













































































EXISTING TOPOGRAPHIC SYMBOLS

	ACCESS GRATE		REGULATION STATION GAS
	AIR CONDITION UNIT		SATELLITE DISH
	ANTENNA		SIGN TRAFFIC
	AUTO SPRINKLER CONNECTION		SIGNAL CONTROL CABINET
	BARRICADE PERMANENT		SOIL BORING
	BASKETBALL POST		SIREN
	BENCH		TELEPHONE BOOTH
	BIRD FEEDER		TILE INLET
	BOLLARD		TILE OUTLET
	BUSH		TILE RISER
	CATCH BASIN RECTANGULAR CASTING		TRANSFORMER-ELECTRIC
	CATCH BASIN CIRCULAR CASTING		TREE-CONIFEROUS
	CURB STOP		TREE-DEAD
	CLEAN OUT		TREE-DECIDUOUS
	CULVERT END		TREE STUMP
	DRINKING FOUNTAIN		TRAFFIC ARM BARRIER
	DOWN SPOUT		TRAFFIC SIGNAL
	FILL PIPE		TRASH CAN
	FIRE HYDRANT		UTILITY MARKER
	FLAG POLE		VALVE
	FLARED END / APRON		VALVE POST INDICATOR
	FUEL PUMP		VALVE VAULT
	GRILL		VENT PIPE
	GUY WIRE ANCHOR		WATER SPIGOT
	HANDHOLE		WELL
	HANDICAP SPACE		WETLAND DELINEATED MARKER
	IRRIGATION SPRINKLER HEAD		WETLAND
	IRRIGATION VALVE BOX		WET WELL
	LIFT STATION CONTROL PANEL		YARD HYDRANT







PROPOSED TOPOGRAPHIC SYMBOLS

	CLEANOUT
	MANHOLE
	LIFT STATION
	STORM SEWER CIRCULAR CASTING
	STORM SEWER RECTANGULAR CASTING
	STORM SEWER FLARED END / APRON
	STORM SEWER OUTLET STRUCTURE
	STORM SEWER OVERFLOW STRUCTURE
	CURB BOX
	FIRE HYDRANT
	WATER VALVE
	WATER REDUCER
	WATER BEND
	WATER TEE
	WATER CROSS
	WATER SLEEVE
	WATER CAP / PLUG
	RIP RAP
	DRAINAGE FLOW
	TRAFFIC SIGNS
	ACCESS GRATE
	AIR CONDITION UNIT
	ANTENNA
	AUTO SPRINKLER CONNECTION
	BARRICADE PERMANENT
	BASKETBALL POST
	BENCH
	BIRD FEEDER
	BOLLARD
	BUSH
	CATCH BASIN RECTANGULAR CASTING
	CATCH BASIN CIRCULAR CASTING
	CURB STOP
	CLEAN OUT
	CULVERT END
	DRINKING FOUNTAIN
	DOWN SPOUT
	FILL PIPE
	FIRE HYDRANT
	FLAG POLE
	FLARED END / APRON
	FUEL PUMP
	GRILL
	GUY WIRE ANCHOR
	HANDHOLE
	HANDICAP SPACE
	IRRIGATION SPRINKLER HEAD
	IRRIGATION VALVE BOX
	LIFT STATION CONTROL PANEL
	LIFT STATION
	LIGHT ON POLE
	LIGHT-GROUND
	MAILBOX
	MANHOLE-COMMUNICATION
	MANHOLE-ELECTRIC
	MANHOLE-GAS
	MANHOLE-HEAT
	MANHOLE-SANITARY SEWER
	MANHOLE-STORM SEWER
	MANHOLE-UTILITY
	MANHOLE-WATER
	METER
	ORDER MICROPHONE
	PARKING METER
	PAVEMENT MARKING
	PEDESTAL-COMMUNICATION
	PEDESTAL-ELECTRIC
	PEDESTRIAN PUSH BUTTON
	PICNIC TABLE
	POLE-UTILITY
	POST
	RAILROAD SIGNAL POLE














SURVEY SYMBOLS

	BENCH MARK LOCATION
	CONTROL POINT
	MONUMENT IRON FOUND
	CAST IRON MONUMENT








EXISTING TOPOGRAPHIC LINES

	RETAINING WALL
	FENCE
	FENCE-DECORATIVE
	GUARD RAIL
	TREE LINE
	BUSH LINE








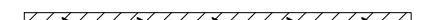
SURVEY LINES

	CONTROLLED ACCESS BOUNDARY
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	SETBACK LINE
	SECTION LINE
	QUARTER LINE
	SIXTEENTH LINE
	TEMPORARY EASEMENT

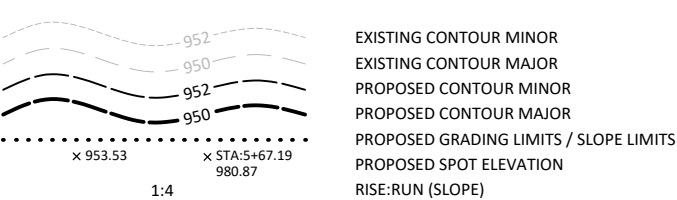
EXISTING UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE


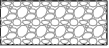

PROPOSED UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE
	PIPE CASING

GRADING INFORMATION







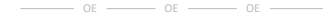


HATCH PATTERNS

	BITUMINOUS		GRAVEL
	CONCRETE		

EXISTING PRIVATE UTILITY LINES

NOTE:
EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY 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"

	UNDERGROUND FIBER OPTIC
	UNDERGROUND ELECTRIC
	UNDERGROUND GAS
	UNDERGROUND COMMUNICATION
	OVERHEAD ELECTRIC
	OVERHEAD COMMUNICATION
	OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL :

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE:  G-A  G-A UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-02.

UTILITY QUALITY LEVELS:

QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL	AC	ACRES
DWY	DRIVEWAY	PC	POINT OF CURVE	CF	CUBIC FEET
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CV	COMPACTED VOLUME
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CY	CUBIC YARD
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	EA	EACH
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EV	EXCAVATED VOLUME
ER	END RADIUS	PERM	PERMANENT	LB	POUND
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LF	LINEAR FEET
EX	EXISTING	PL	PROPERTY LINE	LS	LUMP SUM
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LV	LOOSE VOLUME
F-F	FACE TO FACE	PT	POINT OF TANGENT	SF	SQUARE FEET
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SV	STOCKPILE VOLUME
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	R	RADIUS
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

James P. Kosluhar
JAMES P. KOSLUCHAR
26460
DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	NO.	ISSUED FOR	DATE
BJB			
DRAWN			
BJB			
CHECKED			
JPK			
CLIENT PROJ. NO.			
ST2022-01			

2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

LEGEND

SHEET

2

OF

30

CONTRACT ADMINISTRATION

- 1. The Contractor shall notify the engineer in writing 48 hours prior to commencing work on any project item. Notification shall be given per project and per item.
- 2. The Contractor shall provide names and contact information of the Project Manager, Superintendent and Twenty-four Hour Emergency Response contact assigned to the project prior to commencing work.
- 3. The Superintendent shall be on site during all utility installation, reclaim, and paving operations.
- 4. If the Superintendent leaves the site, The Contractor shall designate a responsible representative capable of being on site within one-hour, contact information of the representative shall be provided to the Inspector 48 hours prior to Superintendent leaving site.
- 5. A Project Schedule showing project phasing, intermediate project deadlines, anticipated substantial completion and final completion shall be submitted by the Contractor at the Pre-Construction meeting.
- 6. The Project Manager and Superintendent shall schedule and attend a meeting once a week in the office of the City Engineer to discuss project schedule, progress, and issues.
- 7. A report of work completed the previous week, work scheduled to be completed the current week, and any change to the overall schedule or cost shall be submitted at each weekly project meeting. See Specifications.
- 8. All work shall conform with local ordinances, laws and rules.

PROJECT REPRESENTATIVE: BRANDON BRODHAG, Engineering 763-238-8086

HOURS OF OPERATION

- 1. Hours of work are limited to 7:00 am to 7:00 pm Monday through Friday, and 9:00 am to 7:00 pm on Saturdays, unless otherwise approved by the Engineer.

UTILITIES

- 1. The subsurface utility information in this plan is Utility Level "D". This Utility level was determined according to the guidelines of CI/ASCE 38-02, "Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data".
- 2. The contractor is responsible for locating and protecting all existing utilities. The Contractor shall arrange locates with Gopher State One Call prior to the start of any excavation. Below are contacts for the major utilities related to this project:

a.	Gopher State One Call	800-252-1166	Emergency Call	811
b.	Centerpoint Energy	612-321-5502	Emergency	888-944-4564
c.	Xcel Energy	612-630-4568	Emergency	800-895-1999
d.	Century Link	612-998-1920		
- 3. In the event of an emergency related to utilities on the project Call 811. In the event of an accident or personal injury Call 911. Upon control of the emergency situation, the contractor shall contact the City within one hour of the incident. A full detailed incident report must be submitted to the Project Engineer within seven (7) days of the event.

CITY OWNED WATER

- 1. No water service shut-downs will be allowed for longer than 96 hours unless approved by the Engineer. See Specifications.
- 2. Water service shut down requests must be submitted in writing 72 hours before the planned shutdown.
- 3. Water will be available from a hydrant identified by the Engineer for the project. A meter is available through the City of Fridley and a security deposit will be submitted by the Contractor. See Specifications.

STAGING

- 1. The City will assist in identifying potential staging sites upon request, the Contractor shall be responsible to negotiate the use of theses areas. See Specifications.
- 2. The Contractor is responsible to propose a staging area for the work. No additional storage of equipment or materials will be allowed outside of city Right of Way.

NON-CITY OWNED FACILITIES

- 1. All non-City of Fridley manhole castings must be salvaged and replaced. Castings shall be adjusted to match the final road surface prior to paving the bituminous wear course.
- 2. Metropolitan Council may provide new castings for the MCES manhole structures. If new castings are not available at the time of paving, the existing castings will be replaced on each structure.

RESIDENTIAL NOTICES & SERVICES

- 1. The City will notify the residents of the start of work, and final completion. Coordination of all other notifications is the responsibility of the Contractor. See Specifications.
- 2. The Contractor shall notify residents, and City of Fridley Water Department, of water shut-offs or installation of temporary water service for their property at least 72 hours before the shut-down.
- 3. The Contractor shall notify the residents of work scheduled in each phase of the project.
- 4. Prior to starting work on a block, the Contractor shall hand deliver a notice to each property stating the starting date of the work, the dates of closure of the street, the planned date for paving, and expected date of final completion in that area.
- 5. Any work that will prevent residents from reaching their driveway requires a minimum of 72 hours notice before the work begins.
- 6. It the contractor is to do any work outside of City Right of Way, the Contractor must obtain a written agreement with the property owner and submit agreement to The Engineer prior to the start of the work.
- 7. The Contractor shall provide access for mail delivery, garbage collection, and bus service. Any time this access will not be available, the Contractor will provide temporary facilities, and insure service to the residents.

- 8. If access to garbage and recycling trucks will not be available to an area, the Contractor shall move all waste containers to the nearest end of block before 7:00am, and return them to the respective property before the end of the day.
- 9. The Contractor will notify The Engineer immediately and respond to Resident complaints within one (1) hour of notification of the complaint. This will include access issues, damage to property, interruption of service, general questions, or others.

LANDSCAPING, TOPSOIL, EROSION CONTROL

- 1. The Contractor is responsible for protecting all trees and landscaping in the limits of construction, and of adjacent properties. Protection of landscaping shall be incidental to the work.
- 2. Any tree adjacent to the work requiring trimming to prevent damage to the tree will be done prior to the work, and will be incidental to the work.
- 3. The Contractor shall be responsible for protection of the stormwater system according to the SWPPP (Sheets 20,21) and the NPDES Construction Stormwater Permit issued by the MPCA.
- 4. All inlet protection and silt fence must be in place prior to the start of the work.
- 5. The Contractor will be responsible for all reporting required by the NPDES Permit. See Specifications.
- 6. Restoration of all boulevards and other project areas must be completed within 7 days of cessation of work in the area, and prior to paving the wear course bituminous surface.

TRAFFIC CONTROL

- 1. The Contractor shall prepare a traffic control plan showing all signage for the project and detours required as a part of the project. The traffic control plan must be approved by the Engineer prior to any work in the project area.
- 2. The Contractor will be responsible for maintaining all traffic control during the project, and will be required to make changes if required.
- 3. All traffic control signage shall be removed within seven (7) days of completion of paving. See Specifications.

CONSTRUCTION STAKING

- 1. Staking - The Agency will provide one set of construction stakes for utilities and curb at the discretion of the Engineer.
- 2. The Contractor must request staking a minimum of 48 hours in advance.
- 3. The Contractor will be responsible for protection of the stakes, and any re-staking if needed. See Specifications.



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

[Signature]

JAMES P. KOSLUCHAR
LIC. NO. 26460 DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	NO.	ISSUED FOR	DATE
BJB			
DRAWN	BJB		
CHECKED	JPK		
CLIENT PROJ. NO.	ST2022-01		

2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

GENERAL NOTES

SHEET
3
OF
30

J:\Engineer\Projects\2022\ST2022-01\Design\Drawings\Sheets\2022-01-EG-SH.dwg 5/23/2022 8:21:51 AM

STATEMENT OF ESTIMATED QUANTITIES						
ITEM NO.	MnDOT SPEC NO.	DESCRIPTION	UNITS	TOTAL ESTIMATED QUANTITIES	STATE AID PARTICIPATING LOCAL STREETS S.A.P. 127-050-030	LOCAL FUNDING/NON-PARTICIPATING
					QTY	QTY
1	2021.501	MOBLIZATION	LS	1	0.70	0.30
2	2104.502	REMOVE GATE VALVE AND BOX	EA	2		2
3	2104.502	REMOVE HYDRANT AND GATE VALVE	EA	1		1
4	2104.502	REMOVE CURB STOP & BOX	EA	7		7
5	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LF	149	149	
6	2104.503	REMOVE WATERMAIN	LF	605		605
7	2104.503	REMOVE WATER SERVICE PIPE	LF	175		175
8	2104.503	REMOVE CONCRETE CURB & GUTTER	LF	1,390	820	570
9	2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SY	81	50	31
10	2104.504	REMOVE CONCRETE DRIVEWAY PAVEMENT	SY	46	30	16
11	2105.507	COMMON EXCAVATION (P) EXCESS RECLAIM	CY	1,572	1572	
12	2112.519	SUBGRADE PREPARATION	RDST	16.42	16.42	
13	2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HOURL	25	25	
14	2215.504	FULL DEPTH RECLAMATION (P)	SY	16,169	16,169	
15	2331.603	BITUMINOUS JOINT SAW & SEAL	LF	3,730	3,730	
16	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	985	985	
17	2360.509	TYPE SP 9.5 WEARING COURSE MIX (3,C)	TN	1,345	1,345	
18	2360.509	TYPE SP 12.5 NON WEAR COURSE MIX (3,C)	TN	1,785	1785	
19	2360.604	3" BITUMINOUS DRIVEWAY W/6" CLASS 5 AGGREGATE	SY	81	50	31
20	2503.602	CONNECT TO EXISTNG STORM SEWER	EA	2		2
21	2503.603	REPAIR SEWER PIPE (SANITARY SEWER LATERAL)	LF	60		60
22	2504.601	TEMPORARY WATER SERVICE	LS	1		1
23	2504.602	CONNECT TO EXISTNG WATERMAIN (INCLUDES EXCAVATION PIT)	EA	4		4
24	2504.602	CONNECT TO EXISTNG WATER SERVICE (INCLUDES EXCAVATION PIT)	EA	10		10
25	2504.602	1" CORPORATION STOP	EA	10		10
26	2504.602	1" CURB STOP & BOX	EA	7		7
27	2504.602	6" GATE VALVE & BOX	EA	4		4
28	2504.602	ADJUST GATE VALVE & BOX (WATER)	EA	9	9	
29	2504.602	HYDRANT WITH 6" GATE VALVE ASSEMBLY (INSTALL ONLY)	EA	1		1
30	2504.603	6" WATERMAIN DUCTILE IRON CL 52 (OPEN CUT INSTALLATION)	LF	605		605
31	2504.603	1" WATER SERVICE (TYPE K COPPER)	LF	175		175
32	2504.608	FITTINGS	LB	242		242
33	2506.502	ADJUST FRAME & RING CASTING (SEWER)	EA	23	23	
34	2506.502	ADJUST FRAME & RING CASTING (STORM)	EA	5	5	
35	2506.602	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL	EA	1		1
36	2531.503	CONCRETE CURB & GUTTER DESIGN B618	LF	1,110	580	530
37	2531.503	CONCRETE CURB & GUTTER DESIGN SPECIAL (SURMOUNTABLE)	LF	280	240	40
38	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SY	46	30	16
39	2531.604	8" CONCRETE VALLEY GUTTER	SY	690	690	
40	2540.601	REPAIR/REPLACE PET FENCE & IRRIGATION SYSTEM	LS	1	0.66	0.34
41	2540.602	REMOVAL, TEMPORARY INSTALLATION & REINSTALLATION OF MAILBOX	LS	1		1
42	2563.601	TRAFFIC CONTROL	LS	1	0.70	0.30
43	2565.602	RIGID PVC LOOP DETECTOR 6" X 6"	EA	1	1	
44	2573.502	STORM DRAIN INLET PROTECTION	EA	13	13	
45	2574.507	COMMON TOPSOIL BORROW	CY	140	40	100
46	2574.508	FERTILIZER TYPE 3	LB	91	26	65
47	2575.505	SEEDING	AC	0.27	0.08	0.19
48	2575.508	SEED MIXTURE 25-151	LB	31	9	22
49	2575.508	HYDRAULIC BONDED FIBER MATRIX	LB	912	264	648

STANDARD PLATES	
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.	
PLATE NO.	DESCRIPTION
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4108F	ADJUSTING RINGS FOR CATCH BASINS & MANHOLES
8000K	CHANNELIZERS (3 SHEETS)

INDEX OF TABULATIONS		
TABLE	TABULATION	PAGE NUMBER
A	BASIS OF ESTIMATED QUANTITIES	4
B	MISCELLANEOUS REMOVALS	5
C	WATERMAIN	5
D	CONCRETE	5
E	ROADWAY SECTION, AGGREGATE & BITUMINOUS	6
F	EROSION CONTROL AND TURF ESTABLISHMENT	6

BASIS FOR ESTIMATED QUANTITIES		A
BID ITEM	BASIS	
TYPE SP WEARING & NON-WEARING COURSE MIX	110 lb/sy-in	
BITUMINOUS TACK COAT	0.06 gal/sy	
HYDRAULIC BONDED FIBER MATRIX	3500 lb/ac	
SEED, MIXTURE 25-151	120 lb/ac	
FERTILIZER TYPE 3 (22-5-10)	350 lb/ac	



Know what's below.
Call 811 before you dig.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

JAMES P. KOSLUCHAR
26460
DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	NO.	ISSUED FOR	DATE
BJB			
DRAWN			
BJB			
CHECKED			
JPK			
CLIENT PROJ. NO.			
ST2022-01			

2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

STATEMENT OF ESTIMATED QUANTITIES

SHEET

4

OF

30

J:\Engineer\Projects\2022\ST2022-01\Design\Drawings\Sheet\2022-01-TB-ALL SH.dwg 5/23/2022 8:21:56 AM

