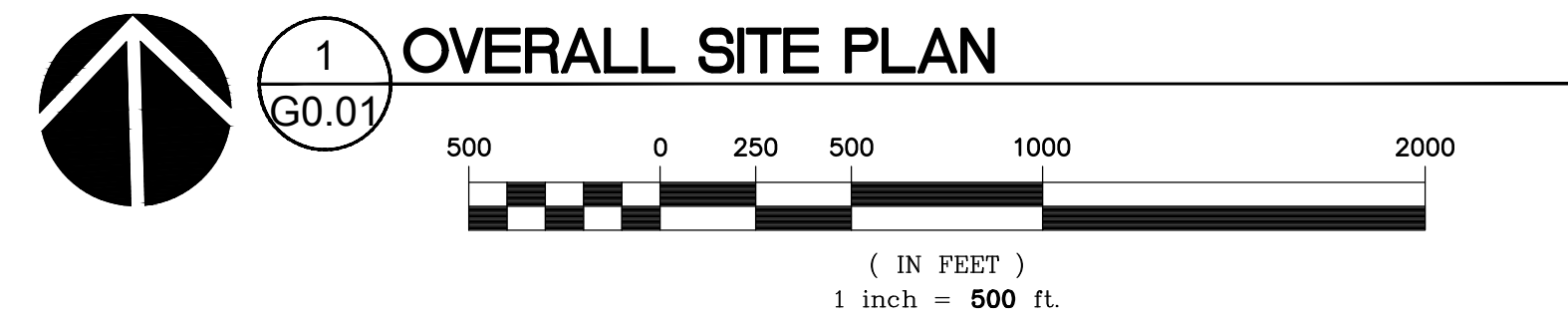
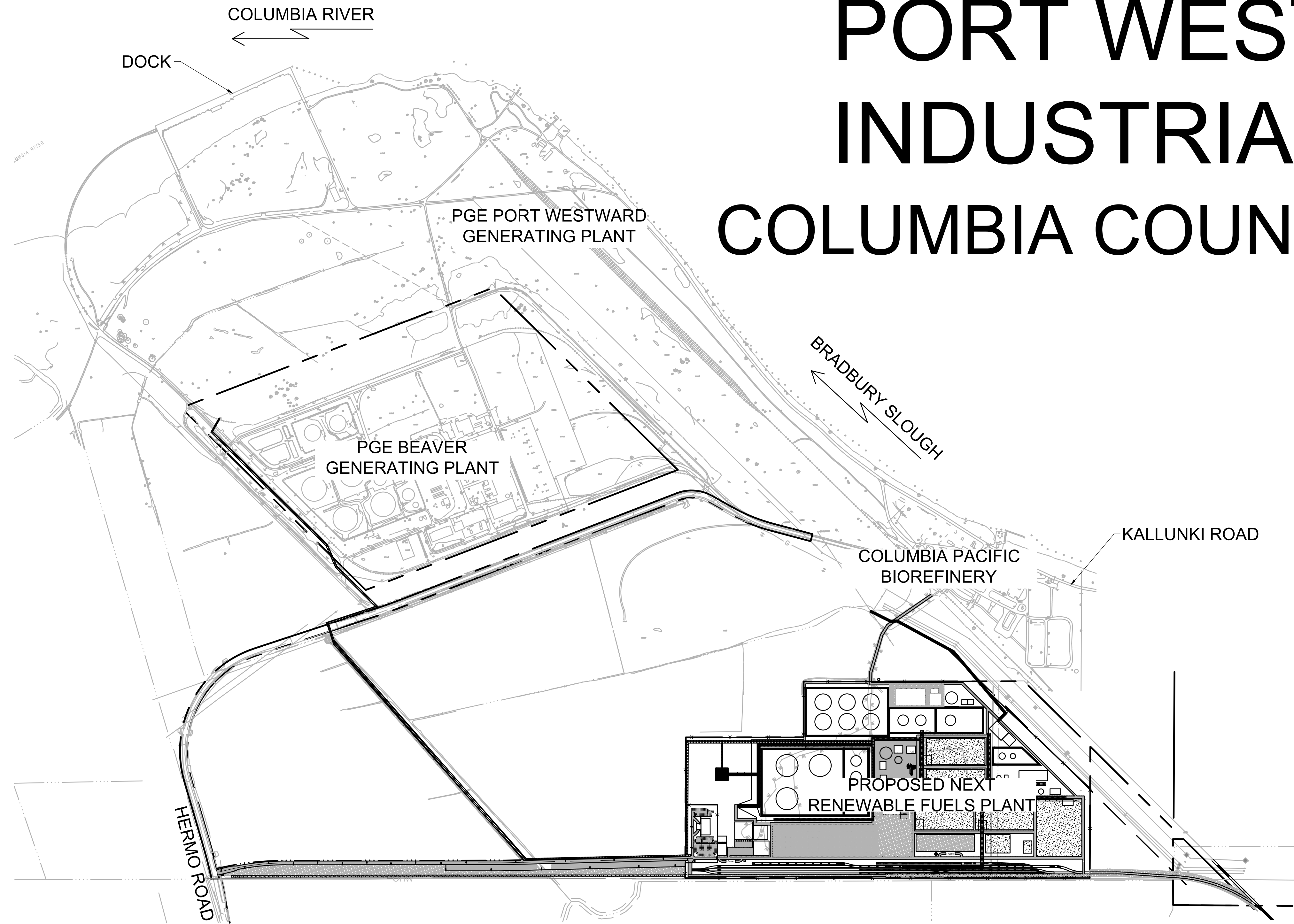


NEXT RENEWABLE FUELS PORT WESTWARD INDUSTRIAL PARK COLUMBIA COUNTY, OREGON



1 OVERALL SITE PLAN
G0.01



2 VICINITY MAP
G0.01 NTS

DEVELOPER/OWNER:
NEXT RENEWABLE FUELS OREGON
11767 KATY FREEWAY
SUITE 705
HOUSTON, TX 77079
CONTACT: GENE COTTEN
PHONE: 681-201-2653
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: 971-348-3761
BNIELSEN@MCKNZE.COM

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

SHEET INDEX

G0.01	COVER SHEET
C0.01	CIVIL NOTES AND LEGEND
V1.10	EXISTING SITE PLAN EAST
V1.11	EXISTING SITE PLAN WEST
C1.11	PROPOSED SITE PLAN
C1.12	ACCESS, PARKING, AND CIRCULATION PLAN
C1.13	ACCESS ROAD PLAN
C1.14	PIPELINE PLAN
C1.20	GRADING PLAN
C1.30	DRAINAGE PLAN
C1.40	SIGN PLAN
C1.50	ILLUMINATION PLAN
C1.51	ILLUMINATION PLAN - PARKING AND ILLUMINATION DETAILS
C2.11	WETLAND IMPACT PLAN
EC1.10	EROSION CONTROL - NORTH
EC1.11	EROSION CONTROL - WEST
EC1.12	EROSION CONTROL - EAST
EC5.10	EROSION CONTROL DETAILS
L1.10	LANDSCAPE GENERAL INFORMATION AND PLANTING PLAN
L1.11	PLANTING PLAN - ENLARGEMENTS
L5.10	PLANTING DETAILS
L5.11	IRRIGATION DETAILS



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF
MACKENZIE AND ARE NOT TO BE USED
OR REPRODUCED IN ANY MANNER
WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
COVER SHEET

DRAWN BY: CAM

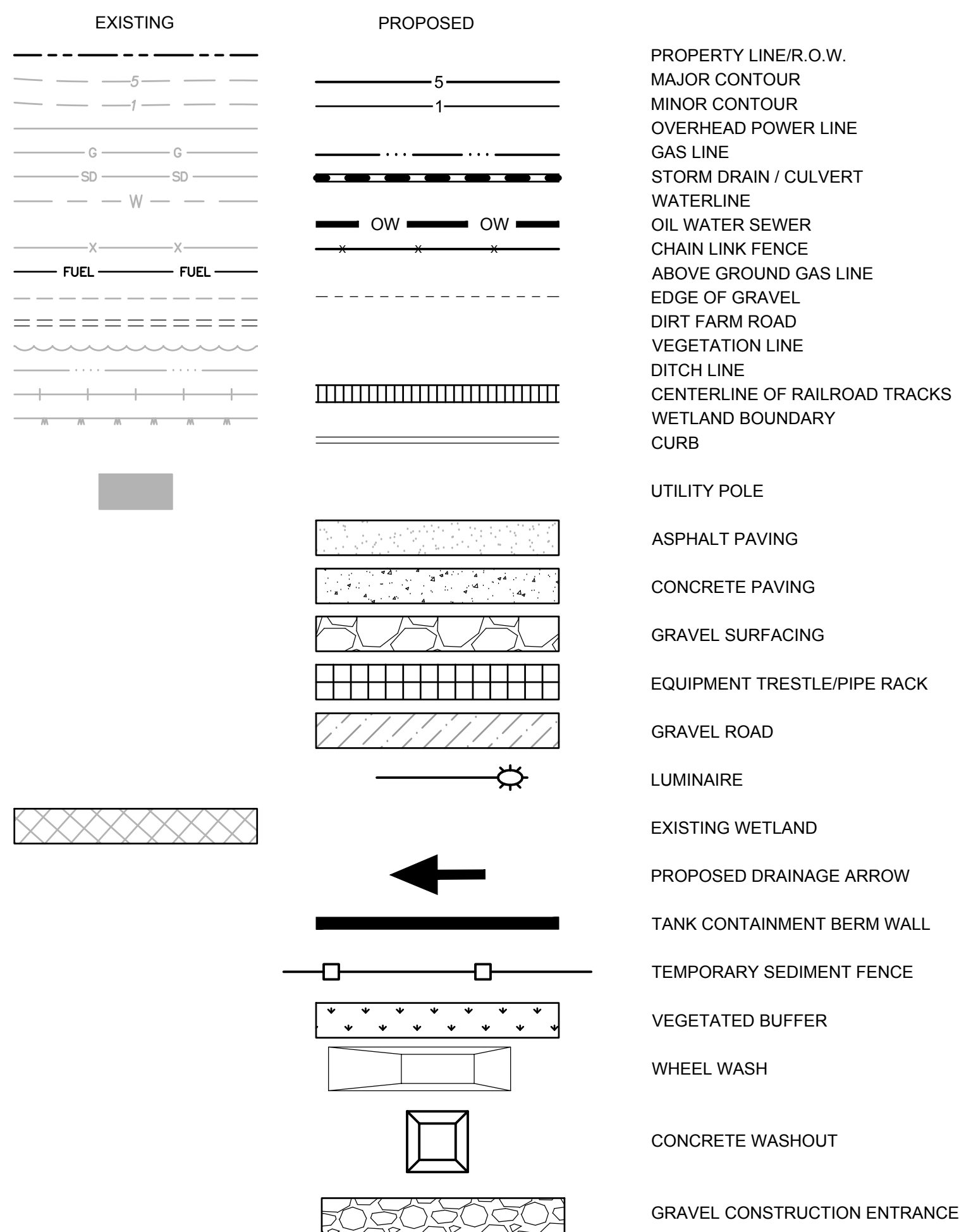
CHECKED BY: BDN

SHEET

G0.01

JOB NO. **2200315.01**

LEGEND:



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 (AHH). ALL EROSION CONTROL MEASURES SHALL CONFORM TO THE REQUIREMENTS OF THE AHH, 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 JURISDICTION
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.



MACKENZIE
DESIGN DRIVEN • CLIENT FOCUSED

NEXT RENEWABLE FUELS OREGON

11767 KATY FREEWAY
SUITE 705
HOUSTON, TX 77079

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



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF MACKENZIE AND ARE NOT TO BE USED OR REPRODUCED IN ANY MANNER, WITHOUT PRIOR WRITTEN PERMISSION

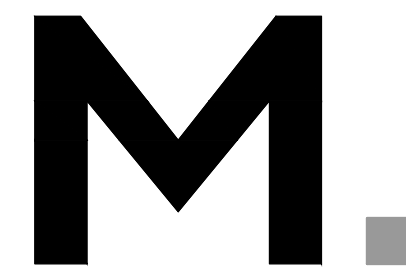
REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
CIVIL NOTES AND LEGEND

DRAWN BY: CAM
CHECKED BY: BDN

C0.01

JOB NO. 2200315.01



Architecture • Interiors
Planning • Engineering

Portland, OR
503.224.9560
Vancouver, WA
360.695.7879
Seattle, WA
206.749.9993
www.mcknize.com

MACKENZIE
DESIGN-BUILD • CLIENT FOCUS

Client
**NEXT RENEWABLE
FUELS OREGON**

**11767 KATY FREEWAY
SUITE 705
HOUSTON, TX 77079**

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



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF
MACKENZIE AND ARE NOT TO BE USED
OR REPRODUCED IN ANY MANNER
WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**EXISTING SITE
PLAN
WEST**

DRAWN BY: CAM

CHECKED BY: BDN

SHEET

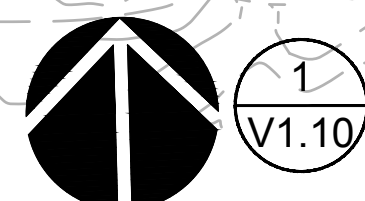
V1.10

JOB NO. **2200315.01**

NEXT PERMIT DRAWING SET - 1/8/2021
220031500DRAWINGS\CIVIL\315-V1.10.DWG BDN 01/08/21 11:06 1:10

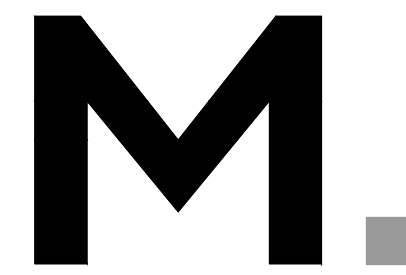


LEGEND:
SEE LEGEND ON SHEET C01.01



EXISTING SITE PLAN - WEST
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

MATCH LINE - SEE SHEET V1.11



Architecture • Interiors
Planning • Engineering

Portland, OR
503.224.9560
Vancouver, WA
360.695.7879
Seattle, WA
206.749.9993
www.mcknize.com

MACKENZIE
DESIGN-BUILD • CLIENT FOCUS

Client
**NEXT RENEWABLE
FUELS OREGON**

**11767 KATY FREEWAY
SUITE 705
HOUSTON, TX 77079**

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



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF
MACKENZIE AND ARE NOT TO BE USED
OR REPRODUCED IN ANY MANNER
WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**EXISTING SITE
PLAN
EAST**

DRAWN BY: CAM
CHECKED BY: BDN
SHEET

V1.11

JOB NO. **2200315.01**

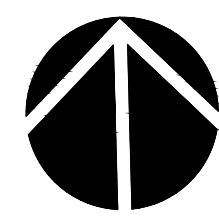
NEXT PERMIT DRAWING SET - 1/8/2021

220031500DRAWINGS\CIVIL\315-V1.10.DWG BDN 01/08/21 11:06 1:10

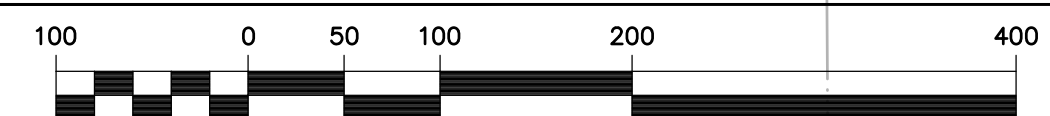


MATCH LINE - SEE SHEET V1.10

LEGEND:
SEE LEGEND ON SHEET C0.01



1
V1.11
EXISTING SITE PLAN - EAST



(IN FEET)
1 inch = 100 ft.

REVISION SCHEDULE		
Delta	Issued As	Issue Date

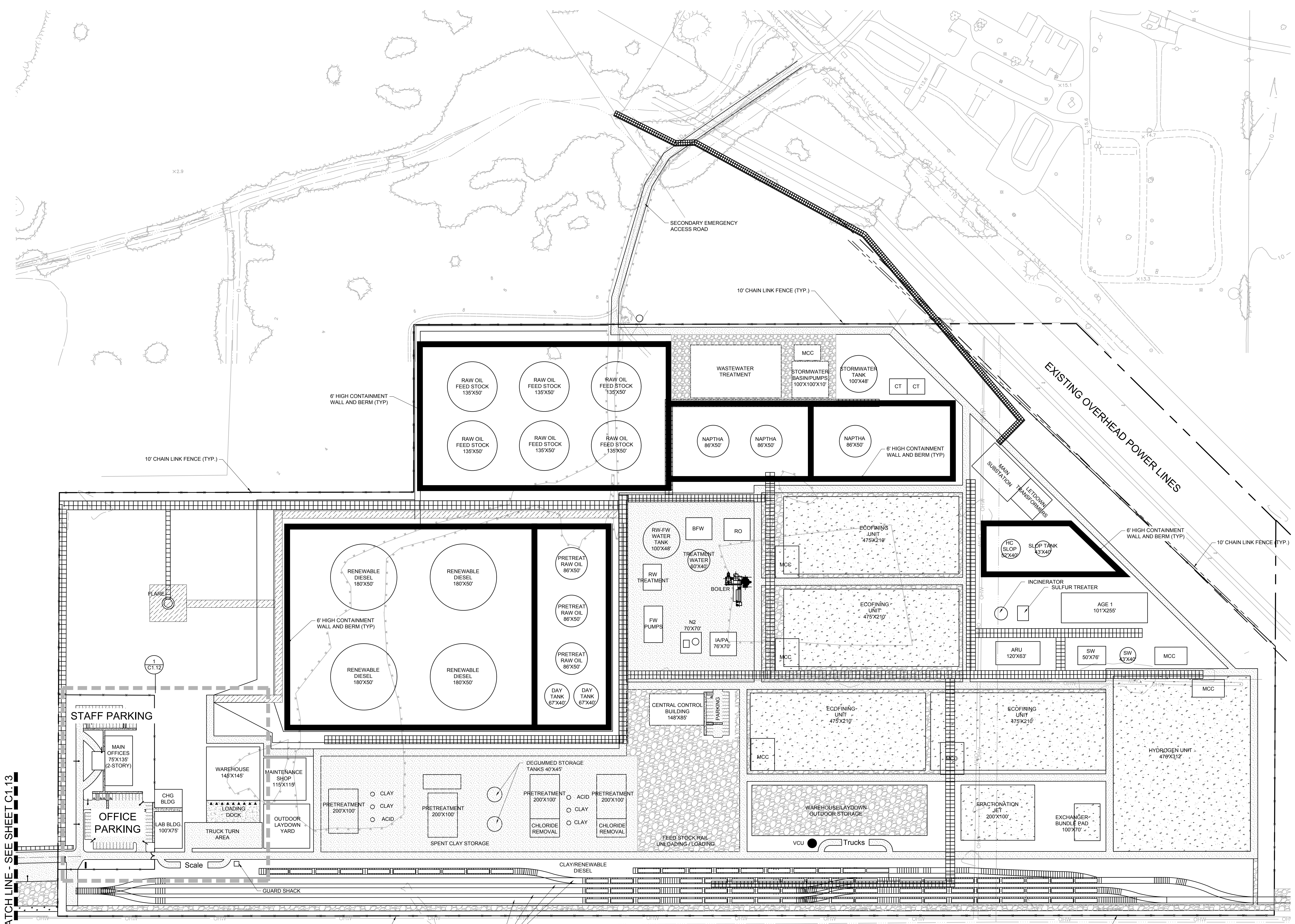
SHEET TITLE:

**PROPOSED
SITE PLAN**

DRAWN BY: CAM
CHECKED BY: BDN
SHEET

C1.11

JOB NO. **2200315.01**



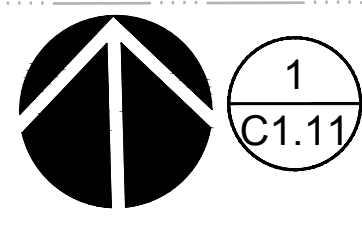
MATCH LINE - SEE SHEET C1.13

LEGEND:
SEE LEGEND ON SHEET C0.01

PARKING SUMMARY:

	STANDARD SPACES	ACCESSIBLE SPACES	TOTAL SPACES
OFFICE PARKING	61	4	65
STAFF PARKING	28	1	29
CONTROL BLDG PARKING	23	1	24
TOTAL PARKING	112	6	118

10' HIGH CHAIN LINK FENCE LOCATED OUTSIDE OF DITCH SLOPE (TYP.)



1 PROPOSED SITE PLAN



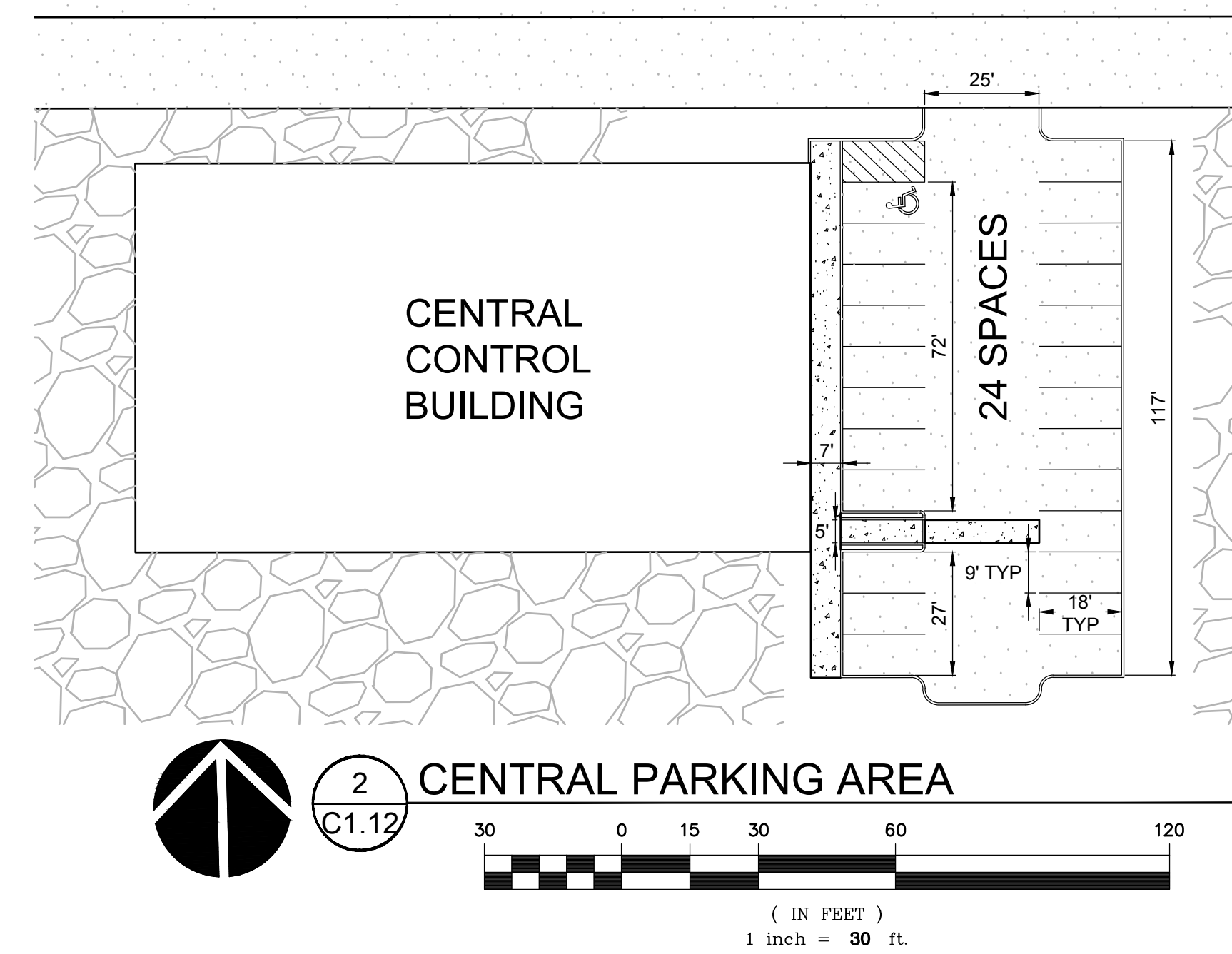
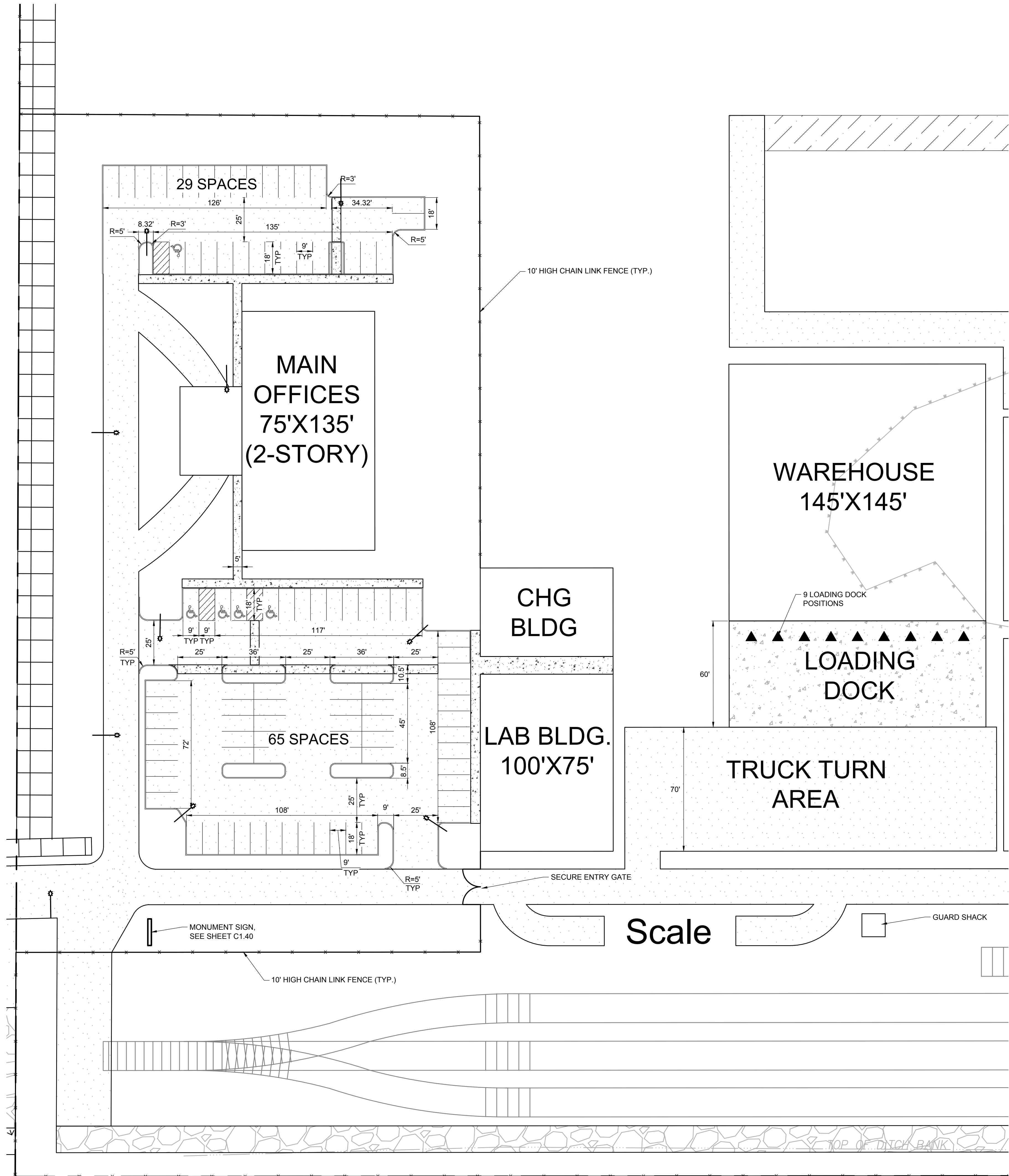
10' HIGH CHAIN LINK FENCE LOCATED OUTSIDE OF DITCH SLOPE (TYP.)

