAM SIDE OF TRAFFIC



RADIAL DETECTABLE WARNING



RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

NOTES:

SEE STANDARD PLAN 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING. WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER. CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

- ① 0" CURB HEIGHT.
- ② FULL CURB HEIGHT.
- ③ 2' - 3' FLARE.
- ④ IMMOVABLE OBJECT OR OBSTRUCTION.
- ⑤ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED ON ALL RAMPS AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.
- ⑥ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑦ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF ROADWAY TO PROVIDE VISUAL CONTRAST.
- ⑧ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.

REVISIONS:
APPROVED: 8-6-2014
[Signature]
OPERATIONS ENGINEER

REVISIONS:
APPROVED: 8-6-2014
[Signature]
CRAIG RUNNAKCO
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS
STANDARD PLAN 5-297.250 4 OF 5

NO	DATE	BY	CKD	REVISION

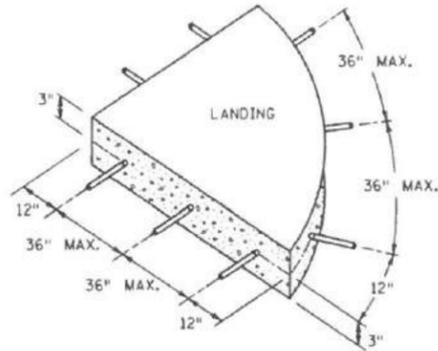
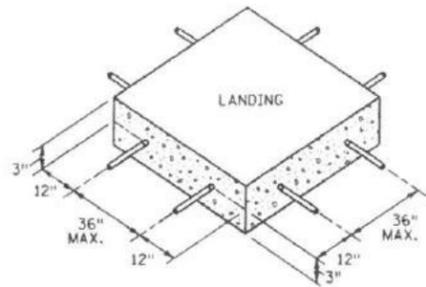
CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
TYPED NAME: CRAIG RUNNAKCO
DATE: 1-25-2016 LIC. NO. 26155
JESSE STRUVE, P.E. CITY ENGINEER

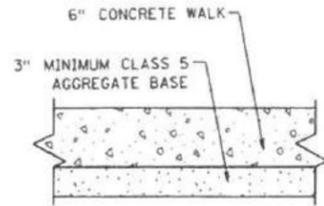
PEDESTRIAN CURB RAMP DETAILS

CAPITAL IMPROV. NO. 4002-16
STATE AID PROJ. NO. 110-102-014
110-102-115
110-137-004
189-128-002
DRAWN BY: IDS
DESIGNED BY: CER
CHECKED BY: CER
DATE APPROVED: 1-25-2016
HORIZ. SCALE
VERT. SCALE

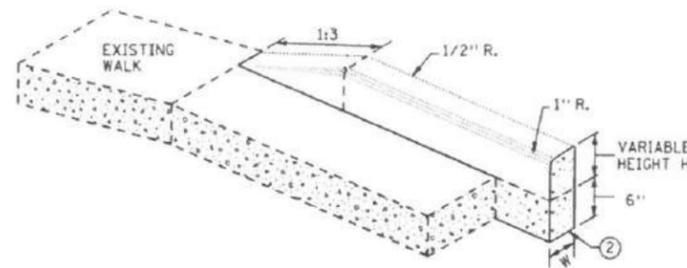
SHEET 11 OF 55



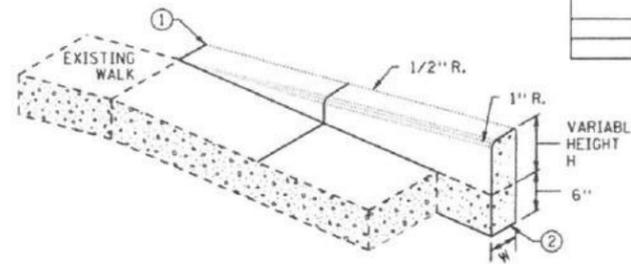
SIDWALK REINFORCEMENT ⑤ ⑥



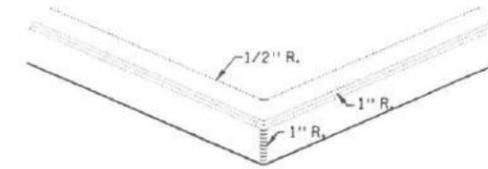
TYPICAL SIDWALK SECTION WITHIN INTERSECTION CORNER



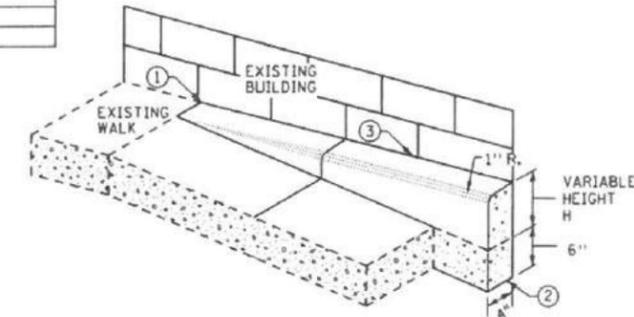
V CURB ADJACENT TO LANDSCAPE
CURB WITHIN SIDEWALK LIMITS



V CURB ADJACENT TO LANDSCAPE
CURB OUTSIDE SIDEWALK LIMITS

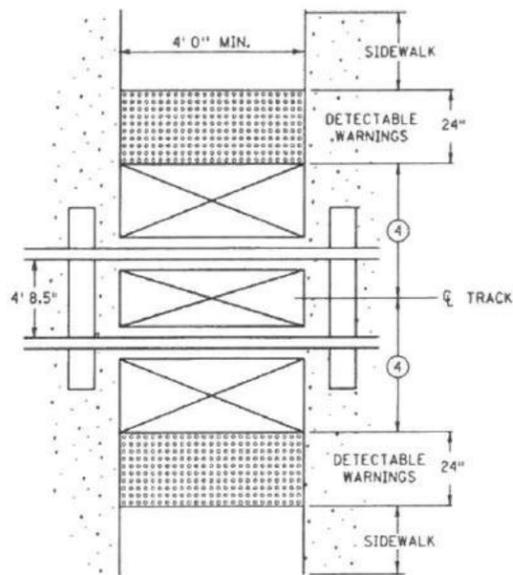


V CURB INTERSECTION

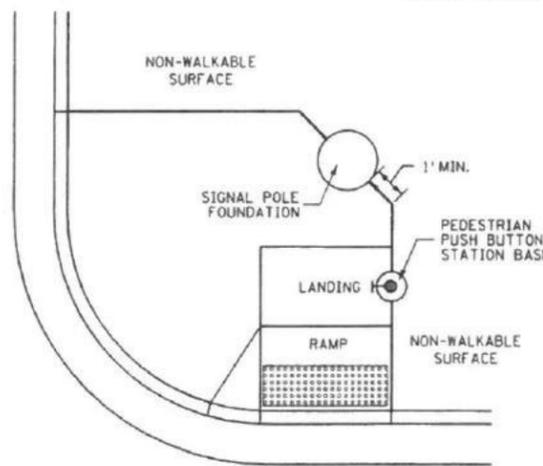


V CURB ADJACENT TO BUILDING
OR BARRIER

CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



RAILROAD CROSSING
PLAN VIEW



CONCRETE WALK EDGES ADJACENT
TO CONCRETE STRUCTURES

NOTES:

- ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.
- WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.
- V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
- V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.
- ① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.
- ② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.
- ③ EDGE BETWEEN NEW V CURB AND INPLACE STRUCTURE SHALL BE SEALED AND BOND BREAKER SHALL BE USED BETWEEN EXISTING STRUCTURE AND PLACED V-CURB.
- ④ EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 15' MAXIMUM FROM THE CENTERLINE OF THE TRACK. WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 17" - 19" FROM THE APPROACHING SIDE OF THE GATE ARM.
- ⑤ WHEN PLAN SPECIFIES, DRILL AND GROUT NO. 4 12" LONG REINFORCEMENT BARS AT 36" MAX. CENTER TO CENTER (EPOXY COATED).
- ⑥ TO ENSURE RAMP AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET WHEN LANDINGS ARE CAST SEPARATELY.

REVISION:
APPROVED: 8-6-2014
[Signature]
OPERATIONS ENGINEER

REVISION:
[Signature]
STATE DESIGN ENGINEER
APPROVED: 8-6-2014

PEDESTRIAN CURB RAMP DETAILS
STANDARD PLAN 5-297.250 5 OF 5

NO	DATE	BY	CKD	REVISION

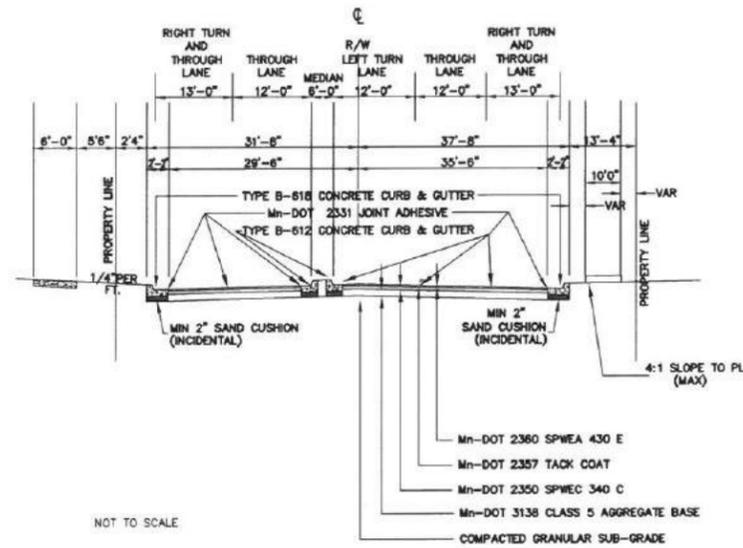
CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
TYPED NAME: CRAIG RUNNAKKO
DATE: 1-25-2016 LIC. NO. 26155
JESSE STRUVE, P.E. CITY ENGINEER

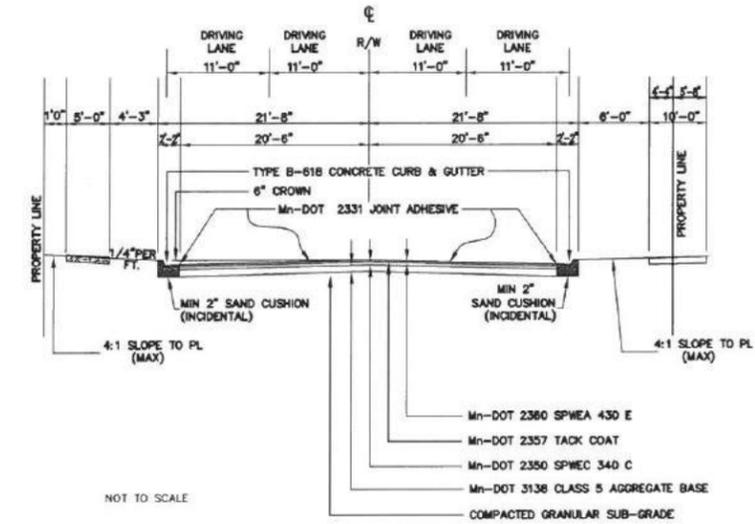
PEDESTRIAN CURB RAMP DETAILS

CAPITAL IMPROV. NO. 4002-16
STATE AID PROJ. NO. 110-102-014
110-102-115
110-137-004
189-128-002
DRAWN BY: IDS
DESIGNED BY: CER
CHECKED BY: CER
DATE APPROVED: 1-25-2016
HORIZ. SCALE
VERT. SCALE

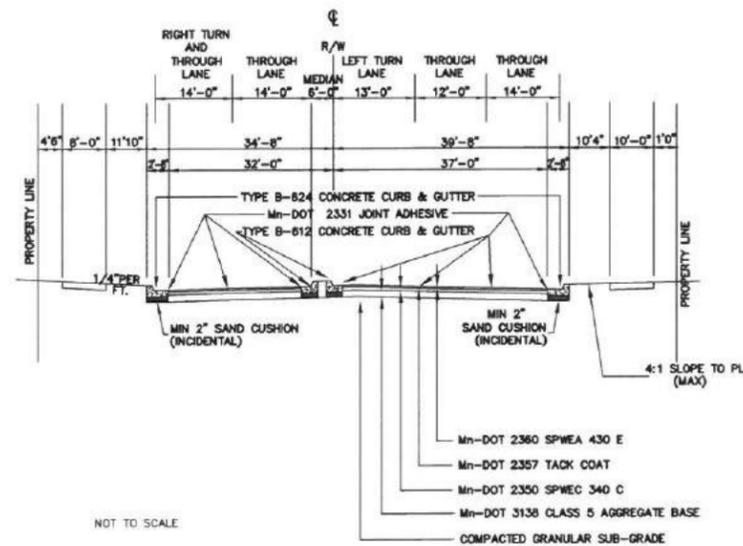
SHEET 12 OF 55



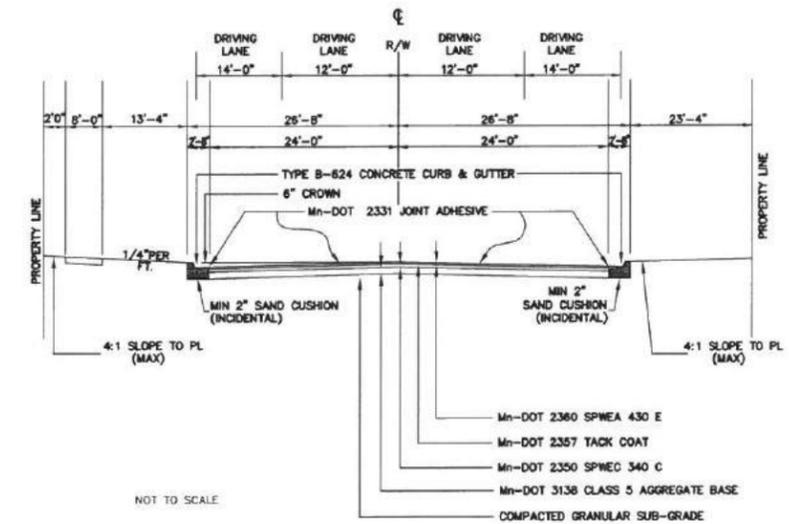
**TYPICAL COMMERCIAL AND MEDIUM DENSITY 68' ROADWAY (F-F)
ZANE AVENUE WITH LEFT TURN LANE**



**TYPICAL COMMERCIAL AND MEDIUM DENSITY 44' ROADWAY (F-F)
ZANE AVE**



**TYPICAL COMMERCIAL AND MEDIUM DENSITY 73' ROADWAY (F-F)
JEFFERSON HIGHWAY WITH LEFT TURN LANE**



**TYPICAL COMMERCIAL AND MEDIUM DENSITY ROADWAY
JEFFERSON HIGHWAY**

NO	DATE	BY	CKD	REVISION

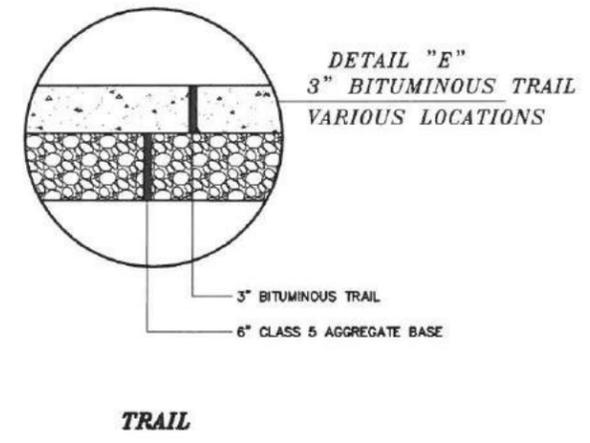
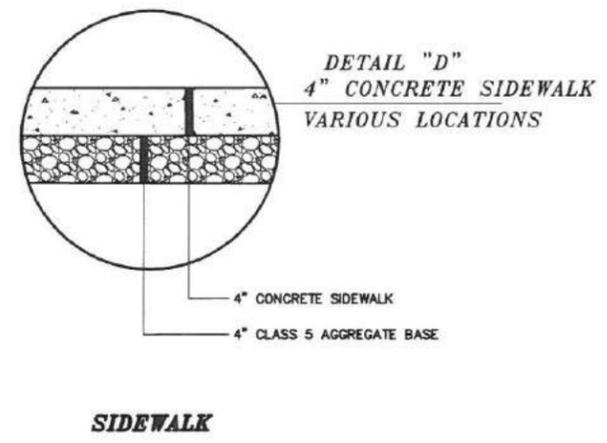
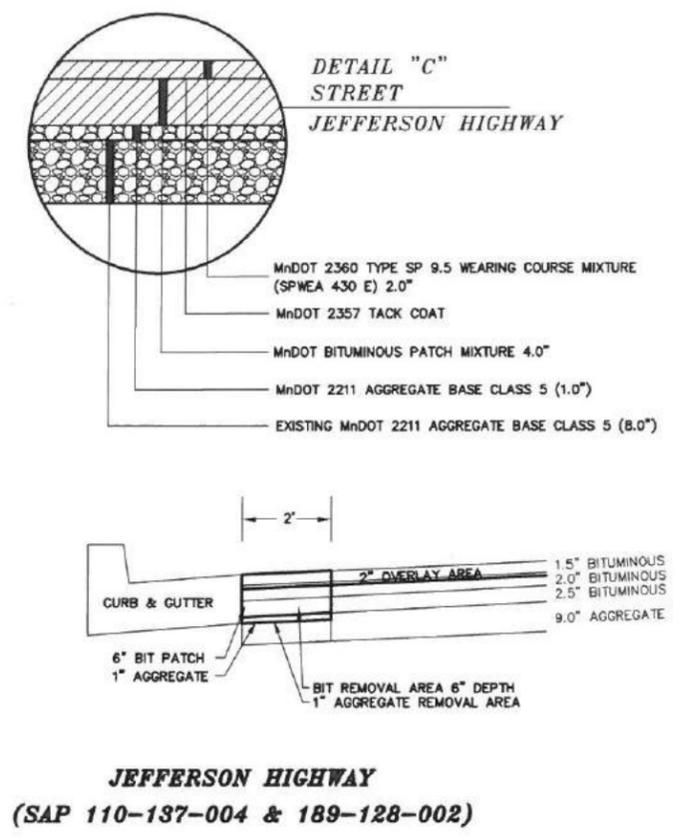
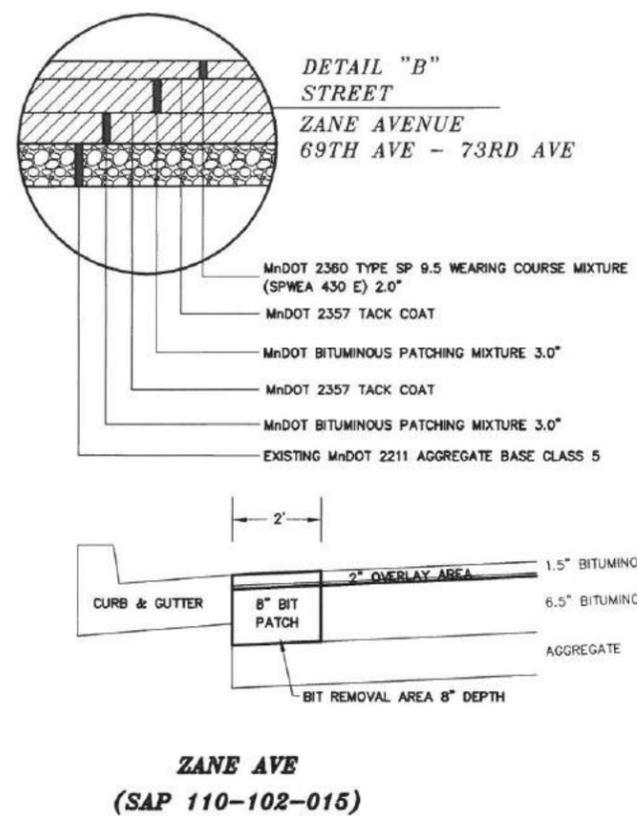
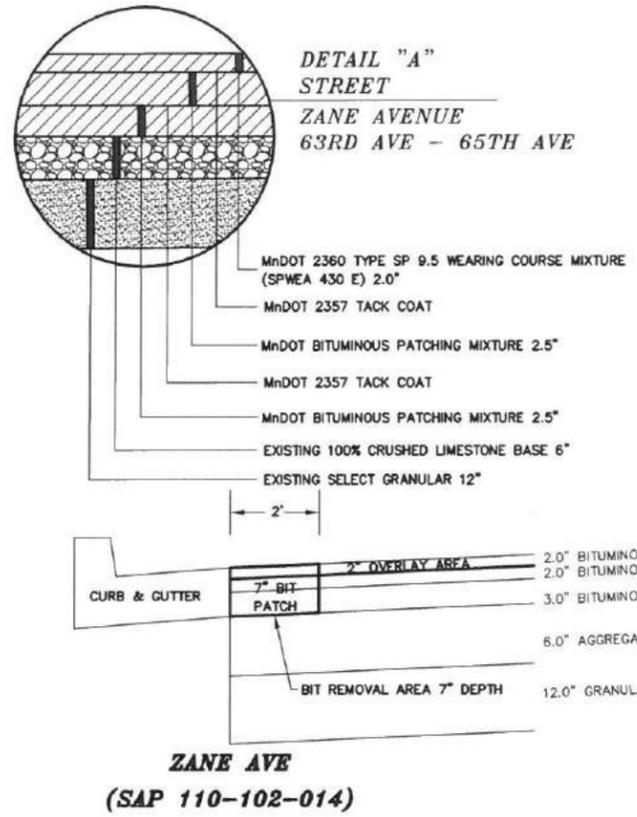
**CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION**
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME CRAIG RUNNAKKO
 DATE 1-25-2016 LIC. NO. 26155
 JESSE STRUVE, P.E. CITY ENGINEER

DETAIL SHEET

CAPITAL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
110-102-015
110-137-004
189-128-002
 DRAWN BY IDS
 DESIGNED BY CER
 CHECKED BY JMS
 DATE APPROVED 1-25-2016
 HORIZ. SCALE
 VERT. SCALE

SHEET 13 OF 55



NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION

Brooklyn Park 5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME CRAIG RUNNAKKO
DATE 1-25-2016 LIC. NO. 26155
JESSE STRUVE, P.E. CITY ENGINEER

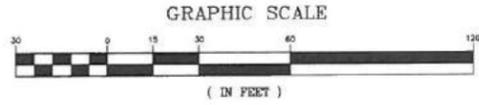
DETAIL SHEET

CAPITAL IMPROV. NO. 4002-16
STATE AID PROJ. NO. 110-102-014
110-102-015
110-137-004
189-128-002

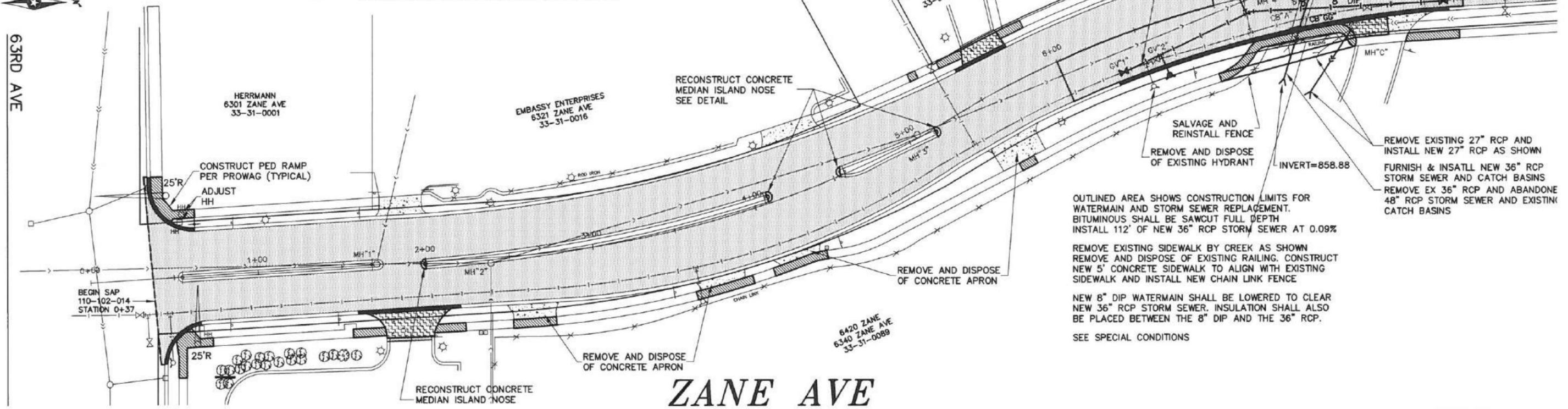
DRAWN BY IDS DATE APPROVED 1-25-2016
DESIGNED BY CER HORIZ. SCALE
CHECKED BY JMS VERT. SCALE

SHEET **14** OF **55**

STA 0+37 - STA 16+07
CONSTRUCT BIT MILL & OVERLAY
MNDOT 2360 SPWEA430E 2.0"

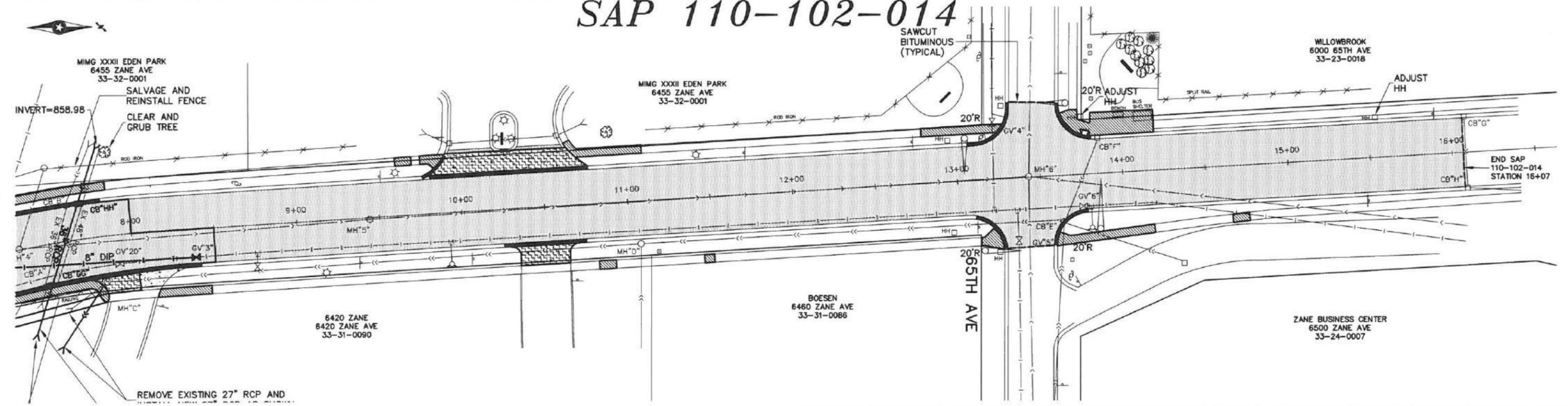


- BITUMINOUS STREET MILL & OVERLAY
- CONCRETE SIDEWALK REMOVAL & REPLACEMENT
- CONCRETE MEDIAN REMOVAL & REPLACEMENT
- CONCRETE APRON REMOVAL & REPLACEMENT
- CONCRETE CURB & GUTTER REMOVAL & REPLACEMENT



ZANE AVE

SAP 110-102-014



NO	DATE	BY	CKD	REVISION

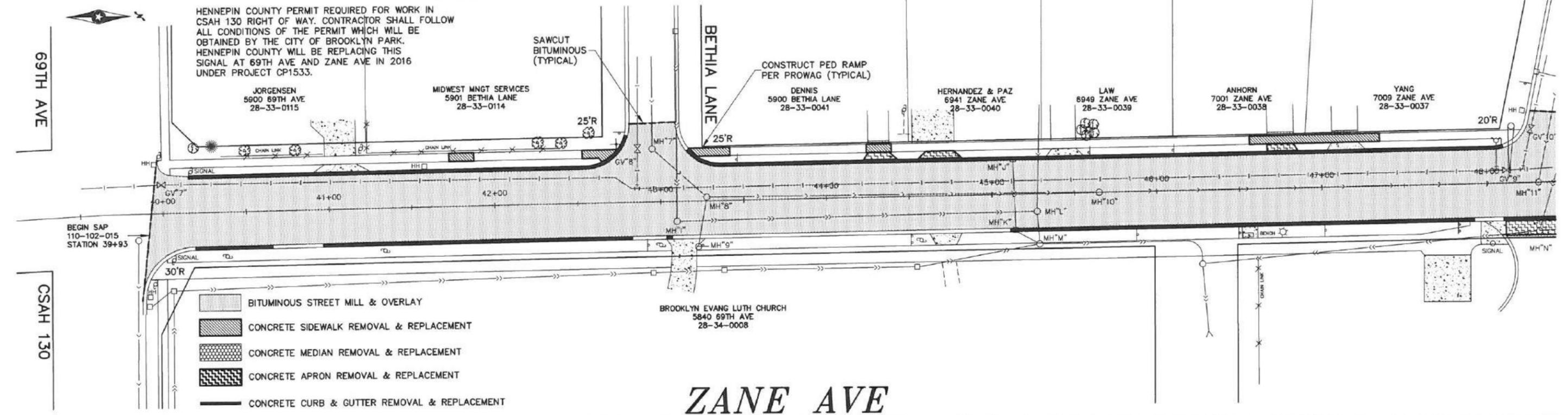
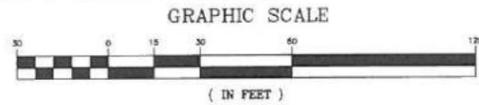
CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: **CRAIG RUNNAKGO**
 DATE: **1-25-2016** LIC. NO. **26155**
 JESSE STRUVE, P.E. CITY ENGINEER