MISCELLANEOUS REMOVALS											B
ALIGNMENT	STATION	REMOVE GATE VALVE & BOX	REMOVE HYDRANT & GATE VALVE	REMOVE CURB STOP & BOX	REMOVE WATERMAIN	REMOVE WATER SERVICE PIPE	REMOVE CONCRETE CURB & GUTTER	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	REMOVE CONCRETE DRIVEWAY PAVEMENT	FULL DEPTH RECLAMATION
		EACH	EACH	EACH	LIN FT	LIN FT	LIN FT	LIN FT	SQ YD	SQ YD	SQ YD
LOCAL STREET, S.A.P. 127-050-030											
HARTMAN CIRCLE NE	00+68 TO 21+90						315	36	15	15	8183
71ST WAY NE	30+49 TO 39+20						175	42	10	10	3004
RIVERVIEW TERRACE NE	50+00 TO 56+44						130	50	10	5	2175
WEST BAVARIAN PASS NE	60+20 TO 70+15						200	21	15		2807
S.A.P. 127-050-030 SUBTOTAL:							820	149	50	30	16169
NON-PARTICIPATING/LOCAL FUNDS											
HARTMAN CIRCLE NE	00+68 TO 21+90	2	1	8	605	175	530		9	16	
71ST WAY NE	30+49 TO 39+20										
RIVERVIEW TERRACE NE	50+00 TO 56+44						40		22		
WEST BAVARIAN PASS NE	60+20 TO 70+15										
NON-PARTICIPATING SUBTOTAL:		2	1	8	605	175	570		31	16	
TOTAL:		2	1	8	605	175	1390	149	81	46	16169


WATER										C
ALIGNMENT	STATION	CONNECT TO EXISTING WATERMAIN	CONNECT TO EXISTING WATER SERVICE	1" CORPORATION STOP	6" GATE VALVE & BOX	HYDRANT WITH 6" GATE VALVE (INSTALL ONLY)	6" WATERMAIN DUCTILE IRON CL 52	1" WATER SERVICE	FITTINGS	
		EACH	EACH	EACH	EACH	EACH	LIN FT	LIN FT	POUND	
NON-PARTICIPATING/LOCAL FUNDS										
HARTMAN CIRCLE NE	00+68 TO 21+90	4	10	10	4	1	605	175	242	
71ST WAY NE	30+49 TO 39+20									
RIVERVIEW TERRACE NE	50+00 TO 56+44									
WEST BAVARIAN PASS NE	60+20 TO 70+15									
NON-PARTICIPATING SUBTOTAL:		4	10	10	4	1	605	175	242	
TOTAL:		4	10	10	4	1	605	175	242	

CONCRETE					D
ALIGNMENT	STATION	8" CONCRETE VALLEY GUTTER	CONCRETE CURB & GUTTER DESIGN B618	CONCRETE CURB & GUTTER DESIGN SPECIAL (SURMOUNTABLE)	6" CONCRETE DRIVEWAY PAVEMENT
		SQ FT	LIN FT	LIN FT	SQ YD
LOCAL STREET, S.A.P. 127-050-030					
HARTMAN CIRCLE NE	00+68 TO 21+90	375	315		15
71ST WAY NE	30+49 TO 39+20	205	65	110	10
RIVERVIEW TERRACE NE	50+00 TO 56+44			130	5
WEST BAVARIAN PASS NE	60+20 TO 70+15	110	200		
S.A.P. 127-050-030 SUBTOTAL:		690	580	240	30
NON-PARTICIPATING/LOCAL FUNDS					
HARTMAN CIRCLE NE	00+68 TO 21+90		530		16
71ST WAY NE	30+49 TO 39+20				
RIVERVIEW TERRACE NE	50+00 TO 56+44			40	
WEST BAVARIAN PASS NE	60+20 TO 70+15				
NON-PARTICIPATING SUBTOTAL:			530	40	16
TOTAL:		690	1110	280	46



Know what's below.
Call 811 before you dig.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.


JAMES P. KOSLUCHAR
LIC. NO. 26460 DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	NO.	ISSUED FOR	DATE
DRAWN			
CHECKED			
CLIENT PROJ. NO.			

2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

QUANTITY TABULATIONS

SHEET
5
OF
30

J:\Engineer\Projects\2022\1572022-01\Design\Drawings\Sheets\2022-01-TB-ALL.dwg 5/23/2022 8:21:59 AM

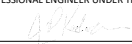
AGGREGATE & BITUMINOUS								E
ALIGNMENT	STATION	COMMON EXCAVATION (P) EXCESS RECLAIM	SUBGRADE PREPARATION	BITUMINOUS JOINT SAW & SEAL	BITUMINOUS MATERIAL FOR TACK COAT	TYPE SP 9.5 WEARING COURSE MIX (3,C)	TYPE SP 12.5 NON WEAR COURSE MIX (3,C)	3' BITUMINOUS DRIVEWAY W/6" CL. 5 AGGRREGATE
		CU YD	RDST	LIN FT	GALLONS	TON	TON	SQ YD
LOCAL STREET, S.A.P. 127-050-030								
HARTMAN CIRCLE NE	00+68 TO 21+90	795	21.22	1860	495	680	900	15
71ST WAY NE	30+49 TO 39+20	292	8.71	765	185	250	335	10
RVIEW TERRACE NE	50+00 TO 56+44	211	6.44	455	135	180	240	10
WEST BAVARIAN PASS NE	60+20 TO 70+15	273	9.95	650	170	235	310	15
S.A.P. 127-050-030 SUBTOTAL:		1572	46.32	3730	985	1345	1785	50
NON-PARTICIPATING/LOCAL FUNDS								
HARTMAN CIRCLE NE	00+68 TO 21+90							9
71ST WAY NE	30+49 TO 39+20							
RVIEW TERRACE NE	50+00 TO 56+44							22
WEST BAVARIAN PASS NE	60+20 TO 70+15							
NON-PARTICIPATING SUBTOTAL:								31
TOTAL:		1572	46	3730	985	1345	1785	81

EROSION CONTROL & TURF ESTABLISHMENT								F
ALIGNMENT	STATION	STORM DRAIN INLET PROTECTION	COMMON TOPSOIL BORROW	FERTILIZER TYPE 3	SEEDING	SEED MIXTURE 25- 151	HYDRAULIC BONDED FIBER MATRIX	
		EACH	CU YD	POUND	ACRE	POUND	POUND	
LOCAL STREET, S.A.P. 127-050-030								
HARTMAN CIRCLE NE	00+68 TO 21+90	6	16	10	0.03	3	101	
71ST WAY NE	30+49 TO 39+20	2	9	6	0.02	2	56	
RIVERVIEW TERRACE NE	50+00 TO 56+44	3	6	4	0.01	1	42	
WEST BAVARIAN PASS NE	60+20 TO 70+15	2	10	6	0.02	2	64	
S.A.P. 127-050-030 SUBTOTAL:		13	40	26	0.08	9	264	
NON-PARTICIPATING/LOCAL FUNDS								
HARTMAN CIRCLE NE	00+68 TO 21+90		92	60	0.17	20	596	
71ST WAY NE	30+49 TO 39+20							
RIVERVIEW TERRACE NE	50+00 TO 56+44		8	5	0.01	2	51	
WEST BAVARIAN PASS NE	60+20 TO 70+15							
NON-PARTICIPATING SUBTOTAL:			100	65	0.19	22	648	
TOTAL:		13	140	91	0.26	31	911	



Know what's below.
Call 811 before you dig.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.


JAMES P. KOSLUCHAR
LIC. NO. 26460 DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	NO.	ISSUED FOR	DATE
BJB			
DRAWN			
BJB			
CHECKED			
JPK			
CLIENT PROJ. NO.			
ST2022-01			






2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

QUANTITY TABULATIONS

SHEET
6
OF
30

LEGEND

BITUMINOUS PAVEMENT / PROJECT AREA	
EXISTING SANITARY SEWER	
EXISTING WATERMAIN	
EXISTING STORM SEWER	
PROPOSED WATERMAIN REPLACEMENT	

69TH WAY NE



MISSISSIPPI RIVER

LOCKE LAKE ROAD NE

LOCKE LAKE

HARTMAN CIRCLE NE
(WEST LEG)

HARTMAN CIRCLE NE
(NORTH LEG)

HARTMAN CIRCLE NE
(EAST LEG)

HARTMAN CIRCLE NE
(SOUTH LEG)

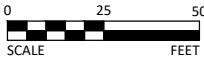
EAST RIVER ROAD NE
(CSAH NO. 1)

S.A.P. 127-050-030
END STA. 21+90

S.A.P. 127-050-030
BEGIN STA. 00+68

MANOMIN PARK
(ANOKA COUNTY PARK)

RICE CREEK



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

James P. Kosluchar
JAMES P. KOSLUCHAR
LIC. NO. 26460 DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT

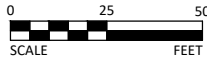
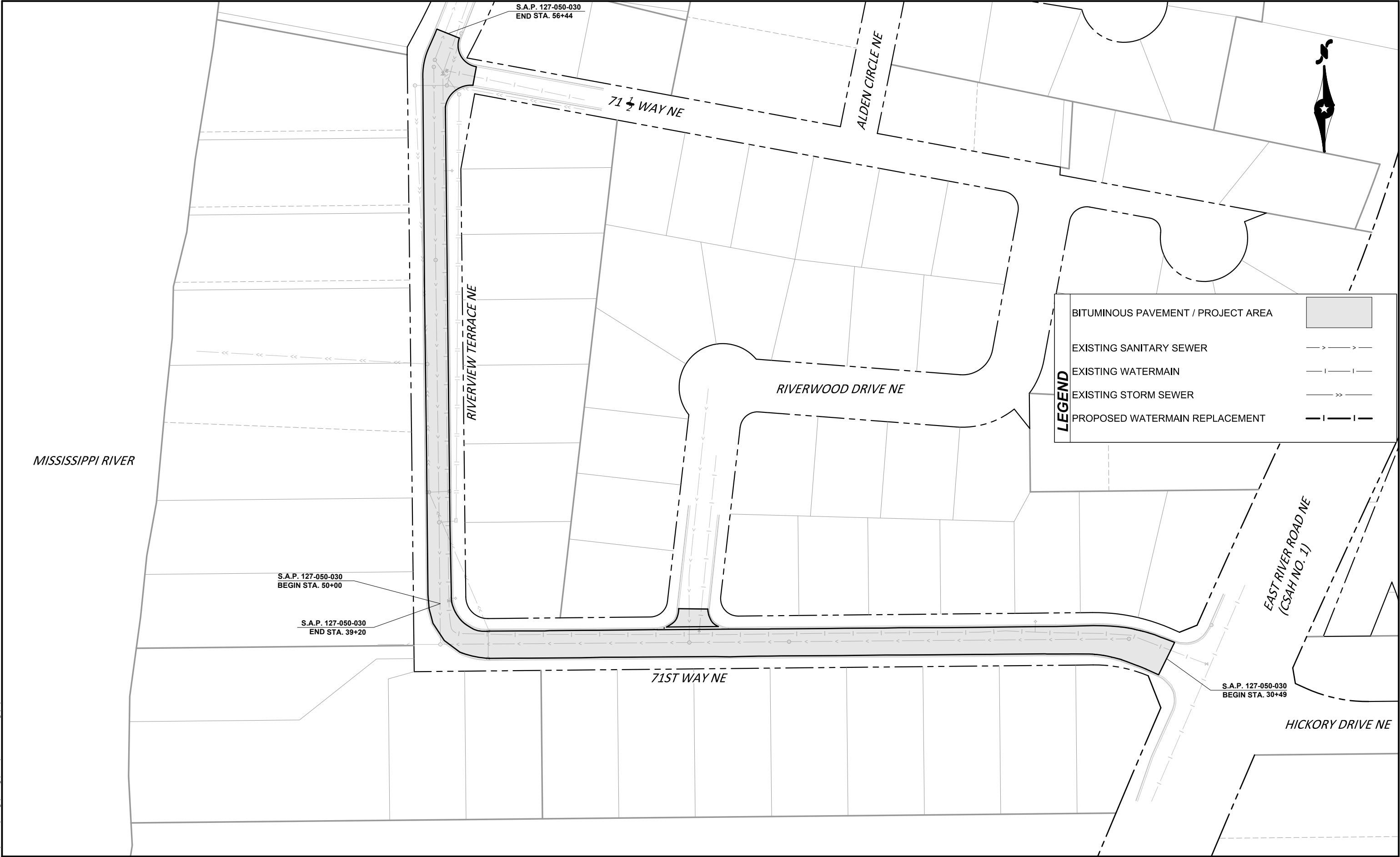
S.A.P. # 127-050-030

LOCATION PLAN - HARTMAN CIRCLE

SHEET
7
OF
30

J:\Engineer\Projects\2022\ST2022-01\Design\Drawings\Sheet\2022-01-GL-514.dwg 5/23/2022 8:22:15 AM

J:\Engineer\Projects\2022\ST2022-01\Design\Drawings\Sheets\2022-01-CL-514.dwg 5/23/2022 8:22:44 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

James P. Kosluhar
JAMES P. KOSLUCHAR
26460
DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT
S.A.P. # 127-050-030
LOCATION PLAN - 71ST WAY & RIVERVIEW TERRACE

SHEET
8
OF
30

S.A.P. 127-050-030
END STA. 70+15

ARTHUR STREET NE

NORTH DANUBE ROAD NE

TRAPP COURT NE

WEST BAVARIAN PASS NE

S.A.P. 127-050-030
BEGIN STA. 60+20

NORTH INNSBRUCK DRIVE NE

LEGEND

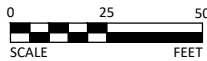
BITUMINOUS PAVEMENT / PROJECT AREA

EXISTING SANITARY SEWER

EXISTING WATERMAIN

EXISTING STORM SEWER

PROPOSED WATERMAIN REPLACEMENT



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

James P. Kosluhar
JAMES P. KOSLUCHAR
LIC. NO. 26460 DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

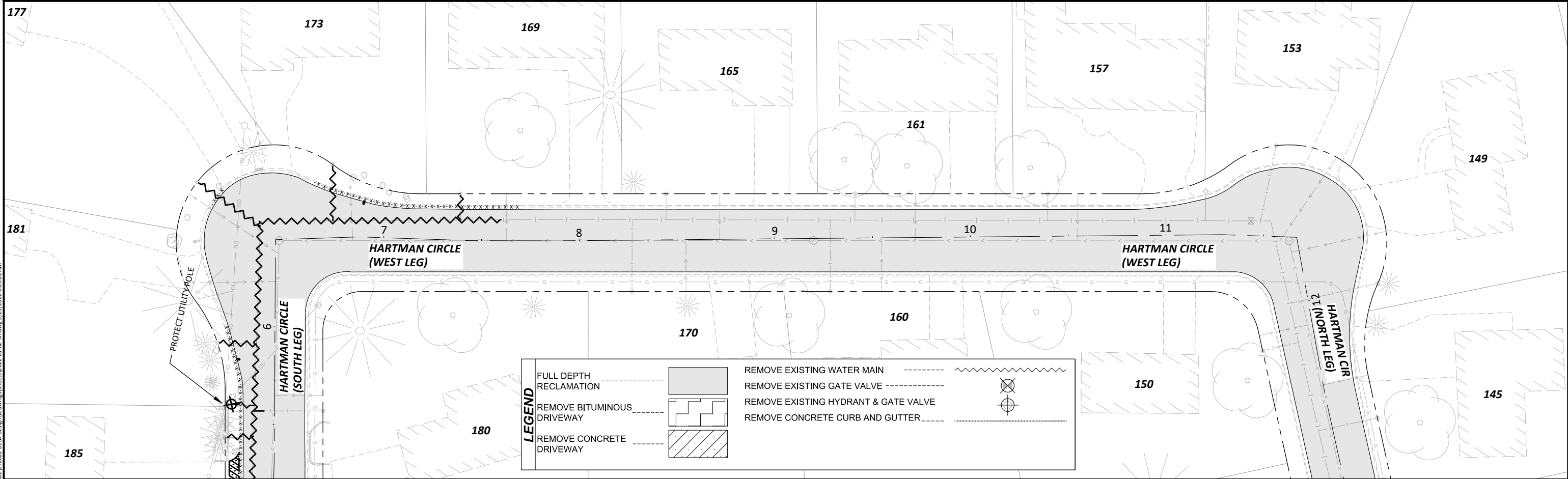
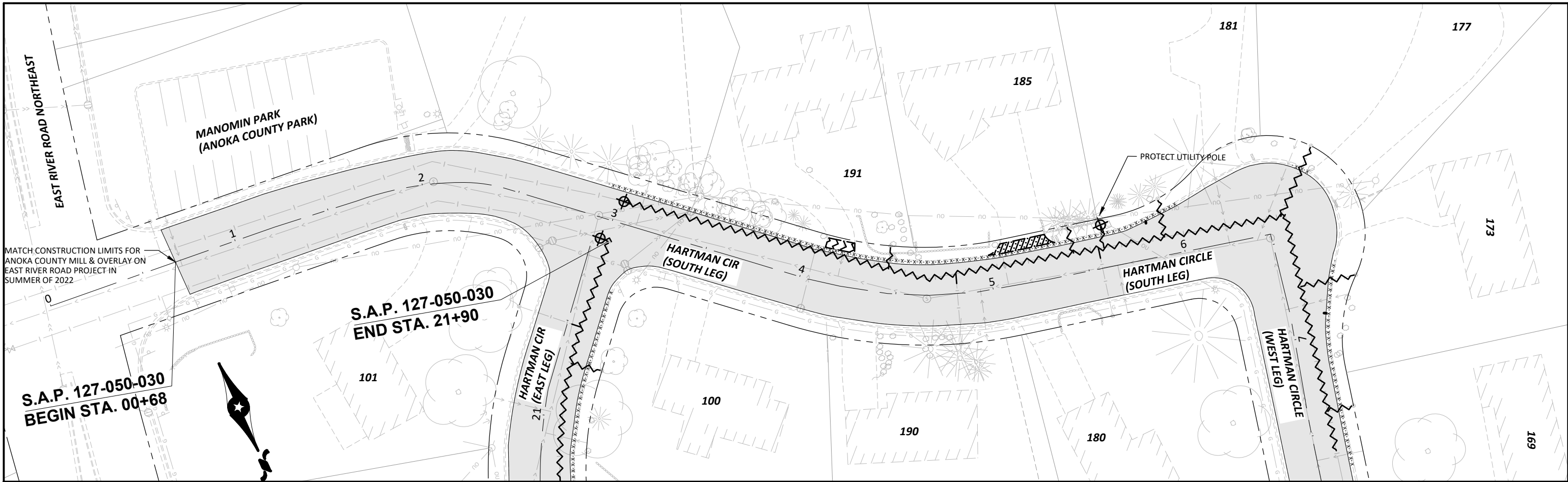
DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT

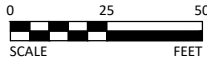
S.A.P. # 127-050-030

LOCATION PLAN - WEST BAVARIAN PASS

SHEET
9
OF
30



LEGEND	REMOVALS		INSTALLATIONS	
	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
FULL DEPTH RECLAMATION		REMOVE EXISTING WATER MAIN		INSTALL NEW WATER MAIN
REMOVE BITUMINOUS DRIVEWAY		REMOVE EXISTING GATE VALVE		INSTALL NEW GATE VALVE
REMOVE CONCRETE DRIVEWAY		REMOVE EXISTING HYDRANT & GATE VALVE		INSTALL NEW HYDRANT & GATE VALVE
		REMOVE CONCRETE CURB AND GUTTER		INSTALL NEW CURB AND GUTTER



