DOCUMENTS FOR:

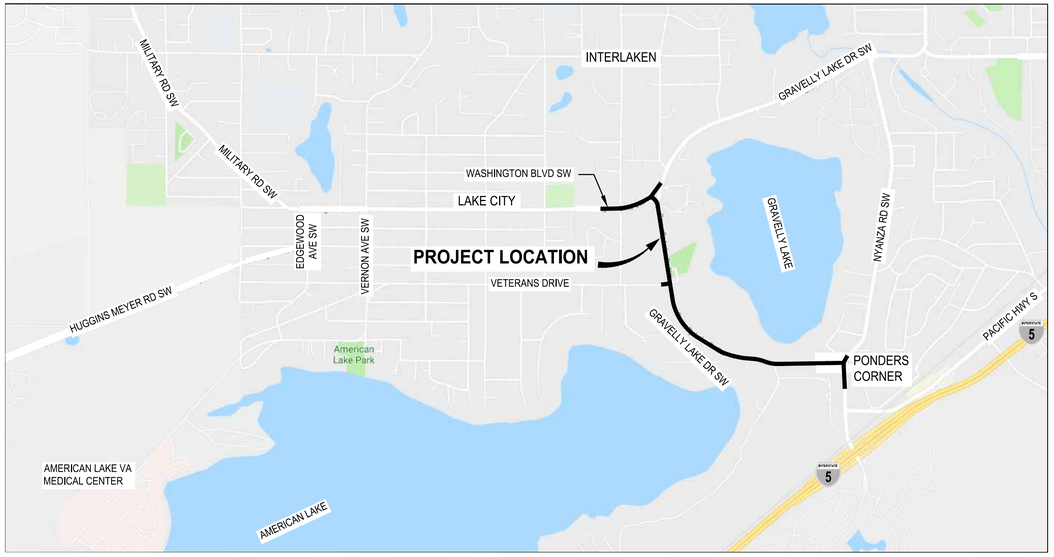
JBLM - NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1

City of Lakewood, Washington

6000 Main Street SW, Lakewood, WA 98499

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

VICINITY MAP



DRAWING INDEX		
DRAWING NUMBERS	SHEET NUMBERS	PLAN SET
1-3	GN1-GN3	GENERAL
4-8	HC1-HC5	HORIZONTAL CONTROL PLANS
9-11	RS1-RS3	ROADWAY SECTIONS
12-24	SP1-SP13	SITE PREPARATION PLANS
25-46	PP1-PP22	ROADWAY PLAN AND PROFILES
47-60	RAB1-RAB14	ROUNDABOUT PLANS
61-82	SD1-SD22	STORM DRAIN PLAN AND PROFILES
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DRAWING INDEX		
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1-18	WS1-WS18	WATER SYSTEM PLANS
19-21	WSD1-WSD3	WATER SYSTEM DETAILS
	CO1-C05, D01	HYDRANT & METER REPLACEMENT

APPROVED FOR CONSTRUCTION

CITY OF LAKEWOOD, WA 1996

Paul A. Bucich

PAUL A. BUCICH, P.E.
PUBLIC WORKS ENGINEERING DIRECTOR

2/5/21
DATE

REVISIONS	DATE	BY

DESIGNED K. TAYLOR
DRAWN K. TAYLOR
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-GN01-03
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD, WA 1996

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

COVER SHEET, VICINITY MAP, AND DRAWING INDEX

DRAWING NO. 1 OF 153
GN1

LAYOUT: GN1 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Friday, February 5, 2021 12:55:01 PM

ABBREVIATIONS

@	AT	LT	LEFT
ADDL	ADDITIONAL	LTG	LIGHTING
ADJ	ADJUSTABLE	MAN	MANUAL
AGG	AGGREGATE	MATL	MATERIAL
ALLOW	ALLOWANCE, ALLOWABLE	MC	MIDDLE OF CURVE
AMT	AMOUNT	MEF	MAXIMUM EXTENT FEASIBLE
ANG	ANGLE	MH	MANHOLE
AP	ANGLE POINT	MIN	MINIMUM, MINUTE
APPD	APPROVED	MISC	MISCELLANEOUS
APPROX	APPROXIMATE	MON	MONUMENT
APWA	AMERICAN PUBLIC WORKS ASSOCIATION	MPH	MILES PER HOUR
ASPH	ASPHALT	MW	MONITORING WELL
ASSY	ASSEMBLY	N	NORTH, NORTHING
AVE	AVENUE	NIC	NOT IN CONTRACT
AVG	AVERAGE	NO.	NUMBER
BC	BEGINNING OF CURVE	NTS	NOT TO SCALE
BLDG	BUILDING	PC	POINT OF CURVATURE
BLVD	BOULEVARD	PCC	PORTLAND CEMENT CONCRETE
BM	BENCH MARK	PG	PERFORMANCE GRADE
BOT	BOTTOM	PH	PHASE, POTHOLE
BRG	BEARING	PI	POINT OF INTERSECTION
BVC	BEGIN VERTICAL CURVE	PIVC	POINT OF INTERSECTION FOR VERTICAL CURVE
CALC	CALCULATION	PP	POWER POLE
CAP	CAPACITY	PT	POINT OF TANGENCY, POINT
CB	CATCH BASIN	PVI	POINT OF VERTICAL INTERSECTION
CEM	CEMENT	PVT	PAVEMENT, PAVING, PRIVATE
CL	CLASS	PWR	POWER
CND	CONDUIT	QTY	QUANTITY
CO	CLEANOUT	RAD	RADIUS
COL	CITY OF LAKEWOOD	RD	ROAD
CONC	CONCRETE	REF	REFERENCE
CONN	CONNECT, CONNECTION	REQD	REQUIRED
CONST	CONSTRUCT, CONSTRUCTION	RET	RETAINING, RETURN
CONT	CONTINUE, CONTINUOUS	REV	REVERSE, REVISED
CONTR	CONTRACTOR	ROW	RIGHT OF WAY
COORD	COORDINATE	RPM	RAISED PAVEMENT MARKER
CSBC	CRUSHED SURFACING BASE COURSE	RT	RIGHT
CSTC	CRUSHED SURFACING TOP COURSE	S	SOUTH, SLOPE
CTR	CENTER	SCH	SCHEDULE
CUFT	CUBIC FOOT, CUBIC FEET	SD	STORM DRAIN
CULV	CULVERT	SDMH	STORM DRAIN MANHOLE
CY	CUBIC YARD	SECT	SECTION
D	DRAIN, DRAINAGE	SEG	SEGMENT
DBL	DOUBLE	SERV	SERVICE
DEG	DEGREE	SIG	SIGNAL
DEMO	DEMOLITION	SPEC	SPECIFICATION
DEPT	DEPARTMENT	SQFT	SQUARE FOOT, SQUARE FEET
DET	DETAIL	SQIN	SQUARE INCH, SQUARE INCHES
DIA	DIAMETER	SQYD	SQUARE YARD, SQUARE YARDS
DIM	DIMENSION	SS	SANITARY SEWER
DIST	DISTANCE, DISTRICT	SSMH	SANITARY SEWER MANHOLE
DWG	DRAWING	ST	STREET
E	EAST, EASTING	STA	STATION
EA	EACH	STD	STANDARD
EC	END OF CURVE	SURV	SURVEY
EL	ELEVATION	SYS	SYSTEM
EOP	EDGE OF PAVEMENT	T	TELEPHONE
EQUIP	EQUIPMENT	TAN	TANGENT
ES	EDGE OF SIDEWALK	TEMP	TEMPORARY
EVC	END VERTICAL CURVE	TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
EXIST	EXISTING	THRU	THROUGH
FG	FINISH GRADE	TOB	TOP OF BANK
FH	FIRE HYDRANT	TOC, TC	TOP OF CONCRETE, TOP OF CURB
FL	FLOW LINE	TOW	TOP OF WALL
FM	FORCE MAIN	TYP	TYPICAL
G	GAS	UG	UNDERGROUND
HMA	HOT MIX ASPHALT	VAR	VARIES, VARIABLE
HORIZ	HORIZONTAL	VERT	VERTICAL
IE	INVERT ELEVATION	W	WATER, WEST, WITH
IN	INCH	WM	WATER METER
INCL	INCLUDE, INCLUDING	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
INV	INVERT		
JB	JUNCTION BOX	YD	YARD
LF	LINEAR FEET, LINEAR FOOT	YR	YEAR
L	LENGTH, LONG		
LIN	LINEAR		

LEGEND

	EXISTING	PROPOSED
RIGHT OF WAY		
PARCEL LINES		
FOUND IRON PIPE		
FOUND CASED/SURFACE MONUMENT		
FOUND MAG NAIL		
FOUND REBAR AND CAP		
FOUND STONE MONUMENT		
SET HUB & TACK		
SET MAG NAIL		
SET PK		
SET NAIL		
SET REBAR WITH CAP		
MAJOR CONTOUR		250
MINOR CONTOUR		
EDGE OF ASPHALT		
EDGE OF CONCRETE		
EDGE OF GRAVEL		
EDGE OF VEGETATION		
GUARD RAIL		
BUILDING		
ROCKERY		
WOOD FENCE		
CHAIN LINK FENCE		
FENCE		
UNDERGROUND CABLE TV	TV	
UNDERGROUND COMMUNICATION	T	
UNDERGROUND FIBER OPTIC	FO FO	
UNDERGROUND POWER	P	
OVERHEAD POWER	OP	
GAS	G	
STORM	SD	
SEWER	SS	
WATER	W	
CABLE TV RISER	TV	
TELEPHONE RISER	TR	
TELEPHONE HAND HOLE	T	
TELEPHONE MANHOLE	T	
TELEPHONE PANEL	T	
TELEPHONE VAULT	T	
TRAFFIC SIGNAL-WALK POLE		
TRAFFIC SIGNAL CABINET		
TRAFFIC SIGNAL LOOP	TL	
TRAFFIC SIGNAL POLE WITH LIGHT		
POWER JUNCTION BOX	P	
POWER METER		
POWER MANHOLE	P	
POWER PANEL	P	
POWER TRANSFORMER		
POWER VAULT	P	
POWER POLE W/ LIGHT		
POWER POLE W/ LIGHT, DROP LINE		
POWER POLE W/ LIGHT, DROP LINE, TRANSFORMER		
POWER POLE W/ LIGHT, TRANSFORMER		
POWER POLE W/ DROP LINE		
POWER POLE W/ DROP LINE, TRANSFORMER		
POWER POLE W/ TRANSFORMER		
POWER POLE		
POWER GUY ANCHOR		
GUY POLE	OP	
STREET LIGHT		
LIGHT STANDARD		
FLOOD LIGHT		
GAS METER		
GAS VALVE		
CATCH BASIN		
AREA DRAIN		
SOLID CATCH BASIN		
STORM MANHOLE		
SEWER CLEAN-OUT		
SEWER MANHOLE		
SEWER VALVE		
WATER HOSE BIB		
IRRIGATION VALVE		
SPRINKLER HEAD		
FIRE HYDRANT		
WATER METER		
WATER VALVE		
FLAG POLE		
SIGN		
HANDICAP SYMBOL		
POST		
GATE POST		
WOOD POST		
MAIL BOX	MB	
TEST BORING PIT		
STUMP		
SHRUB		
DECIDUOUS TREE		
CONIFER TREE		

DETAIL AND SECTION DESIGNATION

1 / 4 — INDICATES DETAIL NUMBER; INDICATES DRAWING/SHEET WHERE DETAIL IS SHOWN

A / C2 — INDICATES SECTION LETTER; INDICATES DRAWING/SHEET WHERE SECTION IS SHOWN

2 / - — DETAIL OR SECTION APPEARS ON THE SAME DRAWING/SHEET

INDICATES DETAIL NUMBER

SUBTITLE
DETAIL 1 / M4
NO SCALE

INDICATES DRAWING/SHEET WHERE DETAIL IS REFERRED TO

INDICATES SECTION LETTER

SUBTITLE
SECTION A / C5
NO SCALE

INDICATES DRAWING/SHEET WHERE SECTION IS REFERRED TO

REVISIONS	DATE	BY

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DRAWN K. TAYLOR
CHECKED B. DORT
APPROVED A. FISHER

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FILE NAME PS3047013-GN01-03
JOB No. 214-3047-013
DATE FEBRUARY 2021

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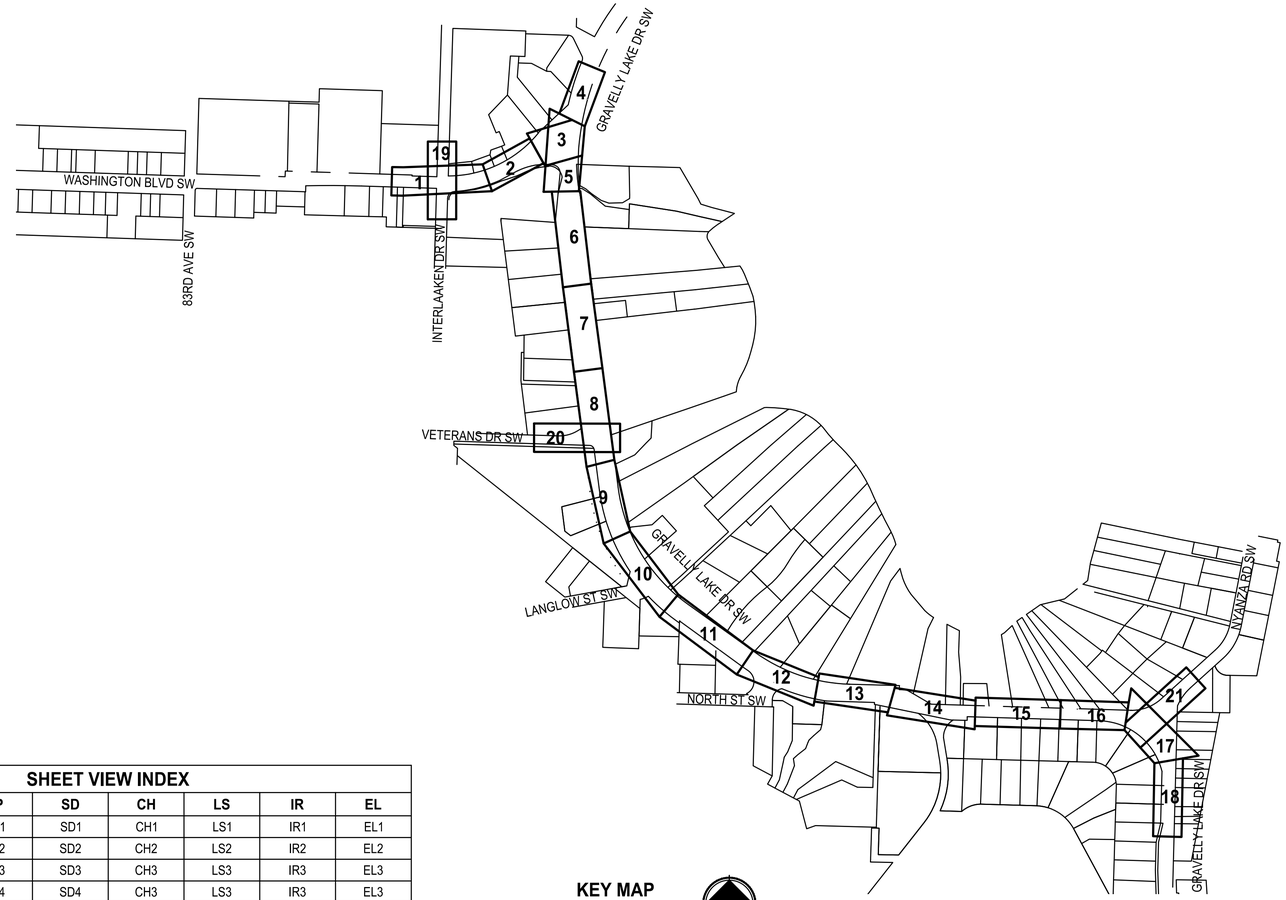
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

PROJECT LEGEND AND ABBREVIATIONS

LAYOUT: GN2 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 9:50:15 AM



SHEET VIEW INDEX							
VIEW #	SP	PP	SD	CH	LS	IR	EL
1	SP1	PP1	SD1	CH1	LS1	IR1	EL1
2	SP2	PP2	SD2	CH2	LS2	IR2	EL2
3	SP3	PP3	SD3	CH3	LS3	IR3	EL3
4	SP4	PP4	SD4	CH3	LS3	IR3	EL3
5	SP3	PP5	SD5	CH3	LS3	IR3	EL3
6	SP5	PP6	SD6	CH4	LS4	-	EL4
7	SP5	PP7	SD7	CH4	LS4	-	EL4
8	SP6	PP8	SD8	CH5	LS5	IR4	EL5
9	SP7	PP9	SD9	CH6	LS6	-	EL6
10	SP7	PP10	SD10	CH6	LS6	-	EL6
11	SP8	PP11	SD11	CH7	LS7	-	EL7
12	SP8	PP12	SD12	CH7	LS7	-	EL7
13	SP9	PP13	SD13	CH8	LS8	-	EL8
14	SP9	PP14	SD14	CH8	LS8	-	EL8
15	SP10	PP15	SD15	CH9	LS9	-	EL9
16	SP10	PP16	SD16	CH9	LS9	-	EL9
17	SP11	PP17	SD17	CH10	LS10	IR5	EL10
18	SP12	PP18	SD18	CH11	LS11	-	EL11
19	SP1	PP19	SD19	CH1	LS1	IR1	EL1
20	SP6	PP20	SD20	CH5	LS5	IR4	EL55
21	SP13	PP21	SD21	CH11	LS11	-	EL10

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 9:50:38 AM

LAYOUT: GN3

REVISIONS	DATE	BY

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APPROVED A. FISHER

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CITY OF LAKEWOOD, WA 1996

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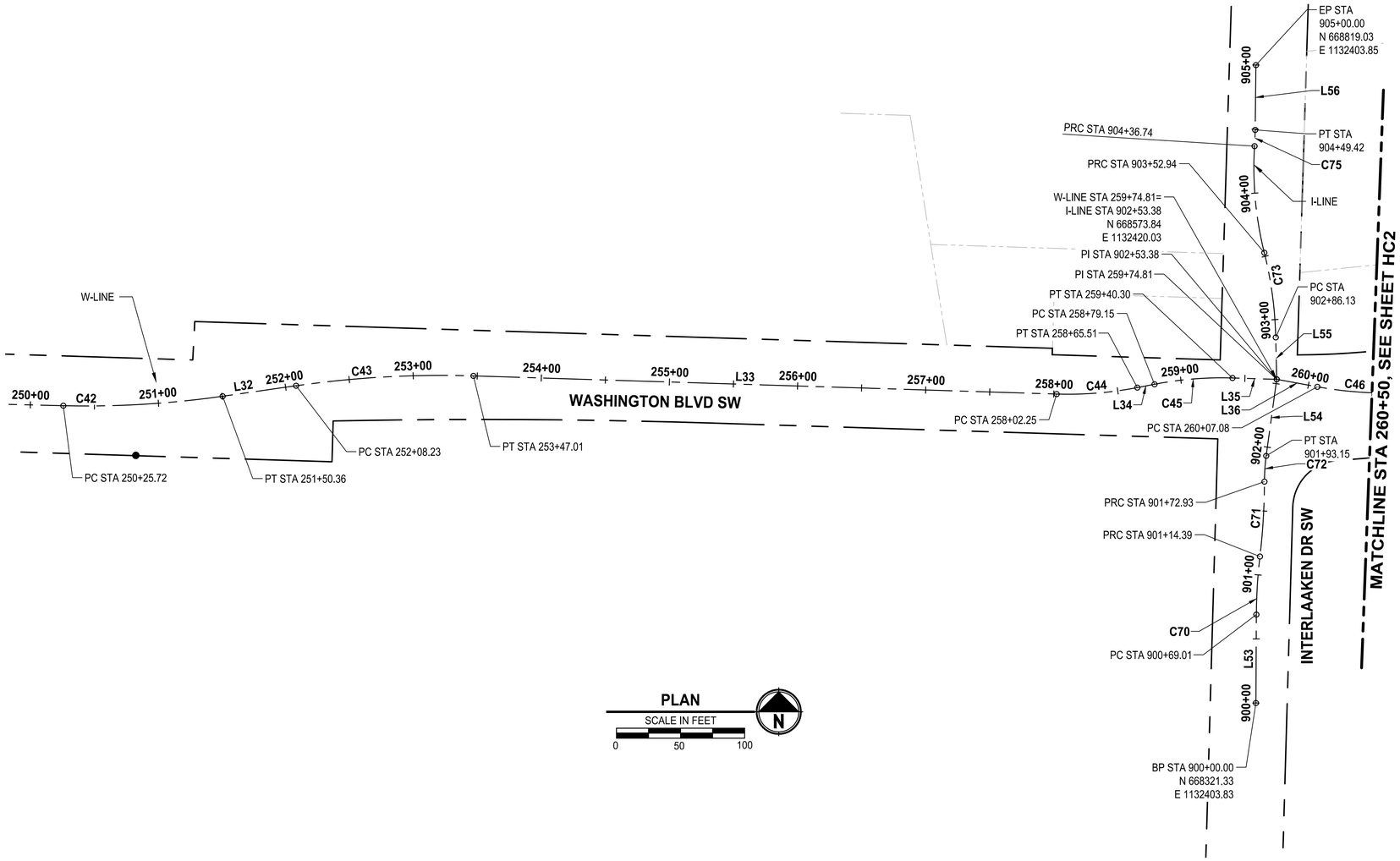
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SHEET VIEW KEY MAP AND INDEX

DRAWING NO. 3 OF 153
GN3



PLAN

SCALE IN FEET

0 50 100

N

W LINE			
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION
C42	750.00	124.65	N86° 36' 31.69"E
L32		57.87	N81° 50' 51.38"E
C43	800.00	138.77	N86° 49' 01.59"E
L33		455.24	S88° 12' 48.20"E
C44	284.00	63.25	N85° 24' 21.71"E
L34		13.64	N79° 01' 31.62"E
C45	275.00	61.15	N85° 23' 45.52"E
L35		34.51	S88° 14' 00.58"E
L36		32.27	S79° 38' 06.56"E
C46	300.00	58.06	S85° 10' 46.77"E
L37		20.40	N89° 16' 33.01"E
C47	350.00	109.54	N80° 18' 35.14"E
C48	675.00	168.93	N64° 10' 26.02"E
C49	315.00	82.12	N49° 32' 09.83"E
C50	170.00	82.03	N55° 53' 31.72"E
L38		14.79	N69° 42' 58.54"E
C51	200.00	34.57	N74° 40' 04.88"E
L39		57.64	N79° 37' 11.22"E
L40		82.00	S74° 57' 47.68"E

I LINE			
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION
L53		69.01	N0° 17' 09.56"E
C70	400.00	45.37	N3° 32' 08.40"E
C71	500.00	58.55	N3° 25' 50.72"E
C72	150.00	20.22	N3° 56' 16.83"E
L54		60.22	N7° 47' 59.45"E
L55		32.75	N1° 17' 53.76"W
C73	300.00	66.81	N7° 40' 40.93"W
C75	250.00	12.69	N2° 08' 24.46"E
L56		50.58	N0° 41' 11.05"E

SURVEY CONTROL				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
121	668068.43	1126911.50	243.98	SET MAG NAIL
122	667904.80	1126191.79	241.60	SET MAG NAIL
124	668699.80	1126972.40	239.48	SET MAG NAIL
130	668614.84	1130024.44	261.88	SET MAG NAIL
400	667653.93	1127926.88	261.54	SET MAG NAIL
300102	666779.00	1133284.57	271.54	SET MAG NAIL
300136	668728.90	1133028.94	268.30	SET MAG NAIL
300143	665931.41	1134166.16	276.12	SET MAG NAIL
300152	665831.31	1134705.57	260.67	SET MAG NAIL
300156	665576.93	1136240.82	281.20	SET MAG NAIL

LEGEND

- ● SURVEY MONUMENT ALONG RIGHT OF WAY AS SHOWN
- ◉ SURVEY MONUMENT IN ROADWAY AS SHOWN

HORIZONTAL DATUM

HORIZONTAL DATUM IS NAD 1983, WASHINGTON STATE PLANE SOUTH ZONE PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

VERTICAL DATUM

VERTICAL DATUM IS NAVD88 PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD MAPPING. THIS CONTROL WAS INDICATED TO BE ON NAVD88 BY AHBL AND CONFIRMED BY PERFORMING A CHECK UTILIZING GPS WITHIN THE WSRN (WASHINGTON STATE REFERENCE NETWORK), WHICH IS A REAL TIME NETWORK OF CONTINUOUSLY OPERATING GPS REFERENCE STATIONS.

REVISIONS	DATE	BY

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DRAWN K. BECKER
CHECKED J. KEMNITZ
APPROVED A. FISHER

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FILE NAME PS3047013-HC04-08
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

HORIZONTAL CONTROL

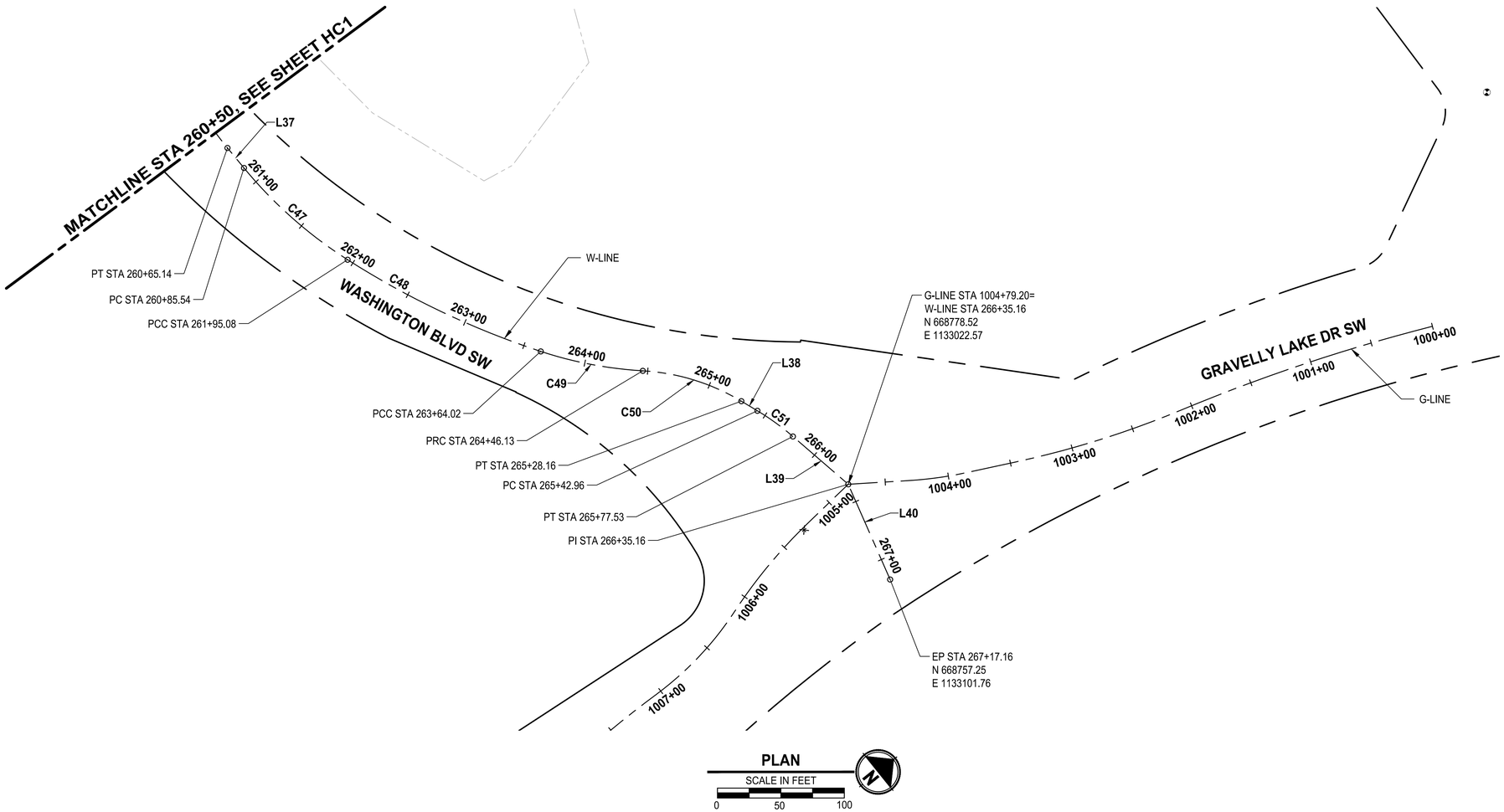
DRAWING NO.

HC1

LAYOUT: HC1 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Sves\CADD\DWG PLOTTED BY: toykokat DATE: Wednesday, February 3, 2021 10:11:16 AM

GENERAL NOTES

1. SEE SHEET HC1 FOR SURVEY CONTROL.
2. SEE SHEET HC1 FOR W-LINE LINE AND CURVE TABLE.



REVISIONS	DATE	BY

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

HORIZONTAL CONTROL

DRAWING NO.
5 OF 153
HC2

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Wednesday, February 3, 2021 10:10:14 AM
LAYOUT: HC2

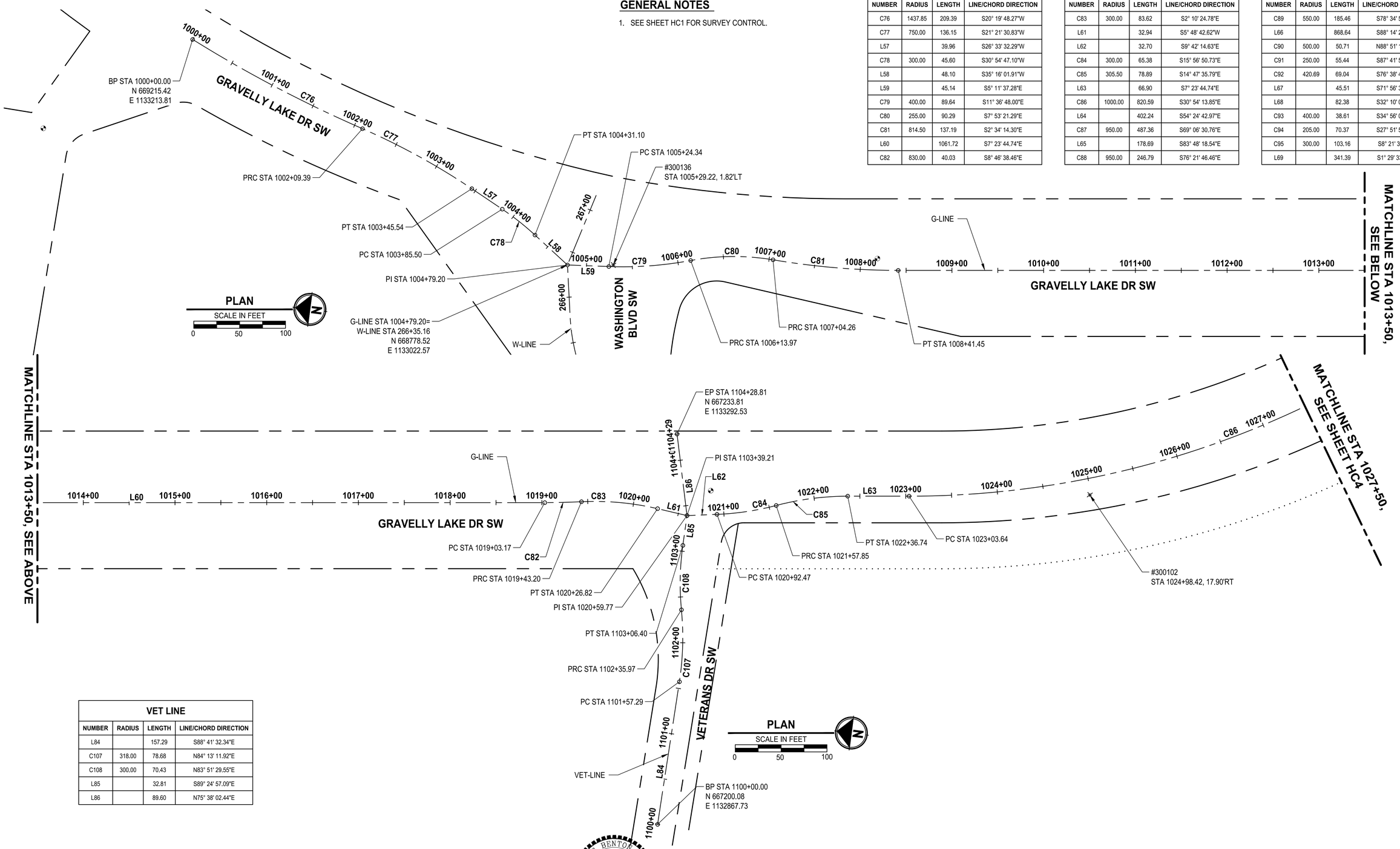
GENERAL NOTES

1. SEE SHEET HC1 FOR SURVEY CONTROL.

G LINE			
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION
C76	1437.85	209.39	S20° 19' 48.27"W
C77	750.00	136.15	S21° 21' 30.83"W
L57		39.96	S26° 33' 32.29"W
C78	300.00	45.60	S30° 54' 47.10"W
L58		48.10	S35° 16' 01.91"W
L59		45.14	S5° 11' 37.28"E
C79	400.00	89.64	S11° 36' 48.00"E
C80	255.00	90.29	S7° 53' 21.29"E
C81	814.50	137.19	S2° 34' 14.30"E
L60		1061.72	S7° 23' 44.74"E
C82	830.00	40.03	S8° 46' 38.46"E

G LINE			
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION
C83	300.00	83.62	S2° 10' 24.78"E
L61		32.94	S5° 48' 42.62"W
L62		32.70	S9° 42' 14.63"E
C84	300.00	65.38	S15° 56' 50.73"E
C85	305.50	78.89	S14° 47' 35.79"E
L63		66.90	S7° 23' 44.74"E
C86	1000.00	820.59	S30° 54' 13.85"E
L64		402.24	S54° 24' 42.97"E
C87	950.00	487.36	S69° 06' 30.76"E
L65		178.69	S83° 48' 18.54"E
C88	950.00	246.79	S76° 21' 46.46"E

G LINE			
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION
C89	550.00	185.46	S78° 34' 50.49"E
L66		868.64	S88° 14' 26.60"E
C90	500.00	50.71	N88° 51' 12.75"E
C91	250.00	55.44	S87° 41' 56.76"E
C92	420.69	69.04	S76° 38' 41.14"E
L67		45.51	S71° 56' 36.68"E
L68		82.38	S32° 10' 06.83"E
C93	400.00	38.61	S34° 56' 02.64"E
C94	205.00	70.37	S27° 51' 57.00"E
C95	300.00	103.16	S8° 21' 30.59"E
L69		341.39	S1° 29' 33.40"W



VET LINE			
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION
L84		157.29	S88° 41' 32.34"E
C107	318.00	78.68	N84° 13' 11.92"E
C108	300.00	70.43	N83° 51' 29.55"E
L85		32.81	S89° 24' 57.09"E
L86		89.60	N75° 38' 02.44"E

REVISIONS	DATE	BY

DESIGNED K. BECKER
DRAWN K. BECKER
CHECKED J. KEMNITZ
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–HC04–08
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ©1996

JAMES BENTON DORR, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

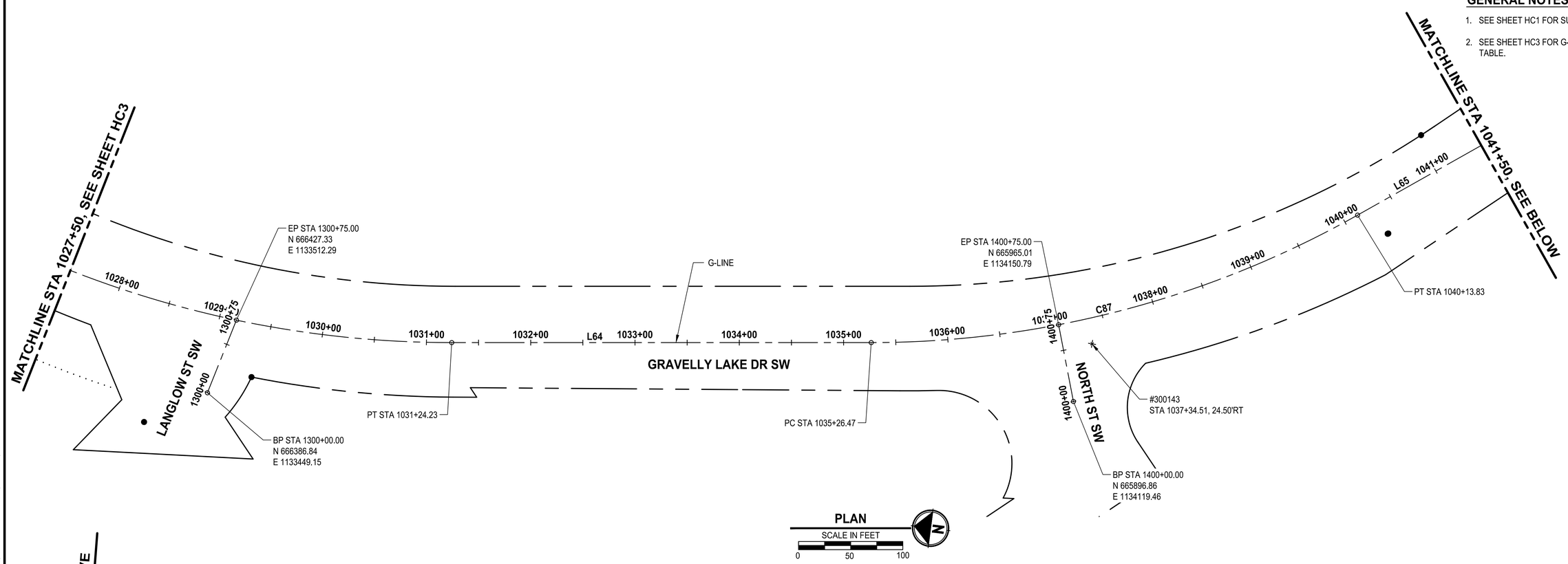
HORIZONTAL CONTROL

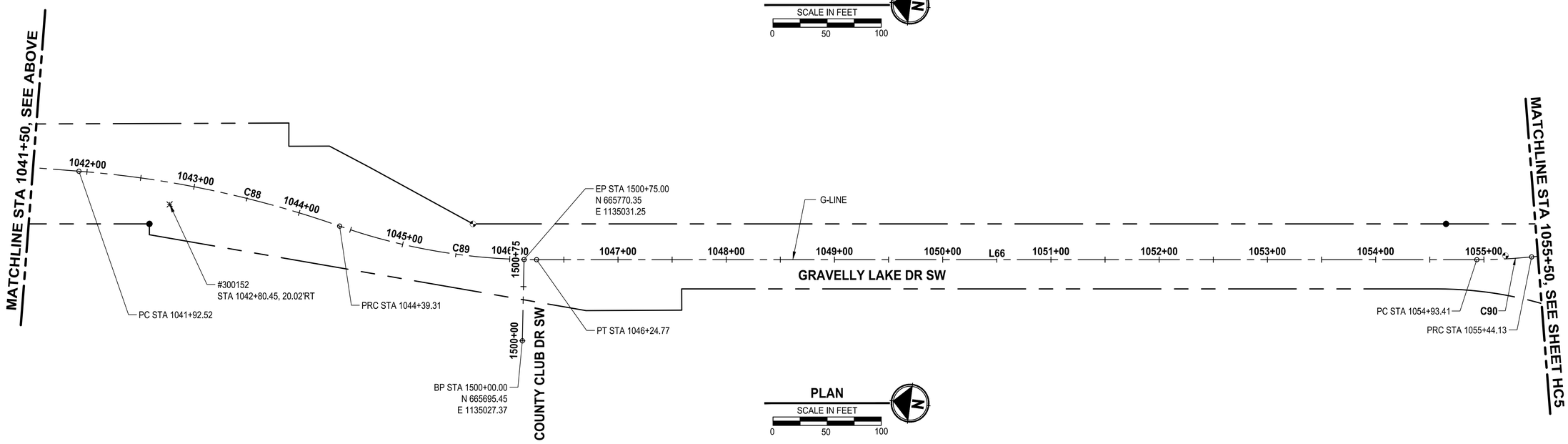
DRAWING NO.
6 OF 153
HC3

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Sves\CADD\DWG PLOTTED BY: toykokat DATE: Tuesday, February 2, 2021 2:18:02 PM
LAYOUT: HC3

GENERAL NOTES

1. SEE SHEET HC1 FOR SURVEY CONTROL.
2. SEE SHEET HC3 FOR G-LINE LINE AND CURVE TABLE.





REVISIONS	DATE	BY

DESIGNED K. BECKER
DRAWN K. BECKER
CHECKED J. KEMNITZ
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-HC04-08
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD, WA 1996

JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

HORIZONTAL CONTROL

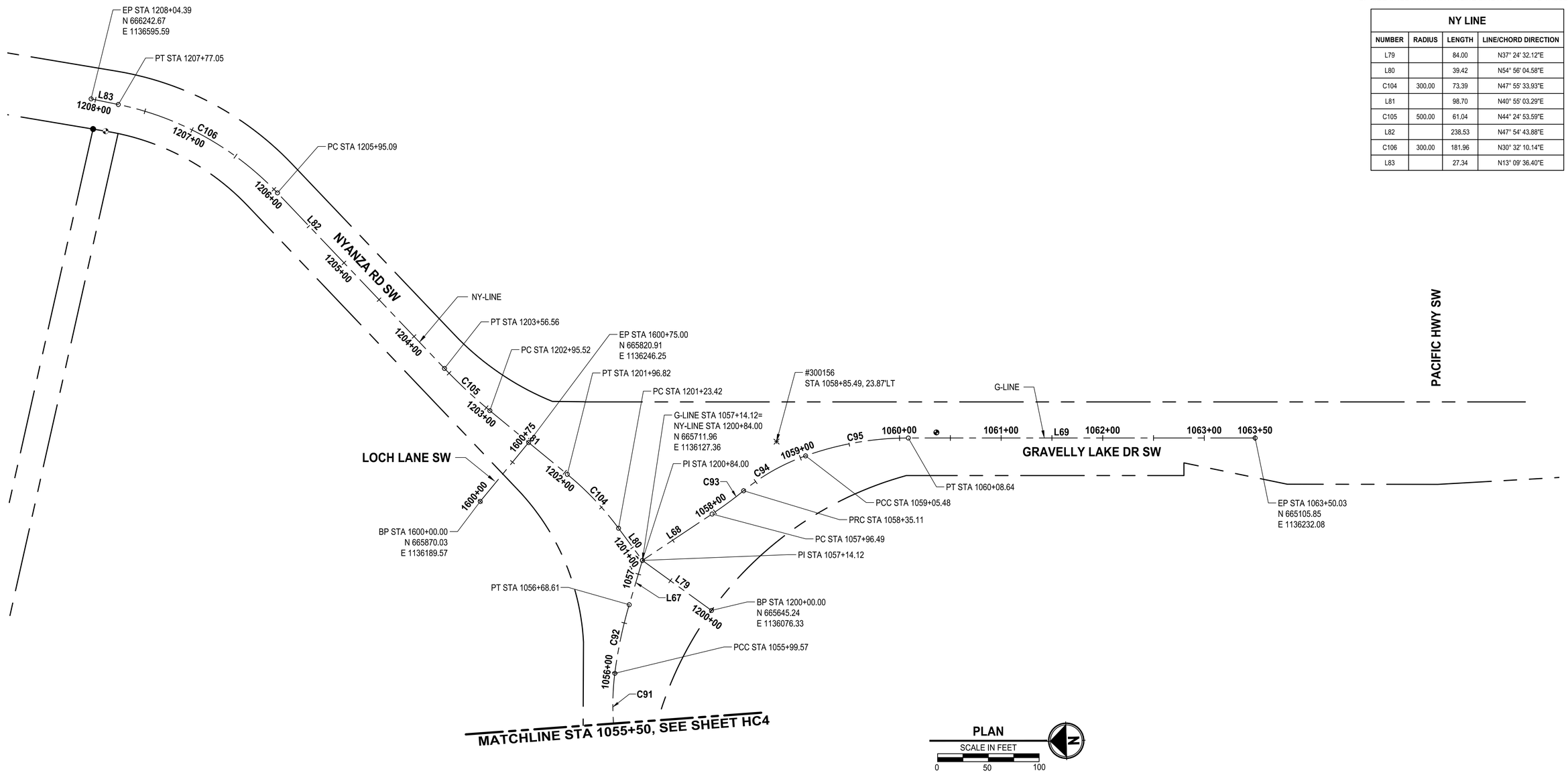
DRAWING NO.
7 OF 153
HC4

LAYOUT: HC4 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 2:18:18 PM

GENERAL NOTES

1. SEE SHEET HC1 FOR SURVEY CONTROL.
2. SEE SHEET HC3 FOR G-LINE LINE AND CURVE TABLE.

NY LINE			
NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION
L79		84.00	N37° 24' 32.12"E
L80		39.42	N54° 56' 04.58"E
C104	300.00	73.39	N47° 55' 33.93"E
L81		98.70	N40° 55' 03.29"E
C105	500.00	61.04	N44° 24' 53.59"E
L82		238.53	N47° 54' 43.88"E
C106	300.00	181.96	N30° 32' 10.14"E
L83		27.34	N13° 09' 36.40"E



REVISIONS	DATE	BY

DESIGNED K. BECKER
DRAWN K. BECKER
CHECKED J. KEMNITZ
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–HC04–08
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

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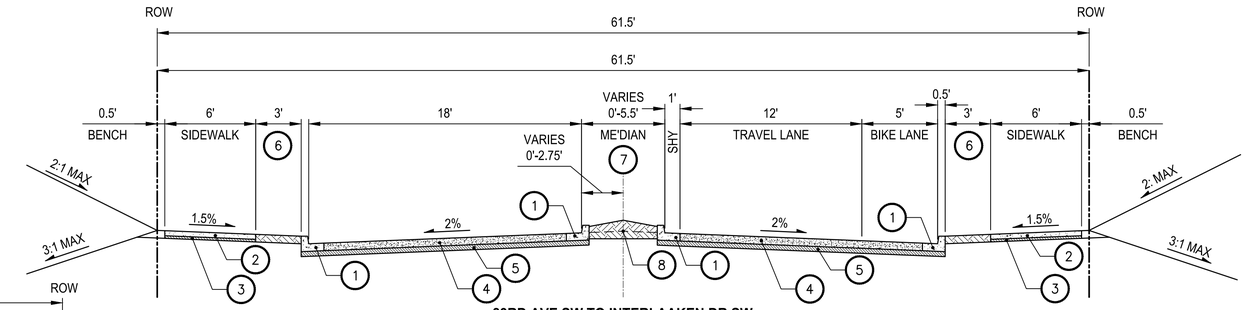
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

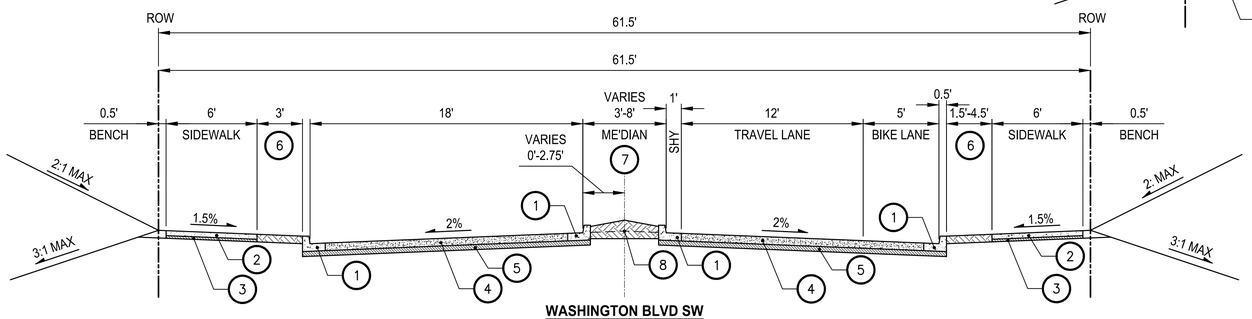
HORIZONTAL CONTROL

DRAWING NO.
8 OF 153
HC5

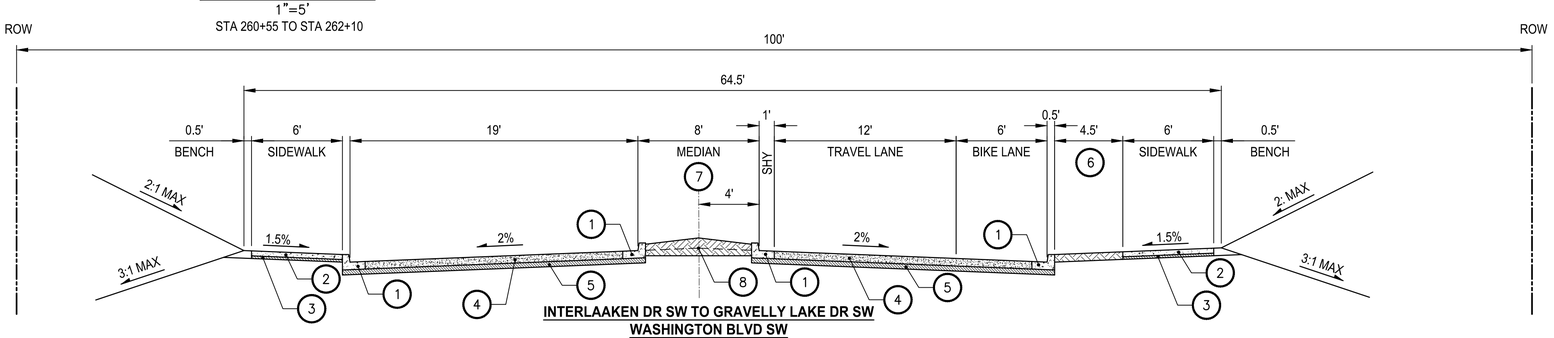
PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toylokat DATE: Tuesday, February 2, 2021 2:18:34 PM
LAYOUT: HC5



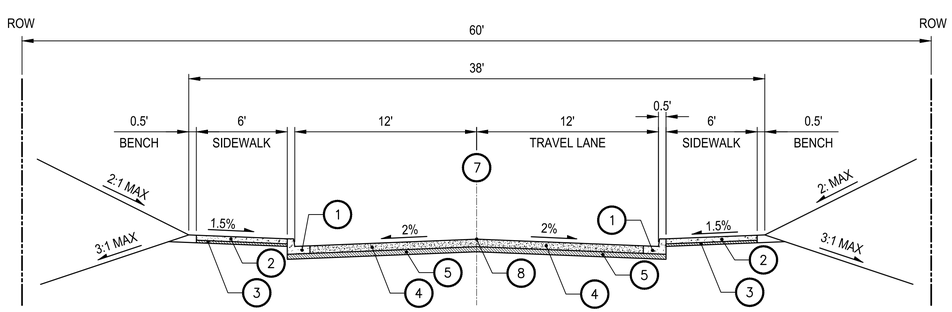
83RD AVE SW TO INTERLAAKEN DR SW
WASHINGTON BLVD SW
SECTION
1"=5'
STA 257+88 TO STA 258+95



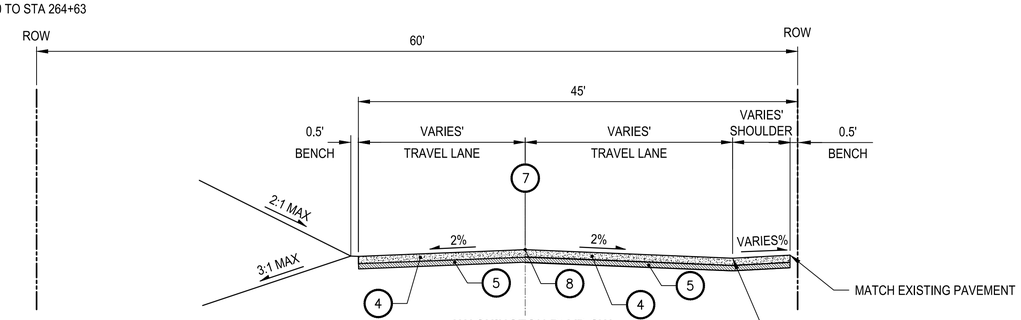
WASHINGTON BLVD SW
SECTION
1"=5'
STA 260+55 TO STA 262+10



INTERLAAKEN DR SW TO GRAVELLY LAKE DR SW
WASHINGTON BLVD SW
SECTION
1"=5'
STA 262+10 TO STA 264+63



INTERLAAKEN DR SW
SECTION
1"=5'
INTERLAAKEN DR SW: STA 900+69 TO STA 901+74, STA 903+36 TO STA 904+61



WASHINGTON BLVD SW
SECTION
1"=5'
STA 257+10 TO STA 257+88

CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04. SLOPE GUTTER TO MATCH ROADWAY CROSS-SLOPE.
2. 4" DEPTH CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03.
3. 2"' DEPTH CSTC.
4. 6" DEPTH HMA CL ½" PG 58H-22.
5. 4" DEPTH CSTC.
6. PLANTER / COLORED CONCRETE, SEE LANDSCAPE PLANS.
7. CONSTRUCTION CENTERLINE.
8. HORIZONTAL AND VERTICAL CONTROL POINT.
9. 3" DEPTH HMA CL ½" PG 58H-22.

REVISIONS	DATE	BY

DESIGNED D. SUSLIKOV
DRAWN K. TAYLOR
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-RS01-02
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

DMITRI VICTOROVIC SUSLIKOV STATE OF WASHINGTON 38390 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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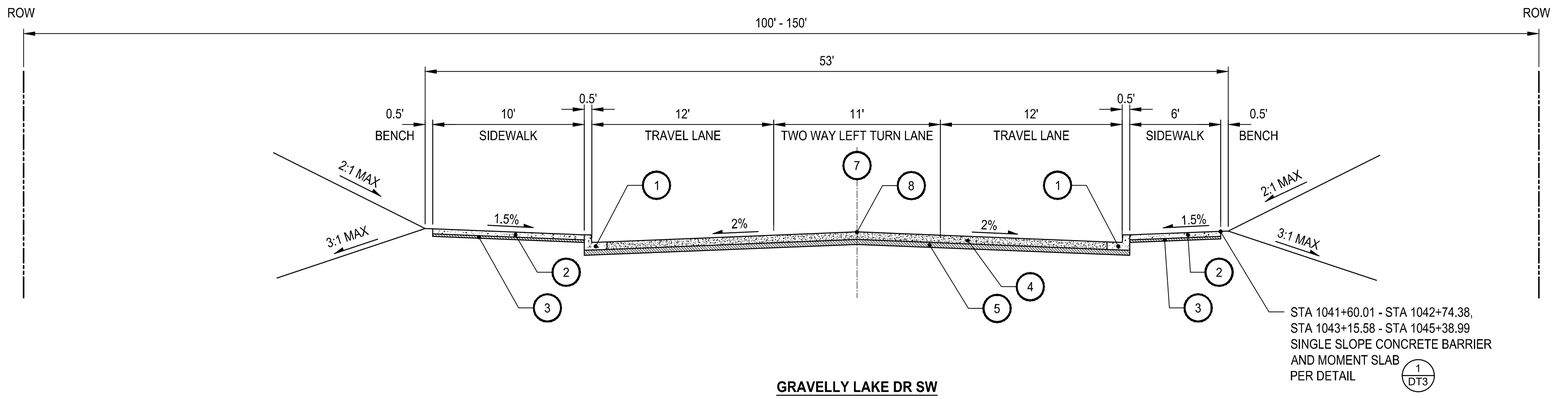
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY SECTIONS

DRAWING NO.
9 OF 153
RS1

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 10:15:01 AM
LAYOUT: RS1

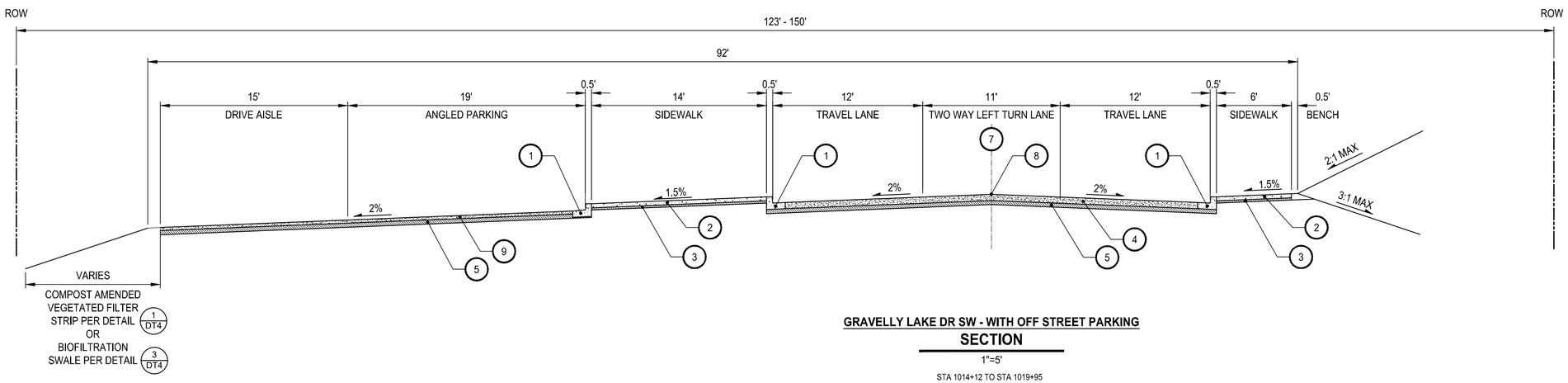


GRAVELLY LAKE DR SW

SECTION

1"=5'

STA 1006+22 TO STA 1014+12, STA 1021+63 TO STA 1055+85



GRAVELLY LAKE DR SW - WITH OFF STREET PARKING

SECTION

1"=5'

STA 1014+12 TO STA 1019+95

CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04. SLOPE GUTTER TO MATCH ROADWAY CROSS-SLOPE.
2. 4" DEPTH CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03.
3. 2"' DEPTH CSTC.
4. 6" DEPTH HMA CL ½" PG 58H-22.
5. 4" DEPTH CSTC.
6. PLANTER / COLORED CONCRETE, SEE LANDSCAPE PLANS.
7. CONSTRUCTION CENTERLINE.
8. HORIZONTAL AND VERTICAL CONTROL POINT.
9. 3" DEPTH HMA CL ½" PG 58H-22.

	REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-RS03-04
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT — STATE OF WASHINGTON — 48540 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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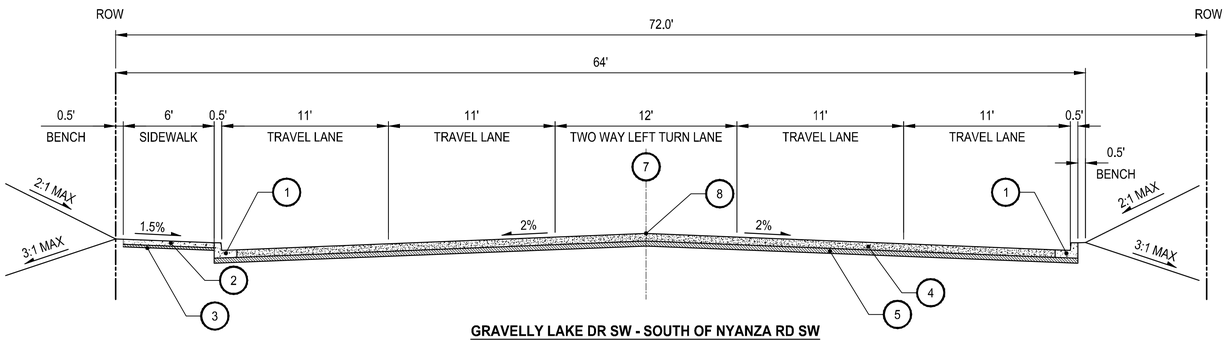
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY SECTIONS

DRAWING NO.
10 OF 153
RS2

LAYOUT: RS2 ROADWAY SECTIONS PATH: \\Jupiter\projects\19000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Tuesday, February 2, 2021 5:20:44 PM

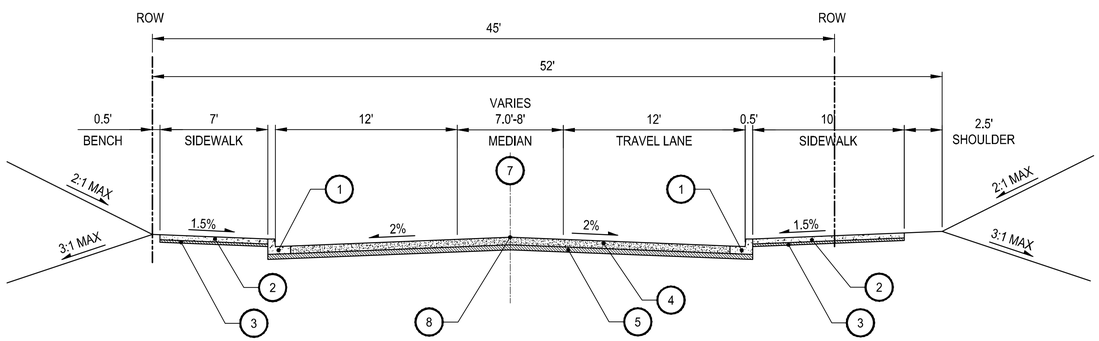


GRAVELLY LAKE DR SW - SOUTH OF NYANZA RD SW

SECTION

1"=5'

STA 1058+75 TO STA 1062+73

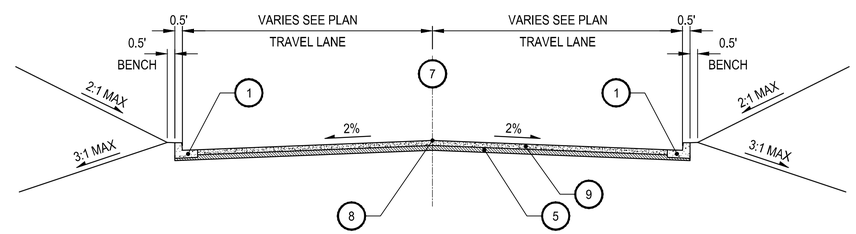


VETERANS DRIVE SW

SECTION

1"=5'

STA 1101+50 TO STA 1102+59

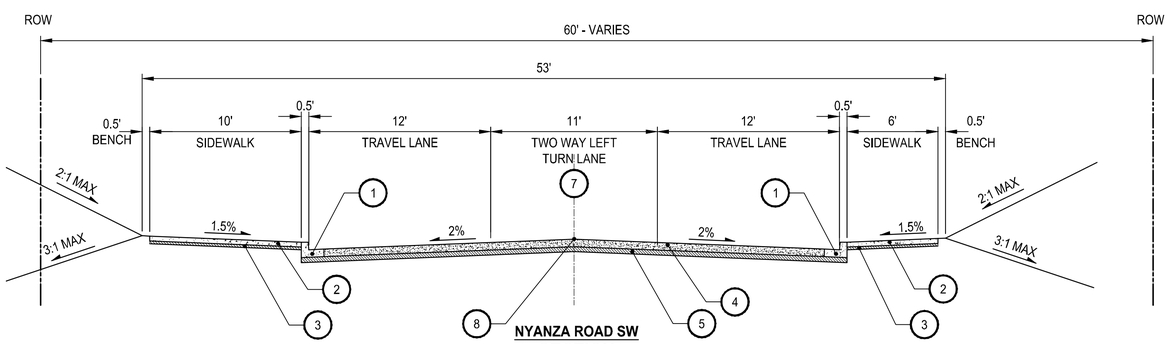


LANGLOW STREET SW, NORTH STREET SW
COUNTRY CLUB DR SW (PRIVATE), & LOCH LANE SW (PRIVATE)

SECTION

1"=5'

LANGLOW STREET SW: STA 1300+26 TO STA 1300+75
NORTH STREET SW: STA 1400+33 TO STA 1400+75
COUNTRY CLUB DRIVE SW (PRIVATE): STA 1500+41 TO STA 1500+75
LOCH LANE SW (PRIVATE ROAD): STA 1600+36 TO STA 1600+75



NYANZA ROAD SW

SECTION

1"=5'

STA 1202+60 TO STA 1202.97

CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04. SLOPE GUTTER TO MATCH ROADWAY CROSS-SLOPE.
2. 4" DEPTH CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03.
3. 2"' DEPTH CSTC.
4. 6" DEPTH HMA CL ½" PG 58H-22.
5. 4" DEPTH CSTC.
6. PLANTER / COLORED CONCRETE, SEE LANDSCAPE PLANS.
7. CONSTRUCTION CENTERLINE.
8. HORIZONTAL AND VERTICAL CONTROL POINT.
9. 3" DEPTH HMA CL ½" PG 58H-22.

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-RS03-04
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

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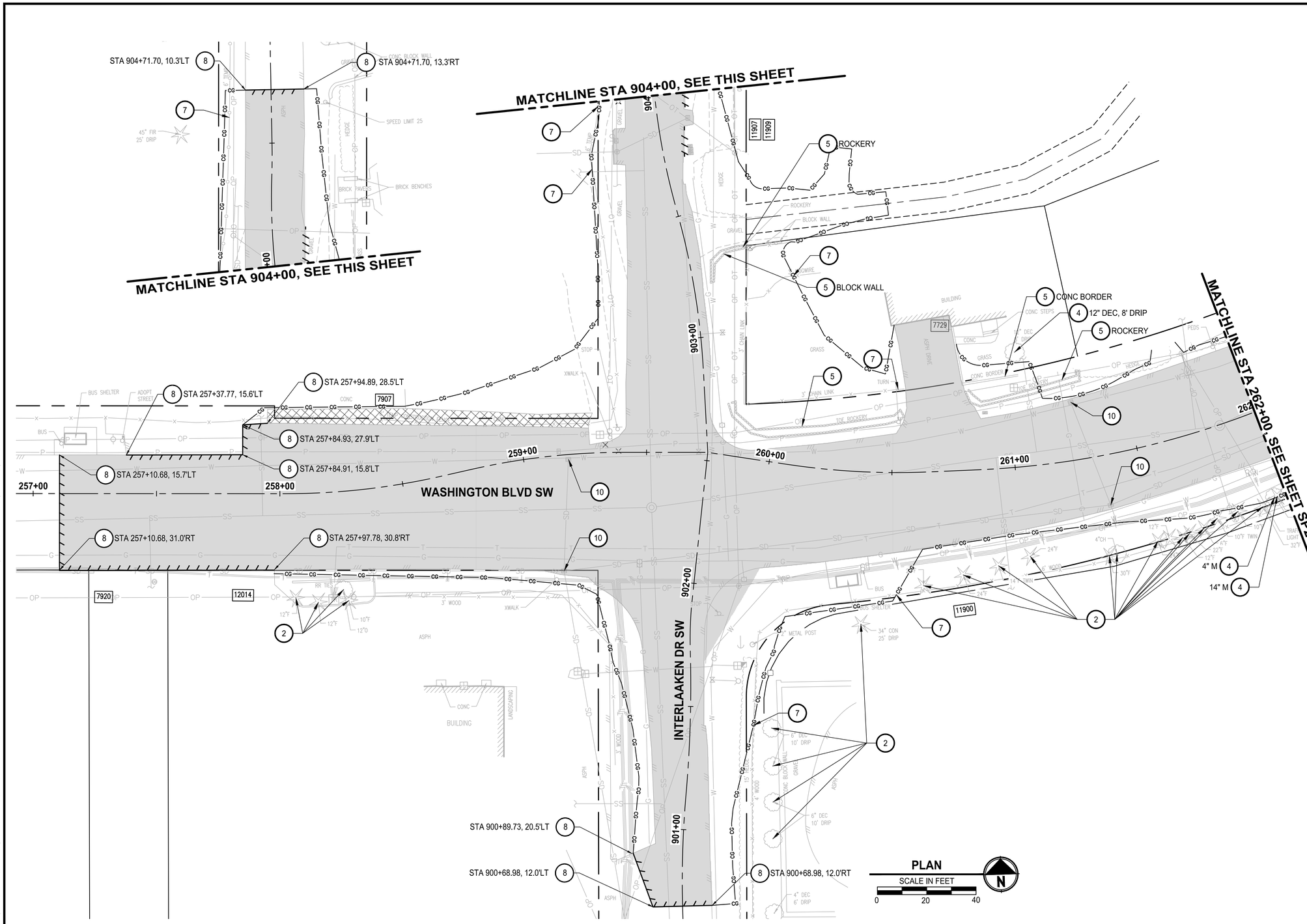
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY SECTIONS

DRAWING NO.
11 OF 153
RS3

LAYOUT: RS3 ROADWAY SECTIONS PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Tuesday, February 2, 2021 5:21:08 PM



SITE PREPARATION NOTES

1. PROTECT EXISTING MONUMENT.
2. PRESERVE AND PROTECT TREE OR SHRUB.
3. EXISTING MONUMENT TO BE RESET. SEE PP SHEETS FOR PROPOSED LOCATION.
4. REMOVE TREE.
5. REMOVE STRUCTURE/OBSTRUCTION.
6. REMOVE CHANNELIZATION OR PAVEMENT MARKING.
7. REMOVE FENCE TO NEAREST POST OUTSIDE CLEARING AND GRUBBING LIMITS.
8. SAWCUT ASPHALT CONCRETE.
9. SAWCUT CEMENT CONCRETE TO NEAREST JOINT.
10. INSTALL INLET PROTECTION PER CITY OF LAKEWOOD STD PLAN SW-15.

LEGEND

- CLEARING AND GRUBBING LIMITS
- REMOVE ASPHALT CONCRETE PAVEMENT
- REMOVE CEMENT CONCRETE PAVEMENT
- REMOVE CURB AND GUTTER
- SAWCUT LINE

GENERAL NOTES

1. REMOVE EXISTING SURFACE IMPROVEMENTS AND VEGETATION WITHIN CLEARING AND GRUBBING LIMITS UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED ON THE UTILITY SPECIFIC PLANS.
2. REMOVE TREES/SHRUBS/VEGETATION WITHIN CLEARING LIMITS, UNLESS OTHERWISE NOTED. TREE DIAMETERS ARE NOTED ON THE PLANS FOR THE CONTRACTOR'S CONVENIENCE ONLY BUT DOES NOT RELIEVE THE CONTRACTOR FROM REMOVING ANY UNMARKED TREES OR SHRUBS WITHIN THE LIMITS.
3. PROTECT EXISTING TRAFFIC CONTROL SIGNAGE AND MAILBOXES UNTIL PERMANENTLY REPLACED OR RELOCATED.
4. SEE THE FOLLOWING SHEETS FOR ADDITIONAL SITE PREPARATION REQUIREMENTS INCLUDING REMOVAL, PROTECTION, AND RELOCATION OF EXISTING FACILITIES:

   EL - ELECTRICAL: EXISTING ILLUMINATION, POWER POLES AND TRAFFIC SIGNALS.

   CH - CHANNELIZATION AND SIGNAGE: EXISTING SIGNS.

   PP - ROADWAY PLAN AND PROFILE: EXISTING MAILBOXES.

   SD - STORM DRAINAGE PLAN AND PROFILE: EXISTING STORM DRAINAGE FACILITIES, SANITARY SEWER AND ALL OTHER UTILITIES.

   WA - WATER PLAN AND PROFILE: EXISTING WATER LINE, HYDRANTS, METERS AND APPURTENANCES.

	REVISIONS	DATE	BY

DESIGNED C. GUTHRIE
DRAWN K. RAY
CHECKED A. CIRILLO
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–SP13–14
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

CODY A. JANSON STATE OF WASHINGTON 41378 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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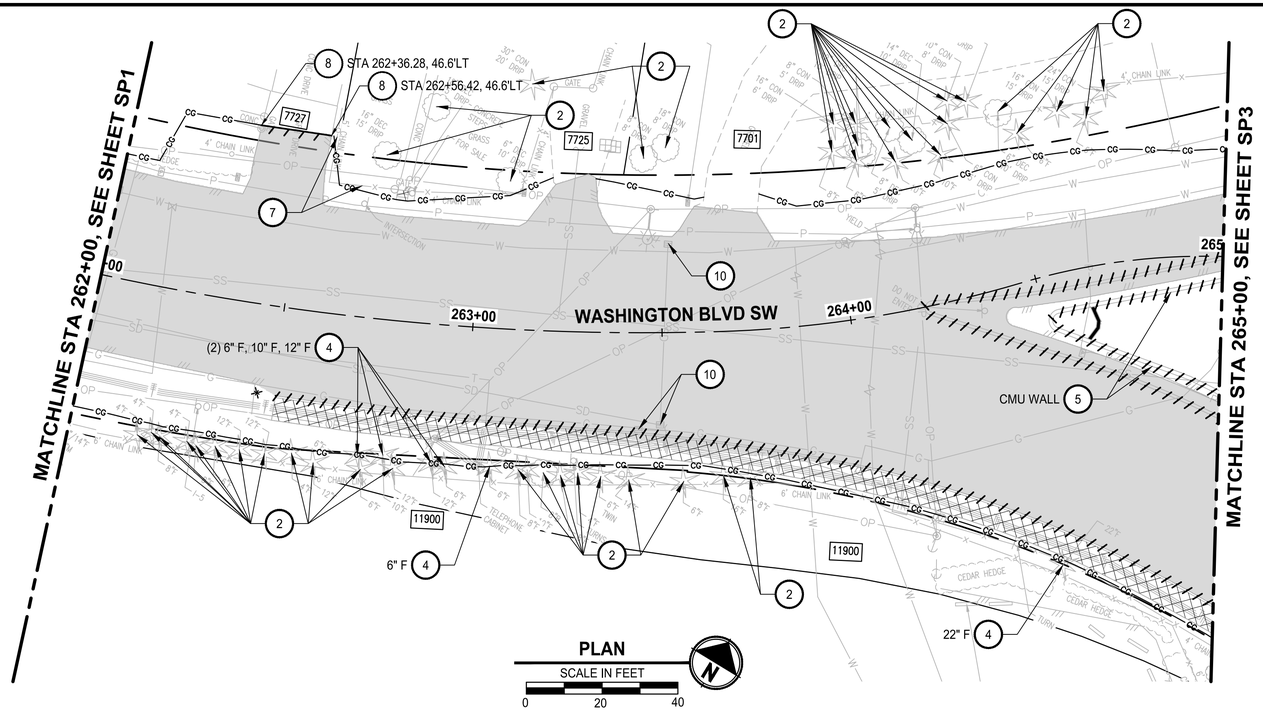
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION WASHINGTON BLVD SW

DRAWING NO.
12 OF 153
SP1

PATH: U:\PSO\Projects\Clients\3047–City of Lakewood\214–3047–013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 12:39:30 PM LAYOUT: SP1



SITE PREPARATION NOTES

1. PROTECT EXISTING MONUMENT.
2. PRESERVE AND PROTECT TREE OR SHRUB.
3. EXISTING MONUMENT TO BE RESET. SEE PP SHEETS FOR PROPOSED LOCATION.
4. REMOVE TREE.
5. REMOVE STRUCTURE/OBSTRUCTION.
6. REMOVE CHANNELIZATION OR PAVEMENT MARKING.
7. REMOVE FENCE TO NEAREST POST OUTSIDE CLEARING AND GRUBBING LIMITS.
8. SAWCUT ASPHALT CONCRETE.
9. SAWCUT CEMENT CONCRETE TO NEAREST JOINT.
10. INSTALL INLET PROTECTION PER CITY OF LAKEWOOD STD PLAN SW-15.

LEGEND

- CLEARING AND GRUBBING LIMITS
- REMOVE ASPHALT CONCRETE PAVEMENT
- REMOVE CEMENT CONCRETE PAVEMENT
- REMOVE CURB AND GUTTER
- SAWCUT LINE

GENERAL NOTES

1. REMOVE EXISTING SURFACE IMPROVEMENTS AND VEGETATION WITHIN CLEARING AND GRUBBING LIMITS UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED ON THE UTILITY SPECIFIC PLANS.
2. REMOVE TREES/SHRUBS/VEGETATION WITHIN CLEARING LIMITS, UNLESS OTHERWISE NOTED. TREE DIAMETERS ARE NOTED ON THE PLANS FOR THE CONTRACTOR'S CONVENIENCE ONLY BUT DOES NOT RELIEVE THE CONTRACTOR FROM REMOVING ANY UNMARKED TREES OR SHRUBS WITHIN THE LIMITS.
3. PROTECT EXISTING TRAFFIC CONTROL SIGNAGE AND MAILBOXES UNTIL PERMANENTLY REPLACED OR RELOCATED.
4. SEE THE FOLLOWING SHEETS FOR ADDITIONAL SITE PREPARATION REQUIREMENTS INCLUDING REMOVAL, PROTECTION, AND RELOCATION OF EXISTING FACILITIES:

   EL - ELECTRICAL: EXISTING ILLUMINATION, POWER POLES AND TRAFFIC SIGNALS.

   CH - CHANNELIZATION AND SIGNAGE: EXISTING SIGNS.

   PP - ROADWAY PLAN AND PROFILE: EXISTING MAILBOXES.

   SD - STORM DRAINAGE PLAN AND PROFILE: EXISTING STORM DRAINAGE FACILITIES, SANITARY SEWER AND ALL OTHER UTILITIES.

   WA - WATER PLAN AND PROFILE: EXISTING WATER LINE, HYDRANTS, METERS AND APPURTENANCES.

REVISIONS	DATE	BY

DESIGNED C. GUTHRIE
DRAWN K. RAY
CHECKED A. CIRILLO
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SP13-14
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

CODY A. JANSON STATE OF WASHINGTON 41378 REGISTERED PROFESSIONAL ENGINEER
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION WASHINGTON BLVD SW

DRAWING NO.

SP2

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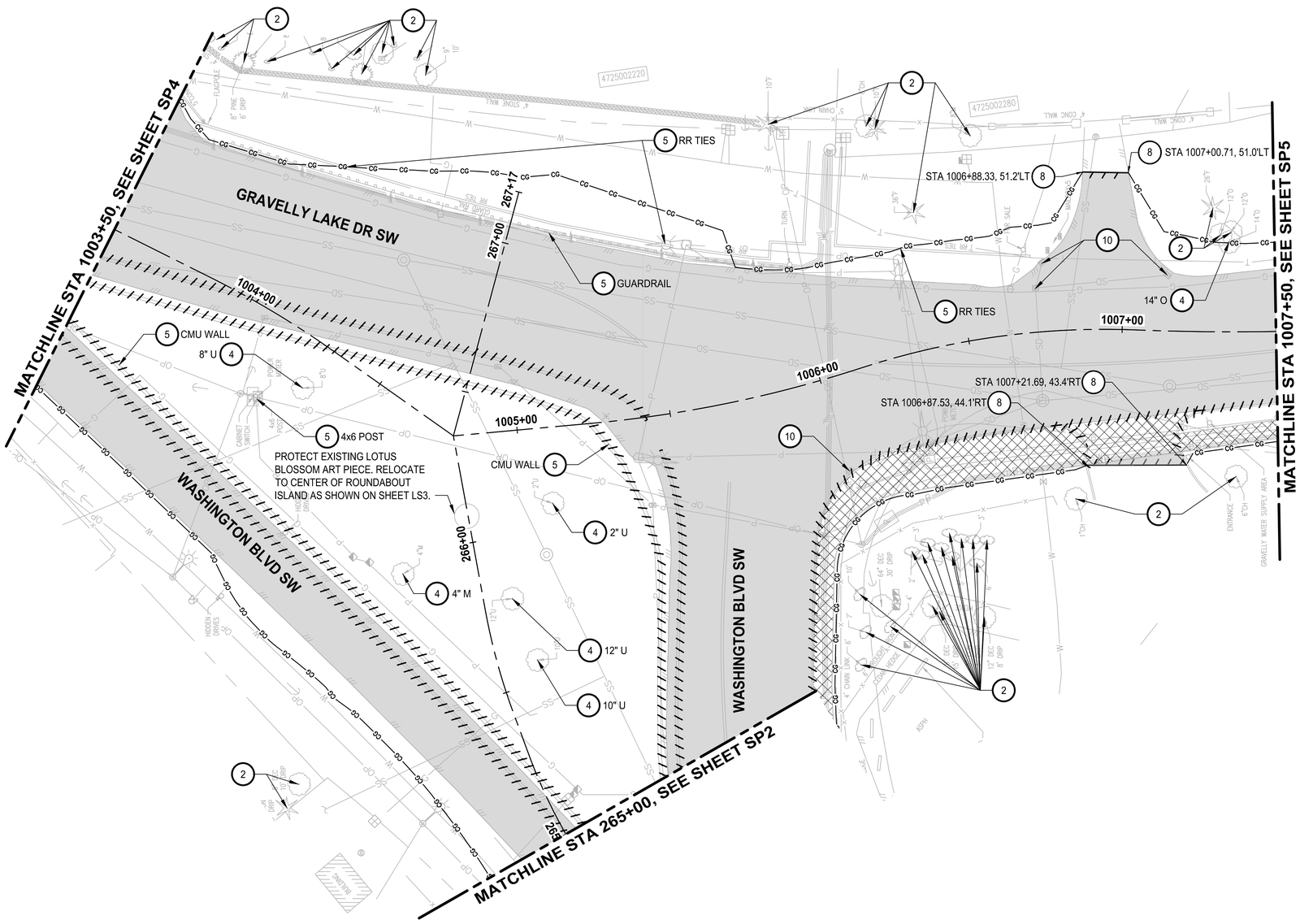

PLAN

SCALE IN FEET

0 20 40

SITE PREPARATION NOTES

1. PROTECT EXISTING MONUMENT.
2. PRESERVE AND PROTECT TREE OR SHRUB.
3. EXISTING MONUMENT TO BE RESET. SEE PP SHEETS FOR PROPOSED LOCATION.
4. REMOVE TREE.
5. REMOVE STRUCTURE/OBSTRUCTION.
6. REMOVE CHANNELIZATION OR PAVEMENT MARKING.
7. REMOVE FENCE TO NEAREST POST OUTSIDE CLEARING AND GRUBBING LIMITS.
8. SAWCUT ASPHALT CONCRETE.
9. SAWCUT CEMENT CONCRETE TO NEAREST JOINT.
10. INSTALL INLET PROTECTION PER CITY OF LAKEWOOD STD PLAN SW-15.

LEGEND

- CLEARING AND GRUBBING LIMITS
- REMOVE ASPHALT CONCRETE PAVEMENT
- REMOVE CEMENT CONCRETE PAVEMENT
- REMOVE CURB AND GUTTER
- SAWCUT LINE

GENERAL NOTES

1. REMOVE EXISTING SURFACE IMPROVEMENTS AND VEGETATION WITHIN CLEARING AND GRUBBING LIMITS UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED ON THE UTILITY SPECIFIC PLANS.
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3. PROTECT EXISTING TRAFFIC CONTROL SIGNAGE AND MAILBOXES UNTIL PERMANENTLY REPLACED OR RELOCATED.
4. SEE THE FOLLOWING SHEETS FOR ADDITIONAL SITE PREPARATION REQUIREMENTS INCLUDING REMOVAL, PROTECTION, AND RELOCATION OF EXISTING FACILITIES:

   EL - ELECTRICAL: EXISTING ILLUMINATION, POWER POLES AND TRAFFIC SIGNALS.

   CH - CHANNELIZATION AND SIGNAGE: EXISTING SIGNS.

   PP - ROADWAY PLAN AND PROFILE: EXISTING MAILBOXES.

   SD - STORM DRAINAGE PLAN AND PROFILE: EXISTING STORM DRAINAGE FACILITIES, SANITARY SEWER AND ALL OTHER UTILITIES.

   WA - WATER PLAN AND PROFILE: EXISTING WATER LINE, HYDRANTS, METERS AND APPURTENANCES.

REVISIONS	DATE	BY

DESIGNED C. GUTHRIE
DRAWN K. RAY
CHECKED A. CIRILLO
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SP15-25
JOB No. 214-3047-013
DATE FEBRUARY 2021

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CODY A. JANSON, STATE OF WASHINGTON, 41378, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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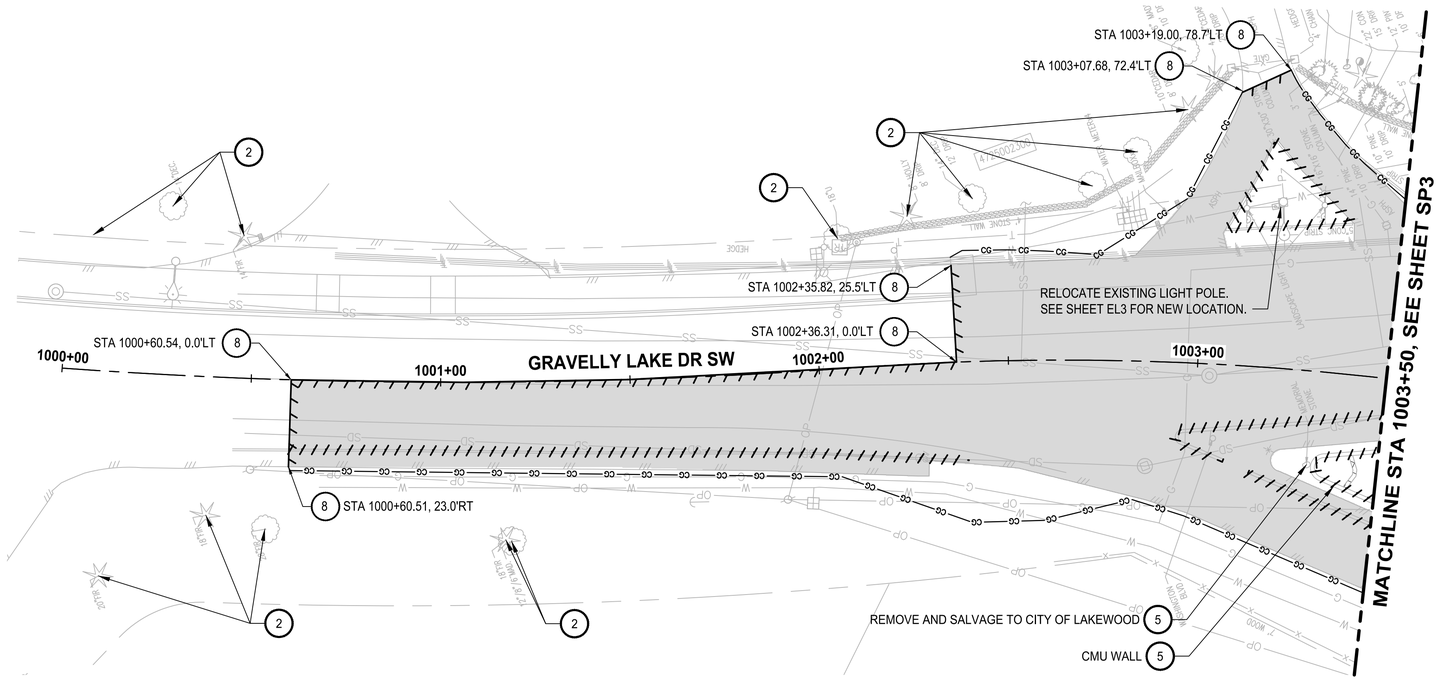
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION GRAVELLY LAKE DR SW

DRAWING NO.

SP3

LAYOUT: SP3 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\995vcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 12:40:38 PM



PLAN

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0 20 40

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LEGEND

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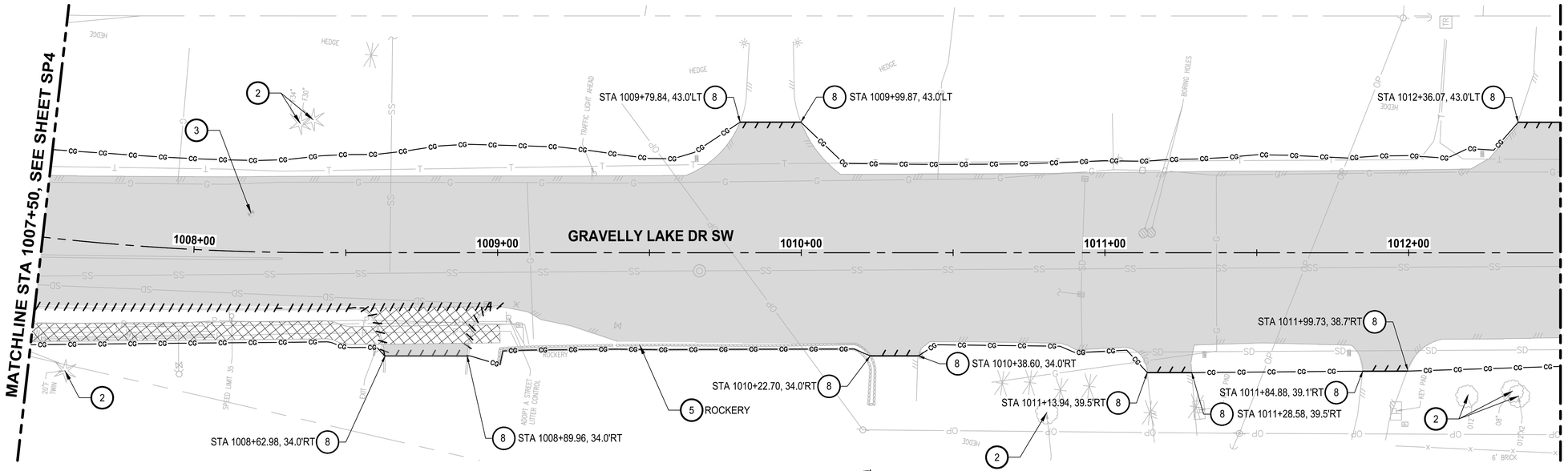
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION
GRAVELLY LAKE DR SW

DRAWING NO.
15 OF 153
SP4

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 12:41:10 PM LAYOUT: SP4



PLAN

SCALE IN FEET

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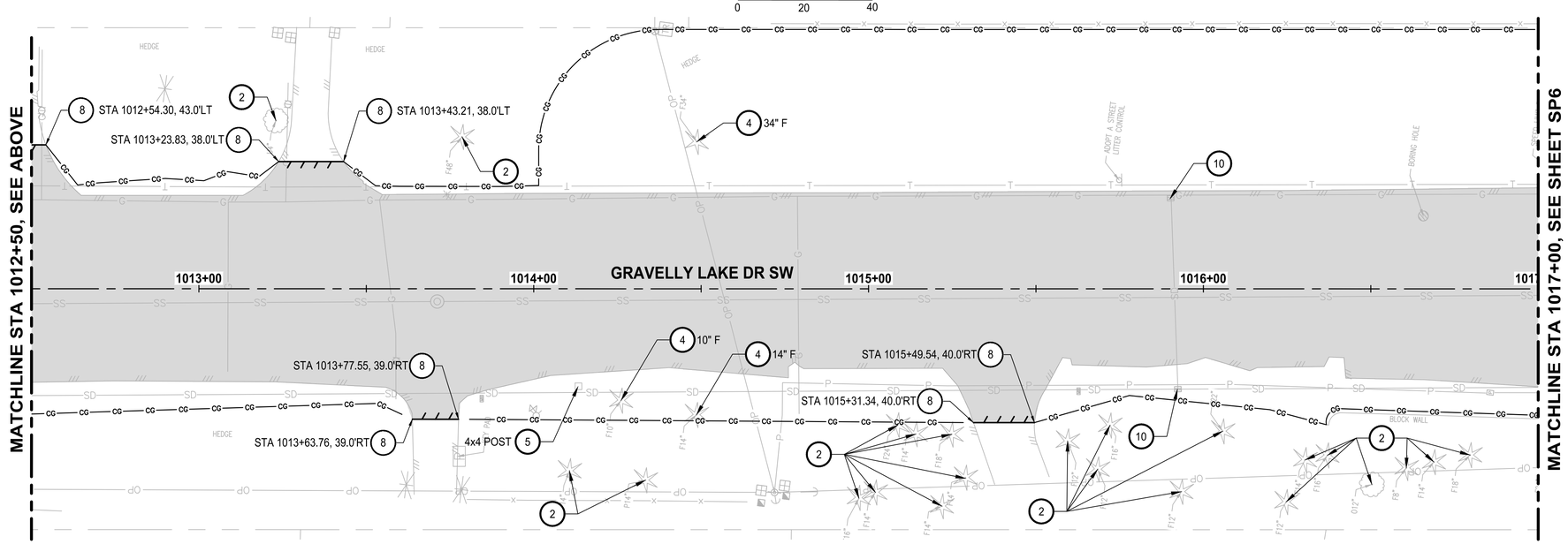

PLAN

SCALE IN FEET

0 20 40

SITE PREPARATION NOTES

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LEGEND

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REVISIONS	DATE	BY

DESIGNED C. GUTHRIE
DRAWN K. RAY
CHECKED A. CIRILLO
APPROVED A. FISHER

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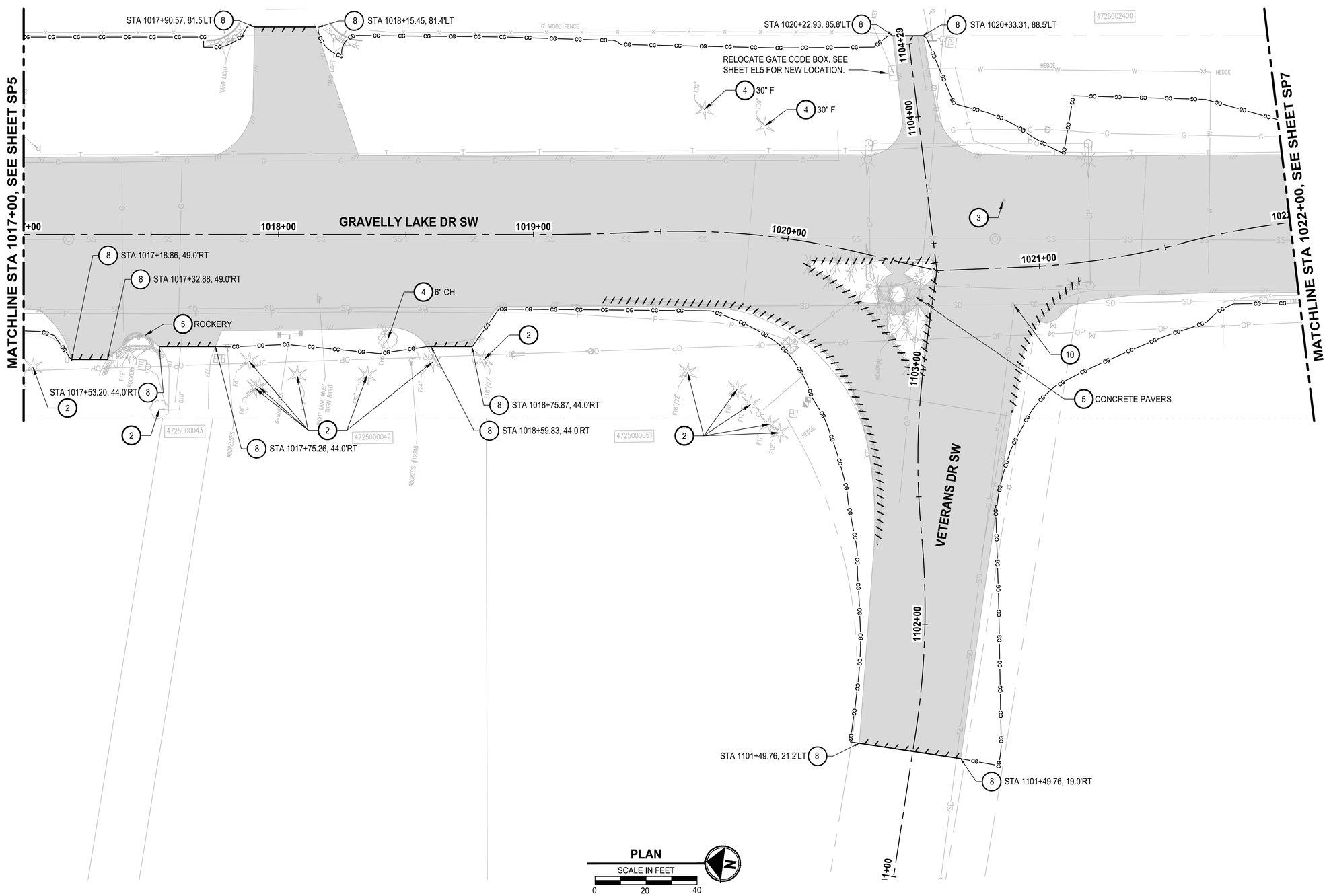
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION GRAVELLY LAKE DR SW

DRAWING NO. 16 OF 153

SP5

LAYOUT: SP5 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\995vcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 12:42:03 PM



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CITY OF LAKEWOOD WA 1996

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION GRAVELLY LAKE DR SW

DRAWING NO.
17 OF 153
SP6

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013_JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 12:42:29 PM
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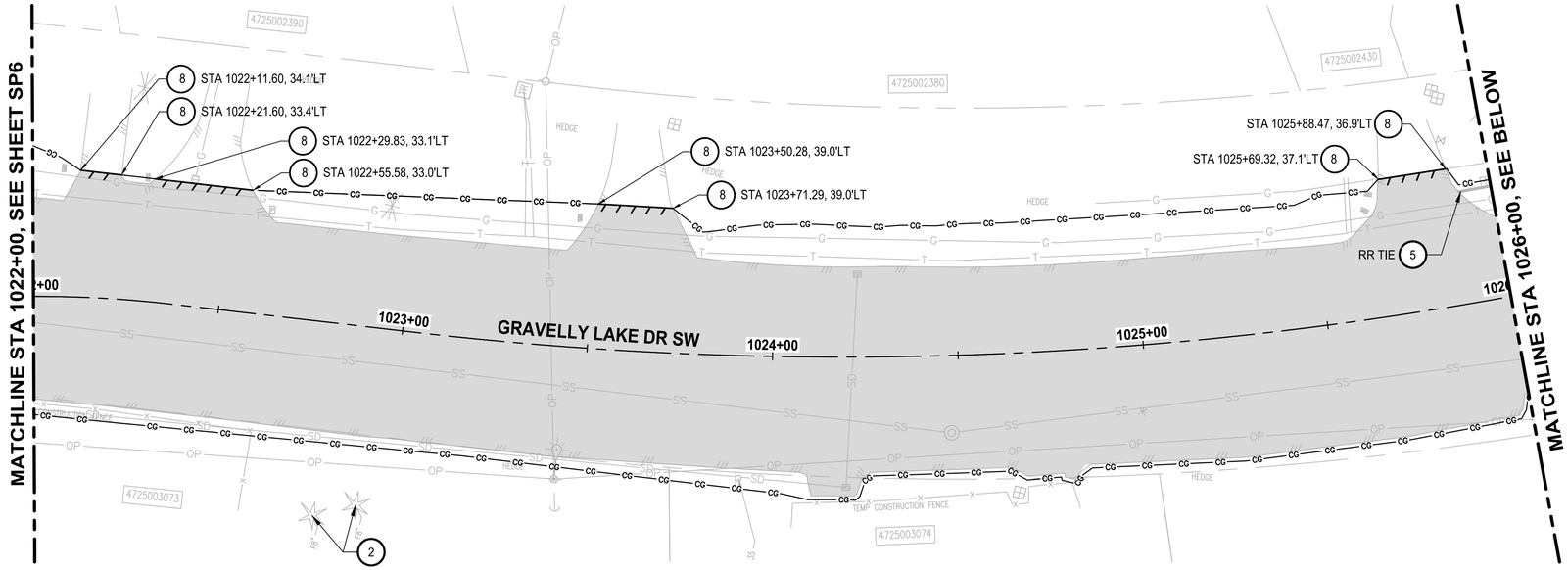

PLAN

SCALE IN FEET

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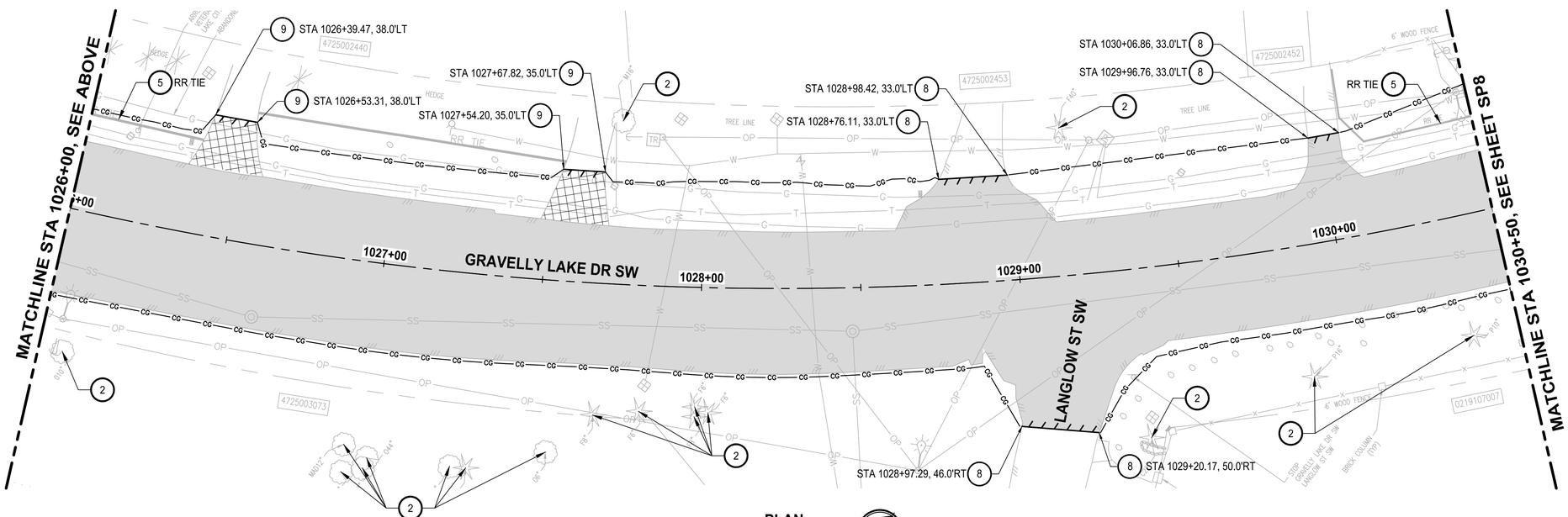

PLAN

SCALE IN FEET

0 20 40

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LEGEND

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- REMOVE ASPHALT CONCRETE PAVEMENT
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	REVISIONS	DATE	BY

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CITY OF LAKEWOOD WA 1996

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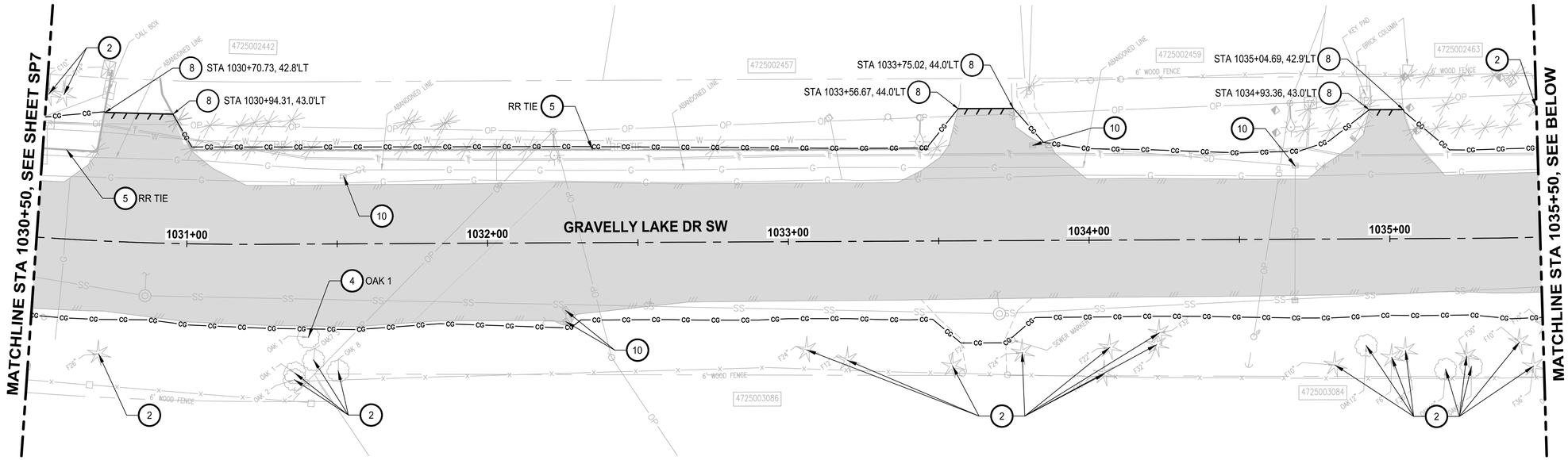
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION GRAVELLY LAKE DR SW

DRAWING NO. 18 OF 153

SP7

LAYOUT: SP7 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 12:43:14 PM



PLAN

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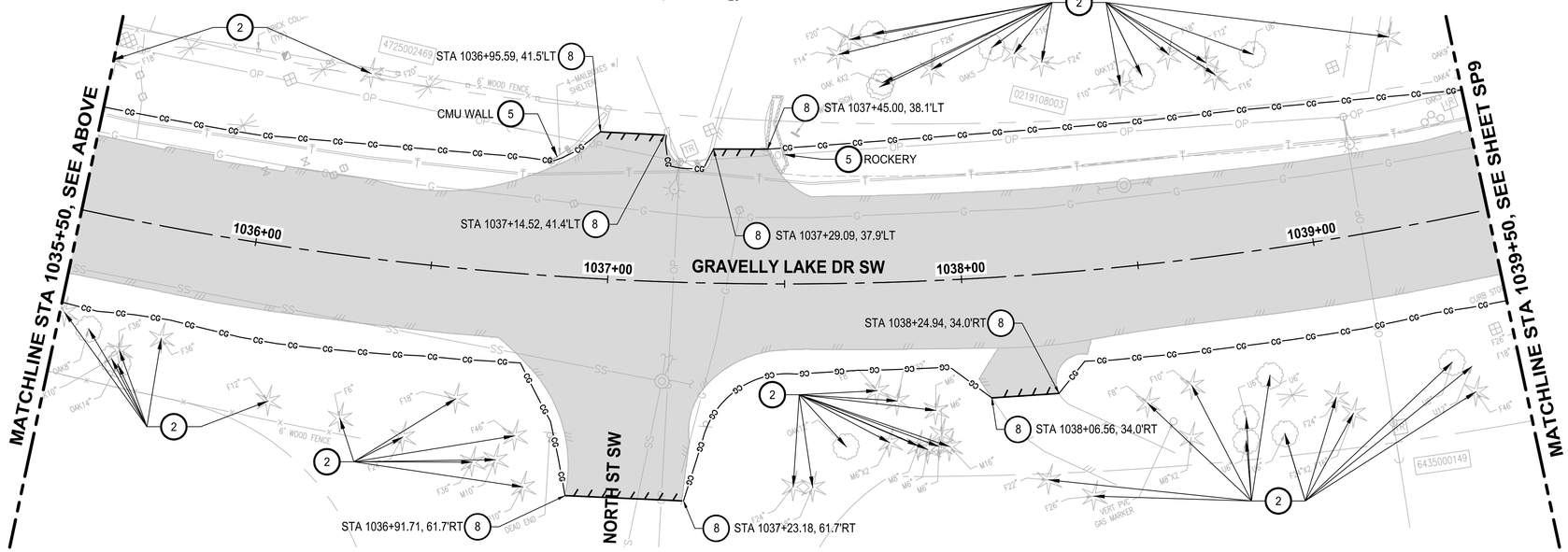

PLAN

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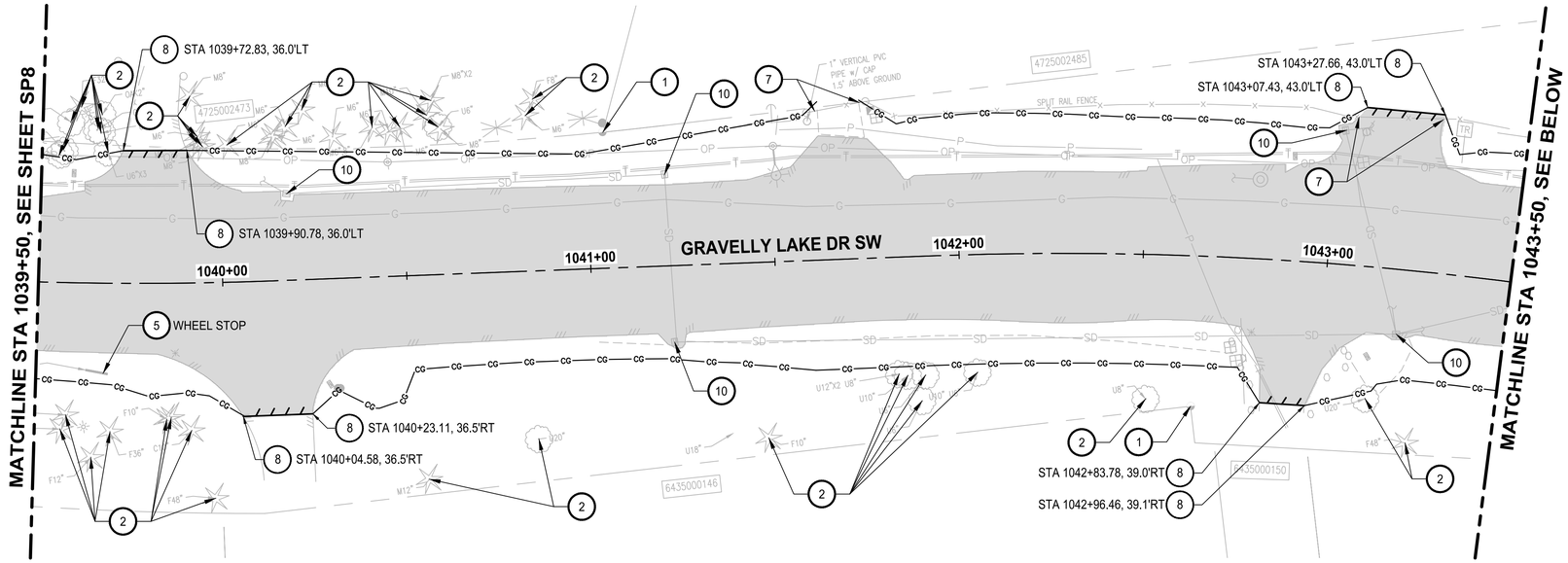
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

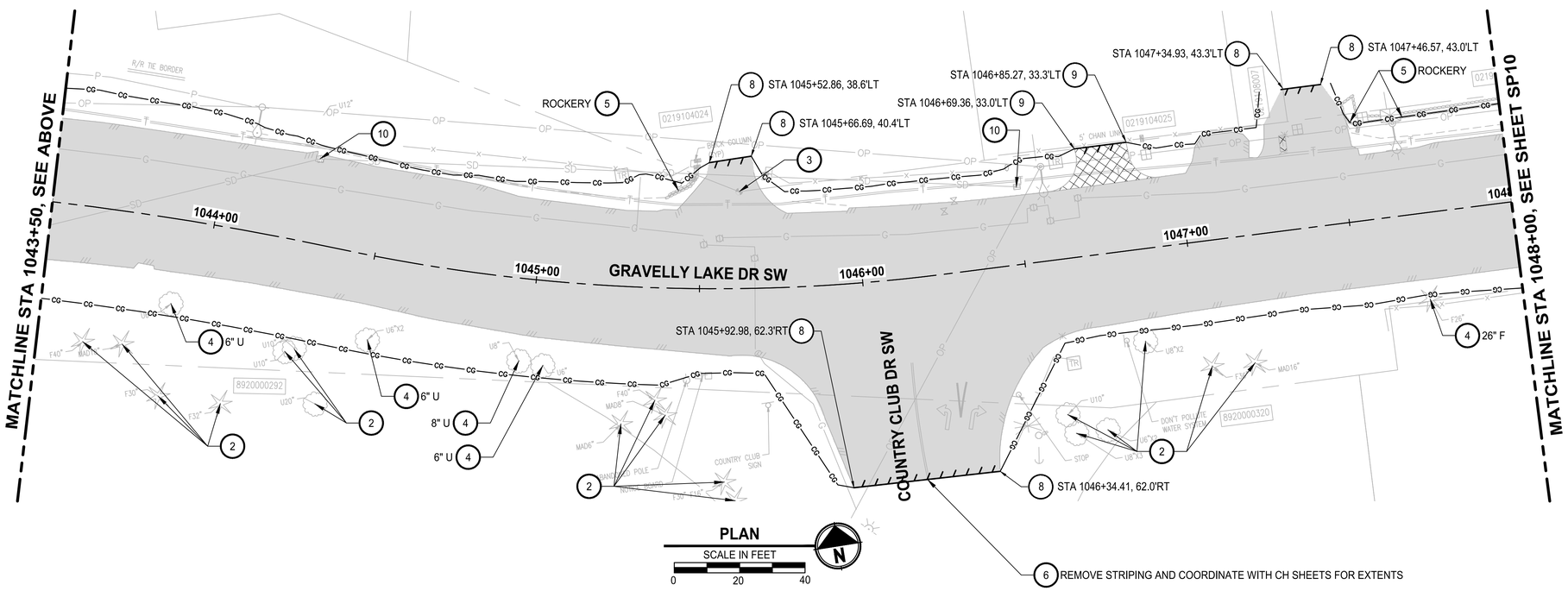
SITE PREPARATION GRAVELLY LAKE DR SW

DRAWING NO.
19 OF 153
SP8

PATH: U:\PSO\Projects\Clients\3047–City of Lakewood\214–3047–013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 12:44:01 PM
LAYOUT: SP8



PLAN
SCALE IN FEET
0 20 40



PLAN
SCALE IN FEET
0 20 40

SITE PREPARATION NOTES

1. PROTECT EXISTING MONUMENT.
2. PRESERVE AND PROTECT TREE OR SHRUB.
3. EXISTING MONUMENT TO BE RESET. SEE PP SHEETS FOR PROPOSED LOCATION.
4. REMOVE TREE.
5. REMOVE STRUCTURE/OBSTRUCTION.
6. REMOVE CHANNELIZATION OR PAVEMENT MARKING.
7. REMOVE FENCE TO NEAREST POST OUTSIDE CLEARING AND GRUBBING LIMITS.
8. SAWCUT ASPHALT CONCRETE.
9. SAWCUT CEMENT CONCRETE TO NEAREST JOINT.
10. INSTALL INLET PROTECTION PER CITY OF LAKEWOOD STD PLAN SW-15.

LEGEND

- CLEARING AND GRUBBING LIMITS
- REMOVE ASPHALT CONCRETE PAVEMENT
- REMOVE CEMENT CONCRETE PAVEMENT
- REMOVE CURB AND GUTTER
- SAWCUT LINE

GENERAL NOTES

1. REMOVE EXISTING SURFACE IMPROVEMENTS AND VEGETATION WITHIN CLEARING AND GRUBBING LIMITS UNLESS OTHERWISE NOTED. PRESERVE AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE NOTED ON THE UTILITY SPECIFIC PLANS.
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   CH - CHANNELIZATION AND SIGNAGE: EXISTING SIGNS.

   PP - ROADWAY PLAN AND PROFILE: EXISTING MAILBOXES.

   SD - STORM DRAINAGE PLAN AND PROFILE: EXISTING STORM DRAINAGE FACILITIES, SANITARY SEWER AND ALL OTHER UTILITIES.

   WA - WATER PLAN AND PROFILE: EXISTING WATER LINE, HYDRANTS, METERS AND APPURTENANCES.

	REVISIONS	DATE	BY

DESIGNED C. GUTHRIE
DRAWN K. RAY
CHECKED A. CIRILLO
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–SP15–25
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

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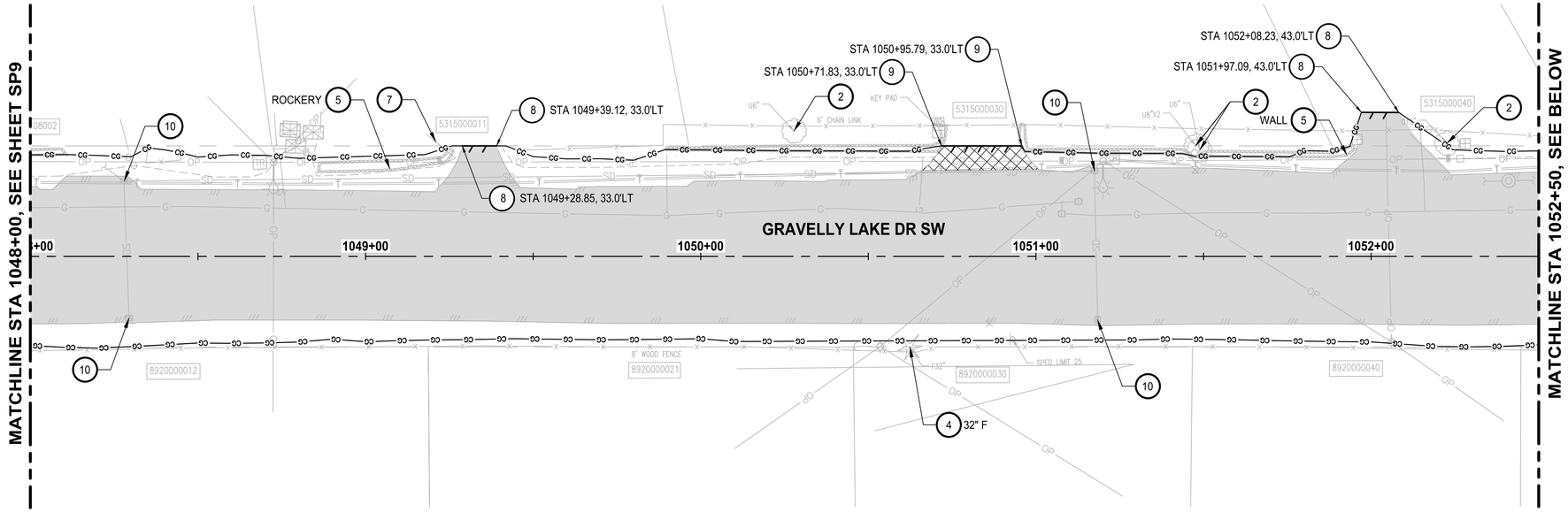
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION GRAVELLY LAKE DR SW

DRAWING NO. 20 OF 153
SP9

LAYOUT: SP9 PATH: U:\PSO\Projects\Clients\3047–City of Lakewood\214–3047–013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 12:44:48 PM



PLAN

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0 20 40

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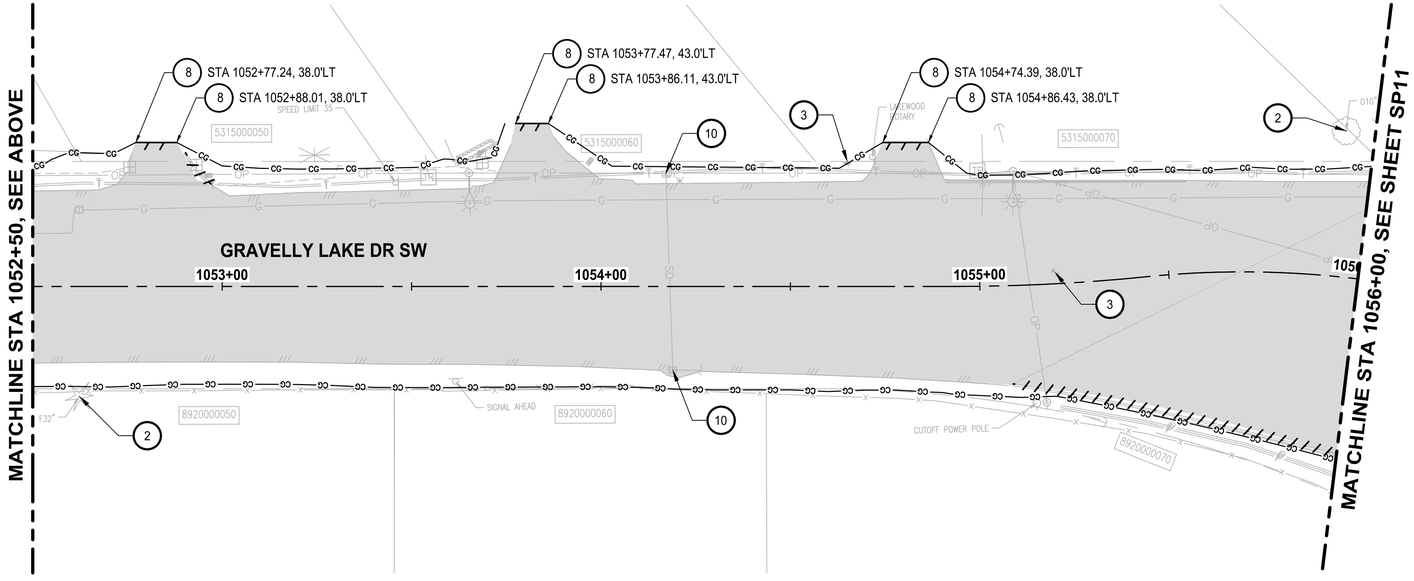

PLAN

SCALE IN FEET

0 20 40

N

SITE PREPARATION NOTES

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LEGEND

- CLEARING AND GRUBBING LIMITS
- REMOVE ASPHALT CONCRETE PAVEMENT
- REMOVE CEMENT CONCRETE PAVEMENT
- REMOVE CURB AND GUTTER
- SAWCUT LINE

GENERAL NOTES

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   PP - ROADWAY PLAN AND PROFILE: EXISTING MAILBOXES.

   SD - STORM DRAINAGE PLAN AND PROFILE: EXISTING STORM DRAINAGE FACILITIES, SANITARY SEWER AND ALL OTHER UTILITIES.

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REVISIONS	DATE	BY

DESIGNED C. GUTHRIE
DRAWN K. RAY
CHECKED A. CIRILLO
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013-SP15-25
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION GRAVELLY LAKE DR SW

DRAWING NO. 21 OF 153

SP10

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 12:45:34 PM
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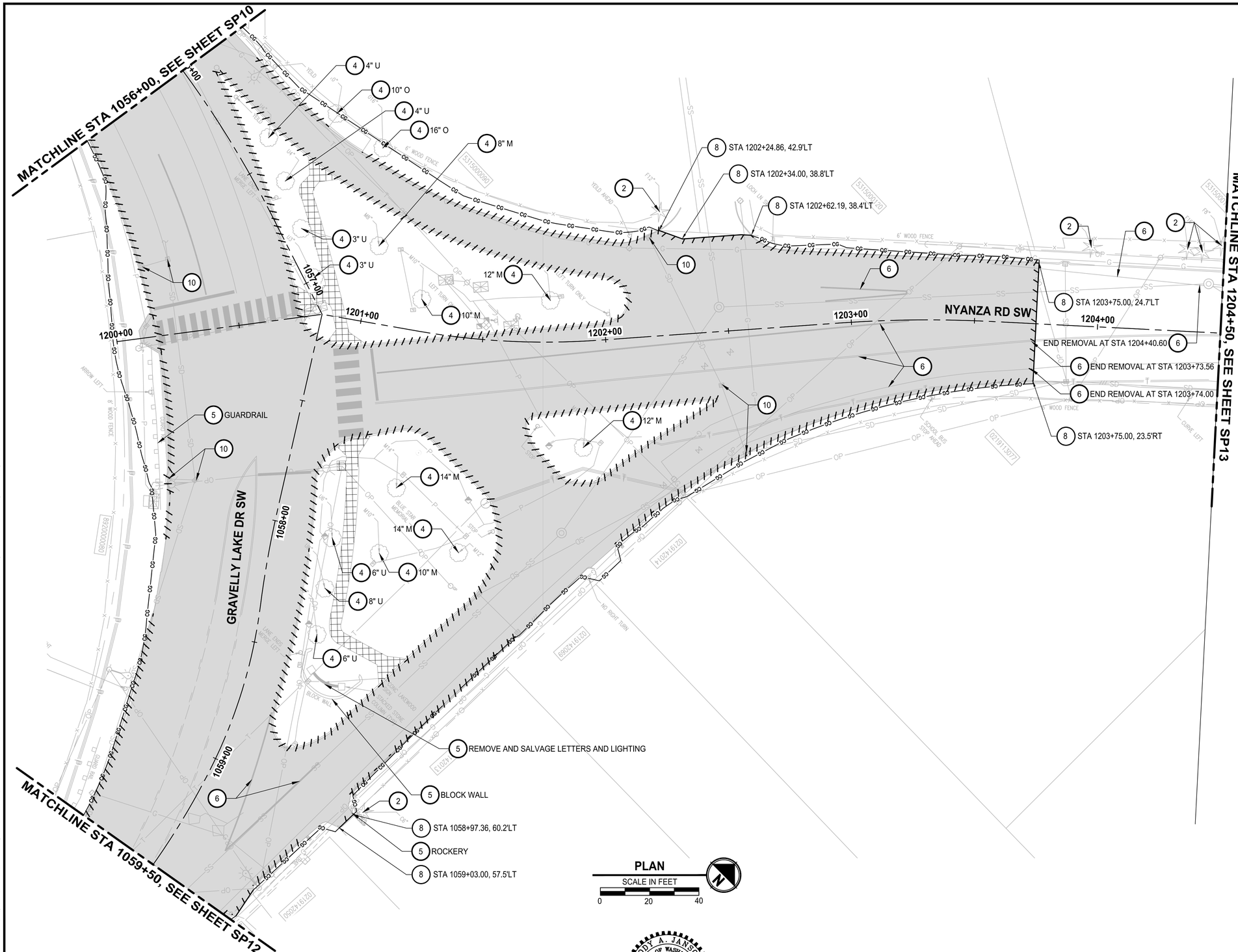

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REVISIONS	DATE	BY

DESIGNED C. GUTHRIE
DRAWN K. RAY
CHECKED A. CIRILLO
APPROVED A. FISHER

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FILE NAME PS3047013–SP15–25
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

CODY A. JANSEN STATE OF WASHINGTON 41378 REGISTERED PROFESSIONAL ENGINEER
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION GRAVELLY LAKE DR SW

DRAWING NO.
22 OF 153
SP11

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Friday, February 5, 2021 2:05:45 PM
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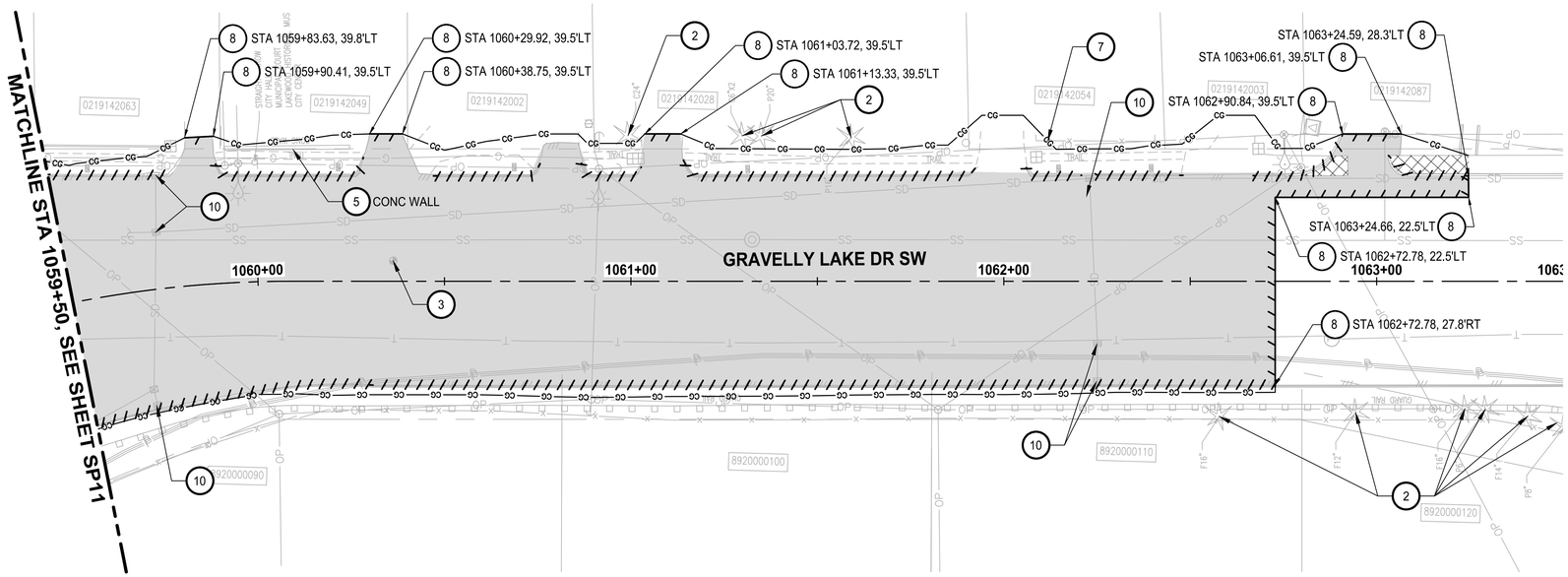

PLAN

SCALE IN FEET

0 20 40

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	REVISIONS	DATE	BY

DESIGNED C. GUTHRIE
DRAWN K. RAY
CHECKED A. CIRILLO
APPROVED A. FISHER

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FILE NAME PS3047013-SP15-25
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

CODY A. JANSON STATE OF WASHINGTON 41378 REGISTERED PROFESSIONAL ENGINEER
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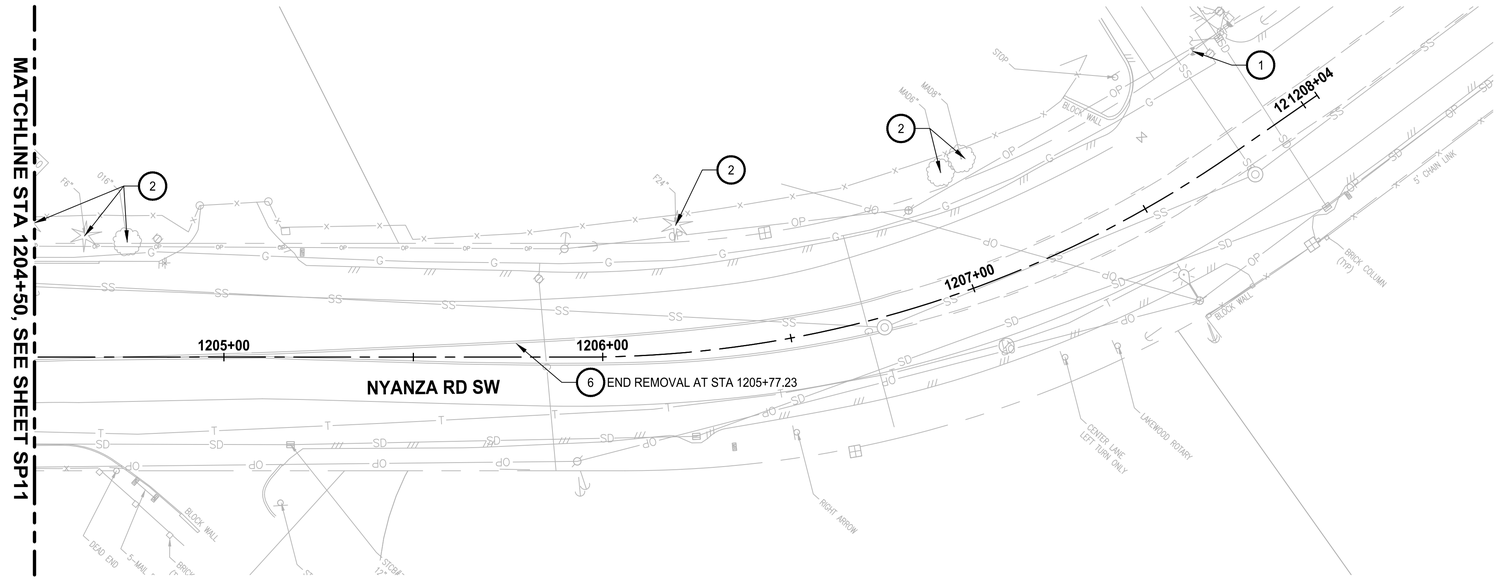
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION GRAVELLY LAKE DR SW

DRAWING NO.