BUILDING AREA SUMMARY:

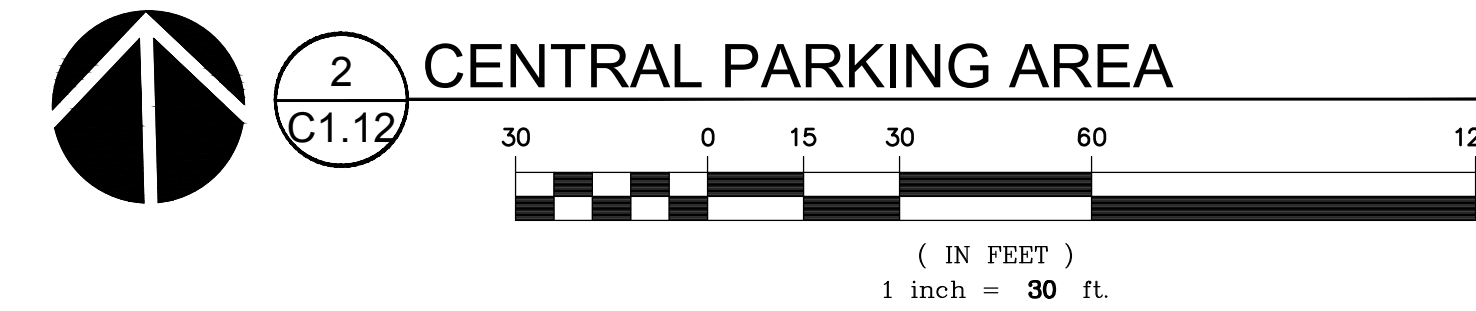
MAIN OFFICE:	20,250 SF
LAB:	7,500 SF
CHANGE BUILDING:	3,750 SF
WAREHOUSE:	21,025 SF
MAINTENANCE:	13,335 SF
CENTRAL CONTROL:	12,580 SF
TOTAL BUILDING FLOOR AREA:	78,330 SF

SITE COVERAGE SUMMARY:

TOTAL SITE AREA:	5,550,980 SF (127.43 AC)
PROPOSED ASPHALT AREA:	831,245 SF (19.08 AC)
PROPOSED CONCRETE AREA:	626,056 SF (14.37 AC)
PROPOSED GRAVEL ROAD AREA:	223,768 SF (5.13 AC)
PROPOSED ROOF AREA:	276,163 SF (6.34 AC)
PROPOSED TANK AREA:	257,214 SF (5.90 AC)
PROPOSED IMPERVIOUS AREA:	2,214,446 SF (50.83 AC)
PROPOSED GRAVEL AREA:	661,387 SF (15.18 AC)
PROPOSED LANDSCAPE AREA:	1,561,433 SF (35.84 AC)
PROPOSED PERVIOUS AREA:	2,222,820 SF (51.02 AC)
SITE AREA OUTSIDE DEVELOPMENT:	1,113,714 (25.58 AC)



LEGEND:
 SEE LEGEND ON SHEET C0.01



© MACKENZIE 2021
 ALL RIGHTS RESERVED
 THESE DRAWINGS ARE THE PROPERTY OF
 MACKENZIE AND ARE NOT TO BE USED
 OR REPRODUCED IN ANY MANNER,
 WITHOUT PRIOR WRITTEN PERMISSION

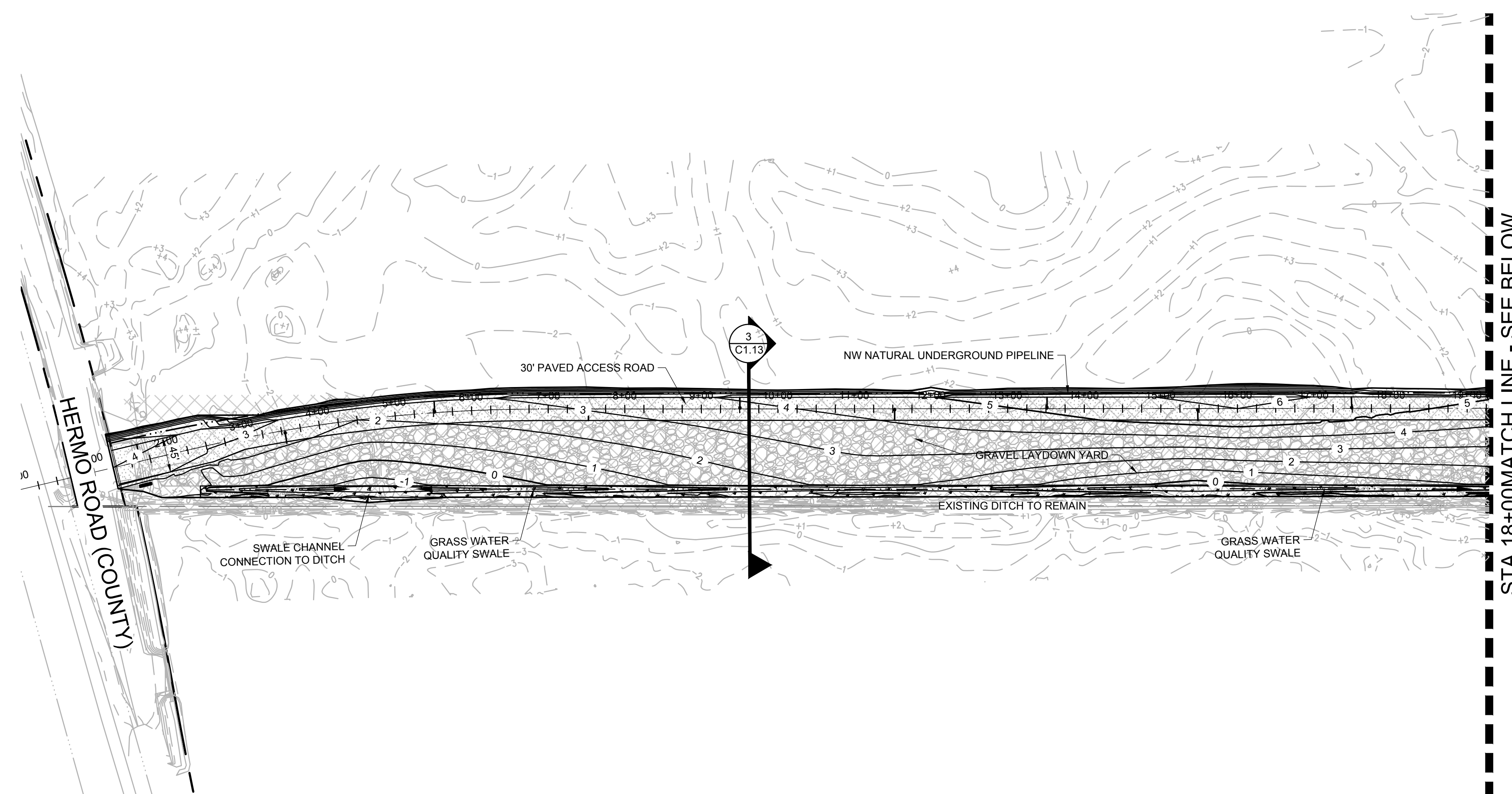
REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**ACCESS,
 PARKING, AND
 CIRCULATION
 PLAN**

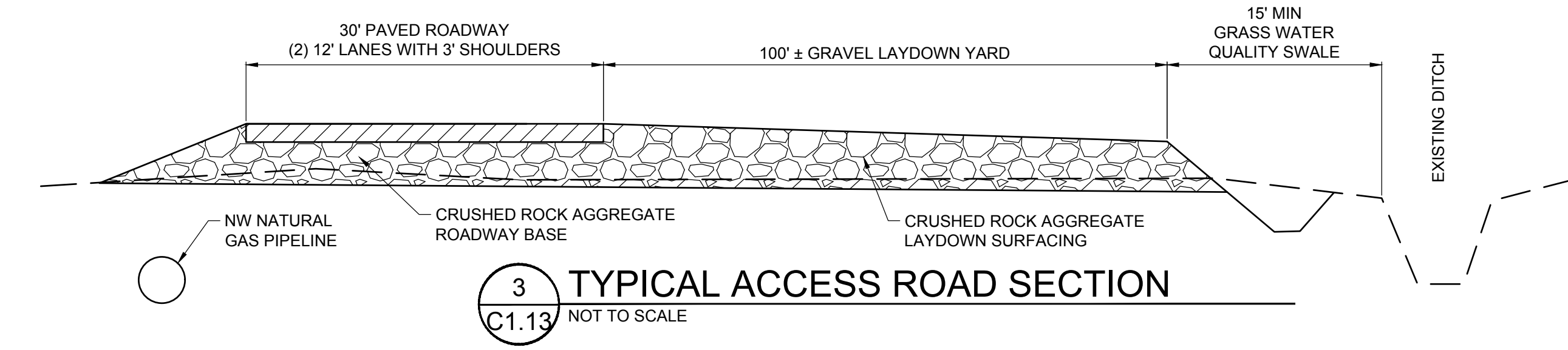
DRAWN BY: CAM
 CHECKED BY: BDN
 SHEET

C1.12

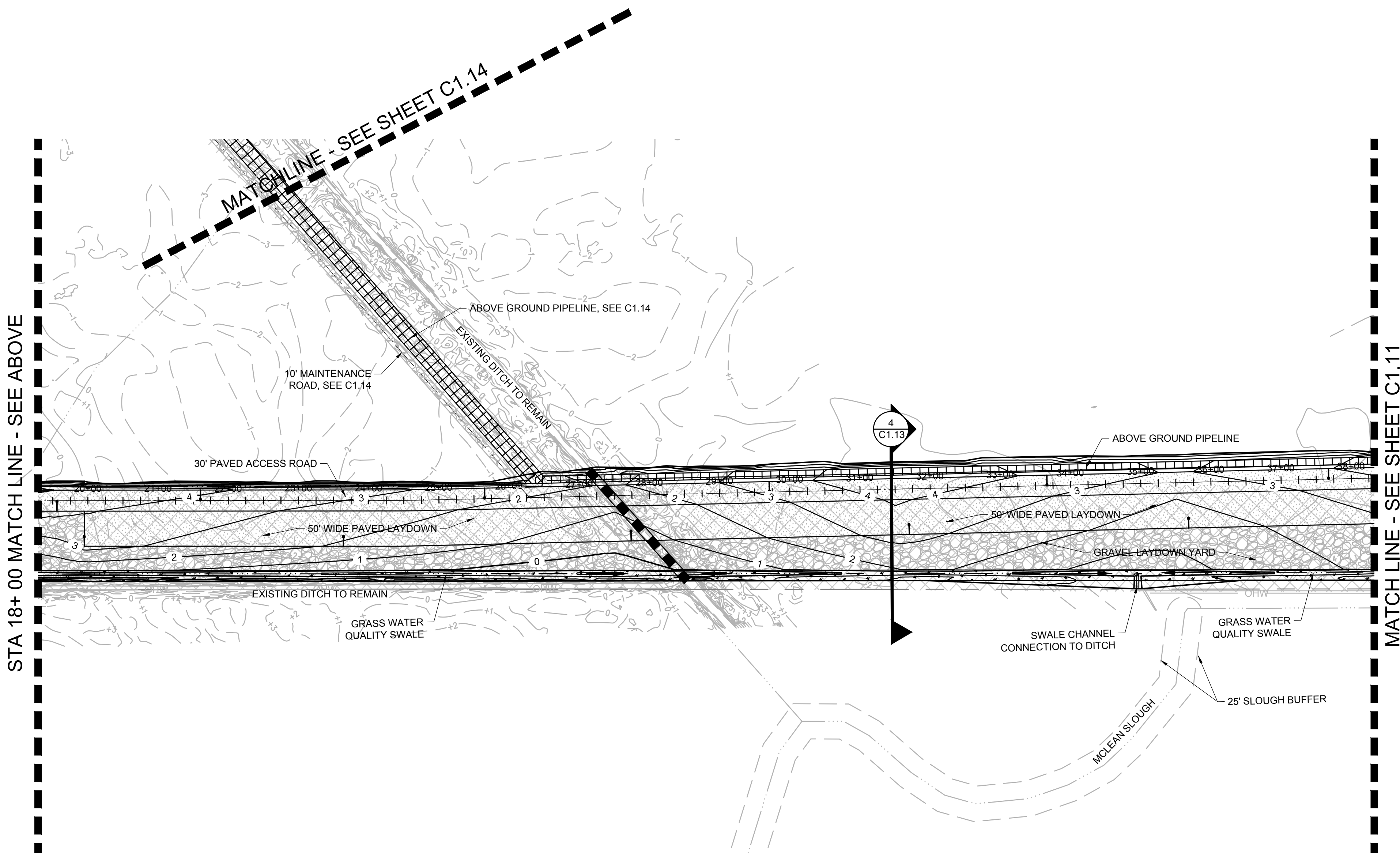
JOB NO. **2200315.01**



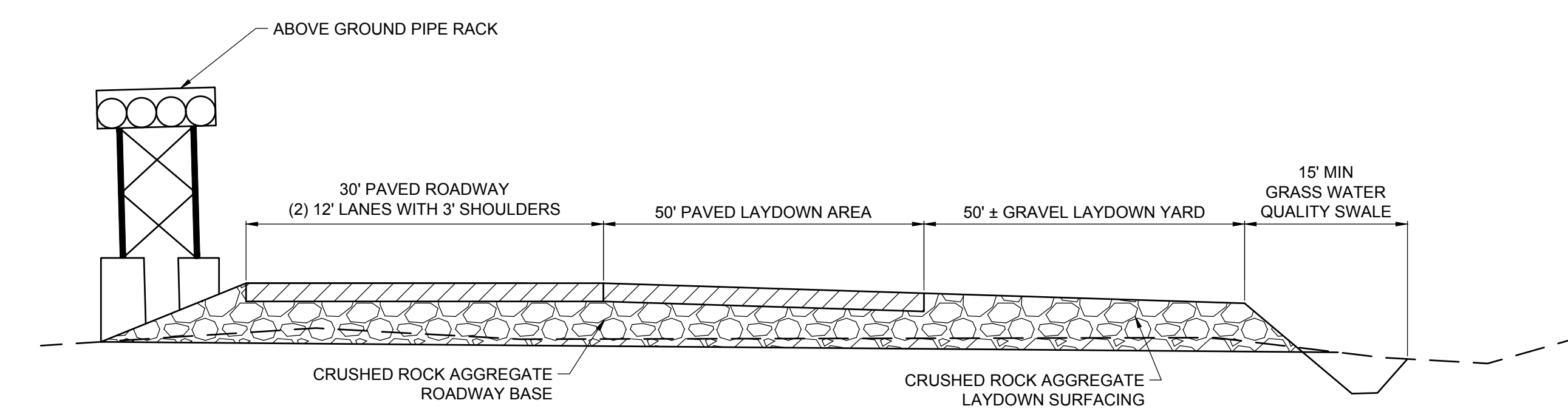
1 ACCESS ROAD PLAN - BEGIN TO STA 18+00
 SCALE: 1"=100'



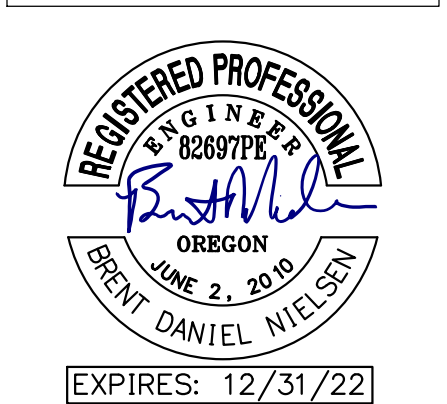
3 TYPICAL ACCESS ROAD SECTION
 NOT TO SCALE



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



4 TYPICAL ACCESS ROAD SECTION
 NOT TO SCALE



© MACKENZIE 2021
 ALL RIGHTS RESERVED
 THESE DRAWINGS ARE THE PROPERTY OF
 MACKENZIE AND ARE NOT TO BE USED
 OR REPRODUCED IN ANY MANNER
 WITHOUT PRIOR WRITTEN PERMISSION

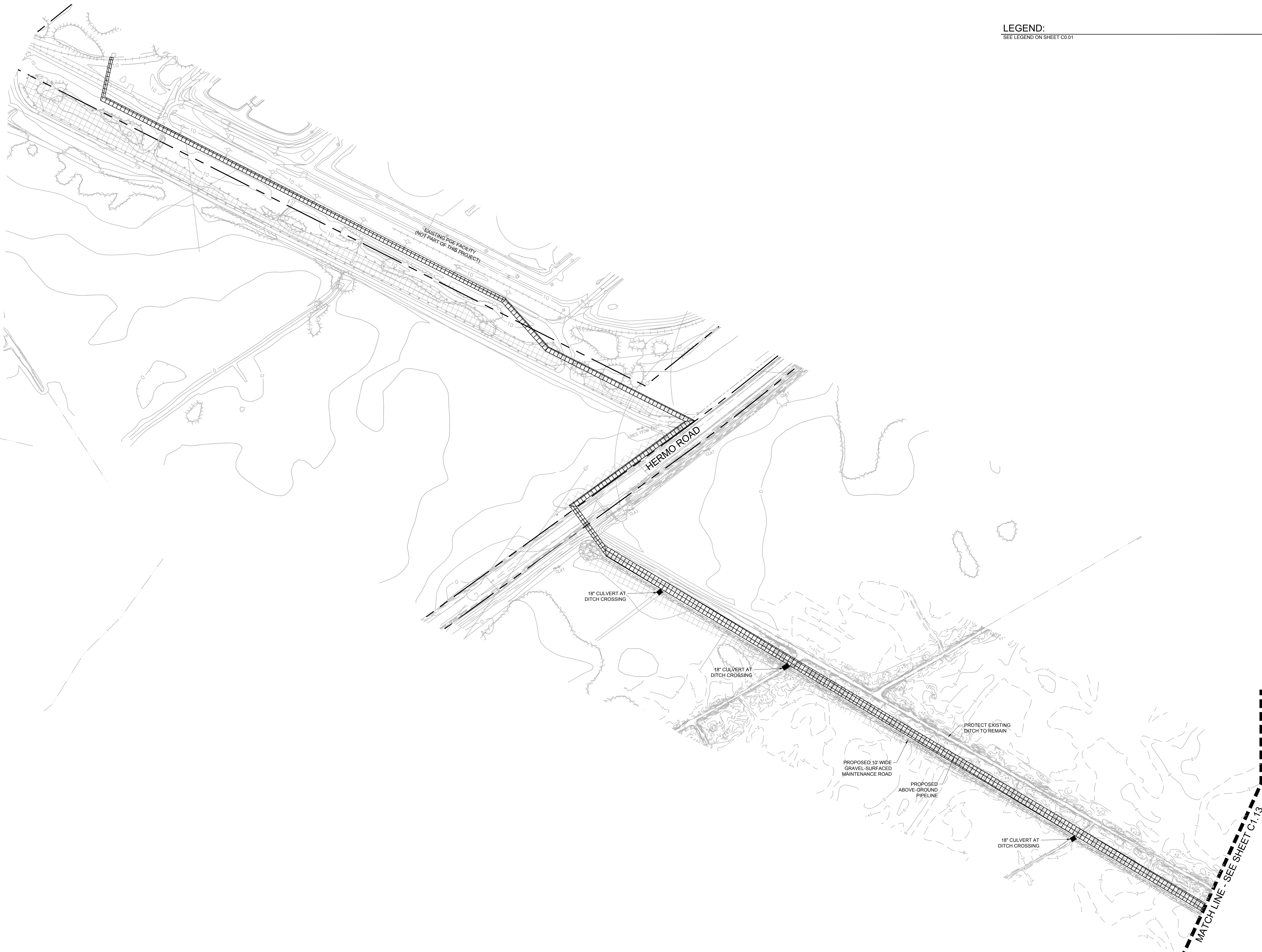
REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**ACCESS ROAD
 PLAN**

DRAWN BY: BMR
 CHECKED BY: BDN
 SHEET

C1.13

JOB NO. **2200315.01**



LEGEND:
SEE LEGEND ON SHEET C0.01



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF
MACKENZIE AND ARE NOT TO BE USED
OR REPRODUCED IN ANY MANNER
WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**PIPELINE
ALIGNMENT
PLAN**

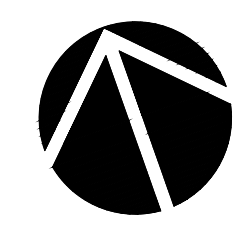
DRAWN BY: BMR

CHECKED BY: BDN

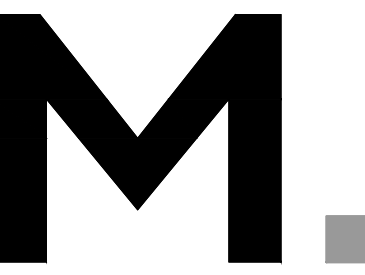
SHEET

C1.14

JOB NO. **2200315.01**



1 PIPELINE ALIGNMENT PLAN
SCALE: 1"=100'



Architecture • Interiors
Planning • Engineering

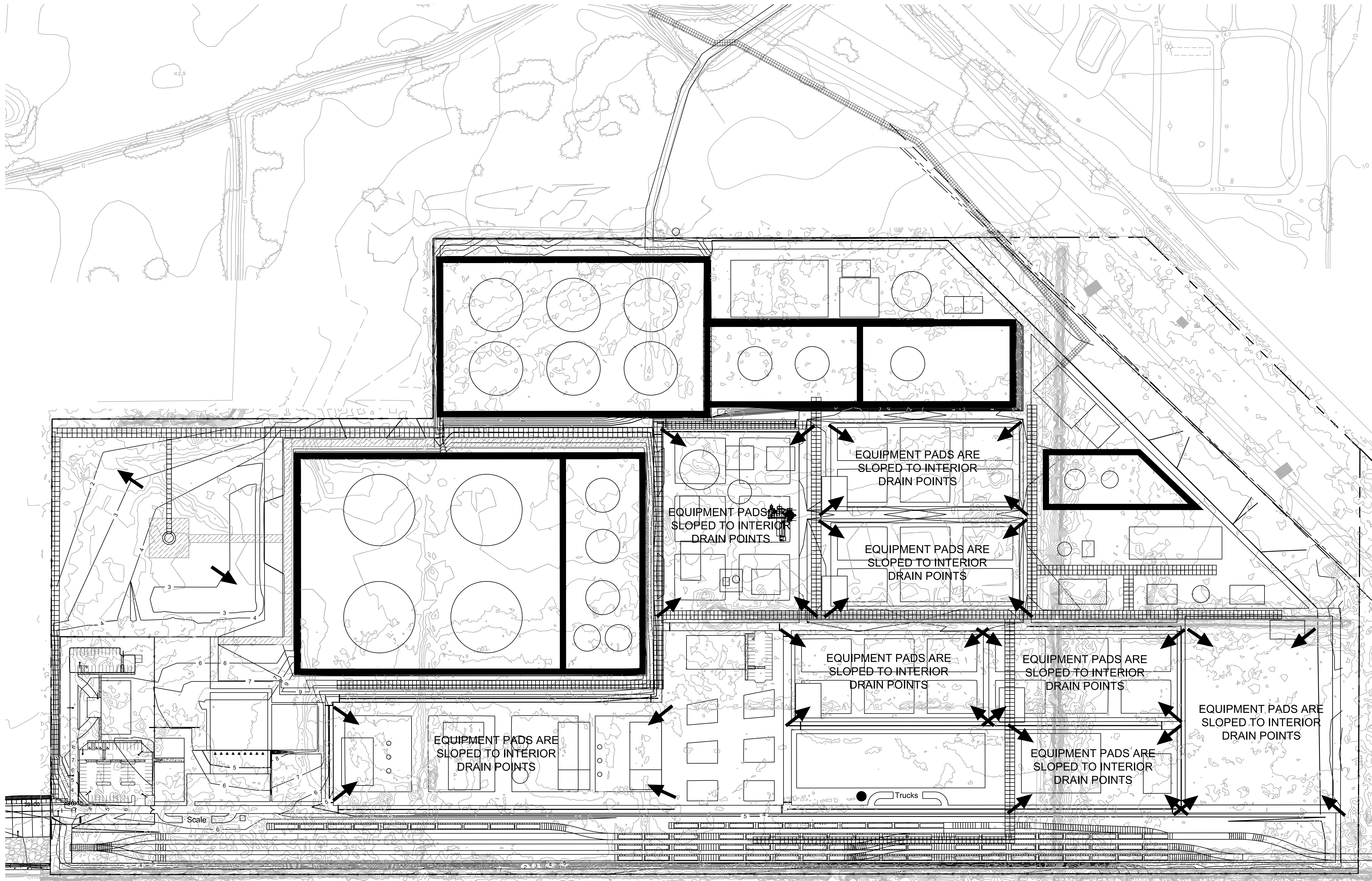
Portland, OR
503.224.9560
Vancouver, WA
360.695.7879
Seattle, WA
206.749.9993
www.mcknize.com

MACKENZIE
DESIGN DRIVEN • CLIENT FOCUSED

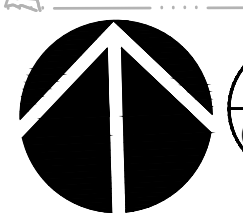
Client
**NEXT RENEWABLE
FUELS OREGON**

**11767 KATY FREEWAY
SUITE 705
HOUSTON, TX 77079**

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



LEGEND:
SEE LEGEND ON SHEET C0.01



1
C1.20

GRADING PLAN



(IN FEET)
1 inch = 100 ft.



