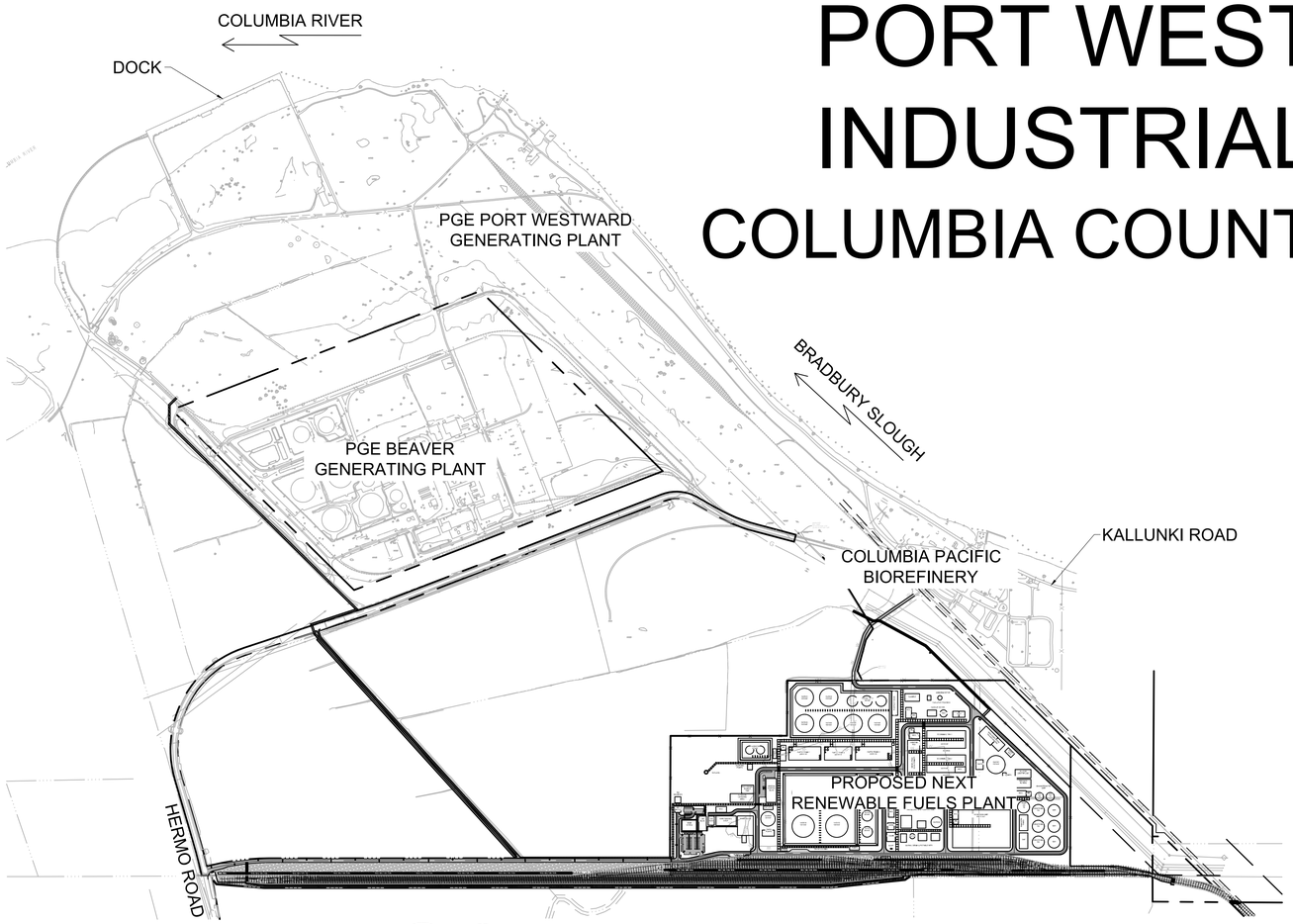
NEXT RENEWABLE FUELS
PORT WESTWARD
INDUSTRIAL PARK
COLUMBIA COUNTY, OREGON



1 G0.01 **OVERALL SITE PLAN**

500 0 250 500 1000 2000

(IN FEET)
1 inch = **500** ft.



2 G0.01 **VICINITY MAP**
NTS

DEVELOPER/OWNER:
NEXT RENEWABLE FUELS OREGON
11767 KATY FREEWAY
SUITE 705
HOUSTON, TX 77079
CONTACT: GENE COTTEN
PHONE: 661-201-2653
GENE@NEXTRENEWABLES.COM

SITE INFORMATION:
PORT WESTWARD
CLATSKANIE, OR 97016
COLUMBIA COUNTY
TAX LOTS: SITE:
08042200 0100
08042200 0200
08042200 0300
DRIVEWAY:
08042200 1100
08042100 0700
PIPE RACK:
08042200 1100
08042100 0700
08041600 0200
08041600 0300

VERTICAL DATUM:
VERTICAL DATUM FOR THIS PROJECT IS NGVD29
LAND ELEVATIONS SHOWN ARE BASED ON LIDAR SURVEY INFORMATION PROVIDED BY DAVE MILLS SURVEYING, DATED AUGUST 27, 2020

CIVIL ENGINEER:
MACKENZIE
CONTACT: BRENT NIELSEN
1515 SE WATER AVE #100
PORTLAND, OR 97214
PHONE: 971-346-3761
BNIELSEN@MCKNZE.COM

LANDSCAPE ARCHITECT:
MACKENZIE
CONTACT: STEVEN TUTTLE
1515 SE WATER AVE #100
PORTLAND, OR 97214
PHONE: 503-224-9560
STUTTLE@MCKNZE.COM

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C0.01	CIVIL NOTES AND LEGEND
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V1.11	EXISTING SITE PLAN EAST
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Client
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Project
NEXT RENEWABLE FUELS, INC.
PORT WESTWARD
COLUMBIA COUNTY, OR

REGISTERED PROFESSIONAL ENGINEER
82807PE
OREGON
JUNE 2, 2010
BRENT DANIEL NIELSEN
EXPIRES: 12/31/22

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Delta	Issued As	Issue Date

SHEET TITLE:
COVER SHEET

DRAWN BY: CAM

CHECKED BY: BDN

SHEET
G0.01

JOB NO. **2200315.01**

COMPLETENESS SUBMITTAL SET - 7/8/2021

"2200315.00" C:\TEMP\ACPUBLISH_24172\2200315-G0.01.DWG BDN 07/08/21 11:01 1:500

LEGEND:

EXISTING	PROPOSED	
		PROPERTY LINE/R.O.W.
5	5	MAJOR CONTOUR
1	1	MINOR CONTOUR
G G		OVERHEAD POWER LINE
SD SD		GAS LINE
W		STORM DRAIN / CULVERT
		WATERLINE
OW OW	OW OW	OIL WATER SEWER
X X		CHAIN LINK FENCE
FUEL FUEL		ABOVE GROUND GAS LINE
		EDGE OF GRAVEL
		DIRT FARM ROAD
		VEGETATION LINE
		DITCH LINE
		CENTERLINE OF RAILROAD TRACKS
		WETLAND BOUNDARY
		CURB
		UTILITY POLE
		ASPHALT PAVING
		CONCRETE PAVING
		GRAVEL SURFACING
		EQUIPMENT TRESTLE/PIPE RACK
		GRAVEL ROAD
		LUMINAIRE
		EXISTING WETLAND
		PROPOSED DRAINAGE ARROW
		TANK CONTAINMENT BERM WALL
		TEMPORARY SEDIMENT FENCE
		VEGETATED BUFFER
		WHEEL WASH
		CONCRETE WASHOUT
		GRAVEL CONSTRUCTION ENTRANCE

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE CURRENT STANDARD SPECIFICATIONS AND REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION AND THE CURRENT AMERICAN PUBLIC WORKS ASSOCIATION STANDARDS FOR PUBLIC WORKS CONSTRUCTION
2. THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN IS BASED ON A SURVEY BY OTHERS AND IS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS WITH ITS OWN RESOURCES PRIOR TO START OF ANY CONSTRUCTION

SITE DEMOLITION NOTES

1. COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS FOR DEMOLITION OPERATIONS AND SAFETY OF ADJACENT STRUCTURES AND THE PUBLIC
2. INSTALL EROSION CONTROL MEASURES AND TEMPORARY FENCING PRIOR TO ANY DEMOLITION ACTIVITIES
3. MITIGATE DUST POLLUTION DUE TO DEMOLITION ACTIVITIES
4. PROTECT ALL EXISTING STRUCTURES, UTILITIES, LANDSCAPE AND OTHER ELEMENTS THAT ARE NOT DESIGNATED FOR REMOVAL. ANY DAMAGE TO EXISTING IMPROVEMENTS NOT DESIGNATED FOR REMOVAL SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE
5. DO NOT BEGIN REMOVAL UNTIL ITEMS TO BE SALVAGED OR RELOCATED HAVE BEEN REMOVED AS NOTED. IF REMOVED GRAVEL OR PAVEMENT MATERIALS ARE TO BE RECYCLED OR REUSED, PREVENT CONTAMINATION OF THESE MATERIALS FROM TOPSOIL OR OTHER DELETERIOUS MATERIAL
6. CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH AFFECTED UTILITY COMPANIES, OBTAIN ALL REQUIRED PERMITS, NOTIFY THEM PRIOR TO STARTING WORK, AND COMPLY WITH THEIR REQUIREMENTS. ADDITIONAL REMOVALS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND THE CONTRACTOR SHALL CONFIRM ACCORDINGLY PRIOR TO BID. ACCURATELY RECORD ACTUAL LOCATIONS OF CAPPED AND ACTIVE UTILITIES FOR AS-BUILT PURPOSES AND SUPPLY TO OWNER AND ARCHITECT/ENGINEER OF RECORD
7. DEMOLISH AND REMOVE ALL NON-BUILDING SITE STRUCTURES AND ASSOCIATED FEATURES (APPURTENANCES) AS SHOWN. WITHIN AREA OF NEW CONSTRUCTION, REMOVE DESIGNATED WALLS AND FOOTINGS TO 2 FEET MINIMUM BELOW FINISHED GRADE. DEMOLISH ALL PAVED AREAS DESIGNATED FOR REMOVAL DOWN TO NATIVE SUBGRADE
8. ALL VEGETATION AND DELETERIOUS MATERIALS WITHIN THE LIMITS OF WORK SHALL BE STRIPPED AND REMOVED FROM THE SITE PRIOR TO GRADING WORK UNLESS NOTED OTHERWISE (E.G. PROTECTED TREES)
9. IF HAZARDOUS MATERIALS ARE DISCOVERED DURING DEMOLITION, STOP WORK AND IMMEDIATELY NOTIFY THE OWNER AND ARCHITECT/ENGINEER OF RECORD

GRADING NOTES

1. ROUGH GRADING: ROUGH GRADE TO ALLOW FOR DEPTH OF BUILDING SLABS, PAVEMENTS, BASE COURSES, AND TOPSOIL PER DETAILS AND SPECIFICATIONS
2. FINISH GRADING: BRING ALL FINISH GRADES TO LEVELS INDICATED. WHERE GRADES ARE NOT OTHERWISE INDICATED, HARDSCAPE FINISH GRADES ARE TO BE THE SAME AS ADJACENT SIDEWALKS, CURBS, OR THE OBVIOUS GRADE OF ADJACENT STRUCTURE. SOFTSCAPE GRADES (INCLUDING ADDITIONAL DEPTH OF TOPSOIL) SHALL BE SET 6 INCHES BELOW BUILDING FINISHED FLOORS WHERE ABUTTING BUILDINGS, 1-2 INCHES WHERE ABUTTING WALKWAYS OR CURBS, OR MATCHING OTHER SOFTSCAPE GRADES. GRADE TO UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE GRADES ARE GIVEN. ROUND OFF SURFACES, AVOID ABRUPT CHANGES IN LEVELS. AT COMPLETION OF JOB AND AFTER BACKFILLING BY OTHER TRADES HAS BEEN COMPLETED, REFILL AND COMPACT AREAS WHICH HAVE SETTLED OR ERODED TO BRING TO FINAL GRADES
3. EXCAVATION: EXCAVATE FOR SLABS, PAVING, AND OTHER IMPROVEMENTS TO SIZES AND LEVELS SHOWN OR REQUIRED. ALLOW FOR FORM CLEARANCE AND FOR PROPER COMPACTION OF REQUIRED BACKFILLING MATERIAL. DAMAGE TO UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE
4. EFFECTIVE EROSION PREVENTION AND SEDIMENT CONTROL IS REQUIRED. EROSION CONTROL DEVICES MUST BE INSTALLED AND MAINTAINED MEETING THE LOCAL AGENCY AND STATE AGENCY REQUIREMENTS. THE AUTHORITIES HAVING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE EROSION CONTROL
5. DRAINAGE SHALL BE CONTROLLED WITHIN THE WORK SITE AND SHALL BE ROUTED SO THAT ADJACENT PRIVATE PROPERTY, PUBLIC PROPERTY, AND THE RECEIVING SYSTEM ARE NOT ADVERSELY IMPACTED. THE ENGINEER AND/OR AUTHORITIES HAVING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE DRAINAGE CONTROL
6. SITE TOPSOIL STOCKPILED DURING CONSTRUCTION AND USED FOR LANDSCAPING SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT
7. CONTRACTOR TO REVIEW AND CONFIRM GRADES AT JOIN POINTS, SUCH AS AT DAYLIGHT LIMITS AND BUILDING ENTRANCES, PRIOR TO CONSTRUCTION
8. ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL BE CONSTRUCTED AT 2% MAXIMUM SLOPE IN ALL DIRECTIONS
9. PEDESTRIAN SIDEWALK CONNECTIONS BETWEEN PUBLIC R.O.W. AND BUILDING ENTRANCES SHALL BE CONSTRUCTED AT AND 2% MAXIMUM CROSS SLOPE AND 5% MAXIMUM LONGITUDINAL SLOPE (8.33% FOR DESIGNATED RAMPS)

UTILITY NOTES

1. ALL WORK SHALL CONFORM TO THE CURRENT EDITIONS OF THE STATE PLUMBING AND BUILDING CODES WITH LOCAL AMENDMENTS AS APPLICABLE ALONG WITH ANY ADDITIONAL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
2. THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SIZE AND LOCATION BY UNCOVERING (POTHOLING), PROVIDING SUCH IS PERMITTED BY THE AUTHORITIES HAVING JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER IF THERE ARE ANY DISCREPANCIES.
3. NOT ALL REQUIRED CLEANOUTS ARE SHOWN ON THE PLANS. PROVIDE CLEANOUTS AS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND THE CURRENT EDITION OF THE OREGON PLUMBING SPECIALTY CODE.
4. ALL SANITARY AND STORM PIPING IS DESIGNED USING CONCENTRIC PIPE TO PIPE AND WYE FITTINGS, UNLESS OTHERWISE NOTED
5. ALL DOWNSPOUT LEADERS TO BE 6 INCHES AT 2.0% MINIMUM UNLESS NOTED OTHERWISE
6. PREFABRICATED PLUMBING PRODUCTS USED SHALL BE LISTED ON THE IAPMO R&T PRODUCT LISTING DIRECTORY (pld.iapmo.org). ALL SUBMITTALS FOR REVIEW SHALL BE ACCOMPANIED BY MANUFACTURER'S LITERATURE CLEARLY STATING THIS CERTIFICATION AND/OR THE PRODUCT LISTING CERTIFICATE FROM THE IAPMO DIRECTORY WEBSITE
7. IF APPLICABLE, CONTRACTOR TO PROVIDE POWER TO IRRIGATION CONTROLLER. SEE LANDSCAPE PLANS AND SPECIFICATIONS
8. PIPE LENGTHS SHOWN ON PLANS ARE TWO DIMENSIONAL AND MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE
9. MANHOLE OR VAULT RIM ELEVATIONS SHALL BE SET FLUSH IN PAVEMENT AREAS AND 3-4 INCHES ABOVE GRADE IN LANDSCAPE AREAS. RIMS IN PAVEMENT AREAS SHALL BE H-20 TRAFFIC RATED

EROSION CONTROL NOTES

1. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE BEFORE ANY LAND IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING APPROPRIATE NON-STORMWATER POLLUTION CONTROLS
2. THE EROSION CONTROL DRAWING IS FOR GENERAL GUIDANCE ONLY. THE CONTRACTOR SHALL KEEP THE PLAN CURRENT FOR ALL PHASES OF CONSTRUCTION AND MEET EROSION/SEDIMENT CONTROL REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION (AHJ). ALL EROSION CONTROL MEASURES SHALL CONFORM TO THE REQUIREMENTS OF THE AHJ, THE PLANS, AND THE PROJECT SPECIFICATIONS
3. CONSTRUCT EROSION CONTROL IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS
4. METHOD OF INSTALLATION FOR SEDIMENT FENCE SHALL NOT CAUSE DAMAGE TO VEGETATED SLOPE EXCEPT AT POINT OF INSTALLATION. SIDECAST MATERIAL SHALL BE KEPT TO A MINIMUM AND SHALL BE TO THE UPHILL SIDE OF THE SEDIMENT FENCE. THE FENCE SHALL BE INSTALLED AT LEAST 4 FEET FROM ADJACENT TREES
5. ALL EROSION CONTROL DEVICES SHALL BE EXAMINED AND REPAIRED AFTER EACH STORM OCCURRENCE, AND INLETS SHALL BE CLEANED OF SEDIMENT WHENEVER NECESSARY
6. HYDROSEED AND MULCH ALL DISTURBED AREAS UPON COMPLETION OF CONSTRUCTION OR AS DIRECTED BY THE AUTHORITIES HAVING JURSIDICTION
7. THE CONTRACTOR SHALL LIMIT CONSTRUCTION TRAFFIC TO PAVED AREAS TO PREVENT AND MINIMIZE SEDIMENT TRACKING OFF-SITE. CONTRACTOR SHALL SWEEP OR VACUUM PAVED AREAS IF SEDIMENT ACCUMULATION OCCURS. DO NOT TRACK SEDIMENT TO THE PUBLIC STREET OR NEIGHBORING PROPERTIES
8. INSTALL TEMPORARY EROSION PREVENTION SUCH AS JUTE NETTING OR GEOTEXTILE ON DISTURBED AREAS STEEPER THAN 4H:1V
9. STAGING AND STOCKPILE AREAS TO BE DETERMINED BY CONTRACTOR AND ADJUSTED TO ACCOMMODATE THE PROGRESS OF CONSTRUCTION

SITE WORK NOTES

1. ALL CURB RADII TO BE 3 FEET UNLESS NOTED OTHERWISE
2. STAIR RISERS AND TREADS SHALL BE CONFORMANT WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION AND THE OREGON STRUCTURAL SPECIALTY CODE.
3. WHEREVER A PEDESTRIAN WALKING PATH IS WITHIN 36 INCHES OF A VERTICAL DROP OF 30 INCHES OR GREATER, GUARDRAIL SHALL BE INSTALLED CONFORMANT WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION AND THE CURRENT EDITION OF THE OREGON SPECIALTY STRUCTURAL CODE.

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Client
NEXT RENEWABLE FUELS OREGON

11767 KATY FREEWAY
SUITE 705
HOUSTON, TX 77079

Project
NEXT RENEWABLE FUELS, INC.
PORT WESTWARD
COLUMBIA COUNTY, OR

REGISTERED PROFESSIONAL ENGINEER
R269705PE
OREGON
JUNE 2, 2010
BRENT DANIEL WIESEN
EXPIRES: 12/31/22

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REVISION SCHEDULE

Delta	Issued As	Issue Date

SHEET TITLE:
CIVIL NOTES AND LEGEND

DRAWN BY: CAM

CHECKED BY: BDN

SHEET
C0.01

JOB NO. **2200315.01**

COMPLETENESS SUBMITTAL SET - 7/8/2021

MATCH LINE - SEE SHEET V1.12

HERMO ROAD

WETLAND CONTINUES

EXISTING DRAINAGE DITCH

EXISTING DRAINAGE DITCH

EXISTING DRAINAGE DITCH

WETLAND CONTINUES

WETLAND CONTINUES

EXISTING DRAINAGE DITCH

HERMO ROAD

WETLAND CONTINUES

WETLAND CONTINUES

EXISTING DRAINAGE DITCH

MATCH LINE - SEE SHEET V1.11

LEGEND:

SEE LEGEND ON SHEET C0.01

1 / V1.10 EXISTING SITE PLAN - WEST

100 0 50 100 200 400

(IN FEET)
1 inch = **100** ft.

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EXISTING SITE PLAN WEST

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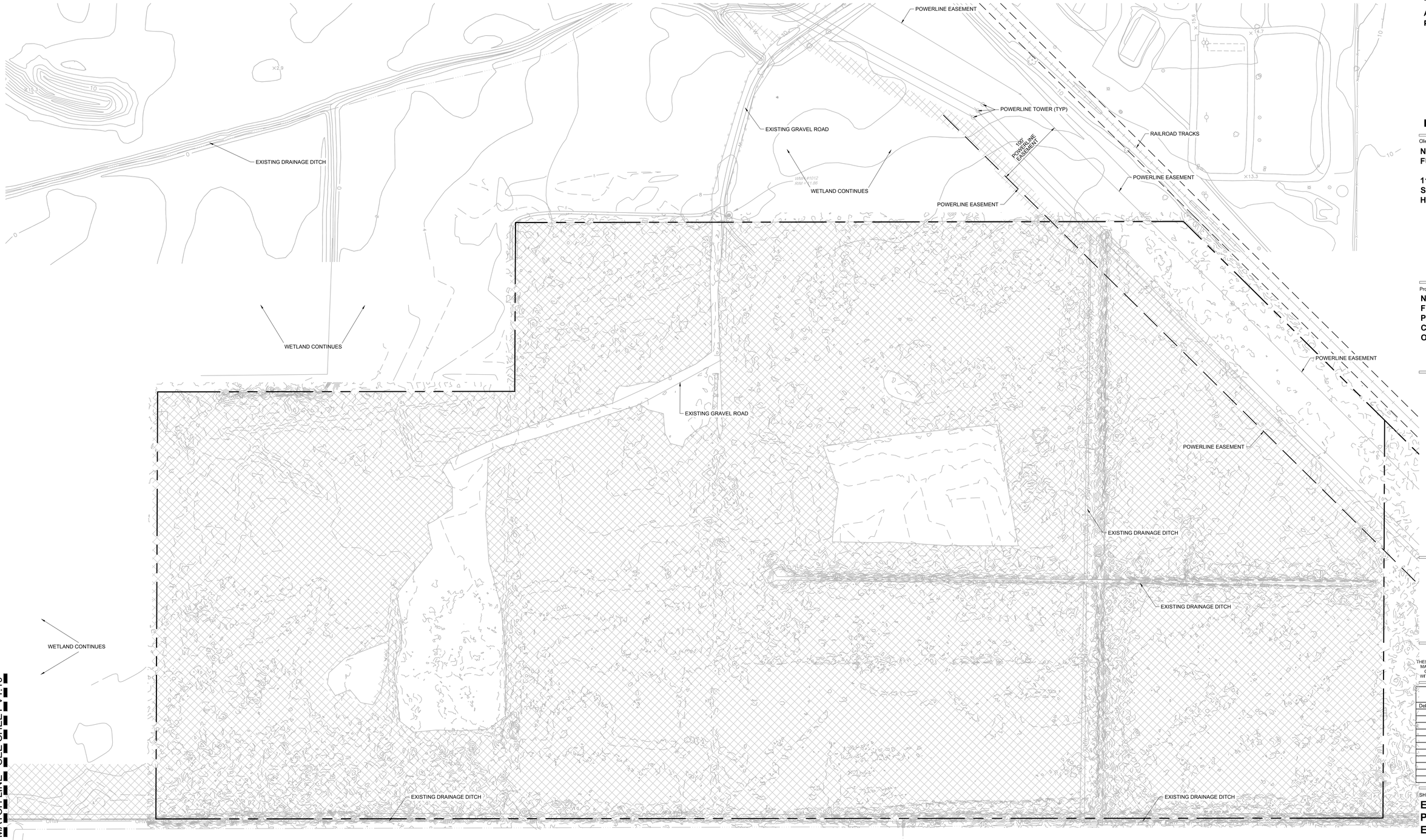
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V1.10

JOB NO. **2200315.01**

COMPLETENESS SUBMITTAL SET - 7/8/2021

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LEGEND:

SEE LEGEND ON SHEET C0.01

1 V1.11 EXISTING SITE PLAN - EAST

100 0 50 100 200 400

(IN FEET)
1 inch = **100** ft.

