

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN LVIP VII – LOT 23B TACO BELL

WARD 17 CITY OF BETHLEHEM NORTHAMPTON COUNTY PENNSYLVANIA

Record Notes

- SUMMERWOOD CORP. (TACO BELL) IS THE DEVELOPER FOR THE PROJECT.
- 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 AS THE UTILITY IS INSTALLED.
- 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 OTHERWISE.
- EXISTING UTILITY POLES REQUIRED TO BE RELOCATED FOR CONSTRUCTION OF IMPROVEMENTS SHALL BE RELOCATED IN ACCORDANCE WITH ALL UTILITY COMPANY, CITY AND PENNDOT REGULATIONS AND SPECIFICATIONS.
- IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM, FIRM (FLOOD INSURANCE RATE MAP), FOR THE CITY OF BETHLEHEM, NORTHAMPTON COUNTY, COMMUNITY PANEL NUMBERS 42095C0326D, EFFECTIVE DATE JULY 16, 2014, THE PROJECT SITE IS LOCATED IN THE ZONE "X" AREA OF MINIMAL FLOOD HAZARD.
- SINKHOLE REPAIRS AND CLOSURES SHALL BE COMPLETED IN ACCORDANCE WITH THE DETAILS PROVIDED ON THE PROJECT DRAWINGS.
- THE SANITARY SEWER LATERALS ARE PROPOSED TO BE PRIVATELY OWNED.
- NO UTILITY WILL BE ACCEPTED BY THE CITY WITH A STRUCTURE OR REMNANT THEREOF ON TOP OF THE UTILITY. NO STRUCTURE SHOULD BE CONSTRUCTED OVER ANOTHER UTILITY.
- ALL ELECTRICAL WORK WILL REQUIRE AN ELECTRICAL PERMIT AND A "PPL" JOB REQUEST NUMBER. DEVELOPER MUST FOLLOW CITY OF BETHLEHEM'S REQUIREMENTS FOR PARKING LOT AREA LIGHTING. POLE HEIGHTS MAY NOT BE GREATER THAN 25 FEET. ANY ARTIFICIAL LIGHT MUST NOT INFINGE ON ADJACENT PROPERTY. ALL LIGHT FIXTURES SHALL HAVE A CUT OFF DESIGN THAT AIMS LIGHT DIRECTLY DOWNWARD.
- 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.
- THE OWNER SHALL INSTALL KNOX BOX FOR CITY OF BETHLEHEM FIRE DEPARTMENT ACCESS.
- THE SUBJECT PARCEL WAS PREVIOUSLY DEVELOPED AS THE BETHLEHEM STEEL AND PRIOR TO THE SUBDIVISION THE PROPERTY WAS SLAG AND SHALL BE CONSIDERED IMPERVIOUS AREA. THUS, NO NEW IMPERVIOUS COVERAGE IS PROPOSED.
- PROPOSED MONUMENT SIGN LOCATION AND SIZE SHALL CONFORM WITH THE CITY'S ZONING ORDINANCE AND LVP COVENANTS AND WILL REQUIRE A PERMIT FROM THE CITY PRIOR TO CONSTRUCTION.
- ANY CHANGE IN THE LOCATION OF THE FIRE DEPARTMENT CONNECTION (FDC) SHALL BE APPROVED BY THE CITY OF BETHLEHEM FIRE DEPARTMENT.

GENERAL CONSTRUCTION NOTES

- A 36" (MIN) BAND OF RIVER ROCK, WITH METAL EDGING, SHALL BE INSTALLED IN ALL LANDSCAPED AREAS AROUND PERIMETER OF BUILDING (3" AVG. ROCK ON PERMEABLE WEED BARRIER).
- CONTRACTOR SHALL COORDINATE WITH THE MUNICIPALITY REGARDING THE PLACEMENT OF A MAILBOX.

IRRIGATION NOTES:

- LANDSCAPER SHALL INSTALL DRIP IRRIGATION IN BEDS AROUND THE BUILDING
- LANDSCAPER SHALL INSTALL SPRAY IRRIGATION IN OUTER BEDS
- SYSTEM SHALL HAVE A BACK FLOW PREVENTER AND A RAIN SENSOR
- SYSTEM SHALL BE DESIGNED TO RUN ON 1" SERVICE
- SYSTEM SHALL RUN DURING OFF HOURS
- SYSTEM SHALL BE DESIGNED SO THAT ZONES ARE ADEQUATE FOR A 1" WATER SERVICE (MORE ZONES MAY BE REQUIRED)

NPDES Note

BY SUBMISSION OF THESE PLANS THE ENGINEER ON RECORD CERTIFIES THAT THESE PLANS ARE IN COMPLETE CONFORMANCE WITH THE CITY OF BETHLEHEM STORM WATER MANAGEMENT ORDINANCE.

As-Built Note

ACCURATE AS-BUILT PLANS SHALL BE KEPT UP TO DATE DURING THE CONSTRUCTION PROCESS. AT THE COMPLETION OF THE PROJECT, RECORD DRAWINGS SHALL BE DEVELOPED FROM 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 (E.P.E. STAMPED AND SIGNED) THAT THE RECORD DRAWINGS COMPLY SUBSTANTIALLY WITH THE APPROVED PLAN AND THAT THEY CONFORM TO INDUSTRY STANDARDS. ALL DIGITAL FILES SHALL RESIDE ON PC COMPATIBLE CD ROM CONTAINING THE DIGITAL REPRESENTATION OF THE FINAL PLAN AS PRESENTED ON THE TWENTY-FOUR (24) INCH BY THIRTY-SIX (36) INCH SHEETS. THE DIGITAL MAP SHALL BE AUTOCAD COMPATIBLE. ALL LAYERS INCLUDED IN THE DIGITAL MAPS SHALL BE THE STANDARDIZED LAYERS PREPARED AND UTILIZED BY THE CITY OF BETHLEHEM TO ENSURE COMPATIBILITY WITH THE CITY'S EXISTING CADD STANDARDS AND AS DESCRIBED IN APPENDIX A OF THE CITY'S SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

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

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.

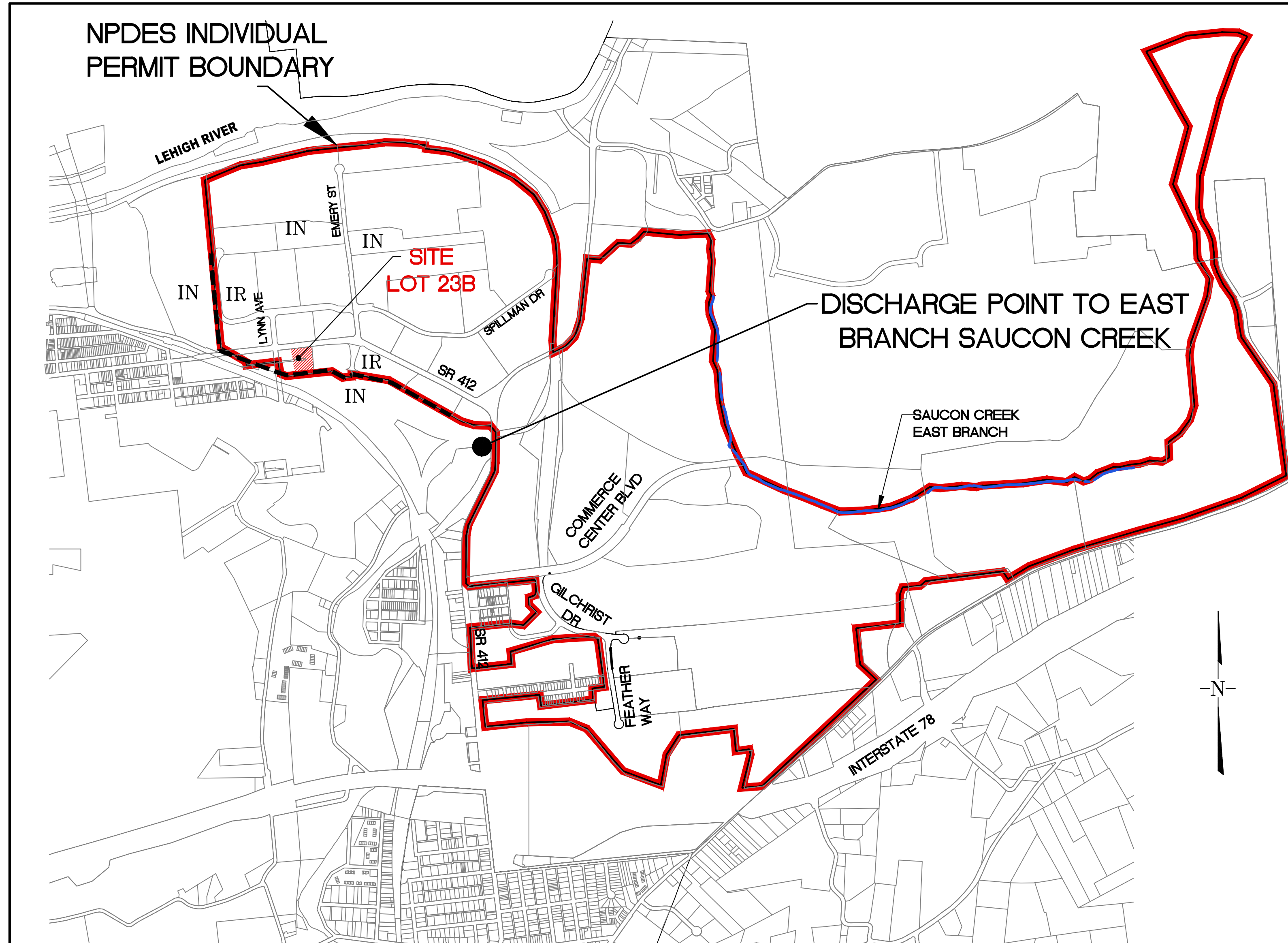
2. THE DRAINAGE EASEMENT PROVIDES FOR THE FLOW OF STORMWATER ACROSS LOTS, AND MAY NOT BE ALTERED WITHOUT THE WRITTEN PERMISSION OF THE CITY ENGINEER. NO OBSTRUCTIONS SUCH AS PLANTING BERMS OR FENCES MAY BE INSTALLED IN THE DRAINAGE EASEMENTS AREAS WITHOUT SUFFICIENT PROVISION FOR THE PASSAGE OF STORMWATER, 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 ENGINEER.

Building Stakeout Note

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



Location Map

SCALE: 1" = 1,000'

Site Data

PARCELS:	P7 - 10 - 1-23 (LOT 23B)	62,637 S.F./1.44 ACRES
WARD:	17	
TAX MAP REFERENCED:	MAP P7, BLOCK 10, LOT 23	
DEED REFERENCED:	2004-1-209584	
ZONING DISTRICT:	IR (INDUSTRIAL REDEVELOPMENT)	
EXISTING USE:	VACANT LOT	
PROPOSED USE:	RESTAURANT-DRIVE THRU	(PERMITTED BY SPECIAL EXCEPTION)
WATER:	PUBLIC	
SEWER:	PUBLIC	
	REQUIRED/ALLOWED	ALLOWED BY LVP COVENANTS
	IR DISTRICT	LOTS 23B
MINIMUM DEVELOPMENT AREA:	20,000 S.F.	1.44 ACRES
MAXIMUM BUILDING COVERAGE:	90%	4.35%
MAXIMUM BUILDING HEIGHT:	200 FT	27 FT.
MINIMUM LOT WIDTH:	60 FT.	450 FT.
IMPERVIOUS COVERAGE:	90%	(50,141 S.F.) 80.0%
SETBACKS:		
FRONT YARD:	10 FT	40 FT
REAR YARD:	20 FT	15 FT
SIDE YARD:	10 FT	15 FT
PARKING, SETBACKS:		
FRONT YARD:	10 FT	25 FT
REAR YARD:	20 FT	10 FT
SIDE YARD:	10 FT	10 FT
PARKING REQUIREMENTS:		
MINIMUM SIZE:	9' X 18'	9' X 19'
SPACES REQUIRED:		
INDOOR RETAIL:	4 SPACES PER 1,000 S.F. OF BLDG.	2,722/1,000x4=11
RESTAURANT COMPONENT:	1 SPACE PER 4 SEATS	(39 INTERIOR) 47/4=12
TOTAL SPACES REQUIRED:	23 SPACES	
ACCESSIBLE PARKING:	2 SPACES	2 SPACES
TOTAL SPACES PROVIDED:		32 SPACES
BICYCLE PARKING:	2 SPACES (5% OF 32) 2 MINIMUM	2 SPACES
BUILDING COVERAGE:	2,722 SF	
	TOTAL 62,637 SF, OR 1.44 AC.	
	(2,722 SF / 62,637 SF=4.35%)	

* LVP BUILDING COMMITTEE TO GRANT RELIEF TO ALLOW THE PAVING AREA TO ENCR OACH INTO THE REQUIRED FRONT YARD SETBACK WITHIN THEIR CONSTRAINTS.

ZONING HEARING BOARD DECISION

DATE OF ZONING HEARING: MAY 17, 2023

DATE OF WRITTEN DECISION: 2023

CONCLUSION OF LAW

1. THE PROPOSED DRIVE-THRU MEETS ALL SPECIFIC REQUIREMENTS OF ZONING ORDINANCE SEC. 1322(a).

2. APPLICANT PRESENTED CLEAR AND CONVINCING EVIDENCE THAT IT MEETS THE GENERAL REQUIREMENTS OF ZONING ORDINANCE SEC. 1325-07(b).

APPROVED BY A VOTE OF 5-0.

Plan Preparer



HanoverEngineering

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

Owner

LVP, INC
1720 SPILLMAN DRIVE
BETHLEHEM, PA 18015
PHONE 610.866.4600

Equitable Owner / Applicant

TACO BELL
SUMMERWOOD CORP.
14 BALLGOWING ROAD
CONSHOHOCKEN, PA 19428
JOE DEPASCALE, DEVELOPMENT
MANAGER -215-307-6463

Site Address

1620 EAST 4TH STREET
BETHLEHEM, PA 18015

Statement of Intent

TO DEVELOP LOT 23B OF THE LVP VII SUBDIVISION AND CONSTRUCT A TACO BELL RESTAURANT WITH A DRIVE THRU WITH ASSOCIATED PARKING AND INFRASTRUCTURE.

Land Development Plans

- * 1 COVER SHEET - (RECORD PLAN 1 OF 2)
- * 2 RECORD PLAN (2 OF 2)
- 3 EXISTING FEATURES PLAN
- 4 DEMOLITION PLAN
- 5 GRADING & UTILITY PLAN
- 6 CURB GRADE PLAN
- 7 PROFILE PLAN
- 8 PROFILE PLAN
- 9 LANDSCAPE PLAN AND DETAILS
- 10 LIGHTING PLAN AND DETAILS
- * 11 POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
- 12 POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
- 13 EROSION & SEDIMENTATION CONTROL PLAN
- 14 EROSION & SEDIMENTATION CONTROL DETAIL SHEET
- 15 EROSION & SEDIMENTATION CONTROL DETAIL SHEET
- 16 CONSTRUCTION DETAIL SHEET
- 17 CONSTRUCTION DETAIL SHEET
- 18 CONSTRUCTION DETAIL SHEET

* DENOTES PLAN TO BE RECORDED

Supplemental Plans

FIRE TRUCK MOVEMENT EXHIBIT - 1 OF 1

PRELIMINARY/FINAL LAND DEVELOPMENT
(RECORD PLAN 1 OF 2)

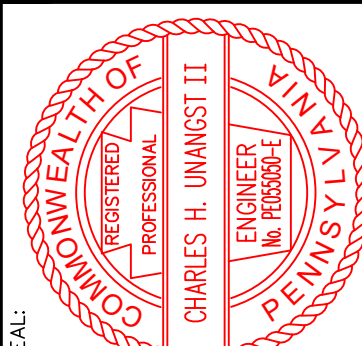
CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

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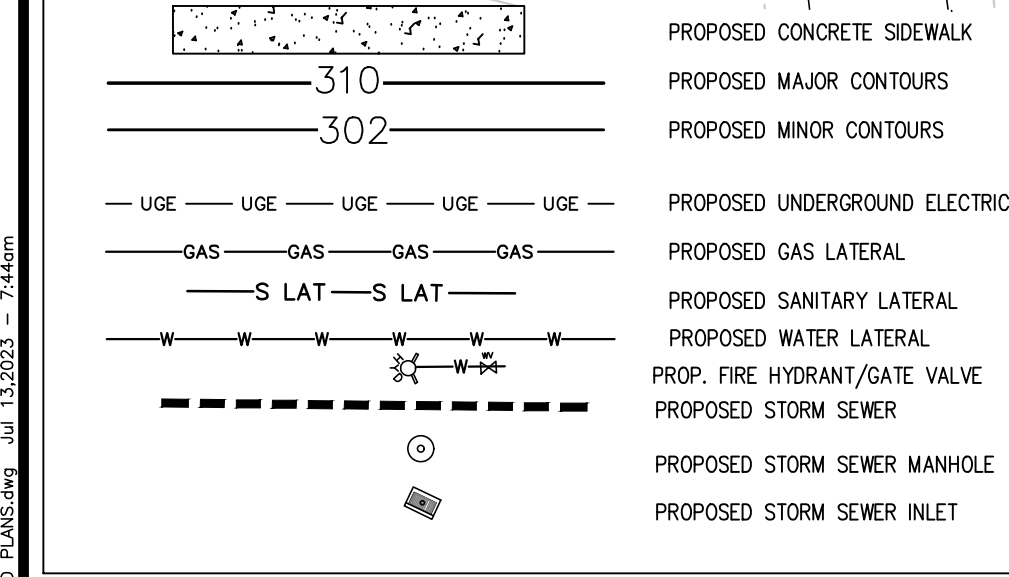
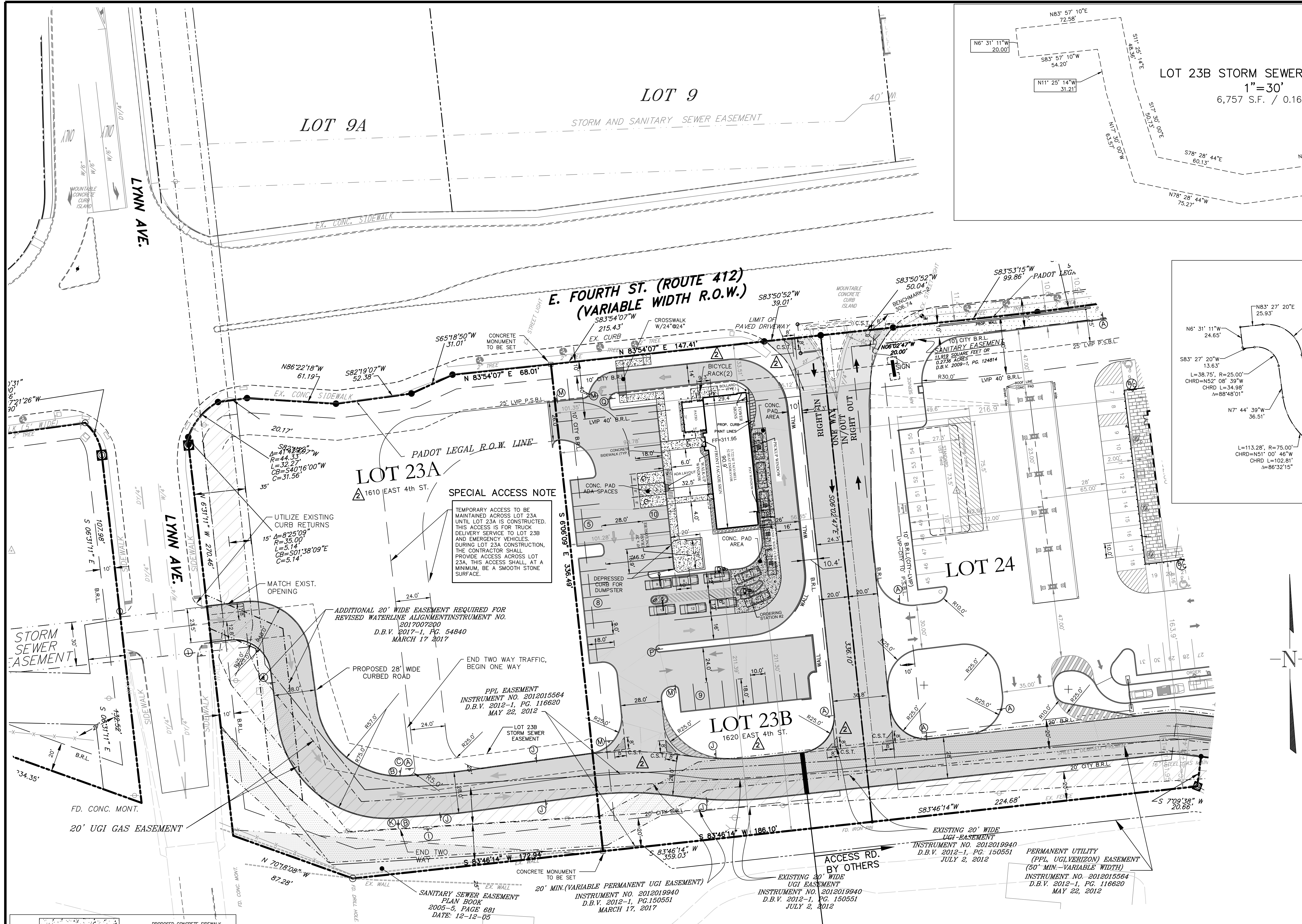
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NO.	REVISIONS	DATE	DRAWN BY	CHECKED BY
1	NCOD SUBMISSION	6/26/23	DA	DA
2	CITY REVIEW COMMENTS	7/12/23		

DATE	SCALE	DATE	SCALE
6/26/23	1"=1000'	6/26/23	1"=1000'
7/12/23		7/12/23	

SHEET NO. 01 OF 18



Benchmarks for this Plan

- BENCHMARK-1, CORNER OF MAST ARM LOCATED AT THE SW CORNER OF EMERY SOUTH AND 412, IN THE WEST CONC. ISLAND, ELEVATION=292.22
- BENCHMARK-2, SW CORNER OF A LIGHT POST LOCATED AT THE SE CORNER OF RTE. 412 AND LYNN AVE, ELEVATION=306.74
- BENCHMARK-3, SOUTH TOP CURB OF STORM INLET LOCATED ON THE WEST SIDE OF EMERY SOUTH, APPROX. 292 FT. SOUTH OF B.M.-1, ELEVATION=308.30

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Call 811
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PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
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1-800-242-1776
THIS SERVICE'S DESIGNER INQUIRY NO.
20221514398

PROJECT / SERIAL NUMBER / EXCAVATION-DEMOLITION / TYPE OF ONE CALL / DATE / ADDRESS / NEAREST INT. / TOWNSHIP / COUNTY
4993 202215144398 EXCAVATION ROUTINE 6/15/2022 1720/1740 E. 4th ST. EMERY STREET CITY OF BETHLEHEM NORTHAMPTON

Legend

PROPERTY LINE/RIGHT-OF-WAY
EXISTING RIGHT-OF-WAY
ADJOINER PROPERTY LINE
EXISTING STORM SEWER
EXISTING CURB
EXISTING SANITARY SEWER
EXISTING OVERHEAD ELECTRIC LINE
EXISTING GAS MAIN
EXISTING WATER LINE
EXISTING RIGHT-OF-WAY
EXISTING MAJOR CONTOURS
EXISTING MINOR CONTOURS
EXISTING STORM INLET
EXISTING STORM MANHOLE
EXISTING SANITARY MANHOLE
EXISTING WATER VALVE
EXISTING FIRE HYDRANT
EXISTING UTILITY POLE
EXISTING GUY WIRE
EXISTING LIGHT POLE
EXISTING IRON PIN
EXISTING SIGN
EXISTING TREES
EXISTING CONCRETE SIDEWALK
PROPOSED CURB

BACKBONE EXTENSION SIGNS

SIGN SCHEDULE				
SYMBOL	QUANTITY	DESCRIPTION	AREA	HEIGHT
(A) SS	7	PENNDOT R1-1 "STOP" TYPE 3-HIGH INTENSITY SHEETING	30"x30"	9'
(B) DNE	2	R5-1 "DO NOT ENTER"	30"x30"	8.5'
(C) NLT	1	R3-2 "NO LEFT TURN"	24"x24"	8.5'
(D) NO	2	R4-2 "NO OUTLET"	30"x30"	8.5'
(E) Y	2	R1-2 "YIELD"	36"x36"	8.5'
(F) R3-7R	2	R3-7R "RIGHT LANE MUST TURN RIGHT"	30"x36"	8.5'
(G) R3-7L	2	R3-7R "LEFT LANE MUST TURN LEFT"	30"x36"	8.5'
(H) R3-9B	1	R3-9B "CENTER LANE- LEFT TURN ONLY"	24"x36"	8.5'
(I) R6-1R	2	R6-1R "ONE WAY"	36"x12"	8.5'
(J) NP	9	R8-3A "NO PARKING"	12"x12"	7.0'
(K) R6-11	1	R6-11 "END ONE WAY"	24"x30"	8.5'
(L) W/24	1	PAINTED LINE DESIGNATIONS: FLOW DIRECTIONAL ARROWS ACTUAL PAINTED ARROWS		

TACO BELL SITE SIGNS

SIGN SCHEDULE				
SYMBOL	QUANTITY	DESCRIPTION	AREA	HEIGHT
(M) SS	3	PENNDOT R1-1 "STOP" TYPE 3-HIGH INTENSITY SHEETING	30"x30"	9'
(N) DNE	2	PENNDOT R7-8 "RESERVED PARKING"	12"x18"	8.5'
(O) NLT	2	PENNDOT R7-8A "VAN ACCESSIBLE"	12"x18"	8.5'
(P) NO	1	PENNDOT R6-1R "ONE WAY"	36"x12"	9'
(Q) NP	1	PENNDOT R5-1 "DO NOT ENTER"	30"x30"	9'

FLOW DIRECTIONAL ARROWS

SIGNAGE NOTE:
ALL SITE AND BUILDING SIGNAGE SHALL BE INSTALLED IN CONFORMITY WITH ARTICLE 1320 OF THE CITY OF BETHLEHEM ZONING ORDINANCE AND LVP COVENANTS. DETAILED DRAWINGS WITH DESIGNED DIMENSIONS OF THE PROPOSED SIGNS WILL BE PROVIDED TO THE CITY & LVP FOR APPROVAL PRIOR TO OBTAINING ANY REQUIRED PERMITS FOR THEIR CONSTRUCTION.