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF
MACKENZIE AND ARE NOT TO BE USED
OR REPRODUCED IN ANY MANNER,
WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
GRADING PLAN

DRAWN BY: CAM
CHECKED BY: BDN
SHEET

C1.20

JOB NO. **2200315.01**



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF
MACKENZIE AND ARE NOT TO BE USED
OR REPRODUCED IN ANY MANNER
WITHOUT PRIOR WRITTEN PERMISSION

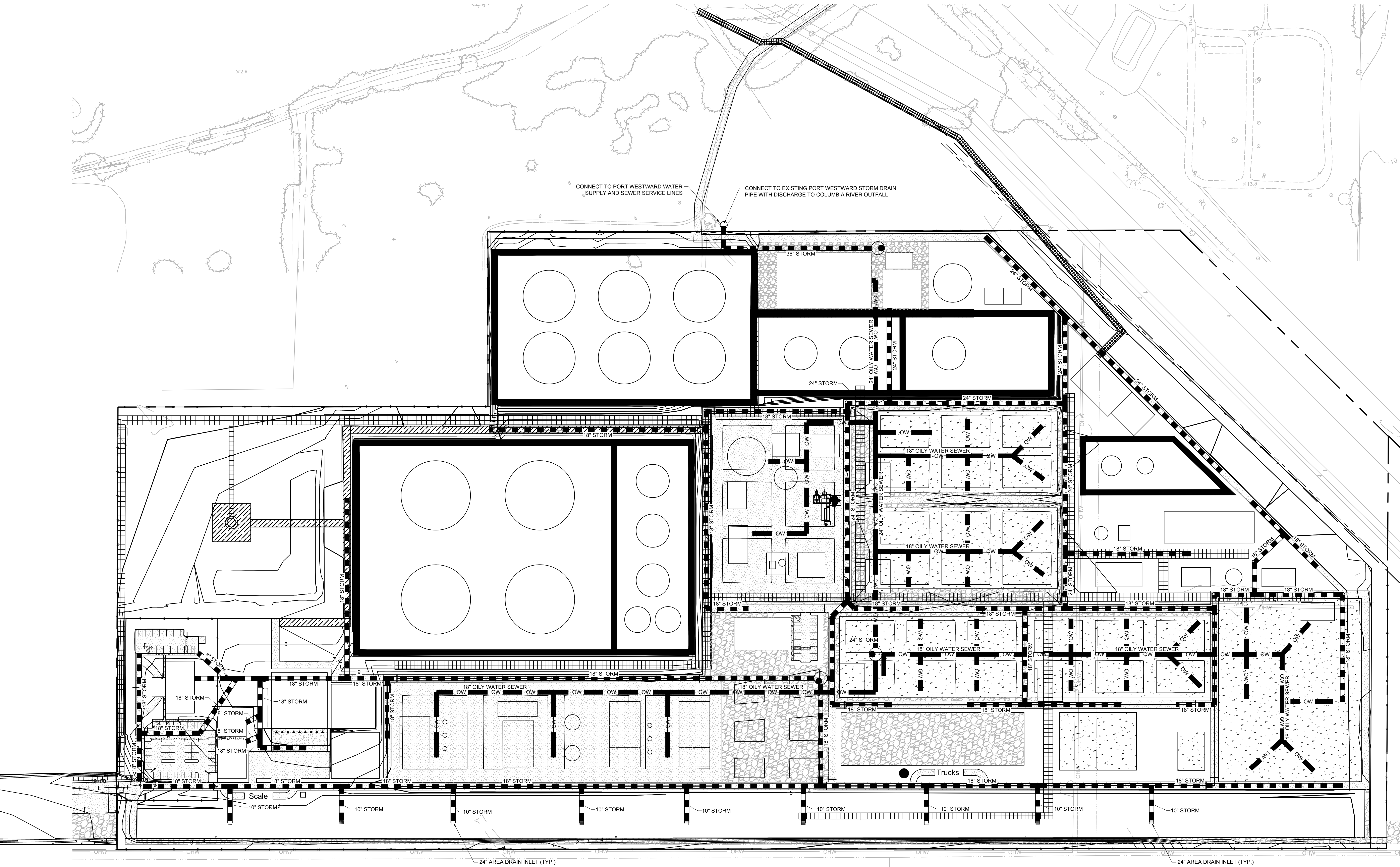
Delta	Issued As	Issue Date

SHEET TITLE:
**DRAINAGE
PLAN**

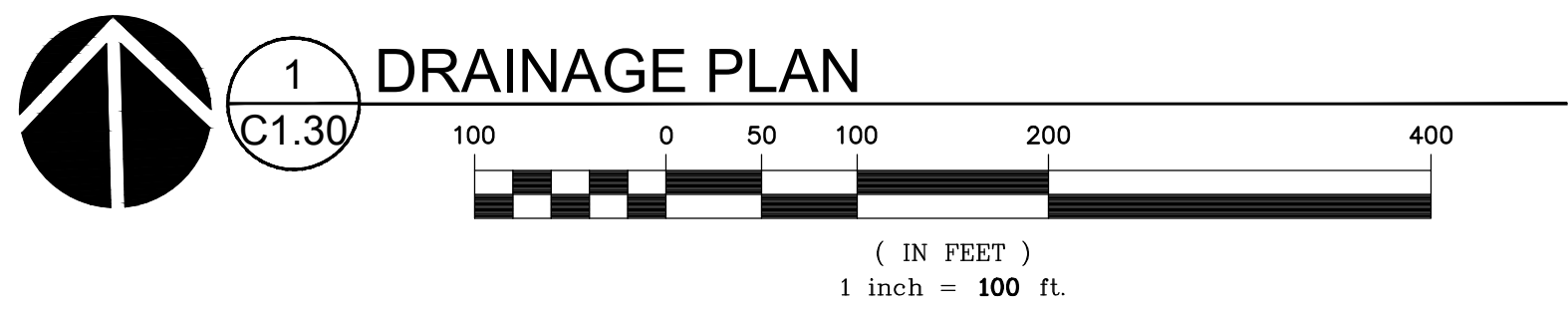
DRAWN BY: CAM
CHECKED BY: BDN
SHEET

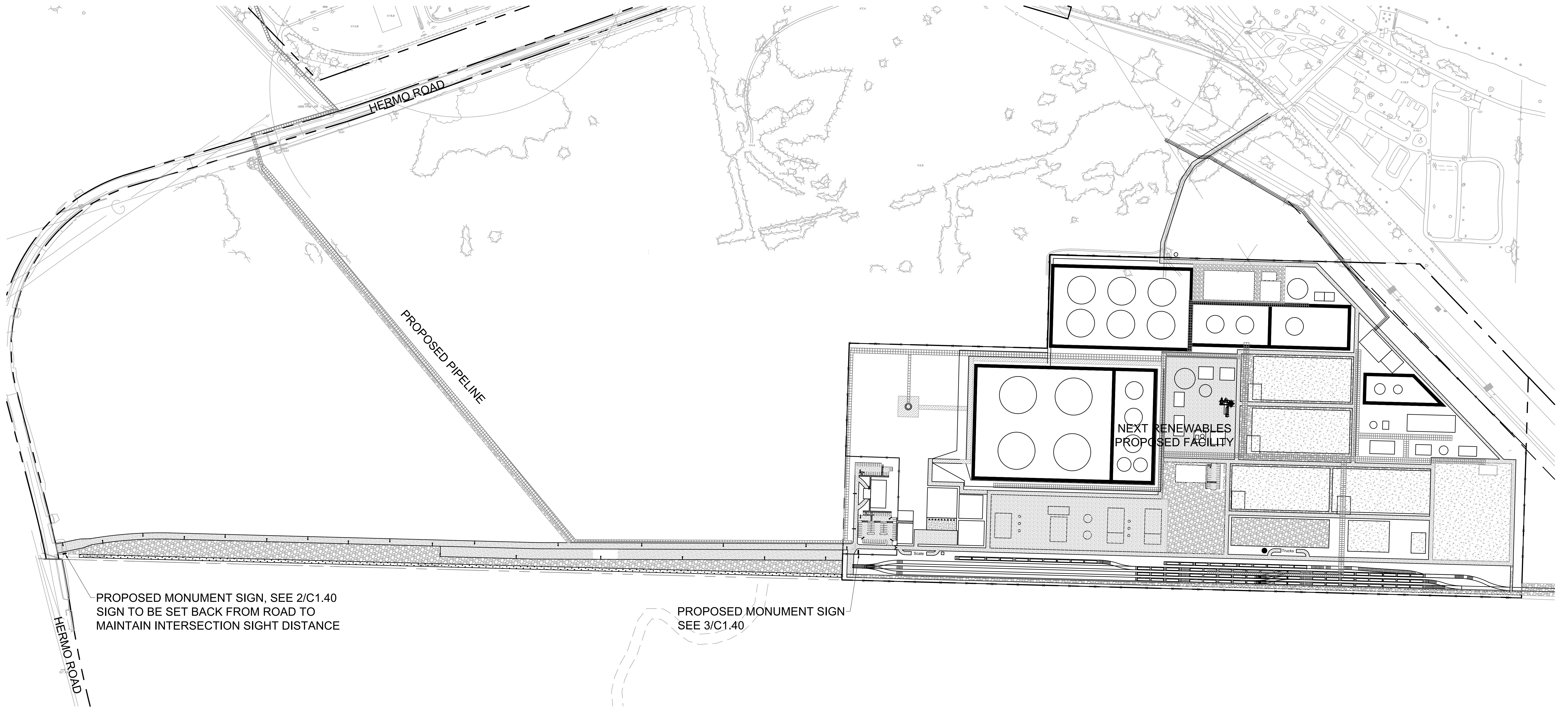
C1.30

JOB NO. **2200315.01**



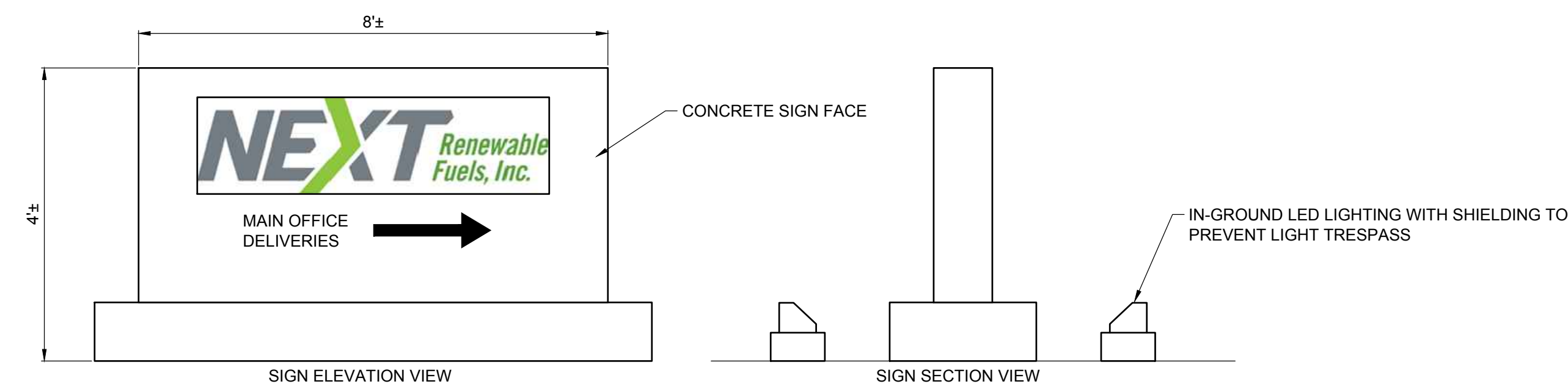
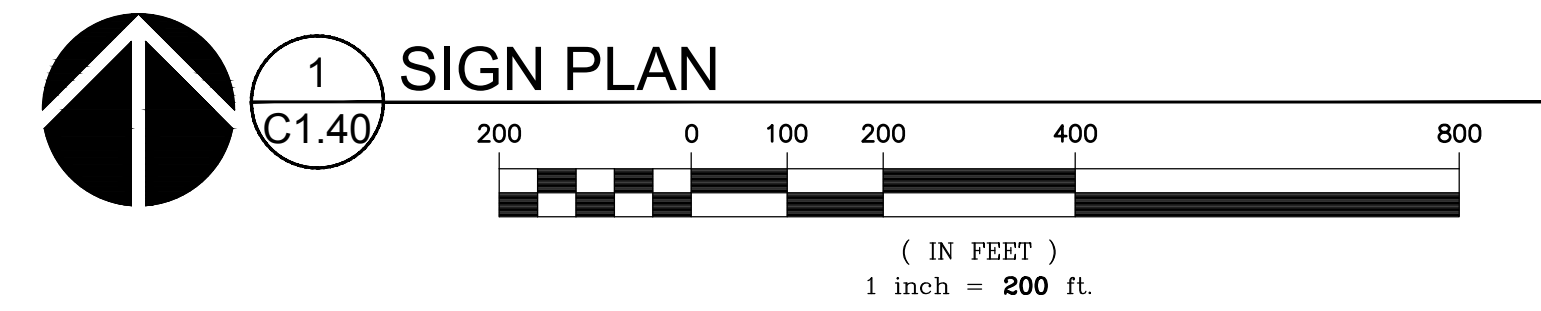
LEGEND:
REFER TO SHEET C0.01 FOR GENERAL LEGEND





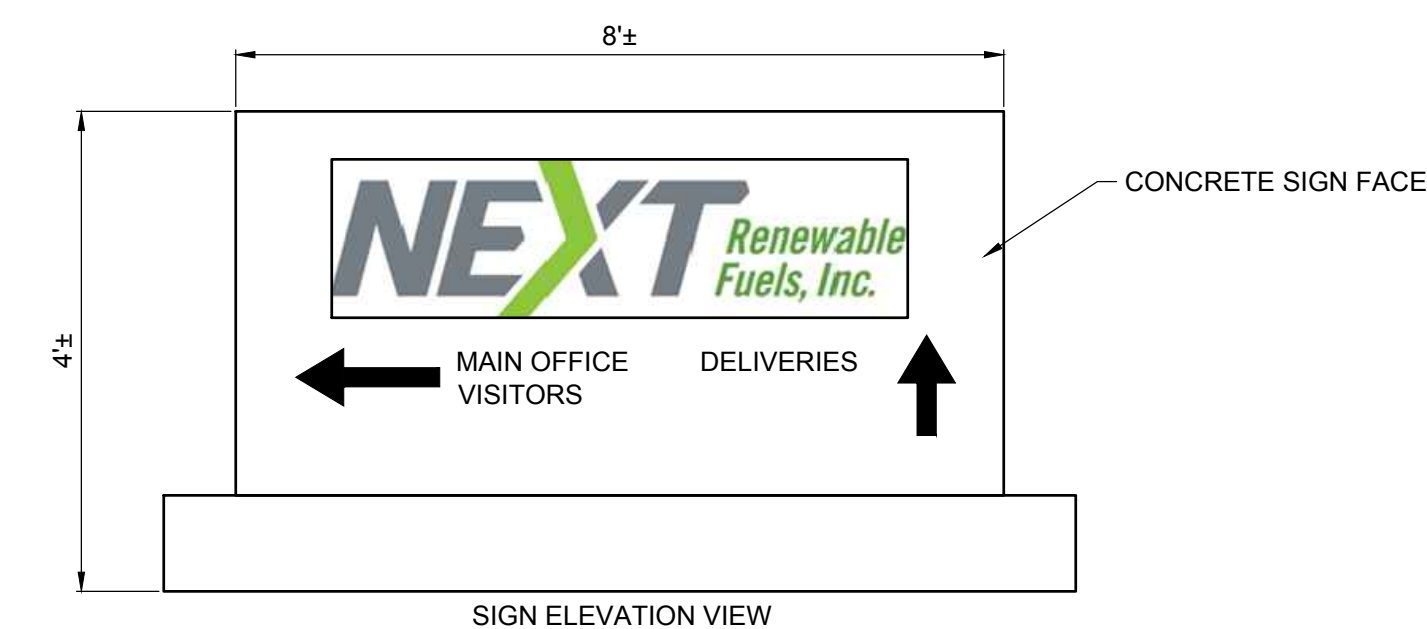
PROPOSED MONUMENT SIGN, SEE 2/C1.40
SIGN TO BE SET BACK FROM ROAD TO
MAINTAIN INTERSECTION SIGHT DISTANCE

PROPOSED MONUMENT SIGN
SEE 3/C1.40



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 HERMO ROAD SIGN
C1.40 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 PLANT ENTRANCE SIGN
C1.40 N.T.S.



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF
MACKENZIE AND ARE NOT TO BE USED
OR REPRODUCED IN ANY MANNER
WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**SIGN
PLAN**

DRAWN BY: CAM

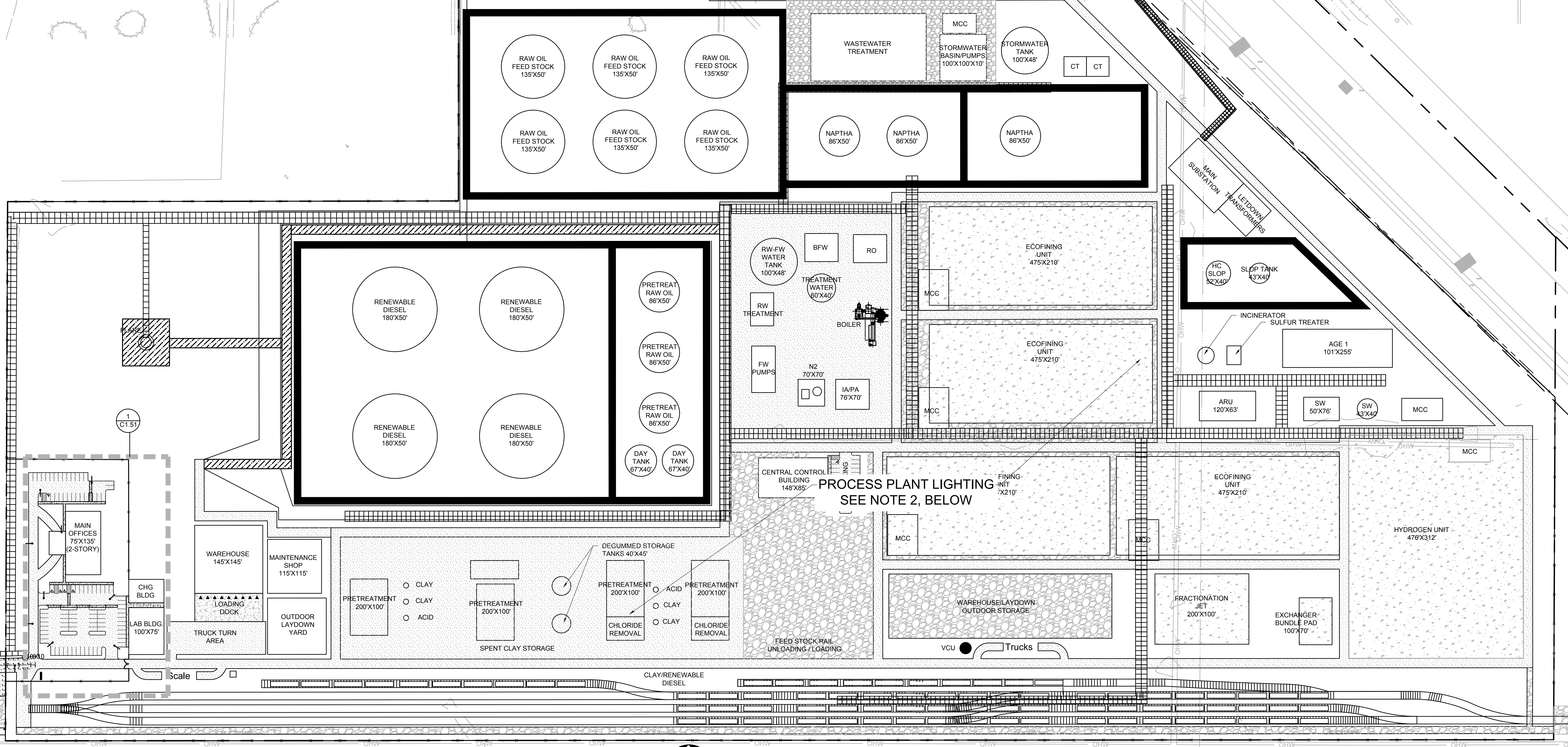
CHECKED BY: BDN

SHEET

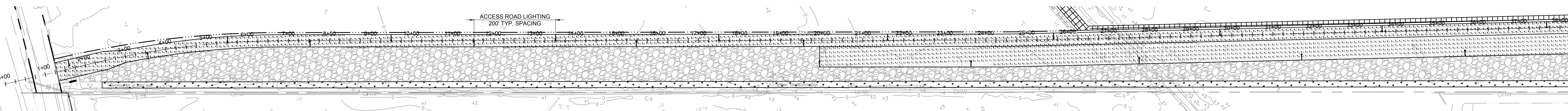
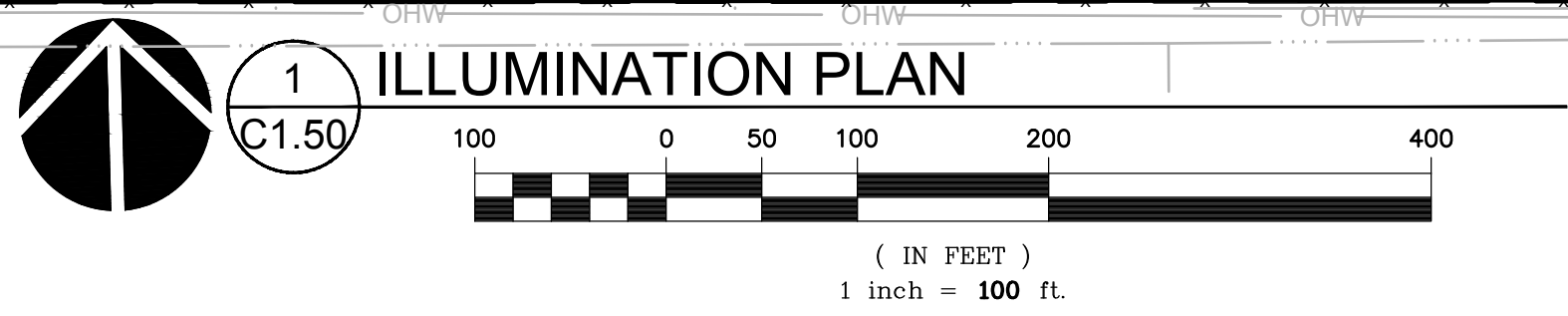
C1.40

JOB NO. **2200315.01**

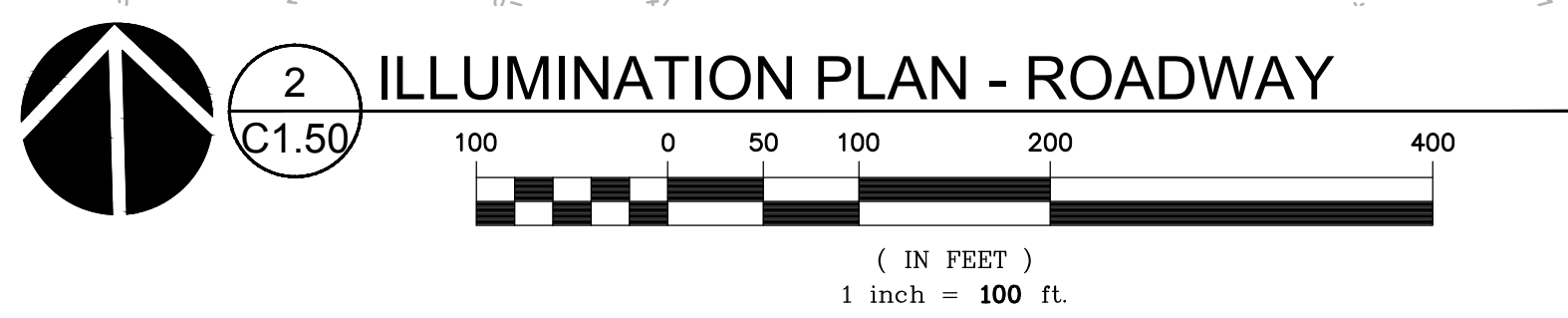
MATCH LINE - SEE SHEET BELOW



LEGEND:
SEE LEGEND ON SHEET C0.01



ENTRANCE ROADWAY ILLUMINATION DATA:
AVERAGE = 1.71 (FOOT CANDLES)
UNIFORMITY RATIO = 5.7:1



- NOTES:**
- SEE SHEET C1.51 FOR LIGHTING SPECIFICATIONS
 - ILLUMINATION WITHIN THE PROCESS PLANT WILL BE PROVIDED THROUGH LIGHTING INSTALLED ON EQUIPMENT STRUCTURES, STAIRWAYS, PIPERACKS ETC. TO MEET AMERICAN PETROLEUM INSTITUTE RECOMMENDED PRACTICE 640.
 - PROCESS AND OUTDOOR LIGHTING WILL BE CONTROLLED THROUGH A COMBINATION OF PHOTOCELL, TIME CLOCK, MOTION DETECTION, PHYSICAL SWITCHING, OR OTHER MEANS.
 - ALL OUTDOOR LIGHTS WILL BE SHIELDED SO AS NOT TO SHINE DIRECTLY ONTO ADJACENT PROPERTIES AND ROADS.