SP12

LAYOUT: SP12 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 12:46:24 PM



PLAN

SCALE IN FEET

0 20 40

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REVISIONS	DATE	BY

DESIGNED C. GUTHRIE
DRAWN K. RAY
CHECKED A. CIRILLO
APPROVED A. FISHER

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FILE NAME PS3047013-SP15-25
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DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

CODY A. JANSON STATE OF WASHINGTON 41378 REGISTERED PROFESSIONAL ENGINEER
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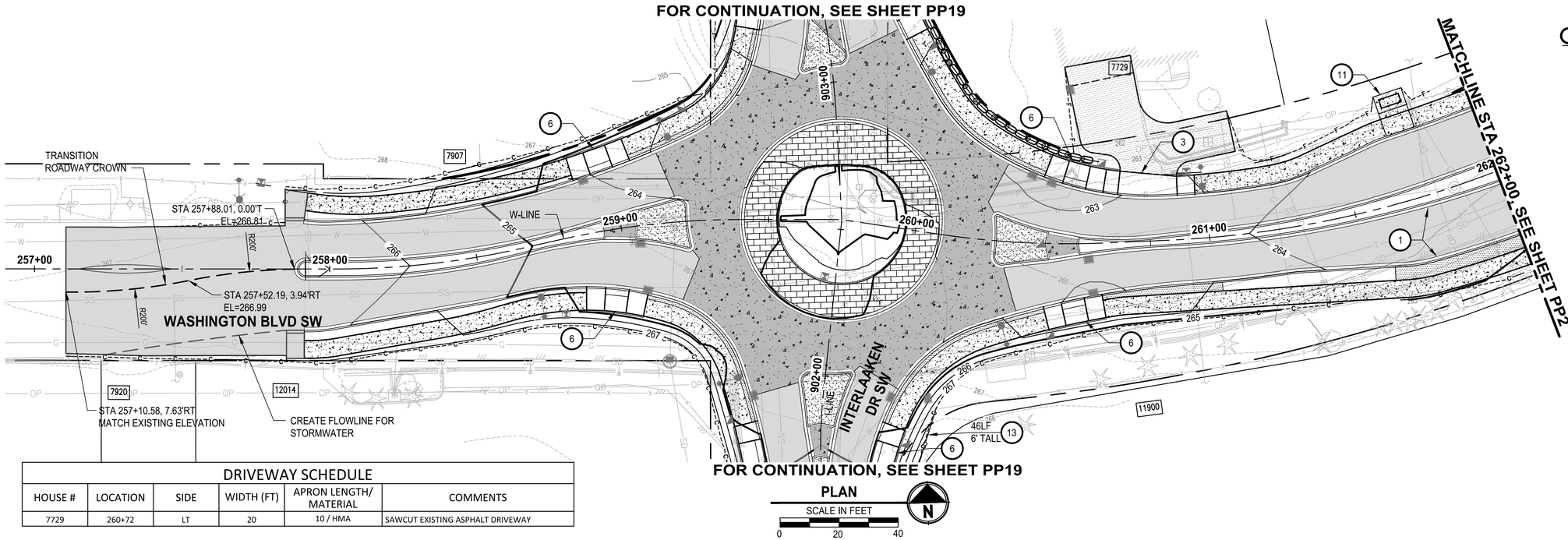
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

SITE PREPARATION
NYANZA RD SW

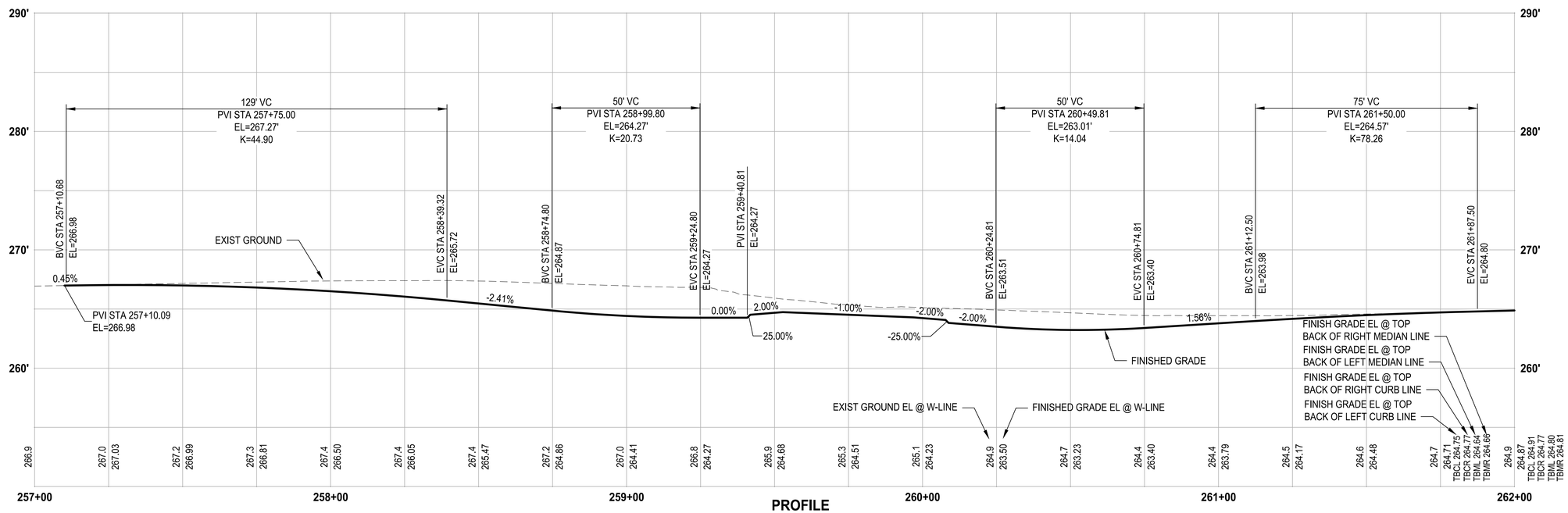
LAYOUT: SP13 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Friday, February 5, 2021 2:08:20 PM



PLAN

SCALE IN FEET 0 20 40

DRIVEWAY SCHEDULE					
HOUSE #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
7729	260+72	LT	20	10 / HMA	SAWCUT EXISTING ASPHALT DRIVEWAY



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —-----c— CUT
- —-----f— FILL

REVISIONS	DATE	BY

DESIGNED D. SUSLIKOV
DRAWN M. VASSEY/K. TAYLOR
CHECKED A. CIRILLO
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–PP19
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CITY OF LAKEWOOD WA ●1996●

DMITRI VICTOROVICH SUSLIKOV STATE OF WASHINGTON 38390 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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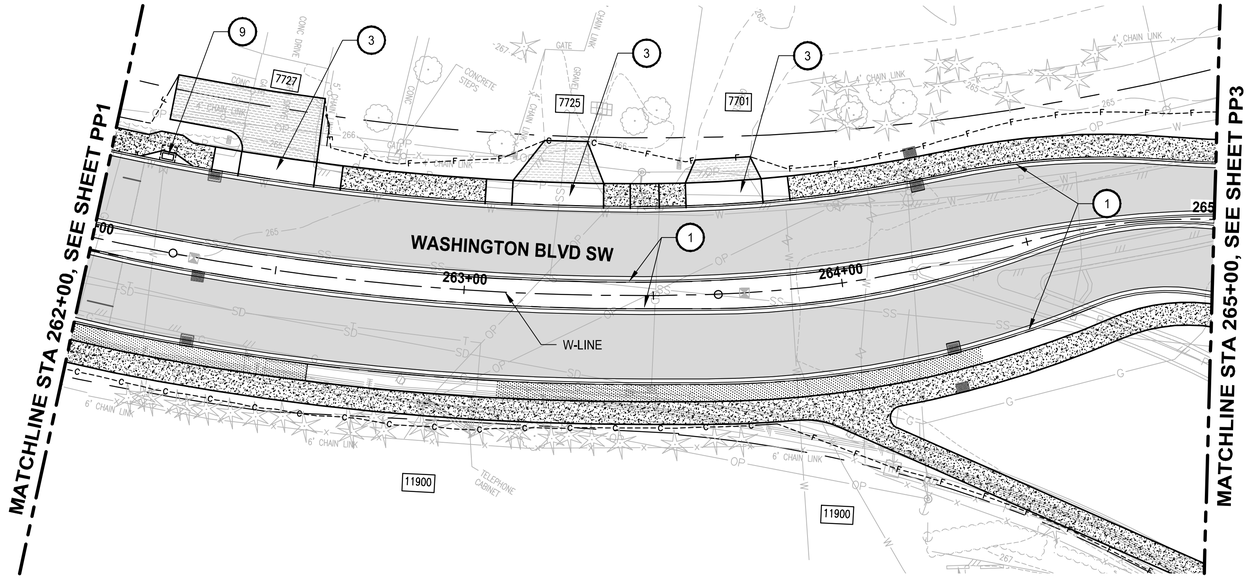
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE WASHINGTON BLVD SW

DRAWING NO.
25 OF 153
PP1

LAYOUT: PP1 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 3:19:38 PM



DRIVEWAY SCHEDULE					
HOUSE #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
7727	262+46.58	LT	20	17/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
7725	263+24.01	LT	24	11/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
7701	263+69.92	LT	20	6/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

PLAN

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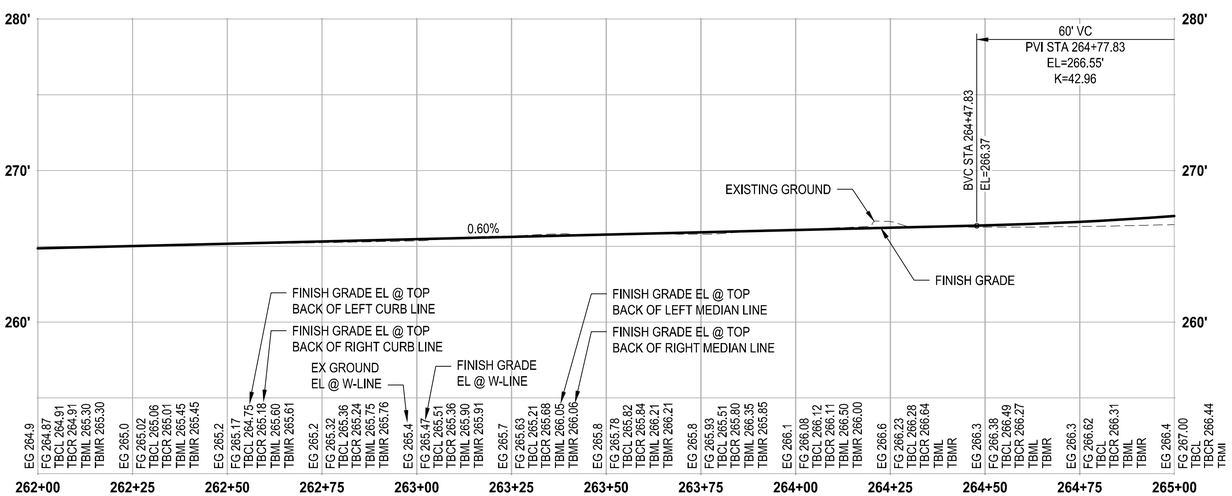

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HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —----c— CUT
- —----F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-PP2-7
JOB No. 214-3047-013
DATE FEBRUARY 2021

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JAMES BENTON DORT STATE OF WASHINGTON 48540 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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WWW.BCRADESIGN.COM

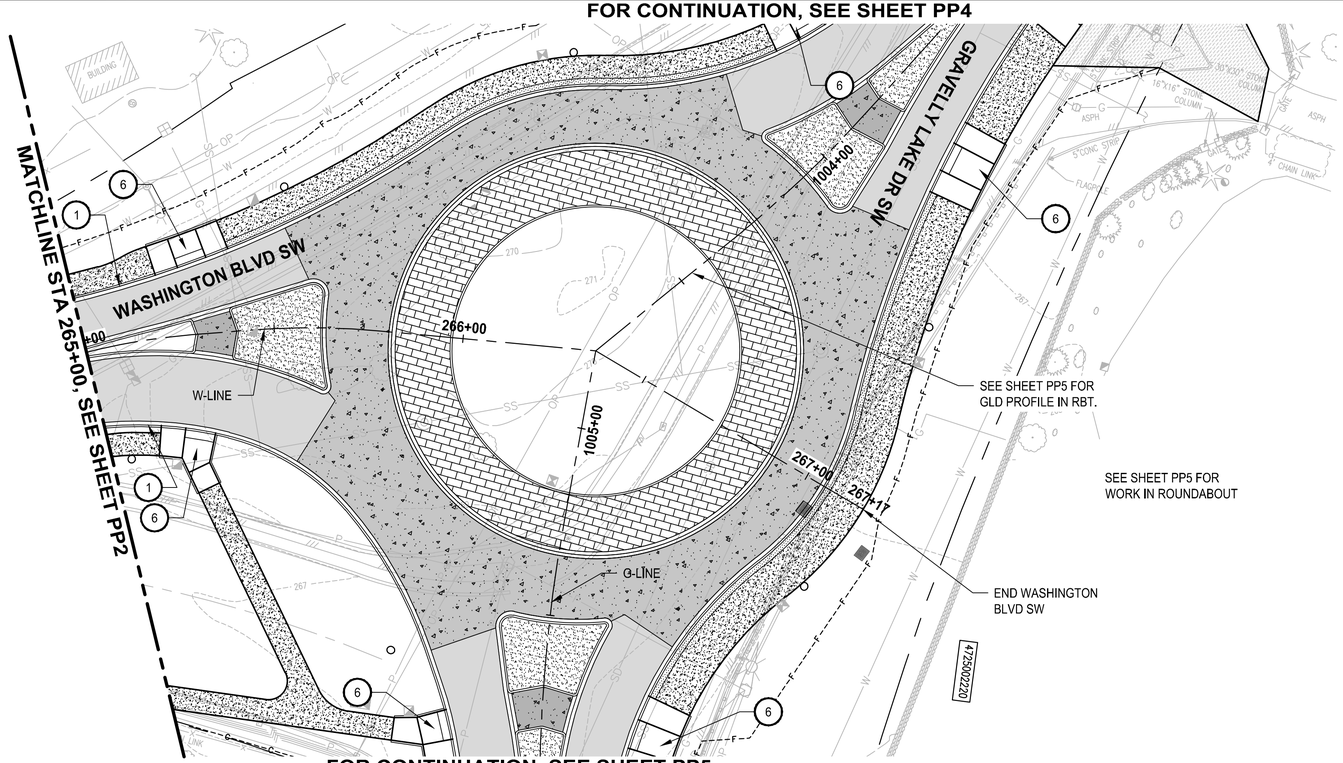
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE WASHINGTON BLVD SW

DRAWING NO.
26 OF 153
PP2

LAYOUT: PP2 ROADWAY PLAN & PROFILE WASHINGTON BLVD SW PATH: \\Jupiter\projects\19000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:32:32 PM

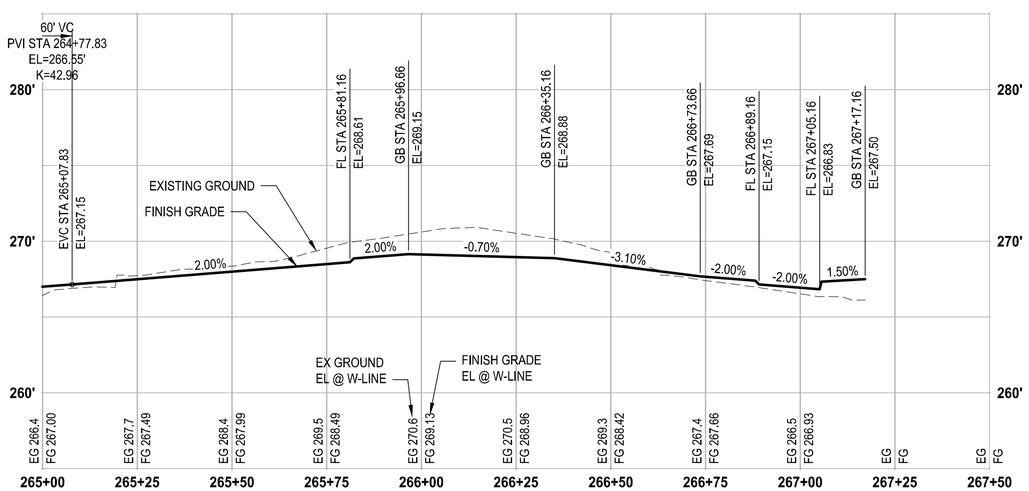
FOR CONTINUATION, SEE SHEET PP4



FOR CONTINUATION, SEE SHEET PP5

PLAN

SCALE IN FEET 0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
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6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
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9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —----C— CUT
- —----F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-PP2-7
JOB No. 214-3047-013
DATE FEBRUARY 2021

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02/01/2021

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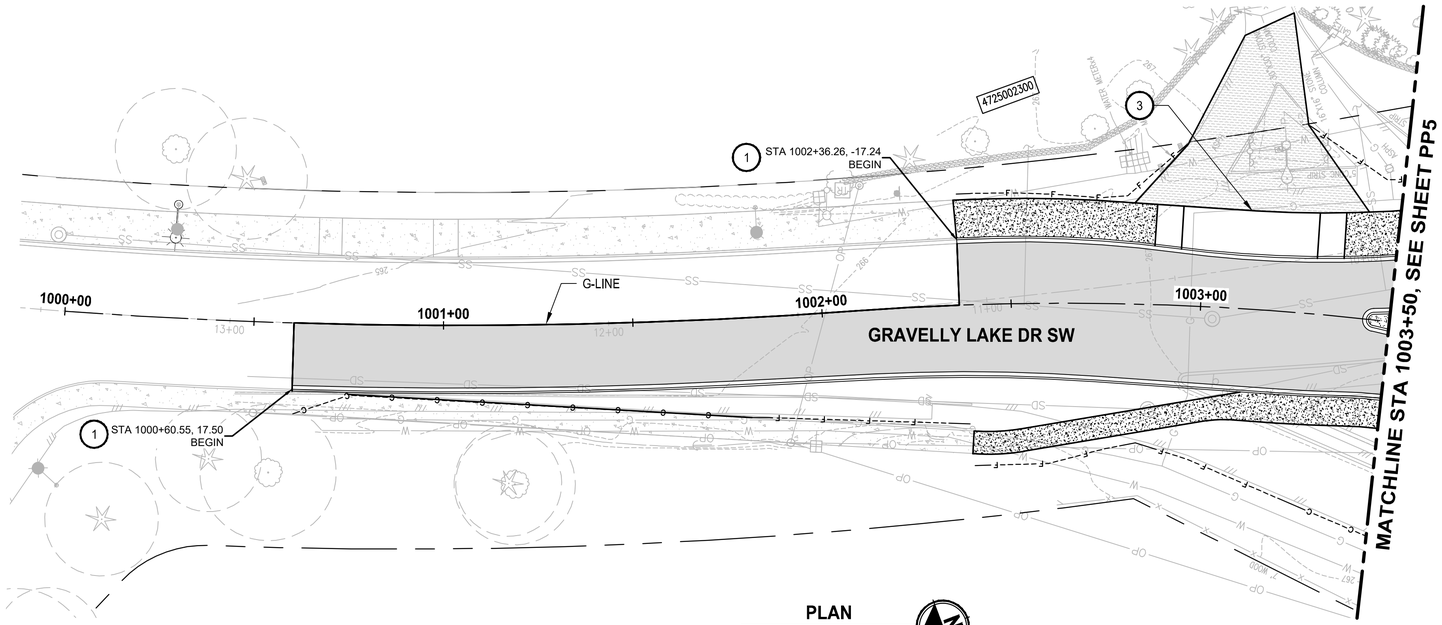
WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE WASHINGTON BLVD SW

DRAWING NO.
27 OF 153
PP3

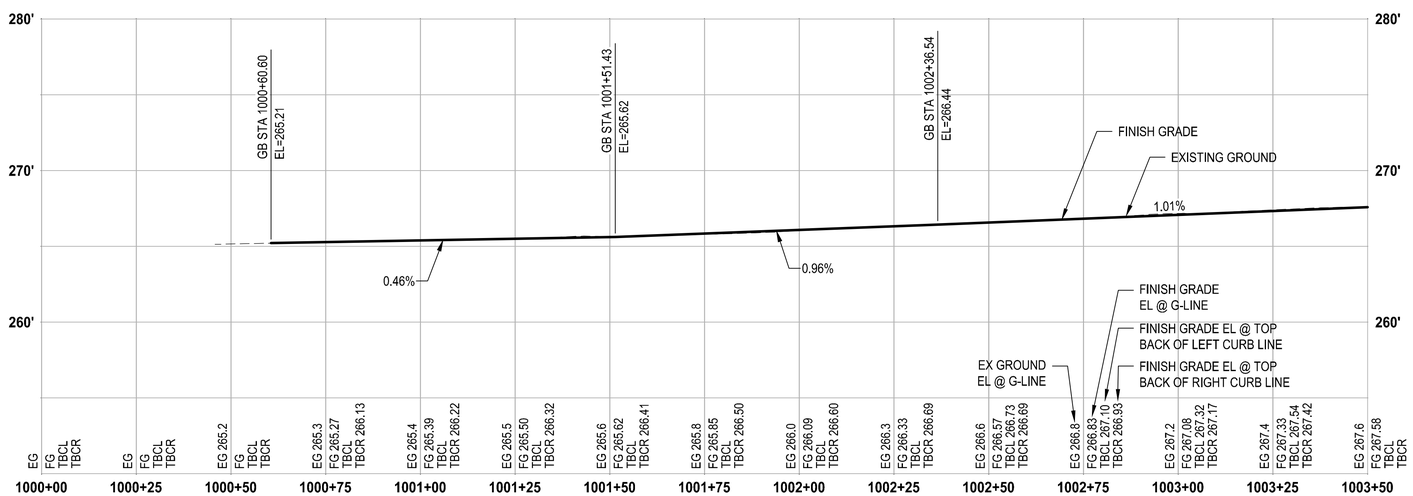
LAYOUT: PP3 ROADWAY PLAN & PROFILE WASHINGTON BLVD SW PATH: \\Jupiter\projects\19000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:33:00 PM



PLAN

SCALE IN FEET 0 20 40

DRIVEWAY SCHEDULE					
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
4725002300	1003+12.00	LT	36	50/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
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3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
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5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

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- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
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- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —-----C— CUT
- —-----F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-PP2-7
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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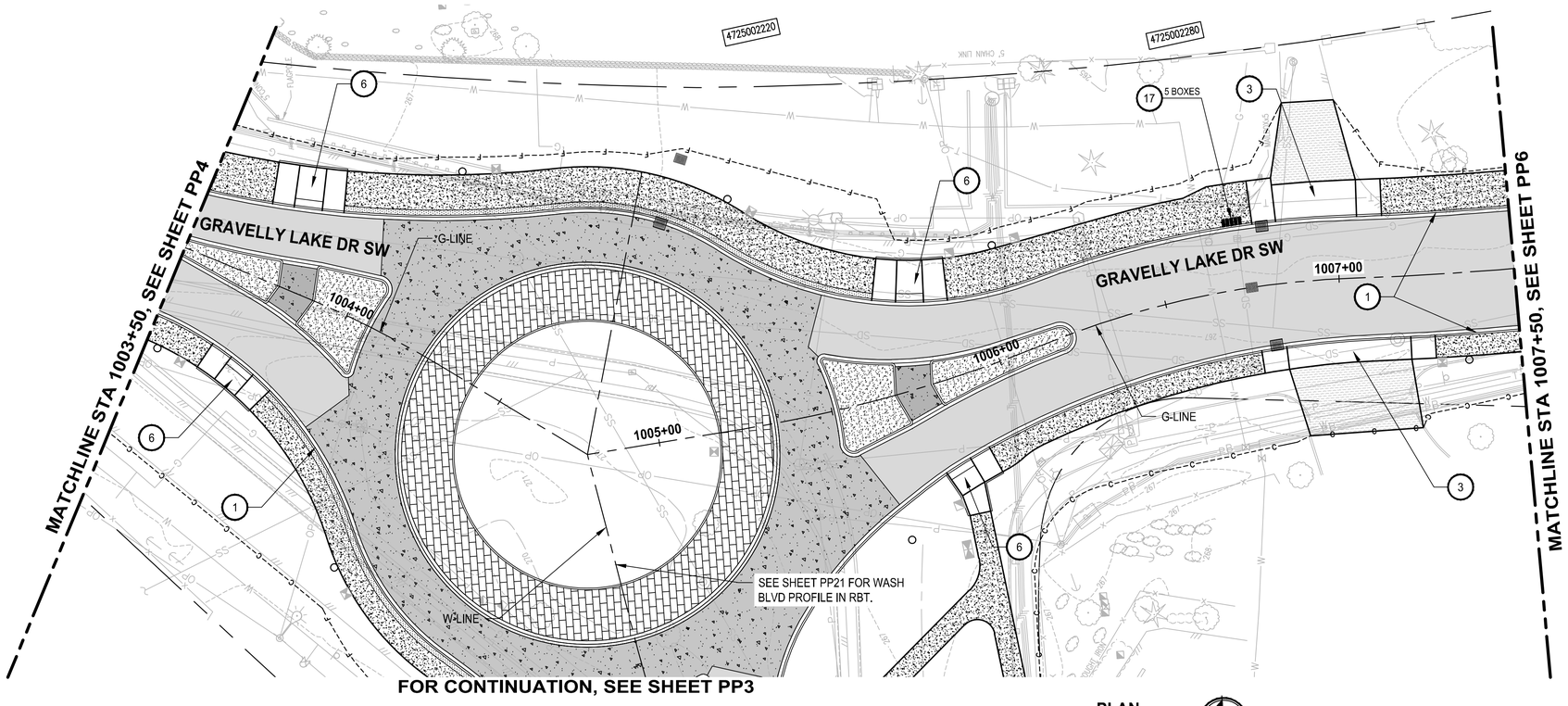
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO. 28 OF 153
PP4

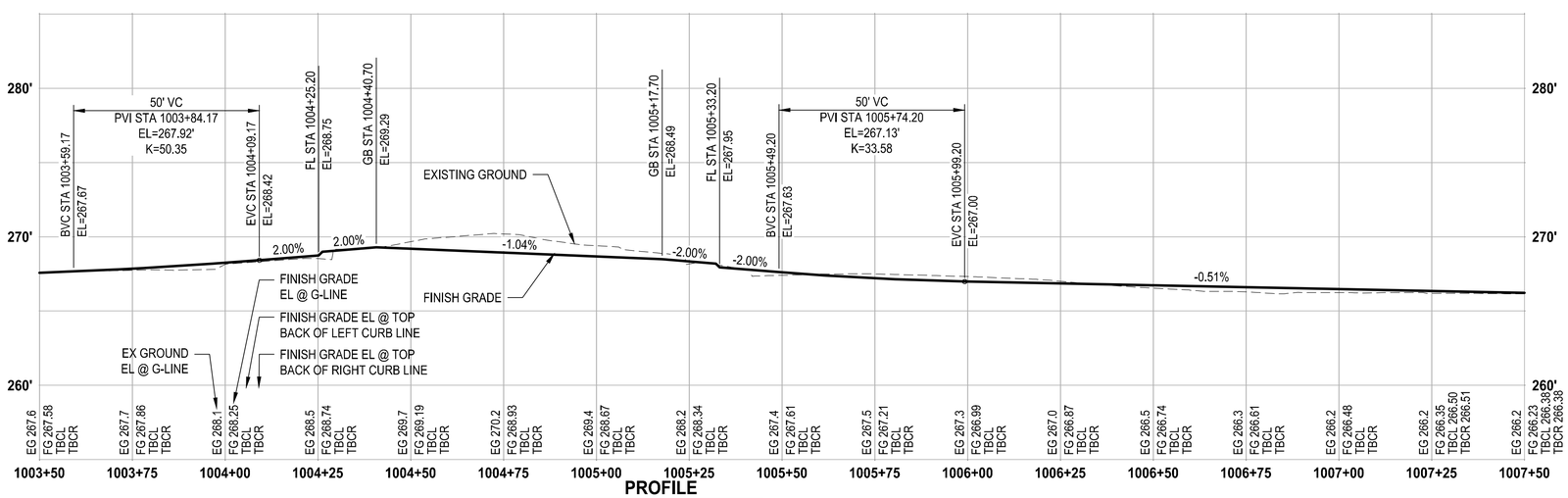
LAYOUT: PP4 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:33:28 PM



PLAN

SCALE IN FEET 0 20 40

DRIVEWAY SCHEDULE					
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
4285001401	1006+94.65	LT	23	23/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002270	1003+02.07	RT	35	12/CONCRETE	SAWCUT EXISTING CONCRETE DRIVEWAY



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
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7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
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15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- ——-----C—— CUT
- ——-----F—— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–PP2–7
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

JAMES BENTON DORT STATE OF WASHINGTON 48540 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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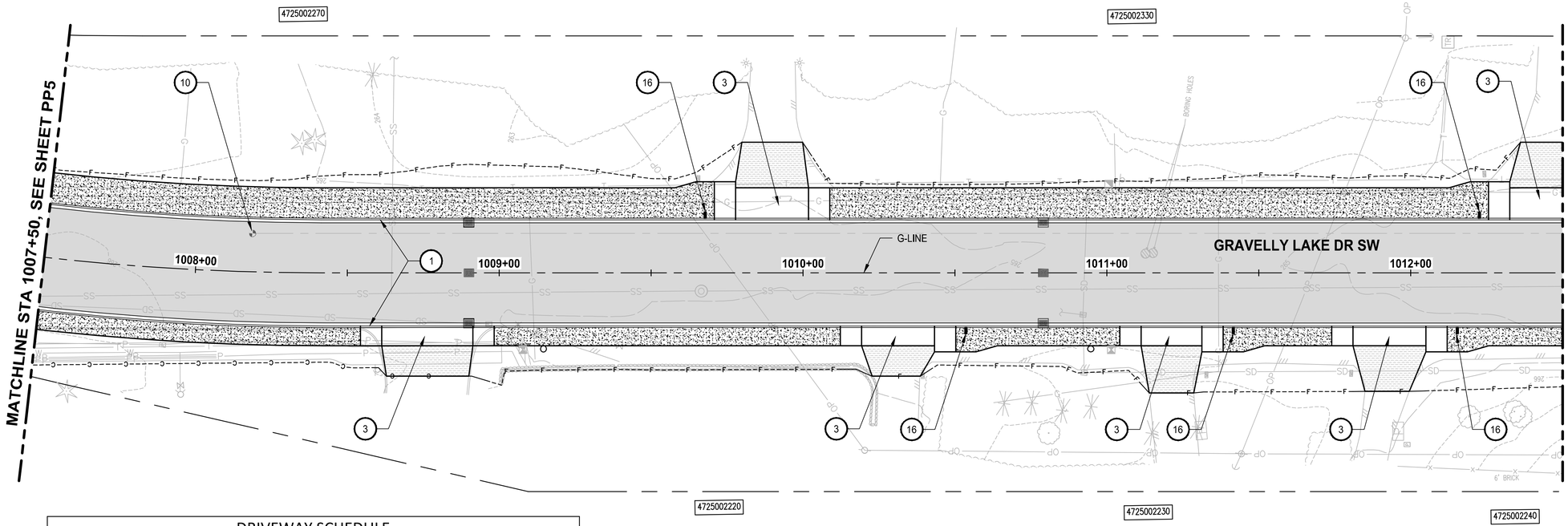
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
29 OF 153
PP5

LAYOUT: PP5 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:33:53 PM



PLAN

SCALE IN FEET 0 20 40

DRIVEWAY SCHEDULE					
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
4285001401	1008+76.31	RT	30	10/CONCRETE	SAWCUT EXISTING CONCRETE DRIVEWAY
4725002330	1009+89.79	LT	24	15/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002220	1010+31.26	RT	24	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002230	1011+21.27	RT	20	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002240	1011+92.99	RT	24	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002340	1012+44.59	LT	24	15/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
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GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
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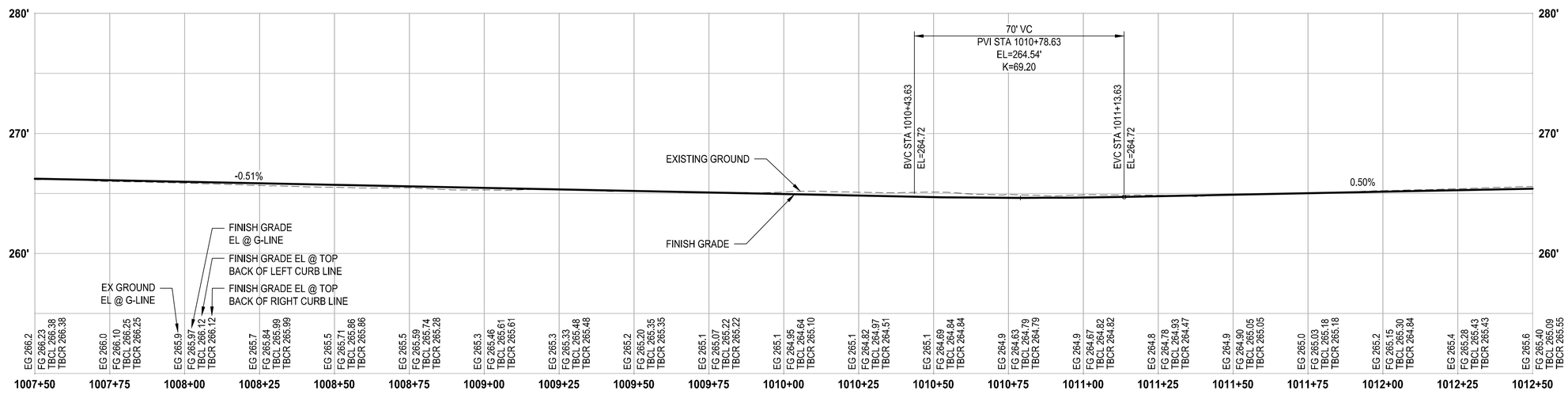

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
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- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —-----c— CUT
- —-----F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
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CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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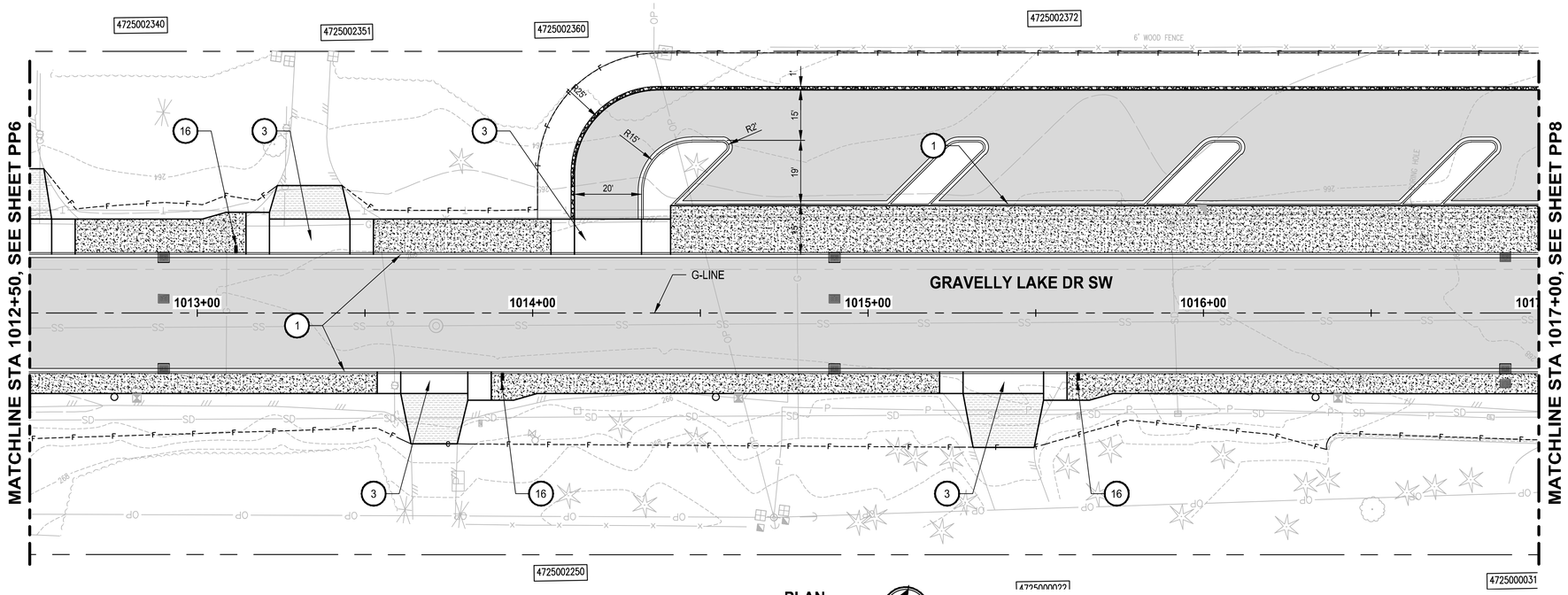
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
30 OF 153
PP6

LAYOUT: PP6 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:34:10 PM



PLAN

SCALE IN FEET

0 20 40

ROADWAY CONSTRUCTION NOTES

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18. HMA SPEED HUMP PER 5/DT3

DRIVEWAY SCHEDULE

PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
4725002351	1013+33.52	LT	24	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002250	1013+70.65	RT	20	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002360	1014+22.48	LT	20	HMA	NEW ASPHALT PARKING ACCESS
4725000022	1015+40.31	RT	24	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
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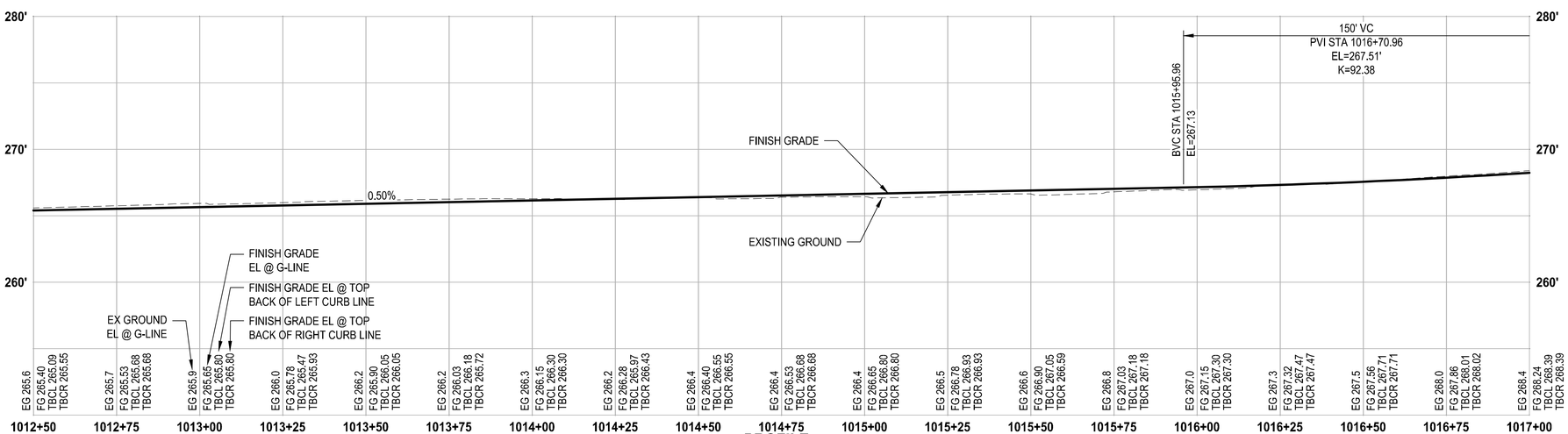
- CUT
- FILL



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013-PP2-7
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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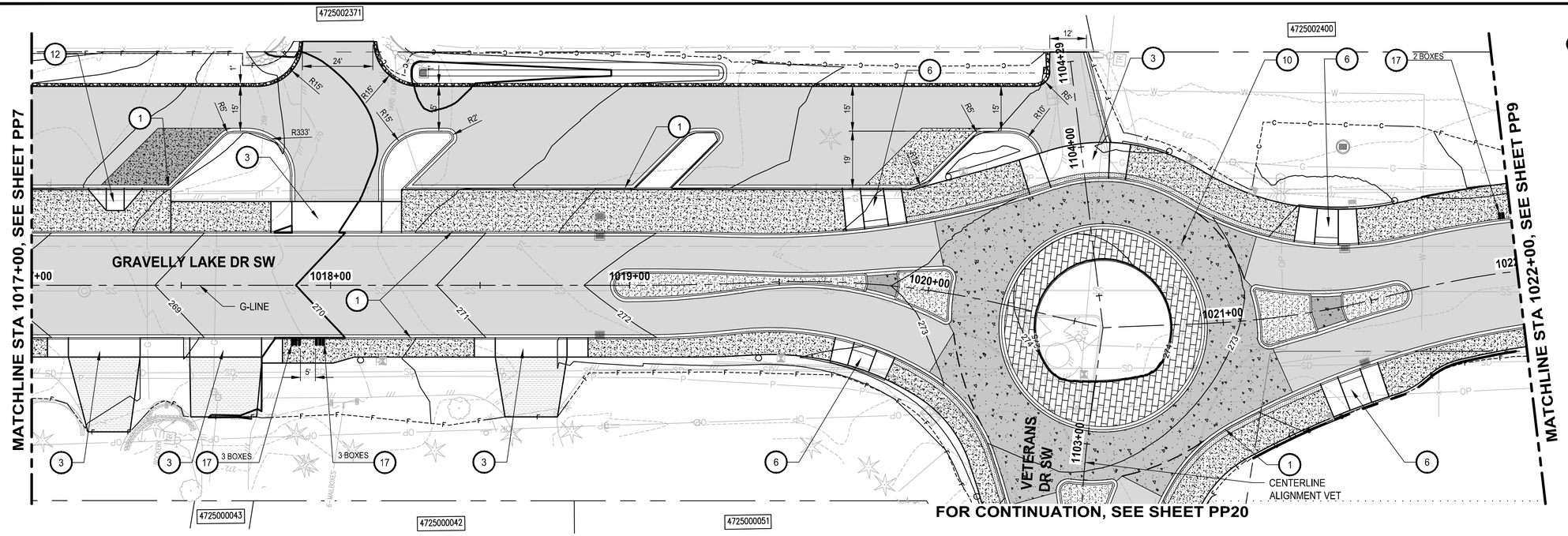
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
31 OF 153
PP7

LAYOUT: PP7 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:34:38 PM



PLAN
SCALE IN FEET
0 20 40

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

DRIVEWAY SCHEDULE

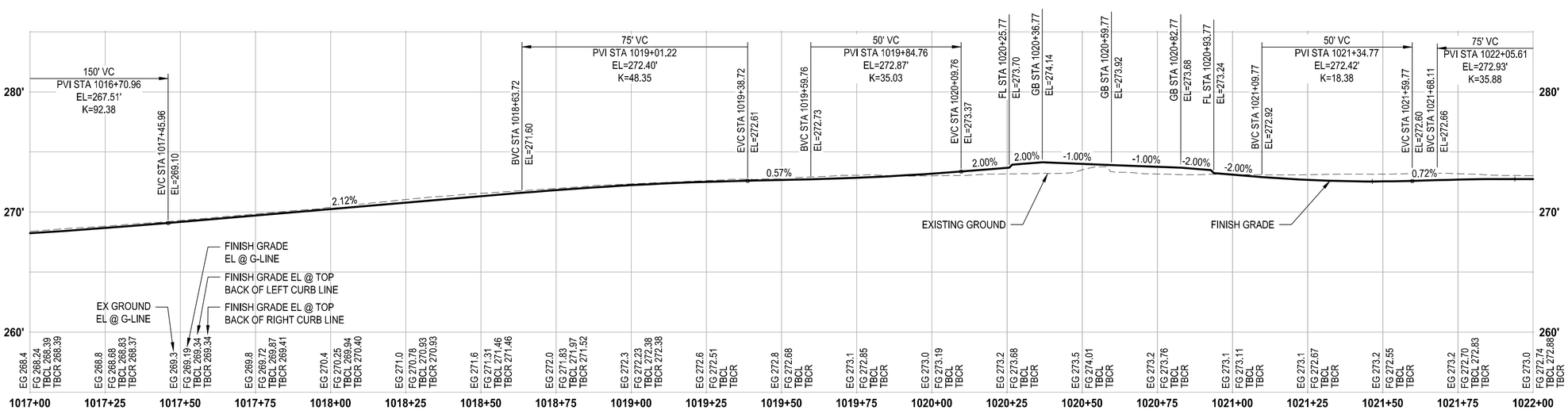
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
4725000031	1017+24.30	RT	24	25/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725000043	1017+64.89	RT	24	20/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002371	1018+02.02	LT	30	HMA	NEW ASPHALT PARKING ACCESS
4725000042	1018+67.02	RT	24	20/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002372	1020+41.12	LT	20	20/HMA	NEW ASPHALT PARKING ACCESS

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- CUT
- FILL



PROFILE
HORIZ: 1"=20'
VERT: 1"=5'

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-PP8-12
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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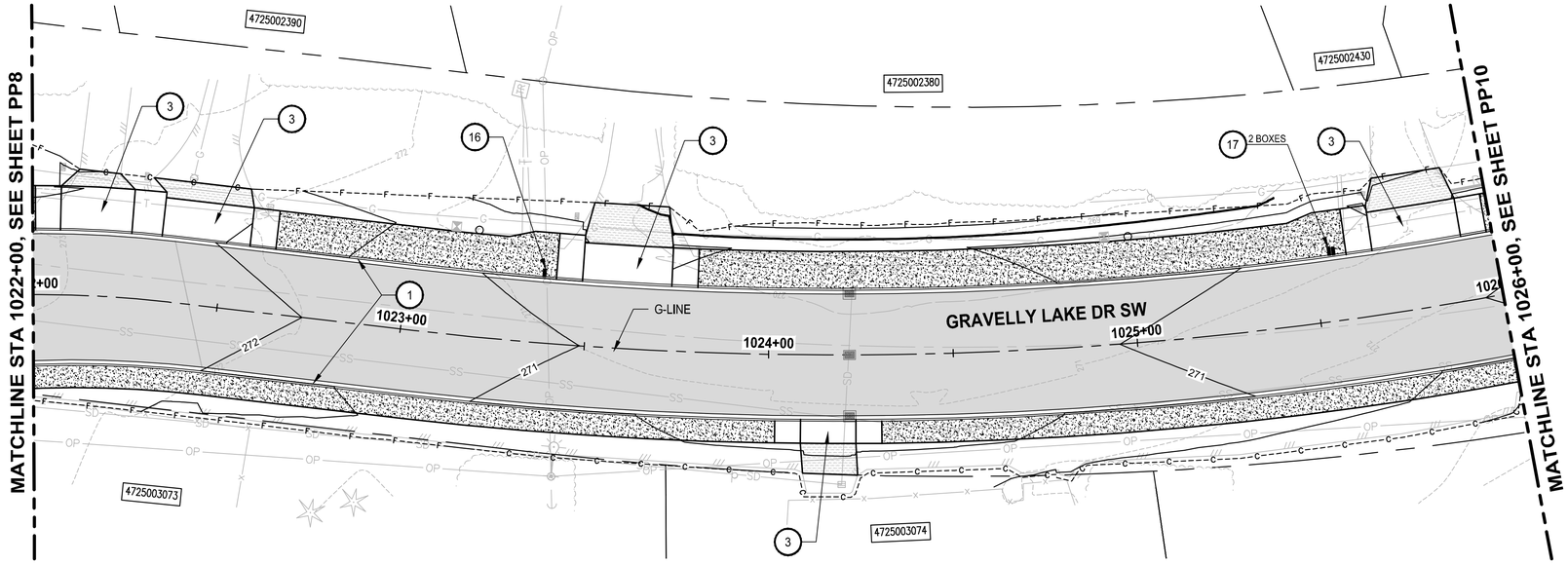
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
32 OF 153
PP8

LAYOUT: PP8 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:35:23 PM

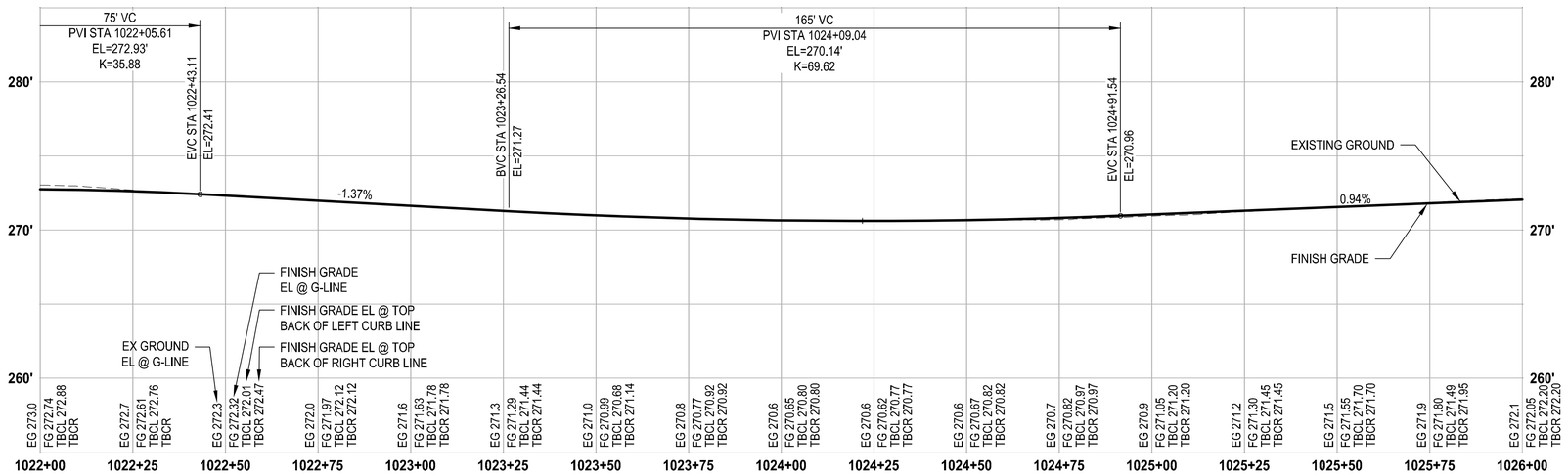


DRIVEWAY SCHEDULE					
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
4725002400	1022+16.29	LT	19	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002390	1022+44.98	LT	24	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002380	1023+60.63	LT	24	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725003074	1024+16.21	RT	15	8/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002430	1025+78.91	LT	24	9/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

PLAN

SCALE IN FEET

0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —-----C— CUT
- —-----F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-PP8-12
JOB No. 214-3047-013
DATE FEBRUARY 2021

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JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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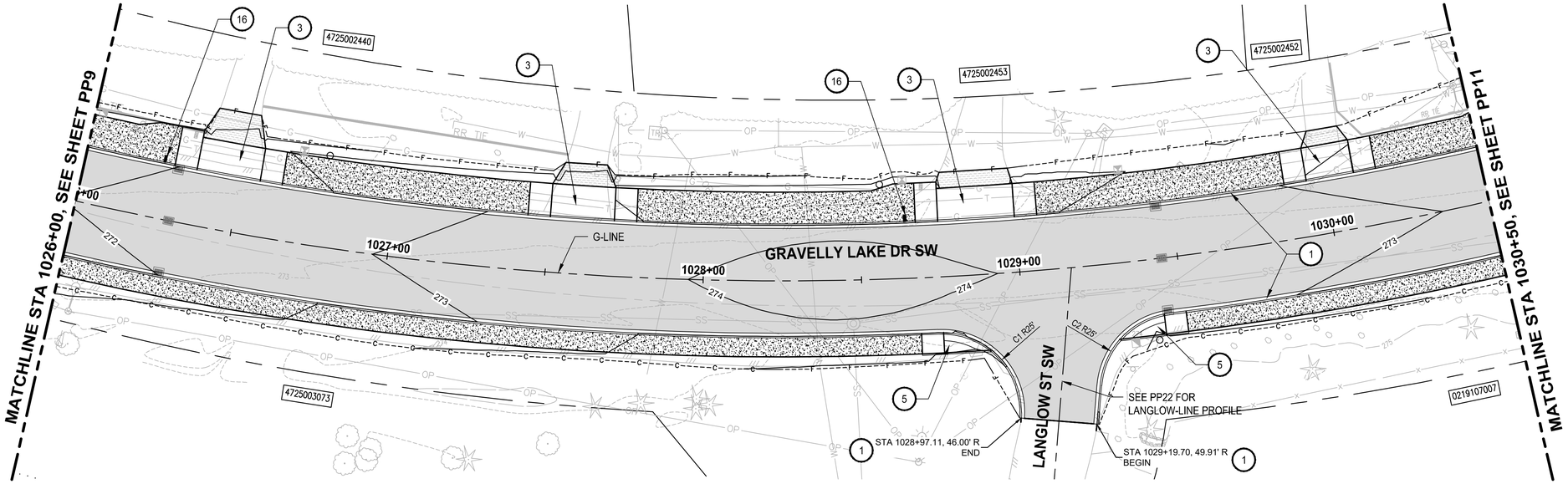
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
33 OF 153
PP9

LAYOUT: PP9 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:35:43 PM



DRIVEWAY SCHEDULE

PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
4725002440	1026+46.15	LT	20	10/CONCRETE	SAWCUT EXIST CONCRETE PAVEMENT
4725002440	1027+60.68	LT	20	7/CONCRETE	SAWCUT EXIST CONCRETE PAVEMENT
4725002453	1028+87.27	LT	24	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002452	1030+01.81	LT	15	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

PLAN

SCALE IN FEET

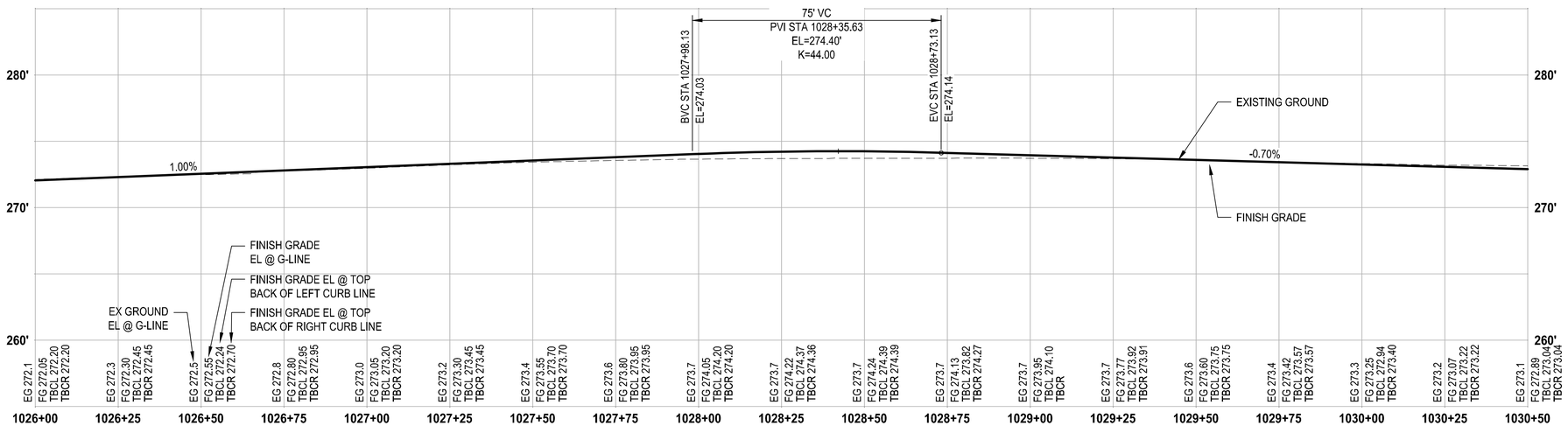
0 20 40

C1 CURB RETURN TABLE

POINT	STATION	OFFSET	FL ELEVATION
PC	1028+73.40	17.50'R	273.79
1/4Δ	1028+83.51	19.77'R	273.67
1/2Δ	1028+91.70	26.17'R	273.55
3/4Δ	1028+96.49	35.48'R	273.42
PT	1028+97.11	46.00'R	273.30
RADIUS DATA	RADIUS=25' Δ=97.400° L=42.50'		

C2 CURB RETURN TABLE

POINT	STATION	OFFSET	FL ELEVATION
PC	1029+21.76	37.81'R	273.46
1/4Δ	1029+24.59	29.80'R	273.41
1/2Δ	1029+29.91	23.26'R	273.37
3/4Δ	1029+37.13	18.99'R	273.33
PT	1029+45.37	17.51'R	272.28
RADIUS DATA	RADIUS=25' Δ=78.500° L=34.30'		



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —c— CUT
- —F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–PP8–12
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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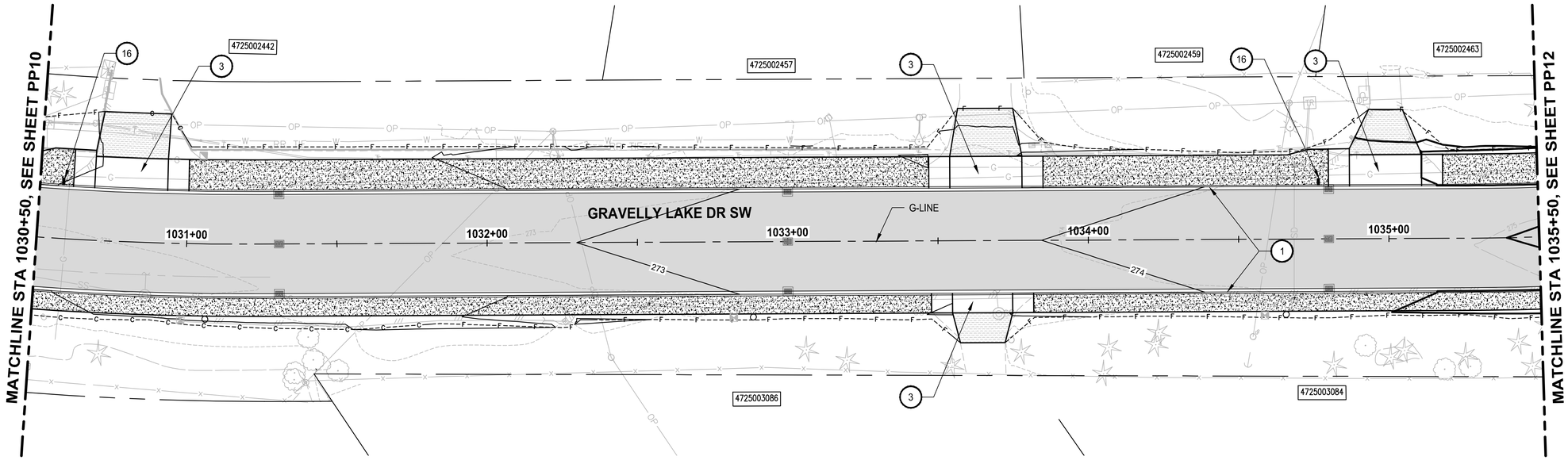
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
34 OF 153
PP10

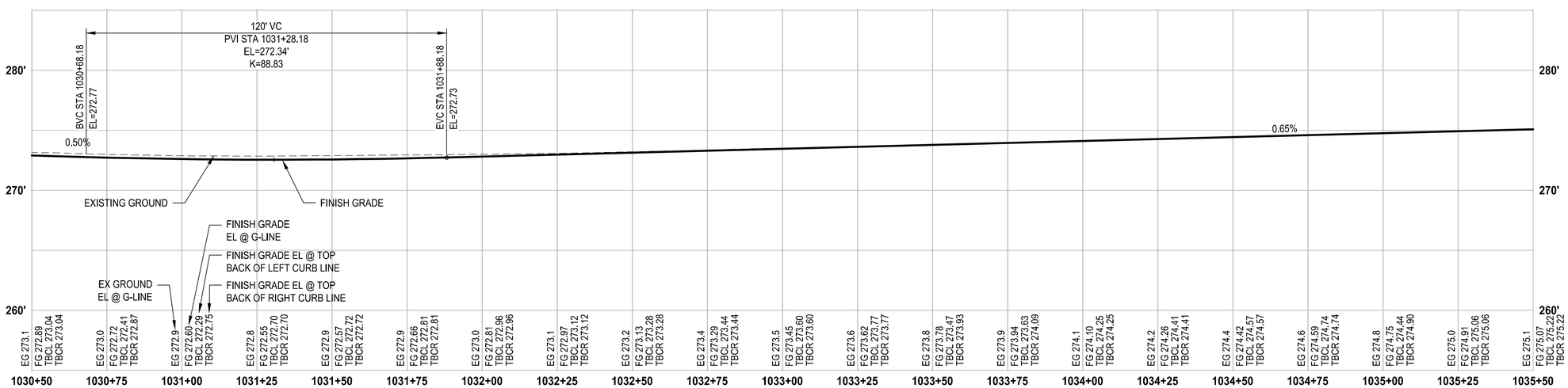
LAYOUT: PP10 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:36:12 PM



PLAN

SCALE IN FEET
0 20 40

DRIVEWAY SCHEDULE					
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
4725002442	1030+80.87	LT	24	15/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725003086	1033+64.70	RT	20	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002457	1033+66.00	LT	24	16/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002463	1034+98.91	LT	24	15/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- CUT
- FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

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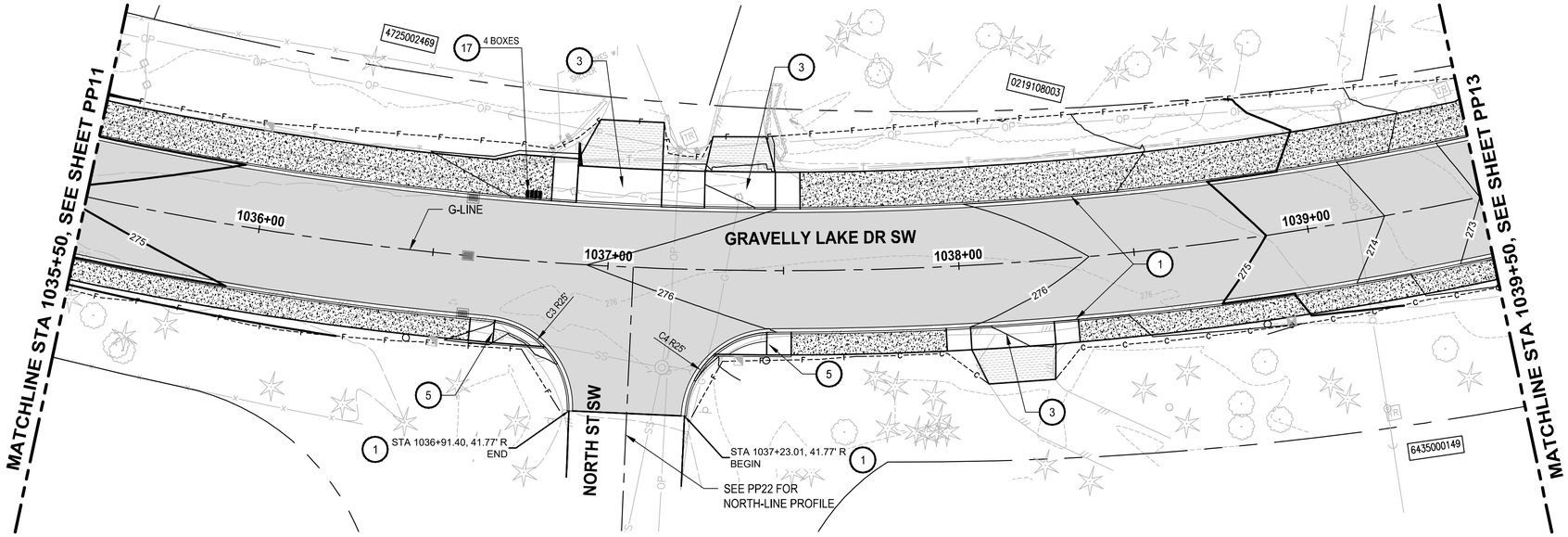
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
35 OF 153
PP11

LAYOUT: PP11 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:36:33 PM



DRIVEWAY SCHEDULE

PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATRIAL	COMMENTS
4725002469	1037+02.15	LT	24	14/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
219108003	1037+37.33	LT	20	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
6435000149	1038+14.06	RT	24	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

PLAN

SCALE IN FEET 0 20 40

N

C3 CURB RETURN TABLE

POINT	STATION	OFFSET	FL ELEVATION
PC	1036+67.34	17.50'R	275.49
1/4Δ	1036+76.55	19.32'R	275.58
1/2Δ	1036+84.34	24.61'R	275.68
3/4Δ	1036+89.51	32.48'R	275.34
PT	1036+91.40	41.77'R	275.01
RADIUS DATA	RADIUS=25' Δ=87.900° L=38.20'		

C4 CURB RETURN TABLE

POINT	STATION	OFFSET	FL ELEVATION
PC	1037+23.01	41.77'R	275.16
1/4Δ	1037+24.91	32.48'R	275.47
1/2Δ	1037+30.08	24.61'R	275.78
3/4Δ	1037+37.82	19.36'R	276.10
PT	1037+46.94	17.5'R	275.99
RADIUS DATA	RADIUS=25' Δ=87.600° L=38.20'		

ROADWAY CONSTRUCTION NOTES

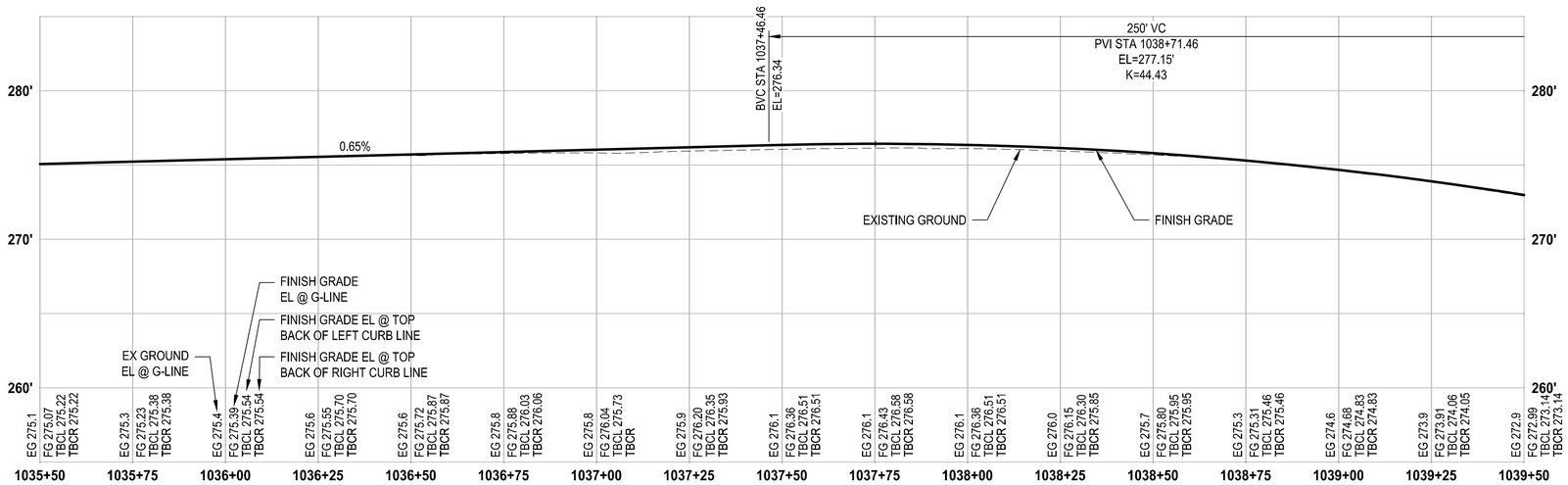
1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —-----c— CUT
- —-----f— FILL



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013–PP8–12
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

JAMES BENTON DORT STATE OF WASHINGTON 18540 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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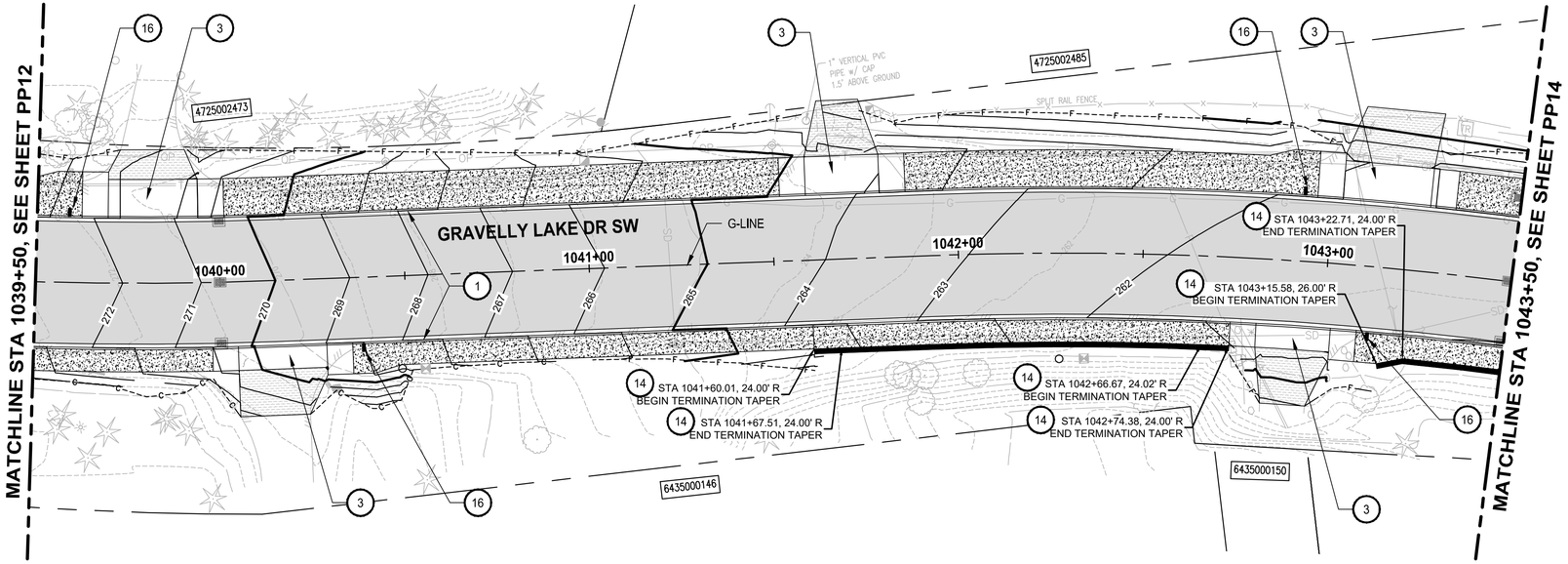
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO. 36 OF 153

PP12

LAYOUT: PP12 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:37:01 PM

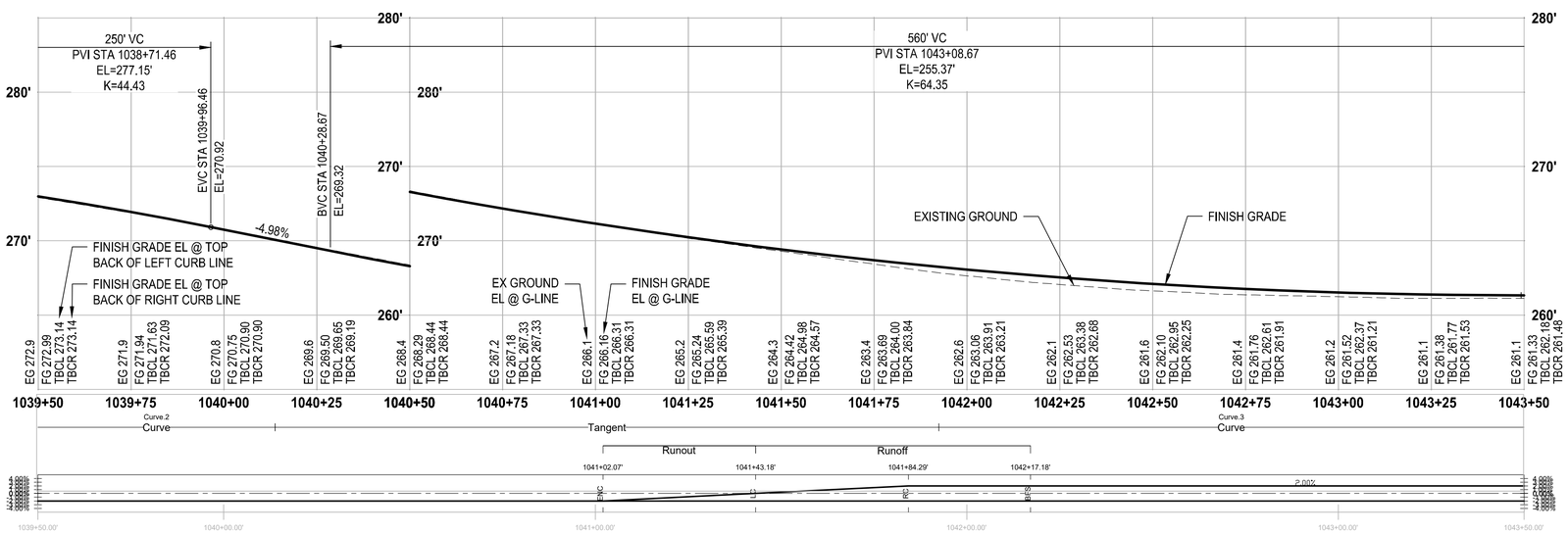


DRIVEWAY SCHEDULE					
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
4725002473	1039+81.89	LT	24	8/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
6435000146	1040+16.26	RT	24	13/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002485	1041+69.19	LT	20	12/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
6435000150	1042+91.83	RT	20	15/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
4725002485	1043+14.53	LT	24	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

PLAN

SCALE IN FEET 0 20 40

N



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —----c— CUT
- —----F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–PP13–18
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

JAMES BENTON DORT STATE OF WASHINGTON 48540 REGISTERED PROFESSIONAL ENGINEER
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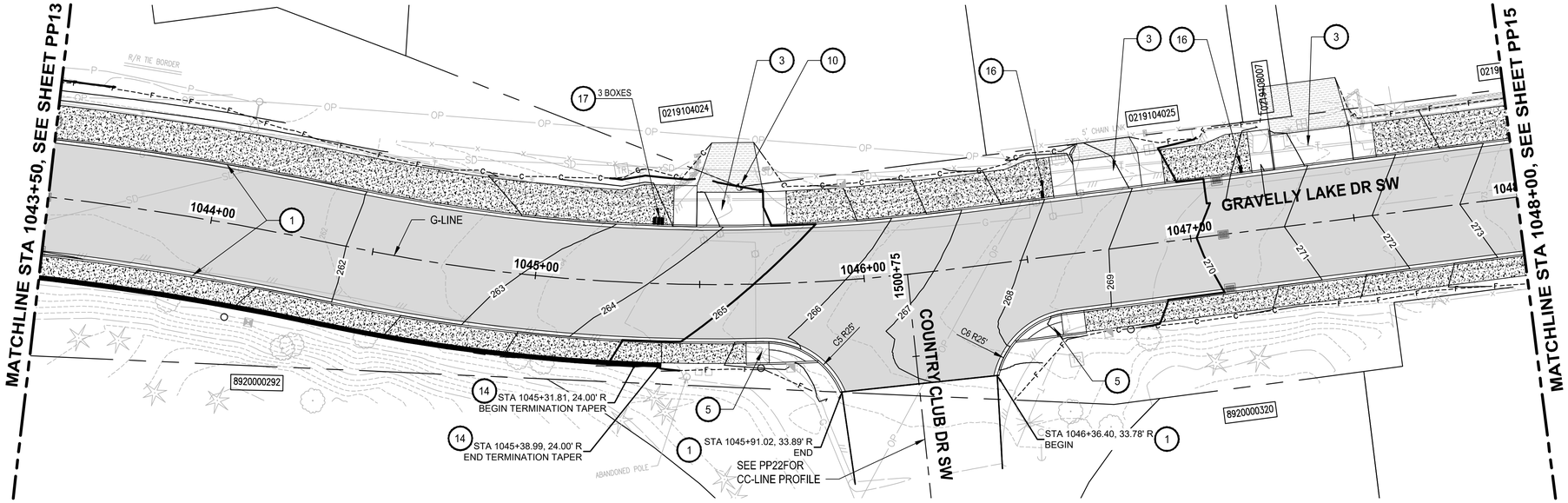
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO. 37 OF 153

PP13

LAYOUT: PP13 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:37:53 PM



PLAN

SCALE IN FEET 0 20 40

N

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
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5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
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14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
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17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —-----c— CUT
- —-----f— FILL

DRIVEWAY SCHEDULE

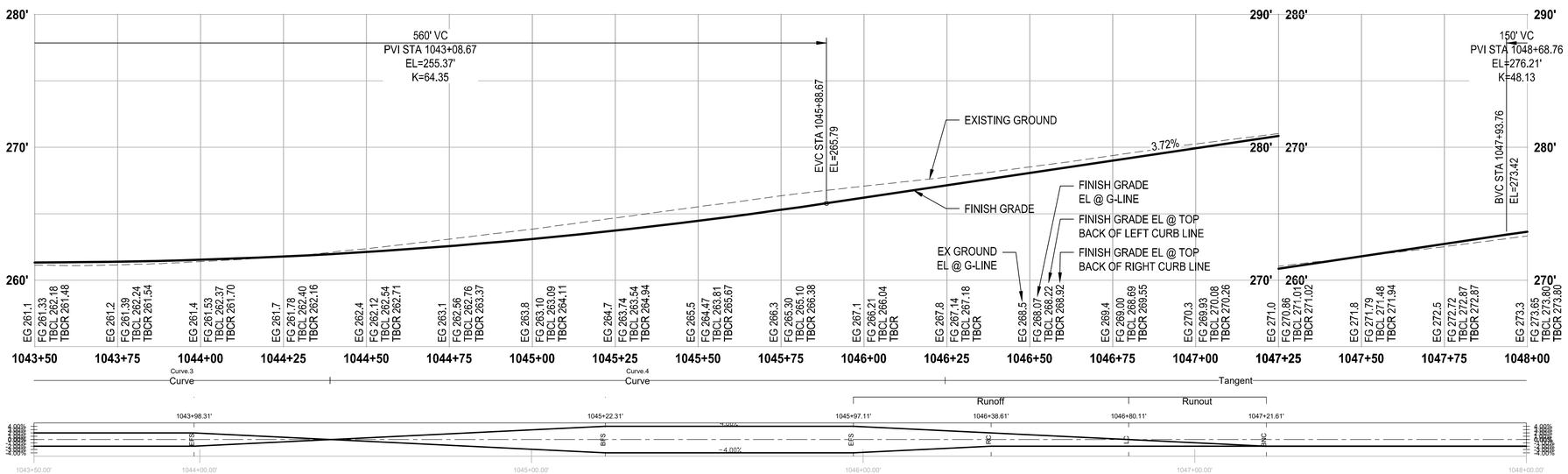
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
219014024	1045+59.43	LT	20	15/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
219104025	1046+77.32	LT	20	5/CONCRETE	SAWCUT EXISTING CONCRETE DRIVEWAY
219108007	1047+40.04	LT	24	15/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

C5 CURB RETURN TABLE

POINT	STATION	OFFSET	FL ELEVATION
PC	1045+69.07	17.52'R	265.79
1/4Δ	1045+76.22	18.68'R	265.95
1/2Δ	1045+82.64	22.04'R	266.08
3/4Δ	1045+87.74	27.31'R	266.26
PT	1045+91.02	33.89'R	266.14
RADIUS DATA	RADIUS=25' Δ=68.600° L=30.00'		

C6 CURB RETURN TABLE

POINT	STATION	OFFSET	FL ELEVATION
PC	1046+36.40	33.78'R	267.38
1/4Δ	1046+39.31	27.42'R	268.00
1/2Δ	1046+45.54	21.98'R	268.34
3/4Δ	1046+52.34	18.65'R	268.46
PT	1046+58.84	17.77'R	269.08
RADIUS DATA	RADIUS=25' Δ=69.500° L=30.3'		



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013–PP13–18
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

JAMES BENTON BOUNDY STATE OF WASHINGTON 48540 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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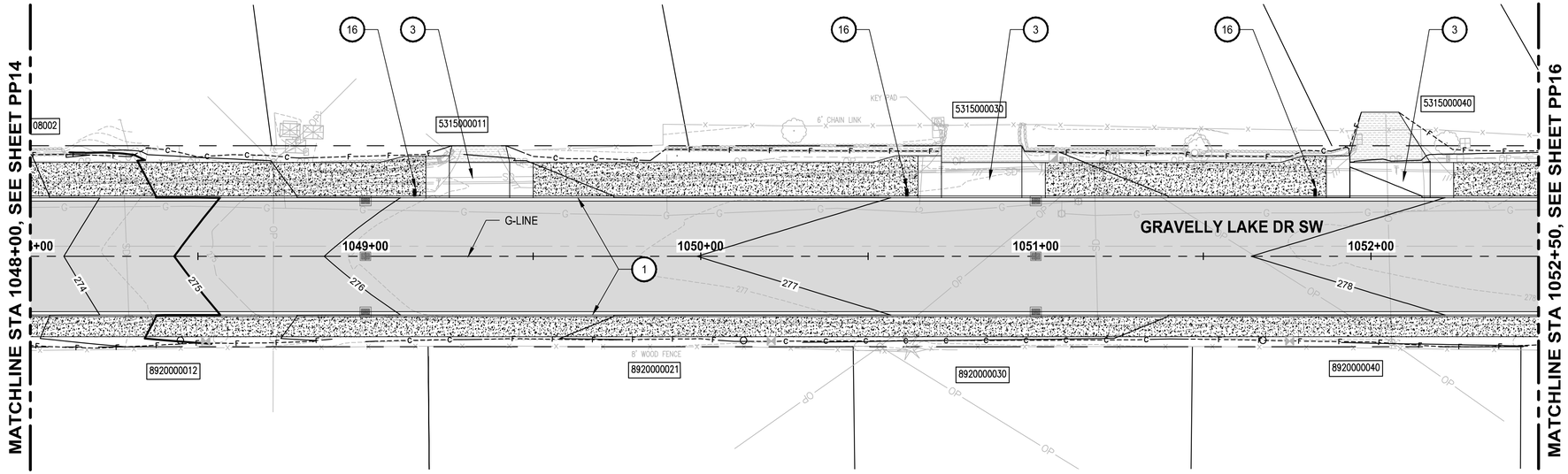
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
38 OF 153
PP14

LAYOUT: PP14 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:38:21 PM



DRIVEWAY SCHEDULE					
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATRIAL	COMMENTS
5315000011	1049+34.03	LT	18	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
5315000030	1050+83.81	LT	24	5/CONCRETE	SAWCUT EXIST CONCRETE PAVEMENT
5315000040	1052+05.64	LT	24	15/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

PLAN

SCALE IN FEET 0 20 40

N

ROADWAY CONSTRUCTION NOTES

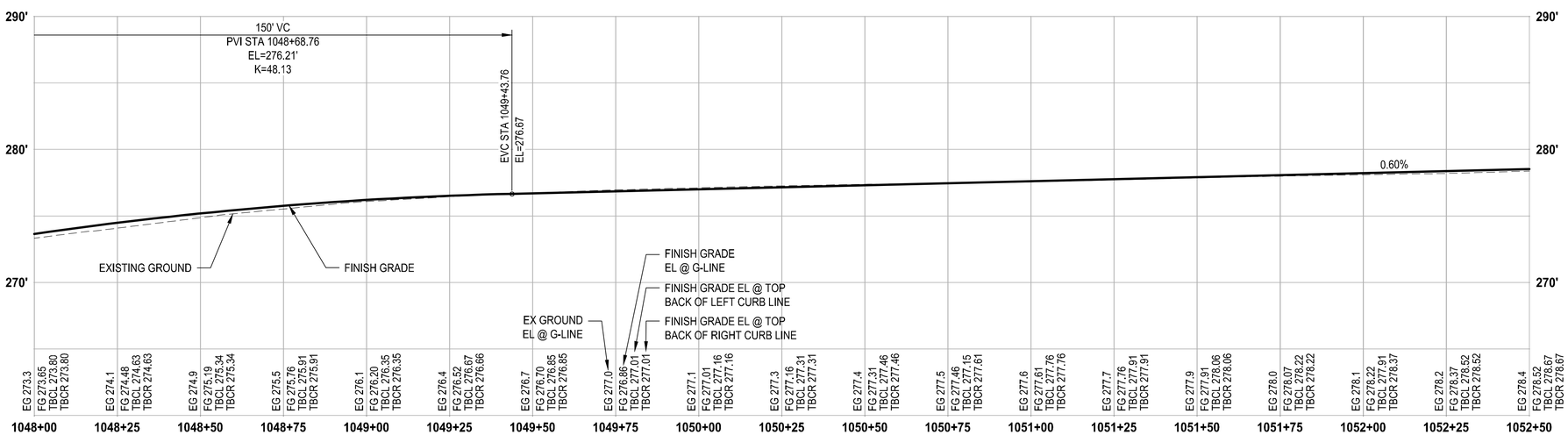
1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —c— CUT
- —F— FILL



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–PP13–18
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT STATE OF WASHINGTON 48540 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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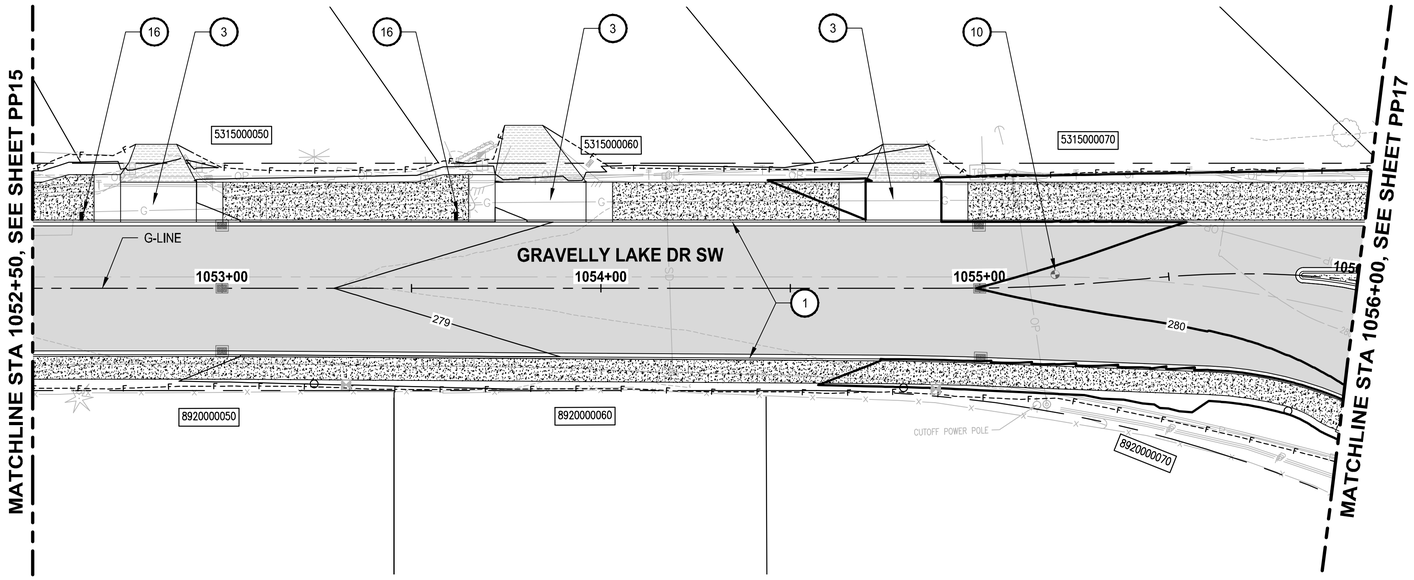
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
39 OF 153
PP15

LAYOUT: PP15 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:38:45 PM



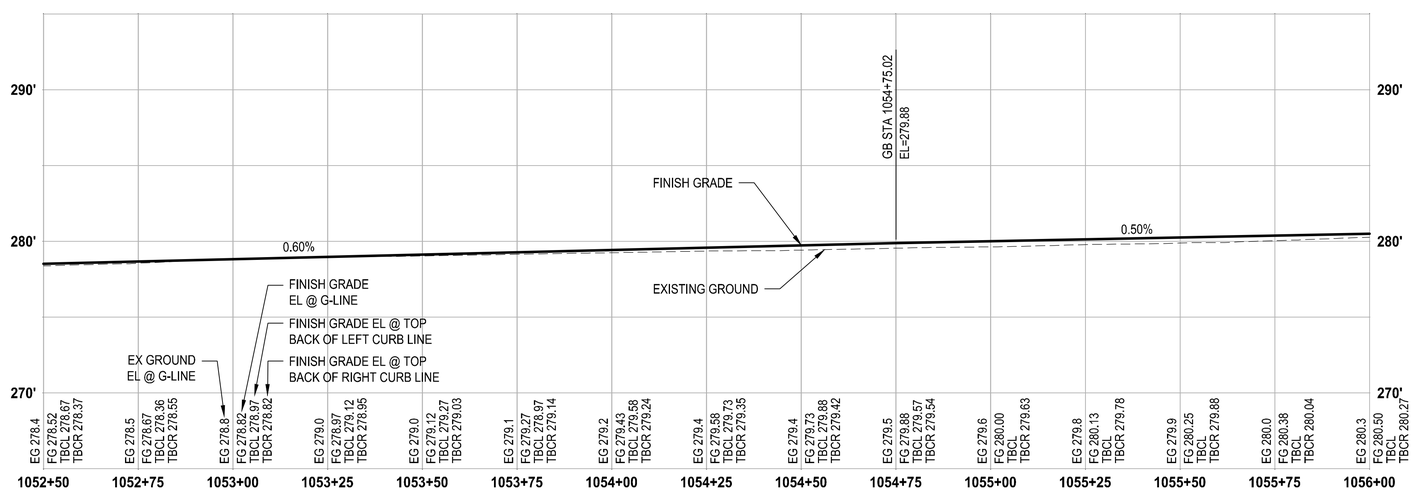
DRIVEWAY SCHEDULE					
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
5315000050	1052+83.26	LT	20	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
5315000060	1053+84.11	LT	24	15/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
5315000070	1054+79.89	LT	20	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

PLAN

SCALE IN FEET

0 20 40

N



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —c— CUT
- —F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–PP13–18
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT STATE OF WASHINGTON 48540 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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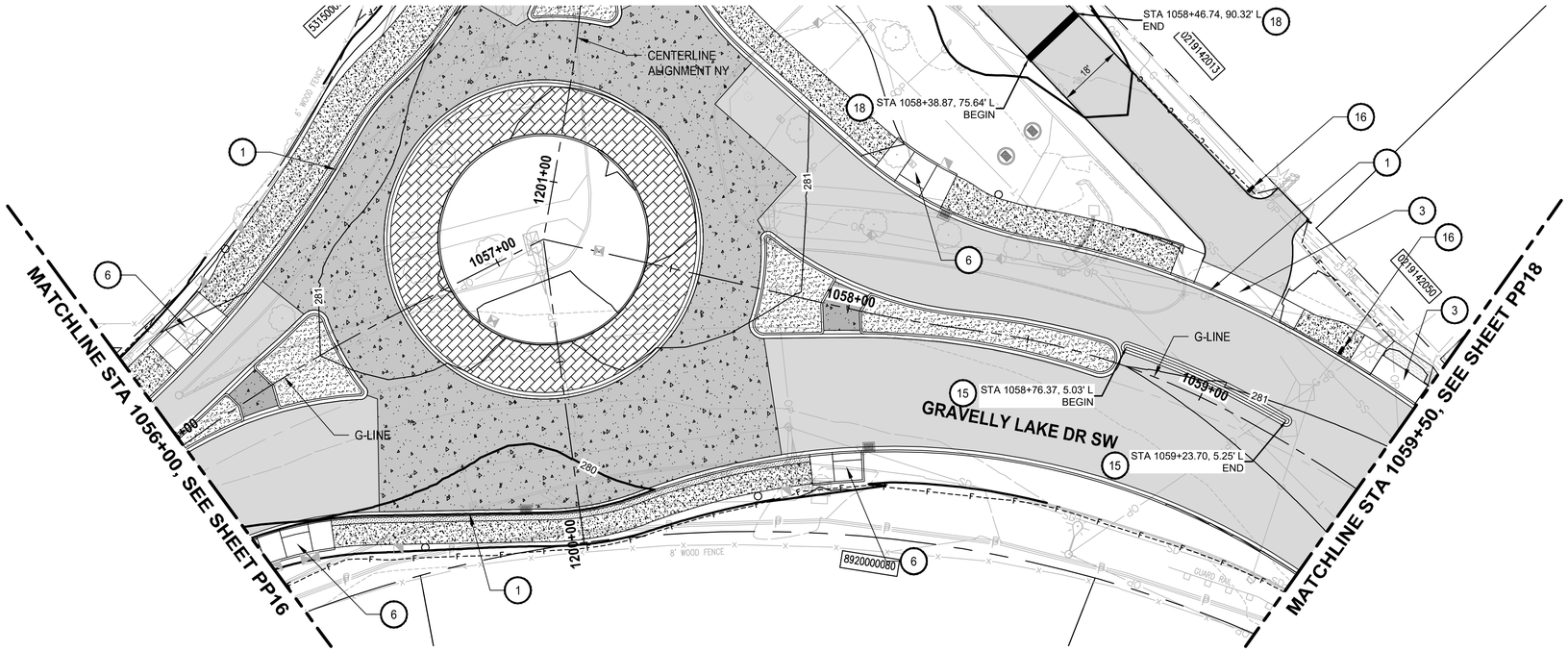
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
40 OF 153
PP16

LAYOUT: PP16 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:39:10 PM

FOR CONTINUATION SEE SHEET PP21

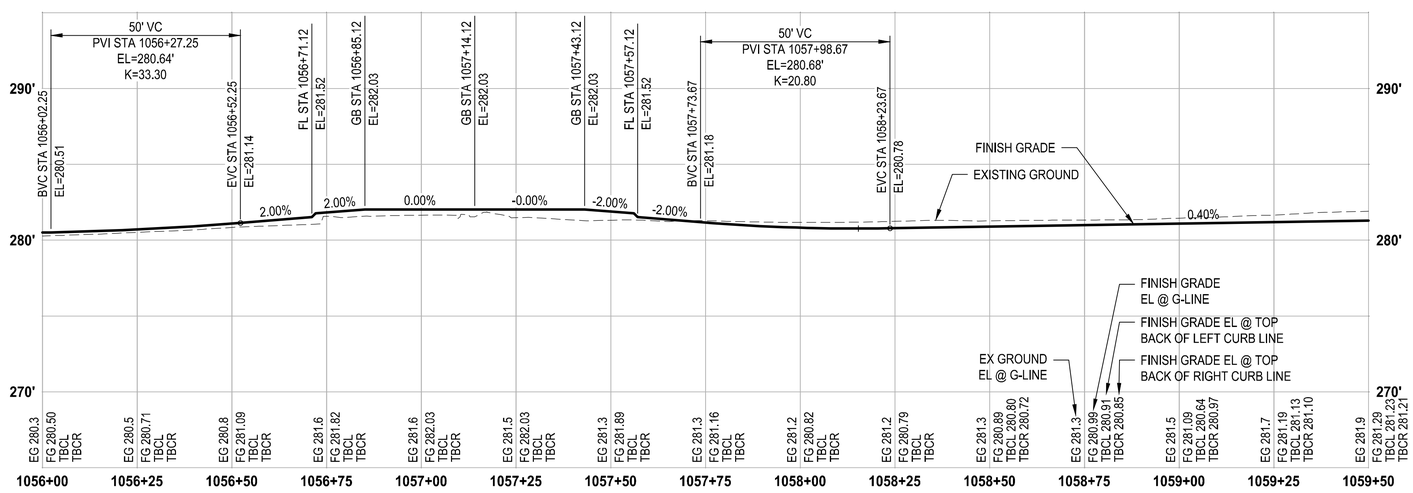


DRIVEWAY SCHEDULE

PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
219142013	1058+97.07	LT	24	HMA	NEW HMA DRIVEWAY ACCESS
219142050	1059+42.78	LT	15	5/HMA	SAWCUT EXISTING ASPHALT PAVEMENT

PLAN

SCALE IN FEET 0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —-----C— CUT
- —-----F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–PP13–18
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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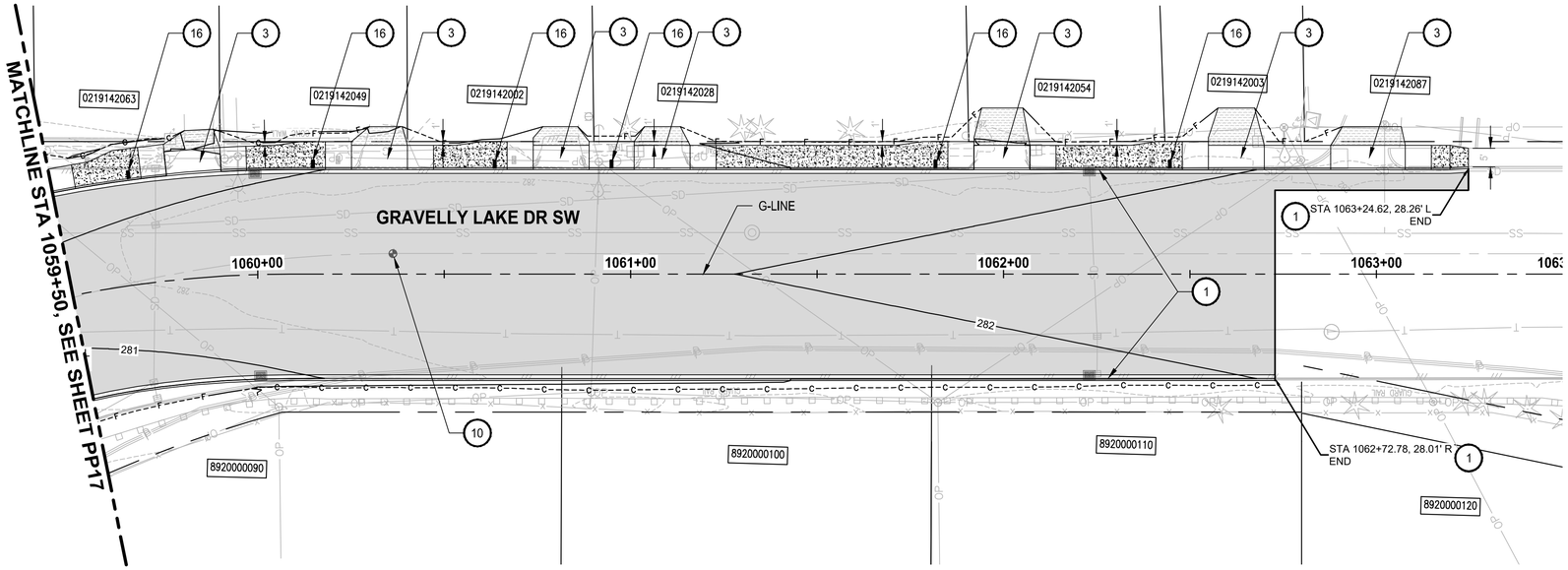
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

LAYOUT: PP17 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:39:36 PM

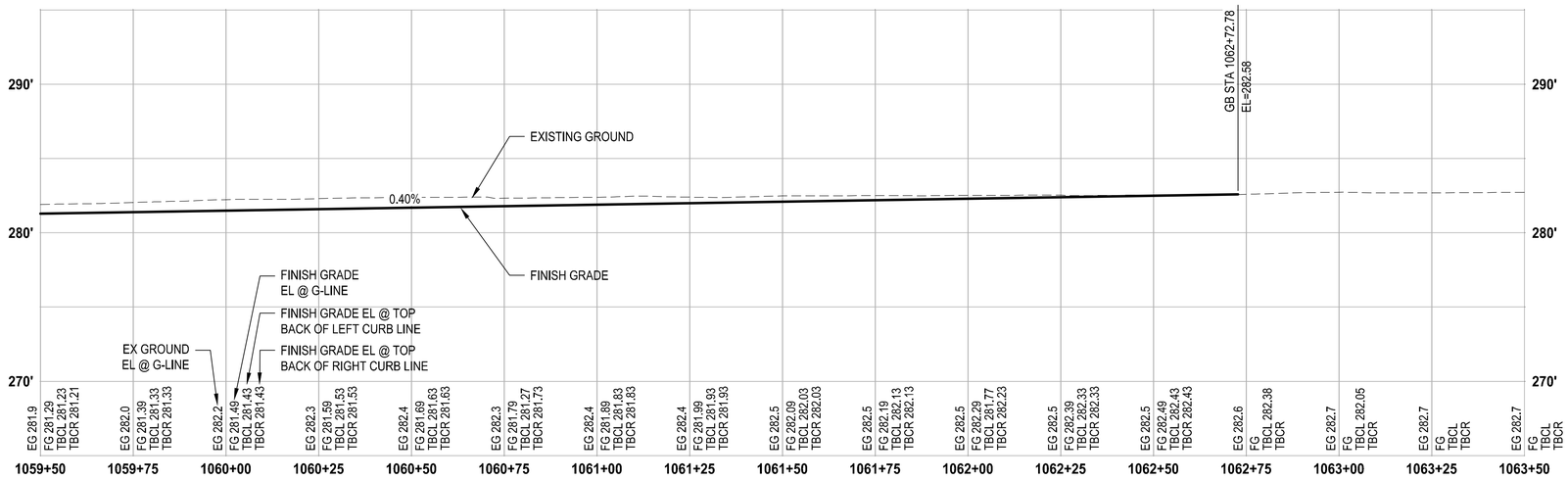


DRIVEWAY SCHEDULE					
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
219142063	1059+85.01	LT	15	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
219142049	1060+32.62	LT	15	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
219142002	1060+81.35	LT	15	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
219142028	1061+08.41	LT	15	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
219142054	1061+99.55	LT	15	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
219142003	1062+62.42	LT	15	10/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY
219142087	1062+97.68	LT	20	5/HMA	SAWCUT EXISTING ASPHALT DRIVEWAY

PLAN

SCALE IN FEET

0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —-----c— CUT
- —-----F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–PP13–18
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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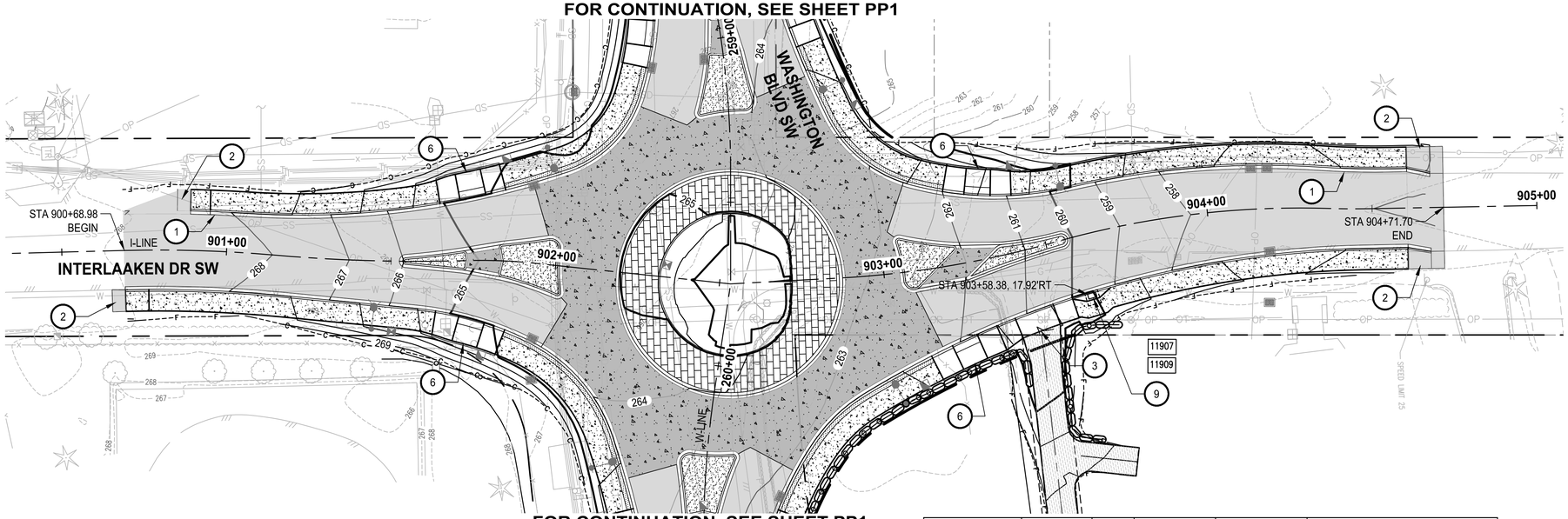
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW

DRAWING NO.
42 OF 153
PP18

LAYOUT: PP18 ROADWAY PLAN & PROFILE GRAVELLY LAKE DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:39:53 PM

FOR CONTINUATION, SEE SHEET PP1

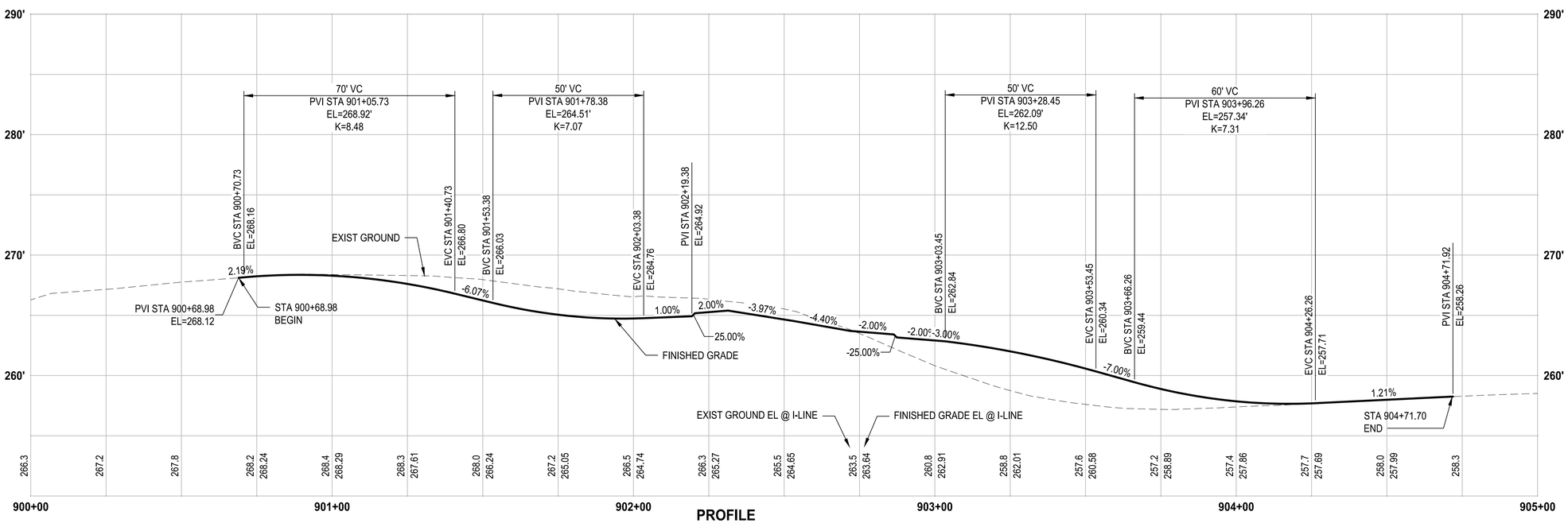


FOR CONTINUATION, SEE SHEET PP1

PLAN

SCALE IN FEET 0 20 40

HOUSE #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
11907 11909	903+65	RT	15	5 / HMA	



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —----C— CUT
- —----F— FILL

REVISIONS	DATE	BY

DESIGNED D. SUSLIKOV
DRAWN M. VASSEY/K. TAYLOR
CHECKED A. CIRILLO
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-PP40
JOB No. 214-3047-013
DATE FEBRUARY 2021

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DMITRI VICTOROVIC SUSLIKOV STATE OF WASHINGTON 38390 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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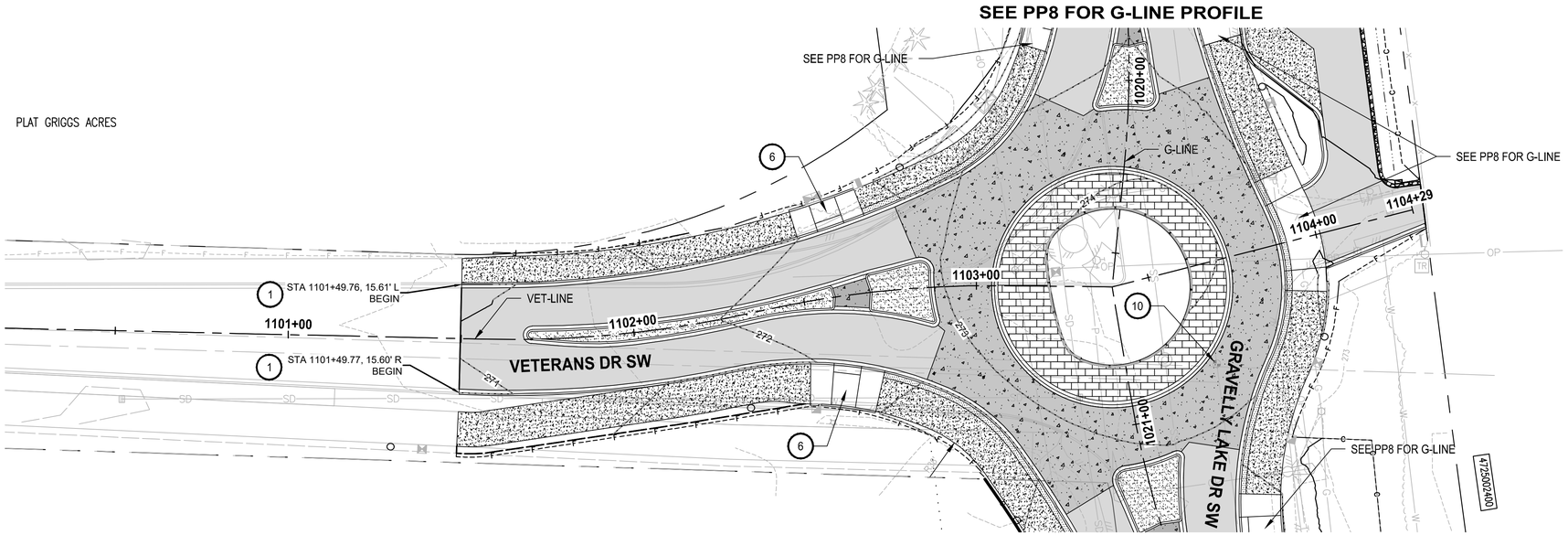
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE INTERLAAKEN DR SW

DRAWING NO.
43 OF 153
PP19

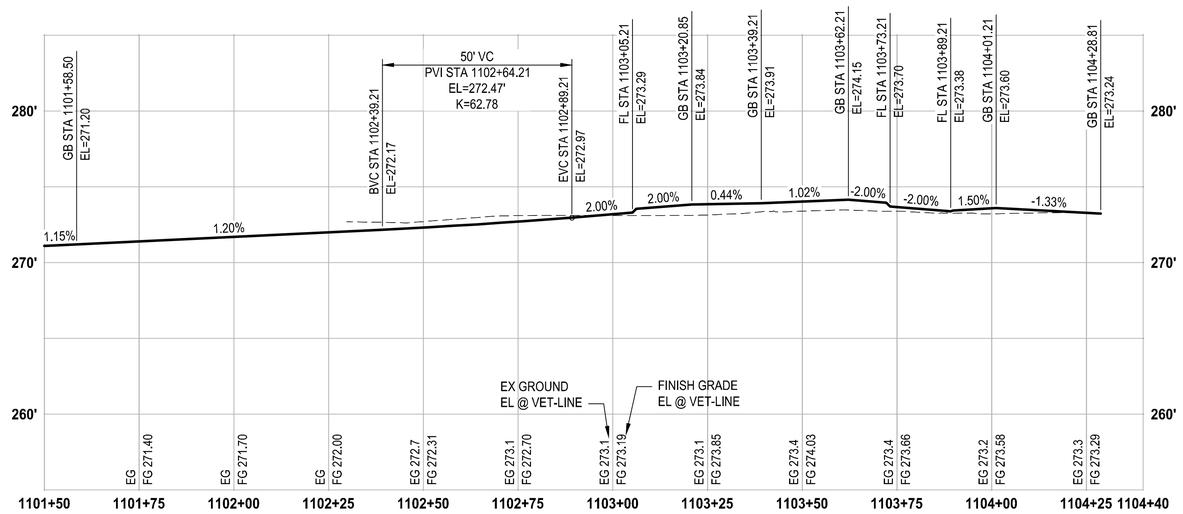
PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 1:18:20 PM
LAYOUT: PP19



PLAN

SCALE IN FEET 0 20 40

N



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —----C— CUT
- —----F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-PP20-22
JOB No. 214-3047-013
DATE FEBRUARY 2021

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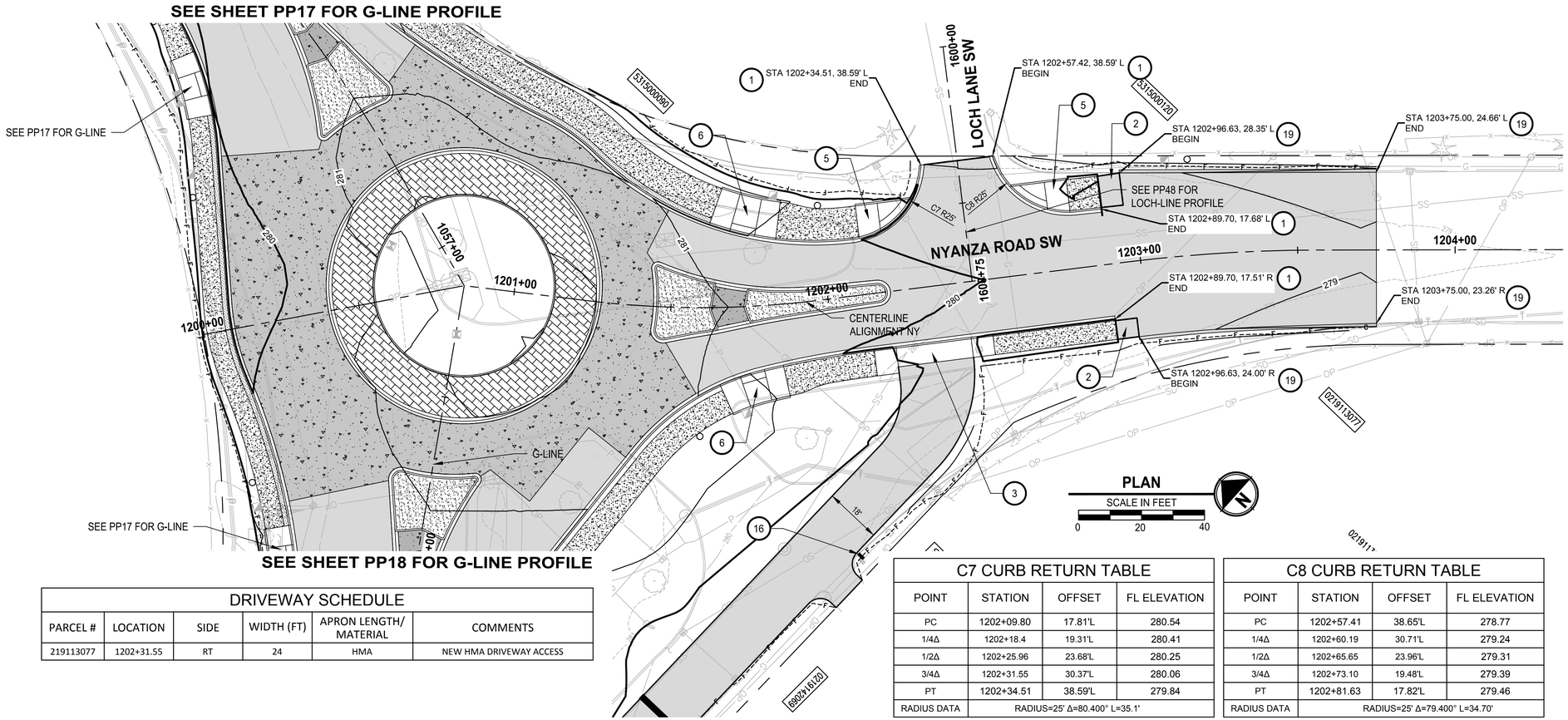
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILE VETERANS DRIVE SW

DRAWING NO.
44 OF 153
PP20

LAYOUT: PP20 ROADWAY PLAN & PROFILE VETERANS DRIVE SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:42:40 PM

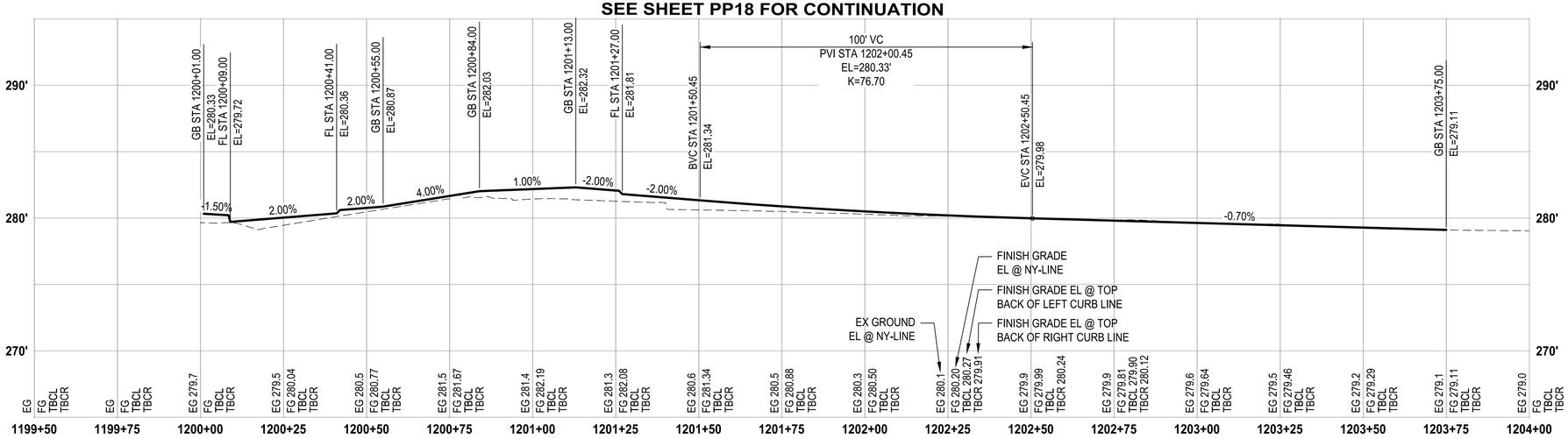


SEE SHEET PP18 FOR CONTINUATION

DRIVEWAY SCHEDULE					
PARCEL #	LOCATION	SIDE	WIDTH (FT)	APRON LENGTH/ MATERIAL	COMMENTS
219113077	1202+31.55	RT	24	HMA	NEW HMA DRIVEWAY ACCESS

C7 CURB RETURN TABLE			
POINT	STATION	OFFSET	FL ELEVATION
PC	1202+09.80	17.81'L	280.54
1/4Δ	1202+18.4	19.31'L	280.41
1/2Δ	1202+25.96	23.68'L	280.25
3/4Δ	1202+31.55	30.37'L	280.06
PT	1202+34.51	38.59'L	279.84
RADIUS DATA	RADIUS=25' Δ=80.400° L=35.1'		

C8 CURB RETURN TABLE			
POINT	STATION	OFFSET	FL ELEVATION
PC	1202+57.41	38.65'L	278.77
1/4Δ	1202+60.19	30.71'L	279.24
1/2Δ	1202+65.65	23.96'L	279.31
3/4Δ	1202+73.10	19.48'L	279.39
PT	1202+81.63	17.82'L	279.46
RADIUS DATA	RADIUS=25' Δ=79.400° L=34.70'		



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

ROADWAY CONSTRUCTION NOTES

1. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04.
2. SIDEWALK TRANSITION WITH HMA RAMP & LANDING, PER 2/DT3
3. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 1, PER 3/DT1
4. CEMENT CONCRETE DRIVEWAY ENTRANCE TYPE 3, PER 1,2/DT1
5. CEMENT CONCRETE CURB RAMP TYPE SINGLE DIRECTION PER WSDOT STD PLAN F-40.16.
6. CEMENT CONCRETE CURB RAMP TYPE PARALLEL PER 4/DT1
7. TYPE 4 CHAIN LINK FENCE PER WSDOT STD PLAN L-20.10-03.
8. NOT USED.
9. CLUSTER BOX UNIT TYPE V, SEE SHT DT2 & SPECIFICATIONS.
10. RESET EXISTING MONUMENT PER COL STD PLAN MI-02.
11. 6" CEMENT CONC PAD FOR BUS SHELTER PER 2/DT2
12. CEMENT CONCRETE CURB RAMP TYPE PERPENDICULAR PER WSDOT STD PLAN F-40.15.
13. WOODEN FENCE, MATCH EXISTING.
14. SINGLE SLOPE BARRIER WITH MOMENT SLAB PER 1/DT3
15. DUAL FACED SLOPED MOUNTABLE CURB PER WSDOT STD PLAN F-10.64
16. MAILBOX SUPPORT TYPE 1 WITH NEW MAILBOXES PER 3/DT3
17. MAILBOX SUPPORT TYPE 2 WITH NEW MAILBOXES PER 4/DT3
18. HMA SPEED HUMP PER 5/DT3
19. HMA WEDGE CURB PER COL STD PLAN FR-04.

GENERAL NOTES

1. SEE SHEETS RS1-RS3 FOR TYPICAL ROAD SECTIONS.
2. SEE SHEETS RAB1-RAB14 FOR ADDITIONAL LAYOUT AND GRADING INFORMATION RELATED TO ROUNDABOUTS.

LEGEND

- CEMENT CONCRETE SIDEWALK PER COL STD PLAN FR-03
- COLORED CEMENT CONCRETE
- CEMENT CONCRETE TRUCK APRON, SEE RAB SHEETS
- CEMENT CONCRETE PAVEMENT, SEE RAB SHEETS
- HMA CL 1/2 IN PG 58H-22, DEPTH PER APPLICABLE ROADWAY SECTION
- CRUSHED SURFACING TOP COURSE
- DRIVEWAY APPROACH PER SECTIONS A,B, & C, SEE SHEET DT1
- —----C— CUT
- —----F— FILL

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–PP20–22
JOB No. 214–3047–013
DATE FEBRUARY 2021

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JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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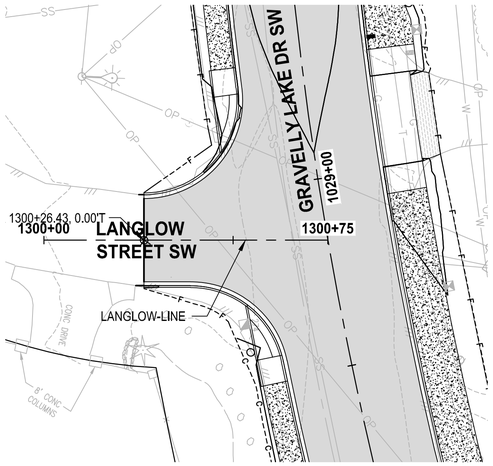
WWW.BCRADESIGN.COM

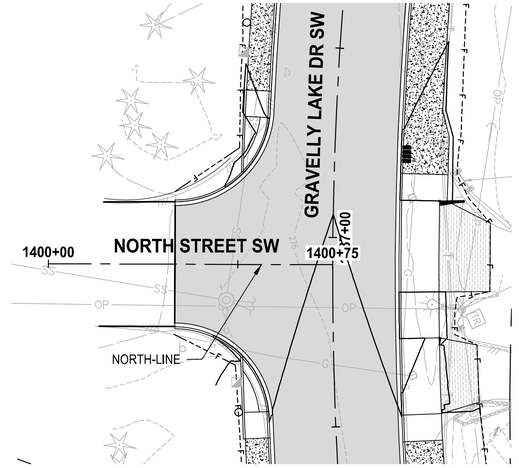
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

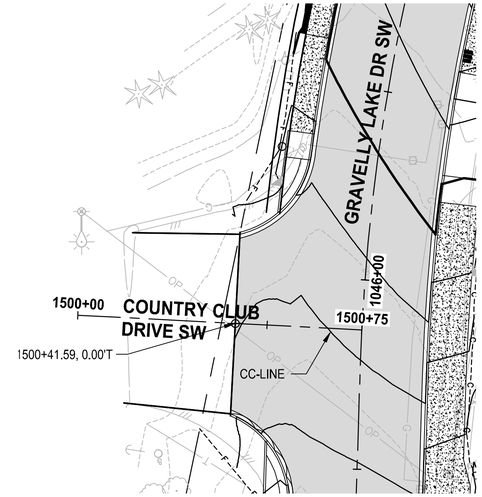
ROADWAY PLAN & PROFILE NYANZA ROAD SW

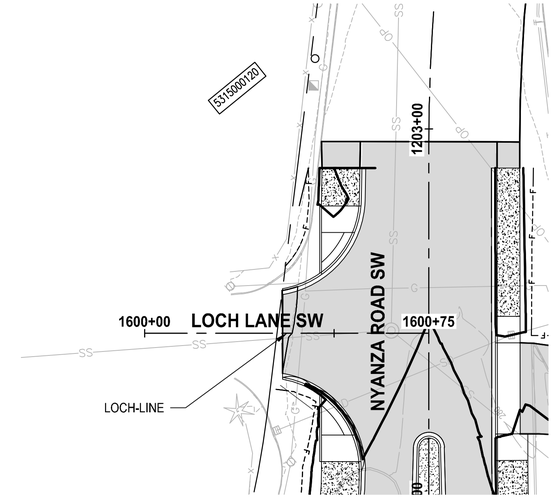
DRAWING NO.
45 OF 153
PP21

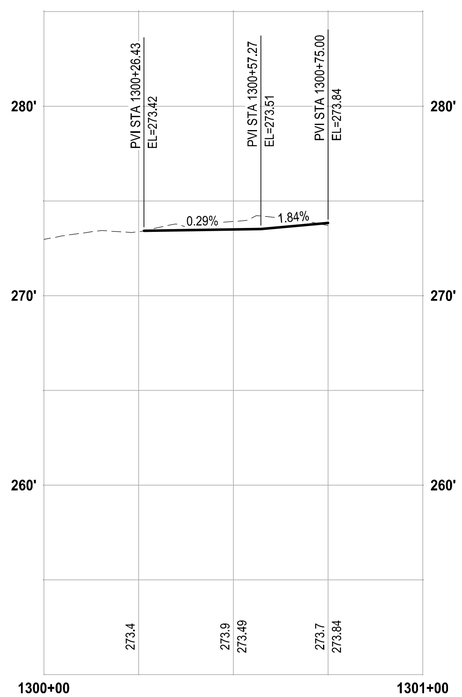
LAYOUT: PP21 ROADWAY PLAN & PROFILE NYANZA ROAD SW PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Friday, February 5, 2021 1:58:56 PM

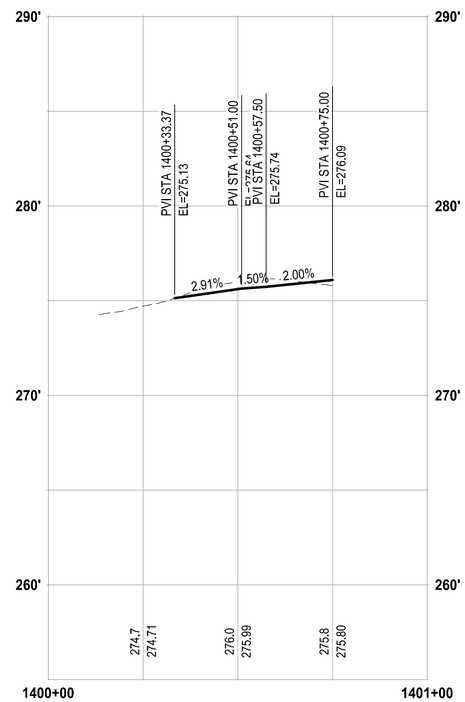


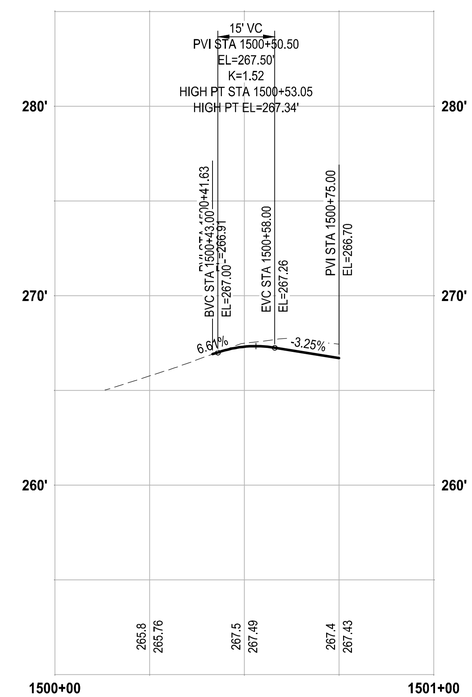


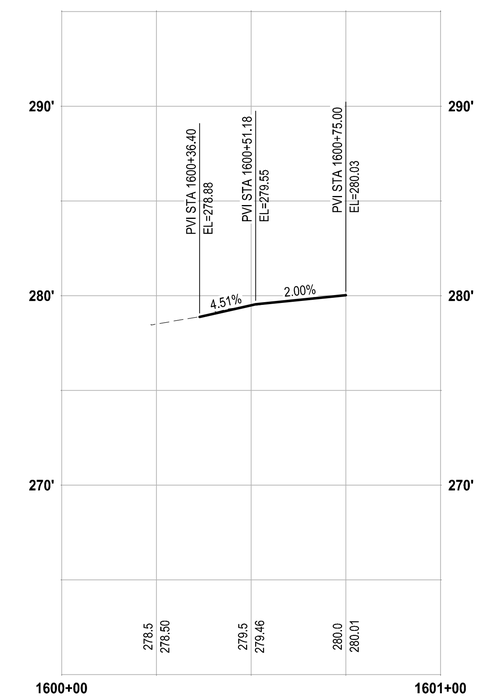












PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

	REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–PP20–22
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT STATE OF WASHINGTON 48540 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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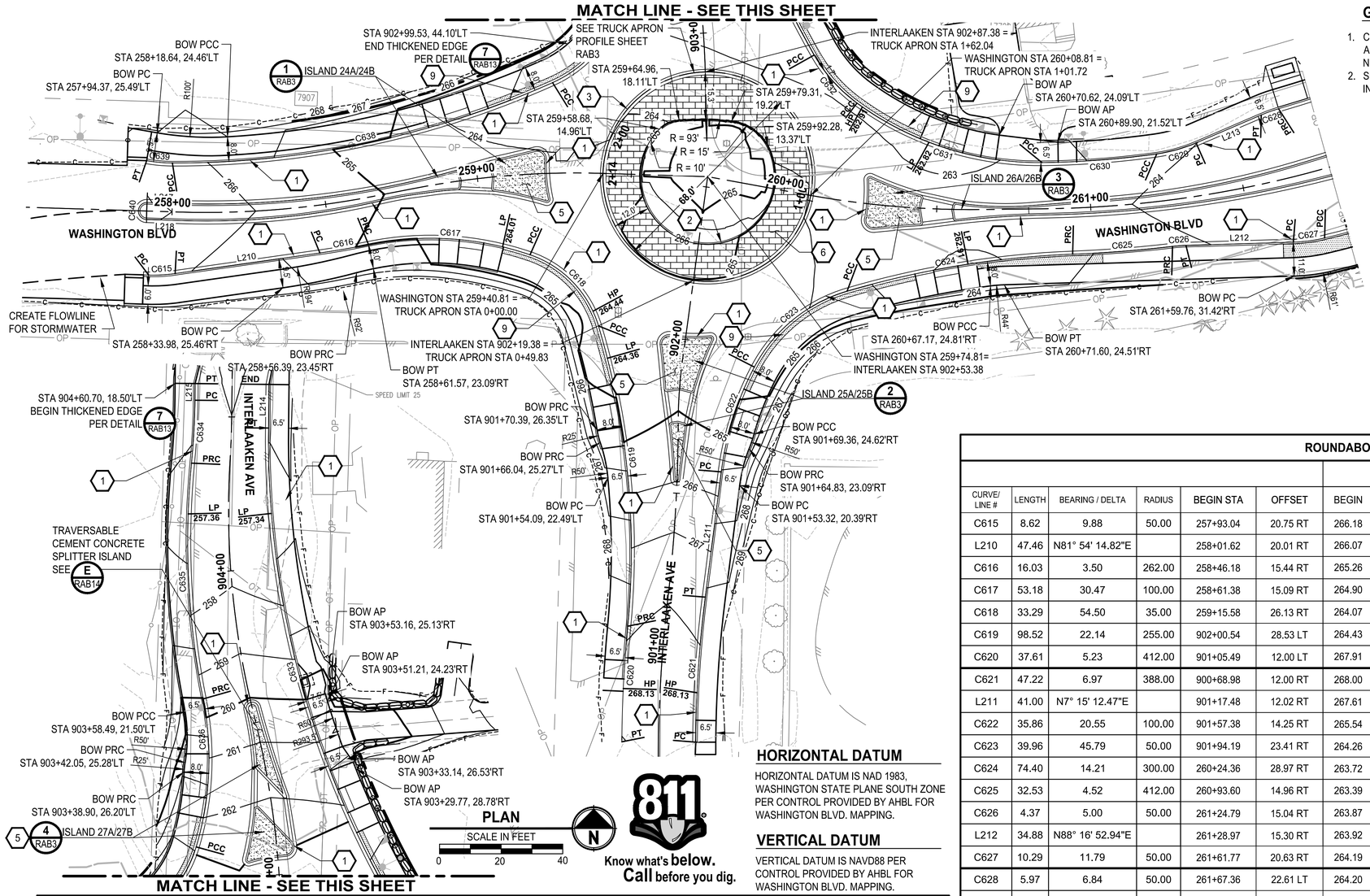
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY PLAN & PROFILES LANGLOW, N ST, CC, LOCH

DRAWING NO.

PP22

LAYOUT: PP22 ROADWAY PLAN & PROFILES LANGLOW N ST CC LOCH PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:47:16 PM



GENERAL NOTES

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THIS WORK
2. SEE PP SHEETS FOR DRIVEWAY INFORMATION

(X) CONSTRUCTION NOTES

1. INSTALL CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04
2. INSTALL TRUCK BARRIER CURB PER COL STD PLAN FR-04 WITH WEEP HOLES PER SECTION A/RAB13
3. INSTALL ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB AND GUTTER PER WSDOT STD PLAN F-10.18-01 (CURB 1)
4. INSTALL TRAFFIC BARRIER CURB PER COL STD PLAN FR-04
5. INSTALL SPLITTER ISLAND PER DETAILS ON SHEET RAB14
6. INSTALL CEMENT CONCRETE TRUCK APRON PER DETAIL 1/RAB13 AND SECTION A/RAB13
7. INSTALL TRAFFIC BARRIER CURB PER COL STD PLAN FR-04 AND SECTION B/RAB13
8. INSTALL ROUNDABOUT CEMENT CONCRETE CURB & GUTTER, TYPE CURB 2 PER WSDOT STD PLAN F-10.18-01
9. INSTALL SIDEWALK BUFFER PER DETAIL 2/RAB13 AND SECTION C/RAB13

HORIZONTAL DATUM

HORIZONTAL DATUM IS NAD 1983, WASHINGTON STATE PLANE SOUTH ZONE PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

VERTICAL DATUM

VERTICAL DATUM IS NAVD88 PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

ROUNDABOUT LINE/CURVE TABLE

						BOTTOM FACE OF CURB/FLOWLINE										
CURVE/ LINE #	LENGTH	BEARING / DELTA	RADIUS	BEGIN STA	OFFSET	BEGIN	1/8	1/4	3/8	1/2	5/8	3/4	7/8	END	END STA	OFFSET
C615	8.62	9.88	50.00	257+93.04	20.75 RT	266.18				266.13				266.07	258+01.62	20.01 RT
L210	47.46	N81° 54' 14.82"E		258+01.62	20.01 RT	266.07		265.91		265.71		265.50		265.26	258+46.18	15.44 RT
C616	16.03	3.50	262.00	258+46.18	15.44 RT	265.26				265.09				264.90	258+61.38	15.09 RT
C617	53.18	30.47	100.00	258+61.38	15.09 RT	264.90	264.74	264.57	264.40	264.22	264.09	264.02	264.01	264.07	259+15.58	26.13 RT
C618	33.29	54.50	35.00	259+15.58	26.13 RT	264.07		264.23		264.37		264.44		264.43	902+00.54	28.53 LT
C619	98.52	22.14	255.00	902+00.54	28.53 LT	264.43	264.37	264.52	264.92	265.58	266.35	267.04	267.55	267.91	901+05.49	12.00 LT
C620	37.61	5.23	412.00	901+05.49	12.00 LT	267.91		268.07		268.13		268.09		268.02	900+68.98	12.00 LT
C621	47.22	6.97	388.00	900+68.98	12.00 RT	268.00		268.12		268.10		267.93		267.61	901+17.48	12.02 RT
L211	41.00	N7° 15' 12.47"E		901+17.48	12.02 RT	267.61		267.21		266.71		266.13		265.54	901+57.38	14.25 RT
C622	35.86	20.55	100.00	901+57.38	14.25 RT	265.54		265.08		264.71		264.44		264.26	901+94.19	23.41 RT
C623	39.96	45.79	50.00	901+94.19	23.41 RT	264.26		264.18		264.09		263.94		263.72	260+24.36	28.97 RT
C624	74.40	14.21	300.00	260+24.36	28.97 RT	263.72	263.48	263.24	263.02	262.92	262.94	263.08	263.23	263.39	260+93.60	14.96 RT
C625	32.53	4.52	412.00	260+93.60	14.96 RT	263.39		263.53		263.65		263.77		263.87	261+24.79	15.04 RT
C626	4.37	5.00	50.00	261+24.79	15.04 RT	263.87				263.89				263.92	261+28.97	15.30 RT
L212	34.88	N88° 16' 52.94"E		261+28.97	15.30 RT	263.92		264.01		264.08		264.13		264.19	261+61.77	20.63 RT
C627	10.29	11.79	50.00	261+61.77	20.63 RT	264.19				264.21				264.25	261+71.39	21.77 RT
C628	5.97	6.84	50.00	261+67.36	22.61 LT	264.20				264.17				264.15	261+61.02	21.96 LT
L213	23.04	S66° 46' 03.71"W		261+61.02	21.96 LT	264.15				264.08				264.00	261+37.16	17.13 LT
C629	13.29	15.23	50.00	261+37.16	17.13 LT	264.00				263.93				263.85	261+23.39	15.39 LT
C630	37.41	7.44	288.00	261+23.39	15.39 LT	263.85		263.72		263.58		263.41		263.24	260+84.34	15.03 LT
C631	64.17	36.77	100.00	260+84.34	15.03 LT	263.24	263.09	262.96	262.88	262.83	262.82	262.85	262.90	262.91	260+19.52	31.98 LT
C632	21.03	24.09	50.00	260+19.52	31.98 LT	262.91				262.86				262.74	902+91.41	35.51 RT
C633	159.03	30.37	300.00	902+91.41	35.51 RT	262.74	262.36	261.76	260.72	259.26	258.07	257.45	257.39	257.40	904+46.69	12.02 RT
L214	14.14	N0° 40' 09.79"E		904+46.69	12.02 RT	257.40				257.52				257.62	904+60.70	12.00 RT
L215	5.41	N0° 40' 09.79"E		904+60.70	12.00 LT	257.75				257.72				257.70	904+55.29	12.00 LT
C634	20.45	4.92	238.00	904+55.29	12.00 LT	257.70				257.60				257.49	904+34.33	12.45 LT
C635	76.92	16.82	262.00	904+34.33	12.45 LT	257.49	257.40	257.37	257.44	257.65	257.96	258.37	258.90	259.53	903+61.17	14.88 LT

ROUNDABOUT LINE/CURVE TABLE

						BOTTOM FACE OF CURB/FLOWLINE										
CURVE/ LINE #	LENGTH	BEARING / DELTA	RADIUS	BEGIN STA	OFFSET	BEGIN	1/8	1/4	3/8	1/2	5/8	3/4	7/8	END	END STA	OFFSET
C636	48.57	27.83	100.00	903+61.17	14.88 LT	259.53	260.00	260.48	260.92	261.30	261.62	261.89	262.17	262.44	903+11.88	26.04 LT
C637	34.45	49.34	40.00	903+11.88	26.04 LT	262.44		262.82		263.09		263.24		263.31	259+25.16	29.41 LT
C638	127.11	24.28	300.00	259+25.16	29.41 LT	263.31	263.52	263.88	264.29	264.71	265.12	265.54	265.91	266.19	257+99.61	15.86 LT
C639	8.40	9.62	50.00	257+99.61	15.86 LT	266.19				266.25				266.29	257+91.24	16.34 LT

REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-RAB-07
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

KEVIN L. HOUSER STATE OF WASHINGTON 41824 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

WASHINGTON & INTERLAAKEN ROUNDABOUT GRADING PLAN

DRAWING NO. 47 OF 153
RAB1

LAYOUT: RAB1 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 4:36:16 PM

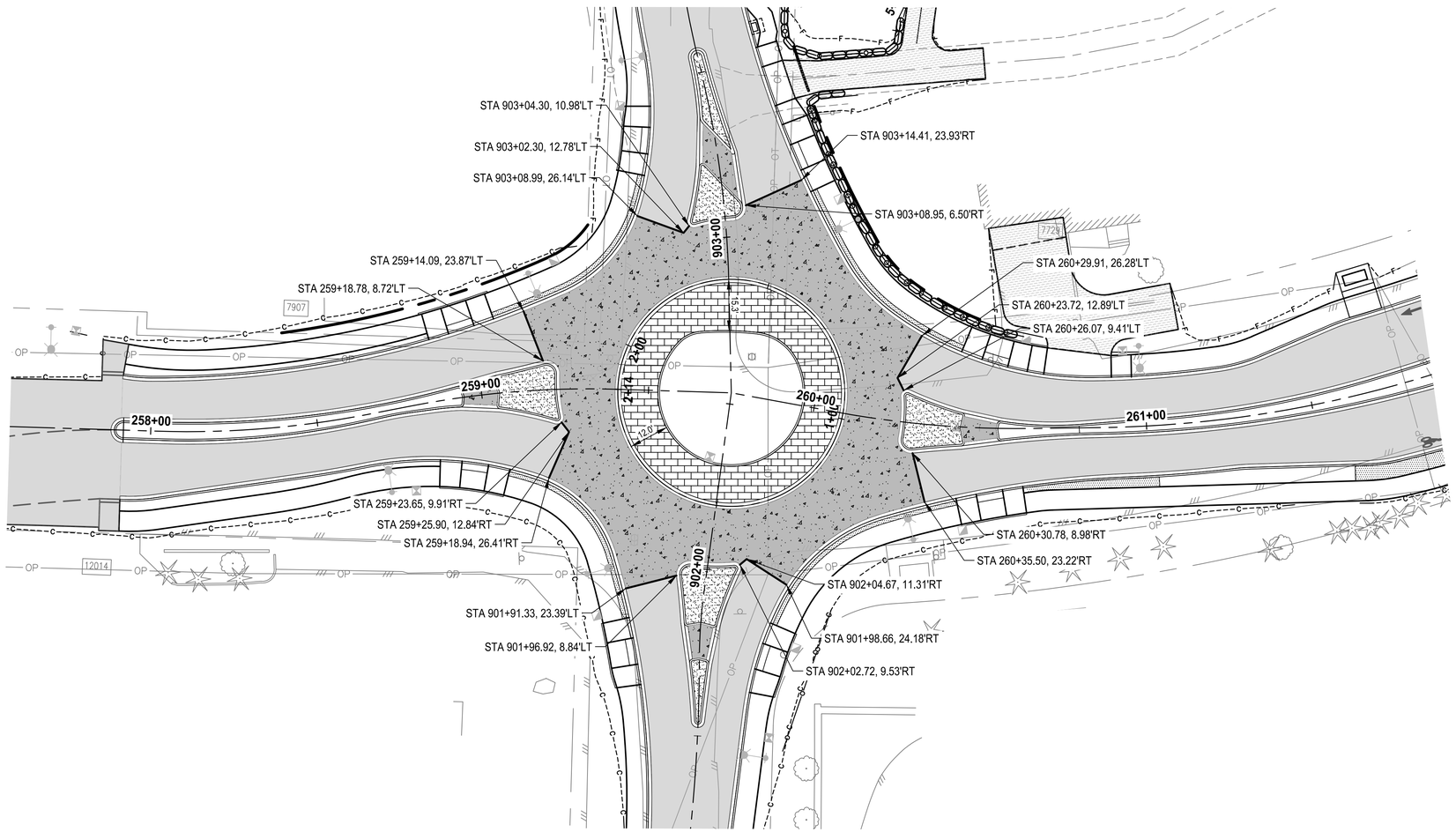
GENERAL NOTES

1. CONTRACTOR SHALL PREPARE JOINTING PLAN PER WSDOT STD PLAN A-40.10-04 AND A-40.15-00
2. SEE SPECIFICATIONS FOR ADDITIONAL PAVEMENT INFORMATION

LEGEND

10" CEMENT CONC. PAVEMENT
3" CSTC

6" HMA CLA 1/2 IN PG 58H-22
4" CSTC



PLAN
SCALE IN FEET
0 20 40
N

HORIZTONAL DATUM

HORIZONTAL DATUM IS NAD 1983, WASHINGTON STATE PLANE SOUTH ZONE PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

VERTICAL DATUM

VERTICAL DATUM IS NAVD88 PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

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

REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-RAB-07
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

KEVIN L. HOUSE STATE OF WASHINGTON 41824 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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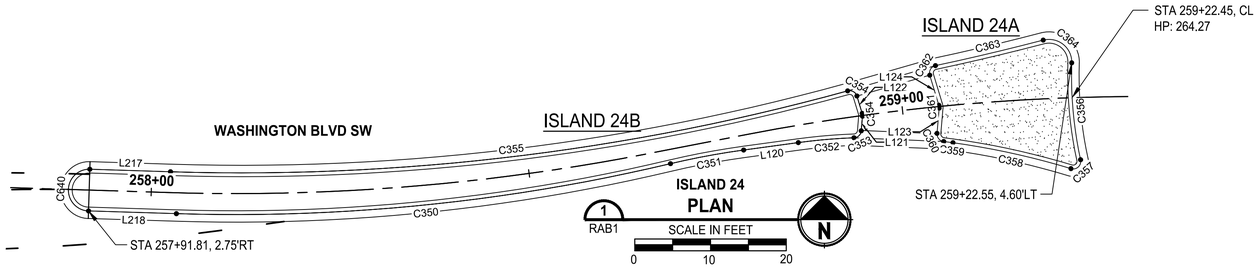
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

WASHINGTON & INTERLAAKEN ROUNDABOUT PAVING PLAN

DRAWING NO.
48 OF 153
RAB2

LAYOUT: RAB2 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 4:38:45 PM



GENERAL NOTE:

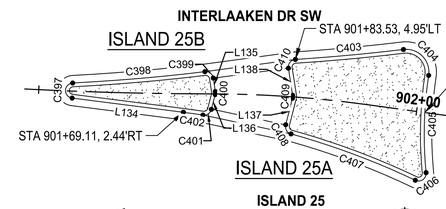
1. ALL ELEVATIONS ARE FROM BOTTOM/FACE OF CURB

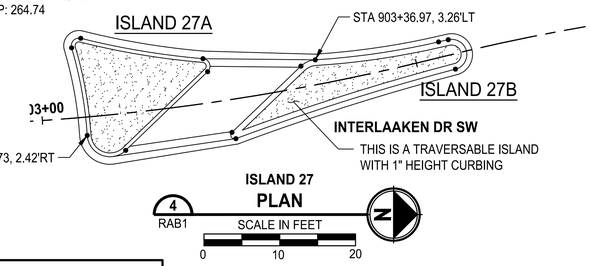
SPLITTER ISLAND 24B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
L218	11.60	S88° 12' 48.20"E		266.56	266.48	266.39
C350	65.74	15.13	249.00	266.39	265.75	264.98
C351	9.83	5.57	101.00	264.98	264.87	264.75
L120	7.28	N82° 14' 05.28"E		264.75	264.67	264.59
C352	7.38	5.63	75.00	264.59	264.52	264.45
C353	1.45	83.05	1.00	264.45	264.45	264.45
L121	1.94	N4° 49' 03.31"E		264.45	264.47	264.48
C354	0.38	21.68	1.00	264.48	264.48	264.48
L122	2.40	N16° 51' 56.72"W		264.48	264.45	264.42
C354	1.55	88.55	1.00	264.42	264.41	264.42
C355	90.35	17.20	301.00	264.42	265.46	266.41
L217	10.65	N88° 12' 48.20"W		266.41	266.49	266.56
C640	8.64	180.00	2.75	266.56	266.65	266.56

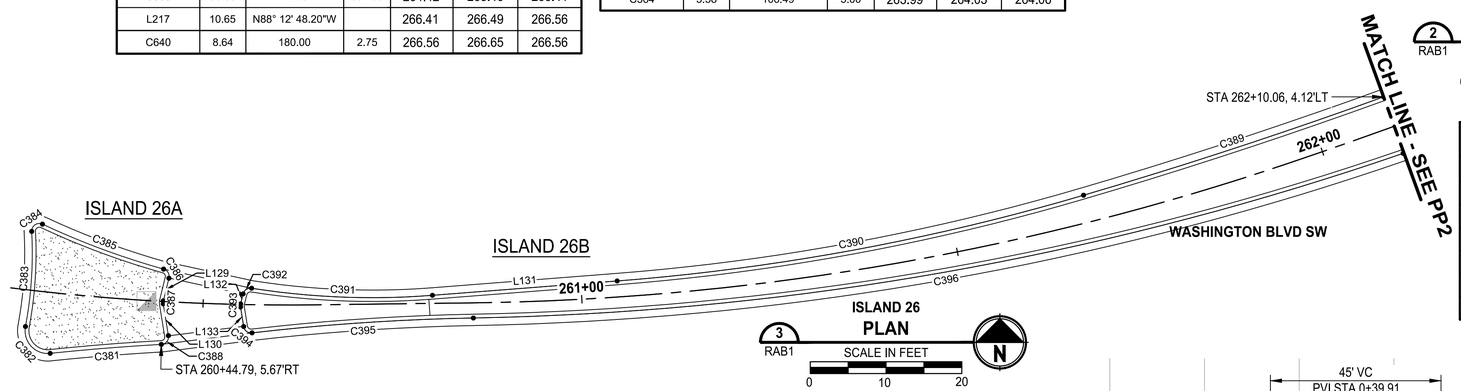
SPLITTER ISLAND 24A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C356	12.88	14.07	52.44	264.06	264.23	264.19
C357	2.08	119.10	1.00	264.19	264.18	264.18
C358	15.96	8.96	102.00	264.18	264.21	264.27
C359	1.24	0.94	75.00	264.27	264.28	264.28
C360	1.53	87.88	1.00	264.28	264.29	264.31
L123	3.35	N4° 49' 03.31"E		264.31	264.33	264.36
C361	0.38	21.68	1.00	264.36	264.36	264.36
L124	4.14	N16° 51' 56.72"W		264.36	264.30	264.24
C362	1.66	94.89	1.00	264.24	264.22	264.19
C363	14.62	2.71	309.65	264.19	264.09	263.99
C364	5.58	106.49	3.00	263.99	264.03	264.06

SPLITTER ISLAND 25B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
L134	14.80	N7° 15' 12.47"E		265.20	265.54	265.95
C397	2.96	169.81	1.00	265.95	266.02	265.95
C398	17.51	3.92	256.00	265.95	265.47	265.09
C399	1.54	88.02	1.00	265.09	265.07	265.07
L135	1.81	S81° 09' 23.49"W		265.07	265.08	265.10
C400	0.41	23.22	1.00	265.10	265.10	265.10
L136	2.02	N75° 37' 10.06"W		265.10	265.09	265.08
C401	1.47	84.35	1.00	265.08	265.08	265.10
C402	2.61	1.48	101.00	265.10	265.15	265.20

SPLITTER ISLAND 25A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C403	14.33	3.12	263.16	264.74	264.65	264.64
C404	5.52	105.39	3.00	264.64	264.67	264.70
C405	12.87	14.05	52.48	264.70	264.70	264.57
C406	2.11	120.92	1.00	264.57	264.56	264.55
C407	17.52	9.94	101.00	264.55	264.61	264.75
C408	1.55	88.90	1.00	264.75	264.77	264.79
L137	3.60	N75° 37' 10.06"W		264.79	264.81	264.84
C409	0.41	23.22	1.00	264.84	264.84	264.84
L138	3.62	S81° 09' 23.49"W		264.84	264.81	264.78
C410	1.66	95.13	1.00	264.78	264.76	264.74





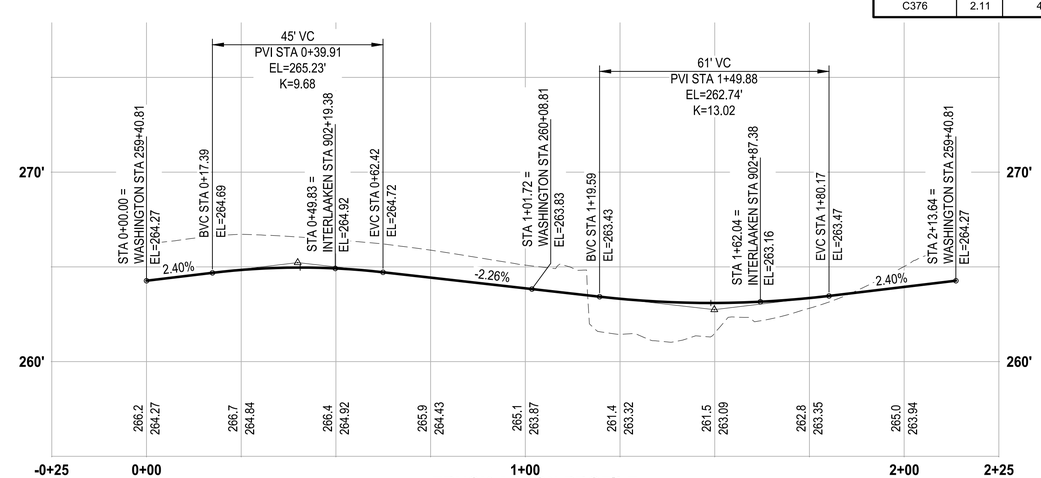


SPLITTER ISLAND 27A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C366	11.77	12.86	52.44	262.75	262.79	262.83
C367	2.11	120.66	1.00	262.83	262.80	262.76
C368	16.38	9.29	101.00	262.76	262.43	262.09
C369	2.29	131.36	1.00	262.09	262.06	262.09
L125	14.99	N43° 49' 47.48"W		262.09	262.38	262.55
C370	6.81	130.13	3.00	262.55	262.64	262.75

SPLITTER ISLAND 27B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C371	16.47	9.34	101.00	261.37	260.87	260.31
C372	1.31	0.30	249.00	260.31	260.26	260.22
C373	6.21	177.97	2.00	260.22	260.11	260.21
C374	30.40	5.79	301.00	260.21	261.19	261.96
C375	1.37	156.63	0.50	261.96	261.98	261.99
L126	12.62	S43° 49' 47.48"E		261.99	261.77	261.48
C376	2.11	40.22	3.00	261.48	261.43	261.37

SPLITTER ISLAND 26A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C381	14.72	2.73	309.45	263.20	263.30	263.47
C382	5.58	106.58	3.00	263.47	263.50	263.54
C383	12.61	13.78	52.44	263.54	263.44	263.35
C384	2.06	118.28	1.00	263.35	263.33	263.31
C385	17.07	9.54	102.50	263.31	263.20	263.17
C386	1.54	88.18	1.00	263.17	263.17	263.18
L129	3.07	S13° 46' 14.34"W		263.18	263.22	263.25
C387	0.40	22.94	1.00	263.25	263.25	263.25
L130	4.25	S9° 10' 17.64"E		263.25	263.22	263.20
C388	1.67	95.94	1.00	263.20	263.19	263.20

SPLITTER ISLAND 26B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C389	41.69	3.54	675.39	264.85	264.72	264.58
C390	62.70	11.94	301.00	264.58	264.27	263.83
L131	24.45	S85° 33' 18.39"W		263.83	263.64	263.46
C391	23.94	13.38	102.50	263.46	263.29	263.18
C392	1.49	85.17	1.00	263.18	263.19	263.20
L132	1.36	S13° 46' 14.34"W		263.20	263.21	263.22
C393	0.40	22.94	1.00	263.22	263.22	263.22
L133	2.62	S9° 10' 17.64"E		263.22	263.20	263.18
C394	1.53	87.46	1.00	263.18	263.17	263.17
C395	29.29	5.58	301.00	263.17	263.29	263.52
C396	125.14	17.97	399.00	263.52	264.41	264.86



TRUCK APRON PROFILE

HORIZ: 1=20
VERT: 1=4

REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-RAB-07
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

KEVIN L. HOUSE STATE OF WASHINGTON 41824 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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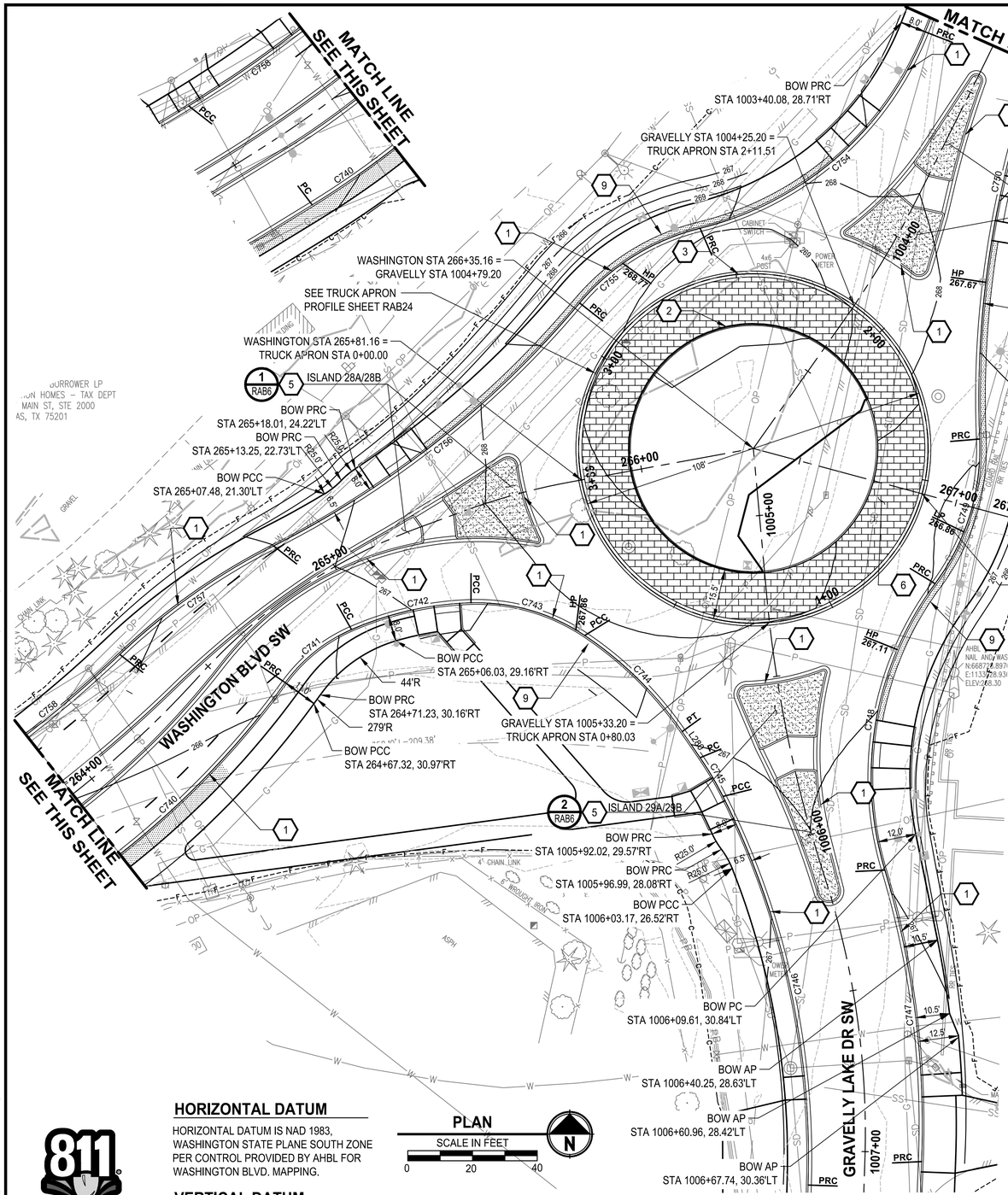
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

WASHINGTON & INTERLAAKEN ROUNDABOUT GRADING DETAILS

DRAWING NO.

