

CERTIFICATIONS & APPROVALS:

CERTIFICATION OF OWNERSHIP (CORPORATION)

I, _____ OF _____
 NAME CORPORATION NAME
 BEING DULY SWORN ACCORDING TO LAW, AND ACTING IN MY CAPACITY AS
 DEPOSE AND SAY THAT THE ABOVE NAMED CORPORATION IS THE
 TITLE
 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.

_____ CORPORATION

BY: _____ CORPORATION OFFICIAL

ATTEST:

ENGINEER'S OR 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.

_____ REGISTERED ENGINEER OR SURVEYOR

_____ REGISTRATION NO.

SEAL

CITY OF BETHLEHEM PLANNING COMMISSION APPROVAL

REVIEWED BY THE CITY OF BETHLEHEM PLANNING COMMISSION

APPROVED ON _____

CHAIRPERSON _____

SECRETARY _____

LEHIGH VALLEY PLANNING COMMISSION

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

LVPC STAFF PERSON RESPONSIBLE FOR REVIEW _____ DATE _____

PROOF OF RECORDING

RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF NORTHAMPTON
 COUNTY, PENNSYLVANIA ON _____, 20____, IN MAP BOOK VOLUME _____

PAGE _____
 _____ NORTHAMPTON COUNTY RECORDER OF DEEDS

THE FOLLOWING WAIVERS HAVE BEEN REQUESTED FROM THE CITY OF BETHLEHEM BOARD OF COMMISSIONERS:

- FROM SWMO APPENDIX A (STORM SEWER PIPES DESIGN REQUIREMENTS A.) TO ALLOW FOR STORM SEWER PIPE SIZES OF 16" IN LIEU OF THE REQUIRED 18" MINIMUM
- FROM SWMO APPENDIX A (STORM SEWER PIPES DESIGN REQUIREMENTS B.) TO ALLOW FOR HDPE STORM SEWER PIPE IN LIEU OF THE REQUIRED RCP
- FROM SALDO SECTION 1349.08(f)(1)- TO PERMIT LESS THAN THE REQUIRED AMOUNT OF LANDSCAPE AREA IN THE PARKING AREA

AMERICANS WITH DISABILITIES ACT (ADA)

THE PERMIT AND/OR PLAN HAS NOT BEEN REVIEWED TO DETERMINE ITS COMPLIANCE WITH TITLE III OF THE AMERICANS WITH DISABILITIES ACT OF 1990 (ADA) WHICH PROHIBITS DISCRIMINATION ON THE BASIS OF DISABILITY IN PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES. COMPLIANCE WITH TITLE III OF THIS ACT WITH REGARD TO PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/OWNER.

THE LAND DEVELOPMENT AS SUBMITTED AND AS BUILT ACCORDING TO THE INFORMATION INCLUDED IN THE CURRENT DESIGN WILL MEET THE ACCESSIBILITY REQUIREMENT AS EXISTING UNDER THE CURRENT BUILDING CODES ESTABLISHED IN LOWER MACUNGIE TOWNSHIP.

REQUIRED APPROVALS

APPROVAL	AGENCY	DATE RECEIVED
NPDES PERMIT	NORTHAMPTON COUNTY CONSERVATION DISTRICT	
LVPC	LEHIGH VALLEY PLANNING COMMISSION	
FIRE DEPARTMENT	BETHLEHEM FIRE DEPARTMENT	
WATER DEPARTMENT	CITY OF BETHLEHEM	
SEWER DEPARTMENT	CITY OF BETHLEHEM	
ACT 537 SEWAGE FACILITIES PLANNING	PADEP	

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR

BETHLEHEM SHARED SERVICES, LLC

PROPOSED

OFFICE, RETAIL & TAVERN MIXED-USE DEVELOPMENT

LOCATION OF SITE

LEHIGH VALLEY INDUSTRIAL PARK 7: LOT 11

1810 SPILLMAN DRIVE

CITY OF BETHLEHEM

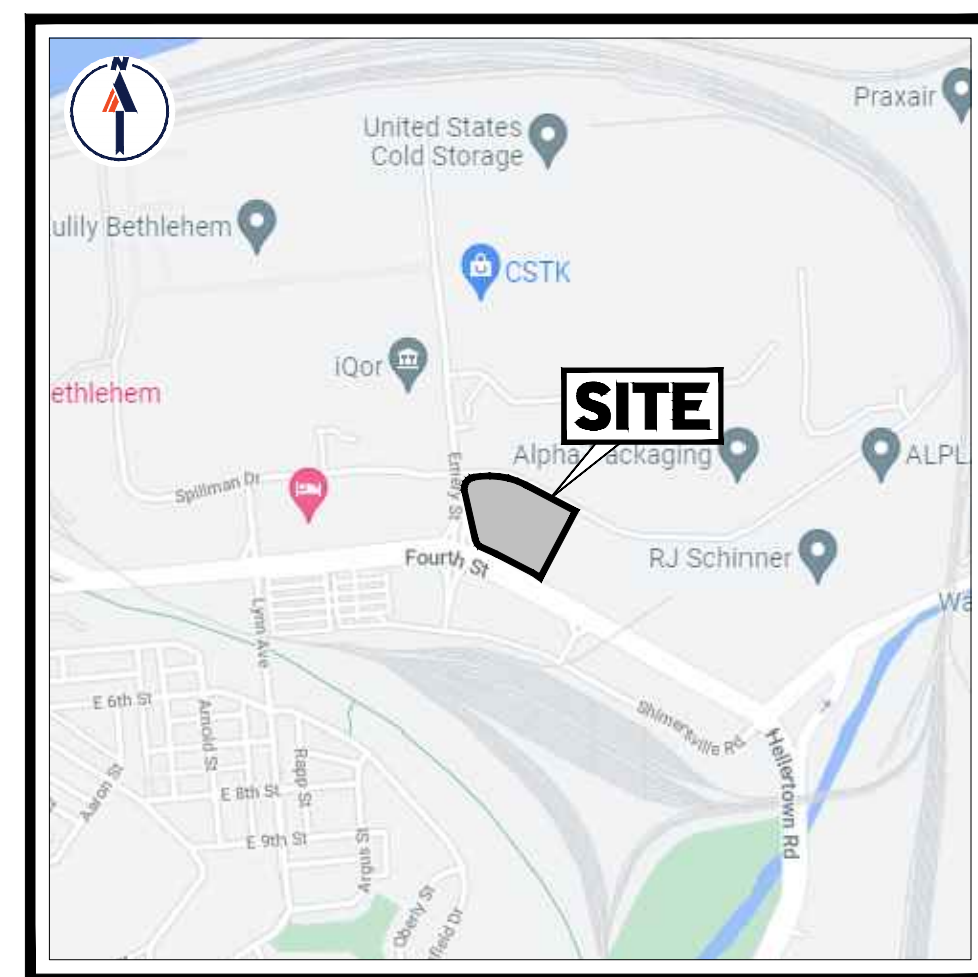
NORTHAMPTON COUNTY, PA

PARCEL: P7-6-6-11-0204

PROPOSED OFFICE (1810 SPILLMAN DRIVE), & PROPOSED RETAIL AND TAVERN (1830 SPILLMAN DRIVE)

OWNER:
 LEHIGH VALLEY INDUSTRIAL PARK, INC.
 1720 SPILLMAN DRIVE
 BETHLEHEM, PA 18015
 (610) 866-4600

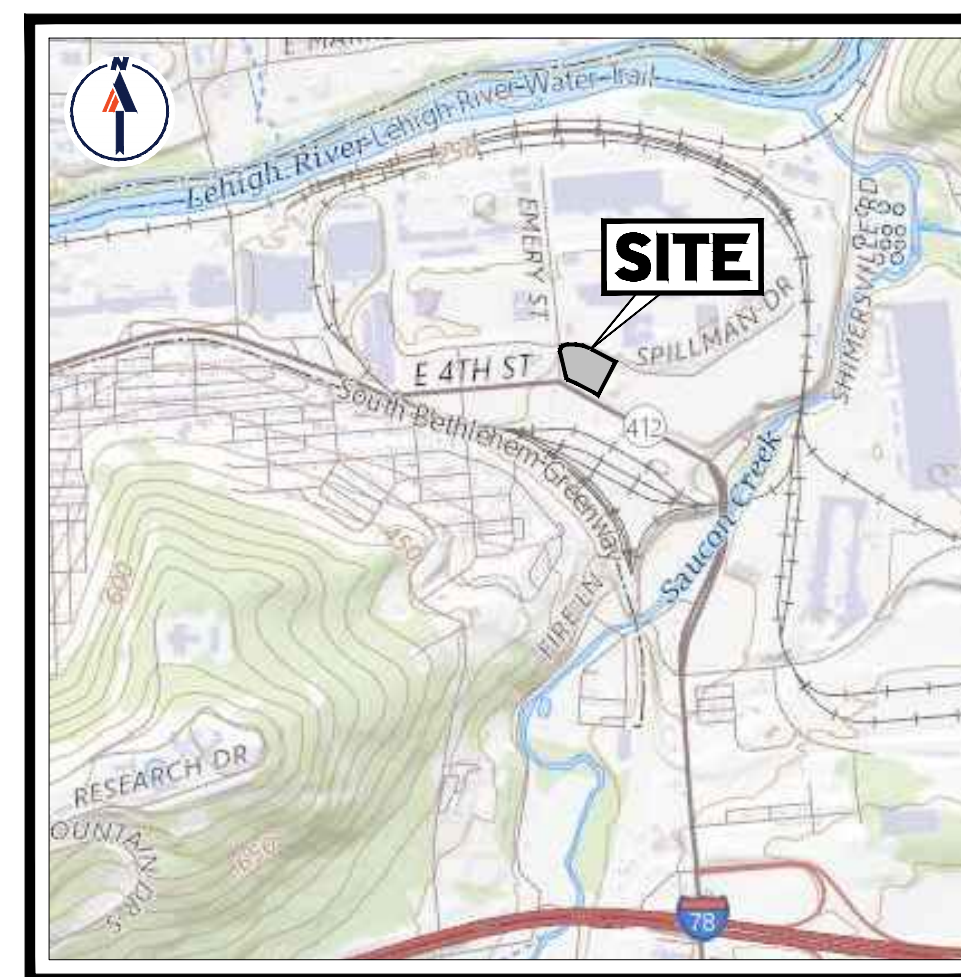
APPLICANT:
 BETHLEHEM SHARED SERVICES, LLC
 1605 VALLEY CENTER PARKWAY
 BETHLEHEM, PA 18017
 (484) 285-0400



LOCATION MAP
 SCALE: 1" = 1,000'



SOIL MAP
 SCALE: 1" = 500'



U.S.G.S. MAP
 SCALE: 1" = 2,000'

DRAWING SHEET INDEX

SHEET TITLE	SHEET NUMBER
COVER SHEET	C-101
NOTES SHEET	C-102
EXISTING CONDITIONS/DEMOLITION PLAN	C-201
SITE PLAN	C-301
GRADING PLAN	C-401
ADA GRADING PLAN	C-402
PRE-DEVELOPMENT DRAINAGE AREA PLAN	C-403
POST-DEVELOPMENT DRAINAGE AREA PLAN	C-404
UTILITY PLAN	C-501
SOIL EROSION AND SEDIMENT POLLUTION CONTROL PLAN	C-601
SOIL EROSION AND SEDIMENT POLLUTION CONTROL NOTES & DETAILS	C-602, C-603 & C-604
LANDSCAPE PLAN	C-701
LANDSCAPE NOTES AND DETAILS	C-702
LIGHTING PLAN	C-703
LIGHTING DETAILS	C-704 & C-705
PROFILES	C-801 & C-802
DETAILS SHEET	C-901 & C-902
TRUCK TURN PLAN	C-903
FIRE TUCK TURN PLAN	C-904



REVISIONS

REV	DATE	COMMENT	CHECKED BY
1	04/22/2022	PER NPDES SUBMISSION	TK
2	07/11/2022	REV PER CITY COMMENTS	MMC



Know what's below.
 Call before you dig.
 PENNSYLVANIA
 YOU MUST CALL 811 BEFORE ANY EXCAVATION
 WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
 1-800-442-1779
 www.811.org
 20212392542 & 20212392479

NOT APPROVED FOR CONSTRUCTION

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.: PY212051
 DRAWN BY: TK
 CHECKED BY: MMC
 DATE: 04/01/2022
 CAD ID: PY212051-CNDS-2A

PRELIMINARY / FINAL LAND DEVELOPMENT PLANS

FOR
BETHLEHEM SHARED SERVICES, LLC

PROPOSED OFFICE & RETAIL MIXED-USE DEVELOPMENT

LEHIGH VALLEY INDUSTRIAL PARK
 1810 SPILLMAN DRIVE
 CITY OF BETHLEHEM
 NORTHAMPTON COUNTY
 PENNSYLVANIA



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



SHEET TITLE:

COVER SHEET

SHEET NUMBER:

C-101

REVISION 2 - 07/11/2022

PREPARED BY





PRE DA TO SUBAREA#1A

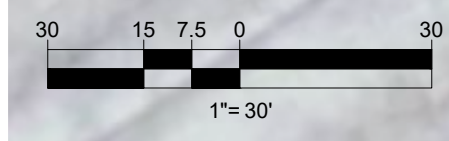
TOTAL AREA	0.293AC.
IMPERVIOUS AREA	0.293AC.
CN=98	TC = 6.0 MIN.

PRE DA TO SUBAREA#1C

TOTAL AREA	0.088AC.
PERVIOUS AREA (C)	0.038 AC.
PERVIOUS AREA (D)	0.006 AC.
IMPERVIOUS AREA	0.044AC.
CN=86	TC = 6.0 MIN.

PRE DA TO SUBAREA#1B

TOTAL AREA	4.159AC.
PERVIOUS AREA (C)	0.604AC.
PERVIOUS AREA (D)	0.029AC.
WOODS (C)	0.570AC.
WOODS (D)	0.118AC.
IMPERVIOUS AREA	2.838AC.
CN=90	TC = 6.0 MIN.



ANALYSIS PER 2005 HISTORICAL AERIAL

LEGEND

EXISTING	
PROPERTY LINE	—————
R.O.W. LINE	-----
EASEMENT LINE	-----
DRAINAGE AREA BOUNDARY	—————
TIME OF CONCENTRATION	—————
RETAINING WALL	—————
CONCRETE CURB	—————
FLUSH CURB	—————
SOIL BOUNDARY & TYPE	—————
TREELINE	—————
CONCRETE MONUMENT/IRON PIN	—————
SIGN	—————
AREA LIGHT	—————
TREE	—————
DRAINAGE INLET	—————
STORM/SANITARY MANHOLE	—————
WATER/GAS VALVES	—————
ROOF DRAIN/CLEANOUT	—————
FIRE HYDRANT	—————
LIGHT POLE	—————
CONTOUR	—————
ELECTRIC LINE	—————
TELEPHONE LINE	—————
GAS LINE	—————
WATER LINE	—————
SANITARY SEWER	—————
STORM PIPE	—————

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

REVISIONS

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	04/22/2022	PER NPDES SUBMISSION	TK	MMC
2	07/11/2022	REV PER CITY COMMENTS	TCK	MMC

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.
 1-800-542-1776
 www.811.org
 20212392542 & 20212392479

NOT APPROVED FOR CONSTRUCTION

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.: PY212051
 DRAWN BY: TK
 CHECKED BY: MMC
 DATE: 04/11/2022
 CAD ID: PY212051-LDVP-2A

PROJECT:
**PRELIMINARY!
 FINAL LAND
 DEVELOPMENT
 PLANS**
 FOR
**BETHLEHEM SHARED
 SERVICES, LLC**
 PROPOSED OFFICE & RETAIL
 MIXED-USE DEVELOPMENT
 LEHIGH VALLEY INDUSTRIAL PARK
 1810 SPILLMAN DRIVE
 CITY OF BETHLEHEM
 NORTHAMPTON COUNTY
 PENNSYLVANIA

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

M.M. STARBUCK
 Professional Engineer
 No. 123456789
 State of Pennsylvania

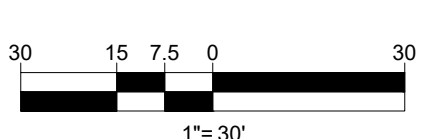
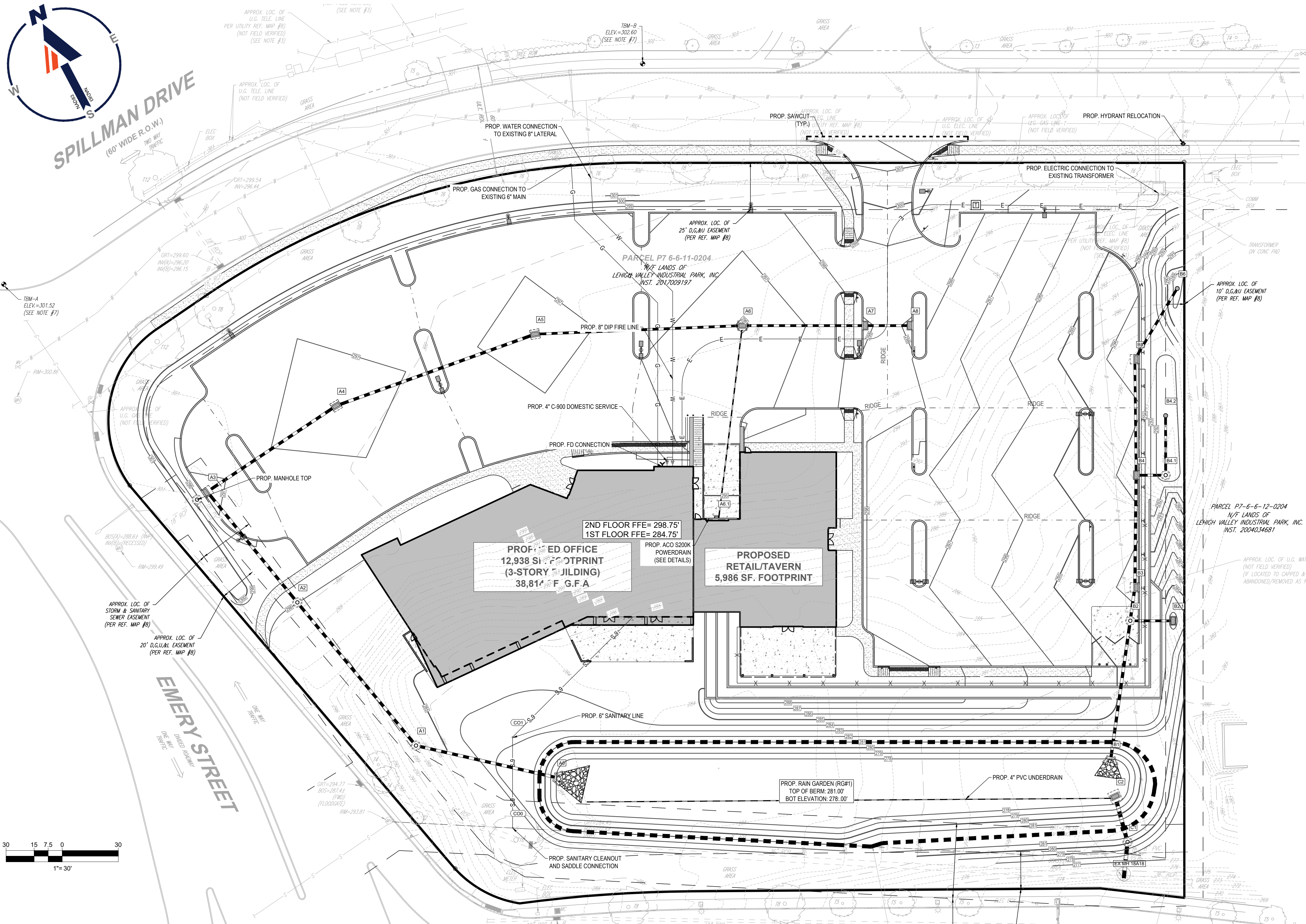
SHEET TITLE:
**PRE-
 DEVELOPMENT
 DRAINAGE
 AREA**
 SHEET NUMBER:
C-403

REVISION 2 - 07/11/2022

R:\31\1921\051\CADD\DRAWINGS\PLAN SET\CIVIL SITE PLANS\1921\1921-LDVP-2A.dwg - LAYOUT: C-403 PRE-DA



SPILLMAN DRIVE
(60' WIDE R.O.W.)