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF
MACKENZIE AND ARE NOT TO BE USED
OR REPRODUCED IN ANY MANNER,
WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
ILLUMINATION PLAN

DRAWN BY: CAM
CHECKED BY: BDN
SHEET

C1.50

JOB NO. **2200315.01**

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
OVERALL WETLAND IMPACT PLAN

DRAWN BY: CAM
 CHECKED BY: BDN
 SHEET

C2.11

JOB NO. **2200315.01**

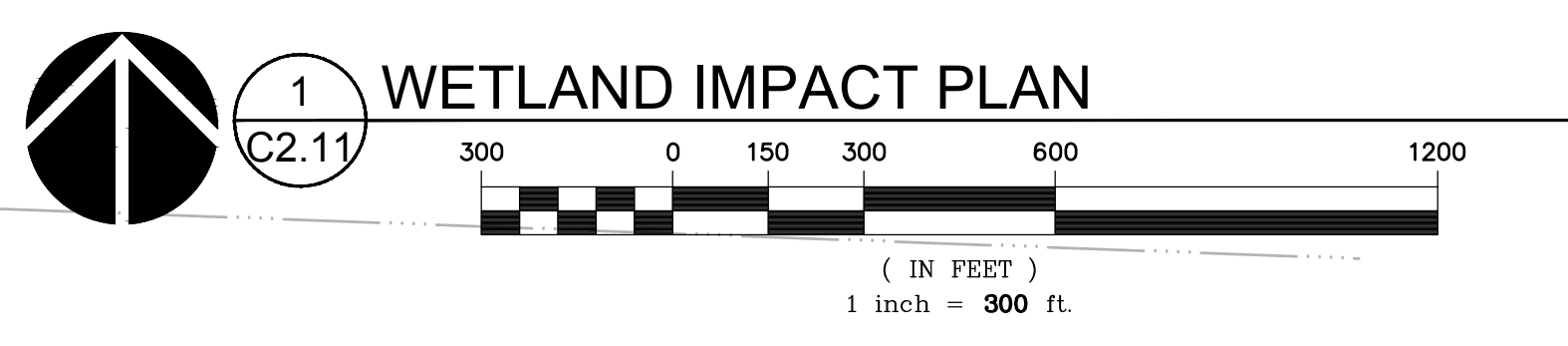
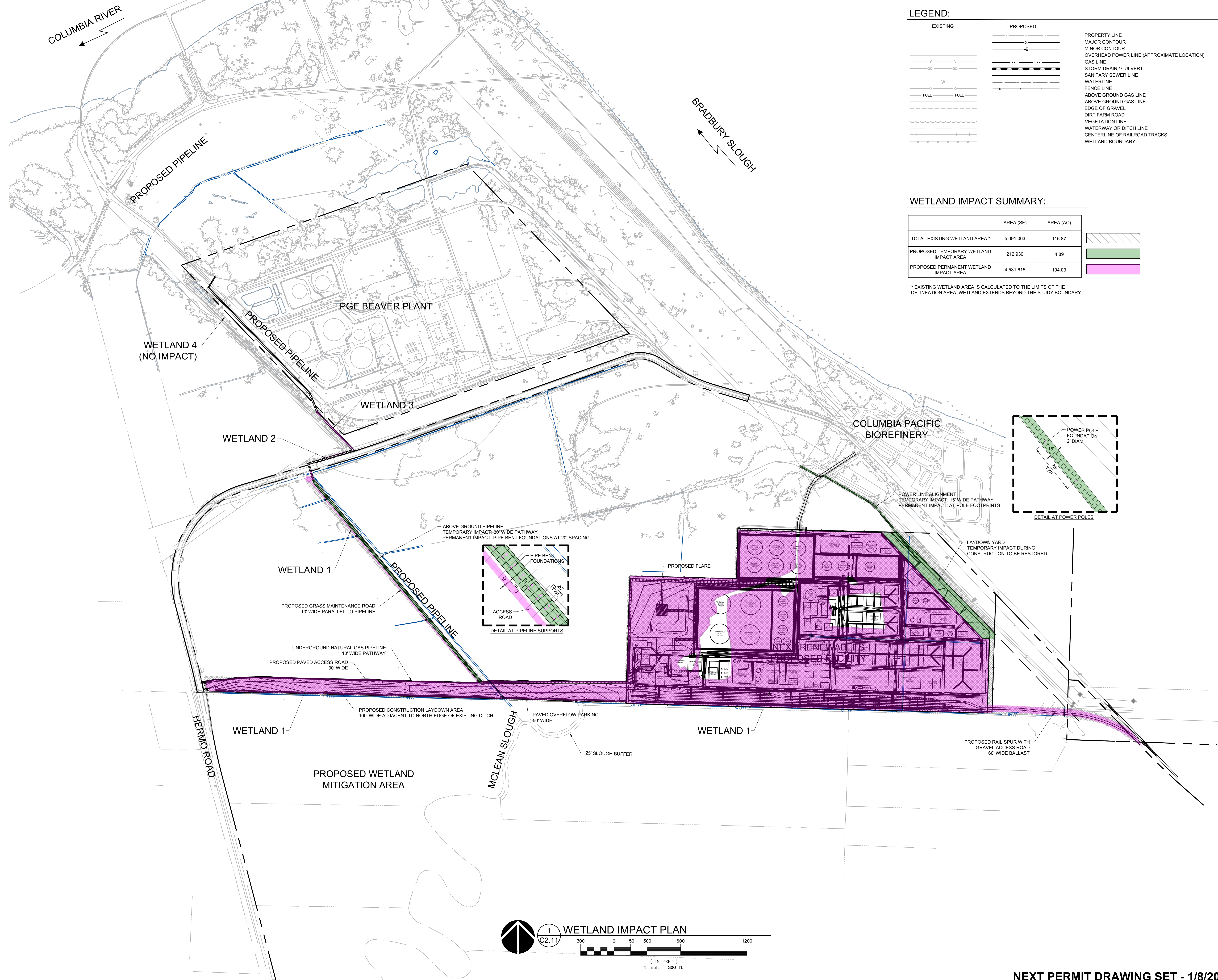
LEGEND:

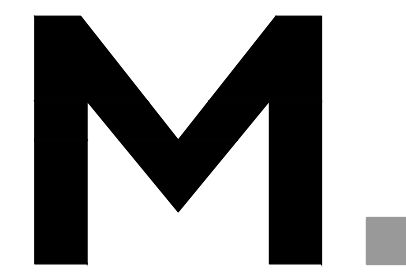
EXISTING	PROPOSED	
—	—	PROPERTY LINE
—	—	MAJOR CONTOUR
—	—	MINOR CONTOUR
—	—	OVERHEAD POWER LINE (APPROXIMATE LOCATION)
—	—	GAS LINE
—	—	STORM DRAIN / CULVERT
—	—	SANITARY SEWER LINE
—	—	WATERLINE
—	—	FENCE LINE
—	—	ABOVE GROUND GAS LINE
—	—	ABOVE GROUND GAS LINE
—	—	EDGE OF GRAVEL
—	—	DIRT FARM ROAD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

WETLAND IMPACT SUMMARY:

	AREA (SF)	AREA (AC)	
TOTAL EXISTING WETLAND AREA *	5,091,063	116.87	
PROPOSED TEMPORARY WETLAND IMPACT AREA	212,930	4.89	
PROPOSED PERMANENT WETLAND IMPACT AREA	4,531,615	104.03	

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





Architecture • Interiors
Planning • Engineering

Portland, OR
503.224.9560
Vancouver, WA
360.695.7879
Seattle, WA
206.749.9993
www.mcknize.com

MACKENZIE
DESIGN-BUILD • CLIENT FOCUS

Client
**NEXT RENEWABLE
FUELS OREGON**

**11767 KATY FREEWAY
SUITE 705
HOUSTON, TX 77079**

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



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF
MACKENZIE AND ARE NOT TO BE USED
OR REPRODUCED IN ANY MANNER
WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**CONSTRUCTION
EROSION
CONTROL PLAN
NORTH**

DRAWN BY: CAM

CHECKED BY: BDN

SHEET

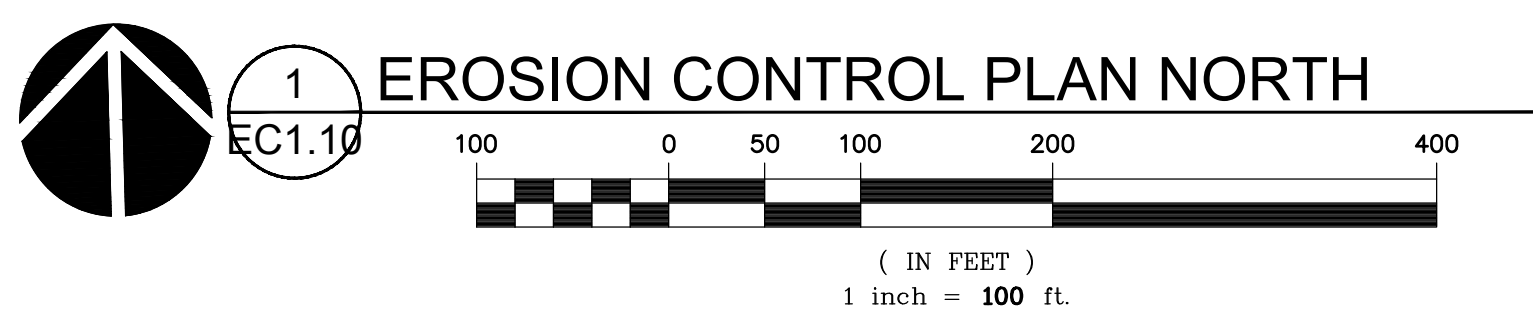
EC1.10

JOB NO. **2200315.01**

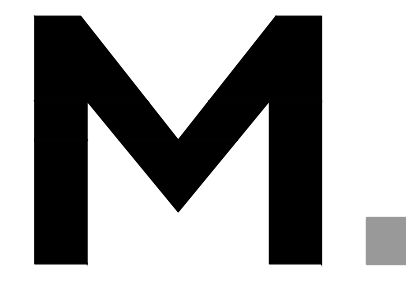
NEXT PERMIT DRAWING SET - 1/8/2021
220031500DRAWINGS\CIVIL\315-EC1.10-1.12.DWG BDN 01/08/21 11:28 1:10



LEGEND:
SEE LEGEND ON SHEET C0.01



MATCH LINE - SEE SHEET EC1.11



Architecture • Interiors
Planning • Engineering

Portland, OR
503.224.9560
Vancouver, WA
360.695.7879
Seattle, WA
206.749.9993
www.mcknze.com

MACKENZIE
DESIGN-BUILD • CLIENT FOCUS

Client
**NEXT RENEWABLE
FUELS OREGON**

**11767 KATY FREEWAY
SUITE 705
HOUSTON, TX 77079**

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



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF
MACKENZIE AND ARE NOT TO BE USED
OR REPRODUCED IN ANY MANNER
WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**CONSTRUCTION
EROSION
CONTROL PLAN
WEST**

DRAWN BY: CAM
CHECKED BY: BDN
SHEET

EC1.11

JOB NO. **2200315.01**

NEXT PERMIT DRAWING SET - 1/8/2021
220031500DRAWINGS\CIVIL\315-EC1.10-1.12.DWG BDN 01/11/21 12:05 1:00

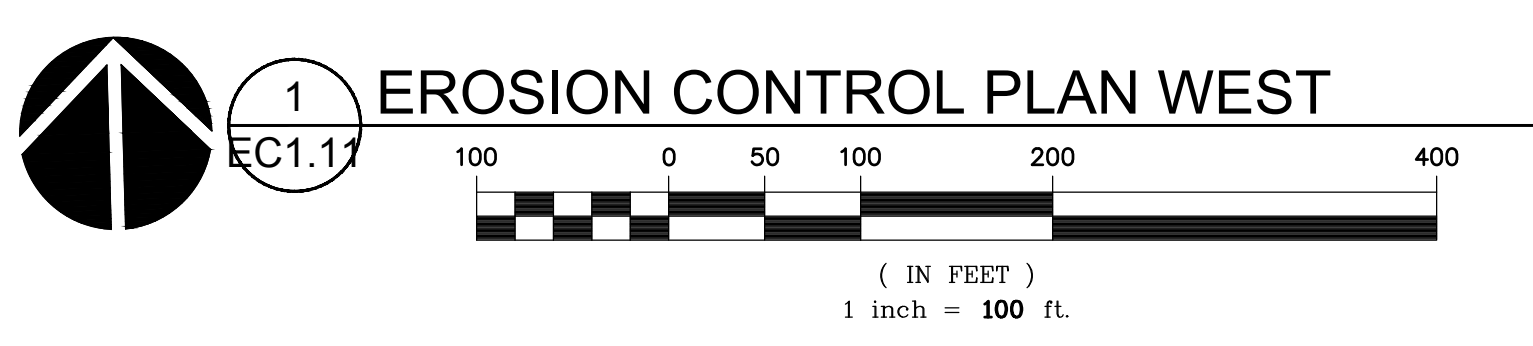
MATCH LINE - SEE SHEET EC1.10

MATCH LINE - SEE SHEET EC1.12

MATCH LINE - SEE SHEET EC1.12



EROSION CONTROL LEGEND:
SEE LEGEND ON SHEET C0.01





© MACKENZIE 2021
 ALL RIGHTS RESERVED
 THESE DRAWINGS ARE THE PROPERTY OF
 MACKENZIE AND ARE NOT TO BE USED
 OR REPRODUCED IN ANY MANNER
 WITHOUT PRIOR WRITTEN PERMISSION

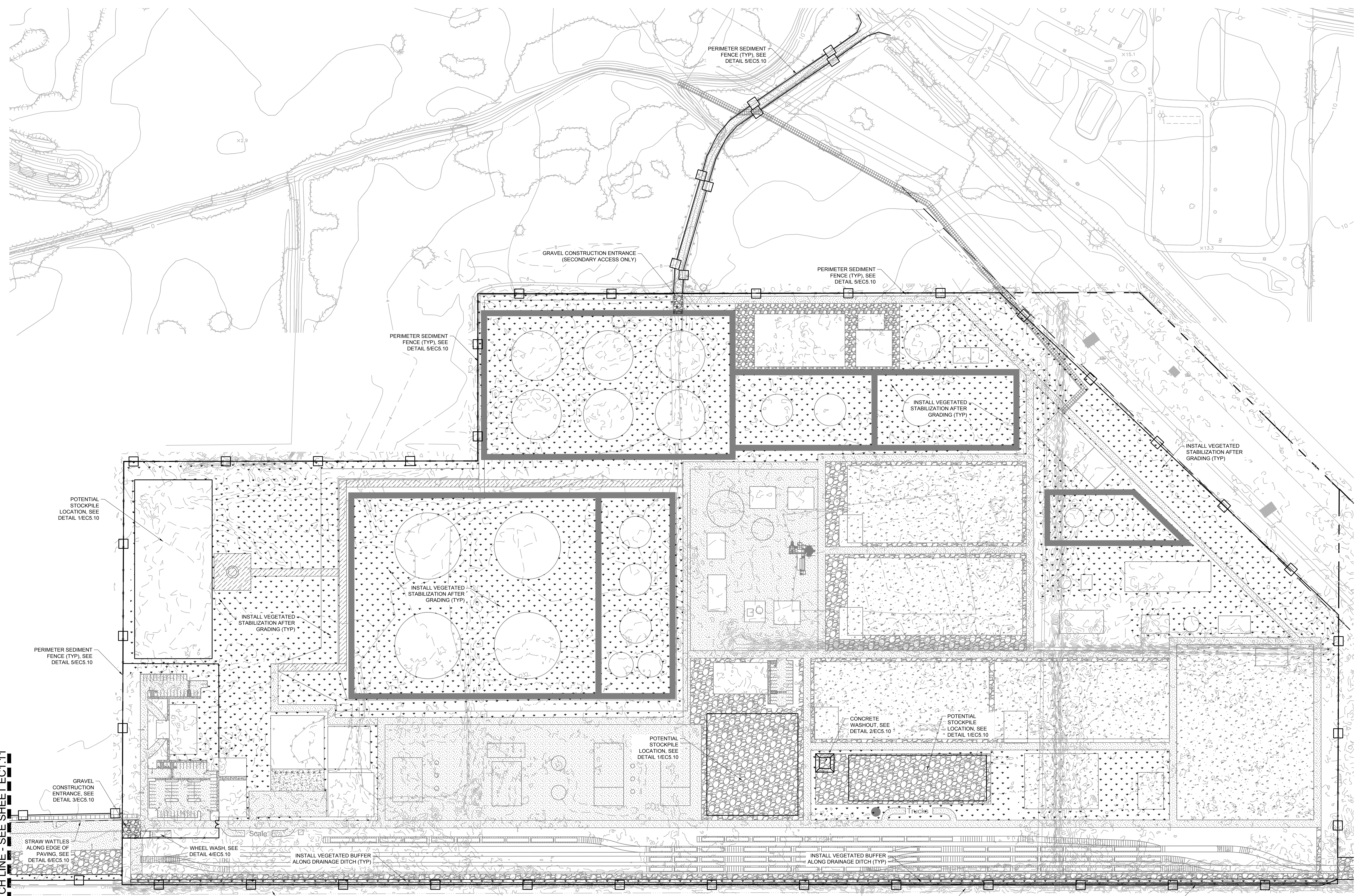
REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**CONSTRUCTION
 EROSION
 CONTROL PLAN
 EAST**

DRAWN BY: CAM
 CHECKED BY: BDN
 SHEET

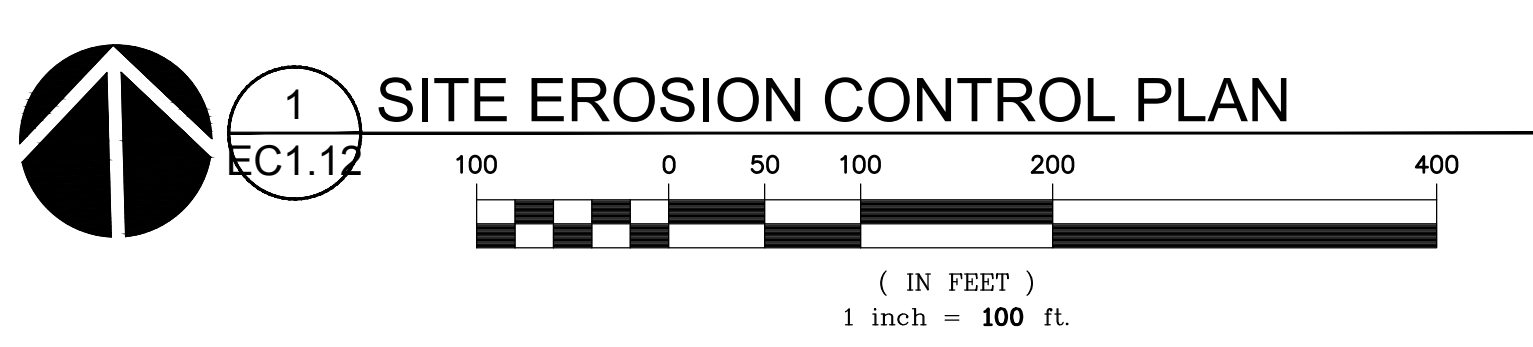
EC1.12

JOB NO. **2200315.01**



MATCH LINE - SEE SHEET EC1.11

LEGEND:
 SEE LEGEND ON SHEET C0.01





© MACKENZIE 2021
 ALL RIGHTS RESERVED
 THESE DRAWINGS ARE THE PROPERTY OF
 MACKENZIE AND ARE NOT TO BE USED
 OR REPRODUCED IN ANY MANNER,
 WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

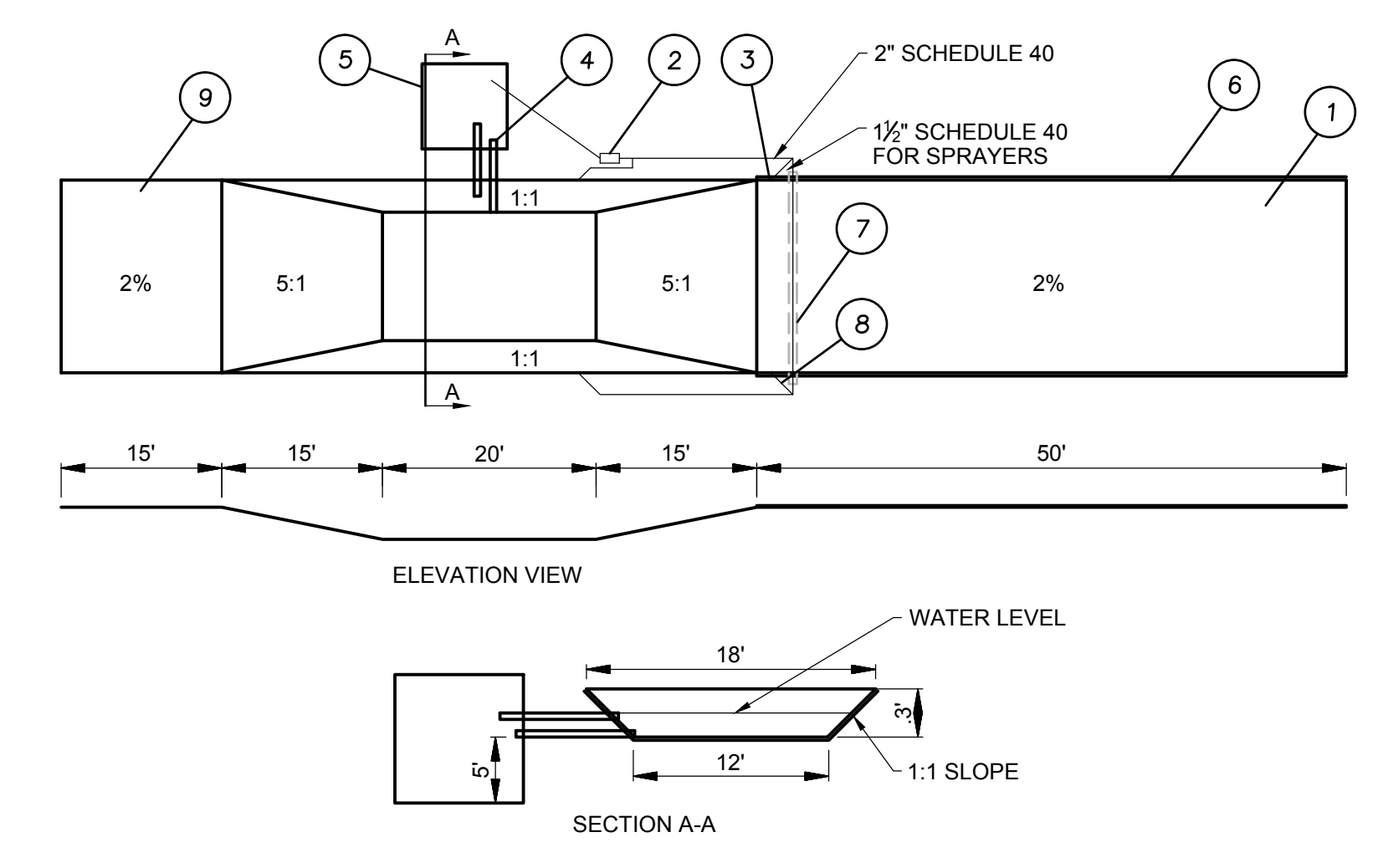
SHEET TITLE:
**EROSION
 CONTROL
 DETAILS**