RAB3

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 4:28:19 PM LAYOUT: RAB3



GENERAL NOTES

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THIS WORK
2. SEE PP SHEETS FOR DRIVEWAY INFORMATION

X CONSTRUCTION NOTES

1. INSTALL CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04
2. INSTALL TRUCK BARRIER CURB PER COL STD PLAN FR-04 WITH WEEP HOLES PER SECTION A/RAB13
3. INSTALL ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB AND GUTTER PER WSDOT STD PLAN F-10.18-01 (CURB 1)
4. INSTALL TRAFFIC BARRIER CURB PER COL STD PLAN FR-04
5. INSTALL SPLITTER ISLAND PER DETAILS ON SHEET RAB14
6. INSTALL CEMENT CONCRETE TRUCK APRON PER DETAIL 1/RAB13 AND SECTION A/RAB13
7. INSTALL TRAFFIC BARRIER CURB PER COL STD PLAN FR-04 AND SECTION B/RAB13
8. INSTALL ROUNDABOUT CEMENT CONCRETE CURB & GUTTER, TYPE CURB 2 PER WSDOT STD PLAN F-10.18-01
9. INSTALL SIDEWALK BUFFER PER DETAIL 2/RAB13 AND SECTION C/RAB13

ROUNDABOUT LINE/CURVE TABLE

						BOTTOM FACE OF CURB/FLOWLINE										
CURVE #	LENGTH	BEARING / DELTA	RADIUS	BEGIN STA	OFFSET	BEGIN	1/8	1/4	3/8	1/2	5/8	3/4	7/8	END	END STA	OFFSET
C740	104.97	22.44	268.00	263+63.45	23.22 RT	265.39	265.48	265.56	265.64	265.72	265.80	265.88	265.99	266.15	264+64.48	20.24 RT
C741	26.55	30.43	50.00	264+64.48	20.24 RT	266.15		266.24		266.34		266.46		266.59	264+94.19	19.32 RT
C742	38.08	21.82	100.00	264+94.19	19.32 RT	266.59		266.79		266.99		267.19		267.39	265+35.76	27.37 RT
C743	37.15	35.48	60.00	265+35.76	27.37 RT	267.39		267.59		267.76		267.85		267.86	265+72.23	47.40 RT
C744	42.55	21.67	112.50	265+72.23	47.40 RT	267.86		267.78		267.60		267.33		267.09	1005+61.46	31.68 RT
L280	9.79	N34° 33' 03.24"W		1005+61.46	31.68 RT	267.09				267.00				266.92	1005+69.81	27.77 RT
C745	13.90	7.97	100.00	1005+69.81	27.77 RT	266.92				266.82				266.74	1005+82.23	23.50 RT
C746	124.22	28.47	250.00	1005+82.23	23.50 RT	266.74	266.63	266.55	266.47	266.39	266.32	266.24	266.16	266.08	1007+10.88	17.28 RT
C747	91.20	19.14	273.00	1007+02.51	17.51 LT	266.12	266.17	266.22	266.28	266.33	266.38	266.43	266.48	266.54	1006+17.31	18.36 LT
C748	93.20	53.40	100.00	1006+17.31	18.36 LT	266.54	266.59	266.71	266.84	266.96	267.07	267.11	267.07	266.96	267+00.24	25.78 RT
C749	47.71	39.05	70.00	267+00.24	25.78 RT	266.96		266.88		266.87		266.95		267.10	267+01.94	20.98 LT
C750	159.28	30.42	300.00	267+01.94	20.98 LT	267.10	267.40	267.65	267.63	267.45	267.28	267.10	266.93	266.75	1002+92.68	14.99 LT
C751	57.75	10.85	305.00	1002+92.68	14.99 LT	266.75	266.69	266.63	266.57	266.50	266.44	266.32	266.16	266.09	1002+36.26	17.24 LT
L281	36.79	S17° 28' 21.93"W		1001+76.40	17.50 RT	266.01		266.04		266.08		266.11		266.14	1002+12.86	17.95 RT
C752	58.11	6.90	482.50	1002+12.86	17.95 RT	266.14	266.17	266.20	266.10	266.13	266.19	266.26	266.33	266.40	1002+72.42	20.21 RT
L282	48.47	S24° 22' 23.74"W		1002+72.42	20.21 RT	266.40		266.52		266.65		266.77		266.89	1003+22.27	21.47 RT
C753	16.66	2.96	323.00	1003+22.27	21.47 RT	266.89				266.98				267.06	1003+39.40	20.74 RT
C754	95.98	54.99	100.00	1003+39.40	20.74 RT	267.06	267.19	267.34	267.53	267.74	267.99	268.24	268.46	268.63	1004+33.14	52.72 RT
C755	44.54	36.46	70.00	1004+33.14	52.72 RT	268.63		268.72		268.77		268.76		268.70	265+90.47	53.88 LT
C756	121.57	23.22	300.00	265+90.47	53.88 LT	268.70	268.54	268.28	267.96	267.64	267.33	267.03	266.75	266.50	264+87.90	15.42 LT
C757	58.40	16.73	200.00	264+87.90	15.42 LT	266.50	266.40	266.30	266.21	266.12	266.04	265.97	265.91	265.86	264+33.57	22.44 LT
C758	80.40	12.06	382.00	264+33.57	22.44 LT	265.86	265.76	265.69	265.62	265.56	265.49	265.43	265.37	265.30	263+47.53	23.00 LT

HORIZONTAL DATUM

HORIZONTAL DATUM IS NAD 1983, WASHINGTON STATE PLANE SOUTH ZONE PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

VERTICAL DATUM

VERTICAL DATUM IS NAVD88 PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

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

REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-RAB-08
JOB No. 214-3047-013
DATE FEBRUARY 2021

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KEVIN L. HOUSE STATE OF WASHINGTON 41824 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRAVELLY LAKE & WASHINGTON ROUNDABOUT GRADING PLAN

DRAWING NO. 50 OF 153
RAB4

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Wednesday, February 3, 2021 8:42:22 AM
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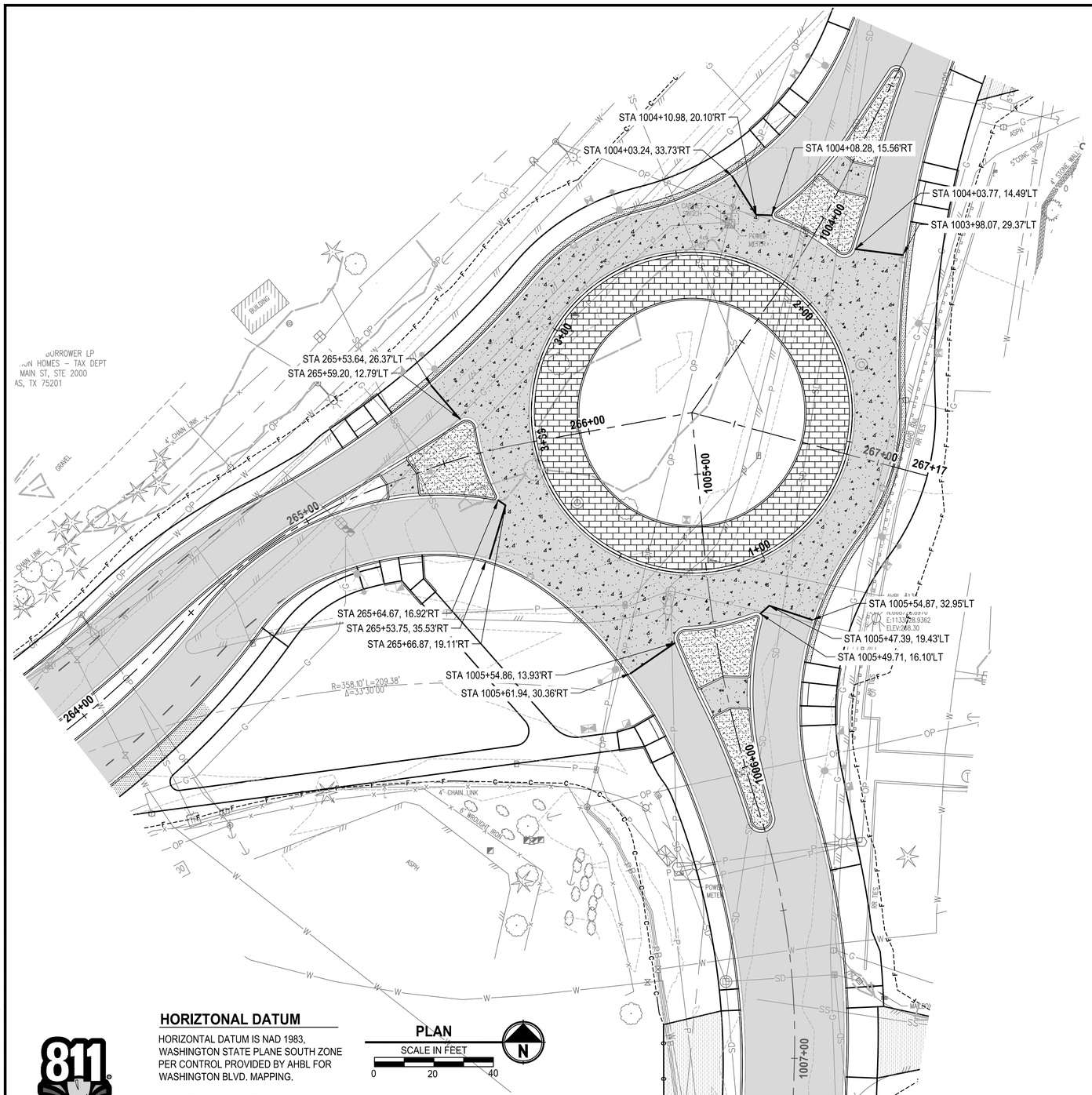

GENERAL NOTES

1. CONTRACTOR SHALL PREPARE JOINTING PLAN PER WSDOT STD PLAN A-40.10-04 AND A-40.15-00
2. SEE SPECIFICATIONS FOR ADDITIONAL PAVEMENT INFORMATION

LEGEND

10" CEMENT CONC. PAVEMENT
3" CSTC

6" HMA CLA 1/2 IN PG 58H-22
4" CSTC

HORIZTONAL DATUM

HORIZONTAL DATUM IS NAD 1983, WASHINGTON STATE PLANE SOUTH ZONE PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

VERTICAL DATUM

VERTICAL DATUM IS NAVD88 PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

PLAN

SCALE IN FEET

0 20 40

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

REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013-RAB-08
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

KEVIN L. HOUSE STATE OF WASHINGTON 41824 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRAVELLY LAKE & WASHINGTON ROUNDABOUT PAVING PLAN

DRAWING NO.
51 OF 153
RAB5

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toylokat DATE: Wednesday, February 3, 2021 8:35:53 AM
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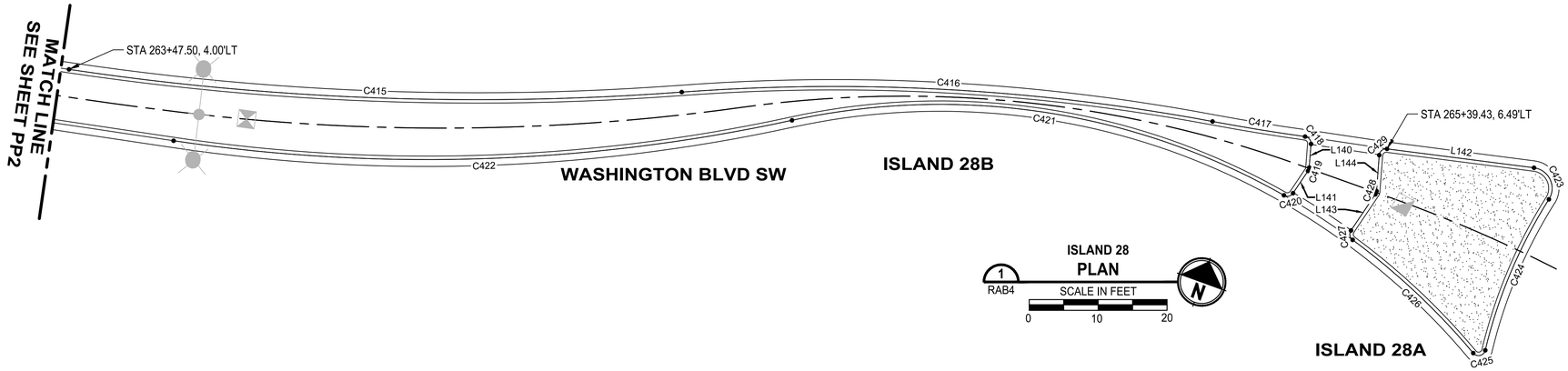
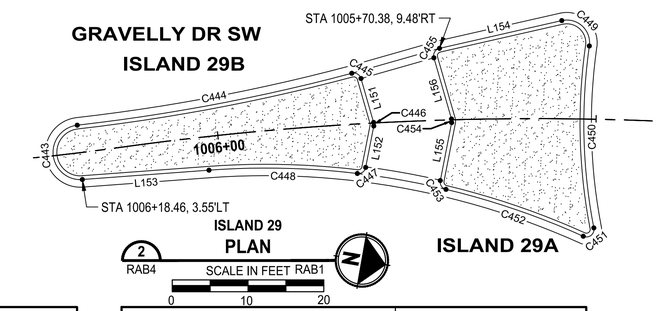
GENERAL NOTE:

1. ALL ELEVATIONS ARE FROM BOTTOM/FACE OF CURB



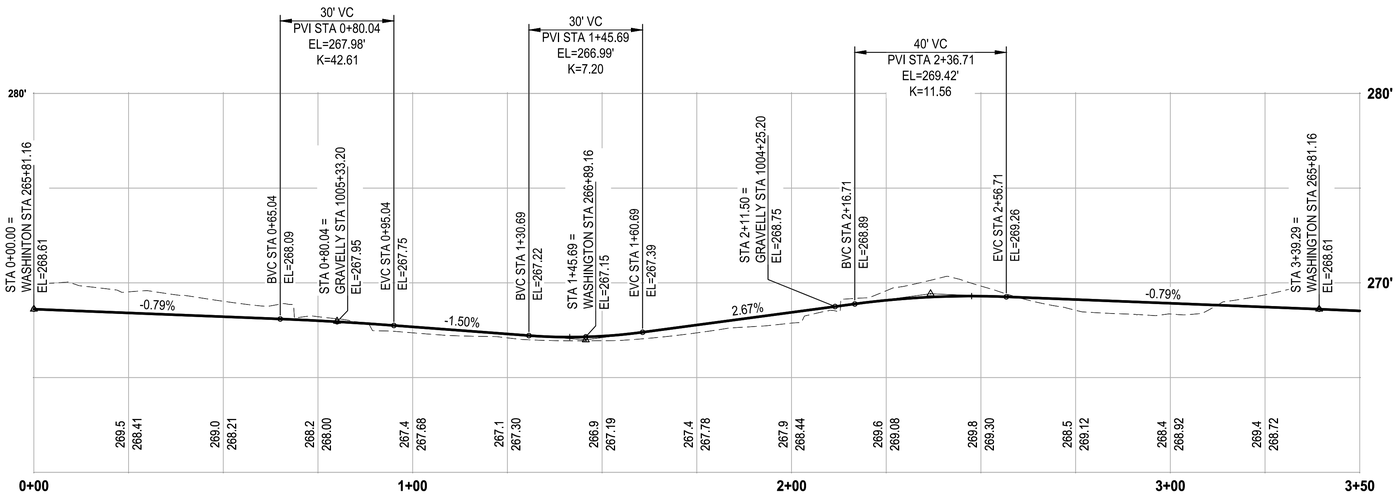


SPLITTER ISLAND 28B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C415	89.17	12.74	401.00	265.68	265.98	266.24
C416	77.36	14.82	299.00	266.24	266.61	267.24
C417	13.61	2.59	301.00	267.24	267.36	267.49
C418	1.51	86.40	1.00	267.49	267.50	267.52
L140	3.44	N35° 36' 46.46"W		267.52	267.55	267.58
C419	0.52	29.60	1.00	267.58	267.58	267.58
L141	3.89	N6° 00' 35.34"W		267.58	267.55	267.51
C420	1.49	85.62	1.00	267.51	267.49	267.48
C421	73.85	41.89	101.00	267.48	266.82	266.36
C422	90.28	20.77	249.00	266.36	266.05	265.78

SPLITTER ISLAND 28A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
L142	21.51	N57° 19' 41.74"E		267.71	267.91	268.14
C423	6.02	114.98	3.00	268.14	268.22	268.27
C424	23.88	18.87	72.49	268.27	268.22	268.14
C425	2.21	126.57	1.00	268.14	268.13	268.11
C426	24.06	13.65	101.00	268.11	267.90	267.69
C427	1.53	87.63	1.00	267.69	267.68	267.69
L143	6.32	N6° 00' 35.34"W		267.69	267.74	267.79
C428	0.52	29.60	1.00	267.79	267.79	267.79
L144	5.22	N35° 36' 46.46"W		267.79	267.75	267.71
C429	1.62	92.94	1.00	267.71	267.70	267.71

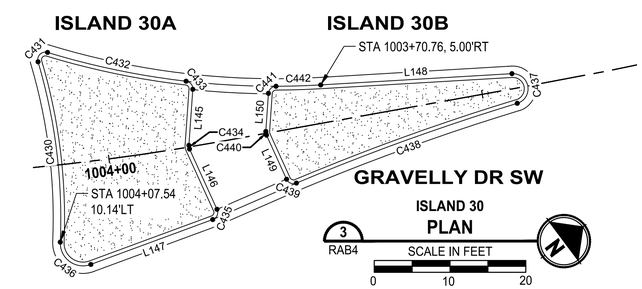
SPLITTER ISLAND 29B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C443	11.17	177.73	3.60	266.83	266.88	266.83
C444	36.90	8.42	251.00	266.83	266.92	267.02
C445	1.55	88.86	1.00	267.02	267.03	267.04
L151	6.03	N63° 56' 32.22"E		267.04	267.10	267.16
C446	0.47	27.13	1.00	267.16	267.16	267.15
L152	5.57	S88° 55' 27.50"E		267.15	267.11	267.07
C447	1.50	85.72	1.00	267.07	267.06	267.05
C448	19.61	11.02	102.00	267.05	266.96	266.90
L153	16.76	S14° 13' 18.41"E		266.90	266.86	266.83

SPLITTER ISLAND 29A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
L154	16.55	N22° 47' 22.41"W		267.14	267.26	267.48
C449	5.81	110.91	3.00	267.48	267.56	267.61
C450	24.13	19.08	72.46	267.61	267.56	267.46
C451	2.19	125.20	1.00	267.46	267.44	267.42
C452	19.18	10.77	102.00	267.42	267.29	267.17
C453	1.53	87.60	1.00	267.17	267.16	267.17
L155	7.79	N88° 55' 27.50"W		267.17	267.23	267.28
C454	0.47	27.13	1.00	267.28	267.29	267.28
L156	8.40	S63° 56' 32.22"W		267.28	267.21	267.14
C455	1.63	93.27	1.00	267.14	267.13	267.14



TRUCK APRON PROFILE

HORIZ: 1=20
VERT: 1=4



SPLITTER ISLAND 30A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C430	24.08	19.05	72.42	268.18	268.42	268.59
C431	2.16	123.50	1.00	268.59	268.57	268.52
C432	18.70	10.40	103.00	268.52	268.18	267.96
C433	1.53	87.48	1.00	267.96	267.95	267.96
L145	7.42	S49° 12' 47.67"E		267.96	268.01	268.06
C434	0.50	28.52	1.00	268.06	268.07	268.06
L146	8.74	S77° 43' 54.57"E		268.06	267.98	267.89
C435	1.65	94.29	1.00	267.89	267.88	267.88
L147	17.14	S16° 33' 31.78"W		267.88	267.99	268.07
C436	5.90	112.71	3.00	268.07	268.12	268.18

SPLITTER ISLAND 30B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
L148	25.28	N33° 24' 35.40"E		267.72	267.60	267.50
C437	5.81	166.46	2.00	267.50	267.52	267.50
C438	31.00	5.90	301.00	267.50	267.62	267.76
C439	1.54	88.30	1.00	267.76	267.77	267.79
L149	6.40	N77° 43' 54.57"W		267.79	267.85	267.91
C440	0.50	28.52	1.00	267.91	267.91	267.91
L150	5.04	N49° 12' 47.67"W		267.91	267.86	267.82
C441	1.50	85.91	1.00	267.82	267.81	267.80
C442	5.91	3.29	103.00	267.80	267.76	267.72

REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
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CITY OF LAKEWOOD WA 1996

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRAVELLY LAKE & WASHINGTON ROUNDABOUT GRADING DETAILS

DRAWING NO.
52 OF 153
RAB6

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toykokot DATE: Wednesday, February 3, 2021 8:27:23 AM
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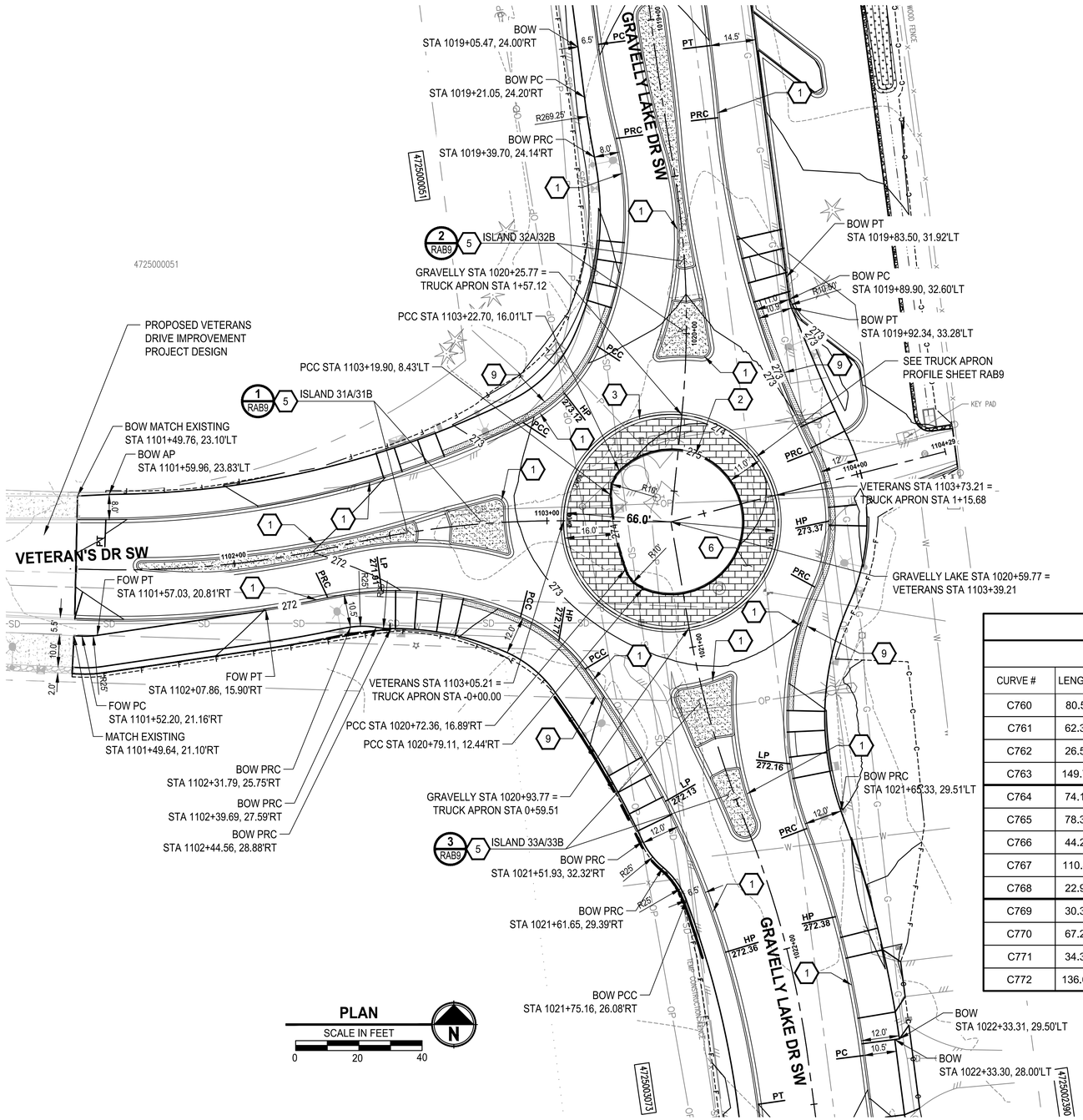

GENERAL NOTES

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THIS WORK
2. SEE PP SHEETS FOR DRIVEWAY INFORMATION

(X) CONSTRUCTION NOTES

1. INSTALL CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04
2. INSTALL TRUCK BARRIER CURB PER COL STD PLAN FR-04 WITH WEEP HOLES PER SECTION A/RAB13
3. INSTALL ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB AND GUTTER PER WSDOT STD PLAN F-10.18-01 (CURB 1)
4. INSTALL TRAFFIC BARRIER CURB PER COL STD PLAN FR-04
5. INSTALL SPLITTER ISLAND PER DETAILS ON SHEET RAB14
6. INSTALL CEMENT CONCRETE TRUCK APRON PER DETAIL 1/RAB13 AND SECTION A/RAB13
7. INSTALL TRAFFIC BARRIER CURB PER COL STD PLAN FR-04 AND SECTION B/RAB13
8. INSTALL ROUNDABOUT CEMENT CONCRETE CURB & GUTTER, TYPE CURB 2 PER WSDOT STD PLAN F-10.18-01
9. INSTALL SIDEWALK BUFFER PER DETAIL 2/RAB13 AND SECTION C/RAB13

ROUNDABOUT LINE/CURVE TABLE

						BOTTOM FACE OF CURB/FLOWLINE										
CURVE #	LENGTH	BEARING / DELTA	RADIUS	BEGIN STA	OFFSET	BEGIN	1/8	1/4	3/8	1/2	5/8	3/4	7/8	END	END STA	OFFSET
C760	80.51	14.79	312.00	1101+49.77	15.60 RT	270.84	270.94	271.05	271.16	271.28	271.39	271.50	271.62	271.73	1102+26.88	15.14 RT
C761	62.33	35.71	100.00	1102+26.88	15.14 RT	271.73	271.82	271.91	272.00	272.11	272.22	272.36	272.50	272.64	1102+90.29	30.19 RT
C762	26.52	30.39	50.00	1102+90.29	30.19 RT	272.64		272.73		272.76		272.75		272.68	1021+00.15	34.74 RT
C763	149.72	28.59	300.00	1021+00.15	34.74 RT	272.68	272.36	272.16	272.14	272.26	272.35	272.34	272.22	272.00	1022+47.74	17.50 RT
C764	74.16	13.16	323.00	1022+36.74	17.50 LT	272.14	272.23	272.30	272.35	272.37	272.38	272.37	272.33	272.28	1021+66.59	17.50 LT
C765	78.38	44.91	100.00	1021+66.59	17.50 LT	272.28	272.22	272.17	272.20	272.33	272.56	272.81	273.04	273.21	1020+87.77	41.42 LT
C766	44.25	50.71	50.00	1020+87.77	41.42 LT	273.21	273.28	273.33	273.36	273.37	273.35	273.32	273.27	273.21	1020+33.15	42.33 LT
C767	110.41	21.09	300.00	1020+33.15	42.33 LT	273.21	272.99	272.82	272.70	272.61	272.52	272.43	272.34	272.22	1019+34.04	16.51 LT
C768	22.94	2.13	617.50	1019+34.04	16.51 LT	272.22				272.12				272.02	1019+10.46	17.47 LT
C769	30.30	6.63	262.00	1019+05.48	17.50 RT	271.96		272.18		272.13		272.33		272.26	1019+35.14	16.38 RT
C770	67.23	38.52	100.00	1019+35.14	16.38 RT	272.26	272.30	272.35	272.40	272.44	272.50	272.58	272.70	272.86	1020+04.76	28.15 RT
C771	34.33	39.33	50.00	1020+04.76	28.15 RT	272.86		273.04		273.12		273.07		272.91	1102+93.41	31.27 LT
C772	136.68	26.10	300.00	1102+93.41	31.27 LT	272.91	272.46	272.16	271.95	271.74	271.54	271.33	271.12	270.92	1101+58.97	15.82 LT

HORIZONTAL DATUM

HORIZONTAL DATUM IS NAD 1983, WASHINGTON STATE PLANE SOUTH ZONE PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

VERTICAL DATUM

VERTICAL DATUM IS NAVD88 PER CONTROL PROVIDED BY AHBL FOR WASHINGTON BLVD. MAPPING.

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

REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-RAB-09
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

KEVIN L. HOUSER STATE OF WASHINGTON 41824 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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WWW.PARAMETRIX.COM

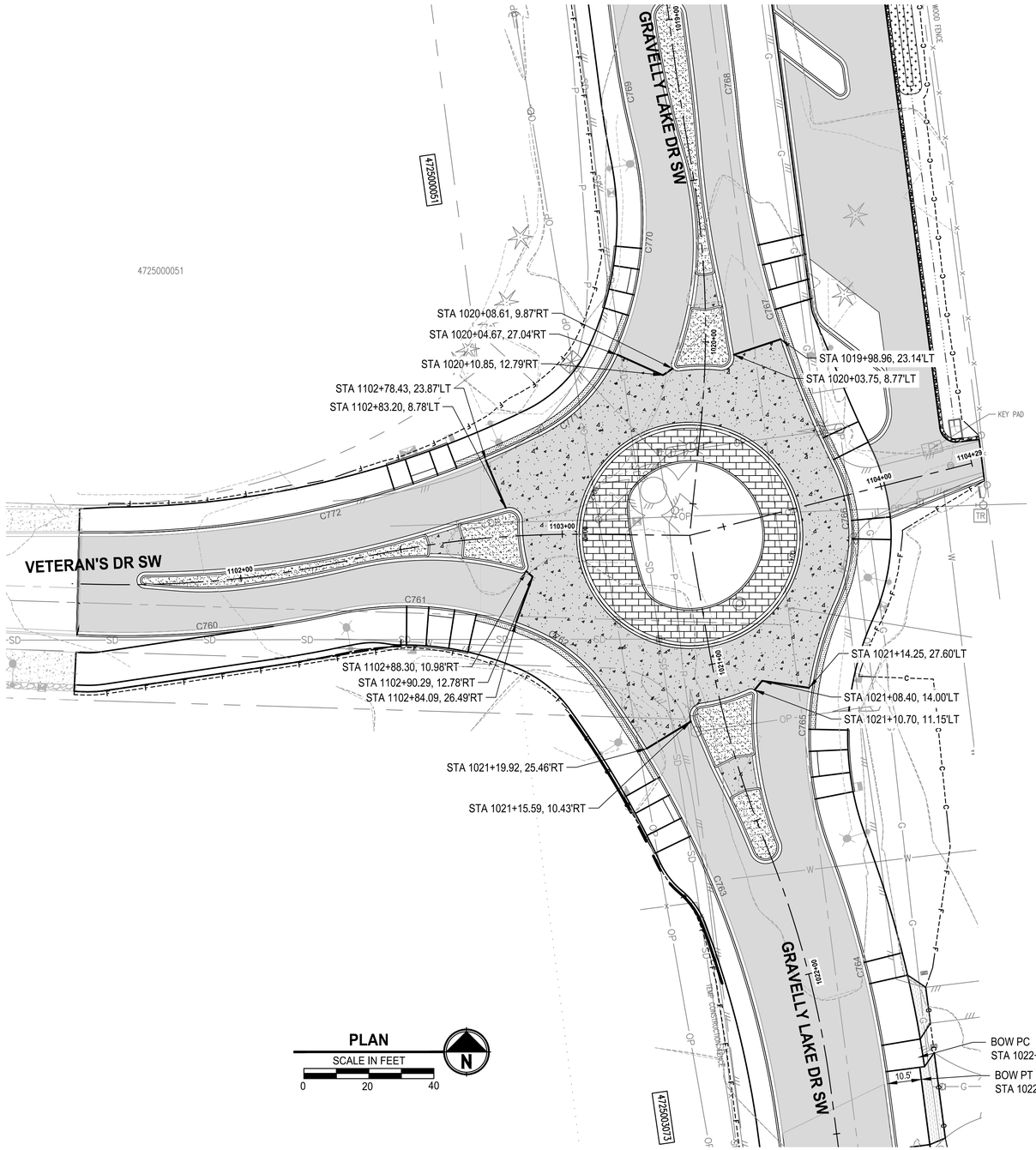
bcra
2106 PACIFIC AVE, SUITE 300
TACOMA, WA 98402
P 253.627.4367
WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRAVELLY LAKE & VETERANS ROUNDABOUT GRADING PLAN

DRAWING NO.
53 OF 153
RAB7

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Wednesday, February 3, 2021 9:27:21 AM LAYOUT: RAB7



GENERAL NOTES

1. CONTRACTOR SHALL PREPARE JOINTING PLAN PER WSDOT STD PLAN A-40.10-04 AND A-40.15-00
2. SEE SPECIFICATIONS FOR ADDITIONAL PAVEMENT INFORMATION

LEGEND

10" CEMENT CONC. PAVEMENT
3" CSTC

6" HMA CLA 1/2 IN PG 58H-22
4" CSTC

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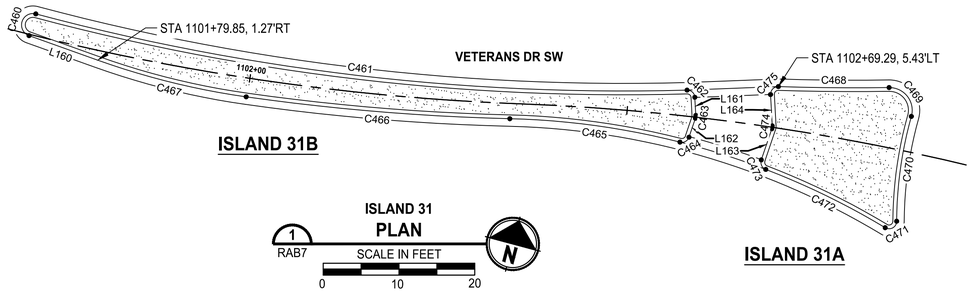
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRAVELLY LAKE & VETERANS ROUNDABOUT PAVING PLANS

DRAWING NO.
54 OF 153
RAB8

LAYOUT: RAB8 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Wednesday, February 3, 2021 9:20:05 AM



SPLITTER ISLAND 31B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
L160	9.63	S85° 19' 58.14"E		271.43	271.39	271.34
C460	4.59	175.27	1.50	271.34	271.30	271.29
C461	86.85	16.53	301.00	271.29	271.83	272.36
C462	1.54	88.50	1.00	272.36	272.37	272.39
L161	2.40	N18° 05' 31.33"W		272.39	272.41	272.44
C463	0.38	21.81	1.00	272.44	272.44	272.44
L162	2.64	N3° 42' 59.77"E		272.44	272.41	272.39
C464	1.49	85.56	1.00	272.39	272.37	272.36
C465	22.71	12.88	101.00	272.36	272.21	272.08
C466	34.94	6.70	299.00	272.08	271.86	271.65
C467	20.22	11.58	100.00	271.65	271.54	271.43

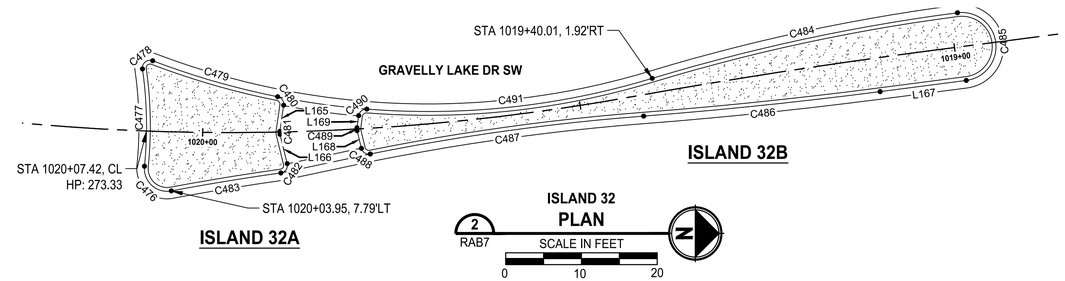
SPLITTER ISLAND 31A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C468	14.62	2.71	309.65	272.51	272.64	272.80
C469	5.58	106.49	3.00	272.80	272.89	272.94
C470	14.01	15.31	52.44	272.94	272.91	272.86
C471	2.11	120.66	1.00	272.86	272.85	272.82
C472	17.56	9.96	101.00	272.82	272.65	272.52
C473	1.53	87.70	1.00	272.52	272.51	272.52
L163	4.34	N3° 42' 59.77"E		272.52	272.56	272.60
C474	0.38	21.81	1.00	272.60	272.60	272.60
L164	4.14	N18° 05' 31.33"W		272.60	272.56	272.52
C475	1.66	94.94	1.00	272.52	272.51	272.52

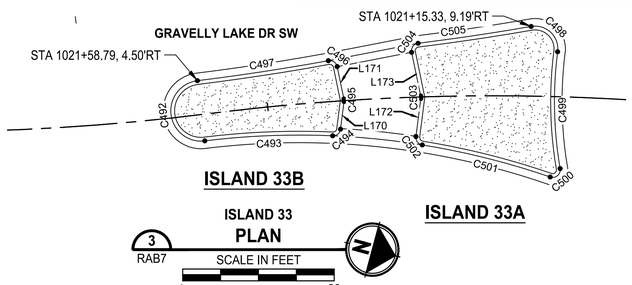
GENERAL NOTE:

1. ALL ELEVATIONS ARE FROM BOTTOM/FACE OF CURB

SPLITTER ISLAND 32A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C476	5.58	106.51	3.00	273.17	273.23	273.29
C477	12.88	14.07	52.44	273.29	273.32	273.28
C478	2.08	119.10	1.00	273.28	273.27	273.24
C479	17.18	9.65	102.00	273.24	273.05	272.95
C480	1.52	86.99	1.00	272.95	272.95	272.96
L165	3.49	S81° 46' 37.30"E		272.96	272.99	273.03
C481	0.38	21.94	1.00	273.03	273.03	273.03
L166	3.99	N76° 16' 47.51"E		273.03	272.98	272.94
C482	1.67	95.78	1.00	272.94	272.93	272.93
C483	14.65	2.71	309.57	272.93	273.02	273.17

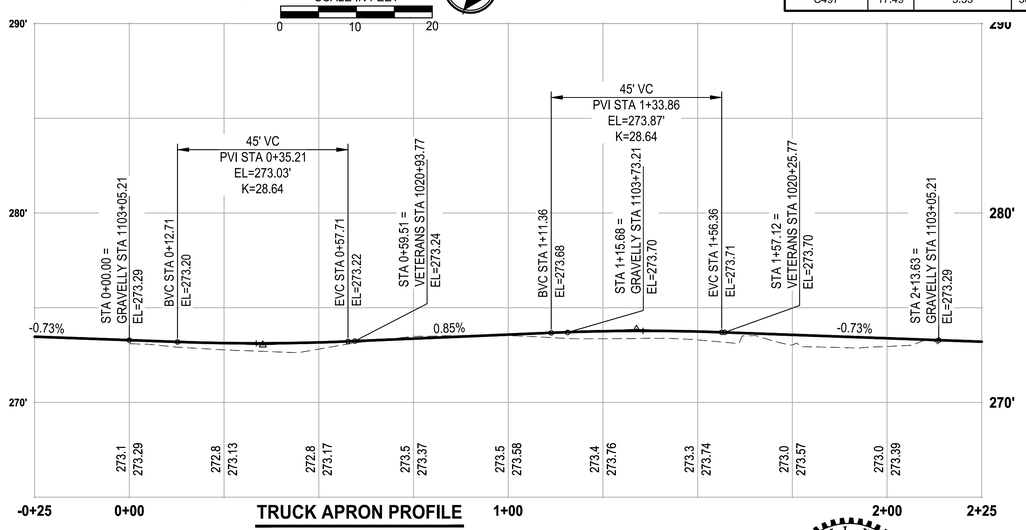
SPLITTER ISLAND 32B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C484	41.25	9.45	250.00	272.58	272.39	272.13
C485	14.14	180.00	4.50	272.13	272.15	272.13
L167	11.46	S7° 23' 44.74"E		272.13	272.21	272.28
C486	31.38	2.97	604.50	272.28	272.44	272.57
C487	36.44	6.94	301.00	272.57	272.70	272.82
C488	1.53	87.64	1.00	272.82	272.83	272.85
L168	2.41	S76° 16' 47.51"W		272.85	272.87	272.90
C489	0.38	21.94	1.00	272.90	272.90	272.90
L169	1.62	N81° 46' 37.30"W		272.90	272.88	272.86
C490	1.51	86.33	1.00	272.86	272.85	272.84
C491	38.11	21.41	102.00	272.84	272.71	272.58





SPLITTER ISLAND 33B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C492	12.57	180.00	4.00	272.50	272.61	272.52
C493	16.91	9.50	102.00	272.52	272.48	272.47
C494	1.49	85.24	1.00	272.47	272.48	272.49
L170	3.68	S82° 14' 34.81"W		272.49	272.52	272.56
C495	0.33	18.99	1.00	272.56	272.56	272.56
L171	4.37	S63° 15' 04.00"W		272.56	272.51	272.47
C496	1.55	88.60	1.00	272.47	272.46	272.45
C497	17.49	3.33	301.00	272.45	272.46	272.50

SPLITTER ISLAND 33A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C498	5.61	107.09	3.00	272.69	272.77	272.83
C499	15.47	16.92	52.39	272.83	272.89	272.92
C500	2.07	118.63	1.00	272.92	272.90	272.87
C501	17.42	9.79	102.00	272.87	272.63	272.53
C502	1.54	88.08	1.00	272.53	272.52	272.53
L172	5.06	N82° 14' 34.81"E		272.53	272.58	272.62
C503	0.33	18.99	1.00	272.62	272.62	272.62
L173	5.89	N63° 15' 04.00"E		272.62	272.56	272.50
C504	1.65	94.70	1.00	272.50	272.49	272.49
C505	15.09	2.80	308.80	272.49	272.56	272.69



TRUCK APRON PROFILE

HORIZ: 1=20
VERT: 1=4

REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-RAB-09
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

KEVIN L. HOUSE STATE OF WASHINGTON 41824 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRAVELLY LAKE & VETERANS ROUNDABOUT GRADING DETAILS

DRAWING NO.
55 OF 153
RAB9

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Wednesday, February 3, 2021 9:03:59 AM
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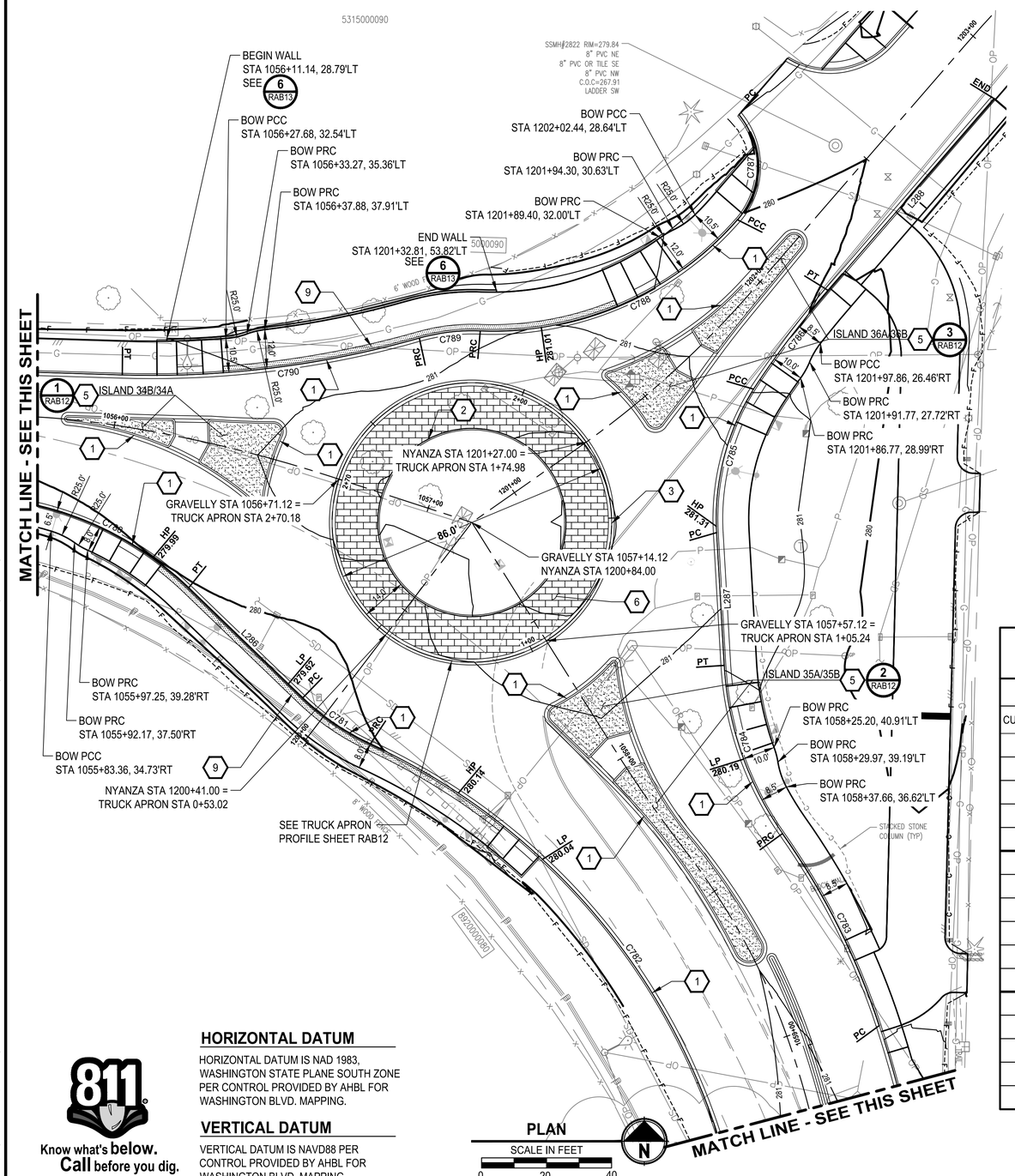

PLAN

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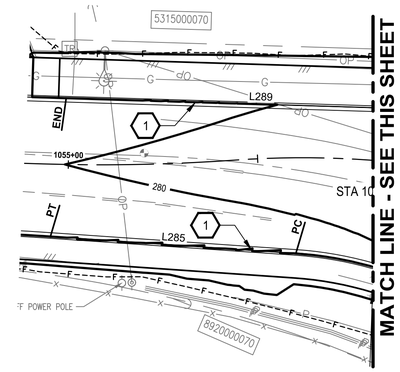

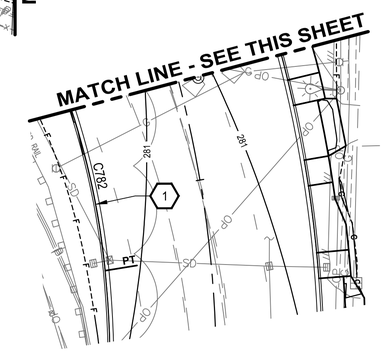

GENERAL NOTES

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THIS WORK
2. SEE PP SHEETS FOR DRIVEWAY INFORMATION

CONSTRUCTION NOTES

1. INSTALL CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER COL STD PLAN FR-04
2. INSTALL TRUCK BARRIER CURB PER COL STD PLAN FR-04 WITH WEEP HOLES PER SECTION A RAB13
3. INSTALL ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB AND GUTTER PER WSDOT STD PLAN F-10.18-01 (CURB 1)
4. INSTALL TRAFFIC BARRIER CURB PER COL STD PLAN FR-04
5. INSTALL SPLITTER ISLAND PER DETAILS ON SHEET RAB14
6. INSTALL CEMENT CONCRETE TRUCK APRON PER DETAIL 1 RAB13 AND SECTION A RAB13
7. INSTALL TRAFFIC BARRIER CURB PER COL STD PLAN FR-04 AND SECTION B RAB13
8. INSTALL ROUNDABOUT CEMENT CONCRETE CURB & GUTTER, TYPE CURB 2 PER WSDOT STD PLAN F-10.18-01
9. INSTALL SIDEWALK BUFFER PER DETAIL 2 RAB13 AND SECTION C RAB13

ROUNDABOUT LINE/CURVE TABLE

						BOTTOM FACE OF CURB/FLOWLINE										
CURVE/LINE #	LENGTH	BEARING / DELTA	RADIUS	BEGIN STA	OFFSET	BEGIN	1/8	1/4	3/8	1/2	5/8	3/4	7/8	END	END STA	OFFSET
L285	64.92	S86° 03' 15.59"E		1054+95.78	19.08 RT	279.60	279.63	279.66	279.69	279.71	279.73	279.75	279.77	279.79	1055+59.90	25.24 RT
C780	69.83	40.01	100.00	1055+59.90	25.24 RT	279.79	279.82	279.86	279.89	279.93	279.96	279.99	279.98	279.95	1056+33.73	44.87 RT
L286	48.77	S46° 02' 35.43"E		1056+33.73	44.87 RT	279.95	279.90	279.84	279.79	279.73	279.68	279.63	279.62	279.63	1056+81.36	67.47 RT
C781	25.29	19.32	75.00	1056+81.36	67.47 RT	279.63		279.68		279.77		279.86		279.95	1057+55.18	62.76 RT
C782	208.53	59.74	200.00	1057+55.18	62.76 RT	279.95	280.13	280.07	280.08	280.23	280.39	280.57	280.71	280.83	1059+71.37	28.00 RT
C783	66.43	17.15	222.00	1059+05.73	28.00 LT	280.55	280.52	280.49	280.45	280.42	280.39	280.37	280.32	280.29	1058+47.14	27.33 LT
C784	55.45	31.77	100.00	1058+47.14	27.33 LT	280.29	280.26	280.23	280.20	280.19	280.22	280.29	280.39	280.54	1057+92.68	42.31 LT
L287	40.93	S3° 16' 24.57"E		1057+92.68	42.31 LT	280.54		280.81		281.07		281.24		281.31	1201+41.12	46.41 RT
C785	48.85	37.32	75.00	1201+41.12	46.41 RT	281.31	281.31	281.26	281.18	281.06	280.91	280.73	280.57	280.42	1201+77.48	20.44 RT
C786	35.58	6.79	300.00	1201+77.48	20.44 RT	280.42		280.24		280.10		280.00		279.94	1202+11.67	17.61 RT
L288	78.03	S40° 50' 20.64"W		1202+11.67	17.61 RT	279.94	279.89	279.84	279.79	279.74	279.69	279.64	279.60	279.55	1202+89.70	17.51 RT
C787	35.09	80.42	25.00	1202+34.51	38.59 LT	278.95		279.55		279.75		279.90		280.03	1202+09.80	17.81 LT
C788	89.09	51.06	99.96	1202+09.80	17.81 LT	280.03	280.18	280.33	281.50	280.70	280.90	281.00	280.99	280.94	1201+19.98	46.76 LT
C789	18.96	18.41	59.00	1201+19.98	46.76 LT	280.94				280.90				280.86	1056+81.16	48.94 LT
C790	92.45	17.66	300.00	1056+81.16	48.94 LT	280.86	280.82	280.79	280.70	280.61	280.52	280.40	280.32	280.26	1056+00.02	15.62 LT
L289	102.83	S88° 14' 26.60"E		1056+00.02	15.62 LT	280.26	280.19	280.12	280.05	279.97	279.89	279.80	279.72	279.65	1054+99.08	17.47 LT

HORIZONTAL DATUM

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRAVELLY LAKE & NYANZA ROUNDABOUT GRADING PLAN

DRAWING NO.
56 OF 153
RAB10

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Friday, February 5, 2021 12:32:02 PM
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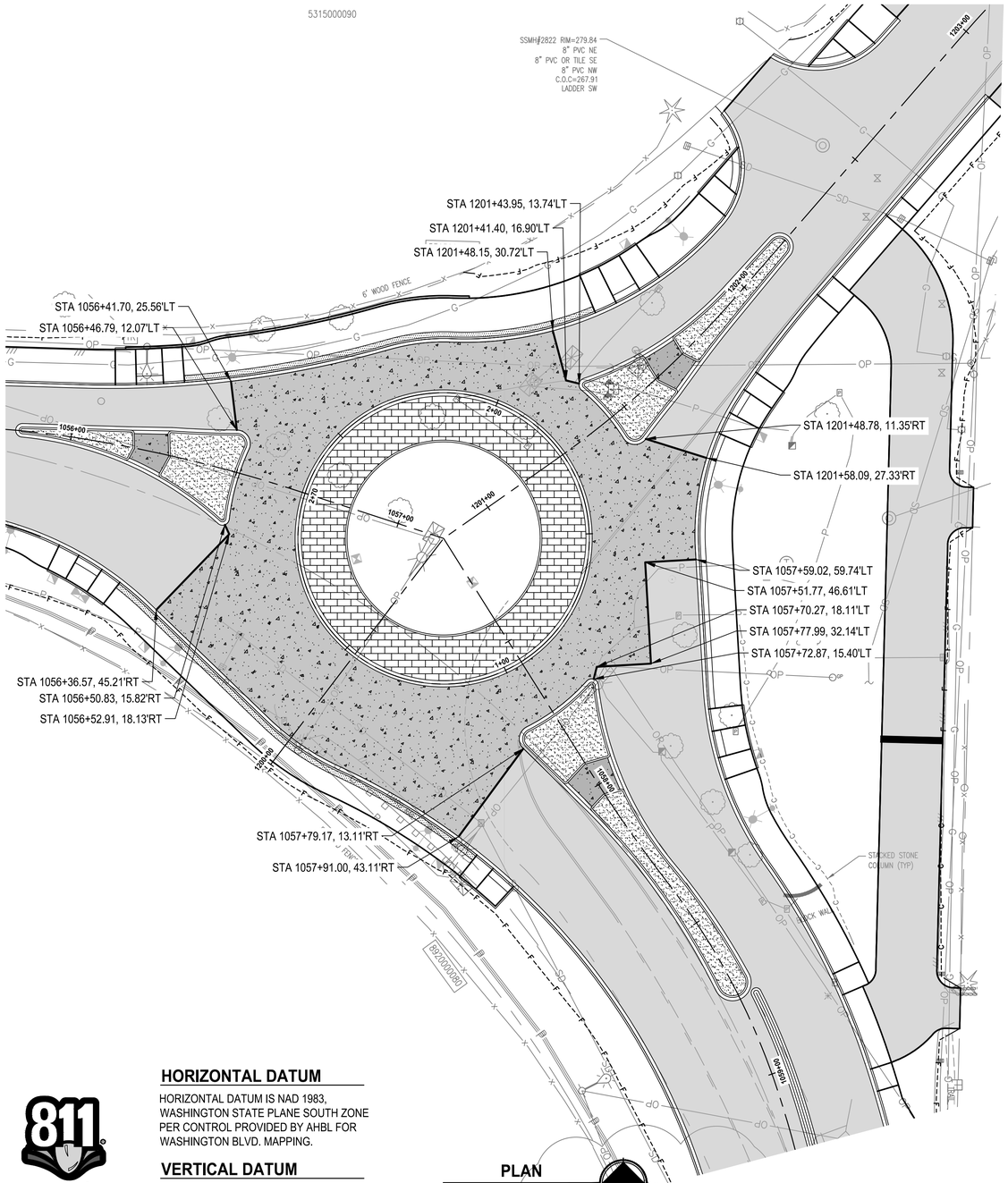

GENERAL NOTES

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2. SEE SPECIFICATIONS FOR ADDITIONAL PAVEMENT INFORMATION

LEGEND

10" CEMENT CONC. PAVEMENT
3" CSTC

6" HMA CLA 1/2 IN PG 58H-22
4" CSTC

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PROJECT NAME

JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1

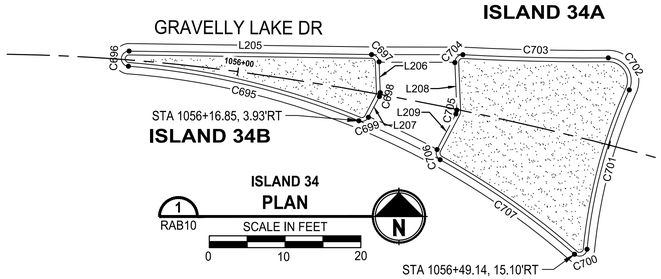
LAKEWOOD, WASHINGTON

GRAVELLY LAKE & NYANZA ROUNDABOUT PAVING PLAN

DRAWING NO. 57 OF 153

RAB11

LAYOUT: RAB11 PATH: U:\PSO\Projects\Clients\3047–City of Lakewood\214–3047–013_JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Friday, February 5, 2021 12:39:23 PM



SPLITTER ISLAND 34B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C695	31.38	17.80	101.00	280.55	280.48	280.41
C696	3.08	176.41	1.00	280.41	280.42	280.41
L205	32.00	N88° 14' 26.60"W		280.41	280.47	280.55
C697	1.52	86.91	1.00	280.55	280.56	280.57
L206	4.07	N1° 20' 03.34"W		280.57	280.61	280.64
C698	0.53	30.17	1.00	280.64	280.64	280.63
L207	3.10	N28° 50' 18.91"E		280.63	280.60	280.58
C699	1.47	84.31	1.00	280.58	280.56	280.55

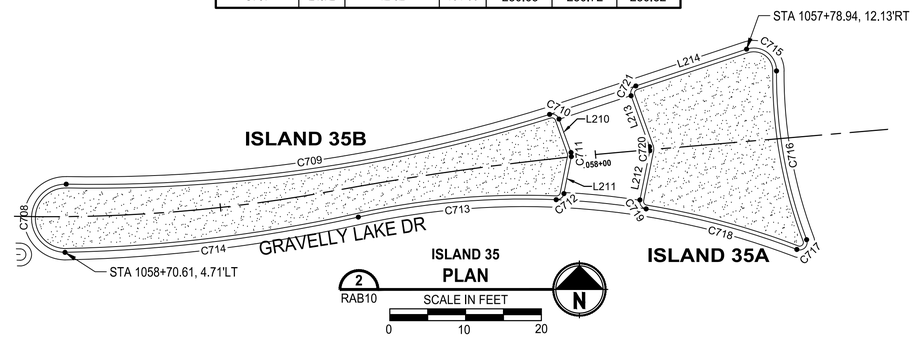
SPLITTER ISLAND 34A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C700	2.19	125.63	1.00	280.82	280.84	280.87
C701	21.85	18.38	68.08	280.87	281.06	281.04
C702	6.00	114.59	3.00	281.04	280.98	280.90
C703	19.19	3.62	303.62	280.90	280.75	280.65
C704	1.66	95.35	1.00	280.65	280.65	280.66
L208	6.28	N1° 20' 03.34"W		280.66	280.71	280.76
C705	0.53	30.17	1.00	280.76	280.75	280.75
L209	5.31	N28° 50' 18.91"E		280.75	280.70	280.64
C706	1.55	88.94	1.00	280.64	280.63	280.63
C707	21.72	12.32	101.00	280.63	280.72	280.82

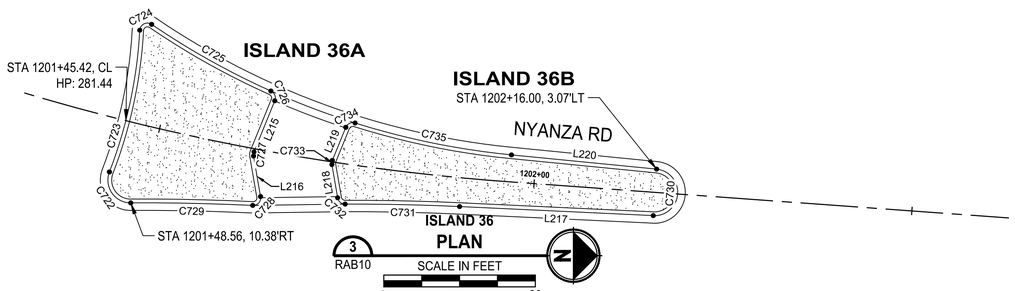
GENERAL NOTE:

1. ALL ELEVATIONS ARE FROM BOTTOM/FACE OF CURB

SPLITTER ISLAND 35A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C715	5.70	108.88	3.00	280.88	280.93	281.00
C716	22.75	21.25	61.34	281.00	281.19	281.36
C717	2.30	131.67	1.00	281.36	281.34	281.31
C718	20.63	11.70	101.00	281.31	281.02	280.79
C719	1.61	92.13	1.00	280.79	280.80	280.81
L212	6.62	S74° 03' 49.80"W		280.81	280.84	280.88
C720	0.54	31.17	1.00	280.88	280.89	280.88
L213	7.15	N42° 53' 33.66"E		280.88	280.81	280.74
C721	1.60	91.45	1.00	280.74	280.73	280.72
L214	15.40	S45° 39' 24.05"E		280.72	280.79	280.88

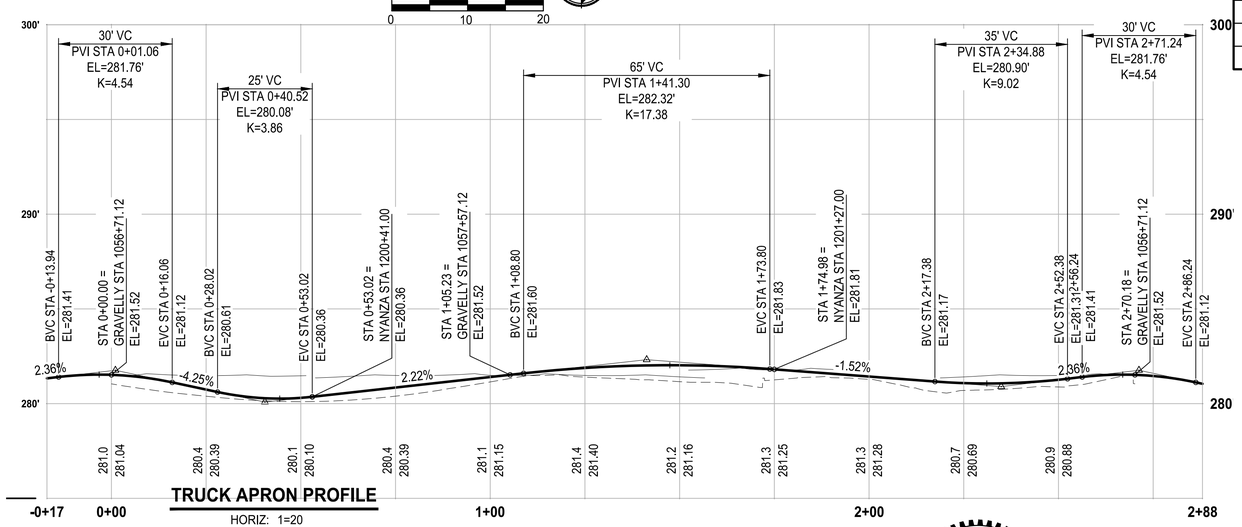
SPLITTER ISLAND 35B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C708	14.14	180.00	4.50	280.87	280.99	280.88
C709	64.74	18.45	201.00	280.88	280.77	280.68
C710	1.53	87.60	1.00	280.68	280.69	280.70
L210	4.69	S42° 53' 33.66"W		280.70	280.74	280.79
C711	0.54	31.17	1.00	280.79	280.80	280.80
L211	4.99	S74° 03' 49.80"W		280.80	280.76	280.72
C712	1.42	81.10	1.00	280.72	280.71	280.71
C713	26.29	14.91	101.00	280.71	280.69	280.73
C714	39.05	11.24	199.00	280.73	280.80	280.87





SPLITTER ISLAND 36A				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C722	5.83	111.36	3.00	281.32	281.39	281.40
C723	19.21	17.94	61.35	281.40	281.36	281.31
C724	2.11	121.16	1.00	281.31	281.28	281.26
C725	18.06	10.14	102.00	281.26	281.11	280.96
C726	1.54	88.01	1.00	280.96	280.96	280.97
L215	7.29	N31° 04' 30.91"W		280.97	281.04	281.09
C727	0.56	31.94	1.00	281.09	281.09	281.09
L216	5.42	N63° 01' 02.36"W		281.09	281.03	280.98
C728	1.79	102.51	1.00	280.98	280.97	280.98
C729	16.10	3.02	305.63	280.98	281.16	281.32

SPLITTER ISLAND 36B				FLOWLINE ELEVATIONS		
Line #/Curve #	Length	Bearing/Delta	Radius			
C730	9.51	177.07	3.08	280.25	280.27	280.24
L217	25.59	S39° 27' 06.75"W		280.24	280.37	280.54
C731	15.11	2.87	302.00	280.54	280.65	280.76
C732	1.40	80.40	1.00	280.76	280.78	280.80
L218	4.45	N63° 01' 02.36"W		280.80	280.85	280.91
C733	0.56	31.94	1.00	280.91	280.91	280.91
L219	4.71	N31° 04' 30.91"W		280.91	280.86	280.81
C734	1.49	85.31	1.00	280.81	280.80	280.78
C735	21.10	11.85	102.00	280.78	280.63	280.48
L220	19.26	N42° 22' 44.15"E		280.48	280.36	280.25



TRUCK APRON PROFILE

HORIZ: 1=20
VERT: 1=4

REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–RAB–10
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

KEVIN L. HOUSER STATE OF WASHINGTON 41824 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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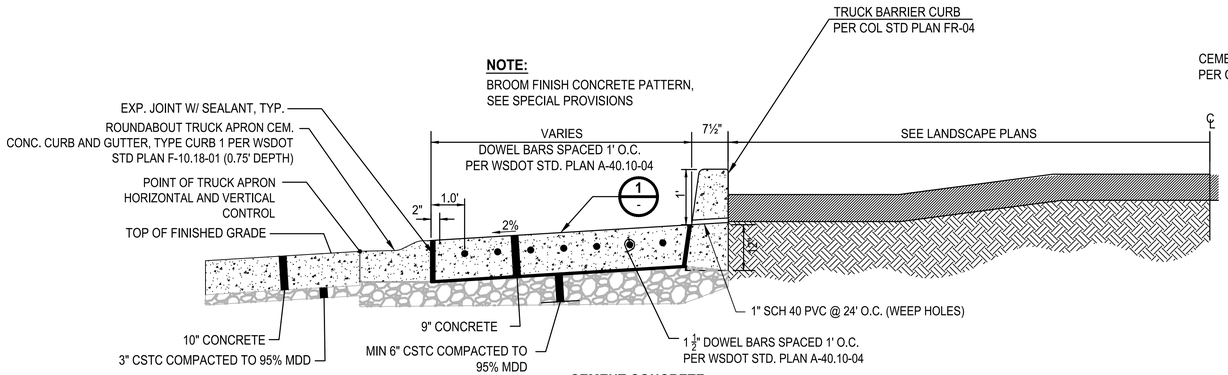
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRAVELLY LAKE & NYANZA ROUNDABOUT GRADING DETAILS

DRAWING NO.
58 OF 153
RAB12

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Wednesday, February 3, 2021 9:41:06 AM LAYOUT: RAB12



CEMENT CONCRETE TRUCK APRON SECTION (A)

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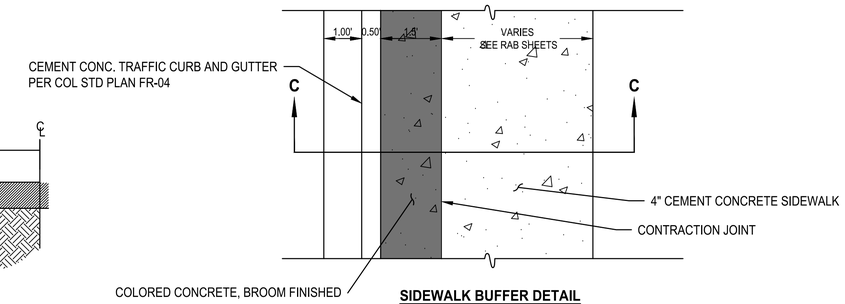

SIDEWALK BUFFER DETAIL DETAIL (2)

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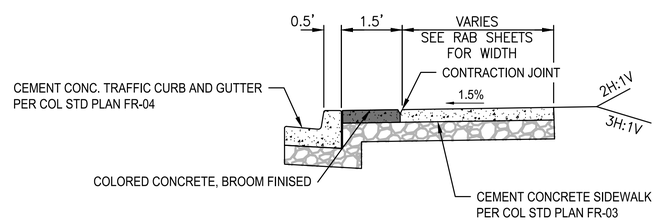

SIDEWALK BUFFER DETAIL SECTION (C)

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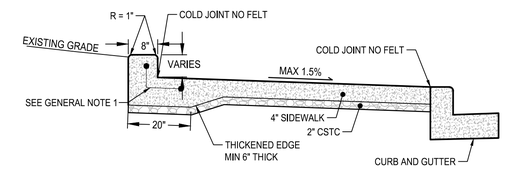
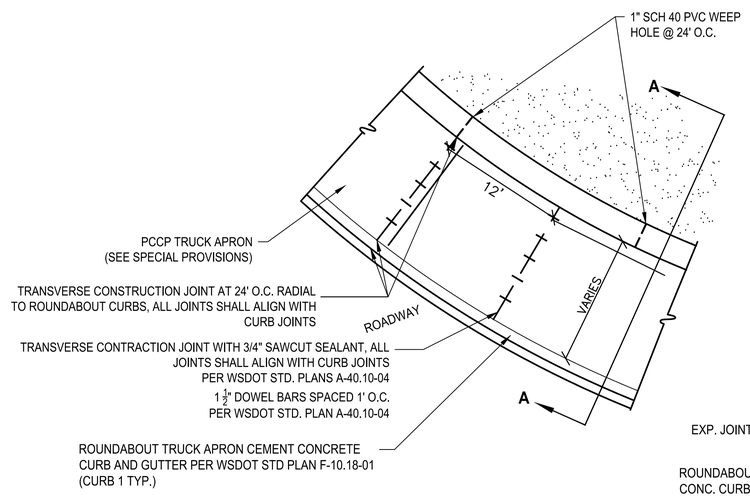


INTEGRAL CURB (5)

NO SCALE — TYP

GENERAL NOTE

1. 6"X18" #4 EL DEPENDANT ON WALL HEIGHT; SPACED 30" ON CENTER; (2) #4 LONGITUDINAL CONTINUOUS EXPANSION JOINT @ 45' O.C.



CEMENT CONCRETE TRUCK APRON - SURFACE DETAIL (1)

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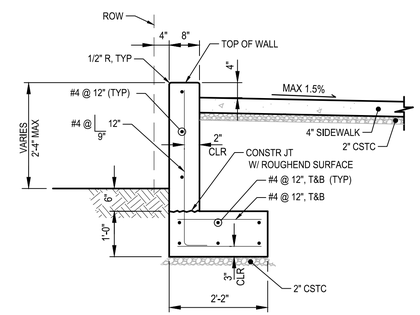
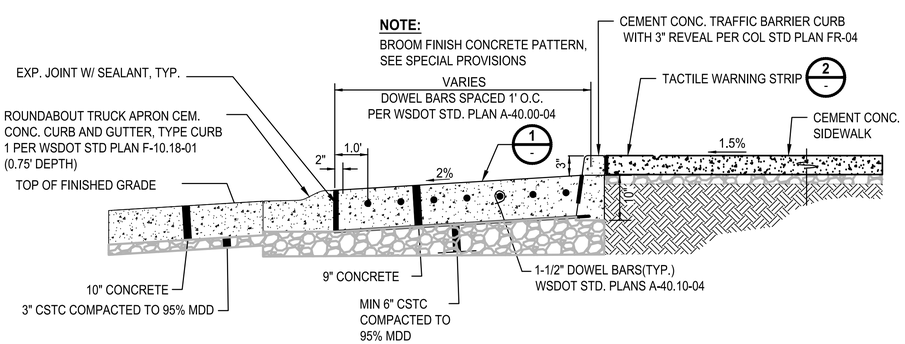


CIP FILL WALL (6)

NO SCALE — TYP



CEMENT CONCRETE OUTSIDE TRUCK APRON SECTION (B)

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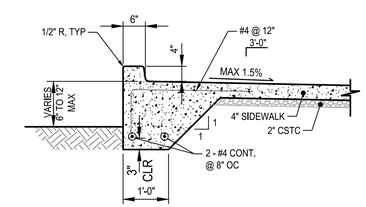

THICKENED EDGE (7)

NO SCALE — TYP

REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013-RAB-DT
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

KEVIN L. HOUSE STATE OF WASHINGTON 41824 REGISTERED PROFESSIONAL ENGINEER
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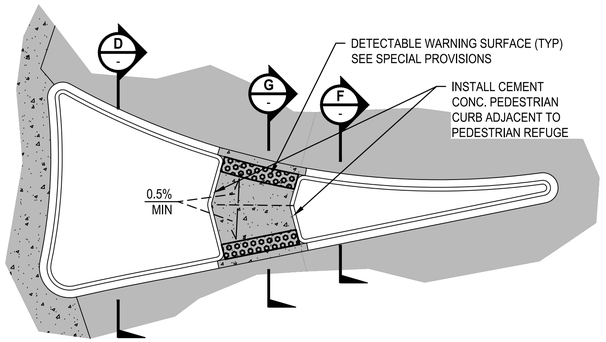
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROUNDABOUT DETAILS

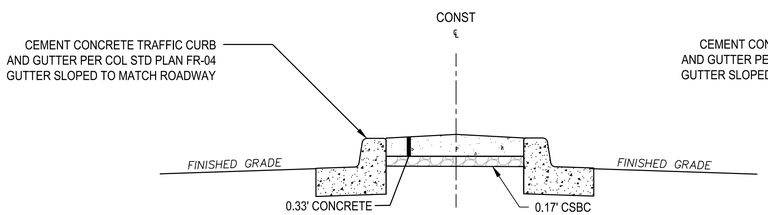
DRAWING NO. 59 OF 153

RAB13

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 4:41:56 PM LAYOUT: RAB13

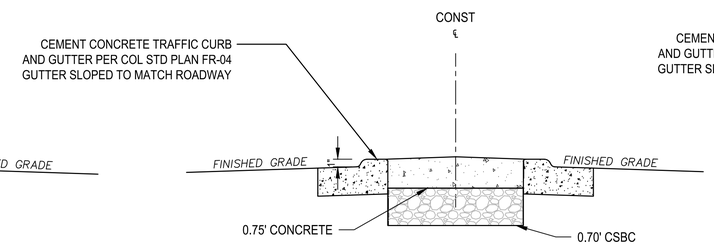


TYP. SPLITTER ISLAND
DETAIL 3
NO SCALE



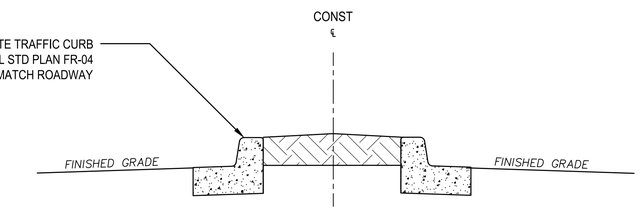
CEMENT CONCRETE SPLITTER ISLAND
SECTION D
NO SCALE

NOTE:
1. SEE RAB SHEETS FOR GRADING INFORMATION.



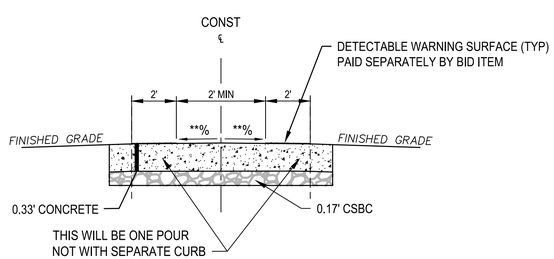
TRAVERSABLE CEMENT CONCRETE SPLITTER ISLAND
SECTION E
NO SCALE

NOTE:
1. SEE RAB SHEETS FOR GRADING INFORMATION.



LANDSCAPE ISLAND
SECTION F
NO SCALE

NOTE:
1. SEE RAB SHEETS FOR GRADING INFORMATION.
2. SEE LS AND RD SHEETS SHEETS FOR MEDIAN FILL



PEDESTRIAN REFUGE
SECTION G
NO SCALE

NOTE:
1. SEE RAB SHEETS FOR GRADING INFORMATION.
** 0.5% MINIMUM SLOPE, 1.5% MAXIMUM SLOPE

	REVISIONS	DATE	BY

DESIGNED S.M. CRAIG
DRAWN C. WOODCOCK
CHECKED K. HOUSE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-RAB-DT
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

KEITH L. HOUSER STATE OF WASHINGTON 41824 REGISTERED PROFESSIONAL ENGINEER
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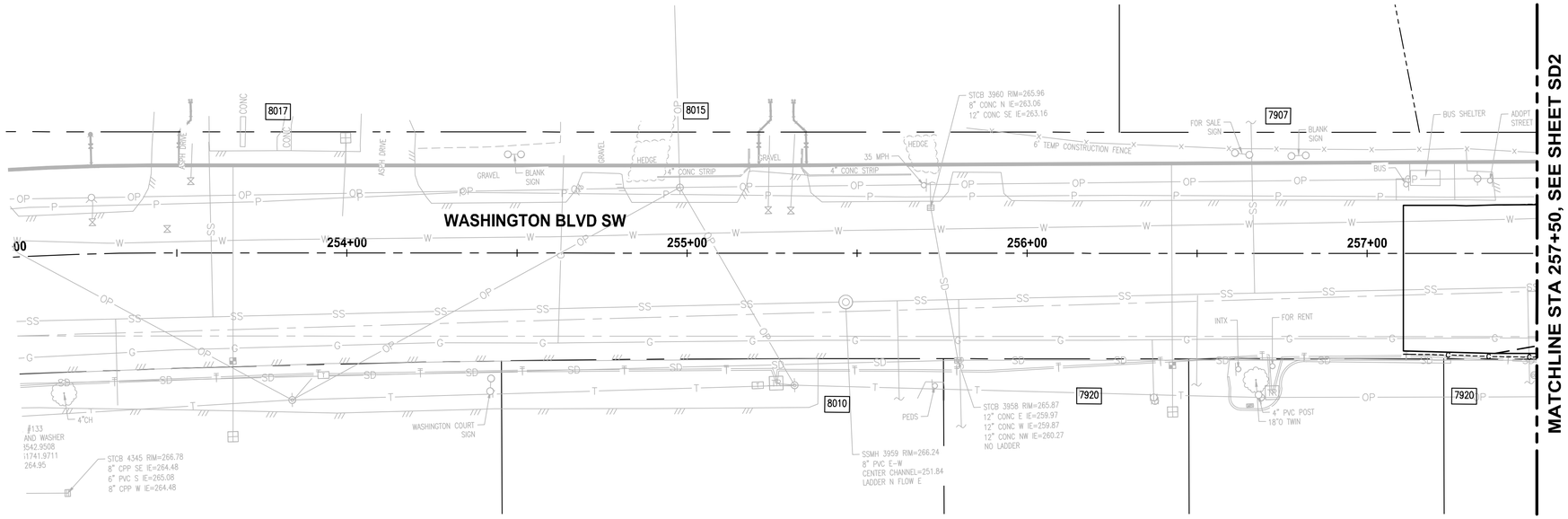
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROUNDABOUT DETAILS

DRAWING NO.
60 OF 153
RAB14

LAYOUT: RAB14 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 4:41:32 PM

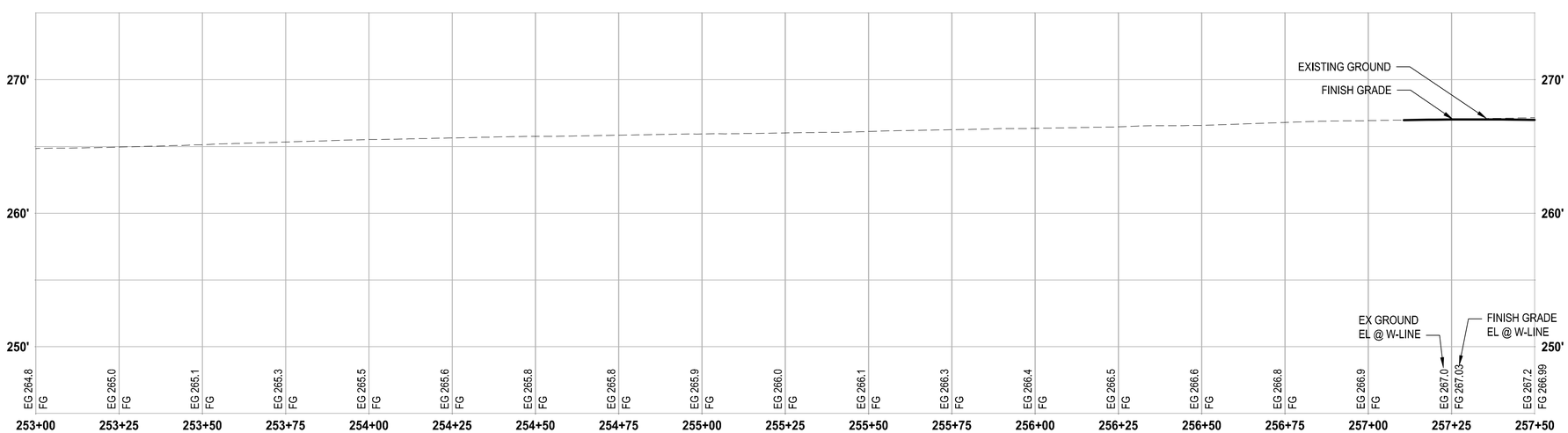


PLAN

SCALE IN FEET

0 20 40

N



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

	REVISIONS	DATE	BY

DESIGNED S. PODGORSKI
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD1-2
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

ANDREW CHRISTOPHER CLEVELAND STATE OF WASHINGTON 55265 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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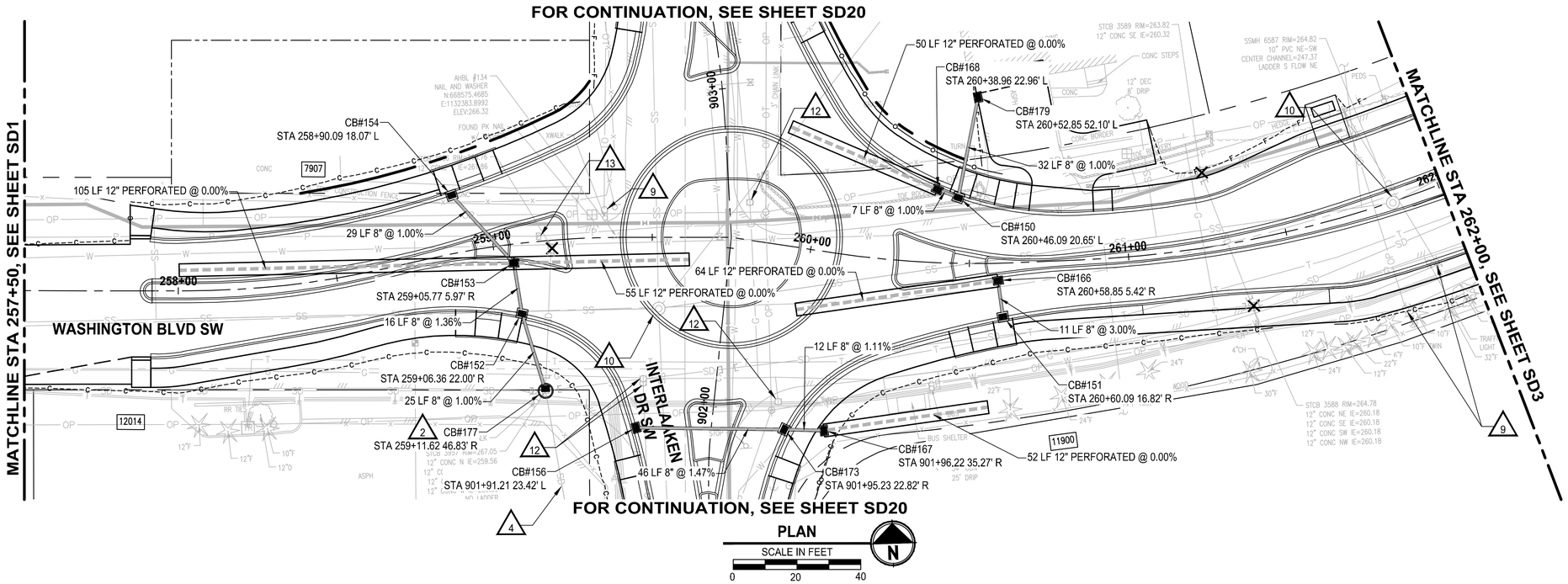
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

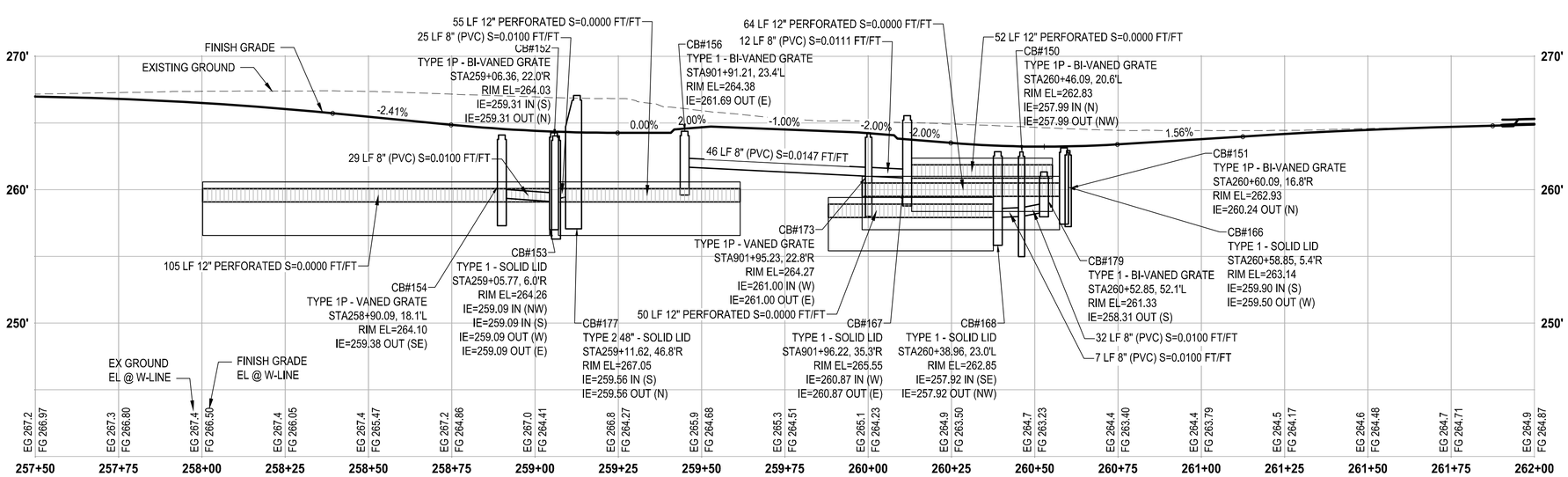
DRAWING NO.
61 OF 153
SD1

LAYOUT: SD1 STORM DRAIN PLAN AND PROFILE PATH: \\jupiter\projects\19000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:03:54 PM



PLAN

SCALE IN FEET 0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED S. PODGORSKI
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD1-2
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CHELLAM STATE OF WASHINGTON 55883 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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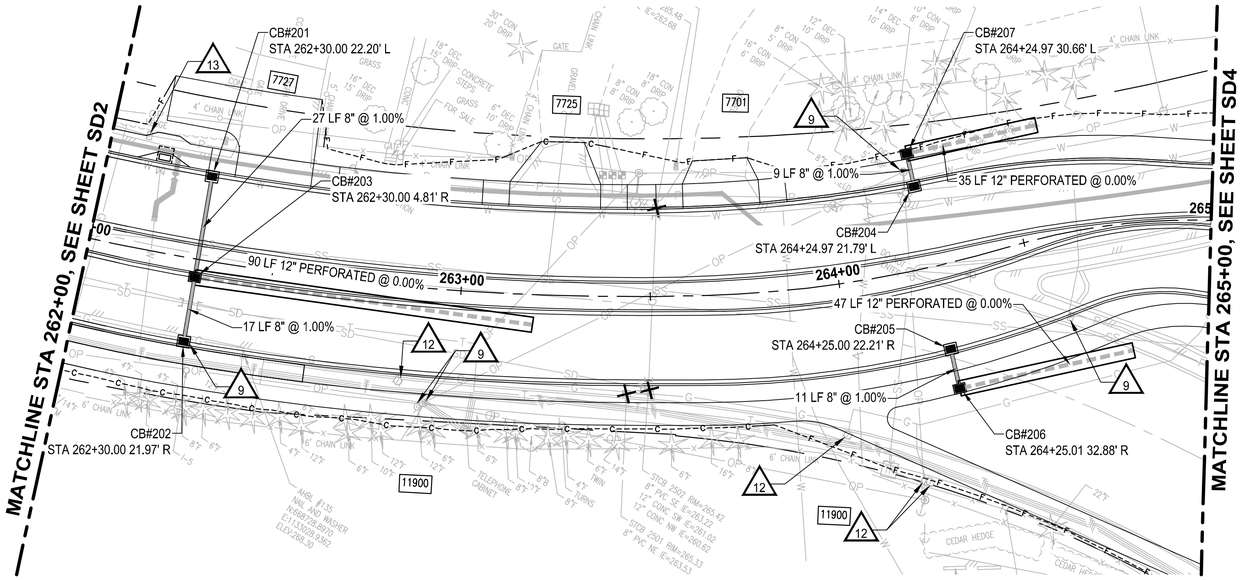
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
62 OF 153
SD2

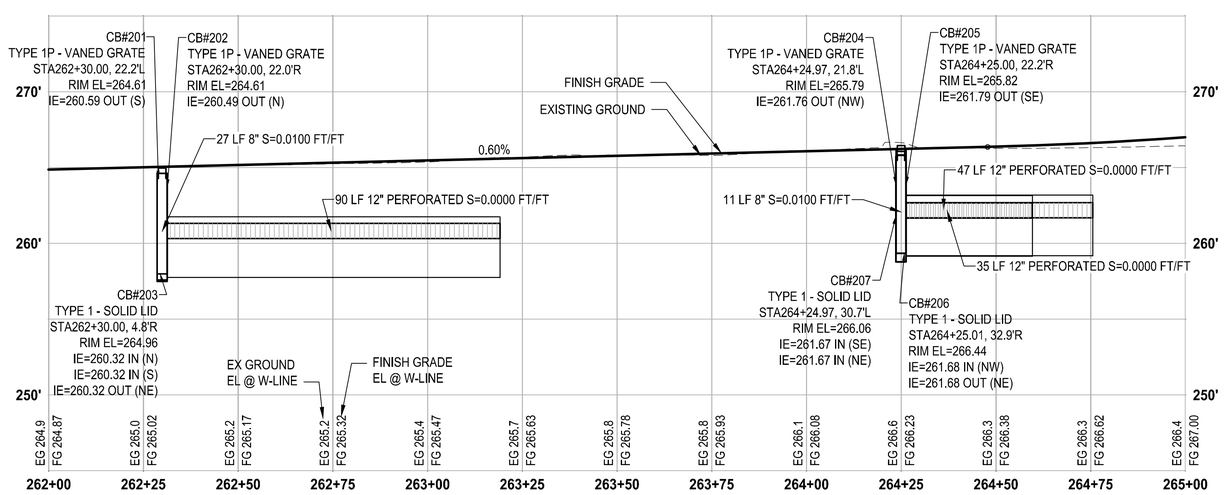
LAYOUT: SD2 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:04:01 PM



PLAN

SCALE IN FEET

0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

	REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–SD3–8
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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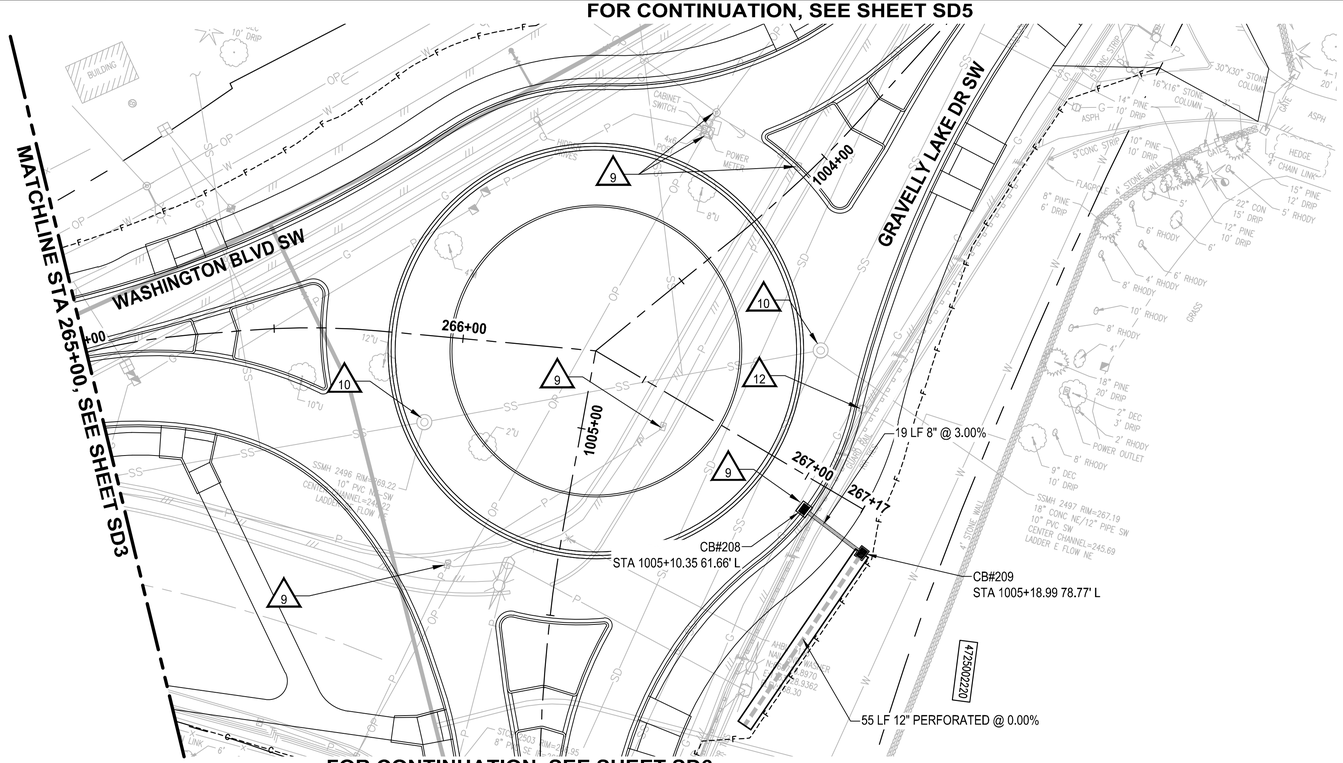
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
63 OF 153
SD3

LAYOUT: SD3 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:05:15 PM

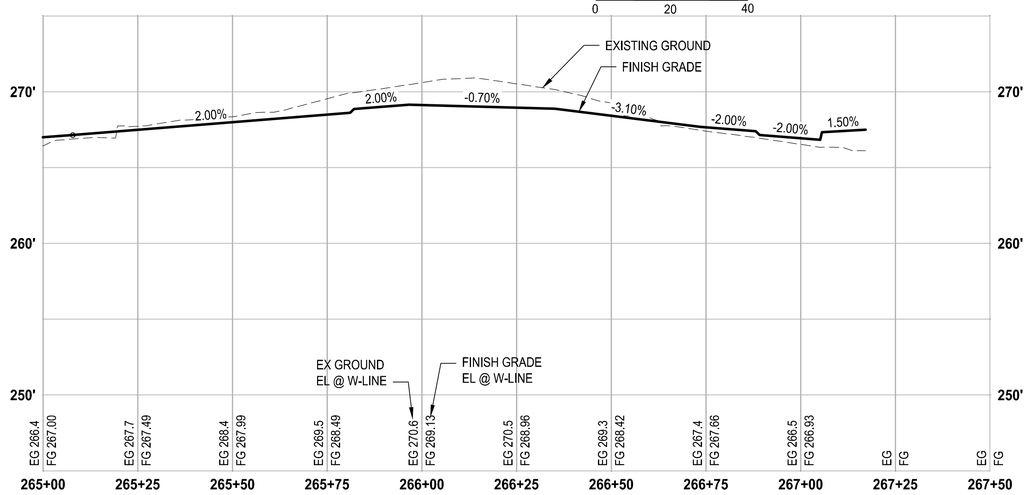
FOR CONTINUATION, SEE SHEET SD5



FOR CONTINUATION, SEE SHEET SD6

PLAN

SCALE IN FEET 0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

	REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD3-8
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO STATE OF WASHINGTON 52665 REGISTERED PROFESSIONAL ENGINEER
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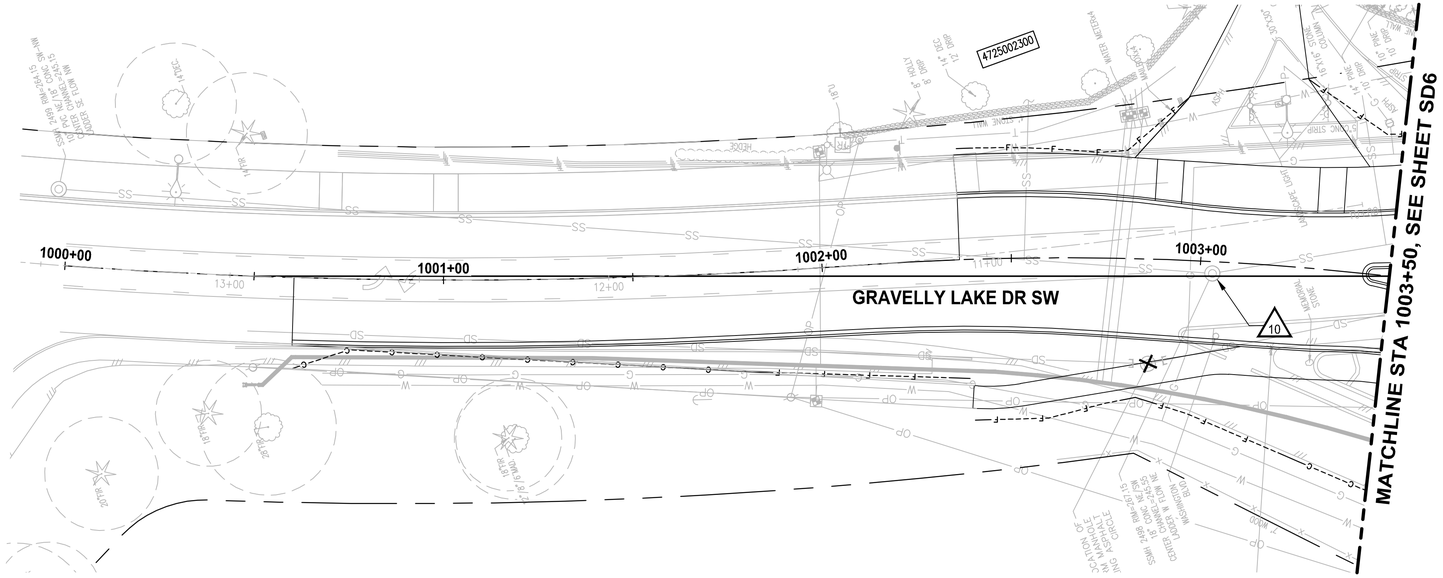
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.

SD4

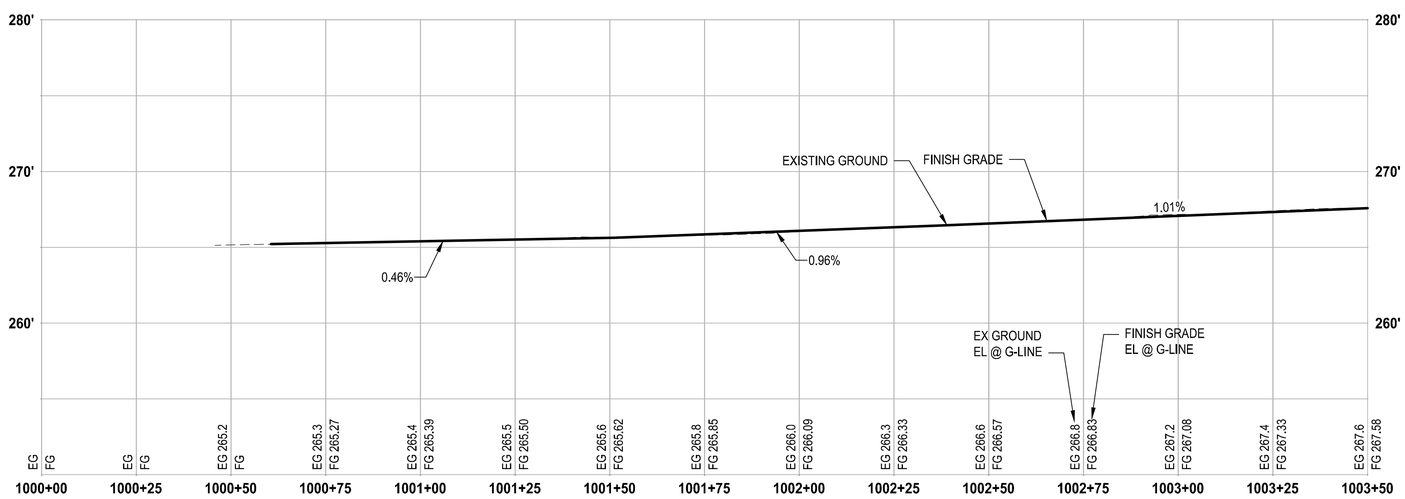
LAYOUT: SD4 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:05:36 PM



PLAN

SCALE IN FEET

0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

	REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD3-8
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

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02/01/2021

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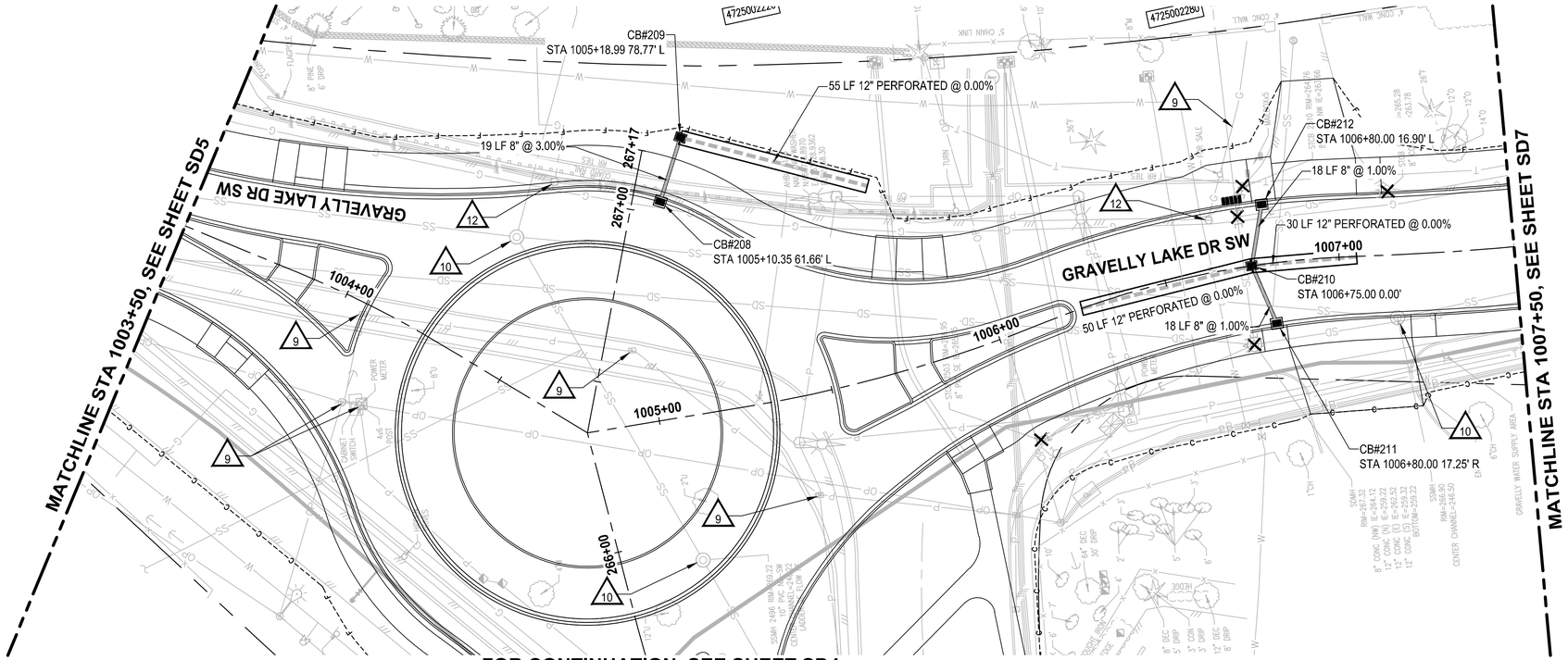
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

LAYOUT: SD5 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:05:55 PM



PLAN

SCALE IN FEET

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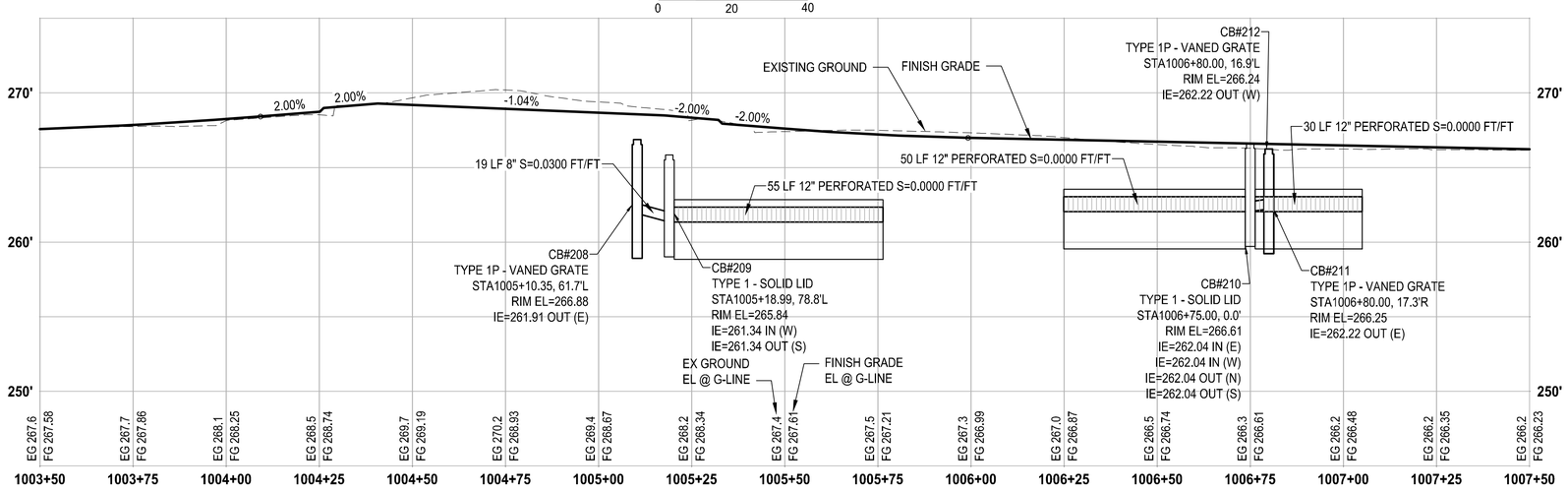

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A.CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD3-8
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO, STATE OF WASHINGTON, 55883, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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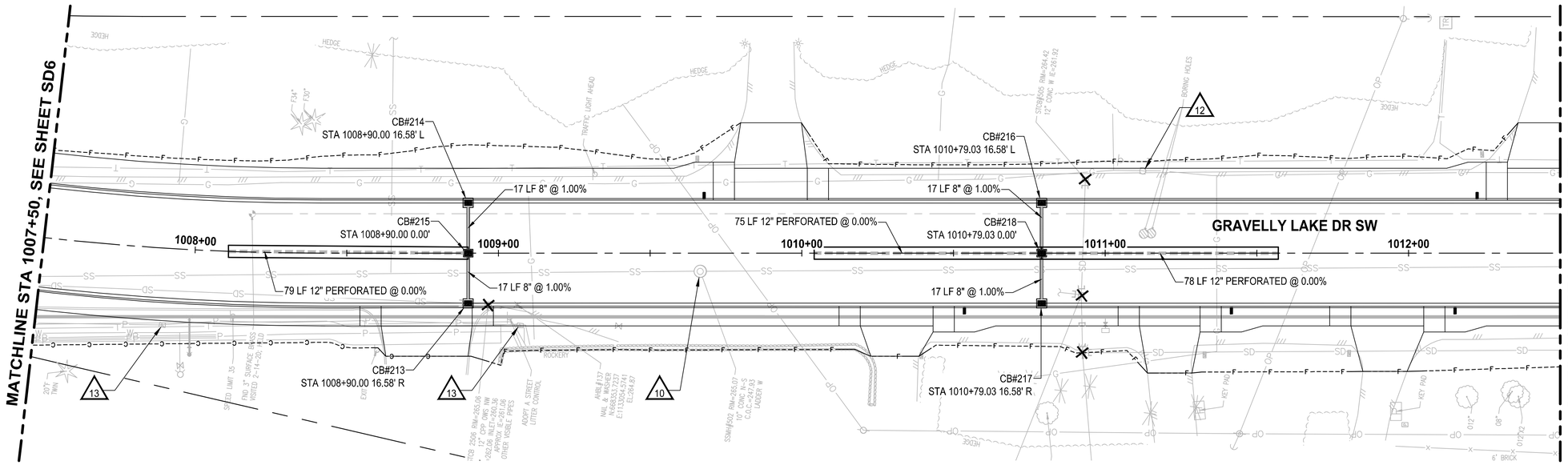
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
66 OF 153
SD6

LAYOUT: SD6 STORM DRAIN PLAN AND PROFILE PATH: \\jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:06:15 PM



PLAN

SCALE IN FEET

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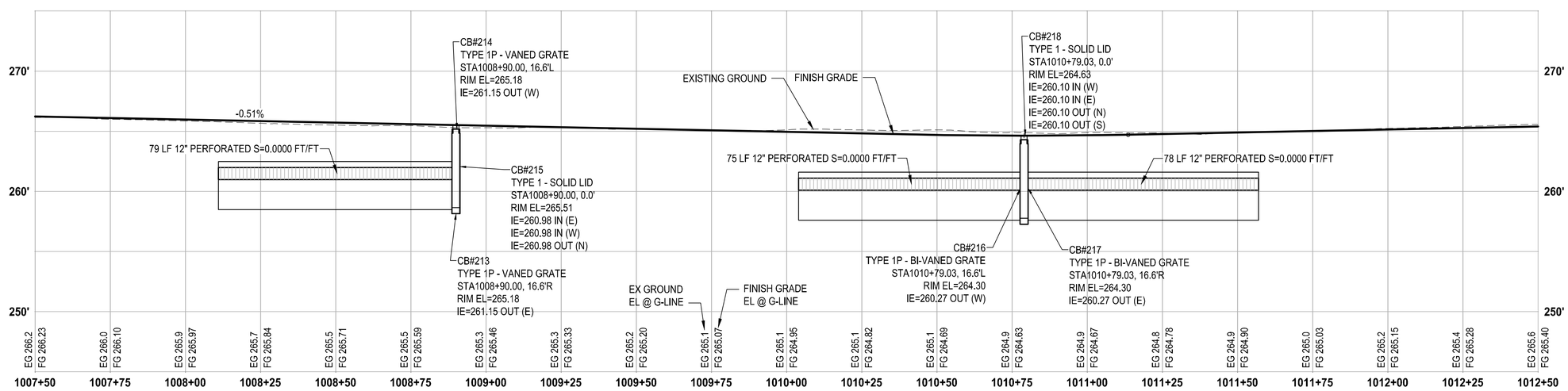

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
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   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

	REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD3-8
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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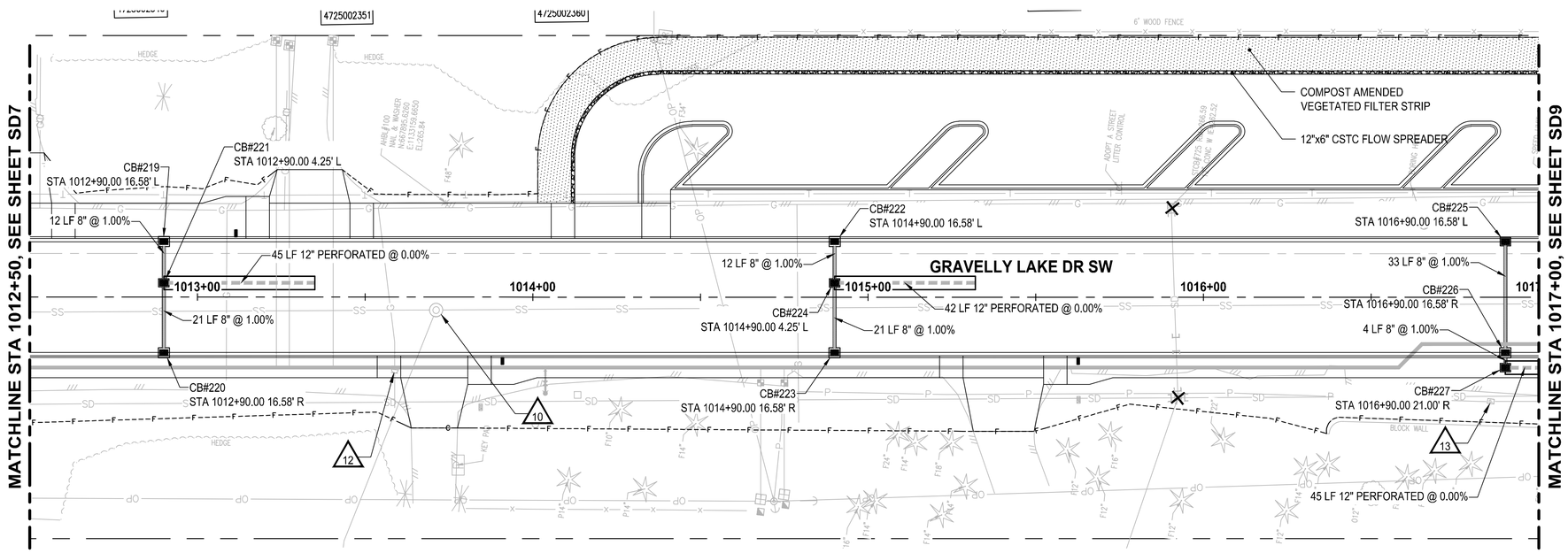
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
67 OF 153
SD7

LAYOUT: SD7 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:06:35 PM



PLAN

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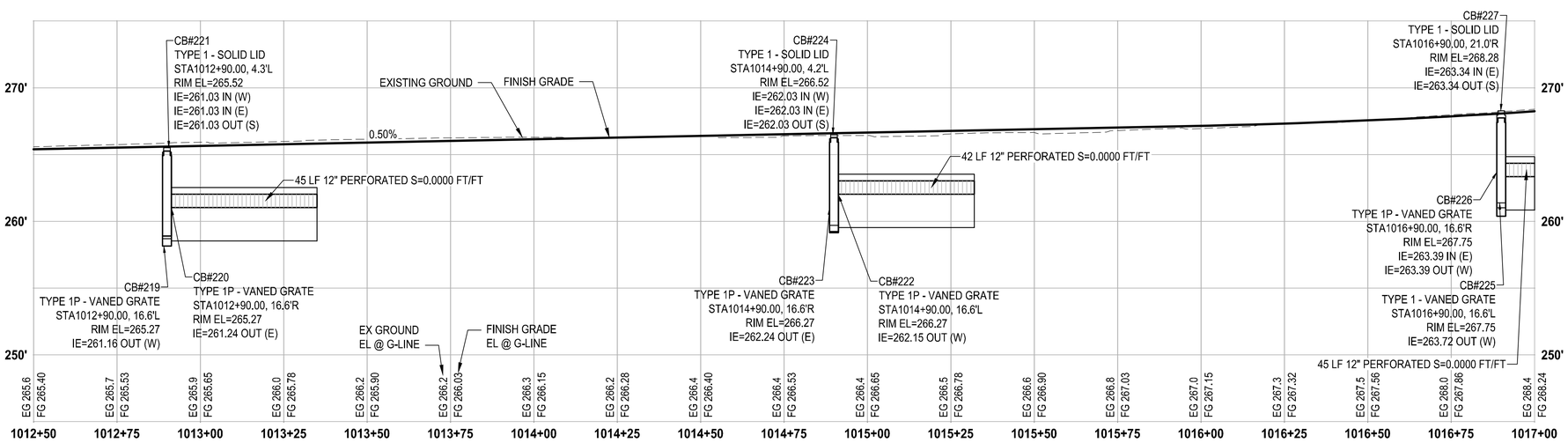
0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

	REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD3-8
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD, WA #1996

ANDREW CHRISTOPHER CIRILLO, STATE OF WASHINGTON, 55383, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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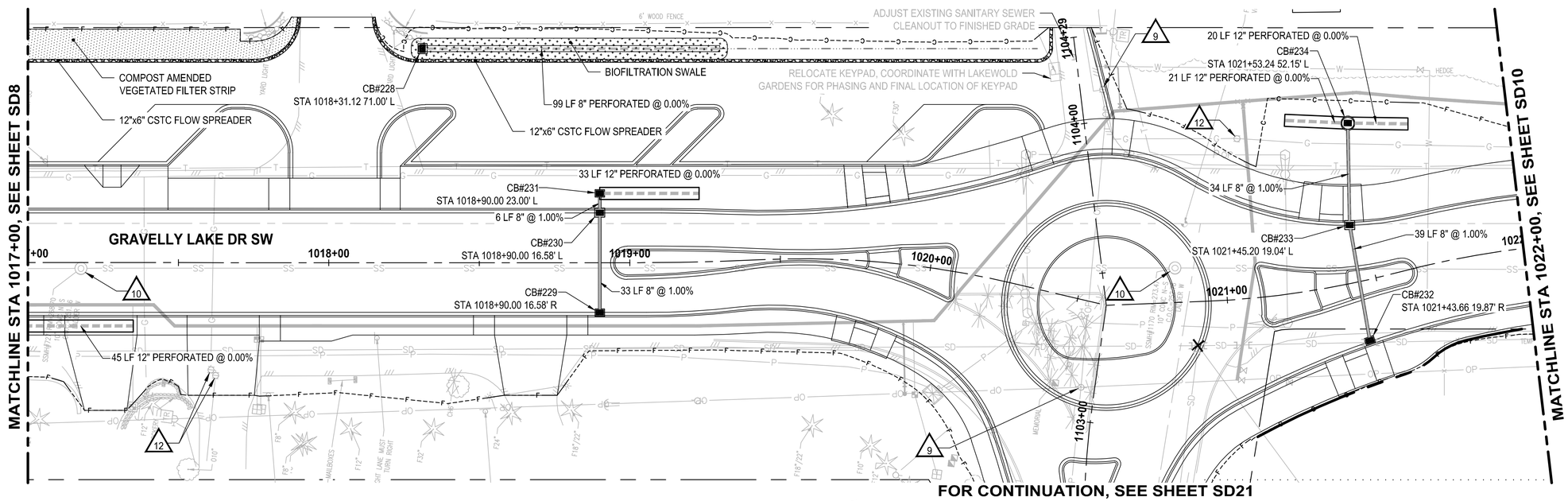
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
68 OF 153
SD8

LAYOUT: SD8 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:06:55 PM



PLAN

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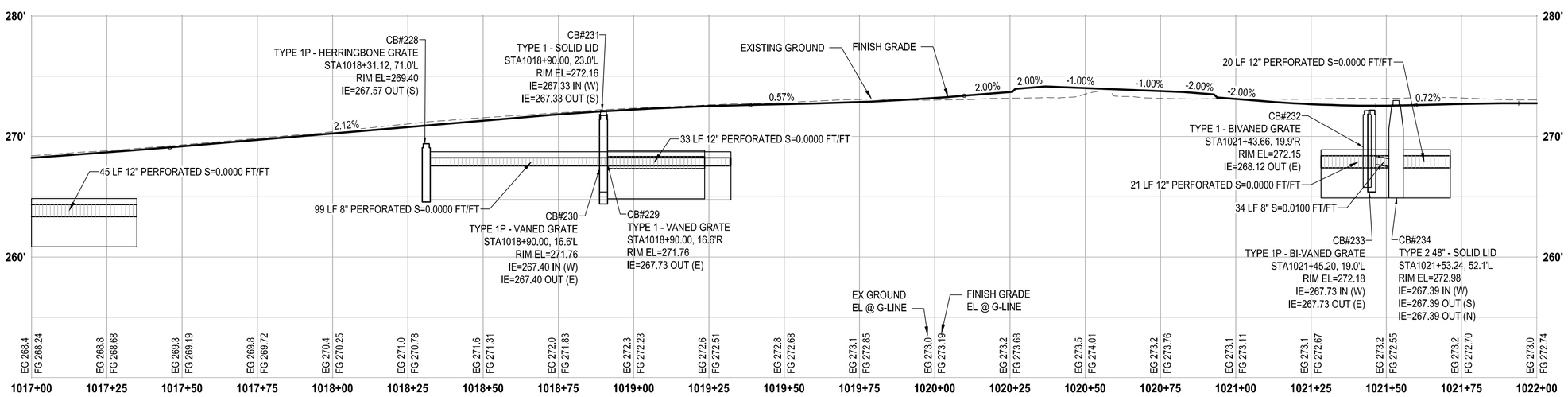

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD9-13
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO STATE OF WASHINGTON 45884 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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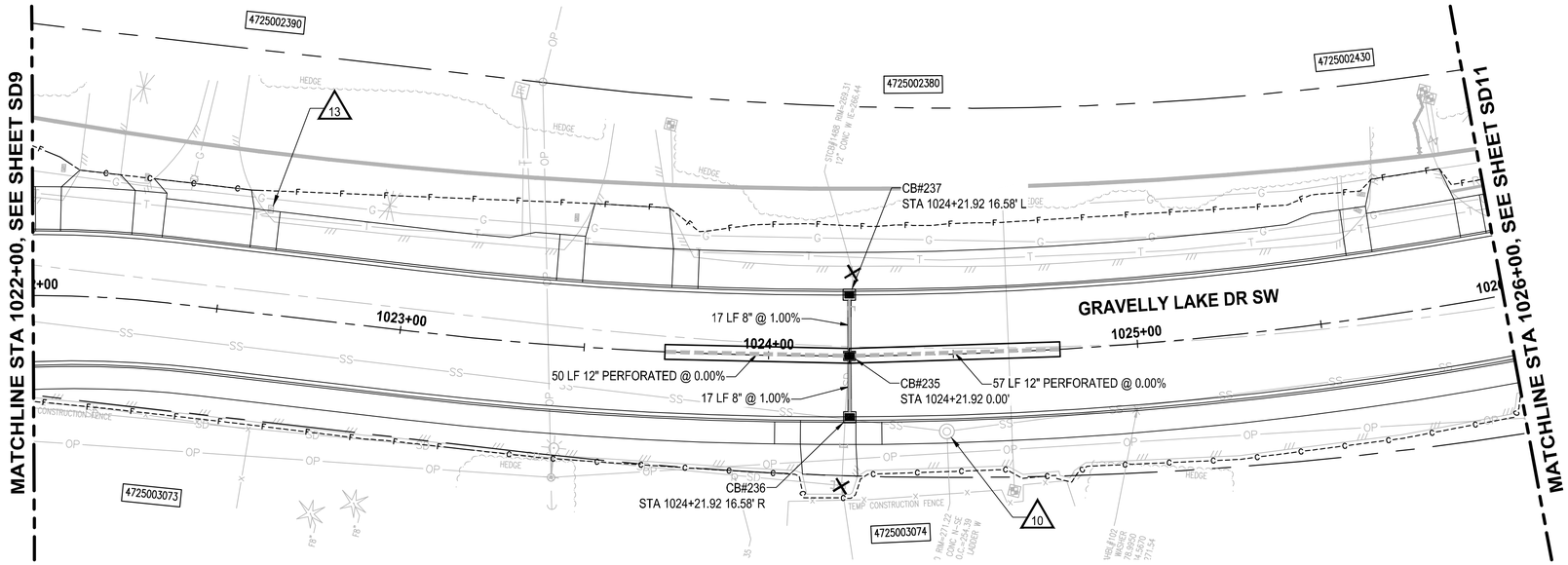
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO. 69 OF 153
SD9

LAYOUT: SD9 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:07:49 PM



PLAN

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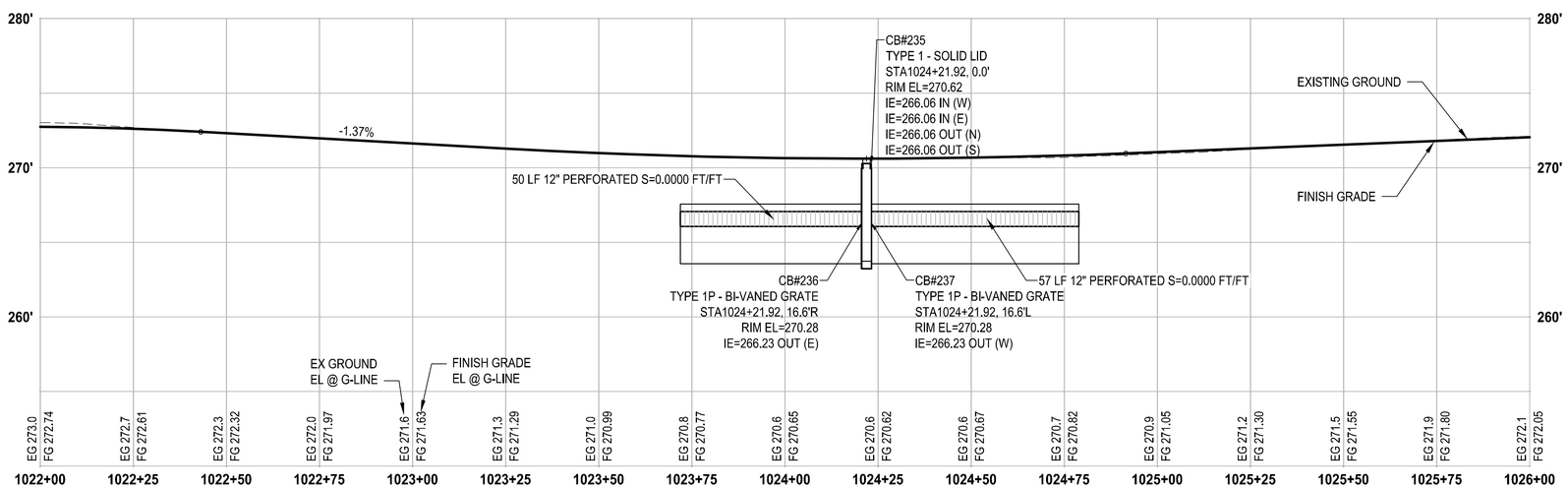

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD9-13
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

02/01/2021

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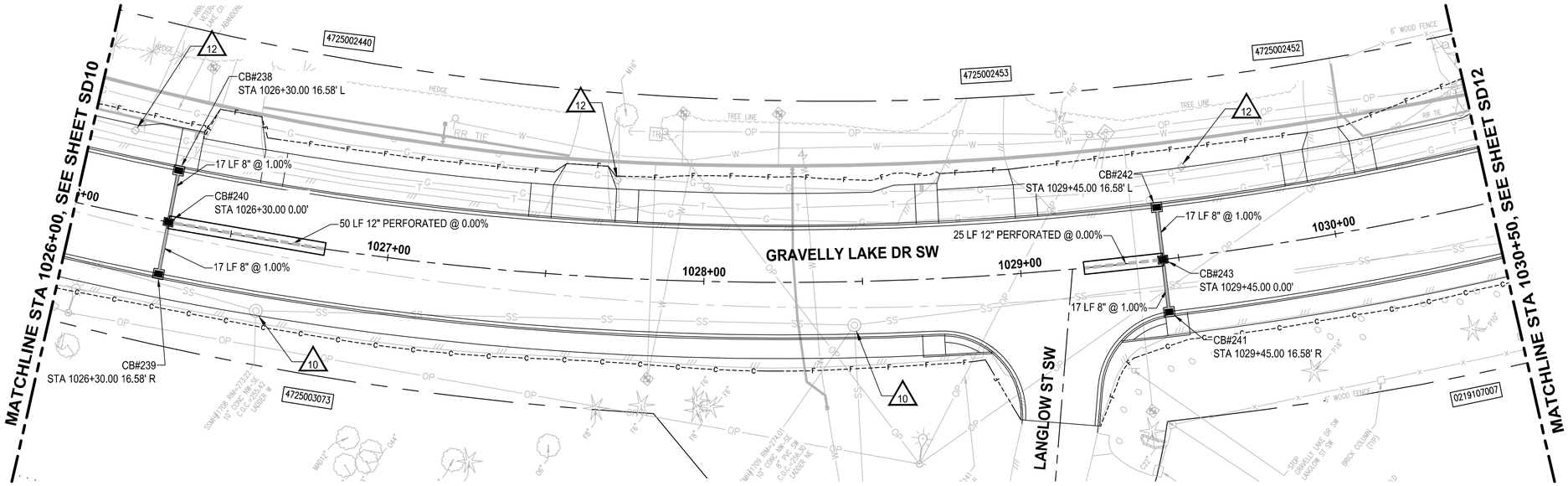
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
70 OF 153
SD10