ADA RAMP DETAILS

NOTES:

- ALL ADA CURB RAMPS SHALL CONFORM TO PENNDOT PUBLICATION 72M RC-67M OF JUNE 1, 2010 OR THE LATEST REVISION.
- ALL PROPOSED PEDESTRIAN CURB RAMPS TO HAVE "RED" TRUNCATED DOME DETECTABLE WARNING AREAS THAT COMPLY WITH THE CURRENT PENNDOT DESIGN MANUAL AND ADA REQUIREMENTS.

AT THE MEETING ON 2023, THE BETHLEHEM CITY PLANNING COMMISSION, BETHLEHEM, PENNSYLVANIA, DULY ENACTED AND APPROVED THIS PLAN OF THE PROPERTY LOT 24A/24B, LVP VII LOCATED IN NORTHAMPTON COUNTY AS SHOWN HEREIN.

CHAIRMAN _____

SECRETARY _____

REVIEWED BY THE LEHIGH VALLEY PLANNING COMMISSION FOR LEHIGH AND NORTHAMPTON COUNTIES.

LVP/C STAFF PERSON RESPONSIBLE FOR REVIEW _____ DATE _____

THIS PLAN WAS RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS FOR NORTHAMPTON COUNTY, ON _____ IN PLAN BOOK _____ PAGE _____

Owner Signature:
LVP
COMMONWEALTH OF PENNSYLVANIA } SS:
COUNTY OF NORTHAMPTON
I, _____ NAME _____ OF _____ CORPORATION NAME _____

BEING DULY SWORN, ACCORDING TO LAW, AND ACTING IN MY CAPACITY AS _____, I 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.

_____ LVP
_____ CORPORATION
_____ CORPORATION OFFICIAL

SWORN AND SUBSCRIBED TO BEFORE ME THIS _____ DAY OF _____

NOTARY PUBLIC

MY COMMISSION EXPIRES ON _____

Developer/Applicant Signature:
TACO BELL
COMMONWEALTH OF PENNSYLVANIA } SS:
COUNTY OF NORTHAMPTON
I, _____ NAME _____ OF _____ CORPORATION NAME _____

BEING DULY SWORN, ACCORDING TO LAW, AND ACTING IN MY CAPACITY AS _____, I 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.

_____ SUMMERWOOD CORP.
_____ (TACO BELL)
_____ CORPORATION
_____ CORPORATION OFFICIAL

SWORN AND SUBSCRIBED TO BEFORE ME THIS _____ DAY OF _____

NOTARY PUBLIC

MY COMMISSION EXPIRES ON _____

PRELIMINARY/FINAL LAND DEVELOPMENT (RECORD PLAN 2 OF 2)

RECORD PLAN
LVP VII - LOTS 23B
1620 EAST 4th STREET

PLAN TITLE
PROJECT TITLE

NO. 1 2

REVISIONS
NO. 1 2
DATE 6/28/23 7/12/23
BY [Signature] [Signature]
CHECKED BY [Signature]
DATE 6/28/23 7/12/23
SCALE 1"=30'

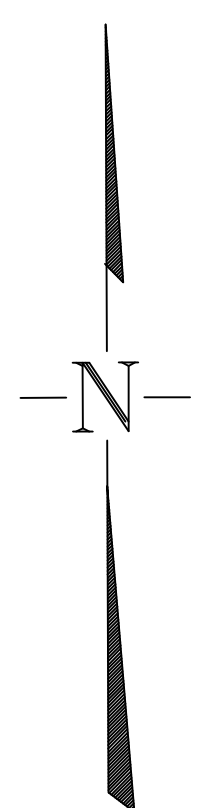
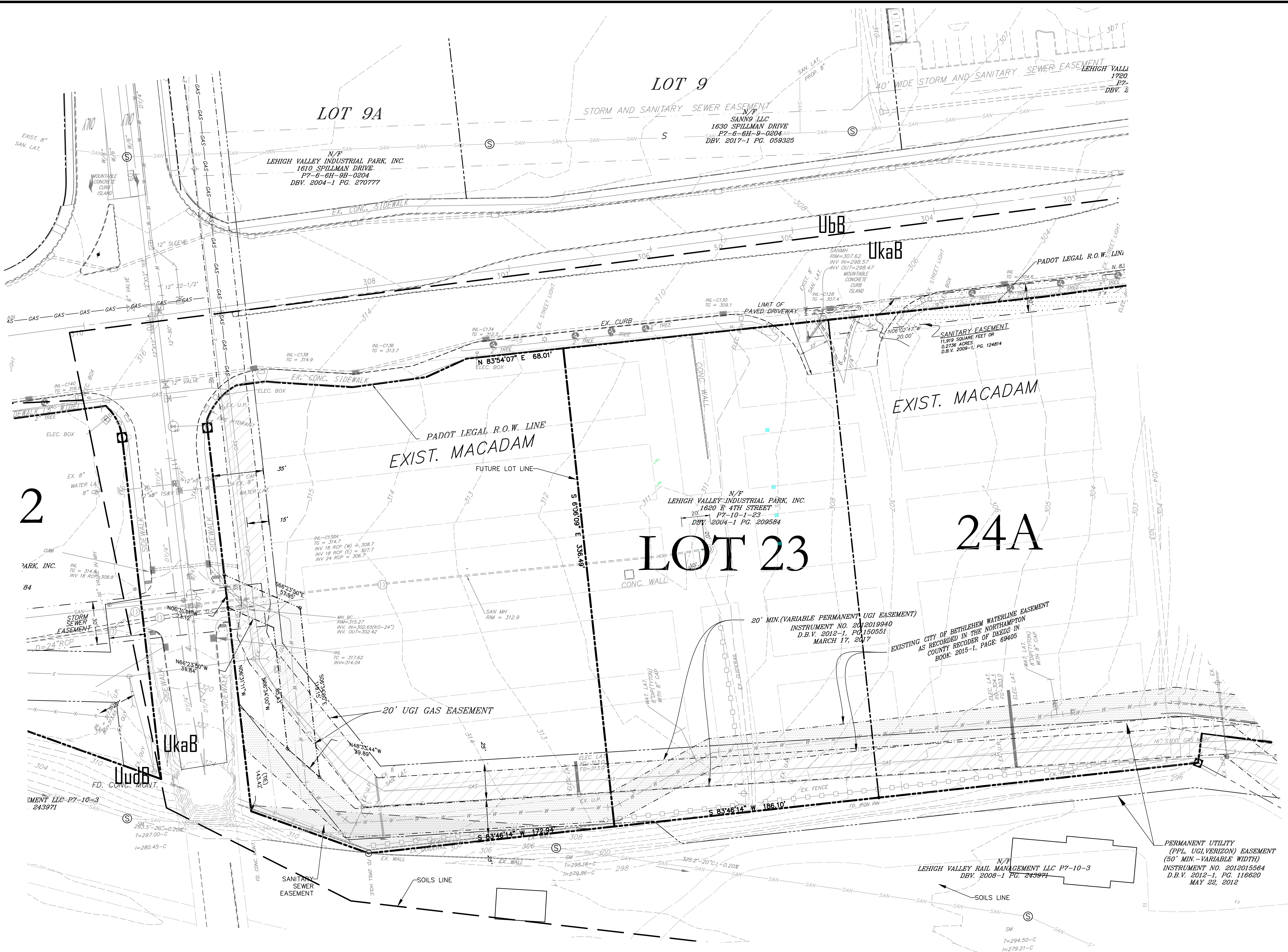
DRAWN BY [Signature]
DATE 6/28/23
SCALE 1"=30'

PROJECT NO. 5024

SHEET NO. 02 OF 18

CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

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



Soil Type
Ubb Udorthents, limestone, 0 to 8 percent slopes
UkaD Urban land, 0 to 8 percent slopes

- Benchmarks for this Plan**
- BENCHMARK-1, CORNER OF EAST ARM LOCATED AT THE SW CORNER OF EMERY SOUTH AND 412, IN THE WEST CONC. ISLAND, ELEVATION=292.22
 - BENCHMARK-2, SW CORNER OF A LIGHT POST LOCATED AT THE SE CORNER OF RTE. 412 AND LYNN AVE. ELEVATION=306.74
 - BENCHMARK-3, SOUTH TOP CURB OF STORM INLET LOCATED ON THE WEST SIDE OF EMERY SOUTH, APPROX. 292 FT. SOUTH OF B.M.-1, ELEVATION=288.90

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THIS PROJECT'S DESIGNER INQUIRY NO.
20221514398

BETHLEHEM CITY(OV)
PPL ELECTRIC(PID)
SERVICE ELECTRIC CABLE TV INC(SET)
UGI UTILITIES LEHIGH HAZLETON(UJ)
FIBERLIGHT FIBER(ION)
VERIZON(VI)

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

4993 / 20221514398 / EXCAVATION / ROUTINE / 6/15/2022 / 1720/1740 E. 4H ST. / EMERY STREET / CITY OF BETHLEHEM / NORTHAMPTON

Legend	
	PROPERTY LINE/RIGHT-OF-WAY
	EXISTING RIGHT-OF-WAY
	ADJACENT PROPERTY LINE
	EXISTING STORM SEWER
	EXISTING CURB
	EXISTING SANITARY SEWER
	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING GAS MAIN
	EXISTING WATER LINE
	EXISTING RIGHT-OF-WAY
	EXISTING MINOR CONTOURS
	EXISTING STORM INLET
	EXISTING STORM MANHOLE
	EXISTING SANITARY MANHOLE
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING UTILITY POLE
	EXISTING GUY WIRE
	EXISTING LIGHT POLE
	EXISTING IRON PIN
	EXISTING TREES
	EXISTING CONCRETE SIDEWALK

PRELIMINARY/FINAL LAND DEVELOPMENT

PLAN TITLE: EXISTING FEATURES PLAN

PROJECT TITLE: LVP VII - LOTS 23B 1620 EAST 4TH STREET

NO. 1

DATE: 6/26/23

SCALE: 1"=30'

REVISIONS: 1

NO. 2

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 2

NO. 3

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 3

NO. 4

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 4

NO. 5

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 5

NO. 6

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 6

NO. 7

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 7

NO. 8

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 8

NO. 9

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 9

NO. 10

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 10

NO. 11

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 11

NO. 12

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 12

NO. 13

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 13

NO. 14

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 14

NO. 15

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 15

NO. 16

DATE: 7/12/23

SCALE: 1"=30'

REVISIONS: 16

NO. 17

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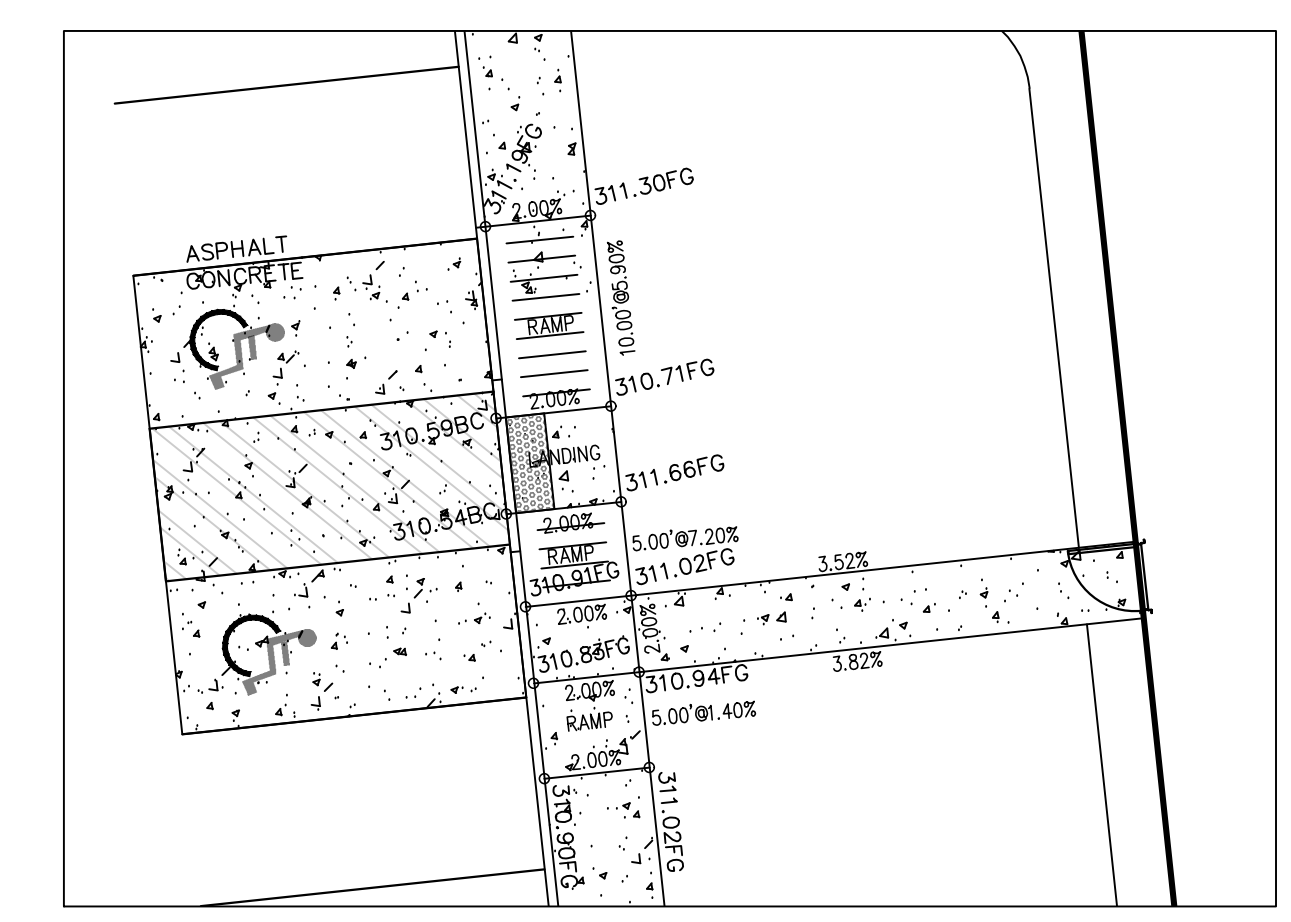
GRADING NOTES:

1. ALL SITE WORK SHALL BE DONE IN ACCORDANCE WITH PLANS PREPARED BY HANOVER ENGINEERING, THE CURRENT REQUIREMENTS OF THE CITY OF BETHLEHEM, PENNDOT STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION, AND ALL OTHER PERTINENT FEDERAL, STATE AND LOCAL LAWS.
2. THE CONTRACTOR SHALL COMPLY AT ALL TIME WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICIES GOVERNING SAFETY AND HEALTH.
3. BEFORE EXCAVATION, ALL UNDERGROUND UTILITIES SHALL BE LOCATED IN THE FIELD BY THE PROPER AUTHORITIES. THE CONTRACTOR SHALL NOTIFY 811 AT THE CITY OF BETHLEHEM TO LOCATE THE LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MAY NOT ALL BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES.
4. ALL EXISTING AND PROPOSED CONCRETE FOUNDATIONS, STRUCTURES AND ORGANIC TOPSOIL SHALL BE STRIPPED AND REMOVED FROM NEW CONSTRUCTION AREAS UNLESS NOTED OTHERWISE.
5. ALL SLOPES SHALL BE 3:1 (HORIZONTAL: VERTICAL) MAXIMUM UNLESS NOTED OTHERWISE.
6. SLOPES GREATER THAN 3:1 TO BE PERMANENTLY STABILIZED WITH LANDSCAPE PLANTS.
7. AN AS-BUILT DRAWING OF NEW UTILITY SERVICES MUST BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.
8. ALL EXISTING AND PROPOSED TOP SOILED, SEEDED, MULCHED OR LANDSCAPED UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DRAWINGS, SITE SPECIFICATIONS OR INSTRUCTED BY THE OWNER.

UTILITY NOTES:

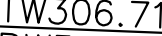



1. ALL SITE WORK SHALL BE DONE IN ACCORDANCE WITH PLANS PREPARED BY HANOVER ENGINEERING, THE CURRENT REQUIREMENTS OF THE CITY OF BETHLEHEM, PENNDOT STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION, AND ALL OTHER PERTINENT FEDERAL, STATE AND LOCAL LAWS.
2. THE CONTRACTOR SHALL COMPLY AT ALL TIME WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, PROVISIONS, AND POLICIES GOVERNING SAFETY AND HEALTH.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE AREAS AND CONDITIONS UNDER WHICH THE PROJECT IS TO BE CONSTRUCTED PRIOR TO THE SUBMISSION OF A BID. SHALL BE CONSTRUED TO MEAN THE CONTRACTOR HAS REVIEWED THE SITE AND IS FAMILIAR WITH CONDITIONS AND CONSTANTS OF THE SITE.
4. BEFORE EXCAVATION, ALL UNDERGROUND UTILITIES SHALL BE LOCATED IN THE FIELD BY THE PROPER AUTHORITIES. THE CONTRACTOR SHALL NOTIFY 811 AT THE CITY OF BETHLEHEM TO LOCATE THE LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MAY NOT ALL BE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES.
5. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE UTILITY COMPANY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE CORRECT DEPT. PERMIT PRIOR TO THE BEGINNING OF THE PROJECT.
6. AN AS-BUILT DRAWING OF NEW UTILITY SERVICES MUST BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER UPON COMPLETION OF THE PROJECT.
7. UTILITY COMPANIES AND CONTACTS ARE LISTED ON PLANS.

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30" 10' EXTEND CONDUIT(S) PAST NEW CURB LINE

"SPOT GRADE" KEY

	DESIGNATES TOP/BOTTOM WALL ELEVATION
	DESIGNATES BOTTOM CURB ELEVATION
	DESIGNATES FINAL GRADE ELEVATION
	DESIGNATES PROPOSED SLOPE/GRADE

1. BENCHMARK-1, CORNER OF MAST ARM LOCATED AT THE SW CORNER OF EMERY SOUTH AND 412, IN THE WEST CONC. ISLAND, ELEVATION=292.22
2. BENCHMARK-2, SW CORNER OF A LIGHT POST LOCATED AT THE SE CORNER OF RTE. 412 AND LYNN AVE. ELEVATION=306.74
3. BENCHMARK-3, SOUTH TOP CURB OF STORM INLET LOCATED ON THE WEST SIDE OF EMERY SOUTH, APPROX. 292 FT. SOUTH OF B.M.-1. ELEVATION=289.90

Know what's at stake™
Call 811
 BEFORE YOU DIG
 PROJECT / SERIAL NUMBERS / EXCAVATION-DEMOLITION

 HanoverEngineering	
	Bethlehem Office

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

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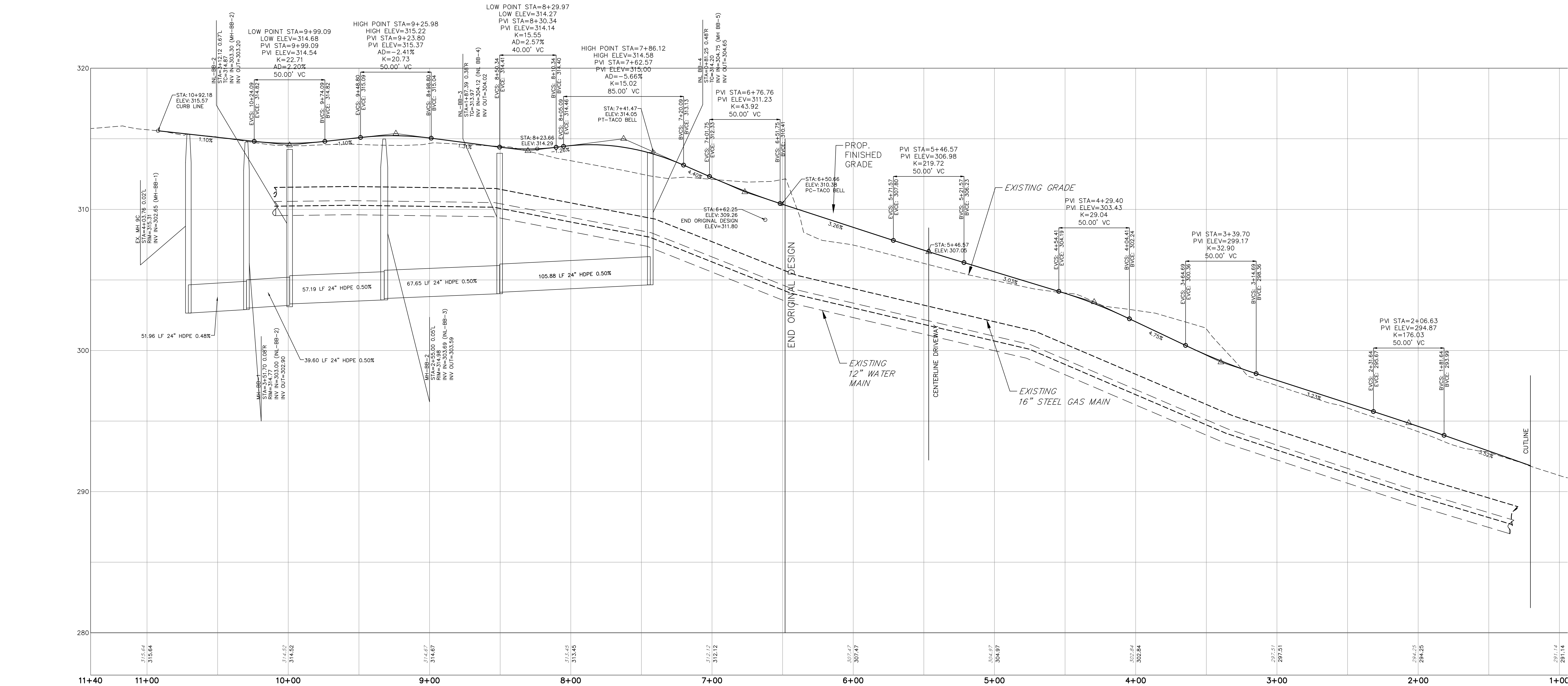
1620 EAST 4th STREET

