SEC. 10, T.18N., R.1W., W.M.

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

LACEY CONTRACT NUMBER PW 2020-29
DRAWING NUMBER D-22-63

SCHEDULE OF DRAWINGS

SHT. NO.	DWG. NO.	DESCRIPTION
1	CVR1	COVER SHEET
2-3	AL1-AL2	SURVEY CONTROL AND ALIGNMENT PLAN
4-5	RS1-RS2	TYPICAL ROADWAY SECTIONS
6-11	SP1-SP6	DEMOLITION AND TESC PLAN
12-17	PV1-PV6	PAVING PLAN
18-20	G1-G3	ROUNDABOUT GRADING PLAN
21-23	PVD1-PVD3	ROADWAY DETAILS
24-26	DR1-DR3	DRAINAGE PLAN
27-29	DD1-DD3	DRAINAGE DETAILS
30-32	IL1-IL3	ILLUMINATION PLAN
33	ILD1	ILLUMINATION DETAILS
34-37	UT1-UT4	UTILITY PLAN
38	UP1	UTILITY PROFILE
39-42	UD1-UD4	UTILITY DETAILS
43-48	CH1-CH6	CHANNELIZATION PLAN
49-50	CHD1-CHD2	CHANNELIZATION DETAILS
51-54	SN1-SN4	SIGNING PLAN
55	SND1	SIGNING DETAILS
56-58	LS1-LS3	LANDSCAPE PLAN
59	LS4	PLANT SCHEDULE
60	LS5	LANDSCAPE DETAILS
61-64	IR1-IR4	IRRIGATION PLAN, NOTES, AND LEGEND

MAYOR
ANDY RYDER

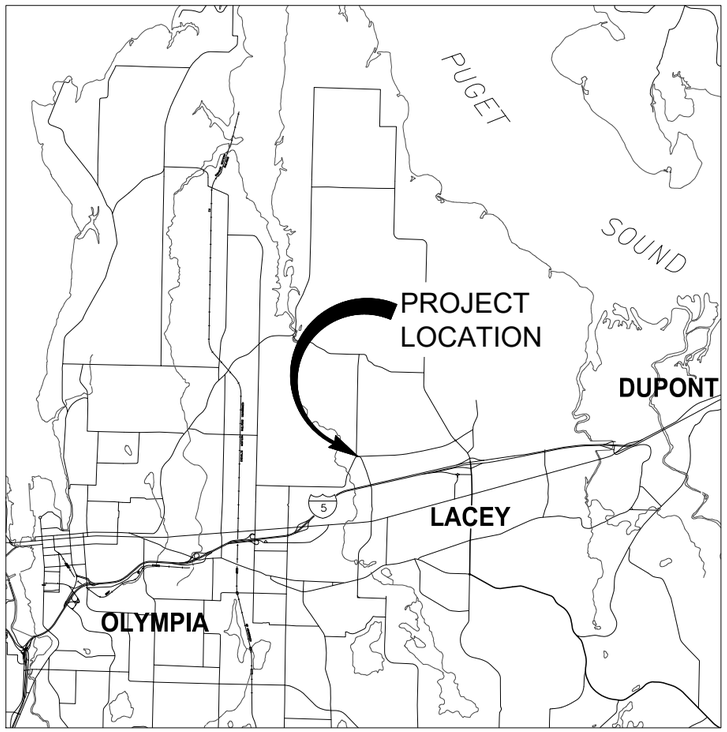
DEPUTY MAYOR
MALCOLM MILLER

CITY COUNCIL
LENNY GREENSTEIN
MICHAEL STEADMAN
CAROLYN COX
ED KUNKEL
ROBIN VAZQUEZ

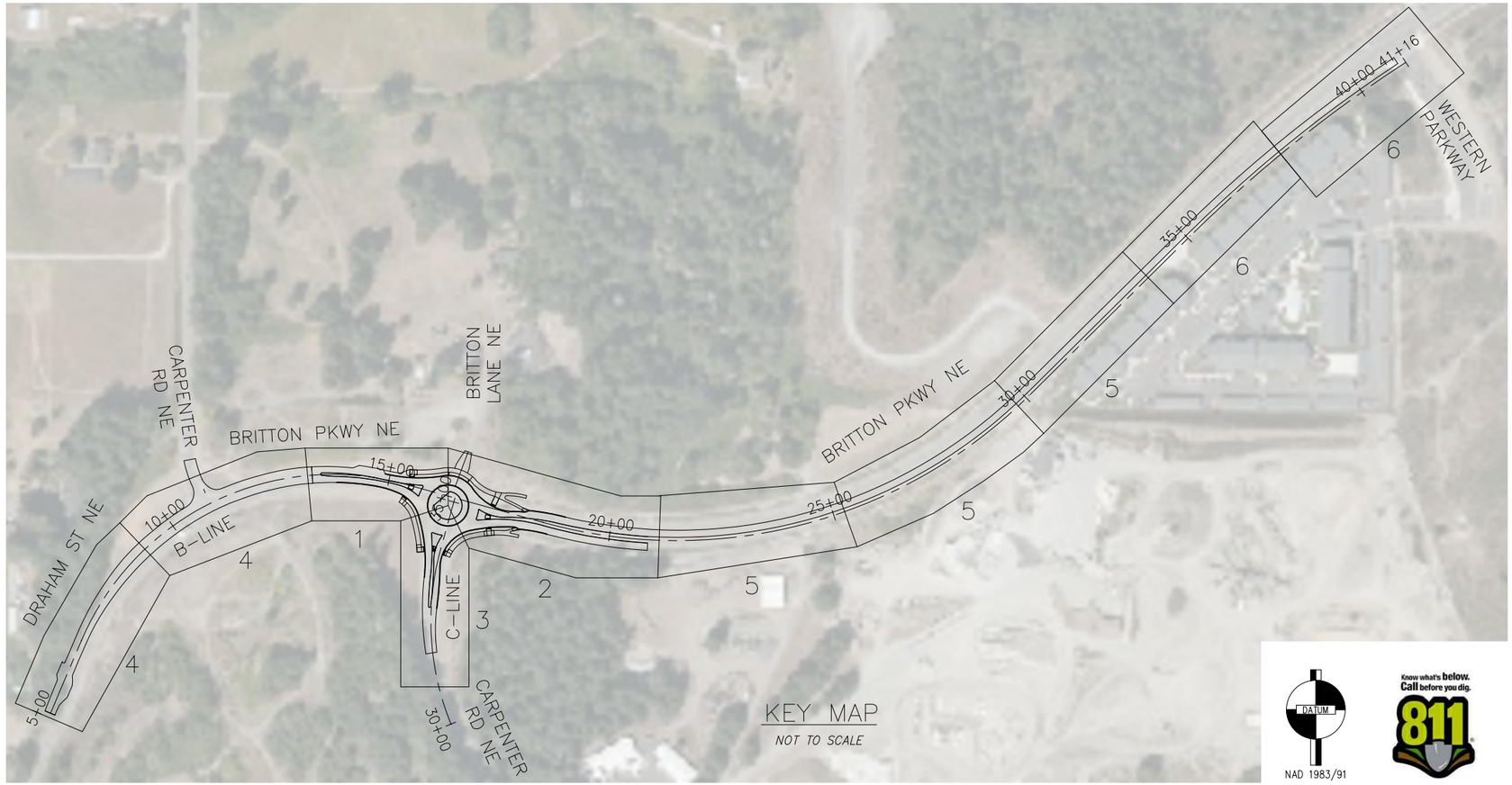
CITY ENGINEER
AUBREY COLLIER, PE

PUBLIC WORKS DIRECTOR
SCOTT EGGER, PE

DATE



VICINITY MAP
NOT TO SCALE



KEY MAP
NOT TO SCALE

DATUM
NAD 1983/91

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AARON T. BUTTERY STATE OF WASHINGTON 31183 REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

COVER SHEET

DRAWING NUMBER
CVR1
SHT 1 OF 64

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SEC. 10, T.18N., R.1W., W.M.

11810220500
PARCEL A
BLA-010011LA
AF#3366155

11810220400

11810220700

THURSTON COUNTY
CITY OF LACEY

CARPENTER RD NE

SLOPE ESMT
AF#3273076

11809140100

PARCEL A
BLA-010011LA
AF#3366155

11810230202

PT STA B 15+37.64 (3)
N 639686.98
E 67397.97

STA B 16+50.00 = (3)
STA C 35+09.19
END C-LINE
N 639656.92
E 67506.23

PC STA B 18+50.86 (3)
N 639603.17
E 67699.77

11810230203
PARCEL B
BLA-010011LA
AF#3366155

11809140101

THURSTON COUNTY
CITY OF LACEY

BRITTON PKWY NE

B-LINE

9+00
10+00
11+00
12+00
13+00
14+00
15+00
16+00
17+00
18+00
19+00

L=564.24 R=600.00

S74° 28' 49"E
L=313.22

N15° 31' 11"E
L=115.32

34+00
35+00

11810230105

SLOPE ESMT
AF#3273076

MATCH LINE STA B 19+25 - SEE DWG AL2

PT STA C 33+93.87 (2)
N 639545.80
E 67475.38

33+00
32+00
31+00
30+00

A=37°36'42"
L=393.87 R=600.00

C-LINE

CARPENTER RD NE

PC STA C 30+00.00 (1)
BEGIN C-LINE
N 639159.60
E 67497.55

11809140200

11809140300

11810230101

11810230100

DRAHAM ST NE

7+00
6+00
5+00

N22° 58' 29"E
L=173.40

PC STA B 6+73.40 (2)
N 639343.22
E 66685.09

STA B 5+00.00
BEGIN B-LINE
N 639183.59
E 66617.36

GENERAL NOTES:

1. SURVEY PROVIDED BY THE CITY OF LACEY.
2. SURVEY PERFORMED BY CONVENTIONAL FIELD TRAVERSE USING A LEICA TS-16 (THREE SECOND TOTAL STATION), LINEAR AND ANGULAR CLOSURE OF THE TRAVERSE MEET THE STANDARDS OF WAC 332-130-090.
3. THE TOPOGRAPHIC SURVEY DEPICTS THE PHYSICAL FEATURES THAT WERE VISIBLE AT THE TIME OF THE SURVEY. LOCHNER AND THE CITY OF LACEY ARE NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES THAT ARE MARKED OR NOT MARKED IN THE FIELD BY OTHER UTILITY PROVIDERS. FEATURE LOCATIONS SHOULD BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION.

DATUMS:

HORIZONTAL DATUM: MERIDIAN IS WASHINGTON COORDINATE SYSTEM OF 1983/91 – SOUTH ZONE DERIVED FROM TIES TO HPGN STATIONS SANDERSON, MCKENNA AND CBL1110 AND TO WSDOT GPS STATIONS G259R, GP34005-2, GP34005-4, GP34101-32, GP34101-39, HC34-2, LUHR RM2, TS34-33, TS34-59 AND TO THURSTON COUNTY GPS STATIONS U-531, AT-194, AT-352, AT-355, AT-447, AT-449 AND AT-478. DISTANCES SHOWN ARE GROUND SCALE U.S. SURVEY FEET. COMBINED SCALE FACTOR (GROUND TO GRID) IS 0.999935701. SURVEY AF# 3111152 DATED 09-24-1997.

VERTICAL DATUM: THE CITY OF LACEY BENCHMARKS ARE BASED ON NGVD 29 DATUM FROM PRIMARY CONTROL ESTABLISHED BY FEDERAL AND STATE AGENCIES TO FIRST OR SECOND ORDER ACCURACY. THE CITY OF LACEY'S BENCHMARKS ARE GENERALLY TO THIRD ORDER ACCURACY

BENCHMARK: CITY OF LACEY BM#1088 CITY OF LACEY 2" SURFACE MONUMENT 150' NORTH OF THE INTERSECTION OF CARPENTER RD NE AND DRAHAM RD NE ELEV.=145.19

LEGEND:

- CONSTRUCTION CENTERLINE
- RIGHT OF WAY
- EASEMENT
- LOT LINE
- SECTION LINE
- CITY/COUNTY BORDER

CONSTRUCTION NOTES:

1. DO NOT DISTURB EXISTING MONUMENT
2. ALUMINUM PIPE MONUMENT & CASE INSTALLATION
3. MONUMENT IN MEDIAN

BOUNDARY:

THE BOUNDARY WAS COMPILED USING PHYSICAL FEATURES TIED IN THE FIELD AND DOCUMENTS OF RECORD AS SHOWN BELOW.

AF# 3111152

BLA REFERENCED
AF#3366155

50 0 50 100
SCALE IN FEET

DATUM
NAD 1983/91

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AARON T. BENTLEY — STATE OF WASHINGTON — 31183 — REGISTERED PROFESSIONAL ENGINEER — 10/31/2023

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

SURVEY CONTROL AND ALIGNMENT PLAN

DRAWING NUMBER
AL1
SHT 2 OF 64

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SEC. 10, T.18N., R.1W., W.M.

MATCH LINE STA B 19+25 – SEE DWG AL1

11810230203
PARCEL B
BLA-0190111A
AF#3366155

THURSTON COUNTY
CITY OF LACEY

11810230100

20+00 21+00 B-LINE 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00

BRITTON PKWY NE

A=60°14'21"
L=1156.51 R=1100.00

PT STA B 30+07.37
N 639818.45
E 68788.09

MATCH LINE STA B 30+75 – SEE THIS SHEET

MATCH LINE STA B 30+75 – SEE THIS SHEET

31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00

N45° 16' 51"E
L=239.58'

PC STA B 32+46.94
N 640050.02
E 68938.33

A=11°39'26"
L=610.37 R=3000.00

PT STA B 41+16.38
END B-LINE
N 640614.86
E 69596.67

WESTERN PARKWAY

GENERAL NOTES:

1. SURVEY PROVIDED BY THE CITY OF LACEY.
2. SURVEY PERFORMED BY CONVENTIONAL FIELD TRAVERSE USING A LEICA TS-16 (THREE SECOND TOTAL STATION), LINEAR AND ANGULAR CLOSURE OF THE TRAVERSE MEET THE STANDARDS OF WAC 332-130-090.
3. THE TOPOGRAPHIC SURVEY DEPICTS THE PHYSICAL FEATURES THAT WERE VISIBLE AT THE TIME OF THE SURVEY. LOCHNER AND THE CITY OF LACEY ARE NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES THAT ARE MARKED OR NOT MARKED IN THE FIELD BY OTHER UTILITY PROVIDERS. FEATURE LOCATIONS SHOULD BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION.

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BENCHMARK: CITY OF LACEY BM#1088 CITY OF LACEY 2" SURFACE MONUMENT 150' NORTH OF THE INTERSECTION OF CARPENTER RD NE AND DRAHAM RD NE ELEV.=145.19

LEGEND:

- CONSTRUCTION CENTERLINE
- RIGHT OF WAY
- EASEMENT
- LOT LINE
- SECTION LINE
- CITY/COUNTY BORDER

CONSTRUCTION NOTES:

1. DO NOT DISTURB EXISTING MONUMENT
2. ALUMINUM PIPE MONUMENT & CASE INSTALLATION
3. MONUMENT IN MEDIAN

BOUNDARY:

THE BOUNDARY WAS COMPILED USING PHYSICAL FEATURES TIED IN THE FIELD AND DOCUMENTS OF RECORD AS SHOWN BELOW.

SURVEYS REFERENCED
AF# 3111152

BLA REFERENCED
AF#3366155

50 0 50 100
SCALE IN FEET

DATUM
NAD 1983/91

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AARON T. PANTERS 31183 REGISTERED PROFESSIONAL ENGINEER 10/31/2023

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

SURVEY CONTROL AND ALIGNMENT PLAN

DRAWING NUMBER
AL2
SHT 3 OF 64

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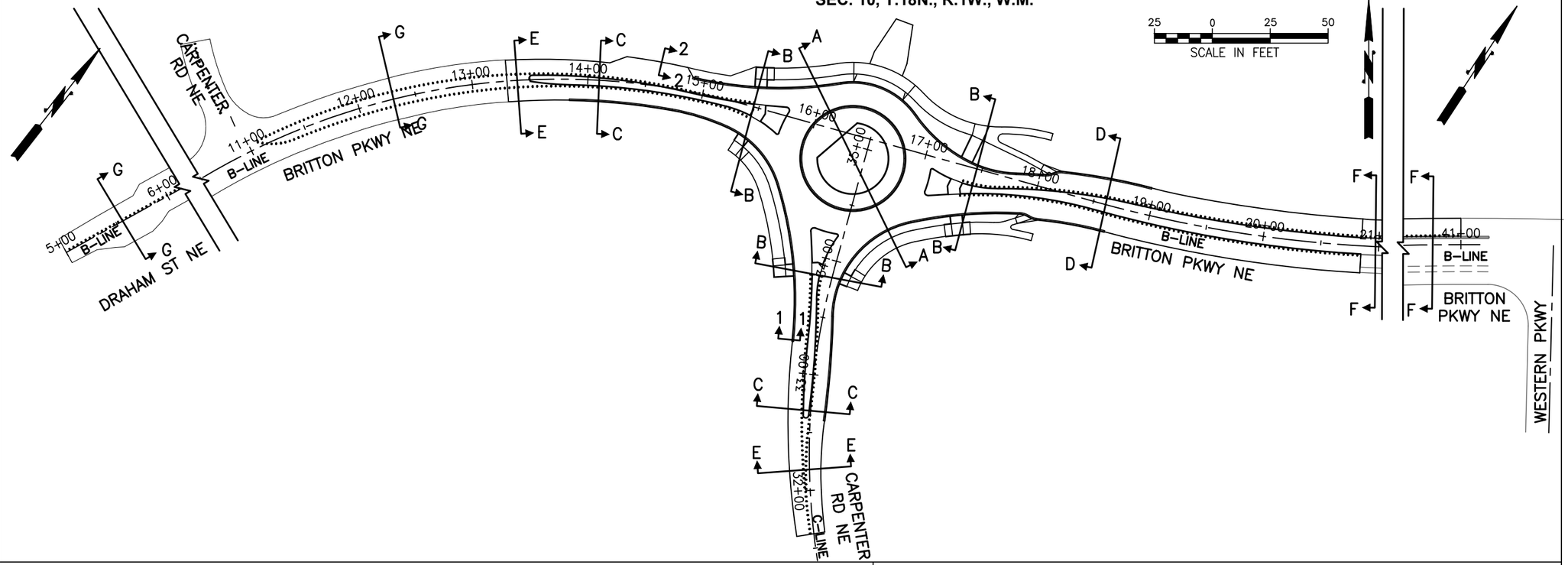
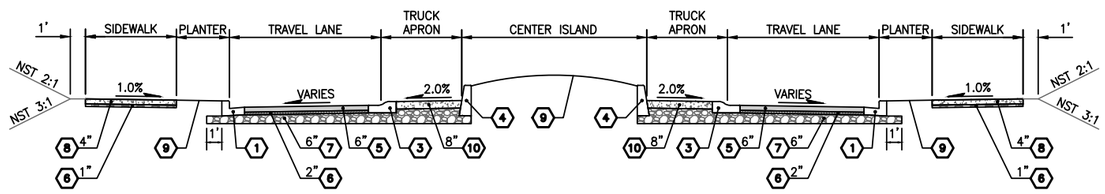
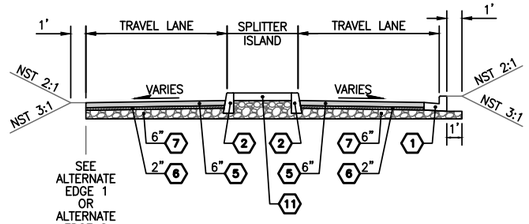
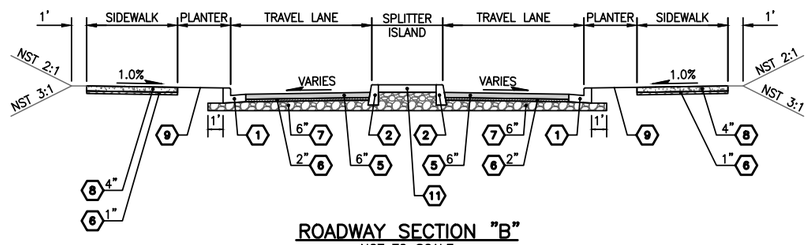




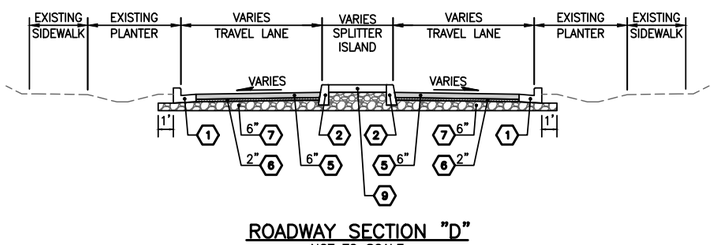
ROADWAY SECTION "A"
NOT TO SCALE



ROADWAY SECTION "C"
NOT TO SCALE



ROADWAY SECTION "B"
NOT TO SCALE



ROADWAY SECTION "D"
NOT TO SCALE

GENERAL NOTES:

1. SIDEWALKS SHALL BE SLOPED TOWARDS ROADWAY. CROSS SLOPES SHALL NOT EXCEED 1.0% UNLESS OTHERWISE NOTED.
2. CATCH SLOPES REQUIRING MOWING SHALL NOT EXCEED 6H:1V.
3. ALL SURFACE AND PAVING DEPTHS ARE COMPACTED DEPTHS.

CONSTRUCTION NOTES:

1. CEMENT CONCRETE TRAFFIC CURB & GUTTER
2. CEMENT CONCRETE TRAFFIC CURB
3. ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB AND GUTTER
4. MODIFIED CEMENT CONCRETE TRAFFIC CURB
5. FIBER REINFORCED HMA CL. 3/8 IN, PG 58V–22
6. CRUSHED SURFACING TOP COURSE
7. CRUSHED SURFACING BASE COURSE
8. CEMENT CONCRETE SIDEWALK
9. LAWN AND LANDSCAPE RESTORATION
10. CONCRETE PATTERN B – TRUCK APRON
11. CONCRETE PATTERN C – ISLANDS/MEDIANS
12. GRAVEL BORROW INCL. HAUL
13. NOT USED
14. GRIND AND FIBER REINFORCED HMA CL. 3/8 IN, PG 58V–22 OVERLAY

NST = NO STEEPER THAN

DATUM
NAD 1983/91

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AARON T. BUTTERS STATE OF WASHINGTON 31183 REGISTERED PROFESSIONAL ENGINEER 10/31/2023

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

TYPICAL ROADWAY SECTIONS

DRAWING NUMBER
RS1

SHT 4 OF 64

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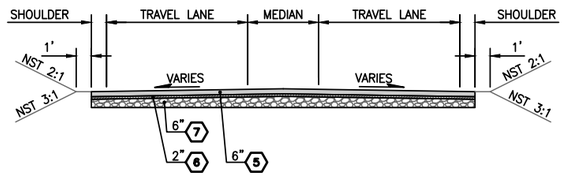

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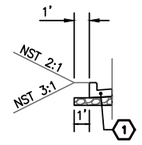

ALTERNATE EDGE 1
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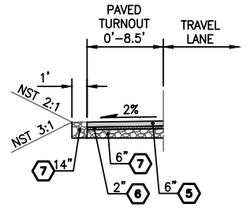

ALTERNATE EDGE 2
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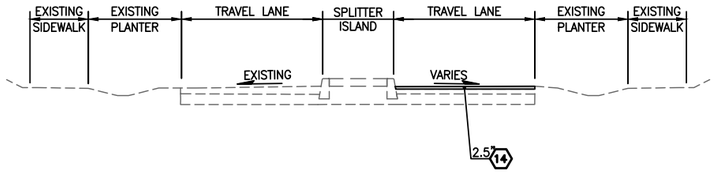

ROADWAY SECTION "F"
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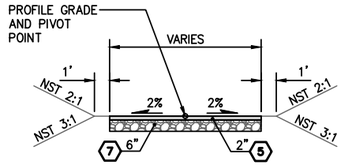
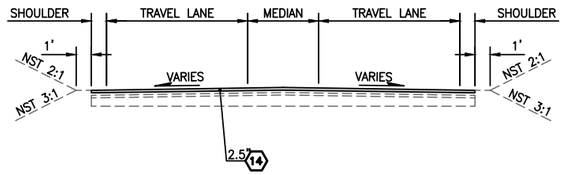


ASPHALT DRIVEWAY
NOT TO SCALE



ROADWAY SECTION "G"
NOT TO SCALE

GENERAL NOTES:

1. SIDEWALKS SHALL BE SLOPED TOWARDS ROADWAY. CROSS SLOPES SHALL NOT EXCEED 1.0% UNLESS OTHERWISE NOTED.
2. CATCH SLOPES REQUIRING MOWING SHALL NOT EXCEED 6H:1V.
3. ALL SURFACE AND PAVING DEPTHS ARE COMPACTED DEPTHS.

CONSTRUCTION NOTES:

1. CEMENT CONCRETE TRAFFIC CURB & GUTTER
2. CEMENT CONCRETE TRAFFIC CURB
3. ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB AND GUTTER
4. MODIFIED CEMENT CONCRETE TRAFFIC CURB
5. FIBER REINFORCED HMA CL. 3/8 IN, PG 58V–22
6. CRUSHED SURFACING TOP COURSE
7. CRUSHED SURFACING BASE COURSE
8. CEMENT CONCRETE SIDEWALK
9. LAWN AND LANDSCAPE RESTORATION
10. CONCRETE PATTERN B – TRUCK APRON
11. CONCRETE PATTERN C – ISLANDS/MEDIANS
12. GRAVEL BORROW INCL. HAUL
13. NOT USED
14. GRIND AND FIBER REINFORCED HMA CL. 3/8 IN, PG 58V–22 OVERLAY

NST = NO STEEPER THAN

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LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

TYPICAL ROADWAY SECTIONS

DRAWING NUMBER
RS2

SHT 5 OF 64

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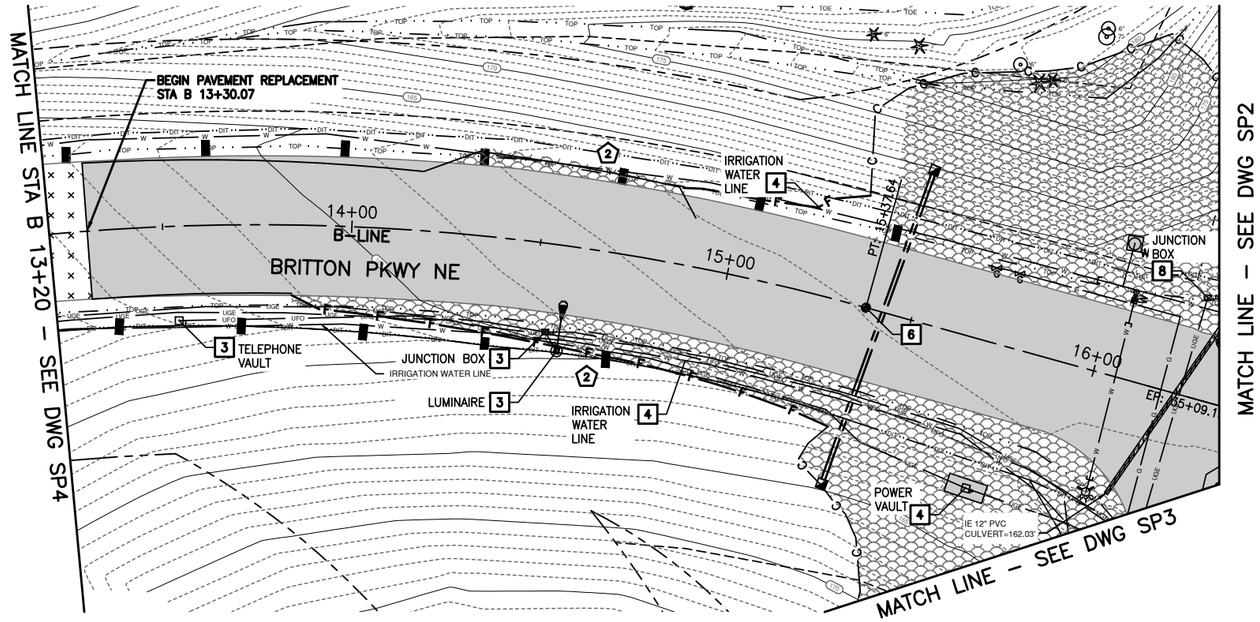

GENERAL NOTES:

1. ADJUST GAS VALVES TO FINISHED GRADE.
2. CATCH BASINS TO BE REMOVED SHALL HAVE INLET PROTECTION INSTALLED UNTIL REMOVAL.

CONSTRUCTION NOTES:

1. REMOVE ASPHALT CONC. PAVEMENT
2. REMOVE CEMENT CONC. SIDEWALK
3. PROTECT
4. RELOCATE
5. ADJUST TO FINISHED GRADE
6. REPLACE MONUMENT
7. PLUG AND ABANDON STORM SEWER LINE
8. REMOVE
9. CUT EXISTING STORMDRAIN PIPE
10. RELOCATE (BY OTHERS)

EROSION CONTROL NOTES:

1. INSTALL STORM DRAIN INLET PROTECTION
2. INSTALL STRAW BALES IN DITCH

LEGEND

- REMOVAL OF STRUCTURES AND OBSTRUCTIONS
- 2.5" PAVEMENT PLANING
- CLEAR AND GRUB AREA
- STORM LINE TO BE ABANDONED
- SAWCUT
- C C CUT LINE
- F F FILL LINE
- STRAW BALE
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING PARCEL LINE
- CITY/COUNTY BORDER

N

20 0 20 40

SCALE IN FEET

DATUM

NAD 1983/91

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AARON T. PINTERAN — STATE OF WASHINGTON — 31183 — REGISTERED PROFESSIONAL ENGINEER — 10/31/2023

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

DEMOLITION AND TESC PLAN

DRAWING NUMBER

SP1

SHT 6 OF 64

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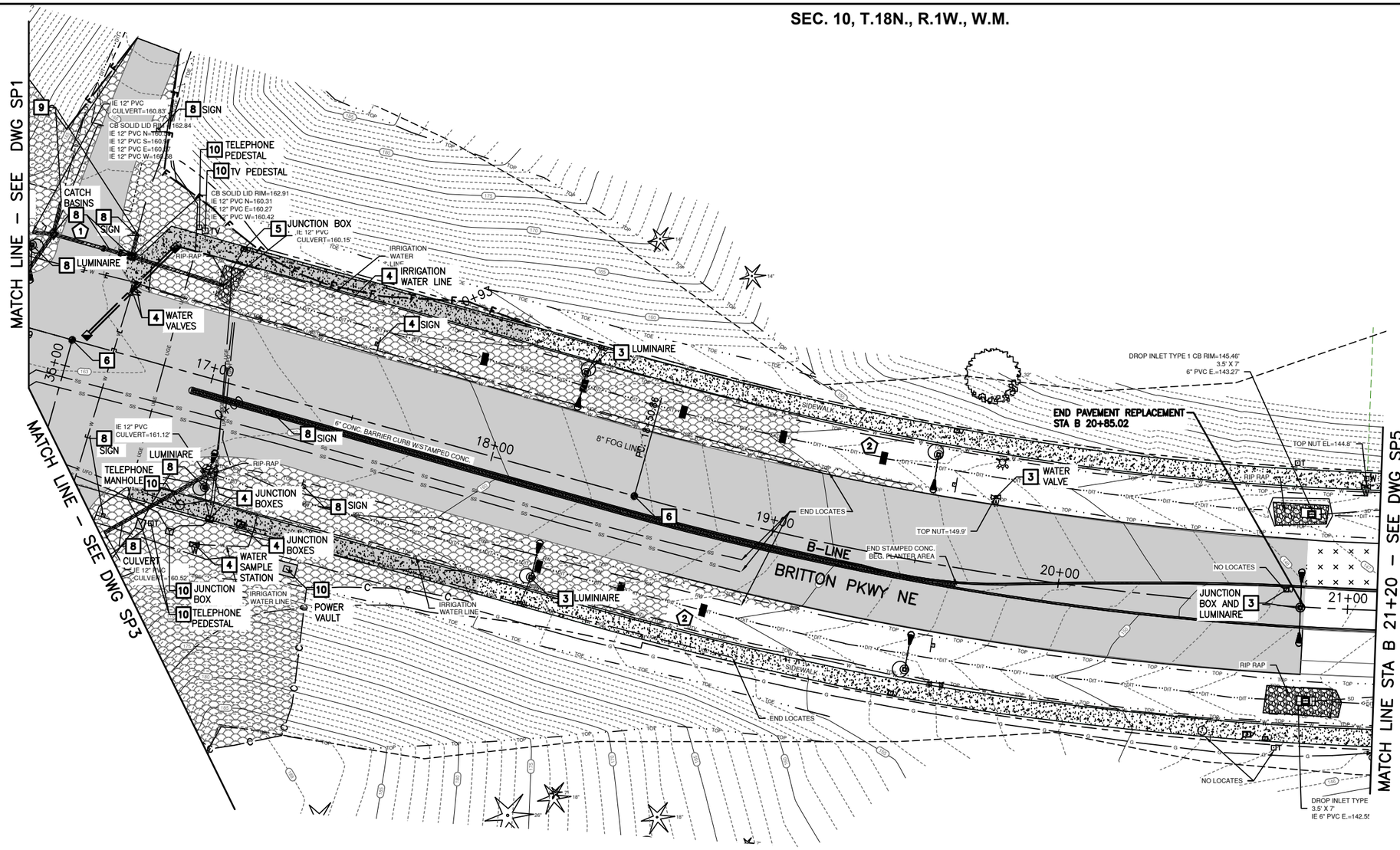

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7. PLUG AND ABANDON STORM SEWER LINE
8. REMOVE
9. CUT EXISTING STORMDRAIN PIPE
10. RELOCATE (BY OTHERS)

EROSION CONTROL NOTES:

1. INSTALL STORM DRAIN INLET PROTECTION
2. INSTALL STRAW BALES IN DITCH

LEGEND

- REMOVAL OF STRUCTURES AND OBSTRUCTIONS
- 2.5" PAVEMENT PLANING
- CLEAR AND GRUB AREA
- STORM LINE TO BE ABANDONED
- SAWCUT
- C—C CUT LINE
- F—F FILL LINE
- STRAW BALE
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING PARCEL LINE
- CITY/COUNTY BORDER

20 0 20 40
SCALE IN FEET

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AARON T. PATTERSON — 31183 — REGISTERED PROFESSIONAL ENGINEER — 10/31/2023

LOCHNER

CITY OF LACEY

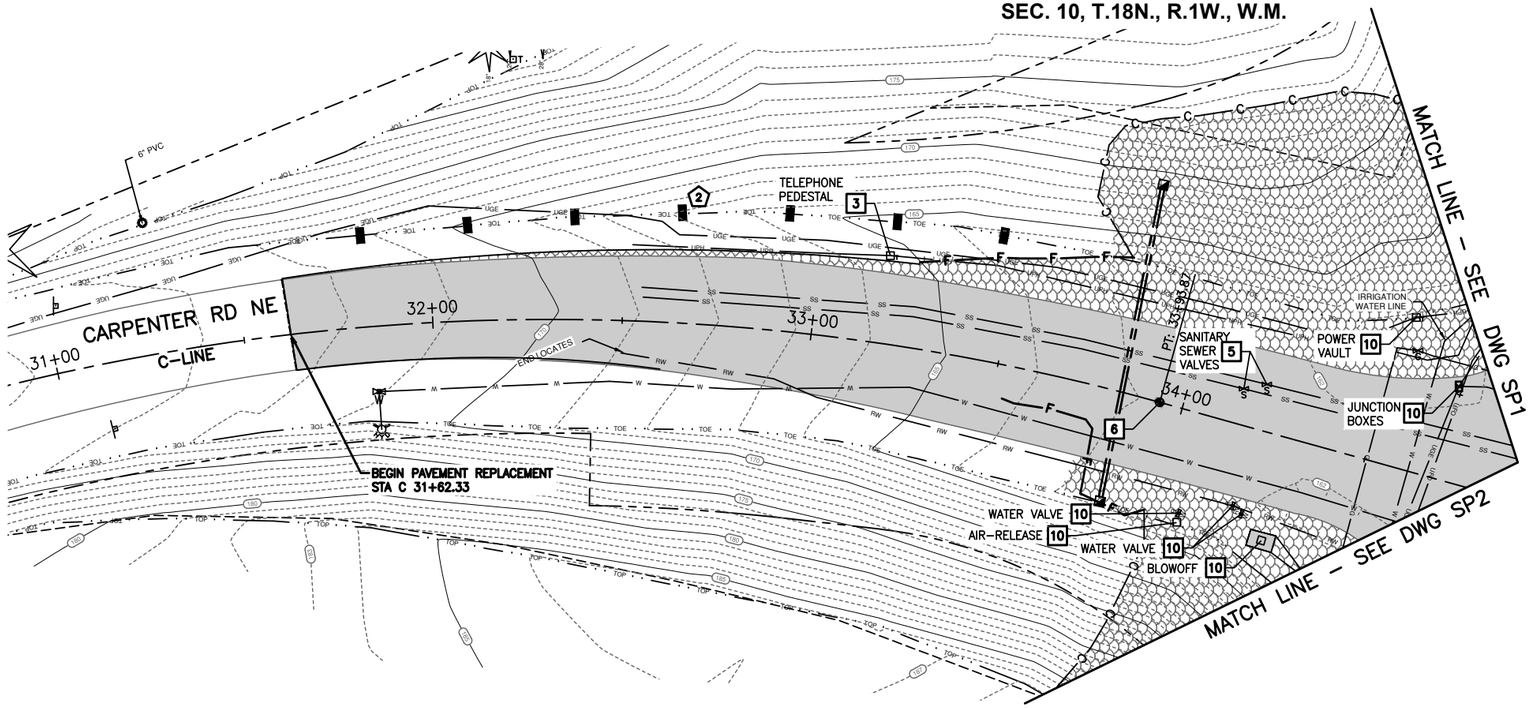
CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

DEMOLITION AND TESC PLAN

DRAWING NUMBER
SP2

SHT 7 OF 64

SEC. 10, T.18N., R.1W., W.M.



GENERAL NOTES:

1. ADJUST GAS VALVES TO FINISHED GRADE.
2. CATCH BASINS TO BE REMOVED SHALL HAVE INLET PROTECTION INSTALLED UNTIL REMOVAL.

CONSTRUCTION NOTES:

1. REMOVE ASPHALT CONC. PAVEMENT
2. REMOVE CEMENT CONC. SIDEWALK
3. PROTECT
4. RELOCATE
5. ADJUST TO FINISHED GRADE
6. REPLACE MONUMENT
7. PLUG AND ABANDON STORM SEWER LINE
8. REMOVE
9. CUT EXISTING STORMDRAIN PIPE
10. RELOCATE (BY OTHERS)

EROSION CONTROL NOTES:

1. INSTALL STORM DRAIN INLET PROTECTION
2. INSTALL STRAW BALES IN DITCH

LEGEND

- REMOVAL OF STRUCTURES AND OBSTRUCTIONS
- 2.5" PAVEMENT PLANING
- CLEAR AND GRUB AREA
- STORM LINE TO BE ABANDONED
- SAWCUT
- C C CUT LINE
- F F FILL LINE
- STRAW BALE
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING PARCEL LINE
- CITY/COUNTY BORDER

20 0 20 40
SCALE IN FEET

DATUM
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CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

DEMOLITION AND TESC PLAN

DRAWING NUMBER
SP3
SHT 8 OF 64

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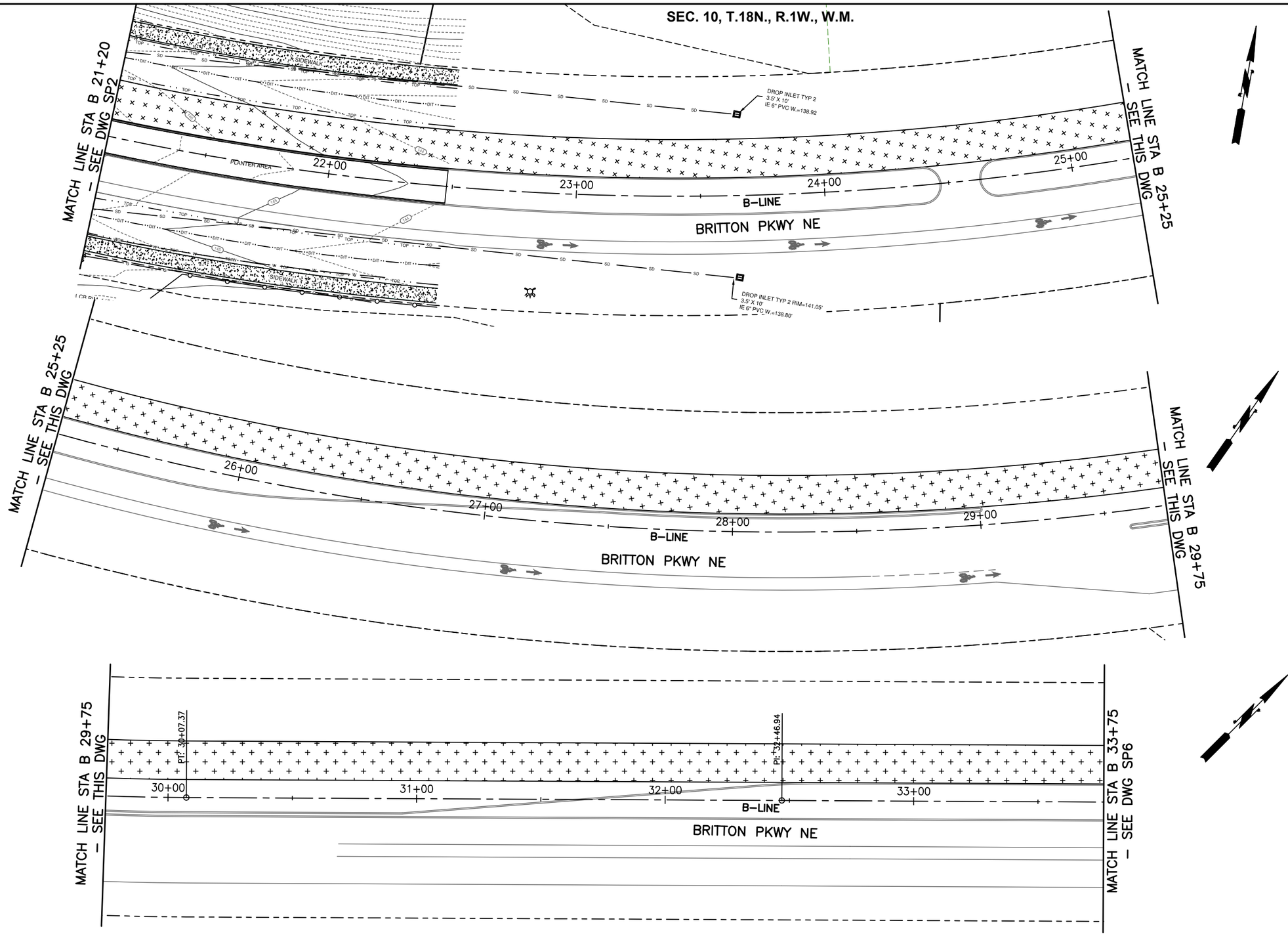

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DEMOLITION AND TESC PLAN

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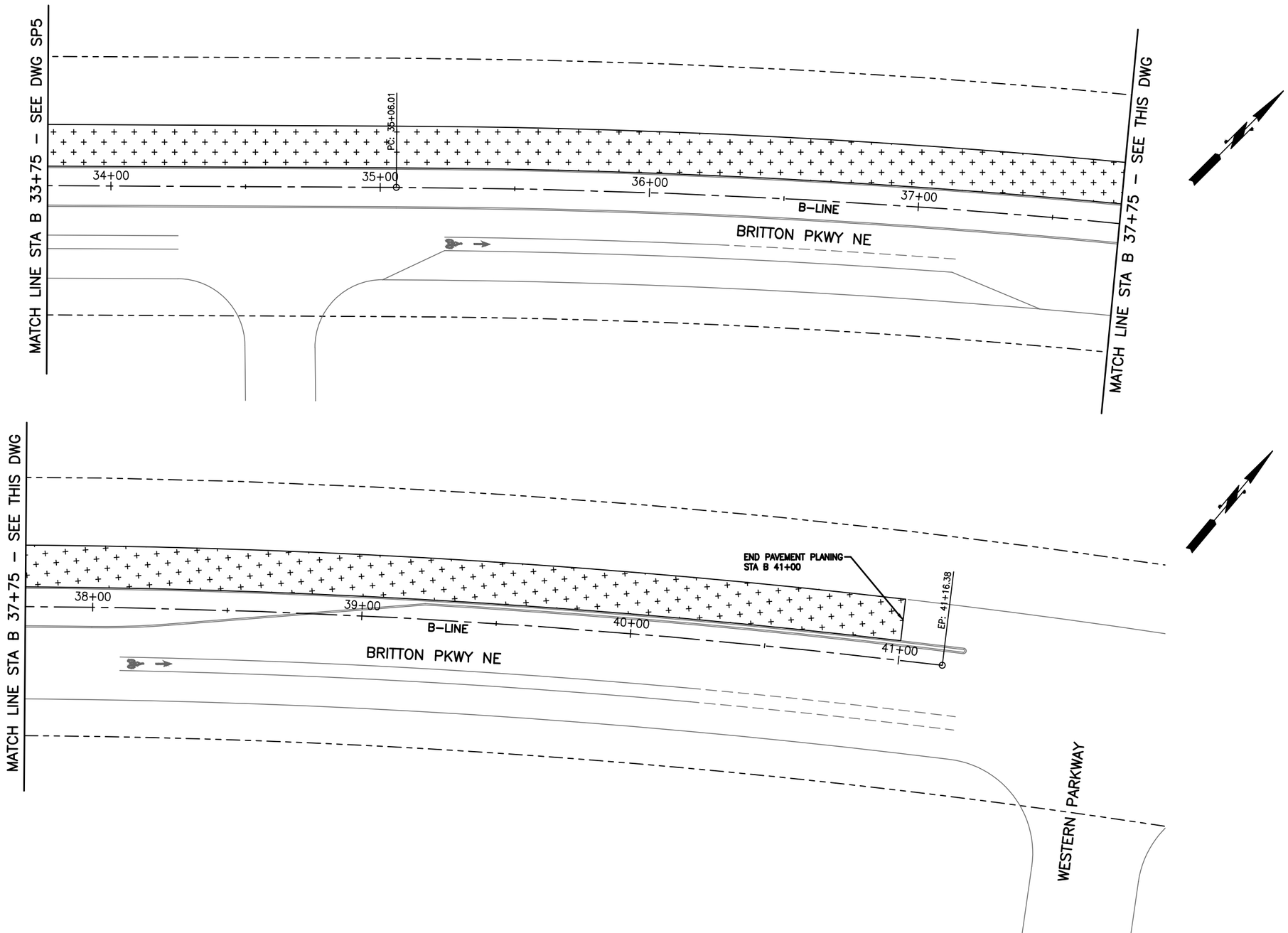

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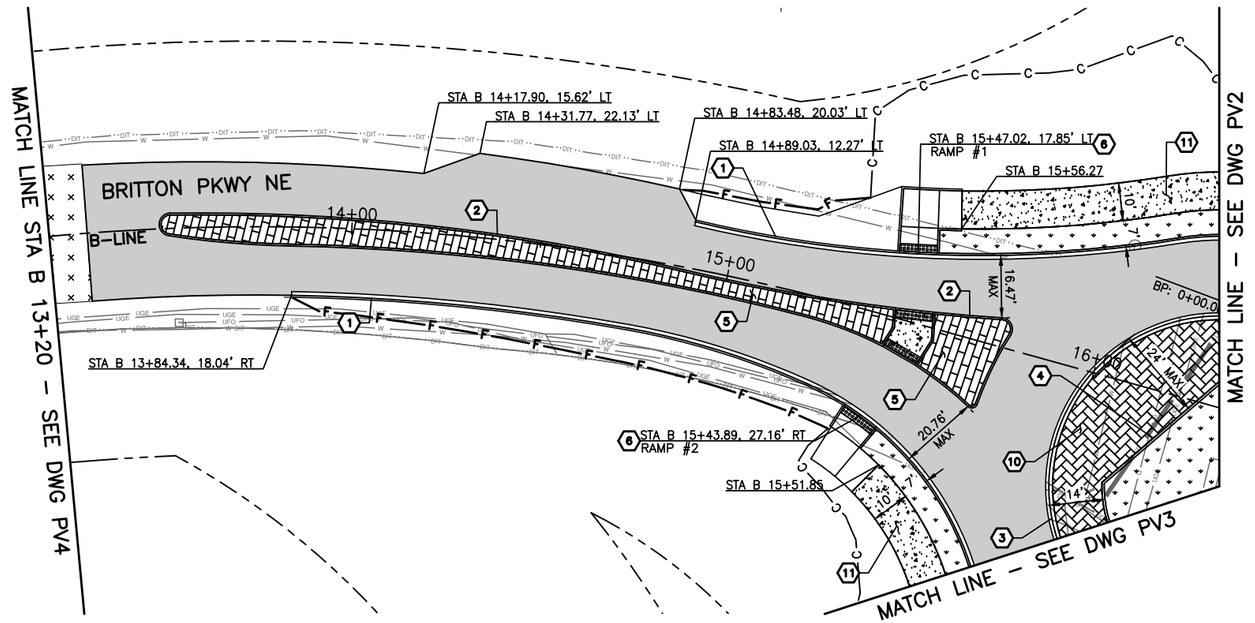

GENERAL NOTES

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2. STATIONS ARE TO FACE OF CURB. RAMP STATIONS ARE TO CENTERLINE OF RAMP.

