

ADDENDUM NO. 1

**City of Lakewood
JBLM-North Access Improvement-Phase I
City Project No. 302.0077**

Date of Issue: February 26, 2021
Date of Opening: **March 2, 2021**

Notice to all Planholders:

This Addendum No. 1, containing the following revisions, additions, deletions, and/or clarifications, is hereby made a part of the Plans and Contract Provisions (Contract Documents) for the above-named project. Bidders shall take this Addendum No. 1 into consideration when preparing and submitting their bids.

Bidders shall attach this Addendum No. 1 to their copy of the Contract Provisions, and shall acknowledge receipt of this Addendum No. 1 in the space provided on the Proposal. Failure to do so may subject the Bidder to disqualification of its bid.

CONTRACT PROVISIONS

Bid Schedule

Sheet ix – Sheet xiv. Replace the Bid Schedule with the attached. Changes include the following:

- Add Bid Item for Structure Excavation Class A for retaining wall footing located at the north end of the Gravelly Lake Drive/Nyanza roundabout shown on sheet 56 (RAB10). Structure Excavation, concrete, and reinforcing steel was estimated based upon a wall section that is 2' high above footing, 100' long, as shown on the plans.
- Add Bid Item for Concrete Class 4000 for Retaining Wall for the wall located at the Gravelly/Nyanza Roundabout Sta 1056+11LT to 1201+32LT.
- Add Bid Item for Steel Reinforcing Bar for Retaining Wall at the location listed in the two bullets above.
- Modify the unit quantity of Schedule A Storm Sewer Pipe, 12 Inch Diameter to account for changes described below in Plans.
- Delete Bid Item for Ductile Iron Storm Sewer, 8 Inch Diameter.
- Add Bid Item for Schedule A Storm Sewer Pipe, 8 Inch Diameter to account for described below in Plans.

Plans

Sheets 61-82 (SD1-SD22). Replace the sheet issued in the original bid submittal with the attached sheets. 8" storm drainage pipe replaces 12" storm drainage pipe going into Type 1P catch basins.

ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS REMAIN IN EFFECT.

Troy Pokswinski

Troy Pokswinski, P.E.
City of Lakewood

Date: February 26, 2021

BID SCHEDULE – SCHEDULE A – ROADWAY (RULE 171)

Note: Unit prices for all items and the total amount bid must be shown. Where conflict occurs between the unit price and the total amount named for any item the unit price shall prevail, and totals shall be corrected to conform thereto. All entries must be typed or entered in ink. A bid must be received on all items. If any are left blank or represent \$0.00, the bid may be disqualified.

Item No.	Section Number	Item Description	Plan Quantity	Unit	Unit Price	Total Amount
1	1-04	Minor Change	30,000	FA	\$1.00	\$30,000.00
2	1-05	Survey Control	1	LS		
3	1-05	Roadway Surveying	1	LS		
4	1-07	SPCC Plan	1	LS		
5	1-07	Pothole Existing Utilities	15,000	FA	\$1.00	\$15,000.00
6	1-07	Utility Conflict Resolution	25,000	FA	\$1.00	\$25,000.00
7	1-09	Mobilization	1	LS		
8	1-10	Project Temporary Traffic Control	1	LS		
9	2-01	Clearing and Grubbing	1	LS		
10	2-02	Removal of Structures and Obstructions	1	LS		
11	2-02	Removing Drainage Structure	55	EA		
12	2-03	Roadway Excavation Incl. Haul	18,000	CY		
13	2-03	Embankment Compaction	3,000	CY		
14	2-09	Shoring or Extra Excavation Class B	1	LS		
15	2-09	Structure Excavation Class A	25	CY		
16	4-04	Crushed Surfacing Top Course	10,130	TON		

17	5-04	HMA CL 1/2 In. PG 58H-22	10,710	TON		
18	5-04	Commercial HMA	226	TON		
19	5-04	Asphalt Cost Price Adjustment	40,000	CALC	\$1.00	\$40,000.00
20	5-04	HMA Speed Hump	6	EACH		
21	5-05	Cement Conc. Pad for Bus Stop	30	SY		
22	5-05	Cement Conc. Truck Apron	1,280	SY		
23	5-05	Cement Conc. Splitter Island	710	SY		
24	5-05	Cement Conc. Pavement	940	CY		
25	6-10	Single Slope Concrete Barrier with Moment Slab	339	LF		
26	6-11	Conc. Class 4000 for Retaining Wall	13	CY		
27	6-11	St. Reinf. Bar for Retaining Wall	1100	LB		
28	7-04	Schedule A Storm Sewer Pipe 8 In. Diam.	1,480	LF		
29	7-04	Schedule A Storm Sewer Pipe 12 In. Diam.	493	LF		
30	7-04	Infiltration Trench	2,455	LF		
31	7-04	Connection to Existing Storm Pipe	3	EACH		
32	7-05	Catch Basin Type 1	48	EACH		
33	7-05	Catch Basin Type 1P with Downturned Elbow	55	EACH		
34	7-05	Catch Basin Type 2 48 In. Diam	5	EACH		

35	7-05	Sanitary Sewer Manhole 48" Barrel Section	3	EACH		
36	7-05	Sanitary Sewer Manhole 60" Barrel Section	1	EACH		
37	7-05	Rotate Existing Manhole Cone and Ladder	3	EACH		
38	7-05	Adjust Existing Sanitary Sewer Manhole	22	EACH		
39	7-05	Connection to Existing Drainage Structure	1	EACH		
40	7-08	Plugging Existing Pipe	103	EACH		
41	7-20	Adjust Existing Junction Box	21	EACH		
42	7-20	Adjust Valve Casing to Grade	35	EACH		
43	7-21	Compost Amended Vegetated Filter Strip	4,068	SF		
44	7-21	Biofiltration Swale	730	SF		
45	8-01	Erosion Control and Water Pollution Prevention	30,000	FA	\$1.00	\$30,000.00
46	8-01	Inlet Protection	45	EA		
47	8-02	Property Restoration	40,000	FA	\$1.00	\$40,000.00
48	8-02	Seeding, Fertilizing, and Mulching	1.45	ACRE		
49	8-02	Topsoil Type A	548	CY		
50	8-02	Bark Mulch	300	CY		
51	8-02	River Rock - Median	235	TON		
52	8-02	River Rock Cobbles - Median	98	TON		

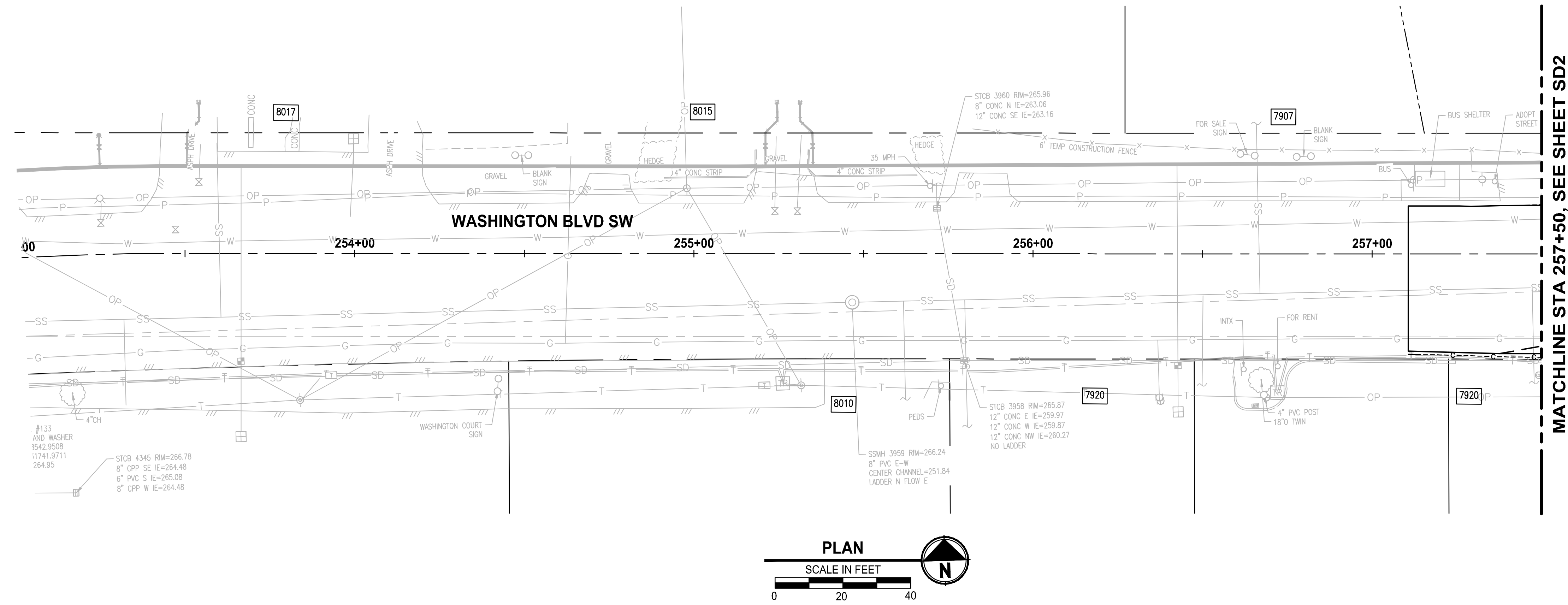
53	8-02	Landscape Boulders - Median	38	EACH		
54	8-02	PSIPE - Berberis x stenphylla 'Corallina Compacta'	26	EACH		
55	8-02	PSIPE - Carpinus betulus 'Columnaris'	3	EACH		
56	8-02	PSIPE - Cornus sericea 'Kelseyi'	29	EACH		
57	8-02	PSIPE - Erica x darleyensis 'Mediterranean Pink'	331	EACH		
58	8-02	PSIPE - Helictorichon sempervirens	64	EACH		
59	8-02	PSIPE - Hemerocallis x 'Purple D'oro'	70	EACH		
60	8-02	PSIPE - Hemerocallis x 'Stella D'Oro'	70	EACH		
61	8-02	PSIPE - Malus tschonoskii	3	EACH		
62	8-02	PSIPE - Prunus x cerasifera 'Cripoizam'	22	EACH		
63	8-02	PSIPE - Prunus laurocerasus 'Mount Vernon'	150	EACH		
64	8-02	PSIPE - Prunus x Hillieri 'Spire'	17	EACH		
65	8-02	PSIPE - Quercus palustris 'Pringeen'	4	EACH		
66	8-03	Irrigation System	1	LS		
67	8-04	Cement Conc. Traffic Curb and Gutter	18,700	LF		
68	8-04	Cement Conc. Pedestrian Curb	1,040	LF		
69	8-04	Cement Conc. Truck Barrier Curb	710	LF		
70	8-04	Roundabout Truck Apron Cem. Conc. Curb and Gutter	1,040	LF		

71	8-04	Dual-Faced Cement Conc. Curb	48	LF		
72	8-05	City Gateway Sign - Nyanza	1	LS		
73	8-06	Cement Conc. Driveway Entrance Type 1	2,008	SY		
74	8-06	Cement Conc. Pavement for Driveway Approach	155	SY		
75	8-09	Raised Pavement Marker Type 1	7.10	HUND		
76	8-09	Raised Pavement Marker Type 2	3.50	HUND		
77	8-12	Wood Fence Under 6 Ft. Tall	46	LF		
78	8-12	Chain Link Fence Type 6	20	LF		
79	8-12	Coated Chain Link Fence Type 6	162	LF		
80	8-13	Reset Existing Monument	4	EACH		
81	8-14	Colored Cement Concrete	281	SY		
82	8-14	Cement Conc. Sidewalk	9,905	SY		
83	8-14	Cement Conc. Curb Ramp Type Perpendicular	1	EACH		
84	8-14	Cement Conc. Curb Ramp Type Single Direction	8	EACH		
85	8-14	Cement Conc. Curb Ramp Type Parallel	26	EACH		
86	8-14	Detectable Warning Surface	520	SF		
87	8-18	Cluster Box Unit, Type V	2	EACH		
88	8-18	Mailbox Support Type 1 with New Mailbox	33	EACH		

89	8-18	Mailbox Support Type 2 with New Mailboxes	8	EACH		
90	8-20	Illumination System, Complete	1	LS		
91	8-20	Remove Existing Signal Systems, Complete	1	LS		
92	8-20	Private Property Electrical Relocations	1	LS		
93	8-21	Permanent Signing	1	LS		
94	8-22	Removing Pavement Markings	1	LS		
95	8-22	Paint Line	1132	LF		
96	8-22	Plastic Line	15,949	LF		
97	8-22	Plastic Wide Lane Line	2,137	LF		
98	8-22	Plastic Stop Bar	53	LF		
99	8-22	Plastic Crosswalk Line	1,160	SF		
100	8-22	Plastic Traffic Arrow	46	EACH		
101	8-22	Painted Access Parking Space Symbol	2	EACH		
102	8-22	Plastic Bicycle Lane Symbol	4	EACH		
103	8-22	Plastic Yield Line Symbol	71	EACH		
104	8-24	Gravity Block Wall	652	SF		
105	8-26	Sculpture Relocation	1	LS		

TOTAL BID SCHEDULE A: \$ _____

LAYOUT: SD1 STORM DRAIN PLAN AND PROFILE
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MATCHLINE STA 257+50, SEE SHEET SD2

STORM DRAINAGE AND UTILITY NOTES

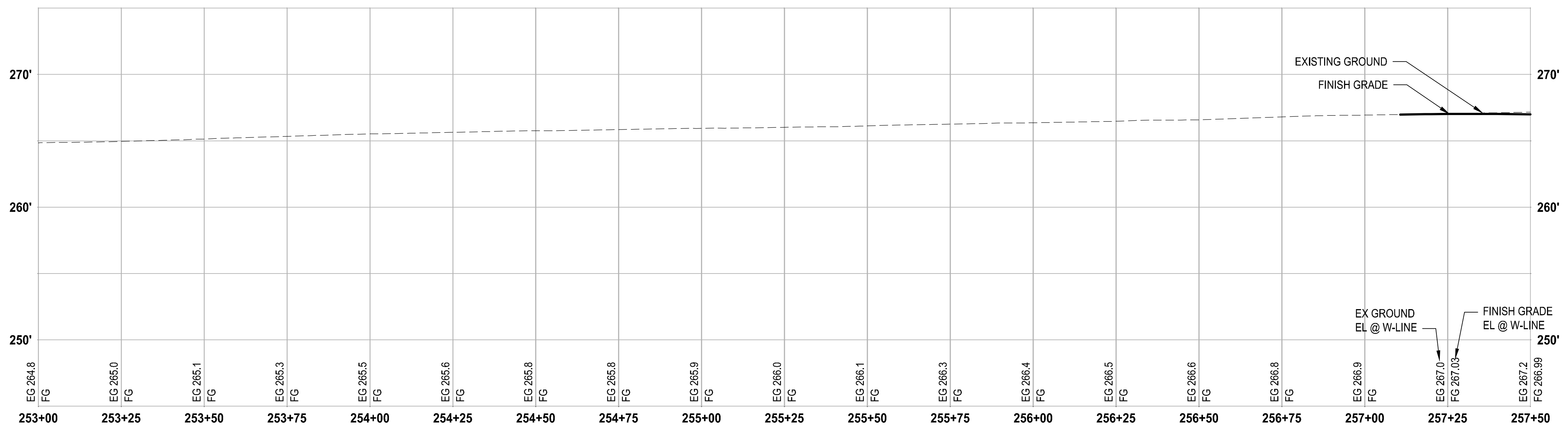
1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST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

GENERAL NOTES

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

LEGEND

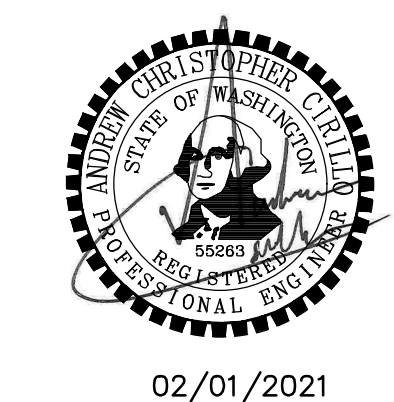
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- 1 PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
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- CATCH BASIN TYPE 2
- ⊙ MANHOLE TYPE 1
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- INFILTRATION TRENCH PER DETAIL (2/DT4)
- BIOFILTRATION SWALE PER DETAIL (3/DT4)
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL (1/DT4)



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

REVISIONS	DATE	BY	DESIGNED
			S. PODGORSKI
			R. BEALS
			A. EPSTEIN
			A. FISHER

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



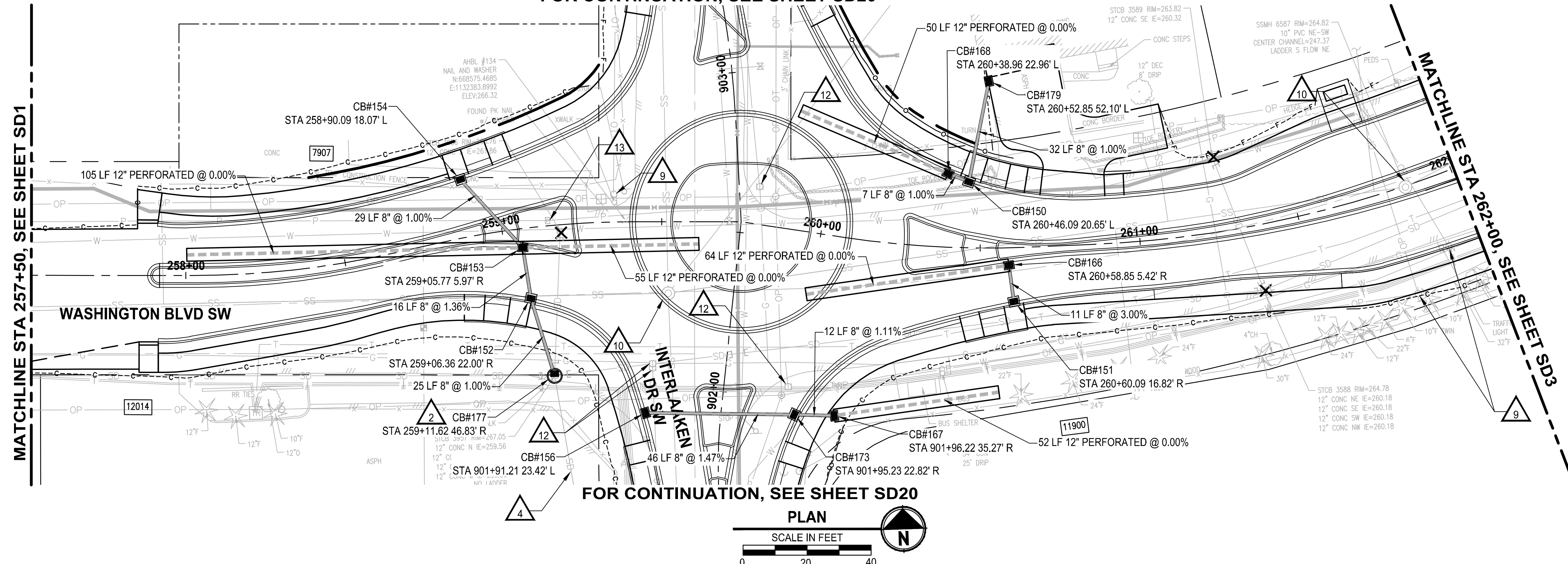
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 P 253.627.4367
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE
 SD1

DRAWING NO.
 61 OF 153

FOR CONTINUATION, SEE SHEET SD20



FOR CONTINUATION, SEE SHEET SD20

PLAN



STORM DRAINAGE AND UTILITY NOTES

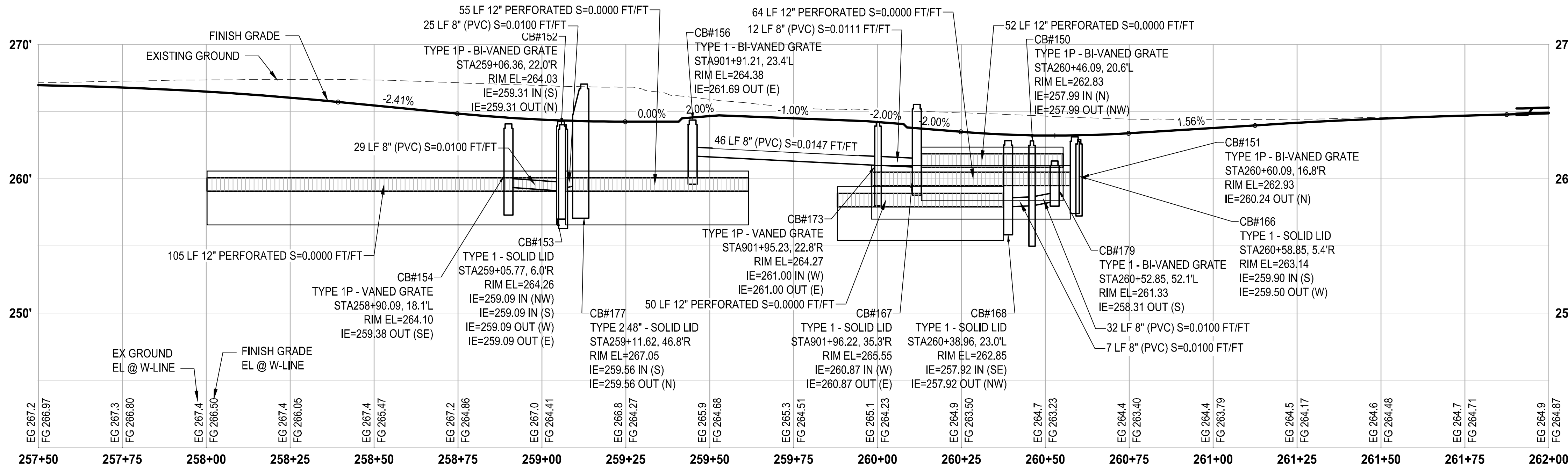
- CONNECT TO EXISTING DRAINAGE STRUCTURE
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 - E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
 - F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
 - G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
- ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
- CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
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LEGEND

- REMOVE EXISTING DRAINAGE STRUCTURE
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- BIOFILTRATION SWALE PER DETAIL (3/DT4)
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL (1/DT4)



PROFILE

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

LAYOUT: SD2 STORM DRAIN PLAN AND PROFILE DATE: Thursday, February 25, 2021 1:04:01 PM

NO.	REVISIONS	DATE	BY	DESIGNED	CHECKED	APPROVED
1				S. PODGORSKI	R. BEALS	A. FISHER
2					A. EPSTEIN	

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IF NOT, SCALE ACCORDINGLY.