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EXISTING SITE PLAN EAST

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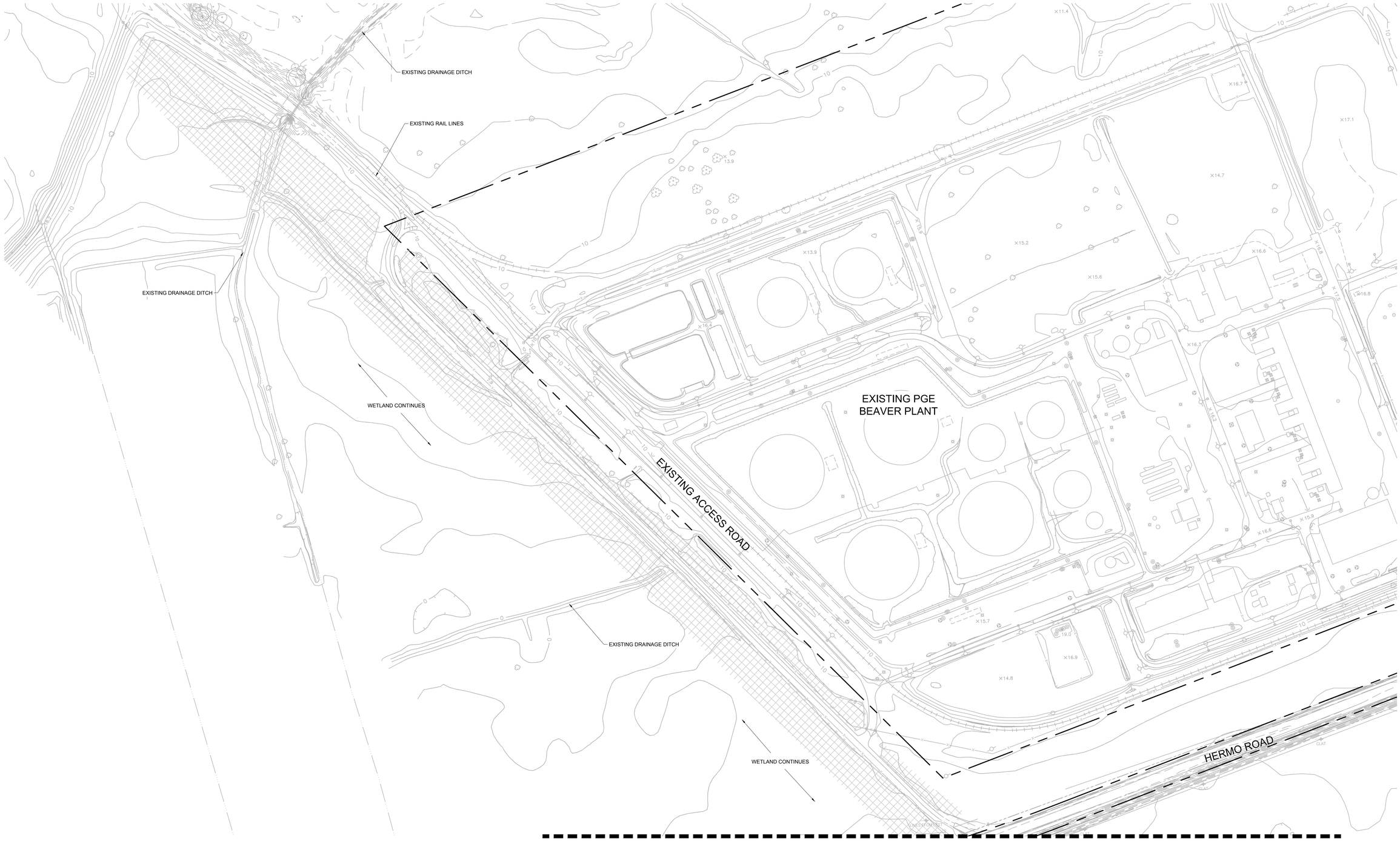
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V1.11

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COMPLETENESS SUBMITTAL SET - 7/8/2021

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MATCH LINE - SEE SHEET V1.10

LEGEND:

SEE LEGEND ON SHEET C0.01

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SHEET TITLE:

EXISTING SITE PLAN NORTH

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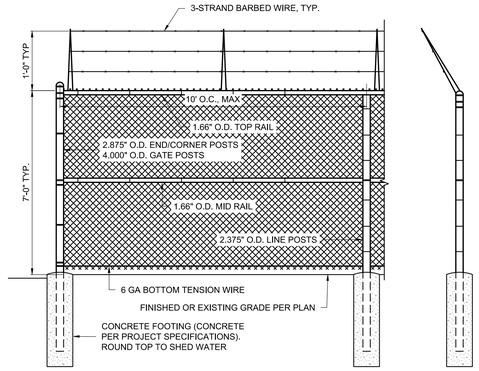
SHEET

V1.12

JOB NO. **2200315.01**

COMPLETENESS SUBMITTAL SET - 7/8/2021

"220031500" C:\TEMP\ACPUBLISH_24772\2200315-V1.10.DWG BDN 07/08/21 11:06 1:100



NOTES:
A. CHAIN LINK FABRIC TO BE 2" x 2" MESH, 9 GA GALVANIZED
B. FENCE POSTS/RAILS/FITTINGS TO BE GALVANIZED
C. FITTINGS TO BE HEAVY PRESSED GALVANIZED PER ASTM F626
D. FENCE MATERIALS AND CONSTRUCTION SHALL CONFORM WITH THE CHAIN LINK FENCE MANUFACTURER'S INSTITUTE (CLFMI) GUIDELINES FOR HEAVY INDUSTRIAL FENCE

1 C1.11 CHAIN LINK FENCE — NTS

MATCH LINE - SEE SHEET C1.13

MATCH EXISTING GRAVEL ROAD
SECONDARY EMERGENCY ACCESS ROAD 20' WIDE GRAVEL SURFACING 12" THICK
PROPOSED NEXT RENEWABLES POWER SERVICE ALIGNMENT
WMH #1012 RIM = 11.86
7' HIGH CHAIN LINK FENCE WITH 1' BARBED WIRE (TYP.)
6' HIGH CONTAINMENT WALL AND BERM (TYP)
EXISTING OVERHEAD POWER LINES
SUSPENDED POWER LINES
EXISTING RAIL
14-TK01 150'X48'
14-TK02 150'X48'
14-TK09, 10, 11 88'X48'
14-TK03 150'X48'
14-TK04 150'X48'
14-TK05 150'X48'
14-TK06 150'X48'
PUMPS/HT EXCH
13-AMINE
28-INCINERATOR
11-SULFUR TREATING
12-SOUR WATER
MCC
RIE
TK01
21-CT
14-TK07/08 67'X40'
PUMPS
15-PTU TRAIN 1 265'X110'
15-PTU TRAIN 2 225'X110'
15-PTU TRAIN 3 300'X110'
AMMONIA PSA
ECOFINING TRN 1 320'X145'
ACCESS
ECOFINING TRN 2 320'X145'
ECOFINING TRN 3 320'X145'
DIESEL FRAC DEBUTANIZER
JET FRAC
MAIN SUBSTATION TRANSFORMERS
EMER GEN
09-P01
09-TK01 150'X48'
09-TK02 150'X48'
PUMPS
SLUDGE CENTRIFUGE
TERTIARY FILTERS
08-WASTEWATER UNIT
EQ TK
ANAEROBIC RX
SBR
POST EQ TK
SKIMMERS TANKS
DAF
HYDROGEN UNIT 476' X 312'
04-BOILERS, BFW PUMPS & TANK
04-TK02
04-TK01
03-RAW, DEMIN & POTABLE WTR
22-N2
23-AIR
SUMP
18-DRUMS PUMPS
18-FLARE
PIG RECEIVER
EXCHANGER BUNDLE PAD
OUTDOOR LAYDOWN AREA
CENTRAL CONTROL BLDG
STAFF PARKING
OFFICE PARKING
MAIN OFFICE
LAB BLDG
CHG BLDG
MAINTENANCE SHOP
WAREHOUSE
03-PUMPS
03-TK01 120'X48'
20-FW PUMPS
14-TK12 184'X48'
14-TK13 184'X48'
14-TK14 184'X48'
14-TK15 184'X48'
FUTURE 88'X48'
14-TK17 88'X48'
14-TK18 88'X48'
14-TK16 88'X48'
14-TK19 52'X40'
14-TK20 43'X40'
17-V03
TRUCK LOADING
SCALE
GUARD/GATE
7' HIGH CHAIN LINK FENCE LOCATED OUTSIDE OF DITCH SLOPE(TYP.)
RAIL SPURS
RELOCATED DRAINAGE DITCH (TYP.)
EXISTING DRAINAGE DITCH TO REMAIN

LEGEND:
SEE LEGEND ON SHEET C0.01

PARKING SUMMARY:

	STANDARD SPACES	ACCESSIBLE SPACES	TOTAL SPACES
OFFICE PARKING	79	5	84
STAFF PARKING	20	0	20
CONTROL BLDG PARKING	23	1	24
TOTAL PARKING	122	6	128

2 C1.11 PROPOSED SITE PLAN
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

BUILDING AREA SUMMARY:

MAIN OFFICE:	20,250 SF
LAB:	7,500 SF
CHANGE BUILDING:	3,750 SF
WAREHOUSE:	21,025 SF
MAINTENANCE:	13,335 SF
CENTRAL CONTROL :	12,580 SF
TOTAL BUILDING FLOOR AREA:	78,330 SF

SITE COVERAGE SUMMARY:

TOTAL SITE AREA:	6,327,777 SF	(145.27 AC)
PROPOSED PAVED AREA:	1,175,130 SF	(26.98 AC)
PROPOSED GRAVEL AREA:	2,332,620 SF	(53.55 AC)
PROPOSED ROOF AREA:	829,187 SF	(19.04 AC)
PROPOSED TANK AREA:	265,593 SF	(6.10 AC)
PROPOSED IMERVIOUS AREA:	4,602,530 SF	(105.66 AC)
PROPOSED LANDSCAPE AREA:	1,725,247 SF	(39.61 AC)

COMPLETENESS SUBMITTAL SET - 7/8/2021

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Project
NEXT RENEWABLE FUELS, INC. PORT WESTWARD COLUMBIA COUNTY, OR

REGISTERED PROFESSIONAL ENGINEER OREGON JUNE 2, 2010 BRENT DANIEL WIELSEN
EXPIRES: 12/31/22

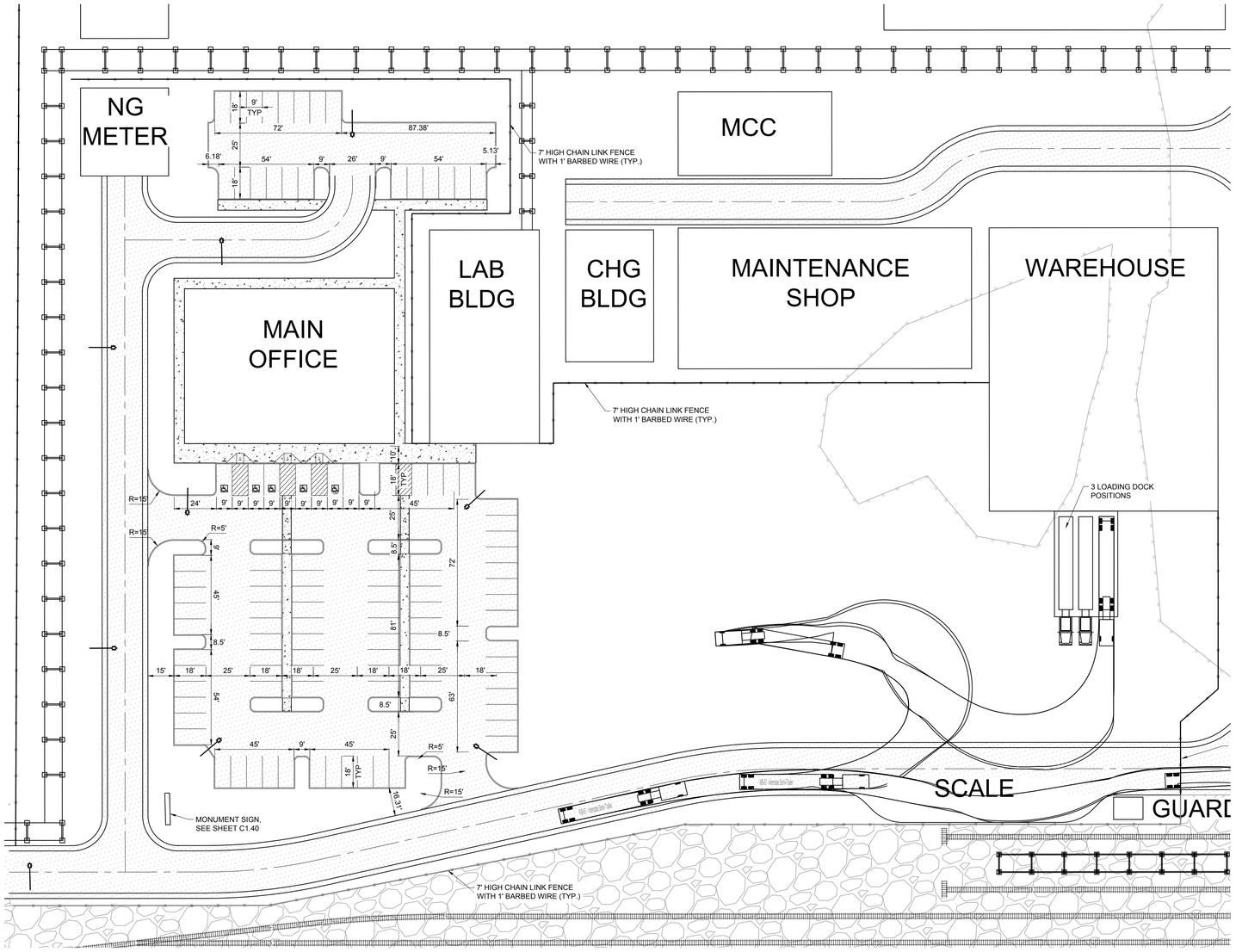
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SHEET TITLE:
PROPOSED SITE PLAN

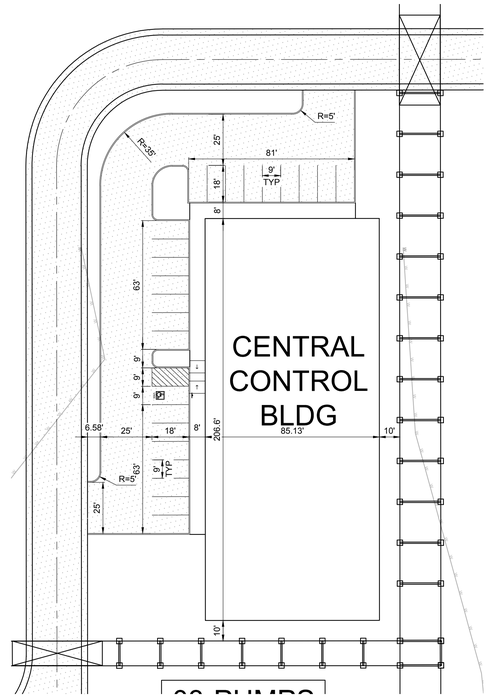
DRAWN BY: CAM
CHECKED BY: BDN
SHEET
C1.11
JOB NO. **2200315.01**



1 C1.12 MAIN PARKING AND OFFICE AREA

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



2 C1.12 CENTRAL PARKING AREA

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

LEGEND:

SEE LEGEND ON SHEET C0.01

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SHEET TITLE:

ACCESS, PARKING, AND CIRCULATION PLAN

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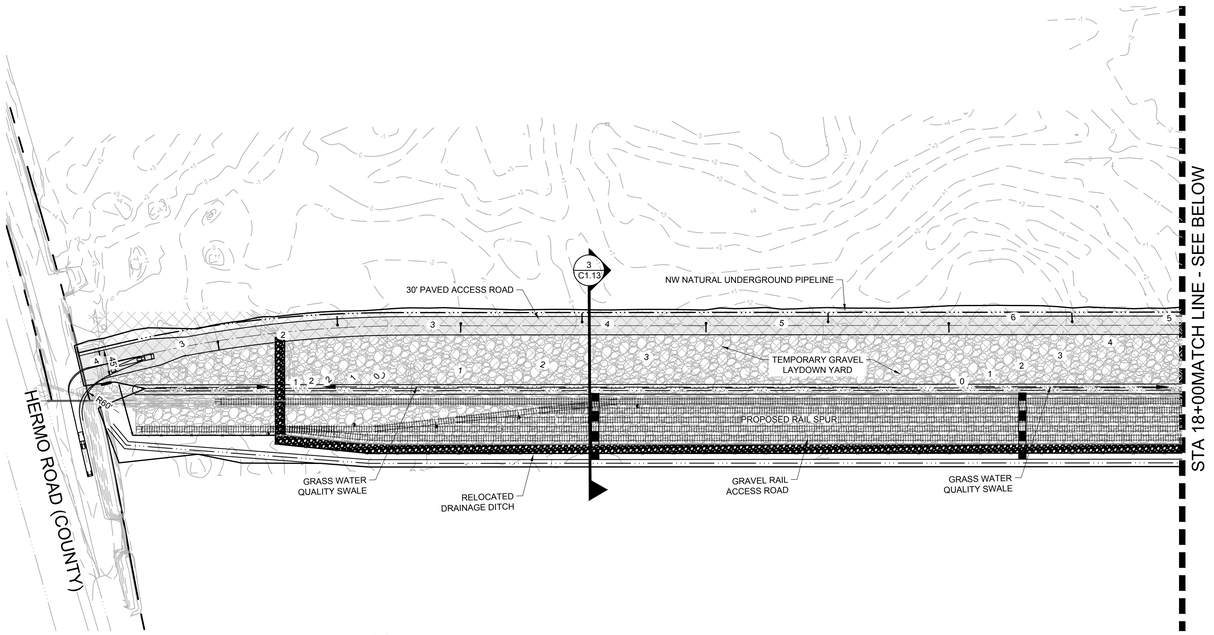
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SHEET

C1.12

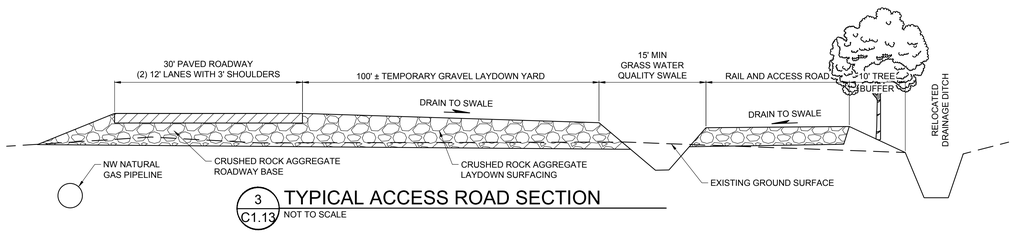
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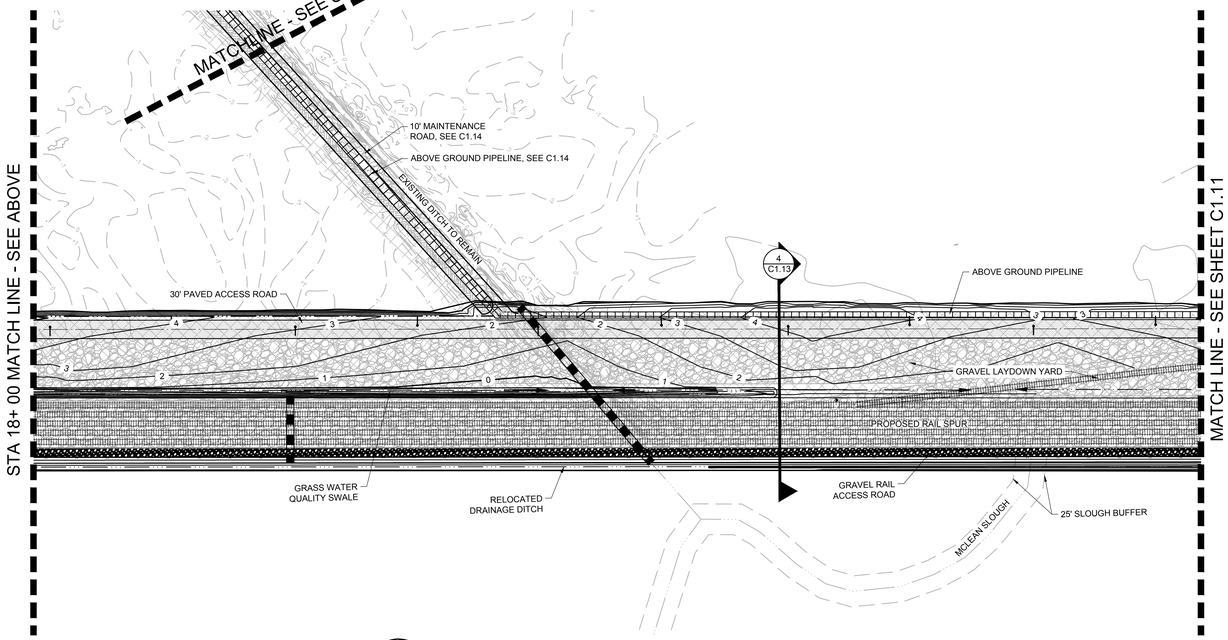


1 C1.13 ACCESS ROAD PLAN - BEGIN TO STA 18+00
SCALE: 1"=100'

100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

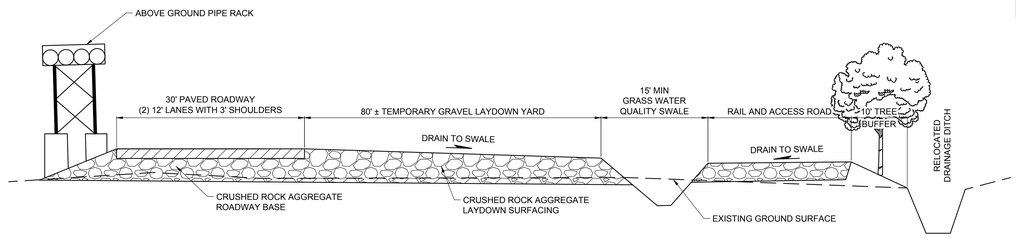


3 C1.13 TYPICAL ACCESS ROAD SECTION
NOT TO SCALE



2 C1.13 ACCESS ROAD PLAN - STA 18+00 TO STA 37+00
SCALE: 1"=100'

100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.