CONSTRUCTION PLAN
ZANE AVE
63RD AVE - 73RD AVE
STATION 0+37 - 16+07

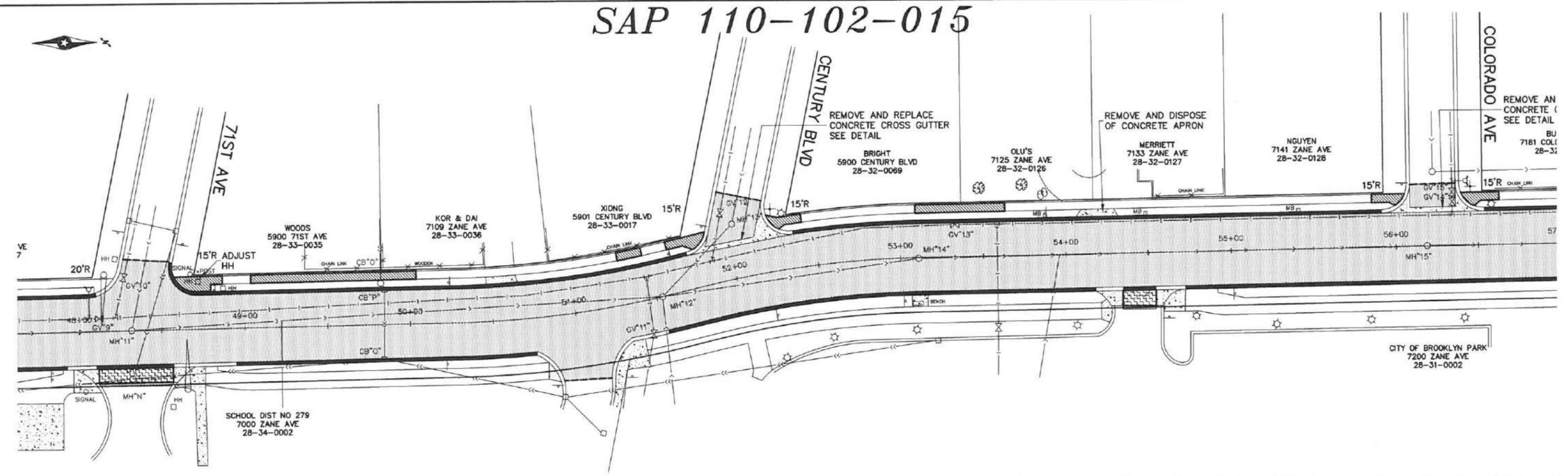
CAPITAL IMPROV. NO. 4002-16	DRAWN BY IDS	DATE APPROVED 1-25-2016	SHEET 15 OF 55
STATE AID PROJ. NO. 110-102-014	DESIGNED BY CER	HORIZ. SCALE 1"=30'	
110-102-015	CHECKED BY JMS	VERT. SCALE	
110-137-004			

STA 39+93 - STA 56+00
CONSTRUCT BIT MILL & OVERLAY
MNDOT 2360 SPWEA430E 2.0"



ZANE AVE

SAP 110-102-015



NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

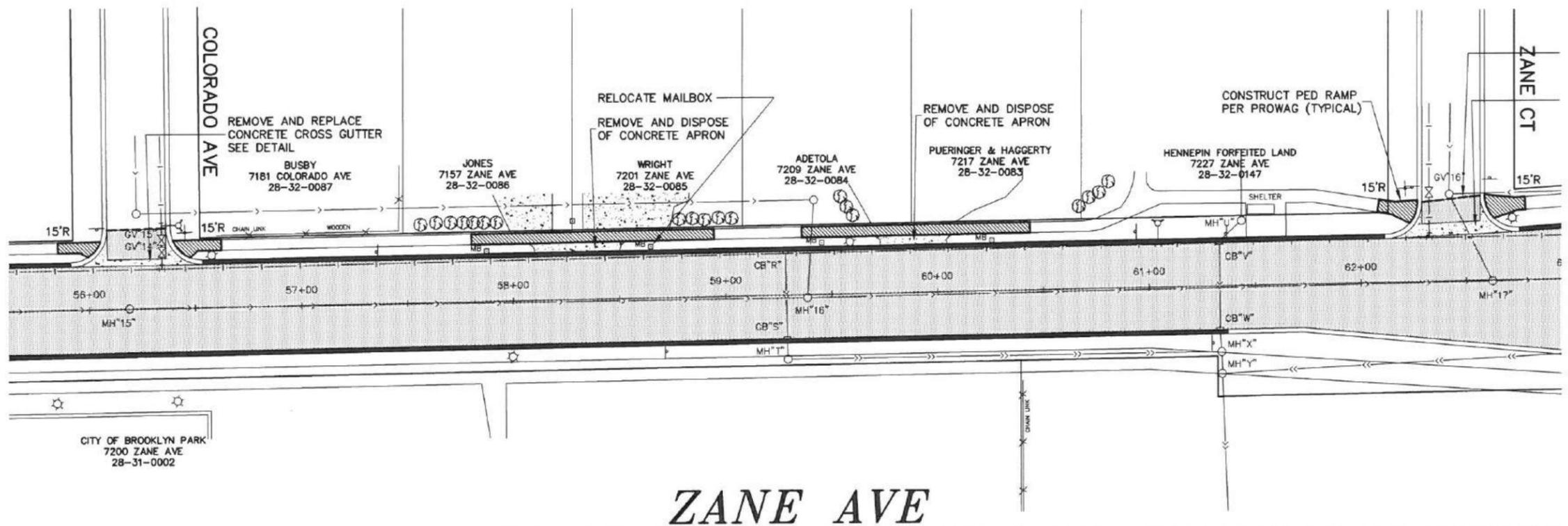
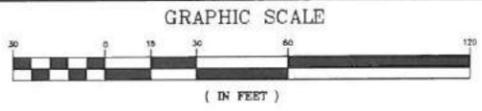
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME CRAIG RUNNAKKO
 DATE 1-25-2016 LIC. NO. 26155
 JESSE STRUVE, P.E. CITY ENGINEER

CONSTRUCTION PLAN
ZANE AVE
63RD AVE - 73RD AVE
STATION 39+93 - 56+00

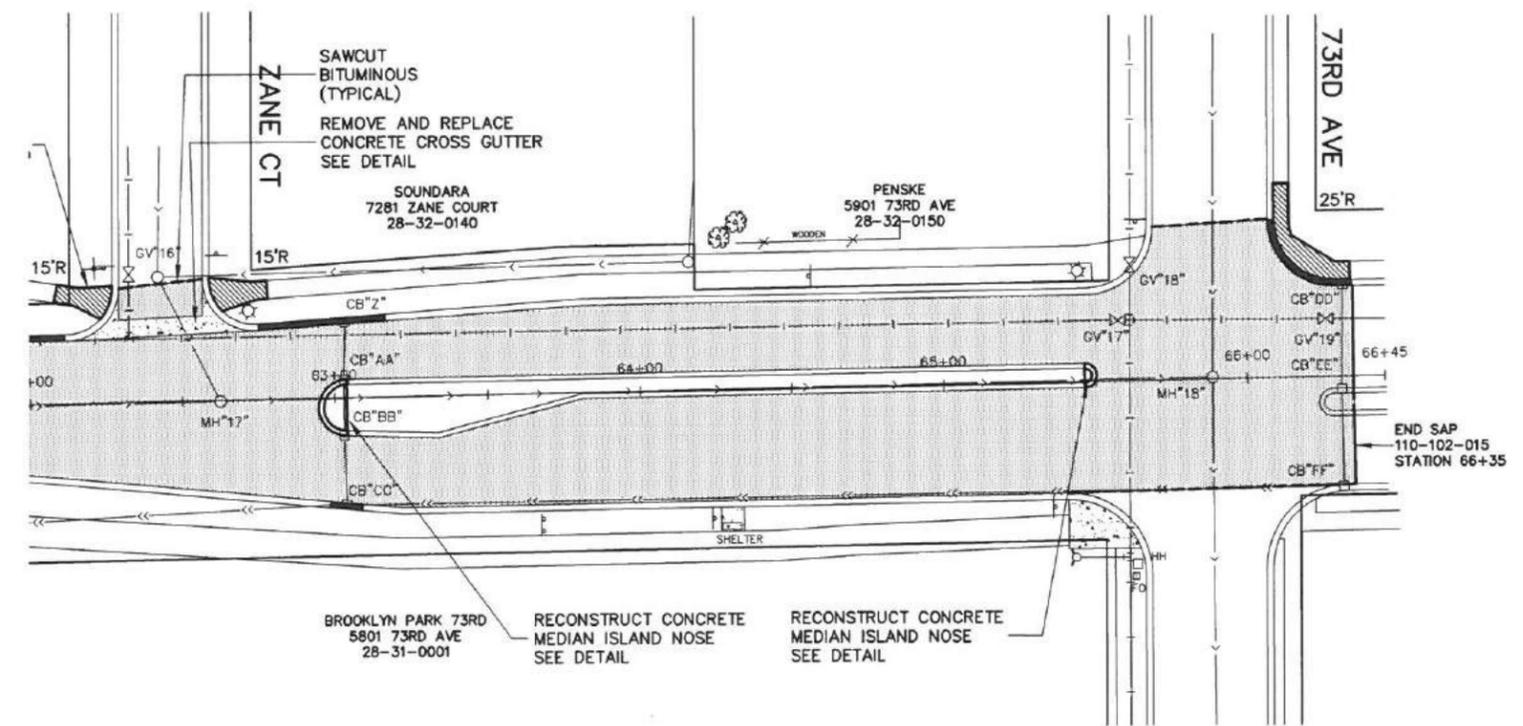
CAPITAL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
110-102-015
110-137-004
189-126-002
 DRAWN BY IDS
 DESIGNED BY CER
 CHECKED BY JMS
 DATE APPROVED 1-25-2016
 HORIZ. SCALE 1"=30'
 VERT. SCALE

SHEET **16** OF **55**

STA 56+00 - STA 66+35
 CONSTRUCT BIT MILL & OVERLAY
 MNDOT 2360 SPWEA430E 2.0"



ZANE AVE SAP 110-102-015



- BITUMINOUS STREET MILL & OVERLAY
- CONCRETE SIDEWALK REMOVAL & REPLACEMENT
- CONCRETE MEDIAN REMOVAL & REPLACEMENT
- CONCRETE APRON REMOVAL & REPLACEMENT
- CONCRETE CURB & GUTTER REMOVAL & REPLACEMENT

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION

Brooklyn Park

5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

TYPED NAME CRAIG RUNNAKKO

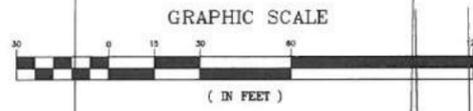
DATE 1-25-2016 LIC. NO. 26155

JESSE STRUVE, P.E. CITY ENGINEER

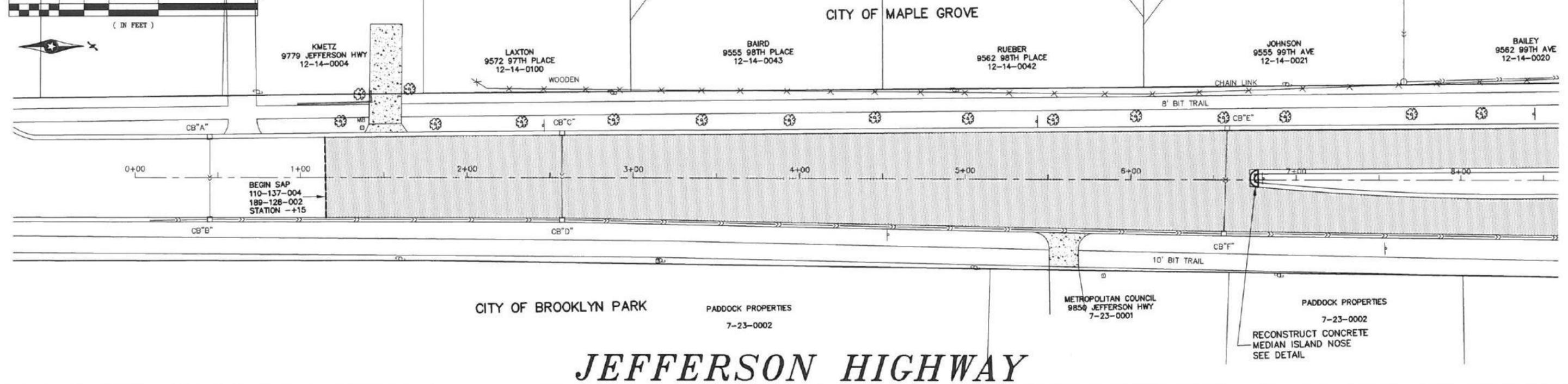
CONSTRUCTION PLAN
ZANE AVE
 63RD AVE - 73RD AVE
 STATION 56+00 - 66+35

CAPITAL IMPROV. NO. 4002-16	DRAWN BY IDS	DATE APPROVED 1-25-2016	SHEET 17
STATE AID PROJ. NO. 110-102-014	DESIGNED BY CER	HORIZ. SCALE 1"=30'	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE	

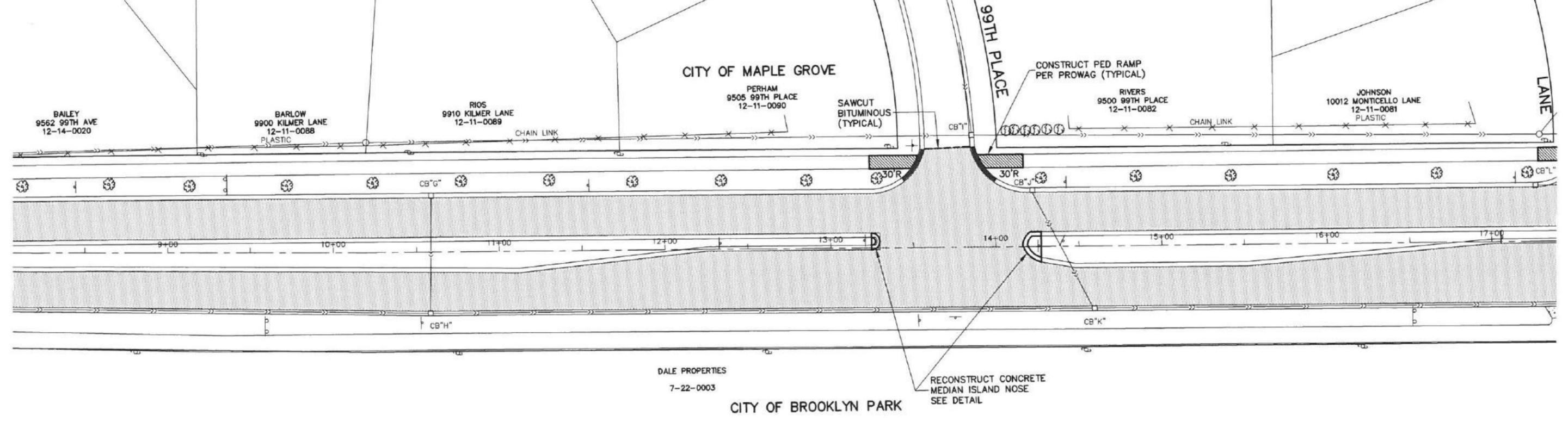
STA 1+15 - STA 17+00
CONSTRUCT BIT MILL & OVERLAY
MNDOT 2360 SPWEA430E 2.0"



- BITUMINOUS STREET MILL & OVERLAY
- BITUMINOUS TRAIL REMOVAL & REPLACEMENT
- CONCRETE CURB & GUTTER REMOVAL & REPLACEMENT



SAP 110-137-004 & 189-128-002



NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

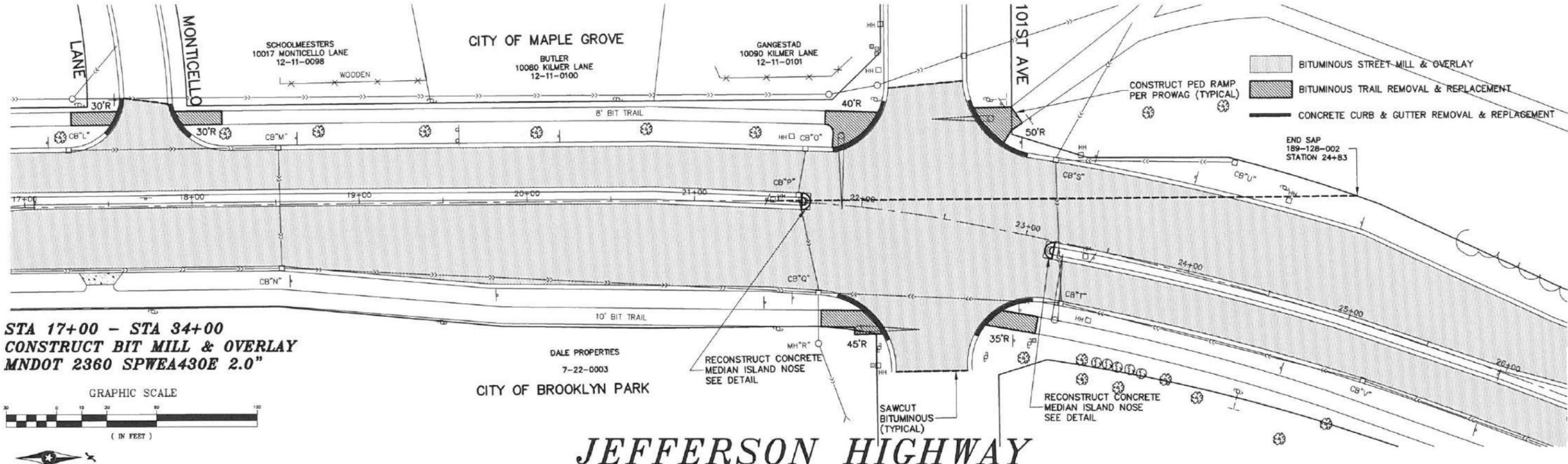
TYPED NAME **CRAIG RUNNAKKO**

DATE **1-25-2016** LIC. NO. **26155**

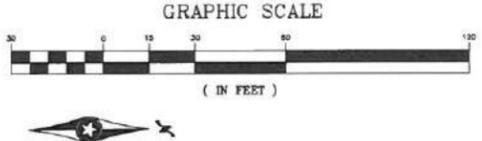
JESSE STRUVE, P.E. CITY ENGINEER

CONSTRUCTION PLAN
JEFFERSON HIGHWAY
 TH 610 - 700' SOUTH OF 109TH AVE
 STATION 1+15 - 17+00

CAPITAL IMPROV. NO. 4002-16	DRAWN BY MLR	DATE APPROVED 1-25-2016	SHEET 18 OF 55
STATE AID PROJ. NO.	DESIGNED BY CER	HORIZ. SCALE 1"=30'	
110-102-014	CHECKED BY CER	VERT. SCALE	
110-102-015			
110-137-004			

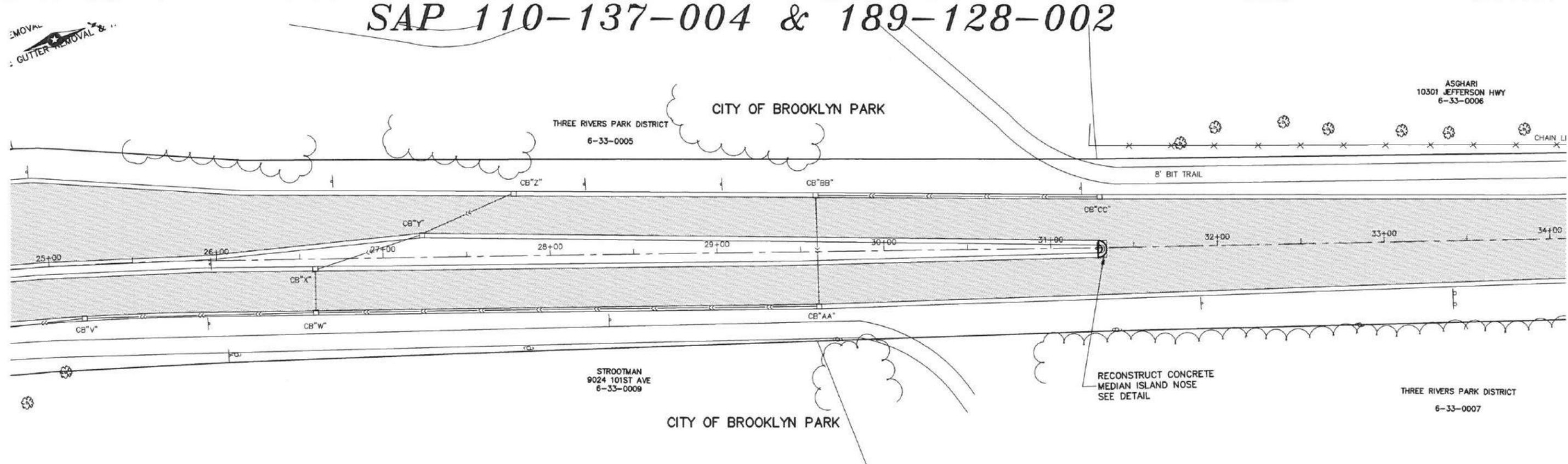


STA 17+00 - STA 34+00
 CONSTRUCT BIT MILL & OVERLAY
 MNDOT 2360 SPWEA430E 2.0"



JEFFERSON HIGHWAY

SAP 110-137-004 & 189-128-002



NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME CRAIG RUNNAKKO
 DATE 1-25-2016 LIC. NO. 26155
 JESSE STRUVE, P.E. CITY ENGINEER

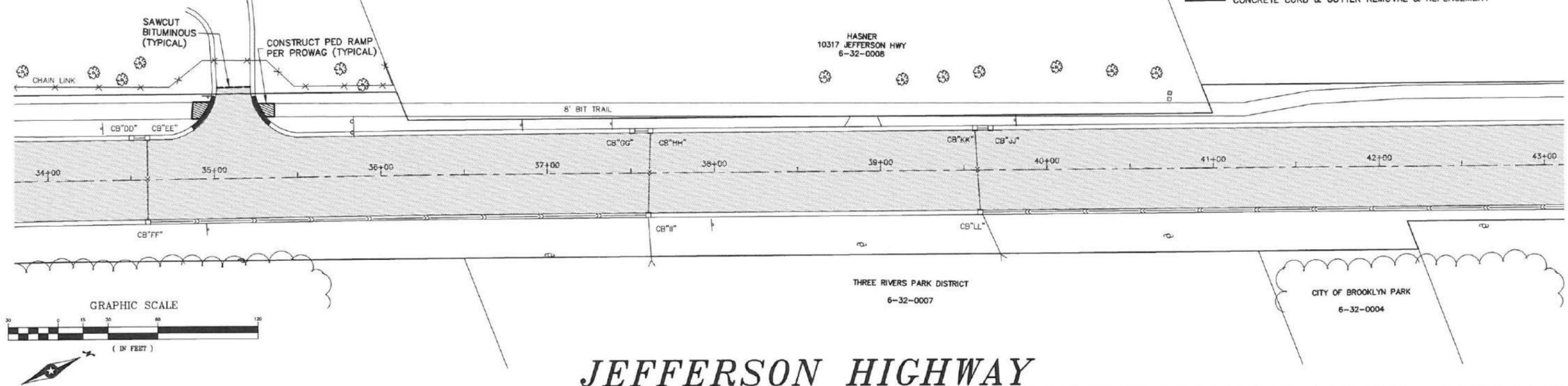
CONSTRUCTION PLAN
JEFFERSON HIGHWAY
 TH 610 - 700' SOUTH OF 109TH AVE
 STATION 17+00 - 34+00

CAPITAL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
110-102-015
110-137-004
189-128-002
 DRAWN BY MLR
 DESIGNED BY CER
 CHECKED BY CER
 DATE APPROVED 1-25-2016
 HORIZ. SCALE 1"=30'
 VERT. SCALE

SHEET **19**
 OF **55**

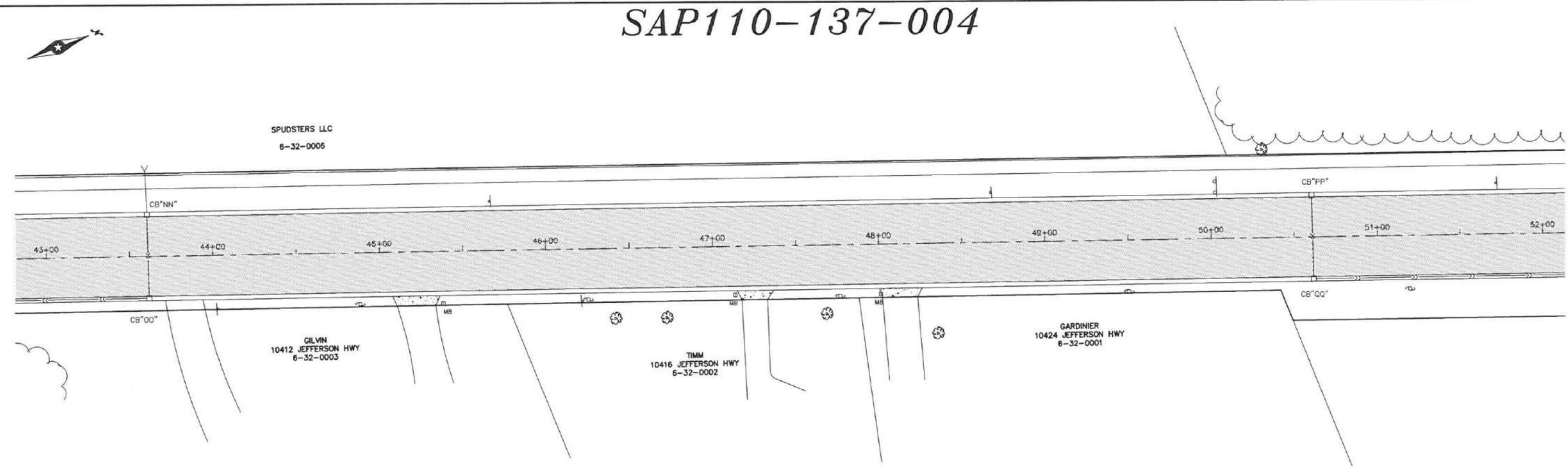
STA 34+00 - STA 52+00
 CONSTRUCT BIT MILL & OVERLAY
 MNDOT 2360 SPWEA430E 2.0"

-  BITUMINOUS STREET MILL & OVERLAY
-  BITUMINOUS TRAIL REMOVAL & REPLACEMENT
-  CONCRETE CURB & GUTTER REMOVAL & REPLACEMENT



JEFFERSON HIGHWAY

SAP110-137-004



NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION

Brooklyn Park 

5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

TYPED NAME CRAIG RUNNAKKO

DATE 1-25-2016 LIC. NO. 26155

JESSE STRUVE, P.E. CITY ENGINEER

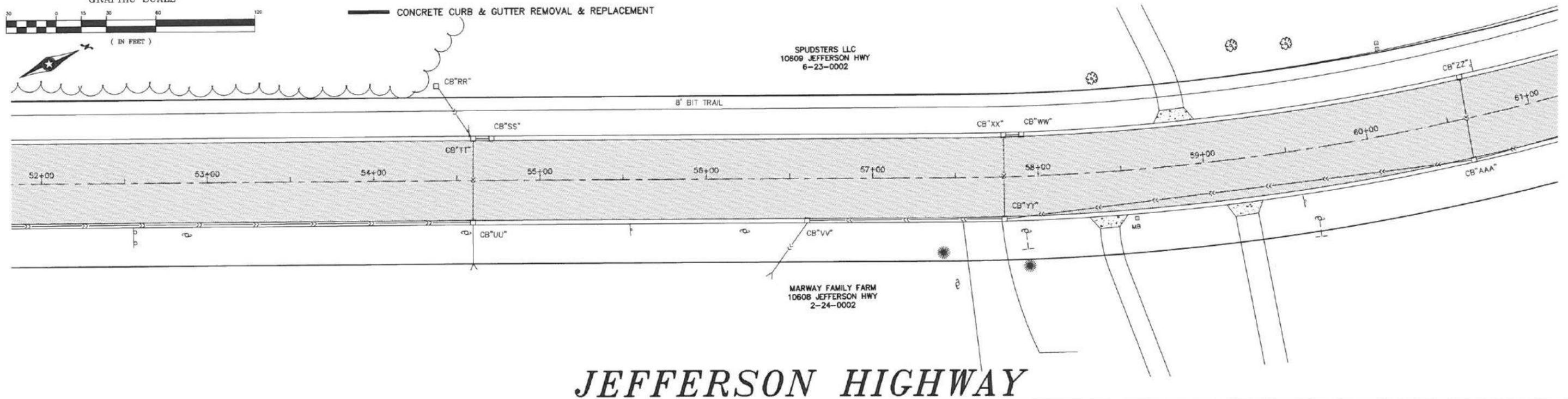
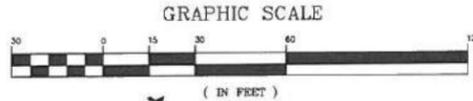
CONSTRUCTION PLAN
JEFFERSON HIGHWAY
 TH 610 - 700' SOUTH OF 109TH AVE
 STATION 34+00 - 52+00

CAPITAL IMPROV. NO. 4002-16	DRAWN BY MLR	DATE APPROVED 1-25-2016
STATE AID PROJ. NO. 110-102-014	DESIGNED BY CER	HORIZ. SCALE 1"=30'
110-137-004	CHECKED BY CER	VERT. SCALE
189-128-002		

SHEET
20
OF
55

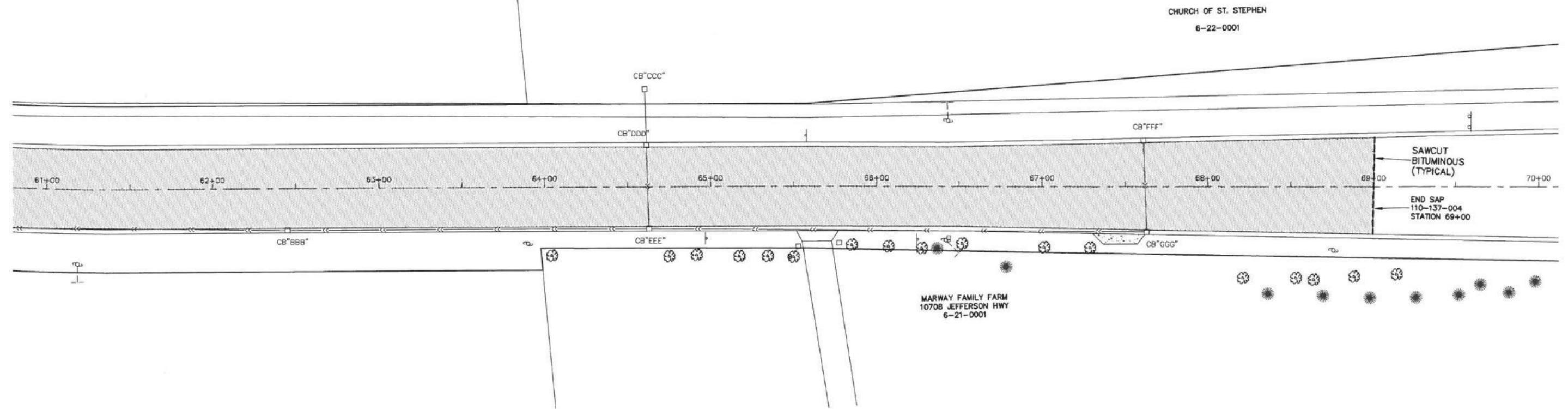
STA 52+00 - STA 69+00
 CONSTRUCT BIT MILL & OVERLAY
 MNDOT 2360 SPWEA430E 2.0"