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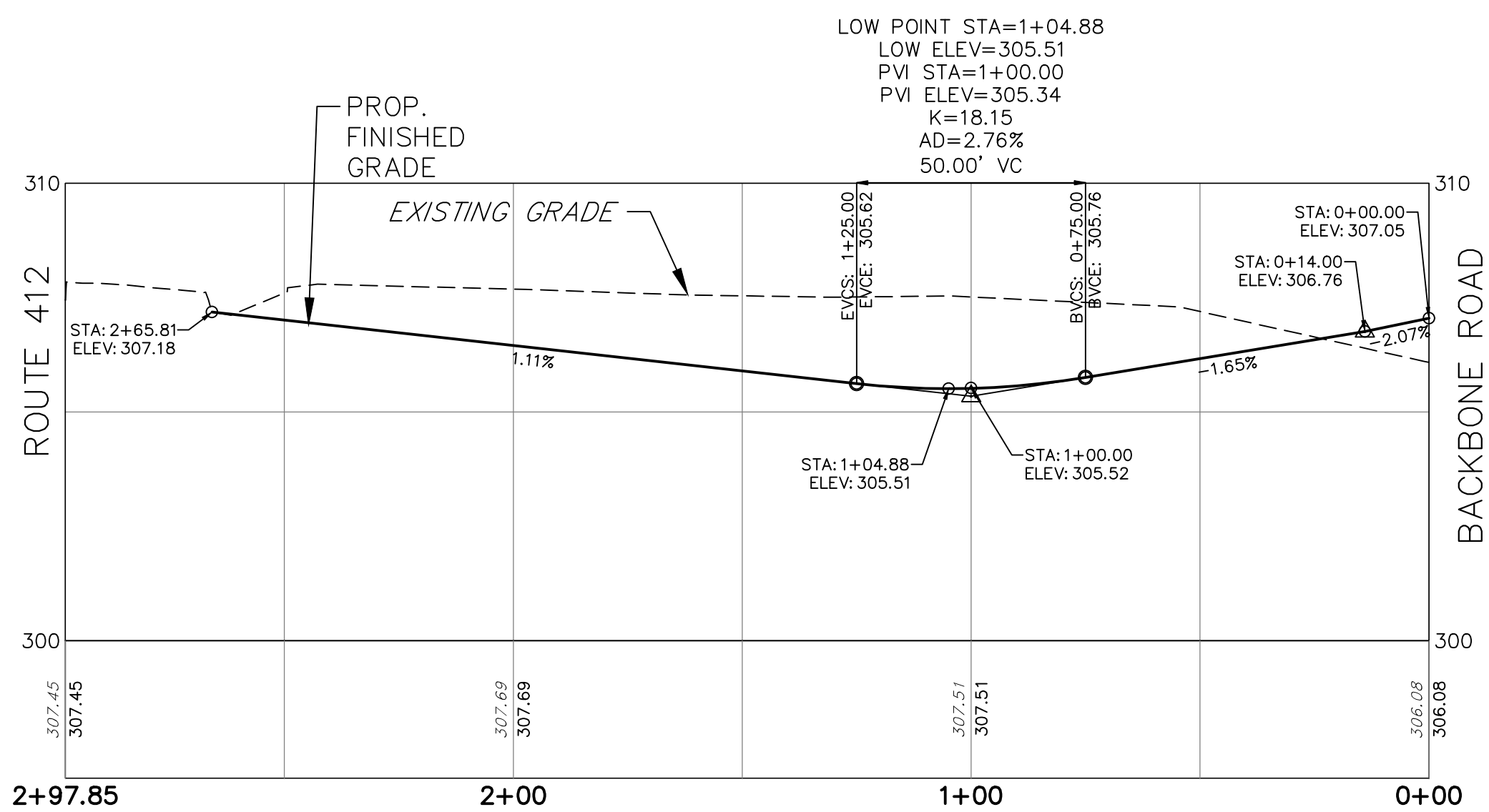
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Bethlehem Office
252 Brodhead Road, Suite 100
Bethlehem, PA 18017-8944
P: 610.691.5644
F: 610.691.6968
HanoverEng.com

7



BACKBONE RD. PROFILE



ONE WAY IN-OUT PROFILE



HORZ. SCALE: 1"=30'
VERT. SCALE: 1"=3'

PRELIMINARY/FINAL LAND DEVELOPMENT

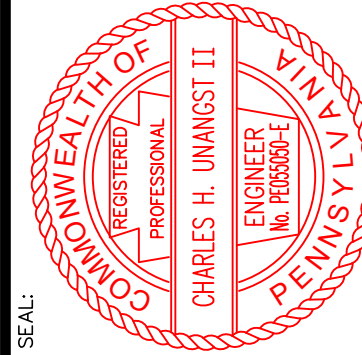
UTILITY PROFILE PLAN

LVP VII - LOTS 23B
1620 EAST 4TH STREET

CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

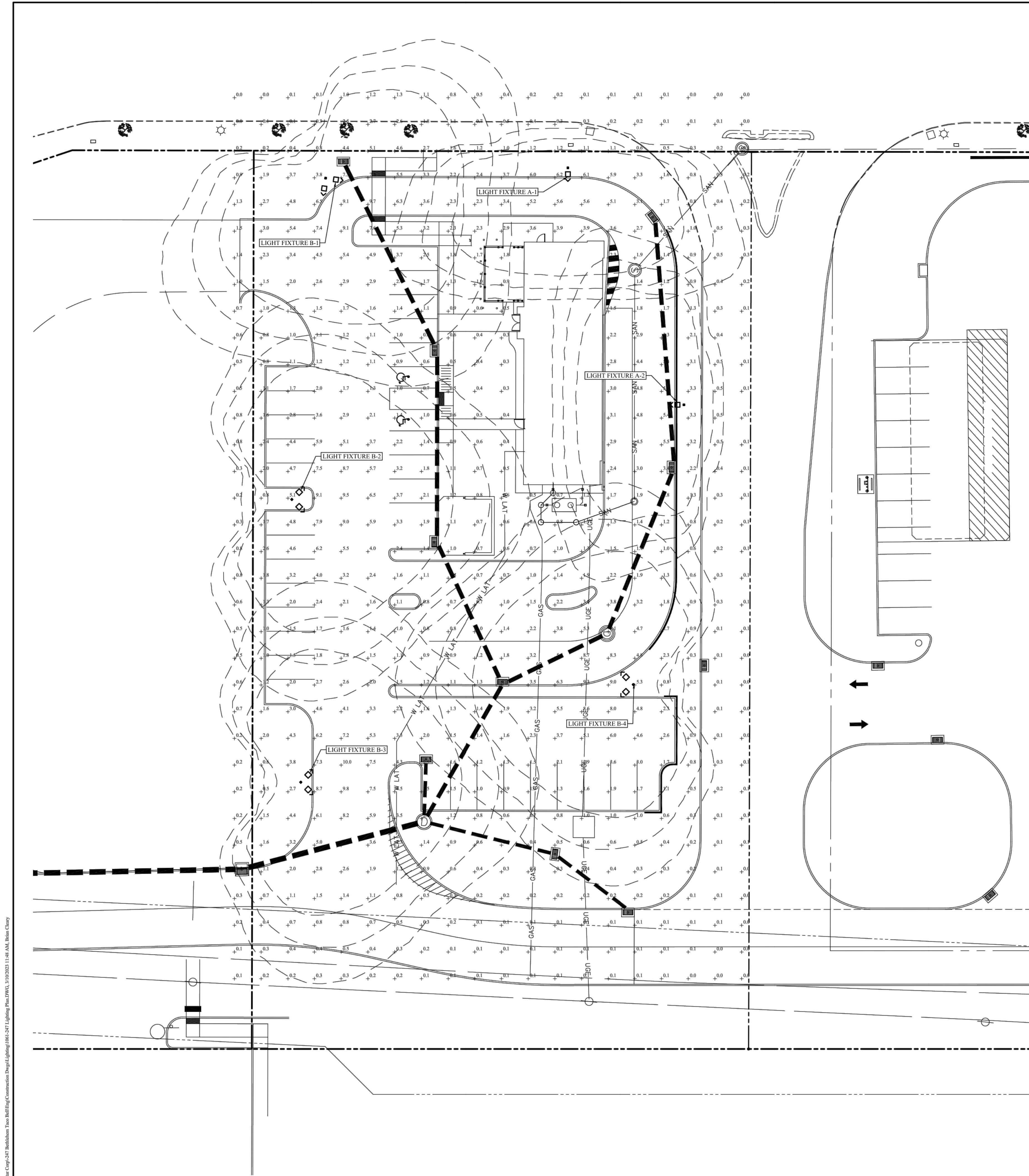
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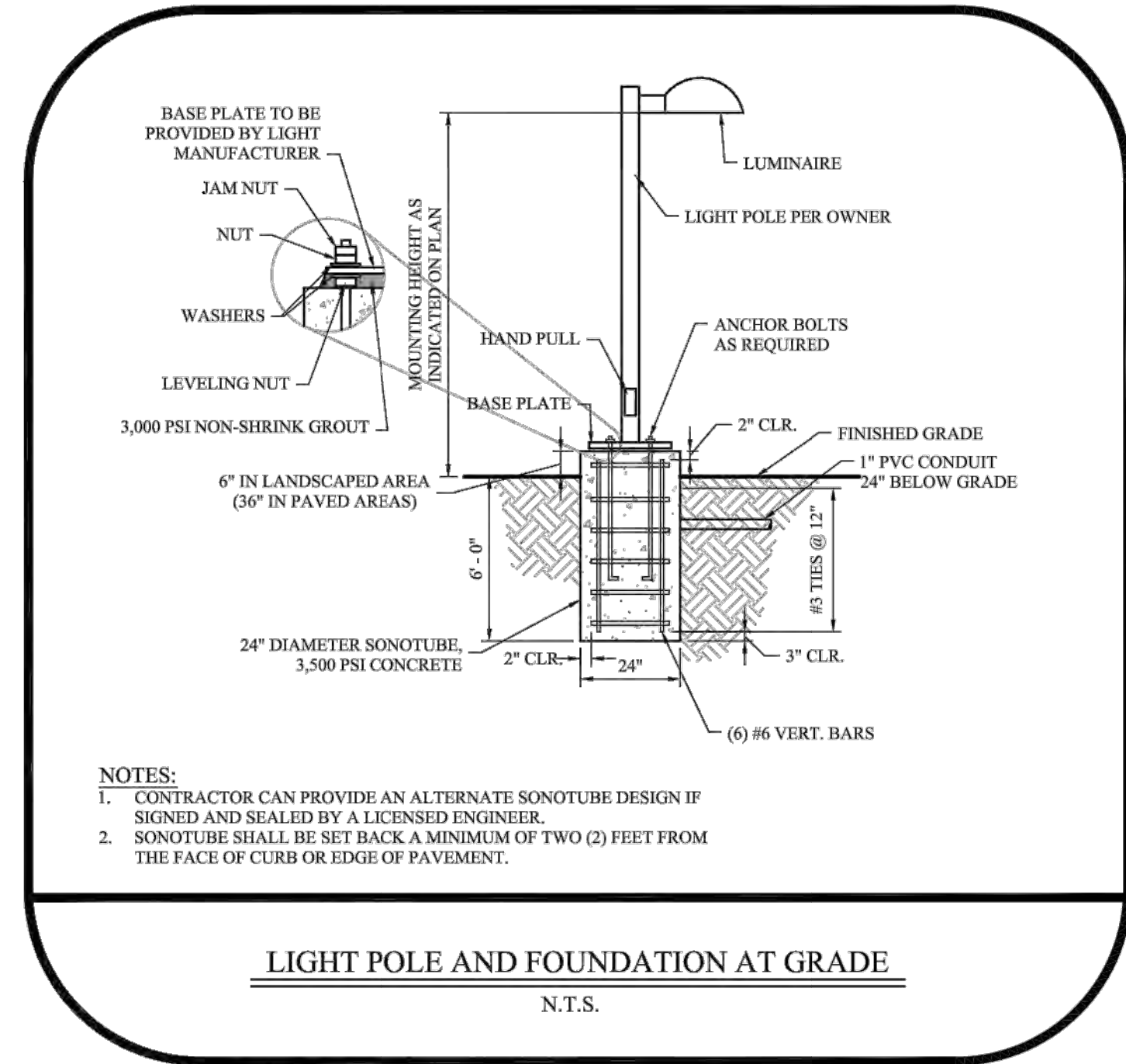
NO.	REVISIONS	DATE	DRAWN BY	CHECKED BY
1	NCDD SUBMISSION	6/26/23	AS NOTED	AS NOTED
2	CITY REVIEW COMMENTS	7/12/23		

PROJECT NO.	5024
SHEET NO.	07
OF	18



LIGHTING NOTES:

1. SITE LAYOUT TAKEN FROM THE PLANS ENTITLED "PRELIMINARY/FINAL LAND DEVELOPMENT PLAN, LVP VII - LOT 23B TACO BELL, WARD 17, CITY OF BETHLEHEM, NORTHAMPTON COUNTY, PENNSYLVANIA", PREPARED BY HANOVER ENGINEERING.
2. THIS PLAN ILLUSTRATES LUMINAIRE LOCATIONS AND ILLUMINATION LEVELS ONLY. REFER TO ELECTRICAL ENGINEERING PLANS FOR CIRCUITRY DESIGN AND SPECIFICATIONS.
3. ALL SUBSTITUTIONS TO THE FIXTURES SPECIFIED MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE FIXTURES IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.



- NOTES:
1. CONTRACTOR CAN PROVIDE AN ALTERNATE SONOTUBE DESIGN IF SIGNED AND SEALED BY A LICENSED ENGINEER.
 2. SONOTUBE SHALL BE SET BACK A MINIMUM OF TWO (2) FEET FROM THE FACE OF CURB OR EDGE OF PAVEMENT.

LIGHT POLE AND FOUNDATION AT GRADE
N.T.S.

THE PETTIT GROUP, LLC
Engineering • Architecture • Planning
497 Center Street • Sewell, NJ 08080
Tel: 856-464-5600 • Fax: 856-464-5606
Certificate of Authorization No. 246A28131400

REVISIONS		
NO.	DESCRIPTION	DATE
1	NOCD SUBMISSION	6/26/23
2	CITY REVIEW COMMENTS	7/12/23

FOR CONCEPTUAL PURPOSES ONLY

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THE CONTRACTOR MUST VERIFY ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK AND NOTIFY THE OWNER OF ANY DISCREPANCIES. THE CONTRACTOR SHALL UNDERSTAND THAT THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE ONLY APPROXIMATE. IT IS IMPORTANT TO NOTE THAT NOT ALL UTILITIES MAY BE SHOWN ON THE PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UTILITIES (AERIAL AND BURIED) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE UNDERGROUND UTILITY MARK-ONE SERVICE (1-800-485-1000) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO REPAIR AT HIS EXPENSE ALL DAMAGED UTILITIES RESULTING FROM HIS WORK.

DESIGNED BY: BWC	JOB NO.: 1001-247
DRAWN BY: BWC	DATE: 03/08/23
CHECKED BY: BWC	SCALE: 1061-288

TACO BELL
LIGHTING PLAN
1630 EAST 4TH STREET
LVP VII - LOT 23B
CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA
FOR
SUMMERWOOD CORP.
PO BOX 429
CONSHOHOCKEN, PA 19428

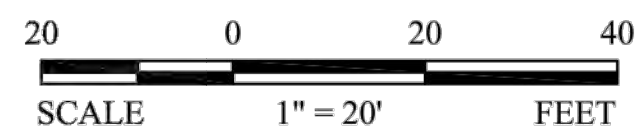
BRIAN W. CLEARY, PE
Professional Engineer
State of New Jersey • License # GE 51748
State of Pennsylvania • License # PEOB10704
State of Maryland • License # 54411

LIGHTING PLAN

1 of 1

Schedule									
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
	A	2	RAB LIGHTING INC.	ALEDM3TN	90W/12,000 lm @ 4000K	1	12930	1	92.8
	B	4	RAB LIGHTING INC.	ALEDM4TN	90W/12,000 lm @ 4000K	1	12911	1	182.6

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.9 fc	10.0 fc	0.0 fc	N/A	N/A



PRELIMINARY/FINAL LAND DEVELOPMENT
LIGHTING PLAN AND DETAILS

LVP VII - LOT 23B
1620 EAST 4TH STREET

CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

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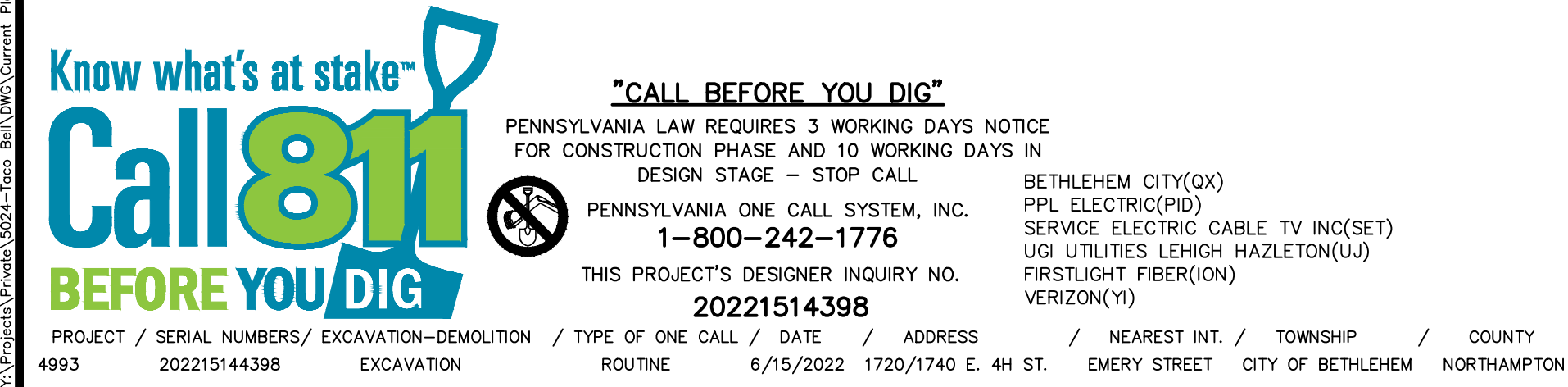
NO.	REVISIONS	DATE	DRAWN BY	CHECKED BY
1	NOCD SUBMISSION	6/26/23	DA	AB
2	CITY REVIEW COMMENTS	7/12/23		

SCALE: 1"=30'

PROJECT NO: 5024

SHEET NO: 10 OF 18

LIGHTING DESIGN PERFORMED BY THE PETTIT GROUP, LLC.
AS SHOWN ON THIS SHEET.



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 PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- 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 POST PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE P&S 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 PROJECT MANAGER SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 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 THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COME INTO 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.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S). IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 25 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 SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
- 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 2601 ET SEQ., 271.1 AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, BURNED, DUMPED, OR DISCHARGED AT THE SITE.
- 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.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM PP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE. FILL DUE TO ANALYTICAL TESTING.
- ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND REINETING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEPENDENCIES FOUND AND THE DATE THEY WERE CORRECTED OR MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCIES AND OFFICIALS AT THE TIME OF INSPECTION.
- SEDIMENT TRAPPED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND REMOVED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARPED 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 OUTCROPS SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLUMP, 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.
- ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
- FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOIL, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES MUST BE COMPLETED BESEED AND BE VEGETATED WITHIN 60 DAYS OF FINISH GRADE. IF SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- 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 THIS PLAN. AREAS NOT AT FINISHED GRADE, WHICH ARE TO BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH ARE TO BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH AN ACCUMULATED EROSION RESISTANCE OF 100% OR MORE. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.
- 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, SOIL REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
- 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 PENNSYLVANIA 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 SUMMARY 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 DIVERTED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
- CHANNELS HAVING RIPRAP, POND MATTESS, 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, 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, TO THE SATISFACTION OF THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
- UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- 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.
- FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS.

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 6% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. ULTIMATELY PLASTIC, FIBER, OR PAPER NETS MAY BE STRIPPED 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.

TABLE 11.6 MULCH APPLICATION RATES				
MULCH TYPE	PER ACRE	APPLICATION RATE PER 1,000 SQ. FT.	PER 1,000 SQ. YD.	NOTES
STRAW	3 TONS	1,240 LB.	1,240 LB.	OTHER WHEAT OR OAT STRAW, FREE OF WEEDS, NOT CHOPPED OR FINELY BROKEN.
HAY	3 TONS	140 LB.	1,240 LB.	THIMOTHY, WHEAT CLOVER AND THIMOTHY OR OTHER WINTER CROCK GRASSES.
WOOD CHIPS	4-6 TONS	185-275 LB.	1,650-2,500 LB.	MAY PREVENT GERMINATION OF GRASSES AND LEGUMES.
HYDRO MULCH	1 TON	47 LB.	415	SEE LIMITATIONS ABOVE.

Assurance Of Design Performance

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

DURING SITE DEVELOPMENT CONSTRUCTION, ALL TEMPORARY EROSION 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 LOOSE SOIL MATERIAL SHALL BE RECOVERED, IF POSSIBLE. WASHED OUT LAWN OR SLOPE AREAS MUST HAVE TOPSOIL REPLACED AND THEN MUST BE RE-SEEDD AND MULCHED.

IF, FOR ANY REASON, THE DESIGNED FACILITIES OR MEASURES DO NOT PROVIDE THE NECESSARY 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

- MAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.
 - MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER."
 - STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
- 102.4(9)(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 ENSURE EFFECTIVE AND EFFICIENT OPERATION."**
- 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. *260209W 2/6/08*
 - 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.
- 102.4(9)(5)(X) "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 ACCORDANCE WITH THIS TITLE."**
- 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 2601 ET SEQ., 271.1 ET SEQ. AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE."
 - SOIL/ROCK DISPOSAL AREAS SHOULD BE ADDRESSED IN THE NARRATIVE AND ON THE DRAWINGS 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 IMPLEMENTED AND MAINTAINED FOR ALL PROPOSED SOIL/ROCK SPILL AND BORROW AREAS ON OR OFFSITE.).

REFER TO NARRATIVE FOR PENN DOT PUBL. 408 DATA

Temporary Seeding

ALL DISTURBED EARTH SURFACES OR TOPSOIL STOCKPILES WHICH ARE TO REMAIN LONGER THAN FOUR (4) DAYS SHALL BE STABILIZED AND SEEDDED WITH A CONTRACTOR'S MIX AS STATED BELOW:

DATE	TYPE OF MIXTURE	PER 1,000 SQ. ACRES	PER ACRE
MARCH 1 TO JUNE 15	ANNUAL RYEGRASS - 100% SUNDRAGRASS - 100%	1.0 LB. 1.0 LB.	40 LB. 40 LB.
JUNE 15 TO SEPT. 15	ANNUAL RYEGRASS - 100%	0.7 LB.	30 LB.
MARCH 1 TO AUG. 15	HAY OR STRAW MULCH - 100%	4.1 LB.	180 LB.
AUG. 15 TO OCT. 15	WINTER WHEAT - 100%	1.0 LB.	30 TONS
MARCH 1 TO MARCH 15	HAY OR STRAW MULCH LIME AND FERTILIZER AND MULCH 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 STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.		

- FORMULA "B" - PRIMARILY KENTUCKY BLUEGRASS & CREEPING RED OR CHEWINGS FESCUE, 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.
- FORMULA "C" - CROWNWHEAT 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 CROWNWHEAT PORTION ANYTIME EXCEPT SEPTEMBER AND OCTOBER.
- FORMULA "M" - MIXTURE OF TALL FESCUE, BROODSTOCK 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.
- 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.

Note:

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

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:

- RAKED FREE OF STONES;
- LIMED AND FERTILIZED AS NECESSARY;
- PLANTED WITH GRASS OR OTHER SPECIFIED SEED;
- 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:

- 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.
- 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

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 lb./in.
GRAB TENSILE	ASTM D-4632	225 lb.
PUNCTURE	ASTM D-4633	110 lb.
MULLEN BURST	ASTM D-3786	350 psi
UV RESISTANCE	ASTM D-4355	70%
ACID RETAINED	ASTM D-4791	80 Shore

MULCH OR APPLY HAY AT 1,240 LBS. PER 1,000 S.Y. TO SEEDD AREAS TO PROTECT THE SEED FROM DRYNESS AND EROSION.

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 PREVENTING STANDARDS, DETAILS OF SPECIAL EROSION CONTROL FACILITIES, I.E. THE FILTER BARRIER, INLET PROTECTION, ETC., ARE NOTED ON THE PROJECT PLANS.

102.5(B)(8) MAINTENANCE OF CONTROL FACILITIES

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 IN 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 REMOVAL, HANDLING 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 LEGALLY. 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 ELEVATION IN THE BOTTOM OF STORMWATER MANAGEMENT PONDS, OR THE SPECIFIED ELEVATIONS IN SEDIMENT TRAPS, MUST BE REMOVED AND STOCKPILED OR REDISTRIBUTED AND STABILIZED ON THE PROJECT SITE.

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.