4 C1.13 TYPICAL ACCESS ROAD SECTION
NOT TO SCALE

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SHEET TITLE:
ACCESS ROAD PLAN

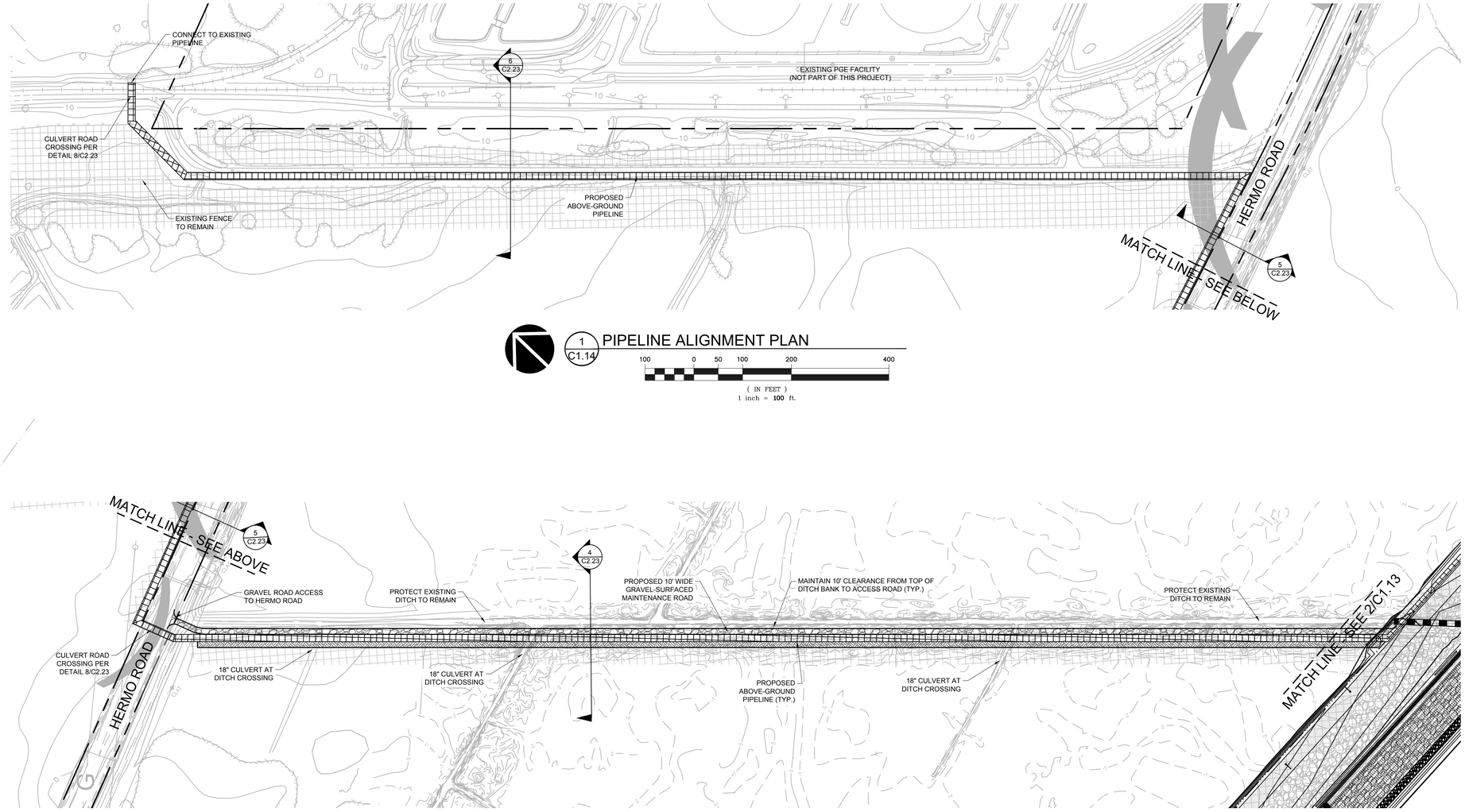
DRAWN BY: BMR

CHECKED BY: BDN

SHEET
C1.13

JOB NO. **2200315.01**

COMPLETENESS SUBMITTAL SET - 7/8/2021



1 C1.14 PIPELINE ALIGNMENT PLAN

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

2 C1.14 PIPELINE ALIGNMENT PLAN

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

LEGEND:

SEE LEGEND ON SHEET C0.01

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SHEET TITLE:
PIPELINE ALIGNMENT PLAN

DRAWN BY: BMR

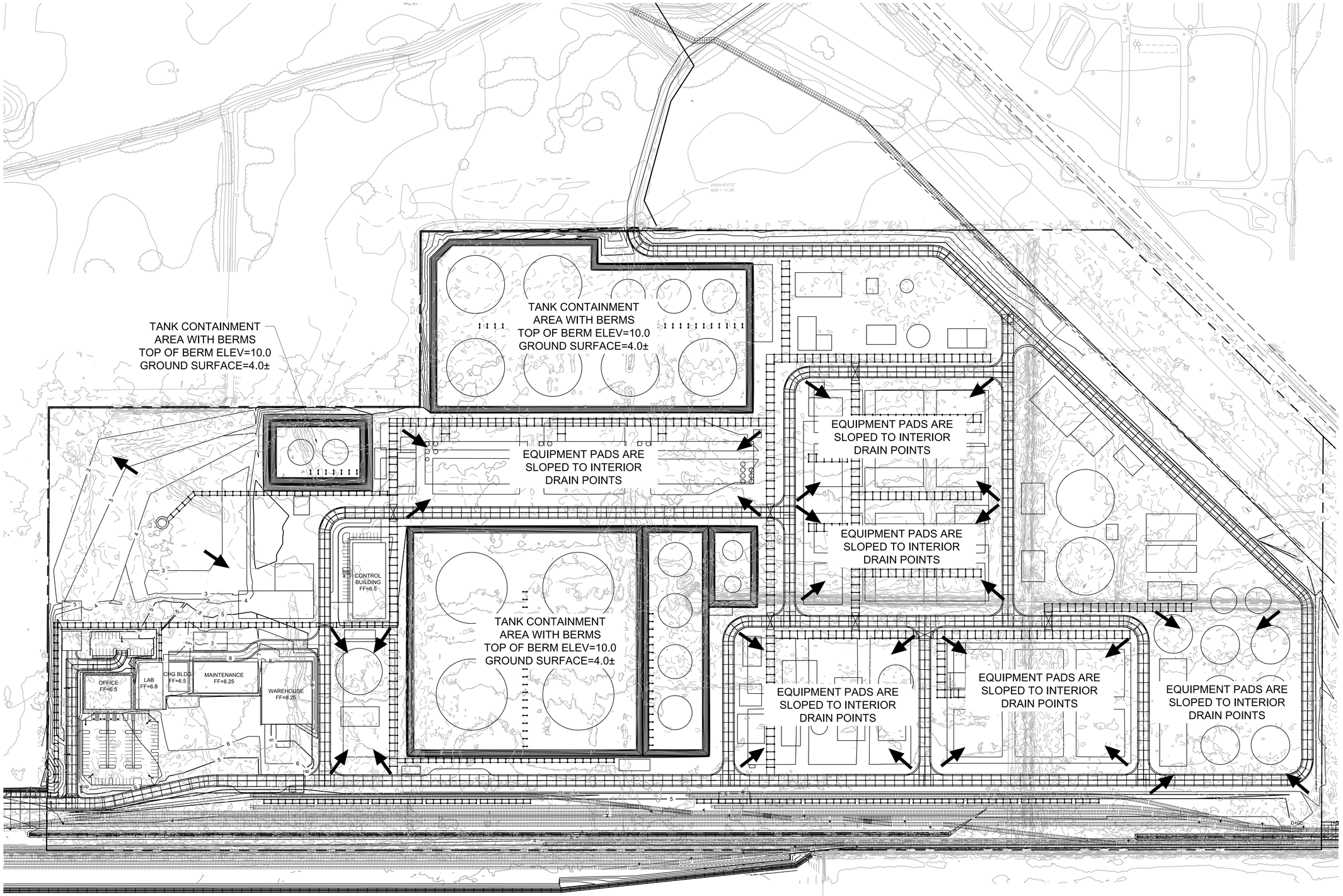
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SHEET

C1.14

JOB NO. **2200315.01**

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LEGEND:

SEE LEGEND ON SHEET C0.01

1 C1.20 GRADING PLAN

100 0 50 100 200 400

(IN FEET)
1 inch = **100** ft.

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SHEET TITLE:

GRADING PLAN

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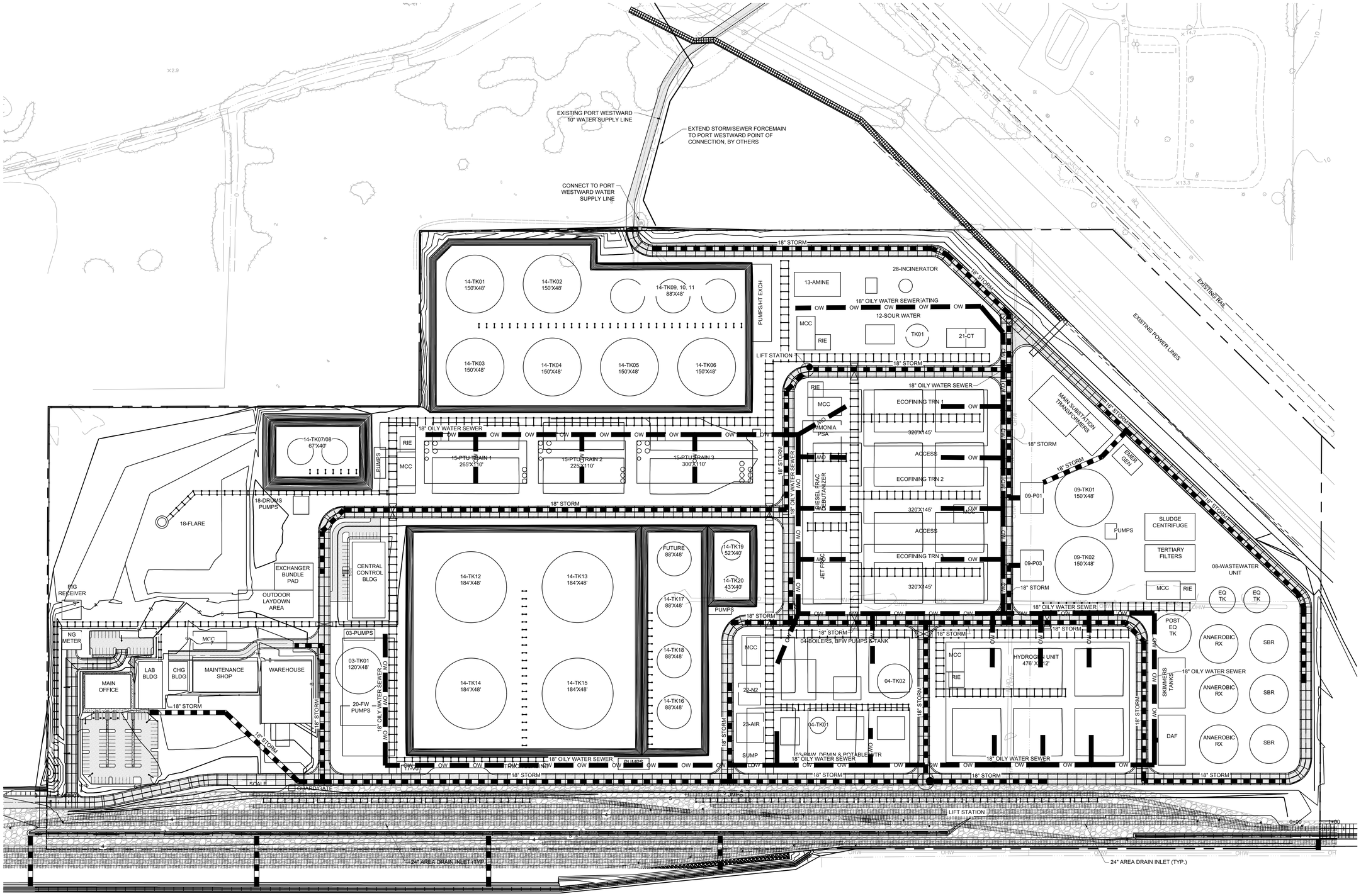
SHEET

C1.20

JOB NO. **2200315.01**

COMPLETENESS SUBMITTAL SET - 7/8/2021

2200315001\DRAWINGS\CIVIL\15-C1.20.DWG BDN 07/07/21 17:03 1:100



LEGEND:

REFER TO SHEET C0.01 FOR GENERAL LEGEND

1 C1.30 DRAINAGE PLAN

100 0 50 100 200 400

(IN FEET)
1 inch = **100** ft.

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Delta	Issued As	Issue Date

SHEET TITLE:

DRAINAGE PLAN

DRAWN BY: CAM

CHECKED BY: BDN

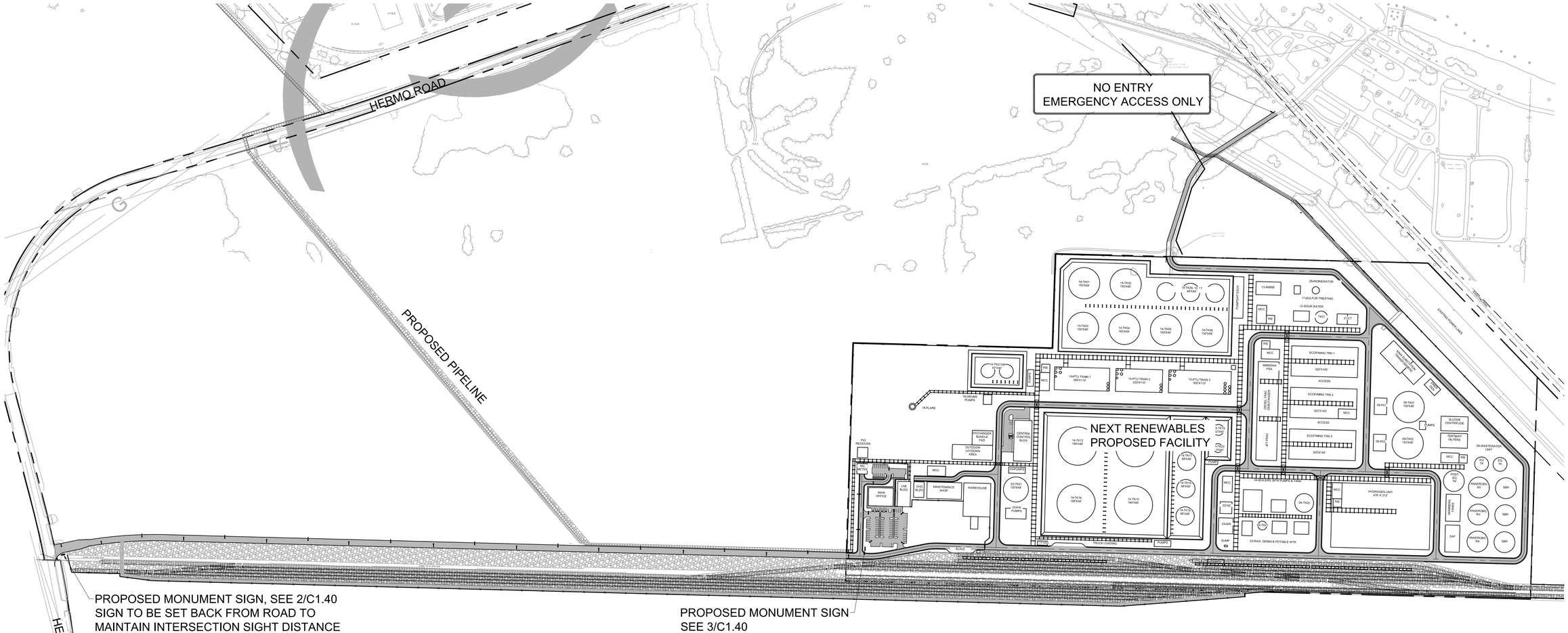
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C1.30

JOB NO. **2200315.01**

COMPLETENESS SUBMITTAL SET - 7/8/2021

2200315001\DRAWINGS\CIVIL\C1.30-C1.30.DWG BDN 07/08/21 10:21 1:100



PROPOSED MONUMENT SIGN, SEE 2/C1.40
SIGN TO BE SET BACK FROM ROAD TO
MAINTAIN INTERSECTION SIGHT DISTANCE

PROPOSED MONUMENT SIGN
SEE 3/C1.40

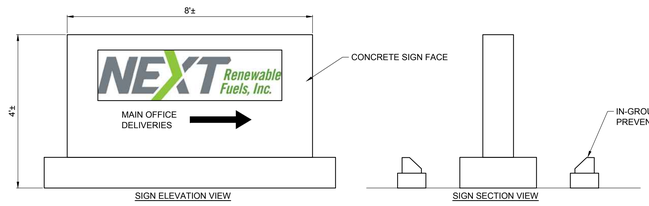
1 C1.40 SIGN PLAN

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

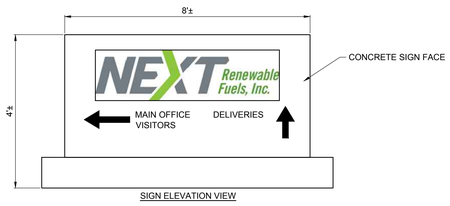
NOTE:

1. INTERNAL PLANT SIGNAGE AND WAYFINDING WILL BE DESIGNED FOR BUILDING PERMIT SUBMITTAL AND WILL BE COORDINATED WITH THE FIRE MARSHAL.



NOTE: SIGN DIMENSIONS, SYMBOLS, AND WORDING ARE PRELIMINARY. FINAL SIGN DESIGN TO BE PROVIDED WITH BUILDING PERMIT SUBMITTAL. SIGNS WILL MEET COLUMBIA COUNTY STANDARDS.

2 C1.40 HERMO ROAD SIGN N.T.S.



NOTE: SIGN DIMENSIONS, SYMBOLS, AND WORDING ARE PRELIMINARY. FINAL SIGN DESIGN TO BE PROVIDED WITH BUILDING PERMIT SUBMITTAL. SIGNS WILL MEET COLUMBIA COUNTY STANDARDS.

3 C1.40 PLANT ENTRANCE SIGN N.T.S.

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SHEET TITLE:
SIGN PLAN

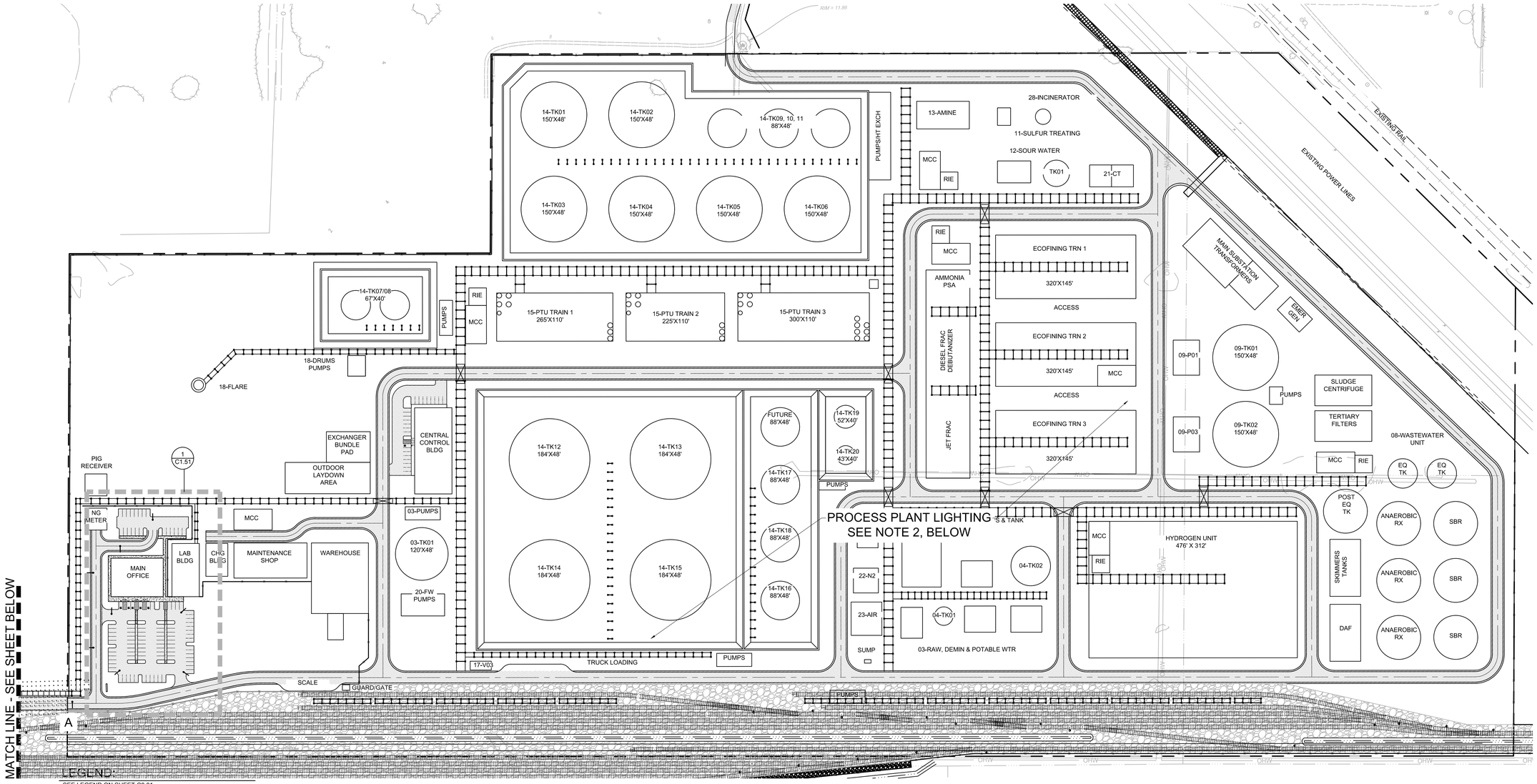
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SHEET
C1.40

JOB NO. **2200315.01**

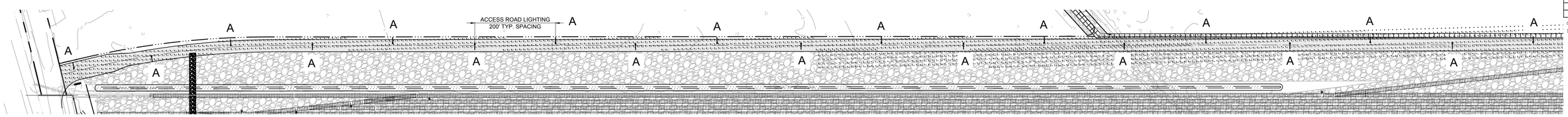
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1 C1.50 ILLUMINATION PLAN

100 0 50 100 200 400

(IN FEET)
1 inch = **100** ft.



ENTRANCE ROADWAY ILLUMINATION DATA:

AVERAGE = 1.71 (FOOT CANDLES)

UNIFORMITY RATIO = 5.7:1

2 C1.50 ILLUMINATION PLAN - ROADWAY

100 0 50 100 200 400

(IN FEET)
1 inch = **100** ft.

NOTES:

1. SEE SHEET C1.51 FOR LIGHTING SPECIFICATIONS
2. ILLUMINATION WITHIN THE PROCESS PLANT WILL BE PROVIDED THROUGH LIGHTING INSTALLED ON EQUIPMENT STRUCTURES, STAIRWAYS, PIPERACKS ETC. TO MEET AMERICAN PETROLEUM INSTITUTE RECOMMENDED PRACTICE 540.
3. PROCESS AND OUTDOOR LIGHTING WILL BE CONTROLLED THROUGH A COMBINATION OF PHOTOCELL, TIME CLOCK, MOTION DETECTION, PHYSICAL SWITCHING, OR OTHER MEANS.
4. ALL OUTDOOR LIGHTS WILL BE SHIELDED SO AS NOT TO SHINE DIRECTLY ONTO ADJACENT PROPERTIES AND ROADS.

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SHEET TITLE:
ILLUMINATION PLAN

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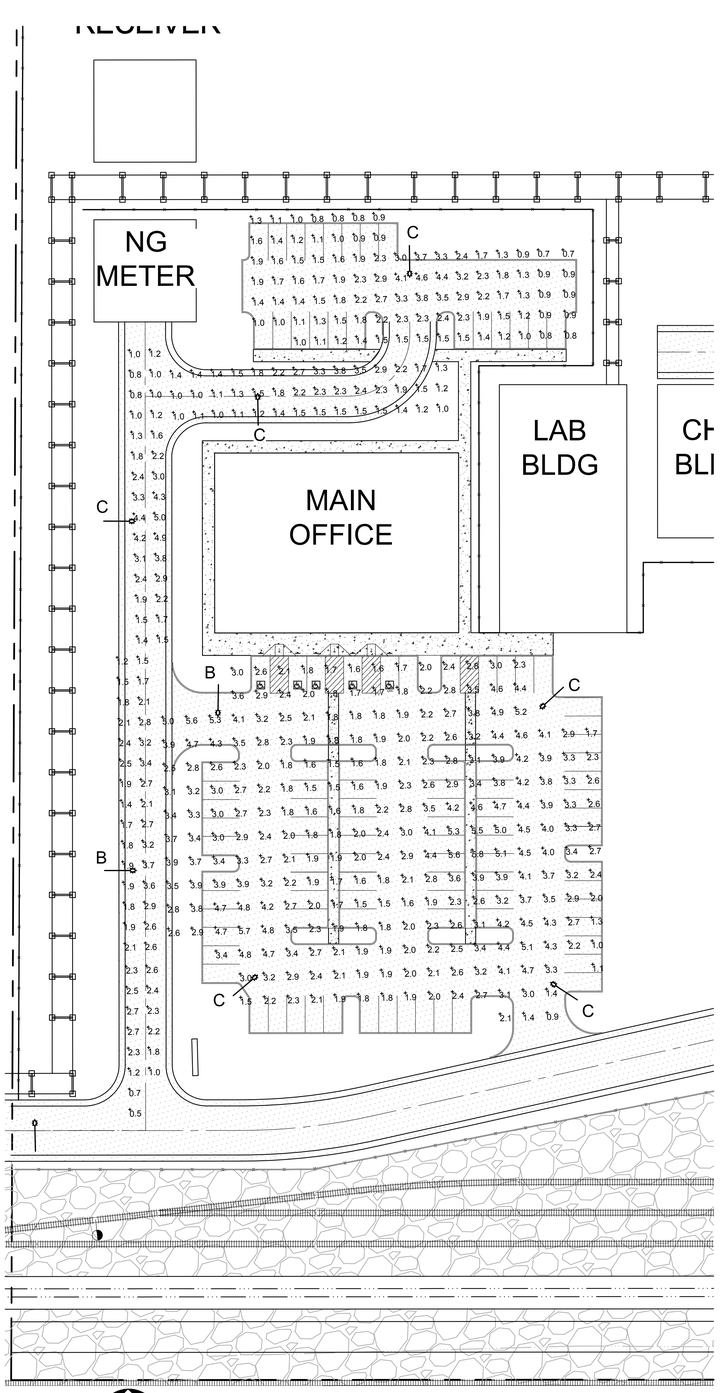
CHECKED BY: BDN

SHEET

C1.50

JOB NO. **2200315.01**

COMPLETENESS SUBMITTAL SET - 7/8/2021



1 C1.51 ILLUMINATION PLAN - PARKING

30 0 15 30 60 120

(IN FEET)
1 inch = **30** ft.

