PRELIMINARY/FINAL LAND DEVELOPMENT PLAN PHOENIX TUBE

AWARD 15, BLOCK 105 CITY OF BETHLEHEM NORTHAMPTON COUNTY PENNSYLVANIA

Record Notes

1. JAVA SD STEEL, LLC. IS THE DEVELOPER FOR THE PROJECT.

2. THE LOT SHOWN IS SUBJECT TO ALL EASEMENTS VISIBLE, OR ON RECORD, OR AS REQUIRED BY A UTILITY TO SERVE SAID LOT AT SUCH TIME 3. ALL PUBLIC IMPROVEMENTS IN THIS PROJECT SHALL BE CONSTRUCTED TO THE STANDARDS OF THE CITY OF BETHLEHEM. THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION AND THE APPROPRIATE PUBLIC UTILITY AUTHORITIES, UNLESS SAID IMPROVEMENTS ARE APPROVED

THE DEVELOPER SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL STREET IDENTIFICATION AND TRAFFIC SIGNS AS DEEMED NECESSARY BY 5. EXISTING UTILITY POLES REQUIRED TO BE RELOCATED FOR CONSTRUCTION OF IMPROVEMENTS SHALL BE RELOCATED IN ACCORDANCE WITH ALL

6. IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM, FIRM (FLOOD INSURANCE RATE MAP), FOR THE CITY OF BETHLEHEM, NORTHAMPTON COUNTY, COMMUNITY PANEL NUMBERS 42095C0263E, EFFECTIVE DATE JULY 16, 2014, THE PROJECT SITE IS LOCATED IN THE ZONE "X" AREA OF MINIMAL FLOOD HAZARD.

7. SINKHOLE REPAIRS AND CLOSURES SHALL BE COMPLETED IN ACCORDANCE WITH THE DETAILS PROVIDED ON THE PROJECT DRAWINGS. 8. THE SANITARY SEWER LATERALS ARE PROPOSED TO BE PRIVATELY OWNED.

9. NO UTILITY WILL BE ACCEPTED BY THE CITY WITH A STRUCTURE OR REMNANT THEREOF ON TOP OF THE UTILITY. NO STRUCTURE SHOULD BE

BETHLEHEM'S REQUIREMENTS FOR PARKING LOT AREA LIGHTING. POLE HEIGHTS MAY NOT BE GREATER THAN 20 FEET. ANY ARTIFICIAL LIGHT MUST NOT INFRINGE ON ADJACENT PROPERTY. ALL LIGHT FIXTURES SHALL HAVE A CUT OFF DESIGN THAT AIMS LIGHT DIRECTLY DOWNWARD. ALL INSTALLATION SHALL COMPLY WITH PPL'S LATEST VERSION OF THE "CUSTOMER INSTALLED THREE PHASE PAD-MOUNTED PRECAST TRANSFORMER FOUNDATION" AND "CUSTOMER INSTALLED DUCT SYSTEM" RULES AND REGULATIONS DATED 2020, OR LATEST VERSION.

11. AT THE TIME OF ANY FUTURE EXPANSION THE DESIGNER SHALL VERIFY AND PROVIDE ANY FEATURES NECESSARY TO ASSURE THAT THE DOWNSTREAM STORM SYSTEM HAS ADEQUATE CONVEYANCE CAPACITY AND MEETS CITY OF BETHLEHEM STANDARDS.

12. THE OWNER SHALL INSTALL KNOX BOX FOR CITY OF BETHLEHEM FIRE DEPARTMENT ACCESS.

DEVICES SHALL BE ACTIVATED BY WATERFLOW EQUIVALENT TO THE FLOW OF A SINGLE SPRINKLER OF THE SMALLEST ORIFICE SIZE INSTALLED IN THE SYSTEM. ALARM DEVICES SHALL BE PROVIDED ON THE EXTERIOR OF THE BUILDING IN AN APPROVED LOCATION. WHERE A FIRE ALARM SYSTEM IS INSTALLED, ACTUATION OF THE AUTOMATIC SPRINKLER SYSTEM SHALL ACTUATE THE BUILDING FIRE ALARM SYSTEM. IN AUTOMATIC SPRINKLER SYSTEMS WHERE MULTIPLE SPRINKLER RISERS ARE REQUIRED, AND THE RISERS ARE LOCATED IN SEPARATE AREAS WITHIN THE BUILDING, AN OUTSIDE VISIBLE ALARM NOTIFICATION APPLIANCE SHALL BE REQUIRED FOR EACH RISER. SUCH APPLIANCE SHALL BE A WHITE STROBE (MINIMUM 95 CANDELA STROBE RATING) PLACED IN AN APPROVED LOCATION ON THE EXTERIOR WALL, AS CLOSE AS PRACTICABLE, TO EACH SPRINKLER RISER. THE STROBE WILL ACTIVATE WHEN THE WATER FLOW ALARM FOR ITS RESPECTIVE RISER IS ACTIVATED. (ORD.

14. PROPOSED MONUMENT SIGN LOCATION AND SIZE SHALL CONFORM WITH THE CITY'S ZONING ORDINANCE AND WILL REQUIRE A PERMIT FROM THE CITY PRIOR TO CONSTRUCTION.

15. ANY CHANGE IN THE LOCATION OF THE FIRE DEPARTMENT CONNECTION (FDC) SHALL BE APPROVED BY THE CITY OF BETHLEHEM FIRE

16. THE OWNER ACKNOWLEDGES THE PARKING SPACES ALONG BETHLEHEM DRIVE ARE WITHIN THE DRAINAGE EASEMENT. IF THE CITY PLANS TO DISTURB THIS AREA, THE OWNER IS RESPONSIBLE FOR COST AND REPAIR FOR ANY IMPACT TO THE PARKING LOT.

NPDES Note

As-Built 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.

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 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 FORM OF 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 DIGITÀL MAPS SHALL BE THE STANDARDIZED LAYERS PREPARED AND UTILIZED BY THE CITY OF BETHLEHEM TO ENSURE COMPATIBILITY WITH THE CITY'S EXISTING CADD STANDARDS AND AS DESCRIBED IN APPENDIX A OF THE

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.

Engineering Permits Note

CITY'S SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

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

Stormwater Notes

1. THE MAINTENANCE OF STORM WATER FACILITIES NOT DEDICATED TO AND ACCEPTED BY THE CITY, 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.

2. THE DRAINAGE EASEMENT PROVIDES FOR THE FLOW OF STORMWATER 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 STORMWATER, AND ANY SUCH PROPOSED PROVISION SHALL BE APPROVED IN WRITING BY THE CITY ENGINEER.

Inlet Marker Note

ALL PUBLIC INLETS SHOULD HAVE INLET MARKERS. THE DESIGN OF THE INLET MARKERS SHALL BE APPROVED BY THE CITY

Building Stakeout Note

THE BUILDING FOOTPRINT SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO STAKEOUT



/ NEAREST INT. / TOWNSHIP / COUNTY JENNINGS ST. CITY OF BETHLEHEM NORTHAMPTON Benchmarks for this Plan

ZARNAS HOLDING COMPANY LLC

N7-5-1L, 164.4 FT. EAST OF BM-1

1. TOP OF IRON PIN AT THE SW CORNER OF PARCEL

2. TOP OF IRON PIN AT THE NE CORNER OF PARCEL

. TOP OF IRON PIN AT THE SE CORNER OF PARCEL

DESTROYED DURING CONSTRUCTION, THE CONTRACTOR

SHALL ESTABLISH A NEW BENCHMARK/BENCHMARKS.

N7-5-1E, ALONG THE WEST RIGHT-OF-WAY OF

BETHLEHEM DRIVE, 231.7 FT. EAST OF BM-2

NOTE: FOR THE TWO BENCHMARKS THAT WILL BE

N7-5-1E, ALSO THE SE CORNER OF LANDS N/F OF



Location Map

CITY ZONING DISTRICTS LI – LIGHT INDUSTRIAL

	SCALE: 1" = 600'	GC – GENERAL COMI
Site Data		
PARCELS: N7 - 5 - N7 - 5 - N7 - 5 -	1L 1.24 ACRES / 53,911	S.F. S.F. S.F.
TAX MAP REFERENCED: MADEED REFERENCED:	AP N7, BLOCK 5 LOT 1E MAP N7, BLOCK 5 2004-1-488842 2022-1-0652	
ZONING DISTRICT: EXISTING USE:	LI (LIGHT INDUS VACANT LO	•
PROPOSED USE:	MANUFACTURING (INDU	JSTRIAL USE)
WATER: SEWER:	PUBLIC PUBLIC	
	REQUIRED/ALLOWED IN DISTRICT	PROPOSED
MINIMUM DEVELOPMENT AREA: MAXIMUM BUILDING COVERAGE: MAXIMUM BUILDING HEIGHT: MINIMUM LOT WIDTH: IMPERVIOUS COVERAGE	10,000 S.F. 65% 80 FT 80 FT 90%	4.48 ACRES 46.50% 33'-6" 219.9 FT. 76.75 %
SETBACKS:		(149,783 S.F
FRONT YARD: REAR YARD: SIDE YARD:	20 FT 15 FT 15 FT	78.14 FT 15.32 FT. 15.27 FT.
FRONT YARD: REAR YARD: SIDE YARD: PARKING REQUIREMENTS:	15 FT 15 FT	15.32 FT. 15.27 FT.
FRONT YARD: REAR YARD: SIDE YARD:	15 FT	15.32 FT.
FRONT YARD: REAR YARD: SIDE YARD: PARKING REQUIREMENTS: MINIMUM SIZE: SPACES REQUIRED: MANUFACTURING ESTABLISHMENT	15 FT 15 FT	15.32 FT. 15.27 FT. 9' X 18'
FRONT YARD: REAR YARD: SIDE YARD: PARKING REQUIREMENTS: MINIMUM SIZE: SPACES REQUIRED: MANUFACTURING ESTABLISHMENT 1 SP./1.5 EMP AT MAX. NUMBER OF GROSS FLOOR AREA.	15 FT 15 FT 9' X 18' AT ONE SHIFT PLUS 1 SP. FOR EACH 10,000 XIST. BLDG. PLUS NEW 69,108 S.F. ADDITION) KIST. EAST BLDG.) ALL THREE BLDG'S.)	15.32 FT. 15.27 FT. 9' X 18'
FRONT YARD: REAR YARD: SIDE YARD: PARKING REQUIREMENTS: MINIMUM SIZE: SPACES REQUIRED: MANUFACTURING ESTABLISHMENT 1 SP./1.5 EMP AT MAX. NUMBER OF GROSS FLOOR AREA. 35 EMP./1.5 = 24 SPACES (EX 90,729/10,000 = 9 SPACES (EX 90,729/10,000 = 9 SPACES (EX SIDE SEARCES)	15 FT 15 FT 9' X 18' AT ONE SHIFT PLUS 1 SP. FOR EACH 10,000 XIST. BLDG. PLUS NEW 69,108 S.F. ADDITION) KIST. EAST BLDG.) ALL THREE BLDG'S.)	15.32 FT. 15.27 FT. 9' X 18'
FRONT YARD: REAR YARD: SIDE YARD: PARKING REQUIREMENTS: MINIMUM SIZE: SPACES REQUIRED: MANUFACTURING ESTABLISHMENT 1 SP./1.5 EMP AT MAX. NUMBER OF GROSS FLOOR AREA. 35 EMP./1.5 = 24 SPACES (EXILIARY SPACES) 12 EMP./1.5 = 8 SPACES (EXILIARY SPACES) 14 EMP./1.5 = 8 SPACES (EXILIARY SPACES) 15 EMP./1.5 = 8 SPACES (EXILIARY SPACES) 16 TOTAL REQUIRED SPACES = 41	15 FT 15 FT 9' X 18' AT ONE SHIFT PLUS 1 SP. FOR EACH 10,000 XIST. BLDG. PLUS NEW 69,108 S.F. ADDITION) XIST. EAST BLDG.) ALL THREE BLDG'S.)	15.32 FT. 15.27 FT. 9' X 18'
FRONT YARD: REAR YARD: SIDE YARD: PARKING REQUIREMENTS: MINIMUM SIZE: SPACES REQUIRED: MANUFACTURING ESTABLISHMENT 1 SP./1.5 EMP AT MAX. NUMBER OF GROSS FLOOR AREA. 35 EMP./1.5 = 24 SPACES (EX 12 EMP./1.5 = 8 SPACES (EX 90,729/10,000 = 9 SPACES (TOTAL REQUIRED SPACES = 41) TOTAL SPACES REQUIRED:	15 FT 15 FT 9' X 18' AT ONE SHIFT PLUS 1 SP. FOR EACH 10,000 XIST. BLDG. PLUS NEW 69,108 S.F. ADDITION) XIST. EAST BLDG.) ALL THREE BLDG'S.) 41 SPACES	15.32 FT. 15.27 FT. 9' X 18'

Deferral Request

THE APPLICANT, JAVA SD STEEL, LLC, IS REQUESTING A DEFERRAL OF THE FOLLOWING CITY OF BETHLEHEM SUBDIVISION AND LAND DEVELOPMENT

1. ARTICLE 1349, SECTION 1349.06(6): THE ORDINANCE REQUIRES THE CONSTRUCTION OF SIDEWALKS BUILT TO CITY SPECIFICATIONS IN ALL SUBDIVISIONS AND LAND DEVELOPMENT.

REVIEWED BY THE LEHIGH VALLEY PLANNING COMMISSION FOR LEHIGH AND NORTHAMPTON COUNTIES. LVPC STAFF PERSON RESPONSIBLE FOR REVIEW THIS PLAN WAS RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS FOR NORTHAMPTON COUNTY, ON______ PLAN BOOK_____, PAGE_____. **Owner Signature:** JAVA SD STEEL, LLC. COMMONWEALTH OF PENNSYLVANIA COUNTY OF NORTHAMPTON JAVA SD STEEL, LLC DAVID REALE CORPORATION NAME 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 THE PEACEFUL POSSESSION OF SAID CORPORATION AND THAT THERE ARE NO LIENS PENDING AFFECTING THE TITLE THEREOF. JAVA SD STEEL, LLC CORPORATION CORPORATION OFFICIAL SWORN AND SUBSCRIBED TO BEFORE ME THIS ___ DAY OF ____, ___ NOTARY PUBLIC MY COMMISSION EXPIRES ON .

PLANNING COMMISSION, BETHLEHEM, PENNSYLVANIA, DULY ENACTED AND APPROVED THIS PLAN LOCATED IN THE CITY OF BETHLEHEM, NORTHAMPTON

COUNTY AS SHOWN HEREIN.

__, 2023, THE BETHLEHEM CITY

Land Development Plans

- 1 COVER SHEET (RECORD PLAN 1 OF 2)
- 2 RECORD PLAN (2 OF 2) 3 EXISTING FEATURES AND DEMOLITION PLAN
- 4 GRADING & UTILITY PLAN
- 5 CURB GRADE PLAN
- 6 UTILITY PROFILE PLAN
- 7 UTILITY PROFILE PLAN
- 8 LANDSCAPE PLAN AND DETAILS 9 LIGHTING PLAN AND DETAILS
- 10 POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

11 POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS

- 12 POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS 13 EROSION & SEDIMENTATION CONTROL PLAN
- 14 EROSION & SEDIMENTATION CONTROL DETAILS

VEHICLE MOVEMENT EXHIBIT - 1 OF 2 AND 2 OF 2

- 15 EROSION & SEDIMENTATION CONTROL DETAILS
- 16 CONSTRUCTION DETAILS 17 CONSTRUCTION DETAILS

Supplemental Plans

Statement of Intent TO EXPAND AN EXISTING MANUFACTURING FACILITY WITH

ASSOCIATED PARKING AND INFRASTRUCTURE.



Bethlehem Office 252 Brodhead Road, Suite 100 P:610.691.5644 Bethlehem, PA 18017-8944 F:610.691.6968 HanoverEng.com

