

CITY OF MINNETONKA MINNESOTA DEPARTMENT OF TRANSPORTATION HENNEPIN COUNTY

CONSTRUCTION PLAN FOR ROUNDABOUTS, SIGNAL, GRADING, BITUMINOUS SURFACING, RETAINING WALL, ADA IMPROVEMENTS AND LIGHTING

S.A.P. 142-153-008 LOCATED ON RIDGEDALE DRIVE (MSAS 153) FROM 100' WEST OF PLYMOUTH ROAD TO 50' SOUTH OF I-394 EASTBOUND RAMP

S.A.P. 027-661-055
S.A.P. 142-020-051 LOCATED ON CSAH 61 (PLYMOUTH ROAD) FROM 450' SOUTH OF RIDGEDALE DRIVE TO 400' NORTH OF RIDGEDALE DRIVE

S.A.P. 142-153-008 LOCATED ON WAYZATA BOULEVARD (MSAS 156) FROM RIDGEDALE DRIVE TO 400' EAST OF RIDGEDALE DRIVE

GEOGRAPHICAL LEGAL DESCRIPTION: ALL WITHIN THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 117, RANGE 22, HENNEPIN COUNTY, MINNESOTA; FROM THE NORTHEAST CORNER OF THE SOUTHWEST QUARTER; THENCE WEST 550 FEET ALONG THE NORTH LINE THEREOF TO THE INTERSECTION OF I-394 AND RIDGEDALE DRIVE; THENCE SOUTH AND WEST 4000 FEET ALONG RIDGEDALE DRIVE TO THE INTERSECTION OF PLYMOUTH ROAD AND THERE TERMINATING

RIDGEDALE DRIVE (MSAS 153)

S.A.P. 142-153-008

GROSS LENGTH 4,155.38 ft 0.787 miles
BRIDGES-LENGTH _____ ft _____ miles
EXCEPTIONS-LENGTH _____ ft _____ miles
NET LENGTH 4,155.38 ft 0.787 miles

CSAH 61 (PLYMOUTH ROAD)

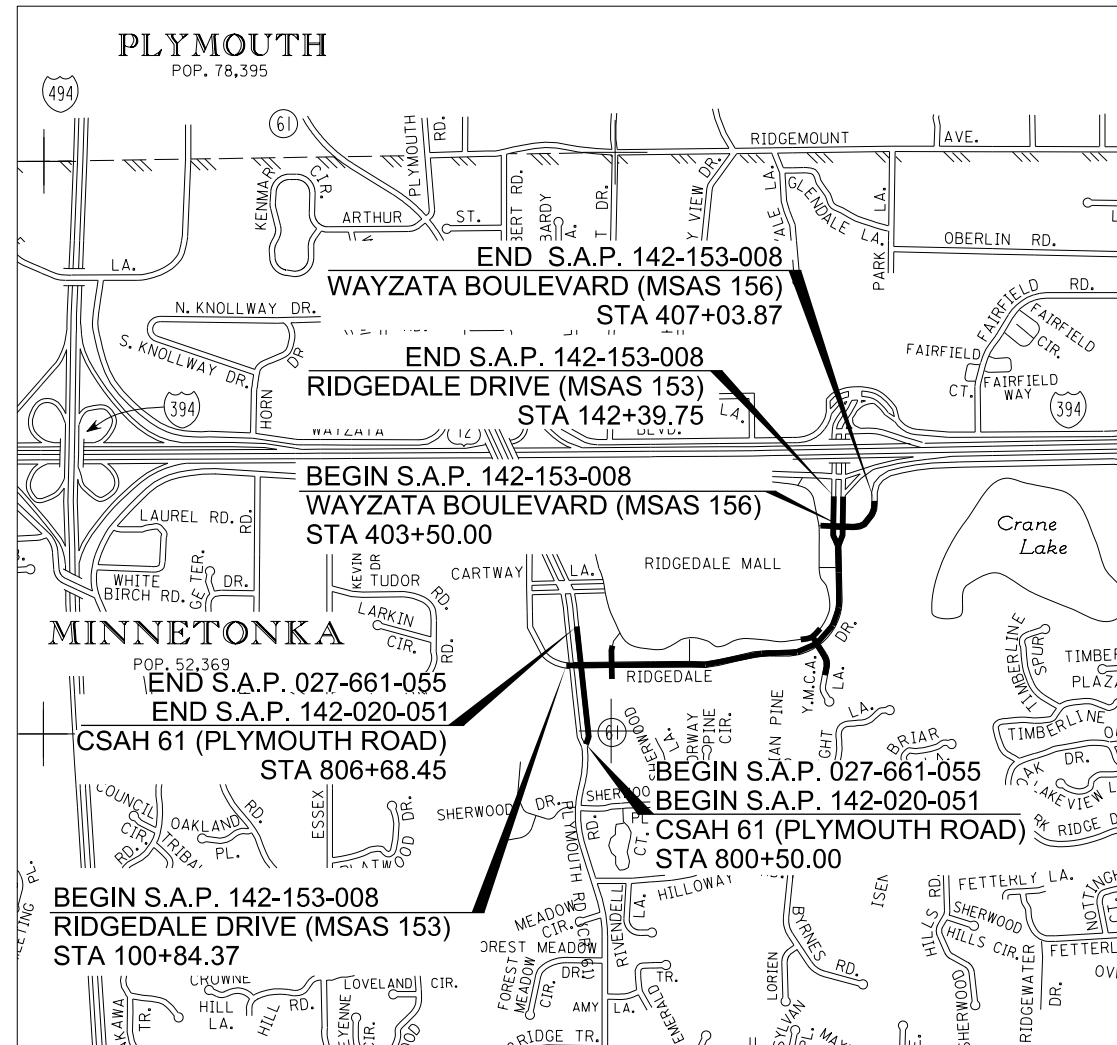
S.A.P. 027-661-055 / S.A.P. 142-020-051

GROSS LENGTH 618.45 ft 0.117 miles
BRIDGES-LENGTH _____ ft _____ miles
EXCEPTIONS-LENGTH _____ ft _____ miles
NET LENGTH 618.45 ft 0.117 miles

WAYZATA BOULEVARD (MSAS 156)

S.A.P. 142-153-008

GROSS LENGTH 353.87 ft 0.067 miles
BRIDGES-LENGTH _____ ft _____ miles
EXCEPTIONS-LENGTH _____ ft _____ miles
NET LENGTH 353.87 ft 0.067 miles



DESIGN DESIGNATION

RIDGEDALE DRIVE (MSAS 153)

R VALUE = 12
ADT (Current Year) 2019 = 11,630
ADT (Future Year) 2039 = 12,250
D (DIRECTIONAL DISTR.) = 50/50
HCADT (Future Year) 2039 = 545
ESALS 1,574,000
DESIGN SPEED 30 MPH
BASED ON STOPPING SIGHT DISTANCE
HEIGHT OF EYE 3.5 HEIGHT OF OBJECT 2.0
DESIGN SPEED NOT ACHIEVED AT: ROUNDABOUT
FUNCTIONAL CLASSIFICATION COLLECTOR

NO. OF TRAFFIC LANES 2-13'
NO. OF PARKING LANES N/A
SHOULDER WIDTH 4'
TON DESIGN 10

DESIGN DESIGNATION

CSAH 61 (PLYMOUTH ROAD)

R VALUE = 12
ADT (Current Year) 2019 = 11,600
ADT (Future Year) 2039 = 13,000
D (DIRECTIONAL DISTR.) = 50/50
HCADT (Future Year) 2039 = 510
ESALS 1,633,000
DESIGN SPEED 35 MPH
BASED ON STOPPING SIGHT DISTANCE
HEIGHT OF EYE 3.5 HEIGHT OF OBJECT 2.0
DESIGN SPEED NOT ACHIEVED AT: _____
FUNCTIONAL CLASSIFICATION MINOR RELIEVER

NO. OF TRAFFIC LANES 2-13'
NO. OF PARKING LANES N/A
SHOULDER WIDTH 4'
TON DESIGN 10

DESIGN DESIGNATION

WAYZATA BOULEVARD (MSAS 156)

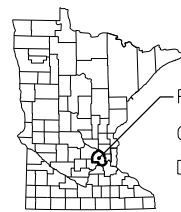
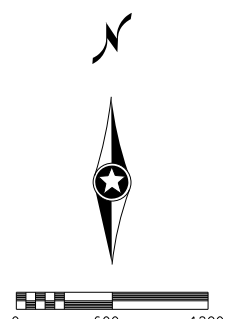
R VALUE = 12
ADT (Current Year) 2019 = 3,200
ADT (Future Year) 2039 = 3,625
D (DIRECTIONAL DISTR.) = 50/50
HCADT (Future Year) 2040 = 142
ESALS N/A
DESIGN SPEED 30 MPH
BASED ON STOPPING SIGHT DISTANCE
HEIGHT OF EYE 3.5 HEIGHT OF OBJECT 2.0
DESIGN SPEED NOT ACHIEVED AT: ROUNDABOUT
FUNCTIONAL CLASSIFICATION MINOR ARTERIAL

NO. OF TRAFFIC LANES 2-13'
NO. OF PARKING LANES N/A
SHOULDER WIDTH 4'
TON DESIGN 10

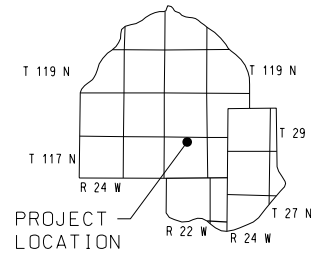
DESIGN DESIGNATION

TRAIL

DESIGN SPEED 20 MPH
BASED ON STOPPING SIGHT DISTANCE
HEIGHT OF EYE 4.5 HEIGHT OF OBJECT 0.0
DESIGN SPEED NOT ACHIEVED AT: ROUNDABOUT



PROJECT LOCATION
COUNTY: HENNEPIN
DISTRICT: METRO



PROJECT LOCATION

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

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MNMUTCD INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONES.

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226-230	CROSS SECTION MATCH LINE LAYOUT
X1-X40	CROSS SECTIONS

THIS PLAN CONTAINS 270 SHEETS.

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITHIN THE CONSTRUCTION OF THIS PROJECT.



SIGNATURE: TYPED OR PRINTED NAME: ANDREW PLOWMAN, PE
DESIGN ENGINEER: 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.
DATE: 4/10/2019 LICENSE NUMBER 44200

APPROVED: CITY OF MINNETONKA ENGINEER _____ DATE _____

APPROVED: HENNEPIN COUNTY: COUNTY HIGHWAY 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 _____ DATE _____

DATE: 5/2/2019 12:15:29 PM
PATH & FILENAME: K:\010557-000\Cad\Plan\010557.tsh.dgn

24" DOME GRATE
NYLOPLAST PART # 3099CGD
DRAWING #7001-110-223
OR APPROVED EQUAL (1)

24" DIAMETER STRUCTURE
NYLOPLAST OR APPROVED
EQUAL

6" DRAINTILE
INV. 924.0
SEE SHEET 166 .

12" HDPE
PIPE SEWER

NOTE: SEE SHEET 164
FOR PIPE PROFILE

(4) ADAPTER
ANGLES
VARIABLE
0° - 360°
ACCORDING
TO PLANS

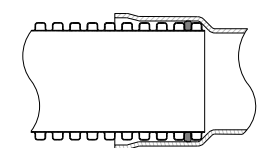
INV. 923.5

THE BACKFILL MATERIAL SHALL
BE CRUSHED STONE OR OTHER
GRANULAR MATERIAL MEETING
THE REQUIREMENTS OF CLASS I,
CLASS II, OR CLASS III MATERIAL
AS DEFINED IN ASTM D2321.
BEDDING & BACKFILL FOR SURFACE
DRAINAGE INLETS SHALL BE PLACED
& COMPACTED UNIFORMLY IN
ACCORDANCE WITH ASTM D2321.

(3) 10" SUMP DEPTH PER
MANUFACTURERS REQ.

