PRELIMINARY/FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC.

PROPOSED

INDUSTRIAL DEVELOPMENT

LOCATION OF SITE

2141 COMMERCE CENTER BOULEVARD

CITY OF BETHLEHEM, NORTHAMPTON COUNTY, PA

WARD 16 BLOCK SM18

PARID: FORMERLY 216-021754

CERTIFICATION OF OWNERSHIP

I, _____ OF _____ BEING DULY SWORN ACCORDING TO LAW, AND ACTING IN MY CAPACITY AS _____ DEPOSE AND SAY THAT THE ABOVE NAMED CORPORATION IS THE TRUE AND LAWFUL OWNER OF PROPERTY KNOWN AS _____; THAT THE ABOVE DESCRIBED PROPERTY IS IN PEACEFUL POSSESSION OF SAID CORPORATION AND THAT THERE ARE NO SUITS OR LIENS PENDING AFFECTING THE TITLE THEREOF.

_____
_____
_____
(ADDRESS)

BY: _____
NAME: _____
TITLE: _____

BY: _____
NAME: _____
TITLE: _____

SWORN TO AND SUBSCRIBED BEFORE ME

THIS _____ DAY OF _____, 20_____

_____
NOTARY PUBLIC

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN CORRECTLY AND ACCURATELY REPRESENTS THE LANDS OF THE OWNER AND, WHERE APPLICABLE, THE LOTS, BUILDINGS, STREETS, PARKING AREAS, WALKWAYS, AND OTHER STRUCTURES AND IMPROVEMENTS SHOWN THEREON.

_____
SIGNATURE: MATTHEW M. CHARTRAND,
REGISTERED No.: PE071444

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN CORRECTLY AND ACCURATELY REPRESENTS THE LANDS OF THE OWNER AND, WHERE APPLICABLE, THE LOTS, BUILDINGS, STREETS, PARKING AREAS, WALKWAYS, AND OTHER STRUCTURES AND IMPROVEMENTS SHOWN THEREON.

_____
SIGNATURE: JAMES C. WEED,
REGISTERED No.: SU075250

PLANNING COMMISSION APPROVAL

APPROVED _____ BY THE CITY OF BETHLEHEM PLANNING COMMISSION.

_____ _____
SECRETARY CHAIRMAN

_____ _____
DATE

LEHIGH VALLEY PLANNING COMMISSION

REVIEWED BY THE LEHIGH VALLEY PLANNING COMMISSION OF LEHIGH AND NORTHAMPTON COUNTIES

_____ _____
DATE

RECORDED PLAN CERTIFICATION

PLAN RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS OF NORTHAMPTON COUNTY, PENNSYLVANIA, ON

_____ DAY OF _____, 20_____, IN MAP BOOK VOLUME _____,

PAGE _____,

_____
NORTHAMPTON COUNTY RECORDER OF DEEDS

GENERAL NOTE:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF THE WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.

VARIANCE APPROVED AT THE OCTOBER 23, 2024 ZONING HEARING BOARD, WITH WRITTEN DECISION DATED DECEMBER 2, 2024

FROM SECTION 1319.01(a)(40) - TO PROVIDE 58 PARKING SPACES IN LIEU OF THE REQUIRED 101 SPACES FOR BUILDING 'B'.

CONDITION #1. THE MAXIMUM NUMBER OF EMPLOYEES EMPLOYED UPON PROPOSED LOT B AT ANY TIME SHALL NOT EXCEED THE NUMBER OF OFF-STREET ON-SITE EMPLOYEE PARKING SPACES ACTUALLY SITUATE UPON PROPOSED LOT B BASED ON THE ACTUAL EMPLOYEE- BASED MECHANISM CONTAINED WITHIN THE ZONING ORDINANCE FOR THE DETERMINATION OF THE MINIMUM NUMBER OF OFF-STREET EMPLOYEE PARKING SPACES. FOR EXAMPLE, BASED ON 58 PARKING SPACES, THE MAXIMUM NUMBER OF EMPLOYEES WHO COULD WORK AT THE SUBJECT PROPERTY WOULD BE 87 EMPLOYEES, OR 1.5 EMPLOYEES FOR EACH ACTUAL OFF-STREET, ON-SITE PARKING SPACE PROVIDED ON PROPOSED LOT B. IF THE NUMBER OF EMPLOYEES WORKING AT PROPOSED LOT B CHANGES, THE NUMBER OF AVAILABLE OFF-STREET PARKING FOR PROPOSED LOT B WOULD BE ALTERED TO ACCOMMODATE THE CHANGE IN ACTUAL EMPLOYEES AS REQUIRED BY THE ZONING ORDINANCE.

CONDITION #2. APPLICANT'S DEVELOPMENT AND USE OF THE SUBJECT PROPERTY SHALL OCCUR IN STRICT CONFORMANCE WITH APPLICANT'S EXHIBITS AND TESTIMONY, INCLUDING BUT NOT LIMITED TO APPLICANT'S SITE PLAN SUBMITTED AS EXHIBIT A-2.

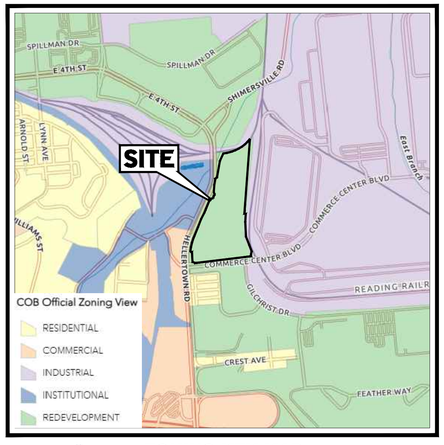
CONDITION #3. APPLICANT'S DEVELOPMENT AND USE OF THE SUBJECT PROPERTY SHALL OCCUR IN STRICT CONFORMANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL LAW AND APPLICANT SHALL ENSURE THAT ANY OWNER, OPERATORS, TENANT OR OCCUPANTS OF THE SUBJECT PROPERTY SHALL BE BOUND BY THE CONDITIONS OF THE RELIEF GRANTED HEREIN.

SPECIAL EXCEPTION APPROVED AT THE OCTOBER 23, 2024 ZONING HEARING BOARD, WITH WRITTEN DECISION DATED DECEMBER 2, 2024

FROM SECTION 1305.01(e) - TO PERMIT DISTRIBUTION, WAREHOUSING OR STORAGE AS A PRINCIPAL USE ON LOTS 'A' & 'B'.

CONDITION #1: APPLICANT'S DEVELOPMENT AND USE OF THE SUBJECT PROPERTY SHALL OCCUR IN STRICT CONFORMANCE WITH APPLICANT'S EXHIBITS AND TESTIMONY, INCLUDING BUT NOT LIMITED TO APPLICANT'S SITE PLAN SUBMITTED AS EXHIBIT A-2.

CONDITION #2: APPLICANT'S DEVELOPMENT AND USE OF THE SUBJECT PROPERTY SHALL OCCUR IN STRICT CONFORMANCE WITH ALL APPLICABLE LOCAL,STATE AND FEDERAL LAW AND APPLICANT SHALL ENSURE THAT ANY OWNER, OPERATORS, TENANT OR OCCUPANTS OF THE SUBJECT PROPERTY SHALL BE BOUND BY THE CONDITIONS OF THE RELIEF GRANTED HEREIN.



ZONING KEY MAP

SCALE: 1" = 800'
SOURCE: CITY OF BETHLEHEM GIS

OWNER

LEHIGH VALLEY INDUSTRIAL PARK, INC.
1720 SPILLMAN DR, SUITE 150
BETHLEHEM, PA 18015
C/O KERRY WROBEL

EQUITABLE OWNER/ DEVELOPER

JERC PARTNERS XCII, LLC.
171 STATE ROUTE 173, SUITE 210
ASBURY, NJ 08802
C/O JOE PETRUCCI
CONTACT NUMBER: 908-730-6909
EMAIL: JOEPETRUCCI@JGPETRUCCI.COM

PREPARED BY

BOHLER

CONTACT: ADAM CITRULLO

REFERENCES AND CONTACTS

REFERENCES

- ALTA/NSPS LAND TITLE SURVEY:
  CONTROL POINT ASSOCIATES, INC.
  1600 MANOR DR., SUITE 210
  CHALFONT, PA 18914
  DATED: 08-14-2024
  FILE #02-240147-00
- GEOTECHNICAL ENGINEERING REPORT:
  PENNONI ASSOCIATES, INC.
  81 HIGHLAND AVE., SUITE 230
  BETHLEHEM, PA 18017
  DATED: 09-18-2024
- WETLAND AND WATERCOURSE DELINEATION:
  SKELLY AND LOY
  449 EISENHOWER BLVD., SUITE 300
  HARRISBURG, PA 17111
  DATED: 08-26-2024
  JOB NO.: JN247277

GOVERNING AGENCIES

- PLANNING, ZONING
  10 E. CHURCH ST.
  BETHLEHEM, PA 18018
  DIRECTOR/ ACTING ZONING OFFICER: DARLENE HELLER
  PHONE: (610) 865-7091
- BUILDING DEPARTMENT
  10 E. CHURCH ST.
  BETHLEHEM, PA 18018
  CHEIF BUILDING INSPECTOR: MIKE SIMONSON
  PHONE: (610) 869-7091
- FIRE DEPARTMENT
  10 E. CHURCH ST.
  BETHLEHEM, PA 18018
  CHIEF: MICHAEL REICH
  PHONE: (610) 865-7140
  FAX: (610) 865-7269

THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS, HOWEVER, BOHLER ENGINEERING DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.

SHEET INDEX

SHEET TITLE	SHEET NUMBER
COVER SHEET **(RECORD SHEET 1 OF 13)**	C-101
GENERAL NOTES AND LEGEND **(RECORD SHEET 2 OF 13)**	C-102
EXISTING CONDITIONS/DEMOLITION PLANS	C-201 - C-205
SITE PLANS **(RECORD SHEETS 3-7 OF 13)**	C-301 - C305
TRUCK TURNING PLANS	C-306 - C-309
EASEMENTS PLAN **(RECORD SHEET 8 OF 13)**	C-310
GRADING PLANS	C-401 - C-406
UTILITY PLANS	C-501 - C-505
SANITARY PROFILES	C-601
STORM PROFILES	C-602 - C-605
PRE DEVELOPMENT DRAINAGE AREA MAP	C-801
EROSION AND SEDIMENT CONTROL PLANS	C-802 - C-811
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	C-812 - C-814
POST DEVELOPMENT DRAINAGE AREA MAP	C-815
POST CONSTRUCTION STORMWATER MANAGEMENT PLANS **(RECORD SHEET 9 OF 13)**	C-816 - C-820
POST CONSTRUCTION STORMWATER MANAGEMENT NOTES AND DETAILS	C-821 - C-822
CONSTRUCTION DETAILS	C-901 - C-903
LANDSCAPE PLAN	L-101 - L105
LANDSCAPE NOTES AND DETAILS	L-106
LIGHTING PLAN	L-201 - L205
LIGHTING NOTES AND DETAILS	L-206

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONCEPTS CONTAINED IN THIS DRAWING ARE THE COPYRIGHTED PROPERTY OF BOHLER AND CANNOT BE USED WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED AND DATED DRAWINGS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES. © 2024 BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-CNDS

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

COMMONWEALTH OF PENNSYLVANIA — MATTHEW M. CHARTRAND — PROFESSIONAL ENGINEER — PENNSYLVANIA LICENSE NO. PE071444

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

COVER SHEET

SHEET NUMBER:

C-101

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-CNDS-PAB240068.00-2A-----LAYOUT: C-101 COVER
JMV

GENERAL NOTES
(Rev. 1/2023)

1. THESE PLANS ARE SOLELY BASED ON INFORMATION THE OWNER AND OTHERS PROVIDED TO BOHLER ENGINEERING PA, LLC (HEREIN "BOHLER") PRIOR TO THE DATE ON WHICH THE PROFESSIONAL OF RECORD AND BOHLER PREPARED THESE PLANS. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS AND IMMEDIATELY NOTIFY BOHLER , IN WRITING, IF ANY ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THESE PLANS, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.
2. THE CONTRACTOR MUST STRICTLY COMPLY WITH THESE NOTES AND ALL SPECIFICATIONS/REPORTS CONTAINED HEREIN. THE CONTRACTOR MUST ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS, THESE NOTES, AND THE REQUIREMENTS ARTICULATED IN THE NOTES CONTAINED IN ALL THE OTHER DRAWINGS THAT COMPRISE THE PLAN SET OF DRAWINGS. ADDITIONAL NOTES AND SPECIFIC PLAN NOTES MAY BE FOUND ON THE INDIVIDUAL PLANS. THESE GENERAL NOTES APPLY TO THIS ENTIRE DOCUMENT PACKAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE, PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION.
3. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST CONFIRM WITH THE PROFESSIONAL OF RECORD AND BOHLER THAT THE LATEST EDITION OF THE DOCUMENTS AND/OR REPORTS REFERENCED WITHIN THE PLAN REFERENCES ARE BEING USED FOR CONSTRUCTION. THIS IS THE CONTRACTOR'S SOLE AND COMPLETE RESPONSIBILITY.
4. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION IS TO BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE CONDITIONS OF APPROVAL TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES AND HAS ALSO CONFIRMED THAT ALL NECESSARY AND REQUIRED PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
5. THE CONTRACTOR MUST ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS/REPORTS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT, AND ALL PROVISIONS IN AND CONDITIONS OF THE CONSTRUCTION CONTRACT WITH THE OWNER/DEVELOPER INCLUDING ALL EXHIBITS, ATTACHMENTS AND ADDENDA TO SAME.
6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFULLY REVIEWING THE MOST CURRENT ARCHITECTURAL, CIVIL AND STRUCTURAL CONSTRUCTION DOCUMENTS (INCLUDING, BUT NOT LIMITED TO, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLANS, WHERE APPLICABLE). THE CONTRACTOR MUST IMMEDIATELY NOTIFY OWNER, ARCHITECT AND PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES WHICH EXIST BETWEEN THESE PLANS AND ANY OTHER PLANS THAT COMPRISE THE CONSTRUCTION DOCUMENTS.
7. CONTRACTOR MUST REFER TO AND ENSURE COMPLIANCE WITH THE APPROVED ARCHITECTURAL/BUILDING PLANS OF RECORD FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
8. THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AND MEASUREMENTS SHOWN ON THESE PLANS, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY NOTIFY PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, IF ANY CONFLICTS, DISCREPANCIES, OR AMBIGUITIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR WORK WHICH HAS TO BE RE-DONE OR REPAIRED DUE TO DIMENSIONS, MEASUREMENTS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO BOTH (A) THE CONTRACTOR GIVING PROFESSIONAL OF RECORD AND BOHLER WRITTEN NOTIFICATION OF SAME AND (B) PROFESSIONAL OF RECORD AND BOHLER, THEREAFTER, PROVIDING THE CONTRACTOR WITH WRITTEN AUTHORIZATION TO PROCEED WITH SUCH ADDITIONAL WORK.
9. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND MEASUREMENTS INCLUDED ON DESIGN DOCUMENTS HEREIN AND MUST NOT SCALE OFF THE DRAWINGS DUE TO POTENTIAL PRINTING INACCURACIES. ALL DIMENSIONS AND MEASUREMENTS ARE TO BE CHECKED AND CONFIRMED BY THE GENERAL CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, FABRICATION/ORDERING OF PARTS AND MATERIALS AND COMMENCEMENT OF SITE WORK. SITE PLAN DRAWINGS ARE NOT INTENDED AS SURVEY DOCUMENTS. DIMENSIONS SUPERSEDE GRAPHICAL REPRESENTATIONS. THE CONTRACTOR MUST MAKE CONTRACTOR'S OWN MEASUREMENTS FOR LAYOUT OF IMPROVEMENTS.
10. THE OWNER AND CONTRACTOR MUST BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
11. WHEN INCLUDED AS ONE OF THE REFERENCED DOCUMENTS, THE GEOTECHNICAL REPORT, SPECIFICATIONS AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY, THE MORE STRINGENT REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN: (A) THE PLANS; AND (B) THE GEOTECHNICAL REPORT AND RECOMMENDATIONS, MUST TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORT AND PLANS AND SPECIFICATIONS, PRIOR TO PROCEEDING WITH ANY FURTHER WORK. IF A GEOTECHNICAL REPORT WAS NOT CREATED, THEN THE CONTRACTOR MUST FOLLOW AND COMPLY WITH ALL OF THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE SPECIFICATIONS WHICH HAVE JURISDICTION OVER THIS PROJECT.
12. PROFESSIONAL OF RECORD AND BOHLER ARE NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, HAS NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.
13. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN AND WHERE SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES. ALL OF THIS WORK IS TO BE PERFORMED AT CONTRACTOR'S SOLE COST AND EXPENSE.
14. THE CONTRACTOR MUST EXERCISE EXTREME CAUTION WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN EITHER FOR AN INITIAL PHASE OF THE PROJECT OR AS PART OF THE FINAL CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ALL APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, UTILITIES, BUILDINGS, AND INFRASTRUCTURE WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK AREA FOR THIRD PARTIES, PEDESTRIANS AND ANYONE INVOLVED WITH THE PROJECT.
15. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION AND CONSTRUCTION WASTES, UNSUITABLE EXCAVATED MATERIAL, EXCESS SOIL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER THE CONTRACTOR.
16. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN RECORDS TO DEMONSTRATE PROPER AND FULLY COMPLIANT DISPOSAL ACTIVITIES, TO BE PROMPTLY PROVIDED TO THE OWNER UPON REQUEST.
17. THE CONTRACTOR MUST REPAIR, AT CONTRACTOR'S SOLE COST, ALL DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME TO INCLUDE, BUT NOT BE LIMITED TO, REDESIGN, RE-SURVEY, RE-PERMITTING AND CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR AND MUST REPLACE ALL SIGNAL INTERCONNECTION CABLE, WIRING CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY MUST RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS, RULES, REGULATIONS, STATUTORY REQUIREMENTS AND STATUTES. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE CONTRACTOR MUST, PROMPTLY, DOCUMENT ALL EXISTING DAMAGE AND NOTIFY, IN WRITING, THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
18. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR AND HAVE NO CONTRACTUAL, LEGAL OR OTHER RESPONSIBILITIES FOR JOB SITE SAFETY JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME. THE PROFESSIONAL OF RECORD AND BOHLER HAVE NOT BEEN RETAINED TO PERFORM OR TO BE RESPONSIBLE FOR JOB SITE SAFETY, SAME BEING WHOLLY OUTSIDE OF PROFESSIONAL OF RECORD'S AND BOHLER SERVICES AS RELATED TO THE PROJECT. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE TO IDENTIFY OR REPORT ANY JOB SITE SAFETY ISSUES OR ANY JOB SITE CONDITIONS, AT ANY TIME.
19. THE CONTRACTOR MUST IMMEDIATELY IDENTIFY IN WRITING, TO THE PROFESSIONAL OF RECORD AND BOHLER , ANY DISCREPANCIES THAT MAY OR COULD AFFECT THE PUBLIC SAFETY, HEALTH OR GENERAL WELFARE, OR PROJECT COST. IF THE CONTRACTOR PROCEEDS WITH CONSTRUCTION WITHOUT PROVIDING PROPER WRITTEN NOTIFICATION AS DESCRIBED ABOVE, IT WILL BE AT THE CONTRACTOR'S OWN RISK AND, FURTHER, THE CONTRACTOR MUST INDEMNIFY, DEFEND AND HOLD HARMLESS THE PROFESSIONAL OF RECORD AND BOHLER FOR ANY AND ALL DAMAGES, COSTS, INJURIES, ATTORNEY'S FEES AND THE LIKE WHICH RESULT FROM OR ARE IN ANY WAY RELATED TO SAME INCLUDING, BUT NOT LIMITED TO, ANY THIRD PARTY AND FIRST PARTY CLAIMS.
20. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM THE CONTRACTOR'S FAILURE TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH THE APPROVED PLANS, AND CURRENT CODES, RULES, STATUTES AND THE LIKE. IF THE CONTRACTOR AND/OR OWNER FAIL TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH APPROVED PLANS, RULES, STATUTES, CODES AND THE LIKE, THE CONTRACTOR AND/OR OWNER AGREE TO AND MUST JOINTLY, INDEPENDENTLY, SEPARATELY, AND SEVERALLY INDEMNIFY AND HOLD THE PROFESSIONAL OF RECORD AND BOHLER HARMLESS FOR AND FROM ALL INJURIES, CLAIMS AND DAMAGES THAT PROFESSIONAL OF RECORD AND BOHLER SUFFER AND ANY AND ALL COSTS THAT PROFESSIONAL OF RECORD AND BOHLER INCUR AS RELATED TO SAME.
21. ALL CONTRACTORS MUST CARRY AT LEAST THE MINIMUM AMOUNT OF THE SPECIFIED AND COMMERCIALLY REASONABLE STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND COMMERCIAL GENERAL LIABILITY INSURANCE (CGL) INCLUDING ALSO ALL UMBRELLA COVERAGES. ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME BOHLER , AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AS ADDITIONAL NAMED INSUREDS AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE (DEFEND, IF APPLICABLE) AND HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED AND AGREED TO BY THE CONTRACTOR HEREIN. ALL CONTRACTORS MUST FURNISH BOHLER WITH CERTIFICATIONS OF INSURANCE OR CERTIFICATES OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE COVERAGES PRIOR TO COMMENCING ANY WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION AND FOR TWO YEARS AFTER THE COMPLETION OF CONSTRUCTION AND AFTER ALL PERMITS ARE ISSUED, WHICHEVER DATE IS LATER. IN ADDITION, ALL CONTRACTORS AGREE THAT THEY WILL, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, INDEMNIFY, DEFEND AND HOLD HARMLESS BOHLER AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, INJURIES, CLAIMS, ACTIONS, PENALTIES, EXPENSES, PUNITIVE DAMAGES, TORT DAMAGES, STATUTORY CLAIMS, STATUTORY CAUSES OF ACTION, LOSSES, CAUSES OF ACTION, LIABILITIES OR COSTS, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR TO THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTOR(S), ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED TO THE PROJECT. THE CONTRACTOR MUST NOTIFY PROFESSIONAL OF RECORD, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION, SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.
22. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK DEPICTED BOTH ON THESE PLANS, AND FOR ANY CONFLICTS IN SCOPE AND REVISIONS THAT RESULT FROM SAME. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR DETERMINING THE MEANS AND METHODS FOR COMPLETION OF THE WORK, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
23. NEITHER THE PROFESSIONAL ACTIVITIES OF BOHLER, NOR THE PRESENCE OF BOHLER AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE (HEREIN "BOHLER PARTIES"), RELIEVES OR WILL RELIEVE THE CONTRACTOR OF AND FROM CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSEEING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE WITH ALL HEALTH AND SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER PARTIES HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER (OR ANY RESPONSIBILITY FOR) ANY CONSTRUCTION, THE CONTRACTOR OR ITS EMPLOYEES RELATING TO THEIR WORK AND ANY AND ALL HEALTH AND SAFETY PROGRAMS OR PROCEDURES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE CONTRACTOR MUST INDEMNIFY, DEFEND, PROTECT AND HOLD HARMLESS BOHLER PARTIES FOR AND FROM ANY LIABILITY TO BOHLER PARTIES RESULTING FROM THE CONTRACTOR'S WORK, SERVICES AND/OR VIOLATIONS OF THIS NOTE, THESE NOTES OR ANY NOTES IN THE PLAN SET AND, FURTHER, THE CONTRACTOR MUST NAME BOHLER AS AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE.
24. WHEN IT IS CLEARLY AND SPECIFICALLY WITHIN BOHLER'S SCOPE OF SERVICES CONTRACT WITH THE OWNER/DEVELOPER, BOHLER WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF EVALUATING CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND METHODS AND/OR TECHNIQUES OR PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND BOHLER HAS NO RESPONSIBILITY OR LIABILITY FOR SAME. BOHLER WILL PERFORM ITS SHOP DRAWING REVIEW WITH REASONABLE PROMPTNESS, AS CONDITIONS PERMIT. ANY DOCUMENT, DOCUMENTING BOHLER'S REVIEW OF A SPECIFIC ITEM OR LIMITED SCOPE, MUST NOT INDICATE THAT BOHLER HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR MUST, IN WRITING, PROMPTLY AND IMMEDIATELY BRING ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS TO BOHLER'S ATTENTION. BOHLER IS NOT REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
25. IF THE CONTRACTOR DEVIATES FROM THESE PLANS AND/OR SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE PROFESSIONAL OF RECORD AND BOHLER FOR ALL DEVIATIONS WITHIN PROFESSIONAL OF RECORD'S SCOPE, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK PERFORMED WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, MUST DEFEND, INDEMNIFY AND HOLD HARMLESS THE PROFESSIONAL OF RECORD AND BOHLER PARTIES TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, FOR AND FROM ALL FEES, ATTORNEYS' FEES, DAMAGES, COSTS, JUDGMENTS, CLAIMS, INJURIES, PENALTIES AND THE LIKE RELATED TO SAME.
26. THE CONTRACTOR IS RESPONSIBLE FOR A MAINTAINING AND PROTECTING THE TRAFFIC CONTROL PLAN AND ELEMENTS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS, FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE RIGHT OF WAY OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE AND IS THE CONTRACTOR'S SOLE RESPONSIBILITY.
27. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS IN STRICT ACCORDANCE WITH THE APPROVED PLAN(S) AND DESIGN; AND, FURTHER, THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE ALL PHYSICAL SITE FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD THE PROFESSIONAL OF RECORD AND BOHLER PARTIES, HARMLESS FOR ALL INJURIES, DAMAGES AND COSTS THAT PROFESSIONAL OF RECORD AND BOHLER INCUR AS A RESULT OF SAID FAILURE OR FAILURE TO PRESERVE.
28. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES AND MATERIALS COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL RULES AND REGULATIONS, LAWS, ORDINANCES, AND CODES, AND ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 ET SEQ.) AS AMENDED, AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
29. THE CONTRACTOR MUST STRICTLY COMPLY WITH THE LATEST AND CURRENT OSHA STANDARDS AND REGULATIONS, AND/OR ANY OTHER AGENCY WITH JURISDICTION OVER EXCAVATION AND TRENCHING PROCEDURES. PROFESSIONAL OF RECORD AND BOHLER HAS NO RESPONSIBILITY FOR OR AS RELATED TO EXCAVATION AND TRENCHING PROCEDURES AND WORK.
30. THE CONTRACTOR AND THE OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF THE CONTRACTOR AND/OR OWNER FAIL TO DO SO, THEY AGREE TO JOINTLY, INDEPENDENTLY, SEPARATELY, COLLECTIVELY, AND SEVERALLY INDEMNIFY, DEFEND, PROTECT AND HOLD PROFESSIONAL OF RECORD AND BOHLER PARTIES HARMLESS FOR ALL INJURIES AND DAMAGES THAT PROFESSIONAL OF RECORD SUFFERS AND COSTS THAT PROFESSIONAL OF RECORD INCURS AS A RESULT OF SAID FAILURE.
31. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN AN ON-SITE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS OR LOCAL GOVERNING AGENCY FOR SITES WHERE ONE (1) ACRE OR MORE IS DISTURBED BY CONSTRUCTION ACTIVITIES (UNLESS THE LOCAL JURISDICTION REQUIRES A DIFFERENT THRESHOLD). THE CONTRACTOR MUST ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF ALL SUBCONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP, INCLUDING BUT NOT LIMITED TO LOGGING ACTIVITIES (MINIMUM ONCE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE AND FURTHER, THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR FAILING TO DO SO.
32. AS CONTAINED IN THESE DRAWINGS AND ASSOCIATED DOCUMENTS PREPARED BY THE PROFESSIONAL OF RECORD AND BOHLER, THE USE OF THE WORDS 'CERTIFY' OR 'CERTIFICATION' CONSTITUTE(S) AN EXPRESSION ONLY OF PROFESSIONAL OPINION REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE PROFESSIONAL OF RECORD'S AND BOHLER KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON AND ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE OF ANY NATURE OR TYPE, EITHER EXPRESSED OR IMPLIED, UNDER ANY CIRCUMSTANCES.

OUTSIDE SOURCE NOTES
(Rev. 11/2023)

ANY INFORMATION, DRAWINGS, DATA, PLANS, SPECIFICATIONS, MATERIALS, FIGURES, DOCUMENTATION, REPORTS, AND THE LIKE WHICH IS INDICATED TO HAVE BEEN PREPARED "BY OTHERS" (HEREIN, "BY OTHERS REPORTS, DOCUMENTS AND DETAILS") HAS BEEN OR WILL BE CREATED, DEVELOPED, PREPARED, PERFORMED, AND ANALYZED BY AN ENTITY OR PARTY OTHER THAN THE "BOHLER" ENTITY INVOLVED WITH THIS PROJECT. THE "BOHLER" ENTITY IS NOT IN ANY WAY RESPONSIBLE FOR THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS EVEN IF/WHERE INCLUDED IN THE "BOHLER" ENTITY'S PLANS, REPORTS, ETC. SAME HAS BEEN INCLUDED ON THIS PLAN FOR THE CONVENIENCE, ONLY, OF THE PROJECT OWNER, DEVELOPERS, CONTRACTORS AND CONSULTANTS AND IN ORDER TO COORDINATE THE "BOHLER" ENTITY'S DESIGN WITH THAT OF "OTHERS". THE "BOHLER" ENTITY HAS ASSUMED, FOR PURPOSES OF THIS PLAN, THAT THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS ARE CURRENT AND, IF APPLICABLE, PREPARED IN STRICT ACCORDANCE WITH ALL APPLICABLE COUNTY, STATE, FEDERAL AND OTHER STATUTES, LAWS, RULES, REGULATIONS, ORDINANCES AND THE LIKE. THE "BOHLER" ENTITY SPECIFICALLY DISCLAIMS ANY AND ALL LIABILITY AND RESPONSIBILITY FOR BY OTHERS REPORTS, DOCUMENTS AND DETAILS. THE ENTITY OR PERSON WHO CREATED THE INFORMATION CONTAINED IN THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS (EXCLUDING INFORMATION AND/OR DETAILS SOLELY SUPPLIED BY A JURISDICTION AND/OR GOVERNING BODY) AGREES BY PARTICIPATING IN THIS PROJECT, RECEIVING, REVIEWING, USING AND/OR RELYING UPON THIS DOCUMENT, AND/OR BY AGREEING TO THE PROJECT OWNER/DEVELOPER'S CONTRACT DOCUMENTS, TO DEFEND, INDEMNIFY, PROTECT AND HOLD HARMLESS THE "BOHLER" ENTITY THAT PREPARED THIS DOCUMENT AND ITS EMPLOYEES FOR ANY AND ALL DAMAGES, INJURIES, COSTS, EXPENSES AND THE LIKE, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, WHICH THE "BOHLER" ENTITY AND/OR ITS EMPLOYEES SUFFER OR INCUR AS A RESULT OF INCLUDING ANY BY OTHERS REPORTS, DOCUMENTS AND DETAILS IN AND ON OR IN THIS PLAN. ANYONE OR ANY ENTITY WHO RECEIVED, RELIES UPON AND/OR USES THIS PLAN, AGREES TO HOLD THE "BOHLER" ENTITY AND ITS EMPLOYEES HARMLESS FROM ANY CLAIMS, DAMAGES, INJURIES, COSTS AND EXPENSES, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, FOR ANY DAMAGES, INJURIES, COSTS, EXPENSES AND THE LIKE, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, WHICH IT OR THEY SUFFER OR INCUR AS A RESULT OF THE ANY BY OTHERS REPORTS, DOCUMENTS AND DETAILS INCORPORATED IN THE PLAN, AND EXPRESSLY CONFIRMS THAT BY RECEIVING, RELYING UPON AND/OR USING SAME, THE "BOHLER" ENTITY SHALL HAVE NO LIABILITY RELATED TO SAME. WITH RESPECT TO ALL BY OTHERS REPORTS, DOCUMENTS AND DETAILS, CONTRACTOR MUST VERIFY ALL INFORMATION CONTAINED IN THE SCOPE OF ALL PARTIES INVOLVED IN PREPARING THE BY OTHERS REPORTS, DOCUMENTS AND DETAILS PRIOR TO COMMENCING ANY CONSTRUCTION AND MUST VERIFY THAT THE INFORMATION IS THE LATEST, THE MOST RECENT AND THE MOST CURRENT REPORT, DOCUMENT AND DETAIL. REFERENCES ON THIS PLAN TO INFORMATION PREPARED OR CONTAINED IN BY OTHERS REPORTS, DOCUMENTS AND DETAILS DEPICTING AN OFF-SITE AREA WHERE NO DETAIL IS INCLUDED IS A REFERENCE TO AN AREA, DETAIL, SPECIFICATION OR DESIGN THAT HAS NOT BEEN DESIGNED OR CONSTRUCTED BY THE "BOHLER" ENTITY AND REGARDING WHICH THE "BOHLER" ENTITY HAS NO CONTROL OVER OR LIABILITY REGARDING, BUT IS ADDED TO THIS PLAN FOR INFORMATIONAL PURPOSES, ONLY.

DEMOLITION NOTES
(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY(IES) PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE RIGHT-OF-WAY.
3. WHEN DEMOLITION-RELATED ACTIVITIES IMPACT ROADWAYS AND/OR ROADWAY RIGHT-OF-WAY, THE CONTRACTOR MUST PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE CURRENT FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AND THE FEDERAL, STATE, AND LOCAL REGULATIONS.
4. THE DEMOLITION (AND/OR REMOVALS) PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION AND TO IDENTIFY ONLY CONDITIONS REGARDING ITEMS TO BE DEMOLISHED, REMOVED, AND/OR TO REMAIN.
   A. THE CONTRACTOR MUST ALSO REVIEW ALL CONSTRUCTION DOCUMENTS AND INCLUDE WITHIN THE DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
   B. THIS PLAN IS NOT INTENDED TO AND DOES NOT PROVIDE DIRECTION REGARDING THE MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE EMPLOYED TO ACCOMPLISH THE WORK. ALL MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE USED MUST BE IN STRICT ACCORDANCE AND CONFORMANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR MUST COMPLY WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE FOR THE CONTRACTOR AND THE PUBLIC.
5. THE CONTRACTOR MUST PROVIDE ALL "METHODS AND MEANS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE CONTRACTOR, AT THE CONTRACTOR'S SOLE COST, MUST REPAIR ALL DAMAGE TO ALL ITEMS AND FEATURES THAT ARE TO REMAIN. CONTRACTOR MUST USE NEW MATERIAL FOR ALL REPAIRS. CONTRACTOR'S REPAIRS MUST INCLUDE THE RESTORATION OF ALL ITEMS AND FEATURES REPAIRED TO THEIR PRE-DEMOLITION CONDITION, OR BETTER. CONTRACTOR MUST PERFORM ALL REPAIRS AT THE CONTRACTOR'S SOLE EXPENSE.
6. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. THE CONTRACTOR MUST PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, COMPLYING WITH ALL OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY AND SAFETY TO ALL PROPERTY ON THE SITE OR ADJACENT OR NEAR TO THE SAME.
7. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY, WHICH MUST INCLUDE, BUT IS NOT LIMITED TO, THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING, OTHER APPROPRIATE AND/OR NECESSARY SAFETY FEATURES AND ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST SAFEGUARD THE SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF ALL UNAUTHORIZED PERSONS AT ANY TIME, TO OR NEAR THE DEMOLITION AREA.
8. PRIOR TO THE COMMENCEMENT OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY, THE CONTRACTOR MUST, IN WRITING, RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS AND/OR SPECIFICATIONS, ALL CONCERNS OR QUESTIONS REGARDING THE APPLICABLE SAFETY STANDARDS, AND/OR THE SAFETY OF THE CONTRACTOR AND/OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT. ANY SUCH CONCERNS MUST BE CONVEYED TO THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING AND MUST ADDRESS ALL ISSUES AND ITEMS RESPONDED TO, BY THE PROFESSIONAL OF RECORD AND BY BOHLER, IN WRITING. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND CODES.
9. THE CONTRACTOR MUST BECOME FAMILIAR WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AND/OR DISCONNECTION AS IDENTIFIED OR REQUIRED FOR THE PROJECT. THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED, REMOVED AND/OR ABANDONED IN ACCORDANCE WITH THE JURISDICTION AND UTILITY COMPANY REQUIREMENTS AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
10. PRIOR TO COMMENCING ANY DEMOLITION, THE CONTRACTOR MUST:
   A. OBTAIN ALL REQUIRED PERMITS AND MAINTAIN THE SAME ON SITE FOR REVIEW BY THE PROFESSIONAL OF RECORD AND ALL PUBLIC AGENCIES WITH JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK, AND DEMOLITION WORK.
   B. NOTIFY, AT A MINIMUM, THE MUNICIPAL ENGINEER, DESIGN ENGINEER, AND LOCAL SOIL CONSERVATION JURISDICTION, AT LEAST 72 BUSINESS HOURS PRIOR TO THE COMMENCEMENT OF WORK.
   C. INSTALL THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE, AND MAINTAIN SAID CONTROLS UNTIL SITE IS STABILIZED
   D. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR MUST CALL THE STATE ONE-CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARK OUT, IN ADVANCE OF ANY EXCAVATION.
   E. LOCATE AND PROTECT ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN AND ADJACENT TO THE LIMITS OF PROJECT ACTIVITIES. THE CONTRACTOR MUST USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL UNDERGROUND UTILITIES.
   F. PROTECT AND MAINTAIN IN OPERATION, ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING REMOVED DURING ANY DEMOLITION ACTIVITIES.
   G. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) FOR THE TEMPORARY OR PERMANENT TERMINATION OF SERVICE REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS REGARDING THE METHODS AND MEANS TO CONSTRUCT SAME. THESE ARE NOT THE PROFESSIONAL OF RECORD'S OR BOHLER RESPONSIBILITY. IN THE EVENT OF ABANDONMENT, THE CONTRACTOR MUST PROVIDE THE UTILITY ENGINEER AND OWNER WITH IMMEDIATE WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND UTILITY COMPANY REQUIREMENTS.
   H. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS NECESSARY OR AS REQUIRED TO MINIMIZE THE IMPACT ON, OF, AND TO THE AFFECTED PARTIES. WORK REQUIRED TO BE PERFORMED "OFF-PEAK" IS TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
   I. IN THE EVENT THE CONTRACTOR DISCOVERS ANY HAZARDOUS MATERIAL, THE REMOVAL OF WHICH IS NOT ADDRESSED IN THE PROJECT PLANS AND SPECIFICATIONS OR THE CONTRACT WITH THE OWNER/DEVELOPER, THE CONTRACTOR MUST IMMEDIATELY CEASE ALL WORK IN THE AREA OF DISCOVERY, AND IMMEDIATELY NOTIFY, IN WRITING AND VERBALLY, THE OWNER, PROFESSIONAL OF RECORD AND BOHLER, THE DISCOVERY OF SUCH MATERIALS TO PURSUE PROPER AND COMPLIANT REMOVAL OF SAME.
11. THE CONTRACTOR MUST NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE, UNLESS SAME IS IN STRICT ACCORDANCE AND CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, OR PURSUANT TO THE WRITTEN DIRECTION OF THE OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
12. DEMOLITION ACTIVITIES AND EQUIPMENT MUST NOT USE OR INCLUDE AREAS OUTSIDE THE DEFINED PROJECT LIMIT LINE, WITHOUT SPECIFIC WRITTEN PERMISSION AND AUTHORITY OF AND FROM THE OWNER AND ALL GOVERNMENTAL AGENCIES WITH JURISDICTION.
13. THE CONTRACTOR MUST BACKFILL ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES. BACKFILL MUST BE ACCOMPLISHED WITH APPROVED BACKFILL MATERIALS AND MUST BE SUFFICIENTLY COMPACTED TO SUPPORT ALL NEW IMPROVEMENTS AND MUST BE PERFORMED IN COMPLIANCE WITH THE RECOMMENDATIONS AND GUIDANCE ARTICULATED IN THE GEOTECHNICAL REPORT. BACKFILLING MUST OCCUR IMMEDIATELY AFTER DEMOLITION ACTIVITIES AND MUST BE PERFORMED SO AS TO PREVENT WATER ENTERING THE EXCAVATION. FINISHED SURFACES MUST BE GRADED TO PROMOTE POSITIVE DRAINAGE. THE CONTRACTOR IS RESPONSIBLE FOR COMPACTION TESTING AND MUST SUBMIT SUCH REPORTS AND RESULTS TO THE PROFESSIONAL OF RECORD AND THE OWNER.
14. EXPLOSIVES MUST NOT BE USED WITHOUT PRIOR WRITTEN CONSENT FROM BOTH THE OWNER AND ALL APPLICABLE, NECESSARY AND REQUIRED GOVERNMENTAL AUTHORITIES. PRIOR TO COMMENCING ANY EXPLOSIVE PROGRAM AND/OR ANY DEMOLITION ACTIVITIES, THE CONTRACTOR MUST ENSURE AND OVERSEE THE INSTALLATION OF ALL OF THE REQUIRED PERMIT AND EXPLOSIVE CONTROL MEASURES THAT THE FEDERAL, STATE, AND LOCAL GOVERNMENTS REQUIRE. THE CONTRACTOR IS ALSO RESPONSIBLE TO CONDUCT AND PERFORM ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES AND THE LIKE.
15. IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS, THE CONTRACTOR MUST USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR. AFTER THE DEMOLITION IS COMPLETE, THE CONTRACTOR MUST CLEAN ALL ADJACENT STRUCTURES AND IMPROVEMENTS TO REMOVE ALL DUST AND DEBRIS WHICH THE DEMOLITION OPERATIONS CAUSE. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION AT CONTRACTOR'S SOLE COST.
16. PAVEMENT MUST BE SAW CUT IN STRAIGHT LINES. ALL DEBRIS FROM REMOVAL OPERATIONS MUST BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS OUTSIDE OF APPROVED AREAS WILL NOT BE PERMITTED, INCLUDING BUT NOT LIMITED TO, THE PUBLIC RIGHT-OF-WAY.
17. THE CONTRACTOR MUST MAINTAIN A RECORD SET OF PLANS WHICH INDICATES THE LOCATION OF EXISTING UTILITIES THAT ARE CAPPED, ABANDONED IN PLACE, OR RELOCATED DUE TO DEMOLITION ACTIVITIES. THIS RECORD DOCUMENT MUST BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK, ALL OF WHICH IS AT THE CONTRACTOR'S SOLE COST.
18. THE CONTRACTOR MUST EMPTY, CLEAN AND REMOVE FROM THE SITE ALL UNDERGROUND STORAGE TANKS, IF ENCOUNTERED, IN ACCORDANCE WITH FEDERAL, STATE, COUNTY AND LOCAL REQUIREMENTS, PRIOR TO CONTINUING CONSTRUCTION IN THE AREA AROUND THE TANK WHICH EMPTYING, CLEANING AND REMOVAL ARE AT THE CONTRACTOR'S SOLE COST.

SOIL EROSION & SEDIMENT CONTROL PLAN NOTES
(Rev. 4/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. EROSION CONTROL MEASURES MUST CONFORM TO THE PENNSYLVANIA GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL UNLESS OTHERWISE NOTED, OR UNLESS THE PROFESSIONAL OF RECORD CLEARLY AND SPECIFICALLY, IN WRITING, DIRECTS OTHERWISE. INSTALLATION OF EROSION CONTROL, CLEARING, AND SITE WORK MUST BE PERFORMED EXACTLY AS INDICATED IN THE EROSION CONTROL CONSTRUCTION NOTES.
3. THE DISTURBED LAND AREA OF THIS SITE IS APPROXIMATELY 25.81 ACRES.
4. INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS.
5. THE CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY. THE CONTRACTOR MUST REMOVE ANY SILT DEPOSITS GREATER THAN 6" COLLECTED ON THE FILTER FABRIC AND/OR SILT SOCK BARRIERS AND EXCAVATE AND REMOVE ANY SILT FROM DROP INLET PROTECTION.
6. THE CONTRACTOR MUST APPLY TEMPORARY SEED AND MULCH TO ALL DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINISHED GRADE AND VEGETATED WITHIN 7 DAYS. WHEN AREAS ARE DISTURBED AFTER THE GROWING SEASON, THE CONTRACTOR MUST STABILIZE SAME WITH GEOTEXTILE FABRIC AND MAINTAIN SAME IN STRICT ACCORDANCE WITH BEST MANAGEMENT PRACTICES.
7. THE CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF THE PROFESSIONAL OF RECORD SO REQUIRES, TO PREVENT ANY, INCLUDING THE INCIDENTAL, DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
8. THE CONTRACTOR MUST BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT PAVING AND TURF/LANDSCAPING IS ESTABLISHED. THE COSTS OF INSTALLING AND MAINTAINING THE EROSION CONTROL MEASURES MUST BE INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS.
9. THE CONTRACTOR MUST CONTINUE TO MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE COMPLETION OF CONSTRUCTION AND THE ESTABLISHMENT OF VEGETATION.
10. THE CONTRACTOR MUST REMOVE EROSION CONTROL MEASURES, SILT AND DEBRIS AFTER ESTABLISHING PERMANENT VEGETATION COVER OR OTHER INSTALLING A DIFFERENT, SPECIFIED METHOD OF STABILIZATION.
11. THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL FACILITIES, MEASURES AND STRUCTURES. ADDITIONAL FACILITIES, MEASURES AND STRUCTURES MUST BE INSTALLED WHERE NECESSARY TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS AND/OR TO PREVENT ANY, INCLUDING THE INCIDENTAL DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
12. THE CONTRACTOR MUST PROTECT ALL EXISTING TREES AND SHRUBS. THE CONTRACTOR MUST REFER TO THE LANDSCAPE AND/OR DEMOLITION PLAN(S) FOR TREE PROTECTION, FENCE LOCATIONS AND DETAILS.
13. THE CONTRACTOR MUST REFER TO GRADING PLANS FOR ADDITIONAL INFORMATION.
14. THE CONTRACTOR MUST CLEAN EXISTING AND PROPOSED DRAINAGE STRUCTURES AND INTERCONNECTING PIPES ON OR OFF-SITE AS THE JURISDICTIONAL AGENCY REQUIRES, BOTH AT THE TIME OF SITE STABILIZATION AND AT END OF PROJECT.
15. SOIL EROSION CONTROL MEASURES MUST BE ADJUSTED OR RELOCATED BY THE CONTRACTOR AS IDENTIFIED DURING SITE OBSERVATION IN ORDER TO MAINTAIN THE COMPLETE EFFECTIVENESS OF ALL CONTROL MEASURES.
16. THE CONTRACTOR MUST IDENTIFY, ON THE PLAN, THE LOCATION OF WASTE CONTAINERS, FUEL STORAGE TANKS, CONCRETE WASHOUT AREAS AND ANY OTHER LOCATIONS WHERE HAZARDOUS MATERIALS ARE STORED.

SITE LAYOUT NOTES
(Rev. 1/2020)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. PRIOR TO THE COMMENCEMENT OF GENERAL CONSTRUCTION, THE CONTRACTOR MUST INSTALL SOIL EROSION CONTROL AND ANY STORMWATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES NECESSARY, AS INDICATED ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN AND IN ACCORDANCE WITH APPLICABLE AND/OR APPROPRIATE AGENCIES' GUIDELINES TO PREVENT SEDIMENT AND/OR LOOSE DEBRIS FROM WASHING ONTO ADJACENT PROPERTIES OR THE RIGHT OF WAY.
3. ALL DIRECTIONAL/TRAFFIC SIGNING AND PAVEMENT STRIPING MUST CONFORM TO THE LATEST STANDARDS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ANY APPLICABLE STATE OR LOCALLY APPROVED SUPPLEMENTS, GUIDELINES, RULES, REGULATIONS, STANDARDS AND THE LIKE.
4. THE LOCATIONS OF PROPOSED UTILITY POLES AND TRAFFIC SIGNS SHOWN ON THE PLANS ARE SCHEMATIC AND PRELIMINARY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD-VERIFYING THEIR LOCATION. THE CONTRACTOR MUST COORDINATE THE RELOCATION OF TRAFFIC SIGNS WITH THE ENTITY WITH JURISDICTION OVER THE PROJECT.
5. ALL DIMENSIONS SHOWN ARE TO BOTTOM FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, EXCEPT WHEN DIMENSION IS TO A PROPERTY LINE, STAKE OUT OF LOCATIONS OF INLETS, LIGHT POLES, ETC. MUST BE PERFORMED IN STRICT ACCORDANCE WITH THE DETAILS, UNLESS NOTED CLEARLY OTHERWISE.

GRADING NOTES
(Rev. 1/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AS REFERENCED IN THIS PLAN SET. IF NO GEOTECHNICAL REPORT HAS BEEN REFERENCED, THE CONTRACTOR MUST HAVE A GEOTECHNICAL ENGINEER PROVIDE WRITTEN SPECIFICATIONS AND RECOMMENDATIONS PRIOR TO THE CONTRACTOR COMMENCING THE GRADING WORK. THE CONTRACTOR MUST FOLLOW THE REQUIREMENTS OF ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS, WHICH HAVE JURISDICTION OVER THIS PROJECT.
3. THE CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. THE CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO THE PROFESSIONAL OF RECORD, BOHLER AND THE OWNER PRIOR TO THE CONTRACTOR COMMENCING ANY WORK.
4. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. SHOULD DISCREPANCIES BETWEEN THE PLANS AND INFORMATION OBTAINED THROUGH FIELD VERIFICATIONS BE IDENTIFIED OR EXIST, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING.
5. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ALL UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. THE CONTRACTOR MUST COMPACT ALL EXCAVATED OR FILLED AREAS IN STRICT ACCORDANCE WITH THE GEOTECHNICAL REPORT'S GUIDANCE. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE SUBMITTED IN A COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED. THIS REPORT MUST VERIFY THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES WHICH ARE IN EFFECT AND WHICH ARE APPLICABLE TO THE PROJECT. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER/DEVELOPER, OR OWNER/DEVELOPER'S REPRESENTATIVE, SUBBASE MUST BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL, COMPACTED AS THE GEOTECHNICAL REPORT DIRECTS. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. EARTHWORK ACTIVITIES MUST COMPLY WITH THE STANDARD STATE DOT SPECIFICATIONS FOR ROADWAY CONSTRUCTION (LATEST EDITION) AND ANY AMENDMENTS OR REVISIONS THERETO.
6. IN THE EVENT OF A DISCREPANCY(IES) AND/OR A CONFLICT(S) BETWEEN PLANS, OR RELATIVE TO OTHER PLANS, THE GRADING PLAN TAKES PRECEDENCE AND CONTROLS. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY DISCREPANCY(IES) AND/OR CONFLICT(S).
7. THE CONTRACTOR IS RESPONSIBLE TO IMPORT FILL OR EXPORT EXCESS MATERIAL AS NECESSARY TO CONFORM TO THE PROPOSED GRADING, AND TO BACKFILL EXCAVATIONS FOR THE INSTALLATION OF UNDERGROUND IMPROVEMENTS.

ACCESSIBILITY DESIGN GUIDELINES
(Rev. 1/2023)

1. ALL ACCESSIBLE (A.K.A. ADA) COMPONENTS AND ACCESSIBLE ROUTES MUST BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF: (A) THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE (42 U.S.C. § 12101 ET SEQ. AND 42 U.S.C. § 4151 ET SEQ.); AND (B) ANY APPLICABLE LOCAL AND STATE GUIDELINES, AND ANY AND ALL AMENDMENTS TO BOTH, WHICH ARE IN EFFECT WHEN THESE PLANS WERE COMPLETED.
2. THE CONTRACTOR MUST REVIEW ALL DOCUMENTS REFERENCED IN THESE NOTES FOR ACCURACY, COMPLIANCE AND CONSISTENCY WITH INDUSTRY GUIDELINES.
3. THE CONTRACTOR MUST EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ACCESSIBLE (ADA) COMPONENTS AND ACCESSIBLE ROUTES FOR THE SITE. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACES, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, AND INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE/EXIT, MUST COMPLY WITH THE ACCESSIBLE GUIDELINES AND REQUIREMENTS WHICH INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
   A. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SLOPES MUST NOT EXCEED 1:50 (2.0%) IN ANY DIRECTION.
   B. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE MUST PROVIDE A 36-INCHES MINIMUM WIDTH (48-INCHES PREFERRED), OR AS SPECIFIED BY THE GOVERNING AGENCY. UNOBSTRUCTED WIDTH OF TRAVEL (CAR OVERHANGS AND/OR HANDRAILS) MUST NOT REDUCE THIS MINIMUM WIDTH. THE SLOPE MUST NOT EXCEED 1:20 (5.0%) IN THE DIRECTION OF TRAVEL AND MUST NOT EXCEED 1:50 (2.0%) IN CROSS SLOPE. WHERE ACCESSIBLE PATH OF TRAVEL IS GREATER THAN 1:20 (5.0%), AN ACCESSIBLE RAMP MUST BE PROVIDED. ALONG THE ACCESSIBLE PATH OF TRAVEL, OPENINGS MUST NOT EXCEED 1/2-INCH IN WIDTH. VERTICAL CHANGES OF UP TO 1/2-INCH ARE PERMITTED ONLY IF THEY INCLUDES A 1/4-INCH BEVEL AT A SLOPE NOT STEEPER THAN 1:2. NO VERTICAL CHANGES OVER 1/4-INCH ARE PERMITTED.
   C. ACCESSIBLE RAMPS MUST NOT EXCEED A SLOPE OF 1:12 (8.3%) AND A RISE OF 30-INCHES. LEVEL LANDINGS MUST BE PROVIDED AT EACH END OF ACCESSIBLE RAMPS. LANDING MUST PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES, AND MUST NOT EXCEED 1:50 (2.0%) SLOPE IN ANY DIRECTION. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS MUST HAVE A CLEAR LANDING OF A MINIMUM OF 60-INCHES BY 60-INCHES. HAND RAILS ON BOTH SIDES OF THE RAMP MUST BE PROVIDED ON AN ACCESSIBLE RAMP WITH A RISE GREATER THAN 6-INCHES.
   D. ACCESSIBLE CURB RAMPS MUST NOT EXCEED A SLOPE OF 1:12 (8.3%). WHERE FLARED SIDES ARE PROVIDED, THEY MUST NOT EXCEED 1:10 (10%) SLOPE. LEVEL LANDING MUST BE PROVIDED AT RAMPS TOP AT A MINIMUM OF 36-INCHES LONG (48-INCHES PREFERRED). IN ALTERATIONS, WHEN THERE IS NO LANDING AT THE TOP, FLARE SIDES SLOPES MUST NOT EXCEED A SLOPE OF 1:12 (8.3%).
   E. DOORWAY LANDINGS AREAS MUST BE PROVIDED ON THE EXTERIOR SIDE OF ANY DOOR LEADING TO AN ACCESSIBLE PATH OF TRAVEL. THIS LANDING MUST BE SLOPED AWAY FROM THE DOOR NO MORE THAN 1:50 (2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA MUST BE NO FEWER THAN 60-INCHES (5 FEET) LONG, EXCEPT WHERE OTHERWISE CLEARLY PERMITTED BY ACCESSIBLE STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS. (SEE ICC/ANSI A117.1-2009 AND OTHER REFERENCES INCORPORATED BY CODE).
   F. WHEN THE PROPOSED CONSTRUCTION INVOLVES RECONSTRUCTION, MODIFICATION, REVISION OR EXTENSION OF OR TO ACCESSIBLE COMPONENTS FROM EXISTING DOORWAYS OR SURFACES, THE CONTRACTOR MUST VERIFY ALL EXISTING ELEVATIONS SHOWN ON THE PLAN. NOTE THAT TABLE 405.2 OF THE DEPARTMENT OF JUSTICE'S ADA STANDARDS FOR ACCESSIBLE DESIGN ALLOWS FOR STEEPER RAMP SLOPES, IN RARE CIRCUMSTANCES. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, OF ANY DISCREPANCIES AND/OR FIELD CONDITIONS THAT DIFFER IN ANY WAY OR IN ANY RESPECT FROM WHAT IS SHOWN ON THE PLANS BEFORE COMMENCING ANY WORK. CONSTRUCTED IMPROVEMENTS MUST FALL WITHIN THE MAXIMUM AND MINIMUM LIMITATIONS IMPOSED BY THE BARRIER FREE REGULATIONS AND THE ACCESSIBLE GUIDELINES.
   G. THE CONTRACTOR MUST VERIFY ALL OF THE SLOPES OF THE CONTRACTOR'S FORMS PRIOR TO POURING CONCRETE. IF ANY NON-CONFORMANCE EXISTS OR IS OBSERVED OR DISCOVERED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, PRIOR TO POURING CONCRETE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS TO REMOVE, REPAIR AND/OR REPLACE NON-CONFORMING CONCRETE AND/OR PAVEMENT SURFACES.
4. IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION TO ENSURE SAME IS CONSISTENT WITH THE LOCAL BUILDING CODE PRIOR TO COMMENCING CONSTRUCTION.

DRAINAGE AND UTILITY NOTES
(Rev. 3/2023)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE, AND THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM THOSE LOCATIONS AND SERVICES WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCING ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM ALL SANITARY CONNECTION POINTS AND ALL OTHER UTILITY SERVICE CONNECTION POINTS IN THE FIELD, PRIOR TO COMMENCING ANY CONSTRUCTION. THE CONTRACTOR MUST REPORT ALL DISCREPANCIES, ERRORS AND OMISSIONS IN WRITING, TO THE PROFESSIONAL OF RECORD AND BOHLER.
3. THE CONTRACTOR MUST VERTICALLY AND HORIZONTALLY LOCATE ALL UTILITIES AND SERVICES INCLUDING, BUT NOT LIMITED TO, GAS, WATER, ELECTRIC, SANITARY AND STORM, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE OR WORK SPACE, WHICHEVER IS GREATER. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL OF THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES WHICH OCCUR DURING CONSTRUCTION, AT NO COST TO THE OWNER AND AT CONTRACTOR'S SOLE COST AND EXPENSE. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES WHICH OCCURS DURING CONSTRUCTION.
4. THE CONTRACTOR MUST FIELD VERIFY THE PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES BY USING A TEST PIT TO CONFIRM EXACT DEPTH, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. STORMWATER ROOF DRAIN LOCATIONS ARE BASED ON ARCHITECTURAL PLANS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS, SIZE, AND MATERIAL OF SAME BASED UPON FINAL ARCHITECTURAL PLANS.
6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SITE PLAN DOCUMENTS AND ARCHITECTURAL PLANS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS; GREASE TRAP REQUIREMENTS; AND DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE ARCHITECT WILL DETERMINE THE UTILITY SERVICE SIZES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF UTILITY SERVICES WITH THE INDIVIDUAL COMPANIES TO AVOID CONFLICTS AND TO ENSURE THAT PROPER DEPTHS ARE ACHIEVED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS OF THE APPLICABLE JURISDICTION AND REGULATORY AGENCIES AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES AND, FURTHER, IS RESPONSIBLE FOR COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE A CONFLICT(S) EXISTS BETWEEN THESE DOCUMENTS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD AND BOHLER, IN WRITING, AND PRIOR TO CONSTRUCTION, MUST RESOLVE SAME.
7. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE EXACTLY AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND THE CONTRACTOR MUST COORDINATE SAME WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS. WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS, FILL AND COMPACTION MUST COMPLY WITH APPLICABLE REQUIREMENTS AND SPECIFICATIONS. THE PROFESSIONAL OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR DESIGN OF TRENCH BACKFILL OR FOR COMPACTION REQUIREMENTS
8. DURING THE INSTALLATION OF SANITARY, STORM, AND ALL UTILITIES, THE CONTRACTOR MUST MAINTAIN A CONTEMPORANEOUS AND THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE AS-INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEVIATE, IN ANY RESPECT, FROM THE INFORMATION CONTAINED IN THESE PLANS. THIS RECORD MUST BE KEPT ON A CLEAN COPY OF THE APPROPRIATE PLAN(S), WHICH THE CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER IMMEDIATELY UPON THE COMPLETION OF WORK.
9. THE CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS INCLUDING SANITARY, WATER AND STORM SYSTEMS, ARE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY AND OR STATE DOT DETAILS AS APPLICABLE. THE CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY WITH JURISDICTION OVER SAME.
10. FINAL LOCATIONS OF PROPOSED UTILITY POLES, AND/ OR POLES TO BE RELOCATED ARE AT THE SOLE DISCRETION OF THE RESPECTIVE UTILITY COMPANY, REGARDLESS OF WHAT THIS PLAN DEPICTS.
11. WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS MUST BE SPECIFIED BY THE LOCAL UTILITY COMPANY. THE CONTRACTOR MUST CONTACT THE APPLICABLE MUNICIPALITY TO CONFIRM THE PROPER WATER METER AND VAULT, PRIOR TO COMMENCING CONSTRUCTION.
12. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED FINISHED GRADES WITH NO TRIPPING OR SAFETY HAZARD IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.

JURISDICTIONAL NOTES:

STATEMENT OF INTENT

THE INTENT OF THIS LAND DEVELOPMENT APPLICATION IS TO CONSTRUCT A 216,000 SQUARE-FOOT COLD STORAGE WAREHOUSE AND A 101,000 SQUARE-FOOT WAREHOUSE. THE OVERALL SCOPE INCLUDES SITE IMPROVEMENTS TO PARKING, ACCESS ROADWAYS, LIGHTING, LANDSCAPING, UTILITIES, AND STORMWATER MANAGEMENT.

ENGINEERING PERMITS NOTE

PRIOR TO ANY WORK WITHIN THE RIGHT-OF-WAY, INCLUDING SIDEWALKS AND DRIVEWAYS, PERMITS MUST BE OBTAINED FROM CITY ENGINEERING OFFICE.

CITY OF BETHLEHEM REQUIRED SITE PLAN NOTES

NPDES NOTE
BY SUBMISSION OF THESE PLANS THE ENGINEER ON RECORD CERTIFIES THAT THESE PLANS ARE IN COMPLETE CONFORMANCE WITH THE CITY OF BETHLEHEM STORM WATER MANAGEMENT ORDINANCE. (PER S. W. DESALVA 9-19-06)

STORM WATER NOTES
THE MAINTENANCE OF STORM WATER FACILITIES SHALL BE THE OWNER'S RESPONSIBILITY. THE OWNER'S DEED, AND THE DEED TO ANY SUBSEQUENT OWNER, SHALL NOTE THAT THE OWNER SHALL ACCEPT THE MAINTENANCE RESPONSIBILITIES. THE CITY OF BETHLEHEM SHALL BE PERMITTED TO INSPECT THE STORM WATER FACILITIES ON AT LEAST AN ANNUAL SCHEDULE TO ENSURE THAT ANY NECESSARY CORRECTIVE WORK IS PERFORMED IN A TIMELY MANNER. THE DRAINAGE EASEMENT PROVIDES FOR THE FLOW OF STORM WATER ACROSS LOTS, AND MAY NOT BE ALTERED WITHOUT THE WRITTEN PERMISSION OF THE CITY ENGINEER. NO OBSTRUCTIONS SUCH AS PLANTING BERMS OR FENCES MAY BE INSTALLED IN THE DRAINAGE EASEMENTS AREAS WITHOUT SUFFICIENT PROVISION FOR THE PASSAGE OF STORM WATER, AND ANY SUCH PROPOSED PROVISION SHALL BE APPROVED IN WRITING BY THE CITY ENGINEER.

REVISIONS NOTE
IN ORDER TO MAINTAIN CONTINUITY BETWEEN PLAN REVISIONS, ANY CHANGES TO A PREVIOUS PLAN SUBMISSION SHALL BE FLAGGED WITH A TRIANGLE. ANY CHANGES NOT FLAGGED MAY BE CONSIDERED NOT APPROVED. FLAGGED CHANGES SHALL BE REFERENCED TO THE APPROPRIATE REVISION DATE IN THE REVISION BLOCK.

AS-BUILT NOTE
ACCURATE AS-BUILT PLANS SHALL BE KEPT UP TO DATE DURING THE CONSTRUCTION PROCESS. AT THE COMPLETION OF THE PROJECT RECORD DRAWINGS SHALL BE DEVELOPED FROM THE AS-BUILT PLANS AND SUBMITTED TO THE CITY ENGINEER'S OFFICE. ALL FINAL DRAWINGS SHALL SHOW NORTH AMERICAN DATUM (NAD) 1983 STATE PLANE COORDINATES IN FEET (PENNSYLVANIA SOUTH, FIPS ZONE 3702) AND THE DIGITAL FILE SHALL BE IN STATE PLANE FEET COORDINATES AS APPLICABLE. THE HARD COPY OF THE RECORD DRAWINGS SHALL BE IN THE FORM OF A MYLAR COPY. THE ENGINEER OF RECORD SHALL CERTIFY (I.E. P.E. STAMPED AND SIGNED) THAT THE RECORD DRAWINGS COMPLY SUBSTANTIALLY WITH THE APPROVED PLAN AND THAT THEY CONFORM TO INDUSTRY STANDARDS. ALL DIGITAL FILES SHALL RESIDE ON PC COMPATIBLE CD ROM CONTAINING THE DIGITAL REPRESENTATION OF THE FINAL PLAN AS PRESENTED ON THE TWENTY-FOUR (24) INCH BY THIRTY-SIX (36) INCH SHEETS. THE DIGITAL MAP SHALL BE AUTOCAD COMPATIBLE. ALL LAYERS INCLUDED IN THE DIGITAL MAPS SHALL BE THE STANDARDIZED LAYERS PREPARED AND UTILIZED BY THE CITY OF BETHLEHEM TO ENSURE COMPATIBILITY WITH THE CITY'S EXISTING CAD STANDARDS AND AS DESCRIBED IN APPENDIX A OF THE CITY'S SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

ENGINEERING PERMITS NOTE
PRIOR TO ANY WORK WITHIN THE RIGHT-OF-WAY, PERMITS MUST BE OBTAINED FROM CITY ENGINEERING OFFICE.

FLOOD PLANE NOTE
BY GRAPHICAL PLOTTING ONLY PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLIAN.), ALSO LOCATED IN FLOOD HAZARD ZONE X SHADED (AREAS OF 0.2% CHANCE ANNUAL FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNNUAL CHANCE FLOOD.); ALSO LOCATED IN FLOOD HAZARD ZONE AE THE SPECIAL FLOOD HAZARD AREA IS THE AREA SUBJECT TO FLOODING BY THE 1% CHANCE ANNUAL FOOD. BASE FLOOD EVELATIONS DETERMINED. EL 240-241.

COMPLIANCE STATEMENTS
THE SITE CONSTRUCTION WILL BE COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURER REQUIREMENTS AND AS ERECTED WILL COMPLY WITH THE PROVISIONS OF THE PA BUILDING CODE, THE CITY OF BETHLEHEM ZONING ORDINANCE, SPECIFICALLY INCLUDING THE FOLLOWING SECTIONS:
- SECTION 1317.19, ELEVATION AND FLOODPROOFING REQUIREMENTS, AND SPECIFICALLY, SUBSECTION E, ACCESSORY STRUCTURES
- SECTION 1317.20, DESIGN AND CONSTRUCTION STANDARDS, AND SPECIFICALLY SUBSECTION G-PLACEMENT OF BUILDINGS AND STRUCTURES, SUBSECTION H-ANCHORING AND SUBSECTION K-ELECTRICAL COMPONENTS
- APPROVALS OF THE CITY OF BETHLEHEM PLANNING COMMISSION, AS APPLICABLE AND OTHER APPLICABLE LAWS GOVERNING BUILDING CONSTRUCTION AND SITE DEVELOPMENT.

ACKNOWLEDGEMENT STATEMENTS
- IT IS ACKNOWLEDGED THAT CHAPTER 33 OF THE IFC "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION" WILL BE ENFORCED FOR THE DURATION OF THE CONSTRUCTION PROJECT.

ADDITIONAL REQUESTED NOTES
- ALL OF THE REQUIREMENTS OF SECTION §1317.20, DESIGN AND CONSTRUCTION STANDARDS, OF THE ZONING ORDINANCE SHALL BE MET AND ALL INFORMATION SHALL BE INCLUDED AS A PART OF A BUILDING PERMIT APPLICATION ON THESE LOTS.
- THE CURRENT, AND ANY SUBSEQUENT, LANDOWNER SHALL BE RESPONSIBLE TO ENSURE THAT THE [BICYCLE] HITCH, RACK OR LOCKER CONTINUES TO BE AVAILABLE AND IS WELL MAINTAINED AND REPLACED IF DAMAGED OR REMOVED.

STANDARD ABBREVIATIONS
FOR ENTIRE PLAN SET

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ACRE / ACRES
AD	AREA DRAIN
ADA	ACCESSIBLE / AMERICANS WITH DISABILITIES ACT
AG	ABOVE GROUND
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
ASSF	AREA SUBJECT TO STORMWATER FLOWAGE
ASSOC	ASSOCIATION
BC	BOTTOM OF CURB
BF	BASEMENT FLOOR
BIO	BIOGARDEN
BIT	BITUMINOUS
BK	BLOCK
BL	BASELINE
BLDG	BUILDING
BM	BENCH MARK
BRL	BUILDING RESTRICTION LINE
BVW	BORDERING VEGETATIVE WETLAND
CB	CATCH BASIN
CF	CUBIC FEET
CI	CURB INLET
CIT	CHANGE IN TYPE
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
CONN	CONNECTION
COORD	COORDINATE
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARD
DEC	DECORATIVE
DEP	DEPARTMENT OF ENVIRONMENTAL PROTECTION
DET	DETENTION
DIA	DIAMETER
DMH	DRAINAGE MANHOLE
DOM	DOMESTIC
DOT	DEPARTMENT OF TRANSPORTATION
DP	DESIGN POINT
DWL	DASHED WHITE LINE
DYL	DOUBLE YELLOW LINE
EG	EXISTING GRADE
ELEC	ELECTRIC
ELEV	ELEVATION
EOR	ENGINEER OF RECORD
EP / EOP	EDGE OF PAVEMENT
ES / EOS	EDGE OF SHOULDER
EW	END WALL
EX	EXISTING
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FES	FLARED END SECTION
FF	FINISH / FIRST FLOOR
FFE	FINISH / FIRST FLOOR ELEVATION
FG	FINISH GRADE
FH	FIRE HYDRANT
FM	FORCE MAIN
FO	FIBER OPTIC
G	GRADE
GC	GENERAL CONTRACTOR
GEO	GEOTECH/GEOTECHNICAL
GF / GFE	GARAGE FLOOR ELEVATION (AT DOOR)
GFA	GROSS FLOOR AREA
GH	GRADE HIGH (WALL)
GL	GRADE LOW (WALL)
GRT	GRATE
GT	GREASE TRAP
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HOR	HORIZONTAL
HP	HIGH POINT
HW	HEADWALL
ICS	INLET CONTROL STRUCTURE
INF	INFILTRATION
INT	INTERSECTION
INV	INVERT
LF	LINEAR FOOT
LOC	LIMIT OF CLEARING
LOD	LIMIT OF DISTURBANCE
LOS	LINE OF SIGHT
LOW	LIMIT OF WORK
LP	LOW POINT

LS	LANDSCAPE
LSA	LANDSCAPE AREA
MAX	MAXIMUM
ME	MATCH EXISTING
MEP	MECHANICAL, ELECTRICAL, AND PLUMBING
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NRCS	NATIONAL RESOURCE CONSERVATION SERVICE
O&M	OPERATIONS AND MAINTENANCE
OC	ON CENTER
OCS	OUTLET CONTROL STRUCTURE
OGS	OIL AND GRIT SEPARATOR
ORD	ORDINANCE
PA / POA	POINT OF ANALYSIS
PC	POINT OF CURVATURE
PCCR	POINT OF CURVATURE, CURB RETURN
PERF	PERFORATED
PG	PROPOSED GRADE
PI	POINT OF INTERSECTION
POG	POINT OF GRADE
PP	POLYPROPYLENE PIPE
PROP	PROPOSED
PT	POINT OF TANGENCY
PTCR	POINT OF TANGENCY, CURB RETURN
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS / RADII
R/W	RIGHT-OF-WAY / RIGHTS-OF-WAY
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REGS	REGULATIONS
RELO	TO BE RELOCATED
REQ	REQUIRED
RET	RETENTION
RET WALL	RETAINING WALL
RETO	TO BE RETURNED TO OWNER
RG	RAIN GARDEN
S	SLOPE
SAN	SANITARY SEWER
SESC	SOIL EROSION AND SEDIMENT CONTROL
SHLO	STATE HIGHWAY LAYOUT
SMH	SANITARY MANHOLE
STA	STATION
STM	STORM WATER / STORM SEWER
SWL	SINGLE/SOLID WHITE LINE
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TBA	TO BE ABANDONED
TBD	TO BE DETERMINED
TBP	TO BE PROTECTED
TBR	TO BE REMOVED
TBRR	TO BE REMOVED AND REPLACED IN KIND
TBS	TO BE SALVAGED
TBV	TO BE VACATED
TC	TOP OF CURB
Tc	TIME OF CONCENTRATION
TD	TRENCH DRAIN
TELE	TELECOMMUNICATIONS / TELEDATA
TPF	TREE PROTECTION FENCE
TR	TO REMAIN
TRANS	TRANSITION
TYP	TYPICAL
UG	UNDERGROUND
UP	UTILITY POLE
USGS	UNITED STATES GEOLOGICAL SURVEY
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WIDE / WIDTH
W/L	WATER LINE
WM	WATER METER
WQU	WATER QUALITY UNIT
YD	YARD DRAIN
#	NUMBER
#:#	SLOPE EXPRESSED IN HORIZONTAL:VERTICAL IN FEET
±	PLUS OR MINUS
°	DEGREE
Ø	DIAMETER

STANDARD DRAWING LEGEND
FOR ENTIRE PLAN SET

LIMIT OF WORK	LOW LOW
LIMIT OF DISTURBANCE	LOD LOD
SAWCUT LINE	

EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
	ONSITE PROPERTY LINE / R.O.W. LINE	
	NEIGHBORING PROPERTY LINE / INTERIOR PARCEL LINE	
	EASEMENT LINE	
	SETBACK LINE	
	CONCRETE CURB & GUTTER	CURB AND GUTTER; SPILL; TRANSITION; DEPRESSED CURB AND GUTTER
	UTILITY POLE WITH LIGHT	
	POLE LIGHT	
	TRAFFIC LIGHT	
	UTILITY POLE	
	TYPICAL LIGHT	
	ACORN LIGHT	
	TYPICAL SIGN	
X	PARKING COUNTS	X
170 / 169	CONTOUR LINE	190 / 187
TC 516.4 OR 516.4	SPOT ELEVATIONS	FF 517.00; TC 516.00 BC 515.55; ME 516.00
SAN #	SANITARY LABEL	S-100
X #	STORM LABEL	A-100
SL	SANITARY SEWER LATERAL	SL
W	UNDERGROUND WATER LINE	W
E	UNDERGROUND ELECTRIC LINE	E
G	UNDERGROUND GAS LINE	G
OH	OVERHEAD WIRE	OH
T	UNDERGROUND TELEPHONE LINE	T
C	UNDERGROUND CABLE LINE	C
	STORM SEWER	
S	SANITARY SEWER MAIN	S
	HYDRANT	
S	SANITARY MANHOLE	S
D	STORM MANHOLE	D
WM	WATER METER	WM
WV	WATER VALVE	
	GAS VALVE	GV
	GAS METER	G
	TYPICAL END SECTION	
OR	HEADWALL OR ENDWALL	
	GRATE INLET	
	CURB INLET	
	CLEAN OUT	C/O
E	ELECTRIC MANHOLE	E
T	TELEPHONE MANHOLE	T
EB	ELECTRIC BOX	E
EP	ELECTRIC PEDESTAL	EP
	MONITORING WELL	
	TEST PIT	T-#
	BENCHMARK	
	BORING	B-#

TM BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES. © BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811
Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-CNDS

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

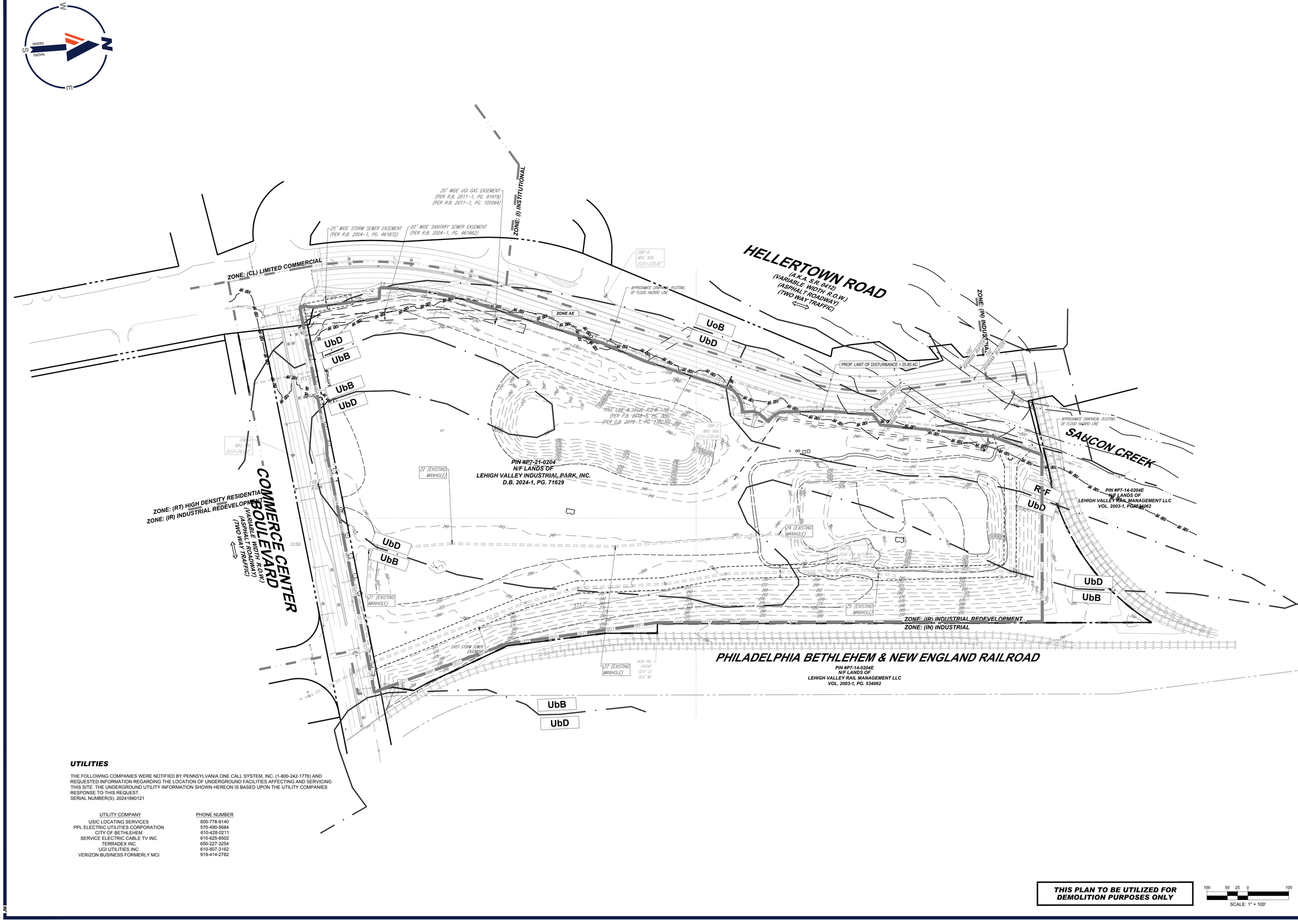
M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE071444

SHEET TITLE:
GENERAL NOTES AND LEGEND

SHEET NUMBER:
C-102

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-PAB240068.00-2A----LAYOUT: C-102 NOTE
JM



UTILITIES

THE FOLLOWING COMPANIES WERE NOTIFIED BY PENNSYLVANIA ONE CALL SYSTEM, INC. (1-800-242-1776) AND REQUESTED INFORMATION REGARDING THE LOCATION OF UNDERGROUND FACILITIES AFFECTING AND SERVICING THIS SITE. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE UTILITY COMPANIES RESPONSE TO THIS REQUEST.
SERIAL NUMBER(S): 20241880121

UTILITY COMPANY	PHONE NUMBER
USIC LOCATING SERVICES	800-778-9140
PPL ELECTRIC UTILITIES CORPORATION	570-490-5684
CITY OF BETHLEHEM	610-428-0211
SERVICE ELECTRIC CABLE TV INC	610-625-8502
TERRADEX INC	650-227-3254
UGI UTILITIES INC	610-807-3162
VERIZON BUSINESS FORMERLY MCI	919-414-2782

THIS PLAN TO BE UTILIZED FOR DEMOLITION PURPOSES ONLY

100 50 25 0 100
SCALE: 1" = 100'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT: C-201 EXDM
JM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND COPYRIGHTED AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

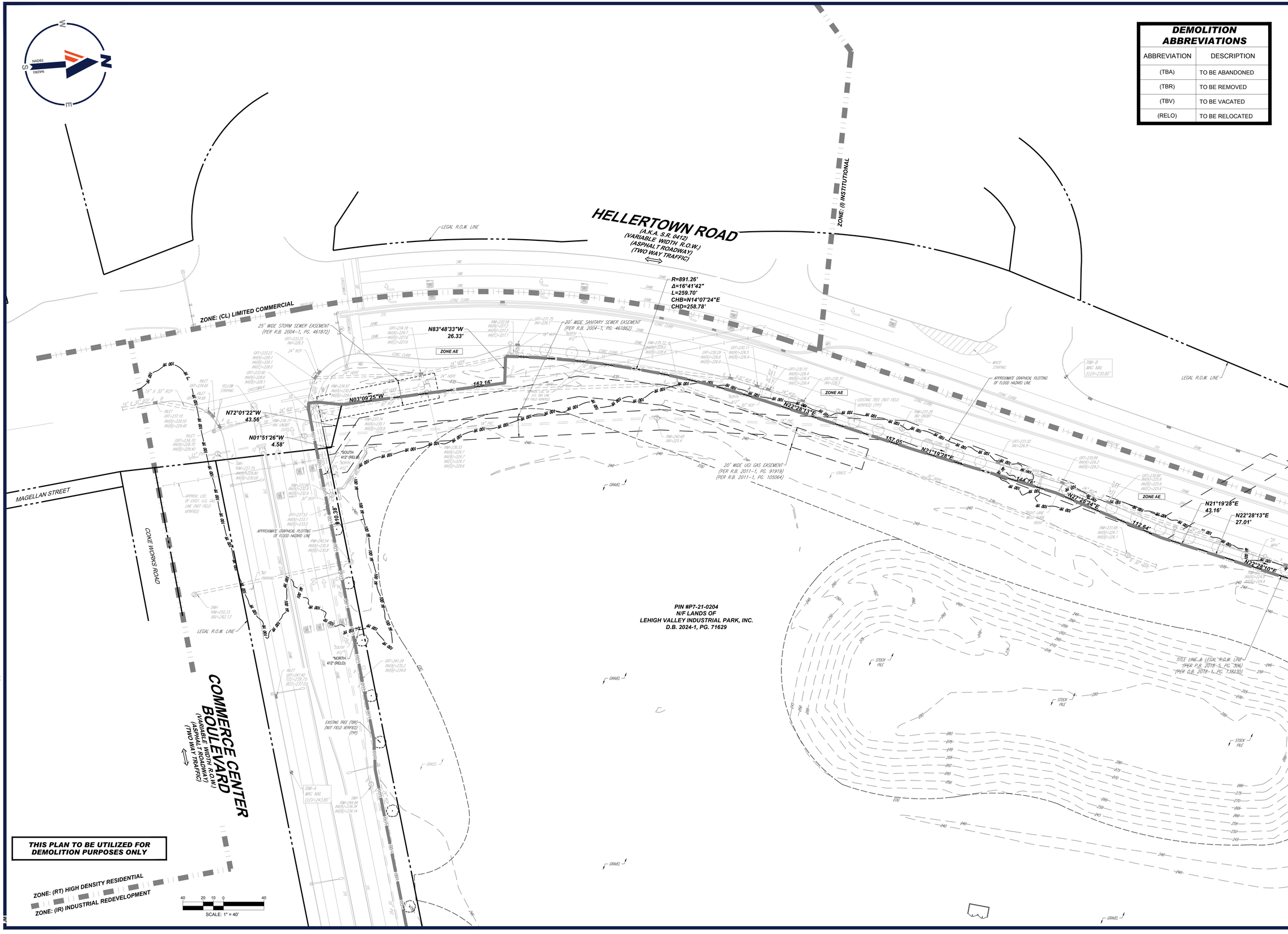
BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:
EXISTING CONDITIONS/ DEMOLITION PLAN