-  BITUMINOUS STREET MILL & OVERLAY
-  BITUMINOUS TRAIL REMOVAL & REPLACEMENT
-  CONCRETE CURB & GUTTER REMOVAL & REPLACEMENT



JEFFERSON HIGHWAY

SAP 110-137-004



NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME CRAIG RUNNAKKO
 DATE 1-25-2016 LIC. NO. 26155
 JESSE STRUVE, P.E. CITY ENGINEER

CONSTRUCTION PLAN
JEFFERSON HIGHWAY
 TH 610 - 700' SOUTH OF 109TH AVE
 STATION 52+00 - 69+00

CAPITAL IMPROV. NO.
 4002-16
 STATE AID PROJ. NO.
 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY: MLR
 DESIGNED BY: CER
 CHECKED BY: CER
 DATE APPROVED: 1-25-2016
 HORIZ. SCALE: 1"=30'
 VERT. SCALE:

SHEET **21**
 OF **55**

NEW (FURNISH AND INSTALL SIGNS)				
MMUTCD CODE	SIZE	AREA SQ. FT.	QTY.	TOTAL SQ. FT.
RB-3a	24" X 24"	4.00	8	32.00
R4-7	24" X 30"	5.00	3	15.00
OM1-3	18" X 18"	2.25	3	6.75
TOTAL= 53.75				

OLD (SALVAGE AND REINSTALL SIGNS)				
MMUTCD CODE	SIZE	AREA SQ. FT.	QTY.	TOTAL SQ. FT.
R4-7	24" X 30"	5.00	2	10.00
OM1-3	18" X 18"	2.25	2	4.50
R2-1-35	24" X 30"	5.00	3	15.00
R3-7R	30" X 30"	9.00	1	9.00
MTC	16" X 24"	3.84	2	7.68
RB-3a	24" X 24"	4.00	2	8.00
TOTAL= 12				

OLD (REMOVE AND DISPOSE OF SIGNS)				
MMUTCD CODE	SIZE	UNIT	TOTAL	
R7-1	12" X 18"	EACH	9	
R4-7	24" X 30"	EACH	3	
OM1-3	18" X 18"	EACH	3	
TOTAL= 15				

NEW (FURNISH AND INSTALL SIGNS)					
MMUTCD CODE	SIZE	AREA SQ. FT.	QTY.	TOTAL SQ. FT.	
D3-2	Zane Ave	36" X 9"	2.25	2	4.50
D3-2	63rd Ave N	36" X 9"	2.25	2	4.50
TOTAL=9.00					

OLD (REMOVE AND DISPOSE OF SIGNS)				
MMUTCD CODE	SIZE	UNIT	TOTAL	
D3-2	ZANE AVE	36" X 9"	EACH	2
D3-2	63RD AVE N	36" X 9"	EACH	2
TOTAL= 4				

PAVEMENT MARKING TOTALS

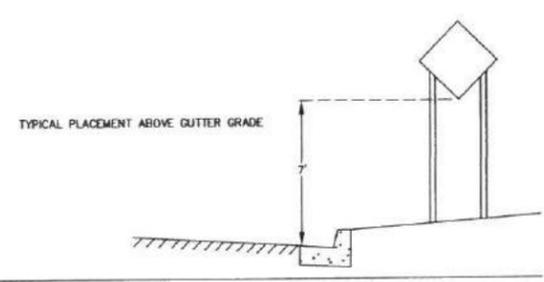
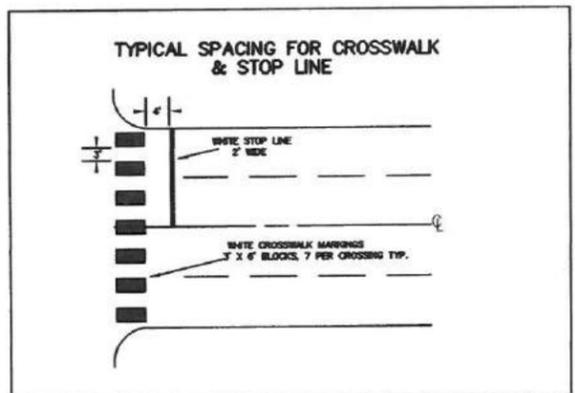
- WHITE EPOXY SKIP LINE- 740' OF 4" WIDE WHITE SKIP LINE (INCLUDES 2160' OF GAP)
- SOLID WHITE EPOXY LANE LINE- 120' OF 4" WIDE SOLID WHITE LINE
- SOLID YELLOW EPOXY LANE LINE- 2020' OF 4" WIDE SOLID YELLOW LINE (i.e. 1010' OF DOUBLE YELLOW LINE)
- WHITE EPOXY STOP LINE- 100' OF 2" WIDE LINE = 200 SQ. FT.
- RIGHT TURN ARROW MARKING (EPOXY)- 2 EACH
- 3' X 6' WHITE CROSSWALK MARKINGS (EPOXY)- 28 EACH

STRIPING NOTES:

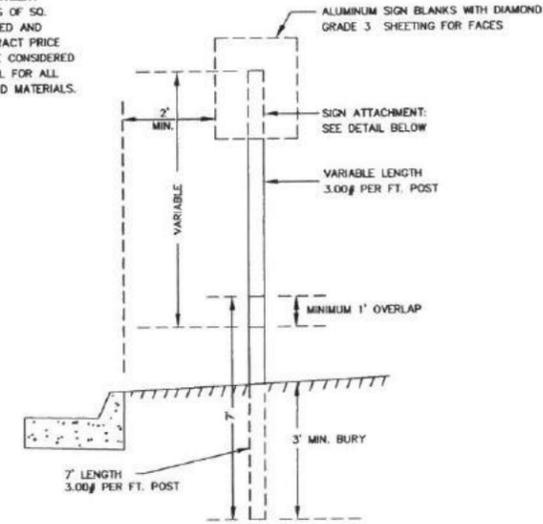
ALL STRIPING AND PAVEMENT MARKINGS SHALL BE EPOXY UNLESS OTHERWISE NOTED
ALL SKIP LINE SHALL CONSIST OF 10' OF LINE WITH 30' OF GAP.

NOTES:

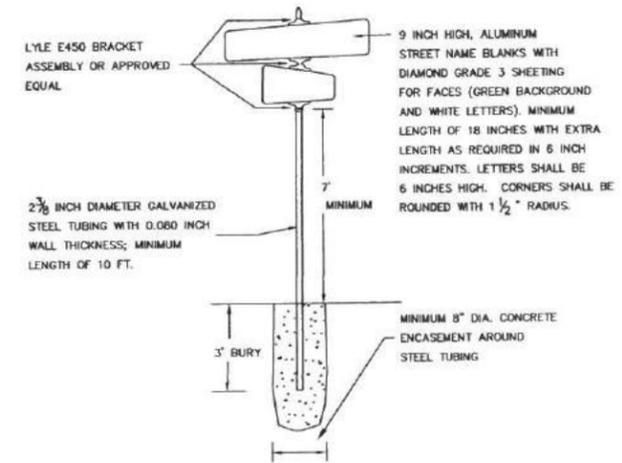
ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE DECEMBER 2011 VERSION OF THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY CONTROL ZONE LAYOUTS, JANUARY 2014.
ALL SIGNS SHALL BE DIAMOND GRADE 3 GRADE SHEETING AND ALL SIGN POSTS SHALL BE GALVANIZED STEEL CHANNEL/TUBING.
MEASUREMENT AND PAYMENT WILL BE ON THE BASIS OF EACH SIGN ASSEMBLY (INCLUDING POSTS) SALVAGED AND REINSTALLED. THE CONTRACT PRICE PER EACH SHALL BE CONSIDERED COMPENSATION IN FULL FOR ALL LABOR, EQUIPMENT AND MATERIALS.
ALL STRIPING AND PAVEMENT MARKINGS ARE TO BE EPOXY.
ALL SIGNS AND STRIPING WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLAN ARE NOT TO BE DISTURBED.
CONTRACTOR TO PROVIDE TEMPORARY NO PARKING AS NEEDED ALONG BOTH SIDES OF 73RD AVENUE AS DIRECTED BY THE ENGINEER.



NOTE: MEASUREMENT AND PAYMENT WILL BE ON THE BASIS OF SQ. FT. OF SIGNS FURNISHED AND INSTALLED. THE CONTRACT PRICE PER SQ. FT. SHALL BE CONSIDERED COMPENSATION IN FULL FOR ALL LABOR, EQUIPMENT AND MATERIALS.



NOT TO SCALE
2-98 GALVANIZED FLANGED CHANNEL SIGN POST
TYPICAL BLVD. SIGN INSTALLATION
DETAIL DRAWING ST-15
CITY OF BROOKLYN PARK



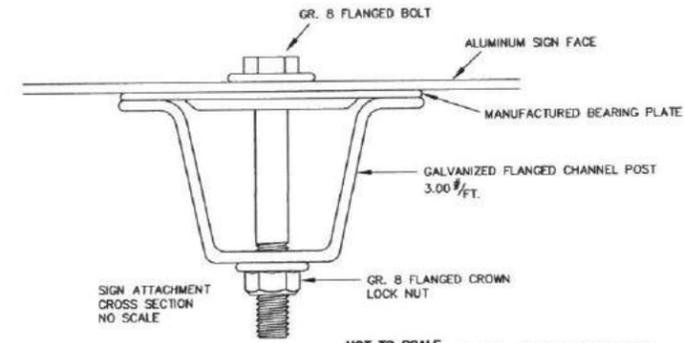
STREET NAME SIGN FACES SHALL BE DIAMOND GRADE 3 SHEETING WITH GREEN BACKGROUND AND WHITE LETTER COPY. THE SIGN FACES SHALL BE APPLIED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SHEETING MANUFACTURER. STREET NAME PLATES SHALL HAVE ALUMINUM BLANKS. THERE SHALL BE ONE FACE APPLIED PER BLANK, AND STREET NAME ASSEMBLY SHALL CONSIST OF FOUR BLANKS (UNLESS OTHERWISE INDICATED IN THE PLANS) AND APPROPRIATE MOUNTING HARDWARE.

MOUNTING HARDWARE FOR STREET NAME ASSEMBLIES SHALL BE THE LYLE E-450 BRACKET ASSEMBLY OR AN APPROVED EQUAL. BOLTS SHALL BE OF ADEQUATE LENGTH TO SECURE THE SIGN BLANK WITH THE LOCKING NUT.

THE HEIGHT OF THE STREET NAME BLANKS SHALL BE 9 INCHES. THE STREET NAME LEGEND SHALL BE 6 INCH UPPER/LOWER SERIES C (SEE MDOT STANDARD SIGN MANUAL). THE LEGEND SHALL BE OPTICALLY CENTERED VERTICALLY AND SPACED BOTH HORIZONTALLY AND VERTICALLY.

BLANKS SHALL BE NOTCHED TO ACCEPT MOUNTING HARDWARE, BLANK HOLDERS AND PUNCHED WITH ONE 1/4" HOLE AT EACH END AND CENTERED TOP TO BOTTOM.

NOT TO SCALE
4-98 STREET NAME SIGN ASSEMBLY DETAIL
DETAIL DRAWING ST-17
CITY OF BROOKLYN PARK



NOT TO SCALE
4-99 SIGN ATTACHMENT
CROSS SECTION

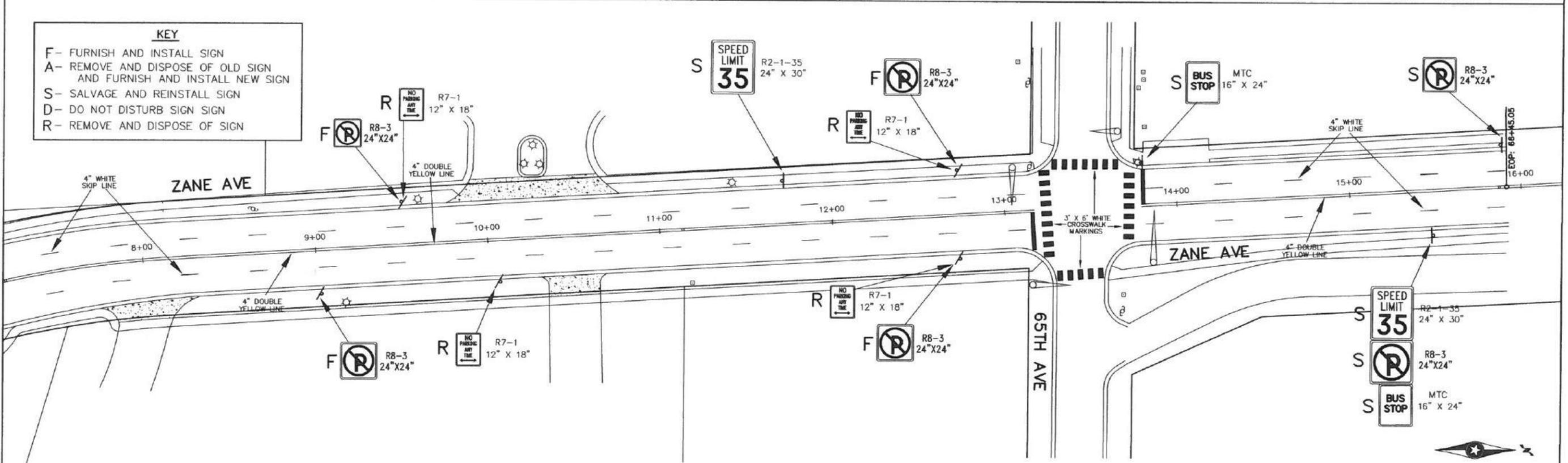
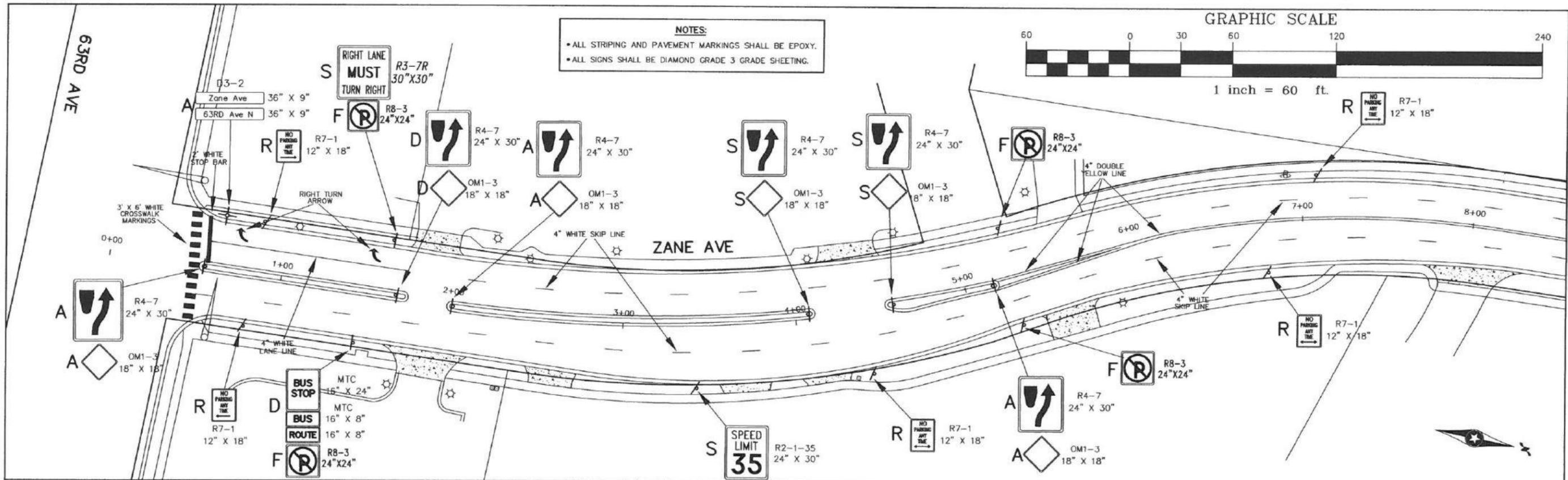
NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
TYPED NAME: JEFF HOLSTEIN
DATE 1/25/16 REG. NO. 20377
JESSE STRUVE, P.E. CITY ENGINEER

ZANE AVENUE
63RD AVE. - 65TH AVE.
SIGNING & STRIPING DETAILS

CAPITOL IMPROV. NO. 4002-16	DRAWN BY JAL	DATE APPROVED 1/25/16	SHEET 22
STATE AID PROJ. NO. 110-102-014	DESIGNED BY JGH	HORIZ. SCALE NA	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE NA	
110-137-004			
189-128-002			



KEY

- F- FURNISH AND INSTALL SIGN
- A- REMOVE AND DISPOSE OF OLD SIGN AND FURNISH AND INSTALL NEW SIGN
- S- SALVAGE AND REINSTALL SIGN
- D- DO NOT DISTURB SIGN SIGN
- R- REMOVE AND DISPOSE OF SIGN

NOTES:

- ALL STRIPING AND PAVEMENT MARKINGS SHALL BE EPOXY.
- ALL SIGNS SHALL BE DIAMOND GRADE 3 GRADE SHEETING.

NO.	DATE	BY	CHKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

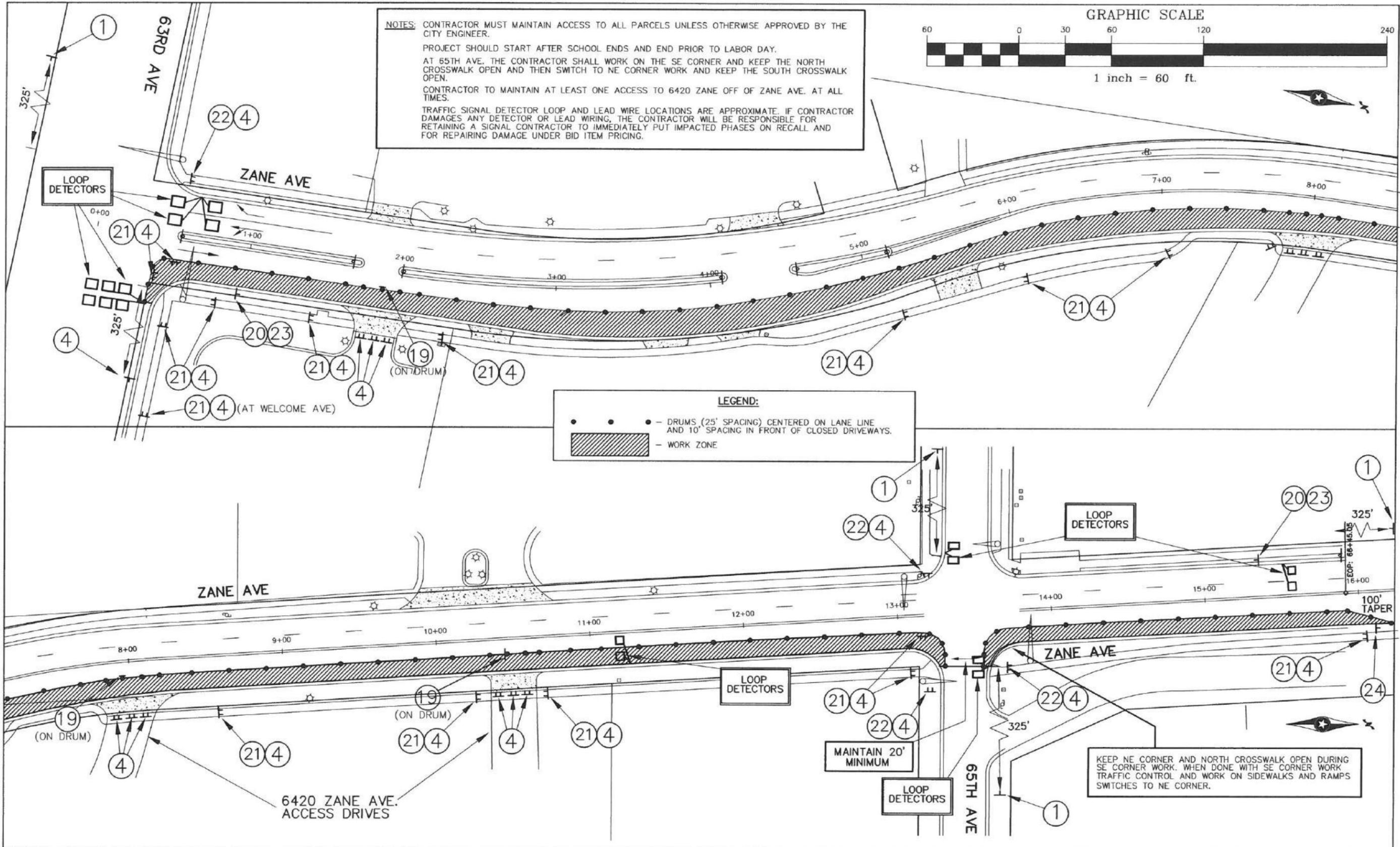
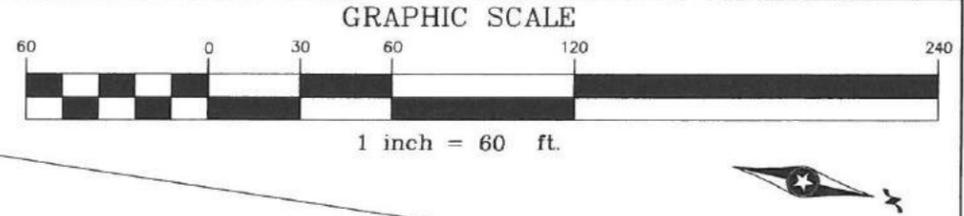
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377
 JESSE STRUVE, P.E. CITY ENGINEER

ZANE AVENUE
63RD AVE - 65TH AVE
SIGNING AND STRIPING PLAN

CAPITOL IMPROV. NO. 4002-16	DRAWN BY JAL	DATE APPROVED 1/25/16	SHEET 23
STATE AID PROJ. NO. 110-102-014	DESIGNED BY JGH	HORIZ. SCALE NA	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE NA	
110-137-004			
189-128-002			

NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 AT 65TH AVE. THE CONTRACTOR SHALL WORK ON THE SE CORNER AND KEEP THE NORTH CROSSWALK OPEN AND THEN SWITCH TO NE CORNER WORK AND KEEP THE SOUTH CROSSWALK OPEN.
 CONTRACTOR TO MAINTAIN AT LEAST ONE ACCESS TO 6420 ZANE OFF OF ZANE AVE. AT ALL TIMES.
 TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.



LEGEND:
 • • • - DRUMS (25' SPACING) CENTERED ON LANE LINE AND 10' SPACING IN FRONT OF CLOSED DRIVEWAYS.
 [Hatched Area] - WORK ZONE

NO	DATE	BY	CKD	REVISION

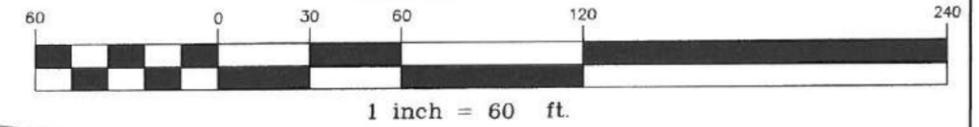
**CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION**
 Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377
 JESSE STRUVE, P.E. CITY ENGINEER

**TRAFFIC CONTROL PLAN
 ZANE AVENUE
 63RD AVE - 65TH AVE
 PHASE 1
 CLOSE OUTSIDE NB LANE**

CAPITOL IMPROV. NO. 4002-16	DRAWN BY JAL	DATE APPROVED 1/25/16	SHEET 24
STATE AID PROJ. NO. 110-102-014	DESIGNED BY JGH	HORIZ. SCALE NA	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE NA	
110-137-004			
189-128-002			

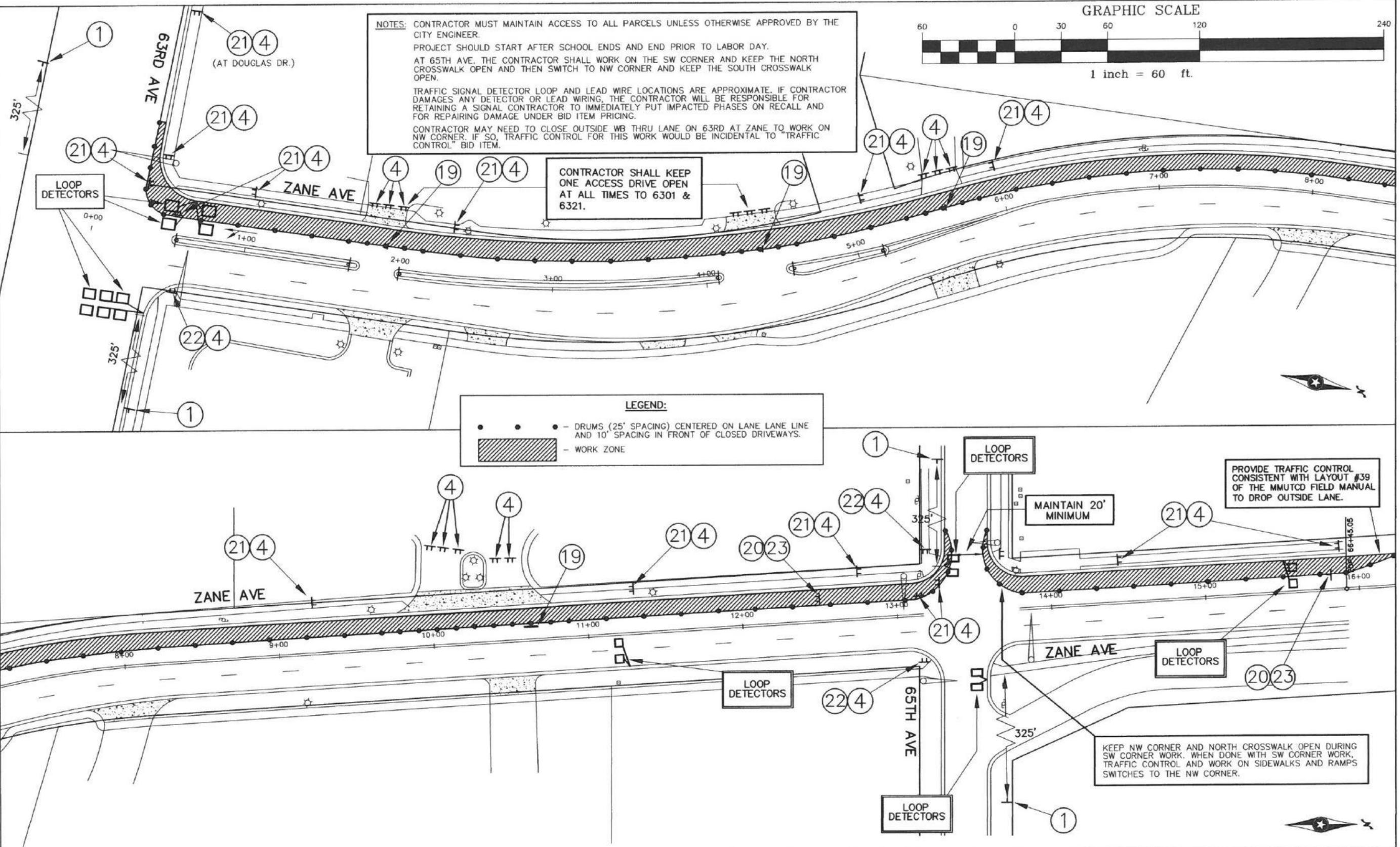
GRAPHIC SCALE



NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 AT 65TH AVE. THE CONTRACTOR SHALL WORK ON THE SW CORNER AND KEEP THE NORTH CROSSWALK OPEN AND THEN SWITCH TO NW CORNER AND KEEP THE SOUTH CROSSWALK OPEN.
 TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.
 CONTRACTOR MAY NEED TO CLOSE OUTSIDE WB THRU LANE ON 63RD AT ZANE TO WORK ON NW CORNER. IF SO, TRAFFIC CONTROL FOR THIS WORK WOULD BE INCIDENTAL TO "TRAFFIC CONTROL" BID ITEM.

CONTRACTOR SHALL KEEP ONE ACCESS DRIVE OPEN AT ALL TIMES TO 6301 & 6321.

LEGEND:
 ● - DRUMS (25' SPACING) CENTERED ON LANE LINE AND 10' SPACING IN FRONT OF CLOSED DRIVEWAYS.
 - WORK ZONE



PROVIDE TRAFFIC CONTROL CONSISTENT WITH LAYOUT #39 OF THE MMUTCD FIELD MANUAL TO DROP OUTSIDE LANE.

MAINTAIN 20' MINIMUM

KEEP NW CORNER AND NORTH CROSSWALK OPEN DURING SW CORNER WORK. WHEN DONE WITH SW CORNER WORK, TRAFFIC CONTROL AND WORK ON SIDEWALKS AND RAMPS SWITCHES TO THE NW CORNER.