LEGEND

- HMA FULL DEPTH PAVING
- HMA OVERLAY
- SIDEWALK
- TRUCK APRON
- LANDSCAPE PER DWG LS1–LS3
- TEXTURED PIGMENTED CONCRETE
- C — CUT LINE
- F — FILL LINE

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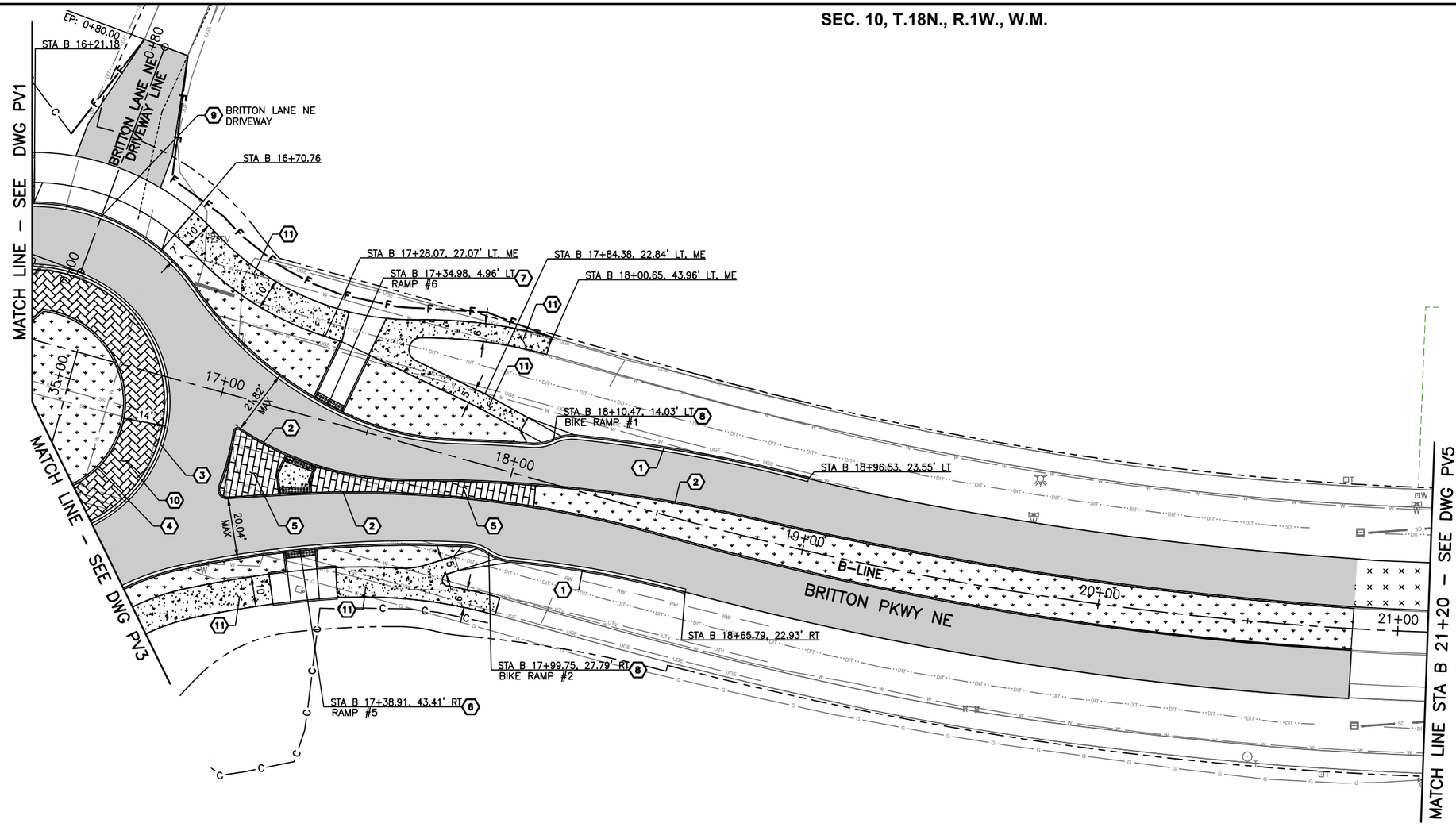

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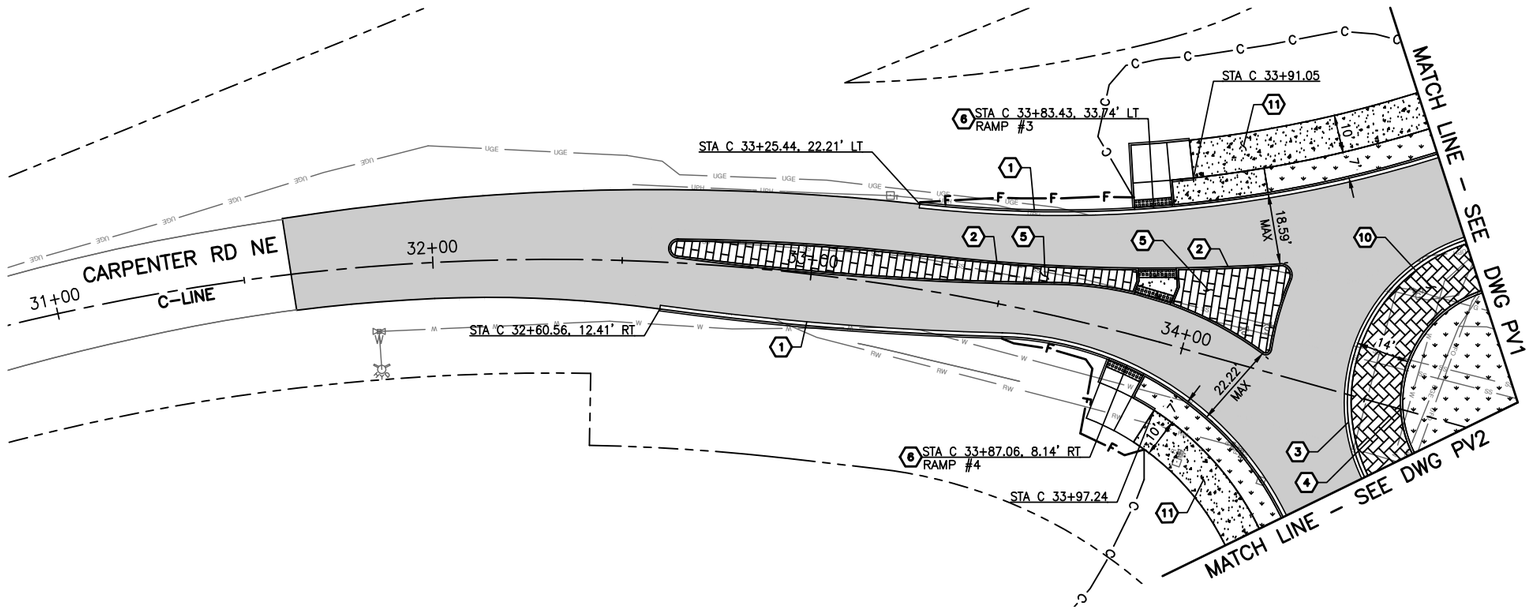

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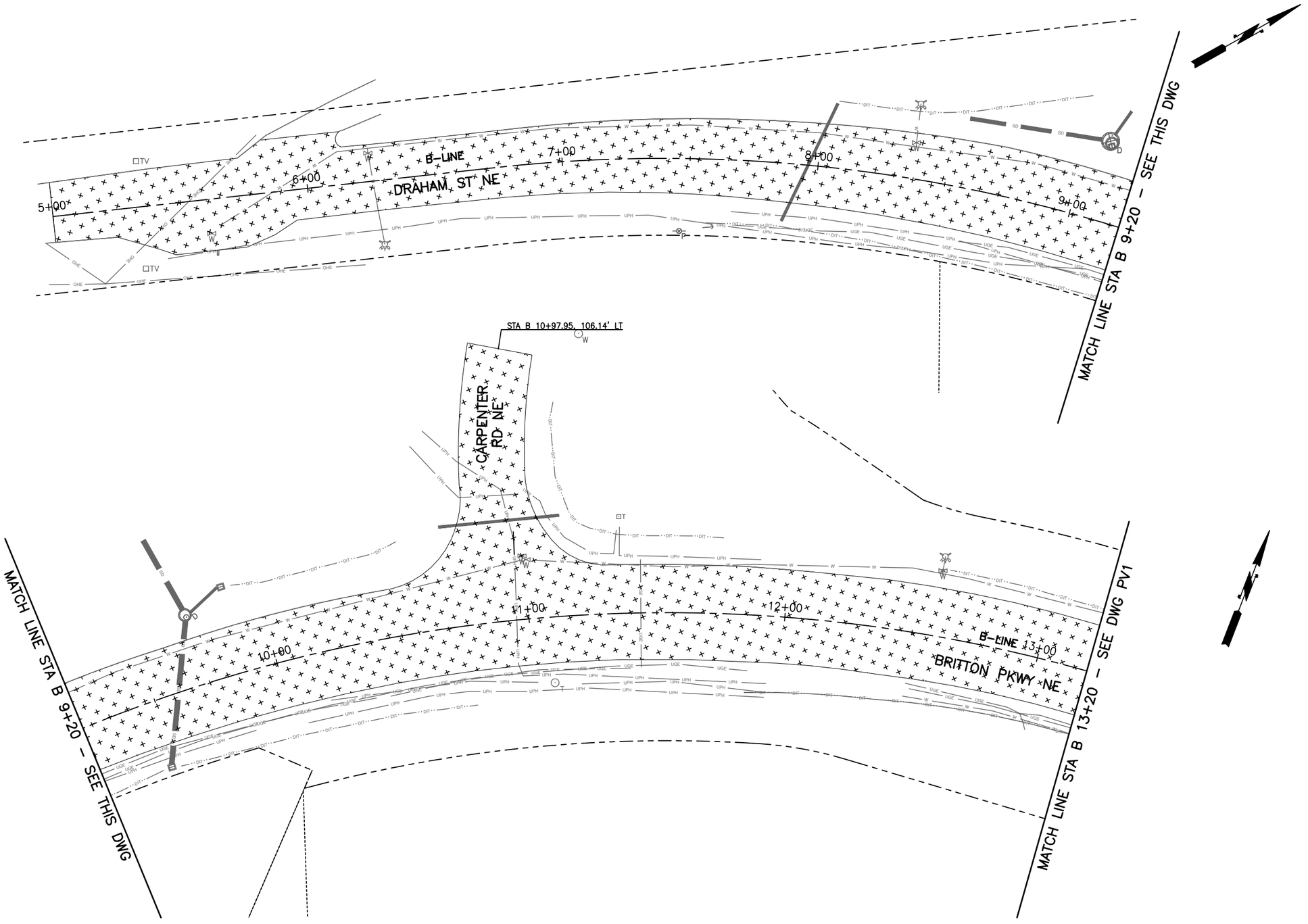

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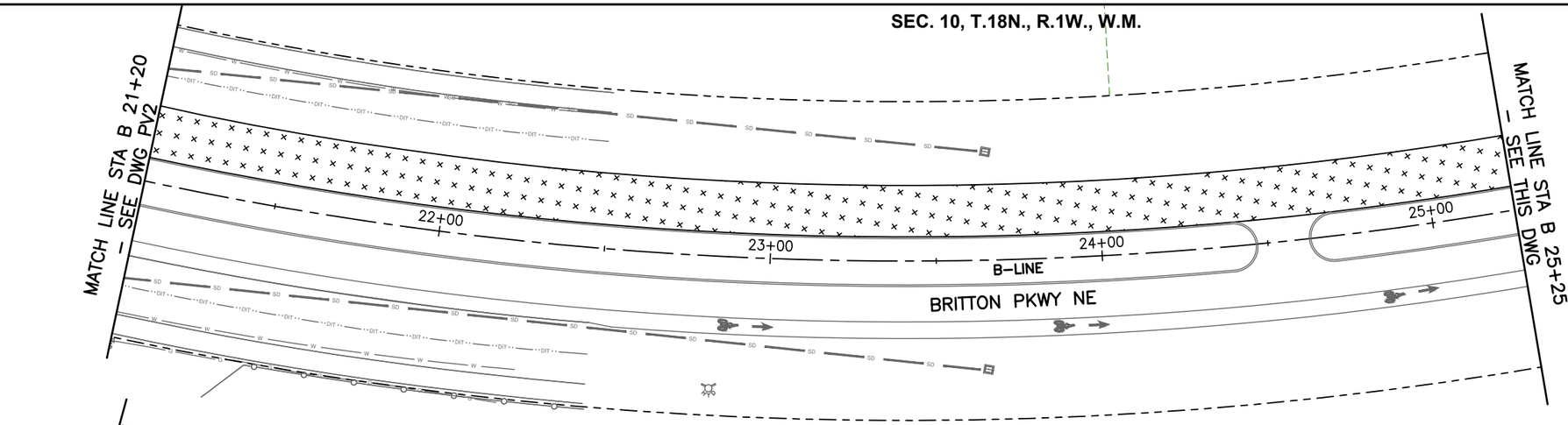

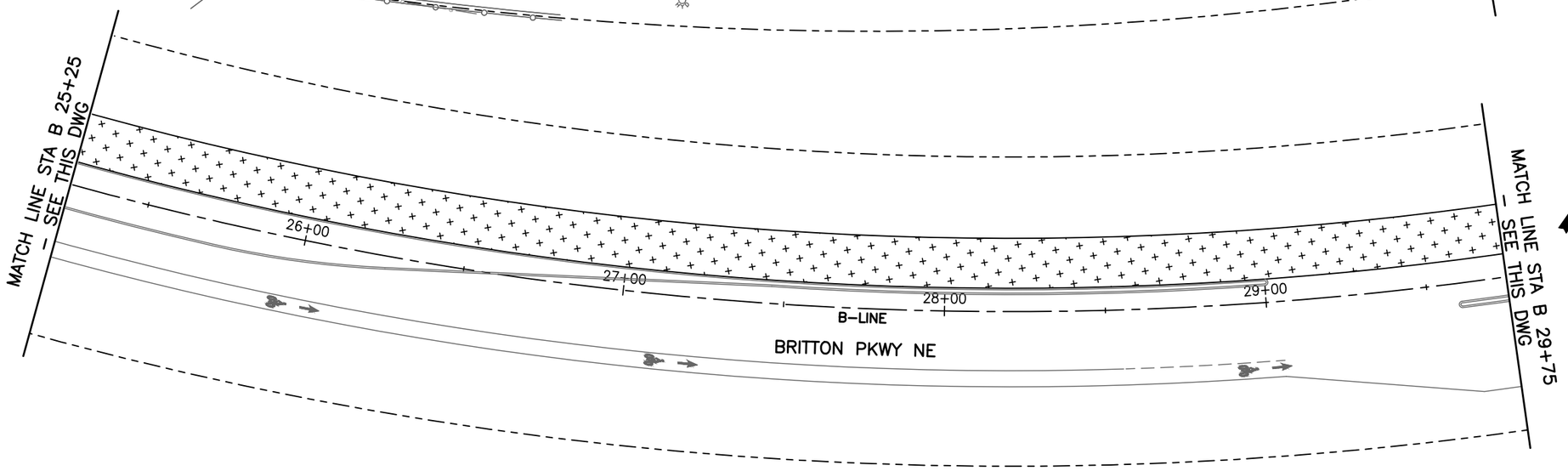

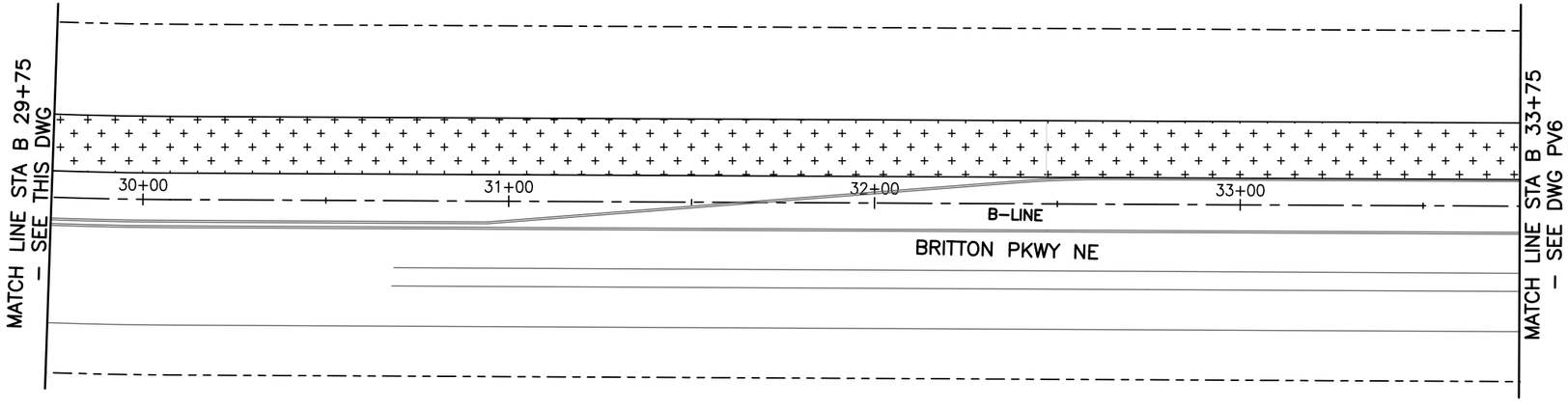

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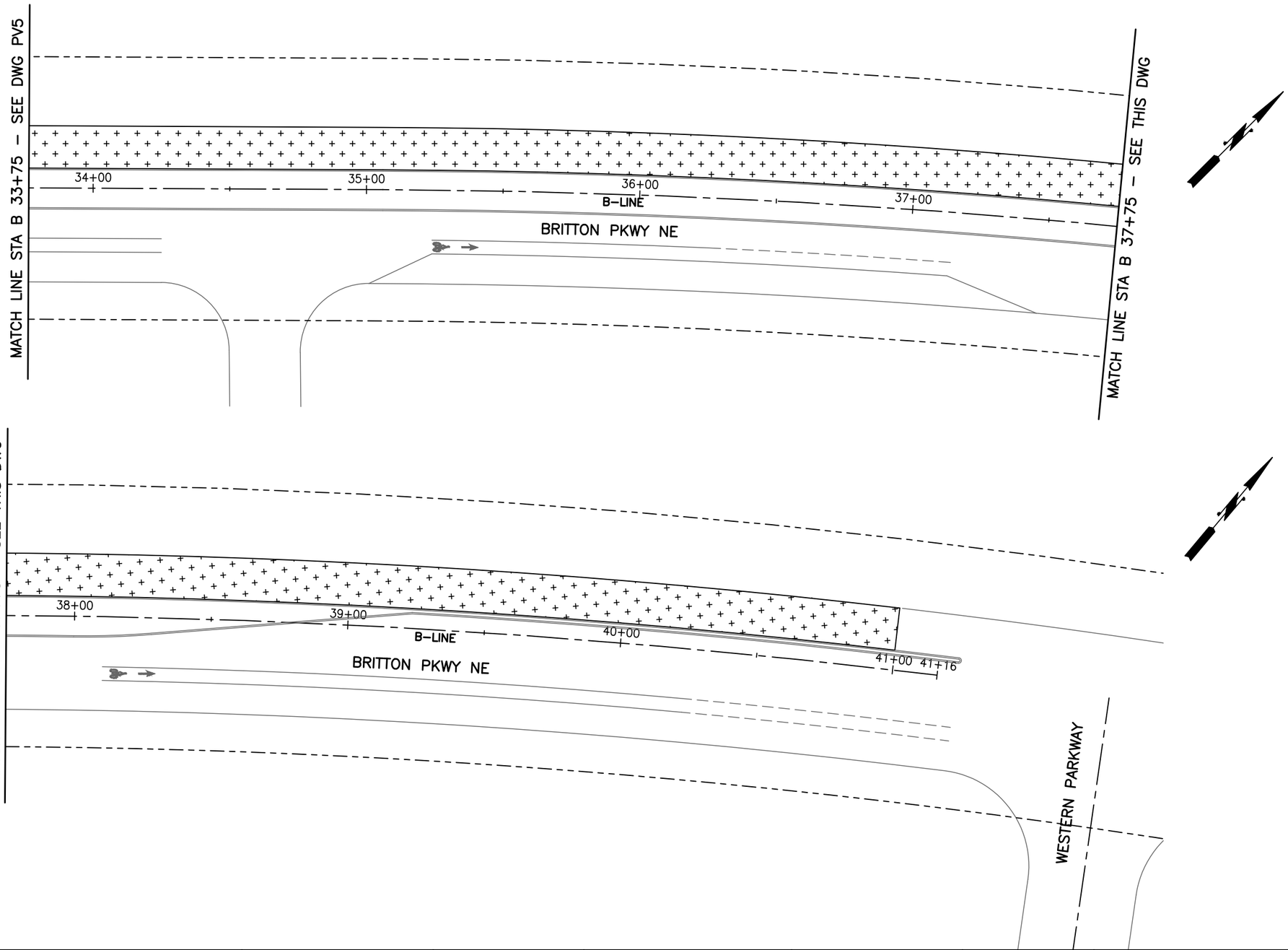

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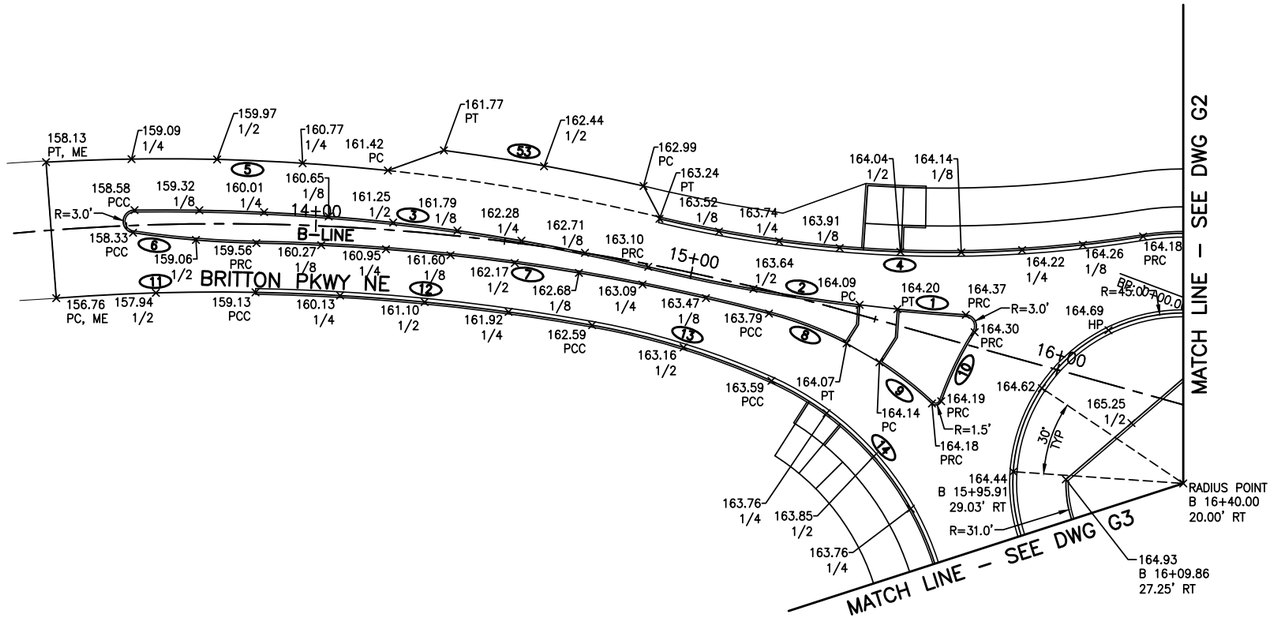

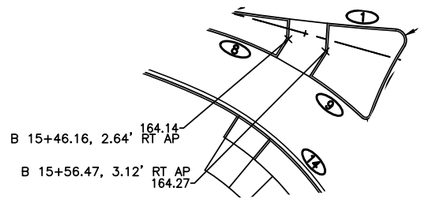

CROSSING DETAIL

GENERAL NOTES:

1. SPOT ELEVATIONS LOCATED ON CURB LINES ARE AT FLOWLINE, FACE OF CURB, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

LEGEND:

(X)	CURVE
– – – – – – – –	GRADE BREAK LINE
X 123.45	SPOT ELEVATION, FINISHED GRADE
ME	MATCH EXISTING
1/2	1/2 DELTA OF CURVE OR 1/2 POINT ALONG LINE SEGMENT
1/4	1/4 DELTA OF CURVE OR 1/4 POINT ALONG LINE SEGMENT
1/8	1/8 DELTA OF CURVE OR 1/8 POINT ALONG LINE SEGMENT
LP	LOW POINT
HP	HIGH POINT
—C——C—	CUT LIMIT
—F——F—	FILL LIMIT

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	STATION, OFFSET	STATION, OFFSET	RADIUS POINT STATION, OFFSET
1	18.12	501.00	2°04'20"	9.06	PRC STA B 15+72.77, 7.51' LT	PT STA B 15+54.97, 4.13' LT	STA B 15+00.95, 500.00' LT
2	56.73	501.00	6°29'15"	28.39	PC STA B 15+45.08, 2.54' LT	PRC STA B 14+88.52, 0.72' RT	STA B 15+00.95, 500.00' LT
3	136.76	549.00	14°16'24"	68.74	PRC STA B 14+88.52, 0.72' RT	PCC STA B 13+52.27, 4.02' LT	STA B 12+14.65, 543.35' RT
4	128.60	325.00	22°40'17"	65.15	PRC STA B 16+12.36, 39.93' LT	PT STA B 14+89.03, 12.27' LT	STA B 14+98.29, 337.06' LT
5	90.34	562.50	9°12'07"	45.27	PC STA B 14+17.90, 15.62' LT	PT STA B 13+30.07, 18.00' LT	STA B 12+14.65, 543.35' RT
6	32.71	250.00	7°29'50"	16.38	PCC STA B 13+51.64, 1.93' RT	PRC STA B 13+84.38, 5.04' RT	STA B 13+84.82, 244.96' LT
7	136.86	576.00	13°36'48"	68.75	PRC STA B 13+84.38, 5.04' RT	PCC STA B 15+22.47, 5.89' RT	STA B 13+39.28, 580.98' RT
8	21.99	100.00	12°36'08"	11.04	PCC STA B 15+22.47, 5.89' RT	PT STA B 15+44.47, 8.16' RT	STA B 15+21.26, 105.89' RT
9	17.65	100.00	10°06'42"	8.85	PC STA B 15+54.16, 10.68' RT	PRC STA B 15+70.44, 17.43' RT	STA B 15+21.26, 105.89' RT
10	20.28	90.00	12°54'28"	10.18	PRC STA B 15+72.63, 16.20' RT	PRC STA B 15+76.25, 3.71' LT	STA B 16+62.43, 22.26' RT
11	52.65	563.00	5°21'29"	26.34	PC STA B 13+30.07, 17.99' RT	PCC STA B 13+84.34, 18.04' RT	STA B 13+39.28, 580.98' RT
12	89.37	563.00	9°05'43"	44.78	PCC STA B 13+84.34, 18.04' RT	PCC STA B 14+76.51, 18.50' RT	STA B 13+39.28, 580.98' RT
13	49.66	200.00	14°13'38"	24.96	PCC STA B 14+76.51, 18.50' RT	PCC STA B 15+27.63, 22.91' RT	STA B 14+74.11, 218.49' RT
14	67.67	80.00	48°27'54"	36.01	PCC STA B 15+27.63, 22.91' RT	PCC STA B 15+83.05, 58.82' RT	STA B 15+11.26, 101.56' RT
53	53.57	569.50	5°23'21"	26.80	PCC STA B 14+83.48, 20.03' LT	PCC STA B 14+31.77, 22.13' LT	STA B 12+14.65, 543.35' RT

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AARON T. PANTESCO STATE OF WASHINGTON 31183 REGISTERED PROFESSIONAL ENGINEER 10/31/2023

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

ROUNDABOUT GRADING PLAN

DRAWING NUMBER
G1
SHT 18 OF 64

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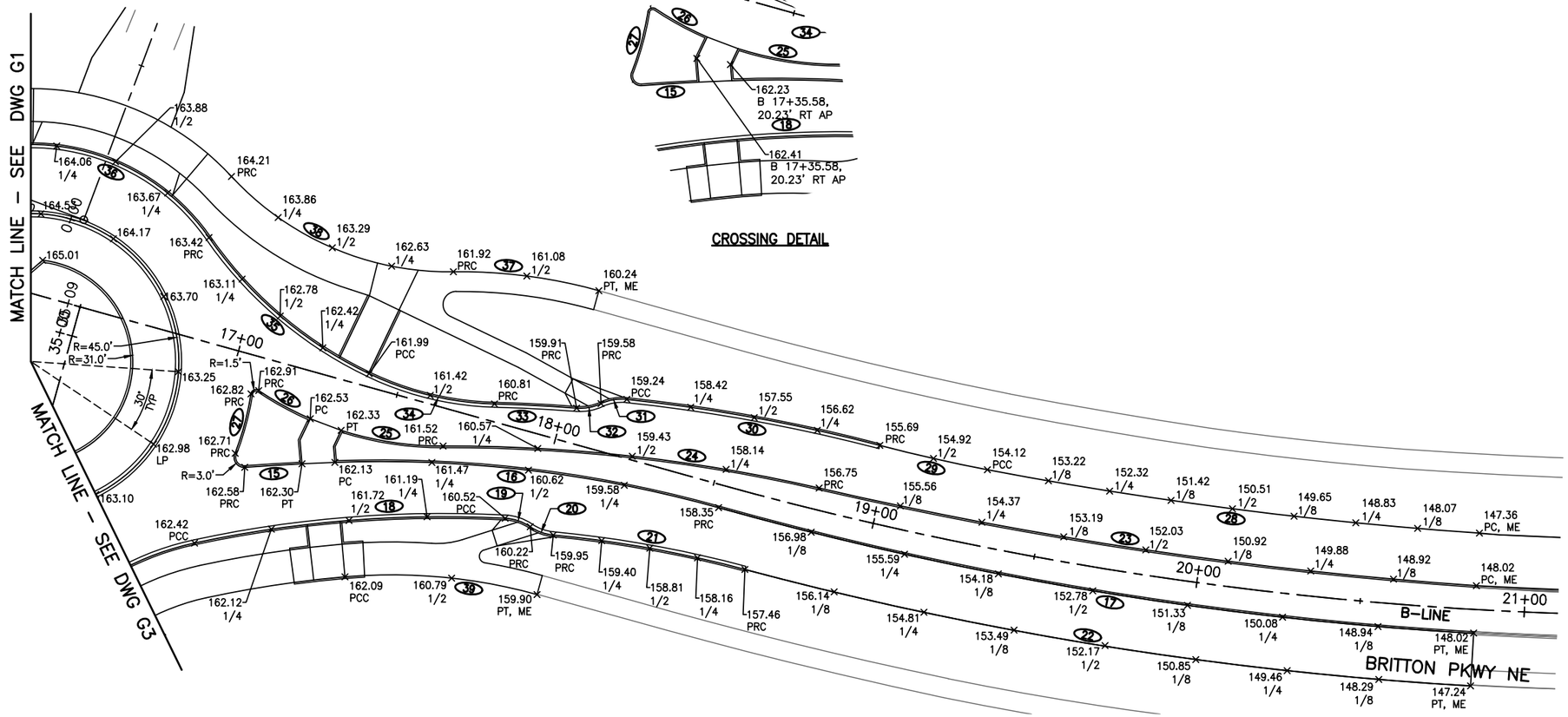

CROSSING DETAIL

GENERAL NOTES:

1. SPOT ELEVATIONS LOCATED ON CURB LINES ARE AT FLOWLINE, FACE OF CURB, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

LEGEND:

(X)	CURVE
– – – – – – – –	GRADE BREAK LINE
X 123.45	SPOT ELEVATION, FINISHED GRADE
ME	MATCH EXISTING
1/2	1/2 DELTA OF CURVE OR 1/2 POINT ALONG LINE SEGMENT
1/4	1/4 DELTA OF CURVE OR 1/4 POINT ALONG LINE SEGMENT
1/8	1/8 DELTA OF CURVE OR 1/8 POINT ALONG LINE SEGMENT
LP	LOW POINT
HP	HIGH POINT
—C——C—	CUT LIMIT
—F——F—	FILL LIMIT

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	STATION, OFFSET	STATION, OFFSET	RADIUS POINT STATION, OFFSET
15	17.44	800.00	1°14'57"	8.72	PRC STA B 17+11.29, 33.60' RT	PT STA B 17+27.78, 27.92' RT	STA B 19+26.18, 791.46' RT
16	117.92	381.00	17°44'00"	59.44	PC STA B 17+37.30, 24.82' RT	PRC STA B 18+53.35, 6.89' RT	STA B 18+52.30, 387.89' RT
17	233.16	1085.00	12°18'46"	117.03	PRC STA B 18+53.35, 6.89' RT	PT STA B 20+85.01, 7.26' RT	STA B 20+55.73, 1077.73' LT
18	95.00	360.00	15°07'11"	47.78	PCC STA B 17+02.73, 59.87' RT	PCC STA B 17+91.70, 27.36' RT	STA B 18+64.87, 378.93' RT
19	8.15	15.00	31°08'48"	4.18	PCC STA B 17+91.70, 27.36' RT	PRC STA B 17+99.75, 27.79' RT	STA B 17+94.95, 42.01' RT
20	7.53	15.00	28°44'59"	3.84	PRC STA B 17+99.75, 27.79' RT	PRC STA B 18+07.17, 28.35' RT	STA B 18+04.54, 13.58' RT
21	59.25	356.00	9°32'11"	29.70	PRC STA B 18+07.17, 28.35' RT	PRC STA B 18+65.79, 22.93' RT	STA B 18+64.87, 378.93' RT
22	223.85	1101.00	11°38'56"	112.31	PRC STA B 18+65.79, 22.93' RT	PT STA B 20+85.02, 23.26' RT	STA B 20+55.73, 1077.73' LT
23	202.22	1276.00	9°04'48"	101.32	PC STA B 20+85.00, 7.26' LT	PRC STA B 18+81.42, 6.63' LT	STA B 18+24.85, 1281.80' LT
24	115.31	499.00	13°14'25"	57.91	PRC STA B 18+81.42, 6.63' LT	PRC STA B 17+67.64, 11.25' RT	STA B 18+87.08, 492.33' RT
25	31.47	100.00	18°01'45"	15.86	PRC STA B 17+67.64, 11.25' RT	PT STA B 17+36.53, 14.94' RT	STA B 17+40.46, 84.98' LT
26	17.91	100.00	10°15'36"	8.98	PC STA B 17+26.53, 14.04' RT	PRC STA B 17+09.11, 9.98' RT	STA B 17+40.46, 84.98' LT
27	18.95	90.00	12°03'48"	9.51	PRC STA B 17+07.15, 11.57' RT	PRC STA B 17+07.29, 30.48' RT	STA B 16+17.72, 21.70' RT
28	150.91	1260.00	6°51'44"	75.54	PC STA B 20+85.00, 23.26' LT	PCC STA B 19+30.80, 23.28' LT	STA B 18+24.85, 1281.80' LT
29	33.55	495.00	3°52'59"	16.78	PCC STA B 19+30.80, 23.28' LT	PRC STA B 18+96.53, 23.55' LT	STA B 19+21.34, 518.23' LT
30	78.25	516.00	8°41'20"	39.20	PRC STA B 18+96.53, 23.55' LT	PCC STA B 18+17.68, 17.39' LT	STA B 18+87.08, 492.33' RT

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	STATION, OFFSET	STATION, OFFSET	RADIUS POINT STATION, OFFSET
31	8.06	15.00	30°46'17"	4.13	PCC STA B 18+17.68, 17.39' LT	PRC STA B 18+10.47, 14.03' LT	STA B 18+20.17, 2.59' LT
32	7.62	15.00	29°06'09"	3.89	PRC STA B 18+10.47, 14.03' LT	PRC STA B 18+03.68, 10.75' LT	STA B 18+00.76, 25.47' LT
33	25.00	512.00	2°47'52"	12.50	PRC STA B 18+03.68, 10.75' LT	PRC STA B 17+79.28, 5.29' LT	STA B 18+87.08, 492.33' RT
34	39.48	94.00	24°03'48"	20.03	PRC STA B 17+79.28, 5.29' LT	PCC STA B 17+40.12, 3.94' LT	STA B 17+56.52, 96.50' LT
35	64.63	125.00	29°37'20"	33.05	PCC STA B 17+40.12, 3.94' LT	PRC STA B 16+82.13, 30.80' LT	STA B 17+61.93, 127.02' LT
36	74.22	66.00	64°25'57"	41.59	PRC STA B 16+82.13, 30.80' LT	PRC STA B 16+12.36, 39.93' LT	STA B 16+40.00, 20.00' RT
37	44.75	156.00	16°26'10"	22.53	PC STA B 18+00.66, 46.96' LT	PRC STA B 17+56.51, 40.66' LT	STA B 18+00.40, 109.04' RT
38	75.64	90.00	48°09'03"	40.21	PRC STA B 17+56.51, 40.66' LT	PRC STA B 16+83.75, 50.54' LT	STA B 17+31.18, 127.02' LT
39	58.98	165.00	20°28'50"	29.81	PCC STA B 17+49.54, 57.55' RT	PT STA B 18+07.26, 47.09' RT	STA B 18+07.34, 212.09' RT

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AARON T. PATTERSON — STATE OF WASHINGTON — 31183 — REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

ROUNDABOUT GRADING PLAN

DRAWING NUMBER
G2

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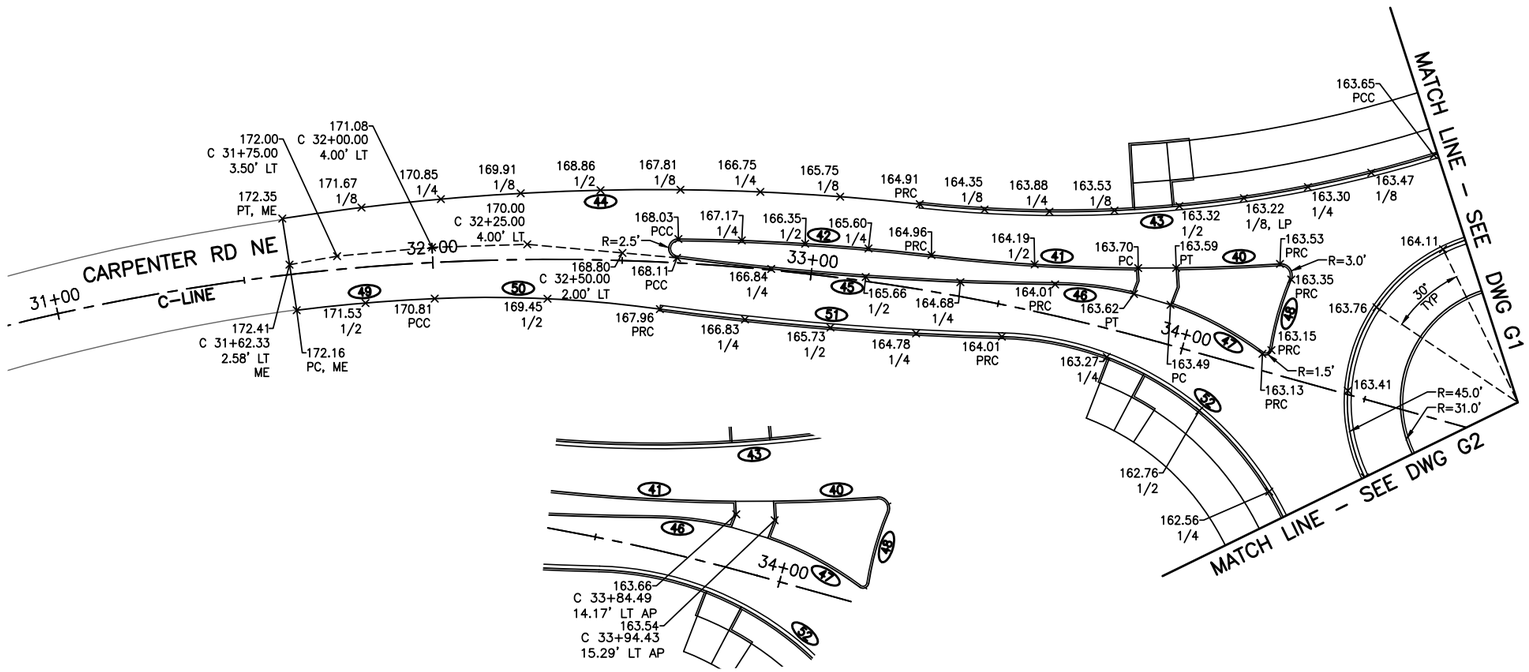

CROSSING DETAIL

GENERAL NOTES:

1. SPOT ELEVATIONS LOCATED ON CURB LINES ARE AT FLOWLINE, FACE OF CURB, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

LEGEND:

(X)	CURVE
- - - - - - - - -	GRADE BREAK LINE
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ME	MATCH EXISTING
1/2	1/2 DELTA OF CURVE OR 1/2 POINT ALONG LINE SEGMENT
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—C——C—	CUT LIMIT
—F——F—	FILL LIMIT

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	STATION, OFFSET	STATION, OFFSET	RADIUS POINT STATION, OFFSET
40	27.45	501.00	3°08'21"	13.73	PRC STA C 34+18.93, 28.43' LT	PT STA C 33+92.83, 20.06' LT	STA C 33+17.51, 510.13' LT
41	54.69	501.00	6°15'18"	27.37	PC STA C 33+83.45, 17.45' LT	PRC STA C 33+30.54, 9.44' LT	STA C 33+17.51, 510.13' LT
42	66.97	624.00	6°08'58"	33.52	PRC STA C 33+30.54, 9.44' LT	PCC STA C 32+64.51, 6.31' LT	STA C 34+25.18, 610.59' RT
43	137.29	335.00	23°28'52"	69.62	PCC STA B 15+83.05, 58.82' RT	PRC STA C 33+25.44, 22.21' LT	STA C 33+15.58, 356.97' LT
44	168.78	637.00	15°10'51"	84.89	PRC STA C 33+25.44, 22.21' LT	PT STA C 31+61.85, 14.89' LT	STA C 34+25.18, 610.59' RT
45	100.11	799.00	7°10'44"	50.12	PCC STA C 32+64.43, 1.32' LT	PRC STA C 33+63.58, 8.10' LT	STA C 32+91.03, 799.28' LT
46	21.02	93.00	12°56'55"	10.55	PRC STA C 33+63.58, 8.10' LT	PT STA C 33+84.09, 10.55' LT	STA C 33+86.36, 82.43' RT
47	27.59	93.00	17°00'00"	13.90	PC STA C 33+93.95, 10.30' LT	PRC STA C 34+20.78, 4.33' LT	STA C 33+86.36, 82.43' RT
48	19.37	80.00	13°52'34"	9.73	PRC STA C 34+22.81, 5.90' LT	PRC STA C 34+22.90, 25.23' LT	STA C 35+02.27, 15.20' LT
49	36.58	449.00	4°40'03"	18.30	PC STA C 31+62.83, 9.57' RT	PCC STA C 31+99.99, 9.54' RT	STA C 31+82.93, 458.46' RT
50	59.58	332.00	10°16'58"	29.87	PCC STA C 31+99.99, 9.54' RT	PRC STA C 32+60.56, 12.41' RT	STA C 31+93.09, 341.51' RT
51	90.60	813.00	6°23'05"	45.34	PRC STA C 32+60.56, 12.41' RT	PRC STA C 33+52.70, 8.32' RT	STA C 32+91.03, 799.28' LT
52	113.45	85.00	76°28'14"	66.97	PRC STA C 33+52.70, 8.32' RT	PCC STA B 17+02.73, 59.87' RT	STA C 33+70.42, 91.77' RT