DRAWN BY: CAM
 CHECKED BY: BDN
 SHEET

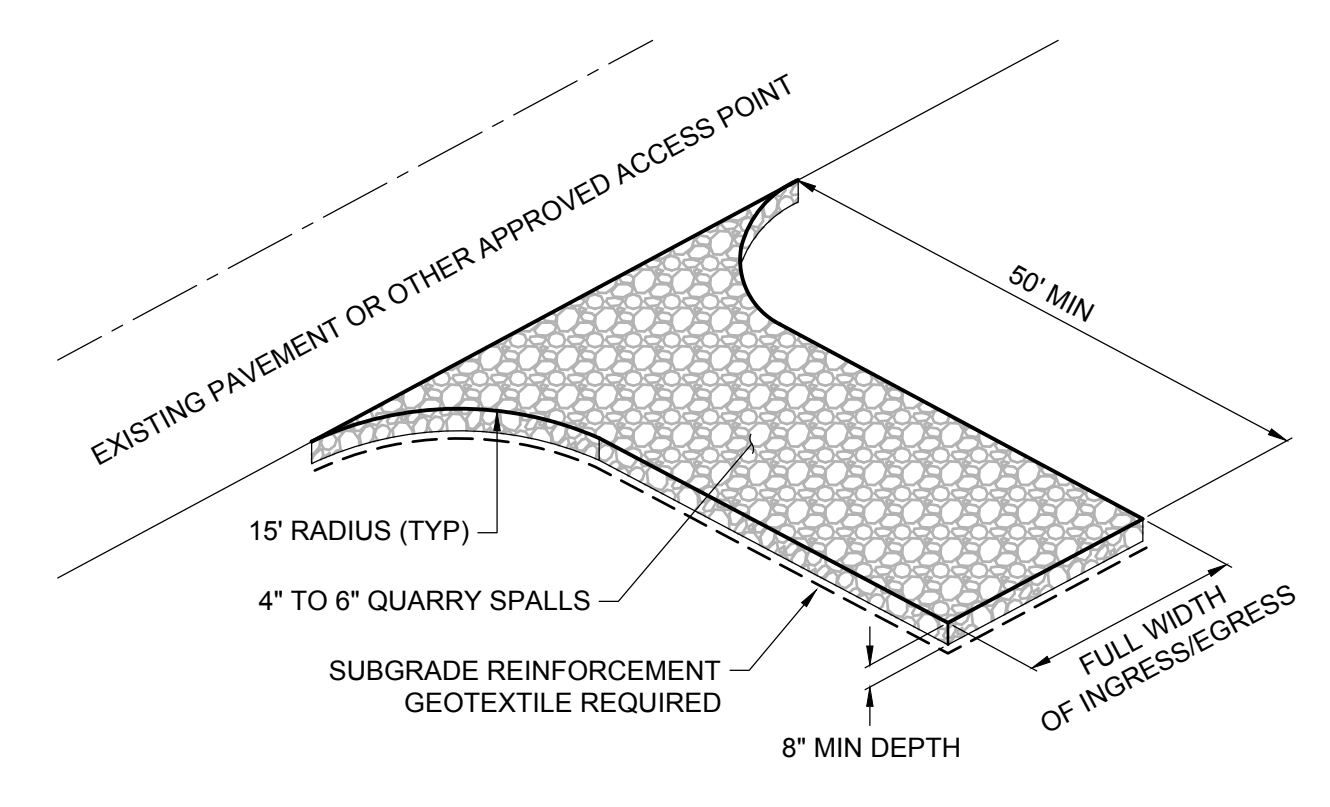
EC5.10

JOB NO. **2200315.01**

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

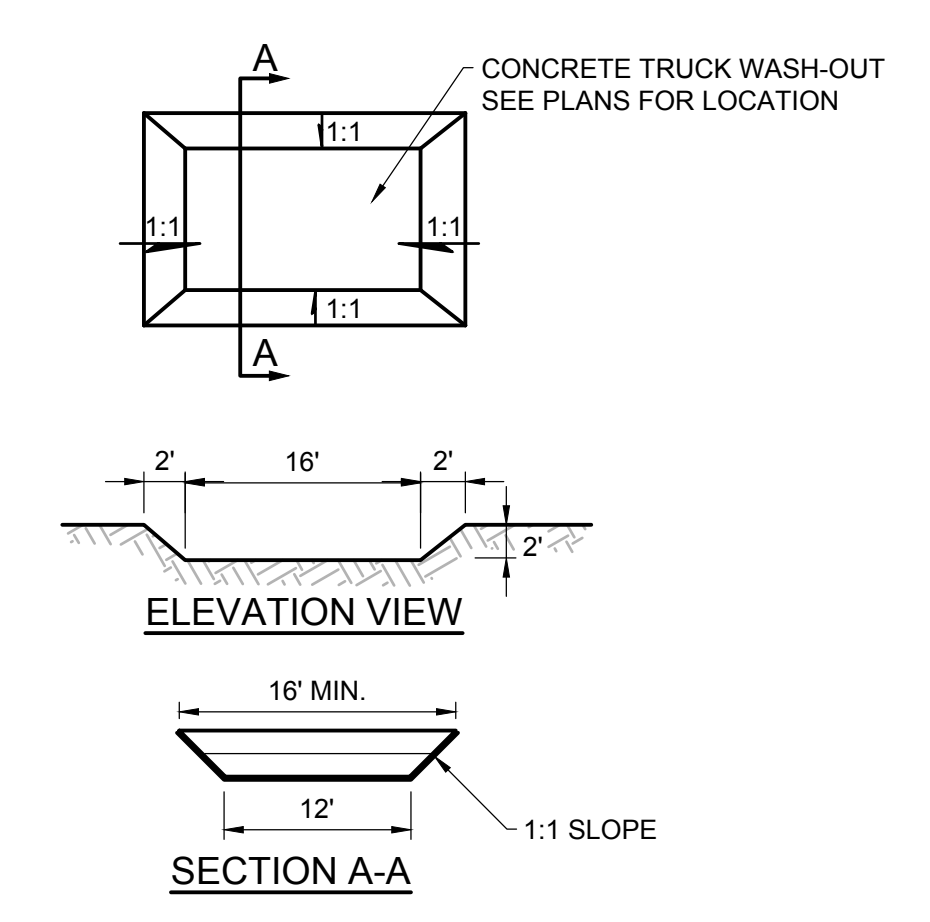


4 WHEEL WASH
 EC5.10 N.T.S.



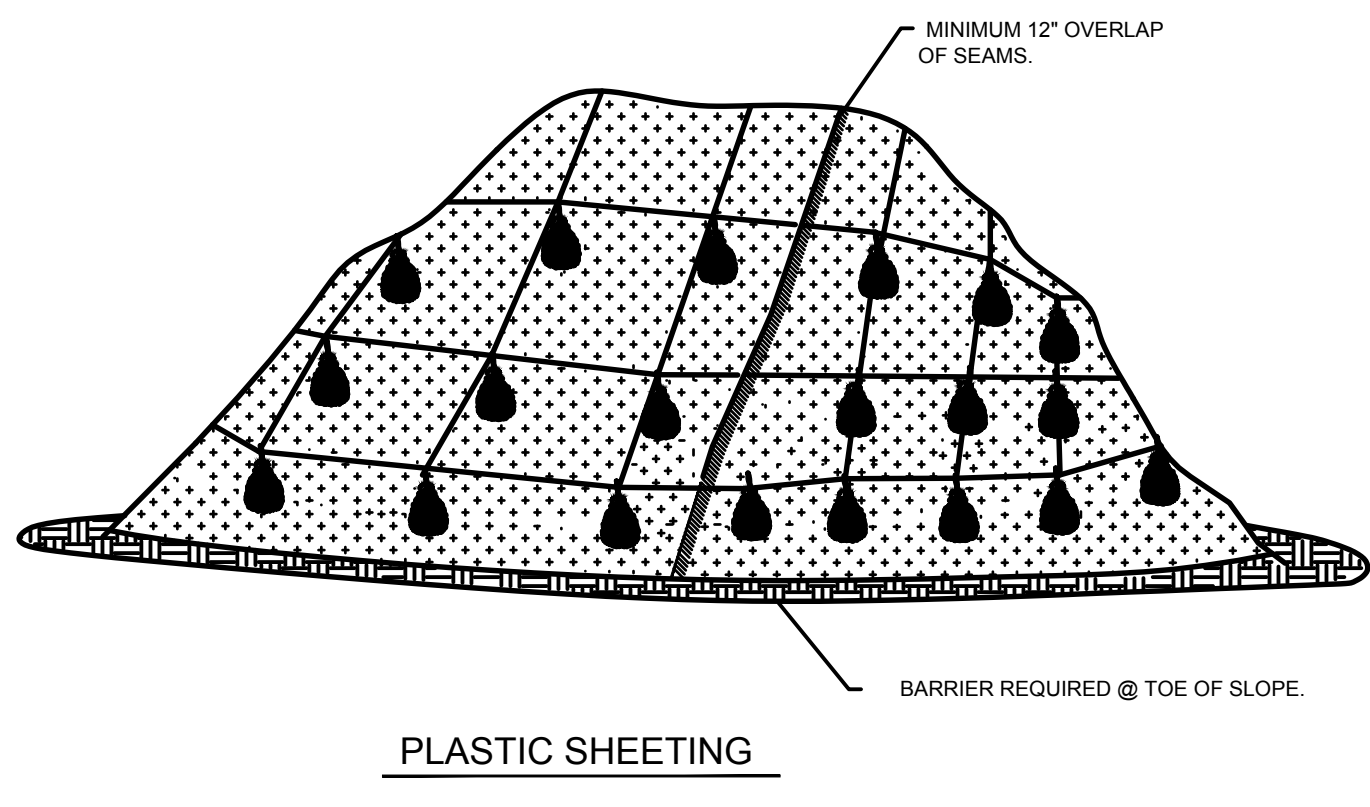
- NOTES:**
- QUARRY SPALL MATERIAL SHALL BE "CLEAN" (LESS THAN 5% PASSING THE US STANDARD NO 200 SIEVE)
 - CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION FOR ALTERNATES, SUCH AS A RUMBLE TRACK
 - PROTECT CONSTRUCTION ENTRANCES FROM SILTATION FROM ADJOINING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

3 CONSTRUCTION ENTRANCE
 EC5.10 N.T.S.



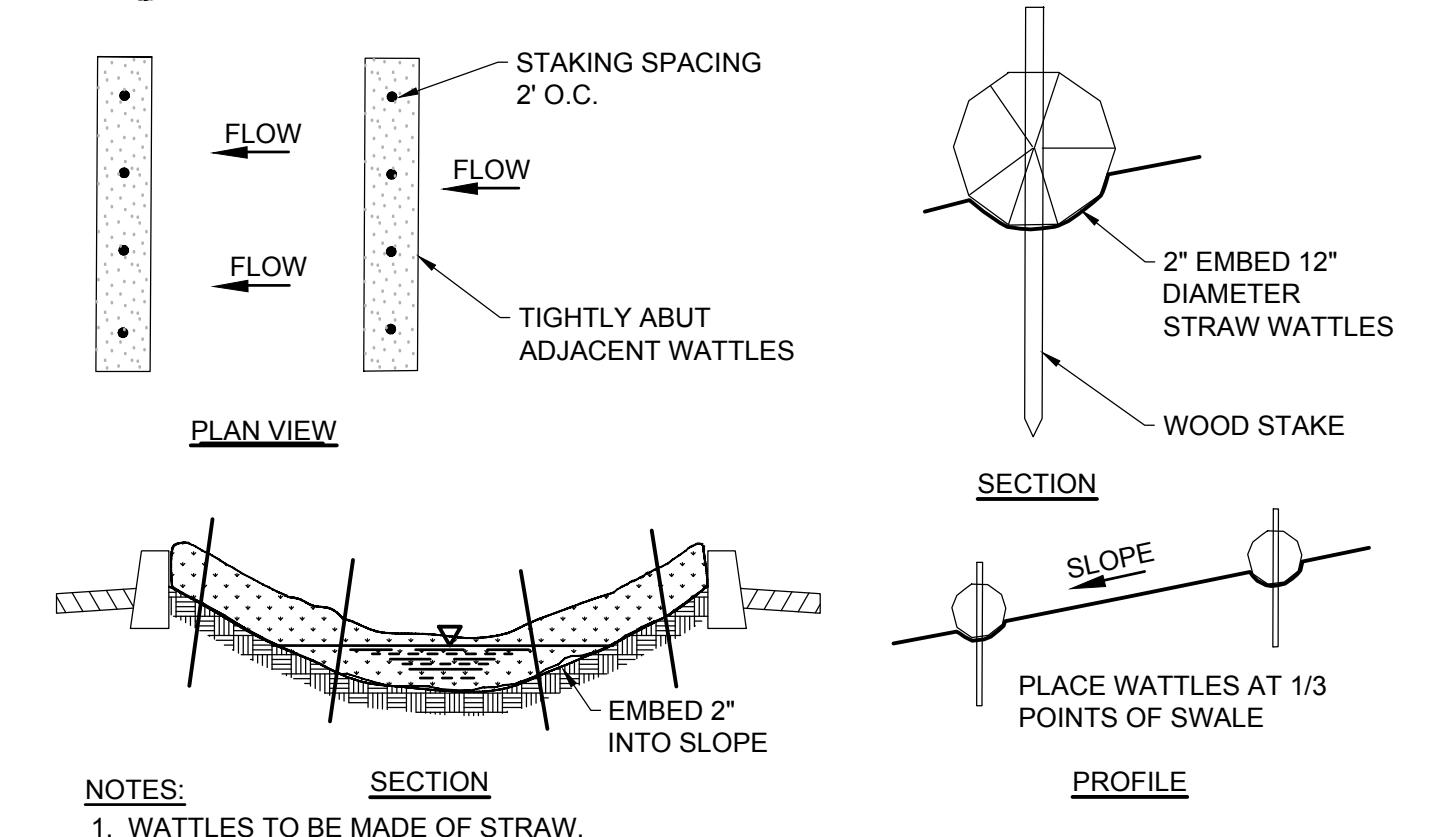
- NOTES:**
- CONCRETE WASHOUT AREA. LOCATED SO RUNOFF CANNOT ENTER STORM SYSTEM. IF WASH-OUT CANNOT BE LOCATED MINIMUM OF 50' FROM ENTRY TO STORM SYSTEM. THAN SECONDARY MEASURES SUCH AS BERMS AND TEMPORARY SETTLING PITS MAY BE REQUIRED.
 - CONTRACTOR SHALL CLEAN OUT CONCRETE TRUCK WASH-OUT AREA WHEN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

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



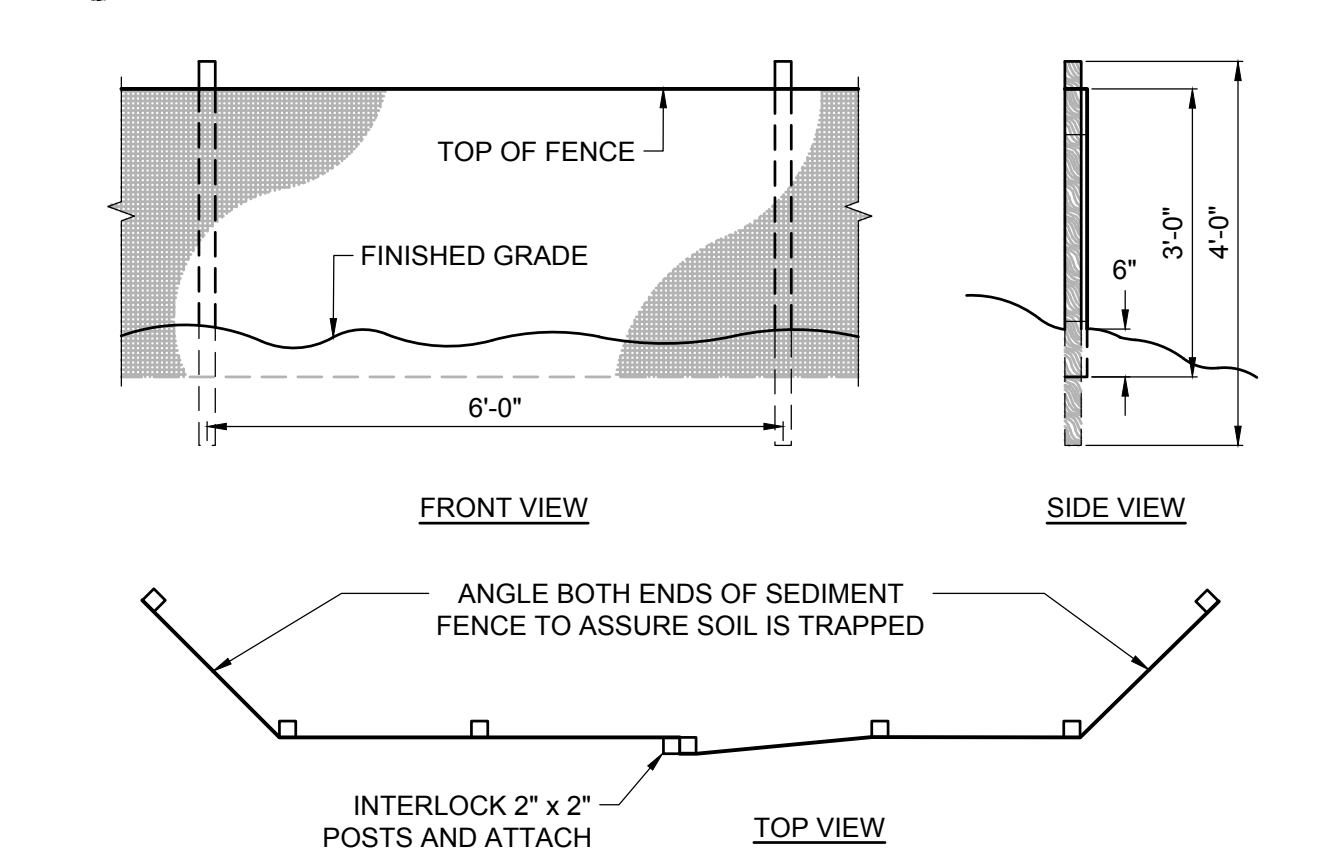
- NOTES:**
- MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
 - BARRIER REQUIRED @ TOE OF STOCK PILE.
 - COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

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



- NOTES:**
- WATTLES TO BE MADE OF STRAW
 - SLOPE REQUIRES MINOR PREPARATION PRIOR TO INSTALLATION
 - RILLS AND SHALLOW GULLIES SHOULD BE SMOOTHED AS WORK PROGRESSES.
 - WATTLES SHOULD BE INSTALLED AT THIRD POINTS OF SWALE
 - WATTLE MUST BE TIGHT AGAINST THE SOIL. IN TRENCH. MAKE SURE NO GAPS EXIST BETWEEN THE SOIL AND THE WATTLE.
 - STAKES MUST BE DRIVEN A MINIMUM OF 12 IN. INTO UNDISTURBED MATERIAL. INSTALL STAKES EVERY 2'
 - 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.
 - MAKE SURE THE WATTLES ARE IN CONTACT WITH THE SOIL.
 - STRING SHOULD BE WRAPPED ROUND WATTLE EVERY FOOT OF ITS LENGTH.

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



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

5 SEDIMENT FENCE
 EC5.10 N.T.S.

SHEET INDEX

- L1.10 LANDSCAPE GENERAL INFORMATION AND PLANTING PLAN
- L1.11 PLANTING PLAN - ENLARGEMENTS
- L5.10 PLANT DETAILS
- L5.11 IRRIGATION DETAILS

ZONING COMPLIANCE

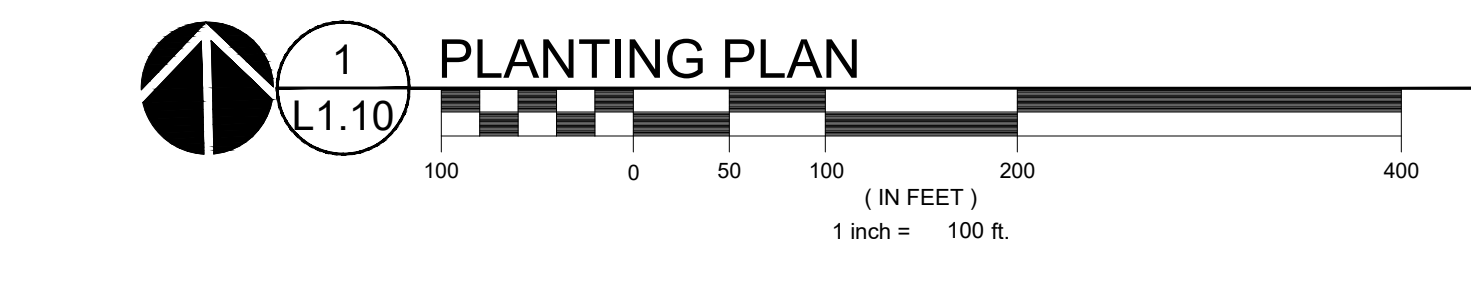
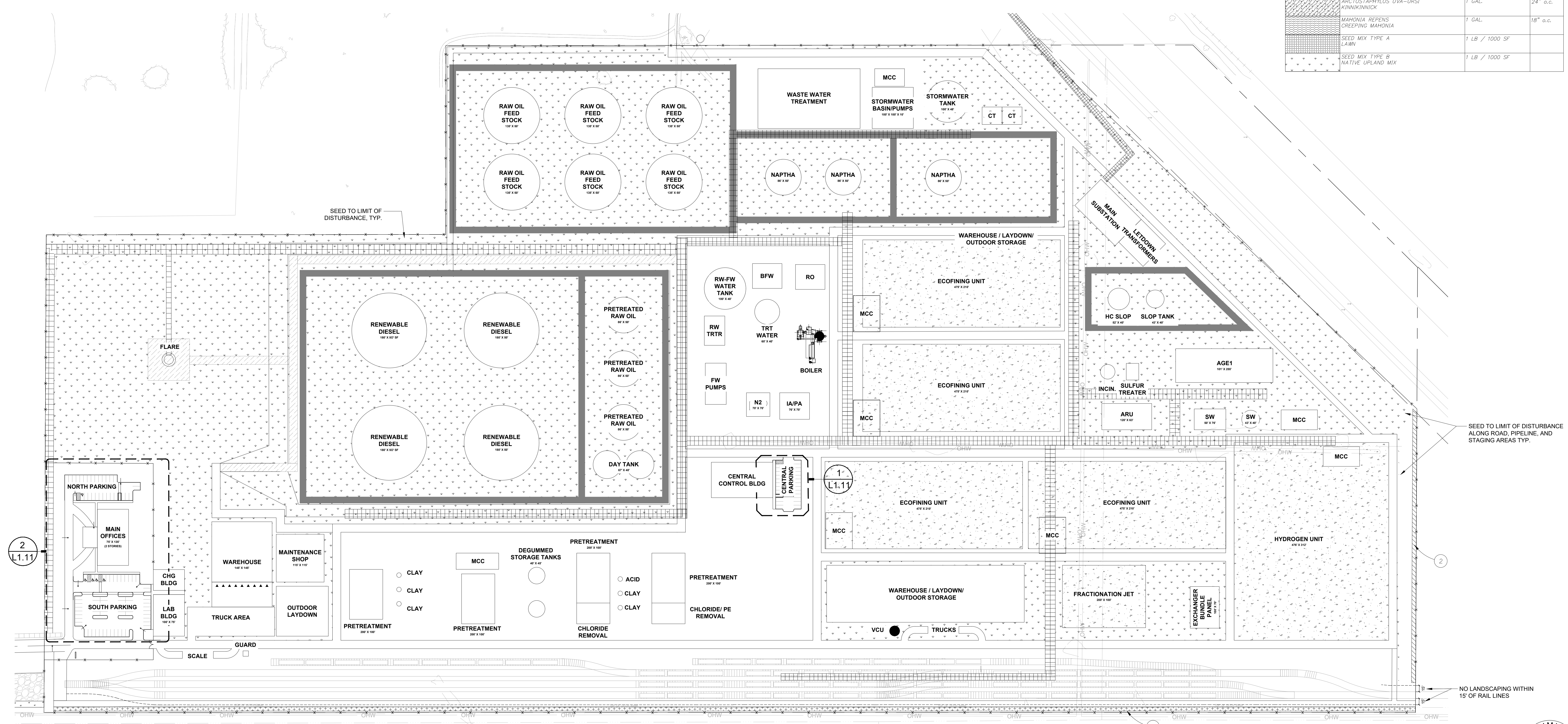
PARKING AREA (10% LANDSCAPE MIN)	
NORTH PARKING AREA	9,285 SF
NORTH PARKING LANDSCAPE AREA	3,144 SF
SOUTH PARKING AREA	23,733 SF
SOUTH PARKING LANDSCAPE AREA	4,642 SF
CENTRAL PARKING AREA	7,460 SF
CENTRAL PARKING LANDSCAPE AREA	2,165 SF

LANDSCAPE NOTES

- GENERAL**
- CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
 - 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.
 - NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS WITH EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK.
 - LOCATION OF EXISTING TREES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
 - DAMAGE TO EXISTING CONCRETE CURB, ASPHALT PAVING, OR OTHER STRUCTURE SHALL BE REPAIRED OR REPLACED TO PRE CONSTRUCTION CONDITIONS.
 - CONTRACTOR SHALL COORDINATE WITH THE OWNER ANY DISRUPTION TO VEHICULAR CIRCULATION PRIOR TO COMMENCEMENT OF ANY WORK.
- PLANTING**
- 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.
 - SHRUBS ADJACENT TO PARKING AREAS SHALL BE PLANTED 2 FT MINIMUM AWAY FROM THE BACK OF CURB. SHRUBS AND GROUND COVER ALONG OTHER PAVEMENT EDGES SHALL BE PLANTED A MINIMUM OF ONE HALF THEIR ON CENTER SPACING AWAY FROM PAVEMENT EDGE.
 - 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.
 - DO NOT PLANT TREES ABOVE WATERLINES, UTILITIES, OR OTHER UNDERGROUND PIPING.
- IRRIGATION**
- UNLESS OTHERWISE INDICATED, ALL NEW LANDSCAPE AREAS TO BE IRRIGATED WITH A FULLY AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. PROVIDE LOOP SYSTEM FOR OPTIMUM EFFICIENCY.
 - 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'.
 - CONTRACTOR TO DETERMINE STATIC WATER PRESSURE AT THE P.O.C. PRIOR TO PREPARING SHOP DRAWINGS.
 - CONTRACTOR SHALL ESTABLISH MINIMUM PRESSURE AND MAXIMUM DEMAND REQUIREMENTS FOR IRRIGATION SYSTEM DESIGN, AND PROVIDE INFORMATION IN AN IRRIGATION SCHEDULE.
- IRRIGATION SYSTEM AS DESIGNED AND INSTALLED SHALL PERFORM WITHIN THE TOLERANCES AND SPECIFICATIONS OF THE SPECIFIED MANUFACTURERS.**
- SYSTEM SHALL BE DESIGNED TO SUPPLY MANUFACTURER'S SPECIFIED MINIMUM OPERATING PRESSURE TO FARTHEST EMITTER FROM WATER METER.
 - SYSTEM SHALL PROVIDE HEAD TO HEAD COVERAGE WITHOUT OVERSPRAY ONTO BUILDING, FENCES, SIDEWALKS, PARKING AREAS, OR OTHER NON-VEGETATED SURFACES.
 - ALL IRRIGATION PIPE MATERIAL AND INSTALLATION SHALL CONFORM TO APPLICABLE CODE FOR PIPING AND COMPONENT REQUIREMENTS.
 - PROVIDE SLEEVING AT ALL AREAS WHERE PIPE TRAVELS UNDER CONCRETE OR HARD SURFACING.
 - VALVES SHALL BE WIRED AND INSTALLED PER MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES AND CONNECTED TO THE IRRIGATION CONTROLLER.
 - REFER TO CIVIL DETAILS AND DETAILS ON L5.10 FOR POINT OF CONNECTION AND BACKFLOW PREVENTION INFORMATION.
 - CONTROLLER TO BE MOUNTED ON BUILDING EXTERIOR. GENERAL CONTRACTOR TO COORDINATE LOCATION WITH OWNER'S REPRESENTATIVE.
 - ZONE THE FOLLOWING AREAS SEPARATELY: TEMPORARY AREAS, PERMANENT LANDSCAPE AREAS, AND TREES.
 - QUICK COUPLERS TO BE PLACED EVERY 300 LINEAR FEET MAX.
 - IRRIGATION SHALL BE WINTERIZED THROUGH LOW PRESSURE, HIGH VOLUME AIR BLOWOUT CONNECTION THROUGH QUICK COUPLER.
 - THE SYSTEM SHALL BE GRAVITY DRAINED. THE CONTRACTOR SHALL PROVIDE APPROPRIATE MANUAL DRAINS AT LOW POINTS.

PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	SIZE	SPACING
○	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.
○	ABUTILUS UNIBIDO "COMPACTA" DWARF STRAWBERRY TREE	5 GAL.	60" o.c.
○	CORNUS SERICEA "KELSEY" KELSEY DWARF REDTIG DOGWOOD	1 GAL.	24" o.c.
○	COTONEASTER GLAUCOPHYLLUS BRIGHT BEAD COTONEASTER	5 GAL.	72" o.c.
○	GALLTHERIA SHALLON SALAL	5 GAL.	60" o.c.
○	HOLIDISCUS DISCOLOR OCEAN-SPRAY	5 GAL.	96" o.c.
○	LONICERA INVOLUCRATA TWINBERRY	5 GAL.	72" o.c.
○	MAHONIA AQUIFOLIUM OREGON GRAPE	5 GAL.	94" 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 DOUGLASSII 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 KINKIFRINK	1 GAL.	24" o.c.
■	MAHONIA REPENS CREEPING MAHONIA	1 GAL.	18" o.c.
■	SEED MIX TYPE A LAW	1 LB / 1000 SF	
■	SEED MIX TYPE B NATIVE UPLAND MIX	1 LB / 1000 SF	



- KEYNOTES**
- PERIMETER PLANTING, TYPE A, SEE 3/L1.11
 - PERIMETER PLANTING, TYPE B, SEE 4/L1.11



Portland, OR
503.224.9560
Vancouver, WA
360.695.7879
Seattle, WA
206.749.9993
www.mckenzie.com

MACKENZIE
DESIGN DRIVEN • CLIENT FOCUSED

Client
NEXT RENEWABLE FUELS OREGON

**11767 KATY FREEWAY
SUITE 705
HOUSTON, TX 77079**

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



© MACKENZIE 2021
ALL RIGHTS RESERVED
THESE DRAWINGS ARE THE PROPERTY OF MACKENZIE AND ARE NOT TO BE USED OR REPRODUCED IN ANY MANNER WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
LANDSCAPE GENERAL INFORMATION AND PLANTING PLAN

DRAWN BY: RAC
CHECKED BY: NRF
SHEET

L1.10
PRELIMINARY NOT FOR CONSTRUCTION
JOB NO. **2200315.01**

PERMIT SET - 1/8/2021
220031500DRAWINGS\LANDSCAPE\315-L0.01.DWG.L1.10 01/07/21 17:56 1:0.00

REVISION SCHEDULE		
Delta	Issued As	Issue Date

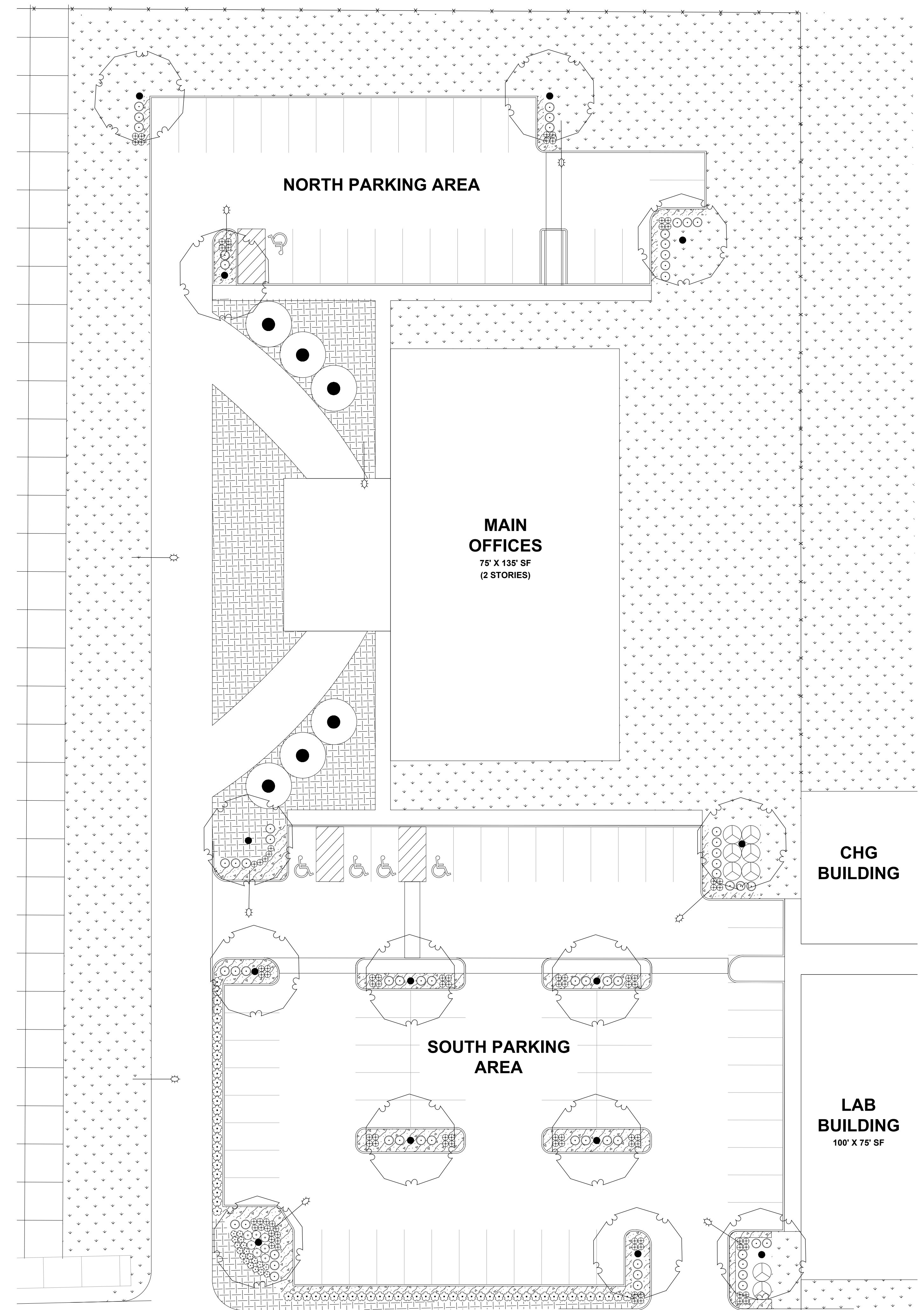
SHEET TITLE:
**PLANTING
 PLAN-
 ENLARGEMENTS**

DRAWN BY: RAC
 CHECKED BY: NRF
 SHEET

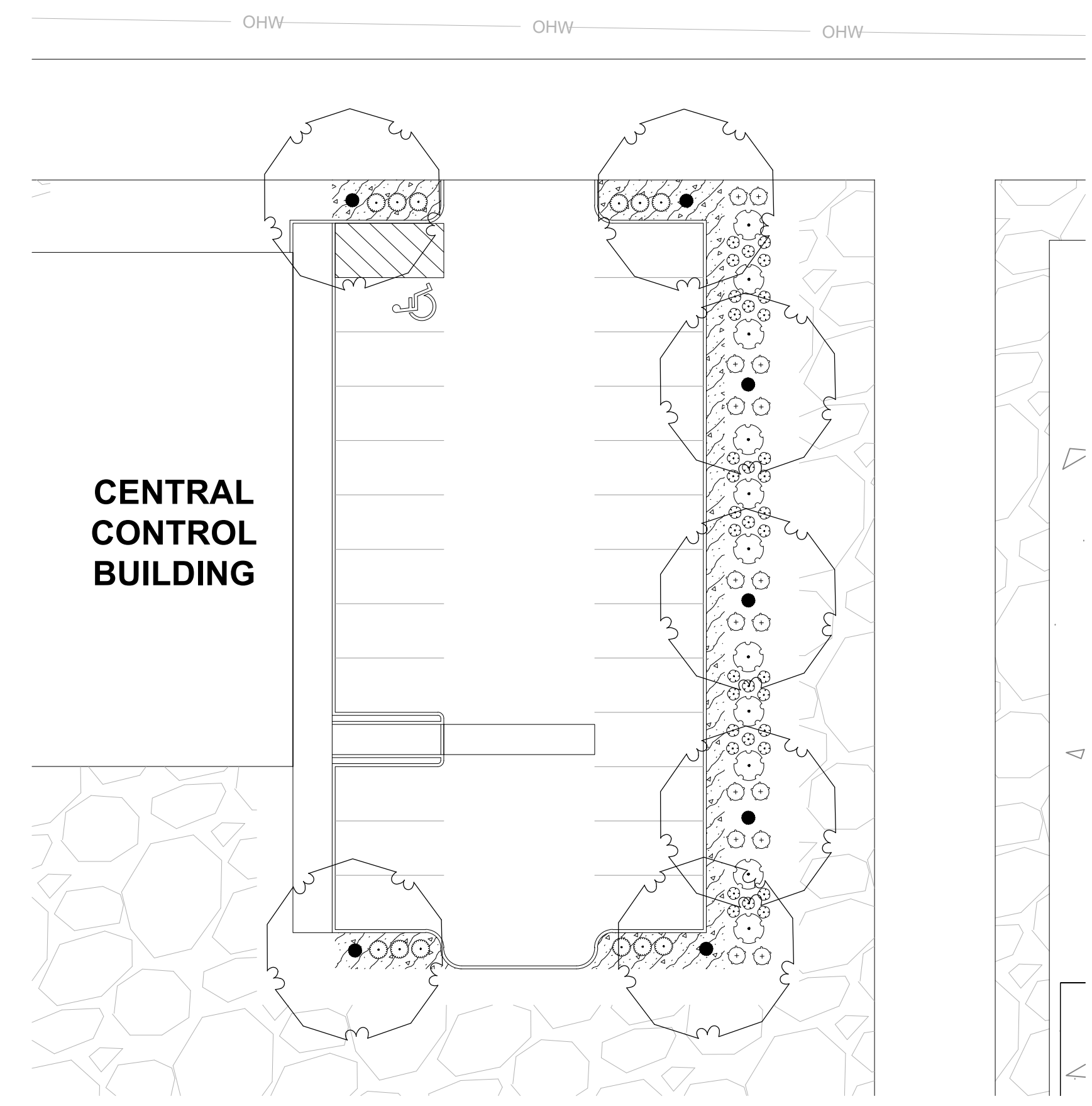
L1.11
 PRELIMINARY
 NOT
 FOR
 CONSTRUCTION
 JOB NO. **2200315.01**

PLANT KEY LEGEND

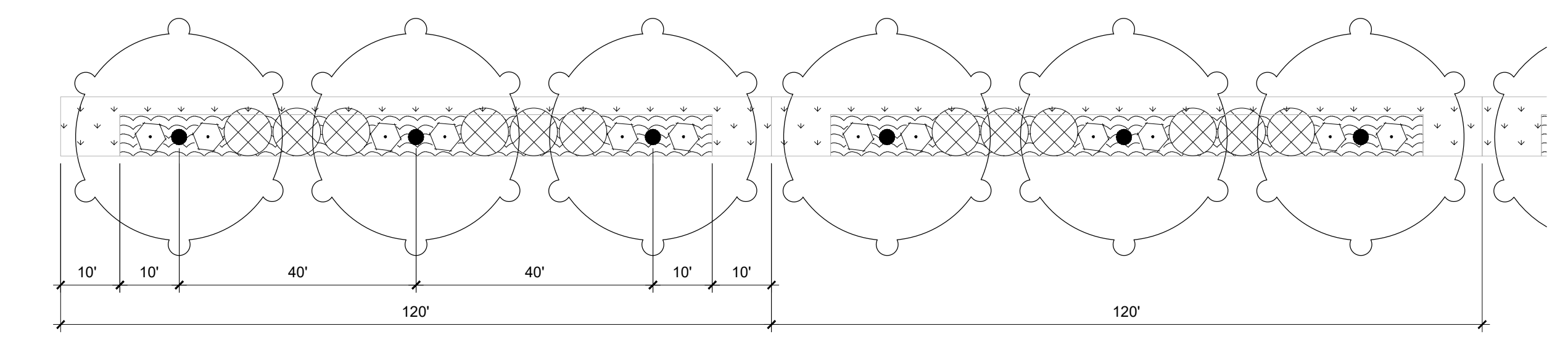
TREES	BOTANICAL / COMMON NAME
	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY MAPLE
	FRAXINUS LATIFOLIA OREGON ASH
	QUERCUS GARRYANA OREGON OAK
	RHAMNUS PURSHIANA CASCARA
SHRUBS	BOTANICAL / COMMON NAME
	AMELANCHIER ALNIFOLIA SERVICEBERRY
	CORNUS SERICEA 'KELSEY' KELSEY DWARF REDTWIG DOGWOOD
	COTONEASTER GLAUCOPHYLLUS 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



2
 L1.11
PLANTING PLAN - NORTH AND SOUTH PARKING AREAS
 (IN FEET)
 1 inch = 20 ft.

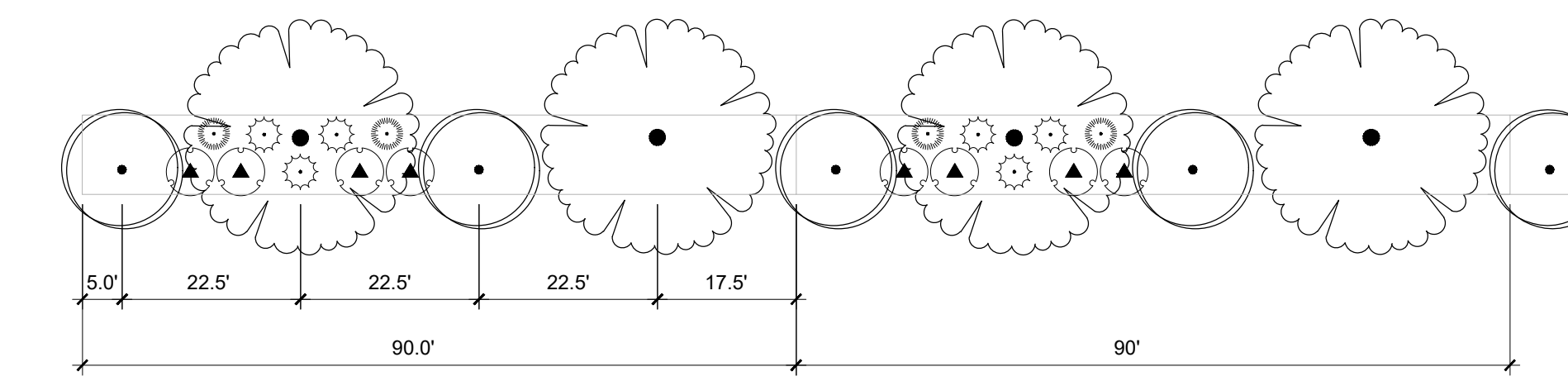


1
 L1.11
PLANTING PLAN - CENTRAL CONTROL PARKING
 (IN FEET)
 1 inch = 20 ft.



3
 L1.11
PERIMETER PLANTING TYPE A, TYPICAL
 (IN FEET)
 1 inch = 20 ft.

NOTES
 1. PLANT PERIMETER IN PREPARED SOIL PER DETAIL 4L5.10.
 2. PATTERN REPEATS EVERY 120'F 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
 (IN FEET)
 1 inch = 20 ft.

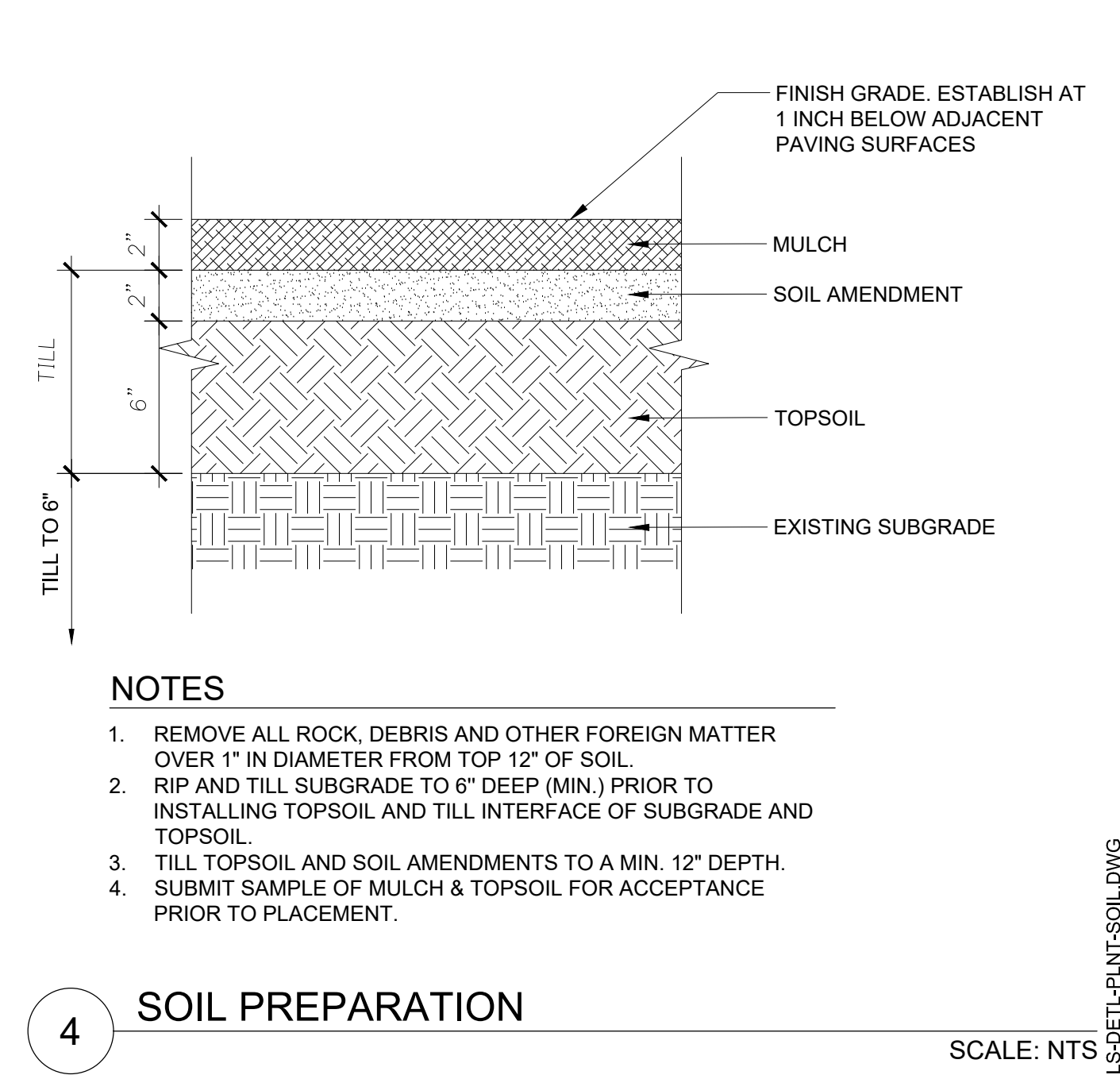
NOTES
 1. FIT PLANT TREES AND SHRUBS IN EXISTING FIELD GRASS.
 2. REMOVE ANY NOXIOUS OR NUISANCE PLANTS WITHIN PERIMETER PLANTING, INCLUDING BLACKBERRY, BINDWEED, LOOSESTRIFE, ETC.
 3. PATTERN REPEATS EVERY 90'F AND INCLUDES 4 TREES AND 9 SHRUBS AS SHOWN.

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
PLANTING DETAILS

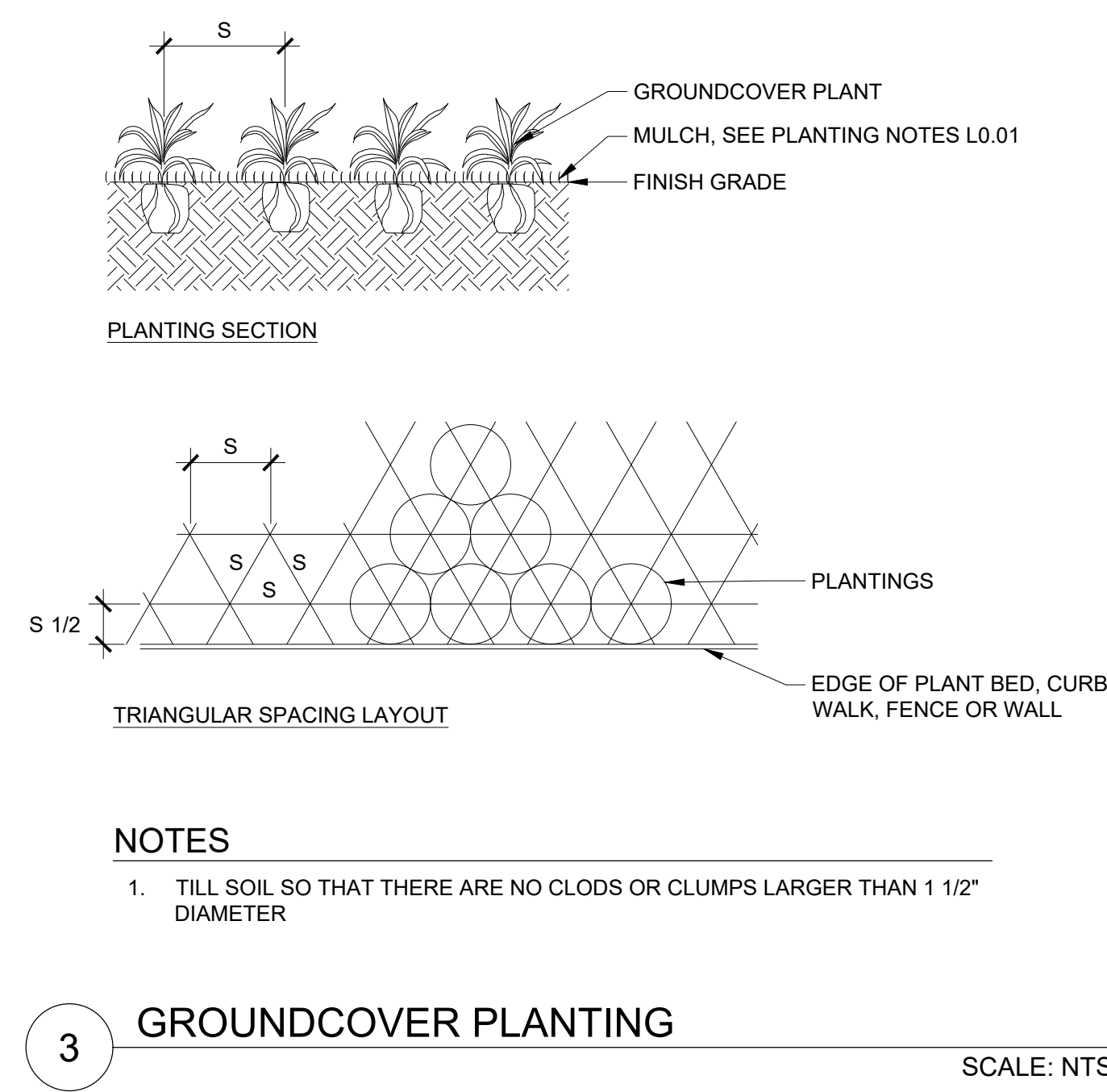
DRAWN BY: RAC
 CHECKED BY: NRF
 SHEET

L5.10
 JOB NO. **2200315.01**



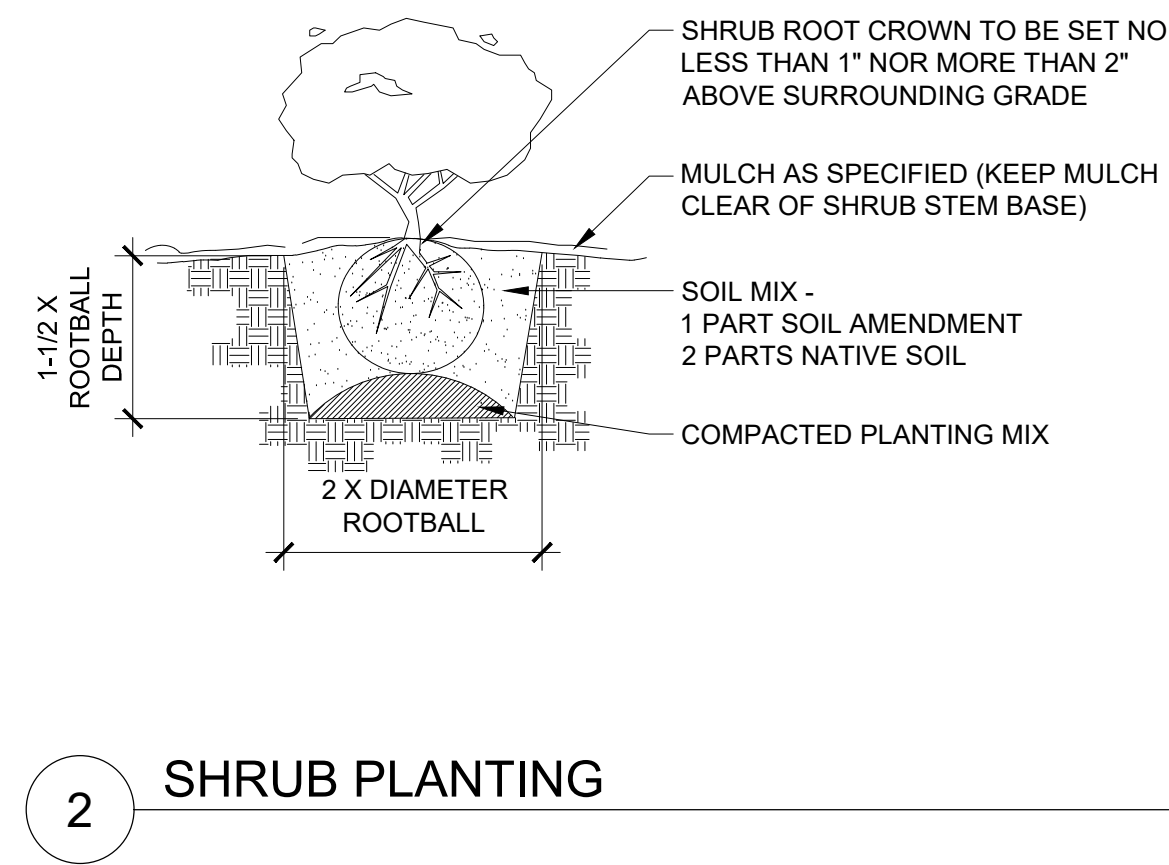
- NOTES**
- REMOVE ALL ROCK, DEBRIS AND OTHER FOREIGN MATTER OVER 1" IN DIAMETER FROM TOP 12" OF SOIL.
 - RIP AND TILL SUBGRADE TO 6" DEEP (MIN.) PRIOR TO INSTALLING TOPSOIL AND TILL INTERFACE OF SUBGRADE AND TOPSOIL.
 - TILL TOPSOIL AND SOIL AMENDMENTS TO A MIN. 12" DEPTH.
 - SUBMIT SAMPLE OF MULCH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