LEGEND

EXISTING

PROPERTY LINE	---
R.O.W. LINE	---
EASEMENT LINE	---
RETAINING WALL	---
CONCRETE CURB	---
FLUSH CURB	---
TREELINE	---
CONCRETE MONUMENT/ IRON PIN	---
SIGN	---
AREA LIGHT	---
TREE	---
DRAINAGE INLET	---
STORM/SANITARY MANHOLE	---
WATER/GAS VALVES	---
ROOF DRAIN/CLEANOUT	---
FIRE HYDRANT	---
LIGHT POLE	---
CONTOUR	---
ELECTRIC LINE	---
TELEPHONE LINE	---
GAS LINE	---
WATER LINE	---
SANITARY SEWER	---
STORM PIPE	---

LEGEND

PROPOSED

BUILDING	---
RETAINING WALL	---
PROJECT SITE BOUNDARY	---
SAWCUT	---
CONCRETE CURB	---
FLUSH CURB	---
FENCE	---
GUIDE RAIL	---
CONCRETE	---
SIDEWALK	---
RAMP	---
SIGN	---
BOLLARD	---
AREA LIGHT	---
DRAINAGE INLET	---
MANHOLE	---
ENDWALL	---
RIPRAP	---
CLEANOUT	---
ELECTRIC LINE	---
ELECTRIC LINE	---
GAS LINE	---
WATER LINE	---
SANITARY SEWER	---
STORM PIPE	---

BOHLER

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

REVISIONS

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	04/22/2022	PER NPDES SUBMISSION	TK	MMC
2	07/11/2022	REV PER CITY COMMENTS	TCK	MMC

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.
1-800-342-1779
www.811.org
20212392542 & 20212392479

NOT APPROVED FOR CONSTRUCTION

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.: PY212051
DRAWN BY: TK
CHECKED BY: MMC
DATE: 04/12/2022
CAD ID: PY212051-LDVP-2A

PROJECT:
**PRELIMINARY/
FINAL LAND
DEVELOPMENT
PLANS**

FOR
**BETHLEHEM SHARED
SERVICES, LLC**

PROPOSED OFFICE & RETAIL
MIXED-USE DEVELOPMENT

LEHIGH VALLEY INDUSTRIAL PARK
1810 SPILLMAN DRIVE
CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

BOHLER

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

**M.M. SPARK AND
SONS**

Professional Engineer
No. 12345
Lehigh Valley, PA

SHEET TITLE:
UTILITY PLAN

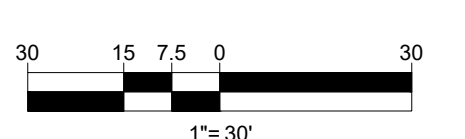
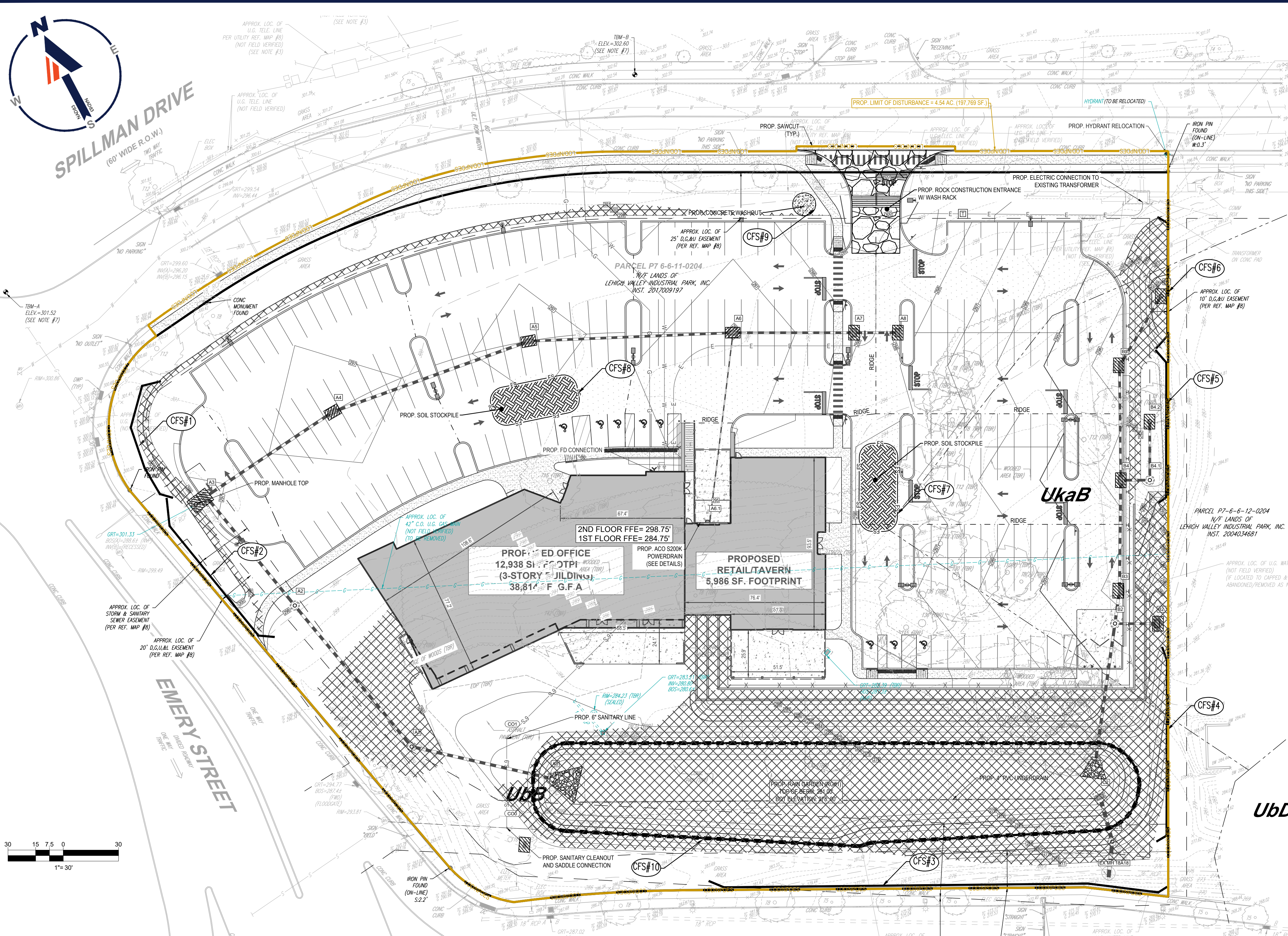
SHEET NUMBER:
C-501

REVISION 2 - 07/11/2022

R:\21\1811\CADD\DRAWINGS\PLAN SET\CIVIL SITE PLANS\1212051-LDVP-2A\...LAYOUT: C-501 UTILITY



SPILLMAN DRIVE
(60' WIDE R.O.W.)



R:\131\131\131\CADD\DRAWINGS\PLAN SET\CIVIL SITE PLANS\12081-LDVP-2A.dwg - LAYOUT: C-601.EAS

THIS PLAN IS FOR SOIL EROSION & SEDIMENT POLLUTION CONTROL PURPOSES ONLY

CHAPTER 93 RECEIVING WATERSHED AND STREAM CLASSIFICATION: SAUCON CREEK, HQ-CWF, MF



SOIL MAP
SCALE: 1" = 50'

LEGEND

EXISTING

PROPERTY LINE	---
R.O.W. LINE	---
EASEMENT LINE	---
RETAINING WALL	---
CONCRETE CURB	---
FLUSH CURB	---
SOIL BOUNDARY & TYPE	---
TREELINE	---
CONCRETE MONUMENT/IRON PIN	○
SIGN	○
AREA LIGHT	○
TREE	○
DRAINAGE INLET	○
STORM/SANITARY MANHOLE	○
WATER/GAS VALVES	○
ROOF DRAIN/CLEANOUT	○
FIRE HYDRANT	○
LIGHT POLE	○
COUNTOUR	---
ELECTRIC LINE	---
TELEPHONE LINE	---
GAS LINE	---
WATER LINE	---
SANITARY SEWER	---
STORM PIPE	---

LEGEND

PROPOSED

BUILDING	---
RETAINING WALL	---
SAWCUT	---
CONCRETE CURB	---
FLUSH CURB	---
FENCE	---
GUIDE RAIL	---
CONCRETE	---
SIDEWALK	---
RAMP	---
SIGN	---
BOLLARD	---
AREA LIGHT	---
DRAINAGE INLET	---
MANHOLE	---
ENDWALL	---
RIPRAP	---
CLEANOUT	---
ELECTRIC LINE	---
ELECTRIC LINE	---
GAS LINE	---
WATER LINE	---
SANITARY SEWER	---
STORM PIPE	---

LEGEND

PROPOSED

PROJECT SITE BOUNDARY	---
COMPOST FILTER SOCK	---
INLET PROTECTION	---
CONCRETE WASHOUT	---
TEMPORARY STOCKPILE	---
ROCK CONSTRUCTION ENTRANCE	---
EROSION CONTROL MATTING	---

SEQUENCE OF CONSTRUCTION

- 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 HEAVY WEATHERS), OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
- 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 NORTHAMPTON COUNTY 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 1-800-342-1778 FOR BURIED UTILITIES LOCATION.
- 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 EAS CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE NORTHAMPTON COUNTY 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.
1. INSTALL ROCK CONSTRUCTION ENTRANCE WITH WASH RACK
 2. INSTALL ALL PERIMETER COMPOST FILTER SOCKS (CFS 1-6)
 3. INSTALL INLET PROTECTION ON THE 2 (TWO) EXISTING ON-SITE INLETS
 4. ESTABLISH SOIL STOCKPILES AND CONCRETE WASHOUT
 - 4.1. INSTALL CFS (7-9)
 5. BEGIN ROUGH GRADING
 - 5.1. ESTABLISH BUILDING PAD. BUILDING CONSTRUCTION MAY BEGIN AT ANY POINT UPON COMPLETION OF BUILDING PAD
 6. INSTALL STORM SEWER PIPE RUN C FROM DOWNSTREAM TO UPSTREAM
 7. INSTALL RAIN GARDEN RG#1. THIS STAGE IS A CRITICAL STAGE AND A LICENSE PROFESSIONAL SHALL BE ON SITE TO OVERSEE THE INSTALLATION OF THE RAIN GARDEN, INCLUDING PREPARATION OF SUBGRADE AND INSTALLATION OF OUTLET CONTROL STRUCTURE (CS).
 - 7.1. INSTALL CFS 10
 8. INSTALL STORM SEWER PIPE RUNS A AND B FROM DOWNSTREAM TO UPSTREAM
 - 8.1. INSTALL INLET PROTECTION AS NECESSARY
 9. BEGIN FINAL GRADING
 10. INSTALL BITUMINOUS PAVEMENT AND CONCRETE INCLUDING SIDEWALKS
 11. INSTALL FINAL VEGETATION AND LANDSCAPING
 12. INSTALL PLANTING SOIL AND RAIN GARDEN (RG#1) PLANTINGS. REMOVE ANY ACCUMULATED SEDIMENT. THIS STAGE IS A CRITICAL STAGE AND A LICENSE PROFESSIONAL SHALL BE ON SITE TO OVERSEE THE INSTALLATION OF THE PLANTING SOIL AND PLANTINGS.
 13. INSTALL SOIL CAP ACROSS ALL LANDSCAPE AREAS EXCLUDING RG#1
 14. A NOTICE OF TERMINATION FORM SHOULD BE SUBMITTED TO THE NORTHAMPTON COUNTY CONSERVATION DISTRICT UPON STABILIZATION AND FINAL COMPLETION OF THIS PROJECT

BOHLER

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

REVISIONS

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	04/22/2022	PER NPDES SUBMISSION	TK	TK
2	07/11/2022	REV PER CITY COMMENTS	TK	TK

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.
1-800-342-1778
www.811.org