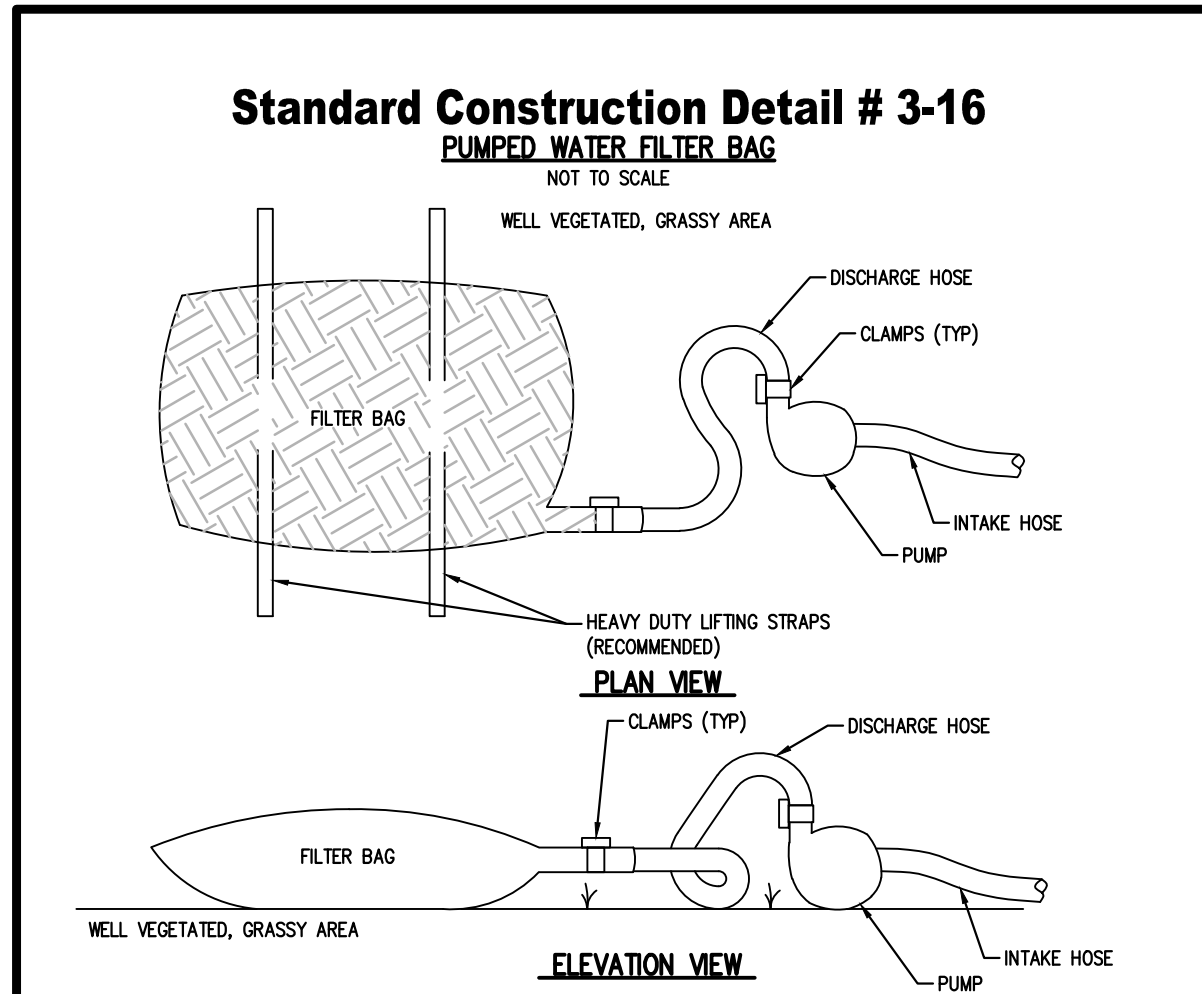
IF THE CONTRACTOR EXPECTS TO RECYCLE OR DISPOSE OF ANY SOIL OR ROCK MATERIAL TO LOCATION OTHER THAN THE PROJECT AREA FOR WHICH THIS PLAN AND NARRATIVE HAVE BEEN PREPARED, THE CONTRACTOR SHALL ARRANGE FOR PREPARATION AND SUBMITTAL TO THE APPROPRIATE COUNTY CONSERVATION DISTRICT OF EROSION AND SEDIMENT 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.



LOW VOLUME FILTER BAG SHALL BE MADE FROM NON-WOODY TEXTILE MATERIAL WITH HIGH STRENGTH. DURING SETTING OF THE BAG, IT SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 10 MICRONS.

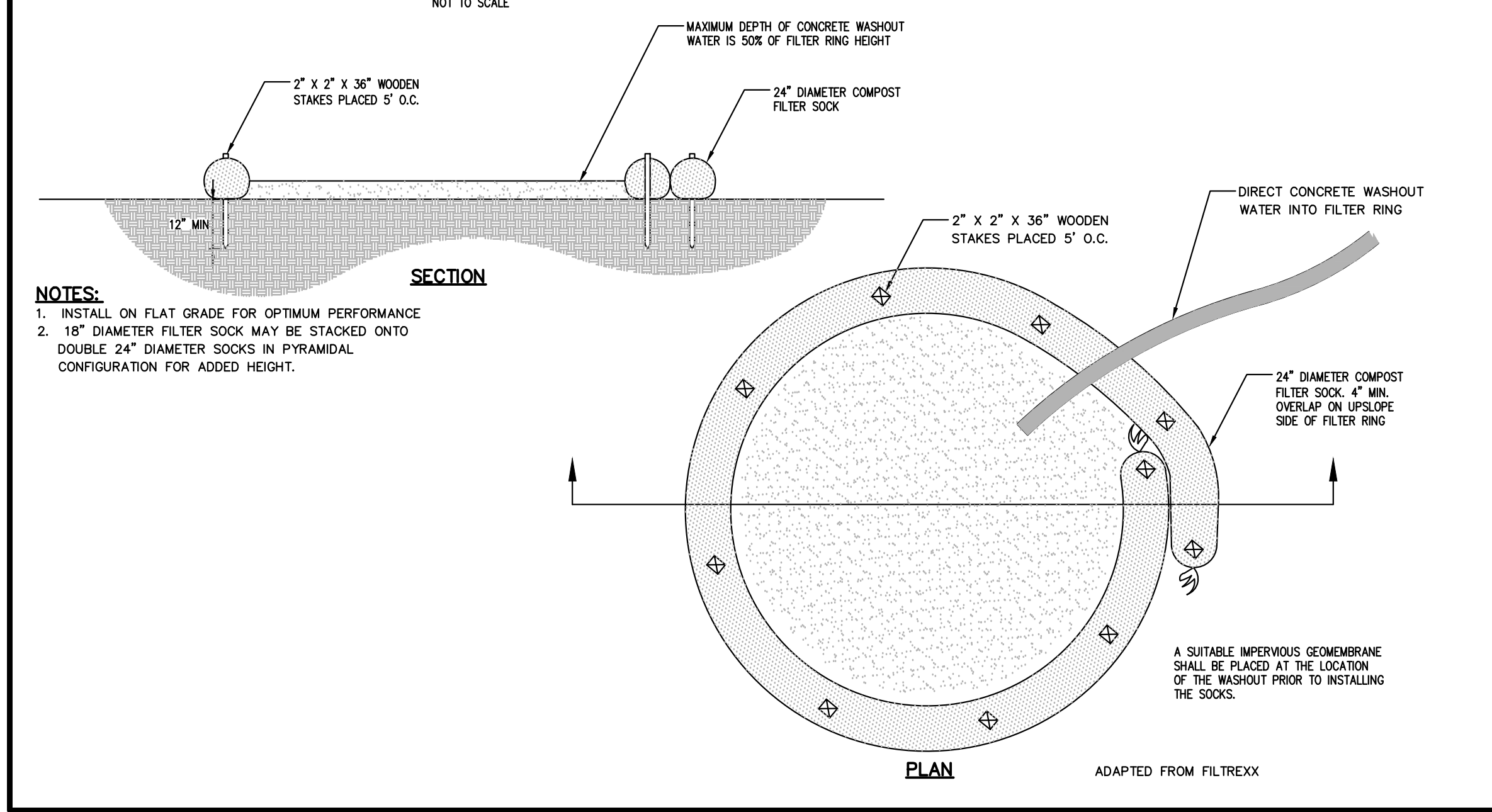
HIGH VOLUME FILTER BAG SHALL BE MADE FROM WOOLY DEVICES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 lb./in.
GRAB TENSILE	ASTM D-4632	225 lb.
PUNCTURE	ASTM D-4633	110 lb.
MULLEN BURST	ASTM D-3786	350 psi
UV RESISTANCE	ASTM D-4355	70%
ACID RETAINED	ASTM D-4791	80 Shore

General Notes:

- A SUFFICIENT MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE RETAINED WHEN THEY REQUIRE 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. UNUSABLE BAGS COME WITH LIFTING STRAPS MOUNTED AT THE TOP.
- BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, DRAINAGE RESISTANT AREA. WHERE THE LIFTING STRAPS ARE NOT POSSIBLE, A SUFFICIENT UNDERLAMENT AND FLOW PAIN SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE OR IN BASINS OF DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 6% FOR SLOPES EXCEEDING 6% CLEAN ROCK OR OTHER NON-VEGETATIVE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SOIL CONTACTS.
- NO CONCRETE, STONE, BRICK OR REBAR FOR MOST INSTALLATIONS. COMPOST BAGS OR COMPOST FILTER BAGS SHALL BE INSTALLED BELOW BAGS LOCATED IN 60 LB OR 100 LB SIZES, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WERE GRASS AREA IS NOT AVAILABLE.
- THE PUMP PRESSURE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THE PURPOSE.
- THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP RATES SHALL BE MONITORED AND ADJUSTED.
- FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

Typical Compost Sock Concrete Washout Detail



ADAPTED FROM FILTERXX

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.P.A-ONE-CALL: 1-800-242-1776
- THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER AT LEAST FORTY-EIGHT HOURS (48 HOURS) IN ADVANCE OF EROSION CONTROL FACILITIES COMPONENT INSTALLATIONS.
- 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.
- 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 DOWNSTREAM OF ALL TOPSOIL STOCKPILES.
A. 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 STABILIZATION.
- PLACE ROCK CONSTRUCTION ENTRANCE WITH WASH RACK AS SHOWN. ALL CONSTRUCTION TRAFFIC FOR THE SITE IS TO ENTER AT THIS LOCATION. ALTERNATE ENTRANCES ARE PROHIBITED, UNLESS APPROVED BY THE CONSERVATION DISTRICT.
- INSTALL INLET PROTECTION AT ALL EXISTING INLETS WITHIN THE LIMIT OF DISTURBANCE.
- INSTALL HIGH VISIBILITY FENCING AT EXISTING ENTRANCE OFF OF 412. IMMEDIATELY STABILIZE ALL DISTURBED AREAS.
- PLACE ALL COMPOST FILTER SOCKS CFS-1 THROUGH CFS-7 AS SHOWN ON SHEET 13 AND IMMEDIATELY STABILIZE ANY DISTURBED AREAS.
- CLEAR AND GRUB ENTIRETY OF SITE WITHIN THE LIMIT OF DISTURBANCE PRIOR TO ANY EARTHMOVING ACTIVITIES. REMOVE STOCKPILE OF SLAG AND FILL MATERIAL. REMOVE ALL WASTE MATERIALS.
- CONSTRUCT BUILDING FOOTERS AND PATIO.
- ROUGH GRADE SITE INCLUDING RETAINING WALLS, PARKING AREAS, AND DRIVEWAYS. IMMEDIATELY STABILIZE DISTURBED AREAS. CONTINUE TO UTILIZE THE ROCK CONSTRUCTION ENTRANCE FOR THE ENTIRETY OF THE SITE WORK.
- INSTALL STORM SEWER AFTER REMOVAL OF EXISTING INLETS AS SHOWN ON THE PLANS. PLACE INLET PROTECTION AS EACH INLET IS PLACED. INSTALL WATERBARS AT INL-BB-3 AND INL-BB-4 AS THESE INLETS ARE INSTALLED.
- CONSTRUCT BUILDING AND CONNECT ROCK LEADERS TO PREVIOUSLY CONSTRUCTED STORM SEWER COLLECTION SYSTEM AS NEEDED.
- 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.
- INSTALL ALL CONCRETE CURBING AND SIDEWALKS. ALL DISTURBANCE GENERATED DURING THE INSTALLATION OF THESE ITEMS SHOULD BE IMMEDIATELY STABILIZED.
- PLACE SUBBASE STONE AGGREGATE FOR ALL AREAS TO BE PAVED.
- FINISH PAVING ALL ASPHALT AREAS AND LINE STRIPE PARKING FACILITIES AND DRIVEWAYS.
- INSTALL CAPPING MATERIAL AND PROPOSED LANDSCAPING. IMMEDIATELY STABILIZE ALL AREAS.
- ALL E&S BMPs SHALL BE REMOVED AFTER ALL VEGETATED AREAS HAVE ACHIEVED FINAL STABILIZATION. ACCUMULATED SEDIMENT SHALL BE REMOVED IN ACCORDANCE WITH THE PLANS. 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.
- 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.

Standard Construction Detail # 4-1

COMPOST FILTER SOCK

NOT TO SCALE

BROWN PLASTIC FILTER MEDIA

2"x2" WOODEN STAKES PLACED 5' O.C.

DISTURBED AREA

UNDISTURBED AREA

SECTION VIEW

EXISTING CONTOURS

PLAN VIEW

2"x2" WOODEN STAKES PLACED 10' O.C.

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (MAR. 2012). TOPSOIL SHALL MEET THE FOLLOWING STANDARDS:

ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.5
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	30% - 50% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 dS/m (mmhos/cm) MAXIMUM

General Notes:

- 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 DOWNSTREAM OF THE SOCK 30 FEET BY THE MANUFACTURER.
- TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
- 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.
- SOCKS SHALL BE

TABLE 11-1 Cubic Yards of Topsoil Required for Application to Various Depths			
Depth (in)	Per 1,000 Square Feet	Per Acre	
1	3.1	134	
2	6.2	268	
3	9.3	403	
4	12.4	537	
5	15.5	672	
6	18.6	806	
7	21.7	940	
8	24.8	1,074	

Adapted from VA DSWG

TABLE 11.2 Soil Amendment Application Rate Equivalents				
Soil Amendment	Permanent Seeding Application Rate			Notes
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	
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

Adapted from Penn State, "Erosion Control and Conservation Plantings on Noncropland"

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 Plant Tolerances of Soil Limitation Factors										
Species	Growth Habit	Tolerates				Minimum Seed Specifications ^a				Seeds/lb. (1,000s)
		Wet Soil	Dry Site	Low Fertility	Acid Soil (pH 5.5-5.7)	Purity (%)	Hard Seed (%)	Seed Germination (%)		
Warm-Season Grasses										
Deerfootgrass	bunch	yes	yes	yes	yes	95	75	75	250	
Weeping lovegrass	bunch	no	yes	yes	yes	97	75	75	1,500	
Switchgrass ^b	bunch	yes	yes	yes	yes	85	80	80	350	
Big bluestem	bunch	no	yes	yes	yes	85	80	80	150	
Cool-Season Grasses										
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	2,500	
River cordgrass	sod	yes	yes	yes	no	85	70	70	520	
Orchardgrass	yes	yes	yes	yes	yes	85	80	80	654	
Timothy	bunch	yes	no	yes	yes	95	80	80	1,230	
Smooth bromegrass	sod	yes	yes	yes	yes	95	80	80	136	
Legumes^c										
Crownvetch	sod	no	yes	yes	no	98	40	30	65	120
Birdfoot trefoil ^d	bunch	yes	yes	yes	yes	98	60	20	60	400
Flupanea	sod	no	no	yes	yes	98	55	20	75	10
Securidaca	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	
Summer rye	bunch	no	no	no	no	98	85	85	15	
Japanese millet	bunch	yes	no	yes	yes	98	80	80	155	

¹ Growth habit refers to the ability of the species to either form a dense sod by vegetative means (solonchons, 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.

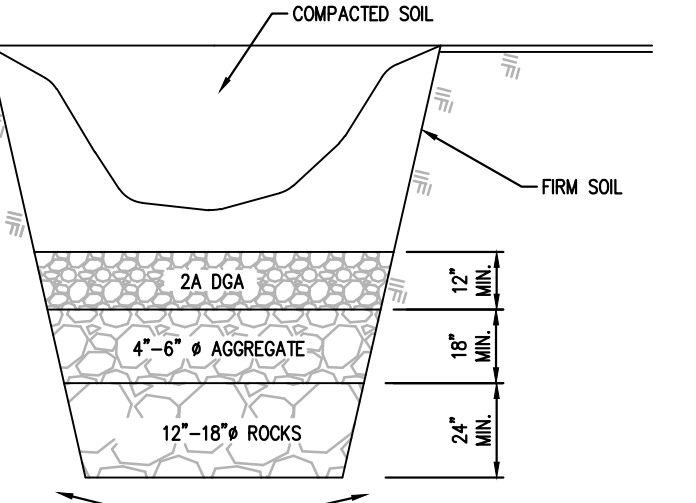
³ Minimum seed lots are truly minimum, and seed lots to be used for revegetation purposes should equal or exceed these standards. Thus, deerfootgrass seed should germinate 75% or better. Crownvetch should have at least 40% readily germinable seed and 30% hard seed. Commonly, seed lots are available that 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.

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

⁵ Need specific legume inoculant. Inoculant suitable for garden peas and sweetpeas usually is satisfactory for flupanea.

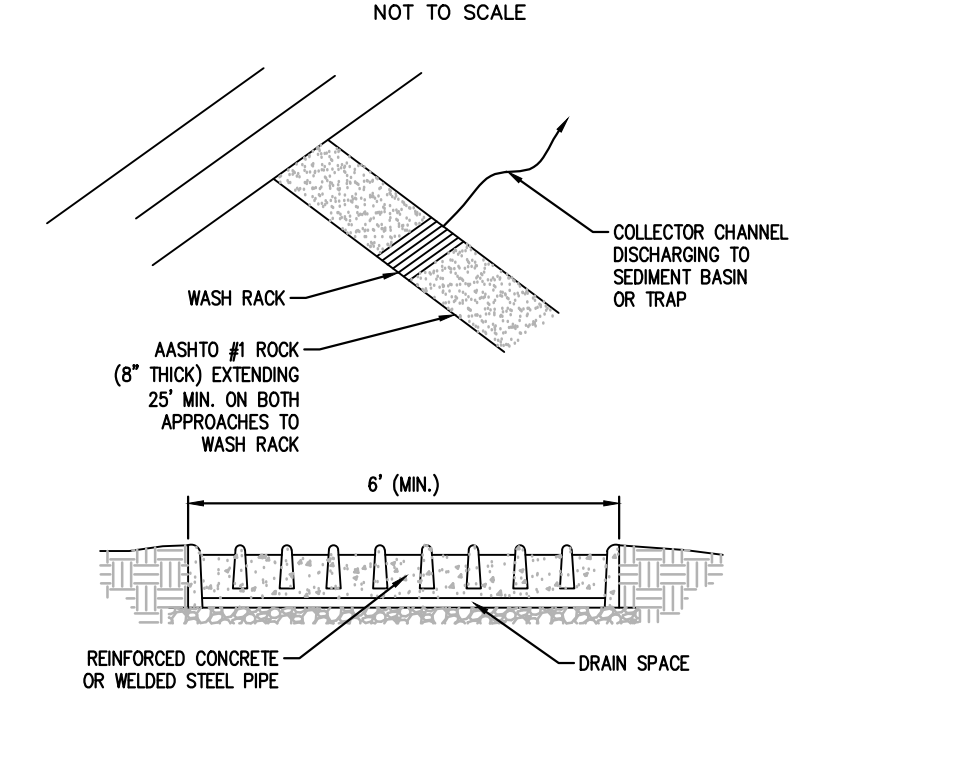
⁶ Birdfoot trefoil is adapted over the entire state, except in the extreme southeast where crown and root rots may injure stands.

Penn State, "Erosion Control and Conservation Plantings on Noncropland."



- 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.
- EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 1 FEET BELOW GRADE, WHICHEVER OCCURS FIRST.
- 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 ABOVE.
- 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.
- BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.

STANDARD CONSTRUCTION DETAIL # 3-2 ROCK CONSTRUCTION ENTRANCE WITH WASH RACK



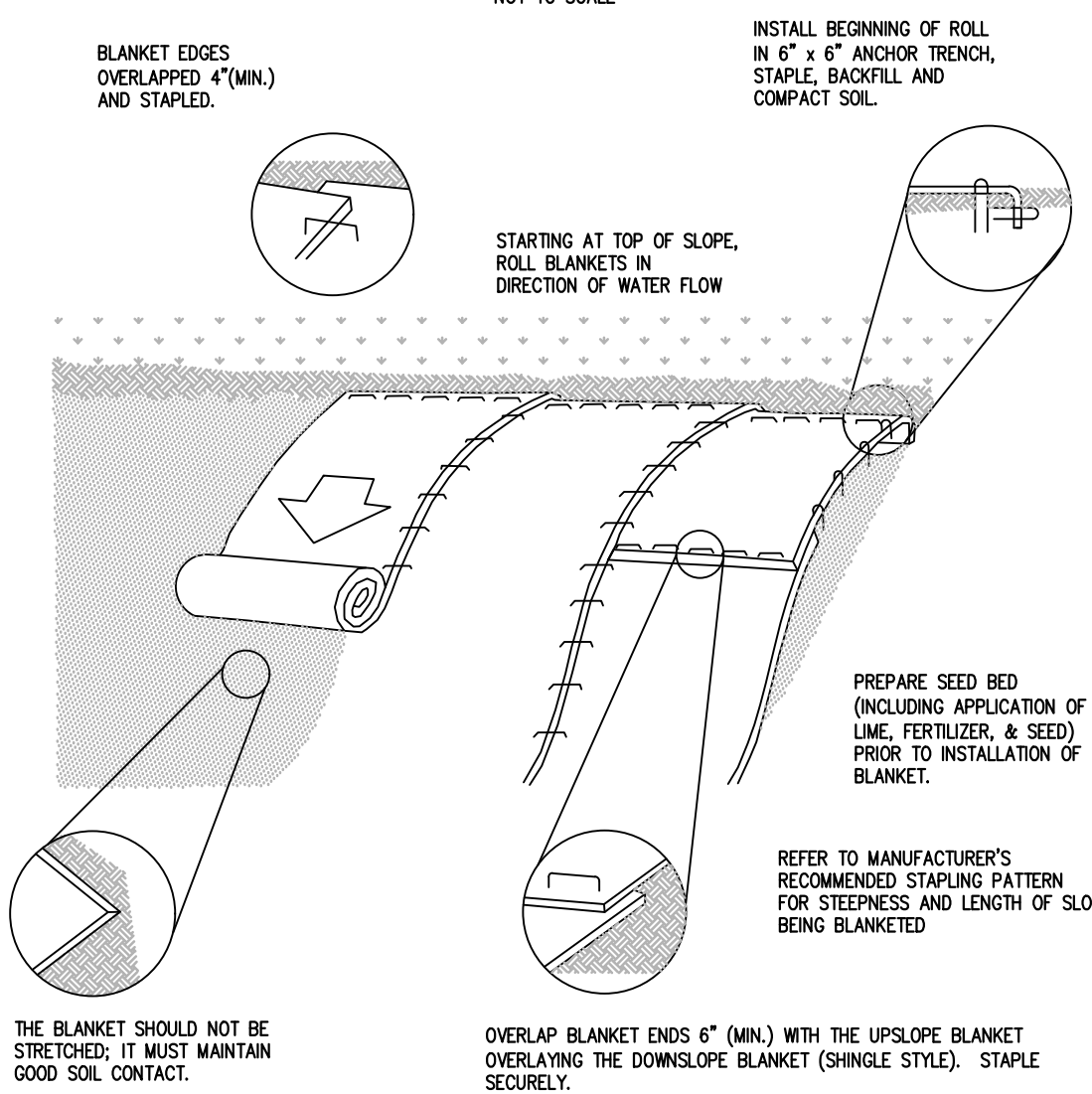
GENERAL NOTES:

- WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.
- WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTED VEHICULAR TRAFFIC.
- A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.