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ROUNDABOUT GRADING PLAN

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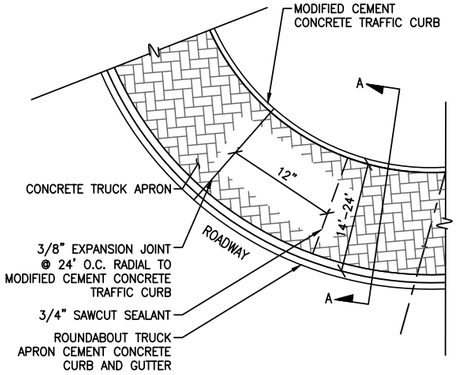

TRUCK APRON PLAN DETAIL
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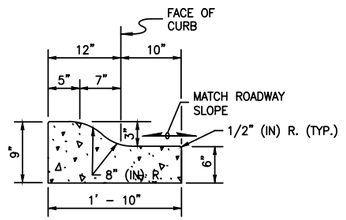
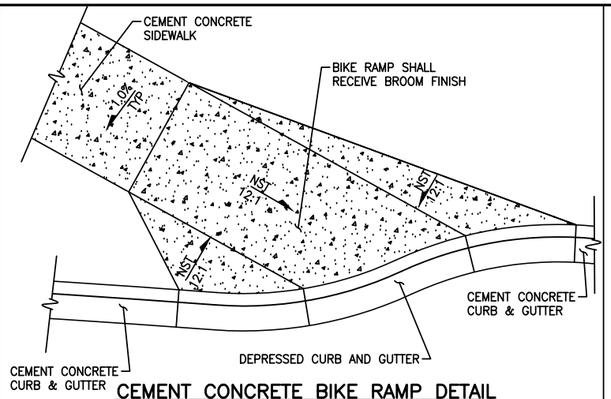


ROUNDABOUT TRUCK APRON CEMENT CONCRETE CURB & GUTTER (ROLLED CURB)
NOT TO SCALE



CEMENT CONCRETE BIKE RAMP DETAIL
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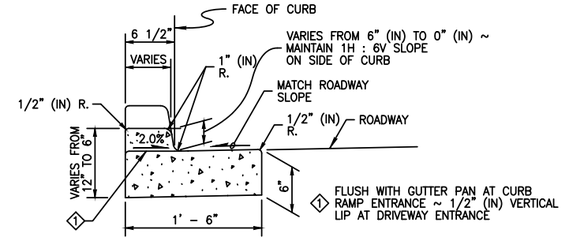
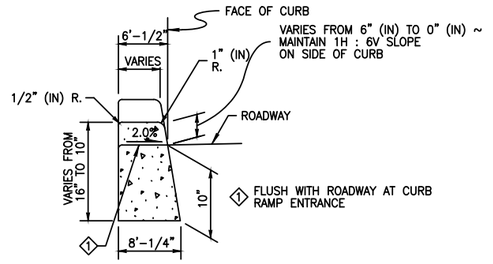


DEPRESSED CURB AND GUTTER DETAIL
NOT TO SCALE



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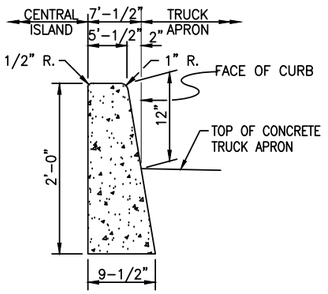

MODIFIED CEMENT CONCRETE TRAFFIC CURB DETAIL
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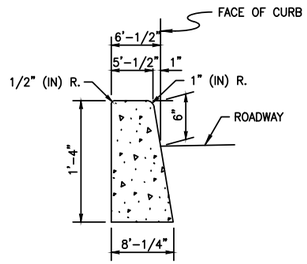

CEMENT CONCRETE TRAFFIC CURB DETAIL
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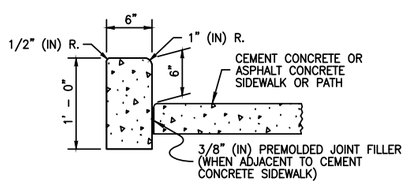

CEMENT CONCRETE PEDESTRIAN CURB DETAIL
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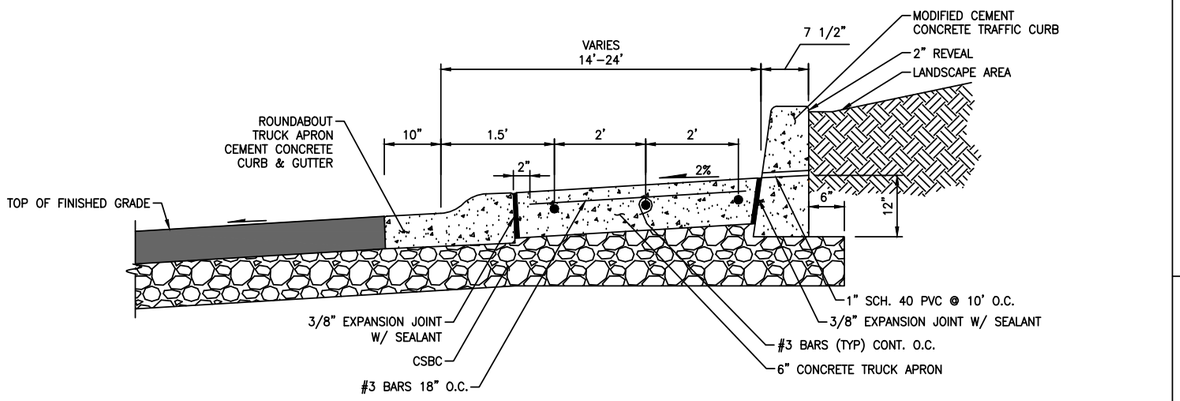
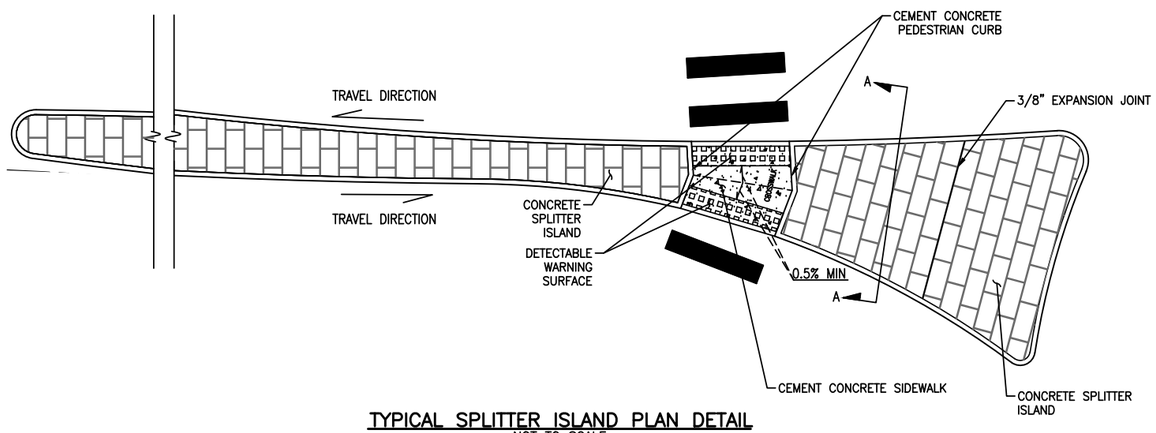
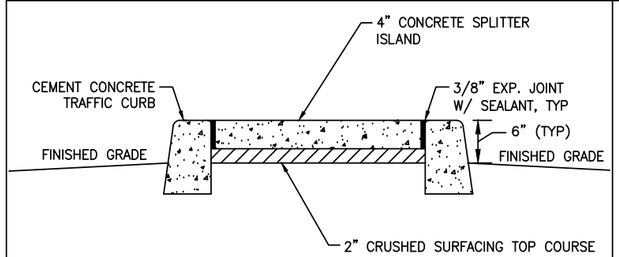


TRUCK APRON CROSS SECTION A–A
NOT TO SCALE



TYPICAL SPLITTER ISLAND PLAN DETAIL
NOT TO SCALE



SPLITTER ISLAND CROSS SECTION A–A
NOT TO SCALE

DATUM
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AARON T. PUTTERMAN — 31183 — REGISTERED PROFESSIONAL ENGINEER — 10/31/2023

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

ROADWAY DETAILS

DRAWING NUMBER
PVD1
SHT 21 OF 64

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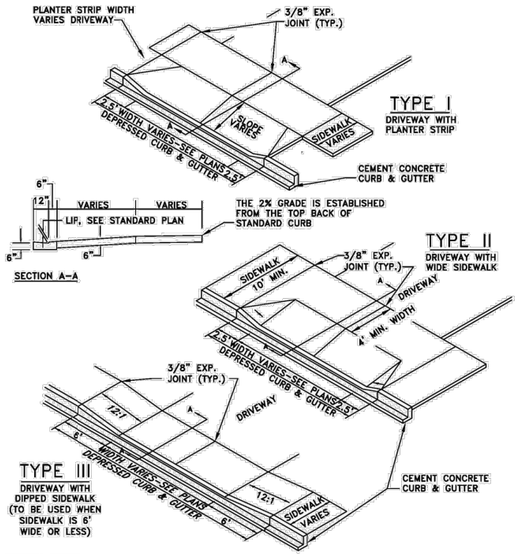
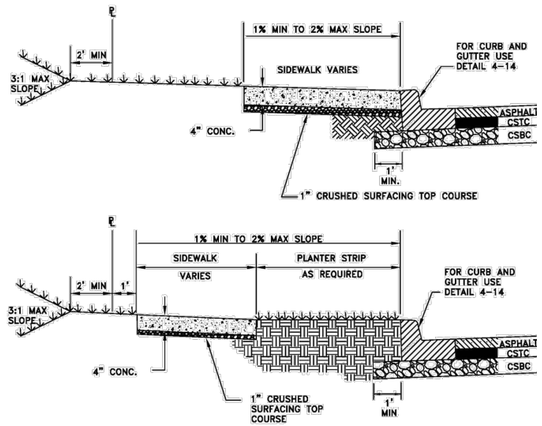


GENERAL NOTES:
1. FORMS SHALL BE OF WOOD OR METAL AND SHALL EXTEND FOR THE FULL DEPTH OF THE CONCRETE, SEE SECTION 8-14.3(2).
2. ALL FORMS SHALL BE STRAIGHT, FREE FROM WARP AND OF SUFFICIENT STRENGTH TO RESIST THE PRESSURE OF THE CONCRETE WITHOUT SPRING.
3. WHERE D/W EXCEEDS 16' WIDTH A 2" DEEP EXPANSION JOINT SHALL BE PLACED TRANSVERSLY, CENTERED IN WALK.
4. FORM AND SUBGRADE INSPECTION ARE REQUIRED BEFORE POURING CONCRETE.
5. DRIVEWAYS SHALL BE 6" THICK. MIN. SIDEWALK AND DRIVEWAY APRON SHALL BE 6" THICK MIN. THROUGH DRIVEWAY SECTION.
6. SIDEWALK CROSS SLOPE 1% MIN. TO MAX. 2%.

CEMENT CONCRETE DRIVEWAY



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GENERAL NOTES:
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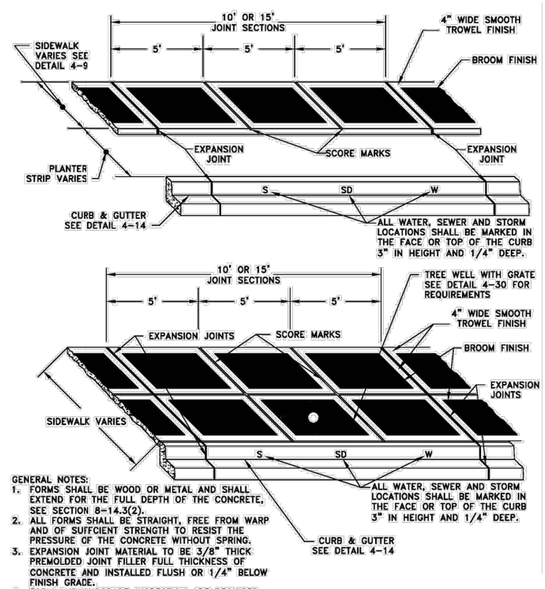
2. ALL FORMS SHALL BE STRAIGHT, FREE FROM WARP, AND OF SUFFICIENT STRENGTH TO RESIST THE PRESSURE OF THE CONCRETE WITHOUT SPRING.
3. FOR JOINTS AND SCORING SEE DETAIL 4-10.
4. CONCRETE DRIVEWAYS REQUIRE A MINIMUM DEPTH OF 6".
5. SEE ROADWAY SECTIONS FOR STREET TREE LOCATIONS.
6. THE TOP OR TOE OF ALL SLOPES SHALL BEGIN 2' BACK OF THE SIDEWALK OR THE RIGHT-OF-WAY LINE.
7. WHEN APPLICABLE THE RIGHT-OF-WAY LINE SHALL BE 1' BEHIND THE SIDEWALK.

SIDEWALK



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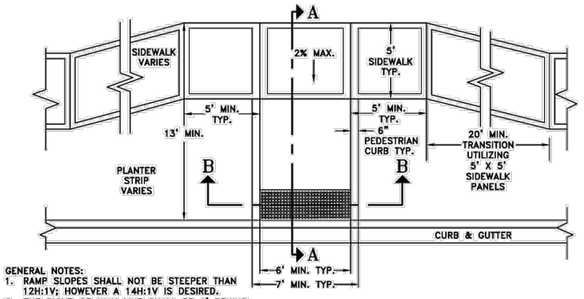
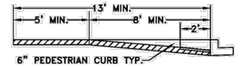
1. FORMS SHALL BE WOOD OR METAL AND SHALL EXTEND FOR THE FULL DEPTH OF THE CONCRETE, SEE SECTION 8-14.3(2).
2. ALL FORMS SHALL BE STRAIGHT, FREE FROM WARP AND OF SUFFICIENT STRENGTH TO RESIST THE PRESSURE OF THE CONCRETE WITHOUT SPRING.
3. EXPANSION JOINT MATERIAL TO BE 3/8" THICK PREMOLDED JOINT FILLER FULL THICKNESS OF CONCRETE AND INSTALLED FLUSH OR 1/4" BELOW FINISH GRADE.
4. FORM AND SUBGRADE INSPECTION ARE REQUIRED BEFORE POURING CONCRETE.
5. PLACEMENT OF STREET LIGHTING, TREES, HYDRANTS AND WATER METERS SHALL BE PER THE DETAILS OF ITS PERSPECTIVE SECTIONS.
6. SCORE MARKS SHALL BE 1/8" TO 1/4" WIDE AND A MINIMUM OF 1" DEEP.
7. EXPANSION JOINTS SHALL BE INSTALLED IN THE CURB & GUTTER AND SIDEWALK AT THE PC AND PT FOR ALL CURB RETURNS. EXPANSION JOINTS SHALL BE PLACED IN THE SIDEWALK AT THE SAME LOCATIONS AS THOSE IN THE CURB & GUTTER WHEN THE SIDEWALK IS ADJACENT TO CURB & GUTTER, OR UNLESS OTHERWISE DIRECTED BY THE CITY.

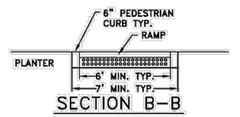
SIDEWALK SPACING
EXPANSION JOINTS & SCORE MARKS



GENERAL NOTES:
1. RAMP SLOPES SHALL NOT BE STEEPER THAN 12H:1V; HOWEVER A 14H:1V IS DESIRED.
2. THE RIGHT-OF-WAY LINE SHALL BE 1' BEHIND THE SIDEWALK.
3. THE CURB RAMP SHALL BE POURED SEPARATE FROM THE SIDEWALK SECTION.
4. THE TRUNCATED DOME PANELS ARE REQUIRED AS SHOWN AND SHALL BE INSTALLED PER THE MANUFACTURER'S REQUIREMENTS.
5. STAMPING OF TRUNCATED DOMES SHALL NOT BE ALLOWED.
6. THE MINIMUM DIMENSIONS FOR THE TRUNCATED DOME PANELS ARE 2' X 3' WITH A MINIMUM OF 2 PANELS AND AN OVERALL LENGTH OF 6'. THE DETECTABLE WARNING PATTERN AREA SHALL BE YELLOW IN COMPLIANCE WITH THE STANDARD SPECIFICATION 8-14.3.
7. CUTTING OR ALTERING TRUNCATED DOME PANELS SHALL NOT BE ALLOWED.
8. THERE SHALL BE NO EXPANSION MATERIAL AROUND THE TRUNCATED DOME PANEL.
9. FOR SIDEWALK SPACING, EXPANSION JOINTS, SCORE MARKS, CRUSHED BEDDING OR ADDITIONAL NOTES SEE DETAILS 4-9 AND 4-10.

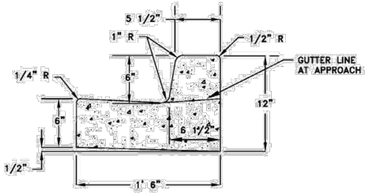


SECTION A-A



SECTION B-B

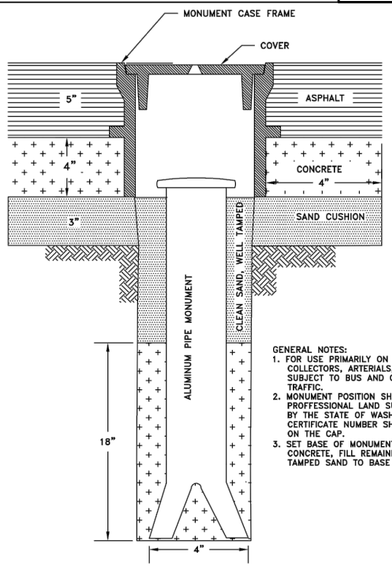
CURB RAMP TYPE III



TYPE I

GENERAL NOTES:
1. EXPANSION JOINT MATERIAL TO BE 3/8" THICK PREMOLDED. JOINT FILLER FULL THICKNESS OF CONCRETE SPACING.
2. FORM AND SUBGRADE INSPECTION REQUIRED BEFORE POURING CONCRETE.
3. TYPE I USED ON OUTSIDE LANES.
4. TYPE II USED IN REVERSE SLOPE AREAS.
5. SEE 4B.025 FOR SPECIFICATIONS FOR CURBS AT MEDIANS.

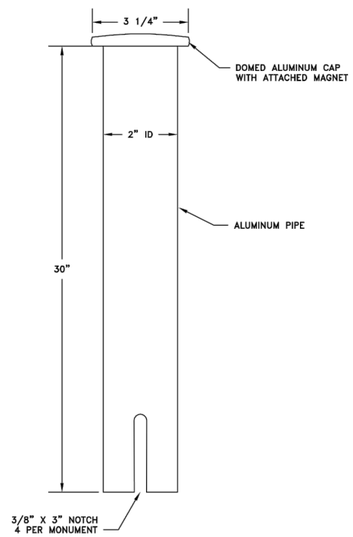
CEMENT CONCRETE CURB & GUTTER



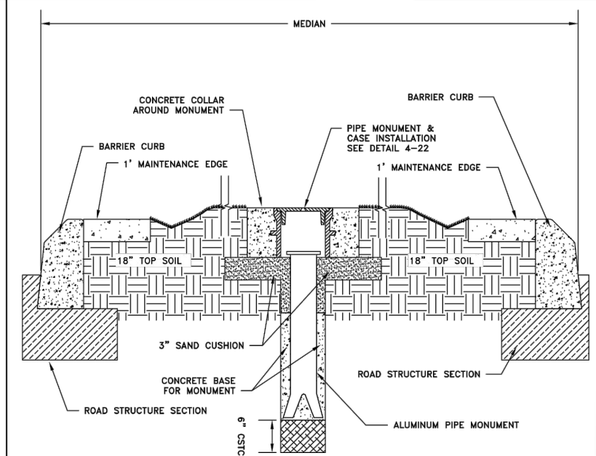
GENERAL NOTES:
1. FOR USE PRIMARILY ON MAJOR & MINOR COLLECTORS, ARTERIALS, AND STREETS SUBJECT TO BUS AND COMMERCIAL TRUCK TRAFFIC.
2. MONUMENT POSITION SHALL BE SET BY A PROFFESSIONAL LAND SURVEYOR LICENSED BY THE STATE OF WASHINGTON WHOSE CERTIFICATE NUMBER SHALL BE STAMPED ON THE CAP.
3. SET BASE OF MONUMENT IN 18" OF CONCRETE, FILL REMAINING SPACE WITH TAMPED SAND TO BASE OF CASE FRAME.

FLARE BOTTOM 3" OF PIPE PRIOR TO INSTALLATION

PIPE MONUMENT & CASE INSTALLATION



ALUMINUM PIPE MONUMENT



MONUMENT IN MEDIAN

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AARON T. BRITTSAN — STATE OF WASHINGTON — 31183 — REGISTERED PROFESSIONAL ENGINEER — 10/31/2023

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

ROADWAY DETAILS

DRAWING NUMBER
PVD2

SHT 22 OF 64

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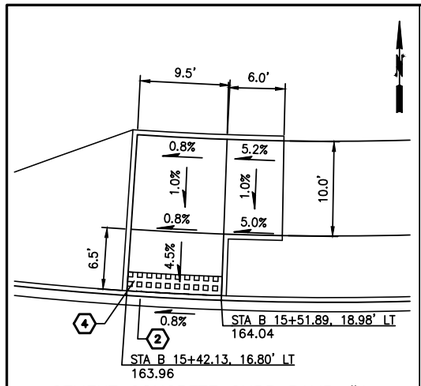
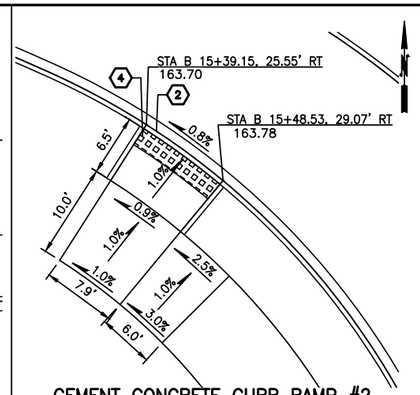


CEMENT CONCRETE CURB RAMP #1

NOT TO SCALE



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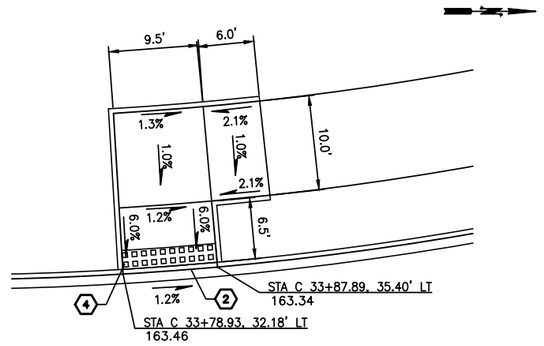
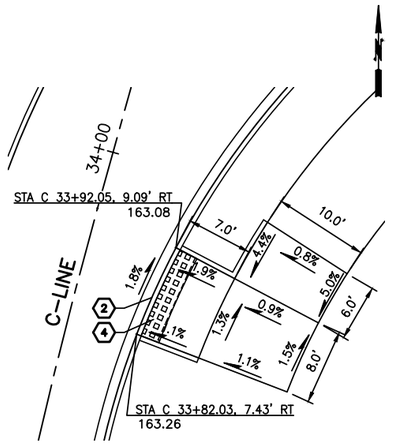


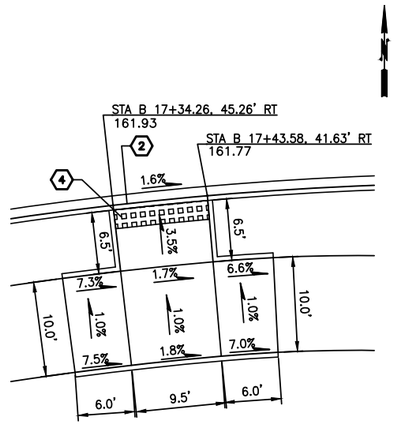
CEMENT CONCRETE CURB RAMP #3

NOT TO SCALE



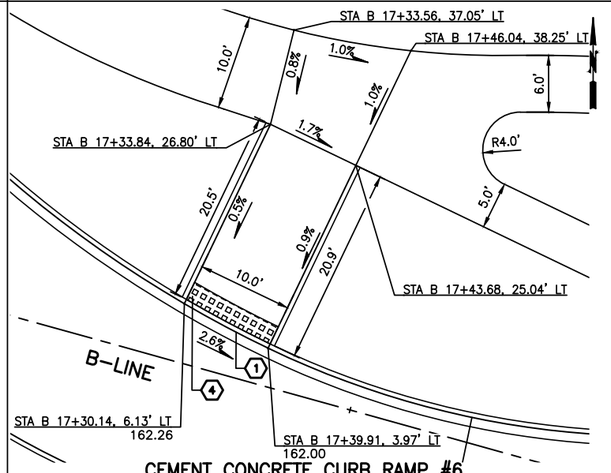
CEMENT CONCRETE CURB RAMP #4

NOT TO SCALE



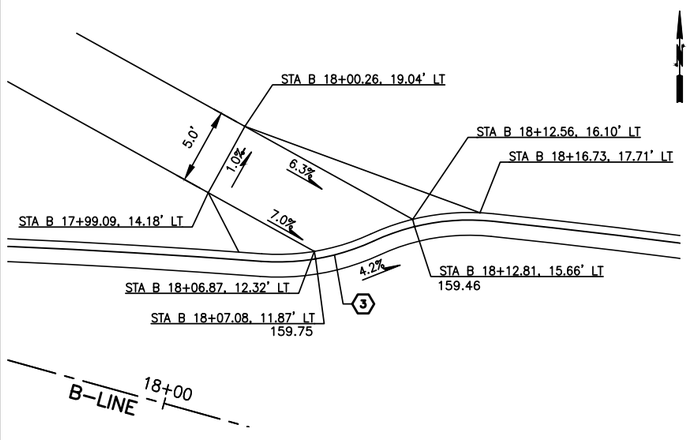
CEMENT CONCRETE CURB RAMP #5

NOT TO SCALE



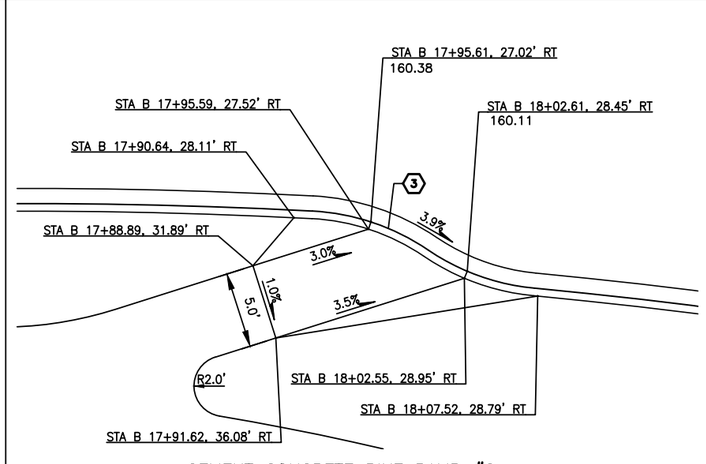
CEMENT CONCRETE CURB RAMP #6

NOT TO SCALE



CEMENT CONCRETE BIKE RAMP #1

NOT TO SCALE



CEMENT CONCRETE BIKE RAMP #2

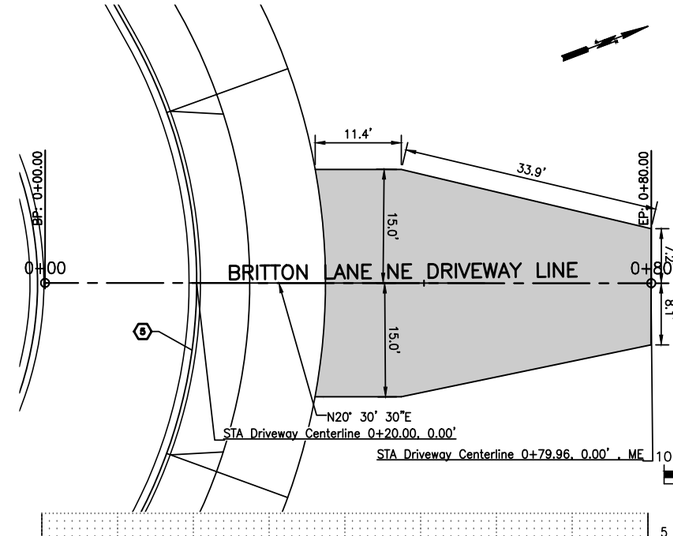
NOT TO SCALE

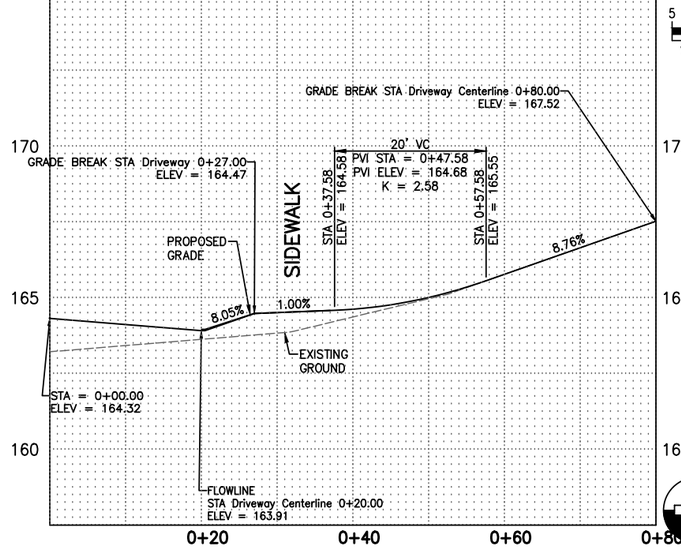
CONSTRUCTION NOTES:

1. CEMENT CONCRETE CURB RAMP TYPE III
2. CEMENT CONCRETE CURB RAMP TYPE COMBINATION
3. CEMENT CONCRETE BIKE RAMP
4. DETECTABLE WARNING SURFACE
5. CEMENT CONCRETE DRIVEWAY TYPE I

LEGEND

ASPHALT DRIVEWAY





BRITTON LANE NE DRIVEWAY

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AARON T. BATTESON, STATE OF WASHINGTON, 31183, REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

ROADWAY DETAILS

DRAWING NUMBER

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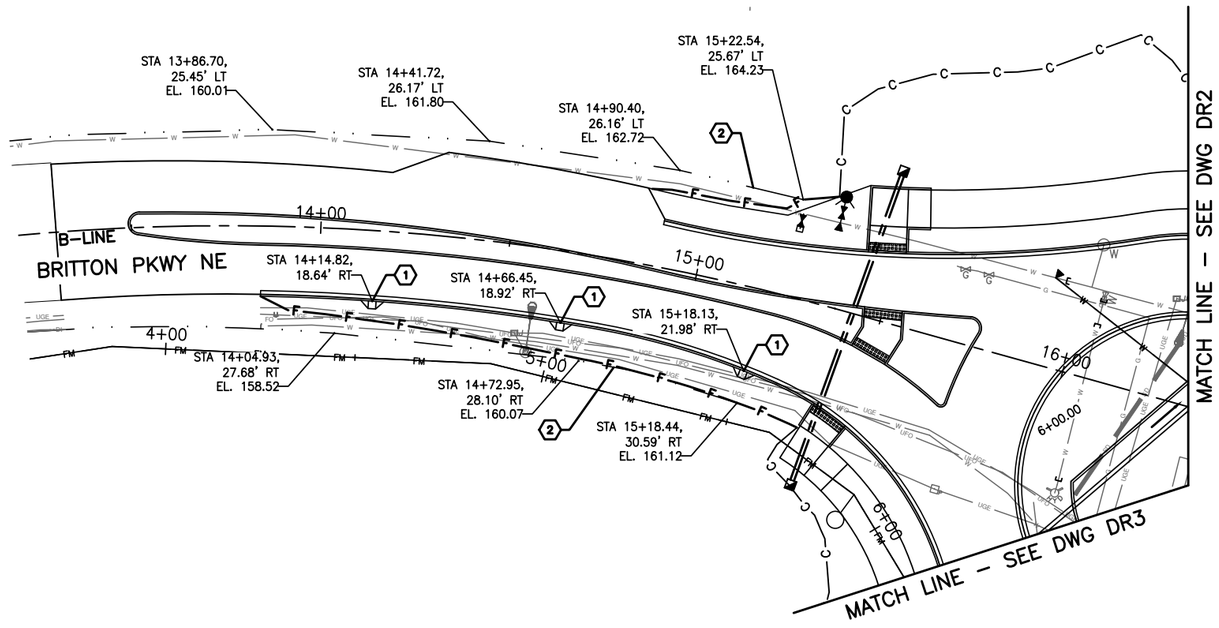

GENERAL NOTES

1. SEE DWG AL1 FOR ROAD CENTERLINE ALIGNMENT DATA.
2. EXISTING UTILITIES SHOWN ARE APPROXIMATE.
3. TYPE 1 AND 1L CATCH BASINS TO HAVE 2' SUMP DEPTH BELOW LOWEST INVERT ELEVATION.

PROFILE ABBREVIATIONS

EX	EXISTING
EX RECLAIMED	EXISTING RECLAIMED WATER LINE

CONSTRUCTION NOTES:

1. CONCRETE SCUPPER PER DETAIL
2. DRAINAGE DITCH PER TYPICAL DITCH SECTION
3. TYPE 1 CATCH BASIN WITH VANED GRATE
4. CUT EXISTING STORMDRAIN PIPE AND CONNECT
5. TYPE 1 CATCH BASIN WITH CURB INLET GRATE
6. TYPE 1L CATCH BASIN WITH CURB INLET GRATE
7. STORMDRAIN INLET IN DITCH BOTTOM
8. BIOSWALE PER TYPICAL SECTION
9. STORMDRAIN OUTLET PER DETAIL
10. QUARRY SPALL CHANNEL PROTECTION
11. TYPE 1 CATCH BASIN WITH SOLID RECTANGULAR LID
12. TYPE 2 CATCH BASIN, 48" DIA. WITH CURB INLET GRATE
13. TYPE 1 CATCH BASIN WITH BEEHIVE GRATE PER DETAIL
14. TYPE 2 CATCH BASIN, 48" DIA. WITH SOLID RECTANGULAR LID

N

20 0 20 40
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DATUM
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STATE OF WASHINGTON PAUL PITTMAN 4088 REGISTERED PROFESSIONAL ENGINEER
10/31/23

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CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

DRAINAGE PLAN

DRAWING NUMBER
DR1

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SEC. 10, T.18N., R.1W., W.M.

SWALE COORDINATES			
POINT X	STATION	OFFSET	ELEVATION
1	19+47.53	30.34' LT	151.8
2	20+34.79	31.63' LT	147.8
3	18+96.36	32.02' RT	155.0
4	19+43.85	32.21' RT	152.7

20 0 20 40
SCALE IN FEET

MATCH LINE – SEE DWG DR1

MATCH LINE – SEE DWG DR3

17+00 18+00 19+00 20+00 21+00

B-LINE

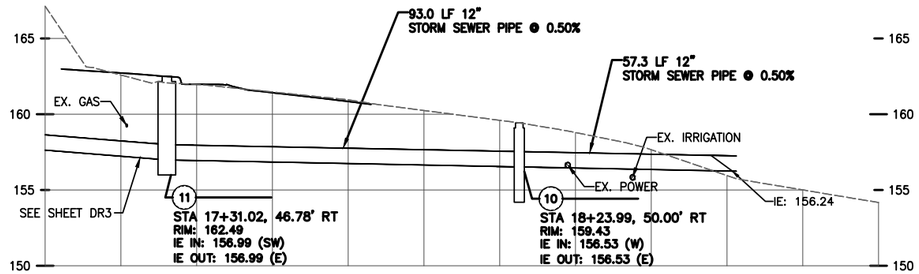
BRITTON PKWY NE

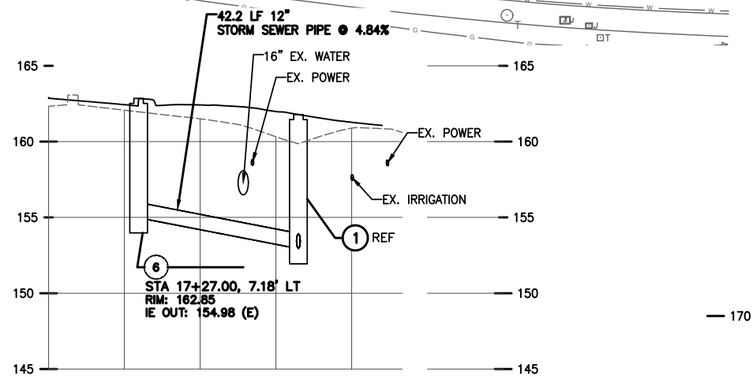
STA 18+13.50
27.78' RT

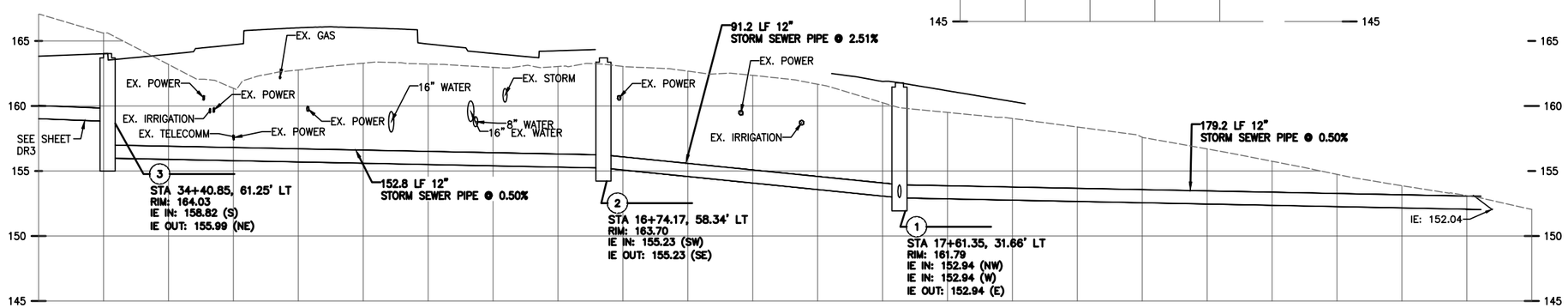
STA 18+10.41
34.72' RT
EL. 159.94

7.8'

8.4'







GENERAL NOTES

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PROFILE ABBREVIATIONS

EX EXISTING
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13. TYPE 1 CATCH BASIN WITH BEEHIVE GRATE PER DETAIL
14. TYPE 2 CATCH BASIN, 48" DIA. WITH SOLID RECTANGULAR LID

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DRAINAGE PLAN

DRAWING NUMBER
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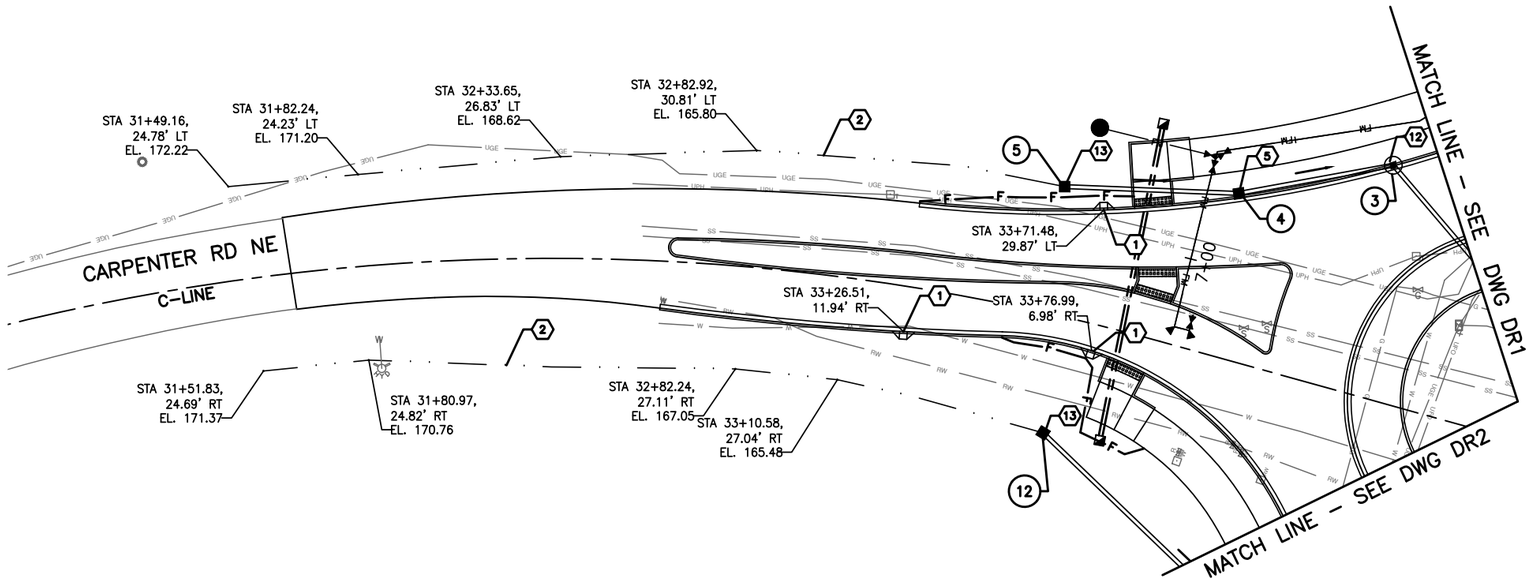

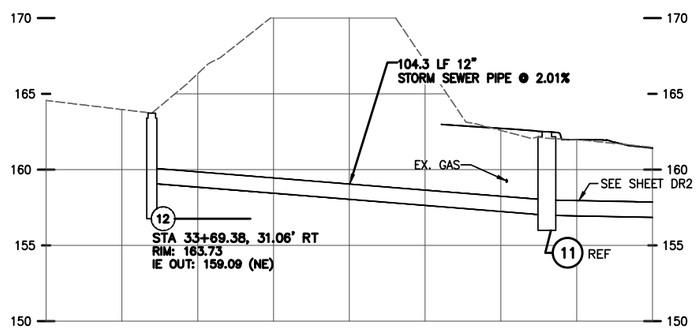

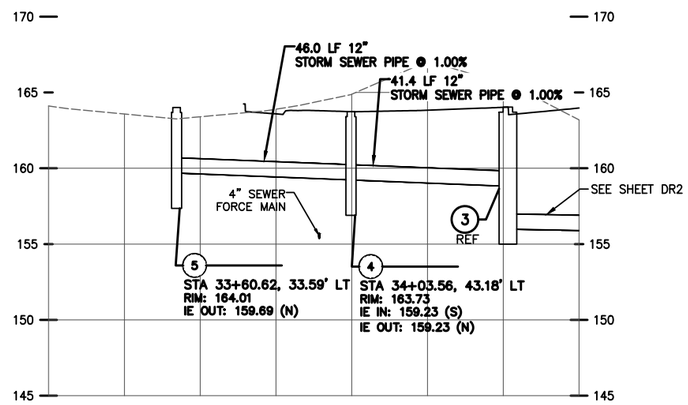

GENERAL NOTES

1. SEE DWG AL1 FOR ROAD CENTERLINE ALIGNMENT DATA.
2. EXISTING UTILITIES SHOWN ARE APPROXIMATE.
3. TYPE 1 AND 1L CATCH BASINS TO HAVE 2' SUMP DEPTH BELOW LOWEST INVERT ELEVATION.