4 SOIL PREPARATION SCALE: NTS



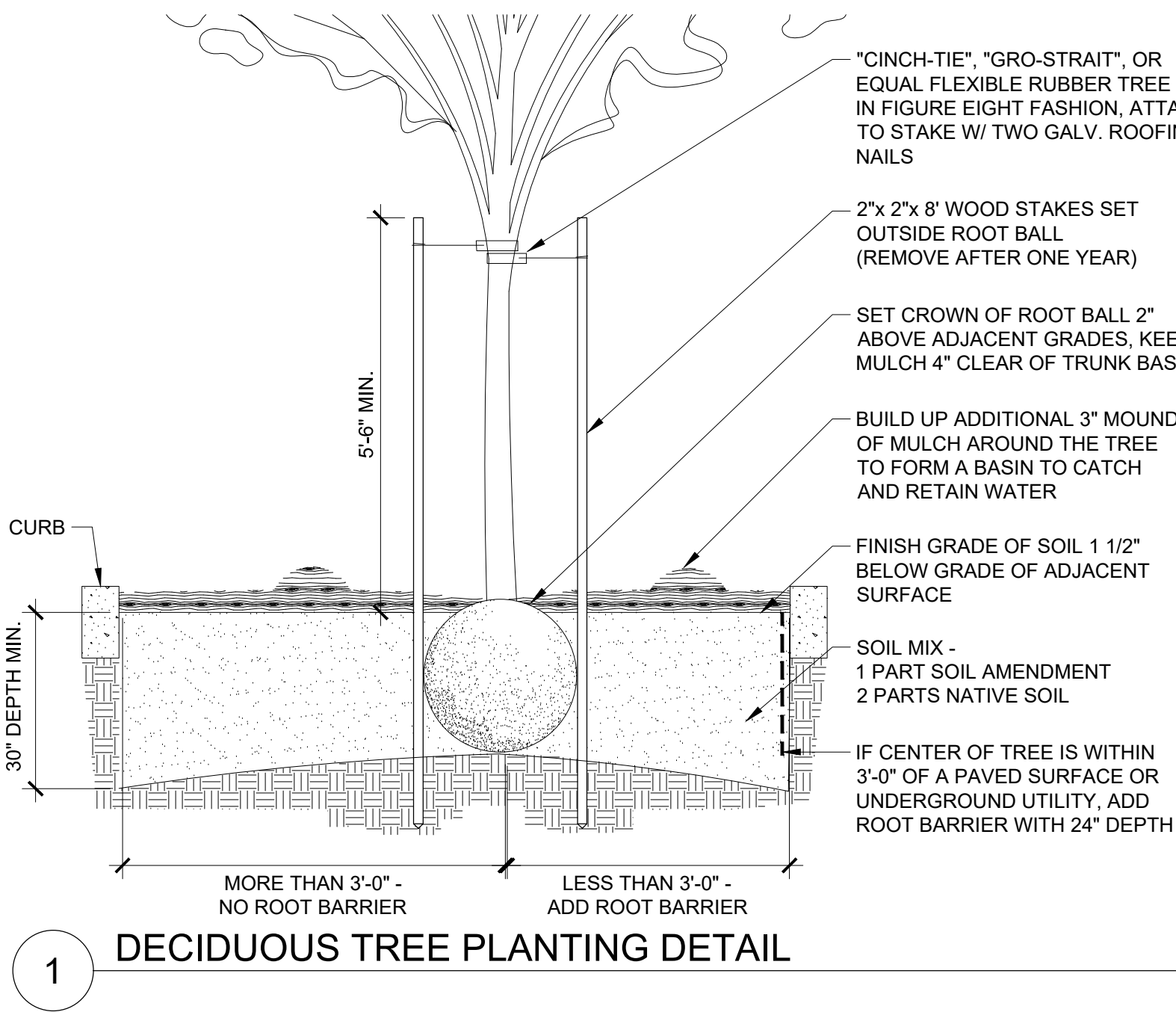
- NOTES**
- TILL SOIL SO THAT THERE ARE NO CLODS OR CLUMPS LARGER THAN 1 1/2" DIAMETER

3 GROUNDCOVER PLANTING SCALE: NTS

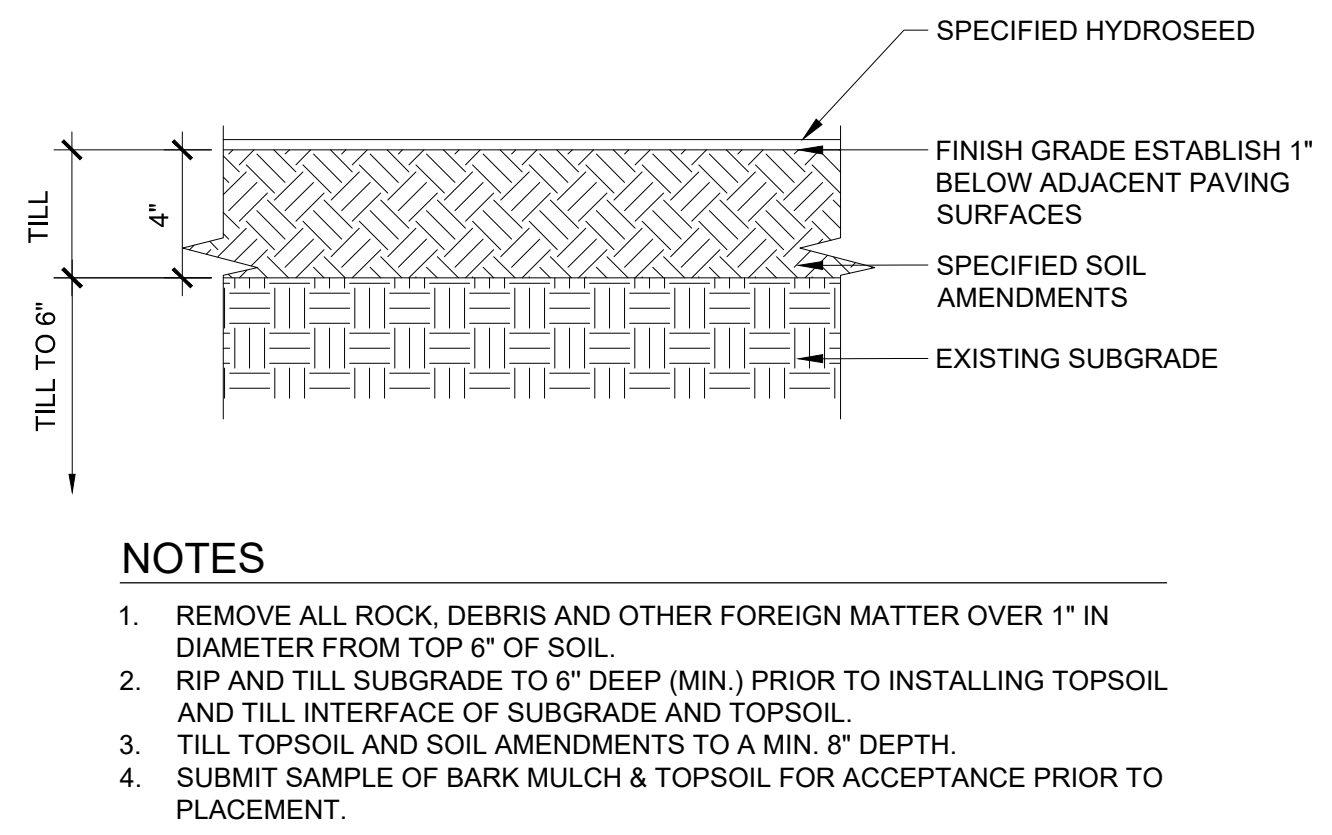


2 SHRUB PLANTING

- NOTES**
- PLANT ALL TREES AT LEAST 32 INCHES FROM THE END OF HEAD-IN PARKING SPACES TO PREVENT DAMAGE FROM CAR OVERHANGS.
 - ALL ROOTS MUST BE COMPLETELY COVERED. BACKFILL SHOULD BE THOROUGHLY WATERED AS IT IS PLACED AROUND THE ROOTS.
 - SCARIFY AND ROUGHEN BOTTOM OF PLANTING PIT PRIOR TO PLACING TREE AND TOPSOIL. SLOPE BOTTOM TO DRAIN TO SIDES.
 - 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.
 - 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.
 - 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. 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.
 - SET TREE STRAIGHT ON TAMPED SOIL.
 - BACKFILL HOLE WITH APPROVED PLANTING MEDIUM MIX TO HALF DEPTH. TAMP SOIL TO STABILIZE ROOTBALL. FINISH BACKFILLING AND TAMP AGAIN.
 - 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.
 - 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.
 - ALL PLANTING BEDS CONTAINING TREES AND SHRUBS AND SURFACE DRAINAGE SHALL BE PREPARED SIMILAR TO THIS LANDSCAPE TREE PLANTING AND DRAINAGE DETAIL.



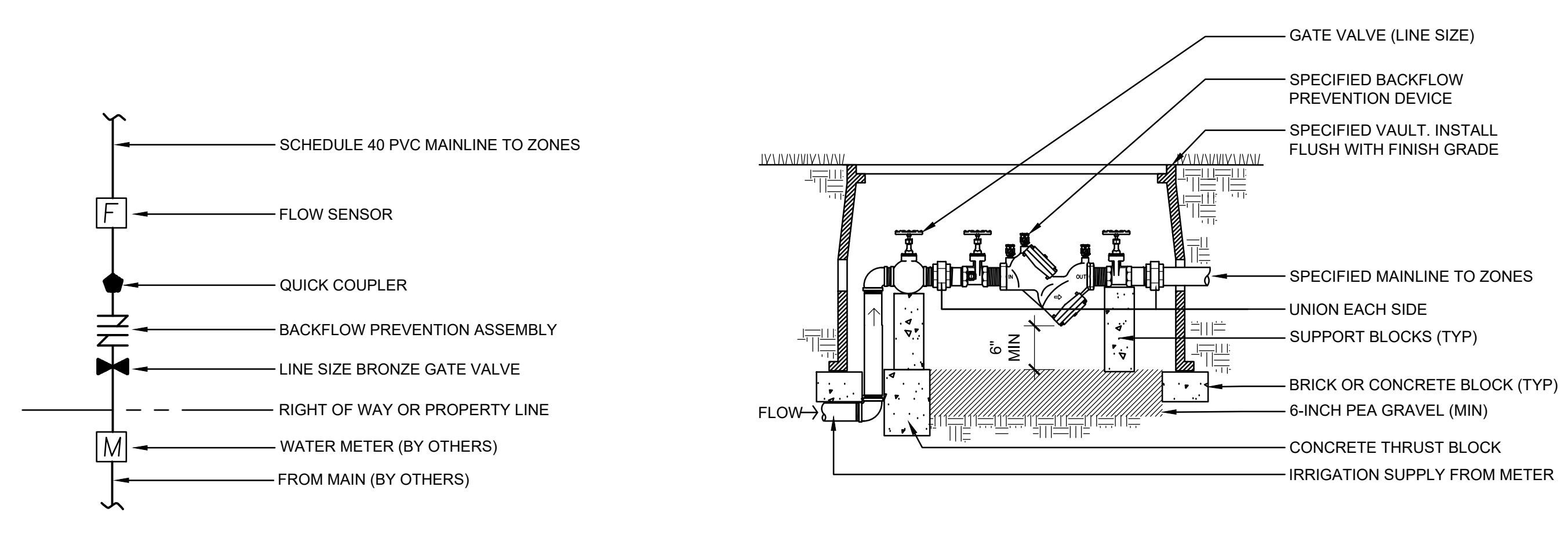
1 DECIDUOUS TREE PLANTING DETAIL



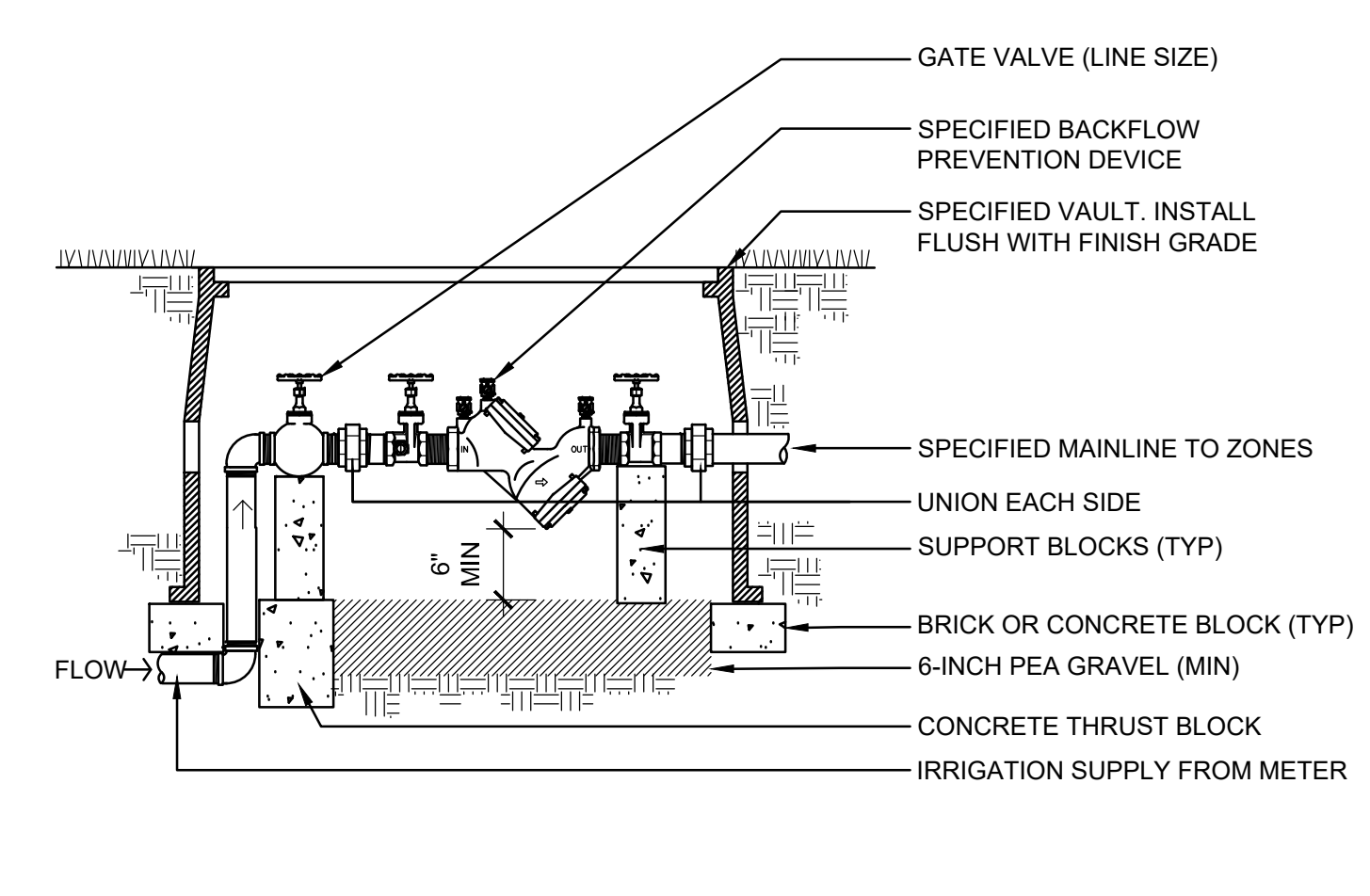
- NOTES**
- REMOVE ALL ROCK, DEBRIS AND OTHER FOREIGN MATTER OVER 1" IN DIAMETER FROM TOP 6" OF SOIL.
 - RIP AND TILL SUBGRADE TO 6" DEEP (MIN.) PRIOR TO INSTALLING TOPSOIL AND TILL INTERFACE OF SUBGRADE AND TOPSOIL.
 - TILL TOPSOIL AND SOIL AMENDMENTS TO A MIN. 8" DEPTH.
 - SUBMIT SAMPLE OF BARK MULCH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

5 SOIL PREP. AT HYDROSEED SCALE: NTS

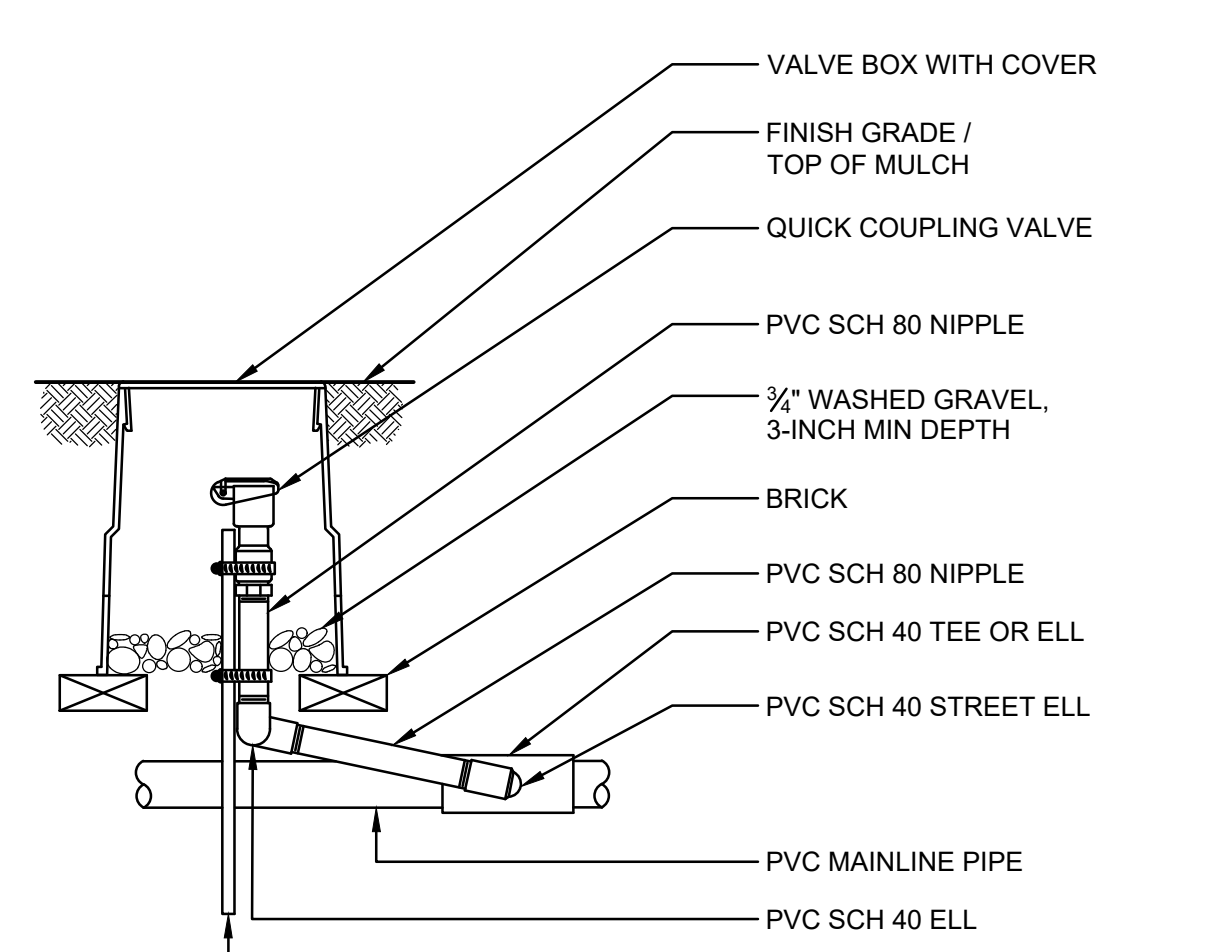
LS-DET1-TREE-DEC-CURB.DWG
 LS-DET1-SHRE.DWG
 LS-DET1-PLANT-SOIL.DWG
 LS-DET1-PLANT-SOIL-SEED.DWG