LEGEND:

SEE LEGEND ON SHEET C0.01

INTERSECTION LIGHTING DATA:

AVERAGE = 2.0 (FOOT CANDLES)

UNIFORMITY RATIO = 4:1

PARKING AND OFFICE AREA LIGHTING DATA:

AVERAGE = 1.86 (FOOT CANDLES)

UNIFORMITY RATIO = 2:1

NORTH PARKING AREA:

AVERAGE = 1.94 (FOOT CANDLES)

UNIFORMITY RATIO = 2.7:1

Autobahn Series ATB2
Roadway Lighting

DesignLights Consortium® Qualified — Consistent with LEED® goals & Green Globes™ criteria for light pollution reduction — NIGHTTIME FRIENDLY™

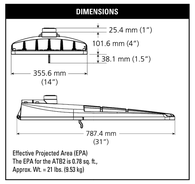
PRODUCT OVERVIEW



Applications:

- Roadways
- Off ramps
- Residential streets
- Parking lots

DIMENSIONS



Effective Projected Area (EPA):
The EPA for the ATB2 is 0.78 sq. ft.,
Approx. Wt. = 21 lbs. (9.53 kg)

STANDARDS

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

Color temperatures of ≤ 3000K must be specified for International Dark-Sky Association certification.

Rated for -40°C to 40°C ambient.
CSA Certified to U.S. and Canadian standards
Complies with ANSI: C136.2, C136.10, C136.14, C136.31, C136.15, C136.37

Note: Specifications subject to change without notice.
Autobahn Series – AEL_0109_ATB2

Features:

OPTICAL

Same Light: Performance is comparable to 250-400W HPS roadway luminaires.

White Light: Correlated color temperature - 4000K, 70 CRI minimum, 3000K, 70CRI minimum or optional 5000K, 70 CRI minimum.

Unique IP66 rated LED light engines provided 0% uplight and restrict backlight to within sidewalk depth, providing optimal application coverage and optimal pole spacing.

Available in Type II, III, IV, & V roadway distributions.

ELECTRICAL

Expected Life: LED light engines are rated >100,000 hours at 25°C, L70. Electronic driver has an expected life of 100,000 hours at a 25°C ambient.

Lower Energy: Saves an average of 40-60% over comparable HPS platforms.

Robust Surge Protection: Three different surge protection options provide a minimum of ANSI C136.2 10kV/5kA protection. 20kV/10kA protection is also available.

MECHANICAL

Easy to Maintain: Includes standard AEL lineman-friendly features such as tool-less entry, 3 station terminal block and quick disconnects. Bubble level located inside the electrical compartment for easy leveling at installation.

Rugged die-cast aluminum housing is polyester powder-coated for durability and corrosion resistance. Rigorous five-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 7 (per ASTM D1654) after over 5000 hours exposure to salt fog chamber (operated per ASTM B117).

Four-bolt mast arm mount is adjustable for arms from 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter and provides a 3G vibration rating per ANSI C136.31.

Wildlife shield is cast into the housing (not a separate piece).

CONTROLS

NEMA 3 Pin photocontrol receptacle is standard, with the Acuity designed ANSI 7 Pin receptacle optionally available.

Premium solid state locking sale photocontrol - PCSS (10 year rated life). Extreme long life sold state locking style photocontrol - PCLL (20 year rated life).

Optional onboard Adjustable Output module allows the light output and input wattage to be modified to meet site specific requirements, and can also allow a single fixture to be flexibly applied in many different applications.

AEL American Electric Lighting

Autobahn Series ATB2
Roadway Lighting

PERFORMANCE PACKAGE

Performance Package	Drive Current (mA)	Input Watts	Optic	3K (3000K CCT, 70 CRI Min.)					4K/5K (4000K/5000K CCT, 70 CRI Min.)					LLD @ 25°C		
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	25k Hours	75k Hours	100k Hours
40B	700	88	R2	10,854	123	2	0	3	11,007	102	3	0	3	0.98	0.97	0.96
	1050	133		15,565	117	3	0	3	16,360	123	3	0	3	0.97	0.95	0.92
	1300	171		18,361	107	3	0	3	19,544	114	3	0	4	0.93	0.90	0.88
	1500	198		20,124	102	3	0	4	21,384	108	2	0	3	0.93	0.90	0.88
	700	88	R3	14,980	125	2	0	3	11,552	131	3	0	3	0.98	0.97	0.96
	1050	133		15,607	117	3	0	3	16,249	122	3	0	3	0.97	0.95	0.92
	1300	171		18,428	108	3	0	3	19,462	114	3	0	3	0.93	0.90	0.88
	1500	198		20,203	102	3	0	3	21,331	108	2	0	3	0.93	0.90	0.88
	700	88	R4	10,905	124	2	0	2	11,788	134	3	0	3	0.98	0.97	0.96
	1050	133		15,637	117	3	0	3	16,593	125	3	0	4	0.97	0.95	0.92
	1300	171		18,405	108	3	0	4	19,677	116	3	0	4	0.93	0.90	0.88
	1500	198		20,167	102	3	0	4	21,799	110	4	0	3	0.93	0.90	0.88
	700	88	R5	11,388	129	4	0	2	12,388	141	4	0	2	0.98	0.97	0.96
	1050	133		16,355	123	4	0	2	17,499	132	5	0	3	0.97	0.95	0.92
	1300	171		19,319	113	4	0	2	20,795	122	5	0	3	0.93	0.90	0.88
	1500	198		21,221	107	5	0	3	22,828	115	3	0	3	0.93	0.90	0.88
60B	700	130	R2	16,471	127	3	0	3	18,193	140	3	0	4	0.98	0.97	0.96
	850	165		19,503	118	3	0	3	21,436	130	3	0	4	0.97	0.95	0.92
	1050	204		23,034	113	3	0	4	24,940	122	3	0	4	0.97	0.95	0.92
	1300	254		27,088	107	3	0	4	29,357	116	3	0	5	0.93	0.90	0.88
	1500	291		29,819	102	3	0	4	32,052	110	3	0	5	0.93	0.90	0.88
	700	130	R3	16,702	128	3	0	3	17,714	136	3	0	3	0.98	0.97	0.96
	850	165		19,809	120	3	0	3	21,351	129	3	0	4	0.97	0.95	0.92
	1050	204		23,400	115	3	0	3	25,520	125	3	0	4	0.97	0.95	0.92
	1300	254		27,541	108	3	0	4	29,991	118	3	0	4	0.93	0.90	0.88
	1500	291		30,230	104	3	0	4	32,709	112	3	0	4	0.93	0.90	0.88
	700	130	R4	16,725	129	3	0	3	17,884	138	3	0	4	0.98	0.97	0.96
	850	165		19,831	120	3	0	4	21,446	130	3	0	4	0.97	0.95	0.92
	1050	204		23,421	115	3	0	4	25,423	125	3	0	5	0.97	0.95	0.92
	1300	254		27,542	108	3	0	4	29,898	118	3	0	5	0.93	0.90	0.88
	1500	291		30,231	104	3	0	5	32,527	113	4	0	2	0.93	0.90	0.88
	700	130	R5	17,413	134	4	0	2	18,561	143	5	0	3	0.98	0.97	0.96
	850	165		20,634	125	5	0	3	22,402	136	5	0	3	0.97	0.95	0.92
	1050	204		24,359	119	5	0	3	26,128	128	5	0	4	0.97	0.95	0.92
	1300	254		28,578	113	5	0	3	30,964	122	5	0	4	0.93	0.90	0.88
	1500	291		31,214	107	5	0	4	33,922	117	3	0	4	0.93	0.90	0.88
80B	700	177	R2	22,056	125	3	0	4	23,037	130	3	0	4	0.98	0.97	0.96
	850	214		25,663	120	3	0	4	27,086	127	3	0	5	0.97	0.95	0.92
	1050	268		30,443	114	3	0	5	31,920	119	4	0	5	0.97	0.95	0.92
	1250	330		34,512	105	4	0	5	36,826	112	4	0	5	0.93	0.90	0.88
	1500	388		39,529	102	4	0	5	40,326	104	3	0	3	0.91	0.87	0.84
	700	177	R3	21,936	124	3	0	3	23,934	135	3	0	4	0.98	0.97	0.96
	850	214		25,512	119	3	0	4	26,679	126	3	0	4	0.97	0.95	0.92
	1050	268		30,302	113	3	0	4	32,418	121	4	0	4	0.97	0.95	0.92
	1200	330		35,047	106	4	0	4	37,042	112	4	0	5	0.93	0.90	0.88
	1500	388		39,490	102	4	0	5	41,858	108	3	0	4	0.91	0.87	0.84
	700	177	R4	22,180	125	3	0	4	23,200	131	3	0	4	0.98	0.97	0.96
	850	214		25,842	121	3	0	4	27,263	127	3	0	5	0.97	0.95	0.92
	1050	268		30,644	114	3	0	5	32,329	121	4	0	5	0.97	0.95	0.92
	1250	330		35,084	106	3	0	5	37,283	113	4	0	5	0.93	0.90	0.88
	1500	388		39,918	103	4	0	5	41,811	107	3	0	3	0.91	0.87	0.84
	700	177	R5	22,895	129	5	0	3	24,776	140	5	0	3	0.98	0.97	0.96
	850	214		26,608	124	5	0	3	28,065	135	5	0	4	0.97	0.95	0.92
	1050	268		31,557	118	5	0	4	34,319	128	5	0	4	0.97	0.95	0.92
	1250	330		36,525	111	5	0	4	39,552	120	5	0	4	0.93	0.90	0.88
	1500	388		41,534	107	5	0	4	44,747	115	5	0	4	0.91	0.87	0.84

Note: Individual fixture performance may vary. Specifications subject to change without notice.

ATB2	15°C	20°C	25°C	30°C	35°C	40°C
LLD Multiplier	1.02	1.01	1	0.99	0.97	0.96

To calculate the LLD for a temperature other than 25°C, multiply the LLD @ 25°C (shown in the performance package table) by the LLD multiplier for the selected temperature.

AEL American Electric Lighting
AEL Headquarters, 3825 Columbus Road, Granville, OH 43023
www.americanelectriclighting.com

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ATB2 Rev. 03/11/20

Warranty Five-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions
Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.
Please contact your sales representative for the latest product information.

LIGHT POLE HEIGHT: 30'
MAST ARM LENGTH: 15'

2 C1.51 LIGHTING DETAILS

Autobahn Series ATB2
Roadway Lighting

ORDERING INFORMATION

Example: ATB2 40LEDE70 MVOLT R2

Series	Performance Packages		Voltage	Optics
ATB2 Autobahn LED Roadway	C	**40BLEDE70** 40B Chips, 700mA Driver	**MVOLT** Multi-volt, 120-277V	**R2** Roadway Type II
		40BLEDE10 40B Chips, 1050mA Driver	**347** 347V	**R3** Roadway Type III
	B	**40BLEDE14** 40B Chips, 1300mA Driver	**480** 480V	**R4** Roadway Type IV
		40BLEDE15 40B Chips, 1500mA Driver		**R5** Roadway Type V
		60BLEDE70 60B Chips, 700mA Driver		
		60BLEDE85 60B Chips, 850mA Driver		
		60BLEDE10 60B Chips, 1050mA Driver		
	A	**60BLEDE13** 60B Chips, 1300mA Driver		
		60BLEDE15 60B Chips, 1500mA Driver		
		80BLEDE70 80B Chips, 700mA Driver		
		80BLEDE85 80B Chips, 850mA Driver		
		80BLEDE10 80B Chips, 1050mA Driver		
		80BLEDE12 80B Chips, 1200mA Driver		
		80BLEDE15 80B Chips, 1500mA Driver		

Options

Color Temperature (CCT)
- **(Blank)** 4000K CCT, 70 CRI Min.
- **3K** 3000K CCT, 70 CRI Min.
- **5K** 5000K CCT, 70 CRI Min.

Paint
- **(Blank)** Gray (Standard)
- **BK** Black
- **BZ** Bronze
- **DDB** Dark Bronze
- **GI** Graphite
- **WH** White

Surge Protection
- **(Blank)** Standard 10kV/5kA SPD
- **20** 20kV/10KA SPD
- **MP**[1] MOV Pack
- **IL**[1] SPD with Indicator Light

Terminal Block
- **(Blank)** Terminal Block (Standard)
- **T2** Wired to L1 & L2 Positions

Misc.
- **BL** External Bubble Level
- **HS** House-Side Shield
- **NL** Nema Label
- **XL** Not CSA Certified
- **HK** Hingekeepers

Misc. (continued)
- **UMS-XX** 8" Horizontal Arm for Round Pole, Painted to match Fixture
- **UMS-XX** 8" Horizontal Arm for Square Pole, Painted to match Fixture
- **UMR-GALV** 8" Horizontal Arm for Round Pole, Galvanized
- **UMS-GALV** 8" Horizontal Arm for Square Pole, Galvanized

Controls
- **(Blank)** 3 Pin NEMA Photocontrol Receptacle (Standard)
- **P7**[2] 7 Pin Photocontrol Receptacle (Dimmable Driver Included)
- **NR** No Photocontrol Receptacle
- **AO**[2] Field Adjustable Output
- **DM** 0V-10V Dimmable Driver (Controls by others)
- **PCSS**[1] Solid State Lighting Photocontrol (120-277V)
- **PCLL** Solid State Long Life Photocontrol
- **SH** Shorting Cap

Packaging
- **(Blank)** Single Unit (Standard)
- **JP** Job Pack (24/Pallet)

Accessories (field installed):
- **ATB2HS40** Light Trespass Shield LEM 40 House Side
- **ATB2SS40** Light Trespass Shield LEM 40 Street Side
- **ATB2HS60** Light Trespass Shield LEM 60 House Side
- **ATB2SS60** Light Trespass Shield LEM 60 Street Side
- **ATB2HS80** Light Trespass Shield LEM 80 House Side
- **ATB2SS80** Light Trespass Shield LEM 80 Street Side

Notes
1. Not available in 347 or 480V.
2. Not available with DM option.

AEL American Electric Lighting
AEL Headquarters, 3825 Columbus Road, Granville, OH 43023
www.americanelectriclighting.com

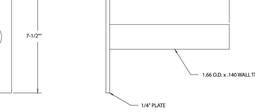
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Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.
Please contact your sales representative for the latest product information.

Autobahn Series ATB2
Roadway Lighting

UMR POLE ADAPTOR
RECOMMENDED FOR USE WITH POLES OF 4" DIAMETER OR SMALLER



UMS POLE ADAPTOR

AEL American Electric Lighting
AEL Headquarters, 3825 Columbus Road, Granville, OH 43023
www.americanelectriclighting.com

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Client
NEXT RENEWABLE FUELS OREGON

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SUITE 705
HOUSTON, TX 77079

Project
NEXT RENEWABLE FUELS, INC.
PORT WESTWARD
COLUMBIA COUNTY, OR

REGISTERED PROFESSIONAL ENGINEER
82687PE
OREGON
JUNE 2, 2010
BRENT DANIEL WIELSEN
EXPIRES: 12/31/22

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REVISION SCHEDULE

Delta	Issued As	Issue Date

SHEET TITLE:
ILLUMINATION PLAN - PARKING & ILLUMINATION DETAILS

DRAWN BY: CAM

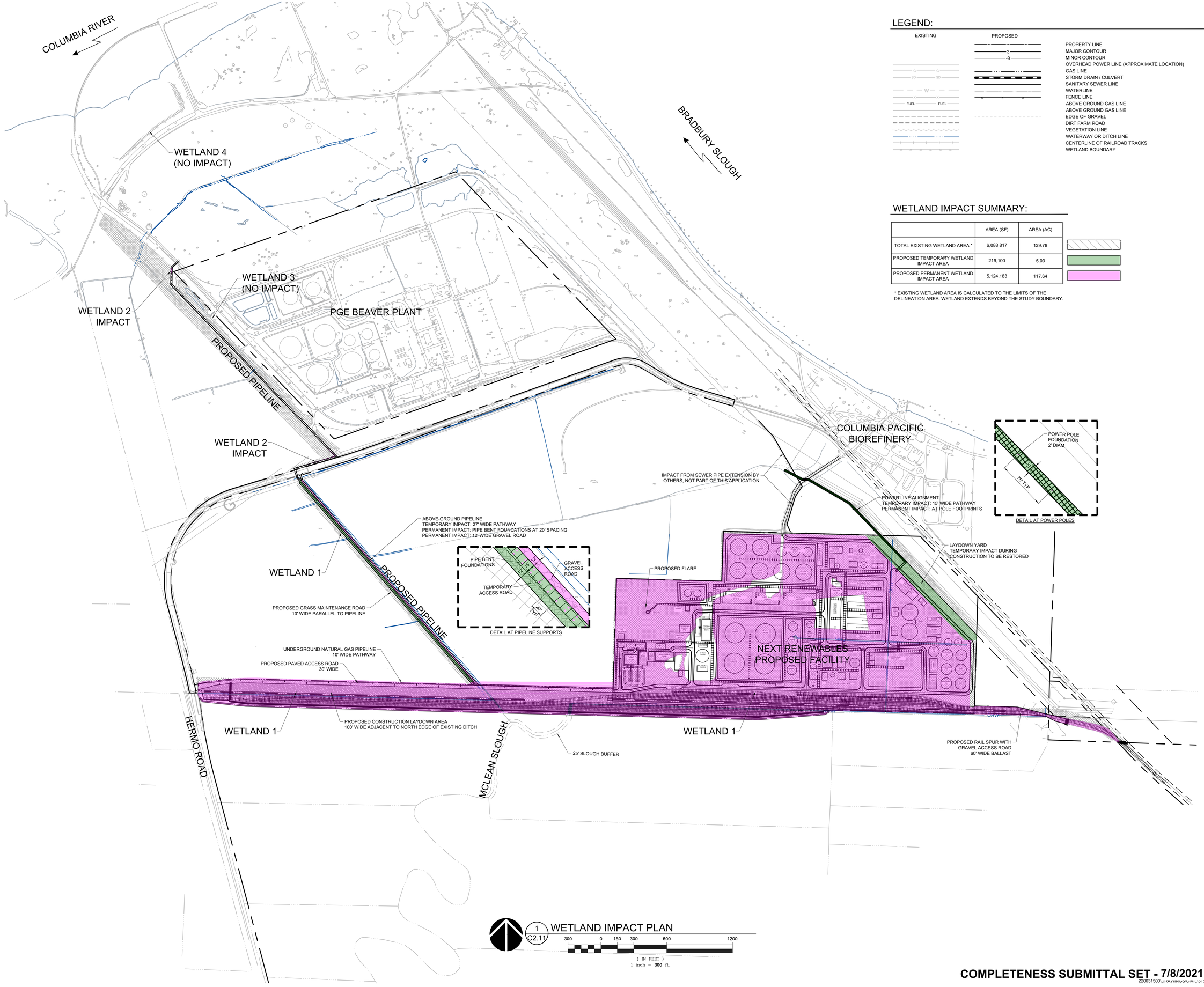
CHECKED BY: BDN

SHEET
C1.51

JOB NO. **2200315.01**

COMPLETENESS SUBMITTAL SET - 7/8/2021

2200315001DRAWINGS\CIVIL\19-C1.51.DWG BDN 07/07/21 17:07 1:30



LEGEND:

EXISTING / PROPOSED

- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- OVERHEAD POWER LINE (APPROXIMATE LOCATION)
- GAS LINE
- STORM DRAIN / CULVERT
- SANITARY SEWER LINE
- WATERLINE
- FENCE LINE
- ABOVE GROUND GAS LINE
- ABOVE GROUND GAS LINE
- EDGE OF GRAVEL
- DIRT FARM ROAD
- VEGETATION LINE
- WATERWAY OR DITCH LINE
- CENTERLINE OF RAILROAD TRACKS
- WETLAND BOUNDARY

WETLAND IMPACT SUMMARY:

	AREA (SF)	AREA (AC)
TOTAL EXISTING WETLAND AREA *	6,088,817	139.78
PROPOSED TEMPORARY WETLAND IMPACT AREA	219,100	5.03
PROPOSED PERMANENT WETLAND IMPACT AREA	5,124,183	117.64

* EXISTING WETLAND AREA IS CALCULATED TO THE LIMITS OF THE DELINEATION AREA. WETLAND EXTENDS BEYOND THE STUDY BOUNDARY.

1 C2.11 WETLAND IMPACT PLAN

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

COMPLETENESS SUBMITTAL SET - 7/8/2021

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Client
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SUITE 705
HOUSTON, TX 77079

Project
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PORT WESTWARD
COLUMBIA COUNTY, OR

REGISTERED PROFESSIONAL ENGINEER
R2697PE
OREGON
JUNE 2, 2016
BRENT DANIEL WIESEN
EXPIRES: 12/31/22

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Delta	Issued As	Issue Date

SHEET TITLE:
OVERALL WETLAND IMPACT PLAN

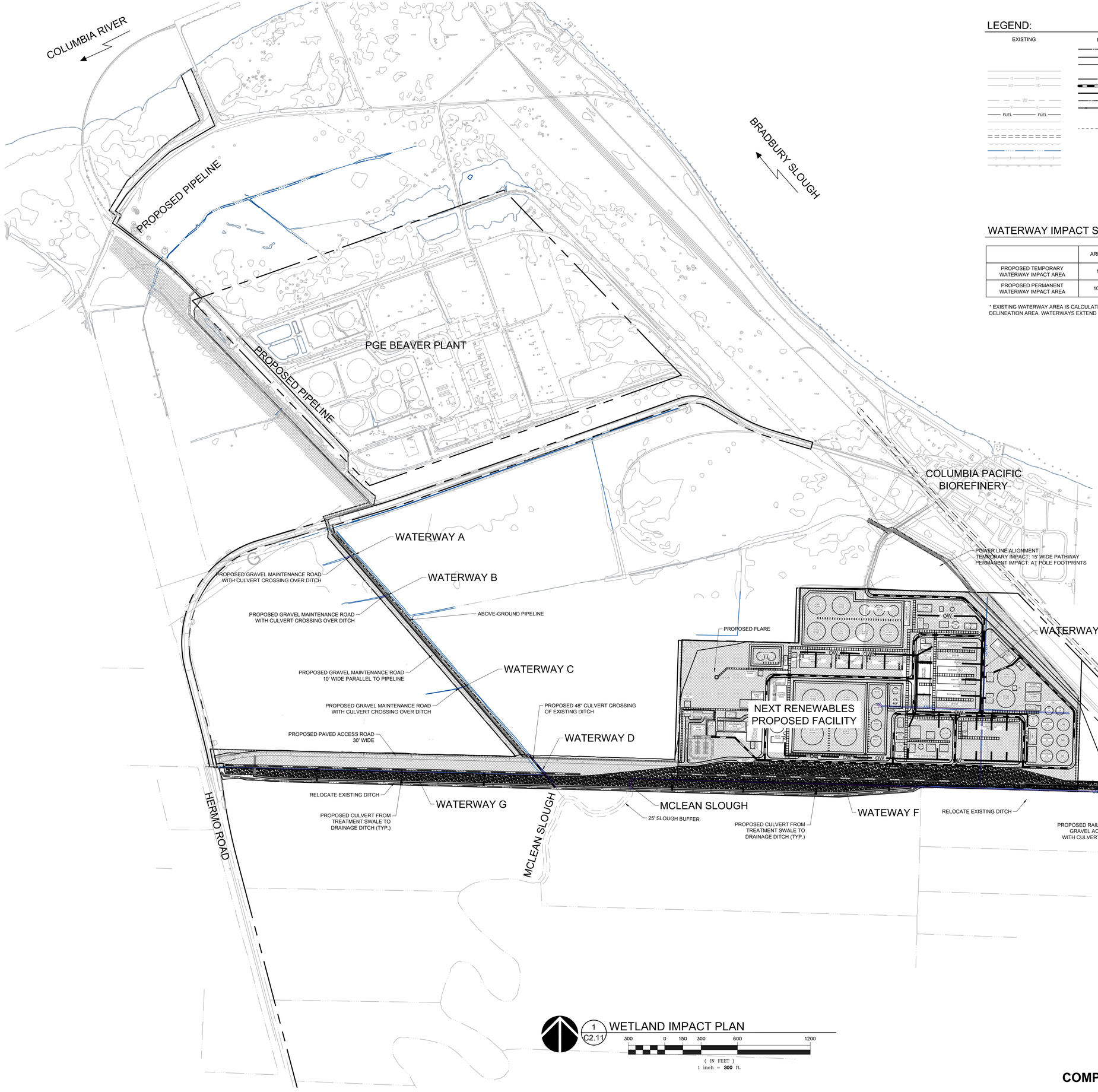
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SHEET
C2.11

JOB NO. **2200315.01**

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LEGEND:

EXISTING / PROPOSED

- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- OVERHEAD POWER LINE (APPROXIMATE LOCATION)
- GAS LINE
- STORM DRAIN / CULVERT
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- ABOVE GROUND GAS LINE
- EDGE OF GRAVEL
- DIRT FARM ROAD
- VEGETATION LINE
- WATERWAY OR DITCH LINE
- CENTERLINE OF RAILROAD TRACKS
- WETLAND BOUNDARY

WATERWAY IMPACT SUMMARY:

	AREA (SF)	AREA (AC)
PROPOSED TEMPORARY WATERWAY IMPACT AREA	1,133	0.03
PROPOSED PERMANENT WATERWAY IMPACT AREA	100,732	1.79

* EXISTING WATERWAY AREA IS CALCULATED TO THE OHW WITHIN THE LIMITS OF THE DELINEATION AREA. WATERWAYS EXTEND BEYOND THE STUDY BOUNDARY.