NO.	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION

 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
 TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377
 JESSE STRUVE, P.E. CITY ENGINEER

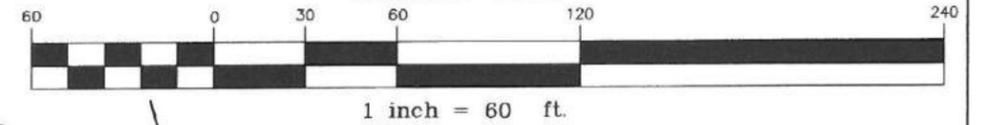
TRAFFIC CONTROL PLAN
ZANE AVENUE
63RD AVE - 65TH AVE
PHASE 2
CLOSE OUTSIDE SB LANE

CAPITOL IMPROV. NO. 4002-18
 STATE AID PROJ. NO. 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY JAL
 DESIGNED BY JGH
 CHECKED BY JMS
 DATE APPROVED 1/25/16
 HORIZ. SCALE NA
 VERT. SCALE NA

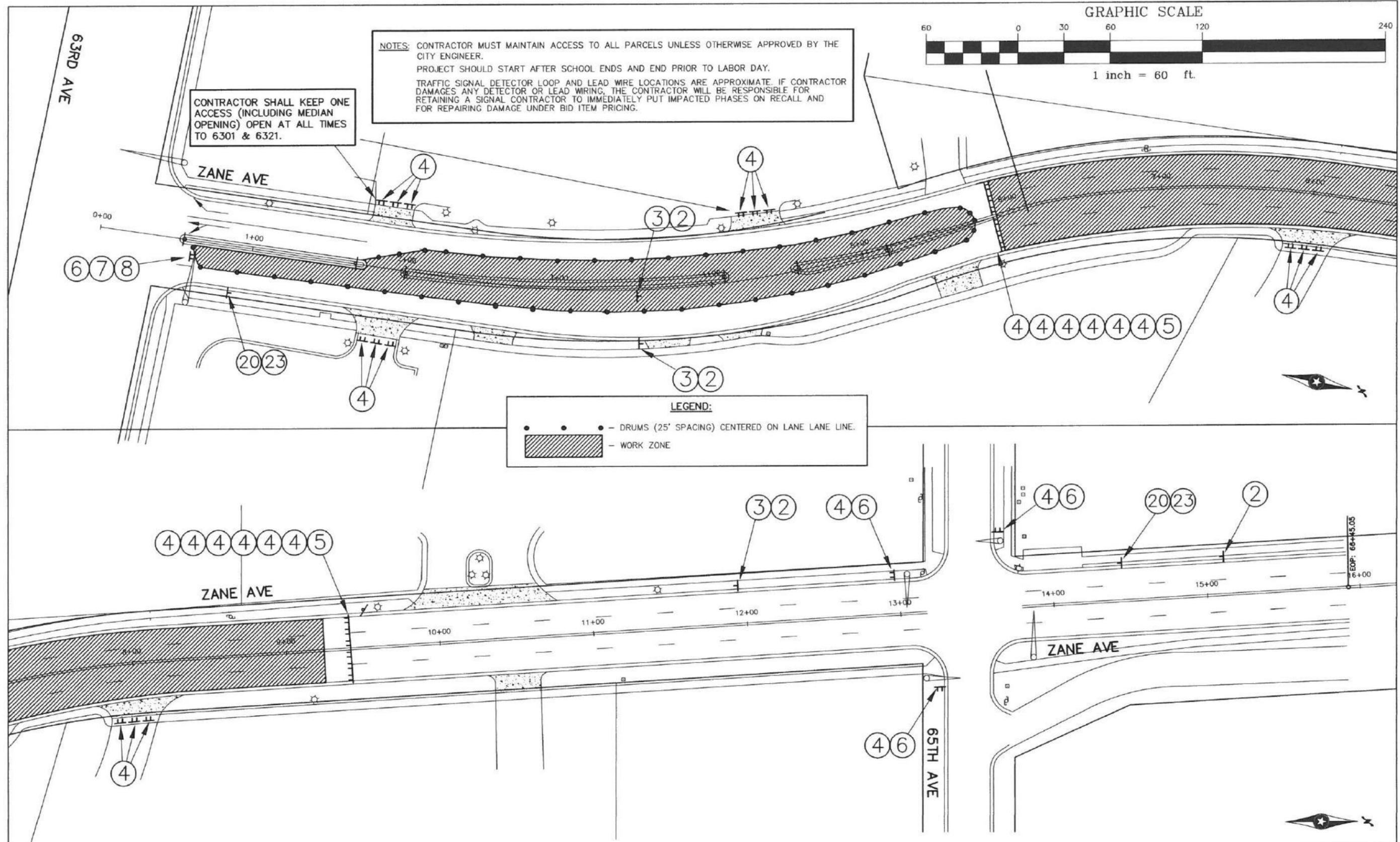
SHEET 25 of 55

GRAPHIC SCALE

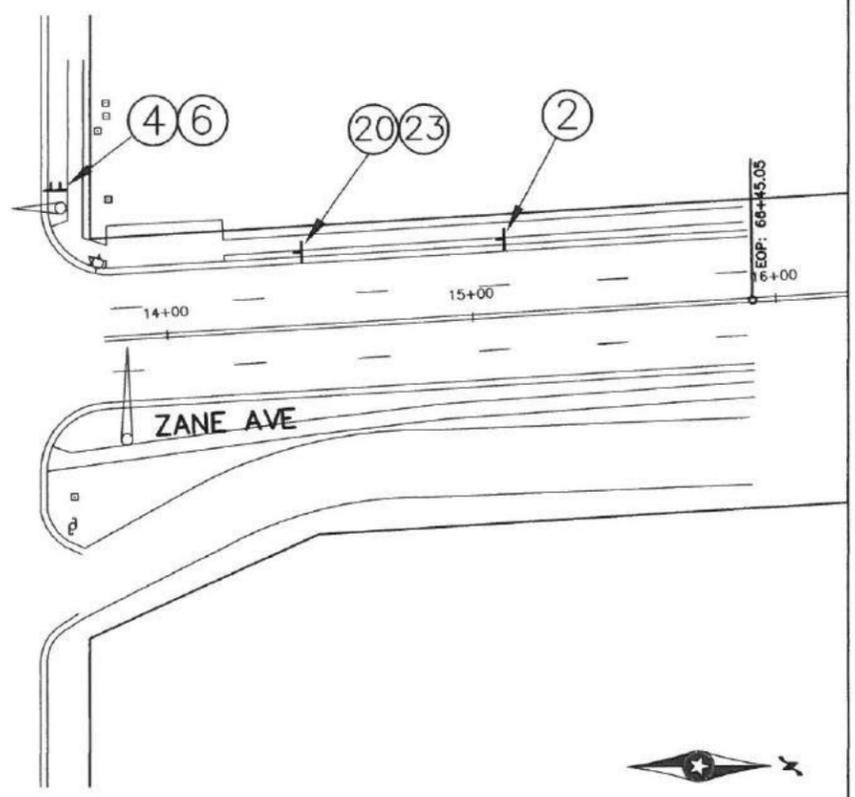


NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.

CONTRACTOR SHALL KEEP ONE ACCESS (INCLUDING MEDIAN OPENING) OPEN AT ALL TIMES TO 6301 & 6321.



LEGEND:
 ● - DRUMS (25' SPACING) CENTERED ON LANE LINE.
 [Hatched Area] - WORK ZONE



NO.	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

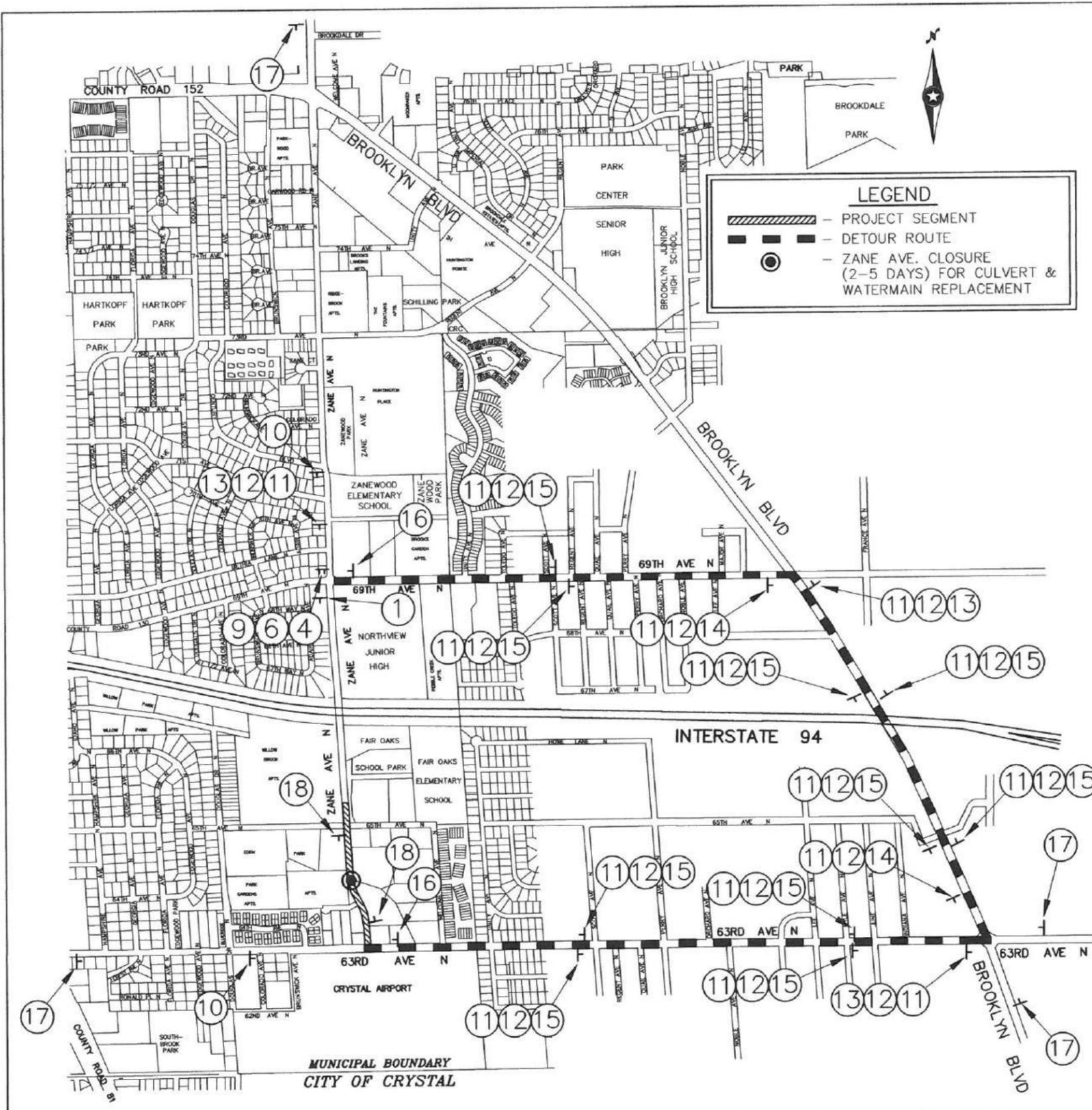
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE 1/25/16 REG. NO. 20377
 JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
ZANE AVENUE
63RD AVE - 65TH AVE
PHASE 3
MEDIAN NOSES AND CULVERT/WATERMAIN WORK

CAPITOL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY JAL
 DESIGNED BY JGH
 CHECKED BY JMS
 DATE APPROVED 1/25/16
 HORIZ. SCALE NA
 VERT. SCALE NA

SHEET 26
 OF 55



LEGEND

- PROJECT SEGMENT
- DETOUR ROUTE
- ZANE AVE. CLOSURE (2-5 DAYS) FOR CULVERT & WATERMAIN REPLACEMENT

TRAFFIC CONTROL/DETOUR SIGN KEY

- 1 W20-1 48"x48" BLACK ON ORANGE
- 2 W20-3 48"x48" BLACK ON ORANGE
- 3 W16-3 30"x24" BLACK ON ORANGE
- 4 TYPE 3 BARRICADE (LEFT) ORANGE/WHITE 8' LONG
- 5 R11-2 48"x30" BLACK ON WHITE
- 6 R11-3a 60"x30" BLACK ON WHITE
- 7 TYPE 3 BARRICADE (RIGHT) ORANGE/WHITE 8' LONG
- 8 M4-10 48"x18" BLACK ON ORANGE (RIGHT)
- 9 M4-10 48"x18" BLACK ON ORANGE (LEFT)
- 10 W20-2 48"x48" BLACK ON ORANGE
- 11 M4-8 24"x12" BLACK ON ORANGE
- 12 SPECIAL 30"x12" BLACK ON ORANGE
- 13 M6-1AL 21"x15" BLACK ON ORANGE
- 14 M6-1AR 21"x15" BLACK ON ORANGE
- 15 M6-3A 21"x15" BLACK ON ORANGE
- 16 M6-8A 24"x18" BLACK ON ORANGE
- 17 SPECIAL 72"x60" BLACK ON ORANGE
- 18 SPECIAL G20-X1 72"x60" BLACK ON ORANGE
INSTALL AT LEAST 7 DAYS IN ADVANCE OF CLOSURE AND REMOVE WHEN ROADWAY IS CLOSED.
- 19 18"x18" (ATTACHED TO DRUM) BLACK ON ORANGE
- 20 W21-1 36"x36" BLACK ON ORANGE
- 21 R9-9 30"x18" BLACK ON WHITE
- 22 R9-10 48"x24" BLACK ON WHITE
- 23 W13-1P 18"x18" BLACK ON ORANGE
- 24 G20-2 36"x18" BLACK ON ORANGE
- 25 18"x18" (ATTACHED TO DRUM)

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO. 20377
 JESSE STRUVE, P.E. CITY ENGINEER

ZANE AVENUE
DETOUR ROUTE
(63RD AVE - 65TH AVE)
PHASE 3-CULVERT/WATERMAIN WORK

CAPITOL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-104-012
 110-115-008
 110-124-106
 110-148-001
 110-149-001

DRAWN BY JAL
 DESIGNED BY JGH
 CHECKED BY JMS
 DATE APPROVED 1/25/16
 HORIZ. SCALE NA
 VERT. SCALE NA

SHEET 27 OF 55

NEW (FURNISH AND INSTALL SIGNS)				
MMUTCD CODE	SIZE	AREA SQ. FT.	QTY.	TOTAL SQ. FT.
R8-3a	24" X 24"	4.00	15	60.00
R3-9b	24" X 36"	6.00	8	48.00
R3-9dp	30" X 12"	2.50	2	5.00
R3-9cp	30" X 12"	2.50	2	5.00
R1-1	36" X 36"	9.00	1	9.00
R1-1	30" X 30"	6.25	1	6.25
R1-4	18" X 6"	0.75	3	2.25
W4-2L	36" X 36"	9.00	1	9.00
W9-2	36" X 36"	9.00	1	9.00
R2-1-35	24" X 30"	5.00	1	5.00
				TOTAL= 158.50

PAVEMENT MARKING TOTALS

YELLOW EPOXY SKIP LINE- 900' OF 4" WIDE WHITE SKIP LINE (INCLUDES 2460' OF GAP)
 WHITE EPOXY SKIP LINE- 100' OF 4" WIDE WHITE SKIP LINE (INCLUDES 240' OF GAP)
 SOLID WHITE EPOXY LANE LINE- 310' OF 4" WIDE SOLID WHITE LINE
 SOLID YELLOW EPOXY LANE LINE- 2940' OF 4" WIDE SOLID WHITE LINE (CENTER LANE LINE)
 SOLID YELLOW EPOXY LANE LINE- 1060' OF 4" WIDE SOLID YELLOW LINE (i.e. 530' OF DOUBLE YELLOW LINE)
 WHITE EPOXY STOP LINE- 160' OF 2" WIDE LINE = 200 SQ. FT.
 LEFT TURN ARROW MARKING (EPOXY)- 17 EACH
 3' X 6' WHITE CROSSWALK MARKINGS (EPOXY)- 70 EACH

STRIPING NOTES:

ALL STRIPING AND PAVEMENT MARKINGS SHALL BE EPOXY UNLESS OTHERWISE NOTED
 ALL SKIP LINE SHALL CONSIST OF 10' OF LINE WITH 30' OF GAP.

NOTES:

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE DECEMBER 2011 VERSION OF THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY CONTROL ZONE LAYOUTS, JANUARY 2014.
 ALL SIGNS SHALL BE DIAMOND GRADE 3 GRADE SHEETING AND ALL SIGN POSTS SHALL BE GALVANIZED STEEL CHANNEL/TUBING.
 MEASUREMENT AND PAYMENT WILL BE ON THE BASIS OF EACH SIGN ASSEMBLY (INCLUDING POSTS) SALVAGED AND REINSTALLED. THE CONTRACT PRICE PER EACH SHALL BE CONSIDERED COMPENSATION IN FULL FOR ALL LABOR, EQUIPMENT AND MATERIALS.
 ALL STRIPING AND PAVEMENT MARKINGS ARE TO BE EPOXY.
 ALL SIGNS AND STRIPING WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLAN ARE NOT TO BE DISTURBED.
 CONTRACTOR TO PROVIDE TEMPORARY NO PARKING AS NEEDED ALONG BOTH SIDES OF 73RD AVENUE AS DIRECTED BY THE ENGINEER.
 ANY STOP SIGNS REMOVED SHALL BE IMMEDIATELY REPLACED WITH TEMPORARY SIGNS BY THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THE TRAFFIC CONTROL BID ITEM.

**OLD
(REMOVE AND DISPOSE OF SIGNS)**

MMUTCD CODE	SIZE	UNIT	TOTAL
R7-1	12" X 18"	EACH	6
R7-2B	12" X 18"	EACH	3
R2-1-35	24" X 30"	EACH	1
R1-1	36" X 36"	EACH	1
R1-1	30" X 30"	EACH	2
R1-4	18" X 6"	EACH	3
W9-1L	36" X 36"	EACH	1
TOTAL= 20			

**OLD
(SALVAGE AND REINSTALL SIGNS)**

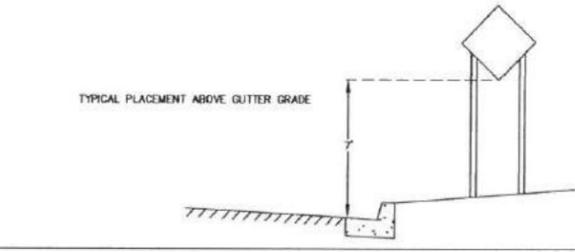
MMUTCD CODE	SIZE	UNIT	TOTAL
R4-7	24" X 30"	EACH	2
OM1-3	18" X 18"	EACH	2
R2-1-35	24" X 30"	EACH	5
R3-7R	30" X 30"	EACH	1
MTC	16" X 24"	EACH	5
MTC	16" X 8"	EACH	3
R1-1	36" X 36"	EACH	1
R1-1	30" X 30"	EACH	5
R1-4	18" X 6"	EACH	1
R3-7L	30" X 30"	EACH	1
R5-1	30" X 30"	EACH	1
S4-3	24" X 8"	EACH	2
S4-2	24" X 8"	EACH	2
R-31C	54" X 30"	EACH	1
TOTAL= 32			

**OLD
(REMOVE AND DISPOSE OF SIGNS)**

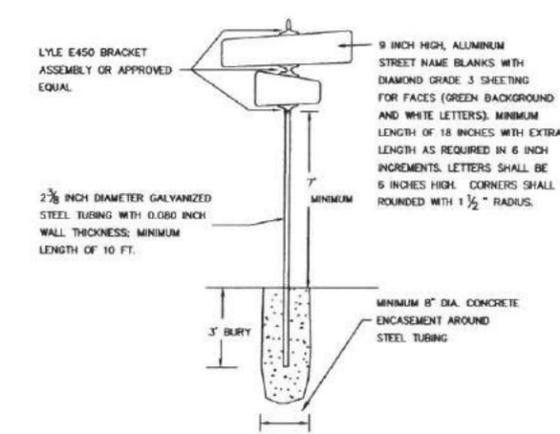
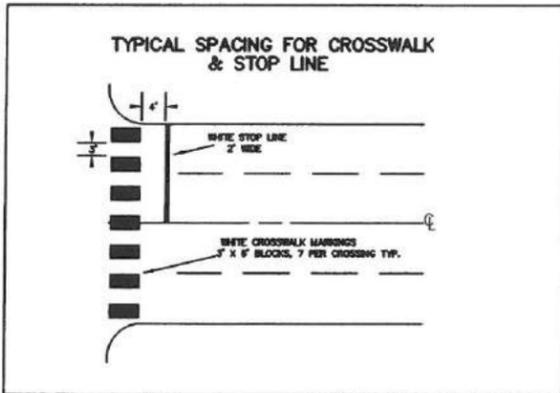
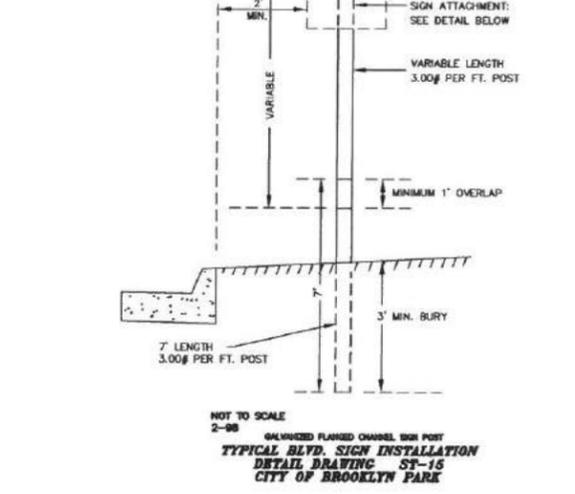
MMUTCD CODE	SIZE	UNIT	TOTAL
D3-2	36" X 9"	EACH	8
D3-2	48" X 9"	EACH	2
D3-2	36" X 9"	EACH	2
D3-2	48" X 9"	EACH	2
D3-2	36" X 9"	EACH	2
TOTAL= 20			

**NEW
(FURNISH AND INSTALL SIGNS)**

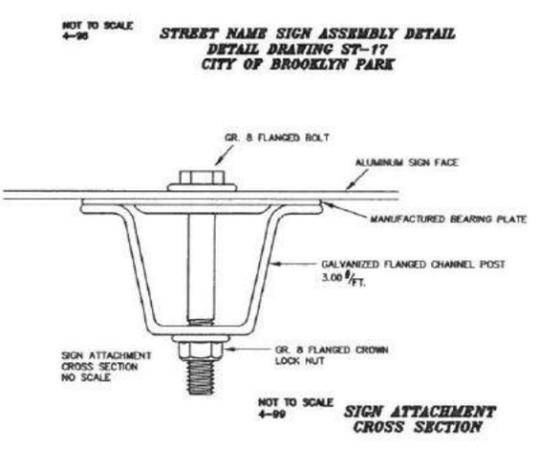
MMUTCD CODE	SIZE	AREA SQ. FT.	QTY.	TOTAL SQ. FT.
D3-2	36" X 9"	2.25	8	22.50
D3-2	48" X 9"	3.00	2	6.00
D3-2	36" X 9"	2.25	2	4.50
D3-2	48" X 9"	3.00	2	6.00
D3-2	36" X 9"	2.25	2	4.50
				TOTAL= 48.00



NOTE: MEASUREMENT AND PAYMENT WILL BE ON THE BASIS OF SQ. FT. OF SIGNS FURNISHED AND INSTALLED. THE CONTRACT PRICE PER SQ. FT. SHALL BE CONSIDERED COMPENSATION IN FULL FOR ALL LABOR, EQUIPMENT AND MATERIALS.



STREET NAME SIGN FACES SHALL BE DIAMOND GRADE 3 SHEETING WITH GREEN BACKGROUND AND WHITE LETTER COPY. THE SIGN FACES SHALL BE APPLIED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SHEETING MANUFACTURER. STREET NAME PLATES SHALL HAVE ALUMINUM BLANKS. THERE SHALL BE ONE FACE APPLIED PER BLANK, AND STREET NAME ASSEMBLY SHALL CONSIST OF FOUR BLANKS (UNLESS OTHERWISE INDICATED IN THE PLANS) AND APPROPRIATE MOUNTING HARDWARE.
 MOUNTING HARDWARE FOR STREET NAME ASSEMBLIES SHALL BE THE LYLE E-450 BRACKET ASSEMBLY OR AN APPROVED EQUAL. BOLTS SHALL BE OF ADEQUATE LENGTH TO SECURE THE SIGN BLANK WITH THE LOCKING NUT.
 THE HEIGHT OF THE STREET NAME BLANKS SHALL BE 9 INCHES. THE STREET NAME LEGEND SHALL BE 6 INCH UPPER/LOWER SERIES C (SEE MNDOT STANDARD SIGN MANUAL). THE LEGEND SHALL BE OPTICALLY CENTERED VERTICALLY AND SPACED BOTH HORIZONTALLY AND VERTICALLY.
 BLANKS SHALL BE NOTCHED TO ACCEPT MOUNTING HARDWARE, BLANK HOLDERS AND PUNCHED WITH ONE 1/4" HOLE AT EACH END AND CENTERED TOP TO BOTTOM.



NO	DATE	BY	CKD	REVISION

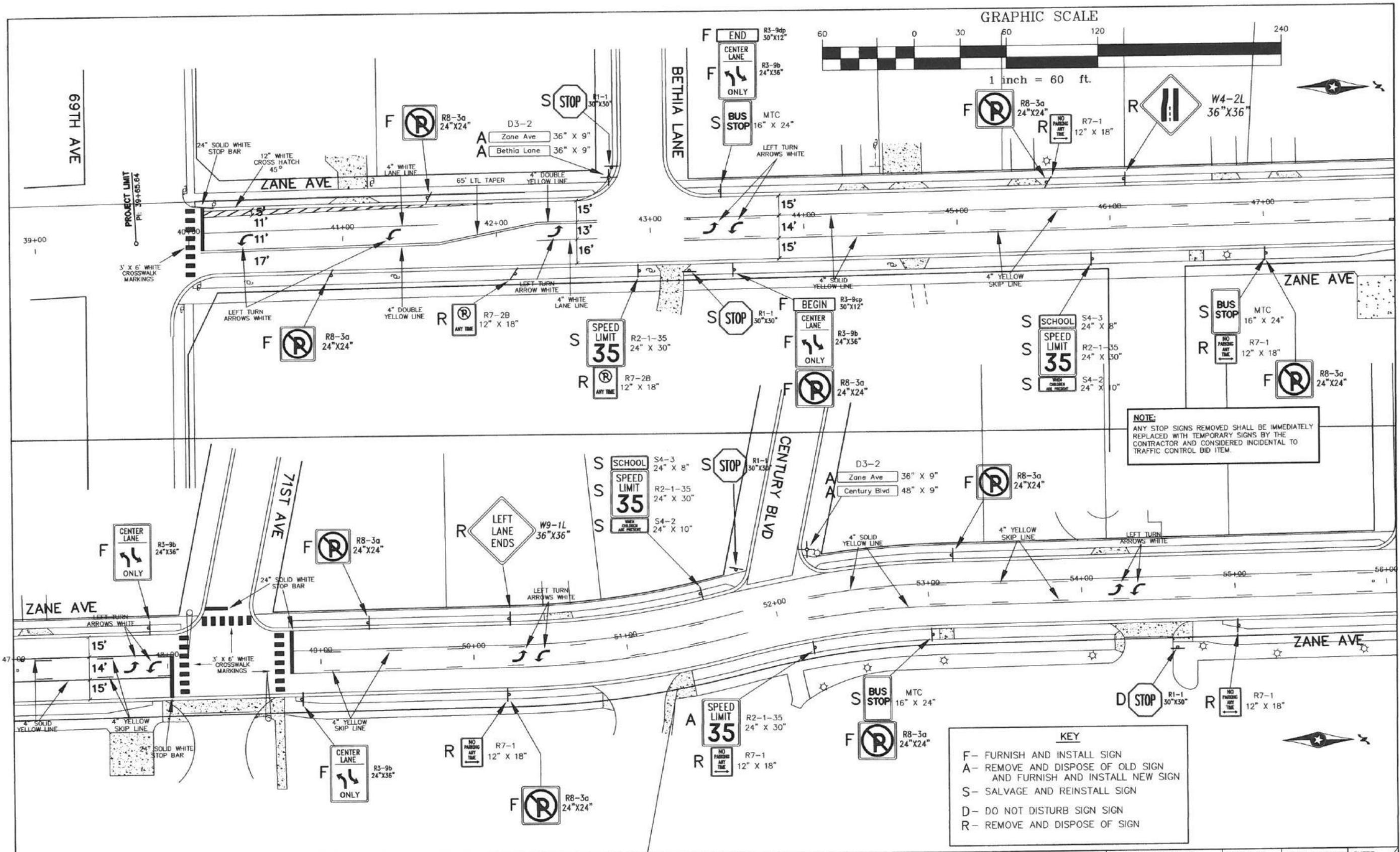
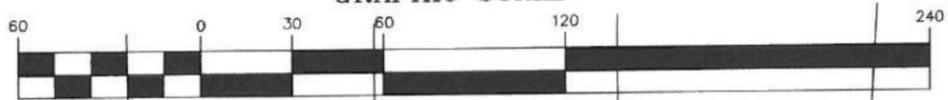
**CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION**
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
 TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377
 JESSE STRUVE, P.E. CITY ENGINEER

**ZANE AVENUE
 69TH AVE. - 73RD AVE.
 SIGNING & STRIPING DETAILS**

CAPITOL IMPROV. NO. 4002-16	DRAWN BY JAL	DATE APPROVED 1/25/16	SHEET 28
STATE AID PROJ. NO. 110-102-014	DESIGNED BY JGH	HORIZ. SCALE NA	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE NA	
110-137-004			
189-128-002			

GRAPHIC SCALE



NOTE:
 ANY STOP SIGNS REMOVED SHALL BE IMMEDIATELY REPLACED WITH TEMPORARY SIGNS BY THE CONTRACTOR AND CONSIDERED INCIDENTAL TO TRAFFIC CONTROL BID ITEM.