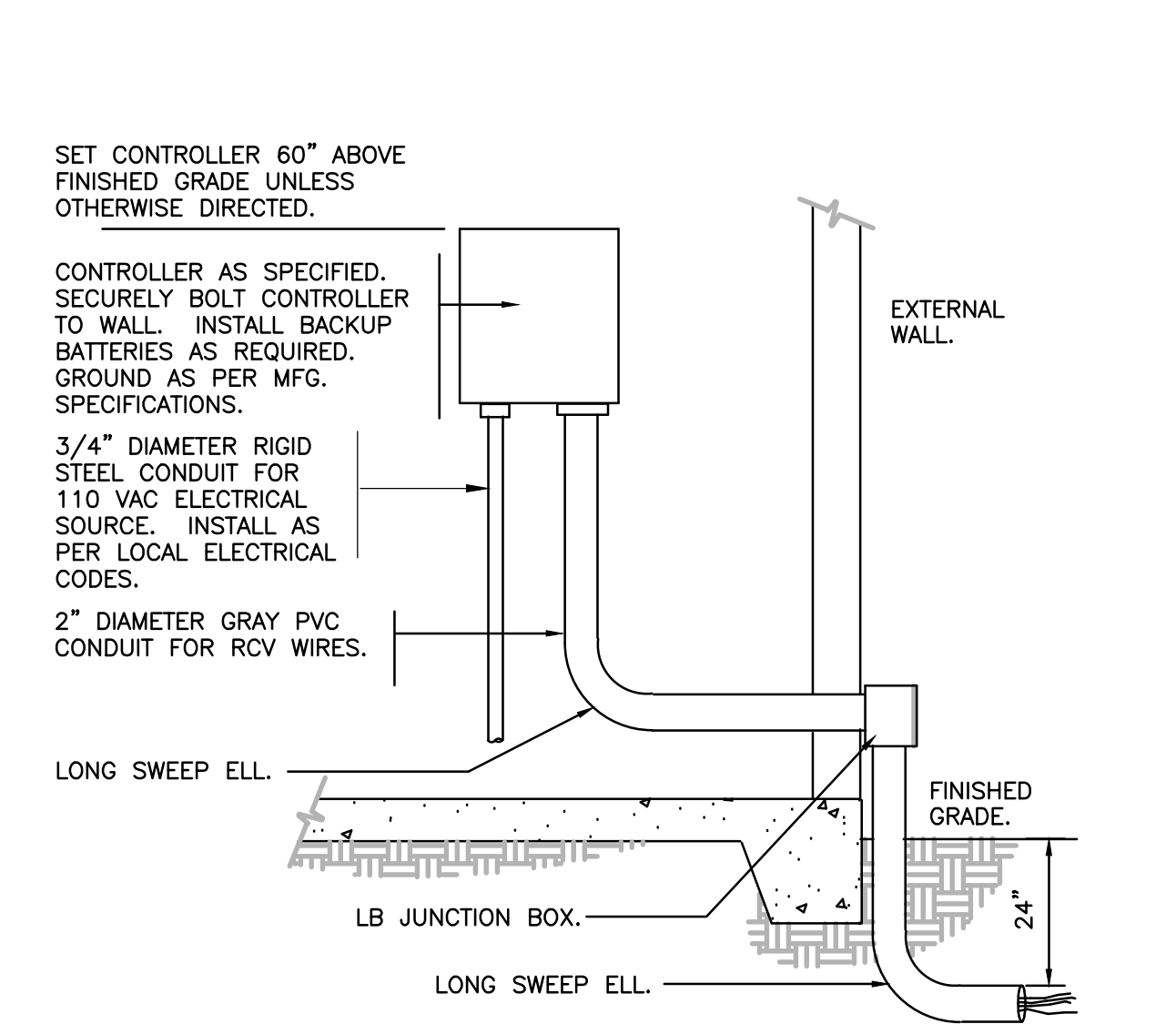
1 POINT OF CONNECTION
 SCALE: NTS



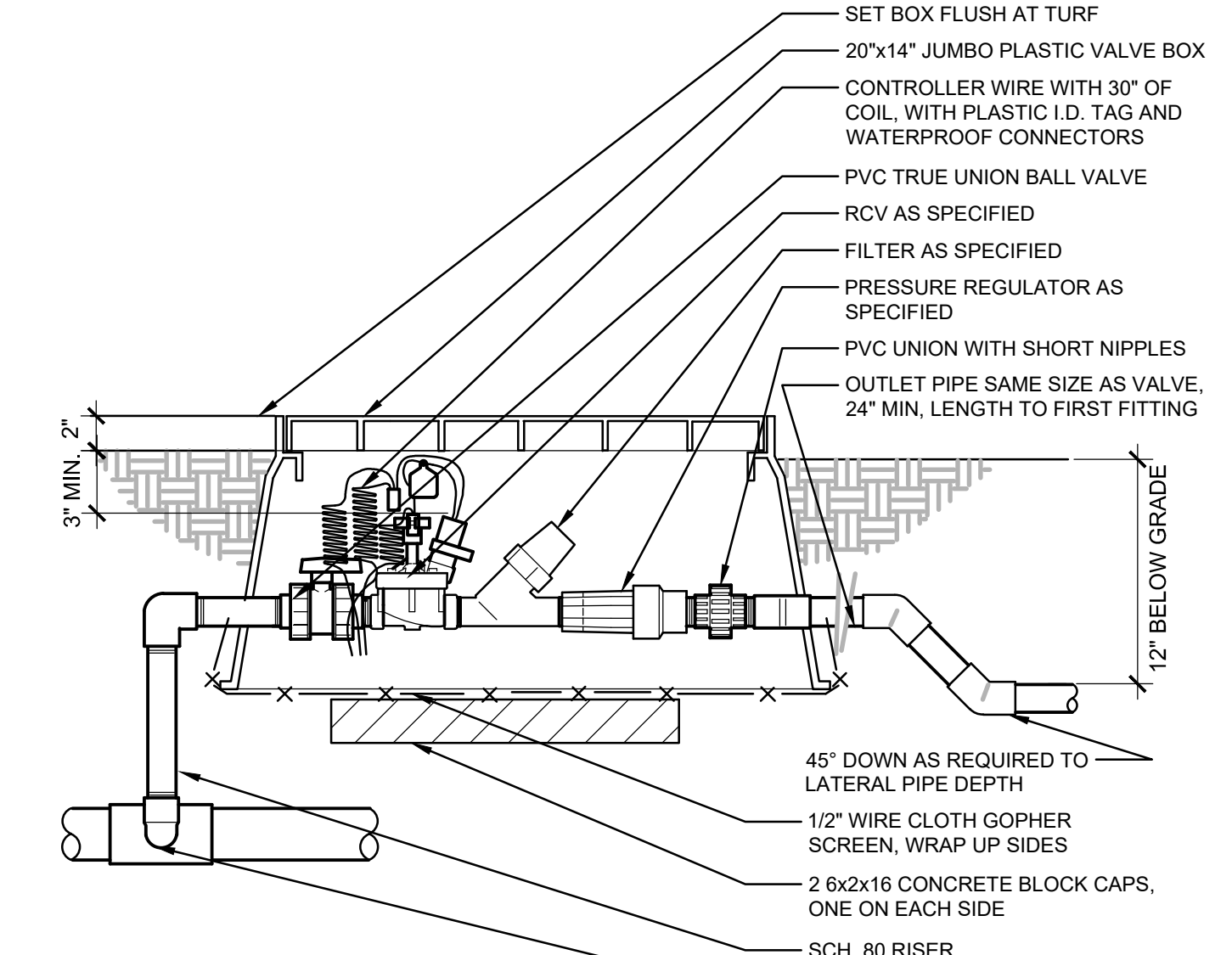
2 DOUBLE CHECK VALVE
 BACKFLOW PREVENTOR (BELOW GRADE)
 SCALE: NTS



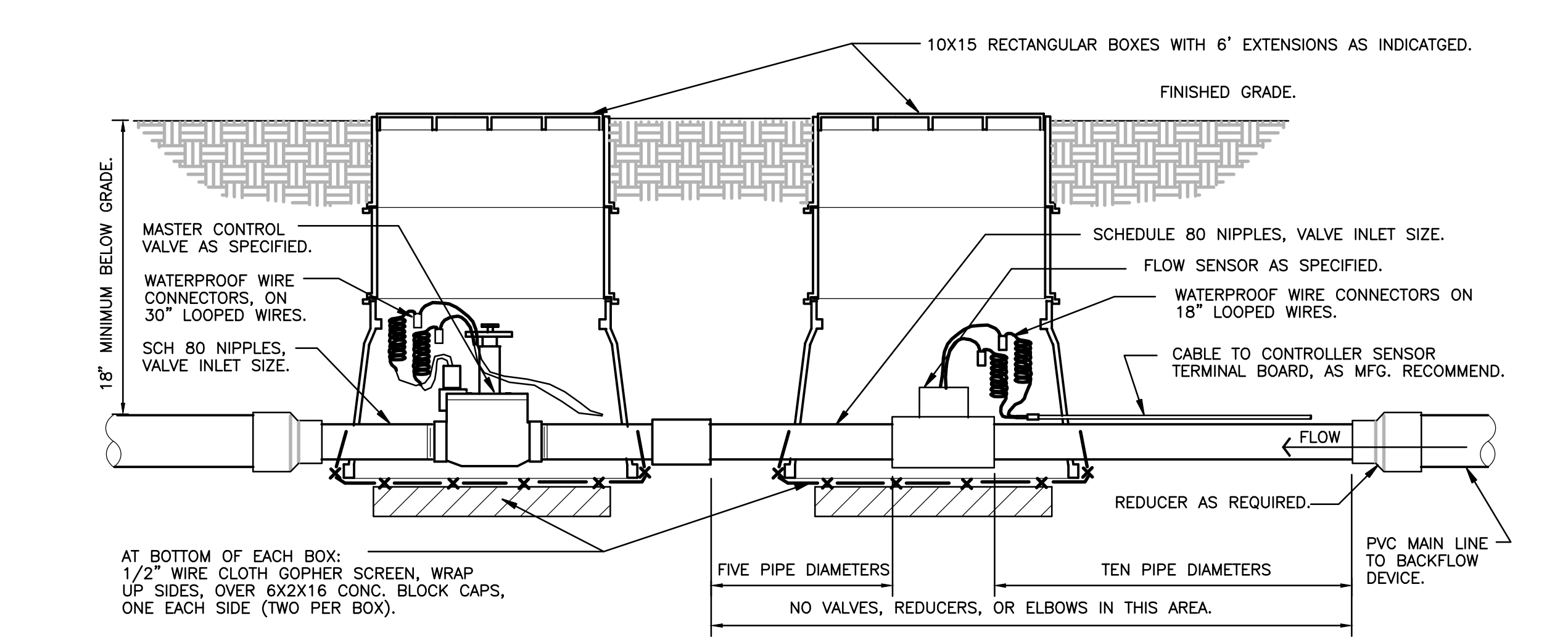
3 QUICK COUPLER VALVE
 SCALE: NTS



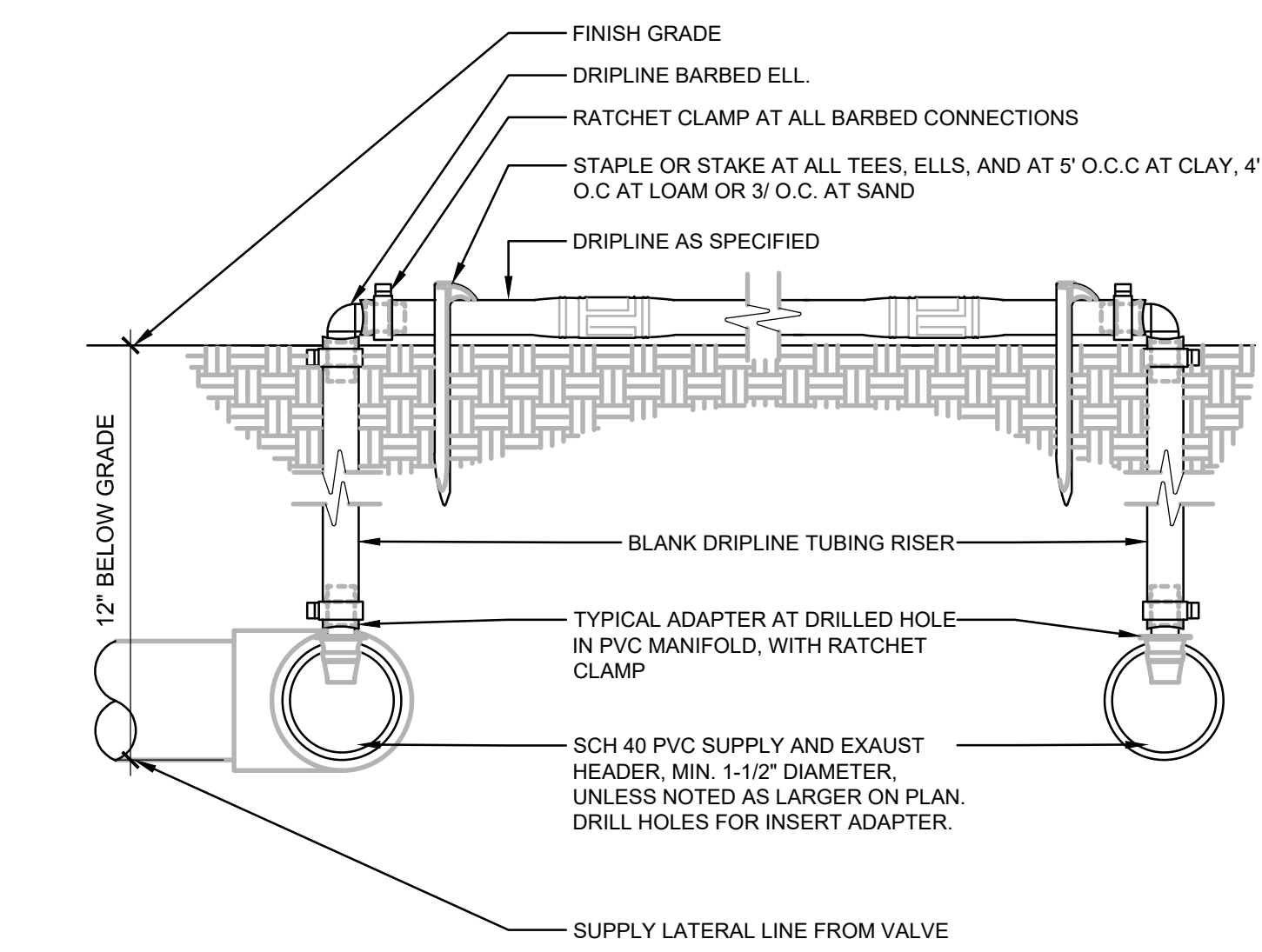
4 INTERIOR WALL MOUNT CONTROLLER
 1" = 1'-0"
 SCALE: NTS



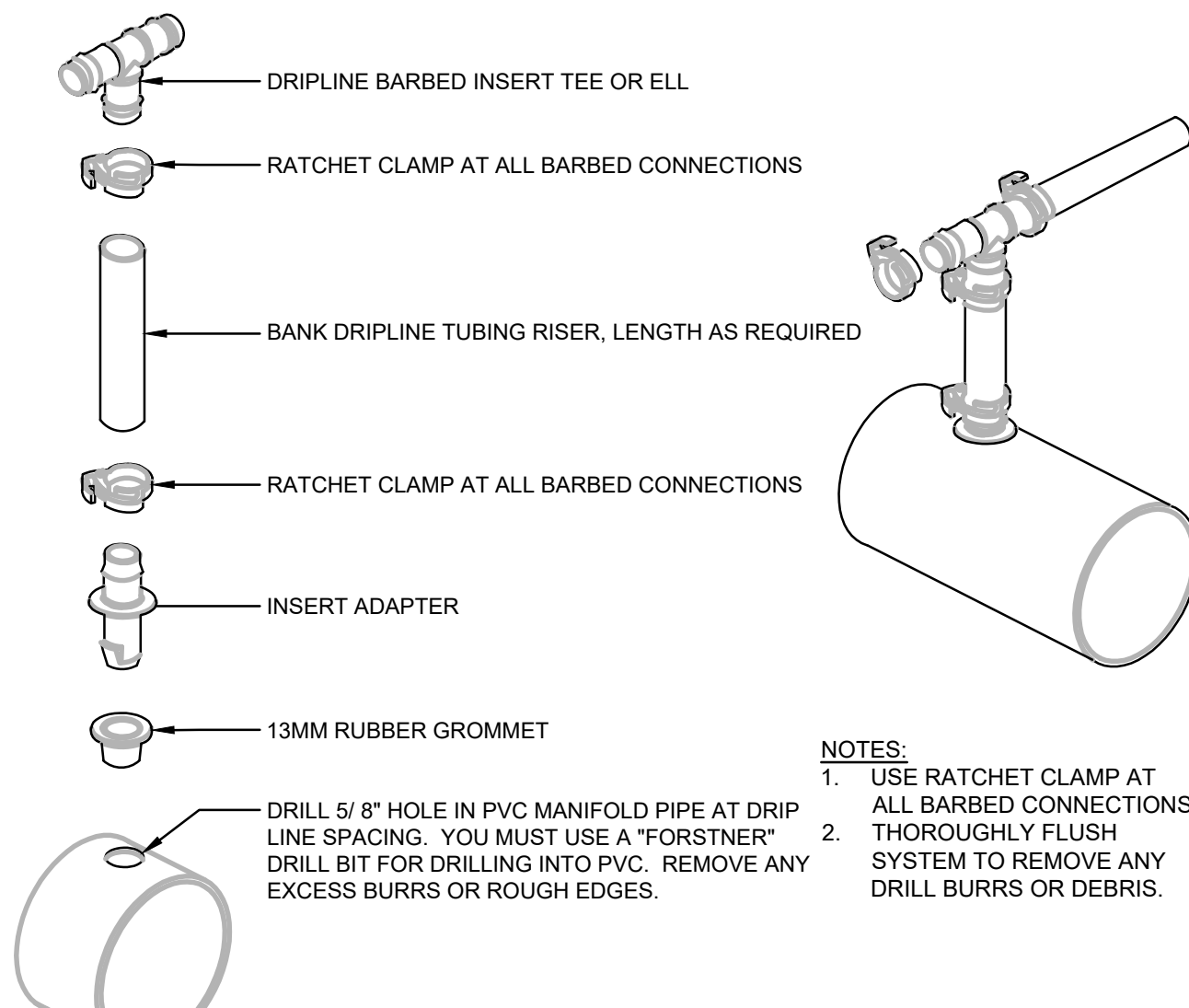
5 1" DRIP VALVE/FILTER/REGULATOR
 SCALE: NTS



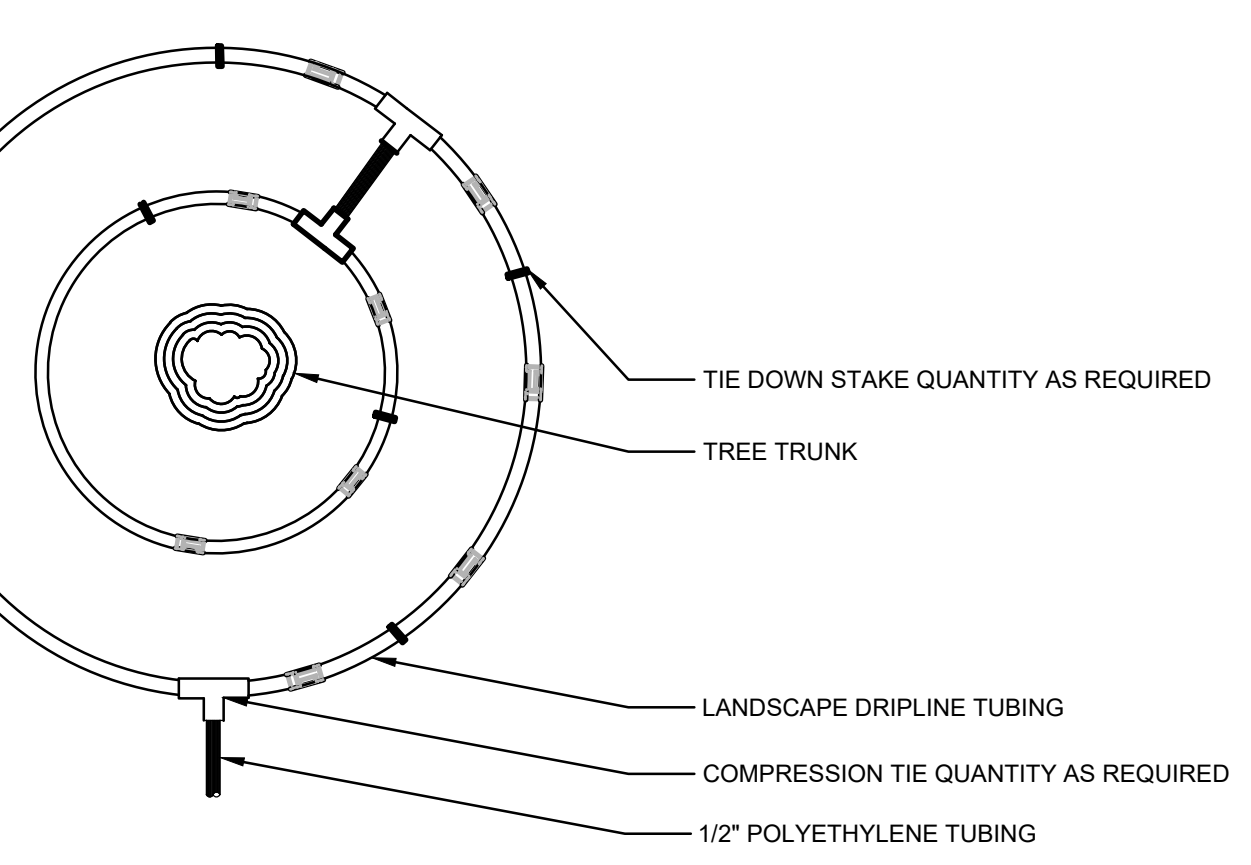
6 MASTER VALVE/FLOW SENSOR ASSEMBLY
 1 1/2" = 1'-0"
 SCALE: NTS



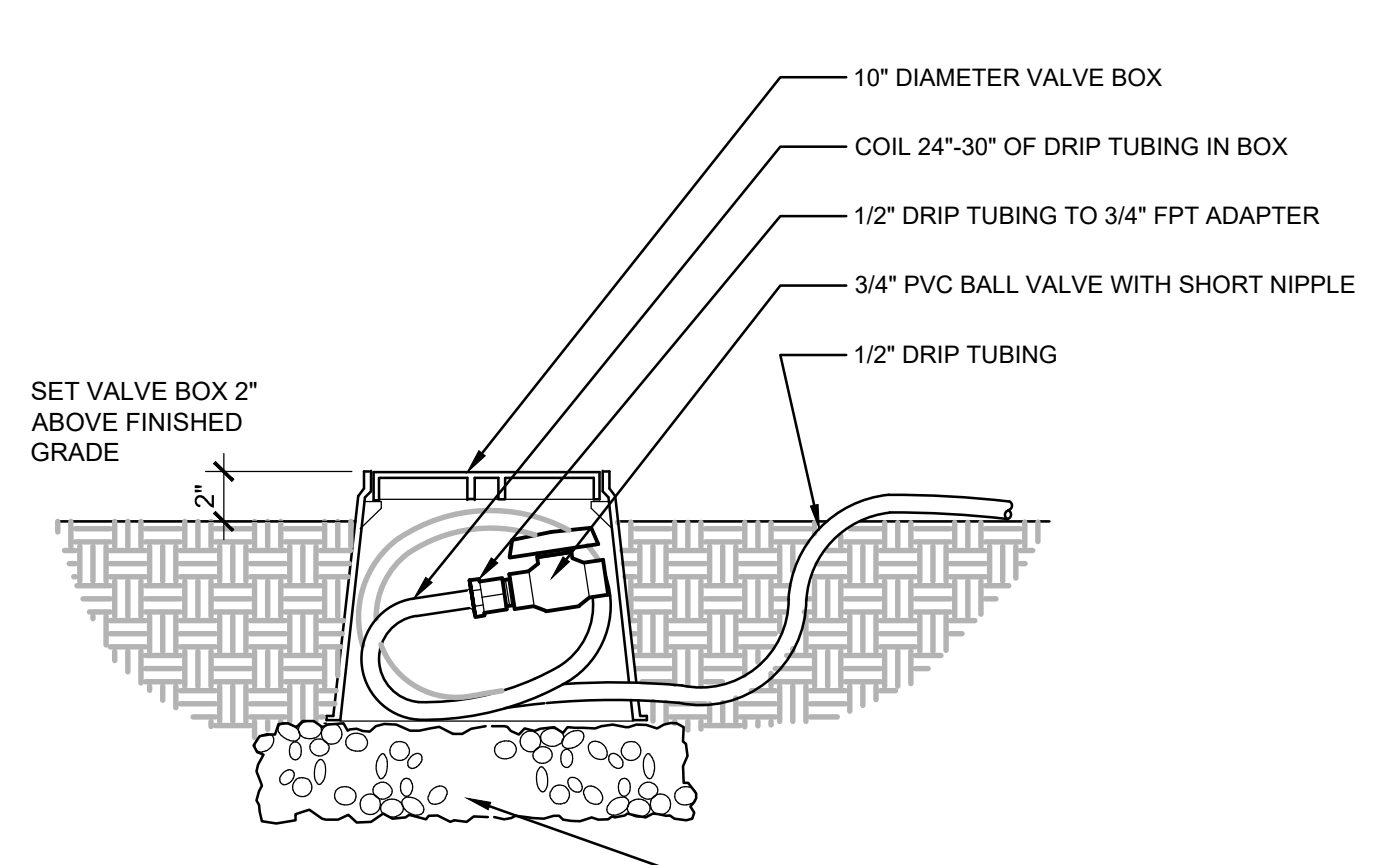
7 DRIPLINE TO MANIFOLD ADAPTER CONNECTION
 SCALE: NTS



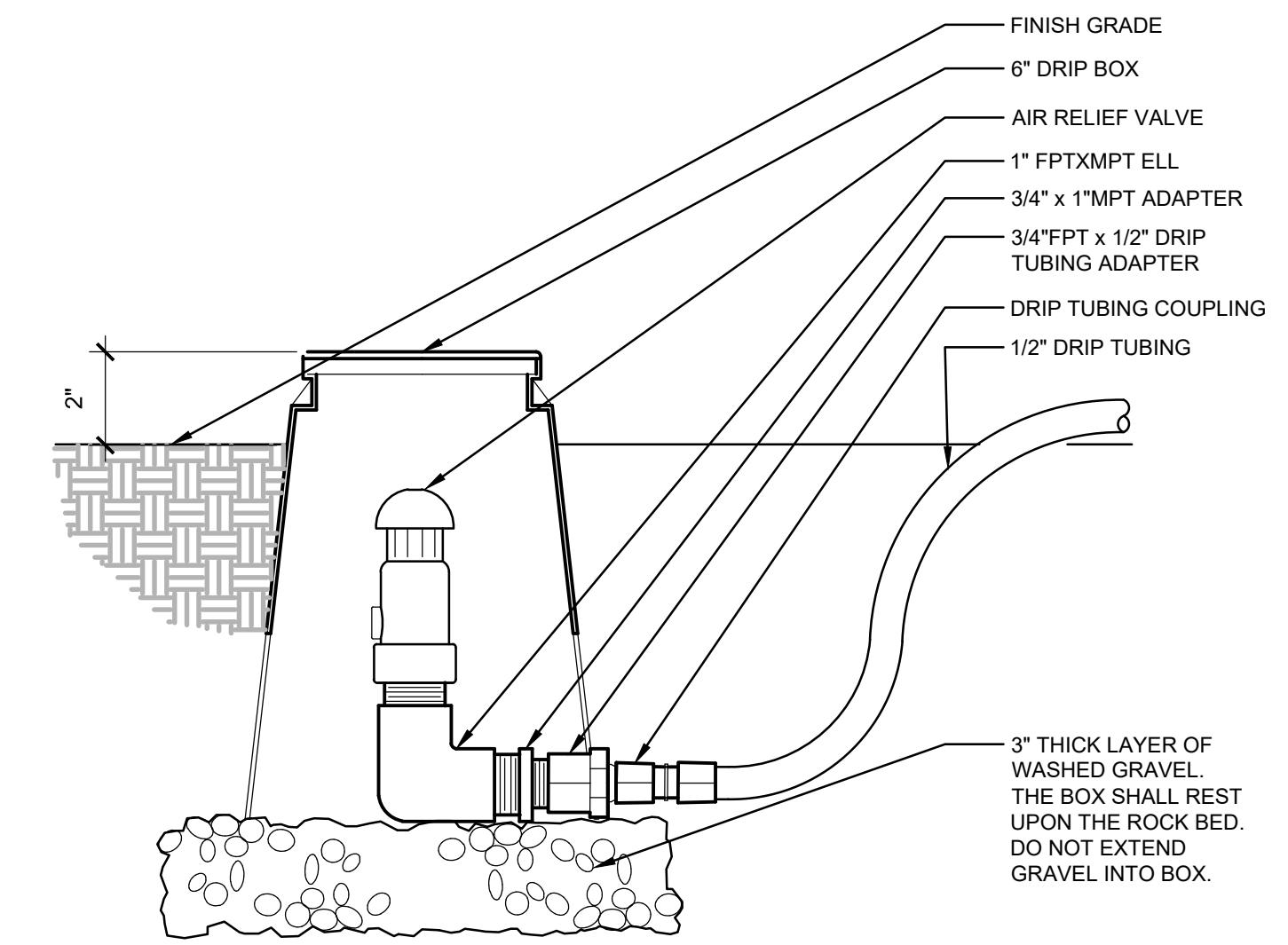
8 ZONE CONTROL
 SCALE: NTS



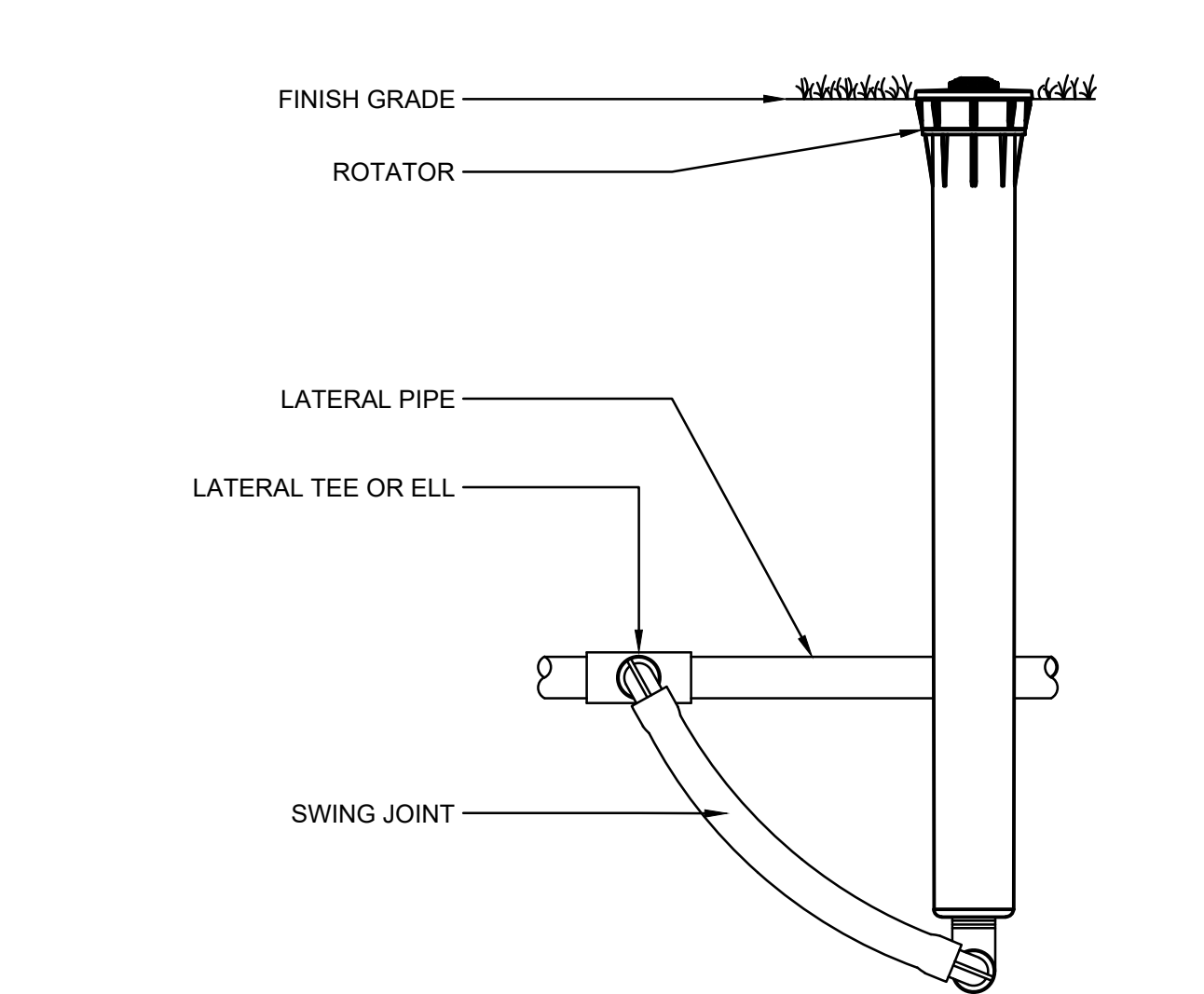
9 DRIPLINE AROUND TREE
 SCALE: NTS



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



© MACKENZIE 2021
 ALL RIGHTS RESERVED
 THESE DRAWINGS ARE THE PROPERTY OF
 MACKENZIE AND ARE NOT TO BE USED
 OR REPRODUCED IN ANY MANNER
 WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
IRRIGATION DETAILS

DRAWN BY: RAC
 CHECKED BY: NRF
 SHEET



L5.11

JOB NO. **2200315.01**