SHEET NUMBER:
C-201

REVISION 2 - 02/19/2025



DEMOLITION ABBREVIATIONS

ABBREVIATION	DESCRIPTION
(TBA)	TO BE ABANDONED
(TBR)	TO BE REMOVED
(TBV)	TO BE VACATED
(RELO)	TO BE RELOCATED

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE DISCLOSED OR USED FOR ANY PURPOSE, WHOLLY OR PARTIALLY, WITHOUT THE EXPRESS WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER

74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

EXISTING CONDITIONS/ DEMOLITION PLAN

SHEET NUMBER:

C-202

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LDVP-PAB240068.00-2A-----\LAYOUT: C-202 EXDM (A)
JMV

DEMOLITION ABBREVIATIONS

ABBREVIATION	DESCRIPTION
(TBA)	TO BE ABANDONED
(TBR)	TO BE REMOVED
(TBV)	TO BE VACATED
(RELO)	TO BE RELOCATED

THIS PLAN TO BE UTILIZED FOR DEMOLITION PURPOSES ONLY

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHT AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER

74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

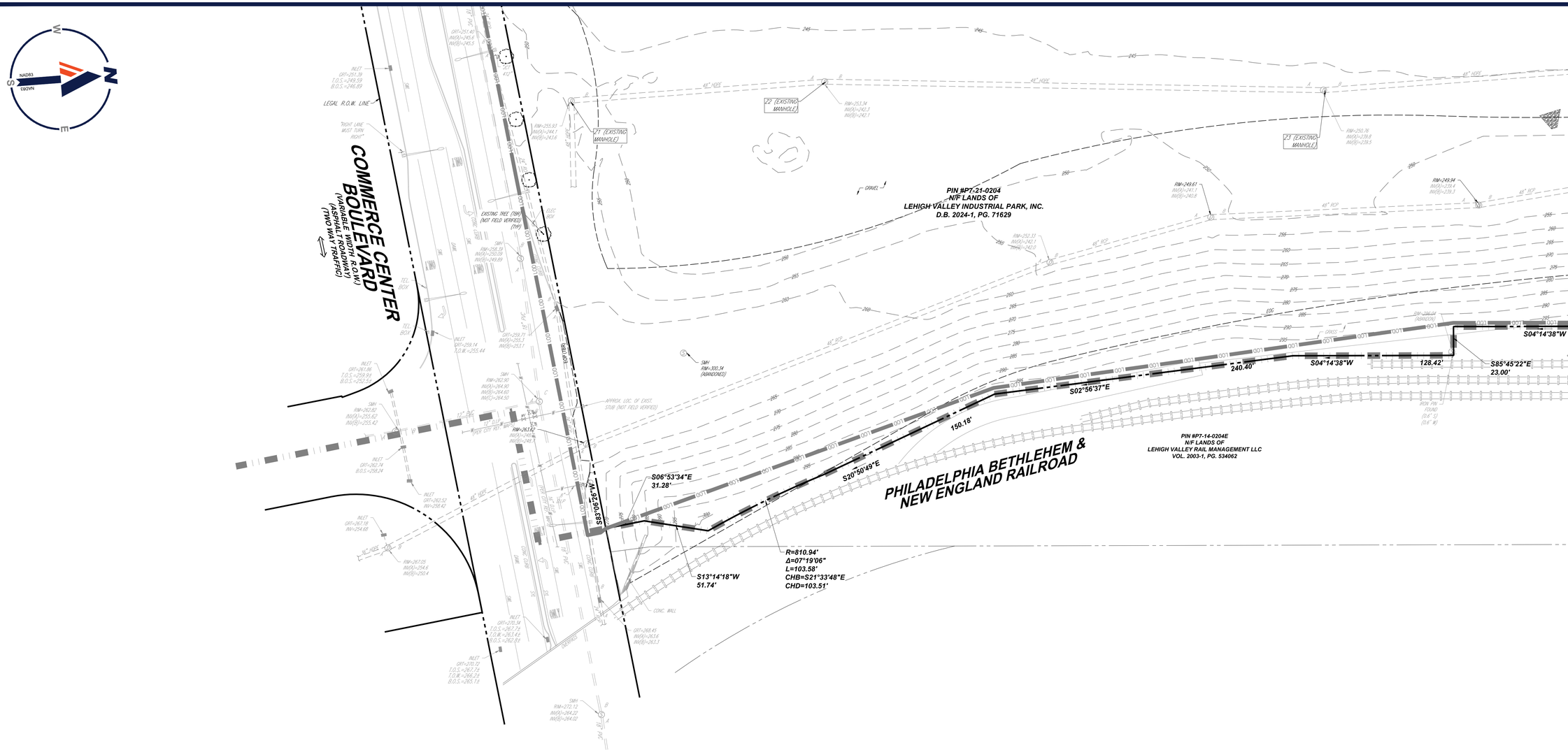
EXISTING CONDITIONS/ DEMOLITION PLAN

SHEET NUMBER:

C-203

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----1A LYOUT: C-203 EXOM (B) JMV



DEMOLITION ABBREVIATIONS	
ABBREVIATION	DESCRIPTION
(TBA)	TO BE ABANDONED
(TBR)	TO BE REMOVED
(TBV)	TO BE VACATED
(RELO)	TO BE RELOCATED

THIS PLAN TO BE UTILIZED FOR DEMOLITION PURPOSES ONLY

40 20 10 0 40
SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A.----LAYOUT: C-204 EXDM (C)
JMI

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABILITY CONSULTING
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONCEPTS OF THIS PLAN ARE COPYRIGHTED AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

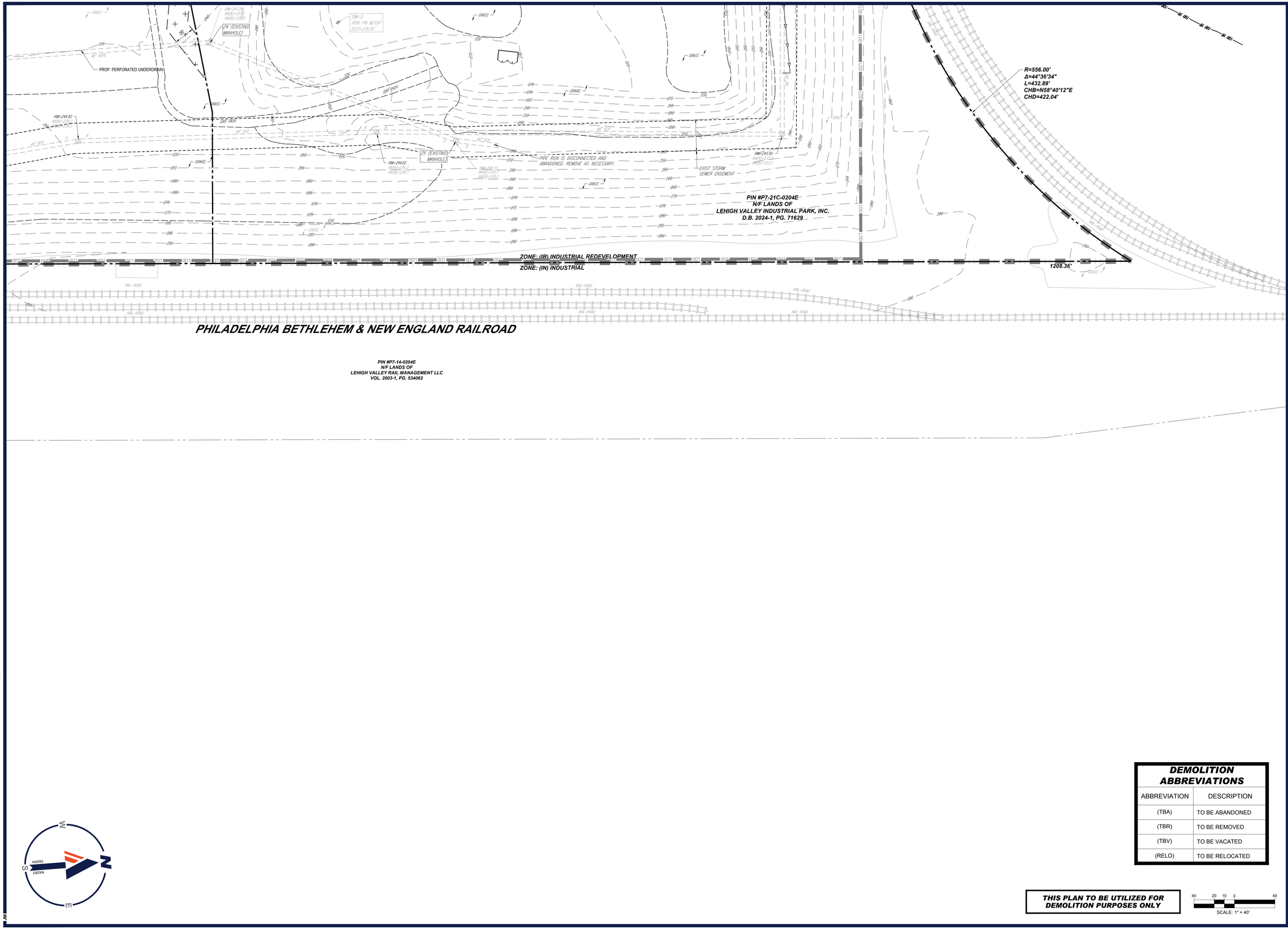
SHEET TITLE:

EXISTING CONDITIONS/ DEMOLITION PLAN

SHEET NUMBER:

C-204

REVISION 2 - 02/19/2025



DEMOLITION ABBREVIATIONS

ABBREVIATION	DESCRIPTION
(TBA)	TO BE ABANDONED
(TBR)	TO BE REMOVED
(TBV)	TO BE VACATED
(RELO)	TO BE RELOCATED

THIS PLAN TO BE UTILIZED FOR DEMOLITION PURPOSES ONLY

40 20 10 0 40
SCALE: 1" = 40'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHT AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT THE EXPRESS AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

EXISTING CONDITIONS/ DEMOLITION PLAN

SHEET NUMBER:

C-205

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LDVP-PAB240068.00-2A-----3-LAYOUT C-205 EXDM (D) JMV

ZONING TABLE

ZONE: IR - INDUSTRIAL REDEVELOPMENT
LOT A USE: WAREHOUSE / DISTRIBUTION (SPECIAL EXCEPTION REQUIRED) LOT B USE: WAREHOUSE / DISTRIBUTION (SPECIAL EXCEPTION REQUIRED)
BLOCK: 21 LOT(S): 1 & 1C

APPLICANT/ OWNER INFORMATION

APPLICANT:	J.G. PETRUCCI COMPANY INC. 171 STATE ROUTE 173, SUITE 201 ASBURY, NJ 08802
PROPERTY OWNER:	LEHIGH VALLEY INDUSTRIAL PARK INC. 1720 SPILLMAN DRIVE, SUITE 150 BETHLEHEM, PA 18015-2164

BULK REQUIREMENTS

ITEM	CODE	PERMITTED	EXISTING (LOT A)	EXISTING (LOT B)	PROPOSED LOT A	PROPOSED LOT B
MIN LOT AREA	CITY OF BETHLEHEM ZONING ORDINANCE ARTICLE 1306	20,000 SF	804,784 SF (18.48 AC)	357,241 SF (8.20 AC)	804,784 SF (18.48 AC)	357,241 SF (8.20 AC)
MIN LOT WIDTH	CITY OF BETHLEHEM ZONING ORDINANCE ARTICLE 1306	60'	910.7'	224.8'	910.7'	224.8'
MIN YARD SETBACKS						
FRONT YARD	CITY OF BETHLEHEM ZONING ORDINANCE ARTICLE 1306	10'	N/A	N/A	67.7' (HELLERTOWN) 87.0' (COMMERCE)	61.4'
SIDE YARD	CITY OF BETHLEHEM ZONING ORDINANCE ARTICLE 1306	PERMITTED FOR BLDG A : 27.0' [1] / PERMITTED FOR BLDG B: 23.0' [1]	N/A	N/A	193.4'	32.4'
REAR YARD	CITY OF BETHLEHEM ZONING ORDINANCE ARTICLE 1306	PERMITTED FOR BLDG A : 27.0' [1] / PERMITTED FOR BLDG B: 23.0' [1]	-	-	230.4'	183.4'
MAX PERMITTED HEIGHT	CITY OF BETHLEHEM ZONING ORDINANCE ARTICLE 1306	200' [2]	N/A	N/A	55'	44'
MAX BUILDING COVERAGE	CITY OF BETHLEHEM ZONING ORDINANCE ARTICLE 1306	90%	0%	0%	216,000 SF (26.84%)	101,000 SF (28.27%)
MAX IMPERVIOUS COVERAGE	CITY OF BETHLEHEM ZONING ORDINANCE ARTICLE 1306	90%	87.16% (701,410 SF)	39.71% (141,845 SF)	466,564 SF (57.97%)	238,914 SF (66.88%)
MIN PARKING SETBACKS	CITY OF BETHLEHEM ZONING ORDINANCE ARTICLE 1306	15' FROM CURBLINE OF PUBLIC STREET	N/A	N/A	23.2'	33.8'

ZONING PARKING REQUIREMENTS

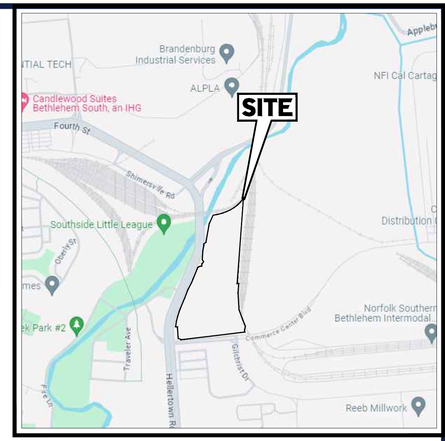
ITEM	PERMITTED (LOT A)	PROPOSED LOT A	PERMITTED (LOT B)	PROPOSED LOT B
MIN STALL SIZE	9' X 18'	9' X 18'	9' X 18'	9' X 18'
MIN AISLE WIDTH	24'	24'	24'	24'
MIN NUMBER OF STALLS (PER EMPLOYEES)	47 SPACES* (AT 70 EMPLOYEES PROPOSED)	106 SPACES (INCLUDING 6 ADA ACCESSIBLE)	N/A	N/A
MIN NUMBER OF STALLS (PER BUILDING FLOOR AREA)	N/A	N/A	101 SPACES*	58 SPACES (V-A) (INCLUDING 3 ADA ACCESSIBLE)
MIN LOADING SIZE	11' X 50'	12' X 55'	11' X 50'	12' X 55'
LOADING SPACES	2 SPACES REQUIRED**	32 SPACES	2 SPACES REQUIRED**	24 SPACES
BICYCLE SPACES	5.3	6 SPACES	2.9	4 SPACES

REQUIRED = PARKING OR STORAGE FOR ALL VEHICLES USED DIRECTLY IN THE CONDUCT OF SUCH BUSINESS + 1 PARKING SPACE FOR EACH 1.5 PERSONS REGULARLY EMPLOYED ON THE PREMISES. IF THE NUMBER OF EMPLOYEES IS NOT KNOWN, THEN 1 SPACE SHALL BE PROVIDED PER 1,000 SQUARE FEET OF BUILDING FLOOR AREA.

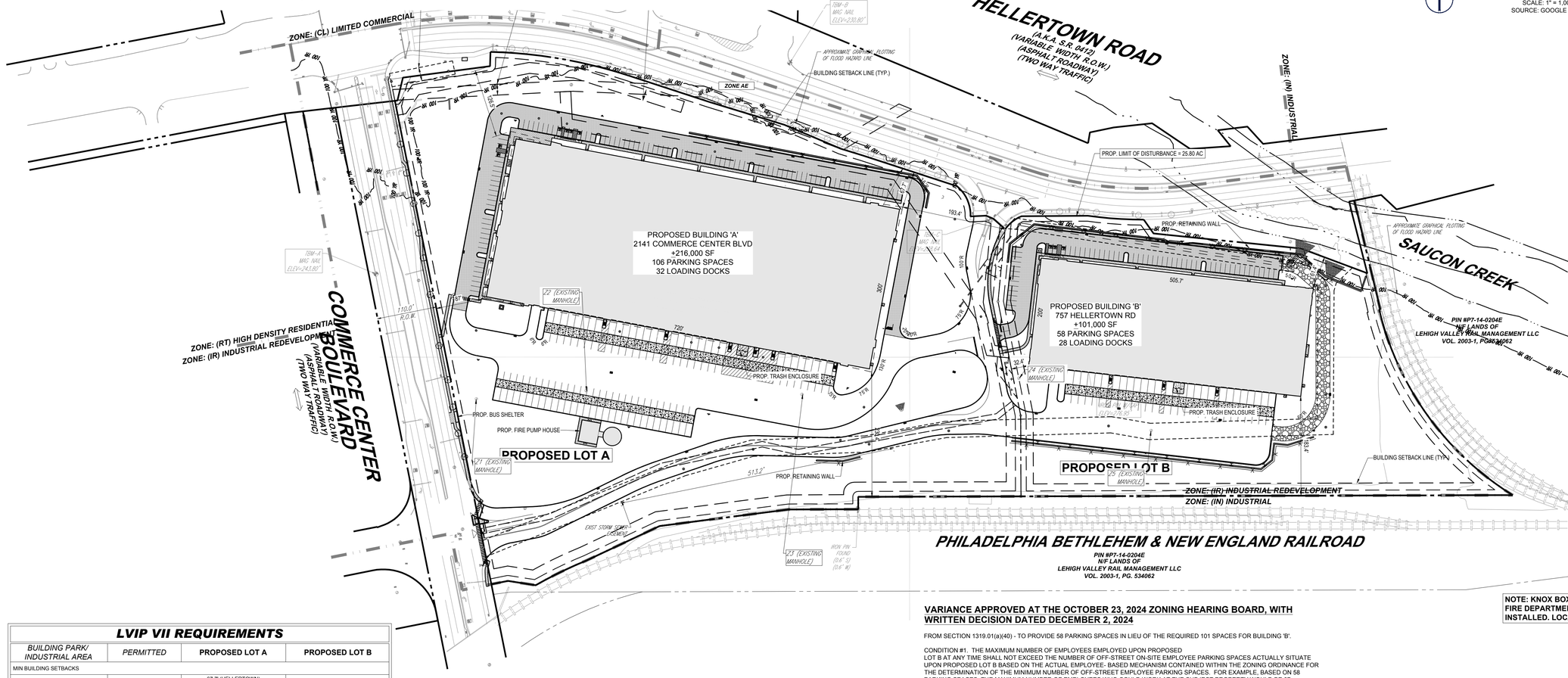
*LOT A = 70 PROPOSED EMPLOYEES / 1.5 PERSONS = 47 REQUIRED SPACES.
*LOT B = 101,000 SF/ 1,000 SF = 101 SPACES
**LOADING = 1 SPACE FOR THE FIRST 7,500 SQUARE FEET OF FLOOR AREA. 12,000 OR MORE SQUARE FEET OF FLOOR AREA SHALL REQUIRE 2 SPACES.
(V-A)= VARIANCE APPROVED

REQUIRED BICYCLE SPACES = 5% OF THE OFF-STREET VEHICLE PARKING REQUIREMENT, WITH A MINIMUM OF 2 SPACES IN ANY EVENT.

1. EXCEPT 25 FEET SIDE AND 50 FEET REAR FOR A PRINCIPAL NON-RESIDENTIAL BUILDING WHERE SUCH SIDE OR REAR YARD WOULD BE ADJACENT TO A LOT IN A RESIDENTIAL DISTRICT THAT IS OCCUPIED BY ONE OR MORE EXISTING DWELLINGS. (NOT APPLICABLE)
2. IN THE IR DISTRICT, IF A BUILDING IS PROPOSED TO HAVE A HEIGHT EXCEEDING 35 FEET, THEN ONE FOOT ADDITIONAL SETBACK SHALL BE REQUIRED FROM AN ABUTTING LOT LINE OF AN EXISTING DWELLING IN A RESIDENTIAL DISTRICT FOR EACH 3 FEET OF BUILDING HEIGHT OVER 35 FEET. ANY STRUCTURE THAT IS ACCESSORY TO A NON-RESIDENTIAL USE, IT SHALL HAVE A MAXIMUM HEIGHT OF 25 FEET, UNLESS IT MEETS THE MINIMUM SETBACKS FOR A PRINCIPAL BUILDING, IN WHICH CASE THE MAXIMUM HEIGHT FOR A PRINCIPAL BUILDING SHALL APPLY.
NOTE: 20 FEET IS THE REQUIRED SETBACK FOR BUILDINGS WITH A HEIGHT OF 35 FEET OR UNDER. SEE ZONING TABLE CHARTS FOR THE UPDATED PERMITTED HEIGHTS FOR BOTH BUILDING A AND BUILDING B.



LOCATION MAP
SCALE: 1" = 1,000'
SOURCE: GOOGLE MAPS



LVIP VII REQUIREMENTS

BUILDING PARK/ INDUSTRIAL AREA	PERMITTED	PROPOSED LOT A	PROPOSED LOT B
MIN BUILDING SETBACKS			
FRONT	50.0'	67.7' (HELLERTOWN) 87.0' (COMMERCE)	61.4'
SIDE	15.0'	193.4'	32.4'
REAR	15.0'	230.4'	183.4'
MIN PARKING SETBACKS			
FRONT	25.0'	12.3' (V)	14' (V)
SIDE	5.0'	183.0'	17.1'
REAR	5.0'	165.0'	130.0'
MAX BUILDING COVERAGE	70%	216,000 SF (26.8%)	101,000 SF (28.3%)
MAX IMPERVIOUS COVERAGE	90%	466,564 SF (57.97%)	238,914 SF (66.88%)
MAX BUILDING HEIGHT	80.0'	55.0'	44.0'

*TRUCK, TRAILER AND VAN PARKING IS PROHIBITED WITHIN THE REQUIRED FRONT YARD BUILDING SETBACK.

**SIDE AND REAR YARDS MAY BE ONE (1) FOOT AGAINST EXISTING ON-SITE WALLS AND AGAINST RAILROAD SIDINGS THAT ARE A PART OF THE USE. SIDE OR REAR YARDS FACING ANY PUBLIC STREET SHALL BE TWENTY-FIVE (25) FEET. SIDE OR REAR YARDS ADJACENT TO OUTDOOR STORAGE OR TRUCK STORAGE AREAS SHALL BE FIFTEEN (15) FEET WIDE
(V)= VARIANCE REQUIRED

LVIP VII PARKING REQUIREMENTS

ITEM	PERMITTED	PROPOSED LOT A	PERMITTED	PROPOSED LOT B
MIN STALL SIZE	9' X 19'	9' X 18' (V)	9' X 19'	9' X 18' (V)
MIN AISLE WIDTH	24'	24'	24'	24'
MIN LOADING SIZE	12' X 35'	12' X 55'	12' X 35'	12' X 55'
MIN NUMBER OF LOADING SPACES	6 SPACES*	31 TRAILER SPACES	N/A	0 TRAILER SPACES
MIN TRAILER STALL SIZE	12' X 55'	12' X 55'	12' X 55'	N/A
MIN NUMBER OF STALLS	ONE CAR SPACE FOR EVERY 1.1 EMPLOYEES	106 CAR SPACES (MAX 117 EMPLOYEES)**	ONE CAR SPACE FOR EVERY 1.1 EMPLOYEES	58 CAR SPACES (MAX 64 EMPLOYEES)**

ALL USES:

REQUIRED = ONE AUTO PARKING SPACE FOR EVERY 1.1 EMPLOYEES PLUS ONE OFF-STREET PARKING SPACE REQUIRED FOR EACH COMPANY VEHICLE BASED AT THE SITE.
**LOT A= 106 PROPOSED SPACES X 1.1 EMPLOYEES+ 0 COMPANY VEHICLES= MAX 117 EMPLOYEES
**LOT B= 58 PROPOSED SPACES X 1.1 EMPLOYEES + 0 COMPANY VEHICLES= MAX 64 EMPLOYEES

LOADING = ONE OFF-STREET TRUCK LOADING SPACE FOR THE FIRST TEN THOUSAND SQUARE FEET PLUS A MINIMUM OF ONE ADDITIONAL OFF-STREET TRUCK LOADING AREA FOR EACH ADDITIONAL FORTY THOUSAND (40,000) SQUARE FEET OF GROSS FLOOR AREA.
*.LOT A= 1 SPACE (FIRST 10,000 SF) + 1 ADDITIONAL FOR EACH REMAINING 40,000 SF OF GROSS FLOOR AREA (206,000 SF/ 40,0000)= 6 SPACES
(V)= VARIANCE REQUIRED

VARIANCE APPROVED AT THE OCTOBER 23, 2024 ZONING HEARING BOARD, WITH WRITTEN DECISION DATED DECEMBER 2, 2024

FROM SECTION 1319.01(a)(40) - TO PROVIDE 58 PARKING SPACES IN LIEU OF THE REQUIRED 101 SPACES FOR BUILDING 'B'.

CONDITION #1. THE MAXIMUM NUMBER OF EMPLOYEES EMPLOYED UPON PROPOSED LOT B AT ANY TIME SHALL NOT EXCEED THE NUMBER OF OFF-STREET ON-SITE EMPLOYEE PARKING SPACES ACTUALLY SITUATE UPON PROPOSED LOT B BASED ON THE ACTUAL EMPLOYEE- BASED MECHANISM CONTAINED WITHIN THE ZONING ORDINANCE FOR THE DETERMINATION OF THE MINIMUM NUMBER OF OFF-STREET EMPLOYEE PARKING SPACES. FOR EXAMPLE, BASED ON 58 PARKING SPACES, THE MAXIMUM NUMBER OF EMPLOYEES WHO COULD WORK AT THE SUBJECT PROPERTY WOULD BE 87 EMPLOYEES, OR 1.5 EMPLOYEES FOR EACH ACTUAL OFF-STREET, ON-SITE PARKING SPACE PROVIDED ON PROPOSED LOT B. IF THE NUMBER OF EMPLOYEES WORKING AT PROPOSED LOT B CHANGES, THE NUMBER OF AVAILABLE OFF-STREET PARKING FOR PROPOSED LOT B WOULD BE ALTERED TO ACCOMMODATE THE CHANGE IN ACTUAL EMPLOYEES AS REQUIRED BY THE ZONING ORDINANCE.

CONDITION #2. APPLICANT'S DEVELOPMENT AND USE OF THE SUBJECT PROPERTY SHALL OCCUR IN STRICT CONFORMANCE WITH APPLICANT'S EXHIBITS AND TESTIMONY, INCLUDING BUT NOT LIMITED TO APPLICANT'S SITE PLAN SUBMITTED AS EXHIBIT A-2.

CONDITION #3. APPLICANT'S DEVELOPMENT AND USE OF THE SUBJECT PROPERTY SHALL OCCUR IN STRICT CONFORMANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL LAW AND APPLICANT SHALL ENSURE THAT ANY OWNER, OPERATORS, TENANT OR OCCUPANTS OF THE SUBJECT PROPERTY SHALL BE BOUND BY THE CONDITIONS OF THE RELIEF GRANTED HEREIN.

SPECIAL EXCEPTION APPROVED AT THE OCTOBER 23, 2024 ZONING HEARING BOARD, WITH WRITTEN DECISION DATED DECEMBER 2, 2024

FROM SECTION 1305.01(e) - TO PERMIT DISTRIBUTION, WAREHOUSING OR STORAGE AS A PRINCIPAL USE ON LOTS 'A' & 'B'.

CONDITION #1: APPLICANT'S DEVELOPMENT AND USE OF THE SUBJECT PROPERTY SHALL OCCUR IN STRICT CONFORMANCE WITH APPLICANT'S EXHIBITS AND TESTIMONY, INCLUDING BUT NOT LIMITED TO APPLICANT'S SITE PLAN SUBMITTED AS EXHIBIT A-2.

CONDITION #2: APPLICANT'S DEVELOPMENT AND USE OF THE SUBJECT PROPERTY SHALL OCCUR IN STRICT CONFORMANCE WITH ALL APPLICABLE LOCAL,STATE AND FEDERAL LAW AND APPLICANT SHALL ENSURE THAT ANY OWNER, OPERATORS, TENANT OR OCCUPANTS OF THE SUBJECT PROPERTY SHALL BE BOUND BY THE CONDITIONS OF THE RELIEF GRANTED HEREIN.

NOTE: KNOX BOXES FOR CITY OF BETHLEHEM FIRE DEPARTMENT ACCESS SHALL BE INSTALLED. LOCATION TBD.

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

100 50 25 0 100
SCALE: 1" = 100'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONCEPTS OF THIS PLAN ARE COPYRIGHTED AND ONLY MAY NOT BE USED OR ALTERED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED AND PERMITTED PLANS MAY BE USED FOR CONSTRUCTION PURPOSES.
© 2024 BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. 31371444

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

C-301

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT: C-301 SITE
JM

NAD83
GRID N

BELGIAN BLOCK CURB
FLUSH CURB
TAPERED CURB
CONCRETE SIDEWALK
CHAIN LINK FENCE GATE
HEAVY DUTY ASPHALT PAVEMENT
HEAVY DUTY CONCRETE PAVEMENT
PAINTED PEDESTRIAN CROSSWALK
PAINTED STOP BAR
STANDARD DUTY ASPHALT PAVEMENT
GUIDE RAIL
BIKE RACK
MONUMENT SIGN

HELLERTOWN ROAD
(A.K.A. S.R. 0412)
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

LEGAL R.O.W. LINE

ZONE: (I) INSTITUTIONAL

ZONE: (CL) LIMITED COMMERCIAL

25' WIDE STORM SEWER EASEMENT
(PER R.B. 2004-1, PG. 461872)

20' WIDE SANITARY SEWER EASEMENT
(PER R.B. 2004-1, PG. 461862)

R=891.26'
Δ=16°41'42"
L=259.70'
CHB=N14°07'24"E
CHD=258.78'

N83°48'33"W
26.33'

ZONE AE

PROP. CONCRETE PAD FOR FUTURE BUS SHELTER

N03°09'25"W

N72°01'22"W
43.56'

N01°51'26"W
4.58'

PROPO 20' WIDE SANITARY EASEMENT IN FAVOR OF LOT B

20' WIDE UGI GAS EASEMENT
(PER R.B. 2011-1, PG. 91919)
(PER R.B. 2011-1, PG. 105064)

PROPOSED LOT A

N22°28'13"E

157.05'

N21°19'28"E

144.76'

N27°28'10"E

APPROXIMATE GRAPHICAL PLOTTING OF FLOOD HAZARD LINE

EXISTING TREE (NOT FIELD VERIFIED) (TYP.)

WHITE STRIPING

TBM-B
MAG NAIL
ELEV=230.80'

N21°19'28"E
43.16'

N22°28'13"E
27.01'

172.64'

N27°28'10"E

MAGELLAN STREET

GONE WORKS ROAD

LEGAL R.O.W. LINE

COMMERCE CENTER BOULEVARD
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

APPROXIMATE GRAPHICAL PLOTTING OF 100D HAZARD LINE

TBM-A
MAG NAIL
ELEV=243.80'

PROPOSED BUILDING 'A'
2141 COMMERCE CENTER BLVD
+216,000 SF
106 PARKING SPACES
32 LOADING DOCKS

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

ZONE: (RT) HIGH DENSITY RESIDENTIAL
ZONE: (IR) INDUSTRIAL REDEVELOPMENT

40 20 10 0 40
SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT: C-302 SITE (A)
JM 12/13/2024 10:36:41 AM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.
ALL RIGHTS RESERVED

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

C-302

REVISION 2 - 02/19/2025

NAD83
GRID N

BCK	BELGIAN BLOCK CURB
CFC	FLUSH CURB
CST	TAPERED CURB
CSW	CONCRETE SIDEWALK
CFA	CHAIN LINK FENCE GATE
CHA	HEAVY DUTY ASPHALT PAVEMENT
CHC	HEAVY DUTY CONCRETE PAVEMENT
CPX	PAINTED PEDESTRIAN CROSSWALK
CSB	PAINTED STOP BAR
CSD	STANDARD DUTY ASPHALT PAVEMENT
RSC	GUIDE RAIL
SBI	BIKE RACK
SMS	MONUMENT SIGN

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

HELLERTOWN ROAD
(A.K.A. S.R. 0412)
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

LEGAL R.O.W. LINE

TITLE LINE & LEGAL R.O.W. LINE
(PER P.B. 2018–5, PG. 306)
(PER D.B. 2018–1, PG. 13823O)

"COMMERCE CENTER BLVD LOOP DETOUR"

ZONE AE

R=69.33'
Δ=52°11'42"
L=63.16'
CHB=N70°28'06"E
CHD=61.00'

R=69.33'
Δ=32°19'09"
L=39.11'
CHB=N34°07'26"W
CHD=38.59'

R=731.74'
Δ=08°06'24"
L=103.53'
CHB=N08°23'25"E
CHD=103.45'

"STOP" "ALL MUST TURN RIGHT"

"SPEED LIMIT 40 MPH"

"NORTH 412 LOFT, TWO LANES"

EXISTING TREE (NOT FIELD VERIFIED) (TYP)

"DIRECTIONAL"

"DIRECTIONAL"

ZONE I(N) INDUSTRIAL

APPROXIMATE GRAPHICAL PLOTTING OF FLOOD HAZARD LINE

MOUNTABLE CONC. CURB

TRAFFIC SIGNAL POST

METAL FENCE

FENCE AND GUIDERAIL

N07°19'07"W
9.51'
S81°14'37"W
25.15'

P.O.B.

LEGAL R.O.W. LINE

206.8'

N71°53'57"E
115.11'

N18°29'28"E
130.61'

S09°01'31"E
2.00'

PIN #P7-14-0204E
N/F LANDS OF
LEHIGH VALLEY RAIL MANAGEMENT LLC
VOL. 2003-1, PG. 534062

SAUCON CREEK

ZONE AE
(FLOODWAY)

INV(A)=227.0
INV(B)=226.9

PROP. RETAINING WALL

N59°00'37"E
31.29'

N10°14'02"E
273.85'

N24°50'58"E

N03°59'17"E
122.57'

193.4'

L1
L2
L3

156.06'

TBM=C
MAG. NAIL
ELEV=238.64

PROP. SANITARY SEWER EASEMENT IN FAVOR OF LOT B

INV=236.4

PROPOSED BUILDING 'B'
757 HELLERTOWN RD
+101,000 SF
58 PARKING SPACES
28 LOADING DOCKS

505.7'

PROPOSED "FIRE DEPARTMENT ACCESS ONLY" SIGN

PROPOSED LOT B

40 20 10 0 40
SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT C-303 SITE (B)
JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED PLANS IN THE PERMIT SET SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES. © 2025 BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE-071444

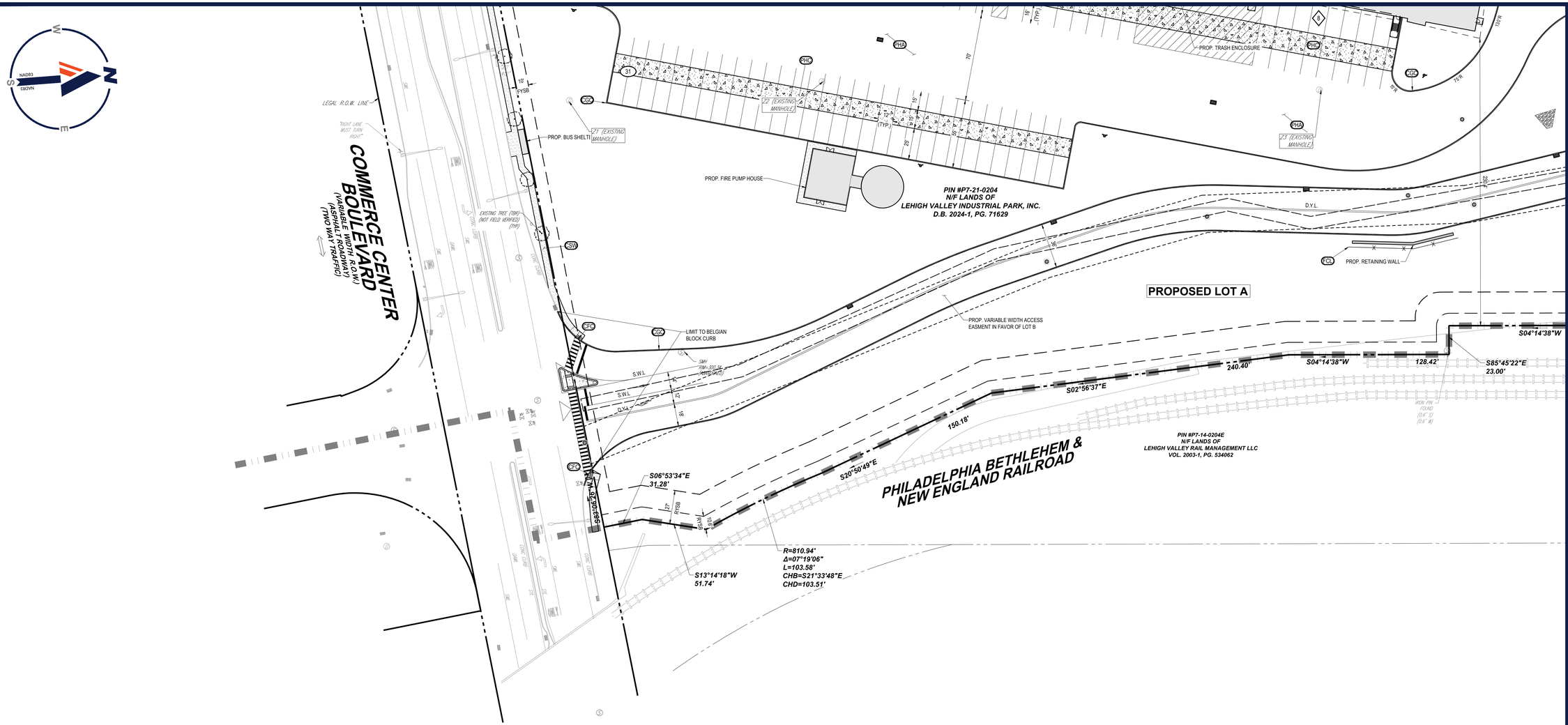
SHEET TITLE:

SITE PLAN

SHEET NUMBER:

C-303

REVISION 2 - 02/19/2025



BCC	BELGIAN BLOCK CURB
FCC	FLUSH CURB
TCC	TAPERED CURB
CSW	CONCRETE SIDEWALK
FCL	CHAIN LINK FENCE GATE
HHA	HEAVY DUTY ASPHALT PAVEMENT
HHC	HEAVY DUTY CONCRETE PAVEMENT
PPX	PAINTED PEDESTRIAN CROSSWALK
PSB	PAINTED STOP BAR
SHA	STANDARD DUTY ASPHALT PAVEMENT
SGR	GUIDE RAIL
SBI	BIKE RACK
SMS	MONUMENT SIGN

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

40 20 10 0 40
SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT C-304 SITE (C)
JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
LAND DEVELOPMENT
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE BOHLER LOGO, DESIGN AND CONTENTS OF THIS PLAN ARE COPYRIGHTED AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

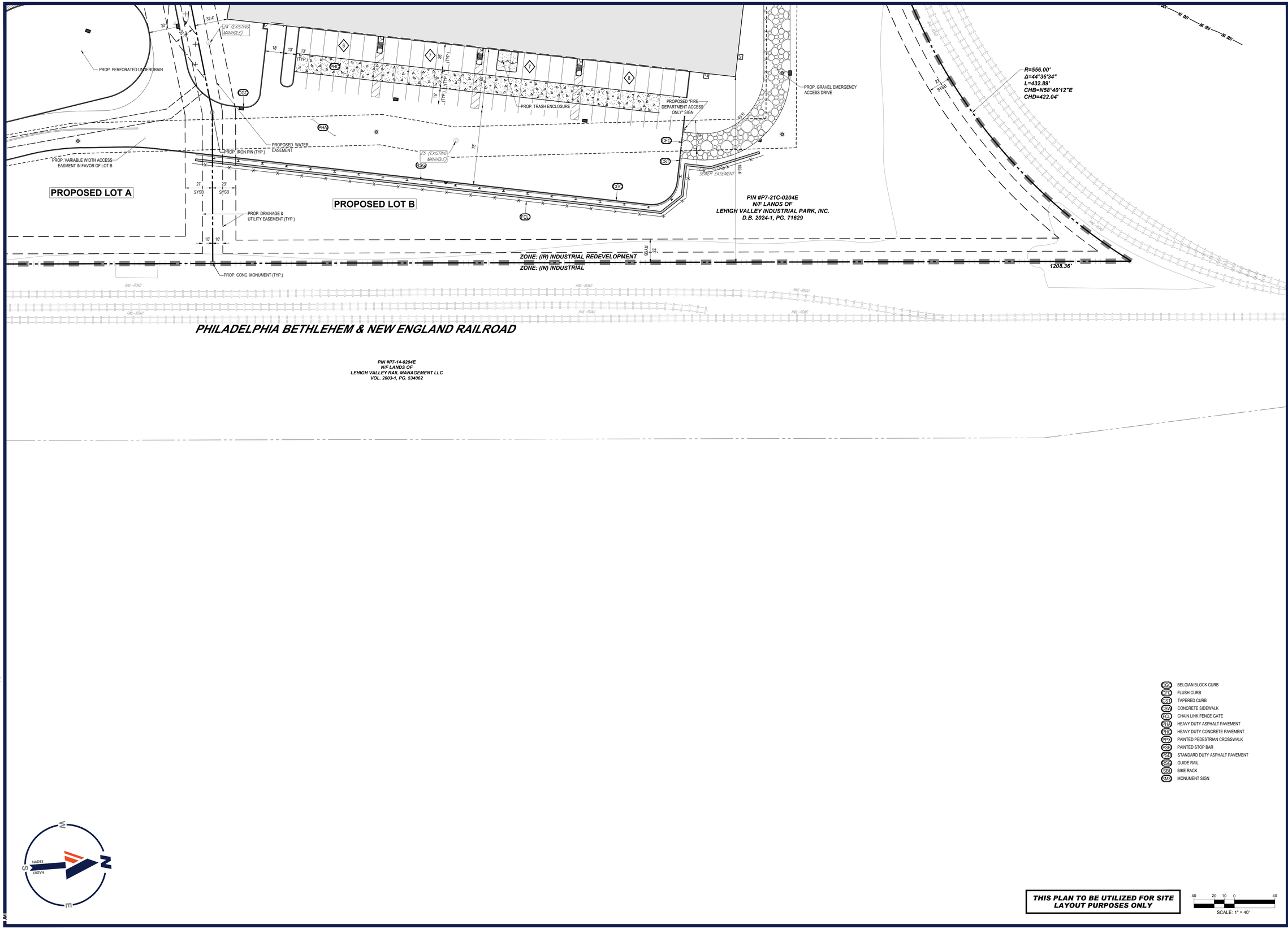
SHEET TITLE:

SITE PLAN

SHEET NUMBER:

C-304

REVISION 2 - 02/19/2025



XGK	BELGIAN BLOCK CURB
CFC	FLUSH CURB
CST	TAPERED CURB
CSW	CONCRETE SIDEWALK
FCL	CHAIN LINK FENCE GATE
PHA	HEAVY DUTY ASPHALT PAVEMENT
PHC	HEAVY DUTY CONCRETE PAVEMENT
PPX	PAINTED PEDESTRIAN CROSSWALK
PSB	PAINTED STOP BAR
PSD	STANDARD DUTY ASPHALT PAVEMENT
PSK	GUIDE RAIL
SBI	BIKE RACK
SMS	MONUMENT SIGN

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

40 20 10 0 40
SCALE: 1" = 40'

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONCEPTS OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE DISCLOSED OR USED FOR ANY PURPOSE, WHOLLY OR PARTIALLY, TO ANY PERSON OR ENTITY OTHER THAN THE ONE FOR WHOM IT WAS PREPARED, WITHOUT THE EXPRESS WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.
©2024 BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

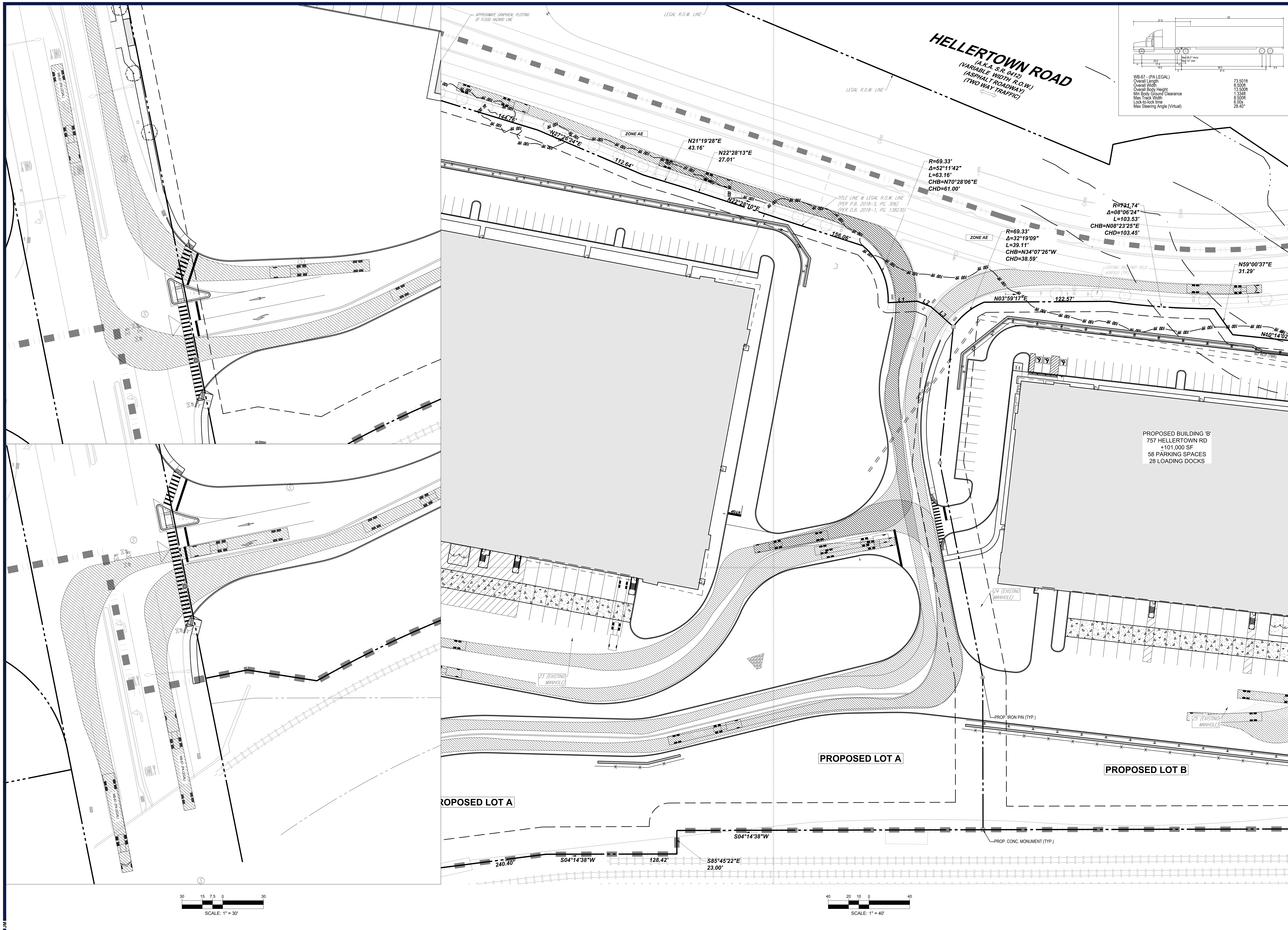
SITE PLAN

SHEET NUMBER:

C-305

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT C-305 SITE (D)
JM



R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LDVP-PAB240068.00-2A----->LAYOUT: C-306 TRUCK

JM

BOHLER//

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES. © BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER//
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE071444

SHEET TITLE:

TRUCK TURNING PLAN

SHEET NUMBER:

C-306

REVISION 2 - 02/19/2025

OSED BUILDING 'A'
MERCE CENTER BLVD
+216,000 SF
ARKING SPACES
OADING DOCKS

CHB=N34°07'26"W
CHD=38.59'

N03°59'17"E 122.5

PROPOSED W
EASEMENT

PROP. IRON PIN (TYP.)

505.7'

PROPOSED LOT A

PROP. IRON PIN (TYP.)

SCALE: 1" = 40'

IMPERVIOUS AREA 14.12 AC

SCALE: 1" = 30'

WB-67 - (PA LEGAL)

Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
LAND PLANNING & ENTITLEMENTS
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE WORK, IDEAS AND CONCEPTS OF THIS PLANS ITEM ARE THE PROPERTY OF BOHLER AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

TRUCK TURNING PLAN

SHEET NUMBER:

C-307

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LDVP-PAB240068.00-2A-----LAYOUT: C-307 TRUCK
JMV

PROPOSED LOT A

FIRE DEPARTMENT CONNECTION

157.05'
N21°19'28"E
144.76'
N27°26'24"E
112.64'
N22°28'10"E
156.06'
N21°19'28"E
43.16'
N22°28'13"E
27.01'

R=69.33'
Δ=52°11'42"
L=63.16'
CHB=N70°28'06"E
CHD=61.00'

R=69.33'
Δ=32°19'09"
L=39.11'
CHB=N34°07'26"W
CHD=38.59'

N03°59'17"E 122

193.4'

LEGAL R.O.W. LINE

TITLE LINE & LEGAL R.O.W. LINE
(PER P.B. 2018-5, PG. 306)
(PER D.B. 2018-1, PG. 13823G)

CITY OF BETHLEHEM FIRE TRUCK.

Overall Length	31.833ft
Overall Width	8.380ft
Overall Body Height	9.087ft
Min Body Ground Clearance	1.670ft
Track Width	8.000ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	38.750ft

PIN #P7-21-0204
N/F LANDS OF
LEHIGH VALLEY INDUSTRIAL PARK, INC.
D.B. 2024-1, PG. 71629

PROPOSED LOT A

PROPOSED LOT A

S04°14'38"W 240.40'
S02°56'37"E 150.18'
S20°50'49"E
S06°53'34"E 31.28'
S04°14'38"W 128.42'
S85°45'22"E 23.00'
S04°14'38"W

PIN #P7-14-0204E
N/F LANDS OF
LEHIGH VALLEY RAIL MANAGEMENT LLC
VOL. 2003-1, PG. 534062

PHILADELPHIA BETHLEHEM & NEW ENGLAND RAILROAD

PHILADELPHIA BE

COMMERCE CENTER BOULEVARD
(VARIABLE WIDTH R.O.W)
(M.V.)

EXISTING TREE (TYP.)
(NOT FIELD VERIFIED)
(TYP.)

TBM-A
MAG. NAIL
ELEV=243.89'

TBM-C
MAG. NAIL
ELEV=238.64

PROP. IRON PIN (TYP.)
PROP. CONC. MONUMENT (TYP.)
FIRE DEPARTMENT CONNECTION

40 20 10 0 40
SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A——LAYOUT C-308 TRUCK

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONCEPTS OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE DISCLOSED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.
©2025 BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

TRUCK TURNING PLAN

SHEET NUMBER:

C-308

REVISION 2 - 02/19/2025

HELLERTOWN ROAD
(A.K.A. S.R. 0412)
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

LEGAL R.O.W. LINE

ZONE: (IN) INDUSTRIAL

ZONE AE

N21°19'28"E
43.16'

N22°28'13"E
27.01'

N22°28'10"E

156.06'

TITLE LINE & LEGAL R.O.W. LINE
(PER P.B. 2018-5, PG. 306)
(PER D.B. 2018-1, PG. 138230)

R=69.33'
Δ=52°11'42"
L=63.16'
CHB=N70°28'06"E
CHD=61.00'

R=731.74'
Δ=08°06'24"
L=103.53'
CHB=N08°23'25"E
CHD=103.45'

R=69.33'
Δ=32°19'09"
L=39.11'
CHB=N34°07'26"W
CHD=38.59'

N59°00'37"E
31.29'

N03°59'17"E
122.57'

N10°14'02"E
273.85'

N24°30'58"E
130.61'

N07°19'07"W
9.51'

S81°14'37"W
25.15'

N13°28'57"W
114.57'

N08°58'28"E
206.81'

S09°01'31"E
2.00'

R=556.00'
Δ=44°36'34"
L=432.89'
CHB=N58°40'12"E
CHD=422.04'

1208.36'

S04°14'38"W

128.42'

S85°45'22"E
23.00'

L1
L2
L3

APPROXIMATE GRAPHICAL PLOTTING OF FLOOD HAZARD LINE

SAUCON CREEK

ZONE AE (FLOODWAY)

P.O.B.

PROPOSED BUILDING 'B'
757 HELLERTOWN RD
+101,000 SF
58 PARKING SPACES
28 LOADING DOCKS

PROPOSED LOT A

PROPOSED LOT B

PROPOSED LOT B

PIN #P7-21C-0204E
N/F LANDS OF
LEHIGH VALLEY INDUSTRIAL PARK, INC.
D.B. 2024-1, PG. 71629

PIN #P7-14-0204E
N/F LANDS OF
LEHIGH VALLEY RAIL MANAGEMENT LLC
VOL. 2003-1, PG. 534062

PIN #P7-14-0204E
N/F LANDS OF
LEHIGH VALLEY RAIL MANAGEMENT
VOL. 2003-1, PG. 534062

ZONE: (IR) INDUSTRIAL REDEVELOPMENT
ZONE: (IN) INDUSTRIAL

PHILADELPHIA BETHLEHEM & NEW ENGLAND RAILROAD

PROP. IRON PIN (TYP.)

PROP. CONC. MONUMENT (TYP.)

24 (EXISTING MANHOLE)

25 (EXISTING MANHOLE)

SEWER EASEMENT

IRON PIN = FOUND (0.6' S) (0.4' W)

CITY OF BETHLEHEM FIRE TRUCK

Overall Length	31.833ft
Overall Width	8.380ft
Overall Body Height	9.087ft
Min Body Ground Clearance	1.670ft
Track Width	8.000ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	38.750ft

SCALE: 1" = 40'

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHTED AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MICHAEL M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

TRUCK TURNING PLAN

SHEET NUMBER:

C-309

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT- C-309 TRUCK JMV

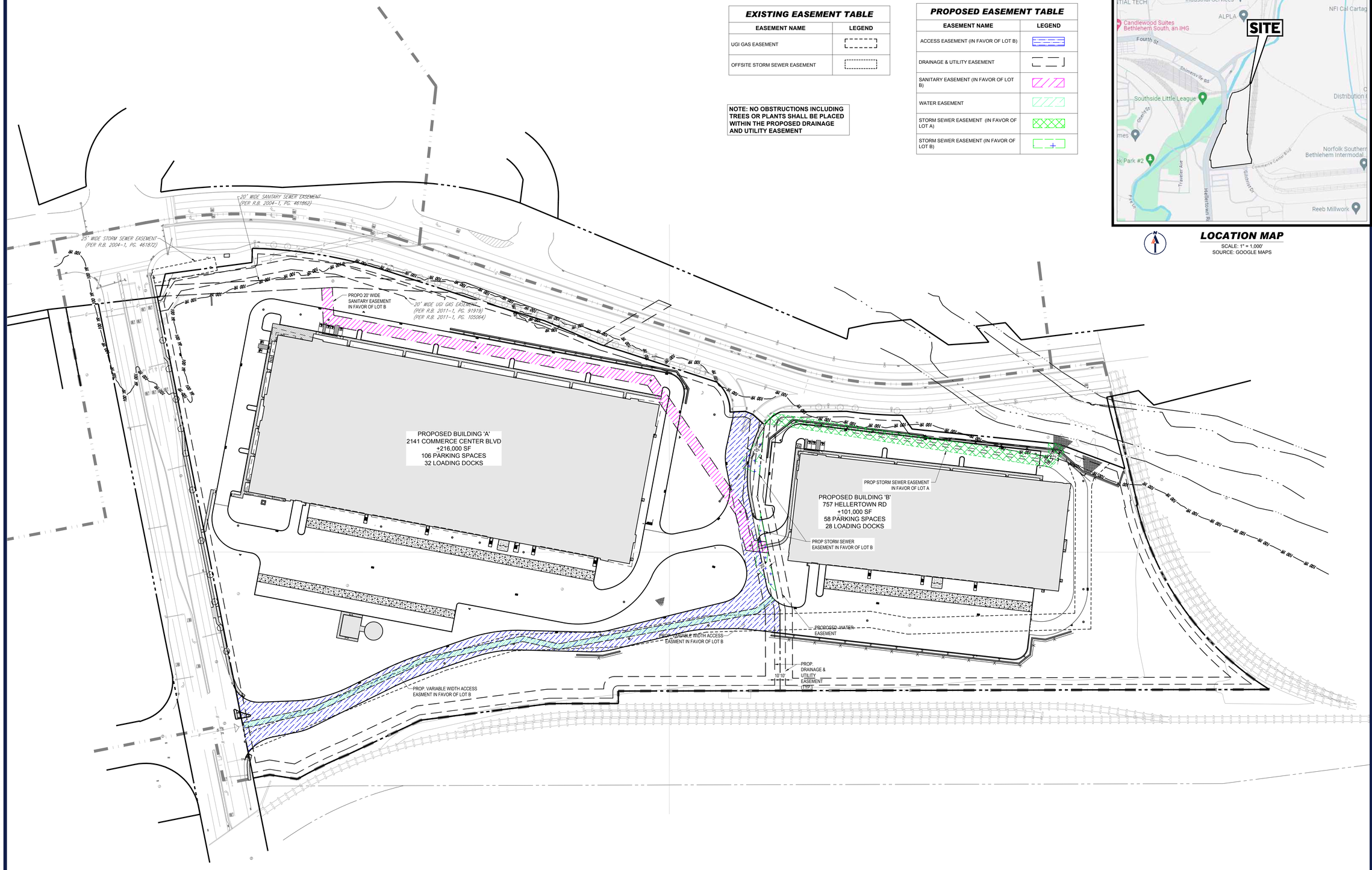
EXISTING EASEMENT TABLE

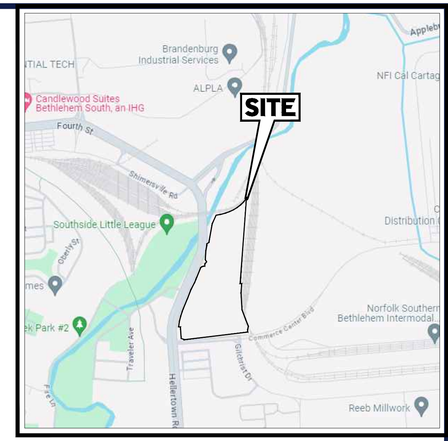
EASEMENT NAME	LEGEND
UGI GAS EASEMENT	
OFFSITE STORM SEWER EASEMENT	

PROPOSED EASEMENT TABLE

EASEMENT NAME	LEGEND
ACCESS EASEMENT (IN FAVOR OF LOT B)	
DRAINAGE & UTILITY EASEMENT	
SANITARY EASEMENT (IN FAVOR OF LOT B)	
WATER EASEMENT	
STORM SEWER EASEMENT (IN FAVOR OF LOT A)	
STORM SEWER EASEMENT (IN FAVOR OF LOT B)	

NOTE: NO OBSTRUCTIONS INCLUDING TREES OR PLANTS SHALL BE PLACED WITHIN THE PROPOSED DRAINAGE AND UTILITY EASEMENT





LOCATION MAP

SCALE: 1" = 1,000'
SOURCE: GOOGLE MAPS

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY

80 40 20 0 80
SCALE: 1" = 80'

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABILITY SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE WORKS CITE, DESIGN AND CONTENT OF THESE PLANS ARE COPYRIGHT AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES. BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: PAB240068.00-2A
DRAWN BY: ABN
CHECKED BY: MMC
DATE: 12/13/2024
CAD I.D.: P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

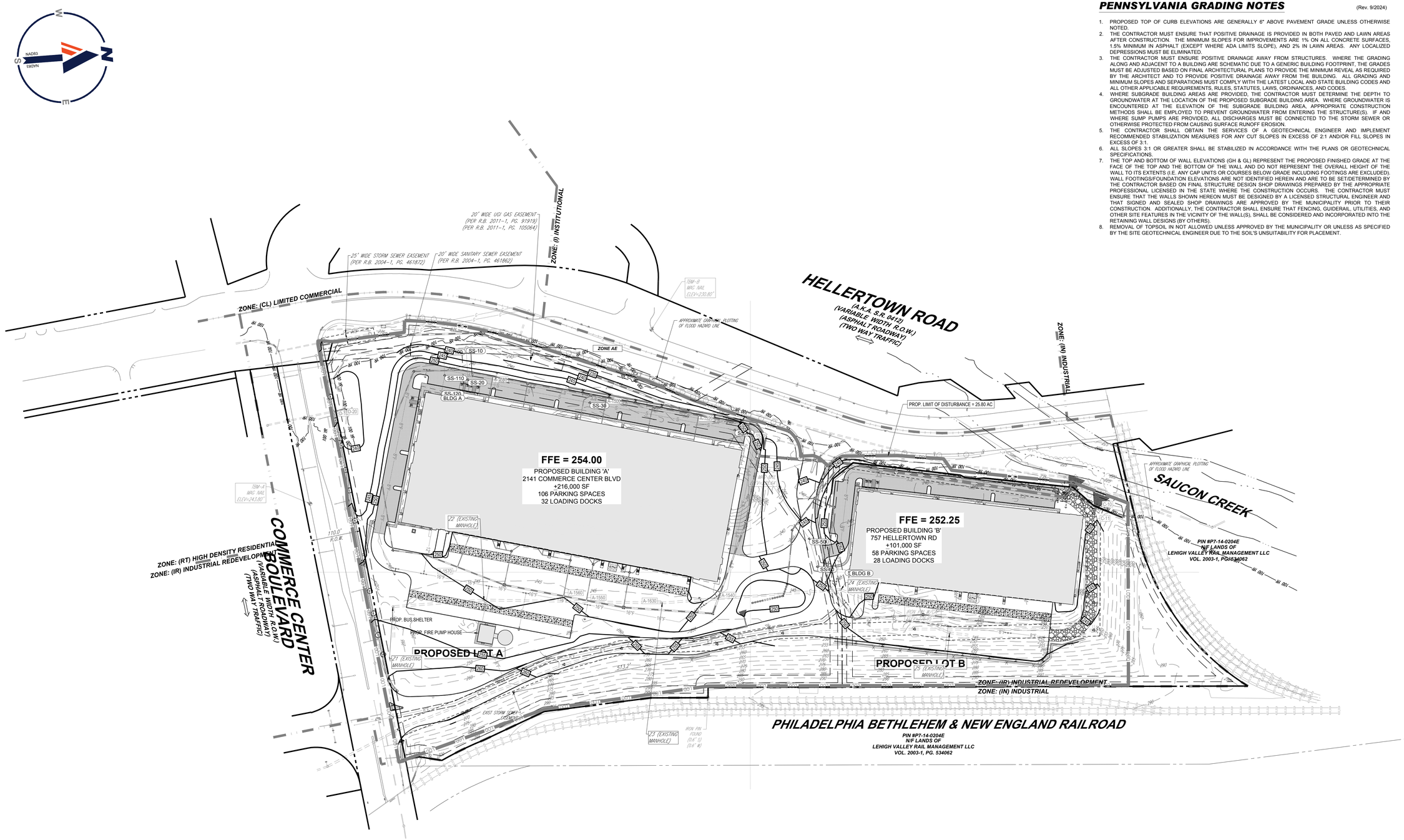
EASEMENTS PLAN

SHEET NUMBER:

C-310

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A_____3-LAYOUT- C-310 EASE
JMI



PENNSYLVANIA GRADING NOTES

(Rev. 9/2024)

1. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE PAVEMENT GRADE UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR MUST ENSURE THAT POSITIVE DRAINAGE IS PROVIDED IN BOTH PAVED AND LAWN AREAS AFTER CONSTRUCTION. THE MINIMUM SLOPES FOR IMPROVEMENTS ARE 1% ON ALL CONCRETE SURFACES, 1.5% MINIMUM IN ASPHALT (EXCEPT WHERE ADA LIMITS SLOPE), AND 2% IN LAWN AREAS. ANY LOCALIZED DEPRESSIONS MUST BE ELIMINATED.
3. THE CONTRACTOR MUST ENSURE POSITIVE DRAINAGE AWAY FROM STRUCTURES. WHERE THE GRADING ALONG AND ADJACENT TO A BUILDING ARE SCHEMATIC DUE TO A GENERIC BUILDING FOOTPRINT, THE GRADES MUST BE ADJUSTED BASED ON FINAL ARCHITECTURAL PLANS TO PROVIDE THE MINIMUM REVEAL AS REQUIRED BY THE ARCHITECT AND TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING. ALL GRADING AND MINIMUM SLOPES AND SEPARATIONS MUST COMPLY WITH THE LATEST LOCAL AND STATE BUILDING CODES AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES, AND CODES.
4. WHERE SUBGRADE BUILDING AREAS ARE PROVIDED, THE CONTRACTOR MUST DETERMINE THE DEPTH TO GROUNDWATER AT THE LOCATION OF THE PROPOSED SUBGRADE BUILDING AREA. WHERE GROUNDWATER IS ENCOUNTERED AT THE ELEVATION OF THE SUBGRADE BUILDING AREA, APPROPRIATE CONSTRUCTION METHODS SHALL BE EMPLOYED TO PREVENT GROUNDWATER FROM ENTERING THE STRUCTURE(S). IF AND WHERE SUMP PUMPS ARE PROVIDED, ALL DISCHARGES MUST BE CONNECTED TO THE STORM SEWER OR OTHERWISE PROTECTED FROM CAUSING SURFACE RUNOFF EROSION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A GEOTECHNICAL ENGINEER AND IMPLEMENT RECOMMENDED STABILIZATION MEASURES FOR ANY CUT SLOPES IN EXCESS OF 2:1 AND/OR FILL SLOPES IN EXCESS OF 3:1.
6. ALL SLOPES 3:1 OR GREATER SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS OR GEOTECHNICAL SPECIFICATIONS.
7. THE TOP AND BOTTOM OF WALL ELEVATIONS (GH & GL) REPRESENT THE PROPOSED FINISHED GRADE AT THE FACE OF THE TOP AND THE BOTTOM OF THE WALL AND DO NOT REPRESENT THE OVERALL HEIGHT OF THE WALL TO ITS EXTENTS (I.E. ANY CAP UNITS OR COURSES BELOW GRADE INCLUDING FOOTINGS ARE EXCLUDED). WALL FOOTINGS/FOUNDATION ELEVATIONS ARE NOT IDENTIFIED HEREIN AND ARE TO BE SET/DETERMINED BY THE CONTRACTOR BASED ON FINAL STRUCTURE DESIGN SHOP DRAWINGS PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED IN THE STATE WHERE THE CONSTRUCTION OCCURS. THE CONTRACTOR MUST ENSURE THAT THE WALLS SHOWN HEREON MUST BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER AND THAT SIGNED AND SEALED SHOP DRAWINGS ARE APPROVED BY THE MUNICIPALITY PRIOR TO THEIR CONSTRUCTION. ADDITIONALLY, THE CONTRACTOR SHALL ENSURE THAT FENCING, GUIDERAIL, UTILITIES, AND OTHER SITE FEATURES IN THE VICINITY OF THE WALL(S), SHALL BE CONSIDERED AND INCORPORATED INTO THE RETAINING WALL DESIGNS (BY OTHERS).
8. REMOVAL OF TOPSOIL IN NOT ALLOWED UNLESS APPROVED BY THE MUNICIPALITY OR UNLESS AS SPECIFIED BY THE SITE GEOTECHNICAL ENGINEER DUE TO THE SOIL'S UNSUITABILITY FOR PLACEMENT.

THIS PLAN TO BE UTILIZED FOR SITE GRADING PURPOSES ONLY

100 50 25 0 100
SCALE: 1" = 100'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LDVP-PAB240068.00-2A.dwg — LAYOUT: C-401 GRAD — JMV

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

GRADING PLAN

SHEET NUMBER:

C-401

REVISION 2 - 02/19/2025

NAD83
GRID N

HELLERTOWN ROAD
(A.K.A. S.R. 0412)
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

LEGAL R.O.W. LINE

ZONE: (I) INSTITUTIONAL

ZONE: (CL) LIMITED COMMERCIAL

25' WIDE STORM SEWER EASEMENT (PER R.B. 2004-1, PG. 461872)

20' WIDE SANITARY SEWER EASEMENT (PER R.B. 2004-1, PG. 461862)

R=891.26'
Δ=16°41'42"
L=259.70'
CHB=N14°07'24"E
CHD=258.78'

N83°48'33"W
26.33'

ZONE AE

PROP. CONCRETE PAD FOR FUTURE BUS SHELTER

N03°09'25"W

N72°01'22"W
43.56'

N01°51'26"W
4.58'

N72°38'30"W
14.14'

N22°28'13"E

APPROXIMATE GRAPHICAL PLOTTING OF FLOOD HAZARD LINE

EXISTING TREE (NOT FIELD VERIFIED) (TYP)

TBM-B
MAG NAIL
ELEV=230.80'

157.05'

N21°19'28"E

144.76'

N27°39'24"E

112.64'

N21°19'28"E
43.16'

N22°28'13"E
27.01'

N22°28'10"E

PROPOSED 20' WIDE SANITARY EASEMENT IN FAVOR OF LOT D

PROPOSED LOT A

MAGELLAN STREET

COKE WORKS ROAD

LEGAL R.O.W. LINE

COMMERCE CENTER BOULEVARD
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

TBM-A
MAG NAIL
ELEV=243.80'

EXISTING TREE (TBR) (NOT FIELD VERIFIED) (TYP)

SS-10 SS-20 SS-30 SS-40 SS-110 SS-120

BLDG A

TW 251.00
BW 250.00

TW 252.25
BW 239.00

TW 254.00
BW 250.00

FIRE DEPARTMENT CONNECTION

PROPOSED BUILDING 'A'
2141 COMMERCE CENTER BLVD
+216,000 SF
106 PARKING SPACES
32 LOADING DOCKS

FFE = 254.00

THIS PLAN TO BE UTILIZED FOR SITE GRADING PURPOSES ONLY

ZONE: (RT) HIGH DENSITY RESIDENTIAL

ZONE: (IR) INDUSTRIAL REDEVELOPMENT

40 20 10 0 40
SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT: C-402 GRAD (A)

JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

GRADING PLAN

SHEET NUMBER:

C-402

REVISION 2 - 02/19/2025

THIS PLAN TO BE UTILIZED FOR SITE GRADING PURPOSES ONLY

NAD83
GRID N

HELLERTOWN ROAD
(A.K.A. S.R. 0412)
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

LEGAL R.O.W. LINE

TITLE LINE & LEGAL R.O.W. LINE
(PER P.B. 2018-5, PG. 306)
(PER D.B. 2018-1, PG. 13823O)

R=69.33'
Δ=52°11'42"
L=63.16'
CHB=N70°28'06"E
CHD=61.00'

R=731.74'
Δ=08°06'24"
L=103.53'
CHB=N08°23'25"E
CHD=103.45'

R=69.33'
Δ=32°19'09"
L=39.11'
CHB=N34°07'26"W
CHD=38.59'

ZONE AE

N59°00'37"E
31.29'

N03°59'17"E
122.57'

N10°14'02"E
273.85'

N24°30'58"E
130.61'

N07°19'07"W
9.51'

S81°14'37"W
25.15'

P.O.B.

N13°58'57"E
206.81'

N11°51'57"E
75.85'

N18°28'28"E

S09°01'31"E
2.00'

ZONE: (IN) INDUSTRIAL

ZONE AE
(FLOODWAY)

SAUCON CREEK

APPROXIMATE GRAPHICAL PLOTTING OF FLOOD HAZARD LINE

EXISTING TREE (NOT FIELD VERIFIED) (TYP.)

FIRE DEPARTMENT CONNECTION

PROPOSED BUILDING 'B'
757 HELLERTOWN RD
+101,000 SF
58 PARKING SPACES
28 LOADING DOCKS

FFE = 252.25

PROPOSED LOT B

PIN #P7-14-0204E
N/F LANDS OF
LEHIGH VALLEY RAIL MANAGEMENT LLC
VOL. 2003-1, PG. 534062

SS-5A
SS-6A
SS-6B
SS-6C
SS-6D

INV=228.4
INV(A)=227.0
INV(B)=228.9

TW 249.67 BW 235.00
TW 250.33 BW 244.00
TW 250.00 BW 242.00
TW 250.58 BW 239.00
TW 250.00 BW 240.00
TW 250.00 BW 227.00
TW 250.00 BW 230.10
TW 222.00 BW 232.00
TW 247.10 BW 232.51
TWBW = 250.00
TWBW = 250.00

RIM=236.60
RIM=234.94
RIM=229.22
RIM=230.49
RIM=230.08
RIM=241.07
RIM=229.46

40 20 10 0 40
SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A——LAYOUT C-403 GRAD (B)
JM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHT AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.
BOHLER.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT
2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

GRADING PLAN

SHEET NUMBER:

C-403

REVISION 2 - 02/19/2025

THIS PLAN TO BE UTILIZED FOR SITE GRADING PURPOSES ONLY

40 20 10 0 40
SCALE: 1" = 40'

BOHLER//
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES
© BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER//
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE071444

SHEET TITLE:

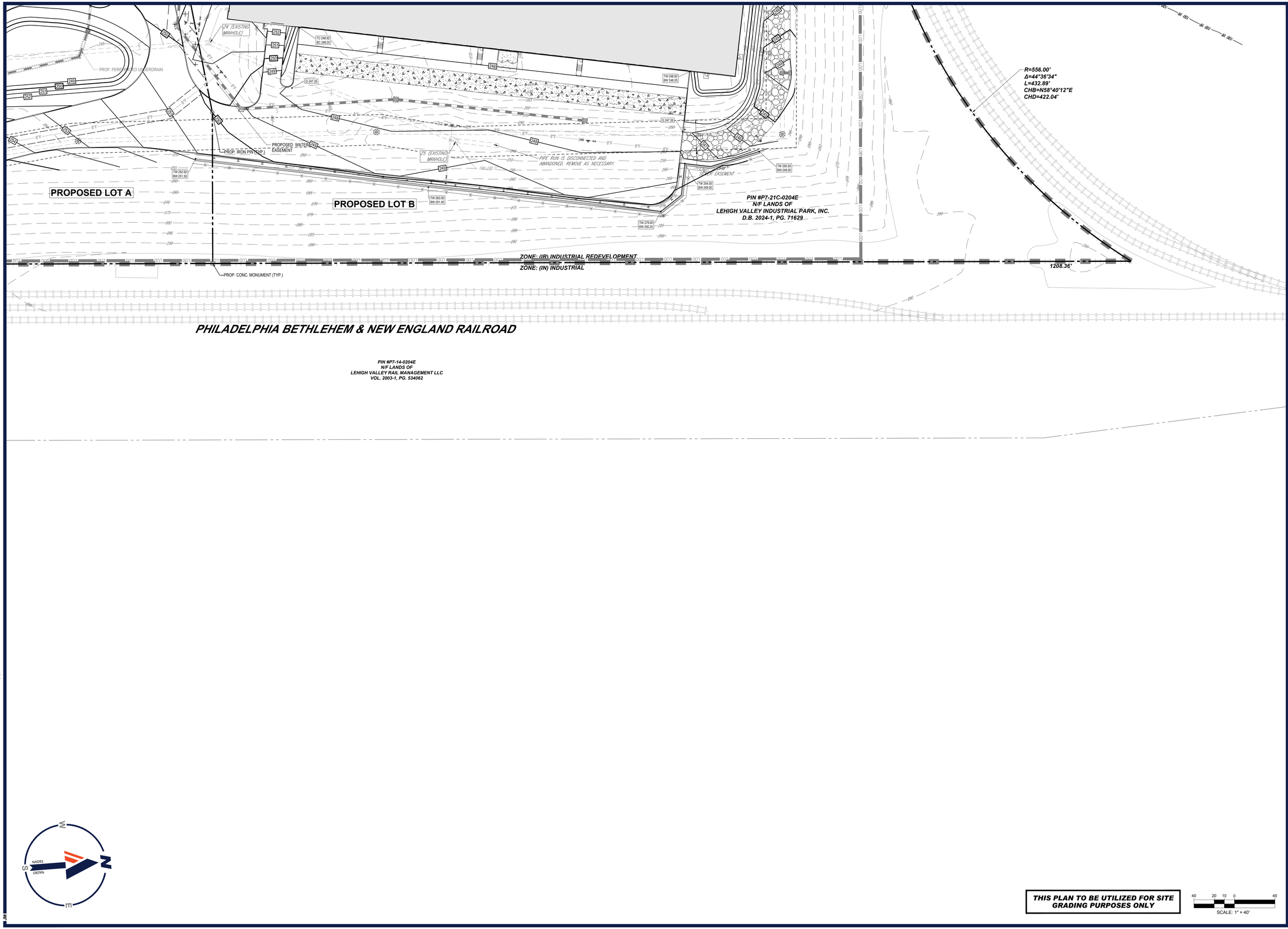
GRADING PLAN

SHEET NUMBER:

C-404

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LDVP-PAB240068.00-2A----->LAYOUT: C-404 GRAD (C)
JM



THIS PLAN TO BE UTILIZED FOR SITE GRADING PURPOSES ONLY

40 20 10 0 40
SCALE: 1" = 40'

NAD83

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT C-405 GRAD (D)
JM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE DISCLOSED, USED OR COPIED FOR ANY PURPOSE, IN WHOLE OR IN PART, WITHOUT THE EXPRESS WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

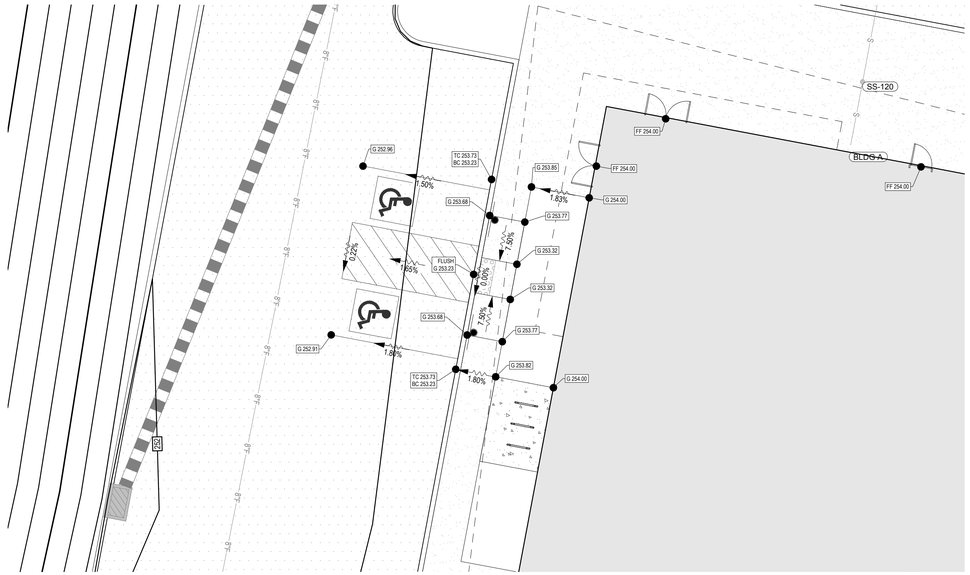
SHEET TITLE:

GRADING PLAN

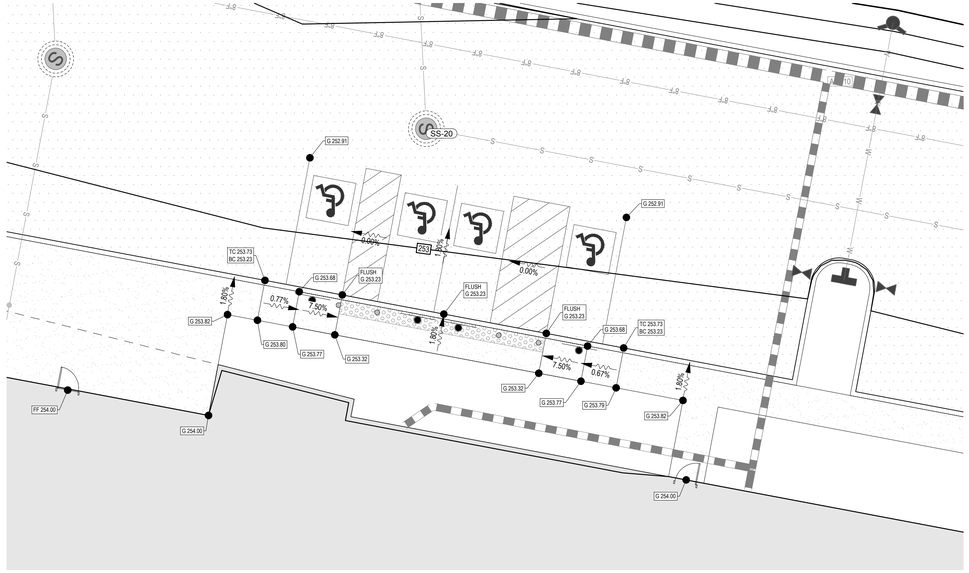
SHEET NUMBER:

C-405

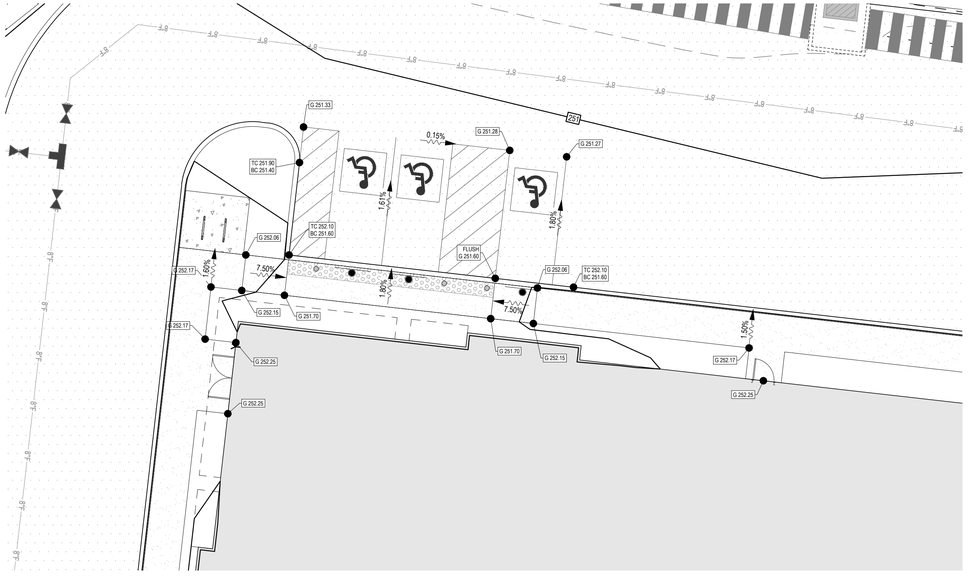
REVISION 2 - 02/19/2025



BUILDING 'A' ADA ENLARGEMENT #1



BUILDING 'A' ADA ENLARGEMENT #2



BUILDING 'B' ADA ENLARGEMENT #1

THIS PLAN TO BE UTILIZED FOR SITE GRADING PURPOSES ONLY

10 5 2.5 0 10

SCALE: 1" = 10'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT C-406 GRAD (ADA)

JM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS FOR CONCEPTUAL PURPOSES ONLY AND DOES NOT BE SCALED OR USED FOR ANY OTHER PURPOSE. WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER, ONLY APPROVED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES
©2024 BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

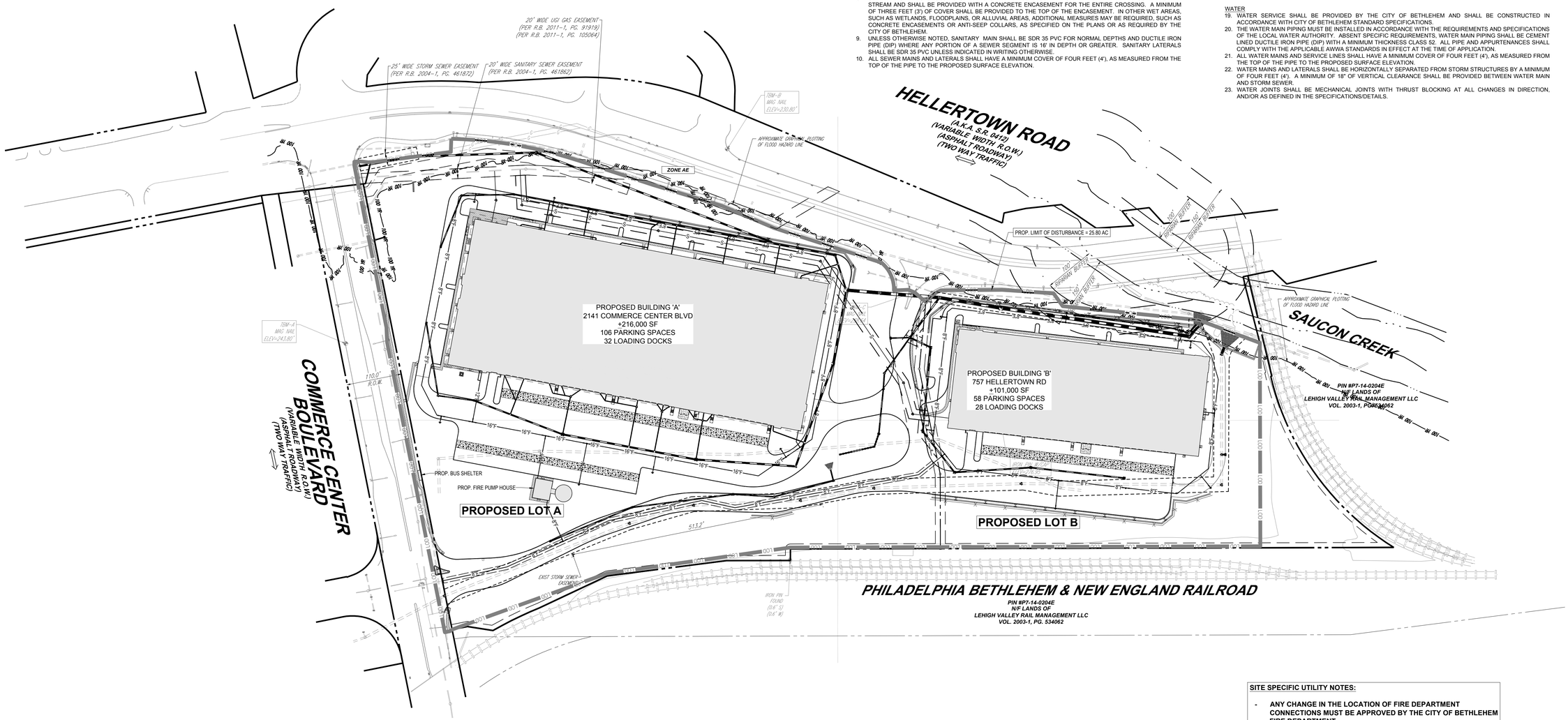
GRADING PLAN

SHEET NUMBER:

C-406

REVISION 2 - 02/19/2025

NOTE: ALL STORM PIPES TO HAVE WATERTIGHT JOINTS AND CONNECTIONS



PENNSYLVANIA DRAINAGE & UTILITY NOTES (Rev. 5/2024)

1. THESE PLANS INVOLVE BUILDINGS THAT MAY BE BUILT AT A LATER DATE. THE CONTRACTOR MUST EXTEND ALL LINES, INCLUDING, BUT NOT LIMITED TO STORM, SANITARY, TELECOM, GAS, AND ELECTRIC, AND IRRIGATION LINES TO A POINT AT LEAST FIVE FEET (5') BEYOND THE PAVED AREAS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. CONTRACTOR MUST CAP ENDS AS APPROPRIATE, MARK LOCATIONS WITH A STAKE, AND MUST NOTE THE LOCATION OF ALL OF THE ABOVE ON A CLEAN COPY OF A PLAN, WHICH THE CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER UPON COMPLETION OF WORK.
2. STORM AND SANITARY PIPE LENGTHS INDICATED IN THE PLANS ARE NOMINAL AND ARE MEASURED FROM THE CENTERS OF INLETS AND MANHOLES.
3. UNLESS OTHERWISE NOTED, ALL NEW UTILITIES/SERVICES, INCLUDING BUT NOT LIMITED TO ELECTRIC, TELEPHONE, TELECOM, GAS, ETC. MUST BE INSTALLED UNDERGROUND. ALL NEW UTILITY SERVICES MUST BE INSTALLED IN ACCORDANCE WITH THE UTILITY SERVICE PROVIDERS' INSTALLATION SPECIFICATIONS AND STANDARDS.
4. THE CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS, MUST BE REPAIRED IN ACCORDANCE WITH THE REFERENCED MUNICIPAL, COUNTY, AND/OR DOT DETAILS AS APPLICABLE. CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY(IES) HAVING JURISDICTION.
5. VARIOUS ASPECTS OF THE UTILITY DESIGNS DEPICTED ON THE PLANS ARE SCHEMATIC IN ORDER TO PROVIDE PLAN CLARITY OR TO CONVEY A DESIGN INTENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY CONFIGURE ALL STRUCTURES IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL, SERVICE PROVIDER, OR MANUFACTURER REQUIREMENTS IN ORDER TO ACHIEVE PROPER SITING, OPERATION, CONNECTIONS, SEPARATIONS, AND ACCESSES. THE CONTRACTOR SHALL REVIEW THE PLAN SPECIFICATIONS AND PREPARE STRUCTURE DESIGNS THAT INCORPORATE ANY AND ALL INTEGRAL COMPONENTS, SUCH AS TRASH RACKS, GATES, VALVES, INTERNAL OR EXTERNAL LININGS, WATER QUALITY DEVICES, SUMPS, RESTRAINTS, STEPS, FRAMES AND GRATES, PIPE/CONDUIT CONNECTIONS, MATERIALS, ETC. SHOULD DISCREPANCIES OR CONFLICTS ARISE UPON THE DESIGN OF THESE STRUCTURES OR INCORPORATION OF THE VARIOUS ELEMENTS, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROFESSIONAL OF RECORD OR BOHLER IN WRITING.