1 C2.11 WETLAND IMPACT PLAN

300 0 150 300 600 1200

(IN FEET)
1 inch = **300** ft.

COMPLETENESS SUBMITTAL SET - 7/8/2021

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Delta	Issued As	Issue Date

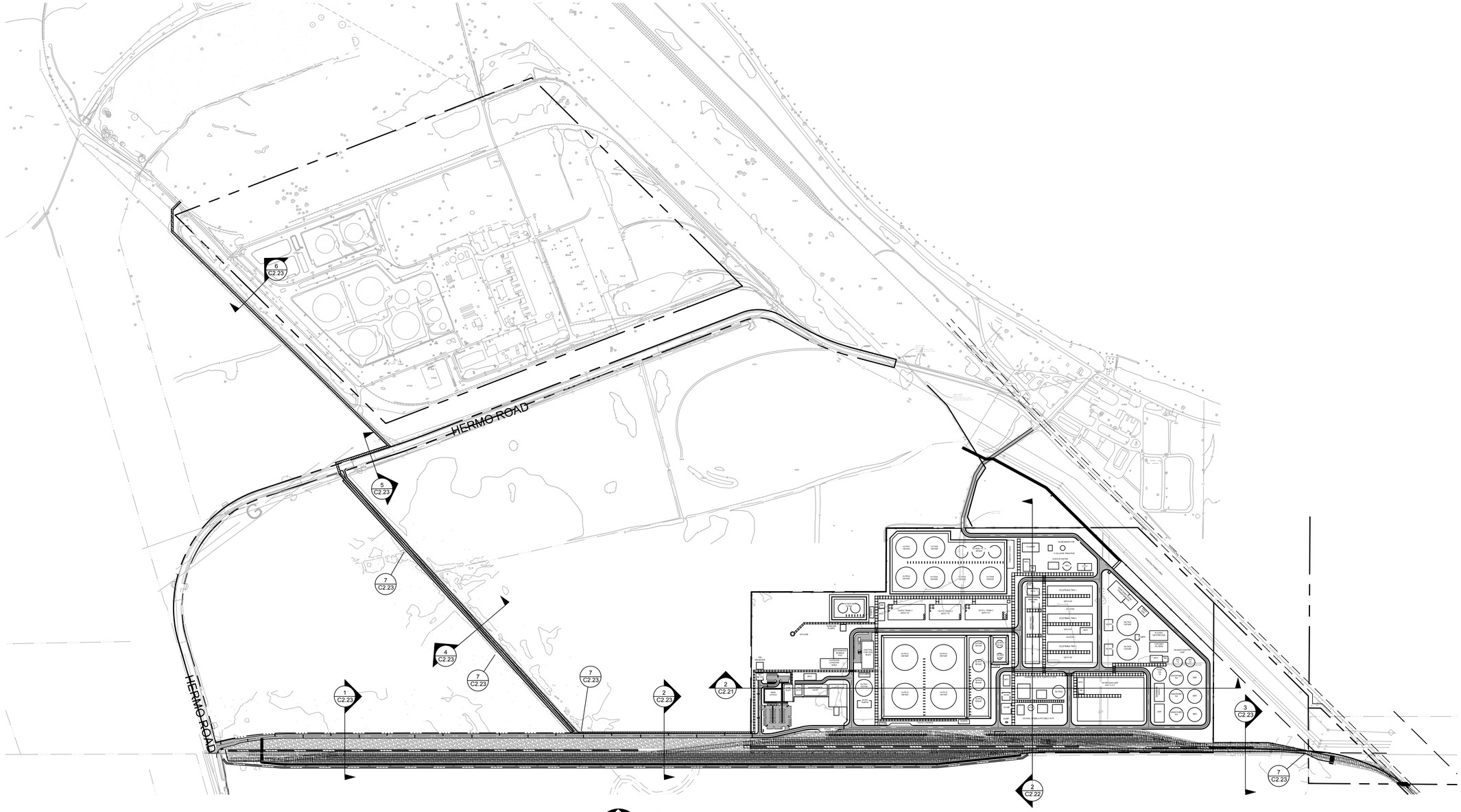
SHEET TITLE:
OVERALL WATERWAY IMPACT PLAN

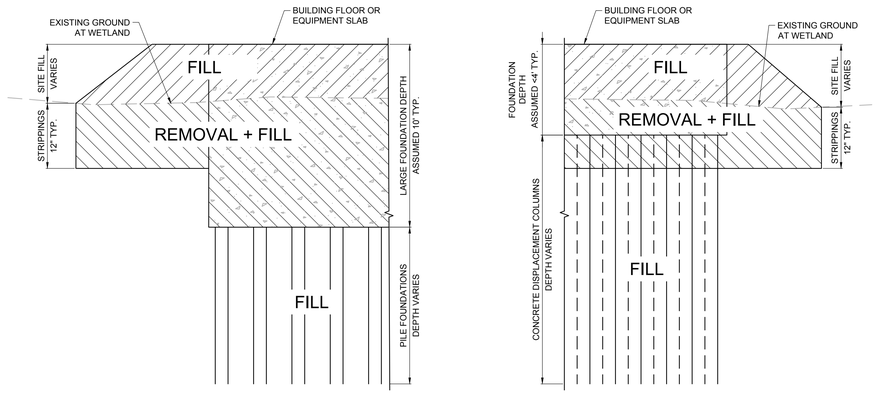
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C2.12

JOB NO. **2200315.01**





2 C2.20 PILE FOUNDATION SCHEMATIC SECTION
N.T.S.

3 C2.20 GROUND IMPROVEMENT SCHEMATIC SECTION
N.T.S.

EXCAVATION DEPTH BELOW EXISTING GRADE
CHARACTERIZED AS CUT VOLUME AND FILL VOLUME WHERE BACKFILLED WITH SOIL OR CONCRETE

FILL EMBANKMENT ABOVE EXISTING GRADE
CHARACTERIZED AS FILL VOLUME

PILE FOUNDATIONS
CHARACTERIZED AS FILL VOLUME, ASSUMES DISPLACEMENT PILES

CONCRETE DISPLACEMENT COLUMN FOUNDATIONS
CHARACTERIZED AS FILL VOLUME, ASSUMES 36% DISPLACEMENT FACTOR FOR CONCRETE FILL

1 C2.20 WETLANDS REMOVAL AND FILL SUMMARY

300 0 150 300 600 1200

(IN FEET)
1 inch = **300** ft.

Wetland 1	Wetland Removal (cy)			Wetland Fill (cy)				Temporary Wetland Removal (cy)	Temporary Wetland Fill (cy)	Wetland Impact (ac)	
	Site Strippings	Foundation Excavation	Total Removal	Site Grading	Foundation Backfill	Pile Displacement	Total Fill	Temporary Site Excavation	Temporary Site Grading	Temporary	Permanent
Access Road + Laydown Area	32,200	-	**32,200**	125,724	32,200	-	**157,924**	-	-	0	13.47
Facility Footprint	136,192	3,075	**139,267**	314,505	139,267	118,855	**572,627**	1,640	1,715	3.6	88.89
Pipeline Alignment + Access Road	1,350	925	**2,275**	1,800	2,275	390	**4,465**	1,153	1,155	1.43	0.72
Rail Spur	5,520	12,222	**17,742**	11,530	17,742	-	**29,272**	-	-	0	14.52
Total Wetland 1	**175,262**	**16,222**	**191,484**	**453,559**	**191,484**	**119,245**	**764,288**	**2,793**	**2,870**	**5.03**	**117.6**

Wetland 2	Wetland Removal (cy)			Wetland Fill (cy)				Temporary Wetland Removal (cy)	Temporary Wetland Fill (cy)	Wetland Impact (ac)	
	Site Strippings	Foundation Excavation	Total Removal	Site Grading	Foundation Backfill	Pile Displacement	Total Fill	Temporary Site Excavation	Temporary Site Grading	Temporary	Permanent
Access Road + Laydown Area	-	-	-	-	-	-	-	-	-	0	0
Facility Footprint	-	-	-	-	-	-	-	-	-	0	0
Pipeline Alignment + Access Road	-	3,800	**3,800**	-	3,800	50	**3,850**	10	10	0	0.04
Rail Spur	-	-	-	-	-	-	-	-	-	0	0
Total Wetland 2	**-**	**3,800**	**3,800**	**-**	**3,800**	**50**	**3,850**	**10**	**10**	**0**	**0.04**

Wetland 3	Wetland Removal (cy)			Wetland Fill (cy)				Temporary Wetland Removal (cy)	Temporary Wetland Fill (cy)	Wetland Impact (ac)	
	Site Strippings	Foundation Excavation	Total Removal	Site Grading	Foundation Backfill	Pile Displacement	Total Fill	Temporary Site Excavation	Temporary Site Grading	Temporary	Permanent
Access Road + Laydown Area	-	-	-	-	-	-	-	-	-	0	0
Facility Footprint	-	-	-	-	-	-	-	-	-	0	0
Pipeline Alignment + Access Road	-	-	-	-	-	-	-	-	-	0	0
Rail Spur	-	-	-	-	-	-	-	-	-	0	0
Total Wetland 3	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0**	**0**

Mitigation Area 1	Wetland Removal (cy)			Wetland Fill (cy)				Temporary Wetland Removal (cy)	Temporary Wetland Fill (cy)	Wetland Impact (ac)	
Offsite Laydown Yard	-	-	-	-	-	-	-	-	175,000	27	-

Total Wetland Impact	Wetland Removal (cy)			Wetland Fill (cy)				Temporary Wetland Removal (cy)	Temporary Wetland Fill (cy)	Wetland Impact (ac)	
	Site Strippings	Foundation Excavation	Total Removal	Site Grading	Foundation Backfill	Pile Displacement	Total Fill	Temporary Site Excavation	Temporary Site Grading	Temporary	Permanent
Access Road + Laydown Area	32,200	-	**32,200**	125,724	32,200	-	**157,924**	-	-	0	13.47
Facility Footprint	136,192	3,075	**139,267**	314,505	139,267	118,855	**572,627**	1,640	1,715	3.6	88.89
Pipeline Alignment + Access Road	1,350	4,725	**6,075**	1,800	6,075	440	**8,315**	1,163	1,165	1.43	0.76
Rail Spur	5,520	12,222	**17,742**	11,530	17,742	-	**29,272**	-	-	0	14.52
Offsite Laydown Yard	-	-	-	-	-	-	-	-	175,000	27	0
Total Project Site	**175,262**	**20,022**	**195,284**	**453,559**	**195,284**	**119,295**	**768,138**	**2,803**	**177,880**	**32.03**	**117.64**

Waterway A	Waterway Removal (cy)	Waterway Fill (cy)	Permanent Waterway Impact (SF)	Temporary Waterway Impact (SF)
Access Road + Laydown Area	-	-	0	0
Facility Footprint	-	-	0	0
Pipeline Alignment + Access Road	23	56	600	246
Rail Spur	-	-	0	0
Total Waterway A	**23**	**56**	**600**	**246**

Waterway B	Waterway Removal (cy)	Waterway Fill (cy)	Permanent Waterway Impact (SF)	Temporary Waterway Impact (SF)
Access Road + Laydown Area	-	-	0	0
Facility Footprint	-	-	0	0
Pipeline Alignment + Access Road	22	54	581	320
Rail Spur	-	-	0	0
Total Waterway B	**22**	**54**	**581**	**320**

Waterway C	Waterway Removal (cy)	Waterway Fill (cy)	Permanent Waterway Impact (SF)	Temporary Waterway Impact (SF)
Access Road + Laydown Area	-	-	0	0
Facility Footprint	-	-	0	0
Pipeline Alignment + Access Road	15	37	390	205
Rail Spur	-	-	0	0
Total Waterway C	**15**	**37**	**390**	**205**

Waterway D	Waterway Removal (cy)	Waterway Fill (cy)	Permanent Waterway Impact (SF)	Temporary Waterway Impact (SF)
Access Road + Laydown Area	160	548	4226	0
Facility Footprint	-	-	0	0
Pipeline Alignment + Access Road	-	-	0	0
Rail Spur	-	-	0	0
Total Waterway D	**160**	**548**	**4226**	**0**

Waterway E	Waterway Removal (cy)	Waterway Fill (cy)	Permanent Waterway Impact (SF)	Temporary Waterway Impact (SF)
Access Road + Laydown Area	-	-	0	0
Facility Footprint	975	4,505	26255	362
Pipeline Alignment + Access Road	-	-	0	0
Rail Spur	-	-	0	0
Total Waterway E	**975**	**4,505**	**26255**	**362**

Waterway F	Waterway Removal (cy)	Waterway Fill (cy)	Permanent Waterway Impact (SF)	Temporary Waterway Impact (SF)
Access Road + Laydown Area	-	-	0	0
Facility Footprint	-	-	0	0
Pipeline Alignment + Access Road	-	-	0	0
Rail Spur	973	3,405	26262	0
Total Waterway F	**973**	**3,405**	**26262**	**0**

Waterway G	Waterway Removal (cy)	Waterway Fill (cy)	Permanent Waterway Impact (SF)	Temporary Waterway Impact (SF)
Access Road + Laydown Area	-	-	0	0
Facility Footprint	-	-	0	0
Pipeline Alignment + Access Road	-	-	0	0
Rail Spur	673	2,353	18150	0
Total Waterway G	**673**	**2,353**	**18150**	**0**

McLean Slough	Waterway Removal (cy)	Waterway Fill (cy)	Permanent Waterway Impact (SF)	Temporary Waterway Impact (SF)
Access Road + Laydown Area	-	-	0	0
Facility Footprint	-	-	0	0
Pipeline Alignment + Access Road	-	-	0	0
Rail Spur	65	227	1746	0
Total McLean Slough	**65**	**227**	**1746**	**0**

Waterways Total	Waterway Removal (cy)	Waterway Fill (cy)	Permanent Waterway Impact (SF)	Temporary Waterway Impact (SF)
Access Road + Laydown Area	160	548	4226	0
Facility Footprint	975	4,505	26255	362
Pipeline Alignment + Access Road	60	147	1571	771
Rail Spur	973	3,405	46158	0
Waterways Total	**2,168**	**8,605**	**78210**	**1133**

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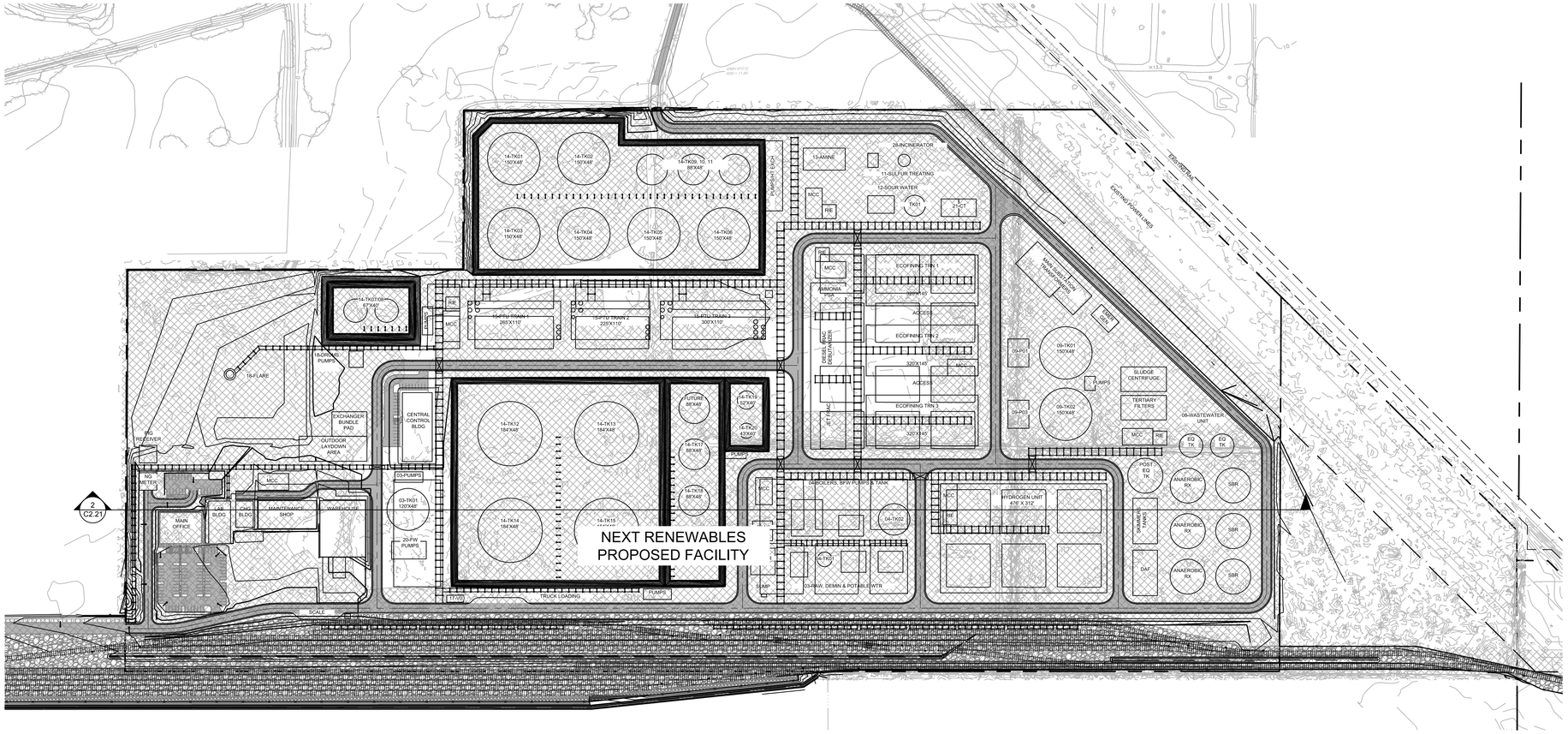
SHEET TITLE:
WETLANDS IMPACT EARTHWORK PLAN

DRAWN BY: CAM

CHECKED BY: BDN

SHEET
C2.20

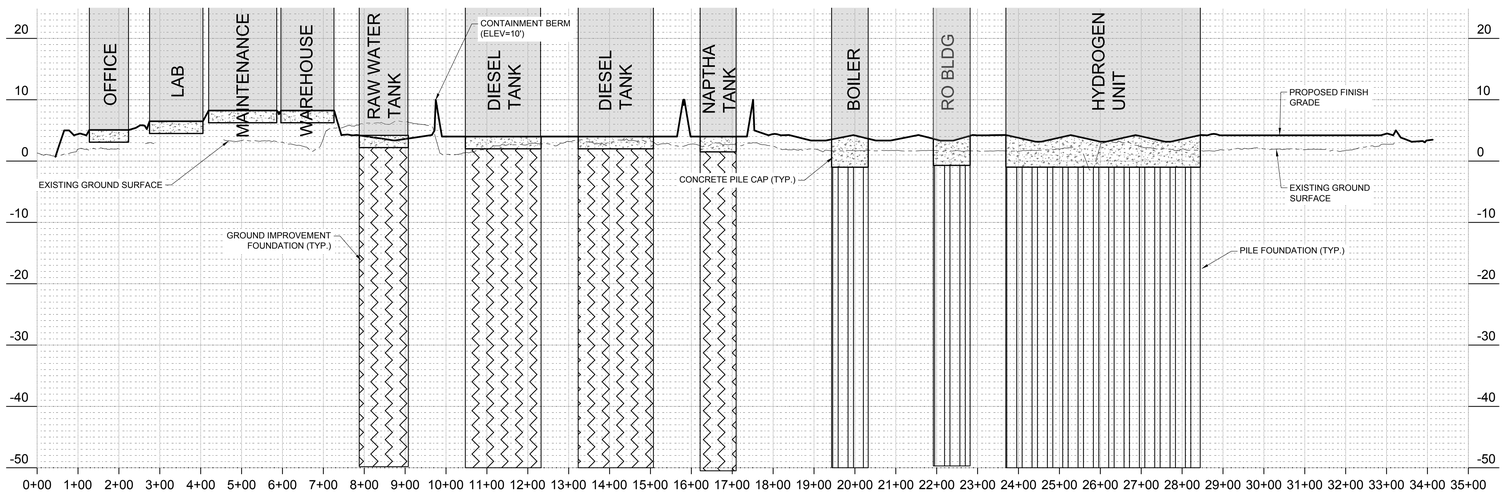
JOB NO. **2200315.01**



1 C2.21 **WETLAND IMPACT PLAN**

150 0 75 150 300 600

(IN FEET)
1 inch = **150** ft.