20212392542 & 20212392479

NOT APPROVED FOR CONSTRUCTION

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

PROJECT No.: PY212051
DRAWN BY: TK
CHECKED BY: MMC
DATE: 04/12/2022
CAD ID: PY212051-LDVP-2A

PROJECT:
PRELIMINARY/ FINAL DEVELOPMENT PLANS

FOR
BETHLEHEM SHARED SERVICES, LLC

PROPOSED OFFICE & RETAIL MIXED-USE DEVELOPMENT

LEHIGH VALLEY INDUSTRIAL PARK
1810 SPILLMAN DRIVE
CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

BOHLER

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

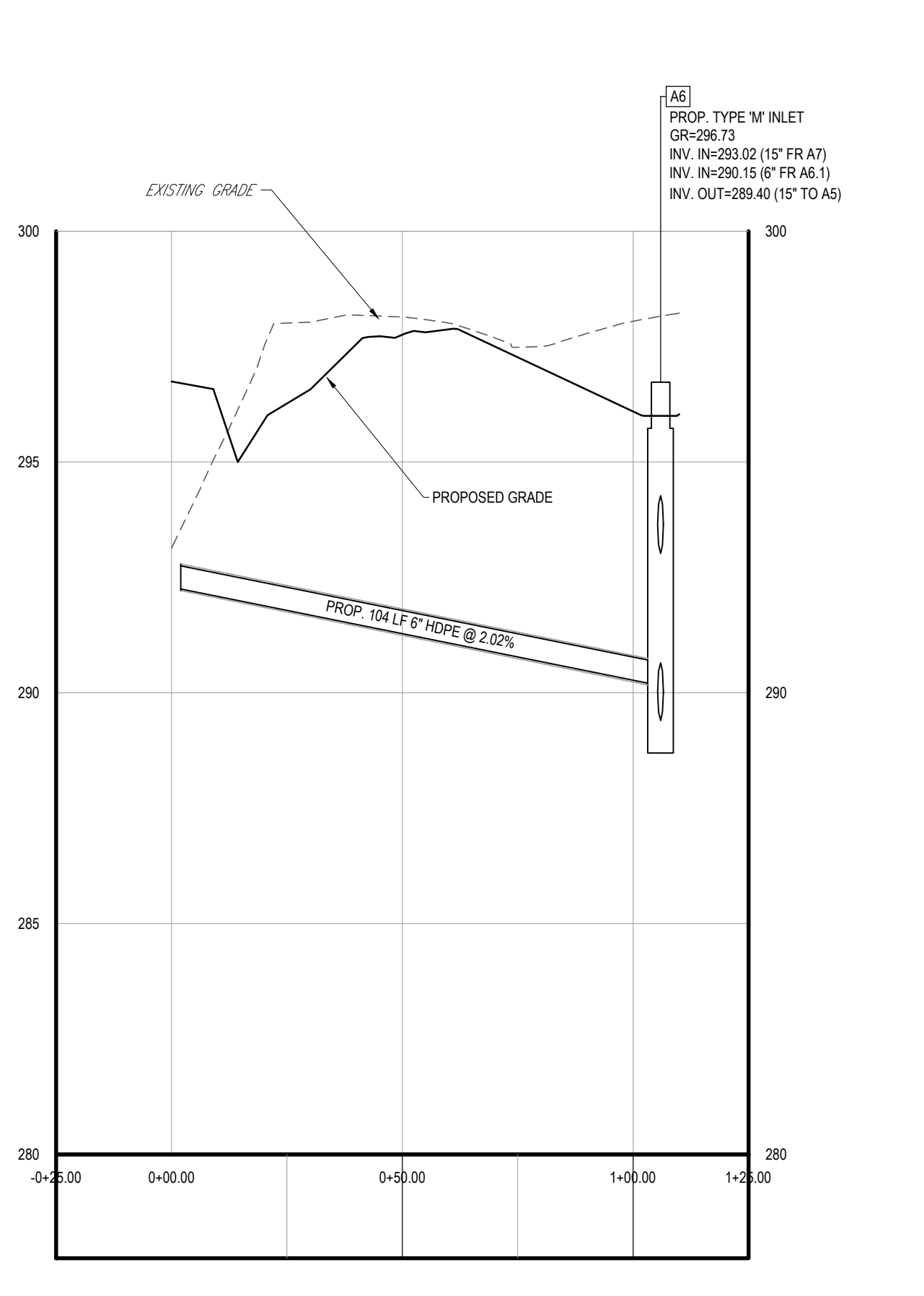
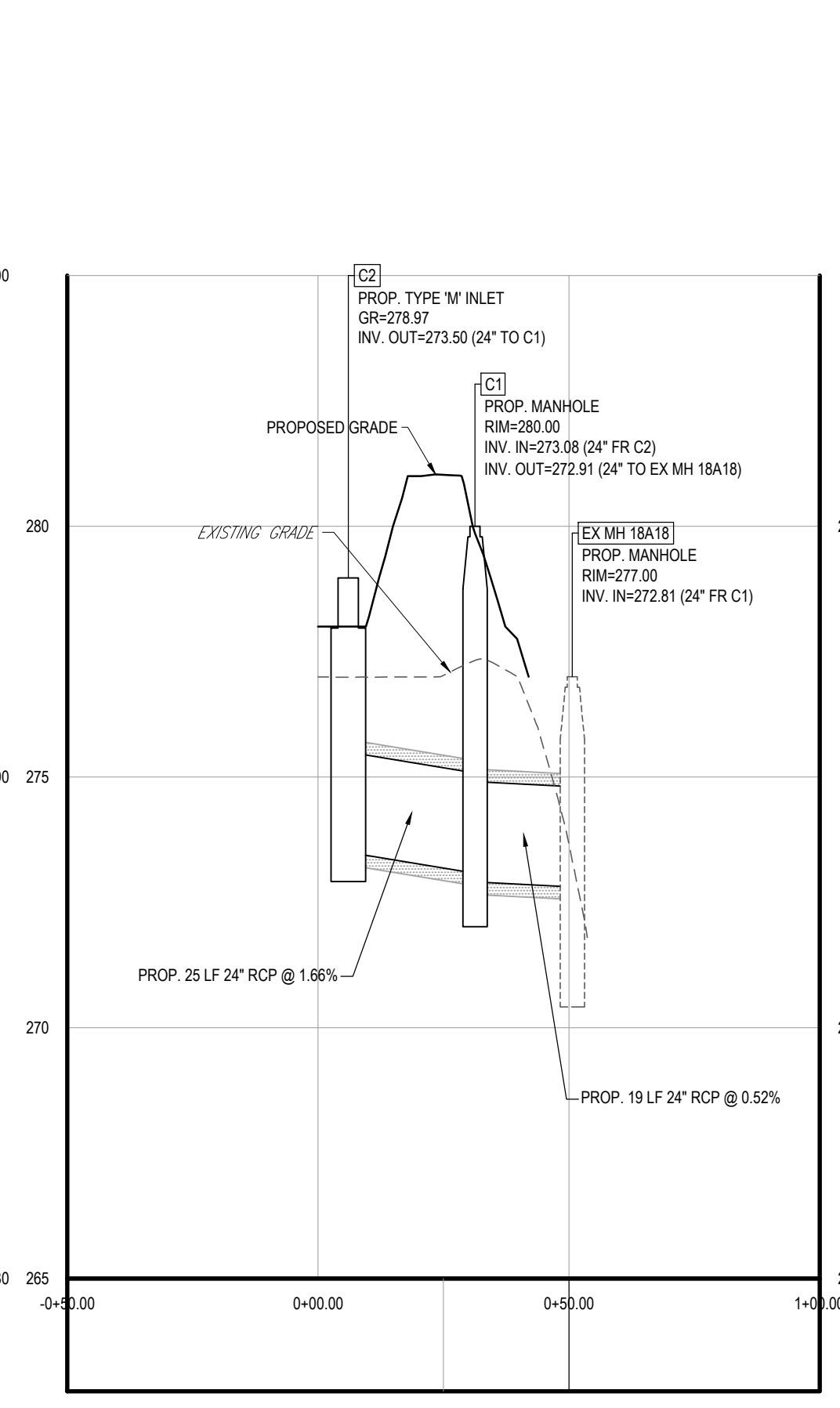
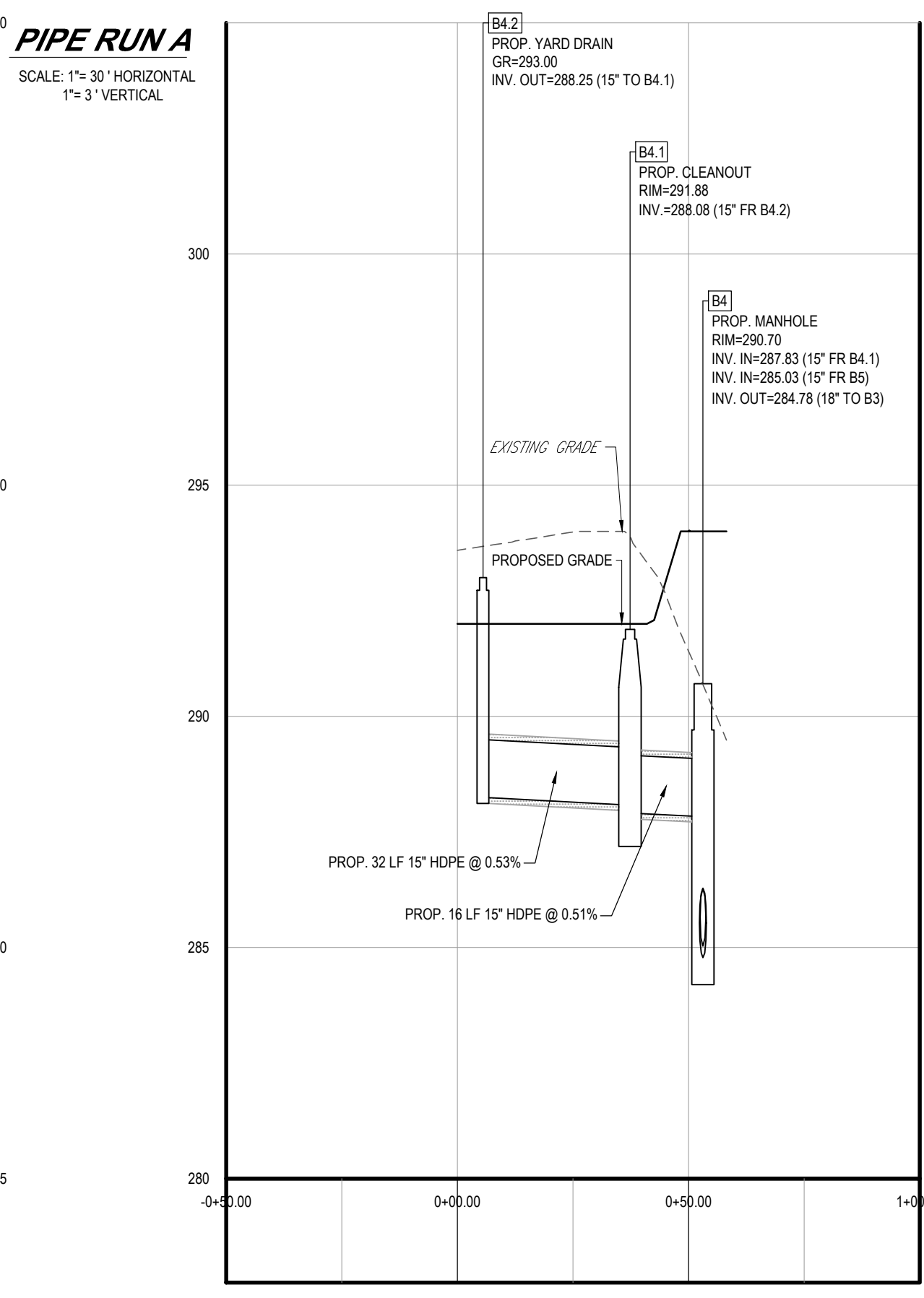
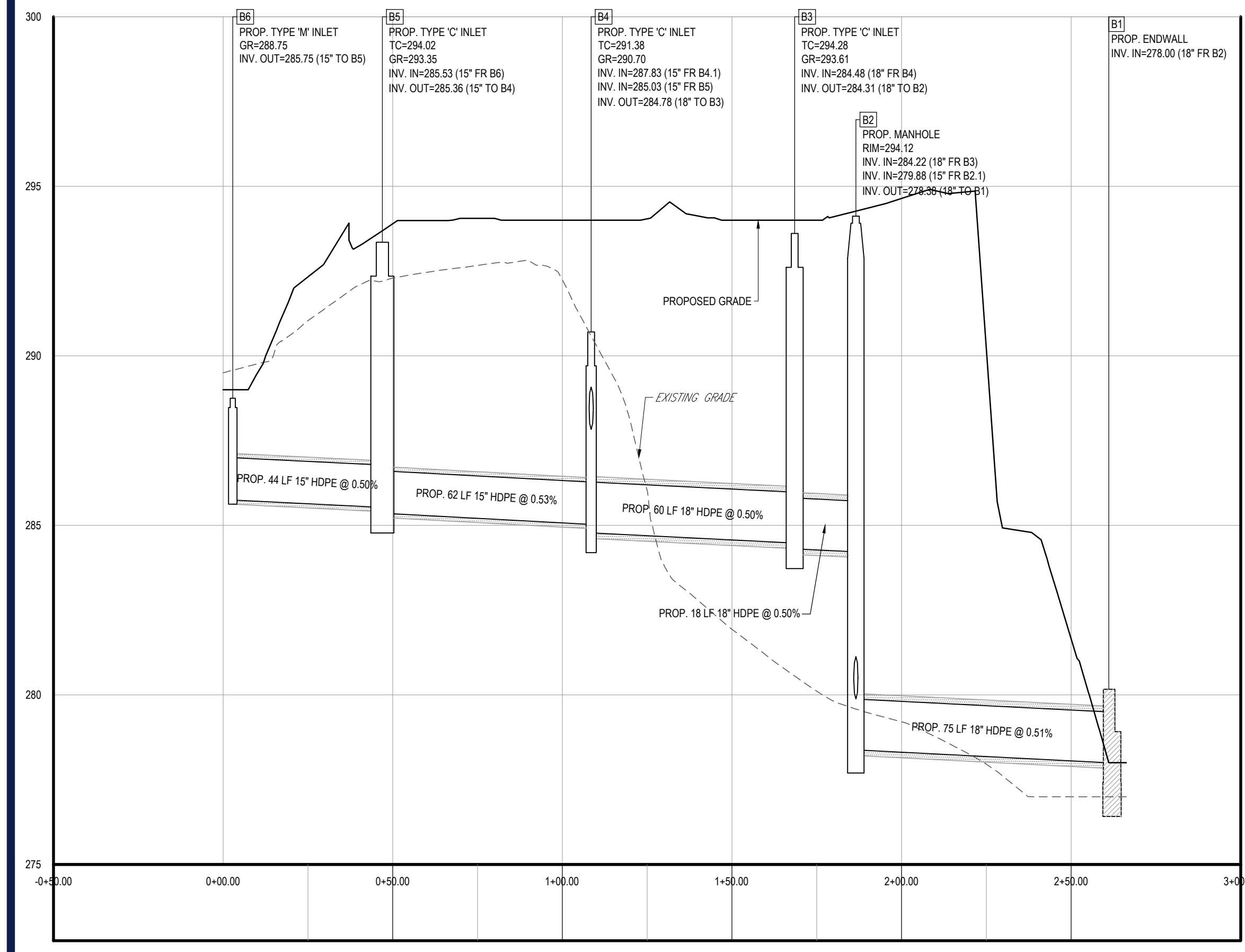
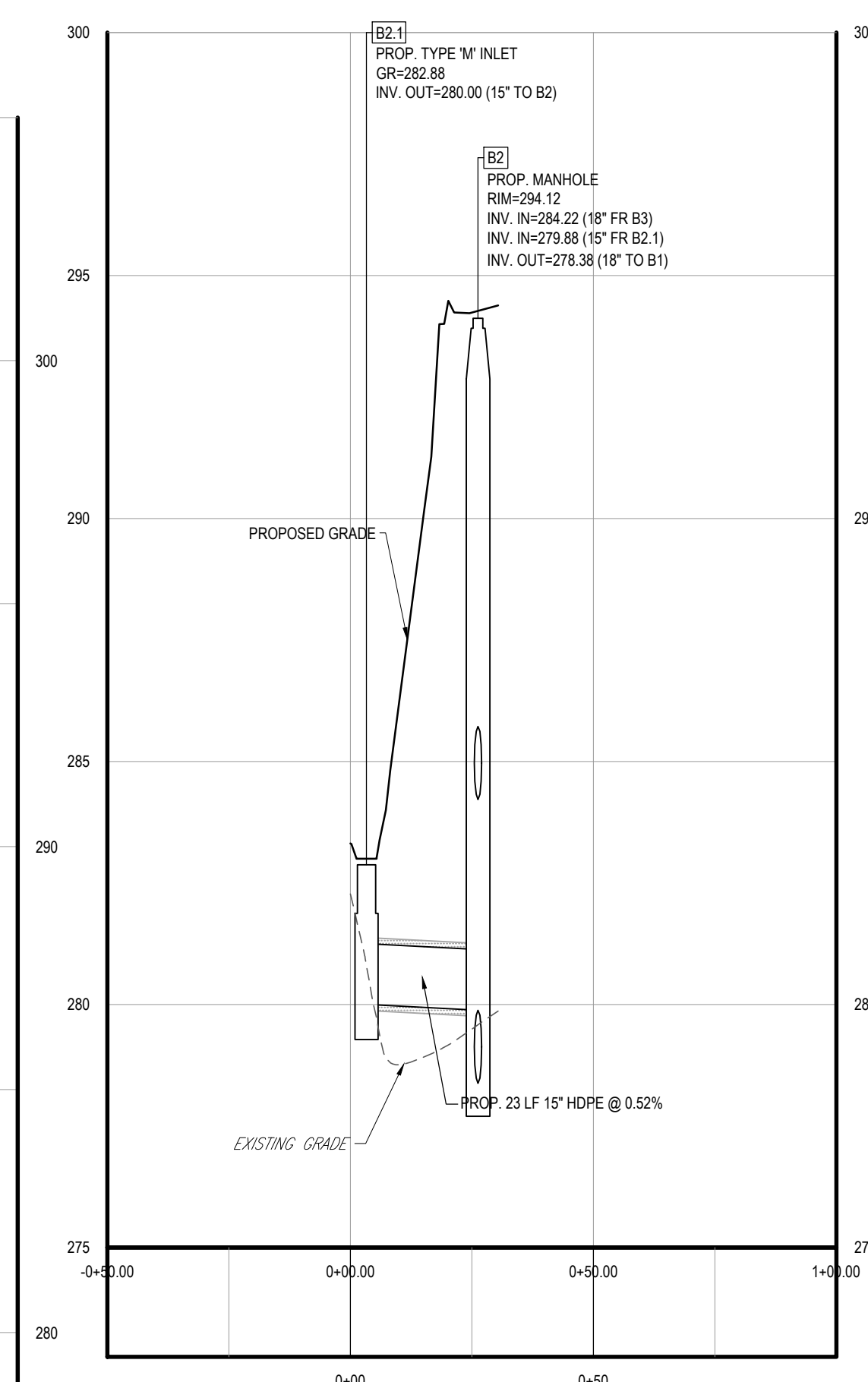
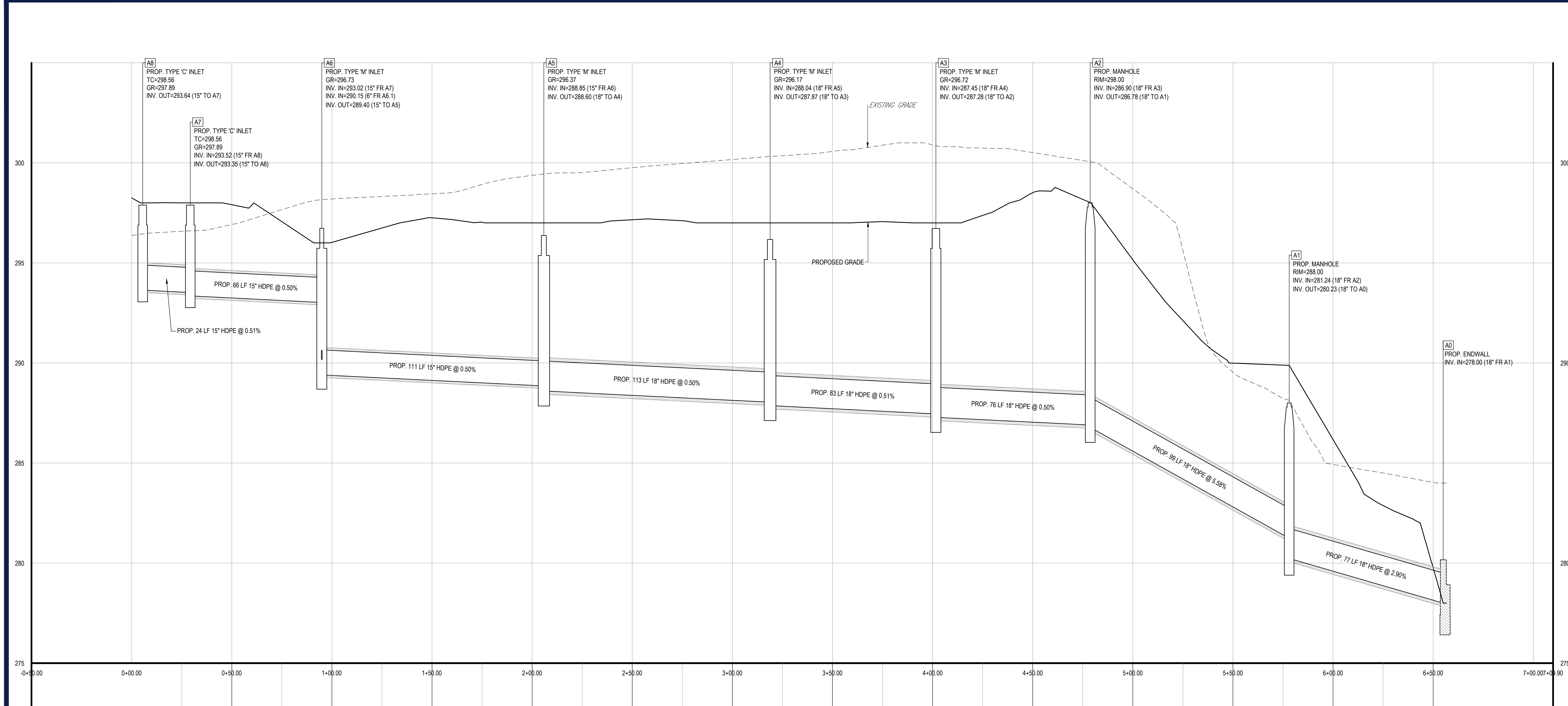
M.M. SPERK AND