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

JAMES P. KOSLUCHAR
26460
DATE 05/10/2022

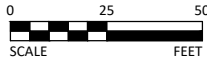
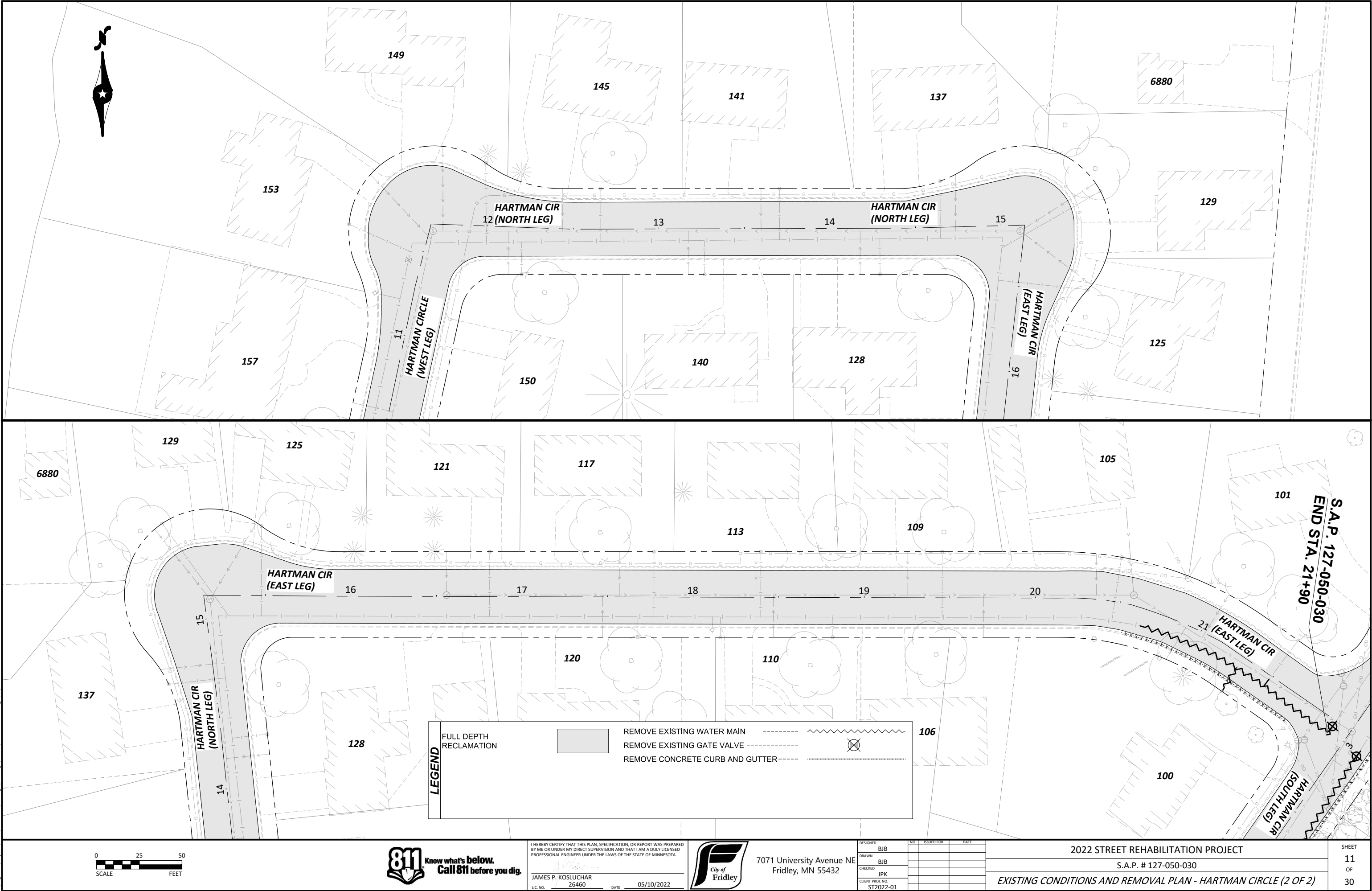


7071 University Avenue NE
Fridley, MN 55432

DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT	
S.A.P. # 127-050-030	
EXISTING CONDITIONS AND REMOVAL PLAN - HARTMAN CIRCLE (1 OF 2)	

SHEET
10
OF
30



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

James P. Kosluchar
JAMES P. KOSLUCHAR
26460
DATE 05/10/2022

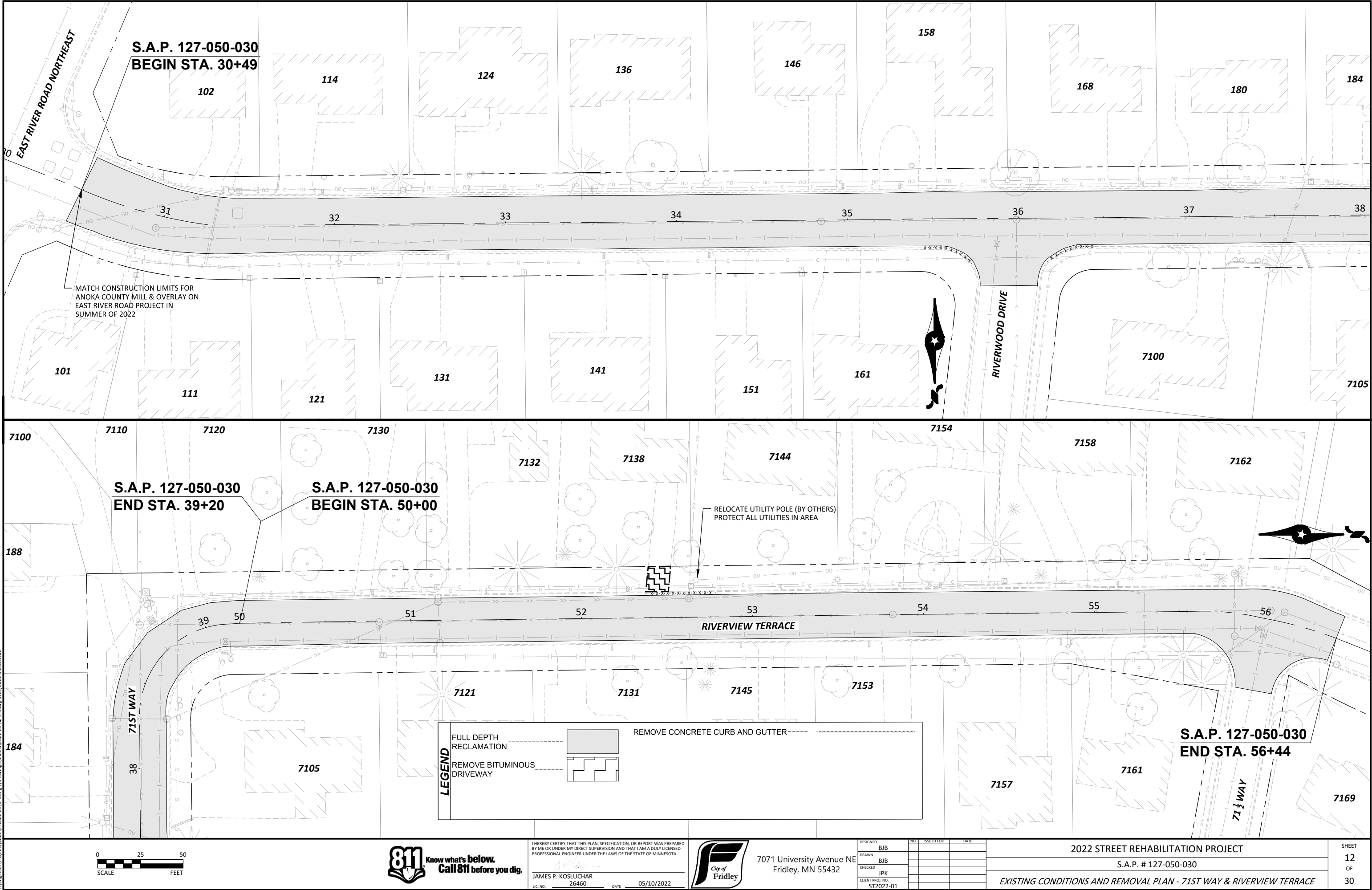


7071 University Avenue NE
Fridley, MN 55432

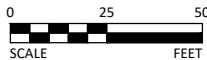
DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT
S.A.P. # 127-050-030
EXISTING CONDITIONS AND REMOVAL PLAN - HARTMAN CIRCLE (2 OF 2)

SHEET
11
OF
30



J:\Engineer\Projects\2022\127-050-030\Drawings\Sheet\2022-01-RE-54.dwg 5/23/2022 8:23:28 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

JAMES P. KOSLUCHAR
26460
DATE 05/10/2022

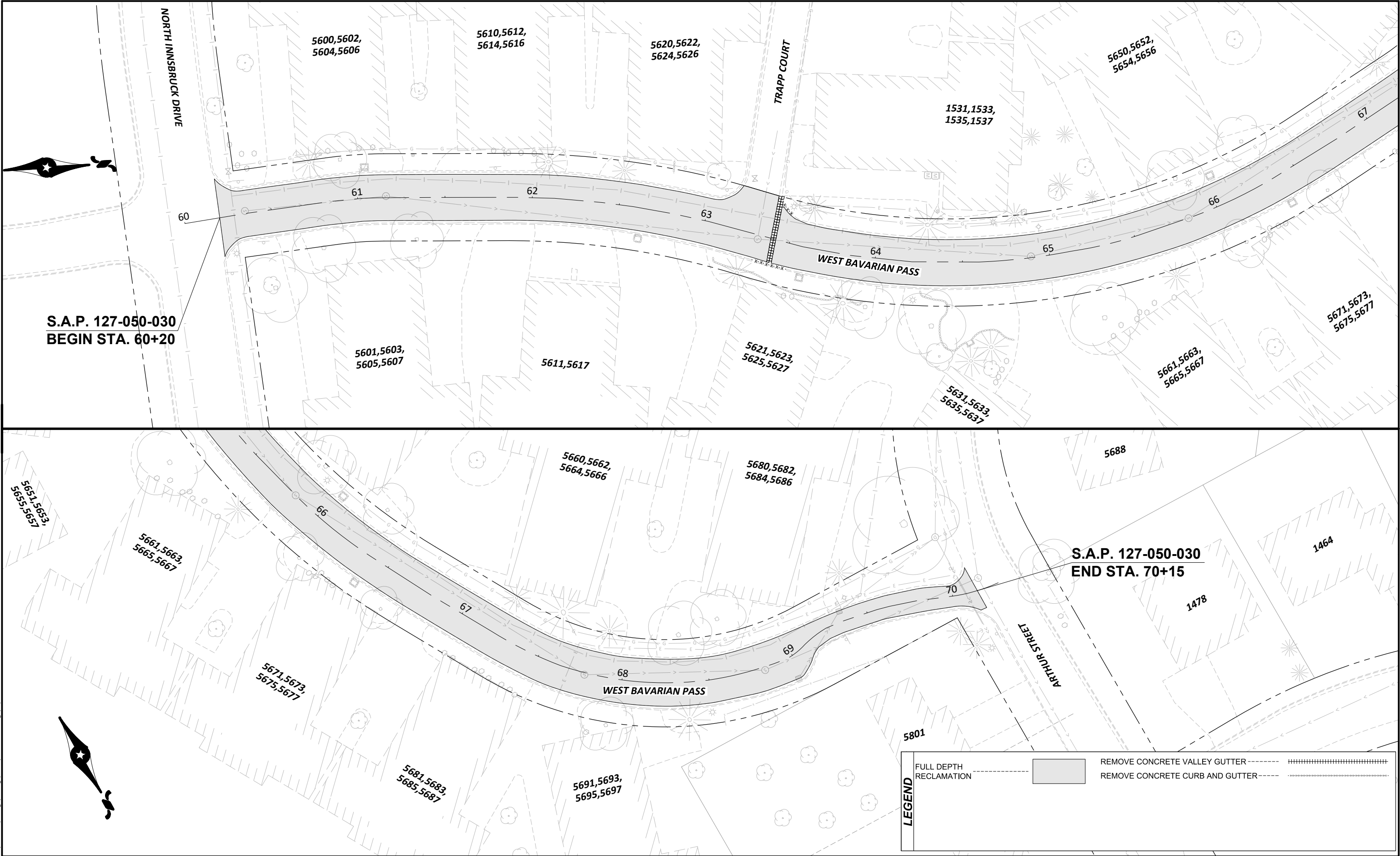


7071 University Avenue NE
Fridley, MN 55432

DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT
S.A.P. # 127-050-030
EXISTING CONDITIONS AND REMOVAL PLAN - 71ST WAY & RIVERVIEW TERRACE

SHEET
12
OF
30



S.A.P. 127-050-030
BEGIN STA. 60+20

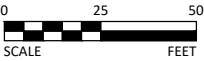
S.A.P. 127-050-030
END STA. 70+15

LEGEND

FULL DEPTH RECLAMATION

REMOVE CONCRETE VALLEY GUTTER

REMOVE CONCRETE CURB AND GUTTER



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

JAMES P. KOSLUCHAR
26460
DATE 05/10/2022



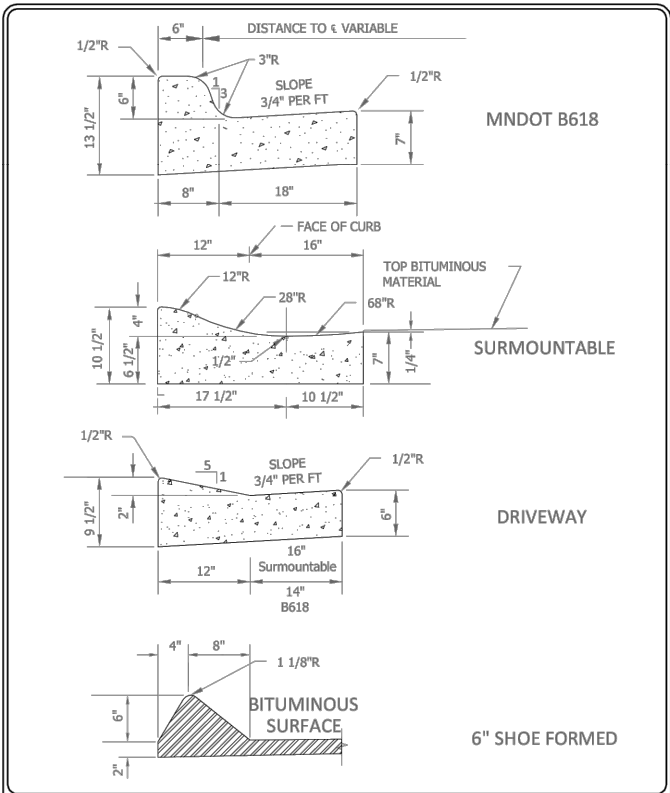
7071 University Avenue NE
Fridley, MN 55432


DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT
S.A.P. # 127-050-030
EXISTING CONDITIONS AND REMOVAL PLAN - WEST BAVARIAN PASS

SHEET
13
OF
30

J:\Engineer\Projects\2022\ST2022-01\Design\Drawings\Sheets\2022-01_RE_SH.dwg 5/23/2022 8:23:09 AM





STANDARD DETAILS

CURB AND GUTTER

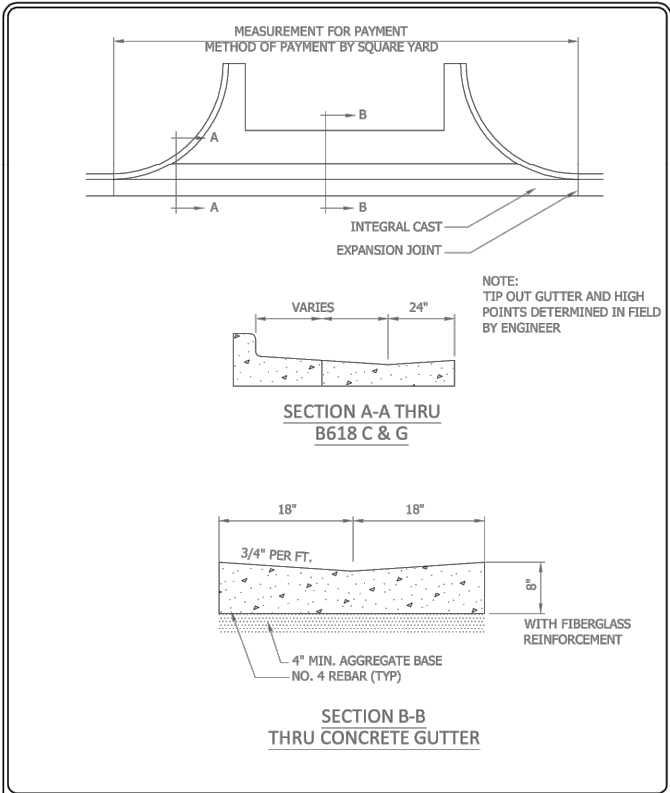
FRIDLEY, MINNESOTA

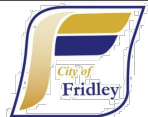
LAST REVISION:

DEC 2018

CITY PLATE NO.

STR-1





STANDARD DETAILS

CONCRETE VALLEY GUTTER

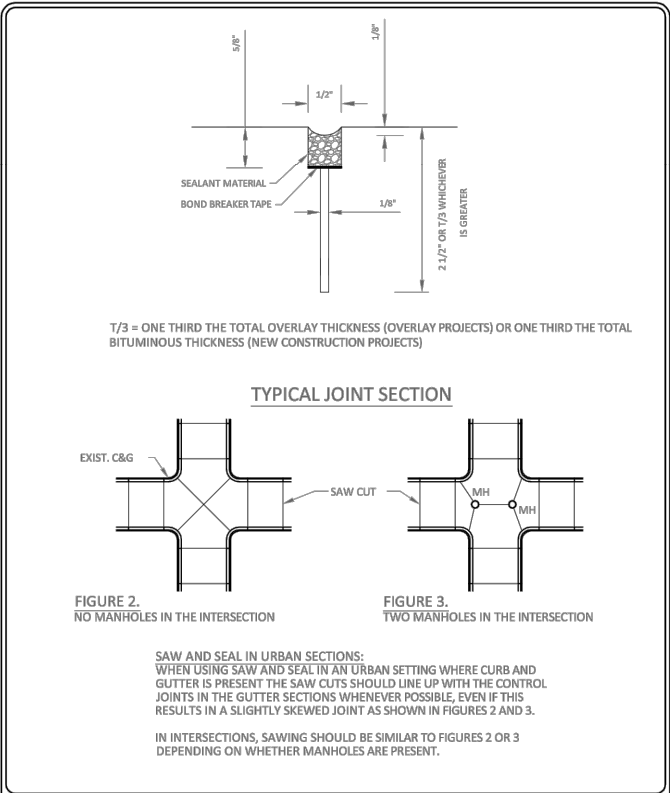
FRIDLEY, MINNESOTA

LAST REVISION:

DEC 2018

CITY PLATE NO.

STR-10





STANDARD DETAILS

BITUMINOUS SAW & SEAL

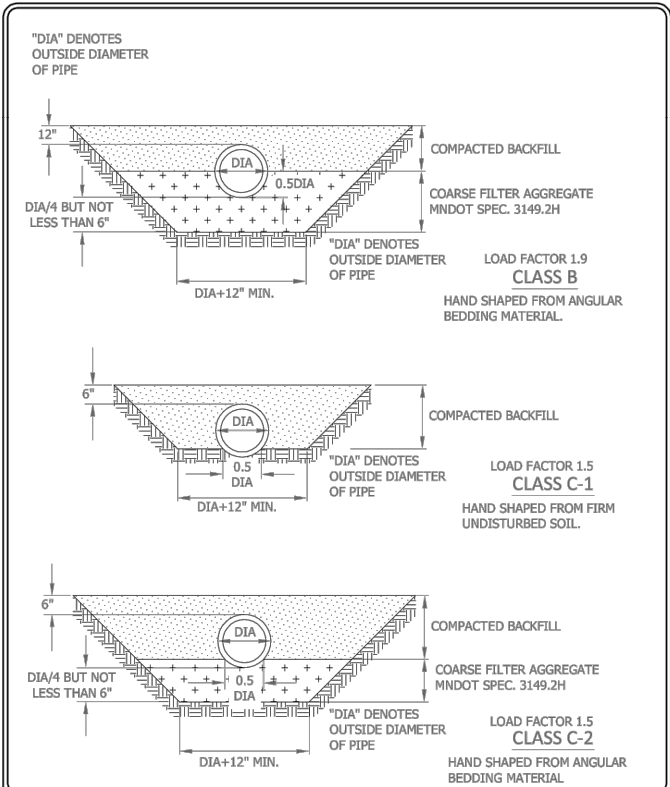
FRIDLEY, MINNESOTA

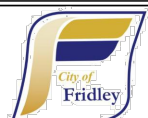
LAST REVISION:

DEC 2018

CITY PLATE NO.