FILE NAME: P33047013-SD1-2
JOB No.: 214-3047-013
DATE: FEBRUARY 2021



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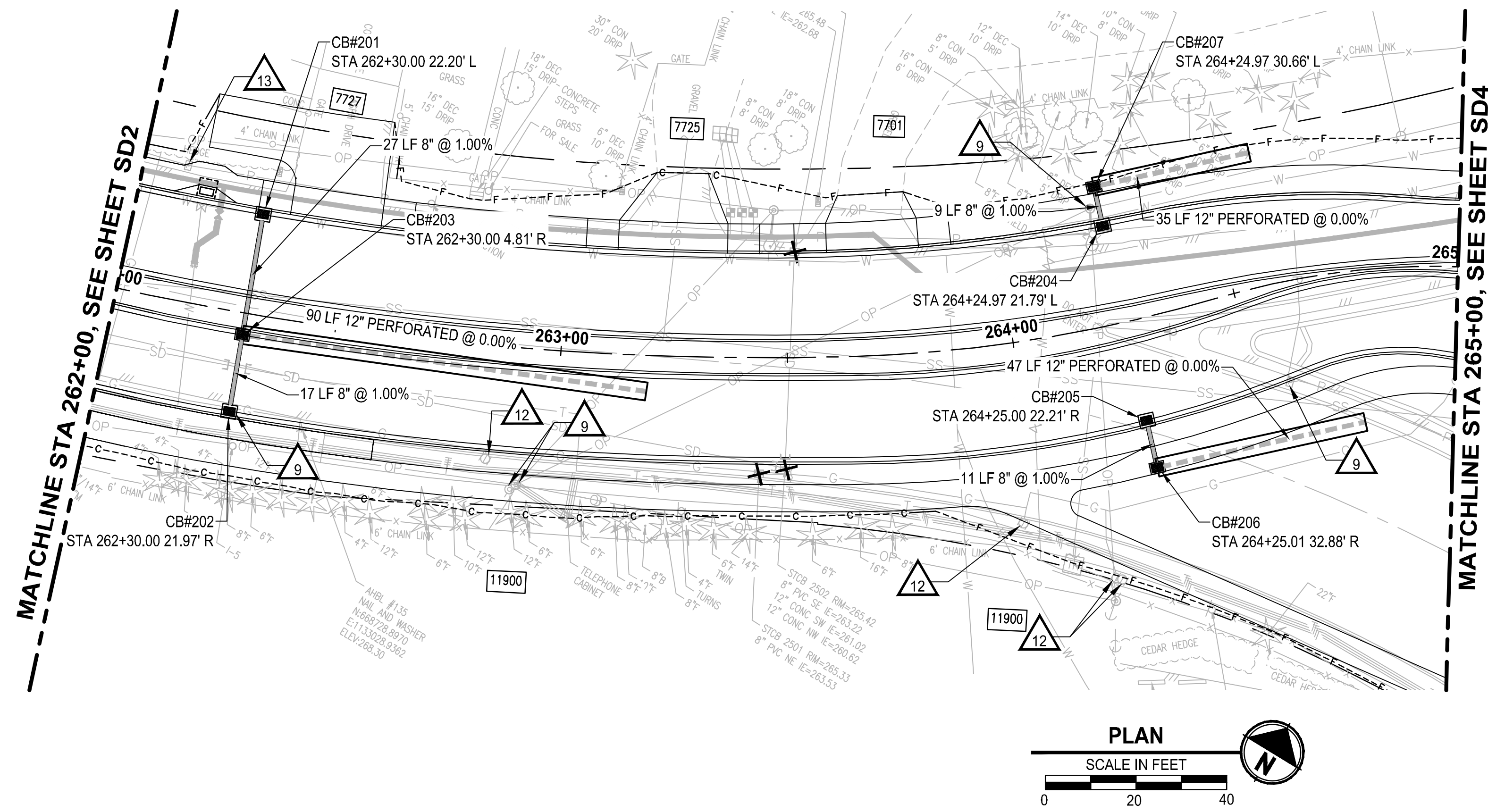
2106 PACIFIC AVE, SUITE 300
TACOMA, WA 98402
P 253.627.4367
WWW.BCRADDESIGN.COM

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

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
62 OF 153
SD2

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



STORM DRAINAGE AND UTILITY NOTES

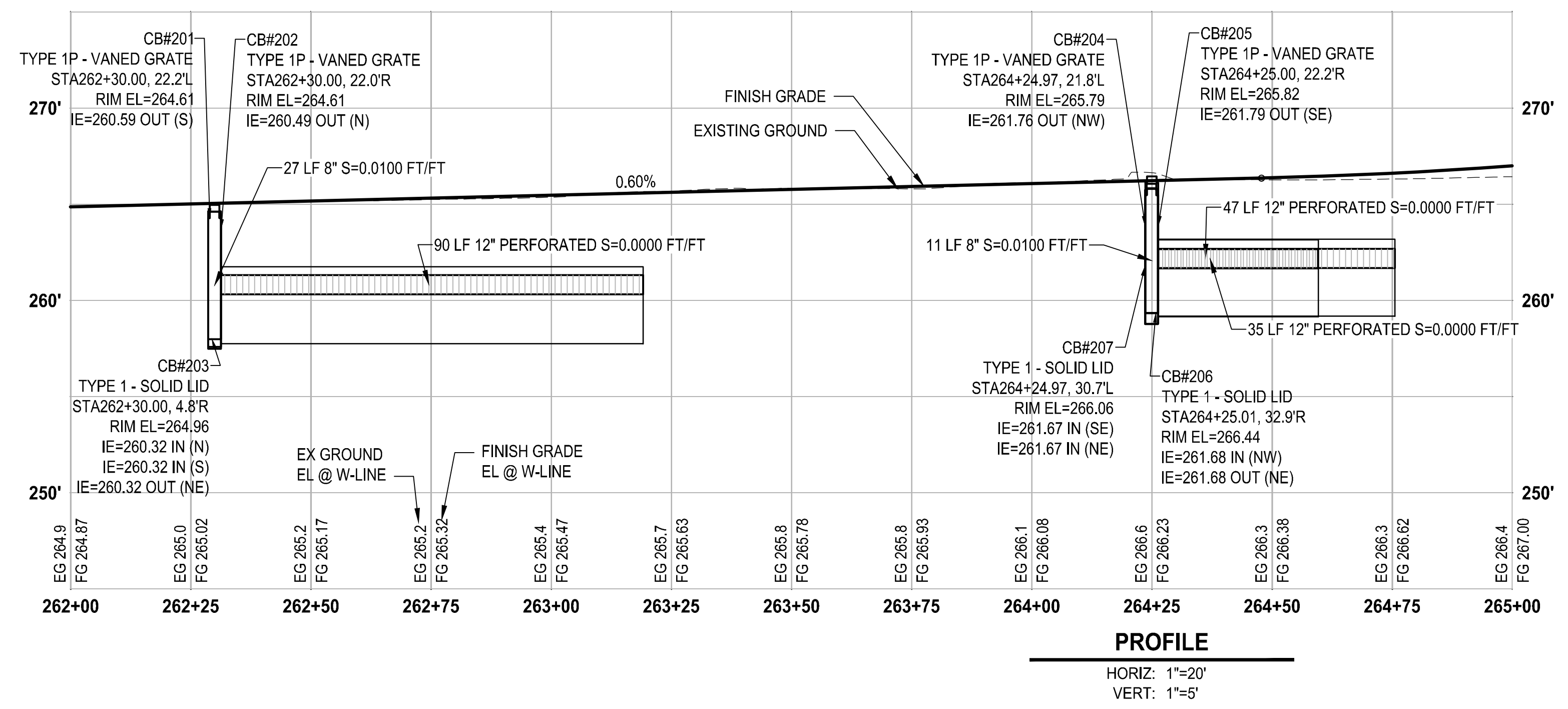
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 - G. BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
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LEGEND

- ✕ REMOVE EXISTING DRAINAGE STRUCTURE
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NO.	REVISIONS	DATE	BY	DESIGNED
				A. CIRILLO
				R. BEALS
				A. EPSTEIN
				A. FISHER

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JOB No.: 214-3047-013
DATE: FEBRUARY 2021

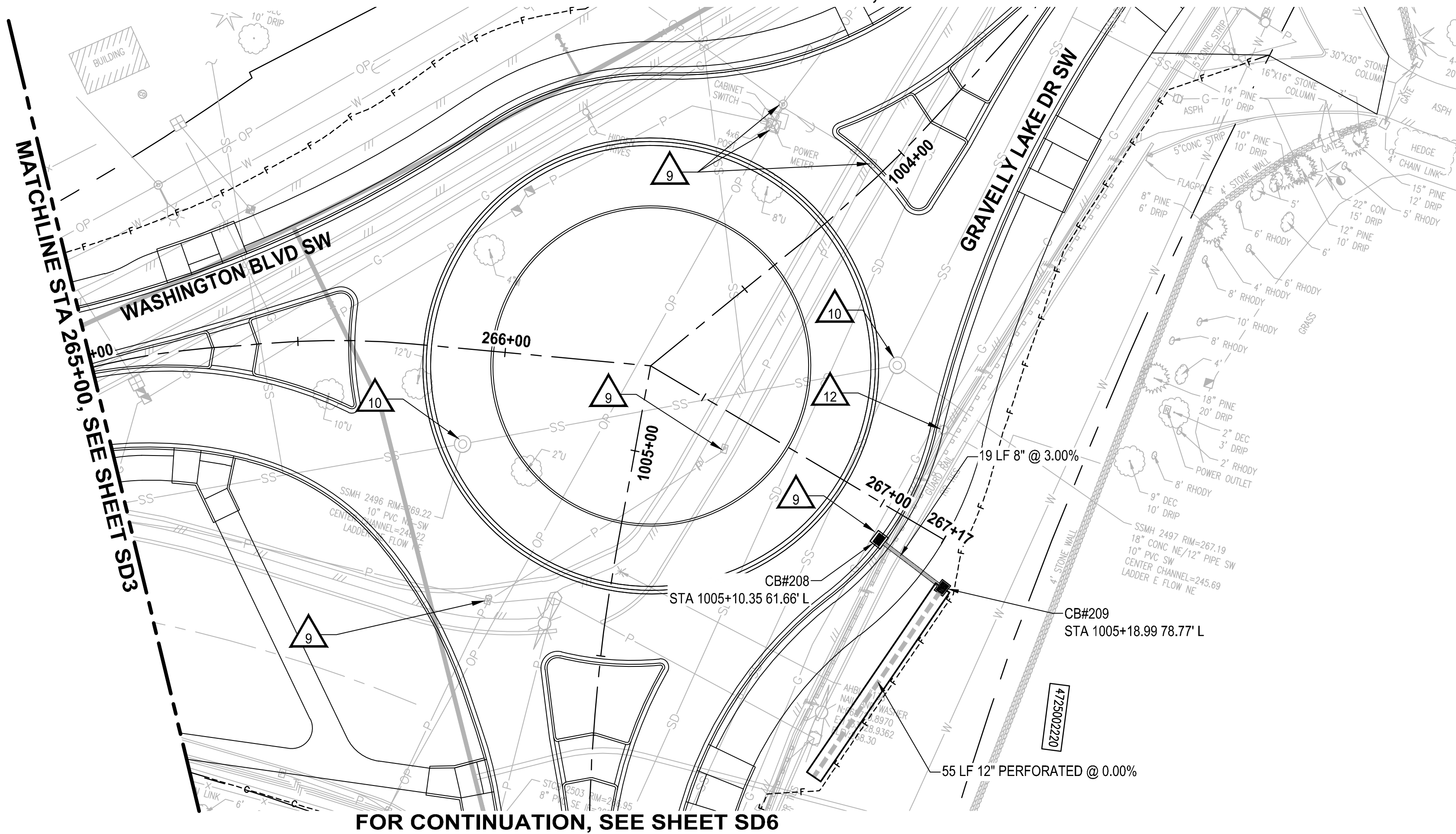


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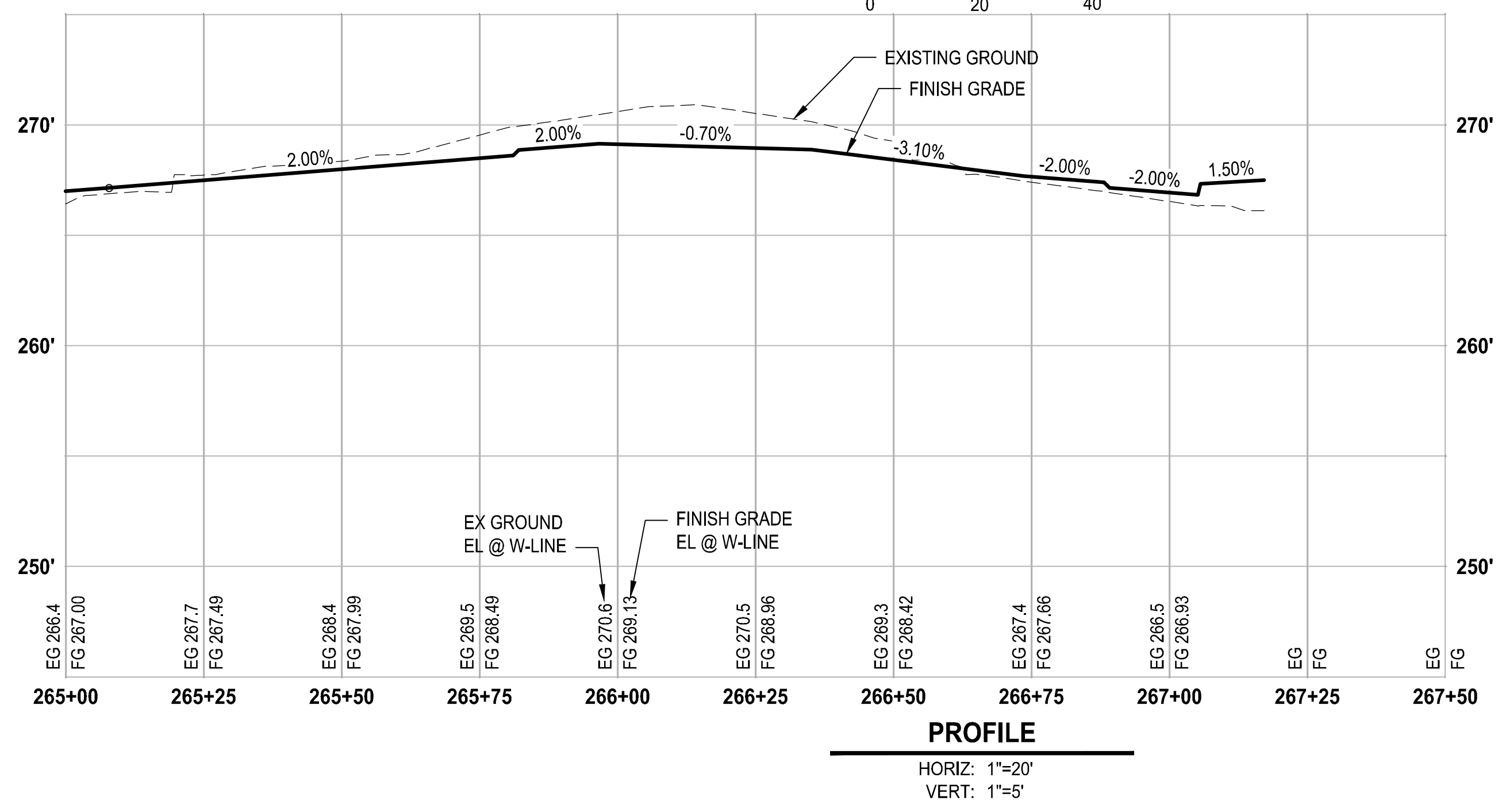
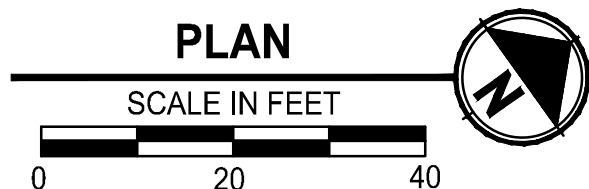
STORM DRAIN PLAN AND PROFILE

DRAWING NO.
63 OF 153
SD3

FOR CONTINUATION, SEE SHEET SD5



FOR CONTINUATION, SEE SHEET SD6



STORM DRAINAGE AND UTILITY NOTES

- CONNECT TO EXISTING DRAINAGE STRUCTURE
- CONNECT TO EXISTING STORM PIPE
- PRESERVE AND PROTECT EXISTING CATCH BASIN
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LEGEND

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- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2
DT4
- BIOFILTRATION SWALE PER DETAIL 3
DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1
DT4

LAYOUT: SD4 STORM DRAIN PLAN AND PROFILE PATH: \\Jupiter\projects\19000\19182\00\00 - JBLM North Access Imp\Civil\07-CAD\DWG PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:05:36 PM