SANITARY SEWER PIPE

6. SANITARY SEWER SERVICE SHALL BE PROVIDED BY THE CITY OF BETHLEHEM AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BETHLEHEM STANDARD SPECIFICATIONS.
7. THE CONTRACTOR MUST NOTIFY, IN WRITING, THE CITY OF BETHLEHEM AT LEAST THREE (3) BUSINESS DAYS PRIOR TO INSTALLATION OF THE SANITARY COMPONENTS. FAILURE TO HAVE SANITARY INSTALLATION AND TESTING OBSERVED BY THE CITY OF BETHLEHEM MAY REQUIRE RE-EXCAVATION OF THE SANITARY LINE(S), AND RE-TESTING, WHICH WILL BE DONE AT THE SOLE EXPENSE OF THE CONTRACTOR.
8. SANITARY SEWERS CROSSING STREAMS SHALL BE CONFIGURED TO BE NEARLY PERPENDICULAR TO THE STREAM AND SHALL BE PROVIDED WITH A CONCRETE ENCASEMENT FOR THE ENTIRE CROSSING. A MINIMUM OF THREE FEET (3') OF COVER SHALL BE PROVIDED TO THE TOP OF THE ENCASEMENT. IN OTHER WET AREAS, SUCH AS WETLANDS, FLOODPLAINS, OR ALLUVIAL AREAS, ADDITIONAL MEASURES MAY BE REQUIRED, SUCH AS CONCRETE ENCASEMENTS OR ANTI-SEEP COLLARS, AS SPECIFIED ON THE PLANS OR AS REQUIRED BY THE CITY OF BETHLEHEM.
9. UNLESS OTHERWISE NOTED, SANITARY MAIN SHALL BE SDR 35 PVC FOR NORMAL DEPTHS AND DUCTILE IRON PIPE (DIP) WHERE ANY PORTION OF A SEWER SEGMENT IS 16' IN DEPTH OR GREATER. SANITARY LATERALS SHALL BE SDR 35 PVC UNLESS INDICATED IN WRITING OTHERWISE.
10. ALL SEWER MAINS AND LATERALS SHALL HAVE A MINIMUM COVER OF FOUR FEET (4'), AS MEASURED FROM THE TOP OF THE PIPE TO THE PROPOSED SURFACE ELEVATION.
11. CLEANOUTS SHALL BE PROVIDED FOR ALL LATERALS LONGER THAN 75' AND REGARDLESS OF LENGTH, SHALL BE PROVIDED AT ALL CHANGES OF DIRECTION. CLEANOUTS SHALL BE THE SAME SIZE AS THE PIPING SERVED BY CLEANOUT, EXCEPT THAT CLEANOUTS FOR PIPING LARGER THAN FOUR INCHES (4") SHALL NOT NEED TO BE LARGER THAN FOUR INCHES (4").
12. SEWERS CONVEYING SANITARY FLOW, COMBINED SANITARY AND STORMWATER FLOW, OR INDUSTRIAL FLOW MUST BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST TEN FEET (10') HORIZONTALLY. IF SUCH HORIZONTAL SEPARATION IS NOT POSSIBLE, THE PIPES MUST BE IN SEPARATE TRENCHES WITH AT LEAST 18" BELOW THE BOTTOM OF THE WATER MAIN, OR SUCH OTHER SEPARATION AS APPROVED BY THE GOVERNING AGENCY WITH JURISDICTION OVER SAME. WHERE APPROPRIATE SEPARATION IS NOT POSSIBLE, THE SEWER MUST BE ENCASED IN CONCRETE, OR CONSTRUCTED OF DIP USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST TEN FEET (10') ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER MUST BE PROVIDED.
13. NO TREES SHALL BE LOCATED WITHIN TEN FEET (10') OF SANITARY SEWER MAINS OR LATERALS.

STORM DRAINAGE

14. UNLESS INDICATED OTHERWISE, MAINLINE (15" OR LARGER) STORM SEWER PIPE SHALL BE DUAL WALL, TYPE S, HIGH-DENSITY POLYETHYLENE (HDPE) OR POLYPROPYLENE (PP) PIPE WITH SMOOTH INTERIORS AND ANNULAR CORRUGATIONS WITH SOIL TIGHT JOINTS. FOR APPLICATIONS OUTSIDE OF STATE DOT ROADWAYS, DEPENDENT UPON COST AND AVAILABILITY, PRODUCTS USING RECYCLED RESIN ARE PREFERRED; WHEREAS IN STATE DOT APPLICATIONS, ONLY PRODUCTS WITH VIRGIN RESIN ARE TO BE USED, UNLESS OTHERWISE APPROVED BY THE STATE DOT. STORM PIPES SMALLER THAN 15", SUCH AS ROOF DRAINS AND UNDERDRAINS, SHALL BE HDPE, PP, AND PVC (SDR 35 OR SCHEDULE 40), UNLESS OTHERWISE NOTED. PIPE MUST CONFORM TO THE FOLLOWING: 4" TO 60" (VIRGIN RESIN) HDPE: AASHTO M252 (4" TO 12"), AASHTO M294 (12" TO 60"); 4" TO 60" (RECYCLED RESIN) HDPE: ASTM F2306 AND ASTM F2648. 12" TO 60" PP PIPE MUST CONFORM TO ASTM F2881 AND AASHTO M330. JOINT GASKETS MUST CONFORM TO ASTM F477. WATER-TIGHT JOINTS ADHERING TO ASTM D3212 SHALL BE PROVIDED WHEN RECOMMENDED BY A GEOTECHNICAL ENGINEER, AND/OR WHEN SITES ARE UNDERLAIN WITH KARST GEOLOGY, WHEN GROUNDWATER SEEPAGE SHOULD BE PREVENTED, AND WHERE THERE ARE ENVIRONMENTAL CONCERNS.
15. A MINIMUM OF FOUR FEET (4') OF HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN STORM STRUCTURES AND OTHER UTILITIES. A MINIMUM OF 18" OF VERTICAL CLEARANCE SHALL BE PROVIDED BETWEEN WATER MAIN AND STORM SEWER.
16. UNLESS SPECIFIC MUNICIPAL DETAILS DICTATE OTHERWISE, ALL STORM STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MOST RECENT REVISION OF PENNDOT PUBLICATION 408 - "SPECIFICATIONS", PUBLICATION 72M - "STANDARDS FOR ROADWAY CONSTRUCTION".
17. ALL INLETS SHALL BE PROVIDED WITH BICYCLE SAFE GRATES.
18. ALL STORM PIPE CONNECTIONS TO STRUCTURES SHALL BE MADE WATER TIGHT.

WATER

19. WATER SERVICE SHALL BE PROVIDED BY THE CITY OF BETHLEHEM AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF BETHLEHEM STANDARD SPECIFICATIONS.
20. THE WATER MAIN PIPING MUST BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE LOCAL WATER AUTHORITY. ABSENT SPECIFIC REQUIREMENTS, WATER MAIN PIPING SHALL BE CEMENT LINED DUCTILE IRON PIPE (DIP) WITH A MINIMUM THICKNESS CLASS 52. ALL PIPE AND APPURTENANCES SHALL COMPLY WITH THE APPLICABLE AWWA STANDARDS IN EFFECT AT THE TIME OF APPLICATION.
21. ALL WATER MAINS AND SERVICE LINES SHALL HAVE A MINIMUM COVER OF FOUR FEET (4'), AS MEASURED FROM THE TOP OF THE PIPE TO THE PROPOSED SURFACE ELEVATION.
22. WATER MAINS AND LATERALS SHALL BE HORIZONTALLY SEPARATED FROM STORM STRUCTURES BY A MINIMUM OF FOUR FEET (4'). A MINIMUM OF 18" OF VERTICAL CLEARANCE SHALL BE PROVIDED BETWEEN WATER MAIN AND STORM SEWER.
23. WATER JOINTS SHALL BE MECHANICAL JOINTS WITH THRUST BLOCKING AT ALL CHANGES IN DIRECTION, AND/OR AS DEFINED IN THE SPECIFICATIONS/DETAILS.

SITE SPECIFIC UTILITY NOTES:

- **ANY CHANGE IN THE LOCATION OF FIRE DEPARTMENT CONNECTIONS MUST BE APPROVED BY THE CITY OF BETHLEHEM FIRE DEPARTMENT.**
- **AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE.**

THIS PLAN TO BE UTILIZED FOR UTILITIES PURPOSES ONLY

100 50 25 0 100
SCALE: 1" = 100'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE BOHLER LOGO AND CONTENT OF THIS PLAN ARE COPYRIGHT AND CAN NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN
			AMC
2	02/19/2025	PER CITY COMMENTS	JMV
			AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

UTILITY PLAN

SHEET NUMBER:

C-501

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----1xLAYOUT, C-501 UTIL
JM

NAD83
GRID N

HELLERTOWN ROAD
(A.K.A. S.R. 0412)
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

LEGAL R.O.W. LINE

R=891.26'
Δ=16°41'42"
L=259.70'
CHB=N14°07'24"E
CHD=258.78'

N83°48'33"W
26.33'

N03°09'25"W

N72°01'22"W
43.56'

N01°51'26"W
4.58'

N72°28'13"E

157.05'

N21°40'26"E

14.75'

N27°26'24"E

112.64'

N21°19'28"E
43.15'

N22°28'13"E
27.01'

N22°28'10"E

25' WIDE STORM SEWER EASEMENT
(PER R.B. 2004-1, PG. 461872)

20' WIDE SANITARY SEWER EASEMENT
(PER R.B. 2004-1, PG. 461862)

PROP. SADDLE CONNECTION

PROP. CONCRETE PAD FOR FUTURE BUS SHELTER

ZONE AE

APPROXIMATE GRAPHICAL PLOTTING OF FLOOD HAZARD LINE

PROPO 20' WIDE SANITARY EASEMENT IN FAVOR OF LOT B

20' WIDE UGI GAS EASEMENT (PER R.B. 2011-1, PG. 91918) (PER R.B. 2011-1, PG. 105064)

PROPOSED LOT A

PROPOSED BUILDING 'A'
2141 COMMERCE CENTER BLVD
±216,000 SF
106 PARKING SPACES
32 LOADING DOCKS

FFE = 254.00

FIRE DEPARTMENT CONNECTION

TBM-B
MAG NAIL
ELEV=230.80'

MAGELLAN STREET

COKE WORKS ROAD

COMMERCE CENTER BOULEVARD
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

TBM-A
MAG NAIL
ELEV=243.80'

NOTE: ANY CHANGE IN THE LOCATION OF FIRE DEPARTMENT CONNECTIONS MUST BE APPROVED BY THE CITY OF BETHLEHEM FIRE DEPARTMENT.

THIS PLAN TO BE UTILIZED FOR UTILITIES PURPOSES ONLY

40 20 10 0 40
SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----1A LAYOUT: C-502 UTIL (A)
JMI

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

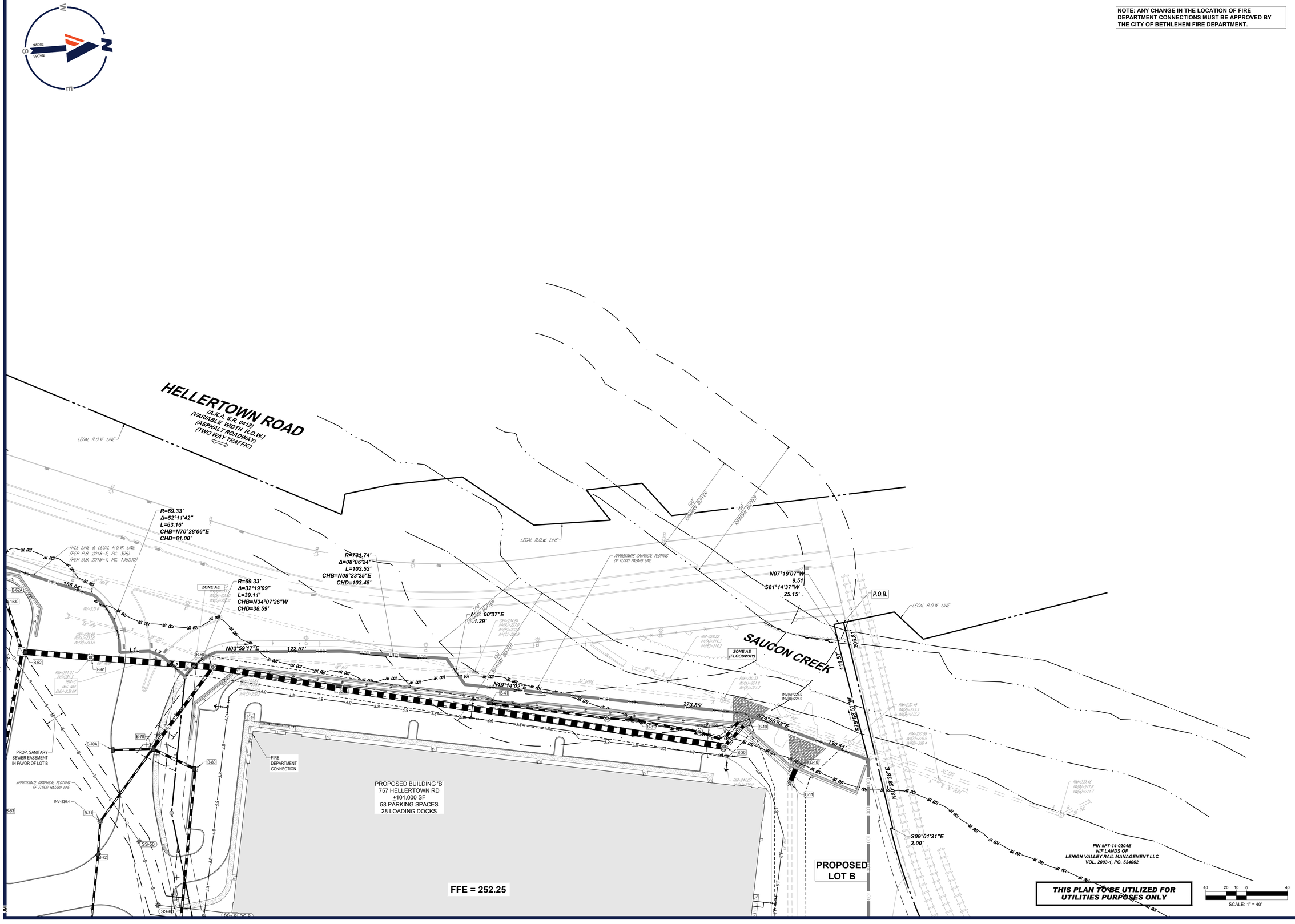
UTILITY PLAN

SHEET NUMBER:

C-502

REVISION 2 - 02/19/2025

NOTE: ANY CHANGE IN THE LOCATION OF FIRE DEPARTMENT CONNECTIONS MUST BE APPROVED BY THE CITY OF BETHLEHEM FIRE DEPARTMENT.



R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A-----LAYOUT C-503 UTIL (B).dwg JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

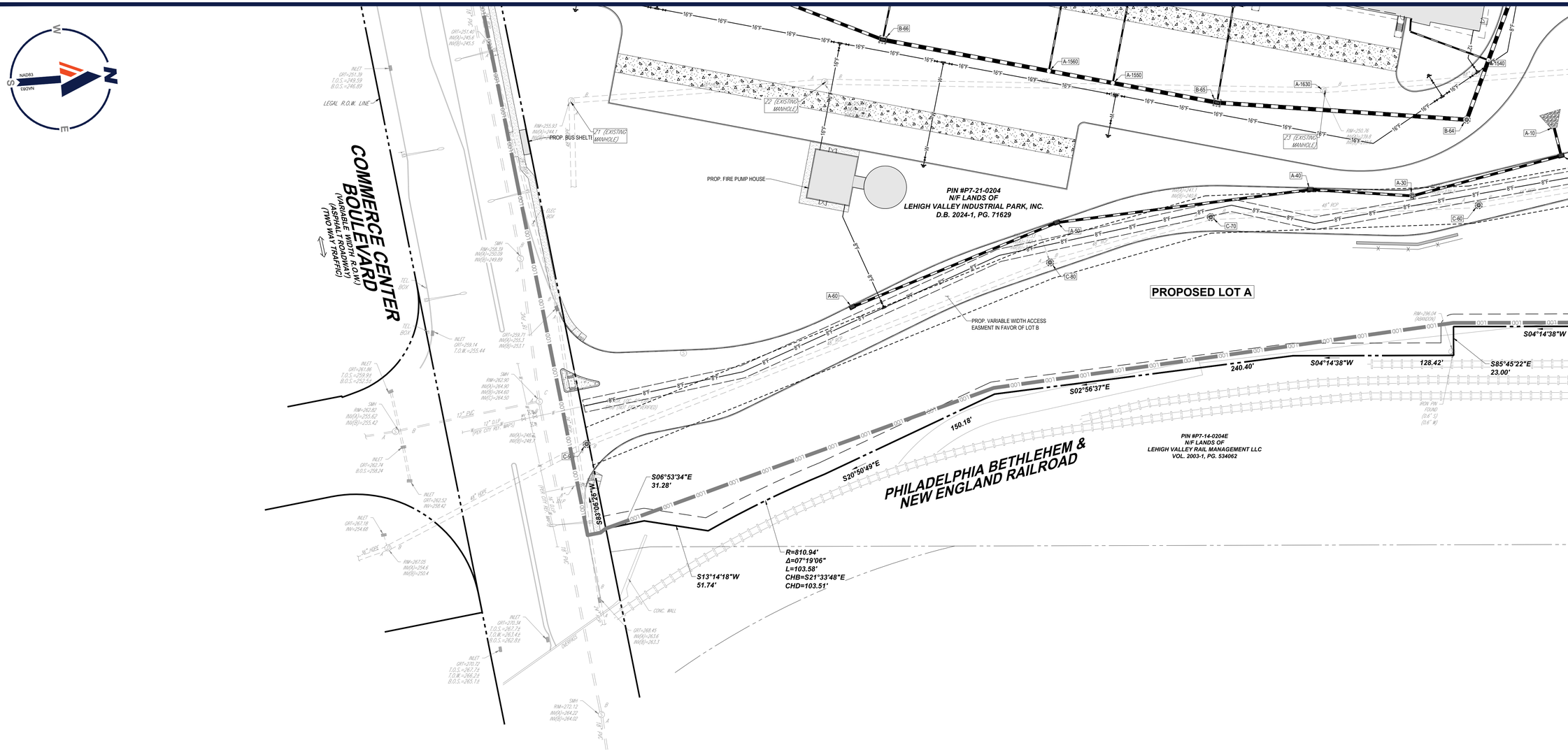
SHEET TITLE:

UTILITY PLAN

SHEET NUMBER:

C-503

REVISION 2 - 02/19/2025



THIS PLAN TO BE UTILIZED FOR UTILITIES PURPOSES ONLY

SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LDVP-PAB240068.00-2A.----LAYOUT: C-504 UTIL (C)

JMI

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
LAND DEVELOPMENT
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE BOHLER LOGO AND CONTENTS OF THIS PLANSET ON ANY MEDIA ARE COPYRIGHTED AND CANNOT BE ALTERED OR USED FOR ANY PURPOSE WITHOUT EXPRESS WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANSETS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES BY BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

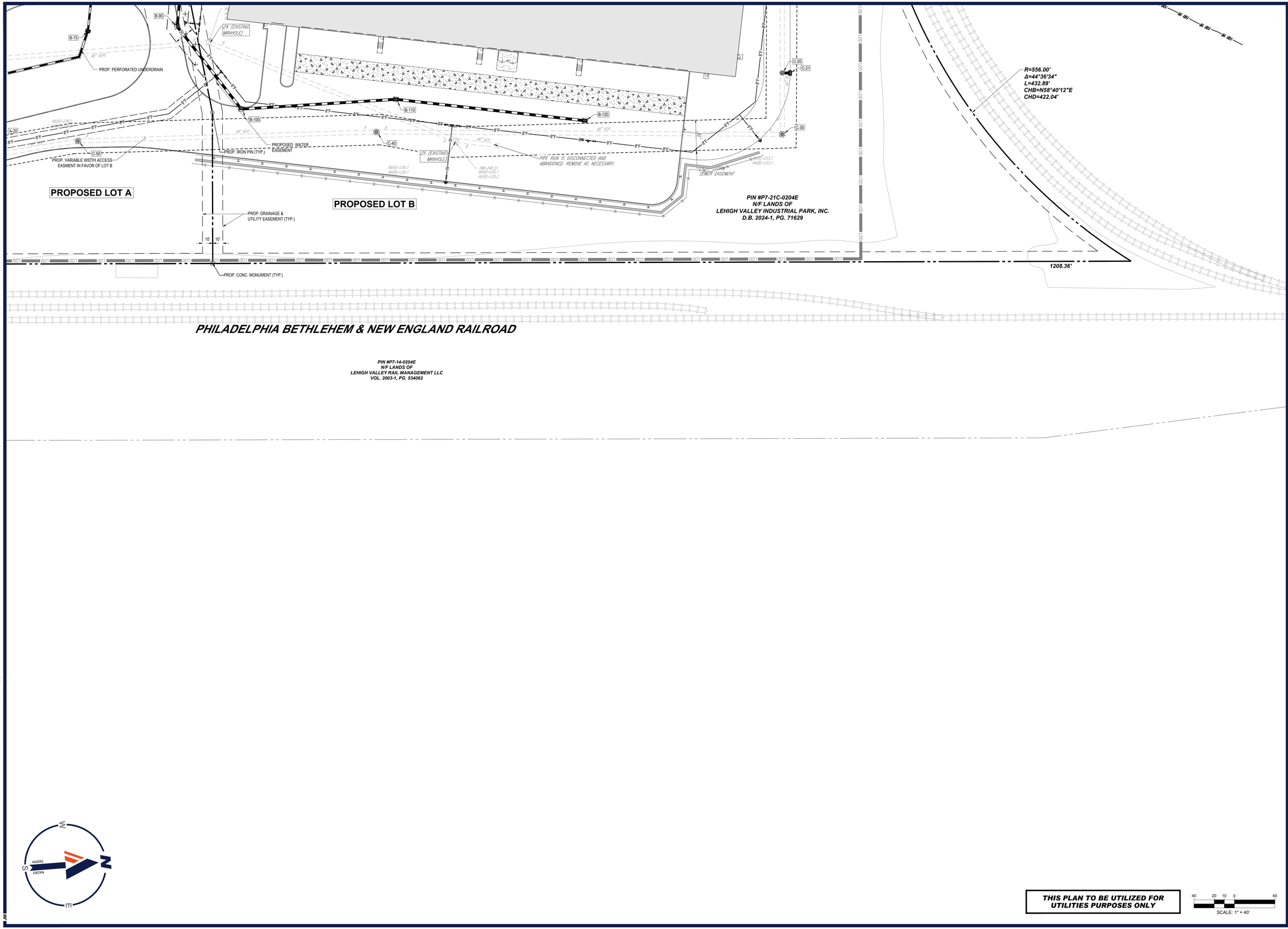
SHEET TITLE:

UTILITY PLAN

SHEET NUMBER:

C-504

REVISION 2 - 02/19/2025



THIS PLAN TO BE UTILIZED FOR UTILITIES PURPOSES ONLY

SCALE: 1" = 40'

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONCEPTS OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE DISCLOSED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LDVP

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER

74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

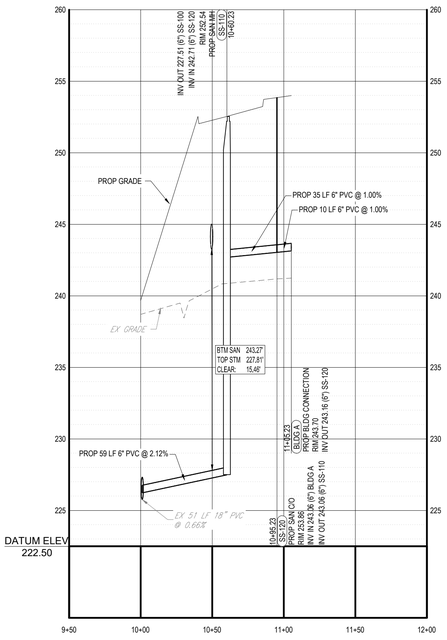
UTILITY PLAN

SHEET NUMBER:

C-505

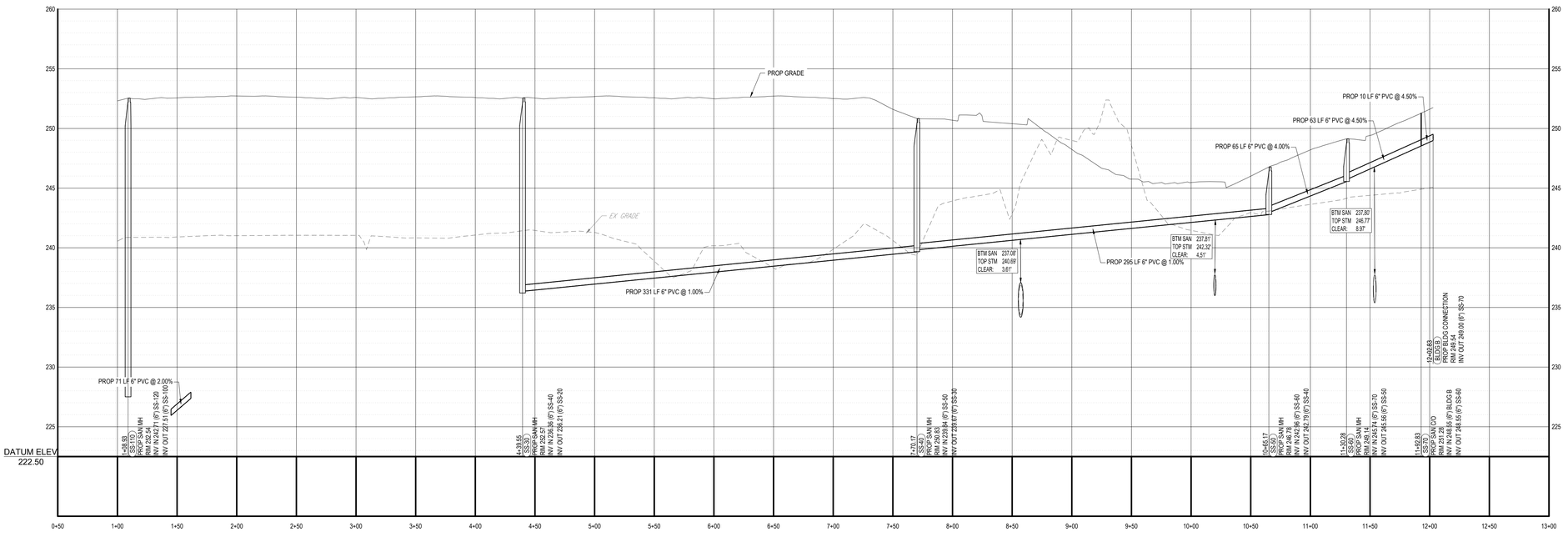
REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LDVP-PAB240068.00-2A-----LAYOUT: C-505 UTIL (5) JMV



PROPOSED SANITARY SEWER PROFILE (SS-10 - SS-30)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL



PROPOSED SANITARY SEWER PROFILE (SS-20 - SS-25)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL

50 25 12.5 0 50
SCALE: 1" = 50'

LEGEND
PROFILE
EXISTING GRADE
PROPOSED GRADE

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.
ALL RIGHTS RESERVED.
©2024 BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.paOneCall.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-PROF

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

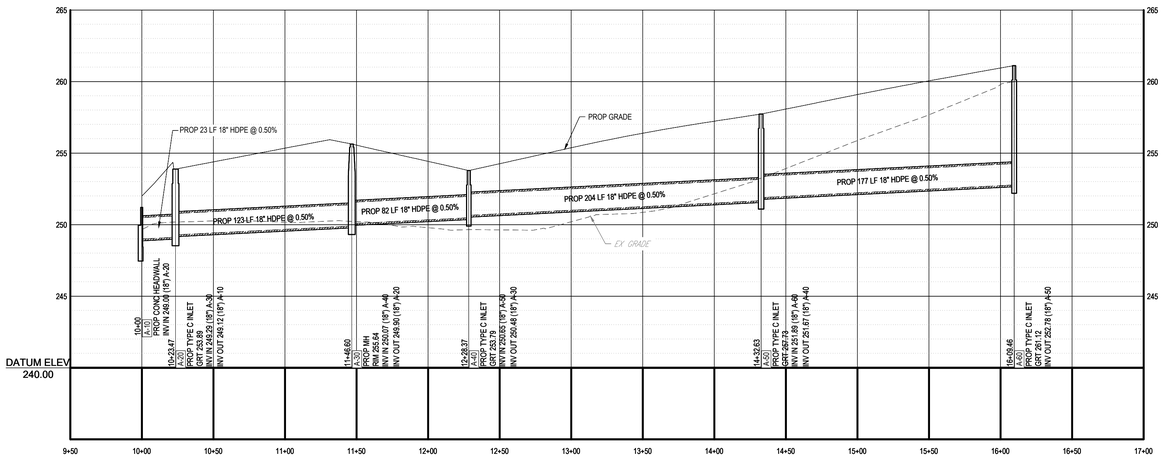
SANITARY PROFILES

SHEET NUMBER:

C-601

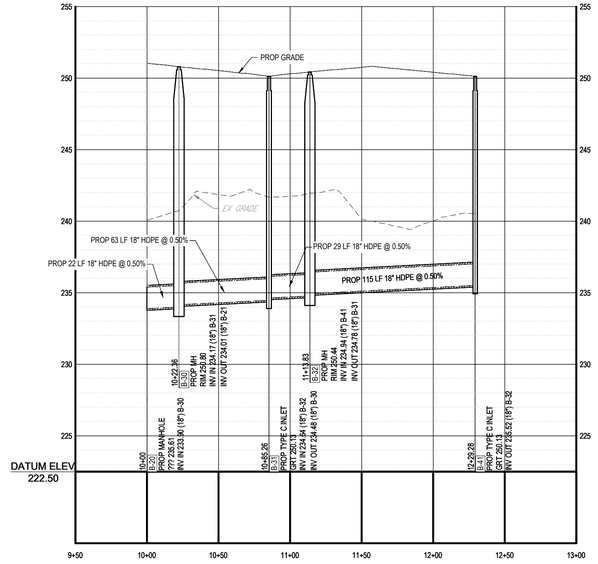
REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-PROF-PAB240068.00-2A-----LAYOUT: C-601 PSAN
JMV



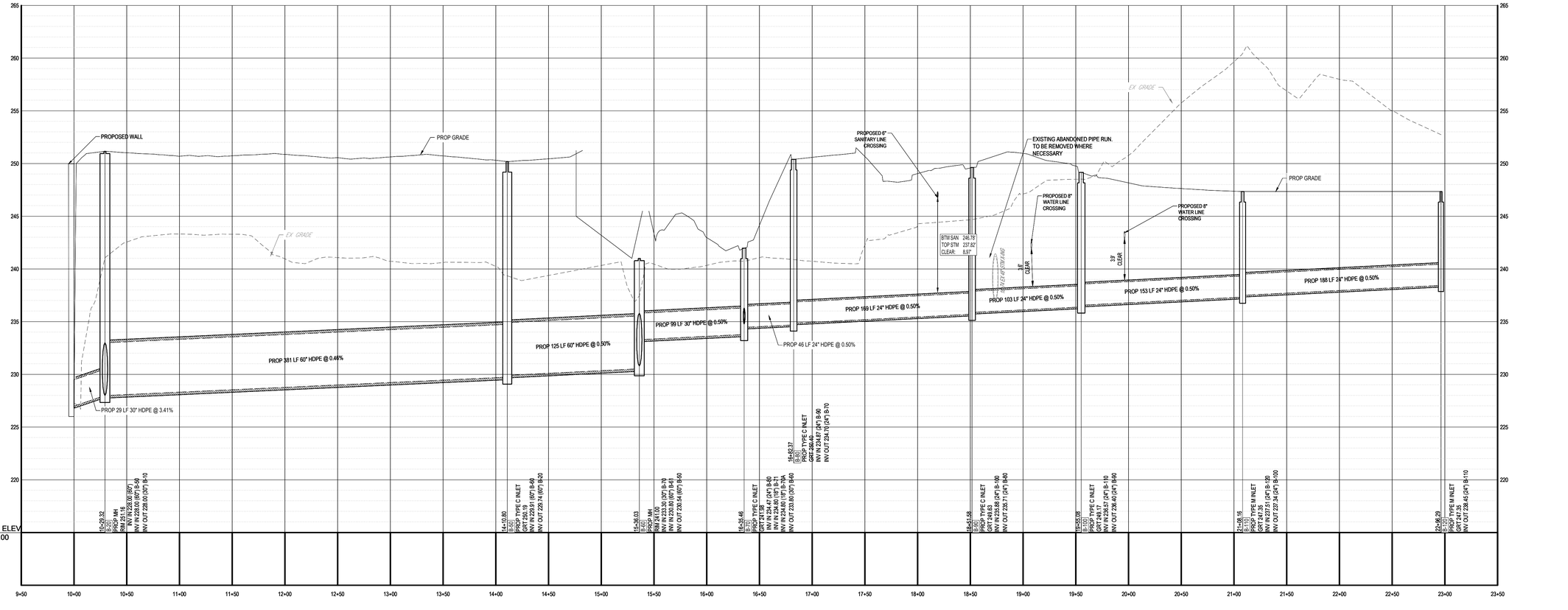
PROPOSED STORM PROFILE (A10 - A60)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL



PROPOSED STORM PROFILE (B-20 - B-41)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL



PROPOSED STORM PROFILE (B-10 - B-120)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL

50 25 12.5 0 50
SCALE: 1" = 50'

LEGEND

PROFILE	
EXISTING GRADE	
PROPOSED GRADE	

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-PROF

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

STORM PROFILES

SHEET NUMBER:

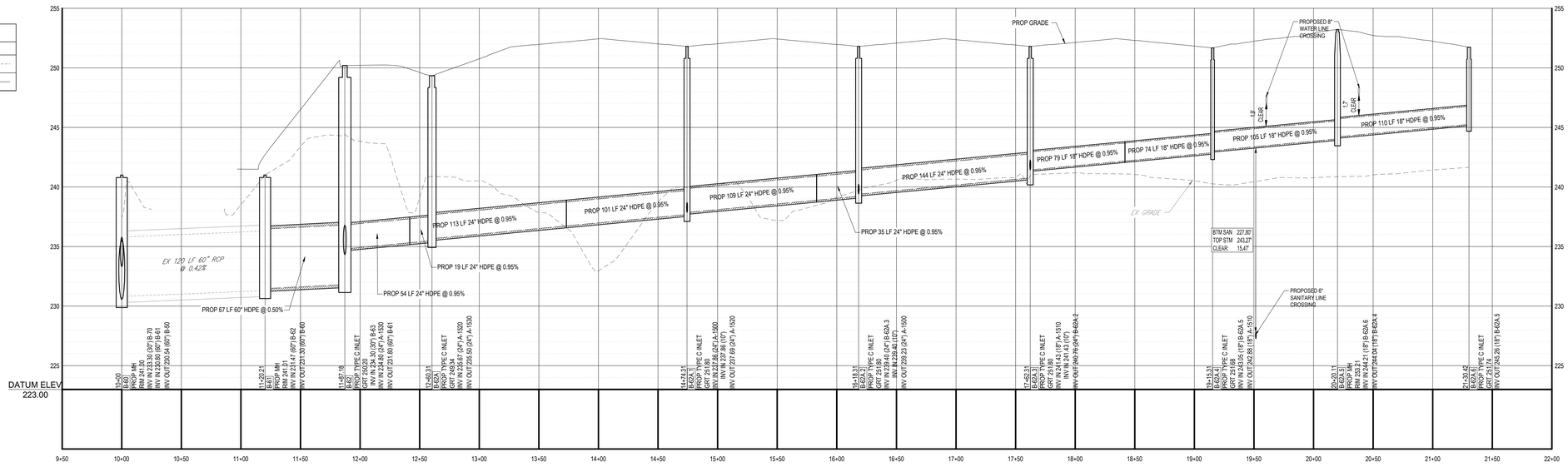
C-602

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-PROF-PAB240068.00-2A-----3-LAYOUT C-602 PSTM
JMV

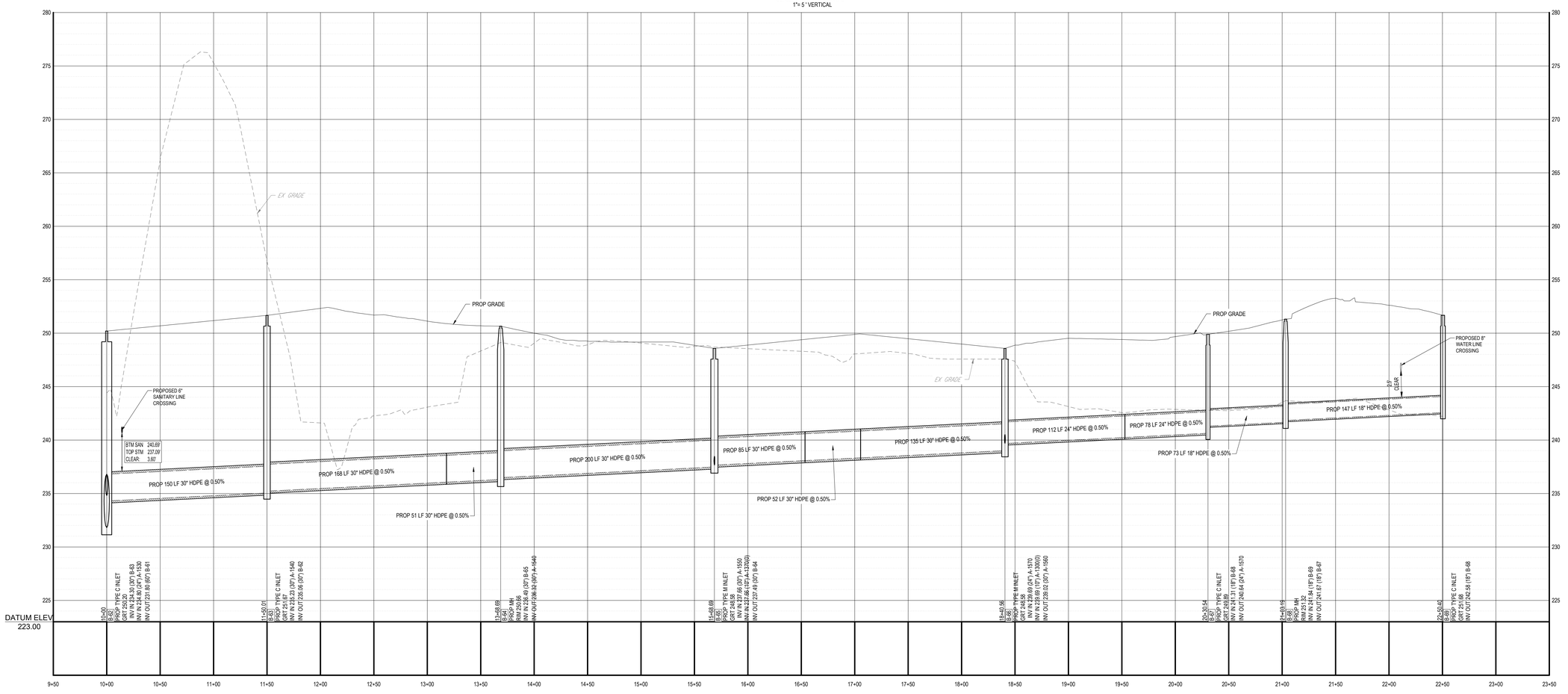
LEGEND

PROFILE
EXISTING GRADE
PROPOSED GRADE


DATUM ELEV
223.00
PROP GRADE
EX GRADE
EX 120 LF 60" RCP @ 0.42%
PROP 67 LF 60" HDPE @ 0.50%
PROP 54 LF 24" HDPE @ 0.95%
PROP 19 LF 24" HDPE @ 0.95%
PROP 113 LF 24" HDPE @ 0.95%
PROP 101 LF 24" HDPE @ 0.95%
PROP 109 LF 24" HDPE @ 0.95%
PROP 35 LF 24" HDPE @ 0.95%
PROP 144 LF 24" HDPE @ 0.95%
PROP 79 LF 18" HDPE @ 0.95%
PROP 74 LF 18" HDPE @ 0.95%
PROP 105 LF 18" HDPE @ 0.95%
PROP 110 LF 18" HDPE @ 0.95%
PROPOSED 8" WATER LINE CROSSING
1.5' CLEAR
1.7' CLEAR
BTM SAN 227.80'
TOP STM 243.27'
CLEAR 15.47'
PROPOSED 6" SANITARY LINE CROSSING
10+00 B-60 PROP 24" HDPE C INLET GRT 253.20 INV IN 234.30 (30") B-63 INV IN 234.80 (24") A-1530 INV OUT 230.80 (60") B-61
10+50 PROP MH RIM 241.00 INV IN 233.30 (30") B-70 INV IN 230.80 (60") B-61 INV OUT 225.54 (60") B-60
11+20.21 B-62 PROP 24" HDPE C INLET GRT 253.20 INV IN 231.44 (60") B-62 INV OUT 229.30 (60") B-60
11+67.18 B-63 PROP TYPE C INLET GRT 253.20 INV IN 233.30 (30") B-63 INV IN 234.80 (24") A-1530 INV OUT 231.80 (60") B-61
12+60.31 B-62A PROP TYPE C INLET GRT 253.20 INV IN 235.67 (24") A-1530 INV OUT 233.50 (24") A-1530
14+74.31 B-62A.3 PROP TYPE C INLET GRT 253.20 INV IN 237.86 (24") A-1500 INV OUT 230.99 (24") A-1520
16+18.31 B-62A.4 PROP TYPE C INLET GRT 253.20 INV IN 239.40 (24") B-62A.3 INV IN 239.40 (24") A-1500 INV OUT 239.23 (24") A-1500
17+82.31 B-62A.5 PROP TYPE C INLET GRT 253.20 INV IN 241.13 (18") A-1510 INV IN 241.43 (10") INV OUT 240.76 (24") B-62A.2
19+15.31 B-62A.6 PROP TYPE C INLET GRT 253.20 INV IN 243.06 (18") B-62A.5 INV OUT 242.88 (18") A-1510
20+20.11 B-62A.7 PROP MH RIM 253.21 INV IN 244.21 (18") B-62A.6 INV OUT 244.04 (10") B-62A.4
21+30.42 B-62A.8 PROP 24" TYPE C INLET GRT 253.20 INV OUT 245.26 (18") B-62A.5

PROPOSED STORM PROFILE (B-60 - B-62A.6)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL


DATUM ELEV
223.00
EX GRADE
PROP GRADE
PROPOSED 6" SANITARY LINE CROSSING
BTM SAN 240.69'
TOP STM 237.09'
CLEAR 3.60'
PROP 150 LF 30" HDPE @ 0.50%
PROP 168 LF 30" HDPE @ 0.50%
PROP 200 LF 30" HDPE @ 0.50%
PROP 85 LF 30" HDPE @ 0.50%
PROP 135 LF 30" HDPE @ 0.50%
PROP 112 LF 24" HDPE @ 0.50%
PROP 78 LF 24" HDPE @ 0.50%
PROP 147 LF 18" HDPE @ 0.50%
PROP 73 LF 18" HDPE @ 0.50%
PROP 51 LF 30" HDPE @ 0.50%
PROP 52 LF 30" HDPE @ 0.50%
PROPOSED 8" WATER LINE CROSSING
2.0' CLEAR
10+00 B-60 PROP 24" HDPE C INLET GRT 253.20 INV IN 234.30 (30") B-63 INV IN 234.80 (24") A-1530 INV OUT 230.80 (60") B-61
11+60.01 B-61 PROP TYPE C INLET GRT 255.25 INV IN 235.23 (30") A-1540 INV OUT 230.06 (60") B-62
13+68.69 A-1540 PROP MH RIM 250.68 INV IN 236.49 (30") B-65 INV OUT 232.56 (60") A-1540
15+68.69 B-65 PROP TYPE M INLET GRT 252.50 INV IN 237.66 (30") A-1550 INV IN 237.66 (10") A-13500) INV OUT 235.49 (30") B-64
18+40.56 B-66 PROP TYPE M INLET GRT 249.95 INV IN 239.69 (24") A-1570 INV IN 239.69 (10") A-13500) INV OUT 239.02 (30") A-1550
20+30.54 B-67 PROP TYPE C INLET GRT 253.25 INV IN 243.31 (18") B-68 INV OUT 240.84 (24") A-1570
21+05.15 B-68 PROP MH RIM 253.32 INV IN 241.94 (18") B-69 INV OUT 241.67 (18") B-67
22+50.45 B-69 PROP 24" TYPE C INLET GRT 253.68 INV OUT 242.58 (18") B-68

PROPOSED STORM PROFILE (B-62 - B-69)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL

SCALE: 1" = 50'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-PROF-PAB240068.00-2A-----3-LAYOUT C-603 PSTM
JMM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHTED BY BOHLER AND MAY NOT BE ALTERED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-PROF

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA — MATTHEW M. CHARTRAND — PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

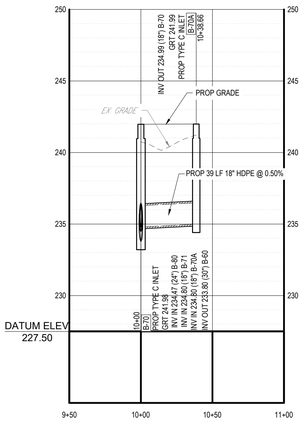
SHEET TITLE:

STORM PROFILES

SHEET NUMBER:

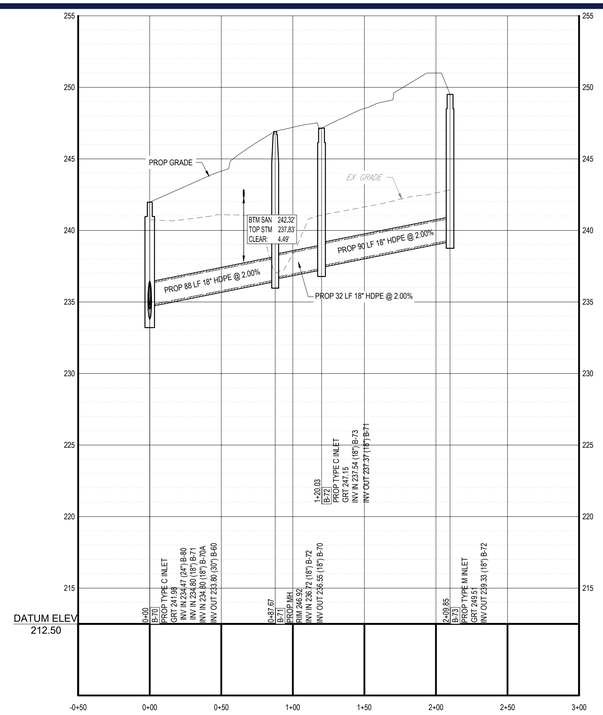
C-603

REVISION 2 - 02/19/2025



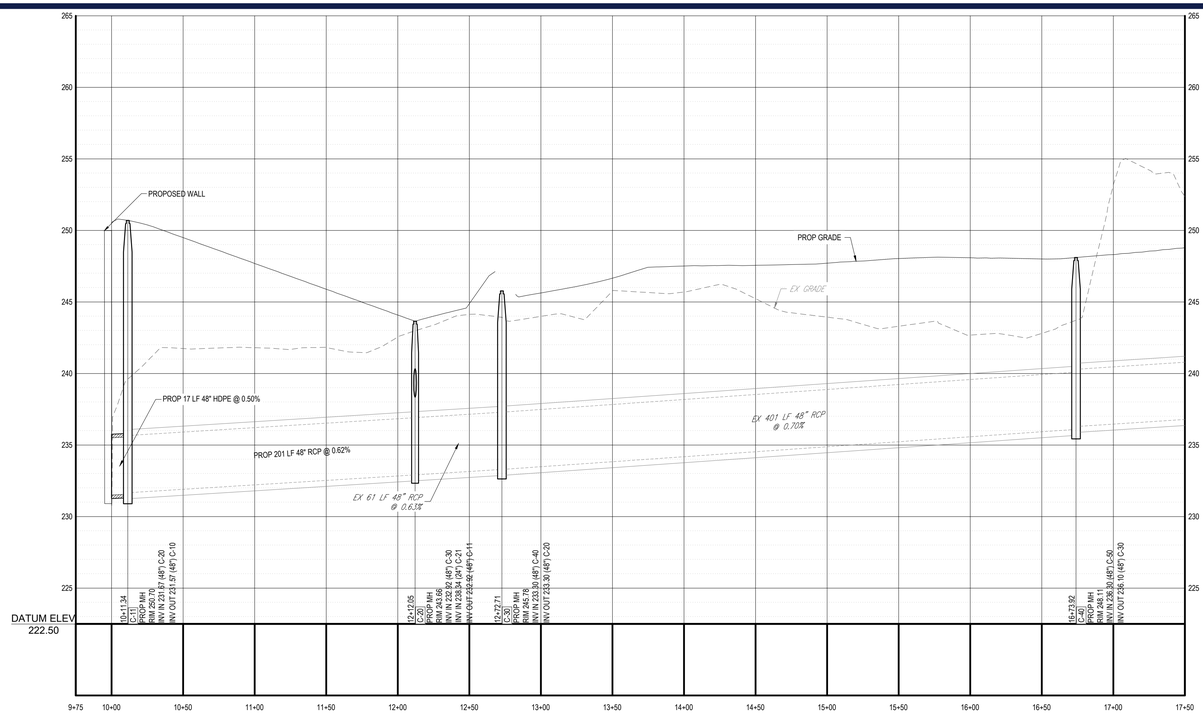
PROPOSED STORM PROFILE (B-70 - B-70A)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL



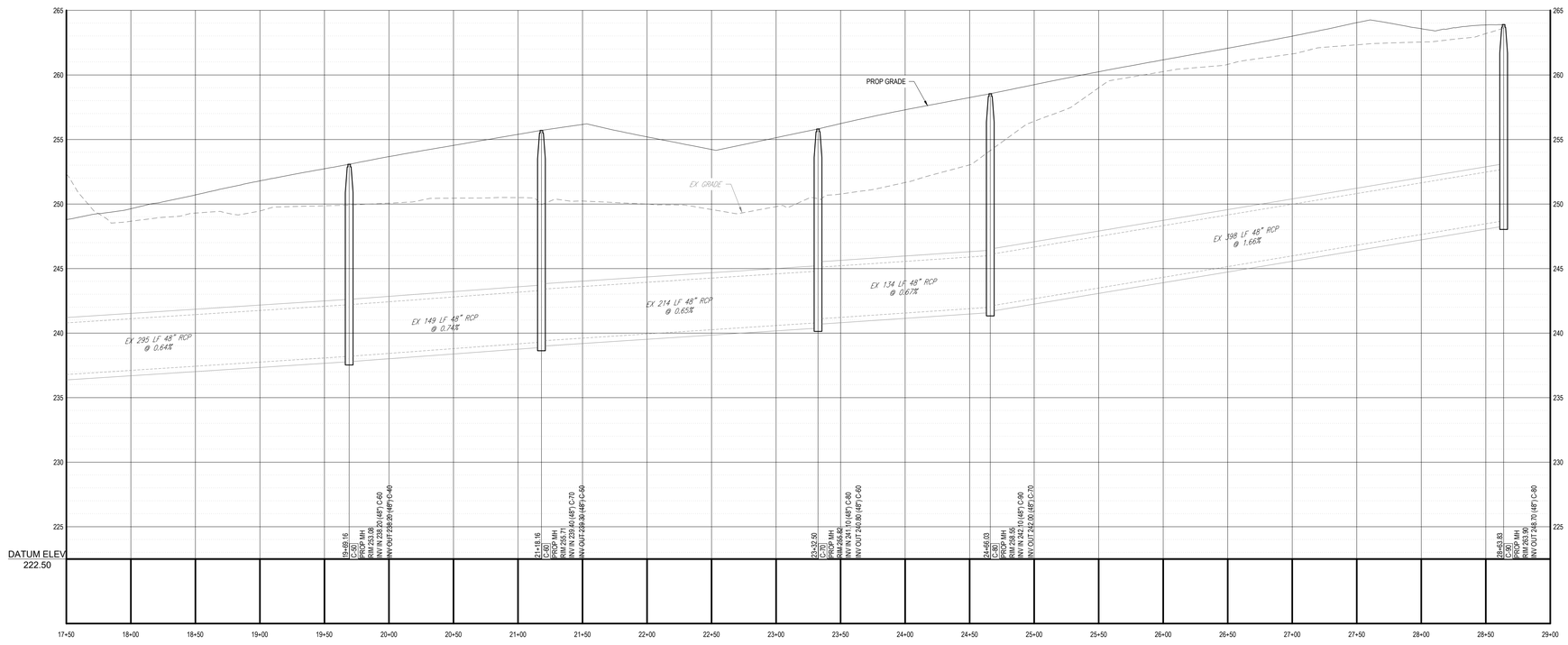
PROPOSED STORM PROFILE (B-70 - B-73)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL



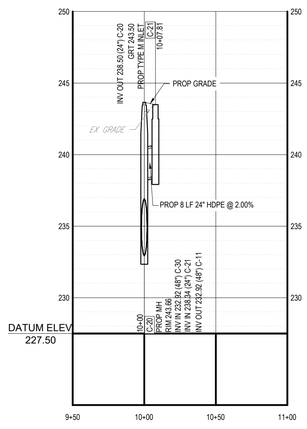
PROPOSED STORM PROFILE (C-10 - C-40)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL



PROPOSED STORM PROFILE (C-40 - C-90)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL



PROPOSED STORM PROFILE (C-20 - C-21)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL

LEGEND	
PROFILE	
EXISTING GRADE	
PROPOSED GRADE	

50 25 12.5 0 50
SCALE: 1" = 50'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-PROF-PAB240068.00-2A-----LAYOUT C-604 PSTM
JMV

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
LAND PLANNING ESTIMATING
PERMITTING SERVICES
TRANSPORTATION SERVICES
THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHT BY AND SHALL NOT BE DISCLOSED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-PROF

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

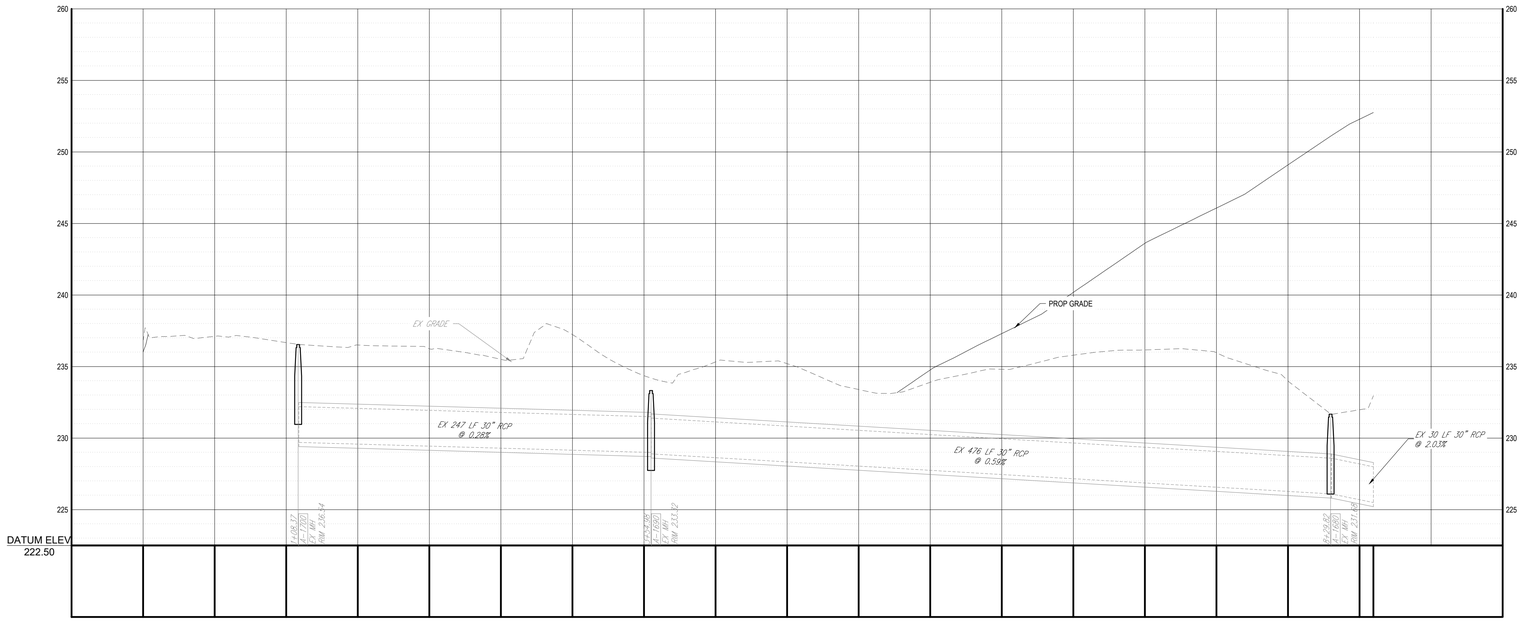
SHEET TITLE:

STORM PROFILES

SHEET NUMBER:

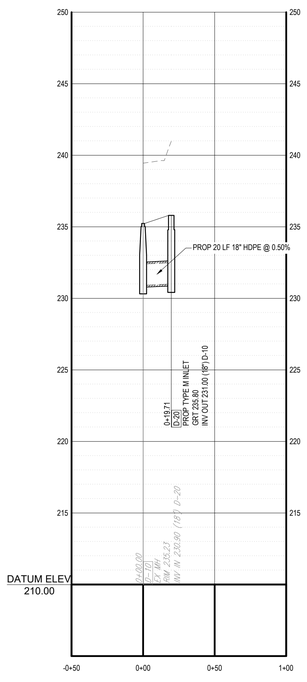
C-604

REVISION 2 - 02/19/2025



EXISTING 30" RCP PIPE (LOT A)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL



PROPOSED STORM PROFILE (D-10 TO D-20)

SCALE: 1"= 50 ' HORIZONTAL
1"= 5 ' VERTICAL

LEGEND
PROFILE
EXISTING GRADE
PROPOSED GRADE

50 25 12.5 0 50

SCALE: 1" = 50'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-PROF-PAB240068.00-2A-----LAYOUT C-605 PSTM
JM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHT BY AND SHALL NOT BE LOANED OR USED FOR ANY PURPOSE, WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.paOneCall.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-PROF

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

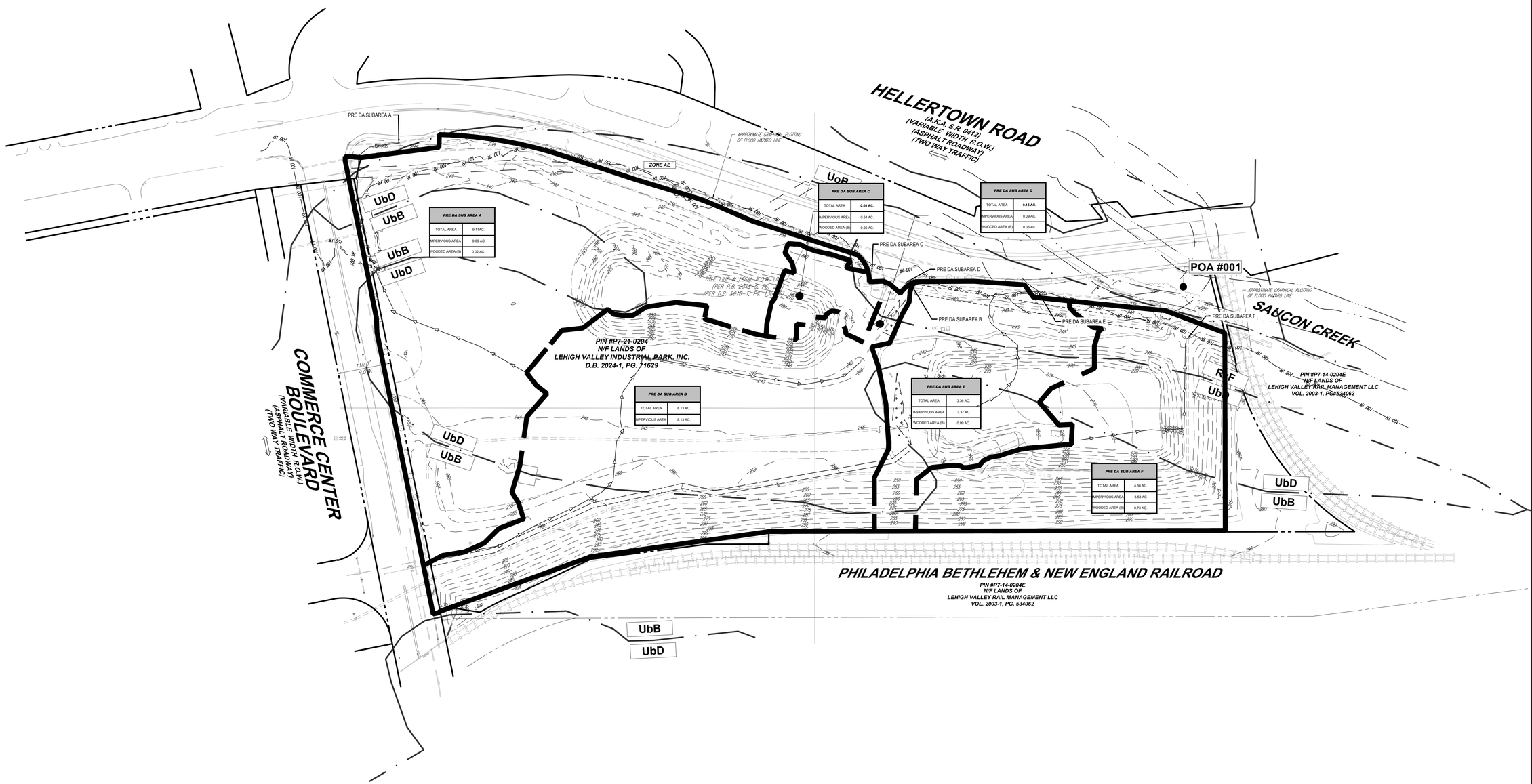
SHEET TITLE:

STORM PROFILES

SHEET NUMBER:

C-605

REVISION 2 - 02/19/2025



R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-SESC-PAB240068.00-2A-----1-LAYOUT, C-801 PRE DEV

JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THESE PLANS ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

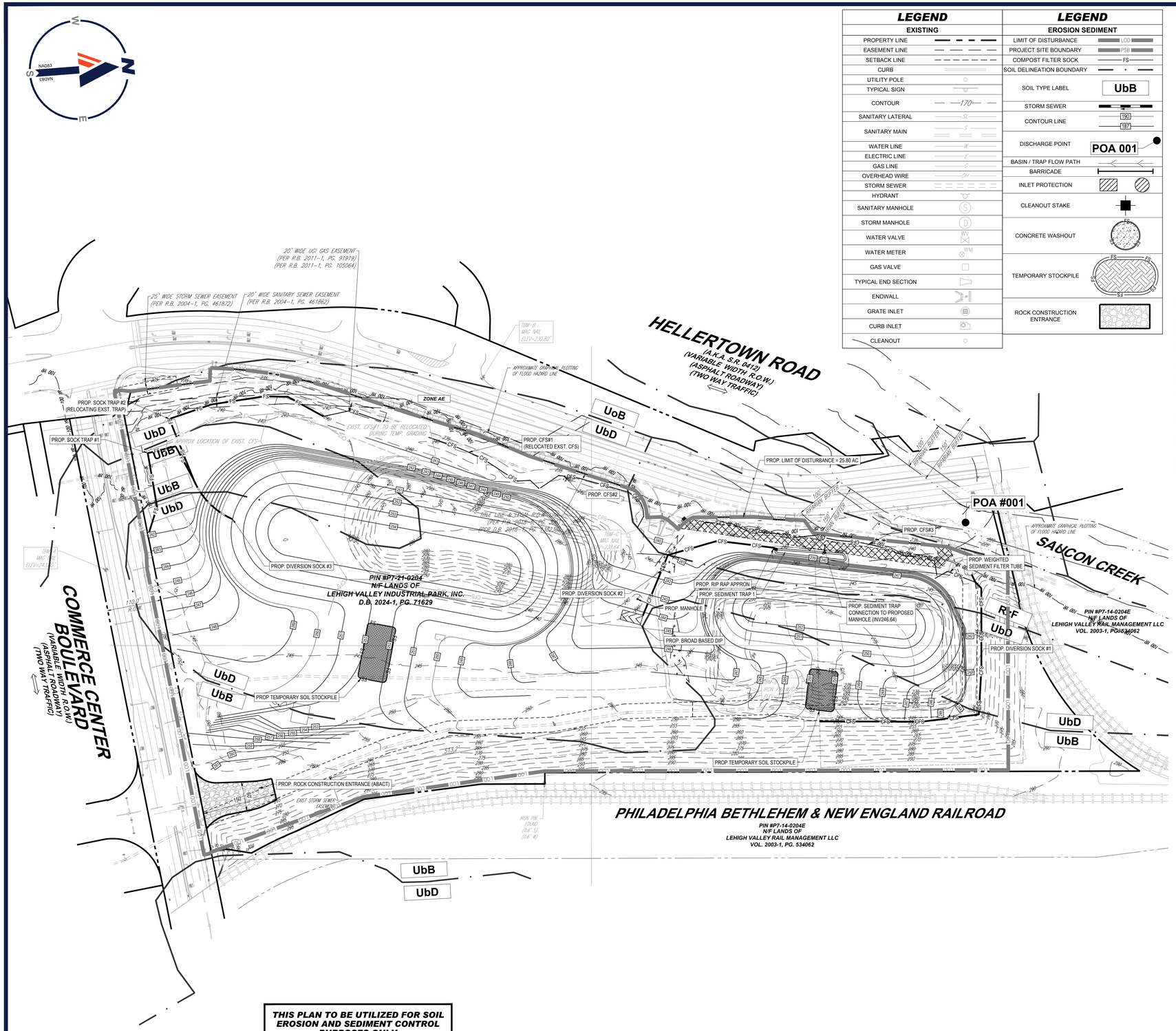
SHEET TITLE:

PRE DEVELOPMENT DRAINAGE AREA MAP

SHEET NUMBER:

C-801

REVISION 2 - 02/19/2025



THIS PLAN TO BE UTILIZED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

CHAPTER 93 RECEIVING WATERSHED AND STREAM CLASSIFICATION: SAUCON CREEK VIA STORM SEWERS, CWF, MF

IMPAIRED: URBAN RUNOFF/STORM SEWERS - SILTATION

LEGEND

EXISTING	
PROPERTY LINE	
EASEMENT LINE	
SETBACK LINE	
CURB	
UTILITY POLE	
TYPICAL SIGN	
CONTOUR	170
SANITARY LATERAL	S
SANITARY MAIN	S
WATER LINE	W
ELECTRIC LINE	E
GAS LINE	G
OVERHEAD WIRE	OH
STORM SEWER	
HYDRANT	
SANITARY MANHOLE	S
STORM MANHOLE	D
WATER VALVE	WV
WATER METER	WM
GAS VALVE	
TYPICAL END SECTION	
ENDWALL	
GRATE INLET	
CURB INLET	
CLEANOUT	

LEGEND

EROSION SEDIMENT	
LIMIT OF DISTURBANCE	LOD
PROJECT SITE BOUNDARY	PSB
COMPOST FILTER SOCK	FS
SOIL DELINEATION BOUNDARY	
SOIL TYPE LABEL	UbB
STORM SEWER	
CONTOUR LINE	190 / 187
DISCHARGE POINT	POA 001
BASIN / TRAP FLOW PATH	
BARRICADE	
INLET PROTECTION	
CLEANOUT STAKE	
CONCRETE WASHOUT	CW
TEMPORARY STOCKPILE	FS, CS, SS
ROCK CONSTRUCTION ENTRANCE	

SOIL MAP

SCALE: 1" = 500'
SOURCE: WEBSOILSURVEY
(Rev. 11/2023)

STAGE 1 CONSTRUCTION SEQUENCE

§102.8(f)(7)

A. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED IN COMPLIANCE WITH CHAPTER 102 REGULATIONS BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED FOUR (4) DAYS (IMMEDIATELY FOR HQ/EV WATERSHEDS), OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

B. REFERENCES TO 'CONSERVATION DISTRICT' USED THROUGHOUT THIS SEQUENCE ARE MEANT TO REFER TO THE NORTHAMPTON COUNTY CONSERVATION DISTRICT.

C. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING, BUT NOT LIMITED TO: THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS AND A REPRESENTATIVE OF THE CONSERVATION DISTRICT FOR AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR BURIED UTILITIES LOCATION.

D. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

E. THE TERM 'PERMANENT STABILIZATION' USED THROUGHOUT THIS SEQUENCE IS MEANT TO DESCRIBE THE PROPER PLACING, GRADING, CONSTRUCTING, REINFORCING, LINING, AND COVERING OF SOIL, ROCK OR EARTH TO ENSURE THEIR PERMANENT RESISTANCE TO EROSION, SLIDING OR OTHER MOVEMENT. FOR AN EARTH DISTURBANCE TO BE PERMANENTLY STABILIZED, THE DISTURBED AREA SHALL BE COVERED WITH ONE OF THE FOLLOWING: A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION, OR AN ACCEPTABLE BMP THAT PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION.

F. FOR EACH OF THE 'CRITICAL STAGES' SPECIFIED BELOW, THE PERMITTEE SHALL PROVIDE ENGINEERING OVERSIGHT. A LICENSED PROFESSIONAL OR DESIGNEE KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF SAID BMP, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

G. SEDIMENT CONTROL FACILITIES, SUCH AS BASINS AND TRAPS, MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES. REFER ALSO TO THE MONITORING, INSPECTION AND REPORTING REQUIREMENTS PROVIDED HEREIN FOR ADDITIONAL REQUIREMENTS DURING CONSTRUCTION.

H. AS SOON AS SLOPES, CHANNELS, DITCHES AND OTHER DISTURBED AREAS REACH FINAL GRADE, THEY MUST BE STABILIZED. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON. AS DISTURBED AREAS WITHIN A PROJECT APPROACH FINAL GRADE, PREPARATIONS SHOULD BE MADE FOR SEEDING AND MULCHING TO BEGIN (I.E. ANTICIPATE THE COMPLETION DATE AND SCHEDULE THE SEEDER). IN NO CASE SHOULD AN AREA EXCEEDING 15,000 SQUARE FEET, WHICH IS TO BE STABILIZED BY VEGETATION, REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED. WAITING UNTIL EARTHMOVING IS COMPLETED BEFORE MAKING PREPARATIONS FOR SEEDING AND MULCHING IS NOT ACCEPTABLE. SEEDING AND MULCHING REQUIREMENTS ARE SPECIFIED IN THE GENERAL CONSERVATION NOTES AND SPECIFICATIONS.

1. LIMIT OF DISTURBANCE (LOD) IS TO BE MARKED OUT PRIOR TO ANY DISTURBANCE ACTIVITIES VIA SURVEY STAKES, POSTS & ROP, CONSTRUCTION FENCE OR OTHER SIMILAR APPROVED DELINEATION FEATURE.
2. INSTALL TEMPORARY INLET PROTECTION ON ALL EXISTING DRAINAGE STRUCTURES TO REMAIN THROUGHOUT CONSTRUCTION.
3. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCE AND ADJACENT COMPOST FILTER SOCK. THE RIGHT-IN, RIGHT-OUT DRIVEWAY FROM HELLERTOWN ROAD SHALL REMAIN BARRICADED DURING CONSTRUCTION.
4. INSTALL PERIMETER COMPOST FILTER SOCKS DOWNGRADIENT OF THE PROJECT SITE. CLEARING AND GRUBBING SHALL BE LIMITED TO ONLY THE MINIMUM AREA NECESSARY TO INSTALL THESE PERIMETER CONTROL BMPS.
5. PREPARE TEMPORARY STAGING AND TOPSOIL STOCKPILE AREAS.
6. INSTALL SOCK TRAPS #1 AND #2.
7. EXCAVATE AND CONSTRUCT TEMPORARY SEDIMENT TRAP #1 AND ALL APPURTENANCES, INCLUDING, BUT NOT LIMITED TO, OUTLET PIPE, TEMPORARY OUTLET STRUCTURE, EROSION CONTROL MATTING, AND RIPRAP OUTLET PROTECTION.
8. RELOCATE C.F.S. #1 FROM EXISTING LOCATION.
9. INSTALL DIVERSION COMPOST SOCKS AND BROAD-BASED DIP.
   I. THE CONSERVATION DISTRICT SHALL BE NOTIFIED AND PERFORM AN INSPECTION OF THE BMPS INSTALLED PRIOR TO PROCEEDING WITH WORK.
10. BEGIN CLEARING, GRUBBING, AND STRIPPING THE REMAINDER OF THE SITE AND INITIATE MASS GRADING. (PHASE CLEARING AND GRUBBING TO THE EXTENT PRACTICAL TO MINIMIZE THE AMOUNT OF AREA DISTURBED AT ANY POINT IN TIME).
11. ONCE RAIN GARDEN ROUGH GRADES HAVE BEEN ESTABLISHED, INSTALL VISI FENCING AROUND PROPOSED RAIN GARDEN PERIMETER.

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
LAND DEVELOPMENT
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT THE EXPRESS AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:
EROSION AND SEDIMENT CONTROL PLAN STAGE 1

SHEET NUMBER:
C-802

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-SESC-PAB240068.00-2A-----LAYOUT: C-802 SESC 1
JMV

NAD83
GRID/N

HELLERTOWN ROAD
(A.K.A. S.R. 0412)
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

LEGAL R.O.W. LINE

25' WIDE STORM SEWER EASEMENT
(PER R.B. 2004-1, PG. 461872)

20' WIDE SANITARY SEWER EASEMENT
(PER R.B. 2004-1, PG. 461862)

ZONE AE

PROP. CONCRETE PAD FOR FUTURE BUS SHELTER

PROP. SOCK TRAP #2
(RELOCATING EXST. TRAP)

PROP. SOCK TRAP #1

APPROXIMATE GRAPHICAL PLOTTING OF FLOOD HAZARD LINE

MAGELLAN STREET

COKE WORKS ROAD

COMMERCE CENTER BOULEVARD
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

LEGAL R.O.W. LINE

UbD

UbB

UbB

UbD

"SOUTH 412' (REL.)

"NORTH 412' (REL.)