KEY
 F- FURNISH AND INSTALL SIGN
 A- REMOVE AND DISPOSE OF OLD SIGN AND FURNISH AND INSTALL NEW SIGN
 S- SALVAGE AND REINSTALL SIGN
 D- DO NOT DISTURB SIGN SIGN
 R- REMOVE AND DISPOSE OF SIGN

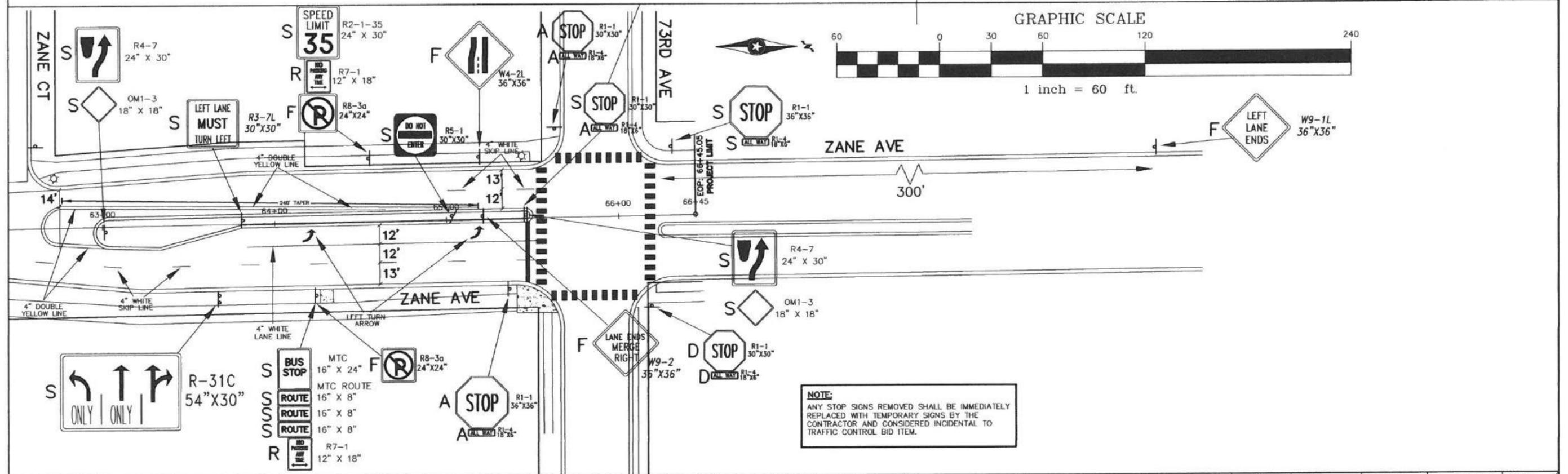
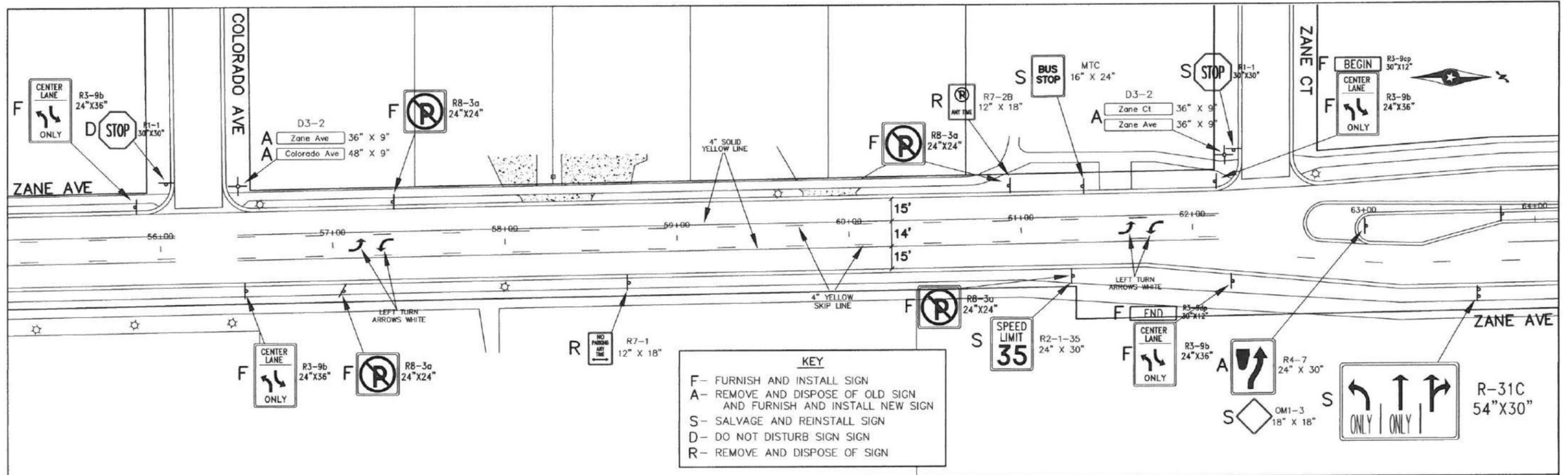
NO	DATE	BY

CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

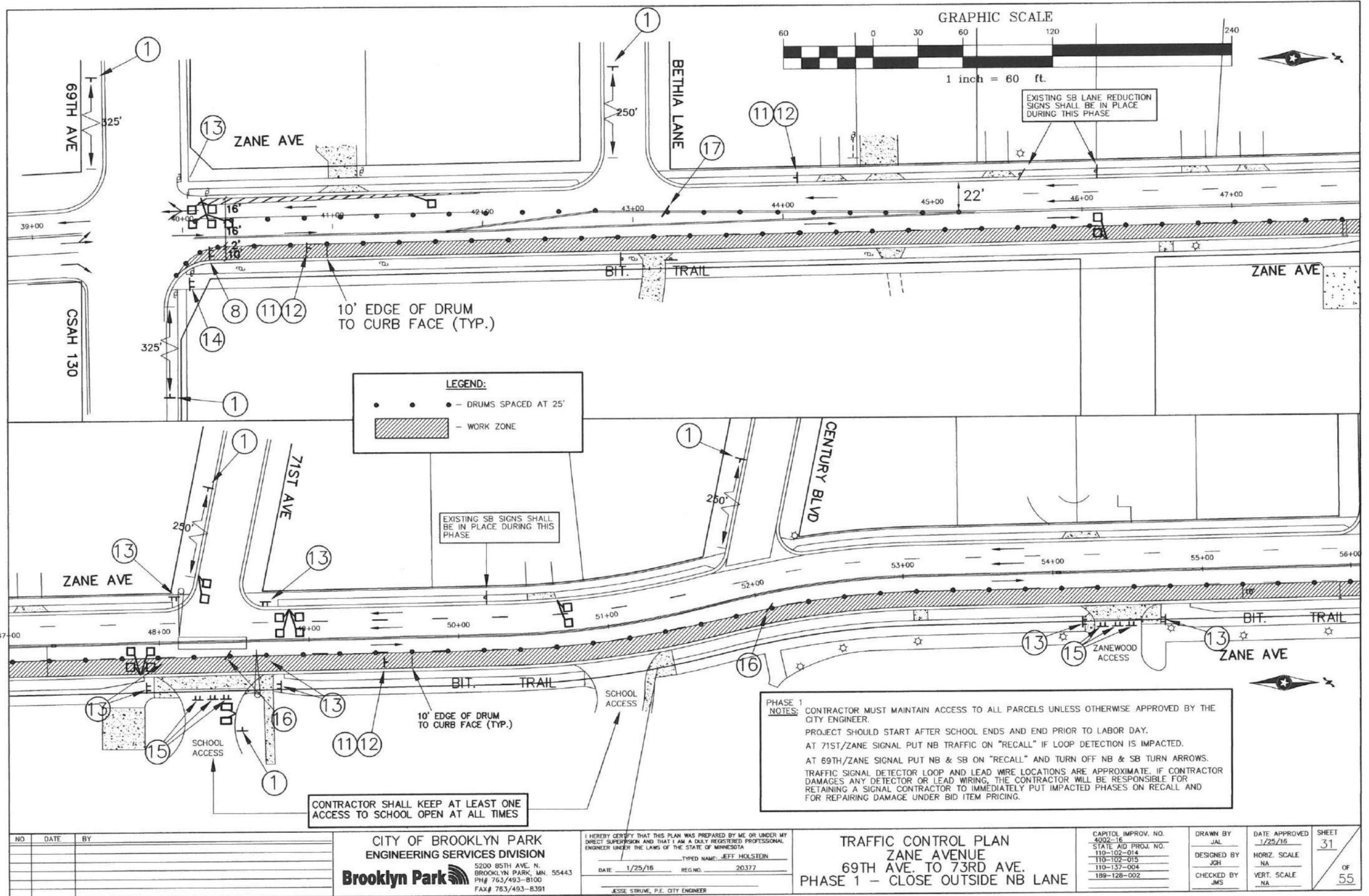
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377
 JESSE STRUVE, P.E. CITY ENGINEER

ZANE AVENUE
 69TH AVE. - 73RD AVE.
 SIGNING & STRIPING PLAN

CAPITOL IMPROV. NO. 4002-16	DRAWN BY JAL	DATE APPROVED 1/25/16	SHEET 29
STATE AID PROJ. NO. 110-102-014	DESIGNED BY JCH	HORIZ. SCALE NA	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE NA	
110-137-004			
189-128-002			



NO	DATE	BY	CITY OF BROOKLYN PARK ENGINEERING SERVICES DIVISION 5200 85TH AVE. N. BROOKLYN PARK, MN. 55443 PH# 763/493-8100 FAX# 763/493-8391	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. TYPED NAME: JEFF HOLSTEIN DATE 1/25/16 REG. NO. 20377 JESSE STRUVE, P.E. CITY ENGINEER	ZANE AVENUE 69TH AVE. - 73RD AVE. SIGNING & STRIPING PLAN	CAPITOL IMPROV. NO. 4002-16	DRAWN BY JAL	DATE APPROVED 1/25/16	SHEET 30 OF 55
						STATE AID PROJ. NO. 110-102-014	DESIGNED BY JGH	HORIZ. SCALE NA	
						110-102-015	CHECKED BY JMS	VERT. SCALE NA	
						110-137-004			
						189-128-002			



LEGEND:

- - DRUMS SPACED AT 25'
- ▨ - WORK ZONE

PHASE 1 NOTES:

CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.

AT 71ST/ZANE SIGNAL PUT NB TRAFFIC ON "RECALL" IF LOOP DETECTION IS IMPACTED.

AT 69TH/ZANE SIGNAL PUT NB & SB ON "RECALL" AND TURN OFF NB & SB TURN ARROWS.

TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.

CONTRACTOR SHALL KEEP AT LEAST ONE ACCESS TO SCHOOL OPEN AT ALL TIMES

NO	DATE	BY

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377

JESSE STRUVE, P.E. CITY ENGINEER

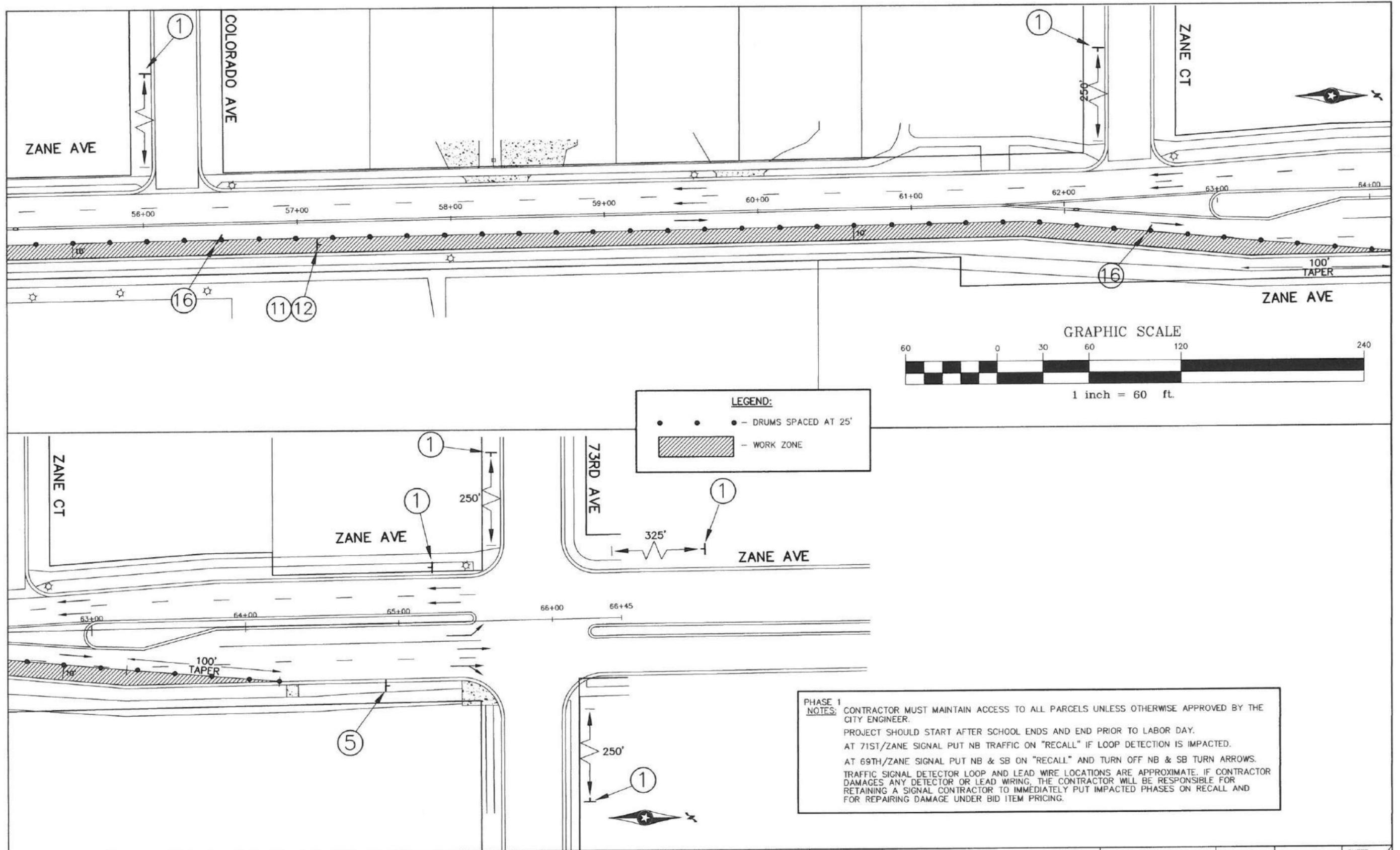
TRAFFIC CONTROL PLAN
ZANE AVENUE
69TH AVE. TO 73RD AVE.
PHASE 1 - CLOSE OUTSIDE NB LANE

CAPITOL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY JAL
 DESIGNED BY JGH
 CHECKED BY JMS

DATE APPROVED 1/25/16
 HORIZ. SCALE NA
 VERT. SCALE NA

SHEET 31
 OF 55



LEGEND:

- • • - DRUMS SPACED AT 25'
- ▨ - WORK ZONE

PHASE 1 NOTES:

CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.

AT 71ST/ZANE SIGNAL PUT NB TRAFFIC ON "RECALL" IF LOOP DETECTION IS IMPACTED.

AT 69TH/ZANE SIGNAL PUT NB & SB ON "RECALL" AND TURN OFF NB & SB TURN ARROWS.

TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.

NO.	DATE	BY

**CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION**

Brooklyn Park

5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME: JEFF HOLSTEIN

DATE: 1/25/16 REG. NO.: 20377

JESSE STRUVE, P.E. CITY ENGINEER

**TRAFFIC CONTROL PLAN
ZANE AVENUE
69TH AVE. TO 73RD AVE.
PHASE 1 - CLOSE OUTSIDE NB LANE**

CAPITOL IMPROV. NO.
4002-16

STATE AID PROJ. NO.
110-102-014

110-102-015

110-137-004

189-128-002

DRAWN BY
JAL

DESIGNED BY
JGH

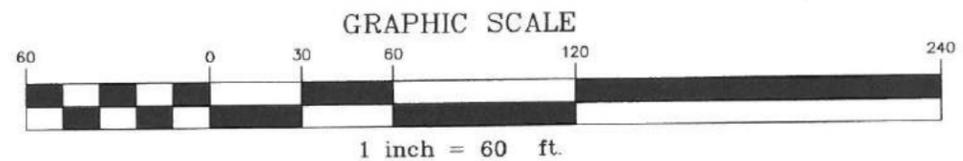
CHECKED BY
JMS

DATE APPROVED
1/25/16

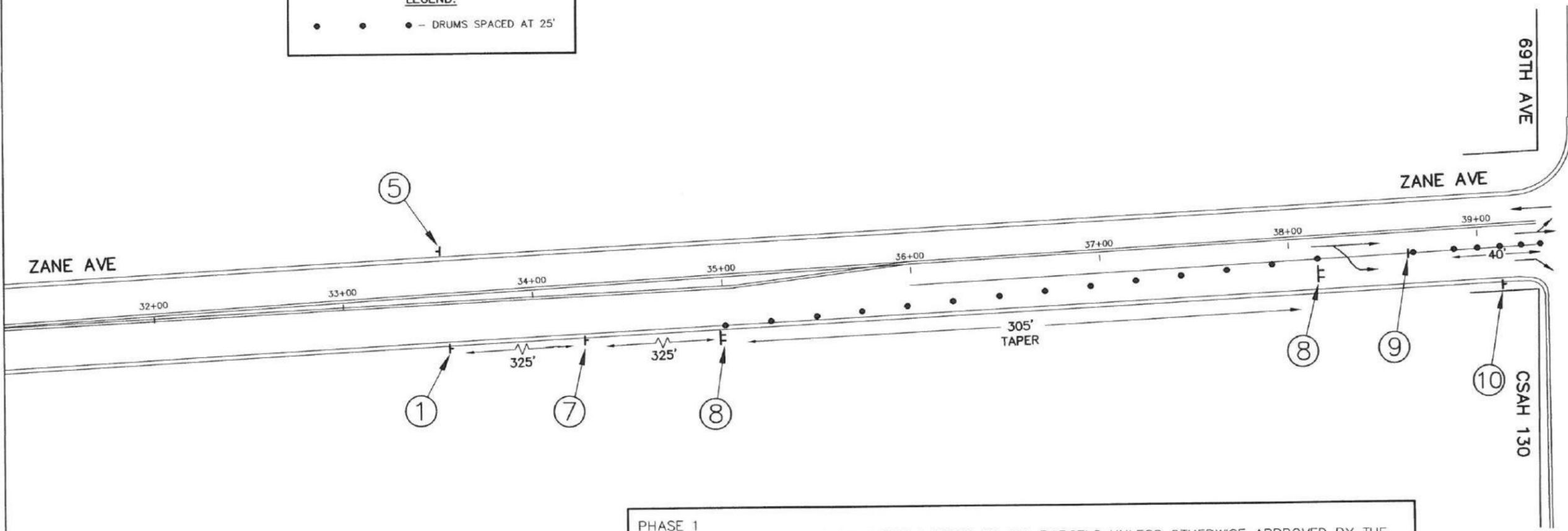
HORIZ. SCALE
NA

VERT. SCALE
NA

SHEET
32
OF
55



LEGEND:
 • • • - DRUMS SPACED AT 25'



PHASE 1 NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 AT 71ST/ZANE SIGNAL PUT NB TRAFFIC ON "RECALL" IF LOOP DETECTION IS IMPACTED.
 AT 69TH/ZANE SIGNAL PUT NB & SB ON "RECALL" AND TURN OFF NB & SB TURN ARROWS.
 TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.

NO	DATE	BY

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE 1/25/16 REG. NO. 20377
 JESSE STRUVE, P.E. CITY ENGINEER

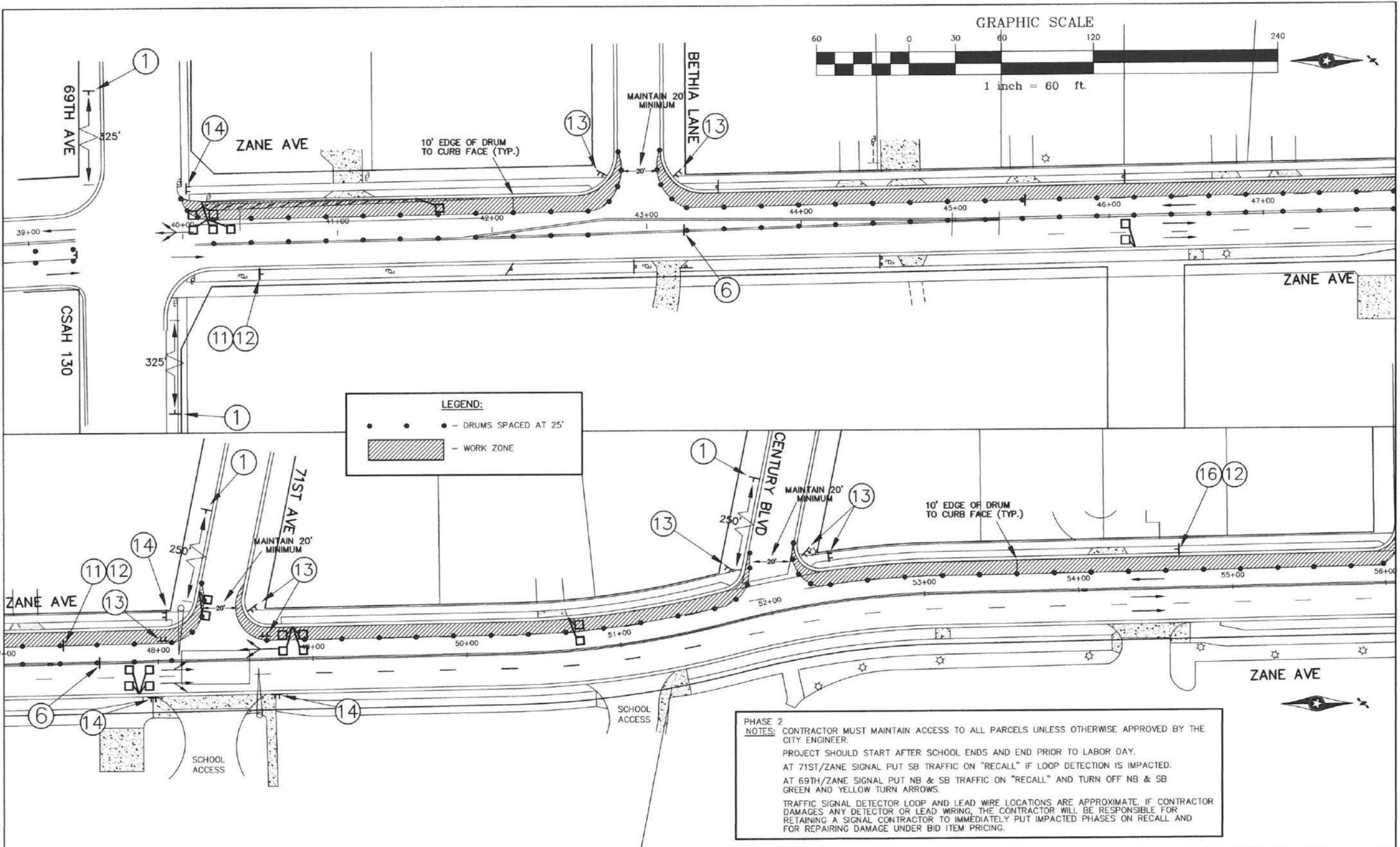
ZANE AVENUE
69TH AVE. TO 73RD AVE.
TRAFFIC CONTROL PLAN
PHASE 1 - CLOSE OUTSIDE NB LANE

CAPITOL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY JAL
 DESIGNED BY JGH
 CHECKED BY JMS

DATE APPROVED 1/25/16
 HORIZ. SCALE NA
 VERT. SCALE NA

SHEET 33 OF 55



LEGEND:

- - DRUMS SPACED AT 25'
- ▨ - WORK ZONE

PHASE 2 NOTES:

CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.

AT 71ST/ZANE SIGNAL PUT SB TRAFFIC ON "RECALL" IF LOOP DETECTION IS IMPACTED.

AT 69TH/ZANE SIGNAL PUT NB & SB TRAFFIC ON "RECALL" AND TURN OFF NB & SB GREEN AND YELLOW TURN ARROWS.

TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.

NO	DATE	BY

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION

Brooklyn Park

5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377

JESSE STRUVE, P.E. CITY ENGINEER

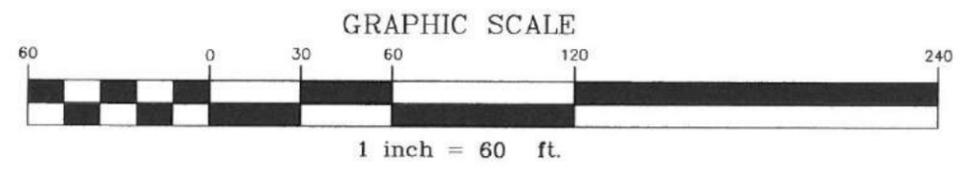
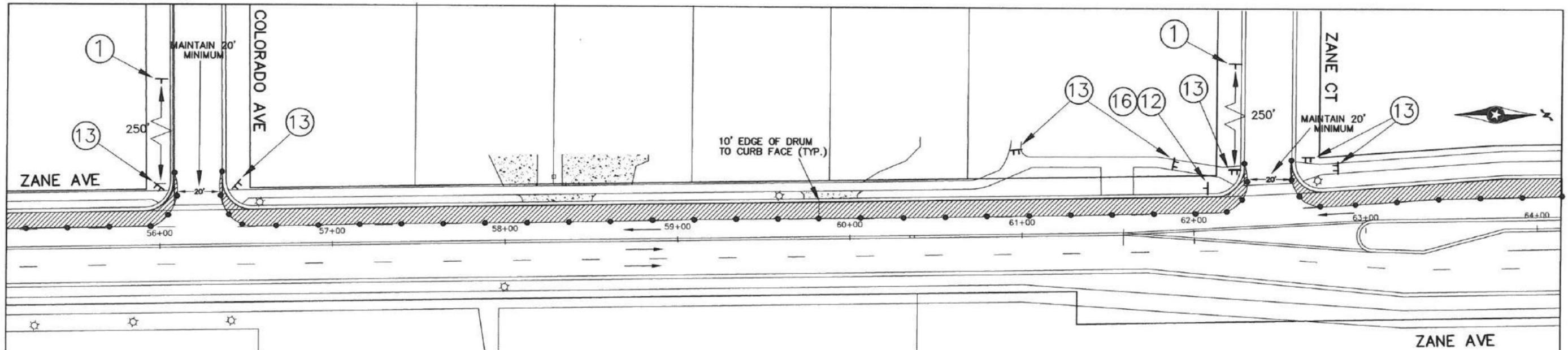
TRAFFIC CONTROL PLAN
ZANE AVENUE
69TH AVE. TO 73RD AVE.
PHASE 2 - CLOSE OUTSIDE SB LANE

CAPITOL IMPROV. NO.
 4002-16
 STATE AID PROJ. NO.
 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY: JAL
 DESIGNED BY: JGH
 CHECKED BY: JMS

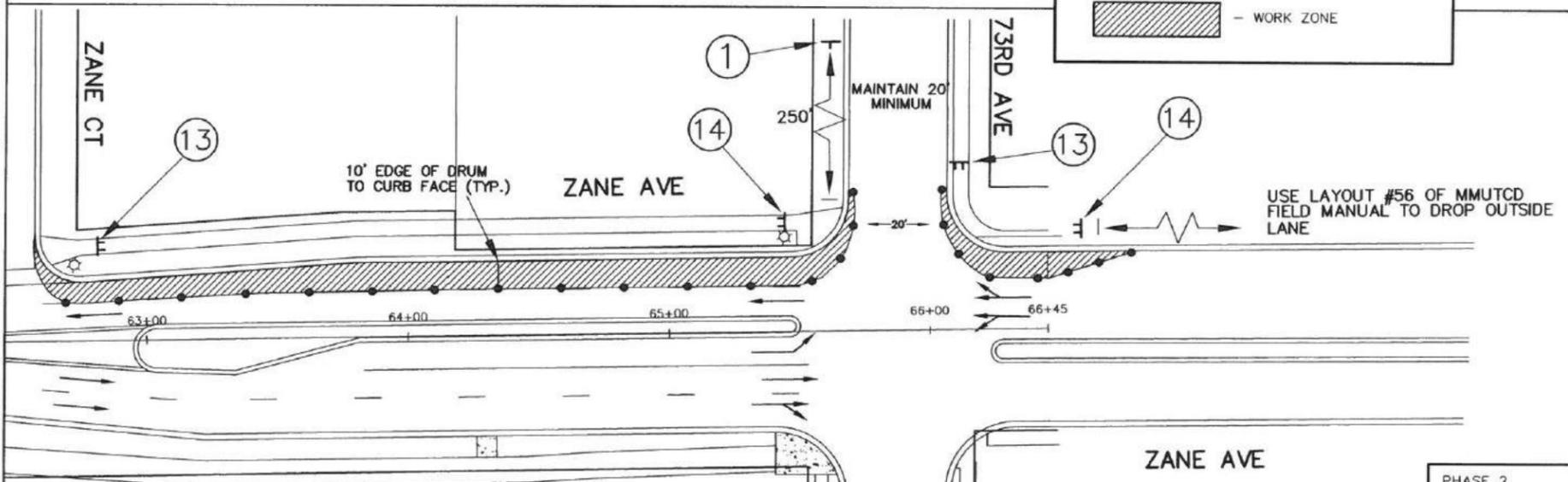
DATE APPROVED: 1/25/16
 HORIZ. SCALE: NA
 VERT. SCALE: NA

SHEET 34 OF 55



LEGEND:

- • • - DRUMS SPACED AT 25'
- ▨ - WORK ZONE



PHASE 2
NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 AT 71ST/ZANE SIGNAL PUT SB TRAFFIC ON "RECALL" IF LOOP DETECTION IS IMPACTED.
 AT 69TH/ZANE SIGNAL PUT NB & SB TRAFFIC ON "RECALL" AND TURN OFF NB & SB GREEN AND YELLOW TURN ARROWS.
 TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.

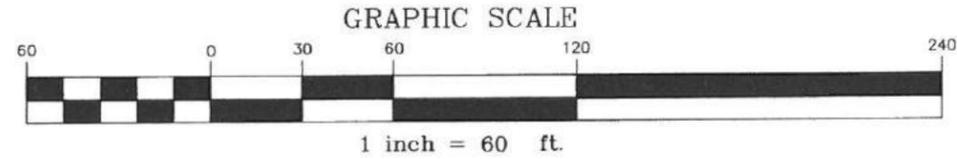
NO.	DATE	BY

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

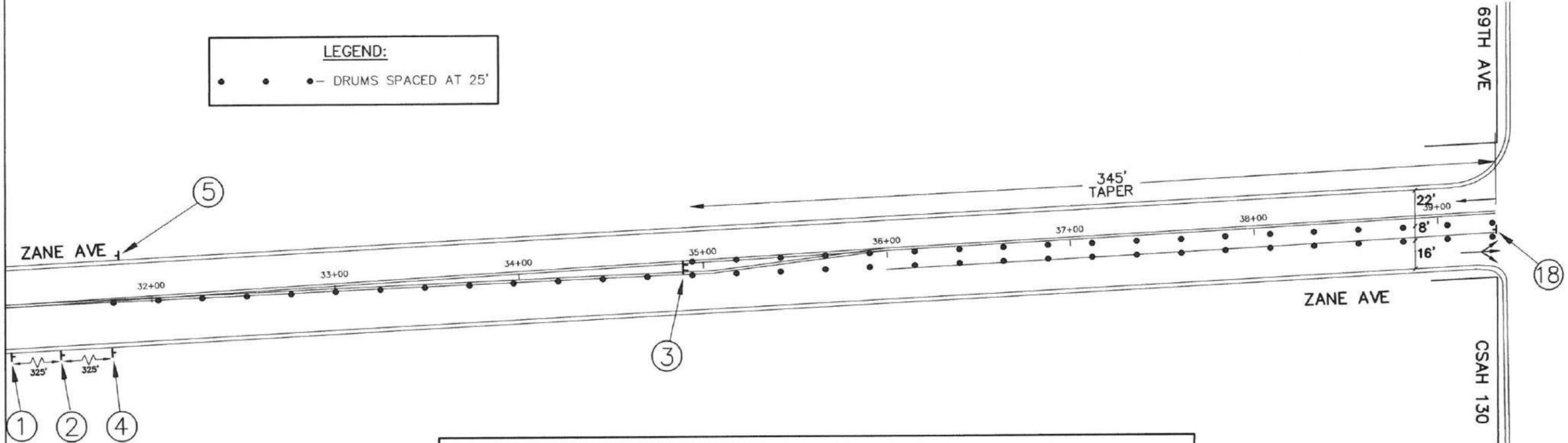
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE: 1/125/16 REG. NO.: 20377
 JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
ZANE AVENUE
69TH AVE. TO 73RD AVE.
PHASE 2 - CLOSE OUTSIDE SB LANE

CAPITOL IMPROV. NO. 4002-16	DRAWN BY JAL	DATE APPROVED 1/25/16	SHEET 35
STATE AID PROJ. NO. 110-102-014	DESIGNED BY JCH	HORIZ. SCALE NA	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE NA	
110-137-004			
189-128-002			



LEGEND:
 • • • — DRUMS SPACED AT 25'



PHASE 2
NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 AT 71ST/ZANE SIGNAL PUT SB TRAFFIC ON "RECALL" IF LOOP DETECTION IS IMPACTED.
 AT 69TH/ZANE SIGNAL PUT NB & SB TRAFFIC ON "RECALL" AND TURN OFF NB & SB GREEN AND YELLOW TURN ARROWS.
 TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.