6" MIN

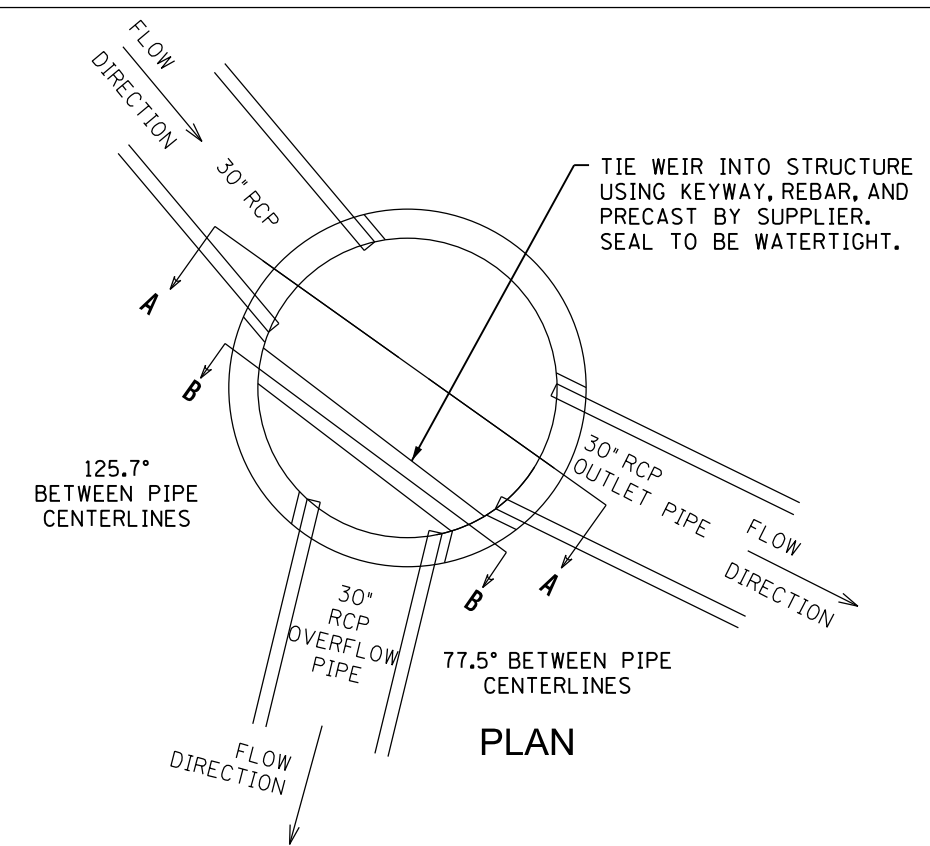
WATERTIGHT JOINT
(CORRUGATED HDPE SHOWN)



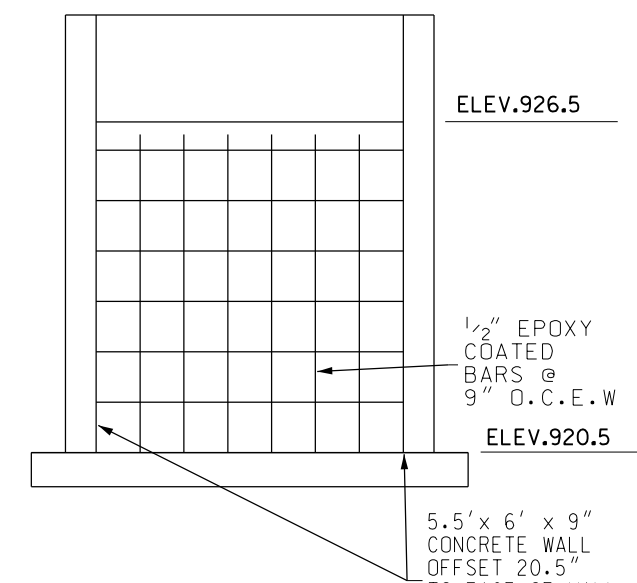
- 1 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 2 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
- 3 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
- 4 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

DESIGN SPECIAL 3 (STRUCTURE 5226)

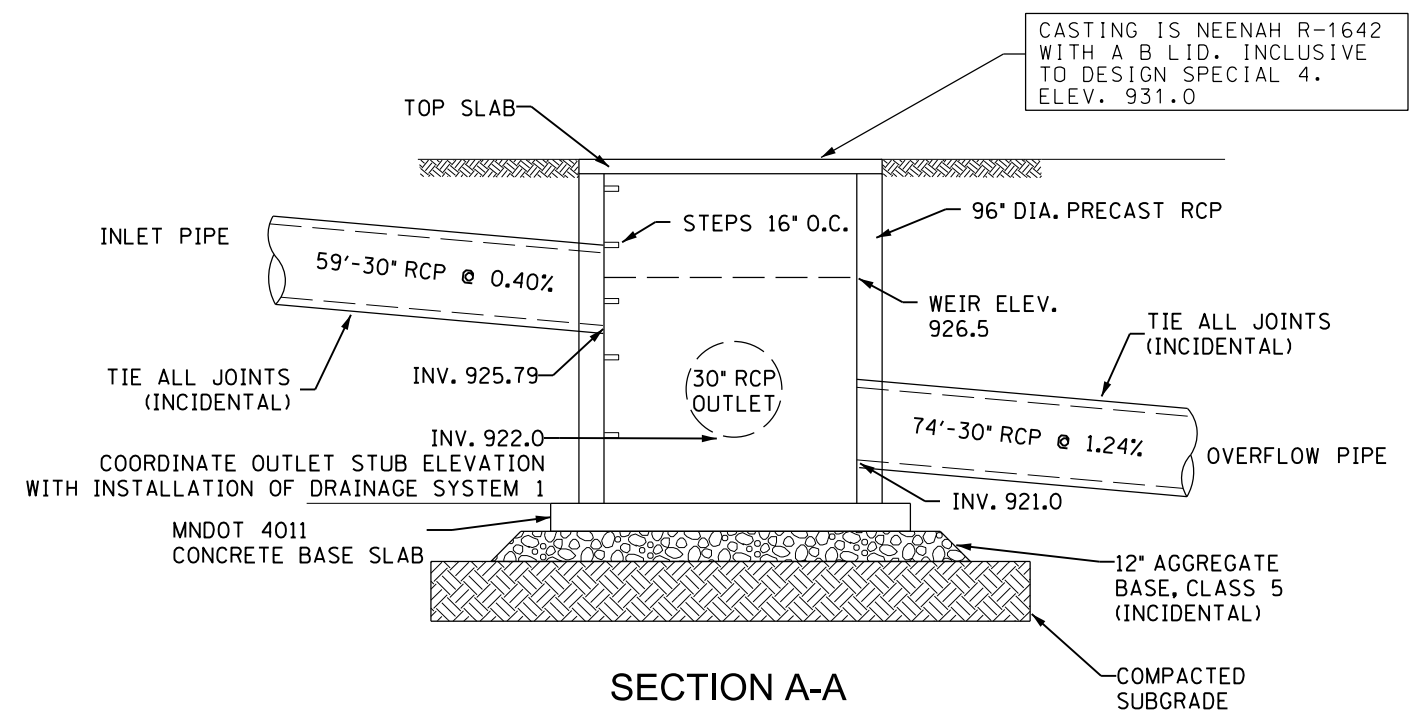
NOT TO SCALE



PLAN



SECTION B-B



SECTION A-A

NOTE: SEE SHEET 159 FOR PIPE PROFILES

DESIGN SPECIAL 4 (STRUCTURE 5099)

NOT TO SCALE

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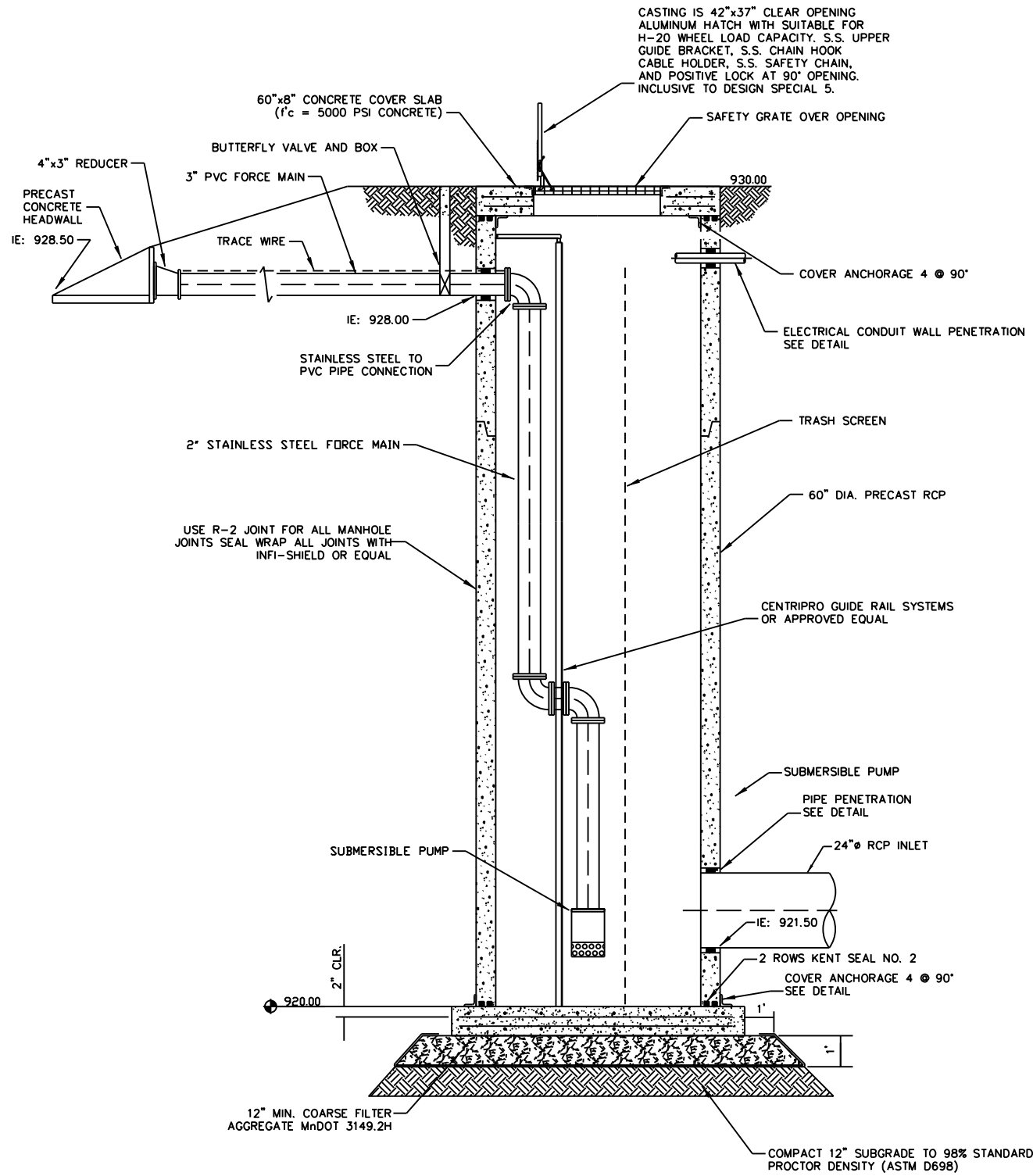
NO.	DATE	BY	CHK	REVISIONS

Design By: AJP
Plan By: EPS
Checked By: ACJ
Approved By: AJP

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.

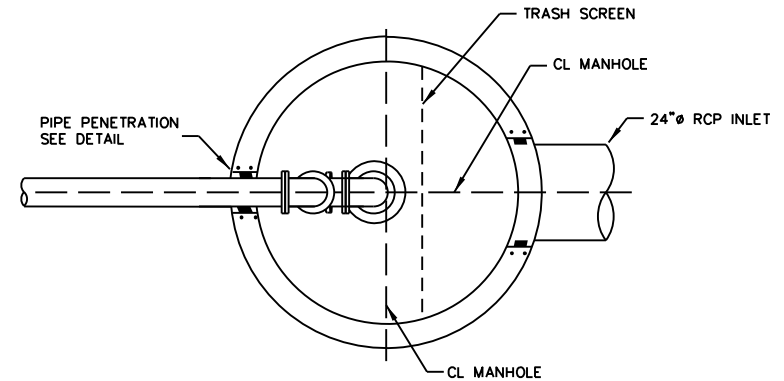
ANDREW PLOWMAN, PE
DATE: 5/2/2019 LICENSE NO. 44200

		RIDGEDALE DRIVE IMPROVEMENTS CITY OF MINNETONKA	CITY OF MINNETONKA, MN	SHEET 34 OF 230 SHEETS
			MISCELLANEOUS DETAILS S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055	



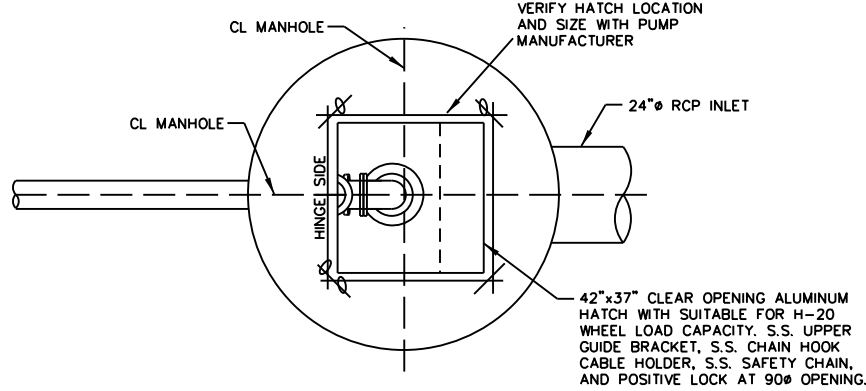
DESIGN SPECIAL 5 (STRUCTURE 5220)

NOT TO SCALE



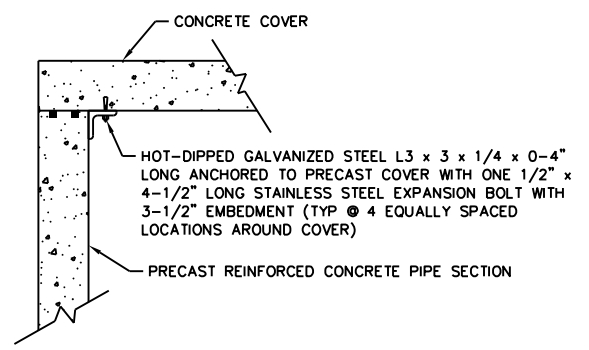
PLAN VIEW

NOT TO SCALE



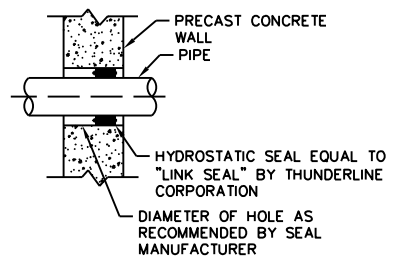
PLAN VIEW - AT GRADE

NOT TO SCALE



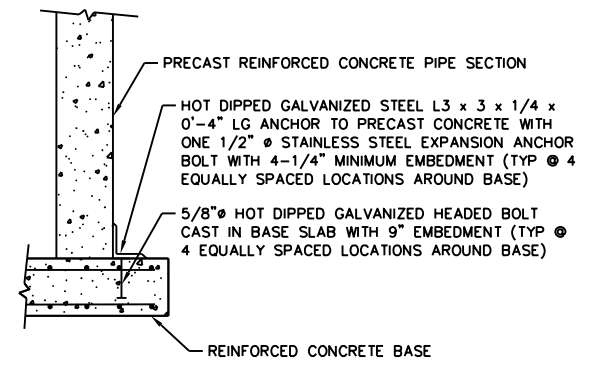
COVER ANCHORAGE DETAIL

NOT TO SCALE



PIPE PENETRATION

NOT TO SCALE



PAINT ALL CONNECTION ITEMS WITH HEAVY COAT OF BITUMASTIC PAINT

BASE ANCHOR DETAIL

NOT TO SCALE

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NO.	DATE	BY	CHK	REVISIONS

Design By: AJP
 Plan By: EPS
 Checked By: ACJ
 Approved By: AJP

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ANDREW PLOWMAN, PE
 DATE: 5/2/2019 LICENSE NO. 44200