Professional Engineer
No. 123456
Geotechnical Engineering

SHEET TITLE:
SOIL EROSION & SEDIMENT POLLUTION CONTROL PLAN

SHEET NUMBER:
C-601

REVISION 2 - 07/11/2022



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

REVISIONS

REV	DATE	COMMENT	DESIGNED BY	CHECKED BY
1	04/22/2022	PER NPDES SUBMISSION	TK	MMC
2	07/11/2022	REV PER CITY COMMENTS	TCK	MMC

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.
1-800-246-1171
www.pa811.org
20212392542 & 20212392479

NOT APPROVED FOR CONSTRUCTION

PROJECT No.: PY212051
DRAWN BY: TK
CHECKED BY: MMC
DATE: 04/01/2022
CAD I.D.: PY212051-Z-PIPE-UTIL

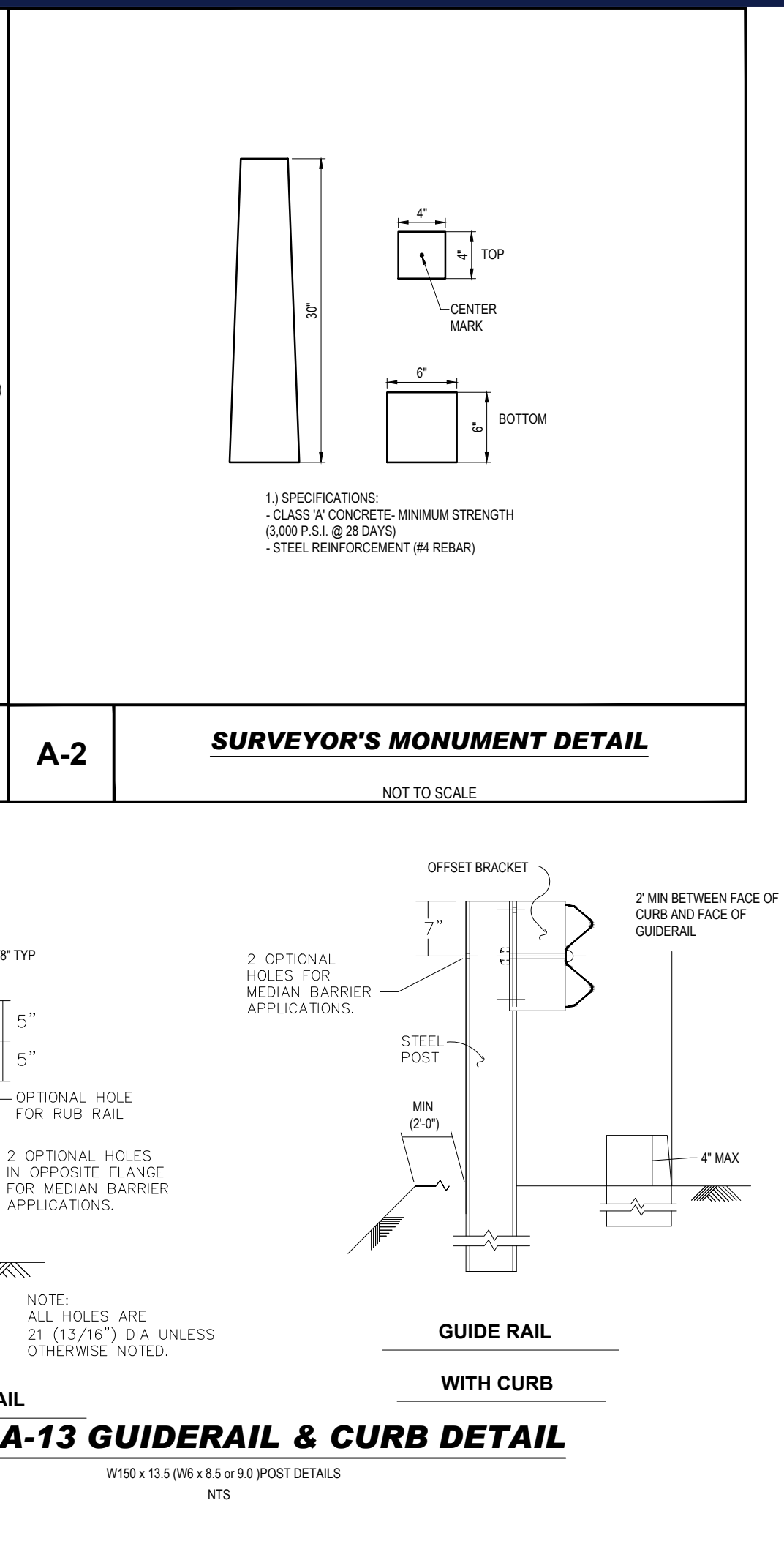
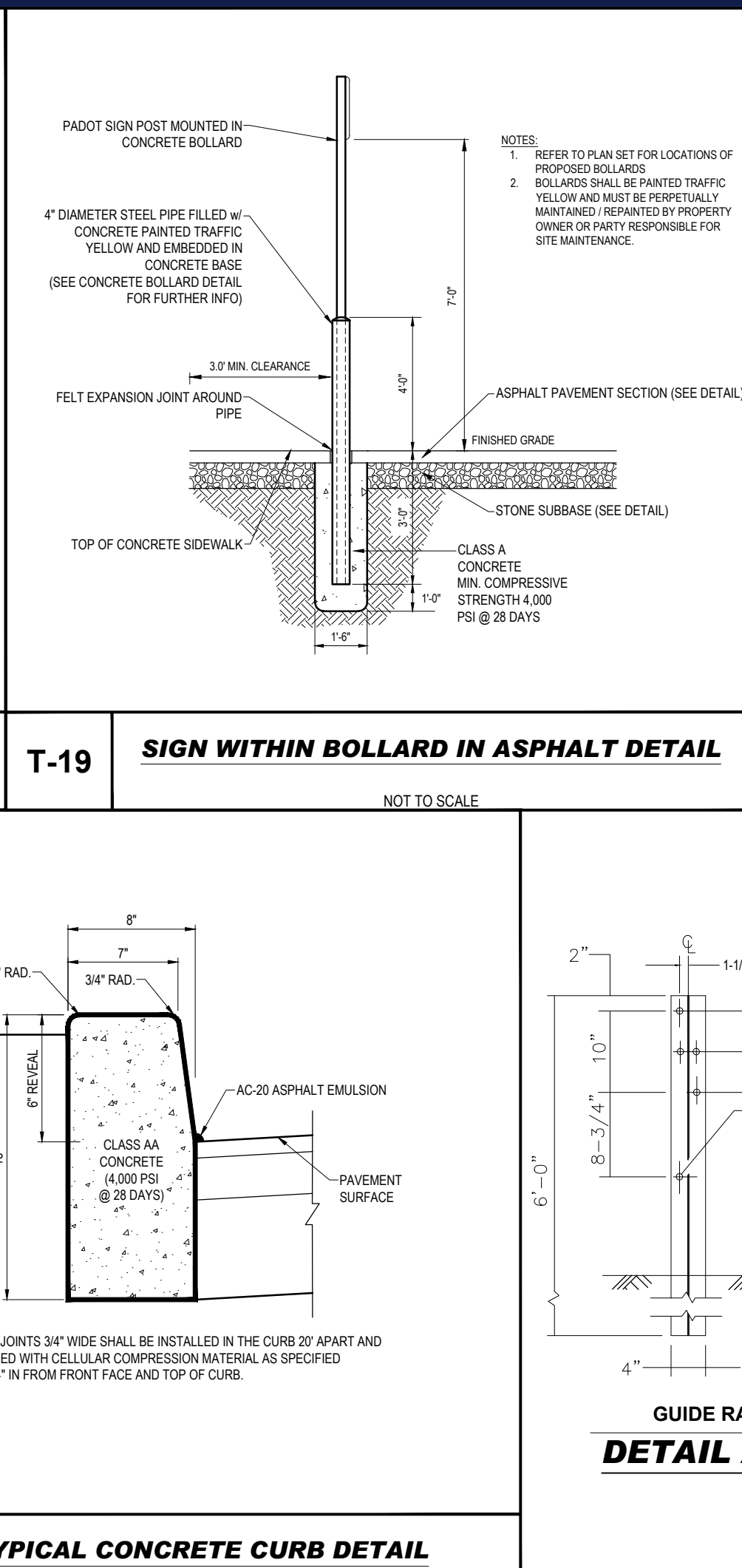
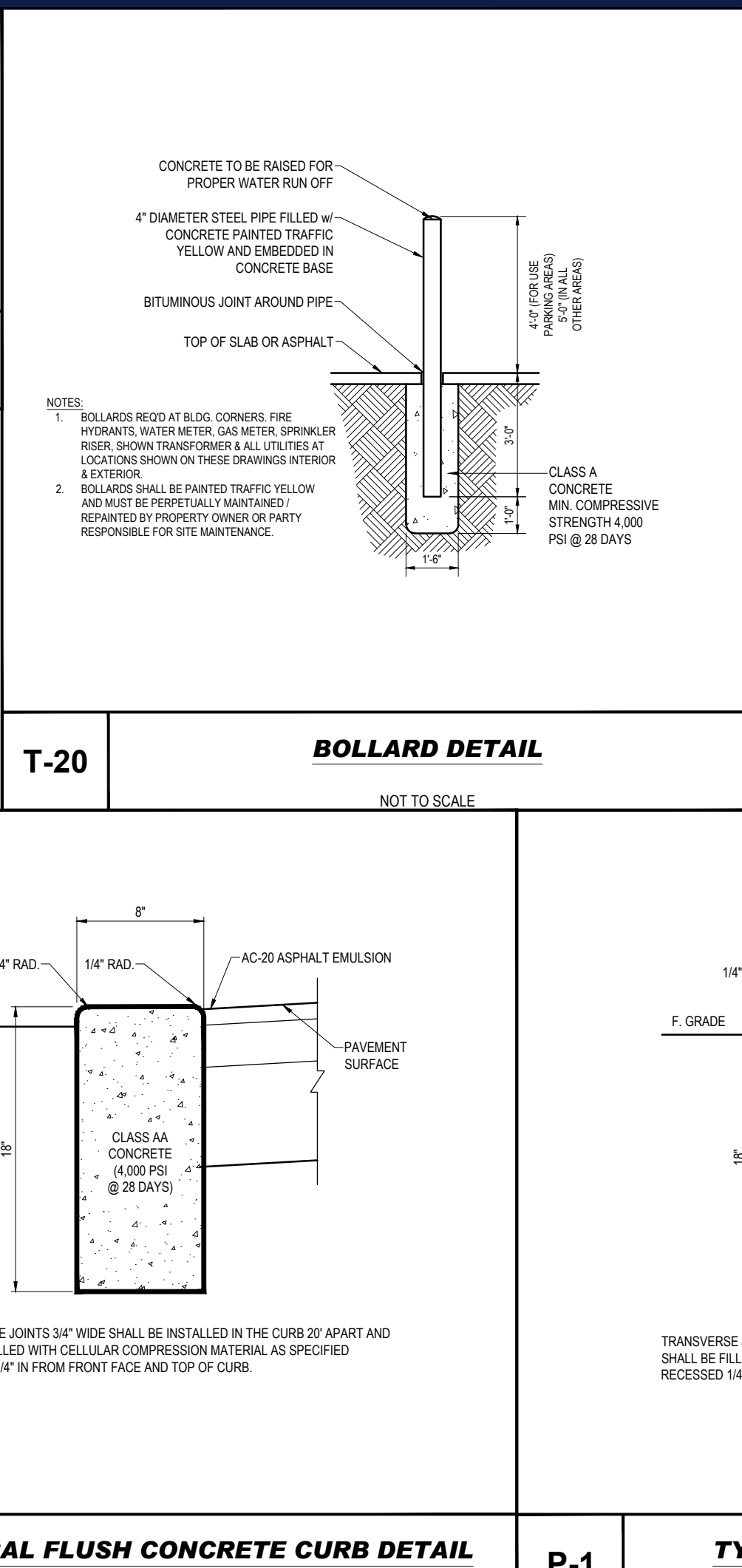
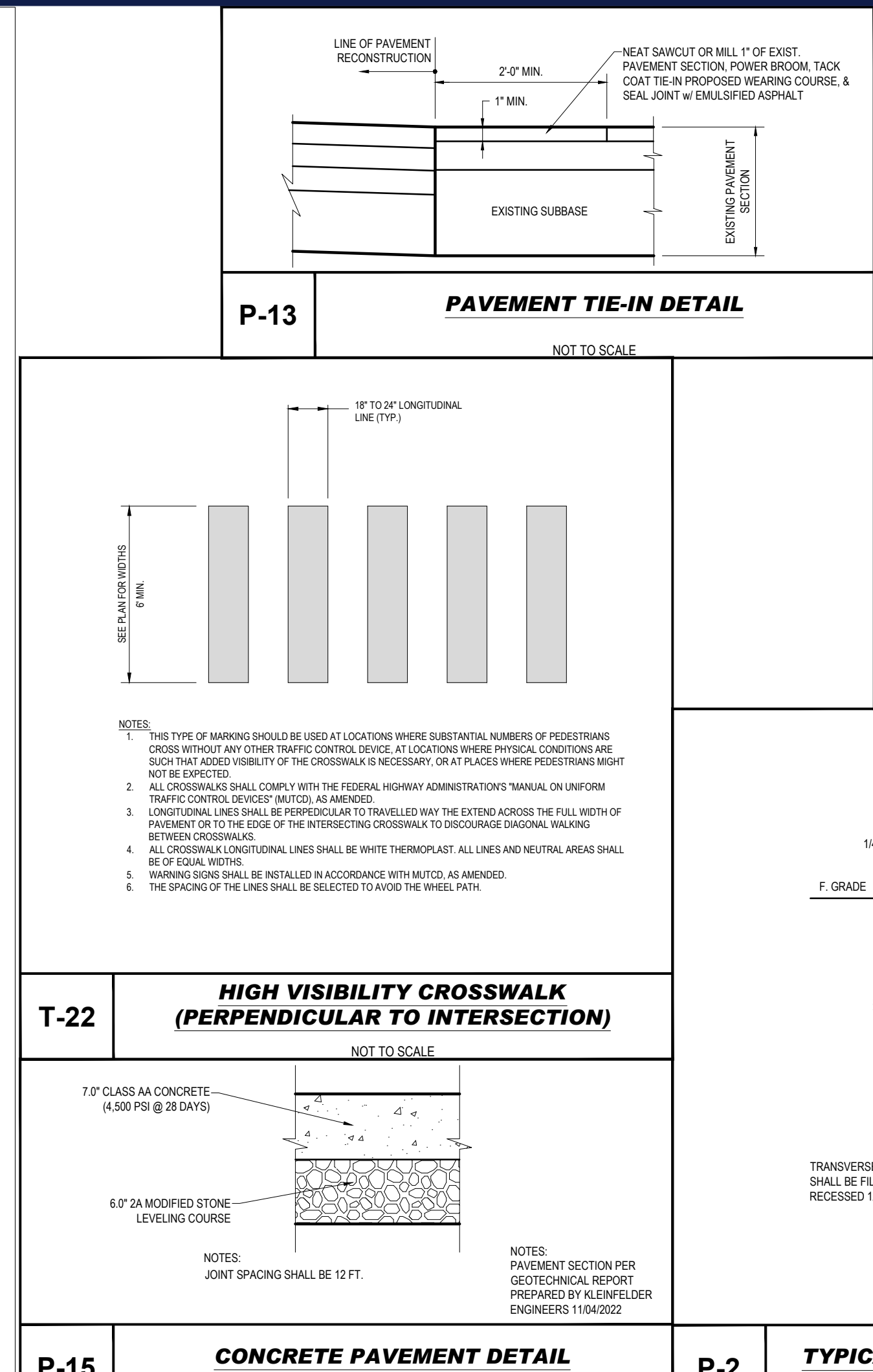
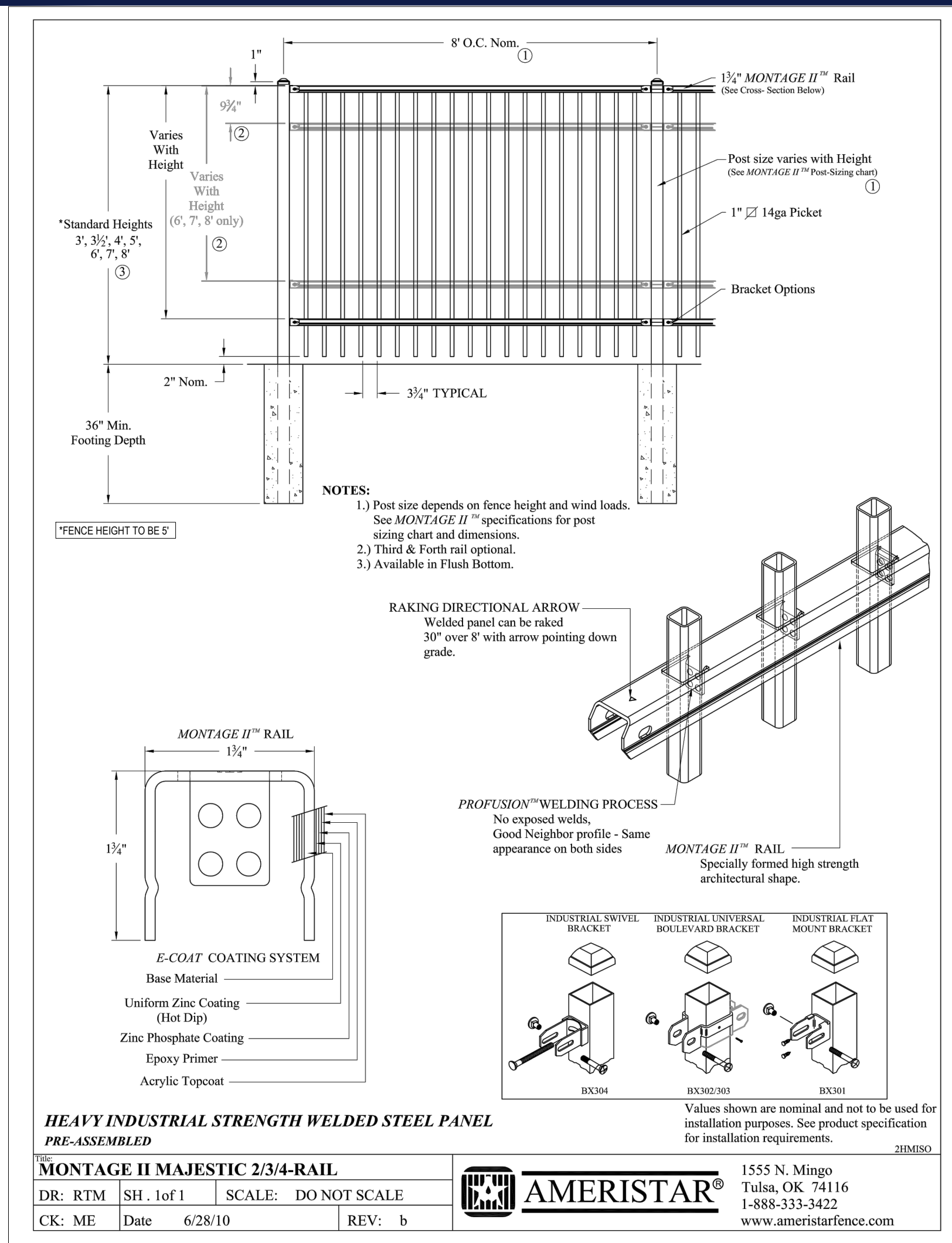
PRELIMINARY! FINAL LAND DEVELOPMENT PLANS
FOR
BETHLEHEM SHARED SERVICES, LLC
PROPOSED OFFICE & RETAIL MIXED-USE DEVELOPMENT
LEHIGH VALLEY INDUSTRIAL PARK
1810 SPILLMAN DRIVE
CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