PROFILE ABBREVIATIONS

EX	EXISTING
EX RECLAIMED	EXISTING RECLAIMED WATER LINE

CONSTRUCTION NOTES:

1. CONCRETE SCUPPER PER DETAIL
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14. TYPE 2 CATCH BASIN, 48" DIA. WITH SOLID RECTANGULAR LID

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DRAINAGE PLAN

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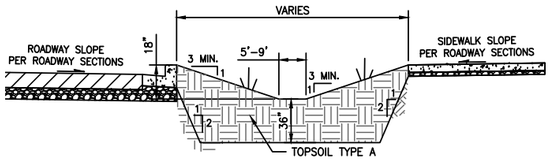
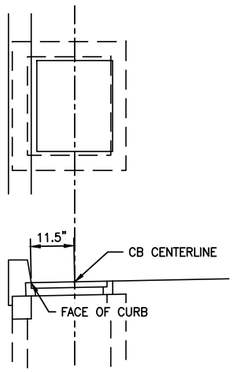
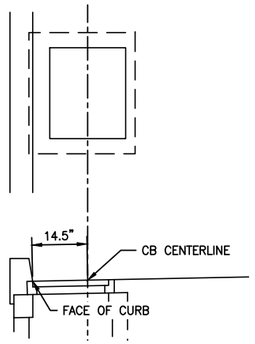


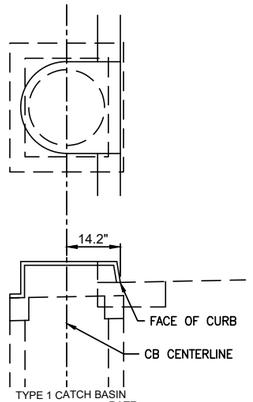
TYPICAL BIOSWALE SECTION
NTS



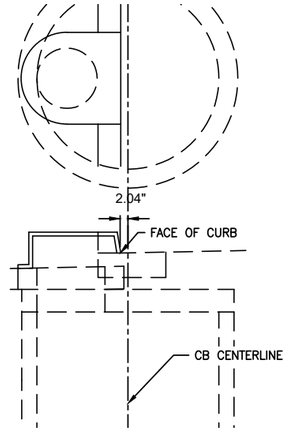
TYPE 1 CATCH BASIN
WITH VANED GRATE



TYPE 1L CATCH BASIN
WITH VANED GRATE



TYPE 1 CATCH BASIN
WITH CURB INLET GRATE

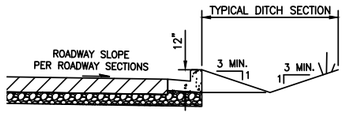


TYPE 2 CATCH BASIN, 48" DIAMETER
WITH CURB INLET GRATE

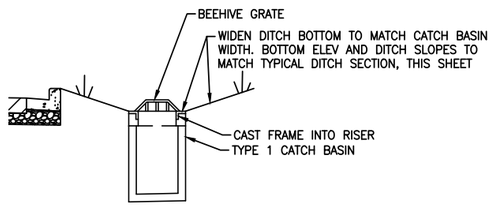
TYPICAL CATCH BASIN PLACEMENT
NTS

GENERAL NOTES

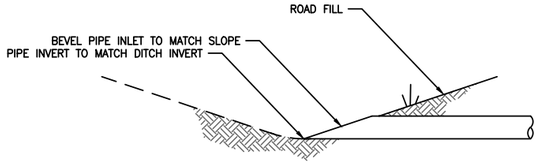
1. COMPACTED SOILS IN BIORETENTION SWALES SHALL BE SCARIFIED AT 4 INCHES BELOW THE AMENDED LAYER.
2. CATCH BASIN STATIONING AND OFFSET TO CENTER OF STRUCTURE.



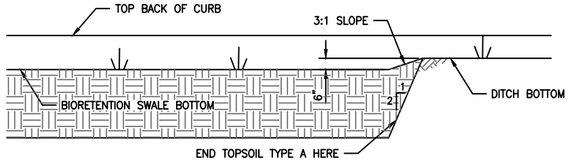
TYPICAL DITCH SECTION
NTS



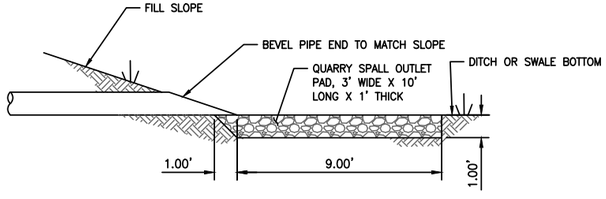
TYPE 1 CATCH BASIN WITH BEEHIVE GRATE
NTS



STORMDRAIN INLET DETAIL
NTS



BIOSWALE TO DITCH TRANSITION SECTION
NTS



STORMDRAIN OUTLET DETAIL
NTS

DATUM
NAD 1983/91

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APPROVED BY
DATE: 10/31/2023

PAUL PAUL PAUL OF WA 40811 REGISTERED PROFESSIONAL ENGINEER
10/31/23

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

DRAINAGE DETAILS

DRAWING NUMBER
DD1

SHT 27 OF 64

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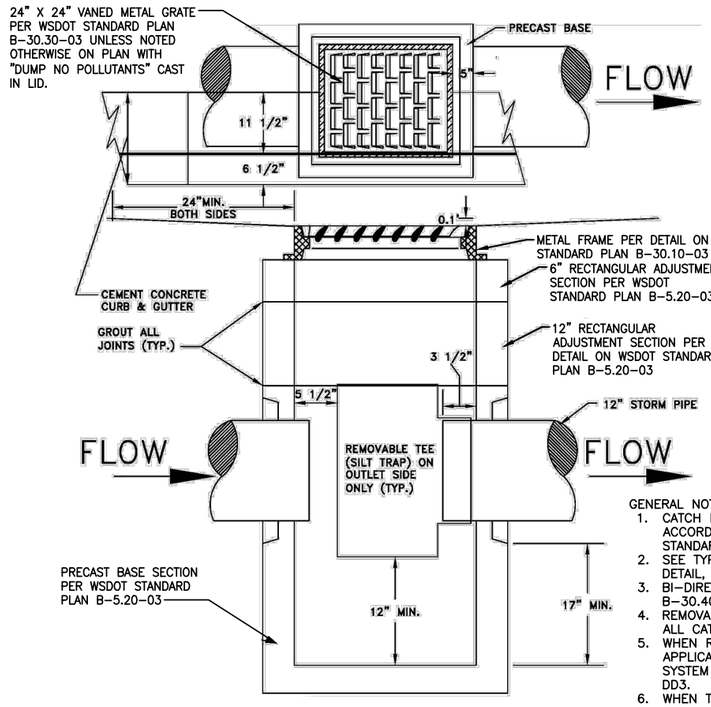
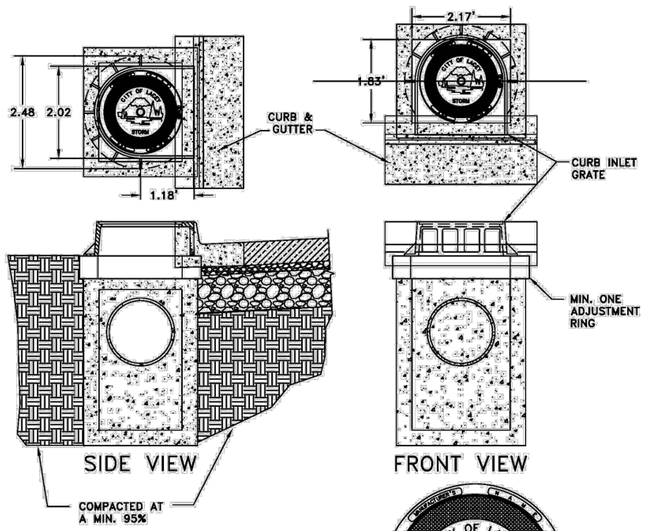


TYPE 1 CATCH BASIN WITH VANED GRATE
NTS

GENERAL NOTES:
1. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS IN WSDOT STANDARD PLANS.
2. SEE TYPE 1 CATCH BASIN WITH CURB INLET GRATE DETAIL, THIS SHEET, FOR PAD REQUIREMENTS.
3. BI-DIRECTIONAL VANED PER WSDOT STANDARD PLAN B-30.40-03 IS FOR BI-DIRECTIONAL FLOWS.
4. REMOVABLE SILT TRAP TEES SHALL BE INSTALLED IN ALL CATCH BASINS.
5. WHEN REMOVABLE SILT TRAP TEES ARE NOT APPLICABLE THE STORM MANHOLE OUTLET BAFFLE SYSTEM SHALL BE USED PER DETAILS ON SHEET DD3.
6. WHEN THE ANGLE OF THE STORM PIPE DOES NOT FIT THE KNOCK-OUT THE BASIN SHALL BE UPGRADED. THE CORNERS OF THE BASIN SHALL NOT BE ALTERED OR BROKEN.
7. SEE DETAIL 5-5 FOR PAD REQUIREMENTS.

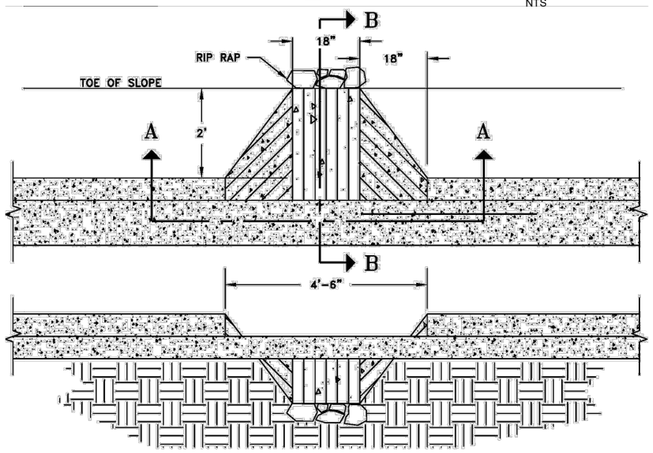


TYPE 1 CATCH BASIN WITH CURB INLET GRATE
NTS

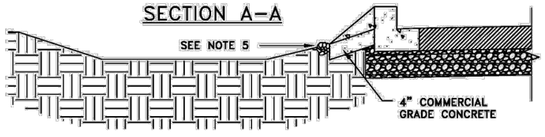
GENERAL NOTES:
1. CONCRETE PADS FOR ALL CURB INLET BASINS SHALL BE A MINIMUM OF 3' X 3' X 8".
2. ALL STORM MANHOLE LID AND RING ASSEMBLIES SHALL BE EAST JORDAN IRON WORKS OR OLYMPIC FOUNDARY WITH CITY OF LACEY LOGO LIDS WHEN AVAILABLE.
3. ALL STORM MANHOLE LID AND RING ASSEMBLIES SHALL BE DUCTILE IRON AND MANUFACTURED IN THE USA.
4. THIS APPLICATION SHALL BE USED FOR INSTALLATIONS ON ARTERIALS AND BOULEVARDS OR WHEN STORM PIPING IS TOO SHALLOW TO MEET THE MINIMUM 2' OF COVER WHERE THE STORM PIPE ENDS UP IN THE ROADWAY STRUCTURE REGARDLESS OF THE TYPE OF PIPE BEING USED.
5. USE A 2" RECTANGULAR ADJUSTMENT SECTION TURNED LENGTHWISE TO ELIMINATE THE GAP UNDER THE FRAME.

NTS

THE CITY OF LACEY LOGO LIDS SHALL BE USE WHEN AVAILABLE



SECTION A-A



SECTION B-B

CONCRETE SCUPPER
NTS

GENERAL NOTES:
1. CONCRETE SCUPPER SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199)
2. THE TOP SURFACE SHALL BE BROOM FINISHED.
3. ALL EXTERNAL EDGES NOT LABELED SHALL BE TROWELLED WITH 1/4" RADIUS EDGER.
4. CONCRETE SCUPPERS SHOULD BE SPACED CONSISTENT WITH CATCH BASIN SPACING REQUIRED IN THE STORM WATER MANUAL.
5. WHERE CONCRETE SCUPPERS ARE USED, APPROXIMATELY 6 INCHES OF ROCK OR OTHER EROSION PROTECTION MATERIAL SHALL BE USED TO DISSIPATE ENERGY AND/OR FLOW DOWN THE CHUTE.
6. PERVIOUS PAVING MAY BE USED FOR SCUPPER WITH CITY APPROVAL.
7. THE SLOPE OF THE CHUTE SHALL BE DETERMINED WHEN THE SWALE IS DESIGNED.

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PAUL A. PITTS, STATE OF WASHINGTON, 40857, REGISTERED PROFESSIONAL ENGINEER, 10/31/23

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

DRAINAGE DETAILS

DRAWING NUMBER
DD2
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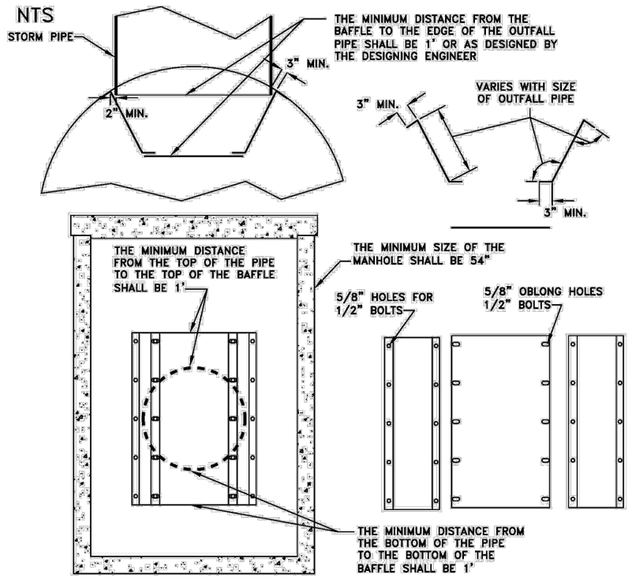
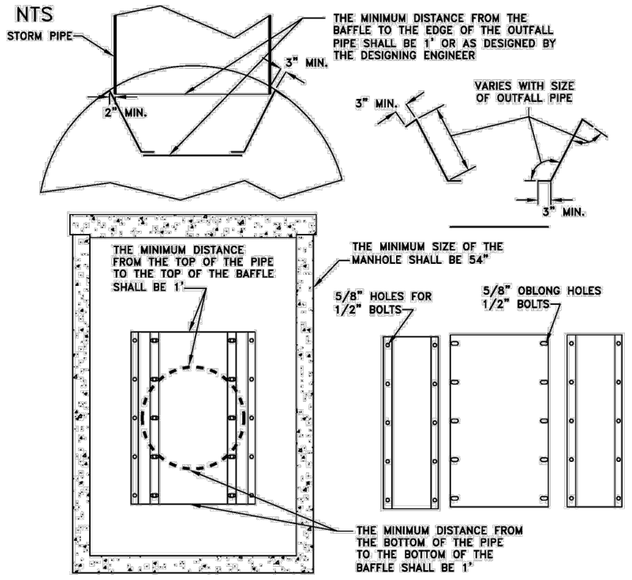


GENERAL NOTES:
1. THE BAFFLE SYSTEM SHALL BE USED WHEN SILT TRAP TEES CANNOT BE INSTALLED DUE TO SIZE OF STRUCTURES OR WHEN APPROVED BY THE CITY.
2. ONLY 2 BAFFLES ARE REQUIRED AT THE END OF EACH NEW RUN OR MAIN LINE SYSTEM. THE MINIMUM SIZE OF THE STRUCTURES FOR THE BAFFLES SHALL BE 54". LARGER MANHOLES SHALL BE DETERMINED BY THE SIZE OF THE PIPE(S).
3. THERE SHALL BE A MIN. OF 3 PIECES AND SHALL BE MANUFACTURED TO FIT THROUGH A 24" MANHOLE FRAME.
4. ALL MATERIALS SHALL BE STAINLESS STEEL. THE PANEL THICKNESS SHALL BE 1/8".
5. SEALANT SHALL BE APPLIED TO ALL JOINTS TO PREVENT GAPS IN BAFFLE.
6. THE CITY OF LACEY SHALL DETERMINE IF OTHER STRUCTURES ARE REQUIRED.
7. THE DESIGN AND RESTRICTION CALCULATION SHALL BE DONE BY THE DESIGNING ENGINEER.

OPTIONAL STORM MANHOLE OUTLET BAFFLE
NTS



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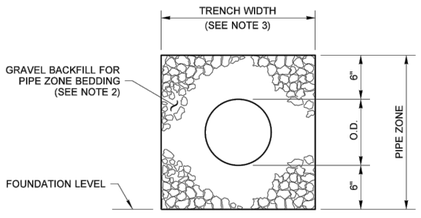
6. THE CITY OF LACEY SHALL DETERMINE IF OTHER STRUCTURES ARE REQUIRED.
7. THE DESIGN AND RESTRICTION CALCULATION SHALL BE DONE BY THE DESIGNING ENGINEER.

OPTIONAL STORM BAFFLE FOR STORM MANHOLES
NTS

NOTES

1. See **Standard Specifications Section 7-08.3(3)** for Pipe Zone Backfill.
2. See **Standard Specifications Section 9-03.12(3)** for Gravel Backfill for Pipe Zone Bedding.
3. See **Standard Specifications Section 2-09.4** for Measurement of Trench Width.
4. For sanitary sewer installation, concrete pipe shall be bedded to spring line.



THERMOPLASTIC PIPE

TYPICAL PIPE TRENCH PER WSDOT STANDARD PLAN B-55.20-02
NTS

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CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

DRAINAGE DETAILS

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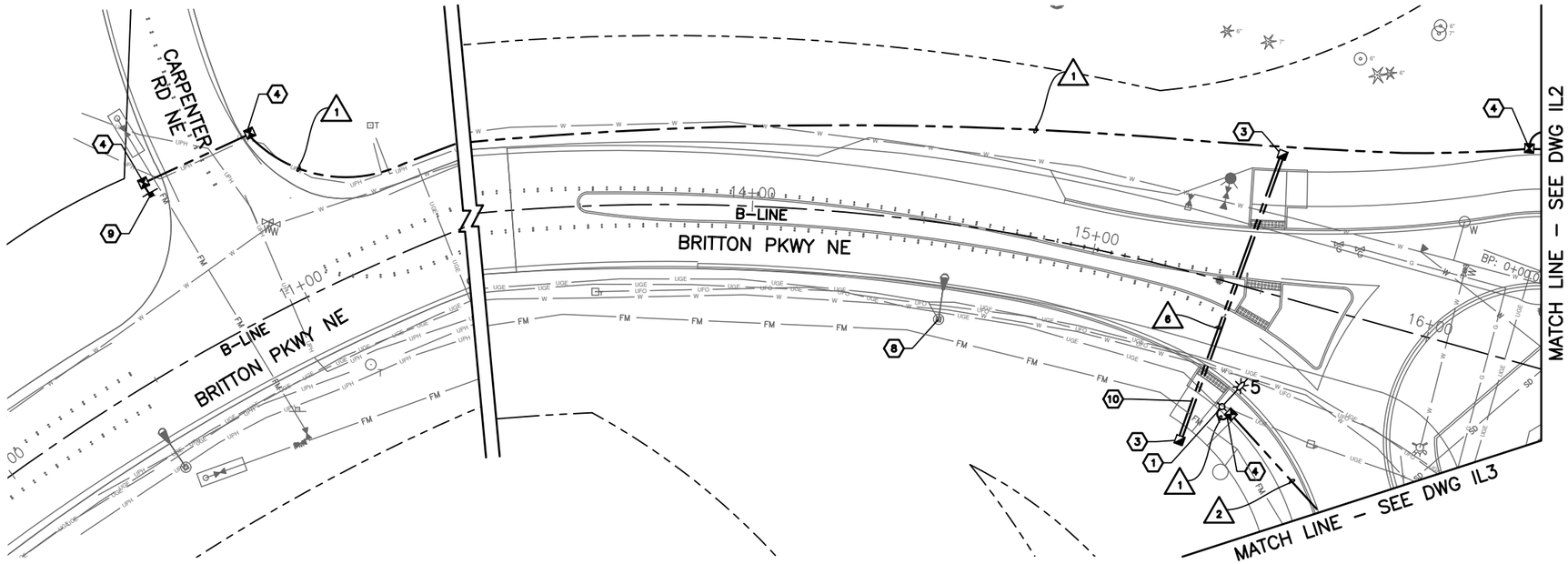

CONSTRUCTION NOTES:

1. INSTALL FOUNDATION AND 40' LIGHT STANDARD WITH 6–FOOT MASTARM AND 180W LED LUMINAIRE
2. INSTALL TYPE 8 JUNCTION BOX
3. TYPE 2 JUNCTION BOX
4. INSTALL TYPE 1 JUNCTION BOX
5. INSTALL FOUNDATION AND RELOCATE EXISTING SERVICE CABINET TO STA B 17+49.6, 62.5'RT. CONTACT UTILITY COMPANY FOR POWER SUPPLY EXTENSION.
6. INTERCEPT EXISTING CONDUITS AND CONNECT EXISTING CONDUITS.
7. REMOVE EXISTING LIGHT POLE AND POLE FOUNDATION
8. EXISTING LIGHT POLE TO REMAIN
9. REMOVE EXISTING STOP SIGN. INSTALL STOP SIGN WITH LED LIGHTS (36"x36")
10. TWO PARALLEL 4" CONDUITS

LEGEND

- EXISTING JUNCTION BOX
- JUNCTION BOX (TYPE 1, 2, 8)
- EXISTING STREET LIGHT ASSEMBLY
- PROPOSED STREET LIGHT ASSEMBLY
- ELECTRICAL CONDUIT
- ELECTRICAL SERVICE

EXISTING SERVICE
STA B 14+49.6 62.5RT

BREAKER SCHEDULE				
SERVICE & CIRCUITS	MAIN BREAKER AMPS	BRANCH BREAKER AMPS	CONTRACTOR AMPS	VOLTS
SERVICE	EXISTING			240
SIGNAL		NA	NA	
CONTROL & GFR		EX	NA	120
EX CIRCUIT		EX	NA	240
EX CIRCUIT		EX	NA	240
CIRCUIT C		20	30	240
SIGN		20	20	120

WIRING SCHEDULE						
RUN NO.	CONDUIT SIZE	WIRE/CABLE				REMARKS
		#2 AWG	#6 AWG	#8 AWG	BARE GND. #8 AWG	
1	2"	–	–	2	1	ILLUMINATION
2	4"	–	–	4	1	ROADWAY CROSSING ILLUMINATION
6	2–4"	–	–	–	–	2 SPARE CONDUITS

LUMINAIRE SCHEDULE					
LUMINAIRE NUMBER	POLE STATION	POLE OFFSET	POLE HEIGHT	CIRCUIT NUMBER	REMARKS
5	B 15+47.9	35.4' RT	40	1–C	NEW

20 0 20 40
SCALE IN FEET

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LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

ILLUMINATION PLAN

DRAWING NUMBER
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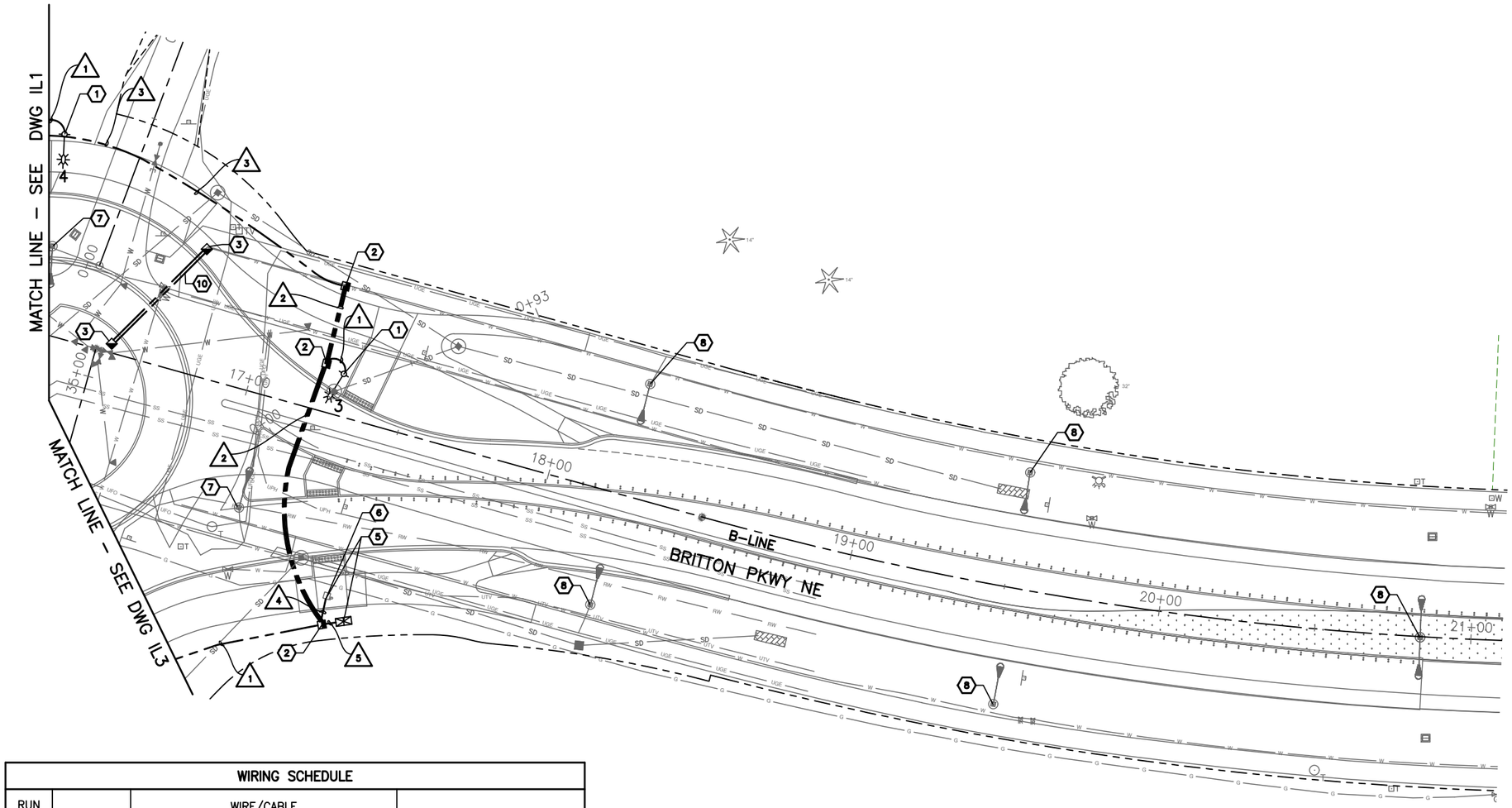

CONSTRUCTION NOTES:

1. INSTALL FOUNDATION AND 40' LIGHT STANDARD WITH 6-FOOT MASTARM AND 180W LED LUMINAIRE
2. INSTALL TYPE 8 JUNCTION BOX
3. TYPE 2 JUNCTION BOX
4. INSTALL TYPE 1 JUNCTION BOX
5. INSTALL FOUNDATION AND RELOCATE EXISTING SERVICE CABINET TO STA B 17+49.6, 62.5'RT. CONTACT UTILITY COMPANY FOR POWER SUPPLY EXTENSION.
6. INTERCEPT EXISTING CONDUITS AND CONNECT EXISTING CONDUITS.
7. REMOVE EXISTING LIGHT POLE AND POLE FOUNDATION
8. EXISTING LIGHT POLE TO REMAIN
9. REMOVE EXISTING STOP SIGN. INSTALL STOP SIGN WITH LED LIGHTS (36"x36")
10. TWO PARALLEL 4" CONDUITS

LEGEND

- EXISTING JUNCTION BOX
- JUNCTION BOX (TYPE 1, 2, 8)
- EXISTING STREET LIGHT ASSEMBLY
- PROPOSED STREET LIGHT ASSEMBLY
- ELECTRICAL CONDUIT
- ELECTRICAL SERVICE

WIRING SCHEDULE

RUN NO.	CONDUIT SIZE	WIRE/CABLE				REMARKS
		#2 AWG	#6 AWG	#8 AWG	BARE GND. #8 AWG	
1	2"	–	–	2	1	ILLUMINATION
2	3–4"	–	–	4	1	ROADWAY CROSSING ILLUMINATION
3	2"	–	–	4	1	ILLUMINATION AND SIGN
4	FIELD DECIDE	–	–	–	1	MATCH EXISTING CONDUIT/CONDUCTOR SIZE
5	4"	–	–	–	1	MATCH EXISTING AND NEW CONDUCTOR SIZE

LUMINAIRE SCHEDULE

LUMINAIRE NUMBER	POLE STATION	POLE OFFSET	POLE HEIGHT	CIRCUIT NUMBER	REMARKS
3	B 17+28.6	13.2' LT	40'	1–C	NEW
4	B 16+22.2	63.2' LT	40'	1–C	NEW

SEE SHEET IL1 FOR WIRING AND LUMINAIRE SCHEDULE

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DATUM
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10/31

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CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

ILLUMINATION PLAN

DRAWING NUMBER
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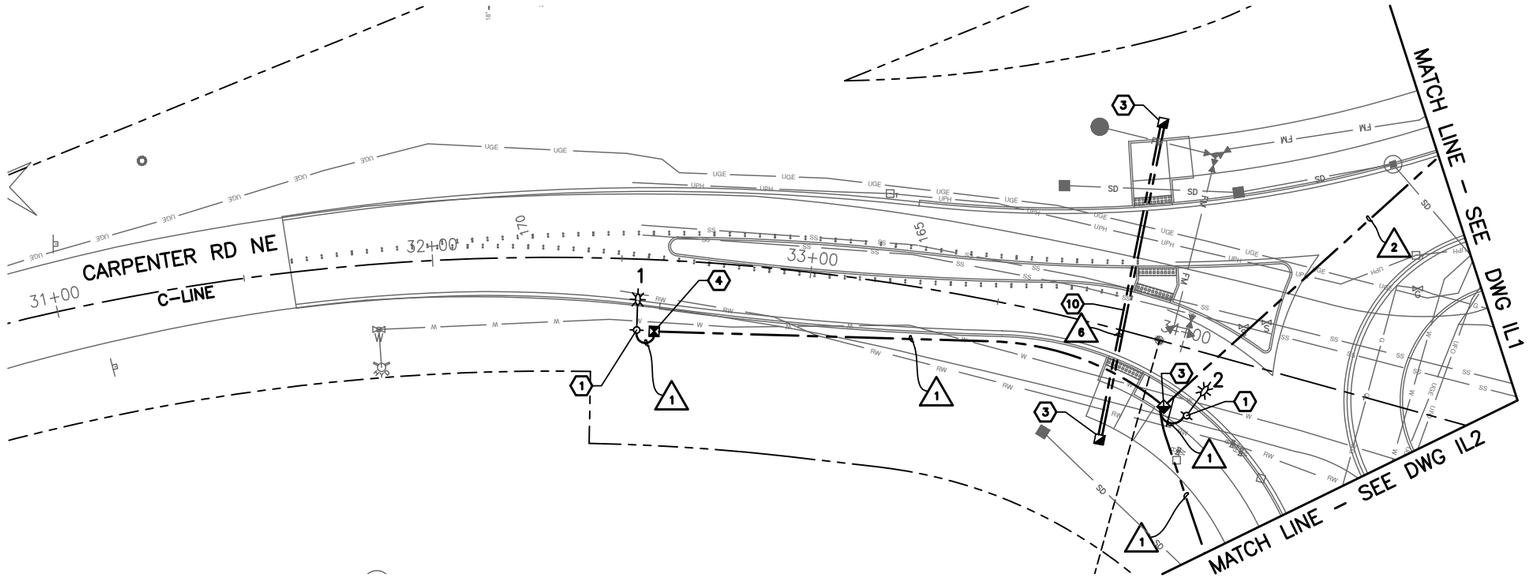

SEE SHEET IL1 FOR WIRING AND LUMINAIRE SCHEDULE

CONSTRUCTION NOTES:

1. INSTALL FOUNDATION AND 40' LIGHT STANDARD WITH 6–FOOT MASTARM AND 180W LED LUMINAIRE
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7. REMOVE EXISTING LIGHT POLE AND POLE FOUNDATION
8. EXISTING LIGHT POLE TO REMAIN
9. REMOVE EXISTING STOP SIGN. INSTALL STOP SIGN WITH LED LIGHTS (36"x36")
10. TWO PARALLEL 4" CONDUITS

LEGEND

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- JUNCTION BOX (TYPE 1, 2, 8)
- EXISTING STREET LIGHT ASSEMBLY
- PROPOSED STREET LIGHT ASSEMBLY
- ELECTRICAL CONDUIT
- ELECTRICAL SERVICE

WIRING SCHEDULE

RUN NO.	CONDUIT SIZE	WIRE/CABLE				REMARKS
		#2 AWG	#6 AWG	#8 AWG	BARE GND. #8 AWG	
1	2"	–	–	2	1	ILLUMINATION
2	4"	–	–	4	1	ROADWAY CROSSING ILLUMINATION
6	2–4"	–	–	–	–	2 SPARE CONDUITS

LUMINAIRE SCHEDULE

LUMINAIRE NUMBER	POLE STATION	POLE OFFSET	POLE HEIGHT	CIRCUIT NUMBER	REMARKS
1	C 32+54.5	18.8' RT	40'	1–C	NEW
2	C 34+06.1	17.3' RT	40'	1–C	NEW

20 0 20 40
SCALE IN FEET

DATUM
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JONATHAN A. LANE — STATE OF WASHINGTON — 42347 — REGISTERED PROFESSIONAL ENGINEER — 10/31

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

ILLUMINATION PLAN

DRAWING NUMBER
IL3

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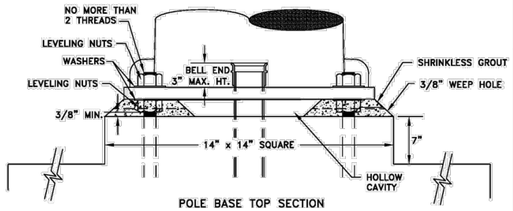
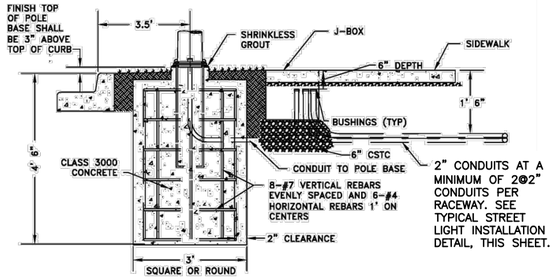
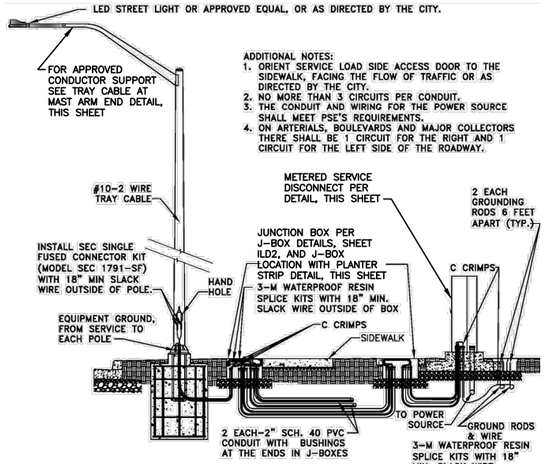


POLE BASE TOP SECTION



GENERAL NOTES:
1. THE FOUNDATION IS DESIGNED FOR 2000 PSF AVERAGE SOIL LATERAL BEARING PRESSURE.
2. BOLT PATTERN PER MANUFACTURER'S SPECIFICATIONS.
3. FOR DETAILS NOT SHOWN, USE MANUFACTURER'S SPECIFICATIONS AND DETAILS.
4. INSTALL EXPANSION JOINTS ON 3 SIDES OF J-BOX.
5. FOUNDATION HOLES SHALL BE AUGERED. IF HOLES ARE DUG, BACKFILL SHALL MEET WSDOT SECTION 8-20.

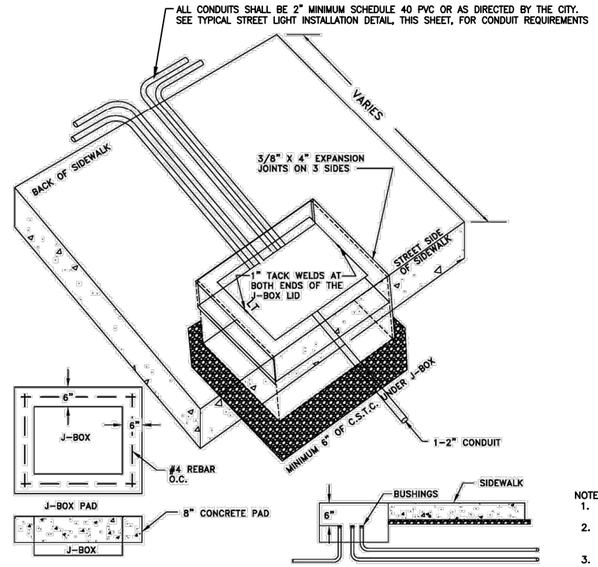
LUMINAIRE FOUNDATION FOR 30' & 40' POLES
NTS



ADDITIONAL NOTES:
1. ORIENT SERVICE LOAD SIDE ACCESS DOOR TO THE SIDEWALK, FACING THE FLOW OF TRAFFIC OR AS DIRECTED BY THE CITY.
2. NO MORE THAN 3 CIRCUITS PER CONDUIT.
3. THE CONDUIT AND WIRING FOR THE POWER SOURCE SHALL MEET PSE'S REQUIREMENTS.
4. ON ARTERIALS, BOULEVARDS AND MAJOR COLLECTORS THERE SHALL BE 1 CIRCUIT FOR THE RIGHT AND 1 CIRCUIT FOR THE LEFT SIDE OF THE ROADWAY.

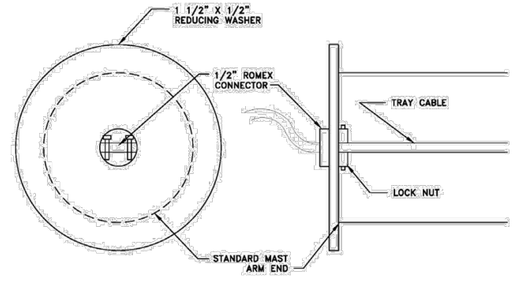
NOTES:
1. A METERED SERVICE DISCONNECT IS REQUIRED FOR EACH BRANCH CIRCUIT. SEE METERED SERVICE DISCONNECT DETAIL, THIS SHEET.
2. INSTALLATION SHALL CONFORM TO NATIONAL ELECRICAL CODE, WSDOT, AND CITY STANDARDS.
3. MARKING INSULATION CONDUCTORS TO USE AS EQUIPMENT GROUND OR GROUNDED CONDUCTOR SHALL NOT BE PERMITTED.
4. ALL WIRE SHALL BE INSTALLED IN CONDUIT AS SPECIFIED ABOVE.
5. ALL SPLICES SHALL BE MADE IN A JUNCTION BOX. WIRE NUTS SHALL NOT BE ALLOWED. SPLICES SHALL BE CENTERED AND ENCASED IN 3M WATERPROOF RESIN SPLICE KITS TYPE 82-A1, 82-81, OR CITY APPROVED EQUAL.
6. THE SERVICE DISCONNECT SHALL BE INSTALLED BEHIND THE SIDEWALK NEAR A PROPERTY LINE AND WHENEVER POSSIBLE IN AN OPEN SPCE. A J-BOX SHALL BE INSTALLED WITHIN 10' OF THE SERVICE DISCONNECT.
7. CURRENT CARRYING CONDUCTORS SHALL BE TYPE U.S.E. INSULATED, STRANDED, COPPER, MINIMUM #8 AWG. GROUND EQUIPMENT CONDUCTORS SHALL BE BARE STRANDED COPPER MINIMUM #8 AWG.

TYPICAL STREET LIGHT INSTALLATION
NTS

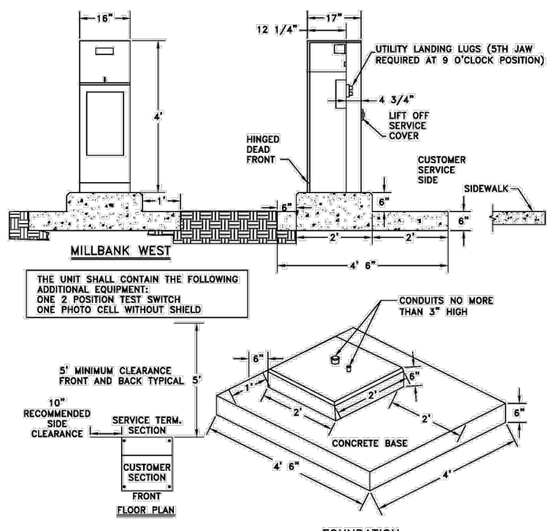


NOTES:
1. SEE LOCKING LID STANDARD DUTY JUNCTION BOX DETAILS ON SHEET ILD2 FOR J-BOX SIZE.
2. ALL LIDS SHALL BE STEEL AND MARKED WITH LT OR TS PER LOCKING LID STANDARD DUTY JUNCTION BOX DETAILS ON SHEET ILD2.
3. IF NO SIDEWALK EXISTS, A CONCRETE PAD SHALL BE CONSTRUCTED 8" THICK, 6" WIDE, COMPLETELY SURROUNDING THE J-BOX WITH ONE #4 REBAR ON CENTER EACH SIDE AND TIED AT CORNERS.
4. CONDUIT RUNS SHALL NOT EXCEED 200 FEET BETWEEN JUNCTION BOXES.
5. JUNCTION BOXES SHALL BE LOCATED WITHIN 10 FEET OF EACH LUMINAIRE POLE AND AT ROAD CROSSING.
6. A SPARE 2" CONDUIT SHALL BE REQUIRED ON ARTERIALS, COLLECTORS, AND RESIDENTIAL STREETS.

J-BOX LOCATION WITH PLANTER STRIP
NTS



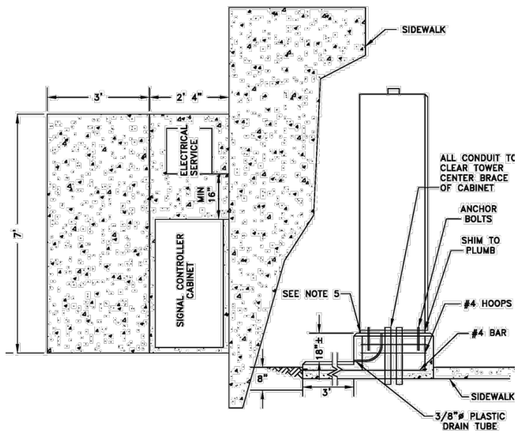
TRAY CABLE AT MAST ARM END
NTS



SPECIFICATIONS:
1. STANDARD VOLTAGE IS 120/240V; 200 AMP.
2. CALTRANS TYPE 3B SERVICE OR U.L. APPROVED EQUAL.
3. TYPE 3R RAIN PROOF ENCLOSURE.
4. NATURAL ALUMINUM CONSTRUCTION.
5. INTERIORS WILL ACCEPT PLUG-IN BREAKERS (BRYANT, GE, WESTINGHOUSE, CROUSE-HINDS).
6. 2-30 AMP LIGHTING CONTACTORS.

GENERAL NOTES:
1. THE SERVICE DISCONNECT SHALL BE INSTALLED BEHIND THE SIDEWALK NEAR A PROPERTY LINE AND WHENEVER POSSIBLE IN AN OPEN SPACE.
2. INSTALLATION SHALL BE CONFORM TO THE NATIONAL ELECTRICAL CODE, WSDOT AND THE CITY OF LACEY STANDARDS.
3. THE CLEARANCE ZONE AROUND THE SERVICE CABINET SHALL BE 5'.
4. THE CABINET FOUNDATION (TOP TIER) SHALL BE PER THE MANUFACTURER'S REQUIREMENTS. DO NOT POUR THE FOUNDATION UNTIL THAT INFORMATION IS RECEIVED.

METERED SERVICE DISCONNECT FOR STREET LIGHTING AND TRAFFIC SIGNALS
NTS



DRAWING IS TYPICAL, SEE NOTE #3. THE PURPOSE IS TO FIT THE CONTROLLER AND SERVICE ON ONE PAD WITH 16" SPACE BETWEEN.

GENERAL NOTES:
1. PAD AND PEDESTAL MOUNTS SHALL BE COMERCIAL CONCRETE UNLESS NOTED OTHERWISE ON PLANS.
2. WHERE PAD OF PEDESTAL MOUNTS ARE LOCATED IN A SIDEWALK, CONSTRUCT MOUNT TOP FLUSH WITH SIDEWALK GRADE, OMITTING CHAMFER WHERE TOP AND SIDEWALK ABUT.
3. PAD MOUNT DESIGN IS TYPICAL: CONTRACTOR SHALL UTILIZE CABINET ON BASE WITH RESPECT TO CONDUIT PLACEMENT. CONTRACTOR SHALL SUBMIT FOR APPROVAL A PROPOSED DESIGN WITH PLAN, ELEVATION AND ANY RELEVANT SECTION VIEW.
4. CABINET SHALL BE ATTACHED WITH AASHTO M 164 CHEMICALLY BONDED ANCHOR TO EXISTING PAD MOUNTS. ANCHOR INSTALLATIONS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS IN DRY CONDITIONS.
5. PLACE A SILICONE SEAL BETWEEN THE CABINET FOUNDATION AND THE CABINET FOR THE PAD MOUNT DESIGN.
6. CABINET AND SERVICE TO BE CENTERED ON BASE.