MAINTENANCE:

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 TO FURTHER LIFE OF THE ROCK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SHEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

Standard Construction Detail # 11-1 EROSION CONTROL BLANKET INSTALLATION



General Notes:

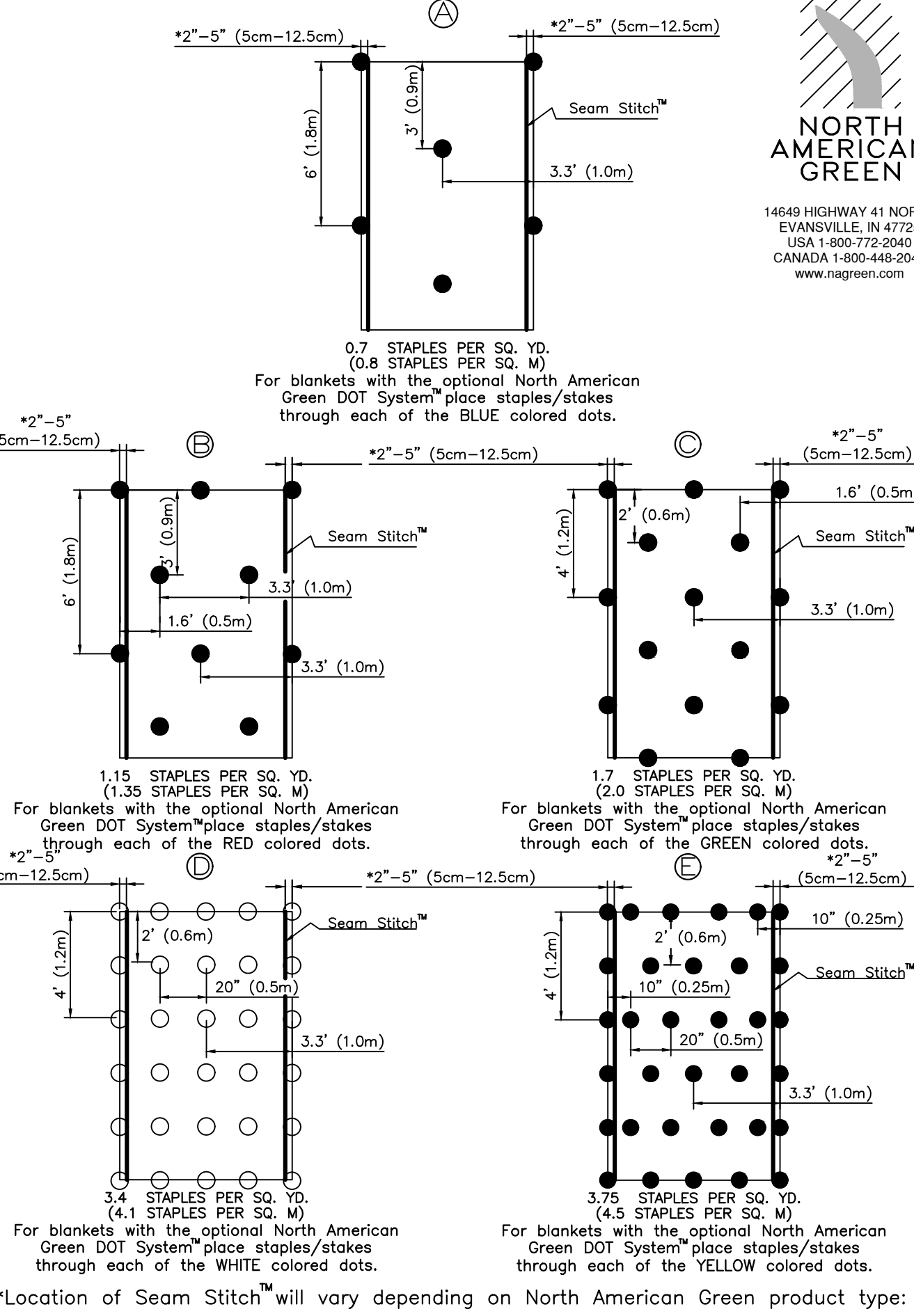
- SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
- PROVIDE ANCHOR TRENCH AT TOP OF SLOPE IN SIMILAR FASHION AS AT BOTTOM OF SLOPE.
- SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
- BLANKET SHALL HAVE CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
- THE BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

TABLE 11.5 Recommended Seed Mixtures for Stabilizing Disturbed Areas			
Site Condition	Nurse Crop	Seed Mixture (Select one mixture)	
Slopes and Banks (not mowed)			
Well-drained	1 plus	3, 5, 5, or 12 ¹	
Variable drainage	1 plus	3 or 7	
Slopes and Banks (mowed)			
Well-drained	1 plus	2 or 10	
Slopes and Banks (grazed/hay)			
Well-drained	1 plus	2, 3, or 12 ¹	
Gullies and Eroded Areas			
Erosion Control Facilities (BMPs)	1 plus	3, 5, 7, or 12 ¹	
Sod waterways, spillways, frequent water flow areas	1 plus	2, 3, or 4	
Drainage ditches	1 plus	2, 3, or 4	
Shallow, less than 3 feet deep	1 plus	2, 3, or 4	
Deep, not mowed	1 plus	5 or 7	
Pond banks, dikes, levees, dams, diversion channels, and occasional water flow areas	1 plus	2 or 3	
Mowed areas	1 plus	5 or 7	
For hay or silage on diversion channels and occasional water flow areas	1 plus	3 or 13	
Highways²			
Non-mowed areas	1 plus	5 or 6	
Pure crownvetch ³	1 plus	5, 7, 8, 9, or 10	
Well-drained	1 plus	3 or 7	
Variable drainage	1 plus	3 or 4	
Poorly drained	1 plus	5 or 7	
Areas mowed several times per year	1 plus	2, 3, or 10	
Utility Right-of-way			
Well-drained	1 plus	5, 8, or 12 ¹	
Variable drainage	1 plus	3 or 7	
Well-drained areas for grazing/hay	1 plus	2, 3, or 13	
Effluent Disposal Areas			
Well-drained	1 plus	3 or 4	
Sanitary Landfills			
Well-drained	1 plus	3, 5, 7, 11 ¹ , or 12 ¹	
Surface mines			
Spills, mine wastes, fly ash, slag, settling basin	1 plus	3, 4, 5, 7, 8, 9, 11 ¹ , or 12 ¹	
Residues and other severely disturbed areas (time to soil test)	1 plus	3 or 13	
Severely disturbed areas for grazing/hay	1 plus	3 or 13	

Penn State, "Erosion Control and Conservation Plantings on Noncropland"

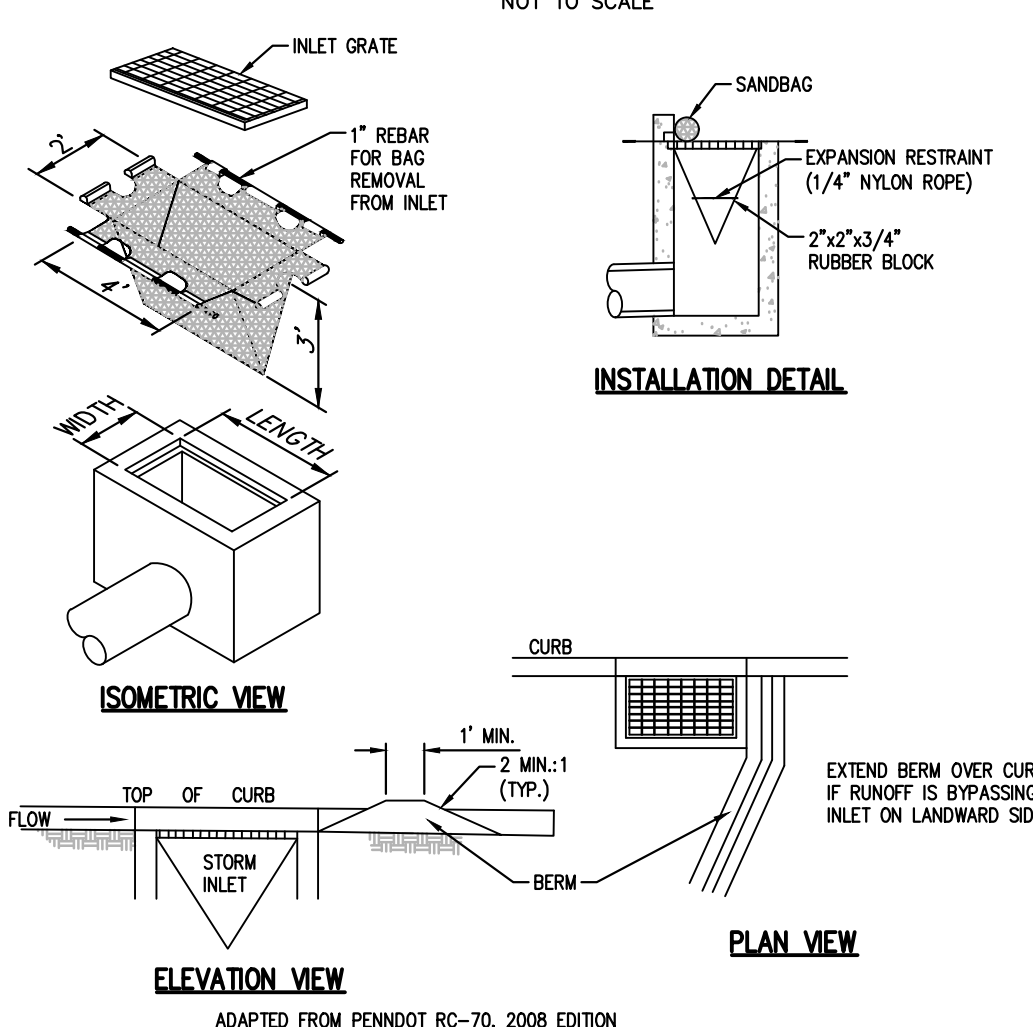
- For seed mixtures 11 and 12, only use spring oats or weeping lovegrass (included in mix) as nurse crop.
- Contact the Pennsylvania Department of Transportation district roadside specialist for specific suggestions on treatment techniques and management practices.
- Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

Staple Pattern Guide



Location of Seam Stitch will vary depending on North American Green product type:

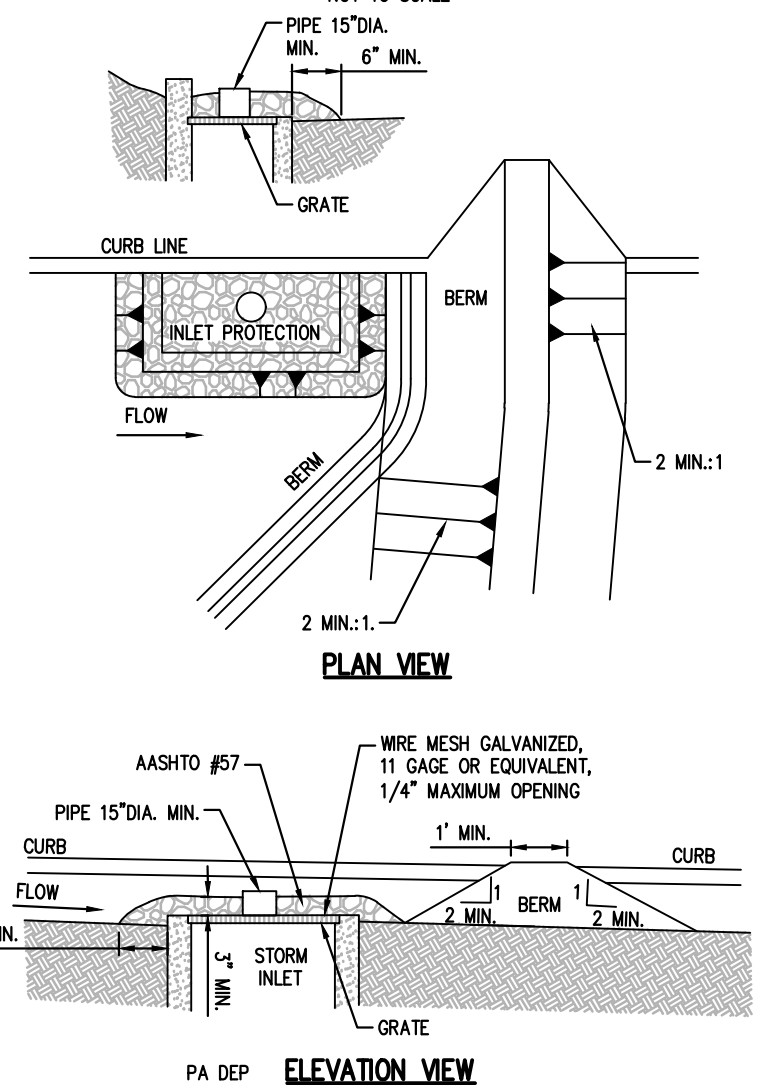
STANDARD CONSTRUCTION DETAIL # 4-15 FILTER BAG INLET – TYPE C INLET



GENERAL NOTES:

- MAXIMUM DRAINAGE AREA = 1/2 ACRE.
- INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
- ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBGRADE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX (6) MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
- AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SEVE.
- INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RAINFALL EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED 50 AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE MADE IMMEDIATELY AFTER INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.
- DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

Standard Construction Detail # 4-19 STONE INLET PROTECTION AND BERM – TYPE C INLET

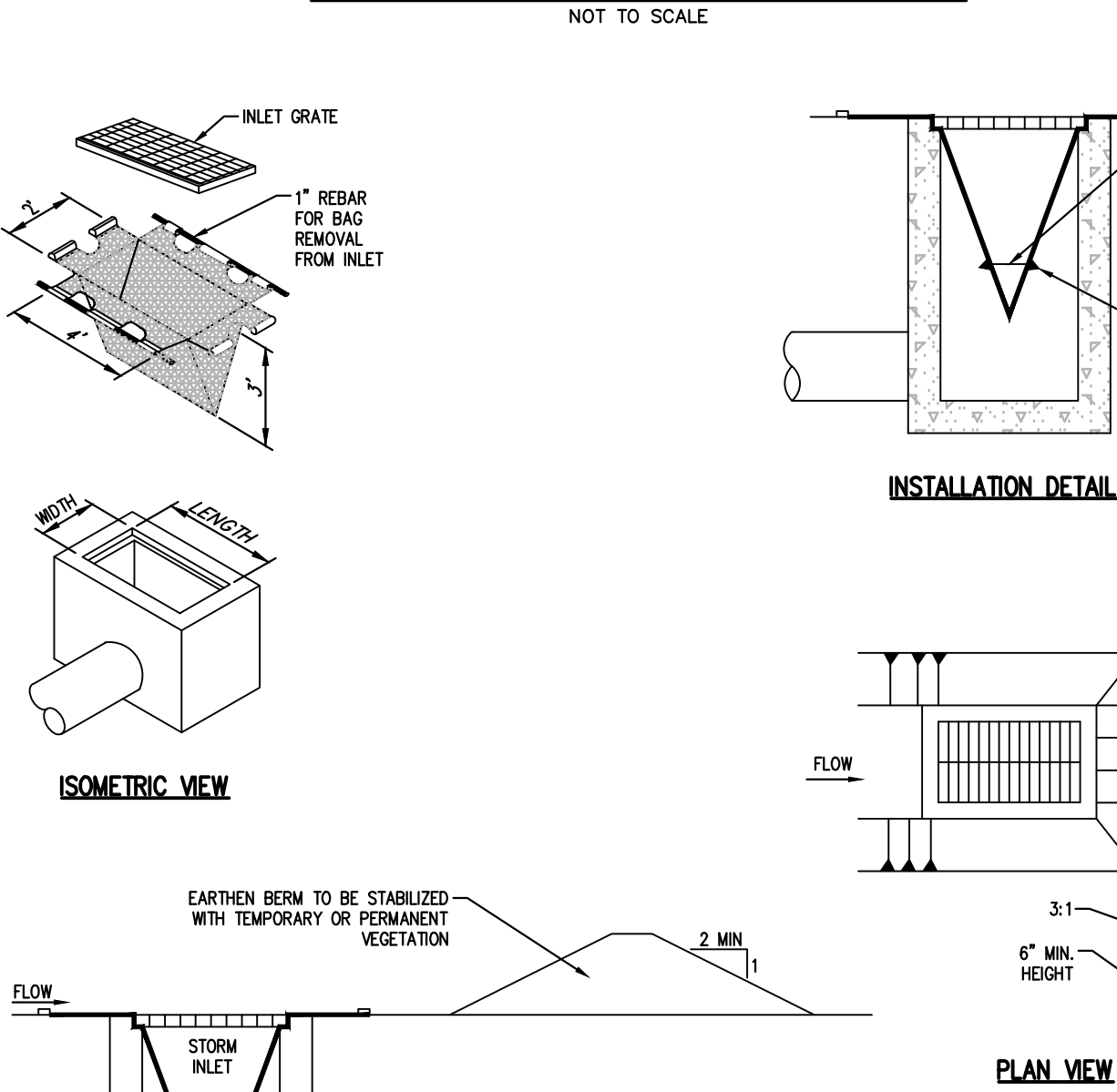


General Notes:

- INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
- ROLLED EARTHEN BERM SHALL BE MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBGRADE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. A 6" MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
- 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 THE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA.
- SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.
- DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.
- FOR SYSTEMS DISCHARGING TO HO OR EY SURFACE WATER, A 6" 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
PH	5.5-8.0
MOISTURE CONTENT	35%-50%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 dg/m (mmoles/cm) MAXIMUM

STANDARD CONSTRUCTION DETAIL # 4-16 FILTER BAG INLET PROTECTION – TYPE M INLET

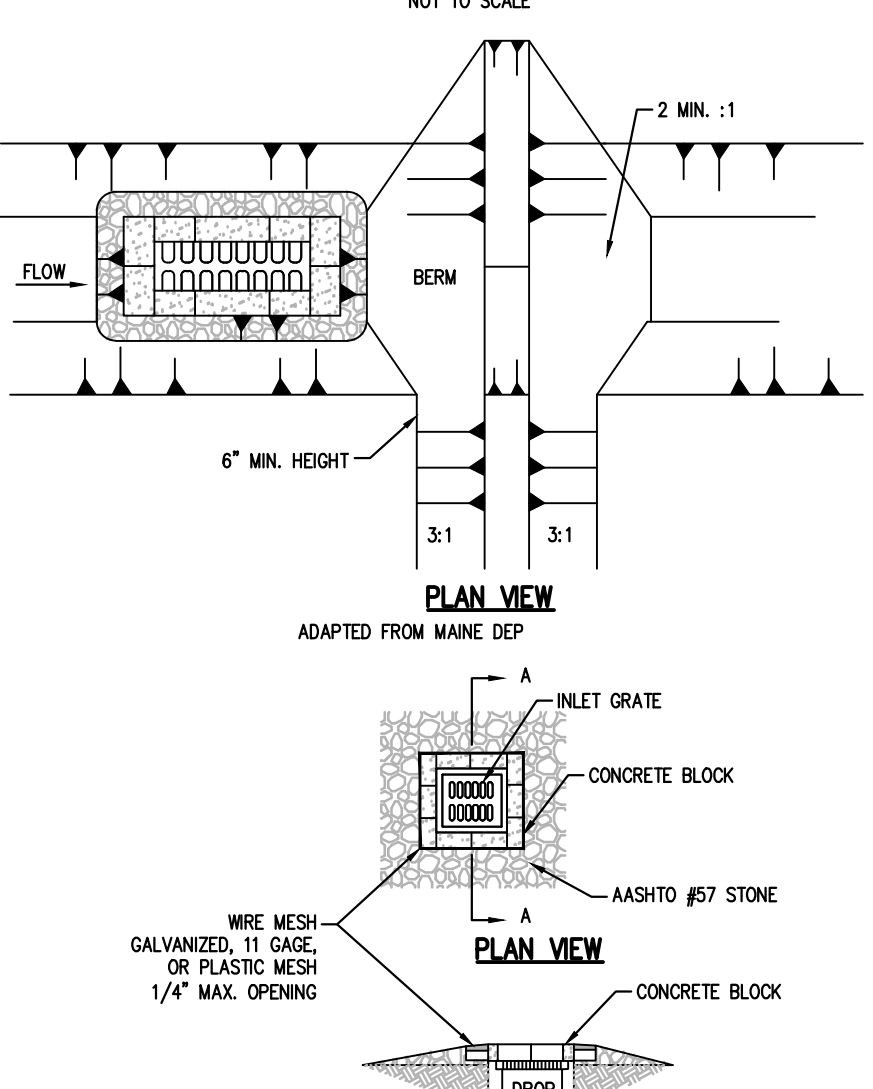


ADAPTED FROM PENNDOT RC-70, 2008 EDITION

GENERAL NOTES:

- MAXIMUM DRAINAGE AREA = 1/2 ACRE.
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- ROLLED EARTHEN BERM IN ROADWAY SHALL BE STONED. ROAD SUBGRADE BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.
- AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SEVE.
- INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RAINFALL EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED 50 AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE MADE IMMEDIATELY AFTER INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.
- DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

Standard Construction Detail # 4-18 STONE AND CONCRETE BLOCK INLET PROTECTION-TYPE M INLET

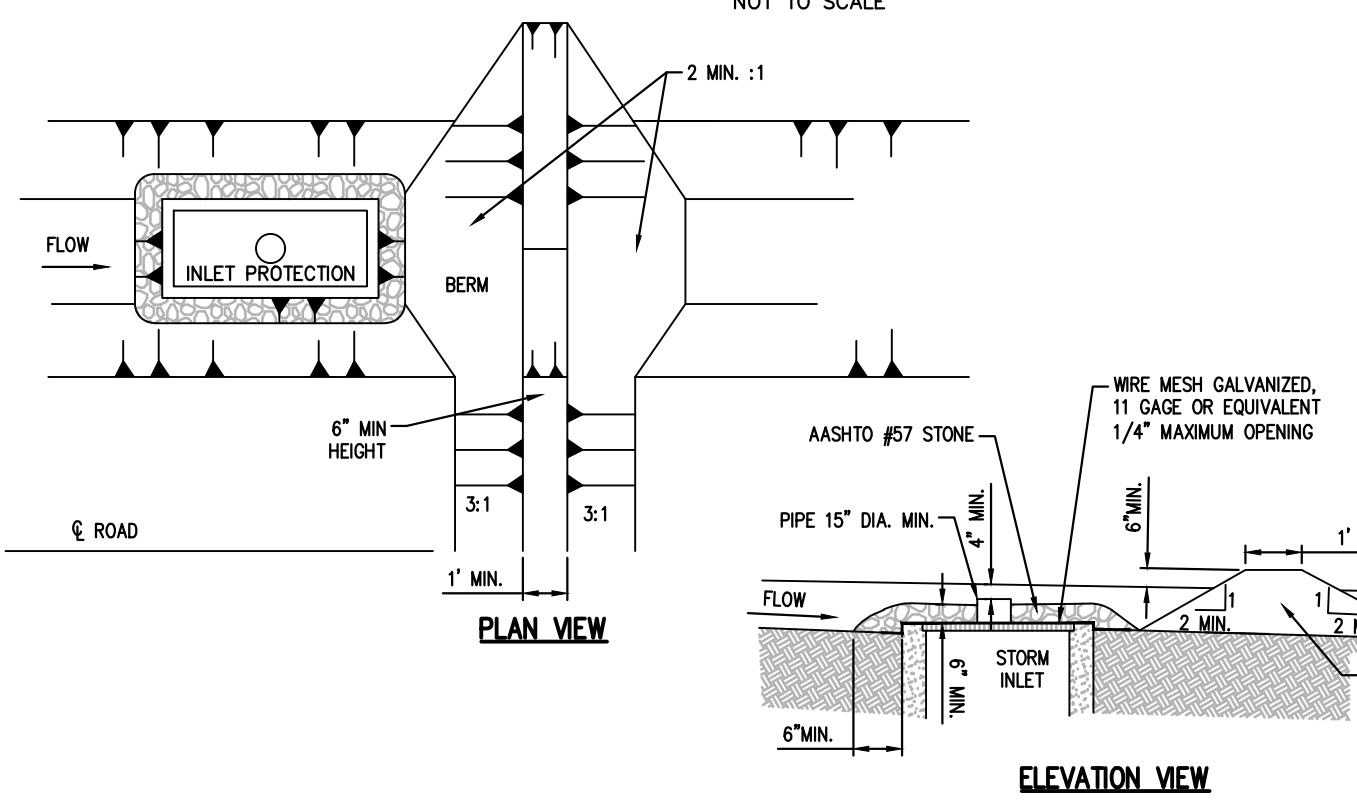


General Notes:

- MAXIMUM DRAINAGE AREA = 1 ACRE.
- INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.
- ROLLED EARTHEN BERM IN ROADWAY SHALL BE STONED. ROAD SUBGRADE BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.
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ORGANIC PORTION	FIBROUS AND ELONGATED
PH	5.5-8.0
MOISTURE CONTENT	35%-50%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 dg/m (mmoles/cm) MAXIMUM