REVISIONS	DATE	BY	DESIGNED
			A. CIRILLO
			R. BEALS
			A. EPSTEIN
			A. FISHER

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



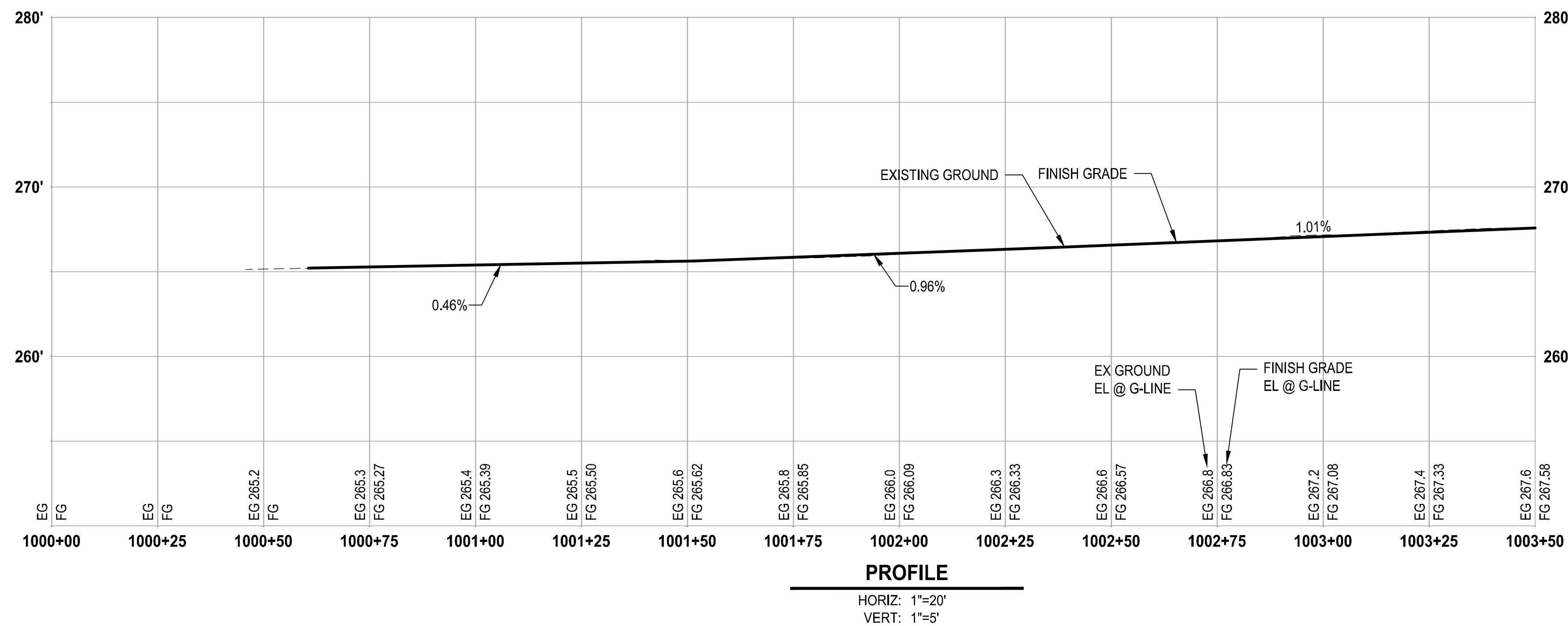
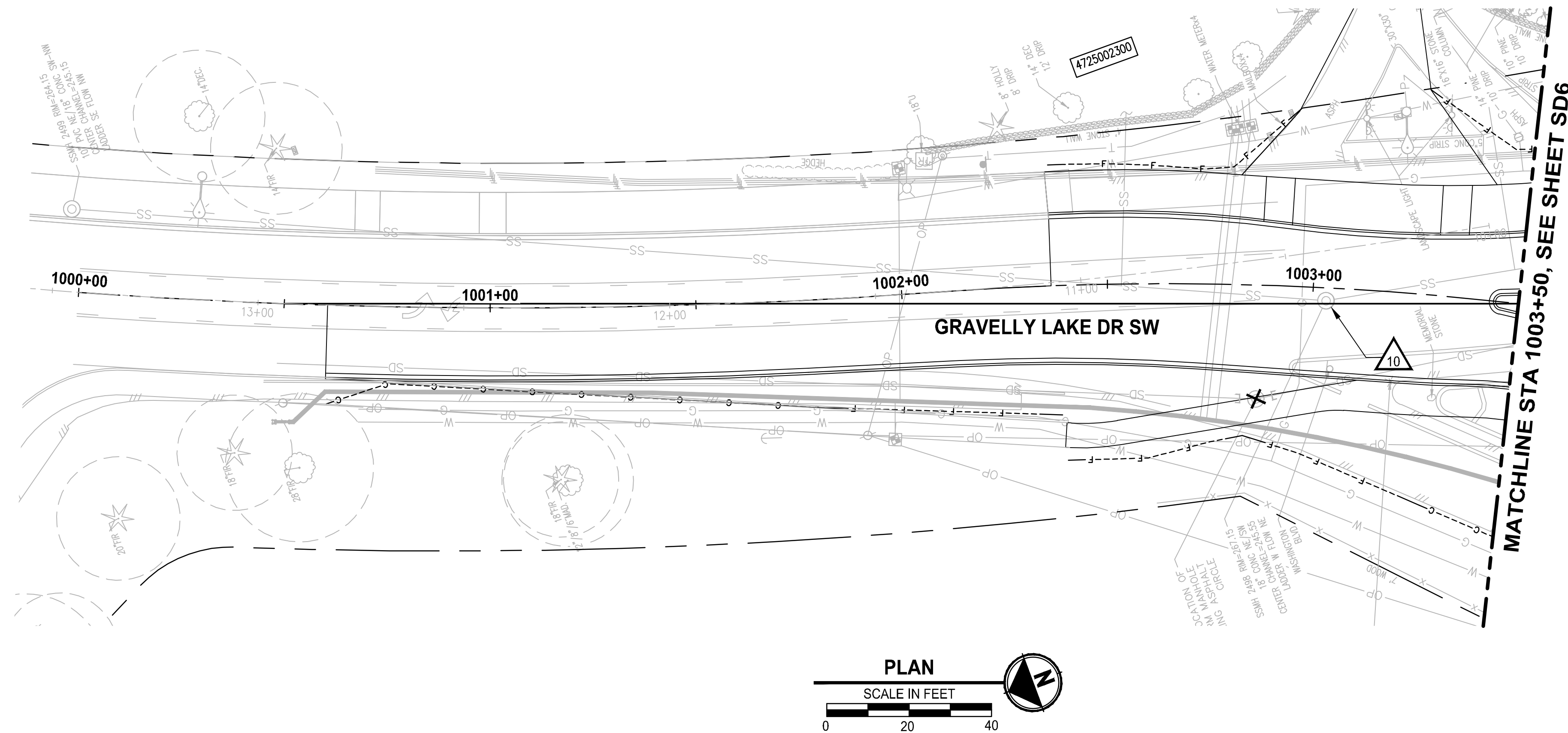
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
 64 OF 153
SD4

LAYOUT: SD5 STORM DRAIN PLAN AND PROFILE PATH: \\jupiter\projects\19000\19182\00.00 - JBLM North Access Imp\Chil\07-CAD\DWG PLOTTED BY: lbeals DATE: Thursday, February 25, 2021 1:05:55 PM



STORM DRAINAGE AND UTILITY NOTES

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

GENERAL NOTES

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

LEGEND

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

REVISIONS	DATE	BY	DESIGNED
			A. CIRILLO
			R. BEALS
			A. EPSTEIN
			A. FISHER

ONE INCH AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

FILE NAME: PS3047013-SD3-8
JOB No.: 214-3047-013
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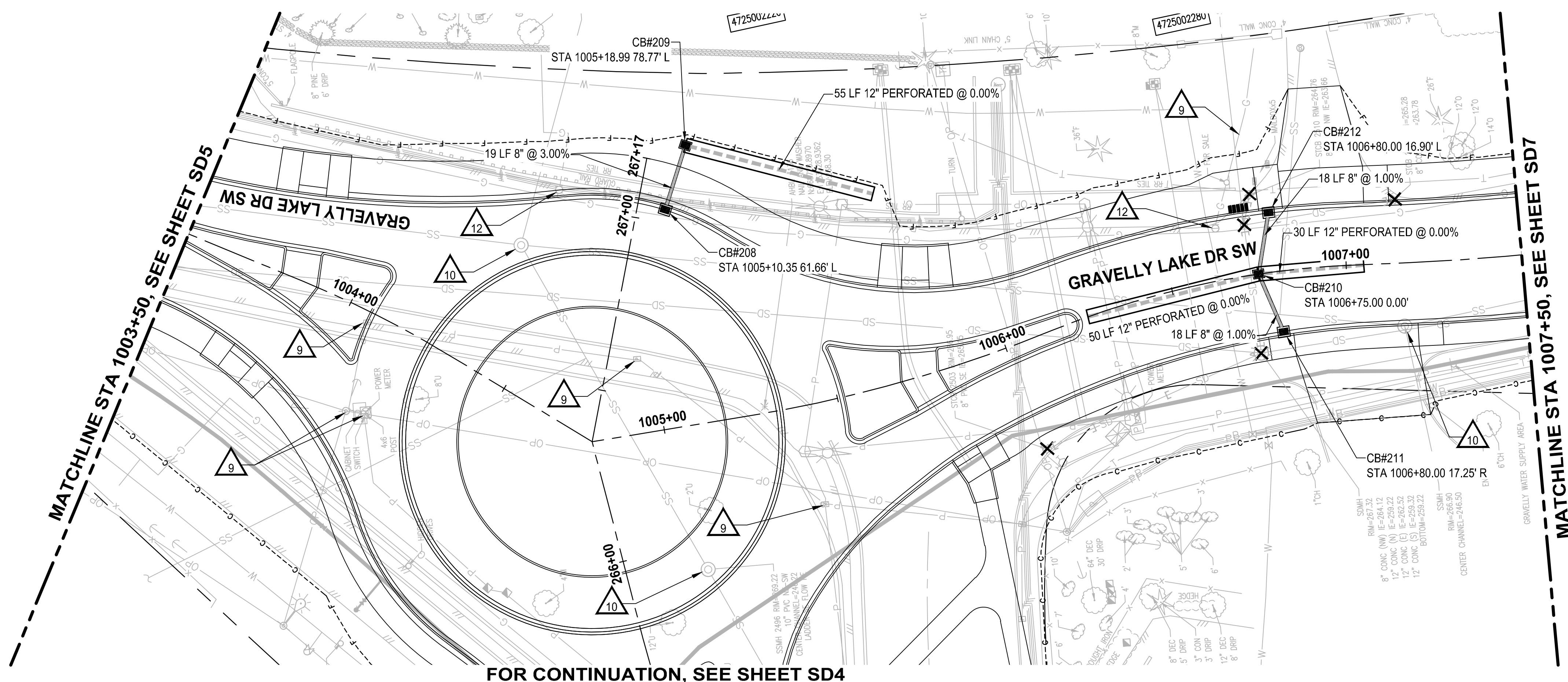
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

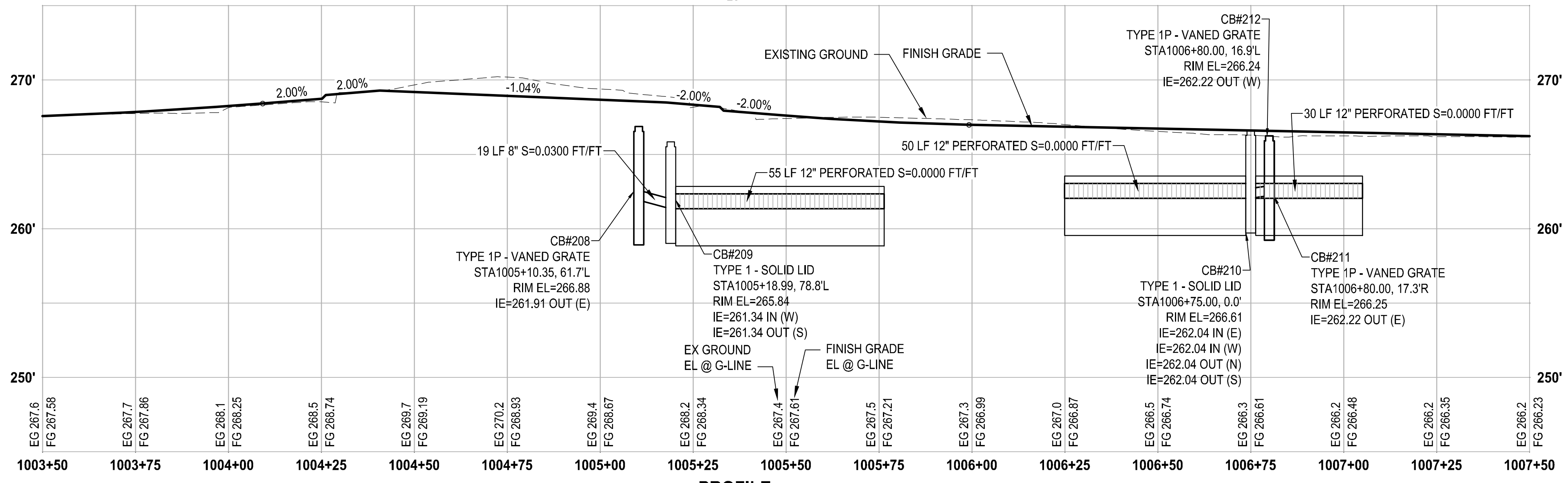
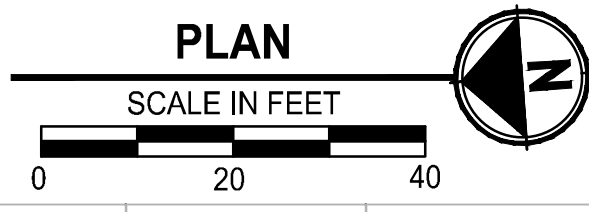
DRAWING NO.
65 OF 153

SD5

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



FOR CONTINUATION, SEE SHEET SD4



PROFILE

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

STORM DRAINAGE AND UTILITY NOTES

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

GENERAL NOTES

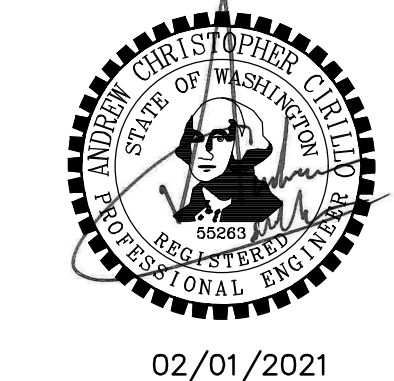
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2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
 - A. CATCH BASIN TYPE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

LEGEND

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

REVISIONS	DATE	BY	DESIGNED
			A. CIRILLO
			R. BEALS
			A. EPSTEIN
			A. FISHER

ONE INCH AT FULL SCALE, IF NOT, SCALE ACCORDINGLY
 FILE NAME: PS3047013-SD3-8
 JOB No.: 214-3047-013
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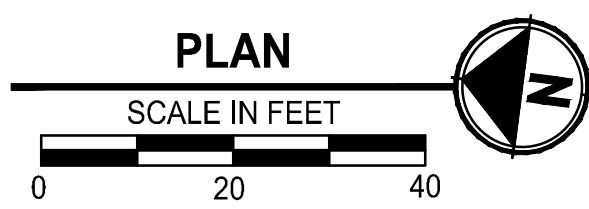
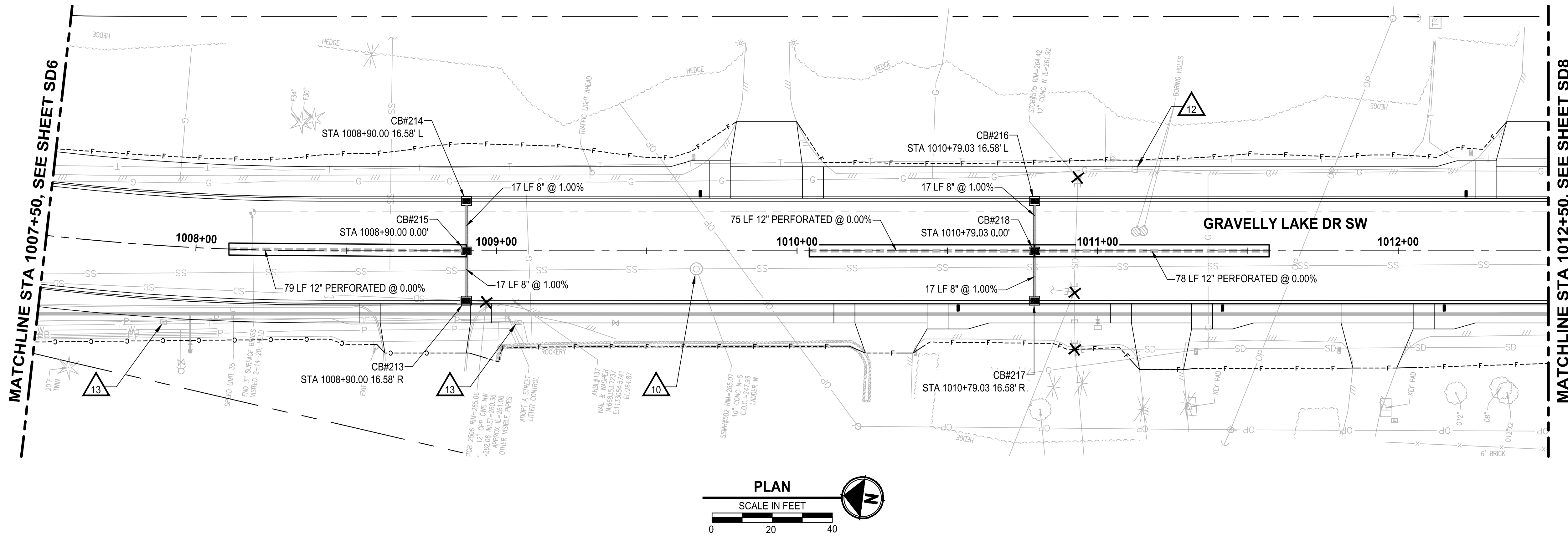
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE
SD6

DRAWING NO.
 66 OF 153
SD6

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



STORM DRAINAGE AND UTILITY NOTES

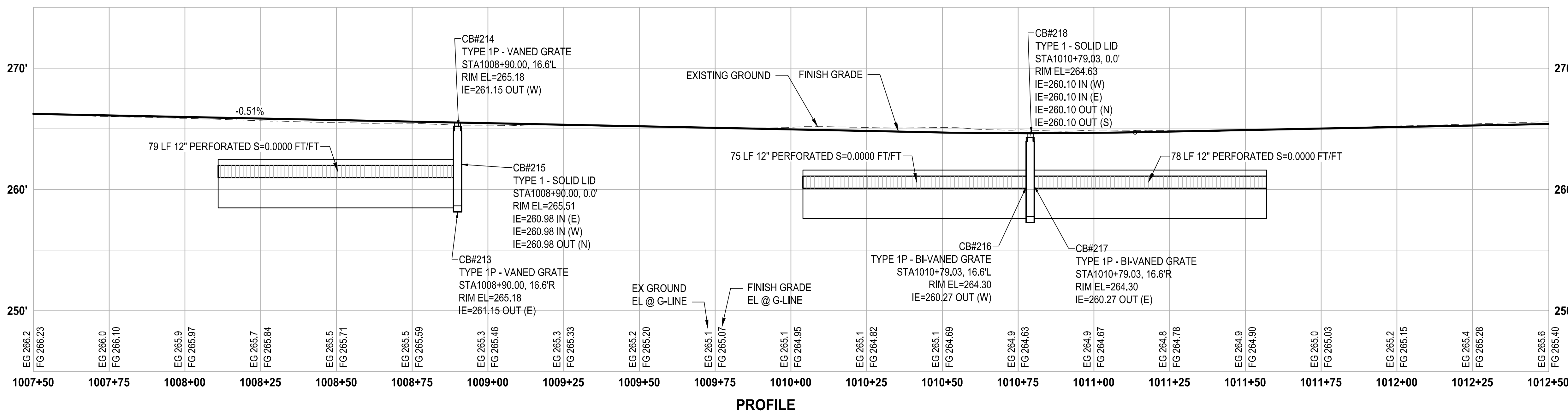
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2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS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