RIDGEDALE DRIVE
 IMPROVEMENTS
 CITY OF MINNETONKA

CITY OF MINNETONKA, MN

MISCELLANEOUS DETAILS

S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

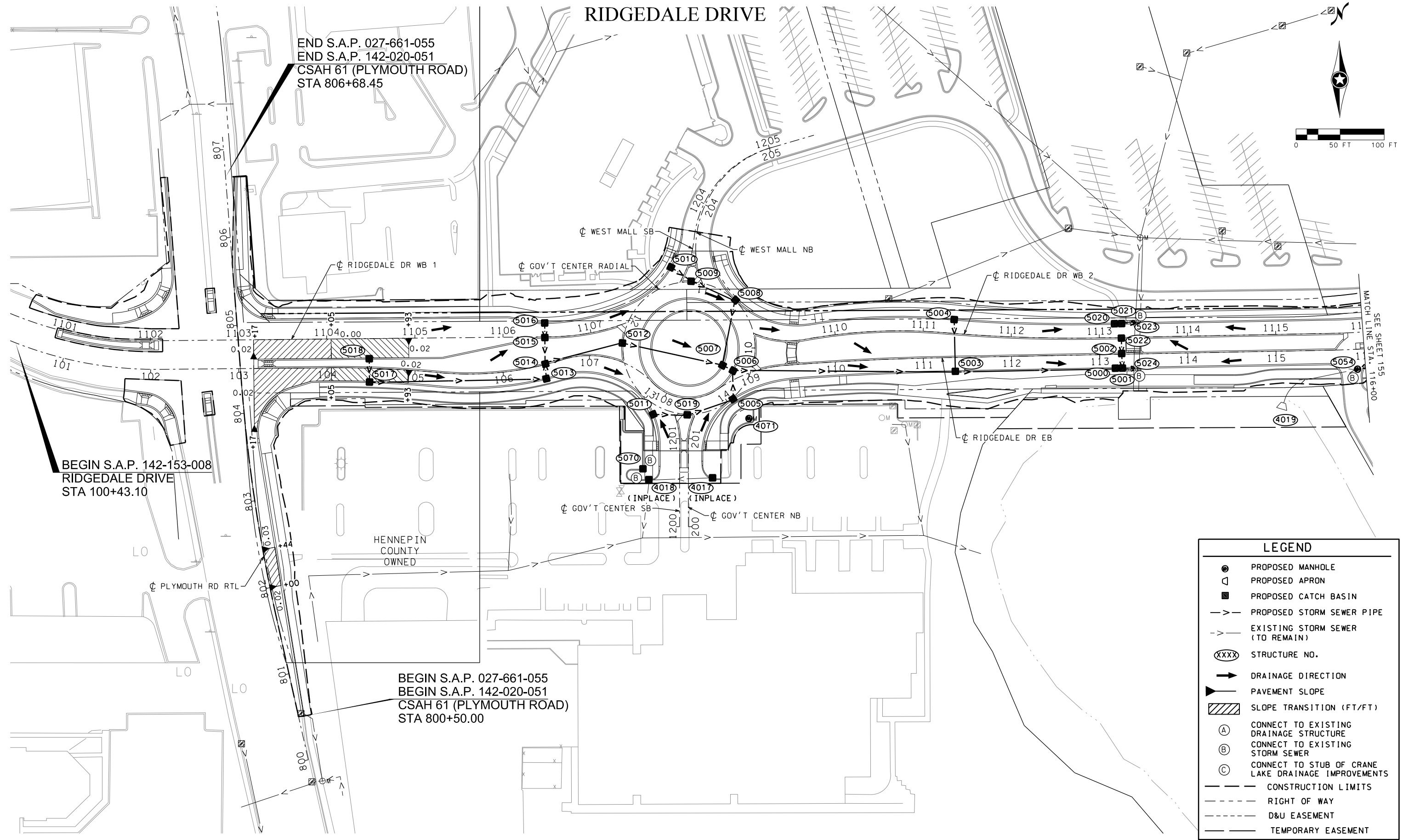
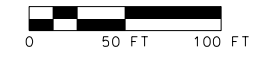
SHEET
 36
 OF
 230
 SHEETS

RIDGEDALE DRIVE

END S.A.P. 027-661-055
 END S.A.P. 142-020-051
 CSAH 61 (PLYMOUTH ROAD)
 STA 806+68.45

BEGIN S.A.P. 142-153-008
 RIDGEDALE DRIVE
 STA 100+43.10

BEGIN S.A.P. 027-661-055
 BEGIN S.A.P. 142-020-051
 CSAH 61 (PLYMOUTH ROAD)
 STA 800+50.00



LEGEND	
	PROPOSED MANHOLE
	PROPOSED APRON
	PROPOSED CATCH BASIN
	PROPOSED STORM SEWER PIPE
	EXISTING STORM SEWER (TO REMAIN)
	STRUCTURE NO.
	DRAINAGE DIRECTION
	PAVEMENT SLOPE
	SLOPE TRANSITION (FT/FT)
	CONNECT TO EXISTING DRAINAGE STRUCTURE
	CONNECT TO EXISTING STORM SEWER
	CONNECT TO STUB OF CRANE LAKE DRAINAGE IMPROVEMENTS
	CONSTRUCTION LIMITS
	RIGHT OF WAY
	D&U EASEMENT
	TEMPORARY EASEMENT

DATE: 5/2/2019 12:18:11 PM
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NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
 Plan By: LGR
 Checked By: MJB
 Approved By: JHN

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.

Jake Newhall
 JAKE NEWHALL, PE
 DATE: 5/2/2019 LICENSE NO. 49170

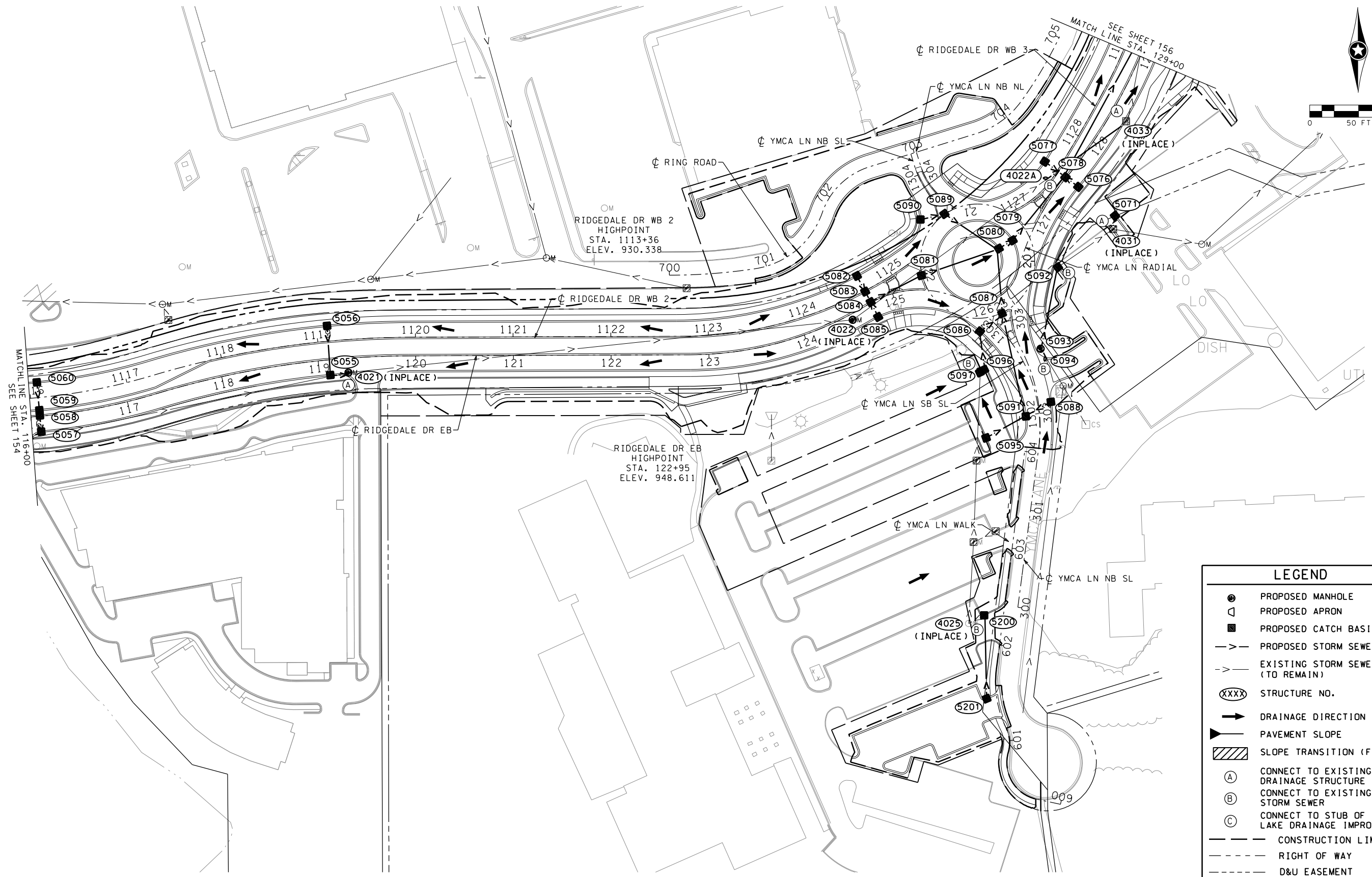
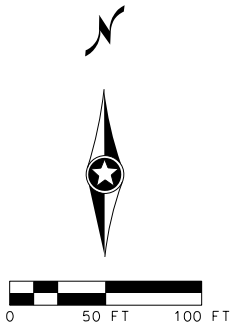


RIDGEDALE DRIVE
 IMPROVEMENTS
 CITY OF MINNETONKA

CITY OF MINNETONKA, MN
 DRAINAGE AND SUPERELEVATION PLAN
 S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET
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 OF
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 SHEETS

RIDGEDALE DRIVE



LEGEND	
	PROPOSED MANHOLE
	PROPOSED APRON
	PROPOSED CATCH BASIN
	PROPOSED STORM SEWER PIPE
	EXISTING STORM SEWER (TO REMAIN)
	STRUCTURE NO.
	DRAINAGE DIRECTION
	PAVEMENT SLOPE
	SLOPE TRANSITION (FT/FT)
	CONNECT TO EXISTING DRAINAGE STRUCTURE
	CONNECT TO EXISTING STORM SEWER
	CONNECT TO STUB OF CRANE LAKE DRAINAGE IMPROVEMENTS
	CONSTRUCTION LIMITS
	RIGHT OF WAY
	D&U EASEMENT
	TEMPORARY EASEMENT

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NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
 Plan By: LGR
 Checked By: MJB
 Approved By: JHN

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.

JAKE NEWHALL, PE
 DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE
 IMPROVEMENTS
 CITY OF MINNETONKA

CITY OF MINNETONKA, MN
 DRAINAGE AND SUPERELEVATION PLAN
 S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET
 155
 OF
 230
 SHEETS

DRAINAGE TABULATION (THIS SHEET ONLY)