LAYOUT: SD10 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:07:59 PM



PLAN

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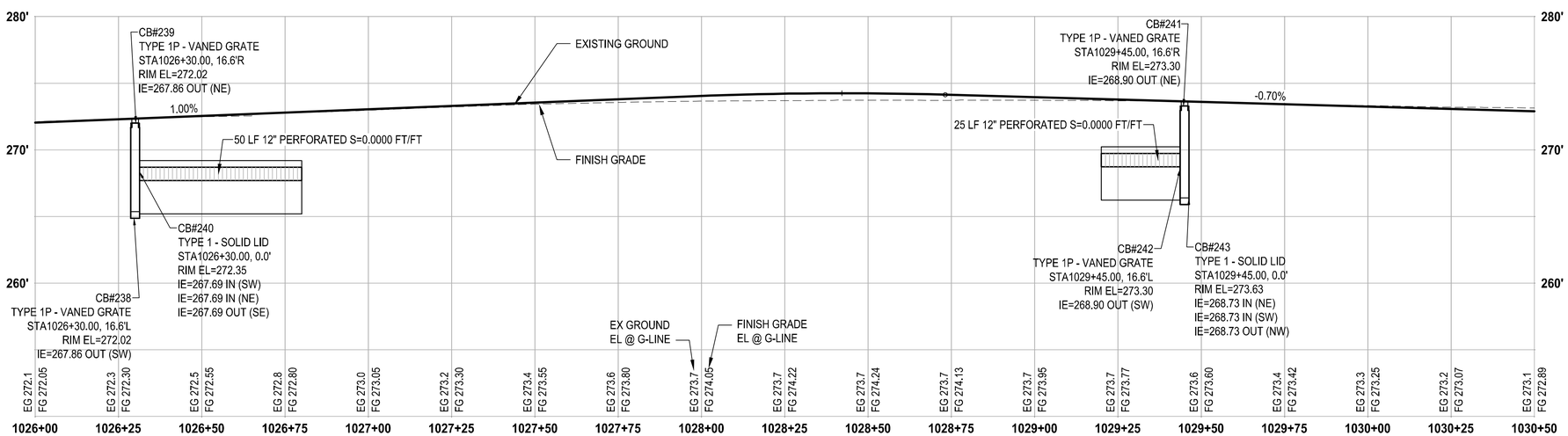

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A.CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–SD9–13
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

ANDREW CHRISTOPHER CIRILLO STATE OF WASHINGTON 55368 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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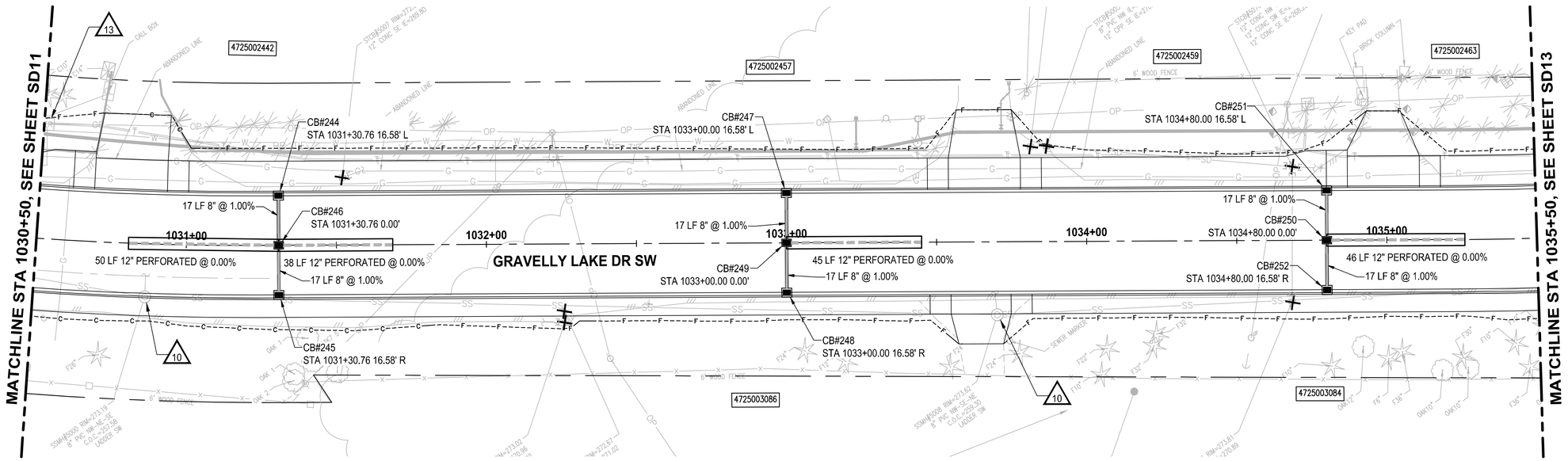
WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
71 OF 153
SD11

LAYOUT: SD11 STORM DRAIN PLAN AND PROFILE PATH: \\jupiter\projects\19000\191820.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:08:09 PM



PLAN

SCALE IN FEET

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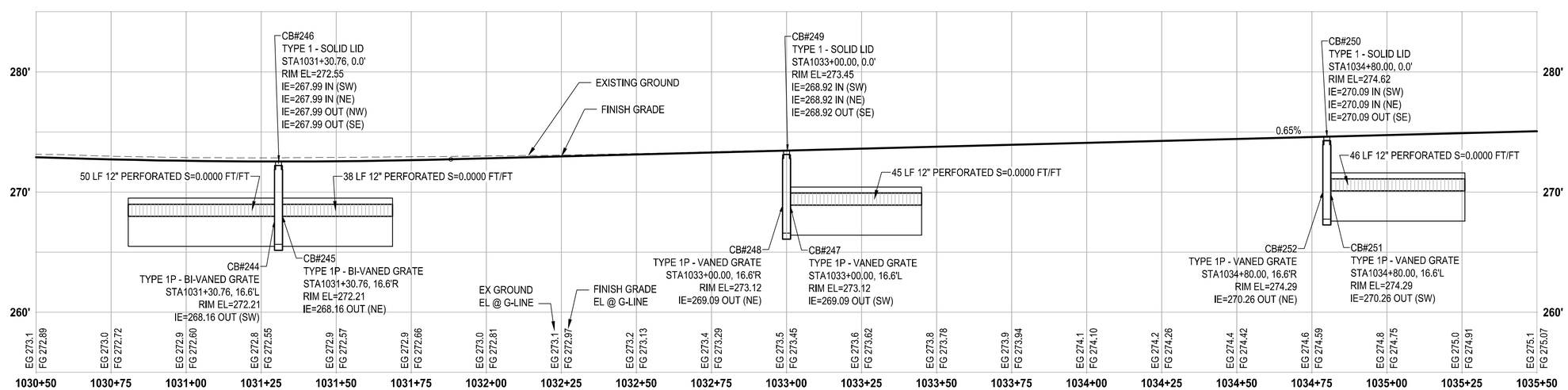

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
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- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD9-13
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

02/01/2021

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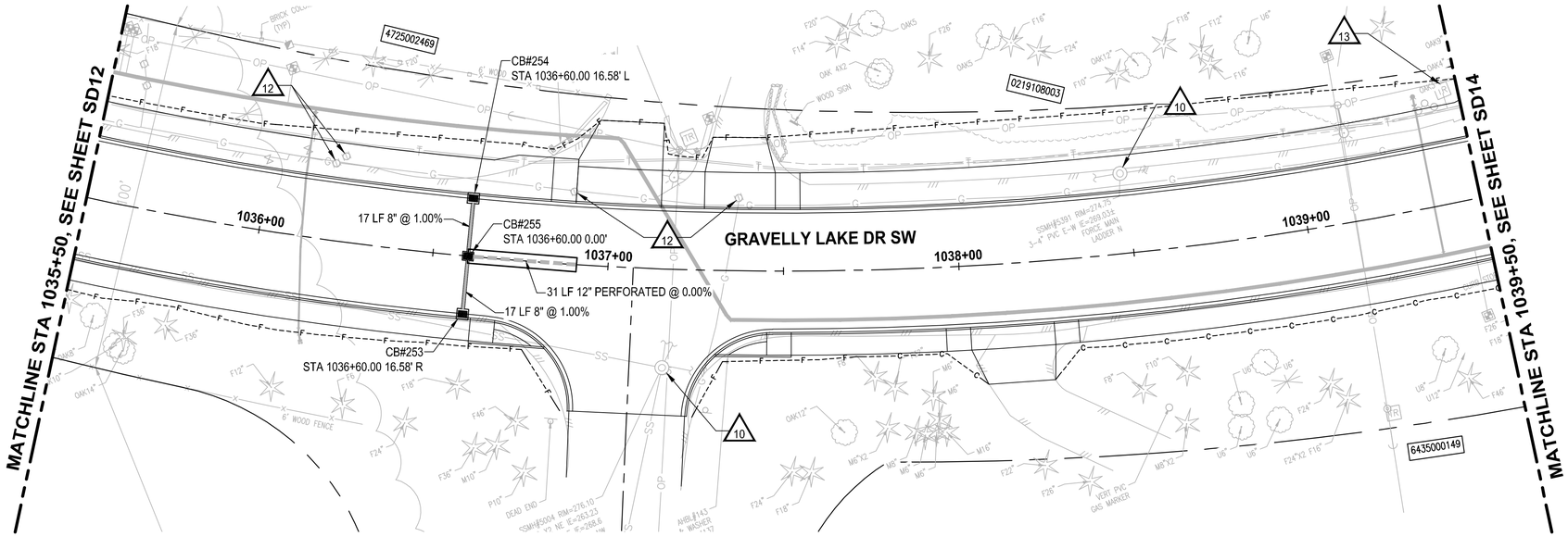
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
72 OF 153
SD12

LAYOUT: SD12 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:06:22 PM



PLAN

SCALE IN FEET

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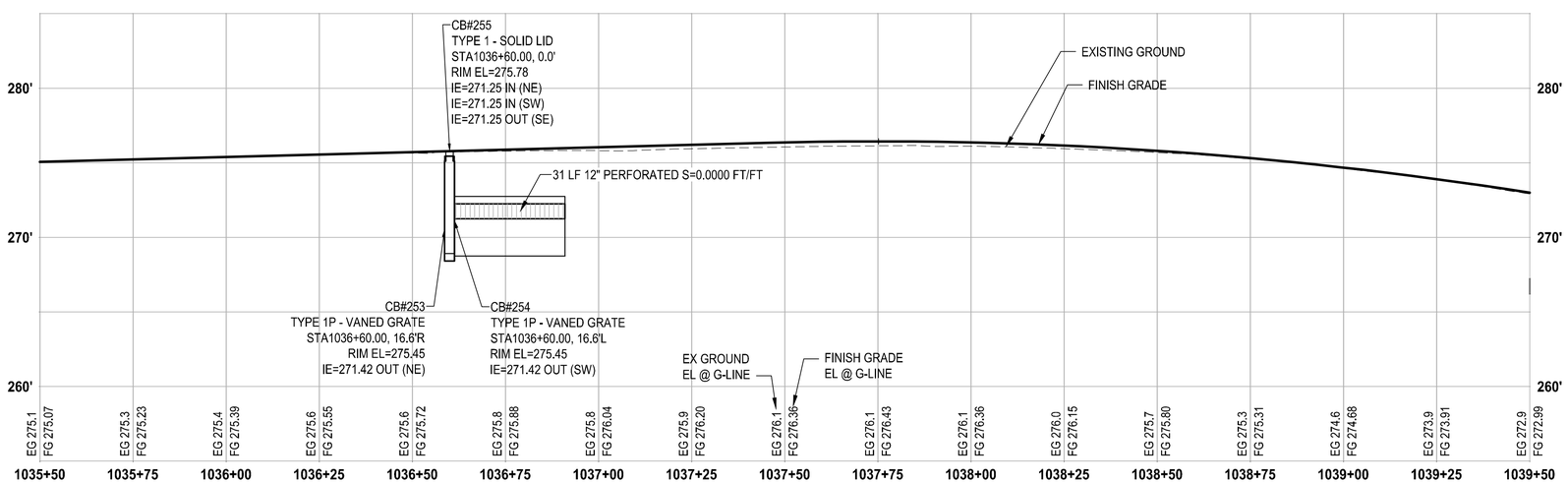

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
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GENERAL NOTES

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   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD9-13
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO, STATE OF WASHINGTON, 55598, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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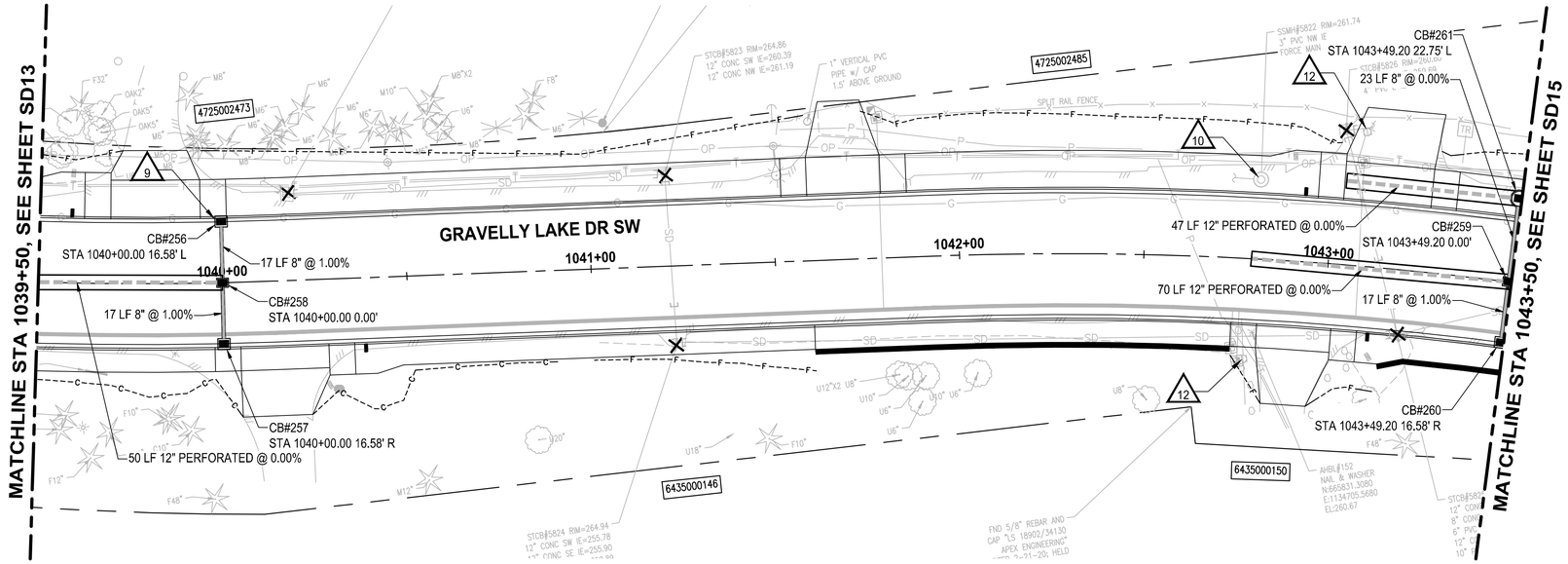
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
73 OF 153
SD13

LAYOUT: SD13 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:06:38 PM



PLAN

SCALE IN FEET

0 20 40

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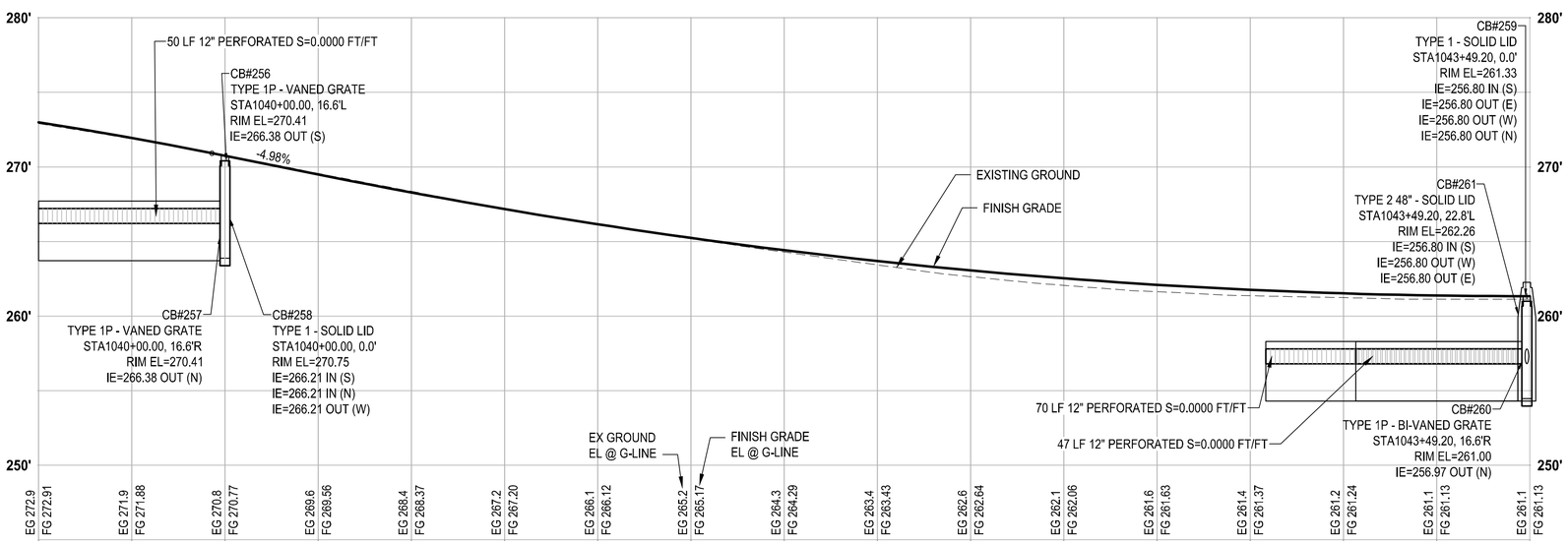

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

	REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–SD14–19
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

ANDREW CHRISTOPHER CIRILLO STATE OF WASHINGTON 50280 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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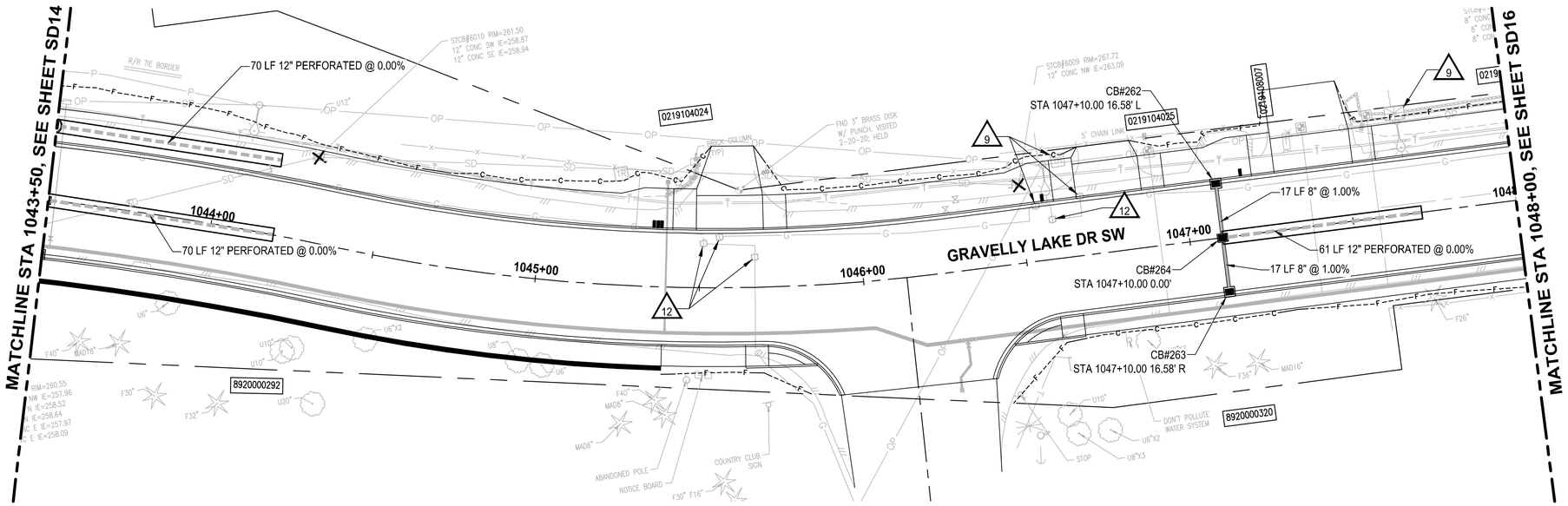
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
74 OF 153
SD14

LAYOUT: SD14 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:09:53 PM



PLAN

SCALE IN FEET

0 20 40

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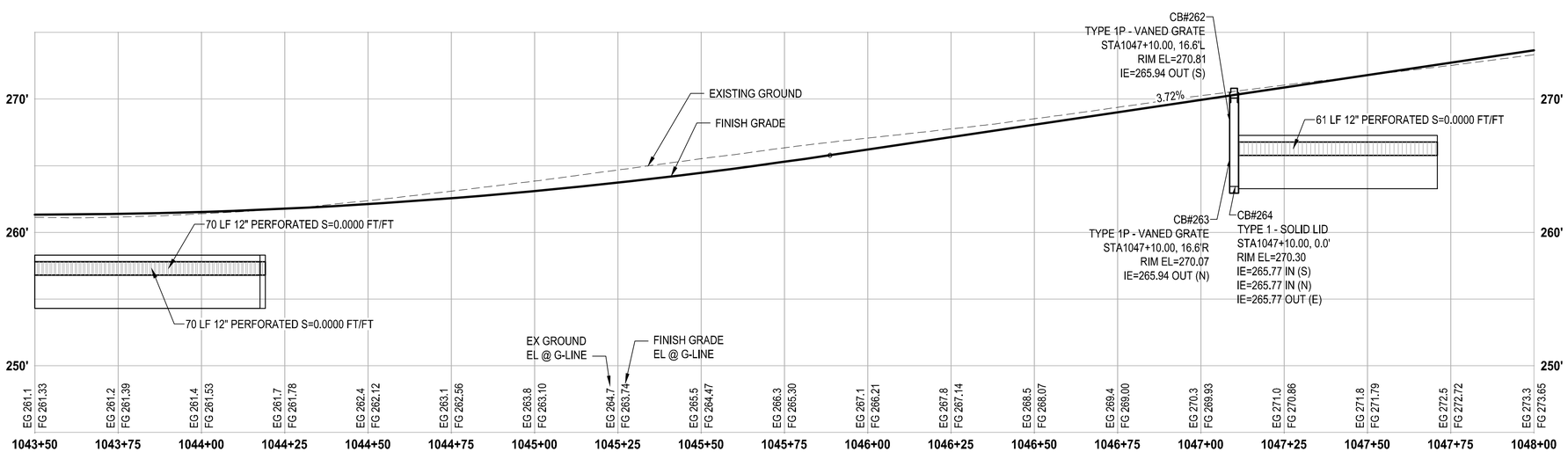

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD14-19
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

STATE OF WASHINGTON ANDREW CHRISTOPHER CIRILLO 55383 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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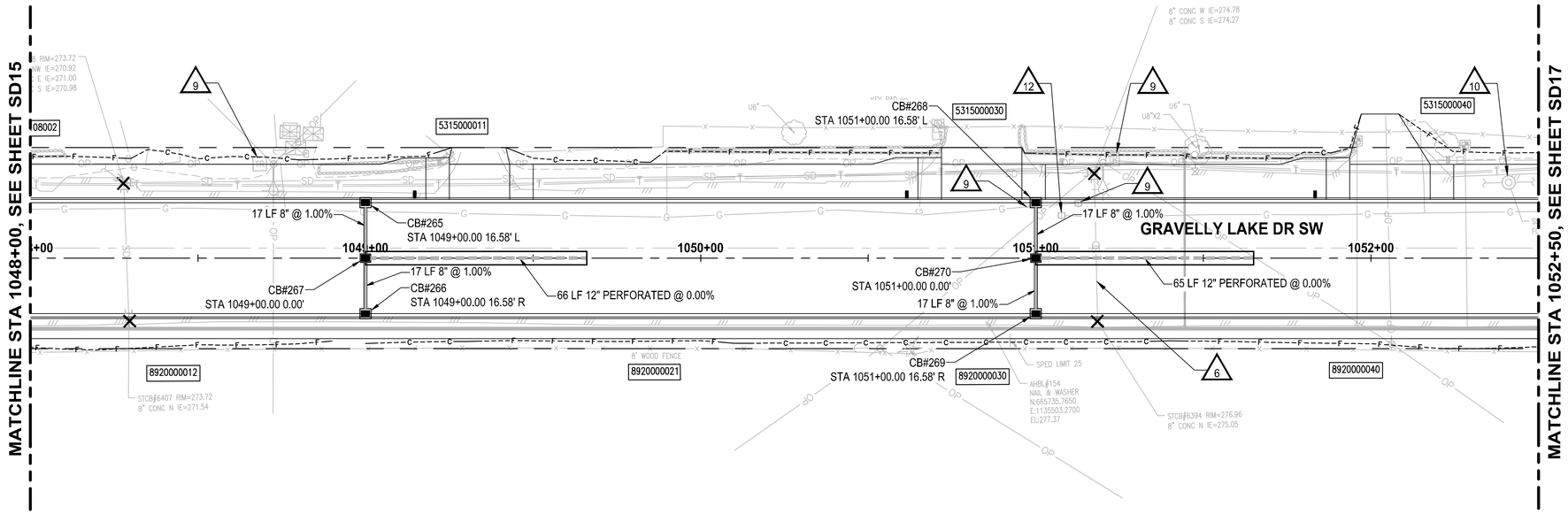
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
75 OF 153
SD15

LAYOUT: SD15 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:10:28 PM



PLAN

SCALE IN FEET 0 20 40

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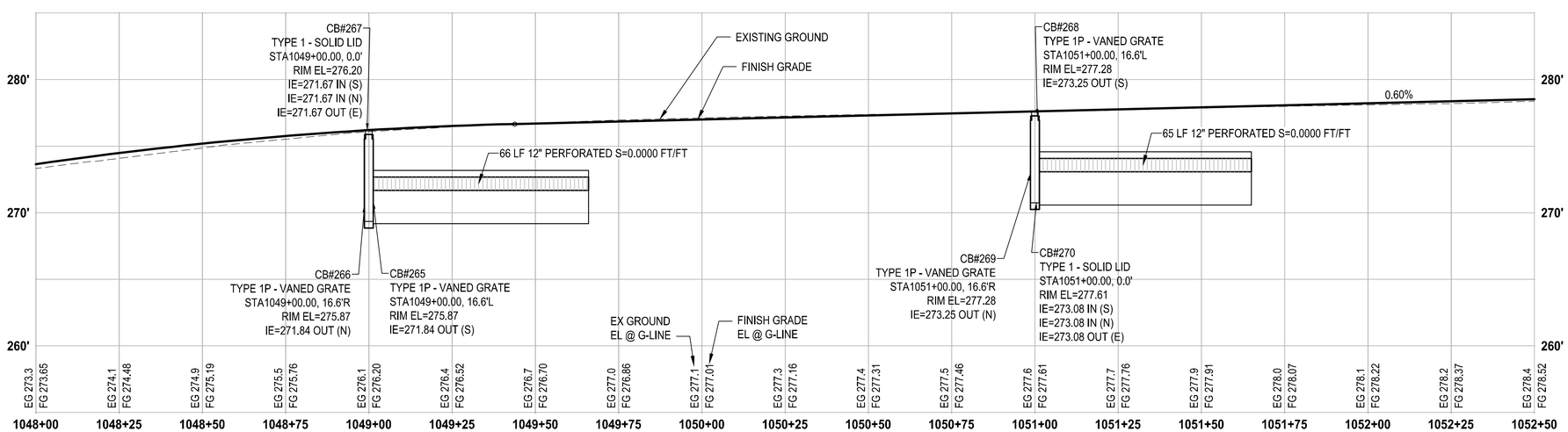

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD14-19
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO, STATE OF WASHINGTON, 50803, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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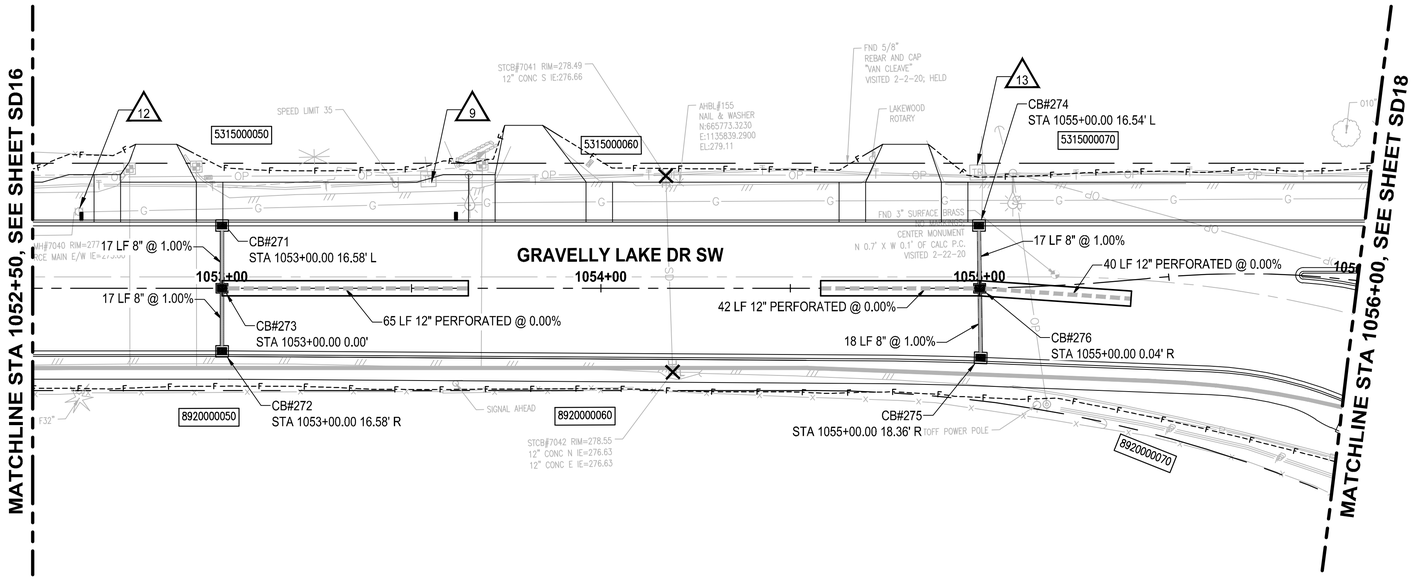
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

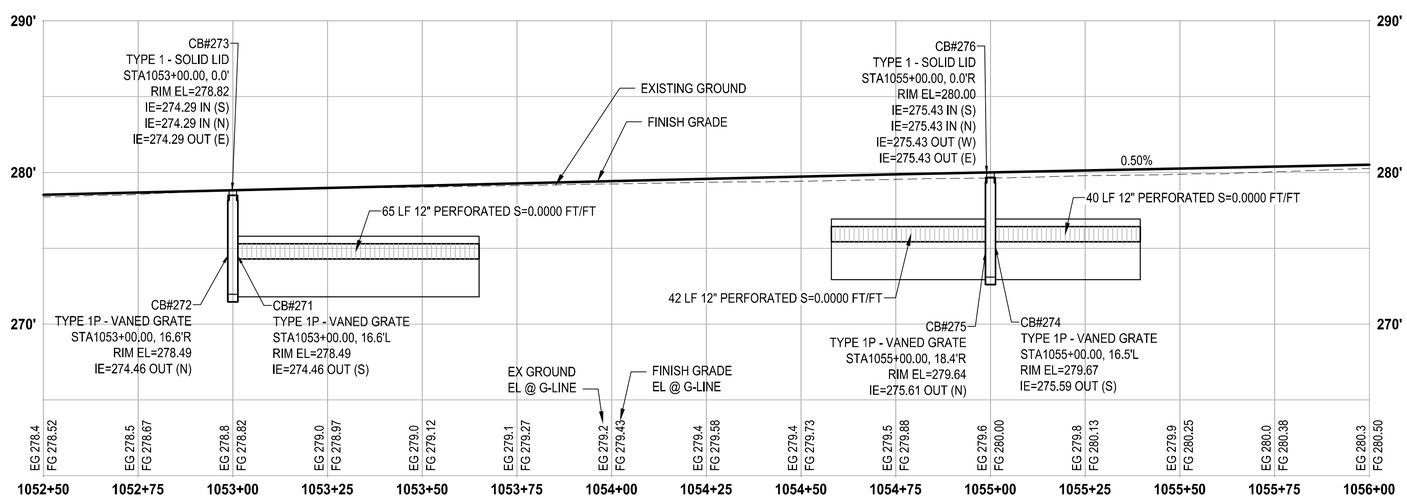
DRAWING NO.
76 OF 153
SD16

LAYOUT: SD16 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:10:55 PM



PLAN

SCALE IN FEET 0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD14-19
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO STATE OF WASHINGTON 55863 PROFESSIONAL ENGINEER
02/01/2021

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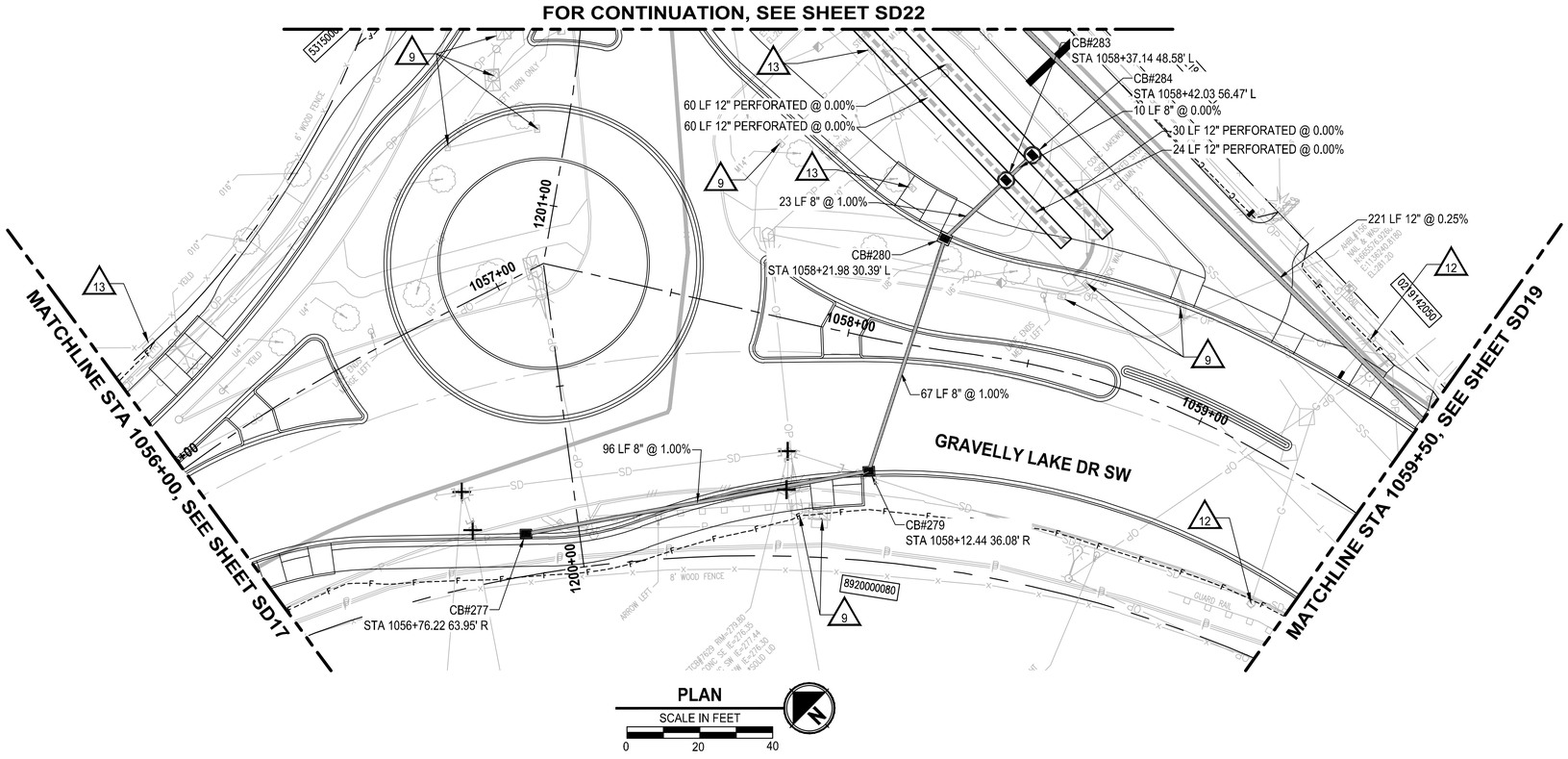
WWW.BCRADESIGN.COM

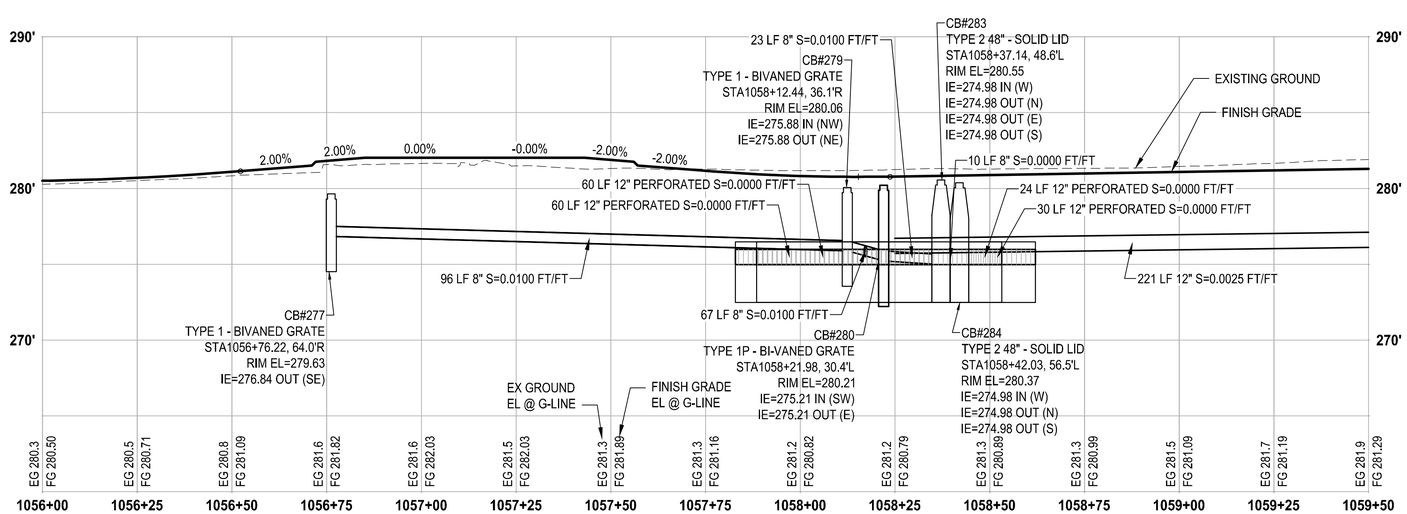
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO. 77 OF 153
SD17

LAYOUT: SD17 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:11:25 PM





PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD14-19
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO, STATE OF WASHINGTON, 55665, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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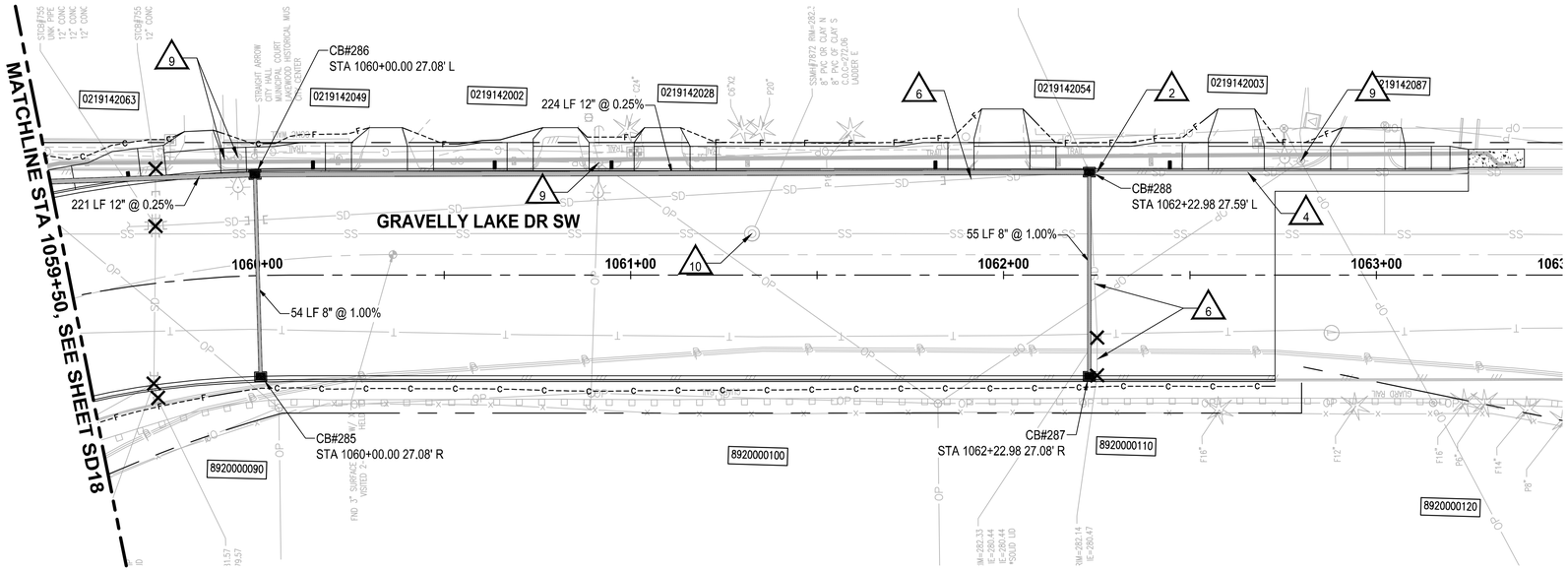
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
78 OF 153
SD18

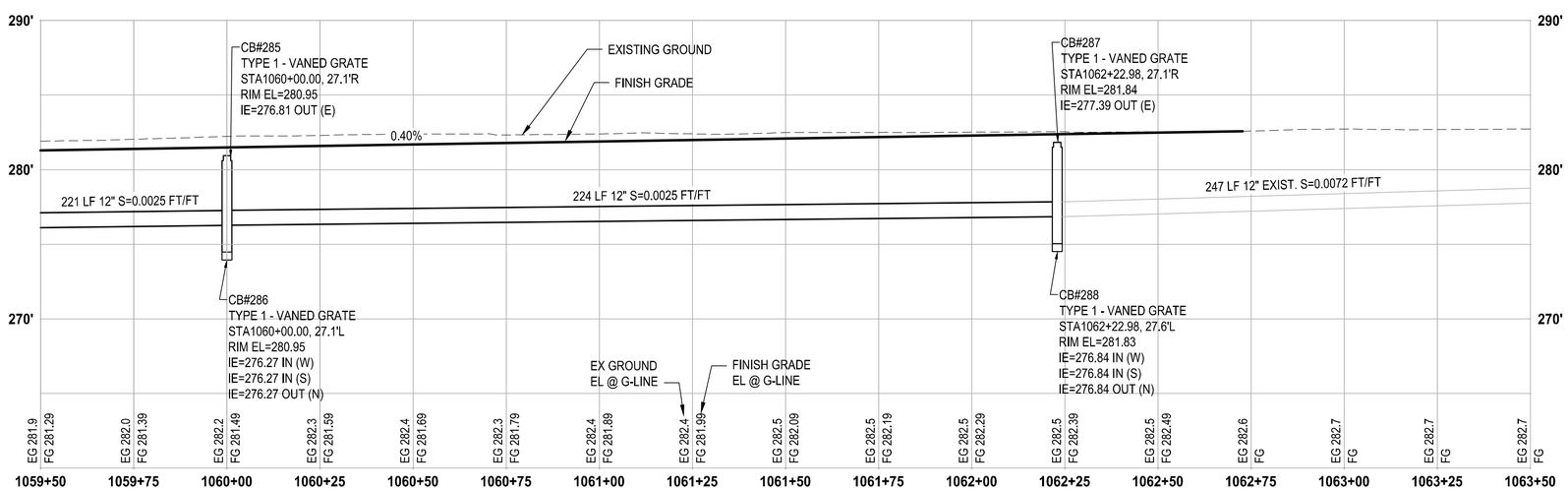
LAYOUT: SD18 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:12:03 PM



PLAN

SCALE IN FEET

0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD14-19
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO STATE OF WASHINGTON 48903 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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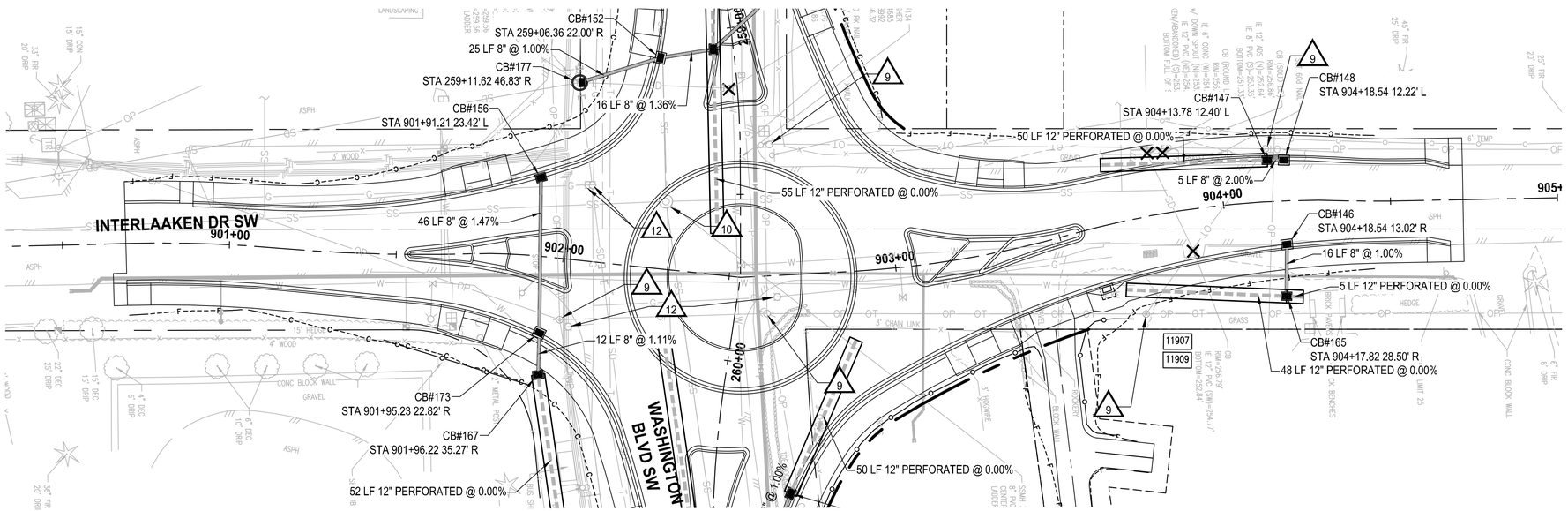
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.

SD19

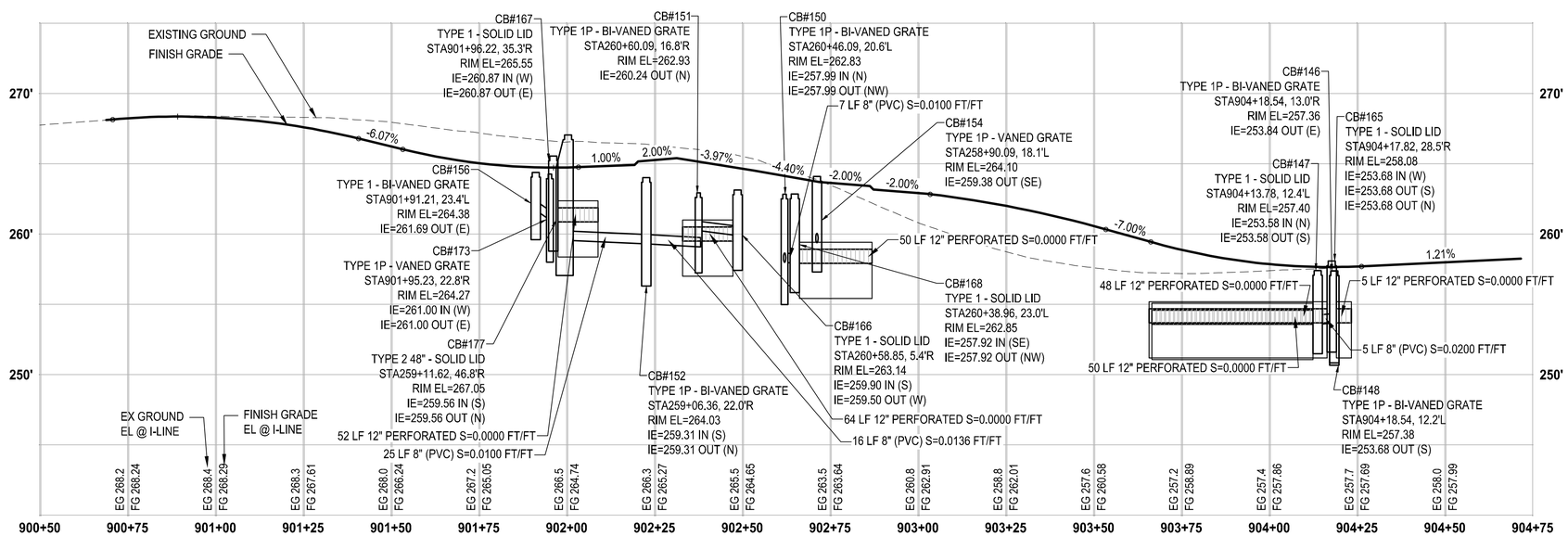
LAYOUT: SD19 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:12:30 PM



PLAN

SCALE IN FEET

0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED S. PODGORSKI
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–SD20
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

ANDREW CHRISTOPHER CHRISTIAN STATE OF WASHINGTON 50960 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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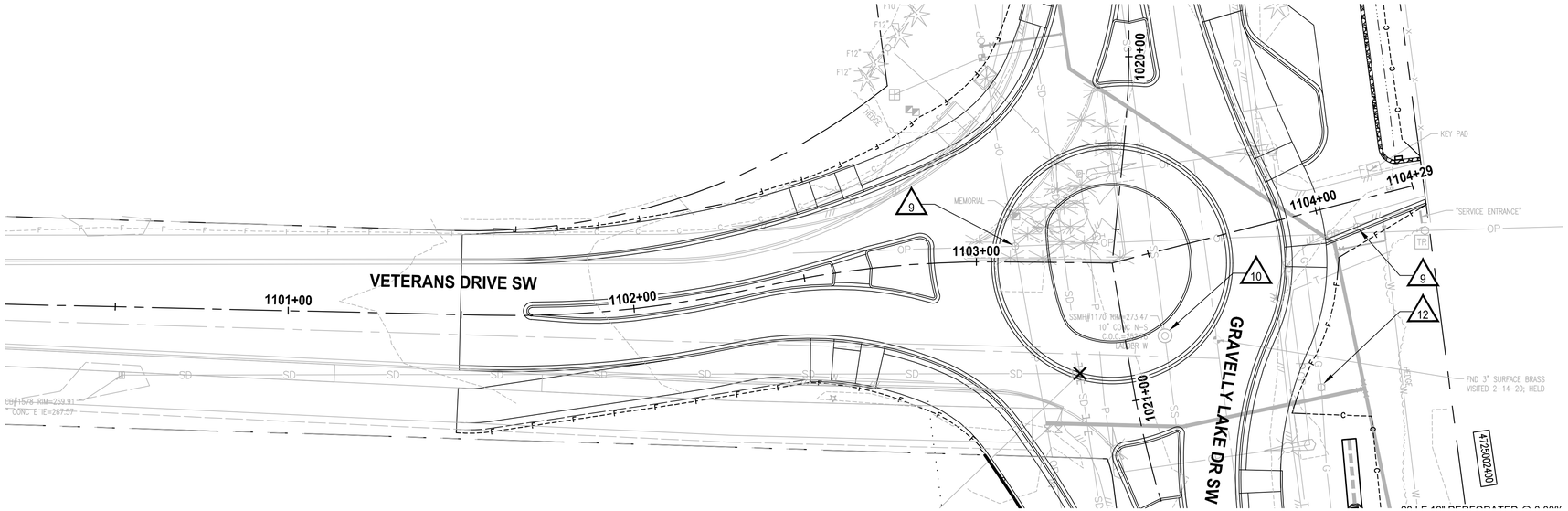
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
80 OF 153
SD20

LAYOUT: SD20 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:13:16 PM

FOR CONTINUATION, SEE SHEET SD9



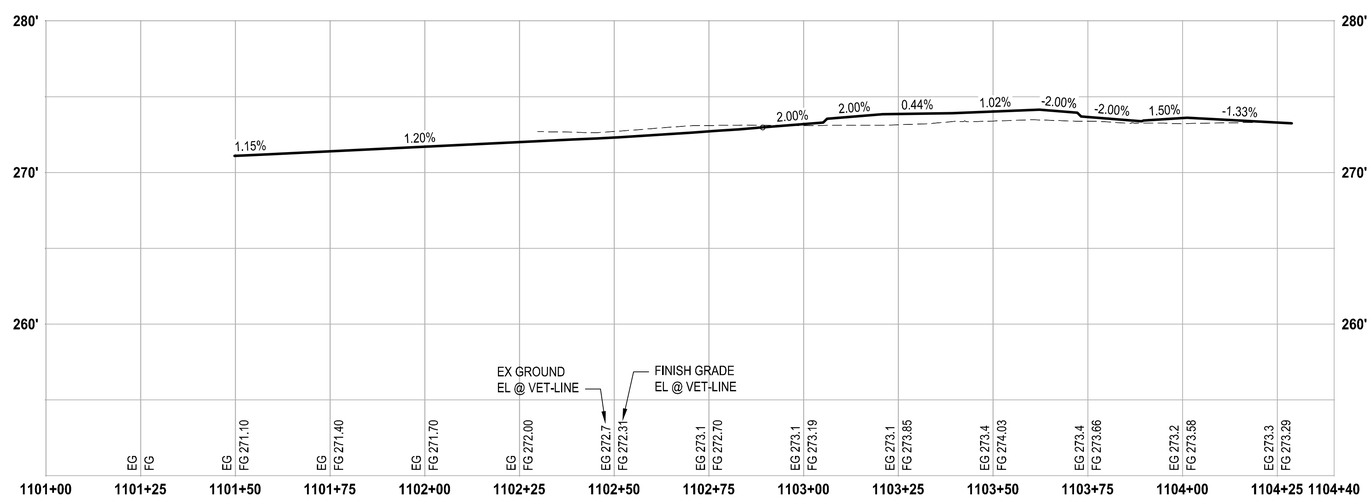
FOR CONTINUATION, SEE SHEET SD9

PLAN

SCALE IN FEET

0 20 40

N



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   - A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   - B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   - C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   - D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   - E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   - F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   - G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD21-22
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ©1996

ANDREW CHRISTOPHER CIRILLO STATE OF WASHINGTON 38861 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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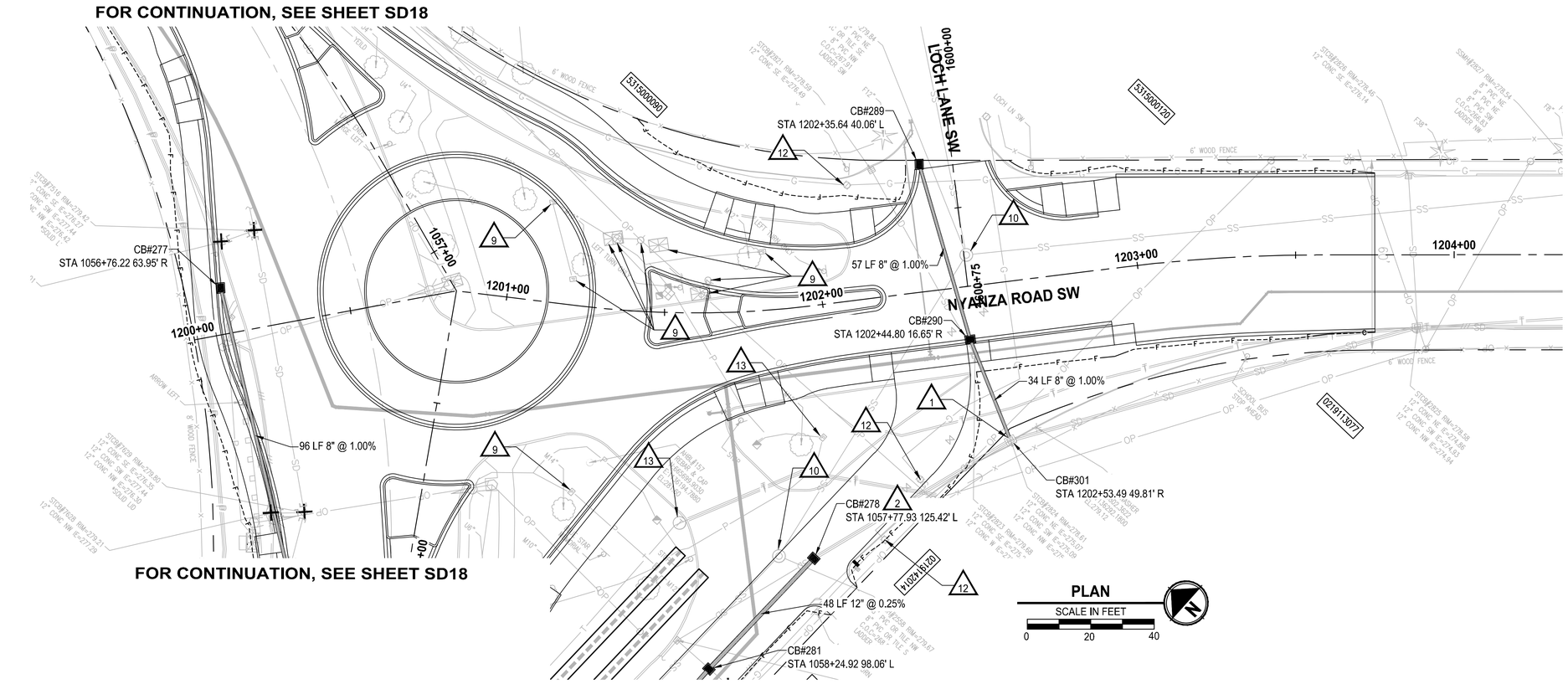
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

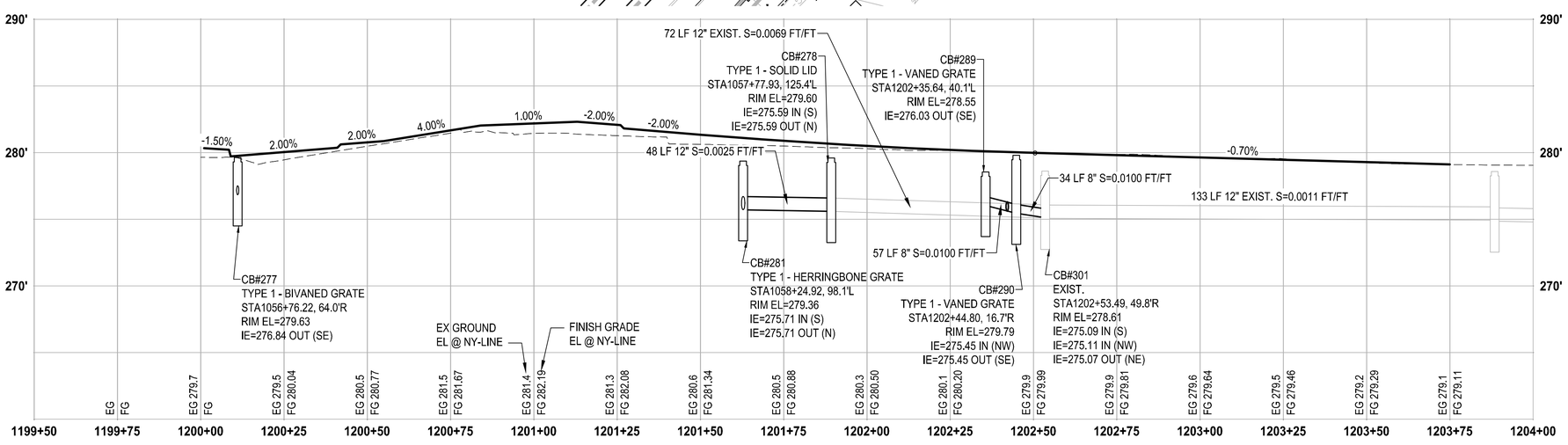
STORM DRAIN PLAN AND PROFILE

DRAWING NO.
81 OF 153
SD21

LAYOUT: SD21 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:14:45 PM



FOR CONTINUATION, SEE SHEET SD18



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

STORM DRAINAGE AND UTILITY NOTES

1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
9. UTILITY TO BE RELOCATED BY OTHERS
10. SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
11. NOT USED
12. ADJUST EXISTING VALVE CASING TO FINISHED GRADE
13. ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
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4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
   A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
   B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
   C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
   D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
   E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
   F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
   G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
5. ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2/DT4
- BIOFILTRATION SWALE PER DETAIL 3/DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1/DT4

REVISIONS	DATE	BY

DESIGNED A. CIRILLO
DRAWN R. BEALS
CHECKED A. EPSTEIN
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-SD21-22
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

ANDREW CHRISTOPHER CIRILLO, STATE OF WASHINGTON, 35882, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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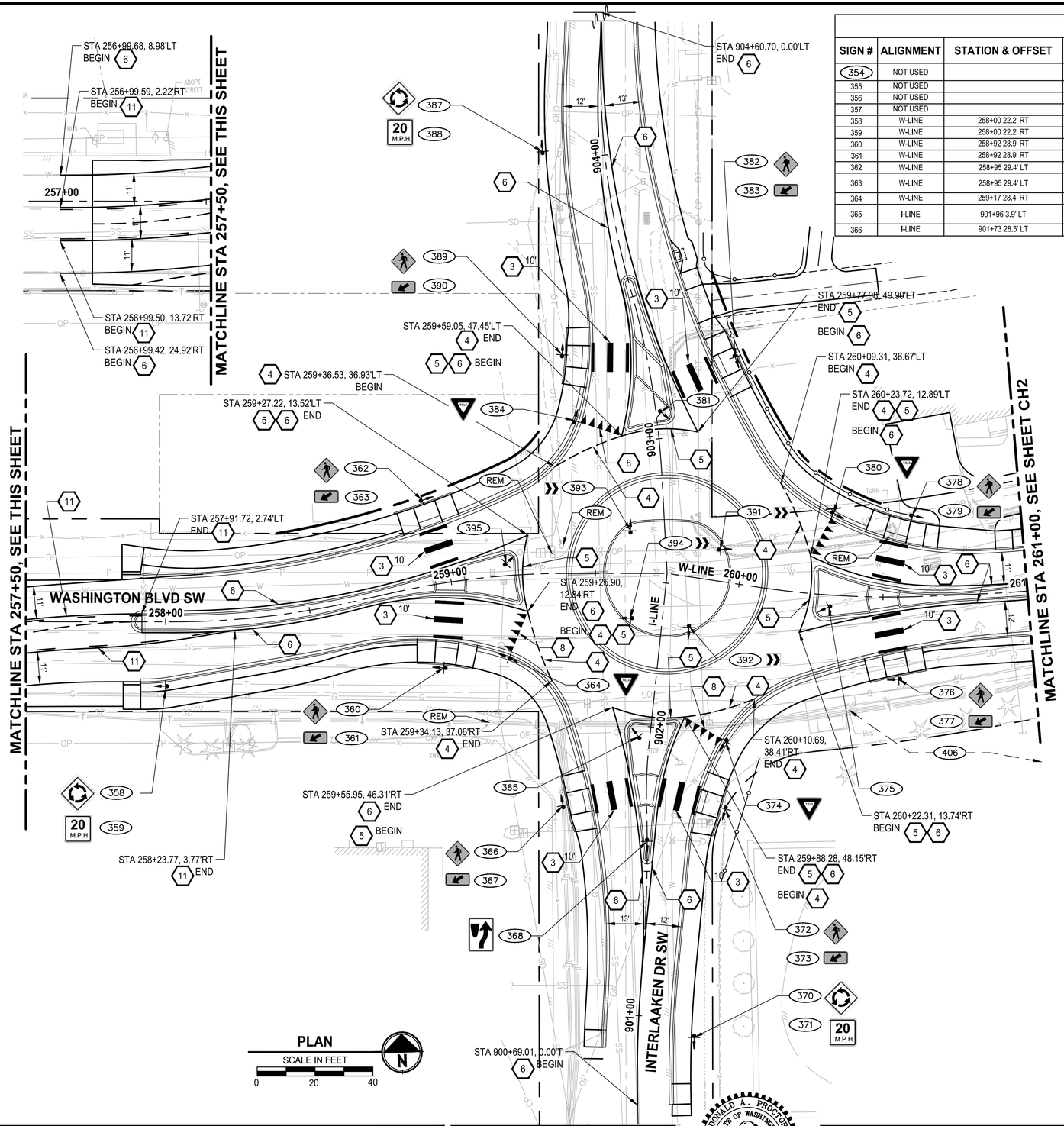
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
82 OF 153
SD22

LAYOUT: SD22 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:15:18 PM



SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
354	NOT USED					
355	NOT USED					
356	NOT USED					
357	NOT USED					
358	W-LINE	258+00 22.2' RT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
359	W-LINE	258+00 22.2' RT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 358, ON SAME POST
360	W-LINE	258+92 28.9' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
361	W-LINE	258+92 28.9' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 360, ON SAME POST
362	W-LINE	258+95 29.4' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
363	W-LINE	258+95 29.4' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 362, ON SAME POST
364	W-LINE	259+17 28.4' RT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
365	I-LINE	901+96 3.9' LT	D3-1	38" X 12"	"INTERLAAKEN DR SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
366	I-LINE	901+73 28.5' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST

CHANNELIZATION NOTES:

1. INSTALL PLASTIC DOUBLE CENTERLINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
2. INSTALL PLASTIC STOP BAR PER COL STD PLAN PS-05
3. INSTALL PLASTIC CROSSWALK LINE PER COL STD PLAN PS-05
4. INSTALL PLASTIC WHITE DOTTED ENTRY LINE PER WSDOT STD PLAN M-12.10-01
5. INSTALL PLASTIC WIDE LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
6. INSTALL PLASTIC EDGE LINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
7. INSTALL PLASTIC EDGE LINE (WHITE) PER PIERCE COUNTY STD PLAN PC. H2.9
8. INSTALL YIELD LINE SYMBOL PER WSDOT STD PLAN M-24.60-04
9. INSTALL PLASTIC TRAFFIC ARROW PER PIERCE COUNTY STD PLAN PC. H2.8 AND WSDOT STD PLAN M-12.10-01
10. INSTALL BIKE LANE SYMBOL PER COL STD PLAN PS-04
11. INSTALL PLASTIC WIDE DOTTED LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
12. INSTALL PLASTIC TWO-WAY LEFT-TURN CENTER LINE PER PIERCE COUNTY STD PLAN PC. H2.9
13. INSTALL PLASTIC ACCESS PARKING SYMBOL
14. INSTALL PLASTIC LINE (4 INCH)

LEGEND:

- NEW SIGN, SINGLE POST PER CITY OF LAKEWOOD STD DETAIL PS-03
- REM — REMOVE SIGN
- XX — RELOCATE / REPLACED SIGN

GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
367	I-LINE	901+73 28.5' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 366, ON SAME POST
368	I-LINE	901+60 0.0'LT	R4-7	24" X 30"	KEEP RIGHT	INSTALL NEW SIGN ON NEW POST
369	NOT USED					
370	I-LINE	900+93 19.4' RT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
371	I-LINE	900+93 19.4' RT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 370, ON SAME POST
372	I-LINE	901+71 27.0' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
373	I-LINE	901+71 27.0' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 372, ON SAME POST
374	I-LINE	901+98 26.2' RT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
375	W-LINE	260+31 4.2' RT	D3-1	36" X 12"	"WASHINGTON BLVD SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
376	W-LINE	260+55 28.4' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
377	W-LINE	260+55 28.4' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 376, ON SAME POST
378	W-LINE	260+61 28.0' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
379	W-LINE	260+61 28.0' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 379, ON SAME POST
380	W-LINE	260+31 28.3' LT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
381	I-LINE	903+09 2.0' RT	D3-1	38" X 12"	"INTERLAAKEN DR SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
382	I-LINE	903+23 30.0' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
383	I-LINE	903+23 30.0' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 382, ON SAME POST
384	I-LINE	903+10 28.4' LT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
385	NOT USED					
386	NOT USED					
387	I-LINE	904+03 21.3' LT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
388	I-LINE	904+03 21.3' LT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 387, ON SAME POST
389	I-LINE	903+36 28.5' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
390	I-LINE	903+36 28.5' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 389, ON SAME POST
391	W-LINE	259+91 10.9' LT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
392	W-LINE	259+85 17.4' RT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
393	W-LINE	259+62 14.7' LT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
394	W-LINE	259+62 15.5' RT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
395	W-LINE	259+19 4.2' LT	D3-1	36" X 12"	"WASHINGTON BLVD SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–CH13–15
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

DONALD A. PROCAR — STATE OF WASHINGTON — 31791 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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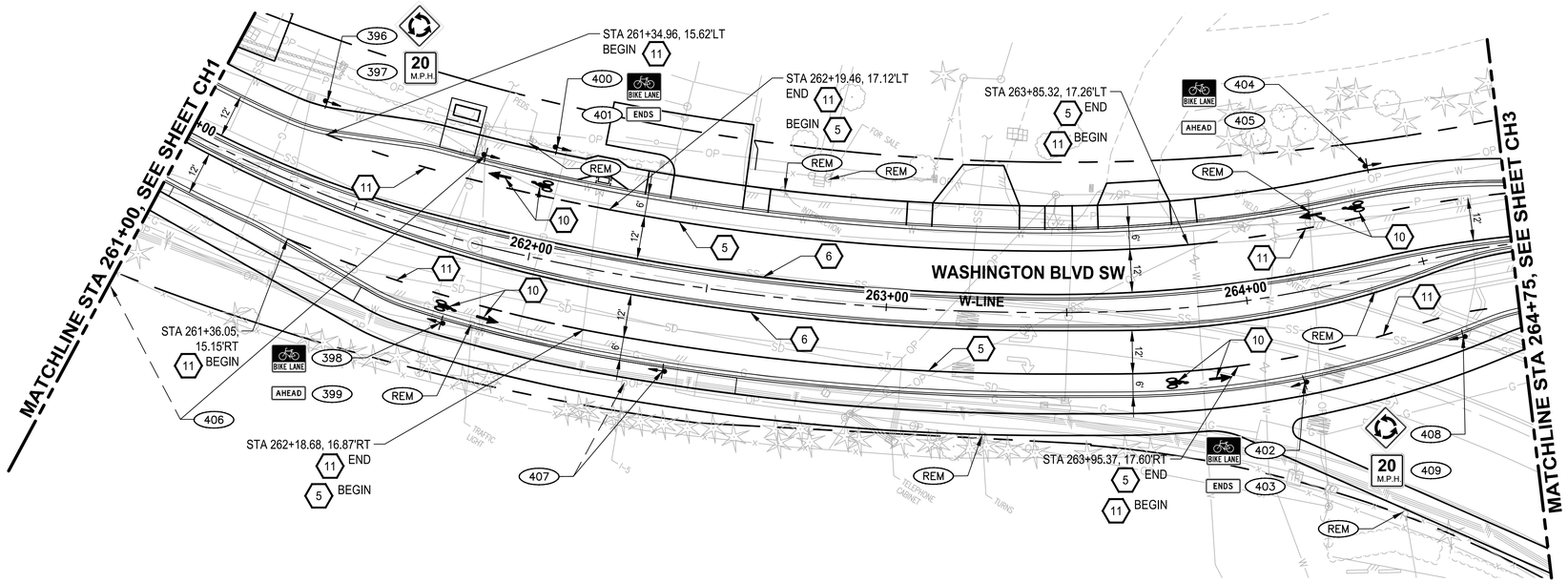
WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN WASHINGTON BLVD SW

DRAWING NO.
83 OF 153
CH1

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toylokat DATE: Tuesday, February 2, 2021 2:24:43 PM
LAYOUT: CH1



PLAN

SCALE IN FEET

0 20 40

CHANNELIZATION NOTES:

1. INSTALL PLASTIC DOUBLE CENTERLINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
2. INSTALL PLASTIC STOP BAR PER COL STD PLAN PS-05
3. INSTALL PLASTIC CROSSWALK LINE PER COL STD PLAN PS-05
4. INSTALL PLASTIC WHITE DOTTED ENTRY LINE PER WSDOT STD PLAN M-12.10-01
5. INSTALL PLASTIC WIDE LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
6. INSTALL PLASTIC EDGE LINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
7. INSTALL PLASTIC EDGE LINE (WHITE) PER PIERCE COUNTY STD PLAN PC. H2.9
8. INSTALL YIELD LINE SYMBOL PER WSDOT STD PLAN M-24.60-04
9. INSTALL PLASTIC TRAFFIC ARROW PER PIERCE COUNTY STD PLAN PC. H2.8 AND WSDOT STD PLAN M-12.10-01
10. INSTALL BIKE LANE SYMBOL PER COL STD PLAN PS-04
11. INSTALL PLASTIC WIDE DOTTED LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
12. INSTALL PLASTIC TWO-WAY LEFT-TURN CENTER LINE PER PIERCE COUNTY STD PLAN PC. H2.9
13. INSTALL PLASTIC ACCESS PARKING SYMBOL
14. INSTALL PLASTIC LINE (4 INCH)

LEGEND:

- NEW SIGN, SINGLE POST PER CITY OF LAKEWOOD STD DETAIL PS-03
- REM — REMOVE SIGN
- XX — RELOCATE / REPLACED SIGN

GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
396	W-LINE	261+31 24.1' LT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
397	W-LINE	261+31 24.1' LT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 396, ON SAME POST
398	W-LINE	261+81 23.5' RT	R3-17	24" X 18"	BIKE LANE	INSTALL NEW SIGN ON NEW POST
399	W-LINE	261+81 23.5' RT	R3-17aP	24" X 8"	"AHEAD"	INSTALL NEW SIGN UNDER SIGN 398, ON SAME POST
400	W-LINE	262+01 31.1' LT	R3-17	24" X 18"	BIKE LANE	INSTALL NEW SIGN ON NEW POST
401	W-LINE	262+01 31.1' LT	R3-147bP	24" X 8"	"ENDS"	INSTALL NEW SIGN UNDER SIGN 400, ON SAME POST
402	W-LINE	264+12 25.0' RT	R3-17	24" X 18"	BIKE LANE	INSTALL NEW SIGN ON NEW POST
403	W-LINE	264+12 25.0' RT	R3-17bP	24" X 8"	"ENDS"	INSTALL NEW SIGN UNDER SIGN 402, ON SAME POST
404	W-LINE	264+42 29.7' LT	R3-17	24" X 18"	BIKE LANE	INSTALL NEW SIGN ON NEW POST
405	W-LINE	264+42 29.7' LT	R3-17aP	24" X 8"	"AHEAD"	INSTALL NEW SIGN UNDER SIGN 404, ON SAME POST
406	W-LINE	261+81 24.5' LT	REPLACE	-	BUS STOP	REPLACE EXISTING SIGN ON NEW POST
407	W-LINE	262+41 24.4' RT	REPLACE	-	"TO I-5 (PLAQUE)", RIGHT ARROW	REPLACE EXISTING SIGN ON NEW POST
408	W-LINE	264+56 23.1' RT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
409	W-LINE	264+56 23.1' RT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 408, ON SAME POST

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–CH13–15
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DONALD A. PROCTOR STATE OF WASHINGTON 31791 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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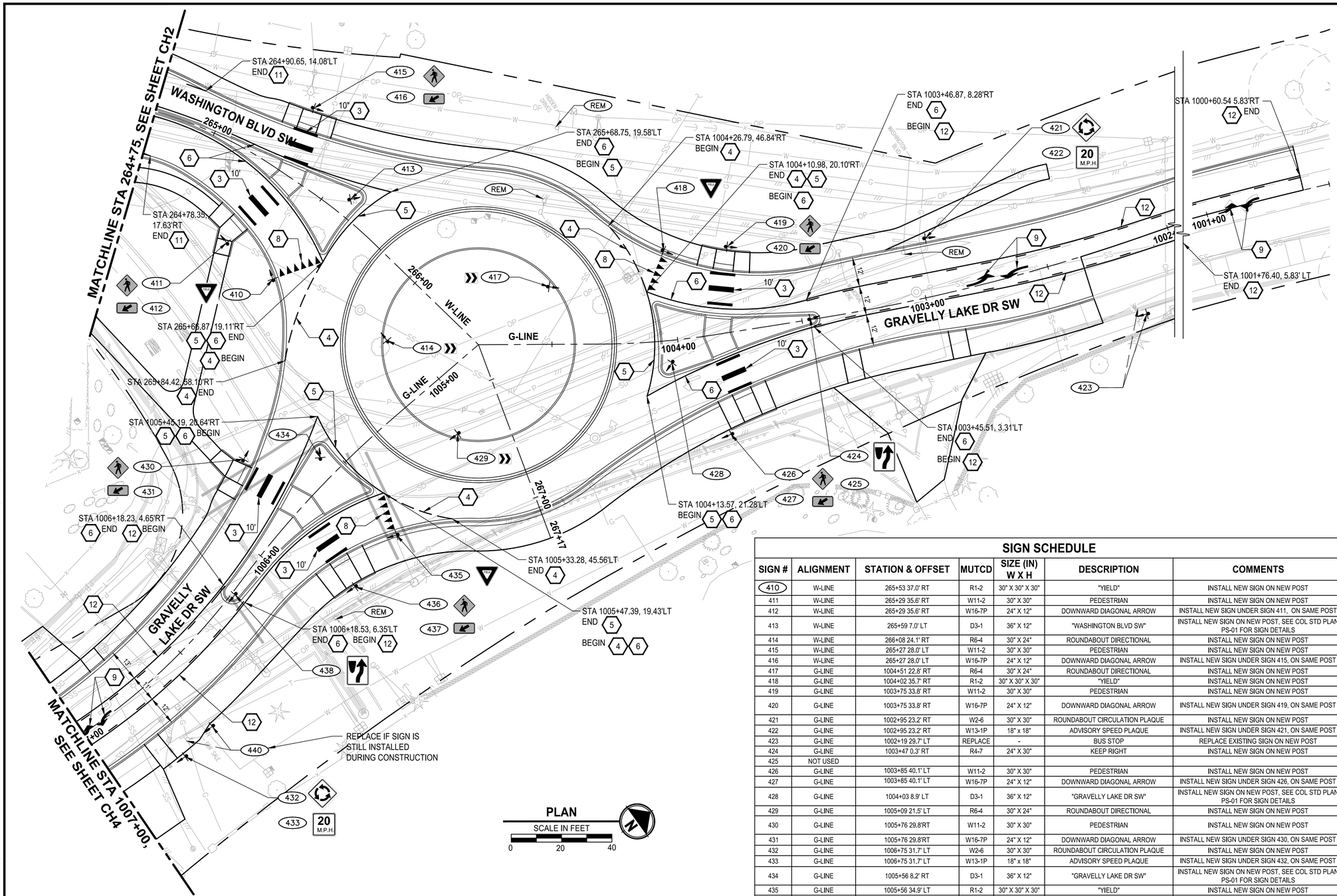
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN WASHINGTON BLVD SW

DRAWING NO.
84 OF 153
CH2

LAYOUT: CH2 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toyokat DATE: Tuesday, February 2, 2021 2:25:28 PM



CHANNELIZATION NOTES:

1. INSTALL PLASTIC DOUBLE CENTERLINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
2. INSTALL PLASTIC STOP BAR PER COL STD PLAN PS-05
3. INSTALL PLASTIC CROSSWALK LINE PER COL STD PLAN PS-05
4. INSTALL PLASTIC WHITE DOTTED ENTRY LINE PER WSDOT STD PLAN M-12.10-01
5. INSTALL PLASTIC WIDE LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
6. INSTALL PLASTIC EDGE LINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
7. INSTALL PLASTIC EDGE LINE (WHITE) PER PIERCE COUNTY STD PLAN PC. H2.9
8. INSTALL YIELD LINE SYMBOL PER WSDOT STD PLAN M-24.60-04
9. INSTALL PLASTIC TRAFFIC ARROW PER PIERCE COUNTY STD PLAN PC. H2.8 AND WSDOT STD PLAN M-12.10-01
10. INSTALL BIKE LANE SYMBOL PER COL STD PLAN PS-04
11. INSTALL PLASTIC WIDE DOTTED LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
12. INSTALL PLASTIC TWO-WAY LEFT-TURN CENTER LINE PER PIERCE COUNTY STD PLAN PC. H2.9
13. INSTALL PLASTIC ACCESS PARKING SYMBOL
14. INSTALL PLASTIC LINE (4 INCH)

LEGEND:

- NEW SIGN, SINGLE POST PER CITY OF LAKEWOOD STD DETAIL PS-03
- REM — REMOVE SIGN
- XX — RELOCATE / REPLACED SIGN

GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
410	W-LINE	265+53 37.0' RT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
411	W-LINE	265+29 35.6' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
412	W-LINE	265+29 35.6' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 411, ON SAME POST
413	W-LINE	265+59 7.0' LT	D3-1	36" X 12"	"WASHINGTON BLVD SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
414	W-LINE	266+08 24.1' RT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
415	W-LINE	265+27 28.0' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
416	W-LINE	265+27 28.0' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 415, ON SAME POST
417	G-LINE	1004+51 22.8' RT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
418	G-LINE	1004+02 35.7' RT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
419	G-LINE	1003+75 33.8' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
420	G-LINE	1003+75 33.8' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 419, ON SAME POST
421	G-LINE	1002+95 23.2' RT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
422	G-LINE	1002+95 23.2' RT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 421, ON SAME POST
423	G-LINE	1002+19 29.7' LT	REPLACE	-	BUS STOP	REPLACE EXISTING SIGN ON NEW POST
424	G-LINE	1003+47 0.3' RT	R4-7	24" X 30"	KEEP RIGHT	INSTALL NEW SIGN ON NEW POST
425	NOT USED					
426	G-LINE	1003+85 40.1' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
427	G-LINE	1003+85 40.1' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 426, ON SAME POST
428	G-LINE	1004+03 8.9' LT	D3-1	36" X 12"	"GRAVELLY LAKE DR SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
429	G-LINE	1005+09 21.5' LT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
430	G-LINE	1005+76 29.8'RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
431	G-LINE	1005+76 29.8'RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 430, ON SAME POST
432	G-LINE	1006+75 31.7' LT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
433	G-LINE	1006+75 31.7' LT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 432, ON SAME POST
434	G-LINE	1005+56 8.2' RT	D3-1	36" X 12"	"GRAVELLY LAKE DR SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
435	G-LINE	1005+56 34.9' LT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
436	G-LINE	1005+85 37.0' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
437	G-LINE	1005+85 37.0' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 436, ON SAME POST
438	G-LINE	1006+18 1.3' LT	R4-7	24" X 30"	KEEP RIGHT	INSTALL NEW SIGN ON NEW POST
439	NOT USED					
440	G-LINE	1006+61 29.8' LT	REPLACE	-	"FOR SALE"	REPLACE EXISTING SIGN ON NEW POST
441-442	NOT USED					

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-CH13-15
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DONALD A. PROCTOR STATE OF WASHINGTON 31791 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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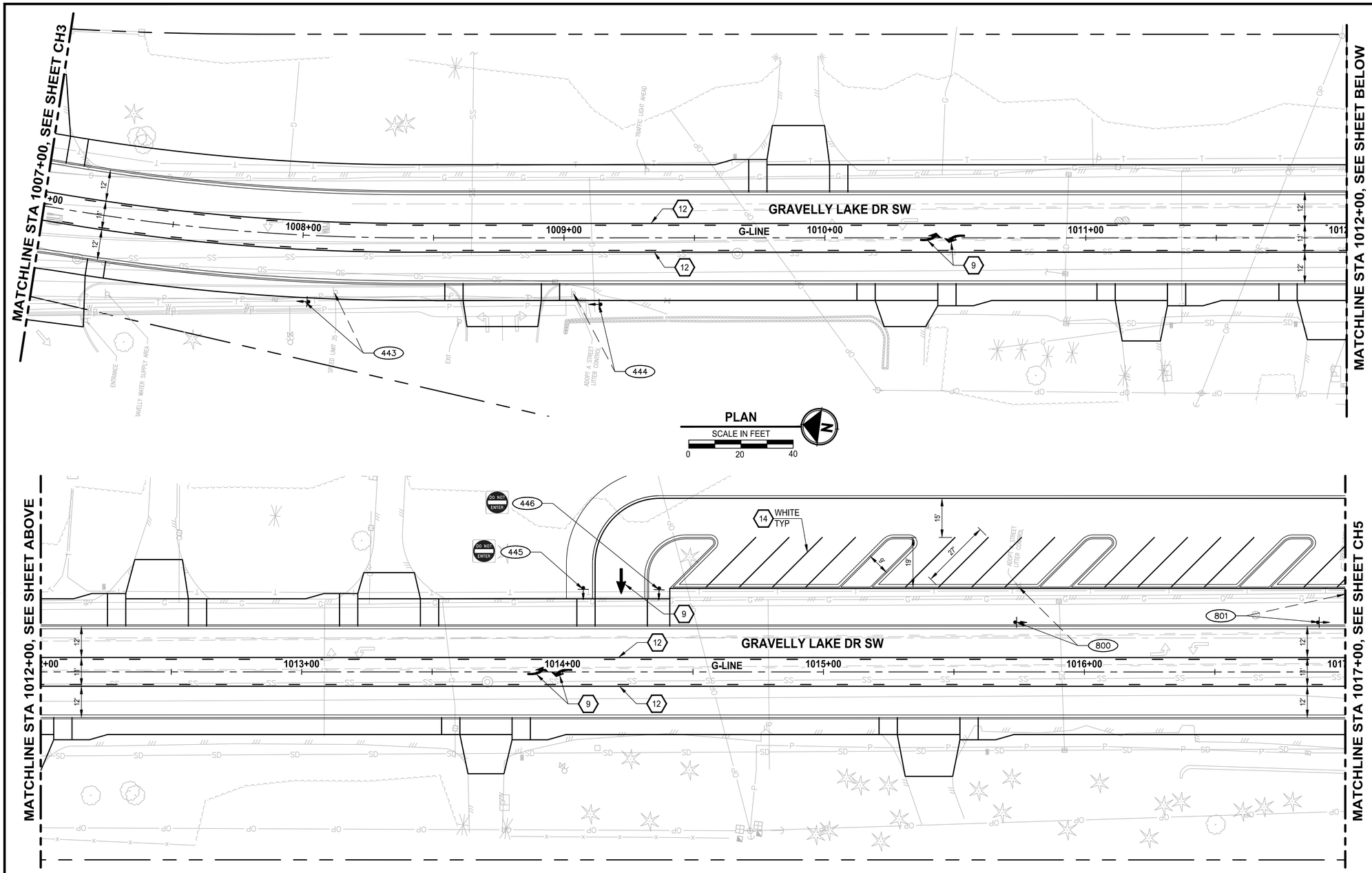
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN WASHINGTON BLVD SW

DRAWING NO.
85 OF 153
CH3

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toylokat DATE: Tuesday, February 2, 2021 2:26:36 PM
LAYOUT: CH3



CHANNELIZATION NOTES:

1. INSTALL PLASTIC DOUBLE CENTERLINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
2. INSTALL PLASTIC STOP BAR PER COL STD PLAN PS-05
3. INSTALL PLASTIC CROSSWALK LINE PER COL STD PLAN PS-05
4. INSTALL PLASTIC WHITE DOTTED ENTRY LINE PER WSDOT STD PLAN M-12.10-01
5. INSTALL PLASTIC WIDE LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
6. INSTALL PLASTIC EDGE LINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
7. INSTALL PLASTIC EDGE LINE (WHITE) PER PIERCE COUNTY STD PLAN PC. H2.9
8. INSTALL YIELD LINE SYMBOL PER WSDOT STD PLAN M-24.60-04
9. INSTALL PLASTIC TRAFFIC ARROW PER PIERCE COUNTY STD PLAN PC. H2.8 AND WSDOT STD PLAN M-12.10-01
10. INSTALL BIKE LANE SYMBOL PER COL STD PLAN PS-04
11. INSTALL PLASTIC WIDE DOTTED LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
12. INSTALL PLASTIC TWO-WAY LEFT-TURN CENTER LINE PER PIERCE COUNTY STD PLAN PC. H2.9
13. INSTALL PLASTIC ACCESS PARKING SYMBOL
14. INSTALL PLASTIC LINE (4 INCH)

LEGEND:

- NEW SIGN, SINGLE POST PER CITY OF LAKEWOOD STD DETAIL PS-03
- REM — REMOVE SIGN
- XX — RELOCATE / REPLACED SIGN

GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	TYPE	SIZE (IN) W X H	DESCRIPTION	COMMENTS
443	G-LINE	1008+02 25.4' RT	REPLACE	-	SPEED LIMIT 35	REPLACE EXISTING SIGN ON NEW POST
444	G-LINE	1009+13 25.5' RT	REPLACE	-	"ADOPT A STREET" "LITTER CONTROL"	REPLACE EXISTING SIGN ON NEW POST
445	G-LINE	1014+08 31.6' LT	R5-1	30" X 30"	"DO NOT ENTER"	INSTALL NEW SIGN ON NEW POST
446	G-LINE	1014+37 31.5' LT	R5-1	30" X 30"	"DO NOT ENTER"	INSTALL NEW SIGN ON NEW POST

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	TYPE	SIZE (IN) W X H	DESCRIPTION	COMMENTS
800	G-LINE	1015+74 19.0' LT	REPLACE	-	"ADOPT A STREET" "LITTER CONTROL"	REPLACE EXISTING SIGN ON NEW POST
801	G-LINE	1016+90 19.0' LT	REPLACE	-	SPEED LIMIT 35	REPLACE EXISTING SIGN ON NEW POST

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-CH16-20
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DONALD A. PROCTOR, STATE OF WASHINGTON, 31791, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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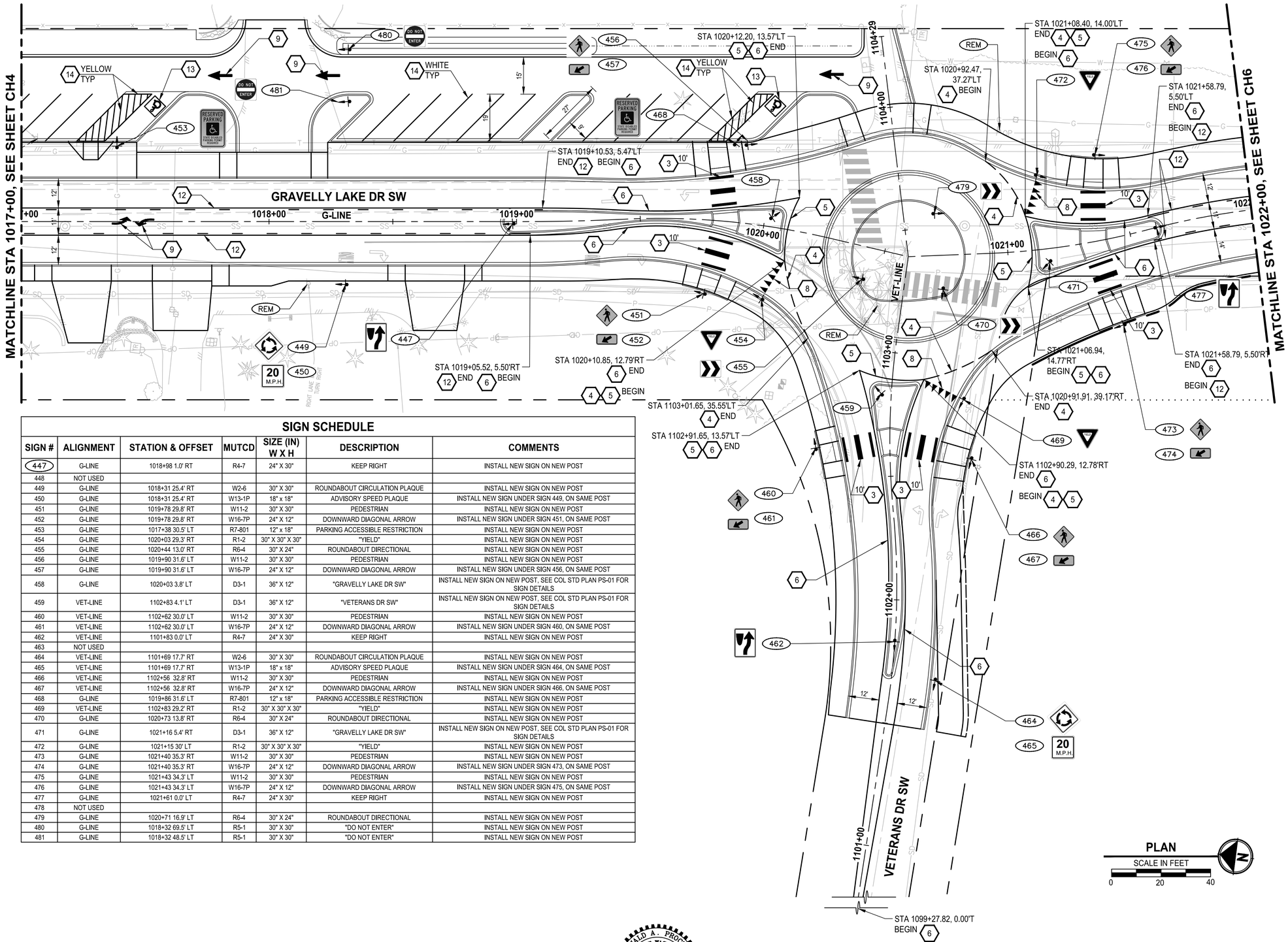
WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN GRAVELLY LAKE DR SW

DRAWING NO.
86 OF 153
CH4

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toylokat DATE: Tuesday, February 2, 2021 2:31:18 PM
LAYOUT: CH4



CHANNELIZATION NOTES:

1. INSTALL PLASTIC DOUBLE CENTERLINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
2. INSTALL PLASTIC STOP BAR PER COL STD PLAN PS-05
3. INSTALL PLASTIC CROSSWALK LINE PER COL STD PLAN PS-05
4. INSTALL PLASTIC WHITE DOTTED ENTRY LINE PER WSDOT STD PLAN M-12.10-01
5. INSTALL PLASTIC WIDE LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
6. INSTALL PLASTIC EDGE LINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
7. INSTALL PLASTIC EDGE LINE (WHITE) PER PIERCE COUNTY STD PLAN PC. H2.9
8. INSTALL YIELD LINE SYMBOL PER WSDOT STD PLAN M-24.60-04
9. INSTALL PLASTIC TRAFFIC ARROW PER PIERCE COUNTY STD PLAN PC. H2.8 AND WSDOT STD PLAN M-12.10-01
10. INSTALL BIKE LANE SYMBOL PER COL STD PLAN PS-04
11. INSTALL PLASTIC WIDE DOTTED LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
12. INSTALL PLASTIC TWO-WAY LEFT-TURN CENTER LINE PER PIERCE COUNTY STD PLAN PC. H2.9
13. INSTALL PLASTIC ACCESS PARKING SYMBOL
14. INSTALL PLASTIC LINE (4 INCH)

LEGEND:

- NEW SIGN, SINGLE POST PER CITY OF LAKEWOOD STD DETAIL PS-03
- REM — REMOVE SIGN
- XX — RELOCATE / REPLACED SIGN

GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
447	G-LINE	1018+98 1.0' RT	R4-7	24" X 30"	KEEP RIGHT	INSTALL NEW SIGN ON NEW POST
448	NOT USED					
449	G-LINE	1018+31 25.4' RT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
450	G-LINE	1018+31 25.4' RT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 449, ON SAME POST
451	G-LINE	1019+78 29.8' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
452	G-LINE	1019+78 29.8' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 451, ON SAME POST
453	G-LINE	1017+38 30.5' LT	R7-801	12" x 18"	PARKING ACCESSIBLE RESTRICTION	INSTALL NEW SIGN ON NEW POST
454	G-LINE	1020+03 29.3' RT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
455	G-LINE	1020+44 13.0' RT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
456	G-LINE	1019+90 31.6' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
457	G-LINE	1019+90 31.6' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 456, ON SAME POST
458	G-LINE	1020+03 3.8' LT	D3-1	36" X 12"	"GRAVELLY LAKE DR SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
459	VET-LINE	1102+83 4.1' LT	D3-1	36" X 12"	"VETERANS DR SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
460	VET-LINE	1102+62 30.0' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
461	VET-LINE	1102+62 30.0' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 460, ON SAME POST
462	VET-LINE	1101+83 0.0' LT	R4-7	24" X 30"	KEEP RIGHT	INSTALL NEW SIGN ON NEW POST
463	NOT USED					
464	VET-LINE	1101+69 17.7' RT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
465	VET-LINE	1101+69 17.7' RT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 464, ON SAME POST
466	VET-LINE	1102+56 32.8' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
467	VET-LINE	1102+56 32.8' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 466, ON SAME POST
468	G-LINE	1019+86 31.6' LT	R7-801	12" x 18"	PARKING ACCESSIBLE RESTRICTION	INSTALL NEW SIGN ON NEW POST
469	VET-LINE	1102+83 29.2' RT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
470	G-LINE	1020+73 13.8' RT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
471	G-LINE	1021+16 5.4' RT	D3-1	36" X 12"	"GRAVELLY LAKE DR SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
472	G-LINE	1021+15 30' LT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
473	G-LINE	1021+40 35.3' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
474	G-LINE	1021+40 35.3' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 473, ON SAME POST
475	G-LINE	1021+43 34.3' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
476	G-LINE	1021+43 34.3' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 475, ON SAME POST
477	G-LINE	1021+61 0.0' LT	R4-7	24" X 30"	KEEP RIGHT	INSTALL NEW SIGN ON NEW POST
478	NOT USED					
479	G-LINE	1020+71 16.9' LT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
480	G-LINE	1018+32 69.5' LT	R5-1	30" X 30"	"DO NOT ENTER"	INSTALL NEW SIGN ON NEW POST
481	G-LINE	1018+32 48.5' LT	R5-1	30" X 30"	"DO NOT ENTER"	INSTALL NEW SIGN ON NEW POST

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-CH16-20
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DONALD A. PROCOR STATE OF WASHINGTON 31791 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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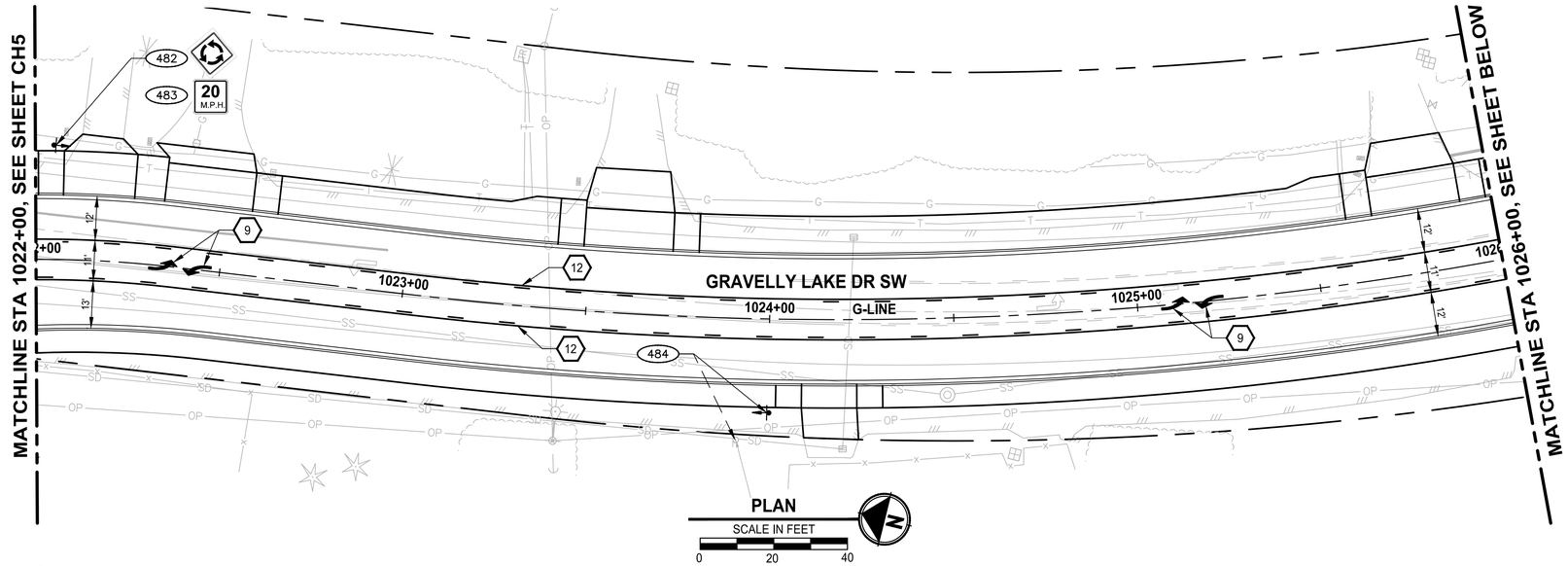
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN GRAVELLY LAKE DR SW

DRAWING NO. 87 OF 153
CH5

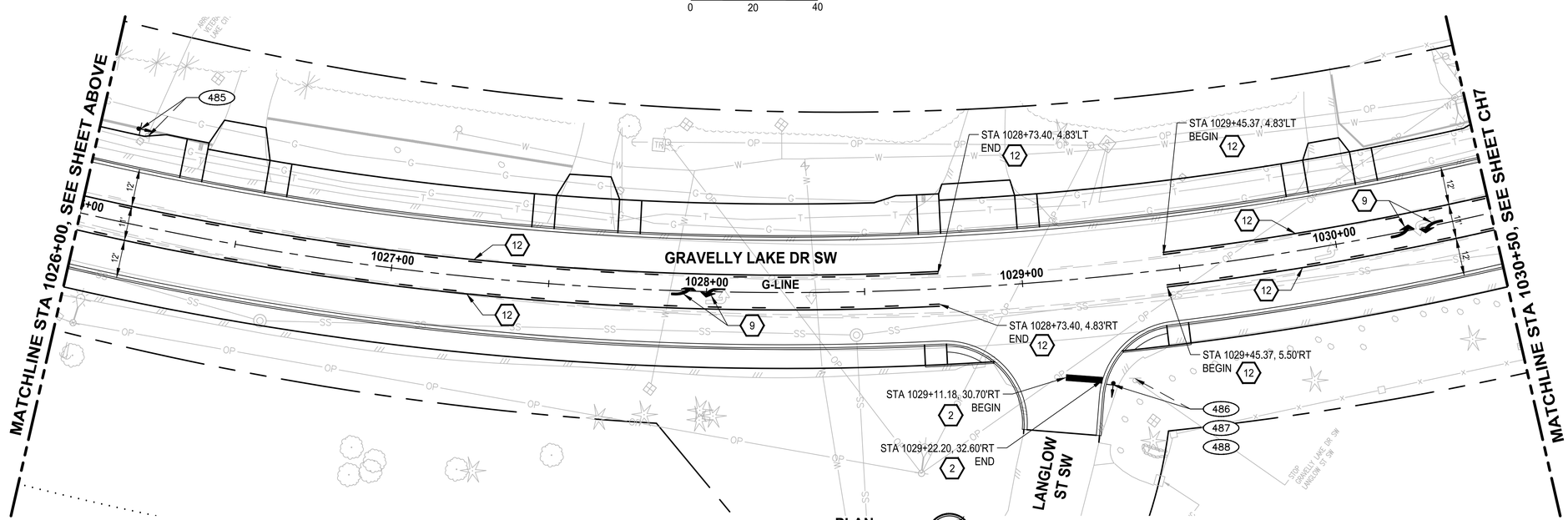
PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 2:32:01 PM
LAYOUT: CH5



PLAN

SCALE IN FEET

0 20 40



PLAN

SCALE IN FEET

0 20 40

CHANNELIZATION NOTES:

1. INSTALL PLASTIC DOUBLE CENTERLINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
2. INSTALL PLASTIC STOP BAR PER COL STD PLAN PS-05
3. INSTALL PLASTIC CROSSWALK LINE PER COL STD PLAN PS-05
4. INSTALL PLASTIC WHITE DOTTED ENTRY LINE PER WSDOT STD PLAN M-12.10-01
5. INSTALL PLASTIC WIDE LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
6. INSTALL PLASTIC EDGE LINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
7. INSTALL PLASTIC EDGE LINE (WHITE) PER PIERCE COUNTY STD PLAN PC. H2.9
8. INSTALL YIELD LINE SYMBOL PER WSDOT STD PLAN M-24.60-04
9. INSTALL PLASTIC TRAFFIC ARROW PER PIERCE COUNTY STD PLAN PC. H2.8 AND WSDOT STD PLAN M-12.10-01
10. INSTALL BIKE LANE SYMBOL PER COL STD PLAN PS-04
11. INSTALL PLASTIC WIDE DOTTED LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
12. INSTALL PLASTIC TWO-WAY LEFT-TURN CENTER LINE PER PIERCE COUNTY STD PLAN PC. H2.9
13. INSTALL PLASTIC ACCESS PARKING SYMBOL
14. INSTALL PLASTIC LINE (4 INCH)

LEGEND:

- NEW SIGN, SINGLE POST PER CITY OF LAKEWOOD STD DETAIL PS-03
- REM — REMOVE SIGN
- XX — RELOCATE / REPLACED SIGN

GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
482	G-LINE	1022+05 31.0' LT	W2-6	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
483	G-LINE	1022+05 31.0' LT	W13-1P	18" X 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 482, ON SAME POST
484	G-LINE	1023+99 25.5' RT	REPLACE	-	SPEED LIMIT 35	REPLACE EXISTING SIGN ON NEW POST
485	G-LINE	1026+13 30.0' LT	REPLACE	-	ARROW LEFT "VETERANS HOSPITAL", ARROW LEFT "LAKE CITY"	REPLACE EXISTING SIGN ON NEW POST

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
486	G-LINE	1029+25 34.5' RT	REPLACE	-	STOP	REPLACE EXISTING SIGN ON NEW POST
487	G-LINE	1029+25 34.5' RT	REPLACE	-	"GRAVELLY LAKE DR SW"	REPLACE EXISTING SIGN ABOVE SIGN 486, ON SAME POST
488	G-LINE	1029+25 34.5' RT	REPLACE	-	"LANGLOW ST SW"	REPLACE EXISTING SIGN ABOVE SIGN 486, ON SAME POST

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013–CH16–20
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DONALD A. PROCOR STATE OF WASHINGTON 31791 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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WWW.BCRADESIGN.COM

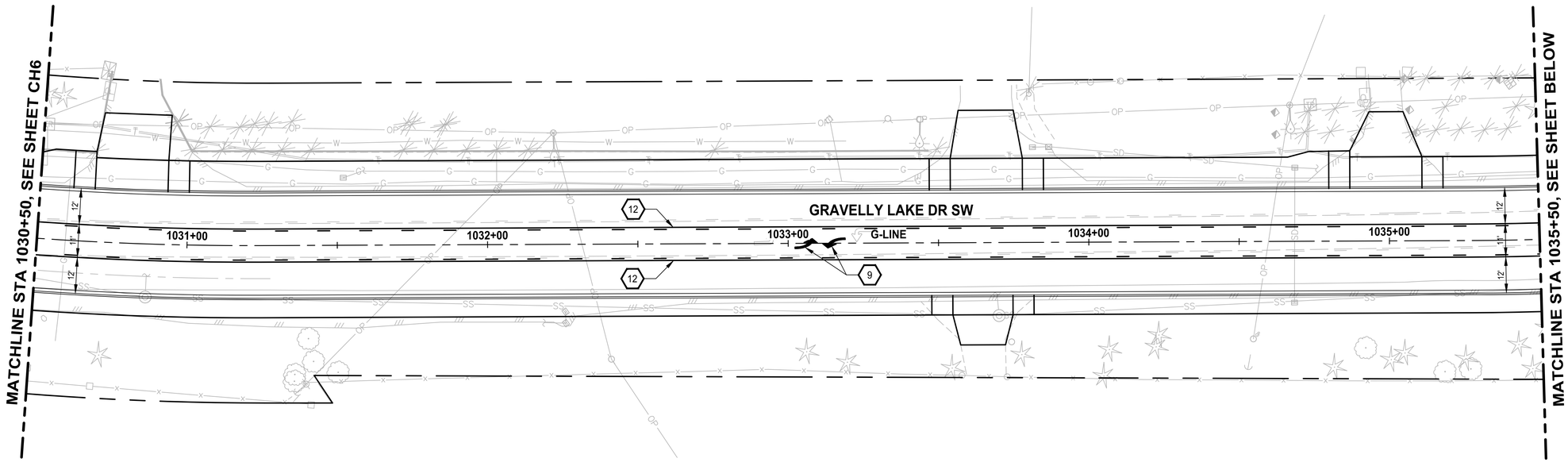
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN GRAVELLY LAKE DR SW

DRAWING NO.
88 OF 153

CH6

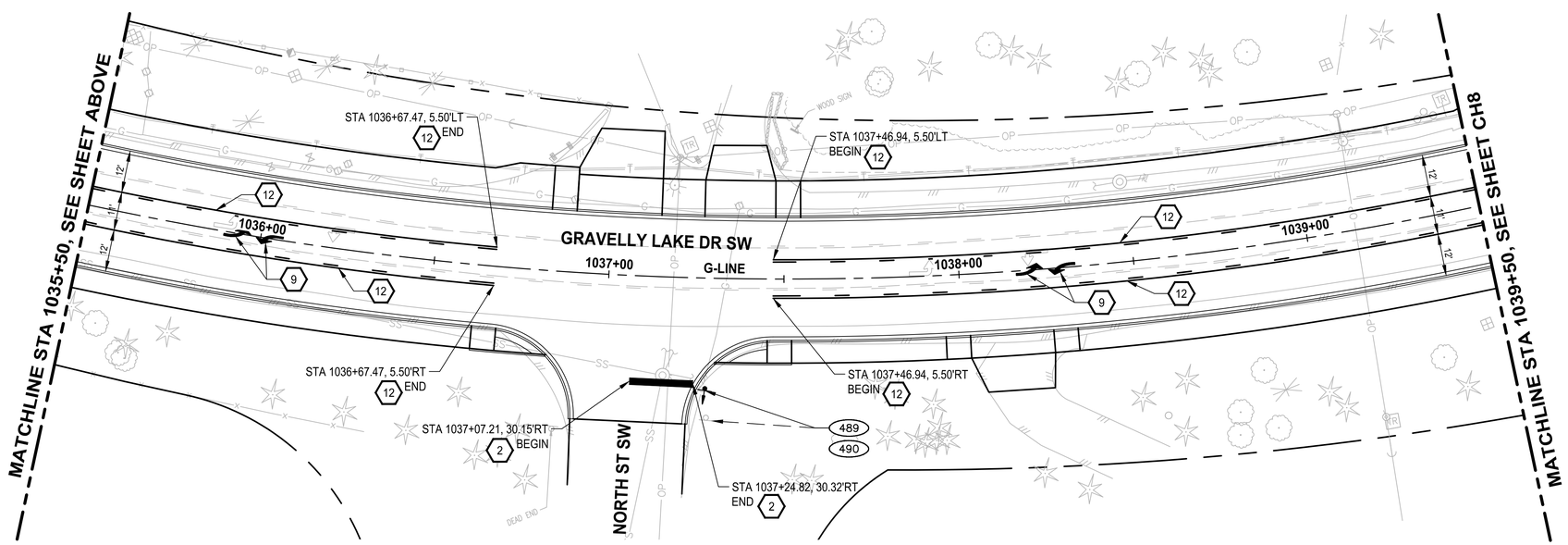
PATH: U:\PSO\Projects\Clients\3047–City of Lakewood\214–3047–013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Wednesday, February 3, 2021 11:06:16 AM
LAYOUT: CH6



PLAN

SCALE IN FEET

0 20 40



PLAN

SCALE IN FEET

0 20 40

CHANNELIZATION NOTES:

1. INSTALL PLASTIC DOUBLE CENTERLINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
2. INSTALL PLASTIC STOP BAR PER COL STD PLAN PS-05
3. INSTALL PLASTIC CROSSWALK LINE PER COL STD PLAN PS-05
4. INSTALL PLASTIC WHITE DOTTED ENTRY LINE PER WSDOT STD PLAN M-12.10-01
5. INSTALL PLASTIC WIDE LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
6. INSTALL PLASTIC EDGE LINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
7. INSTALL PLASTIC EDGE LINE (WHITE) PER PIERCE COUNTY STD PLAN PC. H2.9
8. INSTALL YIELD LINE SYMBOL PER WSDOT STD PLAN M-24.60-04
9. INSTALL PLASTIC TRAFFIC ARROW PER PIERCE COUNTY STD PLAN PC. H2.8 AND WSDOT STD PLAN M-12.10-01
10. INSTALL BIKE LANE SYMBOL PER COL STD PLAN PS-04
11. INSTALL PLASTIC WIDE DOTTED LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
12. INSTALL PLASTIC TWO-WAY LEFT-TURN CENTER LINE PER PIERCE COUNTY STD PLAN PC. H2.9
13. INSTALL PLASTIC ACCESS PARKING SYMBOL
14. INSTALL PLASTIC LINE (4 INCH)

LEGEND:

- NEW SIGN, SINGLE POST PER CITY OF LAKEWOOD STD DETAIL PS-03
- REM — REMOVE SIGN
- XX — RELOCATE / REPLACED SIGN

GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
489	G-LINE	1037+28 32.0' RT	REPLACE	-	STOP	REPLACE EXISTING SIGN ON NEW POST
490	G-LINE	1037+28 32.0' RT	REPLACE	-	"NORTH ST SW"	REPLACE EXISTING SIGN ABOVE SIGN 489, ON SAME POST

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013-CH16-20
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD, WA 1996

DONALD A. PROCTOR, STATE OF WASHINGTON, 31791, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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WWW.BCRADESIGN.COM

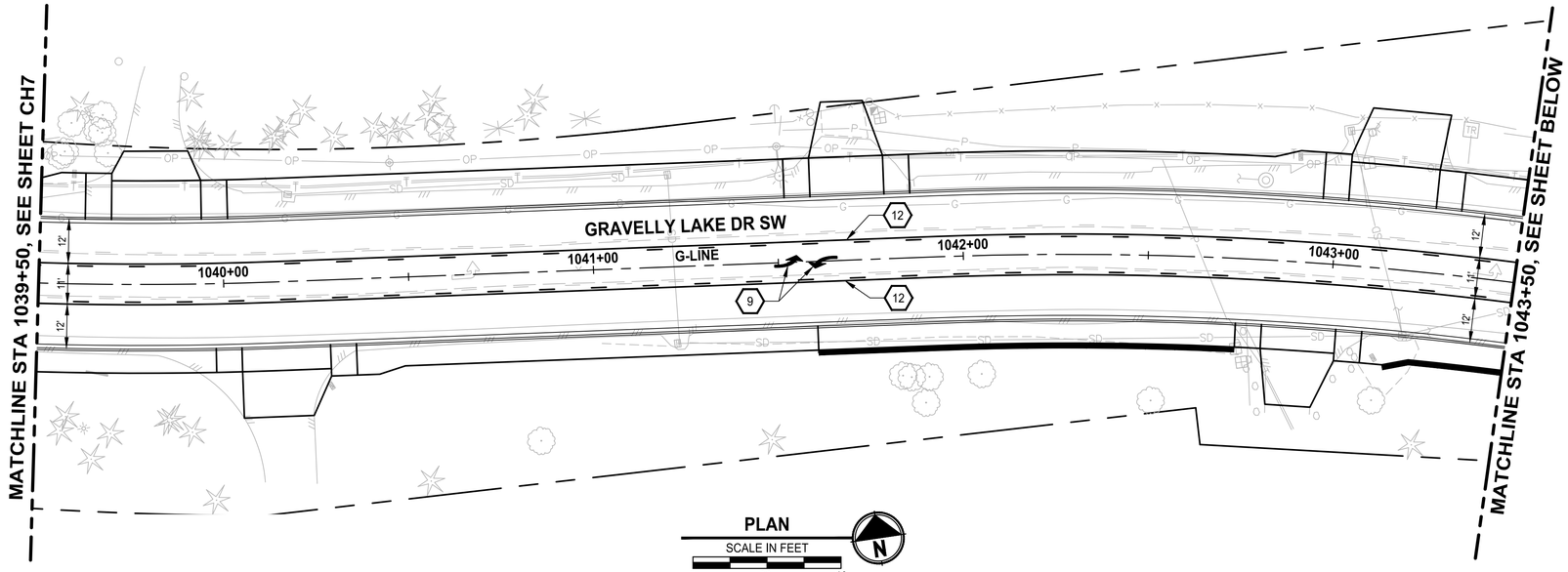
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN GRAVELLY LAKE DR SW

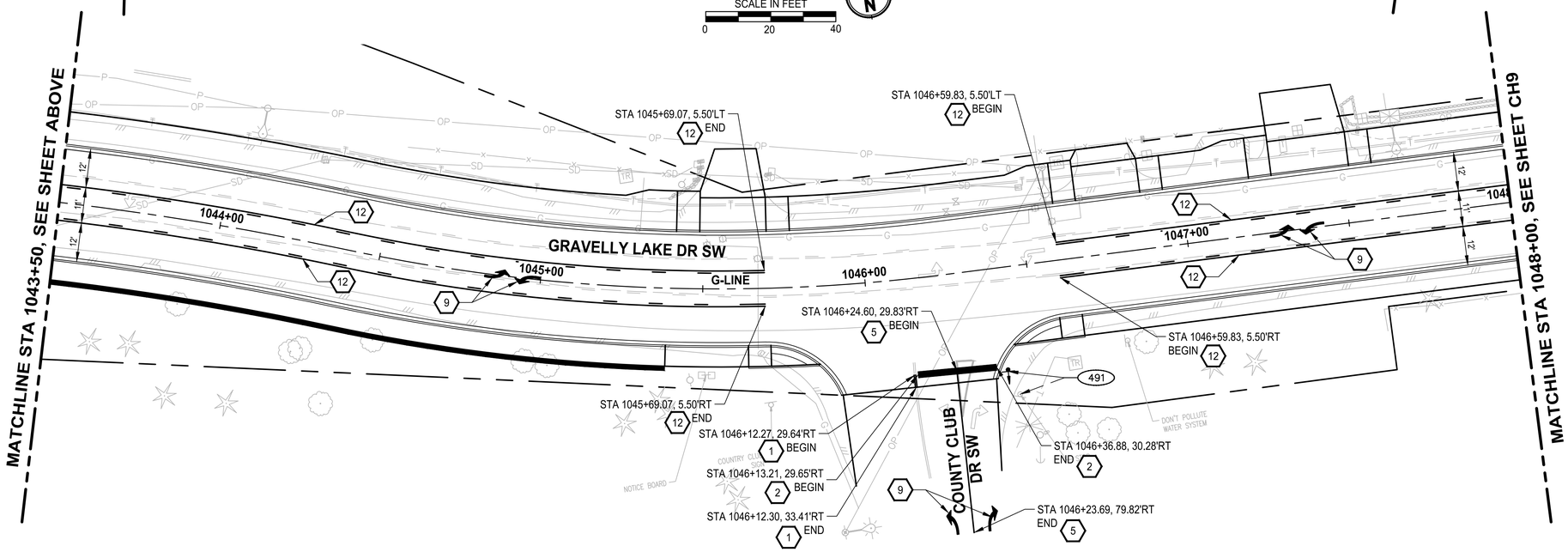
DRAWING NO. 89 OF 153

CH7

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toyokat DATE: Monday, February 1, 2021 3:54:56 PM
LAYOUT: CH7



PLAN
SCALE IN FEET
0 20 40



PLAN
SCALE IN FEET
0 20 40

CHANNELIZATION NOTES:

1. INSTALL PLASTIC DOUBLE CENTERLINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
2. INSTALL PLASTIC STOP BAR PER COL STD PLAN PS-05
3. INSTALL PLASTIC CROSSWALK LINE PER COL STD PLAN PS-05
4. INSTALL PLASTIC WHITE DOTTED ENTRY LINE PER WSDOT STD PLAN M-12.10-01
5. INSTALL PLASTIC WIDE LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
6. INSTALL PLASTIC EDGE LINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
7. INSTALL PLASTIC EDGE LINE (WHITE) PER PIERCE COUNTY STD PLAN PC. H2.9
8. INSTALL YIELD LINE SYMBOL PER WSDOT STD PLAN M-24.60-04
9. INSTALL PLASTIC TRAFFIC ARROW PER PIERCE COUNTY STD PLAN PC. H2.8 AND WSDOT STD PLAN M-12.10-01
10. INSTALL BIKE LANE SYMBOL PER COL STD PLAN PS-04
11. INSTALL PLASTIC WIDE DOTTED LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
12. INSTALL PLASTIC TWO-WAY LEFT-TURN CENTER LINE PER PIERCE COUNTY STD PLAN PC. H2.9
13. INSTALL PLASTIC ACCESS PARKING SYMBOL
14. INSTALL PLASTIC LINE (4 INCH)

LEGEND:

- NEW SIGN, SINGLE POST PER CITY OF LAKEWOOD STD DETAIL PS-03
- REM — REMOVE SIGN
- XX — RELOCATE / REPLACED SIGN

GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
491	G-LINE	1046+40 32.0' RT	REPLACE	30" X 30"	STOP	REPLACE EXISTING SIGN ON NEW POST

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-CH16-20
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

DONALD A. PROCTOR STATE OF WASHINGTON 31791 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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WWW.PARAMETRIX.COM

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2106 PACIFIC AVE, SUITE 300
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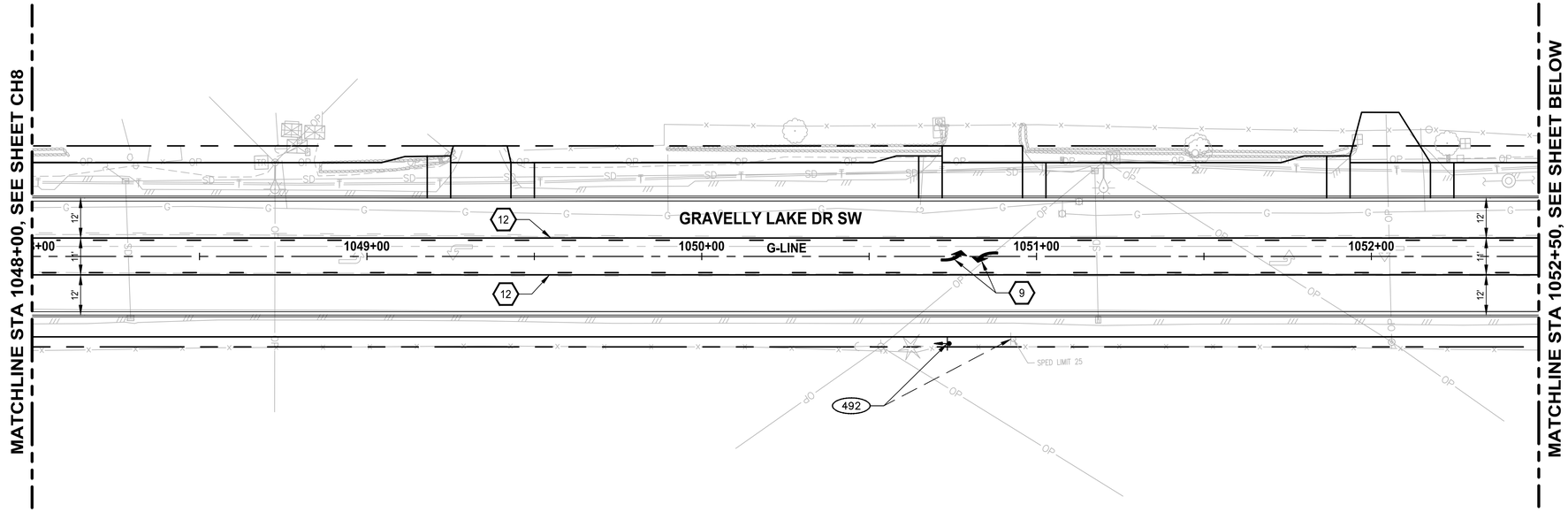
P 253.627.4367
WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN GRAVELLY LAKE DR SW

DRAWING NO. 90 OF 153
CH8

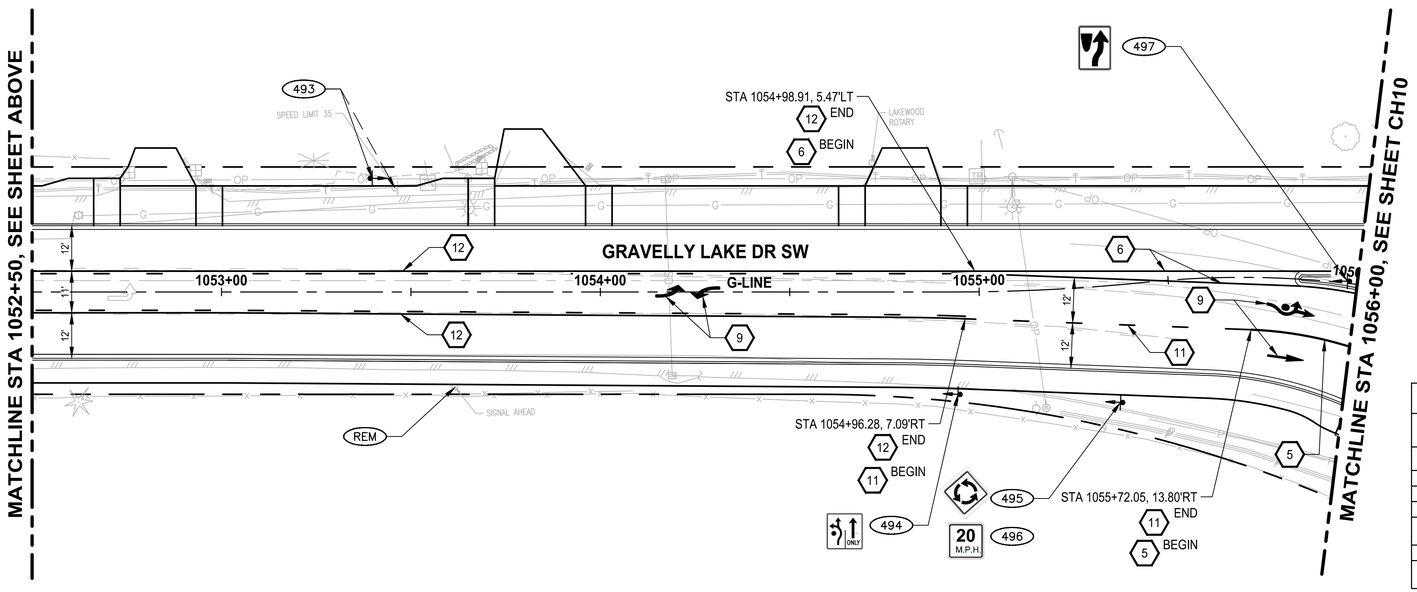
PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 2:35:16 PM
LAYOUT: CH8



PLAN

SCALE IN FEET

0 20 40



PLAN

SCALE IN FEET

0 20 40

CHANNELIZATION NOTES:

1. INSTALL PLASTIC DOUBLE CENTERLINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
2. INSTALL PLASTIC STOP BAR PER COL STD PLAN PS-05
3. INSTALL PLASTIC CROSSWALK LINE PER COL STD PLAN PS-05
4. INSTALL PLASTIC WHITE DOTTED ENTRY LINE PER WSDOT STD PLAN M-12.10-01
5. INSTALL PLASTIC WIDE LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
6. INSTALL PLASTIC EDGE LINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
7. INSTALL PLASTIC EDGE LINE (WHITE) PER PIERCE COUNTY STD PLAN PC. H2.9
8. INSTALL YIELD LINE SYMBOL PER WSDOT STD PLAN M-24.60-04
9. INSTALL PLASTIC TRAFFIC ARROW PER PIERCE COUNTY STD PLAN PC. H2.8 AND WSDOT STD PLAN M-12.10-01
10. INSTALL BIKE LANE SYMBOL PER COL STD PLAN PS-04
11. INSTALL PLASTIC WIDE DOTTED LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
12. INSTALL PLASTIC TWO-WAY LEFT-TURN CENTER LINE PER PIERCE COUNTY STD PLAN PC. H2.9
13. INSTALL PLASTIC ACCESS PARKING SYMBOL
14. INSTALL PLASTIC LINE (4 INCH)

LEGEND:

- NEW SIGN, SINGLE POST PER CITY OF LAKEWOOD STD DETAIL PS-03
- REM — REMOVE SIGN
- XX — RELOCATE / REPLACED SIGN

GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	TYPE	SIZE (IN) W X H	DESCRIPTION	COMMENTS
492	G-LINE	1050+73 26.0' RT	REPLACE	-	SPEED LIMIT 25	REPLACE EXISTING SIGN ON NEW POST
493	G-LINE	1053+40 30.0' LT	REPLACE	-	SPEED LIMIT 35	REPLACE EXISTING SIGN ON NEW POST
494	G-LINE	1054+94 27.0' RT	R3-8	30" X 30"	ADVANCE INTERSECTION LANE CONTROL	INSTALL NEW SIGN ON NEW POST
495	G-LINE	1055+35 31.0' RT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
496	G-LINE	1055+35 31.0' RT	W13-1P	18" X 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 495, ON SAME POST
497	G-LINE	1055+97 0.5' LT	R4-7	24" X 30"	KEEP RIGHT	INSTALL NEW SIGN ON NEW POST
498	NOT USED					

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013-CH21-23
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DONALD A. PROCTOR — STATE OF WASHINGTON — 31791 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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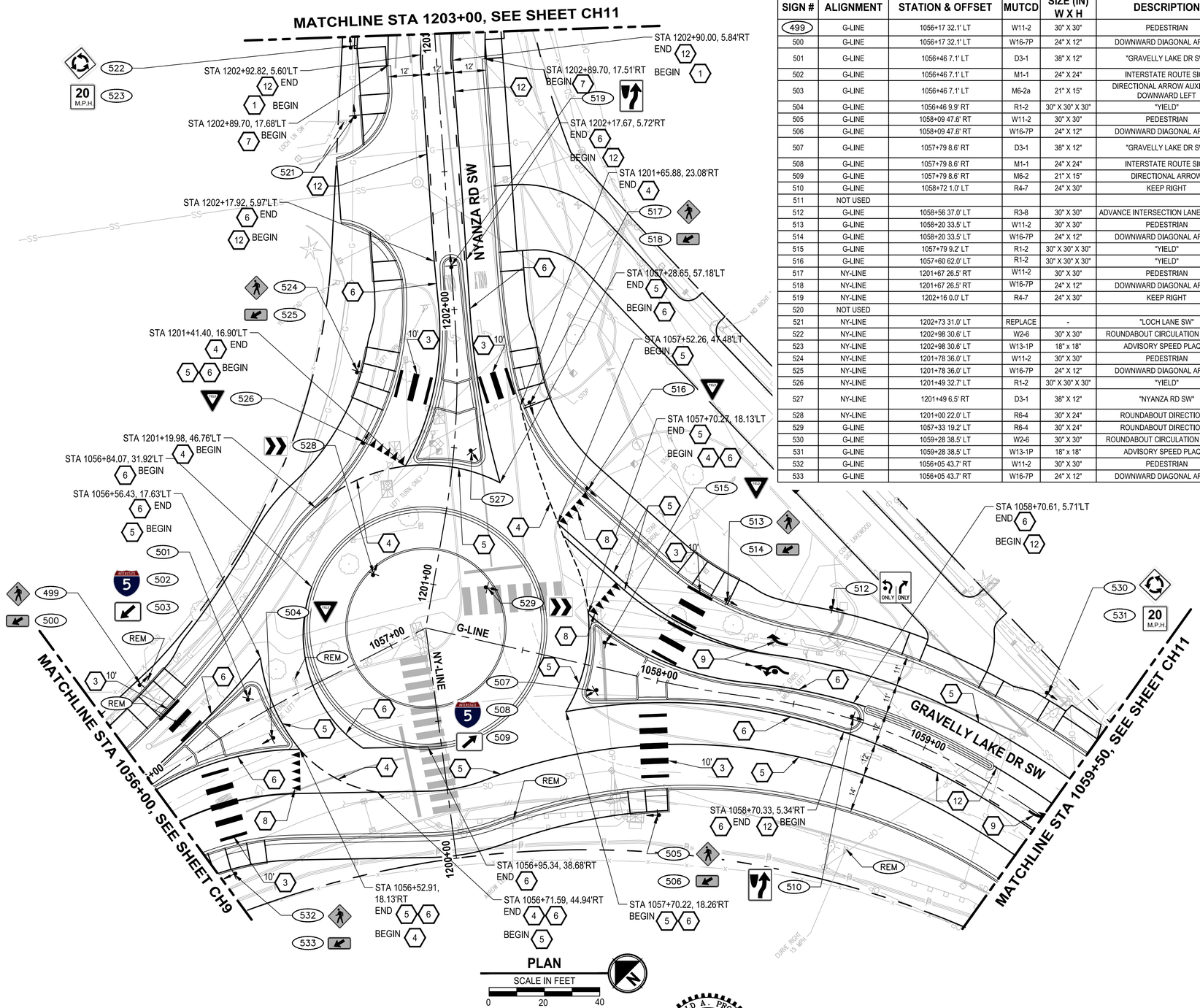
PROJECT NAME

JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1

LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN GRAVELLY LAKE DR SW

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 2:40:57 PM
LAYOUT: CH9



SIGN SCHEDULE

SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
499	G-LINE	1056+17 32.1' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
500	G-LINE	1056+17 32.1' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 499, ON SAME POST
501	G-LINE	1056+46 7.1' LT	D3-1	38" X 12"	"GRAVELLY LAKE DR SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
502	G-LINE	1056+46 7.1' LT	M1-1	24" X 24"	INTERSTATE ROUTE SIGN	INSTALL NEW SIGN UNDER SIGN 501, ON SAME POST
503	G-LINE	1056+46 7.1' LT	M6-2a	21" X 15"	DIRECTIONAL ARROW AUXILIARY, DOWNWARD LEFT	INSTALL NEW SIGN UNDER SIGN 501, ON SAME POST
504	G-LINE	1056+46 9.9' RT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
505	G-LINE	1058+09 47.6' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
506	G-LINE	1058+09 47.6' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 505, ON SAME POST
507	G-LINE	1057+79 8.6' RT	D3-1	38" X 12"	"GRAVELLY LAKE DR SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
508	G-LINE	1057+79 8.6' RT	M1-1	24" X 24"	INTERSTATE ROUTE SIGN	INSTALL NEW SIGN UNDER SIGN 507, ON SAME POST
509	G-LINE	1057+79 8.6' RT	M6-2	21" X 15"	DIRECTIONAL ARROW	INSTALL NEW SIGN UNDER SIGN 507, ON SAME POST
510	G-LINE	1058+72 1.0' LT	R4-7	24" X 30"	KEEP RIGHT	INSTALL NEW SIGN ON NEW POST
511	NOT USED					
512	G-LINE	1058+56 37.0' LT	R3-8	30" X 30"	ADVANCE INTERSECTION LANE CONTROL	INSTALL NEW SIGN ON NEW POST
513	G-LINE	1058+20 33.5' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
514	G-LINE	1058+20 33.5' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 513, ON SAME POST
515	G-LINE	1057+79 9.2' LT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
516	G-LINE	1057+60 62.0' LT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
517	NY-LINE	1201+67 26.5' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
518	NY-LINE	1201+67 26.5' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 517, ON SAME POST
519	NY-LINE	1202+16 0.0' LT	R4-7	24" X 30"	KEEP RIGHT	INSTALL NEW SIGN ON NEW POST
520	NOT USED					
521	NY-LINE	1202+73 31.0' LT	REPLACE	-	"LOCH LANE SW"	REPLACE EXISTING SIGN ON NEW POST
522	NY-LINE	1202+98 30.6' LT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGN ON NEW POST
523	NY-LINE	1202+98 30.6' LT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 522, ON SAME POST
524	NY-LINE	1201+78 36.0' LT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
525	NY-LINE	1201+78 36.0' LT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 524, ON SAME POST
526	NY-LINE	1201+49 32.7' LT	R1-2	30" X 30" X 30"	"YIELD"	INSTALL NEW SIGN ON NEW POST
527	NY-LINE	1201+49 6.5' RT	D3-1	38" X 12"	"NYANZA RD SW"	INSTALL NEW SIGN ON NEW POST, SEE COL STD PLAN PS-01 FOR SIGN DETAILS
528	NY-LINE	1201+00 22.0' LT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
529	G-LINE	1057+33 19.2' LT	R6-4	30" X 24"	ROUNDABOUT DIRECTIONAL	INSTALL NEW SIGN ON NEW POST
530	G-LINE	1059+28 38.5' LT	W2-6	30" X 30"	ROUNDABOUT CIRCULATION PLAQUE	INSTALL NEW SIGNS ON NEW POST
531	G-LINE	1059+28 38.5' LT	W13-1P	18" x 18"	ADVISORY SPEED PLAQUE	INSTALL NEW SIGN UNDER SIGN 530, ON SAME POST
532	G-LINE	1056+05 43.7' RT	W11-2	30" X 30"	PEDESTRIAN	INSTALL NEW SIGN ON NEW POST
533	G-LINE	1056+05 43.7' RT	W16-7P	24" X 12"	DOWNWARD DIAGONAL ARROW	INSTALL NEW SIGN UNDER SIGN 532, ON SAME POST

CHANNELIZATION NOTES:

1. INSTALL PLASTIC DOUBLE CENTERLINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
2. INSTALL PLASTIC STOP BAR PER COL STD PLAN PS-05
3. INSTALL PLASTIC CROSSWALK LINE PER COL STD PLAN PS-05
4. INSTALL PLASTIC WHITE DOTTED ENTRY LINE PER WSDOT STD PLAN M-12.10-01
5. INSTALL PLASTIC WIDE LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
6. INSTALL PLASTIC EDGE LINE (YELLOW) PER PIERCE COUNTY STD PLAN PC. H2.9
7. INSTALL PLASTIC EDGE LINE (WHITE) PER PIERCE COUNTY STD PLAN PC. H2.9
8. INSTALL YIELD LINE SYMBOL PER WSDOT STD PLAN M-24.60-04
9. INSTALL PLASTIC TRAFFIC ARROW PER PIERCE COUNTY STD PLAN PC. H2.8 AND WSDOT STD PLAN M-12.10-01
10. INSTALL BIKE LANE SYMBOL PER COL STD PLAN PS-04
11. INSTALL PLASTIC WIDE DOTTED LANE LINE PER PIERCE COUNTY STD PLAN PC. H2.9
12. INSTALL PLASTIC TWO-WAY LEFT-TURN CENTER LINE PER PIERCE COUNTY STD PLAN PC. H2.9
13. INSTALL PLASTIC ACCESS PARKING SYMBOL
14. INSTALL PLASTIC LINE (4 INCH)

LEGEND:

- NEW SIGN, SINGLE POST PER CITY OF LAKEWOOD STD DETAIL PS-03
- REM — REMOVE SIGN
- XX — RELOCATE / REPLACED SIGN

GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

	REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–CH21–23
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DONALD A. PROCTOR — STATE OF WASHINGTON — 31791 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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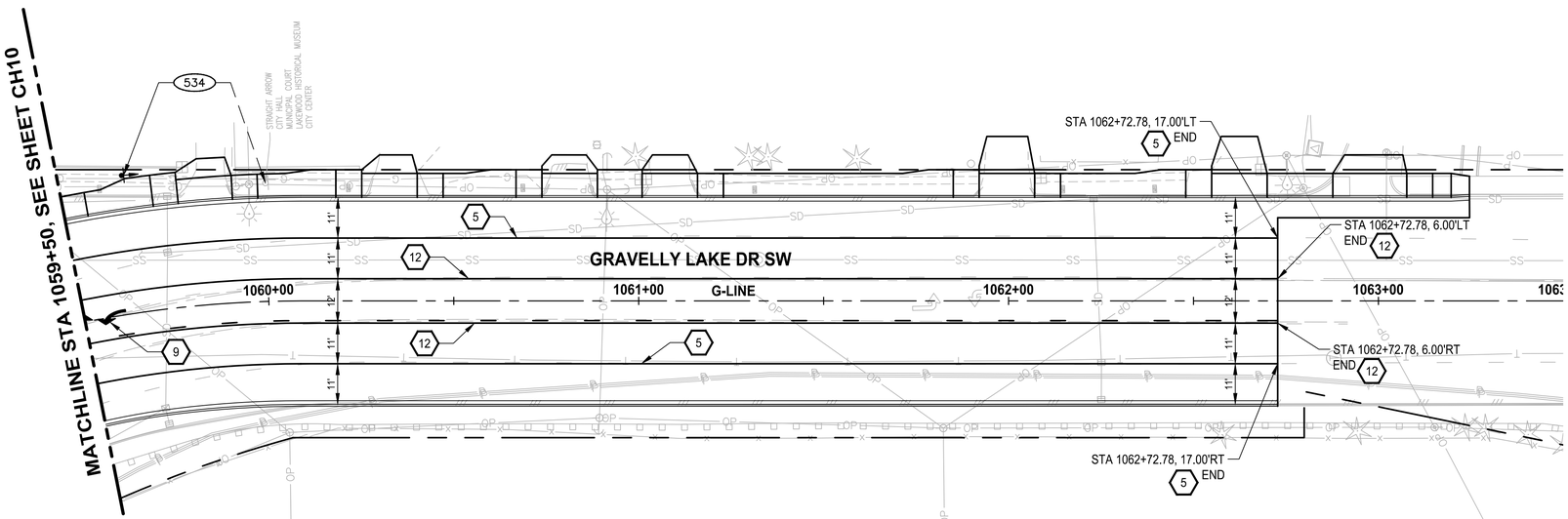
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN GRAVELLY LAKE DR SW NYANZA RD SW

DRAWING NO. 92 OF 153
CH10

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\995vca\CADD\DWG PLOTTED BY: taylokat DATE: Friday, February 5, 2021 2:30:12 PM LAYOUT: CH10

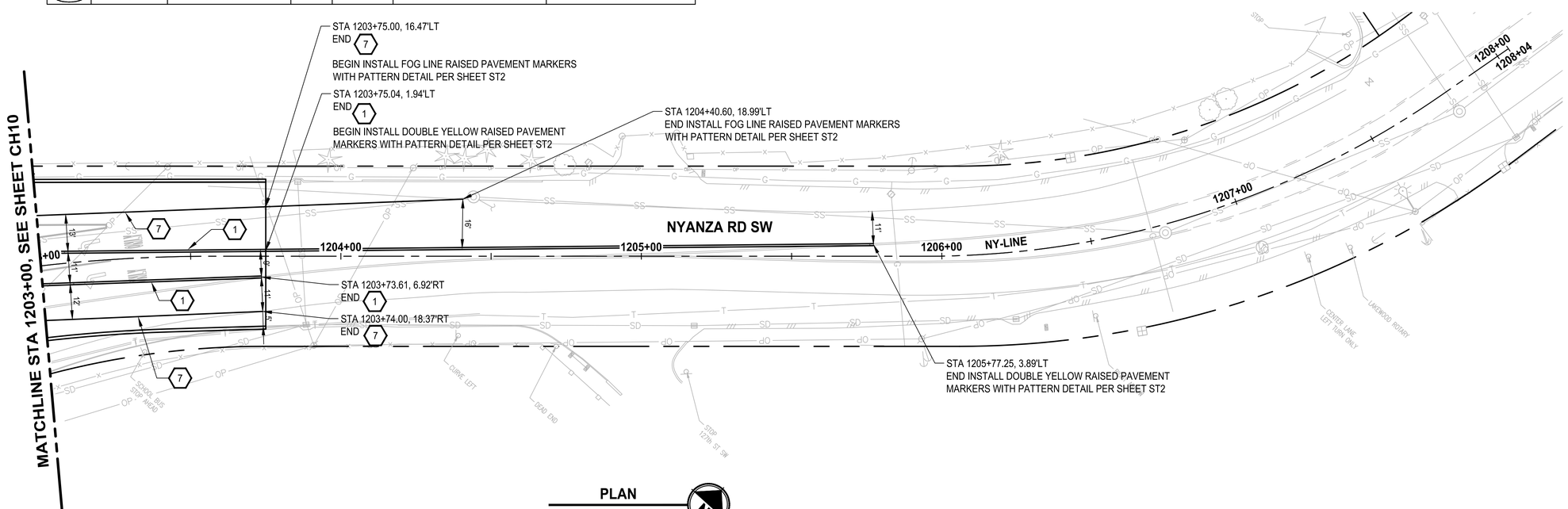


PLAN

SCALE IN FEET

0 20 40

SIGN SCHEDULE						
SIGN #	ALIGNMENT	STATION & OFFSET	MUTCD	SIZE (IN) W X H	DESCRIPTION	COMMENTS
534	G-LINE	1059+66 37.4' LT	REPLACE	-	COMMUNITY WAYFINDING SIGN	REPLACE EXISTING SIGN ON NEW POST



PLAN

SCALE IN FEET

0 20 40

CHANNELIZATION NOTES:

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LEGEND:

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- REM — REMOVE SIGN
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GENERAL NOTES:

1. SALVAGE ALL EXISTING SIGNS AND METAL POSTS TO O&M SHOP.

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. MAY
CHECKED J. JOHNSON
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–CH21–23
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DONALD A. PROCTOR — STATE OF WASHINGTON — 31791 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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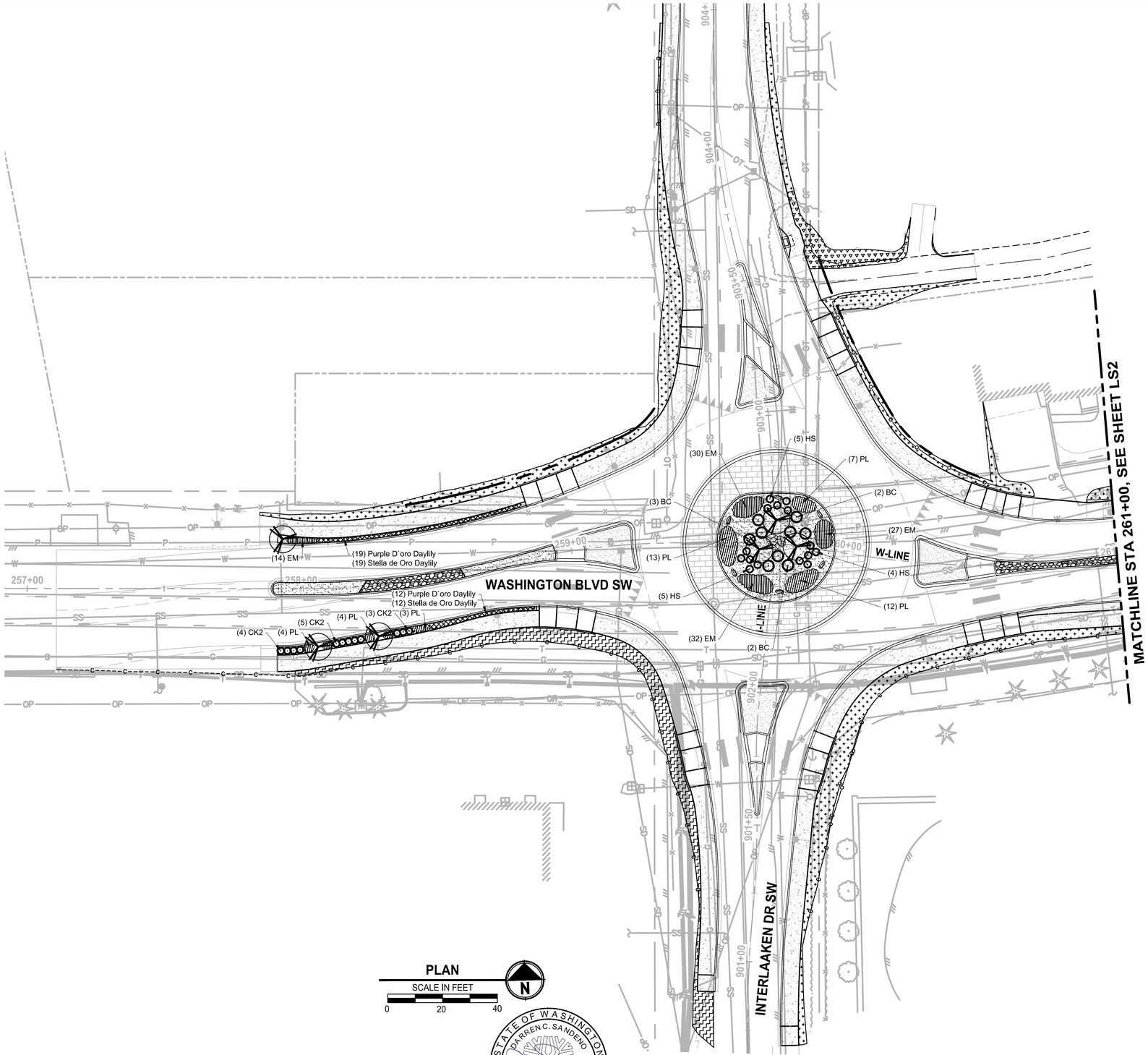
P 253.627.4367
WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

CHANNELIZATION AND SIGNING PLAN GRAVELLY LAKE DR SW NYANZA RD SW

DRAWING NO.
93 OF 153
CH11

LAYOUT: CH11 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Friday, February 5, 2021 3:40:47 PM



LANDSCAPE LEGEND:

- UPRIGHT HORNBEAM - AS SHOWN
- GREEN PILLAR PIN OAK - AS SHOWN
- SPIRE CHERRY - AS SHOWN
- CRIMSON POINT PLUM - AS SHOWN
- COMPACT CORAL BARBERRY - @ 4' O.C.
- KELSEY REDTWIG DOGWOOD - @ 2.5' O.C.
- BLUE OAT GRASS - @ 2.5' O.C.
- DAYLILY MIX - @ 1.5' O.C.
- MEDITERRANEAN PINK HEATH - @ 1.5' O.C.
- MOUNT VERNON ENGLISH LAUREL - @ 2.5' O.C.
- 4"-6" RIVER ROCK COBBLES 12" DEPTH
- 1"-2" RIVER ROCK 4" DEPTH
- 2'-3' ROUNDED RIVER ROCK BOULDERS. SEE LS26, DTL 4.