GENERAL NOTES

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

LEGEND

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



PROFILE

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

NO.	REVISIONS	DATE	BY	DESIGNED
1	ISSUED FOR PERMIT	02/01/2021	R. BEALS	A. CIRILLO
2	REVISED PER COMMENTS	02/01/2021	A. EPSTEIN	A. CIRILLO
3	REVISED PER COMMENTS	02/01/2021	A. FISHER	A. CIRILLO

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 JOB No: 214-3047-013
 DATE: FEBRUARY 2021



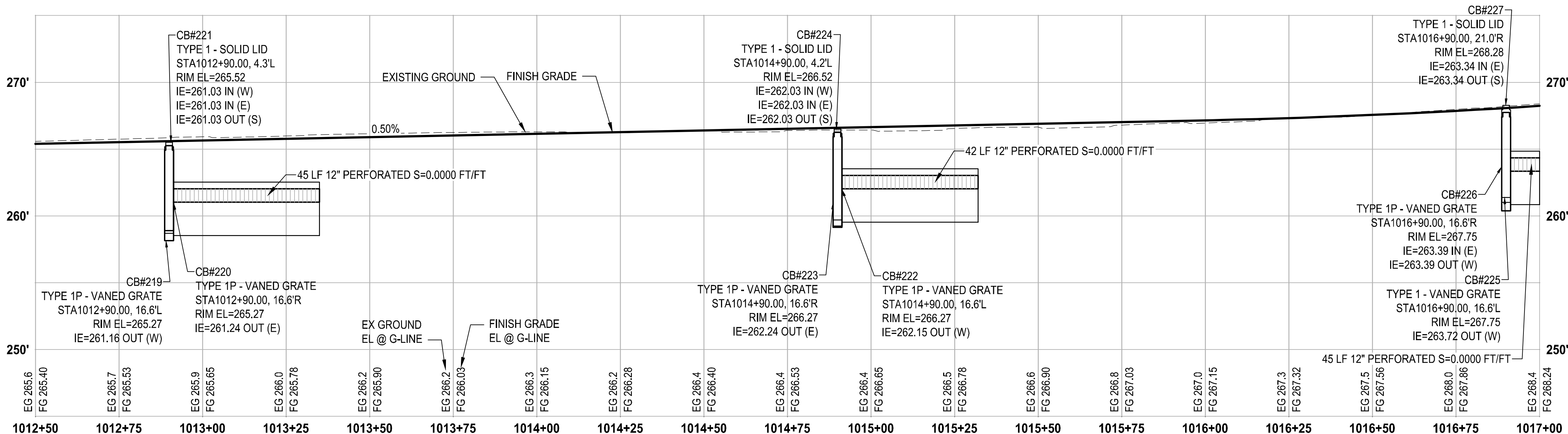
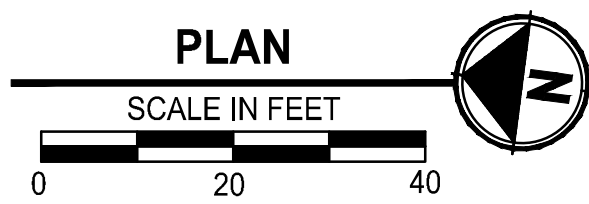
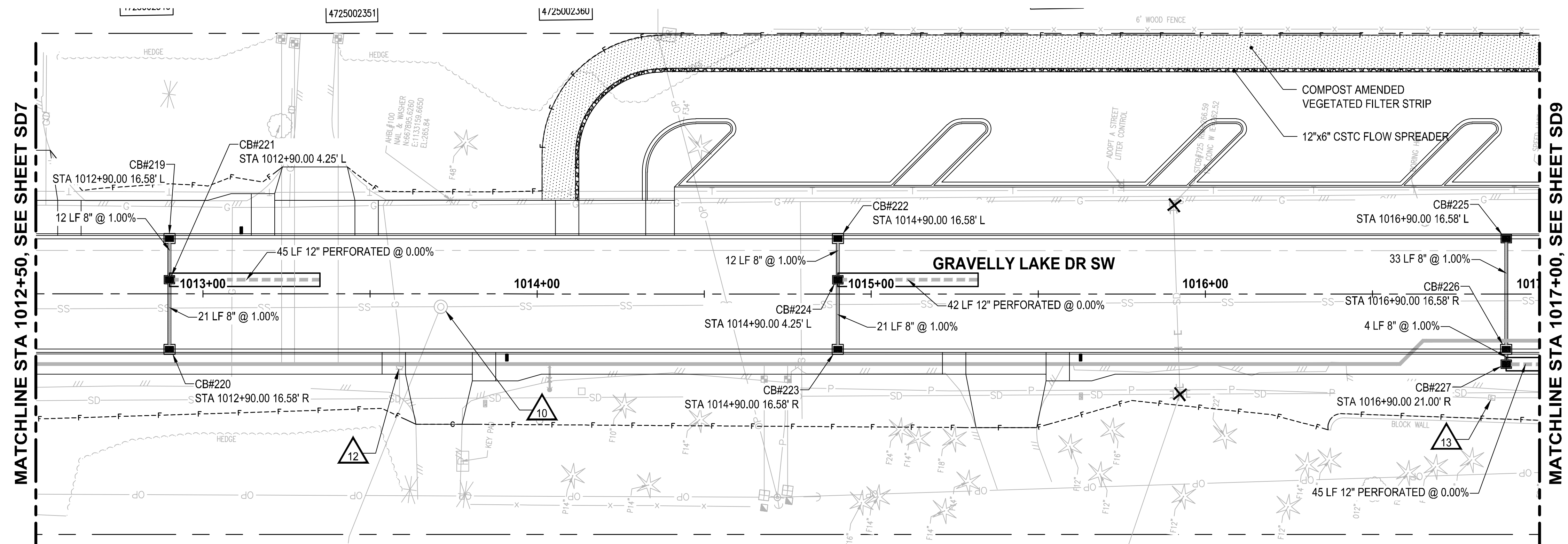
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE
 SD7

DRAWING NO.
 67 OF 153
SD7

LAYOUT: SD8 STORM DRAIN PLAN AND PROFILE
 PATH: \\jupiter\projects\19000\19182.00.00 - JBLM North Access Imp\CD\107-CAD\DWG
 PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:06:55 PM



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

STORM DRAINAGE AND UTILITY NOTES

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

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
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 - E. SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
 - F. VANED GRATES PER WSDOT STD PLAN B-30.30-03
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6. CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

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

NO.	REVISIONS	DATE	BY	DESIGNED	CHECKED	APPROVED
1				A. CIRILLO	R. BEALS	A. EPSTEIN
2						A. FISHER

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



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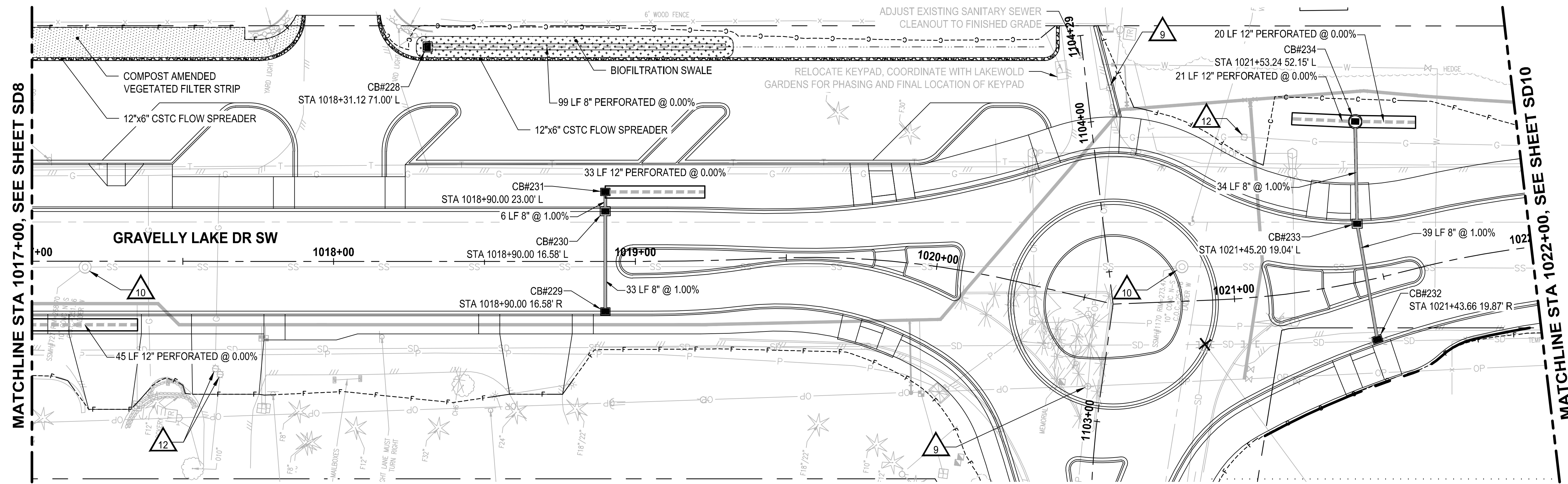
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

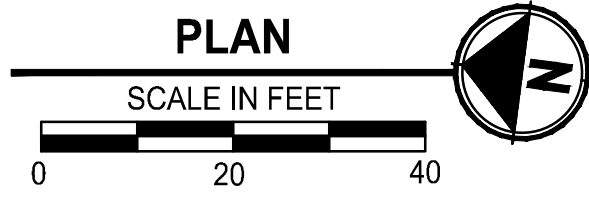
STORM DRAIN PLAN AND PROFILE
 SD8

DRAWING NO.
 68 OF 153
SD8

LAYOUT: SD9 STORM DRAIN PLAN AND PROFILE
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FOR CONTINUATION, SEE SHEET SD21



STORM DRAINAGE AND UTILITY NOTES

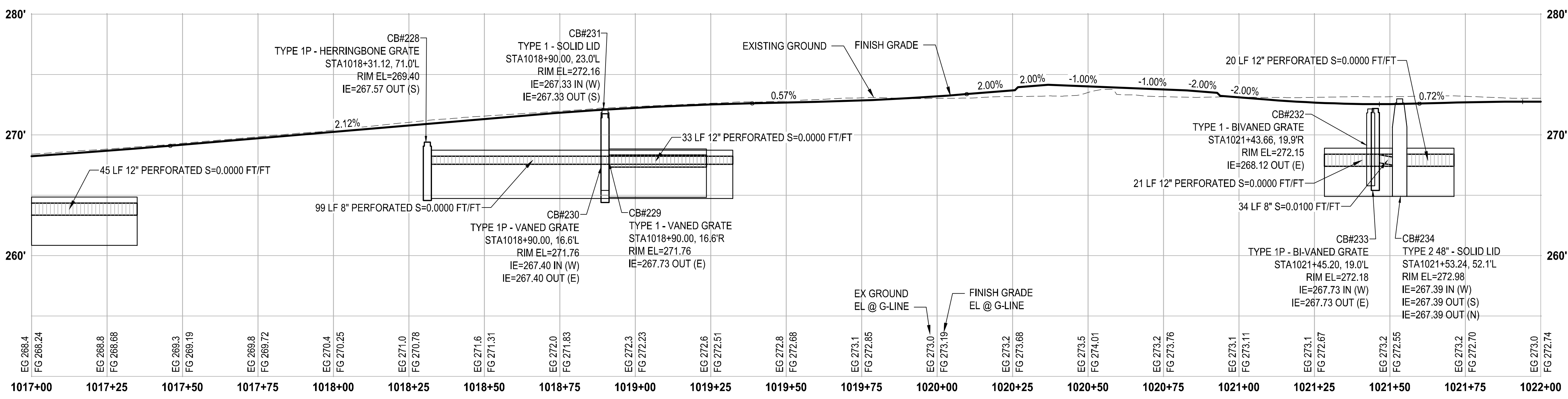
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2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
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GENERAL NOTES

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7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

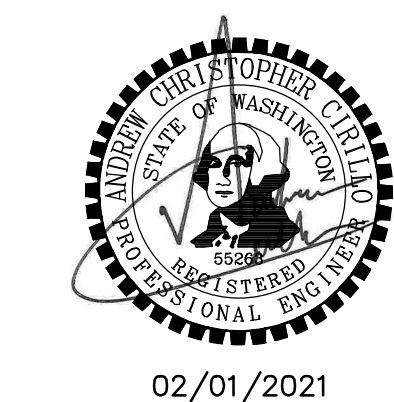
- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
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- INFILTRATION TRENCH PER DETAIL 2
DT4
- BIOFILTRATION SWALE PER DETAIL 3
DT4
- COMPOST AMENDED VEGETATED FILTER STRIP PER DETAIL 1
DT4



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

NO.	REVISIONS	DATE	BY	DESIGNED	DRAWN	CHECKED	APPROVED
1				A. CIRILLO	R. BEALS	A. EPSTEIN	A. FISHER

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



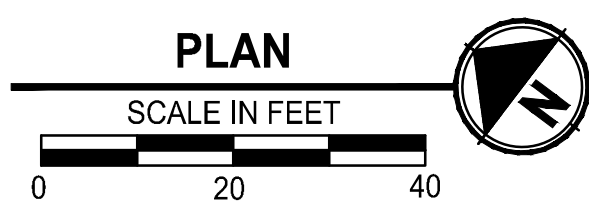
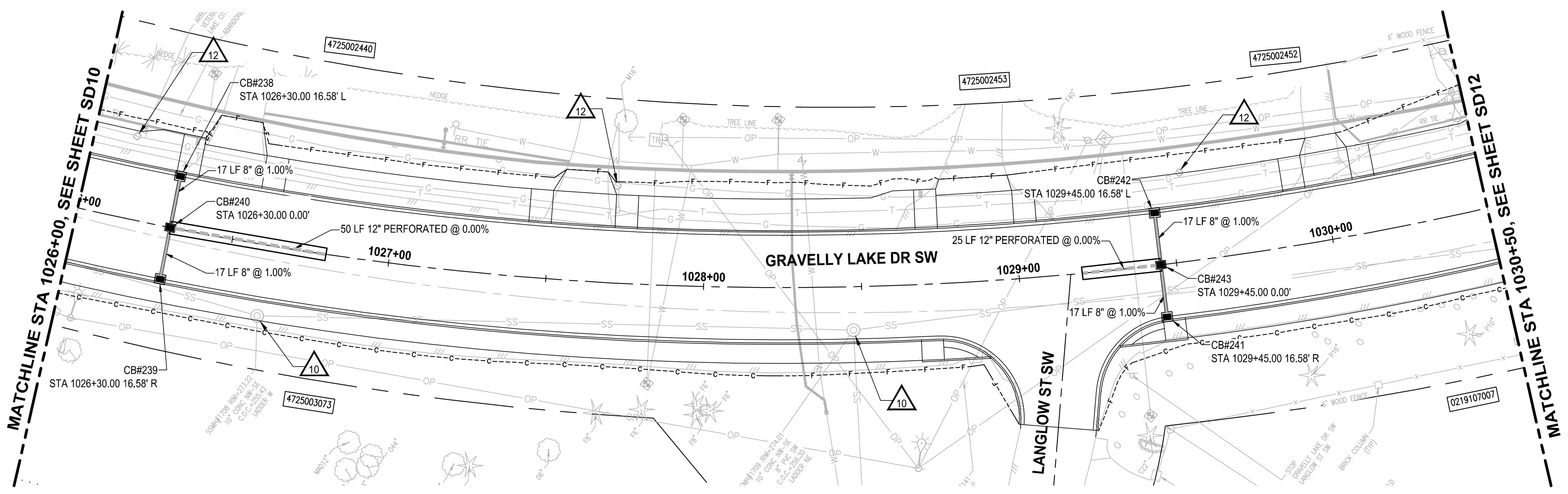
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE
 SD9

DRAWING NO.
 69 OF 153
SD9

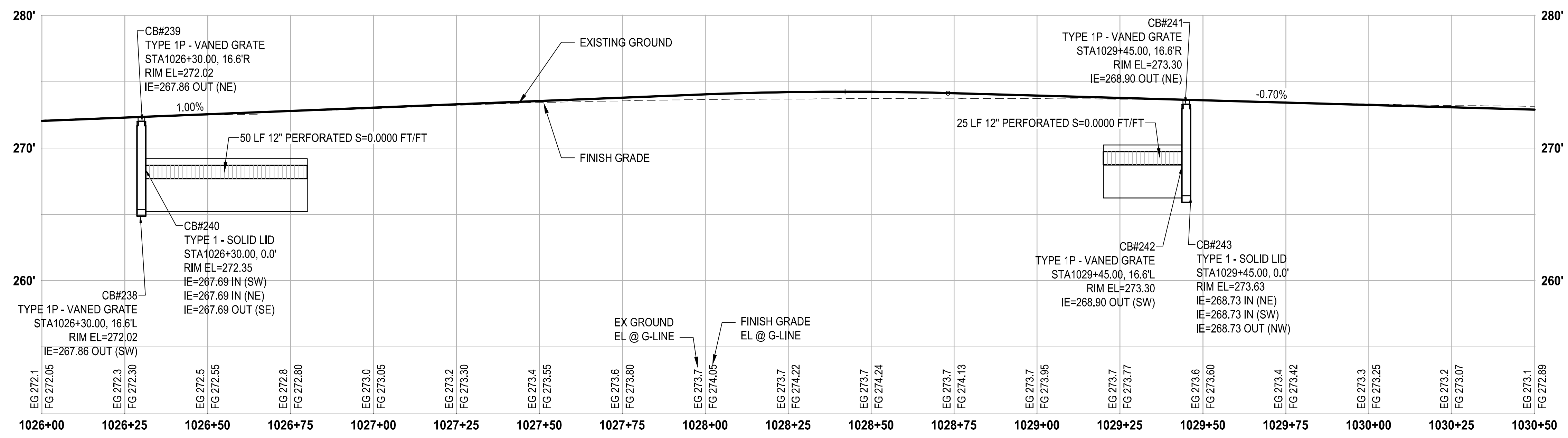
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 PLOTTED BY: bbeats DATE: Thursday, February 25, 2021 1:08:09 PM



- ### STORM DRAINAGE AND UTILITY NOTES
- CONNECT TO EXISTING DRAINAGE STRUCTURE
 - CONNECT TO EXISTING STORM PIPE
 - PRESERVE AND PROTECT EXISTING CATCH BASIN
 - PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
 - WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
 - REMOVE EXISTING STORM PIPE
 - FLOW SPLITTER MANHOLE PER SPECIFICATIONS
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 - UTILITY TO BE RELOCATED BY OTHERS
 - SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
 - NOT USED
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 - CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
 - CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
 - CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
 - MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
 - SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
 - VANED GRATES PER WSDOT STD PLAN B-30.30-03
 - BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
 - ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
 - CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
 - SEE WS SHEETS FOR WATER SYSTEM DESIGN

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



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

NO.	REVISIONS	DATE	BY	DESIGNED
1	ISSUED FOR PERMITS	02/01/2021	A. CIRILLO	A. CIRILLO
2	DESIGN REVISIONS		R. BEALS	R. BEALS
3	CHECKED		A. EPSTEIN	A. EPSTEIN
4	APPROVED		A. FISHER	A. FISHER