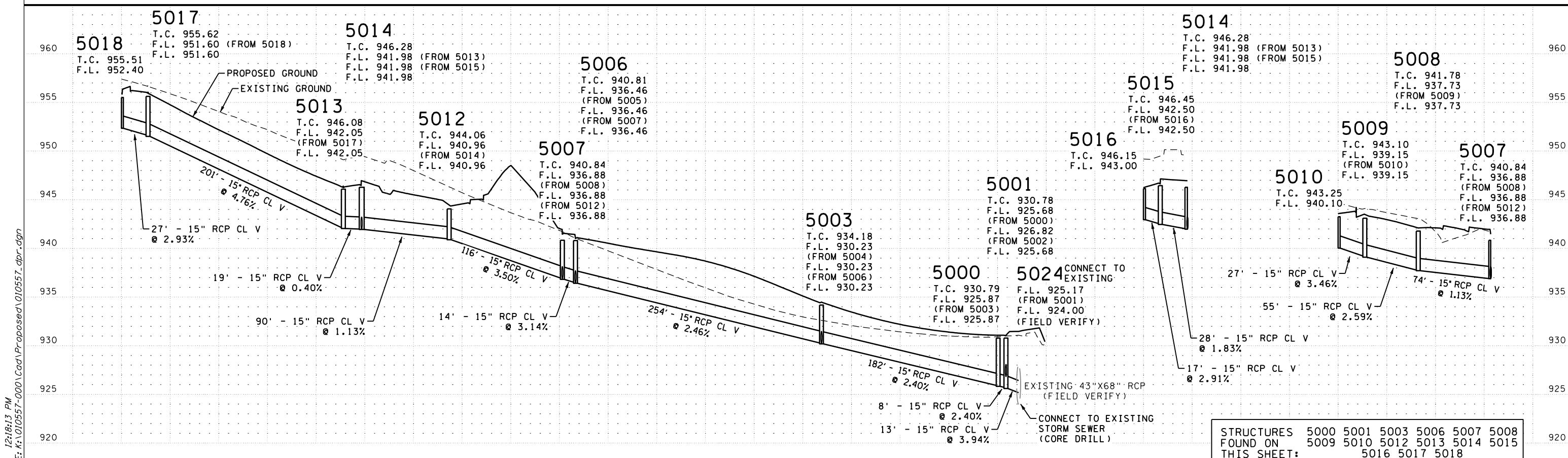
STRUCTURE NO.		STRUCTURE LOCATION			COORDINATES		DRAINAGE STRUCTURES			CONNECT TO EXISTING STORM SEWER EACH	TOP OF CASTING ELEV.	OUTLET ELEV.	INLET ELEV.	15" RCP CL V LIN FT	REMARKS		
FLows FROM	FLows TO	ALIGN.	STATION	OFFSET	X	Y	TYPE	PAY HEIGHT								CASTING ASSEMBLY TYPE	
								SPEC 1 EACH	48-4020 LIN FT	60-4020 LIN FT							
5018	5017	RIDGE_WB_1	1104+48.04	22.8 RT	484873.99	163634.87	CB	1			C - 1	955.51	952.40	951.66	27		
5017	5013	RIDGE_EB	104+48.75	15.8 RT	484874.32	163608.40	CB		4.4		C - 1	955.62	951.50	942.15	201		
5013	5014	RIDGE_EB	106+46.00	15.8 RT	485074.76	163612.21	CB		4.3		C - 1	946.08	942.04	941.98	19		
5014	5012	RIDGE_EB	106+48.90	0.8 LT	485073.64	163628.94	CB			4.6	C - 1	946.28	941.95	940.98	90		
5012	5007	RADIAL_GOVt	12+30.00	0.8 RT	485161.09	163652.64	CB		3.5		C - 1	944.06	940.89	936.95	116		
5007	5006	RADIAL_GOVt	14+35.62	32.3 LT	485274.65	163627.43	CB		4.3		C - 1	940.84	936.82	936.52	14		
5006	5003	RADIAL_GOVt	14+35.62	18.8 LT	485286.66	163621.25	CB		4.7		C - 2	940.81	936.41	930.28	253		
5003	5000	RIDGE_EB	111+36.00	15.8 RT	485538.67	163620.56	CB		4.3		C - 1	934.18	930.18	925.92	182		
5000	5001	RIDGE_EB	113+17.50	15.8 RT	485720.14	163624.08	CB		5.3		C - 1	930.79	925.82	925.73	8		
5001	5024	RIDGE_EB	113+25.50	15.8 RT	485728.13	163624.23	CB		5.5		C - 1	930.78	925.60	925.17	13	K	
5016	5015	RIDGE_WB_1	1106+47.41	15.8 LT	485072.97	163675.37	CB	1			C - 1	946.15	943.00	942.56	17		
5015	5014	RIDGE_WB_1	1106+47.41	0.8 RT	485073.13	163658.87	CB		4.3		C - 1	946.45	942.46	942.03	28		
5010	5009	GOVt_SB_NL	1203+17.20	17.0 LT	485216.14	163738.66	CB	1			C - 1	943.25	940.10	939.22	27		
5009	5008	RADIAL_GOVt	11+15.50	0.8 RT	485238.96	163722.69	CB		4.3		C - 1	943.10	939.10	937.78	55		
5008	5007	GOVt_NE_QUAD	20+75.76	0.8 LT	485289.40	163701.32	CB		4.4		C - 1	941.78	937.71	936.90	74		
TOTAL								3	49.3	4.6						1124	

GENERAL NOTES:

- STATIONS, OFFSETS, AND ELEVATIONS ARE GIVEN TO:
- END OF ALL CONCRETE APRONS.
- CENTER OF CASTING FOR ALL STORM STRUCTURES.
- ALL PIPE LENGTHS EXCLUDE APRONS.
- PAY HEIGHTS ARE FROM BOTTOM OF CASTING TO OUTLET INVERT, PLUS 0.7'.
- RC PIPE IS DES 3006 GASKET JOINT PIPE, PIPE CLASS BASED ON BEDDING DETAILS ON SHEET 41.
- STEPS REQUIRED WHEN DEPTH FROM TOP OF CASTING TO STRUCTURE INVERT IS GREATER THAN 5.0'.
- FLOWLINE (F.L.) ELEVATIONS ON PROFILES ARE AT CENTER OF STRUCTURE. INLET AND OUTLET ELEVATIONS ON TABULATIONS ARE AT EDGE OF STRUCTURE. SPECIAL 1 STRUCTURE FLOWLINE, INLET, AND OUTLET ELEVATIONS ARE AT CENTER OF STRUCTURE.
- C-1 CASTINGS ARE NEENAH R-3067-V WITH A CURB BOX OR APPROVED EQUAL. C-2 CASTINGS ARE NEENAH R-3067-V WITHOUT A CURB BOX OR APPROVED EQUAL. D CASTINGS ARE NEENAH R-1642 WITH A B LID OR APPROVED EQUAL.

NOTES:

- K. ADJUST INVERT AS NEEDED TO MATCH THE SPRINGLINE OF THE EXISTING PIPE.



DATE: 5/2/2019 12:18:13 PM
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NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
Plan By: LGR
Checked By: MJB
Approved By: JHN

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.

Jake Newhall
JAKE NEWHALL, PE
DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE
IMPROVEMENTS
CITY OF MINNETONKA

STRUCTURES FOUND ON THIS SHEET: 5000 5001 5003 5006 5007 5008 5009 5010 5012 5013 5014 5015 5016 5017 5018

CITY OF MINNETONKA, MN
DRAINAGE PROFILES AND TABULATIONS
S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET 157 OF 230 SHEETS

DRAINAGE TABULATION (THIS SHEET ONLY)

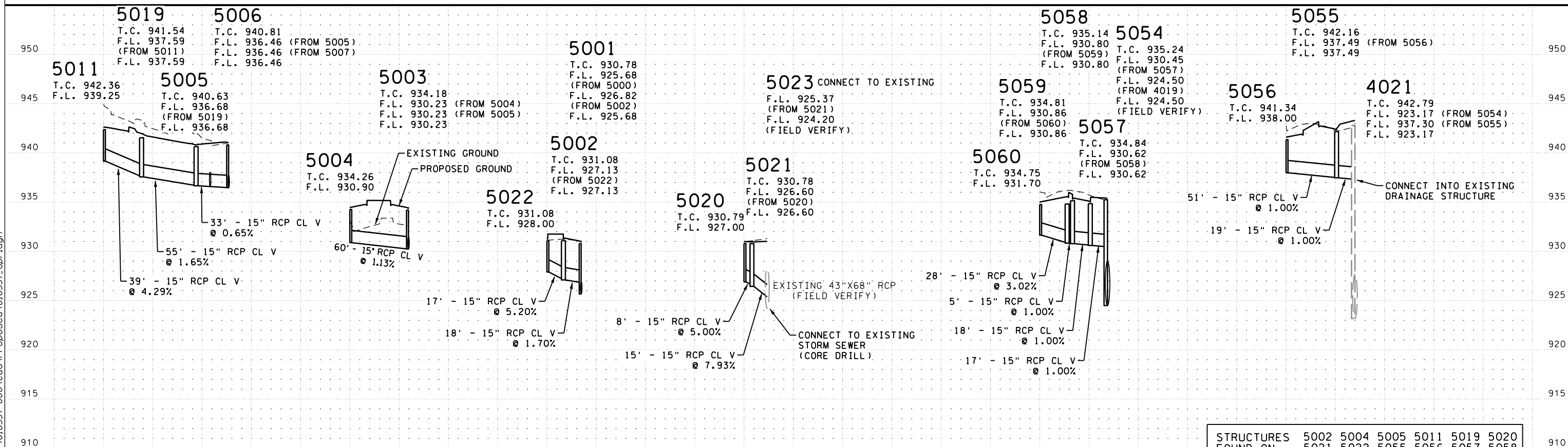
STRUCTURE NO.		STRUCTURE LOCATION			COORDINATES		DRAINAGE STRUCTURES			CONNECT TO EXISTING STORM SEWER EACH	CONNECT INTO EXISTING DRAINAGE STRUCTURE EACH	TOP OF CASTING ELEV.	OUTLET ELEV.	INLET ELEV.	15" RCP CL V LIN FT	REMARKS
FLWS FROM	FLWS TO	ALIGN.	STATION	OFFSET	X	Y	TYPE	PAY HEIGHT SPEC 1 EACH	48-4020 LIN FT	CASTING ASSEMBLY TYPE						
5011	5019	GOVT_SW_QUAD	31+30.30	0.8 RT	485195.97	163571.77	CB	1		C - 1		942.36	939.25	937.68	39	
5019	5005	RADIAL_GOVT	13+51.50	0.8 RT	485234.68	163571.25	CB		4.3	C - 1		941.54	937.56	936.71	55	
5005	5006	GOVT_SE_QUAD	40+82.77	0.8 RT	485286.45	163589.22	CB		4.2	C - 1		940.63	936.67	936.47	33	
5004	5003	RIDGE_WB_2	1111+34.00	15.8 LT	485537.36	163679.28	CB	1		C - 1		934.26	930.90	930.25	60	
5022	5002	RIDGE_WB_2	1113+25.00	0.8 RT	485726.97	163658.22	CB	1		C - 1		931.08	928.00	927.23	17	
5002	5001	RIDGE_EB	113+25.00	0.8 LT	485727.31	163640.72	CB		4.3	C - 1		931.08	927.10	926.85	18	
5020	5021	RIDGE_WB_2	1113+17.50	15.8 LT	485719.15	163674.57	CB	1		C - 1		930.79	927.00	926.70	8	
5021	5023	RIDGE_WB_2	1113+25.50	15.8 LT	485727.15	163674.72	CB		4.6	C - 1	1	930.78	926.44	925.37	15	K
5060	5059	RIDGE_WB_2	1116+07.90	15.8 LT	486008.29	163681.70	CB	1		C - 1		934.75	931.70	930.92	28	
5059	5058	RIDGE_WB_2	1116+07.90	12.9 RT	486010.92	163653.17	CB		4.3	C - 1		934.81	930.84	930.82	5	
5058	5057	RIDGE_EB	116+09.25	0.8 LT	486011.39	163647.70	CB		4.6	C - 1		935.14	930.78	930.64	18	
5057	5054	RIDGE_EB	116+09.25	15.8 RT	486012.87	163631.27	CB		4.5	C - 1		934.84	930.60	930.49	17	
5056	5055	RIDGE_WB_2	1119+11.00	15.8 LT	486305.29	163739.52	CB	1		C - 1		941.34	938.00	937.51	51	
5055	4021	RIDGE_EB	119+11.00	15.8 RT	486308.59	163689.10	CB		5	C - 1	1	942.16	937.47	937.34	19	
TOTAL								6	35.8		1				383	

GENERAL NOTES:

- STATIONS, OFFSETS, AND ELEVATIONS ARE GIVEN TO:
 - END OF ALL CONCRETE APRONS.
 - CENTER OF CASTING FOR ALL STORM STRUCTURES.
- ALL PIPE LENGTHS EXCLUDE APRONS.
- PAY HEIGHTS ARE FROM BOTTOM OF CASTING TO OUTLET INVERT, PLUS 0.7'.
- RC PIPE IS DES 3006 GASKET JOINT PIPE, PIPE CLASS BASED ON BEDDING DETAILS ON SHEET 41.
- STEPS REQUIRED WHEN DEPTH FROM TOP OF CASTING TO STRUCTURE INVERT IS GREATER THAN 5.0'.
- FLOWLINE (F.L.) ELEVATIONS ON PROFILES ARE AT CENTER OF STRUCTURE. INLET AND OUTLET ELEVATIONS ON TABULATIONS ARE AT EDGE OF STRUCTURE. SPECIAL 1 STRUCTURE FLOWLINE, INLET, AND OUTLET ELEVATIONS ARE AT CENTER OF STRUCTURE.
- C-1 CASTINGS ARE NEENAH R-3067-V WITH A CURB BOX OR APPROVED EQUAL. C-2 CASTINGS ARE NEENAH R-3067-V WITHOUT A CURB BOX OR APPROVED EQUAL. D CASTINGS ARE NEENAH R-1642 WITH A B LID OR APPROVED EQUAL.

NOTES:

- K. ADJUST INVERT AS NEEDED TO MATCH THE SPRINGLINE OF THE EXISTING PIPE.



DATE: 5/2/2019 12:18:14 PM PATH & FILENAME: K:\010557-000\Cad\Proposed\010557_dpr.dgn

NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
 Plan By: LGR
 Checked By: MJB
 Approved By: JHN

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.