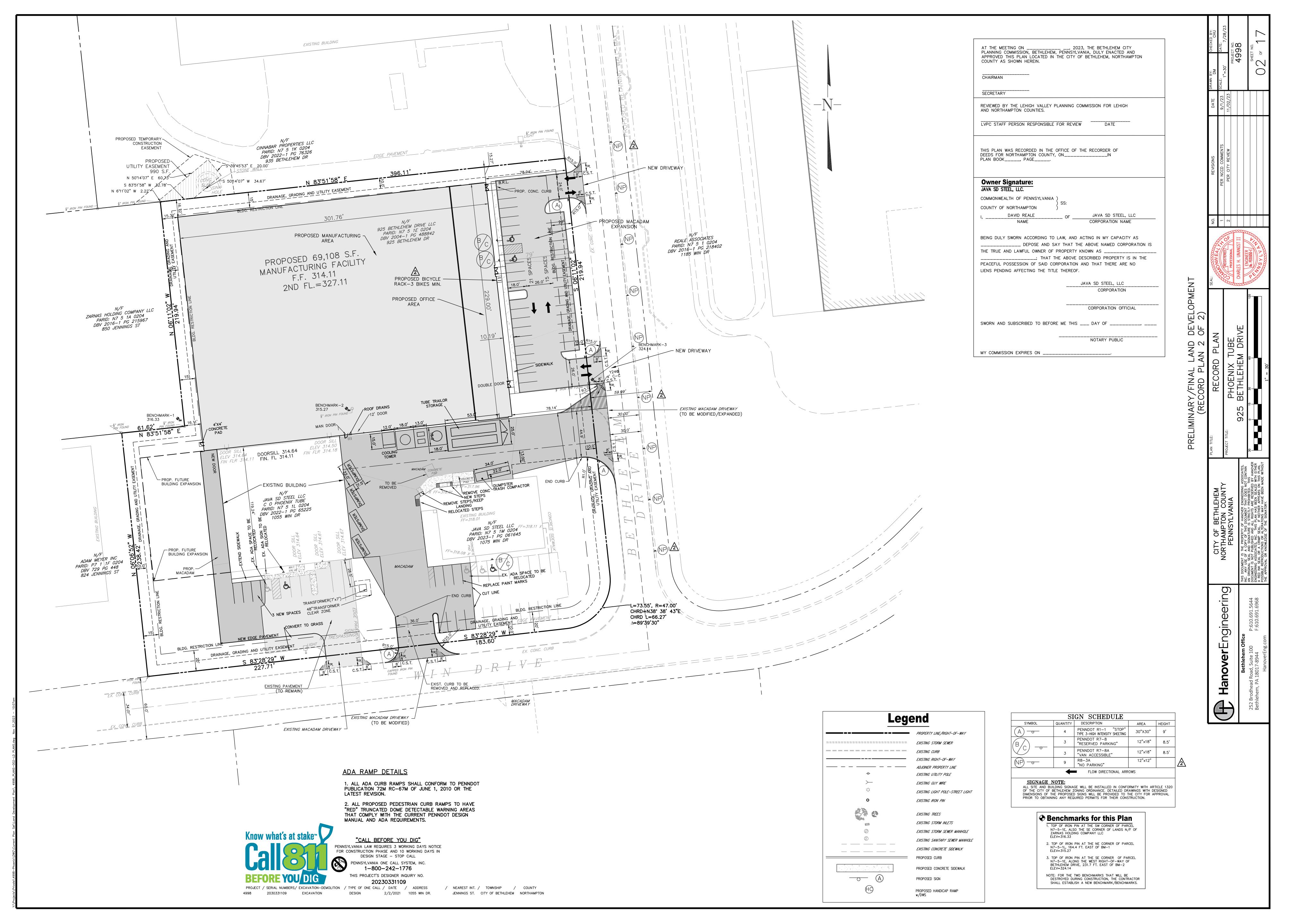
Owner/ Applicant

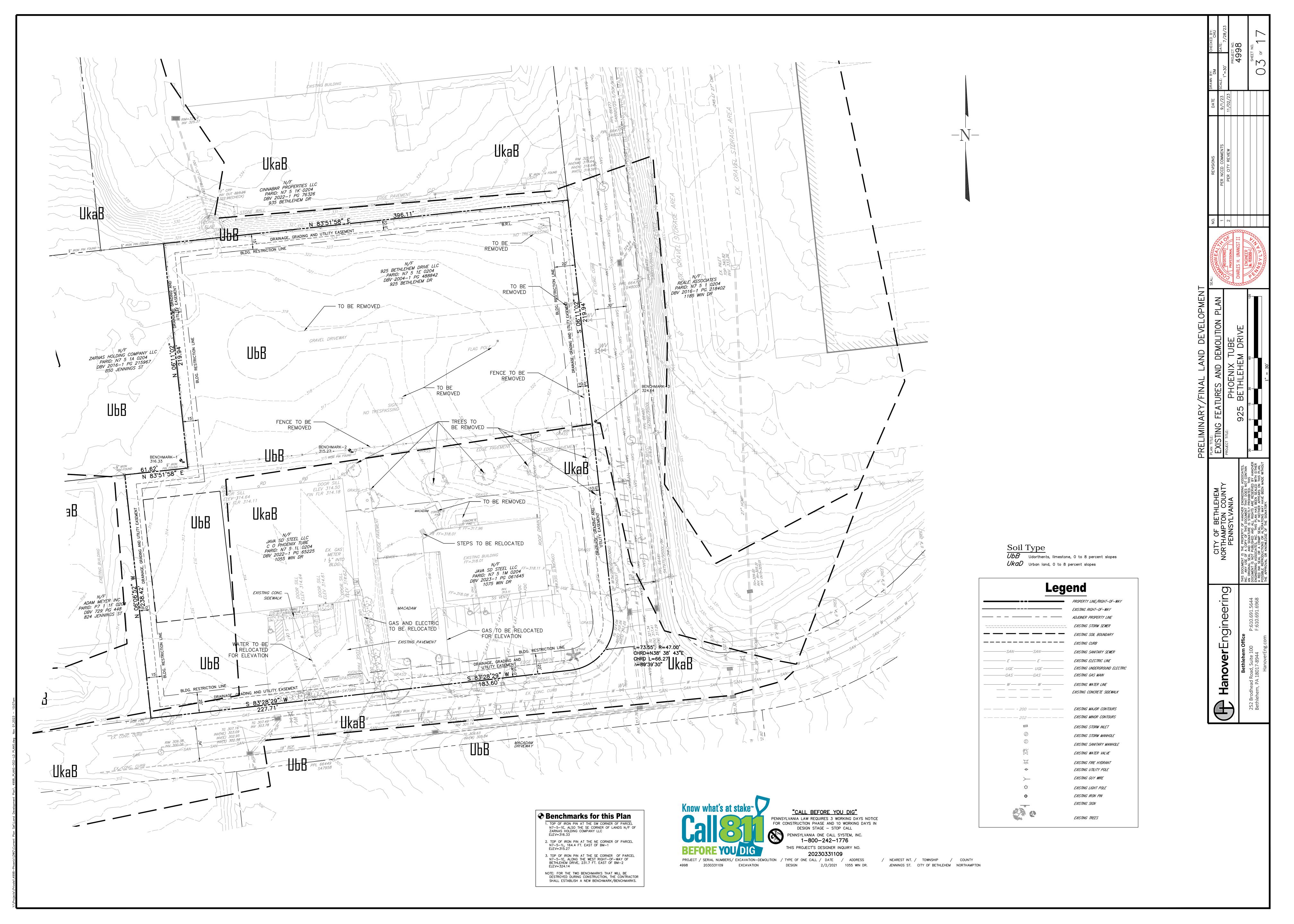
CEO

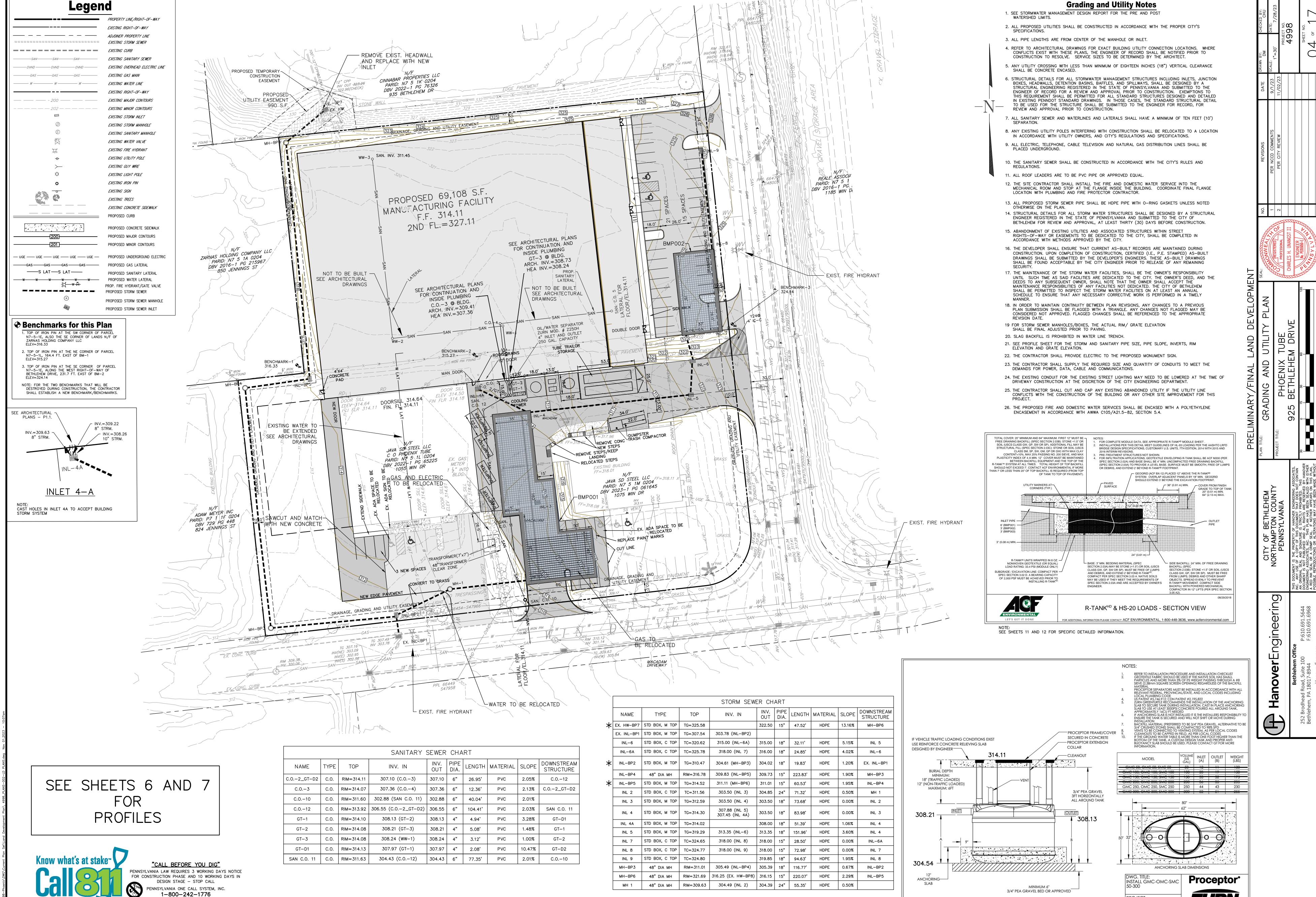
JAVA SD STEEL, LLC 1185 WIN DRIVE BETHLEHEM, PA 18017 PHONE 610.865.5337, EXT. 1145 CONTACT: DAVID REALE,

925 BETHLEHEM DRIVE BETHLEHEM, PA 18017

Site Addresses







* INLET BP2, BP5 AND BP7 REQUIRE SUMPS. SEE THE POST CONSTRUCTION

MANAGEMENT PLAN, SHEET 10 AND SHEET 12 FOR DETAIL.

THIS PROJECT'S DESIGNER INQUIRY NO.

DESIGN 2/2/2021 1055 WIN DR.

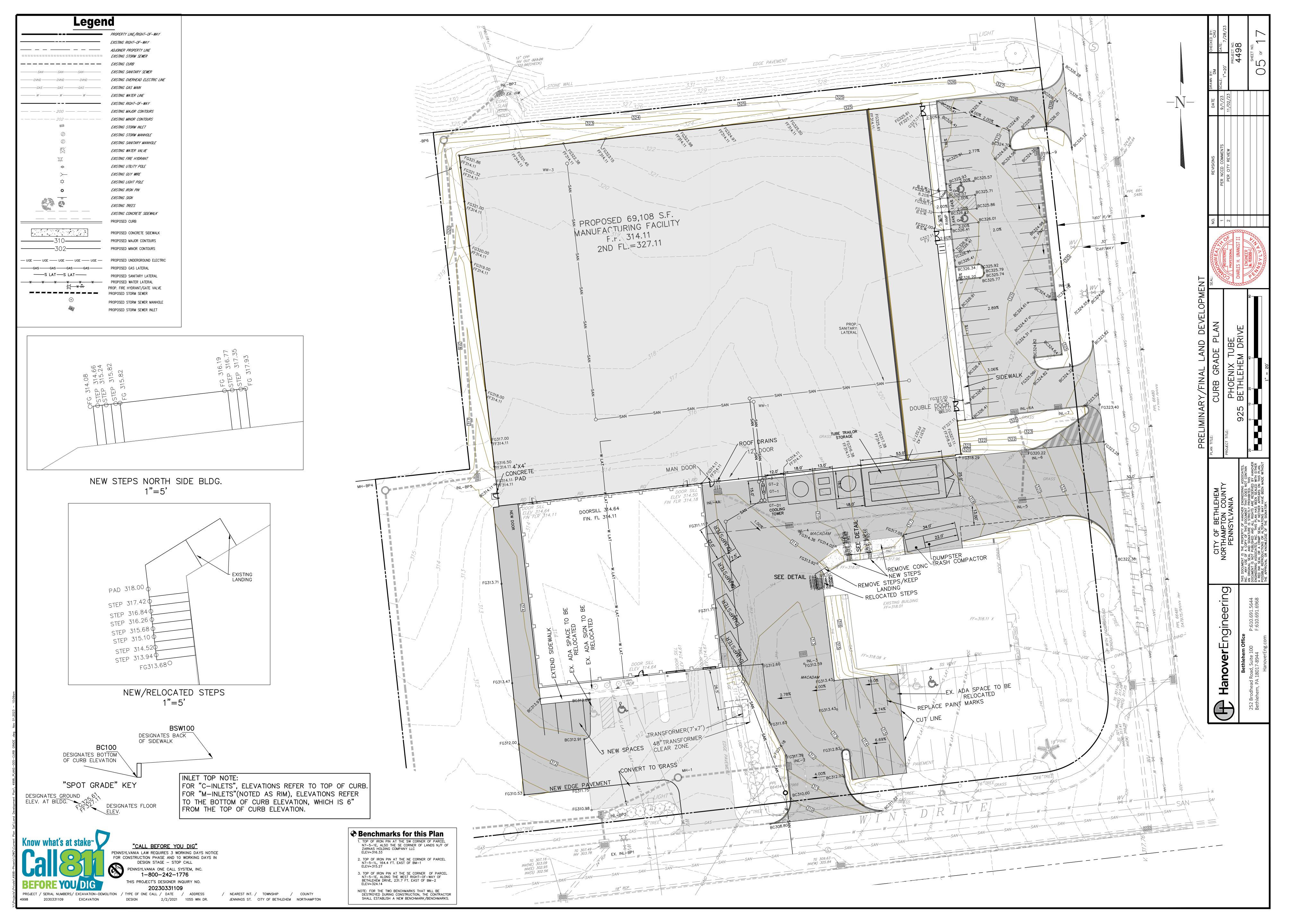
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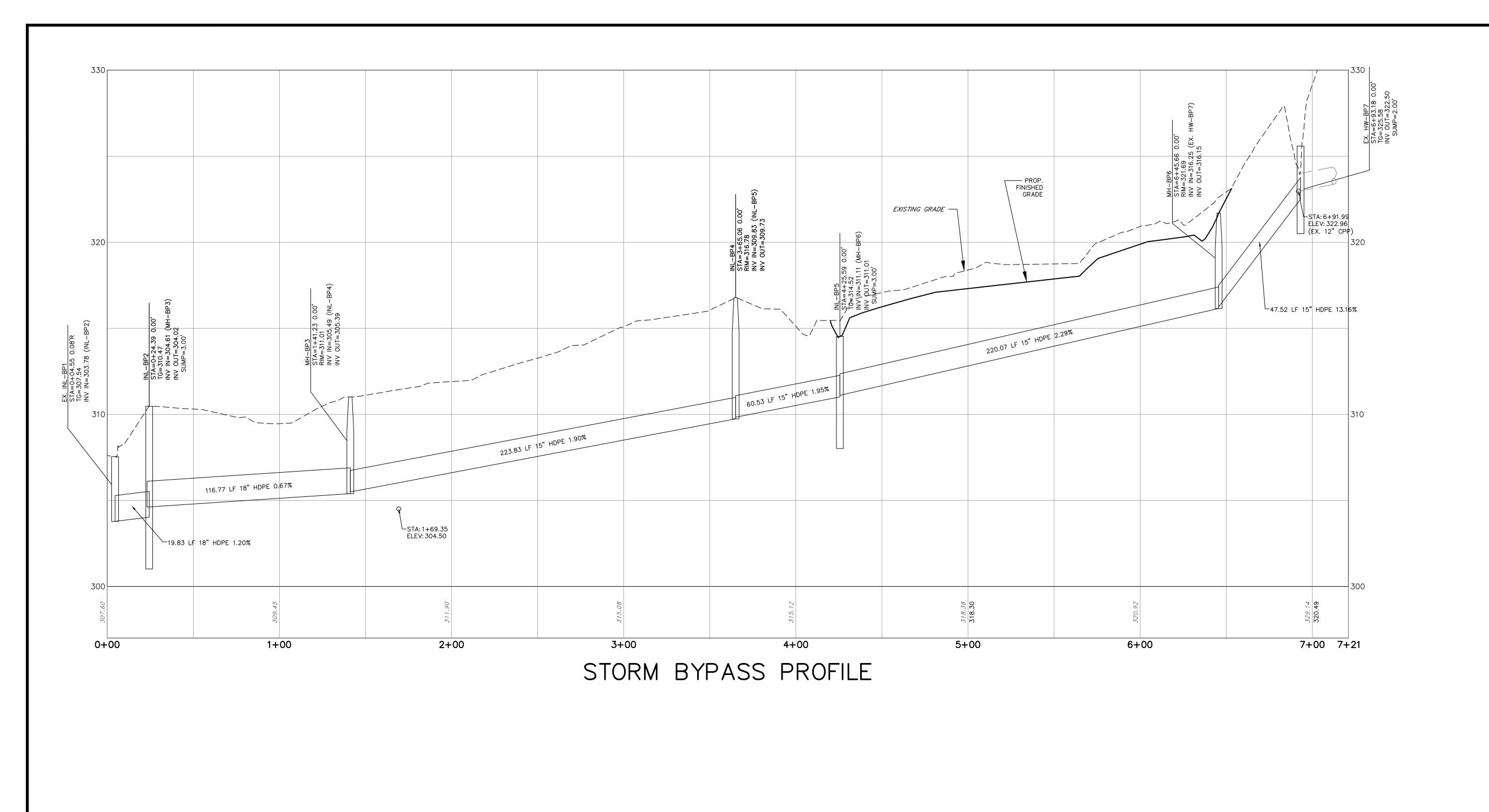
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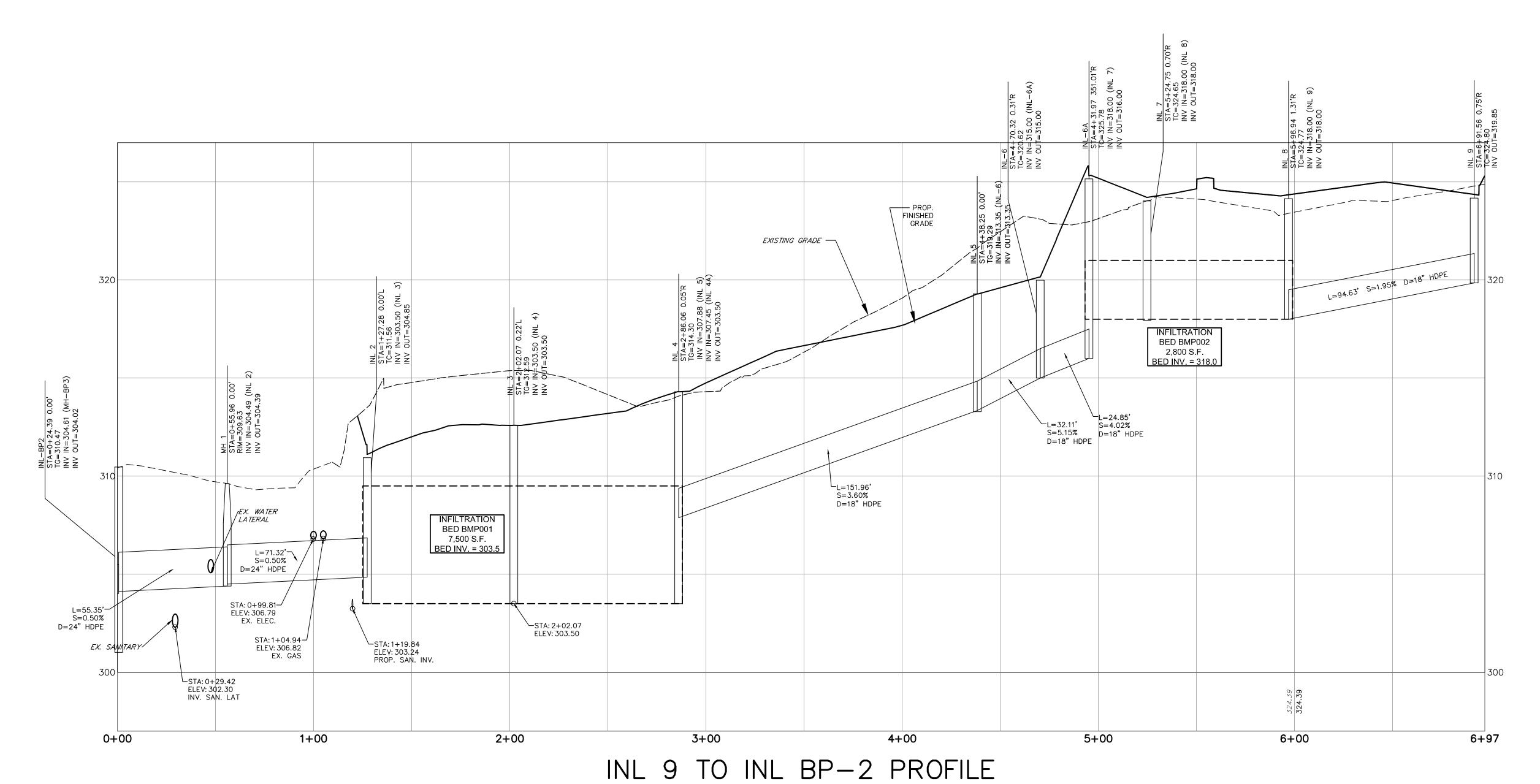
/ NEAREST INT. / TOWNSHIP / COUNTY

JENNINGS ST. CITY OF BETHLEHEM NORTHAMPTON

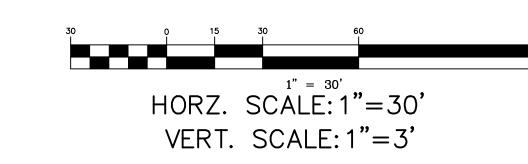
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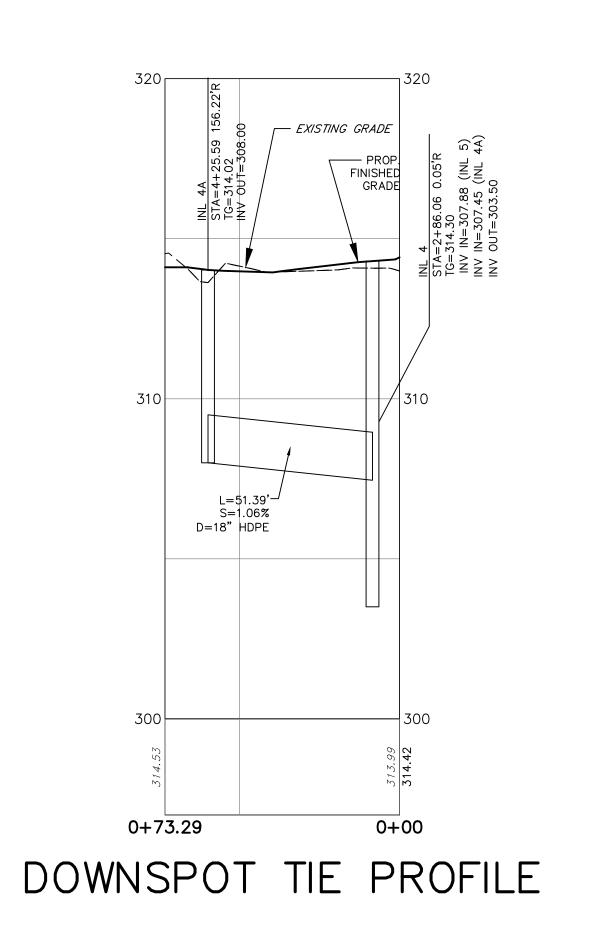