SIGNAL CABINET/ELECTRICAL SERVICE FOUNDATION
NTS

DATUM
NAD 1983/91

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COL DESIGNED BY
COL DRAWN BY
YZ CHECKED BY
ATB APPROVED BY
DATE: 10/31/2023

JON L. JANE, STATE OF WASHINGTON, 12347, REGISTERED PROFESSIONAL ENGINEER
10/31

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

ILLUMINATION DETAILS

DRAWING NUMBER
ILD1
SHT 33 OF 64

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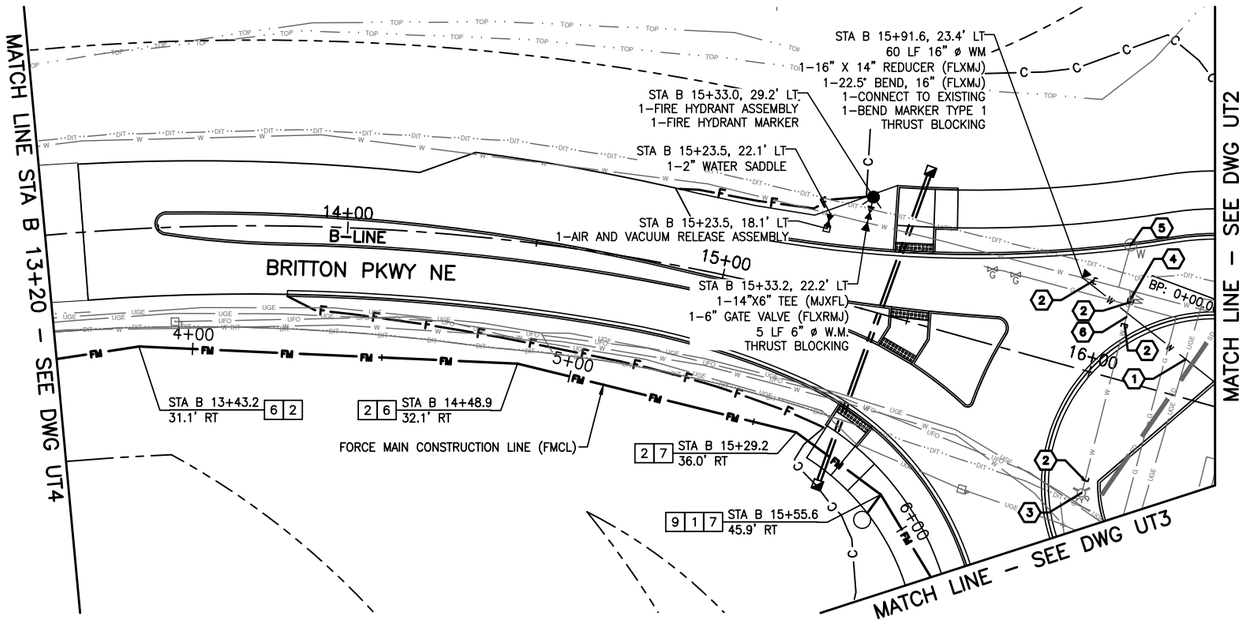

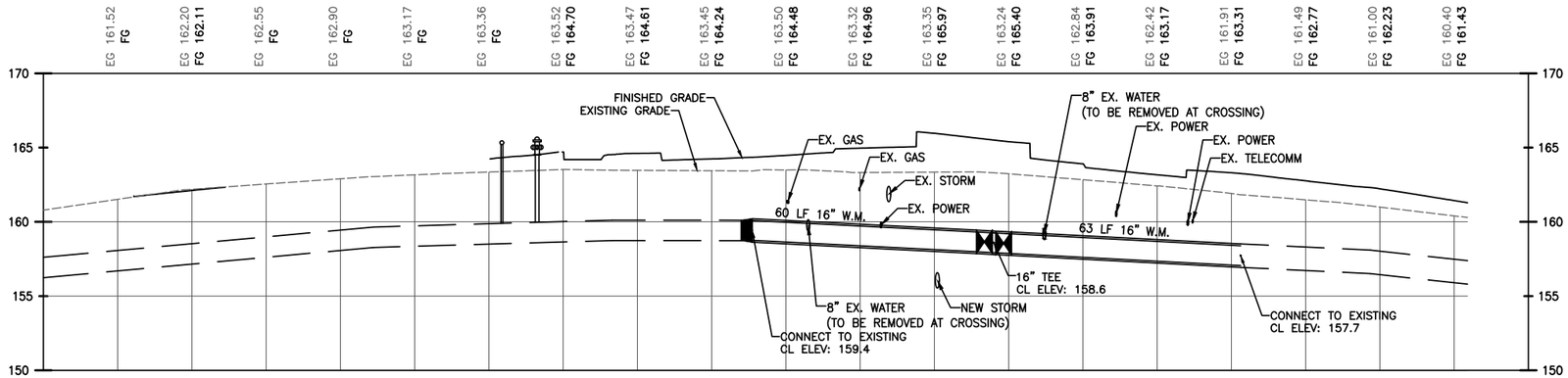

WATERLINE PROFILE – BRITTON PKWY NE

GENERAL NOTES

1. CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555 OR 811.
2. THE CONTRACTOR SHALL FIELD VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION. EXISTING UTILITIES ARE SHOWN BASED ON SURFACE LOCATE MARKS AND LIMITED POTHOLING MEASUREMENTS.
3. THE CONTRACTOR SHALL COORDINATE WATER SYSTEM OUTAGE WITH CITY OF LACEY STAFF. THE CITY WILL BE GIVEN 72 HOURS NOTICE PRIOR TO SCHEDULING A SHUTDOWN. EXISTING VALVES SHALL BE OPERATED BY CITY EMPLOYEES ONLY.
4. THE CONTRACTOR SHALL COORDINATE WATER SYSTEM OUTAGE WITH CITY OF LACEY STAFF. EXISTING VALVES SHALL BE OPERATED BY CITY EMPLOYEES ONLY.
5. SEE DRAWING AL1 AND AL2 FOR ALIGNMENT AND CONTROL INFORMATION.
6. SEE DRAWINGS SP1 TO SP6 FOR PAVEMENT REMOVAL AND DRAWINGS PV1 TO PV6 FOR PAVEMENT REPLACEMENT.
7. SEPARATION BETWEEN WATER AND NON-POTABLE LINES SHALL BE MAINTAINED PER DOE STANDARDS. INVERT OF THE WATER MAIN TO BE 18" ABOVE THE CROWN OF THE NON-POTABLE LINE.
8. SEE DRAWING UP1 FOR SEWER FORCE MAIN PROFILE.

CONSTRUCTION NOTES:

1. CONTRACTOR TO COORDINATE RELOCATION OF EXISTING POWER CONDUIT
2. CUT EXISTING WATER MAIN. CAP OR PLUG END OF PIPE AND ABANDON.
3. REMOVE EXISTING FIRE HYDRANT
4. CLOSE VALVE AND REMOVE EXISTING VALVE BOX
5. REMOVE EXISTING WATER MANHOLE AND AIR RELEASE VALVE. CUT AND PLUG 2" WATER SERVICE TO MANHOLE.
6. REMOVE EXISTING WATER MAIN SEGMENT BETWEEN CUTS.

[1] BEND MARKER TYPE I PER DETAIL ON SHEET UD2
[2] BEND MARKER TYPE II PER DETAIL ON SHEET UD2
[3] 4" PLUG VALVE & VALVE BOX, FL X FL WITH RJ ADAPTERS
[4] CONCRETE THRUST BLOCKING PER DETAIL ON SHEET UD2
[5] FUTURE EXTENSION ASSEMBLY PER DETAIL ON SHEET UD1
[6] 11.25° BEND, RJ
[7] 22.5° BEND, RJ
[8] 45° BEND, RJ
[9] SEWER AIR RELEASE ASSEMBLY PER DETAIL ON SHEET UD1. PLACE AT HIGH POINT IN FORCE MAIN.
[10] LOW POINT DRAIN PER DETAIL ON SHEET UD3

20 0 20 40
SCALE IN FEET

DATUM
NAD 1983/91

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JOHN PAUL PARKER STATE OF WASHINGTON 40502 REGISTERED PROFESSIONAL ENGINEER
10/31/23

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

UTILITY PLAN

DRAWING NUMBER
UT1
SHT 34 OF 64

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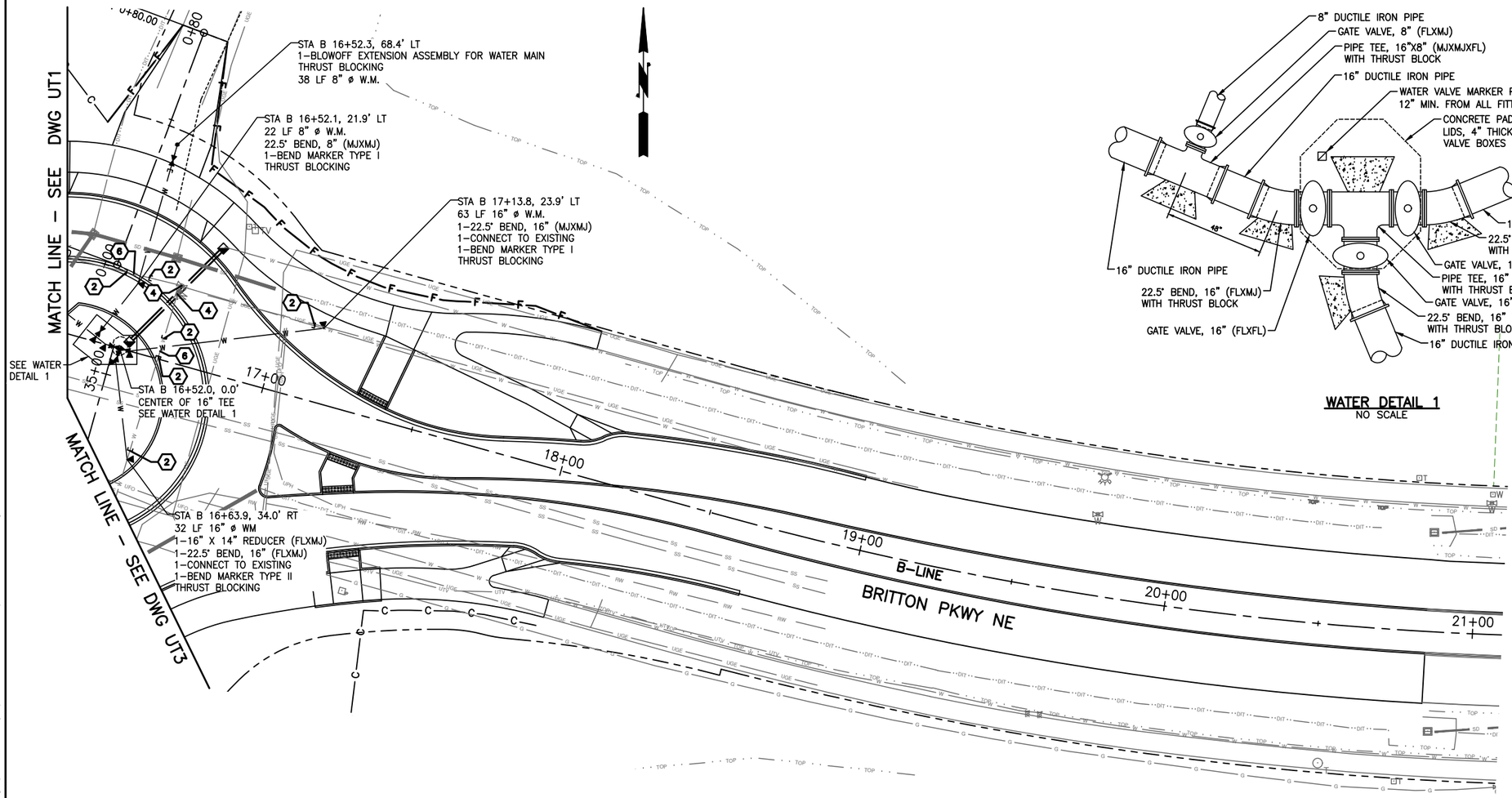

WATER DETAIL 1
NO SCALE

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6. SEE DRAWINGS SP1 TO SP6 FOR PAVEMENT REMOVAL AND DRAWINGS PV1 TO PV6 FOR PAVEMENT REPLACEMENT.
7. SEPARATION BETWEEN WATER AND NON–POTABLE LINES SHALL BE MAINTAINED PER DOE STANDARDS. INVERT OF THE WATER MAIN TO BE 18" ABOVE THE CROWN OF THE NON–POTABLE LINE.
8. SEE DRAWING UP1 FOR SEWER FORCE MAIN PROFILE.

CONSTRUCTION NOTES:

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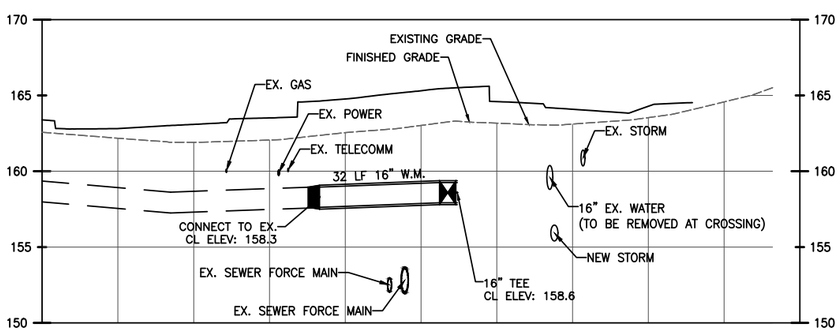
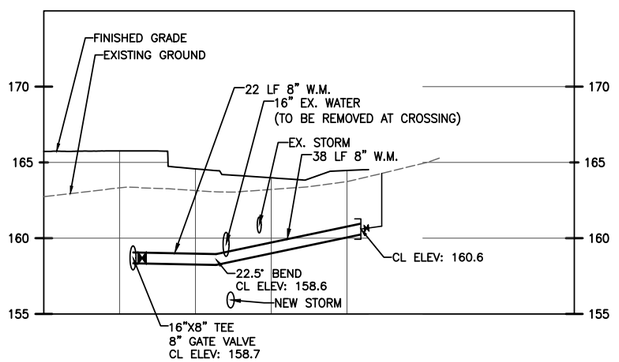
3. 4" PLUG VALVE & VALVE BOX, FL X FL WITH RJ ADAPTERS
4. CONCRETE THRUST BLOCKING PER DETAIL ON SHEET UD2
5. FUTURE EXTENSION ASSEMBLY PER DETAIL ON SHEET UD1
6. 11.25° BEND, RJ
7. 22.5° BEND, RJ
8. 45° BEND, RJ
9. SEWER AIR RELEASE ASSEMBLY PER DETAIL ON SHEET UD1. PLACE AT HIGH POINT IN FORCE MAIN.
10. LOW POINT DRAIN PER DETAIL ON SHEET UD3



WATERLINE PROFILE – CARPENTER ROAD



WATERLINE PROFILE – BRITTON LANE

SCALE IN FEET
20 0 20 40

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PAUL PAUL WASHINGTON KORDO REGISTERED PROFESSIONAL ENGINEER 10/31/23

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

UTILITY PLAN

DRAWING NUMBER
UT2

SHT 35 OF 64

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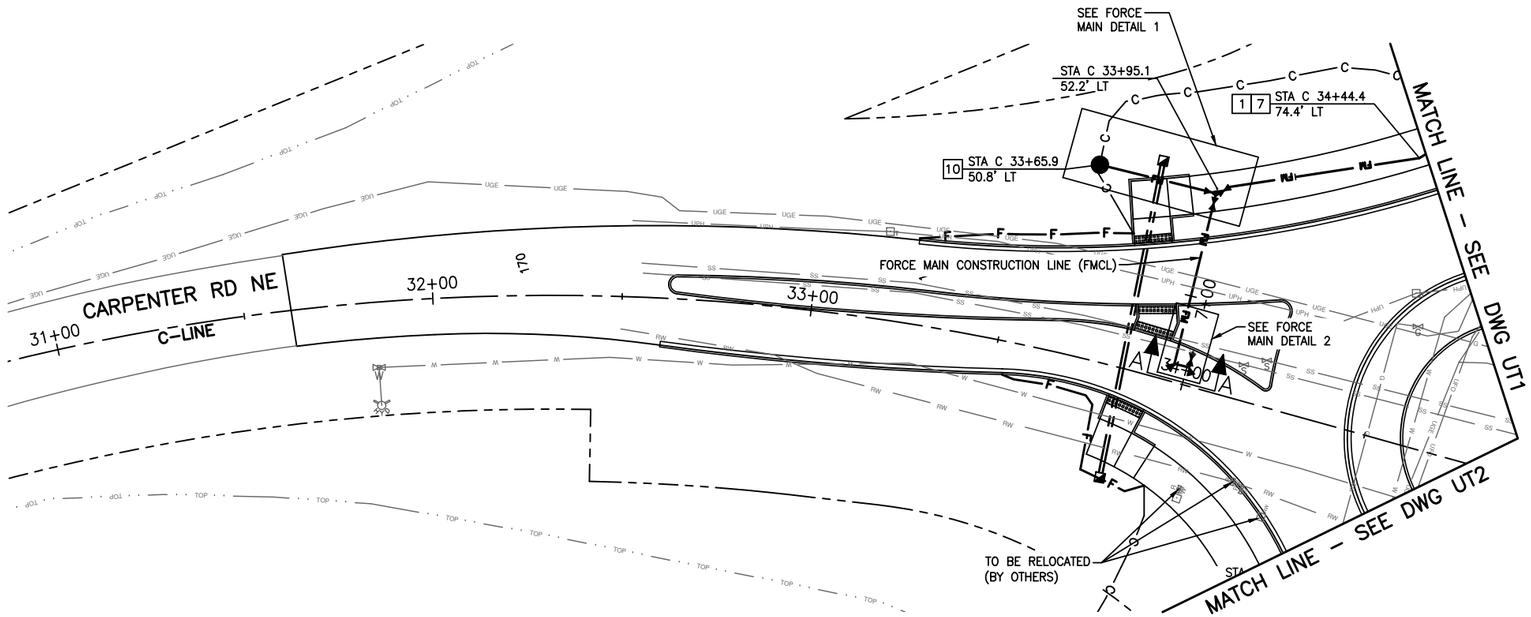

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SCALE IN FEET

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CONSTRUCTION NOTES:

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6. REMOVE EXISTING WATER MAIN SEGMENT BETWEEN CUTS.

1 BEND MARKER TYPE I PER DETAIL ON SHEET UD2

2 BEND MARKER TYPE II PER DETAIL ON SHEET UD2

3 4" PLUG VALVE & VALVE BOX, FL X FL WITH RJ ADAPTERS

4 CONCRETE THRUST BLOCKING PER DETAIL ON SHEET UD2

5 FUTURE EXTENSION ASSEMBLY PER DETAIL ON SHEET UD1

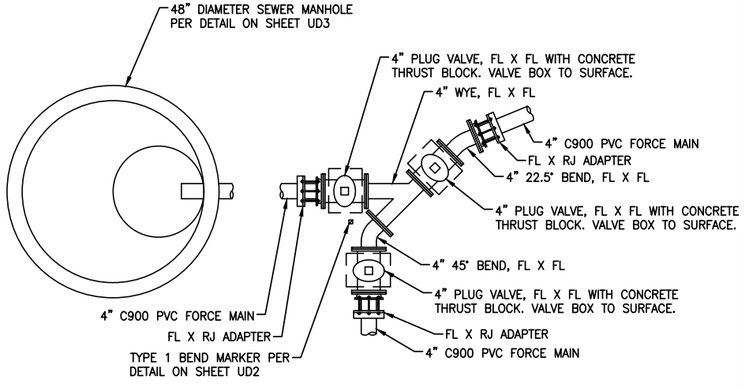
6 11.25° BEND, RJ

7 22.5° BEND, RJ

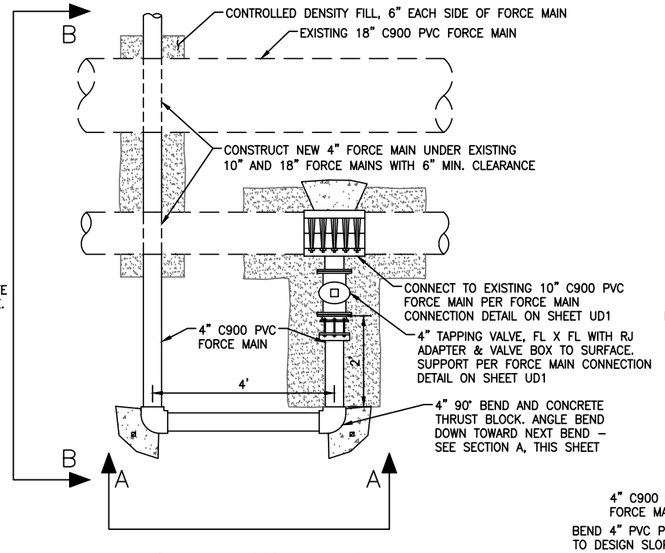
8 45° BEND, RJ

9 SEWER AIR RELEASE ASSEMBLY PER DETAIL ON SHEET UD1. PLACE AT HIGH POINT IN FORCE MAIN.

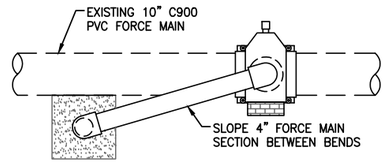
10 LOW POINT DRAIN PER DETAIL ON SHEET UD3



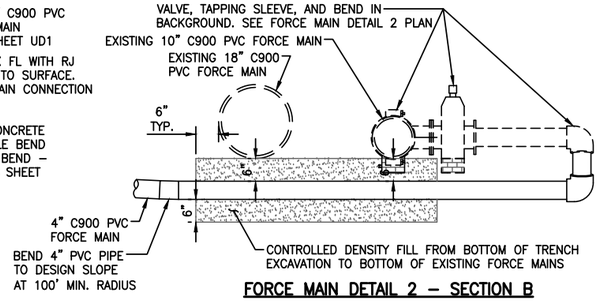
FORCE MAIN DETAIL 1



FORCE MAIN DETAIL 2 – PLAN



FORCE MAIN DETAIL 2 – SECTION A



FORCE MAIN DETAIL 2 – SECTION B

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PAUL PHILLIPS STATE OF WASHINGTON 40880 REGISTERED PROFESSIONAL ENGINEER 10/31/23

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

UTILITY PLAN

DRAWING NUMBER

UT3

SHT 36 OF 64

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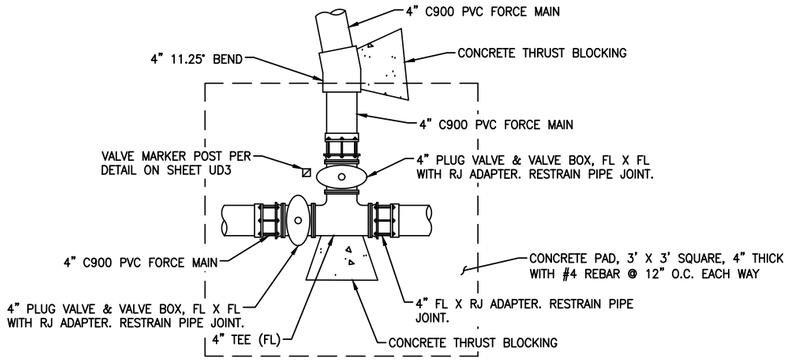
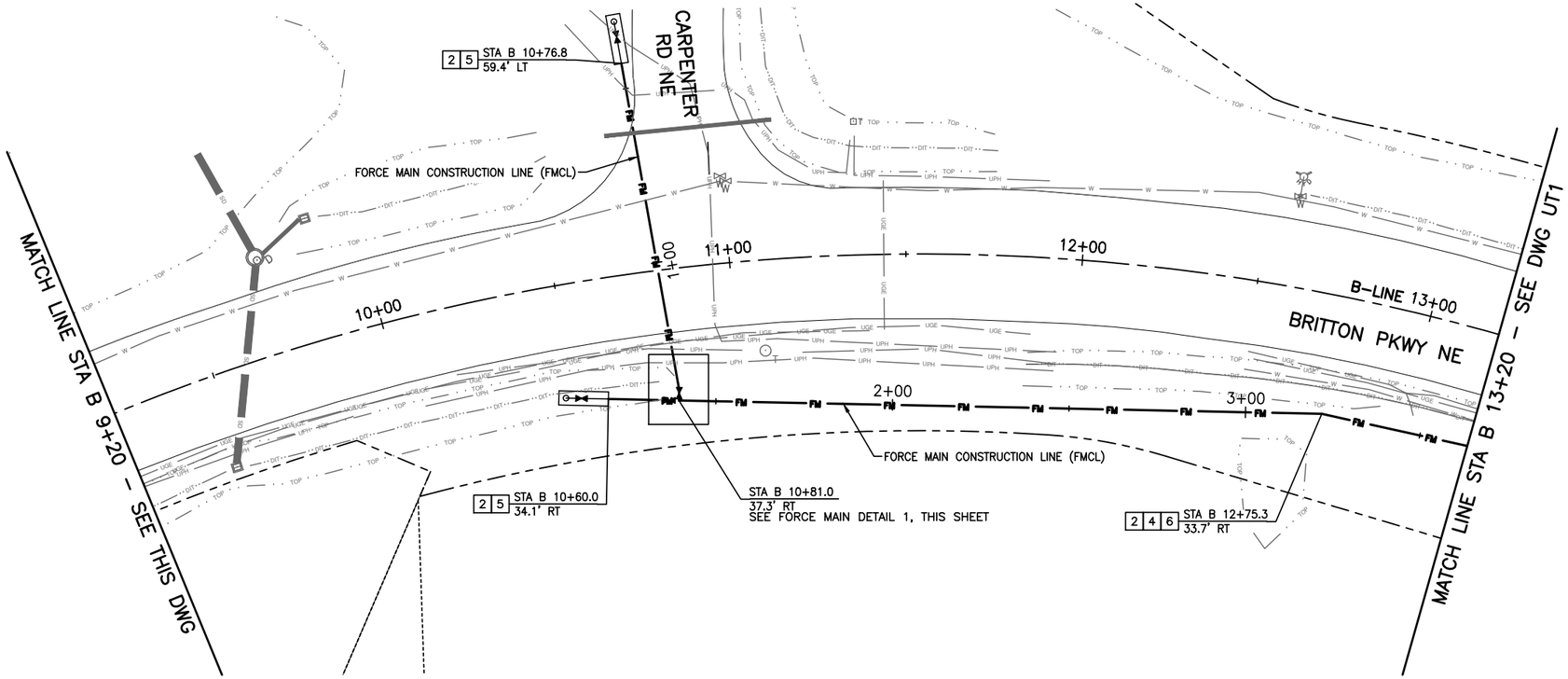


FORCE MAIN DETAIL 1



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8. SEE DRAWING UP1 FOR SEWER FORCE MAIN PROFILE.

CONSTRUCTION NOTES:

(1) CONTRACTOR TO COORDINATE RELOCATION OF EXISTING POWER CONDUIT

(2) CUT EXISTING WATER MAIN. CAP OR PLUG END OF PIPE AND ABANDON.

(3) REMOVE EXISTING FIRE HYDRANT

(4) CLOSE VALVE AND REMOVE EXISTING VALVE BOX

(5) REMOVE EXISTING WATER MANHOLE AND AIR RELEASE VALVE. CUT AND PLUG 2" WATER SERVICE TO MANHOLE.

(6) REMOVE EXISTING WATER MAIN SEGMENT BETWEEN CUTS.

[1] BEND MARKER TYPE I PER DETAIL ON SHEET UD2

[2] BEND MARKER TYPE II PER DETAIL ON SHEET UD2

[3] 4" PLUG VALVE & VALVE BOX, FL X FL WITH RJ ADAPTERS

[4] CONCRETE THRUST BLOCKING PER DETAIL ON SHEET UD2

[5] FUTURE EXTENSION ASSEMBLY PER DETAIL ON SHEET UD1

[6] 11.25° BEND, RJ

[7] 22.5° BEND, RJ

[8] 45° BEND, RJ

[9] SEWER AIR RELEASE ASSEMBLY PER DETAIL ON SHEET UD1. PLACE AT HIGH POINT IN FORCE MAIN.

[10] LOW POINT DRAIN PER DETAIL ON SHEET UD3

20 0 20 40
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PAUL A. BRITTON STATE OF WASHINGTON 40580 REGISTERED PROFESSIONAL ENGINEER 10/31/23

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

UTILITY PLAN

DRAWING NUMBER
UT4

SHT 37 OF 64

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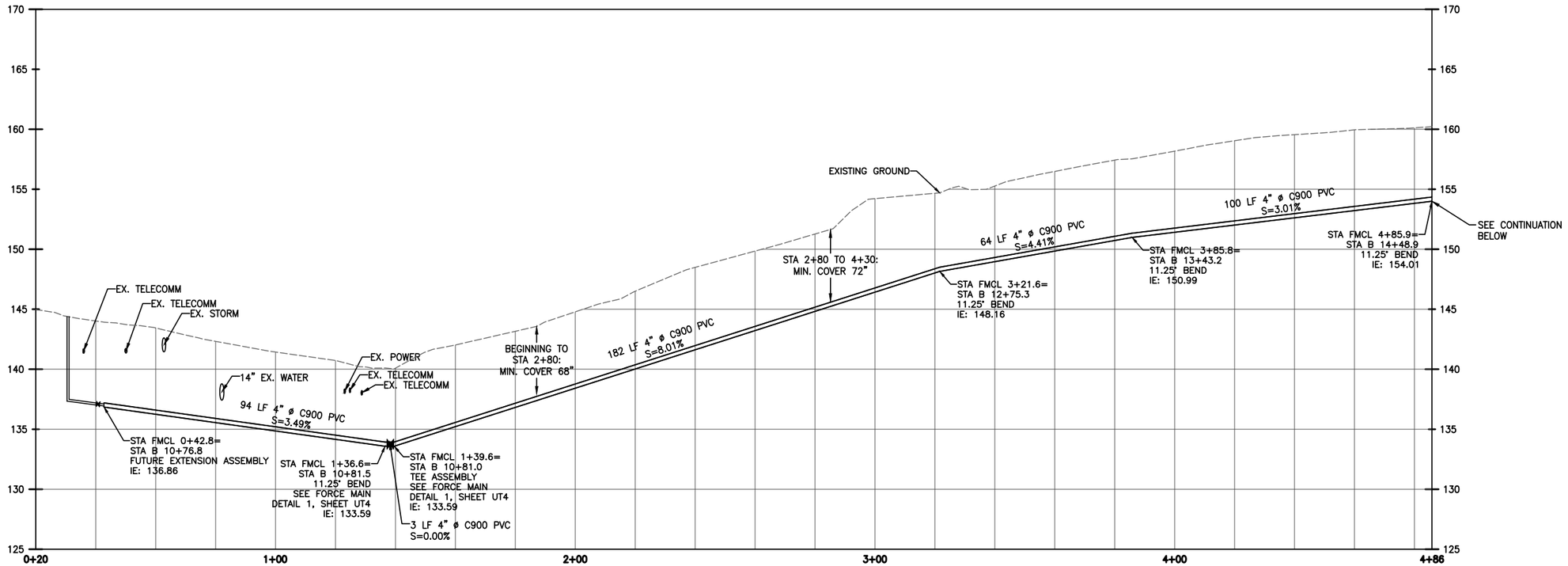
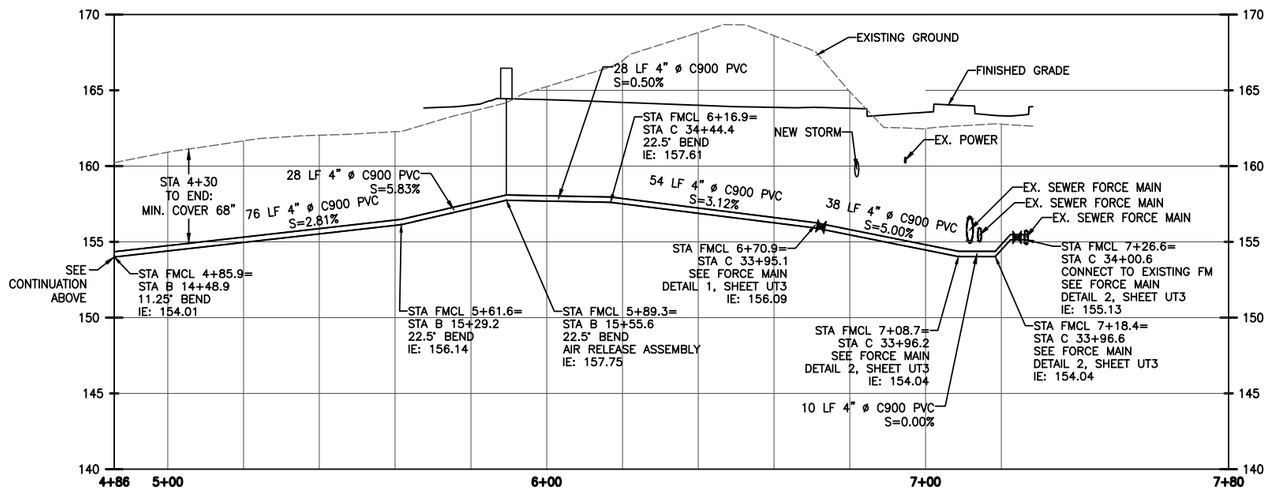
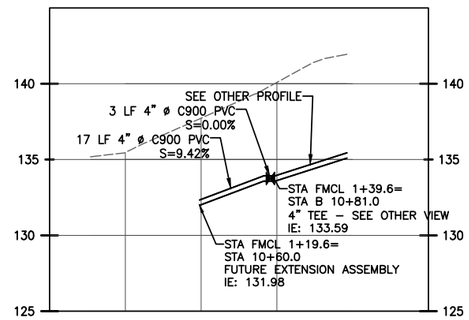


PROFILE ALONG FORCE MAIN CONSTRUCTION LINE



PROFILE ALONG FORCE MAIN CONSTRUCTION LINE



PROFILE TO FUTURE EXTENSION ASSEMBLY

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SCALE IN FEET

DATUM
NAD 1983/91

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PAUL PARK — WASHINGTON — 40880 — REGISTERED PROFESSIONAL ENGINEER
10/31/23

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

UTILITY PROFILE

DRAWING NUMBER
UP1

SHT 38 OF 64

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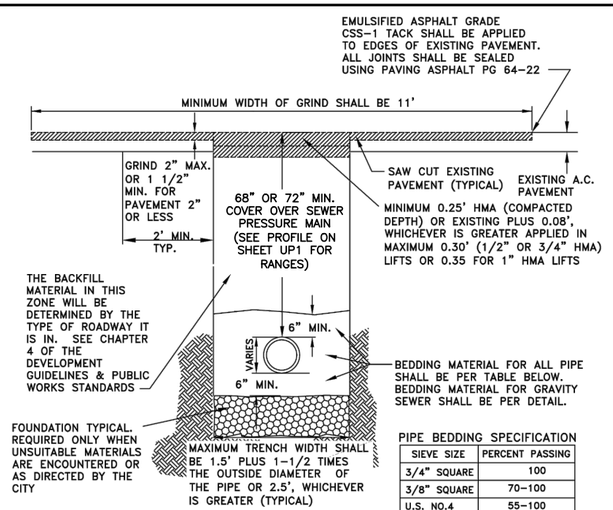
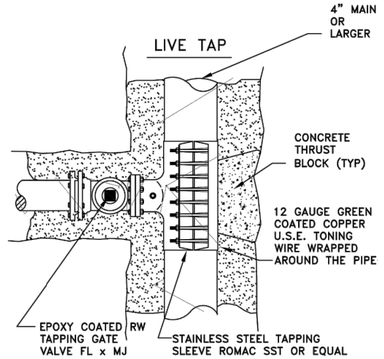


GENERAL NOTES:
1. ALL MATERIALS EXCEPT H.M.A. SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO 95% DENSITY AS DETERMINED BY ASTM D1557.
2. ALL MATERIALS, WORKMANSHIP, AND INSTALLATION SHALL BE IN CONFORMANCE WITH THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AS AMENDED BY CITY OF LACEY STANDARDS.
3. KEEP TRENCH BOTTOM COMPACTED WITH UNIFORM GRADE. NO TEMPORARY SUPPORTS, I.E. BLOCKS, WILL BE ALLOWED TO SUPPORT PIPE. TRENCH BOTTOM SHALL BE TO GRADE PRIOR TO PIPE INSTALLATION.
4. WHENEVER GROUND WATER IS PRESENT A BARRIER SHALL BE INSTALLED ABOVE THE BEDDING.
5. DEVIATION FROM COMPACTION STANDARDS MAY BE APPROVED BY THE DIRECTOR, OR DESIGNEE, WHERE RECOMMENDED BY THE LICENSED PROFESSIONAL ENGINEER FOR PLANNED OR EXISTING INFILTRATION FACILITIES.
6. EXISTING SURFACES PAVED WITH PERMEABLE MATERIALS SHALL BE REPLACED IN-KIND WHERE FEASIBLE IN CONFORMANCE WITH 4B.180 TRENCH BACKFILL AND RESTORATION.

PIPE BEDDING SPECIFICATION

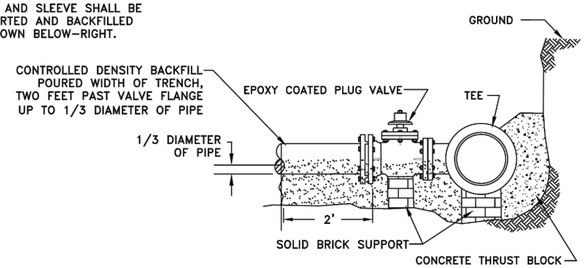
SIEVE SIZE	PERCENT PASSING
3/4" SQUARE	100
3/8" SQUARE	70-100
U.S. NO.4	55-100
U.S. NO. 10	35-95
U.S. NO. 20	20-80
U.S. NO. 40	10-55
U.S. NO. 100	0-10
U.S. NO. 200	0-03

TYPICAL TRENCH SECTION FOR FORCE MAIN
NO SCALE

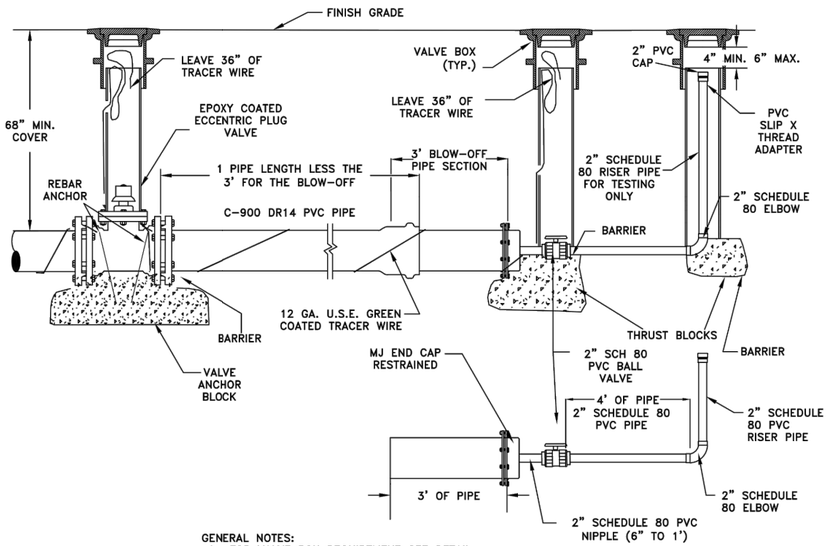


VALVE AND SLEEVE SHALL BE SUPPORTED AND BACKFILLED AS SHOWN BELOW-RIGHT.

GENERAL NOTES:
1. 11 MIL. PLASTIC OR CONSTRUCTION FABRIC SHALL BE WRAPPED AROUND PIPE AND FITTINGS BEFORE THRUST BLOCK IS POURED AND BACKFILLED.
2. CONTROLLED DENSITY FILL SHALL CONSIST OF 1750# SAND, 1750# PEA GRAVEL, 230# WATER, 141# CEMENT, 6 OZ. WATER REDUCING AGENT PER 100# CEMENT.
3. THE MINIMUM DISTANCE FOR ANY TAP OR CUT-IN SHALL BE 2' FROM A BELL END OR FITTING.
4. SUPPORT VALVE AND SLEEVE CONTINUOUSLY THROUGH INSTALLATION.
5. CONNECT TO EXISTING TRACER WIRE PER DETAIL.
6. CUT-IN TEE SHALL BE EPOXY COATED 10 MILS THICK OR COATED WITH PROTECTO 401 OR APPROVED EQUAL.

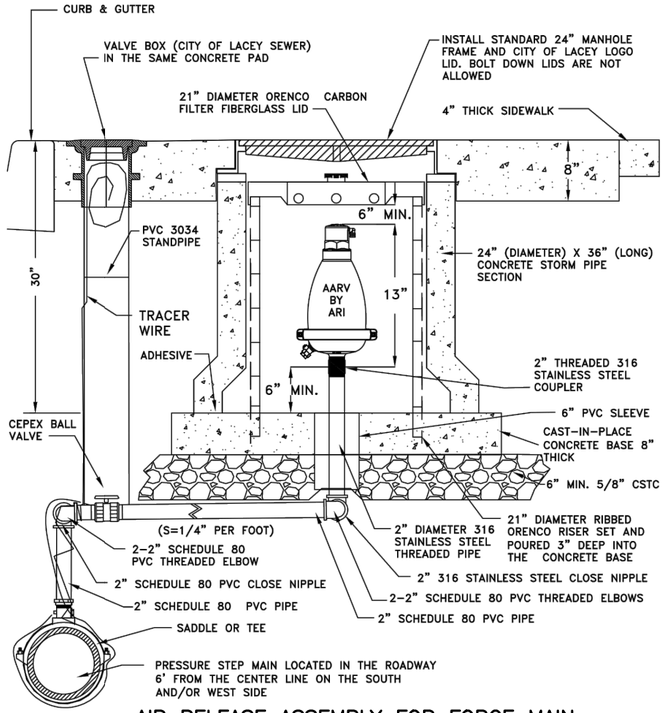


CONNECTION TO EXISTING FORCE MAIN
NO SCALE



GENERAL NOTES:
1. FOR VALVE BOX REQUIREMENT SEE DETAIL.
2. THIS IS A FUTURE SEWER PRESSURE/FORCE MAIN EXTENSION DETAIL AND THE TEST REQUIREMENTS SHALL BE PER SECTION 7A.070 TESTING UNDER FORCE MAINS.
3. SEE SECTION 7D.030 FORCE MAIN FOR PIPING REQUIREMENTS.
4. IN UNUSUAL CIRCUMSTANCES THE PIPE WITH THE BELL END (MIN. LENGTH 17') MAY BE REDUCED TO A SHORTER LENGTH BUT NOT LESS THAN 10'. ALL OTHER CHANGES SHALL BE UNDER THE DIRECTION OF THE CITY ENGINEER.

FUTURE EXTENSION ASSEMBLY FOR FORCE MAIN
NO SCALE



GENERAL NOTES:
1. THE CONCRETE CYLINDER SHALL BE BONDED TO THE BASE TO PREVENT THE EFFLUENT FROM SEEPING INTO THE GROUND.
2. THE AIR RELEASE VALVE FOR THE S.T.E.P. SEWER SHALL BE S-021 AUTOMATIC AIR RELEASE VALVE BY ARI.
3. A RAIN GUARD SHALL BE REQUIRED.
4. LIFT STATION SEWER FORCE MAINS SHALL USE ARI MODEL D-025.
5. APPROVAL IS NEEDED BY THE CITY OF LACEY ENGINEER.

AIR RELEASE ASSEMBLY FOR FORCE MAIN
NO SCALE

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LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

UTILITY DETAILS

DRAWING NUMBER: UD1

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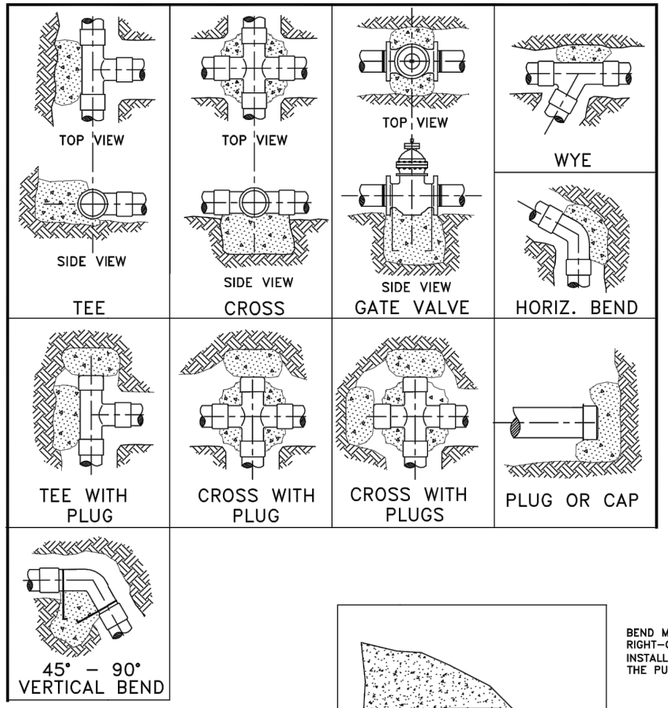


GENERAL NOTES:
1. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. PLASTIC BARRIER SHALL BE PLACED BETWEEN ALL THRUST BLOCKS AND FITTIINGS.
3. ANCHOR REBAR SHALL BE 5/8" MINIMUM DIAMETER

THRUST LOADS

THRUST AT FITTINGS IN POUNDS AT 200 POUNDS PER SQUARE INCH OF WATER PRESSURE

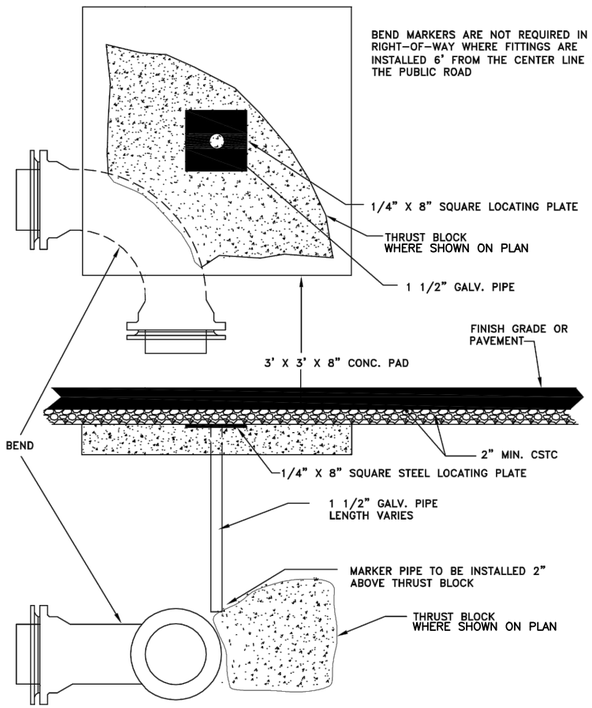
PIPE DIAMETER	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	DEAD END OR TEE
4"	3,600	2,000	1,000	500	2,600
6"	8,000	4,400	2,300	1,200	5,700
8"	14,300	7,700	4,000	2,000	10,100
10"	22,300	12,100	6,200	3,100	15,800
12"	32,000	17,400	8,900	4,500	22,700
14"	43,600	23,600	12,100	6,100	30,800
16"	57,000	30,800	15,700	7,900	40,300

NOTES:
1. BLOCKING SHALL BE COMMERCIAL CONCRETE POURED IN PLACE AGAINST UNDISTURBED EARTH. FITTING SHALL BE ISOLATED FROM CONCRETE THRUST BLOCK WITH PLASTIC OR SIMILAR MATERIAL.
2. TO DETERMINE THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET (S.F.):
   EXAMPLE : 12" – 90° BEND IN SAND AND GRAVEL
   32,000 LBS ÷ 3000 LB/S.F. = 10.7 S.F. OF AREA
3. AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZE, PRESSURES AND SOIL CONDITIONS.
4. BLOCKING SHALL BE ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.