EXISTING TREE (TBR) (NOT FIELD VERIFIED) (TYP)

TBM-A
MAG NAIL
ELEV=243.80'

PROP. DIVERSION SOCK #3

20' WIDE UGI GAS EASEMENT
(PER R.B. 2011-1, PG. 91919)
(PER R.B. 2017-1, PG. 105064)

APPROX LOCATION OF EXIST. CFS

EXIST. CFS#1 TO BE RELOCATED DURING TEMP. GRADING

ZONE AE

PROP. CFS#1
(RELOCATED EXST. CFS)

PROP. C

APPROXIMATE GRAPHICAL PLOTTING OF FLOOD HAZARD LINE

TBM-B
MAG NAIL
ELEV=230.80'

LEGAL R.O.W. LINE

PIN #P7-21-0204
N/F LANDS OF
LEHIGH VALLEY INDUSTRIAL PARK, INC.
D.B. 2024-1, PG. 71629

TITLE LINE & LEGAL R.O.W. LINE
(PER R.B. 2017-1, PG. 105064)
PER R.B. 2018-1, PG. 143630

40 20 10 0 40
SCALE: 1" = 40'

THIS PLAN TO BE UTILIZED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-SESC-PAB240068.00-2A-----LAYOUT: C-803 SESC 1 (A)
JM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, IN WHOLE OR IN PART, WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

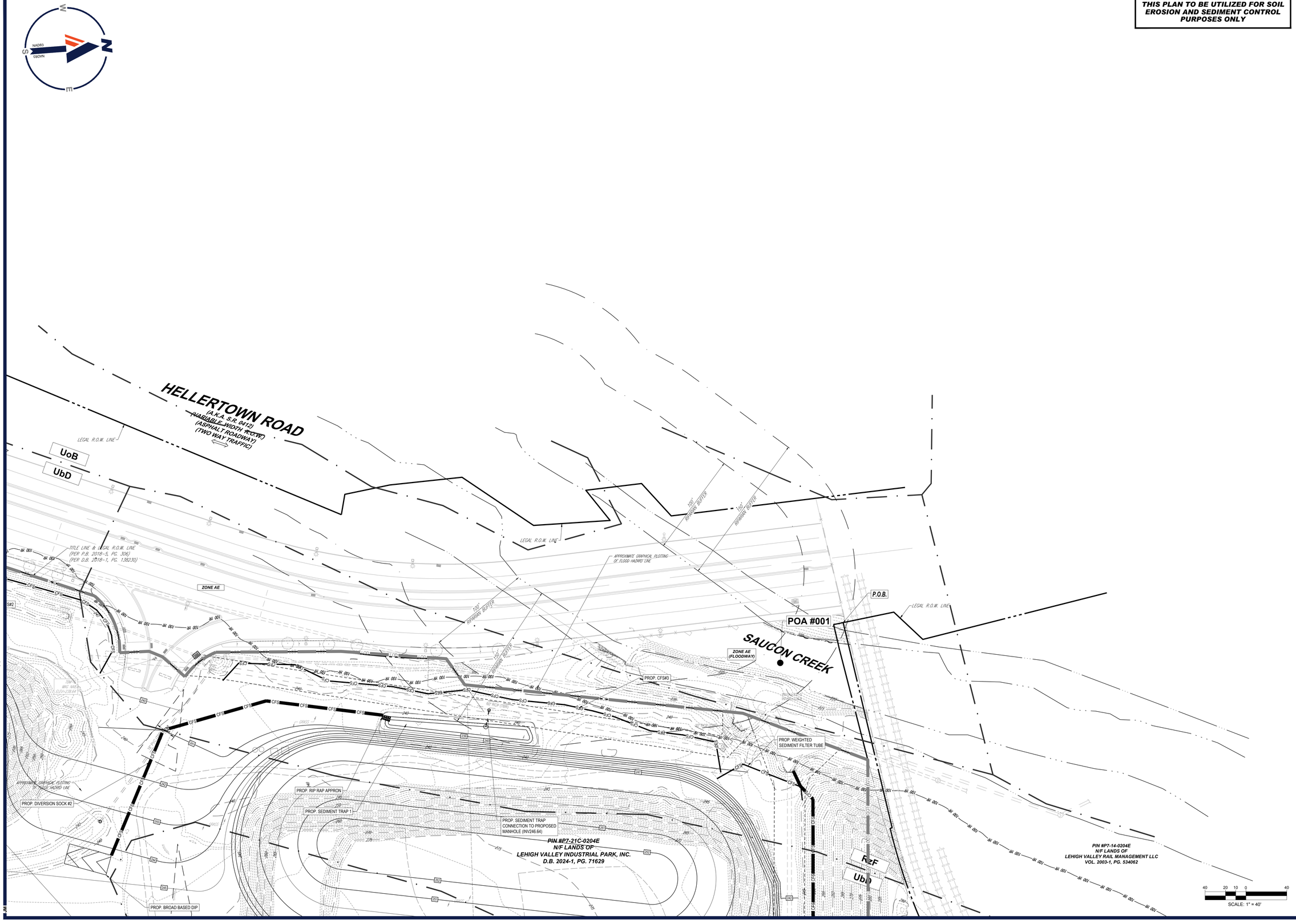
M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:
EROSION AND SEDIMENT CONTROL PLAN PHASE 1 (A)

SHEET NUMBER:
C-803

REVISION 2 - 02/19/2025

THIS PLAN TO BE UTILIZED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY



R:\2024\P\B240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A-----LAYOUT: C-804 SESC 1 (B)
JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, IN WHOLE OR IN PART, WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

EROSION AND SEDIMENT CONTROL PLAN PHASE 1 (B)

SHEET NUMBER:

C-804

REVISION 2 - 02/19/2025

THIS PLAN TO BE UTILIZED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

40 20 10 0 40
SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A.----\LAYOUT: C-805 SESC 1 (C)
JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE BOHLER CIVIL DESIGN AND CONTENT OF THIS PLAN IS FOR CONCEPTUAL USE ONLY AND SHALL NOT BE SCALED OR USED FOR ANY OTHER PURPOSE. WITHOUT EXPRESS WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

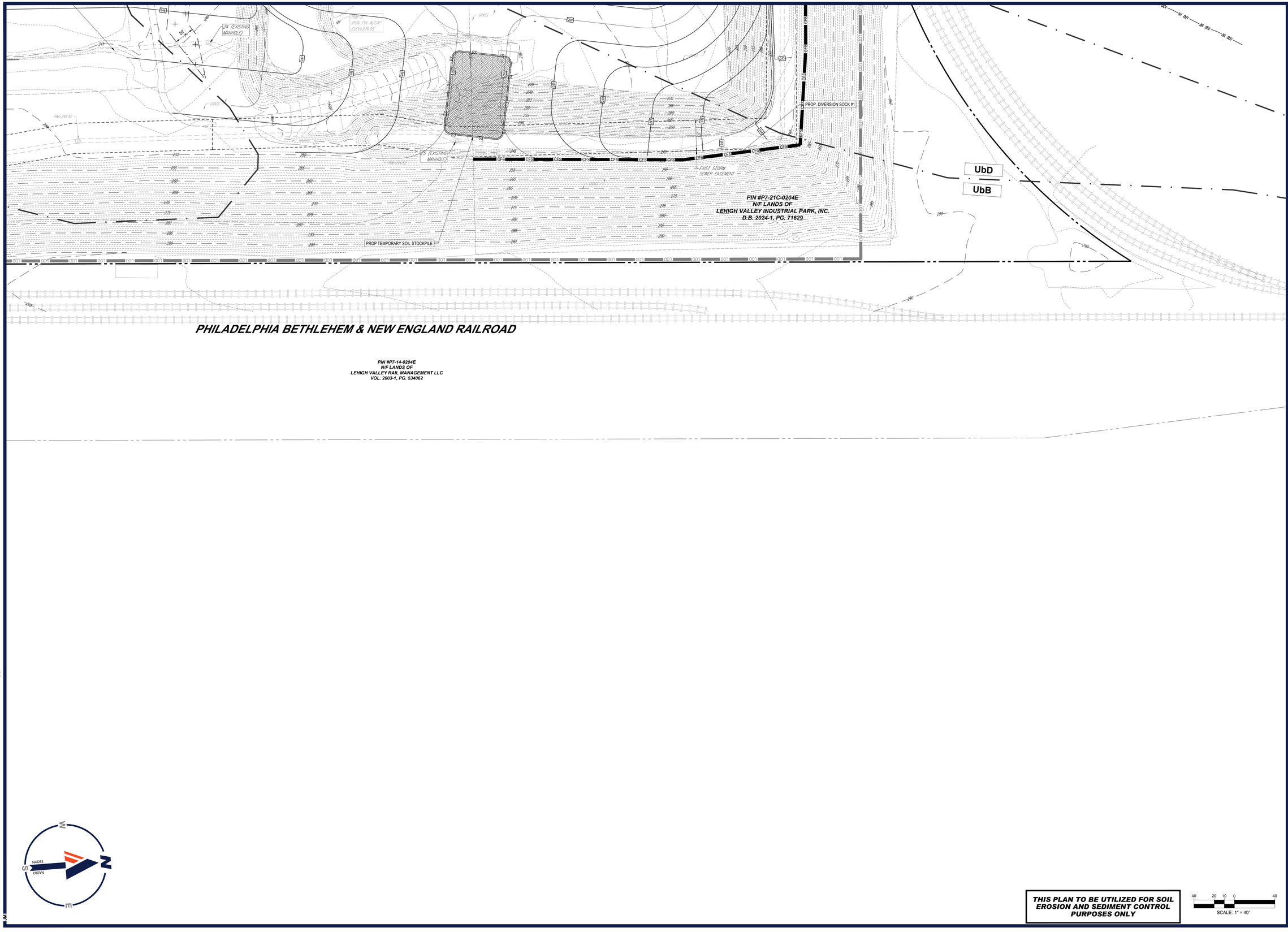
BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:
EROSION AND SEDIMENT CONTROL PLAN PHASE 1 (C)

SHEET NUMBER:
C-805

REVISION 2 - 02/19/2025



THIS PLAN TO BE UTILIZED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A-----\LAYOUT C-806 SESC 1 (D)

JM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE WORK, CIVIL DESIGN AND CONTENT OF THIS PLANS DOCUMENT AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

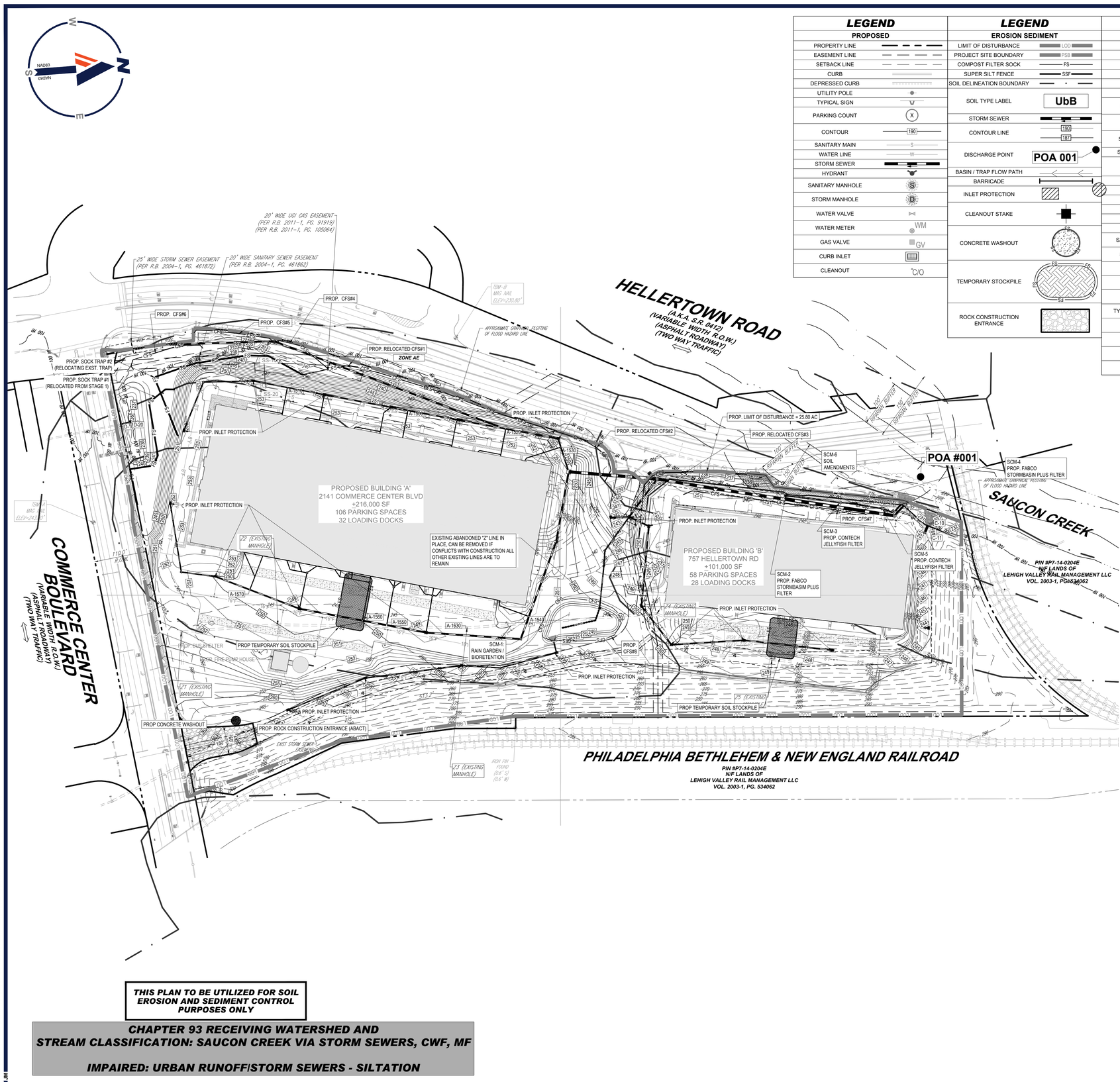
BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:
EROSION AND SEDIMENT CONTROL PLAN PHASE 1 (D)

SHEET NUMBER:
C-806

REVISION 2 - 02/19/2025



LEGEND — PROPOSED

PROPERTY LINE	
EASEMENT LINE	
SETBACK LINE	
CURB	
DEPRESSED CURB	
UTILITY POLE	
TYPICAL SIGN	
PARKING COUNT	X
CONTOUR	190
SANITARY MAIN	S
WATER LINE	W
STORM SEWER	
HYDRANT	
SANITARY MANHOLE	S
STORM MANHOLE	D
WATER VALVE	
WATER METER	WM
GAS VALVE	GV
CURB INLET	
CLEANOUT	C/O

LEGEND — EROSION SEDIMENT

LIMIT OF DISTURBANCE	LOD
PROJECT SITE BOUNDARY	PSB
COMPOST FILTER SOCK	FS
SUPER SILT FENCE	SSF
SOIL DELINEATION BOUNDARY	
SOIL TYPE LABEL	UbB
STORM SEWER	
CONTOUR LINE	190 / 187
DISCHARGE POINT	POA 001
BASIN / TRAP FLOW PATH	
BARRICADE	
INLET PROTECTION	
CLEANOUT STAKE	
CONCRETE WASHOUT	CW
TEMPORARY STOCKPILE	FS / SP
ROCK CONSTRUCTION ENTRANCE	

LEGEND — EXISTING

PROPERTY LINE	
EASEMENT LINE	
SETBACK LINE	
CURB	
UTILITY POLE	
TYPICAL SIGN	
PARKING COUNT	A
CONTOUR	170
SPOT ELEVATIONS	TC 516.4 OR 516.4
SANITARY LATERAL	SL
SANITARY MAIN	S
WATER LINE	W
ELECTRIC LINE	E
GAS LINE	G
OVERHEAD WIRE	OH
STORM SEWER	
HYDRANT	
SANITARY MANHOLE	S
STORM MANHOLE	D
WATER VALVE	WV
WATER METER	WM
GAS VALVE	
TYPICAL END SECTION	
ENDWALL	
GRATE INLET	
CURB INLET	
CLEANOUT	

SOIL MAP

SCALE: 1" = 500'
SOURCE: WEBSOILSURVEY

STAGE 2 CONSTRUCTION SEQUENCE

(Rev. 11/2023)

§102.8(f)(7)

A. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED IN COMPLIANCE WITH CHAPTER 102 REGULATIONS BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE, UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED FOUR (4) DAYS [IMMEDIATELY FOR HQ/EV WATERSHEDS], OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

B. REFERENCES TO 'CONSERVATION DISTRICT' USED THROUGHOUT THIS SEQUENCE ARE MEANT TO REFER TO THE NORTHAMPTON COUNTY CONSERVATION DISTRICT.

C. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING, BUT NOT LIMITED TO, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS AND A REPRESENTATIVE OF THE CONSERVATION DISTRICT FOR AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR BURIED UTILITIES LOCATION.

D. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

E. THE TERM 'PERMANENT STABILIZATION' USED THROUGHOUT THIS SEQUENCE IS MEANT TO DESCRIBE THE PROPER PLACING, GRADING, CONSTRUCTING, REINFORCING, LINING, AND COVERING OF SOIL, ROCK OR EARTH TO ENSURE THEIR PERMANENT RESISTANCE TO EROSION, SLIDING OR OTHER MOVEMENT. FOR AN EARTH DISTURBANCE TO BE PERMANENTLY STABILIZED, THE DISTURBED AREA SHALL BE COVERED WITH ONE OF THE FOLLOWING: A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION, OR AN ACCEPTABLE BMP THAT PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION.

F. FOR EACH OF THE CRITICAL STAGES SPECIFIED BELOW, THE PERMITTEE SHALL PROVIDE ENGINEERING OVERSIGHT. A LICENSED PROFESSIONAL OR DESIGNEE KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF SAID BMP, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

G. SEDIMENT CONTROL FACILITIES, SUCH AS BASINS AND TRAPS, MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES. REFER ALSO TO THE MONITORING, INSPECTION AND REPORTING REQUIREMENTS PROVIDED HEREIN FOR ADDITIONAL REQUIREMENTS DURING CONSTRUCTION.

H. AS SOON AS SLOPES, CHANNELS, DITCHES AND OTHER DISTURBED AREAS REACH FINAL GRADE, THEY MUST BE STABILIZED. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON. AS DISTURBED AREAS WITHIN A PROJECT APPROACH FINAL GRADE, PREPARATIONS SHOULD BE MADE FOR SEEDING AND MULCHING TO BEGIN (I.E. ANTICIPATE THE COMPLETION DATE AND SCHEDULE THE SEEDER). IN NO CASE SHOULD AN AREA EXCEEDING 15,000 SQUARE FEET, WHICH IS TO BE STABILIZED BY VEGETATION, REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED. WAITING UNTIL EARTHMOVING IS COMPLETED BEFORE MAKING PREPARATIONS FOR SEEDING AND MULCHING IS NOT ACCEPTABLE. SEEDING AND MULCHING REQUIREMENTS ARE SPECIFIED IN THE GENERAL CONSERVATION NOTES AND SPECIFICATIONS.

1. ONCE BUILDING PADS ARE ESTABLISHED, BUILDING CONSTRUCTION CAN OCCUR AT ANY TIME SUBSEQUENT TO THIS STAGE.

2. INITIATE STORM SEWER CONSTRUCTION CONCURRENTLY.

3. CONSTRUCT FROM DOWNSTREAM TO UPSTREAM PERMANENT STORM SEWER DISCHARGE FROM STRUCTURES B-10 TO B-20 AND C-10 TO C-11 INCLUDING RIPRAP APRON OUTFALL PROTECTION.

4. INSTALL PERMANENT WATER QUALITY DEVICES ON INLETS B-31, B-41, AND B-50. THIS IS A CRITICAL STAGE. A LICENSED PROFESSIONAL SHALL BE ON-SITE TO OVERSEE THE INSTALLATION OF THIS BMP.
   A. REFER TO PCSM DETAILS SHEET C-821 FOR ASSOCIATED INSTALLATION, OPERATION AND MAINTENANCE NOTES.
   B. INSTALL COMPOST FILTER SOCKS TO FURTHER PROTECT ALL WATER QUALITY FILTER DEVICES.

5. EXCAVATE AND INSTALL PROPOSED RAIN GARDEN. THIS IS A CRITICAL STAGE. A LICENSED PROFESSIONAL SHALL BE ON-SITE TO OVERSEE THE INSTALLATION OF THIS BMP.
   A. REFER TO THE BMP SPECIFIC SEQUENCE OF CONSTRUCTION FOUND ON SHEET C-821.
   B. STABILIZE ALL 3:1 SIDE SLOPES WITH EROSION CONTROL MATTING.
   C. INSTALL RIPRAP OUTLET PROTECTION AT THE ENDWALL.
   D. INSTALL COMPOST FILTER SOCK AROUND THE PERIMETER OF THE RAIN GARDEN.

6. AS STORM SEWER CONSTRUCTION PROGRESSES, INSTALL INLET PROTECTION ON ALL PERMANENT STORM SEWER STRUCTURES AS EACH INLET REACHES GRADE.

7. ESTABLISH WATER, GAS, AND SANITARY CONNECTIONS AS SHOWN ON THE PLAN.
   A. ANY DISTURBANCE RELATED TO ROADWAY UTILITY WORK THAT CANNOT BE DIRECTED TO A PERIMETER SEDIMENT CONTROL BMP MUST BE STABILIZED AT THE END OF EACH WORKDAY WITH STONE.
   B. NO EXCAVATION SHALL OCCUR IN THESE AREAS IF IT IS RAINING OR HAS THE POTENTIAL TO RAIN.
   C. THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME SHOULD NOT BE GREATER THAN THE TOTAL LENGTH OF UTILITY LINE THAT CAN BE PLACED IN THE TRENCH AND BACKFILLED IN ONE WORKING DAY. NO MORE THAN 50 LINEAL FEET OF OPEN TRENCH SHOULD EXIST WHEN UTILITY LINE INSTALLATION CEASES AT THE END OF EACH WORKDAY.

8. BEGIN RETAINING WALL CONSTRUCTION. GRADES SHALL BE DIRECTED TOWARDS THE INTERIOR OF THE SITE TO PREVENT STORMWATER DISCHARGES FROM THE SITE.

9. INSTALL CURBING AND STONE SUBBASE FOR PAVING.

10. FINAL GRADE SITE AND INSTALL TOPSOIL.

11. THIS IS A CRITICAL STAGE. INSTALL CLEAN FILL CAP PER DETAIL ON ALL PERVIOUS AREAS.

12. INSTALL BITUMINOUS ASPHALT PAVEMENT AND CONCRETE INCLUDING SIDEWALKS.

13. THIS IS A CRITICAL STAGE. INSTALL SOIL AMENDMENTS.

14. INSTALL FINAL VEGETATION AND LANDSCAPING SPECIFIED ON THE LANDSCAPE PLAN.

15. UPON ACHIEVING PERMANENT STABILIZATION (UNIFORM 70% PERENNIAL VEGETATIVE COVER) NOTIFY THE CONSERVATION DISTRICT. UPON APPROVAL, REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL FACILITIES. ANY AREA DISTURBED DURING REMOVAL OF SEDIMENT CONTROL FACILITIES SHALL BE STABILIZED IMMEDIATELY.

16. CLEAR SITE OF DEBRIS AND ANY UNWANTED MATERIALS. OPERATOR SHALL REMOVE FROM SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENTS' SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ, 271.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP OR DISCHARGE ANY BUILDING MATERIAL OR WASTE AT THIS SITE.

17. DEMOBILIZE.

18. NOTICE OF TERMINATION FORM SHOULD BE SUBMITTED TO THE CONSERVATION DISTRICT UPON STABILIZATION AND FINAL COMPLETION OF THIS PROJECT.

THIS PLAN TO BE UTILIZED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

CHAPTER 93 RECEIVING WATERSHED AND STREAM CLASSIFICATION: SAUCON CREEK VIA STORM SEWERS, CWF, MF

IMPAIRED: URBAN RUNOFF/STORM SEWERS - SILTATION

100 50 25 0 100
SCALE: 1" = 100'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-SESC-PAB240068.00-2A-----LAYOUT C-807 SESC 2 JMI

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MICHAEL M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:
EROSION AND SEDIMENT CONTROL PLAN STAGE 2

SHEET NUMBER:
C-807

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A-----LAYOUT: C-808 SESC 2 (A)
JMI

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHTED BY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.paOneCall.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

EROSION AND SEDIMENT CONTROL PLAN PHASE 2 (A)

SHEET NUMBER:

C-808

REVISION 2 - 02/19/2025

THIS PLAN TO BE UTILIZED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

NAD83
DOWN

HELLERTOWN ROAD
(A.K.A. S.R. 04123)
(VARIABLE WIDTH R.O.W.)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)

LEGAL R.O.W. LINE

TITLE LINE & LEGAL R.O.W. LINE
(PER PLB. 2019-5, PG. 336)
(PER D.B. 2018-1, PG. 139210)

PROP. RELOCATED CFS#2

PROP. RELOCATED CFS#3

ZONE AE

APPROXIMATE GRAPHICAL PLOTTING OF FLOOD HAZARD LINE

SCM-6 SOIL AMENDMENTS

ZONE AE (FLOODWAY)

SAUCON CREEK

P.O.B.

POA #001

PROP. CFS#7

PROP. INLET PROTECTION

SCM-2
PROP. FABCO STORMBASIM PLUS FILTER

SCM-3
PROP. CONTECH JELLYFISH FILTER

SCM-4
PROP. FABCO STORMBASIN PLUS FILTER

SCM-5
PROP. CONTECH JELLYFISH FILTER

PROPOSED BUILDING 'B'
757 HELLERTOWN RD
+101,000 SF
58 PARKING SPACES
28 LOADING DOCKS

PIN #P7-14-0204E
N/F LANDS OF
LEHIGH VALLEY RAIL MANAGEMENT LLC
VOL. 2003-1, PG. 534062

UoB
UbD
RzF
UbD

SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A----LAYOUT: C-809 SESC 2 (B)
JMV

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:
EROSION AND SEDIMENT CONTROL PLAN PHASE 2 (B)

SHEET NUMBER:
C-809

REVISION 2 - 02/19/2025

THIS PLAN TO BE UTILIZED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A.----\LAYOUT: C-810 SESC 2 (C)

JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ISSUE MANAGEMENT
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE BOHLER CIVIL DESIGN AND CONTENT OF THIS PLAN IS FOR CONCEPTUAL USE ONLY AND SHALL NOT BE SCALED OR USED FOR ANY PURPOSE. WHICH CONSTRUCTION AUTHORIZATION FROM BOHLER ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.
©2024 BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

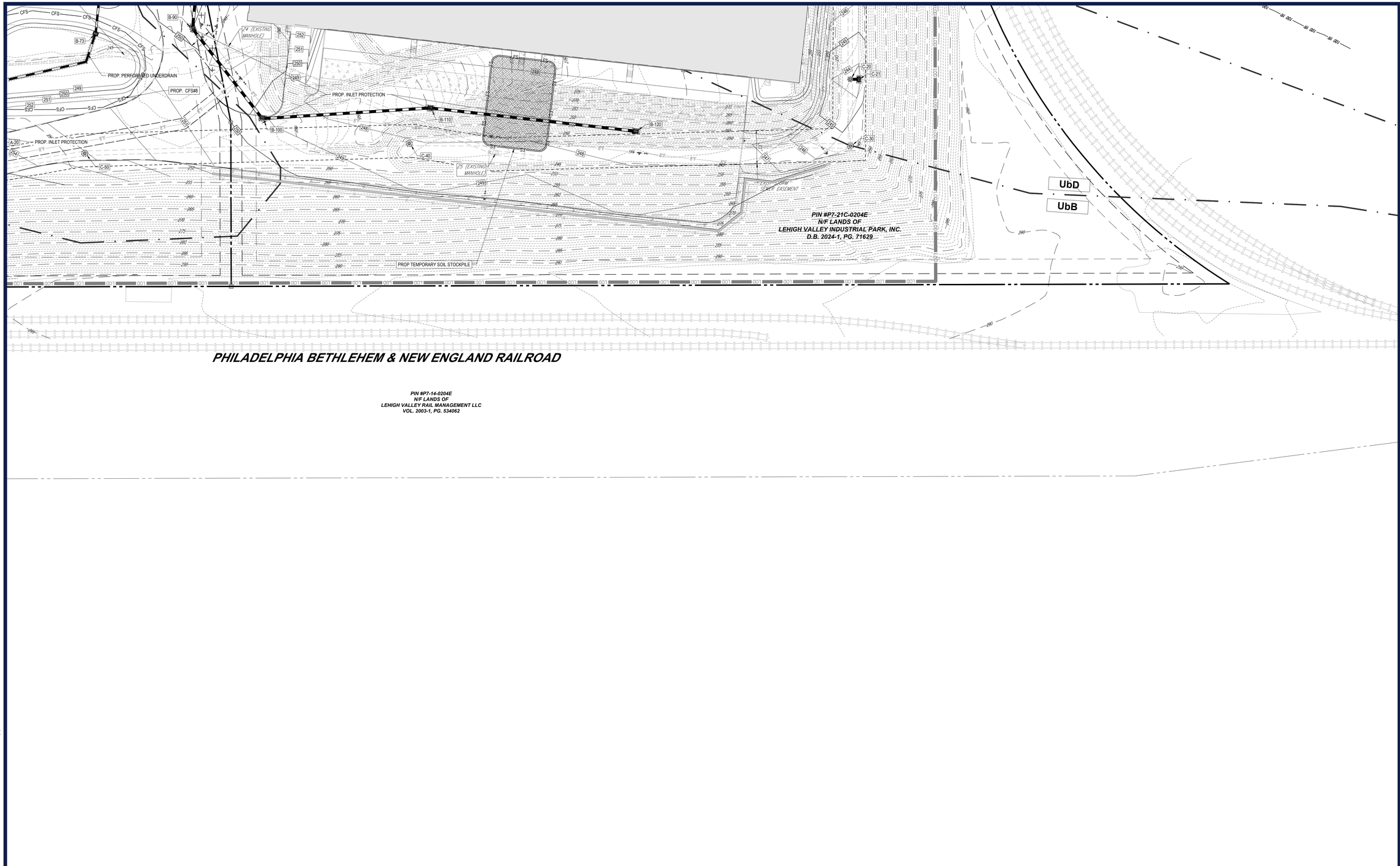
BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:
EROSION AND SEDIMENT CONTROL PLAN PHASE 2 (C)

SHEET NUMBER:
C-810

REVISION 2 - 02/19/2025



THIS PLAN TO BE UTILIZED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

SCALE: 1" = 40'

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS FOR USE ONLY FOR JOB NO. NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
MATTHEW M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

EROSION AND SEDIMENT CONTROL PLAN PHASE 2 (D)

SHEET NUMBER:

C-811

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A-----LAYOUT C-811 SESC 2 (D).dwg JMV

SOIL EROSION GENERAL NOTES

(Rev. 6/2024)

1. THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL STRUCTURES. ADDITIONAL FACILITIES OR MEASURES SHALL BE INSTALLED WHERE NECESSARY OR WHERE DIRECTED BY EITHER THE TOWNSHIP OR THE COUNTY CONSERVATION DISTRICT AS CONSTRUCTION PROGRESSES.
2. THE OWNER/CONSTRUCTION MANAGER IS RESPONSIBLE FOR ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROLS AND SITE STABILIZATION. THE OWNER SHALL ASSIGN ONE INDIVIDUAL TO BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL FACILITIES AND MEASURES.
3. PROTECTION TO THE EXISTING TREES AND SHRUBS SHALL BE TAKEN BY THE CONTRACTOR TO ELIMINATE UNNECESSARY DAMAGE.
4. ANY DRY FILL HAULED OFFSITE MUST BE TAKEN TO A LOCATION WITH AN EROSION AND SEDIMENTATION CONTROL PLAN WHICH HAS BEEN REVIEWED BY THE COUNTY CONSERVATION DISTRICT FOR ADEQUACY
5. EROSION AND SEDIMENTATION CONTROLS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE WITHIN TRIBUTARY AREAS OF THOSE CONTROLS.
6. STOCKPILES MUST BE STABILIZED IMMEDIATELY.
7. NO GRADING, EXCAVATING, REMOVAL OR DESTRUCTION OF THE TOPSOIL, TREES OR OTHER VEGETATIVE COVER OF THE LAND SHALL BE COMMENCED WITHIN A PROPOSED SUBDIVISION OR LAND DEVELOPMENT TRACT UNTIL SUCH TIME THAT A PLAN FOR SEDIMENTATION CONTROL AND MINIMIZING EROSION HAS BEEN REVIEWED AND FOUND SATISFACTORY BY THE COUNTY CONSERVATION DISTRICT AND REVIEWED AND APPROVED BY THE TOWNSHIP, OR THERE HAS BEEN A DETERMINATION BY THE TOWNSHIP, UPON RECOMMENDATION BY THE COUNTY CONSERVATION DISTRICT, THAT SUCH PLANS ARE NOT NECESSARY.
8. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE COUNTY CONSERVATION DISTRICT.
9. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE COUNTY CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.
10. CONTRACTOR SHALL USE TREADED MACHINERY AND MINIMIZE SOIL COMPACTION WHEREVER POSSIBLE.

DEFINITION OF CLEAN FILL AND IMPORT/EXPORT MATERIAL NOTES

(Rev. 5/2024)

IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE APPLICANT.

1. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).
2. CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".
3. ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.
4. ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM.

MAINTENANCE, MONITORING AND INSPECTION PROGRAM

(Rev. 5/2024)

§102.4(b)(5)(x)

UNTIL THE SITE IS STABILIZED AND DURING CONSTRUCTION ACTIVITIES, ALL BMPs MUST BE MAINTAINED PROPERLY BY THE CONTRACTOR. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS TO ENSURE THEIR EFFECTIVE AND EFFICIENT OPERATION. SEE EROSION AND SEDIMENT DETAILS FOR ADDITIONAL INSPECTION AND MAINTENANCE REQUIREMENTS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY AND IN ACCORDANCE WITH THESE PROCEDURES, PLANS AND DETAILS. ANY AREAS DISTURBED DURING MAINTENANCE MUST BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE GENERAL CONSERVATION NOTES AND SPECIFICATIONS. ALL SITE INSPECTIONS MUST BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE INDICATING THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG MUST BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

INSPECTIONS SHALL EVALUATE DISTURBED AREAS AND AREAS USED FOR STORING MATERIALS THAT ARE EXPOSED TO RAINFALL FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM OR DISCHARGING FROM THE SITE. IF NECESSARY, THE MATERIALS MUST BE COVERED OR ORIGINAL COVERS MUST BE REPAIRED OR SUPPLEMENTED. ALL AREAS DISTURBED DURING THE EARTHWORK PHASE OF CONSTRUCTION MUST BE TEMPORARILY SEEDED AND STABILIZED IF STABILIZATION CANNOT BE ACHIEVED WITHIN FOUR (4) DAYS. ALSO, PROTECTIVE BERMS MUST BE CONSTRUCTED, IF NEEDED, IN ORDER TO CONTAIN RUNOFF FROM MATERIAL STORAGE AREAS.

GRASSED AREAS SHALL BE INSPECTED TO CONFIRM THAT A HEALTHY STAND OF GRASS IS MAINTAINED. THE SITE HAS ACHIEVED FINAL STABILIZATION ONCE ALL AREAS ARE COVERED WITH BUILDING FOUNDATION OR PAVEMENT, OR HAVE A STAND OF GRASS WITH AT LEAST 70 PERCENT DENSITY OR GREATER IN ACCORDANCE WITH PERMIT REQUIREMENTS. THE VEGETATIVE DENSITY MUST BE MAINTAINED TO BE CONSIDERED STABILIZED. AREAS MUST BE WATERED, FERTILIZED, AND RESEEDED AS NEEDED TO ACHIEVE THIS REQUIREMENT.

ALL DISCHARGE POINTS MUST BE INSPECTED TO DETERMINE WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING DISCHARGE OF SEDIMENT FROM THE SITE OR IMPACTS TO RECEIVING WATERS.

VISUAL INSPECTIONS
THE PERMITTEE AND CO-PERMITTEE(S) MUST ENSURE THAT VISUAL SITE INSPECTIONS ARE CONDUCTED WEEKLY, AND WITHIN 24 HOURS AFTER EACH MEASURABLE RAINFALL EVENT THROUGHOUT THE DURATION OF CONSTRUCTION AND UNTIL THE RECEIPT AND ACKNOWLEDGEMENT OF THE NOT BY THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT. THE VISUAL SITE INSPECTIONS AND REPORTS SHALL BE COMPLETED IN A FORMAT PROVIDED BY THE DEPARTMENT, AND CONDUCTED BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT E&S BMPs AND PCSM BMPs ARE PROPERLY CONSTRUCTED AND MAINTAINED TO EFFECTIVELY MINIMIZE POLLUTION TO THE WATERS OF THIS COMMONWEALTH. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT AND INCLUDE AT A MINIMUM:
1. A SUMMARY OF SITE CONDITIONS, E&S BMP AND PCSM BMP, IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND
2. THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.

NONCOMPLIANCE REPORTING
WHERE E&S, PCSM OR PPC BMPs ARE FOUND TO BE INOPERATIVE OR INEFFECTIVE DURING AN INSPECTION, OR ANY OTHER TIME, THE PERMITTEE AND CO_PERMITTEE(S) SHALL, WITHIN 24 HOURS, CONTACT THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT, BY PHONE OR PERSONAL CONTACT, FOLLOWED BY THE SUBMISSION OF A WRITTEN REPORT WITHIN 5 DAYS OF THE INITIAL CONTACT. NONCOMPLIANCE REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:
1. ANY CONDITION ON THE PROJECT SITE WHICH MAY ENDANGER PUBLIC HEALTH, SAFETY, OR THE ENVIRONMENT, OR INVOLVE INCIDENTS WHICH CAUSE OR THREATEN POLLUTION;
2. THE PERIOD OF NONCOMPLIANCE, INCLUDING EXACT DATES AND TIMES AND/OR ANTICIPATED TIME WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE;
3. STEPS BEING TAKEN TO REDUCE, ELIMINATE, AND PREVENT RECURRENCE OF THE NONCOMPLIANCE; AND
4. THE DATE OR SCHEDULE OF DATES, AND IDENTIFYING REMEDIES FOR CORRECTING NONCOMPLIANCE CONDITIONS.

REDUCTION, LOSS, OR FAILURE OF THE BMPs
UPON REDUCTION, LOSS, OR FAILURE OF THE BMPs, THE PERMITTEE AND CO_PERMITTEE SHALL TAKE IMMEDIATE ACTION TO RESTORE THE BMPs OR PROVIDE AN ALTERNATIVE METHOD OF TREATMENT. SUCH RESTORED BMPs OR ALTERNATIVE TREATMENT SHALL BE AT LEAST AS EFFECTIVE AS THE ORIGINAL BMPs.

TERMINATION OF COVERAGE
NOT: UPON PERMANENT STABILIZATION OF EARTH DISTURBANCE ACTIVITIES ASSOCIATED WITH CONSTRUCTION ACTIVITY THAT ARE AUTHORIZED BY THIS PERMIT AND WHEN BMPs IDENTIFIED IN THE PCSM PLAN HAVE BEEN PROPERLY INSTALLED, THE PERMITTEE AND/OR CO_PERMITTEE OF THE FACILITY MUST SUBMIT A NOT FORM THAT IS SIGNED IN ACCORDANCE WITH PART B, SECTION 1.C, SIGNATORY REQUIREMENTS, OF THIS PERMIT. ALL LETTERS CERTIFYING DISCHARGE TERMINATION ARE TO BE SENT TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT. THE NOT MUST CONTAIN THE FOLLOWING INFORMATION: FACILITY NAME, ADDRESS, AND LOCATION, OPERATOR NAME AND ADDRESS, PERMIT NUMBER, IDENTIFICATION AND PROOF OF ACKNOWLEDGMENT FROM THE PERSON(S) WHO WILL BE RESPONSIBLE FOR OPERATION AND MAINTENANCE OF THE PCSM BMPs IN ACCORDANCE WITH THE APPROVED PCSM PLAN, AND THE REASON FOR PERMIT TERMINATION. UNTIL THE PERMITTEE HAS RECEIVED WRITTEN ACKNOWLEDGEMENT OF THE NOT, THE PERMITTEE WILL REMAIN RESPONSIBLE FOR OPERATING AND MAINTAINING ALL E&S BMPs AND PCSM BMPs ON THE PROJECT SITE AND WILL BE RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE.

COMPLETION CERTIFICATE AND FINAL PLANS
WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPs IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOT IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS.

GENERAL CONSERVATION NOTES AND SPECIFICATIONS

(Rev. 10/2024)

I. GENERAL INFORMATION

A. THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE AVAILABLE AT THE SITE.
B. NO SEDIMENT OR SEDIMENT LADEN WATER MUST BE ALLOWED TO LEAVE THE SITE WITHOUT FIRST BEING PROPERLY FILTERED.
C. ANY SEDIMENT THAT IS TRACKED ONTO THE ROAD MUST BE CLEANED OFF BEFORE THE END OF THE DAY.
D. DISTURBED AREAS ON WHICH EARTHMOVING ACTIVITIES HAVE CEASED AND WHICH WILL REMAIN EXPOSED SHALL BE STABILIZED IMMEDIATELY, EITHER TEMPORARILY OR PERMANENTLY, INCLUDING THE RESTORATION OF DRIVEWAYS, STOCKPILES, OFF-SITE UNDERGROUND UTILITY LINES AND GRADED PERIMETER AREAS. DURING NON-GERMINATION PERIODS, MULCH MUST BE APPLIED AT RECOMMENDED RATES. CRUSHED STONE ON PAVEMENT SUBGRADES IS CONSIDERED ADEQUATE PROTECTION.
E. AREAS THAT FAIL TO GERMINATE MUST BE RE-SEEDED OR MULCHED.
F. WHERE DISTURBED AREAS ARE DIFFICULT TO STABILIZE, NETTING SHOULD BE USED TO HOLD SEED AND MULCH IN PLACE; THIS IS ESPECIALLY IMPORTANT AROUND WATERCOURSES, IN SWALES AND AREAS OF CONCENTRATED FLOWS, STEEP SLOPES.
G. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING, AND RE-NETTING, MUST BE PERFORMED IMMEDIATELY. IF AT ANY TIME PRIOR TO SITE STABILIZATION ANY E&SP PROBLEMS OCCUR WHICH REQUIRE ADDITIONAL CONTROLS, IMMEDIATE ACTION MUST BE TAKEN TO CORRECT THE PROBLEMS.
H. THE CONTRACTOR MUST DEVELOP AND COORDINATE WITH OWNER AND HAVE APPROVED BY THE COUNTY CONSERVATION DISTRICT, A SEPARATE EROSION AND SEDIMENT POLLUTION CONTROL PLAN FOR EACH SPOIL, BORROW OR OTHER WORK AREA NOT DETAILED ON THE PERMITTED PLANS, WHETHER LOCATED WITHIN OR OUTSIDE OF THE LIMITS OF CONSTRUCTION.
I. CONTRACTOR SHALL NOTIFY THE COUNTY CONSERVATION DISTRICT OF DISPOSAL METHOD AND LOCATION OF MATERIALS (IF ANY) TO BE REMOVED FROM SITE.
J. ALL MATERIALS TO BE RECYCLED OR DISPOSED OF MUST DO SO IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS. STOCKPILES TO BE HAULED OFF SITE MUST HAVE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN AT THE DESTINATION LOCATION.
K. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SOIL STABILIZATION THROUGHOUT CONSTRUCTION. ADDITIONAL MEASURES REQUIRED TO ENSURE ON-SITE AND OFF-SITE STABILIZATION IN AND ADJACENT TO CONSTRUCTION ACTIVITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT NO COST TO THE OWNER. IMMEDIATE NOTIFICATION SHALL BE GIVEN TO THE OWNER AND ENGINEER SHOULD ADDITION STABILIZATION MEASURES BE NECESSARY; IN ACCORDANCE WITH THE NPDES AND/OR SWPPP REQUIREMENTS FOR THE PROJECT.
L. NPDES PERMIT REQUIRES THAT A VISUAL SITE INSPECTION REPORT USING THE CURRENT PADEP FORM BE COMPLETED BY A QUALIFIED SITE INSPECTOR AT THE FOLLOWING FREQUENCY:
   L.1. WEEKLY,
   L.2. AFTER RAINFALL EVENTS OF AT LEAST 0.25 INCH IN A 24-HOUR PERIOD, AND
   L.3. AS A FOLLOW-UP TO DEFICIENCIES FOUND.
M. THE PERMITTEE MUST TAKE COLOR PHOTOGRAPHS OF E&S BMPS AND PCSM SCMS ON THE PROJECT SITE AT LEAST MONTHLY, UNLESS OTHERWISE APPROVED IN WRITING BY DEP/CCD, AND WHEN DEFICIENCIES IN BMPS AND SCMS ARE IDENTIFIED. THE PHOTOGRAPHS MUST HAVE A DATE AND TIME STAMP AND BE MADE AVAILABLE FOR DEP/CCD REVIEW UPON REQUEST.
N. WITHIN 30 DAYS FOLLOWING COMPLETION OF A STRUCTURAL PCSM SCM, AS DEFINED IN THE REISSUED PAG-02 GENERAL PERMIT, THE PERMITTEE MUST SUBMIT THE SCM CONSTRUCTION CERTIFICATION FORM (3800-FM-BCW0271J) TO DEP/CCD, SIGNED BY THE PERMITTEE AND A LICENSED PROFESSIONAL.
O. BEGINNING DECEMBER 8, 2025, THE PERMITTEE MUST COMPLETE CONFIRMATION TESTING FOR INFILTRATION CAPACITY TO VERIFY THAT INFILTRATION SCMS WILL PERFORM AS DESIGNED. TESTING IS REQUIRED FOR BOTH THE SUBGRADE PREPARATION AND POST CONSTRUCTION CONDITION.
P. UPON THE REDUCTION, LOSS, OR FAILURE OF ANY BMP OR PCSM SCM, THE PERMITTEE AND CO-PERMITTEE(S) MUST INITIATE THE REPAIR OR REPLACEMENT OF THE BMP SCM AS FOLLOWS:
   P.1. IMMEDIATELY UPON DISCOVERY IF THE REDUCTION, LOSS, OR FAILURE OF A BMP OR SCM HAS RESULTED IN OR IS LIKELY TO RESULT IN SEDIMENT OR OTHER POLLUTANTS FLOWING OFF THE PROJECT SITE AND/OR DISCHARGING TO SURFACE WATERS. COMPLETION OF THE REPAIR OR REPLACEMENT OF THE BMP OR SCM MUST OCCUR WITHIN 24 HOURS UNLESS OTHERWISE REQUIRED BY DEP/CCD.
   P.2. WHEN FAILURE OF A BMP OR SCM IS NOT LIKELY TO CAUSE POLLUTION, THE PERMITTEE MUST INITIATE REPAIR OR REPLACEMENT WITHIN 24 HOURS OF DISCOVERY AND COMPLETE THE REPAIR OR REPLACEMENT WITHIN 7 DAYS, UNLESS OTHERWISE REQUIRED BY DEP/CCD.
Q. IF SOIL CONTAMINATION OR GROUNDWATER CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION THE PERMITTEE IS TO NOTIFY DEP AND CCD OF NEWLY DISCOVERED ON-SITE SOIL OR GROUNDWATER CONTAMINATION. NOTIFICATION IS TO BE PROVIDED WITHIN 24 HOURS OF RECEIVING THE SAMPLING RESULTS INDICATING THE CONTAMINATION.
R. BY DECEMBER 7 OF EACH YEAR, THE PERMITTEE MUST SUBMIT AN ANNUAL REPORT (3800-PM-BCW0405E) TO THE OFFICE OF DEP/CCD THAT APPROVED GENERAL PERMIT COVERAGE TO REPORT ON THE STATUS OF EARTH DISTURBANCE ACTIVITIES. THE FIRST ANNUAL REPORT FOR EXISTING PERMITTEES IS DUE DECEMBER 7, 2025.
S. RESIDENTIAL ONLY - WHENEVER A LOT OR PARCEL CONTAINING A PCSM SCM IS SOLD DURING THE TERM OF GENERAL PERMIT COVERAGE, THE PERMITTEE MUST PROVIDE THE NEW PROPERTY OWNER WITH 1) RECORD DRAWINGS OR OTHER PLANS IDENTIFYING THE SCM; 2) A LONG-TERM OPERATION AND MAINTENANCE (O&M) PLAN FOR THE SCM; AND 3) A COMPLETED NEW PROPERTY OWNER NOTIFICATION FORM (3800-FM-BCW00271I). THE PERMITTEE MUST SUBMIT COPIES OF COMPLETED NEW PROPERTY OWNER NOTIFICATION FORMS TO DEP/CCD AND TO THE MUNICIPALITY WHERE THE SCM IS LOCATED WITHIN 30 DAYS OF THE DATE OF TRANSFER OF THE PROPERTY.

II. STANDARD FOR LAND GRADING

A. DEFINITION: RESHAPING THE GROUND SURFACE BY GRADING TO PLAN GRADES, WHICH ARE DETERMINED BY TOPOGRAPHIC SURVEY AND LAYOUT.
 A.1. PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE WATER TO STORM DRAINS OR SUITABLE WATER COURSES AND TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FULL SLOPES.
 A.2. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS.
B. INSTALLATION REQUIREMENTS
 B.1. TIMBER, LOGS, BRUSH, RUBBISH, ROCKS, STUMPS AND VEGETABLE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATION OR AFFECT THE PLANNED STABILITY OR FILL AREAS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH STANDARD FOR DISPOSAL OF MATERIALS.
 B.2. FILL MATERIAL IS TO BE FREE OF BRUSH, RUBBISH, TIMBER, LOGS, VEGETATIVE MATTER AND STUMPS IN AMOUNTS THAT WILL BE DETRIMENTAL TO CONSTRUCTING STABLE FILLS.
 B.3. ALL FILLS SHALL BE COMPACTED SUFFICIENTLY FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SLIPPING, EROSION OR EXCESS SATURATION.
 B.4. ALL DISTURBED AREAS SHALL BE LEFT WITH A NEAT AND FINISHED APPEARANCE AND SHALL BE PROTECTED FROM EROSION.
 B.5. (SEE I. D.)

III. STANDARD FOR UTILITY TRENCH EXCAVATION

A. LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
B. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY. DAILY BACKFILLING OF THE TRENCH MAY BE DELAYED FOR A MAX OF SIX DAYS FOR CERTAIN CASES REQUIRING TESTING OF THE INSTALLED PIPE.
C. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING TO A FACILITY FOR REMOVAL OF SEDIMENT (SEDIMENT FILTER BAG, SEE DETAIL) BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS.
D. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND APPROPRIATE TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES / FACILITIES WILL BE INSTALLED. SEEDING AND MULCHING OF ALL DISTURBED AREAS WILL BE DONE IMMEDIATELY.
E. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FORM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
F. ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

IV. STANDARD FOR TEMPORARY STABILIZATION

A. STANDARD FOR TEMPORARY STABILIZATION WITH FIBERMULCH
 A.1. MULCHING IS MOST APPLICABLE TO THOSE AREAS SUBJECT TO PERIODIC DISTURBANCE AND REWORKING IN ADDITION, STABILIZATION WITH FIBER MULCH SHALL BE USED DURING NON-GERMINATION PERIODS.
 A.2. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO THE SLOPE.
 A.3. GRADE AS NEED AND FEASIBLE. SEE STANDARD FOR LAND GRADING.
 A.4. PROTECTIVE MATERIALS TO BE USED:
  A.4.a. UNROTTED SMALL-GRAIN UN-CHOPPED STRAW OR HAY AT 3.0 TONS PER ACRE (4 TONS PER ACRE BETWEEN NOVEMBER 1 AND MARCH 1) SPREAD UNIFORMLY AND ANCHORED WITH LIQUID MULCH BINDER. BINDER PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S SPECIFICATIONS.
  A.4.b. HYDROMULCHER. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL. LIQUID MULCH BINDERS: APPLY IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. PRODUCTS TO BE INSTALLED AT A RATE OF 1 TON PER ACRE (MINIMUM) OR PER MANUFACTURER'S SPECIFICATIONS.

B. STANDARD FOR TEMPORARY STABILIZATION WITH SEED
 B.1. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN TWELVE (12) MONTHS MUST BE SEEDED AND MULCHED IMMEDIATELY WITH A TEMPORARY COVER.
 B.2. ALL AREAS TO BE PERMANENTLY SEEDED SHALL ALSO RECEIVE TEMPORARY SEEDING CONCURRENTLY.
 B.3. SEEDBED PREPARATION FOR TEMPORARY SEEDING
  B.3.A. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO SLOPE.
  B.3.B. APPLY AGRICULTURAL LIME AT A RATE OF 1 TONE PER ACRE
  B.3.C. APPLY 10-10-10 FERTILIZER A RATE OF 500 POUNDS PER ACRE
  B.3.D. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF FOUR (4) INCHES.

C. SEEDING: SEE SEEDING SPECIFICATIONS

V. STANDARD FOR PERMANENT STABILIZATION

A. SPECIFICATION FOR SEEDING & SOIL TREATMENT FOR PERMANENT VEGETATIVE COVER
 A.1. SITE PREPARATION
  A.1.a. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.
  A.1.b. SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT AND LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL PH TO BETWEEN 5.5 AND 7 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.
  A.1.c. IMMEDIATELY PRIOR TO TOPSOIL DISTRIBUTION, THE SURFACE SHOULD BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3-5 INCHES TO PROVIDE A GOOD BOND WITH THE TOPSOIL.
 A.2. APPLYING TOPSOIL
  A.2.a. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE.
  A.2.b. REMOVAL OF TOPSOIL IS NOT ALLOWED UNLESS APPROVED BY THE MUNICIPALITY OR UNLESS AS SPECIFIED BY THE SITE GEOTECHNICAL ENGINEER DUE TO THE SOIL'S UNSUITABILITY FOR PLACEMENT.
 A.3. SEEDBED PREPARATION
  A.3.a. A SOIL TEST SHALL BE CONDUCTED TO ACCURATELY DETERMINE NECESSARY SOIL AMENDMENTS.
  A.3.b. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO SLOPE.
  A.3.c. SOIL MODIFICATIONS:
   A.3.c.1. APPLY 10-20-20 RATED FERTILIZER AT A RATE OF 1000 POUNDS PER ACRE OR 25 POUNDS PER 1000 SQUARE FEET, OR AS DIRECTED BY SOIL TEST.
   A.3.c.2. APPLY AGRICULTURAL LIME AT A RATE OF 6 TONS PER ACRE OR 240 POUNDS PER 1000 SQUARE FEET, OR AS DIRECTED BY SOIL TEST.
  A.3.d. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM FINE SEEDBED IS PREPARED.
  A.3.e. REMOVE FROM THE SURFACE ALL STONES ONE INCH (1") OR LARGER IN ANY DIMENSION, REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.
  A.3.f. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RE-TILLED AND FIRMED AS ABOVE.
 A.4. SEEDING: SEE SEEDING SPECIFICATIONS
 A.5. SEED BED AREAS SHALL ALSO BE STABILIZED USING AN APPROVED METHOD (EG: HYDROMULCHING) AS OUTLINED IN ITEM IV.A. HEREIN

B. STANDARD FOR PERMANENT STABILIZATION WITH SOD
 B.1. METHODS AND MATERIALS
  B.1.a. CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD. SPECIFY "CERTIFIED SOD," OR OTHER HIGH QUALITY CULTIVATED SOD.
  B.1.b. SOD SHOULD BE FREE OF WEEDS AND UNDESIRABLE COARSE WEEDY GRASSES.
  B.1.c. SOD SHOULD BE OF UNIFORM THICKNESS, APPROXIMATELY 5/8 INCH, PLUS OR MINUS 1/4 INCH, AT TIME OF CUTTING. (EXCLUDES TOP GROWTH).
  B.1.d. SOD SHOULD BE VIGOROUS AND DENSE AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 0% OF THE STRIP. BROKEN PADS OR TORN AND UNEVEN ENDS WILL NOT BE ACCEPTABLE.
  B.1.e. A SOD OF KENTUCKY 31 TALL FESCUE WITH BLUEGRASS, OR A FESCUE BLEND IS PREFERRED.
  B.1.f. ONLY MOIST, FRESH UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS.
 B.2. SITE PREPARATIONS: SEE SPECIFICATION FOR SEEDING & SOIL TREATMENT FOR PERMANENT VEGETATIVE COVER (ITEM V.A. ABOVE)
 B.3. SOD PLACEMENT
  B.3.a. SOD STRIPS SHOULD BE LAID ON THE CONTOUR, NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP. ON STEEP SLOPES, THE USE OF LADDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
  B.3.b. PLACE SOD STRIPS WITH SNUG EVEN JOINTS THAT ARE STAGGERED. OPEN SPACES INVITE EROSION.
  B.3.c. ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO INSURE SOLID CONTACT OF ROOT MAT AND SOIL SURFACE. DO NOT OVERLAP SOD. ALL JOINTS SHOULD BE BUTTED TIGHTLY IN ORDER TO PREVENT VOIDS, WHICH WOULD CAUSE DRYING OF THE ROOTS.
  B.3.d. ON SLOPES GREATER THAN 3 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES OR A BIODEGRADABLE FASTENER.
  B.3.e. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE, BUT A CAPPING STRIP OF HEAVY JUTE OR PLASTIC NETTING, PROPERLY SECURED, ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER-CARRYING CHANNELS AND OTHER CRITICAL AREAS. WIRE STAPLES MUST BE USED TO ANCHOR NETTING IN CHANNEL WORK.
  B.3.f. IMMEDIATELY FOLLOWING INSTALLATION, SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER BENEATH SOD TO A DEPTH OF 4 INCHES. MAINTAIN OPTIMUM MOISTURE FOR AT LEAST TWO WEEKS.
 B.4. FOLLOW-UP INSPECTION: AFTER THE FIRST GROWING SEASON, THE SOD SHOULD BE INSPECTED TO DETERMINE IF ADDITIONAL FERTILIZATION OR LIMING IS NEEDED.

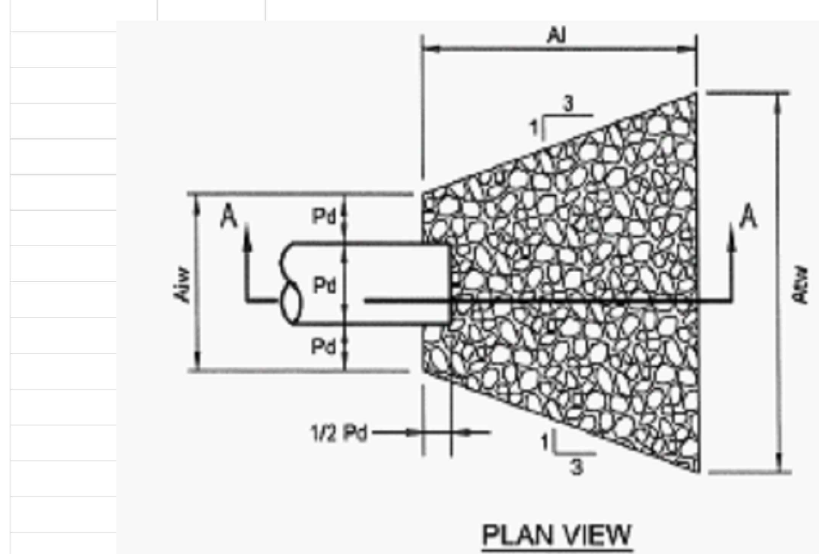
SEEDING SPECIFICATIONS

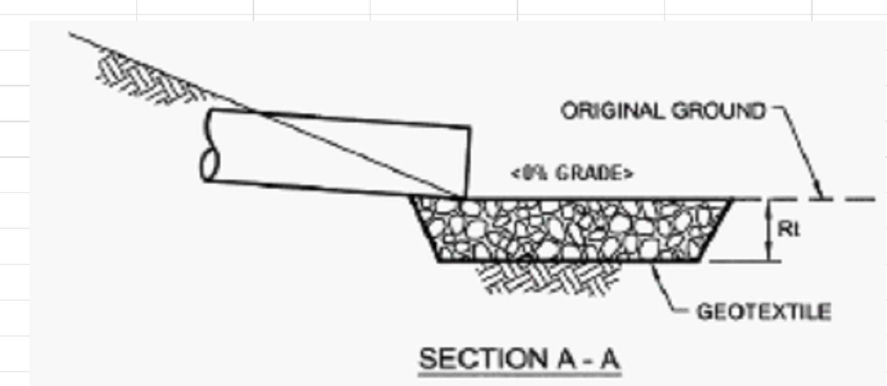
1. SEEDING DATES
   A. SEEDING SHALL OCCUR BETWEEN MARCH 1ST AND MAY 15TH OR BETWEEN AUGUST 15TH AND NO LATER THAN OCTOBER 15TH.
   B. IF SEEDING CANNOT BE CONDUCTED DURING THE TIMEFRAMES NOTED ABOVE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL CONSERVATION DISTRICT AND ALL APPROPRIATE AGENCIES TO DETERMINE AN ACCEPTABLE MEANS IN WHICH TO STABILIZE THE SITE THROUGH THE NEXT GROWING SEASON.
2. SEED MIXTURES: SEED MIXTURE TO BE USED ON THIS SITE SHALL CONSIST OF THE FOLLOWING UNLESS OTHERWISE NOTED ON THE PLANS. RATES ARE IN THE FORM OF POUNDS PER ACRE (LB/A) PER PURE LIVE SEED (POUNDS / ACRE PLS). CONTRACTOR WILL NEED TO ADJUST ACCORDINGLY BASED ON THE SEED GERMINATION AND PURITY RATING (SEE ITEM #3 BELOW).
   A. TEMPORARY SEED MIXTURES: DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE DISTURBED AGAIN WITHIN TWELVE (12) MONTHS MUST BE SEEDED WITH A TEMPORARY SEED MIXTURE AS FOLLOWS:
      ANNUAL RYE (40 POUNDS / ACRE PLS)
      OR SPRING OATS (96 POUNDS / ACRE PLS)
      OR WINTER RYE (168 POUNDS / ACRE PLS)
      (REFERENCE: PENN STATE "EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND", TABLE 5)
   B. PERMANENT SEEDING SHALL CONSIST OF A NURSE CROP PLUS A PERMANENT SEED MIXTURE, AS FOLLOWS:
      I. NURSE CROP (SELECT ONE):
      ANNUAL RYE (10 POUNDS / ACRE PLS)
      OR SPRING OATS (64 POUNDS / ACRE PLS)
      OR WINTER RYE (56 POUNDS / ACRE PLS)
      (REFERENCE: PA DEP EROSION AND SEDIMENT CONTROL PROGRAM MANUAL, LATEST EDITION, TABLE 11.4, SEED MIX #1)
      II. PERMANENT SEED MIX:
      TALL FESCUES (60 POUNDS / ACRE PLS)
      OR FINE FESCUE (35 POUNDS / ACRE PLS)
      OR KENTUCKY BLUEGRASS (25 POUNDS / ACRE PLS) PLUS REDTOP (3 POUNDS / ACRE PLS)
      OR PERENNIAL RYEGRASS (15 POUNDS / ACRE PLS)
      (REFERENCE: PA DEP EROSION AND SEDIMENT CONTROL PROGRAM MANUAL, LATEST EDITION, TABLE 11.4, SEED MIX #2)
3. PURE LIVE SEED: MINIMUM PLS RATING ACCEPTED SHALL BE 85% PLS. SEED RATE MAY NEED TO BE ADJUSTED BASED ON THE PLS RATING OF THE SEED.
   A. SEED USED FOR THE PURPOSE OF PERMANENT STABILIZATION SHALL BE LABELED WITH GERMINATION AND PURITY PERCENTAGES. UNLABELED SEED WILL BE REJECTED. SEED SHALL NOT BE USED MORE THAN ONE (1) YEAR BEYOND THE LABEL DATE.
   B. DETERMINING THE PERCENT PURE LIVE SEED (PERCENT PLS) OF A LABELED SEED: MULTIPLY BY THE PERCENTAGE OF PURE SEED BY THE PERCENTAGE OF GERMINATION AND DIVIDE THE RESULT BY 100 ((%PURE X %GERMINATION) / 100)
   C. DETERMINING THE ACTUAL SEED RATE: SIMPLY DIVIDE THE PERCENT PLS RATING OF THE SEED INTO THE PLS REQUIRED, AS NOTED ABOVE. THE RESULT IS THE POUNDS OF SEED REQUIRED. FOR EXAMPLE: IF THE REQUIRED RATE IS 64 POUNDS PLS, AND THE SEED IS RATED AT 35% PLS, DIVIDE 64 BY 0.35 TO GET 182.9 POUNDS, WHICH IS THE AMOUNT OF THAT SEED REQUIRED PER ACRE.
4. APPLICATION OF SEED: SEEDING SHALL BE APPLIED AND ESTABLISHED IN ACCORDANCE WITH THE "EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL" AS PUBLISHED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER QUALITY PROTECTION (MOST RECENT EDITION).
   A. SEEDING SHALL TAKE PLACE DURING TIMEFRAME NOTED IN THE SEEDING DATES SECTION ABOVE.
   B. SEED SHALL BE APPLIED IN A NON-COMPACTED, ROUGHENED TOPSOIL.
   C. SEED MAY BE APPLIED THROUGH ANY OF THE FOLLOWING MEANS AND METHODS, OR OTHER ACCEPTED INDUSTRY PRACTICES, UNLESS SPECIFICALLY NOTED OTHERWISE ON THESE PLANS:
      I. DRILL SEEDING
      II. BROADCAST SEEDING (TWO DIRECTIONS)
      III. HYDROSEEDING (TWO DIRECTIONS)
   D. ALL SEED SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED UNTIL A 70% PERENNIAL COVER IS ACHIEVED:
      I. TEMPORARY STABILIZATION WITH STRAW:
         1. STRAW MULCH SHALL BE APPLIED ON TOP OF THE FRESHLY SEEDED AREAS AT A RATE OF 3 TONS PER ACRE (4 TONS PER ACRE BETWEEN NOVEMBER 1ST AND MARCH 1ST).
         2. STRAW SHALL BE STABILIZED WITH A WOOD OR PAPER FIBER MULCH AND TACKIFIER SOLUTION IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S SPECIFICATIONS.
      II. TEMPORARY/PERMANENT STABILIZATION WITH EROSION CONTROL MATTING/BLANKETS (WHERE SPECIFIED):
         1. MATTING/BLANKETS SHALL BE INSTALLED IN AREAS AS NOTED ON THE EROSION & SEDIMENT CONTROL PLAN OR WITHIN 50 FEET OF PONDS, STREAMS OR WETLANDS. THE PRODUCT SHALL BE INSTALLED AND STAPLED ON TOP OF THE SEEDING IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
         2. AREAS WITH MATTING/BLANKETS SHALL NOT BE TRACKED (CATWALKED) AFTER INSTALLATION.
         3. MATTING/BLANKETS SHALL BE VISUALLY INSPECTED DAILY TO ENSURE THAT THE PRODUCT IS FUNCTIONING PROPERLY, IS HELD FAST TO THE SOIL SURFACE AND IS IN GOOD CONDITION.
   E. ONCE SEED HAS BEEN SET, VEHICULAR TRAFFIC OR OTHER SOURCES OF COMPACTION SHALL BE AVOIDED
5. IRRIGATION: NEW SEED APPLICATIONS SHOULD BE SUPPLIED WITH ADEQUATE WATER, A MINIMUM OF ¼" TWICE A DAY, UNTIL VEGETATION IS WELL ESTABLISHED (A MINIMUM OF 75% COVER).

Rip-rap Apron Summary Sheet

Project: LVIP LOT 65- PROPOSED INDUSTRIAL DEVELOPMENT

Description:





Outlet Name	Pipe: Dia. In.	Tail Water Condition Min or Max	Manning's "n" For Pipe	Slope	Q cfs	V^1 fps	Apron: d_{50} R-	d_{50} in.	Rt in.	Al ft.	Aiw ft.	Atw ft
RR-A	18	MIN	0.013	0.0050	5.42	3.18	3	3	9.0	13.00	4.5	17.5
RR-B	(2) - 30	MIN	0.013	0.0430	82.76	9.81	5	9	27.0	23.00	15.0	38
RR-C	48	MIN	0.013	0.0062	120.52	10.44	5	9	27.0	27.00	12.0	39

RECYCLING OR DISPOSAL OF MATERIAL

(Rev. 5/2024)

§102.4(b)(5)(xi)

THE FOLLOWING IS A LIST THAT INCLUDES, BUT THAT IS NOT LIMITED TO, THE POTENTIAL CONSTRUCTION WASTES THAT MAY EXIST ON-SITE:
- E&S BMP - COMPOST FILTER SOCKS
- E&S BMP - EROSION CONTROL MATTING
- E&S BMP - INLET PROTECTION

ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 Pa. CODE 260.1 ET SEQ, 271.1, AND 287.1 ET SEQ NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE. BELOW IS A LIST OF METHODS FOR THE PROPER RECYCLING/DISPOSAL OF VARIOUS MATERIALS:
1. DUST CONTROL - CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE SITE AT THE STABILIZED CONSTRUCTION ENTRANCE. THE PURPOSE IS TO TRAP DUST AND MUD THAT WOULD OTHERWISE BE CARRIED OFF-SITE BY CONSTRUCTION TRAFFIC. WATER TRUCKS WILL BE USED AS NEEDED DURING CONSTRUCTION TO REDUCE DUST GENERATED ON THE SITE. DUST CONTROL MUST BE PROVIDED BY THE CONTRACTOR TO A DEGREE THAT IS ACCEPTABLE TO THE LOCAL CONSERVATION DISTRICT. AFTER CONSTRUCTION, THE SITE WILL BE STABILIZED, WHICH WILL REDUCE THE POTENTIAL FOR DUST GENERATION.
2. SOLID WASTE DISPOSAL - NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, ARE ALLOWED TO BE DISCHARGED FROM THE SITE WITH STORMWATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS INCIDENTAL TO THE MAJOR CONSTRUCTION ACTIVITIES, MUST BE COLLECTED AND PLACED IN CONTAINERS. THE CONTAINERS WILL BE EMPTIED AS NECESSARY BY A CONTRACT TRASH DISPOSAL SERVICE AND HAULED AWAY FROM THE SITE.
3. SANITARY FACILITIES - ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY OR SEPTIC SYSTEM REGULATIONS. TEMPORARY SANITARY FACILITIES WILL BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND WILL BE SERVICED BY A LICENSED COMMERCIAL OPERATOR.
4. WATER SOURCE - NON-STORMWATER COMPONENTS OF SITE DISCHARGE MUST BE CLEAN WATER. WATER USED FOR CONSTRUCTION WHICH DISCHARGES FROM THE SITE MUST ORIGINATE FROM A PUBLIC WATER SUPPLY OR PRIVATE WELL APPROVED BY THE STATE HEALTH DEPARTMENT. WATER USED FOR CONSTRUCTION THAT DOES NOT ORIGINATE FROM AN APPROVED PUBLIC SUPPLY MUST NOT DISCHARGE FROM THE SITE.
5. CONCRETE WASTE FROM CONCRETE READY-MIX TRUCKS - DISCHARGE OF EXCESS OR WASTE CONCRETE AND/OR WASH WATER FROM CONCRETE TRUCKS WILL BE ALLOWED ON THE CONSTRUCTION SITE, BUT ONLY IN SPECIFICALLY DESIGNATED DIKED AREAS PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASH WATER AND STORMWATER THAT WILL BE DISCHARGED FROM THE SITE.

E&S PLAN DESIGNED AND IMPLEMENTED TO BE CONSISTENT WITH PCSM PLAN

(Rev. 5/2024)

§102.4(b)(5)(xiv)

REGARDING THE LOCATIONS OF EXISTING RIPARIAN BUFFERS RELATIVE TO THE LIMIT OF DISTURBANCE AND WHETHER PROPOSED INFILTRATION FACILITIES ARE OUTSIDE OF PROPOSED GRADING AREAS, NOTE THE FOLLOWING:

- THE RIPARIAN BUFFER ASSOCIATED WITH SAUCON CREEK IS LOCATED WITHIN THE PROJECT LIMIT OF DISTURBANCE.
- THE ENCROACHMENT IS IN THE 100-150' ZONE.
- AN EQUIVALENCY DEMONSTRATION HAS BEEN PROVIDED.

LOCATION OF ALL SURFACE WATERS AND THEIR CLASSIFICATION UNDER CHAPTER 93

(Rev. 5/2024)

§102.4(b)(5)(v)

THE SUBJECT SITE DRAINS TO THE SAUCON CREEK, WHICH HAS COLD WATER FISHES, AND MIGRATORY FISH CHAPTER 93 CLASSIFICATION.

SAUCON CREEL IS IMPAIRED FOR URBAN RUNOFF/STORM SEWERS- SILTATION.

BOHLER //

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES
© BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-CNDS

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER //
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE071444

SHEET TITLE:
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SHEET NUMBER:
C-812

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-PAB240068.00-2A----->LAYOUT: C-812 EROD
JM

CONSERVATION DISTRICT NOTES

1) ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.

2) AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.

3) AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.

4) ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.

5) AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.

6) CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.

7) AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.

8) TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.

9) IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.

10) ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THIS SITE.

11) ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.

12) THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.

13) ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.

14) UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. THE OPERATOR WILL MAINTAIN AND MAKE AVAILABLE TO NORTHAMPTON COUNTY CONSERVATION DISTRICT COMPLETE, WRITTEN INSPECTION LOGS OF ALL THOSE INSPECTIONS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

15) A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.

16) SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

17) ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.

18) AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.

19) ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

20) ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

21) FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.

22) FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

23) FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

24) SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

25) ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.

26) IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR OTHER PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.

27) PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR MOTHER MOVEMENTS.

28) EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.

29) UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.

30) AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.

31) UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.

32) FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

33) IN THE EVENT OF SINKHOLE DISCOVERY A PROFESSIONAL GEOLOGIST OR ENGINEER WILL BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, THE NORTHAMPTON COUNTY CONSERVATION DISTRICT WILL BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.

34) THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

35) THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.

36) THE E&S CONTROL PLAN MAPPING MUST DISPLAY A PA ONE CALL SYSTEM INCORPORATED SYMBOL INCLUDING THE SITE IDENTIFICATION NUMBER. (THIS IS A NUMBERED SYMBOL NOT A NOTE.)

37) AT STREAM CROSSINGS, 50' BUFFER AREAS SHOULD BE MAINTAINED. ON BUFFERS, CLEARING, SOD DISTURBANCES, EXCAVATION, AND EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITIES SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE ACCOMPLISHED OUTSIDE OF BUFFERS.

38) ALL WETLANDS MUST BE DELINEATED AND PROTECTED WITH ORANGE SAFETY FENCE PRIOR TO ANY EARTHMOVING ACTIVITY.

39) STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN

SOIL USE LIMITATIONS AND THEIR RESOLUTIONS PROVIDED

CONTRACTOR SHALL CONSULT WITH GEOTECHNICAL ENGINEER TO DETERMINE SOIL LIMITATIONS AND RESOLUTIONS SPECIFIC TO THIS PROJECT.

1. SOIL TYPES POORLY SUITED AS SOURCES OF TOPSOIL RESTRICT OR PLACE CONDITIONS ON PLANNING VEGETATIVE STABILIZATION. ACIDIC, LOW FERTILITY, EXCESSIVE DRYNESS AND EXCESSIVE WETNESS LIMIT PLANT GROWTH.

RESOLUTIONS: IDENTIFYING AND RESOLVING CHARACTERISTICS, THAT RENDER THE SOIL TYPES POORLY, SUITED AS TOPSOIL.

2. ACIDIC SOIL TYPES EXHIBITING PH REACTION VALUES LOWER THAN ABOUT 5.5, LIMIT VEGETATIVE STABILIZATION. SOIL TESTS MIGHT BE NECESSARY TO DETERMINE SITE SPECIFIC PH REACTION.

RESOLUTIONS: APPLYING LIME CONSISTENT WITH RATES DETERMINED BY SOIL TESTING; SELECTING VEGETATIVE SPECIES TOLERANT TO ACIDIC SOIL CONDITIONS; AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY PENN STATE.

3. LOW FERTILITY SOIL TYPES LACKING IN SUFFICIENT AMOUNTS OF ESSENTIAL PLANT NUTRIENTS SUCH AS: NITRPGEN, PHOSPHOROUS, POTASSIUM, SULFER, MAGNESIUM, CALCIUM, IRON, MANGANESE, BORON, CHLORINE, ZINC, COPPER AND MOLYBDENUM, LIMIT VEGETATION STABILIZATION. SOIL TESTS MIGHT BE NECESSARY TO DETERMINE SITE SPECIFIC SOIL FERTILITY.

RESOLUTIONS: INCORPORATING SOIL NUTRIENTS CONSISTENT WITH RATES DETERMINED BY SOIL TESTING; SELECTIVE VEGETATIVE SPECIES TOLERANT TO LOW FERTILITY SOIL CONDITIONS, AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY PENN STATE.

4. ERODIBLE SOIL TYPES EXHIBITING K VALUES GREATER THAN 0.36 OR PLASTICITY INDEX VALUES LOWER THAN 10, LIMIT VEGETATIVE STABILIZATION OF CHANNELS.

RESOLUTIONS: TEMPORARY CHANNEL LINING, PROVIDING PERMANENT CHANNEL LINING, DECREASING CHANNEL GRADE, INCREASING CHANNEL WIDTH, SELECTING VEGETATIVE WITH GREATER RETARDANCE, SELECTING PERMANENT LININGS OTHER THAN GRASSES, AND IMPLEMENTING COMBINATION OF THESE AND/OR METHODS. VEGETATIVE RETARDANCE INFORMATION IS PROVIDED IN TABLES 6 AND 7 OF THE EROSION AND SEDIMENT POLLUTION CONTROL MANUAL PUBLISHED BY PADEP.

5. WET SOIL TYPES HAVE EXCESSIVE ROOT ZONE AND SOIL MOISTURES. SOME SOIL SURVEYS INDICATE WETNESS, HIGH WATER TABLE AND FLOODING. THIS INDICATOR IS AFFECTED BY SOIL DISTURBANCE.

RESOLUTIONS: SELECTING VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS, TILING VEGETATIVE AREAS, AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY THE PENN STATE.

6. DRY SOIL TYPES LACK SUFFICIENT ROOT ZONE SOIL MOISTURES. THIS INDICATOR IS AFFECTED BY SOIL DISTURBANCE.

RESOLUTIONS: SELECTING VEGETATIVE SPECIES TOLERANT TO DRY CONDITIONS, IRRIGATING VEGETATED AREAS AND IMPLEMENTING COMBINATION OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY PENN STATE.

7. SOIL TYPES SUSCEPTIBLE TO SINKHOLE AND SOLUTION CHANNEL/CHAMBER FORMATION POSE LIMITATIONS ON LOCATING RESERVOIR AREAS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORMWATER RETENTION BASINS, AND STORMWATER DETENTION BASINS.

RESOLUTIONS: LOCATING THOSE FACILITIES ON OTHER SOIL TYPES, LINING RESERVOIR AREAS WITH IMPERMEABLE LINNINGS, LIMITING STANDING WATER DEPTHS, LIMITING RETENTION TIMES AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.

8. SOIL TYPES THAT EXHIBIT INSTABILITY IN POND EMBANKMENTS OR SUSCEPTIBILITY TO PIPING AND SEEPING POSE LIMITATIONS ON PLANNING EMBANKMENTS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORMWATER RETENTION BASINS AND STORMWATER DETENTION BASINS.

RESOLUTIONS: IMPORTING OTHER SOIL FOR EMBANKMENT OF THOSE FACILITIES, LOCATING THOSE FACILITIES ON OTHER SOIL TYPES, LIMITING EMBANKMENT SLOPE STEEPNESS AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.

9. SOIL THAT ARE DIFFICULT TO COMPACT, UNSUITABLE FOR WINTER GRADING, OR SUSCEPTIBLE TO FROST ACTION POSE LIMITATIONS ON PLANNING EMBANKMENTS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORMWATER RETENTION BASINS AND STORMWATER DETENTION BASINS.

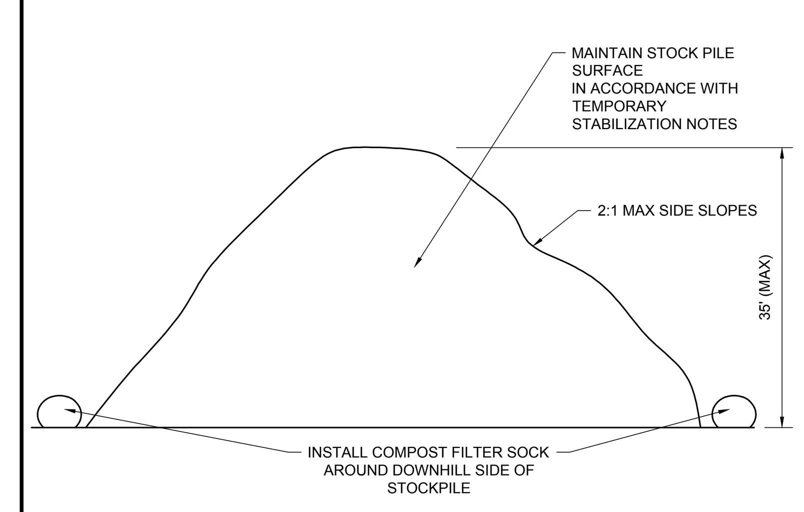
RESOLUTIONS: IMPORTING OTHER SOIL FOR EMBANKMENT OF THOSE FACILITIES, LOCATING THOSE FACILITIES ON OTHER SOIL TYPES, NOT CONSTRUCTING EMBANKMENTS DURING PERIODS PRONE TO FROST AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS

10. SUSCEPTIBILITY FOR THE DEVELOPMENT OF SINKHOLE WITHIN IDENTIFIED SOILS.

RESOLUTIONS: IN THE EVENT THAT PRESENCE OF A SINKHOLE IS DETECTED DURING THE COURSE OF WORK, CORRECTIVE MEASURES SHALL BE PERFORMED UNDER THE OBSERVATION AND GUIDANCE OF THE OWNER'S GEOTECHNICAL CONSULTANT.
EXCAVATE THE LOOSE, WET SOILS SURROUNDING THE SINKHOLE TO EXPOSE THE SINKHOLE "THROAT" (THE OPENING IN THE ROCK) AND THE ADJACENT STABLE SOILS/ROCK WHERE POSSIBLE, THE EXCAVATION SHALL EXTEND A MINIMUM OF TWO FEET (2') BEYOND THE STABLE SOILS OR TO THE ROCK SURFACE, WHICHEVER IS ENCOUNTERED FIRST.
FILL THE EXPOSED SINKHOLE "THROAT" WITH LEAN CONCRETE TO BLOCK THE MIGRATION OF THE UPPER LAYERS OF SOIL THROUGH THE ROCK OPENING. AFTER CONCRETE HAS CURED OVERNIGHT BACKFILL THE REMAINDER OF THE EXCAVATION WITH CLAYEY SOILS TO PROVIDE A LOW PERMEABILITY BARRIER. THE CLAYEY SOILS SHALL BE PLACED IN 8" LIFTS AND EACH LIFT COMPACTED BY REPEATED PASSES OF THE COMPACTION EQUIPMENT UNTIL STABLE. CARE SHALL BE TAKEN TO ASSURE THAT THE SOIL AT THE EDGES OF THE EXCAVATION ARE WELL COMPACTED.