Jake Newhall
 JAKE NEWHALL, PE
 DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE IMPROVEMENTS
 CITY OF MINNETONKA

STRUCTURES FOUND ON THIS SHEET: 5002 5004 5005 5011 5019 5020 5021 5022 5055 5056 5057 5058 5059 5060

CITY OF MINNETONKA, MN
 DRAINAGE PROFILES AND TABULATIONS
 S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET 158 OF 230 SHEETS

DRAINAGE TABULATION (THIS SHEET ONLY)

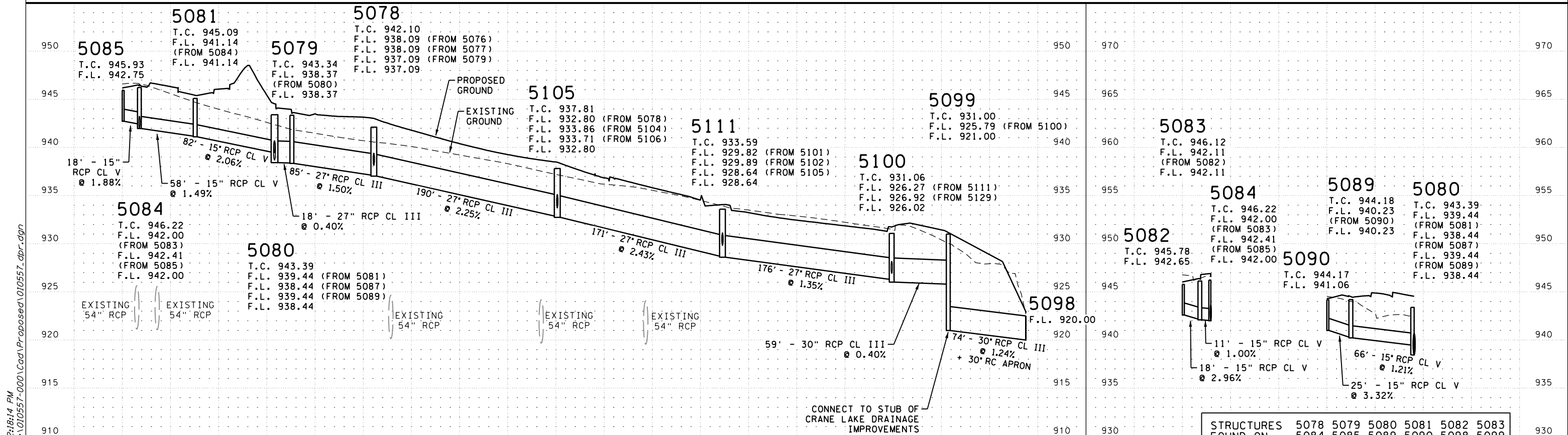
STRUCTURE NO.		STRUCTURE LOCATION			COORDINATES		DRAINAGE STRUCTURES							CASTING ASSEMBLY TYPE	TOP OF CASTING ELEV.	OUTLET ELEV.	INLET ELEV.	15" RCP CL V LIN FT	27" RCP CL III LIN FT	30" RCP CL III LIN FT	APRON EACH	APRON TYPE	RIPRAP CLASS III CU YD	GEOTEXTILE FILTER TYPE 4 SQ YD	REMARKS		
FLOWS FROM	FLOWS TO	ALIGN.	STATION	OFFSET	X	Y	TYPE	PAY HEIGHT																			
								SPEC 1 EACH	SPEC 4 EACH	48-4020 LIN FT	60-4020 LIN FT	72-4020 LIN FT	84-4020 LIN FT														
5085	5084	RIDGE_EB	124+75.00	16.3 RT	486869.25	163748.64	CB	1					C - 1	945.93	942.75	942.45	18										
5084	5081	RIDGE_EB	124+76.00	0.8 LT	486861.58	163763.84	CB			4.5			C - 1	946.22	941.97	941.17	58										
5081	5080	RADIAL_YMCA	21+98.44	0.8 RT	486913.48	163791.01	CB			4.3			C - 1	945.09	941.10	939.51	82										
5080	5079	RADIAL_YMCA	20+31.22	33.3 LT	486992.62	163818.54	CB					5.2	C - 1	943.39	938.43	938.38		18									
5079	5078	RADIAL_YMCA	20+31.22	16.8 LT	487006.82	163826.93	CB			5.3			C - 2	943.34	938.34	937.14		85									
5078	5105	RIDGE_EB	127+54.00	0.8 LT	487060.92	163891.60	CB					5.4	C - 1	942.10	937.02	932.87		190									
5105	5111	RIDGE_EB	129+46.50	0.8 LT	487152.63	164059.18	CB					5.4	C - 1	937.81	932.73	928.71		171									
5111	5100	RIDGE_EB	131+19.50	0.8 LT	487176.54	164229.51	CB					5.3	C - 1	933.59	928.60	926.30		176									
5100	5099	RIDGE_EB	132+94.00	15.8 RT	487194.87	164403.83	CB					5.3	C - 1	931.06	926.01	925.79			59				E, I, K				
5099	5098	RIDGE_EB	133+06.00	74.5 RT	487253.80	164414.53	CB		1				SPEC - 4	931.00	921.00	920.00			74				J, K				
5098		RIDGE_EB	132+73.19	148.5 RT	487327.35	164381.62										920.00				1	RC APRON	38	117				
5082	5083	RIDGE_WB_2	1124+67.50	17.4 LT	486847.40	163790.65	CB	1					C - 1	945.78	942.65	942.11	18										
5083	5084	RIDGE_WB_2	1124+67.50	0.8 RT	486855.90	163774.57	CB	1					C - 1	946.12	942.11	942.02	11										
5090	5089	YMCA_NW_QUAD	11+00.00	0.8 LT	486912.48	163848.33	CB	1					C - 1	944.17	941.06	940.30	25										
5089	5080	RADIAL_YMCA	21+27.72	0.5 RT	486936.96	163853.97	CB			4.3			C - 1	944.18	940.21	939.48	66										
TOTAL								4	1	18.4	5.3	16.1	5.2							278	640	133	1		38	117	

GENERAL NOTES:

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 - END OF ALL CONCRETE APRONS.
 - CENTER OF CASTING FOR ALL STORM STRUCTURES.
- ALL PIPE LENGTHS EXCLUDE APRONS.
- PAY HEIGHTS ARE FROM BOTTOM OF CASTING TO OUTLET INVERT, PLUS 0.7'.
- RC PIPE IS DES 3006 GASKET JOINT PIPE, PIPE CLASS BASED ON BEDDING DETAILS ON SHEET 41.
- STEPS REQUIRED WHEN DEPTH FROM TOP OF CASTING TO STRUCTURE INVERT IS GREATER THAN 5.0'.
- FLOWLINE (F.L.) ELEVATIONS ON PROFILES ARE AT CENTER OF STRUCTURE. INLET AND OUTLET ELEVATIONS ON TABULATIONS ARE AT EDGE OF STRUCTURE. SPECIAL 1 STRUCTURE FLOWLINE, INLET, AND OUTLET ELEVATIONS ARE AT CENTER OF STRUCTURE.
- C-1 CASTINGS ARE NEENAH R-3067-V WITH A CURB BOX OR APPROVED EQUAL. C-2 CASTINGS ARE NEENAH R-3067-V WITHOUT A CURB BOX OR APPROVED EQUAL. D CASTINGS ARE NEENAH R-1642 WITH A B LID OR APPROVED EQUAL.

NOTES:

- B. TIE ALL JOINTS (INCIDENTAL).
- E. SEE SHEET 34 FOR SPECIAL 4 DETAIL.
- I. CONNECT TO STUB OF CRANE LAKE DRAINAGE IMPROVMENTS. SEE SHEET 166.
- J. 13 CU YD RIPRAP AND 42 SY YD GEOTEXTILE FILTER ARE TO BE PLACED AT STRUCTURE 5098. THE REMAINDER IS TO BE PLACED AT EXISTING STRUCTURE 4035.



DATE: 5/2/2019 12:18:14 PM
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NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
 Plan By: LGR
 Checked By: MJB
 Approved By: JHN

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.

Jake Newhall
 JAKE NEWHALL, PE
 DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE
 IMPROVEMENTS
 CITY OF MINNETONKA

STRUCTURES FOUND ON THIS SHEET:	5078 5079 5080 5081 5082 5083 5084 5085 5089 5090 5098 5099
	5100 5105 5111
CITY OF MINNETONKA, MN	
DRAINAGE PROFILES AND TABULATIONS	
S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055	
SHEET	159
OF	230
SHEETS	

DRAINAGE TABULATION (THIS SHEET ONLY)

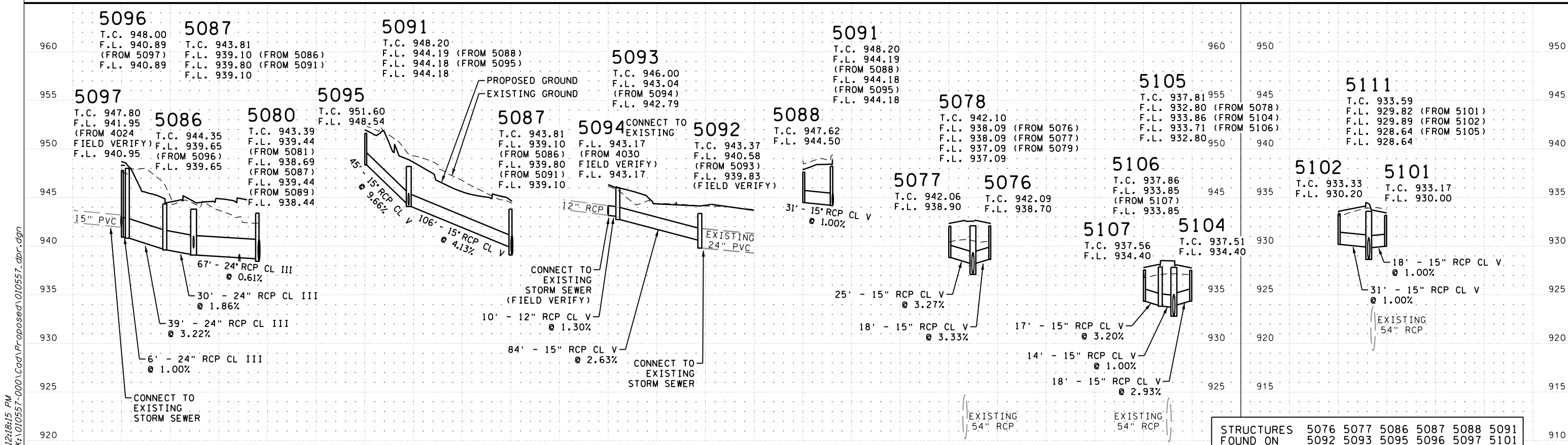
STRUCTURE NO.	STRUCTURE LOCATION			COORDINATES		DRAINAGE STRUCTURES				CONNECT TO EXISTING STORM SEWER EACH	TOP OF CASTING ELEV	OUTLET ELEV.	INLET ELEV.	12" RCP CL V LIN FT	15" RCP CL V LIN FT	24" RCP CL III LIN FT	REMARKS			
	FLOWS FROM	FLOWS TO	ALIGN.	STATION	OFFSET	X	Y	TYPE	PAY HEIGHT									CASTING ASSEMBLY TYPE		
									SPEC 1 EACH										48-4020 LIN FT	60-4020 LIN FT
5097	5096	YMCA_SB_SL	1302+71.05	44.0	LT	486973.25	163691.80	CB									6			
5096	5086	YMCA_SB_SL	1302+71.07	38.7	LT	486977.69	163694.74	CB									39			
5086	5087	YMCA_SW_QUAD	31+30.00	0.8	RT	486973.27	163733.76	CB									30			
5087	5080	RIDGE_EB	126+07.71	16.8	RT	486996.03	163752.05	CB									67			
5095	5091	YMCA_SB_SL	1301+70.00	54.8	LT	486979.58	163624.83	CB	1								45			
5091	5087	YMCA_SB_SL	1301+98.43	13.8	LT	487020.33	163646.86	CB			4.4						106			
5088	5091	YMCA_NB_SL	302+10.00	12.8	RT	487045.97	163661.69	CB	1								31			
5094	5093	YMCA_NB_SL	302+51.85	19.4	RT	487040.60	163707.55													
5093	5092	YMCA_NB_SL	302+60.76	18.1	RT	487035.41	163716.08	MH		3.4							84			
5092	4031	RIDGE_EB	126+62.54	38.1	RT	487053.15	163799.50	CB		3.8										
5077	5078	RIDGE_WB_3	1127+59.37	15.9	LT	487039.68	163907.53	CB	1								25			
5076	5078	RIDGE_EB	127+54.76	15.8	RT	487074.12	163881.67	CB	1								18			
5107	5106	RIDGE_WB_3	1129+44.87	15.8	LT	487121.21	164069.25	CB	1								17			
5106	5105	RIDGE_WB_3	1129+44.88	0.8	RT	487136.93	164064.24	CB		4.3							14			
5104	5105	RIDGE_EB	129+46.51	15.8	RT	487168.36	164054.17	CB	1								18			
5102	5111	RIDGE_WB_3	1131+12.22	15.8	LT	487143.33	164229.45	CB	1								31			
5101	5111	RIDGE_EB	131+19.56	15.8	RT	487193.04	164229.40	CB	1								18			
TOTAL									8	31.2	4.4	5.0	3				10	407	142	

GENERAL NOTES:

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- PAY HEIGHTS ARE FROM BOTTOM OF CASTING TO OUTLET INVERT, PLUS 0.7'.
- RC PIPE IS DES 3006 GASKET JOINT PIPE, PIPE CLASS BASED ON BEDDING DETAILS ON SHEET 41.
- STEPS REQUIRED WHEN DEPTH FROM TOP OF CASTING TO STRUCTURE INVERT IS GREATER THAN 5.0'.
- FLOWLINE (F.L.) ELEVATIONS ON PROFILES ARE AT CENTER OF STRUCTURE. INLET AND OUTLET ELEVATIONS ON TABULATIONS ARE AT EDGE OF STRUCTURE. SPECIAL 1 STRUCTURE FLOWLINE, INLET, AND OUTLET ELEVATIONS ARE AT CENTER OF STRUCTURE.

GENERAL NOTES CONTINUED:

- C-1 CASTINGS ARE NEENAH R-3067-V WITH A CURB BOX OR APPROVED EQUAL. C-2 CASTINGS ARE NEENAH R-3067-V WITHOUT A CURB BOX OR APPROVED EQUAL. D CASTINGS ARE NEENAH R-1642 WITH A B LID OR APPROVED EQUAL.



DATE: 5/2/2019 12:18:15 PM PATH & FILENAME: K:\1010557-000\Cad\Proposed\010557_dbr.dgn

NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
 Plan By: LGR
 Checked By: MJB
 Approved By: JHN

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.