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/	JTILITY PROFILE PLAN	PHOENIX TUBE BETHLEHEM DRIVE	

CITY OF BETHLEHEM

NORTHAMPTON COUNTY

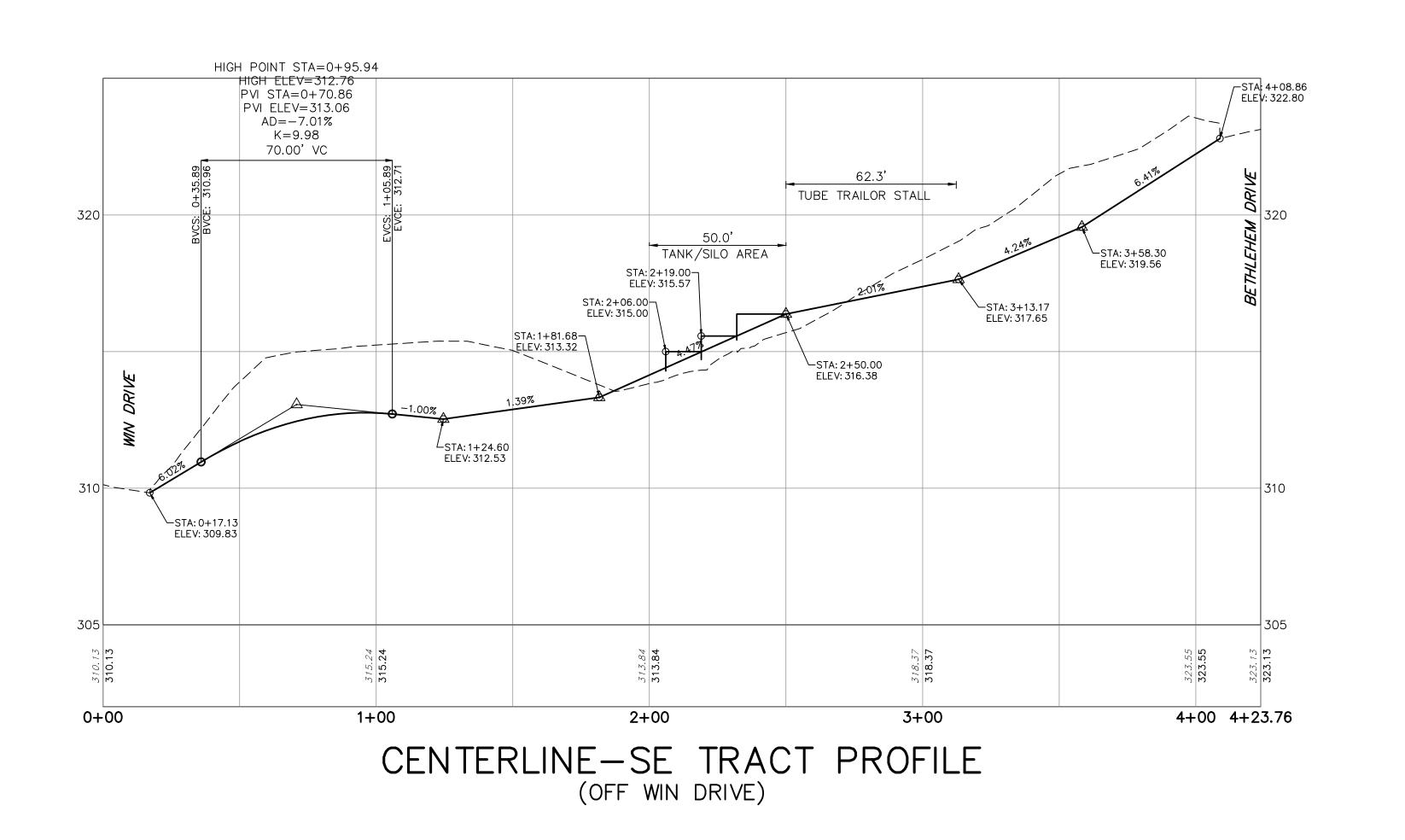
PENNSYLVANIA

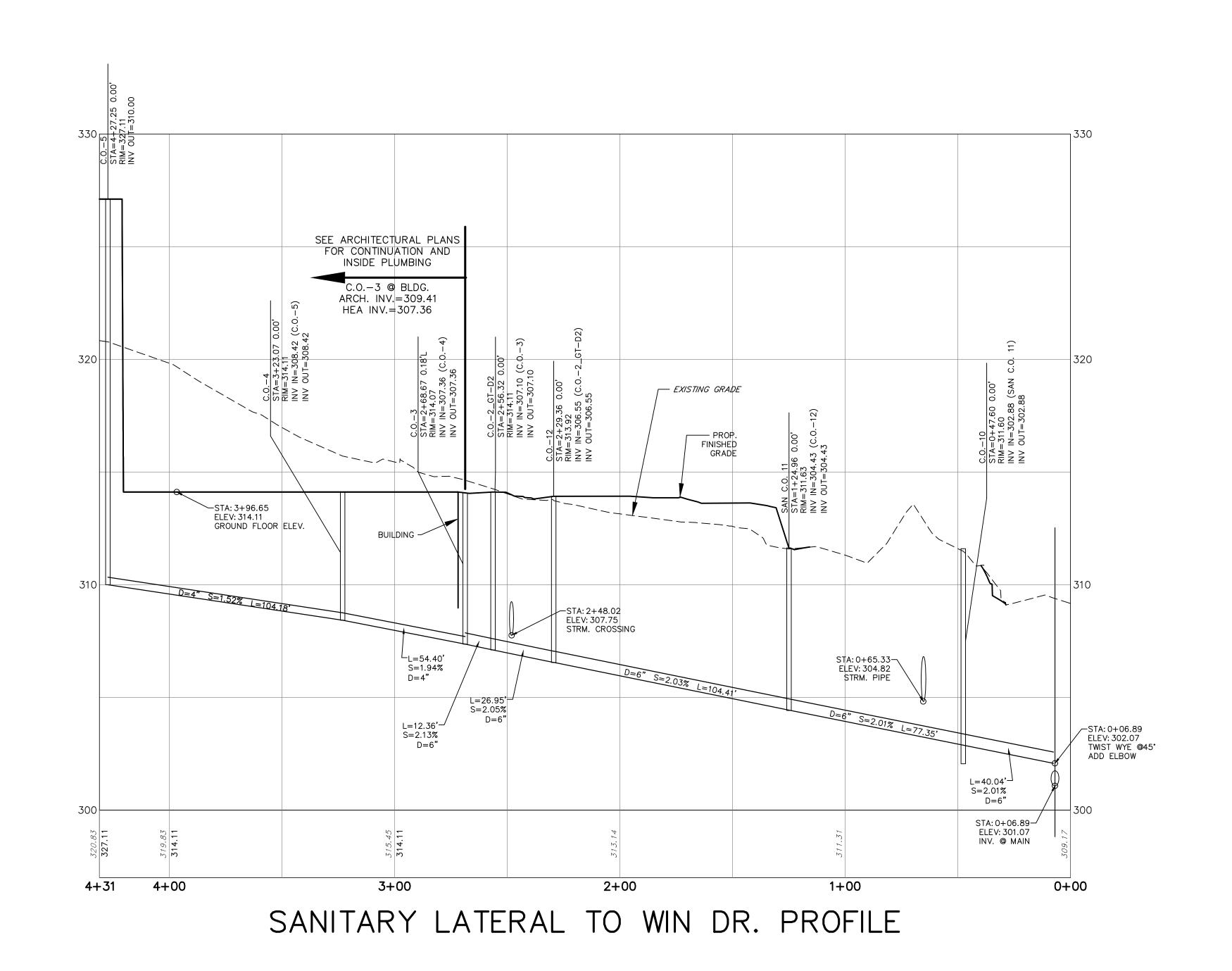
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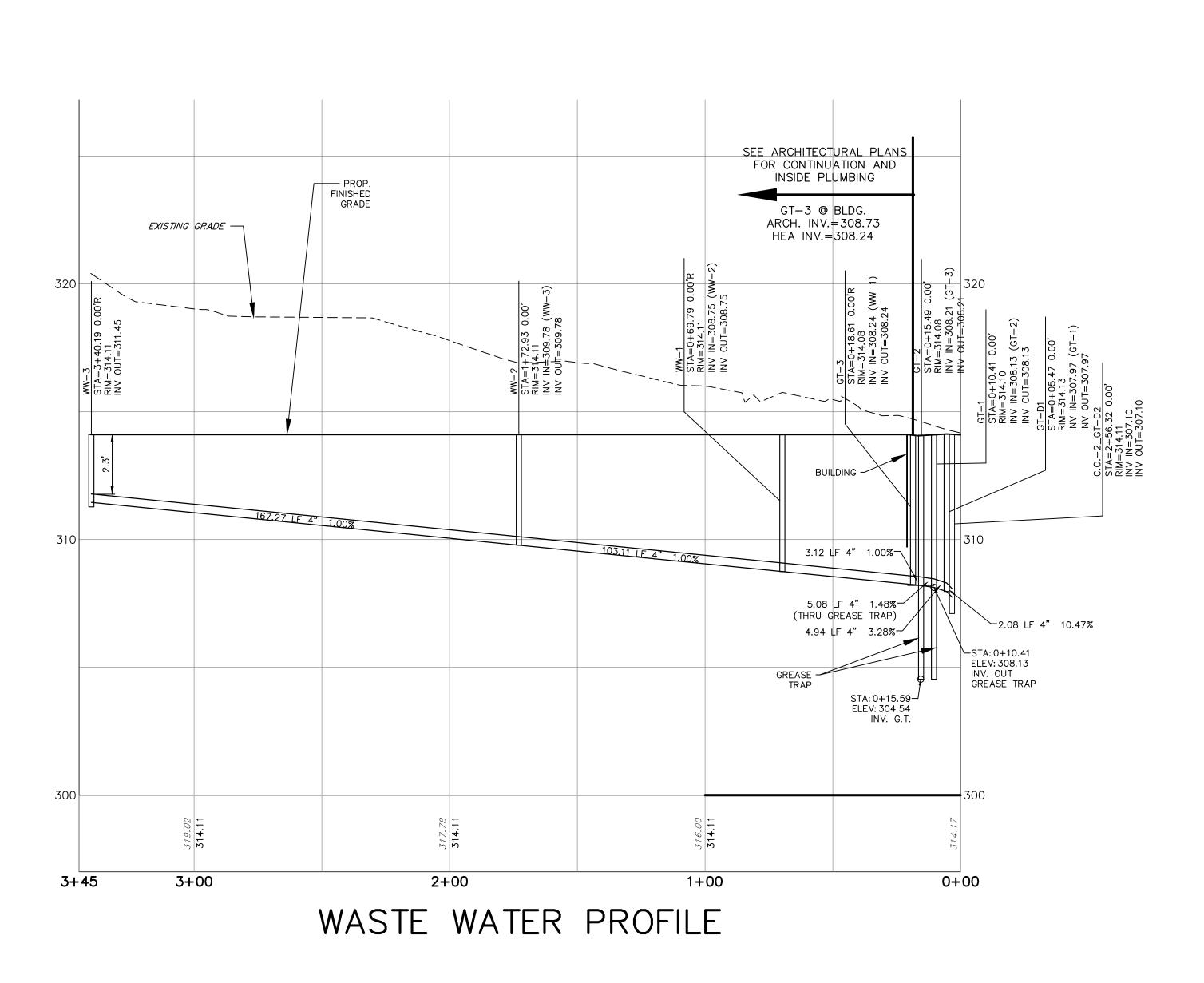
Hanover Engineering

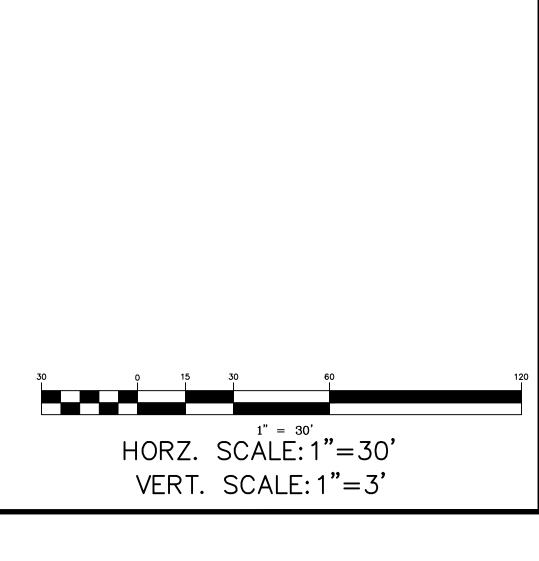
Bethlehem Office

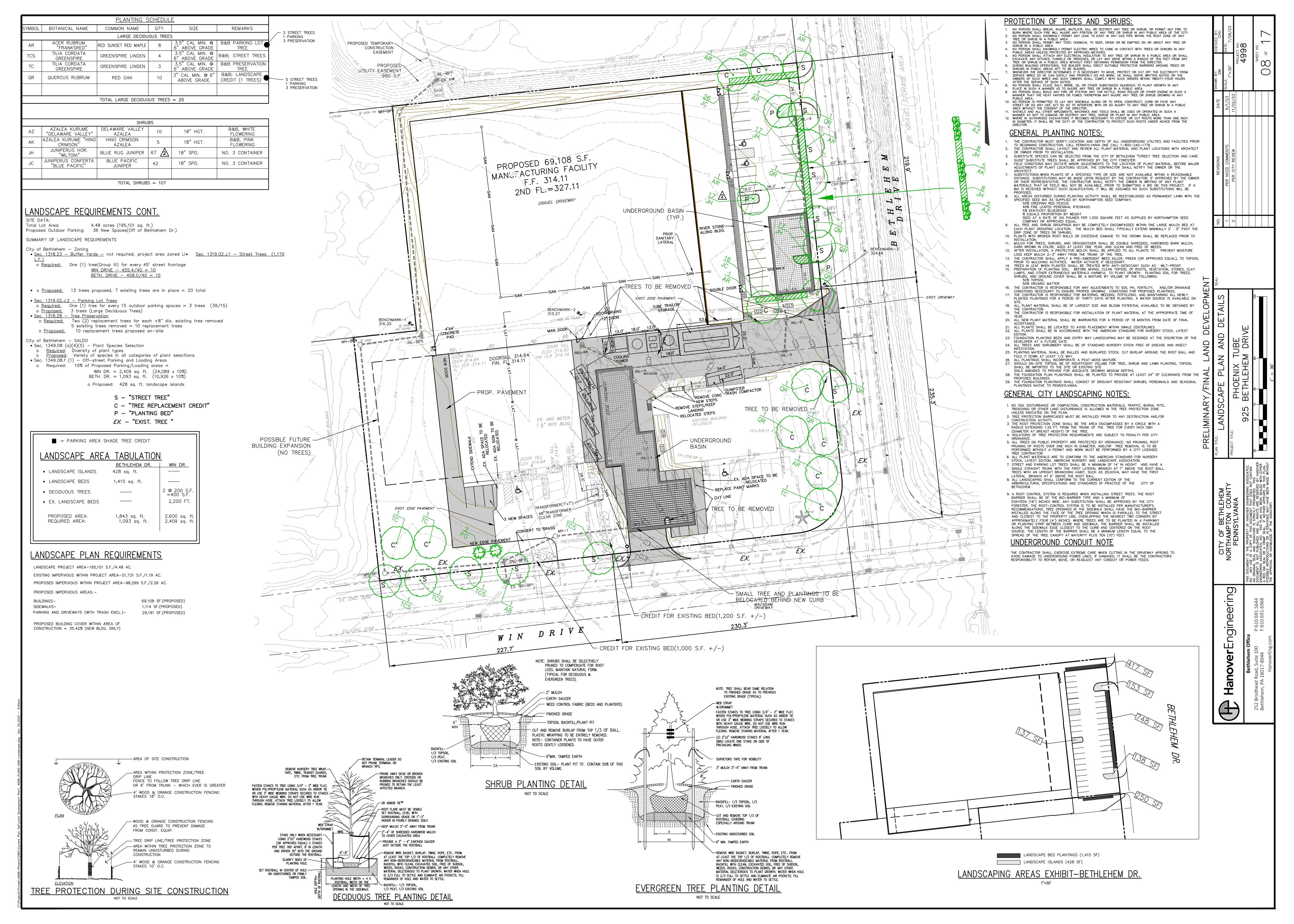
252 Brodhead Road, Suite 100 P:610.691.5644
Bethlehem, PA 18017-8944 F:610.691.6968

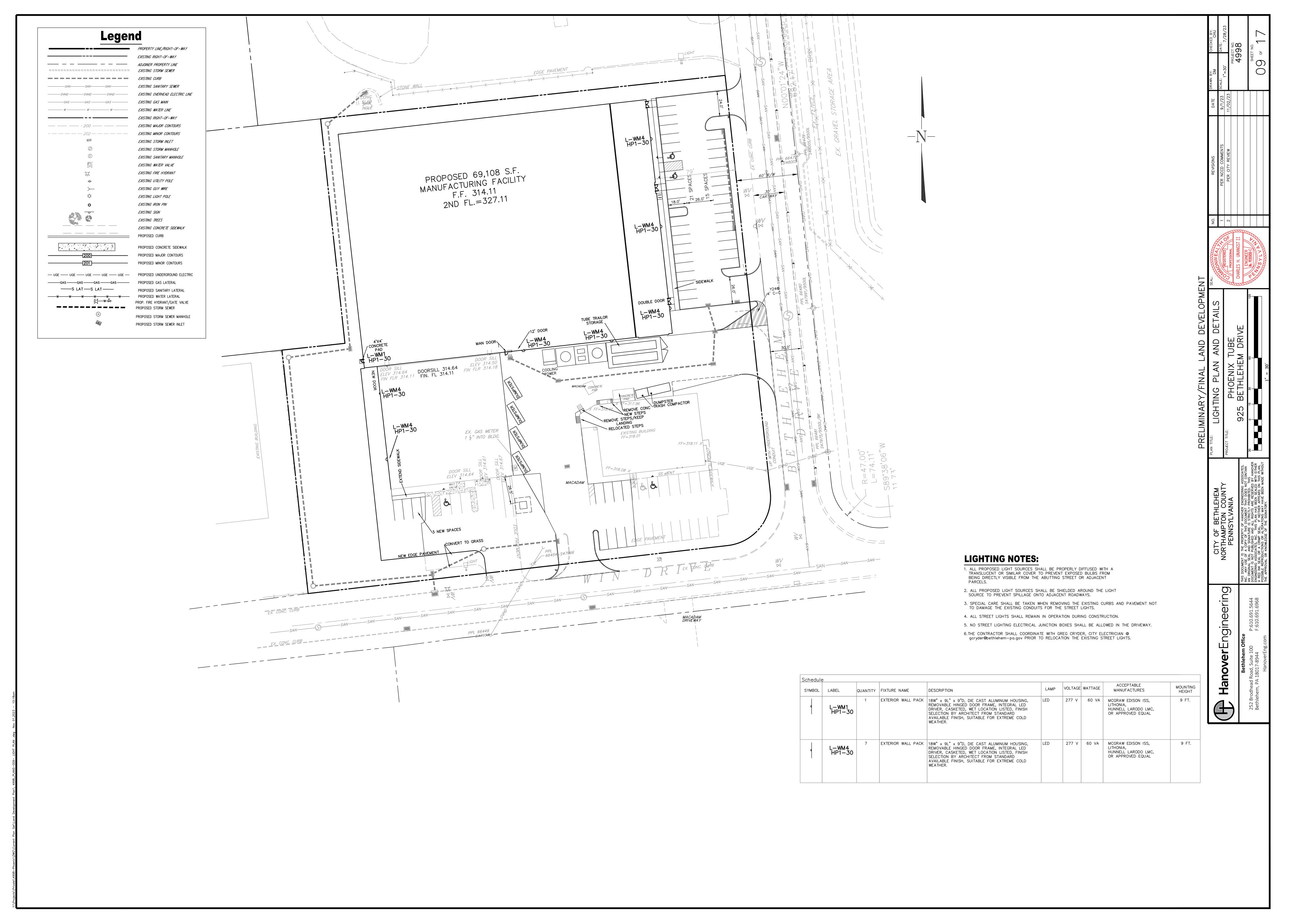


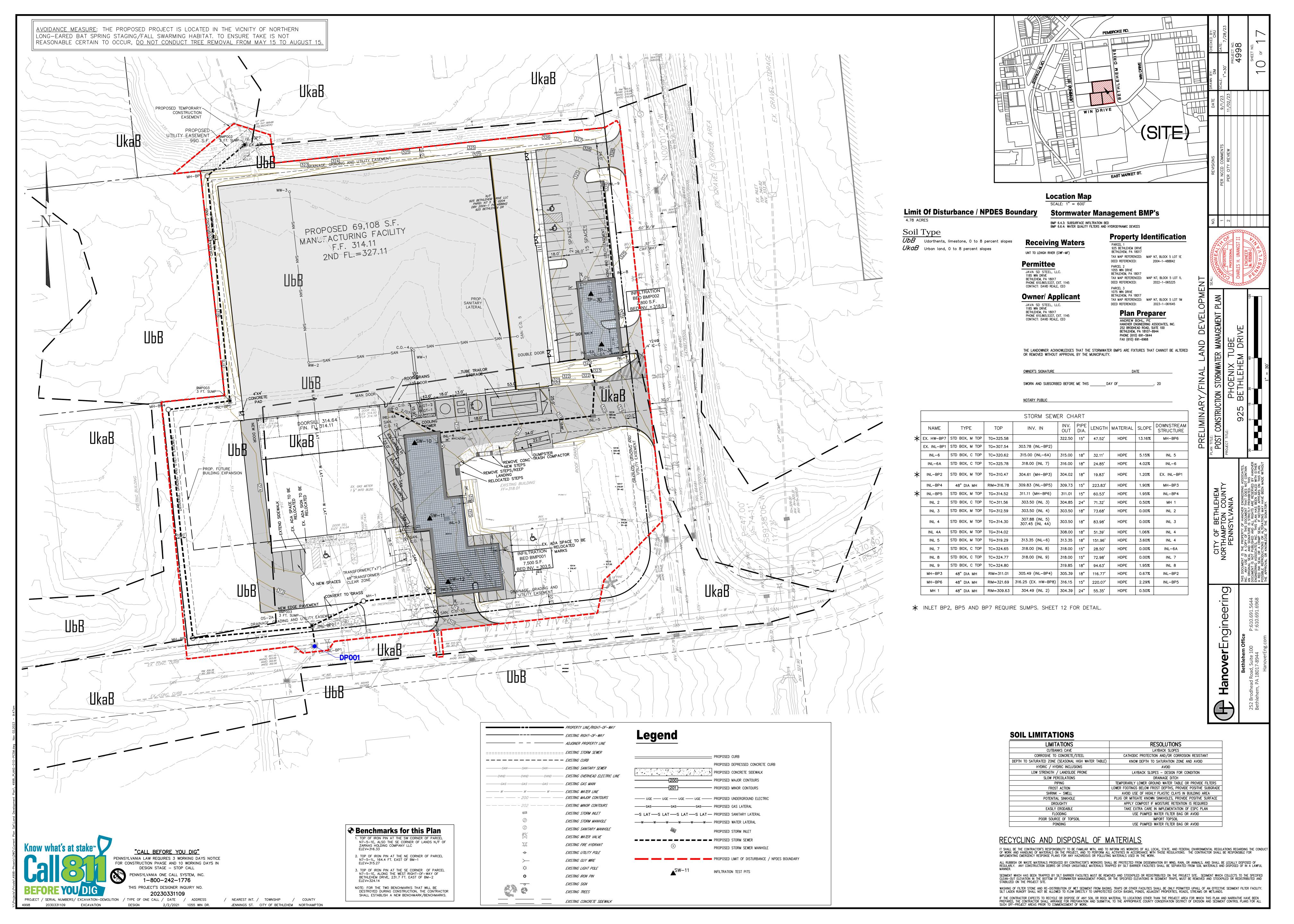












PROPOSED INFILTRATION BED 1

SCHEMATIC / CONFIGURATION

1"=20'