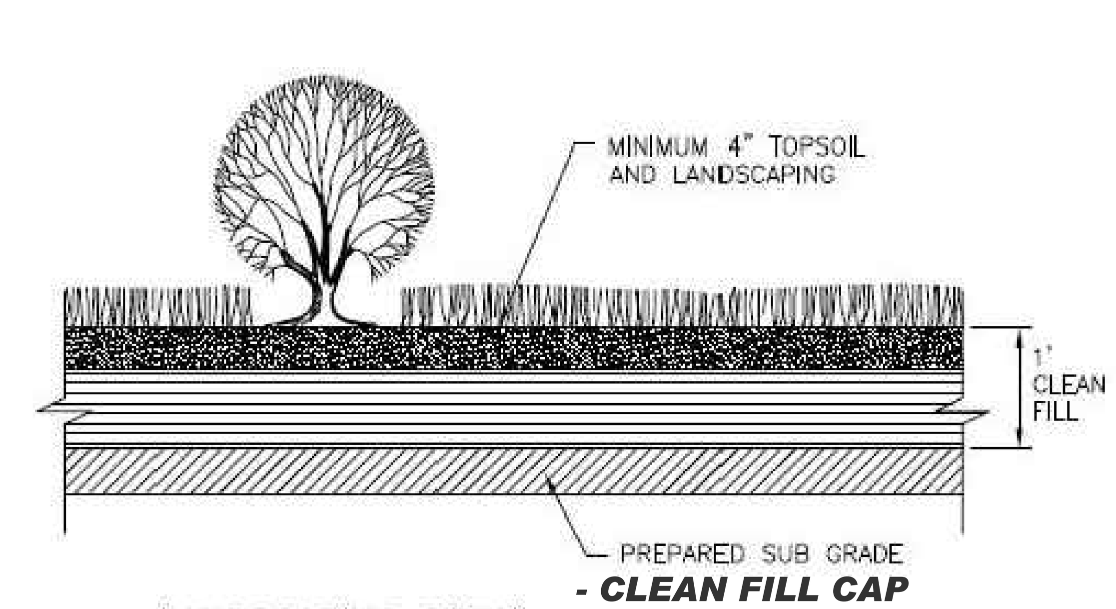
LIMITATIONS FOR PENNSYLVANIA SOILS PERTAINING TO EARTH DISTRURBANCE PROJECTS

SOIL NAME	CUTBANKS CAVE	CORROSIVE TO CONCRETE/ STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/ SEASONAL HIGH WATER TABLE	HYDRIC/ HYDRIC INCLUSIONS	LOW STRENGTH/ LANDSLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK-SWELL	POTENTIAL SINKHOLE	PONDING	WETNESS
RYDER	X	C/S						X	X	X		X		X		
UDORTHENTS	X	C/S	X	X				X	X		X	X				
URBAN LAND	X	C/S	X	X				X	X		X	X				

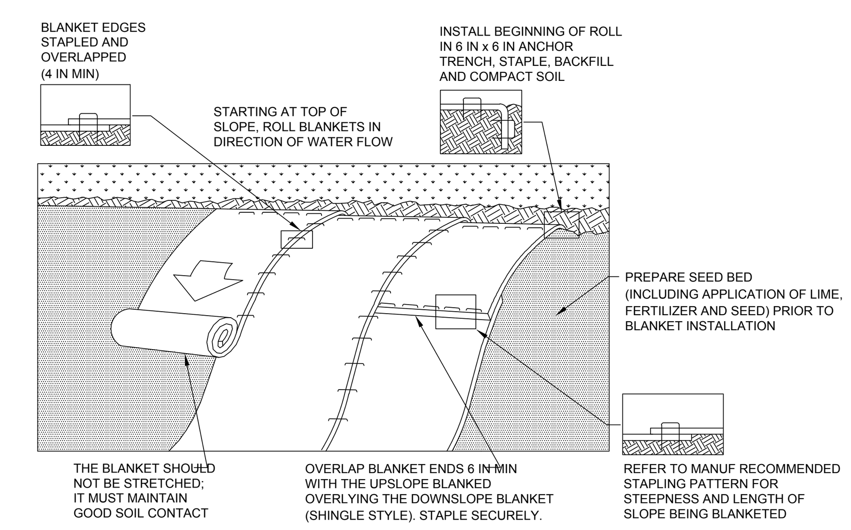


TEMPORARY SOIL STOCKPILE

(PA-O060101 - 09/2023) NOT TO SCALE



LANDSCAPING DETAIL - CLEAN FILL CAP (TO BE PROVIDED ON ALL PERVIOUS AREAS)
SCALE: NONE



NOTES:

SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

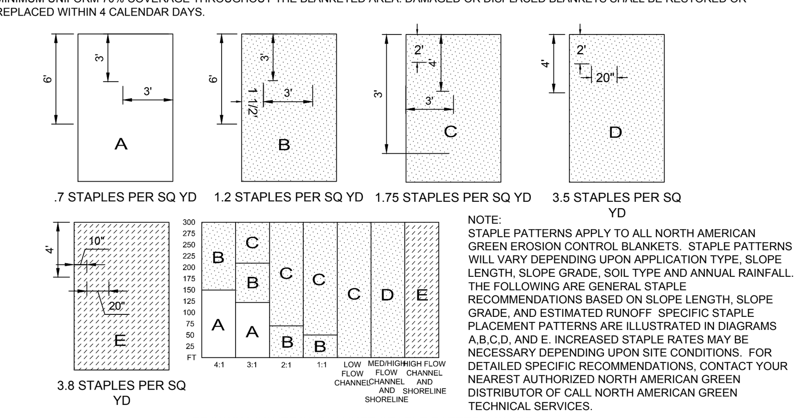
PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

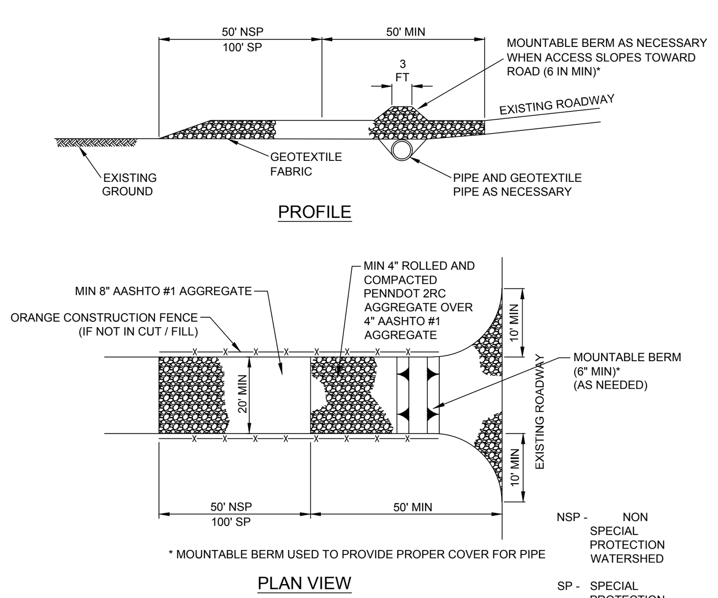


NOTE:
STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS WILL VARY DEPENDING UPON APPLICATION TYPE, SLOPE LENGTH, SLOPE GRADE, SOIL TYPE AND ANNUAL RAINFALL. THE FOLLOWING ARE GENERAL STAPLE RECOMMENDATIONS BASED ON SLOPE LENGTH, SLOPE GRADE, AND ESTIMATED RUNOFF SPECIFIC STAPLE PLACEMENT PATTERNS ARE ILLUSTRATED IN DIAGRAMS A,B,C,D, AND E. INCREASED STAPLE RATES MAY BE NECESSARY DEPENDING UPON SITE CONDITIONS. FOR DETAILED SPECIFIC RECOMMENDATIONS, CONTACT YOUR NEAREST AUTHORIZED NORTH AMERICAN GREEN DISTRIBUTOR OF CALL NORTH AMERICAN GREEN TECHNICAL SERVICES.

EROSION CONTROL BLANKET STAPLE PATTERN GUIDE

STANDARD CONSTRUCTION DETAIL #11-1 EROSION CONTROL BLANKET INSTALLATION

(PADEP - MARCH 2012) NOT TO SCALE



NSP - NON SPECIAL PROTECTION WATERSHED
SP - SPECIAL PROTECTION WATERSHED

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

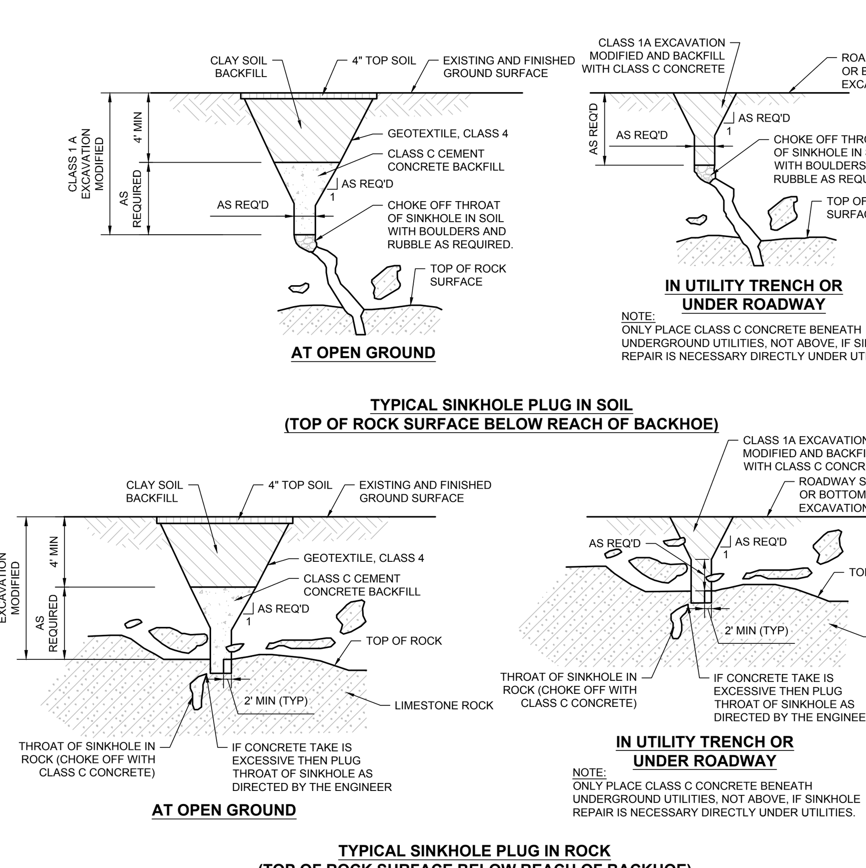
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-1 (ABACT) ROCK CONSTRUCTION ENTRANCE

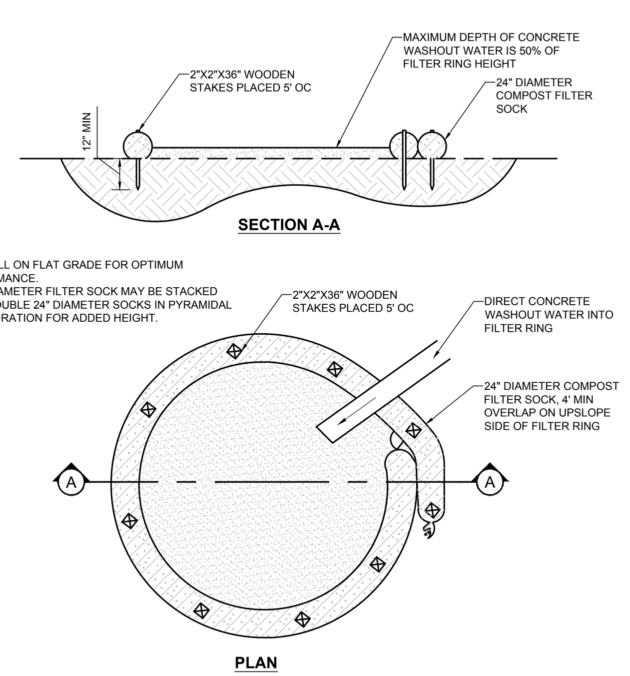
(PADEP - MARCH 2012) NOT TO SCALE



NOTE:
1. THESE NOTES AND DETAILS WERE ADAPTED FROM THOSE IN USE BY THE NORTHAMPTON COUNTY CONSERVATION DISTRICT, AND ARE PROVIDED FOR BID AND BUDGETARY PURPOSES ONLY.
2. SHOULD A SINKHOLE OR SINKHOLE PRONE AREAS BE IDENTIFIED, THE CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL ENGINEER AND PERFORM SINKHOLE PREVENTION AND MITIGATION MEASURES IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. SHOULD DETAILS FROM A GEOTECHNICAL ENGINEER BE AVAILABLE, THEY SHALL SUPERSEDE THIS DETAIL.

TYPICAL SINKHOLE PLUG IN SOIL OR ROCK

(PA-O990101 - 09/2024) NOT TO SCALE



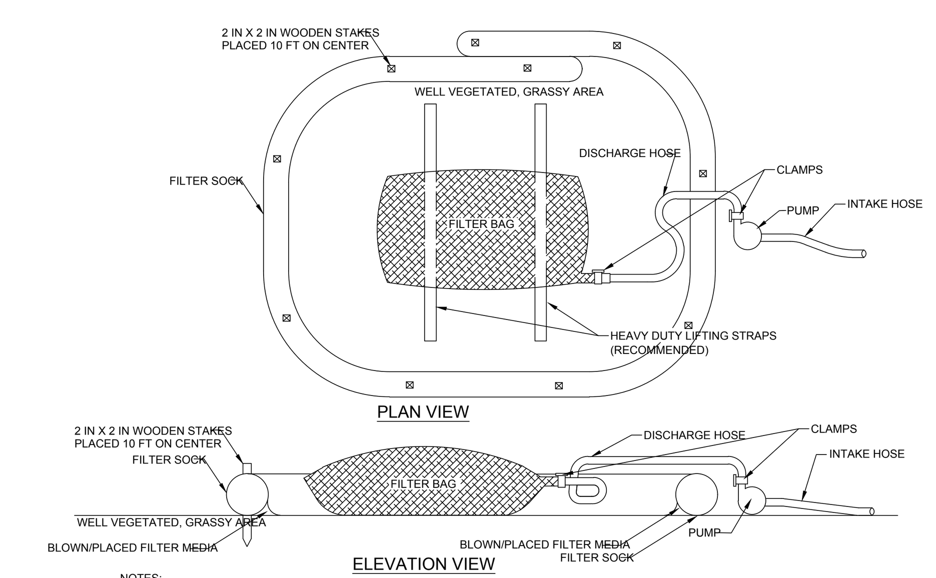
NOTES:
1.) INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2.) 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.

A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.

CONCRETE WASHOUT NOTES:
-UNDER NO CIRCUMSTANCES MAY WASH WATER FROM THESE VEHICLES BE ALLOWED TO ENTER ANY SURFACE WATERS. -WASHOUT FACILITIES SHOULD NOT BE PLACED WITHIN 50 FEET OF STORM DRAINS, OPEN DITCHES OR SURFACE WATERS. -SHOULD BE A MINIMUM OF 10 FEET WIDE AND PROVIDE AT LEAST 12 INCHES OF FREEBOARD ABOVE THE LIQUID AND SOLID WASTE ANTICIPATED BETWEEN CLEANOUT INTERVALS. -THE PIT SHOULD BE LINED WITH PLASTIC SHEETING OF AT LEAST 10-MIL THICKNESS (WITH NO HOLES OR TEARS) TO PREVENT LEACHING OF LIQUIDS INTO THE GROUND. -ALL CONCRETE WASHOUT FACILITIES SHOULD BE INSPECTED DAILY. DAMAGED OR LEAKING WASHOUTS SHOULD BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY. -ACCUMULATED MATERIALS SHOULD BE REMOVED WHEN THEY REACH 75% CAPACITY. -PLASTIC LINERS SHOULD BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.

TYPICAL COMPOST SOCK WASHOUT INSTALLATION

(PA-O020201 - 09/2023) NOT TO SCALE



NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

AS THE PROPOSED DEVELOPMENT IS WITHIN AN IMPAIRED WATERSHED, ALL FILTER BAGS MUST BE SURROUNDED BY A COMPOST FILTER SOCK RING OR OPERATED IN CONJUNCTION WITH A SUMP PIT.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16 (ABACT) PUMPED WATER FILTER BAG

(PADEP - MARCH 2012) NOT TO SCALE

BOHLER //
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES © BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: PAB240068.00-2A
DRAWN BY: ABN
CHECKED BY: MMC
DATE: 12/13/2024
CAD I.D.: P-CIVL-CNDS

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER //
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE071444

SHEET TITLE:
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SHEET NUMBER:
C-813

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-PAB240068.00-2A----->LAYOUT: C-813 EROD
JM

TABLE 4.2

Compost Standards

Organic Matter Content	25% - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5 - 8.5
Moisture Content	30% - 60%
Particle Size	30% - 50% pass through 3/8" sieve
Soluble Salt Concentration	5.0 dS/m (mmhos/cm) Maximum

Filtrexx

Compost Filter Sock Worksheet

Project: LVIP Lot 65 - Proposed Industrial Development

Description: Compost Filter Socks

Location	SiltSoxx Size (inches)	Slope (%)	Max. Allowable Slope Length Above Barrier (ft)*	Provided Slope Length Above Barrier (ft)
CFS #1 (Relocated from Existing)	32	50.00	60	53
CFS #1 (Relocated for Phase 2)	32	33.00	110	60
CFS#2	32	50.00	60	58
CFS#2 (Relocated for Phase 2)	32	50.00	60	57
CFS#3	32	50.00	60	45
CFS #3 (Relocated for Phase 2)	32	40.00	90	30
CFS #4 (Phase 2)	32	35.00	100	40
CFS #5 (Phase 2)	32	33.00	110	42
CFS #6 (Phase 2)	32	30.00	125	40
CFS #7 (Phase 2)	32	50.00	60	52
CFS #8	48	30.00	154	151

TABLE 4.1

Compost Filter Sock Fabric Minimum Specifications

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

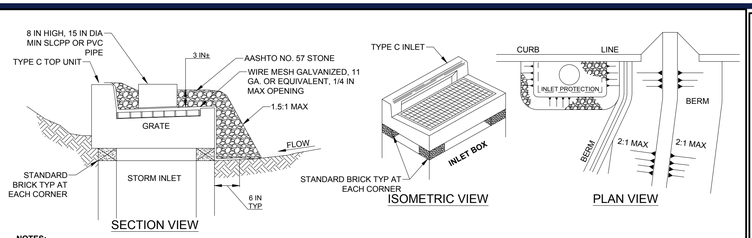
Two-ply systems

Inner Containment Netting	HDPE biaxial net Continuously wound Fusion-welded junctures 3/4" x 3/4" Max. aperture size
Outer Filtration Mesh	Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch) 3/16" Max. aperture size

Sock fabrics composed of burlap may be used on projects lasting 6 months or less.

Filtrexx & JMD

INLET DESIGNATION	MAX. CONSTRUCTION DRAINAGE AREA (AC.)	PROTECTION TYPE
A20	0.248	DETAIL #4-15
A40	0.947	DETAIL #4-22
A50	0.428	DETAIL #4-15
A60	0.323	DETAIL #4-15
B31	0.245	DETAIL #4-15
B41	0.181	DETAIL #4-15
B50	0.222	DETAIL #4-15
B70	0.350	DETAIL #4-15
B80	0.151	DETAIL #4-15
B70A	0.290	DETAIL #4-15
B72	0.272	DETAIL #4-15
B73	0.366	DETAIL #4-16
B63	0.041	DETAIL #4-15
B62	0.140	DETAIL #4-15
B62A	0.261	DETAIL #4-15
B62A.1	0.202	DETAIL #4-15
B62A.2	0.202	DETAIL #4-15
B62A.3	0.202	DETAIL #4-15
B62A.4	0.249	DETAIL #4-15
B62A.6	0.231	DETAIL #4-15
B69	0.216	DETAIL #4-15
B67	0.505	DETAIL #4-22
B66	2.574	DETAIL #4-23
B65	1.355	DETAIL #4-23
B90	0.439	DETAIL #4-15
B100	0.399	DETAIL #4-15
B110	1.364	DETAIL #4-23
D20	0.962	DETAIL #4-23
B120	0.789	DETAIL #4-23
C21	1.164	DETAIL #4-23



NOTES:

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLETS TRIBUTARY TO SEDIMENT BASINS OR SEDIMENT TRAPS. ALTERNATE TYPE C INLET PROTECTION CAN BE USED ON ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN OVERFLOW PIPE AND 4 IN HEAD.

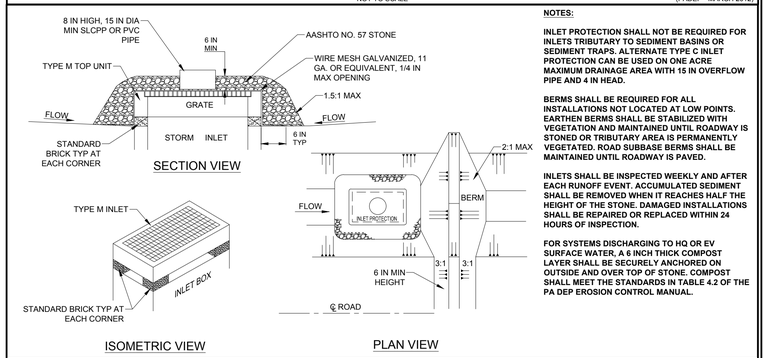
BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT LOW POINTS. EARTHEN BERMS SHALL BE STABILIZED WITH VEGETATION AND MAINTAINED UNTIL ROADWAY IS STONED OR TRIBUTARY AREA IS PERMANENTLY VEGETATED. ROAD SUBBASE BERMS SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED.

INLETS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #4-22
ALTERNATE TYPE C INLET PROTECTION - NOT AT GRADE

NOT TO SCALE (PADEP - MARCH 2012)



NOTES:

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLETS TRIBUTARY TO SEDIMENT BASINS OR SEDIMENT TRAPS. ALTERNATE TYPE C INLET PROTECTION CAN BE USED ON ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN OVERFLOW PIPE AND 4 IN HEAD.

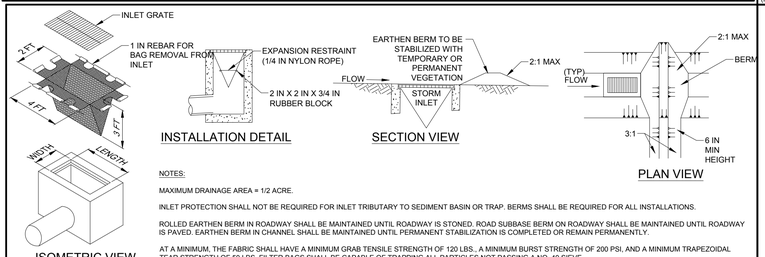
BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT LOW POINTS. EARTHEN BERMS SHALL BE STABILIZED WITH VEGETATION AND MAINTAINED UNTIL ROADWAY IS STONED OR TRIBUTARY AREA IS PERMANENTLY VEGETATED. ROAD SUBBASE BERMS SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED.

INLETS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL #4-23
ALTERNATE TYPE M INLET PROTECTION - NOT AT GRADE

NOT TO SCALE (PADEP - MARCH 2012)



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

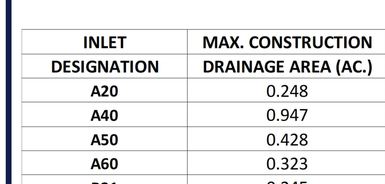
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

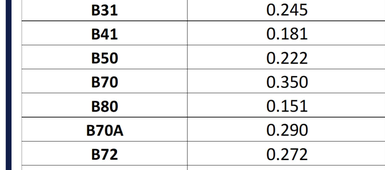
INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-16
FILTER BAG INLET PROTECTION - TYPE M INLET

(PADEP - MARCH 2012) NOT TO SCALE





DESIGN NOTES:

1. COMPOST SOCK SEDIMENT TRAP SHALL BE SIZED TO PROVIDE 2000 CUBIC FEET OF STORAGE CAPACITY FOR EACH ACRE TRIBUTARY TO THE TRAP.
2. MINIMUM BASE WIDTH IS EQUAL TO THE HEIGHT.
3. SEDIMENT ACCUMULATION SHALL NOT EXCEED 1/3 THE TOTAL HEIGHT OF THE TRAP.
4. SOCKS SHALL BE OF LARGER DIAMETER AT THE BASE OF THE TRAP AND DECREASE IN DIAMETER FOR SUCCESSIVE LAYERS AS SHOWN ON THE PLAN VIEW.
5. ENDS OF THE TRAP SHALL BE A MINIMUM OF 1 FOOT HIGHER IN ELEVATION THAN THE MID-SECTION, WHICH SHALL BE LOCATED AT THE POINT OF DISCHARGE.

NOTES:

SOCK MATERIAL SHALL MEET THE STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST SOCK SEDIMENT TRAPS SHALL NOT EXCEED THREE SOCKS IN HEIGHT AND SHALL BE STACKED IN PYRAMIDAL FORM AS SHOWN ABOVE. MINIMUM TRAP HEIGHT IS ONE 24" DIAMETER SOCK. ADDITIONAL STORAGE MAY BE PROVIDED BY MEANS OF AN EXCAVATED SUMP 12" DEEP EXTENDING 1 TO 3 FEET UPSLOPE OF THE SOCKS ALONG THE LOWER SIDE OF THE TRAP.

COMPOST SOCK SEDIMENT TRAPS SHALL PROVIDE 2,000 CUBIC FEET STORAGE CAPACITY WITH 12" FREEBOARD FOR EACH TRIBUTARY DRAINAGE ACRE. (SEE MANUFACTURER FOR ANTICIPATED SETTLEMENT.)

THE MAXIMUM TRIBUTARY DRAINAGE AREA IS 5.0 ACRES. SINCE COMPOST SOCKS ARE "FLOW-THROUGH," NO SPILLWAY IS REQUIRED.

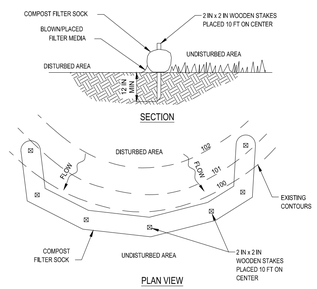
COMPOST SOCK SEDIMENT TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3 THE HEIGHT OF THE SOCKS.

PHOTODEGRADABLE AND BIODEGRADABLE SOCKS SHALL NOT BE USED FOR MORE THAN 1 YEAR.

SED TRAP #	BOT. ELEV. (FT)	CLEANOUT ELEV. (FT)	TOP ELEV. (FT)
1	242.00	243.00	244.00
2	240.00	241.00	242.00

STANDARD CONSTRUCTION DETAIL #3-11 COMPOST SOCK SEDIMENT TRAP

(PADEP - MARCH 2012) NOT TO SCALE



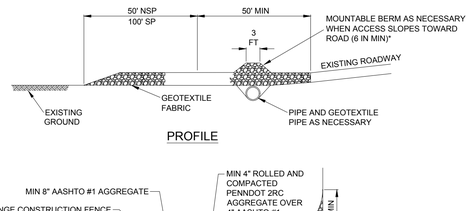
FILTREXX

NOTES:

- SOCK MATERIAL SHALL MEET THE STANDARDS OF PA DEP EROSION CONTROL MANUAL TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF PA DEP EROSION CONTROL MANUAL TABLE 4.2
- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST EIGHT (8) FEET UP SLOPE AT 45° TO THE MAIN SOCK ALIGNMENT (PA DEP EROSION CONTROL MANUAL FIGURE 4.1). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON PA DEP EROSION CONTROL MANUAL FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
- TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
- SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER SIX (6) MONTHS, PHOTODEGRADABLE SOCKS AFTER ONE (1) YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK

(PADEP - MARCH 2012) NOT TO SCALE



NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

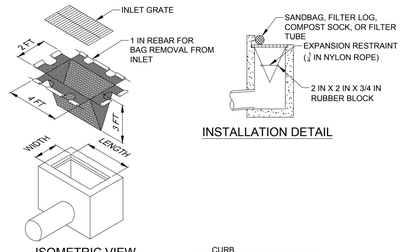
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

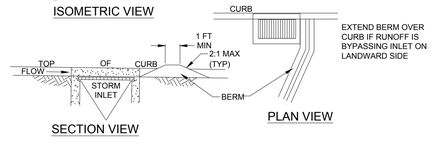
MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-1 (ABACT)
ROCK CONSTRUCTION ENTRANCE

(PADEP - MARCH 2012) NOT TO SCALE





NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-15
FILTER BAG INLET PROTECTION - TYPE C INLET

(PADEP - MARCH 2012) NOT TO SCALE

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF STATE
I HEREBY CERTIFY THAT THE NUMBER OF COPIES OF THE PLAN OR DRAWING HEREWITH ATTACHED IS NOT GREATER THAN THE NUMBER OF COPIES FURNISHED TO THIS DEPARTMENT.
AUTHORIZATION FROM BOHLER, ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.
BOHLER

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN CONSENT OF BOHLER.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-CNDS

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD CITY OF BETHLEHEM LVIP VII NORTHAMPTON COUNTY, PA

BOHLER

74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

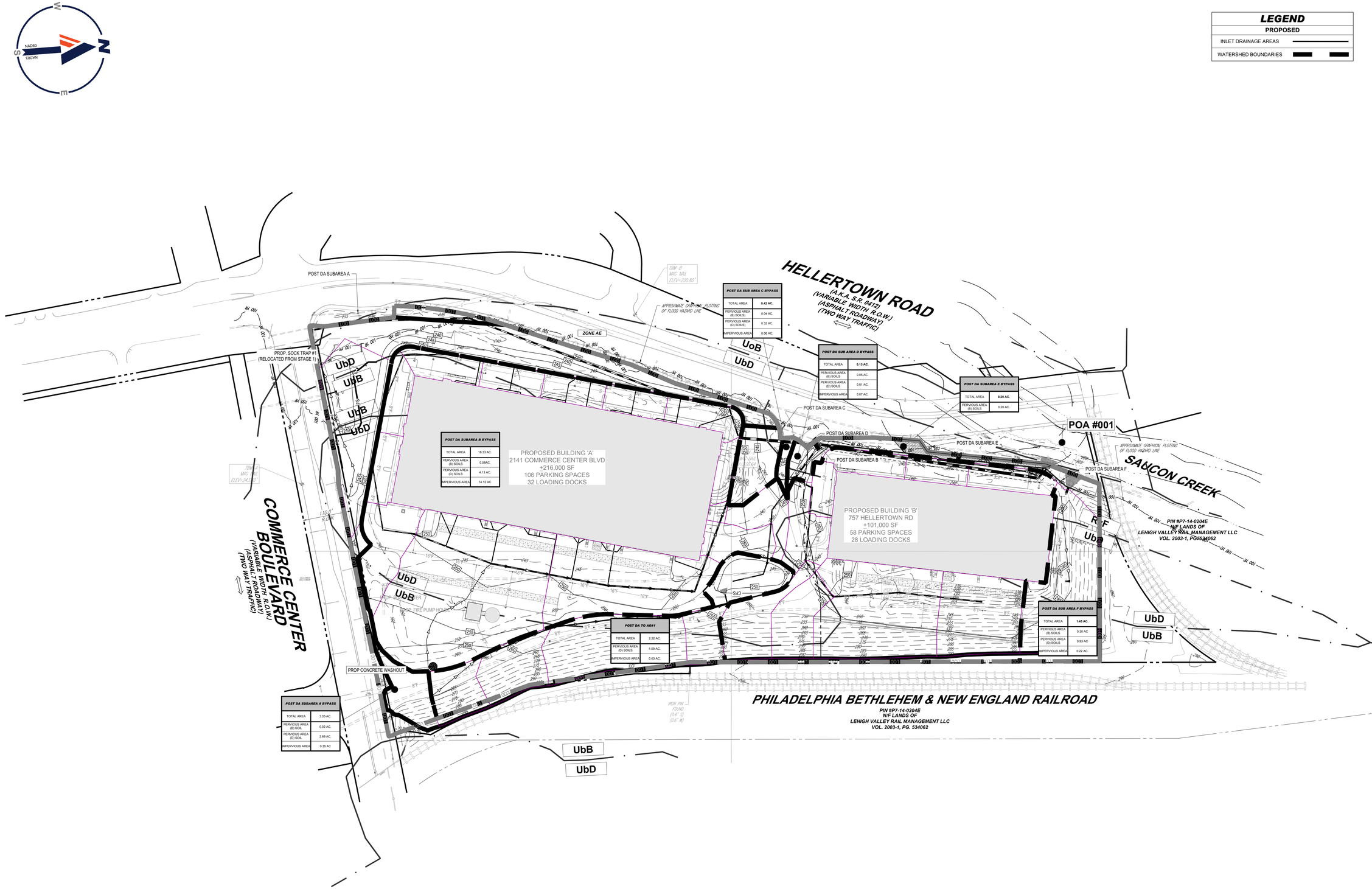
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SHEET NUMBER:

C-814

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-PAB240068.00-2A-----LAYOUT: C-814 EROD



LEGEND

PROPOSED	
INLET DRAINAGE AREAS	
WATERSHED BOUNDARIES	

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHTED BY BOHLER. NOT TO BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER

74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

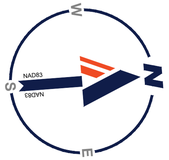
POST DEVELOPMENT DRAINAGE AREA MAP

SHEET NUMBER:

C-815

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-SESC-PAB240068.00-2A-----LAYOUT: C-815 POST DEV
JMV



PLANT SCHEDULE OVERALL

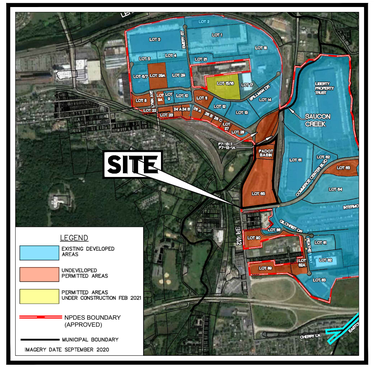
CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		DECIDUOUS TREES			
ARDQ	32	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2.5" CAL.	B&B
GTK	7	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYLINE THORNLESS HONEY LOCUST	2.5" CAL.	B&B
KB	6	KYRSEA BI-LUNTA	SOUR GUM	2.5" CAL.	B&B
QR	14	QUERCUS RUBRA	RED OAK	2.5" CAL.	B&B
TA	26	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B
		EVERGREEN TREES			
ABC	32	ABIES CONCOLOR	WHITE FIR	6-8'	B&B
PAB	26	PICEA ABIES	NORWAY SPRUCE	7 HT.	B&B
		ORNAMENTAL TREES			
AGB	7	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	2.5" CAL.	B&B
CC	24	CORCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B
CF	11	CRNUS FLORIDA	FLOWERING DOGWOOD	2.5" CAL.	B&B
MV	13	MAGNOLIA VIRGINIANA	SWEET BAY	2.5" CAL.	B&B
PS2	4	PRUNUS SARGENTII	SARGENT CHERRY	4" CAL.	B&B

PLANT SCHEDULE LOT A

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		DECIDUOUS TREES			
ARDQ	17	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2.5" CAL.	B&B
GTK	2	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYLINE THORNLESS HONEY LOCUST	2.5" CAL.	B&B
KB	10	KYRSEA BI-LUNTA	SOUR GUM	2.5" CAL.	B&B
QR	7	QUERCUS RUBRA	RED OAK	2.5" CAL.	B&B
TA	23	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B
		EVERGREEN TREES			
ABC	30	ABIES CONCOLOR	WHITE FIR	6-8'	B&B
PAB	26	PICEA ABIES	NORWAY SPRUCE	7 HT.	B&B
		ORNAMENTAL TREES			
AGB	7	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	2.5" CAL.	B&B
CC	25	CORCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B
CF	11	CORNUS FLORIDA	EASTERN DOGWOOD	2.5" CAL.	B&B
MV	13	MAGNOLIA VIRGINIANA	SWEET BAY	2.5" CAL.	B&B

PLANT SCHEDULE LOT B

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		DECIDUOUS TREES			
ARDQ	4	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2.5" CAL.	B&B
TA	3	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B
		ORNAMENTAL TREES			
CC	4	CORCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B
		SHRUBS			
AML	38	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY (SMART)	18-24"	CONTAINER
HL	36	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LIME PANICLE HYDRANGEA	5 GAL.	CONTAINER
HQSQ	6	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL.	CONTAINER
RLE	7	KALMIA LATIFOLIA 'ELF'	DWARF MOUNTAIN LAUREL	36" B/B	B&B
PTA	3	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK (DWARF)	24-30"	CONTAINER

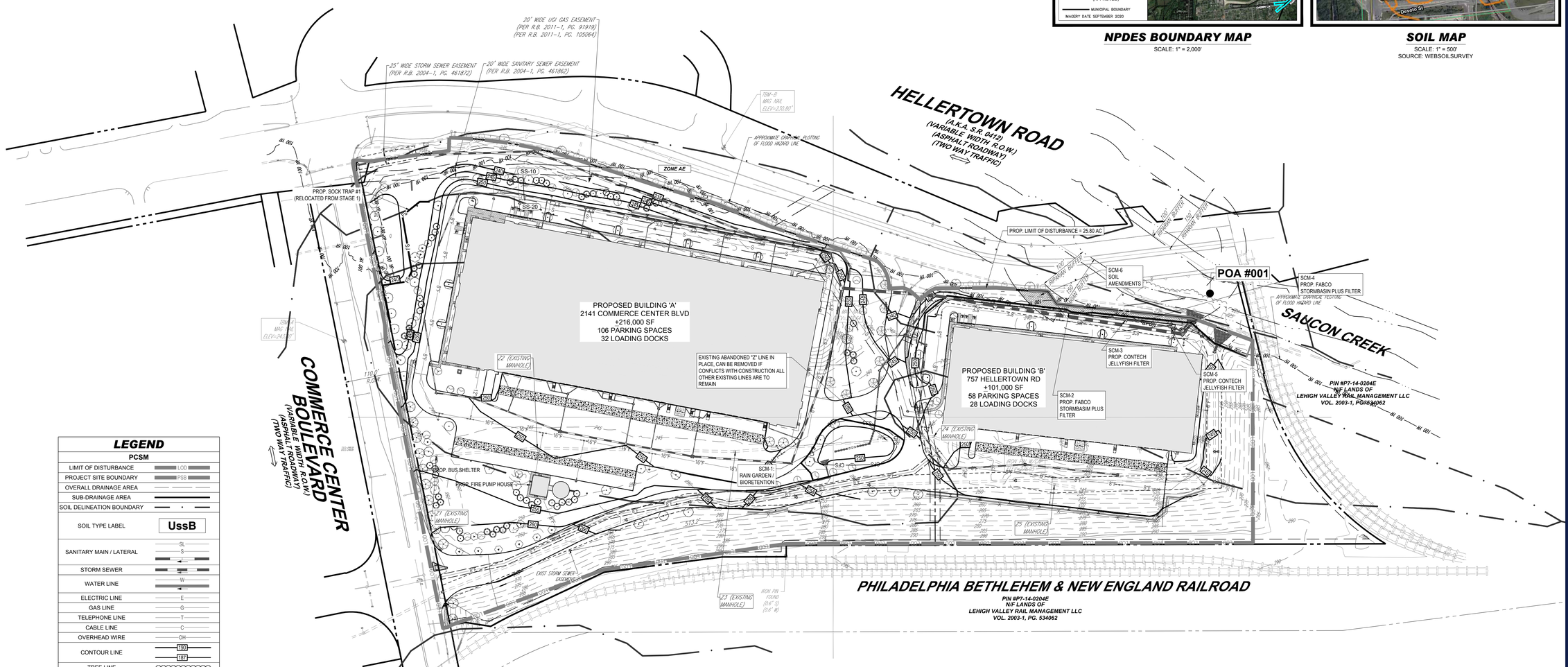


NPDES BOUNDARY MAP

SCALE: 1" = 2,000'

SOIL MAP

SCALE: 1" = 500'
SOURCE: WEBSOILSURVEY



CHAPTER 93 RECEIVING WATERSHED AND STREAM CLASSIFICATION: SAUCON CREEK VIA STORM SEWERS, CWF, MF

IMPAIRED: URBAN RUNOFF/STORM SEWERS - SILTATION

SCALE: 1" = 100'

LEGEND

PCSM

LIMIT OF DISTURBANCE	LOD
PROJECT SITE BOUNDARY	PSB
OVERALL DRAINAGE AREA	
SUB-DRAINAGE AREA	
SOIL DELINEATION BOUNDARY	
SOIL TYPE LABEL	UssB
SANITARY MAIN / LATERAL	SL / S
STORM SEWER	
WATER LINE	W
ELECTRIC LINE	E
GAS LINE	G
TELEPHONE LINE	T
CABLE LINE	C
OVERHEAD WIRE	OH
CONTOUR LINE	190 / 187
TREE LINE	
SANITARY MANHOLE	S
STORM SEWER MANHOLE	D
RIPRAP APRON	
TEST PIT LOCATION	T-#
DISCHARGE POINT	DP 001
LANDSCAPING	
SOIL AMENDMENTS	

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A-----LAYOUT C-816 PCSM

JMV 12/13/2024 11:39:47 AM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND COPYRIGHTED AND SHALL NOT BE SCALED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: PAB240068.00-2A
DRAWN BY: ABN
CHECKED BY: MMC
DATE: 12/13/2024
CAD I.D.: P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

COMMONWEALTH OF PENNSYLVANIA — MATTHEW M. CHARTRAND — PROFESSIONAL ENGINEER

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE-071444

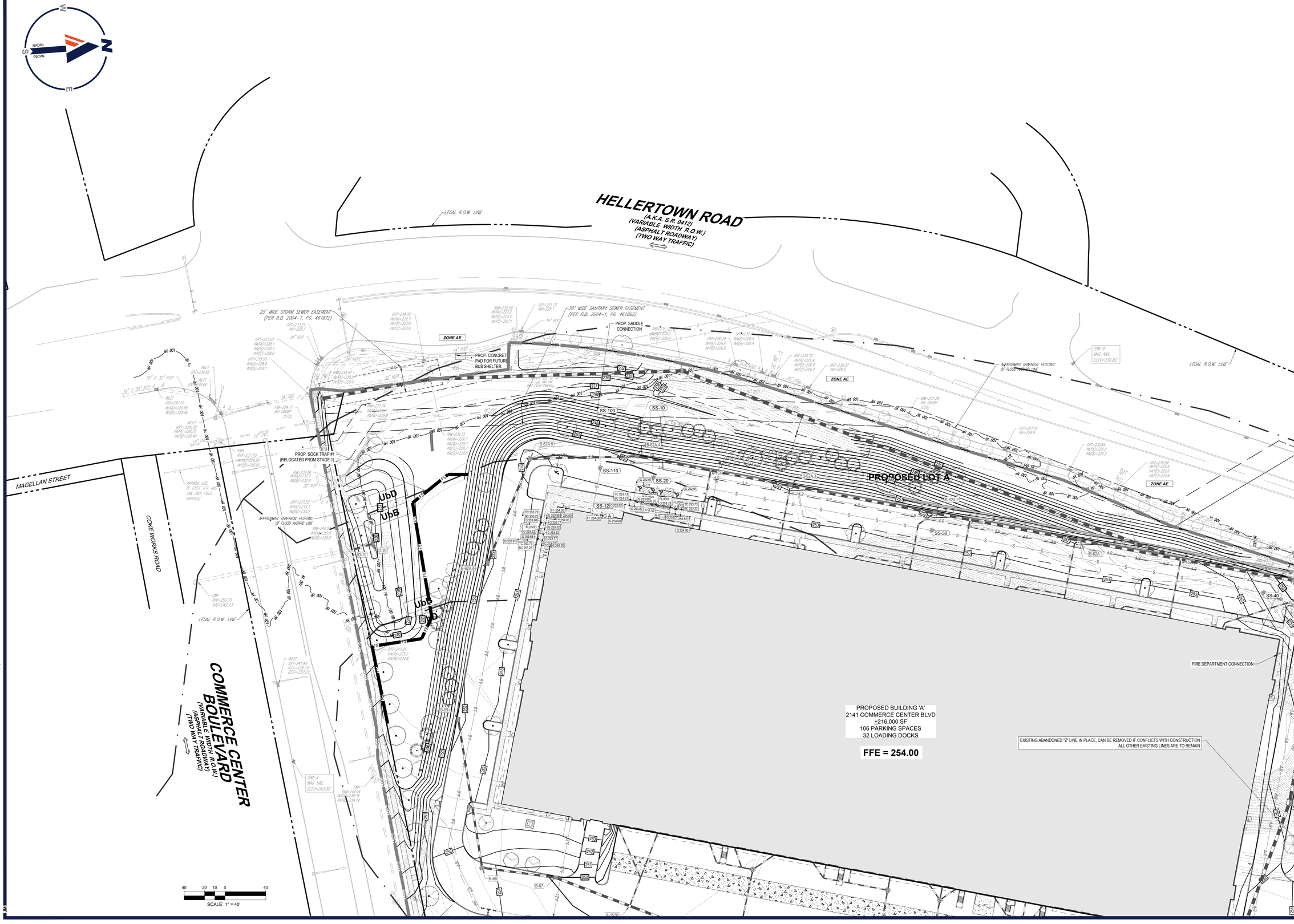
SHEET TITLE:

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

SHEET NUMBER:

C-816

REVISION 2 - 02/19/2025



R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-SESC-PAB240068.00-2A——LAYOUT: C-817 PCSM (A)

JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHTED AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (A)

SHEET NUMBER:

C-817

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A-----LAYOUT: C-818 PCSM (B)
JMV

TM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811
Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (B)

SHEET NUMBER:

C-818

REVISION 2 - 02/19/2025

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
LAND DEVELOPMENT
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE WORKING DOG, SEDUM AND COUNTRY OF TWO PLANS OR PLANTS MAY NOT BE SOWED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

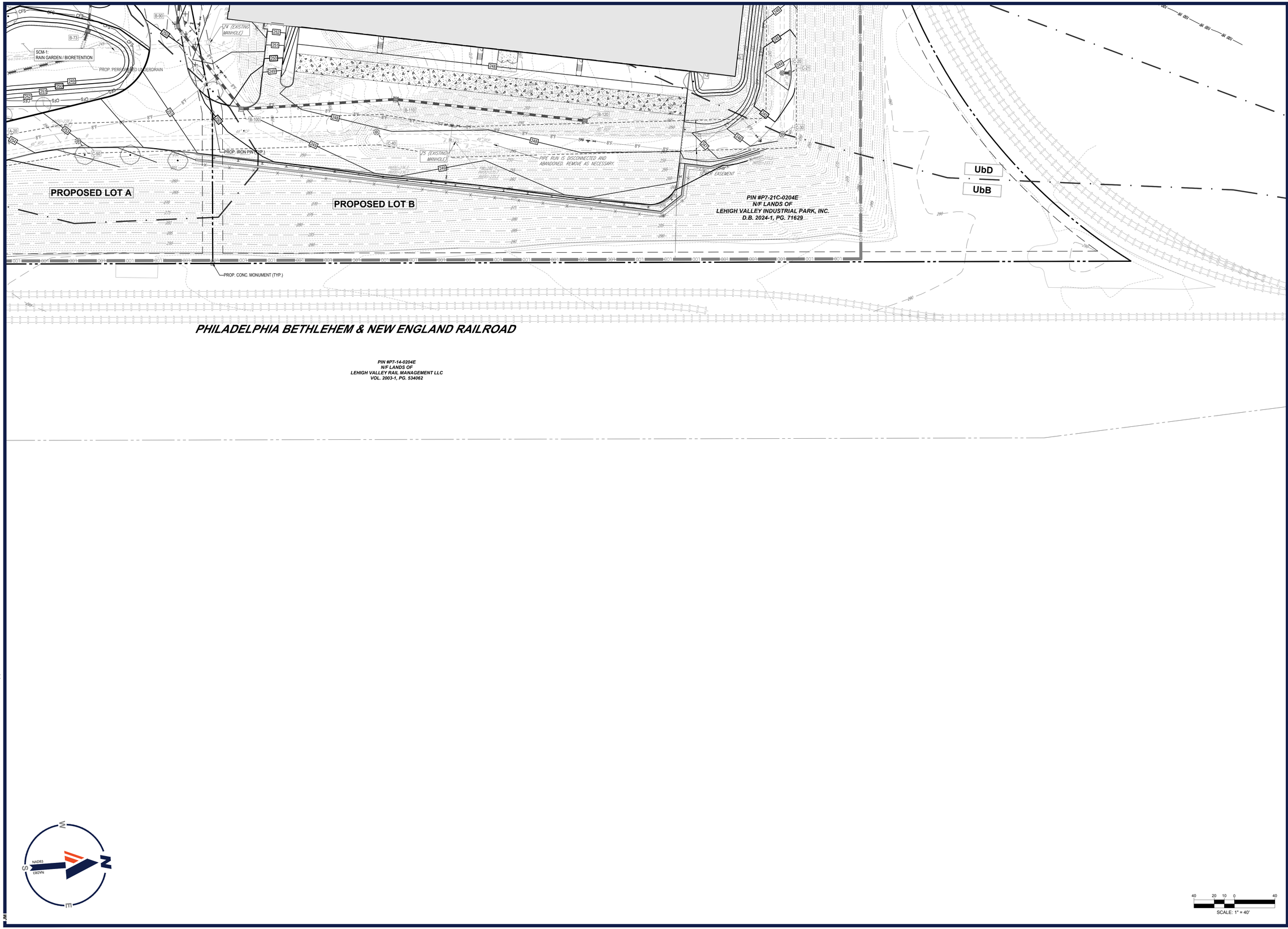
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (C)

SHEET NUMBER:

C-819

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A-----LAYOUT: C-819 PCSM (C)
JMV



40 20 10 0 40

SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-SESC-PAB240068.00-2A-----LAYOUT C-820 PCSM (D)

JM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE WORKING DOCS AND CONTENT OF THIS PLANS STORED ON THIS DISK MAY NOT BE ALTERED OR USED BY ANY PERSONS, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER, AND ANY UNAUTHORIZED USE SHALL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-SESC

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (D)

SHEET NUMBER:

C-820

REVISION 2 - 02/19/2025

PCSM - GENERAL BMP NOTES
(Rev. 5/2024)

1. A SITE INSPECTION AND APPROVAL BY THE COUNTY CONSERVATION DISTRICT IS REQUIRED PRIOR TO THE REMOVAL OR CONVERSION OF SEDIMENT BASINS AND TRAPS.
2. BOHLER ENGINEERING SHALL BE NOTIFIED OF PRE-CONSTRUCTION MEETING DATE AND BMP CONSTRUCTION SCHEDULE.
3. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO LIMIT THE COMPACTION IN THE PROPOSED BMP BOTTOMS.
4. REFER TO THE BMP CONSTRUCTION DETAILS FOR THE CONSTRUCTION OF ALL PROPOSED STORMWATER MANAGEMENT BMPs.
5. REFER TO THE PCSWM PLAN AND DETAILS FOR SPECIFIC BMP CONSTRUCTION GUIDELINES.
6. AS-BUILT PLANS OF THE STORMWATER BMPs FOR EACH PROJECT PHASE SHALL BE PROVIDED WITHIN SIX MONTHS FOLLOWING THE COMPLETION OF EACH PHASE. THE AS-BUILT PLANS SHALL BE SIGNED AND SEALED BY A PA REGISTERED PROFESSIONAL SURVEYOR.
7. A NOTICE OF TERMINATION (NOT) WILL BE REQUIRED TO BE SUBMITTED FOLLOWING APPROVAL OF THE FINAL AS-BUILT PLANS. PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION TO ENSURE SITE STABILIZATION AND VERIFY ADEQUATE INSTALLATION AND FUNCTION OF STORMWATER BMPs.

LONG-TERM OPERATION AND MAINTENANCE SCHEDULE
(Rev. 5/2024)

§102.8(f)(10)

1. UNTIL THE SITE IS STABILIZED AND DURING THE CONSTRUCTION ACTIVITIES, ALL BMPs MUST BE MAINTAINED PROPERLY BY CONTRACTOR. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL BMPs AS SPECIFIED. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY AND IN ACCORDANCE WITH THESE PROCEDURES, PLANS, AND DETAILS. ANY AREAS DISTURBED DURING MAINTENANCE MUST BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE GENERAL CONSERVATION NOTES AND SPECIFICATIONS.
2. ALL SITE INSPECTIONS MUST BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE INDICATING THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG MUST BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.
3. SHOULD ON-SITE EROSION OCCUR FROM THE LANDSCAPED AREAS, THE SOURCE OF EROSION SHALL BE IMMEDIATELY STABILIZED AND THE INLETS AND STORMWATER PIPING SHALL BE CHECKED FOR ACCUMULATION AND CLEARED IF ACCUMULATION OF SEDIMENT EXISTS.
4. HEAVY CONSTRUCTION VEHICLES SHALL NOT BE PARKED ON OR DRIVEN OVER BMP FACILITIES AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY EQUIPMENT, INCLUDING MOWERS.
5. INSPECT INFILTRATION FACILITIES AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SIGNS OF EROSION.
6. REMOVE ACCUMULATED SEDIMENT FROM THE FACILITIES AS REQUIRED. RESTORE ORIGINAL CROSS-SECTION IF NECESSARY. PROPERLY DISPOSE OF SEDIMENT AS SPECIFIED. FOR ABOVE-GROUND INFILTRATION FACILITIES, REMOVE AND REPLACE SAND/STONE LAYER AS NECESSARY IF FACILITY DEWATERING TIME EXCEEDS 72 HOURS.

JERC PARTNERS XCII, LLC IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT BMPs AS DESCRIBED HEREIN

LONG-TERM OPERATION AND MAINTENANCE SCHEDULE

BMP	SCHEDULE	INSPECTION TASK	MAINTENANCE	FAILURE INDICATORS
BMP 5.6.3 RE-VEGETATE/RE-FOREST DISTURBED AREAS	ANNUALLY	- INSPECT FOR DYING/DEAD PLANT MATERIAL - INSPECT FOR INVASIVE SPECIES	REMOVE INVASIVE SPECIES AND DISCARD IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. ANY PLANT THAT IS FOUND TO BE DEAD OR IS DYING AND CANNOT BE SAVED SHALL BE REPLACED IN KIND.	FAILURE INDICATORS INCLUDE AN EXCESSIVE GROWTH OF INVASIVE SPECIES AND VEGETATION THAT FAILS TO ESTABLISH OR DIES OFF UPON OBSERVING A FAILURE INDICATOR A QUALIFIED INDIVIDUAL SUCH AS A LANDSCAPE ARCHITECT OR SOIL SCIENTIST/ENGINEER SHALL BE CONSULTED TO DETERMINE THE EXACT CAUSE OF THE FAILURE. REMEDIATION SHALL BE IN ACCORDANCE WITH THE QUALIFIED INDIVIDUALS RECOMMENDATIONS BASED ON THEIR INVESTIGATION.
BMP 6.4.5 RAIN GARDEN / BIORETENTION	4 TIMES PER YEAR	- INSPECT FOR LITTER AND SEDIMENT ACCUMULATION - INSPECT VEGETATIVE COVER CONDITION - EVALUATE PLANT GROWTH	NEEDED MAINTENANCE SHOULD BE CONDUCTED IMMEDIATELY AFTER EACH INSPECTION. THE LITTER AND SEDIMENT SHALL BE REMOVED TO RESTORE DESIGN CAPACITIES AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.	FAILURE INDICATORS INCLUDE IF THE RAINGARDEN/BIORETENTION BASIN DOES NOT DEWATER WITHIN 72 HOURS OR IF AN ABUNDANCE OF WETLAND PLANTS ARE FOUND WITHIN THE RAINGARDEN/BIORETENTION BASIN UPON OBSERVING A FAILURE INDICATOR A QUALIFIED INDIVIDUAL SUCH AS AN ENGINEER OR SOIL SCIENTIST/ENGINEER SHALL BE CONSULTED TO DETERMINE THE EXACT CAUSE OF FAILURE. UPON FURTHER INVESTIGATION PERFORMED BY THE QUALIFIED INDIVIDUAL A REMEDIATION PLAN SHALL BE IMPLEMENTED TO RESTORE THE BASIN TO ITS ORIGINAL DESIGN CAPACITIES, THIS INCLUDES PERFORMING ADDITIONAL INFILTRATION TESTING TO DETERMINE WHETHER THE FACILITY HAS BEEN BROUGHT BACK TO ITS ORIGINAL DESIGN CAPACITIES.
	ANNUALLY	- REMOVE DETRITUS, CUT BACK DORMANT PERENNIAL PLANS - INSPECT FOR INVASIVE PLANT SPECIES - INSPECT MULCH LEVEL AND REPLENISH AS NECESSARY		
BMP 6.6.4 WATER QUALITY FILTERS & HYDRODYNAMIC DEVICES	2 TIMES PER YEAR	- INSPECT OPERATION OF DEVICE - INSPECT FOR ACCUMULATION OF COLLECTED MATERIALS - INSPECT FOR RIPPED MEMBRANE IN THE CARTRIDGE/TENTACLE.	NEEDED MAINTENANCE SHALL BE PERFORMED IMMEDIATELY AFTER THE INSPECTION. ACCUMULATION OF SEDIMENT/DEBRIS SHALL BE REMOVED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS/RECOMMENDATIONS. THE SEDIMENT/DEBRIS SHALL BE REMOVED, RECYCLED OR DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. IF UPON INSPECTION THE MEMBRANE FROM ANY CARTRIDGE/TENTACLE IS FOUND TO BE TORN, THE ENTIRE CARTRIDGE/TENTACLE SHALL BE REPLACED IMMEDIATELY. THE CARTRIDGE/TENTACLE SHALL BE REPLACED EVERY 3 YEARS REGARDLESS OF CONDITION.	SIGNS OF FAILURE IN A JELLYFISH INCLUDE SEDIMENT/DEBRIS LADEN RUNOFF FLOWING OUT OF THE FILTER. MAINTENANCE SHALL BE PERFORMED IMMEDIATELY IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
BMP 6.7.3 SOILS AMENDMENT & RESTORATION	AS NEEDED	- MINIMUM MAINTENANCE IS REQUIRED - AERATE COMPACTED AREAS AS NEEDED	MINIMUM MAINTENANCE IS REQUIRED FOR SOIL AMENDMENTS. WHEN THE SOIL BECOMES OVERLY COMPACTED OVER TIME, THE SOIL SHALL BE AERATED.	FAILURE INDICATORS INCLUDE OVERLY COMPACTED SOIL AND/OR A LACK OF GRASS/VEGETATIVE COVER. A QUALIFIED INDIVIDUAL SUCH AS A LANDSCAPE ARCHITECT OR A SOIL SCIENTIST/ENGINEER SHALL BE CONSULTED TO DETERMINE THE EXACT CAUSE OF THE FAILURE. REMEDIATION SHALL BE IN ACCORDANCE WITH THE QUALIFIED INDIVIDUALS RECOMMENDATIONS BASED ON THEIR INVESTIGATION.

CRITICAL STAGES
(Rev. 5/2024)

- INSTALLATION OF SCM-1 RAIN GARDEN / BIO-RETENTION BMP INCLUDING IMPERMEABLE LINER, SOIL MEDIA, AND OUTLET CONTROL STRUCTURE
- INSTALLATION OF PERMANENT WATER QUALITY INLET FILTERS (SCM-2 & SCM-4)
- INSTALLATION OF WATER QUALITY MTDS (SCM-3 & SCM-5)
- INSTALLATION OF SOIL AMENDMENTS (SCM-6)
- INSTALLATION OF TREES CREDITED FOR SCM-7 RE-VEGETATE/RE-FOREST WITH NATIVE SPECIES

RECYCLING OR DISPOSAL OF MATERIALS
(Rev. 5/2024)

§102.8(f)(11)

THE FOLLOWING IS A LIST THAT INCLUDES, BUT THAT IS NOT LIMITED TO, THE POTENTIAL CONSTRUCTION WASTES THAT MAY EX ON-SITE:
- TRASH (CANS, BOTTLES, ETC.)
- YARD WASTE (LEAVES, GRASS CLIPPINGS, ETC.)
- DEBRIS COLLECTED IN INLETS
- SEDIMENT CAPTURED IN ANY PCSM BMP

ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH LOCAL REQUIREMENTS. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

1.) DUST CONTROL - CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE SITE AT THE STABILIZED CONSTRUCTION ENTRANCE. THE PURPOSE IS TO TRAP DUST AND MUD THAT WOULD OTHERWISE BE CARRIED OFF-SITE BY CONSTRUCTION TRAFFIC. WATER TRUCKS WILL BE USED AS NEEDED DURING CONSTRUCTION TO REDUCE DUST GENERATED ON THE SITE. DUST CONTROL MUST BE PROVIDED BY THE CONTRACTOR TO A DEGREE THAT IS ACCEPTABLE TO THE LOCAL CONSERVATION DISTRICT. AFTER CONSTRUCTION, THE SITE WILL BE STABILIZED, WHICH WILL REDUCE THE POTENTIAL FOR DUST GENERATION.

2.) SOLID WASTE DISPOSAL - NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, ARE ALLOWED TO BE DISCHARGED FROM THE SITE WITH STORMWATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS INCIDENTAL TO THE MAJOR CONSTRUCTION ACTIVITIES, MUST BE COLLECTED AND PLACED IN CONTAINERS. THE CONTAINERS WILL BE EMPTIED AS NECESSARY BY A CONTRACT TRASH DISPOSAL SERVICE AND HAULED AWAY FROM THE SITE.

3.) SANITARY FACILITIES - ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY OR SEPTIC SYSTEM REGULATIONS. TEMPORARY SANITARY FACILITIES WILL BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND WILL BE SERVICED BY A LICENSED COMMERCIAL OPERATOR.

4.) WATER SOURCE - NON-STORMWATER COMPONENTS OF SITE DISCHARGE MUST BE CLEAN WATER.WATER USED FOR CONSTRUCTION WHICH DISCHARGES FROM THE SITE MUST ORIGINATE FROM A PUBLIC WATER SUPPLY OR PRIVATE WELL APPROVED BY THE STATE HEALTH DEPARTMENT. WATER USED FOR CONSTRUCTION THAT DOES NOT ORIGINATE FROM AN APPROVED PUBLIC SUPPLY MUST NOT DISCHARGE FROM THE SITE.

5.) CONCRETE WASTE FROM CONCRETE READY-MIX TRUCKS - DISCHARGE OF EXCESS OR WASTE CONCRETE AND/OR WASH WATER FROM CONCRETE TRUCKS WILL BE ALLOWED ON THE CONSTRUCTION SITE, BUT ONLY IN SPECIFICALLY DESIGNATED DIKED AREAS PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASH WATER AND STORMWATER THAT WILL BE DISCHARGED FROM THE SITE.

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-PAB240068.00-2A----->LAYOUT: C-821 PCSM NOTES & DETAILS

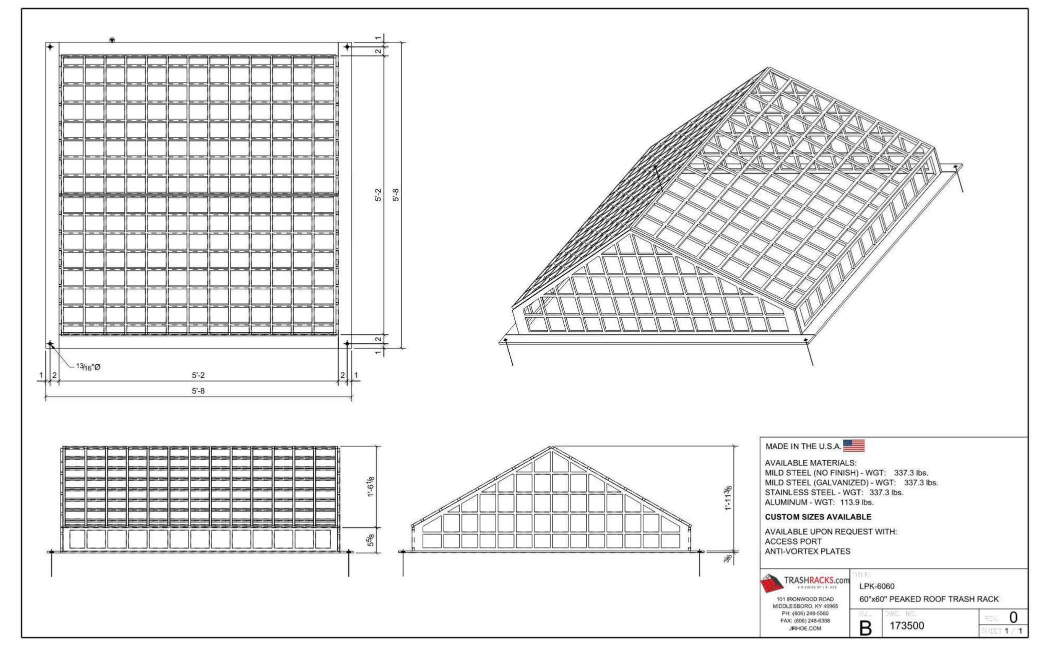
JM

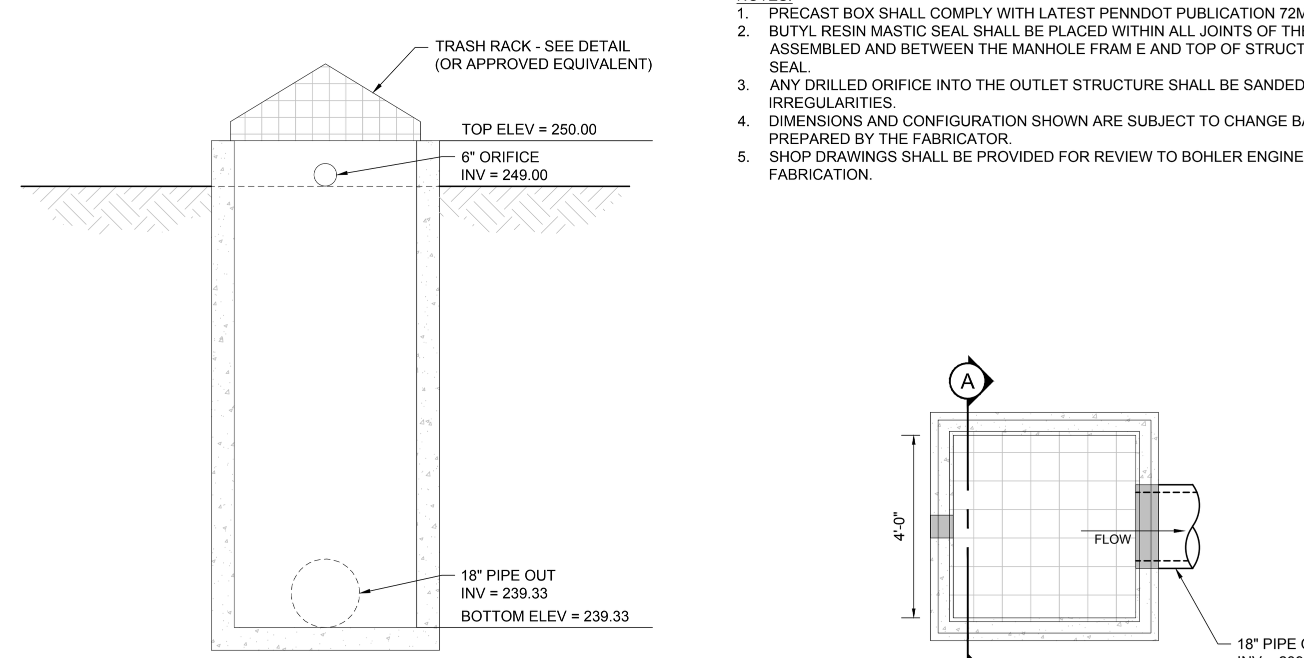
DEFINITION OF CLEAN FILL AND IMPORT/EXPORT MATERIAL NOTES
(Rev. 5/2024)

IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE APPLICANT.

1. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).
2. CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".
3. ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.
4. ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM.

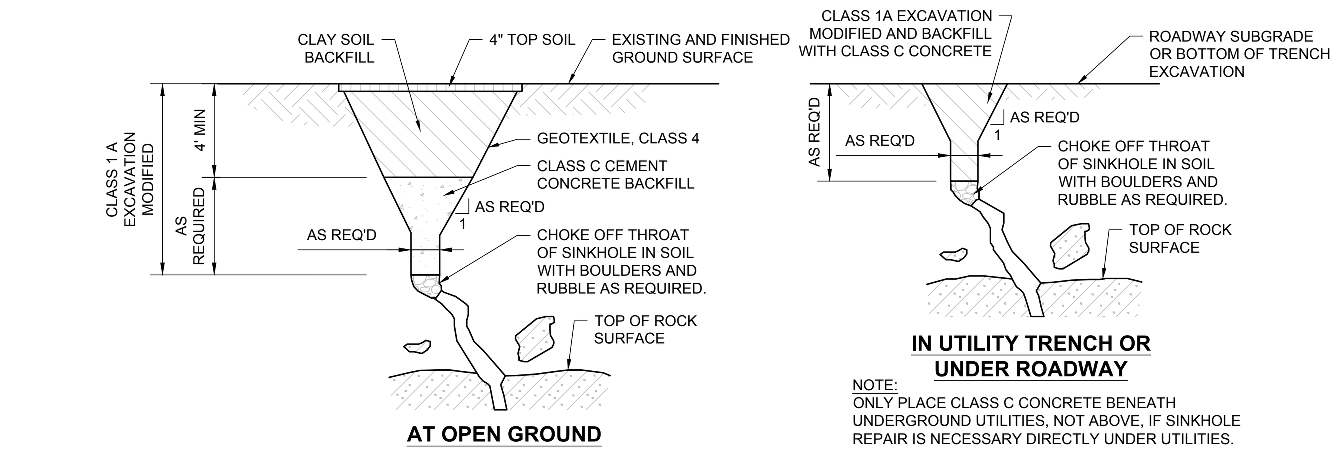




NOTES:
1. PRECAST BOX SHALL COMPLY WITH LATEST PENNDOT PUBLICATION 72M & PUBLICATION 408 STANDARDS.
2. BUTYL RESIN MASTIC SEAL SHALL BE PLACED WITHIN ALL JOINTS OF THE OUTLET STRUCTURE WHEN ASSEMBLED AND BETWEEN THE MANHOLE FRAM E AND TOP OF STRUCTURE TO ENSURE A WATER TIGHT SEAL.
3. ANY DRILLED ORIFICE INTO THE OUTLET STRUCTURE SHALL BE SANDED, FREE OF BURRS AND IRREGULARITIES.
4. DIMENSIONS AND CONFIGURATION SHOWN ARE SUBJECT TO CHANGE BASED ON FINAL DESIGNS AS PREPARED BY THE FABRICATOR.
5. SHOP DRAWINGS SHALL BE PROVIDED FOR REVIEW TO BOHLER ENGINEERING PA, LLC PRIOR TO FABRICATION.

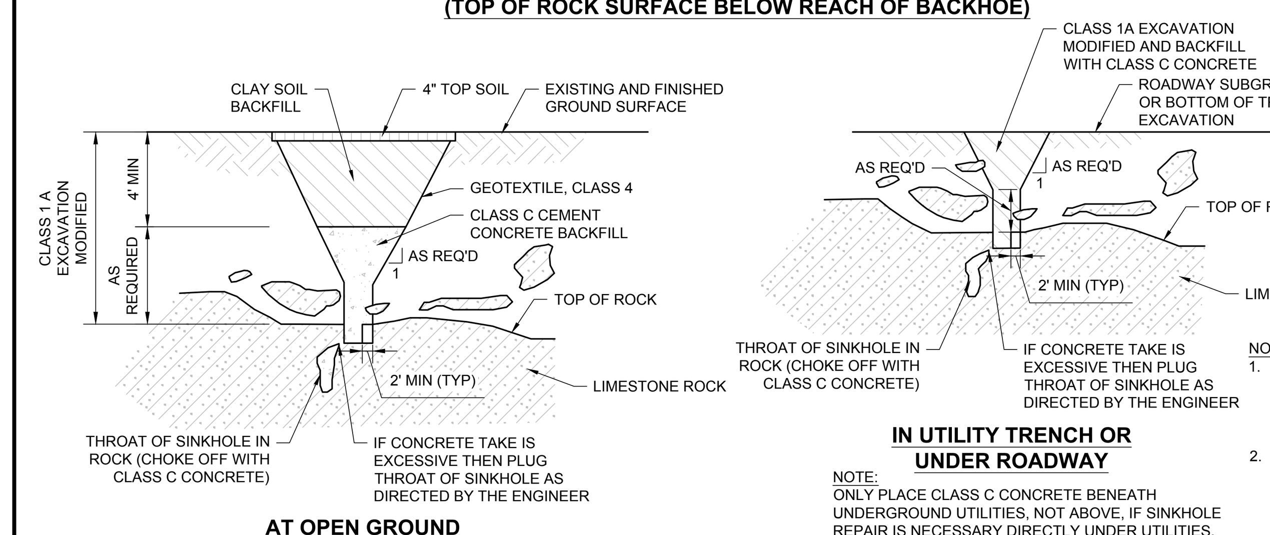
ABOVEGROUND BASIN OUTLET CONTROL STRUCTURE

(PA-U010404 - 04/2024) NOT TO SCALE



NOTE:
ONLY PLACE CLASS C CONCRETE BENEATH UNDERGROUND UTILITIES, NOT ABOVE, IF SINKHOLE REPAIR IS NECESSARY DIRECTLY UNDER UTILITIES.

TYPICAL SINKHOLE PLUG IN SOIL (TOP OF ROCK SURFACE BELOW REACH OF BACKHOE)



NOTE:
ONLY PLACE CLASS C CONCRETE BENEATH UNDERGROUND UTILITIES, NOT ABOVE, IF SINKHOLE REPAIR IS NECESSARY DIRECTLY UNDER UTILITIES.

NOTE:
1. THESE NOTES AND DETAILS WERE ADAPTED FROM THOSE IN USE BY THE NORTHAMPTON COUNTY CONSERVATION DISTRICT, AND ARE PROVIDED FOR BID AND BUDGETARY PURPOSES ONLY.
2. SHOULD A SINKHOLE OR SINKHOLE PRONE AREAS BE IDENTIFIED, THE CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL ENGINEER AND PERFORM SINKHOLE PREVENTION AND MITIGATION MEASURES IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. SHOULD DETAILS FROM A GEOTECHNICAL ENGINEER BE AVAILABLE, THEY SHALL SUPERSEDE THIS DETAIL.

TYPICAL SINKHOLE PLUG IN ROCK (TOP OF ROCK SURFACE BELOW REACH OF BACKHOE)

TYPICAL SINKHOLE PLUG IN SOIL OR ROCK

(PA-O990101 - 09/2024) NOT TO SCALE

LOCATION OF ALL SURFACE WATERS AND THEIR CLASSIFICATION UNDER CHAPTER 93
(Rev. 5/2024)

§102.4(b)(5)(v)

THE SUBJECT SITE DRAINS TO THE SAUCON CREEK, WHICH HAS COLD WATER FISHES, AND MIGRATORY FISH CHAPTER 93 CLASSIFICATION.

CRITERIA AND CREDITS FOR BMP 5.6.3 RE-VEGETATE AND RE-FOREST DISTURBED AREAS, USING NATIVE SPECIES

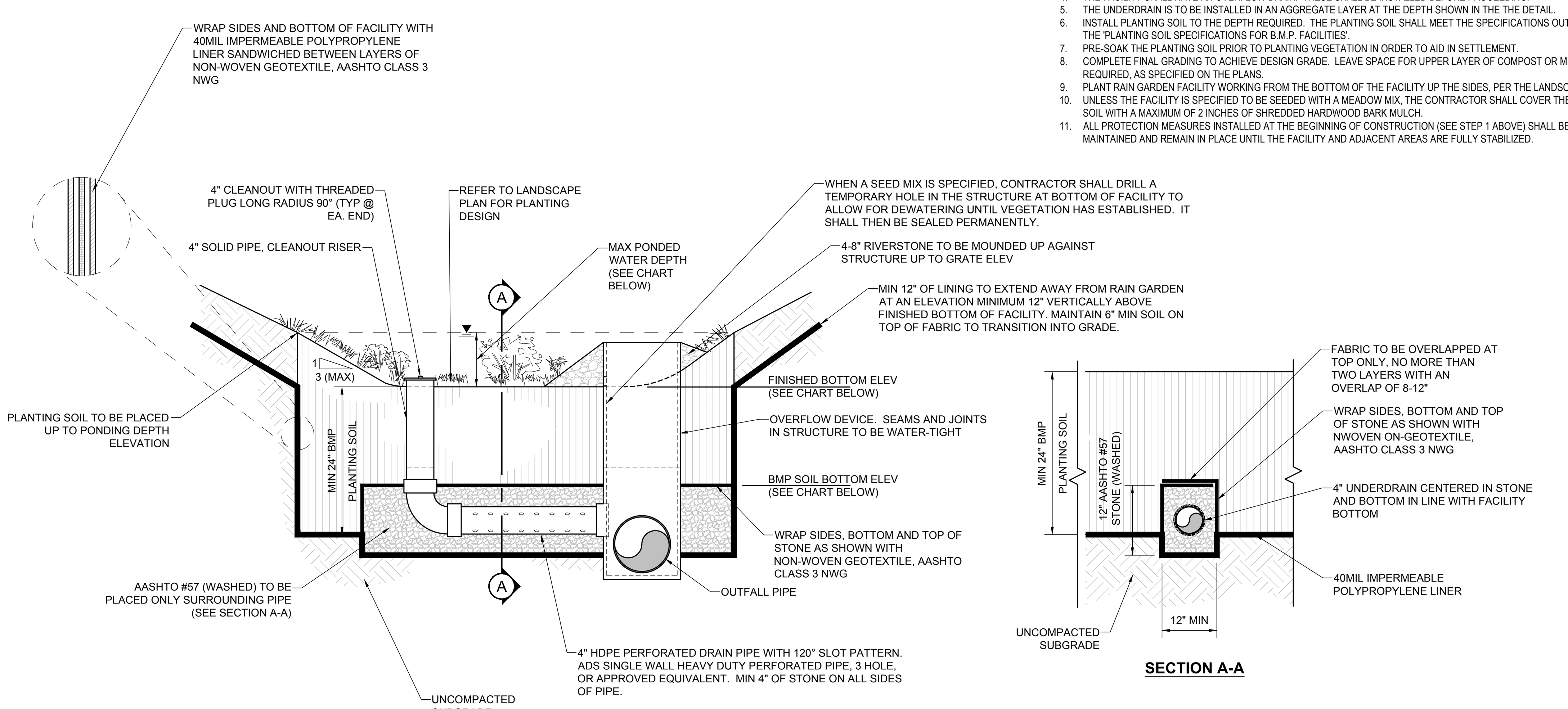
PART 2 REVEGETATE AND REFOREST

TO RECIEVE CREDIT FOR PLANTING TREES, THE FOLLOWING CRITERIA MUST BE MET:

- TREES MUST BE NATIVE SPECIES (SEE APPENDIX), MINIMUM 2" CALIPER. MINIMUM TREE HEIGHT IS 6 FEET.
- TREES SHALL BE ADEQUATELY PROTECTED DURING CONSTRUCTION.
- TREES CREDITED FOR STORMWATER MANAGEMENT SHALL BE CLEARLY LABELED ON THE CONSTRUCTION DRAWINGS AND RECORDED ON RECORD PLAN FOR PROJECT.
- TRESS SHALL BE MAINTAINED AND PROTECTED FOR THE LIFE OF THE PROJECT (50 YEARS) OR UNTIL REDEVELOPMENT OCCURS.
- NO MORE THAN 25% OF THE RUNOFF VOLUME CAN BE MITIGATED THROUGH THE USE OF TREES.
- ESCROW SHALL BE PROVIDED FOR THE REPLACEMENT OF ANY PROTECTED TREES USED FOR STORMWATER CREDIT THAT DIE WITHIN 5 YEARS OF CONSTRUCTION. DEAD TREES SHALL BE REPLACED WITHIN 6 MONTHS.
- SHALL BE LOCATED ON THE DEVELOPMENT PROJECT.
- MAY BE APPLIED FOR TREES REQUIRED UNDER STREET TREE OF LANDSCAPING REQUIREMENTS.
- MAY BE APPLIED FOR TREES PLANTED AS PART OF RIPARIAN BUFFER IMPROVEMENT.
- NON-NATIVE SPECIES ARE NOT APPLICABLE.

SEQUENCE OF CONSTRUCTION FOR BIO-RETENTION / BIO-INFILTRATION

1. PRIOR TO AND DURING CONSTRUCTION, THE FACILITY AREA SHALL BE PROTECTED WITH A COMPLETE RING OF FILTER SOCK TO PREVENT SILT AND EROSION UNTIL THE FACILITY AND THE CONTRIBUTING DRAINAGE AREA IS FULLY STABILIZED.
2. THE BIO-RENTENTION / BIO-INFILTRATION FACILITY SHALL BE EXCAVATED TO THE DEPTH AND SIZE REQUIRED. THE CONTRACTOR MUST TAKE CARE NOT TO COMPACT THE IN-SITU SOILS.
3. SUBSOILS IN THE ENTIRE GARDEN AREA MUST BE THOROUGHLY AND DEEPLY SCARIFIED BEFORE THE CONTRACTOR PLACES THE PLANTING SOIL MATERIAL. SCARIFYING MUST BE DONE WITH A TOOTHED BACKHOE.
4. THE FACILITY SHALL HAVE AN OVERFLOW DRAIN. THESE SHALL BE INSTALLED BEFORE PROCEEDING.
5. THE UNDERDRAIN IS TO BE INSTALLED IN AN AGGREGATE LAYER AT THE DEPTH SHOWN IN THE THE DETAIL.
6. INSTALL PLANTING SOIL TO THE DEPTH REQUIRED. THE PLANTING SOIL SHALL MEET THE SPECIFICATIONS OUTLINED IN THE 'PLANTING SOIL SPECIFICATIONS FOR B.M.P. FACILITIES'.
7. PRE-SOAK THE PLANTING SOIL PRIOR TO PLANTING VEGETATION IN ORDER TO AID IN SETTLEMENT.
8. COMPLETE FINAL GRADING TO ACHIEVE DESIGN GRADE. LEAVE SPACE FOR UPPER LAYER OF COMPOST OR MULCH, IF REQUIRED, AS SPECIFIED ON THE PLANS.
9. PLANT RAIN GARDEN FACILITY WORKING FROM THE BOTTOM OF THE FACILITY UP THE SIDES, PER THE LANDSCAPE PLAN.
10. UNLESS THE FACILITY IS SPECIFIED TO BE SEEDED WITH A MEADOW MIX, THE CONTRACTOR SHALL COVER THE PLANTING SOIL WITH A MAXIMUM OF 2 INCHES OF SHREDDED HARDWOOD BARK MULCH.
11. ALL PROTECTION MEASURES INSTALLED AT THE BEGINNING OF CONSTRUCTION (SEE STEP 1 ABOVE) SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL THE FACILITY AND ADJACENT AREAS ARE FULLY STABILIZED.



FACILITY NUMBER	FINISHED BOTTOM ELEVATION	BMP SOIL BOTTOM ELEVATION	OVERFLOW GRATE ELEVATION	MAXIMUM PONDING DEPTH	OVERFLOW DEVICE	OUTFALL PIPE INVERT	OUTFALL PIPE Ø
BMP #1	249.00	247.00	250.00	1.51'	TYPE 'M' INLET	239.33	18" RCP

TYPICAL BIO-RETENTION / BIO-FILTRATION WITH IMPERMEABLE LINER

NOT TO SCALE (PA-U019810 - 02/2024)

BOHLER//

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES
© BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-CNDS

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

— FOR —

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER//
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE071444

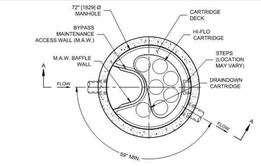
SHEET TITLE:

POST CONSTRUCTION STORMWATER MANAGEMENT NOTES AND DETAILS

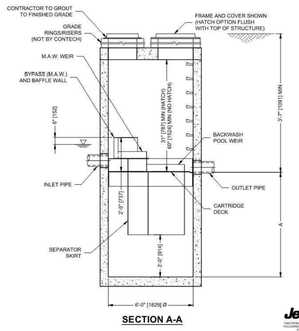
SHEET NUMBER:

C-821

REVISION 2 - 02/19/2025



PLAN VIEW
TOP SLAB NOT SHOWN



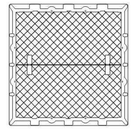
SECTION A-A

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SIZE, TYPE AND QUANTITY. THE STANDARD MANHOLE STYLE IS SHOWN. THE 72" [1829 mm] Ø MANHOLE JELLYFISH PEAK TREATMENT CAPACITY IS 1.16 CFS [32.85 L/s] AND MAXIMUM BYPASS CAPACITY IS 4.0 CFS [113.27 L/s]. IF THE SITE CONDITIONS EXCEED THE BYPASS CAPACITY OF THE SYSTEM, AN UPSTREAM DIVERSION STRUCTURE IS REQUIRED. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.