Jake Newhall
 JAKE NEWHALL, PE
 DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE
 IMPROVEMENTS
 CITY OF MINNETONKA

STRUCTURES FOUND ON THIS SHEET: 5076 5077 5086 5087 5088 5091 5092 5093 5095 5096 5097 5101 5102 5104 5106 5107

CITY OF MINNETONKA, MN
 DRAINAGE PROFILES AND TABULATIONS
 S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET 160 OF 230 SHEETS

DRAINAGE TABULATION (THIS SHEET ONLY)

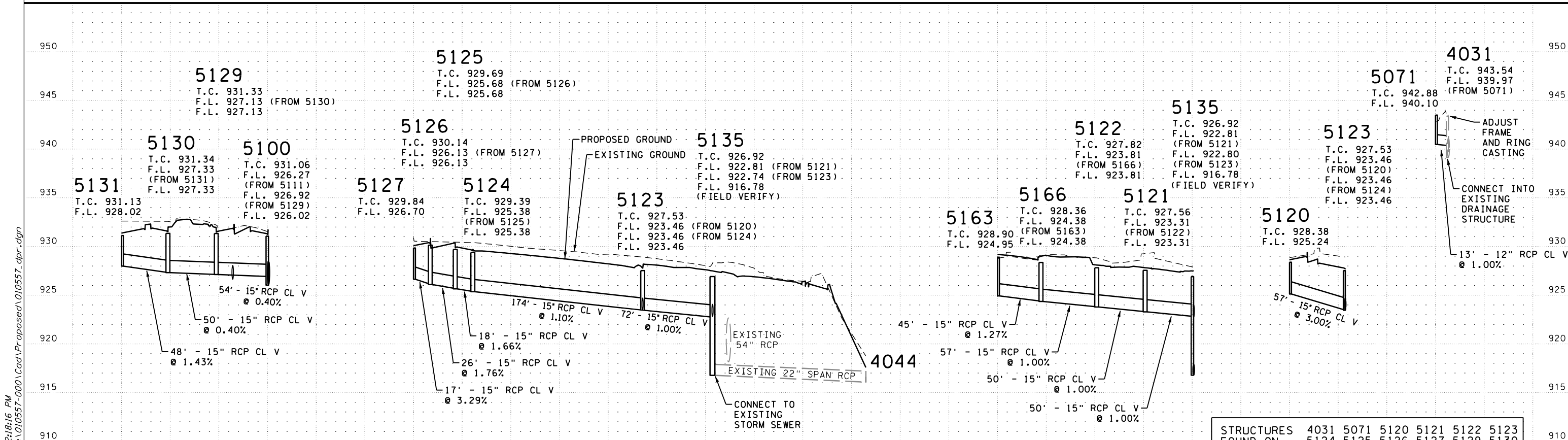
STRUCTURE NO.	STRUCTURE LOCATION			COORDINATES		DRAINAGE STRUCTURES			CONNECT TO EXISTING STORM SEWER EACH	CONNECT INTO EXISTING DRAINAGE STRUCTURE EACH	TOP OF CASTING ELEV.	OUTLET ELEV.	INLET ELEV.	12" RCP CL V LIN FT	15" RCP CL V LIN FT	REMARKS			
	FLOWS FROM	FLOWS TO	ALIGN.	STATION	OFFSET	X	Y	TYPE									PAY HEIGHT		CASTING ASSEMBLY TYPE
																	SPEC 1 EACH	48-4020/60-4020 LIN FT	
5131	5130	E.MALL.WB	1501+68.70	22.8 LT	487106.91	164487.71	CB	1		C - 1	931.13	928.02	927.36		48				
5130	5129	E.MALL.EB	501+68.70	15.3 RT	487107.25	164440.71	CB		4.3	C - 1	931.34	927.32	927.14		50				
5129	5100	RIDGE.WB.3	1132+87.77	15.8 LT	487143.33	164405.00	CB		4.5	C - 1	931.33	927.12	926.93		54				
5127	5126	RIDGE.WB.3	1134+61.67	15.8 LT	487143.33	164578.90	CB	1		C - 1	929.84	926.70	926.20		17				
5126	5125	RIDGE.WB.3	1134+61.67	0.8 RT	487159.83	164578.90	CB		4.3	C - 1	930.14	926.09	925.72		26				
5125	5124	RIDGE.EB	134+69.01	0.8 LT	487187.04	164578.69	CB		4.3	C - 1	929.69	925.65	925.41		18				
5124	5123	RIDGE.EB	134+69.01	15.8 RT	487203.54	164578.92	CB		4.3	C - 1	929.39	925.36	923.48		174				
5123	5135	RIDGE.EB	136+42.31	26.0 RT	487191.08	164752.87	CB		4.4	C - 1	927.53	923.44	922.77		72				
5135	4044	RIDGE.EB	137+29.45	24.5 RT	487209.45	164821.23	MH		10.3	D	926.92	916.77	916.08						
5163	5166	RADIAL.WAYZ	32+72.05	11.3 LT	487088.54	164904.42	CB	1		C - 1	928.90	924.95	924.41		45				
5166	5122	WAYZ.SW.OUAD	31+60.00	0.8 LT	487068.27	164865.55	CB		4.3	C - 1	928.36	924.36	923.83		57				
5122	5121	WAYZ.SW.OUAD	31+00.00	0.8 LT	487111.28	164826.91	CB		4.3	C - 1	927.82	923.79	923.33		50				
5121	5135	RADIAL.WAYZ	34+03.50	0.8 RT	487160.27	164824.05	CB		4.6	C - 1	927.56	923.29	922.84		50				
5120	5123	RIDGE.WB.3	1136+34.00	16.6 LT	487134.76	164747.60	CB	1		C - 1	928.38	925.18	923.52		57				
5071	4031	RIDGE.EB	127+55.76	63.5 RT	487111.64	163852.09	CB	1		C - 1	942.88	940.10	939.97	13					
4031	EX	RIDGE.EB	127+40.42	70.5 RT	487109.65	163838.43					943.54					A			
TOTAL								5	39.3	10.3			1		1		13	718	

GENERAL NOTES:

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- PAY HEIGHTS ARE FROM BOTTOM OF CASTING TO OUTLET INVERT, PLUS 0.7'.
- RC PIPE IS DES 3006 GASKET JOINT PIPE, PIPE CLASS BASED ON BEDDING DETAILS ON SHEET 41.
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- FLOWLINE (F.L.) ELEVATIONS ON PROFILES ARE AT CENTER OF STRUCTURE. INLET AND OUTLET ELEVATIONS ON TABULATIONS ARE AT EDGE OF STRUCTURE. SPECIAL 1 STRUCTURE FLOWLINE, INLET, AND OUTLET ELEVATIONS ARE AT CENTER OF STRUCTURE.
- C-1 CASTINGS ARE NEENAH R-3067-V WITH A CURB BOX OR APPROVED EQUAL. C-2 CASTINGS ARE NEENAH R-3067-V WITHOUT A CURB BOX OR APPROVED EQUAL. D CASTINGS ARE NEENAH R-1642 WITH A B LID OR APPROVED EQUAL.

NOTES:

- A. ADJUST FRAME AND RING CASTING



DATE: 5/2/2019 12:18:16 PM PATH & FILENAME: K:\010557-000\Cad\Proposed\010557.dpr.dgn

NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
 Plan By: LGR
 Checked By: MJB
 Approved By: JHN

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.

Jake Newhall
 JAKE NEWHALL, PE
 DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE IMPROVEMENTS
 CITY OF MINNETONKA

STRUCTURES FOUND ON THIS SHEET:	4031	5071	5120	5121	5122	5123	5130
	5131	5135	5163	5166			

CITY OF MINNETONKA, MN
 DRAINAGE PROFILES AND TABULATIONS
 S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET 161 OF 230 SHEETS

DRAINAGE TABULATION (THIS SHEET ONLY)

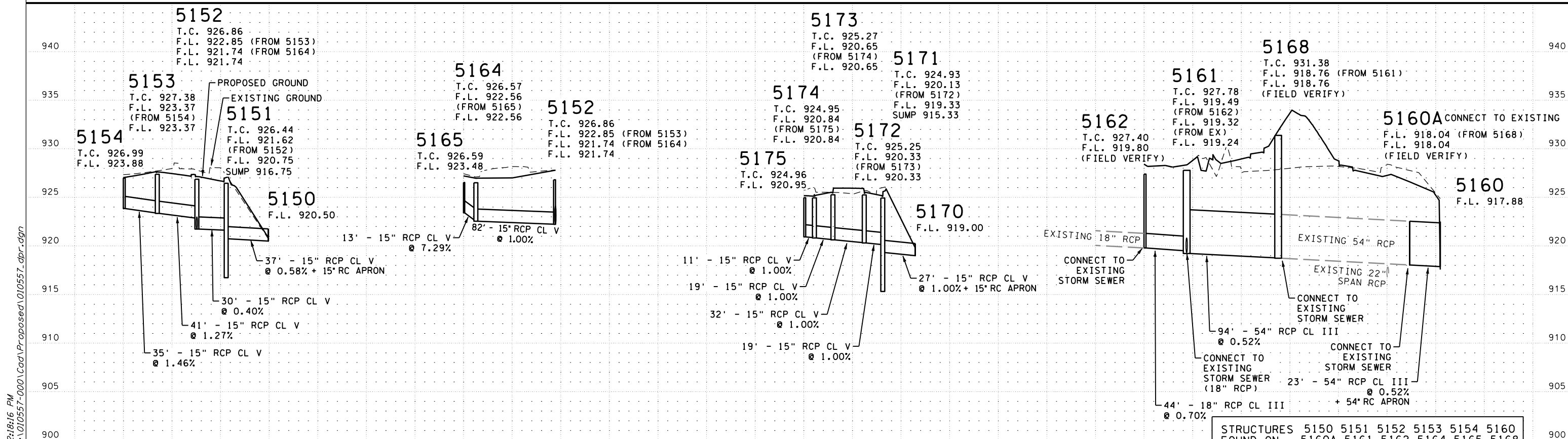
STRUCTURE NO.		STRUCTURE LOCATION			COORDINATES		DRAINAGE STRUCTURES				CONNECT TO EXISTING STORM SEWER	TOP OF CASTING ELEV.	OUTLET ELEV.	INLET ELEV.	15" RCP CL V	18" RCP CL III	54" RCP CL III	APRON	APRON TYPE	RIPRAP CLASS III	GEOTEXTILE FILTER TYPE 4	REMARKS				
FLWS FROM	FLWS TO	ALIGN.	STATION	OFFSET	X	Y	TYPE	SPEC 1 EACH	SPEC 2 EACH	48-4020 LIN FT	84-4020 LIN FT	CASTING ASSEMBLY TYPE	EACH			LIN FT	LIN FT	LIN FT	EACH		CU YD	SO YD				
5154	5153	WAYZ_NW_QUAD	11+70.00	0.8 LT	487121.70	165015.65	CB	1				C - 1		926.99	923.88	923.40	35									
5153	5152	RIDGE_WB_4	1139+02.00	0.8 RT	487147.38	164993.15	CB			4.3		C - 1		927.38	923.34	922.88	41									
5152	5151	RIDGE_EB	139+06.00	0.8 LT	487189.46	164995.43	CB			5.4		C - 1		926.86	921.73	921.63	30									
5151	5150	WAYZ_NE_QUAD	21+54.00	0.8 RT	487216.98	165003.37	CB			10		C - 1		926.44	920.74	920.50	37						C			
5150		RIDGE_EB	139+00.46	71.9 RT	487260.15	165013.09													1	RC APRON	5	21	B			
5165	5164	RADIAL_WAYZ	30+14.67	42.3 LT	487206.07	164917.06	CB	1				C - 1		926.59	923.48	922.71	13									
5164	5152	RADIAL_WAYZ	30+14.67	28.8 LT	487219.37	164919.38	CB			4.3		C - 2		926.57	922.54	921.76	82									
5175	5174	WAYZ_EB_EL	404+76.00	16.8 RT	487366.29	164896.14	CB	1				C - 1		924.96	920.95	920.86	11									
5174	5173	WAYZ_EB_EL	404+66.00	16.8 RT	487356.32	164891.89	CB			4.4		C - 1		924.95	920.82	920.67	19									
5173	5172	WAYZ_EB_EL	404+66.00	0.8 LT	487349.86	164908.16	CB			4.9		C - 1		925.27	920.63	920.35	32									
5172	5171	WAYZ_WB_EL	1405+00.00	0.8 RT	487375.16	164928.75	CB			5.2		C - 1		925.25	920.31	920.15	19						C			
5171	5170	WAYZ_WB_EL	1405+00.00	16.8 LT	487367.36	164944.41	CB			9.9		C - 1		924.93	919.31	919.00	27						C			
5170		WAYZ_WB_EL	1404+96.29	50.7 LT	487349.32	164973.37													1	RC APRON	5	21	B			
5162	5161	WAYZ_NW_QUAD	11+48.04	22.0 LT	487092.32	165007.32	MH			7.7		D	1	927.40	919.79	919.49										
5161	5168	WAYZ_NW_QUAD	11+01.65	30.4 LT	487063.29	164974.65	CB		1			SPEC - 2	1	927.78	919.25	918.78				94		14	F			
5168	5160A	RADIAL_WAYZ	32+44.98	54.6 LT	487134.12	164916.27	MH				12.8	D	1	931.38	918.74	918.04										
5160A	5160	RADIAL_WAYZ	29+11.82	15.2 LT	487233.78	164821.54							1		918.04	917.88					23					
5160		RIDGE_EB	137+33.36	76.5 RT	487257.25	164800.47									917.88				1	RC APRON	26	76	B			
TOTAL								3	1	56.1	12.8			4					346	44	117	3		45	132	

GENERAL NOTES:

- STATIONS, OFFSETS, AND ELEVATIONS ARE GIVEN TO:
 - END OF ALL CONCRETE APRONS.
 - CENTER OF CASTING FOR ALL STORM STRUCTURES.
- ALL PIPE LENGTHS EXCLUDE APRONS.
- PAY HEIGHTS ARE FROM BOTTOM OF CASTING TO OUTLET INVERT, PLUS 0.7'.
- RC PIPE IS DES 3006 GASKET JOINT PIPE, PIPE CLASS BASED ON BEDDING DETAILS ON SHEET 41.
- STEPS REQUIRED WHEN DEPTH FROM TOP OF CASTING TO STRUCTURE INVERT IS GREATER THAN 5.0'.
- FLOWLINE (F.L.) ELEVATIONS ON PROFILES ARE AT CENTER OF STRUCTURE, INLET AND OUTLET ELEVATIONS ON TABULATIONS ARE AT EDGE OF STRUCTURE, SPECIAL 1 STRUCTURE FLOWLINE, INLET, AND OUTLET ELEVATIONS ARE AT CENTER OF STRUCTURE.
- C-1 CASTINGS ARE NEENAH R-3067-V WITH A CURB BOX OR APPROVED EQUAL, C-2 CASTINGS ARE NEENAH R-3067-V WITHOUT A CURB BOX OR APPROVED EQUAL, D CASTINGS ARE NEENAH R-1642 WITH A B LID OR APPROVED EQUAL.