RESTORATION LEGEND:

- 2" DEPTH CRUSHED SURFACING TOP COURSE. BLEND TO EXISTING
- SEEDING, FERTILIZING, AND MULCHING (HYDROSEED)
- 2" TOPSOIL TYPE A AND 3" BARK MULCH

NOTES:

1. SEE SHEET LS12 FOR LANDSCAPE SCHEDULE AND LANDSCAPE NOTES AND PLANTING DETAILS.
2. ALL LANDSCAPE SHRUB PLANTING AREAS SHALL RECEIVE 12" MIN. UNIFORM DEPTH APPROVED IMPORTED TOPSOIL TYPE 'A'.
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4. ALL RESTORATION AREAS SHOWN DIAGRAMMATICALLY ONLY. FIELD ADJUST AS NECESSARY TO MATCH ADJACENT EXISTING CONDITIONS. ALL AREAS DISTURBED BY CONSTRUCTION TO BE RESTORED.

REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-LS13-20
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

STATE OF WASHINGTON
DARREN C. SANDENO
NO. 1424 EXP. 12/06/2021
LANDSCAPE ARCHITECT
02/01/2021

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WWW.BCRADESIGN.COM

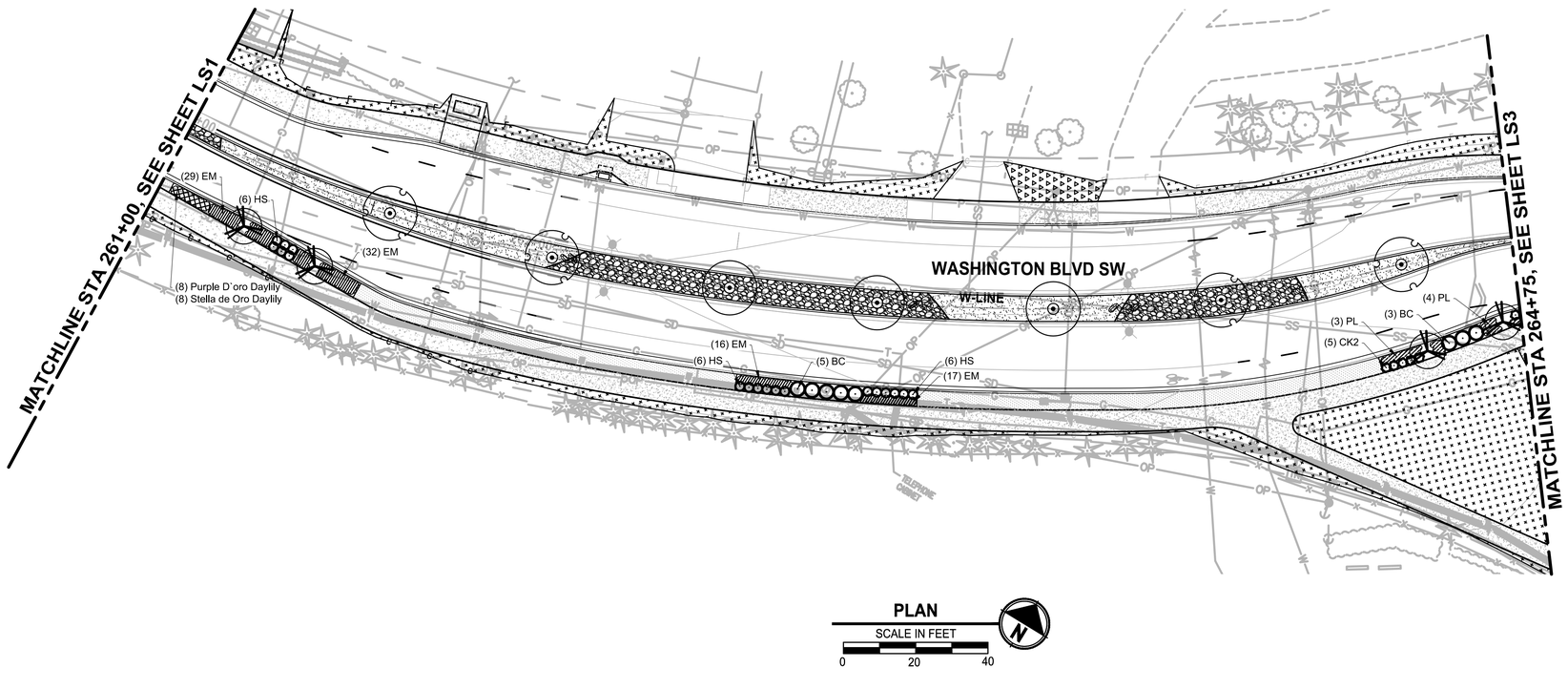
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN WASHINGTON BLVD SW

DRAWING NO. 94 OF 153

LS1

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: tojokat DATE: Monday, February 1, 2021 4:16:18 PM
LAYOUT: LS1



PLAN

SCALE IN FEET

0 20 40

LANDSCAPE LEGEND:

- UPRIGHT HORNBEAM - AS SHOWN
- GREEN PILLAR PIN OAK - AS SHOWN
- SPIRE CHERRY - AS SHOWN
- CRIMSON POINT PLUM - AS SHOWN
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- DAYLILY MIX - @ 1.5' O.C.
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- 4"-6" RIVER ROCK COBBLES 12" DEPTH
- 1"-2" RIVER ROCK 4" DEPTH
- 2'-3' ROUNDED RIVER ROCK BOULDERS. SEE LS26, DTL 4.

RESTORATION LEGEND:

- 2" DEPTH CRUSHED SURFACING TOP COURSE. BLEND TO EXISTING
- SEEDING, FERTILIZING, AND MULCHING (HYDROSEED)
- 2" TOPSOIL TYPE A AND 3" BARK MULCH

NOTES:

1. SEE SHEET LS12 FOR LANDSCAPE SCHEDULE AND LANDSCAPE NOTES AND PLANTING DETAILS.
2. ALL LANDSCAPE SHRUB PLANTING AREAS SHALL RECEIVE 12" MIN. UNIFORM DEPTH APPROVED IMPORTED TOPSOIL TYPE 'A'.
3. ALL LANDSCAPE PLANTING AREAS SHALL RECEIVE 3" UNIFORM DEPTH APPROVED BARK MULCH EXCEPT WHERE SHOWN WITH RIVER ROCK AND ONLY TREE PLANTING RINGS RECEIVE BARK MULCH.
4. ALL RESTORATION AREAS SHOWN DIAGRAMMATICALLY ONLY. FIELD ADJUST AS NECESSARY TO MATCH ADJACENT EXISTING CONDITIONS. ALL AREAS DISTURBED BY CONSTRUCTION TO BE RESTORED.

▷	REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-LS13-20
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

STATE OF WASHINGTON · DARREN C. SANDENO · NO. 4424 EXP. 12/06/2021 · LANDSCAPE ARCHITECT
02/01/2021

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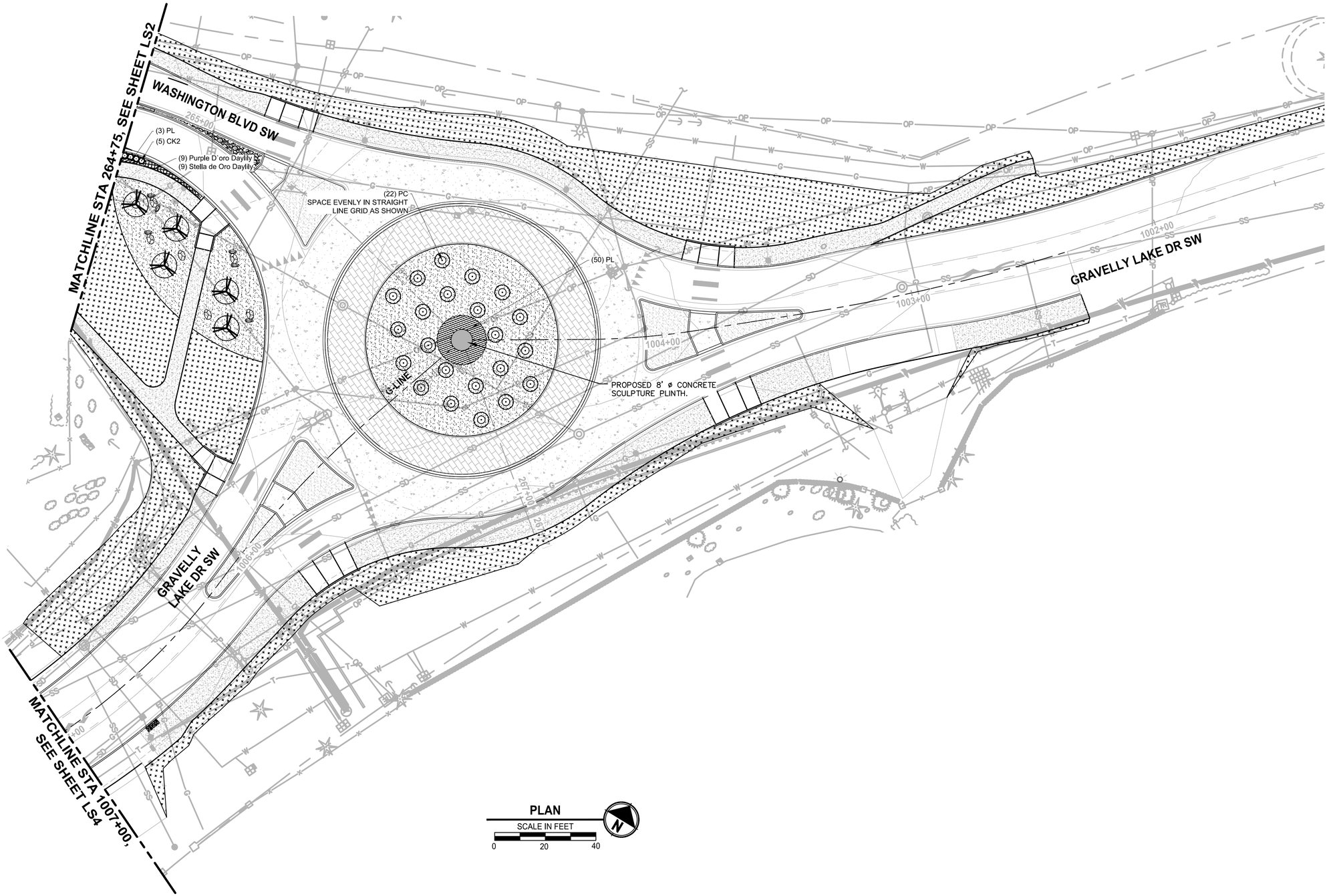
P 253.627.4367
WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN WASHINGTON BLVD SW

DRAWING NO.
95 OF 153
LS2

LAYOUT: LS2 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\995vcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 4:16:43 PM



LANDSCAPE LEGEND:

- UPRIGHT HORNBEAM - AS SHOWN
- GREEN PILLAR PIN OAK - AS SHOWN
- SPIRE CHERRY - AS SHOWN
- CRIMSON POINT PLUM - AS SHOWN
- COMPACT CORAL BARBERRY - @ 4' O.C.
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- BLUE OAT GRASS - @ 2.5' O.C.
- DAYLILY MIX - @ 1.5' O.C.
- MEDITERRANEAN PINK HEATH - @ 1.5' O.C.
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- 1"-2" RIVER ROCK 4" DEPTH
- 2'-3' ROUNDED RIVER ROCK BOULDERS. SEE LS26, DTL 4.

RESTORATION LEGEND:

- 2" DEPTH CRUSHED SURFACING TOP COURSE. BLEND TO EXISTING
- SEEDING, FERTILIZING, AND MULCHING (HYDROSEED)
- 2" TOPSOIL TYPE A AND 3" BARK MULCH

NOTES:

1. SEE SHEET LS12 FOR LANDSCAPE SCHEDULE AND LANDSCAPE NOTES AND PLANTING DETAILS.
2. ALL LANDSCAPE SHRUB PLANTING AREAS SHALL RECEIVE 12" MIN. UNIFORM DEPTH APPROVED IMPORTED TOPSOIL TYPE 'A'.
3. ALL LANDSCAPE PLANTING AREAS SHALL RECEIVE 3" UNIFORM DEPTH APPROVED BARK MULCH EXCEPT WHERE SHOWN WITH RIVER ROCK AND ONLY TREE PLANTING RINGS RECEIVE BARK MULCH.
4. ALL RESTORATION AREAS SHOWN DIAGRAMMATICALLY ONLY. FIELD ADJUST AS NECESSARY TO MATCH ADJACENT EXISTING CONDITIONS. ALL AREAS DISTURBED BY CONSTRUCTION TO BE RESTORED.

	REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–LS13–20
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

STATE OF WASHINGTON DARREN C. SANDENO NO. 1424 EXP. 12/06/2021 LANDSCAPE ARCHITECT
02/01/2021

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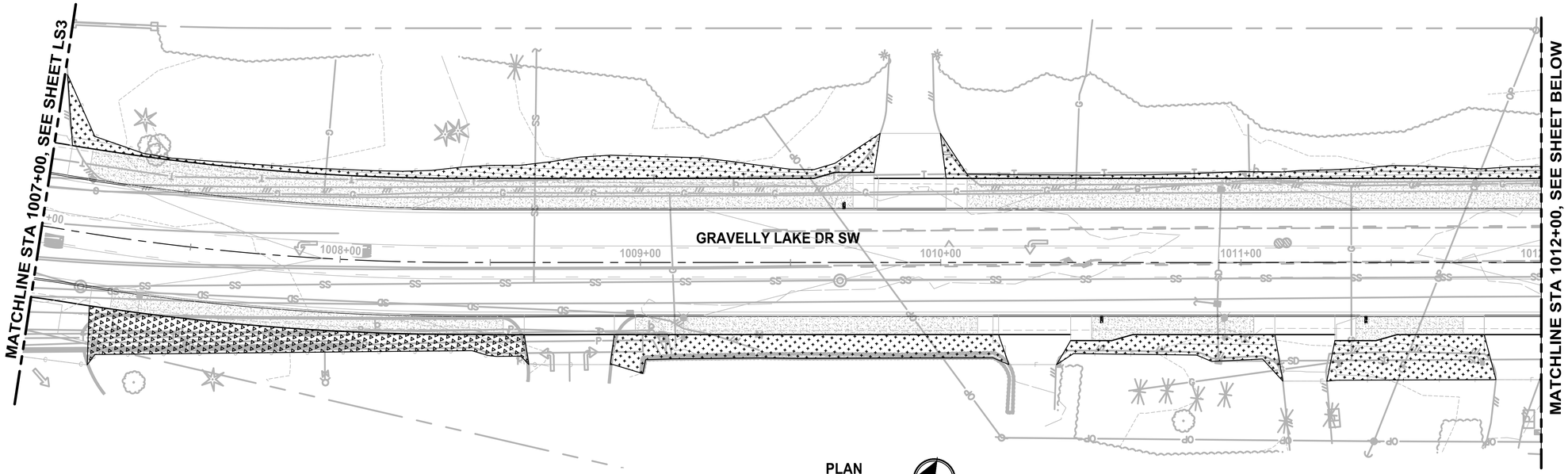
2106 PACIFIC AVE, SUITE 300
TACOMA, WA 98402
P 253.627.4367
WWW.BCRADESIGN.COM

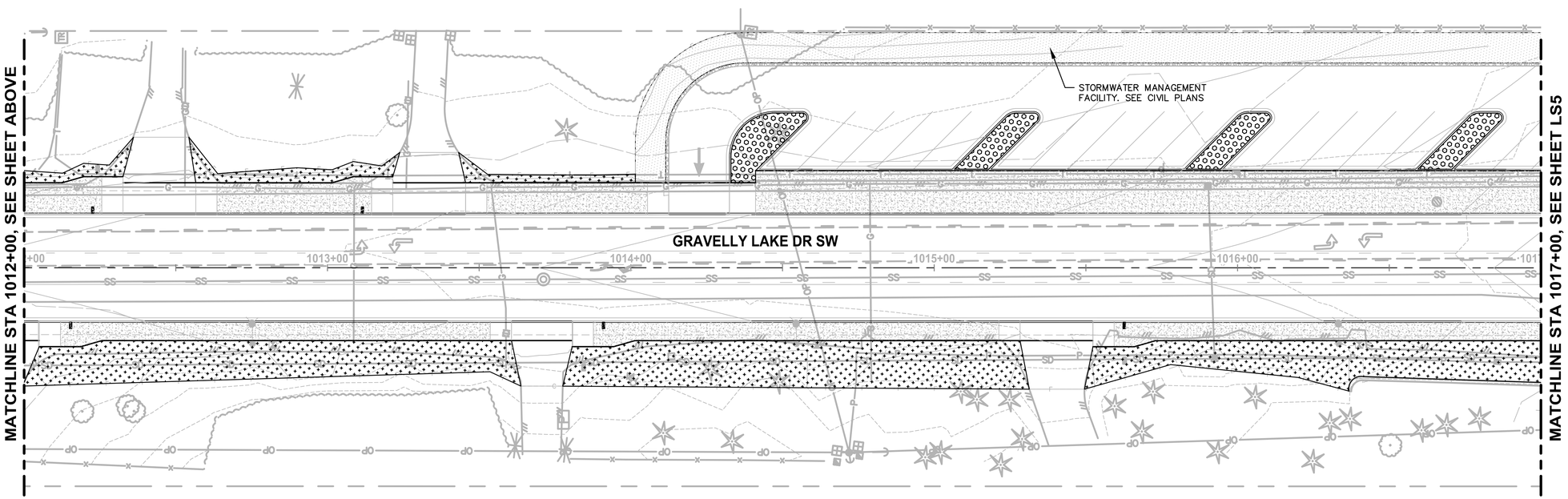
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN WASHINGTON BLVD SW

DRAWING NO.
96 OF 153
LS3

LAYOUT: LS3 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 4:17:08 PM





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RESTORATION LEGEND:

- 2" DEPTH CRUSHED SURFACING TOP COURSE. BLEND TO EXISTING
- SEEDING, FERTILIZING, AND MULCHING (HYDROSEED)
- 2" TOPSOIL TYPE A AND 3" BARK MULCH
- 12" TOPSOIL TYPE A. PLANTING AND MULCH BY OTHERS.

NOTES:

1. SEE SHEET LS12 FOR LANDSCAPE SCHEDULE AND LANDSCAPE NOTES AND PLANTING DETAILS.
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STATE OF WASHINGTON
DARREN C. SANDENO
NO. 1424 EXP. 12/06/2021
LANDSCAPE ARCHITECT
02/01/2021

	REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–LS13–20
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA •1996•

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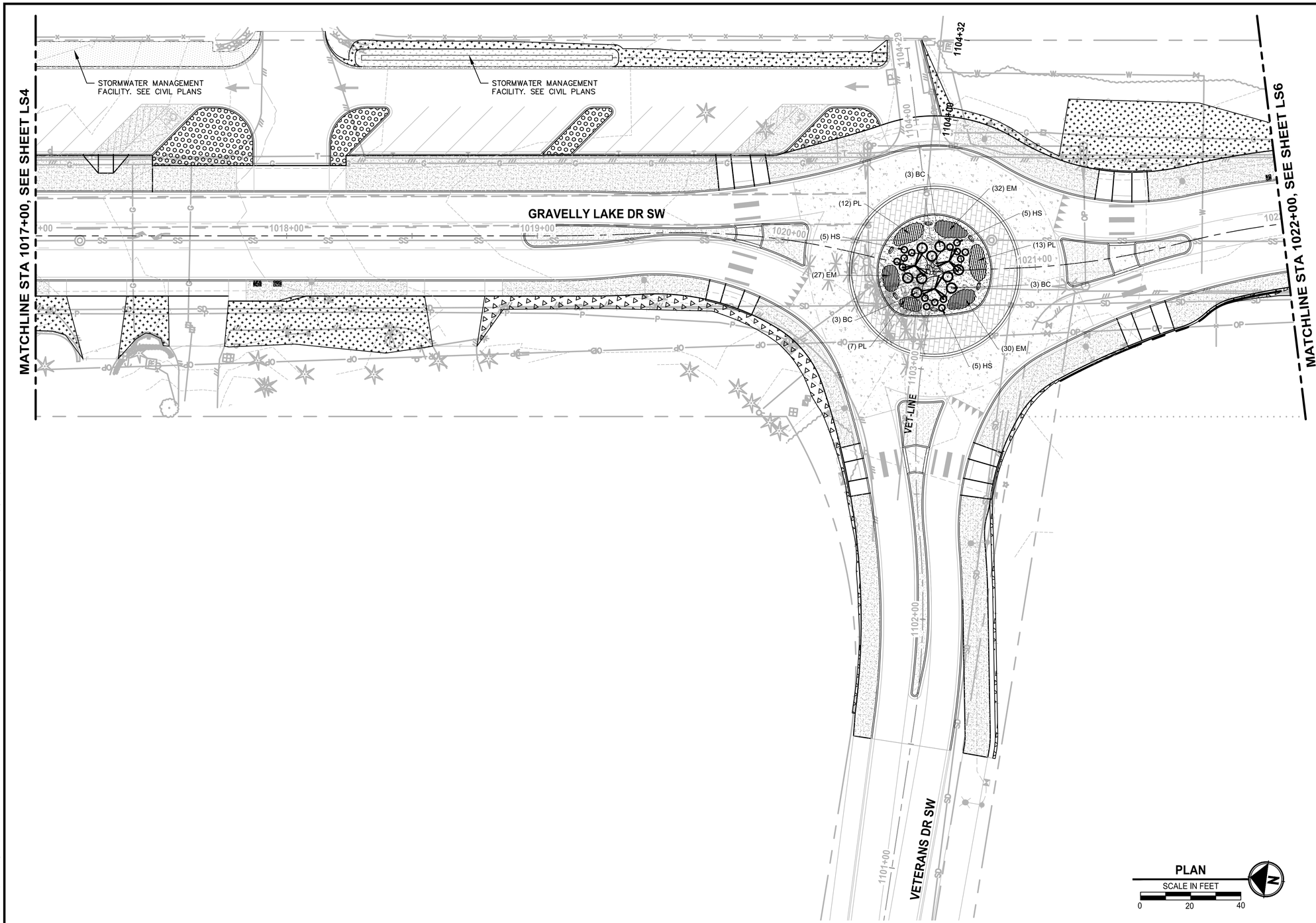
bcra
2106 PACIFIC AVE, SUITE 300
TACOMA, WA 98402
P 253.627.4367
WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN GRAVELLY LAKE DR SW

DRAWING NO.
97 OF 153
LS4

PATH: U:\PSO\Projects\Clients\3047–City of Lakewood\214–3047–013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 4:17:55 PM
LAYOUT: LS4



LANDSCAPE LEGEND:

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RESTORATION LEGEND:

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NOTES:

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PLAN
SCALE IN FEET
0 20 40

REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-LS13-20
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

STATE OF WASHINGTON DARREN C. SANDENO NO. 1424 EXP. 12/06/2021 LANDSCAPE ARCHITECT
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN GRAVELLY LAKE DR SW

DRAWING NO.
98 OF 153
LS5

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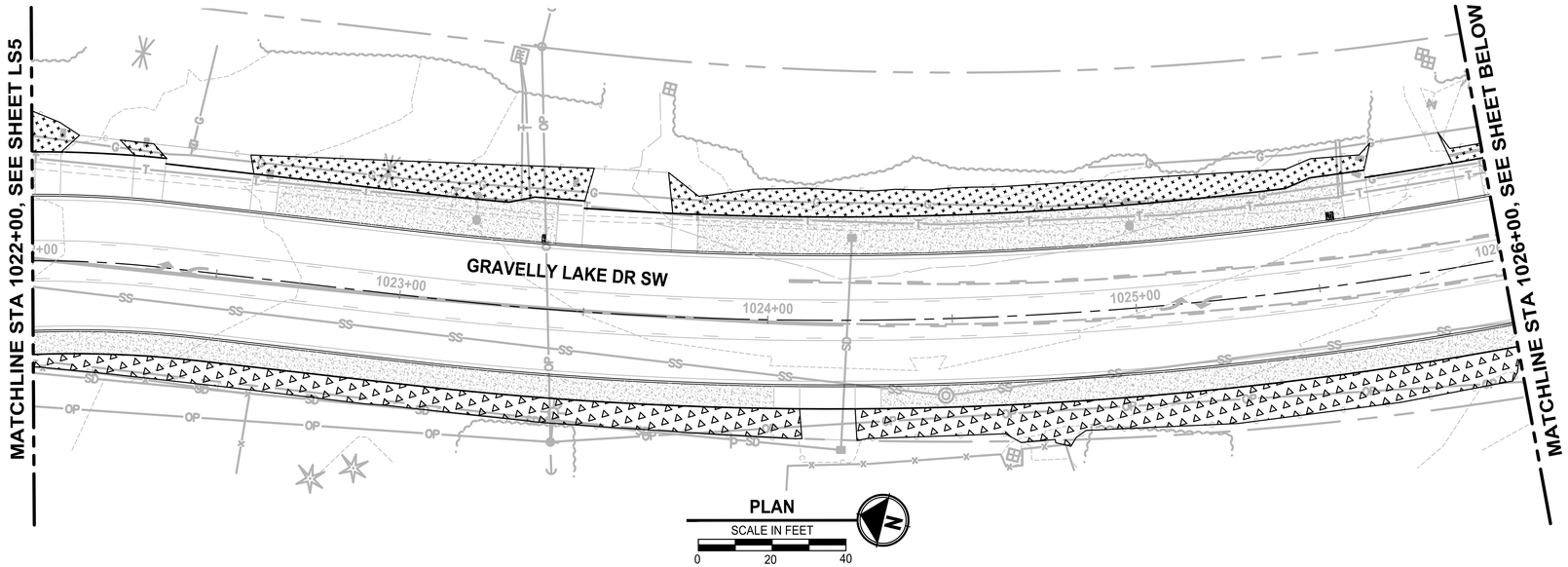

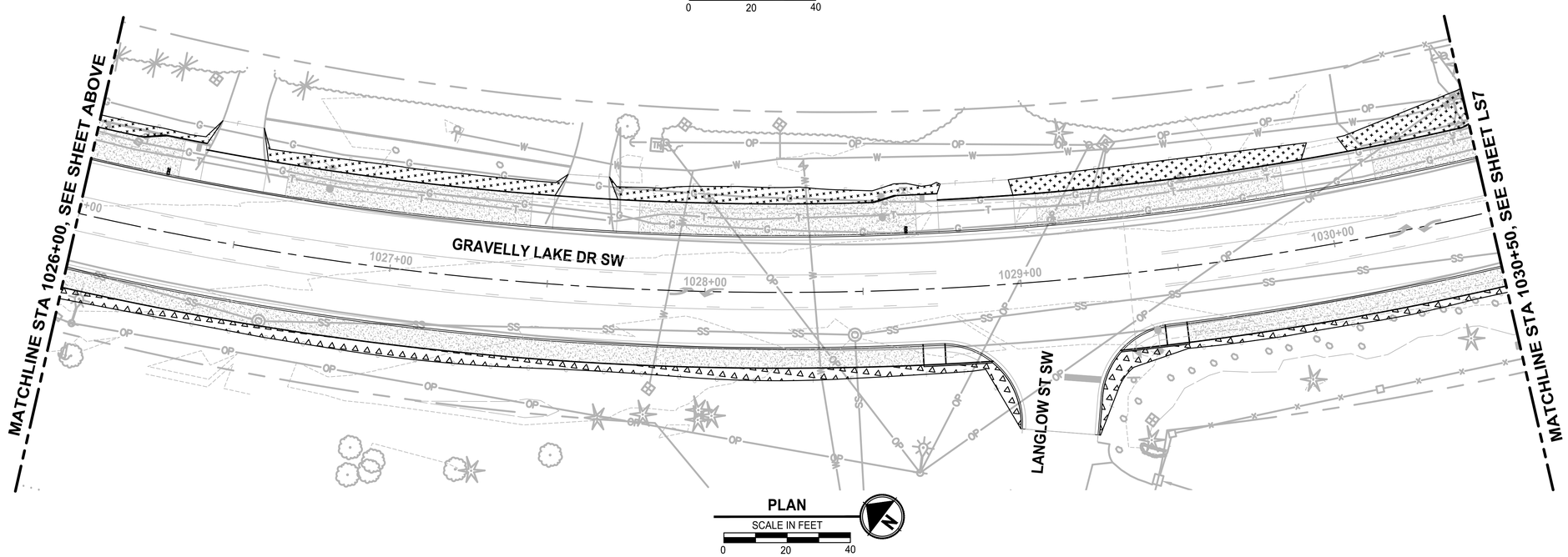

LANDSCAPE LEGEND:

- UPRIGHT HORNBEAM - AS SHOWN
- GREEN PILLAR PIN OAK - AS SHOWN
- SPIRE CHERRY - AS SHOWN
- CRIMSON POINT PLUM - AS SHOWN
- COMPACT CORAL BARBERRY - @ 4' O.C.
- KELSEY REDTWIG DOGWOOD - @ 2.5' O.C.
- BLUE OAT GRASS - @ 2.5' O.C.
- DAYLILY MIX - @ 1.5' O.C.
- MEDITERRANEAN PINK HEATH - @ 1.5' O.C.
- MOUNT VERNON ENGLISH LAUREL - @ 2.5' O.C.
- 4"-6" RIVER ROCK COBBLES 12" DEPTH
- 1"-2" RIVER ROCK 4" DEPTH
- 2'-3' ROUNDED RIVER ROCK BOULDERS. SEE LS26, DTL 4.

RESTORATION LEGEND:

- 2" DEPTH CRUSHED SURFACING TOP COURSE. BLEND TO EXISTING
- SEEDING, FERTILIZING, AND MULCHING (HYDROSEED)
- 2" TOPSOIL TYPE A AND 3" BARK MULCH

NOTES:

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REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-LS13-20
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

STATE OF WASHINGTON DARREN C. SANDENO NO. 4424 EXP. 12/06/2021 LANDSCAPE ARCHITECT
02/01/2021

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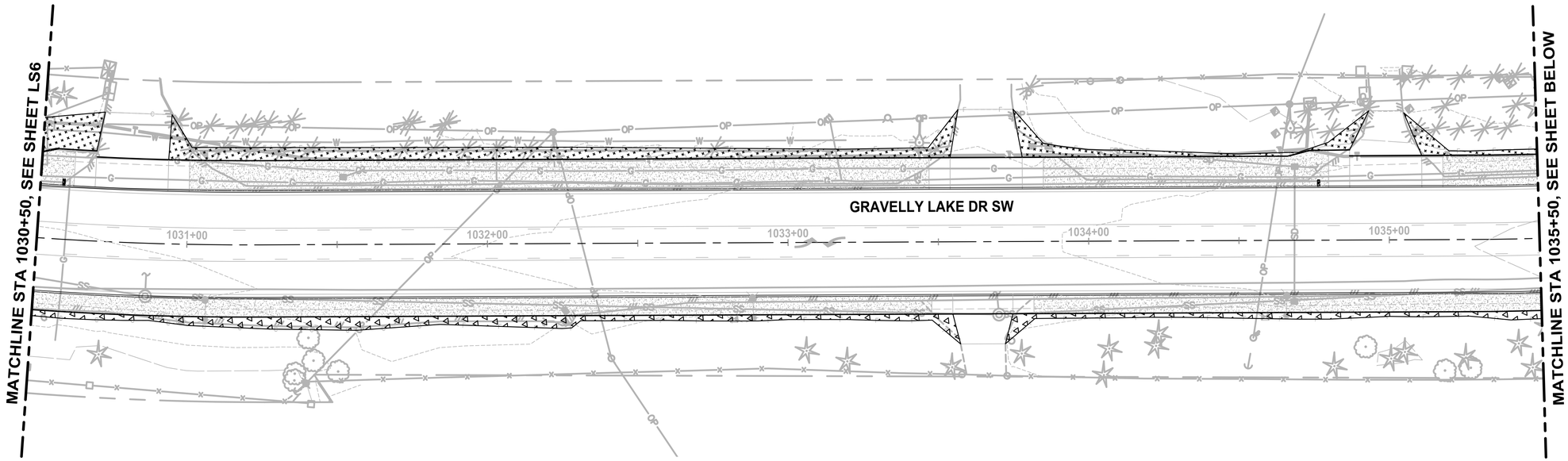
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN GRAVELLY LAKE DR SW

DRAWING NO. 99 OF 153
LS6

LAYOUT: LS6 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Sves\CADD\DWG PLOTTED BY: toylokat DATE: Monday, February 1, 2021 4:19:05 PM



PLAN
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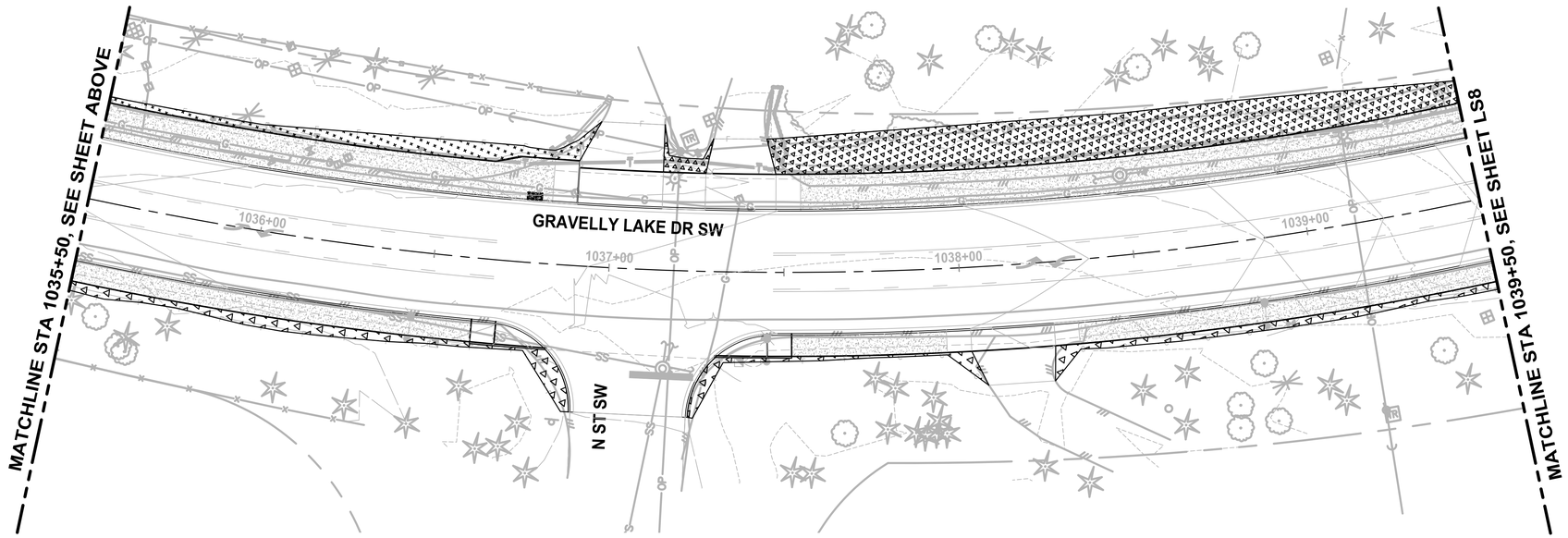

PLAN
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0 20 40

LANDSCAPE LEGEND:

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DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

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JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

STATE OF WASHINGTON · DARREN C. SANDENO · NO. 1424 EXP. 12/06/2021 · LANDSCAPE ARCHITECT
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN GRAVELLY LAKE DR SW

DRAWING NO.
100 OF 153
LS7

PATH: U:\PSO\Projects\Clients\3047–City of Lakewood\214–3047–013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 4:19:51 PM
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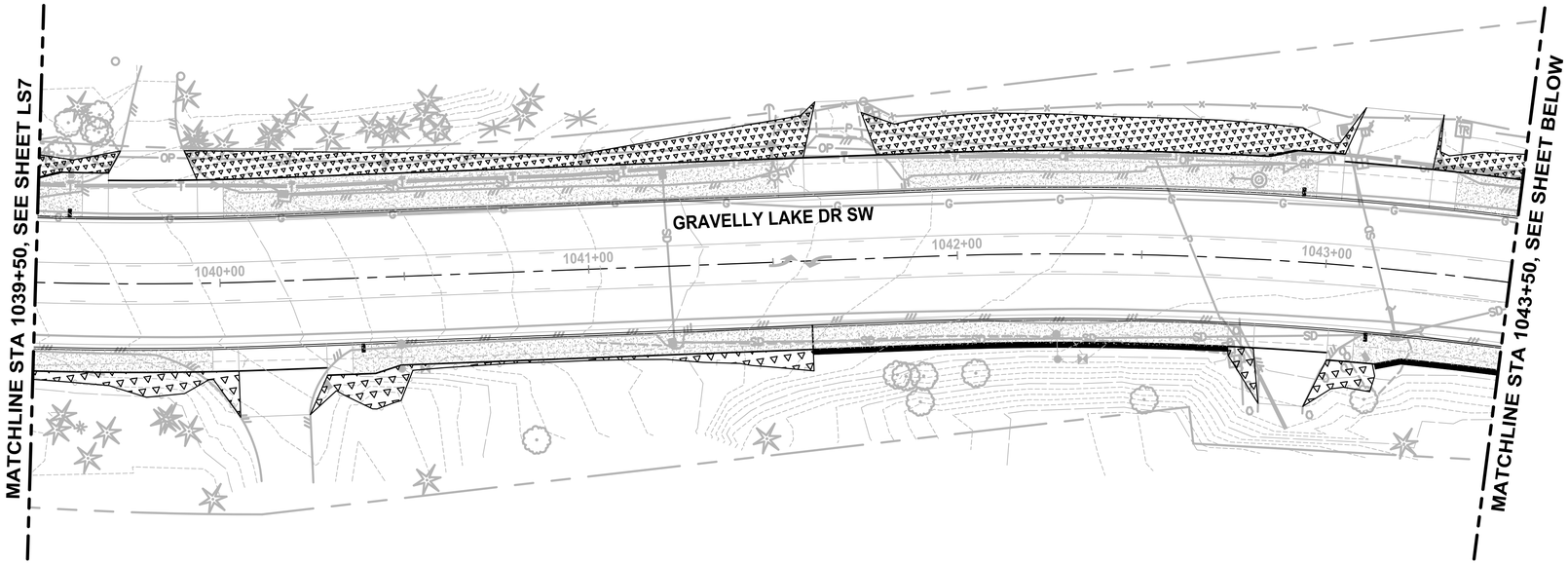

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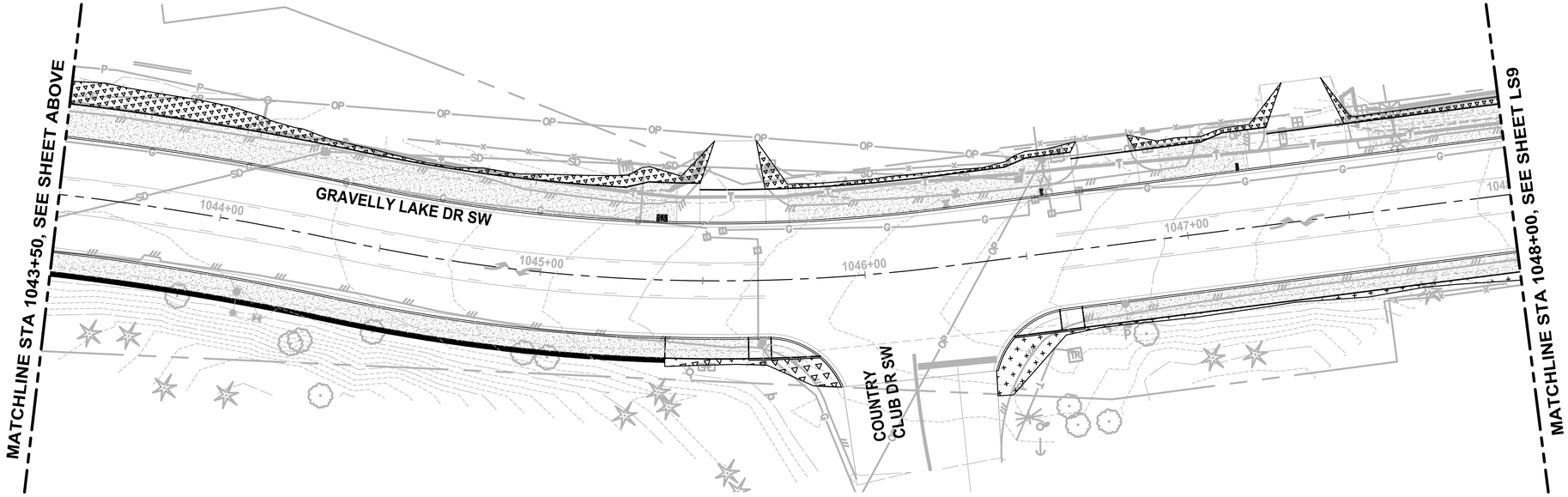
0 20 40



PLAN
SCALE IN FEET
0 20 40

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STATE OF WASHINGTON
DARREN C. SANDENO
NO. 4424 EXP. 12/06/2021
LANDSCAPE ARCHITECT
02/01/2021

REVISIONS	DATE	BY

DESIGNED D. SANDENO
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CHECKED F. IDE
APPROVED A. FISHER

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CITY OF LAKEWOOD, WA ●1996●

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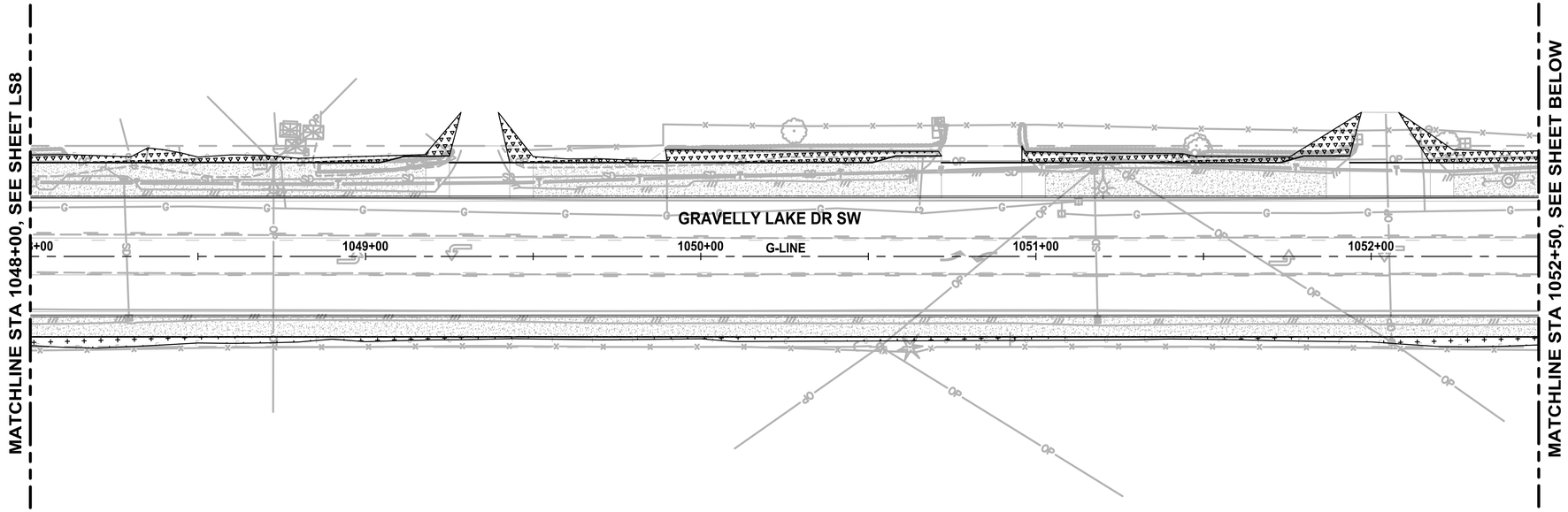
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN GRAVELLY LAKE DR SW

DRAWING NO.
101 OF 153
LS8

LAYOUT: LS8 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toylokat DATE: Monday, February 1, 2021 4:20:36 PM



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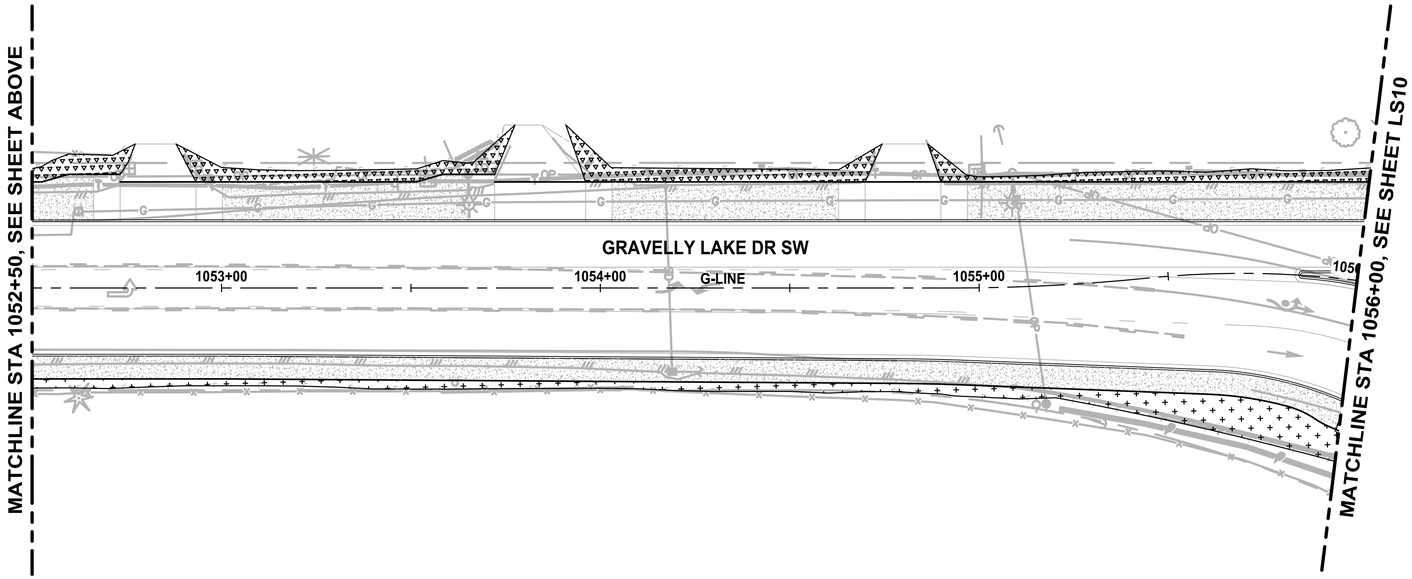

PLAN
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CITY OF LAKEWOOD WA ●1996●

STATE OF WASHINGTON · DARREN C. SANDENO · No. 4424 EXP. 12/06/2021 · LANDSCAPE ARCHITECT
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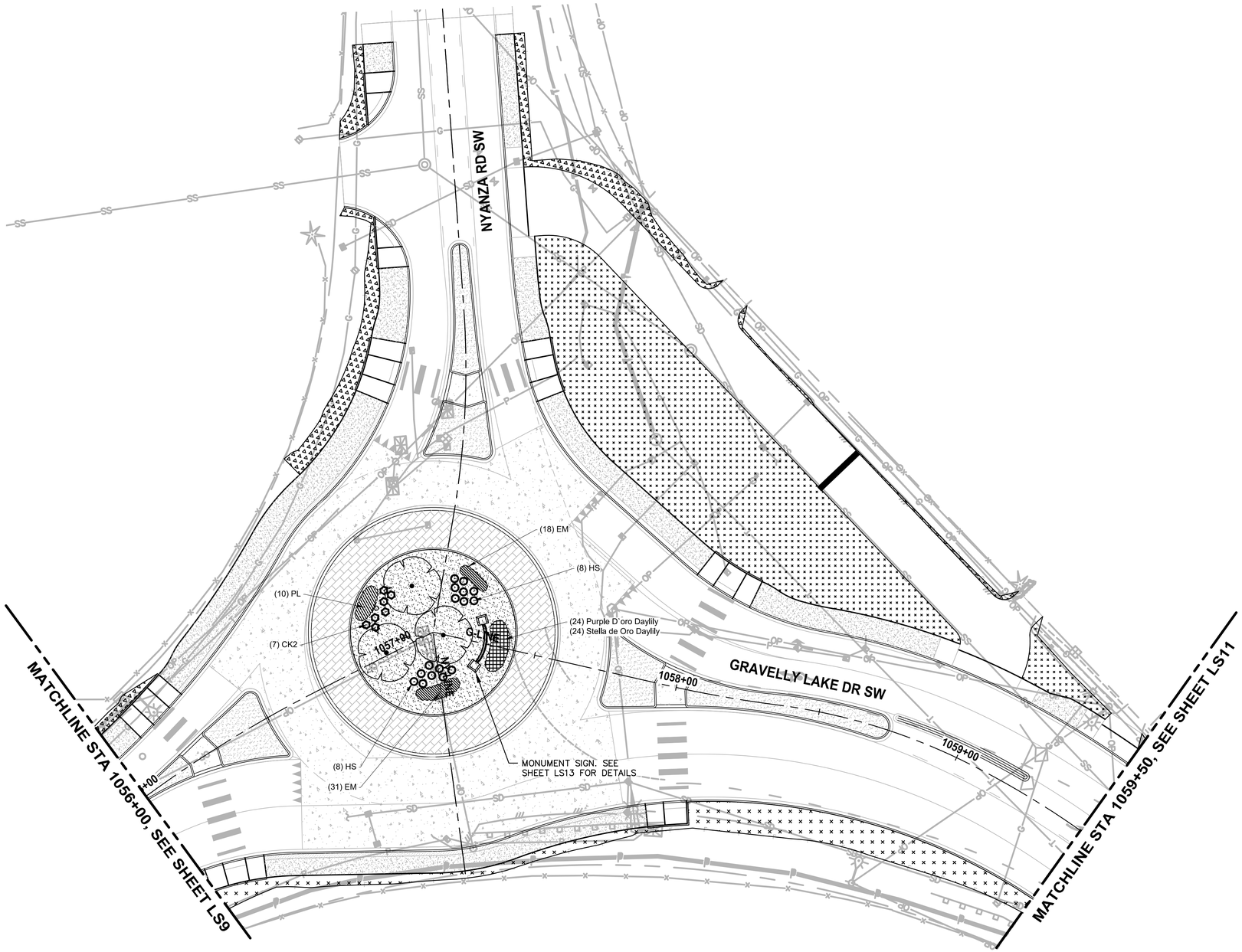
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN GRAVELLY LAKE DR SW

DRAWING NO.
102 OF 153
LS9

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 4:32:03 PM
LAYOUT: LS9



PLAN

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0 20 40

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STATE OF WASHINGTON · DARREN C. SANDENO · NO. 424 EXP. 12/06/2021 · LANDSCAPE ARCHITECT
02/01/2021

REVISIONS	DATE	BY

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APPROVED A. FISHER

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN GRAVELLY LAKE DR NYANZA RD SW

DRAWING NO. 103 OF 153

LS10

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 4:32:27 PM
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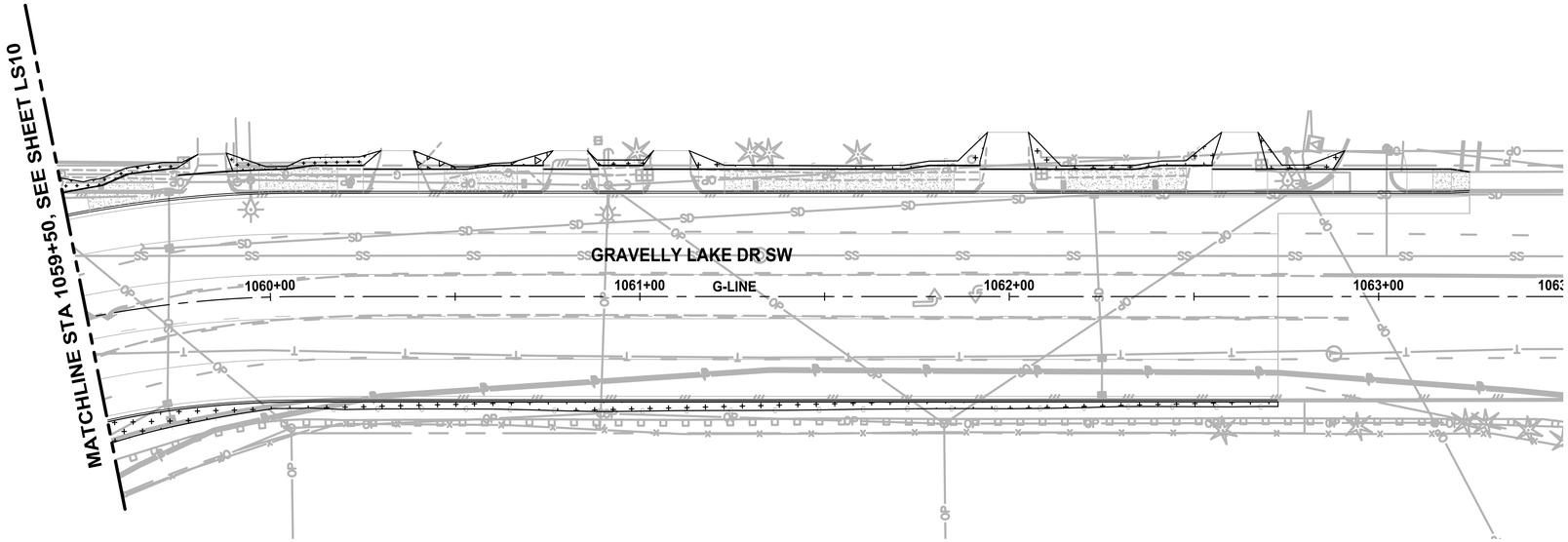

PLAN

SCALE IN FEET

0 20 40

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CITY OF LAKEWOOD WA #1996

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE PLAN GRAVELLY LAKE DR NYANZA RD SW

DRAWING NO.
104 OF 153

LS11

LAYOUT: LS11 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toykokat DATE: Monday, February 1, 2021 4:32:51 PM

PLANT_SCHEDULE

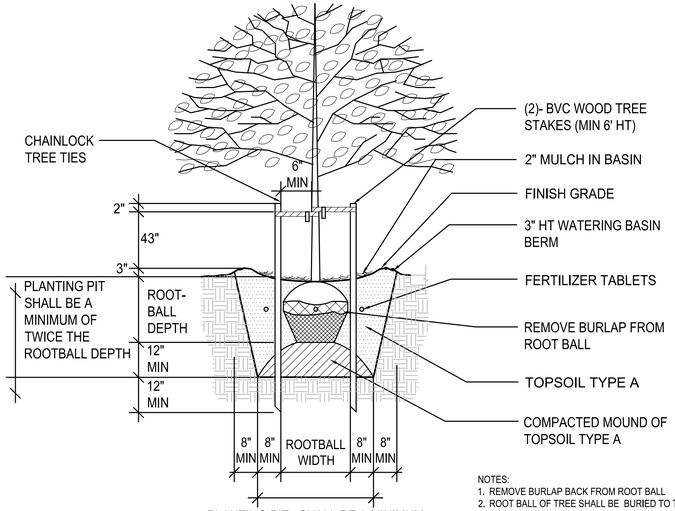
TREES	CODE	QTY	BOTANICAL / COMMON NAME	CAL.
	CC	3	CARPINUS BETULUS 'COLUMNARIS' / COLUMNAR EUROPEAN HORNBEAM	3" CAL / B&B
	MA	3	MALUS TSCHONOSKII / PILLAR APPLE	3" CAL / B&B
	PC	22	PRUNUS X CERASIFERA 'CRIPOIZAM' / CRIMSON POINTE FLOWERING PLUM	3" CAL / B&B
	PX	17	PRUNUS X HILLIERI 'SPIRE' / SPIRE CHERRY	3" CAL / B&B
	QP	4	QUERCUS PALUSTRIS 'PRINGREEN' TM / GREENPILLAR PIN OAK	3" CAL / B&B

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	BC	26	BERBERIS X STENOPHYLLA 'CORALLINA COMPACTA' / COMPACT CORAL BARBERRY	#2 CONT
	CK2	29	CORNUS SERICEA 'KELSEYI' / KELSEYI DWARF REDTWIG DOGWOOD	#2 CONT
	HS	64	HELICTOTRICHON SEMPERVIRENS / BLUE OAT GRASS	#1 CONT

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
				DAYLILY	
		70	HEMEROCALLIS X 'PURPLE D'ORO' / PURPLE D'ORO DAYLILY	1G	18" o.c.
		70	HEMEROCALLIS X 'STELLA DE ORO' / STELLA DE ORO DAYLILY	1G	18" o.c.
	EM	331	ERICA X DARLEYENSIS 'MEDITERRANEAN PINK' / MEDITERRANEAN PINK HEATH	1G	18" o.c.
	PL	150	PRUNUS LAUROCERASUS 'MOUNT VERNON' / MOUNT VERNON LAUREL	#2 CONT	30" o.c.
		38	2'-3' ROUNDED RIVER BOULDERS. VARYING SIZES AND ORIENTATION	SEE DETAIL #4 THIS SHEET	

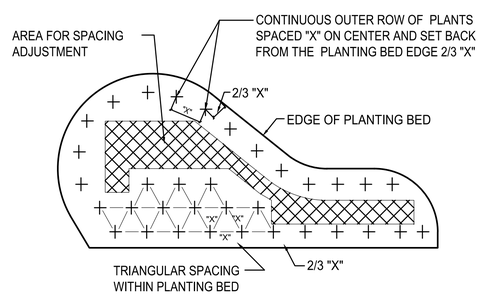
GENERAL LANDSCAPE NOTES:

1. REFER TO THIS SHEET FOR PLANT INSTALLATION DETAILS.
2. ALL WORK SHALL BE PERFORMED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE/CITY.
3. CONTRACTOR IS REQUIRED TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
4. CONTRACTOR IS RESPONSIBLE FOR A THOROUGH CLEAN-UP FOR HIS/HER RESPECTIVE WORK, DAILY AND AT PROJECT CLOSE-OUT.
5. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING IMPROVEMENTS. DAMAGE TO THE EXISTING IMPROVEMENTS BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AND/OR QUALIFIED INSTALLERS/TRADES ACCEPTABLE TO THE SOLE SATISFACTION OF THE CONSTRUCTION OBSERVER AND AT NO COST TO THE OWNER.
6. ALL LANDSCAPE SHRUB PLANTING AREAS SHALL RECEIVE 12" MIN. UNIFORM DEPTH IMPORTED TOPSOIL TYPE 'A'. MEDIAN TO RECEIVE TOPSOIL ONLY AT TREE PLANTING WELLS IN ACCORDANCE WITH TREE PLANTING DETAIL.
7. PLANT MATERIALS SHALL MEET STANDARDS SET FORTH IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARD (ANSI Z60.1) AND WASHINGTON STATE STANDARDS FOR NURSERY STOCK ORDER NO. 1627. ALL PLANT MATERIALS SHALL HAVE SUFFICIENT ROOT DEVELOPMENT TO ASSURE SURVIVAL AND HEALTHY GROWTH. CONTAINER GROWN PLANT MATERIALS ARE REQUIRED TO HAVE SUFFICIENT ROOT GROWTH TO HOLD THE SOIL INTACT WHEN REMOVED FROM THE CONTAINER, BUT SHALL NOT BE ROOT BOUND.
8. PLANT LIST QUANTITIES ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES IN LIST WITH PLAN CALL-OUTS AND INSTALLING PLANTINGS PER THE LANDSCAPE PLAN. GROUNDCOVER QUANTITIES SHALL BE ADJUSTED AS REQUIRED FOR FIELD CONDITIONS AT THE SPECIFIC SPACING.
9. PRIOR TO BARK PLACEMENT, ALL SHRUB BED AREAS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE. FOLLOW ALL MANUFACTURER'S APPLICATION INSTRUCTIONS. PREEMERGENT HERBICIDE SHALL BE ELANCO XL2G OR APPROVED EQUAL.
10. MULCH SHALL BE INSTALLED TO DEPTH OF 3 INCHES IN ALL NEW PLANTING AREAS. PRIOR TO MULCH PLACEMENT GRADE SHALL BE BROUGHT TO A UNIFORM LINE WITH NO SURFACE IRREGULARITIES. WATERING BERMS AROUND PLANTS SHALL BE HAND COMPACTED AND OF A SMOOTH AND EVEN GRADE PRIOR TO MULCH PLACEMENT. MULCH SHALL BE WATER-COMPACTED UPON PLACEMENT.
11. NO SUBSTITUTIONS SHALL BE CONSIDERED FOR PLANTS OR OTHER MATERIALS DURING THE BIDDING PROCESS.
12. CONTRACTOR SHALL WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE HAS BEEN GRANTED. OWNER SHALL THEN ASSUME ALL RESPONSIBILITIES FOR MAINTAINING ALL PLANTS IN A HEALTHY GROWING CONDITION FOR THE LIFE OF THIS PROJECT.
13. LANDSCAPE MATERIALS & QUANTITIES WILL BE FIELD ADJUSTED TO FIT ACTUAL CONDITIONS, IF NECESSARY. COORDINATE LANDSCAPE CONSTRUCTION AND REVIEWS W/ OWNER'S REPRESENTATIVE.
14. CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED DURING CONSTRUCTION INCLUDING CUT/FILL AREAS SHOWN. ALL AREAS DISTURBED AND NOT SPECIFICALLY SHOWN AS RESTORATION TYPE SHALL MATCH EXISTING CONDITIONS.



NOTES:
1. REMOVE BURLAP BACK FROM ROOT BALL
2. ROOT BALL OF TREE SHALL BE BURIED TO THE SAME DEPTH AS IN PREVIOUS NURSERY SETTING
3. CUT BOUND ROOTS TO ENCOURAGE GROWTH
4. REMOVE ANY SOIL AND/OR MULCH AWAY FROM TREE CROWN AFTER INSTALLATION

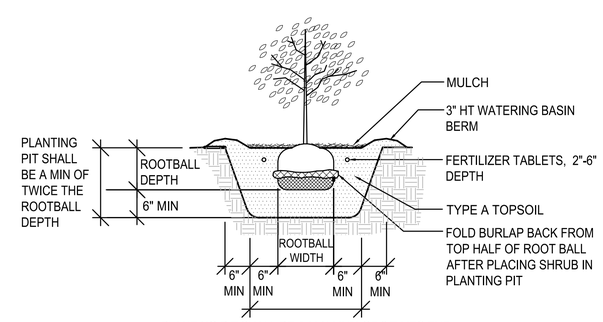
TREE PLANTING W/TREE WELL
DETAIL 1
NOT TO SCALE -



SPECIFIED PLANT SPACING="X"

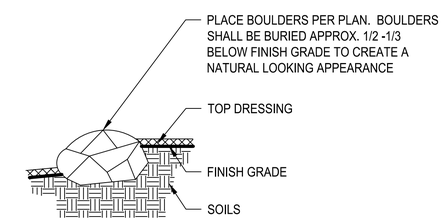
INDIVIDUAL PLANTS REPRESENTED AS: +

PLANT SPACING DETAIL
DETAIL 2
NOT TO SCALE -



PLANTING PIT SHALL BE A MINIMUM OF 2 TIMES THE ROOT- BALL WIDTH AT BASE OF PIT & 3 TIMES ROOTBALL WIDTH AT FINISH GRADE

CONTAINER SHRUB PLANTING
DETAIL 3
NOT TO SCALE -



NOTES:
1. ALL BOULDERS SHALL BE 2'-0" FROM BACK OF CURB.
2. THE TOP OF ALL BOULDERS WITHIN MEDIAN SHALL BE LESS THAN 18" ABOVE TOP OF CURB.
3. BOULDER CLUSTERS TO BE PLACED IRREGULARLY AND ARE VARYING HEIGHTS

BOULDER PLACEMENT
DETAIL T¥P
NO SCALE

REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-LS21-27
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

STATE OF WASHINGTON · DARREN C. SANDENO · NO. 4424 EXP. 12/06/2021 · LANDSCAPE ARCHITECT
02/01/2021

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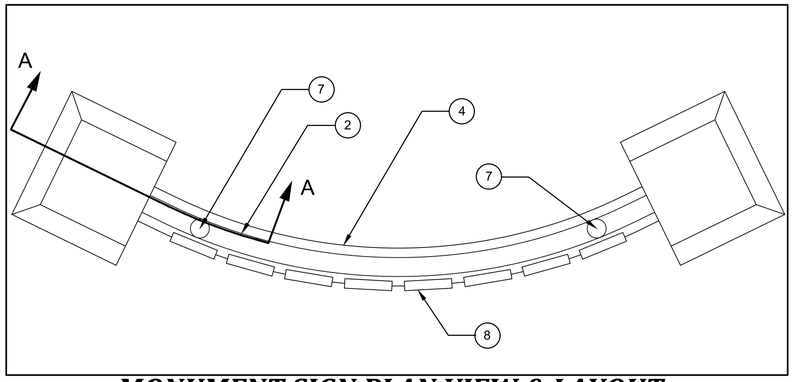
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

LANDSCAPE SCHEDULE, NOTES, & DETAILS

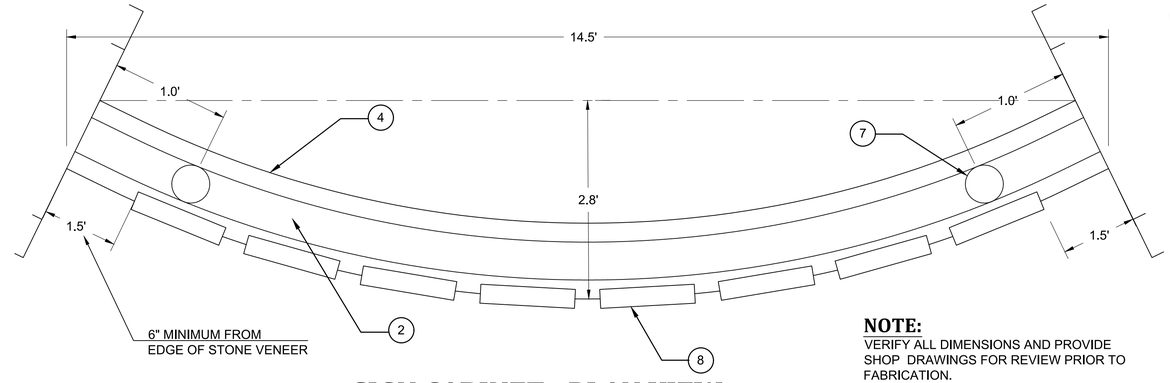
DRAWING NO.
105 OF 153
LS12

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 4:32:53 PM LAYOUT: LS12



MONUMENT SIGN PLAN VIEW & LAYOUT

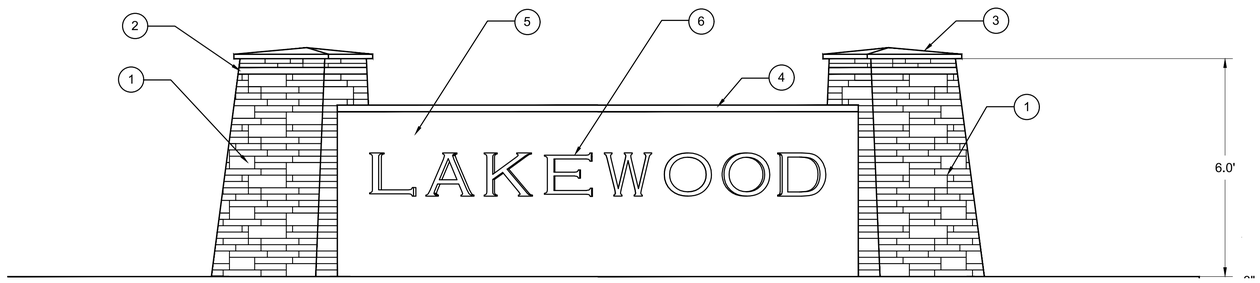
FULL SIZE SCALE
1"=2'



SIGN CABINET - PLAN VIEW

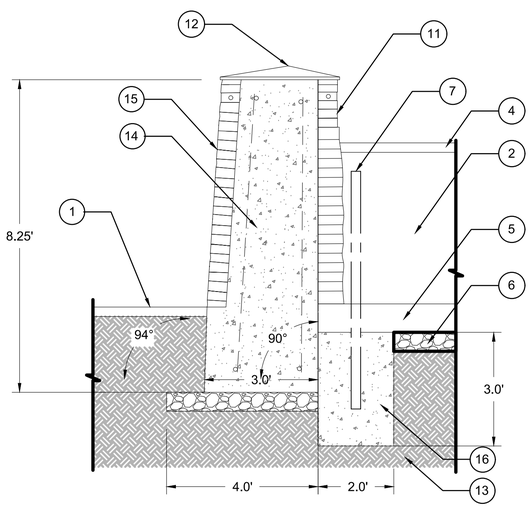
FULL SIZE SCALE
1"=2'

NOTE:
VERIFY ALL DIMENSIONS AND PROVIDE SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.



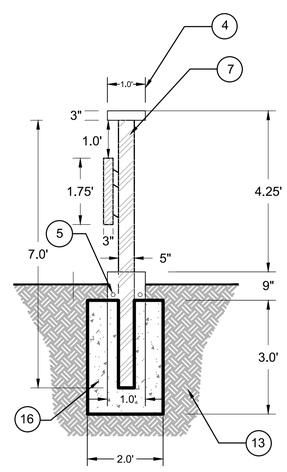
MONUMENT SIGN ELEVATION

FULL SIZE SCALE
1"=2'



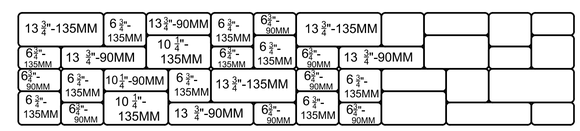
SECTION A-A

FULL SIZE SCALE
1"=2'



SIGN CABINET FOUNDATION DETAIL

FULL SIZE SCALE
1"=2'



PLANTER WALL PATTERN

FULL SIZE SCALE
1"=1'

NOTE:
WALL BLOCK WITH 50% 90 MM UNITS AND 50% 135 MM UNITS.

SECTIONS AND PLAN VIEWS NOTES

1. WALL CAP - 90 MM, COLOR SUMMIT BLEND
2. SIGN CABINET
3. WALL BLOCK, MEDITERRANEAN, COLOR SUMMIT BLEND, VERTICAL INSTALLATION
4. ALUMINUM SIGN CABINET CAP, MATCH COLUMN CAP
5. SIGN CABINET FOUNDATION, 2 #4 HORIZONTAL
6. 6" CSTC
7. SIGN CABINET SUPPORT POSTS - 3" SCH. 40 ROUND STEEL PIPE
8. "LAKEWOOD" LETTERING BOOKMAN OLDSTYLE BOLD FONT
   SPACE LETTERING EVENLY ALONG FACE OF SIGN CABINET
9. 3" BARK MULCH
10. 2' TOP SOIL TYPE A
11. BRICK VENEER BAND
12. ALUMINUM COLUMN CAP
13. COMPACTED SUBGRADE
14. COMMERCIAL C.I.P. CONCRETE COLUMN, #4 HOOPS @ 18" O.C. & #4 VERTICAL AT CORNERS
15. STONE VENEER
16. COMMERCIAL C.I.P. CONCRETE 2' DIAMETER 3' DEEP

MONUMENT SIGN ELEVATION NOTES

1. CULTURED STONE VENEER ECHO RIDGE SOUTHERN LEDGESTONE
2. BRICK VENEER BAND
3. COLUMN CAP, MATCH COLOR, TEXTURE OF SIGN CAP
4. WALL BLOCK SUMMIT BLEND. 50% 90 MM AND 50% 135 MM SIZES - SEE PLANTER WALL PATTERN, 90 MM WALL CAP
5. SIGN CABINET: 5" THICK BY 4' HEIGHT CABINET, FACE 0.125 MM ALUMINUM WITH OUT SEAMS, SIDE TOP, BOTTOM AND REAR, 0.090 MM INSIDE; REAR THREE PANELS FOR ACCESS. NO EXPOSED FASTENERS; COLORS - 1001 BEIGE
6. REVERSE PAN CHANNEL LETTERS "LAKEWOOD" IN BOOKMAN BOLD, 3" DEEP AND INTERNALLY ILLUMINATED . LED MINIMUM OF 200 NIT BRIGHTNESS. FACES OF LETTERS 0.125 ALUMINUM AND RETURNS 0.090. PIN MOUNTED APPROXIMATELY 1 1/2" OFF THE FACE; COLOR - 8028 (BROWN)

REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-LS21-27
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

STATE OF WASHINGTON
DARREN C. SANDENO
No. 4424 EXP. 12/06/2021
LANDSCAPE ARCHITECT
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

MONUMENT SIGN DETAILS

DRAWING NO. 106 OF 153
LS13

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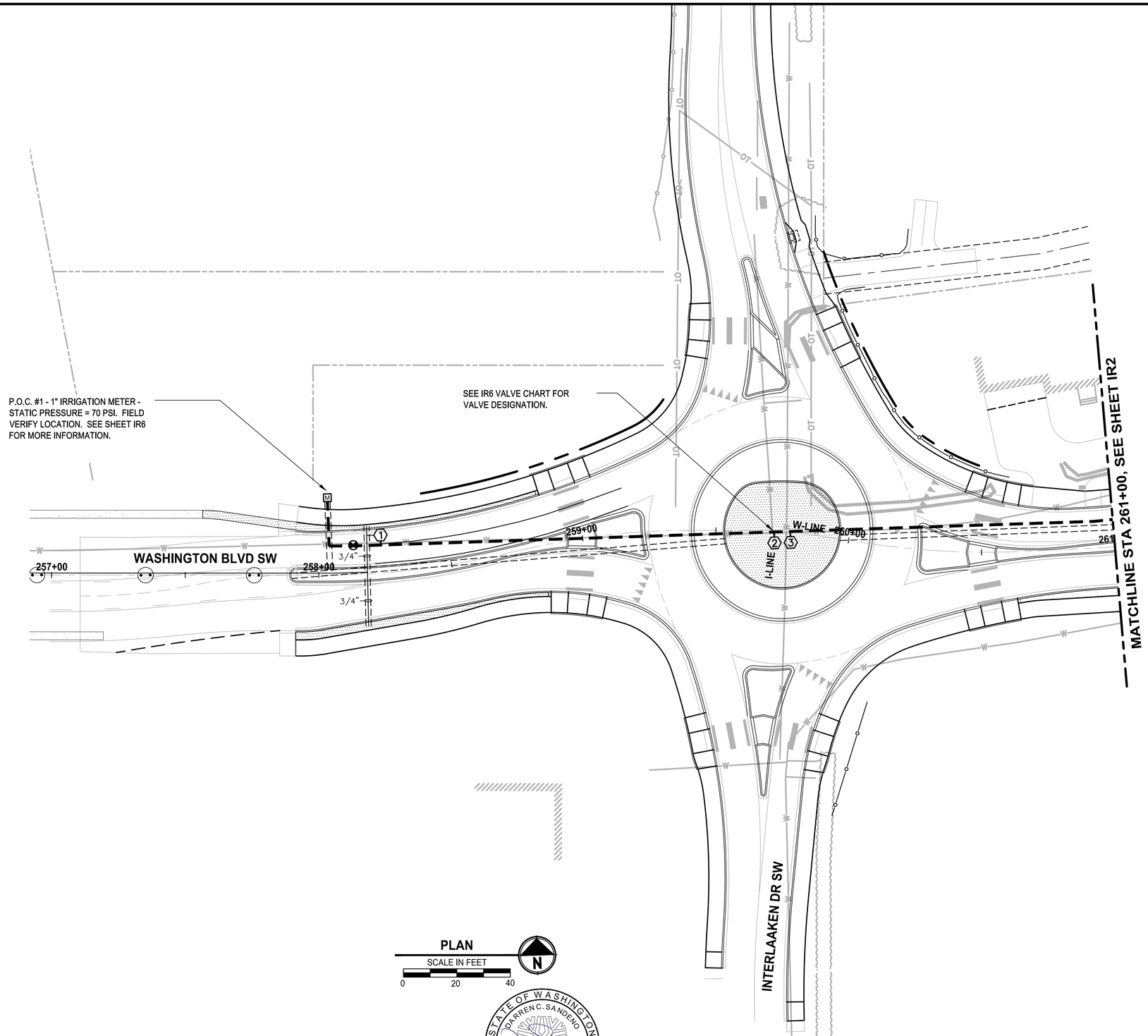

LEGEND

M	PROPOSED IRRIGATION METER LOCATION
	PROPOSED IRRIGATION MAINLINE - 1.5" DIA. SCH. 40 PVC UNLESS OTHERWISE NOTED
	PROPOSED IRRIGATION LATERAL LINE - SIZE VARIES - CL 200 PVC
	PROPOSED IRRIGATION CONDUIT - 4" DIA. SCH. 40 PVC
X	PROPOSED ZONE VALVE
	BUBBLER IRRIGATION - TWO PER TREE
	SUBSURFACE DRIP IRRIGATION.
	ISOLATION VALVE
	MANUAL DRAIN VALVE

SHEET NOTES:

1. REFER TO IR6 & IR7 FOR CONSTRUCTION NOTES, DETAILS, AND IRRIGATION EQUIPMENT LISTS. REFER TO SEPARATE WRITTEN SPECIFICATIONS FOR DETAILED IRRIGATION SYSTEM INFORMATION.
2. STATIC PRESSURE REPORTED = 70 PSI. CONTRACTOR TO FIELD VERIFY AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
3. DECODER WIRES TO BE EXTENDED TO ALL VALVE MANIFOLD ASSEMBLIES.
4. PLAN IS DIAGRAMMATIC. VARIATION IN HEAD LOCATIONS ON PLANS IS FOR THE SAKE OF GRAPHIC CLARITY. LOCATION OF IRRIGATION MAINLINE, LATERALS & SLEEVING ARE SCHEMATIC ONLY AND SHALL OCCUR IN PLANTING AREAS.
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IRRIGATION PLAN IS DIAGRAMMATIC ONLY

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STATE OF WASHINGTON · DARREN C. SANDENO · NO. 1424 EXP. 12/06/2021 · LANDSCAPE ARCHITECT
02/01/2021

REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-IR12-17
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA · 1996

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

IRRIGATION PLAN WASHINGTON BLVD SW

DRAWING NO.
107 OF 153
IR1

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 1:57:11 PM
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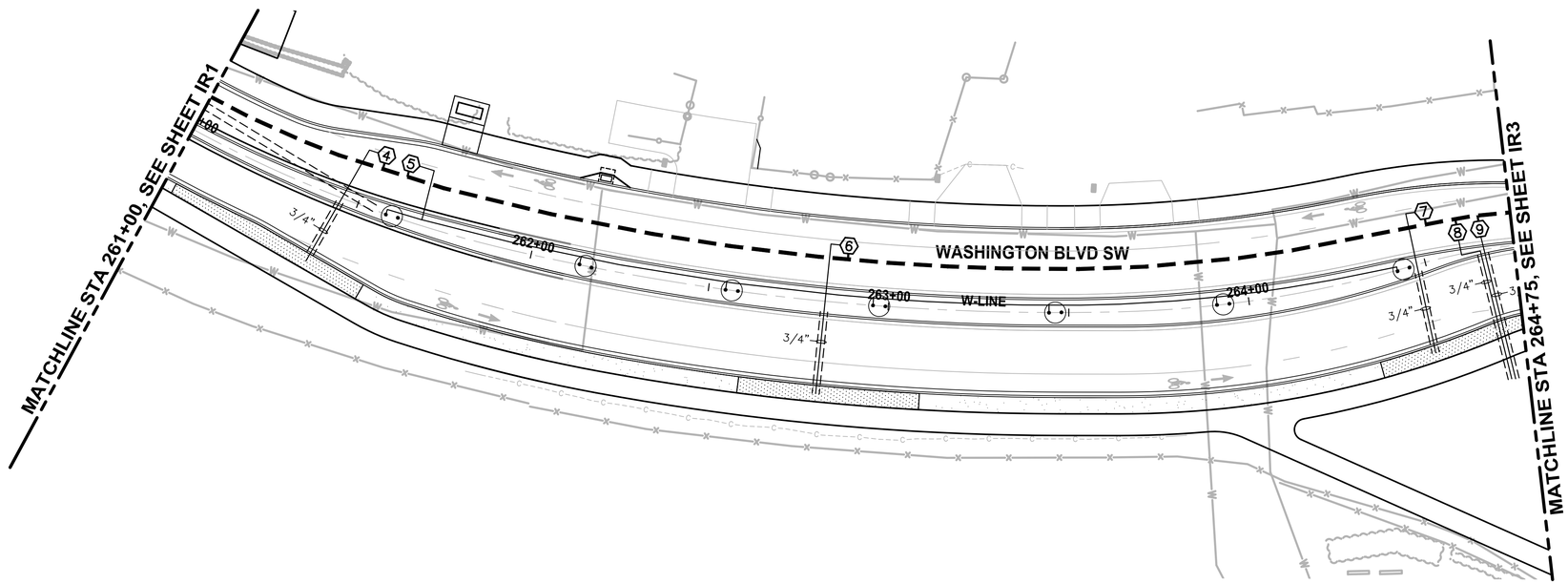

PLAN

SCALE IN FEET

0 20 40

LEGEND

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CHECKED F. IDE
APPROVED A. FISHER

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JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD, WA •1996•

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

IRRIGATION PLAN
WASHINGTON BLVD SW

DRAWING NO. 108 OF 153
IR2

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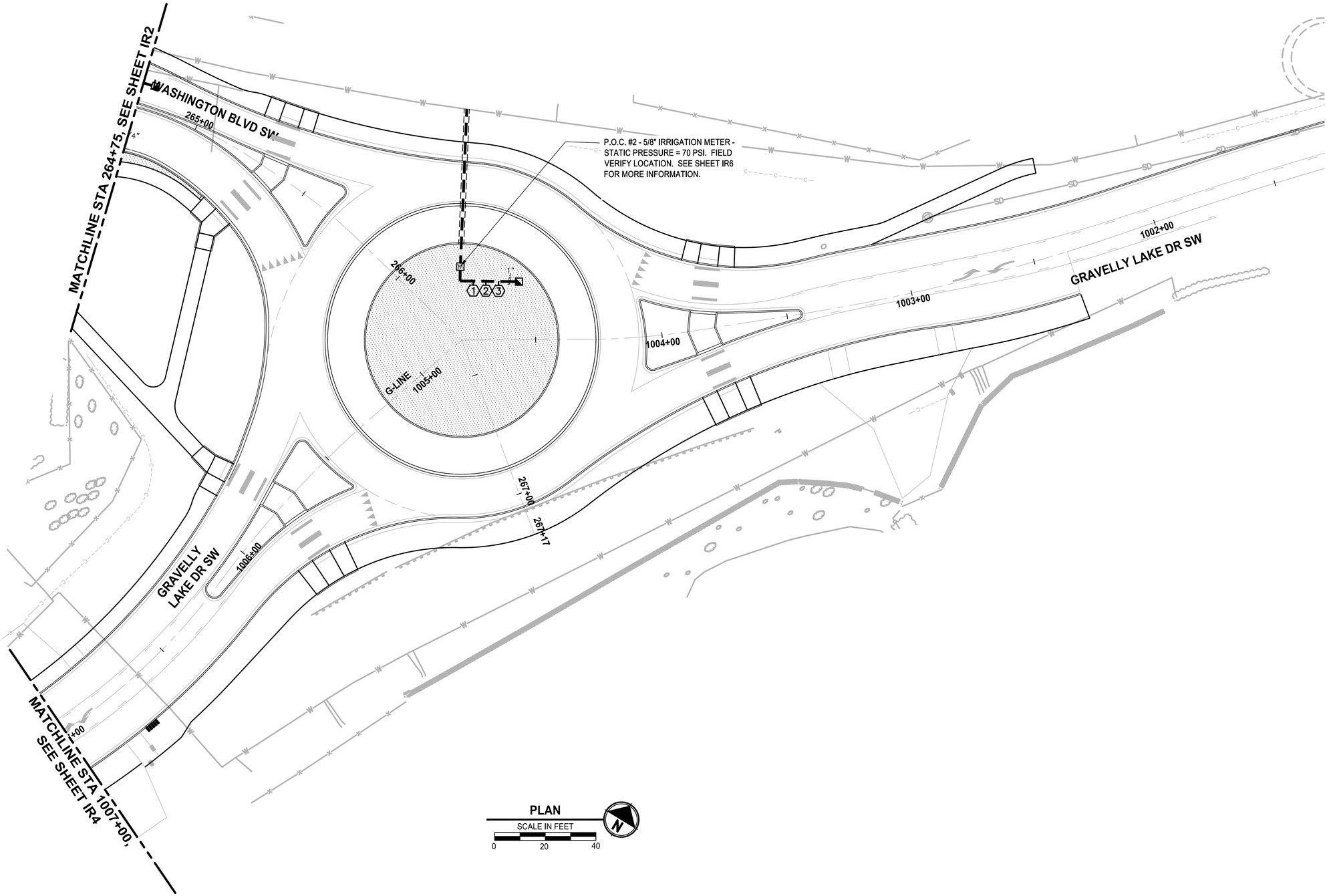

PLAN

SCALE IN FEET

0 20 40

LEGEND

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

IRRIGATION PLAN WASHINGTON BLVD SW

DRAWING NO.
109 OF 153
IR3

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 1:59:00 PM
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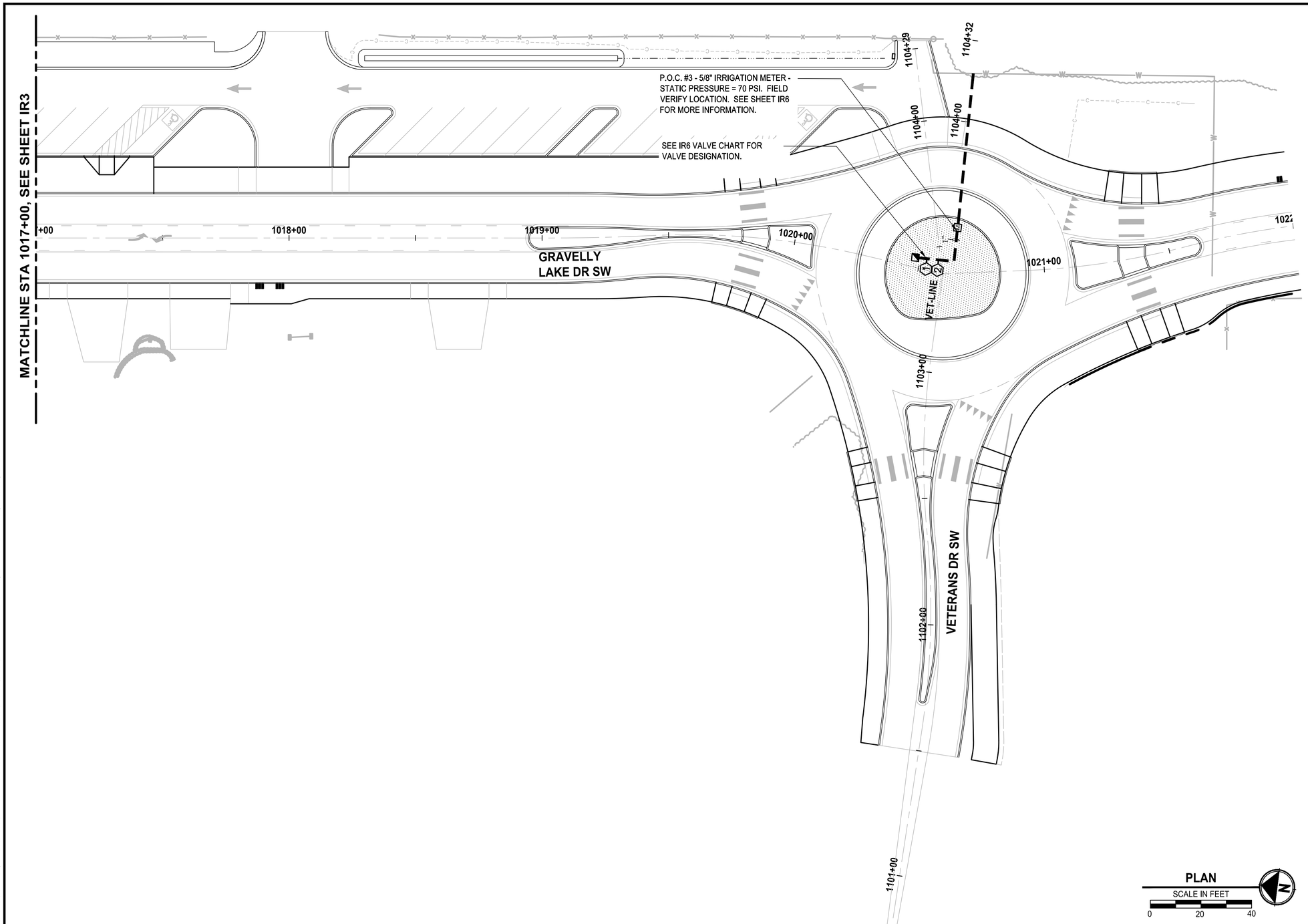

LEGEND

- M — PROPOSED IRRIGATION METER LOCATION
- PROPOSED IRRIGATION MAINLINE - 1.5" DIA. SCH. 40 PVC UNLESS OTHERWISE NOTED
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- X — PROPOSED ZONE VALVE
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4. PLAN IS DIAGRAMMATIC. VARIATION IN HEAD LOCATIONS ON PLANS IS FOR THE SAKE OF GRAPHIC CLARITY. LOCATION OF IRRIGATION MAINLINE, LATERALS & SLEEVING ARE SCHEMATIC ONLY AND SHALL OCCUR IN PLANTING AREAS.
5. CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED TO OBTAIN FULL COVERAGE DESIGNER RESERVES THE RIGHT TO MAKE CHANGES AS NEEDED AT NO ADDITIONAL COST. ADJUST NOZZLE & HEAD POSITIONS AND ADD OR DELETE HEADS OR TUBING AS NECESSARY DEPENDING ON ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL VERIFY DESIGN PRESSURES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.

IRRIGATION PLAN IS DIAGRAMMATIC ONLY

ALL IRRIGATION PIPING AND EQUIPMENT SHALL BE PLACED IN MEDIANS AND PLANTED AREAS AND SLEEVED UNDER ALL HARD SURFACING.

PLAN

SCALE IN FEET

0 20 40

	REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013–IR12–17
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

STATE OF WASHINGTON DARREN C. SANDENO NO. 1424 EXP. 12/06/2021 LANDSCAPE ARCHITECT
02/01/2021

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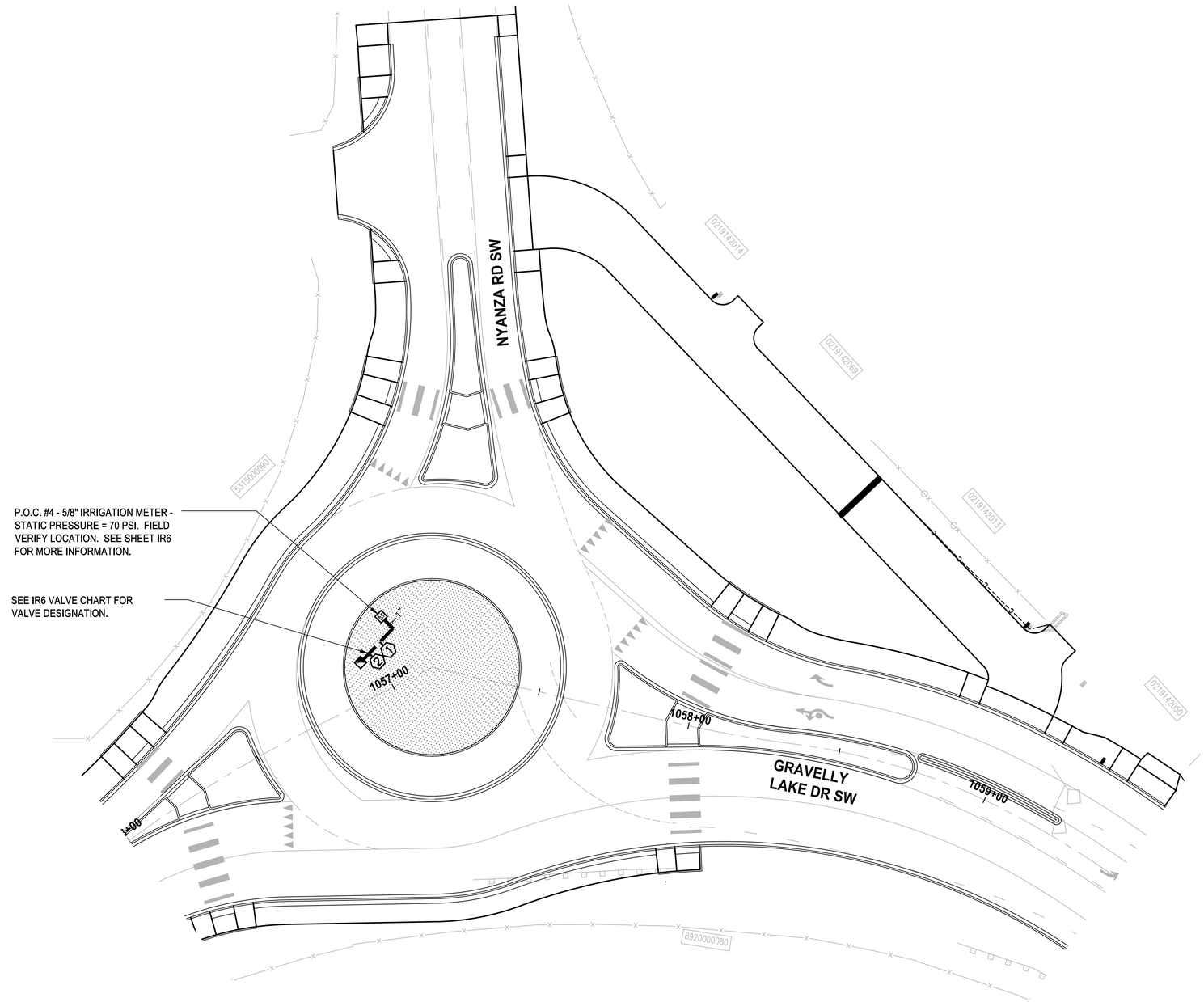
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

IRRIGATION PLAN GRAVELLY LAKE DR SW

DRAWING NO.
110 OF 153
IR4

LAYOUT: IR4 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 1:59:52 PM



PLAN

SCALE IN FEET

0 20 40

LEGEND

- M — PROPOSED IRRIGATION METER LOCATION
- PROPOSED IRRIGATION MAINLINE - 1.5" DIA. SCH. 40 PVC UNLESS OTHERWISE NOTED
- PROPOSED IRRIGATION LATERAL LINE - SIZE VARIES - CL 200 PVC
- PROPOSED IRRIGATION CONDUIT - 4" DIA. SCH. 40 PVC
- X — PROPOSED ZONE VALVE
- BUBBLER IRRIGATION - TWO PER TREE
- SUBSURFACE DRIP IRRIGATION.
- ISOLATION VALVE
- MANUAL DRAIN VALVE

SHEET NOTES:

1. REFER TO IR6 & IR7 FOR CONSTRUCTION NOTES, DETAILS, AND IRRIGATION EQUIPMENT LISTS. REFER TO SEPARATE WRITTEN SPECIFICATIONS FOR DETAILED IRRIGATION SYSTEM INFORMATION.
2. STATIC PRESSURE REPORTED = 70 PSI. CONTRACTOR TO FIELD VERIFY AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
3. DECODER WIRES TO BE EXTENDED TO ALL VALVE MANIFOLD ASSEMBLIES.
4. PLAN IS DIAGRAMMATIC. VARIATION IN HEAD LOCATIONS ON PLANS IS FOR THE SAKE OF GRAPHIC CLARITY. LOCATION OF IRRIGATION MAINLINE, LATERALS & SLEEVING ARE SCHEMATIC ONLY AND SHALL OCCUR IN PLANTING AREAS.
5. CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED TO OBTAIN FULL COVERAGE DESIGNER RESERVES THE RIGHT TO MAKE CHANGES AS NEEDED AT NO ADDITIONAL COST. ADJUST NOZZLE & HEAD POSITIONS AND ADD OR DELETE HEADS OR TUBING AS NECESSARY DEPENDING ON ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL VERIFY DESIGN PRESSURES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.

IRRIGATION PLAN IS DIAGRAMMATIC ONLY

ALL IRRIGATION PIPING AND EQUIPMENT SHALL BE PLACED IN MEDIANS AND PLANTED AREAS AND SLEEVED UNDER ALL HARD SURFACING.

REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013–IR12–17
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

STATE OF WASHINGTON · DARREN C. SANDENO · NO. 1424 EXP. 12/06/2021 · LANDSCAPE ARCHITECT
02/01/2021

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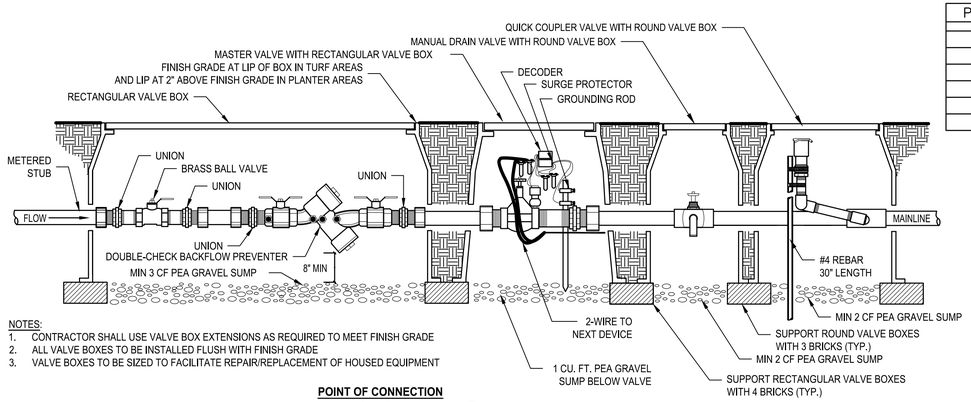
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

IRRIGATION PLAN GRAVELLY LAKE DR SW

DRAWING NO.
111 OF 153
IR5

LAYOUT: IR5 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\995\ces\CADD\DWG PLOTTED BY: toykokat DATE: Tuesday, February 2, 2021 2:00:47 PM



NOTES:
1. CONTRACTOR SHALL USE VALVE BOX EXTENSIONS AS REQUIRED TO MEET FINISH GRADE
2. ALL VALVE BOXES TO BE INSTALLED FLUSH WITH FINISH GRADE
3. VALVE BOXES TO BE SIZED TO FACILITATE REPAIR/REPLACEMENT OF HOUSED EQUIPMENT

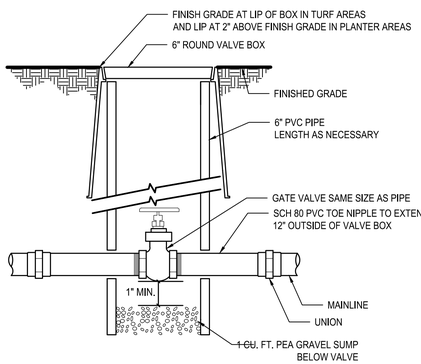
POINT OF CONNECTION
DETAIL 1 TYP
NO SCALE

Valve & Controller Schedule

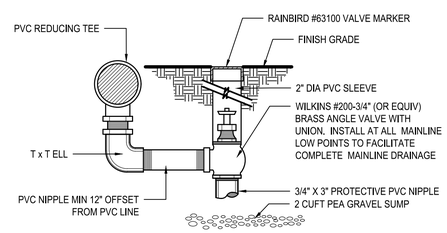
P.O.C #	MFR.	Controller Model	Valve #s	Size
#1	Hunter	PED-ACC-SS	1-9	1.5"
#2	Rainbird	ESP-9V	1-3	3/4"
#3	Rainbird	ESP-9V	1-2	3/4"
#4	Rainbird	ESP-9V	1-2	3/4"

Irrigation Equipment List

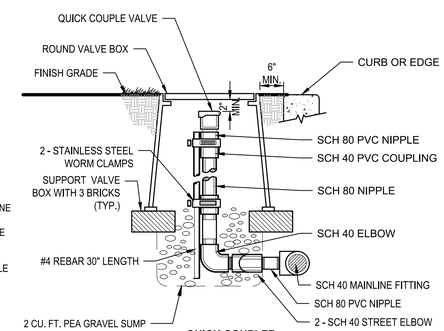
Symbol	MFR.	Ordering #	Product Description
	Rainbird	1404 Bubbler	2.0 gpm pressure compensating full-circle umbrella pattern bubbler
	Rainbird	XFS0912500	Subsurface irrigation tubing with .9 gph emitters with 12" emitter spacing
X	Rainbird	PEB-Series	Electric remote control valve - 100-PEB for all subsurface applications 150-PEB for all bubbler applications
See Detail	Rainbird	3RC	3/4" brass quick coupler
See Detail	Febco	825Y	1.5" backflow preventer
	B & K	107-900 Series	Brass ball valve (schedule 40 unions with brass inserts) match line size
	Wilkins	#200 1/4"	Angle valve for manual drain assembly with key extension
C	Hunter	PED-ACC99-SS	Up to 99 station two-wire irrigation controller on pedestal mount - **See Sheet IR6
NOT SHOWN	Rainbird	ESP-9V2/4	2 & 4 Station battery operated in-box controllers
	Schedule 40 pvc pipe for mainline, install above ground (24" under paved areas)		
	Class 200 pvc pipe for lateral lines, install above ground (24" under paved areas)		
	Class 200 pvc pipe sleeve, install at 24" depth		
NOT SHOWN	Two-Wire system wiring		



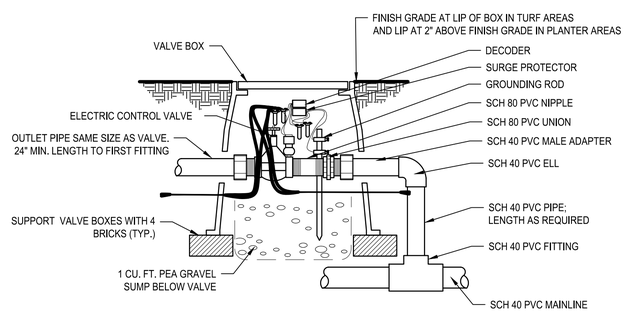
ISOLATION VALVE
DETAIL 2 TYP



MANUAL DRAIN VALVE
DETAIL 3 TYP

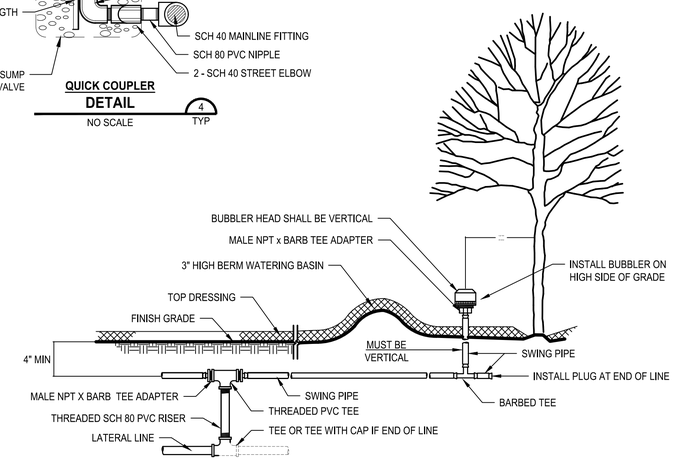


QUICK COUPLER
DETAIL 4 TYP
NO SCALE



NOTE: PROVIDE EXPANSION COILS AT EACH VALVE

CONTROL VALVE BOX
DETAIL 5 TYP
NO SCALE



NOTE: INSTALL TWO (2) BUBBLERS PER TREE WITHIN WATERING BASINS, OPPOSITE AND EQUAL DISTANCES FROM TREE. BUBBLERS SHALL BE VERTICAL AND UNIFORM IN HEIGHT ABOVE TOP DRESSING

BUBBLER
LATERAL TO WATERING BASIN
DETAIL 00 TYP
NO SCALE

IRRIGATION IMPROVEMENTS - ELECTRICAL NOTES

1. 24" LOOP EXPANSION COIL OF WIRE SHALL BE LOCATED AT EACH ELECTRIC VALVE.

2. INSTALL TWO-WIRE SYSTEM TO ALL VALVES. WIRING SHALL BE SIZED APPROPRIATELY FOR LENGTH OF RUN.

3. ALL WIRE SHALL BE UL APPROVED FOR DIRECT BURIAL.

4. ALL ELECTRICAL WORK AND CONNECTIONS SHALL BE INSTALLED AS PER STATE AND LOCAL CODES.

5. SPLICE WIRES ONLY AT CONNECTION POINTS. SUPPLY ECONO VALVE BOX AT ALL ELECTRICAL JUNCTIONS AND NOTE ALL LOCATIONS ON 'AS BUILT' DRAWINGS.

IRRIGATION IMPROVEMENTS - GENERAL NOTES

1. REFER TO THIS SHEET & IR18 FOR IRRIGATION SYSTEM INSTALLATION DETAILS.

2. ALL CONSTRUCTION SHALL COMPLY WITH THE CONTRACT DOCUMENTS AND WASHINGTON DEPARTMENT OF TRANSPORTATION PROJECT SPECIFICATIONS (2018).

3. CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK WITH THE OWNER. CONTRACTOR SHALL SUPPLY ENGINEER WITH A PROJECT WORK PLAN PER WSDOT 8-02.3(2) FOR APPROVAL PRIOR TO BEGINNING WORK. THE INSTALLATION OF PLANT MATERIAL SHALL NOTE BE ALLOWED UNTIL IRRIGATION LAYOUT & COVERAGE TESTS ARE APPROVED BY ENGINEER. ALL CONSTRUCTION CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY UPON RECOGNITION.

4. CONTRACTOR IS RESPONSIBLE FOR A THOROUGH CLEAN-UP FOR HIS/HER RESPECTIVE WORK, DAILY AND AT PROJECT CLOSE-OUT.

5. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING IMPROVEMENTS. DAMAGE TO EXISTING IMPROVEMENTS BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AND/OR QUALIFIED INSTALLERS/TRADES ACCEPTABLE TO THE SOLE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE OWNER.

6. ALL PIPING UNDER HARD SURFACES (INCLUDES CONCRETE, ASPHALT, CRUSHED GRAVEL) SHALL BE SLEEVED WITHIN A SCH. 40 PVC CONDUIT EXTENDING 12 INCHES BEYOND HARD SURFACE EDGE AT 24" DEPTH.

7. ALL CONTROL WIRING NOT IN MAINLINE TRENCH SHALL BE BURIED WITHIN PVC CONDUIT. CONDUIT SHALL BE PLACED 24" BELOW FINISH GRADE. ALL CONDUIT AND FITTINGS SHALL BE SCH. 40.

8. PIPE SIZE SHALL BE THE SAME ON BOTH SIDES OF VALVES.

9. LOCATE ALL VALVES WITHIN ONE (1) FOOT OF THE MAINLINE.

10. WHERE TWO OR MORE VALVE BOXES ARE INSTALLED ADJACENT TO ONE ANOTHER, INSTALL PARALLEL/PERPENDICULAR TO HARD SURFACE AND AT UNIFORM ELEVATION AND DISTANCES RELATIVE TO SURFACES AND ONE ANOTHER.

11. IRRIGATION SITE PLAN IS SCHEMATIC. IRRIGATION PLUMBING AND EQUIPMENT SHALL BE INSTALLED IN LAWN OR SHRUB BED AREAS AND WITHIN PROPERTY BOUNDARIES. THE CONTRACTOR SHALL CONSIDER ALL SITE FEATURES IN THE INSTALLATION OF IRRIGATION IMPROVEMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND INSTALLING ALL IRRIGATION EQUIPMENT NECESSARY FOR A COMPLETE AND FUNCTIONAL IRRIGATION SYSTEM. FIELD VERIFY ALL EXISTING EQUIPMENT LOCATIONS AND REPORT ANY INCONSISTENCIES TO LANDSCAPE ARCHITECT.

12. ALL PVC SOLVENT WELDS WILL BE MADE AS A TWO-STEP PROCESS W/ SEPERATE PRIMER AND GLUE APPLICATIONS. ALL GLUE SHALL BE MANUFACTURED FOR IRRIGATION AND CONDUIT ASSEMBLY ONLY. NO "ONE-STEP" GLUE SHALL BE ALLOWED. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO USE. USE.

13. CONTRACTOR SHALL VERIFY ALL LOCATIONS AND SIZES OF IRRIGATION SLEEVES PRIOR TO CONSTRUCTION AND PROVIDE ANY ADDITIONAL SLEEVING OR UPSIZING REQUIRED PRIOR TO CONSTRUCTION.

14. CONTRACTOR SHALL COORDINATE CONTROLLER LOCATION AND POWER SOURCE WITH CITY AND GENERAL CONTRACTOR PRIOR TO COMMENCING WORK.

	REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-IR12-17
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

STATE OF WASHINGTON DARREN C. SANDENO NO. 1424 EXP. 12/06/2021 LANDSCAPE ARCHITECT
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WWW.BCRADESIGN.COM

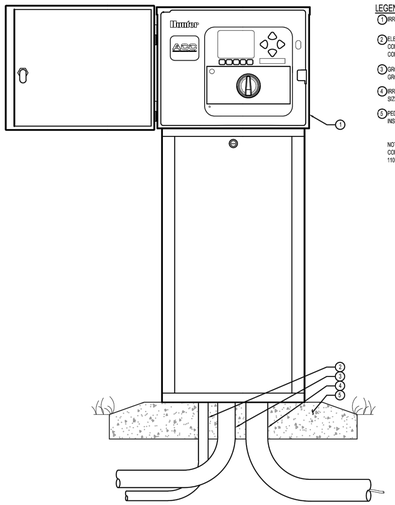
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

IRRIGATION DETAILS & NOTES GRAVELLY LAKE DR SW

DRAWING NO.

IR6

LAYOUT: IR6 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM North Access\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 4:47:21 PM

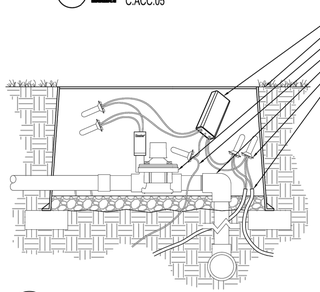


LEGEND:

1. IRRIGATION CONTROLLER (ACC-PED-SS) PER PLAN
2. ELECTRICAL SUPPLY CONDUIT CONNECT TO POWER SOURCE, J-BOX INSIDE CONTROLLER
3. GROUND WIRE CONDUIT GROUND PER ABIC GUIDELINES
4. IRRIGATION CONTROL WIRE IN CONDUIT SEE AND TYPE PER LOCAL CODES
5. PEDESTAL BASE PER PLAN INSURE POSITIVE DRAINAGE AWAY FROM PEDESTAL

NOTE
CONTROLLER SHALL BE HARD-WIRED TO GROUNDED 110 VAC POWER SOURCE

XX ACC - PEDESTAL MOUNT STAINLESS STEEL
Hunter C.ACC.05
NOT TO SCALE

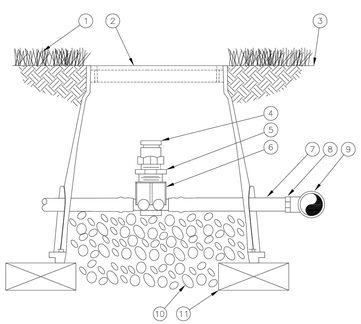


LEGEND:

1. ICD-100 DECODER PER PLAN
2. FINISHED GRADE
3. VALVE PER PLAN
4. TO EARTH GROUND
5. PVC MAIN LINE
6. DBRY-4 (2)
7. JACKETED ID WIRE PATH

NOTE
EARTH GROUND TO BE A MINIMUM OF 8' AWAY FROM DUAL-S AND AT A RIGHT ANGLE TO THE TWO WIRE PATH

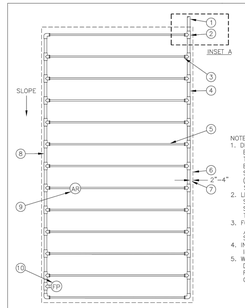
XX ICD-100 DECODER
Hunter C.DICD.01
NOT TO SCALE



1. TURF GRASS
2. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
3. FINISH GRADE
4. ½" AIR RELIEF VALVE: RAIN BIRD ARV050 TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
5. ½" X ¾" PVC REDUCER BUSHING
6. BARB X FEMALE THREAD CONNECTOR: RAIN BIRD XFD-TFA FITTING
7. ½" BLANK DRIPLINE TUBING: RAIN BIRD XF SERIES
8. BARB X MALE THREAD CONNECTOR: RAIN BIRD XFF-MA FITTING
9. PVC TEE CONNECTED TO PVC HEADER PIPE
10. 3" MINIMUM DEPTH OF ¾" WASHED GRAVEL
11. BRICK (1 OF 2)

D XFS SUB-SURFACE DRIPLINE 12-18-2012
N.T.S. 1/2" AIR RELIEF VALVE IN XFS DRIPLINE

XFS Sub-Surface Dripline 0.5 Air Relief Valve In XFS Dripline



NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. FOR SLOPES LESS THAN 3% (3' OF 100' / 0.9M OF 30.5M) DO NOT REQUIRE ANY SPECIAL DESIGN CONSIDERATION.
4. INSTALL AIR RELIEF VALVE AT HIGH POINTS IN DRIP LATERAL.
5. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

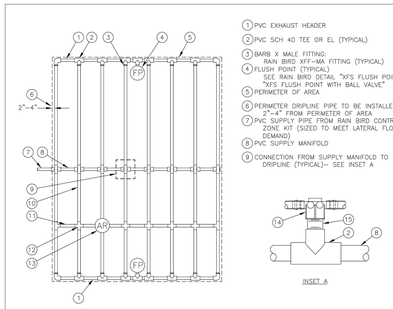
1. PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
2. PVC SCH 40 TEE OR EL (TYPICAL)
3. BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
4. PVC SUPPLY MANIFOLD
5. SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
6. PERIMETER OF AREA
7. PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
8. PVC FLUSH HEADER
9. ⅜" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050 SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION
10. FLUSH POINT: SEE RAIN BIRD XFS DETAILS FOR FLUSH POINT INSTALLATION
11. PVC RISER PIPE
12. TURF OR MULCH
13. FINISH GRADE

XFS Dripline Maximum Lateral Lengths (Feet)

	12" Spacing		18" Spacing		24" Spacing	
Inlet Pressure psi	Nominal Flow (gph)		Nominal Flow (gph)		Nominal Flow (gph)	
	0.6	0.9	0.6	0.9	0.6	0.9
15	273	155	314	250	424	322
20	318	169	353	294	508	368
30	360	230	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	460	290	596	455	780	514

D XFS SUB-SURFACE DRIPLINE 12-18-2012
N.T.S. DOWN SLOPE MEDIAN

XFS Sub-Surface Dripline Down Slope Median



1. PVC EXHAUST HEADER
2. PVC SCH 40 TEE OR EL (TYPICAL)
3. BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
4. FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFS FLUSH POINT" OR "XFS FLUSH POINT WITH BALL VALVE"
5. PERIMETER OF AREA
6. PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
7. PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
8. PVC SUPPLY MANIFOLD
9. CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL)– SEE INSET A
10. SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
11. RAIN BIRD XF SERIES BLANK TUBING
12. BARB X BARB INSERT TEE OR CROSS: RAIN BIRD XFF-TEE OR RAIN BIRD XFD-CROSS (TYPICAL)
13. ⅜" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050 SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION
14. BARB X FEMALE FITTING: RAIN BIRD XFD-TFA-075 FITTING
15. ¾" PVC NIPPLE, LENGTH AS NECESSARY

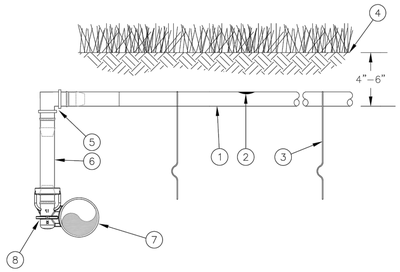
NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XF-SDI DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
3. AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
4. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

XFS Dripline Maximum Lateral Lengths (Feet)

	12" Spacing		18" Spacing		24" Spacing	
Inlet Pressure psi	Nominal Flow (gph)		Nominal Flow (gph)		Nominal Flow (gph)	
	0.6	0.9	0.6	0.9	0.6	0.9
15	273	155	314	250	424	322
20	318	169	353	294	508	368
30	360	230	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	460	290	596	455	780	514

D XFS SUB-SURFACE DRIPLINE 12-18-2012
N.T.S. CENTER FEED LAYOUT

XFS Sub-Surface Dripline Center Feed Layout

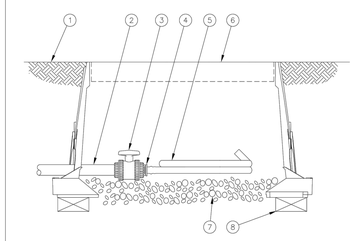


1. SUB-SURFACE DRIPLINE: RAIN BIRD XFS-CV SERIES DRIPLINE NON-POTABLE: XFS-CVP DRIPLINE
2. INLINE DRIP EMITTER OUTLET
3. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (TYPICAL)
4. TURF/FINISH GRADE OR SHRUB BED WITH MULCH
5. BARB X BARB FITTING RAIN BIRD XFF-ELBOW
6. 1/2" RAIN BIRD XF SERIES BLANK TUBING
7. QF HEADER
8. PRE-INSTALLED BARBED FITTING

NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
3. INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN STAKES.

D XFS-CV SUB-SURFACE DRIPLINE 05-17-2017
N.T.S. ATTACHED TO QF HEADER

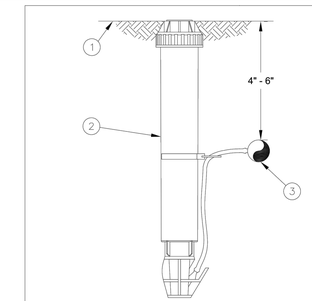
XFS-CV Sub-Surface Dripline Attached To QF Header



1. FINISH GRADE
2. PVC DRIP MANIFOLD PIPE
3. PVC 1" X ⅜" TRUE UNION BALL VALVE
4. EASY FIT MALE X BARB ADAPTER: RAIN BIRD XFF-MA-075
5. SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES BLANK TUBING
6. 12-INCH VALVE BOX WITH COVER: RAIN BIRD VB-STD
7. 3-INCH MINIMUM DEPTH OF ¾" WASHED GRAVEL
8. BRICK (1 OF 2)

D XFS SUB-SURFACE DRIPLINE 12-18-2012
N.T.S. FLUSH POINT WITH BALL VALVE

XFS Sub-Surface Dripline Flush Point With Ball Valve

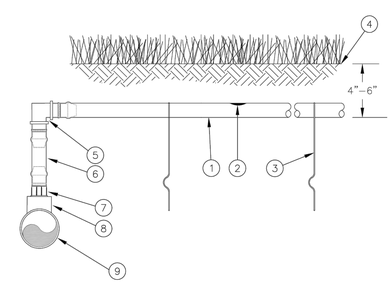


1. FINISH GRADE/TURF
2. OPERATION INDICATOR RAIN BIRD MODEL: OPERIND
3. SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE

NOTE:
1. INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.
2. VAN NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE, SET THE ARC TO ¼ PATTERN. THE FLOW FROM THE NOZZLE, 0.3 GPM, SHOULD BE ACCOUNTED FOR IN THE SYSTEM DESIGN.

D XFS SUB-SURFACE DRIPLINE 12-18-2012
N.T.S. OPERATION INDICATOR

XFS Sub-Surface Dripline Operation Indicator



1. SUB-SURFACE/ON-SURFACE DRIPLINE: RAIN BIRD XFS-CV SERIES DRIPLINE NON-POTABLE: XFS-CVP DRIPLINE
2. INLINE DRIP EMITTER OUTLET
3. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (TYPICAL)
4. TURF/FINISH GRADE OR SHRUB BED WITH MULCH
5. BARB X BARB INSERT RAIN BIRD XFF-ELBOW
6. 1/2" RAIN BIRD XF SERIES BLANK TUBING
7. TWIST LOCK FITTING: TLF-MPT8-0600
8. 1 1/2" X 1 1/2" X 3/4" SST PVC TEE
9. PVC LATERAL MINIMUM 1 1/2" IN DIAMETER DEPTH PER SPECIFICATION

NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
3. INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN STAKES.

D XFS-CV SUB-SURFACE DRIPLINE INSERT 05-17-2017
N.T.S. ADAPTER FOR 1 1/2" OR LARGER PVC

XFS-CV Sub-Surface Dripline Adapter For PVC

STATE OF WASHINGTON · DARREN C. SANDENO · NO. 4424 EXP. 12/06/2021 · LANDSCAPE ARCHITECT
02/01/2021

REVISIONS	DATE	BY

DESIGNED D. SANDENO
DRAWN D. BAILEY
CHECKED F. IDE
APPROVED A.FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-IR12-17
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ·1996·

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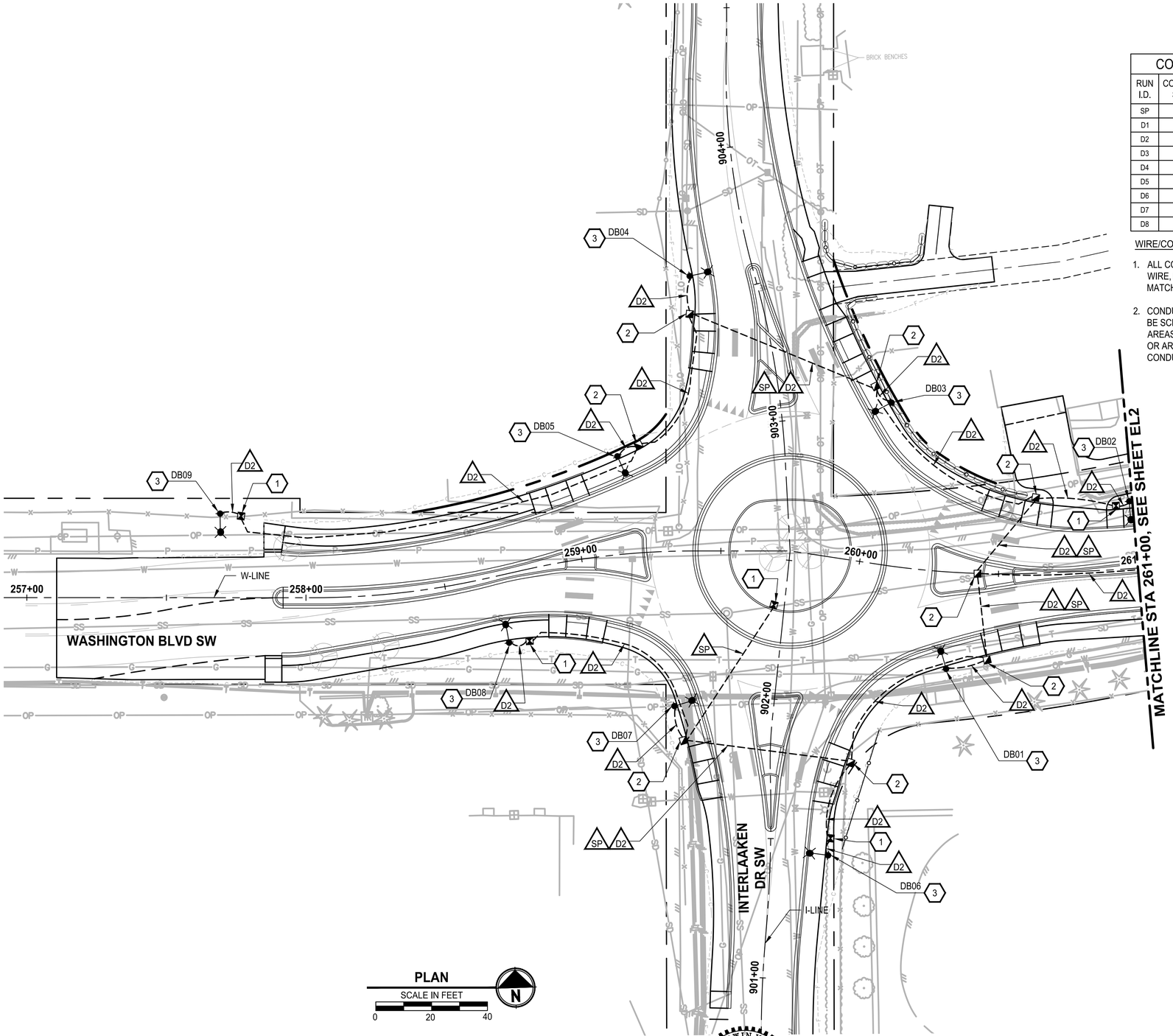
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

IRRIGATION DETAILS & NOTES GRAVELLY LAKE DR SW

DRAWING NO.
113 OF 153
IR7

LAYOUT: IR7 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: tayokat DATE: Monday, February 1, 2021 4:47:25 PM



CONDUIT/WIRE SCHEDULE - SERVICE D						
RUN I.D.	CONDUIT SIZE	SERVICE D				SPARE
		CIRCUIT A	CIRCUIT B	CIRCUIT C	CIRCUIT D	
SP	2"					X
D1	2"	2 X #8				
D2	2"		2 X #8			
D3	2"			2 X #8		
D4	2"				2 X #8	
D5	2"				2 X #6	
D6	2"			2 X #8	2 X #6	
D7	2"		2 X #8	2 X #8	2 X #6	
D8	2"	2 X #8	2 X #8	2 X #8	2 X #6	

WIRE/CONDUIT SCHEDULE NOTES:

1. ALL CONDUITS CONTAINING CONDUCTORS SHALL INCLUDE A GROUND WIRE, NOT SHOWN IN THE WIRE/CONDUIT SCHEDULE. GROUND WIRE SHALL MATCH THE LARGEST CONDUCTOR (MIN. #8 UNLESS OTHERWISE NOTED).
2. CONDUIT INSTALLED UNDER THE SIDEWALK OR NON-PAVED AREAS SHALL BE SCHEDULE 40 PVC. CONDUIT INSTALLED IN EXISTING/NEW PAVED AREAS, WHETHER IN THE ROADWAY AREA, SHOULDER AREA, DRIVEWAYS, OR AREAS OTHER THAN THE ROADWAY, SHALL BE SCHEDULE 80 PVC. CONDUITS FOR POLE RISERS SHALL BE RIGID GALVANIZED STEEL.

GENERAL NOTES

1. UTILITY LOCATION PRIOR TO CONSTRUCTION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONFLICTS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
2. JUNCTION BOXES SHALL BE INSTALLED FLUSH AND ADJACENT TO SIDEWALK/CURB WITH A CONCRETE COLLAR (WHERE APPLICABLE), UNLESS OTHERWISE NOTED ON THE PLANS.
3. CONDUIT LOCATIONS SHOWN ON THE PLAN ARE SCHEMATIC.
4. ALL EQUIPMENT AND CONDUIT SHALL BE GROUNDED PER NEC REQUIREMENTS.

ILLUMINATION NOTES

1. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 1 PER WSDOT STANDARD PLAN J-40.10-04.
2. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 2 PER WSDOT STANDARD PLAN J-40.10-04.
3. CONSTRUCT STREET LIGHT STANDARD FOUNDATION, POLE, ARM(S) AND LUMINAIRE(S) PER COL STD DWG IS-06, AND LUMINAIRE SCHEDULES ON SHEET EL12.
4. INSTALL CONDUIT INTO CABINET AT BACK OF WALL. SPLICE SIGN BACK-LIGHTING WIRE TO CIRCUIT IN CABINET.
5. CONSTRUCT FOUNDATION PER COL STD DWG IS-04. INSTALL SERVICE CABINET TYPE D PER WSDOT STANDARD PLAN J-10.21-01 ON FOUNDATION.
6. EXISTING PSE LUMINAIRE TO REMAIN.
7. EXISTING PSE LUMINAIRE TO BE REMOVED (BY PSE).
8. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 8 PER WSDOT STANDARD PLAN J-40.30-04.
9. INSTALL CONDUIT AND SERVICE WIRING TO EXISTING UTILITY POLE. INSTALL CONDUIT TO 10' UP THE POLE WITH SUFFICIENT SERVICE WIRE TO REACH POINT OF CONNECTION PER PSE STANDARDS. COORDINATE WITH PSE TO COMPLETE SERVICE CONNECTION.

SIGNAL REMOVAL NOTES

1. REMOVE AND SALVAGE TO CITY EXISTING STEEL SIGNAL POLE AND ALL ASSOCIATED EQUIPMENT AND SIGNAL HEADS. REMOVE FOUNDATION, WIRE, CONDUIT TO NEAREST JUNCTION BOX(ES) AND JUNCTION BOX(ES).
2. REMOVE AND SALVAGE TO CITY EXISTING SIGNAL CONTROLLER AND/OR SERVICE CABINET(S) AND ALL ALL ASSOCIATED EQUIPMENT TO CITY. REMOVE FOUNDATION (IF PRESENT), WIRE AND CONDUIT TO NEAREST JUNCTION BOX. COORDINATE DECOMMISSIONING OF SERVICE WITH PSE PRIOR TO REMOVAL.
3. REMOVE EXISTING WOOD POLE AND SPAN WIRE. SALVAGE SIGNAL HEADS TO CITY.

ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
- JUNCTION BOX - TYPE 2
- JUNCTION BOX - TYPE 8
- UNDERGROUND CONDUIT
- # WIRE NOTE
- # ILLUMINATION NOTE
- # SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–EL13–15
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

MARC EDWIN KENDALL STATE OF WASHINGTON 52658 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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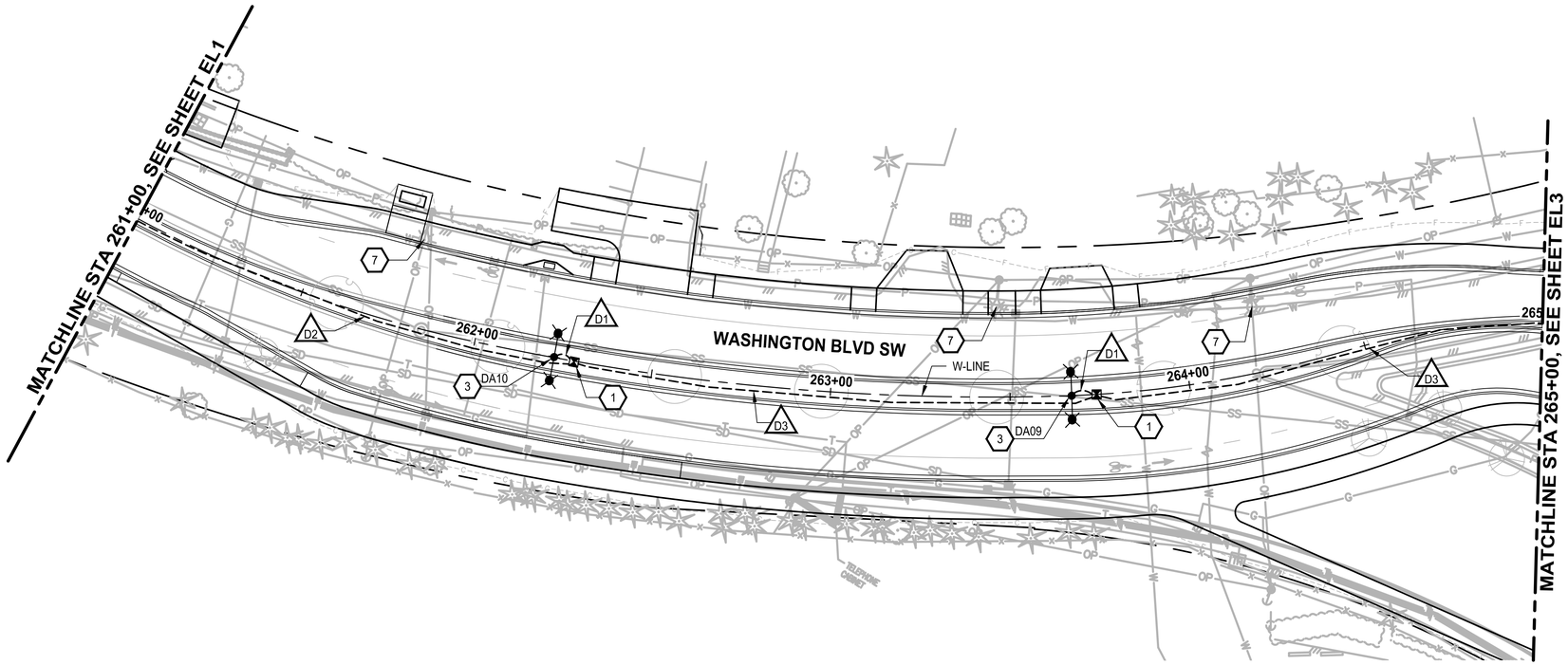
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN WASHINGTON BLVD SW

DRAWING NO.
114 OF 153
EL1

PATH: U:\PSO\Projects\Clients\3047–City of Lakewood\214–3047–013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 2:47:47 PM LAYOUT: EL1



PLAN

SCALE IN FEET

0 20 40

GENERAL NOTES

1. UTILITY LOCATION PRIOR TO CONSTRUCTION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONFLICTS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
2. JUNCTION BOXES SHALL BE INSTALLED FLUSH AND ADJACENT TO SIDEWALK/CURB WITH A CONCRETE COLLAR (WHERE APPLICABLE), UNLESS OTHERWISE NOTED ON THE PLANS.
3. CONDUIT LOCATIONS SHOWN ON THE PLAN ARE SCHEMATIC.
4. ALL EQUIPMENT AND CONDUIT SHALL BE GROUNDED PER NEC REQUIREMENTS.