SAN-24





STANDARD DETAILS

BEDDING METHODS FOR RCP OR DIP

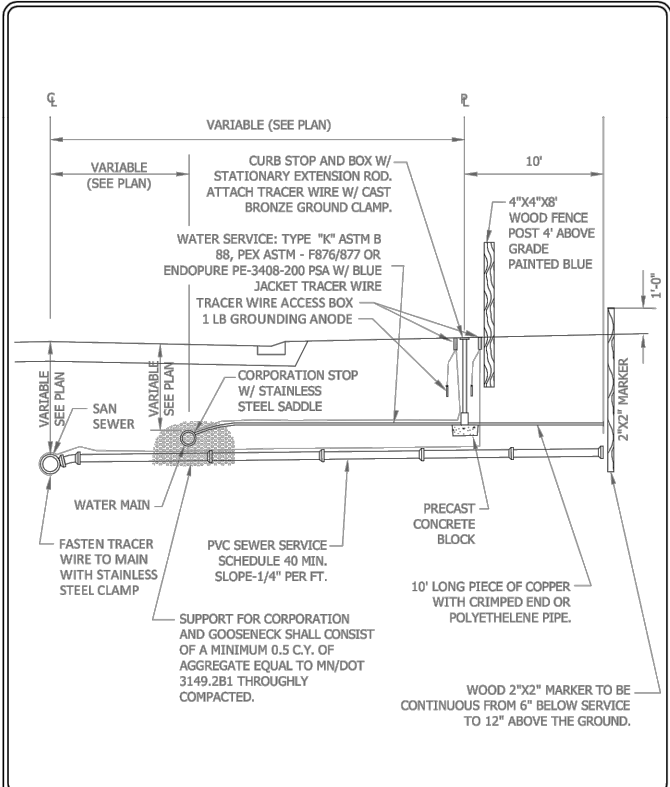
FRIDLEY, MINNESOTA

LAST REVISION:

APRIL 2016

CITY PLATE NO.

BED-2





STANDARD DETAILS

SEWER AND WATER SERVICE CONNECTIONS

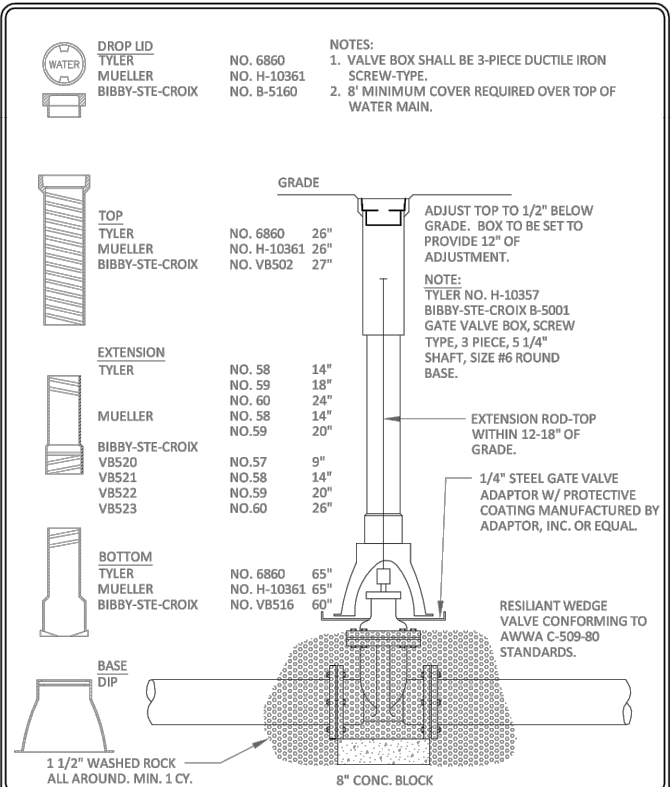
FRIDLEY, MINNESOTA

LAST REVISION:

DEC 2018

CITY PLATE NO.

SER-1





STANDARD DETAILS

GATE VALVE AND BOX

FRIDLEY, MINNESOTA

LAST REVISION:

DEC 2018

CITY PLATE NO.

WAT-1



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

JAMES P. KOSLUCHAR
26460
DATE 05/10/2022

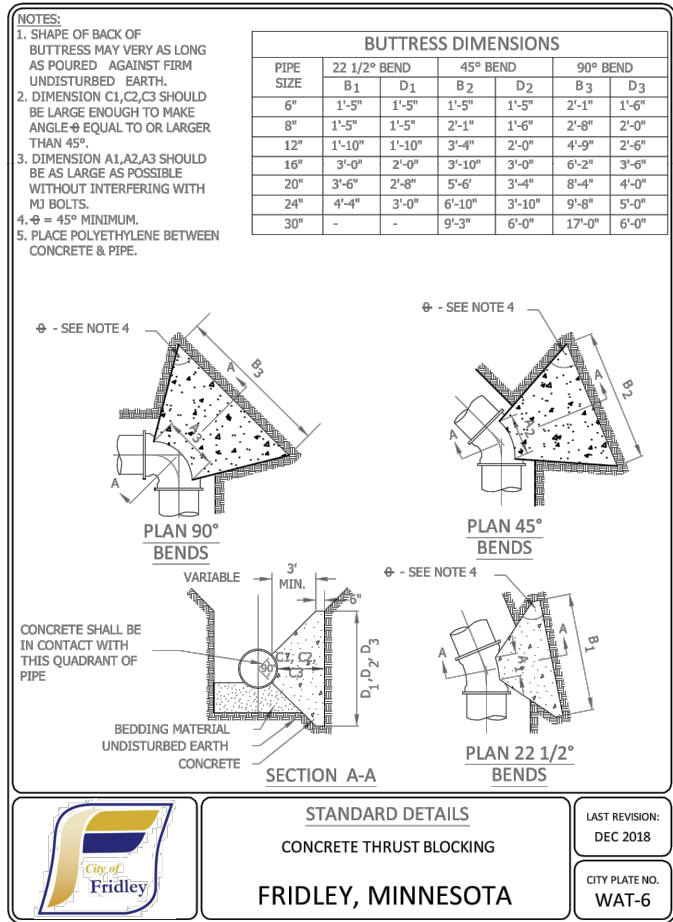
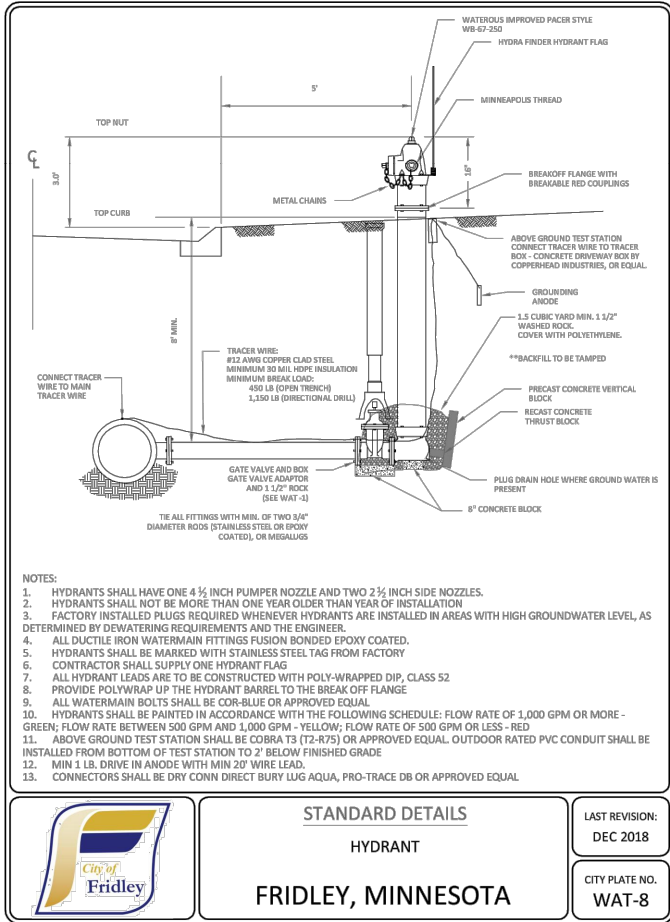
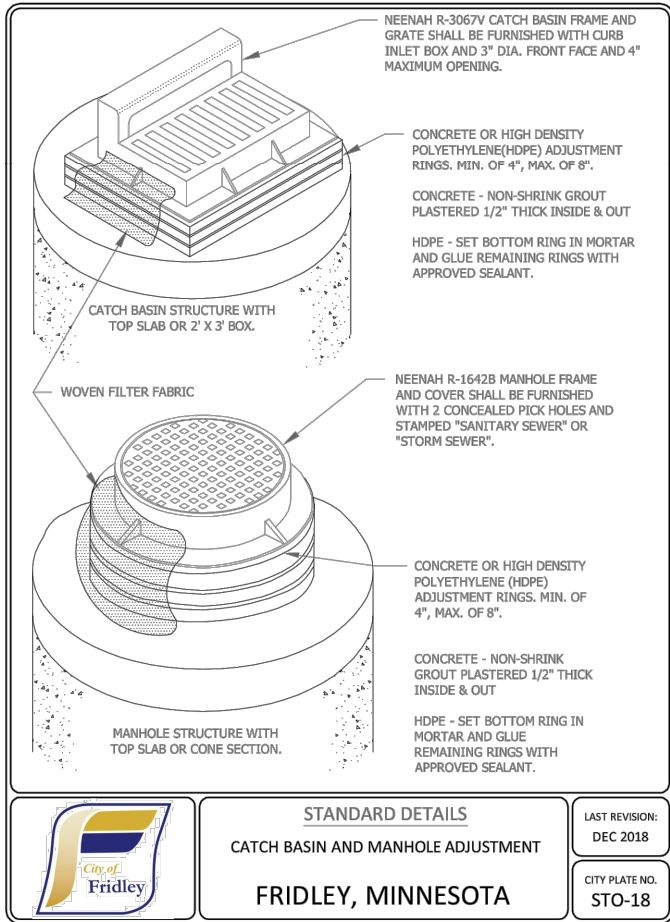


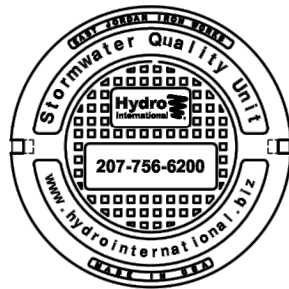
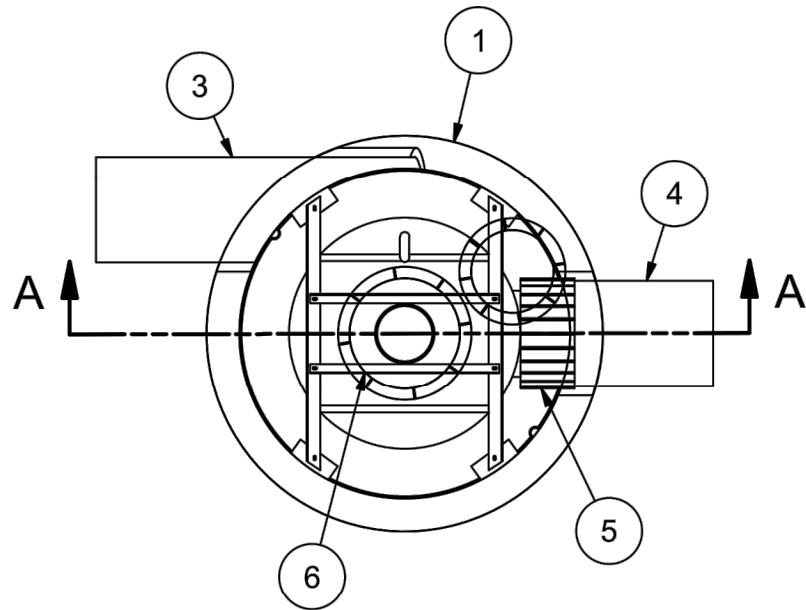
7071 University Avenue NE
Fridley, MN 55432

DESIGNED	NO.	ISSUED FOR	DATE
BJB			
DRAWN	BJB		
CHECKED	JPK		
CLIENT PROJ. NO.	ST2022-01		

2022 STREET REHABILITATION PROJECT
S.A.P. # 127-050-030
CONSTRUCTION DETAILS

SHEET
14
OF
30





HYDRO FRAME AND COVER (INCLUDED)

GRADE RINGS BY OTHERS
AS REQUIRED

EQUIPMENT PERFORMANCE

The stormwater treatment unit shall adhere to the hydraulic parameters given in the chart below and provide the removal efficiencies and storage capacities as follows:

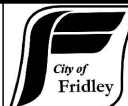
1. The treatment system shall use an induced vortex to separate pollutants from stormwater runoff.
2. Peak Hydraulic Capacity: 8.0 cfs (227 l/s)
3. Sediment Storage Capacity: 2.10 cu. yd. (1.59 cu. m)
4. Continuous Oil Storage Capacity: 216 gal. (818 liters)
5. Sediment shall be stored in a zone that is isolated from the main flow path and protected from reentrainment by a benching skirt.
6. For more product information including regulatory acceptances, please visit <https://hydro-int.com/en/products/downstream-defender>

ANY WARRANTY GIVEN BY HYDRO INTERNATIONAL WILL APPLY ONLY TO THOSE ITEMS SUPPLIED BY IT. ACCORDINGLY HYDRO INTERNATIONAL CANNOT ACCEPT ANY RESPONSIBILITY FOR ANY STRUCTURE, PLANT, OR EQUIPMENT, (OR THE PERFORMANCE THERE OF) DESIGNED, BUILT, MANUFACTURED, OR SUPPLIED BY ANY THIRD PARTY. HYDRO INTERNATIONAL HAVE A POLICY OF CONTINUOUS DEVELOPMENT AND RESERVE THE RIGHT TO AMEND THE SPECIFICATION. HYDRO INTERNATIONAL CANNOT ACCEPT LIABILITY FOR PERFORMANCE OF ITS EQUIPMENT, (OR ANY PART THEREOF), IF THE EQUIPMENT IS SUBJECT TO CONDITIONS OUTSIDE ANY DESIGN SPECIFICATION. HYDRO INTERNATIONAL OWNS THE COPYRIGHT OF THIS DRAWING, WHICH IS SUPPLIED IN CONFIDENCE. IT MUST NOT BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED AND MUST NOT BE REPRODUCED, IN WHOLE OR IN PART, WITHOUT PRIOR PERMISSION IN WRITING FROM HYDRO INTERNATIONAL.



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

JAMES P. KOSLUCHAR
26460
DATE: 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	NO.	ISSUED FOR	DATE
BJB			
DRAWN	BJB		
CHECKED	JPK		
CLIENT PROJ. NO.	ST2022-01		

2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

CONSTRUCTION DETAILS

SHEET
16
OF
30

OUTLET STUB ID: 18" (450 mm)
OUTLET STUB OD: 18.7" (475 mm)

PROJECTION

IF IN DOUBT ASK

COMMENTS:

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING DOWNSTREAM DEFENDER MANHOLE.

DATE:
11/8/19

SCALE:
NTS

DRAWN BY:
GW

CHECKED BY:

APPROVED BY:

Title
6ft-DIAMETER
DOWNSTREAM DEFENDER

STONE BASE
PER PROJECT
SPECIFICATIONS

SECTION A-A

NOTE: NOT FOR CONSTRUCTION.
CONTACT HYDRO FOR SITE
SPECIFIC DETAIL

PARTS LIST

ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	72	1800	PRECAST MANHOLE (BY HYDRO VIA PRECASTER)
2	3	24	600	FRAME AND COVER
2B	1	18	450	FRAME AND COVER
3	1	18 (MAX)	450 (MAX)	MAX INLET PIPE (BY OTHERS)
4	1	18 (MAX)	450 (MAX)	MAX OUTLET PIPE (BY OTHERS)
5	1			PIPE COUPLING (BY OTHERS)
6	1			INTERNAL COMPONENTS (PRE-INSTALLED)

Hydro
International

hydro-int.com
<COMPANY>

DO NOT SCALE DRAWING
STEEL FABRICATION TOLERANCES
UNLESS OTHERWISE SPECIFIED,
DIMENSIONS ARE IN INCHES.