NO	DATE	BY

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

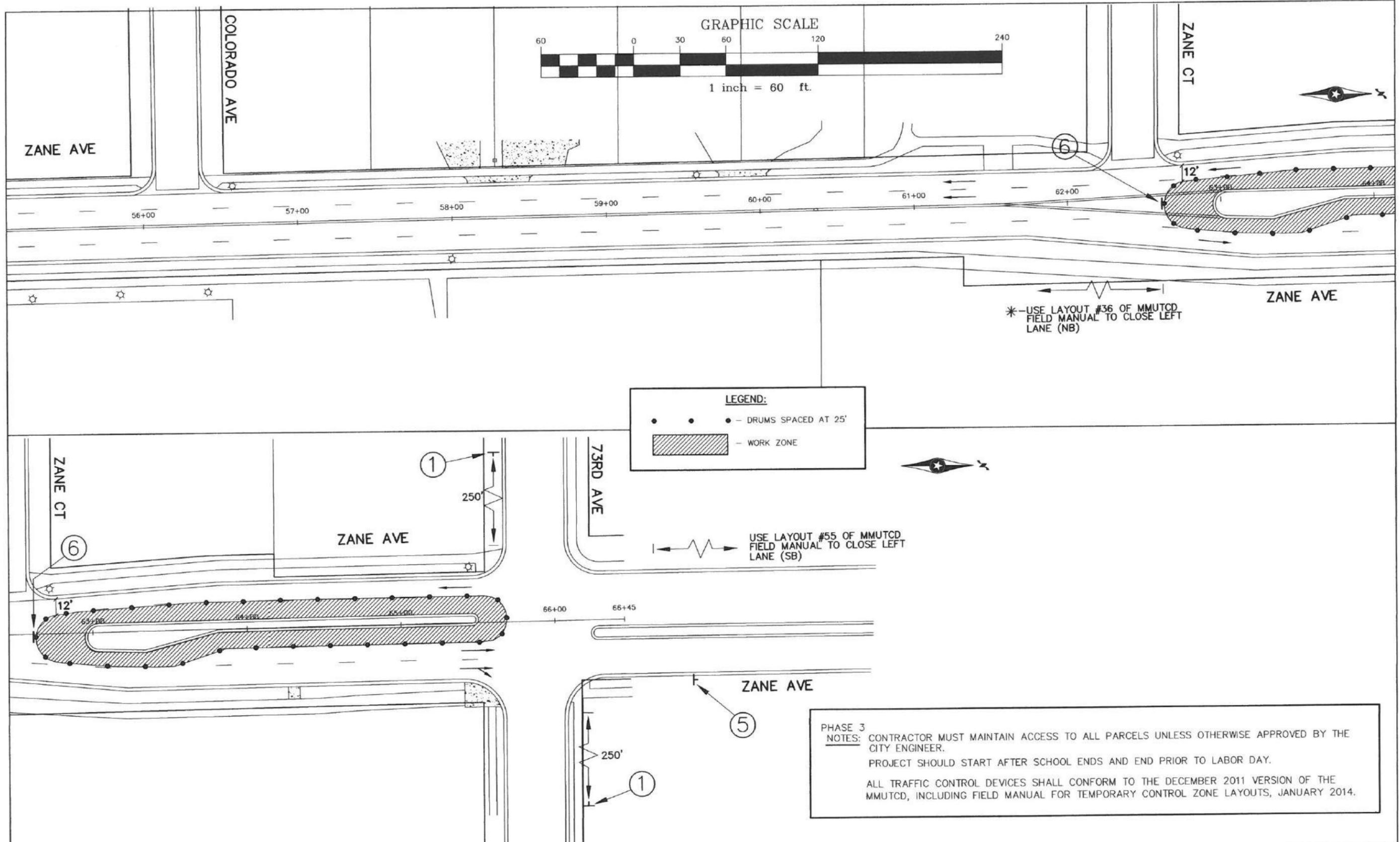
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE 1/25/16 REG. NO. 20377
 JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
ZANE AVENUE
69TH AVE. TO 73RD AVE.
PHASE 2 - CLOSE OUTSIDE SB LANE

CAPITOL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY JAL
 DESIGNED BY JGH
 CHECKED BY JMS
 DATE APPROVED 1/25/16
 HORIZ. SCALE NA
 VERT. SCALE NA

SHEET 36 OF 55



LEGEND:

- - DRUMS SPACED AT 25'
- [Hatched Box] - WORK ZONE

PHASE 3
NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE DECEMBER 2011 VERSION OF THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY CONTROL ZONE LAYOUTS, JANUARY 2014.

NO	DATE	BY

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE 1/25/16 REG. NO. 20377
 JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
ZANE AVENUE
69TH AVE. TO 73RD AVE.
PHASE 3 - MEDIAN NOSES

CAPITOL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY JAL
 DESIGNED BY JGH
 CHECKED BY JMS
 DATE APPROVED 1/25/16
 HORIZ. SCALE NA
 VERT. SCALE NA

SHEET 37 OF 55

TRAFFIC CONTROL SIGN KEY

1 ROAD WORK AHEAD W20-1 48"X48" BLACK ON ORANGE

2 LEFT LANE CLOSED ? 48"X48" BLACK ON ORANGE

3 TYPE 3 8' LONG

4 W4-2L 36" X 36" BLACK ON ORANGE

5 END ROAD WORK G20-2 36"X18" BLACK ON ORANGE

6 R4-7 24" X 30" (ATTACHED TO DRUM)

7 W21-X5R 36"X36" BLACK ON ORANGE

8 TYPE 3 8' LONG

9 RIGHT TURN ? 24" X 30" (ON DRUM)

10 RIGHT LANE MUST TURN RIGHT R3-7R 30"X30"

11 W4-2L 36" X 36" BLACK ON ORANGE

12 25 MPH W13-1P 18"X18" BLACK ON ORANGE

13 TYPE 3 8' LONG

14 SIDEWALK CLOSED R9-10 48"X24" BLACK ON WHITE

15 TYPE 3 8' LONG

16 W14-X7L 18"X18" BLACK ON ORANGE (ATTACHED TO DRUM)

17 W14-X7R 18"X18" BLACK ON ORANGE (ATTACHED TO DRUM)

18 R4-7 24" X 30"

19 W21-1 36"X36" BLACK ON ORANGE

LEGEND
 - WORK AREAS
 - TYPE A LOW INTENSITY FLASHING WARNING LIGHT (ATTACHED TO SIGN OR BARRICADE)
 - TUBULAR DELINEATORS (25' SPACING)

PHASE 1 NOTES:

CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 AT 71ST/ZANE SIGNAL PUT NB TRAFFIC ON "RECALL" IF LOOP DETECTION IS IMPACTED.
 AT 69TH/ZANE SIGNAL PUT NB & SB ON "RECALL" AND TURN OFF NB & SB TURN ARROWS.
 TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.
 ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE DECEMBER 2011 VERSION OF THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY CONTROL ZONE LAYOUTS, JANUARY 2014.

PHASE 2 NOTES:

CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 AT 71ST/ZANE SIGNAL PUT SB TRAFFIC ON "RECALL" IF LOOP DETECTION IS IMPACTED.
 AT 69TH/ZANE SIGNAL PUT NB & SB TRAFFIC ON "RECALL" AND TURN OFF NB & SB GREEN AND YELLOW TURN ARROWS.
 TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.
 ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE DECEMBER 2011 VERSION OF THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY CONTROL ZONE LAYOUTS, JANUARY 2014.

PHASE 3 NOTES:

CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE DECEMBER 2011 VERSION OF THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY CONTROL ZONE LAYOUTS, JANUARY 2014.

NO	DATE	BY

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377
 JESSE STRUWE, P.E. CITY ENGINEER

ZANE AVENUE
 69TH AVE. TO 73RD AVE.
 TRAFFIC CONTROL PLAN
 TRAFFIC CONTROL SIGN KEY/NOTES

CAPITOL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY JAL
 DESIGNED BY JGH
 CHECKED BY JMS
 DATE APPROVED 1/25/16
 HORIZ. SCALE NA
 VERT. SCALE NA

SHEET 38 OF 55

NEW
(FURNISH AND INSTALL SIGNS)

MMUTCD CODE	SIZE	AREA SQ. FT.	QTY.	TOTAL SQ. FT.
R7-1	12" X 18"	1.50	31	46.50
R6-1	36" X 12"	3.00	1	3.00
R5-1	30" X 30"	6.25	1	6.25
R2-1-50	36" X 48"	12.00	1	12.00
TOTAL=				67.75

OLD
(REMOVE AND DISPOSE OF SIGNS)

MMUTCD CODE	SIZE	UNIT	TOTAL
R7-1	12" X 18"	EACH	31
R6-1	36" X 12"	EACH	1
R2-1-50	36" X 48"	EACH	1
TOTAL=			33

PAVEMENT MARKING TOTALS

WHITE EPOXY SKIP LINE- 3260' OF 4" WIDE WHITE SKIP LINE (INCLUDES 9540' OF GAP)
 SOLID WHITE EPOXY LANE LINE- 1350' OF 4" WIDE SOLID WHITE LINE
 SOLID YELLOW EPOXY LANE LINE- 10640' OF 4" WIDE SOLID YELLOW LINE (i.e. 5320' OF DOUBLE YELLOW LINE)
 WHITE EPOXY STOP LINE- 110' OF 2" WIDE LINE = 220 SQ. FT.
 RIGHT TURN ARROW MARKING (EPOXY)- 4 EACH
 LEFT TURN ARROW MARKING (EPOXY)- 5 EACH
 3' X 6' WHITE CROSSWALK MARKINGS (EPOXY)- 27 EACH

STRIPING NOTES:

ALL STRIPING AND PAVEMENT MARKINGS SHALL BE EPOXY UNLESS OTHERWISE NOTED
 ALL SKIP LINE SHALL CONSIST OF 10' OF LINE WITH 30' OF GAP.

NOTES:

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE DECEMBER 2011 VERSION OF THE MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY CONTROL ZONE LAYOUTS, JANUARY 2014.
 ALL SIGNS SHALL BE DIAMOND GRADE 3 GRADE SHEETING AND ALL SIGN POSTS SHALL BE GALVANIZED STEEL CHANNEL/TUBING.
 MEASUREMENT AND PAYMENT WILL BE ON THE BASIS OF EACH SIGN ASSEMBLY (INCLUDING POSTS) SALVAGED AND REINSTALLED. THE CONTRACT PRICE PER EACH SHALL BE CONSIDERED COMPENSATION IN FULL FOR ALL LABOR, EQUIPMENT AND MATERIALS.
 ALL STRIPING AND PAVEMENT MARKINGS ARE TO BE EPOXY.
 ALL SIGNS AND STRIPING WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLAN ARE NOT TO BE DISTURBED.
 ANY STOP SIGNS REMOVED SHALL BE IMMEDIATELY REPLACED WITH TEMPORARY SIGNS BY THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THE TRAFFIC CONTROL BID ITEM.

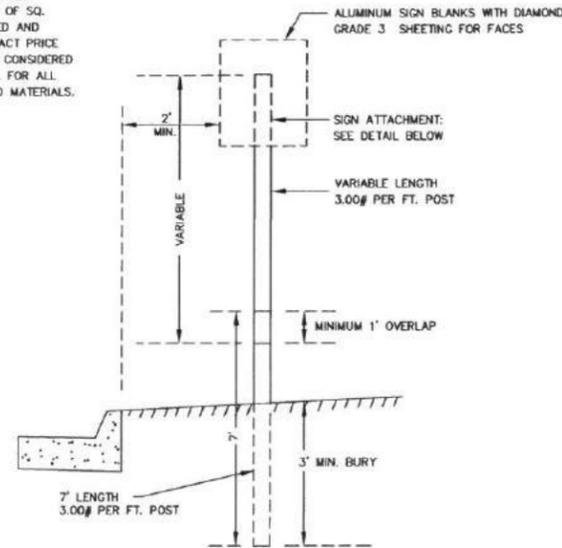
OLD
(SALVAGE AND REINSTALL SIGN ASSEMBLY)

MMUTCD CODE	SIZE	UNIT	TOTAL
D3-2	42" X 9"		
D3-2	42" X 9"	EACH	1
R1-1	30" X 30"		
D3-2	36" X 9"		
D3-2	42" X 9"		
R6-1	36" X 12"	EACH	1
R1-1	30" X 30"		
R6-3	24" X 18"		
W11-1	30" X 30"	EACH	1
S2-P2	24" X 18"		
R1-1	18" X 18"		
R4-7	24" X 30"	EACH	6
OM-3	18" X 18"		
R1-1	18" X 18"	EACH	1
TOTAL=			10



TYPICAL PLACEMENT ABOVE GUTTER GRADE

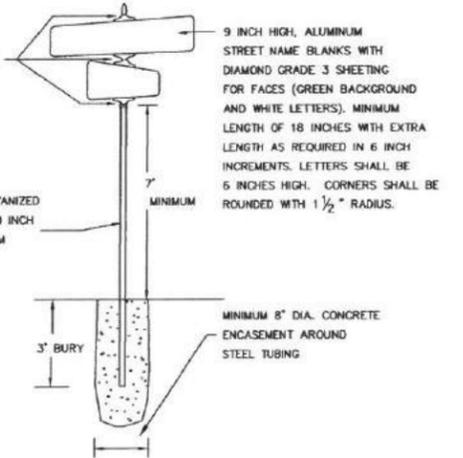
NOTE: MEASUREMENT AND PAYMENT WILL BE ON THE BASIS OF SQ. FT. OF SIGNS FURNISHED AND INSTALLED. THE CONTRACT PRICE PER SQ. FT. SHALL BE CONSIDERED COMPENSATION IN FULL FOR ALL LABOR, EQUIPMENT AND MATERIALS.



NOT TO SCALE
2-98
GALVANIZED FLANGED CHANNEL SIGN POST
TYPICAL BLVD. SIGN INSTALLATION
DETAIL DRAWING ST-16
CITY OF BROOKLYN PARK

LYLE E450 BRACKET ASSEMBLY OR APPROVED EQUAL

2 3/8 INCH DIAMETER GALVANIZED STEEL TUBING WITH 0.080 INCH WALL THICKNESS; MINIMUM LENGTH OF 10 FT.



STREET NAME SIGN FACES SHALL BE DIAMOND GRADE 3 SHEETING WITH GREEN BACKGROUND AND WHITE LETTER COPY. THE SIGN FACES SHALL BE APPLIED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SHEETING MANUFACTURER. STREET NAME PLATES SHALL HAVE ALUMINUM BLANKS. THERE SHALL BE ONE FACE APPLIED PER BLANK, AND STREET NAME ASSEMBLY SHALL CONSIST OF FOUR BLANKS (UNLESS OTHERWISE INDICATED IN THE PLANS) AND APPROPRIATE MOUNTING HARDWARE.

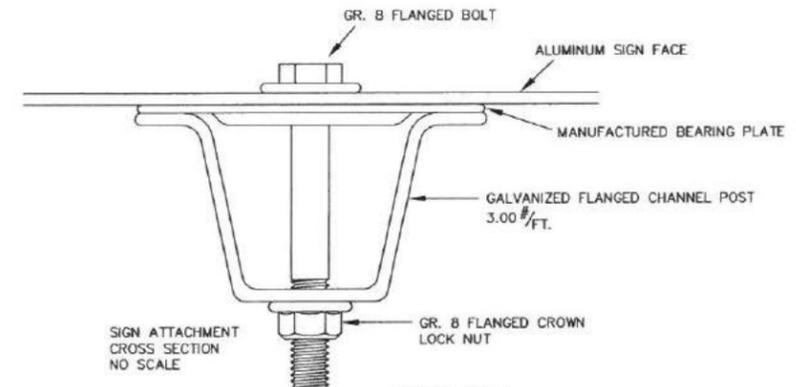
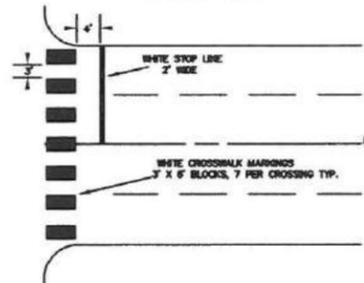
MOUNTING HARDWARE FOR STREET NAME ASSEMBLIES SHALL BE THE LYLE E-450 BRACKET ASSEMBLY OR AN APPROVED EQUAL. BOLTS SHALL BE OF ADEQUATE LENGTH TO SECURE THE SIGN BLANK WITH THE LOCKING NUT.

THE HEIGHT OF THE STREET NAME BLANKS SHALL BE 9 INCHES. THE STREET NAME LEGEND SHALL BE 6 INCH UPPER/LOWER SERIES C (SEE MDOT STANDARD SIGN MANUAL). THE LEGEND SHALL BE OPTICALLY CENTERED VERTICALLY AND SPACED BOTH HORIZONTALLY AND VERTICALLY.

BLANKS SHALL BE NOTCHED TO ACCEPT MOUNTING HARDWARE, BLANK HOLDERS AND PUNCHED WITH ONE 1/4" HOLE AT EACH END AND CENTERED TOP TO BOTTOM.

NOT TO SCALE
4-98
STREET NAME SIGN ASSEMBLY DETAIL
DETAIL DRAWING ST-17
CITY OF BROOKLYN PARK

TYPICAL SPACING FOR CROSSWALK & STOP LINE



NOT TO SCALE
4-99
SIGN ATTACHMENT
CROSS SECTION

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

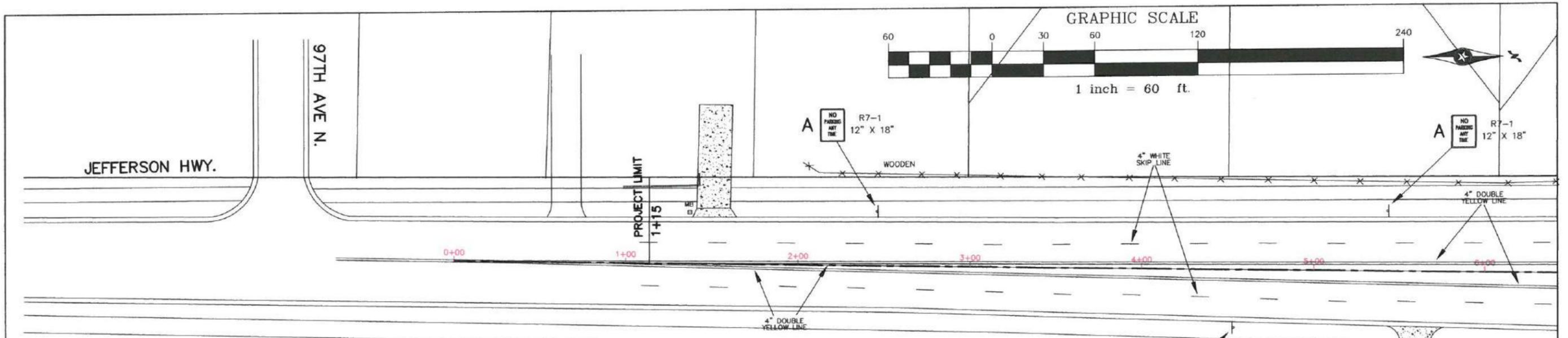
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377
 JESSE STRUVE, P.E. CITY ENGINEER

JEFFERSON HWY.
97TH AVE. TO 109TH AVE.
SIGNING & STRIPING DETAILS

CAPITOL IMPROV. NO.
4002-16
 STATE AID PROJ. NO.
110-102-014
 110-102-015
 110-137-004
 189-128-002

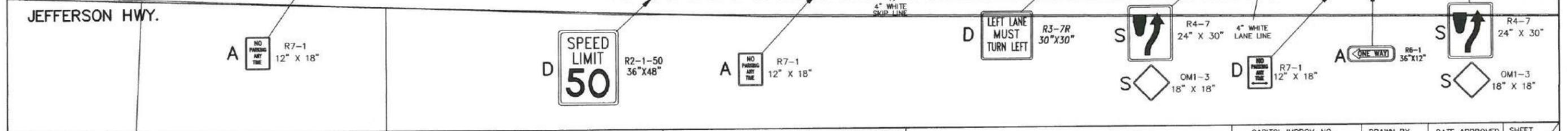
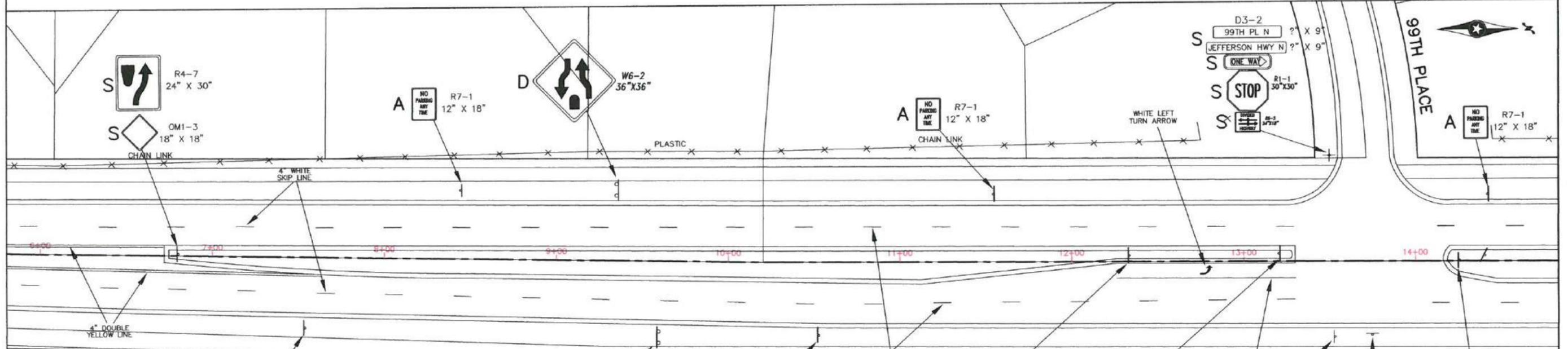
DRAWN BY: JAL
 DESIGNED BY: JGH
 CHECKED BY: JMS
 DATE APPROVED: 1/25/16
 HORIZ. SCALE: NA
 VERT. SCALE: NA

SHEET 39 OF 55



KEY

- F- FURNISH AND INSTALL SIGN
- A- REMOVE AND DISPOSE OF OLD SIGN AND FURNISH AND INSTALL NEW SIGN
- S- SALVAGE AND REINSTALL SIGN
- D- DO NOT DISTURB SIGN SIGN
- R- REMOVE AND DISPOSE OF SIGN



NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377

JESSE STRUVE, P.E. CITY ENGINEER

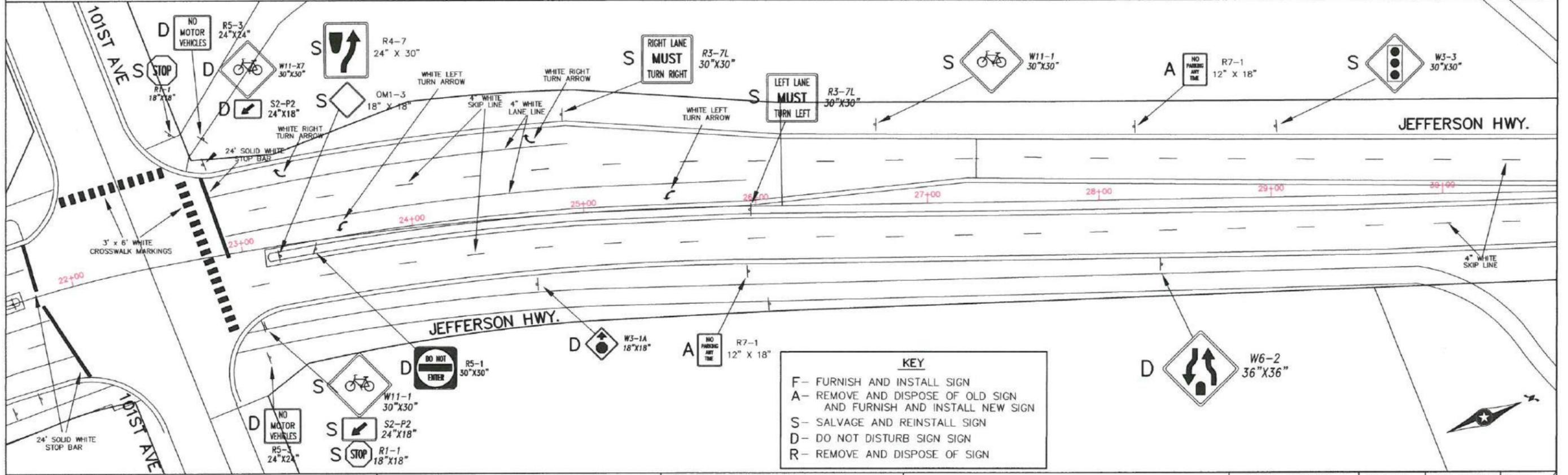
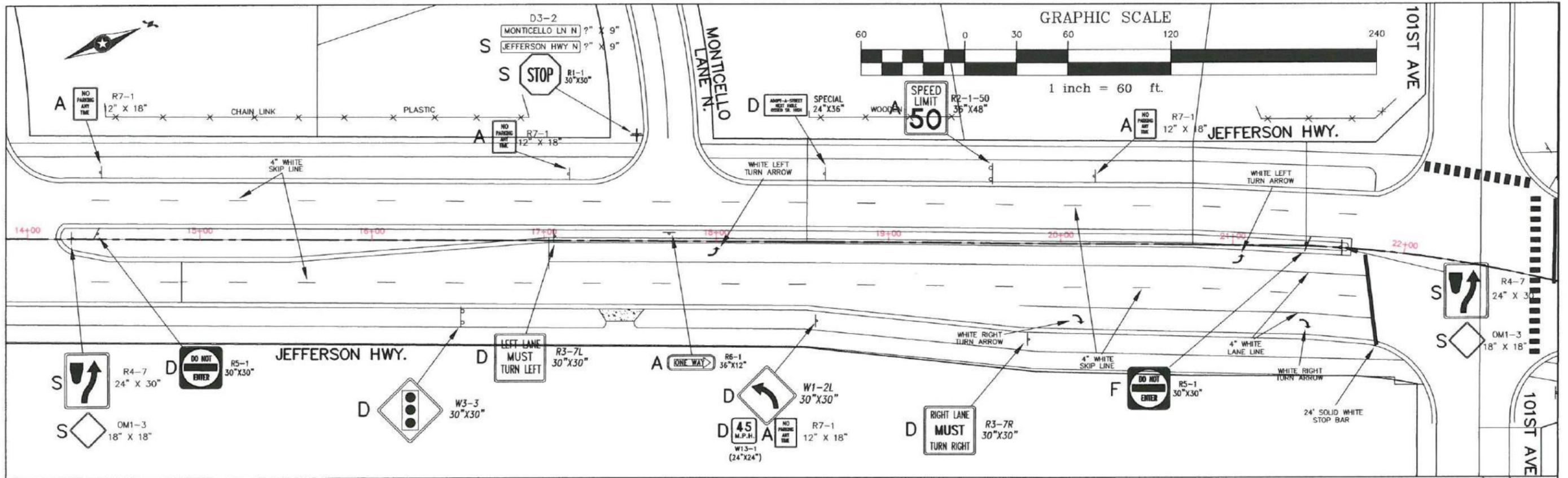
JEFFERSON HWY.
97TH AVE. TO 109TH AVE.
SIGNING & STRIPING PLAN

CAPITOL IMPROV. NO.
 4002-16
 STATE AID PROJ. NO.
 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY: JAL
 DESIGNED BY: JGH
 CHECKED BY: JMS

DATE APPROVED: 1/25/16
 HORIZ. SCALE: NA
 VERT. SCALE: NA

SHEET 40 OF 55



KEY

- F- FURNISH AND INSTALL SIGN
- A- REMOVE AND DISPOSE OF OLD SIGN AND FURNISH AND INSTALL NEW SIGN
- S- SALVAGE AND REINSTALL SIGN
- D- DO NOT DISTURB SIGN SIGN
- R- REMOVE AND DISPOSE OF SIGN