ONE INCH AT FULL SCALE.
 IF NOT, SCALE ACCORDINGLY

FILE NAME: PS3047013-SD9-13
 JOB No.: 214-3047-013
 DATE: FEBRUARY 2021



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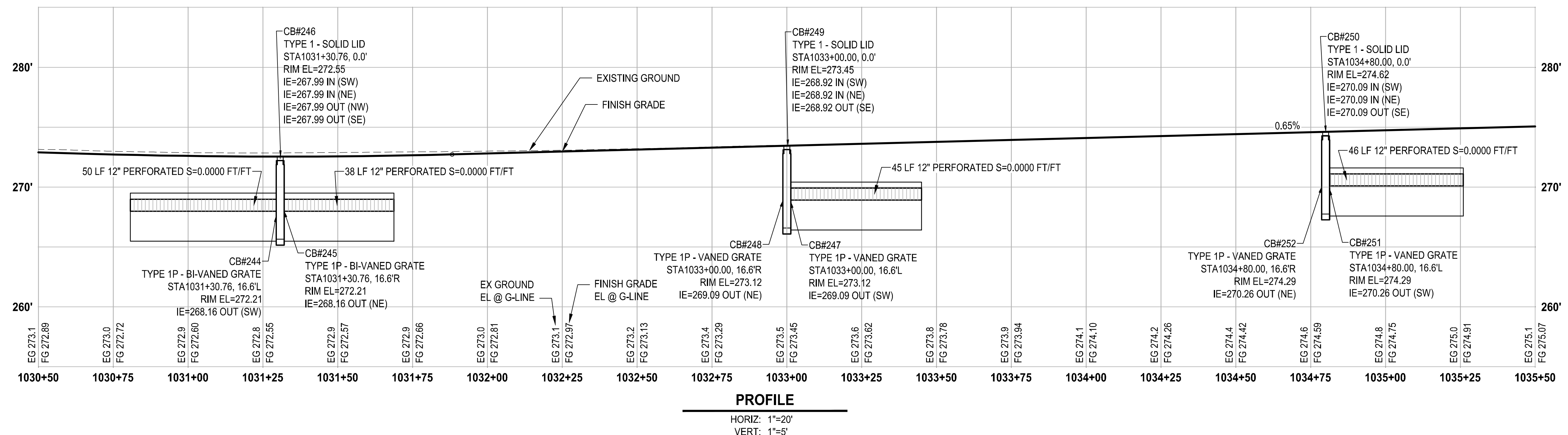
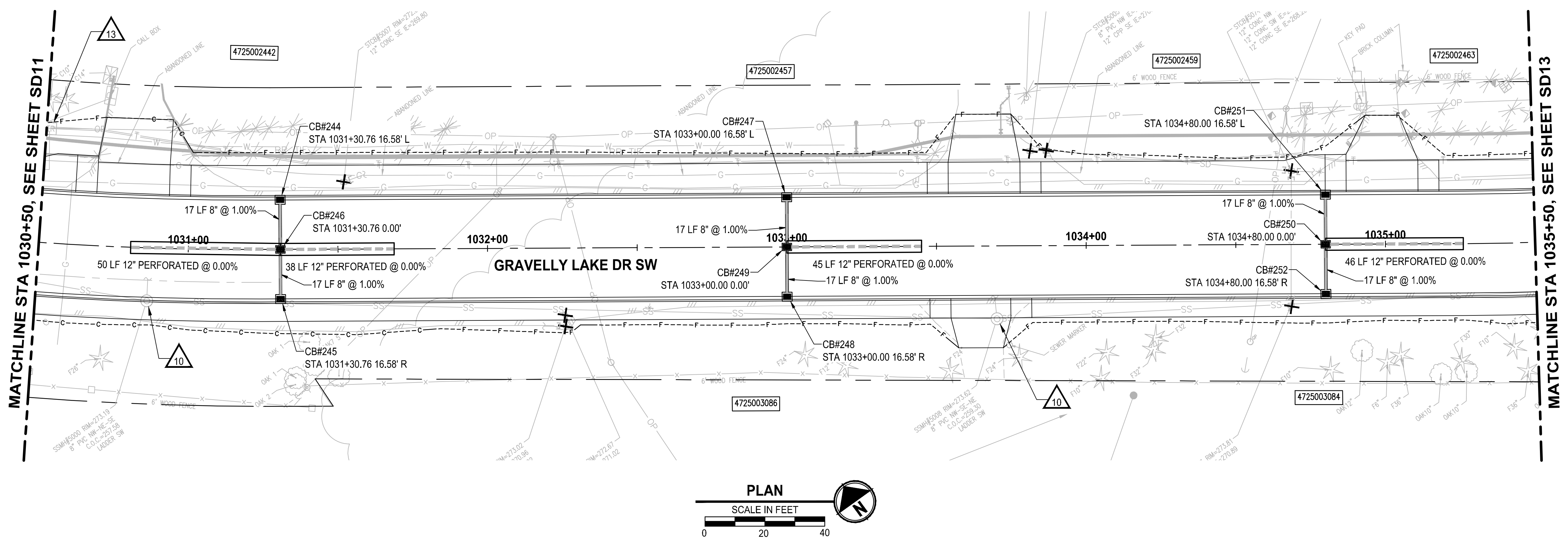
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
 71 OF 153

SD11

LAYOUT: SD12 STORM DRAIN PLAN AND PROFILE
 PATH: \\laurie\projects\19000\19182\00_00 - JBLM North Access Impr\Civil\07-CAD\DWG
 PLOTTED BY: bbeels DATE: Thursday, February 25, 2021 1:08:22 PM



- ### STORM DRAINAGE AND UTILITY NOTES
- CONNECT TO EXISTING DRAINAGE STRUCTURE
 - CONNECT TO EXISTING STORM PIPE
 - PRESERVE AND PROTECT EXISTING CATCH BASIN
 - PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
 - WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
 - REMOVE EXISTING STORM PIPE
 - FLOW SPLITTER MANHOLE PER SPECIFICATIONS
 - ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
 - UTILITY TO BE RELOCATED BY OTHERS
 - SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
 - NOT USED
 - ADJUST EXISTING VALVE CASING TO FINISHED GRADE
 - ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

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

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

NO.	REVISIONS	DATE	BY	DESIGNED
				A. CIRILLO
				R. BEALS
				A. EPSTEIN
				A. FISHER

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 IF NOT, SCALE ACCORDINGLY

FILE NAME: PS3047013-SD9-13
 JOB No.: 214-3047-013
 DATE: FEBRUARY 2021



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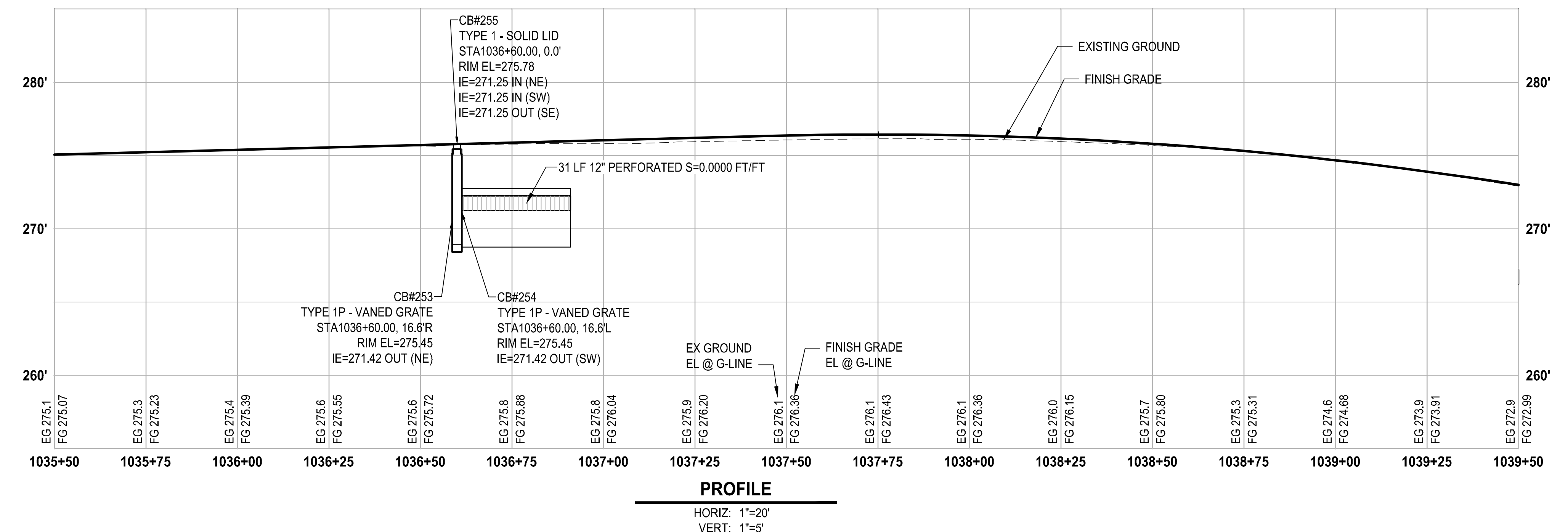
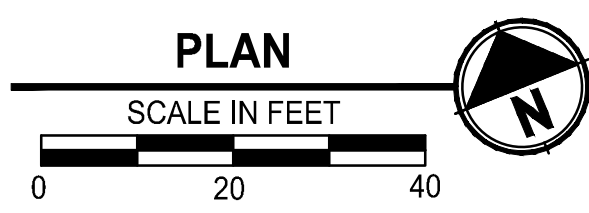
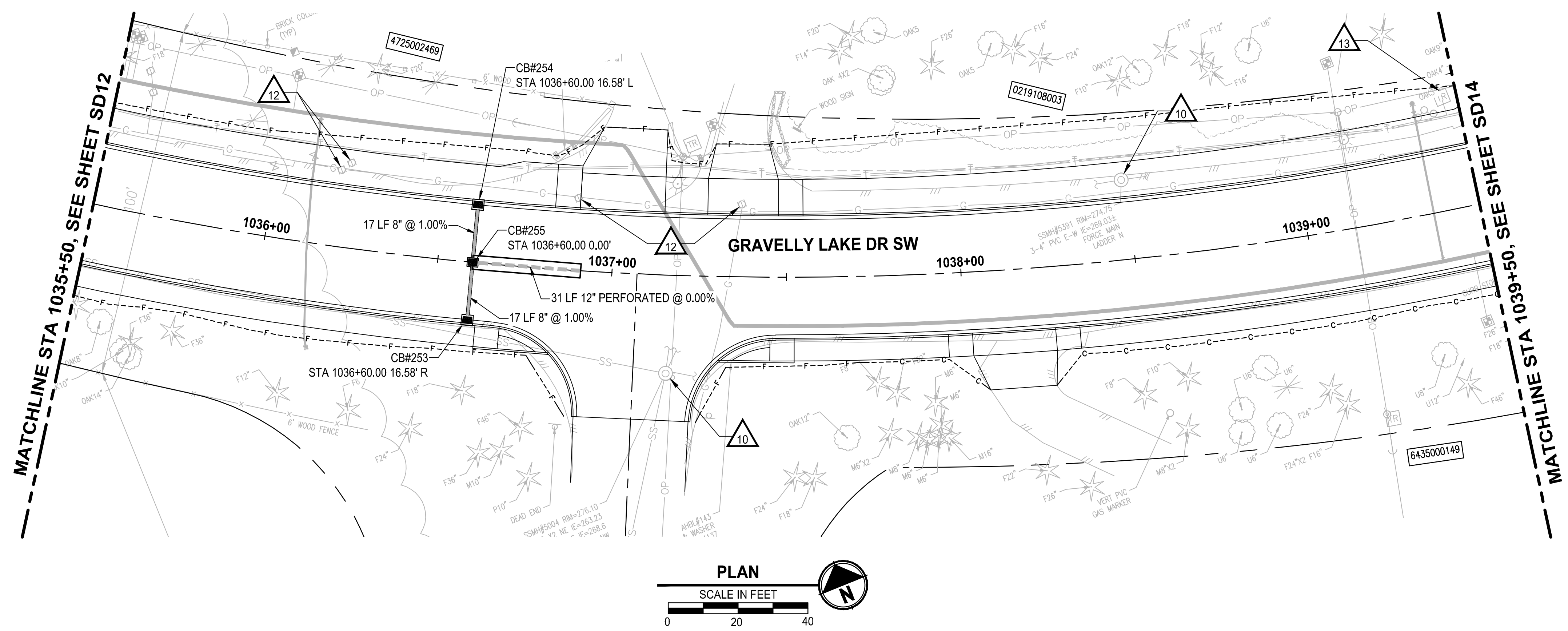
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
 72 OF 153

SD12

LAYOUT: SD13 STORM DRAIN PLAN AND PROFILE
 PATH: \\laurier\projects\19000\19182\00_00 - JBLM North Access Impr\Civil\07-CAD\DWG
 PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:08:38 PM



STORM DRAINAGE AND UTILITY NOTES

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

GENERAL NOTES

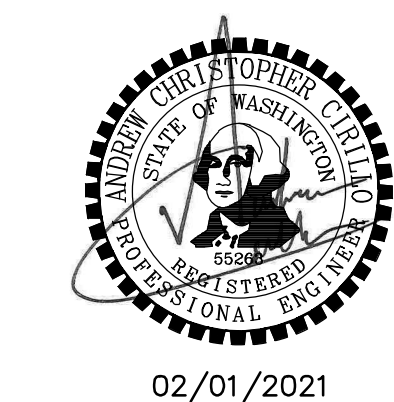
1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
3. PRESERVE AND PROTECT EXISTING UTILITIES UNLESS OTHERWISE NOTED
4. SEE PROFILE CALLOUTS FOR STRUCTURE AND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

LEGEND

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

REVISIONS	DATE	BY	DESIGNED
			A. CIRILLO
			R. BEALS
			A. EPSTEIN
			A. FISHER

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 FILE NAME: PS3047013-SD9-13
 JOB No.: 214-3047-013
 DATE: FEBRUARY 2021



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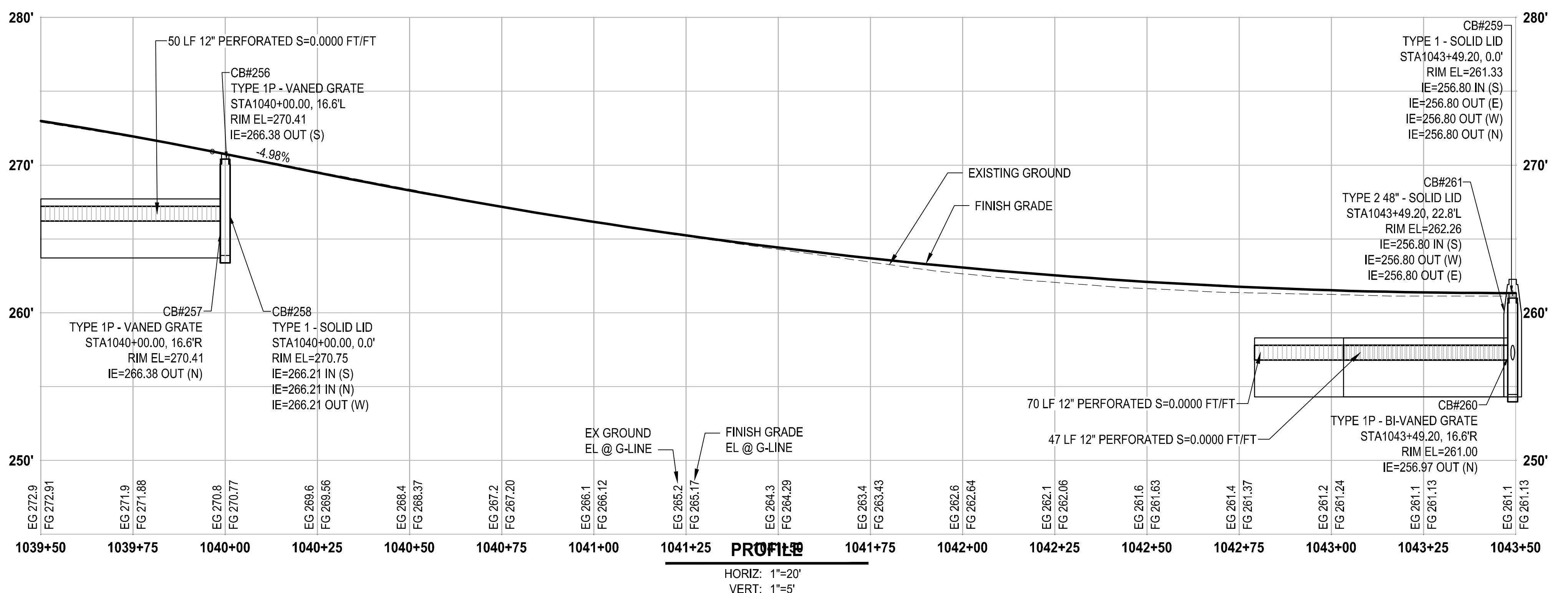
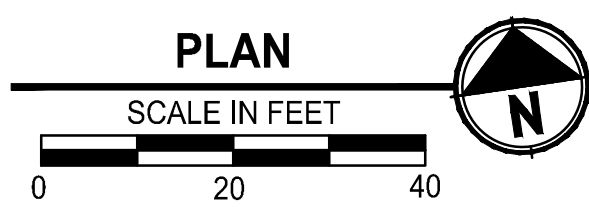
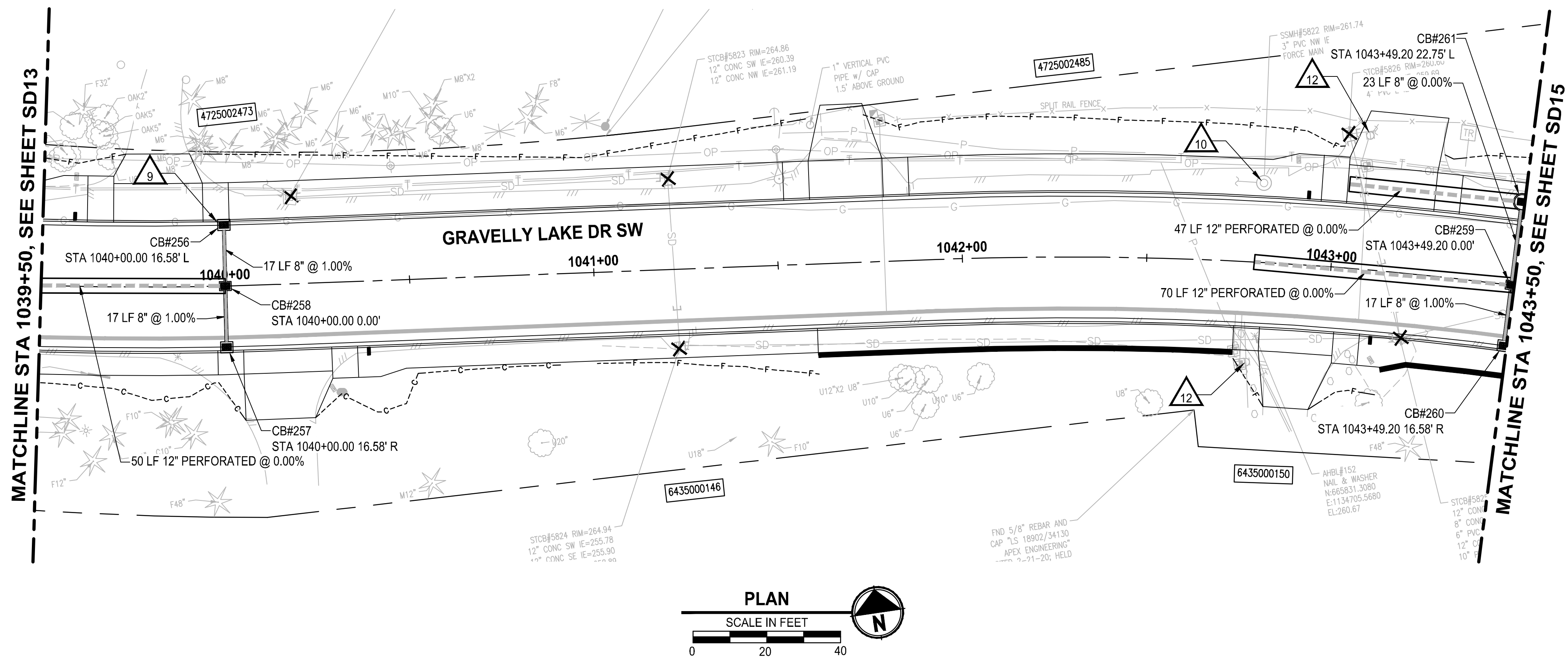
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE
SD13

DRAWING NO.
 73 OF 153
SD13

LAYOUT: SD14 STORM DRAIN PLAN AND PROFILE
 PATH: \\juillet\projects\19000\19182\00_00 - JBLM North Access Impr\Civil\07-CAD\DWG
 PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:09:53 PM