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

M.M. STARBUCK AND ASSOCIATES
PROFESSIONAL ENGINEER
REGISTERED IN PENNSYLVANIA

SHEET TITLE:
PROFILES
SHEET NUMBER:
C-801
REVISION 2 - 07/11/2022

R:\IP\212051\CADD\DRAWINGS\PLAN SET\CIVIL SITE PLANS\PIPE UTIL\LA\OUT\C-801 STN PROFILES



REVISIONS				
REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	04/22/2022	PER NPDES SUBMISSION	TK	TK
2	07/11/2022	REV PER CITY COMMENTS	TK	TK

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.
 1-800-246-1779
 www.811.org
 20212392542 & 20212392479

NOT APPROVED FOR CONSTRUCTION

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.: PY212051
 DRAWN BY: TK
 CHECKED BY: MMC
 DATE: 04/01/2022
 CAD ID.: PY212051-CNDS-2A

PRELIMINARY! FINAL LAND DEVELOPMENT PLANS

FOR
BETHLEHEM SHARED SERVICES, LLC

PROPOSED OFFICE & RETAIL MIXED-USE DEVELOPMENT

LEHIGH VALLEY INDUSTRIAL PARK
 1810 SPILLMAN DRIVE
 CITY OF BETHLEHEM
 NORTHAMPTON COUNTY
 PENNSYLVANIA

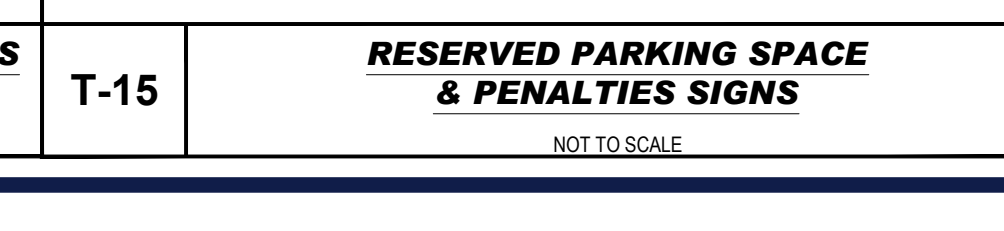
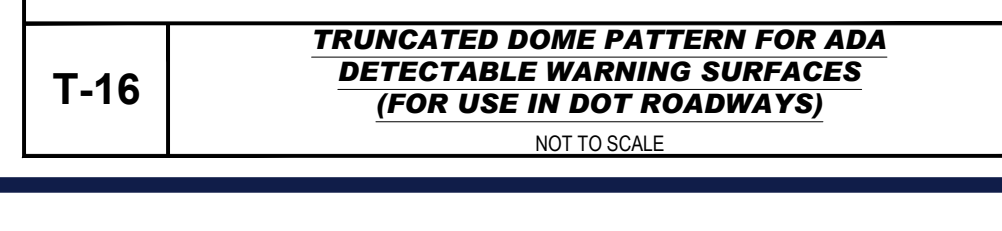
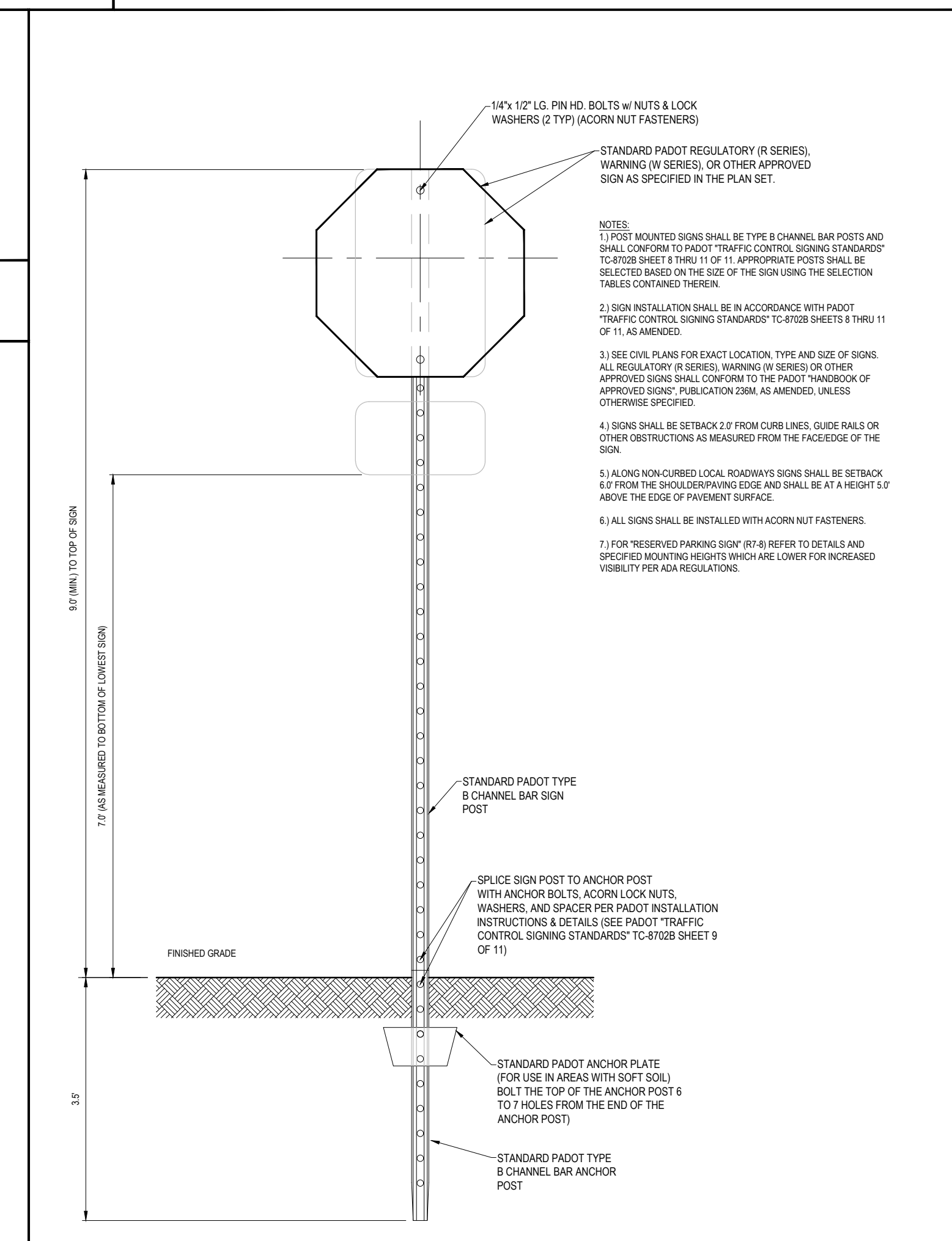
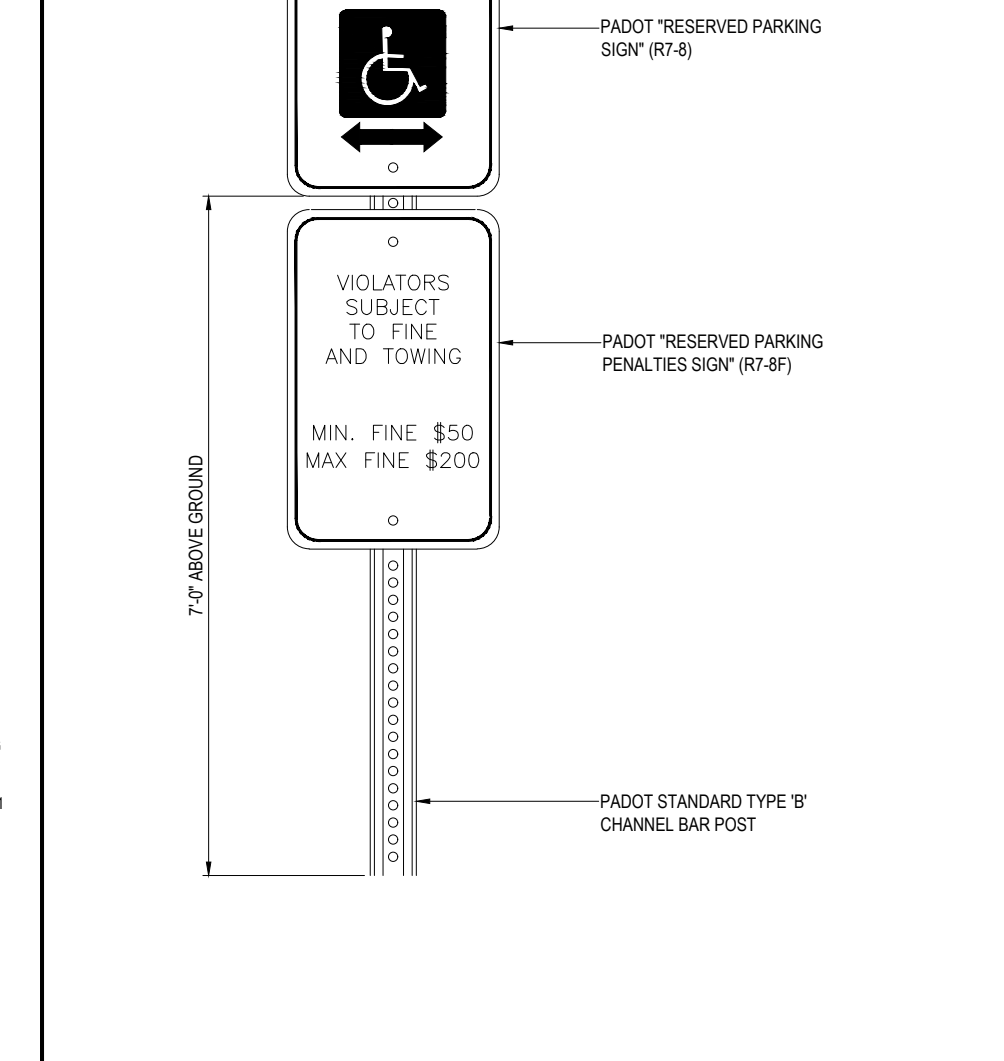
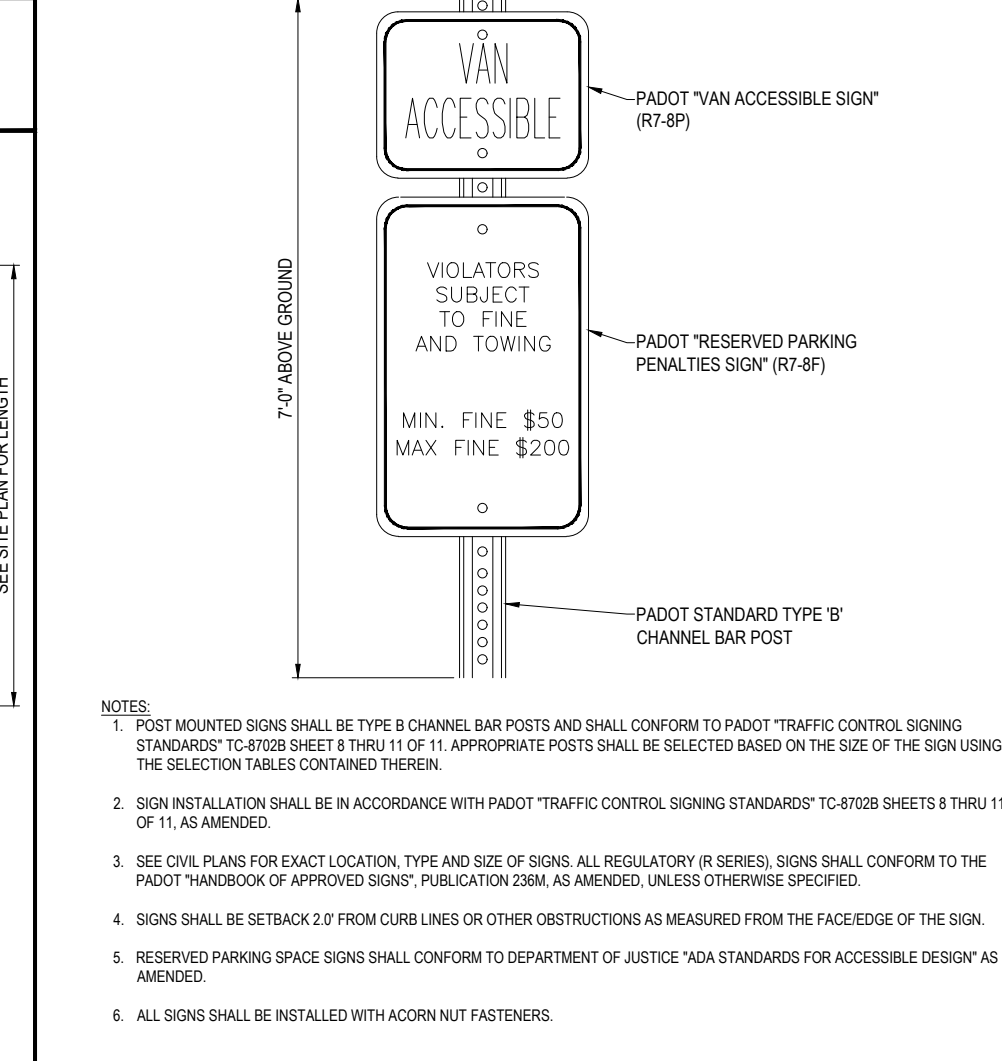
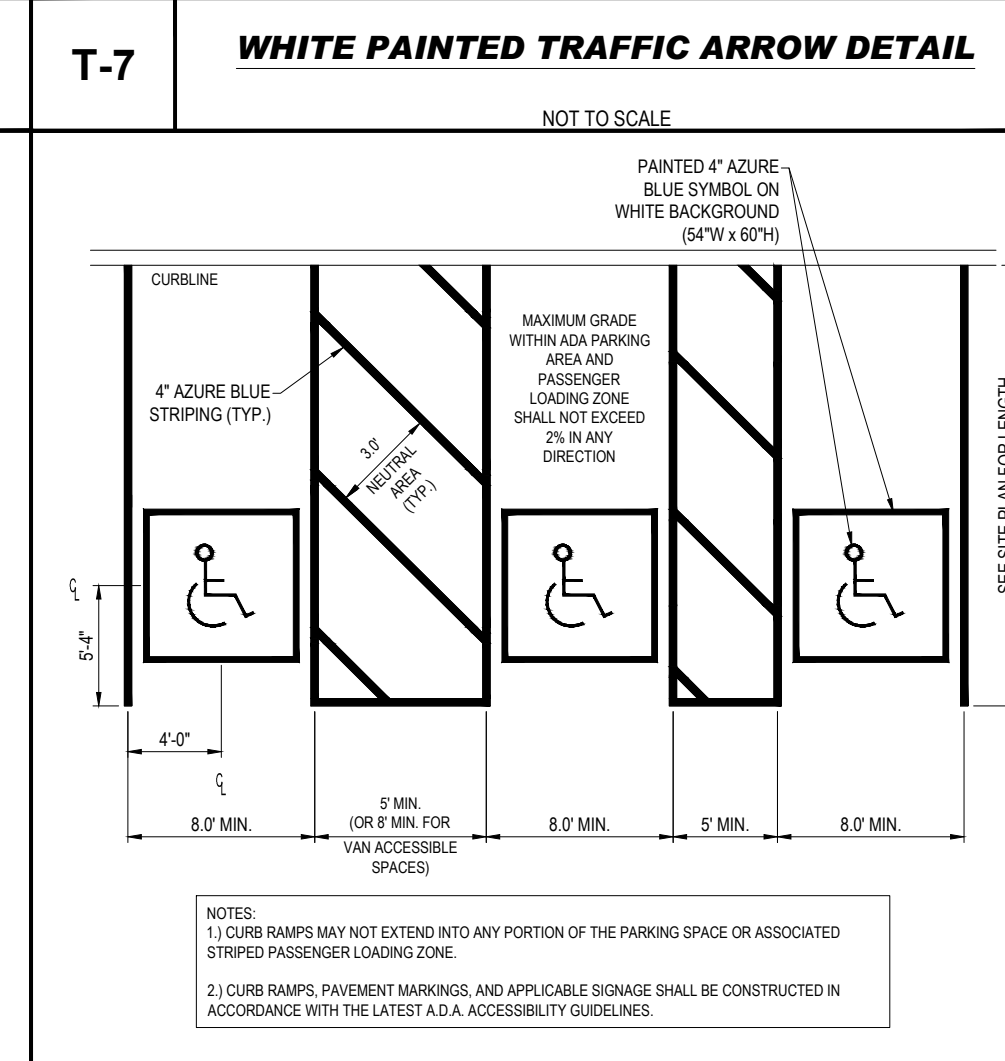
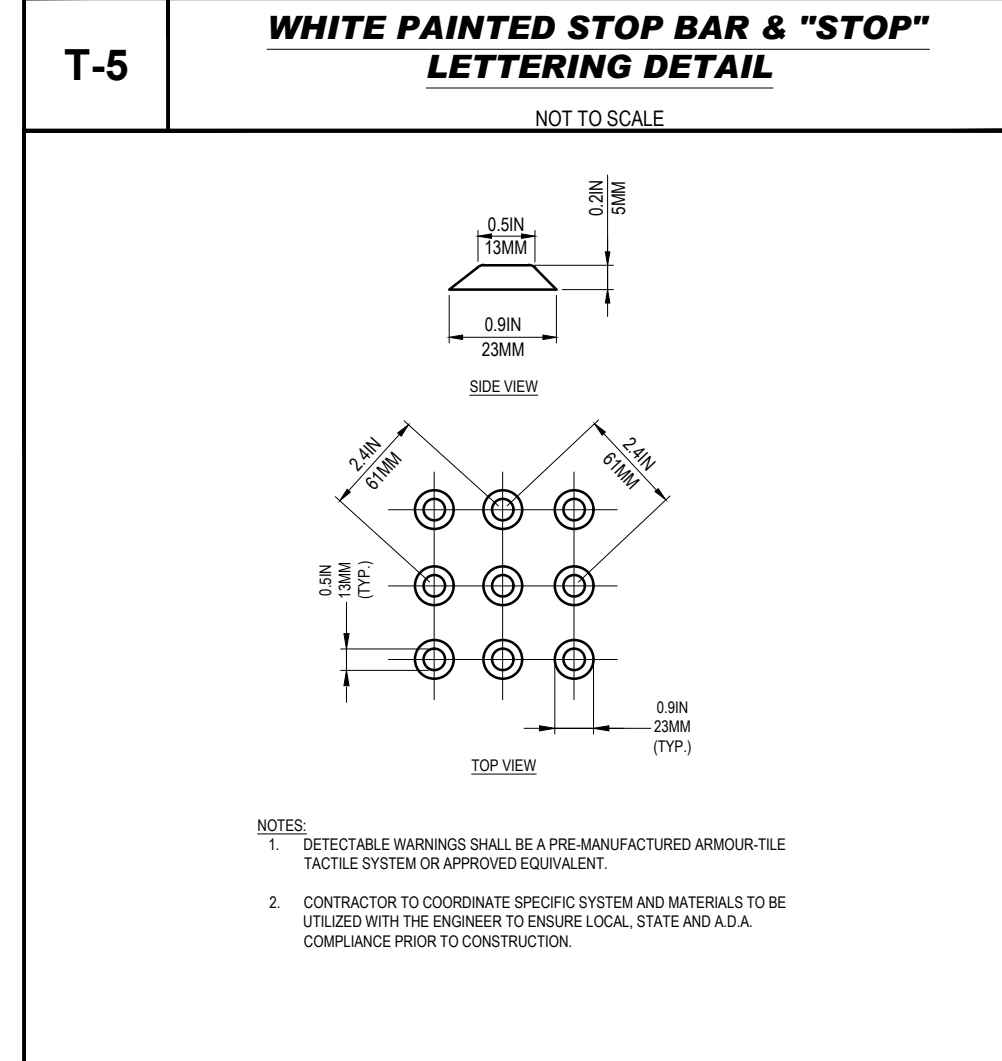
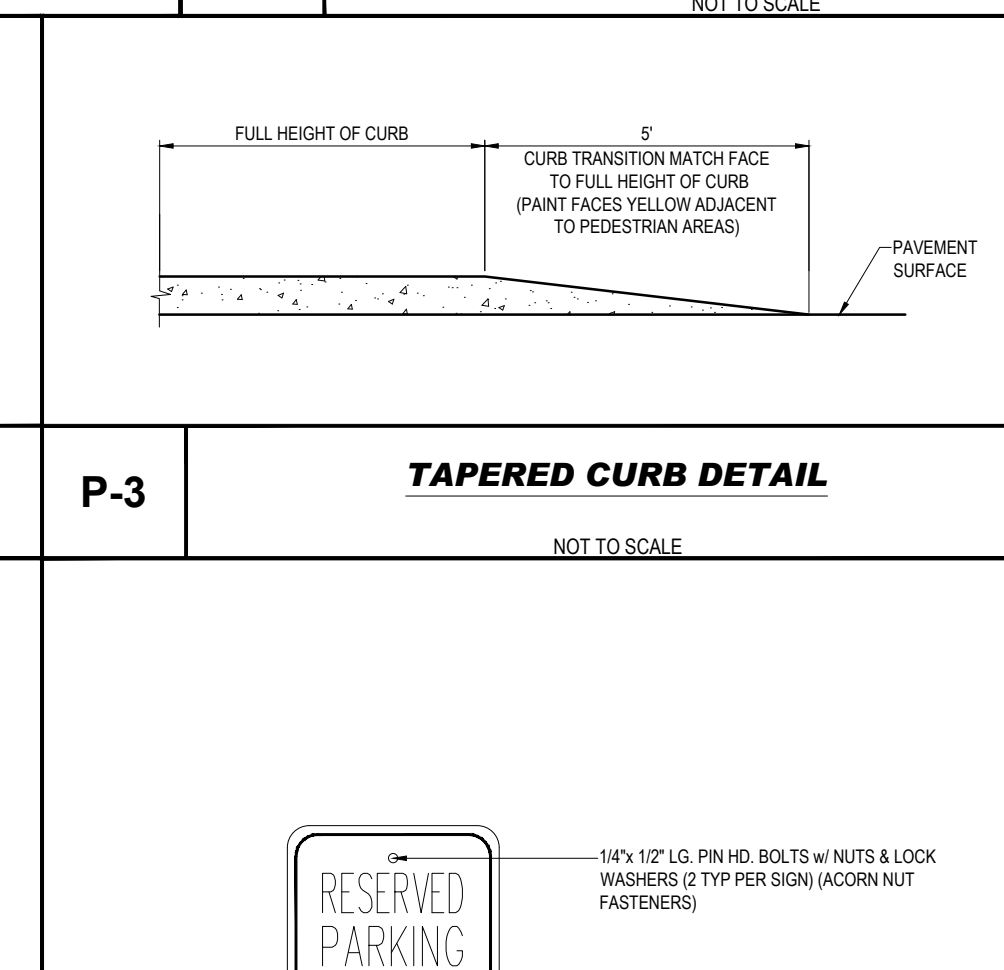
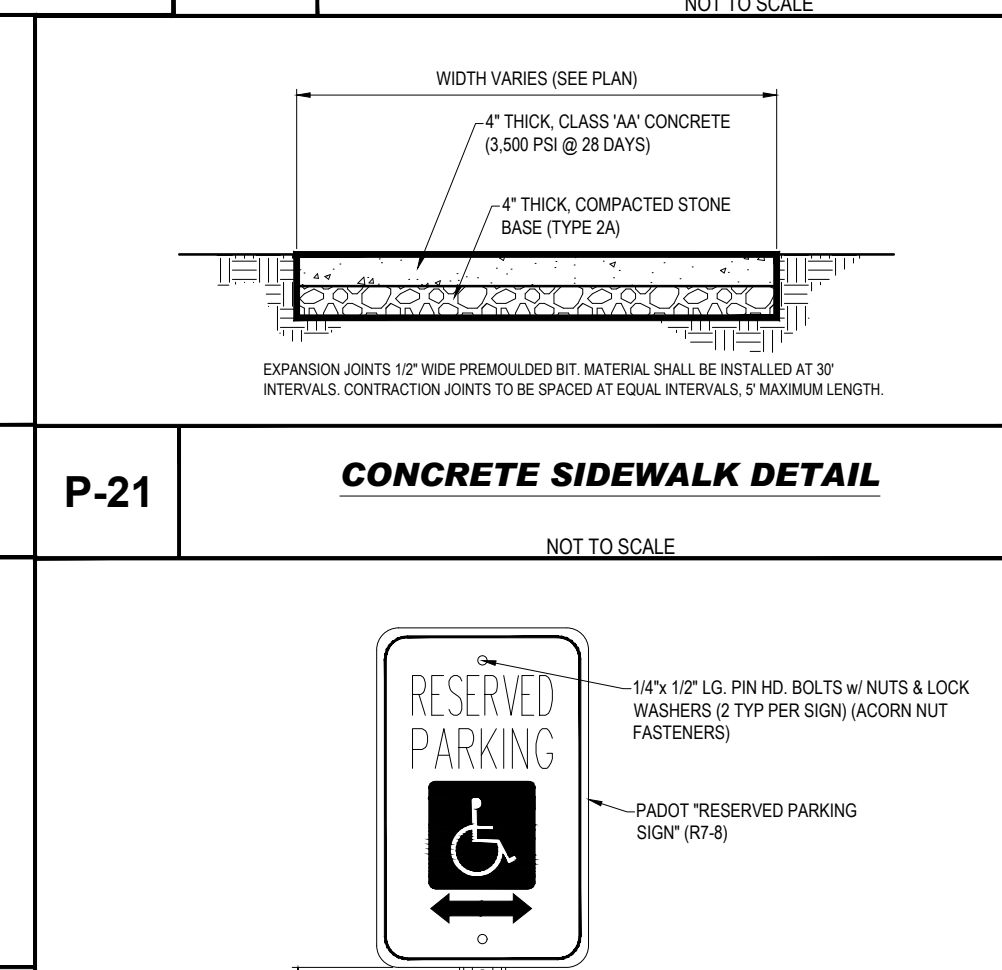
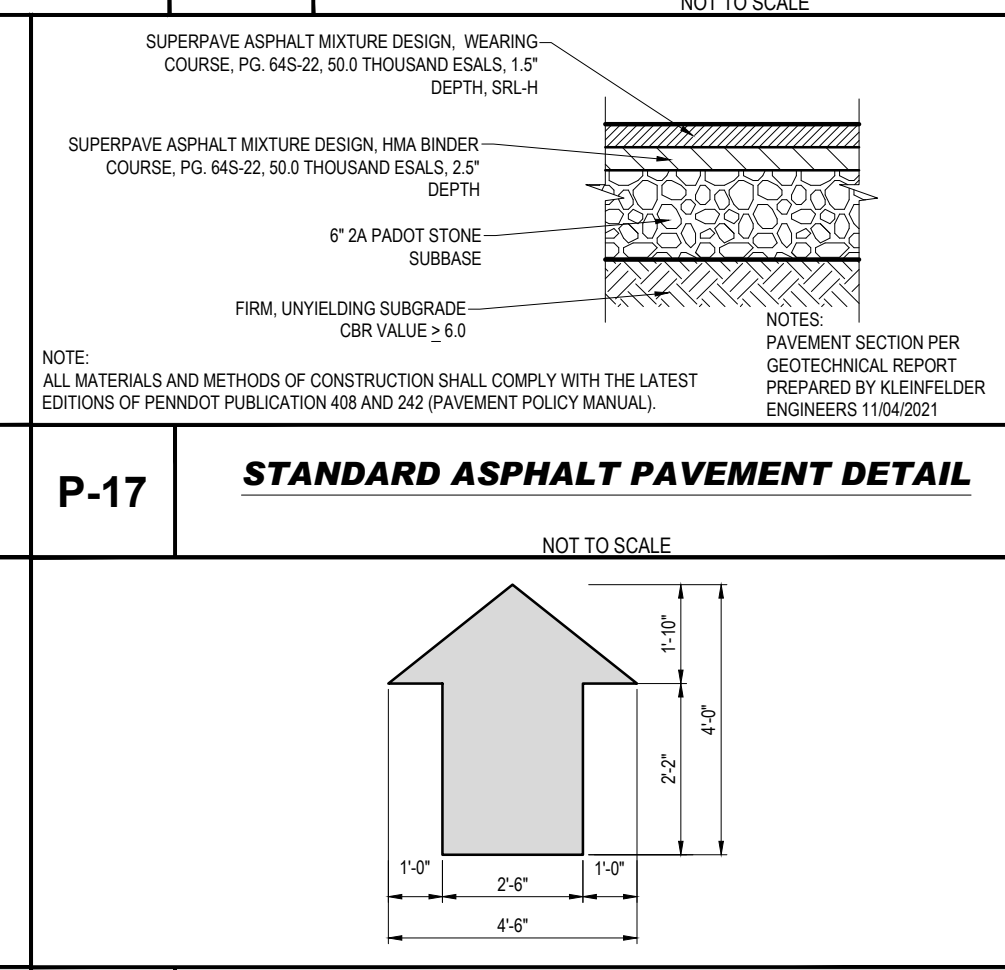
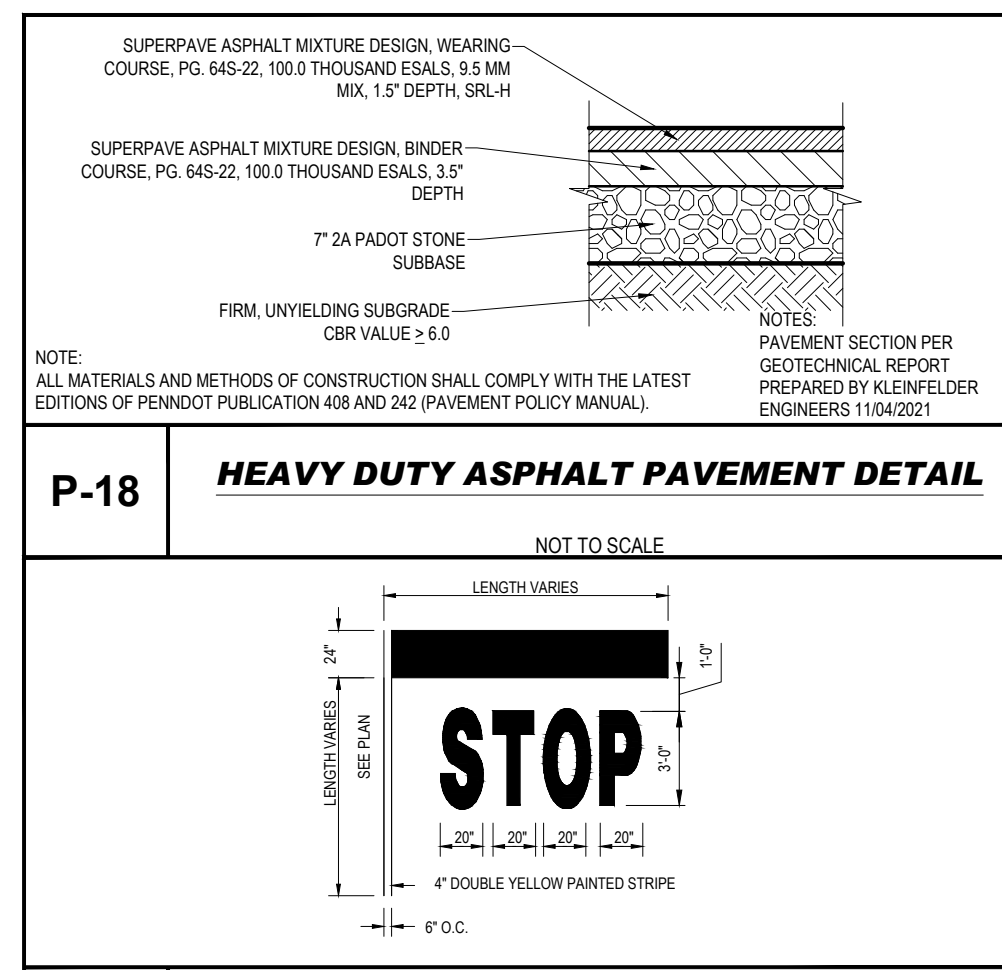
BOHLER
 74 W BROAD STREET, SUITE 500
 BETHLEHEM, PA 18018
 Phone: (610) 709-9971
 Fax: (610) 709-9976
 www.BohlerEngineering.com