CARTRIDGE SIZE	54	40	27	15
FLOW RATE: HIGH-FLO / DRAINDOWN (cfs [L/s])	0.18 / 0.09 [5.10 / 2.55]	0.13 / 0.065 [3.68 / 1.84]	0.09 / 0.045 [2.55 / 1.28]	0.05 / 0.025 [1.42 / 0.71]
MAXIMUM CARTRIDGE QUANTITY HIGH-FLO / DRAINDOWN	6 / 1			
MAXIMUM TREATMENT FLOW RATE (cfs [L/s])	1.16 [32.85]	0.87 [24.64]	0.58 [16.42]	0.32 [9.06]
OUTLET INVERT TO STRUCTURE INVERT (Δ) (ft. [mm])	7.42 [188]	6.25 [159]	5.17 [131]	4.17 [106]

FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE



HATCH
(48" x 48" CAST INTO SLAB)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
BYPASS FLOW RATE (cfs [L/s])	
WATER QUALITY FLOW RATE (cfs [L/s])	
PEAK FLOW RATE (cfs [L/s])	
RETURN PERIOD OF PEAK FLOW (yrs)	
NUMBER OF CARTRIDGES REQUIRED (HF / DD)	
CARTRIDGE SIZE (54, 40, 27, 15)	
RIM ELEVATION	

PIPE DATA:	INVERT	MATL	DIA	SLOPE %	HGL
INLET PIPE 1					
INLET PIPE 2					
OUTLET PIPE					

SEE GENERAL NOTES 6-10 FOR INLET AND OUTLET HYDRAULIC AND SIZING REQUIREMENTS.

NOTES / SPECIAL REQUIREMENTS:

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE OR VISIT WWW.CONTECHES.COM
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 2' - 3" [305], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. INLET HGL NOT TO EXCEED 9" [152] BELOW THE TOP OF THE M.A.W. DURING THE PEAK DESIGN STORM, OR 15-YEAR STORM (WHICHEVER IS GREATER).
7. OUTLET PIPE INVERT ELEVATION VARIES FROM 7" TO 9" [25 TO 152] ABOVE THE OUTLET PIPE INVERT.
8. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.
9. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE AT EQUAL OR GREATER SLOPE.
10. THE DIFFERENCE IN THE INLET AND OUTLET PIPE ELEVATIONS FOR RETROFIT INSTALLATIONS TO EXISTING STORM DRAIN PIPES SHALL BE EQUAL TO THE SLOPE OVER THE DIAMETER OF THE MANHOLE, NOT THE EXCEED 6" [152] IN VERTICAL DIFFERENTIAL BETWEEN INLET AND OUTLET PIPES.
11. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.
12. ALTERNATE UNITS ARE SHOWN IN [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
D. WHEN ACTIVATED PRIOR TO SITE STABILIZATION, CONTRACTOR TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ACCORDING TO THE PROVISIONS IN THE ACTIVATION CHECKLIST AND THE QUOTED SCOPE OF WORK. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (800) 338-1122.

Jellyfish Filter

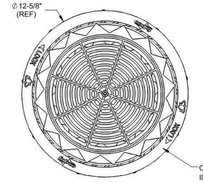
CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

JELLYFISH JF6
ONLINE CONFIGURATION
STANDARD DETAIL

NOTES:

1. WEIGHT: 8 LBS (MAX)
2. MATERIAL:
   A) HOUSING/GRILL/ID RING: POLYPROPYLENE COPOLYMER
   B) TREATMENT MEDIA: PROPRIETARY NON-TOXIC TREATMENT PRODUCTS THAT INCLUDE POLYETHER FOAM
   C) SUPPORT HARDWARE: CRES 300 SERIES STAINLESS OR EQUAL
   D) CARTRIDGE GASKET: NEOPRENE RUBBER
3. FLOW RATE (TYP): 115 GPM (0.26 CFS)
4. STORMWATER TREATMENT: GENERAL CARTRIDGE TO TARGET SEDIMENT, HYDROCARBONS, ATTACHED HEAVY METALS AND NUTRIENTS.
5. RING INDENTIFICATION COLOR: RED
6. INSTALLATION: INSERT INTO CARTRIDGE OPENING AND ROTATE CLOCKWISE 30-DEGREES TO LOCK CARTRIDGE IN PLACE.
7. FITS ALL FABCO STORM BASIN AND STORMPOD PRODUCTS.
8. DISPOSE OF CARTRIDGE IN ACCORDANCE WITH LOCAL REGULATIONS.
9. ADDITIONAL CARTRIDGE DESIGNS ARE AVAILABLE TO TARGET SPECIFIC POLLUTANTS. SEE TABLE 1 FOR DETAILS.

REFERENCE VIEW



COLOR IDENTIFICATION RING

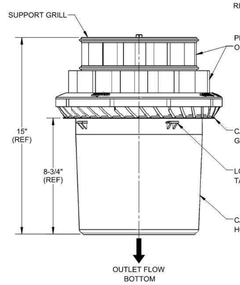


TABLE 1. ADDITIONAL CARTRIDGE DESIGNS

PART NUMBER	DESCRIPTION	COLOR CODE	FLOW RATE (TYP)
9718-1	STANDARD	RED	115 GPM (0.26 CFS)
9718-2	BACTERIA	YELLOW	115 GPM (0.26 CFS)
9718-3	HYDROCARBONS	BLUE	115 GPM (0.26 CFS)
9718-4	HEAVY METALS	GREY	60 GPM (0.13 CFS)
9718-5	STANDARD(SHORT)	MINT	115 GPM (0.26 CFS)
9718-6	NUTRIENTS	GREEN	100 GPM (0.22 CFS)
9718-7	HIGH FLOW	RED (MARKED)	260 GPM (0.58 CFS)

REFERENCE VIEW

ENGINEER AND CONTRACTOR NOTE: FABCO INDUSTRIES WATER QUALITY INSERTS (WQSI) ARE MANUFACTURED TO PROPERLY FIT INLETS BY USING SPECIFIC INFORMATION COMPILED IN A SURVEY OF THE 'AS-BUILT' INLET. IN RETROFIT SITUATIONS THE SURVEY IS DONE TO DOCUMENT THE THREE CRITICAL ASPECTS OF WQI DESIGN (GRATE/FRAME MEASUREMENTS, OPEN/CLEAR SPACE MEASUREMENTS, AND PROTRUSION MEASUREMENTS). IN NEW CONSTRUCTION, FABCO PRODUCT DRAWINGS ARE ESSENTIALLY PLACE HOLDERS BASED ON THE SPECIFIED INLETS. ONCE THE INLETS ARE BUILT, THE PROCESS REVERTS TO THE RETROFIT APPROACH OF SURVEYING THE AS-BUILT INLETS TO CONFIRM FABCO INSERT DESIGN. PLEASE USE THE QR CODE TO ACCESS THE SURVEY FORM AND COMPREHENSIVE GUIDANCE OF THE SURVEY PROCESS. ALTERNATIVELY, NAVIGATE TO www.fabco-industries.com/grate-inlet-survey-guide

PROPRIETARY AND CONFIDENTIAL
THIS DOCUMENTS IS THE PROPERTY OF FABCO INDUSTRIES AND IS CONVEYED WITH THE EXPRESS CONDITION THAT IT SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, NOR BE USED, CIRCULATED, COMPOUNDED, DISSEMINATED OR PARTY, FOR ANY PURPOSE, WITHOUT THE EXPRESS WRITTEN CONSENT OF FABCO INDUSTRIES, AND THAT NO PERSON ACCEPTING THIS DRAWING SECURE ANY INFORMATION CONTAINED IN AND DOCUMENT.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES [MM] SURFACE FINISH: 250 - 500 [6.3 - 12.5] ANGLES ± 2°

TOLERANCES: ONE PLACE DEC. [XX.X] ± .020 TWO PLACE DEC. [XX.XX] ± .010 ANGLES ± 2°

		APPROVAL	DATE
DWN	R.W.		10/23/2021
CHKR			
ENGR	J.P.		10/23/2021
APP.			

SEE NOTES

FABCO INDUSTRIES, INC.
25 CENTRAL DRIVE
FARMINGDALE, NY 11735
WWW.FABCO-INDUSTRIES.COM

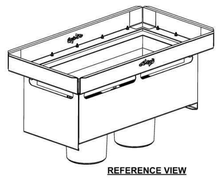
fabco

STORMBASIN PLUS (2C)
NOM. C.S. 24" X 45"

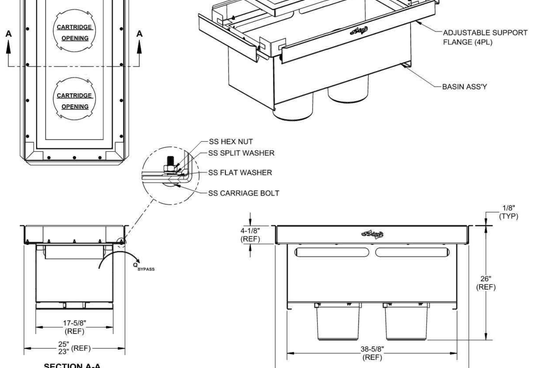
SIZE | DRWG. NO. | REV.
B | PBM2445-11-000 | A
SCALE: NONE | SHEET 1 OF 1

NOTES:

1. TOTAL WEIGHT, EMPTY: 40 LBS (MAX), NO CARTRIDGE
2. MATERIALS:
   1. FRAME/BASIN: ALUMINUM ALLOY, 5000 SERIES
   2. HARDWARE: STAINLESS STEEL
3. PERFORMANCE CHARACTERISTICS:
   1. DEBRIS CAPACITY: 3.9 CU. FT
   2. FILTERED FLOWRATE (STANDARD CARTRIDGE): 230 GPM (0.52 CFS)
   3. BYPASS FLOWRATE: 1,970 GPM (4.4 CFS)
4. CLEAR OPENING RANGE:
   1.MINIMUM SIZE: 23" X 44"
   2.MAXIMUM SIZE: 25" X 46"
5. TYPICAL INSTALLATION:
   CAREFULLY REMOVE THE STORM GRATE, MEASURE CATCH BASIN FRAME CLEAR OPENING AND ADJUST FLANGES TO REST ON GRATE SUPPORT LEDGE. INSTALL STORMBASIN AND VERIFY EACH FLANGE IS SECURE AND THE UNIT IS SNUG WITH LITTLE MOVEMENT IN THE DRAIN. INSTALL CORNER FILLERS USING PROVIDED DOUBLE-SIDED TAPE. COVER ANY UNWANTED GAPS WITH PROVIDED ALUMINUM TAPE. REINSTALL THE STORM GRATE DIRECTLY ON THE STORMBASIN ADJUSTABLE SUPPORT FLANGES.
6. RECOMMENDED MINIMUM VAULT DEPTH 2" BELOW CARTRIDGE



REFERENCE VIEW



SECTION A-A

CARTRIDGES SHOWN FOR REFERENCE

PROPRIETARY AND CONFIDENTIAL
THIS DOCUMENTS IS THE PROPERTY OF FABCO INDUSTRIES AND IS CONVEYED WITH THE EXPRESS CONDITION THAT IT SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, NOR BE USED, CIRCULATED, COMPOUNDED, DISSEMINATED OR PARTY, FOR ANY PURPOSE, WITHOUT THE EXPRESS WRITTEN CONSENT OF FABCO INDUSTRIES, AND THAT NO PERSON ACCEPTING THIS DRAWING SECURE ANY INFORMATION CONTAINED IN AND DOCUMENT.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES [MM] SURFACE FINISH: 250 - 500 [6.3 - 12.5] ANGLES ± 2°

TOLERANCES: ONE PLACE DEC. [X.X] ± .100 TWO PLACE DEC. [X.XX] ± .050 ANGLES ± 2°

		APPROVAL	DATE
DWN	R.W.		10/23/2021
CHKR			
ENGR	J.P.		10/23/2021
APP.			

SEE NOTES

FABCO INDUSTRIES, INC.
25 CENTRAL DRIVE
FARMINGDALE, NY 11735
WWW.FABCO-INDUSTRIES.COM

fabco

STORMBASIN PLUS (2C)
NOM. C.S. 24" X 45"

SIZE | DRWG. NO. | REV.
B | PBM2445-11-000 | A
SCALE: NONE | SHEET 2 OF 2

NOTES REGARDING DETAILS BY OTHERS:

1. DETAILS PREPARED BY OTHERS ARE IDENTIFIED AS SUCH BY WAY OF A TITLE BLOCK, REFERENCE, LOGO, OR OTHER NOTATION.
2. WHERE AN ORIGINAL DETAIL BY OTHERS HAS BEEN MODIFIED, THE MODIFICATIONS ARE IDENTIFIED BY REVISION CLOUDS.
3. REFER TO OUTSIDE SOURCE NOTES ON THE GENERAL NOTES AND LEGEND SHEET.
4. WHEN THE SOURCE OF THE DETAIL IS A REVIEWING/REGULATORY AGENCY, FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS AND SPECIFICATIONS. WHEN APPROPRIATE, SHOP DRAWINGS SHALL BE FORWARDED TO THE REVIEWING/REGULATORY AGENCY PRIOR TO FABRICATION.

DETAILS BY OTHERS DISCLAIMER

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-CNDS-PAB240068.00-2A.dwg — LAYOUT: C-822 PCSM NOTES & DETAILS — JMV

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.
© 2024 BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: PAB240068.00-2A
DRAWN BY: ABN
CHECKED BY: MMC
DATE: 12/13/2024
CAD I.D.: P-CIVIL-CNDS

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
COMMONWEALTH OF PENNSYLVANIA
M. M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

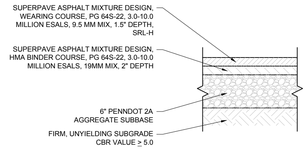
SHEET TITLE:

POST CONSTRUCTION STORMWATER MANAGEMENT NOTES AND DETAILS

SHEET NUMBER:

C-822

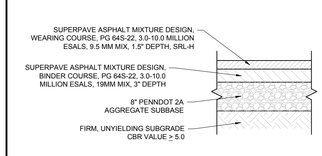
REVISION 2 - 02/19/2025



NOTES:
1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITIONS OF PENNDOT PUBLICATION 408 AND 242 (PAVEMENT POLICY MANUAL).
2. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT PAVEMENT DESIGN RECOMMENDATIONS. IN CASE OF ANY DISCREPANCIES, THE GEOTECHNICAL REPORT RECOMMENDATIONS SHALL SUPERSEDE.

STANDARD ASPHALT PAVEMENT

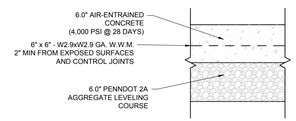
(PA-S010101 - 12/2024) NOT TO SCALE



NOTES:
1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITIONS OF PENNDOT PUBLICATION 408 AND 242 (PAVEMENT POLICY MANUAL).
2. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT PAVEMENT DESIGN RECOMMENDATIONS. IN CASE OF ANY DISCREPANCIES, THE GEOTECHNICAL REPORT RECOMMENDATIONS SHALL SUPERSEDE.

HEAVY DUTY ASPHALT PAVEMENT

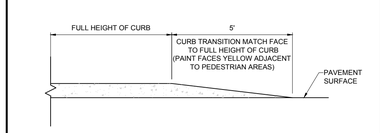
(PA-S010102 - 12/2024) NOT TO SCALE



NOTES:
1. JOINT SPACING SHALL BE 12 FT.
2. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITIONS OF PENNDOT PUBLICATION 408 AND 242 (PAVEMENT POLICY MANUAL).
3. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORT PAVEMENT DESIGN RECOMMENDATIONS. IN CASE OF ANY DISCREPANCIES, THE GEOTECHNICAL REPORT RECOMMENDATIONS SHALL SUPERSEDE.

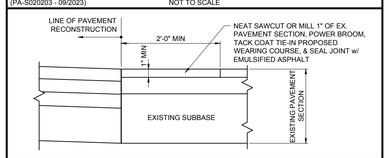
REINFORCED CONCRETE PAVEMENT

(BE-S010203 - 12/2024) NOT TO SCALE



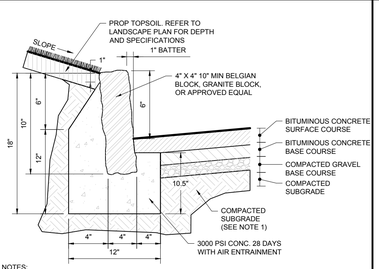
TAPERED CURB

(PA-S020203 - 09/2023) NOT TO SCALE



PAVEMENT TIE-IN

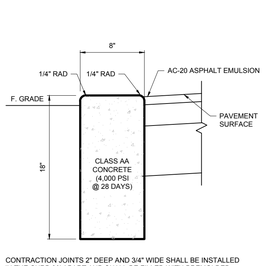
(PA-S019901 - 09/2023) NOT TO SCALE



NOTES:
1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE APPROVED BY THE TOWNSHIP ENGINEER PRIOR TO POURING.
2. JOINTS SHALL BE NOT MORE THAN 1/4" WIDE FOR DRESSED BLOCK AND 3/8" WIDE FOR QUARRY SPLIT BLOCK. THE JOINTS SHALL BE POINTED WITH 1:1 CEMENT - SAND MORTAR.
3. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20' - 0" APART AND SHALL BE FILLED WITH PREFORMED, BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213, RECESSED 1/4" FROM THE FRONT FACE AND TOP OF THE CURB.

BELGIAN BLOCK CURB

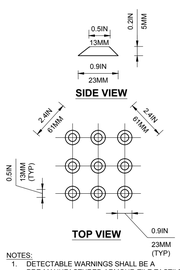
(BE-S020301 - 09/2023) NOT TO SCALE



CONTRACTION JOINTS 2" DEEP AND 3/4" WIDE SHALL BE INSTALLED IN THE CURB 20' APART AND SHALL BE FILLED WITH PREMOLDED EXPANSION JOINT FILLER MATERIAL AS SPECIFIED RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB.

TYPICAL FLUSH CONCRETE CURB

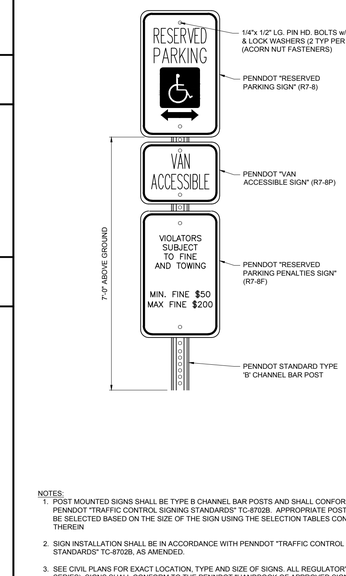
(PA-S020202 - 03/2024) NOT TO SCALE



NOTES:
1. DETECTABLE WARNINGS SHALL BE A PRE-MANUFACTURED ARMOUR-TILE TACTILE SYSTEM OR APPROVED EQUIVALENT.
2. CONTRACTOR TO COORDINATE SPECIFIC SYSTEM AND MATERIALS TO BE UTILIZED WITH THE ENGINEER TO ENSURE LOCAL, STATE AND A.D.A. COMPLIANCE PRIOR TO CONSTRUCTION.

TRUNCATED DOME PATTERN FOR ADA DETECTABLE WARNING SURFACES (FOR USE IN DOT ROADWAYS)

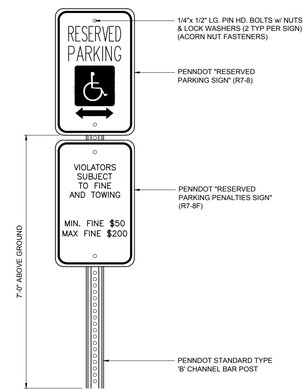
(PA-S030501 - 09/2023) NOT TO SCALE



NOTES:
1. POST MOUNTED SIGNS SHALL BE TYPE B CHANNEL BAR POSTS AND SHALL CONFORM TO PENNDOT "TRAFFIC CONTROL SIGNING STANDARDS" TC-8702B. APPROPRIATE POSTS SHALL BE SELECTED BASED ON THE SIZE OF THE SIGN USING THE SELECTION TABLES CONTAINED THEREIN
2. SIGN INSTALLATION SHALL BE IN ACCORDANCE WITH PENNDOT "TRAFFIC CONTROL SIGNING STANDARDS" TC-8702B, AS AMENDED.
3. SEE CIVIL PLANS FOR EXACT LOCATION, TYPE AND SIZE OF SIGNS. ALL REGULATORY (R SERIES), SIGNS SHALL CONFORM TO THE PENNDOT "HANDBOOK OF APPROVED SIGNS", PUBLICATION 236M, AS AMENDED, UNLESS OTHERWISE SPECIFIED.
4. SIGNS SHALL BE SETBACK 2.0' FROM CURB LINES OR OTHER OBSTRUCTIONS AS MEASURED FROM THE FACE/EDGE OF THE SIGN.
5. RESERVED PARKING SPACE SIGNS SHALL CONFORM TO DEPARTMENT OF JUSTICE "ADA STANDARDS FOR ACCESSIBLE DESIGN" AS AMENDED.
6. ALL SIGNS SHALL BE INSTALLED WITH ACORN NUT FASTENERS.

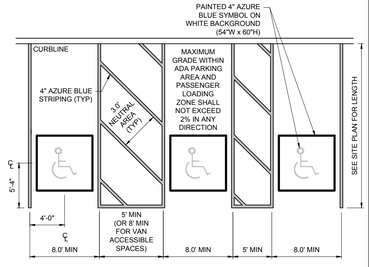
RESERVED PARKING SPACE WITH PENALTIES AND VAN ACCESSIBLE SIGNS

(PA-S060101 - 09/2023) NOT TO SCALE



RESERVED PARKING SPACE AND PENALTIES SIGNS

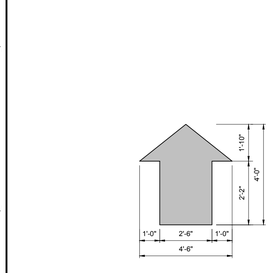
(PA-S060102 - 09/2023) NOT TO SCALE



NOTES:
1. CURB RAMPS MAY NOT EXTEND INTO ANY PORTION OF THE PARKING SPACE OR ASSOCIATED STRIPED PASSENGER LOADING ZONE.
2. CURB RAMPS, PAVEMENT MARKINGS, AND APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.

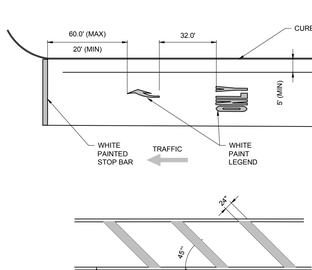
ADA ACCESSIBLE PARKING SPACE STRIPING (3 SPACES)

(PA-S050101 - 09/2023) NOT TO SCALE



WHITE PAINTED TRAFFIC ARROW

(PA-S050301 - 09/2023) NOT TO SCALE



NOTE: DIMENSIONS MAY BE MODIFIED SLIGHTLY TO MEET FIELD CONDITIONS.

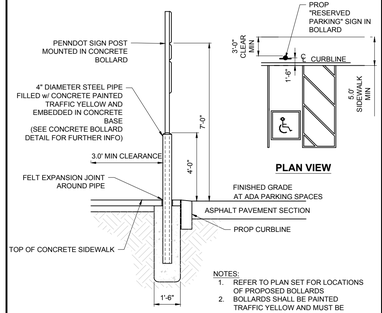
PAVEMENT MARKING

(PA-S050302 - 09/2023) NOT TO SCALE

NOTES:
1. THIS TYPE OF MARKING SHOULD BE USED AT LOCATIONS WHERE SUBSTANTIAL NUMBERS OF PEDESTRIANS CROSS WITHOUT ANY OTHER TRAFFIC CONTROL DEVICE. AT LOCATIONS WHERE PHYSICAL CONDITIONS ARE SUCH THAT ADDED VISIBILITY OF THE CROSSWALK IS NECESSARY, OR AT PLACES WHERE PEDESTRIANS MIGHT NOT BE EXPECTED.
2. ALL CROSSWALKS SHALL COMPLY WITH THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AS AMENDED.
3. LONGITUDINAL LINES SHALL BE PERPENDICULAR TO TRAVELED WAY THE EXTEND ACROSS THE FULL WIDTH OF PAVEMENT OR TO THE EDGE OF THE INTERSECTING CROSSWALK TO DISCOURAGE DIAGONAL WALKING BETWEEN CROSSWALKS.
4. ALL CROSSWALK LONGITUDINAL LINES SHALL BE WHITE THERMOPLASTIC. ALL LINES AND NEUTRAL AREAS SHALL BE OF EQUAL WIDTHS.
5. WARNING SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH MUTCD, AS AMENDED.
6. THE SPACING OF THE LINES SHALL BE SELECTED TO AVOID THE WHEEL PATH.

HIGH VISIBILITY CROSSWALK (PERPENDICULAR TO INTERSECTION)

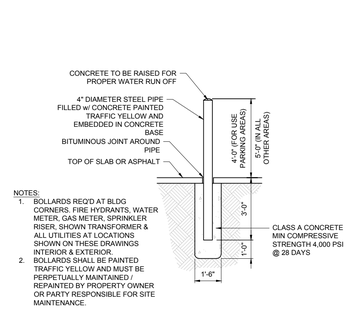
(PA-S050402 - 09/2023) NOT TO SCALE



NOTES:
1. REFER TO PLAN SET FOR LOCATIONS OF PROPOSED BOLLARDS
2. BOLLARDS SHALL BE PAINTED TRAFFIC YELLOW AND MUST BE PERPETUALLY MAINTAINED / REPAINTED BY PROPERTY OWNER OR PARTY RESPONSIBLE FOR SITE MAINTENANCE.

RESERVED PARKING SIGN WITHIN BOLLARD

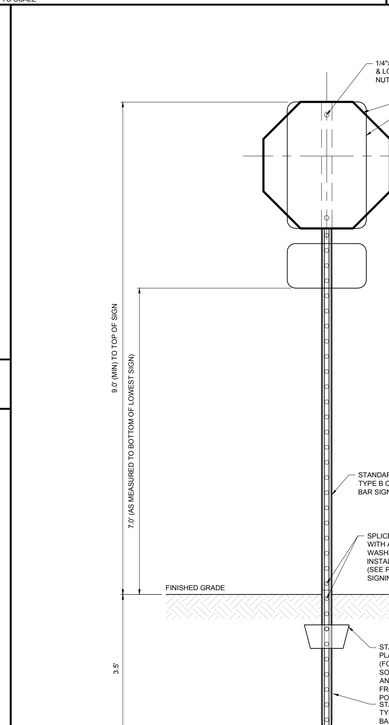
(PA-S060103 - 09/2023) NOT TO SCALE



NOTES:
1. BOLLARDS REQ'D AT BLDG CORNERS, FIRE HYDRANTS, WATER METER, GAS METER, SPRINKLER RISER, SHOWN TRANSFORMER & ALL UTILITIES AT LOCATIONS SHOWN ON THESE DRAWINGS INTERIOR & EXTERIOR.
2. BOLLARDS SHALL BE PAINTED TRAFFIC YELLOW AND MUST BE PERPETUALLY MAINTAINED / REPAINTED BY PROPERTY OWNER OR PARTY RESPONSIBLE FOR SITE MAINTENANCE.

BOLLARD

(PA-S070101 - 09/2023) NOT TO SCALE



NOTES:
1.) POST MOUNTED SIGNS SHALL BE TYPE B CHANNEL BAR POSTS AND SHALL CONFORM TO PENNDOT "TRAFFIC CONTROL SIGNING STANDARDS" TC-8702B. APPROPRIATE POSTS SHALL BE SELECTED BASED ON THE SIZE OF THE SIGN USING THE SELECTION TABLES CONTAINED THEREIN

2.) SIGN INSTALLATION SHALL BE IN ACCORDANCE WITH PENNDOT "TRAFFIC CONTROL SIGNING STANDARDS" TC-8702B, AS AMENDED.

3.) SEE CIVIL PLANS FOR EXACT LOCATION, TYPE AND SIZE OF SIGNS. ALL REGULATORY (R SERIES), WARNING (W SERIES) OR OTHER APPROVED SIGNS SHALL CONFORM TO THE PENNDOT "HANDBOOK OF APPROVED SIGNS", PUBLICATION 236M, AS AMENDED, UNLESS OTHERWISE SPECIFIED.

4.) SIGNS SHALL BE SETBACK 2.0' FROM CURB LINES, GUIDE RAILS OR OTHER OBSTRUCTIONS AS MEASURED FROM THE FACE/EDGE OF THE SIGN.

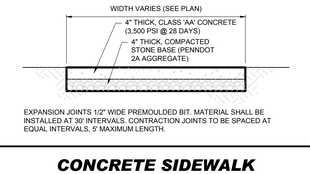
5.) ALONG NON-CURBED LOCAL ROADWAYS SIGNS SHALL BE SETBACK 6.0' FROM THE SHOULDER/PAVING EDGE AND SHALL BE AT A HEIGHT 5.0' ABOVE THE EDGE OF PAVEMENT SURFACE.

6.) ALL SIGNS SHALL BE INSTALLED WITH ACORN NUT FASTENERS.

7.) FOR "RESERVED PARKING SIGN" (R7-8) REFER TO DETAILS AND SPECIFIED MOUNTING HEIGHTS WHICH ARE LOWER FOR INCREASED VISIBILITY PER ADA REGULATIONS.

STANDARD POLE MOUNTED SIGN INSTALLATION

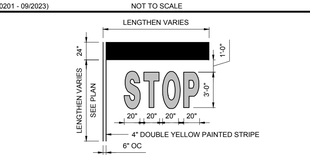
(PA-S060201 - 09/2023) NOT TO SCALE



EXPANSION JOINTS 1/2" WIDE PREMOULDED BIT. MATERIAL SHALL BE INSTALLED AT 30' INTERVALS. CONTRACTION JOINTS TO BE SPACED AT EQUAL INTERVALS, 5' MAXIMUM LENGTH.

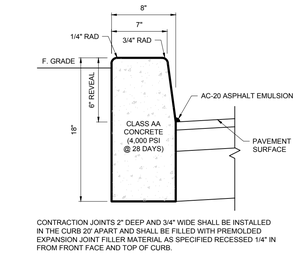
CONCRETE SIDEWALK

(PA-S030201 - 09/2023) NOT TO SCALE



WHITE PAINTED STOP BAR AND "STOP" LETTERING

(PA-S059902 - 09/2023) NOT TO SCALE



CONTRACTION JOINTS 2" DEEP AND 3/4" WIDE SHALL BE INSTALLED IN THE CURB 20' APART AND SHALL BE FILLED WITH PREMOLDED EXPANSION JOINT FILLER MATERIAL AS SPECIFIED RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB.

TYPICAL CONCRETE CURB

(PA-S020201 - 03/2024) NOT TO SCALE

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHT BY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER, ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.
©2024 BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: PAB240068.00-2A
DRAWN BY: ABN
CHECKED BY: MMC
DATE: 12/13/2024
CAD I.D.: P-CIVL-CNDS

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

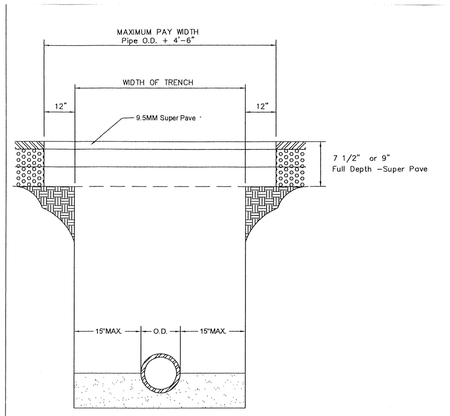
CONSTRUCTION DETAILS

SHEET NUMBER:

C-901

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-PAB240068.00-2A-----LAYOUT: C-901 DETL
AM



Residential Streets – 7 1/2" Full Depth – 3 course – 3"–19MM+3" –19MM+1 1/2"–9.5MM– Super Pave
Arterial Streets – 9" Full Depth – 3 course – 4"–19MM+3 1/2"–19MM+1 1/2"–9.5MM– Super Pave

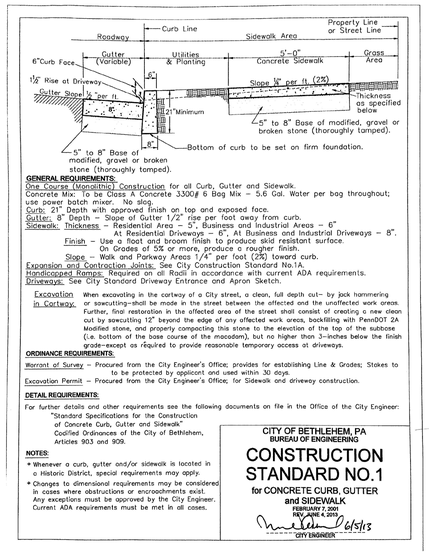
NOTES:
1. All joints abutting existing pave to be primed with a bituminous tack coat, E-1 in accordance with Section 460 of Form 408.
2. All super pave wearing course and super pave base course shall refer to PennDOT Specifications Publication 408/ 2003-1 effective April 2, 2004.
3. All joints to be sealed for one (1) foot (6" on either side of joint) with E-2 in accordance with Section 470 of form 408.
4. All measurements made to the nearest 0.1 foot.

CITY OF BETHLEHEM, PA
BUREAU OF ENGINEERING

FULL DEPTH-SUPER PAVE PAVEMENT REPLACEMENT

SCALE: NTS DATE: FEBRUARY 24, 2006

CITY ENGINEER



GENERAL REQUIREMENTS:
One Course (Monolithic) Construction for all Curb, Gutter and Sidewalk.
Concrete Mix: To be Class A Concrete 3300# 6 Bag Mix – 5.6 Gal. Water per bag throughout; use power batch mixer. No slog.
Curb: 21" Depth with approved finish on top and exposed face.
Gutter: 8" Depth – Slope of Gutter 1/2" rise per foot away from curb.
Sidewalk: Thickness – Residential Area – 5", Business and Industrial Areas – 6"
At Residential Driveways – 6", At Business and Industrial Driveways – 8".
Finish – Use a float and broom finish to produce skid resistant surface.
On Grades of 5% or more, produce a rougher finish.
Slope – Walk and Parkway Areas 1/4" per foot (2%) toward curb.
Expansion and Contraction Joints: See City Construction Standard No.1A.
Handicapped Ramps: Required on all Radii in accordance with current ADA requirements.
Driveways: See City Standard Driveway Entrance and Apron Sketch.

Excavation in Cartway: When excavating in the cartway of a City street, a clean, full depth cut– by jack hammering or sawcutting–shall be made in the street between the affected and the unaffected work areas. Further, final restoration in the affected area of the street shall consist of creating a new clean cut by sawcutting 12" beyond the edge of any affected work areas, backfilling with PennDOT 2A Modified stone, and properly compacting this stone to the elevation of the top of the subbase (i.e. bottom of the base course of the macadam), but no higher than 3–inches below the finish grade–except as required to provide reasonable temporary access at driveways.

ORDINANCE REQUIREMENTS:
Warrant of Survey – Procured from the City Engineer's Office; provides for establishing Line & Grades; Stakes to to be protected by applicant and used within 30 days.
Excavation Permit – Procured from the City Engineer's Office; for Sidewalk and driveway construction.

DETAIL REQUIREMENTS:
For further details and other requirements see the following documents on file in the Office of the City Engineer:
"Standard Specifications for the Construction of Concrete Curb, Gutter and Sidewalk"
Codified Ordinances of the City of Bethlehem, Articles 903 and 909.

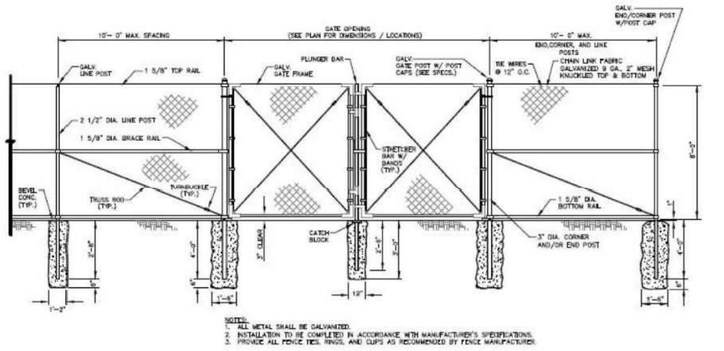
NOTES:
* Whenever a curb, gutter and/or sidewalk is located in a Historic District, special requirements may apply.
* Changes to dimensional requirements may be considered in cases where obstructions or encroachments exist. Any exceptions must be approved by the City Engineer. Current ADA requirements must be met in all cases.

CITY OF BETHLEHEM, PA
BUREAU OF ENGINEERING

CONSTRUCTION STANDARD NO.1

for CONCRETE CURB, GUTTER and SIDEWALK
FEBRUARY 7, 2001
REV. JUNE 4, 2015

CITY ENGINEER

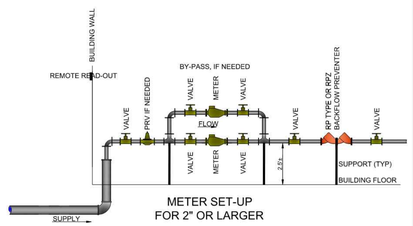


NOTES:
1. ALL METAL SHALL BE GALVANIZED.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. PROVIDE ALL FENCE TIES, RINGS, AND CLIPS AS RECOMMENDED BY FENCE MANUFACTURER.

CHAIN LINK FENCE AND GATE
N.T.S.

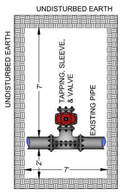
NOTES REGARDING DETAILS BY OTHERS:
1. DETAILS PREPARED BY OTHERS ARE IDENTIFIED AS SUCH BY WAY OF A TITLE BLOCK, REFERENCE, LOGO, OR OTHER NOTATION.
2. WHERE AN ORIGINAL DETAIL BY OTHERS HAS BEEN MODIFIED, THE MODIFICATIONS ARE IDENTIFIED BY REVISION CLOUDS.
3. REFER TO OUTSIDE SOURCE NOTES ON THE GENERAL NOTES AND LEGEND SHEET.
4. WHEN THE SOURCE OF THE DETAIL IS A REVIEWING/REGULATORY AGENCY, FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS AND SPECIFICATIONS. WHEN APPROPRIATE, SHOP DRAWINGS SHALL BE FORWARDED TO THE REVIEWING/REGULATORY AGENCY PRIOR TO FABRICATION.

DETAILS BY OTHERS DISCLAIMER

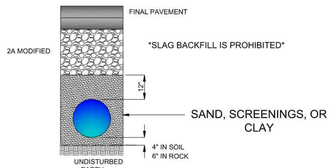


METER SET-UP
FOR 2" OR LARGER

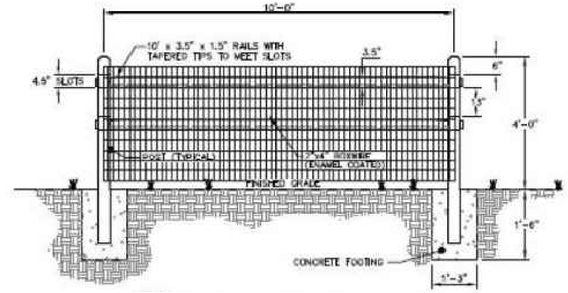
OMNI™ Compound (C²) Water Meters
SUPPLIED
BY THE CITY



TAPPING, SLEEVE, & VALVE
TRENCH DETAIL

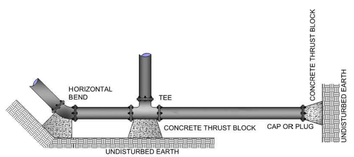


WATER MAIN TRENCH
IN PAVED AREA DETAIL
DUCTILE IRON PIPE or C-900

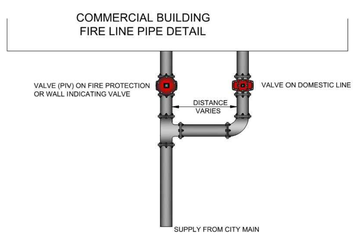


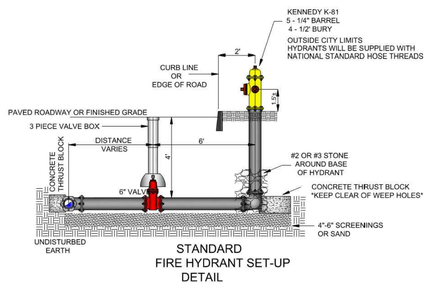
NOTES
1. ALL WOOD FOR SPLIT RAIL FENCE TO BE PRESSURE TREATED
2. END POST SHALL BE TERMINAL POST

SPLIT–FENCE FENCE
N.T.S.

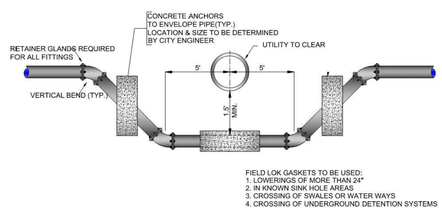


THRUST BLOCK
DETAIL
TOP VIEW





STANDARD
FIRE HYDRANT SET-UP
DETAIL



FIELD LOK GASKETS TO BE USED:
1. LOWERINGS OF MORE THAN 24"
2. IN KNOWN SINK HOLE AREAS
3. CROSSING OF SWALES OR WATER WAYS
4. CROSSING OF UNDERGROUND DETENTION SYSTEMS

LOWERING DETAIL
USING VERTICAL BENDS

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED, AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-CNDS

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

CONSTRUCTION DETAILS

SHEET NUMBER:

C-902

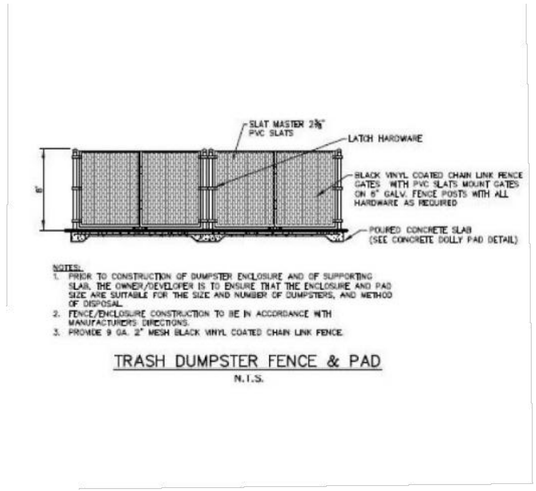
REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-PAB240068.00-2A-----LAYOUT: C-902 DETL
JMV

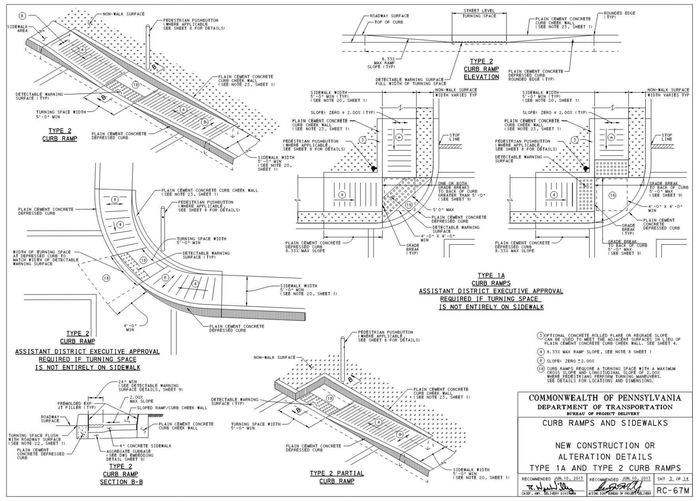
NOTES REGARDING DETAILS BY OTHERS:

1. DETAILS PREPARED BY OTHERS ARE IDENTIFIED AS SUCH BY WAY OF A TITLE BLOCK, REFERENCE, LOGO, OR OTHER NOTATION.
2. WHERE AN ORIGINAL DETAIL BY OTHERS HAS BEEN MODIFIED, THE MODIFICATIONS ARE IDENTIFIED BY REVISION CLOUDS.
3. REFER TO OUTSIDE SOURCE NOTES ON THE GENERAL NOTES AND LEGEND SHEET.
4. WHEN THE SOURCE OF THE DETAIL IS A REVIEWING/REGULATORY AGENCY, FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS AND SPECIFICATIONS. WHEN APPROPRIATE, SHOP DRAWINGS SHALL BE FORWARDED TO THE REVIEWING/REGULATORY AGENCY PRIOR TO FABRICATION.

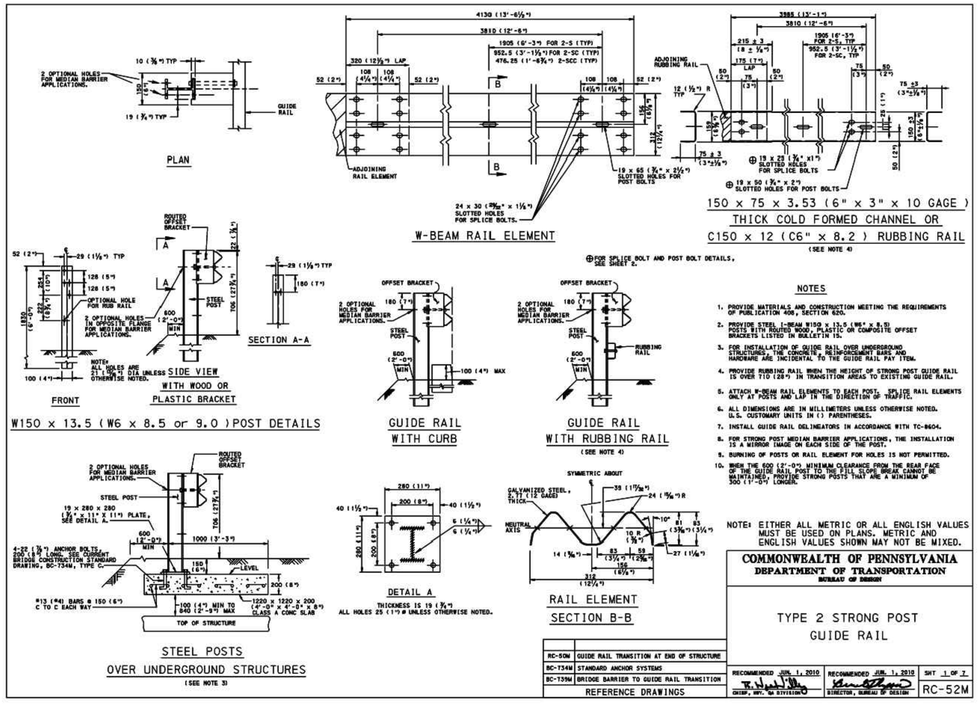
DETAILS BY OTHERS DISCLAIMER

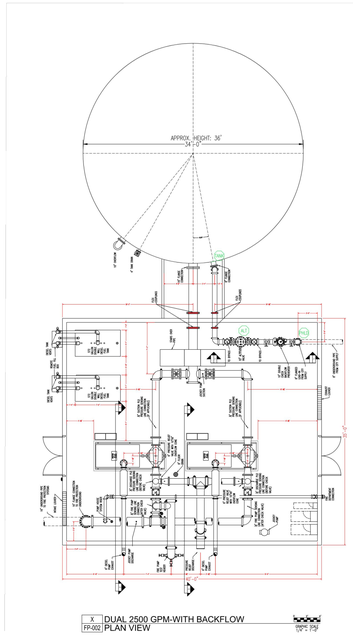


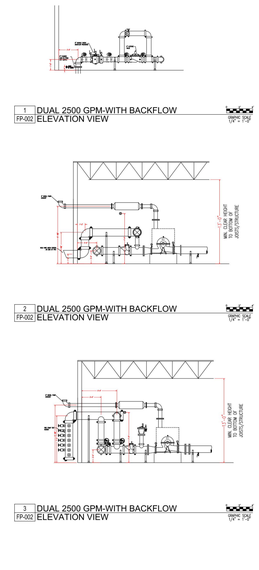
TRASH DUMPSTER FENCE & PAD
N.T.S.



TYPE 2 ADA CURB RAMP DETAIL







BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL ENGINEERING
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED AND SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES. BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-CNDS

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.M. CHARTRAND
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE NO. PE071444

SHEET TITLE:

CONSTRUCTION DETAILS

SHEET NUMBER:

C-903

REVISION 2 - 02/19/2025

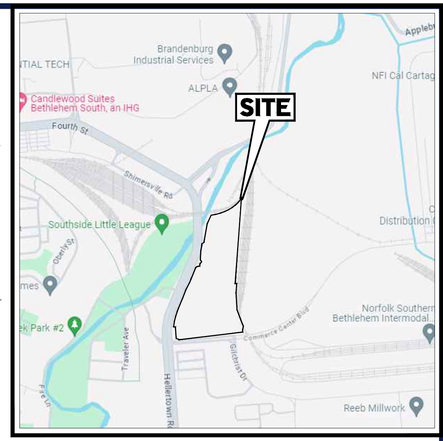
R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-CNDS-PAB240068.00-2A-----LAYOUT: C-903 DETL
JMV

GENERAL NOTES:

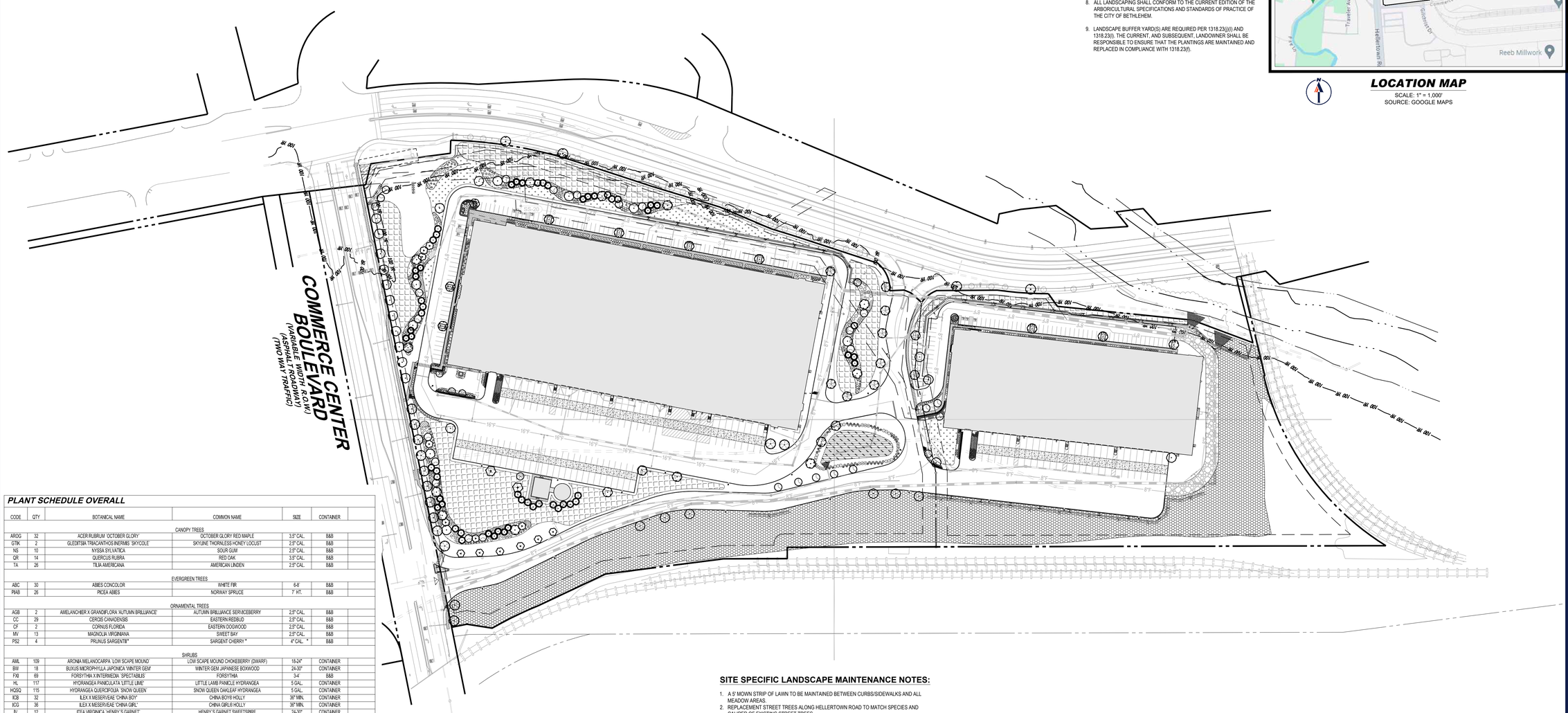
1. THIS PLAN IS TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY.
2. ALL DISTURBED UNPAVED AREAS, EXCLUDING PLANTING BEDS, ARE TO BE INSTALLED AS LAWN IN ACCORDANCE WITH LANDSCAPE SPECIFICATION #2.C., UNLESS OTHERWISE STATED ON THIS PLAN.
3. SHRUBS PLANTED ALONG HEAD-IN PARKING STALLS SHALL BE INSTALLED TO ALLOW A CLEARANCE OF TWO FEET FROM FACE OF CURB TO ALLOW FOR BUMPER OVERHANG.
4. IF IRRIGATION IS REQUIRED BY THE OWNER OR APPROVING MUNICIPALITY, THE CONTRACTOR SHALL PROVIDE AN IRRIGATION SYSTEM MEETING THE SPECIFICATIONS OF THE CHOSEN PRODUCT'S MANUFACTURER. THE IRRIGATION DESIGN SHALL ACCOMMODATE LAWN AND BED AREAS EACH UNDER SEPARATE ZONES TO MAXIMIZE WATER EFFICIENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ANY PERMITS REQUIRED FOR THE INSTALLATION OF AN IRRIGATION SYSTEM.
5. PLANT MATERIAL SUBSTITUTIONS MUST BE FORMALLY SUBMITTED TO BOHLER ENGINEERING AND THE MUNICIPAL ENGINEER AND LANDSCAPE CONSULTANTS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. ANY PLANT MATERIAL THAT ARE TO BE INSTALLED WITHIN STORMWATER BMP FEATURES MUST BE NATIVE SPECIES.
6. WITHOUT EXCEPTION, WEED BARRIER FABRIC SHALL NOT BE INSTALLED WITHIN ANY BMP FACILITY. BMP FACILITIES INCLUDE RAINGARDENS, INFILTRATION TRENCHES, VEGETATIVE SWALES AND STORMWATER BASINS.

CITY OF BETHLEHEM SPECIFIC NOTES

1. NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBANCE IS ALLOWED IN THE TREE PROTECTION ZONE UNLESS INDICATED ON THE PLAN.
2. BARRICADES MUST BE INSTALLED PRIOR TO ANY DESTRUCTION AND/OR CONSTRUCTION ACTIVITY.
3. THE ROOT PROTECTION ZONE SHALL BE THE AREA ENCOMPASSED BY A CIRCLE WITH A RADIUS EXTENDING 1.25 FT. FROM THE TRUNK OF THE TREE FOR EVERY INCH DBH (DIAMETER AT BREAST HEIGHT) OF THE TREE.
4. VIOLATION OF TREE PROTECTION REQUIREMENTS ARE SUBJECT TO PENALTY PER CITY ORDINANCE.
5. ALL TREES ON PUBLIC PROPERTY ARE PROTECTED BY ORDINANCE: NO PRUNING ROOT PRUNING OF ROOTS OVER ONE INCH IN DIAMETER, AND/OR TREE REMOVAL IS TO BE PERFORMED WITHOUT A PERMIT AND WORK MUST BE PERFORMED BY A CITY LICENSED TREE CONTRACTOR.
6. ALL PLANT MATERIALS ARE TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION, AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
7. STREET AND PARKING LOT TREES SHALL BE A MINIMUM OF 14' IN HEIGHT AND HAVE A SINGLE STRAIGHT TRUNK WITH THE FIRST LATERAL BRANCH AT 7' ABOVE THE ROOT BALL. TREES WITH AN UPRIGHT BRANCHING HABIT, SUCH AS ZELKOVA, MAY HAVE THE FIRST LATERAL BRANCH AT 6' ABOVE THE ROOT BALL.
8. ALL LANDSCAPING SHALL CONFORM TO THE CURRENT EDITION OF THE ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE OF THE CITY OF BETHLEHEM.
9. LANDSCAPE BUFFER YARD(S) ARE REQUIRED PER 1318.23(j)(i) AND 1318.23(l). THE CURRENT, AND SUBSEQUENT, LANDOWNER SHALL BE RESPONSIBLE TO ENSURE THAT THE PLANTINGS ARE MAINTAINED AND REPLACED IN COMPLIANCE WITH 1318.23(f).



LOCATION MAP
SCALE: 1" = 1,000'
SOURCE: GOOGLE MAPS



PLANT SCHEDULE OVERALL

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	
			CANOPY TREES			
AROG	32	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B	
GTIK	2	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYLINE THORNLESS HONEY LOCUST	2.5" CAL.	B&B	
NS	10	NYSSA SYLVATICA	SOUR GUM	2.5" CAL.	B&B	
QR	14	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B	
TA	26	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B	
			EVERGREEN TREES			
ABC	30	ABIES CONCOLOR	WHITE FIR	6-8'	B&B	
PAB	26	PICEA ABIES	NORWAY SPRUCE	7' HT.	B&B	
			ORNAMENTAL TREES			
AGB	2	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	2.5" CAL.	B&B	
CC	29	CERCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B	
CF	2	CORNUS FLORIDA	EASTERN DOGWOOD	2.5" CAL.	B&B	
MV	13	MAGNOLIA VIRGINIANA	SWEET BAY	2.5" CAL.	B&B	
PS2	4	PRUNUS SARGENTII*	SARGENT CHERRY *	4" CAL. *	B&B	
			SHRUBS			
AML	109	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY (DWARF)	18-24"	CONTAINER	
BW	18	BUXUS MICROPHYLLA JAPONICA 'WINTER GEM'	WINTER GEM JAPANESE BOXWOOD	24-30"	CONTAINER	
FXI	69	FORSYTHIA X INTERMEDIA 'SPECTABILIS'	FORSYTHIA	3-4'	B&B	
HL	117	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LAMB PANICLE HYDRANGEA	5 GAL.	CONTAINER	
HQSQ	115	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL.	CONTAINER	
ICB	32	ILEX X MESERVEAE 'CHINA BOY'	CHINA BOY® HOLLY	36" MIN.	CONTAINER	
ICG	36	ILEX X MESERVEAE 'CHINA GIRL'	CHINA GIRL® HOLLY	36" MIN.	CONTAINER	
IV	12	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	24-30"	CONTAINER	
IVWR	124	ILEX VERTICILLATA 'WINTER RED'	WINTER RED WINTERBERRY	30-36"	CONTAINER	
KLE	201	KALMIA LATIFOLIA 'ELF'	DWARF MOUNTAIN LAUREL	36" MIN.	B&B	
PTW	8	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK (DWARF)	24-30"	CONTAINER	
RE	20	RHODODENDRON ENCORE® 'AUTUMN CHIFFON®'	ENCORE AZALEA	18-24"	CONTAINER	
RNZ	89	RHODODENDRON X 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	36" MIN.	CONTAINER	
RRD	15	ROSA X 'MEIGALPIO'	RED EIGHT ROSE	3 GAL.	CONTAINER	
VR	98	VIBURNUM RYTIDOPHYLLUM	LEATHERLEAF VIBURNUM	3-4'	B&B	
			GRASSES			
ANG	221	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL.	CONTAINER	
CAKF	25	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	CONTAINER	
CHL	156	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1 GAL.	CONTAINER	
PAH	95	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER	
SSO	81	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	STANDING OVATION LITTLE BLUESTEM GRASS	1 GAL.	CONTAINER	
CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
			GROUND COVERS			
CE	282	CENCHRUS ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER	18" o.c.
HO	251	HEMEROCALLIS X 'STELLA DE ORO'	STELLA DE ORO DAYLILY	1 GAL.	CONTAINER	18" o.c.
IC	8	IRIS SIBIRICA 'CAESAR'S BROTHER'	CAESAR'S BROTHER SIBERIAN IRIS	---		36" o.c.
			PERENNIALS			
AH	183	AMSONIA HUBRICHTII	ARKANSAS BLUE-STAR	1 GAL.	CONTAINER	18" o.c.
LSP	561	LIRIOPE SPICATA	CREEPING LILY TURF	1 GAL.	CONTAINER	15" o.c.

*CONTRACTOR TO VERIFY REPLACEMENT TREE SPECIES AND CALIPER PER NOTE 2 IN THE SITE SPECIFIC LANDSCAPE NOTES.

PLANT SCHEDULE COMMERCE BLVD STREET TREES

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		CANOPY TREES			
AROG	10	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B
QR	12	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B

PLANT SCHEDULE ROUTE 412 STREET TREES

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		ORNAMENTAL TREES			
PS2	4	PRUNUS SARGENTII *	SARGENT CHERRY *	4" CAL.*	B&B

*CONTRACTOR TO VERIFY REPLACEMENT TREE SPECIES AND CALIPER PER NOTE 2 IN THE SITE SPECIFIC LANDSCAPE NOTES.

SITE SPECIFIC LANDSCAPE MAINTENANCE NOTES:

1. A 5' MOWN STRIP OF LAWN TO BE MAINTAINED BETWEEN CURBS/SIDEWALKS AND ALL MEADOW AREAS.
2. REPLACEMENT STREET TREES ALONG HELLERTOWN ROAD TO MATCH SPECIES AND CALIPER OF EXISTING STREET TREES.
3. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TREE PLANTING DETAILS, INCLUDING BUT NOT LIMITED TO EXCAVATION OF THE PLANTING HOLE TO 3X THE DIAMETER OF THE ROOTBALL AND AMENDED SOIL SPECIFICATIONS AS DICTATED BY LANDSCAPE SPECIFICATION 9.H ON SHEET L-106.

AREA TO BE SEEDED WITH ERNST NORTHEAST SOLAR POLLINATOR 3' SEED MIX (ERNMX-612, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX (ERNMX-153, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST RETENTION BASIN WILDLIFE SEED MIX (ERNMX-127, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST NATIVE HABITAT FOR STRIP MINES SEED MIX (ERNMX-111, SEE SPECIFICATIONS)

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

100 50 25 0 100
SCALE: 1" = 100'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABILITY SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONCEPTS OF THIS PLAN ARE COPYRIGHT AND ONLY MAY NOT BE SCALED OR USED FOR ANY PURPOSE WITHOUT WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES. ©2024 BOHLER, INC.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

COMMONWEALTH OF PENNSYLVANIA — M.R. BACHERT — REGISTERED LANDSCAPE ARCHITECT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA002385
NEW JERSEY LICENSE NO. 21AS00139900

SHEET TITLE:

LANDSCAPE PLAN

SHEET NUMBER:

L-101

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LLGT-PAB240068.00-2A-----LAYOUT L-101 LSCP
JMV

SITE SPECIFIC LANDSCAPE MAINTENANCE NOTES:

1. A 5' MOWN STRIP OF LAWN TO BE MAINTAINED BETWEEN CURBS/SIDEWALKS AND ALL MEADOW AREAS.
2. REPLACEMENT STREET TREES ALONG HELLERTOWN ROAD TO MATCH SPECIES AND CALIPER OF EXISTING STREET TREES.
3. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TREE PLANTING DETAILS, INCLUDING BUT NOT LIMITED TO EXCAVATION OF THE PLANTING HOLE TO 3X THE DIAMETER OF THE ROOTBALL AND AMENDED SOIL SPECIFICATIONS AS DICTATED BY LANDSCAPE SPECIFICATION 9.H ON SHEET L-106.

AREA TO BE SEEDED WITH ERNST NORTHEAST SOLAR POLLINATOR 3' SEED MIX (ERNMX-612, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX (ERNMX-153, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST RETENTION BASIN WILDLIFE SEED MIX (ERNMX-127, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST NATIVE HABITAT FOR STRIP MINES SEED MIX (ERNMX-111, SEE SPECIFICATIONS)

PLANT SCHEDULE COMMERCE BLVD STREET TREES

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		CANOPY TREES			
AROG	10	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B
QR	12	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B

PLANT SCHEDULE ROUTE 412 STREET TREES

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		ORNAMENTAL TREES			
PS2	4	PRUNUS SARGENTII *	SARGENT CHERRY	4" CAL.	B&B

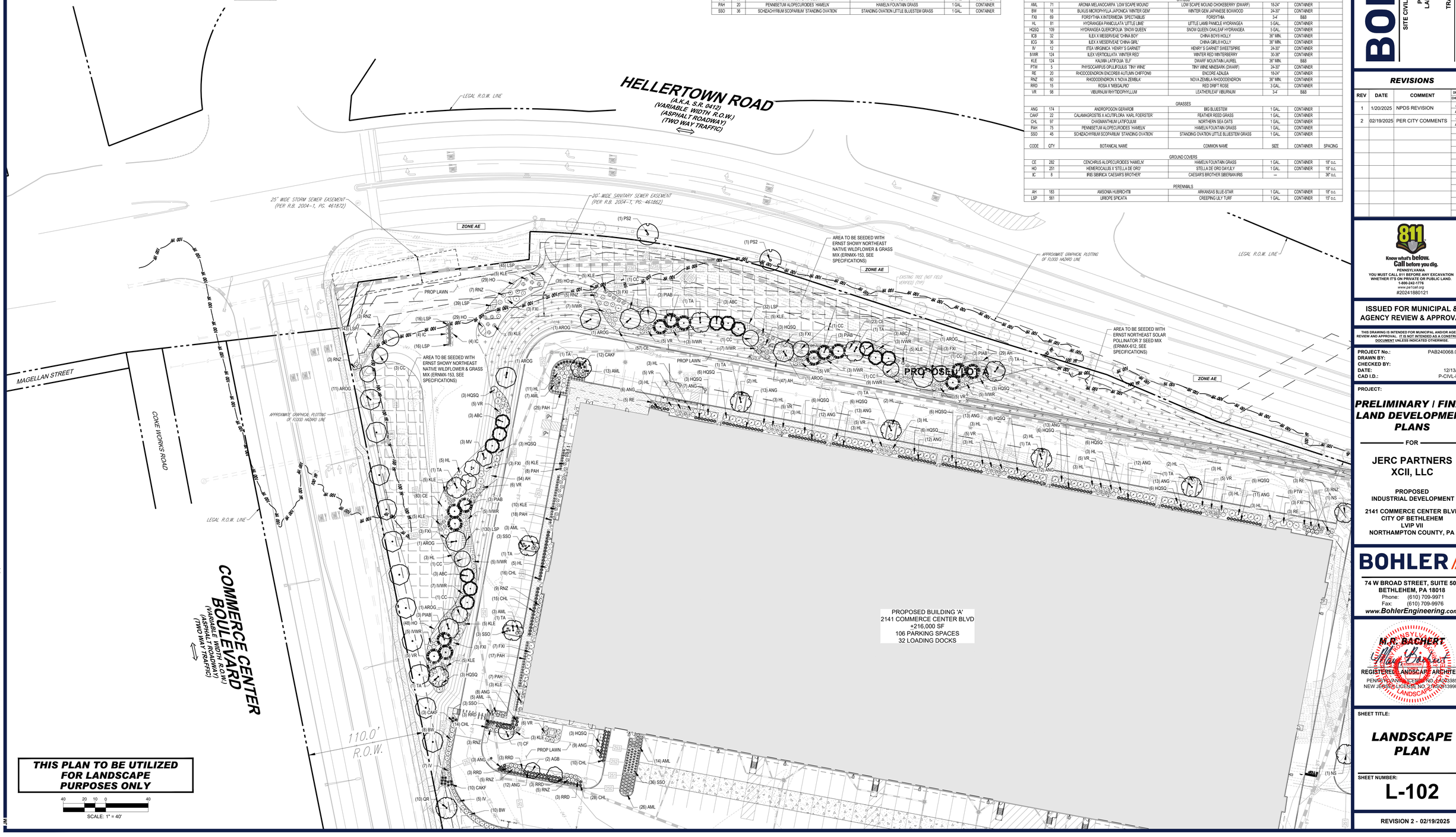
*CONTRACTOR TO VERIFY REPLACEMENT TREE SPECIES AND CALIPER PER NOTE 2 IN THE SITE SPECIFIC LANDSCAPE NOTES.

PLANT SCHEDULE LOT B

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		CANOPY TREES			
AROG	4	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B
TA	3	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B
		ORNAMENTAL TREES			
CC	4	CERCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B
		SHRUBS			
AML	38	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY (DWARF)	18-24"	CONTAINER
HL	36	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LAMB PANICLE HYDRANGEA	5 GAL.	CONTAINER
HQSQ	6	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL.	CONTAINER
KLE	77	KALMIA LATIFOLIA 'ELF'	DWARF MOUNTAIN LAUREL	36" MIN.	B&B
PTW	3	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK (DWARF)	24-30"	CONTAINER
RNZ	29	RHODODENDRON X 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	36" MIN.	CONTAINER
		GRASSES			
ANG	47	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL.	CONTAINER
CHL	59	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1 GAL.	CONTAINER
PAH	20	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER
SSO	36	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	STANDING OVATION LITTLE BLUESTEM GRASS	1 GAL.	CONTAINER

PLANT SCHEDULE LOT A

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	
		CANOPY TREES				
AROG	17	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B	
GTK	2	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYLINE THORNLESS HONEY LOCUST	2.5" CAL.	B&B	
NS	10	NYSSA SYLVATICA	SOUR GUM	2.5" CAL.	B&B	
QR	2	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B	
TA	23	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B	
		EVERGREEN TREES				
ABC	30	ABIES CONCOLOR	WHITE FIR	6-8'	B&B	
PAB	26	PICEA ABIES	NORWAY SPRUCE	7' HT.	B&B	
		ORNAMENTAL TREES				
AGB	2	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	2.5" CAL.	B&B	
CC	25	CERCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B	
CF	2	CORNUS FLORIDA	EASTERN DOGWOOD	2.5" CAL.	B&B	
MV	13	MAGNOLIA VIRGINIANA	SWEET BAY	2.5" CAL.	B&B	
		SHRUBS				
AML	71	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY (DWARF)	18-24"	CONTAINER	
BW	18	BUXUS MICROPHYLLA JAPONICA 'WINTER GEM'	WINTER GEM JAPANESE BOXWOOD	24-30"	CONTAINER	
FXI	69	FORSYTHIA X INTERMEDIA 'SPECTABILIS'	FORSYTHIA	3-4'	B&B	
HL	81	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LAMB PANICLE HYDRANGEA	5 GAL.	CONTAINER	
HQSQ	109	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL.	CONTAINER	
ICB	32	ILEX X MESERVEAE 'CHINA BOY'	CHINA BOY® HOLLY	36" MIN.	CONTAINER	
ICG	36	ILEX X MESERVEAE 'CHINA GIRL'	CHINA GIRL® HOLLY	36" MIN.	CONTAINER	
IV	12	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	24-30"	CONTAINER	
IVWR	124	ILEX VERTICILLATA 'WINTER RED'	WINTER RED WINTERBERRY	30-36"	CONTAINER	
KLE	124	KALMIA LATIFOLIA 'ELF'	DWARF MOUNTAIN LAUREL	36" MIN.	B&B	
PTW	5	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK (DWARF)	24-30"	CONTAINER	
RE	20	RHODODENDRON ENCORE® AUTUMN CHIFFON®	ENCORE AZALEA	18-24"	CONTAINER	
RNZ	60	RHODODENDRON X 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	36" MIN.	CONTAINER	
RRD	15	ROSA X 'MEIGALPIO'	RED DRIFT ROSE	3 GAL.	CONTAINER	
VR	98	VIBURNUM RHYTIDOPHYLLUM	LEATHERLEAF VIBURNUM	3-4'	B&B	
		GRASSES				
ANG	174	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL.	CONTAINER	
CAKF	22	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	CONTAINER	
CHL	97	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1 GAL.	CONTAINER	
PAH	75	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER	
SSO	45	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	STANDING OVATION LITTLE BLUESTEM GRASS	1 GAL.	CONTAINER	
CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
		GROUND COVERS				
CE	282	CENCHRUS ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER	18" o.c.
HO	251	HEMEROCALLIS X 'STELLA DE ORO'	STELLA DE ORO DAYLILY	1 GAL.	CONTAINER	18" o.c.
IC	8	IRIS SIBIRICA 'CAESAR'S BROTHER'	CAESAR'S BROTHER SIBERIAN IRIS	--		36" o.c.
		PERENNIALS				
AH	183	AMSONIA HUBRICHTII	ARKANSAS BLUE-STAR	1 GAL.	CONTAINER	18" o.c.
LSP	561	LIRIOPE SPICATA	CREEPING LILY TURF	1 GAL.	CONTAINER	15" o.c.



THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

40 20 10 0 40

SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LLGT-PAB240068.00-2A-----LAYOUT: L-102 LSCP (A)

JMI

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE DISCLOSED OR USED FOR ANY PURPOSE, IN WHOLE OR IN PART, WITHOUT THE EXPRESS WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED OR CONSTRUCTED FROM.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT NO.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER

74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.P. BACHERT
COMMONWEALTH OF PENNSYLVANIA
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA002385
NEW JERSEY LICENSE NO. 21AS00139900

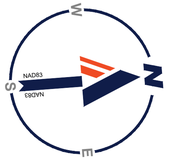
SHEET TITLE:

LANDSCAPE PLAN

SHEET NUMBER:

L-102

REVISION 2 - 02/19/2025



PLANT SCHEDULE COMMERCE BLVD STREET TREES

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
CANOPY TREES					
AROG	10	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B
QR	12	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B

PLANT SCHEDULE ROUTE 412 STREET TREES

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
ORNAMENTAL TREES					
PS2	4	PRUNUS SARGENTII *	SARGENT CHERRY *	4" CAL.	B&B *

*CONTRACTOR TO VERIFY REPLACEMENT TREE SPECIES AND CALIPER PER NOTE 2 IN THE SITE SPECIFIC LANDSCAPE NOTES.

PLANT SCHEDULE LOT B

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
CANOPY TREES					
AROG	4	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B
TA	3	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B
ORNAMENTAL TREES					
CC	4	CERCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B
SHRUBS					
AML	38	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY (DWARF)	18-24"	CONTAINER
HL	36	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LAMB PANICLE HYDRANGEA	5 GAL.	CONTAINER
HQSQ	6	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL.	CONTAINER
KLE	77	KALMIA LATIFOLIA 'ELF'	DWARF MOUNTAIN LAUREL	36" MIN.	B&B
PTW	3	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK (DWARF)	24-30"	CONTAINER
RNZ	29	RHODODENDRON X 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	36" MIN.	CONTAINER
GRASSES					
ANG	47	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL.	CONTAINER
CHL	59	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1 GAL.	CONTAINER
PAH	20	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER
SSO	36	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	STANDING OVATION LITTLE BLUESTEM GRASS	1 GAL.	CONTAINER

PLANT SCHEDULE LOT A

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	
CANOPY TREES						
AROG	17	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B	
GTIK	2	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYLINE THORNLESS HONEY LOCUST	2.5" CAL.	B&B	
NS	10	NYSSA SYLVATICA	SOUR GUM	2.5" CAL.	B&B	
QR	2	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B	
TA	23	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B	
EVERGREEN TREES						
ABC	30	ABIES CONCOLOR	WHITE FIR	6-8'	B&B	
PAB	26	PICEA ABIES	NORWAY SPRUCE	7' HT.	B&B	
ORNAMENTAL TREES						
AGB	2	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	2.5" CAL.	B&B	
CC	25	CERCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B	
CF	2	CORNUS FLORIDA	EASTERN DOGWOOD	2.5" CAL.	B&B	
MV	13	MAGNOLIA VIRGINIANA	SWEET BAY	2.5" CAL.	B&B	
SHRUBS						
AML	71	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY (DWARF)	18-24"	CONTAINER	
BW	18	BUXUS MICROPHYLLA JAPONICA 'WINTER GEM'	WINTER GEM JAPANESE BOXWOOD	24-30"	CONTAINER	
FXI	69	FORSYTHIA X INTERMEDIA 'SPECTABILIS'	FORSYTHIA	3-4'	B&B	
HL	81	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LAMB PANICLE HYDRANGEA	5 GAL.	CONTAINER	
HQSQ	109	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL.	CONTAINER	
ICB	32	ILEX X MESERVEAE 'CHINA BOY'	CHINA BOY® HOLLY	36" MIN.	CONTAINER	
ICG	36	ILEX X MESERVEAE 'CHINA GIRL'	CHINA GIRL® HOLLY	36" MIN.	CONTAINER	
IV	12	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	24-30"	CONTAINER	
IVWR	124	ILEX VERTICILLATA 'WINTER RED'	WINTER RED WINTERBERRY	30-36"	CONTAINER	
KLE	124	KALMIA LATIFOLIA 'ELF'	DWARF MOUNTAIN LAUREL	36" MIN.	B&B	
PTW	5	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK (DWARF)	24-30"	CONTAINER	
RE	20	RHODODENDRON ENCORE® AUTUMN CHIFFON®	ENCORE AZALEA	18-24"	CONTAINER	
RNZ	60	RHODODENDRON X 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	36" MIN.	CONTAINER	
RRO	15	ROSA X 'MEIGALPIO'	RED DRIFT ROSE	3 GAL.	CONTAINER	
VR	98	VIBURNUM RHYTIDOPHYLLUM	LEATHERLEAF VIBURNUM	3-4'	B&B	
GRASSES						
ANG	174	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL.	CONTAINER	
CAKF	22	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	CONTAINER	
CHL	97	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1 GAL.	CONTAINER	
PAH	75	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER	
SSO	45	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	STANDING OVATION LITTLE BLUESTEM GRASS	1 GAL.	CONTAINER	
CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
GROUND COVERS						
CE	282	CENCHRUS ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER	18" o.c.
HO	251	HEMEROCALLIS X 'STELLA DE ORO'	STELLA DE ORO DAYLILY	1 GAL.	CONTAINER	18" o.c.
IC	8	IRIS SIBIRICA 'CAESAR'S BROTHER'	CAESAR'S BROTHER SIBERIAN IRIS	---		36" o.c.
PERENNIALS						
AH	183	AMSONIA HUBRICHTII	ARKANSAS BLUE-STAR	1 GAL.	CONTAINER	18" o.c.
LSP	561	LIRIOPE SPICATA	CREEPING LILY TURF	1 GAL.	CONTAINER	15" o.c.

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

AREA TO BE SEEDED WITH ERNST NORTHEAST SOLAR POLLINATOR 3' SEED MIX (ERNMX-612, SEE SPECIFICATIONS)

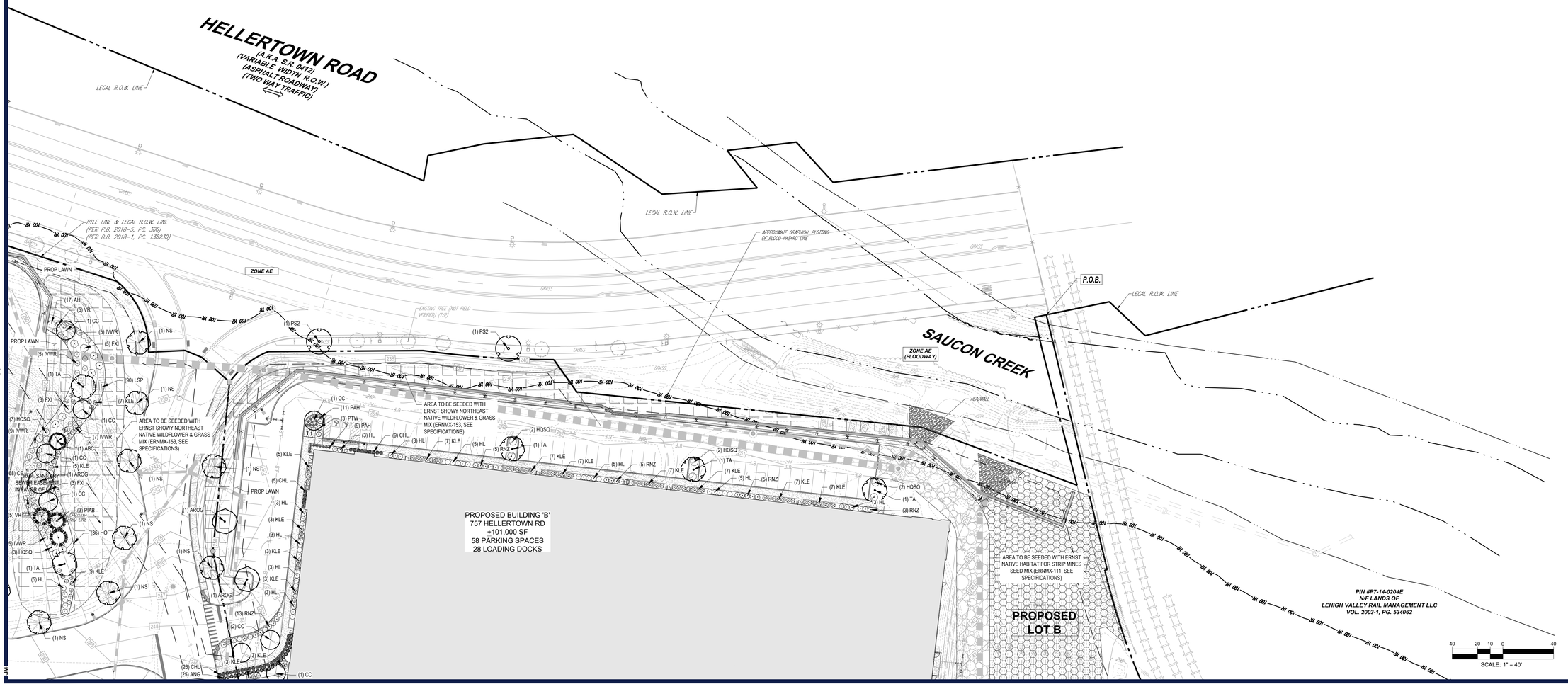
AREA TO BE SEEDED WITH ERNST SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX (ERNMX-153, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST RETENTION BASIN WILDLIFE SEED MIX (ERNMX-127, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST NATIVE HABITAT FOR STRIP MINES SEED MIX (ERNMX-111, SEE SPECIFICATIONS)

SITE SPECIFIC LANDSCAPE MAINTENANCE NOTES:

1. A 5' MOWN STRIP OF LAWN TO BE MAINTAINED BETWEEN CURBS/SIDEWALKS AND ALL MEADOW AREAS.
2. REPLACEMENT STREET TREES ALONG HELLERTOWN ROAD TO MATCH SPECIES AND CALIPER OF EXISTING STREET TREES.
3. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TREE PLANTING DETAILS, INCLUDING BUT NOT LIMITED TO EXCAVATION OF THE PLANTING HOLE TO 3X THE DIAMETER OF THE ROOTBALL AND AMENDED SOIL SPECIFICATIONS AS DICTATED BY LANDSCAPE SPECIFICATION 9.H ON SHEET L-106.