STORM DRAINAGE AND UTILITY NOTES

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

GENERAL NOTES

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

LEGEND

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

NO.	REVISIONS	DATE	BY	DESIGNED
				A. CIRILLO
				R. BEALS
				A. EPSTEIN
				A. FISHER

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 FILE NAME: PS3047013-SD14-19
 JOB No.: 214-3047-013
 DATE: FEBRUARY 2021



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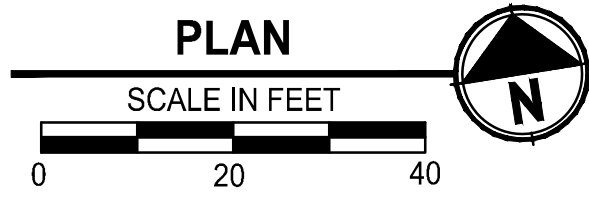
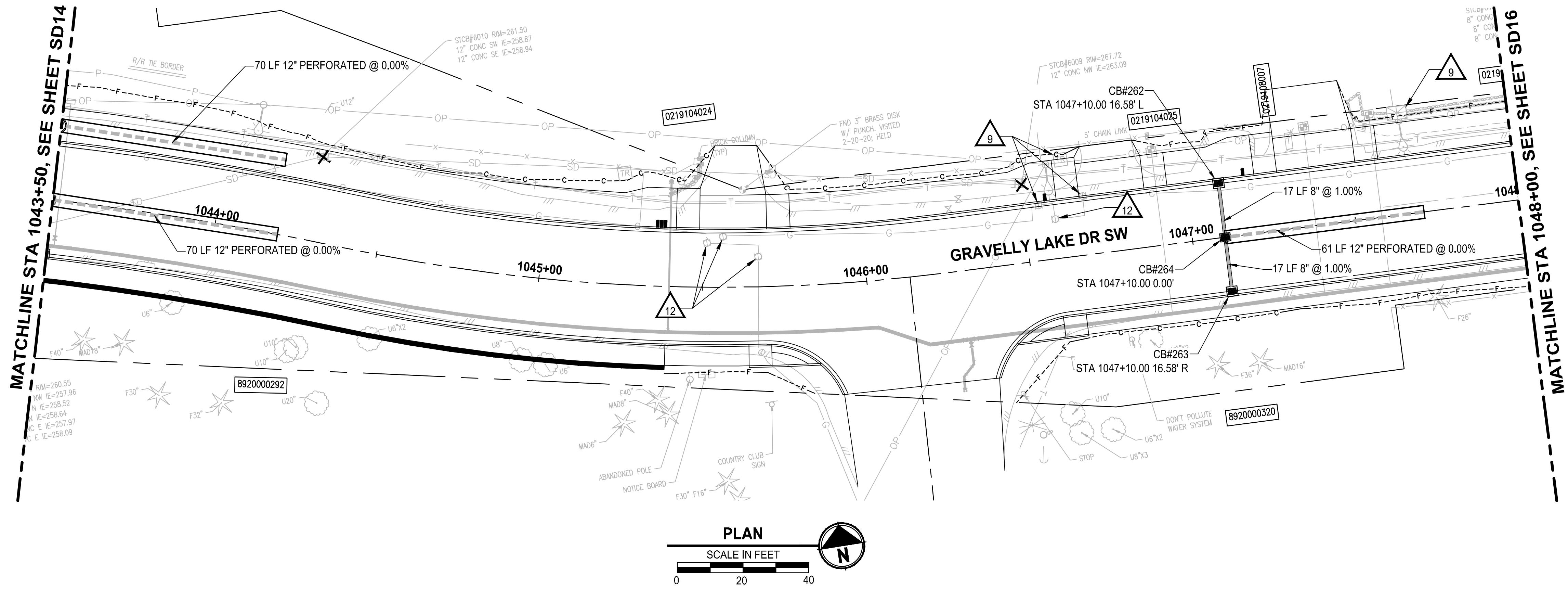
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE
 SD14

DRAWING NO.
 74 OF 153
SD14

LAYOUT: SD15 STORM DRAIN PLAN AND PROFILE
 PATH: \\jupiter\projects\19182\00\00 - JBLM North Access Impr\Civil\07-CAD\DWG - PLOTTED BY: bbeels DATE: Thursday, February 25, 2021 1:10:28 PM



STORM DRAINAGE AND UTILITY NOTES

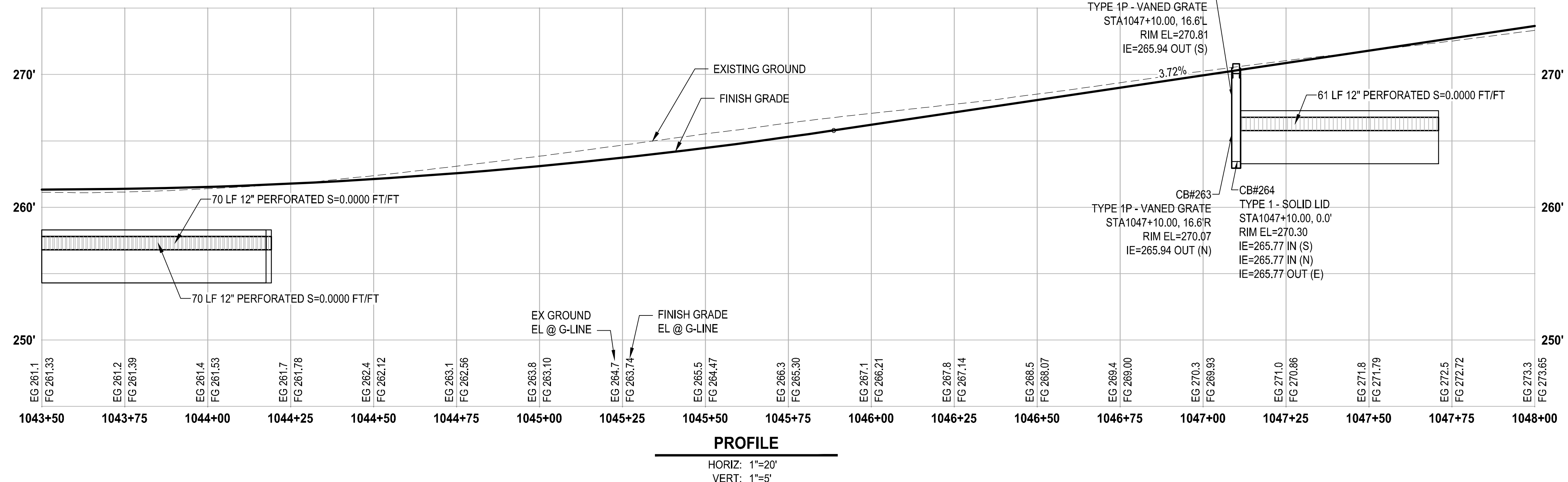
1. CONNECT TO EXISTING DRAINAGE STRUCTURE
2. CONNECT TO EXISTING STORM PIPE
3. PRESERVE AND PROTECT EXISTING CATCH BASIN
4. PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
5. WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
6. REMOVE EXISTING STORM PIPE
7. FLOW SPLITTER MANHOLE PER SPECIFICATIONS
8. ADJUST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

GENERAL NOTES

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

LEGEND

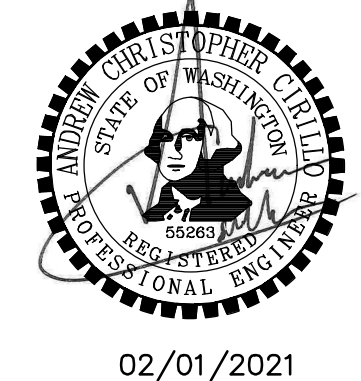
- REMOVE EXISTING DRAINAGE STRUCTURE
- PLUG EXISTING PIPE
- CATCH BASIN TYPE 1
- CATCH BASIN TYPE 1P WITH DOWNTURNED ELBOW
- CATCH BASIN TYPE 2
- MANHOLE TYPE 1
- STORM SEWER PIPE, SCHEDULE A UNLESS OTHERWISE NOTED
- INFILTRATION TRENCH PER DETAIL 2
DT4
- BIOFILTRATION SWALE PER DETAIL 3
DT4
- COMPOST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



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

REVISIONS	DATE	BY	DESIGNED
			A. CIRILLO
			R. BEALS
			A. EPSTEIN
			A. FISHER

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 FILE NAME: PS3047013-SD14-19
 JOB No.: 214-3047-013
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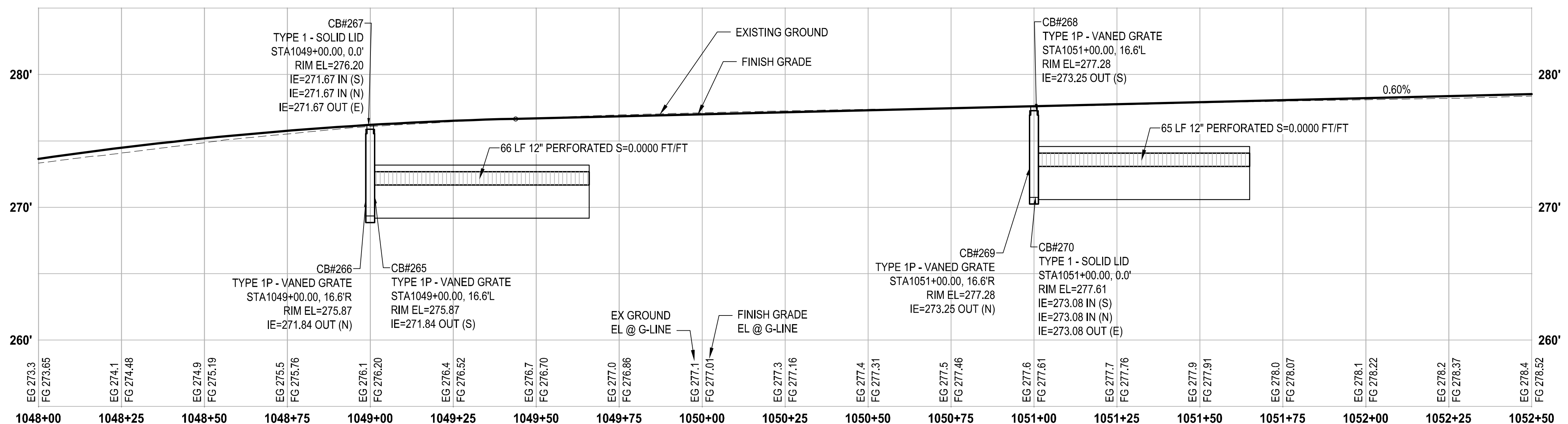
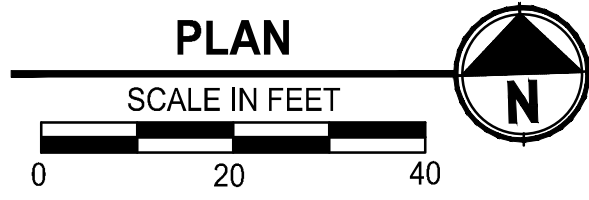
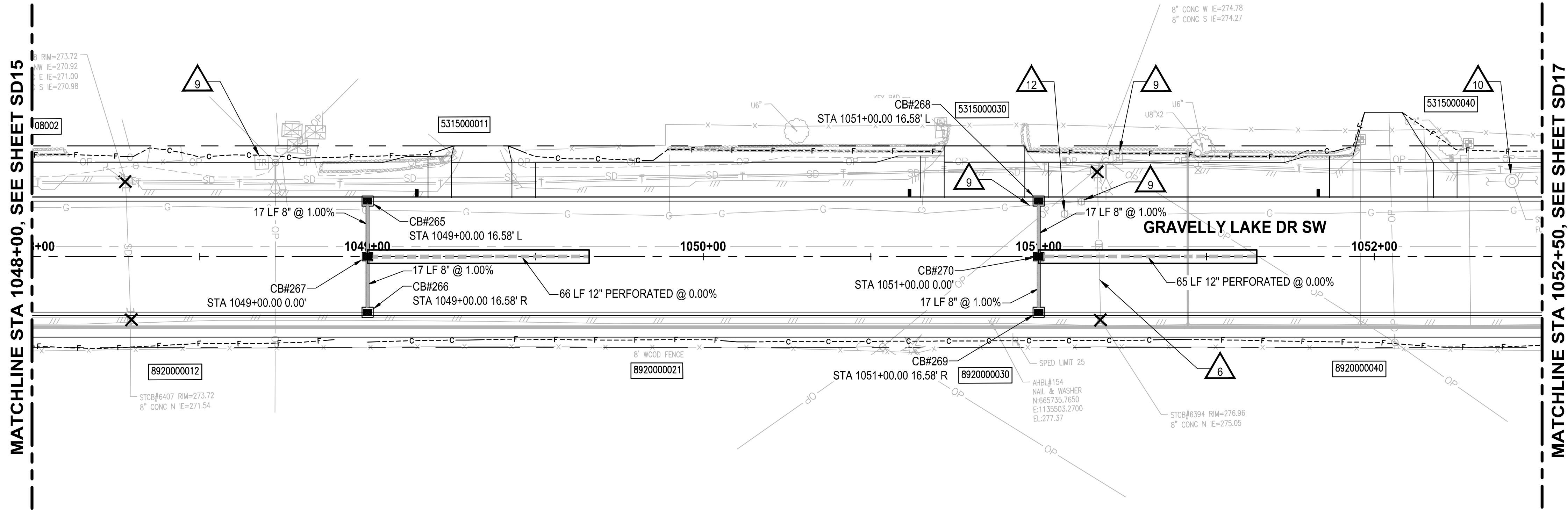
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
 75 OF 153
SD15

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



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

STORM DRAINAGE AND UTILITY NOTES

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

GENERAL NOTES

1. REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
2. PLUG AND ABANDON EXISTING STORM DRAIN PIPES IN PLACE WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
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4. SEE PROFILE CALLOUTS FOR STRUCTURE AND GRATE/ LID TYPE
 - A. CATCH BASIN TYPE 1 PER WSDOT STD PLAN B-5.20-02
 - B. CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
 - C. CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
 - D. MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
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7. SEE WS SHEETS FOR WATER SYSTEM DESIGN

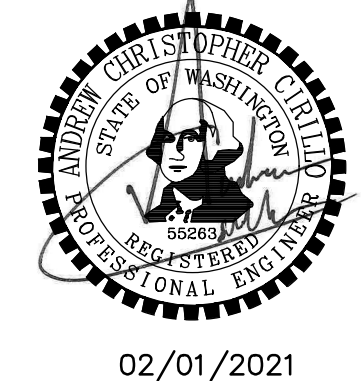
LEGEND

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

REVISIONS	DATE	BY	DESIGNED
			A. CIRILLO
			R. BEALS
			A. EPSTEIN
			A. FISHER

ONE INCH AT FULL SCALE.
 IF NOT, SCALE ACCORDINGLY

FILE NAME: PS3047013-SD14-19
 JOB No.: 214-3047-013
 DATE: FEBRUARY 2021



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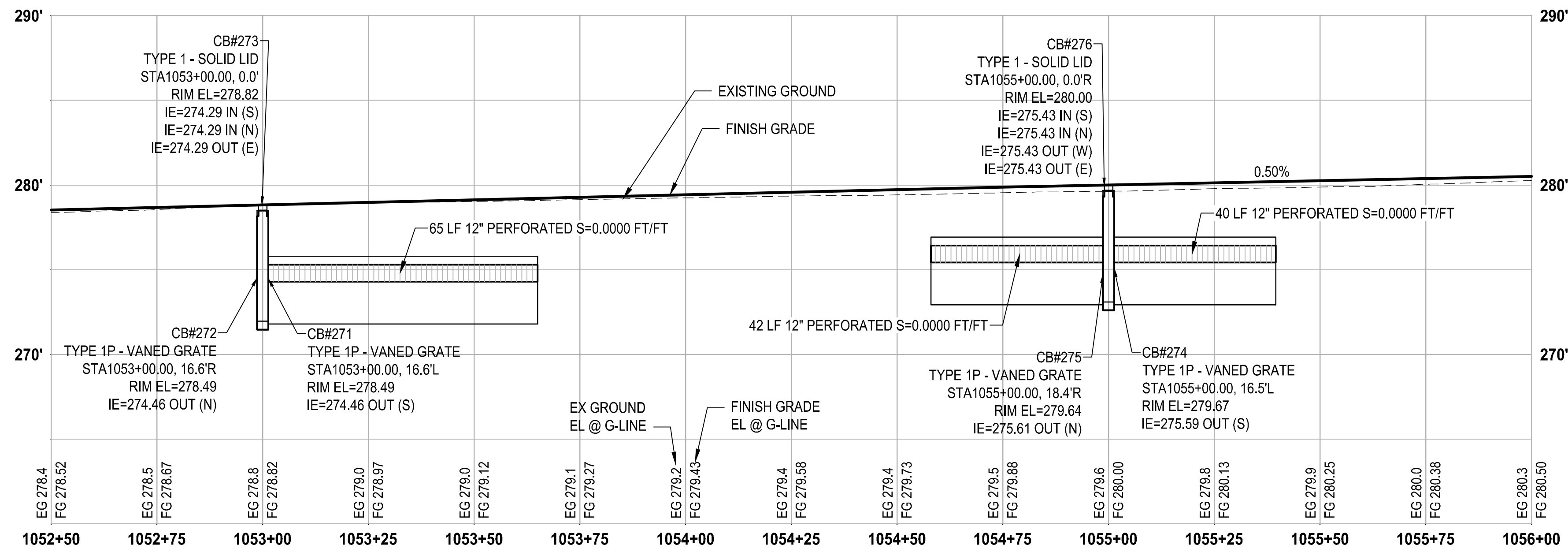
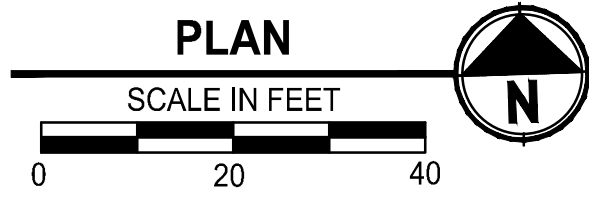
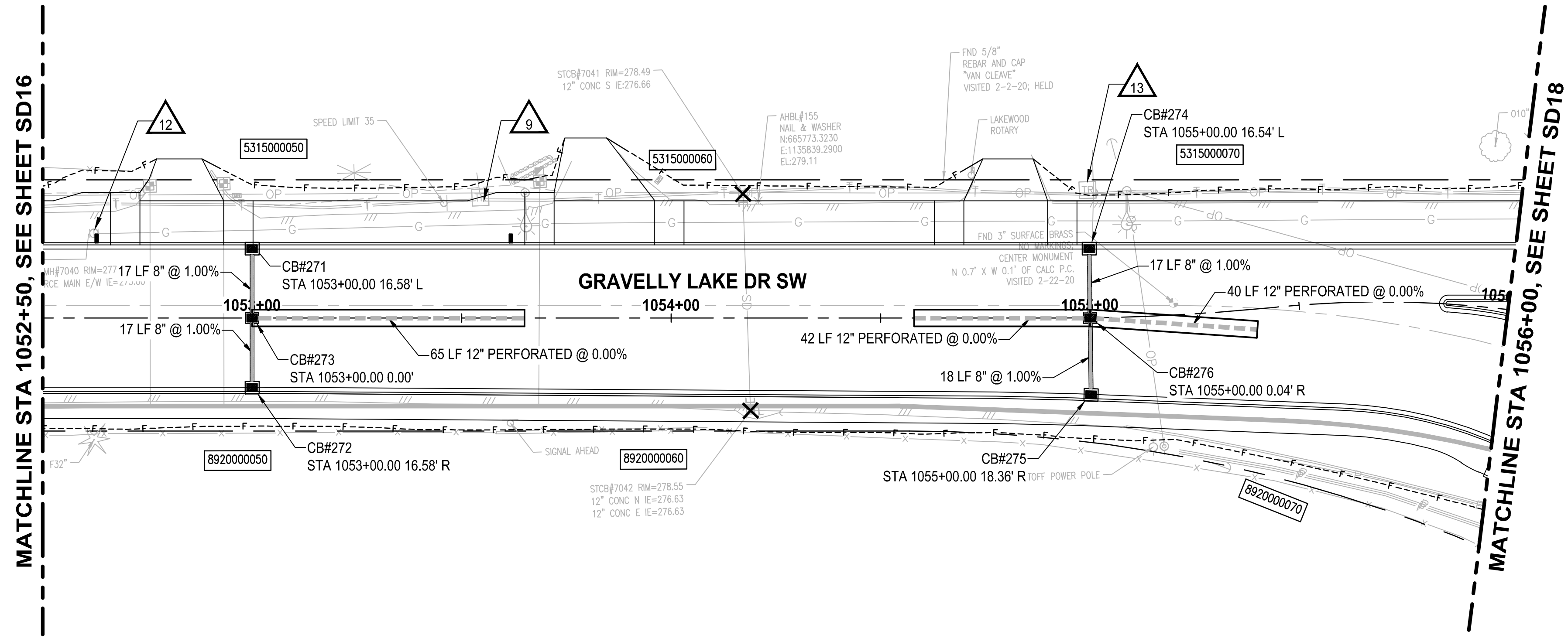
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
 76 OF 153