2 C2.21 **WETLAND IMPACT CROSS-SECTION**

HORIZONTAL SCALE: 1" = 150'
VERTICAL SCALE: 1" = 10' (15X EXAGGERATION)

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SHEET TITLE:
SCHEMATIC WETLAND FILL CROSS SECTION EAST-WEST

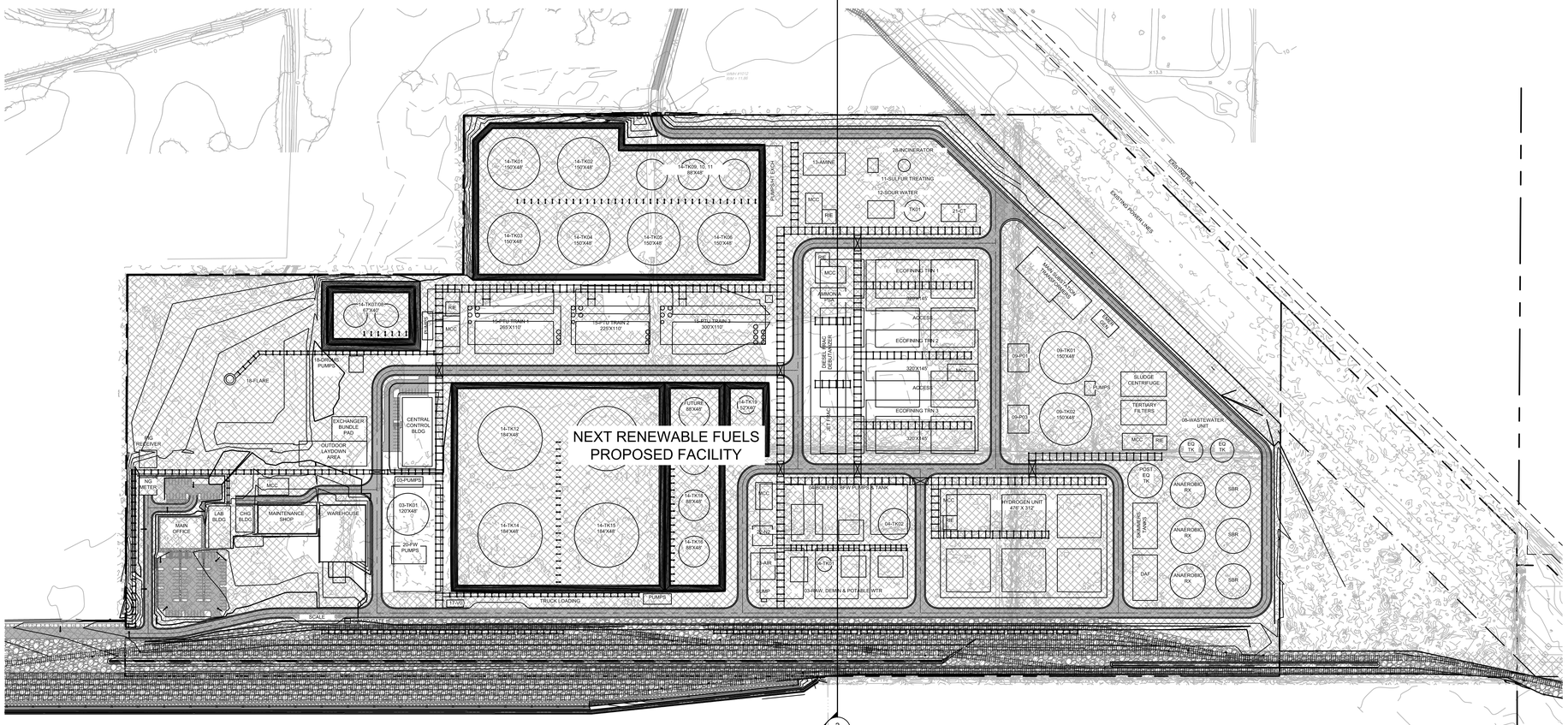
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SHEET
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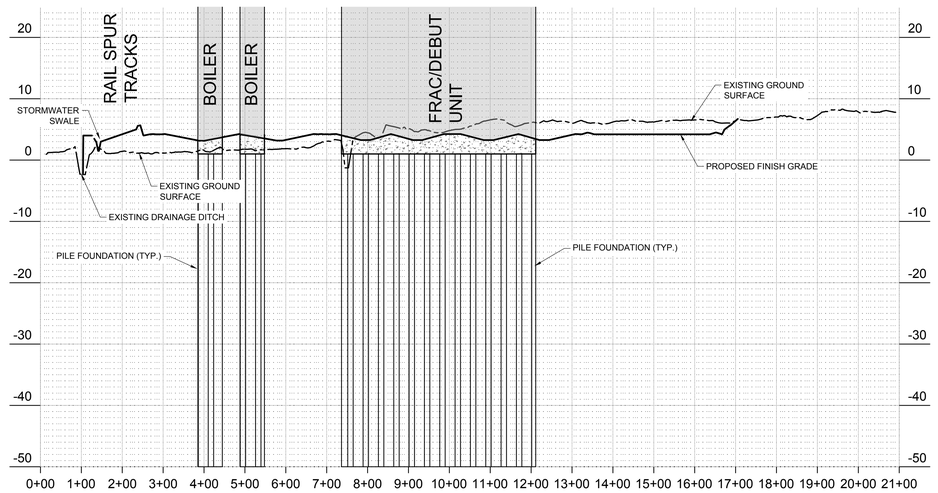


2
C2.22

1 C2.22 WETLAND IMPACT PLAN

150 0 75 150 300 600

(IN FEET)
1 inch = 150 ft.



2 C2.22 WETLAND IMPACT CROSS-SECTION

HORIZONTAL SCALE: 1" = 150'
VERTICAL SCALE: 1" = 10' (15X EXAGGERATION)

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SHEET TITLE:
SCHEMATIC WETLAND FILL CROSS SECTION NORTH-SOUTH

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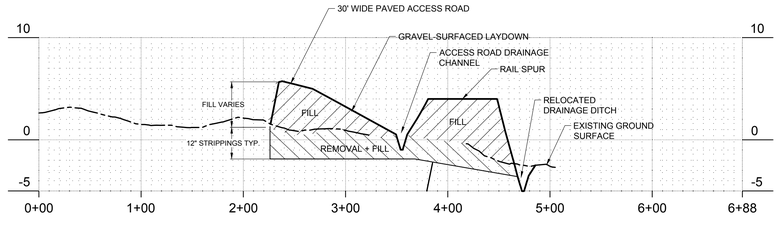
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SHEET
C2.22

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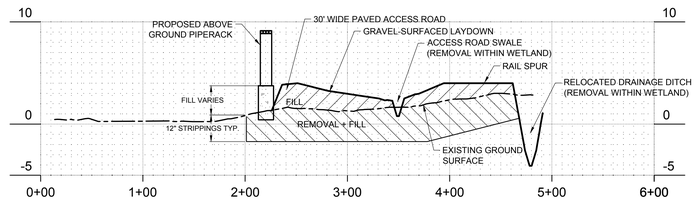
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2200315\00\DRAWINGS\CIVIL\15-C2.22.DWG BDN 07/08/21 10:55 1:150



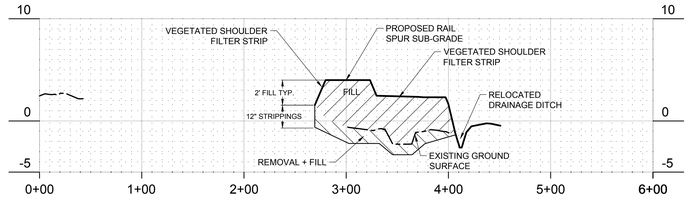
1 C2.23 ACCESS ROAD CROSS-SECTION

HORIZONTAL SCALE = 1"=60'
VERTICAL SCALE = 1"=6'



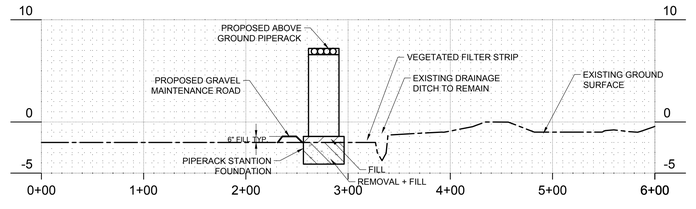
2 C2.23 ACCESS ROAD CROSS SECTION WITH WIDENED PAVING

HORIZONTAL SCALE = 1"=60'
VERTICAL SCALE = 1"=6'



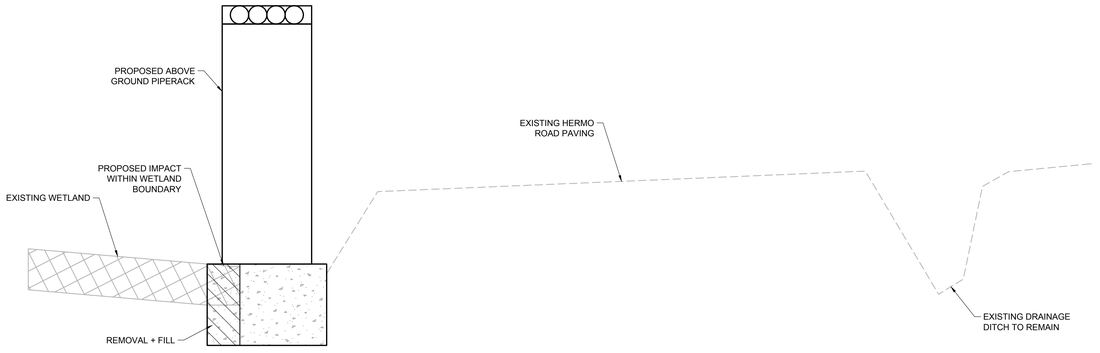
3 C2.23 RAIL SPUR BRANCH LINE TYPICAL CROSS-SECTION

HORIZONTAL SCALE = 1"=60'
VERTICAL SCALE = 1"=6'



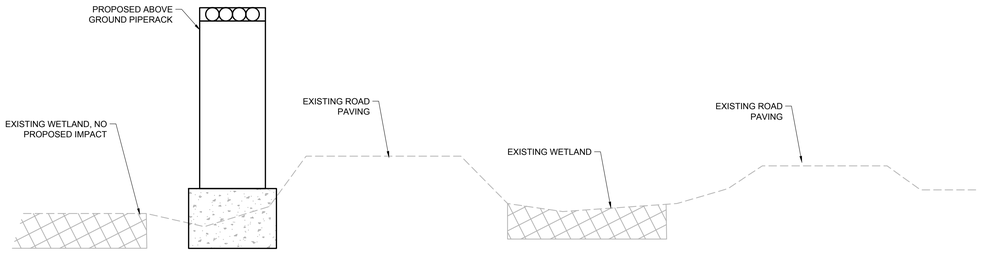
4 C2.23 PIPELINE MAINTENANCE ROAD TYPICAL CROSS-SECTION

HORIZONTAL SCALE = 1"=60'
VERTICAL SCALE = 1"=6'



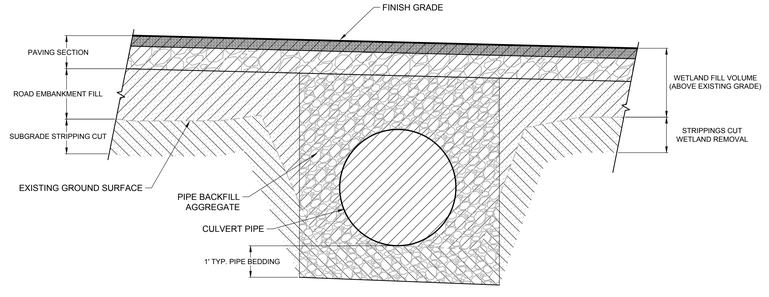
5 C2.23 TYPICAL CROSS-SECTION OF PIPERACK ALONG HERMO ROAD

NOT TO SCALE



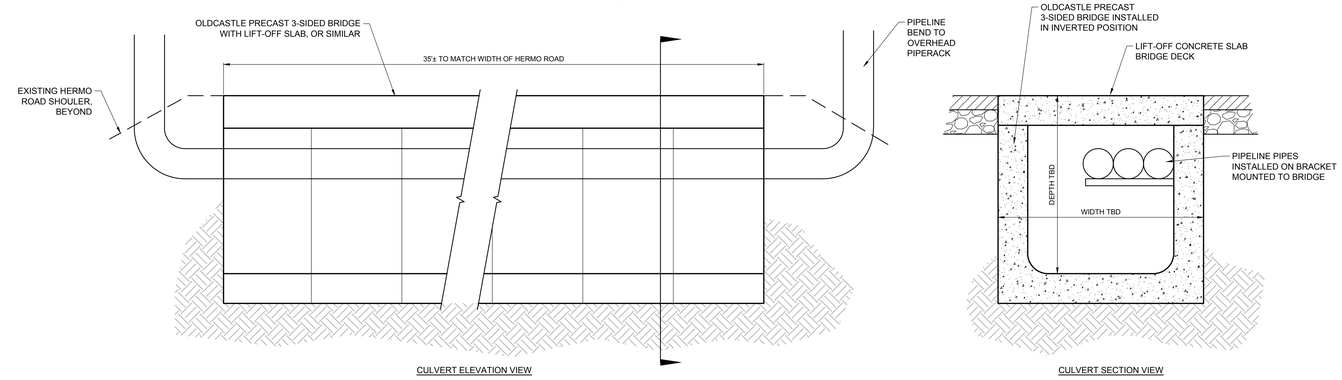
6 C2.23 TYPICAL CROSS-SECTION OF PIPERACK ALONG SERVICE ROAD

NOT TO SCALE



7 C2.23 TYPICAL CROSS-SECTION OF CULVERT INSTALLATION

NOT TO SCALE



8 C2.23 PIPELINE CULVERT ROAD CROSSING

NOT TO SCALE

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WETLAND IMPACTS - TYPICAL SECTIONS

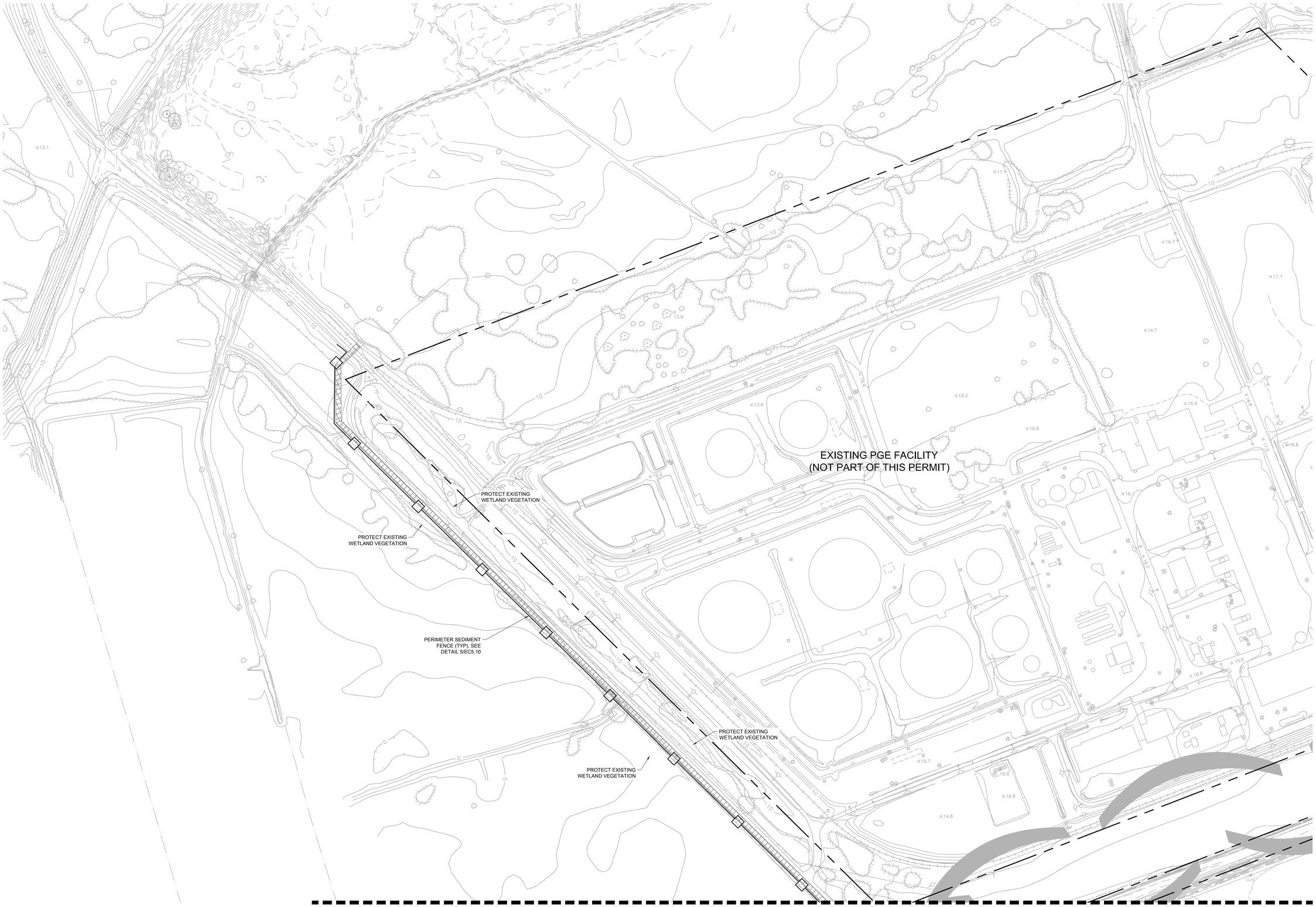
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SHEET

C2.23

JOB NO. **2200315.01**



LEGEND:

SEE LEGEND ON SHEET C0.01

1 EC1.10 EROSION CONTROL PLAN NORTH

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

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SHEET TITLE:

CONSTRUCTION EROSION CONTROL PLAN NORTH

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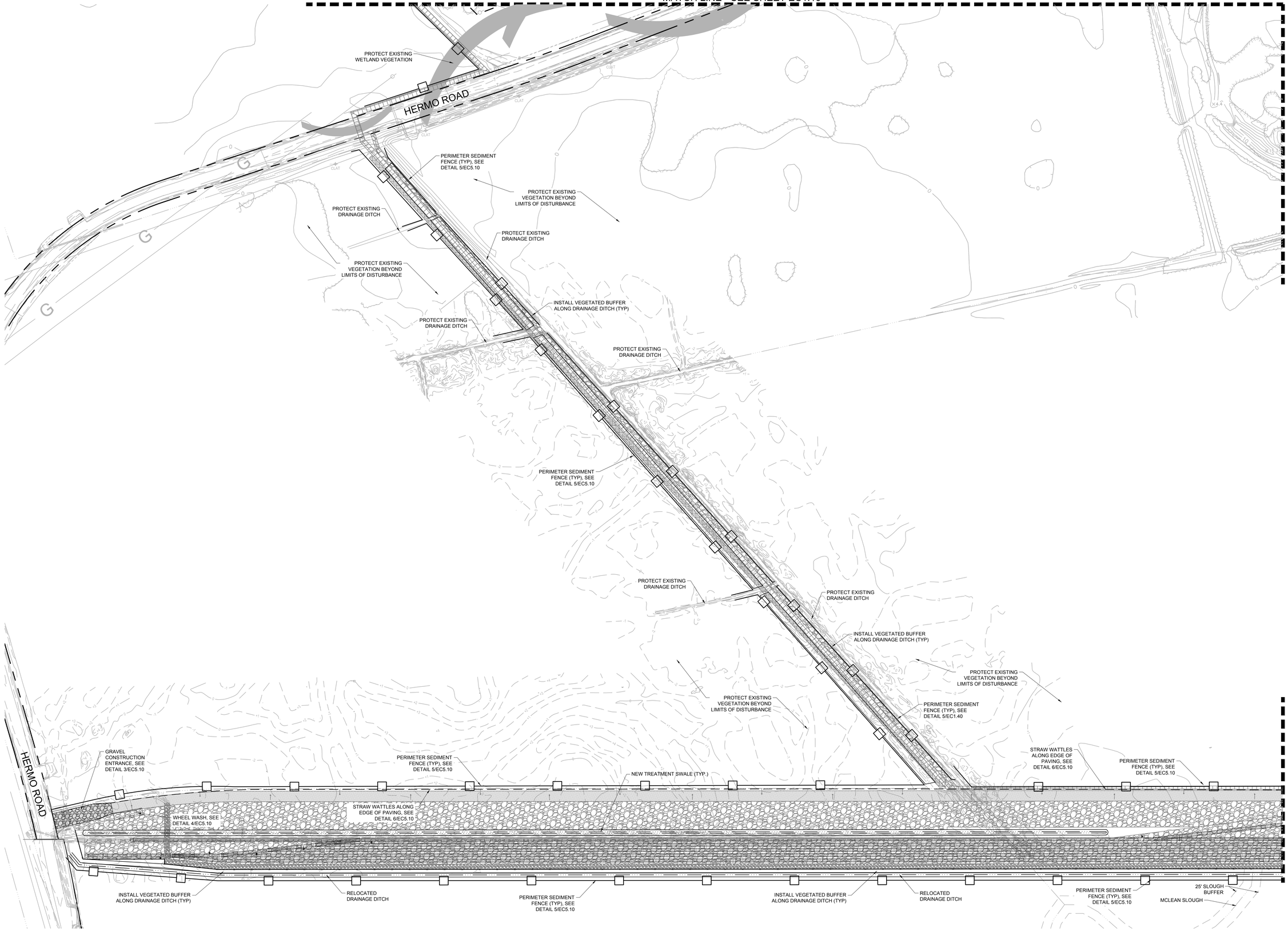
SHEET

EC1.10

JOB NO. **2200315.01**

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MATCH LINE - SEE SHEET EC1.10



MATCH LINE - SEE SHEET EC1.12

EROSION CONTROL LEGEND:

SEE LEGEND ON SHEET C0.01

1 EC1.11 EROSION CONTROL PLAN WEST

100 0 50 100 200 400

(IN FEET)

1 inch = **100** ft.

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SHEET TITLE:

CONSTRUCTION EROSION CONTROL PLAN WEST

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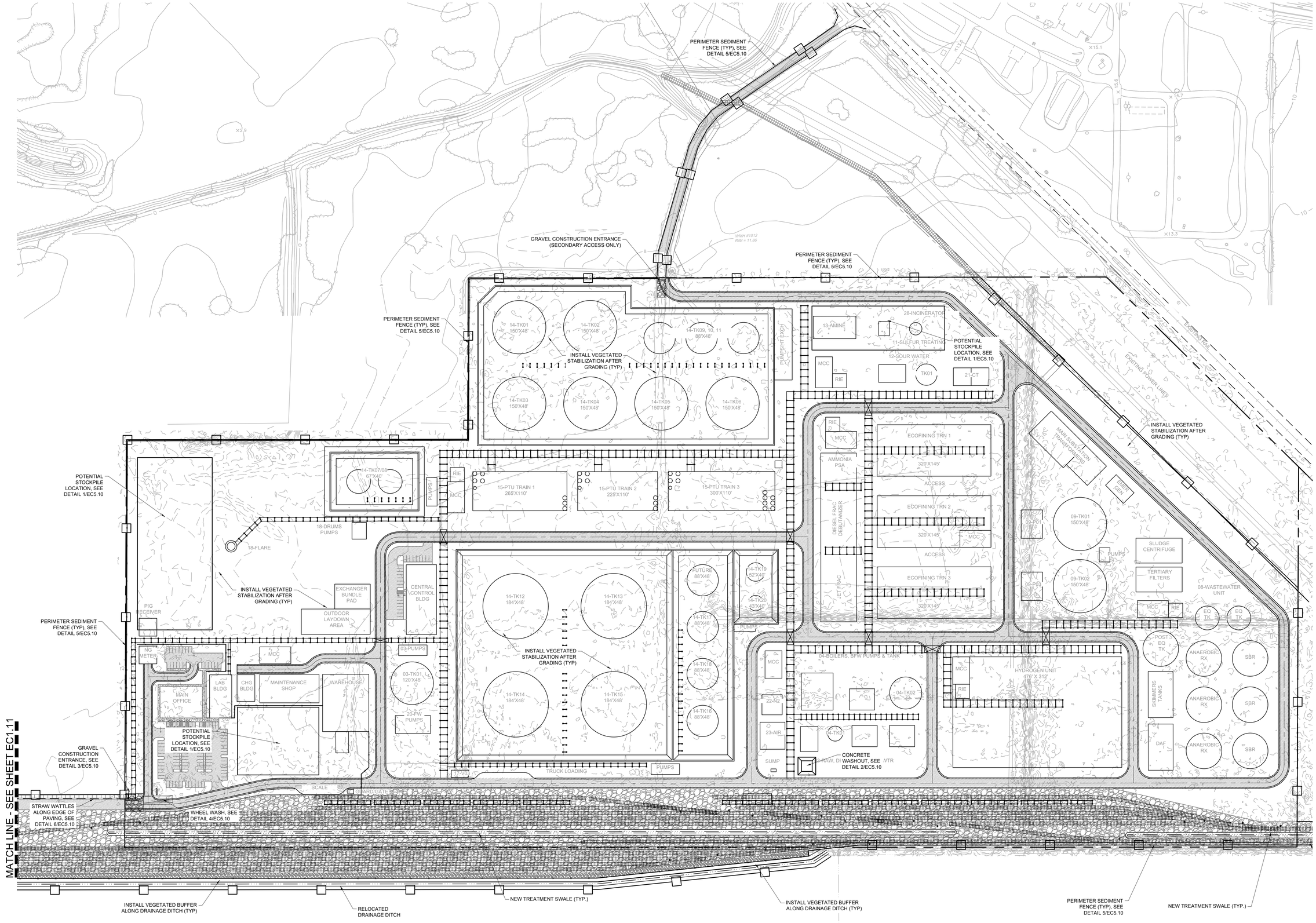
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SHEET

EC1.11

JOB NO. **2200315.01**

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LEGEND:

SEE LEGEND ON SHEET C0.01

1 EC1.12 SITE EROSION CONTROL PLAN

100 0 50 100 200 400

(IN FEET)
1 inch = **100** ft.