1" = 20

BOTTOM ELEVATION *TOP ELEVATION | BED WIDTH | BED LENGTH

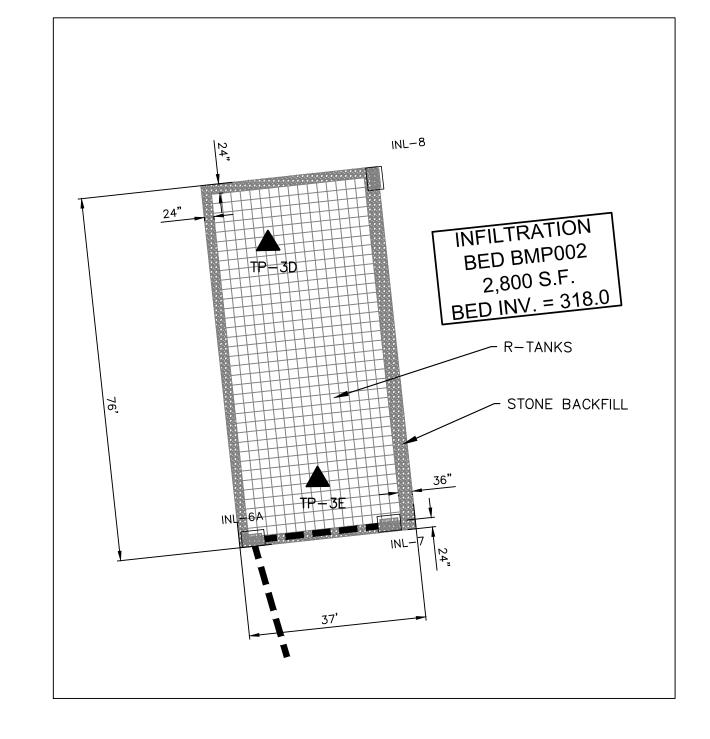
SEE SEE DIMENSIONS

Infiltration Bed #1

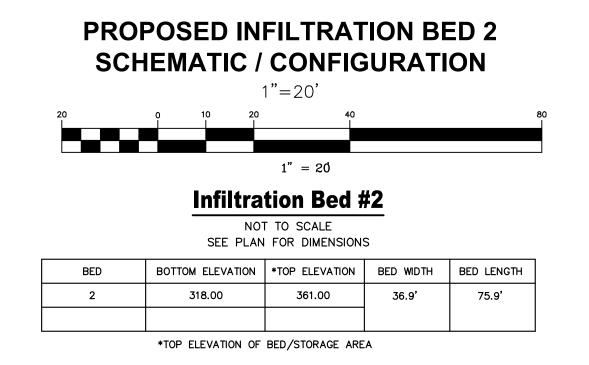
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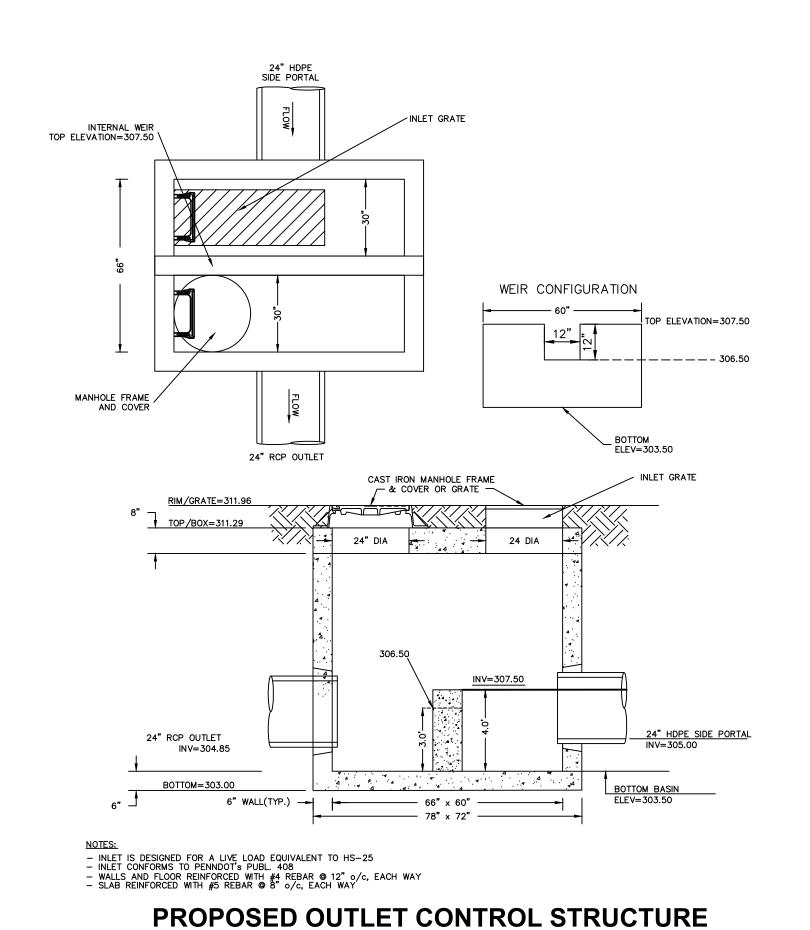
SEE PLAN FOR DIMENSIONS

*TOP ELEVATION OF BED/STORAGE AREA

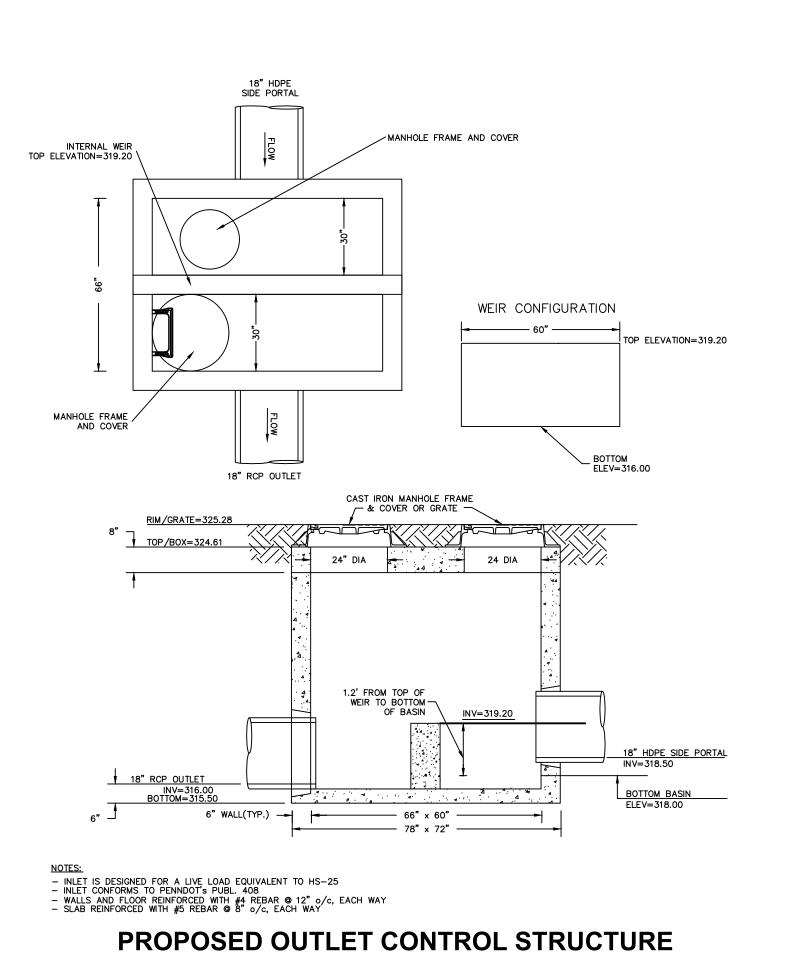








FOR UNDERGROUND INFILTRATION BED #1

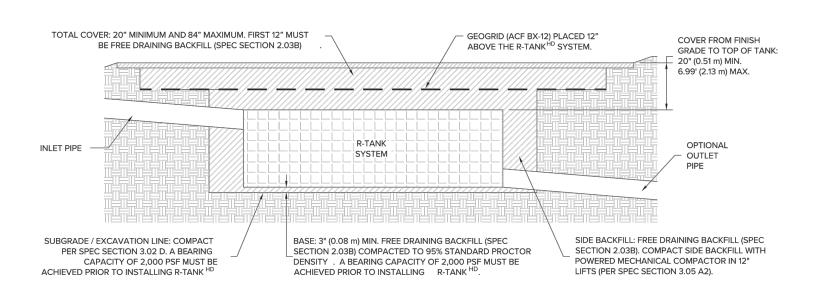


FOR UNDERGROUND INFILTRATION BED #2

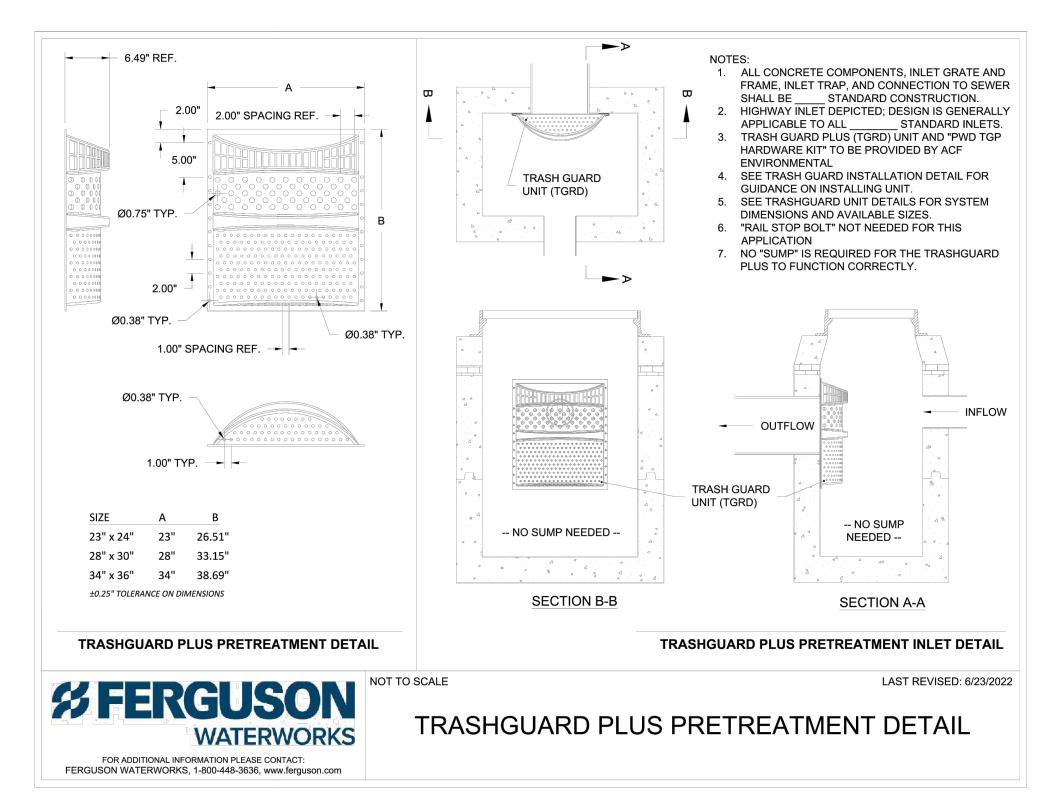


DIMENSIONS &	CAPACIT	ΓΥ				
Module (Segments)	Width (in)	Length (in)	Height (in/ft)	Volume (cf)	Capacity (cf)	Weight (lbs)
Single (1)	23.62	23.62	14.17"/1.18'	4.57	4.35	21.2
Double (2)	23.62	23.62	27.17"/2.26'	8.77	8.33	39.0
Triple (3)	23.62	23.62	40.16"/3.35'	12.97	12.32	56.8
Quad (4)	23.62	23.62	53.15"/4.43'	17.16	16.30	74.6
Pent (5)	23.62	23.62	66.14"/5.5'	21.35	20.29	92.4

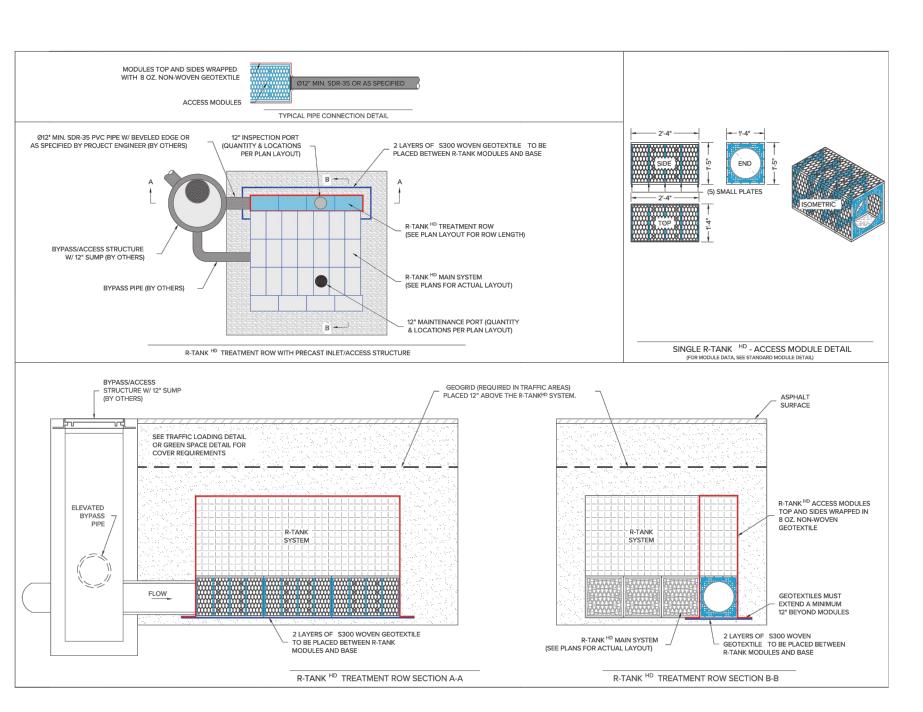
R Tank Specs



R Tank System



Trash Guard Plus Detail



R Tank Maintenance

AVOIDANCE MEASURE: THE PROPOSED PROJECT IS LOCATED IN THE VICNITY OF NORTHERN LONG-EARED BAT SPRING STAGING/FALL SWARMING HABITAT. TO ENSURE TAKE IS NOT REASONABLE CERTAIN TO OCCUR, DO NOT CONDUCT TREE REMOVAL FROM MAY 15 TO AUGUST 15.

NORTHAMPTON PENNSYL PENNSYL PHIS DOCUMENT IS THE PROPERTY OF HAN INC. ANY USE OF A COPY OF THIS DOCUMENT OF THE DOCUMENT OF THIS DOCUMENT OF THE DOCUMENT OF THE DOCUMENT OF THE DOCUMENT OF THE

HanoverEngineering

Bethlehem Office

Bethlehem Office

Bethlehem Office

Bethlehem Office

F:610.691.5644

F:610.691.6968

A RED POSSIBI

PCSM Standard Notes:

<u>GENERAL</u>

THE MAINTENANCE OF THE STORMWATER FACILITIES ARE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE OWNER'S DEED AND THE DEEDS TO ANY SUBSEQUENT OWNER, SHALL NOTE THAT THE OWNER SHALL ACCEPT THE MAINTENANCE RESPONSIBILITIES OF ANY FACILITIES NOT DEDICATED. THE MUNICIPALITY SHALL BE PERMITTED TO INSPECT THE STORMWATER FACILITIES ON, AT LEAST, AN ANNUAL SCHEDULE TO ENSURE THAT ANY NECESSARY CORRECTIVE WORK IS PERFORMED IN A TIMELY MANNER.

ANY REVISIONS TO THE PCSM PLAN WILL REQUIRE CONSERVATION DISTRICT APPROVAL.

PERMIT TERMINATION

UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER \\$102.22(a)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMPS IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH \$102.4 AND \$102.8 (RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS: AND PCSM REQUIREMENTS), THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.

THE NOTICE OF TERMINATION MUST INCLUDE:

- (1) THE FACILITY NAME, ADDRESS AND LOCATION. (2) THE OPERATOR NAME AND ADDRESS.
- (3) THE PERMIT NUMBER.

PROOF OF COMPLIANCE WITH \$102.8(m)(2).

(4) THE REASON FOR PERMIT TERMINATION. (5) IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS IN ACCORDANCE WITH §102.8(m) AND

PCSM REQUIREMENTS

PCSM REPORTING AND RECORDKEEPING: THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

<u>LICENSED PROFESSIONAL OVERSIGHT OF CRITICAL STAGES:</u> A LICENSED PROFESSIONAL OR A DESIGNEE SHALL BE PRESENT ONSITE AND BE RESPONSIBLE DURING CRITICAL STAGES OF IMPLEMENTATION OF THE APPROVED PCSM PLAN. THE CRITICAL STAGES MAY INCLUDE THE INSTALLATION OF UNDERGROUND TREATMENT OR STORAGE BMPS, STRUCTURALLY ENGINEERED BMPS, OR OTHER BMPS AS DEEMED APPROPRIATE BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

FINAL CERTIFICATION: THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS: "I (NAME) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA.C.S.A. \$4904 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES."

- (1) THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED
- (2) THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS.

PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION. THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE FOR ALL PCSM BMPS ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE. THE DEPARTMENT OR CONSERVATION DISTRICT WILL CONDUCT A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION WITHIN 30 DAYS.

THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPS.

FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP. PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMPS AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEES, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER \$102.7(b)(5) RELATING TO PERMIT TERMINATION.

THE PERSON RESPONSIBLE FOR PERFORMING LONG-TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON INCLUDING A CONSERVATION DISTRICT, NONPROFIT ORGANIZATION, MUNICIPALITY, AUTHORITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR PCSM BMPS OR TO PERFORM LONG-TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE DEPARTMENT.

A PERMITTEE OR CO-PERMITTEE THAT FAILS TO TRANSFER LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE

BMP 6.4.3 Subsurface Infiltration Beds SEQUENCE OF CONSTRUCTION

- 1. THE AREA PROPOSED FOR INFILTRATION SHALL BE FENCED TO PROTECT THE AREA FROM COMPACTION FROM CONSTRUCTION ACTIVITIES. 2. INSTALL PROPOSED STORM SEWER FROM DETENTION BASIN PROCEEDING
- UPSTREAM TO BMP OUTLET STRUCTURE BEFORE THE CONSTRUCTION OF THE
- . IMMEDIATELY PLACE INLET PROTECTION AT OUTLET & INLETS. 4. EXCAVATE INFILTRATION AREA TO THE DESIGN DEPTH. LIMIT THE AMOUNT OF COMPACTION AND DISTURBANCE TO THE EXISTING SOILS WITHIN THE INFILTRATION AREA.
- 5. FOR SUBSURFACE INFILTRATION BEDS, INSTALL 6" STONE BED FOR SUBSURFACE INFILL AND INSTALL PERFORATED PIPE NETWORK AND ASSOCIATED STRUCTURES. THEN FILL IN REMAINING AREA WITH AASHTO #3 STONE TO THE DESIGN DEPTH IN 6" MAXIMUM LIFTS. CONSTRUCT PARKING LOT AS SHOWN ON THE LAND DEVELOPMENT PLANS TO STABILIZE THE AREA.
- 1. THE INFILTRATION SURFACE SHALL BE PROTECTED DURING CONSTRUCTION
- 2. EXCAVATION OF THE PROPOSED INFILTRATION BMPs SHOULD BE COMPLETED FROM THE PERIMETER OF THE PROPOSED BMP AND OUTSIDE ANY OTHER INFILTRATION BMP WHERE POSSIBLE. WHERE EXCAVATION CANNOT BE COMPLETED FROM THE PERIMETER OF THE BMP, BULK EARTHWORK MAY BE COMPLETED TO AN ELEVATION WHICH IS 1 FOOT ABOVE THE INFILTRATION SURFACE. THE FINAL 1 FOOT OF MATERIAL SHOULD BE EXCAVATED WITH A HOE OR SIMILAR EQUIPMENT. EXCAVATION FROM THIS POINT SHOULD BE PER THE MANUFACTURE OF THE UNDERGROUND TANK SYSTEM.
- 3. THE USE OF LOW GROUND PRESSURE (LGP) MACHINES IS ALLOWED AS LONG AS THE SPECIFICATIONS OF THE MACHINE TO BE USED ARE PROVIDED AT THE PRE-CONSTRUCTION MEETING AND IT IS VERIFIED PRIOR TO EXCAVATION THAT THE PROPOSED MACHINE IS A LGP MACHINE.
- 4. REGARDLESS OF THE EXCAVATION TYPE, THE INFILTRATION SURFACE SHALL BE SCARIFIED.
- 5. STRIP TOPSOIL FROM BMP (REMOVING TEMPORARY CONSTRUCTION FENCE) AND STOCKPILE AS SHOWN ON THE PLAN, FERTILIZE, SEED AND MULCH
- 6. WITH LIGHT EQUIPMENT, EXCAVATE BED SUBGRADE AS SHOWN ON THE PLAN, BEING CAREFUL NOT TO COMPACT SUBGRADE.
- 7. SCARIFY SUBGRADE USING HAND TOOLS OR LIGHT EQUIPMENT, PLACE GEOTEXTILE ON PREPARED SUBGRADE AND BEGIN PLACING STONE WITHIN THE INFILTRATION BED. STONE SHALL BE PLACED WITH LIGHT EQUIPMENT WORKING FROM THE UPSLOPE SIDE OF THE BED. AS STONE IS PLACED, INSTALL PERF HDPE DISTRIBUTION PIPES AS SHOWN ON THE PLANS AS WELL AS THE INFLOW AND OUTFLOW PIPES.
- 8. UPON COMPLETION OF THE INFILTRATION BED INCLUDING ALL PIPING, PLACE FILL MATERIAL AND TOPSOIL.
- 9. INFILTRATION BED SHALL BE PROTECTED FROM SEDIMENT AT ALL TIMES. ALL UPSLOPE INLETS SHALL BE INSTALLED WITH FILTERS OR BLOCKED.

PCSM BMP Sequence of Construction

- 1. CLEARLY DELINEATE PROTECTED AREAS PRIOR TO START OF CONSTRUCTION TO ENSURE THESE AREAS ARE NOT DISTURBED. 2. UPON COMPLETION OF FINAL GRADING AND PLACEMENT OF TOPSOIL, PERFORM SOIL AMENDMENT AND RESTORATION PER SOIL CAPPING DETAIL AND AS SPECIFIED UNDER THE SOIL AMENDMENT AND RESTORATION NOTES.
- 3. AFTER CONSTRUCTION HAS BEEN COMPLETED AND THE SITE IS OPERATING AS DESIGNED, BEGIN STREET SWEEPING PROGRAM.

BMP 6.6.4 WATER QUALITY FILTERS AND HYDRODYNAMIC DEVICES **SEQUENCE OF CONSTRUCTION**

- 1. STABILIZE ALL CONTRIBUTING AREAS BEFORE INSTALLING AND CONNECTING PIPES TO THESE INLETS
- 2. FOLLOW MANUFACTURE'S GUIDELINES FOR INSTALLATION. DO NOT USE WATER INSERTS DURING CONSTRUCTION UNLESS PRODUCT IS DESIGNED PRIMARILY FOR SEDIMENT REMOVAL. (SOME PRODUCTS HAVE ABSORPTION COMPONENTS THAT SHOULD BE INSTALLED POST-CONSTRUCTION.)

NOTES:

- 1. INLETS SHOULD BE INSPECTED WEEKLY DURING CONSTRUCTION.
- 2. POST-CONSTRUCTION, THEY SHOULD BE EMPTIED WHEN OVER HALF FULL OF SEDIMENT (AND TRASH) AND CLEANED AT LEAST TWICE A YEAR. THEY SHOULD BE INSPECTED AFTER RUNNOFF EVENTS.
- 3. WATER QUALITY INSERTS THAT PRIMARILY CATCH SEDIMENT AND DETRITUS FROM AREAS SUCH AS LAWNS MAY REUSE THE WASTE ON SITE.

Subsurface Infiltration Bed Notes:

- 1. CATCH BASINS AND INLETS (UPGRADIENT OF AN INFILTRATION BMPS) SHOULD BE INSPECTED AND CLEANED AT LEAST TWO TIMES PER YEAR AND AFTÉR RUNOFF
- 2. INSPECT AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. MOSQUITO'S SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS.
- 3. INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS.
- 4. REMOVE ACCUMULATED SEDIMENT AS REQUIRED. RESTORE ORIGINAL CROSS SECTION AND INFILTRATION RATE. PROPERLY DISPOSE OF SEDIMENT.