NO	DATE	BY	CKD	REVISION

**CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION**

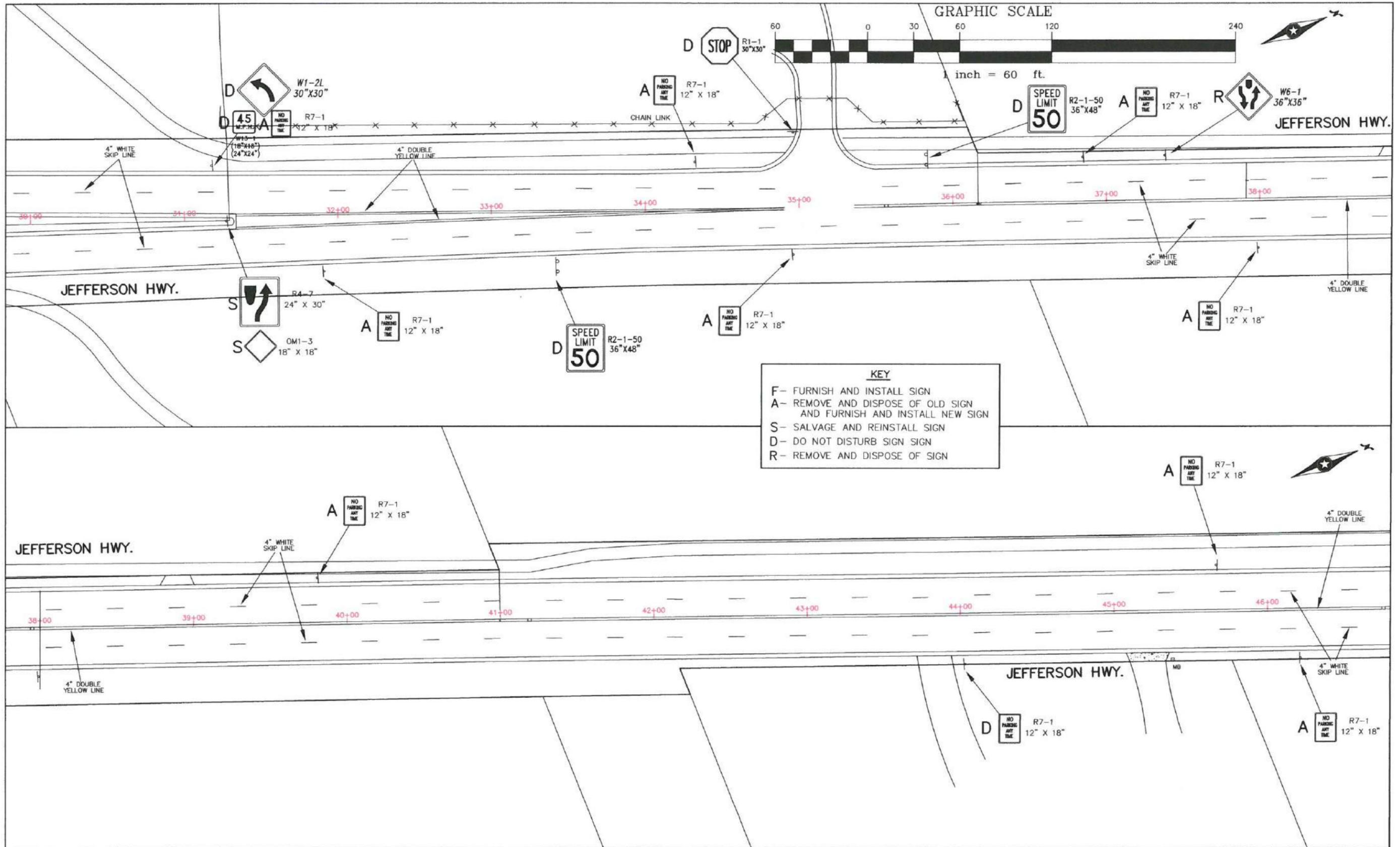
5200 65TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

TYPED NAME: JEFF HOLSTEIN
DATE: 1/25/16 REG. NO.: 20377
JESSE STRUVE, P.E. CITY ENGINEER

**JEFFERSON HWY.
97TH AVE TO 109TH AVE.
SIGNING & STRIPING PLAN**

CAPITOL IMPROV. NO. 4002-18	DRAWN BY JAL	DATE APPROVED 1/25/16	SHEET 41
STATE AID PROJ. NO. 110-102-014	DESIGNED BY JGH	HORIZ. SCALE NA	OF 55
110-102-015	CHECKED BY JMS	VERT. SCALE NA	
110-137-004			
189-128-002			



KEY

- F- FURNISH AND INSTALL SIGN
- A- REMOVE AND DISPOSE OF OLD SIGN AND FURNISH AND INSTALL NEW SIGN
- S- SALVAGE AND REINSTALL SIGN
- D- DO NOT DISTURB SIGN SIGN
- R- REMOVE AND DISPOSE OF SIGN

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377

JESSE STRUVE, P.E. CITY ENGINEER

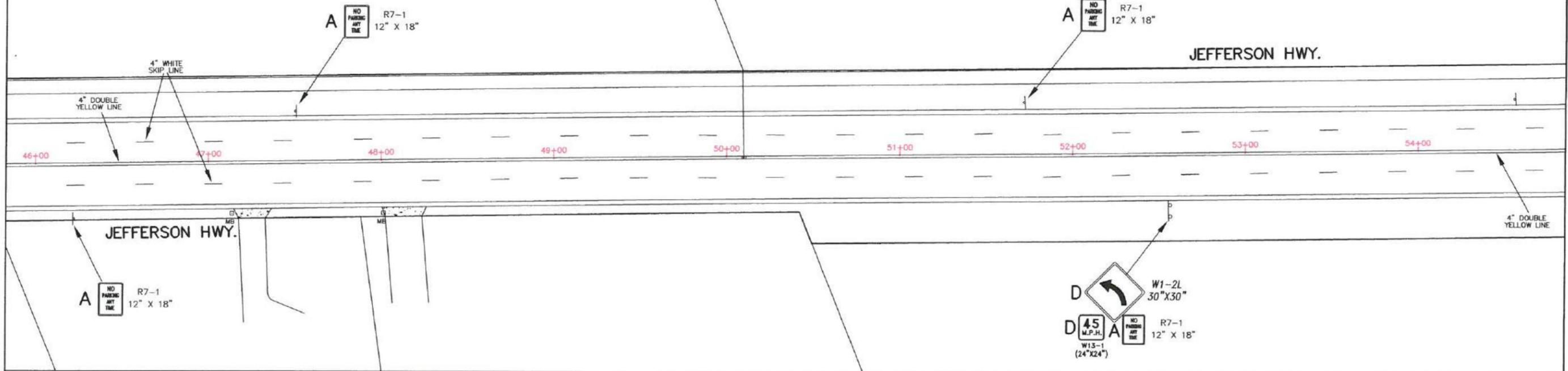
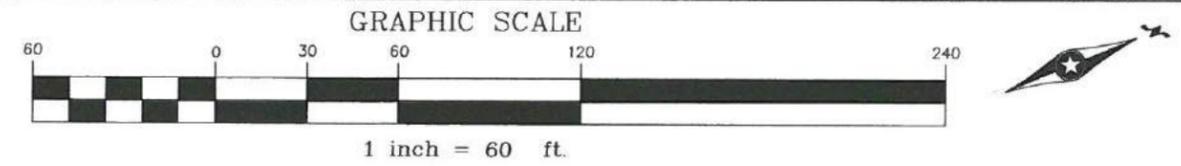
JEFFERSON HWY.
T.H. 610 TO 109TH AVE.
SIGNING & STRIPING PLAN

CAPITOL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY: JAL
 DESIGNED BY: JGH
 CHECKED BY: JMS

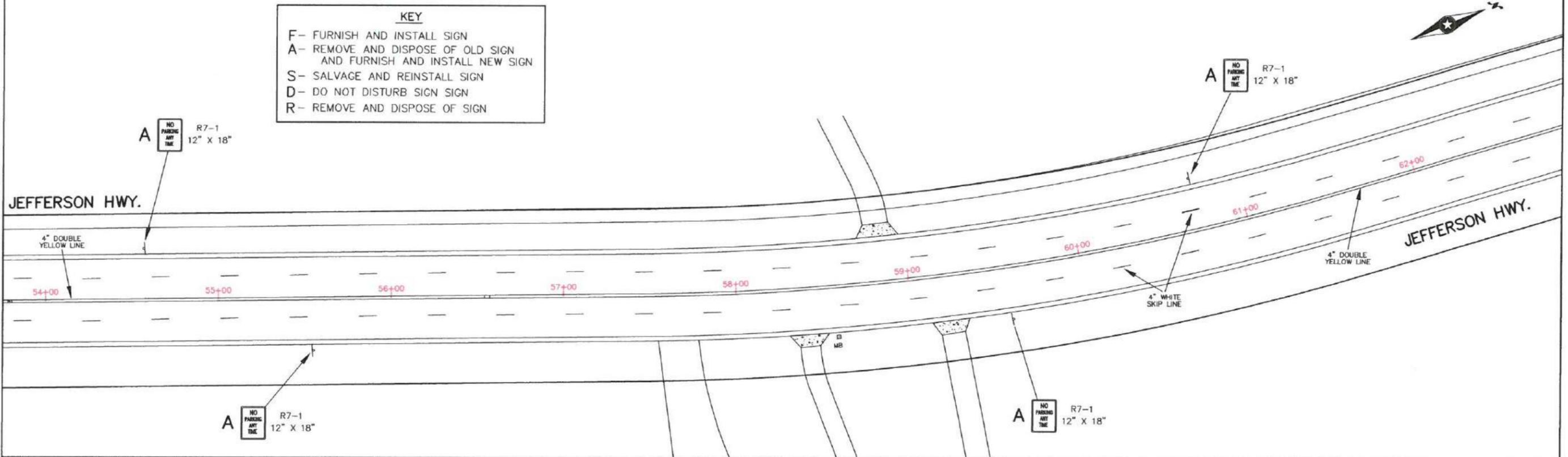
DATE APPROVED: 1/25/16
 HORIZ. SCALE: NA
 VERT. SCALE: NA

SHEET 42 OF 55



KEY

- F- FURNISH AND INSTALL SIGN
- A- REMOVE AND DISPOSE OF OLD SIGN AND FURNISH AND INSTALL NEW SIGN
- S- SALVAGE AND REINSTALL SIGN
- D- DO NOT DISTURB SIGN SIGN
- R- REMOVE AND DISPOSE OF SIGN



NO.	DATE	BY	CHKD	REVISION

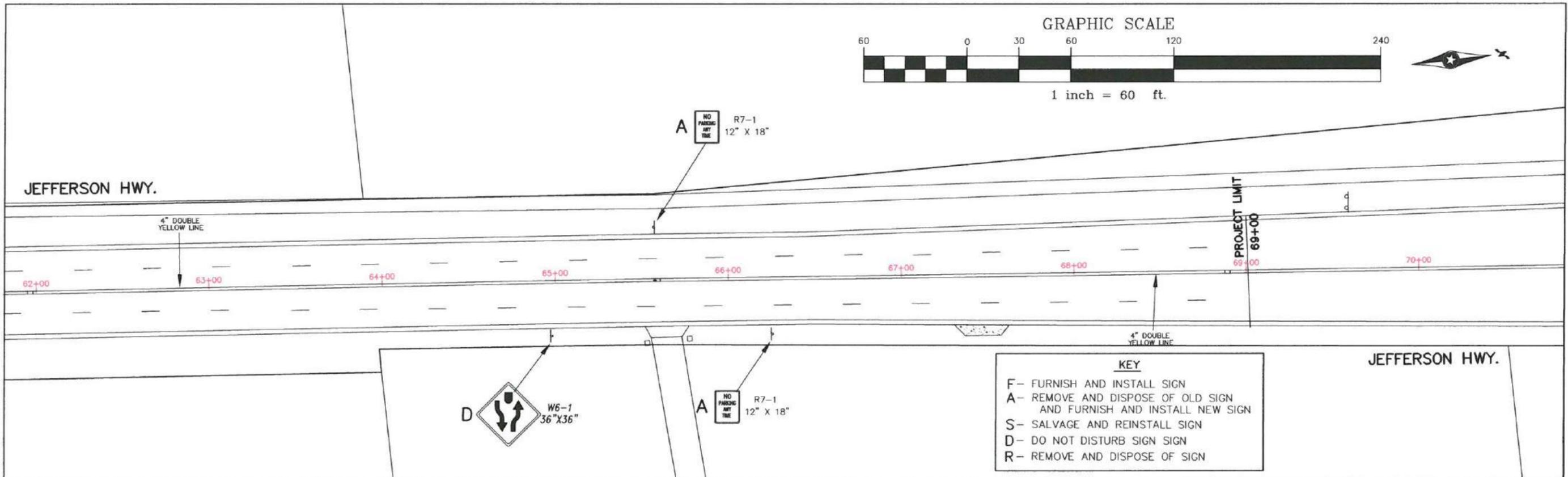
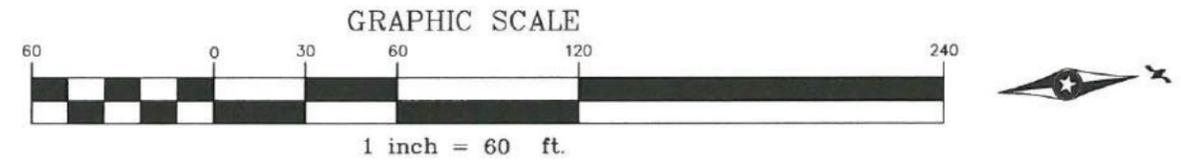
CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 REG. NO.: 20377
 JESSE STRUVE, P.E. CITY ENGINEER

JEFFERSON HWY.
T.H. 610 TO 109TH AVE.
SIGNING & STRIPING PLAN

CAPITOL IMPROV. NO. 4902-16	DRAWN BY JAL	DATE APPROVED 1/25/16	SHEET 43 OF 55
STATE AID PROJ. NO. 110-102-014	DESIGNED BY JGH	HORIZ. SCALE NA	
110-102-015	CHECKED BY JMS	VERT. SCALE NA	
110-137-004			



KEY

F- FURNISH AND INSTALL SIGN
 A- REMOVE AND DISPOSE OF OLD SIGN AND FURNISH AND INSTALL NEW SIGN
 S- SALVAGE AND REINSTALL SIGN
 D- DO NOT DISTURB SIGN SIGN
 R- REMOVE AND DISPOSE OF SIGN

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park  5200 85TH AVE. N.
 BROOKLYN PARK, MN 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

TYPED NAME: JEFF HOLSTEIN
 DATE 1/25/16 REG. NO. 20377
 JESSE STRUVE, P.E. CITY ENGINEER

JEFFERSON HWY.
T.H. 610 TO 109TH AVE.
SIGNING & STRIPING PLAN

CAPITOL IMPROV. NO. 4002-18
 STATE AID PROJ. NO. 110-102-014
 110-102-015
 110-137-004
 189-128-002

DRAWN BY JAL
 DESIGNED BY JGH
 CHECKED BY JMS

DATE APPROVED 1/25/16
 HORIZ. SCALE NA
 VERT. SCALE NA

SHEET 44 OF 55



TRAFFIC CONTROL SIGN KEY

- ① W20-1
36"x36"
BLACK ON ORANGE
- ② W21-X5R
36"x36"
BLACK ON ORANGE
- ③ W4-2R
36"x36"
BLACK ON ORANGE
- ④ TYPE 3
8' LONG
- ⑤ W1-6L
60"x36"
BLACK ON ORANGE
- ⑥ TRAIL CLOSED
USE OTHER SIDE R9-10
48"x24"
BLACK ON WHITE
- ⑦ W14-X7
18"x18"
BLACK ON ORANGE
(ON DRUM)
- ⑧ G20-2
36"x18"
BLACK ON ORANGE
- ⑨ W21-X5L
36"x36"
BLACK ON ORANGE
- ⑩ W4-2L
36"x36"
BLACK ON ORANGE
- ⑪ TYPE 3
8' LONG
- ⑫ W1-6R
60"x36"
BLACK ON ORANGE
- ⑬ TRAIL CLOSED R9-9
30"x18"
BLACK ON WHITE
- ⑭ 35 M.P.H. W13-1P
18"x18"
BLACK ON ORANGE
- ⑮ W21-1
36"x36"
BLACK ON ORANGE
- ⑯ RIGHT LANE MUST TURN RIGHT R3-7R
30"x30"
BLACK ON WHITE
- ⑰ SPECIAL 18"x24"
BLACK ON ORANGE
(ON DRUM)
- ⑱ SPECIAL 18"x24"
BLACK ON ORANGE
(ON DRUM)
- ⑲ R4-7
18"x24"
BLACK ON WHITE
(ON DRUM)

JEFFERSON HWY PROJECT LOCATION

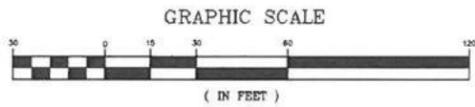
NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

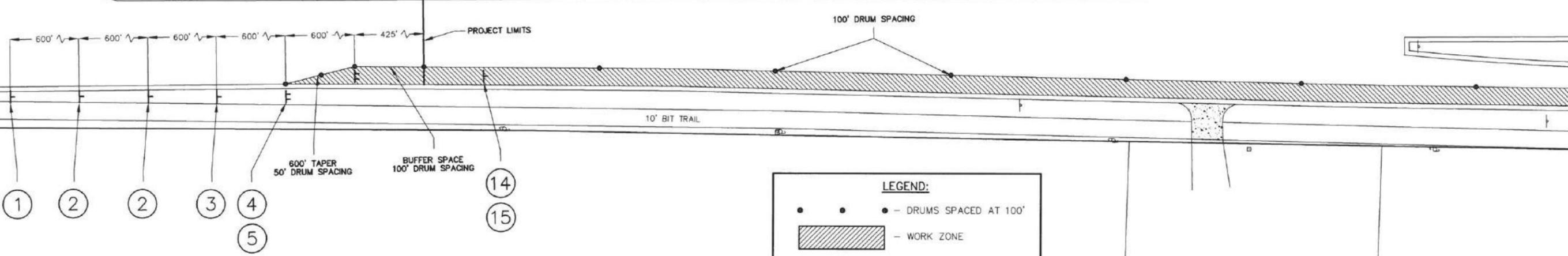
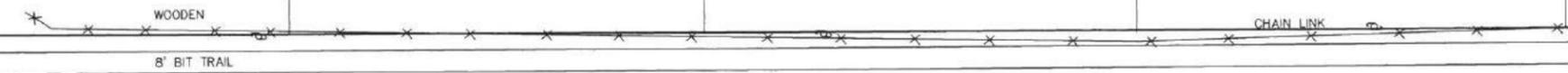
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
TYPED NAME JEFF HOLSTEIN
DATE 1/25/16 LIC. NO. 20377
JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
JEFFERSON HIGHWAY
NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
SIGN KEY

CAPITAL IMPROV. NO. 4002-16
STATE AID PROJ. NO. 110-102-014
110-102-015
110-137-004
189-128-002
DRAWN BY MLR
DESIGNED BY JGH
CHECKED BY JMS
DATE APPROVED 1/25/16
HORIZ. SCALE 1"=30'
VERT. SCALE



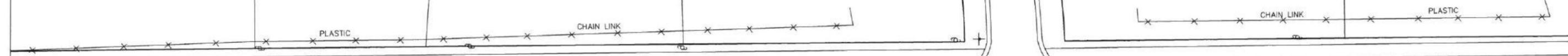
97TH AVE



LEGEND:

- - DRUMS SPACED AT 100'
- ▨ - WORK ZONE

99TH PLACE



NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 USE LAYOUT 39 FROM THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUT FIELD MANUAL 2014.

NO	DATE	BY	CKD	REVISION

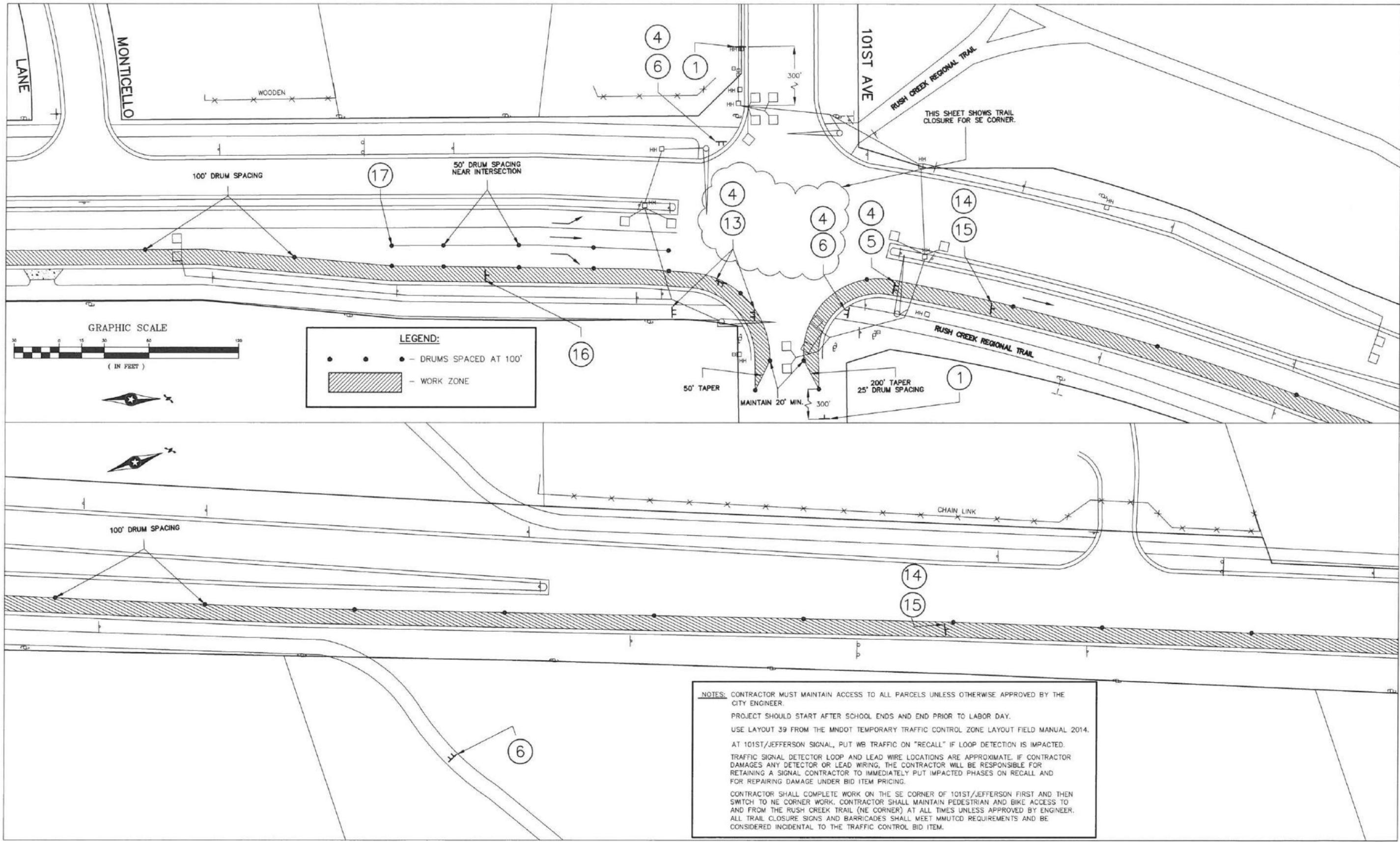
CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME: JEFF HOLSTEIN
 DATE: 1/25/16 LIC. NO. 20377
 JESSE STRUYE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
 JEFFERSON HIGHWAY
 NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
 PHASE 1 - CLOSE OUTSIDE NB LANE

CAPITAL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
110-102-015
110-137-004
189-128-002
 DRAWN BY MLR
 DESIGNED BY JGH
 CHECKED BY JMS
 DATE APPROVED 1/25/16
 HORIZ. SCALE 1"=30'
 VERT. SCALE

SHEET **46**
 OF **55**



NO	DATE	BY	CKD	REVISION

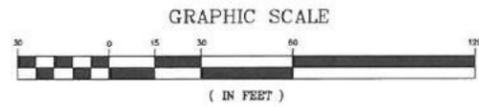
CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME JEFF HOLSTEIN
 DATE 1/25/16 LIC. NO. 20377
 JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
JEFFERSON HIGHWAY
NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
PHASE 1 - CLOSE OUTSIDE NB LANE

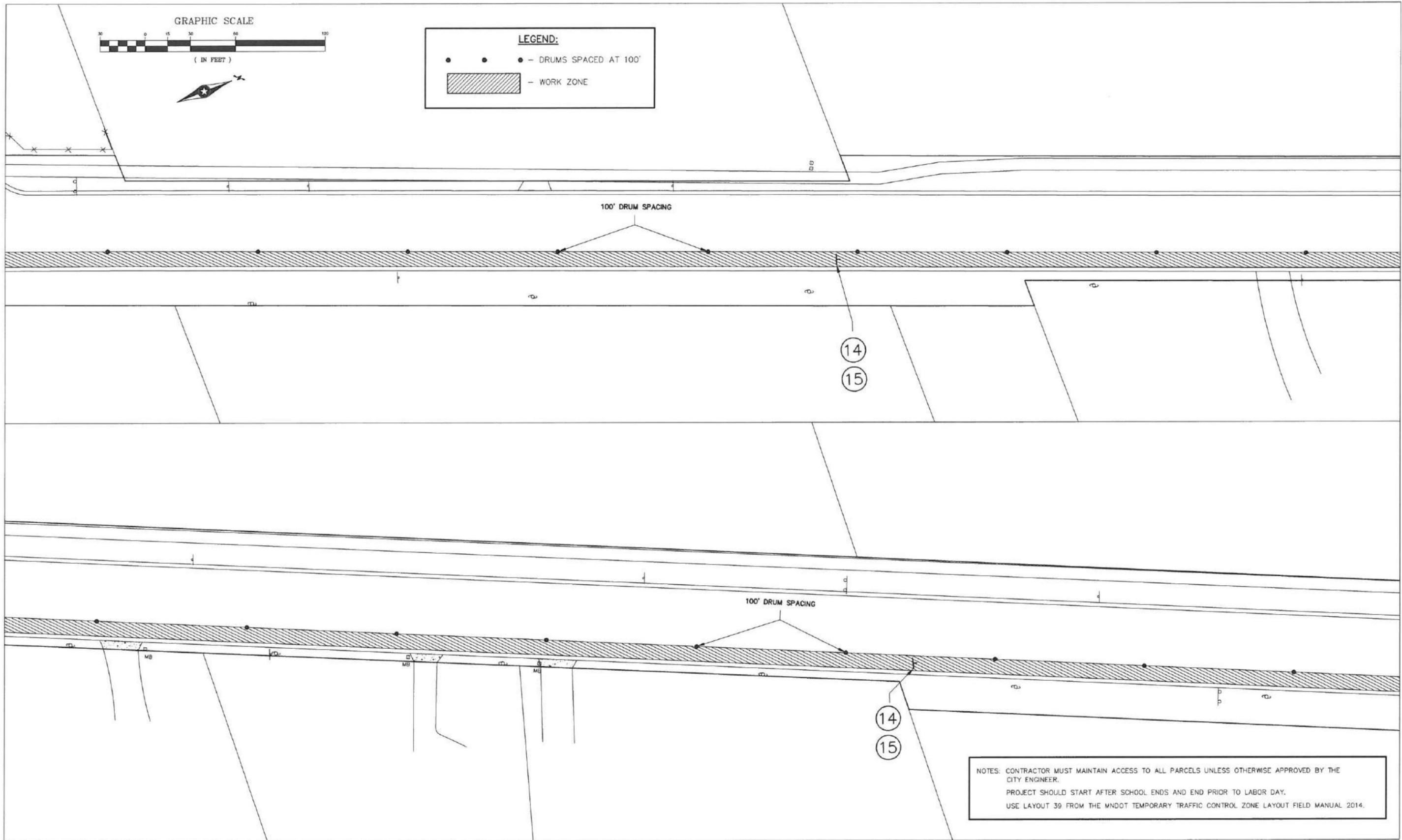
CAPITAL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
110-102-015
110-137-004
189-128-002
 DRAWN BY MLR
 DESIGNED BY JGH
 CHECKED BY JMS
 DATE APPROVED 1/25/16
 HORIZ. SCALE 1"=30'
 VERT. SCALE

SHEET **47** OF **55**



LEGEND:

- • - DRUMS SPACED AT 100'
- ▨ - WORK ZONE



NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 USE LAYOUT 39 FROM THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUT FIELD MANUAL 2014.

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION

Brooklyn Park 5200 85TH AVE. N.
 BROOKLYN PARK, MN 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

TYPED NAME JEFF HOLSTEIN
 DATE 1/25/16 LIC. NO. 20377
 JESSE STRUVE, P.E. CITY ENGINEER

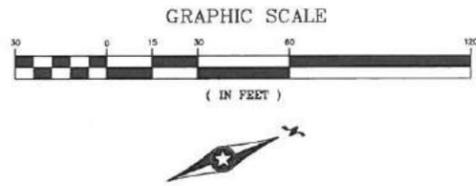
TRAFFIC CONTROL PLAN
JEFFERSON HIGHWAY
 NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
 PHASE 1 - CLOSE OUTSIDE NB LANE

CAPITAL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
110-102-015
110-137-004
189-128-002

DRAWN BY MLR
 DESIGNED BY JGH
 CHECKED BY JMS

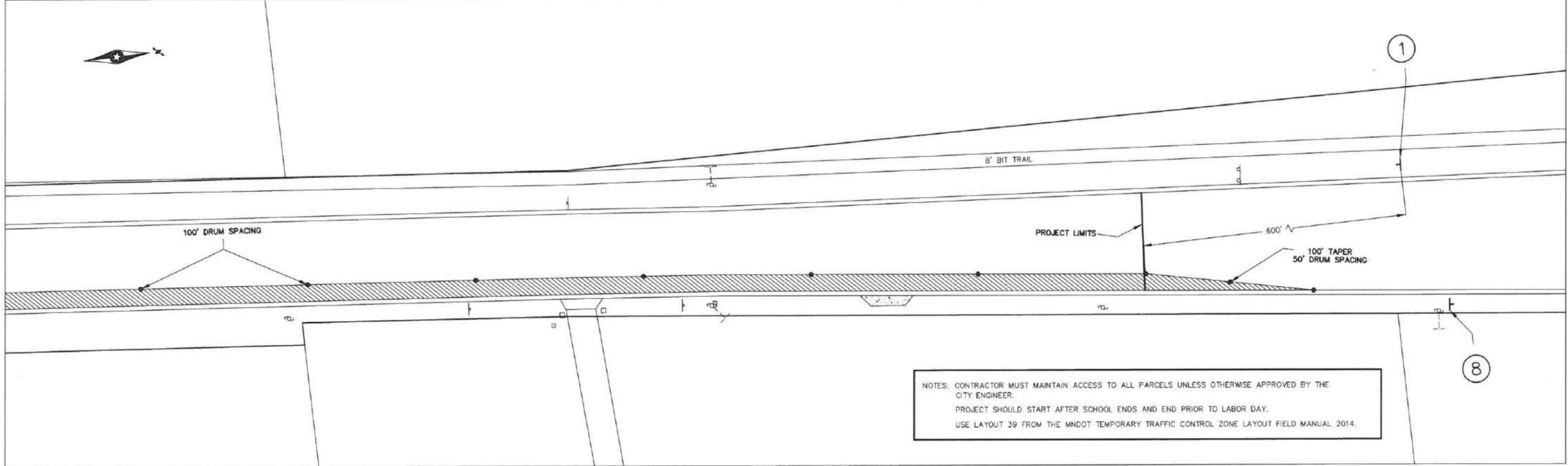
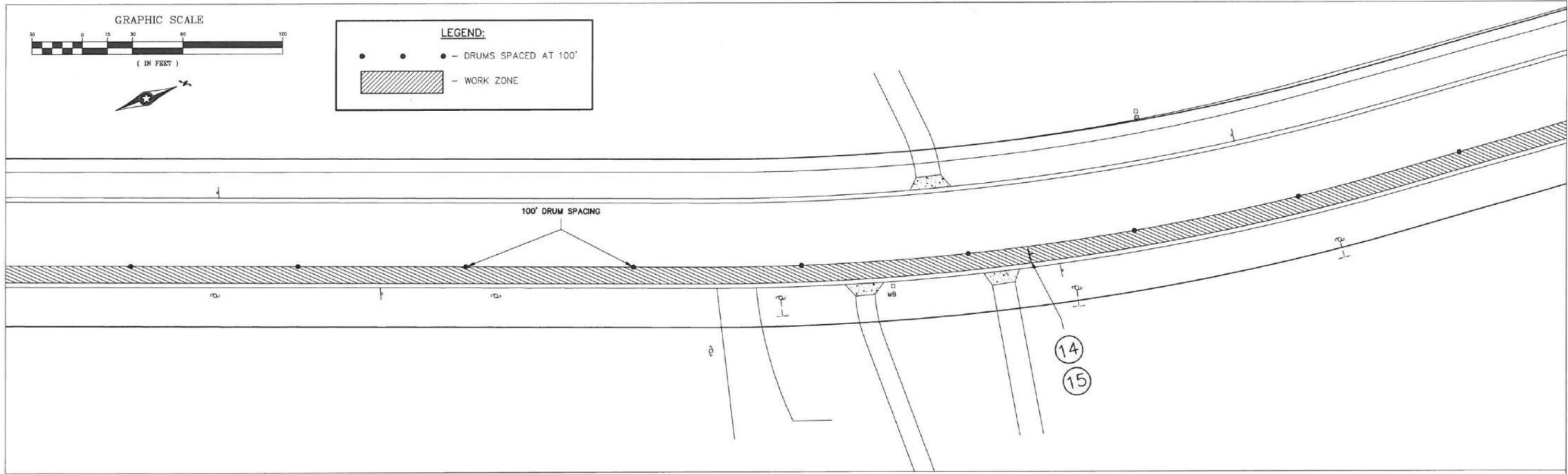
DATE APPROVED 1/25/16
 HORIZ. SCALE 1"=30'
 VERT. SCALE

SHEET **48** OF **55**



LEGEND:

- • • - DRUMS SPACED AT 100'
- ▨ - WORK ZONE



NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 USE LAYOUT 39 FROM THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUT FIELD MANUAL 2014.