LINEAR
000 - 012in = ±0.04in
012 - 024in = ±0.06in
024 - 048in = ±0.08in
048 - 120in = ±0.12in
120in >>> = ±0.20in

ANGULAR
000 - 120in = ±1°
120 - 240in = ±0.5°
240in >>> = ±0.25°

WEIGHT:

MATERIAL:

REFERENCE NUMBER:

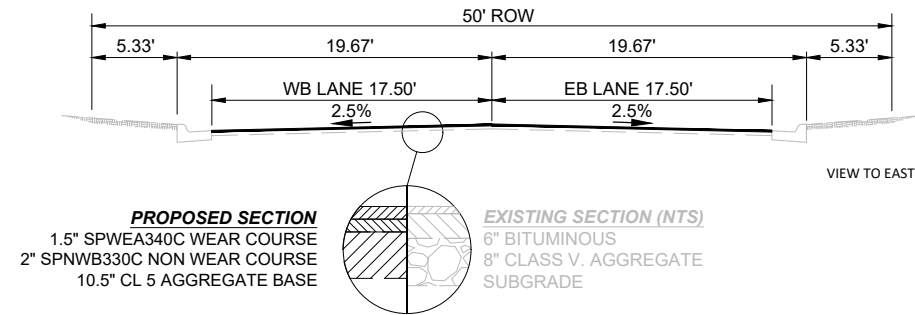
DRAWING NO.:

SHEET SIZE:

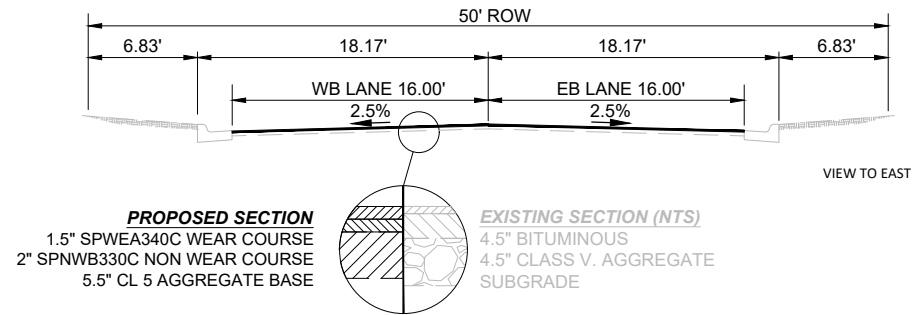
SHEET:

Rev:

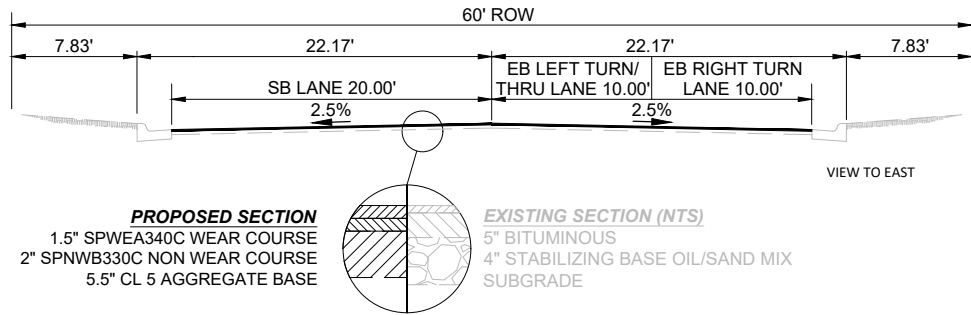
-



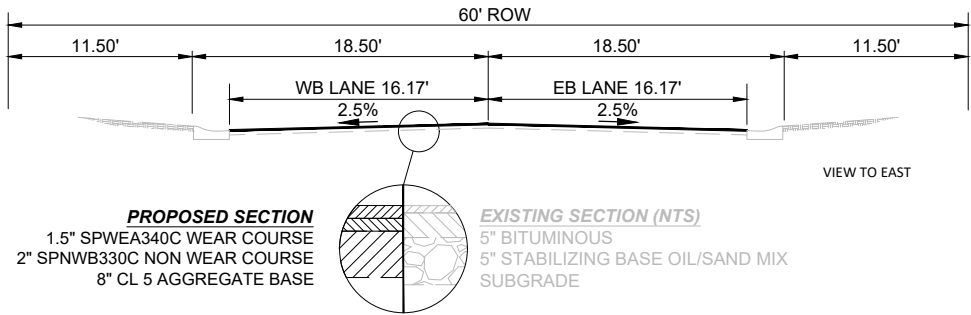
HARTMAN CIRCLE
S.A.P.127-050-030 (RECLAIM)
STA. 00+68 - 2+00



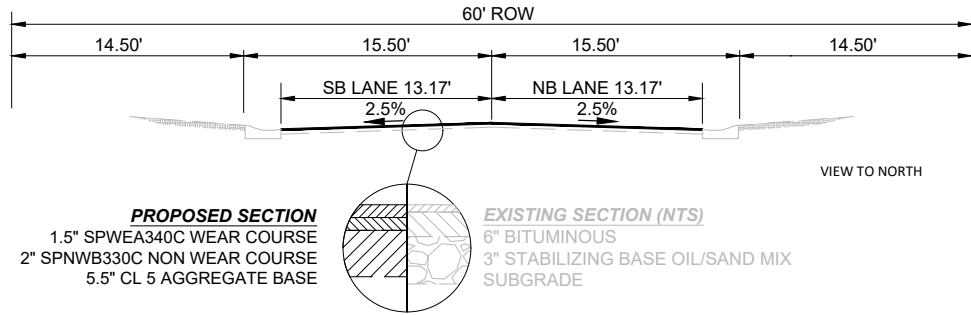
HARTMAN CIRCLE
S.A.P.127-050-030 (RECLAIM)
STA. 2+00 - 21+90



71ST WAY
S.A.P.127-050-030 (RECLAIM)
STA. 30+49 - 31+75



71ST WAY
S.A.P.127-050-030 (RECLAIM)
STA. 31+75 - 39+20



RIVERVIEW TERRACE
S.A.P.127-050-030 (RECLAIM)
STA. 50+00 - 56+44



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

JAMES P. KOSLUCHAR
LIC. NO. 26460 DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

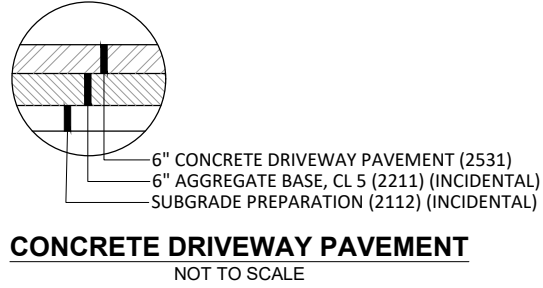
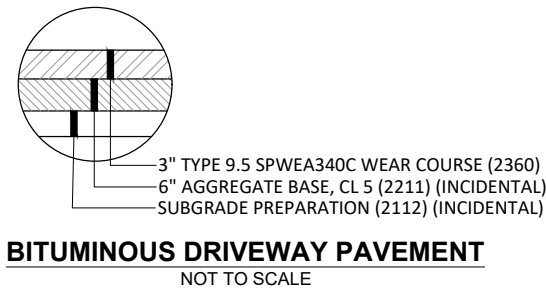
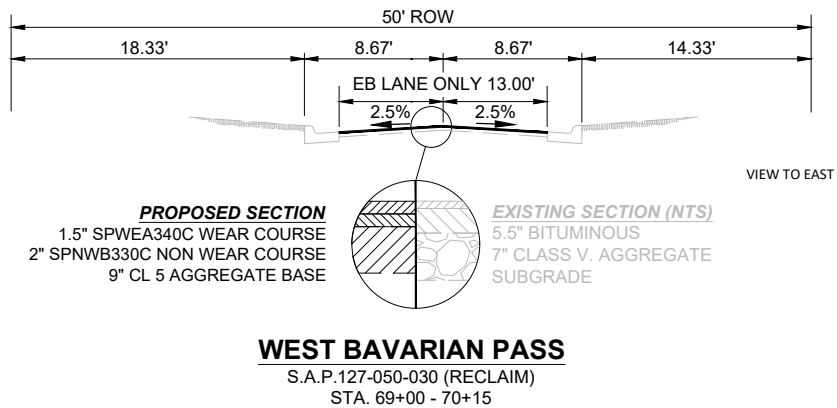
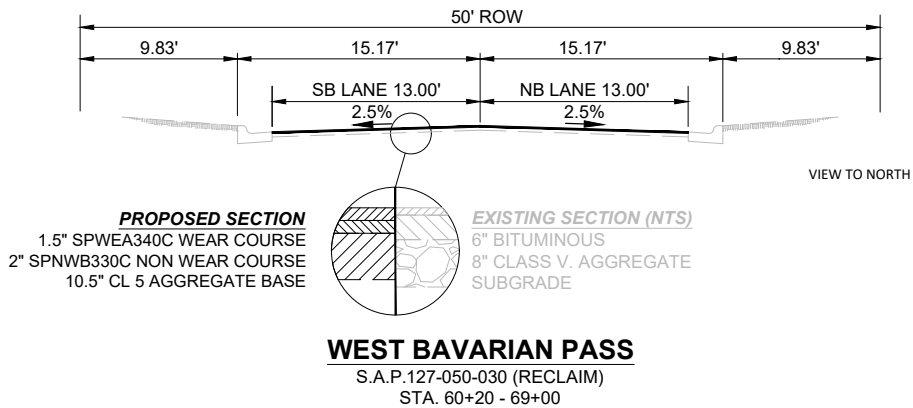
DESIGNED	NO.	ISSUED FOR	DATE
BJB			
DRAWN	NO.	ISSUED FOR	DATE
BJB			
CHECKED	NO.	ISSUED FOR	DATE
JPK			
CLIENT PROJ. NO.	NO.	ISSUED FOR	DATE
ST2022-01			

2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

TYPICAL SECTIONS

SHEET
17
OF
30



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

JAMES P. KOSLUCHAR
LIC. NO. 26460 DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

TYPICAL SECTIONS

SHEET
18
OF
30

2022 STREET REHABILITATION PROJECT
S.A.P. 127-050-030
CITY OF FRIDLEY
ANOKA COUNTY, MINNESOTA



The Contractor and Owner will be joint applicants under the MPCA's General Stormwater Permit for Construction Activity as required by the National Pollutant Discharge Elimination System (NPDES) Phase II program.

A Construction SWPPP Manager must be available for an on-site inspection within 72 hours upon request by the MPCA.

The SWPPP Designer, Construction SWPPP Manager, and BMP Installer must have appropriate training. Documentation showing training commensurate with the job duties and responsibilities is required to be included in the SWPPP prior to any work beginning on the site. Training documentation for the SWPPP Designer is included on the Narrative sheet. The Contractor shall attach training documentation to this SWPPP for the Construction SWPPP Manager and BMP Installer prior to the start of construction. This information shall be kept up to date until the project NOT is filed.

Payment for all work associated with Erosion and Sediment Control shall be as described in the Project Manual. Unless otherwise authorized by the Owner no additional payment shall be made for any work required to administer and maintain the site erosion and sediment control in compliance with the Minnesota Pollution Control Agency (MPCA) - General Stormwater Permit for Construction Activity (MN R100001) including but not limited to inspection, maintenance, and removal of BMPs or addition of BMPs to accommodate Contractor phasing.

Permittees must make the SWPPP, including all inspection reports, maintenance records, training records and other information required by this permit, available to federal, state, and local officials within three (3) days upon request for the duration of the permit and for three (3) years following the NOT.

1. The expected amount, frequency, intensity, and duration of precipitation.
2. The nature of stormwater runoff and run-on at the site
3. Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
4. The range of soil particle sizes expected to be present on the site.

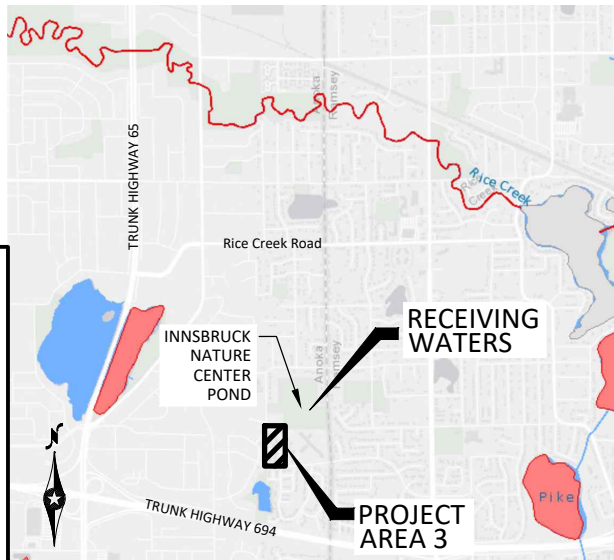
PROJECT AREAS:		
Total Project Size (disturbed area) =	3.60	ACRES
Existing area of impervious surface =	3.34	ACRES
Post construction area of impervious surface =	3.34	ACRES
Total new impervious surface area created =	0.00	ACRES

Planned Construction Start Date:	<u>06/15/2022</u>
Estimated Construction Completion Date:	<u>10/28/2022</u>

Type of storm water management used if more than 1 acre of new impervious surface is created: N/A

COUNTY	TOWNSHIP	RANGE	SECTION	LATITUDE	LONGITUDE
ANOKA	T30N	R24W	15	45°05'33" N	93°16'39"
ANOKA	T30N	R24W	10	45°05'51" N	93°16'32"
ANOKA	T30N	R24W	24	45°04'13" N	93°13'50"

During construction all storm sewer system inlets will be protected and maintained, After construction is complete, there will be no change in drainage area or land use.



Receiving waters, including surface water, wetlands, Public Waters, and stormwater ponds, within 1-mile of the project boundary are identified on the USGS 7.5 min quad map above. Receiving waters that are impaired, the impairment, and WLA are listed as follows. All specific BMPs relative to construction activities listed in the permit for special, prohibited, restricted, or impaired have been incorporated into this plan. All specific BMPs listed in approved TMDLs and those BMPs listed for construction related waste load allocations have also been incorporated.

³ Construction Related TMDLs include those related to: phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.

IMPLEMENTATION SCHEDULE AND PHASING: The Contractor is required to provide an updated schedule and site management plan meeting the minimum requirements of Section 1717 of the Minnesota Standard Specifications for Construction.

- 1) Submit SWPPP Updates to Engineer. Submittal shall include any requested changes to the SWPPP, including but not limited to: Trained Personnel, Locations for Stockpiles, Sanitation Facilities, Types and Locations of Erosion & Sediment Control. Failure to submit updates shall be considered acceptance of the SWPPP as designed with no changes.
- 2) Install perimeter sediment control, inlet protection, and construction exit.
- 3) Reclaim bituminous pavement.
- 4) Removals
- 5) Utility Installation
- 6) Concrete Curb & Gutter Installation
- 7) Mill Bituminous Pavement
- 8) Bituminous PAVING
- 9) Ensure final stabilization measures are complete.
- 10) Provide digital copy of all Field SWPPP Documentation including Inspection Reports and SWPPP Revisions to the Owner.
- 11) Submit Notice of Termination (NOT) to MPCA. NOTE: The NOT must be submitted to MPCA before Final Stabilization is considered complete.

This Area consists of project work taking place on:
71st Way
Riverview Terrace

This Area consists of project work taking place on:
West Bavarian Pass

Information contained in this SWPPP narrative sheet summarizes requirements of the GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PROGRAM - Permit No: MN RI00001 (Permit) as they apply to this project. All provisions of the Permit including those not specifically cited herein shall apply to this project. The Contractor is responsible to be familiar with and comply with all conditions of the permit. The full text of the Permit is available at: <https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf>

SWPPP AMENDMENTS AND SUBMITTALS

Contractor must prepare and submit to the Engineer a SWPPP amendment as necessary to include additional Best Management Practices (BMPs) "as follows".

1. To provide contact information and training documentation for Construction SWPPP Manager and BMP Installer,

2. When there is a change in construction method of phasing, operation, maintenance, weather or seasonal conditions not anticipated during the design of the SWPPP including but not limited to:

a. Types and/or Locations of BMPs

b. Material Storage and Spill Response

c. Fueling Plans

d. Locations for Stockpiles, Concrete Washout, and Sanitation Facilities and

e. Project Phasing

3. When it is determined that the SWPPP is not achieving objectives of minimizing pollutants in stormwater discharges associated with construction activity, or

4. When the SWPPP is not consistent with the terms and conditions of the permit or is not meeting the requirements of the permit.
- The Contractor may implement SWPPP amendments immediately and is not required to wait for Engineer review of the submittal. The responsibility for completeness of SWPPP amendments and compliance with the Permit lies with the Contractor. Review, comment, or lack of comment by the Engineer on a SWPPP amendment shall not absolve the responsibilities of the Contractor in any way.
- If a change order is issued for a design change the SWPPP amendment will be prepared by the Engineer and included in the change order.
- In addition to SWPPP amendments, the Contractor shall submit to the Engineer Weekly Erosion and Sediment Control Schedule meeting the requirements of MnDOT 1717.
- The Contractor shall keep copies of all SWPPP amendments, Weekly Erosion and Sediment Control Schedules, inspection logs, and maintenance logs with the field copy of the SWPPP. A PDF copy of these documents will be provided along with a copy of the final Field Copy of the SWPPP to the Engineer along with the signed Notice of Termination when final stabilization is complete.
- EROSION PREVENTION PRACTICES
- Stormwater conveyance channels shall be routed around unstabilized areas. Erosion controls and velocity dissipation devices shall be used at outlets within and along the length of any constructed conveyance channel.
- The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.
- Temporary or permanent ditches or swales used as sediment containment during construction do not need to be stabilized during temporary period of use and shall be stabilized within 24 hours after no longer used as sediment containment.
- Mulch, hydromulch, tackifier, or similar practices shall not be used in any portion of the wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than 2 percent.
- Energy dissipation shall be installed at all temporary or permanent pipe outlets within 24 hours of connection to a surface water or permanent stormwater treatment system.
- The Contractor shall phase construction and use construction methods to the extent practical to minimize exposed soils. The project phasing shall be documented in the Weekly Erosion and Sediment Control Schedule.
- SEDIMENT CONTROL PRACTICES
- Downgradient BMPs including perimeter BMPs must be in place before up gradient land disturbing activities begin and shall remain in place until final stabilization.
- All BMPs that have been adjusted or removed to accommodate short-term activities shall be re-installed or replaced the earlier of the end of the work day or before the next precipitation event even if the activity is not complete.
- Inlet BMPs may be removed for specific safety concerns. The BMPs shall be replaced as soon as the safety concern is resolved. The removal shall be documented in the SWPPP as a SWPPP amendment.
- Temporary stockpiles must have sediment control BMPs. The Contractor shall prepare and submit to the Engineer a SWPPP amendment showing the location of temporary stockpiles and the BMPs for each stockpile. The SWPPP amendment must meet the minimum requirements of Section 9 of the Permit.
- Soil compaction shall be minimized and topsoil shall be preserved, unless infeasible or if construction activities dictate soil compaction or topsoil stripping.
- The use of polymers, flocculants, or other sedimentation treatment chemicals are not proposed as part of this SWPPP as designed by the Engineer. If methods or phasing of construction require the use of any of these chemicals, the Contractor shall prepare and submit to the Engineer a SWPPP amendment that meets the minimum requirements of Section 9 of the Permit.
- TEMPORARY SEDIMENTATION BASINS
- A temporary sedimentation basin has not been included in this SWPPP as designed by the Engineer. If a basin is later determined to be desirable or necessary the Contractor shall prepare and submit to the Engineer a SWPPP amendment. Temporary sedimentation basins shall meet or exceed the minimum requirements of Section 14 of the Permit and shall include a basin draining plan meeting or exceeding the minimum requirements of Section 10 of the Permit. Where the site discharges to Special and/or Impaired Waters the SWPPP amendment shall also meet or exceed the minimum requirements of Section 23 of the permit.
- DEWATERING
- A dewatering plan has not been included in this SWPPP as designed by the Engineer. If dewatering is required for this project, the Contractor shall prepare and submit to the Engineer a SWPPP amendment. All dewatering shall meet or exceed the minimum requirements of Section 10 of the Permit.
- POLLUTION PREVENTION
- Products and materials that have the potential to leach pollutants that are stored on the site must be stored in a manner designed to minimize contact with stormwater. Materials that are not a source of potential contamination to stormwater or that are designed for exposure to stormwater are not required to be covered.
- Hazardous materials including but not limited to pesticides, fertilizer, petroleum products, curing compounds and toxic waste must be properly stored and protected from stormwater exposure as recommended by the manufacturer in an access restricted area.
- Solid waste must be stored, collected and disposed of in compliance with Minnesota Administrative Rules Chapter 7035.
- Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. CH 7041.
- Exterior vehicle or equipment washing on the project site shall be prohibited. No engine degreasing is allowed on site.
- The Contractor shall prepare and submit a SWPPP amendment detailing the location and BMPs proposed for storage of materials, solid waste, and portable toilets. The SWPPP amendment shall include shall include a spill prevention and response plan that is appropriate for the materials proposed to be on the site. The SWPPP amendment sheet meet or exceed the minimum requirements of Section 12 of the Permit.
- INSPECTION & MAINTENANCE
- A trained person shall routinely inspect the entire construction site at the time interval indicated on this sheet of the SWPPP during active construction and within 24-hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24-hours after a rainfall event, the next inspection must be conducted at the time interval indicated in the Receiving Waters Table found on the SITE PLAN AND INFORMATION SHEET of the SWPPP.
- All inspections and maintenance conducted during construction must be recorded on the day it is completed and must be retained with the SWPPP. Inspection report forms are available in the Project Specifications. Inspection report forms other than those provided shall be approved by the engineer.
- The Contractor may request a change in inspection schedule for the following conditions:
- a. Inspections of areas with permanent cover to be reduced to once per month,

b. Inspections of areas that have permanent cover and have had no construction activity for 12 months to be suspended until construction resumes,

c. Inspections of areas where construction is suspended due to frozen ground conditions, inspections to be suspended until the earlier of within 24 hours of runoff occurring, or upon resuming construction.
- No change in inspection schedule shall occur until authorized by the Engineer.
- Inspections must include:
1. All erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness.