STANDARD CONSTRUCTION DETAIL # 4-20 STONE INLET PROTECTION AND BERM – TYPE M INLET

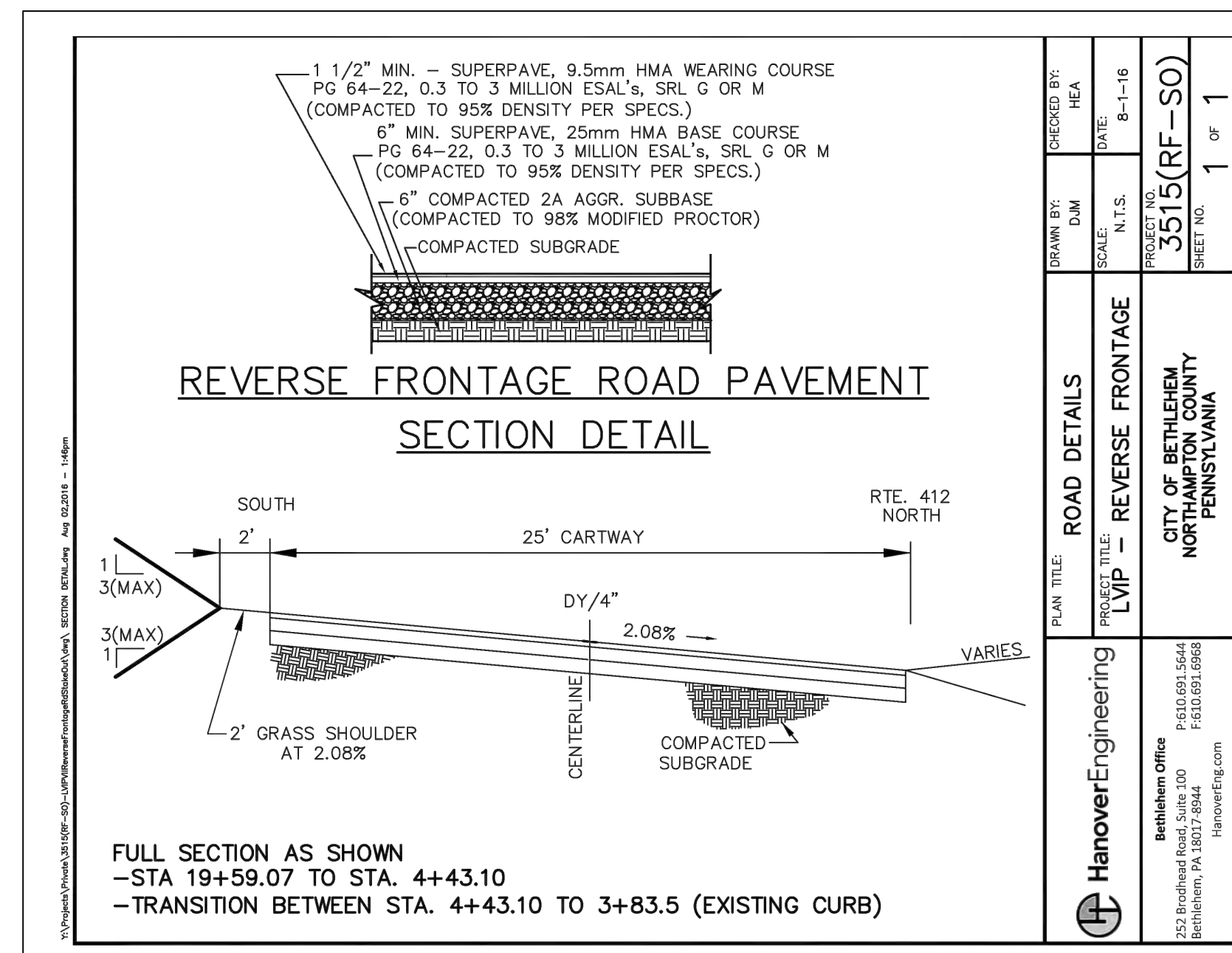
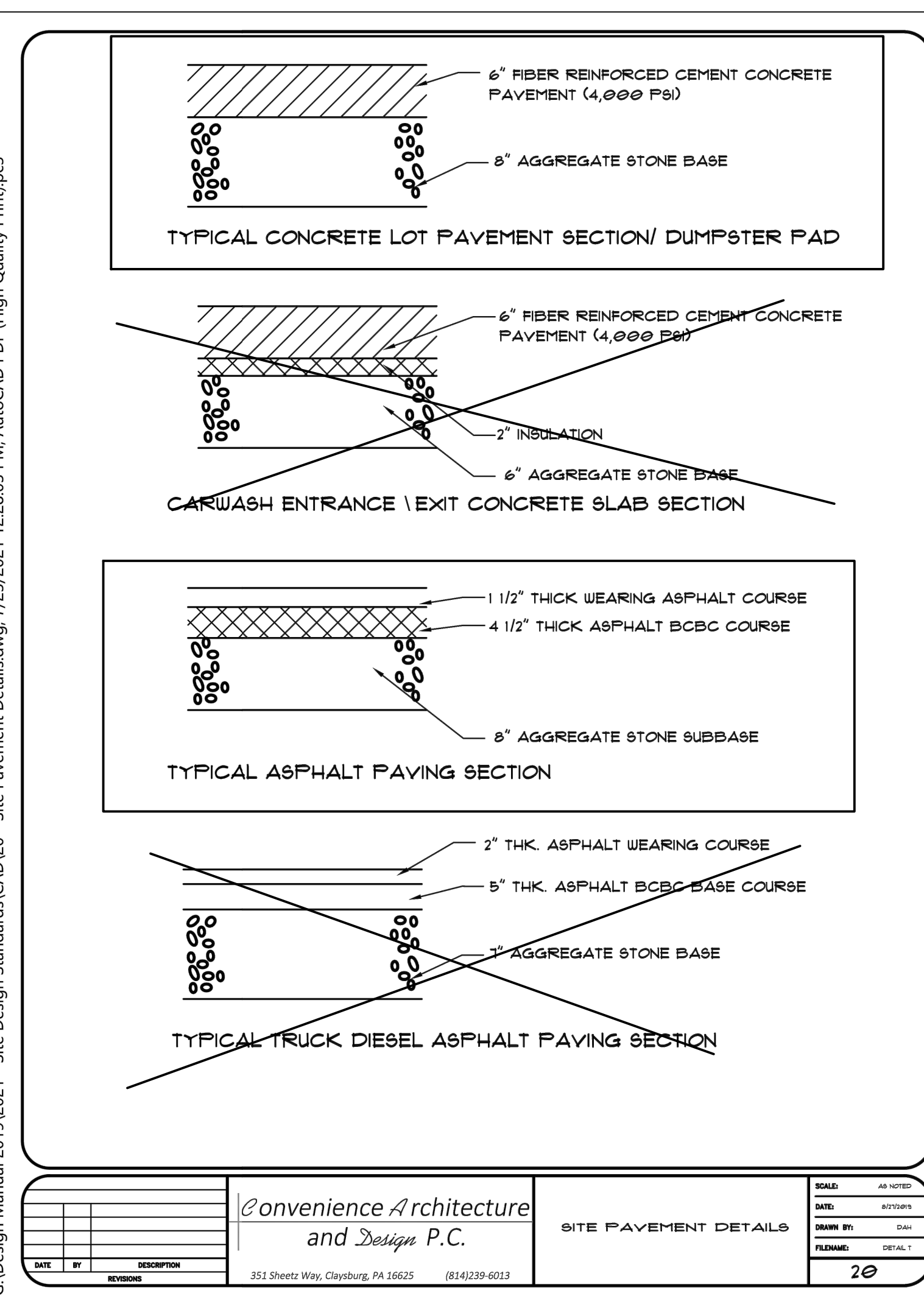
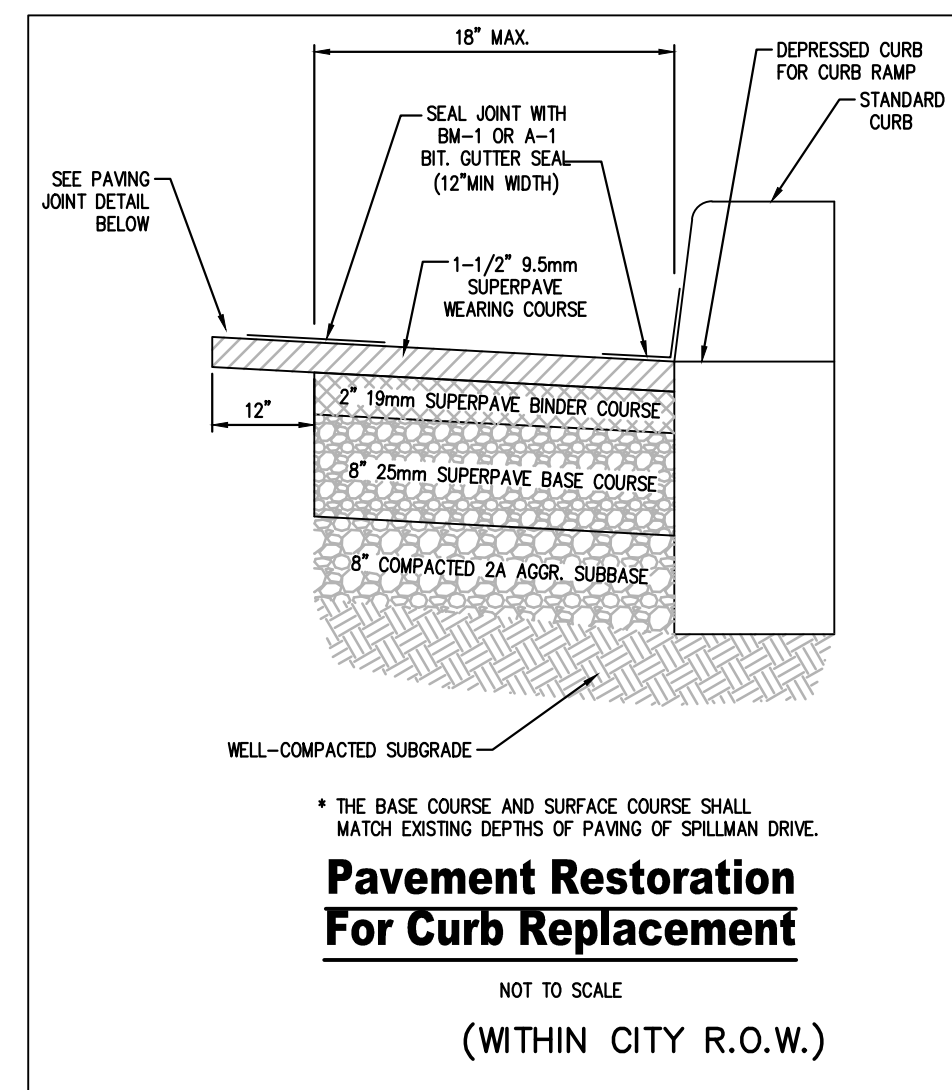
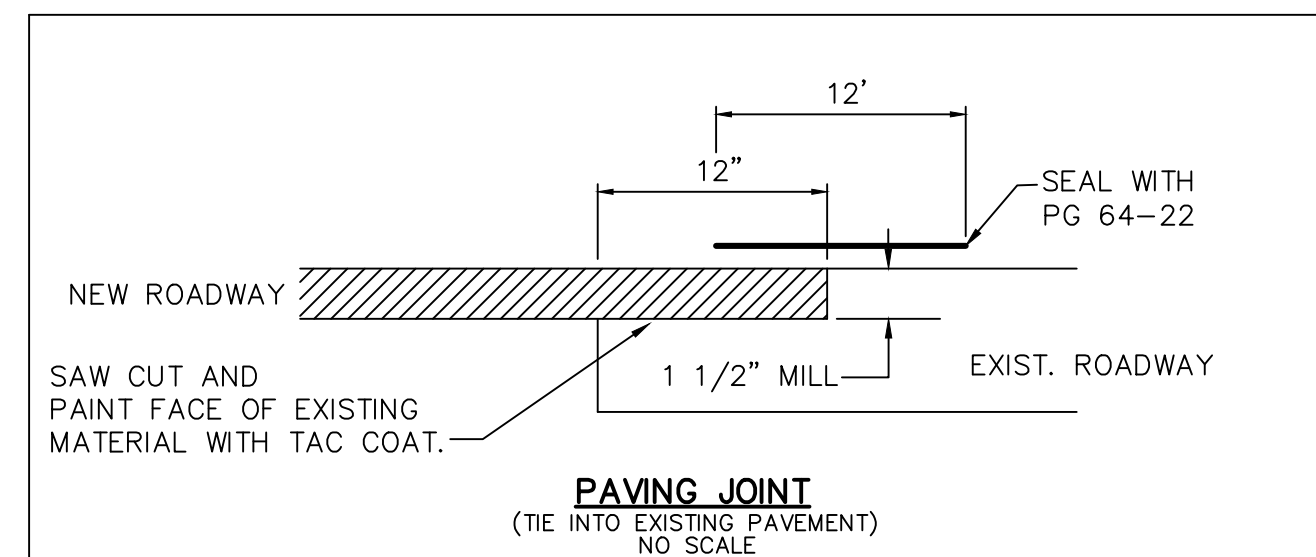
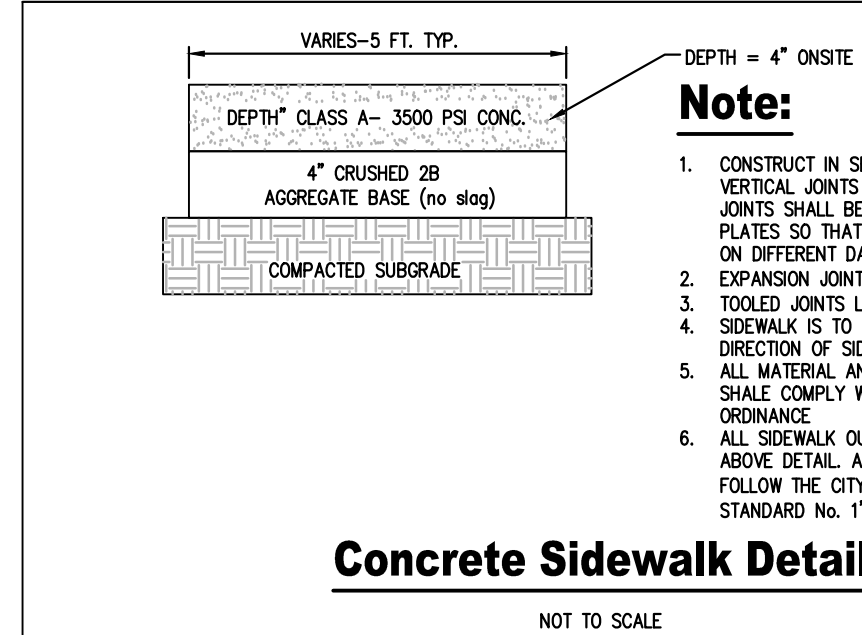
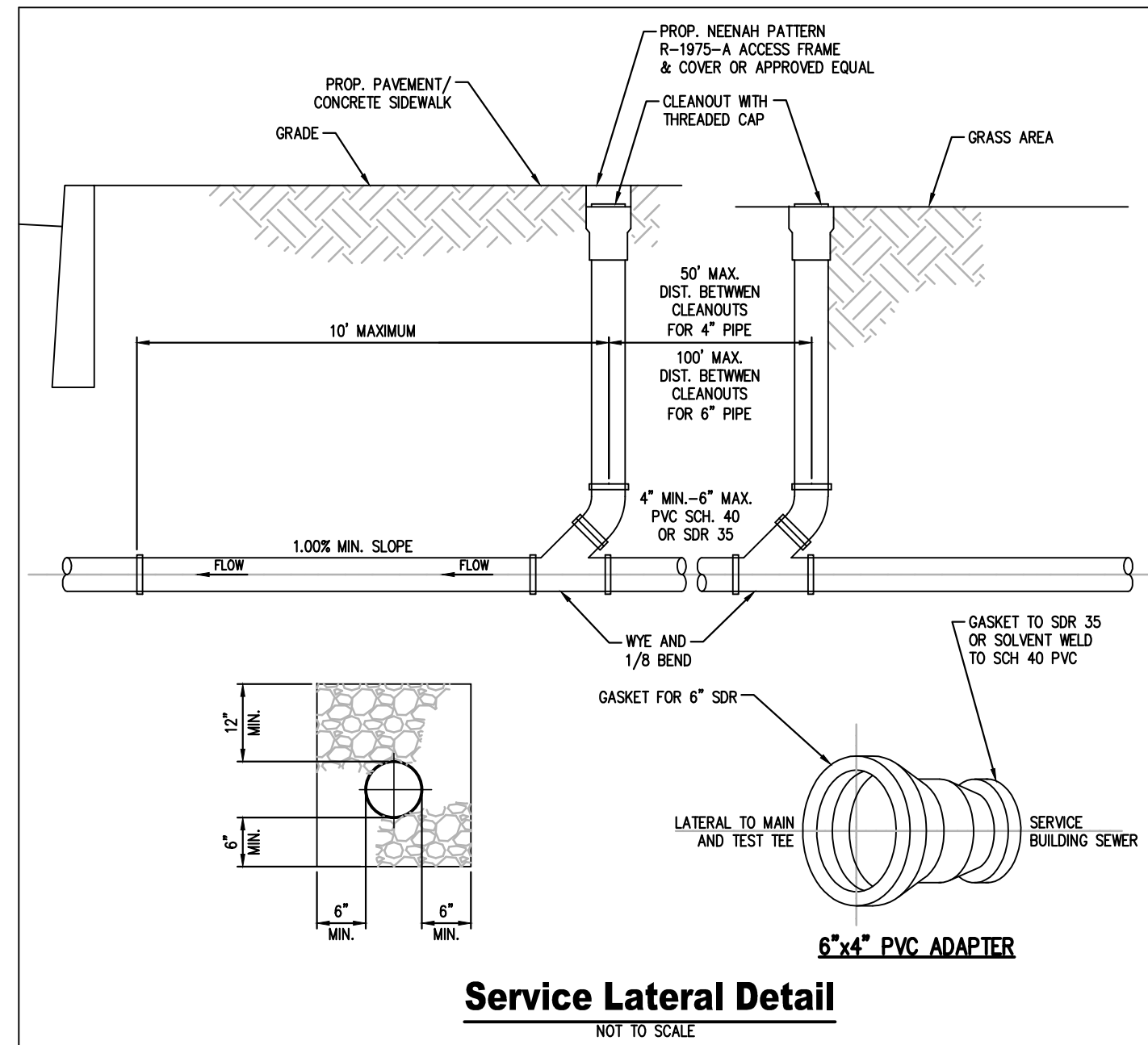
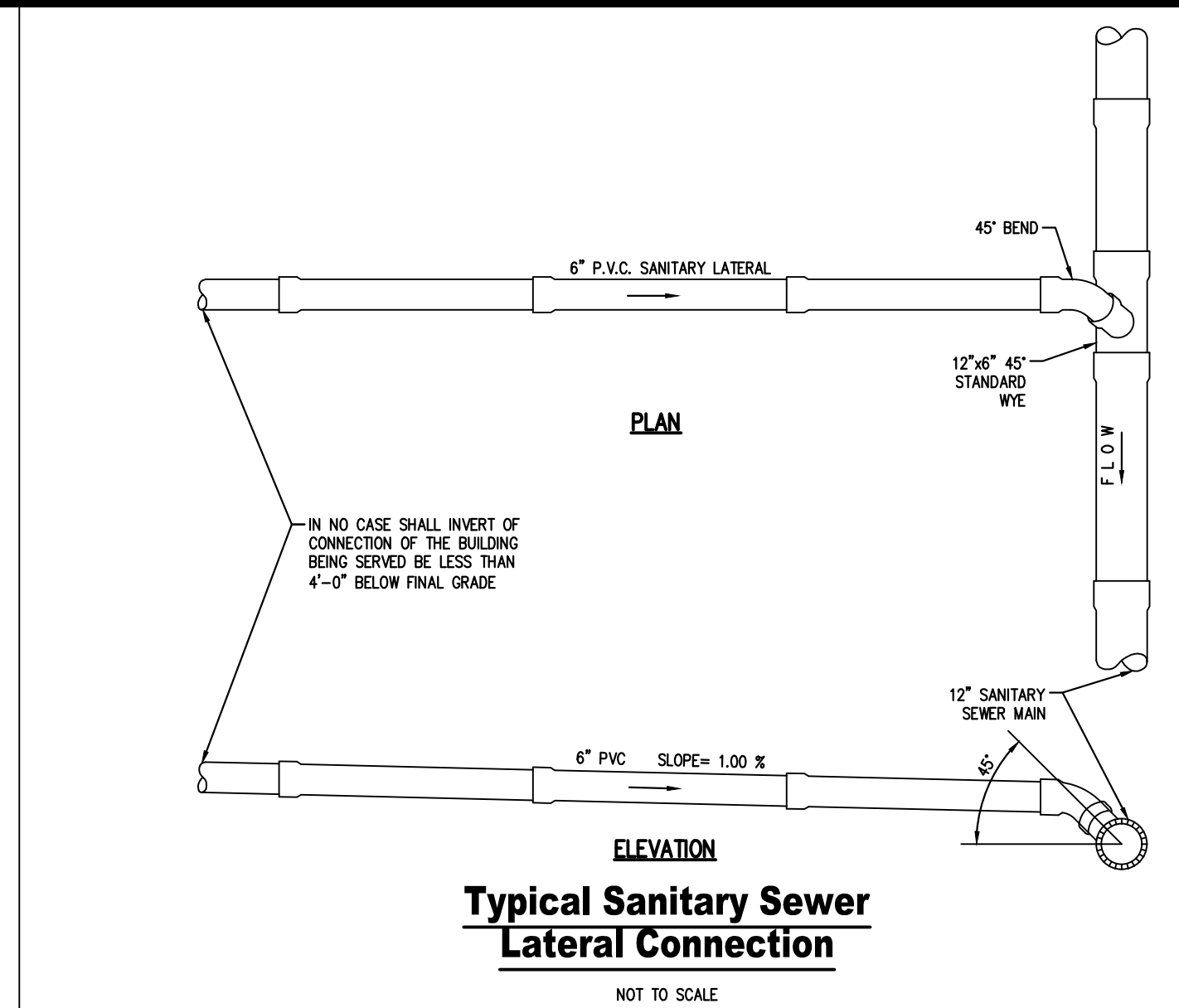
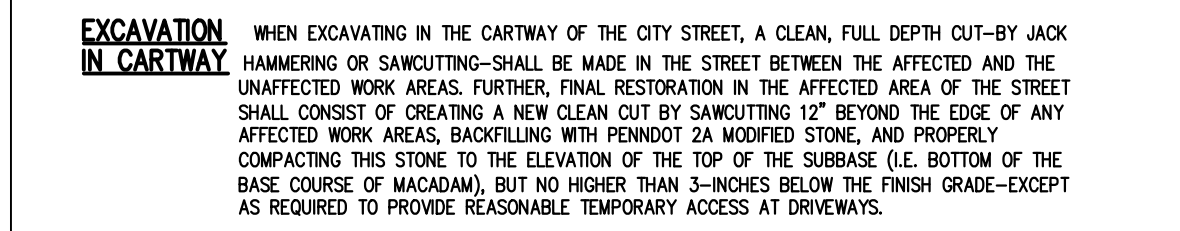
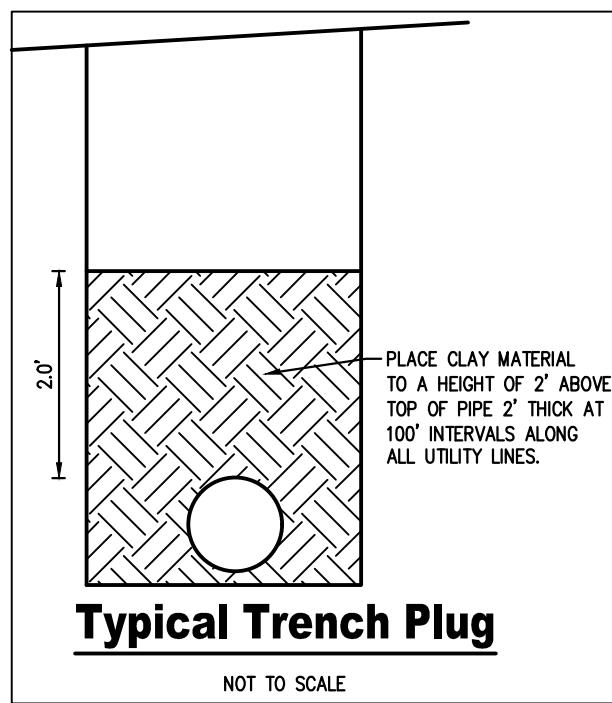


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- ROLLED EARTHEN BERM SHALL BE MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBGRADE BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.
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MOISTURE CONTENT	35%-50%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 dg/m (mmoles/cm) MAXIMUM

<div><div></div><div><div>HanoverEngineering</div><div><div>Bethlehem Office</div><div>252 Brodhead Road, Suite 100 Bethlehem, PA 18017-8944</div><div>F-610.691.5644 F-610.691.6968</div><div>HanoverEng.com</div></div></div></div>		CITY OF BETHLEHEM NORTHAMPTON COUNTY PENNSYLVANIA		SCALE:		PROJECT TITLE:		NO.		REVISIONS		DATE		DRAWN BY		CHECKED BY			
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						2		CITY REVIEW COMMENTS		7/12/23		PROJECT NO. 5024							



- Gas stations
- Parking lots
- Dock drains
- Maintenance

Benefits


- Stainless steel frame provides extended service life
- Easily replaceable filter bags
- Meets stringent removal requirements:
 - All bags rated >80% removal efficiency of street sweep-size particles
 - Optional FXP/PCP bags can be used for hydrocarbon removal when required