SAFE SOIL BEARING LOADS

FOR HORIZONTAL THRUSTS WHEN THE DEPTH OF COVER OVER THE PIPE EXCEEDS 2 FEET

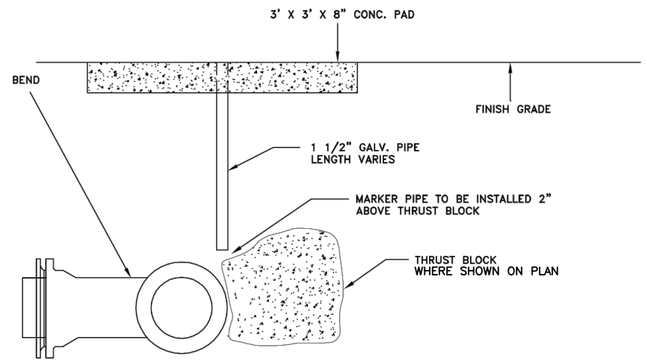
SOIL	POUNDS PER SQUARE FOOT
MUCK, PEAT	0
SOFT CLAY	1,000
SAND	2,000
SAND & GRAVEL	3,000
SAND & GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000



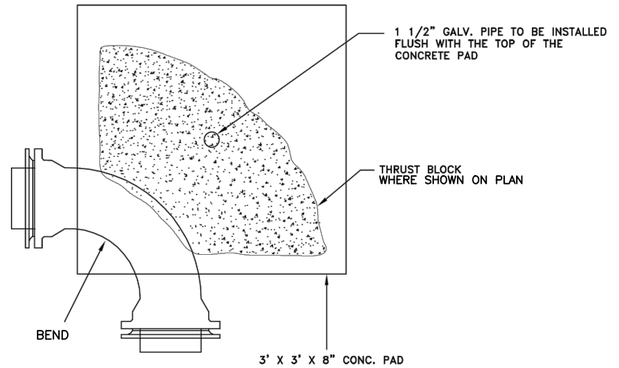
GENERAL NOTE:
1. TO BE INSTALLED IN EASEMENTS SUCH AS GRAVEL ACCESS ROADS, PAVED PRIVATE ROADS, PARKING LOTS AND PLAY GROUNDS.

BEND MARKER TYPE I
NO SCALE

CONCRETE THRUST BLOCKS
NO SCALE



GENERAL NOTES:
1. TO BE INSTALLED IN EASEMENTS OTHER THAN PLAY GROUNDS, PARKING LOTS, GRAVEL ACCESS OR PRIVATE ROADS.



BEND MARKER TYPE II
NO SCALE

DATUM
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LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

UTILITY DETAILS

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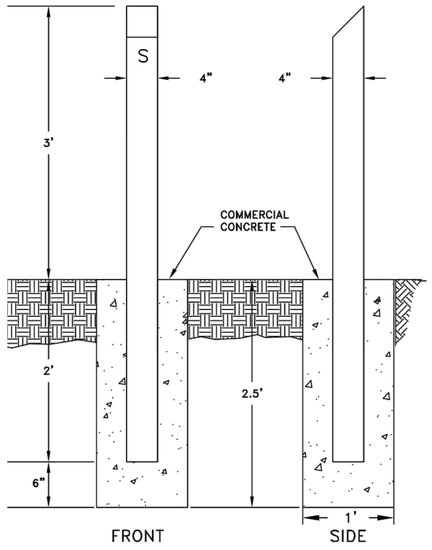
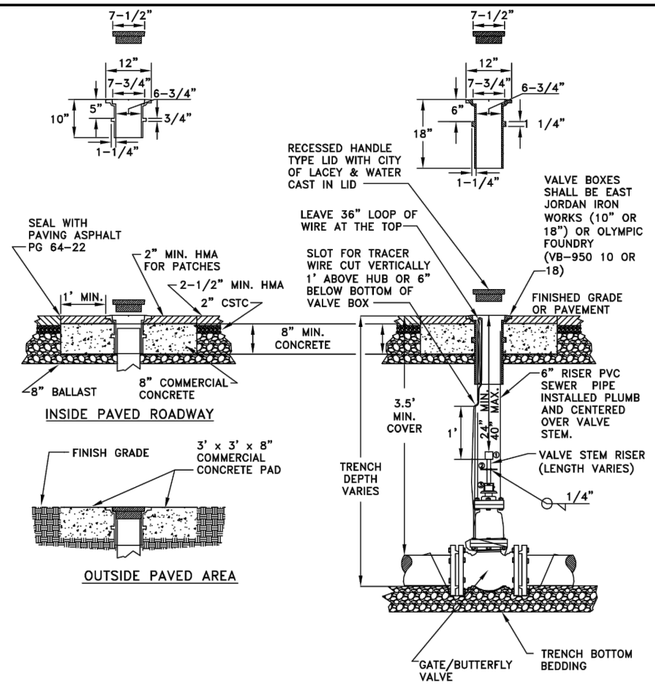


SEWER VALVE MARKER
NO SCALE

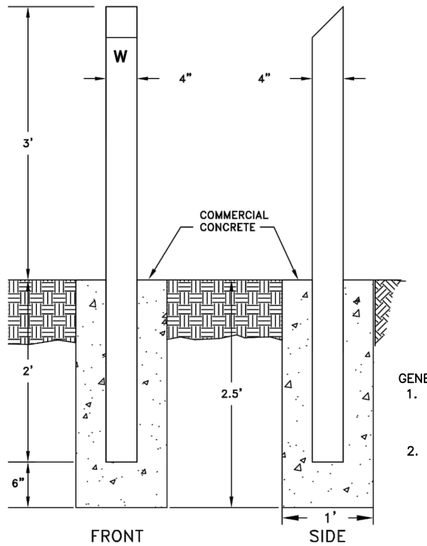
GENERAL NOTES:
1. 4" SCHEDULE 40 STEEL OR REINFORCED CONCRETE MARKER POST STAMPED WITH "S" AND DISTANCE TO VALVE.
2. THE POST TO BE COATED WITH ONE PRIME COAT AND TWO COATS OF OUTDOOR OIL BASE ENAMEL (WHITE).



STANDARD VALVE BOX INSTALLATION
NO SCALE

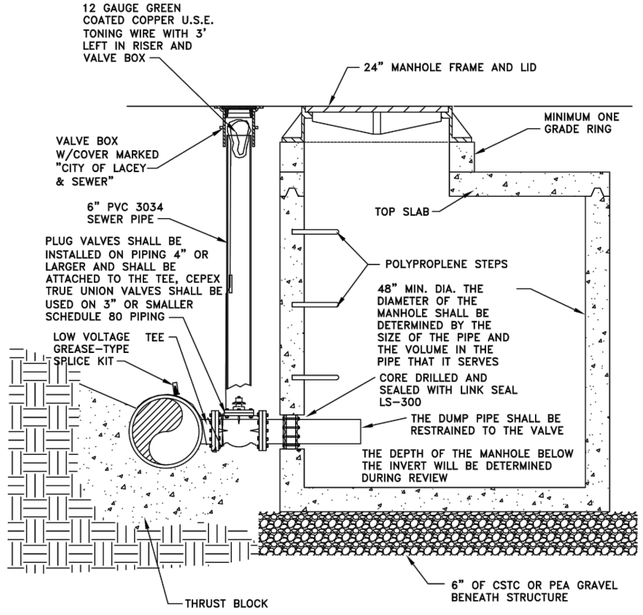
GENERAL NOTES:
1. ALL VALVES SHALL HAVE A U.S.E. 14 GAUGE BLUE COATED COPPER TRACER WIRE TIED OFF AT VALVE BODY. THE WIRE SHALL BE EXTENDED UP ON THE OUTSIDE RISER PIPE A FOOT ABOVE THE VALVE HUB BEFORE THE WIRE IS PUT INTO THE RISER THROUGH A SLOT CUT INTO THE RISER. LEAVE 36" OF WIRE ABOVE THE TOP OF VALVE BOX.
2. ALL WELDS TO THE SHAFT SHALL BE FILLET WELD, AROUND THE ENTIRE PLATE PER #2 BELOW,

VALVE STEM EXTENSION LEGEND
① VALVE OPERATING NUT OR 1-7/8" X 1-7/8" X 2" HIGH GRADE STEEL WELDED TO GUIDE PLATE.
② 3/16" THICK X 5 1/5" DIA STEEL GUIDE PLATE WELDED TO RISER SHAFT.
③ 2"X2"X 3/16" SQUARE STRUCTURAL STEEL TUBING TO FIT OPERATING NUT. LENGTH AS REQUIRED.



WATER VALVE MARKER
NO SCALE

GENERAL NOTES:
1. 4" SCHEDULE 40 STEEL OR REINFORCED CONCRETE MARKER POST STAMPED WITH "W" AND DISTANCE TO VALVE.
2. THE POST TO BE COATED WITH ONE PRIME COAT AND TWO COATS OF OUTDOOR OIL BASE ENAMEL (WHITE).



LOW POINT DRAIN FOR FORCE MAIN
NO SCALE

GENERAL NOTES:
1. INSTALL A CONCRETE PAD WHEN LOW POINT DRAIN MANHOLE IS INSTALLED OUTSIDE OF PAVED AREA.
2. THE MANHOLE LID SHALL BE A CITY OF LACEY "LOGO" LID. SEE DETAIL 7-3.
3. LOW POINT DRAIN SHALL BE A 4" DIA. PLUG VALVE.
4. SEE FORCE MAIN DETAIL 1 ON SHEET UT3 FOR VALVE AND PIPE WYE ARRANGEMENT.
5. FOR VALVE BOX REQUIREMENTS SEE DETAIL.

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LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

UTILITY DETAILS

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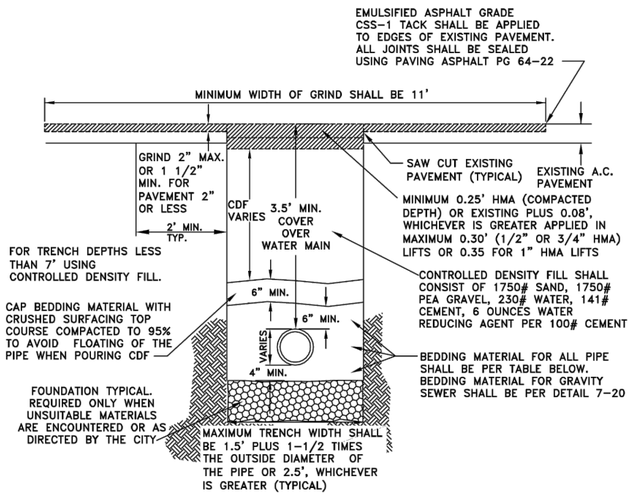
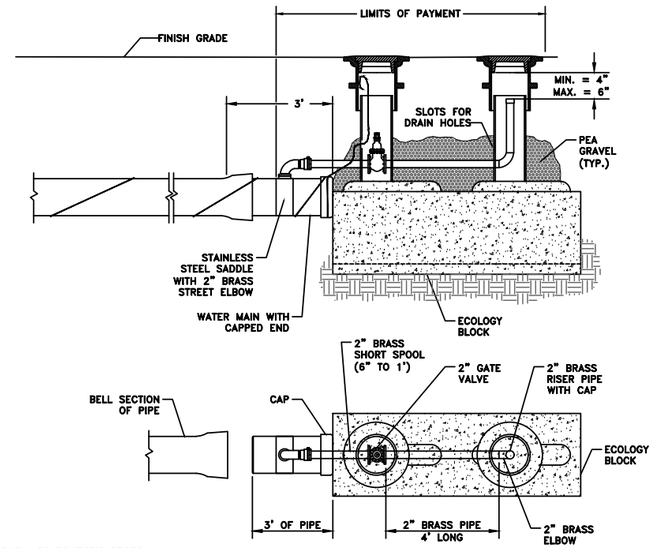


PIPE BEDDING SPECIFICATION

SIEVE SIZE	PERCENT PASSING
3/4" SQUARE	100
3/8" SQUARE	70-100
U.S. NO.4	55-100
U.S. NO. 10	35-95
U.S. NO. 20	20-80
U.S. NO. 40	10-55
U.S. NO. 100	0-10
U.S. NO. 200	0-03

GENERAL NOTES:
1. ALL MATERIALS EXCEPT H.M.A. SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO 95% DENSITY AS DETERMINED BY ASTM D1557.
2. ALL MATERIALS, WORKMANSHIP, AND INSTALLATION SHALL BE IN CONFORMANCE WITH THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AS AMENDED BY CITY OF LACEY STANDARDS.
3. KEEP TRENCH BOTTOM COMPACTED WITH UNIFORM GRADE. NO TEMPORARY SUPPORTS, I.E. BLOCKS, WILL BE ALLOWED TO SUPPORT PIPE. TRENCH BOTTOM SHALL BE TO GRADE PRIOR TO PIPE INSTALLATION.
4. SAW CUT PAVEMENT TO MAX. TRENCH WIDTH. BACKFILL AND PAVE TO TOP OF EXISTING PAVEMENT FOR TRENCH WIDTH. ALLOW 24 HOURS MINIMUM FOR TRENCH PATCH TO CURE. GRIND AND PAVE FINAL PATCH AS SHOWN.

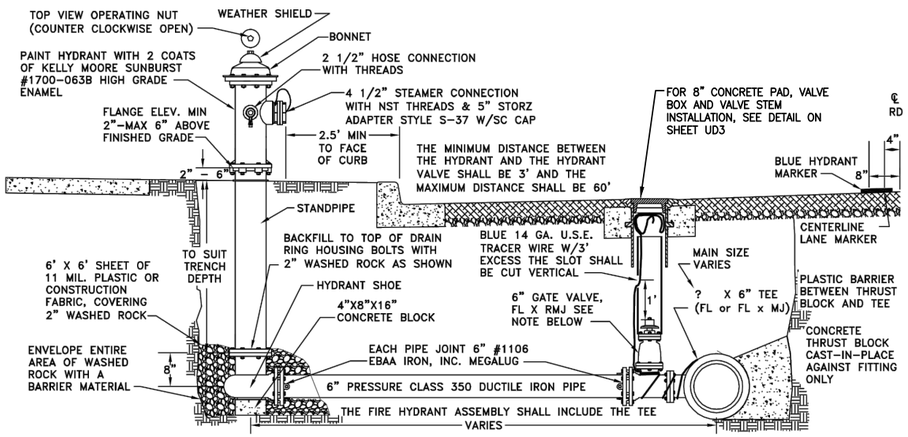
TYPICAL TRENCH FOR WATER MAIN
NO SCALE



GENERAL NOTES:

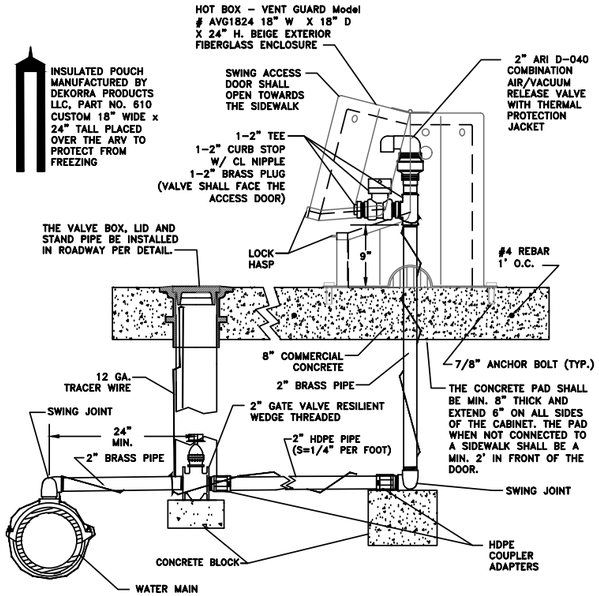
ALL 2" PIPING AND FITTINGS SHALL BE DOMESTIC BRASS.

BLOWOFF EXTENSION ASSEMBLY FOR WATER MAIN
NO SCALE



NOTES:
1. A MINIMUM FIVE FOOT RADIUS OF UNOBSTRUCTED WORKING AREA SHALL BE PROVIDED AROUND ALL HYDRANTS. THE UNOBSTRUCTED AREA SHALL INCLUDE BUT NOT BE LIMITED TO TREES, SHRUBS, PLANTS, VAULTS, FDC, AND METERS.
2. HYDRANTS SHALL BE WATEROUS PACER, M&H RELIANT STYLE 929, AMERICAN AVK, KENNEDY K-81, MUELLER CENTURION, OR CLOW MEDALLION.
3. GATE VALVES SHALL BE RESILIENT WEDGE NRS WITH O-RING SEALS. VALVE ENDS SHALL BE MECHANICAL JOINT BY ANSI FLANGES. VALVES SHALL CONFORM TO AWWA 509-80. VALVES SHALL BE MUELLER, M&H, KENNEDY, CLOW R/W OR WATEROUS SERIES 500.
4. REMOVE FACTORY CHAINS HOLDING CAPS.
5. WHEN DISTANCE BETWEEN HYDRANT AND VALVE EXCEED 20 FEET, FIELDLOK GASKETS SHALL BE ALLOWED.
6. INSTALLATION OF THE TYPE 2E TWO WAY BLUE REFLECTIVE HYDRANT MARKER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. THE TYPE 2E TWO WAY BLUE REFLECTIVE HYDRANT MARKER SHALL BE ALIGNED WITH THE OUTSIDE EDGE OF THE LANE MARKER OR 8" FROM THE CENTER OF THE RPM TO THE CENTER LINE OF THE ROADWAY. SEE STRIPING DETAIL ON SHEET CHD2 FOR LOCATION.

FIRE HYDRANT ASSEMBLY
NO SCALE



GENERAL NOTES:
1. VALVE ASSEMBLY SHALL BE SET AT THE HIGH POINT OF THE LINE.
2. ALL AIR/VACUUM RELEASE VALVES SHALL BE INSTALLED BEHIND THE EDGE OF PAVEMENT NEAR THE PROPERTY CORNER.
3. AIR RELEASE VALVES SHALL BE 2" ARI D-040 W/THERMO PROTECTION ENCASEMENT.
4. ALL FITTINGS AND PIPING SHALL BE DOMESTIC BRASS.
5. CABINET SHALL OPEN AWAY FROM THE ROADWAY.
6. INSTALL THE INSULATED POUCH 602-DT OVER THE ARV UNIT TO PROTECT IT FROM FREEZING.

AIR AND VACUUM RELEASE ASSEMBLY
NO SCALE

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CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

UTILITY DETAILS

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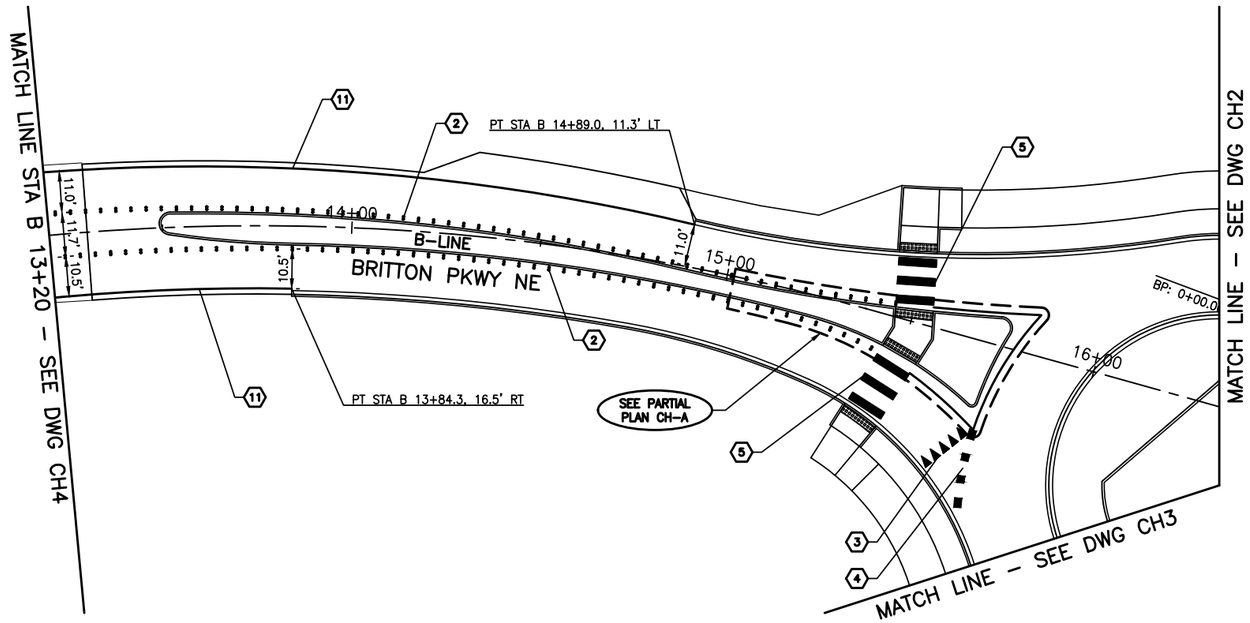

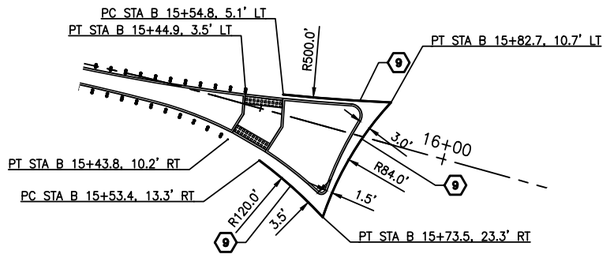

PARTIAL PLAN CH–A

GENERAL NOTES:

1. DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, OR CENTER OF STRIPE.
2. PAVEMENT MARKING STATIONS ARE TO CENTER OF MARKING.
3. BREAK STRIPING AT CROSSWALKS.
4. PAVEMENT MARKING LAYOUT SHALL BE VERIFIED BY THE ENGINEER AT LEAST 72 HOURS BEFORE STRIPING BEGINS.
5. THE BID ITEM FOR ENTRY LINE SHALL BE CROSSWALK LINE.
6. ALL ROUNDABOUT CHANNELIZATION SHALL BE TYPE B PRE–FORMED FUSED THERMOPLASTIC.

CONSTRUCTION NOTES:

1. RPM GORE STRIPE
2. RPM DOUBLE YELLOW CENTER STRIPE
3. PLASTIC YIELD LINE SYMBOLS
4. PLASTIC ENTRY LINE
5. PLASTIC CROSSWALK LINES
6. PLASTIC BIKE LANE/GORE LINE
7. BIKE LANE ARROW AND BSF SYMBOL
8. PLASTIC LEFT TRAFFIC ARROW
9. WHITE WIDE LANE LINE
10. PLASTIC BIKE LANE SKIP LINE
11. WHITE EDGE LINE
12. 8' LETTERS (ONLY)

20 0 20 40
SCALE IN FEET

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CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

CHANNELIZATION PLAN

DRAWING NUMBER
CH1

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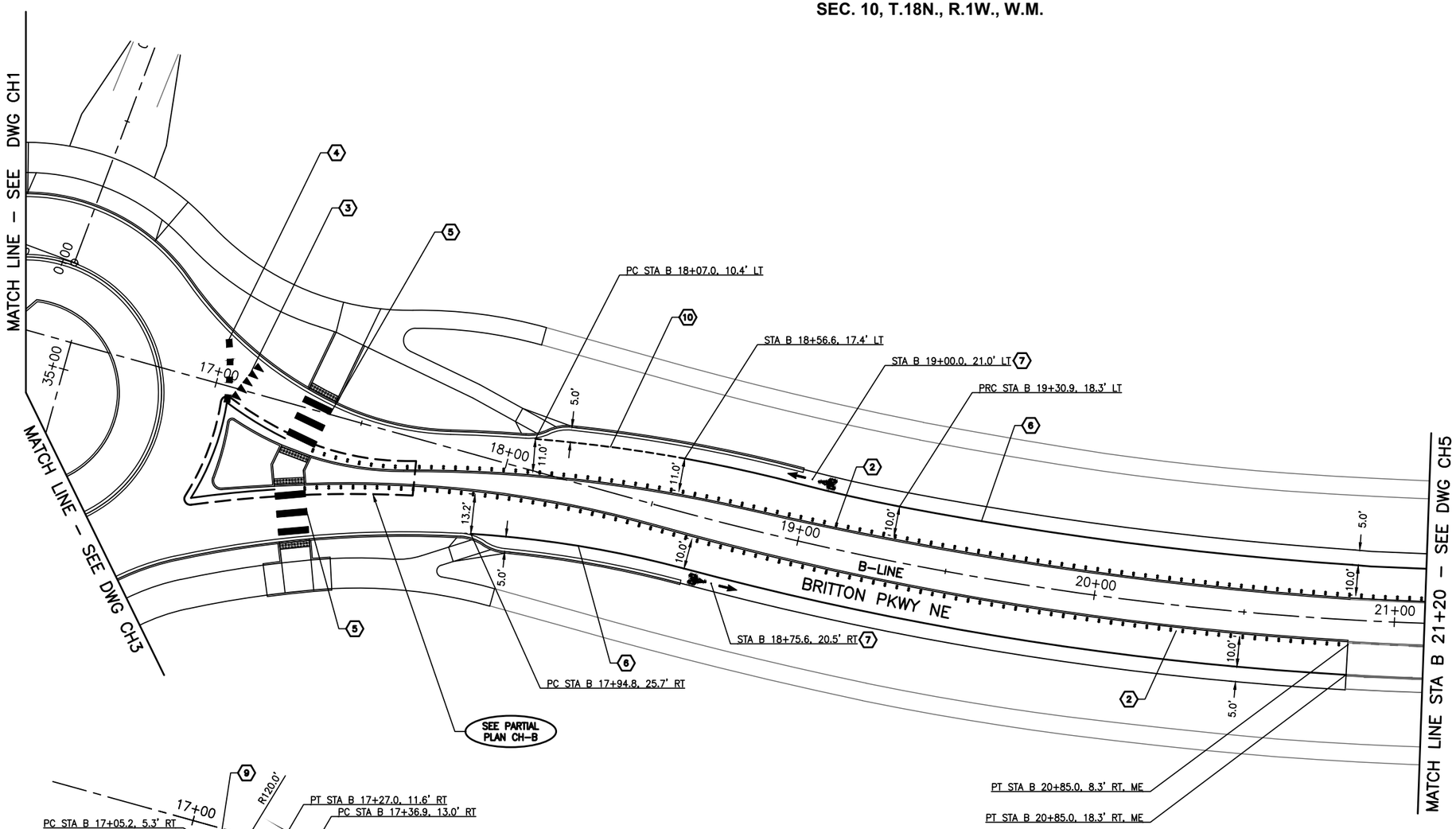

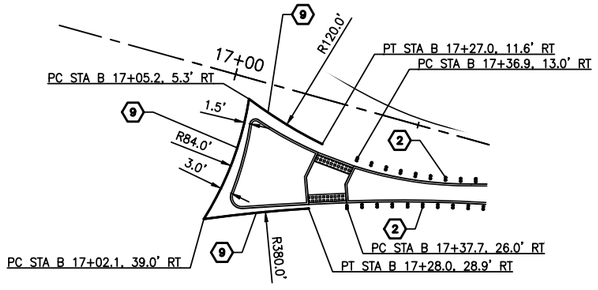

PARTIAL PLAN CH–B

GENERAL NOTES:

1. DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, OR CENTER OF STRIPE.
2. PAVEMENT MARKING STATIONS ARE TO CENTER OF MARKING.
3. BREAK STRIPING AT CROSSWALKS.
4. PAVEMENT MARKING LAYOUT SHALL BE VERIFIED BY THE ENGINEER AT LEAST 72 HOURS BEFORE STRIPING BEGINS.
5. THE BID ITEM FOR ENTRY LINE SHALL BE CROSSWALK LINE.
6. ALL ROUNDABOUT CHANNELIZATION SHALL BE TYPE B PRE–FORMED FUSED THERMOPLASTIC.

CONSTRUCTION NOTES:

1. RPM GORE STRIPE
2. RPM DOUBLE YELLOW CENTER STRIPE
3. PLASTIC YIELD LINE SYMBOLS
4. PLASTIC ENTRY LINE
5. PLASTIC CROSSWALK LINES
6. PLASTIC BIKE LANE/GORE LINE
7. BIKE LANE ARROW AND BSF SYMBOL
8. PLASTIC LEFT TRAFFIC ARROW
9. WHITE WIDE LANE LINE
10. PLASTIC BIKE LANE SKIP LINE
11. WHITE EDGE LINE
12. 8' LETTERS (ONLY)

N

20 0 20 40
SCALE IN FEET

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CHANNELIZATION PLAN

DRAWING NUMBER
CH2

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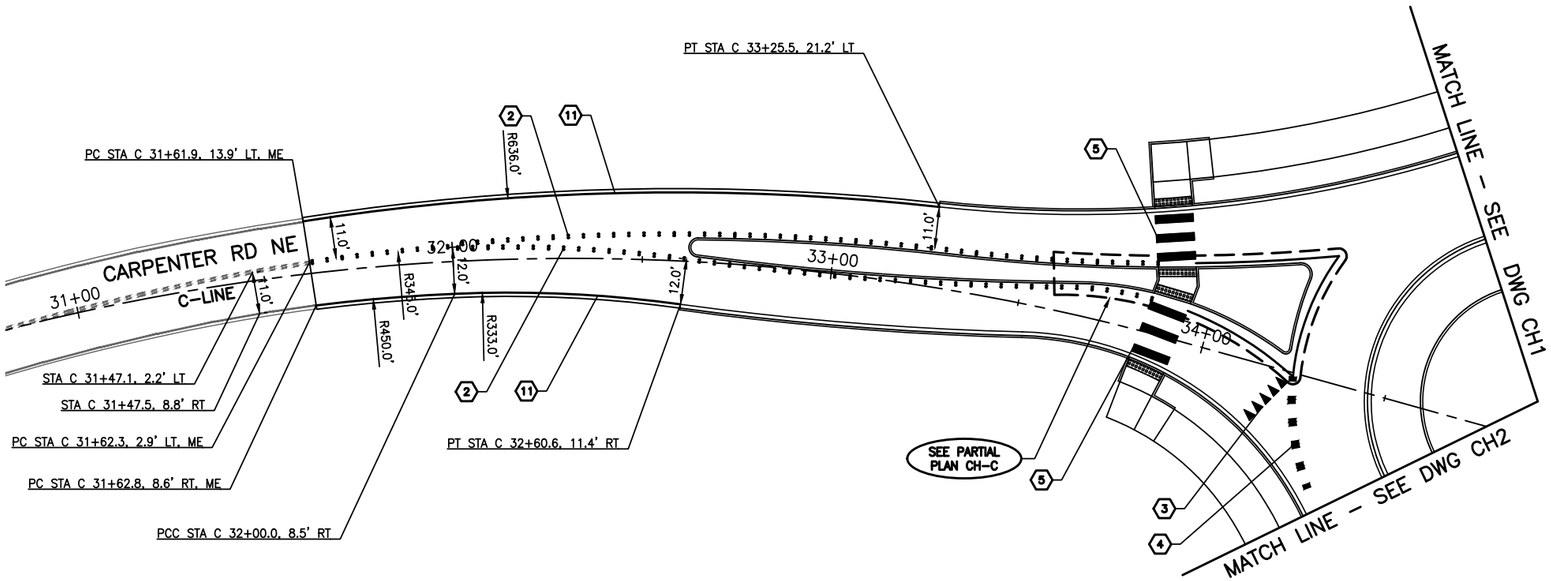

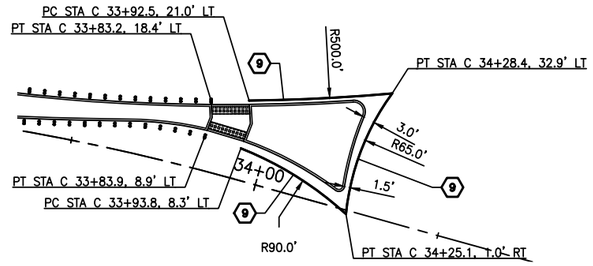

PARTIAL PLAN CH–C

GENERAL NOTES:

1. DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, OR CENTER OF STRIPE.
2. PAVEMENT MARKING STATIONS ARE TO CENTER OF MARKING.
3. BREAK STRIPING AT CROSSWALKS.
4. PAVEMENT MARKING LAYOUT SHALL BE VERIFIED BY THE ENGINEER AT LEAST 72 HOURS BEFORE STRIPING BEGINS.
5. THE BID ITEM FOR ENTRY LINE SHALL BE CROSSWALK LINE.
6. ALL ROUNDABOUT CHANNELIZATION SHALL BE TYPE B PRE–FORMED FUSED THERMOPLASTIC.

CONSTRUCTION NOTES:

1. RPM GORE STRIPE
2. RPM DOUBLE YELLOW CENTER STRIPE
3. PLASTIC YIELD LINE SYMBOLS
4. PLASTIC ENTRY LINE
5. PLASTIC CROSSWALK LINES
6. PLASTIC BIKE LANE/GORE LINE
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11. WHITE EDGE LINE
12. 8' LETTERS (ONLY)

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JC APPROVED BY
DATE: 10/31/2023

AARON T. PATTERSON — STATE OF WASHINGTON — 31183 — REGISTERED PROFESSIONAL ENGINEER — 10/31/23

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

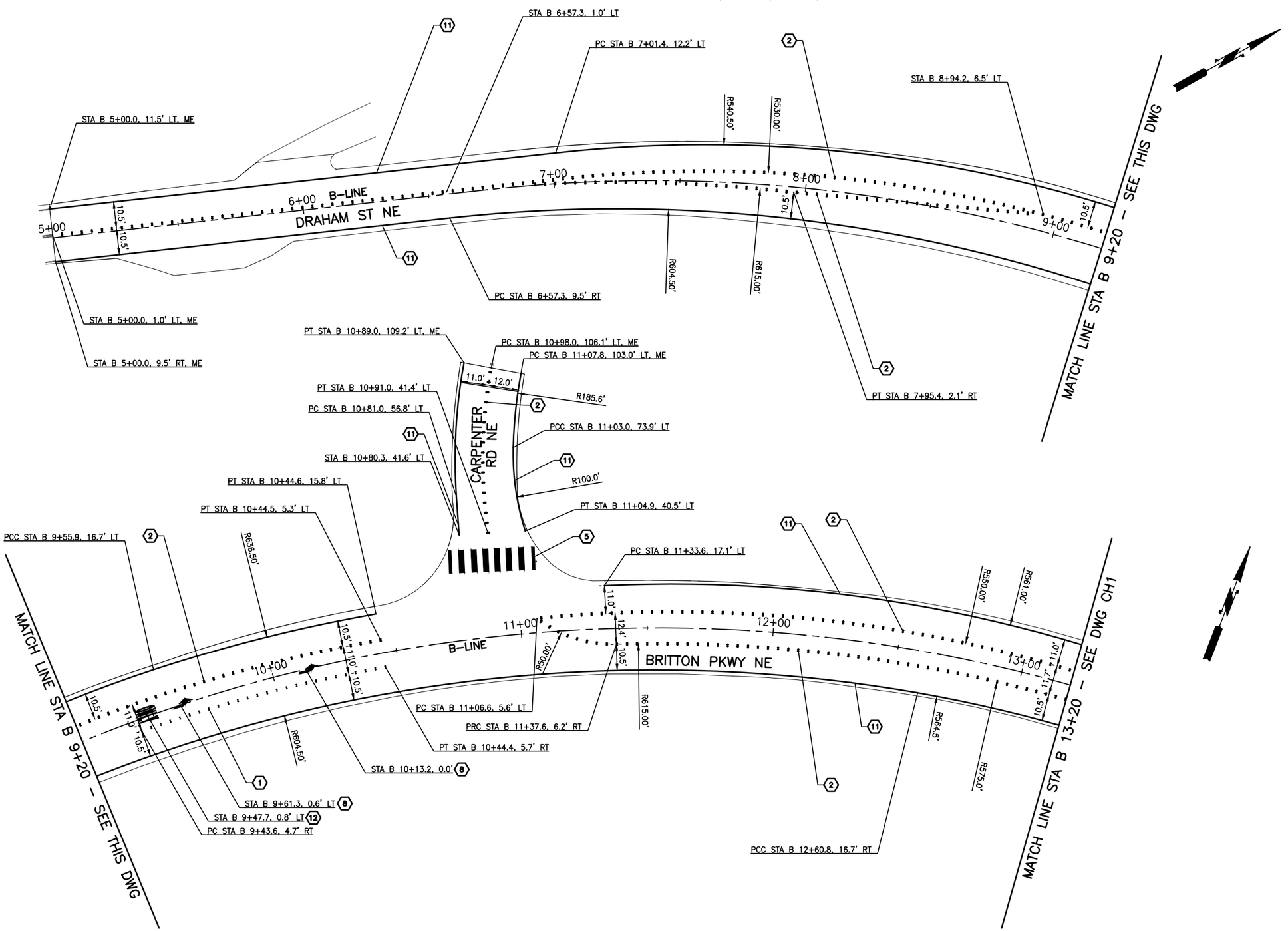
CHANNELIZATION PLAN

DRAWING NUMBER
CH3

SHT 45 OF 64

8/4/2022 1:39 PM I:\BLV\PRJ\000017032\7_Engineering\3_Intermediate Design\CADD_Roadways\Plans –Civil 3D 2020\17032–sheet–CH.dwg

SEC. 10, T.18N., R.1W., W.M.



GENERAL NOTES:

1. DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, OR CENTER OF STRIPE.
2. PAVEMENT MARKING STATIONS ARE TO CENTER OF MARKING.
3. BREAK STRIPING AT CROSSWALKS.
4. PAVEMENT MARKING LAYOUT SHALL BE VERIFIED BY THE ENGINEER AT LEAST 72 HOURS BEFORE STRIPING BEGINS.
5. THE BID ITEM FOR ENTRY LINE SHALL BE CROSSWALK LINE.
6. ALL ROUNDABOUT CHANNELIZATION SHALL BE TYPE B PRE-FORMED FUSED THERMOPLASTIC.

CONSTRUCTION NOTES:

1. RPM GORE STRIPE
2. RPM DOUBLE YELLOW CENTER STRIPE
3. PLASTIC YIELD LINE SYMBOLS
4. PLASTIC ENTRY LINE
5. PLASTIC CROSSWALK LINES
6. PLASTIC BIKE LANE/GORE LINE
7. BIKE LANE ARROW AND BSF SYMBOL
8. PLASTIC LEFT TRAFFIC ARROW
9. WHITE WIDE LANE LINE
10. PLASTIC BIKE LANE SKIP LINE
11. WHITE EDGE LINE
12. 8' LETTERS (ONLY)

20 0 20 40
SCALE IN FEET

DATUM
NAD 1983/91

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

NO.	DATE	BY	APPR.	REVISIONS

KGH DESIGNED BY
KGH DRAWN BY
GW CHECKED BY
JC APPROVED BY
DATE: 10/31/2023

AARON T. PETERSEN STATE OF WASHINGTON 31183 REGISTERED PROFESSIONAL ENGINEER 10/31/2023

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

CHANNELIZATION PLAN

DRAWING NUMBER
CH4

SHT 46 OF 64

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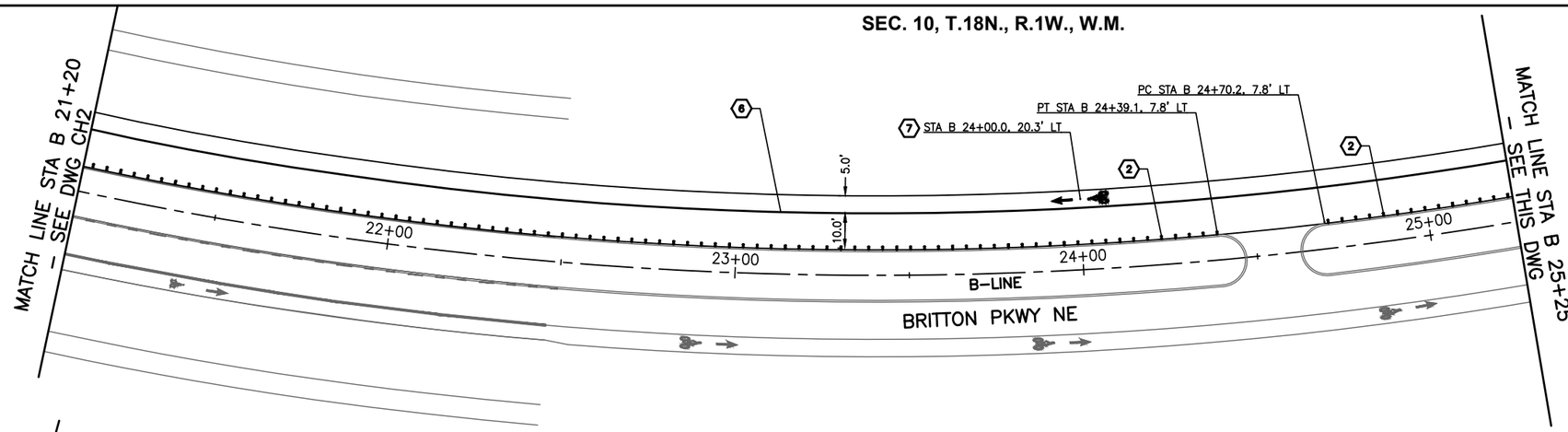
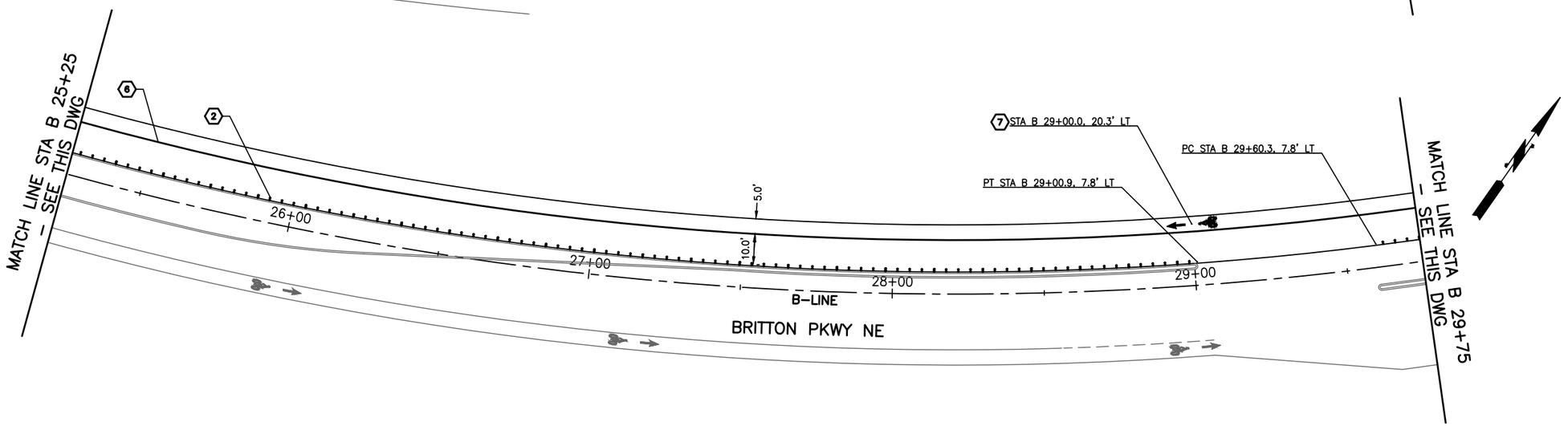
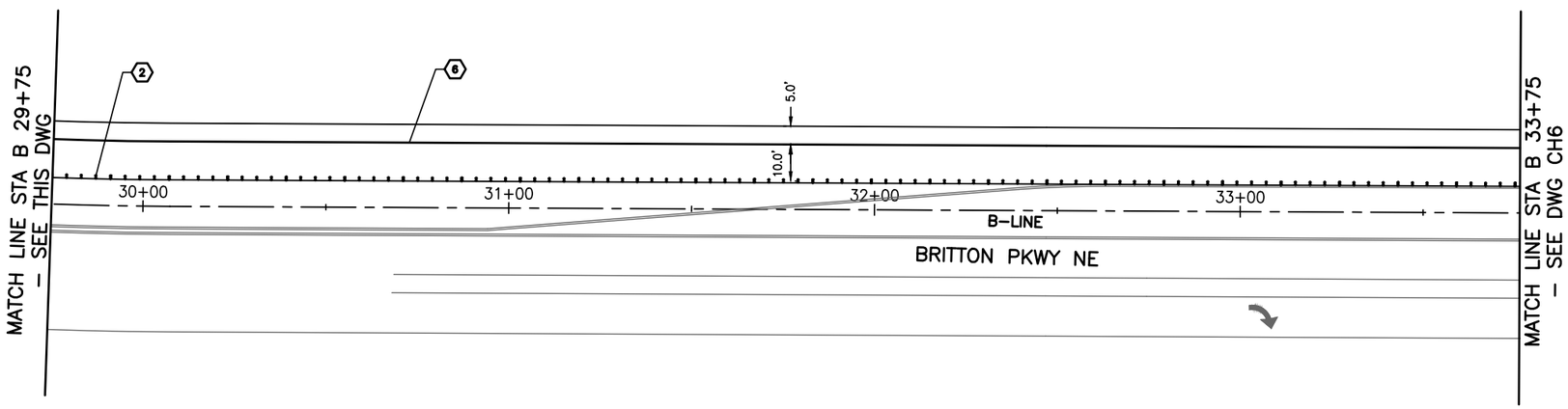
SEC. 10, T.18N., R.1W., W.M.







GENERAL NOTES:

1. DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, OR CENTER OF STRIPE.
2. PAVEMENT MARKING STATIONS ARE TO CENTER OF MARKING.
3. BREAK STRIPING AT CROSSWALKS.
4. PAVEMENT MARKING LAYOUT SHALL BE VERIFIED BY THE ENGINEER AT LEAST 72 HOURS BEFORE STRIPING BEGINS.
5. THE BID ITEM FOR ENTRY LINE SHALL BE CROSSWALK LINE.
6. ALL ROUNDABOUT CHANNELIZATION SHALL BE TYPE B PRE–FORMED FUSED THERMOPLASTIC.