Permanent Stabilization

- 1. HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.
- 2. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER."
- 3. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY

Permanent Seeding - IMMEDIATELY UPON FINAL GRADING OF ANY PHASE OR SECTION, TOPSOIL SHALL BE BROUGHT BACK OVER THE DISTURBED AREAS WHICH ARE NOT TO BE PAVED OR BUILT UPON. THIS TOPSOIL SHALL BE SPREAD TO A SMOOTH FINISH GRADE WITH A MINIMUM DEPTH OF SIX (6) INCHES. THE TOPSOIL SHALL THEN BE:

- A. RAKED FREE OF STONES;
- B. LIMED AND FERTILIZED AS NECESSARY;
- C. PLANTED WITH GRASS OR OTHER SPECIFIED SEED;
- D. MULCHED OR MATTED TO PROTECT THE SEED FROM DRYNESS AND EROSION (STRAW OR HAY AT 1,240 LB. PER 1,000 SQ. YD.).
- IT IS RECOMMENDED THAT THE CONTRACTOR TAKE SOIL SAMPLES TO ENSURE THE PROPOSED SEED MIXTURE WILL PROVIDE ADEQUATE COVER.
- PERMANENT SEEDING SHALL BE UNDERTAKEN IN ACCORDANCE WITH PENNDOT, FORM 408 SPECIFICATIONS AS FOLLOWS:
- A. PENNDOT FORMULA "B" (PRIMARILY KENTUCKY BLUEGRASS AND CREEPING RED OR CHEWING FESCUE) SPREAD AT A RATE OF 21 POUNDS PER 1,000 SQUARE YARDS, OR OTHER SEED MIX APPROVED FOR THE AREA. SPREAD FORMULA "B" FROM MARCH 15 TO JUNE 1, OR FROM AUGUST 1 TO OCTOBER 15.
- B. ALTERNATE SEED MIXES, BASED ON SECTION IX OF THE "PENN STATE AGRONOMY GUIDE", MAY BE USED ONLY IF APPROVED IN WRITING IN ADVANCE OF PLACEMENT BY THE PROJECT ENGINEER AND THE LOCAL COUNTY CONSERVATION DISTRICT.

Lime And Fertilizer Specifications

PULVERIZED AGR. LIMESTONE, 800 LBS. PER 1,000 S.Y. ANALYSIS COMMERCIAL 10-20-20, 140 LBS. PER 1,000 S.Y. UREAFORM FERTILIZER 38-0-0, 50 LBS. PER 1.000 S.Y. IBDUFERTILIZER 31-0-0, 61 LBS. PER 1,000 S.Y.

THE SEED FROM DRYNESS AND EROSION.

MULCH OR APPLY HAY AT 1,240 LBS. PER 1,000 S.Y. TO SEEDED AREAS TO PROTECT

General Maintenance Schedule for Stormwater Management RMPS:

General Ma	intenance schedule for stormwater manage	
REQUENCY	MAINTENANCE ACTIVITY	REMEDY
VEEKLY OR VHEN NEEDED	1. MOW LAWN AREAS — MOW WHEN NEEDED 2. CHECK FOR DAMAGE TO VEGETATED AREAS * 3. CHECK FOR SIGNS OF EROSION * 4. CHECK FOR STANDING WATERS IN DETENTION & INFILTRATION BMPS * 72 HOURS AFTER STORM	 DO NOT CUT SHORTER THAN RECOMMENDED — TURF COULD DIE OFF DO NOT CUT SHORTER THAN RECOMMENDED — TURF COULD DIE OFF RE-GRADE AND RE-SEED AFFECTED AREAS TILL INFILTRATION AREA TO A DEPTH OF 6" AND RE-SEED
MONTHLY	 INSPECT VEGETATION MINIMAL MOWING OF VEGETATION IN VEGETATED SWALES 	 WATER, WEED, AND SEED/REPLANT AS NECESSARY MOW VEGETATION IN SWALES TO 6 INCHES MINIMUM HEIGHT
VERY 3 MONTHS	 REMOVE SEDIMENT, TRASH, AND DEBRIS AROUND FACILITY REMOVE INVASIVE WEEDS AROUND FACILITY CHECK FOR STANDING WATER IN SWALES AND BASINS CHECK FOR MOSQUITO-BREEDING HABITATS CHECK FOR ANIMAL BURROWING AROUND FACILITY 	1. RAKE OR PICK UP SEDIMENT, TRASH, AND DEBRIS 2. REMOVE WEEDS AND RE—SEED WHERE NECESSARY 3. REGRADE FLAT SPOT. IF THIS DOES NOT WORK, PROVIDE POSITIVE SLOPE 1 4. REMOVE MOSQUITO BREEDING HABITAT, INCLUDING WATER FILLED DEBRIS 5. REMOVE ANIMAL PRESENCE, FILL IN BURROW, REGRADE, AND RE—SEED

6. CHECK BASIN PIPING FOR SEEPAGE AND SETTLING FERTILIZE LAWN AREA
 CHECK FOR TREES AND WOODY VEGETATION AROUND FACILITY EVERY 6 MONTHS 3. MAINTENANCE OF STORMWATER STRUCTURES

1. CHECK FOR SETTLING AROUND FACILITY

2. INSPECT SURCHARGE PIPE AND OVERFLOW PIPE

1. INSPECT CLEAN OUT PORT

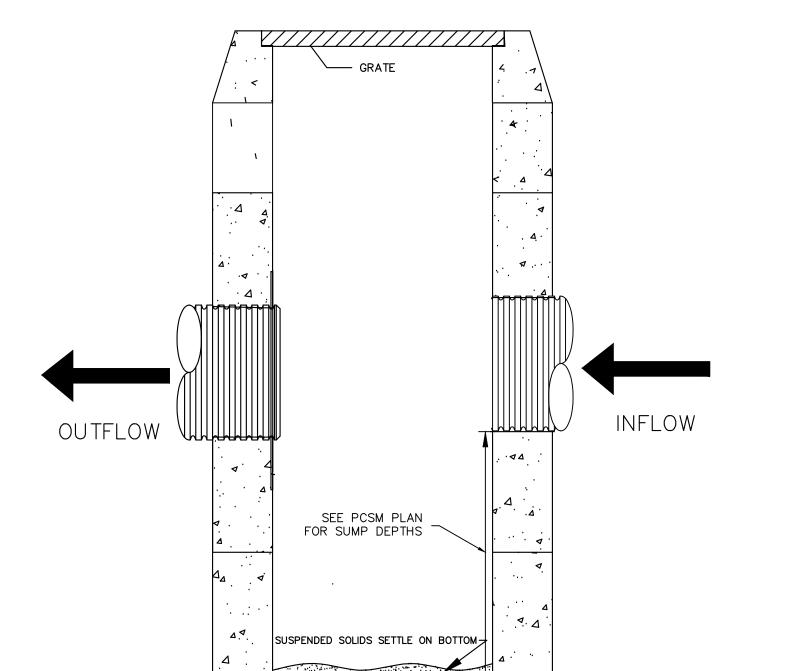
5. REMOVE ANIMAL PRESENCE. FILL IN BURROW, REGRADE, AND RE-SEED 6. REMOVE CAUSE OF SEEPAGE, PIPING, AND/OR SETTLING; RESTORE AREA . REMOVE VEGETATION, INCLUDING ROOTS, FILL-IN AND RE-SEED WHERE NECESSARY . REMOVE FLOATABLES, OIL, AND GREASE AND DISPOSE AT APPROPRIATE SITE AND REMOVE SEDIMENT WHEN DEPTH OF SEDIMENT ACCUMULATION IS > THAN 1/2 DEPTH OF SUMP

REMOVE AND ACCUMULATED SEDIMENT OR DEBRIS TO ENSURE PROPER DRAINAGE

1. REMOVE DEBRIS FROM DRAINAGE PIPE AS NECESSARY

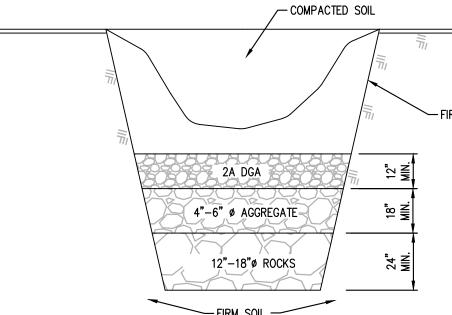
1. FILL-IN SETTLED AREA, REGRADE, AND RE-SEED AREA

EVERY 12 MONTHS	2. INSPECT CLEAN OUT PORTS & OUTLET STRUCTURES 3. INSPECT FOR PROPER VEGETATION GROWTH AND MAINTAIN 85% COVER	1. FILL—IN SETTLED AREA, REGRADE, AND RE—SEED AREA 2. REMOVE DEBRIS AND SEDIMENT AS NECESSARY 3. WATER, WEED, SEED/REPLANT, AND MULCH AS NECESSARY
*ALSO AFTER EVERY MAJO	PR STORM EVENT (>1" RAINFALL DEPTH)	
Maintenance	and Operation Schedule for Stormwater	Management BMPS:
SUMPED INLETS:		
FREQUENCY	MAINTENANCE ACTIVITY	REMEDY
AFTER EVERY MAJOR STORM EVENT > 0.5 INCH RAINFALL DEPTH AND MONTHLY FOR FIRST YEAR	 INSPECT INLETS SUMPS FOR SEDIMENT, DEBRIS & OIL ACCUMULATION 	 CHECK AND RECORD SEDIMENT DEPTH AND SURFACE POLLUTANTS TO PLAN FUTURE MAINTENANCE. IT IS BEST TO SCHEDULE MAINTENANCE BASED ON SOLIDS COLLECTED IN SUMP.
WHEN SUMP IS HALF FULL OR IF A SPILL OR OTHER INCIDENT CAUSES A LARGER THAN NORMAL ACCUMULATION OF POLLUTANTS	1. CLEAN THE INLET	 MAINTENANCE IS BEST PERFORMED WITH A VACUUM TRUCK. ALL COLLECTED WASTED MUST BE HANDLED AND DISPOSED OF ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS.
ANNUALLY	 INSPECT INLET SUMPS FOR SEDIMENT, DEBRIS & OIL ACCUMULATION 	 MAINTENANCE IS BEST PERFORMED WITH A VACUUM TRUCK. ALL COLLECTED WASTED MUST BE HANDLED AND DISPOSED OF ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS.
SUBSURFACE INFILTRA	TION BEDS:	
FREQUENCY	MAINTENANCE ACTIVITY	REMEDY
WEEKLY OR AS	1. INSPECT SURFACE VEGETATION	1. WATER, WEED, AND SEED AS NECESSARY



SUMPED INLET DETAIL

NOT TO SCALE

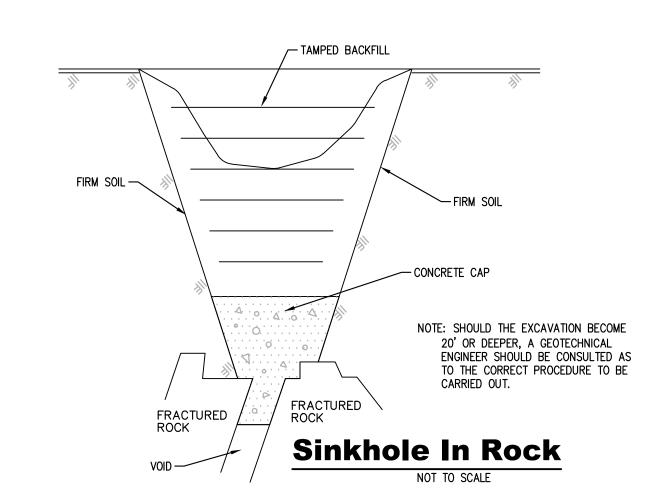


1. THE REPAIR TECHNIQUES AS DESCRIBED BELOW ARE SUITABLE ONLY IF THE SINKHOLE IS LOCATED IN AN OPEN AREA. IF THE SINKHOLE IS LOCATED UNDER OR NEAR A STRUCTURE OR A BUILDING, COMPACTION GROUTING MAY BE NECESSARY FOR REMEDIATION, AS DETERMINED BY A GEOTECHNICAL ENGINEER LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA.

2. EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 15 FEET BELOW GRADE, WHICHEVER

3. IF ROCK IS ENCOUNTERED WITHIN 10 FEET, STOP EXCAVATION. THE LIMIT OF EXCAVATION SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER, GENERALLY, A ZONE OF SOFT, IN-FILL MATERIAL WILL BE FOUND WHICH COVERS MOST OF THE BOTTOM OF THE EXCAVATION. COVER THIS AREA WITH A GRADED ROCK FILTER AS SHOWN

4. BACKFILL HOLE WITH RELATIVELY IMPERMEABLE CLAY SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER TO AT LEAST 95% OF THE STANDARD PROCTOR. 5. BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.



1. THE REPAIR TECHNIQUES AS DESCRIBED BELOW ARE SUITABLE ONLY IF THE SINKHOLE IS LOCATED IN AN OPEN AREA. IF THE SINKHOLE IS LOCATED UNDER OR NEAR A STRUCTURE OR A BUILDING, COMPACTION GROUTING MAY BE NECESSARY FOR REMEDIATION, AS DETERMINED BY A GEOTECHNICAL ENGINEER LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA.

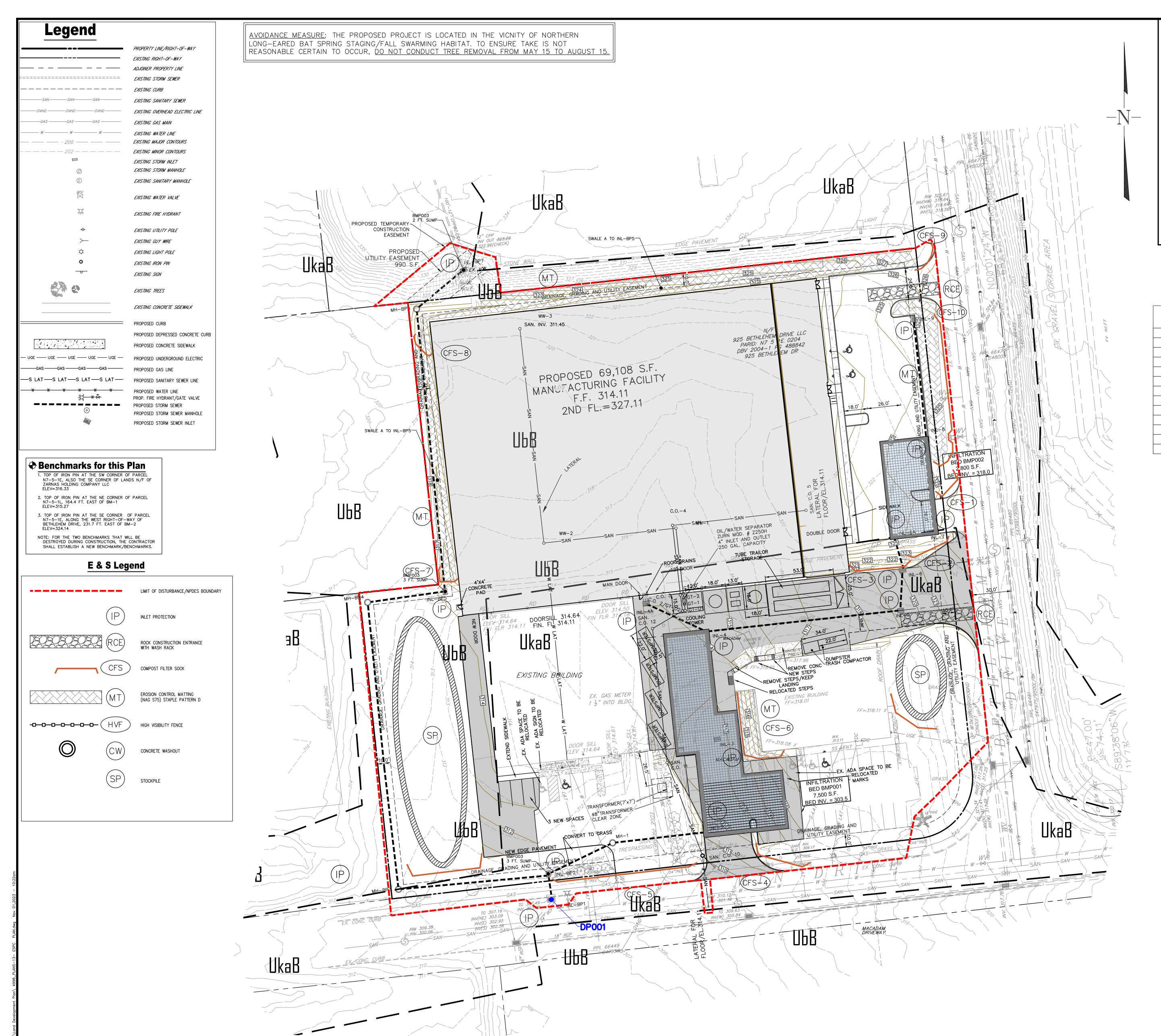
2. EXCAVATE DOWN TO BEDROCK OR TO THE SINKHOLE THROAT S. EXPOSE THE ROCK SURFACE BY WASHING THE AREA WITH A SMALL HOSE WATER SPRAY AND INSTALL HIGHSUMP CEMENT INTO VOIDS AND CREVICES UNTIL VOIDS ARE FILLED AND A CAP COVERS THE AREA. THE LIMIT OF EXCAVATION AND CONCRETE SHALL BE DETERMINED BY THE ENGINEER. 4. AFTER CONCRETE HAS SET OVERNIGHT, BACKFILL HOLE WITH RELATIVELY IMPERMEABLE CLAY SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER TO AT LEAST 95% OF THE STANDARD PROCTOR. THE TOP THREE(3) FEET SHALL BE BACKFILLED WITH 2RC CRUSHED AGGREGATE.

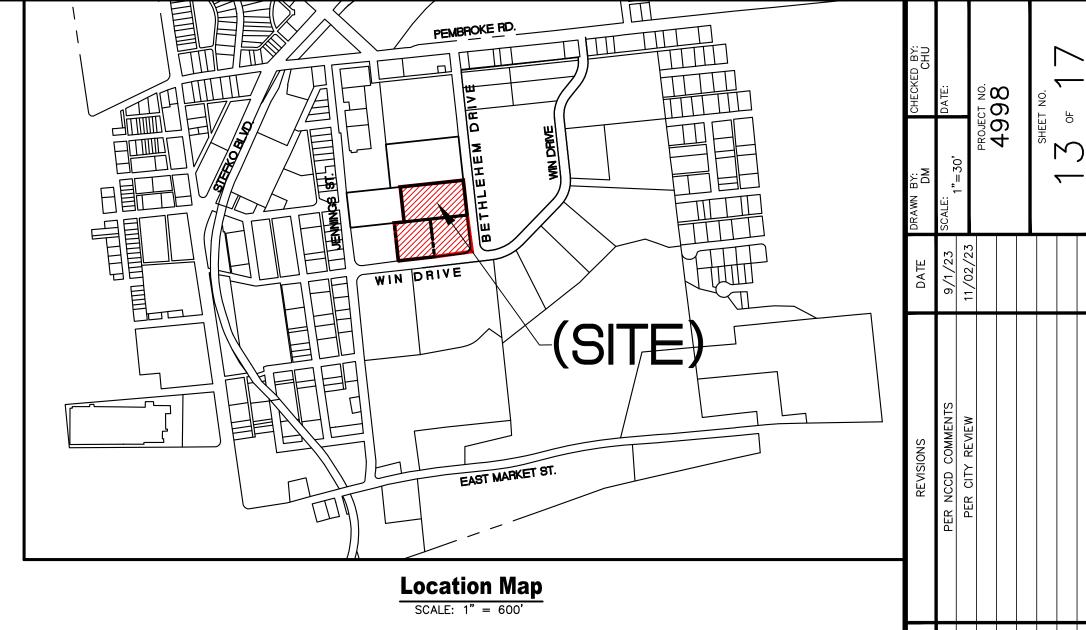
5. BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER. 6. WHEN SINKHOLE IS UNDER A PROPOSED UTILITY. CONCRETE IS TO BE SET 6" BELOW THE UTILITY TO ALLOW FOR

A STONE BEDDING.

AVOIDANCE MEASURE: THE PROPOSED PROJECT IS LOCATED IN THE VICNITY OF NORTHERN LONG-EARED BAT SPRING STAGING/FALL SWARMING HABITAT. TO ENSURE TAKE IS NOT REASONABLE CERTAIN TO OCCUR, DO NOT CONDUCT TREE REMOVAL FROM MAY 15 TO AUGUST 15.

Sinkhole In Soil





Compost Filter Sock Table				
STRUCTURE	<u>SIZE</u>			
CFS-1	12"			
CFS-2	12"			
CFS-3	12"			
CFS-4	12"			
CFS-5	12"			
CFS-6	12"			
CFS-7	12"			
CFS-8	24"			
CFS-9	24"			
CFS-10	12"			
-				

Inlet Drete	otion Toblo
iniet Prote	ction Table
STRUCTURE	DRAINAGE AREA (AC.)
INL-2	0.18
INL-3	0.44
INL-4A	0.02
INL-4	0.14
INL-5	0.04
INL-6	0.04
INL-7	0.18
INL-8	0.19
INL-9	0.08
INL-BP-8	0.15
INL−BP−5 ≭	0.96
INL−BP−2 ≭	0.52
.1	

* CONTRACTOR SHALL USE STONE AND BERM INLET PROTECTION (SEE CONSTRUCTION DETAIL 4-19)

Limit Of Disturbance / NPDES Boundary

Soil Type

4.78 ACRES

UbB Udorthents, limestone, 0 to 8 percent slopes UkaB Urban land, 0 to 8 percent slopes

Soil Limitations & Resolutions

LIMITATIONS

1. CUTBANKS CAVE

2. CORROSIVE TO STEEL . LATBACK SLOPES
2. CATHODIC PROTECTION AND/OR CORROSION RESISTANT CONCRETE
3. APPLY COMPOST IF MOISTURE RETENTION IS REQUIRED
4. TAKE EXTRA CARE IN IMPLEMENTATION OF EROSION CONTROL PLAN DROUGHTY 4. EASILY ERODABLE 5. LOW STRENGTH / LANDSLIDE PRONE LAYBACK SLOPES - DESIGN FOR CONDITION . SLOW PERCOLATION . FROST ACTION DRAINAGE DITCH

THIS SOIL TYPE HAS A LOW TO MEDIUM PH FACTOR AND SHOULD BE TESTED FOR PROPER LIME AND FERTILIZER APPLICATION RATES. IF UNDERGROUND WATER IS ENCOUNTERED, A PUMPED WATER FILTER BAG (DETAIL ON SHEET 12 OF 15) SHALL BE UTILIZED. IF SINKHOLES ARE ENCOUNTERED, A SINKHOLE REPAIR DETAIL HAS BEEN SUPPLIED ON THE PROJECT DRAWINGS.