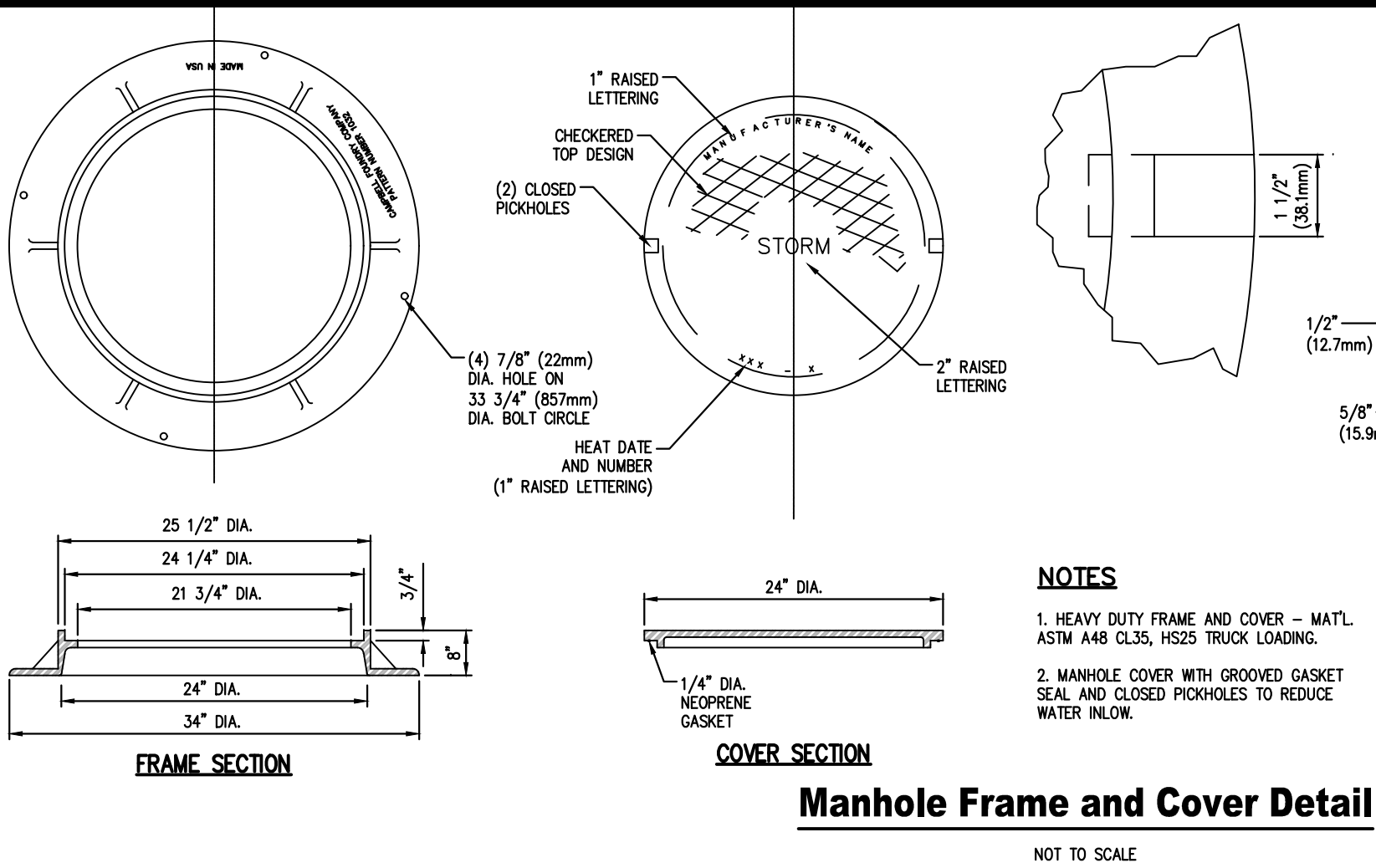
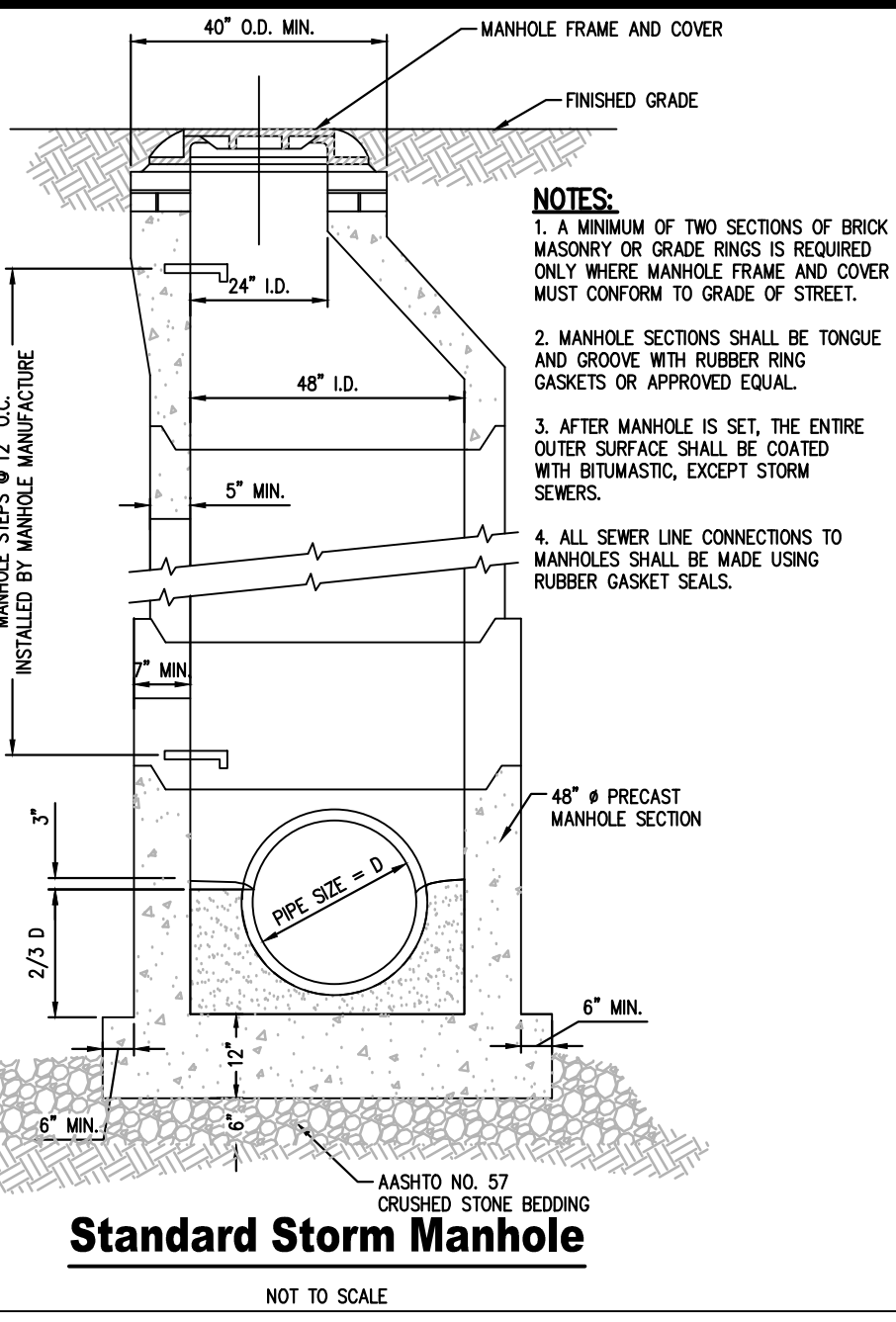
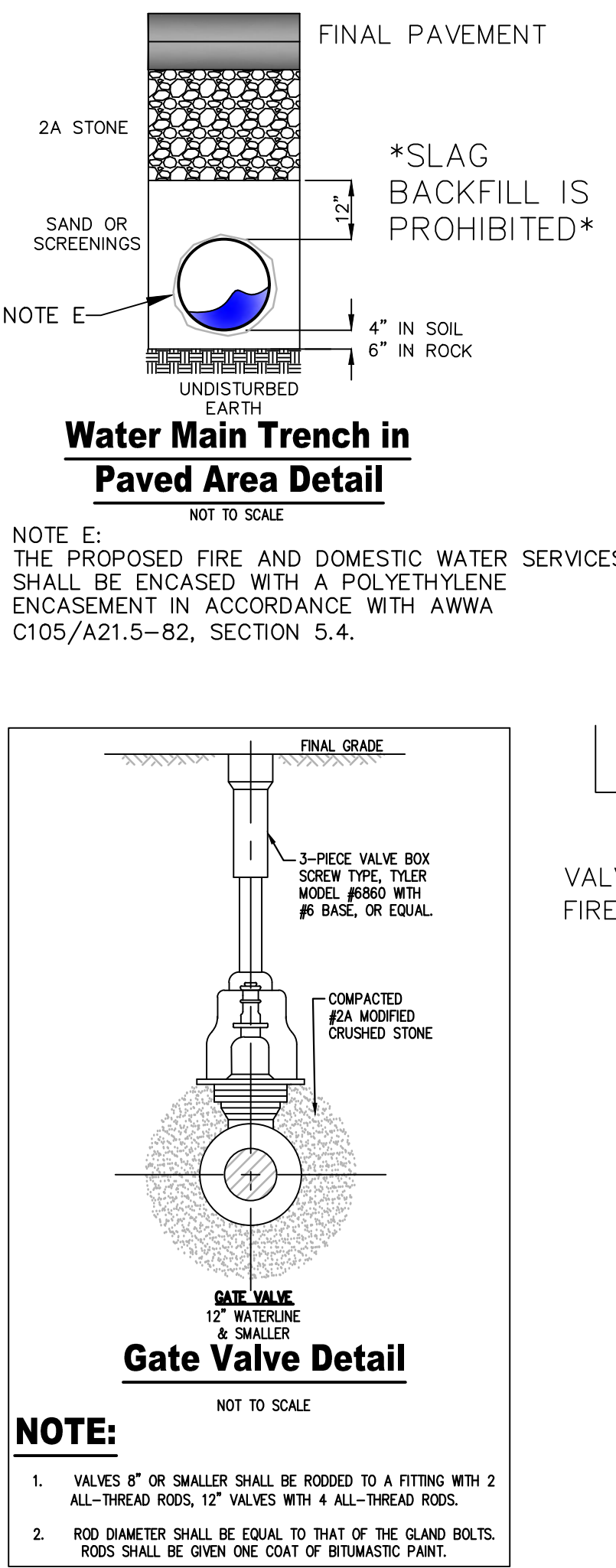
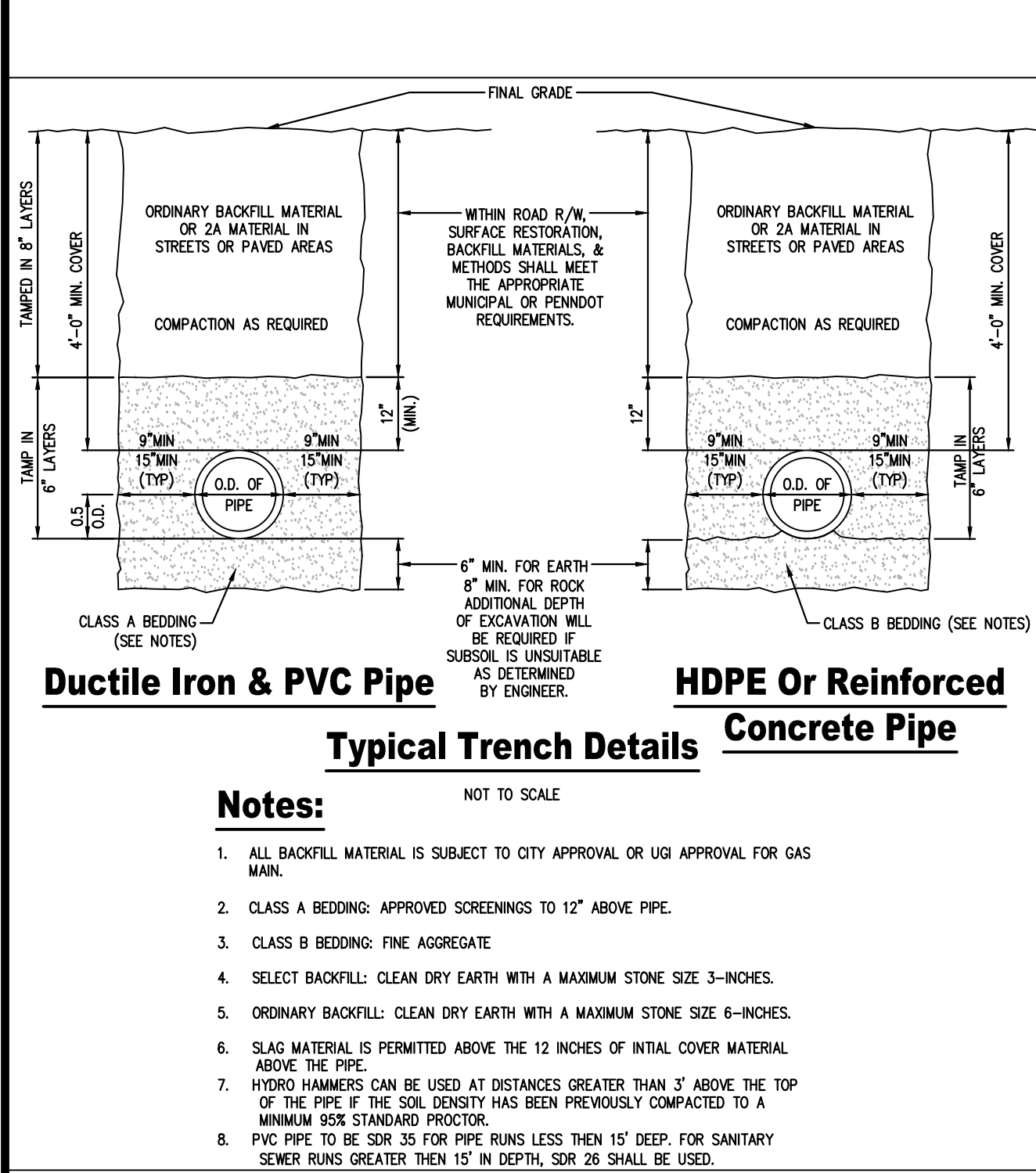
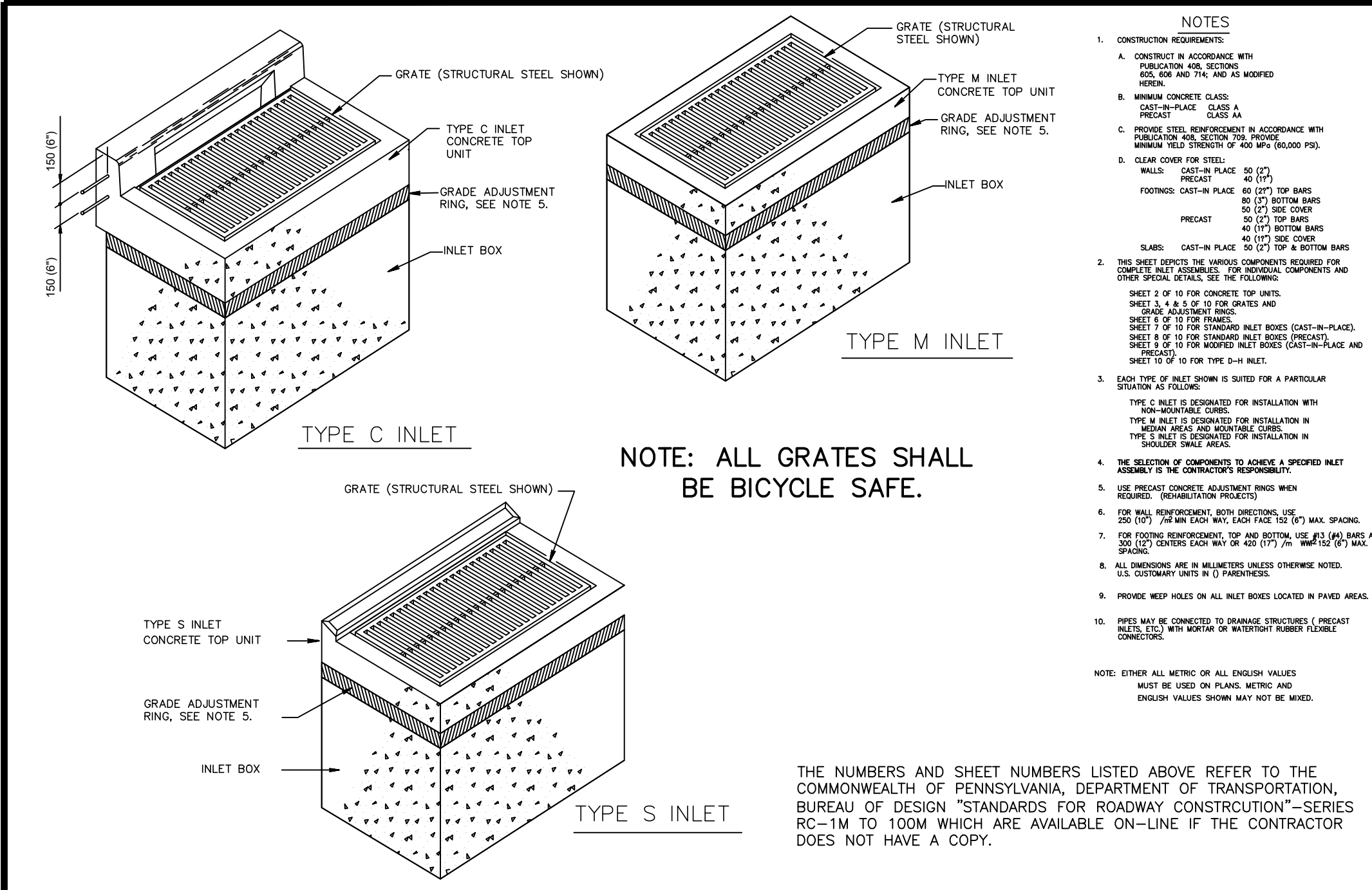