CONSTRUCTION NOTES:

1. RPM GORE STRIPE
2. RPM DOUBLE YELLOW CENTER STRIPE
3. PLASTIC YIELD LINE SYMBOLS
4. PLASTIC ENTRY LINE
5. PLASTIC CROSSWALK LINES
6. PLASTIC BIKE LANE/GORE LINE
7. BIKE LANE ARROW AND BSF SYMBOL
8. PLASTIC LEFT TRAFFIC ARROW
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10. PLASTIC BIKE LANE SKIP LINE
11. WHITE EDGE LINE
12. 8' LETTERS (ONLY)

20 0 20 40
SCALE IN FEET

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KGH DRAWN BY
GW CHECKED BY
JC APPROVED BY
DATE: 10/31/2023

AARON T. PATTERSON
STATE OF WASHINGTON
31183
REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

CHANNELIZATION PLAN

DRAWING NUMBER
CH5

SHT 47 OF 64

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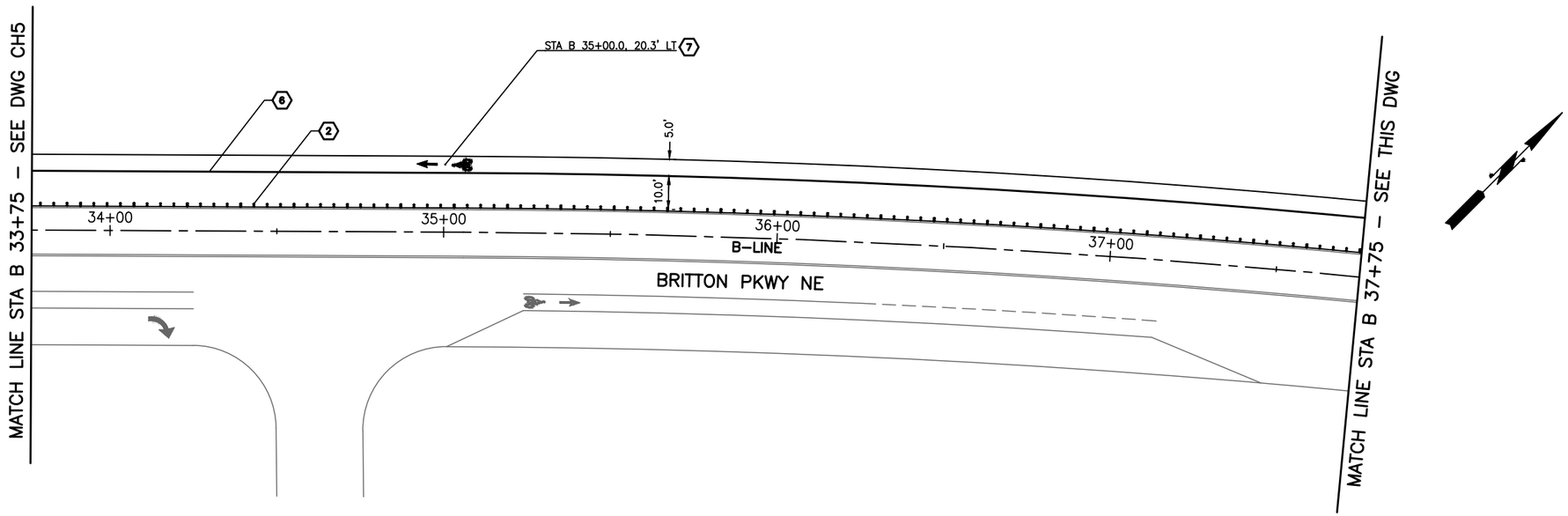
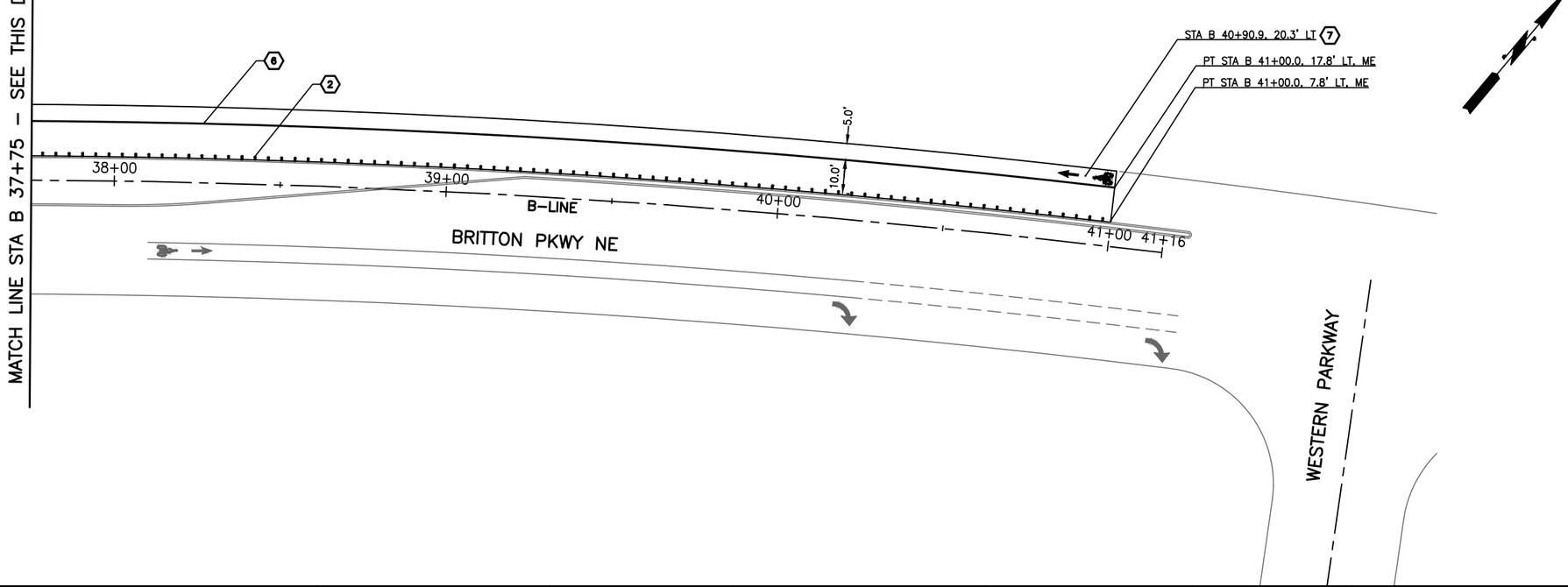
SEC. 10, T.18N., R.1W., W.M.





GENERAL NOTES:

1. DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, OR CENTER OF STRIPE.
2. PAVEMENT MARKING STATIONS ARE TO CENTER OF MARKING.
3. BREAK STRIPING AT CROSSWALKS.
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5. THE BID ITEM FOR ENTRY LINE SHALL BE CROSSWALK LINE.
6. ALL ROUNDABOUT CHANNELIZATION SHALL BE TYPE B PRE–FORMED FUSED THERMOPLASTIC.

CONSTRUCTION NOTES:

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2. RPM DOUBLE YELLOW CENTER STRIPE
3. PLASTIC YIELD LINE SYMBOLS
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AARON T. PATTERSON STATE OF WASHINGTON 31183 REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

CHANNELIZATION PLAN

DRAWING NUMBER
CH6

SHT 48 OF 64

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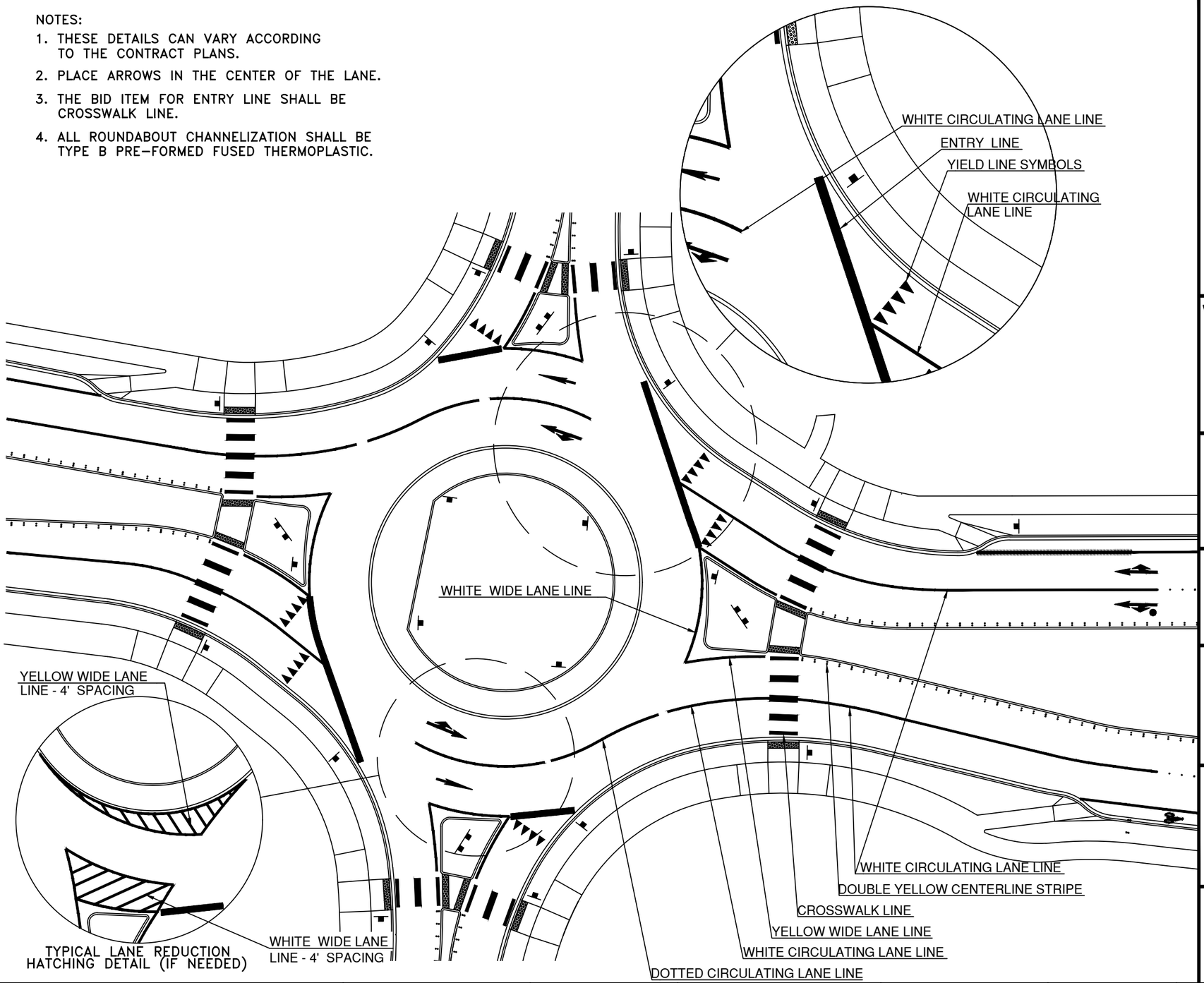
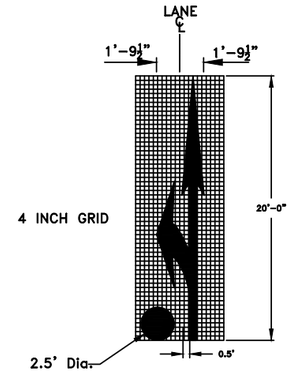
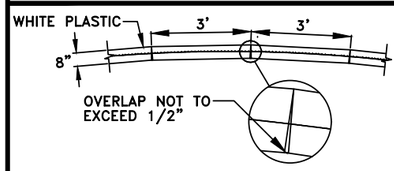
NOTES:

1. THESE DETAILS CAN VARY ACCORDING TO THE CONTRACT PLANS.
2. PLACE ARROWS IN THE CENTER OF THE LANE.
3. THE BID ITEM FOR ENTRY LINE SHALL BE CROSSWALK LINE.
4. ALL ROUNDABOUT CHANNELIZATION SHALL BE TYPE B PRE-FORMED FUSED THERMOPLASTIC.

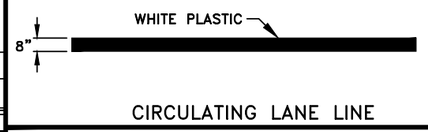




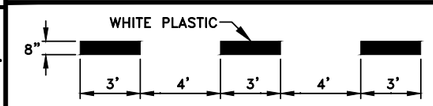
TRAFFIC ARROW WITH CIRCLE



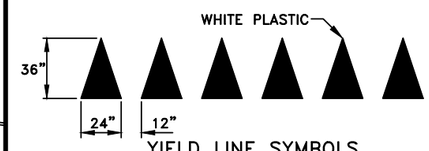
CURVED CIRCULATING LANE LINE



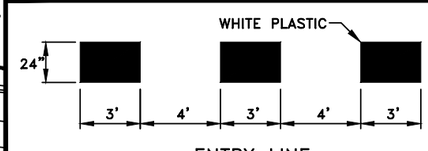
CIRCULATING LANE LINE



DOTTED CIRCULATING LANE LINE



YIELD LINE SYMBOLS



ENTRY LINE

ROUNDABOUT CHANNELIZATION DETAILS

DATUM
NAD 1983/91

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NO.	DATE	BY	APPR.	REVISIONS

COL DESIGNED BY
COL DRAWN BY
GW CHECKED BY
ATB APPROVED BY
DATE: 10/31/2023

AARON T. PATTERSON — STATE OF WASHINGTON — 31183 — REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

CHANNELIZATION DETAILS

DRAWING NUMBER
CHD1

SHT 49 OF 64

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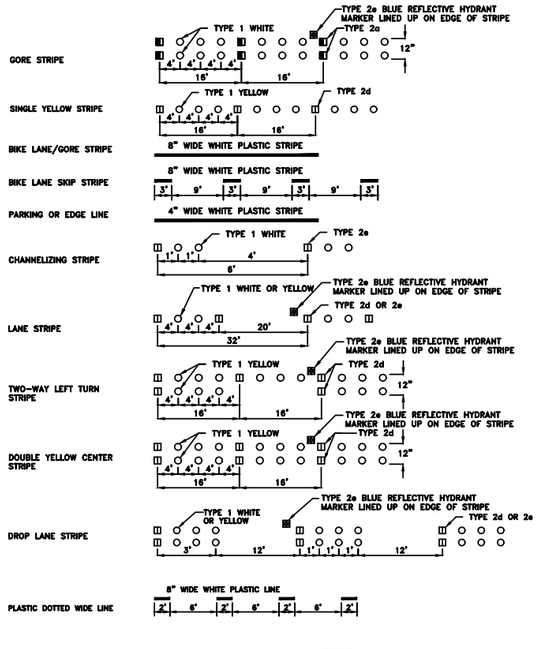
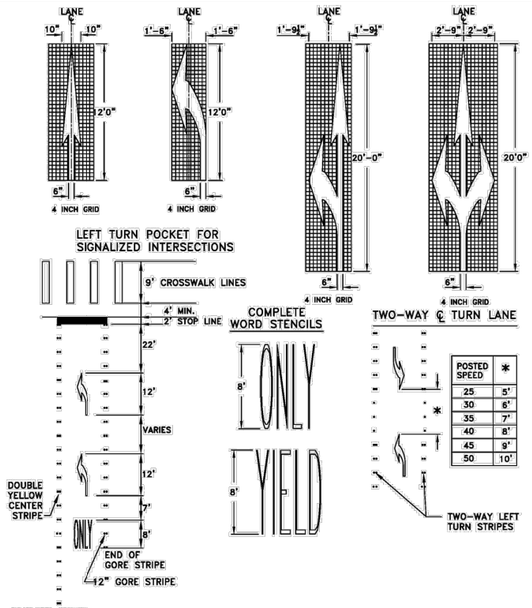
PAVEMENT MARKING DETAILS



LANE MARKERS

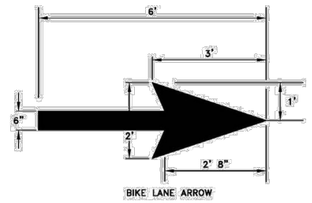
- ○ TYPE 1 LANE MARKERS, WHITE OR YELLOW
- ■ TYPE 2a REFLECTIVE LANE MARKER, WHITE AND RED
- ◫ TYPE 2d REFLECTIVE LANE MARKER, YELLOW AND YELLOW
- ◫ TYPE 2e REFLECTIVE LANE MARKER, WHITE ONE SIDE ONLY
- ◫ TYPE 2a TWO WAY BLUE REFLECTIVE HYDRANT MARKER

STRIPING DETAIL



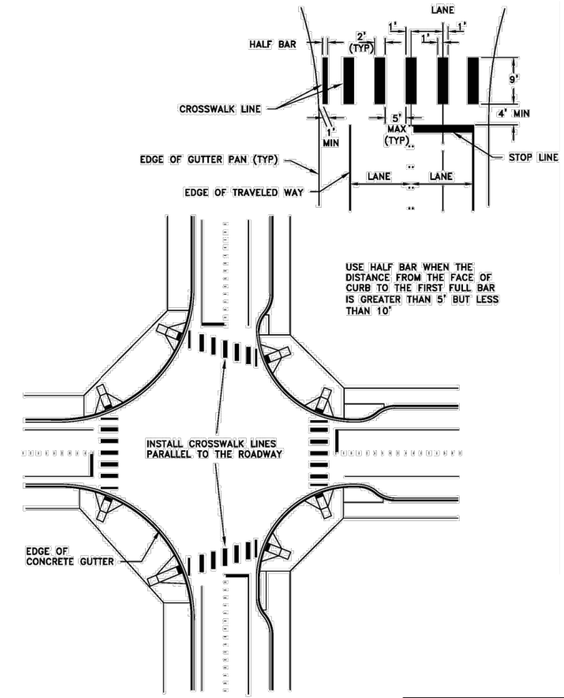
GENERAL NOTES:
1. THE MATERIALS USED FOR ALL STOP LINES, CROSSWALKS, ARROWS, PARKING DELINEATION LINES, LETTERS, LEGENDS, AND SYMBOLS SHALL BE PREMARK OR HOT TAPE PREFORMED THERMOPLASTIC 125 MIL THICKNESS.
2. THE PLASTIC MATERIAL USED TO FORM ALL LONG LINE PAVEMENT MARKINGS SHALL BE PAVE-MARK OR NORLINE THERMOPLASTIC, HYDROCARBONFORMULATION125 MIL THICKNESS MARKING MATERIAL.
3. ALL MARKINGS SHALL MEET FEDERAL METRIC STANDARDS.

PAVEMENT MARKINGS



GENERAL NOTES:
1. THE MATERIALS USED FOR ALL STOP LINES, CROSSWALKS, ARROWS, PARKING DELINEATION LINES, LETTERS, LEGENDS, AND SYMBOLS SHALL BE PREMARK OR HOT TAPE PREFORMED THERMOPLASTIC 125 MIL THICKNESS.
2. THE PLASTIC MATERIAL USED TO FORM ALL LONG LINE PAVEMENT MARKINGS SHALL BE PAVE-MARK OR NORLINE THERMOPLASTIC.
2. ALL MARKINGS SHALL MEET FEDERAL METRIC STANDARDS.

PAVEMENT MARKINGS
BICYCLE LANES



CROSSWALK

DATUM
NAD 1983/91

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COL — DESIGNED BY
COL — DRAWN BY
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AARON T. BUTTERY — STATE OF WASHINGTON — 31183 — REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

CHANNELIZATION DETAILS

DRAWING NUMBER
CHD2
SHT 50 OF 64

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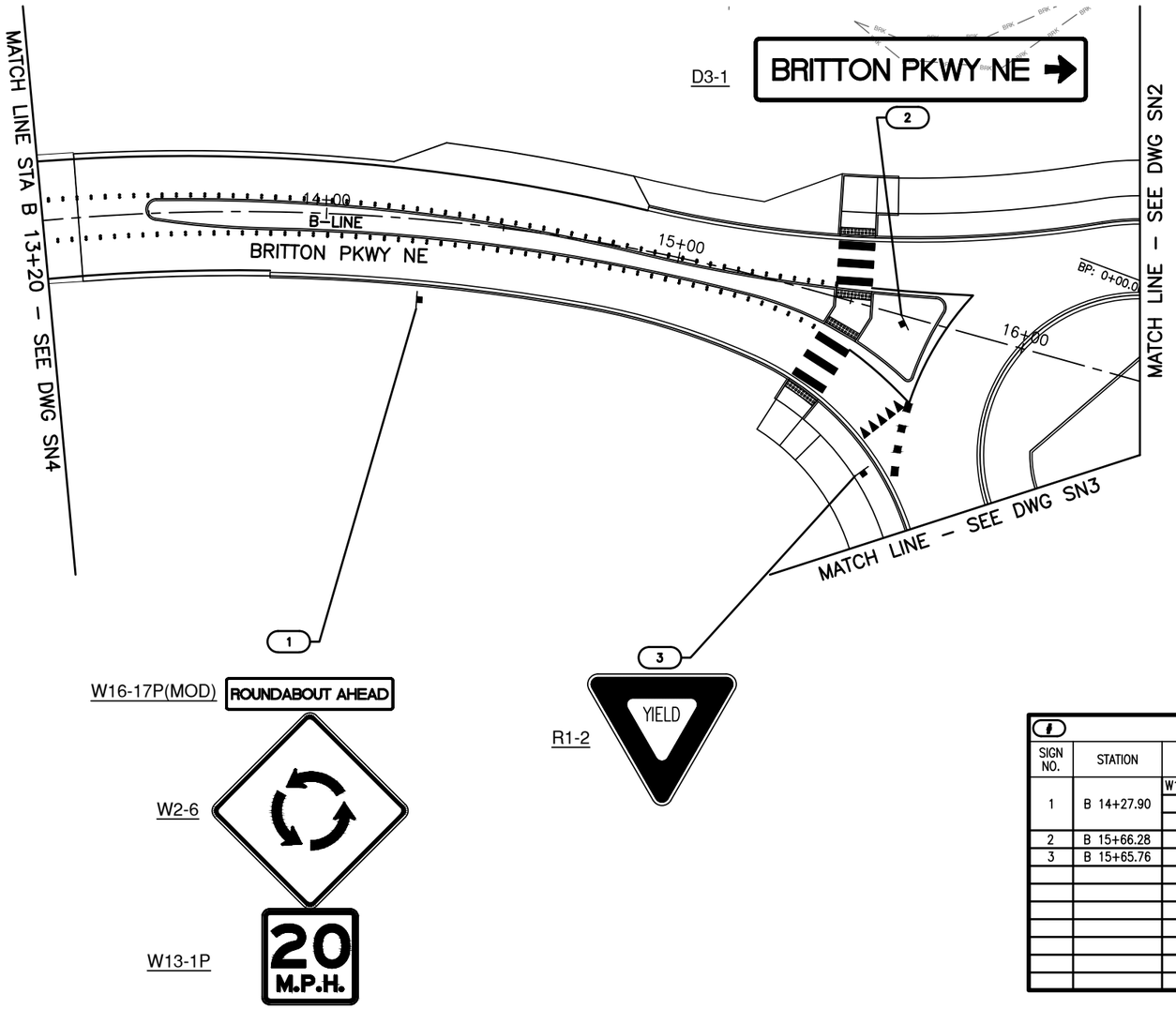

LEGEND:

- EXISTING SIGN
- PROPOSED SIGN
- (X) SIGN NUMBER

GENERAL NOTES:

1. SIGN PLACEMENT PER DETAIL ON DWG SND1
2. STEEL SIGN SUPPORT INSTALLATION PER DETAIL ON DWG SND1
3. SIGN BRACING PER DETAIL ON DWG SND1
4. NEW AND REPLACED SIGNS TO BE PROVIDED AND INSTALLED BY THE CITY, EXCEPT THE LED FLASHING STOP SIGN (EX36).

SIGN SCHEDULE

SIGN NO.	STATION	MUTCD SIGN TYPE	DESCRIPTION	COMMENTS
1	B 14+27.90	W16-17P(MOD)	ROUNDABOUT AHEAD	NEW
		W2-6	INTERSECTION WARNING	NEW
		W13-1P	20 MPH	NEW
2	B 15+66.28	D3-1	BRITTON PKWY NE	2 POSTS
3	B 15+65.76	R1-2	YIELD	NEW

20 0 20 40
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NO.	DATE	BY	APPR.	REVISIONS

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GW CHECKED BY
ATB APPROVED BY
DATE: 10/31/2023

AARON T. PINTERAN 31183 REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

SIGNING PLAN

DRAWING NUMBER
SN1
SHT 51 OF 64

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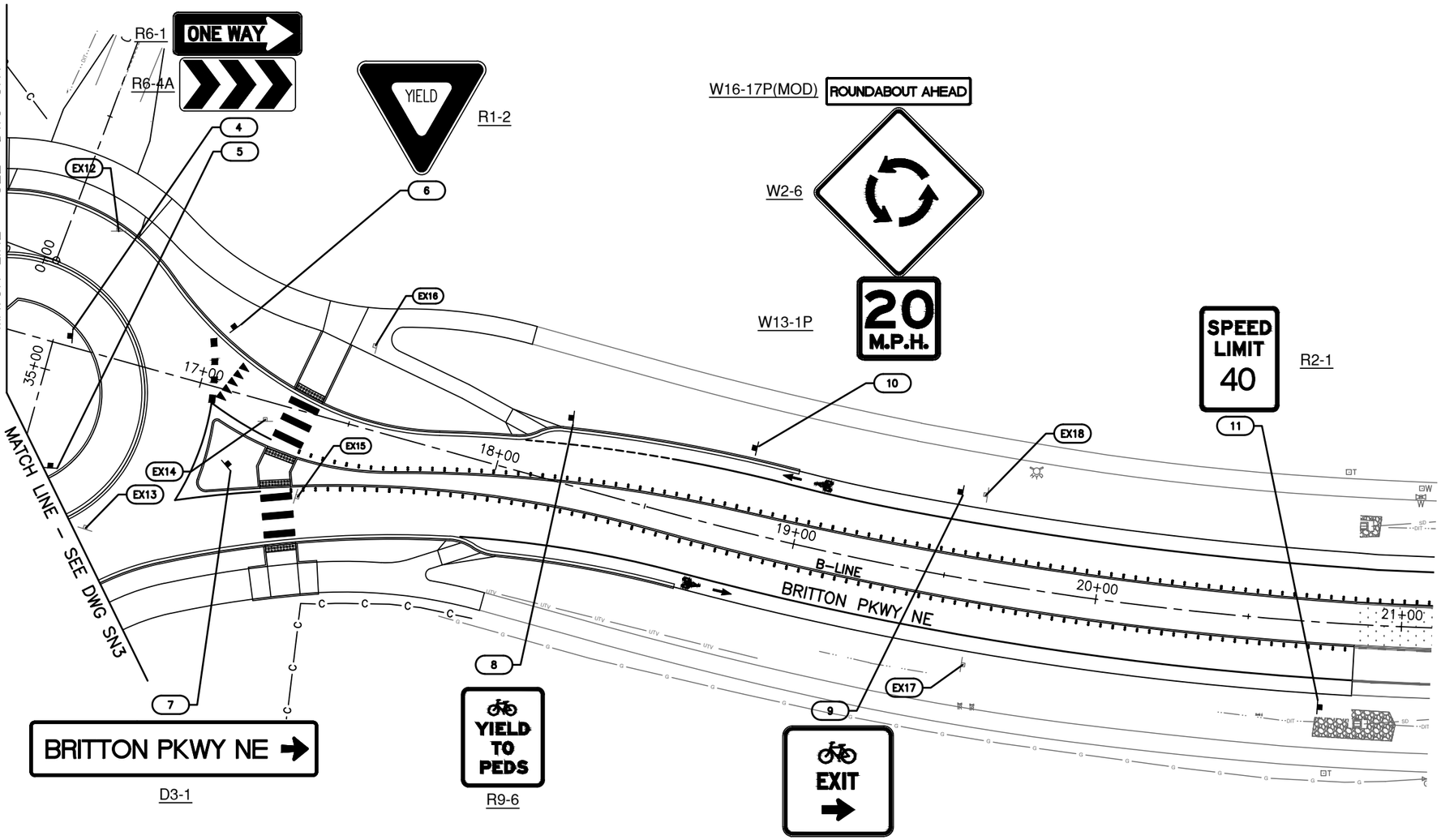

LEGEND:

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- PROPOSED SIGN
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3. SIGN BRACING PER DETAIL ON DWG SND1
4. NEW AND REPLACED SIGNS TO BE PROVIDED AND INSTALLED BY THE CITY, EXCEPT THE LED FLASHING STOP SIGN (EX36).

SIGN SCHEDULE

SIGN NO.	STATION	MUTCD SIGN TYPE	DESCRIPTION	COMMENTS
4	B 16+55.67	R6-1	ONE WAY	NEW
		R6-4A	ROUNDABOUT DIRECTIONAL	NEW
5	B 16+60.16	R6-1	ONE WAY	NEW
		R6-4A	ROUNDABOUT DIRECTIONAL	NEW
6	B 17+06.14	R1-2	YIELD	NEW
7	B 17+15.10	D3-1	BRITTON PKWY NE	2 POSTS
8	B 18+19.99	R9-6	BICYCLE YIELD TO PEDS	NEW
9	B 19+51.16	R5-601(MOD)	BICYCLE EXIT	NEW

SIGN SCHEDULE

SIGN NO.	STATION	MUTCD SIGN TYPE	DESCRIPTION	COMMENTS
10	B 18+80.91	W16-7P(MOD)	ROUNDABOUT AHEAD	NEW
		W2-6	INTERSECTION WARNING	NEW
		W13-1P	20 MPH	NEW
11	B 20+74.33	R2-1	SPEED LIMIT 40 MPH	NEW
EX12	B 16+61.06	–	STREET NAME	EXISTING SIGN TO REMOVE
EX13	B 16+76.66	–	STOP SIGN AND STREET NAME	EXISTING SIGN TO REMOVE
EX14	B 17+23.54	–	KEEP RIGHT	EXISTING SIGN TO REMOVE
EX15	B 17+39.67	–	BIKE LANE AHEAD	EXISTING SIGN TO REMOVE
EX16	B 17+51.60	–	BIKE LANE ENDS	EXISTING SIGN TO REMOVE
EX17	B 19+60.53	–	SPEED LIMIT 40 MPH	EXISTING SIGN TO REMAIN
EX18	B 19+59.50	–	SPEED LIMIT 35 MPH	EXISTING SIGN TO REMOVE

20 0 20 40
SCALE IN FEET

DATUM
NAD 1983/91

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YZ
DESIGNED BY
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DRAWN BY
GW
CHECKED BY
ATB
APPROVED BY
DATE: 10/31/2023

AARON T. PETTERSON
EXPIRES: 10/31/2023
31183
REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

SIGNING PLAN

DRAWING NUMBER
SN2
SHT 52 OF 64

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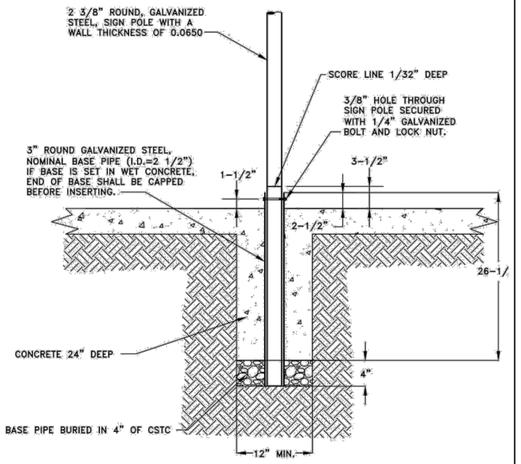
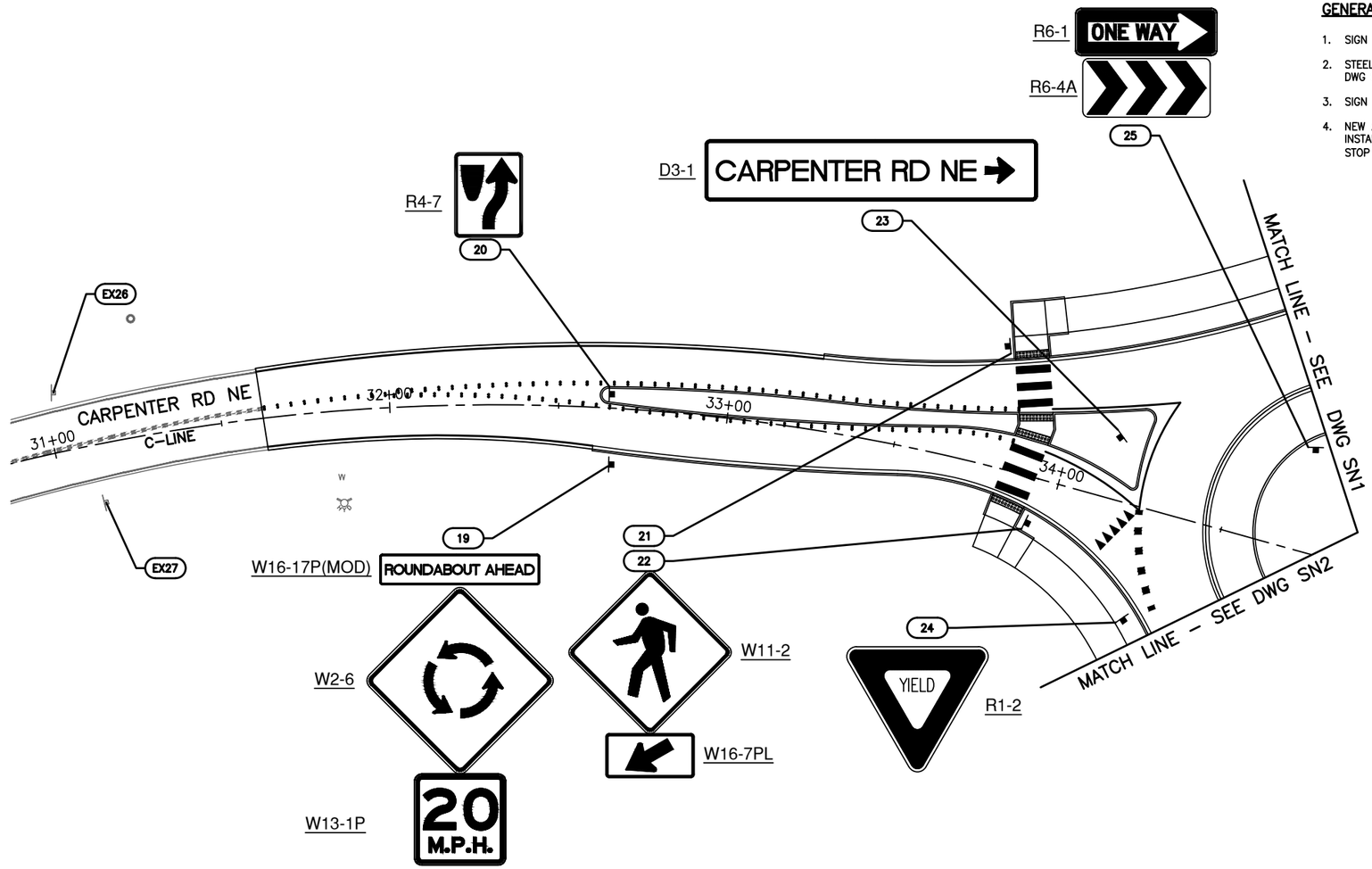


GENERAL NOTE:
1. LOCATION OF SIGN SHALL BE DETERMINED BY THE CITY.
2. WHEN POSSIBLE INSTALL BASE PIPE 2" BELOW THE CONCRETE IN CRUSHED BASE TO ALLOW THE BASE PIPE TO DRAIN.
3. THE USE OF A CAP AT THE BOTTOM OF THE BASE PIPE SHALL ONLY BE USED IN UNUSUAL CONDITIONS.
4. THE CITY SHALL SUPPLY AND LOCATE THE BREAK-AWAY SLEEVES AND THE CONTRACTOR SHALL INSTALL BEFORE POURING CONCRETE.

SIGN POLE BREAK-AWAY



LEGEND:

- EXISTING SIGN
- PROPOSED SIGN
- (X) SIGN NUMBER

GENERAL NOTES:

1. SIGN PLACEMENT PER DETAIL ON DWG SND1
2. STEEL SIGN SUPPORT INSTALLATION PER DETAIL ON DWG SND1
3. SIGN BRACING PER DETAIL ON DWG SND1
4. NEW AND REPLACED SIGNS TO BE PROVIDED AND INSTALLED BY THE CITY, EXCEPT THE LED FLASHING STOP SIGN (EX36).

SIGN SCHEDULE

SIGN NO.	STATION	MUTCD SIGN TYPE	DESCRIPTION	COMMENTS
19	C 32+66.47	W16-7P(MOD)	ROUNDABOUT AHEAD	NEW
		W2-6	INTERSECTION WARNING	NEW
		W13-1P	20 MPH	NEW
20	C 32+64.58	R4-7	KEEP RIGHT	NEW
21	C 33+76.44	W11-2	PEDESTRIAN	NEW
		W16-7PL	DOWNWARD DIAGONAL ARROW	NEW
22	C 33+93.44	W11-2	PEDESTRIAN	NEW
		W16-7PL	DOWNWARD DIAGONAL ARROW	NEW
23	C 34+14.45	D3-1	CARPENTER RD NE	2 POSTS

SIGN SCHEDULE

SIGN NO.	STATION	MUTCD SIGN TYPE	DESCRIPTION	COMMENTS
24	C 34+28.66	R1-2	YIELD	NEW
25	C 34+70.45	R6-1	ONE WAY	NEW
		R6-4A	ROUNDABOUT DIRECTIONAL	NEW
EX26	C 31+03.16	–	SPEED LIMIT 35 MPH	EXISTING SIGN TO REMAIN
EX27	C 31+11.76	–	STOP SIGN AHEAD	EXISTING SIGN TO REMOVE

20 0 20 40
SCALE IN FEET

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YZ DRAWN BY
GW CHECKED BY
ATB APPROVED BY
DATE: 10/31/2023

AARON T. PATTERSON EXPIRES 9/6/2024 WASHINGTON 31183 REGISTERED PROFESSIONAL ENGINEER 10/31/2023

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

SIGNING PLAN

DRAWING NUMBER
SN3
SHT 53 OF 64

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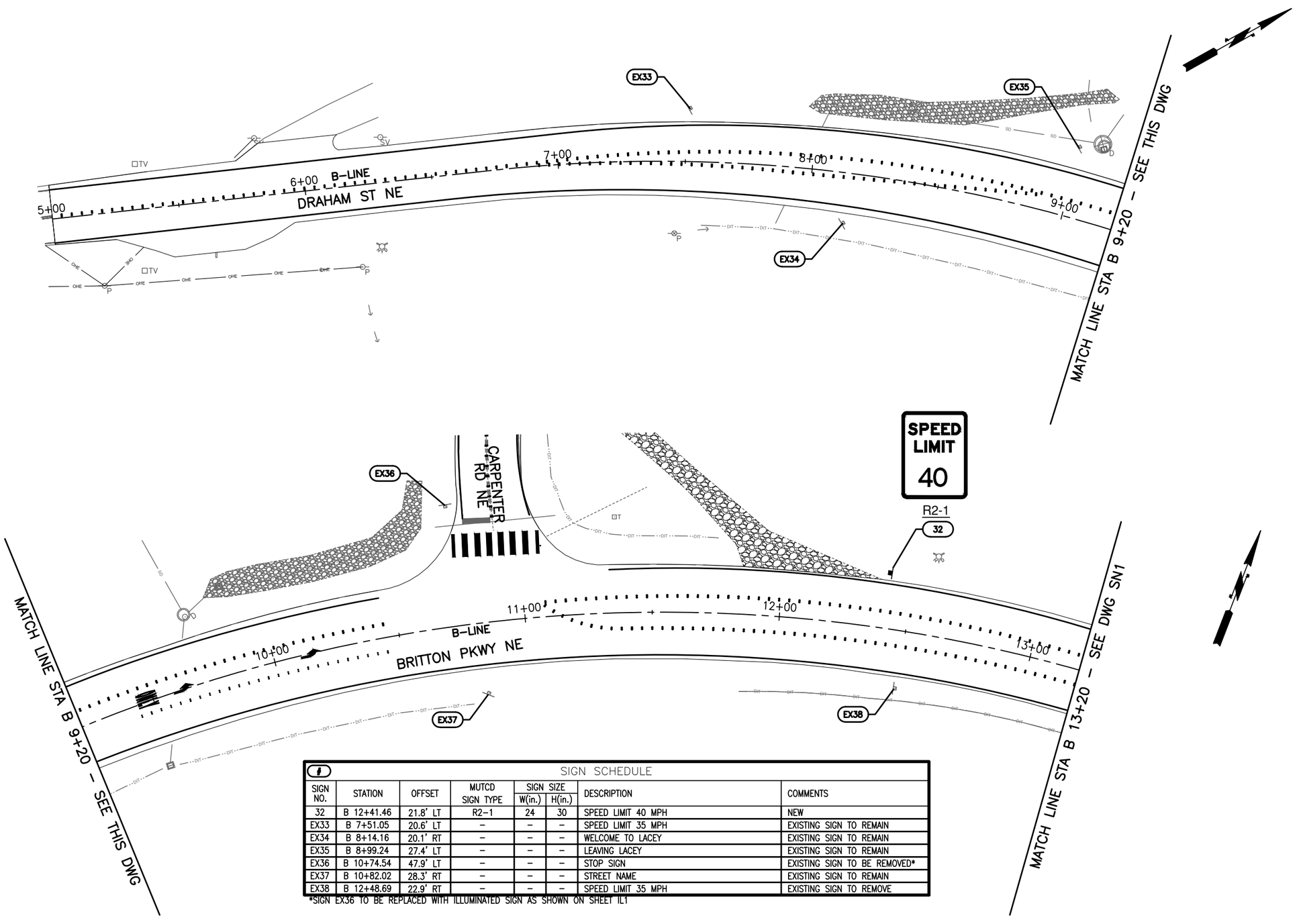

LEGEND:

- EXISTING SIGN
- PROPOSED SIGN
- (X) SIGN NUMBER

GENERAL NOTES:

1. SIGN PLACEMENT PER DETAIL ON DWG SND1
2. STEEL SIGN SUPPORT INSTALLATION PER DETAIL ON DWG SND1
3. SIGN BRACING PER DETAIL ON DWG SND1
4. NEW AND REPLACED SIGNS TO BE PROVIDED AND INSTALLED BY THE CITY, EXCEPT THE LED FLASHING STOP SIGN (EX36).

SIGN SCHEDULE

SIGN NO.	STATION	OFFSET	MUTCD SIGN TYPE	SIGN SIZE W(in.)	SIGN SIZE H(in.)	DESCRIPTION	COMMENTS
32	B 12+41.46	21.8' LT	R2-1	24	30	SPEED LIMIT 40 MPH	NEW
EX33	B 7+51.05	20.6' LT	–	–	–	SPEED LIMIT 35 MPH	EXISTING SIGN TO REMAIN
EX34	B 8+14.16	20.1' RT	–	–	–	WELCOME TO LACEY	EXISTING SIGN TO REMAIN
EX35	B 8+99.24	27.4' LT	–	–	–	LEAVING LACEY	EXISTING SIGN TO REMAIN
EX36	B 10+74.54	47.9' LT	–	–	–	STOP SIGN	EXISTING SIGN TO BE REMOVED*
EX37	B 10+82.02	28.3' RT	–	–	–	STREET NAME	EXISTING SIGN TO REMAIN
EX38	B 12+48.69	22.9' RT	–	–	–	SPEED LIMIT 35 MPH	EXISTING SIGN TO REMOVE

*SIGN EX36 TO BE REPLACED WITH ILLUMINATED SIGN AS SHOWN ON SHEET IL1

20 0 20 40
SCALE IN FEET

DATUM
NAD 1983/91

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

NO.	DATE	BY	APPR.	REVISIONS

YZ
DESIGNED BY
YZ
DRAWN BY
GW
CHECKED BY
ATB
APPROVED BY
DATE: 10/31/2023

AARON T. BUTTERFIELD — STATE OF WASHINGTON — 31183 — REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

SIGNING PLAN

DRAWING NUMBER
SN4

SHT 54 OF 64

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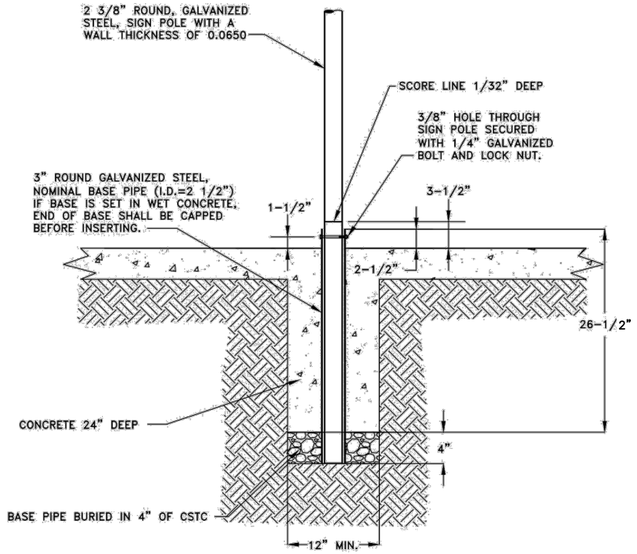


GENERAL NOTE:
1. LOCATION OF SIGN SHALL BE DETERMINED BY THE CITY.
2. WHEN POSSIBLE INSTALL BASE PIPE 2" BELOW THE CONCRETE IN CRUSHED BASE TO ALLOW THE BASE PIPE TO DRAIN.
3. THE USE OF A CAP AT THE BOTTOM OF THE BASE PIPE SHALL ONLY BE USED IN UNUSUAL CONDITIONS.
4. THE CITY SHALL SUPPLY AND LOCATE THE BREAK-AWAY SLEEVES AND THE CONTRACTOR SHALL INSTALL BEFORE POURING CONCRETE.