2. Surface waters, including drainage ditches and conveyance systems for evidence of erosion and sediment deposition.

3. Construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles.

4. Infiltration areas to ensure that no sediment from ongoing construction activity is reaching the infiltration area and that equipment is not being driven across the infiltration area.
- All non-functioning BMPs and those BMPs where sediment reaches one-half (1/2) of the depth of the BMP, or in the case of sediment basins one-half (1/2) of the storage volume, must be repaired, replaced, or supplemented by the end of the next business day after discovery, or as soon as field conditions allow and reported to and approved by the Engineer.
- Permittees must repair, replace or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow.
- Any sediment that escapes the site must be removed and the area stabilized within 24 hours of discovery unless precluded by legal, regulatory, or physical access in which case the conditions shall be reported immediately to the Engineer and the work shall be completed within 7 calendar days when authorized by the Engineer. Paved surfaces such as streets shall have any escaped or tracked sediment removed by the end of the day that it is discovered. Sediment release, other than on paved surfaces that can be cleaned up with street sweeping shall be reported immediately upon discovery to the Engineer.
- PUBLIC WATER RESTRICTIONS:
- For public waters that have been promulgated "work in water restrictions" during fish spawning time frames, all exposed soil areas that are within 200 feet of the water's edge, and drain to these waters must complete stabilization within 24-hours during the time period. MN DNR permits are not valid for work in waters that are designated as infested waters unless accompanied by an Infested Waters Permit or written notification has been obtained from MN DNR stating that such permit is not required. There is no exception for pre-existing permits. If a MN DNR Permit has been issued for the project and the water is later designated as infested, the Contractor shall halt all work covered by the MN DNR Permit until an Infested Waters Permit is obtained or that written notification is obtained stating that such permit is not required.
- FINAL STABILIZATION
- Final Stabilization is not complete until all the following requirements have been met:
1. Substantial Completion has been reached and no ground disturbing activities are anticipated.

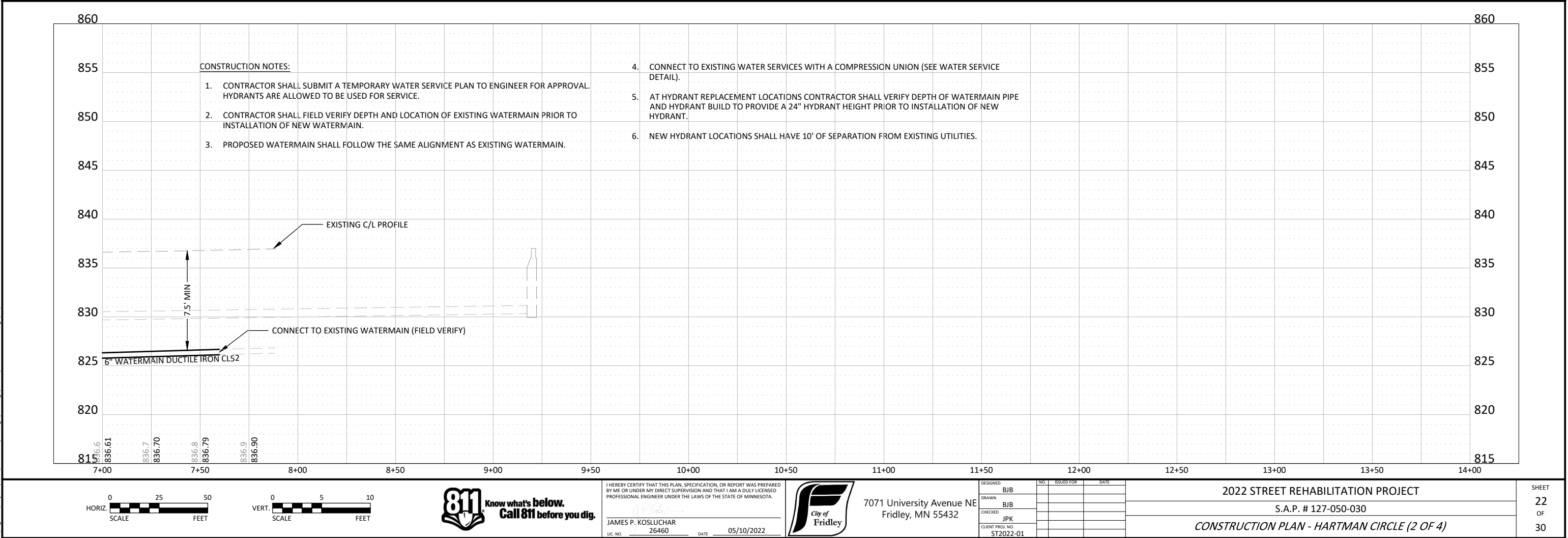
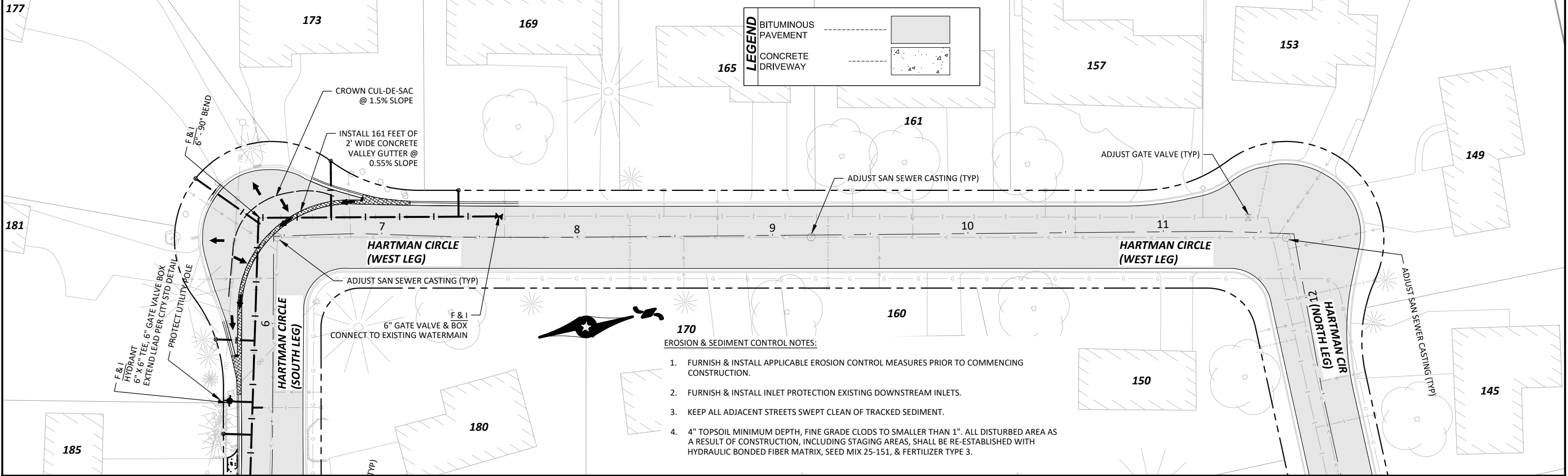
2. Permanent cover has been installed with an established minimum uniform perennial vegetation density of 70 percent of its expected final growth. Vegetation is not required in areas where no vegetation is proposed by this project such as impervious surfaces or the base of a sand filter.

3. Accumulated sediment has been removed from all permanent stormwater treatment systems as necessary to ensure the
- system is operating as designed.
4. All sediment has been removed from conveyance systems.

5. All temporary synthetic erosion prevention and sediment control BMPs have been removed. BMPs designated on the SWPPP to remain to decompose on-site may remain.

6. For residential construction only, permit coverage terminates on individual lots if the structures are finished and temporary erosion prevention and downgradient perimeter control is complete, the residence sells to the homeowner, and the permittee distributes the MPCA's "Homeowner Fact Sheet" to the homeowner.

7. For agricultural land only (e.g., pipelines across cropland), the disturbed land must be returned to its preconstruction agricultural use prior to submitting the NOT.
- SITE STABILIZATION COMPLETION:
- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Stabilization of exposed soils shall begin immediately and shall be completed after the construction activity has temporarily or permanently ceased no later than: | 7 calendar days |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
- SITE INSPECTION INTERVAL:
- | | |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------|
| A trained person shall routinely inspect the entire construction site during active construction at an interval of no less than: | 7 calendar days |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------|
- SPECIAL ENVIRONMENTAL CONSIDERATIONS AND PERMITS:
- | | | |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1) | Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project? | NO |
| 2) | Does any portion of the site have the potential to affect threatened or endangered species or their critical habitat? | NO |
| 3) | Does any portion of this site discharge to a Calcareous fen. | NO |
| 4) | Will any portion of the site potentially affect properties listed on the National Register of Historic Places or a known or discovered archeological site? | NO |
| 5) | Have any Karst features have been identified in the project vicinity? | NO |
| 6) | Is compliance with temporary or permanent stormwater management design requirements infeasible for this project? | NO |
| 7) | Has the MN DNR promulgated "work in water restrictions" for any Public Water this site discharges to during fish spawning? | NO |
- | TYPE OF PERMIT | PERMITTING AGENCY | PERMIT STATUS AND CONDITIONS |
|-------------------------------|-------------------|---------------------------------|
| Construction Stormwater NPDES | MPCA | SHALL BE OBTAINED BY CONTRACTOR |
| | | |
| | | |
| | | |
-
- Know what's below.
Call 811 before you dig.
- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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. | |
| | |
| JAMES P. KOSLUCHAR | |
| U.C. NO. 26460 | DATE 05/10/2022 |
-
- 7071 University Avenue NE
Fridley, MN 55432
- | | | | |
|------------------|-----|------------|------|
| DESIGNED | NO. | ISSUED FOR | DATE |
| BJB | | | |
| DRAWN | | | |
| BJB | | | |
| CHECKED | | | |
| JPK | | | |
| CLIENT PROJ. NO. | | | |
| ST2022-01 | | | |
- 2022 STREET REHABILITATION PROJECT
- S.A.P. # 127-050-030
- SWPPP NARRATIVE
- SHEET
- 20
OF
- 30
- J:\Engineer\Project\43\2022\431\Design\Drawings\Sheet\2022-01-SW-SH.dwg 5/12/2022 8:24:24 AM

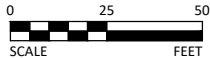
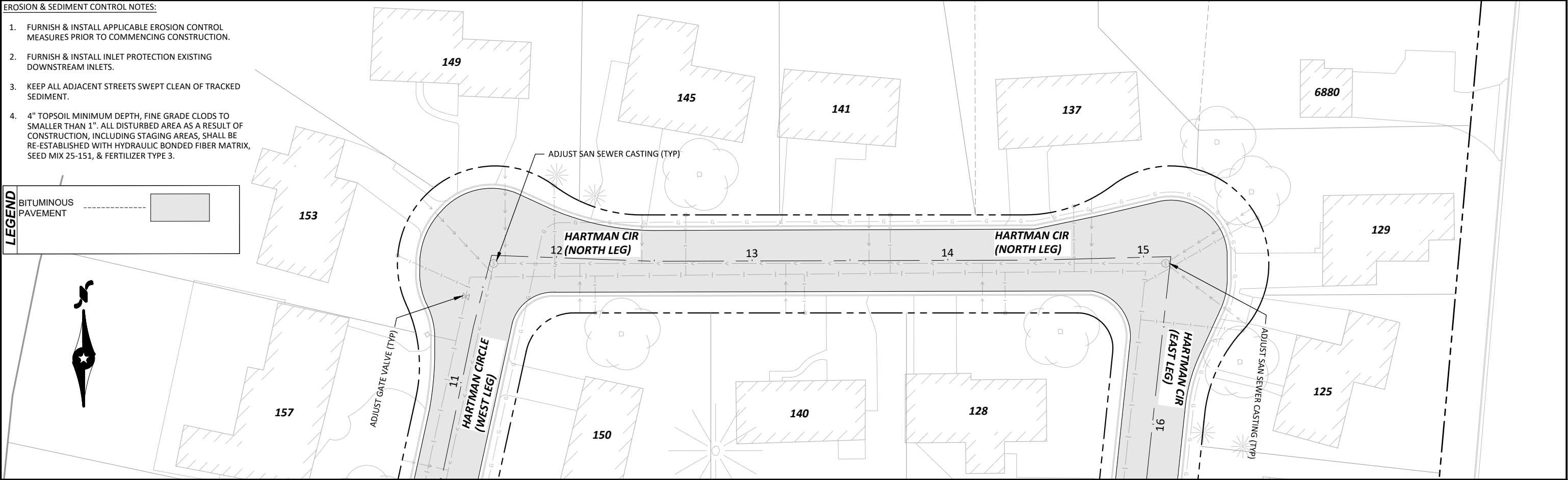


EROSION & SEDIMENT CONTROL NOTES:

1. FURNISH & INSTALL APPLICABLE EROSION CONTROL MEASURES PRIOR TO COMMENCING CONSTRUCTION.
2. FURNISH & INSTALL INLET PROTECTION EXISTING DOWNSTREAM INLETS.
3. KEEP ALL ADJACENT STREETS SWEEPED CLEAN OF TRACKED SEDIMENT.
4. 4" TOPSOIL MINIMUM DEPTH, FINE GRADE CLODS TO SMALLER THAN 1". ALL DISTURBED AREA AS A RESULT OF CONSTRUCTION, INCLUDING STAGING AREAS, SHALL BE RE-ESTABLISHED WITH HYDRAULIC BONDED FIBER MATRIX, SEED MIX 25-151, & FERTILIZER TYPE 3.

LEGEND

BITUMINOUS PAVEMENT



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

[Signature]
JAMES P. KOSLUCHAR
LIC. NO. 26460 DATE 05/10/2022

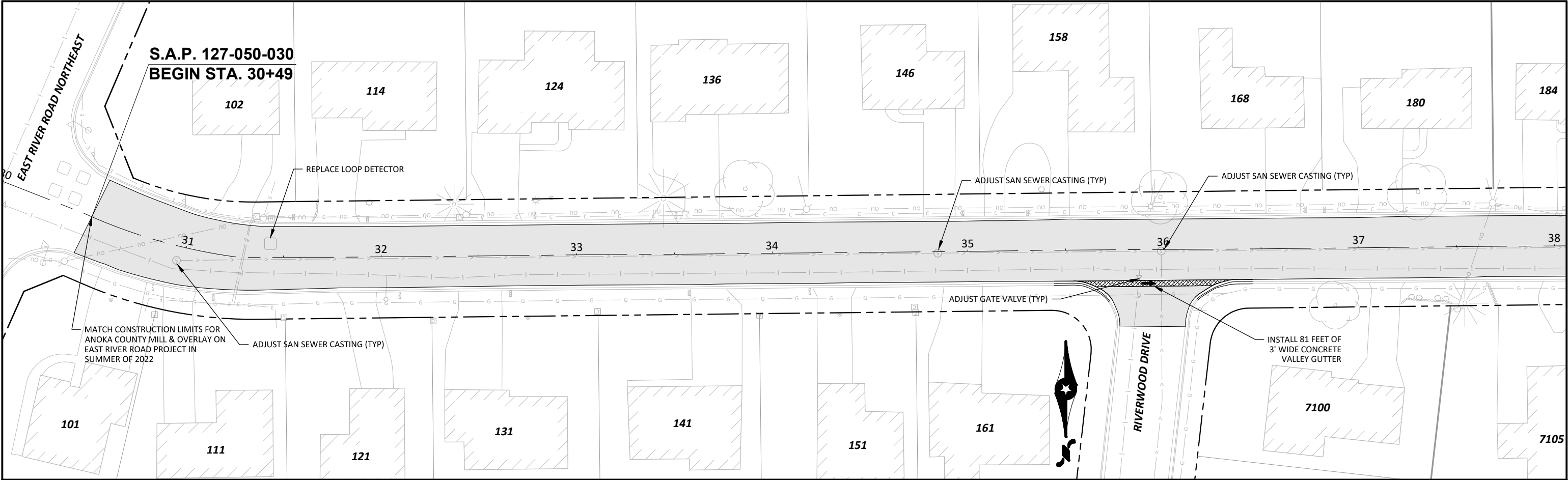


7071 University Avenue NE
Fridley, MN 55432

DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT	
S.A.P. # 127-050-030	
CONSTRUCTION PLAN - HARTMAN CIRCLE (3 OF 4)	

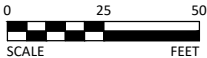
SHEET
23
OF
30



LEGEND

BITUMINOUS PAVEMENT

- EROSION & SEDIMENT CONTROL NOTES:
- FURNISH & INSTALL APPLICABLE EROSION CONTROL MEASURES PRIOR TO COMMENCING CONSTRUCTION.
 - FURNISH & INSTALL INLET PROTECTION EXISTING DOWNSTREAM INLETS.
 - KEEP ALL ADJACENT STREETS SWEEPED CLEAN OF TRACKED SEDIMENT.
 - 4" TOPSOIL MINIMUM DEPTH, FINE GRADE CLODS TO SMALLER THAN 1". ALL DISTURBED AREA AS A RESULT OF CONSTRUCTION, INCLUDING STAGING AREAS, SHALL BE RE-ESTABLISHED WITH HYDRAULIC BONDED FIBER MATRIX, SEED MIX 25-151, & FERTILIZER TYPE 3.