M.M. SPARK AND
 PROFESSIONAL ENGINEER
 1000 N. 22ND ST. SUITE 200
 BETHLEHEM, PA 18018

SHEET TITLE:
DETAILS

SHEET NUMBER:
C-901

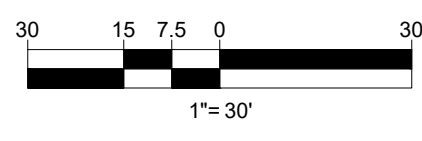
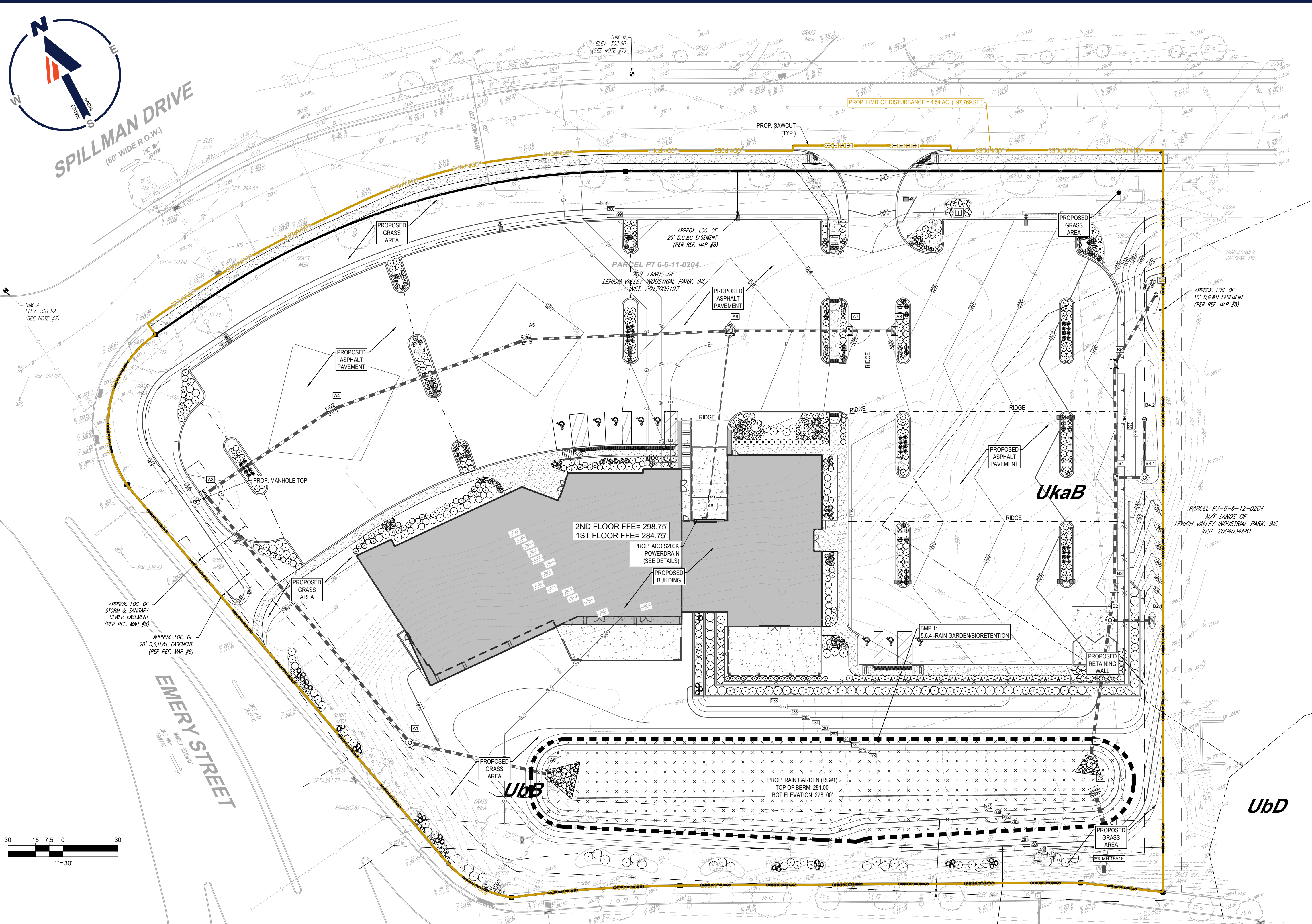
REVISION 2 - 07/11/2022



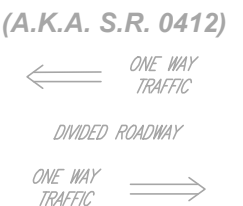
R:\1\1721\101\CADD\DRAWINGS\PLAN SET\CIVIL SITE PLANS\PT1212051-CNDS-2A.dwg - LAYOUT: C-901 DETAILS



SPILLMAN DRIVE
(60' WIDE R.O.W.)



FOURTH STREET
(A.K.A. S.R. 0412)



PROOF OF RECORDING

RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF NORTHAMPTON COUNTY, PENNSYLVANIA ON _____, 20____, IN MAP BOOK VOLUME _____

PAGE _____
NORTHAMPTON COUNTY RECORDER OF DEEDS

CHAPTER 93 RECEIVING WATERSHED AND STREAM CLASSIFICATION:
SAUCON CREEK, HQ-CWF, MF



SOIL MAP
SCALE: 1" = 50'

LEGEND

EXISTING	
PROPERTY LINE	---
R.O.W. LINE	---
EASEMENT LINE	---
RETAINING WALL	---
CONCRETE CURB	---
FLUSH CURB	---
SOIL BOUNDARY & TYPE	---
TREELINE	---
CONCRETE MONUMENT/ IRON PIN	○
SIGN	○
AREA LIGHT	○
TREE	○
DRAINAGE INLET	○
STORM/SANITARY MANHOLE	○
WATER/GAS VALVES	○
ROOF DRAIN/CLEANOUT	○
FIRE HYDRANT	○
LIGHT POLE	○
CONTOUR	---
ELECTRIC LINE	---
TELEPHONE LINE	---
GAS LINE	---
WATER LINE	---
SANITARY SEWER	---
STORM PIPE	---

LEGEND

PROPOSED	
BUILDING	■
RETAINING WALL	---
PROJECT SITE BOUNDARY	---
SAWCUT	---
CONCRETE CURB	---
FLUSH CURB	---
FENCE	---
GUIDE RAIL	---
ACCESSIBLE SYMBOL	---
CONCRETE	---
SIDEWALK	---
RAMP	---
CONCRETE MONUMENT	○
SIGN	○
BOLLARD	○
AREA LIGHT	○
DRAINAGE INLET	○
MANHOLE	○
ENDWALL	○
RIPRAP	○
CLEANOUT	○
ELECTRIC LINE	---
ELECTRIC LINE	---
GAS LINE	---
WATER LINE	---
SANITARY SEWER	---
STORM PIPE	---

PCSM - GENERAL BMP NOTES

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.

AS-BUILT NOTES

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, PIPS ZONE 3 702) 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.

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

REVISIONS

REV	DATE	COMMENT	CHECKED BY
1	04/22/2022	PER NPDES SUBMISSION	TK
2	07/11/2022	REV PER CITY COMMENTS	MMC

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.
1-800-242-1779
www.811.org
20212392542 & 20212392479

NOT APPROVED FOR CONSTRUCTION

PROJECT No.: PY212051
DRAWN BY: TK
DATE: 04/12/2022
CAD ID: PY212051-LDVP-2A

**PRELIMINARY!
FINAL LAND
DEVELOPMENT
PLANS**
FOR
**BETHLEHEM SHARED
SERVICES, LLC**
PROPOSED OFFICE & RETAIL
MIXED-USE DEVELOPMENT
LEHIGH VALLEY INDUSTRIAL PARK
1810 SPILLMAN DRIVE
CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

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

M.M. SPARKLAND
Professional Engineer
No. 123456789
RECEIVED

SHEET TITLE: **POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS**
SHEET NUMBER: **C-1001**
REVISION 2 - 07/11/2022

RECEIVING SURFACE WATERS

- 1. THE SUBJECT SITE DRAINS TO SAUCON CREEK, WHICH HAS A HQ-CWF (HIGH QUALITY - COLD WATER FISHES) & MF (MIGRATORY FISHES) CHAPTER 93 CLASSIFICATION.
- 2. THE DEVELOPMENT IS IN NEITHER AN HQ NOR AN EV WATERSHED AND THEREFORE, NO BOUNDARIES ARE SHOWN.
- 3. THERE ARE NO WETLANDS LOCATED ON THE PROJECT SITE.

GENERAL PCSM PLANNING AND DESIGN

- THE FOLLOWING MEASURES WERE TAKEN TO PRESERVE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL, AND CHEMICAL QUALITIES OF THE RECEIVING STREAM:
- DIRECT RUNOFF FROM IMPERVIOUS SURFACES TO BMPs
- THE USE OF NATIVE SPECIES REQUIRES LESS FERTILIZATION AND CHEMICAL APPLICATION THAN NONNATIVE SPECIES.

- THE FOLLOWING MEASURES WERE TAKEN TO PREVENT AN INCREASE IN THE RATE OF STORMWATER RUNOFF:
- MINIMIZE IMPERVIOUS AREAS WHERE PRACTICAL.

- THE FOLLOWING MEASURES WERE TAKEN TO MINIMIZE ANY INCREASE IN STORMWATER RUNOFF VOLUME:
- PROVIDE RAINGARDEN TO HELP REDUCE RUNOFF VOLUME
- MINIMIZE IMPERVIOUS AREAS WHERE PRACTICAL.

MEASURES WERE TAKEN TO MINIMIZE IMPERVIOUS AREAS.

- THE FOLLOWING MEASURES ARE TAKEN TO MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION:
- ACCESS THE SITE THRU DESIGNATED CONSTRUCTION ENTRANCES

- THE FOLLOWING MEASURES WERE TAKEN TO MINIMIZE LAND CLEARING AND GRADING:
- GRADE SITE TO MINIMIZE EXTENT OF CUTS/FILLS

- THE FOLLOWING MEASURES ARE TAKEN TO MINIMIZE SOIL COMPACTION:
- ACCESS THE SITE THRU DESIGNATED CONSTRUCTION ENTRANCES
- USE OF TREADED MACHINERY WHERE PRACTICAL DURING EARTH-MOVING OPERATIONS
- GRADE SITE TO MINIMIZE EXTENT OF CUTS/FILLS

- THE FOLLOWING MEASURES WERE TAKEN TO UTILIZE OTHER STRUCTURAL OR NONSTRUCTURAL BMPs THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF:
- DIRECT RUNOFF TO RAINGARDEN TO HELP REDUCE RUNOFF VOLUME
- RE-VEGETATE DISTURBED AREAS TO HELP REDUCE RUNOFF VOLUME
- MINIMIZE IMPERVIOUS AREAS WHERE PRACTICAL.

RECYCLING OR DISPOSAL OF MATERIALS

- THE FOLLOWING IS A LIST THAT INCLUDES, BUT THAT IS NOT LIMITED TO, THE POTENTIAL CONSTRUCTION WASTES THAT MAY EXIST ON-SITE:
- CONCRETE CURB AND SIDEWALK ASPHALT
- BUILDING/DEMOLITION MATERIAL
- EAS BMP - COMPOST FILTER SOCKS
- EAS BMP - EROSION CONTROL MATTING
- EAS BMP - FILTER BAG INLET PROTECTION
- EAS BMP - STONE & CONCRETE BLOCK INLET PROTECTION
- EAS BMP - REGULATED FILL MATERIALS

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 HAULIED 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. WASH WATER WILL BE DISCHARGED FROM THE SITE.

LIST OF CRITICAL STAGES

- THE CONTRACTOR SHALL NOTIFY THE PROFESSIONAL RESPONSIBLE FOR THE PROPER IMPLEMENTATION OF THE STORMWATER BMP'S PRIOR TO COMMENCING CONSTRUCTION OF THE FOLLOWING CRITICAL STAGES:
- INSTALLATION OF RAIN GARDEN (RG#1), INCLUDING PREPARATION OF SUBGRADE AND INSTALLATION OF OUTLET CONTROL STRUCTURE (C2).
- INSTALLATION OF RG#1 PLANTING SOIL AND PLANTINGS

POTENTIAL THERMAL IMPACTS TO SURFACE WATERS

A POTENTIAL FOR THERMAL IMPACTS EXISTS IN INSTANCES WHERE SURFACE RUNOFF IS DIRECTLY CONVEYED TO A RECEIVING STREAM WITHOUT ADEQUATE ATTENUATION OR COOLING. THE SHADING EFFECTS OF THE PROPOSED AND EXISTING LANDSCAPING IN SERIES WITH THE PROPOSED UNDERGROUND STORMWATER CONVEYANCE SYSTEMS WILL PROVIDE THERMAL WATER QUALITY BENEFITS BY ALLOWING THE STORMWATER TO DECREASE IN TEMPERATURE PRIOR TO ENTERING THE DOWNSTREAM WATERSHED. ADDITIONAL THERMAL WATER QUALITY BENEFITS ARE ACHIEVED THROUGH THE IMPLEMENTATION OF TWO (2) ABOVEGROUND DETENTION BASINS, ONE (1) UNDERGROUND DETENTION BASIN, AND SUBSTANTIAL AMOUNTS OF VEGETATION AROUND EACH OF THE BMPs. ALL OF THOSE MEASURES WILL HELP TO CONTROL RUNOFF VOLUME AND RATE AND THEREBY PROVIDE ADDITIONAL COOLING TIME, THEREBY MINIMIZING THERMAL IMPACTS TO THE RECEIVING STREAM.

GEOLOGIC FORMATIONS OR SOIL CONDITIONS

THERE ARE NO GEOLOGIC FORMATIONS OR SOIL CONDITIONS THAT COULD CAUSE CONTAMINANT POLLUTION DURING EARTH DISTURBANCE ACTIVITIES.

BELOW ARE INSTRUCTIONS FOR THE PROPER HANDLING AND/OR DISPOSAL OF ALL MATERIALS THAT COULD CAUSE POLLUTION:

- 1. ANY HAZARDOUS OR POTENTIALLY HAZARDOUS MATERIAL THAT IS BROUGHT ONTO THE CONSTRUCTION SITE SHALL BE HANDLED PROPERLY TO REDUCE THE POTENTIAL FOR STORMWATER POLLUTION. ALL MATERIALS USED ON THIS CONSTRUCTION SITE SHALL BE PROPERLY STORED, HANDLED, DISPENSED AND DISPOSED OF FOLLOWING ALL APPLICABLE LABEL DIRECTIONS. FLAMMABLE AND COMBUSTIBLE LIQUIDS SHALL BE STORED AND HANDLED ACCORDING TO APPLICABLE REGULATIONS, AND, AT A MINIMUM, ACCORDING TO 29 CFR 1926.152. ONLY APPROVED CONTAINERS AND PORTABLE TANKS SHALL BE USED FOR STORAGE AND HANDLING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.

- 2. MATERIAL SAFETY DATA SHEETS (MSDS) INFORMATION SHALL BE KEPT ON SITE FOR ANY AND ALL APPLICABLE MATERIALS. HOWEVER, MSDS MAY ALSO BE ACCESSIBLE VIA TELEPHONE OR OTHER ELECTRONIC MEANS OR APPARATUS.

- 3. IN THE EVENT OF AN ACCIDENTAL SPILL, IMMEDIATE ACTION SHALL BE TAKEN BY THE GC TO CONTAIN AND REMOVE THE SPILLED MATERIAL. THE SPILL SHALL BE REPORTED TO THE APPROPRIATE AGENCIES IN THE REQUIRED TIME FRAMES. AS REQUIRED UNDER THE PROVISIONS OF THE CLEAN WATER ACT, ANY SPILL OR DISCHARGE ENTERING WATERS OF THE UNITED STATES SHALL BE PROPERLY REPORTED.

- 4. ALL HAZARDOUS MATERIALS, INCLUDING CONTAMINATED SOIL AND LIQUID CONCRETE WASTE, SHALL BE DISPOSED OF BY THE CONTRACTOR IN THE MANNER SPECIFIED BY FEDERAL, STATE AND LOCAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS.

- 5. THE GC SHALL PREPARE A WRITTEN RECORD OF ANY SPILL AND ASSOCIATED CLEAN-UP ACTIVITIES OF PETROLEUM PRODUCTS OR HAZARDOUS MATERIALS IN EXCESS OF 1 GALLON OR REPORTABLE QUANTITIES, WHICHEVER IS LESS, ON THE DAY OF THE SPILL. THE GC SHALL PROVIDE NOTICE TO OWNER, VIA THE ONLINE CRITICAL INCIDENT REPORT, IMMEDIATELY UPON IDENTIFICATION OF ANY SPILL. SPILL REPORT FORMS ARE AVAILABLE IN THE ONLINE SWPPP REPORTING SYSTEM PROVIDED BY THE OWNER. COPIES OF SPILL CRITICAL INCIDENT REPORTS SHALL BE PRINTED AND MAINTAINED IN THE JOBSITE BINDER.

- 6. ANY SPILLS OF PETROLEUM PRODUCTS OR HAZARDOUS MATERIALS IN EXCESS OF REPORTABLE QUANTITIES AS DEFINED BY EPA OR THE STATE OR LOCAL AGENCY REGULATIONS, SHALL BE IMMEDIATELY REPORTED TO THE EPA NATIONAL RESPONSE CENTER (1-800-424-9802) AND THE NORTHAMPTON COUNTY CONSERVATION DISTRICT (610-828-6276).

- 7. AS PER THE PA GENERAL PERMIT, ANY TIME THE PERMITTEE OR CO-PERMITTEE BECOMES AWARE OF ANY INCIDENT CAUSING OR THREATENING POLLUTION AS DESCRIBED IN 25 PA CODE SECTION 91.33, AS REQUIRED BY 25 PA CODE SECTION 92A.41(B), THE PERMITTEE AND CO-PERMITTEE(S) SHALL, WITHIN 24 HOURS, CONTACT THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT, BY PHONE OR PERSONAL CONTACT, FOLLOWED BY SUBMISSION OF A WRITTEN REPORT WITHIN FIVE (5) DAYS OF THE INITIAL CONTACT.

- 8. TO MINIMIZE THE POTENTIAL FOR A SPILL OF PETROLEUM PRODUCT OR HAZARDOUS MATERIALS TO COME IN CONTACT WITH STORMWATER, THE FOLLOWING STEPS SHALL BE IMPLEMENTED:

(1) ALL MATERIALS WITH HAZARDOUS PROPERTIES, SUCH AS PESTICIDES, PETROLEUM PRODUCTS, FERTILIZERS, SOAPS, DETERGENTS, CONSTRUCTION CHEMICALS, ACIDS, BASES, PAINTS, PAINT SOLVENTS, ADDITIVES FOR SOIL STABILIZATION, CONCRETE, CURING COMPOUNDS AND ADDITIVES, ETC., SHALL BE STORED IN A SECURE LOCATION, UNDER COVER AND IN APPROPRIATE, TIGHTLY SEALED CONTAINERS WHEN NOT IN USE.