NOTES:

- B. TIE ALL JOINTS (INCIDENTAL).
- C. 4 FT SUMP INCLUDED IN PAY HEIGHT.
- F. SEE SHEET 33 FOR SPECIAL 2 DETAIL.



STRUCTURES 5150 5151 5152 5153 5154 5160
 FOUND ON 5160A 5161 5162 5164 5165 5168
 THIS SHEET: 5170 5171 5172 5173 5174 5175

DATE: 5/2/2019 12:18:16 PM PATH & FILENAME: K:\010557-000\Cad\Proposed\010557.dpr.dgn

NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
 Plan By: LGR
 Checked By: MJB
 Approved By: JHN

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.

Jake Newhall
 JAKE NEWHALL, PE
 DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE
 IMPROVEMENTS
 CITY OF MINNETONKA

CITY OF MINNETONKA, MN

DRAINAGE PROFILES AND TABULATIONS
 S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET
 162
 OF
 230
 SHEETS

DRAINAGE TABULATION (THIS SHEET ONLY)

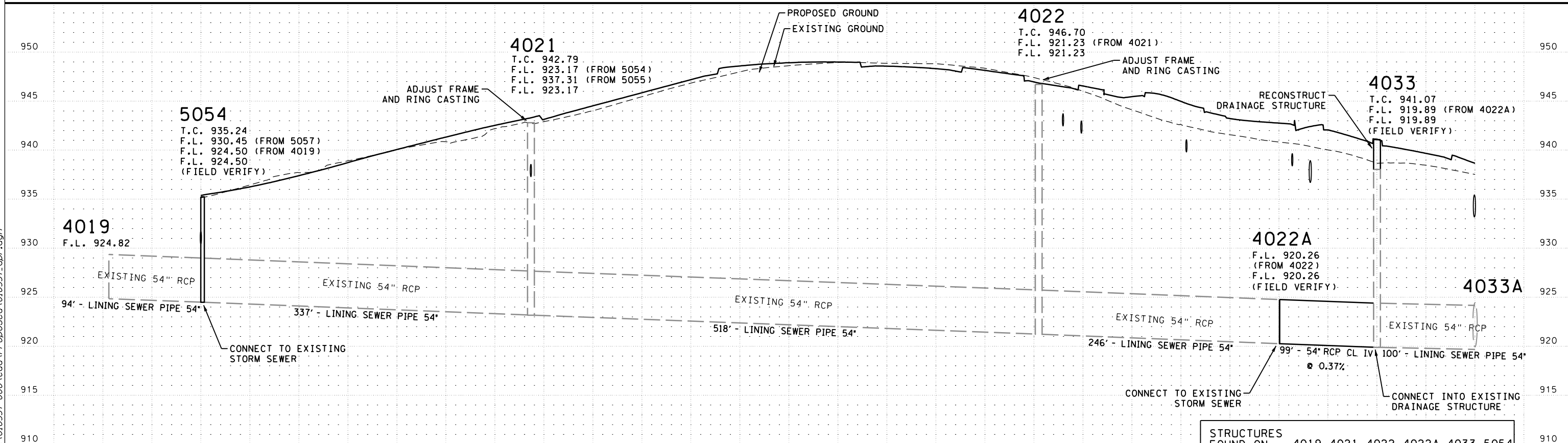
STRUCTURE NO.		STRUCTURE LOCATION			COORDINATES		DRAINAGE STRUCTURES			CONNECT TO EXISTING STORM SEWER EACH	CONNECT INTO EXISTING DRAINAGE STRUCTURE EACH	TOP OF CASTING ELEV.	OUTLET ELEV.	INLET ELEV.	54" RCP CL IV LIN FT	LINING SEWER PIPE 54" LIN FT	REMARKS
FLOWS FROM	FLOWS TO	ALIGN.	STATION	OFFSET	X	Y	TYPE	PAY HEIGHT	RECONSTRUCT DRAINAGE STRUCTURE	CASTING ASSEMBLY TYPE							
								84-4020 LIN FT	LIN FT								
4019	5054	RIDGE_EB	115+04.97	65.6 RT	485908.54	163577.86										94	
5054	4021	RIDGE_EB	115+91.24	22.7 RT	485994.85	163622.98	MH	11.7		D	1	936.05	924.49	924.51		337	
4021	4022	RIDGE_EB	119+30.05	14.8 RT	486327.16	163691.66	MH					942.79	923.16	921.24		518	A
4022	4022A	RIDGE_EB	124+51.20	5.9 RT	486843.21	163745.65	MH					946.70	921.22	920.26		246	A
4022A	4033	RIDGE_EB	127+41.68	14.3 LT	487042.42	163890.05					1		920.26	919.90	99		
4033	4033A	RIDGE_EB	128+34.55	16.0 RT	487121.54	163948.85	MH		3	D		941.07	919.88	919.67		100	
TOTAL								11.7	3.0		2	1			99	1295	

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NOTES:

- A. ADJUST FRAME AND RING CASTING.



STRUCTURES FOUND ON THIS SHEET: 4019 4021 4022 4022A 4033 5054

DATE: 5/2/2019 12:18:17 PM PATH & FILENAME: K:\1010557-000\Cad\Proposed\1010557_dpr.dgn

NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
 Plan By: LGR
 Checked By: MJB
 Approved By: JHN

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.

Jake Newhall
 JAKE NEWHALL, PE
 DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE IMPROVEMENTS
 CITY OF MINNETONKA

CITY OF MINNETONKA, MN
 DRAINAGE PROFILES AND TABULATIONS
 S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET 163 OF 230 SHEETS

DRAINAGE TABULATION (THIS SHEET ONLY)

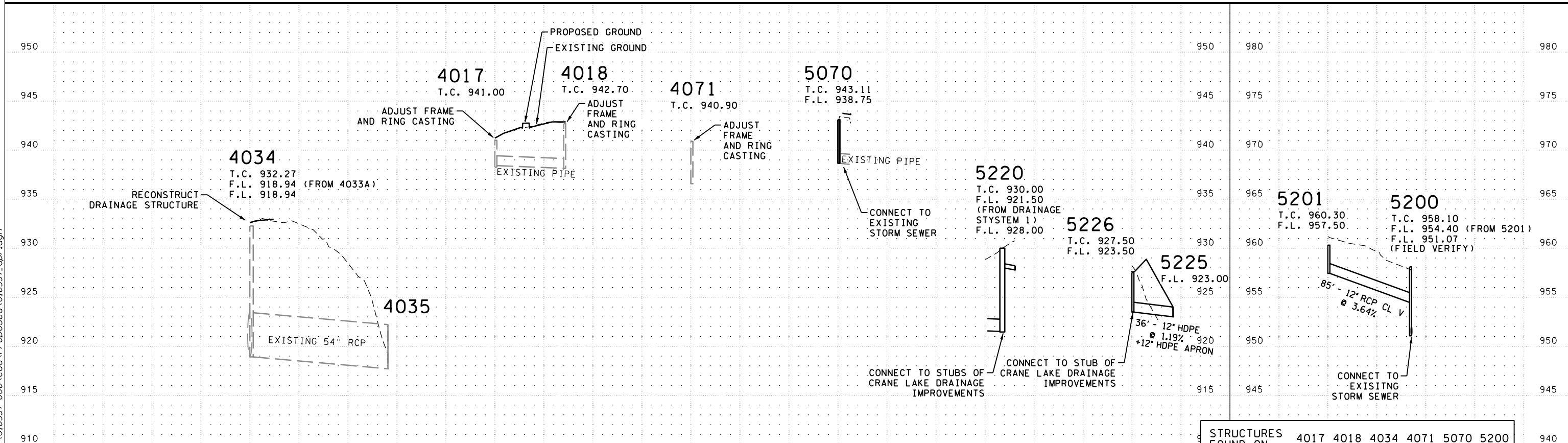
STRUCTURE NO.		STRUCTURE LOCATION			COORDINATES		DRAINAGE STRUCTURES				CONNECT TO EXISTING STORM SEWER EACH	TOP OF CASTING ELEV	OUTLET ELEV.	INLET ELEV.	12" HDPE LIN FT	12" RCP CL V LIN FT	APRON TYPE	RIPRAP CLASS III CU YD	GEOTEXTILE FILTER TYPE 4 SQ YD	REMARKS		
FLows FROM	FLows TO	ALIGN.	STATION	OFFSET	X	Y	TYPE	PAY HEIGHT		RECONSTRUCT DRAINAGE STRUCTURE LIN FT											CASTING ASSEMBLY TYPE	
								SPEC 1 EACH	SPEC 3 EACH	SPEC 5 EACH	48-4020 LIN FT											
4034	4035	RIDGE_EB	132+17.83	17.9 RT	487196.19	164327.64	MH					D		932.27	918.91	917.70				H		
4017	4018	GOVT_NB_SL	200+55.45	27.4 RT	485263.29	163499.77	CB							941.00						A		
4018	EX	GOVT_SB_SL	1200+53.44	34.9 LT	485191.02	163497.77	CB							942.70						A		
4071	EX	GOVT_NB_SL	201+29.39	56.0 RT	485304.59	163567.03	MH							940.90						A		
5070	4018	GOVT_SB_SL	1200+65.69	41.5 LT	485184.40	163510.01	CB	1				C - 1	1	943.11								
5201	5200	YMCA_SB_SL	1301+64.16	19.5 LT	486980.21	163358.02	CB	1				C - 1		960.30	957.50	954.47		85				
5200	4025	YMCA_SB_SL	1301+64.16	33.1 LT	486977.66	163443.26	CB				7.5	C - 1	1	958.10	950.87							
5220		RIDGE_EB	134+00.66	73.2 RT	487258.37	164504.33	CB					SPEC - 5		930.00	928.00					I, L		
5226	5225	RIDGE_EB	136+17.15	64.4 RT	487232.97	164739.88	CB		1			SPEC - 3		927.50	923.50	923.00				G, I		
5225		RIDGE_EB	136+09.02	105.4 RT	487274.98	164739.90	CB							923.00			HDPE APRON	5	20	D		
TOTAL								2	1	1	7.5	1.0		2				36	85	5	20	

GENERAL NOTES:

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NOTES:

- A. ADJUST FRAME AND RING CASTING.
- D. APRON INCIDENTAL TO PIPE.
- G. SEE SHEET 34 FOR SPECIAL 3 DETAIL.
- H. ROTATE TOP SLAB SO THAT CASTING IS IN GREEN SPACE.
- I. CONNECT TO STUB OF CRANE LAKE DRAINAGE IMPROVEMENTS. SEE SHEET 166.
- L. SEE SHEET 36 FOR SPECIAL 5 DETAIL.



STRUCTURES FOUND ON THIS SHEET: 4017 4018 4034 4071 5070 5200 5201 5220 5225 5226

DATE: 5/2/2019 12:18:17 PM PATH & FILENAME: K:\010557-000\Cad\Proposed\010557.dpr.dgn

NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
 Plan By: LGR
 Checked By: MJB
 Approved By: JHN
 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.
 JAKE NEWHALL, PE
 DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE IMPROVEMENTS
 CITY OF MINNETONKA

CITY OF MINNETONKA, MN
 DRAINAGE PROFILES AND TABULATIONS
 S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET 164 OF 230 SHEETS

STORM SEWER SUMMARY										I
ITEM	UNIT	QUANTITIES FROM SHEET NO.								TOTALS
		S.A.P. 142-153-008								
		157	158	159	160	161	162	163	164	
12" HDPE PIPE SEWER	LIN FT								36	36
12" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT				10	13			85	108
15" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	1124	383	278	407	718	346			3256
18" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT						44			44
24" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT				142					142
27" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT			640						640
30" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT			133						133
54" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT						117			117
54" RC PIPE SEWER DESIGN 3006 CLASS IV	LIN FT							99		99
LINING SEWER PIPE 54"	LIN FT							1295		1295
15" RC PIPE APRON	EACH						2			2
30" RC PIPE APRON	EACH			1						1
54" RC PIPE APRON	EACH						1			1
CONNECT TO EXISTING STORM SEWER	EACH	1	1		3	1	4	2	2	14
CONNECT INTO EXISTING DRAINAGE STRUCTURE	EACH		1			1		1		3
RANDOM RIPRAP CLASS III	CU YD			38			45		5	88
GEOTEXTILE FILTER TYPE 4	SQ YD			117			132		20	269

CASTING ASSEMBLY SUMMARY							K
ASSEMBLY	RING OR FRAME	COVER OR GRATE	CURB BOX	STANDARD PLATE NUMBER	USE	S.A.P. 142-153-008	TOTALS
C - 1	NEENAH CASTING R-3067-V WITH CURB BOX OR APPROVED EQUAL.					51	51
C - 2	NEENAH CASTING R-3067-V WITHOUT CURB BOX OR APPROVED EQUAL.					3	3
D	NEENAH CASTING R-1642 WITH B LID OR APPROVED EQUAL.					7	7
TOTAL						61	61
SPEC - 2	SPECIAL 2 CASTING - SEE SHEET 33 FOR DETAIL SPECIAL 2 STRUCTURE INCLUDES SPECIAL 2 CASTING TOTAL FOR INFORMATIONAL PURPOSES.					1	1
SPEC - 3	SPECIAL 3 CASTING - SEE SHEET 34 FOR DETAIL SPECIAL 3 STRUCTURE INCLUDES SPECIAL 3 CASTING TOTAL FOR INFORMATIONAL PURPOSES.					1	1
SPEC - 4	SPECIAL 4 CASTING - SEE SHEET 34 FOR DETAIL SPECIAL 4 STRUCTURE INCLUDES SPECIAL 4 CASTING TOTAL FOR INFORMATIONAL PURPOSES.					1	1
SPEC - 5	SPECIAL 5 CASTING - SEE SHEET 36 FOR DETAIL SPECIAL 5 STRUCTURE INCLUDES SPECIAL 4 CASTING TOTAL FOR INFORMATIONAL PURPOSES.					1	1
C - 1 INCLUSIVE WITH SPEC-1	NEENAH CASTING R-3067-V WITH CURB BOX OR APPROVED EQUAL. TOTAL FOR INFORMATIONAL PURPOSES.					31	31

DRAINAGE STRUCTURE SUMMARY										J
ITEM	UNIT	QUANTITIES FROM SHEET NO.								TOTALS
		S.A.P. 142-153-008								
		157	158	159	160	161	162	163	164	
CONST DRAINAGE STRUCTURE DES 48-4020	LIN FT	49.3	35.8	18.4	31.2	39.3	56.1		7.5	237.6
CONST DRAINAGE STRUCTURE DES 60-4020	LIN FT	4.6		5.3	4.4	10.3				24.6
CONST DRAINAGE STRUCTURE DES 72-4020	LIN FT			16.1	5.0					21.1
CONST DRAINAGE STRUCTURE DES 84-4020	LIN FT			5.2			12.8	10.9		28.9
CONST DRAINAGE STRUCTURE DESIGN SPEC 1	EACH	3	6	4	8	5	3		2	31
CONST DRAINAGE STRUCTURE DESIGN SPEC 2	EACH						1			1
CONST DRAINAGE STRUCTURE DESIGN SPEC 3	EACH								1	1
CONST DRAINAGE STRUCTURE DESIGN SPEC 4	EACH			1						1
CONST DRAINAGE STRUCTURE DESIGN SPEC 5	EACH								1	1
RECONSTRUCT DRAINAGE STRUCTURE	LIN FT							3.0	1.0	4.0
CASTING ASSEMBLY	EACH	12	8	9	8	10	10	2	2	61
ADJUST FRAME & RING CASTING	EACH					1		2	3	6

DATE: 5/2/2019 12:18:18 PM
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NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
Plan By: LGR
Checked By: MJB
Approved By: JHN

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.