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION

Brooklyn Park 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

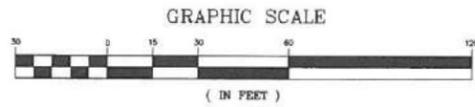
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

TYPED NAME **JEFF HOLSTEIN**
 DATE **1/25/16** LIC. NO. **20377**
 JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
JEFFERSON HIGHWAY
NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
PHASE 1 - CLOSE OUTSIDE NB LANE

CAPITAL IMPROV. NO. **4002-16**
 STATE AID PROJ. NO. **110-102-014**
110-102-015
110-137-004
189-128-002

DRAWN BY **MLR** DATE APPROVED **1/25/16**
 DESIGNED BY **JGH** HORIZ. SCALE **1"=30'**
 CHECKED BY **JMS** VERT. SCALE



97TH AVE

1

100' TAPER
50' DRUM SPACING

WOODEN

8' BIT TRAIL

CHAIN LINK

PROJECT LIMITS

600'

100' DRUM SPACING

10' BIT TRAIL

1

LEGEND:

- — DRUMS SPACED AT 100'
- ▨ — WORK ZONE

14

15

99TH PLACE

14

15

PLASTIC

CHAIN LINK

CHAIN LINK

PLASTIC

100' DRUM SPACING

NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
USE LAYOUT 39 FROM THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUT FIELD MANUAL 2014.

NO	DATE	BY	CKD	REVISION

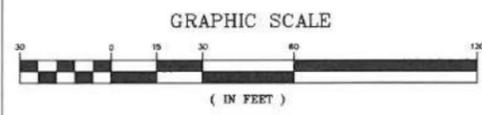
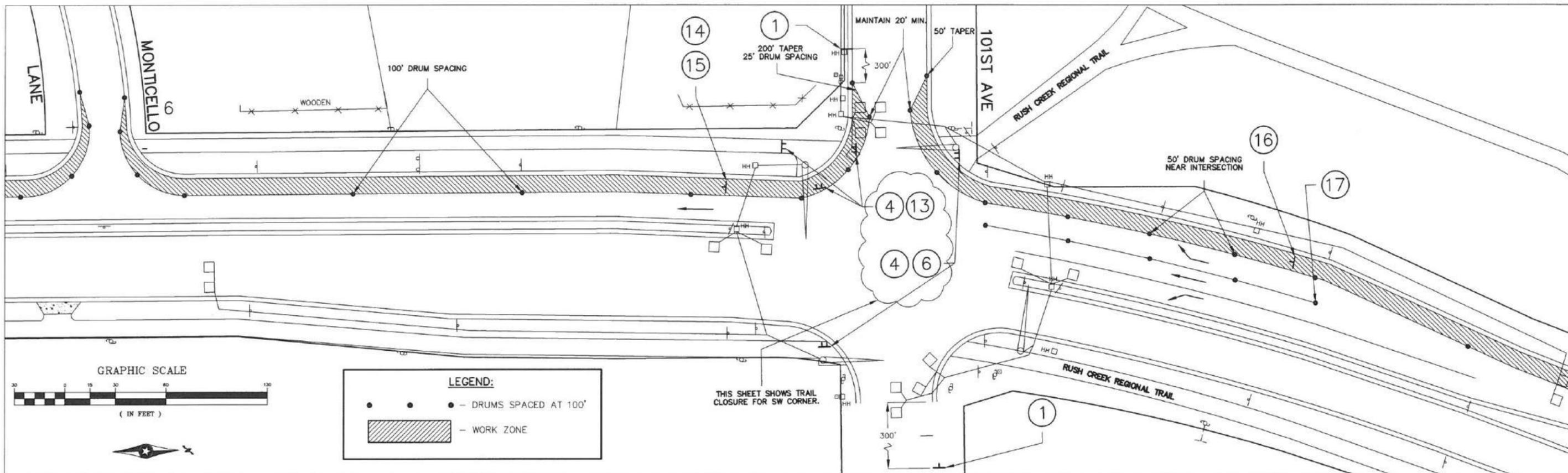
CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
TYPED NAME JEFF HOLSTEIN
DATE 1/25/16 LIC. NO. 20377
JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
JEFFERSON HIGHWAY
NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
PHASE 2 - CLOSE OUTSIDE SB LANE

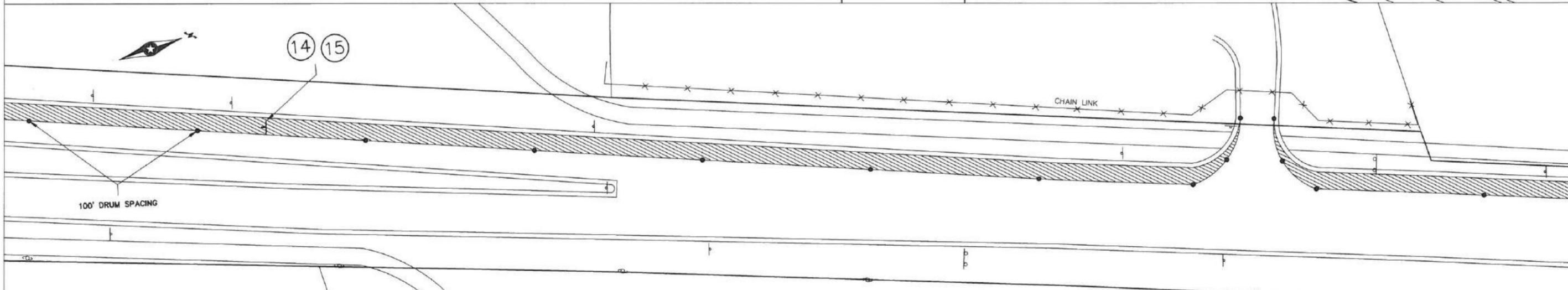
CAPITAL IMPROV. NO. 4002-16
STATE AID PROJ. NO. 110-102-014
110-102-015
110-137-004
189-128-002
DRAWN BY MLR
DESIGNED BY JGH
CHECKED BY JMS
DATE APPROVED 1/25/16
HORIZ. SCALE 1"=30'
VERT. SCALE

SHEET **50**
OF **55**



LEGEND:

- • • - DRUMS SPACED AT 100'
- ▨ - WORK ZONE



NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.

USE LAYOUT 39 FROM THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUT FIELD MANUAL 2014.

AT 101ST/JEFFERSON SIGNAL, PUT EB TRAFFIC ON "RECALL" IF LOOP DETECTION IS IMPACTED.

TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.

CONTRACTOR SHALL COMPLETE WORK ON THE SW CORNER OF 101ST/JEFFERSON FIRST AND THEN SWITCH TO NW CORNER WORK. CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND BIKE ACCESS TO AND FROM THE RUSH CREEK TRAIL (NW CORNER) AT ALL TIMES UNLESS APPROVED BY ENGINEER. ALL TRAIL CLOSURE SIGNS AND BARRICADES SHALL MEET MMUTCD REQUIREMENTS AND BE CONSIDERED INCIDENTAL TO THE TRAFFIC CONTROL BID ITEM.

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION

Brooklyn Park

5200 85TH AVE. N.
BROOKLYN PARK, MN. 55443
PH# 763/493-8100
FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

TYPED NAME: **JEFF HOLSTEIN**

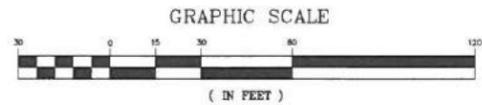
DATE: **1/25/16** LIC. NO.: **20377**

JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
JEFFERSON HIGHWAY
NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
PHASE 2 - CLOSE OUTSIDE SB LANE

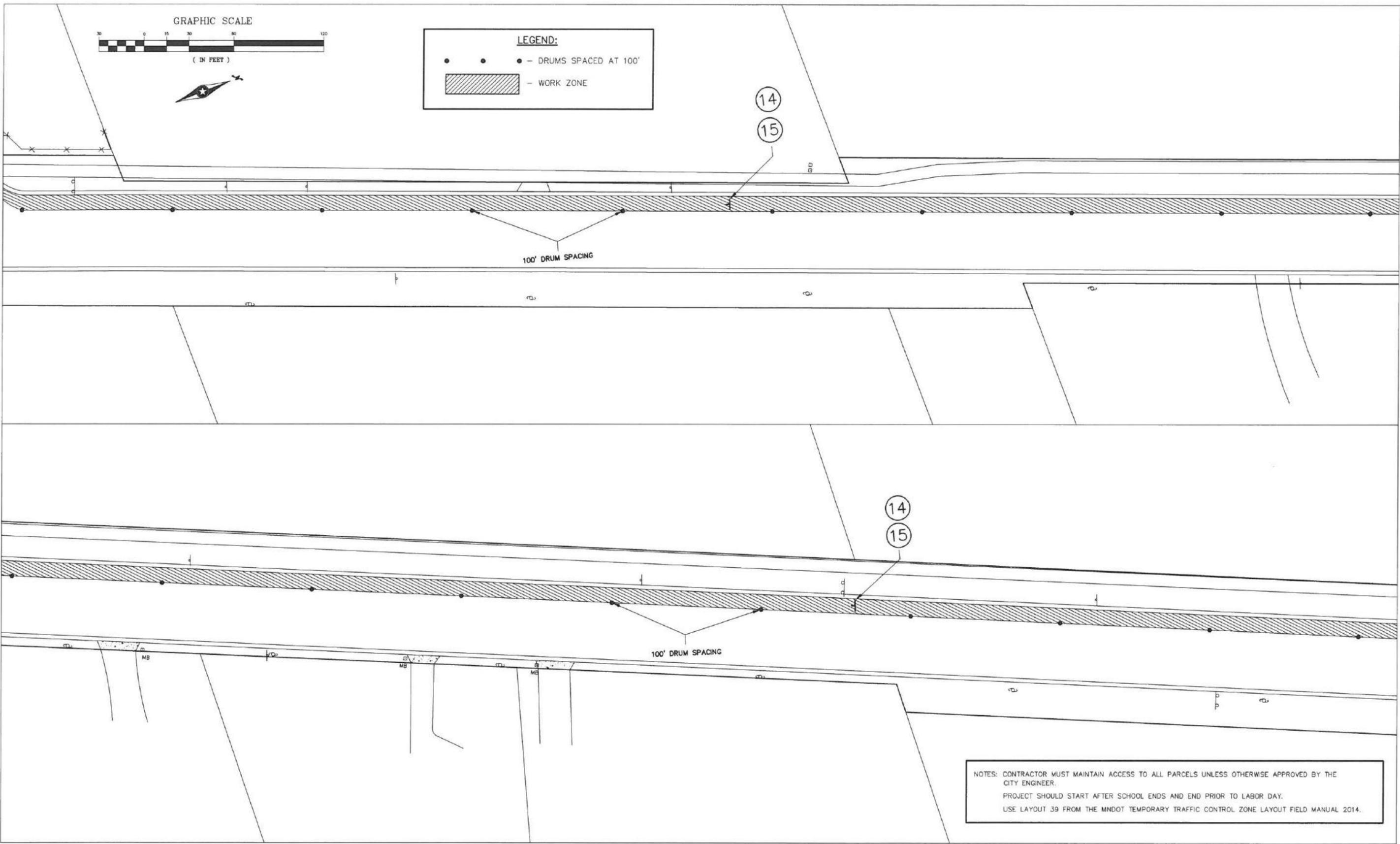
CAPITAL IMPROV. NO. 4002-16	DRAWN BY MLR	DATE APPROVED 1/25/16
STATE AID PROJ. NO. 110-102-014	DESIGNED BY JGH	HORIZ. SCALE 1"=30'
110-102-015	CHECKED BY JMS	VERT. SCALE
110-137-004		
189-128-002		

SHEET
51
OF
55



LEGEND:

- - DRUMS SPACED AT 100'
- ▨ - WORK ZONE



NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 USE LAYOUT 39 FROM THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUT FIELD MANUAL 2014.

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

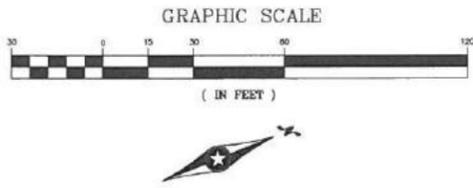
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME JEFF HOLSTEIN
 DATE 1/25/16 LIC. NO. 20377
 JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
JEFFERSON HIGHWAY
NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
PHASE 2 - CLOSE OUTSIDE SB LANE

CAPITAL IMPROV. NO. 4002-16
 STATE AID PROJ. NO. 110-102-014
110-102-015
110-137-004
189-128-002

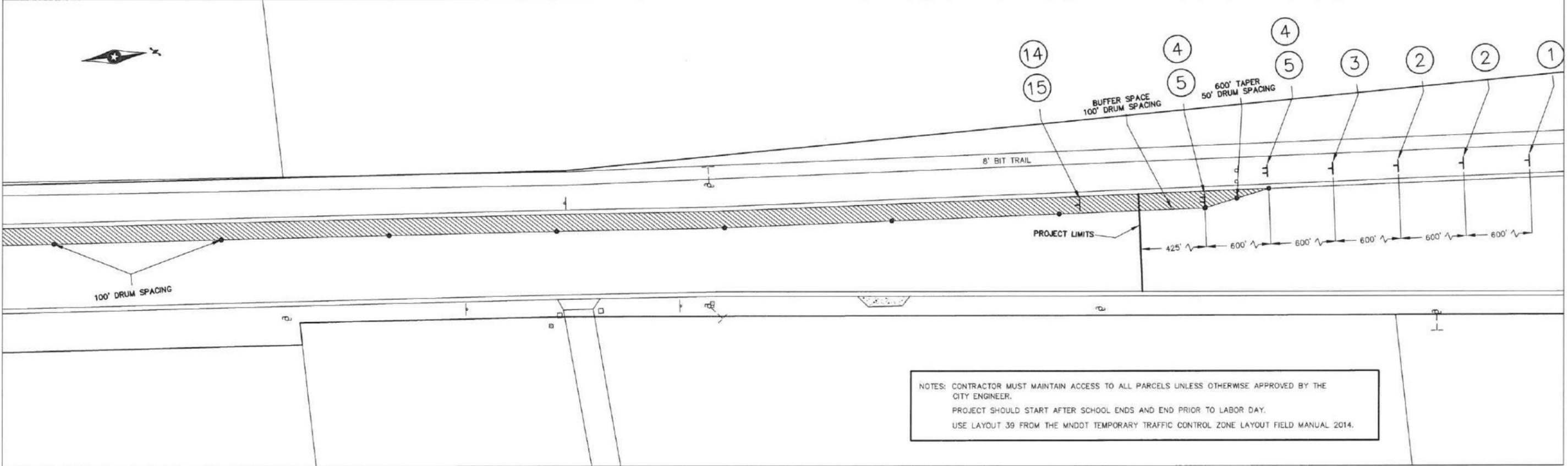
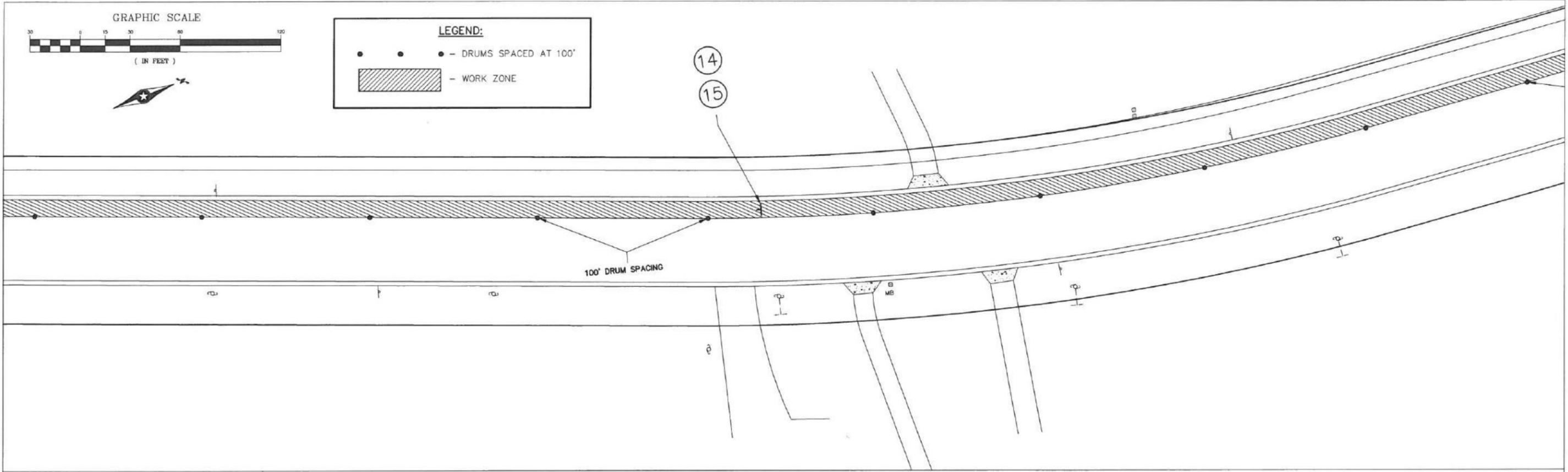
DRAWN BY MLR DATE APPROVED 1/25/16
 DESIGNED BY JGH HORIZ. SCALE 1"=30'
 CHECKED BY JMS VERT. SCALE

SHEET **52**
 OF **55**



LEGEND:

- - DRUMS SPACED AT 100'
- ▨ - WORK ZONE



NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 USE LAYOUT 39 FROM THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUT FIELD MANUAL 2014.

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION

Brooklyn Park

5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

TYPED NAME **JEFF HOLSTEIN**

DATE **1/25/16** UC.NO. **20377**

JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
JEFFERSON HIGHWAY
 NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
 PHASE 2 - CLOSE OUTSIDE SB LANE

CAPITAL IMPROV. NO. **4002-16**

STATE AID PROJ. NO. **110-102-014**

110-102-015

110-137-004

189-128-002

DRAWN BY **MLR**

DESIGNED BY **JGH**

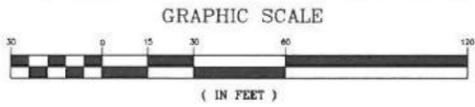
CHECKED BY **JMS**

DATE APPROVED **1/25/16**

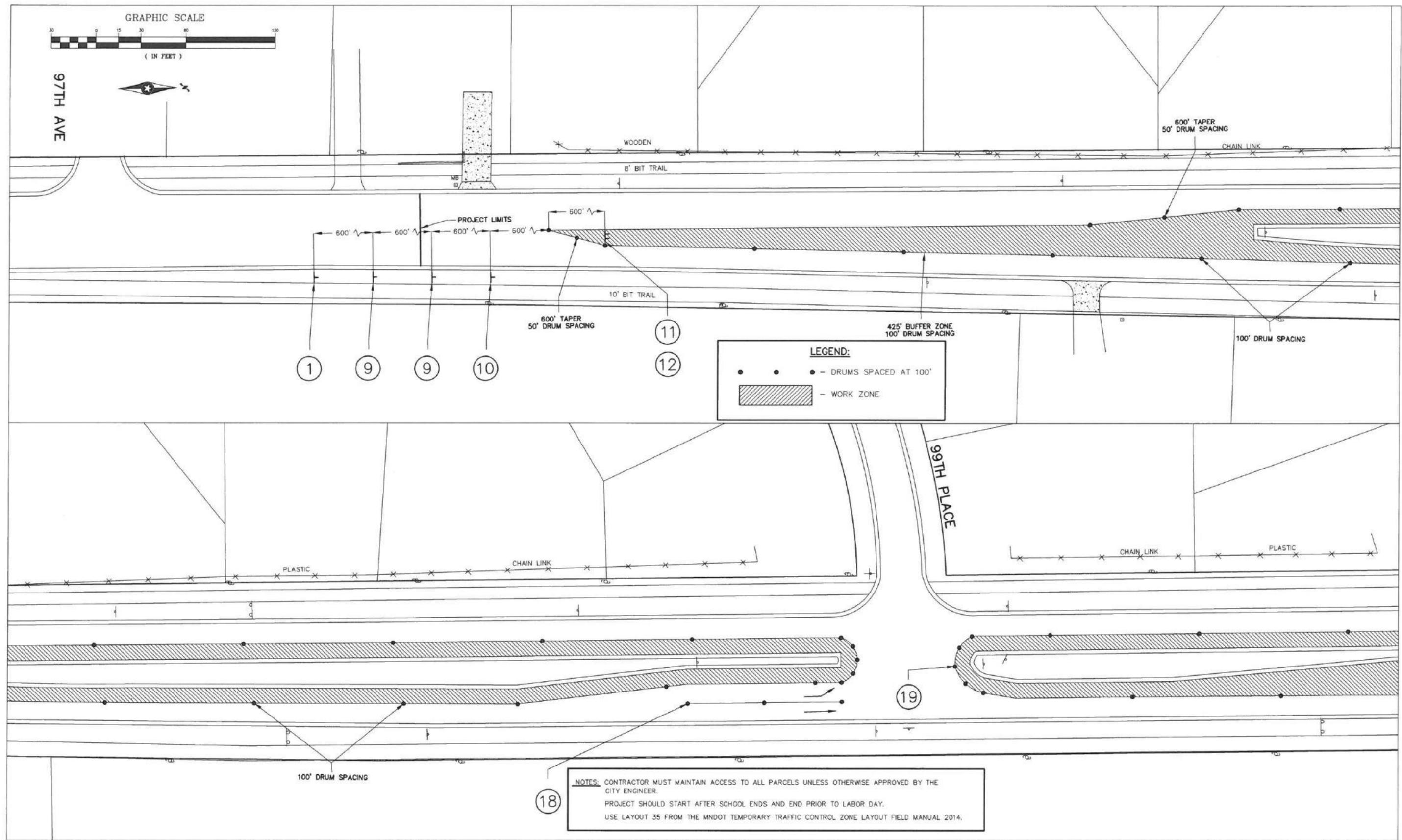
HORIZ. SCALE **1"=30'**

VERT. SCALE

SHEET **53** OF **55**



97TH AVE



LEGEND:

- - DRUMS SPACED AT 100'
- ▨ - WORK ZONE

NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 USE LAYOUT 35 FROM THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUT FIELD MANUAL 2014.

NO	DATE	BY	CKD	REVISION

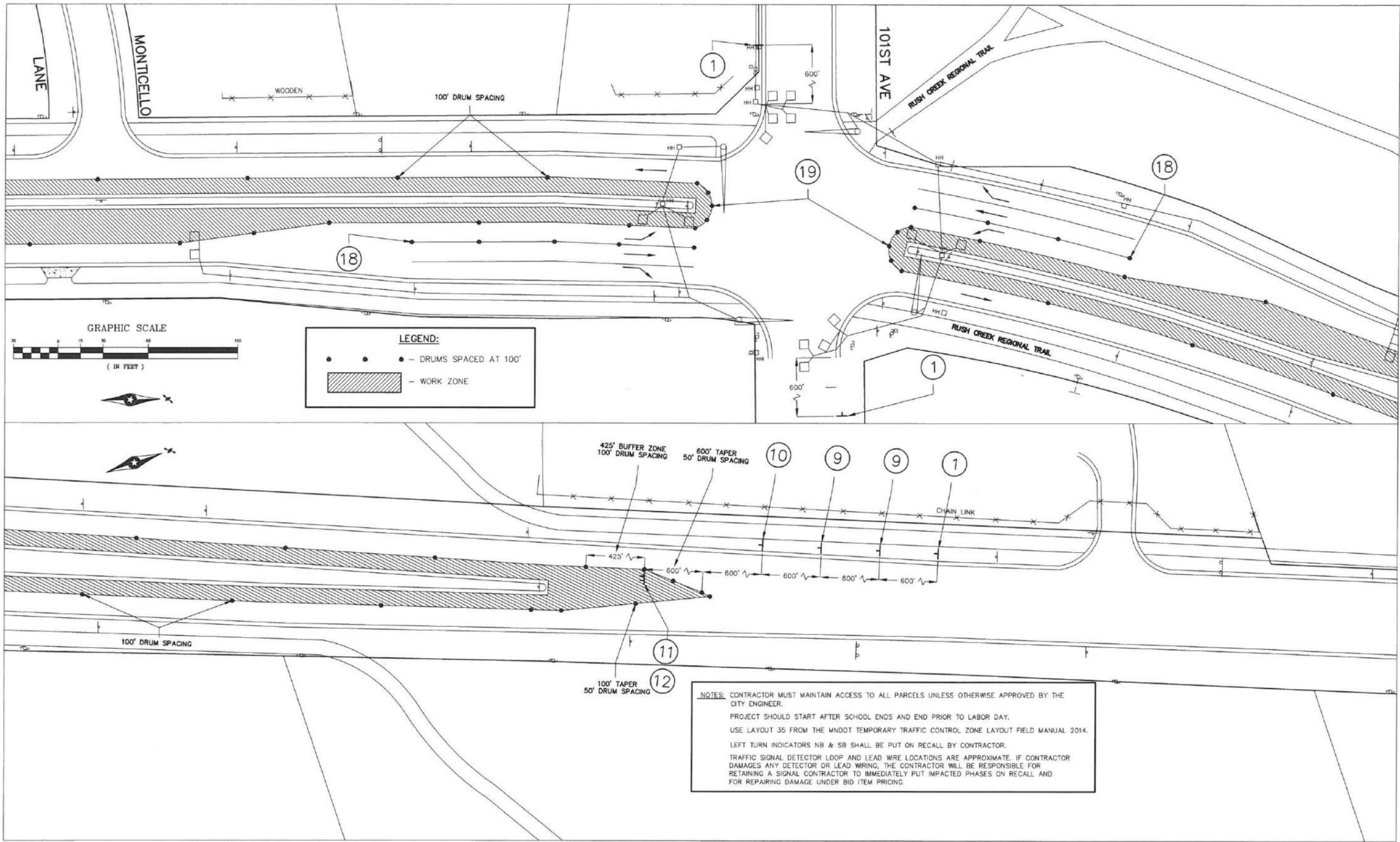
CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN, 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME **JEFF HOLSTEIN**
 DATE **1/25/16** UC.NO. **20377**
 JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
JEFFERSON HIGHWAY
 NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
 PHASE 3 - CLOSE INSIDE NB & SB LANES

CAPITAL IMPROV. NO. **4002-16**
 STATE AID PROJ. NO. **110-102-014**
110-102-015
110-137-004
189-128-002
 DRAWN BY **MLR**
 DESIGNED BY **JGH**
 CHECKED BY **JMS**
 DATE APPROVED **1/25/16**
 HORIZ. SCALE **1"=30'**
 VERT. SCALE

SHEET **54**
 OF **55**



LEGEND:

- - DRUMS SPACED AT 100'
- ▨ - WORK ZONE

NOTES: CONTRACTOR MUST MAINTAIN ACCESS TO ALL PARCELS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 PROJECT SHOULD START AFTER SCHOOL ENDS AND END PRIOR TO LABOR DAY.
 USE LAYOUT 35 FROM THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUT FIELD MANUAL 2014.
 LEFT TURN INDICATORS NB & SB SHALL BE PUT ON RECALL BY CONTRACTOR.
 TRAFFIC SIGNAL DETECTOR LOOP AND LEAD WIRE LOCATIONS ARE APPROXIMATE. IF CONTRACTOR DAMAGES ANY DETECTOR OR LEAD WIRING, THE CONTRACTOR WILL BE RESPONSIBLE FOR RETAINING A SIGNAL CONTRACTOR TO IMMEDIATELY PUT IMPACTED PHASES ON RECALL AND FOR REPAIRING DAMAGE UNDER BID ITEM PRICING.

NO	DATE	BY	CKD	REVISION

CITY OF BROOKLYN PARK
 ENGINEERING SERVICES DIVISION
Brooklyn Park
 5200 85TH AVE. N.
 BROOKLYN PARK, MN. 55443
 PH# 763/493-8100
 FAX# 763/493-8391

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 TYPED NAME **JEFF HOLSTEIN**
 DATE **1/25/16** LIC. NO. **20377**
 JESSE STRUVE, P.E. CITY ENGINEER

TRAFFIC CONTROL PLAN
JEFFERSON HIGHWAY
 NORTH OF T.H. 610 TO SOUTH OF 109TH AVE
 PHASE 3 - CLOSE INSIDE NB & SB LANE

CAPITAL IMPROV. NO. **4002-16**
 STATE AID PROJ. NO. **110-102-014**
110-102-015
110-137-004
189-128-002
 DRAWN BY **MLR**
 DESIGNED BY **JGH**
 CHECKED BY **JMS**
 DATE APPROVED **1/25/16**
 HORIZ. SCALE **1"=30'**
 VERT. SCALE

SHEET **55**
 OF **55**