(2) THE MINIMUM PRACTICAL QUANTITY OF ALL SUCH MATERIALS SHALL BE KEPT ON THE JOB SITE AND SCHEDULED FOR DELIVERY AS CLOSE TO TIME OF USE AS PRACTICAL.

(3) A SPILL CONTROL AND CONTAINMENT KIT (CONTAINING FOR EXAMPLE, ABSORBENT MATERIAL SUCH AS KITTY LITTER OR SAWDUST, ACID, BASE, NEUTRALIZING AGENT, BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, PLASTIC AND METAL TRASH CONTAINERS, ETC.) SHALL BE PROVIDED AT THE CONSTRUCTION SITE AND ITS LOCATION(S) SHALL BE IDENTIFIED WITH LEGIBLE SIGNAGE AND SHOWN ON SITE MAPS.

a. THE SPILL CONTROL AND CONTAINMENT KIT SUPPLIES SHALL BE OF SUFFICIENT QUANTITIES AND APPROPRIATE CONTENT TO CONTAIN A SPILL FROM THE LARGEST ANTICIPATED PIECE OF EQUIPMENT AND FROM THE LARGEST ANTICIPATED QUANTITIES OF PRODUCTS STORED ON THE SITE AT ANY GIVEN TIME.

b. CONTENTS SHALL BE INSPECTED DAILY DURING THE DAILY STORMWATER INSPECTION.

(4) ALL PRODUCTS SHALL BE STORED IN AND USED FROM THE ORIGINAL CONTAINER WITH THE ORIGINAL PRODUCT LABEL. CONTAINERS MUST BE STORED IN A MANNER TO PROTECT THEM FROM THE ELEMENTS AND INCIDENTAL DAMAGE.

(5) ALL PRODUCTS SHALL BE USED IN STRICT COMPLIANCE WITH INSTRUCTIONS ON THE PRODUCT LABEL.

(6) THE DISPOSAL OF EXCESS OR USED PRODUCTS SHALL BE IN STRICT COMPLIANCE WITH INSTRUCTIONS ON THE PRODUCT LABEL AND REGULATIONS.

PCSM - GENERAL BMP NOTES

- 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.

PREVENTIVE MEASURES AGAINST INDUCING SINKHOLES (GEOLOGIC FORMATIONS RESOLUTION)

THE FOLLOWING GENERAL CONSTRUCTION CONSIDERATIONS ARE PROVIDED TO MINIMIZE THE POTENTIAL FOR DEVELOPMENT OF SINKHOLES AT THE SITE BOTH DURING AND FOLLOWING CONSTRUCTION.

- SURFACE WATER SHOULD NOT BE ALLOWED TO COLLECT OR POOL IN LOW LYING AREAS OF THE SITE AND SHOULD BE DIRECTED TO APPROPRIATE STORMWATER CHANNELS. EXPEDITIOUS BACKFILLING OR GRADING OF LOW-LYING AREAS WILL ALSO HELP MINIMIZE THE POTENTIAL FOR THE DEVELOPMENT OF SINKHOLES.

- THE BASES OF FOUNDATION EXCAVATIONS SHOULD BE REVIEWED FOR UNUSUALLY SOFT OR WET SOIL CONDITIONS, ANY UNSTABLE AREAS ENCOUNTERED SHOULD BE FURTHER EXCAVATED AND REVIEWED BY KLEINFELDER TO DETERMINE THE EXTENT OF ANY SOLUTION ACTIVITY SO THAT REMEDIAL MEASURES CAN BE DESIGNED AND IMPLEMENTED.

- THE EXTENT OF EXCAVATIONS SHOULD BE KEPT TO A MINIMUM AND THE INFILUX OF SURFACE WATER INTO EXCAVATIONS SHOULD BE MINIMIZED.

- POSITIVE DRAINAGE AWAY FROM THE PROPOSED STRUCTURES SHOULD ALWAYS BE MAINTAINED. ROOF DRAINS SHOULD ALSO BE DIRECTED AWAY FROM THE STRUCTURES AND INTO DESIGNATED, STORM SEWER CONNECTIONS.

- STORM SEWER CONVEYANCE LINES SHOULD BE CONSTRUCTED WITH WATERTIGHT JOINTS.

- UNPAVED AREAS, SWALES, AND/OR SURFACE/SUBSURFACE STORMWATER MANAGEMENT FACILITIES SHOULD BE AVOIDED IMMEDIATELY ADJACENT TO FOUNDATION AREAS.

- EXTERIOR BACKFILL AROUND FOUNDATIONS SHOULD CONSIST OF FINE-GRAINED, ON-SITE SOILS, (I.E. CLAY) TO LIMIT STORMWATER INFILTRATION IN FOUNDATION AREAS.

CONSIDERATIONS OF KARST GEOLOGY PER GEOTECHNICAL ENGINEERING REPORT PREPARED BY KLEINFELDER, DATED NOVEMBER 4, 2021

SOIL SUITABILITY AND CHARACTERISTICS

MAP UNIT SYMBOL	SOIL	DEPTH TO SEASONAL HIGH WATER TABLE	DEPTH TO BEDROCK	BRIEF DESCRIPTION OF SOIL	DEPTH FROM SURFACE OF TYPICAL PROFILE	PERMEABILITY	SHRINK/SWELL POTENTIAL	HYDROLOG IC GROUP	SUSCEPTIBILITY TO HEAVING	FOR USE AS ROAD FILL	FOR USE AS TOPSOIL	FOR USE AS SAND, GRAVEL, AND STONE	HYDRC
Ubb	LOESSHILLS LIMESTONE, 1 TO 3 PERCENT SLOPES	60 INCHES	40-9 IN	THIS COMPONENT IS ON HILLS. UPLANDS. THE PARENT MATERIAL CONSISTS OF GRADED AREAS OF ARGILLACEOUS LIMESTONE. DEPTH TO A ROOT RESTRICTIVE LAYER, BEDROCK, LITHIC, IS 40 TO 90 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY LOW. AVAILABLE WATER TO A DEPTH OF 60 INCHES IS HIGH. THE SOIL IS NOT FLOODED. IT DOES NOT FLOOD. A SEASONAL ZONE OF WATER SATURATION IS AT 60 INCHES DURING HEAVY RAINFALL WHICH NORMALLY DECREASES ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 1 PERCENT. THIS SOIL DOES NOT MEET HYDRC CRITERIA.	0 TO 60 INCHES SILTY CLAY LOAM & TO 60 INCHES CLAY	WELL DRAINED	MODERATE	C	MODERATE	POOR	POOR	POOR	NO
UkaB	URBAN LAND, 0 TO 10 PERCENT SLOPES			URBAN LAND IS MISCELLANEOUS AREA.						NOT RATED	NOT RATED	NOT RATED	NO

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 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: NITROGEN, PHOSPHORUS, POTASSIUM, SULFUR, 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 PA DEP.

- 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 THE PENN STATE.

- 7. SOIL TYPES SUSCEPTIBLE TO SINKHOLE AND OTHER SOIL TYPES, LIMITING EMBANKMENT SLOPE STEEPNESS AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.
- RESOLUTIONS: LOCATING THOSE FACILITIES ON OTHER SOIL TYPES, LINING RESERVOIR AREAS WITH IMPERMEABLE LININGS, 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 WHEN 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.

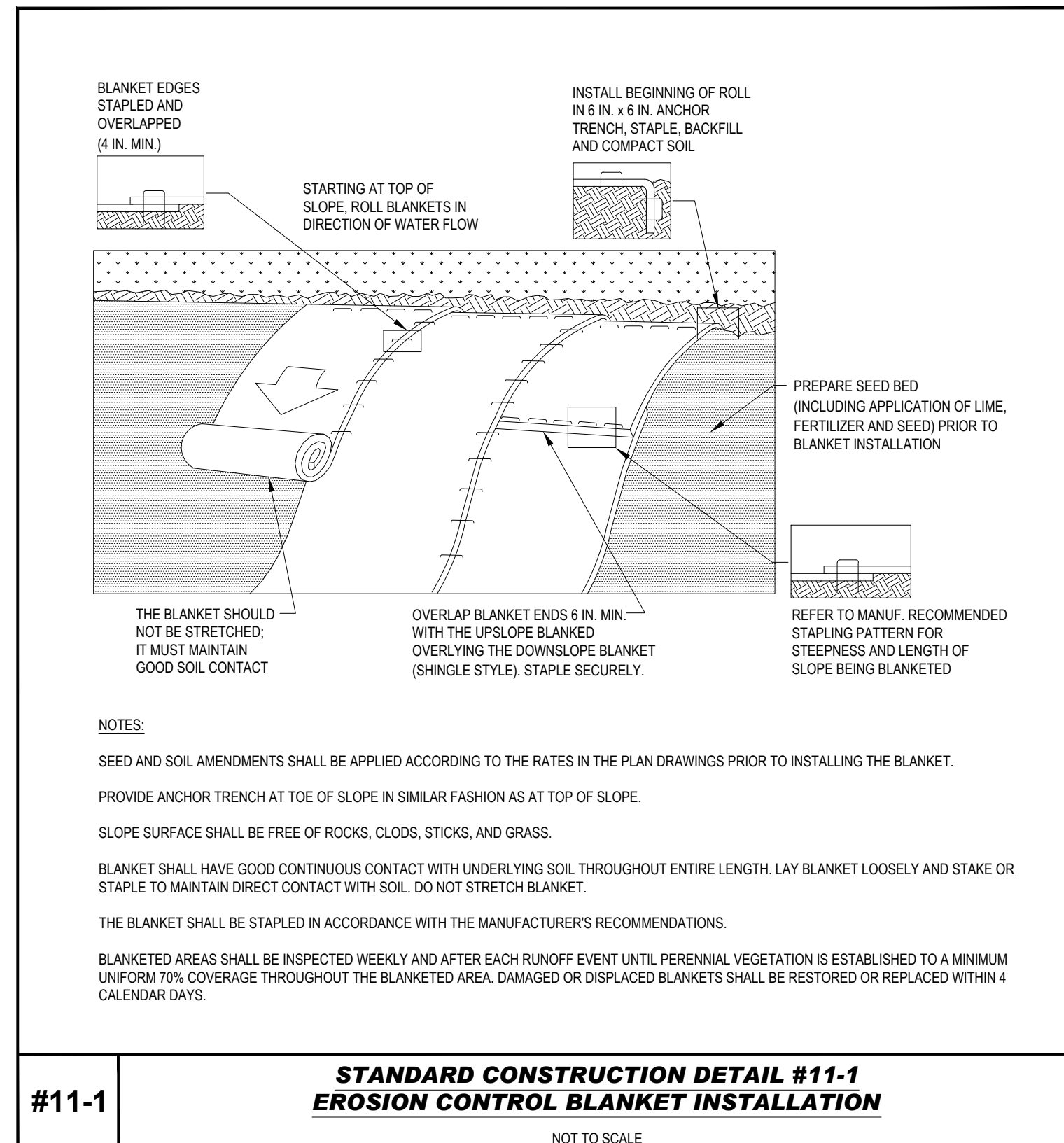
EXCAVATE THE LOOSE, WET SOILS SURROUNDING THE SINKHOLE TO EXPOSE THE SINKHOLE "THROAT" (THE OPENING IN THE ROCK) AND THE ADJACENT STABLE SOILS/ROCK WHERE POSSIBLE. THE EXCAVATION SHALL EXTEND A MINIMUM OF TWO FEET (2') BEYOND THE STABLE SOILS OR TO THE ROCK SURFACE, WHICHEVER IS ENCOUNTERED FIRST.

FILL THE EXPOSED SINKHOLE "THROAT" WITH LEAN CONCRETE TO BLOCK THE MIGRATION OF THE UPPER LAYERS OF SOIL THROUGH THE ROCK OPENING. AFTER CONCRETE IS 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.

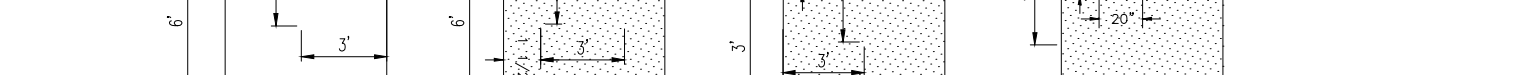
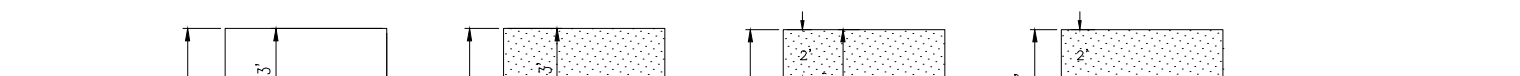
LONG-TERM OPERATION AND MAINTENANCE SCHEDULE

- 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-SETTING 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 RAINFALL 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.

BETHLEHEM SHARED SERVICES IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT BMPs AS DESCRIBED HEREIN.



STANDARD CONSTRUCTION DETAIL #11-1 EROSION CONTROL BLANKET INSTALLATION



LANDSCAPING FILL CAP DETAIL

EROSION CONTROL BLANKET STAPLE PATTERN GUIDE

NOTE: STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN, PROPER CONSOLE, BRANDED, STAPLE PATTERNS WILL VARY DEPENDING UPON APPLICATION, SOIL TYPE, EROSION, SOIL GRADE, SOIL TYPE AND ANNUAL RAINFALL. THE FOLLOWING ARE GRADES THAT REQUIRE STAPLES. STAPLES ARE REQUIRED ON LENGTHS, SLOPE GRADE, AND ESTIMATED RUNOFF. SPECIFIC STAPLE PATTERN PATTERNS ARE ILLUSTRATED IN DRAWING.

A, B, C, D, AND E - INCREASED STAPLE RATES MAY BE NECESSARY DEPENDING UPON THE SLOPE, SOIL TYPE, AND OTHER SPECIFIC REQUIREMENTS. CONTACT YOUR MANUFACTURER FOR FURTHER INFORMATION. CONTACT YOUR MANUFACTURER FOR FURTHER INFORMATION. CONTACT YOUR MANUFACTURER FOR FURTHER INFORMATION.

EROSTER	SEED CO.	RETENTION BASIN WILDLIFE SEED MIX SPECIFICATIONS (ERNMXX-127):
PANICUM CLAUDEANUM TOGA	DEERTONGUE TOGA	20%
CAREX VULPIDIVA (PA ECOTYPE)	FOX SEDGE	30%
ELYSIUM VIRGINICUM (PA ECOTYPE)	VIRGINIA WILDFIRE	20%
CAREX LURIDA (PA ECOTYPE)	LURD SEDGE	7%
CAREX SCOPARIA (PA ECOTYPE)	BLUNT BROOM SEDGE	7%
VERBENA HASTATA (PA ECOTYPE)	BLUE VERVAIN	7%
JUNCUS EFFUSUS	SOFT TRUSH	0.5%
AGROSTIS PERENNANS (NY ECOTYPE)	AUTUMN BENTGRASS, ALBANY PINE BUSH	15%
ACELPUS NICHOLSONII (PA ECOTYPE)	SHARP WILDEDGE	0.5%
SORGHUM OLYRUM (PA ECOTYPE)	WOOL GRASS	0.2%
HELENIUM AUTUMNALE (PA ECOTYPE)	COMMON SNEEZEWEED	0.2%
ASTER NOV-ANGLAIE (PA ECOTYPE)	NEW ENGLAND ASTER	0.1%
ASTER FINEGUS (PA ECOTYPE)	PURPLESTRA ASTER ASTER	0.1%
ASTER LAMILLATA (PA ECOTYPE)	FLAT TOPPED WHITE ASTER	0.1%
EUPATORIUM PERFORIATUM (PA ECOTYPE)	BONESET	0.1%
LOBELIA SPICULATA (PA ECOTYPE)	GREAT BLUE COBELIA	0.1%

SEEDING RATE: 20 LBS PER ACRE OF THE ERNST MIX

MIXED SEED: THE ERNST SEED MIX MUST BE ACCOMPANIED BY ONE OF THE FOLLOWING TEMPORARY SEED SPECIFICATIONS APPROPRIATE FOR THE YEAR OF PLANTING SHALL BE USED:

- ANNUAL RYE (10 LBS PER ACRE)
- OR SPRING GRASS (8 LBS PER ACRE)
- OR WINTER RYE (5 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 PROMPT GERMINATION.
- 3) THE ENTIRE FACILITY SHALL BE STABILIZED WITH A NORTH AMERICAN GREEN SC20 STRAW & COCOON MAT (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 ROOT OF AT LEAST 1".
- 5) THE SEEDING AREA SHALL BE MOVED ONCE AFTER THE FIRST GROWING SEASON, EARLY IN THE SPRING, AND THEN SHALL BE MOVED NO MORE THAN ONCE EVERY THREE YEARS THEREAFTER EARLY IN SPRING ONLY.

PROOF OF RECORDING

RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF NORTHAMPTON COUNTY, PENNSYLVANIA ON _____, 20____, IN MAP BOOK VOLUME _____.

PAGE _____

_____, NORTHAMPTON COUNTY RECORDER OF DEEDS

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

REVISIONS

REV	DATE	COMMENT	DRAWN BY	CHECKED BY
1	04/22/2022	PER NPDES SUBMISSION	TK	MMC
2	07/11/2022	REV PER CITY COMMENTS	TKC	MMC

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.

811
Know what's below.
Call before you dig.
PENNSYLVANIA
YOU MUST CALL 811 BEFORE ANY EXCAVATION WHETHER ITS FOR PRIVATE OR PUBLIC WORK.
1-800-244-1779
WWW.811.PA.GOV
20212392542 & 20212392479

NOT APPROVED FOR CONSTRUCTION

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.: PY212051
DRAWN BY: TK
CHECKED BY: MMC
DATE: 04/20/2022
CAD ID: PY212051-CNDS-2A

PRELIMINARY! FINAL LAND DEVELOPMENT PLANS

FOR
BETHLEHEM SHARED SERVICES, LLC

PROPOSED OFFICE & RETAIL MIXED-USE DEVELOPMENT