ILLUMINATION NOTES

1. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 1 PER WSDOT STANDARD PLAN J-40.10-04.
2. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 2 PER WSDOT STANDARD PLAN J-40.10-04.
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4. INSTALL CONDUIT INTO CABINET AT BACK OF WALL. SPLICE SIGN BACK-LIGHTING WIRE TO CIRCUIT IN CABINET.
5. CONSTRUCT FOUNDATION PER COL STD DWG IS-04. INSTALL SERVICE CABINET TYPE D PER WSDOT STANDARD PLAN J-10.21-01 ON FOUNDATION.
6. EXISTING PSE LUMINAIRE TO REMAIN.
7. EXISTING PSE LUMINAIRE TO BE REMOVED (BY PSE).
8. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 8 PER WSDOT STANDARD PLAN J-40.30-04.
9. INSTALL CONDUIT AND SERVICE WIRING TO EXISTING UTILITY POLE. INSTALL CONDUIT TO 10' UP THE POLE WITH SUFFICIENT SERVICE WIRE TO REACH POINT OF CONNECTION PER PSE STANDARDS. COORDINATE WITH PSE TO COMPLETE SERVICE CONNECTION.

SIGNAL REMOVAL NOTES

1. REMOVE AND SALVAGE TO CITY EXISTING STEEL SIGNAL POLE AND ALL ASSOCIATED EQUIPMENT AND SIGNAL HEADS. REMOVE FOUNDATION, WIRE, CONDUIT TO NEAREST JUNCTION BOX(ES) AND JUNCTION BOX(ES).
2. REMOVE AND SALVAGE TO CITY EXISTING SIGNAL CONTROLLER AND/OR SERVICE CABINET(S) AND ALL ALL ASSOCIATED EQUIPMENT TO CITY. REMOVE FOUNDATION (IF PRESENT), WIRE AND CONDUIT TO NEAREST JUNCTION BOX. COORDINATE DECOMMISSIONING OF SERVICE WITH PSE PRIOR TO REMOVAL.
3. REMOVE EXISTING WOOD POLE AND SPAN WIRE. SALVAGE SIGNAL HEADS TO CITY.

ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
- JUNCTION BOX - TYPE 2
- JUNCTION BOX - TYPE 8
- UNDERGROUND CONDUIT
- # WIRE NOTE
- # ILLUMINATION NOTE
- # SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

CONDUIT/WIRE SCHEDULE - SERVICE D

RUN I.D.	CONDUIT SIZE	SERVICE D		SPARE
		CIRCUIT A	CIRCUIT B	
SP	2"			X
D1	2"	2 X #8		
D2	2"		2 X #8	
D3	2"	2 X #8	2 X #8	

WIRE/CONDUIT SCHEDULE NOTES:

1. ALL CONDUITS CONTAINING CONDUCTORS SHALL INCLUDE A GROUND WIRE, NOT SHOWN IN THE WIRE/CONDUIT SCHEDULE. GROUND WIRE SHALL MATCH THE LARGEST CONDUCTOR (MIN. #8 UNLESS OTHERWISE NOTED).
2. CONDUIT INSTALLED UNDER THE SIDEWALK OR NON-PAVED AREAS SHALL BE SCHEDULE 40 PVC. CONDUIT INSTALLED IN EXISTING/NEW PAVED AREAS, WHETHER IN THE ROADWAY AREA, SHOULDER AREA, DRIVEWAYS, OR AREAS OTHER THAN THE ROADWAY, SHALL BE SCHEDULE 80 PVC. CONDUITS FOR POLE RISERS SHALL BE RIGID GALVANIZED STEEL.

REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013–EL13–15
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD, WA 1996

MARC EDWIN KENDALL — STATE OF WASHINGTON — 52658 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN WASHINGTON BLVD SW

DRAWING NO.
115 OF 153
EL2

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 2:48:18 PM
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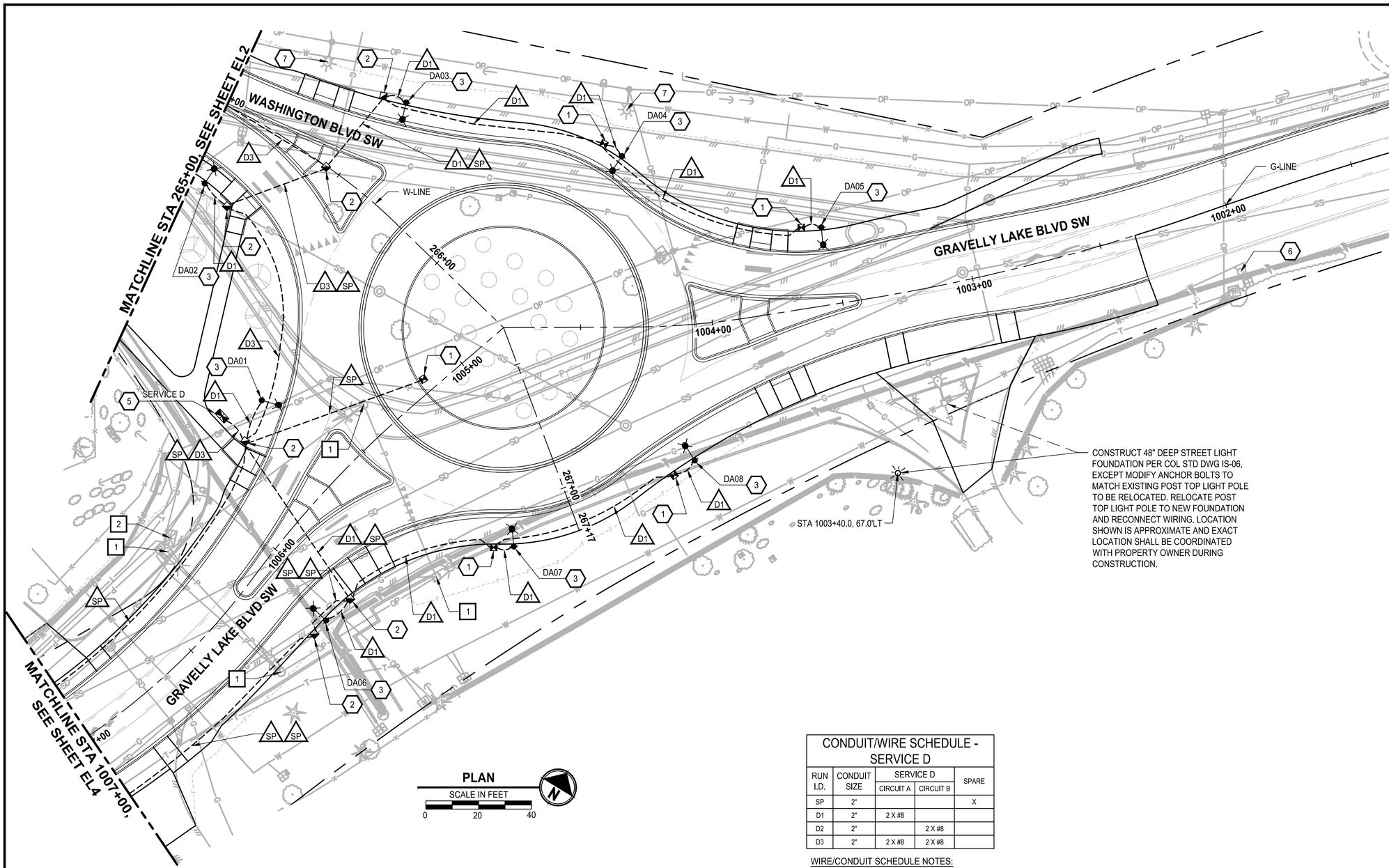

GENERAL NOTES

1. UTILITY LOCATION PRIOR TO CONSTRUCTION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONFLICTS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
2. JUNCTION BOXES SHALL BE INSTALLED FLUSH AND ADJACENT TO SIDEWALK/CURB WITH A CONCRETE COLLAR (WHERE APPLICABLE), UNLESS OTHERWISE NOTED ON THE PLANS.
3. CONDUIT LOCATIONS SHOWN ON THE PLAN ARE SCHEMATIC.
4. ALL EQUIPMENT AND CONDUIT SHALL BE GROUNDED PER NEC REQUIREMENTS.

ILLUMINATION NOTES

1. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 1 PER WSDOT STANDARD PLAN J-40.10-04.
2. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 2 PER WSDOT STANDARD PLAN J-40.10-04.
3. CONSTRUCT STREET LIGHT STANDARD FOUNDATION, POLE, ARM(S) AND LUMINAIRE(S) PER COL STD DWG IS-06, AND LUMINAIRE SCHEDULES ON SHEET EL12.
4. INSTALL CONDUIT INTO CABINET AT BACK OF WALL. SPLICE SIGN BACK-LIGHTING WIRE TO CIRCUIT IN CABINET.
5. CONSTRUCT FOUNDATION PER COL STD DWG IS-04. INSTALL SERVICE CABINET TYPE D PER WSDOT STANDARD PLAN J-10.21-01 ON FOUNDATION.
6. EXISTING PSE LUMINAIRE TO REMAIN.
7. EXISTING PSE LUMINAIRE TO BE REMOVED (BY PSE).
8. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 8 PER WSDOT STANDARD PLAN J-40.30-04.
9. INSTALL CONDUIT AND SERVICE WIRING TO EXISTING UTILITY POLE. INSTALL CONDUIT TO 10' UP THE POLE WITH SUFFICIENT SERVICE WIRE TO REACH POINT OF CONNECTION PER PSE STANDARDS. COORDINATE WITH PSE TO COMPLETE SERVICE CONNECTION.

SIGNAL REMOVAL NOTES

1. REMOVE AND SALVAGE TO CITY EXISTING STEEL SIGNAL POLE AND ALL ASSOCIATED EQUIPMENT AND SIGNAL HEADS. REMOVE FOUNDATION, WIRE, CONDUIT TO NEAREST JUNCTION BOX(ES) AND JUNCTION BOX(ES).
2. REMOVE AND SALVAGE TO CITY EXISTING SIGNAL CONTROLLER AND/OR SERVICE CABINET(S) AND ALL ALL ASSOCIATED EQUIPMENT TO CITY. REMOVE FOUNDATION (IF PRESENT), WIRE AND CONDUIT TO NEAREST JUNCTION BOX. COORDINATE DECOMMISSIONING OF SERVICE WITH PSE PRIOR TO REMOVAL.
3. REMOVE EXISTING WOOD POLE AND SPAN WIRE. SALVAGE SIGNAL HEADS TO CITY.

ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
- JUNCTION BOX - TYPE 2
- JUNCTION BOX - TYPE 8
- UNDERGROUND CONDUIT
- # WIRE NOTE
- # ILLUMINATION NOTE
- # SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

CONDUIT/WIRE SCHEDULE - SERVICE D

RUN I.D.	CONDUIT SIZE	SERVICE D		SPARE
		CIRCUIT A	CIRCUIT B	
SP	2"			X
D1	2"	2 X #8		
D2	2"		2 X #8	
D3	2"	2 X #8	2 X #8	

WIRE/CONDUIT SCHEDULE NOTES:

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	REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–EL13–15
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DATE FEBRUARY 2021

CITY OF LAKEWOOD, WA #1996

MARC EDWIN KENDALL, STATE OF WASHINGTON, 52658, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN GRAVELLY LAKE BLVD

DRAWING NO. 116 OF 153
EL3

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 2:48:54 PM
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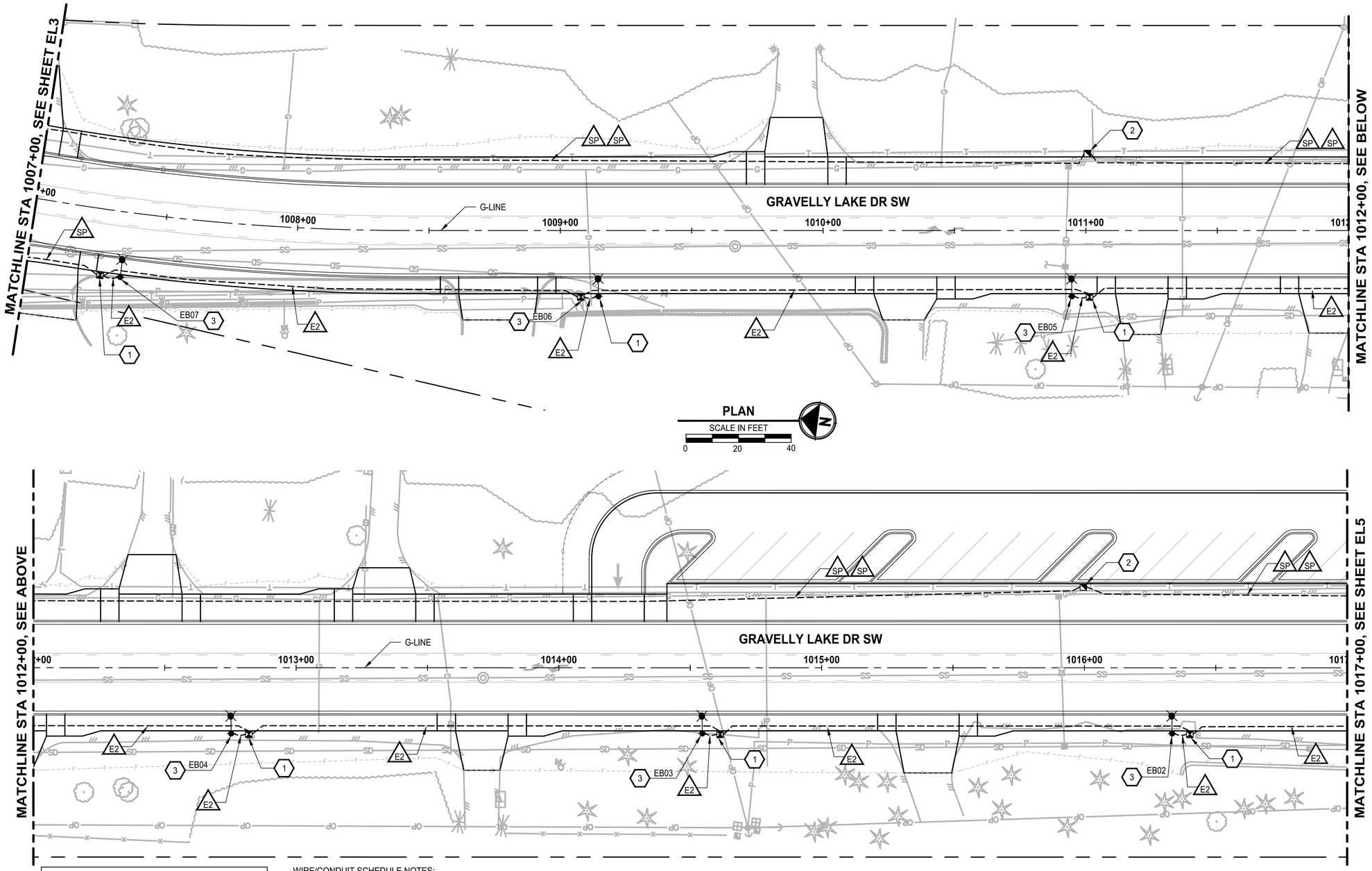

GENERAL NOTES

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ILLUMINATION NOTES

1. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 1 PER WSDOT STANDARD PLAN J-40.10-04.
2. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 2 PER WSDOT STANDARD PLAN J-40.10-04.
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4. INSTALL CONDUIT INTO CABINET AT BACK OF WALL. SPLICE SIGN BACK-LIGHTING WIRE TO CIRCUIT IN CABINET.
5. CONSTRUCT FOUNDATION PER COL STD DWG IS-04. INSTALL SERVICE CABINET TYPE D PER WSDOT STANDARD PLAN J-10.21-01 ON FOUNDATION.
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SIGNAL REMOVAL NOTES

1. REMOVE AND SALVAGE TO CITY EXISTING STEEL SIGNAL POLE AND ALL ASSOCIATED EQUIPMENT AND SIGNAL HEADS. REMOVE FOUNDATION, WIRE, CONDUIT TO NEAREST JUNCTION BOX(ES) AND JUNCTION BOX(ES).
2. REMOVE AND SALVAGE TO CITY EXISTING SIGNAL CONTROLLER AND/OR SERVICE CABINET(S) AND ALL ALL ASSOCIATED EQUIPMENT TO CITY. REMOVE FOUNDATION (IF PRESENT), WIRE AND CONDUIT TO NEAREST JUNCTION BOX. COORDINATE DECOMMISSIONING OF SERVICE WITH PSE PRIOR TO REMOVAL.
3. REMOVE EXISTING WOOD POLE AND SPAN WIRE. SALVAGE SIGNAL HEADS TO CITY.

ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
- JUNCTION BOX - TYPE 2
- JUNCTION BOX - TYPE 8
- UNDERGROUND CONDUIT
- # WIRE NOTE
- # ILLUMINATION NOTE
- # SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

CONDUIT/WIRE SCHEDULE - SERVICE E

RUN I.D.	CONDUIT SIZE	SERVICE E			SPARE
		CIRCUIT A	CIRCUIT B	CIRCUIT C	
SP	2"				X
E1	2"	2 X #8			
E2	2"		2 X #8		
E3	2"			2 X #8	
E4	2"	2 X #8	2 X #8		
E5	2"	2 X #8		2 X #8	
E6	2"	2 X #8	2 X #8	2 X #8	

WIRE/CONDUIT SCHEDULE NOTES:

1. ALL CONDUITS CONTAINING CONDUCTORS SHALL INCLUDE A GROUND WIRE, NOT SHOWN IN THE WIRE/CONDUIT SCHEDULE. GROUND WIRE SHALL MATCH THE LARGEST CONDUCTOR (MIN. #8 UNLESS OTHERWISE NOTED).
2. CONDUIT INSTALLED UNDER THE SIDEWALK OR NON-PAVED AREAS SHALL BE SCHEDULE 40 PVC. CONDUIT INSTALLED IN EXISTING/NEW PAVED AREAS, WHETHER IN THE ROADWAY AREA, SHOULDER AREA, DRIVEWAYS, OR AREAS OTHER THAN THE ROADWAY, SHALL BE SCHEDULE 80 PVC. CONDUITS FOR POLE RISERS SHALL BE RIGID GALVANIZED STEEL.

PLAN
SCALE IN FEET
0 20 40

REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–EL16–20
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

MARC EDWIN KENDALL STATE OF WASHINGTON 52658 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN GRAVELLY LAKE DR SW

DRAWING NO. 117 OF 153
EL4

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toylokat DATE: Tuesday, February 2, 2021 2:56:21 PM
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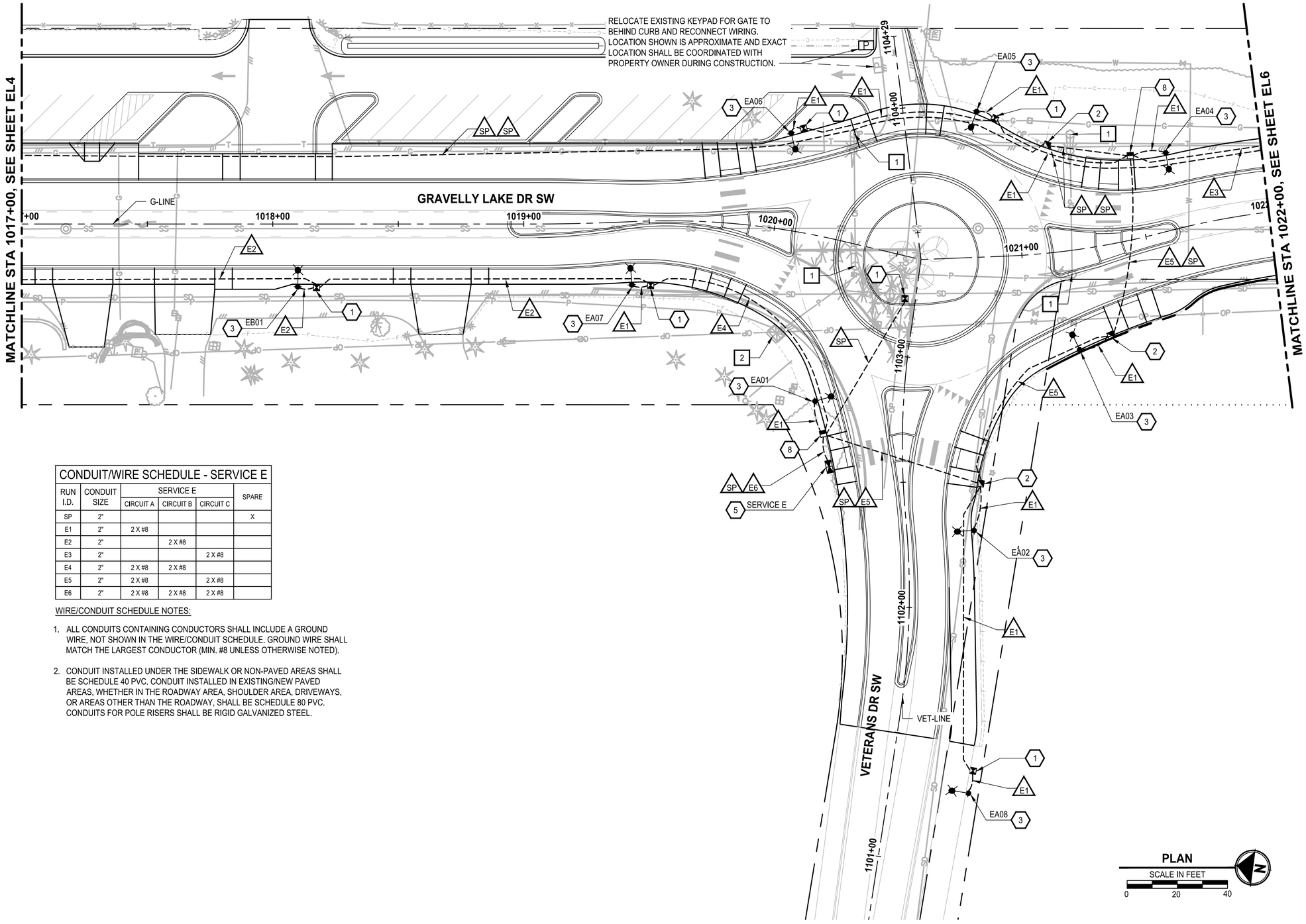

GENERAL NOTES

1. UTILITY LOCATION PRIOR TO CONSTRUCTION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONFLICTS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
2. JUNCTION BOXES SHALL BE INSTALLED FLUSH AND ADJACENT TO SIDEWALK/CURB WITH A CONCRETE COLLAR (WHERE APPLICABLE), UNLESS OTHERWISE NOTED ON THE PLANS.
3. CONDUIT LOCATIONS SHOWN ON THE PLAN ARE SCHEMATIC.
4. ALL EQUIPMENT AND CONDUIT SHALL BE GROUNDED PER NEC REQUIREMENTS.

ILLUMINATION NOTES

1. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 1 PER WSDOT STANDARD PLAN J-40.10-04.
2. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 2 PER WSDOT STANDARD PLAN J-40.10-04.
3. CONSTRUCT STREET LIGHT STANDARD FOUNDATION, POLE, ARM(S) AND LUMINAIRE(S) PER COL STD DWG IS-06, AND LUMINAIRE SCHEDULES ON SHEET EL12.
4. INSTALL CONDUIT INTO CABINET AT BACK OF WALL. SPLICE SIGN BACK-LIGHTING WIRE TO CIRCUIT IN CABINET.
5. CONSTRUCT FOUNDATION PER COL STD DWG IS-04. INSTALL SERVICE CABINET TYPE D PER WSDOT STANDARD PLAN J-10.21-01 ON FOUNDATION.
6. EXISTING PSE LUMINAIRE TO REMAIN.
7. EXISTING PSE LUMINAIRE TO BE REMOVED (BY PSE).
8. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 8 PER WSDOT STANDARD PLAN J-40.30-04.
9. INSTALL CONDUIT AND SERVICE WIRING TO EXISTING UTILITY POLE. INSTALL CONDUIT TO 10' UP THE POLE WITH SUFFICIENT SERVICE WIRE TO REACH POINT OF CONNECTION PER PSE STANDARDS. COORDINATE WITH PSE TO COMPLETE SERVICE CONNECTION.

SIGNAL REMOVAL NOTES

1. REMOVE AND SALVAGE TO CITY EXISTING STEEL SIGNAL POLE AND ALL ASSOCIATED EQUIPMENT AND SIGNAL HEADS. REMOVE FOUNDATION, WIRE, CONDUIT TO NEAREST JUNCTION BOX(ES) AND JUNCTION BOX(ES).
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3. REMOVE EXISTING WOOD POLE AND SPAN WIRE. SALVAGE SIGNAL HEADS TO CITY.

ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
- JUNCTION BOX - TYPE 2
- JUNCTION BOX - TYPE 8
- UNDERGROUND CONDUIT
- WIRE NOTE
- ILLUMINATION NOTE
- SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

PLAN
SCALE IN FEET
0 20 40

CONDUIT/WIRE SCHEDULE - SERVICE E

RUN I.D.	CONDUIT SIZE	SERVICE E			SPARE
		CIRCUIT A	CIRCUIT B	CIRCUIT C	
SP	2"				X
E1	2"	2 X #8			
E2	2"		2 X #8		
E3	2"			2 X #8	
E4	2"	2 X #8	2 X #8		
E5	2"	2 X #8		2 X #8	
E6	2"	2 X #8	2 X #8	2 X #8	

WIRE/CONDUIT SCHEDULE NOTES:

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REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-EL16-20
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

MARC EDWIN KENDALL STATE OF WASHINGTON 52858 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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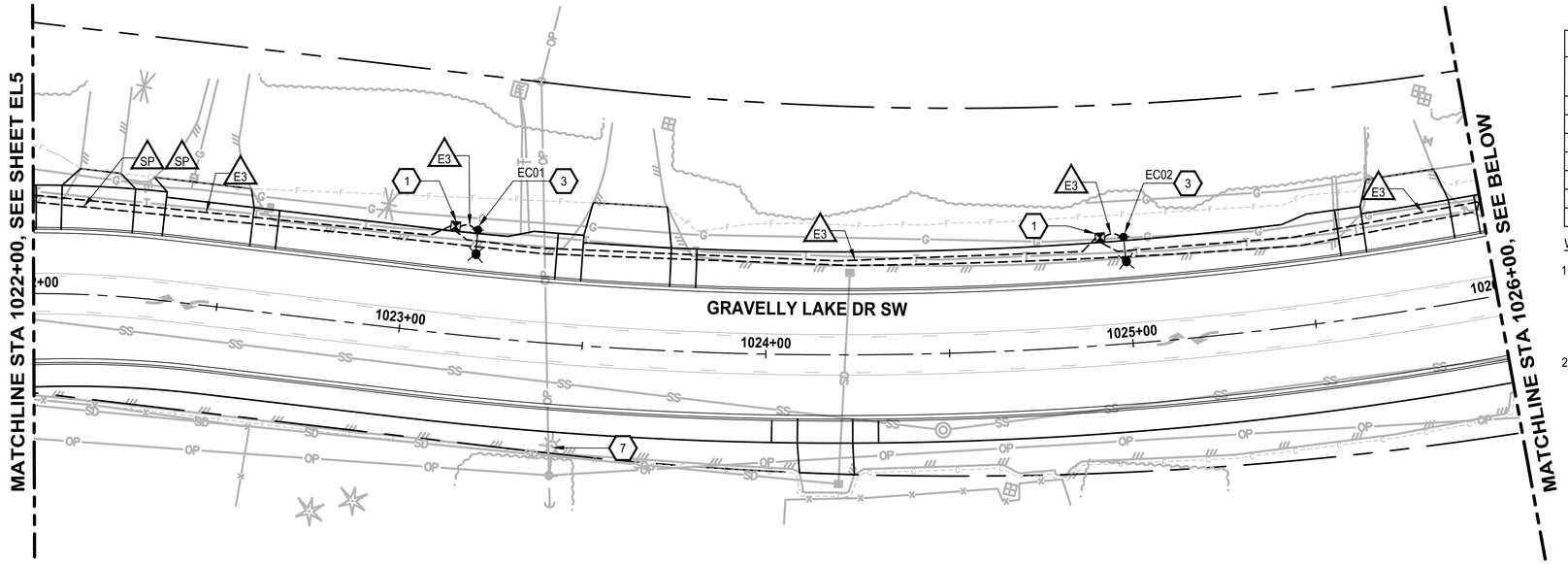
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN GRAVELLY LAKE DR SW

DRAWING NO.
118 OF 153
EL5

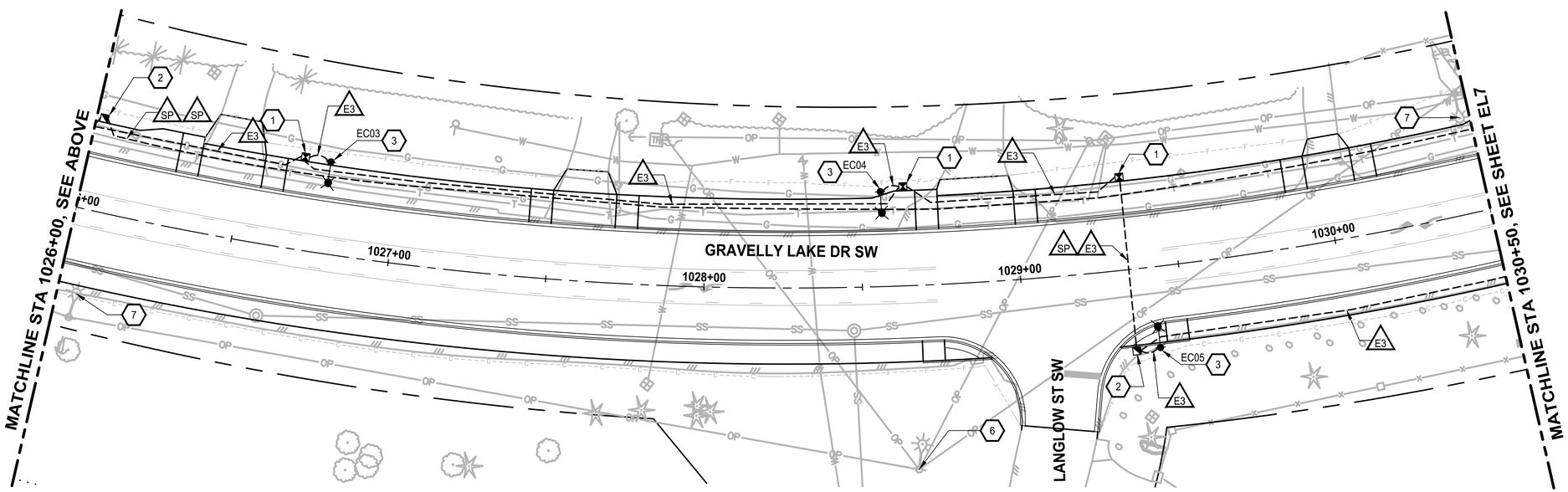
LAYOUT: EL5 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013_JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toylokat DATE: Tuesday, February 2, 2021 2:57:01 PM



PLAN

SCALE IN FEET

0 20 40



PLAN

SCALE IN FEET

0 20 40

CONDUIT/WIRE SCHEDULE - SERVICE E

RUN I.D.	CONDUIT SIZE	SERVICE E			SPARE
		CIRCUIT A	CIRCUIT B	CIRCUIT C	
SP	2"				X
E1	2"	2 X #8			
E2	2"		2 X #8		
E3	2"			2 X #8	
E4	2"	2 X #8	2 X #8		
E5	2"	2 X #8		2 X #8	
E6	2"	2 X #8	2 X #8	2 X #8	

WIRE/CONDUIT SCHEDULE NOTES:

1. ALL CONDUITS CONTAINING CONDUCTORS SHALL INCLUDE A GROUND WIRE, NOT SHOWN IN THE WIRE/CONDUIT SCHEDULE. GROUND WIRE SHALL MATCH THE LARGEST CONDUCTOR (MIN. #8 UNLESS OTHERWISE NOTED).
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GENERAL NOTES

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3. CONDUIT LOCATIONS SHOWN ON THE PLAN ARE SCHEMATIC.
4. ALL EQUIPMENT AND CONDUIT SHALL BE GROUNDED PER NEC REQUIREMENTS.

ILLUMINATION NOTES

1. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 1 PER WSDOT STANDARD PLAN J-40.10-04.
2. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 2 PER WSDOT STANDARD PLAN J-40.10-04.
3. CONSTRUCT STREET LIGHT STANDARD FOUNDATION, POLE, ARM(S) AND LUMINAIRE(S) PER COL STD DWG IS-06, AND LUMINAIRE SCHEDULES ON SHEET EL12.
4. INSTALL CONDUIT INTO CABINET AT BACK OF WALL. SPLICE SIGN BACK-LIGHTING WIRE TO CIRCUIT IN CABINET.
5. CONSTRUCT FOUNDATION PER COL STD DWG IS-04. INSTALL SERVICE CABINET TYPE D PER WSDOT STANDARD PLAN J-10.21-01 ON FOUNDATION.
6. EXISTING PSE LUMINAIRE TO REMAIN.
7. EXISTING PSE LUMINAIRE TO BE REMOVED (BY PSE).
8. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 8 PER WSDOT STANDARD PLAN J-40.30-04.
9. INSTALL CONDUIT AND SERVICE WIRING TO EXISTING UTILITY POLE. INSTALL CONDUIT TO 10' UP THE POLE WITH SUFFICIENT SERVICE WIRE TO REACH POINT OF CONNECTION PER PSE STANDARDS. COORDINATE WITH PSE TO COMPLETE SERVICE CONNECTION.

SIGNAL REMOVAL NOTES

1. REMOVE AND SALVAGE TO CITY EXISTING STEEL SIGNAL POLE AND ALL ASSOCIATED EQUIPMENT AND SIGNAL HEADS. REMOVE FOUNDATION, WIRE, CONDUIT TO NEAREST JUNCTION BOX(ES) AND JUNCTION BOX(ES).
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3. REMOVE EXISTING WOOD POLE AND SPAN WIRE. SALVAGE SIGNAL HEADS TO CITY.

ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
- JUNCTION BOX - TYPE 2
- JUNCTION BOX - TYPE 8
- UNDERGROUND CONDUIT
- # WIRE NOTE
- # ILLUMINATION NOTE
- # SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013-EL16-20
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

MARC EDWIN KENDALL — STATE OF WASHINGTON — 52658 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN GRAVELLY LAKE DR SW

DRAWING NO.
119 OF 153
EL6

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Wednesday, February 3, 2021 11:13:17 AM
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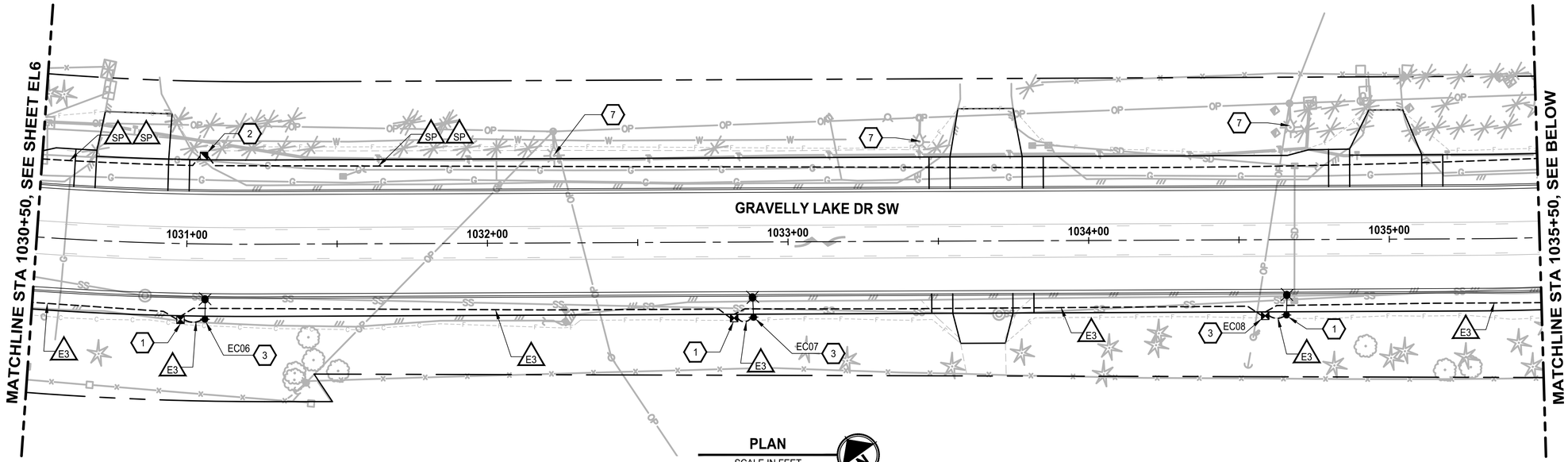

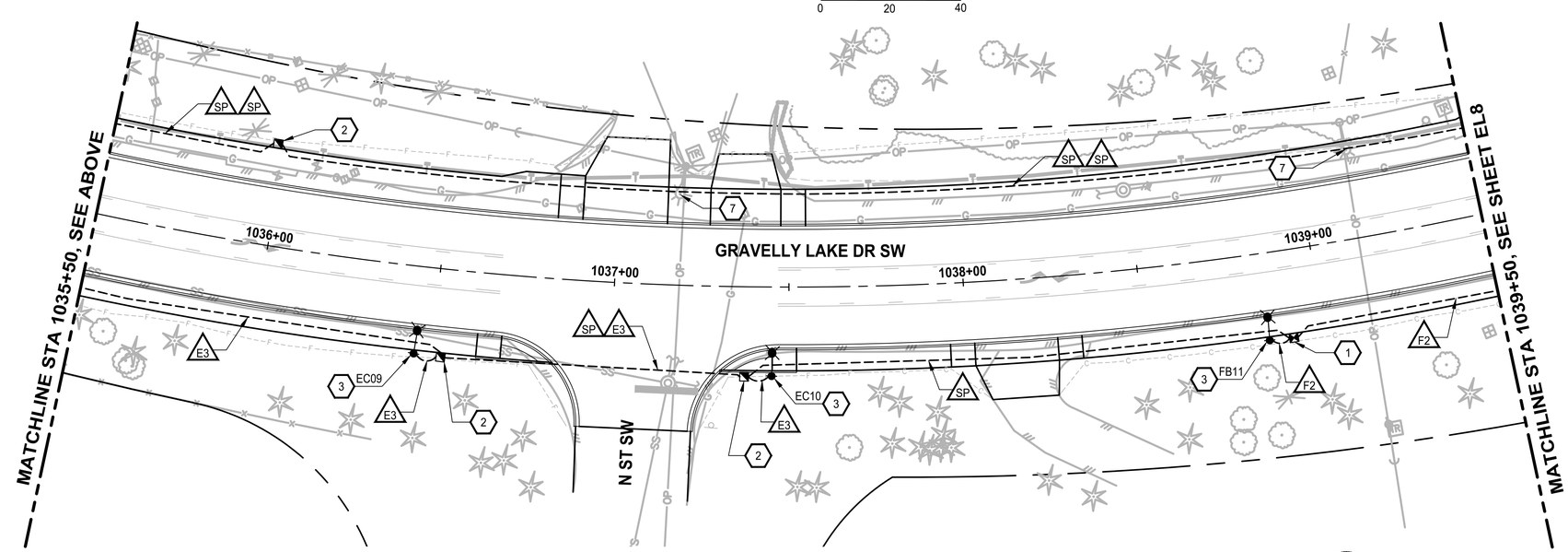

GENERAL NOTES

1. UTILITY LOCATION PRIOR TO CONSTRUCTION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONFLICTS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
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3. CONDUIT LOCATIONS SHOWN ON THE PLAN ARE SCHEMATIC.
4. ALL EQUIPMENT AND CONDUIT SHALL BE GROUNDED PER NEC REQUIREMENTS.

ILLUMINATION NOTES

1. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 1 PER WSDOT STANDARD PLAN J-40.10-04.
2. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 2 PER WSDOT STANDARD PLAN J-40.10-04.
3. CONSTRUCT STREET LIGHT STANDARD FOUNDATION, POLE, ARM(S) AND LUMINAIRE(S) PER COL STD DWG IS-06, AND LUMINAIRE SCHEDULES ON SHEET EL12.
4. INSTALL CONDUIT INTO CABINET AT BACK OF WALL. SPLICE SIGN BACK-LIGHTING WIRE TO CIRCUIT IN CABINET.
5. CONSTRUCT FOUNDATION PER COL STD DWG IS-04. INSTALL SERVICE CABINET TYPE D PER WSDOT STANDARD PLAN J-10.21-01 ON FOUNDATION.
6. EXISTING PSE LUMINAIRE TO REMAIN.
7. EXISTING PSE LUMINAIRE TO BE REMOVED (BY PSE).
8. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 8 PER WSDOT STANDARD PLAN J-40.30-04.
9. INSTALL CONDUIT AND SERVICE WIRING TO EXISTING UTILITY POLE. INSTALL CONDUIT TO 10' UP THE POLE WITH SUFFICIENT SERVICE WIRE TO REACH POINT OF CONNECTION PER PSE STANDARDS. COORDINATE WITH PSE TO COMPLETE SERVICE CONNECTION.

SIGNAL REMOVAL NOTES

1. REMOVE AND SALVAGE TO CITY EXISTING STEEL SIGNAL POLE AND ALL ASSOCIATED EQUIPMENT AND SIGNAL HEADS. REMOVE FOUNDATION, WIRE, CONDUIT TO NEAREST JUNCTION BOX(ES) AND JUNCTION BOX(ES).
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3. REMOVE EXISTING WOOD POLE AND SPAN WIRE. SALVAGE SIGNAL HEADS TO CITY.

ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
- JUNCTION BOX - TYPE 2
- JUNCTION BOX - TYPE 8
- UNDERGROUND CONDUIT
- WIRE NOTE
- ILLUMINATION NOTE
- SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

CONDUIT/WIRE SCHEDULE - SERVICE E

RUN I.D.	CONDUIT SIZE	SERVICE E			SPARE
		CIRCUIT A	CIRCUIT B	CIRCUIT C	
SP	2"				X
E1	2"	2 X #8			
E2	2"		2 X #8		
E3	2"			2 X #8	
E4	2"	2 X #8	2 X #8		
E5	2"	2 X #8		2 X #8	
E6	2"	2 X #8	2 X #8	2 X #8	

CONDUIT/WIRE SCHEDULE - SERVICE F

RUN I.D.	CONDUIT SIZE	SERVICE F		SPARE
		CIRCUIT A	CIRCUIT B	
SP	2"			X
F1	2"	2 X #8		
F2	2"		2 X #8	
F3	2"	2 X #8	2 X #8	

WIRE/CONDUIT SCHEDULE NOTES:

1. ALL CONDUITS CONTAINING CONDUCTORS SHALL INCLUDE A GROUND WIRE, NOT SHOWN IN THE WIRE/CONDUIT SCHEDULE. GROUND WIRE SHALL MATCH THE LARGEST CONDUCTOR (MIN. #8 UNLESS OTHERWISE NOTED).
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REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–EL16–20
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

MARC EDWIN KENDALL STATE OF WASHINGTON 52658 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN GRAVELLY LAKE DR SW

DRAWING NO. 120 OF 153
EL7

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 5:13:04 PM
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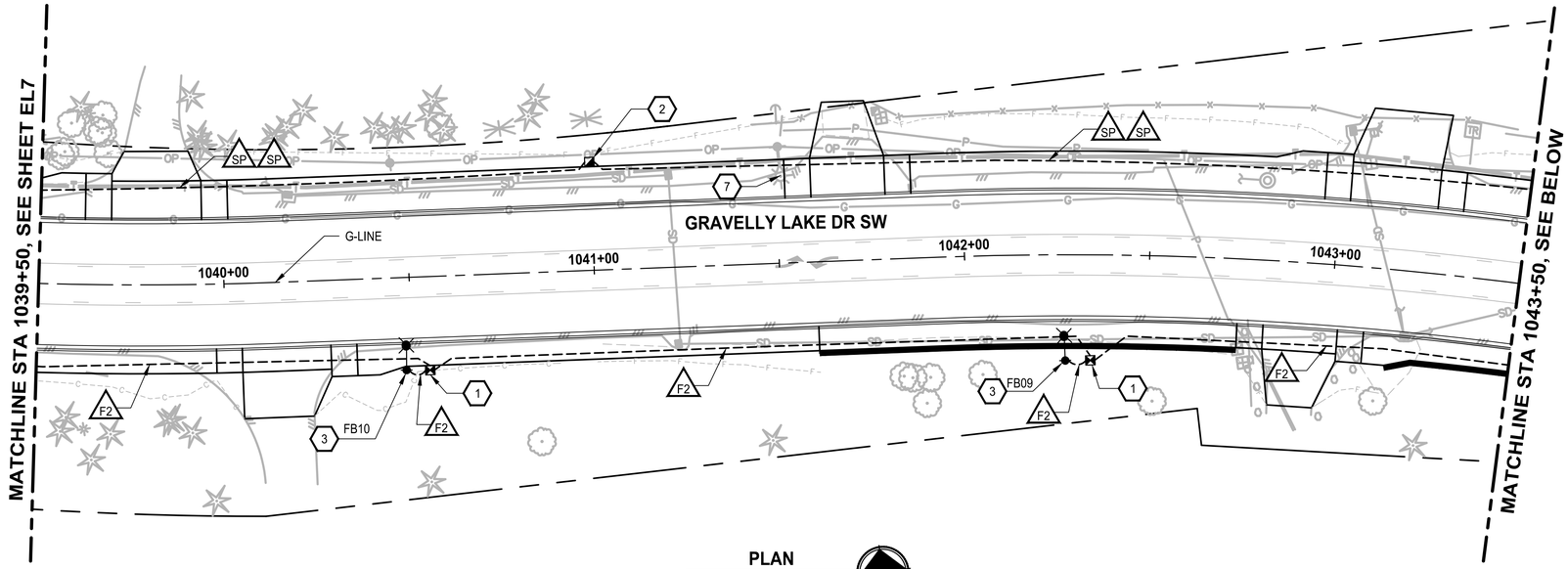

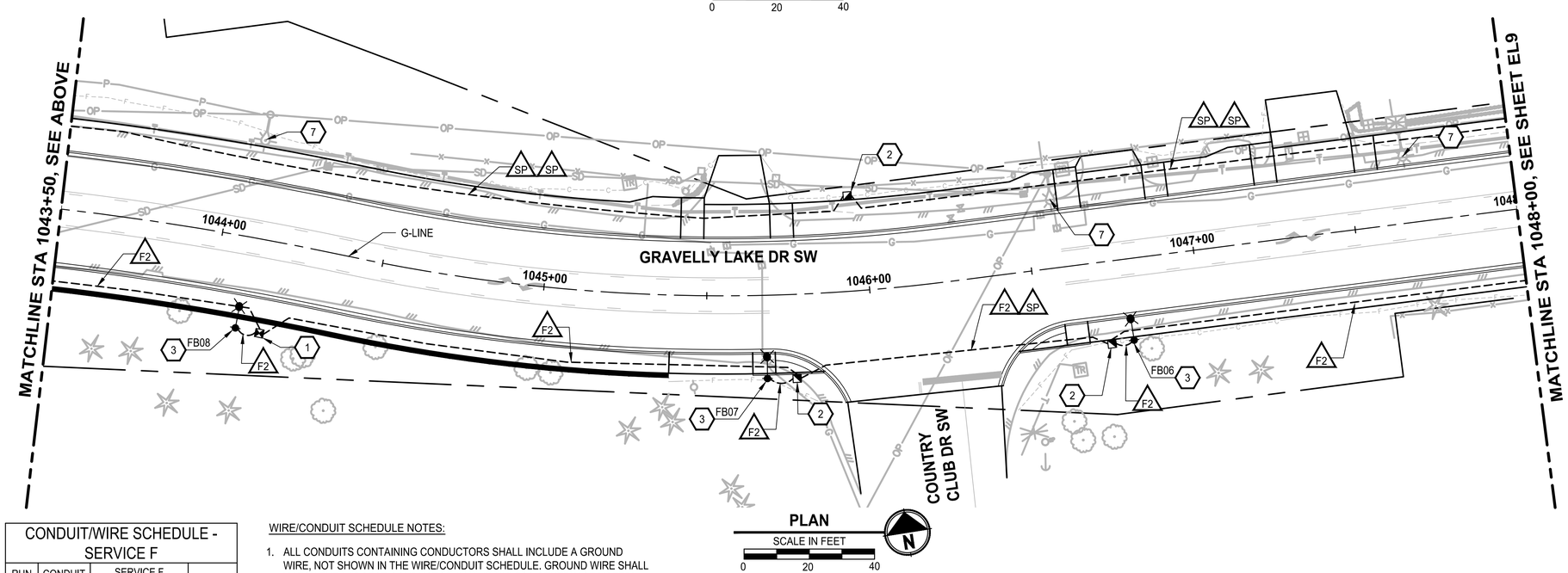

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ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
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- UNDERGROUND CONDUIT
- # WIRE NOTE
- # ILLUMINATION NOTE
- # SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

CONDUIT/WIRE SCHEDULE - SERVICE F

RUN I.D.	CONDUIT SIZE	SERVICE F		SPARE
		CIRCUIT A	CIRCUIT B	
SP	2"			X
F1	2"	2 X #8		
F2	2"		2 X #8	
F3	2"	2 X #8	2 X #8	

WIRE/CONDUIT SCHEDULE NOTES:

1. ALL CONDUITS CONTAINING CONDUCTORS SHALL INCLUDE A GROUND WIRE, NOT SHOWN IN THE WIRE/CONDUIT SCHEDULE. GROUND WIRE SHALL MATCH THE LARGEST CONDUCTOR (MIN. #8 UNLESS OTHERWISE NOTED).
2. CONDUIT INSTALLED UNDER THE SIDEWALK OR NON-PAVED AREAS SHALL BE SCHEDULE 40 PVC. CONDUIT INSTALLED IN EXISTING/NEW PAVED AREAS, WHETHER IN THE ROADWAY AREA, SHOULDER AREA, DRIVEWAYS, OR AREAS OTHER THAN THE ROADWAY, SHALL BE SCHEDULE 80 PVC. CONDUITS FOR POLE RISERS SHALL BE RIGID GALVANIZED STEEL.

REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–EL16–20
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

MARC EDWIN KENDALL — STATE OF WASHINGTON — 52656 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN GRAVELLY LAKE DR SW

DRAWING NO.
121 OF 153
EL8

PATH: U:\PSO\Projects\Clients\3047–City of Lakewood\214–3047–013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toylokat DATE: Tuesday, February 2, 2021 2:58:34 PM
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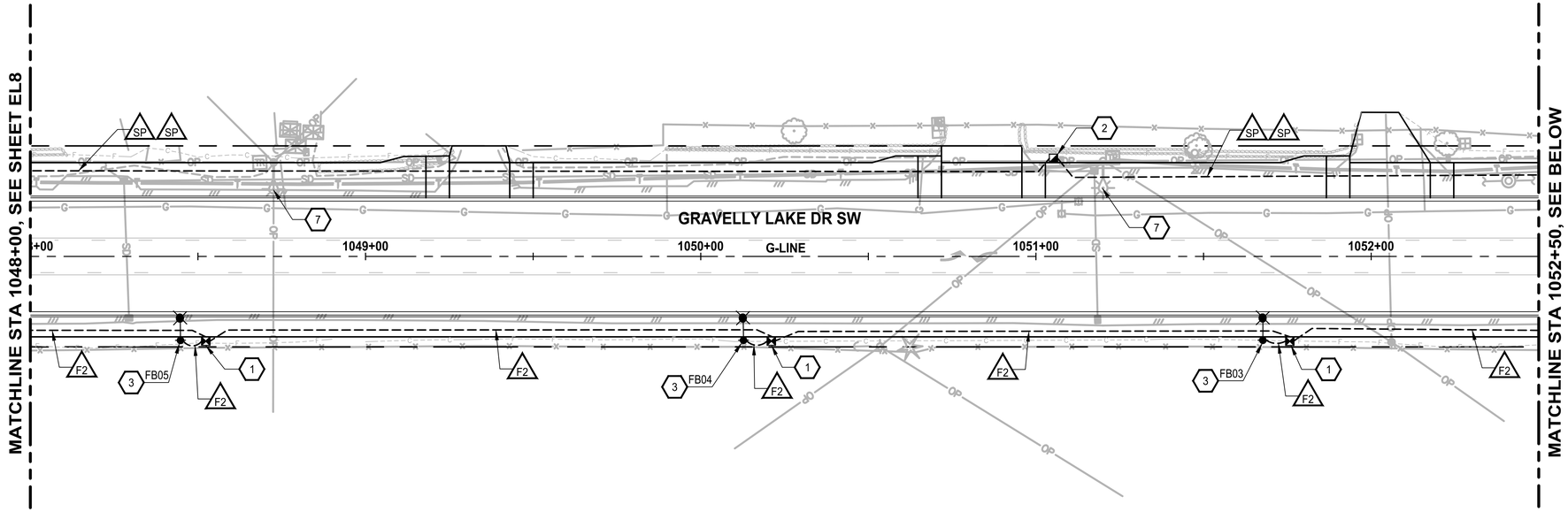
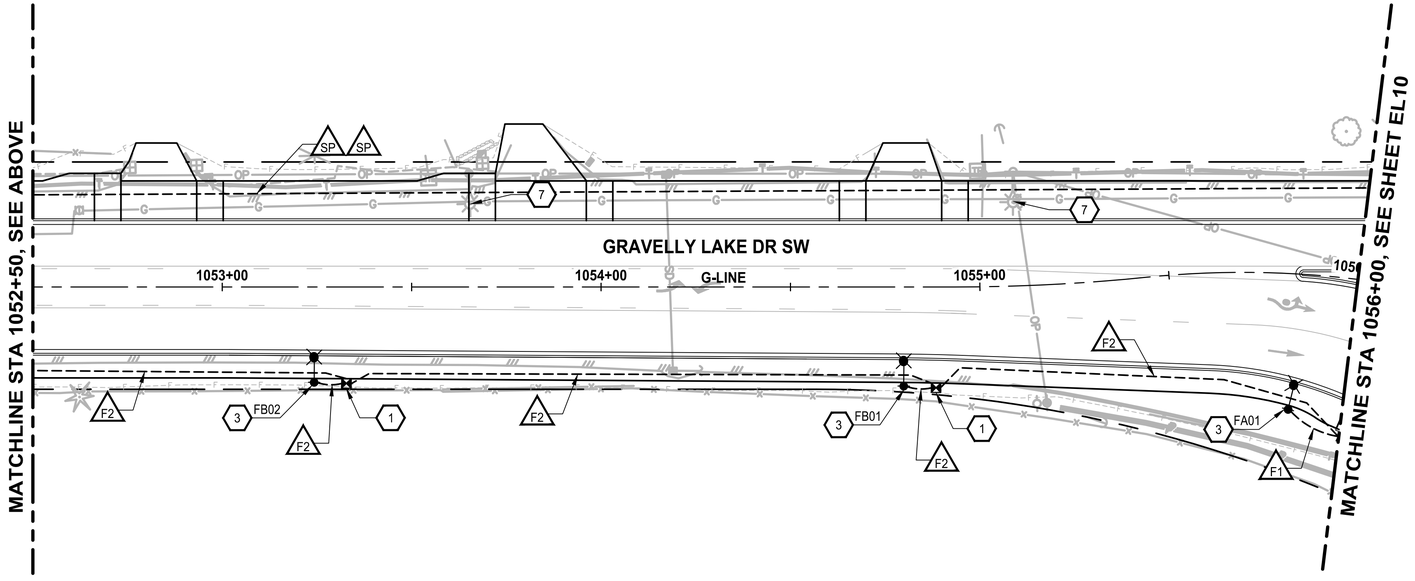


PLAN

SCALE IN FEET

0 20 40

N



PLAN

SCALE IN FEET

0 20 40

N

GENERAL NOTES

1. UTILITY LOCATION PRIOR TO CONSTRUCTION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONFLICTS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
2. JUNCTION BOXES SHALL BE INSTALLED FLUSH AND ADJACENT TO SIDEWALK/CURB WITH A CONCRETE COLLAR (WHERE APPLICABLE), UNLESS OTHERWISE NOTED ON THE PLANS.
3. CONDUIT LOCATIONS SHOWN ON THE PLAN ARE SCHEMATIC.
4. ALL EQUIPMENT AND CONDUIT SHALL BE GROUNDED PER NEC REQUIREMENTS.

ILLUMINATION NOTES

1. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 1 PER WSDOT STANDARD PLAN J-40.10-04.
2. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 2 PER WSDOT STANDARD PLAN J-40.10-04.
3. CONSTRUCT STREET LIGHT STANDARD FOUNDATION, POLE, ARM(S) AND LUMINAIRE(S) PER COL STD DWG IS-06, AND LUMINAIRE SCHEDULES ON SHEET EL12.
4. INSTALL CONDUIT INTO CABINET AT BACK OF WALL. SPLICE SIGN BACK-LIGHTING WIRE TO CIRCUIT IN CABINET.
5. CONSTRUCT FOUNDATION PER COL STD DWG IS-04. INSTALL SERVICE CABINET TYPE D PER WSDOT STANDARD PLAN J-10.21-01 ON FOUNDATION.
6. EXISTING PSE LUMINAIRE TO REMAIN.
7. EXISTING PSE LUMINAIRE TO BE REMOVED (BY PSE).
8. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 8 PER WSDOT STANDARD PLAN J-40.30-04.
9. INSTALL CONDUIT AND SERVICE WIRING TO EXISTING UTILITY POLE. INSTALL CONDUIT TO 10' UP THE POLE WITH SUFFICIENT SERVICE WIRE TO REACH POINT OF CONNECTION PER PSE STANDARDS. COORDINATE WITH PSE TO COMPLETE SERVICE CONNECTION.

SIGNAL REMOVAL NOTES

1. REMOVE AND SALVAGE TO CITY EXISTING STEEL SIGNAL POLE AND ALL ASSOCIATED EQUIPMENT AND SIGNAL HEADS. REMOVE FOUNDATION, WIRE, CONDUIT TO NEAREST JUNCTION BOX(ES) AND JUNCTION BOX(ES).
2. REMOVE AND SALVAGE TO CITY EXISTING SIGNAL CONTROLLER AND/OR SERVICE CABINET(S) AND ALL ALL ASSOCIATED EQUIPMENT TO CITY. REMOVE FOUNDATION (IF PRESENT), WIRE AND CONDUIT TO NEAREST JUNCTION BOX. COORDINATE DECOMMISSIONING OF SERVICE WITH PSE PRIOR TO REMOVAL.
3. REMOVE EXISTING WOOD POLE AND SPAN WIRE. SALVAGE SIGNAL HEADS TO CITY.

CONDUIT/WIRE SCHEDULE - SERVICE F

RUN I.D.	CONDUIT SIZE	SERVICE F		SPARE
		CIRCUIT A	CIRCUIT B	
SP	2"			X
F1	2"	2 X #8		
F2	2"		2 X #8	
F3	2"	2 X #8	2 X #8	

WIRE/CONDUIT SCHEDULE NOTES:

1. ALL CONDUITS CONTAINING CONDUCTORS SHALL INCLUDE A GROUND WIRE, NOT SHOWN IN THE WIRE/CONDUIT SCHEDULE. GROUND WIRE SHALL MATCH THE LARGEST CONDUCTOR (MIN. #8 UNLESS OTHERWISE NOTED).
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ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
- JUNCTION BOX - TYPE 2
- JUNCTION BOX - TYPE 8
- UNDERGROUND CONDUIT
- # WIRE NOTE
- # ILLUMINATION NOTE
- # SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013–EL21–23
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ●1996●

MARC EDWIN KENDALL STATE OF WASHINGTON 52658 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN GRAVELLY LAKE DR SW

DRAWING NO. 122 OF 153

EL9

LAYOUT: EL9 PATH: U:\PSO\Projects\Clients\3047–City of Lakewood\214–3047–013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 3:04:02 PM

CONDUIT/WIRE SCHEDULE - SERVICE F				
RUN I.D.	CONDUIT SIZE	SERVICE F		SPARE
		CIRCUIT A	CIRCUIT B	
SP	2"			X
F1	2"	2 X #8		
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F3	2"	2 X #8	2 X #8	

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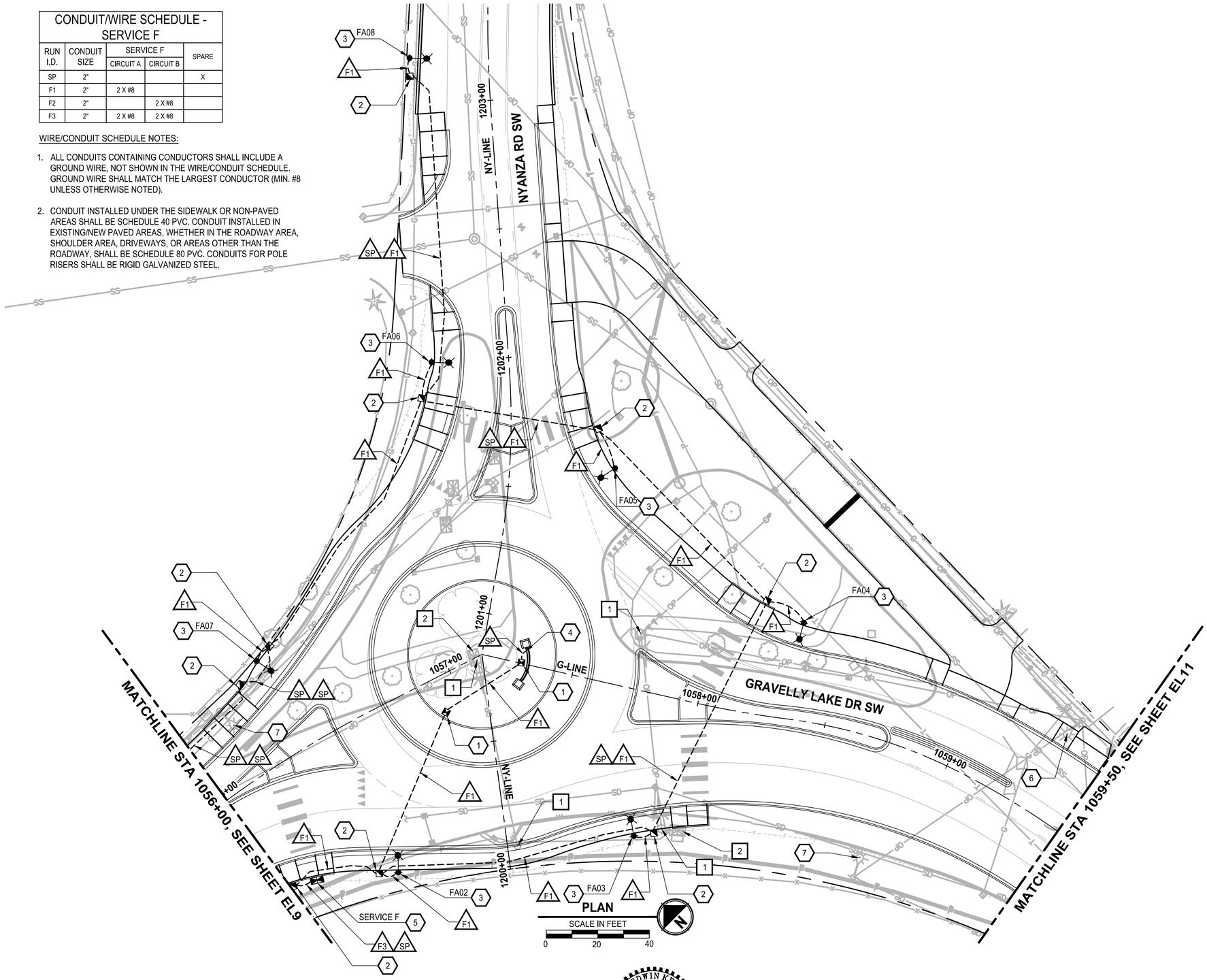

GENERAL NOTES

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ILLUMINATION NOTES

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2. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 2 PER WSDOT STANDARD PLAN J-40.10-04.
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4. INSTALL CONDUIT INTO CABINET AT BACK OF WALL. SPLICE SIGN BACK-LIGHTING WIRE TO CIRCUIT IN CABINET.
5. CONSTRUCT FOUNDATION PER COL STD DWG IS-04. INSTALL SERVICE CABINET TYPE D PER WSDOT STANDARD PLAN J-10.21-01 ON FOUNDATION.
6. EXISTING PSE LUMINAIRE TO REMAIN.
7. EXISTING PSE LUMINAIRE TO BE REMOVED (BY PSE).
8. INSTALL LOCKING LID STANDARD DUTY JUNCTION BOX, TYPE 8 PER WSDOT STANDARD PLAN J-40.30-04.
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SIGNAL REMOVAL NOTES

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ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
- JUNCTION BOX - TYPE 2
- JUNCTION BOX - TYPE 8
- UNDERGROUND CONDUIT
- WIRE NOTE
- ILLUMINATION NOTE
- SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

	REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN D. SCHNEIDER
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–EL21–23
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

MARC EDWIN KENDALL STATE OF WASHINGTON 52656 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN GRAVELLY LAKE DR SW

DRAWING NO.
123 OF 153
EL10

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013_JBLM NorthAccess\995ves\CADD\DWG PLOTTED BY: toylokat DATE: Friday, February 5, 2021 12:45:54 PM
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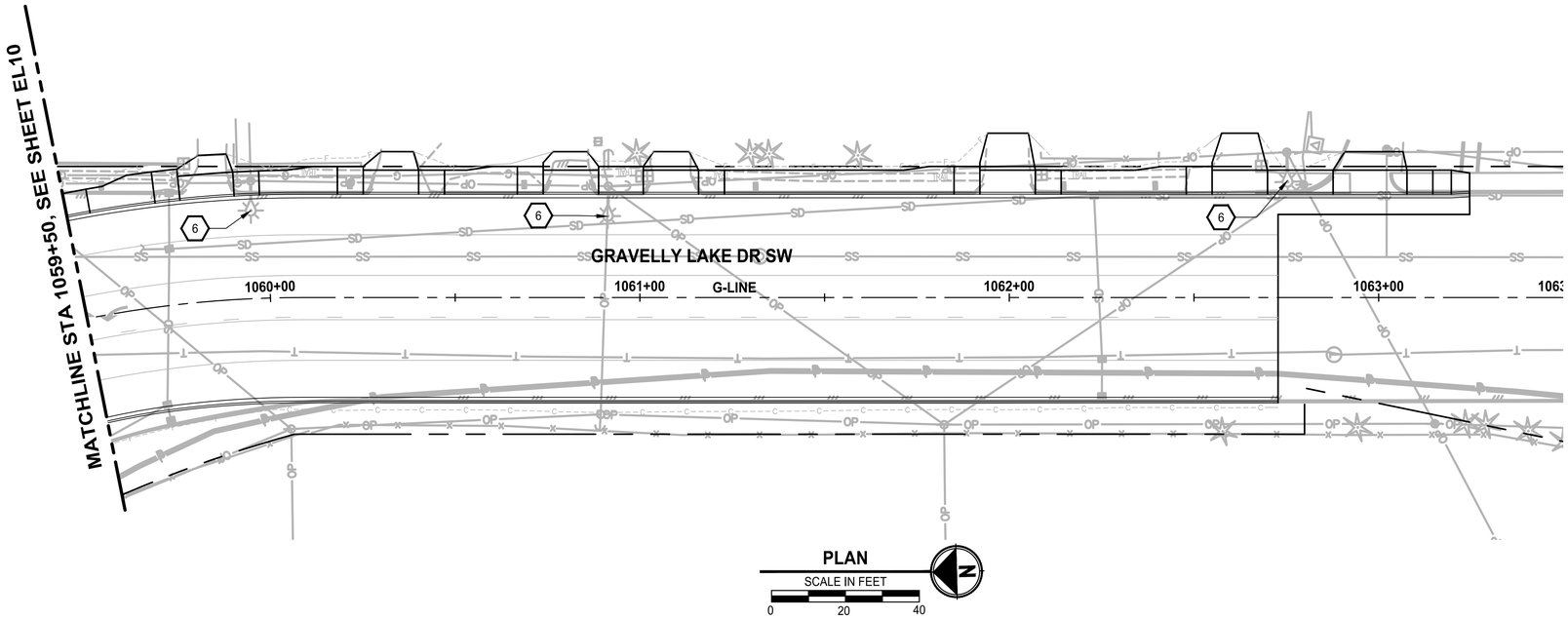

GENERAL NOTES

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SIGNAL REMOVAL NOTES

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ILLUMINATION LEGEND

- STREET LIGHT
- SERVICE CABINET
- JUNCTION BOX - TYPE 1
- JUNCTION BOX - TYPE 2
- JUNCTION BOX - TYPE 8
- UNDERGROUND CONDUIT
- # WIRE NOTE
- # ILLUMINATION NOTE
- # SIGNAL REMOVAL NOTE
- XY## POLE IDENTIFICATION
  - STREET LIGHT ID
  - CIRCUIT ID
  - SERVICE ID

REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–EL21–23
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA ©1996

MARC EDWIN KENDALL — STATE OF WASHINGTON — 52858 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN GRAVELLY LAKE DR SW

DRAWING NO.
124 OF 153
EL11

LAYOUT: EL11 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Tuesday, February 2, 2021 3:05:09 PM

LUMINAIRE SCHEDULE FOR "SERVICE D" CABINET AT WASHINGTON BLVD/GRAVELLY LAKE DR ROUNDABOUT

POLE #	CIRCUIT	ALIGNMENT	STATION (1)	OFFSET (1)	TOP OF FOUND. ELEVATION (9)	MOUNTING HEIGHT	ARM LENGTH	ORIENTATION ANGLE (2)	LUMINAIRE TYPE	SHEET REFERENCE	NOTES
DA01	A	G	1005+62.7	41.0' RT	267.73	35'	10'	335	3D	EL3	
DA02	A	W	265+05.7	30.1' RT	267.95	35'	10'	5	3D	EL3	
DA03	A	W	265+53.7	37.3' LT	269.09	35'	10'	335	3D	EL3	
DA04	A	G	1004+34.0	64.8' RT	269.81	35'	10'	35	3D	EL3	
DA05	A	G	1003+53.6	29.5' RT	268.33	35'	10'	5	3D	EL3	
DA06	A	G	1006+09.9	31.8' LT	267.75	35'	10'	5	3D	EL3	
DA07	A	W	267+14.2	25.4' RT	268.09	35'	10'	285	3D	EL3	
DA08	A	G	1004+10.5	51.4' LT	268.68	35'	10'	330	3D	EL3	
DA09	A	W	263+67.1	0.0'	266.60	30'	2 X 4'	0	2 X 3B	EL2	NOTE 7, NOTE 8
DA10	A	W	262+22.5	0.0'	266.00	30'	2 X 4'	0	2 X 3B	EL2	NOTE 7, NOTE 8
DB01	B	W	260+33.4	34.7' RT	264.65	25'	4'	340	3C	EL1	
DB02	B	W	260+98.9	24.1' LT	264.58	25'	4'	0	3C	EL1	
DB03	B	I	903+02.4	39.6' RT	NOTE 6	25'	4'	340	3C	EL1	NOTE 6
DB04	B	I	903+58.8	22.5' LT	260.83	25'	4'	0	3C	EL1	
DB05	B	W	259+16.0	35.1' LT	264.50	25'	4'	340	3C	EL1	
DB06	B	I	901+44.6	20.7' RT	267.35	25'	4'	5	3C	EL1	
DB07	B	I	901+93.8	35.4' LT	265.51	25'	4'	335	3C	EL1	
DB08	B	W	258+68.0	24.2' RT	265.83	25'	4'	0	3C	EL1	
DB09	B	W	257+69.2	30.1' LT	267.64	25'	4'	0	3C	EL1	

LUMINAIRE SCHEDULE FOR "SERVICE E" CABINET AT VETERANS DR/GRAVELLY LAKE DR ROUNDABOUT

POLE #	CIRCUIT	ALIGNMENT	STATION (1)	OFFSET (1)	TOP OF FOUND. ELEVATION (9)	MOUNTING HEIGHT	ARM LENGTH	ORIENTATION ANGLE (2)	LUMINAIRE TYPE	SHEET REFERENCE	NOTES
EA01	A	VET	1102+80.5	35.2' LT	273.70	35'	10'	340	3D	EL5	
EA02	A	VET	1102+28.8	26.7' RT	272.91	35'	10'	0	3D	EL5	
EA03	A	G	1021+18.1	39.7' RT	273.04	35'	10'	340	3D	EL5	NOTE 4
EA04	A	G	1021+65.4	30.5' LT	273.44	35'	10'	0	3D	EL5	
EA05	A	VET	1103+95.1	29.1' RT	274.49	35'	10'	295	3D	EL5	
EA06	A	G	1020+01.1	38.5' LT	273.92	35'	10'	340	3D	EL5	
EA07	A	G	1019+41.9	25.0' RT	273.41	35'	10'	0	3D	EL5	
EA08	A	VET	1101+30.3	31.6' RT	NOTE 10	35'	10'	0	3D	EL5	
EB01	B	G	1018+10.0	25.0' RT	271.20	35'	10'	0	3A	EL5	
EB02	B	G	1016+33.4	25.0' RT	268.13	35'	10'	0	3A	EL4	
EB03	B	G	1014+54.6	25.0' RT	267.16	35'	10'	0	3A	EL4	
EB04	B	G	1012+75.3	25.0' RT	266.27	35'	10'	0	3A	EL4	
EB05	B	G	1010+94.7	25.0' RT	265.39	35'	10'	0	3A	EL4	
EB06	B	G	1009+14.5	25.0' RT	266.12	35'	10'	0	3A	EL4	
EB07	B	G	1007+35.4	25.0' RT	267.04	35'	10'	0	3A	EL4	
EC01	C	G	1023+18.6	29.0' LT	272.17	35'	10'	0	3A	EL6	
EC02	C	G	1024+99.7	29.0' LT	271.79	35'	10'	0	3A	EL6	
EC03	C	G	1026+77.5	29.0' LT	273.62	35'	10'	0	3A	EL6	
EC04	C	G	1028+56.5	30.0' LT	275.04	35'	10'	0	3A	EL6	
EC05	C	G	1029+41.4	25.5' RT	274.43	35'	10'	0	3A	EL6	
EC06	C	G	1031+06.3	25.0' RT	273.26	35'	10'	0	3A	EL7	
EC07	C	G	1032+88.4	25.0' RT	274.12	35'	10'	0	3A	EL7	
EC08	C	G	1034+65.7	25.0' RT	275.27	35'	10'	0	3A	EL7	
EC09	C	G	1036+44.9	25.0' RT	276.42	35'	10'	0	3A	EL7	
EC10	C	G	1037+45.2	25.5' RT	277.05	35'	10'	0	3A	EL7	

LUMINAIRE SCHEDULE FOR "SERVICE F" CABINET AT NYANZA RD/GRAVELLY LAKE DR ROUNDABOUT

POLE #	CIRCUIT	ALIGNMENT	STATION (1)	OFFSET (1)	TOP OF FOUND. ELEVATION (9)	MOUNTING HEIGHT	ARM LENGTH	ORIENTATION ANGLE (2)	LUMINAIRE TYPE	SHEET REFERENCE	NOTES
FA01	A	G	1055+83.5	35.8'RT	280.97	35'	10'	10	3D	EL9	
FA02	A	G	1056+43.2	60.1' RT	280.93	35'	10'	30	3D	EL10	
FA03	A	G	1057+87.2	55.6' RT	281.25	35'	10'	340	3D	EL10	
FA04	A	G	1058+36.6	37.9' LT	281.35	35'	10'	10	3D	EL10	
FA05	A	NY	1201+59.3	40.9' RT	282.30	35'	10'	325	3D	EL10	
FA06	A	NY	1202+00.3	29.9' LT	281.34	35'	10'	5	3D	EL10	
FA07	A	G	1056+37.8	38.5' LT	281.71	35'	10'	335	3D	EL10	
FA08	A	NY	1203+17.3	30.5' LT	279.32	35'	10'	0	3D	EL10	
FB01	B	G	1054+79.9	26.2' RT	280.62	35'	10'	0	3A	EL9	
FB02	B	G	1053+24.3	25.0' RT	279.70	35'	10'	0	3A	EL9	
FB03	B	G	1051+67.7	25.0' RT	278.76	35'	10'	0	3A	EL9	
FB04	B	G	1050+12.8	25.0' RT	277.82	35'	10'	0	3A	EL9	
FB05	B	G	1048+44.8	25.0' RT	275.79	35'	10'	0	3A	EL9	
FB06	B	G	1046+78.5	25.0' RT	270.24	35'	10'	0	3A	EL8	
FB07	B	G	1045+68.0	25.5' RT	266.84	35'	10'	0	3A	EL8	
FB08	B	G	1044+09.1	28.0' RT	NOTE 10	35'	10'	0	3A	EL8	NOTE 5
FB09	B	G	1042+27.1	28.0' RT	NOTE 10	35'	10'	0	3A	EL8	NOTE 5
FB10	B	G	1040+48.4	25.0' RT	269.10	35'	10'	0	3A	EL8	
FB11	B	G	1038+84.8	25.0' RT	275.81	35'	10'	0	3A	EL7	

LUMINAIRE SCHEDULE NOTES:

1) STATIONS AND OFFSETS ARE TO THE CENTER OF THE POLE. TYPICALLY, FOUNDATIONS SHALL BE AT THE BACK OF SIDEWALK UNLESS OTHERWISE NOTED.
2) THE ORIENTATION ANGLE IS MEASURED CLOCKWISE, WITH 0° BEING PERPENDICULAR TO THE REFERENCED ALIGNMENT.
3) ALL LUMINAIRES SHALL BE LED. SEE SPECIAL PROVISIONS FOR ADDITIONAL FIXTURE REQUIREMENTS. SPECIFIC FIXTURES ARE LISTED BELOW AND IN THE SPECIAL PROVISIONS:
   A) MAX WATTAGE: 130 WATTS
      LUMEN OUTPUT: 17,800 LUMENS, 4000 CCT, TYPE 3M DIST.
   B) MAX WATTAGE: 85 WATTS
      LUMEN OUTPUT: 7,200 LUMENS, 2700 CCT, TYPE 2M DIST.
      SHIELD: FRONT SIDE SHIELD
   C) MAX WATTAGE: 95 WATTS
      LUMEN OUTPUT: 8,400 LUMENS, 2700 CCT, TYPE 2M DIST.
   D) MAX WATTAGE: 90 WATTS
      LUMEN OUTPUT: 11,700 LUMENS, 4000 CCT, TYPE 2M DIST.
4) FOUNDATION PARTIALLY IN SIDEWALK TO STAY WITHIN EXISTING CITY RIGHT-OF-WAY. TOP OF FOUNDATION SHALL BE FLUSH WITH TOP OF SIDEWALK.
5) POLE LOCATED BEHIND MOMENT SLAB WITH MINIMUM OFFSET OF 1 FOOT CLEAR FROM BACK OF SLAB TO POLE FOUNDATION. FOUNDATION LOCATED ON SLOPE SHOULD HAVE A DEPTH OF FOUNDATION MEASURED FROM BACK OF EXPOSED SIDE OF FOUNDATION.
6) CONSTRUCT POLE FOUNDATION INTEGRAL WITH WALL. TOP OF FOUNDATION ELEVATION AND ELEVATION AT BASE OF WALL SHALL BE AS NOTED ON WALL PROFILES. FOUNDATION DEPTH SHALL BE 72" BELOW FINISHED GRADE AT BACK OF WALL. EXPOSED PORTION OF THE FOUNDATION SHALL BE FORMED 24" X 24" SQUARE TO ALIGN WITH WALL BLOCKS.
7) POLE INCLUDES BACK-TO-BACK 4 FT ARMS AT INSTALLED 180 DEGREES.
8) POLE SHALL BE INSTALLED WITH OMNI-DIRECTIONAL BREAKAWAY SUPPORT COUPLING SYSTEM.
9) TOP OF FOUNDATION ELEVATIONS ARE APPROXIMATE AND BASED ON THE SURFACE CREATED IN CAD SOFTWARE. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS. IN GENERAL, TOP OF FOUNDATIONS SHALL BE 6" ABOVE FINISHED GRADE, PER COL STD DWG IS-06.
10) CONTRACTOR SHALL DETERMINE TOP OF FOUNDATION ELEVATION IN THE FIELD.
11) ALL STREET LIGHT POLES SHALL BE ALUMINUM.

BREAKER SCHEDULE - SERVICE D

CIRCUIT	DESCRIPTION / LABEL	BRANCH BREAKER RATING		CONTACTOR RATING	VOLTAGE	LOAD (KVA)
		POLES	AMPS			
-	MAIN	2	100A	N.A.	240	N.A.
A	ILLUM - RBT (WASHINGTON/GRAVELLY)	2	20A	30 AMP	240	9.38
B	ILLUM - RBT (WASHINGTON/INTERLAAKEN)	2	20A	30 AMP	240	5.36
C	SPARE ILLUM - WASHINGTON (WEST)	2	20A	30 AMP	240	-
D	SPARE ILLUM - RBT (WASHINGTON/83RD)	2	20A	30 AMP	240	-
BUSSWORK SHALL BE RATED AT 250 AMP MINIMUM.					PEAK	16.54
					CONTINUOUS	14.74

BREAKER SCHEDULE - SERVICE E

CIRCUIT	DESCRIPTION / LABEL	BRANCH BREAKER RATING		CONTACTOR RATING	VOLTAGE	LOAD (KVA)
		POLES	AMPS			
-	MAIN	2	100A	N.A.	240	N.A.
A	ILLUM - RBT (GRAVELLY/VETERANS)	2	20A	30 AMP	240	7.84
B	ILLUM - GRAVELLY (NORTH)	2	20A	30 AMP	240	6.86
C	ILLUM - GRAVELLY (SOUTH)	2	20A	30 AMP	240	9.80
BUSSWORK SHALL BE RATED AT 250 AMP MINIMUM.					PEAK	26.30
					CONTINUOUS	24.50

BREAKER SCHEDULE - SERVICE F

CIRCUIT	DESCRIPTION / LABEL	BRANCH BREAKER RATING		CONTACTOR RATING	VOLTAGE	LOAD (KVA)
		POLES	AMPS			
-	MAIN	2	100A	N.A.	240	N.A.
A	ILLUM - RBT (GRAVELLY/NYANZA)	2	20A	30 AMP	240	7.84
B	ILLUM - GRAVELLY (WEST)	2	20A	30 AMP	240	10.78
BUSSWORK SHALL BE RATED AT 250 AMP MINIMUM.					PEAK	20.42
					CONTINUOUS	18.62

BREAKER SCHEDULE NOTES:

1. ILLUMINATION CIRCUIT LOADS ARE BASED ON THE HIGHEST ALLOWABLE FIXTURE WATTAGE LISTED IN THE SPECIAL PROVISIONS. ULTIMATE LOADS MAY BE LESS THAN THOSE LISTED IN THE SCHEDULE IF A LOWER WATTAGE FIXTURE IS INSTALLED.
2. PHOTOCELL (0.001 KVA) AND GFCI RECEPTACLE (1.8 KVA) BREAKERS ARE NOT SHOWN IN THE BREAKER SCHEDULES. SEE WSDOT STANDARD PLAN J-10.21-01.

	REVISIONS	DATE	BY

DESIGNED M. KENDALL
DRAWN K. DUDDLESTEN
CHECKED C. SCHOTT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-EL27
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

MARC EDWIN KENDALL STATE OF WASHINGTON 52658 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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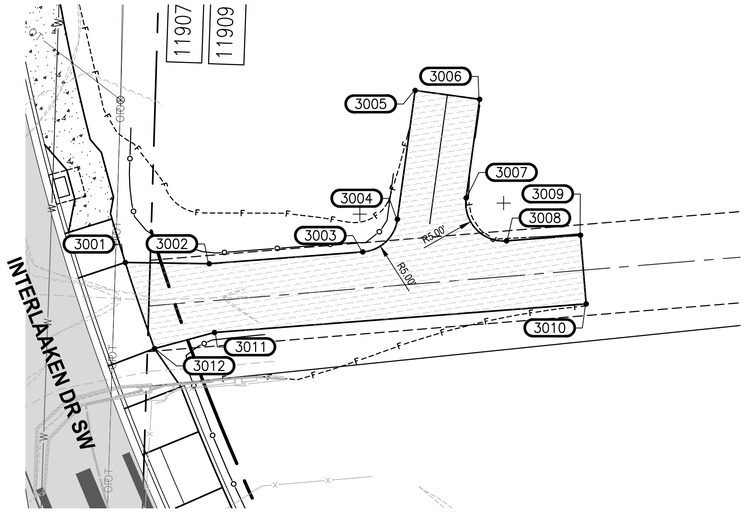
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ELECTRICAL PLAN LUMINAIRE SCHEDULE

LAYOUT: EL12 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 5:46:02 PM



PLAN
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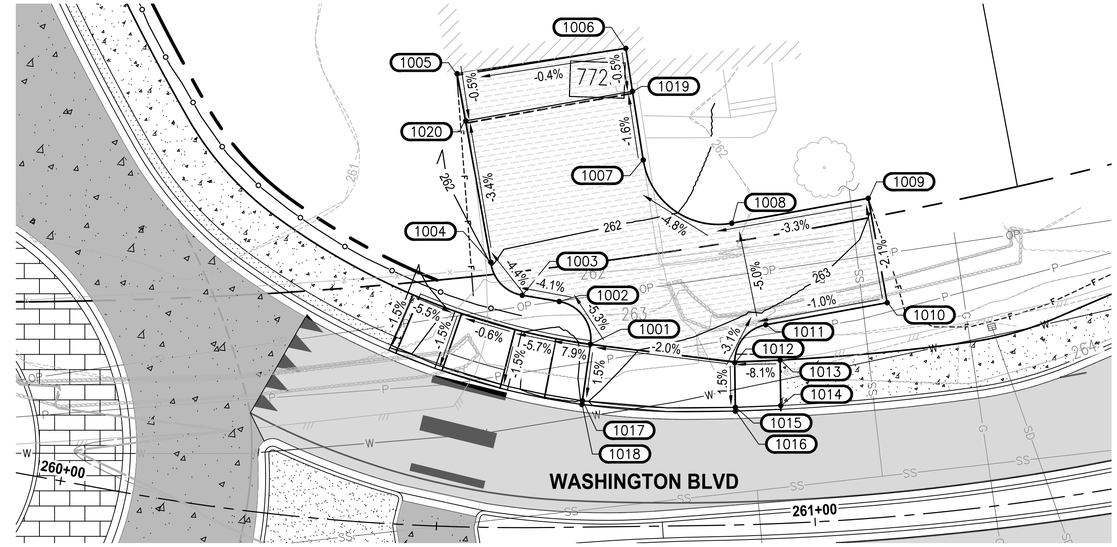
0 10 20



PLAN
SCALE IN FEET
0 10 20

903+39 DRIVEWAY

POINT #	STATION	OFFSET	DESCRIPTION
3001	903+48.03	24.45' RT	AP
3002	903+45.64	35.21' RT	AP
3003	903+43.17	55.34' RT	PC
3004	903+45.86	60.73' RT	PT
3005	903+62.78	66.89' RT	AP
3006	903+58.76	74.96' RT	AP
3007	903+46.48	70.20' RT	PC
3008	903+41.10	74.21' RT	PT
3009	903+40.11	83.91' RT	AP
3010	903+33.03	82.93' RT	AP
3011	903+37.55	34.02' RT	AP
3012	903+37.03	25.85' RT	AP

STATION AND OFFSET REFERENCE I-LINE

260+72 DRIVEWAY

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
1001	260+70.63	24.13' LT	263.099'	AP, PC
1002	260+66.57	29.82' LT	262.713'	PT
1003	260+61.31	30.68' LT	262.465'	PC
1004	260+56.62	35.00' LT	262.143'	PT
1005	260+50.56	59.76' LT	0.000'	AP
1006	260+75.79	63.10' LT	261.441'	AP
1007	260+77.90	48.34' LT	261.888'	PC
1008	260+89.98	39.83' LT	262.368'	PT
1009	261+10.56	42.12' LT	262.965'	AP
1010	261+12.02	28.18' LT	263.245'	AP
1011	260+94.47	26.28' LT	263.082'	PC
1012	260+89.90	21.43' LT	263.434'	PT
1013	260+96.30	21.55' LT	263.914'	ES
1014	260+96.11	15.55' LT	263.825'	TC
1015	260+89.83	15.52' LT	263.345'	AP
1016	260+89.82	15.02' LT	263.345'	BC
1017	260+69.48	16.67' LT	262.986'	TC
1018	260+69.40	16.18' LT	262.976'	BC
1019	260+76.60	57.43' LT	261.412'	AP
1020	260+52.23	53.58' LT	261.320'	AP

STATION AND OFFSET REFERENCE W-LINE

* ALL ELEVATION POINTS WITH ZERO ELEVATION WILL NEED TO BE SURVEYED BY CONTRACTOR AND CONSIDERED ONLY FOR THEIR STATION AND OFFSET.

REVISIONS	DATE	BY

DESIGNED M. VASSEY
DRAWN M. VASSEY
CHECKED A. CIRILLO
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-DT-DWY2
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DMITRI VICTOROVICH SIMAKOV STATE OF WASHINGTON 38390 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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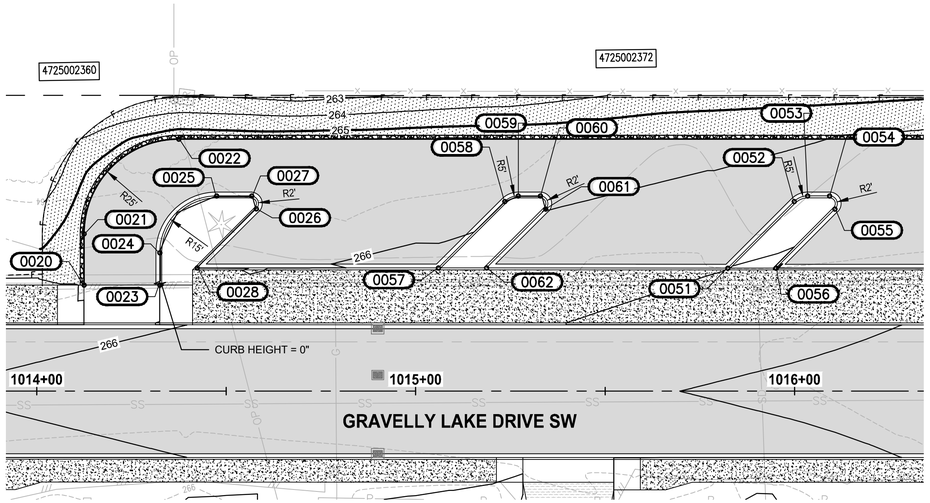
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

DRIVEWAY DETAIL

DRAWING NO.
126 OF 153
DWY1

LAYOUT: DW1 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toylokat DATE: Tuesday, February 2, 2021 4:03:22 PM



PLAN

SCALE IN FEET

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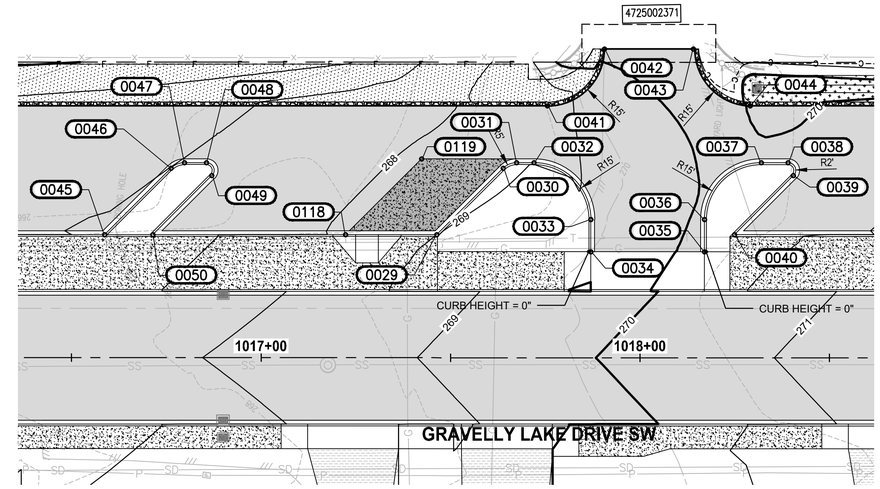
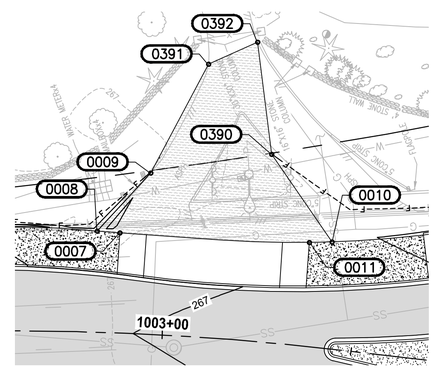


PLAN

SCALE IN FEET

0 20 40



PLAN

SCALE IN FEET

0 20 40

1014+22.48 DRIVEWAY				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
0020	1014+12.48	28.00' LT	265.76	AP
0021	1014+12.48	41.50' LT	265.69	PC
0022	1014+37.48	66.50' LT	265.40	PT
0023	1014+32.48	28.00' LT	265.86	AP
0024	1014+32.48	36.50' LT	265.85	PC
0025	1014+47.48	51.50' LT	265.83	PT
0026	1014+57.89	48.09' LT	265.83	PC
0027	1014+56.70	51.49' LT	265.82	PT
0028	1014+42.31	32.50' LT	265.94	AP
0051	1015+82.31	32.50' LT	266.50	AP
0052	1015+99.85	50.04' LT	266.28	PC
0053	1016+03.38	51.50' LT	266.27	PT
0054	1016+09.21	51.50' LT	266.31	PC
0055	1016+10.63	48.09' LT	266.38	PT
0056	1015+95.04	32.50' LT	266.57	AP
0057	1015+05.95	32.50' LT	266.12	AP
0058	1015+23.48	50.04' LT	265.90	PC
0059	1015+27.02	51.50' LT	265.88	PT
0060	1015+32.91	51.50' LT	265.91	PC
0061	1015+34.26	48.09' LT	265.99	PT
0062	1015+18.67	32.50' LT	266.19	AP

1003+12.00 DRIVEWAY				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
0007	1002+87.85	26.40' LT	267.34	AP
0008	1002+82.06	26.64' LT	267.24	AP
0009	1002+94.96	42.52' LT	267.11	AP
0010	1003+41.86	28.14' LT	267.88	AP
0011	1003+36.12	27.37' LT	267.83	AP
0390	1003+24.65	49.57' LT	267.21	AP
0391	1003+07.64	72.01' LT	267.36	AP
0392	1003+19.00	78.73' LT	267.27	AP

1018+02.02 DRIVEWAY				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
0029	1017+46.36	32.50' LT	268.51	AP
0030	1017+63.90	50.04' LT	268.41	PC
0031	1017+67.43	51.50' LT	268.39	PT
0032	1017+72.02	51.50' LT	268.53	PC
0033	1017+87.02	36.50' LT	269.25	PT
0034	1017+87.02	28.00' LT	269.51	AP
0035	1018+17.02	28.00' LT	270.15	AP
0036	1018+17.02	36.50' LT	270.13	PC
0037	1018+32.02	51.50' LT	270.06	PT
0038	1018+39.08	51.49' LT	270.04	PC
0039	1018+40.49	48.08' LT	270.06	PT
0040	1018+24.92	32.50' LT	270.17	AP
0041	1017+75.57	66.50' LT	268.41	PC
0042	1017+90.57	81.50' LT	270.27	AP
0043	1018+14.09	81.50' LT	270.85	AP
0044	1018+29.09	66.50' LT	269.95	PT
0045	1016+58.68	32.50' LT	267.10	AP
0046	1016+76.22	50.04' LT	267.01	PC
0047	1016+79.75	51.50' LT	267.03	PT
0048	1016+85.58	51.50' LT	267.11	PC
0049	1016+86.99	48.09' LT	267.20	PT
0050	1016+71.41	32.50' LT	267.26	AP
0118	1017+22.32	32.50' LT	268.17	AP
0119	1017+42.32	52.50' LT	268.17	AP

GENERAL NOTE
ALL ELEVATIONS ON CURB ARE AT BOTTOM FACE OF CURB. CURB HEIGHTS ARE ALL 6" UNO.

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013-DWY7-8
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT — STATE OF WASHINGTON — 48540 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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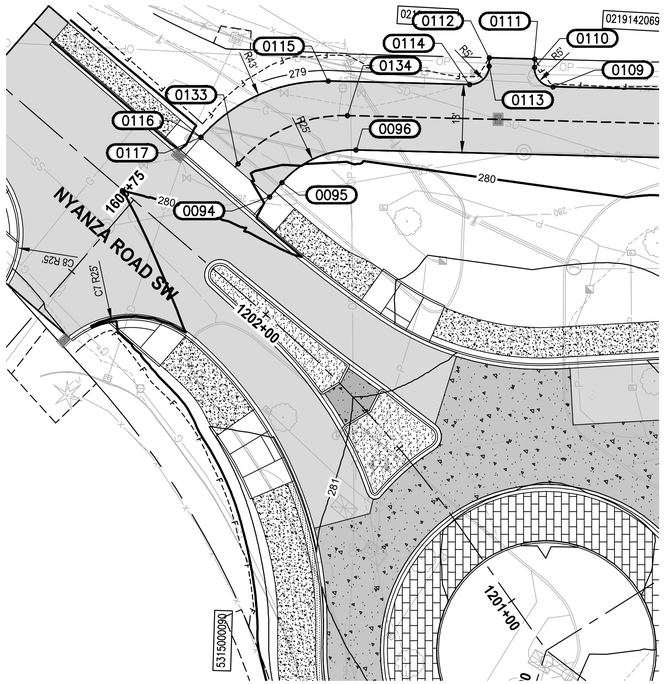
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRADING DETAILS

DRAWING NO.
127 OF 153
DWY2

LAYOUT: DWY2 GRADING DETAILS PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:49:07 PM

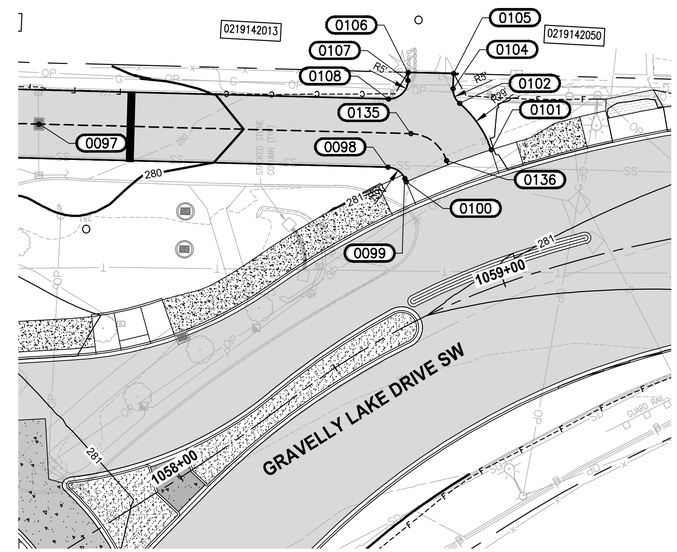


PLAN

SCALE IN FEET

0 20 40

1202+31.55 DRIVEWAY				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
0094	1057+15.98	140.27' LT	280.03	AP
0095	1057+20.74	141.71' LT	280.05	PC
0096	1057+41.86	138.61' LT	279.88	PT
0109	1057+94.78	125.03' LT	279.62	PC
0110	1057+93.39	131.96' LT	279.49	PT
0111	1057+94.61	133.79' LT	279.45	AP
0112	1057+84.62	140.44' LT	279.37	AP
0113	1057+83.39	138.61' LT	279.45	PC
0114	1057+76.46	137.21' LT	279.73	PT
0115	1057+45.36	157.90' LT	279.92	PC
0116	1057+14.12	163.32' LT	279.92	PT
0117	1057+14.12	163.30' LT	279.92	AP
0133	1057+14.12	152.07' LT	279.97	PC
0134	1057+44.79	147.47' LT	279.80	PT

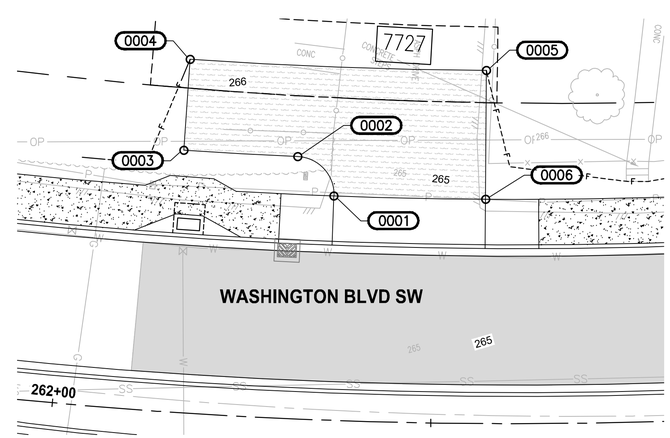


PLAN

SCALE IN FEET

0 20 40

1058+94.47 DRIVEWAY				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
0097	1058+24.92	98.06' LT	279.36	AP
0098	1058+84.33	39.87' LT	280.54	PC
0099	1058+86.77	35.32' LT	280.62	PT
0100	1058+86.77	34.39' LT	280.60	AP
0101	1059+07.53	34.50' LT	280.79	AP/PC
0102	1059+03.87	48.74' LT	280.27	PRC
0104	1059+03.56	52.98' LT	280.12	PT
0105	1059+04.64	56.73' LT	279.98	AP
0106	1058+95.92	60.99' LT	280.77	AP
0107	1058+95.29	59.01' LT	280.72	PC
0108	1058+90.17	56.37' LT	280.54	PT
0135	1058+91.82	45.66' LT	280.52	PC
0136	1058+96.99	35.63' LT	280.67	PT



PLAN

SCALE IN FEET

0 10 20

262+46.58 DRIVEWAY				
POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
0001	1005+64.10	374.18' RT	264.76	PC
0002	1005+62.08	380.03' RT	265.11	PT
0003	1005+63.44	394.83' RT	265.77	AP
0004	1005+57.50	396.90' RT	266.31	AP
0005	1005+53.16	358.72' RT	265.91	AP
0006	1005+61.88	354.63' RT	264.88	AP

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-DWY7-8
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT STATE OF WASHINGTON 48540 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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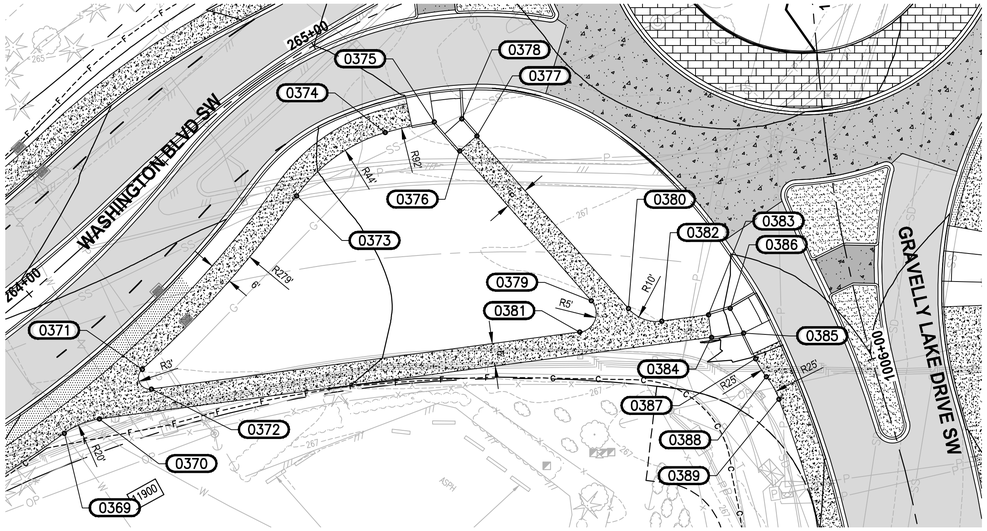
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRADING DETAILS

DRAWING NO.
128 OF 153
DWY3

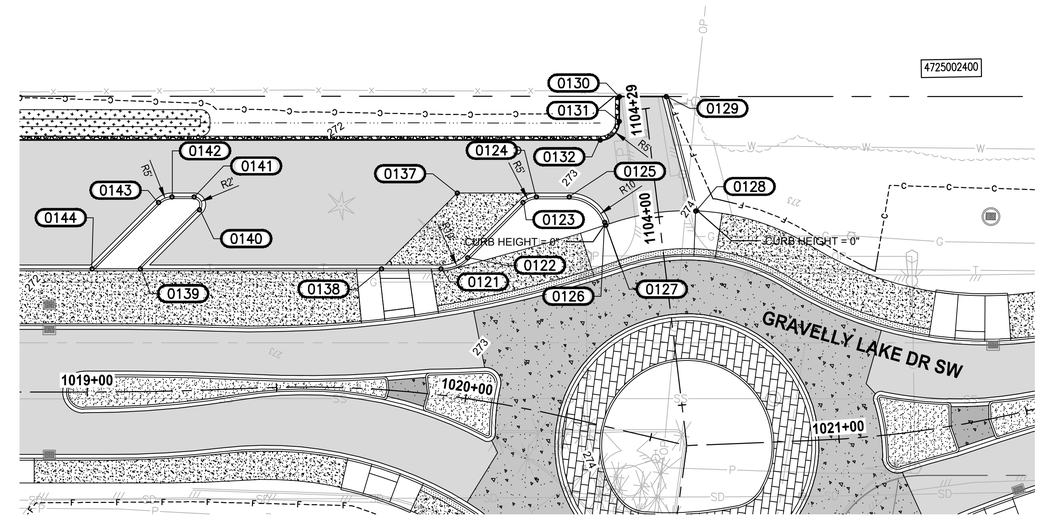
LAYOUT: DWY3 GRADING DETAILS PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:49:55 PM



PLAN

SCALE IN FEET

0 20 40



PLAN

SCALE IN FEET

0 20 40

SIDEWALK LAYOUT

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
0369	1005+73.77	211.58' RT	266.20	PRC
0370	1005+72.63	201.73' RT	266.29	PT
0371	1005+65.55	188.01' RT	266.36	PRC
0372	1005+69.34	186.68' RT	266.40	PT
0373	1005+38.10	140.50' RT	266.85	PRC
0374	1005+27.49	115.44' RT	267.46	PCC
0375	1005+26.25	102.29' RT	267.26	AP
0376	1005+32.94	96.35' RT	267.60	AP
0377	1005+30.15	91.44' RT	267.54	AP
0378	1005+26.19	94.93' RT	267.36	AP
0379	1005+69.84	68.28' RT	267.56	PC
0380	1005+73.32	59.12' RT	267.39	PC
0381	1005+76.15	73.04' RT	267.51	PT
0382	1005+77.85	51.22' RT	267.29	PT
0383	1005+78.89	38.86' RT	267.17	AP
0384	1005+84.33	39.46' RT	267.26	AP
0385	1005+85.18	30.99' RT	266.83	AP
0386	1005+78.53	32.87' RT	266.92	AP
0387	1005+92.02	29.57' RT	267.27	PC
0388	1005+96.99	28.08' RT	267.23	PRC
0389	1006+03.17	26.52' RT	267.19	PCC

1020+40.39 DRIVEWAY

POINT #	STATION	OFFSET	ELEVATION	DESCRIPTION
0121	1019+89.85	33.10' LT	272.59	PC
0122	1019+95.83	36.84' LT	272.63	PT
0123	1020+06.56	53.40' LT	272.71	PC
0124	1020+09.30	55.44' LT	272.71	PT
0125	1020+16.45	57.02' LT	273.23	PC
0126	1020+25.44	52.45' LT	273.38	PT
0127	1020+25.80	51.77' LT	273.39	AP
0128	1020+47.85	60.84' LT	274.07	AP
0129	1020+33.33	88.45' LT	273.13	AP
0130	1020+22.58	85.68' LT	273.14	AP
0131	1020+23.64	79.27' LT	273.06	PC
0132	1020+20.59	73.37' LT	272.96	PT
0137	1019+91.70	53.46' LT	272.51	AP
0138	1019+75.77	31.79' LT	272.43	AP
0139	1019+14.45	32.43' LT	271.84	AP
0140	1019+31.21	47.64' LT	271.70	PC
0141	1019+29.83	51.10' LT	271.63	PT
0142	1019+23.62	51.26' LT	271.57	PC
0143	1019+19.82	49.88' LT	271.57	PT
0144	1019+01.28	32.50' LT	271.69	AP

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–DWY7–8
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORT STATE OF WASHINGTON 48540 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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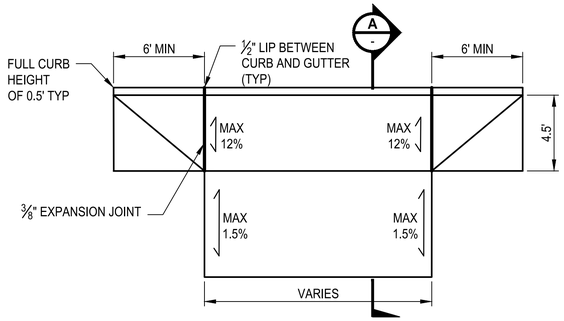
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

GRADING DETAILS

DRAWING NO.
129 OF 153
DWY4

LAYOUT: DWY4 GRADING DETAILS PATH: \\Jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07–CAD\DWG PLOTTED BY: bbeals DATE: Wednesday, February 3, 2021 3:50:45 PM



DRIVEWAY TYPE 3A
DETAIL 1 TYP
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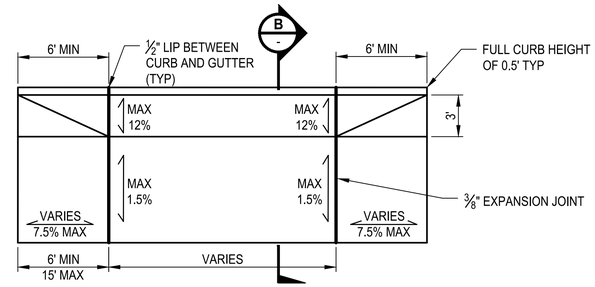

DRIVEWAY TYPE 3B
DETAIL 2 TYP
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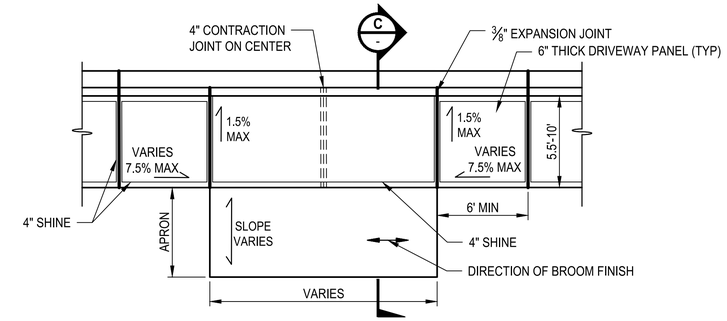
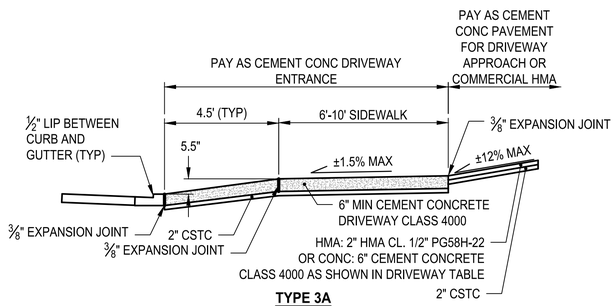


DRIVEWAY TYPE 1
DETAIL 3 TYP
NO SCALE



TYPE 3A
SECTION A -
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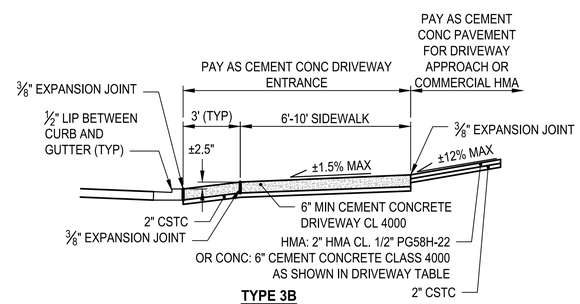

TYPE 3B
SECTION B -
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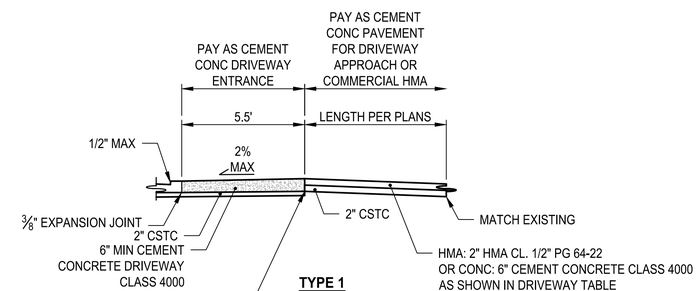
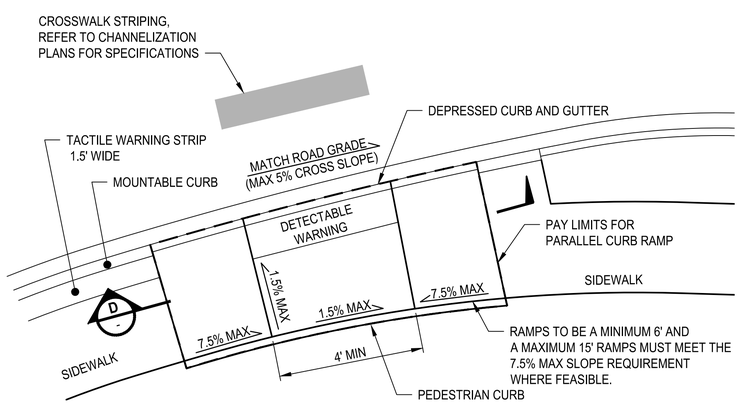
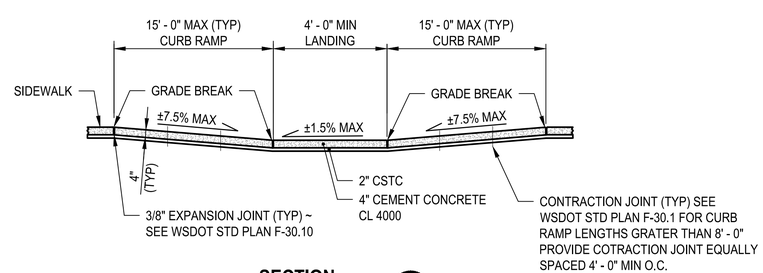


TYPE 1
SECTION C -
NO SCALE



PARALLEL CURB RAMP
DETAIL 4 TYP
NO SCALE



SECTION D -
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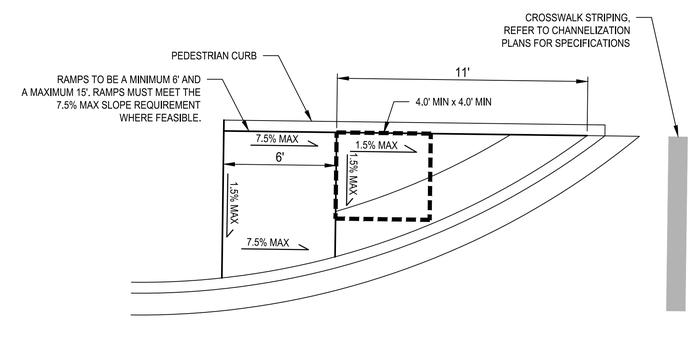

SINGLE DIRECTION CURB RAMP
DETAIL 5 TYP
NO SCALE

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: tayfokat DATE: Wednesday, February 3, 2021 10:27:02 AM
LAYOUT: DT1

▷	REVISIONS	DATE	BY

DESIGNED M. VASSEY
DRAWN M.VASSEY
CHECKED D. PROCTOR
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-DT01-04
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DMITRI VICTOROVIC SUSLIKOV STATE OF WASHINGTON 38396 REGISTERED PROFESSIONAL ENGINEER
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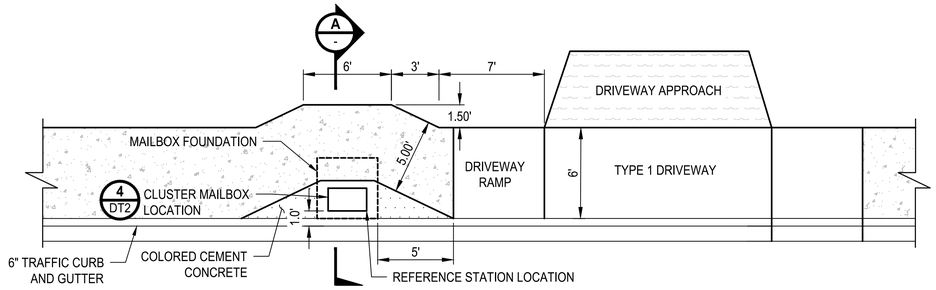
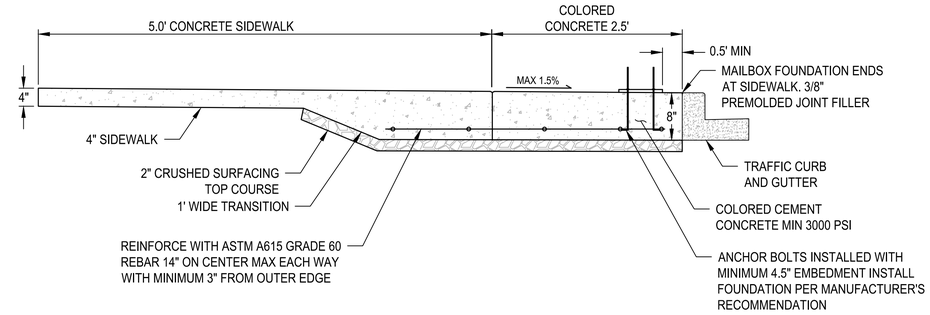
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY DETAILS

DRAWING NO.
130 OF 153
DT1

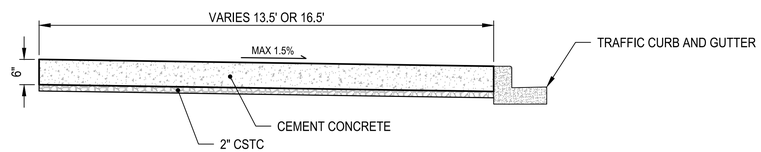


CLUSTER MAILBOX
DETAIL 1 TYP
NO SCALE

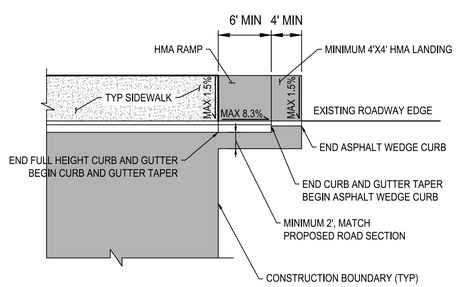


NOTE:
1. MAILBOX FOUNDATION TO BE PLACE TO ENSURE THE FRONT OF CLUSTER BOX IS 1' FROM THE FACE OF CURB.
2. CLUSTER MAILBOX REBAR AND FOUNDATION, MEASURED AND PAID WITH CLUSTER MAILBOX. COLORED CONCRETE MEASURED AND PAID SEPARATELY.

CLUSTER MAILBOX FOUNDATION
SECTION A -
NO SCALE



BUS STOP PAD
DETAIL 2 TYP
NO SCALE



ASPHALT RAMP WITH CURB AND GUTTER TAPER
DETAIL 3 TYP
NO SCALE

BOX #	REFERENCE LOCATION	SHEET	LT	RT	TYPE	1	2	3	4	5	6	7	8	DETAIL (1)
1	262+17.92	PP2	X		5	7729	7727	7725	7701					1
2	903+58.38	PP19		X	5	11907	11909A	11909B	11909C					1

CLUSTER MAILBOX TABLE
DETAIL 4 TYP
NO SCALE

REVISIONS	DATE	BY

DESIGNED M. VASSEY
DRAWN M. VASSEY
CHECKED D. PROCTOR
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-DT01-04
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

DMITRIY VICTOROVICH SUSLIKOV STATE OF WASHINGTON 38396 REGISTERED PROFESSIONAL ENGINEER
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY DETAILS

DRAWING NO.
131 OF 153
DT2

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Wednesday, February 3, 2021 10:26:22 AM
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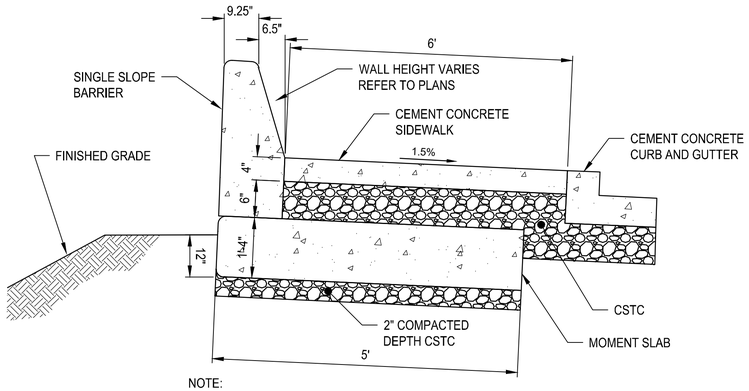
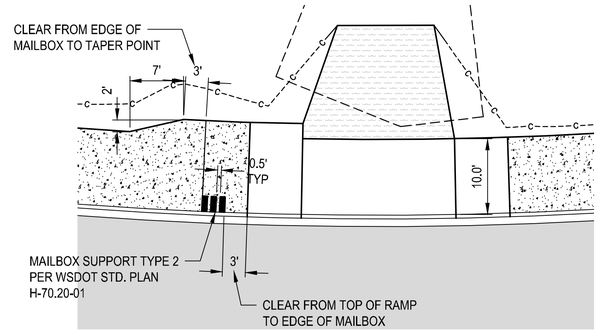
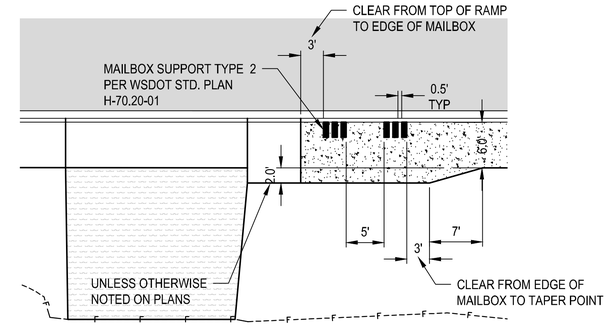


NOTE:
1. SEE WSDOT STANDARD PLAN D-3.15-02 FOR MOMENT SLAB AND BARRIER DESIGN.
2. SEE WSDOT STANDARD PLAN C-80.20-01 FOR TERMINATION TAPER DESIGN.

SINGLE SLOPE BARRIER AND MOMENT SLAB (1)

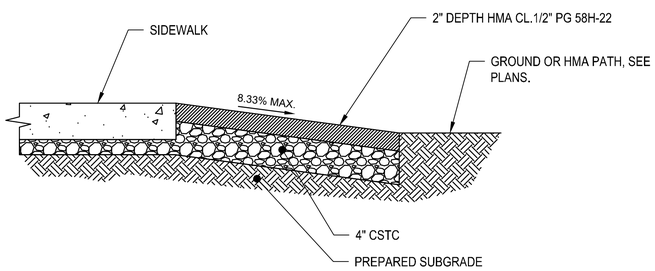
SCALE: NTS





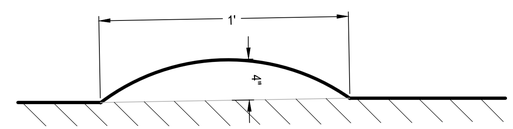
MAILBOX SUPPORT TYPE 2 (4)

SCALE: NTS



HMA RAMP DETAIL (2)

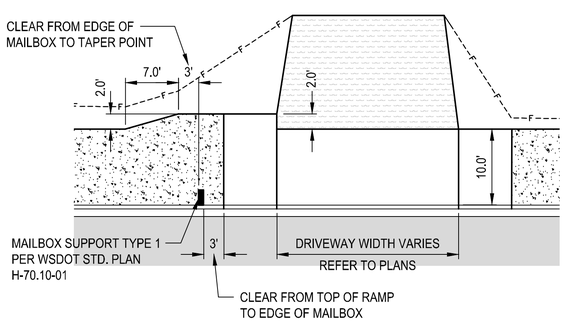
SCALE: NTS

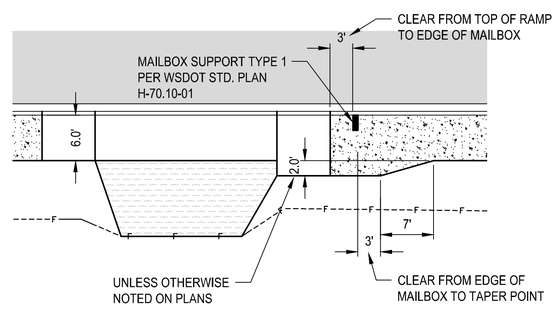


SPEED BUMP DETAIL

HMA SPEED HUMP (5)

SCALE: NTS





MAILBOX SUPPORT TYPE 1 (3)

SCALE: NTS

REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED B. DORT
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-DT01-02
JOB No. 214-3047-013
DATE FEBRUARY 2021

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JAMES BENTON DORT, STATE OF WASHINGTON, 48540, REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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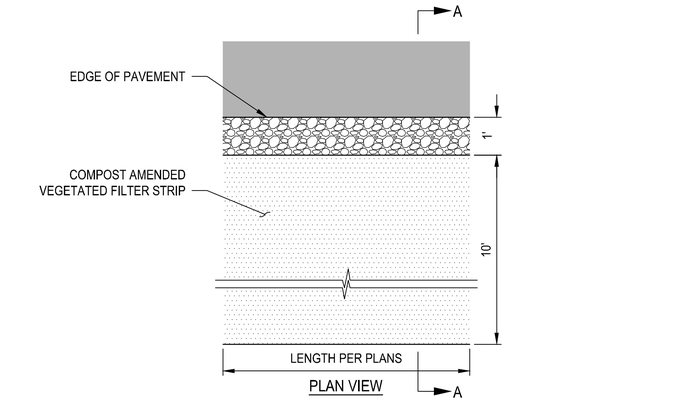
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

ROADWAY DETAILS

DRAWING NO.
132 OF 153
DT3

LAYOUT: DT3 ROADWAY DETAILS PATH: \\jupiter\projects\19000\19182.00.00 – JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Tuesday, February 2, 2021 5:21:21 PM

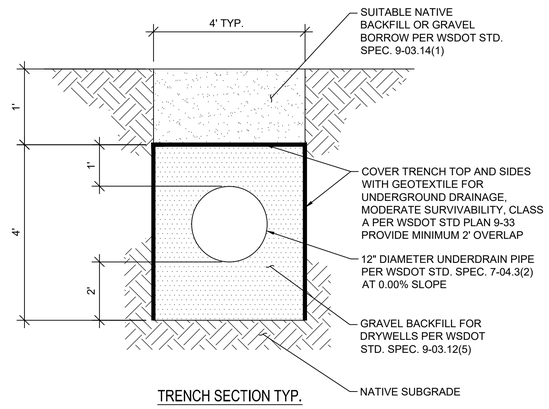


SEED MIX	
60-70%	TALL FESCUE
10-15%	SEASIDE/COLONIAL BENTGRASS
10-15%	MEADOW FOXTAIL
6-10%	ALSIKE CLOVER
1-5%	MARSHFIELD BIG TREFOIL
1-6%	REDTOP
NOTE: ALL PERCENTAGES ARE BY WEIGHT	

COMPOST AMENDED VEGETATED FILTER STRIP

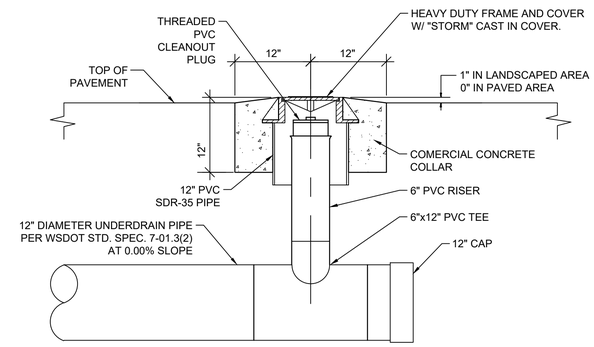
SCALE: NTS

1



TRENCH SECTION TYP.

NOTE: PROVIDE OBSERVATION PORT AT END OF TRENCH.



OBSERVATION PORT

INFILTRATION TRENCH

SCALE: NTS

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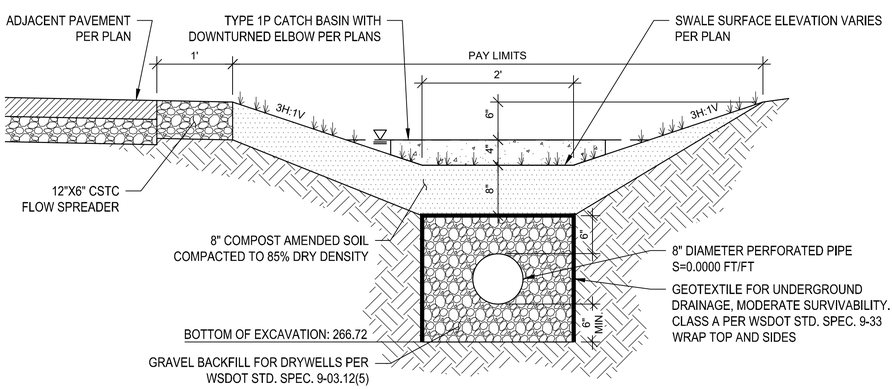

SEED MIX	
60-70%	TALL FESCUE
10-15%	SEASIDE/COLONIAL BENTGRASS
10-15%	MEADOW FOXTAIL
6-10%	ALSIKE CLOVER
1-5%	MARSHFIELD BIG TREFOIL
1-6%	REDTOP
NOTE: ALL PERCENTAGES ARE BY WEIGHT	

BIOFILTRATION SWALE

SCALE: NTS

3

	REVISIONS	DATE	BY

DESIGNED B. HARRINGTON
DRAWN R. BEALS
CHECKED A. CIRILLO
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-DT01-02
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

JAMES BENTON DORRIAN STATE OF WASHINGTON 48540 REGISTERED PROFESSIONAL ENGINEER
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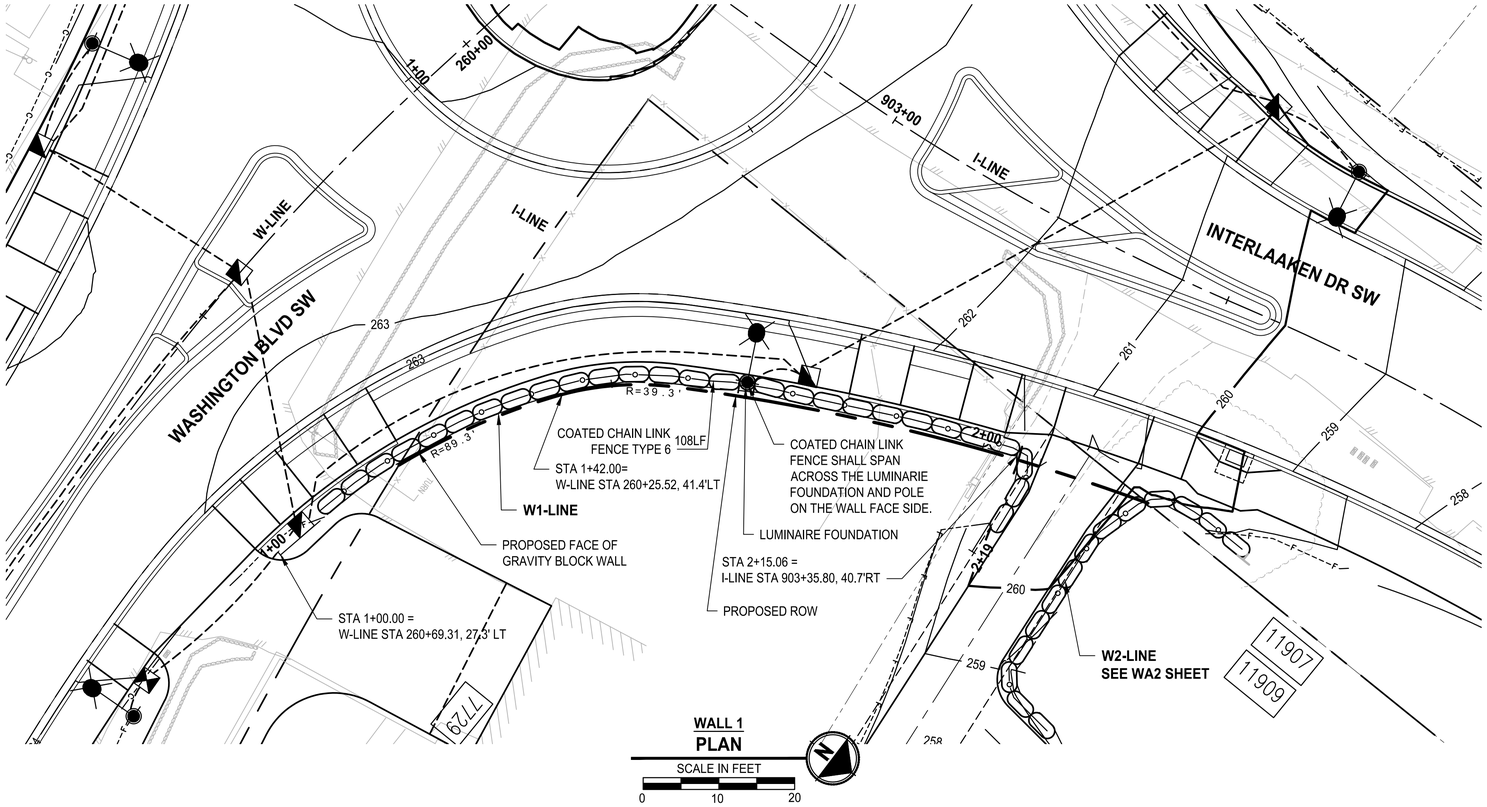
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DETAILS

DRAWING NO.
133 OF 153
DT4

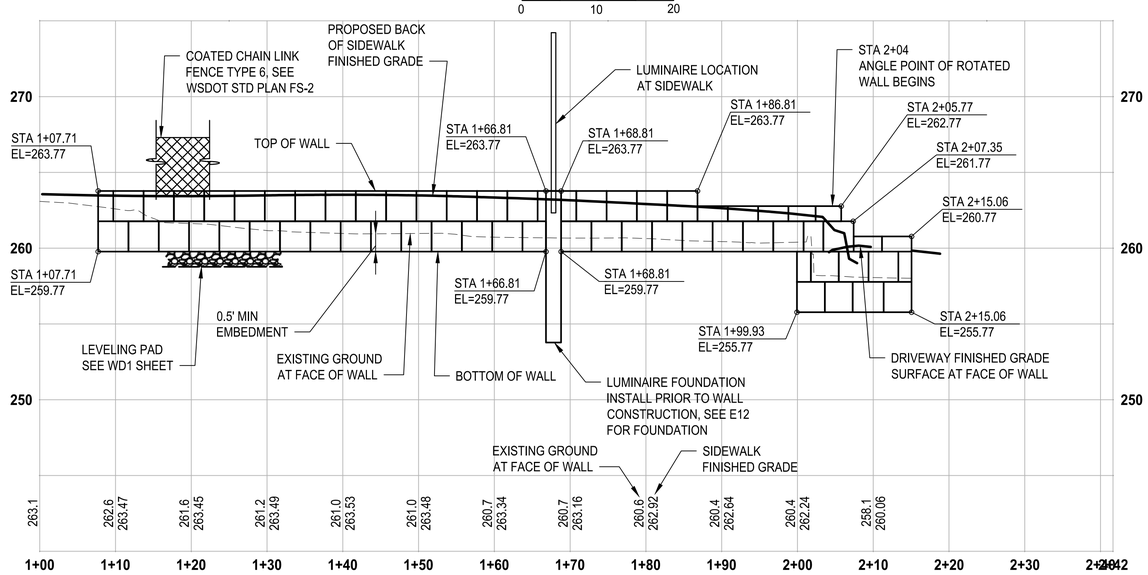
LAYOUT: DT4 STORM DETAILS PATH: \\jupiter\projects\19000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Tuesday, February 2, 2021 5:21:25 PM



WALL 1
PLAN
SCALE IN FEET
0 10 20

GENERAL NOTES:

1. SEE WD1 FOR GENERAL WALL CROSS-SECTION DETAILS.
2. GRAVITY BLOCK WALL LAYOUTS, PROFILES, AND DETAILS SHOWN IN THESE SHEETS ARE APPROXIMATE ONLY FOR BIDDING PURPOSES. CONTRACTOR SHALL PREPARE ENGINEERED DESIGNS AND CITY BUILDING PERMIT APPLICATIONS AND OBTAIN PERMIT APPROVAL PRIOR TO CONSTRUCTING THE WALLS.
3. WALL LAYOUT AS SHOWN IS BASED ON A TYPICAL STANDARD 2'x2'x4' BLOCK SIZE. CONTRACTOR'S ACTUAL LAYOUT MAY VARY DEPENDING ON THEIR SELECTED BLOCK SYSTEM.
4. SEE SPECIAL PROVISIONS SECTION 8-24 FOR ADDITIONAL MATERIAL, SUBMITTAL, AND DESIGN INFORMATION AND REQUIREMENTS.