Property Identification

LOWER FOOTINGS BELOW FROST DEPTHS, PROVIDE POSITIVE SUBGRADE

Receiving Waters UNT TO LEHIGH RIVER (CWF-MF)

Permittee JAVA SD STEEL, LLC. 1185 WN DRIVE BETHLEHEM, PA 18017 PHONE 610.865.5337, EXT. 1145 CONTACT: DAVID REALE, CEO

Owner/ Applican JAVA SD STEEL, LLC. 1185 WN DRIVE BETHLEHEM, PA 18017 PHONE 610.865.5337, EXT. 1145

CONTACT: DAVID REALE, CEO

PARCEL 1 925 BETHLEHEM DRIVE BETHLEHEM, PA 18017 TAX MAP REFERENCED: MAP N7, BLOCK 5 LOT 1E DEED REFERENCED: PARCEL 2 1055 WN DRIVE BETHLEHEM, PA 18017 TAX MAP REFERENCED: MAP N7, BLOCK 5 LOT 1L DEED REFERENCED: 2022-1-065225 PARCEL 3 1075 WN DRIVE BETHLEHEM, PA 18017 TAX MAP REFERENCED: MAP N7, BLOCK 5 LOT 1M DEED REFERENCED: 2023-1-061645

Plan Preparer ANDREW BOHL, PE
HANOVER ENGINEERING ASSOCIATES, INC.
252 BRODHEAD ROAD, SUITE 100
BETHLEHEM, PA 18107–8944 PHONE (610) 691-5644 FAX (610) 691-6968

PROJECT / SERIAL NUMBERS/ EXCAVATION-DEMOLITION / TYPE OF ONE CALL / DATE / ADDRESS / NEAREST INT. / TOWNSHIP / COUNTY

4998 2030331109 EXCAVATION

"CALL BEFORE YOU DIG" PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 THIS PROJECT'S DESIGNER INQUIRY NO.

20230331109

DESIGN 2/2/2021 1055 WIN DR.

JENNINGS ST. CITY OF BETHLEHEM NORTHAMPTON

ALL BMP'S SHOULD BE INSPECTED AFTER EVERY RUNOFF EVENT AND ON A WEEKLY BASIS. ANY NECESSARY REPAIRS MUST BE MADE IMMEDIATELY.

THIS PROPOSAL REQUIRES TO BE PERMITTED AND/OR APPROVED BY THE FOLLOWING GOVERNMENT ENTITIES: NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) NORTHAMPTON COUNTY CONSERVATION DISTRICT LEHIGH VALLEY PLANNING COMMISSION

Standard Erosion And Sediment Control Plan Notes

- . 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
- . 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
- . 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. . AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- . CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF E 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.
- . 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 MAPS(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. . 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 FT 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. 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. 14. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL FROSION AND SEDIMENT BMPS AFTER FACH RUNOFF EVENT AND ON A WEEKLY BASIS, 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. 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 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
- 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 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.
- 7. 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 OTHER MOVEMENTS. 28. 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
- 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
- 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 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
- 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 PENNSYLVANIÁ 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.

OPTIONAL NOTES

- THE FOLLOWING NOTES SHOULD BE ADDED TO PLAN DRAWINGS AS APPLICABLE.
- CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS. . ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY
- DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS—SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS
- CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
- . SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS. . SEDIMENT TRAPS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
- '. ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY
- 8. UPON REQUEST. THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT. 9. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A
- SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS. 10. FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS.

Buffers (Riparian and Forest) 102.4(B)(5)(XIV) NO EXISTING RIPARIAN OR FOREST BUFFERS ARE LOCATED ON THE SUBJECT PARCEL NOR ADJACENT TO THE LIMIT OF CONSTRUCTION. NO RIPARIAN OR FOREST BUFFERS ARE PROPOSED FOR THIS PROJECT, SINCE, THERE ARE NO FOREST

NOR WETLANDS LOCATED ON THE SUBJECT PARCEL NOR WITHIN 150' OF THE LIMIT OF

CONSTRUCTION BOUNDARY. Potential Thermal Impacts to Surface Water 102.4(B)(5)(XIII) THE PROJECT IS DESIGNED TO MINIMIZE THE THERMAL IMPACTS TO SURFACE WATERS OF THE PROJECT DISCHARGES TOO. THE PROJECT PROPOSES

SUBSURFACE INFILTRATION BEDS TO ASSIST TO PREVENT THERMAL IMPACTS TO THE

Erosion and Sediment Plans Consistent with **PCSM Plans**

102.4(B)(5)(XIV) NO RIPARIAN BUFFERS ARE LOCATED OUTSIDE THE LIMITS OF CONSTRUCTION. NO PROPOSED INFILTRATION BMPS ARE PROPOSED OUTSIDE THE PROPOSED GRADING.

THE SPECIFICATIONS AND REQUIREMENTS OF THE PROJECT PLANS. NARRATIVE AND SPECIFICATION ARE THE MINIMUM ACCEPTABLE CONSTRUCTION CRITERIA FOR THIS

THEN MUST BE RE-SEEDED AND MULCHED.

IF, FOR ANY REASON, THE DESIGNED FACILITIES OR MEASURES DO NOT PROVIDE THE NÉCESSARY PROTECTION, THE CONTRACTOR SHALL ADJUST THE EROSION CONTROL MEASURES AND SEDIMENT CONTROL MEASURES TO ACHIEVE A COMPLETE NON-ERODED STABILIZED SITE CONDITION.

AFTER THE CITY'S FINAL ACCEPTANCE OF SITE WORK CONSTRUCTION AND STABILIZATION BY THE CONTRACTOR, THE GROUND SURFACE AND ALL DRAINAGE FACILITIES LOCATED ON PRIVATE PROPERTY MUST BE MAINTAINED BY THE OWNER OF THE PROPERTY.

Temporary Stabilization & Permanent Stabilization

- 1. HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.
- ALL SLOPES 3:1 AND STEEPER."
- 3. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
- ENSURE EFFECTIVE AND EFFICIENT OPERATION." 4. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS MUST BE MAINTAINED PROPERLY, MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS 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 EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED. E&SPCPM P168

102.4(B)(5)(XI) "PROCEDURES WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE WILL BE UNDERTAKEN IN

- 6. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR
- 7. SOIL/ROCK DISPOSAL AREAS SHOULD BE ADDRESSED IN THE NARRATIVE AND ON THE DRAWINGS IMPLEMENTED AND MAINTAINED FOR ALL PROPOSED SOIL/ROCK SPOIL AND BORROW AREAS ON OR

REFER TO NARRATIVE FOR PENN DOT PUBL. 408 DATA Temporary Seeding

STOCKPILES WHICH ARE TO REMAIN LONGER THAN FOUR (4) DAYS SHALL BE STABILIZED AND

SEEDED WITH A CONTRACTOR	RS MIX AS STATED BELOW:		
		<u>PER</u>	<u>PER</u>
<u>DATE</u>	TYPE OF MIXTURE	1,000 SF	ACRE
MARCH 1 TO JUNE 15	ANNUAL RYEGRASS - 100%	1.0 LB.	40 LB.
JUNE 15 TO AUG. 15	SUDANGRASS - 100%	1.0 LB.	40 LB.
AUG. 15 TO SEPT. 15	ANNUAL RYEGRASS - 100%	0.7 LB.	30 LB.
MARCH 1 TO AUG. 15			
AUG. 15 TO OCT. 15	WINTER WHEAT - 100%	4.1 LB.	180 LB.
OCT. 15 TO MARCH 1	HAY OR STRAW MULCH		3.0 TONS
LIME AND FERTILIZER AND M	IULCH SPECIFICATIONS		
TEMPORARY SEEDING -			

- APPLY ONE TON OF LIME PER ACRE AND - FERTILIZER 50-50-50 PER ACRE - MULCH, HAY OR STRAW - 3 TONS PER ACRE
- SPREAD AT A SEEDING RATE OF 42 LB. PER 1000 SQ. YDS. SPREAD FORMULA "B" FROM MARCH 15 TO JUNE 1 OR FROM AUGUST 1 TO OCTOBER 15.
- B. FORMULA "C"- CROWNVETCH AND ANNUAL RYEGRASS (45% 55%) SPREAD AT A RATE OF 12 LB. PER 1000 SQ. YDS. ON ALL SLOPES 2 HORIZONTAL TO 1 VERTICAL OR STEEPER. SPREAD FORMULA "C" RYEGRASS PORTION FROM MARCH 1 TO OCTOBER 15 AND CROWNVETCH PORTION ANYTIME EXCEPT SEPTEMBER AND OCTOBER.
- C. FORMULA "W"—MIXTURE OF TALL FESCUE, BIRDSFOOT TREFOIL, AND REDTOP, SPREAD AT A SEEDING RATE OF 15 LB. PER 1000 SQ. YDS. ON THE DETENTION POND. SPREAD THIS FORMULA FROM APRIL 1 TO JUNE 15 OR FROM AUGUST 16 TO SEPTEMBER 15.
- D. ALTERNATE SEED MIXES, BASED ON SECTION IX OF THE "PENN STATE AGRONOMY GUIDE". MAY BE USED ONLY IF APPROVED IN WRITING IN ADVANCE OF PLACEMENT.

Permanent Seeding - immediately upon final grading of any PHASE OR SECTION, TOPSOIL SHALL BE BROUGHT BACK OVER THE DISTURBED AREAS WHICH ARE NOT TO BE PAVED OR BUILT UPON. THIS TOPSOIL SHALL BE SPREAD TO A SMOOTH FINISH GRADE WITH A MINIMUM DEPTH OF SIX (6) INCHES. THE TOPSOIL SHALL THEN BE:

- C. PLANTED WITH GRASS OR OTHER SPECIFIED SEED;
- HAY AT 1,240 LB. PER 1,000 SQ. YD.). IT IS RECOMMENDED THAT THE CONTRACTOR TAKE SOIL SAMPLES TO ENSURE THE PROPOSED
- SEED MIXTURE WILL PROVIDE ADEQUATE COVER. PERMANENT SEEDING SHALL BE UNDERTAKEN IN ACCORDANCE WITH PENNDOT, FORM 408 SPECIFICATIONS AS FOLLOWS:
- A. PENNDOT FORMULA "B" (PRIMARILY KENTUCKY BLUEGRASS AND CREEPING RED OR CHEWING FESCUE) SPREAD AT A RATE OF 21 POUNDS PER 1,000 SQUARE YARDS, OR OTHER SEED MIX APPROVED FOR THE AREA. SPREAD FORMULA "B" FROM MARCH 15 TO JUNE 1, OR FROM AUGUST 1 TO OCTOBER 15.
- B. ALTERNATE SEED MIXES, BASED ON SECTION IX OF THE "PENN STATE AGRONOMY GUIDE", MAY BE USED ONLY IF APPROVED IN WRITING IN ADVANCE OF PLACEMENT BY THE PROJECT

Lime And Fertilizer Specifications

PULVERIZED AGR. LIMESTONE, 2,480 LBS. PER 1,000 S.Y. ANALYSIS COMMERCIAL 10-20-20, 210 LBS. PER 1,000 S.Y. UREAFORM FERTILIZER 38-0-0, 50 LBS. PER 1,000 S.Y. IBDUFERTILIZER 31-0-0, 61 LBS. PER 1,000 S.Y.

SEED FROM DRYNESS AND EROSION.

- GRADING SHOULD COMPLY WITH THE FOLLOWING SPECIFICATIONS FOR ALL SITES: AREAS TO BE FILLED SHOULD BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL. AREAS WHICH ARE TO BE TOPSOILED SHOULD BE SCARIFIED TO A DEPTH OF 3 TO 5 INCHES, OR 6 TO 12 INCHES ON COMPACTED SOILS, PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHOULD HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHOULD HAVE A
- MINIMUM OF 2 INCHES OF TOPSOIL ALL EARTHEN FILLS SHOULD BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, ROADWAYS, STRUCTURES AND CONDUITS, ETC. SHOULD BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- 4. ALL EARTHEN FILLS SHOULD BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS. 5. FILL MATERIALS SHOULD BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR
- NOT BE INCORPORATED INTO FILLS. FILL SHOULD NOT BE PLACED ON SATURATED OR FROZEN SURFACES. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHOULD BE HANDLED IN
- ACCORDANCE WITH STANDARDS AND SPECIFICATIONS FOR SUBSURFACE DRAINS OR OTHER APPROVED METHOD. 9. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON
- REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. 10. STOCKPILES, BORROW AREAS AND SPOIL AREAS SHOULD BE SHOWN ON THE PLAN MAPS AND SHOULD BE SUBJECT TO THE PROVISIONS OF THESE STANDARDS AS WELL AS THOSE OF THE APPROVED E&S PLAN. ALL APPROPRIATE PERMITS/AUTHORIZATION SHOULD BE OBTAINED PRIOR TO EARTH DISTURBANCE ACTIVITIES WITHIN THESE

Geologic Formation

GEOLOGIC FORMATION AND SOIL CONDITIONS ON SITE DO HAVE THE POTENTIAL TO CAUSE POLLUTION. SINKHOLES ARE A POTENTIAL POLLUTION ACTIVITY. IF SINKHOLES ARE ENCOUNTERED, THE CONTRACTOR SHALL REFER TO THE

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. THE LOGS SHALL GO ONTO DEP FORM

Compaction Requirements:

ALL DETENTION BASIN EMBANKMENTS SHALL BE PLACED IN MAXIMUM OF 8 INCH LIFTS TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY AS ESTABLISHED BY ASTM D-1557, PTM NO. 112 OR 402, PRIOR TO PROCEEDING TO THE NEXT LIFT THE COMPACTION SHALL BE CHECKED BY THE CITY ENGINEER OR SOILS ENGINEER. THE DEVELOPER'S CONTRACTOR SHALL OBTAIN THE SERVICES OF A QUALIFIED LABORATORY OR TECHNICIAN TO CONDUCT COMPACTION TESTS ON THE LEADING AND TRAILING EDGE OF THE BERM ALONG WITH THE TOP OF

BERM. ALL TESTS SHALL BE FURNISHED TO THE CITY FOR REVIEW.

Location Of Measures And Facilities

THE REQUIRED LOCATIONS OF THE PERMANENT CONTROL MEASURES WILL BE DETERMINED BY THE ENGINEER DURING/AFTER CONSTRUCTION AND WILL BE INSTALLED TO STABILIZE THE PROJECT AS PART OF THE CONTRACTOR'S RESPONSIBILITY.

Dimensioned Details Of The Facilities

ALL ITEMS TO BE USED IN THIS PROJECT SHALL BE CONSTRUCTED TO PREVAILING STANDARDS. DETAILS OF SPECIAL EROSION CONTROL FACILITIES, I.E. THE FILTER FABRIC, INLET PROTECTION, ETC.,

102.5(B)(8) MAINTENANCE OF CONTROL FACILITIES

ARE NOTED ON THE PROJECT PLANS.

Disposal Of Materials From The Control Facilities

SEDIMENT WHICH HAS BEEN TRAPPED BY SILT BARRIER FACILITIES MUST BE REMOVED AND STOCKPILED OR REDISTRIBUTED ON THE PROJECT SITE. ALL CONSTRUCTION DEBRIS OR OTHER UNSUITABLE MATERIALS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A LAWFUL MANNER. WASHING OF FILTER STONE AND REDISTRIBUTION OF WET SEDIMENT SHALL BE ONLY PERMITTED UPHILL OF AN EFFECTIVE SEDIMENT FILTER FACILITY. SILT LADEN RUN-OFF SHALL NOT BE ALLOWED TO FLOW DIRECTLY TO UNPROTECTED INLETS, BASINS, ADJACENT PROPERTIES, ROADWAYS, OR WETLANDS. ALL SILT BARRIER FACILITIES MUST BE CHECKED FOR CAPACITY AND PROPER FUNCTION WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL ALL UPSTREAM AREAS HAVE A UNIFORM PERENNIAL VEGETATIVE

COVER OF OVER SEVENTY (70) PERCENT. RECYCLING AND/OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE MUST BE ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Recycling And Disposal Of Materials IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH. AND TO INFORM HIS WORKERS

OF ALL LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS REGARDING THE CONDUCT OF WORK AND HANDLING OF MATERIALS ON THE PROJECT. AND TO PERFORM ALL ACTIVITIES IN ACCORDANCE WITH THOSE REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING EMERGENCY RESPONSE PLANS FOR ANY HAZARDOUS OR POLLUTING MATERIALS USED IN THE WORK. ALL RUBBISH OR WASTE MATERIALS PRODUCED BY CONTRACTOR'S WORKERS SHALL BE PROTECTED FROM DISSEMINATION BY WIND, RAIN, OR ANIMALS, AND SHALL BE LEGALLY DISPOSED OF REGULARLY ANY CONSTRUCTION DEBRIS OR OTHER UNSUITABLE MATERIALS TRAPPED BY SILT BARRIER FACILITIES SHALL BE SEPARATED FROM SOIL MATERIALS AND DISPOSED OF IN A LAWFUL MANNER. SEDIMENT WHICH HAS BEEN TRAPPED BY SILT BARRIER FACILITIES MUST BE REMOVED AND STOCKPILED OR REDISTRIBUTED ON THE PROJECT SITE. SEDIMENT WHICH COLLECTS TO THE SPECIFIED CLEAN-OUT

SEDIMENT TRAPS, MUST BE REMOVED AND STOCKPILED OR REDISTRIBUTED AND STABILIZED ON THE WASHING OF FILTER STONE AND RE-DISTRIBUTION OF WET SEDIMENT FROM BASINS, TRAPS OR OTHER FACILITIES SHALL BE ONLY PERMITTED UPHILL OF AN EFFECTIVE SEDIMENT FILTER FACILITY. SILT LADEN RUNOFF SHALL NOT BE ALLOWED TO FLOW DIRECTLY TO UNPROTECTED CATCH BASINS, PONDS, ADJACENT PROPERTIES, ROADS, STREAMS OR WETLANDS.

ELEVATION IN THE BOTTOM OF STORMWATER MANAGEMENT PONDS, OR THE SPECIFIED ELEVATIONS IN

IF THE CONTRACTOR EXPECTS TO RECYCLE OR DISPOSE OF ANY SOIL OR ROCK MATERIAL TO LOCATIONS OTHER THAN THE PROJECT AREA FOR WHICH THIS PLAN AND NARRATIVE HAVE BEEN PREPARED, THE CONTRACTOR SHALL ARRANGE FOR PREPARATION AND SUBMITTAL TO THE APPROPRIATE COUNTY CONSERVATION DISTRICT OF EROSION AND SEDIMENT CONTROL PLANS FOR ALL SUCH OFF-PROJECT AREAS PRIOR TO COMMENCEMENT OF WORK.

Anticipated Project Specific Waste

SEDIMENT TRAPPED BY EROSION CONTROL BMPS PLANT WASTE CREATED DURING CLEARANCE OF SITE

ALL WASTE IS TO BE RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Responsibilty for E & S Control Facilities

DURING IMPROVEMENTS CONSTRUCTION, THE SITE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION, STABILIZATION & MAINTENANCE OF ALL SITE EROSION & SEDIMENTATION CONTROL FACILITIES. AFTER CONTRACTOR INVOLVEMENT CEASES, RESPONSIBILITY SHALL REVERT TO THE OWNER OF THE PROPERTY.

Sediment Re-Distribution

WASHING OF FILTER STONE AND RE-DISTRIBUTION OF WET SEDIMENT FROM BASINS, TRAPS OR OTHER FACILITIES SHALL ONLY BE PERMITTED UPHILL OF AN EFFECTIVE SEDIMENT FILTER FACILITY. SILT LADEN RUNOFF SHALL NOT BE ALLOWED TO FLOW DIRECTLY TO UNPROTECTED CATCH BASINS, PONDS, ADJACENT PROPERTIES, ROADS OR WETLANDS.