SIGN POLE BREAK-AWAY
NO SCALE

NAD 1983/91

NO.	DATE	BY	APPR.	REVISIONS

YZ DESIGNED BY
YZ DRAWN BY
GW CHECKED BY
ATB APPROVED BY
DATE: 10/31/2023

AARON T. BATTERSBY STATE OF WASHINGTON 31183 REGISTERED PROFESSIONAL ENGINEER

LOCHNER

CITY OF LACEY

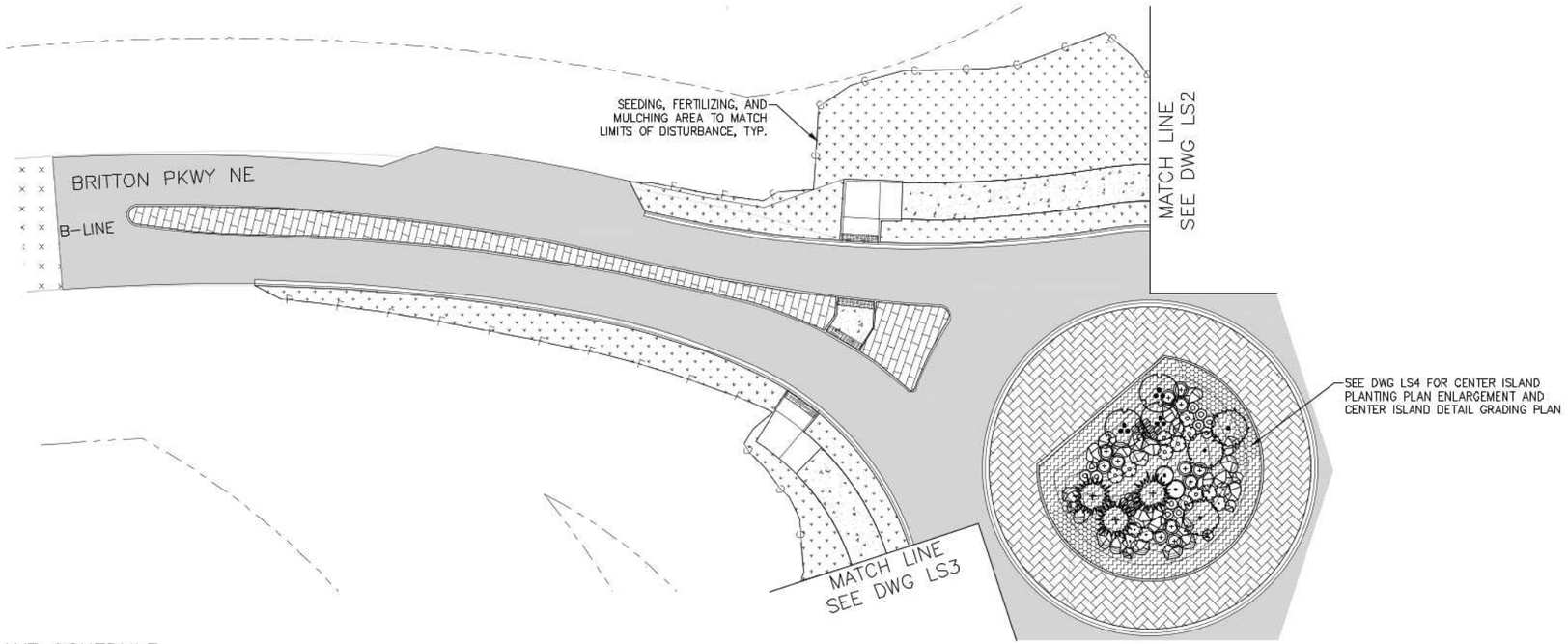
CARPENTER ROAD/BRITTON PARKWAY ROUNDABOUT

SIGNING DETAILS

DRAWING NUMBER
SND1

SHT 55 OF 64

SEC. 10, T.18N., R.1W., W.M.



PLANTING NOTES

1. PLANTING PLAN LAYOUT IS DIAGRAMMATIC AND MAY REQUIRE FIELD ADJUSTMENT PER DIRECTION OF THE OWNER'S REPRESENTATIVE.
2. ANY DISCREPANCIES BETWEEN THE DRAWINGS, SPEC'S, AND/OR SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
4. SEE SHEET LS5 AND SPECIAL PROVISIONS FOR SOIL PREPARATION IN ROUNDABOUT CENTER ISLAND. SEE DRAINAGE PLANS FOR SOIL PREPARATION AT BIOSWALES.
5. ALL PLANTING AREAS SHALL RECEIVE A MINIMUM OF 3" DEPTH BARK OR WOOD CHIP MULCH.
6. SEEDING, FERTILIZING, AND MULCHING LIMITS SHALL MATCH LIMITS OF DISTURBANCE.

PLANT SCHEDULE

TREES	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	REMARKS
	3	CHAMAECYPARIS NOOTKATENSIS 'PENDULA'	WEEPING ALASKA CEDAR	7'-8' HT	AS SHOWN	SINGLE TRUNK WITH STRAIGHT CENTRAL LEADER. SYMMETRICAL BRANCHING HABIT.
	3	CHAMAECYPARIS PISIFERA 'BOULEVARD'	EXCELSA WESTERN RED CEDAR	7'-8' HT	AS SHOWN	SINGLE TRUNK WITH STRAIGHT CENTRAL LEADER. SYMMETRICAL BRANCHING HABIT.

SHRUBS	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	REMARKS
	3	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	6'-7' HT	AS SHOWN	MULTI-STEM, THREE STEMS MIN, B&B
	103	CALUNA VULGARIS 'SPRING TORCH'	SPRING TORCH HEATHER	#2 CONT	18" O.C.	FULL AND WELL ROOTED
	6	CORNUS SANGUINEA 'MIDWINTER FIRE'	MIDWINTER FIRE DOGWOOD	#2 CONT	AS SHOWN	FULL AND WELL ROOTED
	15	CORNUS SERICEA 'KESEYI'	KELSEY DOGWOOD	#1 CONT	24" O.C.	FULL AND WELL ROOTED
	664	MAHONIA REPENS	CREEPING OREGON GRAPE	#1 CONT	18" O.C.	FULL AND WELL ROOTED
	2	RIBES SANGUINEUM 'KING EDWARD VII'	KING EDWARD VII FLOWERING CURRANT	#2 CONT	AS SHOWN	FULL AND WELL ROOTED
	11	SPIRAEA JAPONICA 'GOLDFLAME'	GOLDFLAME SPIREA	#2 CONT	AS SHOWN	FULL AND WELL ROOTED
	9	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	#2 CONT	AS SHOWN	FULL AND WELL ROOTED

GRASSES & PERENNIALS	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	REMARKS
	13	MISCANTHUS SINENSIS 'GRACILLIMUS'	MAIDEN HAIR GRASS	#2 CONT	AS SHOWN	FULL AND WELL ROOTED
	5,475 SF	SEEDING, FERTILIZING, AND MULCHING SEE SPECIAL PROVISIONS	SEED MIX SHALL BE TURF TYPE PERRENIAL RYE BLEND – TWO OR MORE VARIETIES (50% BY WEIGHT), CHEWING FESCUE (30% BY WEIGHT), AND HARD FESCUE (20% BY WEIGHT). APPLICATION RATE SHALL 6 LBS PER 1,000 SQUARE FEET.			

20 0 20 40
SCALE IN FEET

DATUM
NAD OF 1983

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NO.	DATE	BY	APPR.	REVISIONS

APPROVED FOR CONSTRUCTION

ENGINEERING MANAGER DATE

PROJECT MANAGER DATE

PROJECT ENGINEER DATE

RDL DESIGNED BY
RDL DRAWN BY
MER CHECKED BY
APPROVED BY
DATE: 11/1/2023

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT RYAN D. LAMBERT CERTIFICATE NO. 1190 11/01/23

russell lambert LANDSCAPE ARCHITECTURE
7724 2nd Ave NE
Seattle, WA 98115
206.271.9620

LOCHNER

CITY OF LACEY

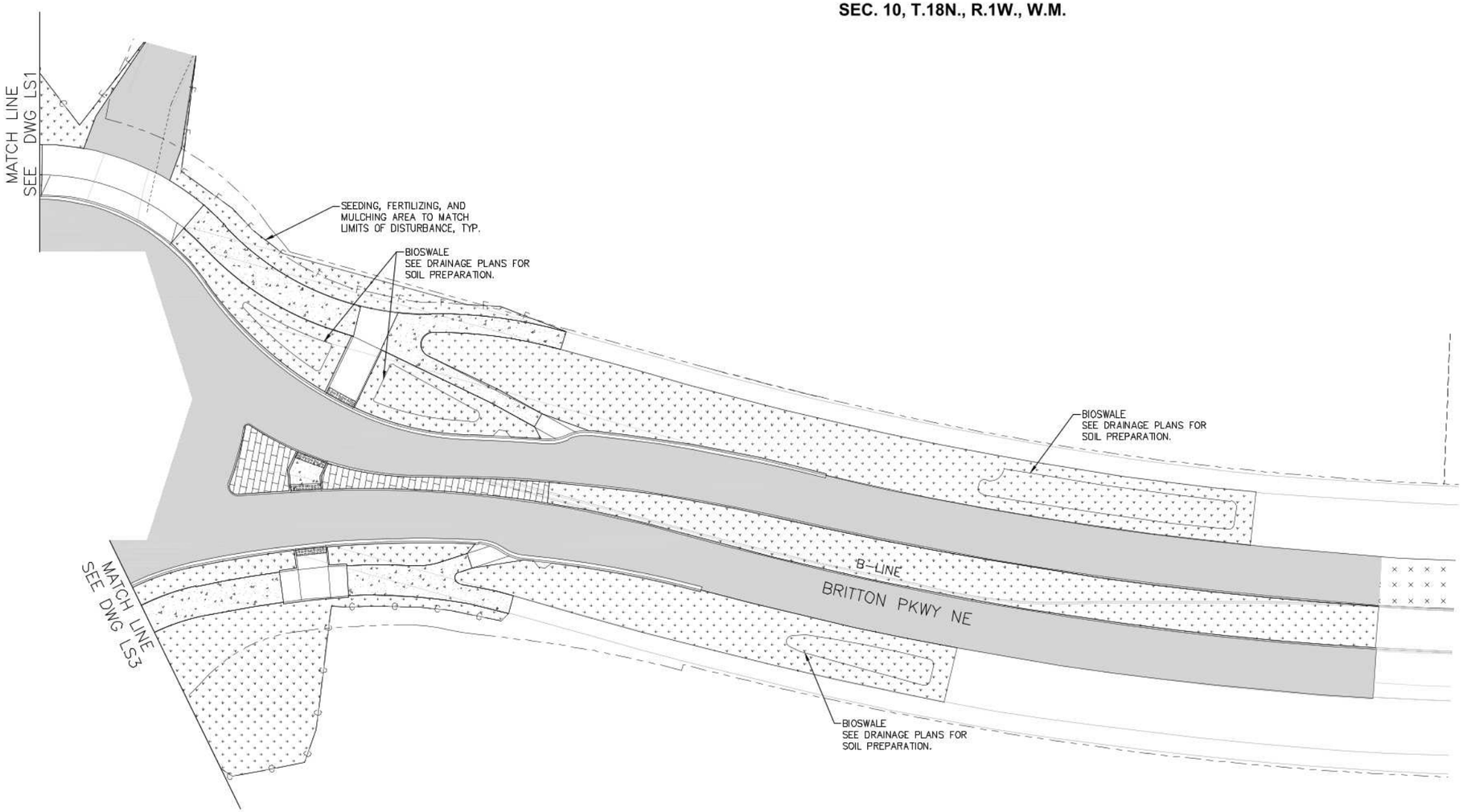
CITY OF LACEY
CARPENTER ROAD ROUNDABOUT

LANDSCAPE PLAN

DRAWING NUMBER
LS1
SHT 56 OF 64

11/1/2023 11:23 AM C:\Users\crims\Dropbox\Russell + Lambert\Projects\20-07 Carpenter Rd RB - Lochner\CAD\17032-sheet-LS.dwg

SEC. 10, T.18N., R.1W., W.M.



PLANTING NOTES

1. PLANTING PLAN LAYOUT IS DIAGRAMMATIC AND MAY REQUIRE FIELD ADJUSTMENT PER DIRECTION OF THE OWNER'S REPRESENTATIVE.
2. ANY DISCREPANCIES BETWEEN THE DRAWINGS, SPEC'S, AND/OR SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
4. SEE SHEET LS5 AND SPECIAL PROVISIONS FOR SOIL PREPARATION IN ROUNDABOUT CENTER ISLAND. SEE DRAINAGE PLANS FOR SOIL PREPARATION AT BIOSWALES.
5. ALL PLANTING AREAS SHALL RECEIVE A MINIMUM OF 3" DEPTH BARK OR WOOD CHIP MULCH.
6. SEEDING, FERTILIZING, AND MULCHING LIMITS SHALL MATCH LIMITS OF DISTURBANCE.

PLANT SCHEDULE

GRASSES & PERENNIALS	QTY	NAME	
	17,000 SF	SEEDING, FERTILIZING, AND MULCHING SEE SPECIAL PROVISIONS	SEED MIX SHALL BE TURF TYPE PERRENIAL RYE BLEND – TWO OR MORE VARIETIES (50% BY WEIGHT), CHEWING FESCUE (30% BY WEIGHT), AND HARD FESCUE (20% BY WEIGHT). APPLICATION RATE SHALL 6 LBS PER 1,000 SQUARE FEET.

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PROJECT ENGINEER DATE

RDL DESIGNED BY
DRL DRAWN BY
MER CHECKED BY
APPROVED BY
DATE: 11/1/2023

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT RYAN D. LAMBERT CERTIFICATE NO. 1180 11/01/23

russell lambert LANDSCAPE ARCHITECTURE
7724 2nd Ave NE
Seattle, WA 98115
206.271.9620

LOCHNER

CITY OF LACEY

CITY OF LACEY
CARPENTER ROAD ROUNDABOUT

LANDSCAPE PLAN

DRAWING NUMBER
LS2
SHT 57 OF 64

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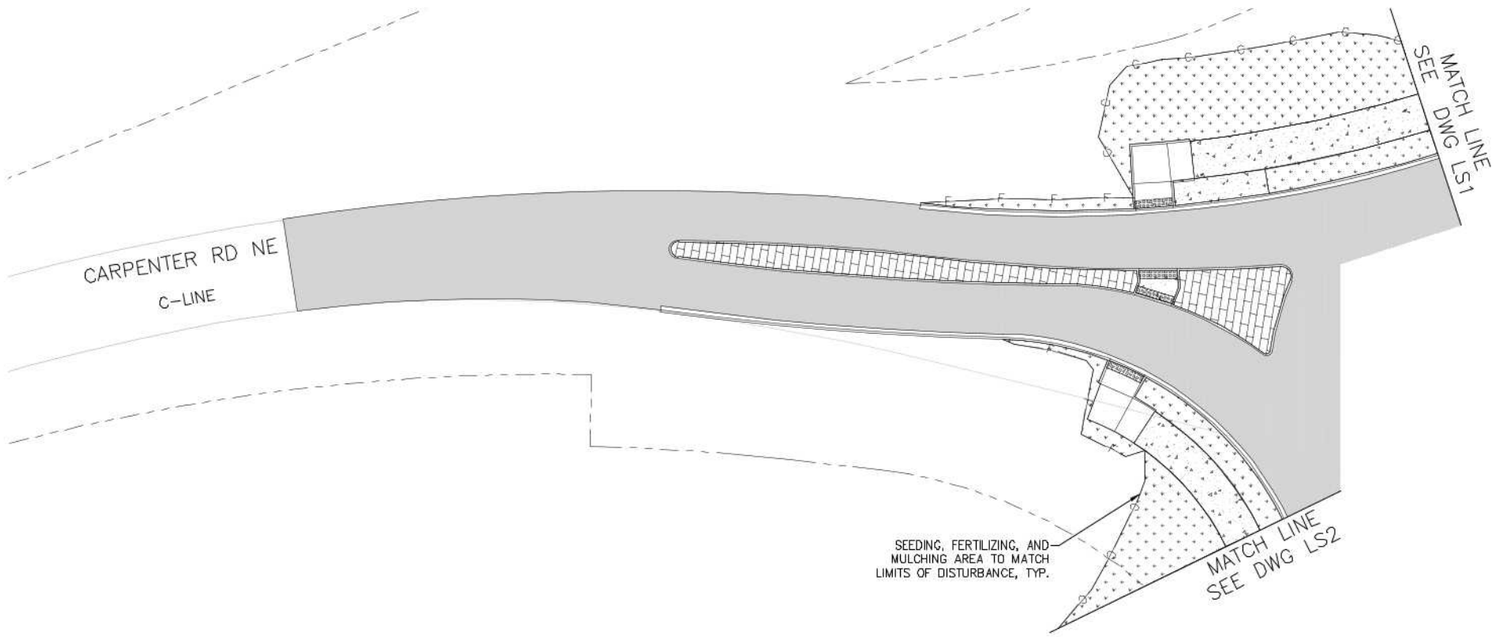

PLANTING NOTES

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6. SEEDING, FERTILIZING, AND MULCHING LIMITS SHALL MATCH LIMITS OF DISTURBANCE.

PLANT SCHEDULE

GRASSES & PERENNIALS	QTY	NAME	
	3,320 SF	SEEDING, FERTILIZING, AND MULCHING SEE SPECIAL PROVISIONS	SEED MIX SHALL BE TURF TYPE PERRENIAL RYE BLEND – TWO OR MORE VARIETIES (50% BY WEIGHT), CHEWING FESCUE (30% BY WEIGHT), AND HARD FESCUE (20% BY WEIGHT). APPLICATION RATE SHALL 6 LBS PER 1,000 SQUARE FEET.

20 0 20 40
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RDL DRAWN BY
MER CHECKED BY
APPROVED BY
DATE: 11/1/2023

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT RYAN D. LAMBERT CERTIFICATE NO. 1190

russell + lambert LANDSCAPE ARCHITECTURE
7724 2nd Ave NE
Seattle, WA 98115
206.271.9620

LOCHNER

CITY OF LACEY

CITY OF LACEY
CARPENTER ROAD ROUNDABOUT

LANDSCAPE PLAN

DRAWING NUMBER
LS3
SHT. 58 OF 64

SEC. 10, T.18N., R.1W., W.M.

PLANTING NOTES

1. PLANTING PLAN LAYOUT IS DIAGRAMMATIC AND MAY REQUIRE FIELD ADJUSTMENT PER DIRECTION OF THE OWNER'S REPRESENTATIVE.
2. ANY DISCREPANCIES BETWEEN THE DRAWINGS, SPEC'S, AND/OR SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
4. SEE SHEET LS5 AND SPECIAL PROVISIONS FOR SOIL PREPARATION IN ROUNDABOUT CENTER ISLAND. SEE DRAINAGE PLANS FOR SOIL PREPARATION AT BIOSWALES.
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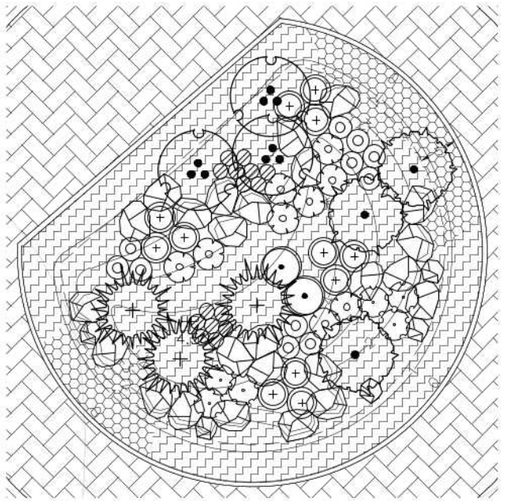
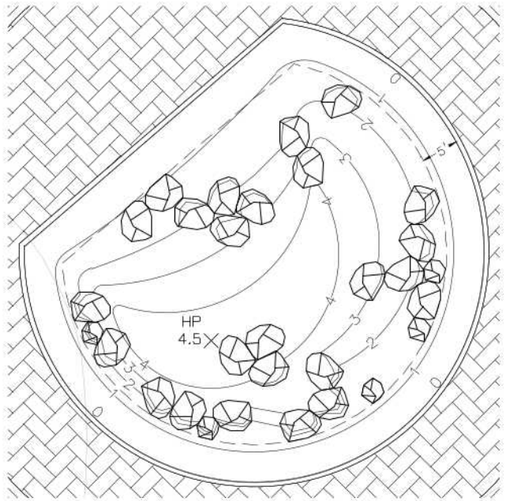
6. SEEDING, FERTILIZING, AND MULCHING LIMITS SHALL MATCH LIMITS OF DISTURBANCE.



10 0 10 20
SCALE IN FEET

A CENTER ISLAND PLANTING PLAN ENLARGEMENT
SCALE: 1" = 10'-0"



10 0 10 20
SCALE IN FEET

B CENTER ISLAND DETAIL GRADING PLAN
SCALE: 1" = 10'-0"

LEGEND

STREAMBED BOULDER FOUR MAN

STREAMBED BOULDER SIX MAN

GRADING NOTES:

1. CONTOUR UNITS ARE IN FEET.
2. GRADE CENTER ISLAND TO BE SMOOTH AND NATURAL IN APPEARANCE.
3. SLOPE ALL LANDSCAPE TO DRAIN AND TO BE FREE OF PUDDLES.
4. MINIMUM LANDSCAPE SLOPE SHALL BE 2%.
5. MAXIMUM LANDSCAPE SLOPE SHALL BE 2:1.
6. GRADING PLAN LAYOUT IS DIAGRAMMATIC AND MAY REQUIRE FIELD ADJUSTMENT PER DIRECTION OF THE OWNER'S REPRESENTATIVE.
7. ANY DISCREPANCIES BETWEEN THE DRAWINGS, SPEC'S, AND/OR SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH CONSTRUCTION.

20 0 20 40
SCALE IN FEET

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PROJECT ENGINEER DATE

RDL DESIGNED BY
RDL DRAWN BY
MER CHECKED BY
APPROVED BY
DATE: 11/1/2023

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
RYAN D. LAMBERT 11/01/23
CERTIFICATE NO. 1190

russell lambert LANDSCAPE ARCHITECTURE
7724 2nd Ave NE
Seattle, WA 98115
206.271.9620

LOCHNER

CITY OF LACEY

CITY OF LACEY
CARPENTER ROAD ROUNDABOUT

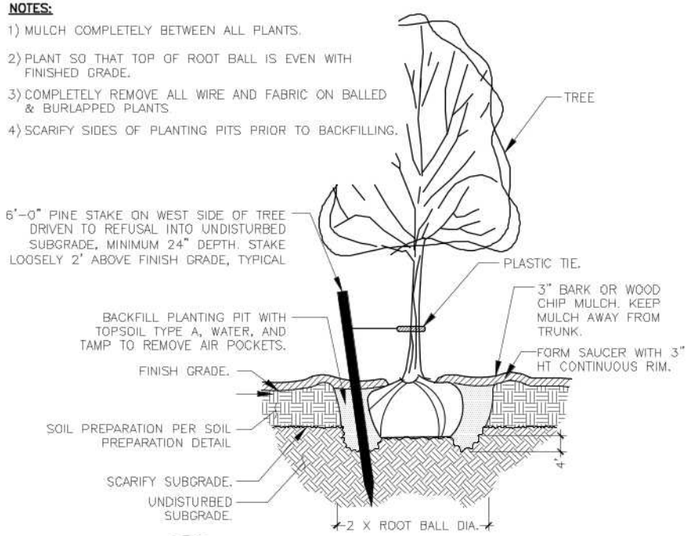
PLANT SCHEDULE

DRAWING NUMBER
LS4
SHT 59 OF 64

11/1/2023 11:23 AM C:\Users\cnims\Dropbox\Russell + Lambert\Projects\20-07 Carpenter Rd RB - Lochner\CAD\17032-sheet-LS.dwg

NOTES:

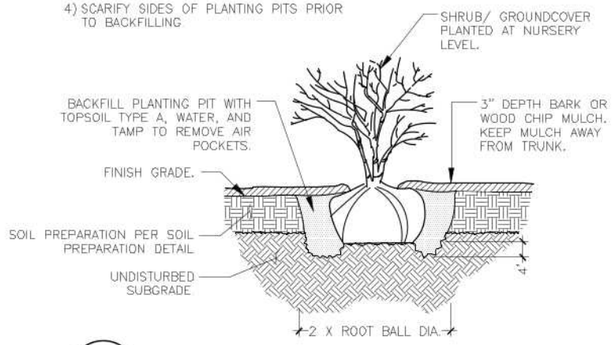
1) MULCH COMPLETELY BETWEEN ALL PLANTS.
2) PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH FINISHED GRADE.
3) COMPLETELY REMOVE ALL WIRE AND FABRIC ON BALLED & BURLAPPED PLANTS.
4) SCARIFY SIDES OF PLANTING PITS PRIOR TO BACKFILLING.



A TREE PLANTING IN LANDSCAPE PLANTING BED
NOT TO SCALE

NOTES:

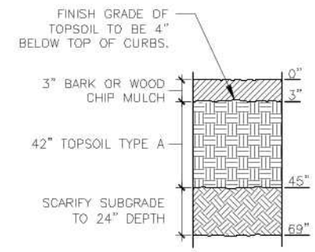
1) MULCH COMPLETELY BETWEEN ALL PLANTS.
2) PLANT SO THAT TOP OF ROOT BALL IS EVEN WITH FINISHED GRADE.
3) COMPLETELY REMOVE ALL WIRE AND FABRIC ON BALLED & BURLAPPED PLANTS.
4) SCARIFY SIDES OF PLANTING PITS PRIOR TO BACKFILLING



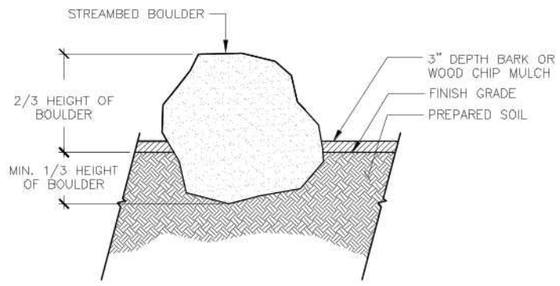
B TYPICAL SHRUB & GROUNDCOVER PLANTING
NOT TO SCALE

NOTE:

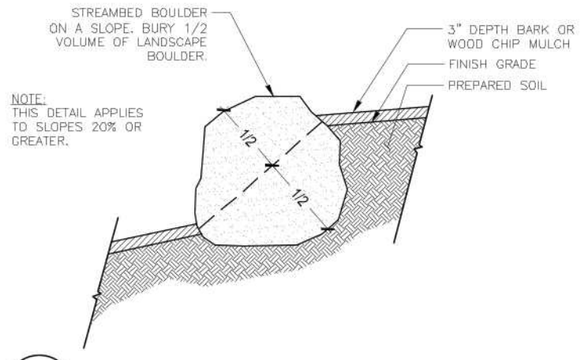
1) SEE DRAINAGE PLANS FOR SOIL PREPARATION AT BIOSWALES.



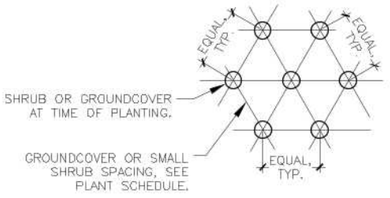
C CENTER ISLAND SOIL PREPARATION
NOT TO SCALE



D STREAMBED BOULDER INSTALLATION
NOT TO SCALE



E STREAMBED BOULDER INSTALLATION ON SLOPE
NOT TO SCALE



F TYPICAL GROUNDCOVER SPACING
NOT TO SCALE

20 0 20 40
SCALE IN FEET

DATUM
NAD OF 1983

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ENGINEERING MANAGER DATE

PROJECT MANAGER DATE

PROJECT ENGINEER DATE

RDL DESIGNED BY
RDL DRAWN BY
MER CHECKED BY
APPROVED BY
DATE: 11/1/2023

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT RYAN D. LAMBERT CERTIFICATE NO. 1190 11/01/23

russell lambert LANDSCAPE ARCHITECTURE
7724 2nd Ave NE
Seattle, WA 98115
206.271.9620

LOCHNER

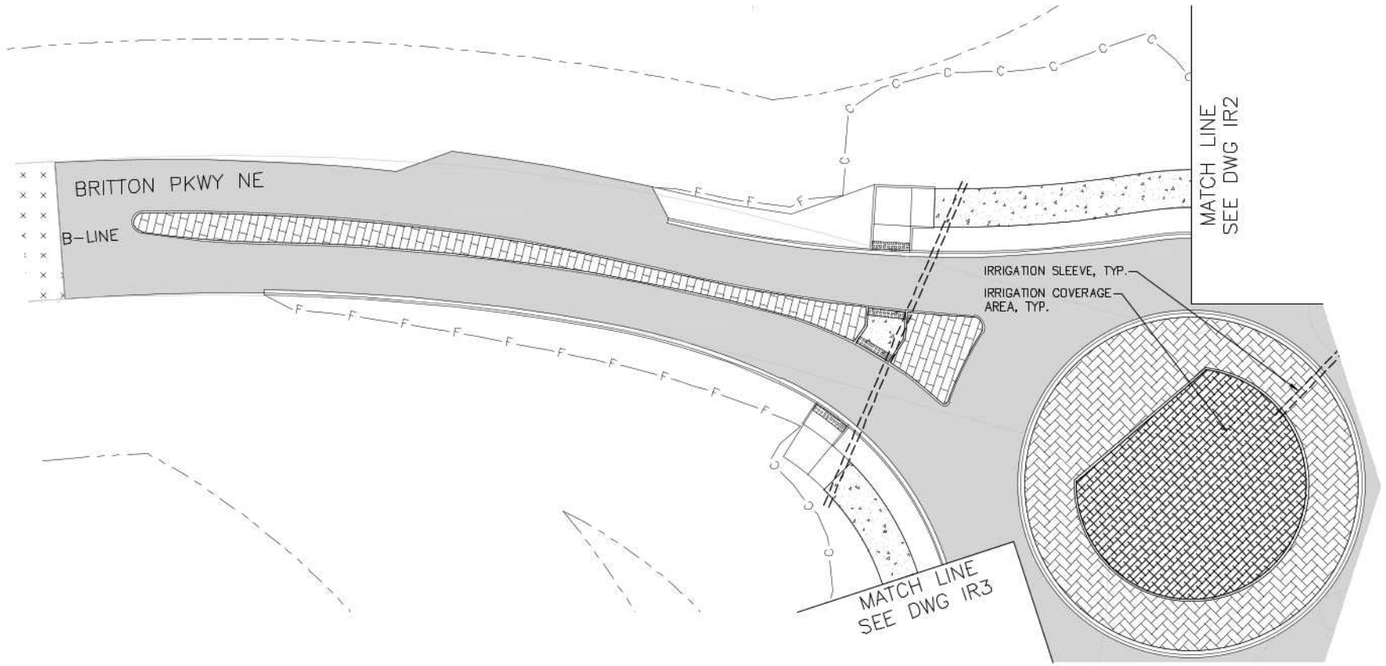
CITY OF LACEY

CITY OF LACEY
CARPENTER ROAD ROUNDABOUT

LANDSCAPE DETAILS

DRAWING NUMBER
LS5
SHT 60 OF 64

SEC. 10, T.18N., R.1W., W.M.



IRRIGATION NOTES

1. CONTRACTOR SHALL DESIGN AND INSTALL IRRIGATION SYSTEM PER SPECIFICATIONS AND SPECIAL PROVISIONS.
2. IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF LACEY.
3. ANY DISCREPANCIES BETWEEN THE DRAWINGS, SPEC'S, AND/OR SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH CONSTRUCTION.

IRRIGATION LEGEND

- IRRIGATION COVERAGE AREA
- POINT OF CONNECTION
- IRRIGATION SLEEVE

20 0 20 40
SCALE IN FEET

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STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT RYAN D. LAMBERT CERTIFICATE NO. 1190

russell + lambert
LANDSCAPE ARCHITECTURE
7724 2nd Ave NE
Seattle, WA 98115
206.271.9620

LOCHNER

CITY OF LACEY

CITY OF LACEY
CARPENTER ROAD ROUNDABOUT

IRRIGATION PLAN, NOTES, AND LEGEND

DRAWING NUMBER
IR1
SHT. 61 OF 64

11/1/2023 11:28 AM C:\Users\crims\Dropbox\Russell + Lambert\Projects\20-07 Carpenter Rd RB - Lochner\CAD\17032-sheet-IR.dwg

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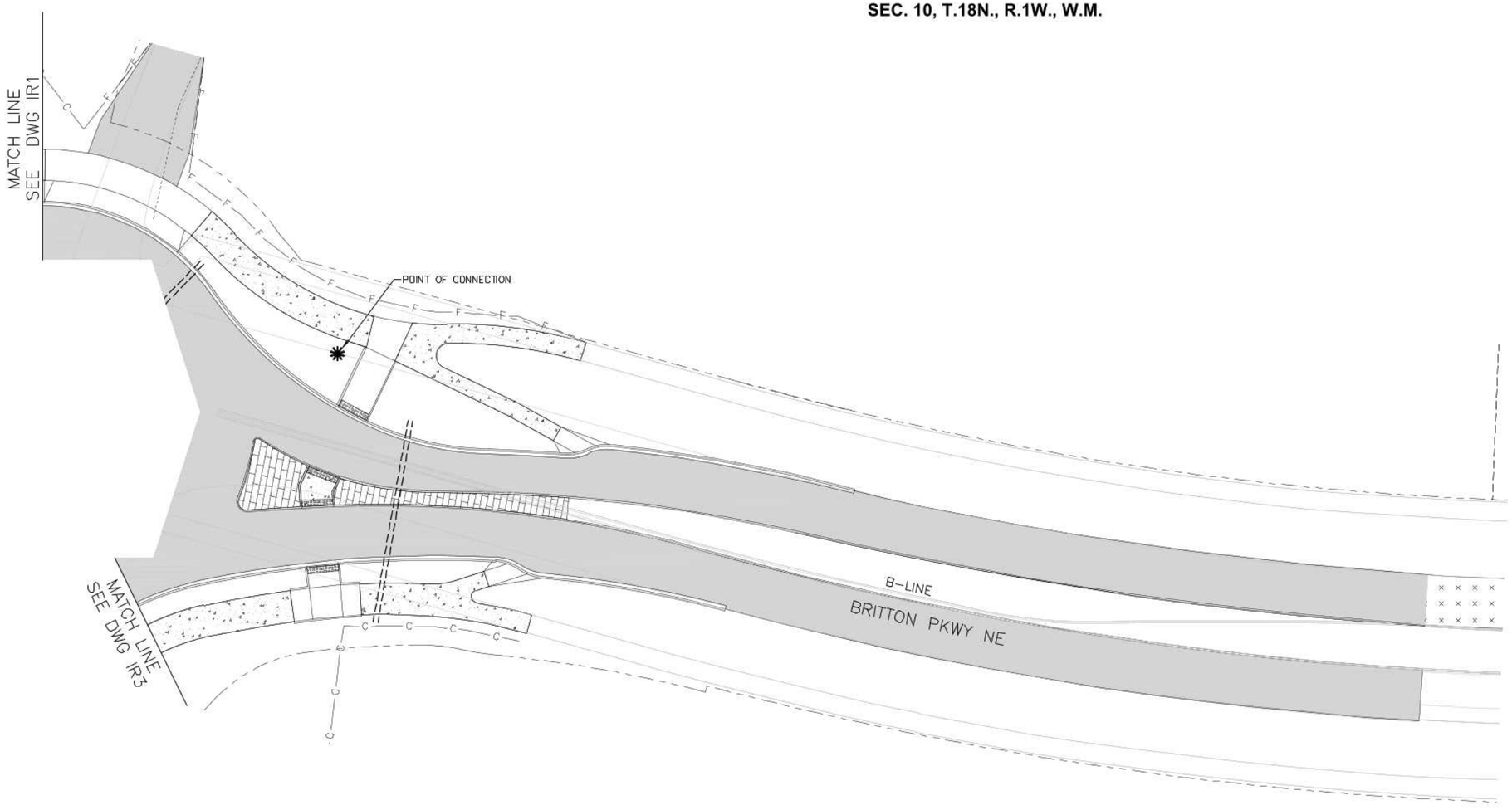

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IRRIGATION LEGEND

IRRIGATION COVERAGE AREA

POINT OF CONNECTION

IRRIGATION SLEEVE

20 0 20 40
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DRL DRAWN BY
MER CHECKED BY
APPROVED BY
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STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
RYAN D. LAMBERT CERTIFICATE NO. 1198
11/1/23

russell lambert
LANDSCAPE ARCHITECTURE
7724 2nd Ave NE
Seattle, WA 98115
206.271.9620

LOCHNER

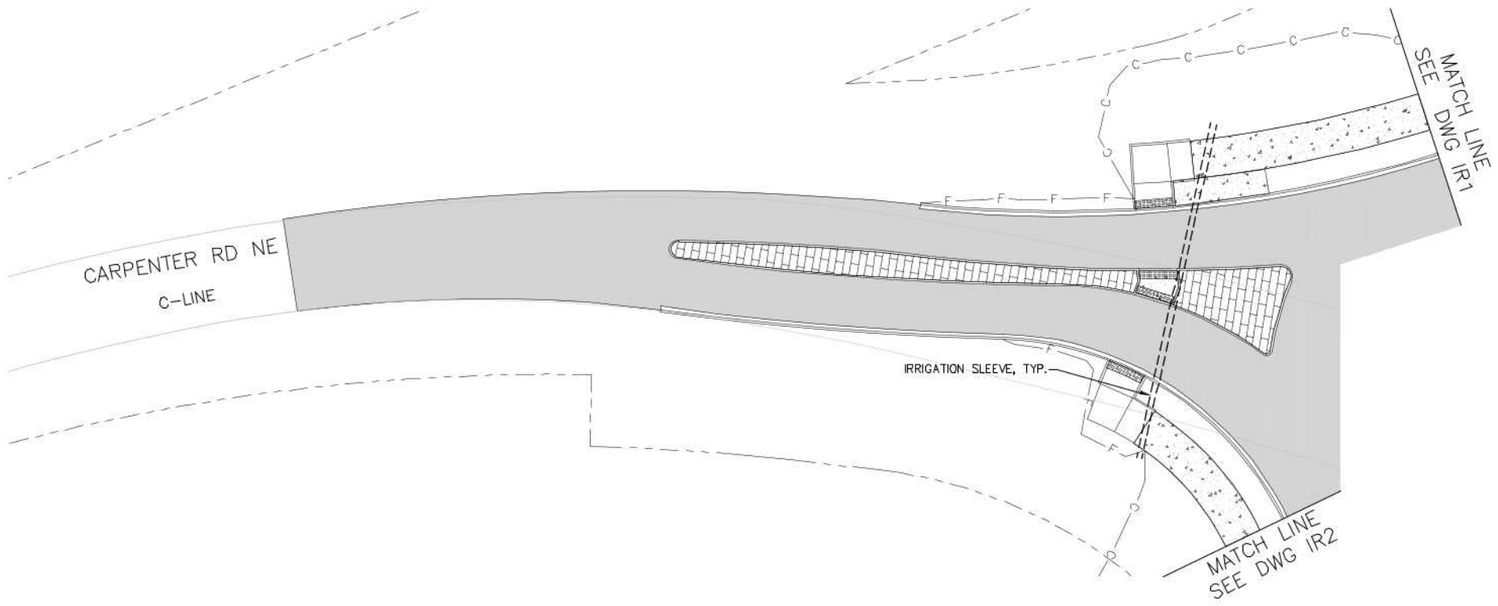
CITY OF LACEY

CITY OF LACEY
CARPENTER ROAD ROUNDABOUT

IRRIGATION PLAN, NOTES, AND LEGEND

DRAWING NUMBER
IR2
SHT 62 OF 64

SEC. 10, T.18N., R.1W., W.M.



IRRIGATION NOTES

1. CONTRACTOR SHALL DESIGN AND INSTALL IRRIGATION SYSTEM PER SPECIFICATIONS AND SPECIAL PROVISIONS.
2. IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF LACEY.
3. ANY DISCREPANCIES BETWEEN THE DRAWINGS, SPEC'S, AND/OR SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH CONSTRUCTION.

IRRIGATION LEGEND

IRRIGATION COVERAGE AREA

POINT OF CONNECTION

IRRIGATION SLEEVE

20 0 20 40
SCALE IN FEET

DATUM
NAD OF 1983

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

NO.	DATE	BY	APPR.	REVISIONS

APPROVED FOR CONSTRUCTION

ENGINEERING MANAGER DATE

PROJECT MANAGER DATE

PROJECT ENGINEER DATE

RDL
DESIGNED BY
RDL
DRAWN BY
MER
CHECKED BY

APPROVED BY

DATE: 11/1/2023

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT RYAN D. LAMBERT CERTIFICATE NO. 1190

russell + lambert
LANDSCAPE ARCHITECTURE
7724 2nd Ave NE
Seattle, WA 98115
206.271.9620

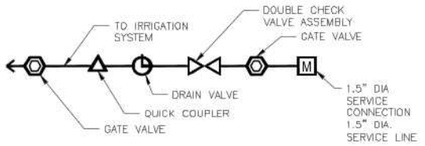
LOCHNER

CITY OF LACEY

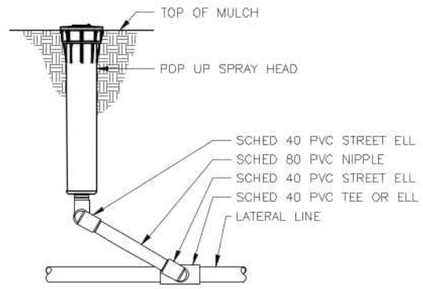
CITY OF LACEY
CARPENTER ROAD ROUNDABOUT

IRRIGATION PLAN, NOTES, AND LEGEND

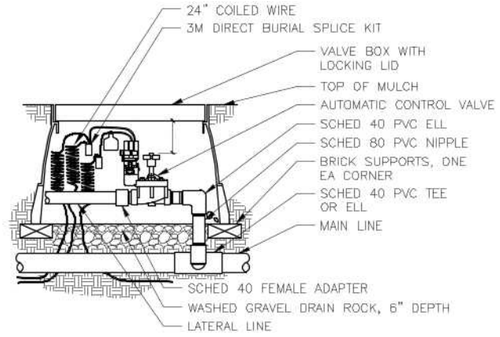
DRAWING NUMBER
IR3
SHT 63 OF 64



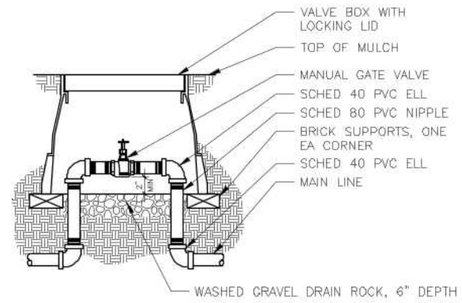
A POINT OF CONNECTION
SCALE: NOT TO SCALE



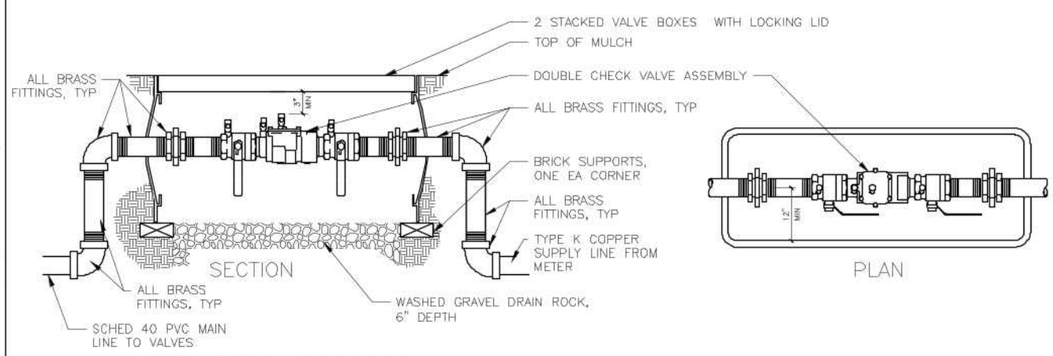
B POP-UP SPRAY HEAD
SCALE: NOT TO SCALE



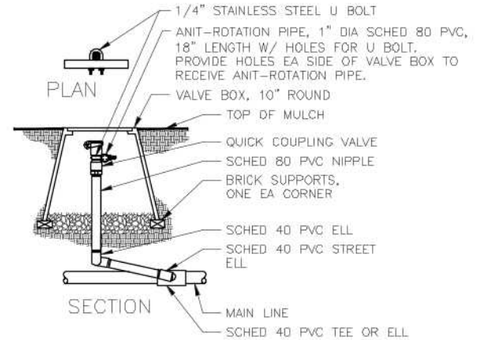
C AUTOMATIC CONTROL VALVE
SCALE: NOT TO SCALE



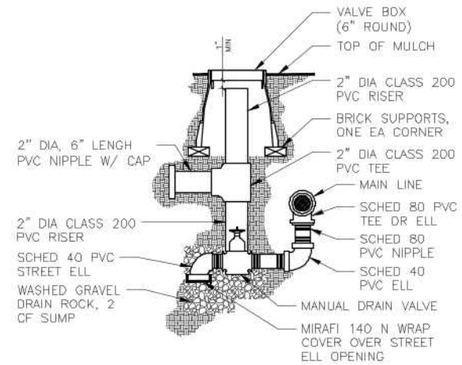
D GATE VALVE
SCALE: NOT TO SCALE



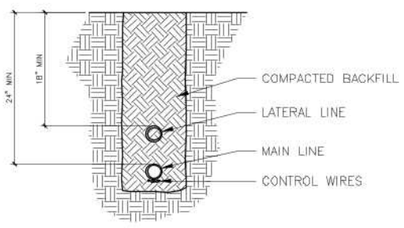
E BACKFLOW PREVENTER
SCALE: X" = 1' - 0"



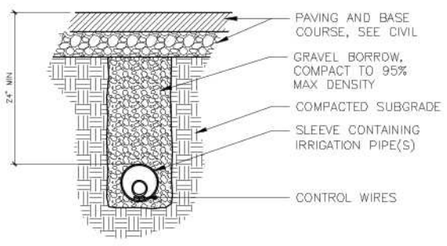
F QUICK COUPLING VALVE
SCALE: NOT TO SCALE



G MANUAL DRAIN VALVE
SCALE: NOT TO SCALE



H MAIN AND/OR LATERAL LINE PIPE TRENCH
SCALE: NOT TO SCALE



I IRRIGATION SLEEVE
SCALE: NOT TO SCALE

DATUM
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STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT RYAN D. LAMBERT CERTIFICATE NO. 1150 10/27

russell + lambert LANDSCAPE ARCHITECTURE
7724 2nd Ave NE
Seattle, WA 98115
206.271.9620

LOCHNER

CITY OF LACEY

CITY OF LACEY
CARPENTER ROAD ROUNDABOUT

IRRIGATION DETAILS

DRAWING NUMBER
IR4
SHT 64 OF 64