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

[Signature]
JAMES P. KOSLUCHAR
LIC. NO. 26460 DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

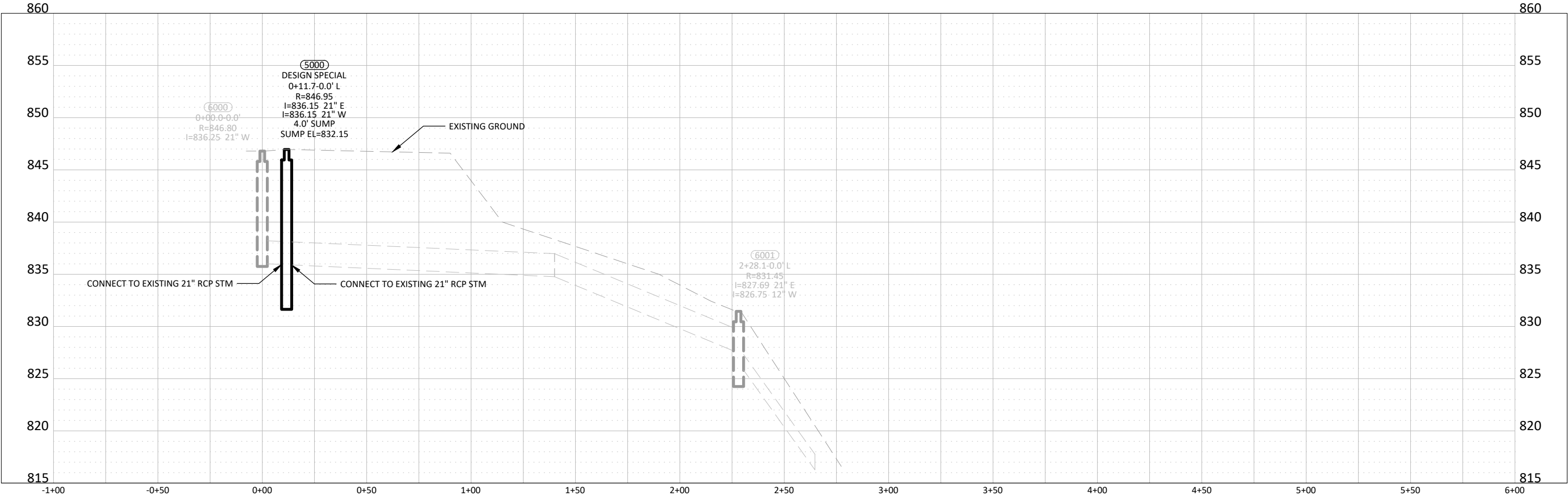
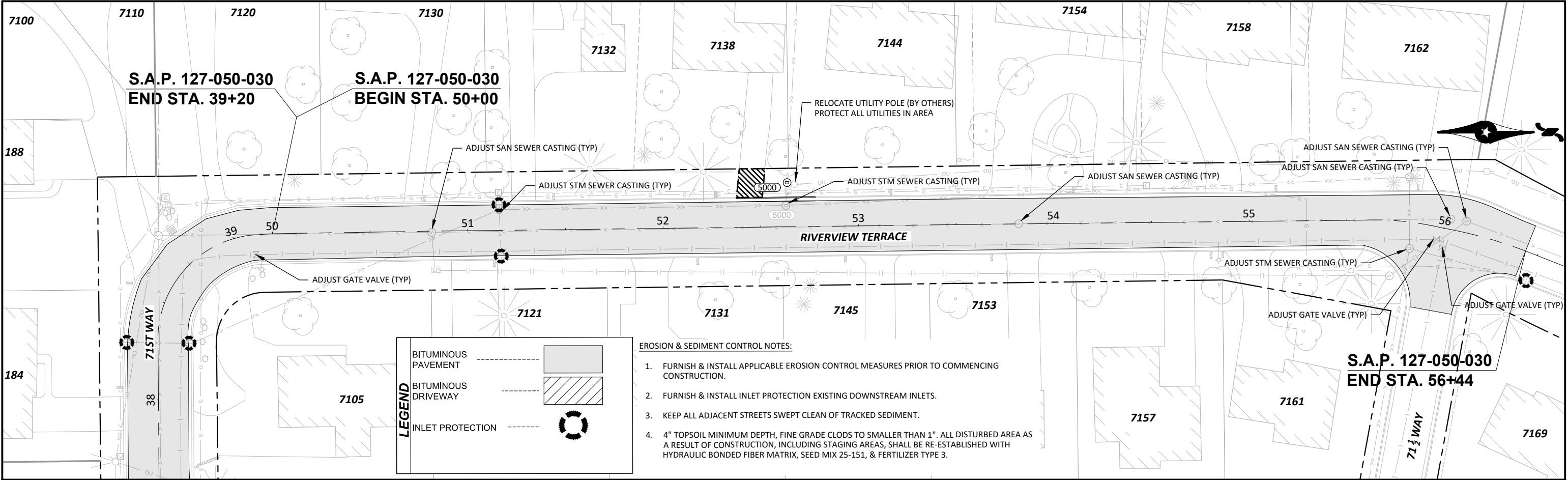
2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

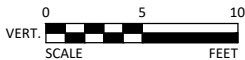
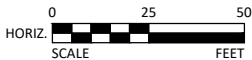
CONSTRUCTION PLAN - 71ST WAY

SHEET
25
OF
30

J:\Engineer\Projects\2022\ST2022-01\Design\Drawings\Sheets\2022-01-CT-SH.dwg 5/23/2022 8:25:49 AM



J:\Engineer\Projects\2022\127-050-030\Drawings\Sheet\2022-01-CT-SW.dwg 5/23/2022 8:36:05 AM



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

JAMES P. KOSLUCHAR
26460
DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

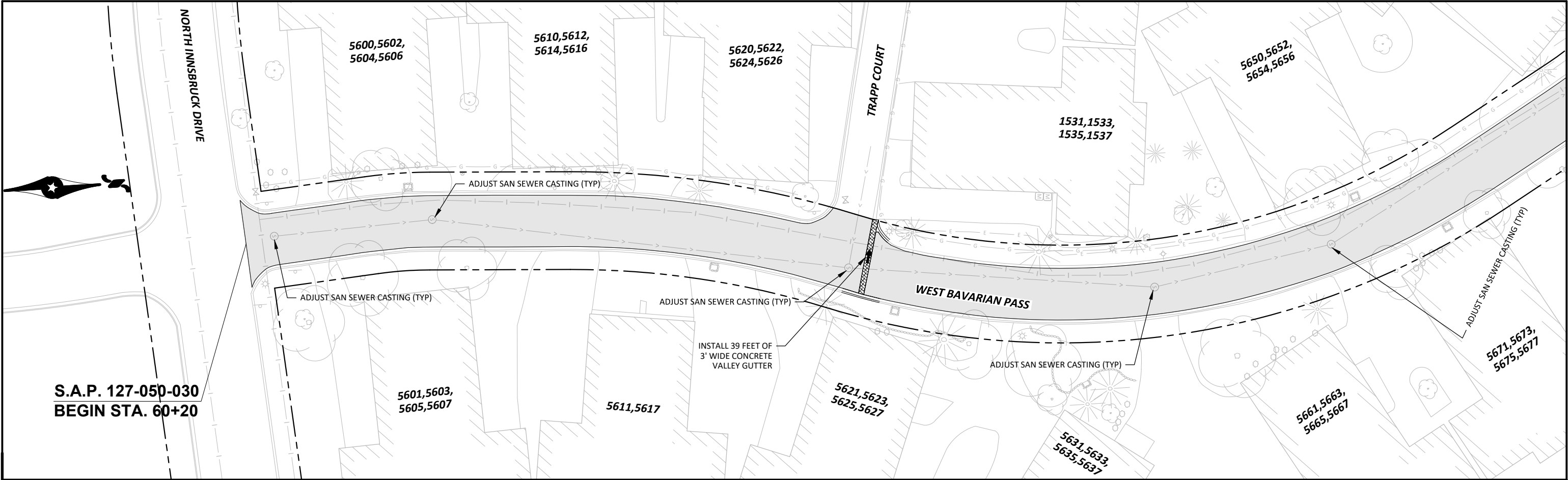
DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT

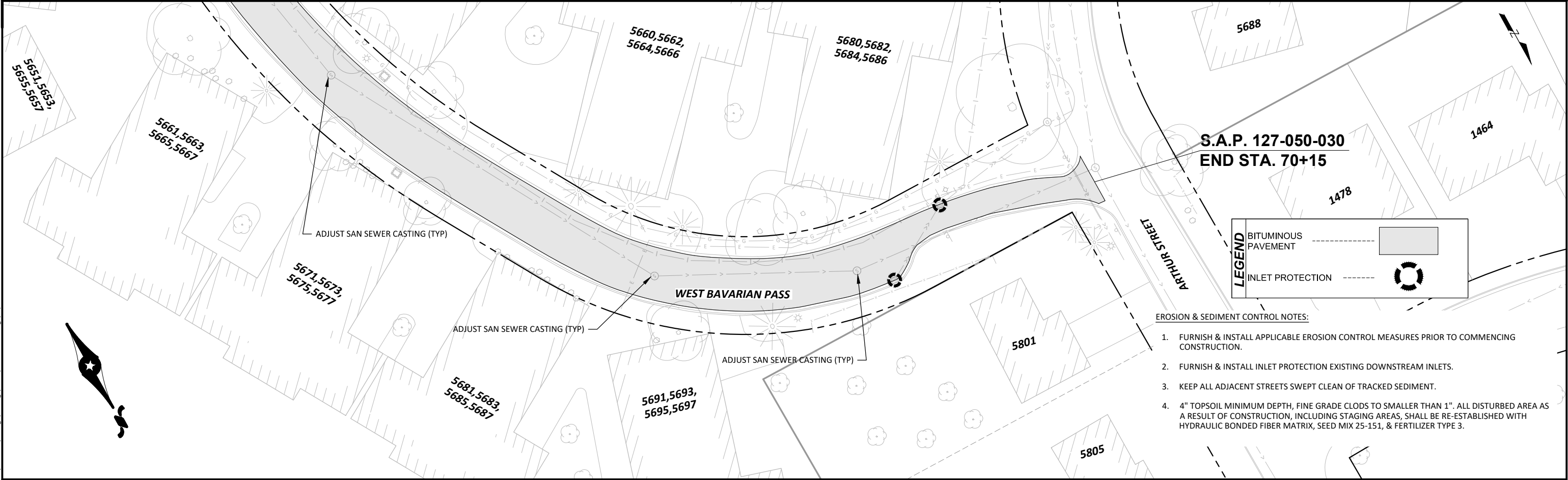
S.A.P. # 127-050-030

CONSTRUCTION PLAN - RIVERVIEW TERRACE

SHEET
26
OF
30



S.A.P. 127-050-030
BEGIN STA. 60+20



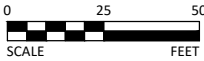
S.A.P. 127-050-030
END STA. 70+15

LEGEND

BITUMINOUS PAVEMENT

INLET PROTECTION

- EROSION & SEDIMENT CONTROL NOTES:
- FURNISH & INSTALL APPLICABLE EROSION CONTROL MEASURES PRIOR TO COMMENCING CONSTRUCTION.
 - FURNISH & INSTALL INLET PROTECTION EXISTING DOWNSTREAM INLETS.
 - KEEP ALL ADJACENT STREETS SWEEPED CLEAN OF TRACKED SEDIMENT.
 - 4" TOPSOIL MINIMUM DEPTH, FINE GRADE CLODS TO SMALLER THAN 1". ALL DISTURBED AREA AS A RESULT OF CONSTRUCTION, INCLUDING STAGING AREAS, SHALL BE RE-ESTABLISHED WITH HYDRAULIC BONDED FIBER MATRIX, SEED MIX 25-151, & FERTILIZER TYPE 3.



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT 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.

JAMES P. KOSLUCHAR
26460
DATE 05/10/2022



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	BJB	NO.	ISSUED FOR	DATE
DRAWN	BJB			
CHECKED	JPK			
CLIENT PROJ. NO.	ST2022-01			

2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

CONSTRUCTION PLAN - WEST BAVARIAN PASS

SHEET
27
OF
30

*LOOP DETECTORS			
NUMRF	SIZE	FUNCTION	LOCATION
D1-1	2-6' X 6'	1	5'
D1-2	2-6' X 6'	1	AS SHOWN
D2-1	6' X 6'	1	300'
D2-2	6' X 6'	1	300'
D4-1	6' X 6'	3/8	120'
D4-2	6' X 6'	7	5'
D4-3	6' X 6'	1	5'
D5-1	2-6' X 6'	1	5'
D5-2	2-6' X 6'	1	AS SHOWN
D6-1	6' X 6'	1	300'
D6-2	6' X 6'	1	300'
D8-1	6' X 6'	3/8	120'
D8-2	6' X 6'	7	5'

* NOTE: ALL DETECTORS IN NMC CONDUIT (SEE DETAILS)

LOCATION-DISTANCE FROM STOP LINE TO DETECTOR

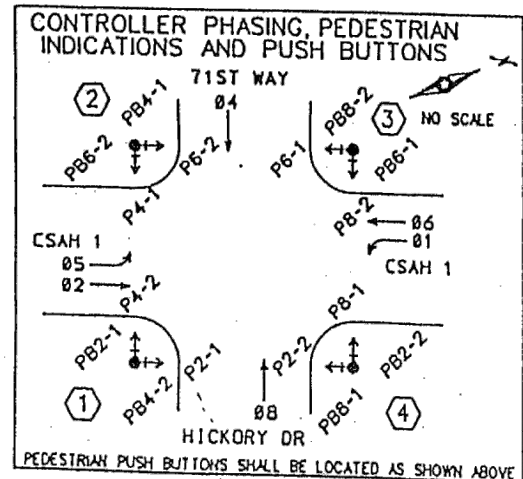
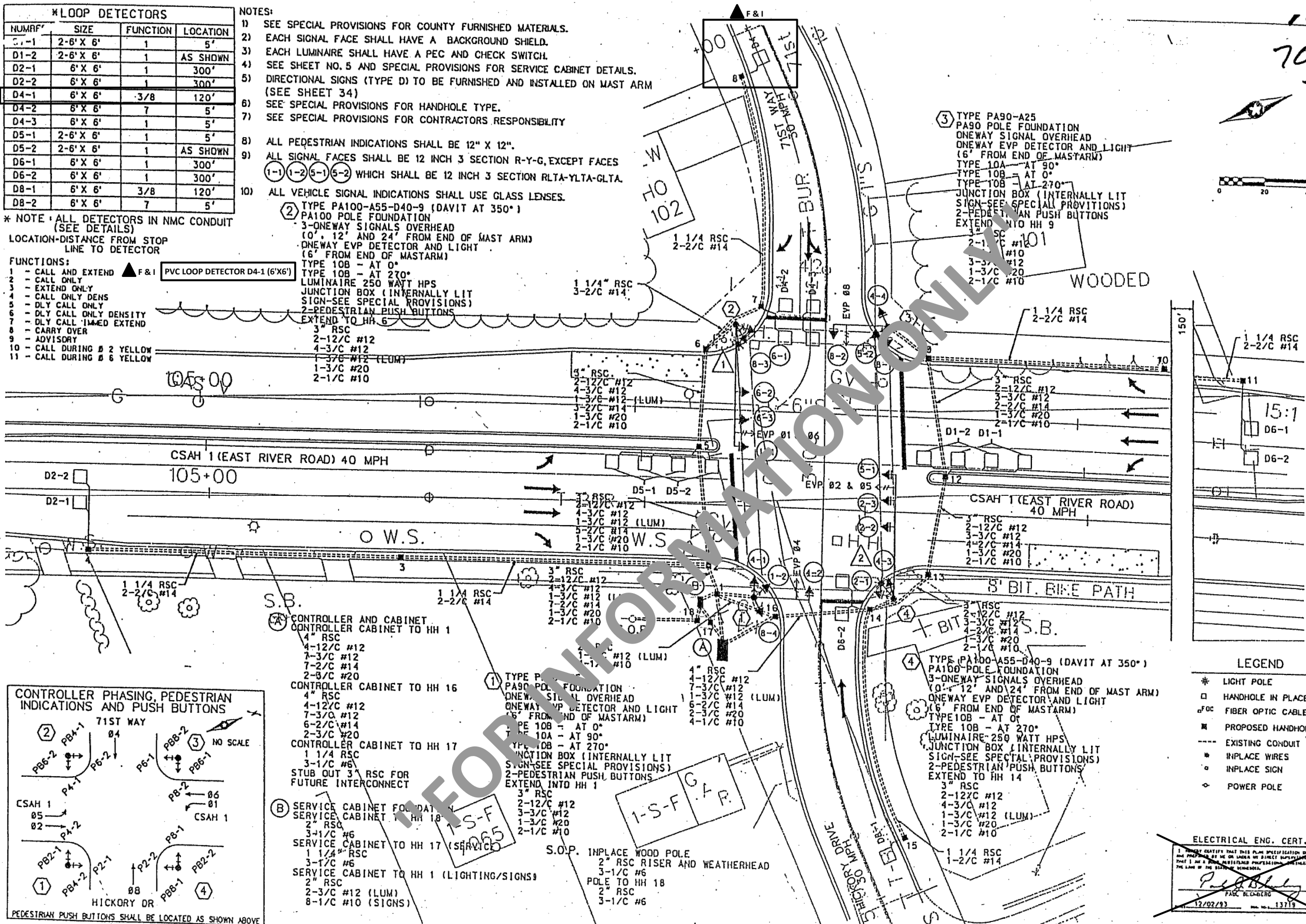
FUNCTIONS:

- 1 - CALL AND EXTEND
- 2 - CALL ONLY
- 3 - EXTEND ONLY
- 4 - CALL ONLY DENS
- 5 - DLY CALL ONLY
- 6 - DLY CALL ONLY DENSITY
- 7 - DLY CALL IMMEDIATE EXTEND
- 8 - CARRY OVER
- 9 - ADVISORY
- 10 - CALL DURING 2 YELLOW
- 11 - CALL DURING 6 YELLOW

NOTES:

- 1) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
- 2) EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
- 3) EACH LUMINAIRE SHALL HAVE A PEC AND CHECK SWITCH.
- 4) SEE SHEET NO. 5 AND SPECIAL PROVISIONS FOR SERVICE CABINET DETAILS.
- 5) DIRECTIONAL SIGNS (TYPE D) TO BE FURNISHED AND INSTALLED ON MAST ARM (SEE SHEET 34)
- 6) SEE SPECIAL PROVISIONS FOR HANDHOLE TYPE.
- 7) SEE SPECIAL PROVISIONS FOR CONTRACTORS RESPONSIBILITY
- 8) ALL PEDESTRIAN INDICATIONS SHALL BE 12" X 12".
- 9) ALL SIGNAL FACES SHALL BE 12 INCH 3 SECTION R-Y-G, EXCEPT FACES (1-1) (1-2) (5-1) (5-2) WHICH SHALL BE 12 INCH 3 SECTION RLTA-YLTA-GLTA.
- 10) ALL VEHICLE SIGNAL INDICATIONS SHALL USE GLASS LENSES.

- (2) TYPE PA100-A55-D40-9 (DAVIT AT 350°)
PA100 POLE FOUNDATION
3-ONEWAY SIGNALS OVERHEAD
(0°, 12° AND 24° FROM END OF MAST ARM)
ONEWAY EVP DETECTOR AND LIGHT
(6' FROM END OF MAST ARM)
TYPE 10B - AT 0°
TYPE 10B - AT 270°
LUMINAIRE 250 WATT HPS
JUNCTION BOX (INTERNALLY LIT
SIGN-SEE SPECIAL PROVISIONS)
2-PEDESTRIAN PUSH BUTTONS
EXTEND INTO HH 9
3" RSC
2-12/C #12
4-3/C #12
1-3/C #12 (LUM)
1-3/C #20
2-1/C #10



- (A) CONTROLLER AND CABINET
CONTROLLER CABINET TO HH 1
4" RSC
4-12/C #12
7-3/C #12
7-2/C #14
2-3/C #20
CONTROLLER CABINET TO HH 16
4" RSC
4-12/C #12
7-3/C #12
6-2/C #14
2-3/C #20
CONTROLLER CABINET TO HH 17
1 1/4" RSC
3-1/C #6
STUB OUT 3" RSC FOR FUTURE INTERCONNECT

- (B) SERVICE CABINET FOUNDATION
SERVICE CABINET TO HH 18
2" RSC
3-1/C #6
SERVICE CABINET TO HH 17 (SERVICE)
1 1/4" RSC
3-1/C #6
SERVICE CABINET TO HH 1 (LIGHTING/SIGNS)
2" RSC
2-3/C #12 (LUM)
8-1/C #10 (SIGNS)

- (1) TYPE PA90-A25
PA90 POLE FOUNDATION
ONEWAY SIGNAL OVERHEAD
ONEWAY EVP DETECTOR AND LIGHT
(6' FROM END OF MAST ARM)
TYPE 10B - AT 0°
TYPE 10A - AT 90°
TYPE 10B - AT 270°
JUNCTION BOX (INTERNALLY LIT
SIGN-SEE SPECIAL PROVISIONS)
2-PEDESTRIAN PUSH BUTTONS
EXTEND INTO HH 1
3" RSC
2-12/C #12
4-3/C #12
1-3/C #12 (LUM)
2-1/C #10

- (3) TYPE PA90-A25
PA90 POLE FOUNDATION
ONEWAY SIGNAL OVERHEAD
ONEWAY EVP DETECTOR AND LIGHT
(6' FROM END OF MAST ARM)
TYPE 10A - AT 90°
TYPE 10B - AT 0°
TYPE 10B - AT 270°
JUNCTION BOX (INTERNALLY LIT
SIGN-SEE SPECIAL PROVISIONS)
2-PEDESTRIAN PUSH BUTTONS
EXTEND INTO HH 9
3" RSC
2-12/C #12
4-3/C #12
1-3/C #12 (LUM)
2-1/C #10

- (4) TYPE PA100-A55-D40-9 (DAVIT AT 350°)
PA100 POLE FOUNDATION
3-ONEWAY SIGNALS OVERHEAD
(0°, 12° AND 24° FROM END OF MAST ARM)
ONEWAY EVP DETECTOR AND LIGHT
(6' FROM END OF MAST ARM)
TYPE 10B - AT 0°
TYPE 10B - AT 270°
LUMINAIRE 250 WATT HPS
JUNCTION BOX (INTERNALLY LIT
SIGN-SEE SPECIAL PROVISIONS)
2-PEDESTRIAN PUSH BUTTONS
EXTEND INTO HH 14
3" RSC
2-12/C #12
4-3/C #12
1-3/C #12 (LUM)
1-3/C #20
2-1/C #10

LEGEND

- * LIGHT POLE
- HANDHOLE IN PLACE
- FIBER OPTIC CABLE
- PROPOSED HANDHOLE
- EXISTING CONDUIT
- * INPLACE WIRES
- INPLACE SIGN
- ◇ POWER POLE

ELECTRICAL ENG. CERT.