DISPOSAL AREAS FOR THIS SITE SHALL BE ACQUIRED FROM OR DISPOSED OF ON THIS SITE. THE CONTRACTOR SHALL UTILIZE THIS APPROVED PLAN. IF ADDITIONAL E & S POLLUTION CONTROL MEASURES ARE REQUIRED IN ADDITION TO WHAT HAS BEEN NOTED ON THE APPROVED SITE, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT E & S POLLUTION CONTROL MEASURES AS REQUIRED. IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR RECEIVE APPROVAL IN THE FORM OF A PLAN FROM THE NORTHAMPTON COUNTY CONSERVATION

1. OFF-SITE BORROW OR DISPOSAL AREAS. IT IS INTENDED THAT ANY BORROW OR

Topsoil Stockpile MULCH ON ALL SURFACES

SEQUENCE OF CONSTRUCTION

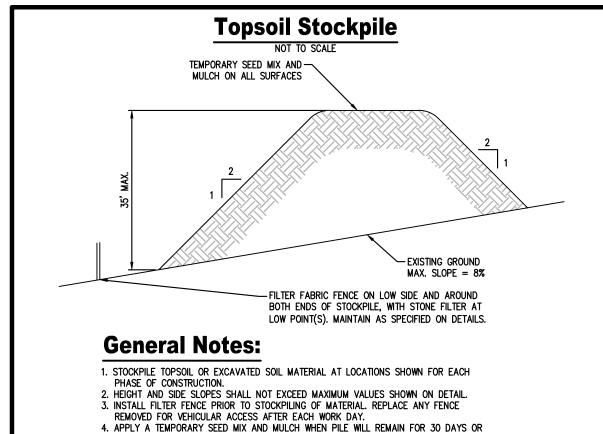
- SCHEDULE A PRE-CONSTRUCTION CONFERENCE AND PROVIDE AT LEAST SEVEN (7) WORKING DAYS' NOTICE TO THE FOLLOWING AGENCIES PRIOR TO COMMENCEMENT OF SITE GRADING WORK: A. PROJECT ENGINEER: 610-691-5644 B. NORTHAMPTON COUNTY CONSERVATION DISTRICT: 610-829-6276
- C. PA-ONE-CALL: 1-800-242-1776 2. THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER AT LEAST FORTY-EIGHT HOURS (48 HOURS) IN ADVANCE
- OF EROSION CONTROL FACILITIES COMPONENT INSTALLATIONS. 3. THE CONTRACTOR SHALL REFER TO THE POST CONSTRUCTION STORMWATER MANAGEMENTS PLANS FOR LOW IMPACT/NO COMPACTION TECHNIQUES FOR THE EXCAVATION AND PLACEMENT OF THE PROPOSED FILL MATERIALS.
- 4. PRIOR TO REMOVAL OF TOPSOIL, REFER TO THE ESPC PLAN SHEET FOR LOCATION OF SOIL STOCKPILES. TEMPORARY AND PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH REQUIREMENTS LISTED AND AS NOTED IN THE PROJECT NARRATIVE AND AS LISTED ON THE ESPC PLAN SHEET. COMPOST FILTER SOCK SHALL BE INSTALLED DOWNSLOPE OF ALL TOPSOIL STOCKPILES. PRIOR TO ANY SEEDING AND LIME AND FERTILIZE APPLICATION, A SOIL TEST SHALL BE

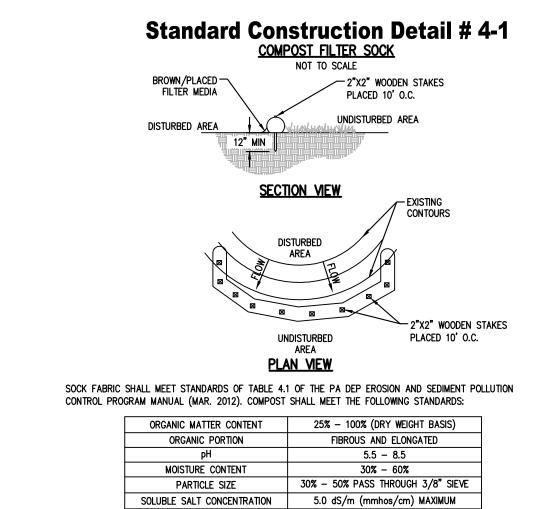
PERFORMED TO DETERMINE THE PH FACTOR. ADDITIONAL LIME AND FERTILIZER MAY BE REQUIRED.

- DISTURBED AREAS SHALL NOT BE STRIPPED OF TOPSOIL FOR MORE THAN FOUR (4) DAYS WITHOUT TEMPORARY
- 6. PLACE THE ROCK CONSTRUCTION ENTRANCES WITH WASH RACKS AT THE LOCATIONS SHOWN ON THE PLAN. ALL CONSTRUCTION TRAFFIC FOR THE SITE IS TO ENTER AT THIS LOCATION. ALTERNATE ENTRANCES ARE PROHIBITED, UNLESS APPROVED BY THE CONSERVATION DISTRICT.
- 7. INSTALL INLET PROTECTION AT ALL EXISTING INLETS WITHIN THE LIMIT OF DISTURBANCE.
- 8. PLACE ALL COMPOST FILTER SOCKS CFS-1 THROUGH CFS-10 AND DOWNSLOPE OF ALL STOCKPILE LOCATIONS AS SHOWN ON THE PLANS AND IMMEDIATELY STABILIZE ANY DISTURBED AREAS.
- 9. CLEAR AND GRUB ENTIRETY OF SITE WITHIN THE LIMIT OF DISTURBANCE PRIOR TO ANY EARTHMOVING ACTIVITIES. REMOVE STOCKPILE OF FILL MATERIAL. REMOVE ALL WASTE MATERIALS, AS OUTLINED ON SHEET 14.
- STORMWATER FILLS IN EXCAVATION TRENCH, UTILIZE FILTER BAG TO REMOVE. INSTALL INLET PROTECTION AT ALL INLETS IMMEDIATELY AFTER INSTALLATION. 11. INSTALL STORM SEWER RUN FROM THE ROOF LEADERS TO INLET-6A. INSTALL STORM SEWER RUN FROM INLET-8 TO

10. INSTALL THE BYPASS STORM SEWER RUN FROM EXISTING INLET-BP-1 TO INL-BP-7, INCLUDING MH-1 AND INL-2. IF

- INLET-9. INSTALL INLET-7 AND INLET 3 IN THE FOOTPRINTS OF THE PROPOSED UNDERGROUND INFILTRATION BEDS AS SHOWN ON THE PLANS. IF STORMWATER FILLS IN EXCAVATION TRENCH, UTILIZE FILTER BAG TO REMOVE. INSTALL INLET PROTECTION AT ALL INLETS IMMEDIATELY AFTER INSTALLATION.
- 12. INSTALL THE TWO SUBSURFACE INFILTRATION BEDS WITH R-TANK CHAMBERS AS SHOWN ON THE PLANS. DO NOT COMPACT ANY AREA PROPOSED FOR INFILTRATION. INSTALL HIGH VISIBILITY FENCE AROUND EXCAVATED TRENCH. IF STORMWATER FILLS IN EXCAVATED TRENCH, UTILIZE FILTER BAG TO REMOVE.
- 13. ROUGH GRADE SITE INCLUDING BUILDING PAD, PARKING AREAS, AND LOADING DOCK AREAS. IMMEDIATELY STABILIZE DISTURBED AREAS. 14. CONSTRUCT BUILDING AND CONNECT ROOF LEADERS TO PREVIOUSLY CONSTRUCTED STORM SEWER COLLECTION SYSTEM
- 15. INSTALL SITE UTILITIES INCLUDING SANITARY SEWER LATERAL, WATER SERVICE, GAS LATERAL, SITE LIGHTING, UNDERGROUND ELECTRIC AND COMMUNICATION LINES. IMMEDIATELY STABILIZE DISTURBED AREAS. IF STORMWATER FILLS IN EXCAVATION TRENCH, UTILIZE FILTER BAG TO REMOVE. THIS STEP CAN BE COMPLETED CONCURRENTLY WITH
- STEP 14 (BUILDING CONSTRUCTION). 16. INSTALL ALL CONCRETE CURBING AND SIDEWALKS. ALL DISTURBANCE GENERATED DURING THE INSTALLATION OF THESE ITEMS SHOULD BE IMMEDIATELY STABILIZED.
- 17. PLACE SUBBASE STONE AGGREGATE FOR ALL AREAS TO BE PAVED. 18. SAW CUT WIN DRIVE FOR THE SOUTHERN DRIVEWAY AND PARKING LOT AND THE PORTION OF THE EASTERN DRIVEWAY WHICH IS BEING WIDENED.
- 19. FINISH PAVING ALL ASPHALT AREAS AND LINE STRIPE PARKING FACILITIES. 20. TOPSOIL THE SITE AND INSTALL THE PROPOSED LANDSCAPING. IMMEDIATELY STABILIZE ALL AREAS.
- 21. A VEGETATED AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OVER THE ENTIRE DISTURBED AREA AND/OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.
- 22. NO SOIL IS TO BE HAULED OFF SITE WITHOUT SEPARATE EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN REVIEWED BY THE DESIGN ENGINEER. A VEGETATED AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OVER THE ENTIRE DISTURBED AREA AND/OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.





General Notes:

I. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (SEE FIGURE 4.1 OF THE PA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, MAR. 2012). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN OF FIGURE 4.2 OF THE PA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (MAR. 2012). STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN. 4. 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.

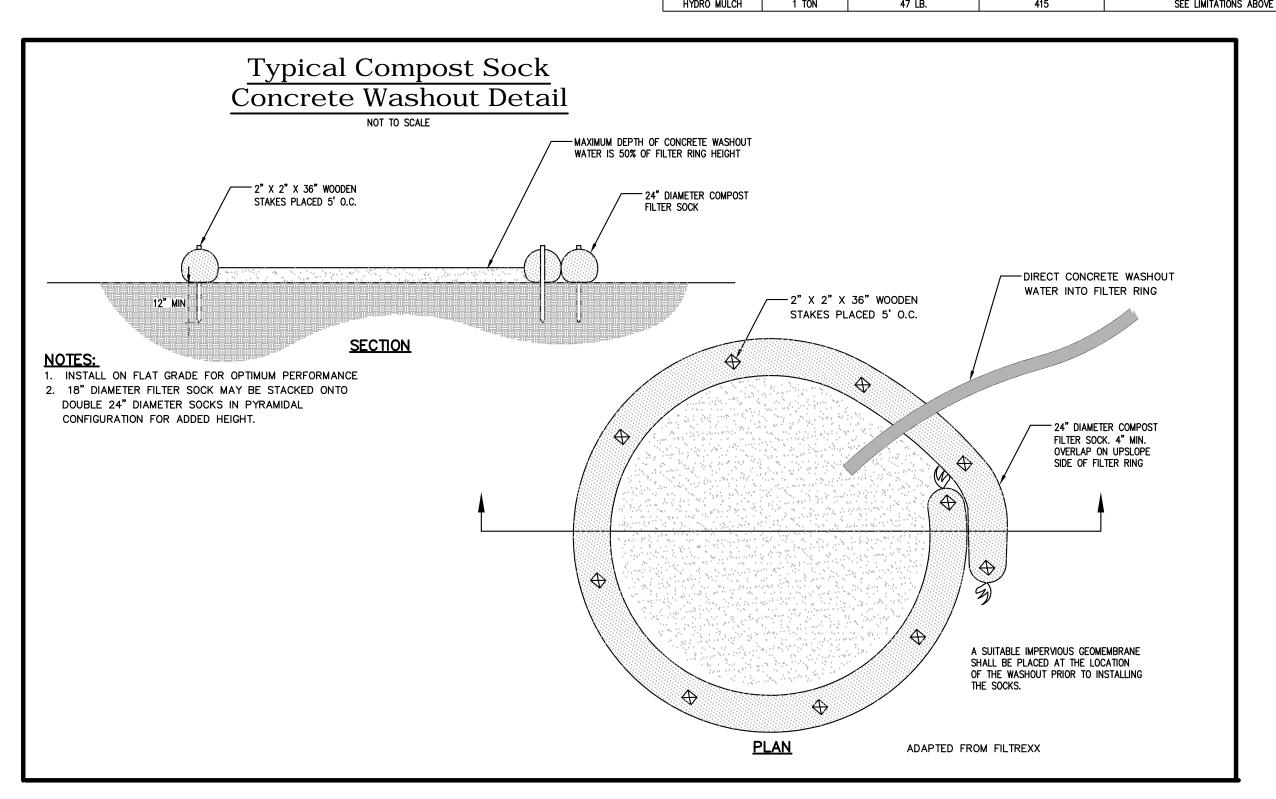
. BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. 6. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

MATERIAL TYPE	3 mil HDPE	5 mil HDPE	5 mil HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMEN POLYPROPYLENI (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-PL	Y SYSTEMS		
				HDPE BIAXIAL NET	
INNER CO	NTAINMENT NETTING			CONTINUOUSLY WOUND	
INNER CO	NTAINMENT NETTING			FUSION-WELD JUNCTURES	5
			3/4	" X 3/4" MAX. APERTURE	SIZE
OUTER	FILTRATION MESH		(WOVEN LAYE	Posite Polypropylene f. R & Non—Woven Fleece Fused via Needle Punch	MECHANICALLY
				3/16" MAX. APERTURE SIZ	

TA	BLE 4.2
COMPO	ST STANDARDS
ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
рН	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

SYNTHETIC BINDERS, OR CHEMICAL BINDERS MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES. MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5% WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE OF HYDROMULCH SHOULD BE 2,000 LB./ACRE AT A MINIMUM.

MULCH APPLICATION RATES						
MULCH TYPE		APPLICATION RATE (NOTES			
	PER ACRE	PER 1,000 SQ. FT.	PER 1,000 SQ. YD.	NOILS		
STRAW	3 TONS	140 LB.	1,240 LB.	EITHER WHEAT OR OAT STRAW, FREE OF WEEDS, N CHOPPED OR FINELY BROKEN		
HAY	3 TONS	140 LB.	1,240 LB	TIMOTHY, MIXED CLOVER AND TIMOTHY OR OTHER NATIVE FORAGE GRASSES		
WOOD CHIPS	4-6 TONS	185-275 LB.	1,650-2,500 LB.	MAY PREVENT GERMINATION OF GRASSES AND LEGUI		
HADDO MIII CH	1 TON	47 LD	415	SEE LIMITATIONS ADOVE		



AVOIDANCE MEASURE: THE PROPOSED PROJECT IS LOCATED IN THE VICNITY OF NORTHERN LONG-EARED BAT SPRING STAGING/FALL SWARMING HABITAT. TO ENSURE TAKE IS NOT REASONABLE CERTAIN TO OCCUR, DO NOT CONDUCT TREE REMOVAL FROM MAY 15 TO AUGUST 15

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Assurance Of Design Performance

DURING SITE DEVELOPMENT CONSTRUCTION, ALL TEMPORARY FROSION AND SEDIMENTATION CONTROL FACILITIES MUST BE CHECKED BY THE SITE CONTRACTOR AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ANY DAMAGE TO THE FACILITIES MUST BE REPAIRED IMMEDIATELY. ANY LOST SOIL MATERIAL SHALL BE RECOVERED, IF POSSIBLE. WASHED OUT LAWN OR SLOPE AREAS MUST HAVE TOPSOIL REPLACED AND

2. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON

102.4(B)(5)(X) "A MAINTENANCE PROGRAM WHICH PROVIDES FOR INSPECTION OF BMPS ON A WEEKLY BASIS AND AFTER EACH MEASURABLE RAINFALL EVENT, INCLUDING THE REPAIR OF THE BMPS TO

5. 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.

ACCORDANCE WITH THIS TITLE."

- WASTES AT THE SITE." WITH APPROPRIATE BMPS (E.G. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE CONSERVATION DISTRICT AND IS BEING

OFFSITE.).

ALL DISTURBED EARTH SURFACES OR TOPSOIL

STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN. A. FORMULA "B" - PRIMARILY KENTUCKY BLUEGRASS & CREEPING RED OR CHEWINGS FESCUE,

Note: SLURRY APPLICATIONS MUST INCLUDE A STRAW MULCH BINDER. AT A RATE OF 3.0 TONS PER

- A. RAKED FREE OF STONES; B. LIMED AND FERTILIZED AS NECESSARY;
- D. MULCHED OR MATTED TO PROTECT THE SEED FROM DRYNESS AND EROSION (STRAW OR

ENGINEER AND THE LOCAL COUNTY CONSERVATION DISTRICT.

- MULCH OR APPLY HAY AT 1,240 LBS. PER 1,000 S.Y. TO SEEDED AREAS TO PROTECT THE **Grading Standards Notes:**
- PREVENT CONSTRUCTION OF SATISFACTORY FILLS. 6. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHOULD

SINKHOLE REPAIR DETAILS ON SHEET 10 OF THE PLAN SET. Inspection Log:

(3800-FM-BCW0271d) REV. 1/2019.

PLAN VIEW CLAMPS (TYP) ✓ DISCHARGE HOSE FILTER BAG WELL VEGETATED, GRASSY AREA ELEVATION VIEW LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, TEST METHOD MINIMUM STANDARD /G. WIDE WIDTH STRENGTH ASTM D-4884 ASTM D-4632 PUNCTUR MULLEN BURS ASTM D-3786

JV RESISTANC

AOS % RETAINED

CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

Standard Construction Detail # 3-16

PUMPED WATER FILTER BAG

NOT TO SCALE

WELL VEGETATED, GRASSY AREA

-HEAVY DUTY LIFTING STRAPS

(RECOMMENDED

General Notes: 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 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 NOCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPHESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER ROCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY

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

ASTM D-4355

ASTM D-4751

TABLE 11.2 Soil Amendment Application Rate Equivalents

. Bide - 72800 540	Perma					
Soil Amendment	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	Notes		
Agricultural lime	6 tons	240 lb.	2,480 lb.	Or as per soil test; may not be required in agricultural fields		
10-20-20 fertilizer	1,000 lb.	25 lb.	210 lb.	Or as per soil test; may not be required in agricultural fields		
	Temporary Seeding Application Rate					
Agricultural lime	1 ton	40 lb.	410 lb.	Typically not required for topsoil stockpiles		
10-10-10 fertilizer	500 lb.	12.5 lb.	100 lb.	Typically not required for topsoil stockpiles		

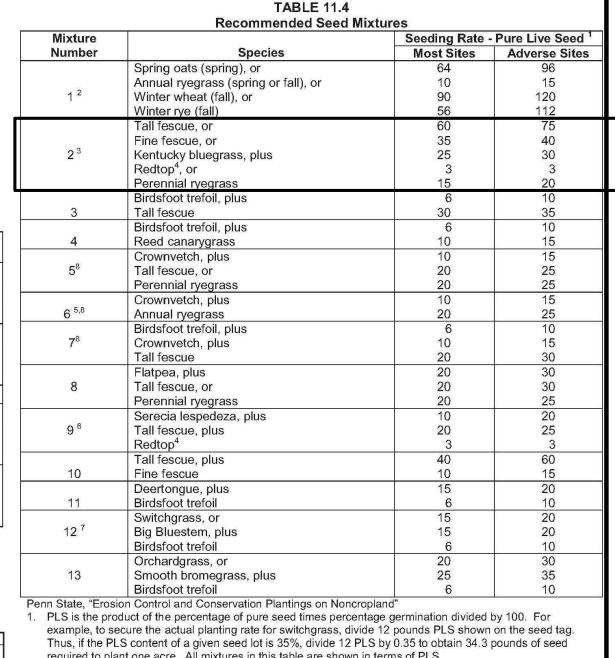
NOTE: A compost blanket which meets the standards of this chapter may be substituted for the soil amendments shown in Table 11.2.

TABLE 11.3

		Tolerates			Minimum Seed Specifications ³					
Species	Growth Habit ¹	Wet Soil	Dry Site	Low Fertility	Acid Soil (pH 5-5.5) ²	Purity (%)	Ready Germ (%)	Hard Seed (%)	Total Germ (%)	Seeds/lk (1,000s)
Warm-Season Grass	ses									
Deertongue	bunch	yes	yes	yes	yes	95	75		75	250
Weeping lovegrass	bunch	no	yes	yes	yes	97	75		75	1,500
Switchgrass⁴ Big bluestem	bunch bunch	yes no	yes yes	yes yes	yes yes			PLS) PLS)		390 150
Cool-Season Grasse	es									
Tall Fescue	bunch	yes	no	yes	no	95	80		80	227
Redtop	sod	yes	yes	yes	yes	92	80		80	5,000
Fine fescues	sod	no	no	yes	no	95	80		80	400
Perennial ryegrass	bunch	yes	no	no	no	95	85		85	227
Annual ryegrass	bunch	yes	no	yes	no	95	85		85	227
Kentucky bluegrass	sod	no	no	no	no	85	75		75	2,200
Reed canarygrass	sod	yes	yes	yes	no	95	70		70	520
Orchardgrass	bunch	yes	yes	yes	yes	95	80		80	654
Timothy	bunch	yes	no	yes	yes	95	80		80	1,230
Smooth bromegrass	sod	no	yes	yes	no	95	80		80	136
Legumes ⁵					-					
Crownvetch	sod	no	yes	yes	no	98	40	30	65	120
Birdsfoot trefoil ⁶	bunch	yes	no	yes	yes	98	60	20	80	400
Flatpea	sod	no	no	yes	yes	98	55	20	75	10
Serecia lespedeza	bunch	no	yes	yes	yes	98	60	20	80	335
Cereals										
Winter wheat	bunch	no	no	no	no	98	85		85	15
Winter rye	bunch	no	no	yes	yes	98	85		85	18
Spring oats	bunch	no	no	no	no	98	85		85	13
Sundangrass	bunch	no	yes	no	no	98	85		85	55
Japanese millet	bunch	yes	no	yes	yes	98	80		80	155

- Growth habit refers to the ability of the species to either form a dense sod by vegetative means (stolons, rhizomes, or roots) or remain in a bunch or single plant form. If seeded heavily enough, even bunch formers can produce a very dense stand. This is sometimes called a sod, but not in the sense of a sod formed by vegetative means.
- ² Once established, plants may grow at a somewhat lower pH, but cover generally is only adequate at pH 6.0 or above. Minimum seed lots are truly minimum, and seed lots to be used for revegetation purposes should equal or exceed these standards. Thus, deertongue grass should germinate 75% or better.
- Crownvetch should have at least 40% readily germinable seed and 30% hard seed. Commonly, seed lots are available that equal or exceed minimum specifications. Remember that disturbed sites are adverse for plant establishment. Ready germination refers to seed that germinates during the period of the germination test and that would be expected, if conditions are favorable, to germinate rapidly when planted. The opposite of ready germination is dormant seed, of which hard seed is one type.
- ⁵ Need specific legume inoculant. Inoculant suitable for garden peas and sweetpeas usually is satisfactory for flatpea. ⁶ Birdsfoot trefoil is adapted over the entire state, except in the extreme southeast where crown and root rots may injure stands.
- Penn State, "Erosion Control and Conservation Plantings on Noncropland,"

⁴ Switchgrass seed is sold only on the basis of PLS.



required to plant one acre. All mixtures in this table are shown in terms of PLS. If high-quality each is used for most sites each enring rate at a rate of 2 hushals nor area winter wheat at TABLE 11.4

	Recommended Seed M		D 11 0 11
Mixture			Pure Live Seed 1
Number	Species	Most Sites	Adverse Sites
	Spring oats (spring), or	64	96
	Annual ryegrass (spring or fall), or	10	15
1 ²	Winter wheat (fall), or	90	120
	Winter rye (fall)	56	112
	Tall fescue, or	60	75
	Fine fescue, or	35	40
2 ³	Kentucky bluegrass, plus	25	30
	Redtop ⁴ , or	3	3
	Perennial ryegrass	15	20
	Birdsfoot trefoil, plus	6	10
3	Tall fescue	30	35
	Birdsfoot trefoil, plus	6	10
4	Reed canarygrass	10	15
	Crownvetch, plus	10	15
5 ⁸	Tall fescue, or	20	25
	Perennial ryegrass	20	25
1000000	Crownvetch, plus	10	15
6 5,8	Annual ryegrass	20	25
(±1)	Birdsfoot trefoil, plus	6	10
7 ⁸	Crownvetch, plus	10	15
	Tall fescue	20	30
	Flatpea, plus	20	30
8	Tall fescue, or	20	30
	Perennial ryegrass	20	25
	Serecia lespedeza, plus	10	20
9 ⁶	Tall fescue, plus	20	25
	Redtop ⁴	3	3
	Tall fescue, plus	40	60
10	Fine fescue	10	15
	Deertongue, plus	15	20
11	Birdsfoot trefoil	6	10
	Switchgrass, or	15	20
12 ⁷	Big Bluestem, plus	15	20
	Birdsfoot trefoil	6	10
	Orchardgrass, or	20	30
13	Smooth bromegrass, plus	25	35
	Birdsfoot trefoil	6	10

- Penn State, "Erosion Control and Conservation Plantings on Noncropland" 1. PLS is the product of the percentage of pure seed times percentage germination divided by 100. For example, to secure the actual planting rate for switchgrass, divide 12 pounds PLS shown on the seed tag. Thus, if the PLS content of a given seed lot is 35%, divide 12 PLS by 0.35 to obtain 34.3 pounds of seed
- required to plant one acre. All mixtures in this table are shown in terms of PLS. . If high-quality seed is used, for most sites seed spring oats at a rate of 2 bushels per acre, winter wheat at 11.5 bushels per acre, and winter rye at 1 bushel per acre. If germination is below 90%, increase these suggested seeding rates by 0.5 bushel per acre.
- . This mixture is suitable for frequent mowing. Do not cut shorter than 4 inches. Keep seeding rate to that recommended in table. These species have many seeds per pound and are very competitive. To seed small quantities of small seeds such as weeping lovegrass and redtop, dilute with dry

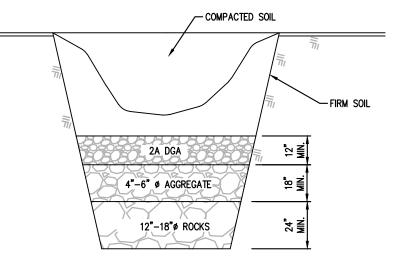
5. Use for highway slopes and similar sites where the desired species after establishment is crownvetch.

REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

3. NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING, GRASS HEIGHT SHALL

BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

sawdust, sand, rice hulls, buckwheat hulls, etc.

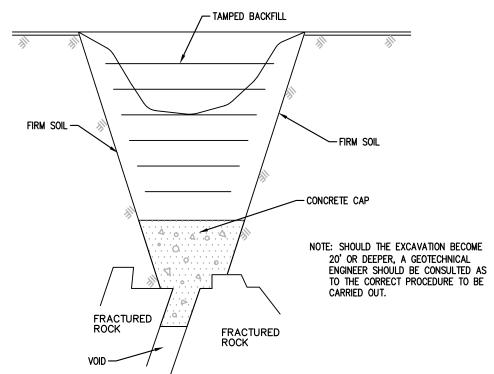


Sinkhole In Soil

1. THE REPAIR TECHNIQUES AS DESCRIBED BELOW ARE SUITABLE ONLY IF THE SINKHOLE IS LOCATED IN AN OPEN AREA. IF THE SINKHOLE IS LOCATED UNDER OR NEAR A STRUCTURE OR A BUILDING, COMPACTION GROUTING MAY BE NECESSARY FOR REMEDIATION, AS DETERMINED BY A GEOTECHNICAL ENGINEER LICENSED IN THE

2. EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 15 FEET BELOW GRADE, WHICHEVER 3. IF ROCK IS ENCOUNTERED WITHIN 10 FEET, STOP EXCAVATION. THE LIMIT OF EXCAVATION SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER. GENERALLY, A ZONE OF SOFT, IN-FILL MATERIAL WILL BE FOUND WHICH COVERS MOST OF THE BOTTOM OF THE EXCAVATION. COVER THIS AREA WITH A GRADED ROCK FILTER AS SHOWN

4. BACKFILL HOLE WITH RELATIVELY IMPERMEABLE CLAY SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER TO AT LEAST 95% OF THE STANDARD PROCTOR. 5. BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.



Sinkhole In Rock

1. THE REPAIR TECHNIQUES AS DESCRIBED BELOW ARE SUITABLE ONLY IF THE SINKHOLE IS LOCATED IN AN OPEN AREA. IF THE SINKHOLE IS LOCATED UNDER OR NEAR A STRUCTURE OR A BUILDING, COMPACTION GROUTING MAY BE NECESSARY FOR REMEDIATION, AS DETERMINED BY A GEOTECHNICAL ENGINEER LICENSED IN THE

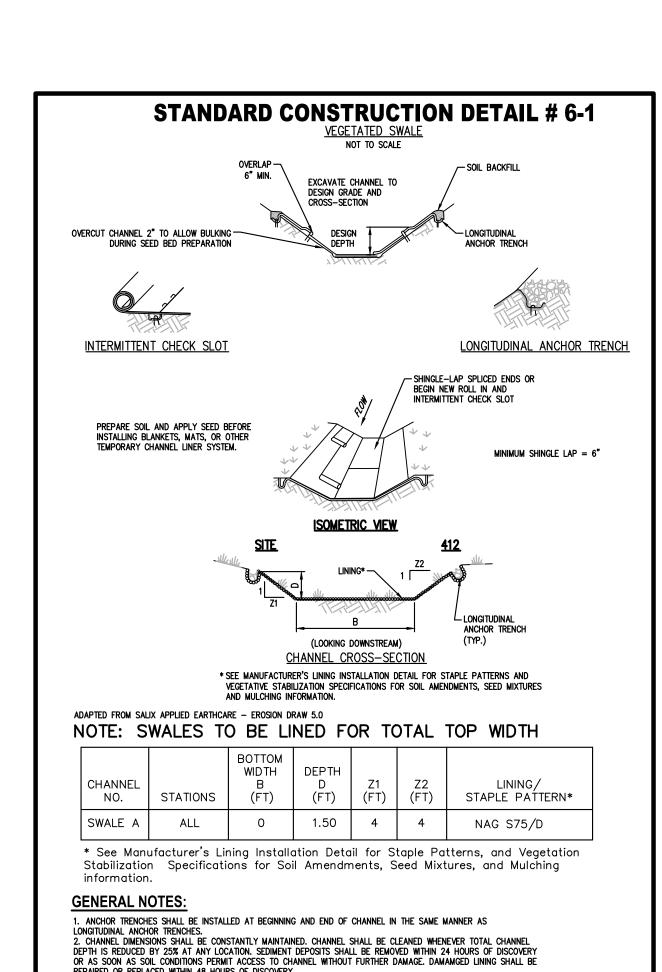
COMMONWEALTH OF PENNSYLVANIA. 2. EXCAVATE DOWN TO BEDROCK OR TO THE SINKHOLE THROAT .

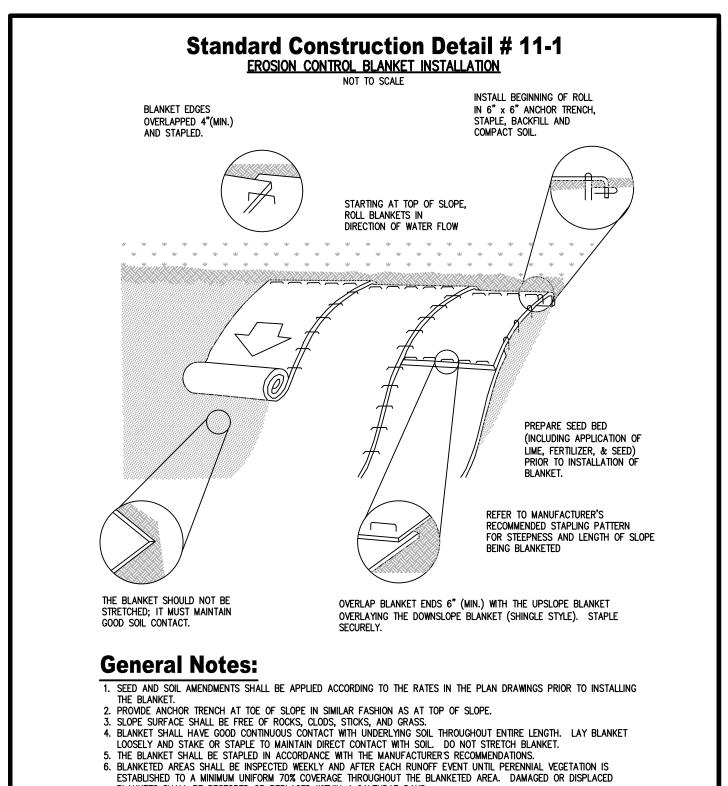
3. EXPOSE THE ROCK SURFACE BY WASHING THE AREA WITH A SMALL HOSE WATER SPRAY AND INSTALL HIGHSUMP CEMENT INTO VOIDS AND CREVICES UNTIL VOIDS ARE FILLED AND A CAP COVERS THE AREA. THE LIMIT OF

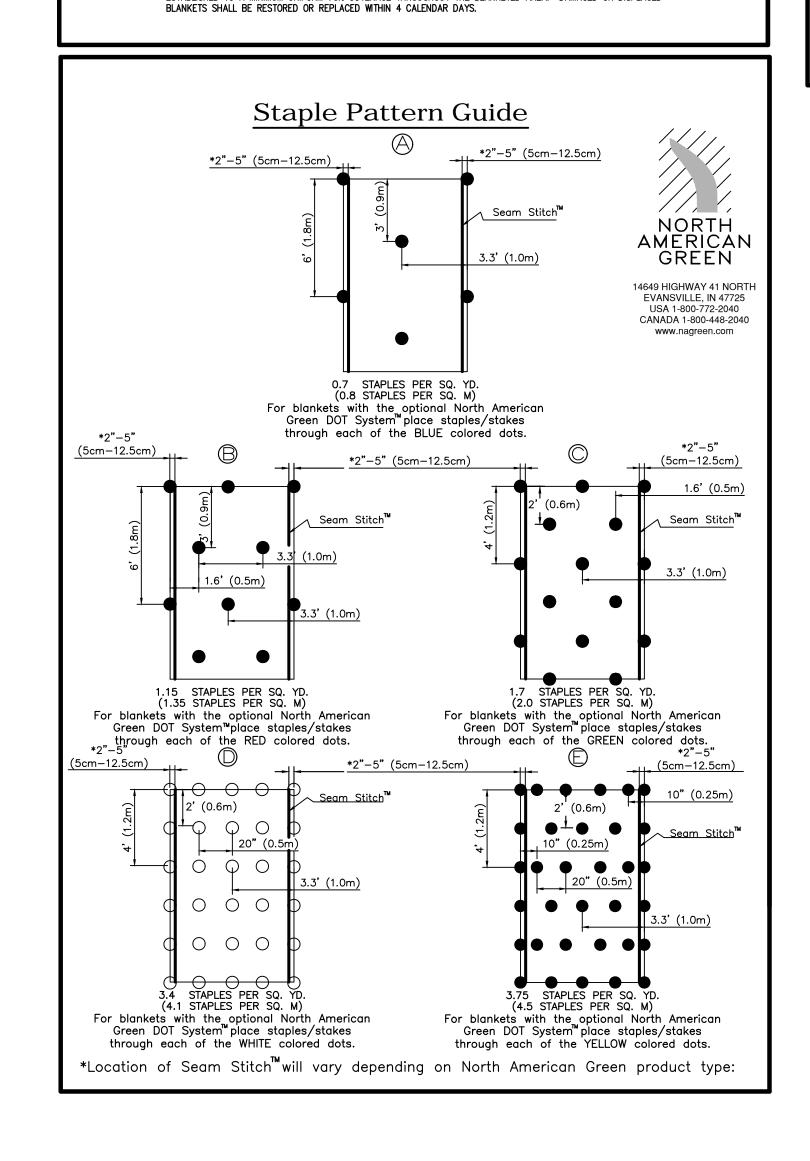
EXCAVATION AND CONCRETE SHALL BE DETERMINED BY THE ENGINEER. 4. AFTER CONCRETE HAS SET OVERNIGHT, BACKFILL HOLE WITH RELATIVELY IMPERMEABLE CLAY SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER TO AT LEAST 95% OF THE STANDARD PROCTOR. THE TOP

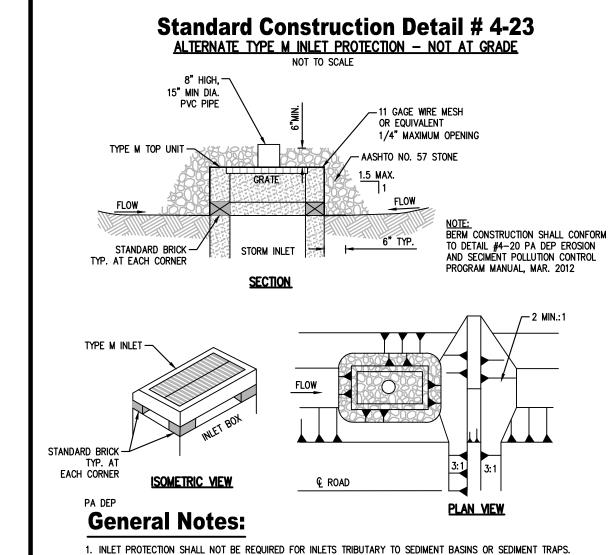
THREE(3) FEET SHALL BE BACKFILLED WITH 2RC CRUSHED AGGREGATE. 5. BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.

6. WHEN SINKHOLE IS UNDER A PROPOSED UTILITY. CONCRETE IS TO BE SET 6" BELOW THE UTILITY TO ALLOW FOR









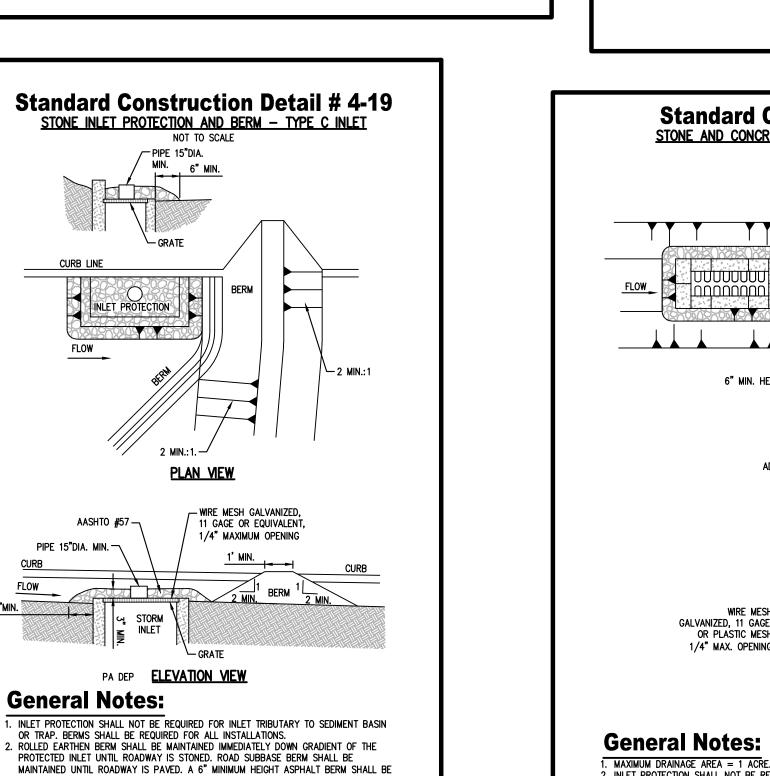
ALTERNATE TYPE C INLET PROTECTION CAN BE USED ON ONE ACRE MAXIMUM DRAINAGE AREA WITH 15" OVERFLOW PIPE AND 4 HEAD.

2. 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.

3. 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.
4. 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 FOLLOWING STANDARDS:

ORGANIC MATTER CONTENT	80%-100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
рН	5.5-8.0
MOISTURE CONTENT	35%-55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 dS/m (mmhos/cm) MAXIMUM

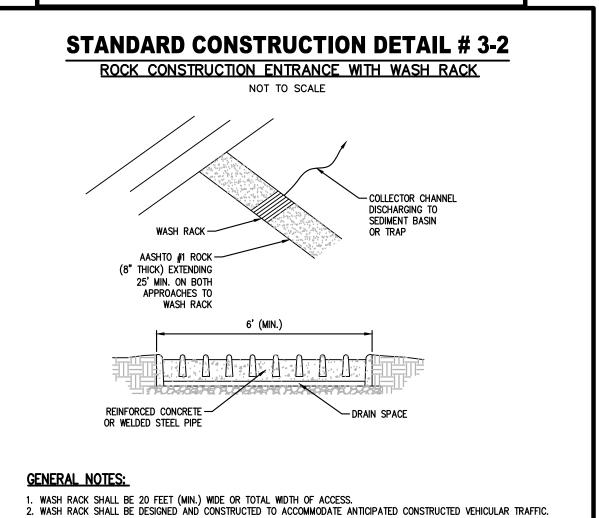


MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

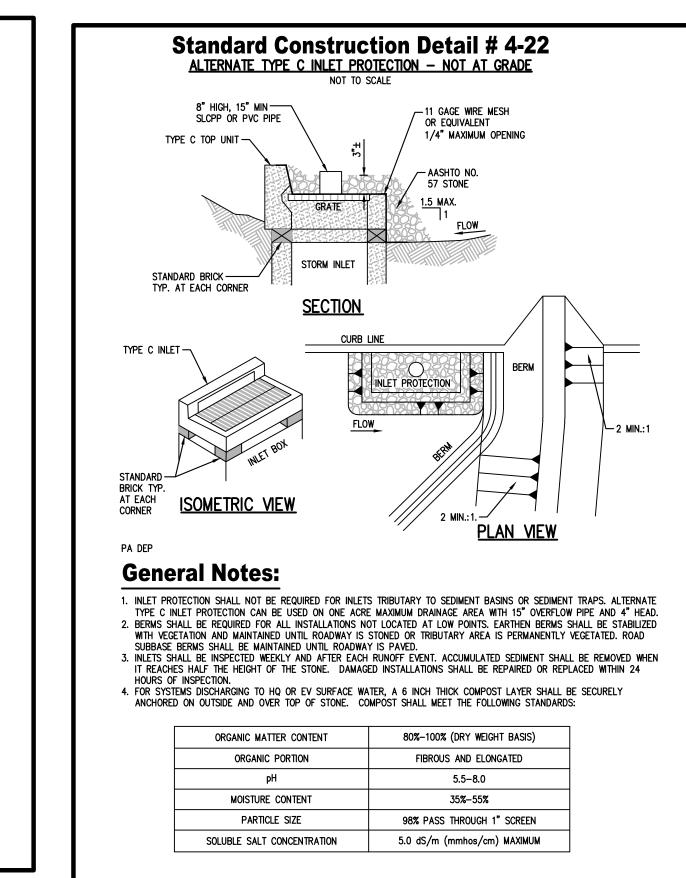
3. STONE INLET PROTECTION AND BERM FOR A TYPE C INLET CAN BE USED IN ONE ACRE MAXIMUM DRAINAGE AREA WITH 15" OVERFLOW PIPE AND 4" HEAD. A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT HE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA. 4. SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY. 5. DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC

6. FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6" THICK COMPOST LAYER

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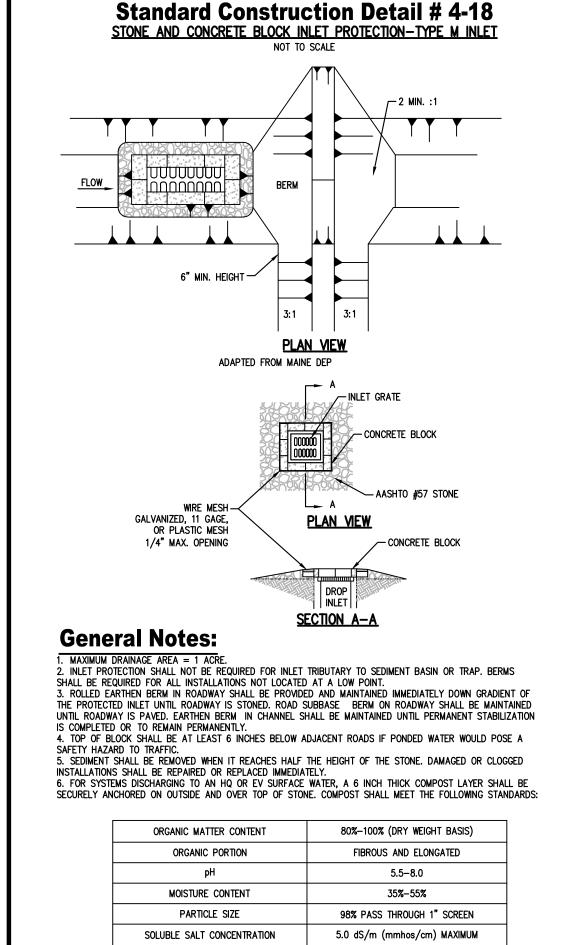
3. A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE. ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. L SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

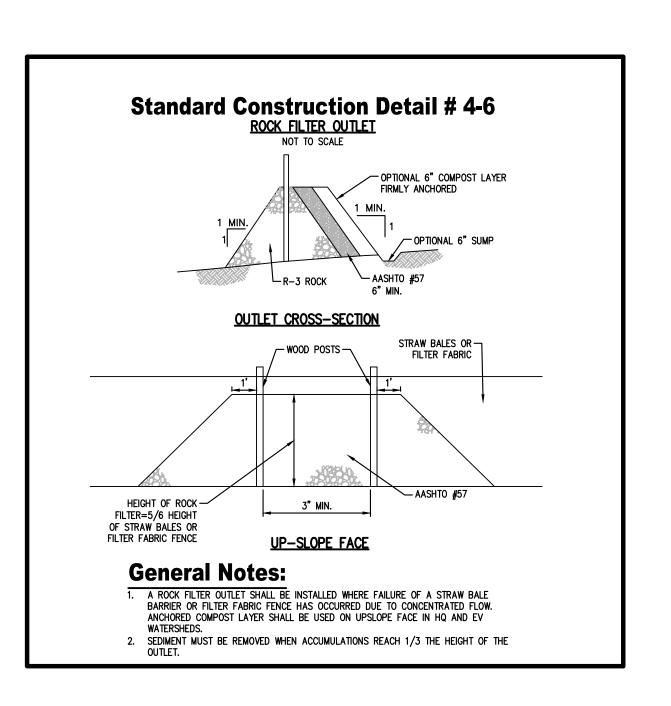


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AVOIDANCE MEASURE: THE PROPOSED PROJECT IS LOCATED IN THE VICNITY OF NORTHERN LONG-EARED BAT SPRING STAGING/FALL SWARMING HABITAT. TO ENSURE TAKE IS NOT REASONABLE CERTAIN TO OCCUR, <u>DO NOT CONDUCT TREE REMOVAL FROM MAY 15 TO AUGUST 15</u>