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SHEET TITLE:

CONSTRUCTION EROSION CONTROL PLAN EAST

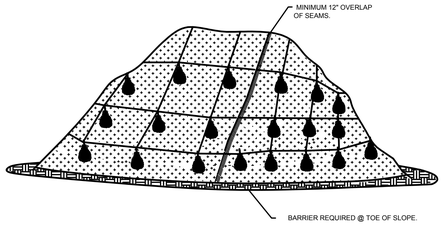
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SHEET

EC1.12

JOB NO. **2200315.01**



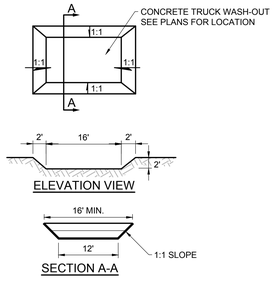
PLASTIC SHEETING

NOTES:
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. BARRIER REQUIRED @ TOE OF STOCK PILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

1 STOCKPILE COVER/SHEETING
EC5.10 N.T.S.

NOTES:
A. BURY BOTTOM OF FILTER FABRIC 6" MIN VERTICALLY BELOW FINISHED GRADE
B. UTILIZE 2" x 2" FIR, PINE, OR STEEL FENCE POSTS TO ANCHOR FENCING
C. ATTACH FENCING TO POSTS USING STITCHED LOOPS INSTALLED ON UPHILL SIDE OF SLOPE
D. COMPACT THE NATIVE FILL IN ALL AREAS OF FILTER FABRIC TRENCH
E. ACCUMULATED SEDIMENT CAN BE ALLOWED TO REACH NO MORE THAN ONE-THIRD OF THE SEDIMENT FENCE HEIGHT

5 SEDIMENT FENCE
EC5.10 NTS



NOTES:
1. CONCRETE WASHOUT AREA. LOCATED SO RUNOFF CANNOT ENTER STORM SYSTEM. IF WASH-OUT CANNOT BE LOCATED MINIMUM OF 50' FROM ENTRY TO STORM SYSTEM, THAN SECONDARY MEASURES SUCH AS BERMS AND TEMPORARY SETTLING PITS MAY BE REQUIRED.
2. CONTRACTOR SHALL CLEAN OUT CONCRETE TRUCK WASH-OUT AREA WHEN WHEN DEPTH REACHES 1'.

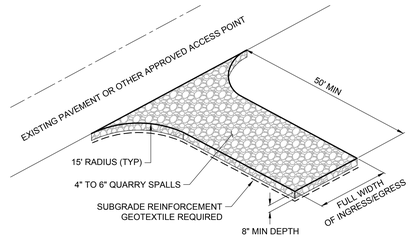
2 CONCRETE WASHOUT
EC5.10 N.T.S.

E-CONCWASHOUT 1:1

NOTES:
1. WATTLES TO BE MADE OF STRAW.
2. SLOPE REQUIRES MINOR PREPARATION PRIOR TO INSTALLATION
3. RILLS AND SHALLOW GULLIES SHOULD BE SMOOTHED AS WORK PROGRESSES.
4. WATTLES SHOULD BE INSTALLED AT THIRD POINTS OF SWALE.
5. WATTLE MUST BE TIGHT AGAINST THE SOIL IN TRENCH. MAKE SURE NO GAPS EXIST BETWEEN THE SOIL AND THE WATTLE.
6. STAKES MUST BE DRIVEN A MINIMUM OF 12 IN. INTO UNDISTURBED MATERIAL. INSTALL STAKES EVERY 2'.
7. INSPECT ONCE PER WEEK ON ACTIVE SITES, ONCE EVERY TWO WEEKS ON INACTIVE SITES, AND WITHIN 24 HOURS FOLLOWING A 0.5 INCH RAIN EVENT.
8. MAKE SURE THE WATTLES ARE IN CONTACT WITH THE SOIL.
9. STRING SHOULD BE WRAPPED ROUND WATTLE EVERY FOOT OF ITS LENGTH.

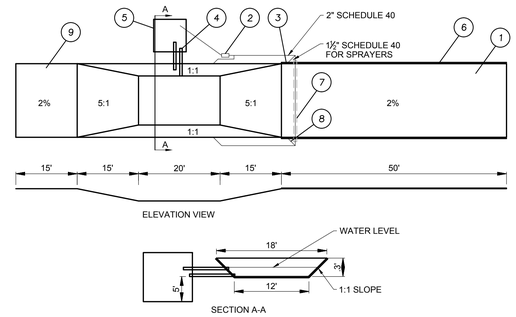
6 STRAW WATTLE EROSION CONTROL
EC5.10 N.T.S.

WATTLES



NOTES:
1. QUARRY SPALL MATERIAL SHALL BE "CLEAN" (LESS THAN 5% PASSING THE US STANDARD NO.200 SIEVE).
2. CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION FOR ALTERNATES, SUCH AS A RUMBLE TRACK
3. PROTECT CONSTRUCTION ENTRANCES FROM SILTATION FROM ADJOINING BARE SOIL AREAS
4. ANY RAMPING CONSTRUCTED TO MOUNT EXISTING ROADWAY CURBING SHALL NOT IMPEDE DRAINAGE OF THE ROADWAY

3 CONSTRUCTION ENTRANCE
EC5.10 NTS



4 WHEEL WASH
EC5.10 N.T.S.

WHEEL WASH

NOTES:
1. ASPHALT CONSTRUCTION ENTRANCE - 6" ASPHALT TREATED BASE(ATB).
2. 3-INCH TRASH PUMP WITH FLOATS ON THE SUCTION HOSE.
3. MIDPOINT SPRAY NOZZLES IF NEEDED.
4. 6-INCH SEWER PIPE WITH BUTTERFLY VALVES. BOTTOM ONE IS A DRAIN. LOCATE TOP PIPES INVERT ONE FOOT ABOVE BOTTOM OF WHEEL WASH.
5. 8'x8' SUMP WITH 5' OF CATCH. BUILD SO CAN BE CLEANED WITH TRACKHOE.
6. ASPHALT CURB ON THE LOW ROAD SIDE TO DIRECT WATER BACK TO THE POND.
7. 6-INCH SLEEVE UNDER ROAD.
8. BALL VALVES.
9. 15' ATB APRON TO PROTECT GROUND FROM SPLASHING WATER.

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PORT WESTWARD
COLUMBIA COUNTY, OR

REGISTERED PROFESSIONAL ENGINEER
OREGON
JUNE 2, 2010
BRENT DANIEL NIELSEN
EXPIRES: 12/31/22

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REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
EROSION CONTROL DETAILS

DRAWN BY: CAM

CHECKED BY: BDN

SHEET
EC5.10

JOB NO. **2200315.01**

COMPLETENESS SUBMITTAL SET - 7/8/2021

SHEET INDEX

L1.10 LANDSCAPE GENERAL INFORMATION AND PLANTING PLAN
L1.11 PLANTING PLAN - ENLARGEMENTS
L1.12 PLANTING PLAN - DRIVEWAY AND RAIL MAINTENANCE ROAD
L5.10 PLANT DETAILS
L5.11 IRRIGATION DETAILS

ZONING COMPLIANCE

PARKING AREA (10% LANDSCAPE MIN)

NORTH PARKING AREA	7,567 SF
NORTH PARKING LANDSCAPE AREA	3,450 SF
SOUTH PARKING AREA	31,551 SF
SOUTH PARKING LANDSCAPE AREA	6,225 SF
CENTRAL PARKING AREA	11,951 SF
CENTRAL PARKING LANDSCAPE AREA	3,870 SF

LANDSCAPE NOTES

GENERAL

1. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
2. CALL BEFORE YOU DIG. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF ALL UNDERGROUND UTILITIES AND NOTIFY LANDSCAPE ARCHITECT IF THERE ARE ANY DISCREPANCIES WITH PLANTING ROOT ZONES. TO REQUEST LOCATES FOR PROPOSED EXCAVATION CALL 1-800-332-2344 (OR 811) IN OREGON.
3. NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS WITH EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK.
4. LOCATION OF EXISTING TREES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
5. DAMAGE TO EXISTING CONCRETE CURB, ASPHALT PAVING, OR OTHER STRUCTURE SHALL BE REPAIRED OR REPLACED TO PRE CONSTRUCTION CONDITIONS.
6. CONTRACTOR SHALL COORDINATE WITH THE OWNER ANY DISRUPTION TO VEHICULAR CIRCULATION PRIOR TO COMMENCEMENT OF ANY WORK.

PLANTING

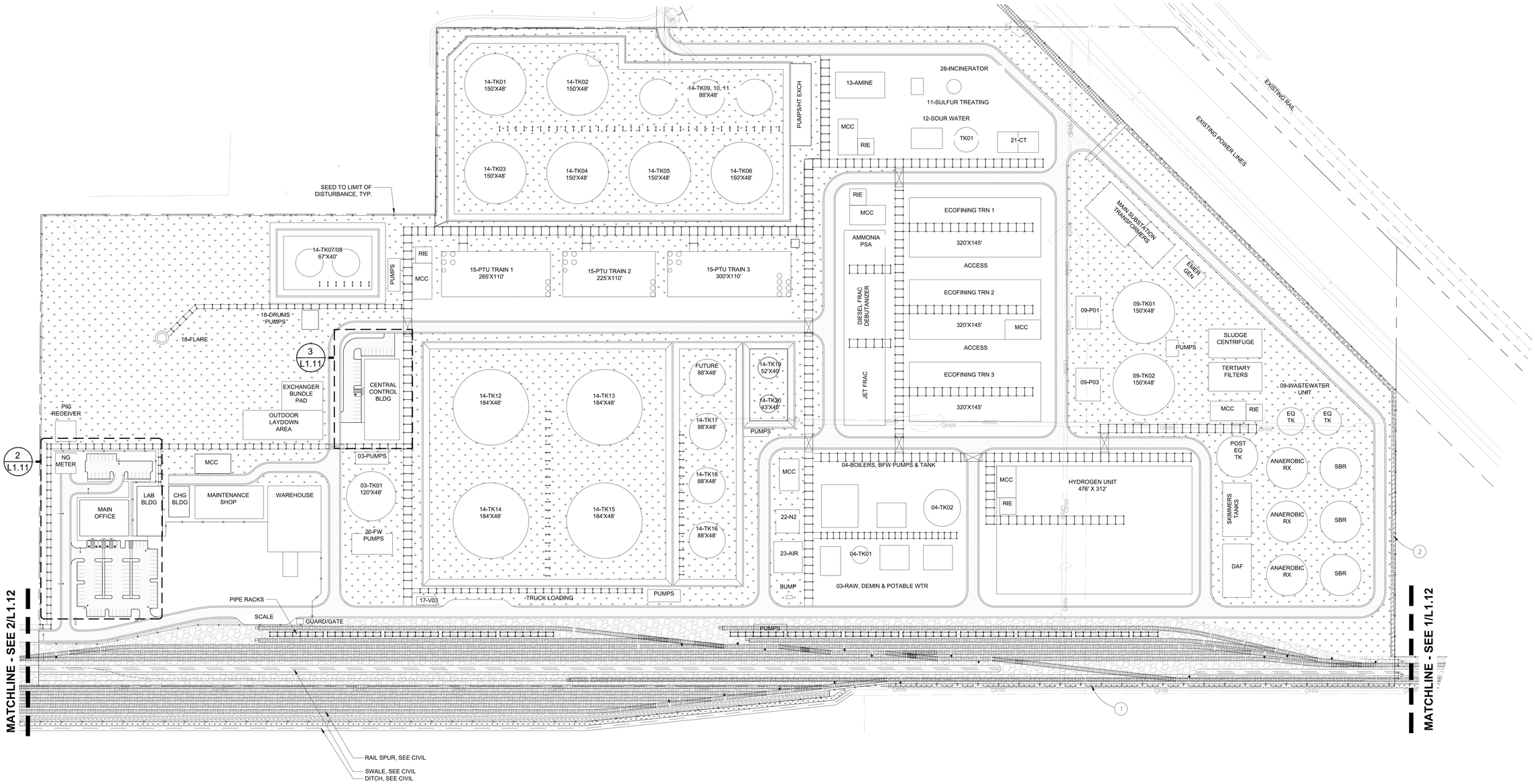
1. ALL EXISTING TREES, PLANTS, AND ROOTS SHALL BE PROTECTED FROM DAMAGE FROM ANY CONSTRUCTION PREPARATION, REMOVAL OR INSTALLATION ACTIVITIES WITHIN AND ADJACENT TO PROJECT LIMITS.
2. SHRUBS ADJACENT TO PARKING AREAS SHALL BE PLANTED 2 FT MINIMUM AWAY FROM THE BACK OF CURB. SHRUBS AND GROUNDCOVER ALONG OTHER PAVEMENT EDGES SHALL BE PLANTED A MINIMUM OF ONE HALF THEIR ON CENTER SPACING AWAY FROM PAVEMENT EDGE.
3. ALL PLANT MATERIAL SHALL BE HEALTHY NURSERY STOCK, WELL BRANCHED AND ROOTED, FULL FOLIAGE, FREE FROM INSECTS, DISEASES, WEEDS, WEED ROT, INJURIES AND DEFECTS WITH NO LESS THAN MINIMUMS SPECIFIED IN AMERICAN STANDARDS FOR NURSERY STOCK, ANSI Z60.1-2004.
4. DO NOT PLANT TREES ABOVE WATERLINES, UTILITIES, OR OTHER UNDERGROUND PIPING.
5. IF DISTURBANCE IS NECESSARY AROUND EXISTING TREES, CONTRACTOR SHALL PROTECT THE CROWN AND ALL WORK WITHIN THE TREE DRIPZONE SHALL BE LIMITED TO THE USE OF HAND TOOLS AND MANUAL EQUIPMENT ONLY.
6. REPLACE, REPAIR AND RESTORE DISTURBED LANDSCAPE AREAS DUE TO GRADING, TRENCHING OR OTHER REASONS TO PRE-CONSTRUCTION CONDITION AND PROVIDE MATERIAL APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE UNLESS OTHERWISE INDICATED, ALL DISTURBED SOIL SHALL RECEIVE TYPE B NATIVE SEED MIX. IF SEEDED DURING DRY SEASON PROVIDE IRRIGATION THROUGH ESTABLISHMENT. THIS APPLIES TO ALL DISTURBED SOIL ALONG LINEAR IMPROVEMENTS.
7. A SOILS ANALYSIS, BY AN INDEPENDENT SOILS TESTING LABORATORY RECOGNIZED BY THE STATE DEPARTMENT OF AGRICULTURE, SHALL BE USED TO RECOMMEND AN APPROPRIATE PLANTING SOIL AND/OR SPECIFIED SOIL AMENDMENTS.
8. TOPSOIL SHALL BE AMENDED AS RECOMMENDED BY AN INDEPENDENT SOILS TESTING LABORATORY AND AS OUTLINED IN THE SPECIFICATION.
9. ALL LANDSCAPED AREAS SHALL BE COVERED BY A LAYER OF ORGANIC MULCH TO A MINIMUM DEPTH OF 2-INCHES.

IRRIGATION

1. UNLESS OTHERWISE INDICATED, ALL NEW LANDSCAPE AREAS TO BE IRRIGATED WITH A FULLY AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. PROVIDE LOOP SYSTEM FOR OPTIMUM EFFICIENCY.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (IRRIGATION PLANS) TO LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION. DRAWINGS TO INDICATE HEAD TYPE, GALLONS PER MINUTE, LATERAL LINES, AND BE AT MINIMUM SCALE OF 1"=20'
3. CONTRACTOR TO DETERMINE STATIC WATER PRESSURE AT THE P.O.C. PRIOR TO PREPARING SHOP DRAWINGS.
4. CONTRACTOR SHALL ESTABLISH MINIMUM PRESSURE AND MAXIMUM DEMAND REQUIREMENTS FOR IRRIGATION SYSTEM DESIGN, AND PROVIDE INFORMATION IN AN IRRIGATION SCHEDULE.
5. IRRIGATION SYSTEM AS DESIGNED AND INSTALLED SHALL PERFORM WITHIN THE TOLERANCES AND SPECIFICATIONS OF THE SPECIFIED MANUFACTURERS.
6. SYSTEM SHALL BE DESIGNED TO SUPPLY MANUFACTURER'S SPECIFIED MINIMUM OPERATING PRESSURE TO FARTHEST EMITTER FROM WATER METER.
7. SYSTEM SHALL PROVIDE HEAD TO HEAD COVERAGE WITHOUT OVERSPRAY ONTO BUILDING, FENCES, SIDEWALKS, PARKING AREAS, OR OTHER NON-VEGETATED SURFACES.
8. ALL IRRIGATION PIPE MATERIAL AND INSTALLATION SHALL CONFORM TO APPLICABLE CODE FOR PIPING AND COMPONENT REQUIREMENTS.
9. PROVIDE SLEEVING AT ALL AREAS WHERE PIPE TRAVELS UNDER CONCRETE OR HARD SURFACING.
10. VALVES SHALL BE WIRED AND INSTALLED PER MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES AND CONNECTED TO THE IRRIGATION CONTROLLER.
11. REFER TO CIVIL DETAILS AND DETAILS ON L5.10 FOR POINT OF CONNECTION AND BACKFLOW PREVENTION INFORMATION.
12. CONTROLLER TO BE MOUNTED ON BUILDING EXTERIOR. GENERAL CONTRACTOR TO COORDINATE LOCATION WITH OWNER'S REPRESENTATIVE.
13. ZONE THE FOLLOWING AREAS SEPARATELY: TEMPORARY AREAS, PERMANENT LANDSCAPE AREAS, AND TREES.
14. QUICK COUPLERS TO BE PLACED EVERY 300 LINEAR FEET MAX.
15. IRRIGATION SHALL BE WINTERIZED THROUGH LOW PRESSURE, HIGH VOLUME AIR BLOWOUT CONNECTION THROUGH QUICK COUPLER.
16. THE SYSTEM SHALL BE GRAVITY DRAINED. THE CONTRACTOR SHALL PROVIDE APPROPRIATE MANUAL DRAINS AT LOW POINTS.

PLANT SCHEDULE

	ACER RUBRUM 'OCTOBER GLORY' *OCTOBER GLORY MAPLE*	*10' HT. MIN. B&B*	
	FRAXINUS LATIFOLIA *OREGON ASH*	*10' HT. MIN. B&B*	
	QUERCUS GARRYANA *OREGON OAK*	*10' HT. MIN. B&B*	
	RHAMNUS PURSHIANA *CASCARA*	*10' HT. MIN. B&B*	
SHRUBS	*BOTANICAL / COMMON NAME*	*SIZE*	*SPACING*
	AMELANCHIER ALNIFOLIA *SERVICEBERRY*	*6'-8' HT. MIN., B&B*	*180" o.c.*
	ARBUTUS UNEDO 'COMPACTA' *DWARF STRAWBERRY TREE*	*5 GAL.*	*60" o.c.*
	CORNUS SERICEA 'KELSEYI' *KELSEYI DWARF REDTWIG DOGWOOD*	*1 GAL.*	*24" o.c.*
	COTONEASTER GLAUCOPHYLLUS *BRIGHT BEAD COTONEASTER*	*5 GAL.*	*72" o.c.*
	GAULTHERIA SHALLON *SALAL*	*5 GAL.*	*60" o.c.*
	HOLODISCUS DISCOLOR *OCEAN-SPRAY*	*5 GAL.*	*96" o.c.*
	LONICERA INVOLUCRATA *TWINBERRY*	*5 GAL.*	*72" o.c.*
	MAHONIA AQUIFOLIUM *OREGON GRAPE*	*5 GAL.*	*54" o.c.*
	ROSA X 'NOARE' TM *FLOWER CARPET RED GROUNDCOVER ROSE*	*3 GAL.*	*36" o.c.*
	SPIRAEA BETULIFOLIA *BIRCH LEAF SPIREA*	*1 GAL.*	*24" o.c.*
	SPIRAEA DOUGLASII *WESTERN SPIREA*	*1 GAL.*	*48" o.c.*
	VACCINIUM OVATUM *EVERGREEN HUCKLEBERRY*	*5 GAL.*	*36" o.c.*
	VIBURNUM DAVIDII *DAVID VIBURNUM*	*5 GAL.*	*36" o.c.*
SHRUB AREAS	*BOTANICAL / COMMON NAME*	*SIZE*	*SPACING*
	PERIMETER PLANTING TYPE A *SEE 3/L1.11*	*---*	
	PERIMETER PLANTING TYPE B *SEE 4/L1.11*	*---*	
GROUND COVERS	*BOTANICAL / COMMON NAME*	*SIZE*	*SPACING*
	ARCTOSTAPHYLOS UVA-URSI *KINNIKINNICK*	*1 GAL.*	*24" o.c.*
	MAHONIA REPENS *CREEPING MAHONIA*	*1 GAL.*	*18" o.c.*
	SEED MIX TYPE A *LAWN*	*1 LB / 1000 SF*	
	SEED MIX TYPE B *NATIVE UPLAND MIX*	*1 LB / 1000 SF*	



1 L1.10 PLANTING PLAN - MAIN SITE

100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

KEYNOTES

1. PERIMETER PLANTING, TYPE A, SEE 3/L1.11
2. PERIMETER PLANTING, TYPE B, SEE 4/L1.11

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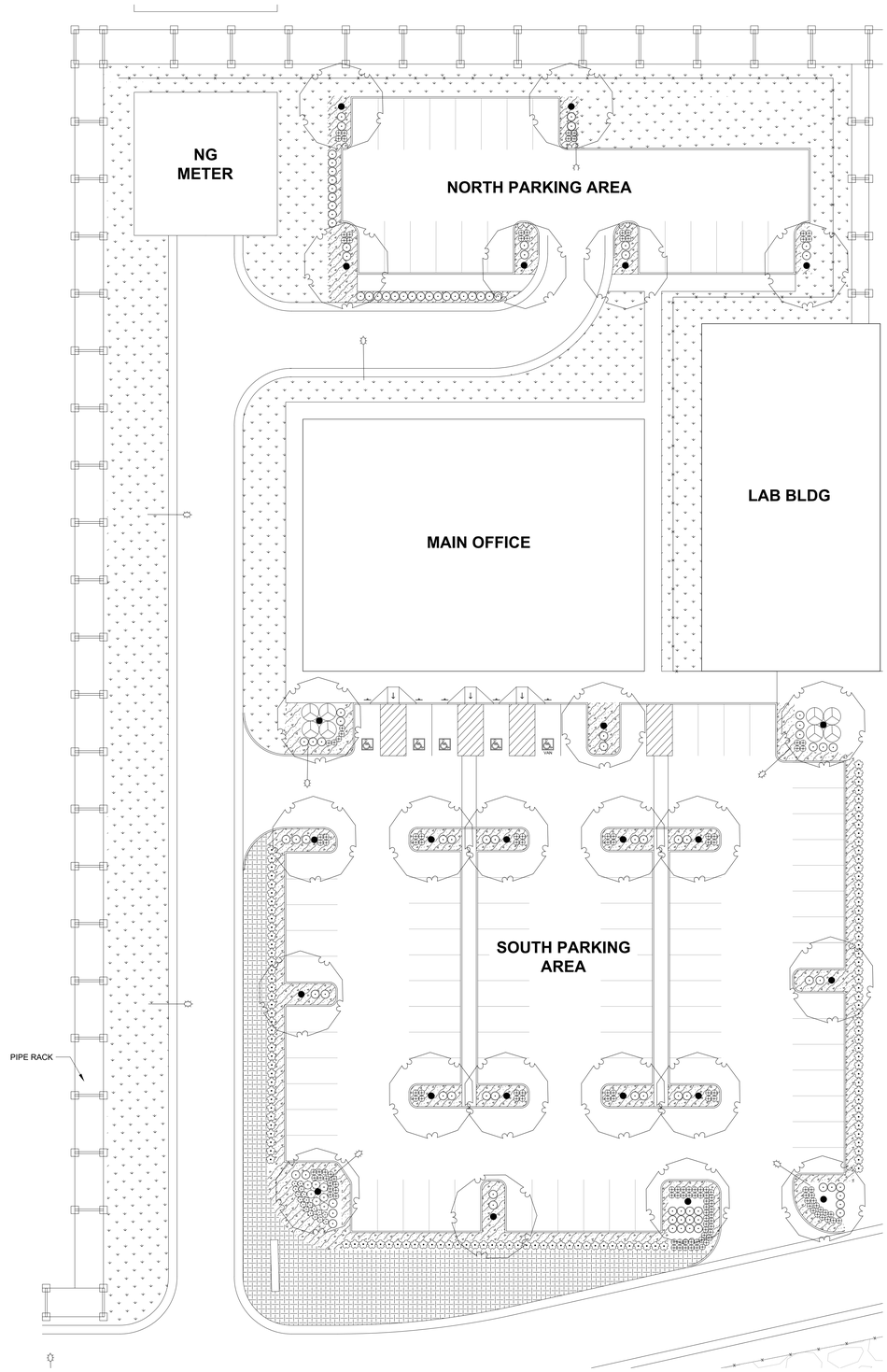
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L1.10

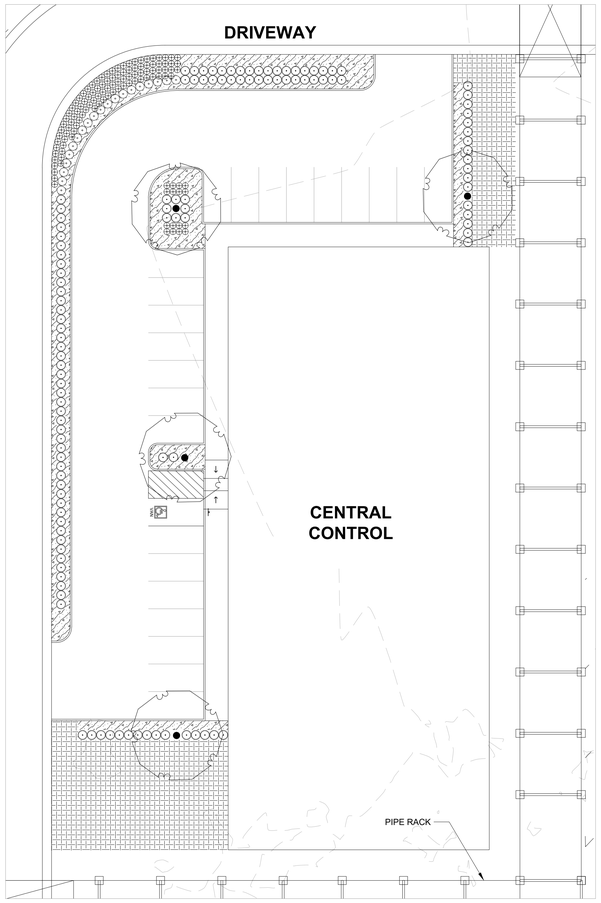
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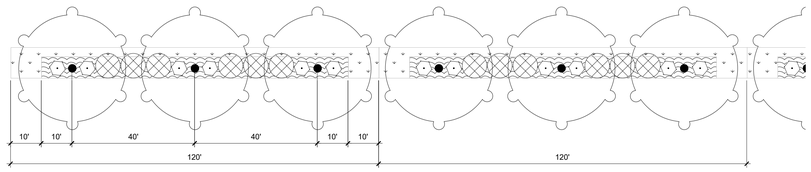
1 L1.11 PLANTING PLAN - NORTH AND SOUTH PARKING AREAS

20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.