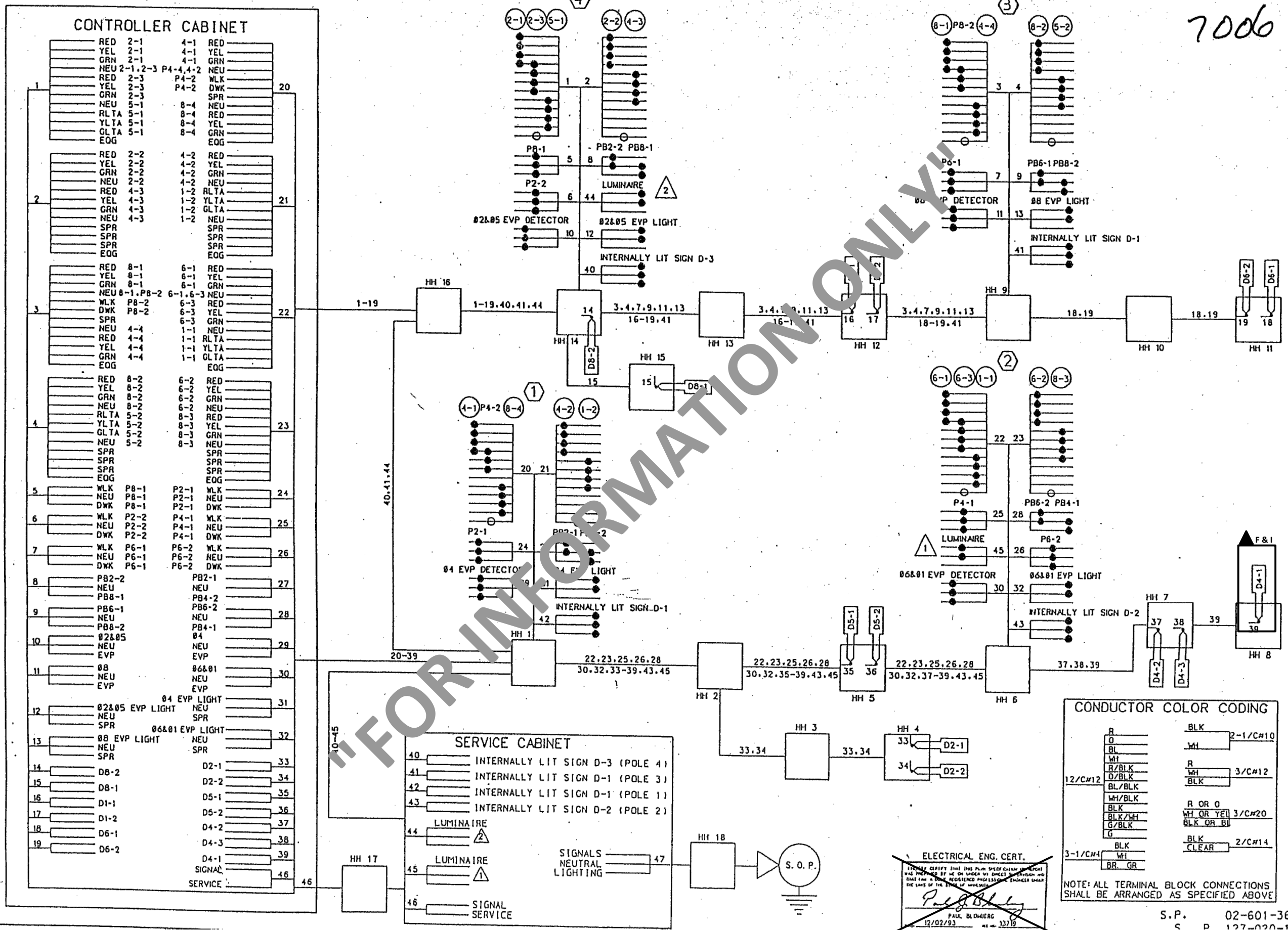
I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A PROFESSIONAL ENGINEER LICENSED UNDER THE LAWS OF THE STATE OF MINNESOTA.

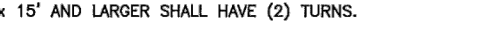
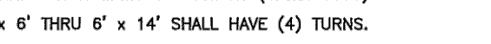
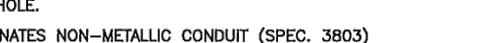
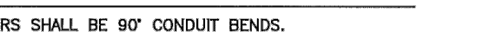
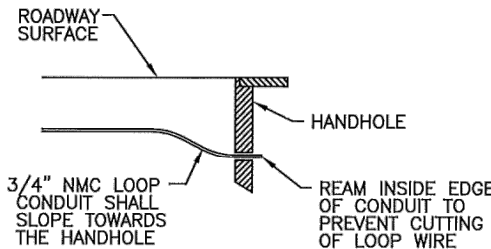
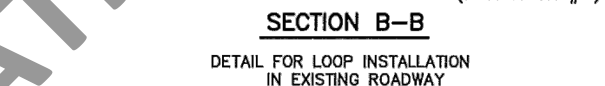
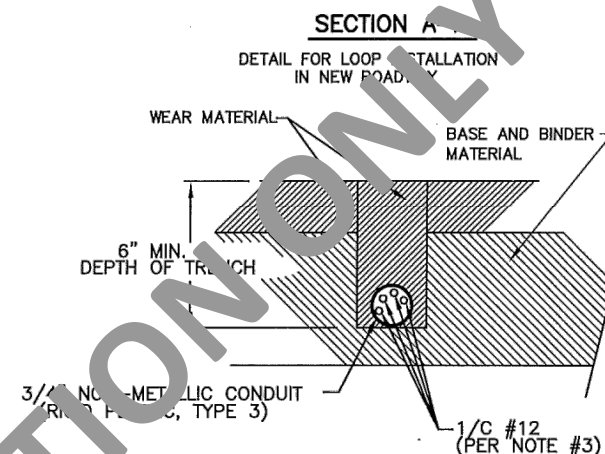
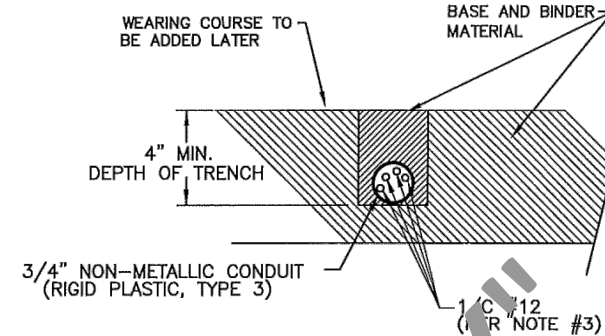
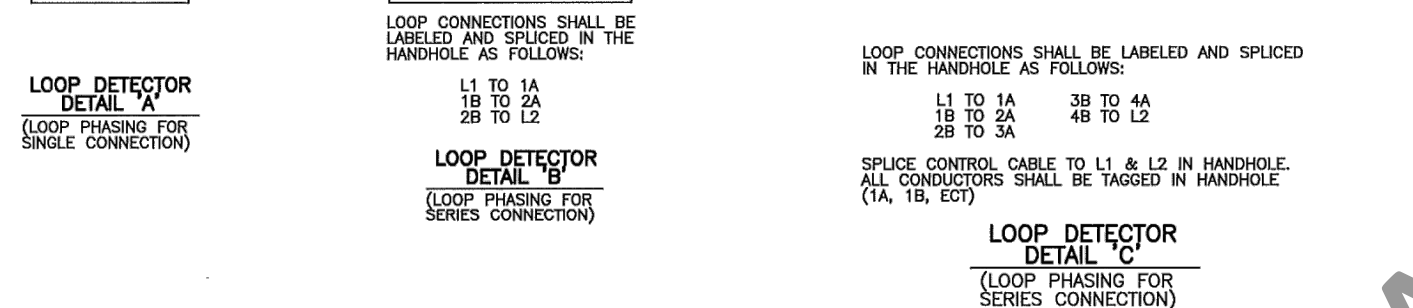
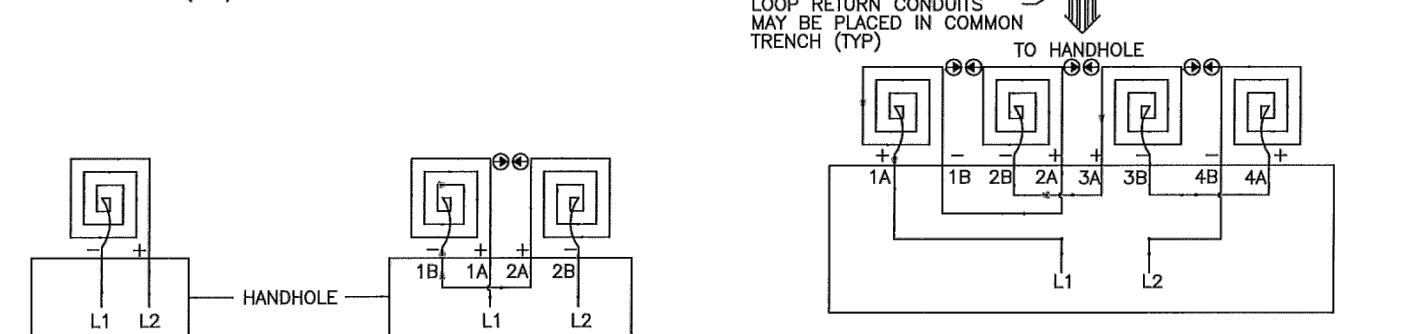
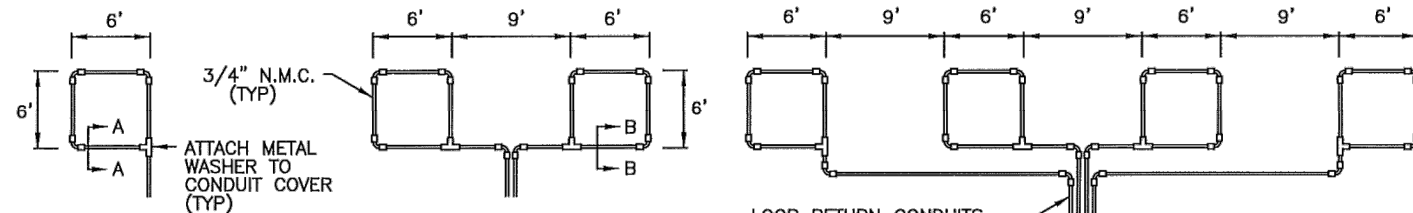
Paul G. Berg
PAUL G. BERG
12/02/93
13719

INTERSECTION LAYOUT
CSAH 1 (EAST RIVER RD)
AND 71ST WAY / HICKORY DR
SP. 02-6C-83
FRIDLEY, MINNESOTA

Ort Schelen
Meyer &
Associates, Inc.
Engineers & Architects
300 Park Place Center • 5775 Hennepin Avenue
Minneapolis, MN 55412-1222 • 612-546-5775

7006





LEGEND OF SYMBOLS	
CONTROLLER AND SERVICE EQUIP. NO's	(A)
SIGNAL BASE NO.	(B)
SIGNAL FACE NO.	(C)
LUMINAIRE NO.	(D)
CONTROLLER AND CABINET	(E)
CONTROLLER AND CABINET - IN PLACE	(F)
HANDHOLE	(G)
HANDHOLE - IN PLACE	(H)
RIGID STEEL CONDUIT (RSC)	(I)
RIGID STEEL CONDUIT (RSC) - IN PLACE	(J)
SIGNAL FACE WITH BACKGROUND SHIELD	(K)
SIGNAL FACE W/O BACKGROUND SHIELD	(L)
SIGNAL FACE - IN PLACE	(M)
PEDESTRIAN INDICATORS	(N)
PEDESTRIAN INDICATORS - IN PLACE	(O)
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	(P)
PEDESTRIAN PUSH BUTTON STATION	(Q)
TRAFFIC SIGNAL PEDESTAL	(R)
TRAFFIC SIGNAL PEDESTAL - INPLACE	(S)
TRAFFIC SIGNAL POLE AND MAST ARM	(T)
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	(U)
STREET LIGHT POLE AND LUMINAIRE	(V)
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	(W)
MAST ARM AND LUMINAIRE	(X)
MAST ARM AND LUMINAIRE - INPLACE	(Y)
WOOD POLE	(Z)
WOOD POLE - IN PLACE	(AA)
SOURCE OF POWER	(AB)
RAILROAD SIGNAL - IN PLACE	(AC)
RIGHT OF WAY LINE	(AD)
CENTERLINE	(AE)
EDGE OF ROADWAY	(AF)
SHOULDERLINE	(AG)
CURB LINE	(AH)
STOP BAR	(AI)
EMERGENCY VEHICLE PREEMPTION DETECTOR	(AJ)

ABBREVIATION	
3-1(EG)	SIGNAL HEAD PHASE "3" - NO. "1"
BR. GR.	BARE GROUND
CH. SW.	CHECK SWITCH
CLR	CLEAR
D2-1(EG)	DETECTOR PHASE "2" - NO. "1"
DWK	DON'T WALK
EGG	EQUIPMENT GROUND
EVP	EMERGENCY VEHICLE PRE-EMPTION
F&I	FURNISH AND INSTALL
FL	FLASH/FLASHING
G	GREEN
GLTA	GREEN LEFT TURN ARROW
GRN	GREEN
GR. R	GROUND ROD
GRTA	GREEN RIGHT TURN ARROW
GTHA	GREEN THRU ARROW
HH	HANDHOLE
HPS	HIGH PRESSURE SODIUM
JB	JUNCTION BOX
LUM	LUMINAIRE
NEU	NEUTRAL
NMC	NON-METALLIC CONDUIT
P2-1(EG)	DETECTOR PHASE "2" - NO. "1"
PB	PUSH BUTTON
PB2-1(EG)	PUSH BUTTON PHASE "2" - NO. "1"
PEC	PHOTOELECTRIC CELL
RED	RED
R&S	REMOVE AND SALVAGE
RLTA	RED LEFT TURN ARROW
RRTA	RED RIGHT TURN ARROW
RSC	RIGID STEEL CONDUIT
SOP	SOURCE OF POWER
SPR	SPARE
ST. LHT	STREET LIGHT
STA	STATION
SW	SWITCH
SWD	SWITCHED
S&R	SALVAGE AND REINSTALL
TDW	TELEPHONE DROP WIRE
WLK	WALK
YEL	YELLOW
YLTA	YELLOW LEFT TURN ARROW
YRTA	YELLOW RIGHT TURN ARROW
YTHA	YELLOW THRU ARROW

CONDUCTOR COLOR CODE	
R	RED
O	ORANGE
BL	BLUE
WH	WHITE
R/BLK	RED WITH BLACK TRACER
O/BLK	ORANGE WITH BLACK TRACER
BL/BLK	BLUE WITH BLACK TRACER
WH/BLK	WHITE WITH BLACK TRACER
BLK	BLACK
BLK/WH	BLACK WITH WHITE TRACER
G/BLK	GREEN WITH BLACK TRACER
G	GREEN

TABULATION OF SIGNAL QUANTITIES					
ITEM NO	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	PARTICIPATION	
				SAP 002-678-022	SAP 198-xxx-xxx
2104	REMOVE SIGNAL SYSTEM "B"	EACH	1		
2104	REMOVE SIGNAL SYSTEM "C"	EACH	1		
2545	SERVICE CABINET	EACH	2		
2565	EMERGENCY VEHICLE PREEMPTION SYSTEM "B"	LS	1		
2565	EMERGENCY VEHICLE PREEMPTION SYSTEM "C"	LS	1		
2565	TRAFFIC CONTROL INTERCONNECT	LS	1		
2565	TRAFFIC CONTROL SIGNAL SYSTEM "B"	SYSTEM	1		
2565	TRAFFIC CONTROL SIGNAL SYSTEM "C"	SYSTEM	1		
2565	REVISE SIGNAL SYSTEM "A"	SYSTEM	1		
2565	REVISE FLASHER SYSTEM "D"	SYSTEM	1		
2565	REVISE FLASHER SYSTEM "E"	SYSTEM	1		
2565	PEDESTRIAN CROSSWALK FLASHER SYSTEM	SYSTEM	1		

TRAFFIC SIGNAL STANDARD PLATES	
THESE TRAFFIC SIGNAL STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:	
PLATE NO.	DESCRIPTION
* 8000 J	CHANNELIZERS, TYPE A, B, C (3 SHEETS)
* 8111 E	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED) (3 SHEETS)
* 8112 I	PEDESTAL FOUNDATION (FOR TRAFFIC CONTROL SIGNALS)
* 8118 D	SERVICE EQUIPMENT & POLE-TRAFFIC CONTROL SIGNALS
* 8119 C	GROUND MOUNTED CABINET FOUNDATION
* 8121 H	TRANSFORMER BASE & POLE BASE PLATE (2 SHEETS)
* 8122 F	PEDESTAL AND PEDESTAL BASE (FOR TRAFFIC CONTROL SIGNALS SUPPORT) (2 SHEETS)
* 8123 G	POLE & MAST ARM-LUMINAIRES & TRAFFIC LIGHTS ASSEMBLY (2 SHEETS)
* 8126 L	POLE FOUNDATION (PA90 & PA100)
* 8129 A	SHIM AND WASHER (TRAFFIC CONTROL SIGNALS AND ROADWAY LIGHTING)
* - APPLIES TO THIS PROJECT	

DRAWN BY: JMG	DESIGNER: JMG	CHECKED BY: JMG	DESIGN TEAM	NO.	BY	DATE	REVISIONS	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.	NAME: John M. Gray, PE	LIC. NO. 22457	DATE: January 30, 2018	PHONE: (651) 490-2000 3535 VADNAIS CENTER DR. ST. PAUL, MN 55110	ANOKA COUNTY, MINNESOTA S.A.P. 002-678-022	TRAFFIC SIGNAL SYSTEMS "A-C" DETAILS AND STANDARD PLATES CSAH 78 (HANSON BLVD NW) SIGNAL SYSTEMS	FILE NO. ANOK 144176 SIGNAL SHEET 1 OF 27	XX XX
---------------	---------------	-----------------	-------------	-----	----	------	-----------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------	----------------	------------------------	------------------------------------------------------------------------	-----------------------------------------------	-----------------------------------------------------------------------------------------------------------	----------------------------------------------	----------



7071 University Avenue NE
Fridley, MN 55432

DESIGNED	DRAWN	CHECKED	CLIENT PROJ. NO.
BJB	BJB	JPK	ST2022-01

2022 STREET REHABILITATION PROJECT

S.A.P. # 127-050-030

FOR INFORMATION ONLY - SIGNAL PLANS FOR 71ST WAY & EAST RIVER RD

SHEET
OF
30