R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LLGT-PAB240068.00-2A-----LAYOUT1 L-103 LSCP (B) JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

**2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA**

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.R. BACHERT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA002385
NEW JERSEY LICENSE NO. 24GA28039900

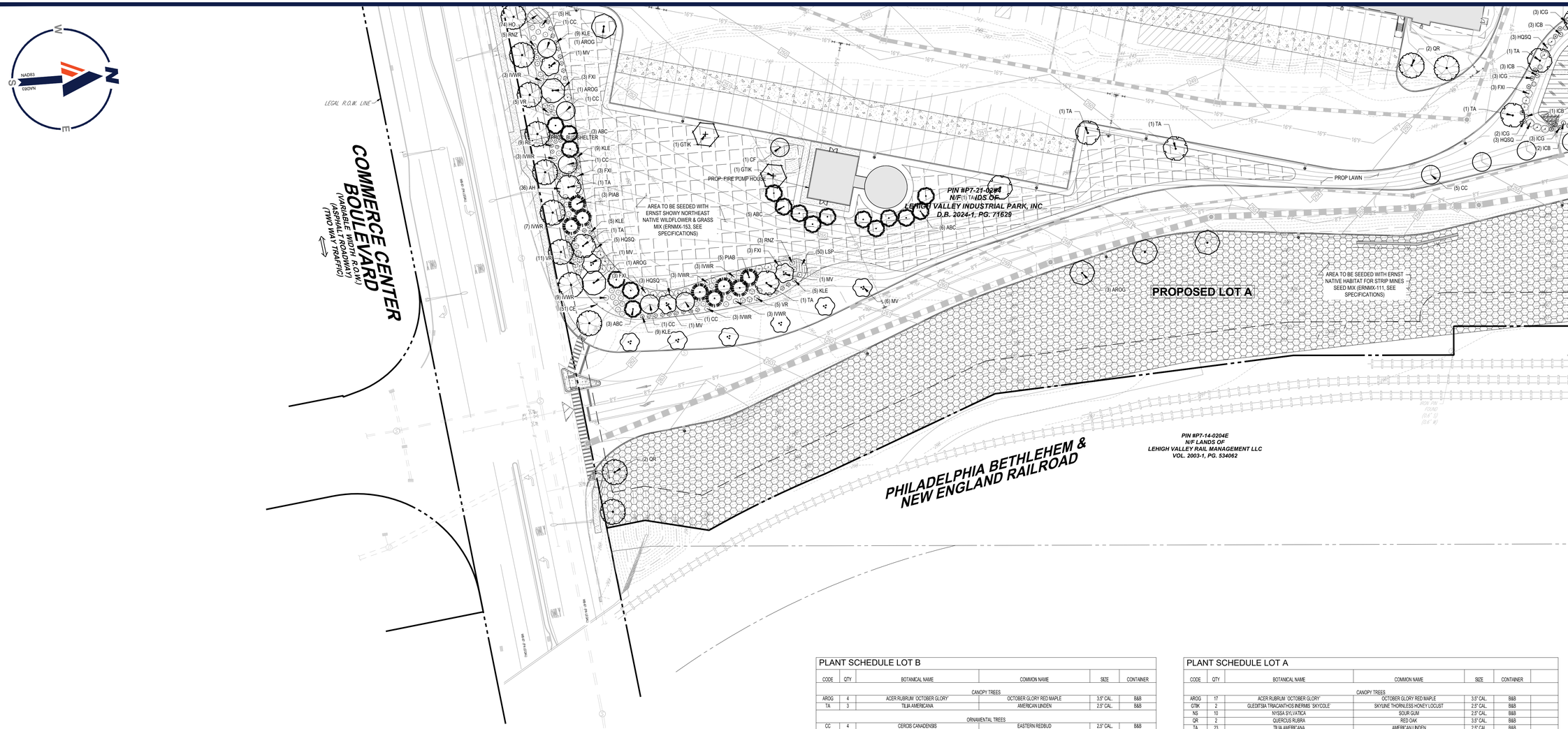
SHEET TITLE:

LANDSCAPE PLAN

SHEET NUMBER:

L-103

REVISION 2 - 02/19/2025



PLANT SCHEDULE LOT B

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
CANOPY TREES					
AROG	4	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B
TA	3	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B
ORNAMENTAL TREES					
CC	4	CERCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B
SHRUBS					
AML	38	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY (DWARF)	18-24"	CONTAINER
HL	36	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LAMB PANICLE HYDRANGEA	5 GAL.	CONTAINER
HQSQ	6	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL.	CONTAINER
KLE	77	KALMIA LATIFOLIA 'ELF'	DWARF MOUNTAIN LAUREL	36" MIN.	B&B
PTW	3	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK (DWARF)	24-30"	CONTAINER
RNZ	29	RHODODENDRON X 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	36" MIN.	CONTAINER
GRASSES					
ANG	47	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL.	CONTAINER
CHL	59	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1 GAL.	CONTAINER
PAH	20	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER
SSO	36	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	STANDING OVATION LITTLE BLUESTEM GRASS	1 GAL.	CONTAINER

PLANT SCHEDULE COMMERCE BLVD STREET TREES

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
CANOPY TREES					
AROG	10	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B
QR	12	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B

PLANT SCHEDULE ROUTE 412 STREET TREES

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
ORNAMENTAL TREES					
PS2	4	PRUNUS SARGENTII *	SARGENT CHERRY *	4" CAL*	B&B

*CONTRACTOR TO VERIFY REPLACEMENT TREE SPECIES AND CALIPER PER NOTE 2 IN THE SITE SPECIFIC LANDSCAPE NOTES.

AREA TO BE SEEDED WITH ERNST NORTHEAST SOLAR POLLINATOR 3' SEED MIX (ERNMX-612, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX (ERNMX-153, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST RETENTION BASIN WILDLIFE SEED MIX (ERNMX-127, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST NATIVE HABITAT FOR STRIP MINES SEED MIX (ERNMX-111, SEE SPECIFICATIONS)

SITE SPECIFIC LANDSCAPE MAINTENANCE NOTES:

1. A 5' MOWN STRIP OF LAWN TO BE MAINTAINED BETWEEN CURBS/SIDEWALKS AND ALL MEADOW AREAS.
2. REPLACEMENT STREET TREES ALONG HELLERTOWN ROAD TO MATCH SPECIES AND CALIPER OF EXISTING STREET TREES.
3. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TREE PLANTING DETAILS, INCLUDING BUT NOT LIMITED TO EXCAVATION OF THE PLANTING HOLE TO 3X THE DIAMETER OF THE ROOTBALL AND AMENDED SOIL SPECIFICATIONS AS DICTATED BY LANDSCAPE SPECIFICATION 9.H ON SHEET L-106.

PLANT SCHEDULE LOT A

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	
CANOPY TREES						
AROG	17	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B	
GTIK	2	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYLINE THORNLESS HONEY LOCUST	2.5" CAL.	B&B	
NS	10	NYSSA SYLVATICA	SOUR GUM	2.5" CAL.	B&B	
QR	2	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B	
TA	23	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B	
EVERGREEN TREES						
ABC	30	ABIES CONCOLOR	WHITE FIR	6-8'	B&B	
PIAB	26	PICEA ABIES	NORWAY SPRUCE	7' HT.	B&B	
ORNAMENTAL TREES						
AGB	2	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	2.5" CAL.	B&B	
CC	25	CERCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B	
CF	2	CORNUS FLORIDA	EASTERN DOGWOOD	2.5" CAL.	B&B	
MV	13	MAGNOLIA VIRGINIANA	SWEET BAY	2.5" CAL.	B&B	
SHRUBS						
AML	71	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY (DWARF)	18-24"	CONTAINER	
BW	18	BUXUS MICROPHYLLA JAPONICA 'WINTER GEM'	WINTER GEM JAPANESE BOXWOOD	24-30"	CONTAINER	
FXI	69	FORSYTHIA X INTERMEDIA 'SPECTABILIS'	FORSYTHIA	3-4'	B&B	
HL	81	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LAMB PANICLE HYDRANGEA	5 GAL.	CONTAINER	
HQSQ	109	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL.	CONTAINER	
ICB	32	ILEX X MESERVEAE 'CHINA BOY'	CHINA BOY® HOLLY	36" MIN.	CONTAINER	
ICG	36	ILEX X MESERVEAE 'CHINA GIRL'	CHINA GIRL® HOLLY	36" MIN.	CONTAINER	
IV	12	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	24-30"	CONTAINER	
IVWR	124	ILEX VERTICILLATA 'WINTER RED'	WINTER RED WINTERBERRY	30-36"	CONTAINER	
KLE	124	KALMIA LATIFOLIA 'ELF'	DWARF MOUNTAIN LAUREL	36" MIN.	B&B	
PTW	5	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK (DWARF)	24-30"	CONTAINER	
RE	20	RHODODENDRON ENCORE® AUTUMN CHIFFON®	ENCORE® AZALEA	18-24"	CONTAINER	
RNZ	60	RHODODENDRON X 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	36" MIN.	CONTAINER	
RRD	15	ROSA X 'MEIGALPIO'	RED DRIFT® ROSE	3 GAL.	CONTAINER	
VR	98	VIBURNUM RHYTIDOPHYLLUM	LEATHERLEAF VIBURNUM	3-4'	B&B	
GRASSES						
ANG	174	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL.	CONTAINER	
CAKF	22	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	CONTAINER	
CHL	97	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1 GAL.	CONTAINER	
PAH	75	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER	
SSO	45	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	STANDING OVATION LITTLE BLUESTEM GRASS	1 GAL.	CONTAINER	
CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
GROUND COVERS						
CE	282	CENCHRUS ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER	18" o.c.
HO	251	HEMEROCALLIS X 'STELLA DE ORO'	STELLA DE ORO DAYLILY	1 GAL.	CONTAINER	18" o.c.
IC	8	IRIS SIBIRICA 'CAESAR'S BROTHER'	CAESAR'S BROTHER SIBERIAN IRIS	---		36" o.c.
PERENNIALS						
AH	183	AMSONIA HUBRICHTII	ARKANSAS BLUE-STAR	1 GAL.	CONTAINER	18" o.c.
LSP	561	LIRIOPE SPICATA	CREEPING LILY TURF	1 GAL.	CONTAINER	15" o.c.

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

40 20 10 0 40

SCALE: 1" = 40'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE BOHLER CIVIL DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHT AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT THE EXPRESS AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

COMMONWEALTH OF PENNSYLVANIA — REGISTERED LANDSCAPE ARCHITECT — M. R. BACHERT — LICENSE NO. LA002385 — EXPIRES 12/31/2025
M.R. BACHERT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA002385
NEW JERSEY LICENSE NO. 21AS00139900

SHEET TITLE:

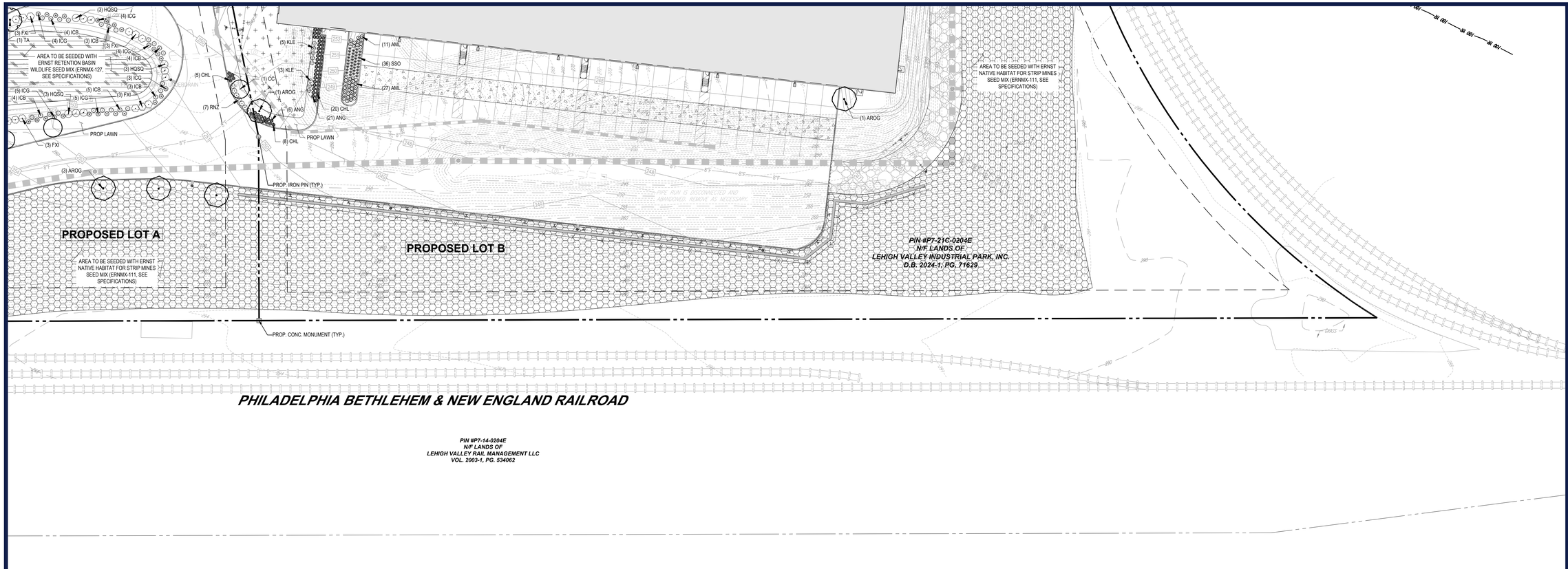
LANDSCAPE PLAN

SHEET NUMBER:

L-104

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LLGT\PAB240068.00-2A-----LAYOUT\ L-104 LSCP (C)
JM



PLANT SCHEDULE LOT B

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		CANOPY TREES			
AROG	4	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B
TA	3	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B
		ORNAMENTAL TREES			
CC	4	CERCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B
		SHRUBS			
AML	38	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY (DWARF)	18-24"	CONTAINER
HL	36	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LAMB PANICLE HYDRANGEA	5 GAL.	CONTAINER
HQSQ	6	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL.	CONTAINER
KLE	77	KALMIA LATIFOLIA 'ELF'	DWARF MOUNTAIN LAUREL	36" MIN.	B&B
PTW	3	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK (DWARF)	24-30"	CONTAINER
RNZ	29	RHODODENDRON X 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	36" MIN.	CONTAINER
		GRASSES			
ANG	47	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL.	CONTAINER
CHL	59	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1 GAL.	CONTAINER
PAH	20	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER
SSO	36	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	STANDING OVATION LITTLE BLUESTEM GRASS	1 GAL.	CONTAINER

PLANT SCHEDULE COMMERCE BLVD STREET TREES

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		CANOPY TREES			
AROG	10	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B
QR	12	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B

PLANT SCHEDULE ROUTE 412 STREET TREES

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
		ORNAMENTAL TREES			
PS2	4	PRUNUS SARGENTII	SARGENT CHERRY	4" CAL.	B&B

*CONTRACTOR TO VERIFY REPLACEMENT TREE SPECIES AND CALIPER PER NOTE 2 IN THE SITE SPECIFIC LANDSCAPE NOTES.

AREA TO BE SEEDED WITH ERNST NORTHEAST SOLAR POLLINATOR 3' SEED MIX (ERNMX-612, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX (ERNMX-153, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST RETENTION BASIN WILDLIFE SEED MIX (ERNMX-127, SEE SPECIFICATIONS)

AREA TO BE SEEDED WITH ERNST NATIVE HABITAT FOR STRIP MINES SEED MIX (ERNMX-111, SEE SPECIFICATIONS)

PLANT SCHEDULE LOT A

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	
		CANOPY TREES				
AROG	17	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3.5" CAL.	B&B	
GTK	2	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYLINE THORNLESS HONEY LOCUST	2.5" CAL.	B&B	
NS	10	NYSSA SYLVATICA	SOUR GUM	2.5" CAL.	B&B	
QR	2	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B	
TA	23	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B	
		EVERGREEN TREES				
ABC	30	ABIES CONCOLOR	WHITE FIR	6-8	B&B	
PAB	26	PICEA ABIES	NORWAY SPRUCE	7' HT.	B&B	
		ORNAMENTAL TREES				
AGB	2	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	2.5" CAL.	B&B	
CC	25	CERCIS CANADENSIS	EASTERN REDBUD	2.5" CAL.	B&B	
CF	2	CORNUS FLORIDA	EASTERN DOGWOOD	2.5" CAL.	B&B	
MV	13	MAGNOLIA VIRGINIANA	SWEET BAY	2.5" CAL.	B&B	
		SHRUBS				
AML	71	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND CHOKEBERRY (DWARF)	18-24"	CONTAINER	
BW	18	BUXUS MICROPHYLLA JAPONICA 'WINTER GEM'	WINTER GEM JAPANESE BOXWOOD	24-30"	CONTAINER	
FXI	69	FORSYTHIA X INTERMEDIA 'SPECTABILIS'	FORSYTHIA	3-4'	B&B	
HL	81	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LAMB PANICLE HYDRANGEA	5 GAL.	CONTAINER	
HQSQ	109	HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SNOW QUEEN OAKLEAF HYDRANGEA	5 GAL.	CONTAINER	
ICB	32	ILEX X MESERVEAE 'CHINA BOY'	CHINA BOY® HOLLY	36" MIN.	CONTAINER	
ICG	36	ILEX X MESERVEAE 'CHINA GIRL'	CHINA GIRL® HOLLY	36" MIN.	CONTAINER	
IV	12	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	24-30"	CONTAINER	
IVWR	124	ILEX VERTICILLATA 'WINTER RED'	WINTER RED WINTERBERRY	30-36"	CONTAINER	
KLE	124	KALMIA LATIFOLIA 'ELF'	DWARF MOUNTAIN LAUREL	36" MIN.	B&B	
PTW	5	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK (DWARF)	24-30"	CONTAINER	
RE	20	RHODODENDRON ENCORE® AUTUMN CHIFFON®	ENCORE AZALEA	18-24"	CONTAINER	
RNZ	60	RHODODENDRON X 'NOVA ZEMBLA'	NOVA ZEMBLA RHODODENDRON	36" MIN.	CONTAINER	
RRD	15	ROSA X 'MEIGALPIO'	RED DRIFT ROSE	3 GAL.	CONTAINER	
VR	98	VIBURNUM RHYTIDOPHYLLUM	LEATHERLEAF VIBURNUM	3-4'	B&B	
		GRASSES				
ANG	174	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL.	CONTAINER	
CAKF	22	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	CONTAINER	
CHL	97	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1 GAL.	CONTAINER	
PAH	75	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER	
SSO	45	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	STANDING OVATION LITTLE BLUESTEM GRASS	1 GAL.	CONTAINER	
CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING
		GROUND COVERS				
CE	282	CENCHRUS ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL.	CONTAINER	18" o.c.
HO	251	HEMEROCALLIS X 'STELLA DE ORO'	STELLA DE ORO DAYLILY	1 GAL.	CONTAINER	18" o.c.
IC	8	IRIS SIBIRICA 'CAESAR'S BROTHER'	CAESAR'S BROTHER SIBERIAN IRIS	---		36" o.c.
		PERENNIALS				
AH	183	AMSONIA HUBRICHTII	ARKANSAS BLUE-STAR	1 GAL.	CONTAINER	18" o.c.
LSP	561	LIRIOPE SPICATA	CREEPING LILY TURF	1 GAL.	CONTAINER	15" o.c.

SITE SPECIFIC LANDSCAPE MAINTENANCE NOTES:

1. A 5' MOWN STRIP OF LAWN TO BE MAINTAINED BETWEEN CURBS/SIDEWALKS AND ALL MEADOW AREAS.
2. REPLACEMENT STREET TREES ALONG HELLERTOWN ROAD TO MATCH SPECIES AND CALIPER OF EXISTING STREET TREES.
3. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TREE PLANTING DETAILS, INCLUDING BUT NOT LIMITED TO EXCAVATION OF THE PLANTING HOLE TO 3X THE DIAMETER OF THE ROOTBALL AND AMENDED SOIL SPECIFICATIONS AS DICTATED BY LANDSCAPE SPECIFICATION 9.H ON SHEET L-106.

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

40 20 10 0 40

SCALE: 1" = 40'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE ESG SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED AND DATED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: PAB240068.00-2A
DRAWN BY: ABN
CHECKED BY: MMC
DATE: 12/13/2024
CAD I.D.: P-CIVIL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT
2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

COMMONWEALTH OF PENNSYLVANIA — M. J. BACHERT — 414E — REGISTERED LANDSCAPE ARCHITECT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA002385
NEW JERSEY LICENSE NO. 21AS00139900

SHEET TITLE:

LANDSCAPE PLAN

SHEET NUMBER:

L-105

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LLGT-PAB240068.00-2A-----LAYOUT L-105 LSCP (3)
JM

COMPLIANCE CHART

SECTION	REQUIREMENT	CALCULATIONS (REQUIRED / PROVIDED)	COMPLIANCE
SALDO: 1349.08 PLANTING	(f)(1) LANDSCAPED OFF-STREET PARKING AND LOADING AREAS SHALL HAVE A MINIMUM OF TEN (10%) PERCENT OF THE AREA REPRESENTED BY APPROVED PLANTINGS. THESE PLANTINGS SHALL BE IN ADDITION TO ANY BUFFER PLANTINGS WHICH MAY BE NECESSARY.	LOT A: 144,049.9 SF * 10% = 14,404.9 SF REQUIRED: 14,404.9 SF (10%) **PROVIDED:** 16,722.7 SF OF PLANTABLE AREA AROUND THE BUILDING AND WITHIN PARKING ISLANDS (11.6%)	COMPLIES
		LOT B: 80,055.9 SF * 10% = 8,005.5 SF REQUIRED: 8,005.5 SF (10%) **PROVIDED:** 8,258.6 SF OF PLANTABLE AREA AROUND THE BUILDING AND WITHIN PARKING ISLANDS (10.3%)	COMPLIES
ZONING: 1308.01 ADDITIONAL REQUIREMENTS IN THE IR AND IR-R DISTRICTS	(e)2. SEE CITY SIDEWALKS REQUIREMENTS AND CITY STREET TREE REQUIREMENTS IN SEPARATE ORDINANCES. AN AVERAGE OF AT LEAST ONE STREET TREE SHALL BE PLANTED FOR EACH 40 FEET OF STREET LENGTH, UNLESS EXISTING TREES WILL BE PRESERVED TO SERVE THE SAME PURPOSE. THE SPACING OF SUCH TREES MAY VARY TO PROVIDE FOR DRIVEWAYS, GROWTH HABIT, SIGHT DISTANCE AND OTHER FEATURES, PROVIDED THE AVERAGE SEPARATION OF TREES IS MET.	LOT A: HELLERTOWN ROAD: 1,036± LF REQUIRED: 1,036 / 40 = 25.9 OR 26 TREES **PROVIDED:** 26 TREES (24 EXISTING TREES TO REMAIN, 2 PS2) COMMERCE BLVD: 910± LF REQUIRED: 910 / 40 = 22.7 OR 23 TREES **PROVIDED:** 23 TREES (11 AROG, 12 QR)	COMPLIES
		LOT B: HELLERTOWN ROAD: 265± LF REQUIRED: 265 / 40 = 6.6 OR 7 TREES **PROVIDED:** 7 TREES (5 EXISTING TREES TO REMAIN, 2 PS2)	COMPLIES
	(e)15.PARKING AREAS SHOULD BE WELL-SCREENED FROM AN ARTERIAL STREET BY LANDSCAPING AND A DECORATIVE MASONRY WALL. WHERE REAR PARKING IS NOT PRACTICAL, THEN PARKING SHOULD BE PROVIDED TO THE SIDE OF A BUILDING.	THE PARKING AREA HAS BEEN SCREENED FROM COMMERCE BOULEVARD AND HELLERTOWN ROAD WITH LANDSCAPING AND RETAINING WALLS.	COMPLIES
1318.23 BUFFER YARDS	BUFFER YARDS ARE REQUIRED ALONG REAR AND SIDE LOT LINES IN ALL PRIMARILY NON-RESIDENTIAL DISTRICTS (SUCH AS THE CM, INDUSTRIAL REDEVELOPMENT, COMMERCIAL AND INDUSTRIAL DISTRICTS), ALONG THE DISTRICT BOUNDARIES BETWEEN A NEW OR EXPANDED NON-RESIDENTIAL USE AND ANY RESIDENTIAL AND INSTITUTIONAL DISTRICTS THAT DIRECTLY ABUTS THE NON-RESIDENTIAL DISTRICT OR IS ONLY SEPARATED FROM THE NON-RESIDENTIAL DISTRICT BY AN ORDAINED ALLEY OR LOCAL STREET. (f) BUFFER YARDS SHALL INCLUDE A DENSE SCREEN PLANTING OF PRIMARILY EVERGREEN TREES AND SHRUBS, ALSO INCLUDING VEGETATIVE GROUND COVER TO THE FULL LENGTH OF THE LOT LINE. THE BUFFER YARD SHALL BE DESIGNED TO SERVE AS A BARRIER TO VISIBILITY, AIRBORNE PARTICLES, GLARE AND NOISE. SUCH SCREEN PLANTING SHALL BE LOCATED WITHIN THE BUFFER YARD, AND SHALL BE IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS: (1) PLANT MATERIALS USED IN THE SCREEN PLANTING SHALL BE AT LEAST 4 FEET IN HEIGHT WHEN PLANTED AND BE OF SUCH SPECIES AND SPACING THAT CAN BE EXPECTED TO PRODUCE, WITHIN 3 YEARS, A COMPLETE VISUAL SCREEN OF AT LEAST 6 FEET IN HEIGHT.	NOT ADJACENT TO RESIDENTIAL DISTRICT OR USE. NOT APPLICABLE.	NOT APPLICABLE
	(I) IN ADDITION, AN 8 FEET MINIMUM WIDTH BUFFER STRIP ALONG A PUBLIC STREET SHALL BE REQUIRED WHERE NEW PARKING SPACES FOR 10 OR MORE VEHICLES ARE PROPOSED TO BE ADJACENT TO AND VISIBLE FROM A PUBLIC STREET. SUCH BUFFER STRIP SHALL INCLUDE PLANTS WITH AN ANTICIPATED MATURE HEIGHT OF AT LEAST 4 FEET AND DECIDUOUS SHADE TREES. THE CITY MAY REQUIRE SUCH BUFFER TO BE DESIGNED SO THAT IT IS POSSIBLE TO HAVE VIEWS AT EYE LEVEL INTO THE PARKING AREA FOR SECURITY REASONS.	THE PARKING SPACES HAVE BEEN SCREENED FROM THE STREETS WITH LANDSCAPING AND RETAINING WALLS.	COMPLIES
1318.28 TREE CONSERVATION	(a) WHERE ANY EXISTING HEALTHY TREE(S) THAT HAS A TRUNK DIAMETER OF 8 INCHES OR GREATER (MEASURED 4.5 FEET ABOVE THE GROUND LEVEL) ARE REMOVED FROM A SITE AS PART OF OR IN PREPARATION FOR A DEVELOPMENT PROJECT, 1 NEW TREE SHALL BE PLANTED FOR EACH SUCH TREE THAT IS REMOVED. THE NEW TREES SHALL HAVE A MINIMUM TRUNK DIAMETER OF 2.5 INCHES MEASURED 6 INCHES ABOVE THE GROUND LEVEL AND SHALL MEET THE CITY SPECIES REQUIREMENTS THAT WOULD APPLY TO STREET TREES, UNLESS OTHER SPECIES ARE APPROVED BY THE CITY FORESTER. IF THERE IS MUTUAL CONSENT BY THE APPLICANT AND THE CITY, SOME OR ALL OF THE REPLACEMENT TREES MAY BE PLANTED ON CITY OWNED LAND AS AN IN LIEU OF REQUIREMENT.	NO EXISTING TREES PROPOSED TO BE REMOVED. NOT APPLICABLE.	NOT APPLICABLE
1319.02 (j) STREET TREES AND PARKING LOT TREES	(1) STREET TREES MEETING REQUIREMENTS OF THE CITY SHALL BE REQUIRED ON EACH SIDE OF EVERY PUBLIC AND PRIVATE STREET. A MINIMUM AVERAGE OF ONE STREET TREE SHALL BE REQUIRED FOR EACH 30 FEET OF PUBLIC OR PRIVATE STREET LENGTH, UNLESS EXISTING TREES WILL BE PRESERVED TO SERVE THE SAME PURPOSE, OR UNLESS THE CITY ALLOWS AN AVERAGE OF ONE TREE FOR EVERY 50 FEET FOR TREES WITH LARGER CANOPIES.	SEE SECTION 1308.01(e)2 ABOVE.	SEE ABOVE
	(2) IN ADDITION, A MINIMUM AVERAGE OF ONE DECIDUOUS SHADE TREE SHALL BE REQUIRED FOR EVERY 15 SURFACE PARKING SPACES. SUCH DECIDUOUS TREES SHALL MEET THE STREET TREES REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE. NO MORE THAN 20 CONSECUTIVE SURFACE PARKING SPACES SHALL BE LOCATED IN A STRAIGHT ROW (NOT INCLUDING ADJACENT SPACES ACCESSED FROM A DIFFERENT AISLE) WITHOUT BEING SEPARATED BY A LANDSCAPED ISLAND WITH A DECIDUOUS TREE.	LOT A: 106 PROPOSED PARKING SPACES REQUIRED: 106 / 15 = 7.1 OR 8 TREES **PROVIDED:** 8 TREES (7 TA, 1 NS)	COMPLIES
		LOT B: 58 PROPOSED PARKING SPACES REQUIRED: 58 / 15 = 3.9 OR 4 TREES **PROVIDED:** 5 TREES (3 TA, 1 CC, 1 AROG)	COMPLIES
LVIP PROTECTIVE COVENANTS: 305 LANDSCAPING AND FENCES	(5) STREET TREES ARE REQUIRED TO BE PLANTED WITHIN SIX (6) FEET OUTSIDE OF THE STREET RIGHT-OF-WAY LINE AND ARE TO BE A DECIDUOUS HARDWOOD TYPE AS APPROVED BY THE BUILDING COMMITTEE OF LVIP. THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY TO STREET TREE AND ALL OTHER TREE PLANTINGS: (a) STREET TREE PLANTINGS WILL INITIALLY BE PLANTED BY LVIP. AFTER ONE YEAR FROM THE DATE OF PLANTING, THE VEGETATION WILL BE THE RESPONSIBILITY OF THE DEVELOPER TO MAINTAIN AND REPLACE ANY DETERIORATED MATERIAL . REMOVAL OF ANY STREET TREE PLANTINGS BY THE DEVELOPER OR HIS REPRESENTATIVE SHALL BE REPLACED BY THE DEVELOPER OR HIS REPRESENTATIVE WITH AN IDENTICAL TREE, SPECIES, FORM AND AT A MINIMUM CALIPER OF 3 ½", ELSEWHERE ALONG THE LOT'S FRONT YARD.	11 STREET TREES REMOVED ALONG COMMERCE CENTER BLVD. **PROVIDED:** 11 STREET TREES OF THE SAME SPECIES (TREE SPECIES AND VARIETY TBD)	COMPLIES
	(6) THE AREA SURROUNDING EACH BUILDING SHALL BE LANDSCAPED. PARTICULAR EMPHASIS SHALL BE GIVEN TO SCREENING THE PARKING, DOCKING AND SERVICE RELATED AREAS. EACH LOT OWNER SHALL SUBMIT TO LVIP FOR ITS APPROVAL, A PLANTING PLAN. THIS PLAN SHALL NOTE A PLANTING SCHEDULE WHICH INCLUDES THE BOTANICAL NAMES, COMMON NAMES, SIZE, QUANTITY AND GENERAL REMARKS FOR EACH PLANT PROPOSED. LANDSCAPE WILL NOT BE APPROVED UNLESS THEY CONFORM TO THE FOLLOWING MINIMUM STANDARDS: (a) DECIDUOUS SHADE TREES SHALL HAVE A MINIMUM CALIPER MEASUREMENT OF THREE (3) INCHES AND DECIDUOUS FLOWERING TREES SHALL HAVE A MINIMUM CALIPER MEASUREMENT OF TWO (2) INCHES. (b) CONIFEROUS TREES SHALL HAVE A MINIMUM HEIGHT OF SEVEN (7) FEET. (c) EVERGREEN SHRUBS, EXCEPT FOR THOSE USED AS LOW GROUND COVERS, SHALL HAVE A MINIMUM HEIGHT OR SPREAD OF EIGHTEEN (18) INCHES. (d) DECIDUOUS SHRUBS SHALL HAVE A MINIMUM HEIGHT OF THIRTY (30) INCHES.	LANDSCAPING HAS BEEN PROVIDED THROUGHOUT THE SITE.	COMPLIES
	(7) OWNERS OF LOTS WHICH ARE ADJACENT TO FEDERAL, STATE OR TOWNSHIP ROADWAYS SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF AN ADEQUATE LANDSCAPE BUFFER FOR SUFFICIENT VISUAL SCREENING OF PAVED AREAS.	THE PAVED AREAS HAVE BEEN SCREENED FROM THE STREETS WITH LANDSCAPING AND RETAINING WALLS.	COMPLIES
	(8) THE NUMBER OF TREES REQUIRED FOR EACH BUILDING SITE SHALL BE DETERMINED AS FOLLOWS: (a) MIXED COMMERCIAL / BUSINESS PARK AREA FOR LOTS FRONTING ON EAST 4TH STREET / ROUTE 412. EACH BUILDING SITE SHALL INCLUDE A MINIMUM OF SEVEN (7) DECIDUOUS TREES AND FIVE (5) EVERGREEN TREES (PER COVENANT SIZE) FOR EACH ONE (1) ACRE.	LOT A: TOTAL AREA = 18.48± AC REQUIRED: 18.48 x 7 = 129.4 = 130 DECIDUOUS TREES 18.48 x 5 = 92.4 = 93 EVERGREEN TREES **PROVIDED:** 17 AROG, 2 GTIK, 10 NS, 2 QR, 23 TA, 2 AGB, 25 CC, 2 CF, 13 MV (96 DECIDUOUS TREES) 30 ABC, 26 PIAB (56 EVERGREEN TREES)	**WAIVER REQUESTED**
		LOT B: TOTAL AREA = 8.20± AC REQUIRED: 8.20 x 7 = 57.4 = 58 DECIDUOUS TREES 8.20 x 5 = 41 EVERGREEN TREES **PROVIDED:** 4 AROG, 3 TA, 4 CC (11 DECIDUOUS TREES) (0 EVERGREEN TREES)	**WAIVER REQUESTED**

ERNST SEED CO. NORTHEAST SOLAR POLLINATOR 3' MIX SEEDING SPECIFICATIONS (ERNMX-612)

FESTUCA OVINA	SHEEP FESCUE	96.8%
ASCLEPIAS TUBEROSA (PA ECOTYPE)	BUTTERFLY MILKWEED	1.8%
PYCNANTHEMUM TENUIFOLIUM	NARROWLEAF MOUNTAINMINT	0.6%
ZIZIA AUREA (PA ECOTYPE)	GOLDEN ALEXANDERS	0.6%
PENSTEMON HIRSUTUS	HAIRY BEARDTONGUE	0.2%

SEEDING RATE: 40 lb. PER ACRE OF THE ERNST MIX

NURSE CROP: THE ERNST SEED MIX MUST BE ACCOMPANIED BY ONE OF THE FOLLOWING TEMPORARY SEED SPECIFICATIONS APPROPRIATE FOR THE TIME OF YEAR:
- GRAIN OATS (30 LBS PER ACRE; 1 JAN. TO 31 JUL.)
- GRAIN RYE (30 LBS PER ACRE; 1 AUG. TO 31 DEC.)

NOTES:
1. THE FORMULATION NOTED ABOVE IS REPRESENTATIVE OF THE ERNST SEED SPECIFICATION. THE MOST CURRENT FORMULATION AS SPECIFIED BY THE ERNST COMPANY AT THE TIME OF PLANTING SHALL BE USED.
2. SEED SHOULD BE APPLIED USING DRILL SEEDING OR BROADCAST SEEDING METHODS ONLY. THE CONTRACTOR MUST ENSURE DIRECT SEED-TO-SOIL CONTACT. HYDROSEEDING IS NOT PERMITTED WITH THIS SEED MIX; IT WILL PROHIBIT GERMINATION.
3. THE SEED MIX WILL NEED DAILY SUPPLEMENTAL WATERING UNTIL IT HAS GERMINATED AND REACHED AN AVERAGE HEIGHT OF AT 12-18".
4. THE SEEDING AREA SHALL BE MOWED ONCE AFTER THE FIRST GROWING SEASON, EARLY IN THE SPRING, AND THEN SHALL BE MOWED NO MORE THAN ONCE EVERY THREE YEARS THEREAFTER EARLY IN SPRING ONLY.

ERNST SEED CO. RETENTION BASIN WILDLIFE SEED MIX SPECIFICATIONS (ERNMX-127)

PANICUM CLANDESTINUM 'TIOGA'	DEERTONGUE, TIOGA	30%
CAREX VULPINOIDEA (PA ECOTYPE)	FOX SEDGE	29.5%
ELYMUS VIRGINICUS (PA ECOTYPE)	VIRGINIA WILD RYE	20%
CAREX LURIDA (PA ECOTYPE)	LURID SEDGE	7%
CAREX SCOPARIA (PA ECOTYPE)	BLUNT BROOM SEDGE	7%
VERBENA HASTATA (PA ECOTYPE)	BLUE VERVAIN	3%
JUNCUS EFFUSUS	SOFT RUSH	1.5%
AGROSTIS PERENNANS (NY ECOTYPE)	AUTUMN BENTGRASS, ALBANY PINE BUSH	0.5%
ASCLEPIAS INCARNATA (PA ECOTYPE)	SWAMP MILKWEED	0.5%
SCIRPUS CYPERINUS (PA ECOTYPE)	WOOL GRASS	0.3%
HELENIUM AUTUMNALE (PA ECOTYPE)	COMMON SNEEZEWEED	0.2%
ASTER NOVAE-ANGLIAE (PA ECOTYPE)	NEW ENGLAND ASTER	0.1%
ASTER PUNICEUS (PA ECOTYPE)	PURPLESTEM ASTER ASTER	0.1%
ASTER UMBELLATA (PA ECOTYPE)	FLAT TOPPED WHITE ASTER	0.1%
EUPATORIUM PERFOLIATUM (PA ECOTYPE)	BONESET	0.1%
LOBELIA SIPHILITICA (PA ECOTYPE)	GREAT BLUE LOBELIA	0.1%

SEEDING RATE: 20 LBS PER ACRE OF THE ERNST MIX

NURSE CROP: THE ERNST SEED MIX MUST BE ACCOMPANIED BY ONE OF THE FOLLOWING TEMPORARY SEED SPECIFICATIONS APPROPRIATE FOR THE TIME OF YEAR:
- ANNUAL RYE (10 LBS PER ACRE)
- OR SPRING OATS (64 LBS PER ACRE)
- OR WINTER RYE (56 LBS PER ACRE)

NOTES:
1. THE FORMULATION NOTED ABOVE IS REPRESENTATIVE OF THE ERNST SEED SPECIFICATION. THE MOST CURRENT FORMULATION AS SPECIFIED BY THE ERNST COMPANY AT THE TIME OF PLANTING SHALL BE USED.
2. SEED SHOULD BE APPLIED USING DRILL SEEDING OR BROADCAST SEEDING METHODS ONLY. THE CONTRACTOR MUST ENSURE DIRECT SEED-TO-SOIL CONTACT. HYDROSEEDING IS NOT PERMITTED WITH THIS SEED MIX; IT WILL PROHIBIT GERMINATION.
3. THE ENTIRE FACILITY SHALL BE STABILIZED WITH A NORTH AMERICAN GREEN SC150 STRAW & COCONUT BLANKET (OR APPROVED EQUAL). THE BLANKET SHOULD BE INSTALLED ON TOP OF THE SEED IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS.
4. SEED MIX WILL NEED DAILY SUPPLEMENTAL WATERING UNTIL IT HAS GERMINATED AND REACHED AN AVERAGE HEIGHT OF AT 12-18".
5. THE SEEDING AREA SHALL BE MOWED ONCE AFTER THE FIRST GROWING SEASON, EARLY IN THE SPRING, AND THEN SHALL BE MOWED NO MORE THAN ONCE EVERY THREE YEARS THEREAFTER EARLY IN SPRING ONLY.

ERNST SEED CO. SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX SEEDING SPECIFICATIONS (ERNMX-153)

BOUTELOUA CURTIPENDULA 'BUTTE'	SIDE OATS GRAMA 'BUTTE'	29.7%
SCHIZACHYRIUM SCOPARIUM (FORT INDIANTOWN GAP-PA ECOTYPE)	LITTLE BLUESTEM	27.2%
ELYMUS VIRGINICUS (PA ECOTYPE)	VIRGINIA WILD RYE	15%
ECHINACEA PURPUREA	PURPLE CONEFLOWER	7%
CHAMAECRISTA FASCICULATA (PA ECOTYPE)	PARTRIDGE PEA	3.5%
COREOPSIS LANCEOLATA (COASTAL PLAIN NC ECOTYPE)	LANCELEAF COREOPSIS	3%
RUDBECKIA HIRTA	BLACK EYED SUSAN	3%
HELIOPSIS HELIANTHOIDES (PA ECOTYPE)	OXE EYE SUNFLOWER	2%
LIATRIS SPICATA	MARSH BLAZING STAR	1.5%
TRADESCANTIA OHIENSIS (PA ECOTYPE)	OHIO SPIDERWORT	1.2%
PYCNANTHEMUM TENUIFOLIUM	NARROWLEAF MOUNTAINMINT	0.9%
SENNA HEBECARPA (VA & WV ECOTYPE)	WILD SENNA	0.7%
ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	0.5%
BAPTISIA AUTRALIS (SOUTHERN WV ECOTYPE)	BLUE FALSE INDIGO	0.5%
ZIZIA AUREA	GOLDEN ALEXANDERS	0.5%
ASTER OBLONGIFOLIUS (PA ECOTYPE)	AROMATIC ASTER	0.4%
ASTER PRENANTHOIDES (PA ECOTYPE)	ZIGZAG ASTER	0.4%
MONDARDA FISTULOA (FORT INDIANATOWN GAP PA ECOTYPE)	WILD BERGAMOT	0.4%
ASTER LAEVIS (NY ECOTYPE)	SMOOTH BLUE ASTER	0.3%
ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	0.3%
COREOPSIS TRIPTERIS (PA ECOTYPE)	TALL COREOPSIS	0.2%
OENOTHERA FRUTICOSA VAR FRUTICOSA	SUNDROPS	0.2%
SOLIDAGO NEMORALIS (PA ECOTYPE)	GRAY GOLDENROD	0.2%
PENSTEMON HIRSUTUS	HAIRY BEARDTONGUE	0.1%
SENNA MARILANDICA	MARYLAND SENNA	0.1%
SOLIDAGO JUNCEA (PA ECOTYPE)	EARLY GOLDENROD	0.1%
SOLIDAGO ODORA (PA ECOTYPE)	LICORICE SCENTED GOLDENROD	0.1%

SEEDING RATE: 20 lb. PER ACRE OF THE ERNST MIX

NURSE CROP: THE ERNST SEED MIX MUST BE ACCOMPANIED BY ONE OF THE FOLLOWING TEMPORARY SEED SPECIFICATIONS APPROPRIATE FOR THE TIME OF YEAR:
- ANNUAL RYE (10 LBS PER ACRE)
- OR SPRING OATS (64 LBS PER ACRE)
- OR WINTER RYE (56 LBS PER ACRE)

NOTES:
1. THE FORMULATION NOTED ABOVE IS REPRESENTATIVE OF THE ERNST SEED SPECIFICATION. THE MOST CURRENT FORMULATION AS SPECIFIED BY THE ERNST COMPANY AT THE TIME OF PLANTING SHALL BE USED.
2. SEED SHOULD BE APPLIED USING DRILL SEEDING OR BROADCAST SEEDING METHODS ONLY. THE CONTRACTOR MUST ENSURE DIRECT SEED-TO-SOIL CONTACT. HYDROSEEDING IS NOT PERMITTED WITH THIS SEED MIX; IT WILL PROHIBIT GERMINATION.
3. THE ENTIRE FACILITY SHALL BE STABILIZED WITH A NORTH AMERICAN GREEN SC150 STRAW & COCONUT BLANKET (OR APPROVED EQUAL). THE BLANKET SHOULD BE INSTALLED ON TOP OF THE SEED IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS.
4. THE SEED MIX WILL NEED DAILY SUPPLEMENTAL WATERING UNTIL IT HAS GERMINATED AND REACHED AN AVERAGE HEIGHT OF AT 12-18".
5. THE SEEDING AREA SHALL BE MOWED ONCE AFTER THE FIRST GROWING SEASON, EARLY IN THE SPRING, AND THEN SHALL BE MOWED NO MORE THAN ONCE EVERY THREE YEARS THEREAFTER EARLY IN SPRING ONLY.

ERNST SEED CO. NATIVE HABITAT FOR STRIP MINES MIX SEEDING SPECIFICATIONS (ERNMX-111)

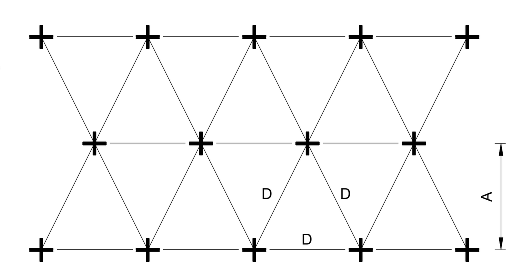
ANDROPOGON GERARDII, 'SOUTHLOW'-MI ECOTYPE	BIG BLUESTEM, 'SOUTHLOW'-MI ECOTYPE	20.3%
ELYMUS VIRGINICUS, MADISON-NY ECOTYPE	VIRGINIA WILDRYE, MADISON-NY ECOTYPE	20%
SCHIZACHYRIUM SCOPARIUM, FORT INDIANTOWN GAP-PA ECOTYPE	LITTLE BLUESTEM, FORT INDIANTOWN GAP-PA ECOTYPE	18.9%
SORGHASTRUM NUTANS, PA ECOTYPE	INDIANGRASS, PA ECOTYPE	18.9%
PANICUM VIRGATUM, 'HABITAT'-NJ ECOTYPE	SWITCHGRASS, 'HABITAT'-NJ ECOTYPE	13%
RUDBECKIA HIRTA	BLACKEYED SUSAN	2.5%
HELIOPSIS HELIANTHOIDES, PA ECOTYPE	OXEYE SUNFLOWER, PA ECOTYPE	2%
DESMODIUM CANADENSE, PA ECOTYPE	SHOWY TICKTREFOIL, PA ECOTYPE	1.6%
CHAMAECRISTA FASCICULATA, PA ECOTYPE	PARTRIDGE PEA, PA ECOTYPE	1.5%
LESPEDEZA CAPITATA, RI ECOTYPE	ROUNDHEAD LESPEDEZA, RI ECOTYPE	0.5%
MONARDA FISTULOSA, FORT INDIANTOWN GAP-PA ECOTYPE	WILD BERGAMOT, FORT INDIANTOWN GAP-PA ECOTYPE	0.3%
ASCLEPIAS SYRIACA, PA ECOTYPE	COMMON MILKWEED, PA ECOTYPE	0.2%
ASTER PILOSUS, PA ECOTYPE	HEATH ASTER, PA ECOTYPE	0.1%
PYCNANTHEMUM TENUIFOLIUM	NARROWLEAF MOUNTAINMINT	0.1%
SOLIDAGO CANADENSIS, PA ECOTYPE	CANADA GOLDENROD, PA ECOTYPE	0.1%

SEEDING RATE: 20 lb. PER ACRE OF THE ERNST MIX

NURSE CROP: THE ERNST SEED MIX MUST BE ACCOMPANIED BY ONE OF THE FOLLOWING TEMPORARY SEED SPECIFICATIONS APPROPRIATE FOR THE TIME OF YEAR:
- ANNUAL RYE (10 LBS PER ACRE)
- OR SPRING OATS (64 LBS PER ACRE)
- OR WINTER RYE (56 LBS PER ACRE)

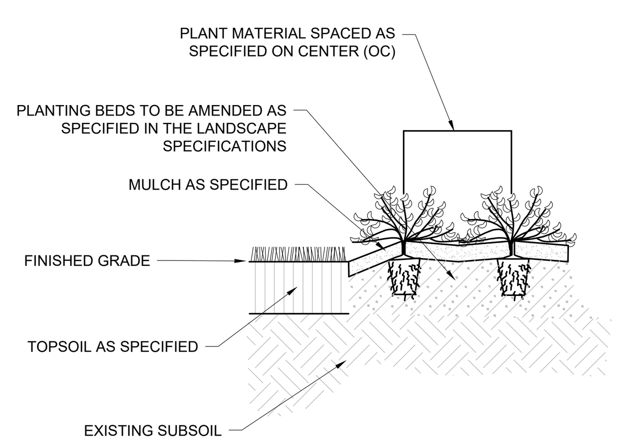
NOTES:
1. THE FORMULATION NOTED ABOVE IS REPRESENTATIVE OF THE ERNST SEED SPECIFICATION. THE MOST CURRENT FORMULATION AS SPECIFIED BY THE ERNST COMPANY AT THE TIME OF PLANTING SHALL BE USED.
2. SEED SHOULD BE APPLIED USING DRILL SEEDING OR BROADCAST SEEDING METHODS ONLY. THE CONTRACTOR MUST ENSURE DIRECT SEED-TO-SOIL CONTACT. HYDROSEEDING IS NOT PERMITTED WITH THIS SEED MIX; IT WILL PROHIBIT GERMINATION.
3. THE ENTIRE FACILITY SHALL BE STABILIZED WITH A NORTH AMERICAN GREEN SC150 STRAW & COCONUT BLANKET (OR APPROVED EQUAL). THE BLANKET SHOULD BE INSTALLED ON TOP OF THE SEED IN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS.
4. SEED MIX WILL NEED DAILY SUPPLEMENTAL WATERING UNTIL IT HAS GERMINATED AND REACHED AN AVERAGE HEIGHT OF AT 12-18".
5. THE SEEDING AREA SHALL BE MOWED ONCE AFTER THE FIRST GROWING SEASON, EARLY IN THE SPRING, AND THEN SHALL BE MOWED NO MORE THAN ONCE EVERY THREE YEARS THEREAFTER EARLY IN SPRING ONLY.

SPACING "D"	ROW "A"
6" OC	5.20"
8" OC	6.93"
10" OC	8.66"
12" OC	10.40"
15" O.C	13.00"
18" OC	15.60"
24" OC	20.80"
30" OC	26.00"
36" OC	30.00"



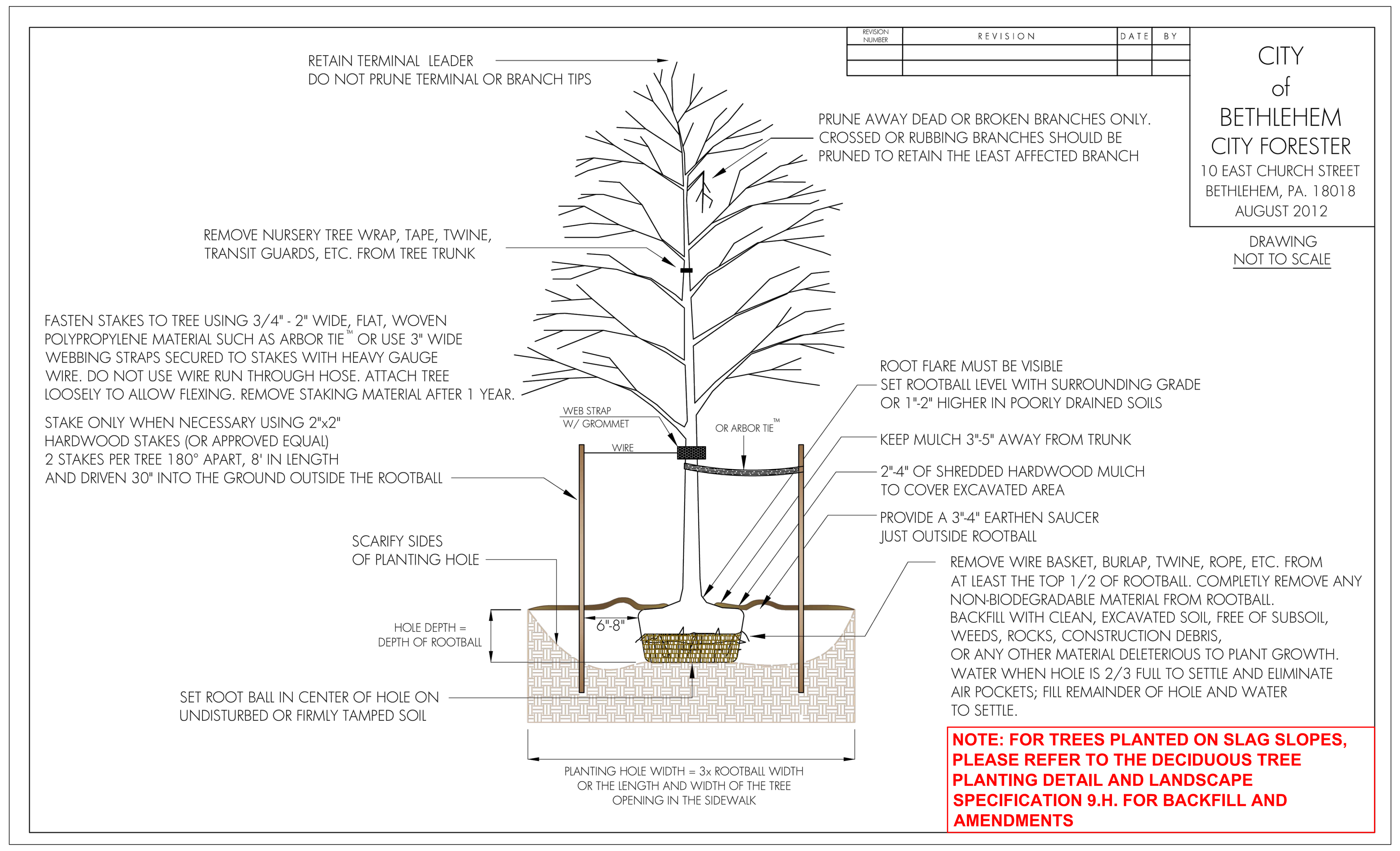
GROUNDCOVER & ANNUAL SPACING

NOT TO SCALE (PA-L070302 - 11/2023)



PERENNIAL AND GROUND PLANTING

NOT TO SCALE (PA-L070301 - 11/2023)



CITY STREET TREE PLANTING DETAIL (FOR PLANTING OF STREET TREES)

LANDSCAPE SPECIFICATIONS:

1. SCOPE OF WORK:
THE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.

2. MATERIALS
A. GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.

B. TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 5.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.

C. LAWN - LAWN AREAS SHALL BE SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED WITHIN THE SOIL EROSION AND SEDIMENT CONTROL NOTES. FOR SOIL BED PREPARATIONS, REFER TO ITEM 8 BELOW.
I. LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
II. SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.

D. MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN.

E. FERTILIZER
I. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
II. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.

F. PLANT MATERIAL
I. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY AMERICAN HORT (FORMERLY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION).
II. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
III. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
IV. TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1¼", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
V. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
VI. CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
VII. SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
VIII. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.

3. GENERAL WORK PROCEDURES
A. CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.

B. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.

4. SITE PREPARATIONS
A. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.

B. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.

C. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.

5. TREE PROTECTION
A. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR 15 FEET FROM THE TRUNK OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.

B. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY 'VISI-FENCE', OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.

C. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.

D. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

6. SOIL MODIFICATIONS
A. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.

B. CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE CONTRACTOR DEPENDING ON SITE CONDITIONS.

C. THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.
I. TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5.
II. TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE.
III. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

7. FINISHED GRADING
A. UNLESS OTHERWISE CONTRACTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.

B. CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"±).

C. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.

D. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.

8. TOPSOILING
A. CONTRACTOR SHALL PROVIDE A SIX INCH (6") THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AND LAWN AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.

B. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.

C. CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.

D. ALL LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY [SEE SPECIFICATION 6.A.]):
I. 20 POUNDS 'GRO-POWER' OR APPROVED EQUAL SOIL CONDITIONER/FERTILIZER
II. 20 POUNDS 'NITRO-FORM' (COURSE) 38-0-0 BLUE CHIP OR APPROVED NITROGEN FERTILIZER

E. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.

9. PLANTING
A. INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.

B. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.

C. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.

D. ALL PLANTING CONTAINERS, BASKETS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.

E. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.

F. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
I. PLANTS: MARCH 15TH TO DECEMBER 15TH
II. LAWN AND SEED MIXES: MARCH 1ST TO MAY 15TH OR BETWEEN AUGUST 15TH AND OCTOBER 15TH

PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.

G. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

ACER RUBRUM	PLATANUS X ACERIFOLIA
BETULA VARIETIES	POPULUS VARIETIES
CARPINUS VARIETIES	PRUNUS VARIETIES
CRATAEGUS VARIETIES	PYRUS VARIETIES
KOELREUTERIA	QUERCUS VARIETIES
LIQUIDAMBAR STYRACIFLUA	TILIA TOMENTOSA
LIRIODENDRON TULIPIFERA	ZELKOVA VARIETIES

H. PLANTING PITS SHALL BE DUG WITH LEVEL OR CONVEX BOTTOMS, WITH THE WIDTH THREE TIMES THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
I. 1 PART PEAT MOSS
II. 1 PART COMPOSTED COW MANURE BY VOLUME
III. 3 PARTS TOPSOIL BY VOLUME
IV. 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
A) 2 TABLETS PER 1 GALLON PLANT
B) 3 TABLETS PER 5 GALLON PLANT
C) 4 TABLETS PER 15 GALLON PLANT
D) LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK

I. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.

J. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.

K. ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE. NO PRUNING SHALL BE CONDUCTED WITHIN THE FIRST YEAR OF PLANTING.

L. GROUND COVER AREAS SHALL RECEIVE A ¼" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.

M. NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.

N. ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.

O. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.

10. TRANSPLANTING (WHEN REQUIRED)
A. ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT. (SEE SPECIFICATION 2.F. ABOVE)

B. IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.

C. PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10TH AND JUNE 30TH.

D. UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.

E. TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.

F. IF TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.

11. WATERING
A. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.

B. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.

C. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.

12. GUARANTEE
A. THE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

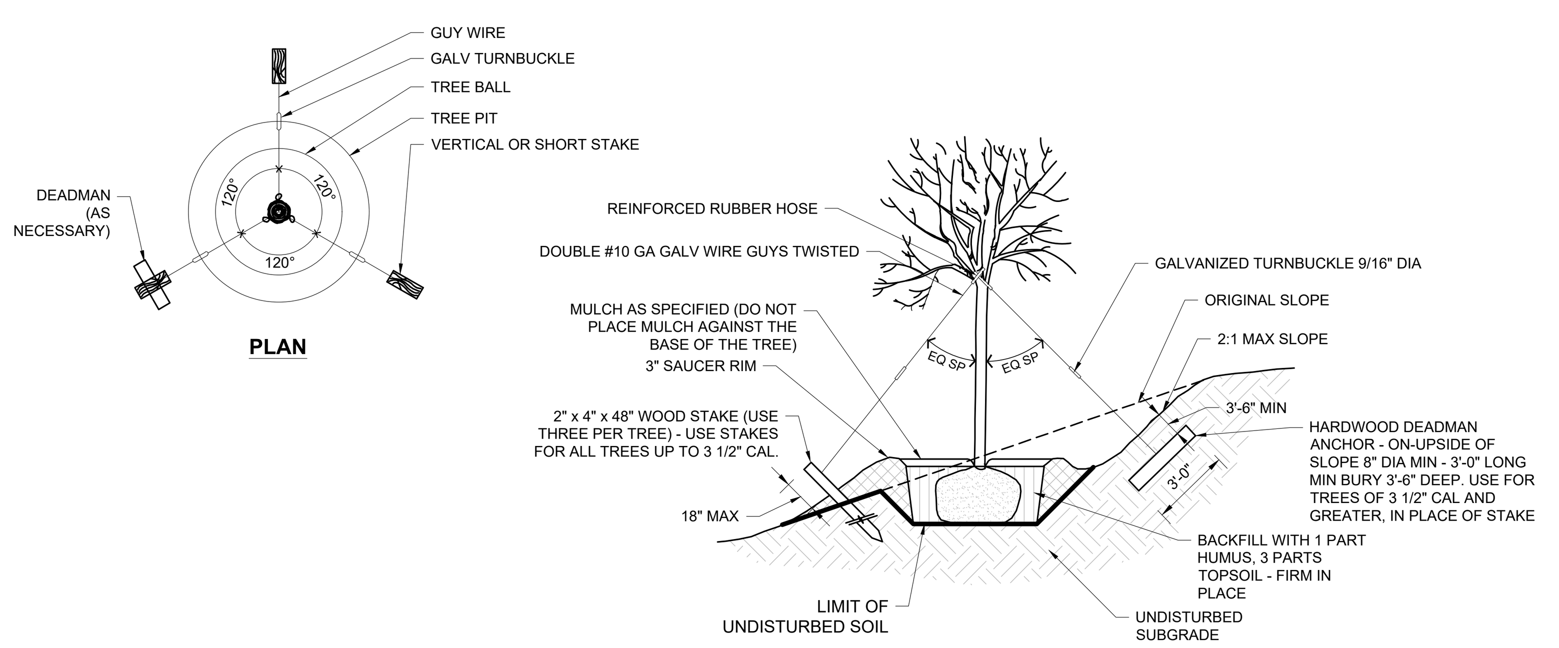
B. ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION. A PLANT SHALL BE CONSIDERED "DEAD OR DYING" IF MORE THAN 30% OF ITS BRANCHES ARE DEAD.

C. TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND UNTIL TURNOVER TO THE OWNER/OPERATOR. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.

D. LAWNS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND UNTIL TURNOVER TO THE OWNER/OPERATOR THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.

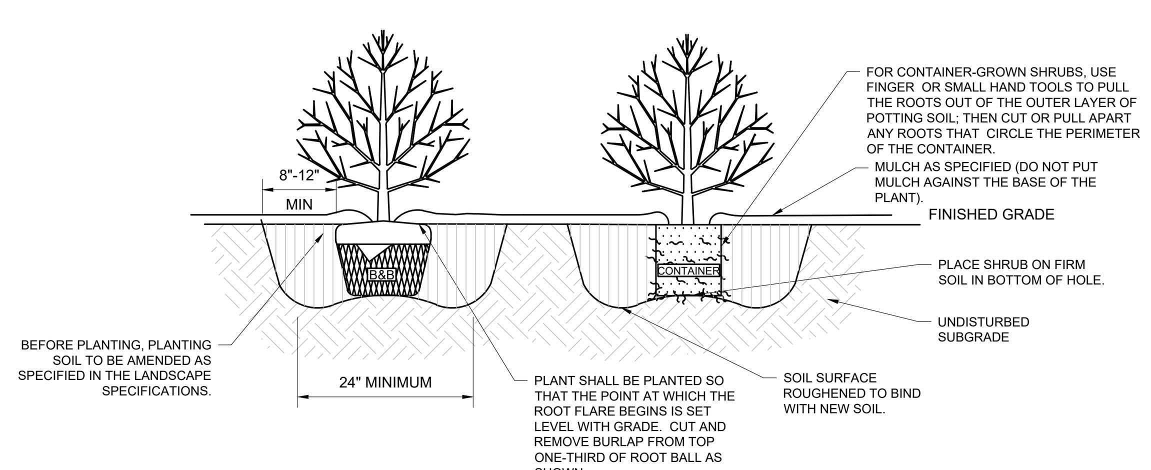
13. CLEANUP
A. UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.

B. THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.



SLOPE TREE PLANTING

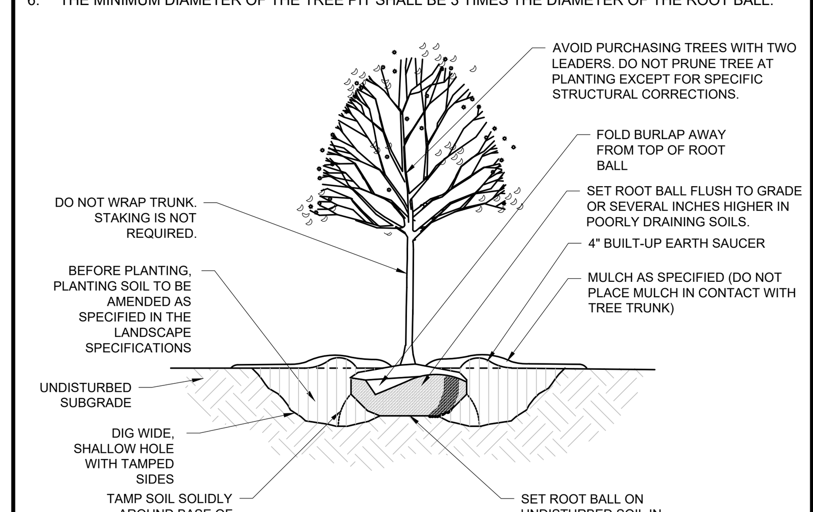
NOT TO SCALE (PA-L070105 - 12/2023)



SHRUB PLANTING

NOT TO SCALE (PA-L070201 - 11/2023)

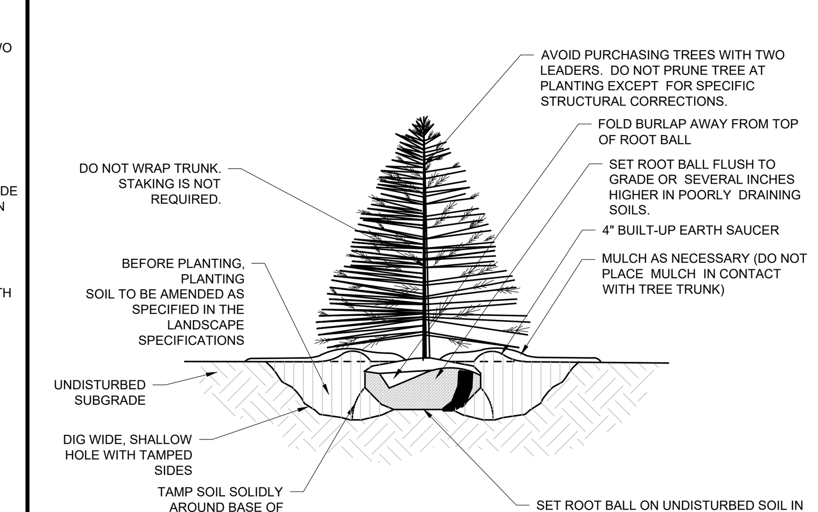
NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. REMOVE ALL NON-BIODEGRADABLE MATERIAL AND ROPE FROM TRUNK & TOP OF ROOT BALL. FOLD OR CUT BURLAP BACK FROM TOP 1/3 OF ROOT BALL.
3. PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
4. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5. THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE SCARIFIED TO AVOID MATTING OF SOIL.
6. THE MINIMUM DIAMETER OF THE TREE PIT SHALL BE 3 TIMES THE DIAMETER OF THE ROOT BALL.



DECIDUOUS TREE PLANTING

NOT TO SCALE (PA-L070101 - 11/2023)

NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. REMOVE ALL NON-BIODEGRADABLE MATERIAL AND ROPE FROM TRUNK & TOP OF ROOT BALL. FOLD BURLAP BACK 1/3 FROM ROOT BALL.
3. PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
4. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5. THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE SCARIFIED TO AVOID MATTING OF SOIL.
6. THE MINIMUM DIAMETER OF THE TREE PIT SHALL BE 3 TIMES THE DIAMETER OF THE ROOT BALL.



EVERGREEN TREE PLANTING

NOT TO SCALE (PA-L070102 - 11/2023)

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LLGT-PAB240068.00-2A----->LAYOUT: L-106 LSCD
JM

BOHLER™

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES
© BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's **below.** **Call** before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.R. BACHERT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA003385
NEW JERSEY LICENSE NO. 21AS00139900

SHEET TITLE:

LANDSCAPE NOTES AND DETAILS

SHEET NUMBER:

L-106

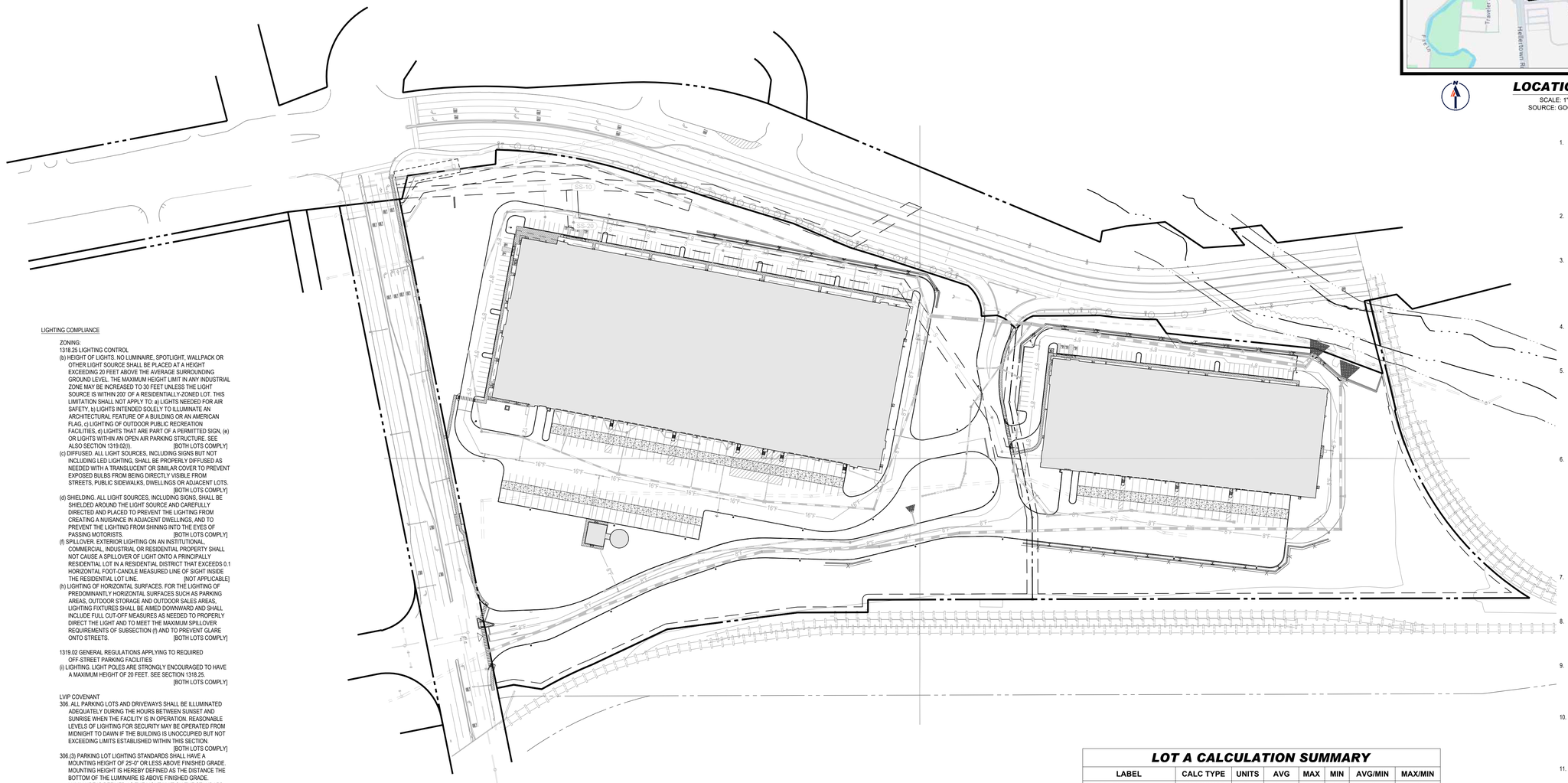
REVISION 2 - 02/19/2025

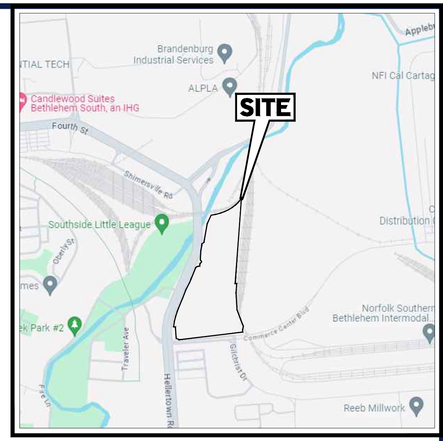
LOT A LUMINARE SCHEDULE

LABEL	QTY.	MOUNTING HT.	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P2	5	25'-0" AFG	SINGLE	15180	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 2, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-2-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P3	5	25'-0" AFG	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P4	6	25'-0" AFG	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P5-W	3	25'-0" AFG	SINGLE	15443	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 5W, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-5W-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
W2	1	25'-0" AFF	SINGLE	15180	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 2, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-2-RPA)	
W3	7	25'-0" AFF	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	
W4	10	25'-0" AFF	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	

LOT B LUMINARE SCHEDULE

LABEL	QTY.	MOUNTING HT.	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P3	1	25'-0" AFG	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P4	3	25'-0" AFG	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
W3	3	25'-0" AFF	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	
W4	6	25'-0" AFF	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	





LOCATION MAP

SCALE: 1" = 1,000'
SOURCE: GOOGLE MAPS

GENERAL LIGHTING NOTES

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE ELECTRICAL CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE ELECTRICAL CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. THE ELECTRICAL CONTRACTOR MUST COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE PLANS, INCLUDING BUT NOT LIMITED TO GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL AGENCY AND GOVERNMENTAL REGULATIONS.
3. THE LIGHTING PLAN DEPICTS PROPOSED, SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER. ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
4. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED. ILLUMINATION LEVELS ARE SHOWN IN FOOT-CANDLES (FC).
5. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT IS NOT LIMITED TO, VISUAL OBSERVATION, CLEANING OF LENSES, AND RE-LAMPING ACCORDING TO MANUFACTURER RECOMMENDATIONS. FAILURE TO FOLLOW THE ABOVE STEPS COULD RESULT IN IMPROPER LIGHT DISTRIBUTION AND FAILURE TO COMPLY WITH THE APPROVED DESIGN. UPON COMPLETION AND OWNER'S ACCEPTANCE OF THE WORK, THE ABOVE RESPONSIBILITIES BECOMES SOLELY THE OWNER'S.
6. THE LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES. POWER SYSTEM, CONDUITS, WIRING AND OTHER ELECTRICAL COMPONENTS ARE SOLELY THE ARCHITECT'S, MECHANICAL ENGINEER'S AND/OR ELECTRICAL CONTRACTOR'S RESPONSIBILITY, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THE CONTRACTOR MUST COORDINATE WITH THE PROJECT ARCHITECT AND/OR ELECTRICAL ENGINEER REGARDING ANY AND ALL POWER SOURCES AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES.
7. THE ELECTRICAL CONTRACTOR MUST BRING IMMEDIATELY, IN WRITING, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURE(S) TO THE ENGINEER OF RECORD'S ATTENTION, PRIOR TO THE START OF CONSTRUCTION.
8. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SHIELDING AND OR ROTATED OPTICS ARE INSTALLED AS INDICATED ON THE PLAN IN ORDER TO ACHIEVE THE LIGHTING LEVELS THE REVIEWING AGENCY APPROVED.
9. UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.
10. THE LIGHT LOSS FACTORS (LLF) DEPICTED IN THE LUMINAIRE SCHEDULE ON THIS PLAN ARE BASED ON DATA PROVIDED BY THE MANUFACTURER FOLLOWING IES LM-80-08 TESTING. THE LIGHT LEVELS DEPICTED ON THIS PLAN WERE CALCULATED BASED ON THE LLF LISTED IN THE LUMINAIRE SCHEDULE.
11. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE PROJECT ENGINEER (BOHLER) FOR REVIEW AND APPROVAL. SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE LUMINAIRE(S) IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.