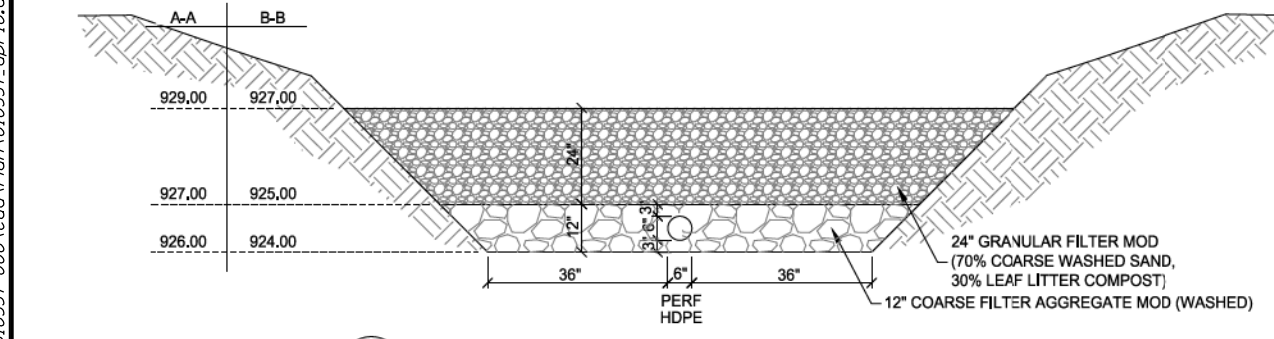
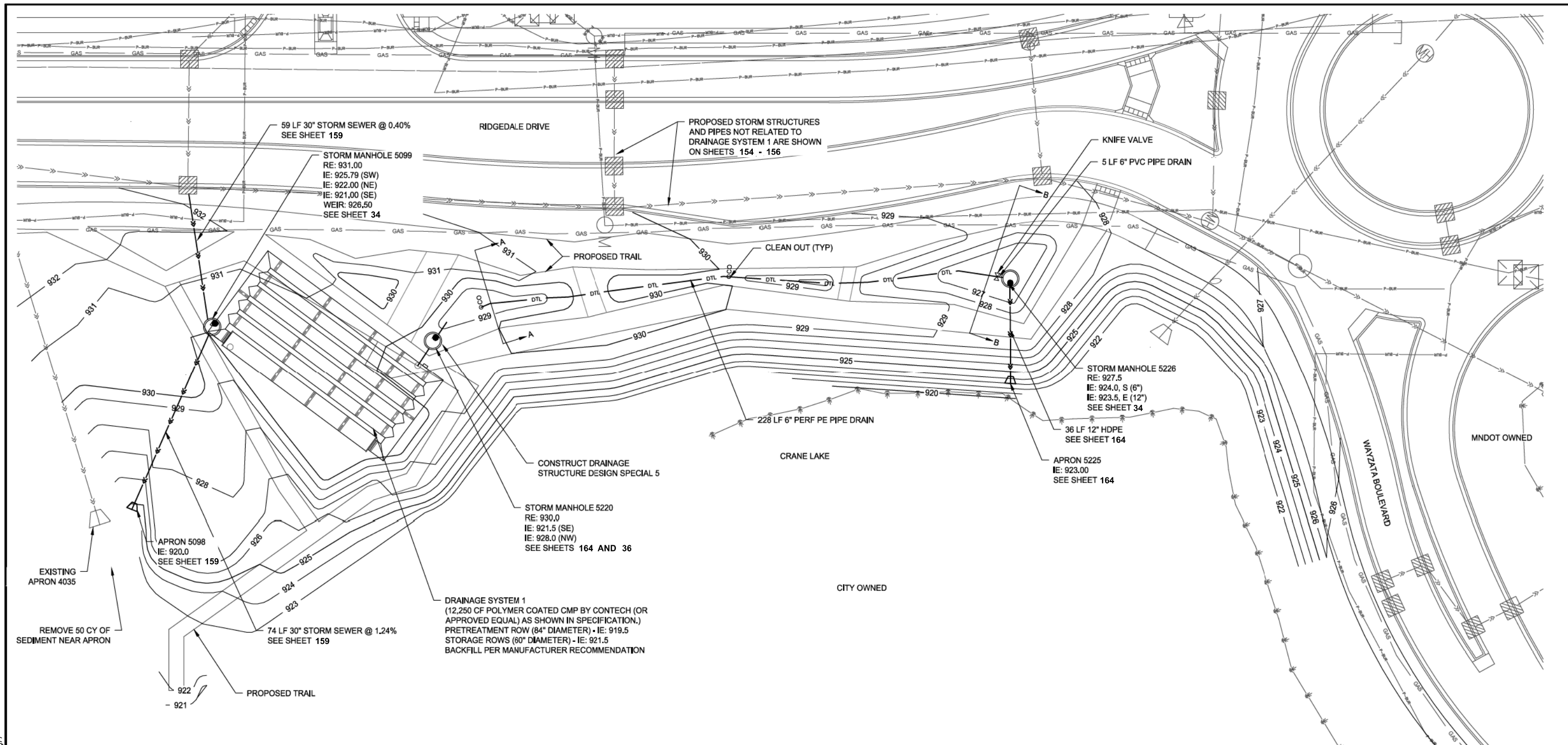
Jake Newhall
JAKE NEWHALL, PE
DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE
IMPROVEMENTS
CITY OF MINNETONKA

CITY OF MINNETONKA, MN
DRAINAGE PROFILES AND TABULATIONS
S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET
165
OF
230
SHEETS



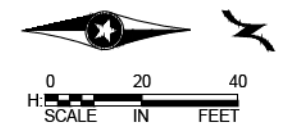
6" PERFORATED HDPE TYPICAL SECTION
 1
 166 SCALE: NO SCALE

PROPOSED LEGEND

- ○ ○ CLEANOUT
- ⊗ KNIFE VALVE
- STORM SEWER MANHOLE
- ▽ APRON
- STORM SEWER PIPE
- DRAINTILE
- 930 PROPOSED CONTOUR MAJOR
- 929 PROPOSED CONTOUR MINOR

CRANE LAKE DRAINAGE		L
Description		
DEWATERING	1	LS
DRAINAGE SYSTEM 1	1	LS
6" PVC PIPE DRAIN	5	LF
6" PERF PE PIPE DRAIN	228	LF
GRANULAR FILTER MOD	175	CY
COARSE FILTER AGGREGATE MOD (CV)	75	CY
6" PVC PIPE DRAIN CLEANOUT	2	EA
INSTALL VALVE AND BOX	1	EA
EXCAVATION - CHANNEL AND POND	50	CY

FOR STORM PIPE, STRUCTURES, AND APRONS NOT TABULATED HERE, SEE SHEETS 157 - 165



DATE: 5/2/2019 12:18:18 PM PATH & FILENAME: K:\1010557-000\Cad\Plan\010557_dbr10.dgn

NO.	DATE	BY	CHK	REVISIONS

Design By: LGR
 Plan By: LGR
 Checked By: MJB
 Approved By: JHN

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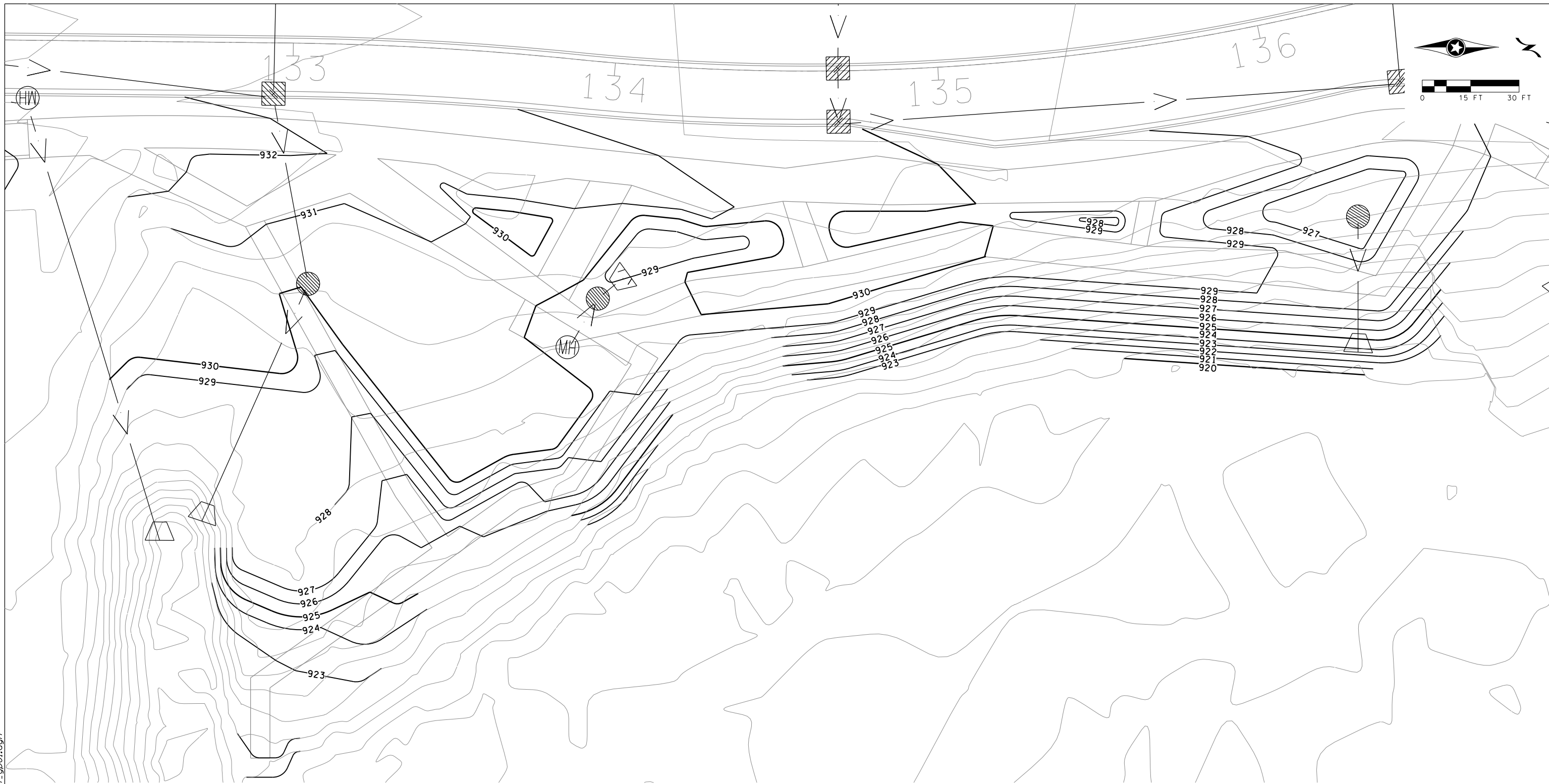
Jake Newhall
 JAKE NEWHALL, PE
 DATE: 5/2/2019 LICENSE NO. 49170



RIDGEDALE DRIVE IMPROVEMENTS
 CITY OF MINNETONKA

CITY OF MINNETONKA, MN
 CRANE LAKE DRAINAGE PLAN
 S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET
 166
 OF
 230
 SHEETS



DATE: 5/2/2019 12:18:24 PM
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LEGEND

	EXISTING CONTOURS
	PROPOSED CONTOURS
	PROPOSED MANHOLE
	PROPOSED CATCH BASIN

- NOTES:**
1. GRADING CONTOURS ARE APPROXIMATE. EXACT CONTOURS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 2. CONTOURS SHOWN ARE TO FINISHED GROUND (TOP OF TOPSOIL).
 3. 6" TOPSOIL AND SEED AS SHOWN IN TURF ESTABLISHMENT PLAN.

NO.	DATE	BY	CHK	REVISIONS

Design By: AJP
 Plan By: EPS
 Checked By: ACJ
 Approved By: AJP

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.

ANDREW PLOWMAN, PE
 DATE: 5/2/2019 LICENSE NO. 44200



RIDGEDALE DRIVE
 IMPROVEMENTS
 CITY OF MINNETONKA

CITY OF MINNETONKA, MN
 CRANE LAKE AREA
 GRADING PLAN
 S.A.P. 142-153-008, S.A.P. 142-020-051, S.A.P. 027-661-055

SHEET
 167
 OF
 230
 SHEETS