2 L1.11 PLANTING PLAN - CENTRAL CONTROL PARKING AREA

20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

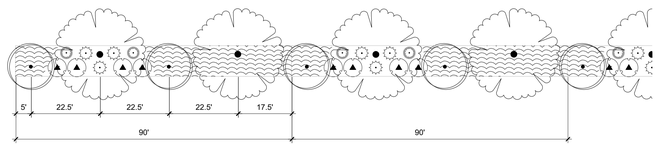


3 L1.11 PERIMETER PLANTING TYPE A, TYPICAL

20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

NOTES

1. PLANT PERIMETER IN PREPARED SOIL PER DETAIL 4/L5.10.
2. PATTERN REPEATS EVERY 120LF AND INCLUDES 3 TREES,12 SHRUBS, AND GROUND COVER AS SHOWN.
3. 20' WIDE GRASSY BREAKS ARE PROVIDED TO FACILITATE MAINTENANCE ACCESS BETWEEN THE ROAD ALONG THE NORTH AND THE CHANNEL ALONG THE SOUTH.



4 L1.11 PERIMETER PLANTING TYPE B, TYPICAL

20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

NOTES

1. REMOVE ANY NOXIOUS OR NUISANCE PLANTS WITHIN PERIMETER PLANTING, INCLUDING BLACKBERRY, BINDWEED, LOOSESTRIFE, ETC.
2. PATTERN REPEATS EVERY 90LF AND INCLUDES 4 TREES AND 9 SHRUBS AS SHOWN.

PLANT KEY LEGEND

TREES	BOTANICAL / COMMON NAME
	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY MAPLE
	FRAXINUS LATIFOLIA OREGON ASH
	QUERCUS GARRYANA OREGON OAK
	RHAMNUS PURSHIANA CASCARA

SHRUBS	BOTANICAL / COMMON NAME
	AMELANCHIER ALNIFOLIA SERVICEBERRY
	CORNUS SERICEA 'KELSEYI' KELSEYI DWARF REDTWIG DOGWOOD
	COTONEASTER GLAUCOPHYLLUS BRIGHT BEAD COTONEASTER
	GAULTHERIA SHALLON SALAL
	HOLODISCUS DISCOLOR OCEAN-SPRAY
	LONICERA INVOLUCRATA TWINBERRY
	MAHONIA AQUIFOLIUM OREGON GRAPE
	ROSA X 'NOARE' TM FLOWER CARPET RED GROUNDCOVER ROSE
	SPIRAEA BETULIFOLIA BIRCH LEAF SPIREA
	SPIRAEA DOUGLASII WESTERN SPIREA
	VACCINIUM OVATUM EVERGREEN HUCKLEBERRY
	VIBURNUM DAVIDII DAVID VIBURNUM

GROUND COVERS	BOTANICAL / COMMON NAME
	ARCTOSTAPHYLOS UVA-URSI KINNIKINNICK
	MAHONIA REPENS CREEPING MAHONIA
	SEED MIX TYPE A LAWN
	SEED MIX TYPE B NATIVE UPLAND MIX

REFERENCE NOTES

1. PLANT SIZE AND SPACING, SEE PLANT SCHEDULE L1.10

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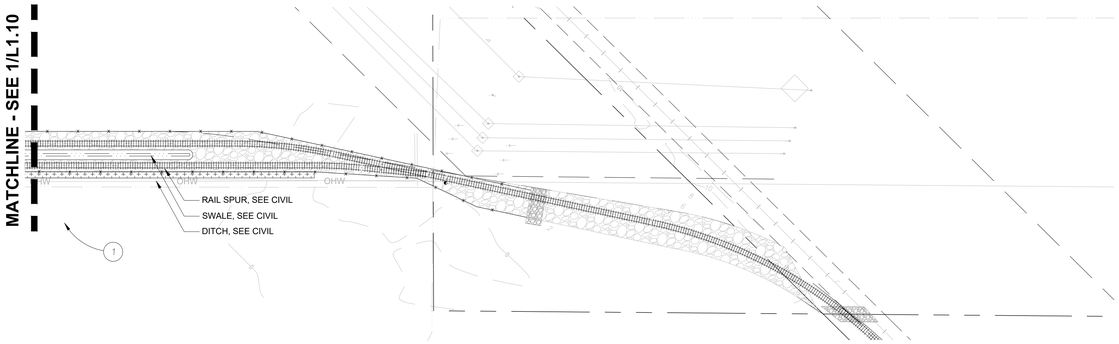
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L1.11

JOB NO. **2200315.01**

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PLANT SCHEDULE

	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY MAPLE	10' HT. MIN. B&B	
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	GAULTHERIA SHALLON SALAL	5 GAL.	60" o.c.
	HOLODISCUS DISCOLOR OCEAN-SPRAY	5 GAL.	96" o.c.
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	VIBURNUM DAVIDII DAVID VIBURNUM	5 GAL.	36" o.c.
SHRUB AREAS	BOTANICAL / COMMON NAME	SIZE	SPACING
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	PERIMETER PLANTING TYPE B SEE 4/L1.11	---	
GROUND COVERS	BOTANICAL / COMMON NAME	SIZE	SPACING
	ARCTOSTAPHYLOS UVA-URSI KINNIKINNICK	1 GAL.	24" o.c.
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	SEED MIX TYPE A LAWN	1 LB / 1000 SF	
	SEED MIX TYPE B NATIVE UPLAND MIX	1 LB / 1000 SF	

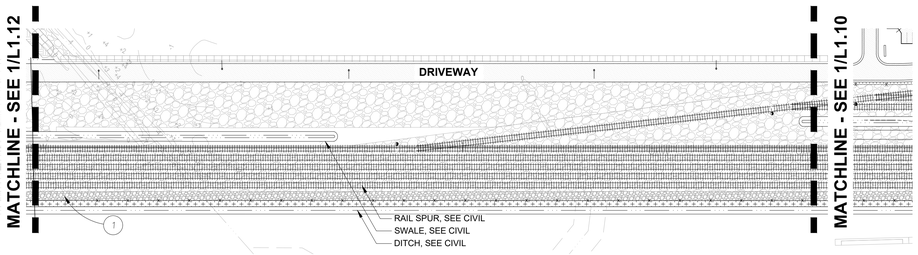


1 L1.12 PLANTING PLAN - RAIL MAINTENANCE ROAD

100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

KEYNOTES

1. PERIMETER PLANTING, TYPE A, SEE 3/L1.11

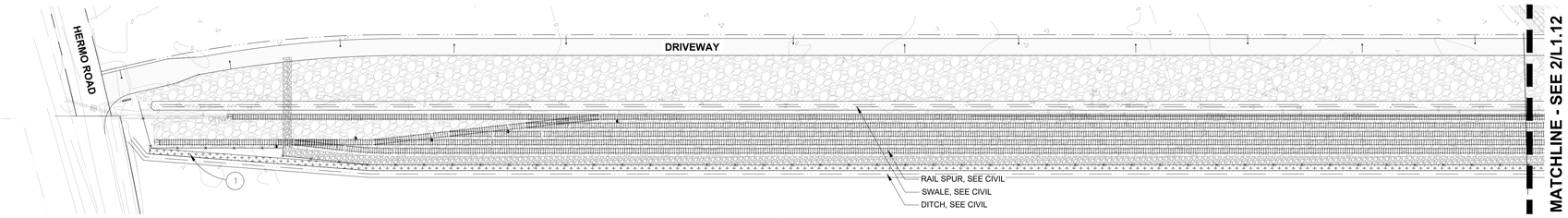


2 L1.12 PLANTING PLAN - DRIVEWAY

100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

KEYNOTES

1. PERIMETER PLANTING, TYPE A, SEE 3/L1.11



3 L1.12 PLANTING PLAN - DRIVEWAY

100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

KEYNOTES

1. PERIMETER PLANTING, TYPE A, SEE 3/L1.11

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SHEET TITLE:

PLANTING PLAN - DRIVEWAY AND RAIL MAINTENANCE ROAD

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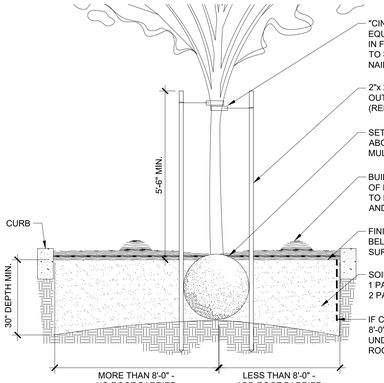
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COMPLETENESS SUBMITTAL SET - 7/8/2021



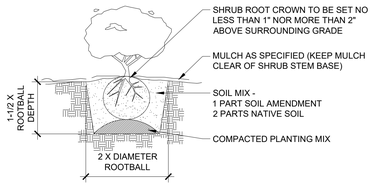
1 DECIDUOUS TREE PLANTING DETAIL

SCALE: NTS

LS-DETL-TREE-DECD-CURB.DWG

NOTES

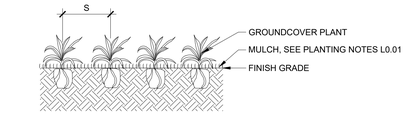
1. PLANT ALL TREES AT LEAST 32 INCHES FROM THE END OF HEAD-IN PARKING SPACES TO PREVENT DAMAGE FROM CAR OVERHANGS.
2. ALL ROOTS MUST BE COMPLETELY COVERED. BACKFILL SHOULD BE THOROUGHLY WATERED AS IT IS PLACED AROUND THE ROOTS.
3. SCARIFY AND ROUGHEN BOTTOM OF PLANTING PIT PRIOR TO PLACING TREE AND TOPSOIL. SLOPE BOTTOM TO DRAIN TO SIDES.
4. THE ENTIRE WIDTH OF THE PLANTING ISLAND SHALL CONTAIN ONLY SOIL/COMPOST PLANTING MIX AND BE FREE OF ALL DEBRIS INCLUDING GARBAGE, CONCRETE, GRAVEL OR OTHER FOREIGN MATERIALS.
5. ALL TREES SHALL CONFORM TO MOST RECENT ANSI Z60.1 AMERICAN STANDARD FOR NURSERY STOCK. FIRST LIMBS OF DECIDUOUS TREES IN PARKING LOTS AND ALONG STREETS AND SIDEWALKS SHALL BE 5 FEET ABOVE GROUND OR HIGHER.
6. EXCAVATE HOLE INTO PREPARED SOIL TO ONE INCH LESS THAN HEIGHT OF ROOTBALL AND TWO TIMES THE WIDTH OF THE ROOTBALL. TAMP BOTTOM OF PIT UNDER ROOTBALL THOROUGHLY TO KEEP TREE FROM SETTLING. BUTTRESS AT THE BOTTOM OF THE PIT NO LESS THAN THREE FEET WIDE IF NEEDED TO REINFORCE LATERAL SUPPORT.
7. DO NOT DAMAGE THE ROOTBALL WHEN PLANTING. REMOVE ALL WIRE, STRING AND BURLAP FROM TOP AND SIDES OF ROOTBALL ONLY AFTER PLACING IN THE HOLE.
8. SET TREE STRAIGHT ON TAMPED SOIL.
9. BACKFILL HOLE WITH APPROVED PLANTING MEDIUM MIX TO HALF DEPTH. TAMP SOIL TO STABILIZE ROOTBALL. FINISH BACKFILLING AND TAMP AGAIN.
10. STAKE TREES OUTSIDE OF ROOTBALL AND PARALLEL TO PLANTING ISLAND CURBS WITH TREE STAKES. USE ONE INCH HEAVY CHAINLOCK TREE TIES OR SIMILAR. REMOVE AFTER ONE YEAR.
11. WATER IMMEDIATELY AND THOROUGHLY, TWICE PER WEEK DURING THE FIRST MONTH, THEN ONCE PER WEEK THROUGH THE REMAINDER OF THE DRY SEASON. WATER A MINIMUM OF ONCE PER MONTH DURING THE SECOND SUMMER SEASON.
12. ALL PLANTING BEDS CONTAINING TREES AND SHRUBS AND SURFACE DRAINAGE SHALL BE PREPARED SIMILAR TO THIS LANDSCAPE TREE PLANTING AND DRAINAGE DETAIL.



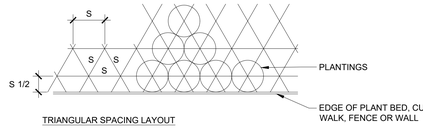
2 SHRUB PLANTING

SCALE: NTS

LS-DETL-SHRB.DWG



PLANTING SECTION



TRIANGULAR SPACING LAYOUT

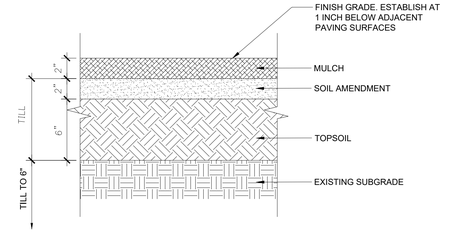
NOTES

1. TILL SOIL SO THAT THERE ARE NO CLODS OR CLUMPS LARGER THAN 1 1/2" DIAMETER

3 GROUNDCOVER PLANTING

SCALE: NTS

LS-DETL-GCVR.DWG



NOTES

1. REMOVE ALL ROCK, DEBRIS AND OTHER FOREIGN MATTER OVER 1" IN DIAMETER FROM TOP 12" OF SOIL.
2. RIP AND TILL SUBGRADE TO 6" DEEP (MIN.) PRIOR TO INSTALLING TOPSOIL AND TILL INTERFACE OF SUBGRADE AND TOPSOIL.
3. TILL TOPSOIL AND SOIL AMENDMENTS TO A MIN. 12" DEPTH.
4. SUBMIT SAMPLE OF MULCH & TOPSOIL FOR ACCEPTANCE PRIOR TO PLACEMENT.

4 SOIL PREPARATION

SCALE: NTS

LS-DETL-PLNT-SOIL.DWG

NOTES

1. REMOVE ALL ROCK, DEBRIS AND OTHER FOREIGN MATTER OVER 1" IN DIAMETER FROM TOP 6" OF SOIL.
2. RIP AND TILL SUBGRADE TO 6" DEEP (MIN.) PRIOR TO INSTALLING TOPSOIL AND TILL INTERFACE OF SUBGRADE AND TOPSOIL.
3. TILL TOPSOIL AND SOIL AMENDMENTS TO A MIN. 8" DEPTH.
4. SUBMIT SAMPLE OF BARK MULCH & TOPSOIL FOR ACCEPTANCE PRIOR TO PLACEMENT.

5 SOIL PREP. AT HYDROSEED

SCALE: NTS

LS-DETL-PLNT-SOIL-SEED.DWG

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Project

NEXT RENEWABLE FUELS, INC. PORT WESTWARD COLUMBIA COUNTY, OR

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT
Steven P. Tuttle
OREGON
11/14/2008

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REVISION SCHEDULE

Delta	Issued As	Issue Date

SHEET TITLE:

PLANTING DETAILS

DRAWN BY: RAC

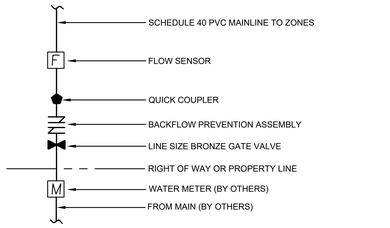
CHECKED BY: SPT

SHEET

L5.10

JOB NO. **2200315.01**

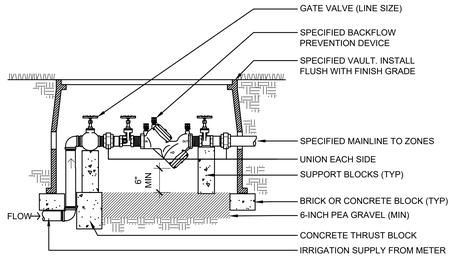
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1 POINT OF CONNECTION

SCALE: NTS

LA-DETL-GEN-POC.DWG



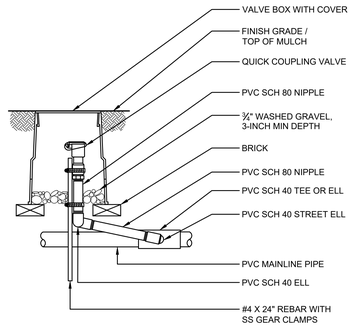
NOTE:
INSTALL BACKFLOW PREVENTOR PER CODE AND REQUIREMENTS OF PREVAILING JURISDICTIONS.

2 DOUBLE CHECK VALVE

BACKFLOW PREVENTOR (BELOW GRADE)

SCALE: NTS

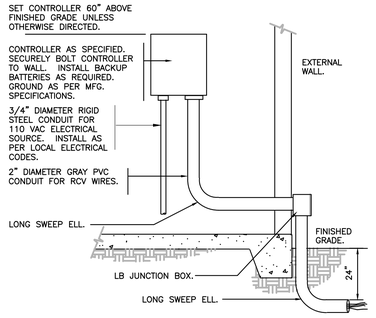
LA-DETL-VALV-DCHK.DWG



3 QUICK COUPLER VALVE

SCALE: NTS

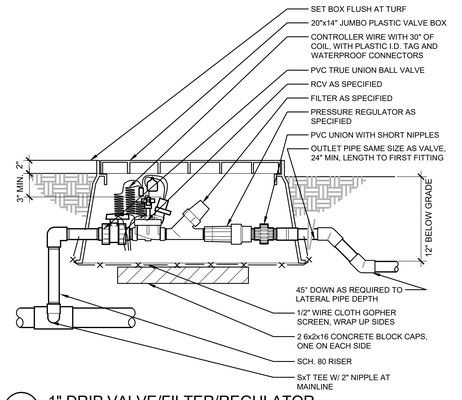
LA-DETL-VALV-QCUP.DWG



4 INTERIOR WALL MOUNT CONTROLLER

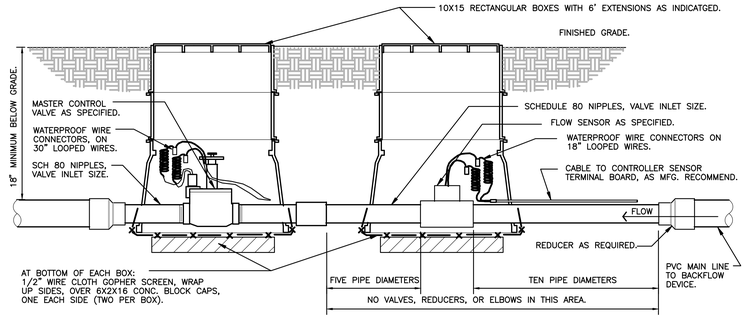
1" = 1'-0"

FX-IR-FX-CONT-21



5 1" DRIP VALVE/FILTER/REGULATOR

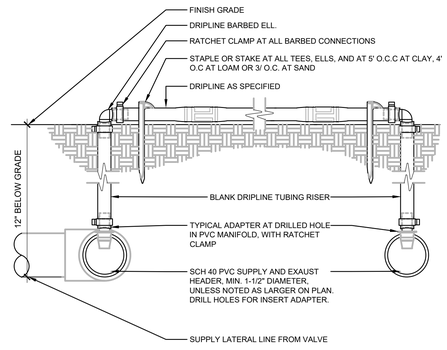
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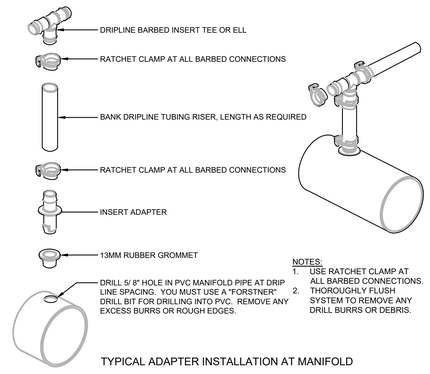
6 MASTER VALVE/FLOW SENSOR ASSEMBLY

1 1/2" = 1'-0"

FX-IR-FX-MAST-56



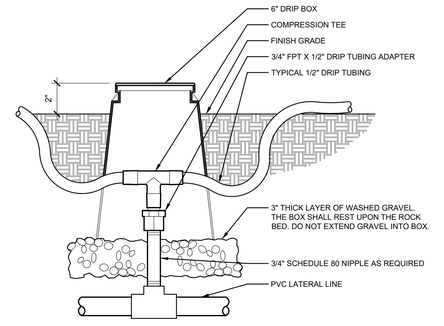
TYPICAL DRIPLINE TO MANIFOLD CONNECTION WITH ADAPTER



TYPICAL ADAPTER INSTALLATION AT MANIFOLD

7 DRIPLINE TO MANIFOLD ADAPTER CONNECTION

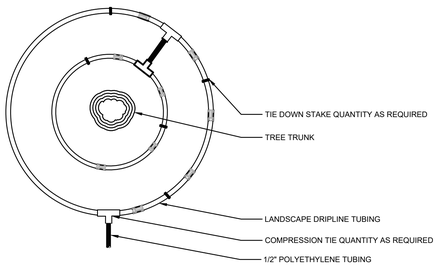
SCALE: NTS



8 ZONE CONTROL

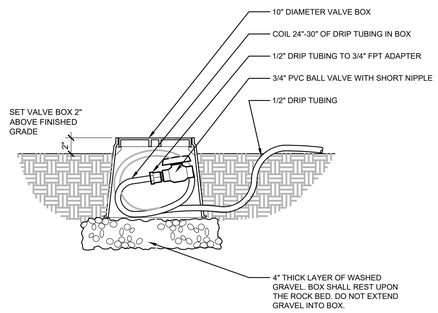
SCALE: NTS

315-00.01.DWG



9 DRIPLINE AROUND TREE

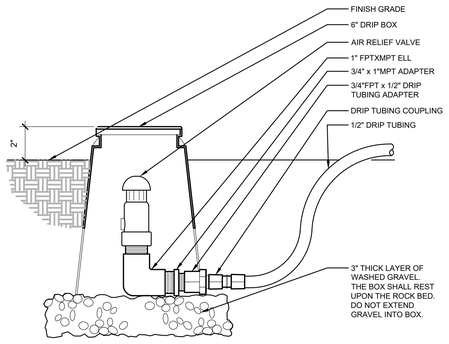
SCALE: NTS



10 DRIP FLUSH VALVE

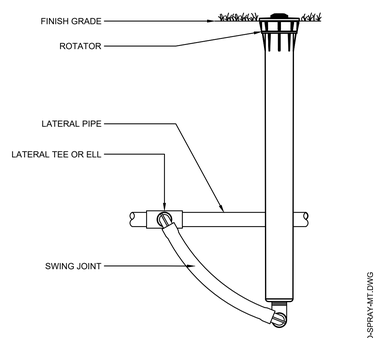
1:1

SCALE: NTS



11 DRIP AIR RELIEF VALVE IN BOX

SCALE: NTS



12 MULTI-TRAJECTORY SPRAY HEAD

DETAIL-SUBTITLE

SCALE: NTS

LA-DETL-HEAD-SPRAY-MT.DWG

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SHEET TITLE:

IRRIGATION DETAILS

DRAWN BY: RAC

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JOB NO. **2200315.01**

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