LIGHTING COMPLIANCE

ZONING:
1318.25 LIGHTING CONTROL
(b) HEIGHT OF LIGHTS. NO LUMINAIRE, SPOTLIGHT, WALLPACK OR OTHER LIGHT SOURCE SHALL BE PLACED AT A HEIGHT EXCEEDING 20 FEET ABOVE THE AVERAGE SURROUNDING GROUND LEVEL. THE MAXIMUM HEIGHT LIMIT IN ANY INDUSTRIAL ZONE MAY BE INCREASED TO 30 FEET IF UNLESS THE LIGHT SOURCE IS WITHIN 200' OF A RESIDENTIALLY-ZONED LOT. THIS LIMITATION SHALL NOT APPLY TO: a) LIGHTS NEEDED FOR AIR SAFETY, b) LIGHTS INTENDED SOLELY TO ILLUMINATE AN ARCHITECTURAL FEATURE OF A BUILDING OR AN AMERICAN FLAG, c) LIGHTING OF OUTDOOR PUBLIC RECREATION FACILITIES, d) LIGHTS THAT ARE PART OF A PERMITTED SIGN, (e) OR LIGHTS WITHIN AN OPEN AIR PARKING STRUCTURE. SEE ALSO SECTION 1319.02(I). [BOTH LOTS COMPLY]
(c) DIFFUSED. ALL LIGHT SOURCES, INCLUDING SIGNS BUT NOT INCLUDING LED LIGHTING, SHALL BE PROPERLY DIFFUSED AS NEEDED WITH A TRANSLUCENT OR SIMILAR COVER TO PREVENT EXPOSED BULBS FROM BEING DIRECTLY VISIBLE FROM STREETS, PUBLIC SIDEWALKS, DWELLINGS OR ADJACENT LOTS. [BOTH LOTS COMPLY]
(d) SHIELDING. ALL LIGHT SOURCES, INCLUDING SIGNS, SHALL BE SHIELDED AROUND THE LIGHT SOURCE AND CAREFULLY DIRECTED AND PLACED TO PREVENT THE LIGHTING FROM CREATING A NUISANCE IN ADJACENT DWELLINGS, AND TO PREVENT THE LIGHTING FROM SHINING INTO THE EYES OF PASSING MOTORISTS. [BOTH LOTS COMPLY]
(f) SPILLOVER. EXTERIOR LIGHTING ON AN INSTITUTIONAL, COMMERCIAL, INDUSTRIAL OR RESIDENTIAL PROPERTY SHALL NOT CAUSE A SPILLOVER OF LIGHT ONTO A PRINCIPALLY RESIDENTIAL LOT IN A RESIDENTIAL DISTRICT THAT EXCEEDS 0.1 HORIZONTAL FOOT-CANDLE MEASURED LINE OF SIGHT INSIDE THE RESIDENTIAL LOT LINE. [NOT APPLICABLE]
(h) LIGHTING OF HORIZONTAL SURFACES. FOR THE LIGHTING OF PREDOMINANTLY HORIZONTAL SURFACES SUCH AS PARKING AREAS, OUTDOOR STORAGE AND OUTDOOR SALES AREAS, LIGHTING FIXTURES SHALL BE AIMED DOWNWARD AND SHALL INCLUDE FULL CUT-OFF MEASURES AS NEEDED TO PROPERLY DIRECT THE LIGHT AND TO MEET THE MAXIMUM SPILLOVER REQUIREMENTS OF SUBSECTION (f) AND TO PREVENT GLARE ONTO STREETS. [BOTH LOTS COMPLY]

1319.02 GENERAL REGULATIONS APPLYING TO REQUIRED OFF-STREET PARKING FACILITIES
(i) LIGHTING. LIGHT POLES ARE STRONGLY ENCOURAGED TO HAVE A MAXIMUM HEIGHT OF 20 FEET. SEE SECTION 1318.25. [BOTH LOTS COMPLY]

LVIP COVENANT
306.(2) ALL PARKING LOTS AND DRIVEWAYS SHALL BE ILLUMINATED ADEQUATELY DURING THE HOURS BETWEEN SUNSET AND SUNRISE WHEN THE FACILITY IS IN OPERATION. REASONABLE LEVELS OF LIGHTING FOR SECURITY MAY BE OPERATED FROM MIDNIGHT TO DAWN IF THE BUILDING IS UNOCCUPIED BUT NOT EXCEEDING LIMITS ESTABLISHED WITHIN THIS SECTION. [BOTH LOTS COMPLY]
306.(3) PARKING LOT LIGHTING STANDARDS SHALL HAVE A MOUNTING HEIGHT OF 25'-0" OR LESS ABOVE FINISHED GRADE. MOUNTING HEIGHT IS HEREBY DEFINED AS THE DISTANCE THE BOTTOM OF THE LUMINAIRE IS ABOVE FINISHED GRADE. LUMINAIRE IS DEFINED AS THE LIGHT UNIT ON THE STANDARD . THE VERTICAL DIMENSION OF THE LUMINAIRE FIXTURE SHALL NOT EXCEED 18'. [BOTH LOTS COMPLY]
306.(4) ALL FIXTURES SHALL BE CUT-OFF TYPE LUMINAIRES AS DEFINED BY THE MOST CURRENT IES (ILLUMINATING ENGINEERS SOCIETY) LIGHTING HANDBOOK. FREE STANDING AND BUILDING MOUNTED LIGHTING SHALL BE "SHOEBOX TYPE". LVIP MAY APPROVE OTHER LIGHTING THAT HAS EQUAL LIGHTING AND CUT-OFF CHARACTERISTICS. BUILDING MOUNTED LUMINAIRES, AS A MINIMUM, SHALL BE CUT-OFF TYPE AND SHALL MEET THE REQUIREMENTS OF THE PARKING LOT LUMINAIRES. [BOTH LOTS COMPLY]
306.(5) THE PARKING LOT LIGHTING LEVELS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT IES LIGHTING HANDBOOK. AS A MINIMUM, THE LIGHT FOOT-CANDLE LEVEL ON THE DRIVEWAYS AND PARKING LOT AREAS SHALL BE SIXTH-TENTHS (0.6) FOOT-CANDLE, WITH A UNIFORMITY RATIO (AVERAGE TO MINIMUM) OF 4 TO 1, WITH A MAXIMUM FOOT-CANDLE OF 4.2. [BOTH LOTS COMPLY]

LOT A CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.75	5.7	0.0	N/A	N/A
CAR PARKING	ILLUMINANCE	Fc	1.16	3.2	0.6	1.93	5.33
LOADING	ILLUMINANCE	Fc	3.08	4.4	1.5	2.05	2.93
TRUCK COURT	ILLUMINANCE	Fc	1.27	3.8	0.3	4.23	12.67

LOT B CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.65	4.3	0.0	N/A	N/A
CAR PARKING	ILLUMINANCE	Fc	1.28	3.1	0.6	2.13	5.17
LOADING	ILLUMINANCE	Fc	3.32	4.3	1.7	1.95	2.53
TRUCK COURT	ILLUMINANCE	Fc	1.53	3.5	0.3	5.10	11.67

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

100 50 25 0 100
SCALE: 1" = 100'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHT BY AND OWNED BY BOHLER AND MAY NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED AND DATED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: PAB240068.00-2A
DRAWN BY: ABN
CHECKED BY: MMC
DATE: 12/13/2024
CAD I.D.: P-CIVIL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

COMMONWEALTH OF PENNSYLVANIA
M.R. BACHERT
LICENSED LANDSCAPE ARCHITECT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA003385
NEW JERSEY LICENSE NO. 21AS00139900

SHEET TITLE:

LIGHTING PLAN

SHEET NUMBER:

L-201

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LLGT-PAB240068.00-2A-----LAYOUT: L-201 LIGHT
JMV 12/19/2024 11:47:21 AM

LOT A LUMINARE SCHEDULE

LABEL	QTY.	MOUNTING HT.	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P2	5	25'-0" AFG	SINGLE	15180	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 2, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-2-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P3	5	25'-0" AFG	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P4	6	25'-0" AFG	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P5-W	3	25'-0" AFG	SINGLE	15443	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 5W, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-5W-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
W2	1	25'-0" AFF	SINGLE	15180	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 2, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-2-RPA)	
W3	7	25'-0" AFF	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	
W4	10	25'-0" AFF	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	

LOT A CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.75	5.7	0.0	N/A	N/A
CAR PARKING	ILLUMINANCE	Fc	1.16	3.2	0.6	1.93	5.33
LOADING	ILLUMINANCE	Fc	3.08	4.4	1.5	2.05	2.93
TRUCK COURT	ILLUMINANCE	Fc	1.27	3.8	0.3	4.23	12.67

LOT B LUMINARE SCHEDULE

LABEL	QTY.	MOUNTING HT.	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P3	1	25'-0" AFG	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P4	3	25'-0" AFG	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
W3	3	25'-0" AFF	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	
W4	6	25'-0" AFF	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	

LOT B CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.65	4.3	0.0	N/A	N/A
CAR PARKING	ILLUMINANCE	Fc	1.28	3.1	0.6	2.13	5.17
LOADING	ILLUMINANCE	Fc	3.32	4.3	1.7	1.95	2.53
TRUCK COURT	ILLUMINANCE	Fc	1.53	3.5	0.3	5.10	11.67

LIGHTING COMPLIANCE

ZONING:
1318.25 LIGHTING CONTROL
(b) HEIGHT OF LIGHTS. NO LUMINAIRE, SPOTLIGHT, WALLPACK OR OTHER LIGHT SOURCE SHALL BE PLACED AT A HEIGHT EXCEEDING 20 FEET ABOVE THE AVERAGE SURROUNDING GROUND LEVEL. THE MAXIMUM HEIGHT LIMIT IN ANY INDUSTRIAL ZONE MAY BE INCREASED TO 30 FEET UNLESS THE LIGHT SOURCE IS WITHIN 200' OF A RESIDENTIALLY-ZONED LOT. THIS LIMITATION SHALL NOT APPLY TO: a) LIGHTS NEEDED FOR AIR SAFETY, b) LIGHTS INTENDED SOLELY TO ILLUMINATE AN ARCHITECTURAL FEATURE OF A BUILDING OR AN AMERICAN FLAG, c) LIGHTING OF OUTDOOR PUBLIC RECREATION FACILITIES, d) LIGHTS THAT ARE PART OF A PERMITTED SIGN, (e) OR LIGHTS WITHIN AN OPEN AIR PARKING STRUCTURE. SEE ALSO SECTION 1319.02(I). [BOTH LOTS COMPLY]
(c) DIFFUSED. ALL LIGHT SOURCES, INCLUDING SIGNS BUT NOT INCLUDING LED LIGHTING, SHALL BE PROPERLY DIFFUSED AS NEEDED WITH A TRANSLUCENT OR SIMILAR COVER TO PREVENT EXPOSED BULBS FROM BEING DIRECTLY VISIBLE FROM STREETS, PUBLIC SIDEWALKS, DWELLINGS OR ADJACENT LOTS. [BOTH LOTS COMPLY]
(d) SHIELDING. ALL LIGHT SOURCES, INCLUDING SIGNS, SHALL BE SHIELDED AROUND THE LIGHT SOURCE AND CAREFULLY DIRECTED AND PLACED TO PREVENT THE LIGHTING FROM CREATING A NUISANCE IN ADJACENT DWELLINGS, AND TO PREVENT THE LIGHTING FROM SHINING INTO THE EYES OF PASSING MOTORISTS. [BOTH LOTS COMPLY]
(f) SPILLOVER. EXTERIOR LIGHTING ON AN INSTITUTIONAL, COMMERCIAL, INDUSTRIAL OR RESIDENTIAL PROPERTY SHALL NOT CAUSE A SPILLOVER OF LIGHT ONTO A PRINCIPALLY RESIDENTIAL LOT IN A RESIDENTIAL DISTRICT THAT EXCEEDS 0.1 HORIZONTAL FOOT-CANDLE MEASURED LINE OF SIGHT INSIDE THE RESIDENTIAL LOT LINE. [NOT APPLICABLE]
(h) LIGHTING OF HORIZONTAL SURFACES. FOR THE LIGHTING OF PREDOMINANTLY HORIZONTAL SURFACES SUCH AS PARKING AREAS, OUTDOOR STORAGE AND OUTDOOR SALES AREAS, LIGHTING FIXTURES SHALL BE AIMED DOWNWARD AND SHALL INCLUDE FULL CUT-OFF MEASURES AS NEEDED TO PROPERLY DIRECT THE LIGHT AND TO MEET THE MAXIMUM SPILLOVER REQUIREMENTS OF SUBSECTION (f) AND TO PREVENT GLARE ONTO STREETS. [BOTH LOTS COMPLY]

1319.02 GENERAL REGULATIONS APPLYING TO REQUIRED OFF-STREET PARKING FACILITIES
(i) LIGHTING. LIGHT POLES ARE STRONGLY ENCOURAGED TO HAVE A MAXIMUM HEIGHT OF 20 FEET. SEE SECTION 1318.25. [BOTH LOTS COMPLY]

LVIP COVENANT
306. ALL PARKING LOTS AND DRIVEWAYS SHALL BE ILLUMINATED ADEQUATELY DURING THE HOURS BETWEEN SUNSET AND SUNRISE WHEN THE FACILITY IS IN OPERATION. REASONABLE LEVELS OF LIGHTING FOR SECURITY MAY BE OPERATED FROM MIDNIGHT TO DAWN IF THE BUILDING IS UNOCCUPIED BUT NOT EXCEEDING LIMITS ESTABLISHED WITHIN THIS SECTION. [BOTH LOTS COMPLY]
306.(3) PARKING LOT LIGHTING STANDARDS SHALL HAVE A MOUNTING HEIGHT OF 25'-0" OR LESS ABOVE FINISHED GRADE. MOUNTING HEIGHT IS HEREBY DEFINED AS THE DISTANCE THE BOTTOM OF THE LUMINAIRE IS ABOVE FINISHED GRADE. LUMINAIRE IS DEFINED AS THE LIGHT UNIT ON THE STANDARD . THE VERTICAL DIMENSION OF THE LUMINAIRE FIXTURE SHALL NOT EXCEED 18'. [BOTH LOTS COMPLY]
306.(4) ALL FIXTURES SHALL BE CUT-OFF TYPE LUMINAIRES AS DEFINED BY THE MOST CURRENT IES (ILLUMINATING ENGINEERS SOCIETY) LIGHTING HANDBOOK. FREE STANDING AND BUILDING MOUNTED LIGHTING SHALL BE "SHOEBOX TYPE". LVIP MAY APPROVE OTHER LIGHTING THAT HAS EQUAL LIGHTING AND CUT-OFF CHARACTERISTICS. BUILDING MOUNTED LUMINAIRES, AS A MINIMUM, SHALL BE CUT-OFF TYPE AND SHALL MEET THE REQUIREMENTS OF THE PARKING LOT LUMINAIRES. [BOTH LOTS COMPLY]
306.(5) THE PARKING LOT LIGHTING LEVELS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT IES LIGHTING HANDBOOK. AS A MINIMUM, THE LIGHT FOOT-CANDLE LEVEL ON THE DRIVEWAYS AND PARKING LOT AREAS SHALL BE SIXTH-TENTHS (0.6) FOOT-CANDLE, WITH A UNIFORMITY RATIO (AVERAGE TO MINIMUM) OF 4 TO 1, WITH A MAXIMUM FOOT-CANDLE OF 4.2. [BOTH LOTS COMPLY]

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

SCALE: 1" = 40'

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LLGT-PAB240068.00-2A.----3-LAYOUT: L-202 LIGHT (A) JMV

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE WORKING COPY, DESIGN AND CONTENT OF THESE PLANS ARE COPYRIGHT AND SHALL NOT BE LOANED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED AND SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES. ©2024 BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: PAB240068.00-2A
DRAWN BY: ABN
CHECKED BY: MMC
DATE: 12/13/2024
CAD I.D.: P-CIVIL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT
2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.R. BACHERT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA002385
NEW JERSEY LICENSE NO. 21AS00139900

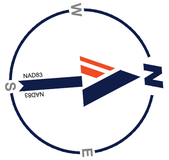
SHEET TITLE:

LIGHTING PLAN

SHEET NUMBER:

L-202

REVISION 2 - 02/19/2025



LOT A LUMINARE SCHEDULE

LABEL	QTY.	MOUNTING HT.	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P2	5	25'-0" AFG	SINGLE	15180	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 2, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-2-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P3	5	25'-0" AFG	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P4	6	25'-0" AFG	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P5-W	3	25'-0" AFG	SINGLE	15443	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 5W, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-5W-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
W2	1	25'-0" AFF	SINGLE	15180	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 2, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-2-RPA)	
W3	7	25'-0" AFF	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	
W4	10	25'-0" AFF	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	

LOT B LUMINARE SCHEDULE

LABEL	QTY.	MOUNTING HT.	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P3	1	25'-0" AFG	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P4	3	25'-0" AFG	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
W3	3	25'-0" AFF	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	
W4	6	25'-0" AFF	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	

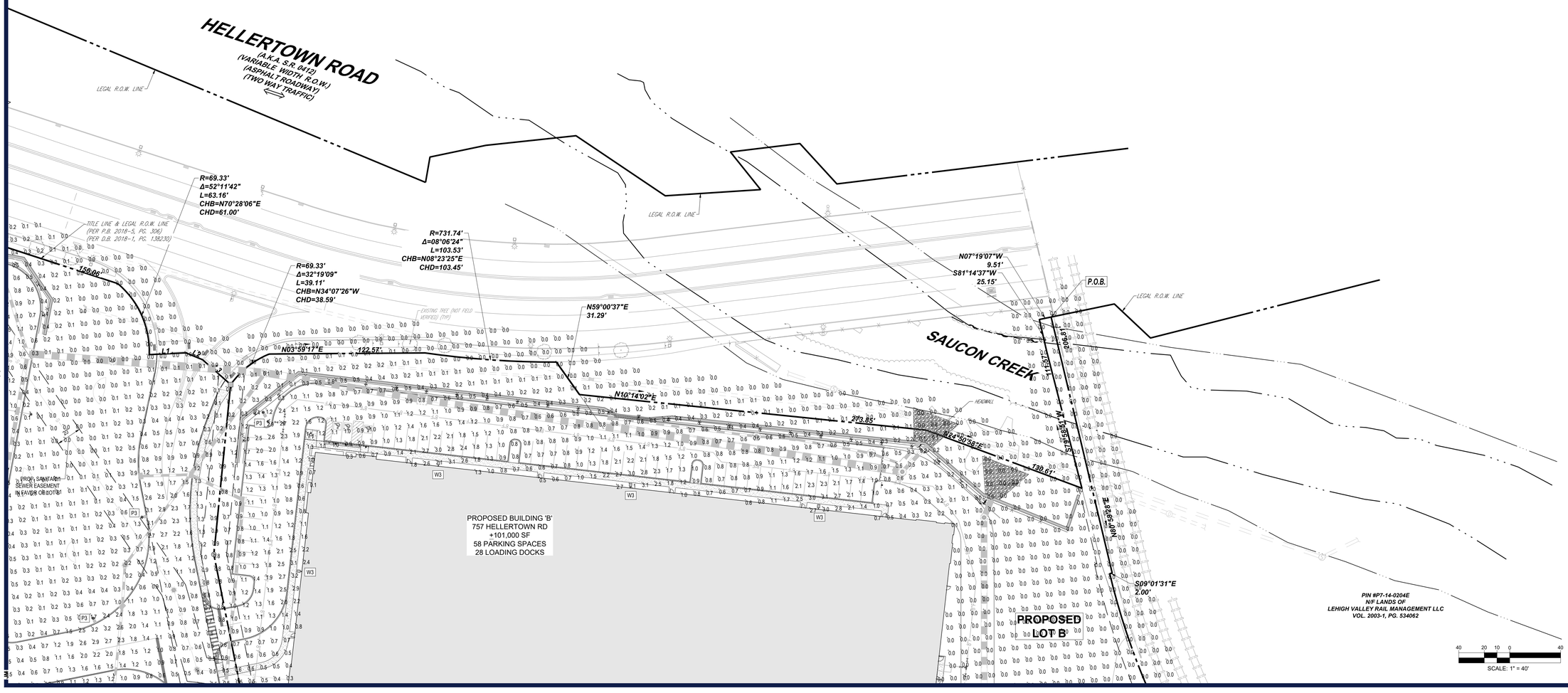
LOT A CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.75	5.7	0.0	N/A	N/A
CAR PARKING	ILLUMINANCE	Fc	1.16	3.2	0.6	1.93	5.33
LOADING	ILLUMINANCE	Fc	3.08	4.4	1.5	2.05	2.93
TRUCK COURT	ILLUMINANCE	Fc	1.27	3.8	0.3	4.23	12.67

LOT B CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.65	4.3	0.0	N/A	N/A
CAR PARKING	ILLUMINANCE	Fc	1.28	3.1	0.6	2.13	5.17
LOADING	ILLUMINANCE	Fc	3.32	4.3	1.7	1.95	2.53
TRUCK COURT	ILLUMINANCE	Fc	1.53	3.5	0.3	5.10	11.67

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY



R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LLGT-PAB240068.00-2A.----LAYOUT(L-203 LGHT (B)

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHT AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVIL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.R. BACHERT
COMMONWEALTH OF PENNSYLVANIA
REGISTERED LANDSCAPE ARCHITECT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA002385
NEW JERSEY LICENSE NO. LA#21AS00139900

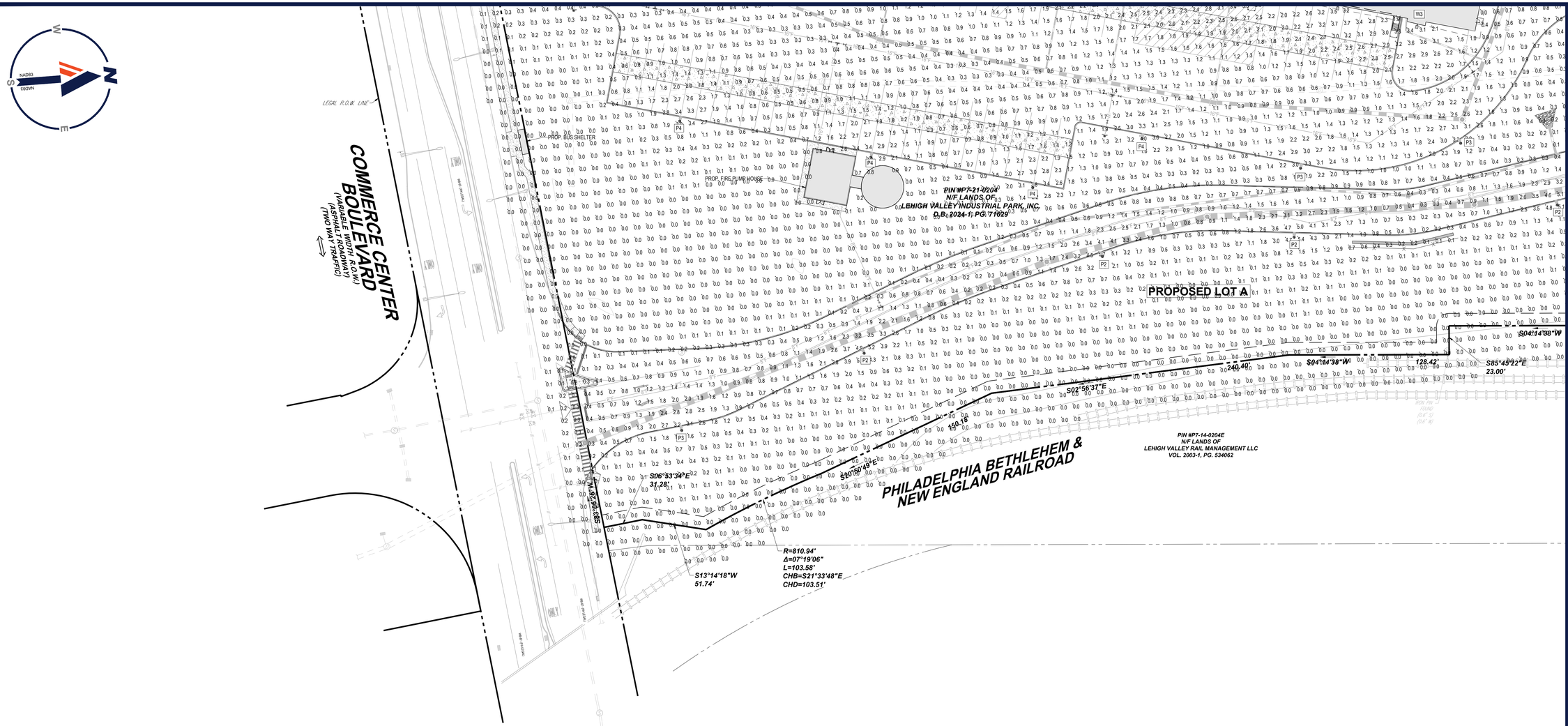
SHEET TITLE:

LIGHTING PLAN

SHEET NUMBER:

L-203

REVISION 2 - 02/19/2025



LOT A LUMINARE SCHEDULE

LABEL	QTY.	MOUNTING HT.	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P2	5	25'-0" AFG	SINGLE	15180	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 2, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-2-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P3	5	25'-0" AFG	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P4	6	25'-0" AFG	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P5-W	3	25'-0" AFG	SINGLE	15443	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 5W, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-5W-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
W2	1	25'-0" AFF	SINGLE	15180	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 2, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-2-RPA)	
W3	7	25'-0" AFF	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	
W4	10	25'-0" AFF	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	

LOT B LUMINARE SCHEDULE

LABEL	QTY.	MOUNTING HT.	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P3	1	25'-0" AFG	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P4	3	25'-0" AFG	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
W3	3	25'-0" AFF	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	
W4	6	25'-0" AFF	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	

LOT A CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.75	5.7	0.0	N/A	N/A
CAR PARKING	ILLUMINANCE	Fc	1.16	3.2	0.6	1.93	5.33
LOADING	ILLUMINANCE	Fc	3.08	4.4	1.5	2.05	2.93
TRUCK COURT	ILLUMINANCE	Fc	1.27	3.8	0.3	4.23	12.67

LOT B CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.65	4.3	0.0	N/A	N/A
CAR PARKING	ILLUMINANCE	Fc	1.28	3.1	0.6	2.13	5.17
LOADING	ILLUMINANCE	Fc	3.32	4.3	1.7	1.95	2.53
TRUCK COURT	ILLUMINANCE	Fc	1.53	3.5	0.3	5.10	11.67

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

40 20 10 0 40

SCALE: 1" = 40'

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
LAND DEVELOPMENT
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE WORK CIVIL DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER

74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

COMMONWEALTH OF PENNSYLVANIA — REGISTERED LANDSCAPE ARCHITECT — M.R. BACHERT — LICENSE NO. LA002385 — EXPIRES 12/31/2025

M.R. BACHERT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA002385
NEW JERSEY LICENSE NO. 21AS00139900

SHEET TITLE:

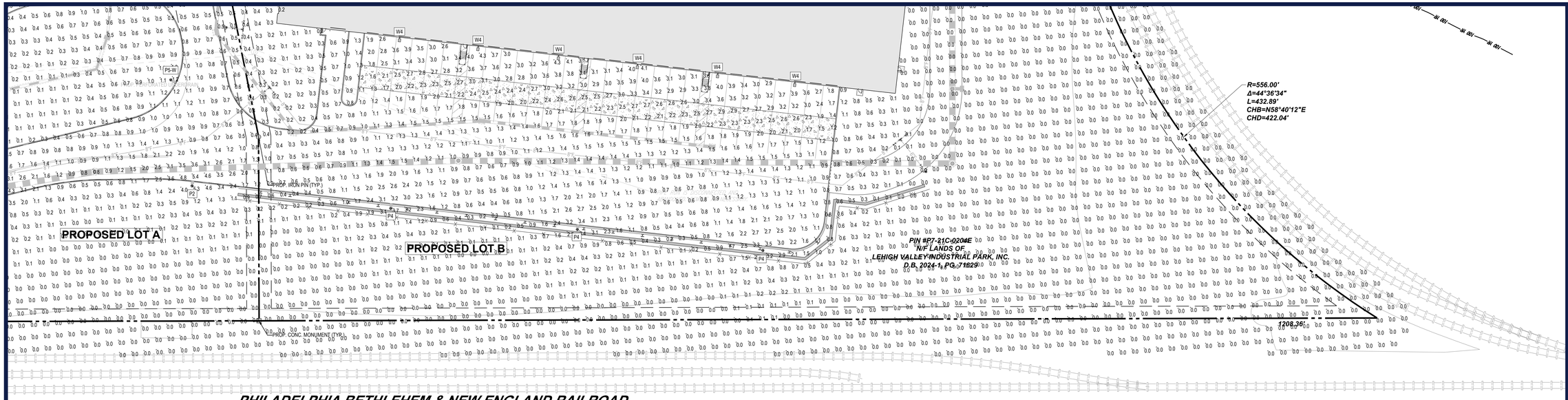
LIGHTING PLAN

SHEET NUMBER:

L-204

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LLGT-PAB240068.00-2A-----LAYOUT: L-204 LGHT (C)
JMV 2/19/2025 3:46:39 PM



LOT A LUMINARE SCHEDULE

LABEL	QTY.	MOUNTING HT.	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P2	5	25'-0" AFG	SINGLE	15180	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 2, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-2-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P3	5	25'-0" AFG	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P4	6	25'-0" AFG	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P5-W	3	25'-0" AFG	SINGLE	15443	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 5W, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-5W-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
W2	1	25'-0" AFF	SINGLE	15180	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 2, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-2-RPA)	
W3	7	25'-0" AFF	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	
W4	10	25'-0" AFF	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	

LOT B LUMINARE SCHEDULE

LABEL	QTY.	MOUNTING HT.	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
P3	1	25'-0" AFG	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
P4	3	25'-0" AFG	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	GARDCO BY SIGNIFY, STRAIGHT ROUND STEEL POLE, 22'-6" LENGTH (SRS-CB-4-11-22.5-D1)
W3	3	25'-0" AFF	SINGLE	14851	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 3, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-3-RPA)	
W4	6	25'-0" AFF	SINGLE	15537	0.900	GARDCO BY SIGNIFY, ECOFORM SIZE SMALL LED AREA LUMINAIRE, TYPE 4, ZERO UP-LIGHT (ECF-S-32L-1.2A-NW-G2-AR-4-RPA)	

LOT A CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.75	5.7	0.0	N/A	N/A
CAR PARKING	ILLUMINANCE	Fc	1.16	3.2	0.6	1.93	5.33
LOADING	ILLUMINANCE	Fc	3.08	4.4	1.5	2.05	2.93
TRUCK COURT	ILLUMINANCE	Fc	1.27	3.8	0.3	4.23	12.67

LOT B CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	Fc	0.65	4.3	0.0	N/A	N/A
CAR PARKING	ILLUMINANCE	Fc	1.28	3.1	0.6	2.13	5.17
LOADING	ILLUMINANCE	Fc	3.32	4.3	1.7	1.95	2.53
TRUCK COURT	ILLUMINANCE	Fc	1.53	3.5	0.3	5.10	11.67

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

40 20 10 0 40

SCALE: 1" = 40'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE ELEVATION
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE COPYRIGHT BY AND SHALL NOT BE EXPOSED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

811 Know what's below. Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION
WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: PAB240068.00-2A
DRAWN BY: ABN
CHECKED BY: MMC
DATE: 12/13/2024
CAD I.D.: P-CIVL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER
74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M. P. BACHERT — COMMONWEALTH OF PENNSYLVANIA — REGISTERED LANDSCAPE ARCHITECT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA002385
NEW JERSEY LICENSE NO. 21AS00139900

SHEET TITLE:

LIGHTING PLAN

SHEET NUMBER:

L-205

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVIL-LLGT-PAB240068.00-2A-----LAYOUT: L-205 LIGHT (5) JMV

GARDCO
by Signify

Site & Area
EcoForm
ECF-S small area light

Project:
Location:
Cat.No:
Type:
Lamps: Qty:
Notes:

Gardco EcoForm Gen-2 combines economy with performance in an LED area luminaire. Capable of delivering up to 27,800 lumens or more in a compact, low profile LED luminaire, EcoForm offers a new level of customer value. EcoForm features an innovative retrofit arm kit, simplifying site conversions to LED by eliminating the need to drill additional holes in most existing poles. Integral control systems available for further energy savings. Includes Service Tag, our innovative way to provide assistance throughout the life of the product.

Ordering guide

example: ECF-S-64L-900-NW-G2-AR-5-120-HIS-MGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting	Distribution	Voltage
ECF-S EcoForm site and area, small	32L 32 LEDs (2 modules)	365 365mA; 530 530mA; 700 700mA; 1A 1050mA; 1.2A 1200mA	WW-G2 Warm White 3000K, 70CRI Generation 2; NW-G2 Neutral White 4000K, 70CRI Generation 2; CW-G2 Cool White 5000K, 70CRI Generation 2	AR[2] Arm Mount (standard); The following mounting kits must be ordered separately (See accessories); SF[3] Slip Fitter Mount (fits to 2 3/8" O.D. tenon); WS Wall mount with surface conduit rear entry permitted; RAM[3] Retrofit arm mount kit	Type 2: 2 Type 2; 2-90 Rotated left 90°; 2-270 Rotated right 270°; Type 3: 3 Type 3; 3-90 Rotated left 90°; 3-270 Rotated right 270°; Type 4: 4 Type 4; 4-90 Rotated left 90°; 4-270 Rotated right 270°; Type 5: 5 Type 5; 5W Type 5W; AFR Auto Front Row; AFR-90 Auto Front Row, Rotated left 90°; AFR-270 Auto Front Row, Rotated right 270°; BLC Back Light Control; BLC-90 Back Light Control rotated at 90°; BLC-270 Back Light Control rotated at 270°; LCL[19] LEED Corner Optic Left; RCL[19] LEED Corner Optic Right	120 120V; 208 208V; 240 240V; 277 277V; 347 347V; 480 480V; UNV 120-277V (50/60Hz); HVU 347-480V (50/60Hz)
	48L 48 LEDs (3 modules)	900 900mA; 1A 1050mA; 1.2A[19] 1200mA				
	64L 64 LEDs (4 modules)	900 900mA; 1A[19] 1050mA				

Options

Dimming controls	Motion sensing lens	Photo-sensing	Electrical	Luminaire	Finish
DD[4,18] 0-10V External dimming (for controls by others); DCC[4,5,6,18] Dual Circuit Control; FAWS[4,5,6,18] Field Adjustable Wattage Selector; LLC[4,6,7,8,18] Integral wireless module; BL[1,4,7,18] Bi-level functionality; SRDR[4,5,6,8,17] SR driver connected to Zhaga socket; DynaDimmer: Automatic Profile Dimming: CS50[4,8] Safety 50% Dimming, 7 hours; CM50[4,8] Median 50% Dimming, 8 hours; CS30[4,8] Safety 30% Dimming, 7 hours; CM30[4,8] Median 30% Dimming, 8 hours	IMRI3[15] Integral with #3 lens; IMRI7[16] Integral with #7 lens	PCB[6,9] Photocontrol Button; TLRD5[10,17] Twist Lock Receptacle 5 Pin; TLRD7[10,17] Twist Lock Receptacle 7 Pin; TLRPC[8,10,11,17] Twist Lock Receptacle w/ Photocell	Fusing: F1[9] Single (120, 277, 347VAC); F2[9] Double (208, 240, 480VAC); Pole Mount Fusing: FP1[9] Single (120, 277, 347VAC); FP2[9] Double (208, 240, 480VAC); FP3[9] Canadian Double Pull (208, 240, 480VAC); Surge Protection (10kA standard): SP2 Increased 20kA	Square Pole Adapter included in standard product; TB[12] Terminal Block; RPA[13] Round Pole Adapter (fits to 3"- 3.9" O.D. pole); HIS[14] Internal House Side Shield	Textured: BK Black; WH White; BZ Bronze; DGY Dark Gray; MGY Medium Gray; Customer specified: RAL Specify optional color or RAL (ex: RAL7024); CC Custom color (Must supply color chip for required factory quote)

1. BL-IMRI3/7 equipped with out-boarded sensor housing when voltage is HVU (347-480V)
2. Mounts to a 4" round pole with adapter included for square poles.
3. Limited to a maximum of 45 degrees aiming above horizontal.
4. Not available with other dimming control options.
5. Not available with motion sensor.
6. Not available with photocontrol.
7. Must specify a motion sensor lens.
8. Not available in 347 or 480V
9. Must specify input voltage.
10. TLRD5, TLRD7 and TLRPC receptacle pins 4 & 5 are capped off when ordered with any of the Dimming controls DD or FAWS or LLC.
11. Not available in 480V. Order photocell separately with TLRD5/7.
12. Not available with DCC.
13. Not available with SF and WS. RPAs provided with black finish standard.
14. HIS not available with Type 5, 5W, BLC, BLC-90, BLC-270, LCL or RCL optics.
15. Not available with DD, DCC, and FAWS dimming control options.
16. Not available with DD, DCC, FAWS and LLC dimming control options.
17. When ordering SRDR, controller (by others) to be used on socket must be SR compatible (See specifications for more details). Consult factory for lead time. All 7 pins in NEMA receptacle are connected to SR driver. SRDR not available with TLRD5 or TLRPC.
18. 0-10V dimming driver standard.
19. LCL and RCL not available with 48L-1.2A or 64L-1A.

ECF-S EcoForm small
Area luminaire

EcoForm Accessories[21] (ordered separately, field installed)

Shielding Accessories

House Side shield
Standard optic orientation:
HIS-32-H[20] Internal House Side Shield for 32 LEDs (2 modules)
HIS-48-H[20] Internal House Side Shield for 48 LEDs (3 modules)
HIS-64-H[20] Internal House Side Shield for 64 LEDs (4 modules)

Optic at 90 or 270 orientation:
HIS-32-V[20] Internal House Side Shield for 32 LEDs (2 modules)
HIS-48-V[20] Internal House Side Shield for 48 LEDs (3 modules)
HIS-64-V[20] Internal House Side Shield for 64 LEDs (4 modules)

Footnotes
20. Not available with Type 5 or 5W optics
21. Consult Signify to confirm whether specific accessories are BAA-compliant.

Luminaire Accessories

ECF-BD-G2 Bird deterrent
ECF-RAM-G2-(F) Retrofit Arm mount kit
ECF-SF-G2-(F) Slip Fitter Mount (fits to 2 3/8" O.D. tenon)
ECF-WS-G2-(F) Wall mount with surface conduit rear entry permitted

EcoForm PTF2 (pole top fitter fits 2 3/8-2 1/2" OD x 4" depth tenon)		EcoForm PTF3 (pole top fitter fits 3-3 1/2" OD x 6" depth tenon)		EcoForm PTF4 (pole top fitter fits 3 1/2-4" OD x 6" depth tenon)	
PTF2-ECF-S/L-1-90-(F)	1 luminaire at 90°	PTF3-ECF-S/L-1-90-(F)	1 luminaire at 90°	PTF4-ECF-S/L-1-90-(F)	1 luminaire at 90°
PTF2-ECF-S/L-2-90-(F)	2 luminaires at 90°	PTF3-ECF-S/L-2-90-(F)	2 luminaires at 90°	PTF4-ECF-S/L-2-90-(F)	2 luminaires at 90°
PTF2-ECF-S/L-2-180-(F)	2 luminaires at 180°	PTF3-ECF-S/L-2-180-(F)	2 luminaires at 180°	PTF4-ECF-S/L-2-180-(F)	2 luminaires at 180°
PTF2-ECF-S/L-3-90-(F)	3 luminaires at 90°	PTF3-ECF-S/L-3-90-(F)	3 luminaires at 90°	PTF4-ECF-S/L-3-90-(F)	3 luminaires at 90°
PTF2-ECF-S/L-4-90-(F)	4 luminaires at 90°	PTF3-ECF-S/L-4-90-(F)	4 luminaires at 90°	PTF4-ECF-S/L-4-90-(F)	4 luminaires at 90°
PTF2-ECF-S/L-3-120-(F)	3 luminaires at 120°	PTF3-ECF-S/L-3-120-(F)	3 luminaires at 120°	PTF4-ECF-S/L-3-120-(F)	3 luminaires at 120°

(F) = Specify finish

Ready to Go configurations (when ordered with the "RS-" catalog code, the following configurations will ship in 2 weeks):

Catalog Number	12NC
RS-ECF-S-32L-1A-NW-G2-AR-3-UNV-BZ	912401466002
RS-ECF-S-32L-1A-NW-G2-AR-3-UNV-MGY	912401466003
RS-ECF-S-32L-1A-NW-G2-AR-3-UNV-BK	912401534554
RS-ECF-S-32L-1A-NW-G2-AR-4-UNV-BZ	912401466004
RS-ECF-S-32L-1A-NW-G2-AR-4-UNV-MGY	912401466005
RS-ECF-S-32L-1A-NW-G2-AR-4-UNV-BK	912401534555
RS-ECF-S-32L-1A-NW-G2-AR-5-UNV-BZ	912401466006
RS-ECF-S-32L-1A-NW-G2-AR-5-UNV-MGY	912401466007
RS-ECF-S-32L-1A-NW-G2-AR-5-UNV-BK	912401534556
RS-ECF-S-48L-1A-NW-G2-AR-3-UNV-BZ	912401466008
RS-ECF-S-48L-1A-NW-G2-AR-3-UNV-MGY	912401466009
RS-ECF-S-48L-1A-NW-G2-AR-3-UNV-BK	912401534557
RS-ECF-S-48L-1A-NW-G2-AR-4-UNV-BZ	912401466010
RS-ECF-S-48L-1A-NW-G2-AR-4-UNV-MGY	912401466011
RS-ECF-S-48L-1A-NW-G2-AR-4-UNV-BK	912401534558
RS-ECF-S-48L-1A-NW-G2-AR-5-UNV-BZ	912401466012
RS-ECF-S-48L-1A-NW-G2-AR-5-UNV-MGY	912401466013
RS-ECF-S-48L-1A-NW-G2-AR-5-UNV-BK	912401534559
RS-ECF-S-64L-1A-NW-G2-AR-3-UNV-BZ	912401466014
RS-ECF-S-64L-1A-NW-G2-AR-3-UNV-MGY	912401466015

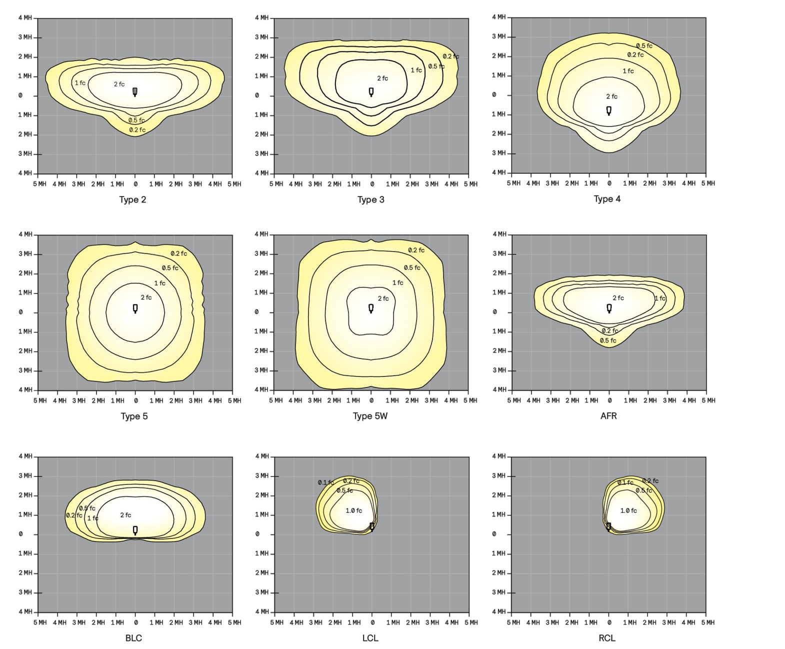
Catalog Number	12NC
RS-ECF-S-64L-1A-NW-G2-AR-3-UNV-BK	912401534560
RS-ECF-S-64L-1A-NW-G2-AR-4-UNV-BZ	912401466016
RS-ECF-S-64L-1A-NW-G2-AR-4-UNV-MGY	912401466017
RS-ECF-S-64L-1A-NW-G2-AR-4-UNV-BK	912401534561
RS-ECF-S-64L-1A-NW-G2-AR-5-UNV-BZ	912401466018
RS-ECF-S-64L-1A-NW-G2-AR-5-UNV-MGY	912401466019
RS-ECF-S-64L-1A-NW-G2-AR-5-UNV-BK	912401534562
RS-ECF-RAM-G2-DGY	912401466487
RS-ECF-RAM-G2-MGY	912401466488
RS-ECF-RAM-G2-WH	912401466485
RS-ECF-RAM-G2-BZ	912401466486
RS-ECF-RAM-G2-BK	912401466484
RS-HIS-32-H	912401466489
RS-HIS-48-H	912401466491
RS-HIS-64-H	912401466493

ECF-S EcoForm small
Area luminaire

Predicted Lumen Depreciation Data
Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L_{70} is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L_{70} hours limited to 6 times actual LED test hours

Ambient Temperature °C	Driver mA	Calculated L_{70} Hours	L_{70} per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 1200 mA	>100,000 hours	>120,000 hours	>99%

Optical Distributions
Based on configuration ECF-S-48L-1A-NW-G2 (159W) mounted at 20ft.



ECF-S EcoForm small
Area luminaire

3000K LED Wattage and Lumen Values

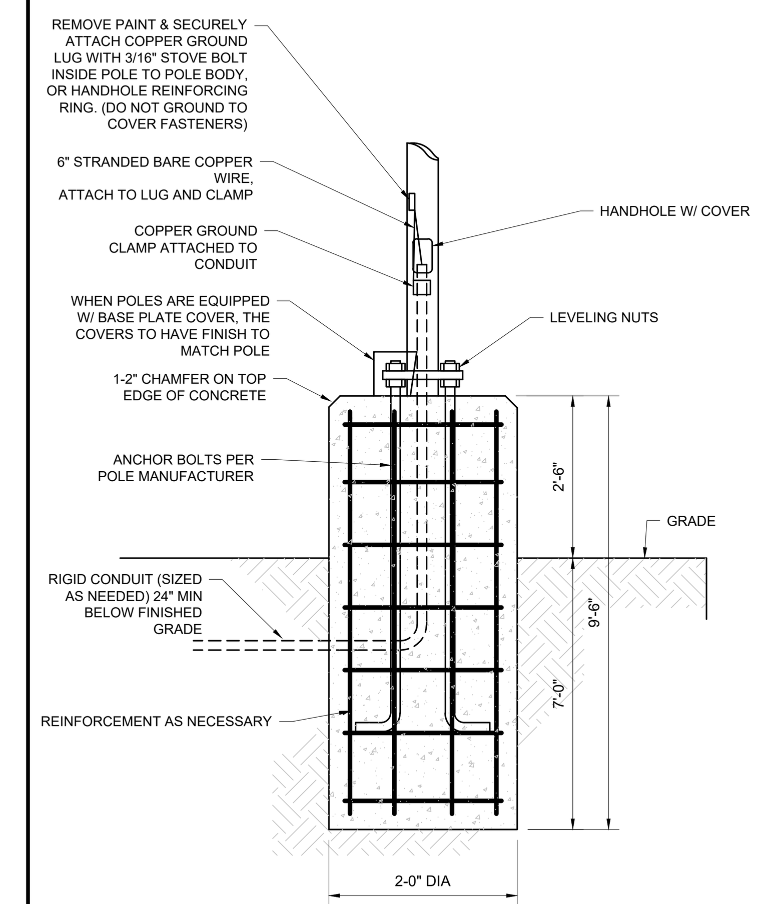
Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 2 Lumen Output	Type 2 BUG Rating	Type 2 Efficacy (LPW)	Type 3 Lumen Output	Type 3 BUG Rating	Type 3 Efficacy (LPW)	Type 4 Lumen Output	Type 4 BUG Rating	Type 4 Efficacy (LPW)	Type 5 Lumen Output	Type 5 BUG Rating	Type 5 Efficacy (LPW)	Type 5W Lumen Output	Type 5W BUG Rating	Type 5W Efficacy (LPW)
ECF-S-32L-365-WW-G2-x	32	365	3000	40	5,508	B1-U0-G1	138	5,428	B1-U0-G2	136	5,637	B1-U0-G2	141	5,790	B3-U0-G1	145	5,604	B3-U0-G1	140
ECF-S-32L-530-WW-G2-x	32	530	3000	56	7,159	B2-U0-G2	129	7,055	B1-U0-G2	127	7,327	B1-U0-G2	132	7,526	B3-U0-G2	135	7,284	B3-U0-G2	131
ECF-S-32L-700-WW-G2-x	32	700	3000	73	9,234	B2-U0-G2	127	9,034	B2-U0-G2	124	9,452	B2-U0-G2	130	9,707	B4-U0-G2	133	9,395	B4-U0-G2	129
ECF-S-32L-1A-WW-G2-x	32	1050	3000	106	13,001	B3-U0-G2	123	12,719	B2-U0-G2	120	13,306	B2-U0-G3	126	13,665	B4-U0-G2	129	13,227	B4-U0-G2	125
ECF-S-32L-1.2A-WW-G2-x	32	1200	3000	122	14,421	B3-U0-G2	119	14,108	B2-U0-G3	116	14,760	B2-U0-G3	121	15,158	B4-U0-G2	125	14,671	B4-U0-G2	121
ECF-S-48L-900-WW-G2-x	48	900	3000	135	17,115	B3-U0-G3	127	16,744	B3-U0-G3	124	17,518	B2-U0-G3	130	17,990	B4-U0-G2	133	17,413	B5-U0-G3	129
ECF-S-48L-1A-WW-G2-x	48	1050	3000	159	19,381	B3-U0-G3	122	18,960	B3-U0-G3	119	19,836	B3-U0-G4	125	20,372	B5-U0-G3	128	19,717	B5-U0-G3	124
ECF-S-48L-1.2A-WW-G2-x	48	1200	3000	183	21,515	B3-U0-G3	118	21,048	B3-U0-G4	115	22,020	B3-U0-G4	120	22,616	B5-U0-G3	124	21,888	B5-U0-G3	120
ECF-S-64L-900-WW-G2-x	64	900	3000	178	22,652	B3-U0-G3	127	22,161	B3-U0-G4	125	23,185	B3-U0-G4	130	23,810	B5-U0-G3	134	23,045	B5-U0-G3	130
ECF-S-64L-1A-WW-G2-x	64	1050	3000	206	25,520	B3-U0-G3	124	24,966	B3-U0-G4	121	26,120	B3-U0-G4	127	26,150	B5-U0-G3	127	25,964	B5-U0-G4	126

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type AFR Lumen Output	Type AFR BUG Rating	Type AFR Efficacy (LPW)	BLC Lumen Output	BLC BUG Rating	BLC Efficacy (LPW)	LCL or RCL Lumen Output	LCL or RCL BUG Rating	LCL or RCL Efficacy (LPW)
ECF-S-32L-365-WW-G2-x	32	365	3000	40	5,706	B2-U0-G1	143	3,691	B0-U0-G1	94	2,449	B0-U0-G1	62
ECF-S-32L-530-WW-G2-x	32	530	3000	56	7,417	B2-U0-G1	133	5,005	B0-U0-G2	91	3,183	B0-U0-G1	58
ECF-S-32L-700-WW-G2-x	32	700	3000	73	9,567	B2-U0-G2	131	6,409	B0-U0-G2	89	4,106	B0-U0-G1	57
ECF-S-32L-1A-WW-G2-x	32	1050	3000	106	13,467	B3-U0-G2	128	9,024	B1-U0-G2	87	5,793	B0-U0-G2	56
ECF-S-32L-1.2A-WW-G2-x	32	1200	3000	122	14,939	B3-U0-G2	123	10,010	B1-U0-G2	84	6,426	B0-U0-G2	54
ECF-S-48L-900-WW-G2-x	48	900	3000	135	17,731	B3-U0-G2	131	11,880	B1-U0-G2	89	7,626	B0-U0-G2	57
ECF-S-48L-1A-WW-G2-x	48	1050	3000	159	20,076	B3-U0-G3	126	13,453	B1-U0-G2	86	8,636	B0-U0-G2	55
ECF-S-48L-1.2A-WW-G2-x	48	1200	3000	183	22,288	B3-U0-G2	122	14,934	B1-U0-G3	83			
ECF-S-64L-900-WW-G2-x	64	900	3000	178	23,465	B3-U0-G2	132	15,723	B1-U0-G3	90	10,093	B0-U0-G2	58
ECF-S-64L-1A-WW-G2-x	64	1050	3000	206	26,437	B4-U0-G3	128	17,714	B1-U0-G3	87			

4000K LED Wattage and Lumen Values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 2 Lumen Output	Type 2 BUG Rating	Type 2 Efficacy (LPW)	Type 3 Lumen Output	Type 3 BUG Rating	Type 3 Efficacy (LPW)	Type 4 Lumen Output	Type 4 BUG Rating	Type 4 Efficacy (LPW)	Type 5 Lumen Output	Type 5 BUG Rating	Type 5 Efficacy (LPW)	Type 5W Lumen Output	Type 5W BUG Rating	Type 5W Efficacy (LPW)
ECF-S-32L-365-NW-G2-x	32	365	4000	40	5,798	B1-U0-G1	145	5,713	B1-U0-G2	143	5,934	B1-U0-G2	148	6,094	B3-U0-G1	152	5,898	B3-U0-G2	147
ECF-S-32L-530-NW-G2-x	32	530	4000	56	7,536	B2-U0-G2	135	7,426	B1-U0-G2	133	7,713	B1-U0-G2	138	7,922	B3-U0-G2	142	7,667	B3-U0-G2	138
ECF-S-32L-700-NW-G2-x	32	700	4000	73	9,720	B2-U0-G2	133	9,509	B2-U0-G2	130	9,949	B2-U0-G2	136	10,218	B4-U0-G2	140	9,889	B4-U0-G2	136
ECF-S-32L-1A-NW-G2-x	32	1050	4000	106	13,685	B3-U0-G2	130	13,388	B2-U0-G3	127	14,006	B2-U0-G3	133	14,384	B4-U0-G2	136	13,923	B4-U0-G2	132
ECF-S-32L-1.2A-NW-G2-x	32	1200	4000	122	15,180	B3-U0-G3	125	14,851	B2-U0-G3	122	15,537	B2-U0-G3	128	15,956	B4-U0-G2	131	15,443	B4-U0-G2	127
ECF-S-48L-900-NW-G2-x	48	900	4000	135	18,016	B3-U0-G3	133	17,625	B3-U0-G3	130	18,440	B3-U0-G3	136	18,937	B4-U0-G3	140	18,329	B5-U0-G3	136
ECF-S-48L-1A-NW-G2-x	48	1050	4000	159	20,401	B3-U0-G3	129	19,958	B3-U0-G4	126	20,880	B3-U0-G4	132	21,444	B5-U0-G3	135	20,755	B5-U0-G3	131
ECF-S-48L-1.2A-NW-G2-x	48	1200	4000	183	22,647	B3-U0-G3	124	22,156	B3-U0-G4	121	23,179	B3-U0-G4	127	23,806	B5-U0-G3	130	23,040	B5-U0-G3	126
ECF-S-64L-900-NW-G2-x	64	900	4000	178	23,844	B3-U0-G3	134	23,327	B3-U0-G4	131	24,405	B3-U0-G4	137	25,063	B5-U0-G3	141	24,258	B5-U0-G4	136
ECF-S-64L-1A-NW-G2-x	64	1050	4000	206	26,863	B3-U0-G3	130	26,280	B3-U0-G4	128	27,495	B3-U0-G4	134	27,526	B5-U0-G3	134	27,330	B5-U0-G4	133

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type AFR Lumen Output	Type AFR BUG Rating	Type AFR Efficacy (LPW)	BLC Lumen Output	BLC BUG Rating	BLC Efficacy (LPW)	LCL or RCL Lumen Output	LCL or RCL BUG Rating	LCL or RCL Efficacy (LPW)
ECF-S-32L-365-NW-G2-x	32	365	4000	40	6,006	B2-U0-G1	150	3,991	B0-U0-G1	101	2,633	B0-U0-G1	67
ECF-S-32L-530-NW-G2-x	32	530	4000	56	7,807	B2-U0-G1	140	5,412	B0-U0-G2	99	3,423	B0-U0-G1	62
ECF-S-32L-700-NW-G2-x	32	700	4000	73	10,070	B2-U0-G2	138	6,930	B0-U0-G2	96	4,415	B0-U0-G1	61
ECF-S-32L-1A-NW-G2-x	32	1050	4000	106	14,176	B3-U0-G2	134	9,756	B1-U0-G2	94	6,229	B0-U0-G2	60
ECF-S-32L-1.2A-NW-G2-x	32	1200	4000	122	15,725	B3-U0-G2	129	10,822	B1-U0-G2	90	6,910	B0-U0-G2	58
ECF-S-48L-900-NW-G2-x	48	900	4000	135	18664	B3-U0-G2	138	12,843	B1-U0-G2	96	8,200	B0-U0-G2	62
ECF-S-48L-1A-NW-G2-x	48	1050	4000	159	21,133	B3-U0-G3	133	14,544	B1-U0-G3	93	9,286	B0-U0-G2	59
ECF-S-48L-1.2A-NW-G2-x	48	1200	4000	183	23,461	B3-U0-G3	128	16,145	B1-U0-G3	90			
ECF-S-64L-900-NW-G2-x	64	900	4000	178	24,700	B3-U0-G2	139	16,998	B1-U0-G3	97	10,853	B0-U0-G2	62
ECF-S-64L-1A-NW-G2-x	64	1050	4000	206	27,828	B4-U0-G3	135	19,150	B1-U0-G3	94			

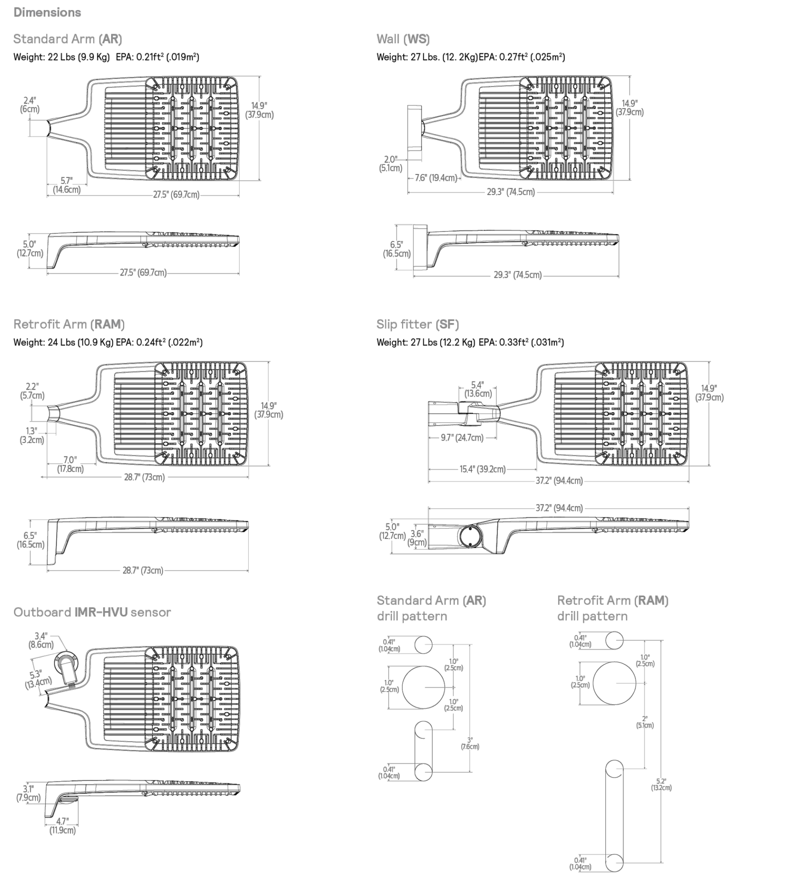


NOTES:
1. THIS DETAIL IS FOR BID AND BUDGETARY PURPOSES ONLY. CONTRACTOR SHALL ENSURE DESIGN IS PREPARED BY A QUALIFIED STRUCTURAL ENGINEER CONSIDERING LIGHTING MANUFACTURER REQUIREMENTS, LOCAL WIND LOADS, SITE SPECIFIC SOIL PARAMETERS.
   A. SOME SITE LOCATIONS AND/OR CONDITIONS MAY REQUIRE VIBRATION DAMPENING MEASURES AS DETERMINED BY A STRUCTURAL ENGINEER.
   B. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF THE INTENT TO MOUNT ANYTHING ASIDE FROM THE LIGHT FIXTURE INCLUDING (BUT NOT LIMITED TO) CAMERAS, BANNERS, FLAGS, SIGNAGE, ETC AS IT WILL IMPACT THE POLE AND FOUNDATION DESIGN.
2. ALL REBAR SHALL HAVE A YIELD STRENGTH OF 60ksi, AND MAINTAIN A 3" MIN CLEARANCE FROM SURFACES.

LIGHT POLE FOUNDATION
NOT TO SCALE (PA-I010101 - 11/2023)

ECF-S EcoForm small
Area luminaire

Dimensions

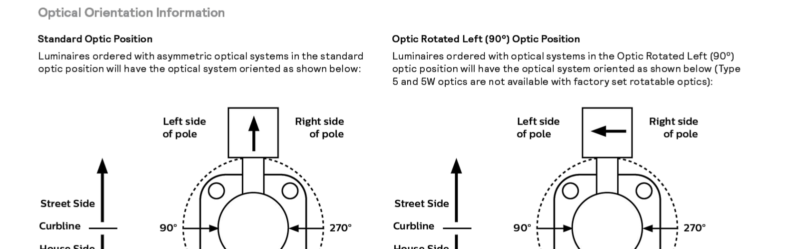


ECF-S EcoForm small
Area luminaire

Optical Orientation Information

Standard Optic Position
Luminaires ordered with asymmetric optical systems in the standard optic position will have the optical system oriented as shown below:

Optic Rotated Left (90°) Optic Position
Luminaires ordered with optical systems in the Optic Rotated Left (90°) optic position will have the optical system oriented as shown below (Type 5 and 5W optics are not available with factory set rotatable optics):

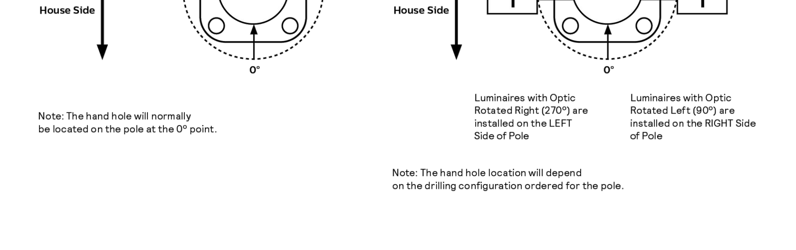


Note: The hand hole will normally be located on the pole at the 0° point.

Note: The hand hole will normally be located on the pole at the 0° point.

Optic Rotated Right (270°) Optic Position
Luminaires ordered with optical systems in the Optic Rotated Right (270°) optic position will have the optical system oriented as shown below (Type 5 and 5W optics are not available with factory set rotatable optics):

Twin Luminaire Assemblies with Type-90/Type-270 Rotated Optical Systems
Twin luminaire assemblies installed with rotated optical systems are an excellent way to direct light toward the interior of the site (Street Side) without additional equipment. It is important, however, that care be exercised to insure that luminaires are installed in the proper location.



Note: The hand hole will normally be located on the pole at the 0° point.

Note: The hand hole location will depend on the drilling configuration ordered for the pole.

ECF-S EcoForm small
Area luminaire

Specifications

Housing
One-piece die cast aluminum housing with integral arm and separate, self-retained hinged, one-piece die cast door frame. Luminaire housing rated to IP65, tested in accordance to Section 9 of IEC 60598-1.

Vibration resistance
Luminaire is tested and rated 3G over 100,000 cycles conforming to standards set forth by ANSI C136.31-2018. Testing includes vibration in three axes, all performed on the same luminaire.

Light engine
Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 2, 3, and 4 modules or 32, 48, and 64 LEDs. Module is RoHS compliant. Color temperatures: 3000K +/-125K, 4000K, 5000K +/- 200K. Minimum CRI of 70. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

Energy saving benefits
System efficacy up to 152 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

Optical systems
Type 2, 3, 4, 5, 5W, and AFR distributions available. Internal Shield option mounts to LED optics and is available with Type 2, 3, 4, and AFR distributions, including a dedicated BLC, LCL, and RCL optics to provide the best backlight control possible for those stringent requirements around property lines. Types 2, 3, 4, AFR, and BLC when specified and used as rotated, are factory set only. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

Mounting
Standard luminaire arm mounts to 4" O.D. round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. Round Pole Adapter (RPA) required for 3-3.9" poles. EcoForm features a retrofit arm kit. When specified with the retrofit arm (RAM) option, EcoForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately. Also optional are slipfitter and wall mounting accessories. Note that only fixed mounts (AR, RAM, WS) are required to meet IDA compliance. SF mounting will not meet IDA.

Control options
0-10V dimming (DD): Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.
Dual Circuit Control (DCC): Luminaire equipped with the ability to have two separate circuits controlling drivers and light engines independently. Permits separate switching of separate modules controlled by use of two sets of leads, one for each circuit. Not recommended to be used with other control options, motion response, or photocells.
Sensor Ready Zhaga Socket Connector (SRDR): Product equipped with Sensor Ready drivers connected to 4-pin Zhaga Book 18 compliant receptacle designed for sensor and other control system applications. Receptacle is rated IP66 assembly in a compact design that provides a sealed electrical interface and rated UV resistance, mounted on underside of the luminaire, protective dust cap included. When a controller not provided by Signify is used with Sensor Ready Zhaga socket connector, the controller must be certified to work with the Xitanium SR LED drivers as part of the SR certified program. SRDR can be used with NEMA 7-pin twist lock receptacle, which is mounted on top of the luminaire.
Automatic Profile Dimming (CS/CM/CE/CA): Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic diming profile schedule. Automatic dimming profile scheduled with the following settings:
- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

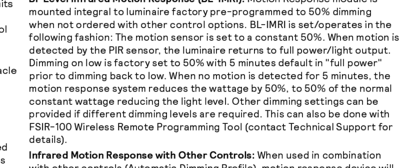
Field Adjustable Wattage Selector (FAWS): Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: Typical value accuracy +/- 5%

Wireless system (LLC): Optional wireless controller integral to luminaire ready to be connected to a Limelight system (sold by others). The system allows you to wirelessly manage the entire site, independent lighting groups or individual luminaires while on-site or remotely. Based on a high-density mesh network with an easy to use web-based portal, you can conveniently access, monitor and manage your lighting network remotely. Wireless controls can be combined with site and area, pedestrian, and parking garage luminaires as well, for a completely connected outdoor solution. Equipped with motion response with #3 lens for 8-25' mounting heights. Also available with remote pod accessory where pod is mounted separate from luminaire to pole or wall.

LLC wireless controller with #3 lens



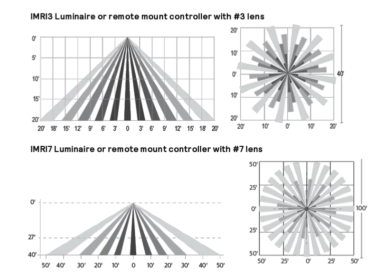
Motion response options
Bi-Level Infrared Motion Response (BL-IMRI): Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL-IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).
Infrared Motion Response with Other Controls: When used in combination with other controls (Automatic Dimming Profile), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

ECF-S EcoForm small
Area luminaire

Specifications

Infrared Motion Response Lenses (IMRI3/IMRI7): Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. Lens #7 is designed for higher mounting heights up to 40' with larger coverage areas up to 100' diameter coverage area. See charts for approximate detection patterns:

IMRI3 Luminaire or remote mount controller with #3 lens
IMRI7 Luminaire or remote mount controller with #7 lens



Electrical
Twist-Lock Receptacle (TLRD5/TLRD7/ TLRPC): Twist Lock Receptacle with 5 pins enabling dimming or with 7 pins with additional functionality (by others) can be used with a twistlock photoelectric cell or a shorting cap. Dimming Receptacle Type B (5-pin) and Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire housing. When specifying receptacle with twistlock photoelectric cell, voltage must be specified. When ordering 7-pin Twist-lock receptacle (TLRD7), all 7 pins are wired to respective pins with the Sensor Ready (SR) driver, and photocell or shorting cap is not included. When ordering a twist-lock receptacle with a photocell (TLRPC), the receptacle used is a 5-pin receptacle, so pins 6 and 7 are not available (no SR driver). 0-10V dimming leads (pins 4 and 5) are connected if not ordered with any other dimming option.

Driver: Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. All drivers are 0-10V dimming to 10% power standard, except when using Sensor Ready (SR) drivers, which uses DALI protocol (options CS50/CM50/CS30/CM30, SRDR, and TR7). Drivers are RoHS and FCC Title 47 CFR Part 15 compliant.
Button Photocontrol (PCB): Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.
Surge protection (SP1/SP2): Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

Listings
UL/cUL wet location listed to the UL 1598 standard, suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Most EcoForm configurations are qualified under Premium and Standard DesignLights Consortium® categories. Consult DLC Qualified Products list to confirm your specific luminaire selection is approved. CCTs 3000K and warmer are Dark Sky Approved.

Finish
Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DGY), and medium gray (MGY). Consult factory for specs on optional or custom colors.

Service Tag
Each individual luminaire is uniquely identifiable, thanks to the Service tag application. With a simple scan of a QR code, placed on the inside of the mast door, you gain instant access to the luminaire configuration, making installation and maintenance operations faster and easier, no matter what stage of the luminaire's lifetime. Just download the APP and register your product right away. For more details visit: signify.com

Warranty
EcoForm luminaires feature a 5-year limited warranty
See signify.com/warranties for complete details and exclusions.

Buy American Act of 1933 (BAA):
This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit www.signify.com/baa to view a current list of BAA-compliant products to confirm this product's current compliance.

Signify

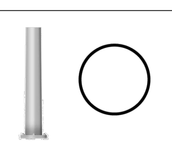
© 2021 Signify Holding. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

Signify North America Corporation
200 Franklin Square Drive,
Somerset, NJ 08873
Telephone 855-486-2216

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone 800-668-9008

All trademarks are owned by Signify Holding or their respective owners.

www.gardcolighting.com



GARDCO
by Signify

Poles & Brackets
Site and Area Poles
Straight Round Steel

Project:
Location:
Cat.No:
Type:
Notes:

The **Gardco SRS Straight Round Steel** pole consists of a one-piece high tensile carbon steel tube welded and secured to the carbon steel base plate providing excellent strength and integrity. The poles are finished with an electrostatically applied, thermally cured polyester powdercoat. All poles include base cover, hand hole, ground lug and top cap. Anchor bolts and templates are ordered as a separate accessory.

Ordering Guide

example: SRS-CB-5-7-25-T2D4L-N-BZ

Family	Base	Pole Shaft Size (in.)	Pole Gauge/ Wall Thickness	Height (ft.)[5]	Drilling/Tenon Configuration[1]	Drilling Template[2]	Finish	Options[3]
SRS	CB Carbon Steel Base w/ Base Cover	3	11 11 ga. / 0.120"	10, 12, 14, 16	Drilling: D1 1 Way; D1@180 1 Way @ 180; D2 2 Way @ 180; D2@90 2 Way @ 90; D3 3 Way @ 90; D3@120 3 Way @ 120; D4 4 Way @ 90	DT1 Drill Template 1; DT2 Drill Template 2; DT3 Drill Template 3; DT4 Drill Template 4; DT5 Drill Template 5; DT6 Drill Template 6; [DTX-xxx][6] Custom Template; See drill template chart for details.	BK Black; BZ Bronze; WH White; DG Dark Grey; MG Medium Grey; GY3[7] Light Grey, Smooth; SSDGY[7] SolarForm Dark Grey (RAL7011); GV Galvanized (No Paint); FP/GV Finished Textured Paint over Galvanized (Specify, ex: MG/GV); OC Optional Color Paint (ex: RAL7024); SC[6] Special/Custom Color (Specify, must supply color chip)	FES[6] Festoon Outlet; VDA Vibration Dampener; AHH[6] Additional Hand Hole; DR[6,7] Duplex Receptacle; VPA Vandalproof Screws; GFI[6,7] DR with GFI (120V only); BAC[8] Buy American Compliant; CL1/2[6] Coupling 1/2"; CL3/4[6] Coupling 3/4"; CL1[6] Coupling 1"; CL1-1/4[6] Coupling 1-1/4"; CL1-1/2[6] Coupling 1-1/2"; NL1/2[6] Nipple 1/2"; NL3/4[6] Nipple 3/4"; NL1[6] Nipple 1"; NL1-1/4[6] Nipple 1-1/4"; NL1-1/2[6] Nipple 1-1/2"
		4	11 11 ga. / 0.120"	10, 12, 14, 16, 20, 25	Tenons: T2D4L 2-3/8" OD x 4" length; T2D6L[7] 2-3/8" OD x 6" length; T3D4L 3" OD x 4" length; T4D6L 4" OD x 6" length	N No Drilling Template (for Tenon and Plain Top Options)		
L/SRS		5	11 11 ga. / 0.120"	20, 25, 30	No Drilling/No Tenon: P Plain Top			
			7 7 ga. / 0.180"	25, 30				

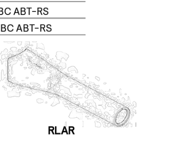
For FES, AHH, DR, GFI, CL*, and NL* options, indicate height in inches above base and orientation to hand hole. See page 2 and 3 for details.

1. See Drilling Configurations on Page 3.
2. See Luminaire Drilling Templates on Page 3
3. Not all options available with all configurations. Consult factory for more details
4. Options listed with white text will be shipped with the Legacy SRS design. Use the L/SRS family code whenever these options are specified.
5. Pole heights can be cut to length. Specify as a whole number in ft. (ex. 11, 13) or to the inch as a decimal (ex. 15.33 = 15' 4") or as "15FT 4IN" for Legacy designs.
6. Option must be specified by the customer before order release. Custom drill templates (DTX) require factory quote.
7. Option not available with Legacy SRS designs.
8. Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
9. Consult Signify to confirm whether specific accessories are BAA-compliant.

Accessories[9]

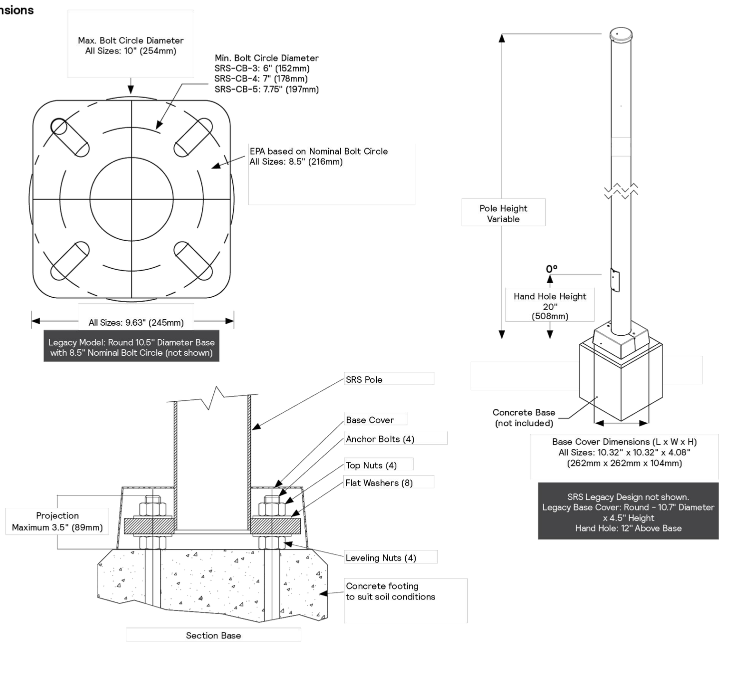
Service	Pole Size	12NC	Description (Diameter x Length x Hook)
Anchor Bolts + Templates			
For shipment with the pole (order 1 per pole)	3" Poles	912401597399	AB 3/4x17x3-G DEC w/ 8.5 BC ABT
	4" & 5" Poles	912401597397	AB 3/4x24x3-G DEC w/ 8.5 BC ABT
For Pre-Ship service (order 1 per pole)	3" Poles	912401597407	AB 3/4x17x3-G DEC w/ 8.5 BC ABT-RS
	4" & 5" Poles	912401597405	AB 3/4x24x3-G DEC w/ 8.5 BC ABT-RS

Part No.	Pole Size	Description
RLAR-1A-R4@4.9-(finish)	4" Poles	Cast Aluminum mounting arm, 15" long with DT6 drill pattern. (order 1 per luminaire). For use with Lumec Roadway and Gardco SoloarForm luminaires. Specify finish to match pole.
RLAR-1A-R5@6-(finish)	5" Poles	


RLAR

Poles Straight Round Steel

Dimensions



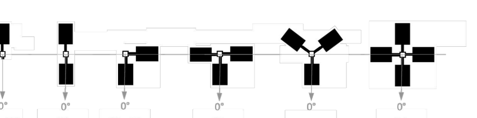
* Anchor Bolt Lock Washers are not normally required and are not included in standard anchor bolt sets. They are available upon request at additional cost.
**Grouting should include a drainage slot or tube (by others) to permit water to drain from the base of the pole. Failure to provide drainage may weaken the pole base structure over time and may result in pole base failure, for which Gardco is not responsible.

NOTE: Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

Poles Straight Round Steel

Drilling Configuration

Code	Description
D1	Single Luminaire
D1@180	Single Luminaire @ 180
D2	Two Luminaires @ 180
D2@90	Two Luminaires @ 90
D3	Three Luminaires @ 90
D3@120	Three Luminaires @ 120
D4	Four Luminaires @ 90

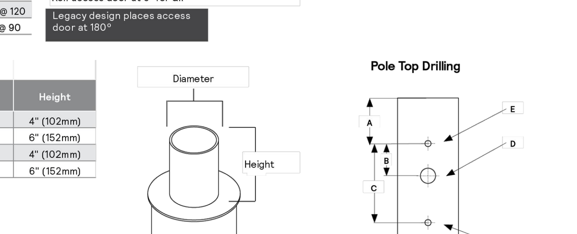


Ref. access door at 0° for all
Legacy design places access door at 180°

Tenon Dimensions

Tenon	Diameter	Height
T2D4L	2.375" (60mm)	4" (102mm)
T2D6L	2.375" (60mm)	6" (152mm)
T3D4L	3" (76mm)	4" (102mm)
T4D6L	4" (102mm)	6" (152mm)

Pole Top Drilling



Luminaire Drill Pattern

Code	Description	Luminaires	Pole Drilling A To Pole Top	B	C Full Extent	D Wireway Hole	E Bolt Hole
DT1	Drill Template 1	Gardco SlenderForm Round SFRA	2.25" (57mm)	1.5" (38.1mm)	3" (76mm)	0.875" (22.2mm)	0.40" (10.2mm)
DT2	Drill Template 2	Gardco SlenderForm Square - SFA; Gardco Gullwing - GL13, GL18; Gardco Form Ten - EH14L, EH19L, CAL17, CAL22, MAL17, MAL22	2.25" (57mm)	2.17" (55mm)	3.84" (98mm)	0.875" (22.2mm)	0.39" (9.9mm)
DT3	Drill Template 3	Gardco PowerForm PFAS	2.25" (57mm)	1.75" (44mm)	3.84" (98mm)	0.875" (22.2mm)	0.41" (10.4mm)
DT4	Drill Template 4	**Gen1** Stonco/Keene AL150-G1, AL200-G1	2.5" (64mm)	1.7" (43mm)	3.5" (89mm)	0.875" (22.2mm)	0.41" (10.4mm)
DT5	Drill Template 5	Gardco EcoForm Gen2 - ECF-S, ECF-L; Gardco PureForm Gen2 - P15, P20, P26, P34	3" (76mm)	1" (25mm)	3" (76mm)	1" (25mm)	0.41" (10.4mm)
DT6	Drill Template 6	Hole pattern drilled for the following: Attach RLAR bracket accessory, suitable for use with: Lumec Capella CPLM, CPLS; Lumec RoadStar GPLM, GPLS; Lumec RoadFocus RFS, RFM, RFL; Lumec RoadView RVM, RVS; Lumec MiniView SVS; Lumec StreetView SVM; Gardco SolarForm BRP710	2.5" (64mm)	1" (25mm)	2" (50mm)	0.875" (22mm)	0.5" (12.7mm)

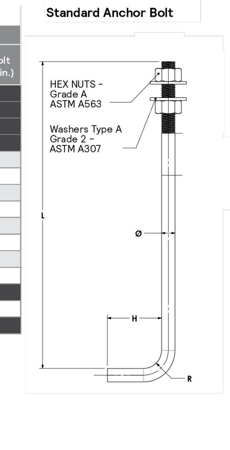
Poles Straight Round Steel

Pole Data

Product Catalog Number	Height (ft.)	Pole Diameter (in.)	Wall Thickness (in.)	Pole Weight (lbs)	Bolt Circle (in.)	Anchor Bolt Spec (in.)	Anchor Bolt Max Proj. (in.)
SRS-CB-3-11-10	10	3	0.12	37	8 (7-9)	3/4 x 17 x 3	3.5
SRS-CB-3-11-12	12	3	0.12	44	8 (7-9)	3/4 x 17 x 3	3.5
SRS-CB-3-11-14	14	3	0.12	52	8 (7-9)	3/4 x 17 x 3	3.5
SRS-CB-3-11-16	16	3	0.12	59	8 (7-9)	3/4 x 17 x 3	3.5
SRS-CB-4-11-10	10	4	0.12	50	8.5 (7-10)	3/4 x 24 x 3	3.5
SRS-CB-4-11-12	12	4	0.12	60	8.5 (7-10)	3/4 x 24 x 3	3.5
SRS-CB-4-11-14	14	4	0.12	69	8.5 (7-10)	3/4 x 24 x 3	3.5
SRS-CB-4-11-16	16	4	0.12	79	8.5 (7-10)	3/4 x 24 x 3	3.5
SRS-CB-4-11-20	20	4	0.12	99	8.5 (7-10)	3/4 x 24 x 3	3.5
SRS-CB-4-11-25	25	4	0.12	123	8.5 (7-10)	3/4 x 24 x 3	3.5
SRS-CB-5-11-20	20	5	0.12	124	8.5 (7.75-10)	3/4 x 24 x 3	3.5
SRS-CB-5-11-25	25	5	0.12	155	8.5 (7.75-10)	3/4 x 24 x 3	3.5
SRS-CB-5-11-30	30	5	0.12	186	8 (7-9)	3/4 x 24 x 3	3.5
SRS-CB-5-7-25	25	5	0.18	229	8.5 (7.75-10)	3/4 x 24 x 3	3.5
SRS-CB-5-7-30	30	5	0.18	275	8 (7-9)	3/4 x 24 x 3	3.5

SRS Legacy Design

Standard Anchor Bolt



Pole Data (cont.)

Product Catalog Number	AASHTO 2001 - EPA ft² 80 MPH	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH
SRS-CB-3-11-10	10.00	7.70	6.00	N/A	N/A	N/A	N/A	N/A
SRS-CB-3-11-12	10.00	7.70	6.00	N/A	N/A	N/A	N/A	N/A
SRS-CB-3-11-14	6.00	4.40	3.30	N/A	N/A	N/A	N/A	N/A
SRS-CB-3-11-16	4.60	3.20	2.30	N/A	N/A	N/A	N/A	N/A
SRS-CB-4-11-10	26.56	20.65	16.39	13.26	10.94	9.24	7.90	6.82
SRS-CB-4-11-12	21.80	16.80	13.23	10.57	8.62	7.25	6.17	5.32
SRS-CB-4-11-14	18.19	13.87	10.77	8.48	6.82	5.71	4.83	4.12
SRS-CB-4-11-16	15.30	11.51	8.80	6.78	5.35	4.44	3.71	3.15
SRS-CB-4-11-20	10.47	7.57	5.49	3.97	2.89	2.31	1.86	1.51
SRS-CB-4-11-25	6.35	4.15	2.56	1.41	N/A	N/A	N/A	N/A
SRS-CB-5-11-20	17.94	13.29	10.30	8.31	6.78	5.64	4.73	4.03
SRS-CB-5-11-25	11.74	8.19	6.08	4.75	3.77	3.03	2.45	2.00
SRS-CB-5-11-30	4.20	3.00	2.20	N/A	N/A	N/A	N/A	N/A
SRS-CB-5-7-25	19.65	14.46	11.14	8.93	7.29	6.02	5.04	4.26
SRS-CB-5-7-30	8.00	6.50	4.70	N/A	N/A	N/A	N/A	N/A

1. **Warning:** Additional wind loading, in terms of EPA, from banners, cameras, floodlights and other accessories attached to the pole, must be added to the luminaire(s) EPA before selecting the pole with the appropriate wind load capability. Specifying BAA or BAC compliant poles may result in different EPA ratings.
2. Factory supplied template must be used when setting anchor bolts. Gardco will not honor any claim for incorrect anchorage placement resulting from failure to use factory supplied templates. Exact length of anchor bolts may vary.
3. EPA ratings are based on the listed, optimal nominal dimension of the bolt circle listed above. The bolt circle has limited variability but the EPA rating will change.

NOTE: Above EPA (Effective Projected Area) rating is in accordance with AASHTO 2001, with a 50 pound load (22.7 kg) placed at 1 foot (305mm) above its center.

Poles Straight Round Steel

Specifications

Pole shaft
The pole shaft is fabricated from a single piece of 11 ga (0.1196") or 7 ga (0.180") high tensile carbon steel. The formed steel plate is longitudinally welded providing minimum yield strength of 50 ksi. Shaft includes factory installed copper ground lug, 10-7 copper wire, and ground lug screw.

Anchor Base
The pole anchor base is fabricated from 44W structural quality carbon steel with a minimum yield strength of 44 ksi. The base plate is circumferentially welded on both top and bottom.

Anchor Bolts
Anchor bolts are fabricated from a commercial quality hot rolled carbon steel bar that meets or exceeds a minimum guaranteed yield strength of 55 ksi. Bolts have an "L" bend on one end and threaded on the opposite end. Anchor bolts are galvanized in accordance with ASTM A-153.6 C1.C. Four (4) properly sized bolts, each furnished with two (2) regular hex nuts and two (2) flat washers, are provided per pole (priced and ordered separately), unless otherwise specified. Conforms to AASHTO M 314 90 and ASTM F1554.

Customer Specified Options
The options, DTX, FES, DR, GFI, AHH, CL*, and NL* require factory quotation. Poles with custom drilling templates (DTX) are provided as a service, however Signify holds no liability for improper installation and safety when using non-Signify luminaires or attachments on Gardco poles via drilling, tenon mounting, or coupling and nipple mounting. It is the responsibility of the customer to ensure the pole is loaded and installed in a safe manner to the limitations of the pole structure. See "Warning" paragraph for more details.

Base Cover
A two-piece painted square aluminum base cover that completely conceals the entire base plate and anchorage. Base cover is provided standard. Legacy model includes a round 0.125" thick composite base cover.

Hand hole
The hand hole has a nominal rectangular 2"x4.5" inside opening in the pole shaft. Included is an aluminum cover plate, EPDM gasket, and captive attachment screws. The hand hole is located 20" above the base and 0° clockwise with respect to the luminaire arm when viewed from the top of the pole for one arm. For two arms the hand hole is located directly under one arm. Legacy design includes an easy to install, self-contained Swing Latch hand hole cover assembly. U.S. Patent Swing Latch cover is fabricated from durable polycarbonate/ABS blend plastic. All pole assemblies are provided with a 2.50" x 5.00" rectangular hand hole.

Pole Top Cap
Each pole assembly is provided with a removable aluminum pole top cap painted to match the specified pole and attached with three pressure screws. Legacy design is provided with a removable plastic top push cap. Finish is Black.

Finish
Poles are available with Gardco's standard textured color finishes - Black, White, Bronze, Dark Grey, Medium Grey, and Lumec GY3 for a match with roadway luminaire finishes. Optional Galvanized finish and custom colors also available. Legacy design is provided with gloss paint on standard finishes.

Couplings and Nipples
Couplings (NPSC standard internal threads) and Nipples (NPT standard external threads) are available to mount 3rd party objects to the pole. Lengths are as follows:

Couplings < 1" dia. = 1" length
Couplings >= 1" dia. = 1.5" length
Nipples < 1" dia. = 1.5" length
Nipples >= 1" dia. = 2" length

Legacy pole designs may deviate from specifications listed here. See "Customer Specified Options" paragraph for more details.

General Pole Information

Design
EPA specs conform to AASHTO 2001. The poles as charted are designed to withstand dead loads and predicted dynamic loads developed by variable wind pressure with an additional 2.5 gust factor under the following conditions: The charted weights include luminaire(s) and/or mounting bracket(s). Poles installed in areas of known abnormal conditions may require special consideration. For example: coastal areas, airports and areas of special winds. Poles are designed for ground mounted applications. Poles mounted on structures (such as buildings and bridges) may also necessitate special consideration requiring Gardco's recommendation. Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated in the pole.

Warning
This design information is intended as a general guideline only. The customer is solely responsible for proper selection of pole, luminaire, accessory and foundation under the given site conditions and intended usage. The addition of any items to the pole, in addition to the luminaire, will dramatically impact the EPA load on that pole. It is strongly recommended that a qualified professional be consulted to analyze the loads given the user's specific needs to ensure proper selection of the pole, luminaire, accessories, and foundation. Gardco assumes no responsibility for such proper analysis or product selections. Failure to ensure proper site analysis, pole selection, loads and installation can result in pole failure, leading to serious injury or property damage.

Warranty
Gardco Steel poles are covered by a 3-year structural and finish warranty. Legacy designs are covered by a 1-year warranty. For more information visit **signify.com/warranties.**

Signify

© 2021 Signify Holding. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

Signify North America Corporation
400 Crossing Blvd, Suite 600
Bridgewater, NJ 08807
Telephone 855-486-2216

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone 800-668-9008

All trademarks are owned by Signify Holding or their respective owners.

www.gardcolighting.com

BOHLER //

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES © BOHLER

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	1/20/2025	NPDS REVISION	ABN / AMC
2	02/19/2025	PER CITY COMMENTS	JMV / AMC

Know what's **below.** **Call** before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
1-800-242-1776
www.pa1call.org
#20241880121

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	PAB240068.00-2A
DRAWN BY:	ABN
CHECKED BY:	MMC
DATE:	12/13/2024
CAD I.D.:	P-CIVL-LLGT

PROJECT:

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

JERC PARTNERS XCII, LLC

PROPOSED
INDUSTRIAL DEVELOPMENT

2141 COMMERCE CENTER BLVD
CITY OF BETHLEHEM
LVIP VII
NORTHAMPTON COUNTY, PA

BOHLER //

74 W BROAD STREET, SUITE 500
BETHLEHEM, PA 18018
Phone: (610) 709-9971
Fax: (610) 709-9976
www.BohlerEngineering.com

M.R. BACHERT
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE NO. LA003385
NEW JERSEY LICENSE NO. 21AS00139900

SHEET TITLE:
LIGHTING NOTES AND DETAILS

SHEET NUMBER:
L-206

REVISION 2 - 02/19/2025

R:\2024\PAB240068.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LLGT-PAB240068.00-2A----->LAYOUT: L-206 LGHD
JM