SD16

LAYOUT: SD17 STORM DRAIN PLAN AND PROFILE
 PATH: \\junder\projects\19000\19182\00\00 - JBLM North Access Impr\Civil\07-CAD\DWG
 PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:11:25 PM



PROFILE

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

STORM DRAINAGE AND UTILITY NOTES

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

GENERAL NOTES

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

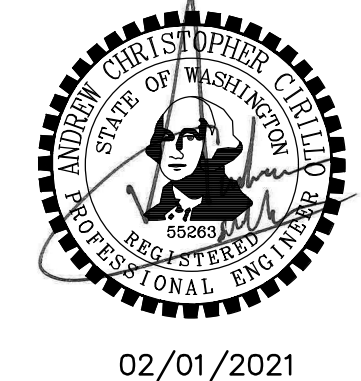
LEGEND

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

NO.	REVISIONS	DATE	BY	DESIGNED	DRAWN	CHECKED	APPROVED
				A. CIRILLO	R. BEALS	A. EPSTEIN	A. FISHER

ONE INCH AT FULL SCALE, IF NOT, SCALE ACCORDINGLY

FILE NAME: PS3047013-SD14-19
 JOB No.: 214-3047-013
 DATE: FEBRUARY 2021



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 P 253.627.4367
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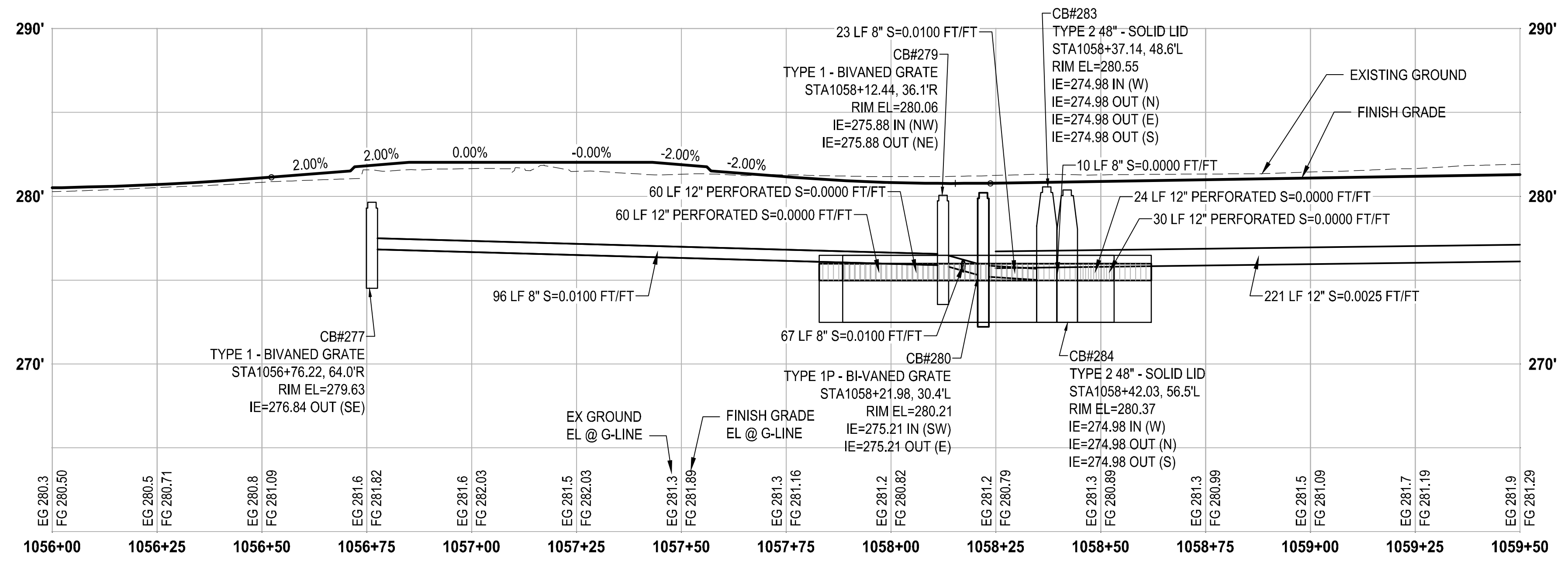
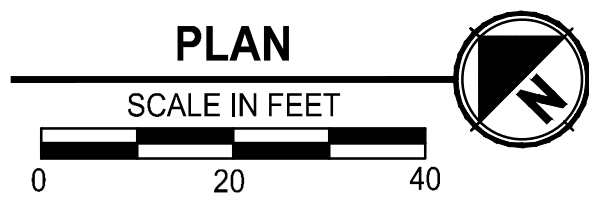
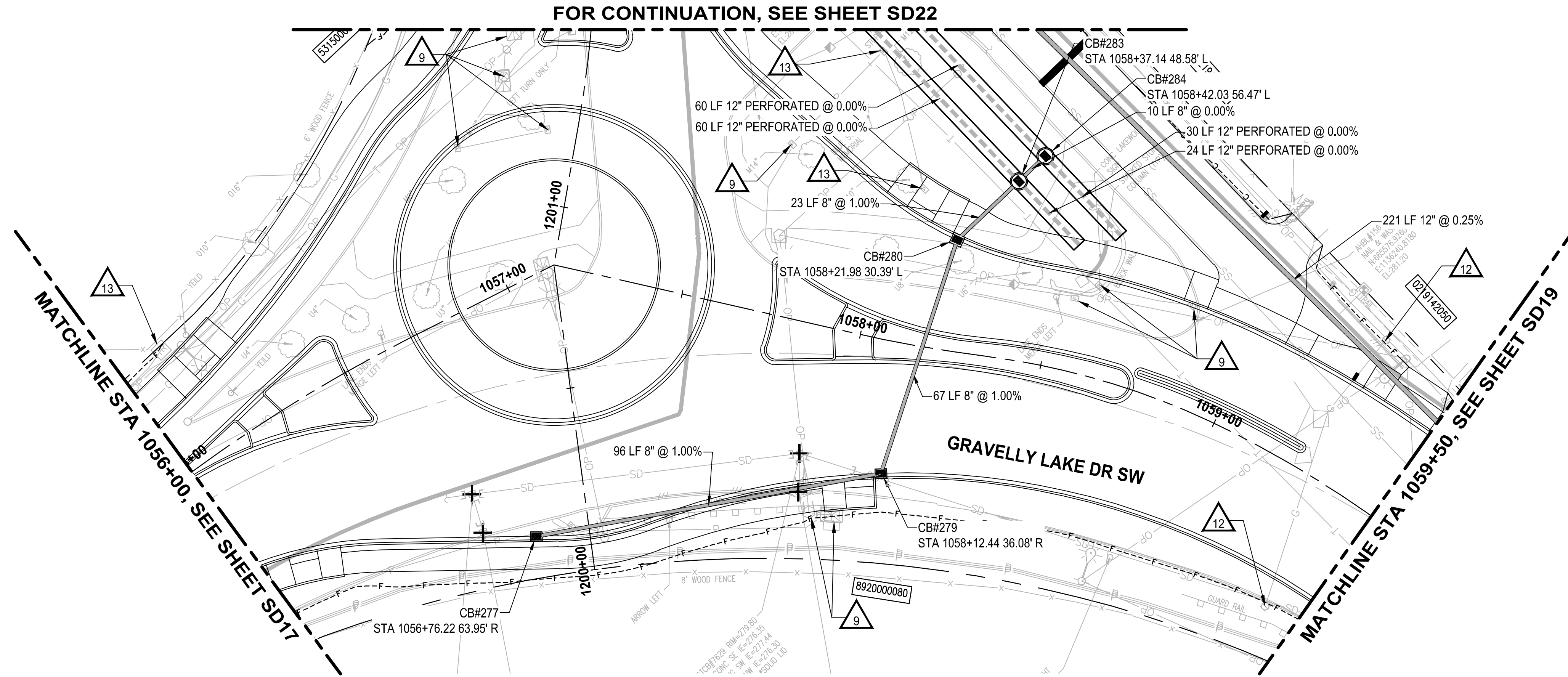
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
 77 OF 153

SD17

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



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

STORM DRAINAGE AND UTILITY NOTES

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

GENERAL NOTES

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

LEGEND

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

REVISIONS	DATE	BY	DESIGNED
			A. CIRILLO
			R. BEALS
			A. EPSTEIN
			A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY.

FILE NAME: PS3047013-SD14-19
 JOB No.: 214-3047-013
 DATE: FEBRUARY 2021



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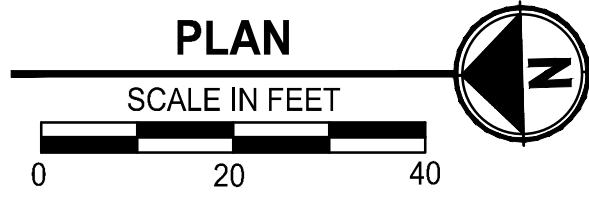
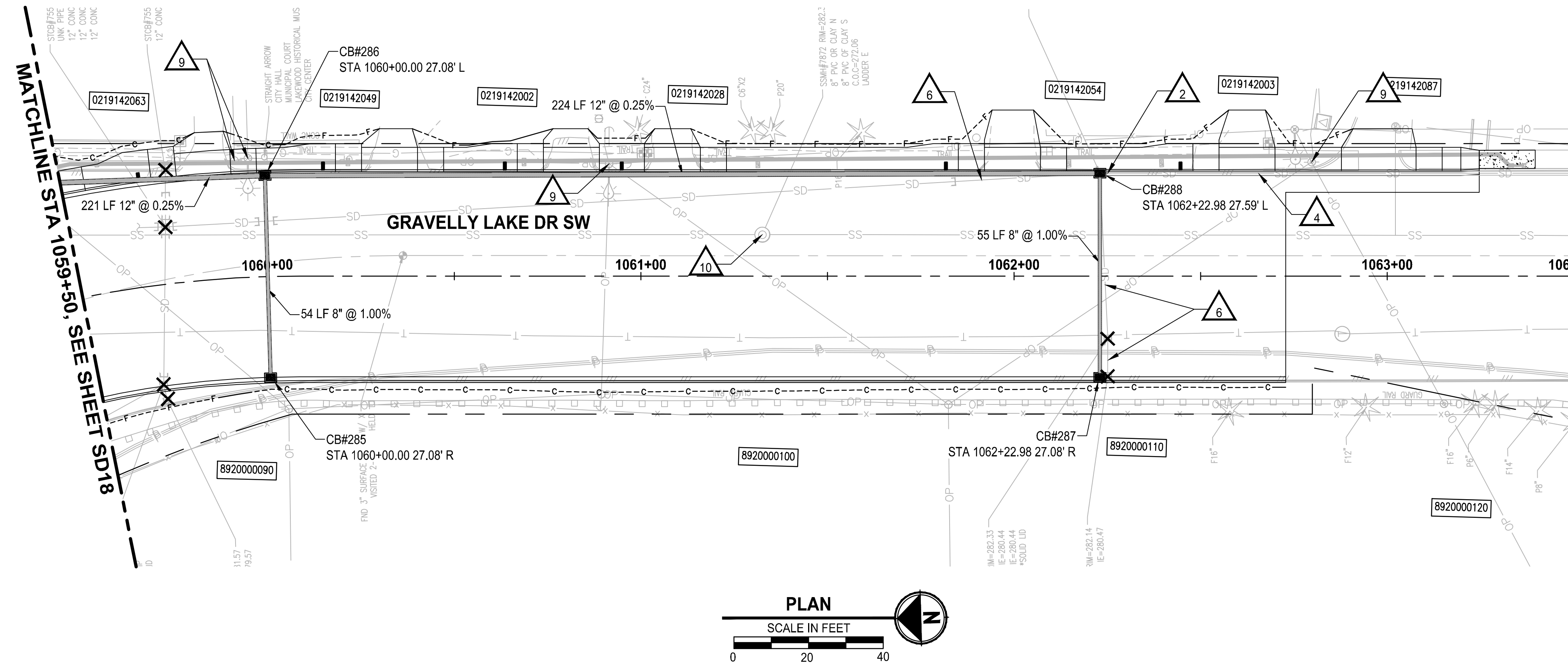
PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
 78 OF 153

SD18

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

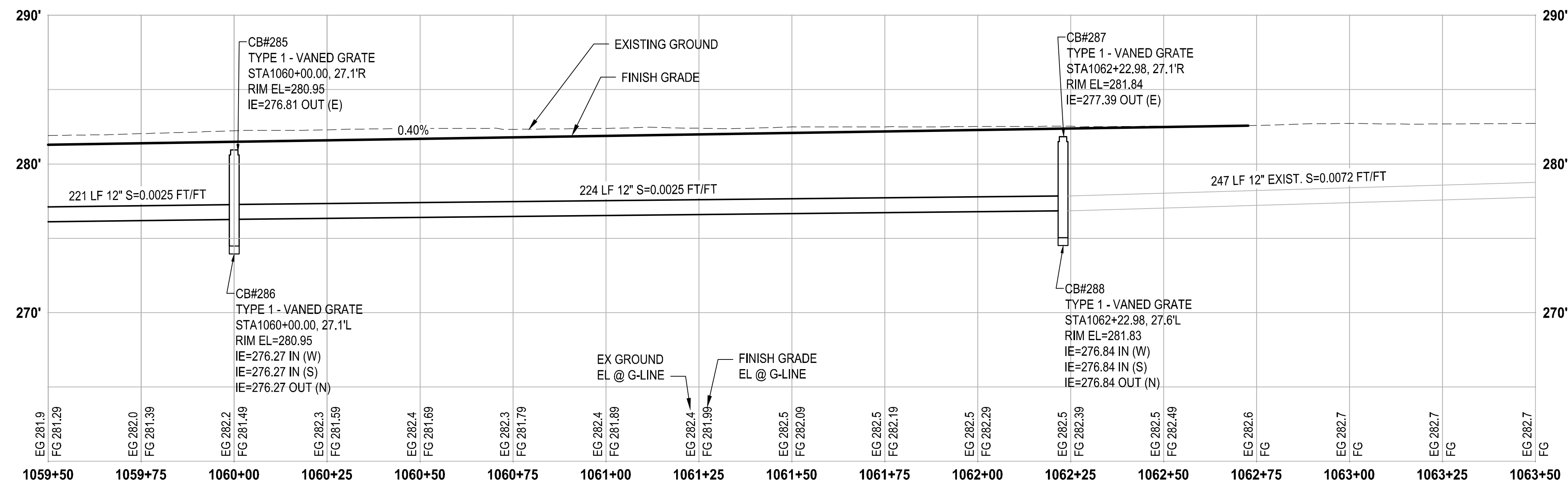


STORM DRAINAGE AND UTILITY NOTES

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

GENERAL NOTES

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



PROFILE

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

LEGEND

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

NO.	REVISIONS	DATE	BY	DESIGNED
				A. CIRILLO
				R. BEALS
				A. EPSTEIN
				A. FISHER

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



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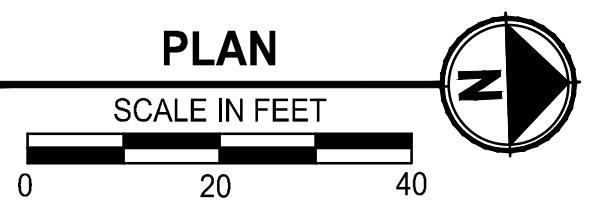
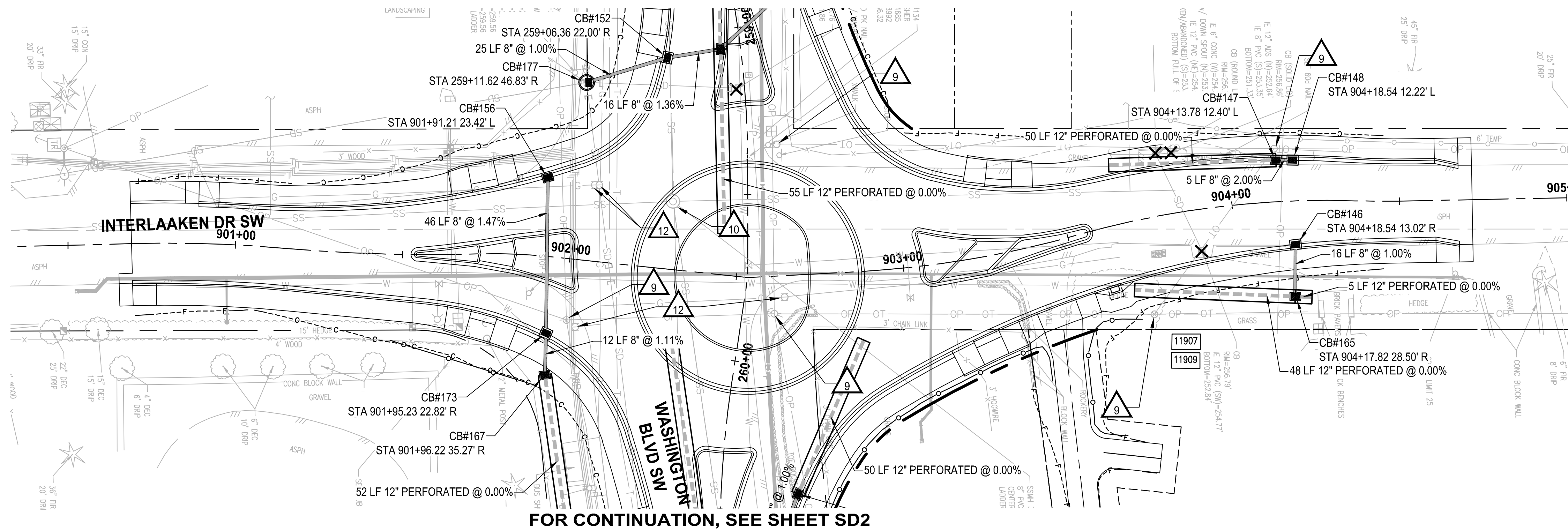
 1019 39TH AVE SE, SUITE 100
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 P 253.604.6600
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