WALL 1 PROFILE
HORIZ: 1"=10'
VERT: 1"=5'

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. PURGANAN
CHECKED D. PROCTOR
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013–WA03–04
JOB No. 214–3047–013
DATE FEBRUARY 2021

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MICHAEL YING TSUN STATE OF WASHINGTON 54064 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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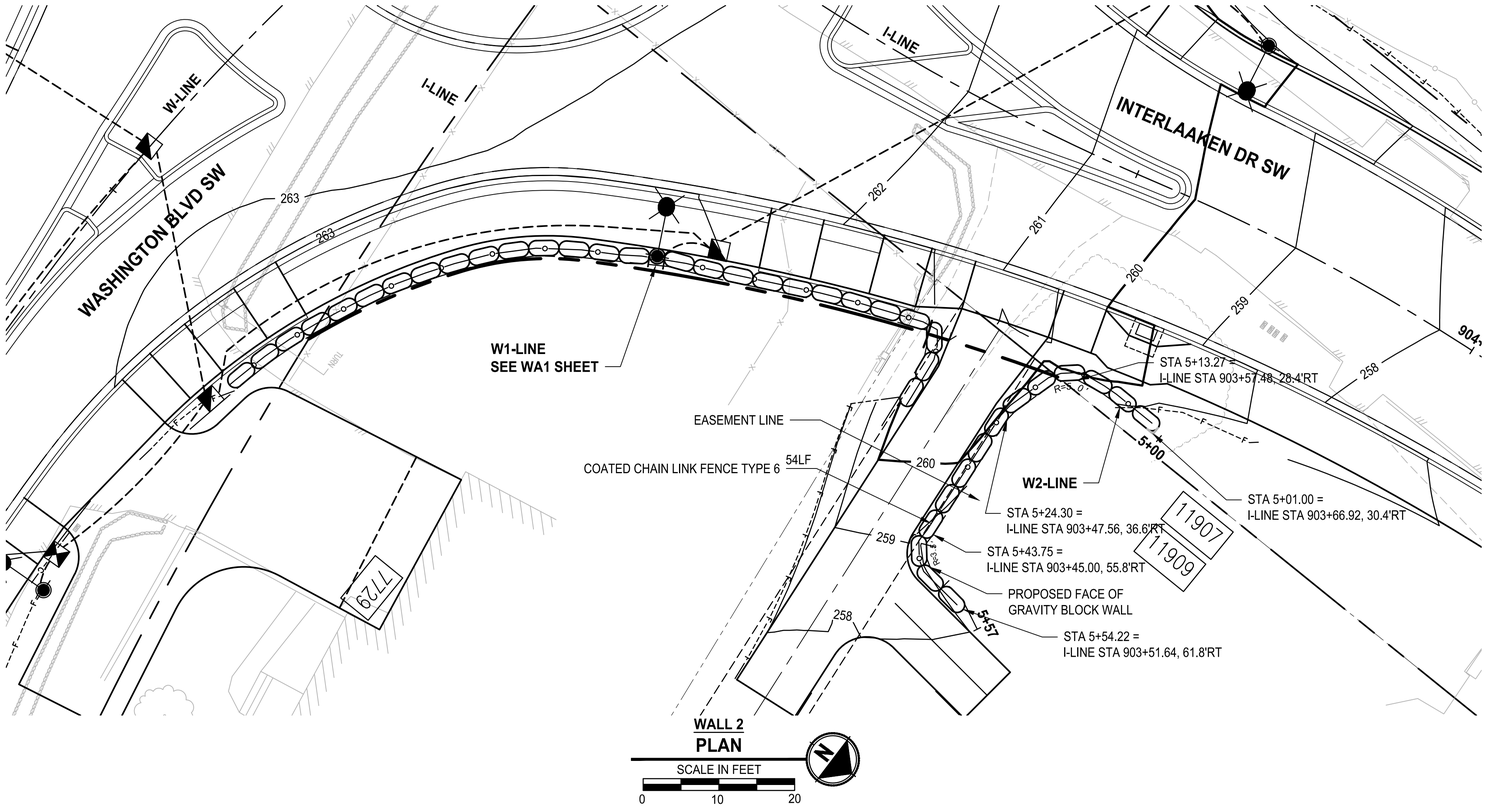
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

WALL PLAN AND PROFILE

DRAWING NO.
134 OF 153
WA1

LAYOUT: WA1 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013_JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: toykokat DATE: Tuesday, February 2, 2021 1:44:47 PM

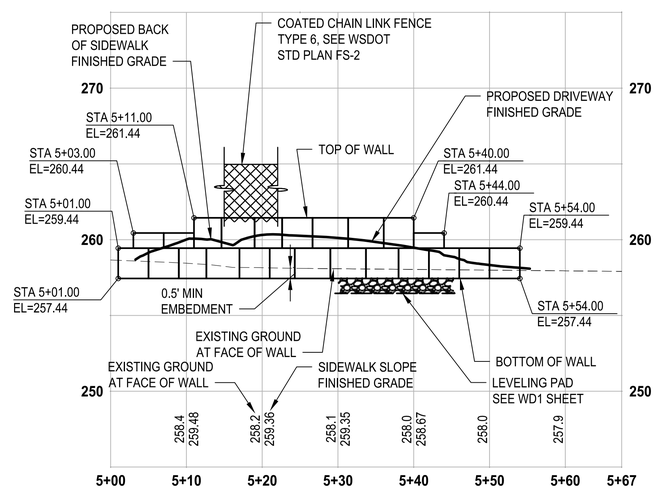


WALL 2

PLAN

SCALE IN FEET

0 10 20



WALL 2 PROFILE

HORIZ: 1"=10'
VERT: 1"=5'

GENERAL NOTES:

1. SEE WD1 FOR GENERAL WALL CROSS-SECTION DETAILS.
2. GRAVITY BLOCK WALL LAYOUTS, PROFILES, AND DETAILS SHOWN IN THESE SHEETS ARE APPROXIMATE ONLY FOR BIDDING PURPOSES. CONTRACTOR SHALL PREPARE ENGINEERED DESIGNS AND CITY BUILDING PERMIT APPLICATIONS AND OBTAIN PERMIT APPROVAL PRIOR TO CONSTRUCTING THE WALLS.
3. WALL LAYOUT AS SHOWN IS BASED ON A TYPICAL STANDARD 2'x2'x4' BLOCK SIZE. CONTRACTOR'S ACTUAL LAYOUT MAY VARY DEPENDING ON THEIR SELECTED BLOCK SYSTEM.
4. SEE SPECIAL PROVISIONS SECTION 8-24 FOR ADDITIONAL MATERIAL, SUBMITTAL, AND DESIGN INFORMATION AND REQUIREMENTS.

REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. PURGANAN
CHECKED D. PROCTOR
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-WA03-04
JOB No. 214-3047-013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA #1996

MICHAEL YING TSUN STATE OF WASHINGTON 54964 REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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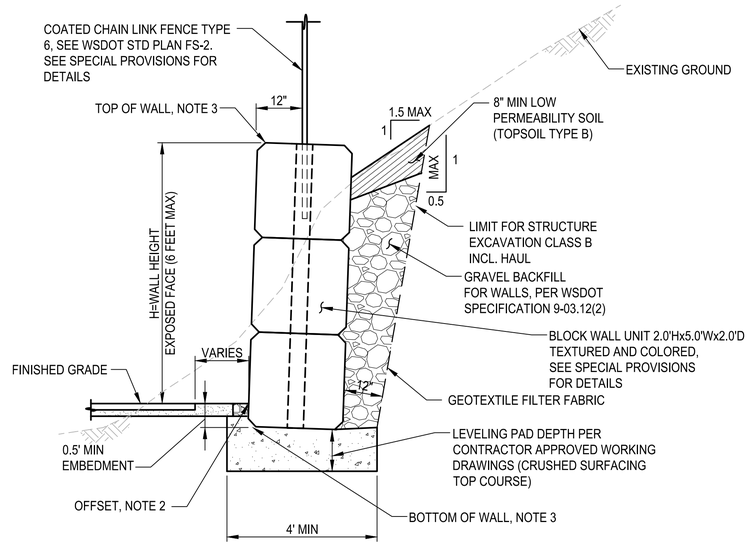
WWW.BCRADESIGN.COM

PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

WALL PLAN AND PROFILE

DRAWING NO.
135 OF 153
WA2

LAYOUT: WA2 PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Sves\CADD\DWG PLOTTED BY: toykokat DATE: Tuesday, February 2, 2021 1:45:40 PM



GRAVITY BLOCK WALL - CUT WALL (4'<H≤6')

DETAIL 1

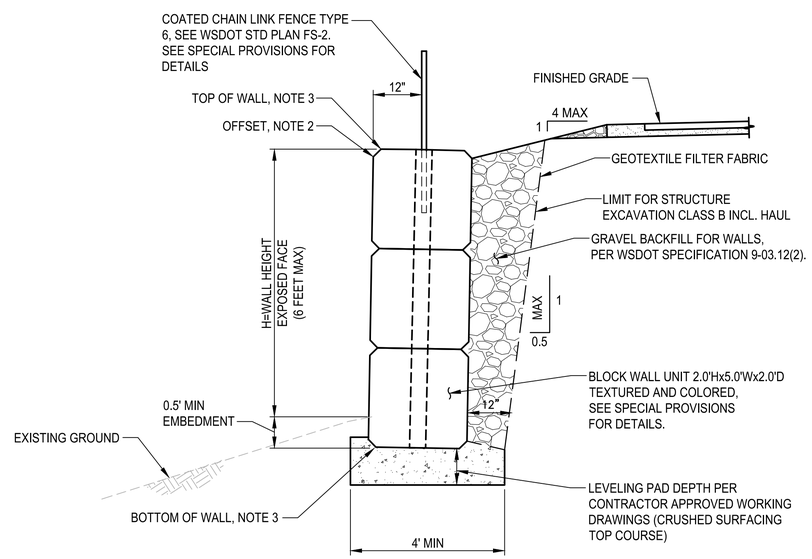
NOT TO SCALE

NOTES:

1. RESTORE DISTURBED EXISTING GROUND WITH NATIVE SOIL BACKFILL AND SEEDING, ANY LANDSCAPING SHALL BE OFFSET 2 FEET MIN FROM FACE OF WALL.
2. FOR FILL WALLS, OFFSET DISTANCE SHOWN ON THE WALL LAYOUT PLAN IS AT OUTSIDE EDGE OF THE TOP BLOCK. FOR CUT WALLS, OFFSET DISTANCE SHOWN ON THE WALL LAYOUT PLAN IS AT THE BOTTOM OF EXPOSED WALL FACE.
3. SEE WA SHEETS FOR TOP AND BOTTOM OF WALL ELEVATIONS.
4. FILL BLOCK UNITS HOLLOW CORES WITH GROUT . SEE SPECIAL PROVISIONS FOR WALL DESIGN REQUIREMENTS. ALL CONSTRUCTION MUST CONFORM TO MANUFACTURER'S SPECIFIC REQUIREMENTS.

DESIGN LOAD FOR FILL WALLS

LIVELOAD FOR SIDEWALK	100 PSF
DEADLOAD	NONE



GRAVITY BLOCK WALL - FILL WALL (4≤H≤6')

DETAIL 2

NOT TO SCALE

	REVISIONS	DATE	BY

DESIGNED M. TSUN
DRAWN B. PURGANAN
CHECKED D. PROCTOR
APPROVED A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS3047013–WD01
JOB No. 214–3047–013
DATE FEBRUARY 2021

CITY OF LAKEWOOD WA 1996

MICHAEL YING TSUN — STATE OF WASHINGTON — 54964 — REGISTERED PROFESSIONAL ENGINEER
02/01/2021

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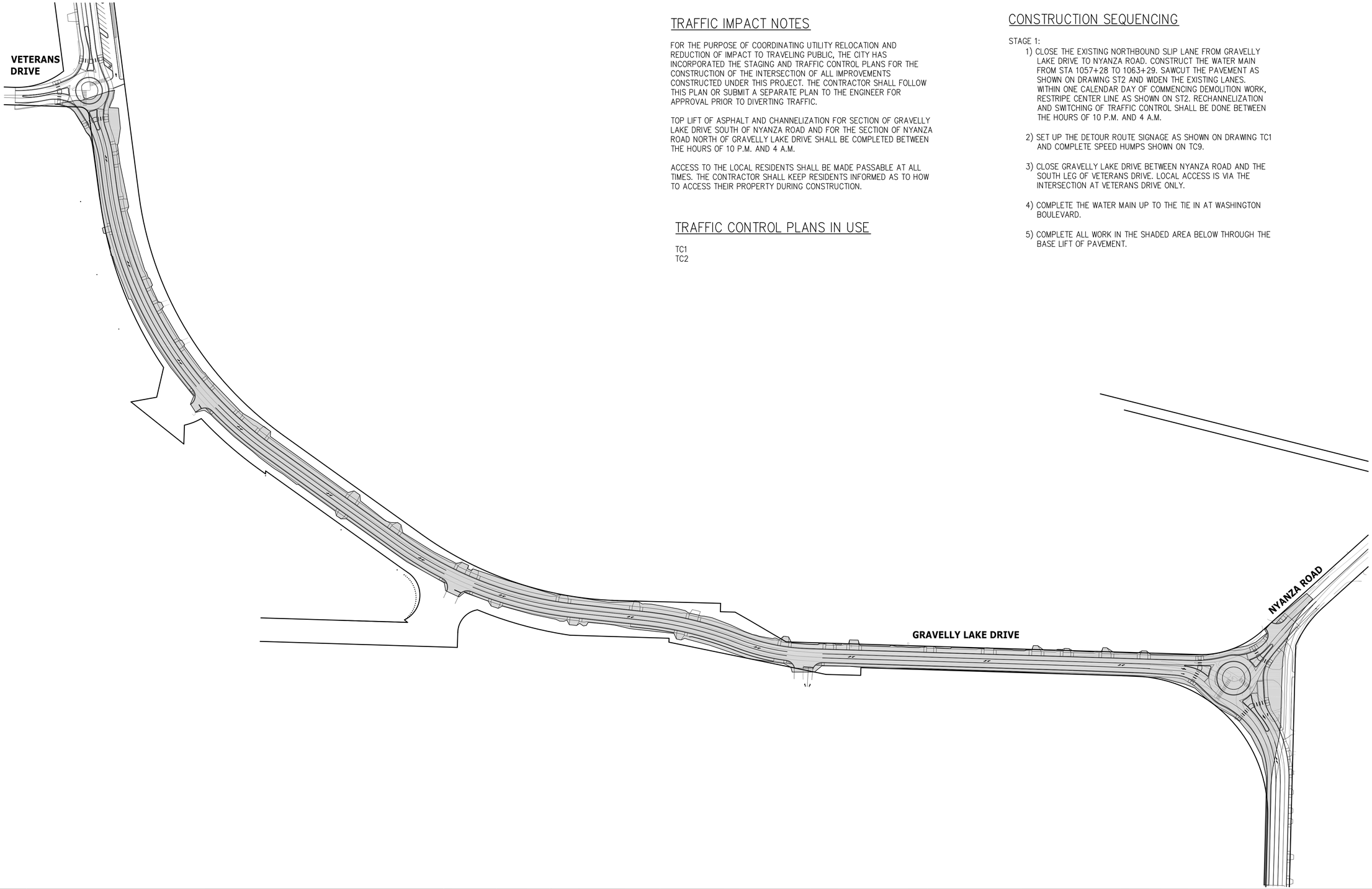
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

WALL DETAILS

DRAWING NO.
136 OF 153
WD1

PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM NorthAccess\99Svcs\CADD\DWG PLOTTED BY: taylokat DATE: Monday, February 1, 2021 5:40:47 PM
LAYOUT: WD1



TRAFFIC IMPACT NOTES

FOR THE PURPOSE OF COORDINATING UTILITY RELOCATION AND REDUCTION OF IMPACT TO TRAVELING PUBLIC, THE CITY HAS INCORPORATED THE STAGING AND TRAFFIC CONTROL PLANS FOR THE CONSTRUCTION OF THE INTERSECTION OF ALL IMPROVEMENTS CONSTRUCTED UNDER THIS PROJECT. THE CONTRACTOR SHALL FOLLOW THIS PLAN OR SUBMIT A SEPARATE PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO DIVERTING TRAFFIC.

TOP LIFT OF ASPHALT AND CHANNELIZATION FOR SECTION OF GRAVELLY LAKE DRIVE SOUTH OF NYANZA ROAD AND FOR THE SECTION OF NYANZA ROAD NORTH OF GRAVELLY LAKE DRIVE SHALL BE COMPLETED BETWEEN THE HOURS OF 10 P.M. AND 4 A.M.

ACCESS TO THE LOCAL RESIDENTS SHALL BE MADE PASSABLE AT ALL TIMES. THE CONTRACTOR SHALL KEEP RESIDENTS INFORMED AS TO HOW TO ACCESS THEIR PROPERTY DURING CONSTRUCTION.

TRAFFIC CONTROL PLANS IN USE

TC1
TC2

CONSTRUCTION SEQUENCING

STAGE 1:

1) CLOSE THE EXISTING NORTHBOUND SLIP LANE FROM GRAVELLY LAKE DRIVE TO NYANZA ROAD. CONSTRUCT THE WATER MAIN FROM STA 1057+28 TO 1063+29. SAWCUT THE PAVEMENT AS SHOWN ON DRAWING ST2 AND WIDEN THE EXISTING LANES. WITHIN ONE CALENDAR DAY OF COMMENCING DEMOLITION WORK, RESTRIPE CENTER LINE AS SHOWN ON ST2. RECHANNELIZATION AND SWITCHING OF TRAFFIC CONTROL SHALL BE DONE BETWEEN THE HOURS OF 10 P.M. AND 4 A.M.

2) SET UP THE DETOUR ROUTE SIGNAGE AS SHOWN ON DRAWING TC1 AND COMPLETE SPEED HUMPS SHOWN ON TC9.

3) CLOSE GRAVELLY LAKE DRIVE BETWEEN NYANZA ROAD AND THE SOUTH LEG OF VETERANS DRIVE. LOCAL ACCESS IS VIA THE INTERSECTION AT VETERANS DRIVE ONLY.

4) COMPLETE THE WATER MAIN UP TO THE TIE IN AT WASHINGTON BOULEVARD.

5) COMPLETE ALL WORK IN THE SHADED AREA BELOW THROUGH THE BASE LIFT OF PAVEMENT.

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

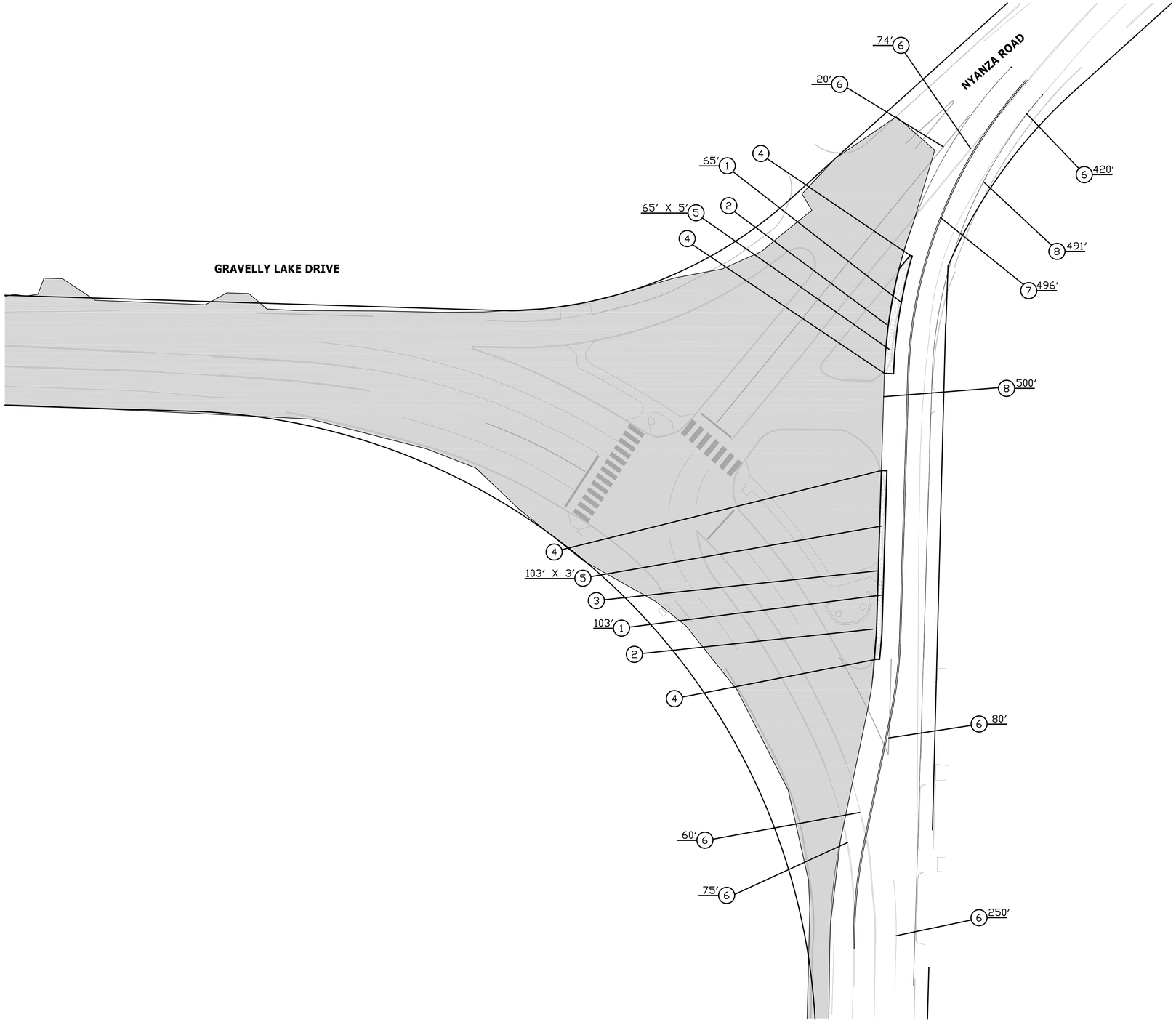
CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI STATE OF WASHINGTON 45879 REGISTERED PROFESSIONAL ENGINEER 2/3/21

Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

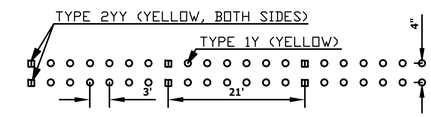
Drawing Name:
STAGING PLAN - STAGE 1

Job No. **302.0077**
Drawing No. **ST1**
Sheet **137** of **153**

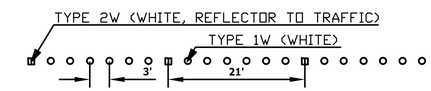


CONSTRUCTION NOTES

1. REMOVE EXISTING CURB
2. CLEAR AND EXCAVATE (1' DEPTH) EXISTING LANDSCAPING BEHIND CURB TO PREPARE FOR WIDENING 1' DEPTH
3. REMOVE EXISTING SIDEWALK PANEL OUTSIDE OF WIDENING AREA
4. SAWCUT EXISTING PAVEMENT AS NEEDED TO SQUARE OFF PATCH AND REMOVE ASPHALT
5. WIDEN BYPASS USING 2" CSBC AND 3" HMA
6. GRIND EXISTING STRIPING
7. INSTALL DOUBLE YELLOW RAISED PAVEMENT MARKERS WITH PATTERN DETAILED BELOW (48 TYPE 2YY, 288 TYPE 1Y)
8. INSTALL FOG LINE RAISED PAVEMENT PARKERS WITH PATTERN DETAILED BELOW (48 TYPE 2W, 288 TYPE 1W)



DOUBLE YELLOW CENTER LINE PATTERN



FOG LINE PATTERN

TRAFFIC CONTROL PLANS IN USE

TC1
TC2

N

HORIZONTAL GRAPHIC SCALE
30 15 0 15 30
FULL SIZE GRAPHIC SCALE: 1"= 30'
HALF SIZE GRAPHIC SCALE: 1"= 60'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

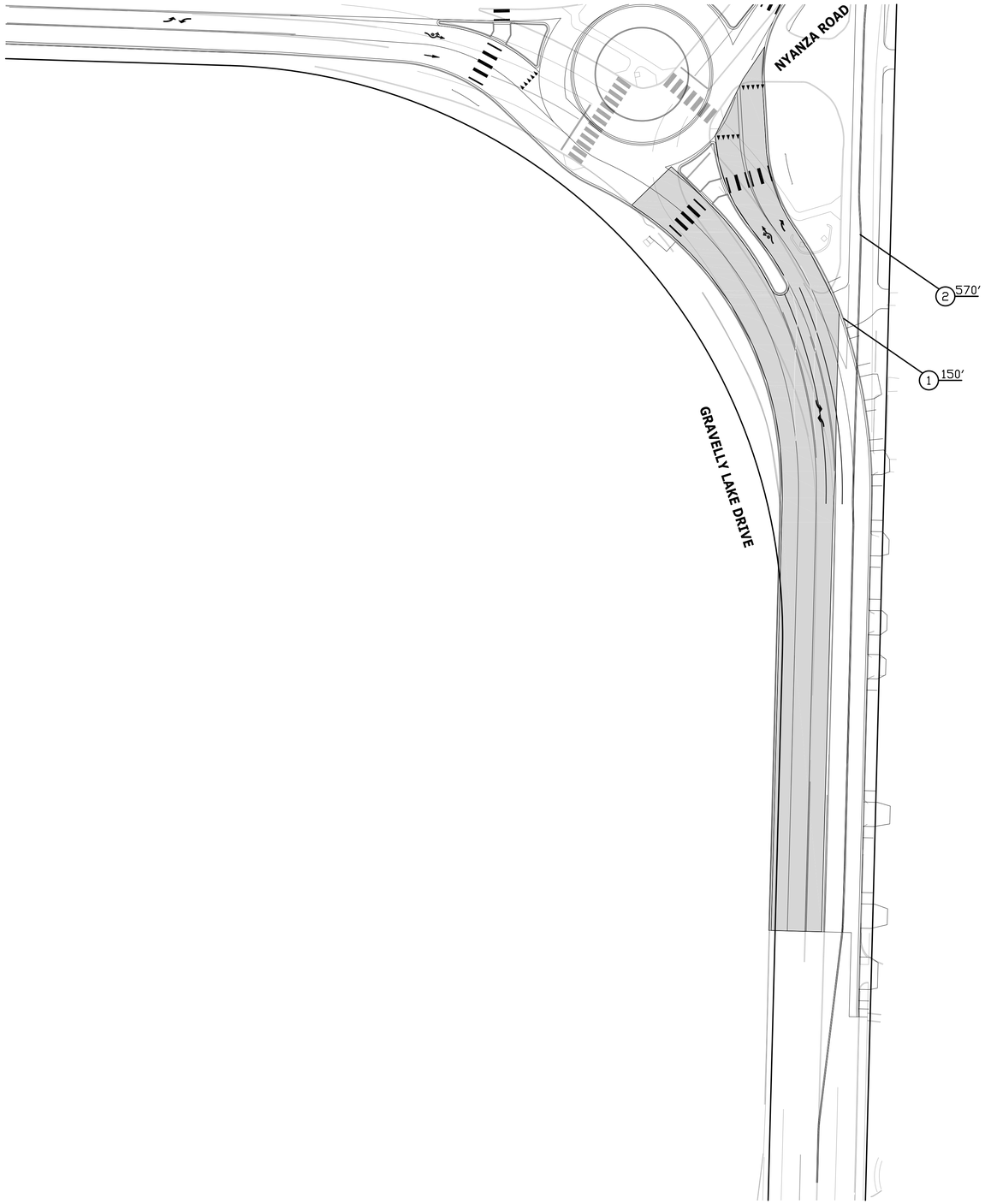
CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI STATE OF WASHINGTON 45879 REGISTERED PROFESSIONAL ENGINEER 2/3/21

Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
STAGING PLAN - STAGE 1 - NYANZA INTERSECTION PREPARATION

Job No. **302.0077**
Drawing No. **ST2**
Sheet **138** of **153**



CONSTRUCTION NOTES

1 **REMOVE RAISED PAVEMENT MARKERS**

2 **INSTALL DOUBLE YELLOW TEMPORARY TRAFFIC STRIPING TAPE**

CONSTRUCTION SEQUENCING

STAGE 2:

1) ONCE COMPLETION OF THE IMPROVEMENTS OF PHASE 1 ARE NEARING COMPLETION (BASE LIFT WITHIN ONE WEEK OF BEING PLACED), MODIFY THE TRAFFIC CONTROL ALONG GRAVELLY LAKE DRIVE SOUTH OF NYANZA AS SHOWN ON THIS SHEET. RECHANNELIZATION AND SWITCHING OF TRAFFIC CONTROL SHALL BE DONE BETWEEN THE HOURS OF 10 P.M. AND 4 A.M.

2) REMOVE EXISTING PAVEMENT AND GRADE FOR BASE COURSE IN SHADED AREA ON THIS SHEET.

3) INSTALL BASE LIFT OF PAVING.

TRAFFIC CONTROL PLANS IN USE

TC1
TC2
TC3

N

HORIZONTAL GRAPHIC SCALE
40 20 0 20 40
FULL SIZE GRAPHIC SCALE: 1"= 40'
HALF SIZE GRAPHIC SCALE: 1"= 80'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI STATE OF WASHINGTON 45303 REGISTERED PROFESSIONAL ENGINEER 3/3/20

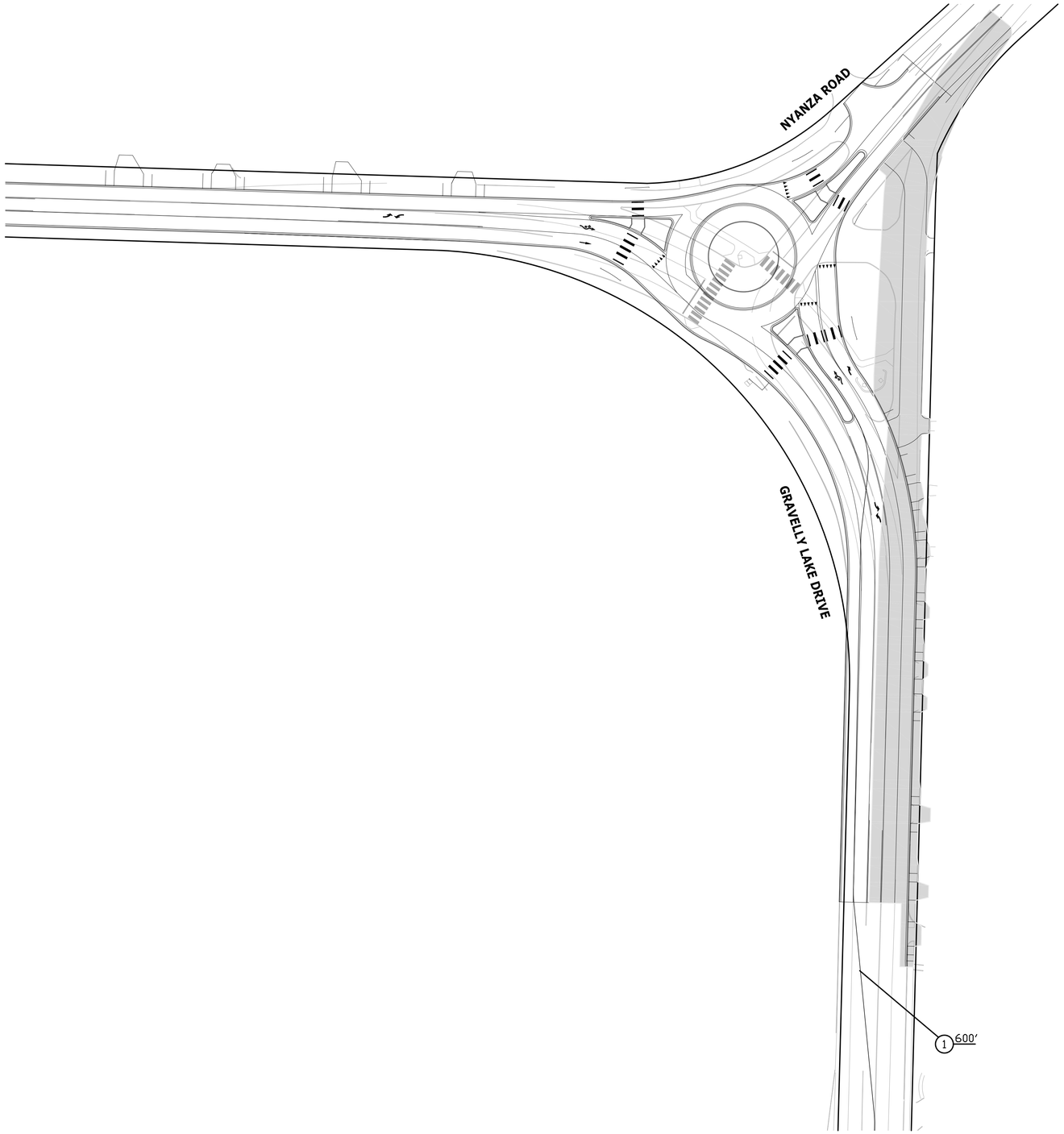
Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
STAGING PLAN - STAGE 2 - ROAD REBUILD SOUTH OF NYANZA WEST SIDE

Job No. **302.0077**

Drawing No. **ST3**

Sheet **139** of **153**



CONSTRUCTION NOTES

1 **INSTALL DOUBLE YELLOW TEMPORARY TRAFFIC STRIPING TAPE**

CONSTRUCTION SEQUENCING

STAGE 3:

1) ONCE COMPLETION OF THE IMPROVEMENTS OF STAGE 2 ARE COMPLETED (BASE LIFT COMPLETED), MODIFY THE TRAFFIC CONTROL ALONG GRAVELLY LAKE DRIVE SOUTH OF NYANZA AS SHOWN ON THIS SHEET. RECHANNELIZATION AND SWITCHING OF TRAFFIC CONTROL FOR THIS STAGE CAN BE DONE AT ANY TIME OF THE DAY.

2) COMPLETE WORK IN THE SHADED AREA THROUGH BASE LIFT OF PAVING. STAGE 3 AND STAGE 4 CAN BE DONE CONCURRENTLY FOLLOWING THE SHIFT IN TRAFFIC NOTED IN STEP 1 ABOVE.

3) ONCE STAGE 4 IS COMPLETED WITH THE TIE IN TO VETERANS, CLOSE THE ROUNDABOUT LEG TO NORTHBOUND NYANZA AT GRAVELLY AND COMPLETE ALL CURB, SIDEWALK AND HMA.

TRAFFIC CONTROL PLANS IN USE

TC1
TC2
TC4

N

HORIZONTAL GRAPHIC SCALE
50 25 0 25 50
FULL SIZE GRAPHIC SCALE: 1"= 50'
HALF SIZE GRAPHIC SCALE: 1"= 100'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI STATE OF WASHINGTON 45309 REGISTERED PROFESSIONAL ENGINEER 2/3/20

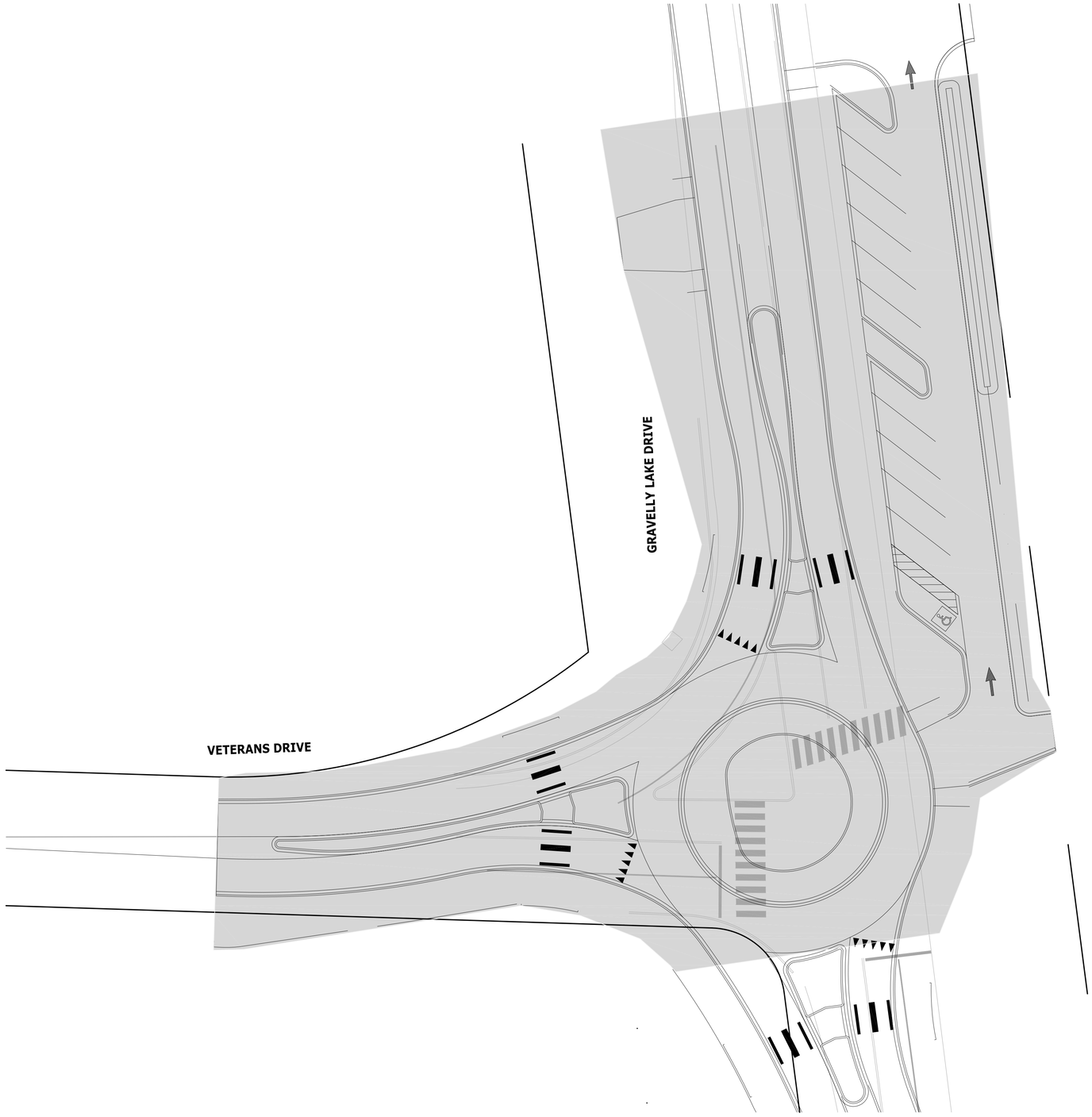
Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
STAGING PLAN - STAGE 3 - ROAD REBUILD SOUTH OF NYANZA EAST SIDE

Job No. **302.0077**

Drawing No. **ST4**

Sheet **140** of **153**



CONSTRUCTION SEQUENCING

STAGE 4:

1) ONCE COMPLETION OF THE IMPROVEMENTS OF STAGE 2 ARE COMPLETED (BASE LIFT COMPLETED), MODIFY THE LOCAL ACCESS FROM THE INTERSECTION OF VETERANS AND GRAVELLY TO THE INTERSECTION OF GRAVELLY AND NYANZA.

2) COMPLETE WORK IN THE SHADED AREA THROUGH BASE LIFT OF PAVING.

3) ONCE ALL WORK IN STAGE 4 IS COMPLETED, COMPLETE THE TOP LIFT OF PAVEMENT FOR ALL WORK ON THE PROJECT SOUTH OF THE VETERANS DRIVE INTERSECTION.

TRAFFIC CONTROL PLANS IN USE

TC1
TC5

N

HORIZONTAL GRAPHIC SCALE
20 10 0 10 20
FULL SIZE GRAPHIC SCALE: 1"= 20'
HALF SIZE GRAPHIC SCALE: 1"= 40'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

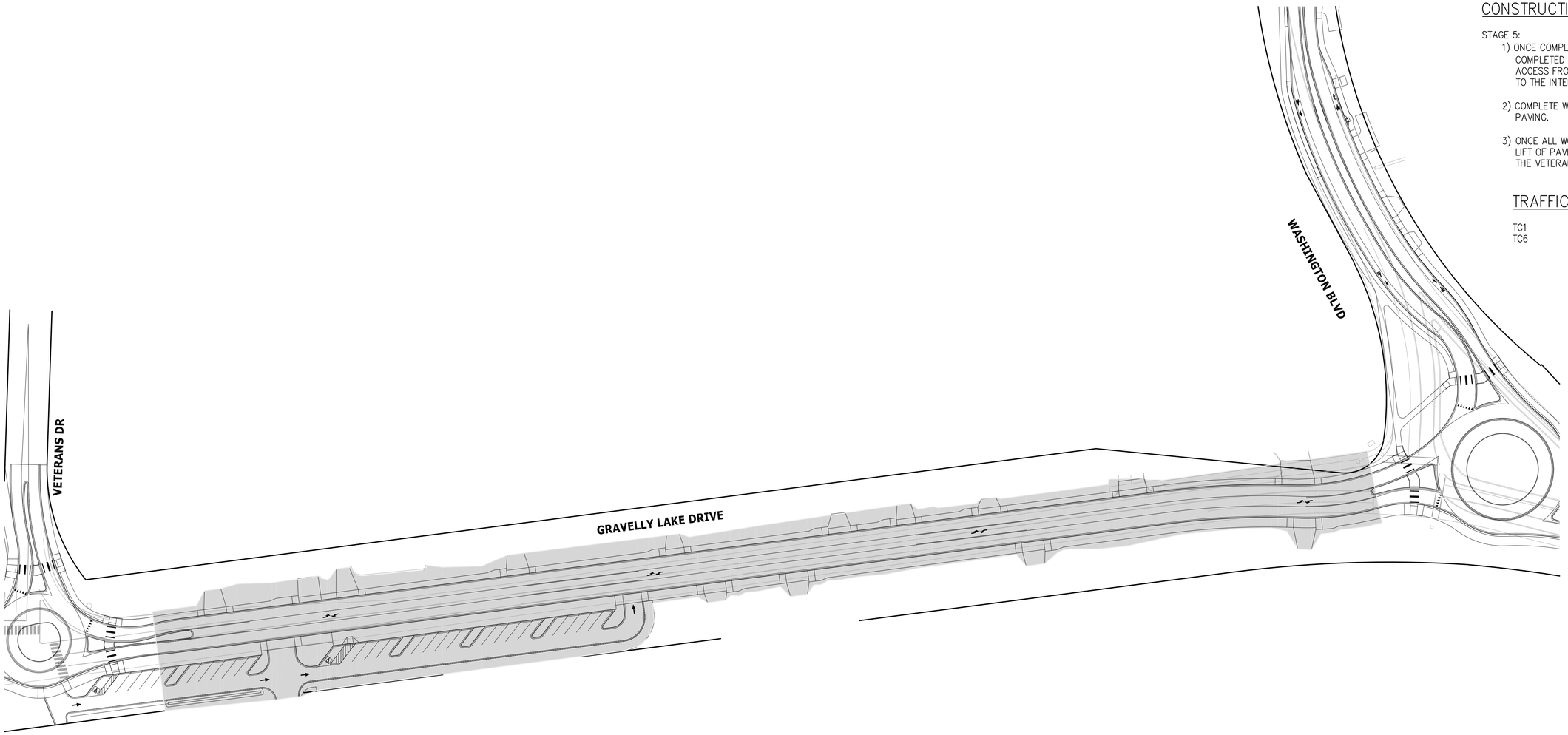
CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI STATE OF WASHINGTON 45809 REGISTERED PROFESSIONAL ENGINEER 2/3/20

Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
STAGING PLAN - STAGE 4 - VETERANS DR/GRAVELLY LK DR ROUNDABOUT

Job No. **302.0077**
Drawing No. **ST5**
Sheet **141** of **153**



CONSTRUCTION SEQUENCING

STAGE 5:

1) ONCE COMPLETION OF THE IMPROVEMENTS OF STAGE 4 ARE COMPLETED (SUBSTANTIALLY COMPLETED), MODIFY THE LOCAL ACCESS FROM THE INTERSECTION OF VETERANS AND GRAVELLY TO THE INTERSECTION OF GRAVELLY AND NYANZA.

2) COMPLETE WORK IN THE SHADED AREA THROUGH BASE LIFT OF PAVING.

3) ONCE ALL WORK IN STAGE 4 IS COMPLETED, COMPLETE THE TOP LIFT OF PAVEMENT FOR ALL WORK ON THE PROJECT SOUTH OF THE VETERANS DRIVE INTERSECTION.

TRAFFIC CONTROL PLANS IN USE

TC1
TC6

HORIZONTAL GRAPHIC SCALE
60 30 0 30 60
FULL SIZE GRAPHIC SCALE: 1"= 60'
HALF SIZE GRAPHIC SCALE: 1"= 120'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

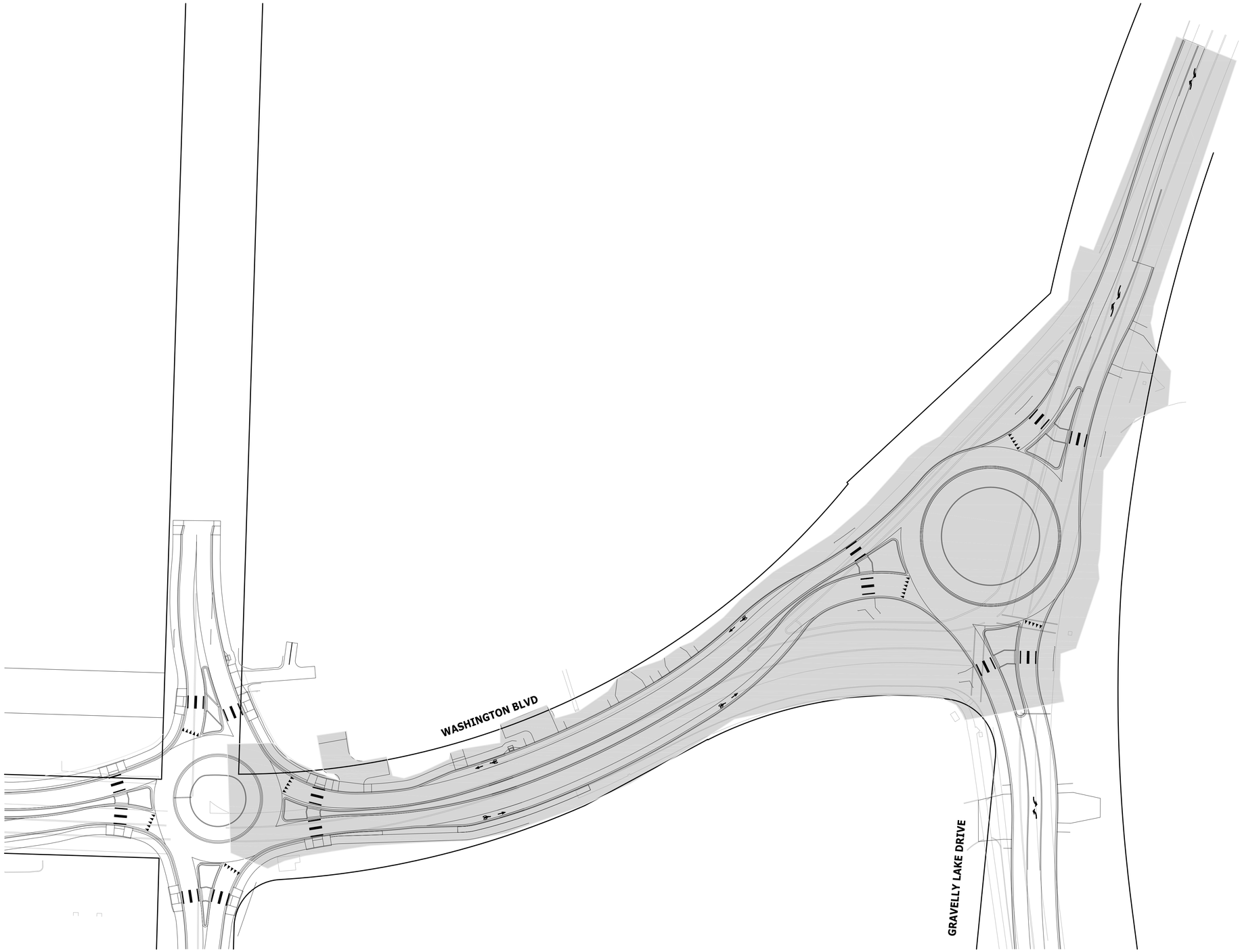
CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI STATE OF WASHINGTON 45879 REGISTERED PROFESSIONAL ENGINEER 2/3/20

Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
STAGING PLAN - STAGE 5 - GRAVELLY LAKE - VETERANS TO WASHINGTON

Job No. **302.0077**
Drawing No. **ST6**
Sheet **142** of **153**



CONSTRUCTION SEQUENCING

STAGE 6:

1) ONCE COMPLETION OF THE IMPROVEMENTS OF STAGE 5 ARE COMPLETED (BASE LIFT COMPLETED), MODIFY THE DETOUR PLAN ON DRAWING TC7.

2) COMPLETE WORK IN THE SHADED AREA AND PAVE FINAL LIFT AND CHANNELIZATION BETWEEN VETERANS DRIVE AND WASHINGTON BLVD.

TRAFFIC CONTROL PLANS IN USE

TC7

N

HORIZONTAL GRAPHIC SCALE
20 10 0 10 20
FULL SIZE GRAPHIC SCALE: 1"= 20'
HALF SIZE GRAPHIC SCALE: 1"= 40'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI
STATE OF WASHINGTON
45809
REGISTERED PROFESSIONAL ENGINEER
3/3/20

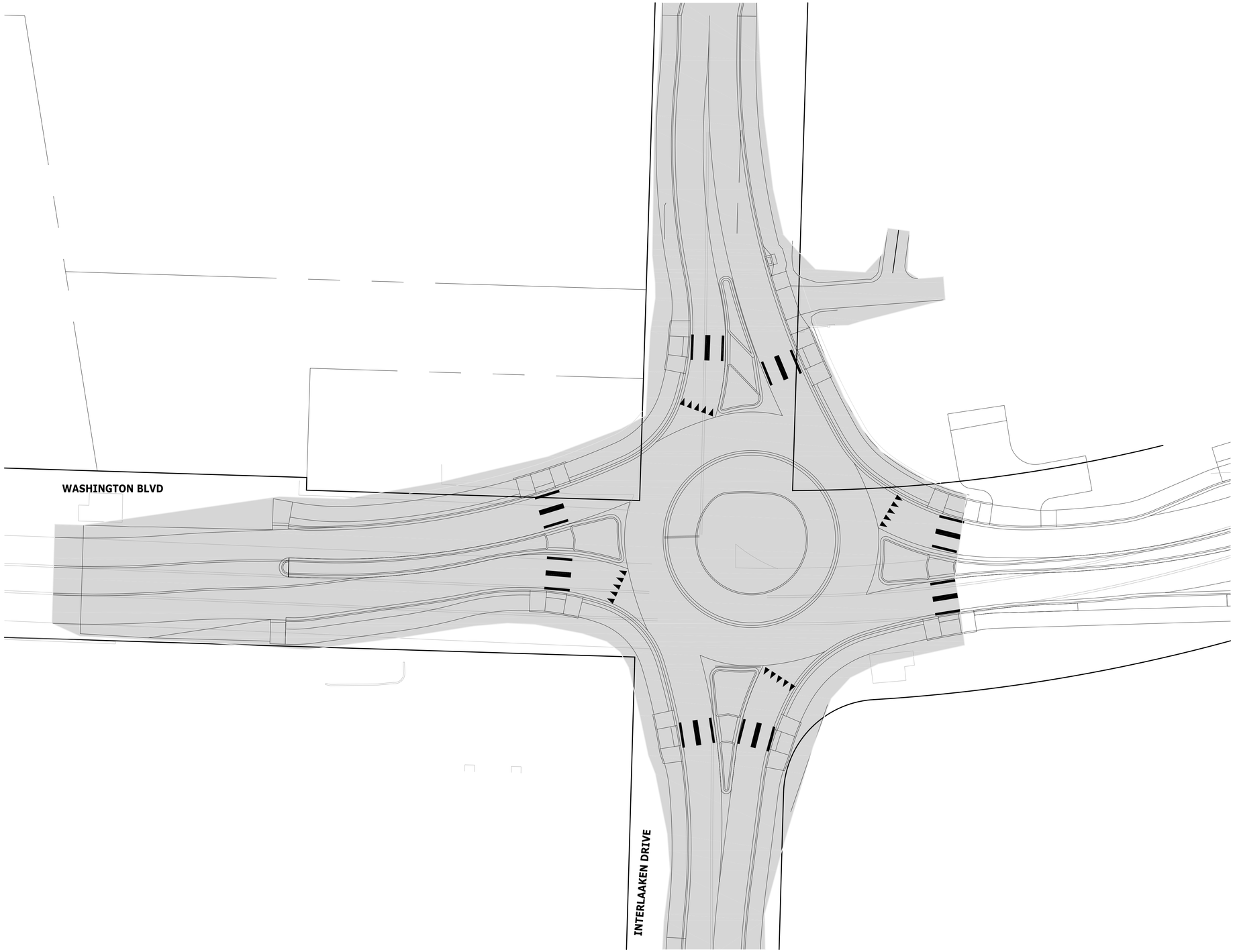
Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
STAGING PLAN - STAGE 4 - WASHINGTON/GRAVELLY LK DR ROUNDABOUT

Job No. **302.0077**

Drawing No. **ST7**

Sheet **143** of **153**



CONSTRUCTION SEQUENCING

STAGE 7:

1) ONCE COMPLETION OF THE IMPROVEMENTS OF STAGE 6 ARE COMPLETED (BASE LIFT COMPLETED), MODIFY THE DETOUR PLAN ACCORDING TO TC8.

2) COMPLETE WORK IN THE SHADED AREA.

TRAFFIC CONTROL PLANS IN USE

TC8

N

HORIZONTAL GRAPHIC SCALE

20 10 0 10 20

FULL SIZE GRAPHIC SCALE: 1"= 20'

HALF SIZE GRAPHIC SCALE: 1"= 40'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

CITY OF LAKEWOOD, WA ●1996●

TODD S. POKSWINSKI STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

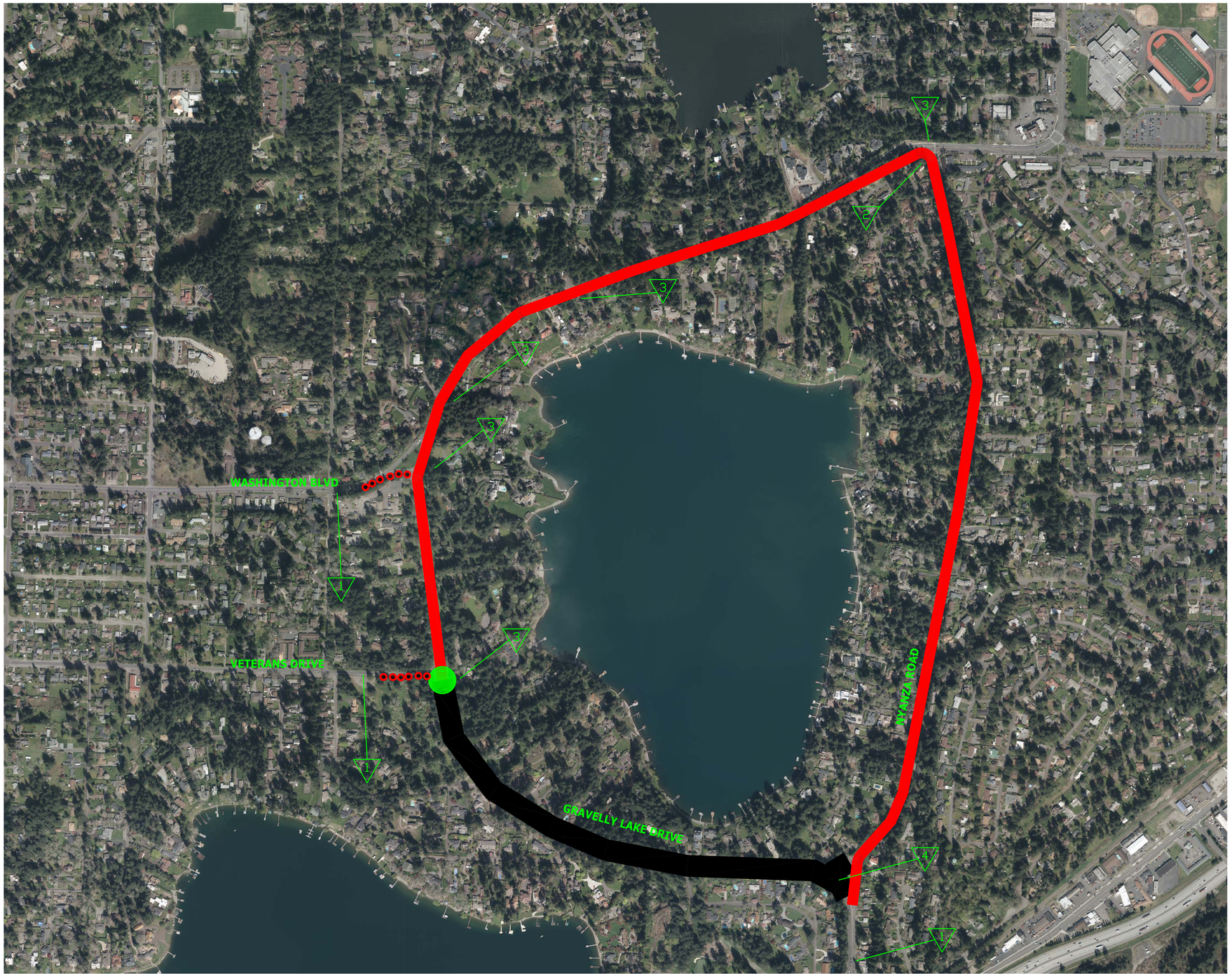
Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
STAGING PLAN - STAGE 7 - WASHINGTON/INTERLAAKEN ROUNDABOUT

Job No. **302.0077**

Drawing No. **ST8**

Sheet **144** of **153**



LEGEND

- DETOUR ROUTE
- ROAD CLOSURE
- POINT OF LOCAL ACCESS
- CLOSE RIGHT TURN LANE OFF WITH LIGHTED BARRELS

TRAFFIC CONTROL NOTES:

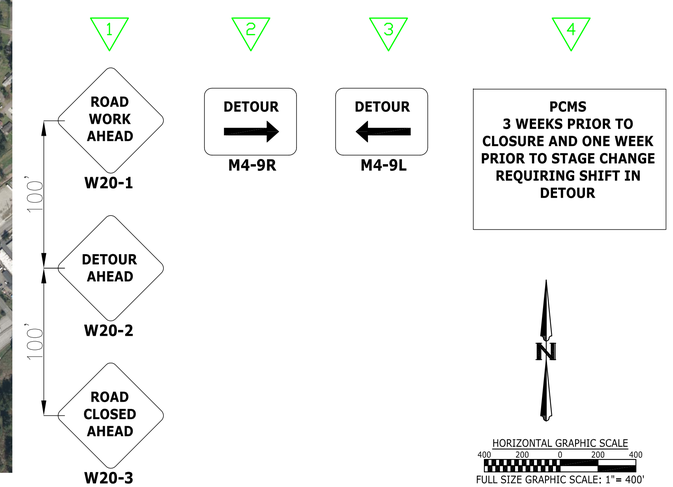
PCMS SHALL BE INSTALLED THREE WEEKS PRIOR TO ROAD CLOSURE AND REMOVED UPON ROAD CLOSURE. SIGN SHALL BE SET UP WITH THE FOLLOWING MESSAGE:
SCREEN 1:
GRAVELLY
CLOSED @
NYANZA

SCREEN 2:
BEG (INSERT DATE; I.E. 4/15)
USE
DETOUR

ROAD CLOSURES SHALL CONSIST OF TYPE III BARRICADES AT EACH END OF THE CLOSURE.

FOR STAGE 1, THE CLOSURE MEANS THAT BARRICADES WILL NEED TO BE COMPLETED COMPLETELY ACROSS NYANZA, NOT ALLOWING TRAFFIC IN TO THE CLOSURE. THE CLOSURE AT VETERANS DRIVE SHALL CONSIST OF A SINGLE TYPE III BARRICADE WITH ROAD CLOSED SIGN AND LOCAL TRAFFIC ONLY SIGN, PLACED IN THE MIDDLE OF THE ROAD SO TRAFFIC CAN PASS ON EITHER SIDE OF THE BARRICADE.

TRAFFIC CONTROL SIGN SCHEDULE



No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20 | Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

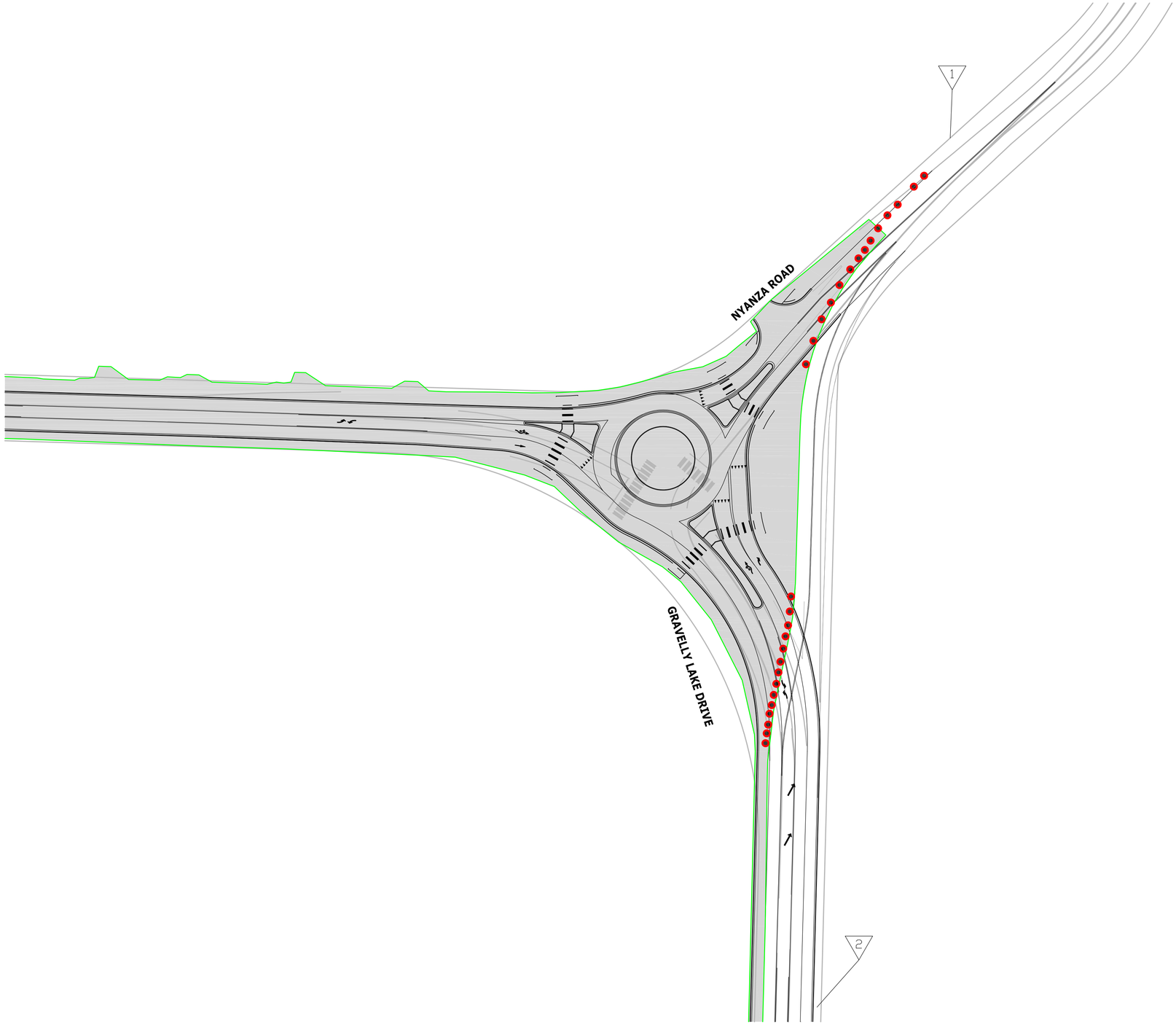
CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER

Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
TRAFFIC CONTROL PLAN - STAGE 1 THROUGH 5 DETOUR

Job No. **302.0077**
Drawing No. **TC1**
Sheet **145** of **153**



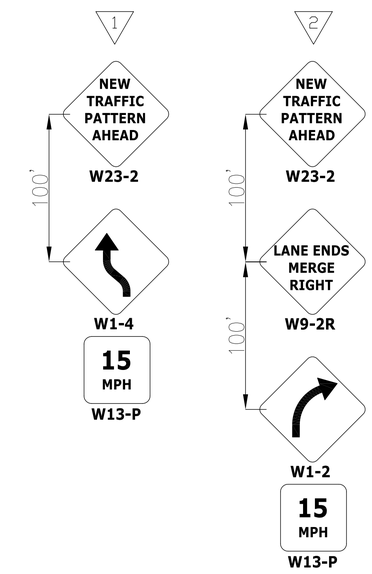
LEGEND

ROAD CLOSURE

BARREL CLOSURE WITH LIGHTED BARRELS

PAINTED ARROW

TRAFFIC CONTROL SIGN SCHEDULE



N

HORIZONTAL GRAPHIC SCALE
50 25 0 25 50
FULL SIZE GRAPHIC SCALE: 1"= 50'
HALF SIZE GRAPHIC SCALE: 1"= 100'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

CITY OF LAKEWOOD · WA · 1996

TROY S. POKSWINSKI · STATE OF WASHINGTON · 45303 · REGISTERED PROFESSIONAL ENGINEER · 3/3/20

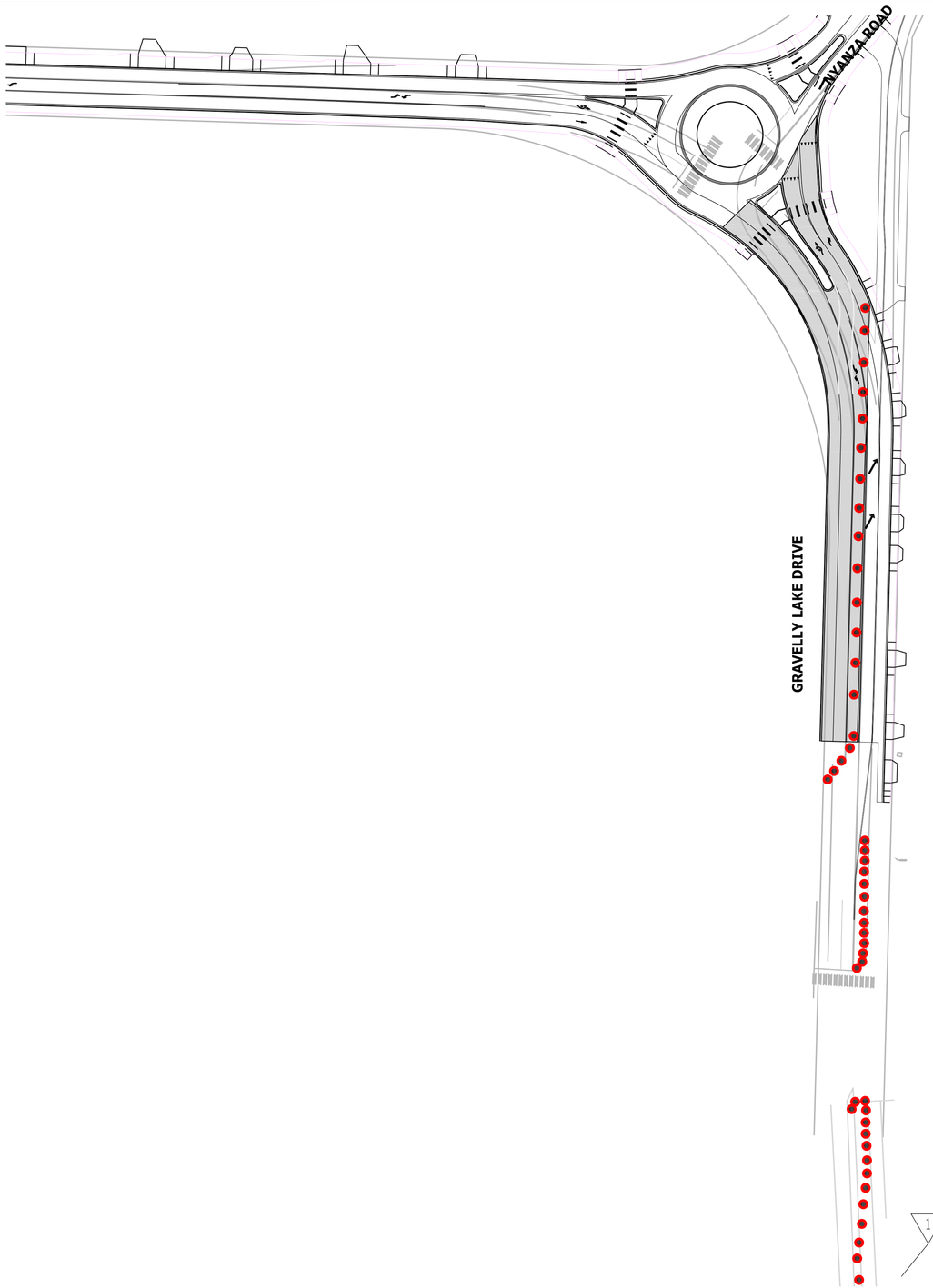
Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
TRAFFIC CONTROL PLAN - STAGE 1 - NYANZA/GRAVELLY INTERSECTION

Job No. **302.0077**

Drawing No. **TC2**

Sheet **146** of **153**



LEGEND

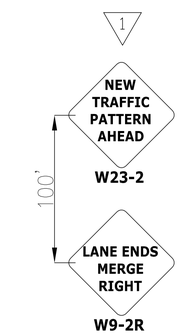
ROAD CLOSURE

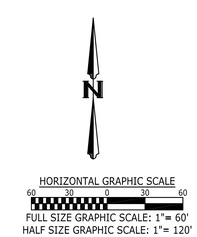
BARREL CLOSURE WITH LIGHTED BARRELS

REMOVE PAINTED ARROW

TRAFFIC CONTROL SIGN SCHEDULE

RELOCATE SIGNS AHEAD OF CLOSURE





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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER

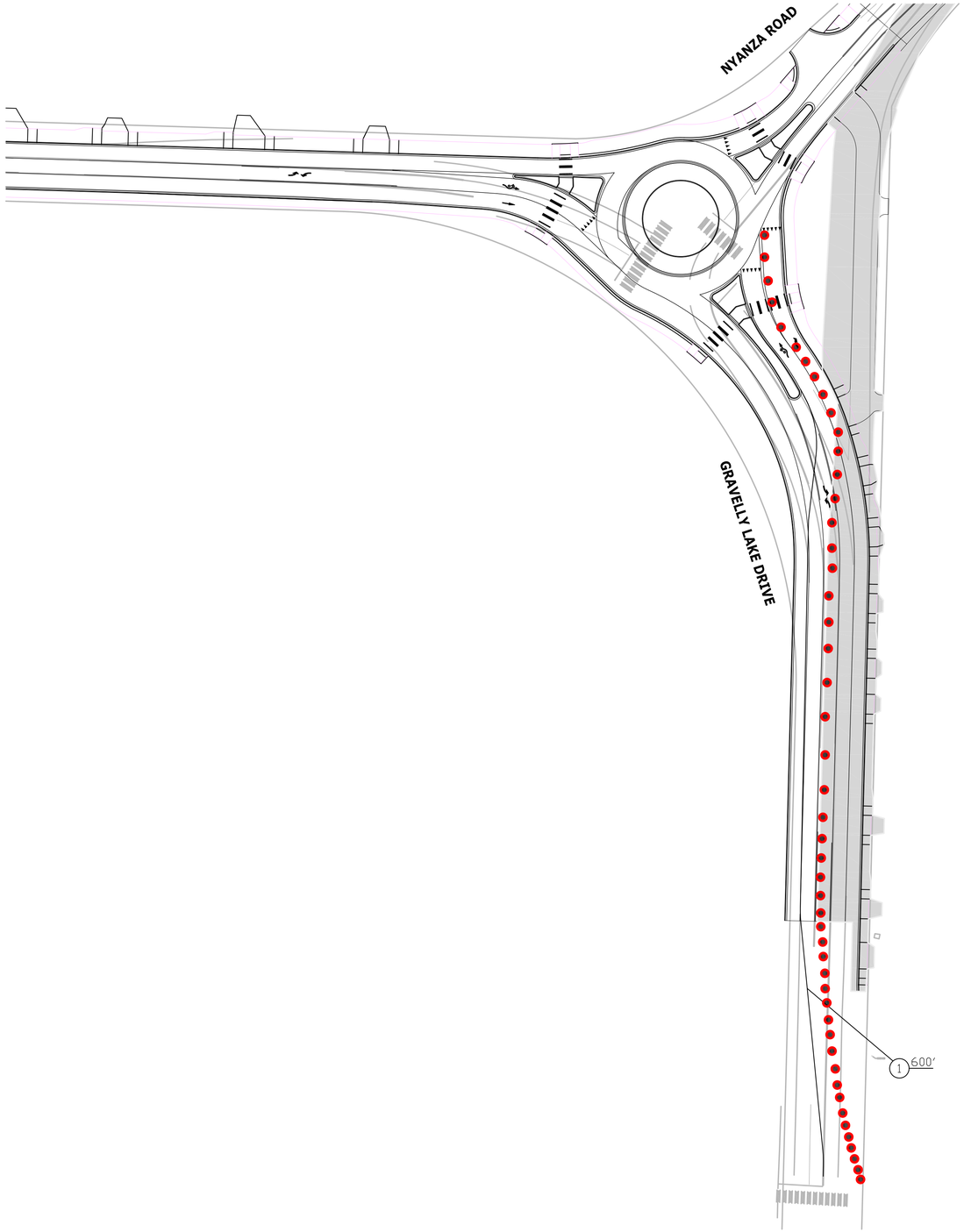
Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
TRAFFIC CONTROL PLAN - STAGE 2

Job No. **302.0077**

Drawing No. **TC3**

Sheet **147** of **153**



LEGEND

ROAD CLOSURE

BARREL CLOSURE WITH LIGHTED BARRELS

CONSTRUCTION NOTES

1 **INSTALL DOUBLE YELLOW TEMPORARY TRAFFIC STRIPING TAPE**

TRAFFIC CONTROL NOTES

REMOVE ALL SIGNS SHOWN ON TC2. KEEP SIGNS AND BARRELS SOUTH OF PACIFIC HIGHWAY SHOWN ON TC3..

FOR WORK ON THE NYANZA NORTH LEG OF THE ROUNDABOUT, CLOSE THE NYANZA LEG OF THE ROUNDABOUT. SWITCH DETOUR SIGNS AT THE NORTH END OF THE NYANZA/GRAVELLY INTERSECTION AND DETOUR TRAFFIC ALONG GRAVELLY NORTH TO VETERANS. PROVIDE PCMS ONE WEEK PRIOR TO SHIFT TO LET PUBLIC KNOW OF THE DETOUR REVISION.

FINAL LIFT OF PAVEMENT AND STRIPING SHALL BE DONE UNDER FULL CLOSURE OF GRAVELLY AND NYANZA. PREPAVING MEETING IS REQUIRED WITH THE CITY TO DISCUSS WORK BEING DONE BETWEEN THE HOURS OF 10 P.M. AND 4 A.M. AND TRAFFIC CONTROL.

N

HORIZONTAL GRAPHIC SCALE
50 25 0 25 50
FULL SIZE GRAPHIC SCALE: 1"= 50'
HALF SIZE GRAPHIC SCALE: 1"= 100'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

CITY OF LAKEWOOD · WA · 1996

TROY S. POKSWINSKI · STATE OF WASHINGTON · 45303 · REGISTERED PROFESSIONAL ENGINEER

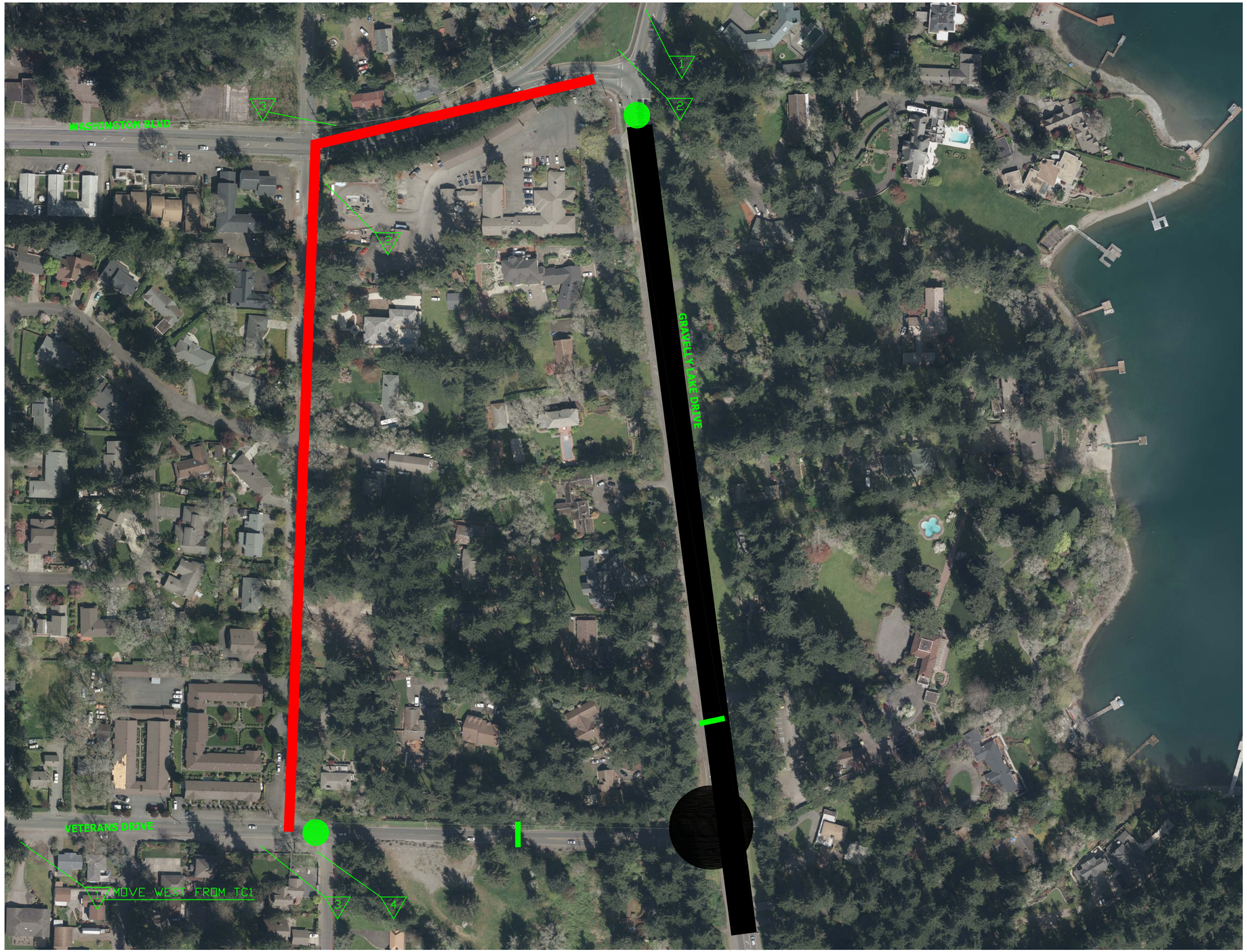
Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
TRAFFIC CONTROL PLAN - STAGE 3

Job No.
302.0077

Drawing No.
TC4

Sheet **148** of **153**



LEGEND

- DETOUR ROUTE
- ROAD CLOSURE
- POINT OF LOCAL ACCESS
- BARRICADE BLOCKING COMPLETE ROAD ON GRAVELLY, LOCAL ACCESS ON VETERANS EAST OF INTERLAAKEN

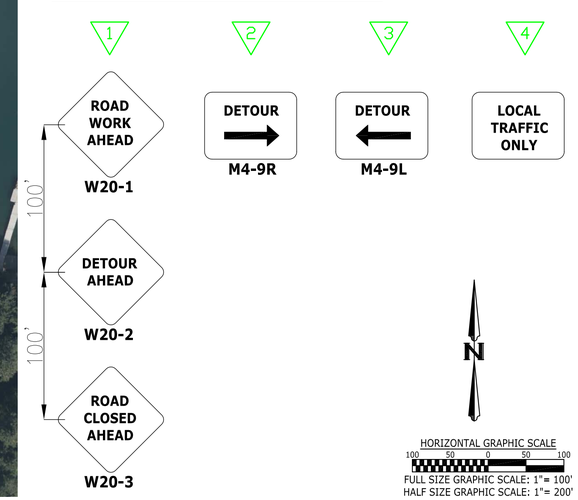
TRAFFIC CONTROL NOTES

ALL PREVIOUS DETOURS ARE STILL IN PLACE FOR STAGE 4. THIS ADDITIONAL DETOUR IS ADDED TO REMOVE TRAFFIC FROM GRAVELLY LAKE DRIVE FROM VETERANS TO WASHINGTON IN ORDER TO CONSTRUCT THE ROUNDABOUT AT VETERANS.

LOCAL ACCESS IS REQUIRED ON VETERANS JUST EAST OF INTERLAAKEN AND ON GRAVELLY JUST SOUTH OF WASHINGTON.

CITY SHALL MONITOR TRAFFIC CONDITIONS AT THE INTERSECTIONS OF VETERANS/INTERLAAKEN AND WASHINGTON/INTERLAAKEN IN THE EVENT ALL-WAY STOPS ARE NEEDED.

TRAFFIC CONTROL SIGN SCHEDULE



HORIZONTAL GRAPHIC SCALE
100 50 0 50 100
FULL SIZE GRAPHIC SCALE: 1"= 100'
HALF SIZE GRAPHIC SCALE: 1"= 200'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

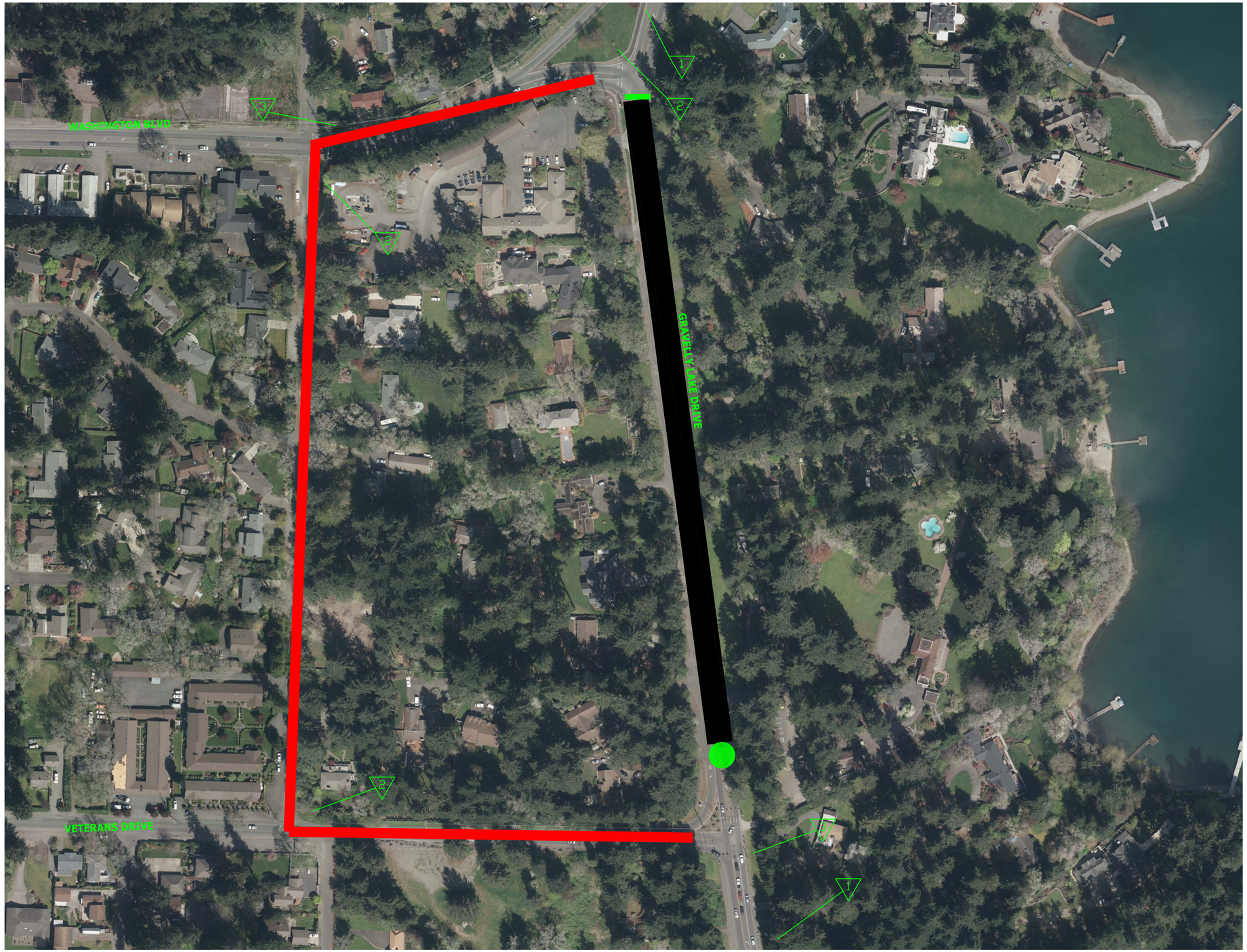
CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI STATE OF WASHINGTON 45879 REGISTERED PROFESSIONAL ENGINEER 2/3/21

Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
TRAFFIC CONTROL PLAN - STAGE 4

Job No. 302.0077
Drawing No. TC5
Sheet 149 of 153



LEGEND

- DETOUR ROUTE
- ROAD CLOSURE
- POINT OF LOCAL ACCESS
- TYPE III BARRICADES COMPLETELY BLOCKING GRAVELLY LAKE DRIVE

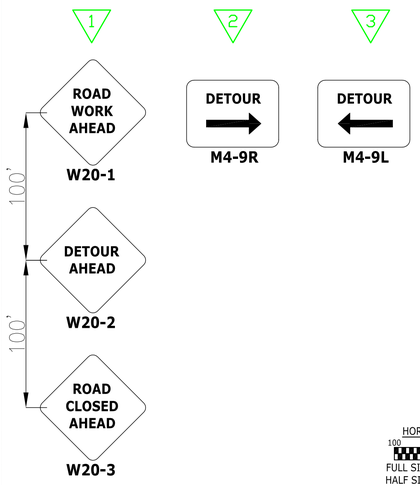
TRAFFIC CONTROL NOTES

REMOVE ALL PREVIOUS DETOURS.

LOCAL ACCESS IS ALONG GRAVELLY JUST NORTH OF THE WASHINGTON/VETERANS ROUNDABOUT.

CITY SHALL MONITOR TRAFFIC CONDITIONS AT THE INTERSECTIONS OF VETERANS/INTERLAAKEN AND WASHINGTON/INTERLAAKEN IN THE EVENT ALL-WAY STOPS ARE NEEDED.

TRAFFIC CONTROL SIGN SCHEDULE



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HORIZONTAL GRAPHIC SCALE
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FULL SIZE GRAPHIC SCALE: 1"= 100'
HALF SIZE GRAPHIC SCALE: 1"= 200'

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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER

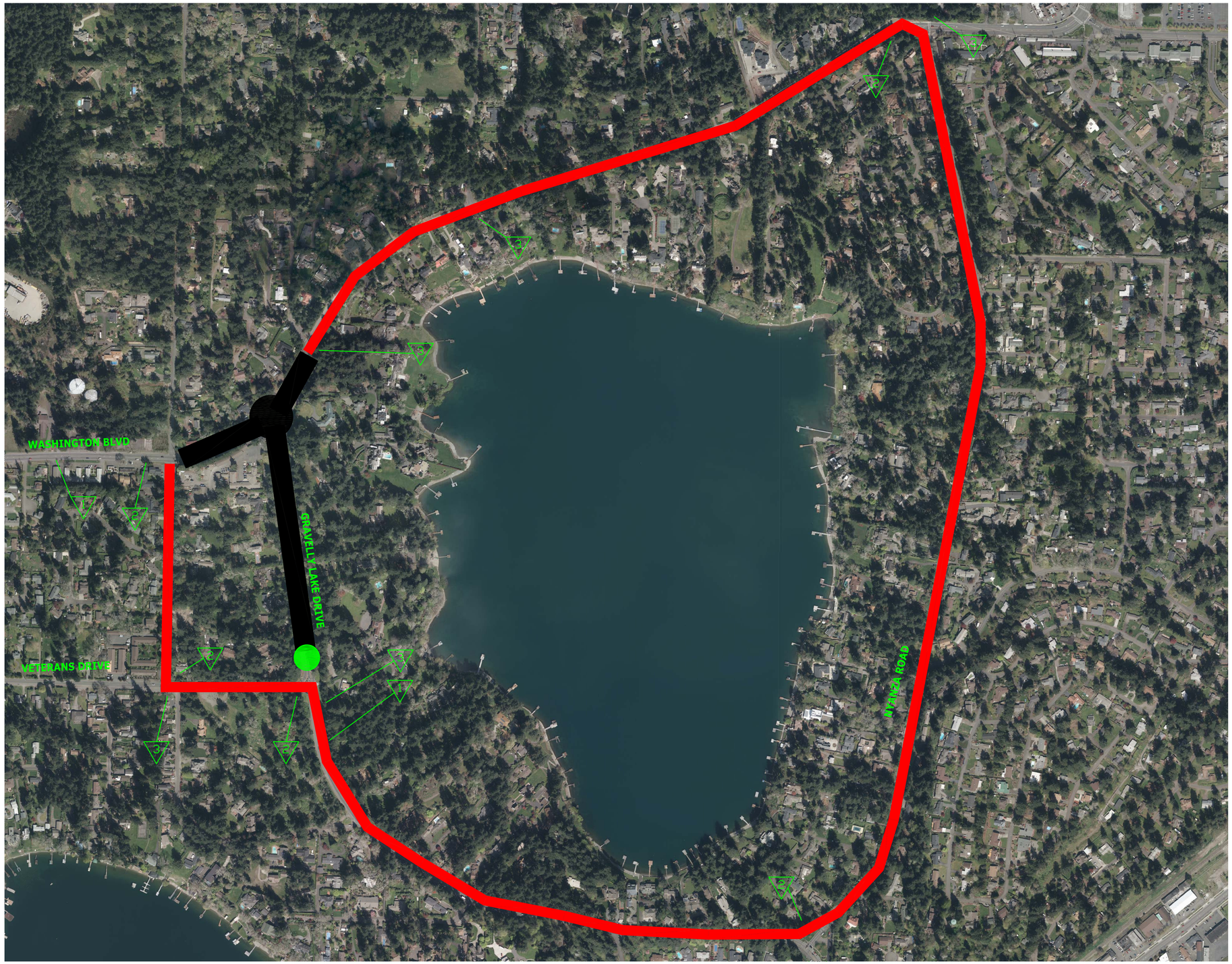
Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
TRAFFIC CONTROL PLAN - STAGE 5

Job No. **302.0077**

Drawing No. **TC6**

Sheet **150** of **153**



LEGEND

- DETOUR ROUTE
- ROAD CLOSURE
- POINT OF LOCAL ACCESS

TRAFFIC CONTROL NOTES

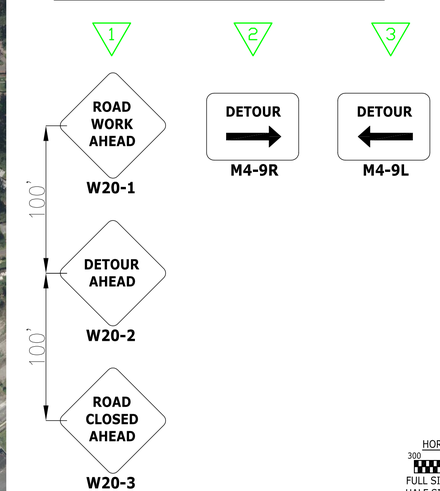
REMOVE ALL DETOURS FROM PREVIOUS STAGES.

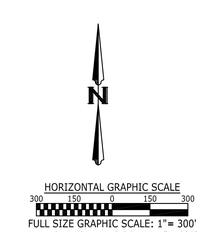
ONE WEEK PRIOR TO DETOUR GOING INTO EFFECT, SET UP PORTABLE CHANGEABLE MESSAGE SIGN AT THE GRAVELLY/WASHINGTON INTERSECTION TO NOTIFY MOTORISTS OF DETOUR. FOLLOWING THE DETOUR GOING INTO EFFECT, MOVE PCMS TO THE INTERSECTION OF GRAVELLY/NYANZA (NORTH) TO ALERT TRAVELERS WEST OF NYANZA OF CLOSURE AT GRAVELLY/WASHINGTON.

LOCAL ACCESS IS ALONG GRAVELLY JUST NORTH OF THE WASHINGTON/VETERANS ROUNDABOUT.

CITY SHALL MONITOR TRAFFIC CONDITIONS AT THE INTERSECTIONS OF VETERANS/INTERLAAKEN AND WASHINGTON/INTERLAAKEN IN THE EVENT ALL-WAY STOPS ARE NEEDED.

TRAFFIC CONTROL SIGN SCHEDULE





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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

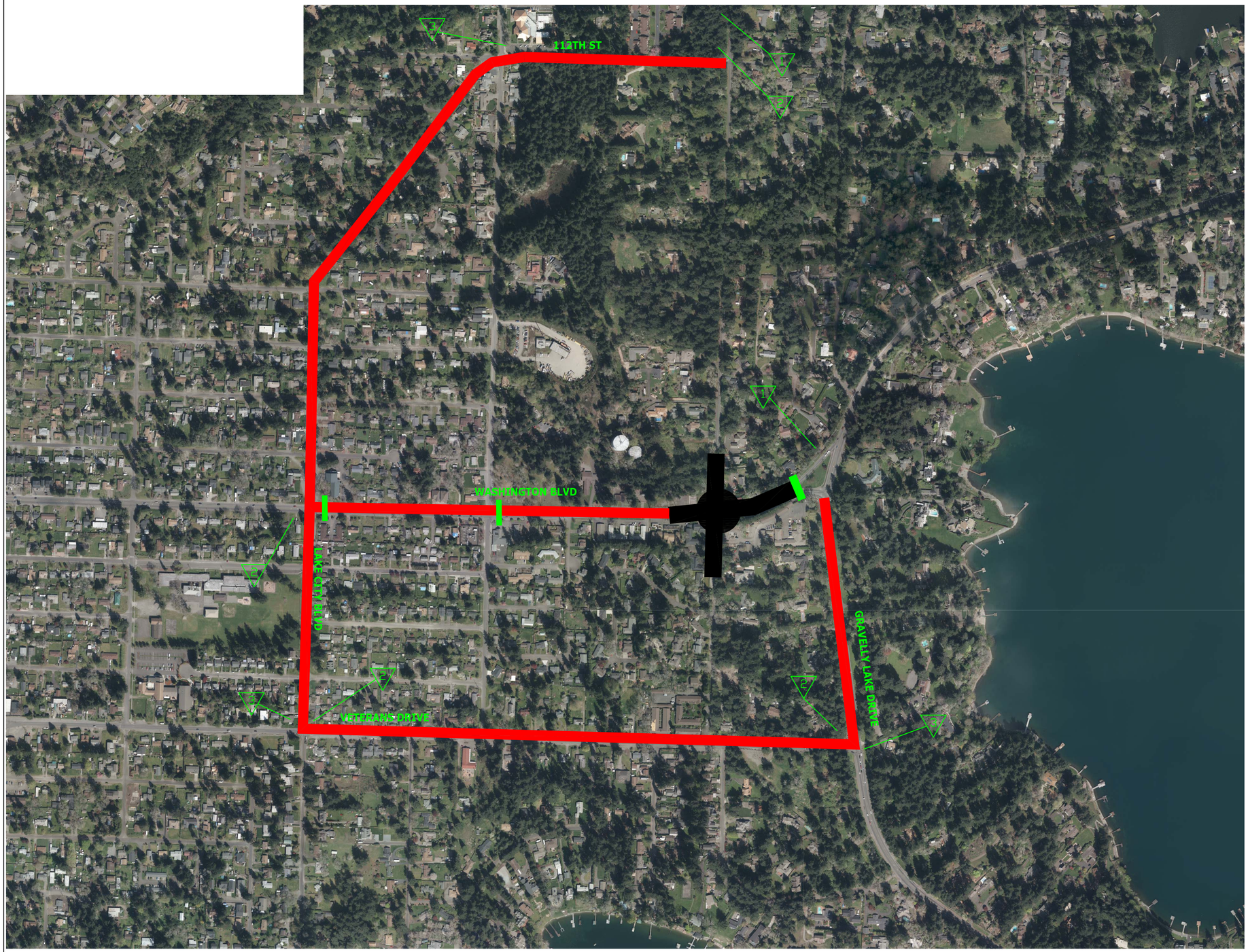
CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI STATE OF WASHINGTON 45819 REGISTERED PROFESSIONAL ENGINEER 2/3/21

Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
TRAFFIC CONTROL PLAN - STAGE 6

Job No. **302.0077**
Drawing No. **TC7**
Sheet **151** of **153**



LEGEND

- DETOUR ROUTE
- ROAD CLOSURE
- TYPE III BARRICADES

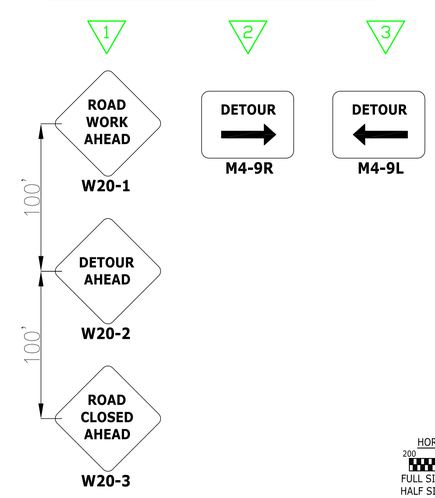
TRAFFIC CONTROL NOTES

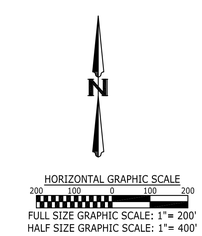
REMOVE ALL PREVIOUS DETOURS.

LOCAL ACCESS IS ALONG GRAVELLY JUST NORTH OF THE WASHINGTON/VETERANS ROUNDABOUT.

CITY SHALL MONITOR TRAFFIC CONDITIONS AT THE INTERSECTIONS OF VETERANS/INTERLAAKEN AND WASHINGTON/INTERLAAKEN IN THE EVENT ALL-WAY STOPS ARE NEEDED.

TRAFFIC CONTROL SIGN SCHEDULE





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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

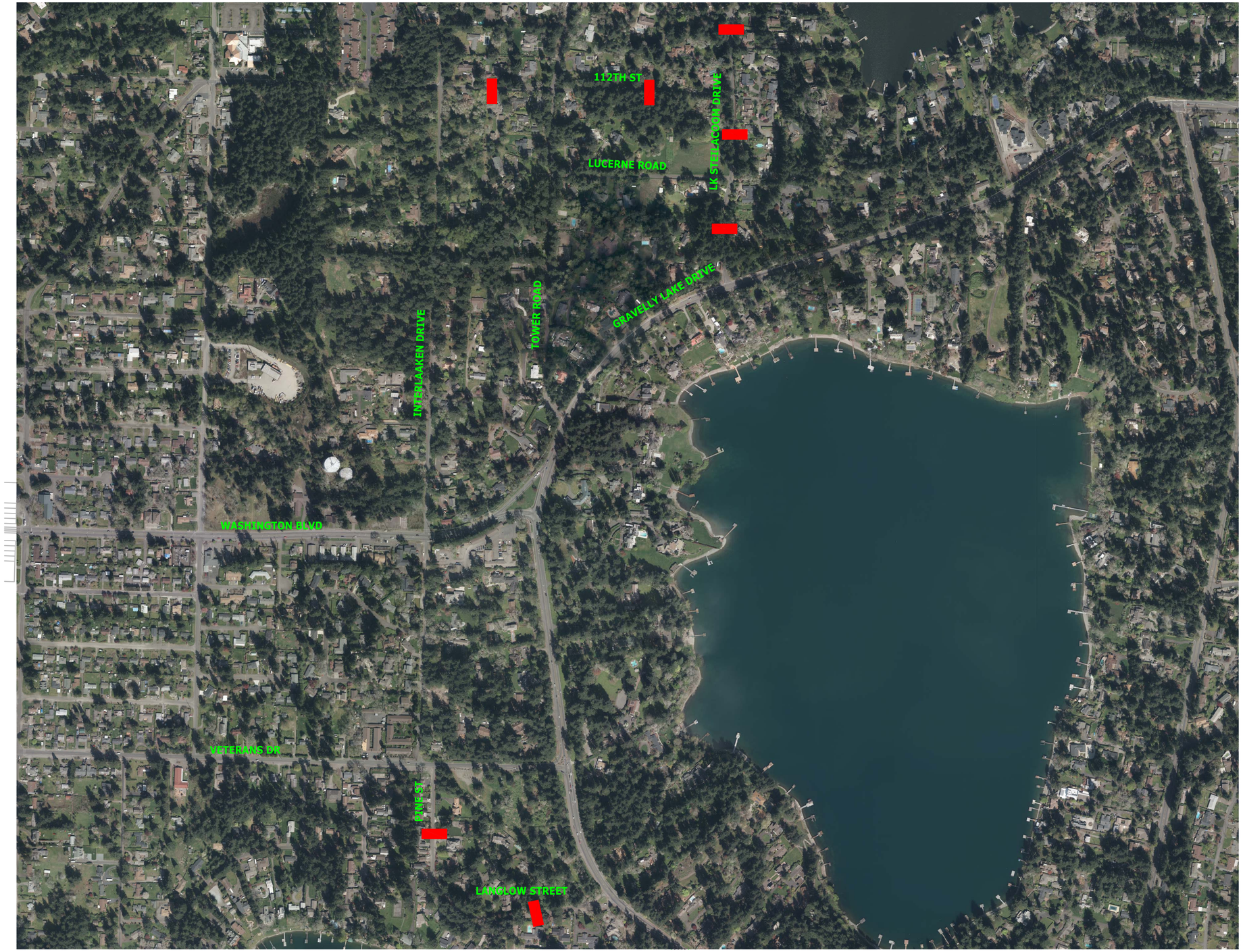
CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI STATE OF WASHINGTON 45879 REGISTERED PROFESSIONAL ENGINEER 2/3/21

Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

Drawing Name:
TRAFFIC CONTROL PLAN - STAGE 7

Job No. **302.0077**
Drawing No. **TC8**
Sheet **152** of **153**



CONSTRUCTION NOTES

INSTALL SPEED HUMP PER DETAIL ON CITY OF LAKEWOOD STANDARD PLANS RW-07, RW-08, AND RW-09. SPEED HUMP SHALL INCLUDE SIGNING AND TRAFFIC MARKING.

LAYOUT SHALL BE COMPLETED IN THE FIELD BY THE ENGINEER.

N

HORIZONTAL GRAPHIC SCALE
300 150 0 150 300
FULL SIZE GRAPHIC SCALE: 1"= 300'
HALF SIZE GRAPHIC SCALE: 1"= 600'

No.	Release/Revision	Re. Date	Re. By
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Designed By: T. POKSWINSKI
Drawn By: T. POKSWINSKI
Checked By: W. OTT
Approved By: P. BUCICH
Project Start Date: 3/1/20
Drawing Scale: AS SHOWN
Electronic File Name: 302.0077

CITY OF LAKEWOOD, WA 1996

TROY S. POKSWINSKI
STATE OF WASHINGTON
45303
REGISTERED PROFESSIONAL ENGINEER
3/3/21

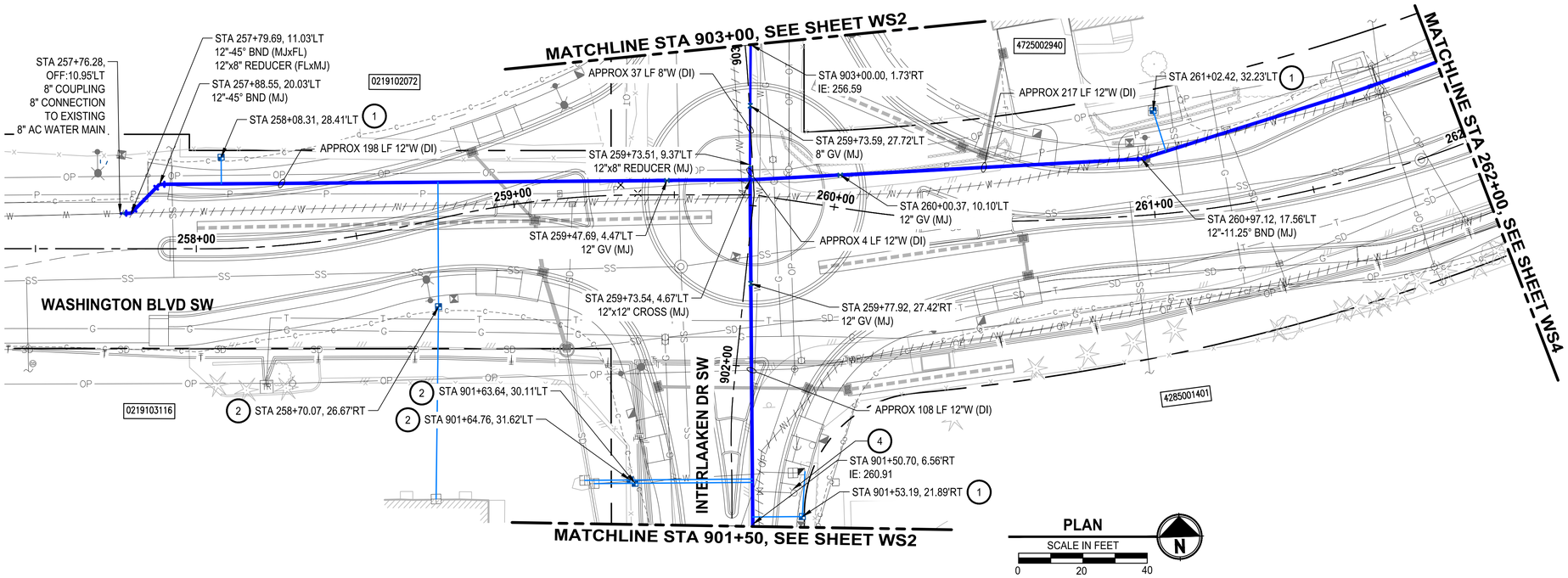
Project Name:
JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I

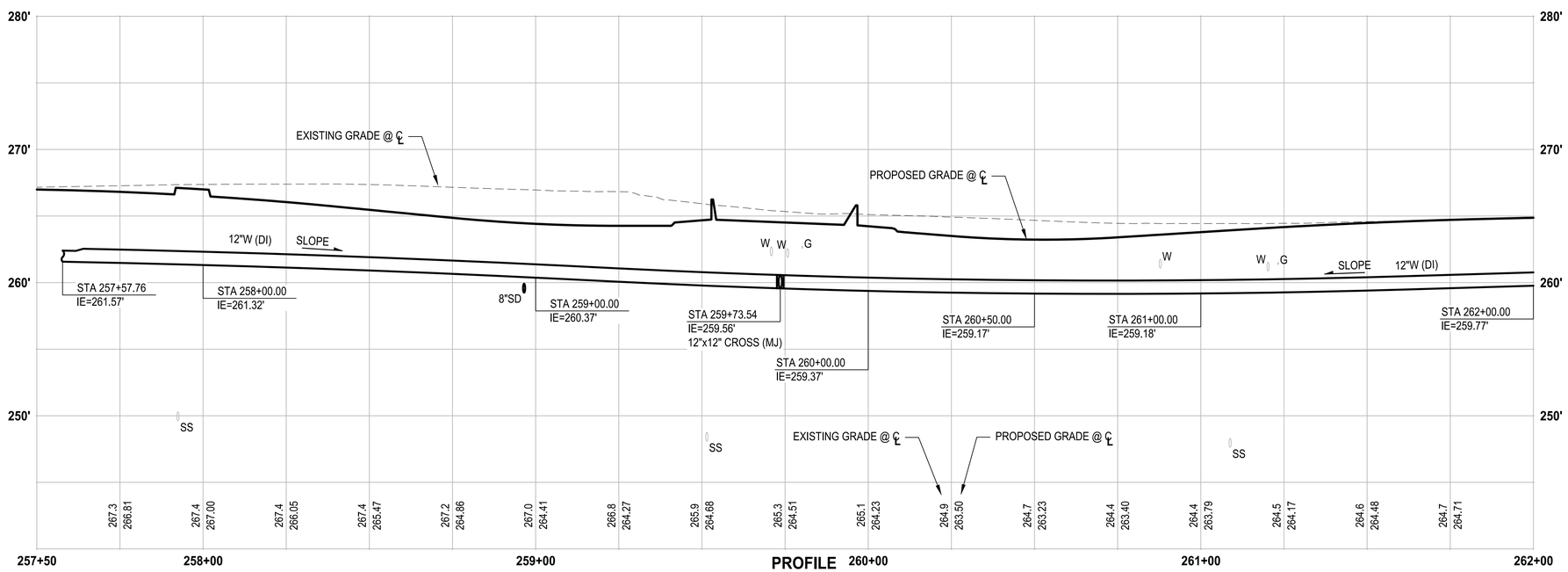
Drawing Name:
TRAFFIC CONTROL PLAN - ALTERNATE ROUTE DETAILS

Job No. **302.0077**

Drawing No. **TC9**

Sheet **153** of **153**





PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

CONSTRUCTION NOTES:

1. REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
2. WATER SERVICES LOCATED ON THE SIDE OF THE STREET OPPOSITE FROM THE WATER MAIN SHALL BE INSTALLED PER LWD DETAIL 7A IN A 2.5" PVC SCHEDULE 40 SOLVENT WELD JOINT SLEEVE JACKED OR PUSHED UNDER THE EXISTING ROADWAY PAVEMENT.
3. INSTALL NEW FIRE HYDRANT ASSEMBLY PER LWD DETAIL 9.
4. REMOVE EXISTING FIRE HYDRANT ASSEMBLY.
5. INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
6. REFER TO RH2 PLANS FOR CONTINUATION

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING THE LOCATION, DEPTH, SIZE, MATERIAL, AND CONFIGURATION OF THE EXISTING WATER MAIN SYSTEM. VERIFICATION SHALL BE COMPLETED EARLY ENOUGH SO AS TO ADJUST PROPOSED WATER MAIN SYSTEM TO ACCOMMODATE ACTUAL CONDITIONS. UNDER NO CIRCUMSTANCES WILL LAKEWOOD WATER DISTRICT PAY THE CONTRACTOR ADDITIONAL MONIES TO RELAY WATER MAIN AND/OR FITTINGS INSTALLED UNDER THIS CONTRACT.
2. WHEN THE HORIZONTAL SEPARATION BETWEEN WATER AND SEWER IS LESS THAN 10-FEET, THE VERTICAL SEPARATION BETWEEN THE BOTTOM OF THE WATER MAIN AND THE CROWN OF THE SEWER SHALL BE 18-INCHES MINIMUM
3. ALL WATER MAIN JOINTS AND FITTINGS SHALL BE RESTRAINED.
4. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS BEYOND THE SCOPE OF THE ROADWAY AND SHOULDER IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER. HYDROSEED ALL GRASS AREAS DISTURBED.
5. THE CONTRACTOR MAY INSTALL THE WATERMAIN AT THE STANDARD DEPTH SHOWN ON THE LAKEWOOD WATER DISTRICT'S STANDARD TRENCH DETAIL. ANY UTILITY CONFLICTS CREATED BY USING THE STANDARD LAKEWOOD WATER DISTRICT DEPTH SHALL BE MITIGATED THROUGH ADDITIONAL EXCAVATION AND FITTINGS AT THE SOLE COST OF THE CONTRACTOR.

LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

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

	REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104018–WS1–2
JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III, STATE OF WASHINGTON, 48258, REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

Parametrix
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
1019 39TH AVENUE SE, SUITE 100 | PUYALLUP, WA 98374
P 253.604.6600
WWW.PARAMETRIX.COM

PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE WASHINGTON BLVD SW

DRAWING NO. 1 OF 21
WS1

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly\k0r WMRepl\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 2:54:31 PM
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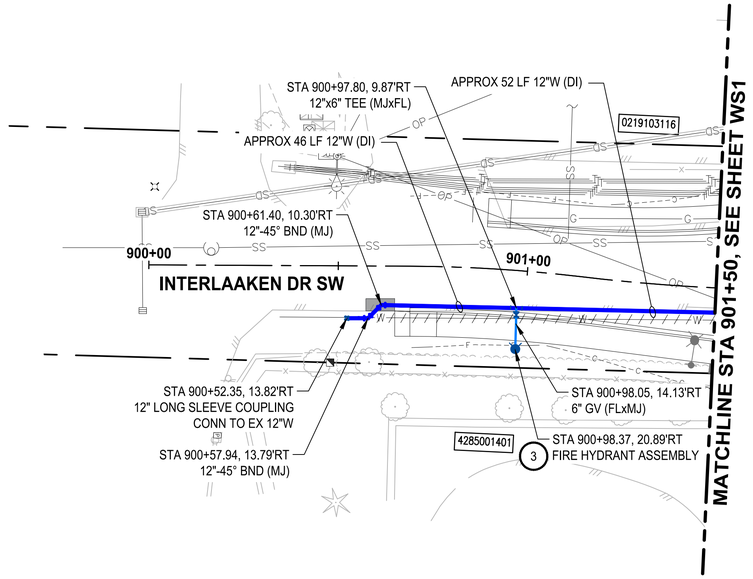

PLAN

SCALE IN FEET

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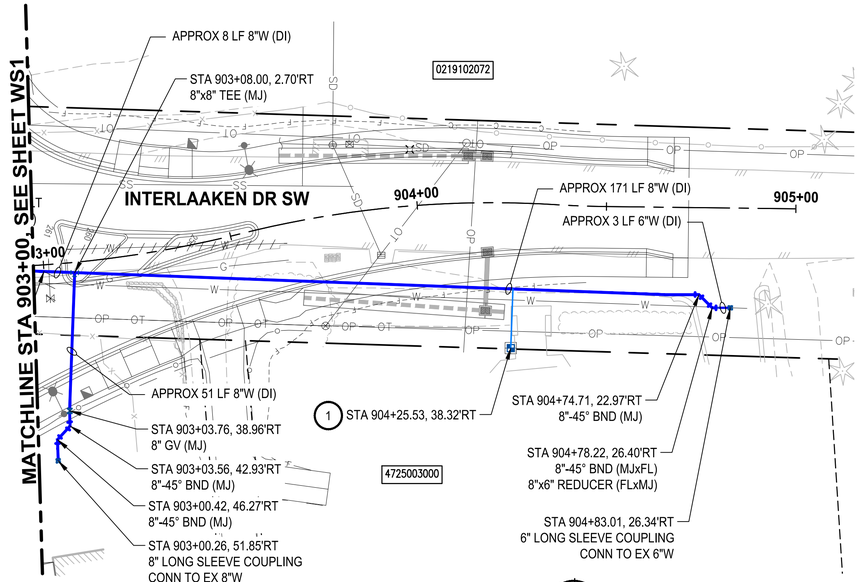
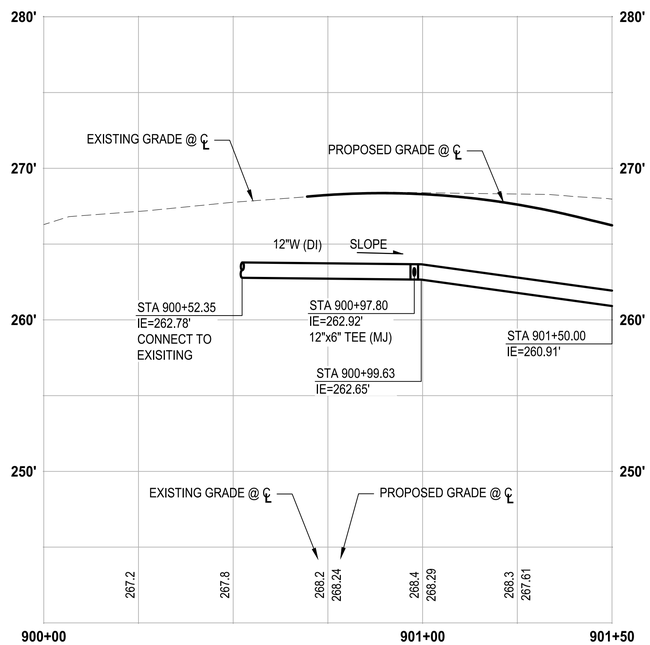


PLAN

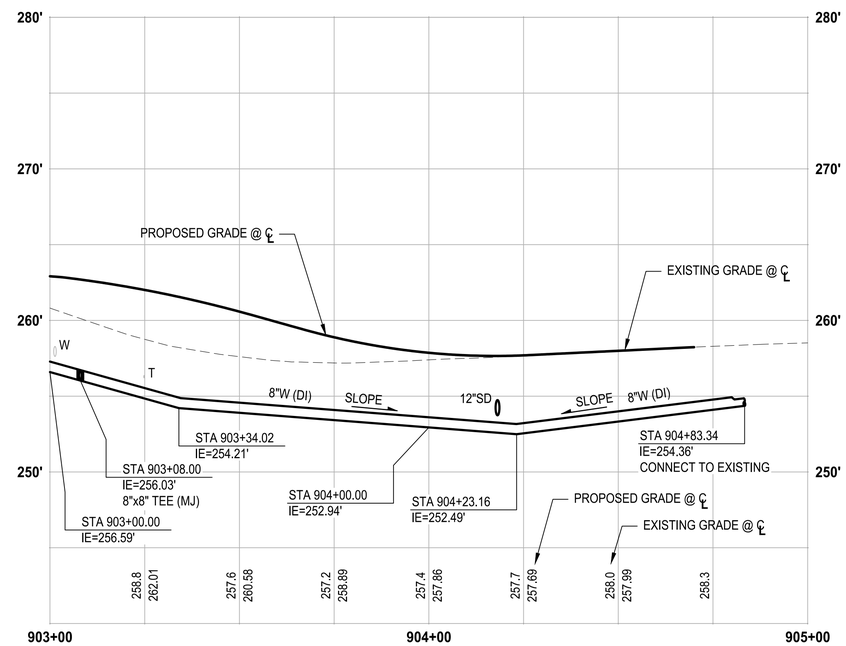
SCALE IN FEET

0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

CONSTRUCTION NOTES:

1. REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
2. WATER SERVICES LOCATED ON THE SIDE OF THE STREET OPPOSITE FROM THE WATER MAIN SHALL BE INSTALLED PER LWD DETAIL 7A IN A 2.5" PVC SCHEDULE 40 SOLVENT WELD JOINT SLEEVE JACKED OR PUSHED UNDER THE EXISTING ROADWAY PAVEMENT.
3. INSTALL NEW FIRE HYDRANT ASSEMBLY PER LWD DETAIL 9.
4. REMOVE EXISTING FIRE HYDRANT ASSEMBLY.
5. INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
6. REFER TO RH2 PLANS FOR CONTINUATION

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING THE LOCATION, DEPTH, SIZE, MATERIAL, AND CONFIGURATION OF THE EXISTING WATER MAIN SYSTEM. VERIFICATION SHALL BE COMPLETED EARLY ENOUGH SO AS TO ADJUST PROPOSED WATER MAIN SYSTEM TO ACCOMMODATE ACTUAL CONDITIONS. UNDER NO CIRCUMSTANCES WILL LAKEWOOD WATER DISTRICT PAY THE CONTRACTOR ADDITIONAL MONIES TO RELAY WATER MAIN AND/OR FITTINGS INSTALLED UNDER THIS CONTRACT.
2. WHEN THE HORIZONTAL SEPARATION BETWEEN WATER AND SEWER IS LESS THAN 10-FEET, THE VERTICAL SEPARATION BETWEEN THE BOTTOM OF THE WATER MAIN AND THE CROWN OF THE SEWER SHALL BE 18-INCHES MINIMUM
3. ALL WATER MAIN JOINTS AND FITTINGS SHALL BE RESTRAINED.
4. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS BEYOND THE SCOPE OF THE ROADWAY AND SHOULDER IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER. HYDROSEED ALL GRASS AREAS DISTURBED.
5. THE CONTRACTOR MAY INSTALL THE WATERMAIN AT THE STANDARD DEPTH SHOWN ON THE LAKEWOOD WATER DISTRICT'S STANDARD TRENCH DETAIL. ANY UTILITY CONFLICTS CREATED BY USING THE STANDARD LAKEWOOD WATER DISTRICT DEPTH SHALL BE MITIGATED THROUGH ADDITIONAL EXCAVATION AND FITTINGS AT THE SOLE COST OF THE CONTRACTOR.

LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

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

REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104018–WS1–2
JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III — STATE OF WASHINGTON — 48256 — REGISTERED PROFESSIONAL ENGINEER

FEBRUARY 05, 2021

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P 253.604.6600
WWW.PARAMETRIX.COM

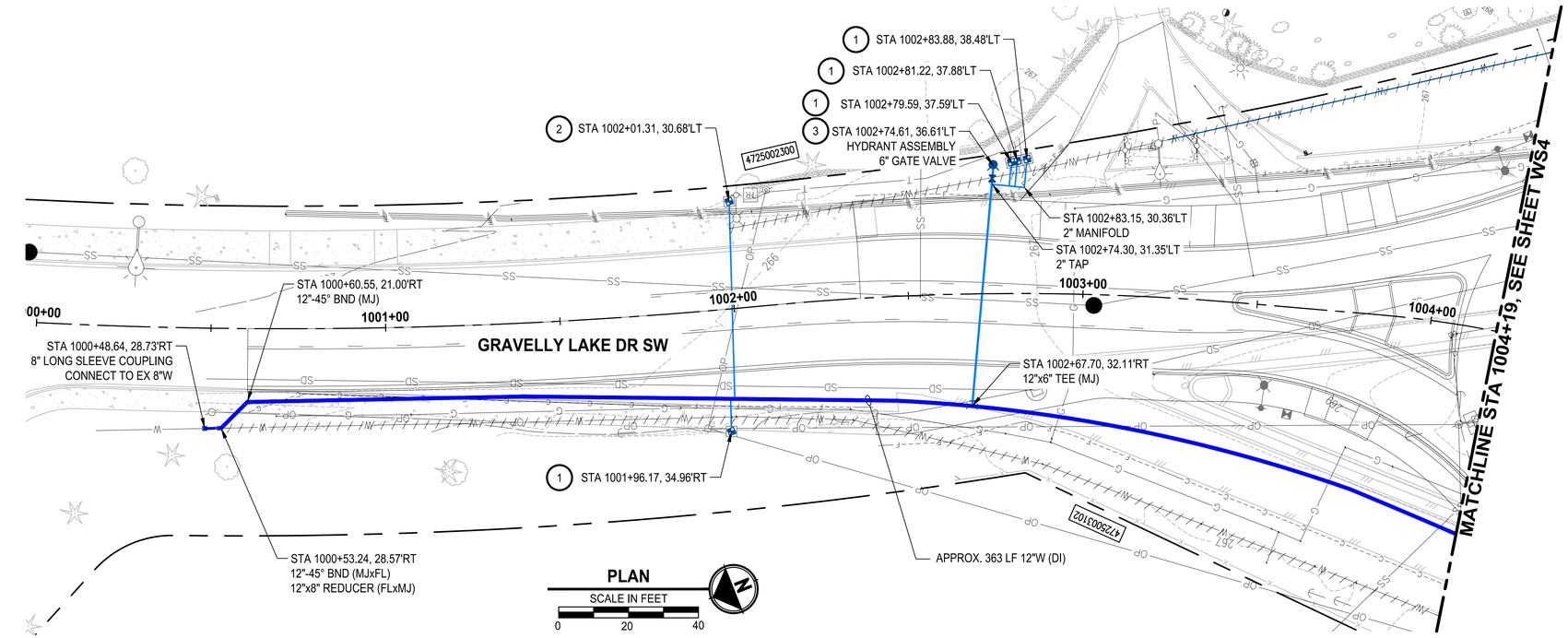
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

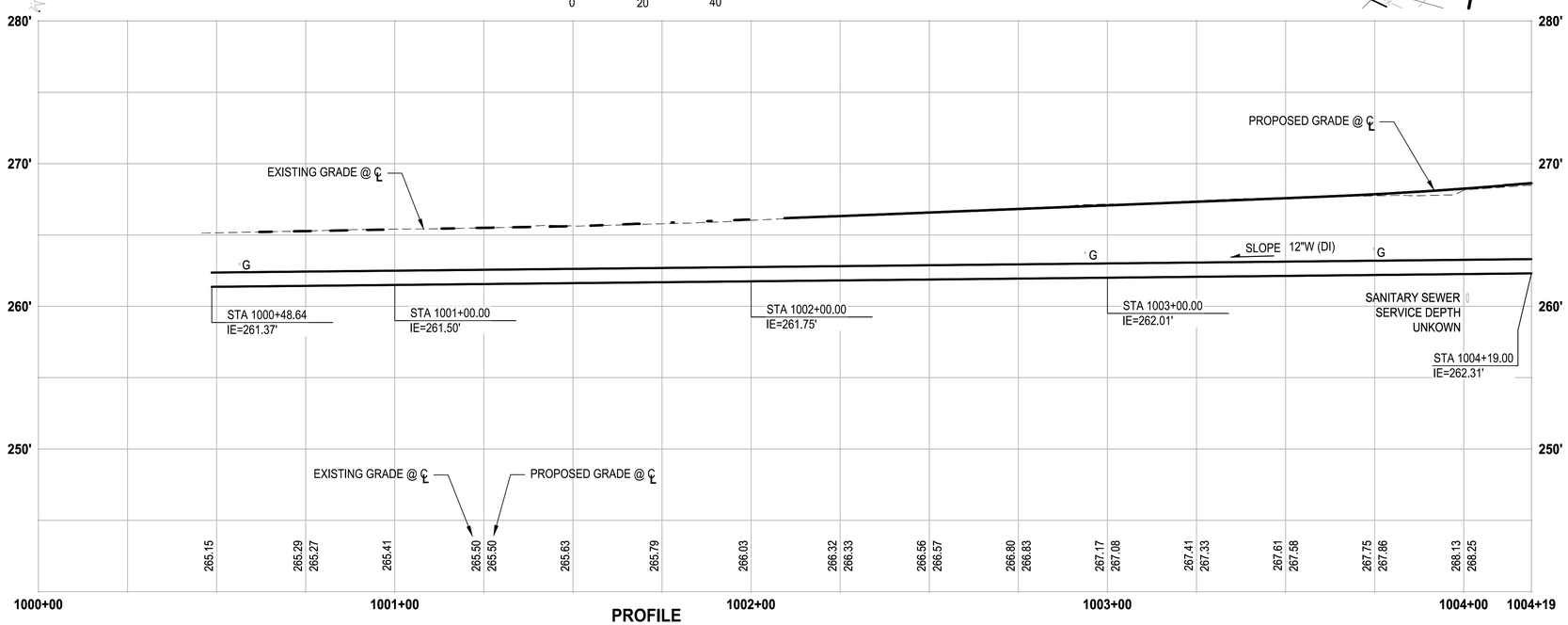
WATER MAIN PLAN AND PROFILE INTERLAKEN DR SW

DRAWING NO. 2 OF 21

WS2

LAYOUT: WS2 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly\Ld\ WMRepl\999ucs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 2:57:01 PM





PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

CONSTRUCTION NOTES:

1. REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
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6. REFER TO RH2 PLANS FOR CONTINUATION

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LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

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

	REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104017–WS3–6
JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III — STATE OF WASHINGTON — 48258 — REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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P 253.604.6600
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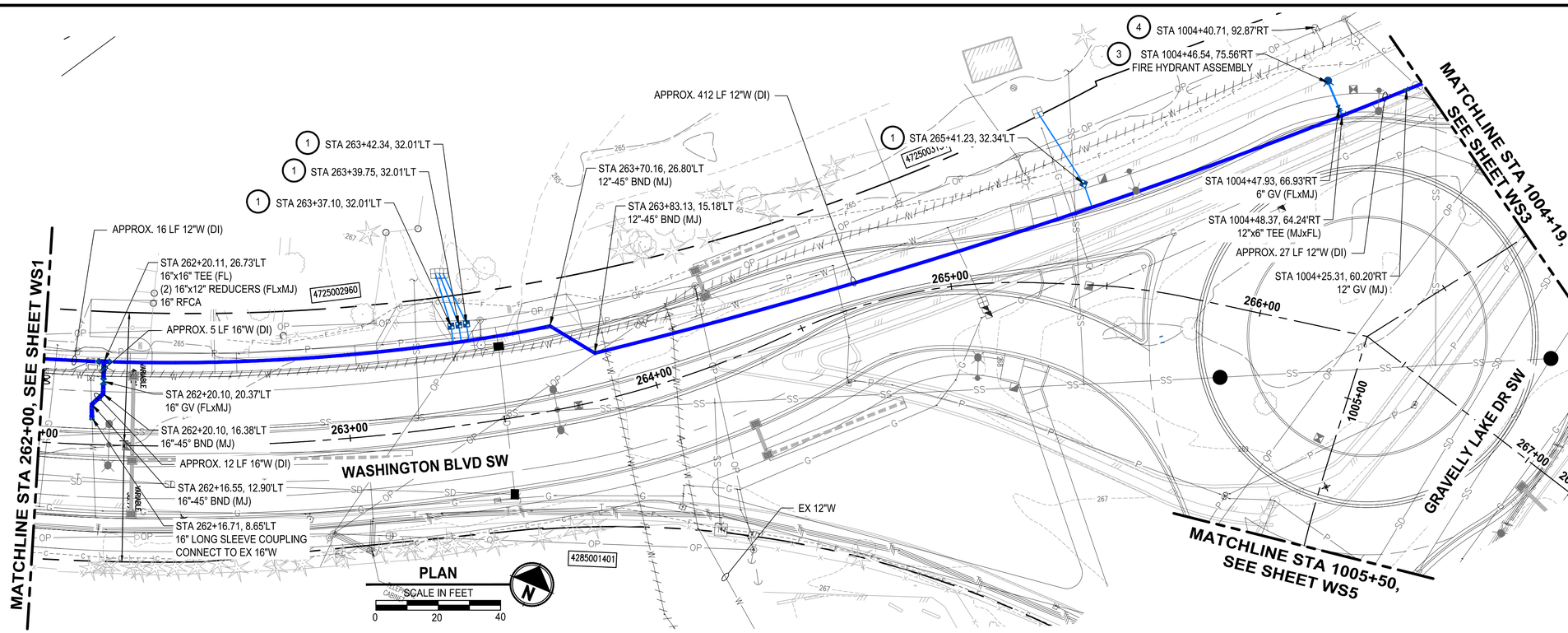
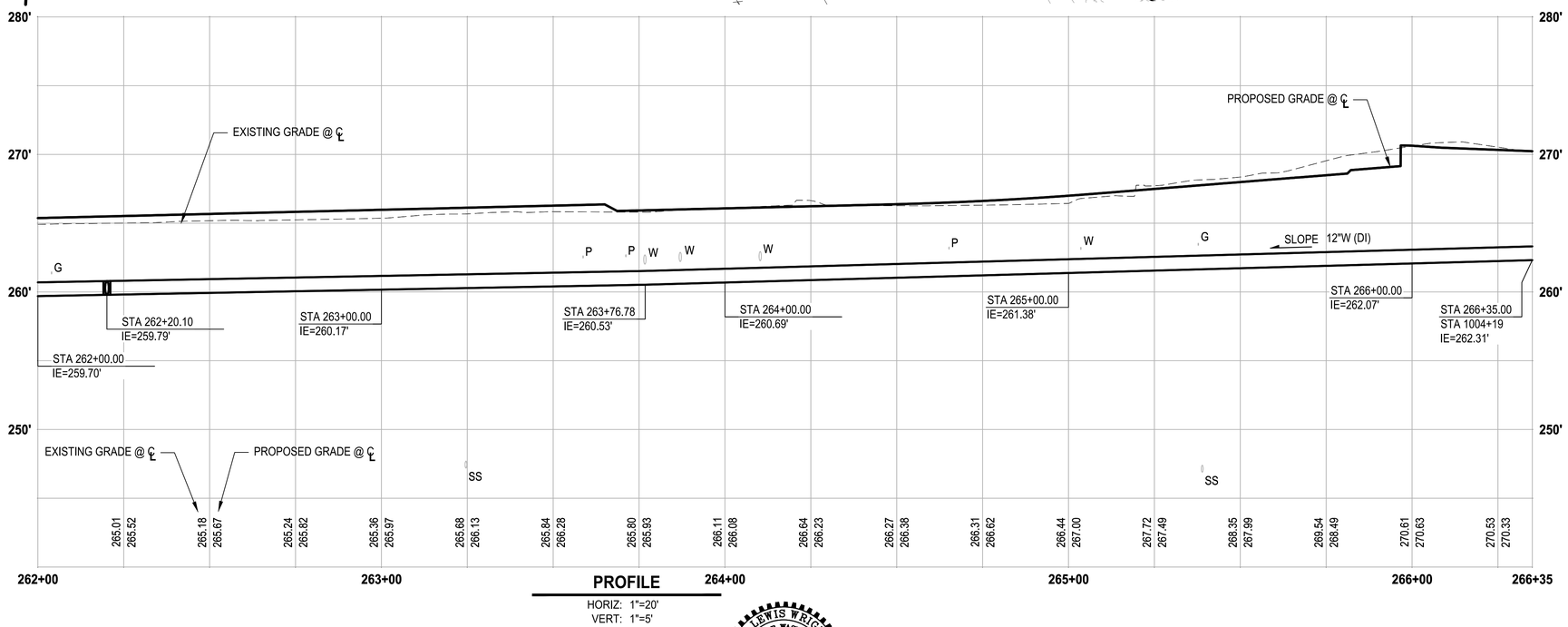
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

DRAWING NO.
3 OF 21
WS3

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 GravellyLkDr WMRep\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 2:45:17 PM
LAYOUT: WS3





PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

CONSTRUCTION NOTES:

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LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

Know what's below. Call before you dig.

	REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104017-WS3-6
JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III, STATE OF WASHINGTON, 48258, REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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P 253.604.6600
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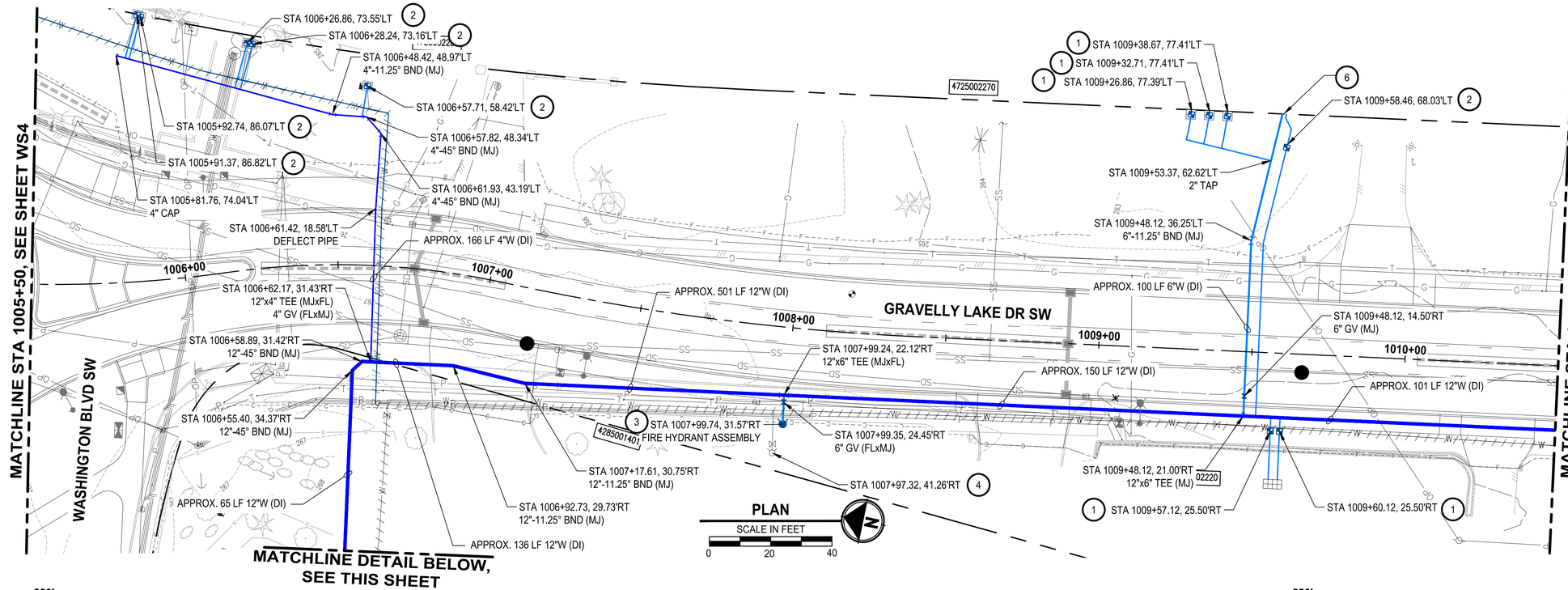
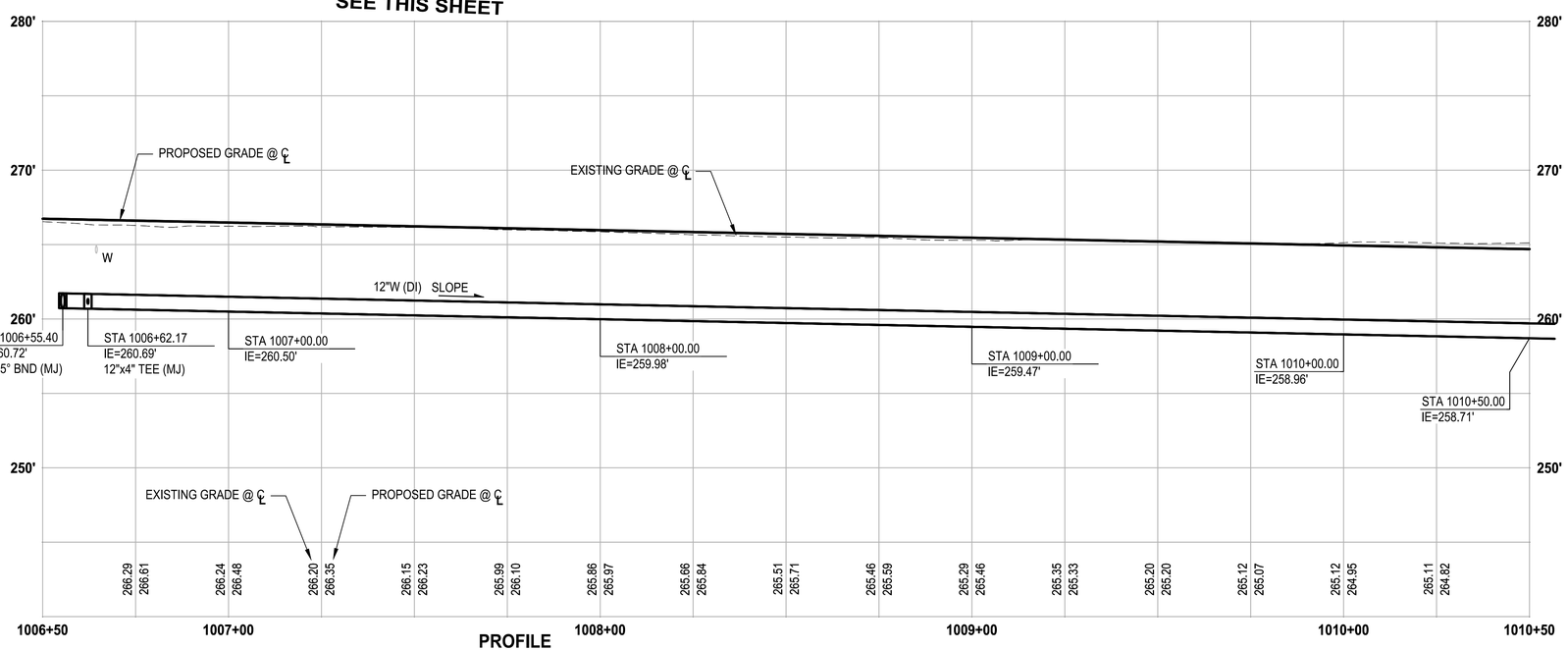
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE WASHINGTON BLVD SW

DRAWING NO.
4 OF 21
WS4

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly&Dr WMRep\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 2:47:33 PM
LAYOUT: WS4





PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

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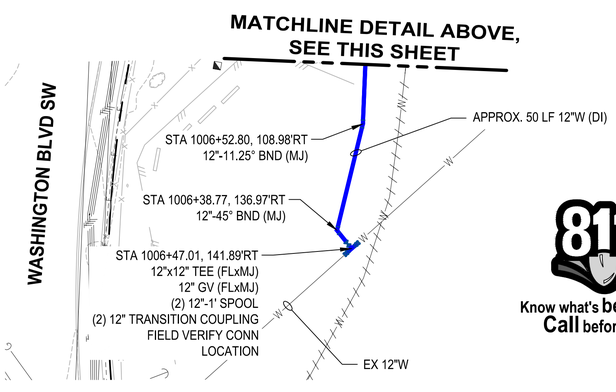
LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION



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

REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104017–WS3–6
JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III, STATE OF WASHINGTON, 48258, REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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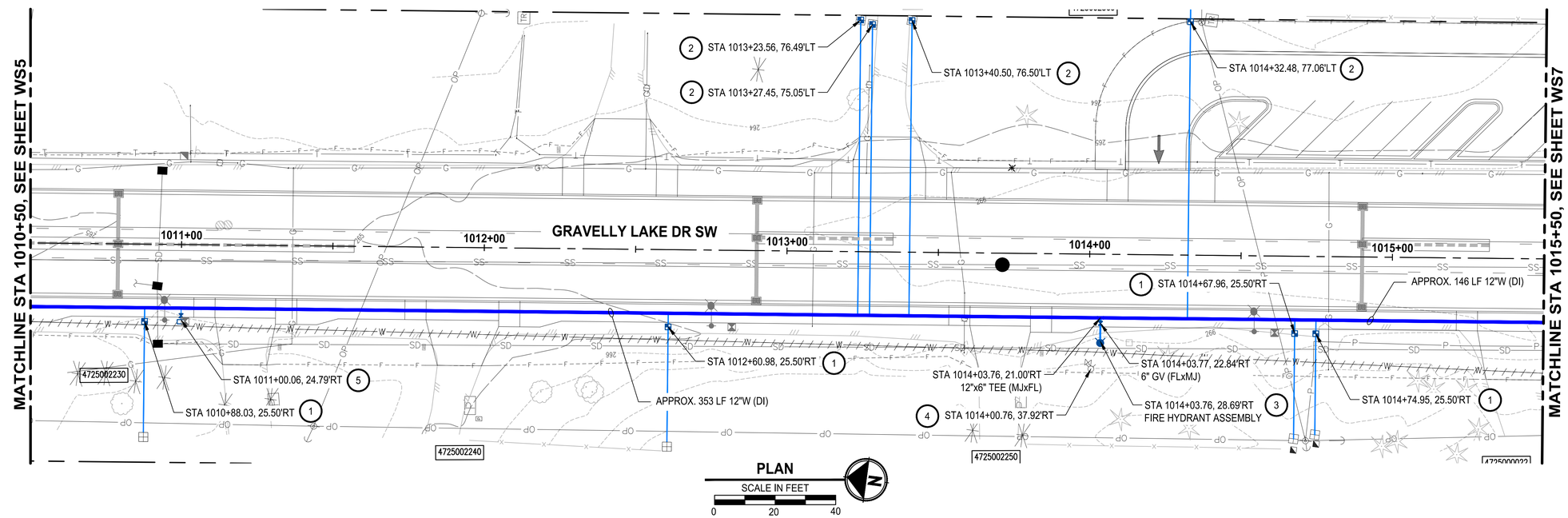
P 253.604.6600
WWW.PARAMETRIX.COM

PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

DRAWING NO.
5 OF 21
WS5

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 GravellyLkDr WMRepl\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 2:50:53 PM
LAYOUT: WS5



PLAN

SCALE IN FEET

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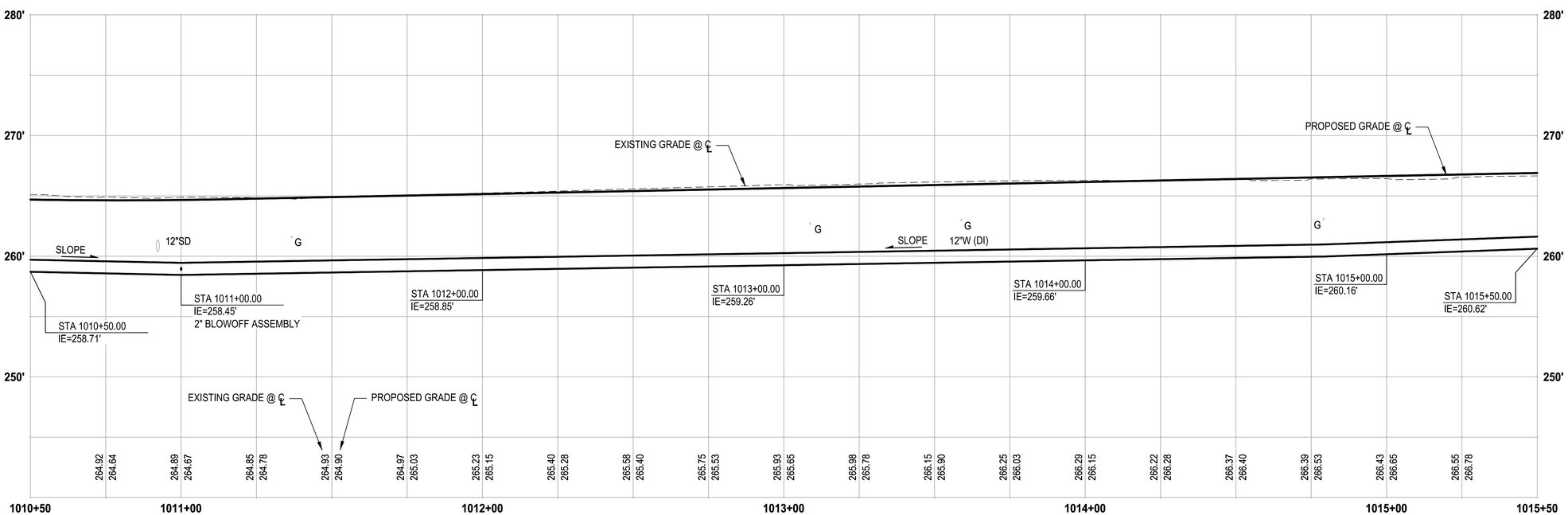

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

CONSTRUCTION NOTES:

1. REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
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LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

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

REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104017-WS3-6
JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III, STATE OF WASHINGTON, 48258, REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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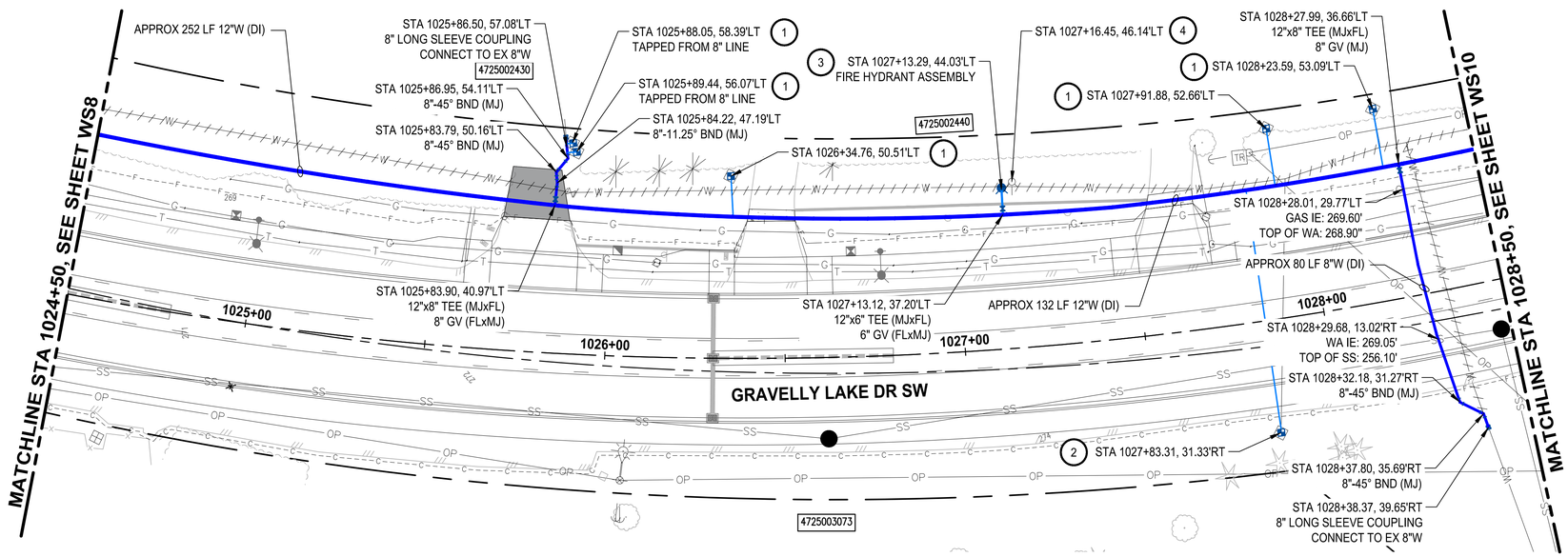
P 253.604.6600
WWW.PARAMETRIX.COM

PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

DRAWING NO.
6 OF 21
WS6

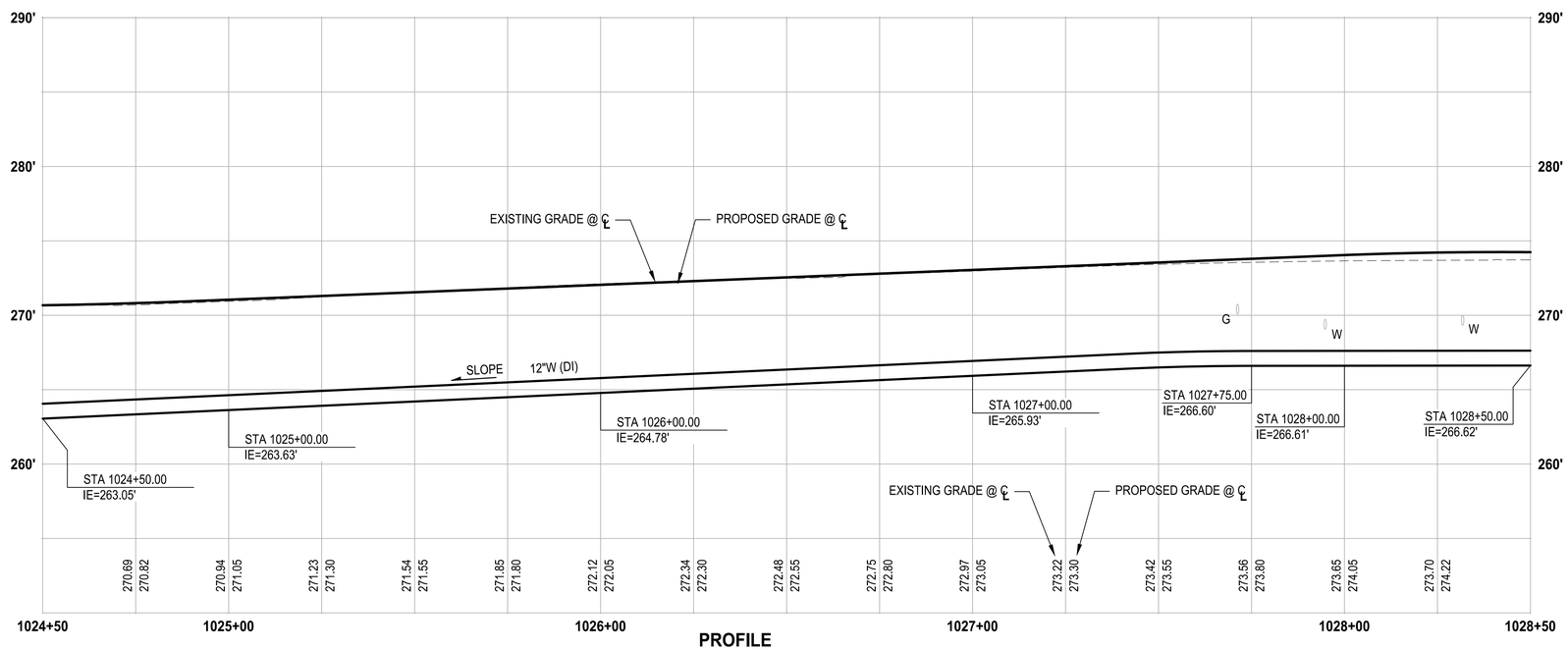
PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly\AkOr WMRep\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 2:53:08 PM
LAYOUT: WS6



PLAN

SCALE IN FEET

0 20 40



PROFILE

HORIZ: 1"=20'
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LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

Know what's **below.**
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	REVISIONS	DATE	BY

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CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104017–WS7–11
JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III — STATE OF WASHINGTON — 48258 — REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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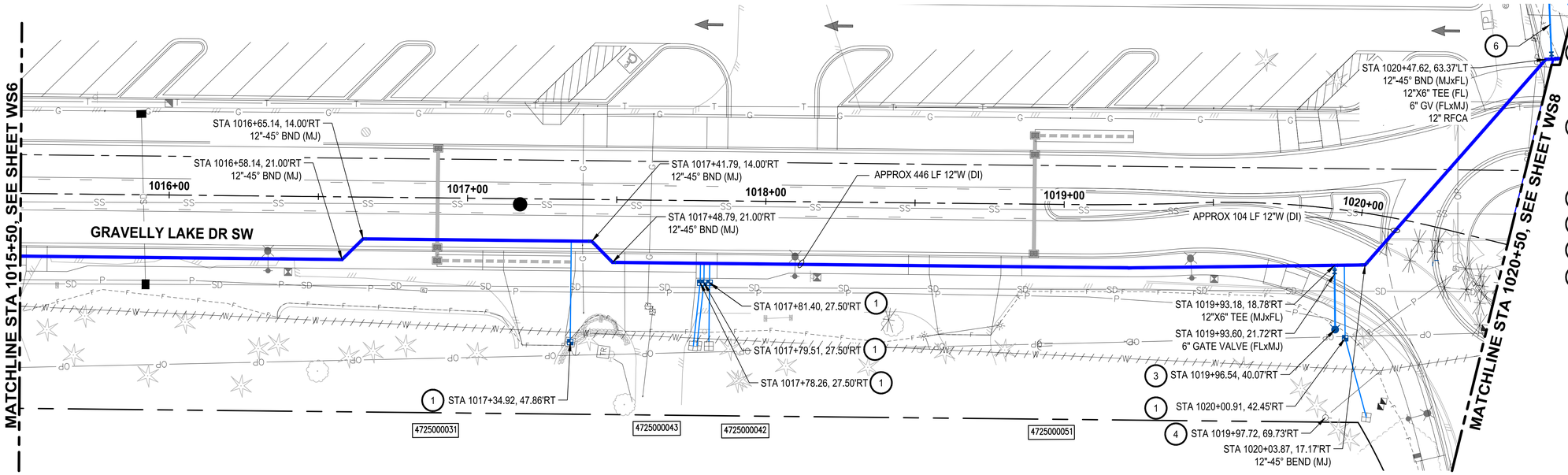
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE BLVD SW

DRAWING NO.
9 OF 21
WS9

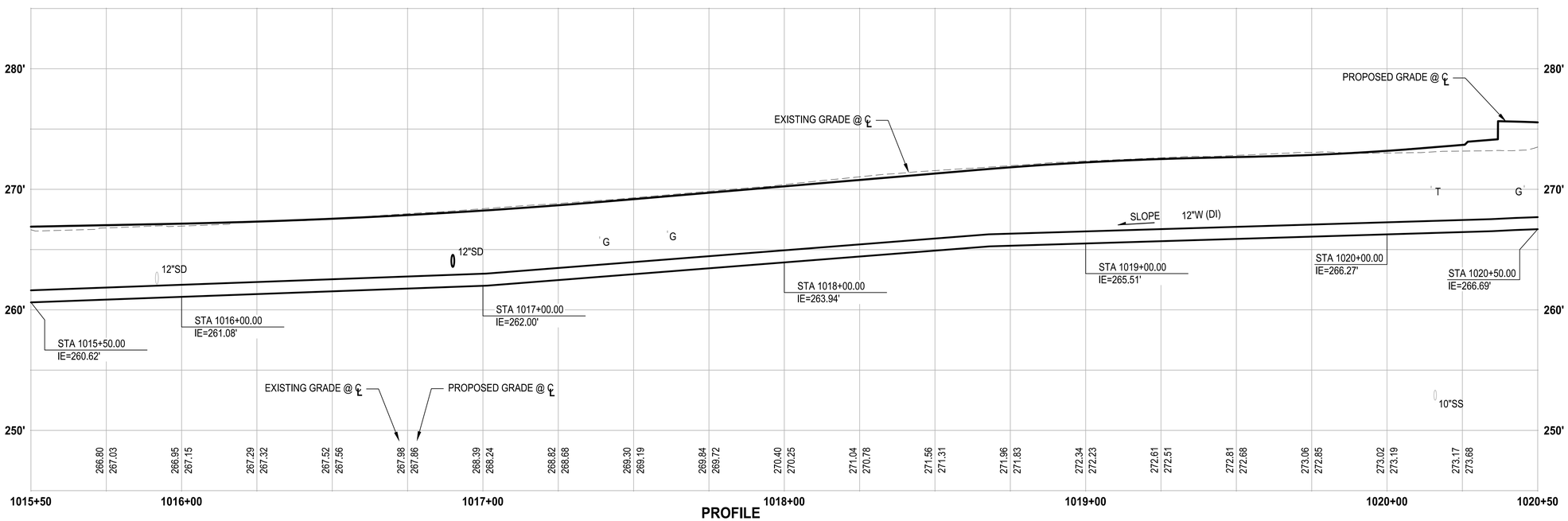
LAYOUT: W9 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly&Dr WMRepl\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:00:43 PM



PLAN

SCALE IN FEET

0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

CONSTRUCTION NOTES:

1. REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
2. WATER SERVICES LOCATED ON THE SIDE OF THE STREET OPPOSITE FROM THE WATER MAIN SHALL BE INSTALLED PER LWD DETAIL 7A IN A 2.5" PVC SCHEDULE 40 SOLVENT WELD JOINT SLEEVE JACKED OR PUSHED UNDER THE EXISTING ROADWAY PAVEMENT.
3. INSTALL NEW FIRE HYDRANT ASSEMBLY PER LWD DETAIL 9.
4. REMOVE EXISTING FIRE HYDRANT ASSEMBLY.
5. INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
6. REFER TO RH2 PLANS FOR CONTINUATION

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING THE LOCATION, DEPTH, SIZE, MATERIAL, AND CONFIGURATION OF THE EXISTING WATER MAIN SYSTEM. VERIFICATION SHALL BE COMPLETED EARLY ENOUGH SO AS TO ADJUST PROPOSED WATER MAIN SYSTEM TO ACCOMMODATE ACTUAL CONDITIONS. UNDER NO CIRCUMSTANCES WILL LAKEWOOD WATER DISTRICT PAY THE CONTRACTOR ADDITIONAL MONIES TO RELAY WATER MAIN AND/OR FITTINGS INSTALLED UNDER THIS CONTRACT.
2. WHEN THE HORIZONTAL SEPARATION BETWEEN WATER AND SEWER IS LESS THAN 10-FEET, THE VERTICAL SEPARATION BETWEEN THE BOTTOM OF THE WATER MAIN AND THE CROWN OF THE SEWER SHALL BE 18-INCHES MINIMUM
3. ALL WATER MAIN JOINTS AND FITTINGS SHALL BE RESTRAINED.
4. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS BEYOND THE SCOPE OF THE ROADWAY AND SHOULDER IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER. HYDROSEED ALL GRASS AREAS DISTURBED.
5. THE CONTRACTOR MAY INSTALL THE WATERMAIN AT THE STANDARD DEPTH SHOWN ON THE LAKEWOOD WATER DISTRICT'S STANDARD TRENCH DETAIL. ANY UTILITY CONFLICTS CREATED BY USING THE STANDARD LAKEWOOD WATER DISTRICT DEPTH SHALL BE MITIGATED THROUGH ADDITIONAL EXCAVATION AND FITTINGS AT THE SOLE COST OF THE CONTRACTOR.

LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

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

	REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104017–WS7–11
JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III — STATE OF WASHINGTON — 48256 — REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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P 253.604.6600
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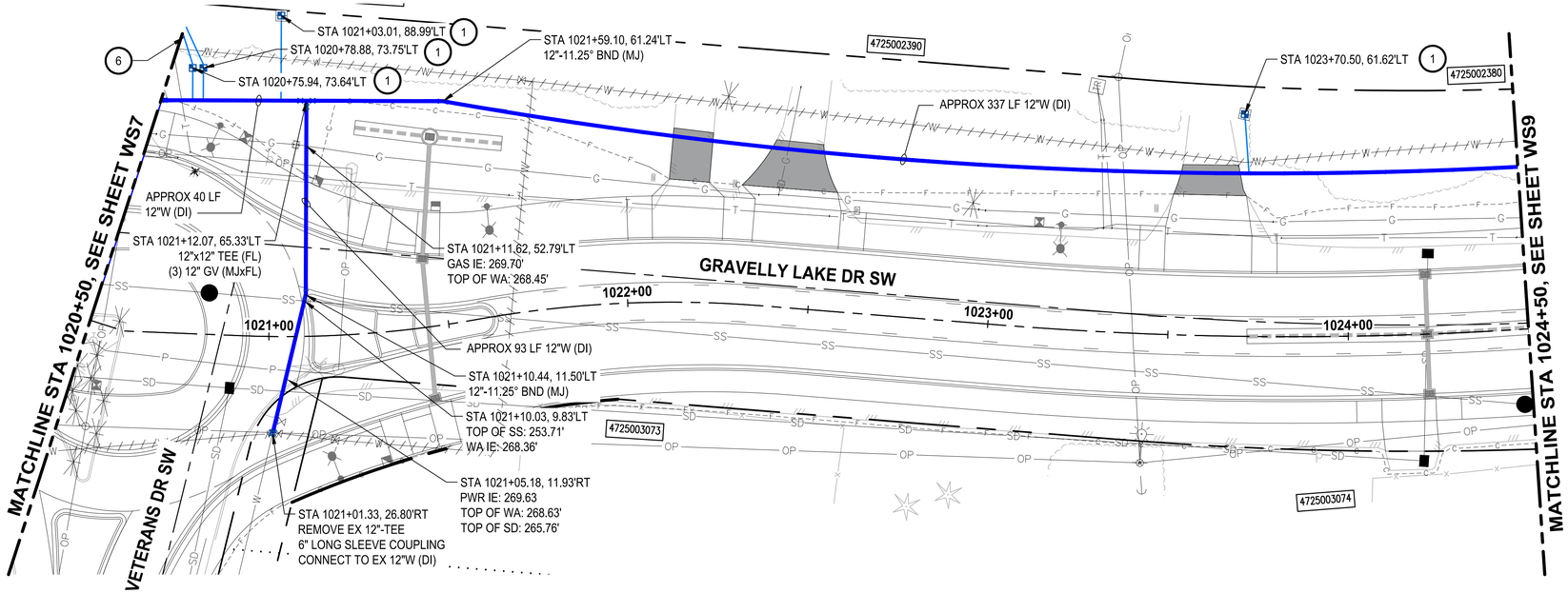
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

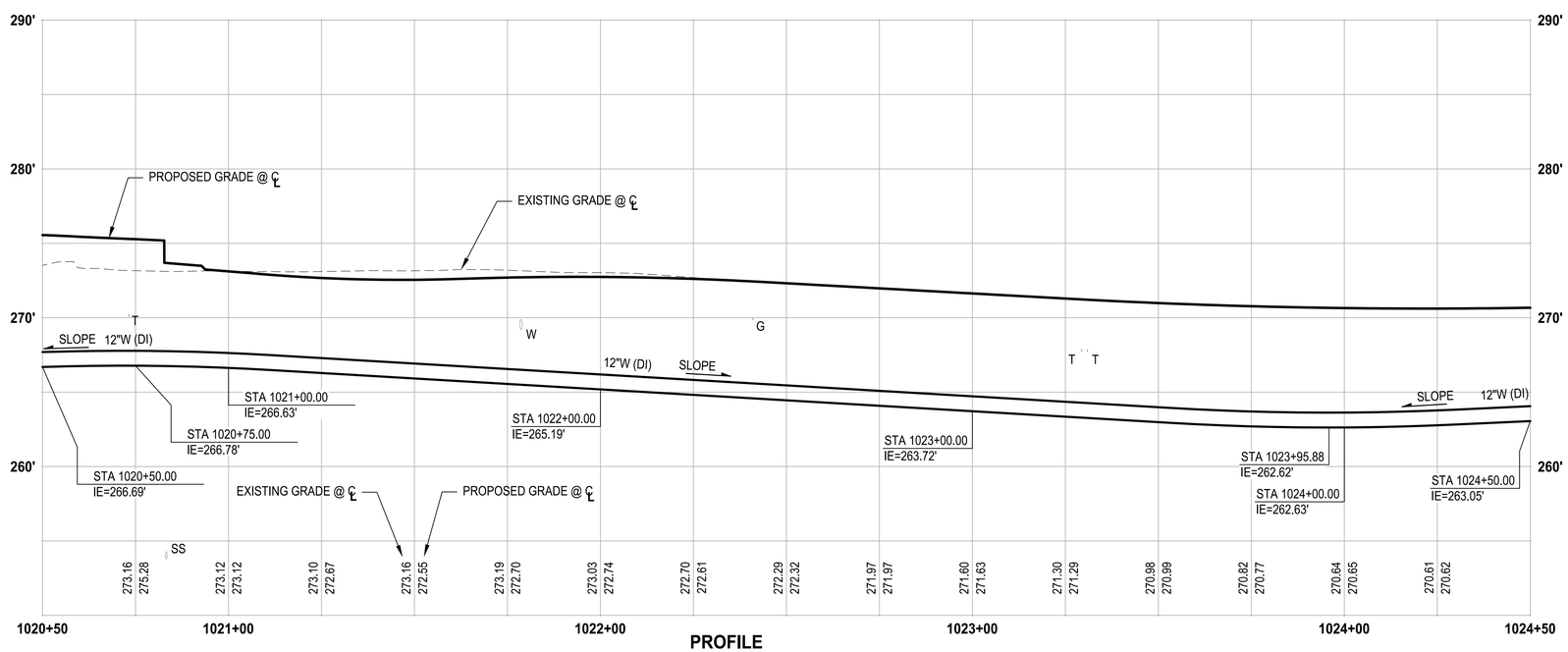
DRAWING NO.
7 OF 21
WS7

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly&Dr WMRepl\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 2:58:20 PM
LAYOUT: WS7



PLAN

SCALE IN FEET
0 20 40



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LEGEND:

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- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

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REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
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JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III, STATE OF WASHINGTON, 48256, REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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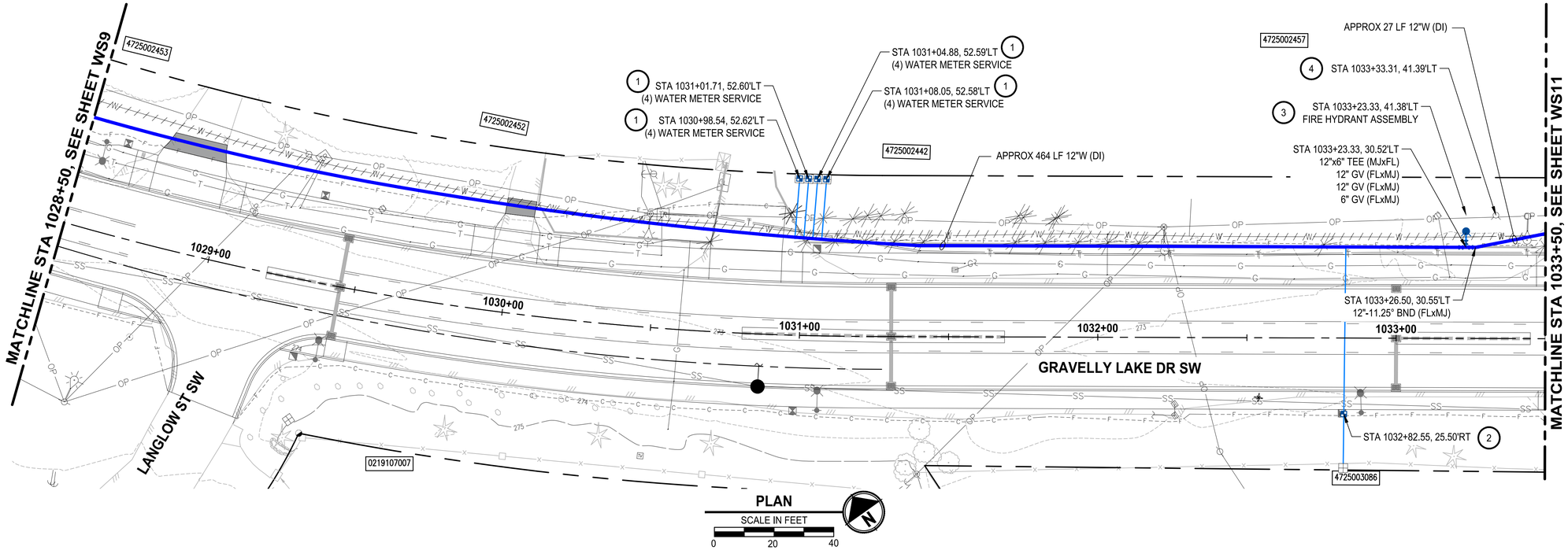
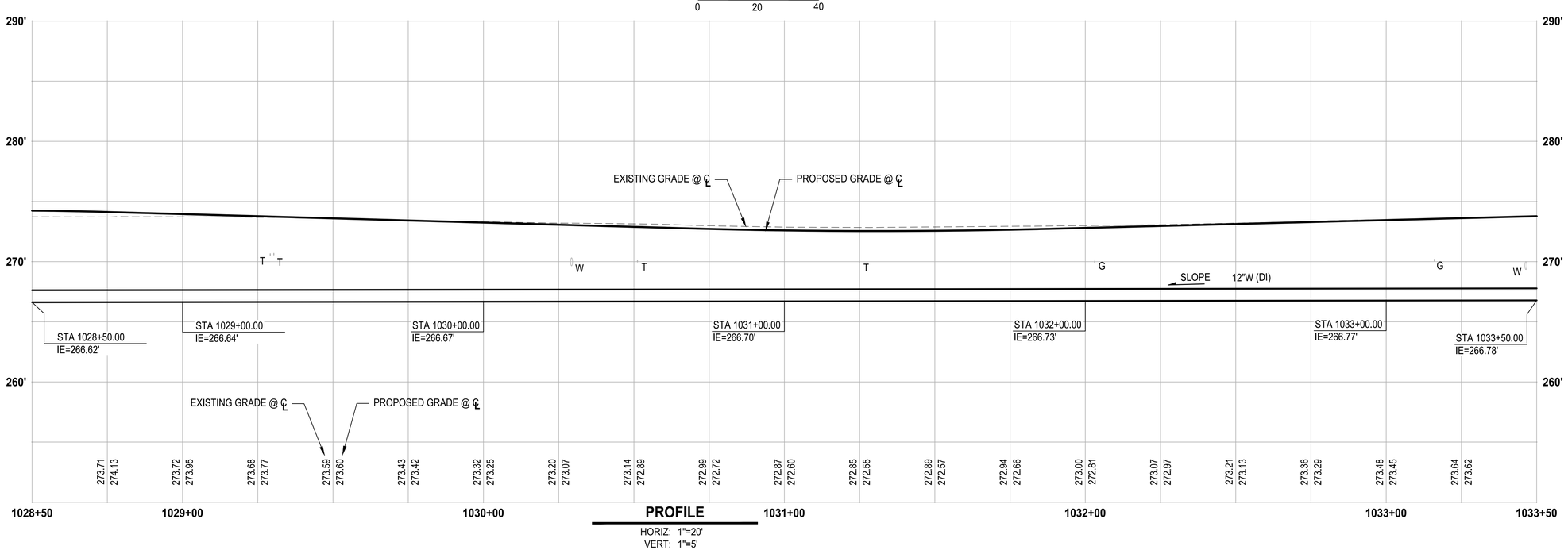
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY BLVD SW

DRAWING NO.
8 OF 21
WS8

LAYOUT: WS8 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly&Dr WMRepl\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 2:59:32 PM





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- CONCRETE PAVEMENT RESTORATION

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REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
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JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III, STATE OF WASHINGTON, 48256, REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

DRAWING NO.
10 OF 21
WS10

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly&Lkdr WMRep\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:01:46 PM
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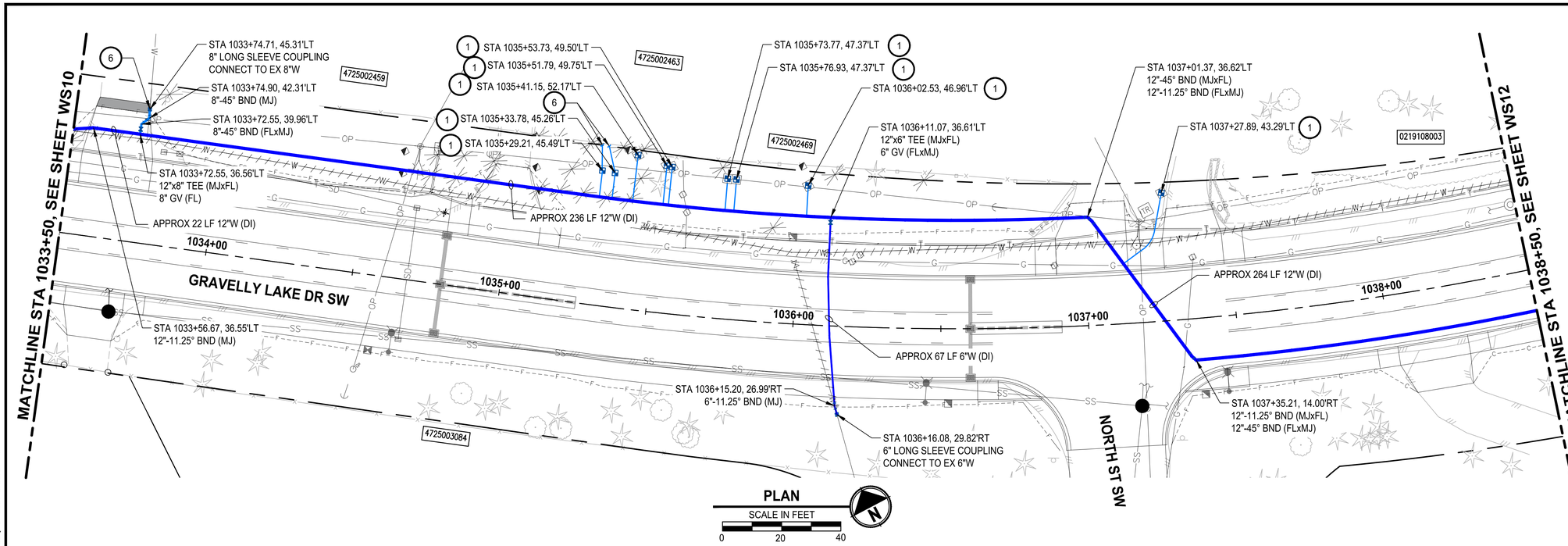
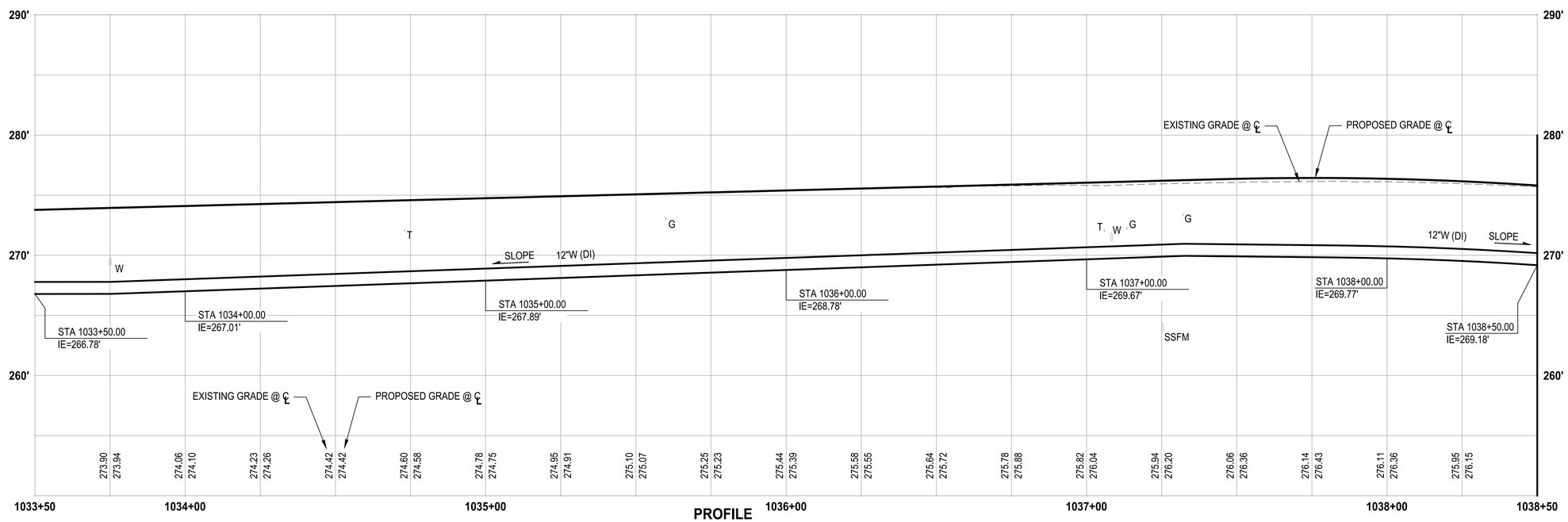


PLAN

SCALE IN FEET

0 20 40



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JOHN LEWIS WRIGHT III — STATE OF WASHINGTON — 48258 — REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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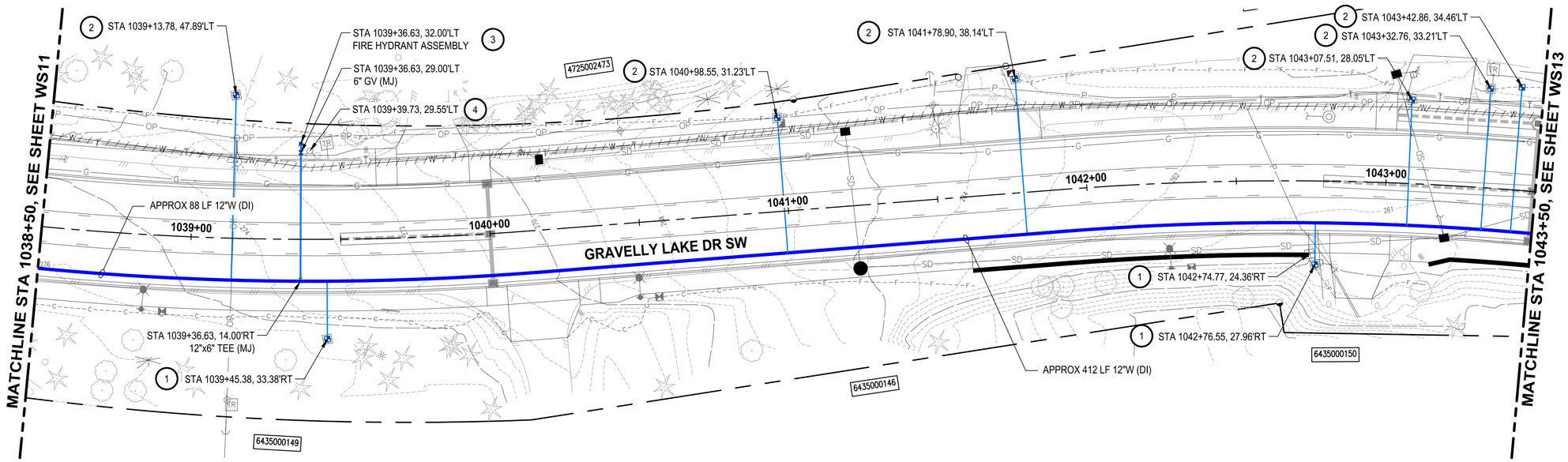
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

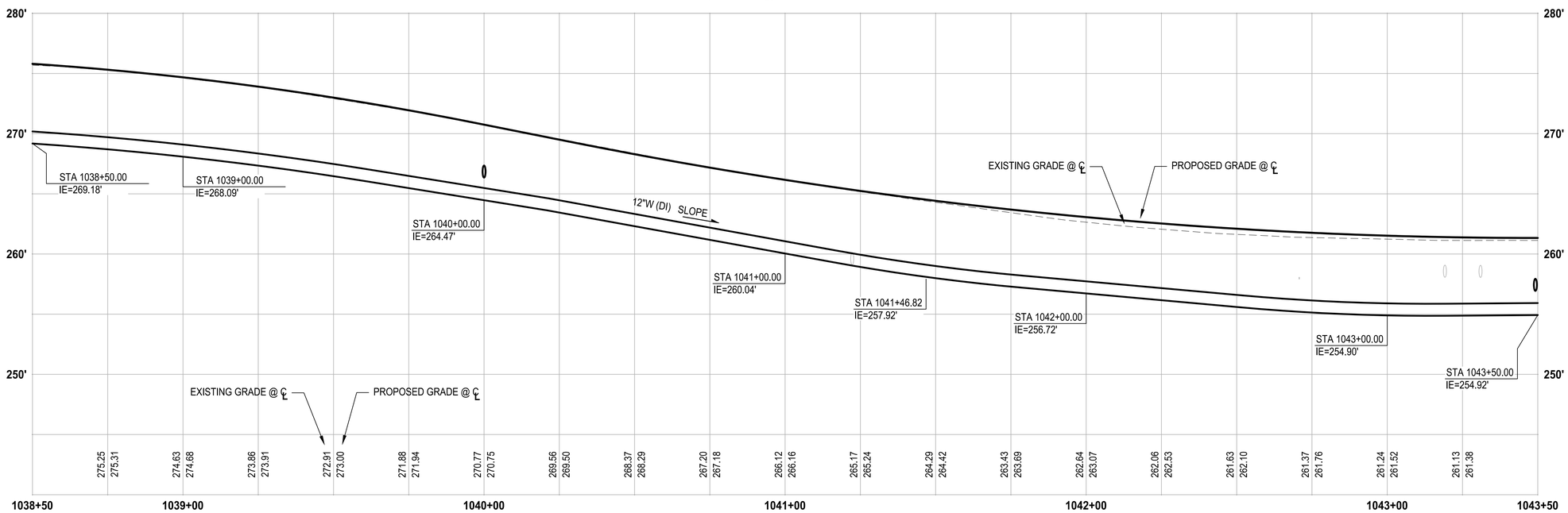
DRAWING NO.
11 OF 21
WS11

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 GravellyLakDr WMRep\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:02:51 PM LAYOUT: WS11



PLAN

SCALE IN FEET 0 20 40



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

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FEBRUARY 05, 2021

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APPROVED J. WRIGHT

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JOB No. 216-4104-017
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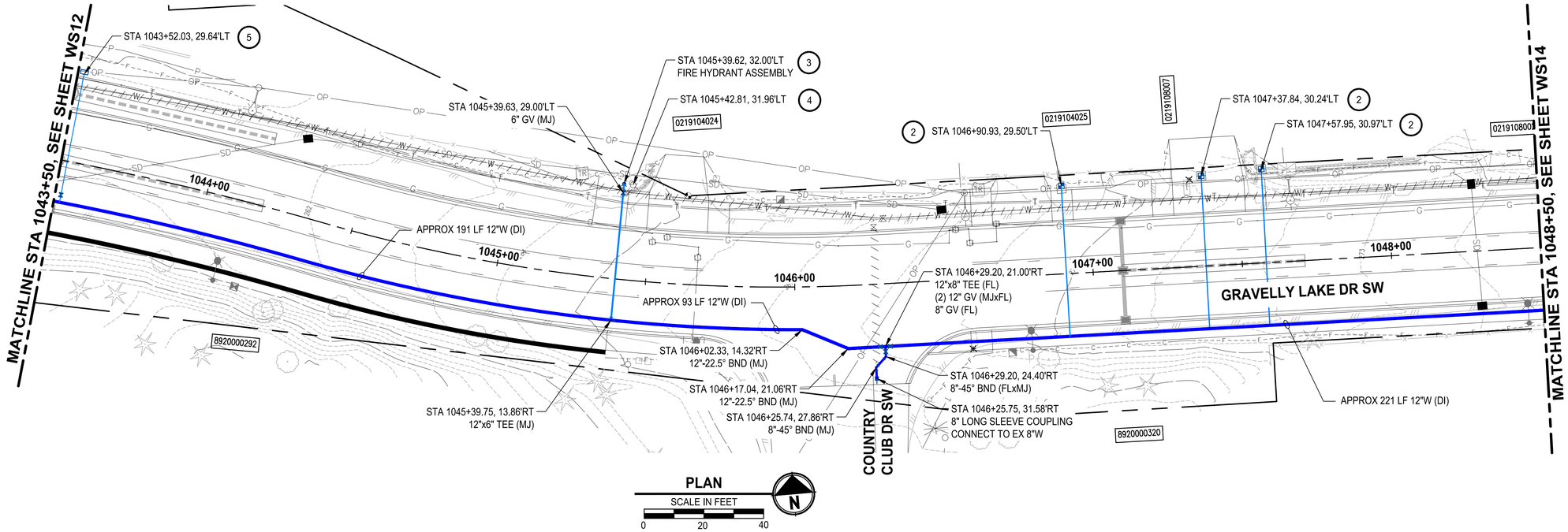
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

DRAWING NO.
12 OF 21
W12

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly&Lkdr WMRep\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:22:44 PM
LAYOUT: WS12

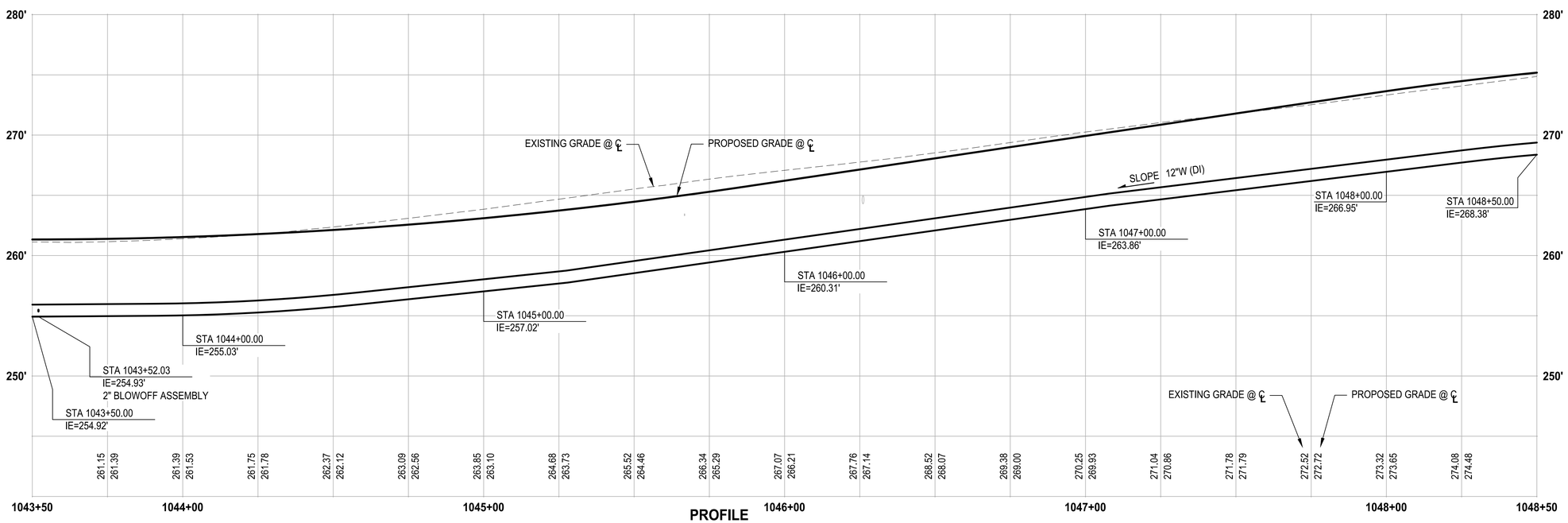


PLAN

SCALE IN FEET

0 20 40

N



PROFILE

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JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III, STATE OF WASHINGTON, 48256, REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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1019 39TH AVENUE SE, SUITE 100 | PUYALLUP, WA 98374
P 253.604.6600
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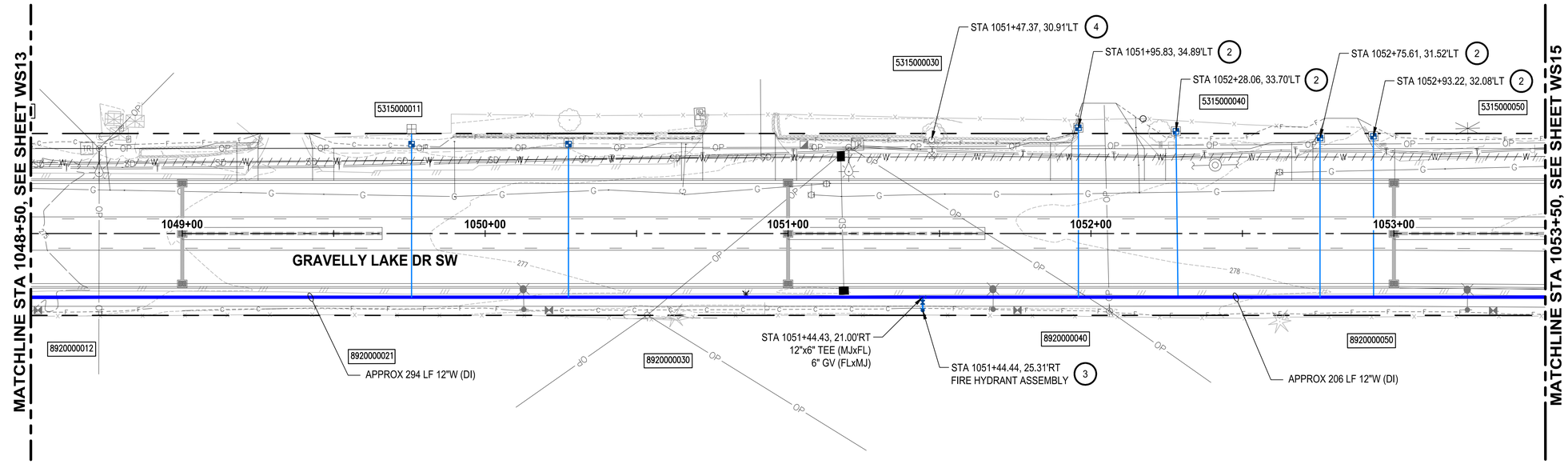
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

DRAWING NO.
13 OF 21
WS13

LAYOUT: WS13 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly&Kr WMRepl\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:23:18 PM



PLAN

SCALE IN FEET 0 20 40

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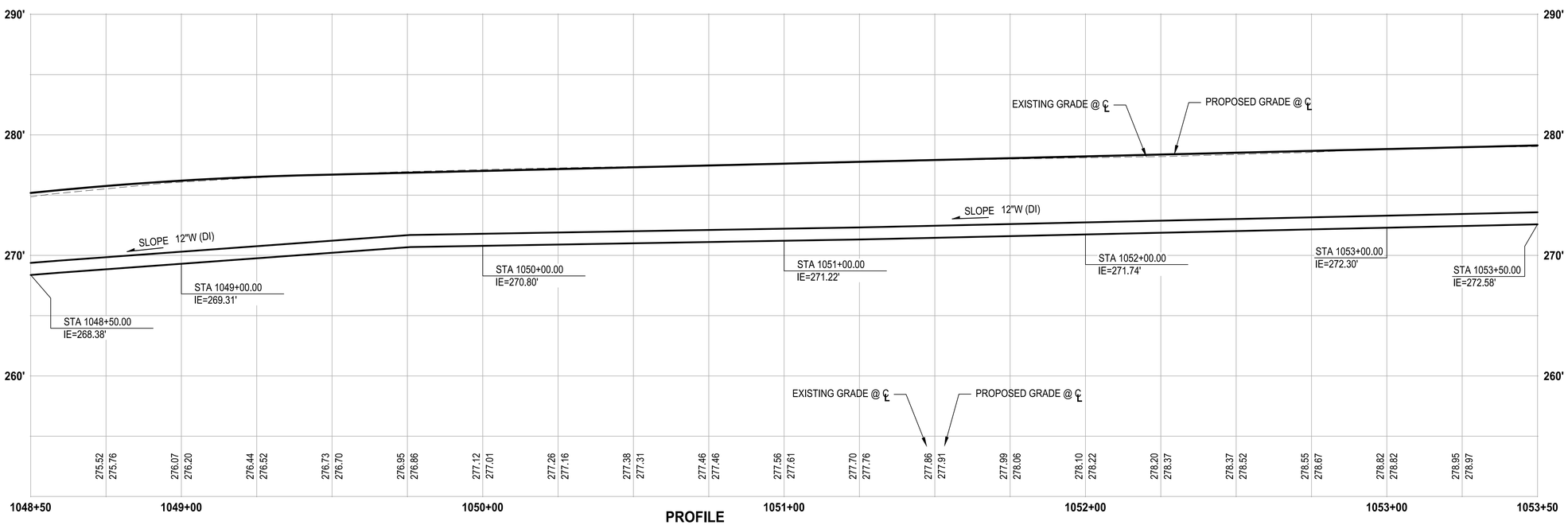

PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

CONSTRUCTION NOTES:

1. REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
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4. REMOVE EXISTING FIRE HYDRANT ASSEMBLY.
5. INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
6. REFER TO RH2 PLANS FOR CONTINUATION

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LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

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

JOHN LEWIS WRIGHT III — STATE OF WASHINGTON — 48258 — REGISTERED PROFESSIONAL ENGINEER

FEBRUARY 05, 2021

REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104017–WS12–19
JOB No. 216-4104-017
DATE FEBRUARY 2021

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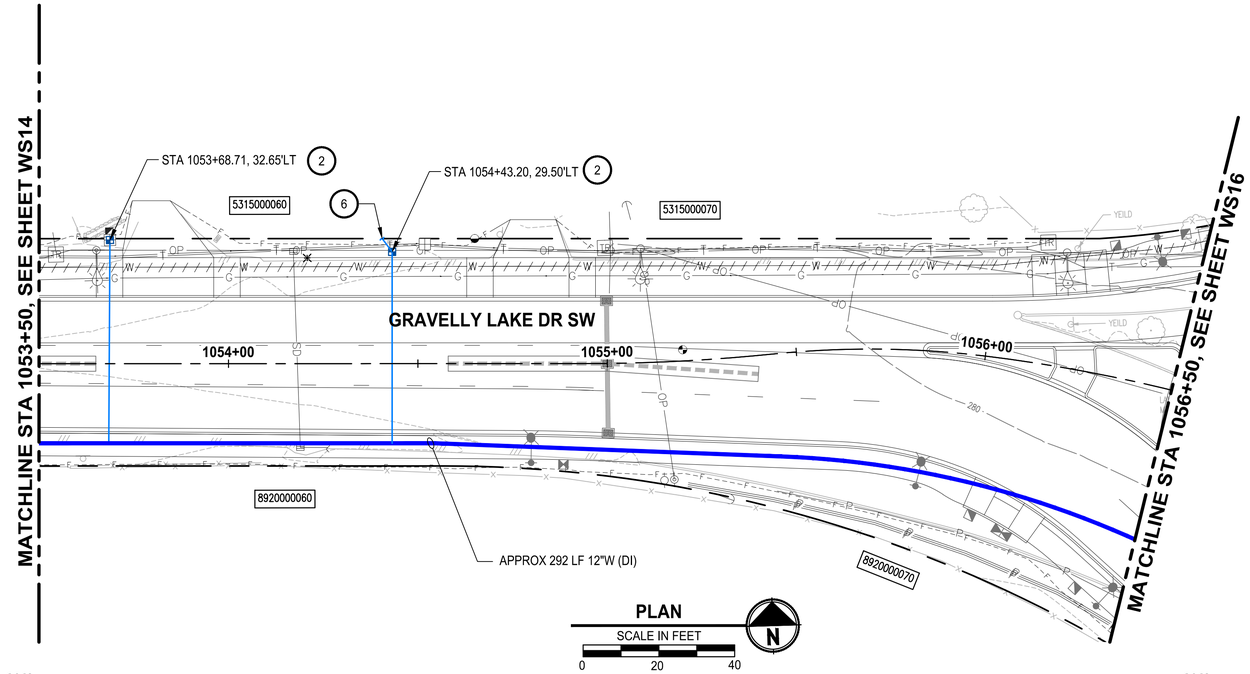
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

DRAWING NO.
14 OF 21
WS14

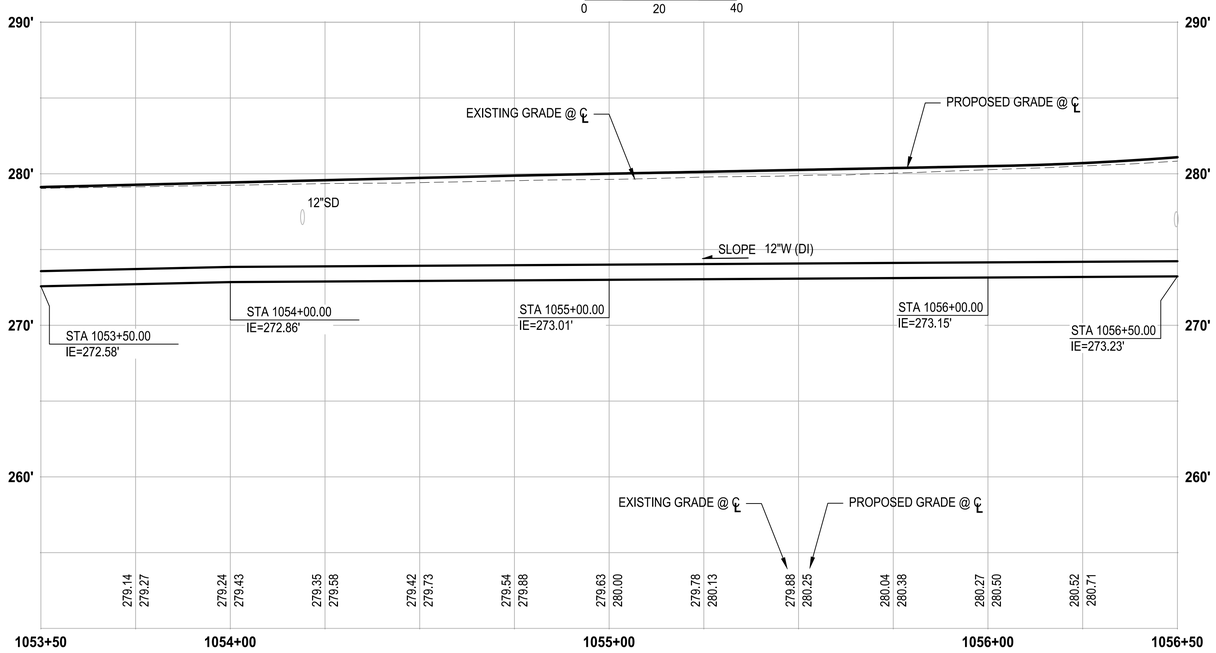
LAYOUT: WS14 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly&Kbr WMRep\995vcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:23:53 PM



PLAN

SCALE IN FEET

0 20 40



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LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

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REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
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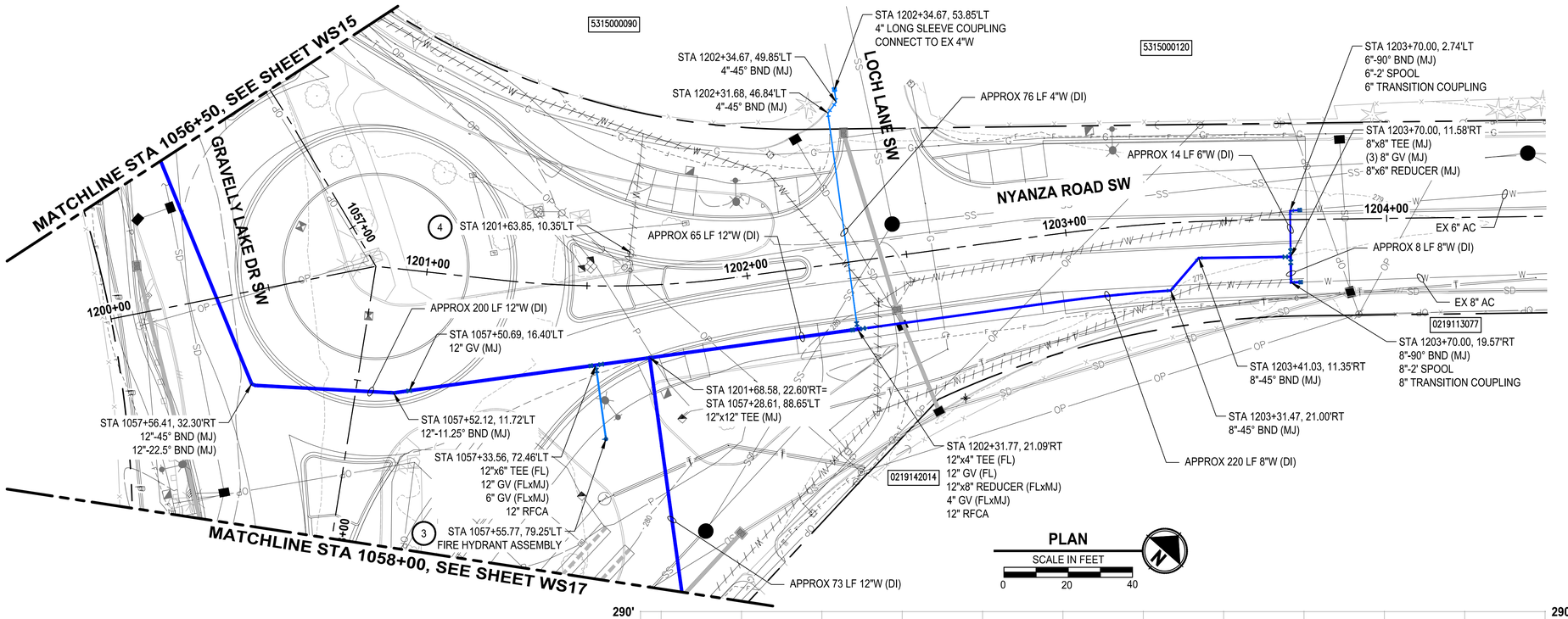
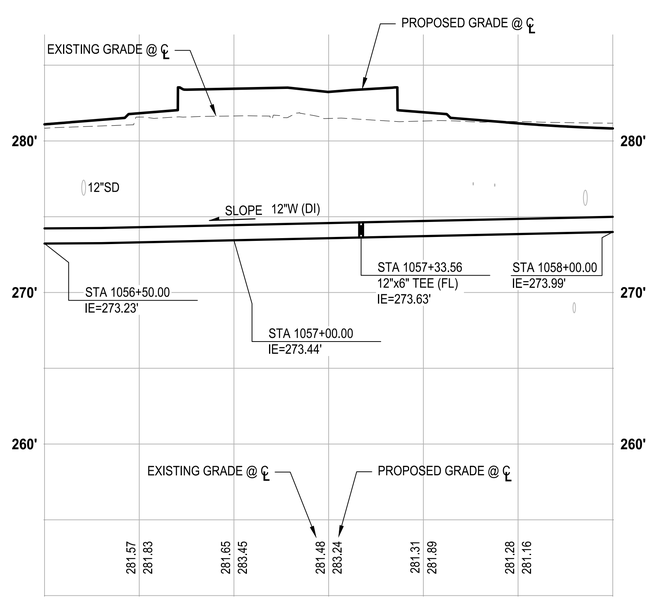
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

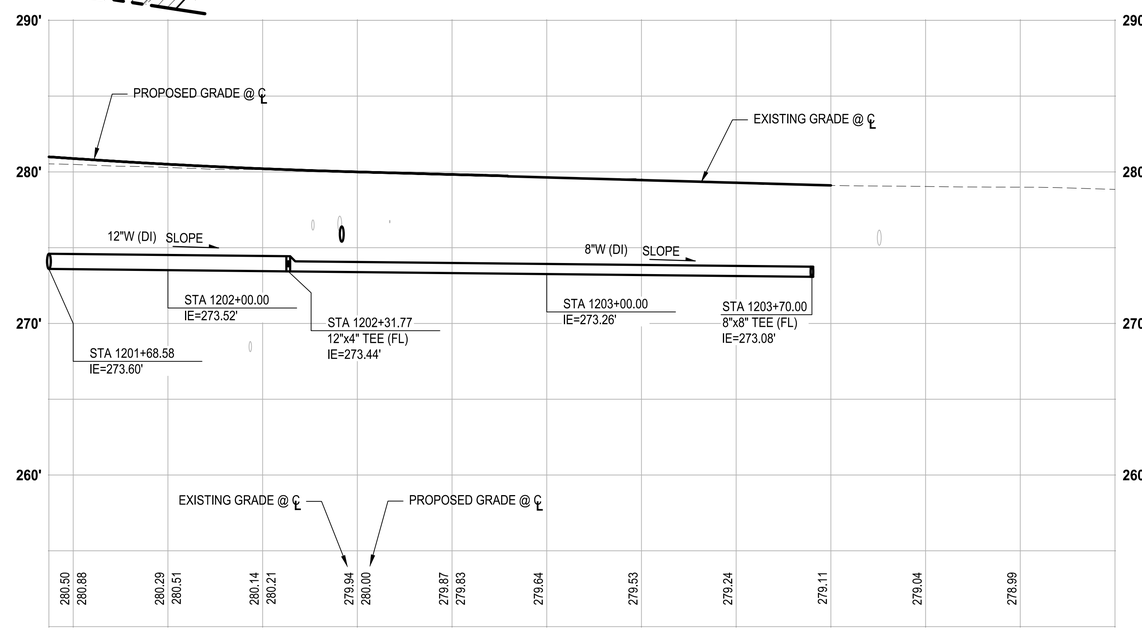
WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

DRAWING NO.
15 OF 21
WS15

LAYOUT: WS15 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 GravellyLkDr WMRep\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:24:26 PM







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- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

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	REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
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JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III — STATE OF WASHINGTON — 48258 — REGISTERED PROFESSIONAL ENGINEER
FEBRUARY 05, 2021

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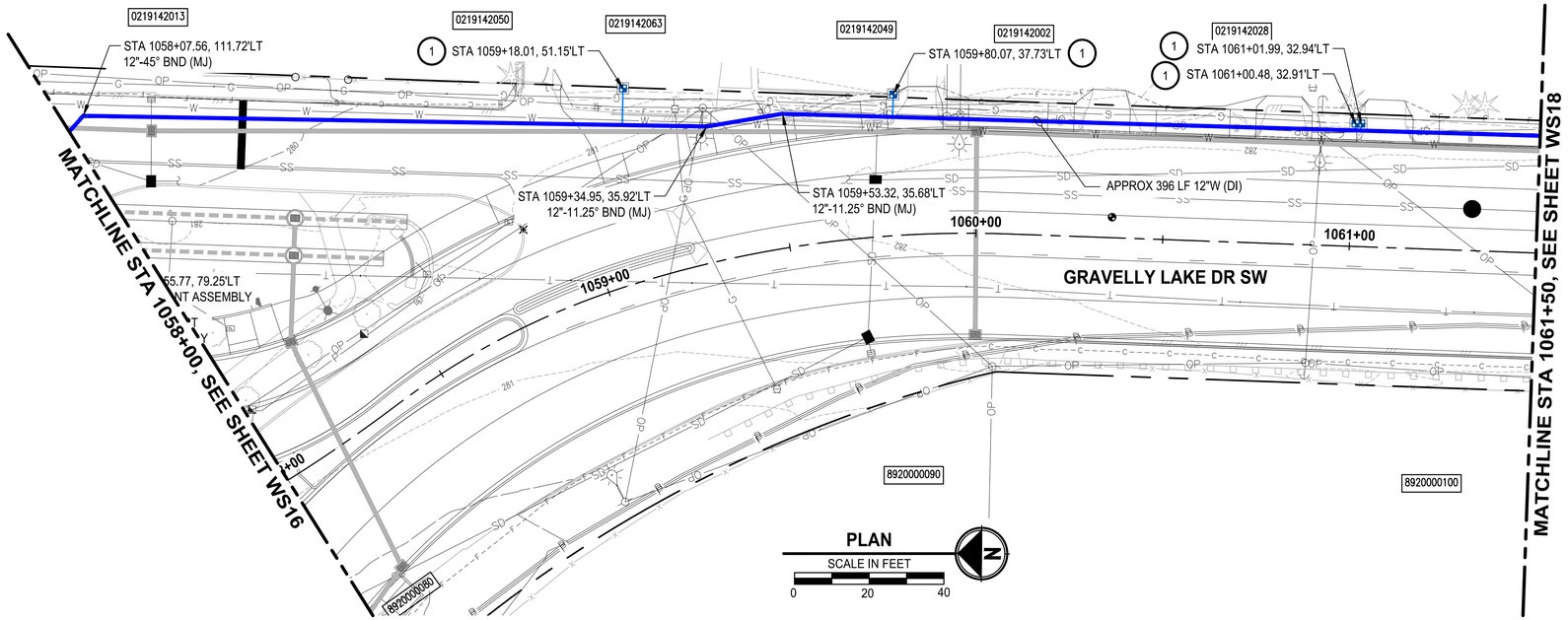
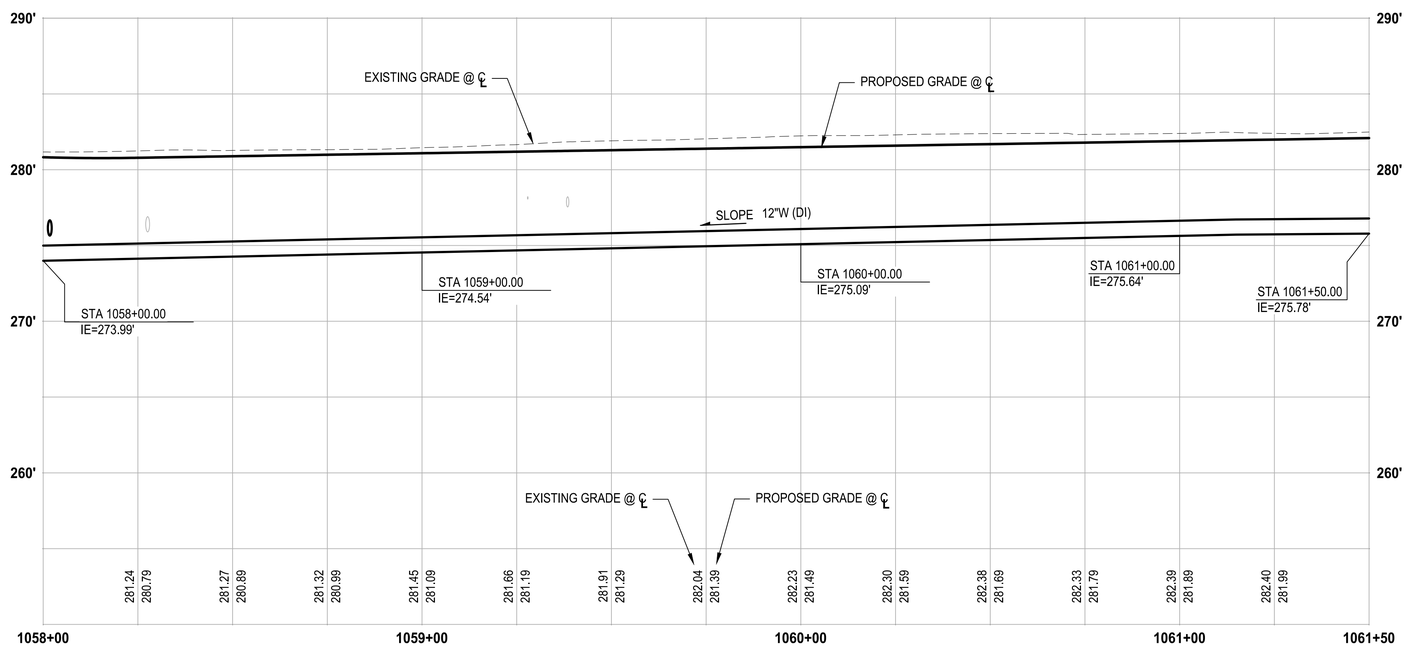
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE NYANZA ROAD SW

DRAWING NO.
16 OF 21
WS16

LAYOUT: WS16 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly\kJD- WMRepl\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:25:05 PM





PROFILE

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	REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
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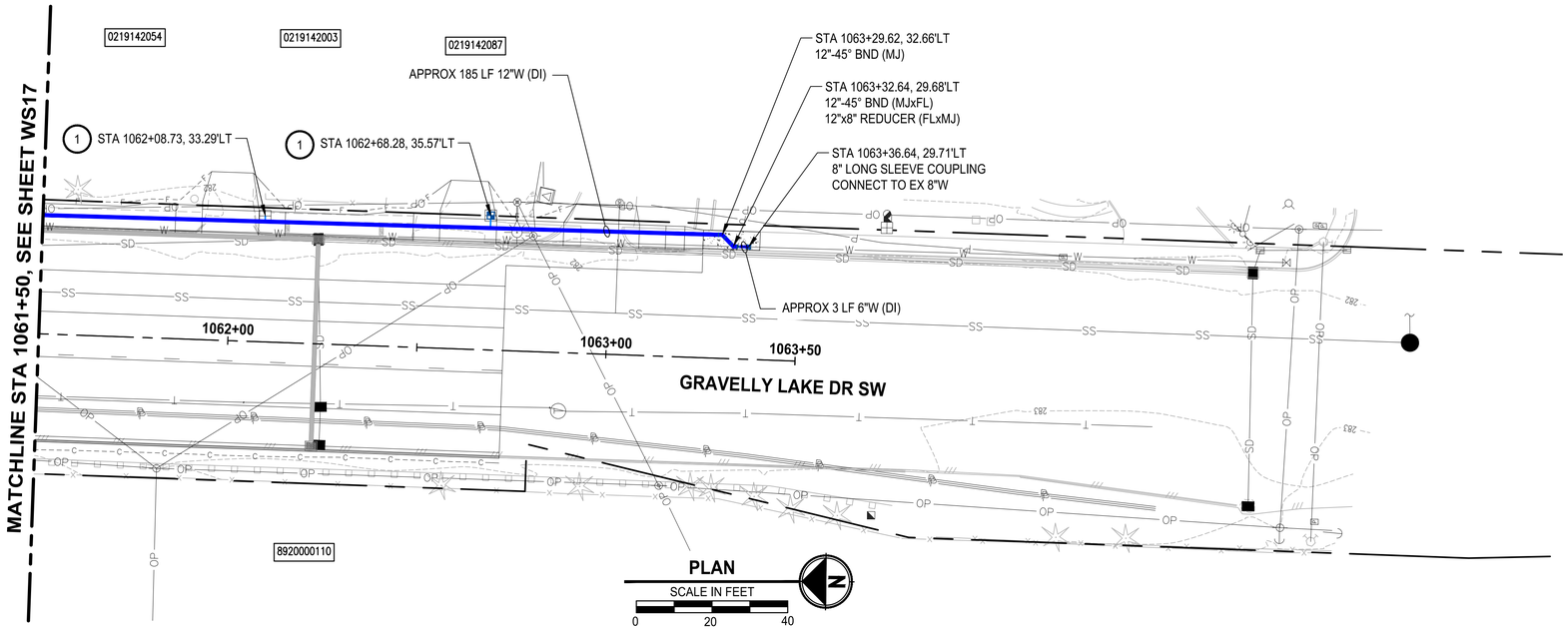
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

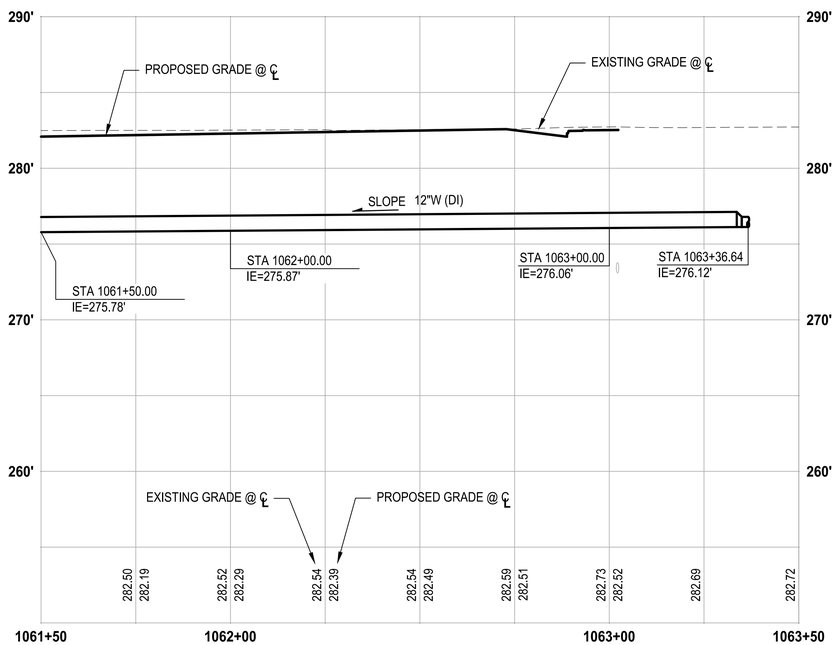
DRAWING NO.
17 OF 21
WS17

LAYOUT: WS17 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly\dgn WMRepl\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:25:49 PM



PLAN

SCALE IN FEET
0 20 40



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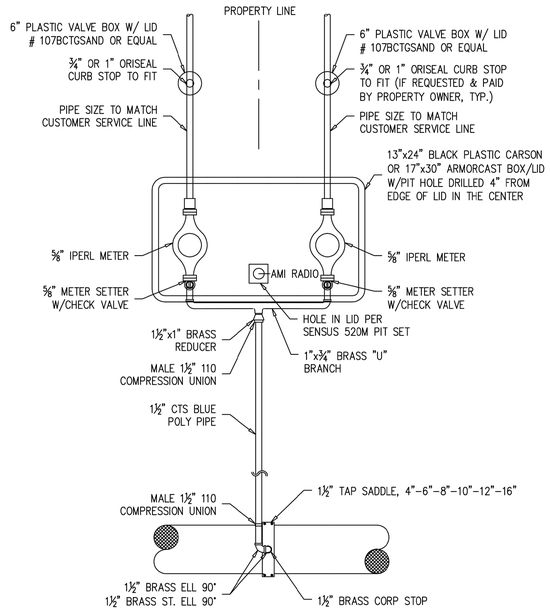
GRAVELLY LAKE DRIVE WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE GRAVELLY LAKE DR SW

DRAWING NO.
18 OF 21
WS18

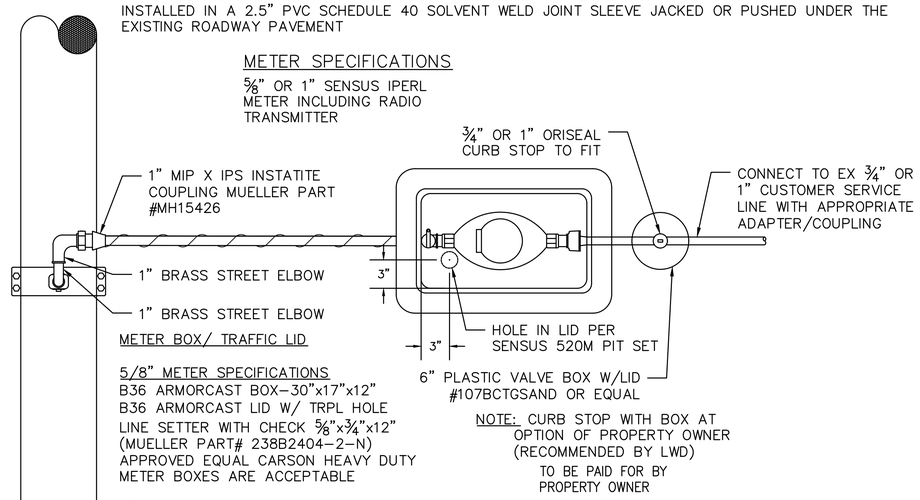
LAYOUT: WS18 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 GravellyLkDr WMRepl\99Svcs\CADD\DWG PLOTTED BY: mahmooyou DATE: Friday, February 5, 2021 3:26:32 PM

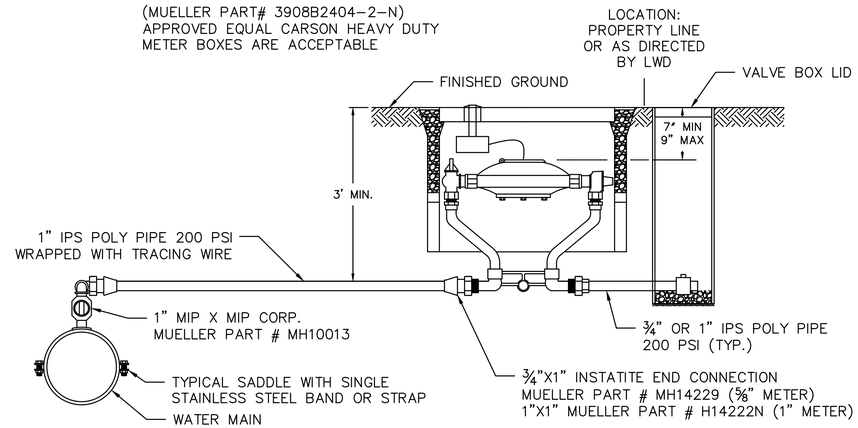


18 DUAL WATER SERVICE
(NON-TRAFFIC AREAS)

May 12, 2016

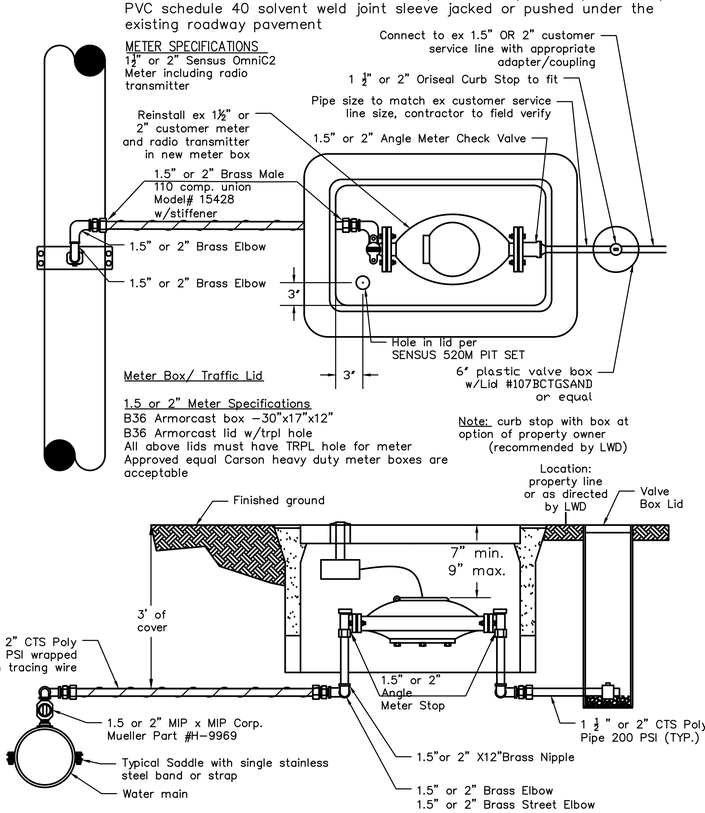
WATER SERVICES LOCATED ON THE SIDE OF THE STREET OPPOSITE FROM THE WATER MAIN SHALL BE INSTALLED IN A 2.5" PVC SCHEDULE 40 SOLVENT WELD JOINT SLEEVE JACKED OR PUSHED UNDER THE EXISTING ROADWAY PAVEMENT





7A TYPICAL WATER SERVICE FOR A 5/8" AND 1" ASSEMBLY

Water services located on the side of the street opposite from the water main shall be installed in a 2.5" (1.5" Service) or 3" (2" Service) PVC schedule 40 solvent weld joint sleeve jacked or pushed under the existing roadway pavement



DETAIL REVISED 02/14/2020

7B TYPICAL WATER SERVICE FOR 1.5" AND 2" ASSEMBLY

Know what's below. Call before you dig.

REVISIONS	DATE	BY

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CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS4104017-WSD01-03
JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III — STATE OF WASHINGTON — 48256 — REGISTERED PROFESSIONAL ENGINEER

FEBRUARY 05, 2021

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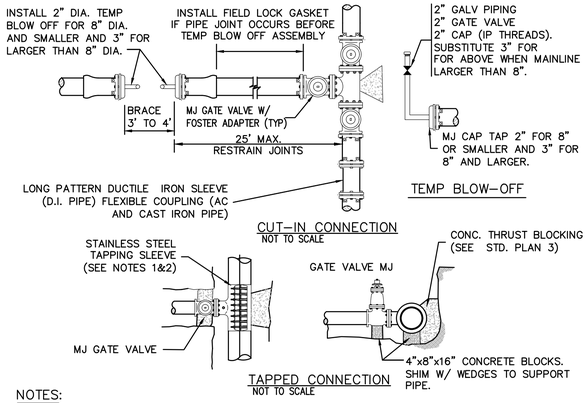
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

LAKEWOOD WATER DISTRICT DETAILS

DRAWING NO. 19 OF 21
WSD1

LAYOUT: WSD01 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly\JAD\ WMRepl\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:31:54 PM



NOTES:

TAPPED CONNECTIONS NOT ALLOWED WITHOUT SPECIFIC APPROVAL FROM THE DISTRICT.

NO CONNECTION WILL BE ALLOWED UNTIL ALL PRESSURE TESTING COMPLETED, AND SATISFACTORY BACTERIOLOGICAL TEST RECEIVED. SEE CROSS CONNECTION CONTROL SECTION IN SPECIFICATIONS.

TAPPING SLEEVE TO BE STAINLESS STEEL FOR AC PIPE AND EPOXY COATED STEEL FOR DUCTILE OR CAST IRON PIPE. CLOSEST EDGE OF TAPPING SLEEVE MUST BE 3' (MIN.) FROM COUPLING ON AC PIPE.

SEE DETAILS FOR VALVE BOX, THRUST BLOCKING. PIPE AND FITTING RESTRAINT REQUIREMENTS.

BACKFILL PER JURISDICTIONAL REQUIREMENTS WHEN IN ASPHALT. ALL OTHER AREAS PER THE STANDARD SPECIFICATIONS.

TEMP BLOW OFF'S MUST BE PROTECTED FROM DAMAGE. PLACE IN TRAFFIC BOX IF REQUIRED.

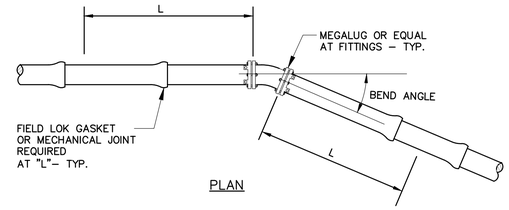
WATER OUTAGE ONLY ALLOWED TUESDAY THROUGH THURSDAY 9:00AM TO 3:00PM. (7) WORKING DAYS NOTICE REQUIRED.

ALL MJ JOINTS TO BE MEGALUG OR EQUAL.

SIMILAR TEMP B.O. REQUIREMENTS FOR TAPPED CONNECTIONS. LOCATE BLOW OFF OUT OF ASPH. WHEN POSSIBLE.

ALL FITTINGS AND PIPE SHALL BE STERILE SWABBED. CONNECTION SHALL BE INSPECTED FOR VISUAL LEAKAGE UNDER FULL LINE PRESSURE PRIOR TO BACKFILL.

1 CONNECTION REQUIREMENTS



HORIZONTAL BEND RESTRAINED LENGTH (L) REQUIRED EACH LEG PAST FITTING (FT)					
PIPE SIZE	TEE OR PLUG	90°	45°	22.5°	11.25°
6"	79	38	16	8	4
8"	103	50	21	10	5
10"	124	59	25	12	6
12"	113	54	23	11	6
16"	145	68	29	14	7

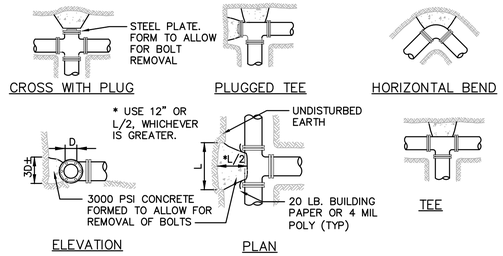
NOTES:

1. RESTRAINED LENGTH SHALL BE ADJUSTED IF CONDITIONS DIFFER FROM ASSUMPTIONS.
2. IF RESTRAINED LENGTH SHOWN IS NOT ACHIEVABLE, THRUST BLOCKS SHALL ALSO BE USED. SEE DETAIL 3.
3. RESTRAINED LENGTHS CAN BE ADJUSTED WITH SITE SPECIFIC SOILS INFORMATION, ENGINEER DESIGN AND DISTRICT APPROVAL.
4. MULTIPLE FITTINGS IN MULTIPLE PLANES SHALL BE DESIGNED AND STAMPED ON AN INDIVIDUAL BASIS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON.

ASSUMPTIONS:

1. TEST PRESSURE 200 PSI.
2. LAYING CONDITION 3.
3. SAND–SILT SOIL DESIGNATION.
4. COVER ON 6–10" DIA. AT 3 FEET; COVER ON 12–16" DIA. AT 4 FEET.
5. SAFETY FACTOR 1.5
6. VALUES DEVELOPED WITH DIPRA THRUST RESTRAINT CALCULATOR.

2 HORIZONTAL BEND RESTRAINT



THRUST BLOCK TABLE

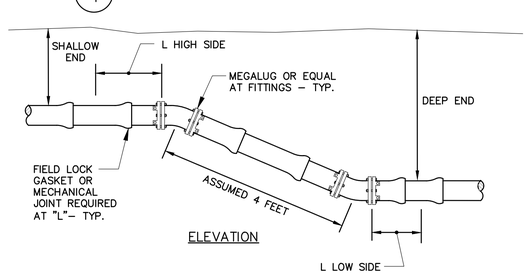
PIPE SIZE	TEE OR END PLUG	90°	45°	22 ½°	11 ¼°
4" OR 6"	3	4	2	2	2
8"	6	7	4	2	2
12"	12	16	9	5	3
16"	21	29	16	8	4

MINIMUM BEARING AREA AGAINST UNDISTURBED EARTH (SQUARE FEET)

NOTES:

1. BEARING AREA OF CONC. THRUST BLOCK BASED ON 200 PSI PRESSURE AND SOIL BEARING LOAD OF 2000 POUNDS PER SQUARE FOOT.
2. AREAS MUST BE ADJUSTED FOR OTHER SIZE PIPES, PRESSURES AND SOIL CONDITIONS.
3. CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF ½ SQUARE FOOT BEARING AGAINST THE FITTING. SIDES SHALL BE FORMED WITH PLYWOOD OR EQUIVALENT.
4. THRUST BLOCK SHALL BEAR AGAINST FITTING ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT DISMANTLING OF JOINTS.
5. CONCRETE TO BE 3000 PSI MINIMUM. PRE–MIX CONCRETE IS PREFERRED. IF CONCRETE IS HAND MIXED THE PROPORTIONS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. COMPRESSIVE TESTS OF "HAND MIXED" CONCRETE MAY BE REQUIRED. PRE–INSPECTION OF BLOCKING AREA REQUIRED PRIOR TO PLACEMENT OF CONCRETE.
6. CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.
7. SEE STANDARD PLAN NO. 2 FOR PIPE AND FITTING RESTRAINT REQUIREMENTS.

3 THRUST BLOCKING DETAIL



VERTICAL BEND RESTRAINED LENGTH (L) REQUIRED EACH LEG PAST FITTING (FT)						
PIPE SIZE	45°		22.5°		11.25°	
	HIGH SIDE	LOW SIDE	HIGH SIDE	LOW SIDE	HIGH SIDE	LOW SIDE
6"	64	29	30	12	14	5
8"	84	38	39	17	19	7
10"	100	46	47	21	23	9
12"	91	42	43	19	21	8
16"	118	54	56	25	27	11

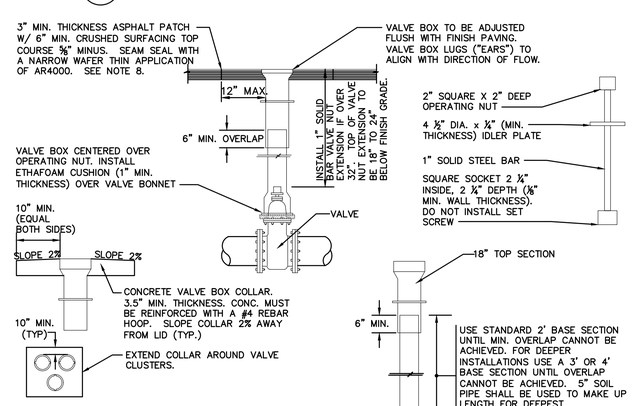
NOTES:

1. RESTRAINED LENGTH SHALL BE ADJUSTED IF CONDITIONS DIFFER FROM ASSUMPTIONS.
2. IF RESTRAINED LENGTH SHOWN IS NOT ACHIEVABLE, THRUST BLOCKS SHALL ALSO BE USED. CONTACT DISTRICT FOR THRUST BLOCKING DETAIL.
3. ALL PIPE BETWEEN VERTICAL BENDS SHALL BE RESTRAINED.
4. RESTRAINED LENGTHS CAN BE ADJUSTED WITH SITE SPECIFIC SOILS INFORMATION, ENGINEER DESIGN AND DISTRICT APPROVAL.
5. 90° VERTICAL BENDS ARE NOT ALLOWED.
6. MULTIPLE FITTINGS IN MULTIPLE PLANES SHALL BE DESIGNED AND STAMPED ON AN INDIVIDUAL BASIS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON.

ASSUMPTIONS:

1. TEST PRESSURE 200 PSI.
2. LAYING CONDITION 3.
3. SAND–SILT SOIL DESIGNATION.
4. SHALLOW END COVER ON 6–10" DIA. AT 3 FEET; COVER ON 12–16" DIA. AT 4 FEET.
5. LENGTH BETWEEN FITTINGS ASSUMED TO BE 4 FEET SO KNOWN LENGTH IS 2 FEET.
6. SAFETY FACTOR 1.5
7. VALUES DEVELOPED WITH DIPRA THRUST RESTRAINT CALCULATOR.

4 VERTICAL BEND RESTRAINT



NOTES:

1. VALVE BOX TO BE 045/046 – SEATTLE/TACOMA TOP AND LID.
2. VALVE BOX LIDS TO BE 4" DEEP IN TRAFFIC AREAS AND A MIN. OF 3" IN OTHER LOCATIONS. LOCKING VALVE BOX LIDS (AMPRO STYLE 940) REQUIRED IF LIDS WILL NOT STAY PUT DUE TO TRAFFIC.
3. SAWCUT VALVE BOX COMPONENTS. BROKEN OR JAGGED VALVE BOX SECTIONS NOT ACCEPTABLE.
4. OVERLAY ADJUSTMENT RINGS NOT ALLOWED, UNLESS APPROVED BY THE DISTRICT.
5. VALVE BOX COLLARS REQUIRED IF VALVE BOX OUT OF PAVING. COLLARS TO BE FLUSH WITH FINISH SURFACE. SLOPE COLLARS AWAY FROM LID @ 2% (TYP.)
6. VALVE BOX LIDS TO BE PAINTED (2) COATS SAFETY YELLOW PAINT.
7. VALVE BOX COLLAR REQUIRED WHEN VALVE BOX OUTSIDE OF PAVING.
8. VALVE BOXES SHALL BE ADJUSTED AFTER PAVING AND PATCHED AS SHOWN ABOVE. VALVES CONNECTED TO THE EXISTING SYSTEM SHALL BE MADE ACCESSIBLE AT ALL TIMES.

5 VALVE BOX INSTALLATION

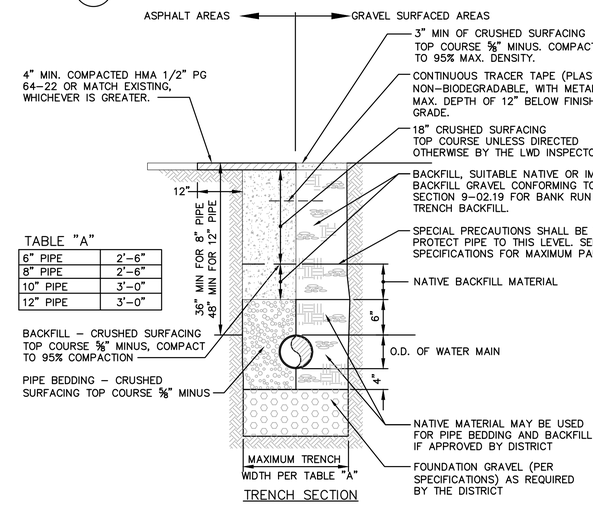


TABLE "A"

6" PIPE	2'–6"
8" PIPE	2'–6"
10" PIPE	3'–0"
12" PIPE	3'–0"

NOTES:

1. BEDDING REQUIRED ONLY IF DIRECTED BY THE DISTRICT DUE TO NATIVE SOIL CONDITIONS. BEDDING SHALL BE ⅝" CRUSHED SURFACING IF NATIVE MATERIAL IS JUDGED UNSUITABLE BY THE DISTRICT. BEDDING UNDER ASPHALT OR CONCRETE PAVEMENT AREAS SHALL BE CRUSHED ROCK ⅝" MINUS.
2. PUMPING SOILS SHALL BE REMOVED FROM THE TRENCH BACKFILL IMMEDIATELY.
3. TEMPORARY PATCH TO BE BACKFILLED AND COMPACTED TO EXISTING GROUND LINE AND PATCHED WITH CRUSHED ROCK SURFACING OR HMA ½" PG 64–22. TEMPORARY PATCH SHALL BE 2" THICK OR AS DIRECTED BY LWD INSPECTOR.
4. BACKFILL MATERIAL PLACED IN 6" LIFTS AND COMPACTED TO 95% MAXIMUM DENSITY. BACKFILL OF THE TOP 18" SHALL BE CRUSHED ROCK ⅝" MINUS UNDER ASPHALT OR CONCRETE PAVEMENT AND NATIVE MATERIAL IN GRAVEL AREAS IF APPROVED BY THE DISTRICT.

6 TYPICAL TRENCH SECTION

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

JOHN LEWIS WRIGHT III — STATE OF WASHINGTON — 48256 — REGISTERED PROFESSIONAL ENGINEER

FEBRUARY 05, 2021

REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104017-WSD01-03
JOB No. 216-4104-017
DATE FEBRUARY 2021

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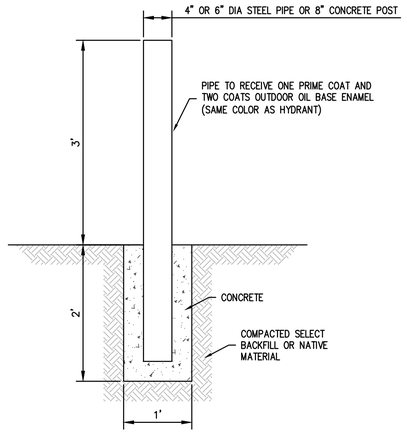
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

LAKEWOOD WATER DISTRICT DETAILS

DRAWING NO. 20 OF 21
WSD2

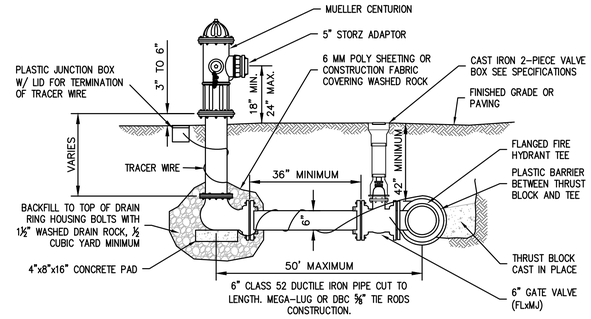
LAYOUT: WSD02 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly\ADr WMRep\99Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:32:46 PM



NOTE:

LOCATE BOLLARDS 3' MINIMUM FROM HYDRANT DO NOT BLOCK HYDRANT PORTS.

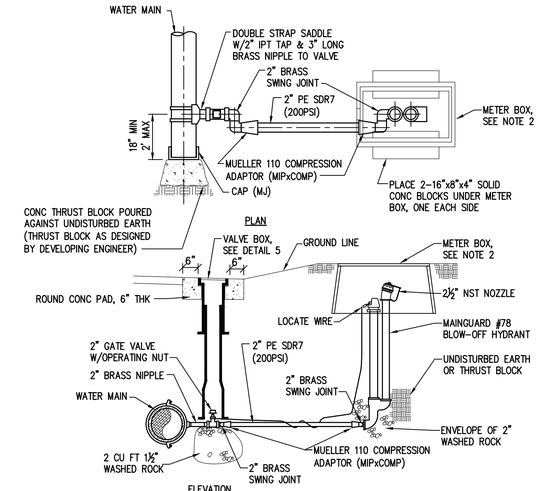
8 HYDRANT BOLLARD



NOTES:

1. ANY HYDRANT SETBACK LONGER THAN ONE FULL LENGTH OF PIPE THAT REQUIRES A BELL AND SPICKET WILL NEED A FIELD LOCK GASKET, AND MAY REQUIRE A THRUST BLOCK AT THE DIRECTION OF THE INSPECTOR.
2. MAINTAIN MINIMUM 3' RADIUS UNOBSTRUCTED WORKING AREA AROUND HYDRANT INCLUDING FUTURE IMPROVEMENTS.

9 FIRE HYDRANT

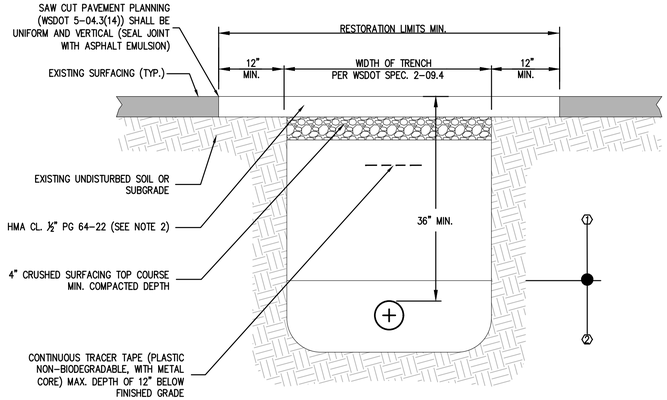


NOTES:

1. BLOW-OFF HYDRANTS SHALL BE #78 MAINGUARD HYDRANT (THE KUPFERLE FOUNDRY CO).
2. SET UNDERGROUND IN ARMORCAST B36 W/ LID OR EQUIVALENT CARSON HD BOX & LID, (30"x17"x12").
3. THE OUTLET SHALL ALSO BE BRONZE AND BE 2-1/2" NST.
4. HYDRANTS SHALL BE LOCKABLE TO PREVENT UNAUTHORIZED USE.
5. LOCATE WIRE SHALL BE 10 GAUGE WIRE FROM 2" GV TO METER BOX W/ 6" MIN EXPOSED WITHIN BOX.
6. THRUST BLOCKS TO BE DETERMINED BY LWD INSPECTOR.

13 BLOWOFF ASSEMBLY (2")

NOTE: CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS BEYOND THE SCOPE OF THE ROADWAY AND SHOULDER IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER. HYDROSEED ALL GRASS AREAS DISTURBED.



RESTORATION GENERAL NOTES:

1. MATERIALS AND CONSTRUCTION REQUIREMENTS SHALL BE PER LATEST EDITION OF WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION UNLESS OTHERWISE NOTED.
2. COMPACTED HMA DEPTH SHALL BE 3" MINIMUM OR AS SHOWN IN PLANS OR PERMIT, WHICHEVER IS GREATER, AND SHALL BE COMPACTED TO 92% OF RICE DENSITY.

DETAIL GENERAL NOTES:

1. ALL PATCHES ACROSS CITY STREETS SHALL CONFORM TO THIS DETAIL.

BACKFILL COMPACTION LEGEND

1. BACKFILL MATERIAL SHALL BE PLACED IN 6" LIFTS AND COMPACTED TO MINIMUM OF 95% MAXIMUM DENSITY OF THE MODIFIED PROCTOR PER ASTM 1557.
2. BEDDING MATERIAL SHALL BE PLACED IN 4" LIFTS AND COMPACTED TO MINIMUM OF 95% MAXIMUM DENSITY OF THE MODIFIED PROCTOR PER ASTM 1557.

11 CITY OF LAKEWOOD TRENCH PATCH DETAIL

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

	REVISIONS	DATE	BY

DESIGNED Y. MAHMOODI
DRAWN Y. MAHMOODI
CHECKED R. RAYMOND
APPROVED J. WRIGHT

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME PS4104017-WSD01-03
JOB No. 216-4104-017
DATE FEBRUARY 2021

JOHN LEWIS WRIGHT III — STATE OF WASHINGTON — 48258 — REGISTERED PROFESSIONAL ENGINEER

FEBRUARY 05, 2021

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P 253.604.6600
WWW.PARAMETRIX.COM

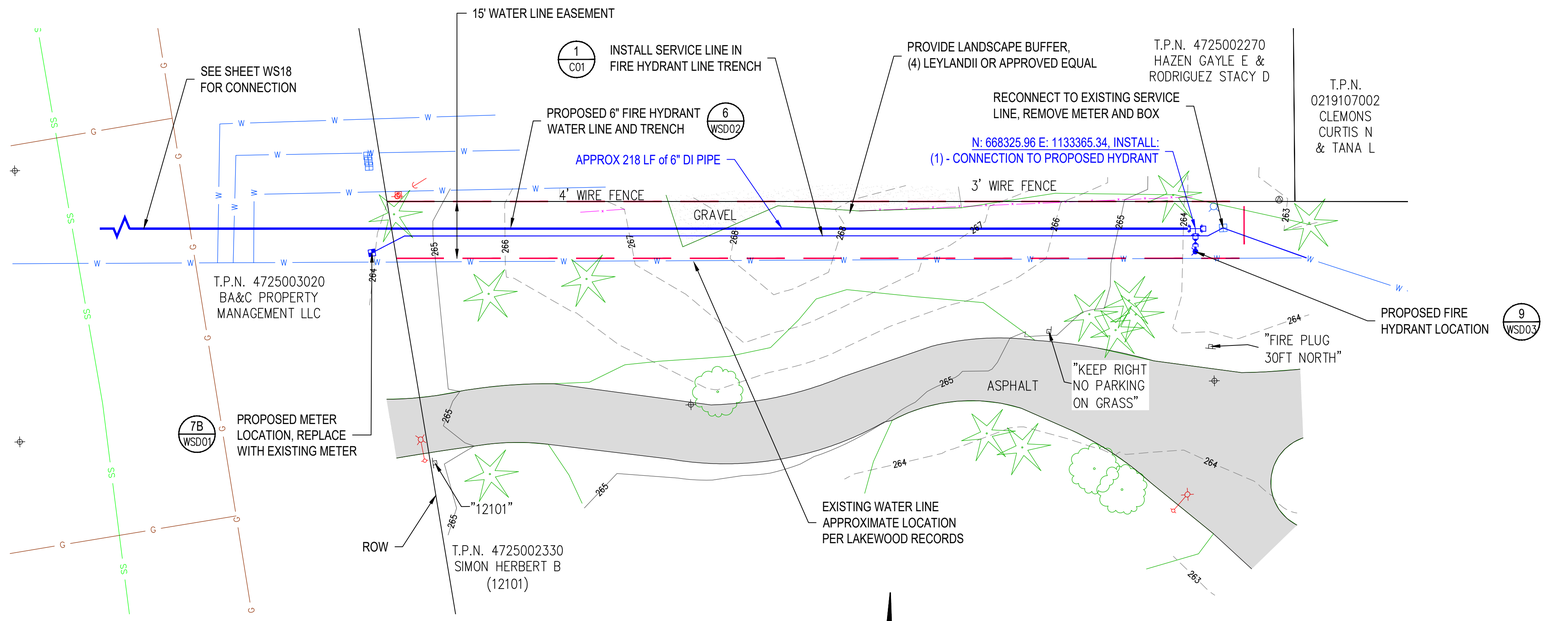
PROJECT NAME
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

LAKEWOOD WATER DISTRICT DETAILS

DRAWING NO. 21 OF 21

WSD3

LAYOUT: WSD03 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly\ldr\ WMRep\99Svcs\CAD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:33:39 PM



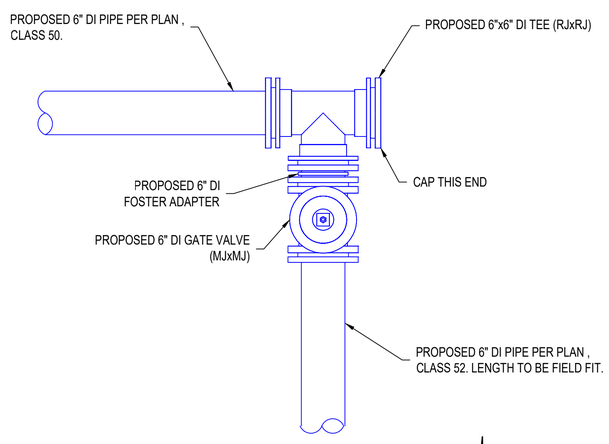
12101 GRAVELLY LAKE DR SW

1" = 20'

NOTES

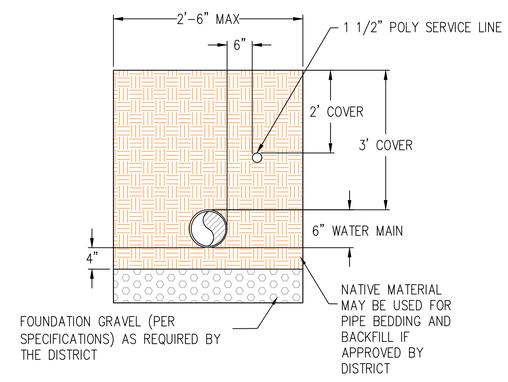
EXACT LOCATION FOR FIRE HYDRANT AND METER SHALL BE DETERMINED BY LAKEWOOD WATER DISTRICT INSPECTOR.

IN LIEU OF FLANGES ON DUCTILE IRON FITTINGS AND VALVES, FOSTER ADAPTORS MANUFACTURED BY INFACT CORPORATION, OR APPROVED EQUAL, WILL BE USED TO ALLOW MECHANICAL JOINT RESTRAINT.



CONNECTION TO PROPOSED FIRE HYDRANT

1" = 1'



1 JOINT TRENCH SECTION

RH2

GODFREY G. DILLARD STATE OF WASHINGTON 31196 REGISTERED PROFESSIONAL ENGINEER

SIGNED: 01/28/2021

DAVID J. MAY STATE OF WASHINGTON 27844 REGISTERED PROFESSIONAL ENGINEER

SIGNED: 01/28/2021

LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
HYDRANT AND METER REPLACEMENT

LAKEWOOD WATER DISTRICT

12101 GRAVELLY LAKE DRIVE

ENGINEER: JMO
REVIEWED: DJM
SAVE DATE: Jan 28, 2021
PLOT DATE: Jan 28, 2021
CLIENT: LAK
FILENAME: GRAV-D-CN01.DWG
JOB NO.: 519-154

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
		PRELIMINARY REVIEW DRAWINGS		

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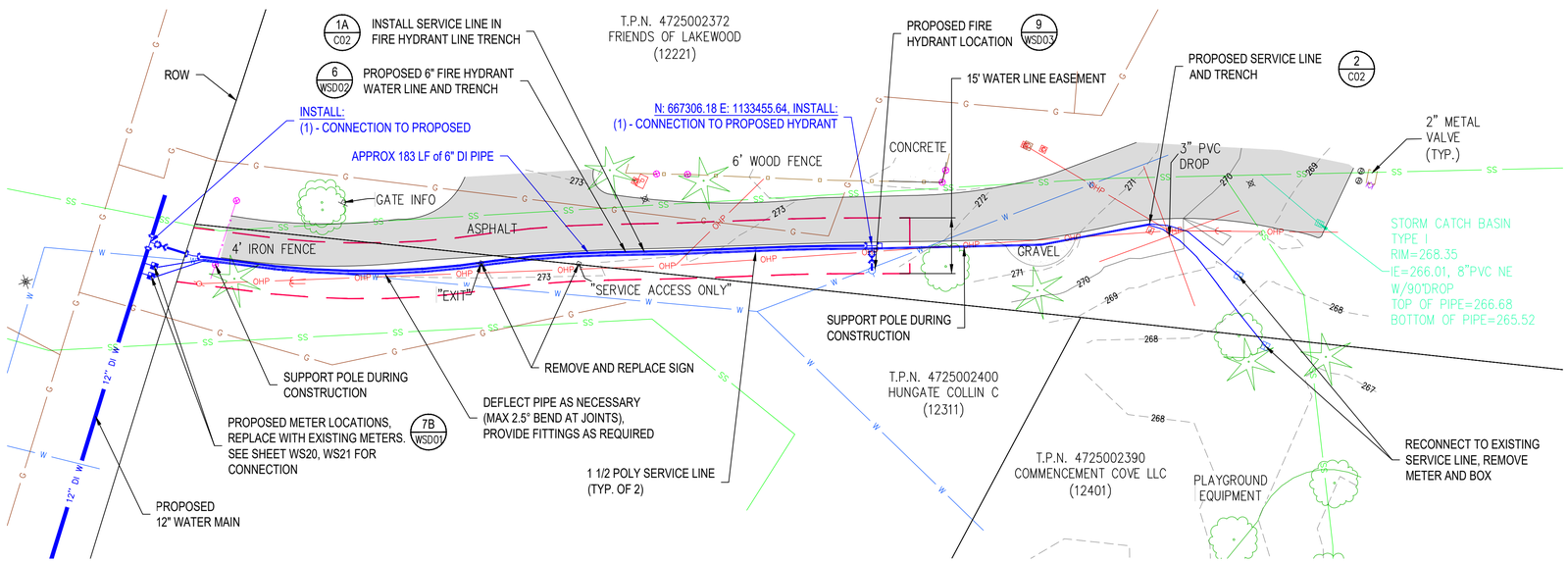
0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

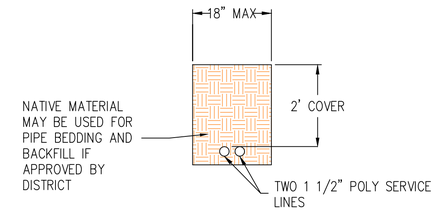
DWG NO.: C01

SHEET NO.: 01 / 06

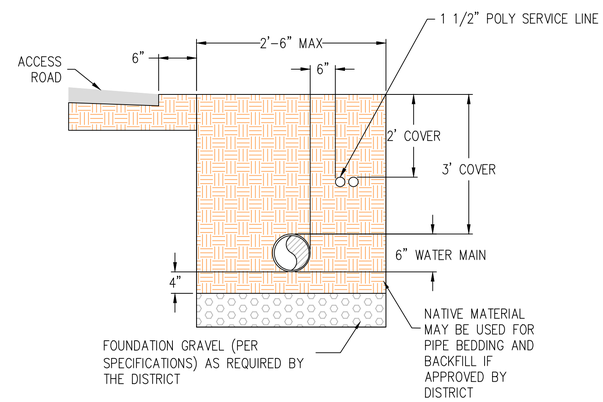


12221 GRAVELLY LAKE DR SW

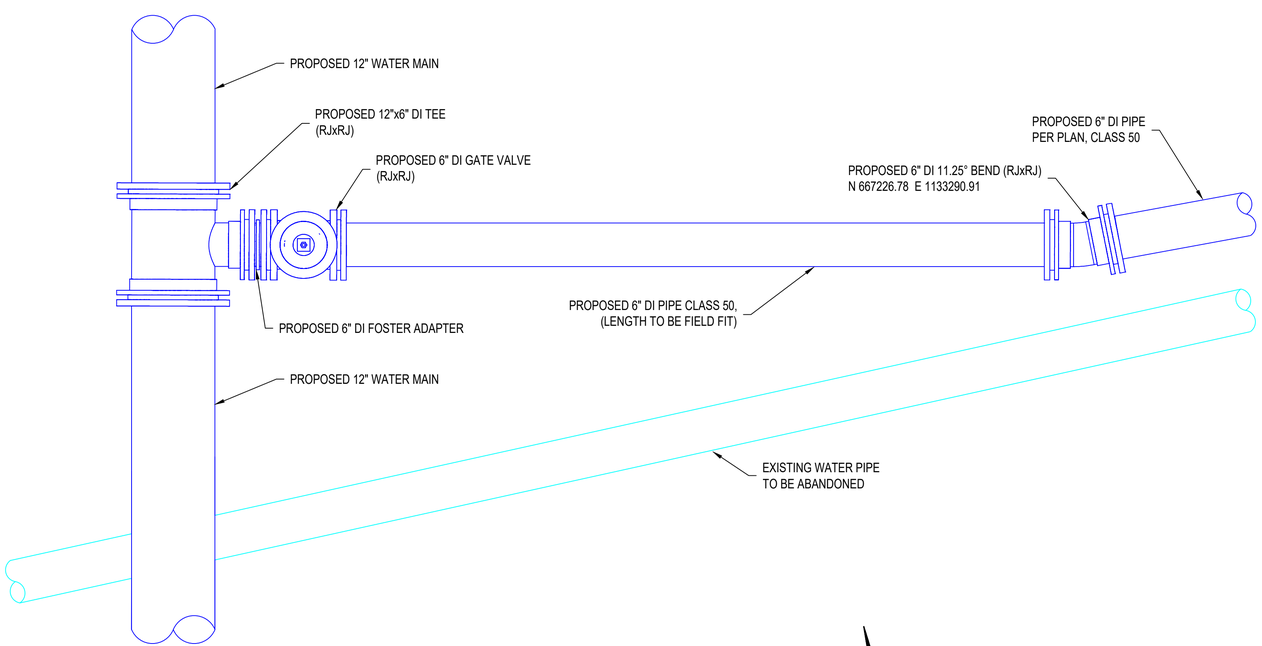
1" = 20'



2 SERVICE LINE TRENCH SECTION

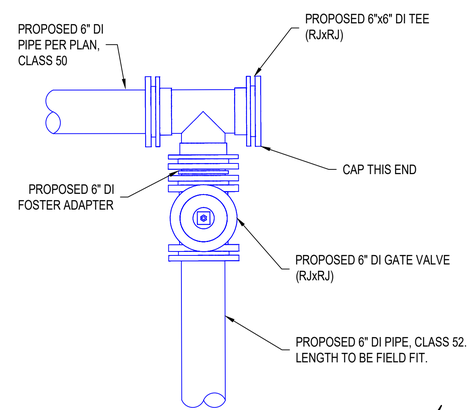


1A JOINT TRENCH SECTION



CONNECTION TO PROPOSED WATER MAIN

1" = 1'



CONNECTION TO PROPOSED FIRE HYDRANT

1" = 1'

NOTES

EXACT LOCATION FOR FIRE HYDRANT AND METER SHALL BE DETERMINED BY LAKEWOOD WATER DISTRICT INSPECTOR.

IN LIEU OF FLANGES ON DUCTILE IRON FITTINGS AND VALVES, FOSTER ADAPTORS MANUFACTURED BY INFACT CORPORATION, OR APPROVED EQUAL, WILL BE USED TO ALLOW MECHANICAL JOINT RESTRAINT.

RH2

GODFREY G. DILLARD, STATE OF WASHINGTON, 31196, REGISTERED PROFESSIONAL ENGINEER

SIGNED: 01/28/2021

DAVID J. MAY, STATE OF WASHINGTON, 27844, REGISTERED PROFESSIONAL ENGINEER

SIGNED: 01/28/2021

LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
HYDRANT AND METER REPLACEMENT

12221 GRAVELLY LAKE DRIVE

ENGINEER: JMO | REVIEWED: DJM | SAVE DATE: Jan 28, 2021 | PLOT DATE: Jan 28, 2021 | CLIENT: LAK | FILENAME: GRAV-D-CV01.DWG | JOB NO.: 519-154

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

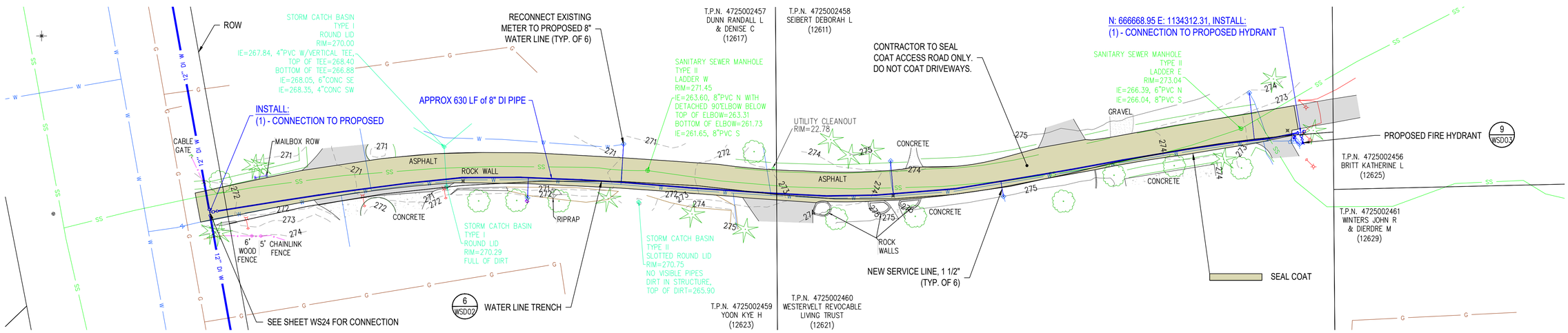
PRELIMINARY REVIEW DRAWINGS

SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C02 | SHEET NO.: 02 / 06



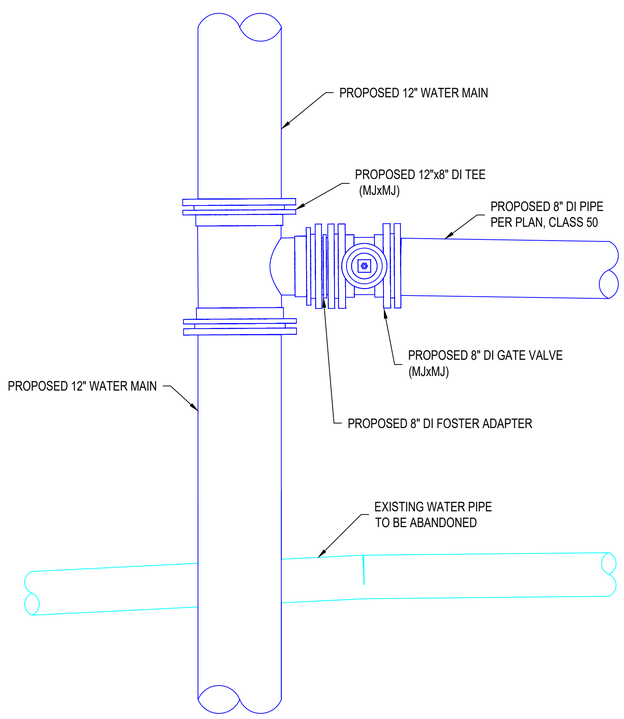
12617 TO 12629 GRAVELLY LAKE DR SW

1" = 30'

NOTES

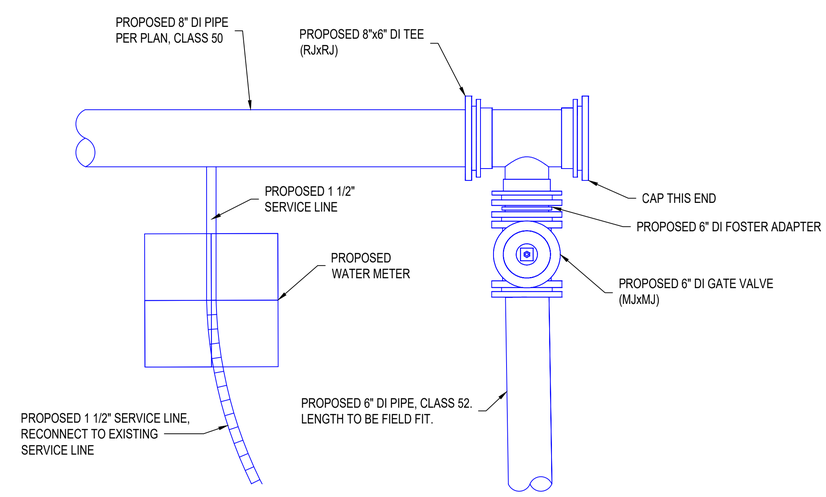
EXACT LOCATION FOR FIRE HYDRANT AND METER SHALL BE DETERMINED BY LAKEWOOD WATER DISTRICT INSPECTOR.

IN LIEU OF FLANGES ON DUCTILE IRON FITTINGS AND VALVES, FOSTER ADAPTORS MANUFACTURED BY INFACT CORPORATION, OR APPROVED EQUAL, WILL BE USED TO ALLOW MECHANICAL JOINT RESTRAINT.



CONNECTION TO PROPOSED WATER MAIN

1" = 1'



CONNECTION TO PROPOSED FIRE HYDRANT

1" = 1'

RH2

GODFREY G. DILLARD
STATE OF WASHINGTON
31196
REGISTERED PROFESSIONAL ENGINEER

SIGNED: 01/28/2021

DAVID J. MAY
STATE OF WASHINGTON
27844
REGISTERED PROFESSIONAL ENGINEER

SIGNED: 01/28/2021

LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
HYDRANT AND METER REPLACEMENT

LAKEWOOD WATER DISTRICT

12623 GRAVELLY LAKE DRIVE

JOB NO.: 519-154

CLIENT: LAK

FILENAME: GRAV-D-CV01.DWG

SAVE DATE: Jan 29, 2021

PLOT DATE: Jan 29, 2021

ENGINEER: JMO

REVIEWED: DJM

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
		PRELIMINARY REVIEW DRAWINGS		

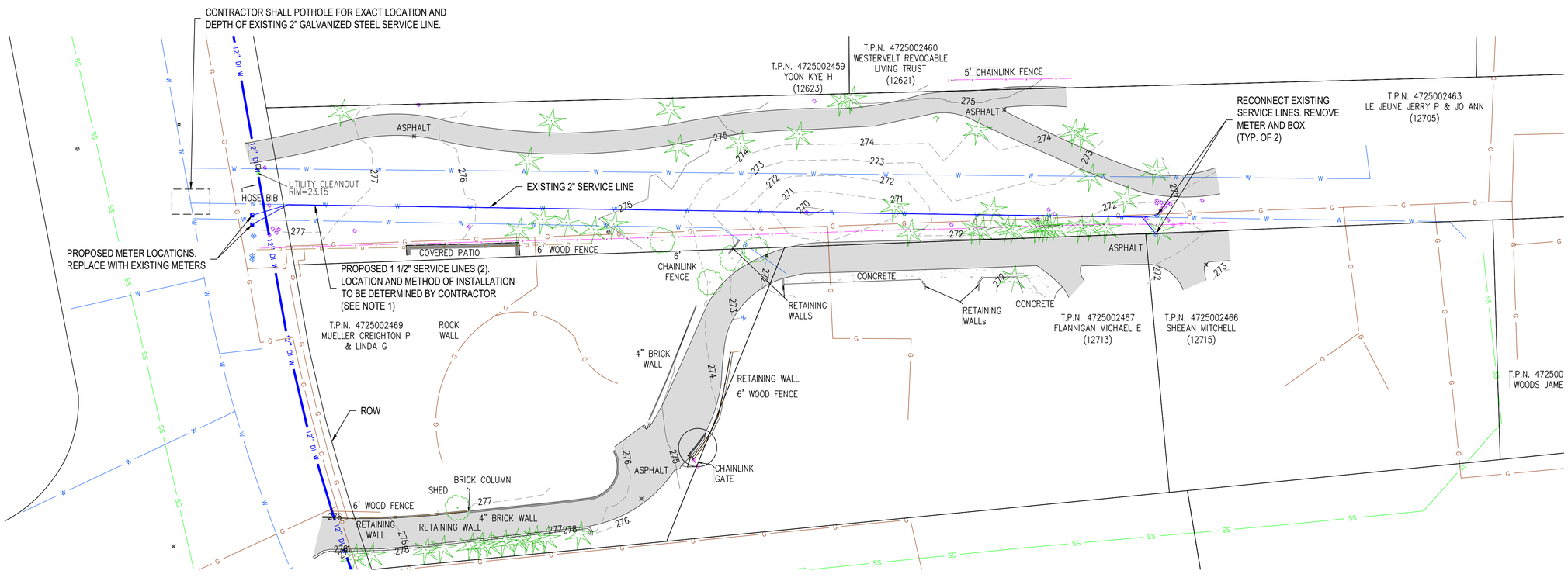
SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C03

SHEET NO.: 03 / 06



SEE SHEET WS24 FOR METER LOCATIONS

12705 AND 12715 GRAVELLY LAKE DR SW

1" = 30'

NOTES

1) CONTRACTOR SHALL INSTALL NEW 1 1/2" HIGH DENSITY POLYETHYLENE (HDPE, OR APPROVED EQUAL) LINE SERVICES TO 12705 AND 12715 EXISTING METER LOCATION BY EITHER DIRECTIONAL DRILLING, PIPE BURSTING (EXISTING 2" LINE) OR APPROVED CONSTRUCTION METHOD.

2) CONTRACTOR SHALL PROVIDE TEMPORARY OVERLAND SERVICE (MIN 2" DIAMETER) TO 12705 AND 12715 CONNECTIONS PRIOR TO ANY SERVICE DISRUPTION. MUST MAINTAIN WATER SERVICE TO CUSTOMERS AT ALL TIMES.

3) CONTRACTOR MUST NOTIFY LWD AND PROPERTY OWNERS 48 HOURS PRIOR TO ANY WORK ON THEIR PROPERTY.

4) 12705 HAS AN EXTENSIVE LANDSCAPE IRRIGATION SYSTEM THROUGHOUT PROPERTY. LINES HAVE NOT BEEN SHOWN. EXACT LOCATION OF LINES IS UNKNOWN.

5) EXACT LOCATION FOR METER SHALL BE DETERMINED BY LWD INSPECTOR.

RH2

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LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
HYDRANT AND METER REPLACEMENT

12705 GRAVELLY LAKE DRIVE

LAKEWOOD WATER DISTRICT

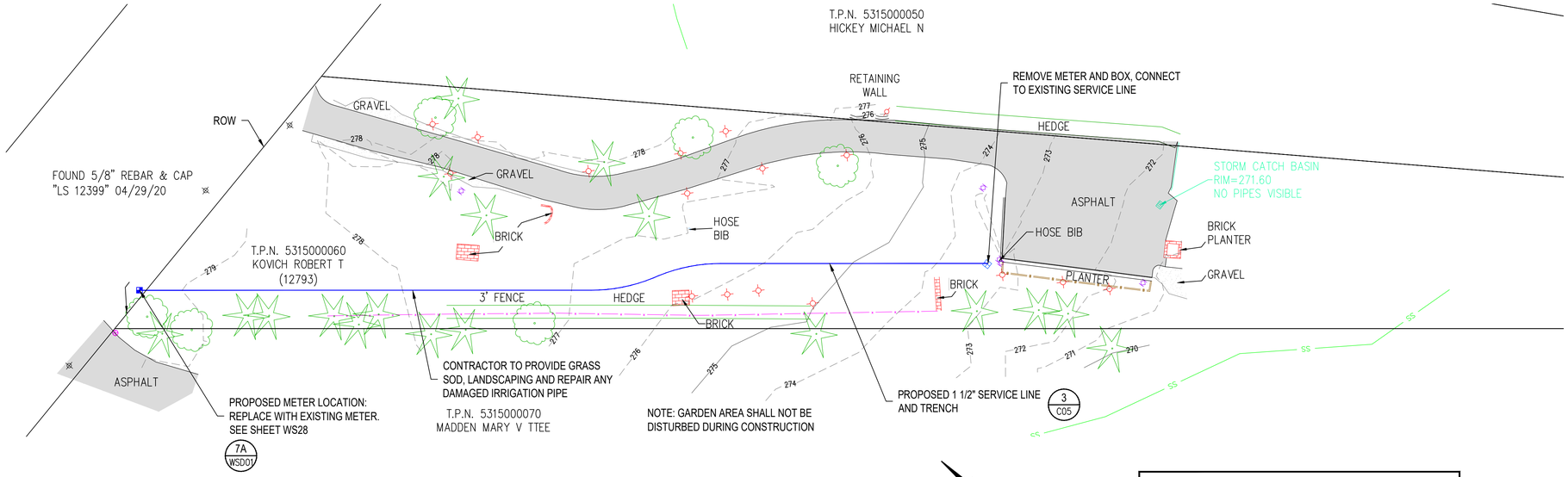
JOB NO.: 519-154
CLIENT: LAK
FILENAME: GRAV-D-CV01.DWG
ENGINEER: JMO
REVIEWED: DJM
SAVE DATE: Jan 29, 2021
PLOT DATE: Jan 29, 2021

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
		PRELIMINARY REVIEW DRAWINGS		

SCALE: SHOWN
0" 1" 2"
DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C04
SHEET NO.: 04 / 06

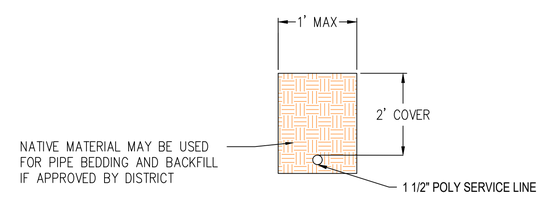


12793 GRAVELLY LAKE DR SW

1" = 20'

NOTE: EXACT LOCATION FOR METER SHALL BE DETERMINED BY LAKEWOOD WATER DISTRICT INSPECTOR.

GARDEN AREA TO BE AVOIDED



3 SERVICE LINE TRENCH SECTION

RH2

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SIGNED: 01/28/2021

LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
HYDRANT AND METER REPLACEMENT

LAKEWOOD WATER DISTRICT

12793 GRAVELLY LAKE DRIVE

ENGINEER: JMO
REVIEWED: DJM
SAVE DATE: Jan 28, 2021
PLOT DATE: Jan 28, 2021
CLIENT: LAK
FILENAME: GRAV-D-CV01.DWG
JOB NO.: 519-154

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW
		PRELIMINARY REVIEW DRAWINGS		

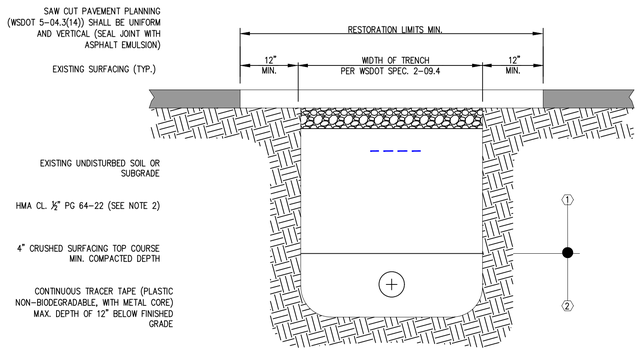
SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: C05

SHEET NO.: 05 / 06



RESTORATION GENERAL NOTES:

1. MATERIALS AND CONSTRUCTION REQUIREMENTS SHALL BE PER LATEST EDITION OF WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION UNLESS OTHERWSE NOTED.
2. COMPACTED HMA DEPTH SHALL BE 4" MINIMUM OR AS SHOWN IN PLANS OR PERMIT, WHICHEVER IS GREATER, AND SHALL BE COMPACTED TO 92% OF RICE DENSITY.

DETAIL GENERAL NOTES:

1. ALL PATCHES ACROSS CITY STREETS SHALL CONFORM TO THIS DETAIL.

BACKFILL COMPACTION LEGEND

1. BACKFILL MATERIAL SHALL BE PLACED IN 6" LIFTS AND COMPACTED TO MINIMUM OF 95% MAXIMUM DENSITY OF THE MODIFIED PROCTOR PER ASTM 1557.
2. BEDDING MATERIAL SHALL BE PLACED IN 4" LIFTS AND COMPACTED TO MINIMUM OF 95% MAXIMUM DENSITY OF THE MODIFIED PROCTOR PER ASTM 1557.

11 CITY OF LAKEWOOD TRENCH PATCH DETAIL

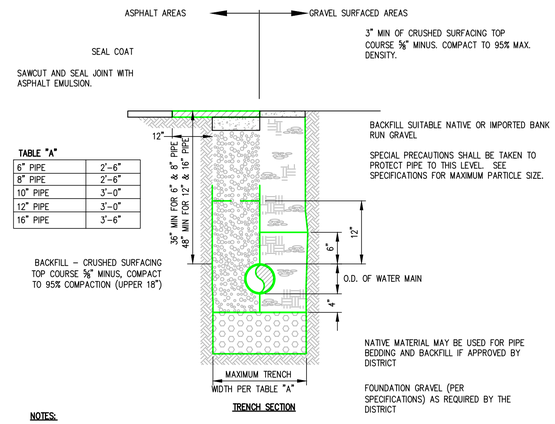


TABLE "A"

6" PIPE	2'-6"
8" PIPE	2'-6"
10" PIPE	3'-0"
12" PIPE	3'-0"
16" PIPE	3'-6"

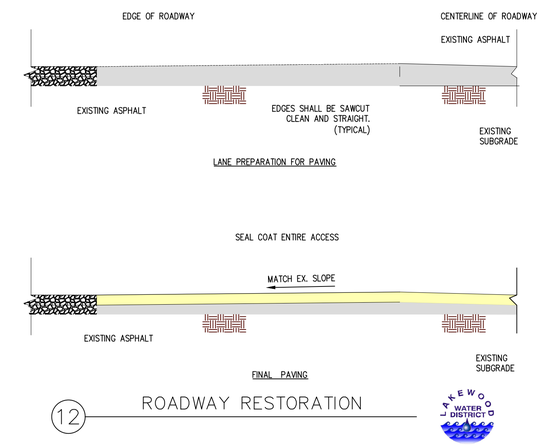
NOTES:

1. BEDDING REQUIRED ONLY IF DIRECTED BY THE DISTRICT DUE TO NATIVE SOIL CONDITIONS. BEDDING SHALL BE ⅝" CRUSHED SURFACING IF NATIVE MATERIAL IS JUDGED UNSUITABLE BY THE DISTRICT. BEDDING UNDER ASPHALT OR CONCRETE PAVEMENT AREAS SHALL BE CRUSHED ROCK ⅝" MINUS.
2. PUMPING SOILS SHALL BE REMOVED FROM THE TRENCH BACKFILL IMMEDIATELY.
3. TEMPORARY PATCH TO BE BACKFILLED AND COMPACTED TO EXISTING GROUND LINE AND PATCHED WITH HMA ½" PG 64-22 TEMPORARY PATCH 2" THICK.
4. BACKFILL MATERIAL PLACED IN 6" LIFTS AND COMPACTED TO 95% MAXIMUM DENSITY. BACKFILL SHALL BE CRUSHED ROCK ⅝" MINUS UNDER ASPHALT OR CONCRETE PAVEMENT AND NATIVE MATERIAL IN GRAVEL AREAS IF APPROVED BY THE DISTRICT.

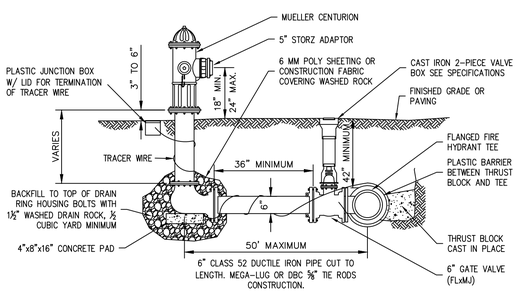
6 TYPICAL TRENCH SECTION

NOTE: EXTENTS OF ONE LANE ROADWAY RESTORATION SHOWN ON PLANS

NOTE: CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS BEYOND THE SCOPE OF THE ROADWAY AND SHOULDER IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER. GRASS SOD ALL GRASS AREAS DISTURBED.



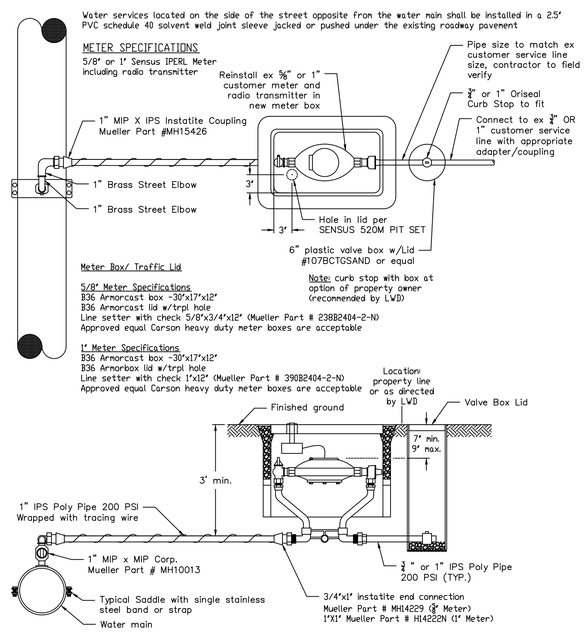
12 ROADWAY RESTORATION



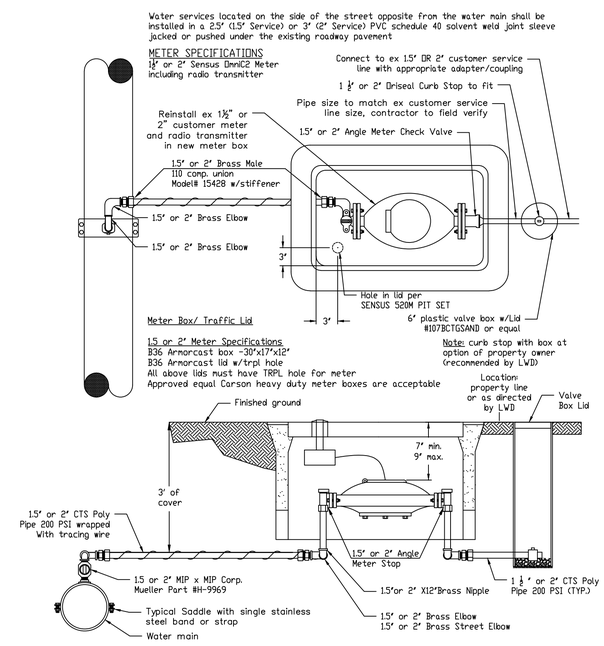
NOTES:

1. ANY HYDRANT SETBACK LONGER THAN ONE FULL LENGTH OF PIPE THAT REQUIRES A BELL AND SPICKET WILL NEED A FIELD LOCK GASKET, AND MAY REQUIRE A THRUST BLOCK AT THE DIRECTION OF THE INSPECTOR.
2. MAINTAIN MINIMUM 3' RADIUS UNOBSTRUCTED WORKING AREA AROUND HYDRANT INCLUDING FUTURE IMPROVEMENTS.

9 FIRE HYDRANT



7A TYPICAL WATER SERVICE FOR A 5/8" AND 1" ASSEMBLY



DETAIL REVISED 02/14/2020

7B TYPICAL WATER SERVICE FOR 1.5" AND 2" ASSEMBLY

RH2

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SIGNED: 01/28/2021

DAVID J. MAY — STATE OF WASHINGTON — 27844 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: 01/28/2021

LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
HYDRANT AND METER REPLACEMENT
STANDARD DETAILS

ENGINEER: JMO | SAVE DATE: Jan 28, 2021 | CLIENT: LAK | JOB NO.: 519-154
REVIEWED: DJM | PLOT DATE: Jun 5, 2020 | FILENAME: GRAV-D-DET.DWG

REVISIONS

NO.	DATE	DESCRIPTION	BY	REVIEW

SCALE: SHOWN

0" 1" 2"

DRAWING IS FULL SCALE WHEN BAR MEASURES 2"

DWG NO.: D01 | SHEET NO.: 06 / 06