STORM DRAIN PLAN AND PROFILE
 SD19

DRAWING NO.
 79 OF 153
SD19

FOR CONTINUATION, SEE SHEET SD2



FOR CONTINUATION, SEE SHEET SD2

STORM DRAINAGE AND UTILITY NOTES

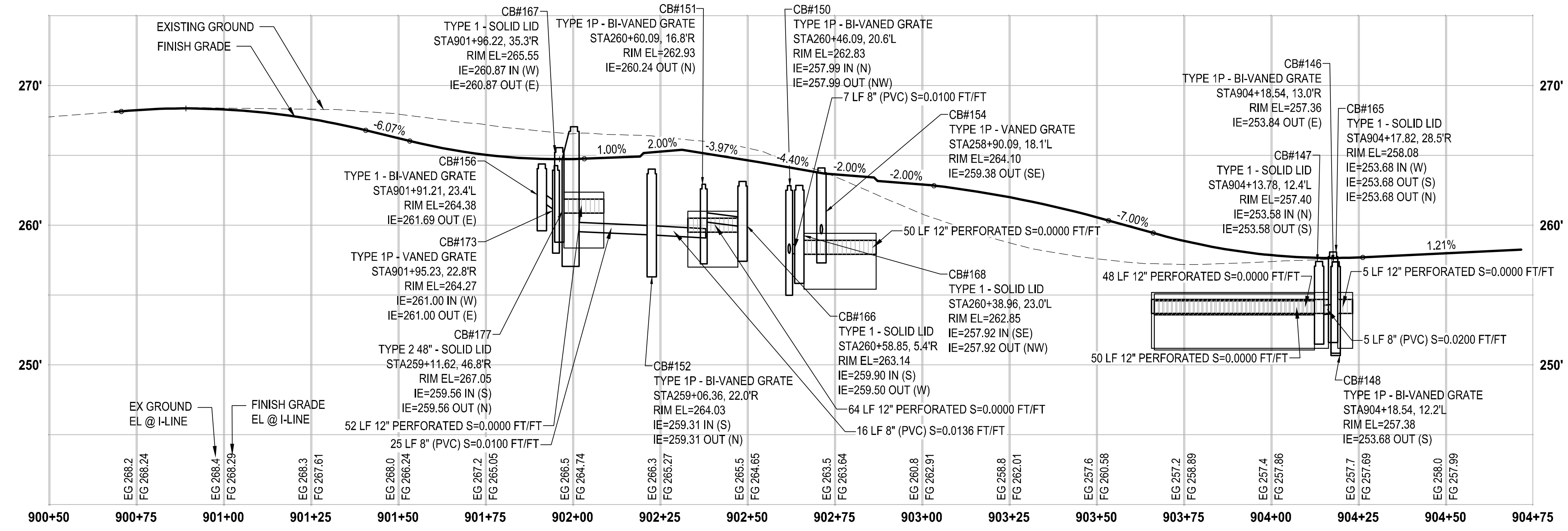
- CONNECT TO EXISTING DRAINAGE STRUCTURE
- CONNECT TO EXISTING STORM PIPE
- PRESERVE AND PROTECT EXISTING CATCH BASIN
- PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
- WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
- REMOVE EXISTING STORM PIPE
- FLOW SPLITTER MANHOLE PER SPECIFICATIONS
- ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
- UTILITY TO BE RELOCATED BY OTHERS
- SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
- NOT USED
- ADJUST EXISTING VALVE CASING TO FINISHED GRADE
- ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

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

LEGEND

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

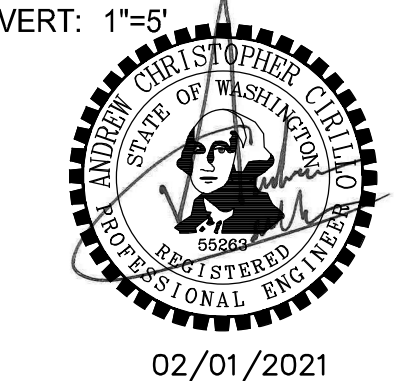


PROFILE
HORIZ: 1"=20'
VERT: 1"=5'

LAYOUT: SD20 STORM DRAIN PLAN AND PROFILE
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 PLOTTED BY: bbeals DATE: Thursday, February 25, 2021 1:13:16 PM

NO.	REVISIONS	DATE	BY	DESIGNED
1	ISSUED FOR PERMIT			S. PODGORSKI
2	REVISED			R. BEALS
3	CHECKED			A. EPSTEIN
4	APPROVED			A. FISHER

ONE INCH AT FULL SCALE, IF NOT, SCALE ACCORDINGLY
 FILE NAME: P53047013-SD20
 JOB No: 214-3047-013
 DATE: FEBRUARY 2021



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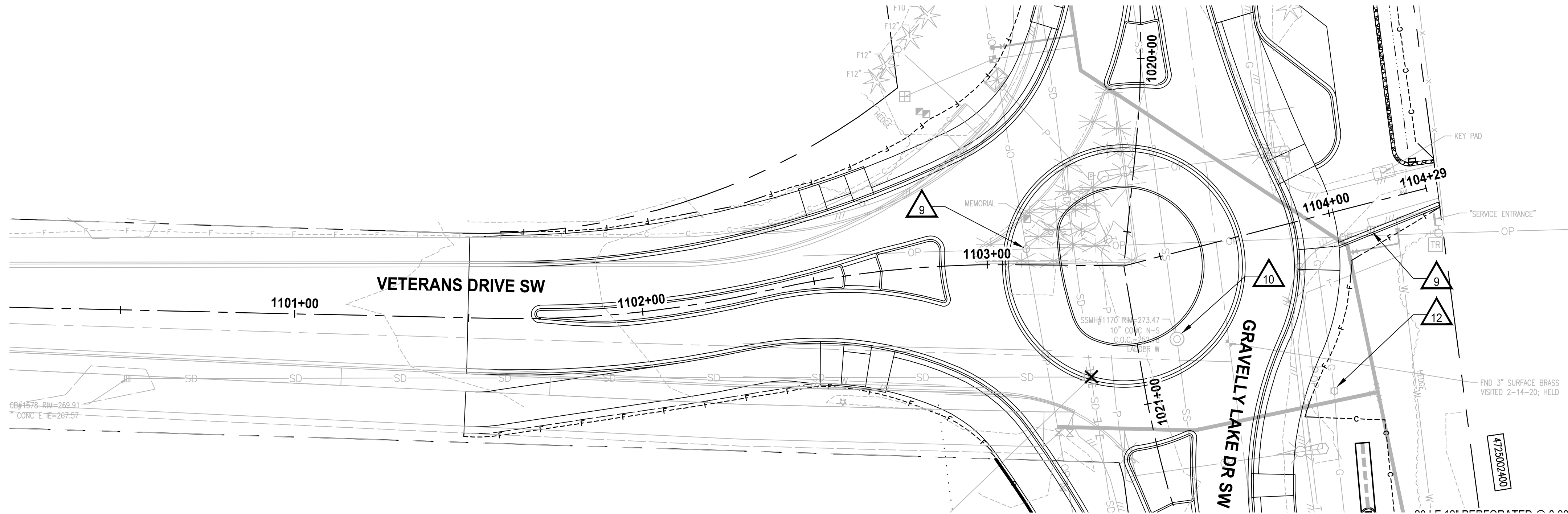
b cra
 2106 PACIFIC AVE, SUITE 300
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 P 253.627.4367
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PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
 LAKEWOOD, WASHINGTON

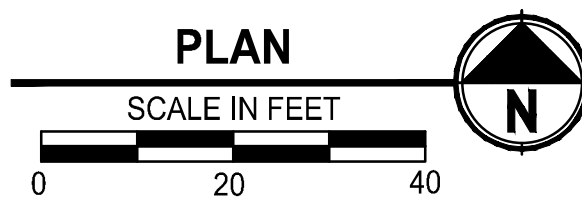
STORM DRAIN PLAN AND PROFILE

DRAWING NO.
 80 OF 153
SD20

FOR CONTINUATION, SEE SHEET SD9



FOR CONTINUATION, SEE SHEET SD9

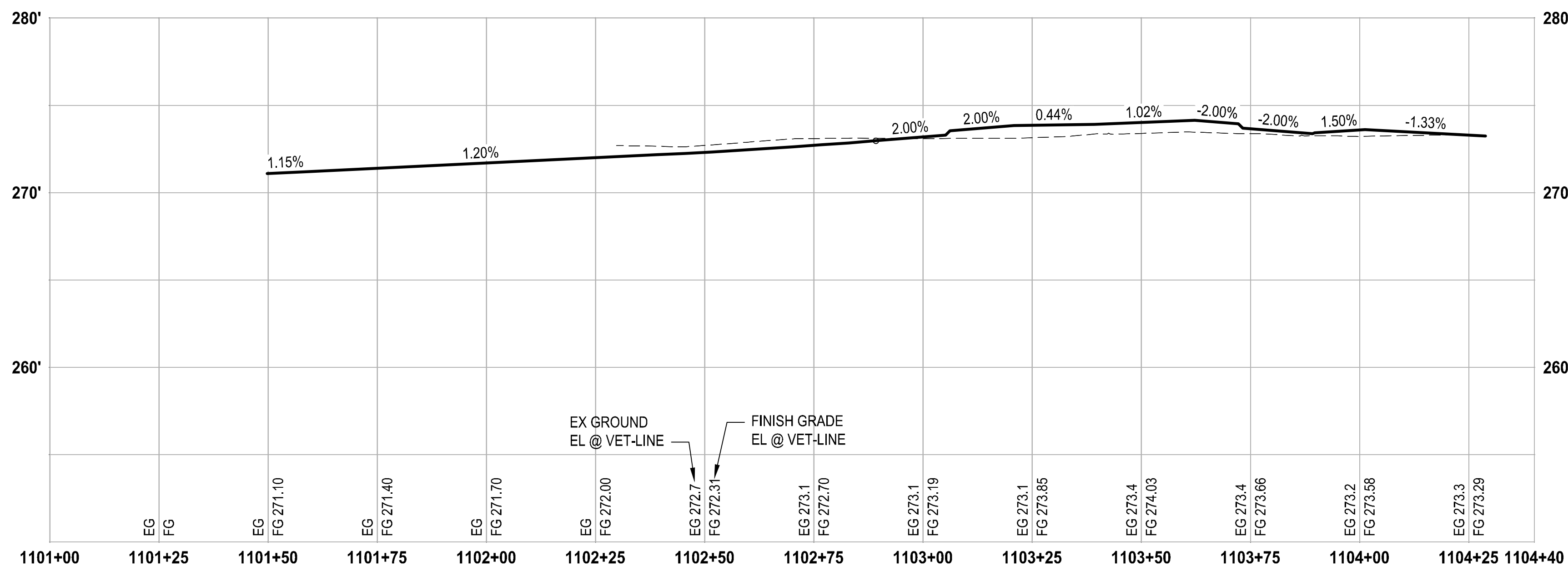


STORM DRAINAGE AND UTILITY NOTES

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

GENERAL NOTES

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



PROFILE

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

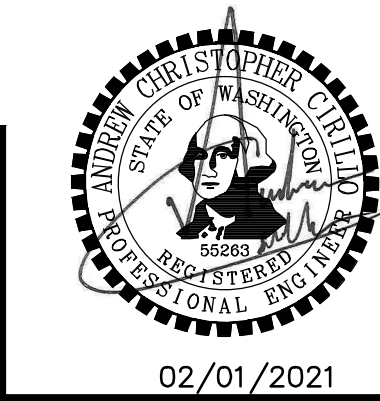
LEGEND

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

LAYOUT: SD21 STORM DRAIN PLAN AND PROFILE PATH: \\lakeside\projects\19000\19182\00\00 - JBLM North Access Impr\Civil\07-CAD\DWG PLOTTED BY: bbeels DATE: Thursday, February 25, 2021 1:14:45 PM

REVISIONS	DATE	BY	DESIGNED
			A. CIRILLO
			R. BEALS
			A. EPSTEIN
			A. FISHER

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



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

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
81 OF 153
SD21

FOR CONTINUATION, SEE SHEET SD18

STORM DRAINAGE AND UTILITY NOTES

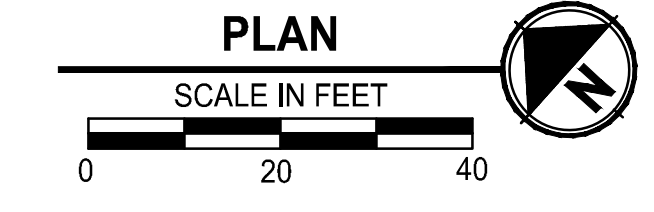
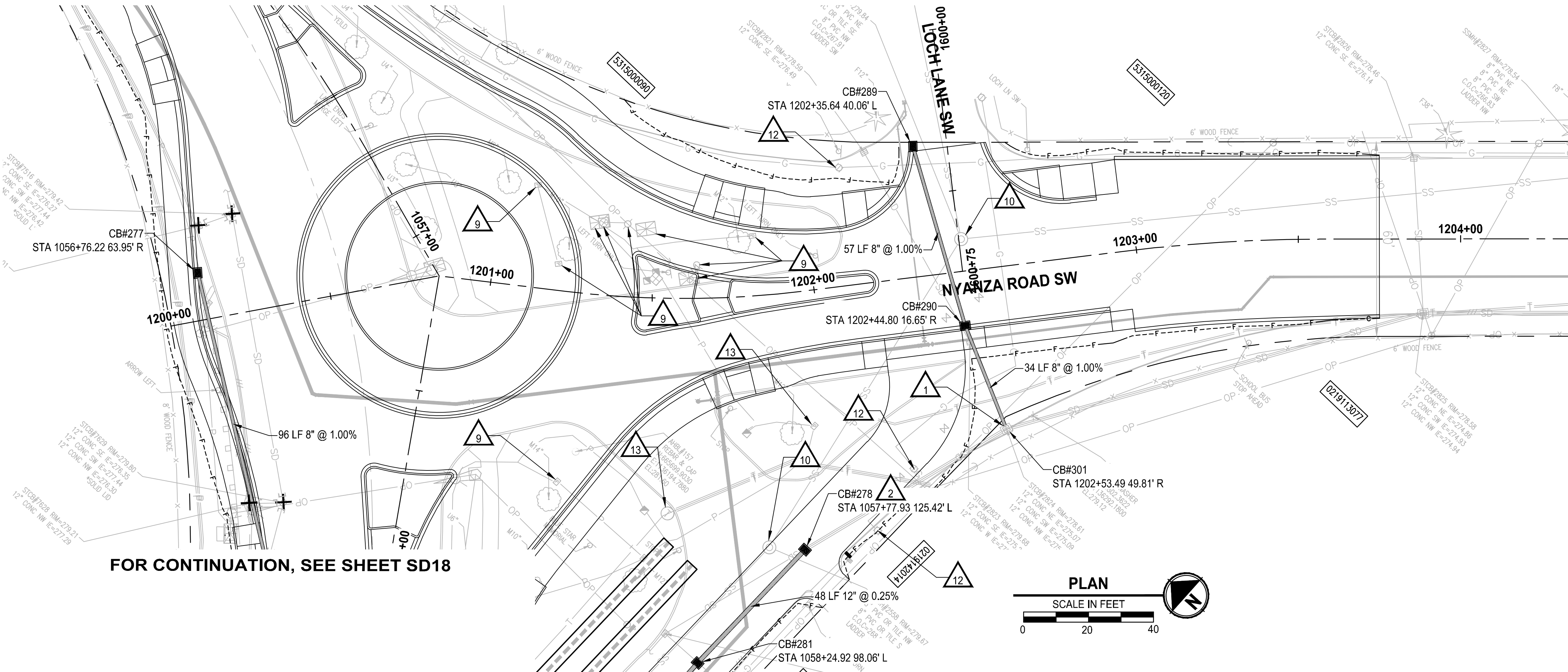
- CONNECT TO EXISTING DRAINAGE STRUCTURE
- CONNECT TO EXISTING STORM PIPE
- PRESERVE AND PROTECT EXISTING CATCH BASIN
- PRESERVE AND PROTECT EXISTING STORM DRAIN PIPE
- WATER QUALITY TREATMENT UNIT PER SPECIFICATIONS
- REMOVE EXISTING STORM PIPE
- FLOW SPLITTER MANHOLE PER SPECIFICATIONS
- ADJUST EXISTING CATCH BASIN TO FINISHED GRADE
- UTILITY TO BE RELOCATED BY OTHERS
- SANITARY SEWER MANHOLE, SEE SPECIFICATIONS FOR WORK REQUIRED
- NOT USED
- ADJUST EXISTING VALVE CASING TO FINISHED GRADE
- ADJUST EXISTING JUNCTION BOX TO FINISHED GRADE

GENERAL NOTES

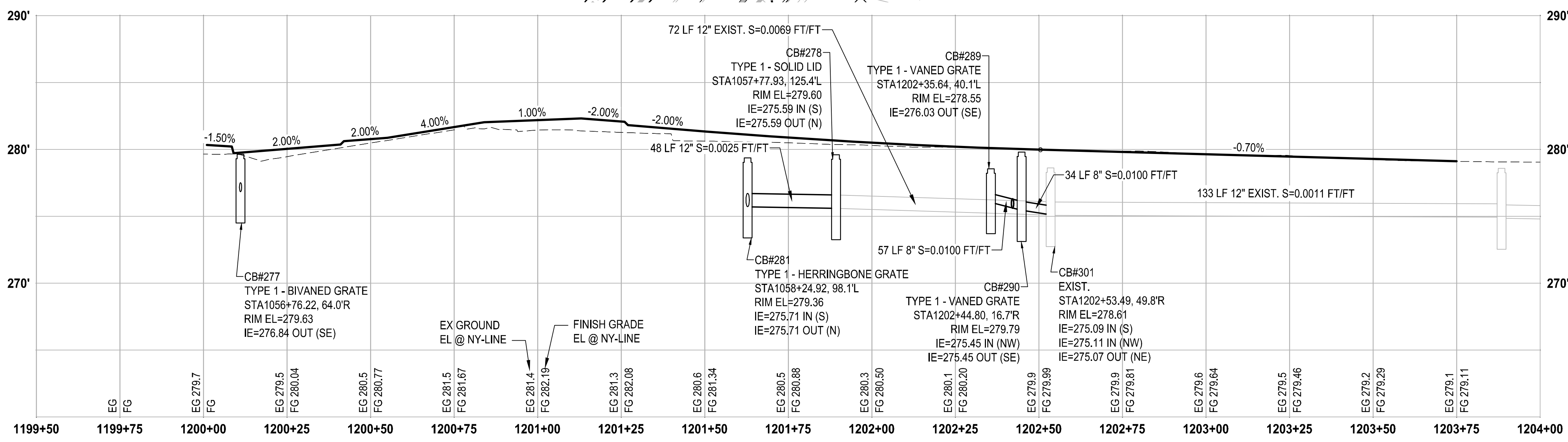
- REMOVE EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS UNLESS OTHERWISE NOTED
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 - CATCH BASIN TYPE 1P PER WSDOT STD PLAN B-5.60-02
 - CATCH BASIN TYPE 2 PER WSDOT STD PLAN B-10.20-02
 - MANHOLE TYPE 1 PER WSDOT STD PLAN B-15.20-02
 - SOLID LOCKING LID PER WSDOT STD PLAN B-20.30-04
 - VANED GRATES PER WSDOT STD PLAN B-30.30-03
 - BI-VANED GRATES PER WSDOT STD PLAN B-30.40-03
- ALL TYPE 1P CATCH BASINS SHALL HAVE A DOWNTURNED ELBOW PER LAKEWOOD STD PLAN SW-03
- CIRCULAR RING AND COVER PER WSDOT STD PLAN B-30.70-04
- SEE WS SHEETS FOR WATER SYSTEM DESIGN

LEGEND

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



FOR CONTINUATION, SEE SHEET SD18



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

LAYOUT: SD22 STORM DRAIN PLAN AND PROFILE
PATH: \\jupiter\projects\190000\19182.00.00 - JBLM North Access Impr\Civil\07-CAD\DWG
PLOTED BY: bbeals DATE: Thursday, February 25, 2021 1:15:18 PM

NO.	REVISIONS	DATE	BY	DESIGNED	CHECKED	APPROVED
1				A. CIRILLO	R. BEALS	A. EPSTEIN
2						A. FISHER

ONE INCH AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

FILE NAME: PS3047013-SD21-22
JOB No.: 214-3047-013
DATE: FEBRUARY 2021



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

STORM DRAIN PLAN AND PROFILE

DRAWING NO.
82 OF 153
SD22