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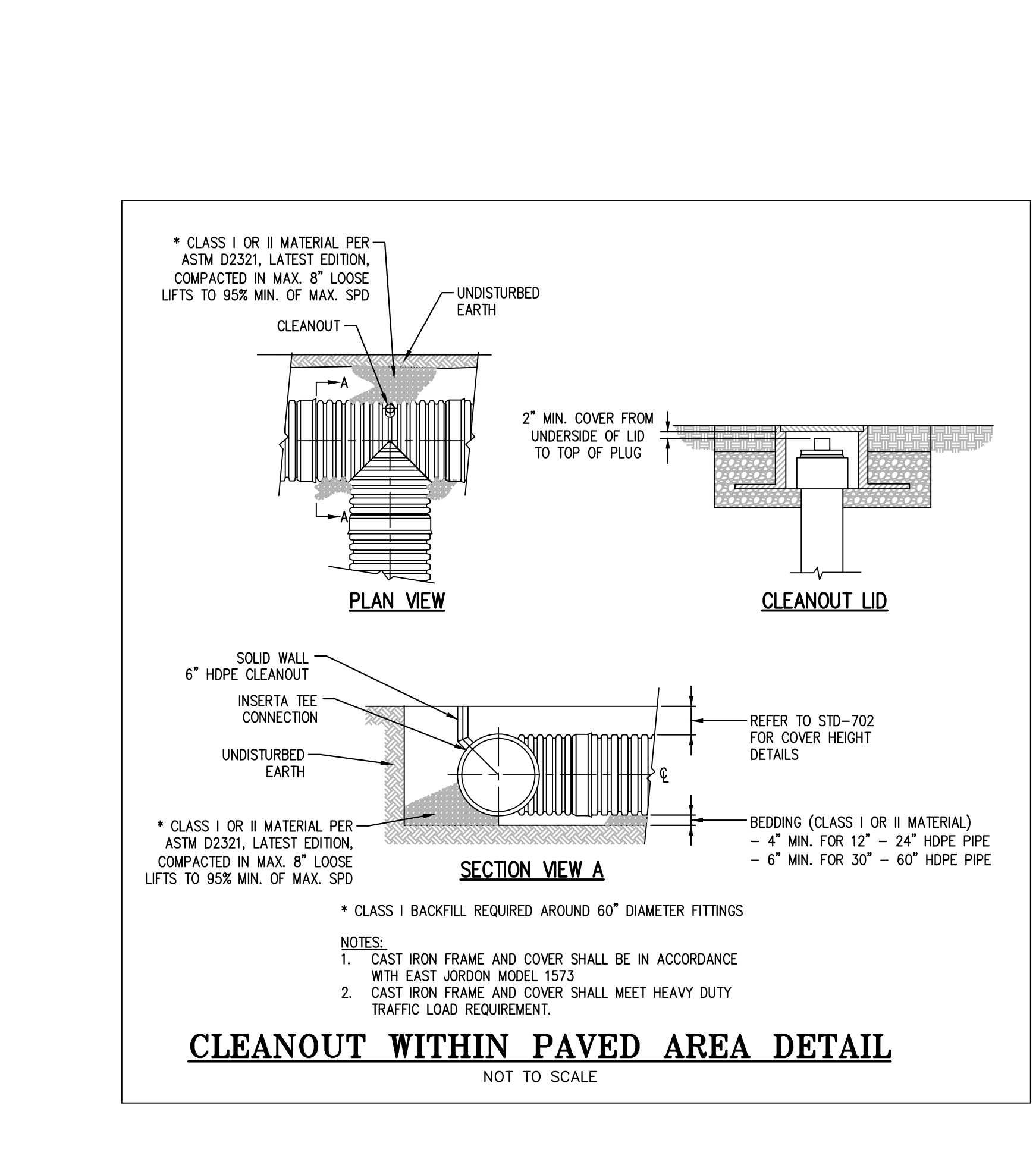
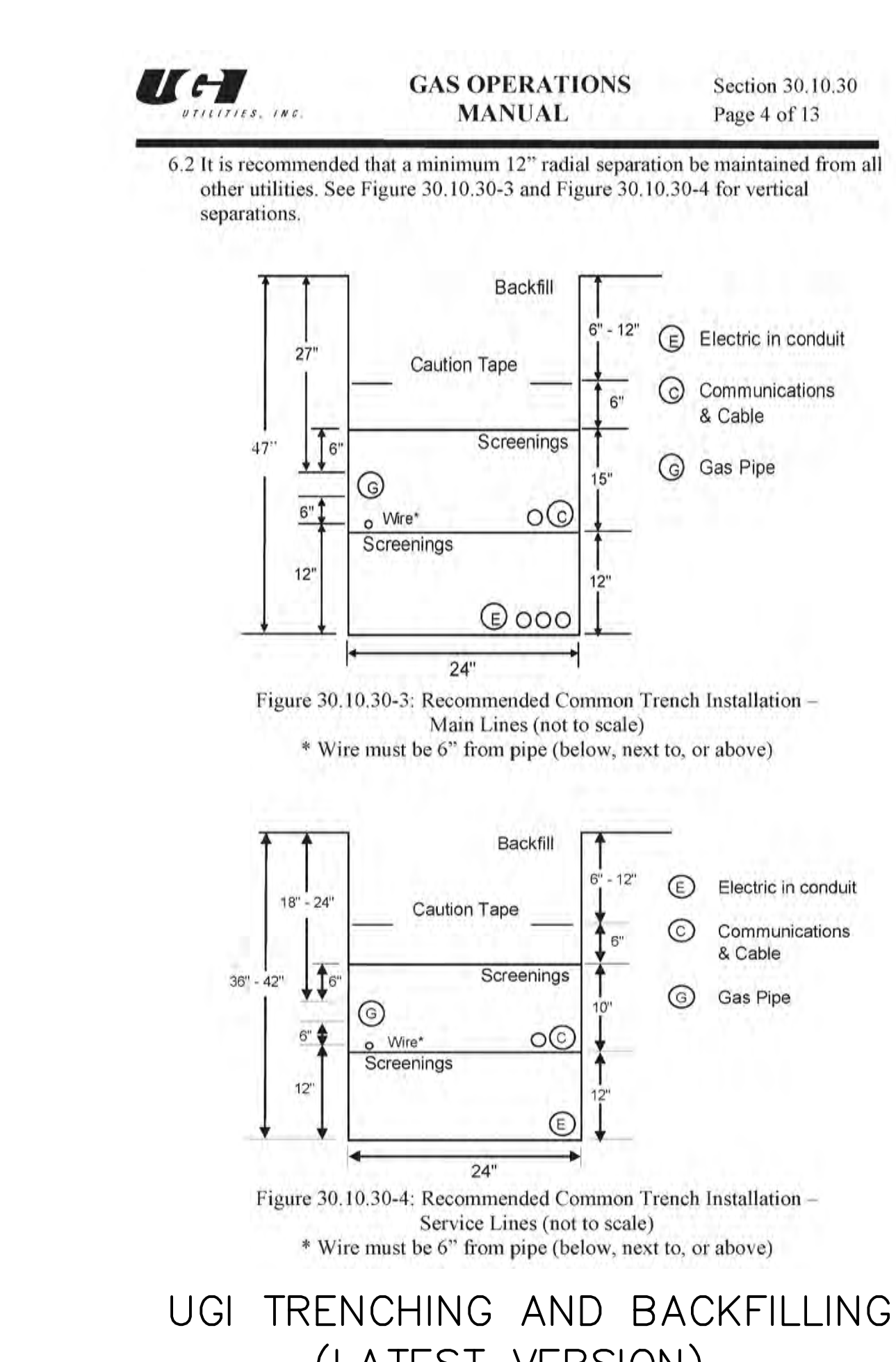
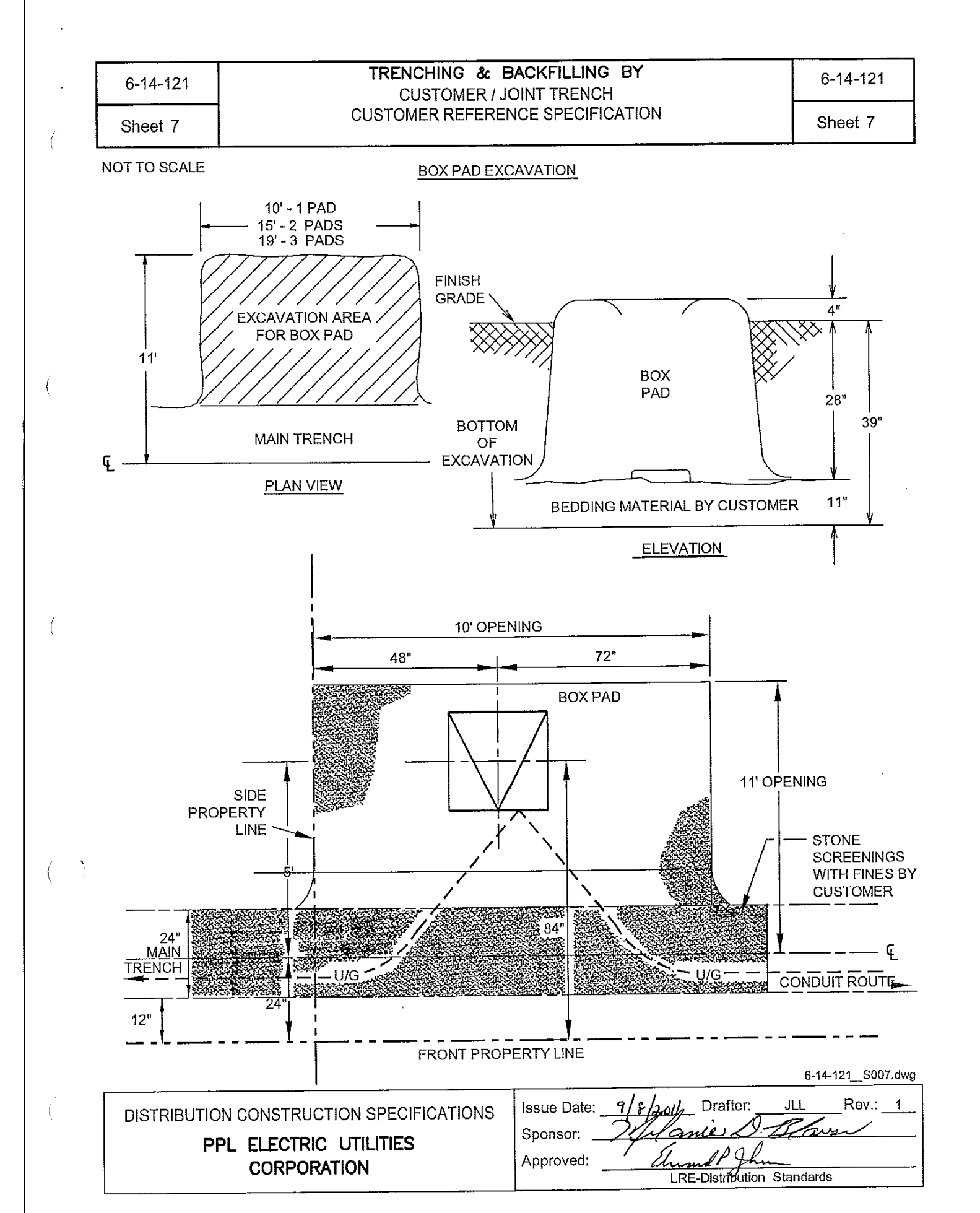
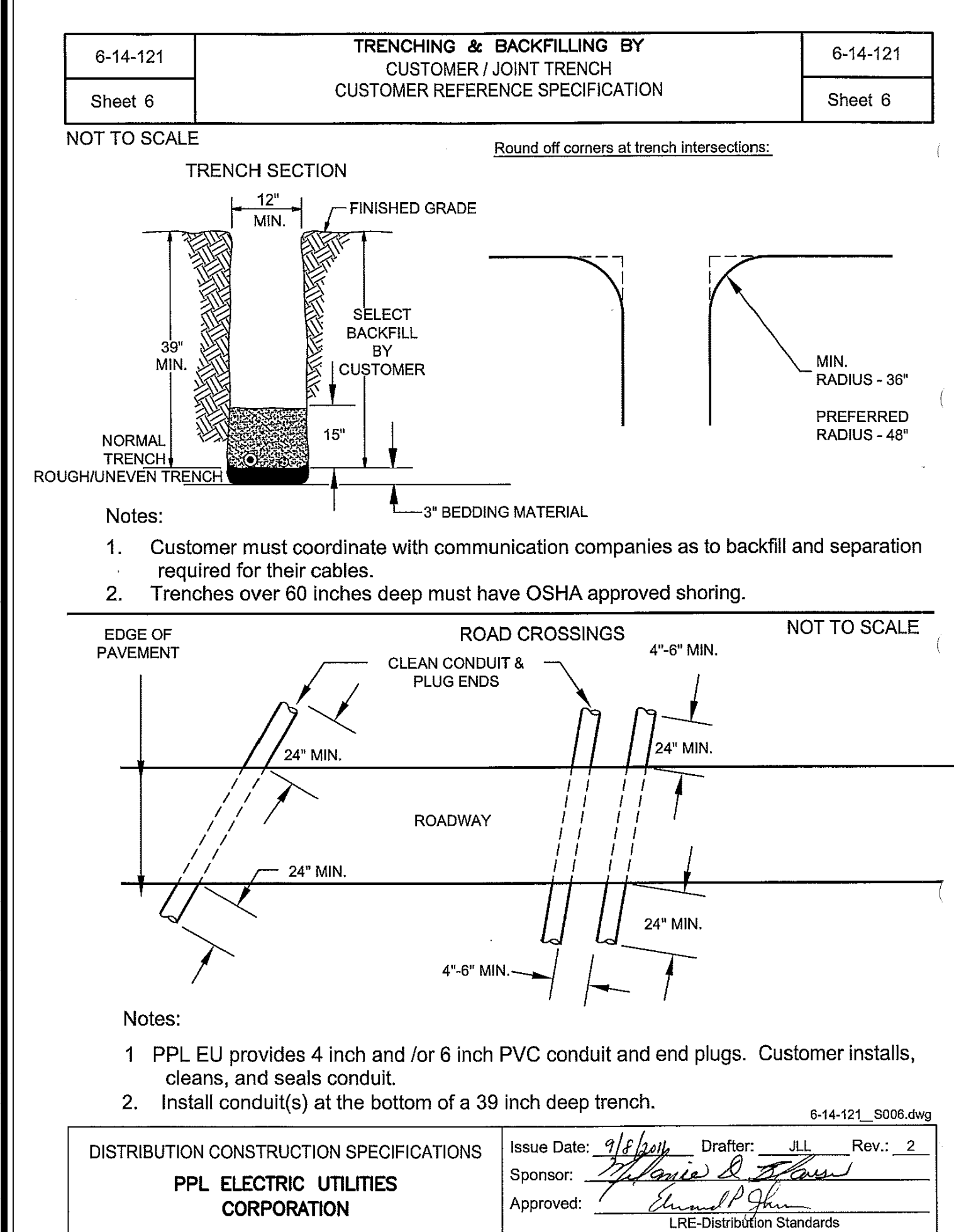
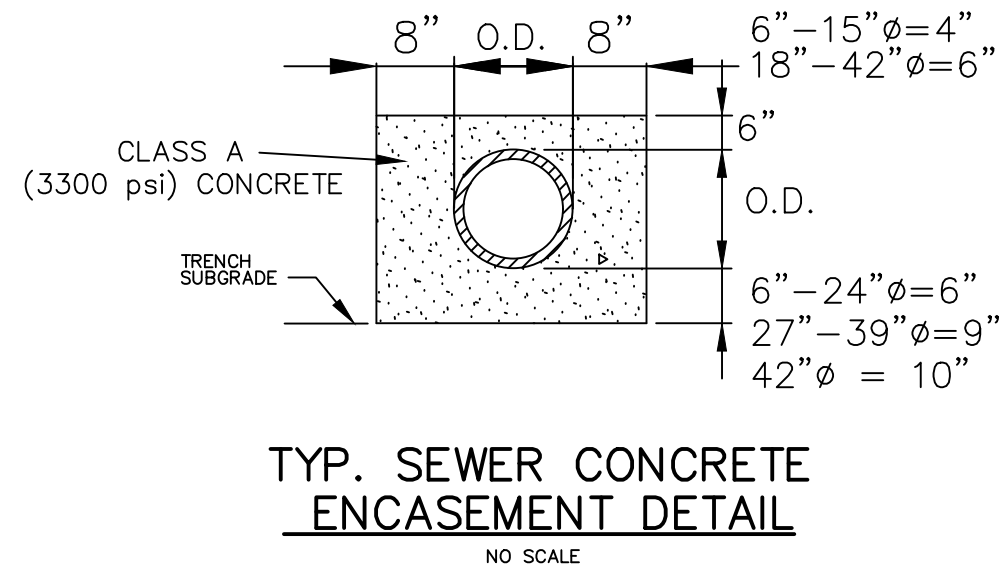
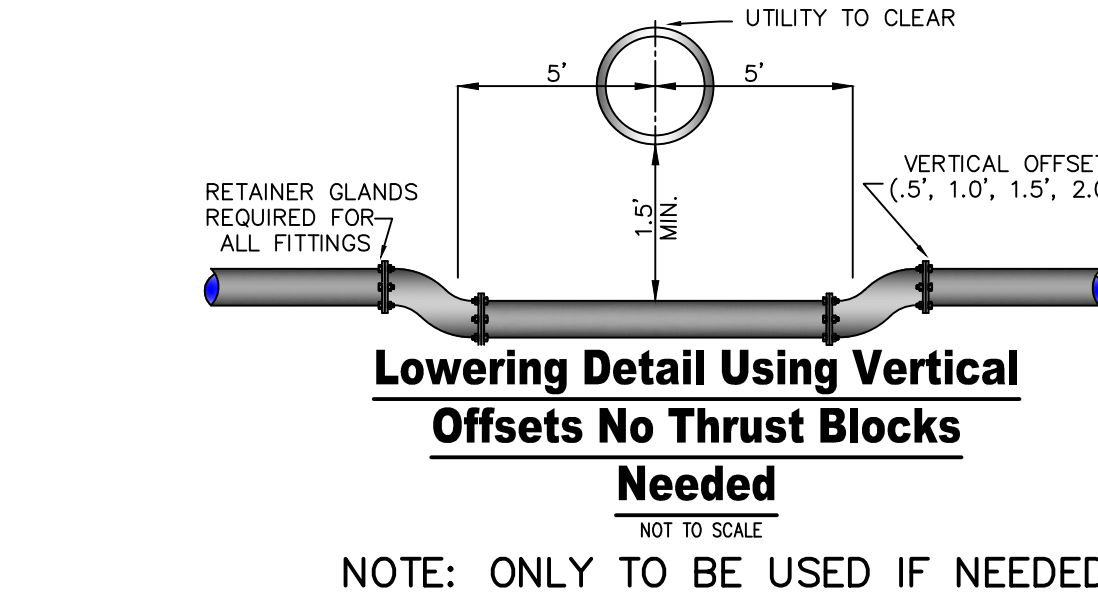
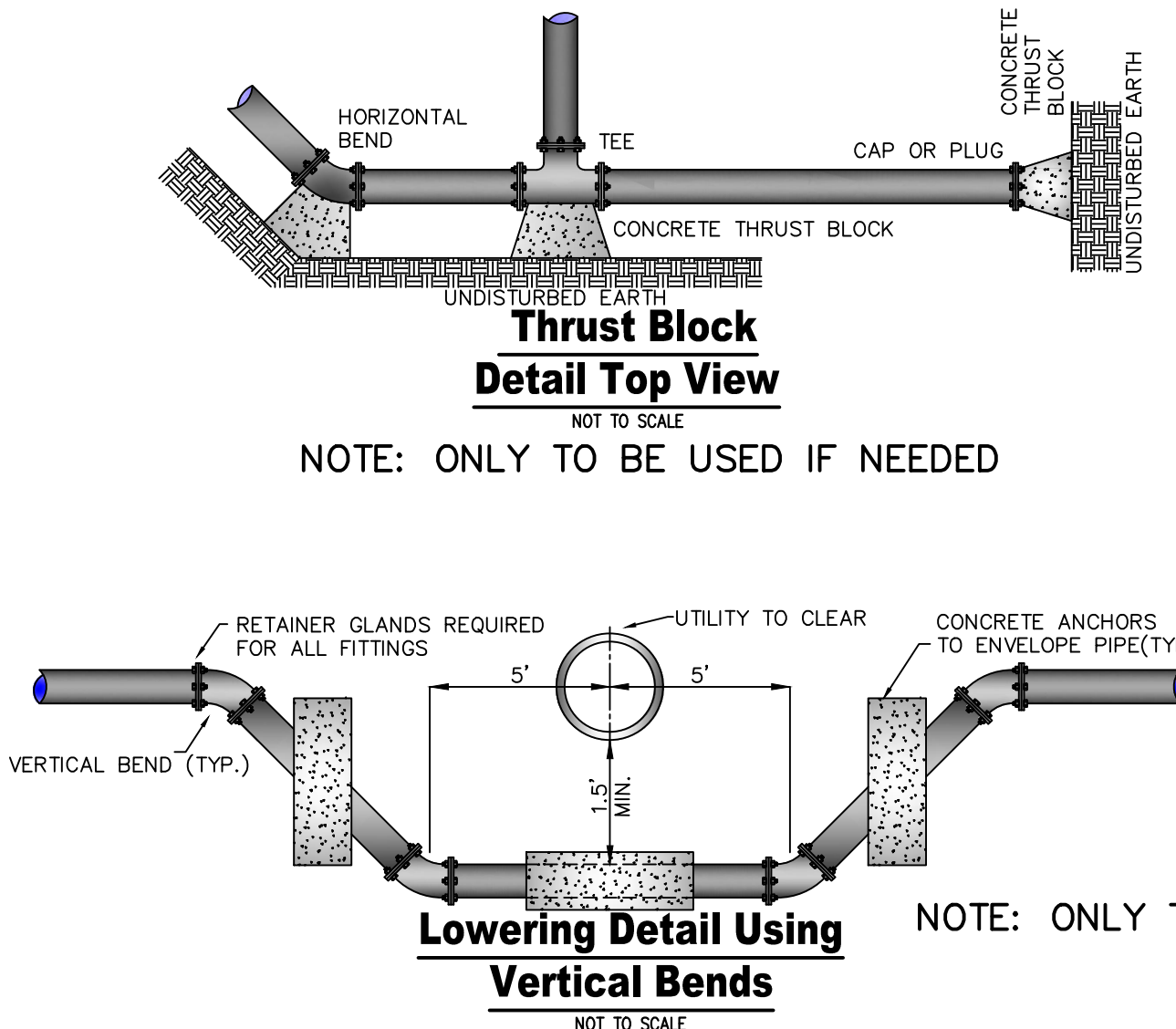


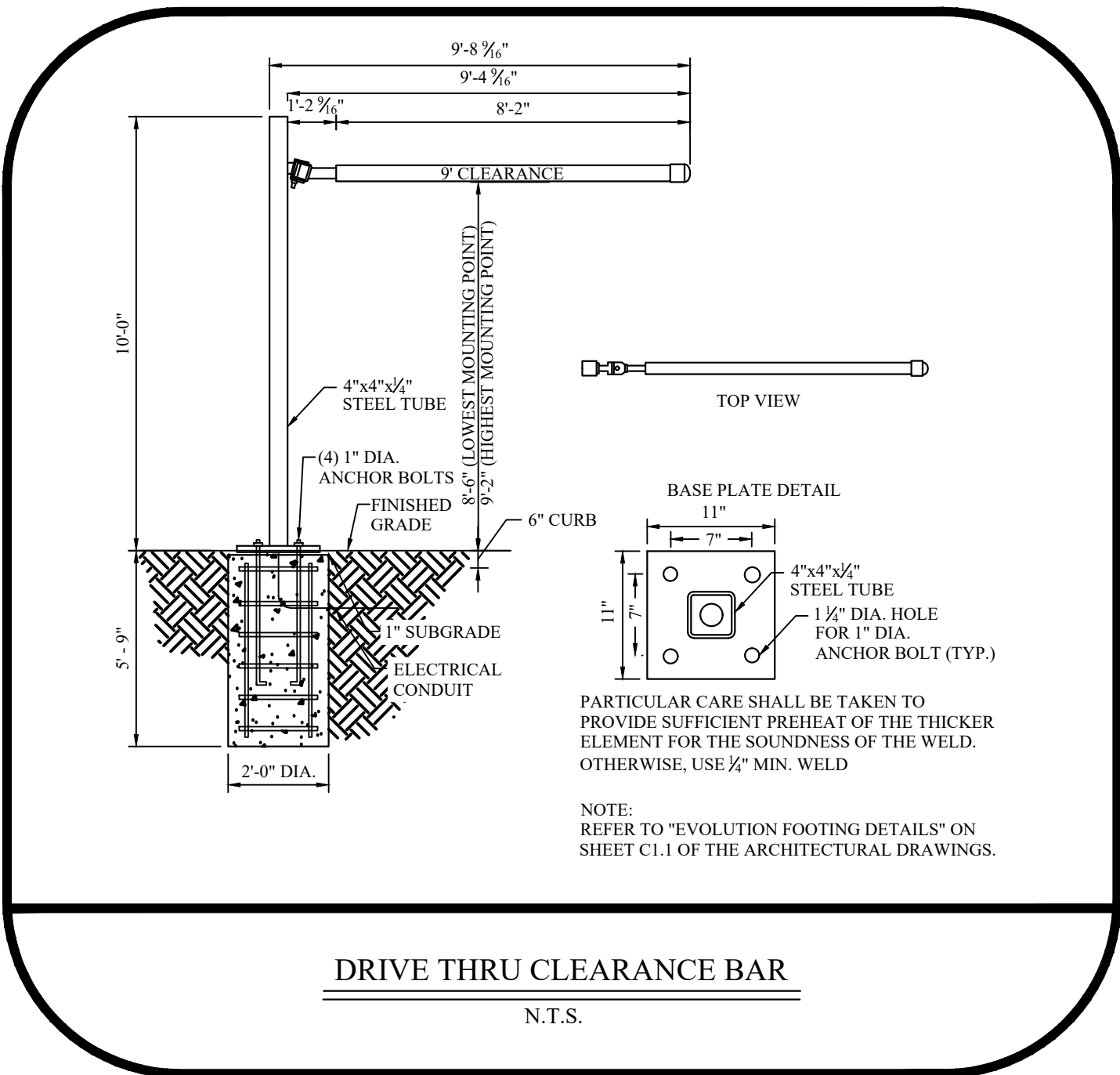
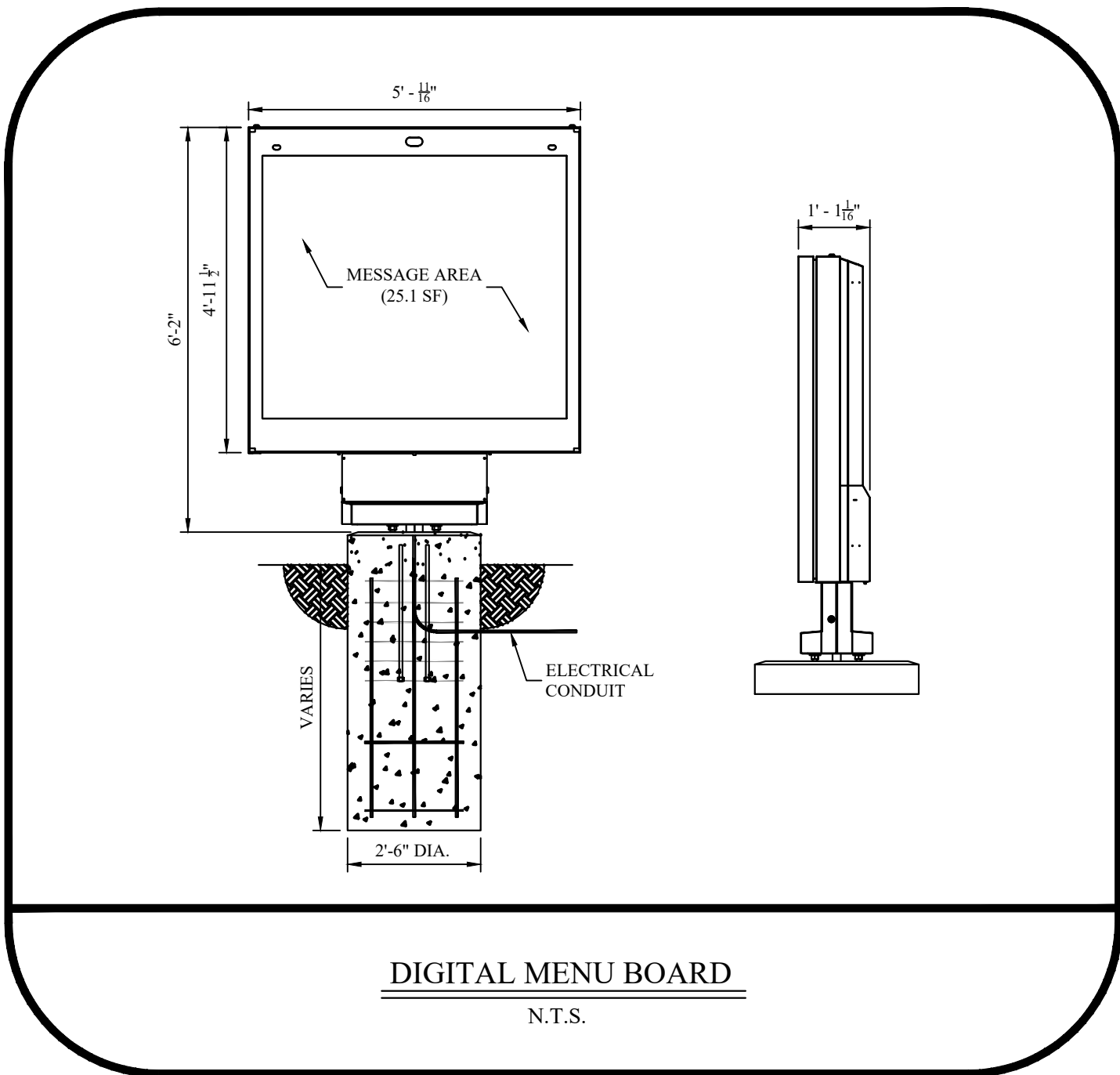
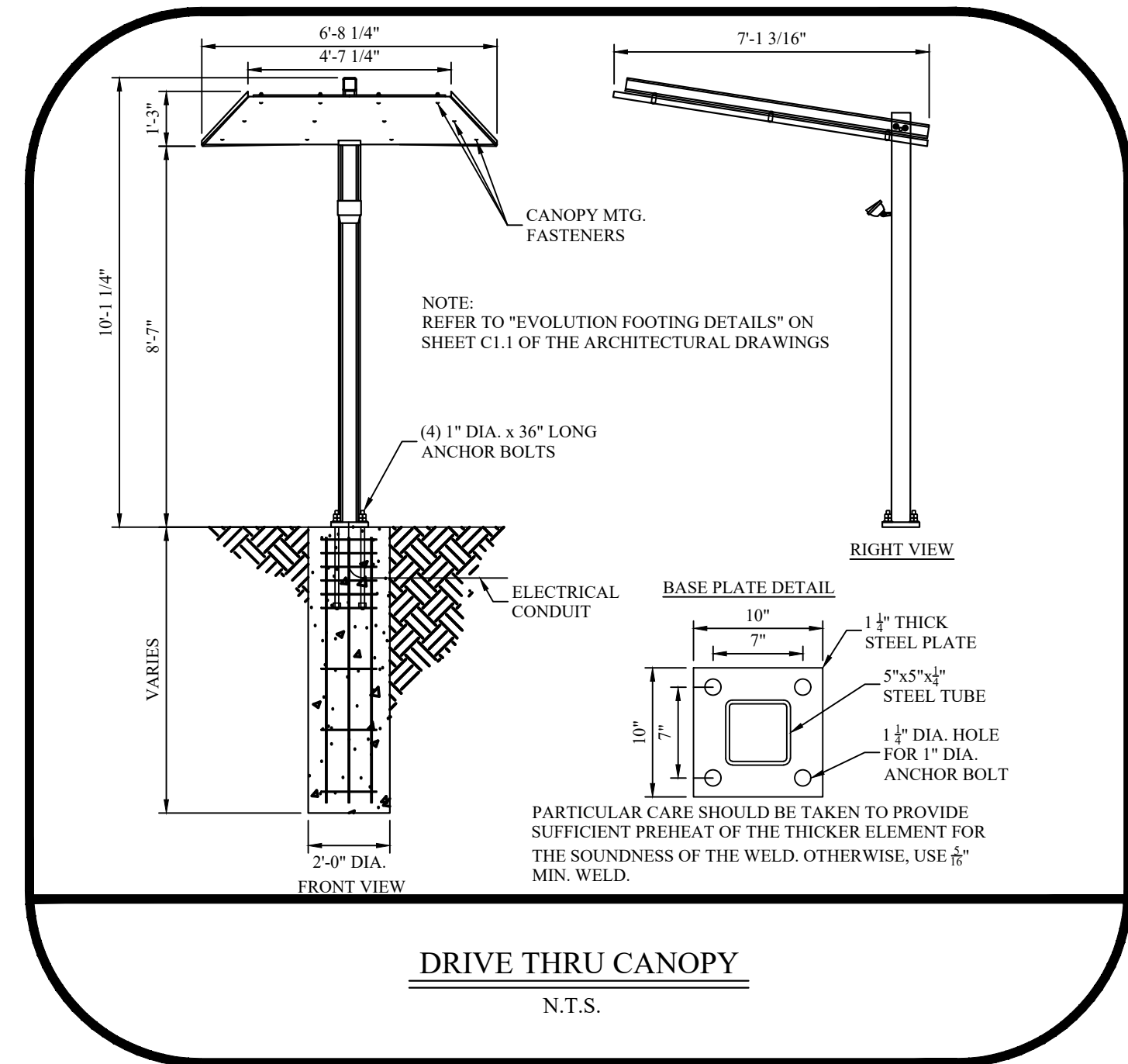
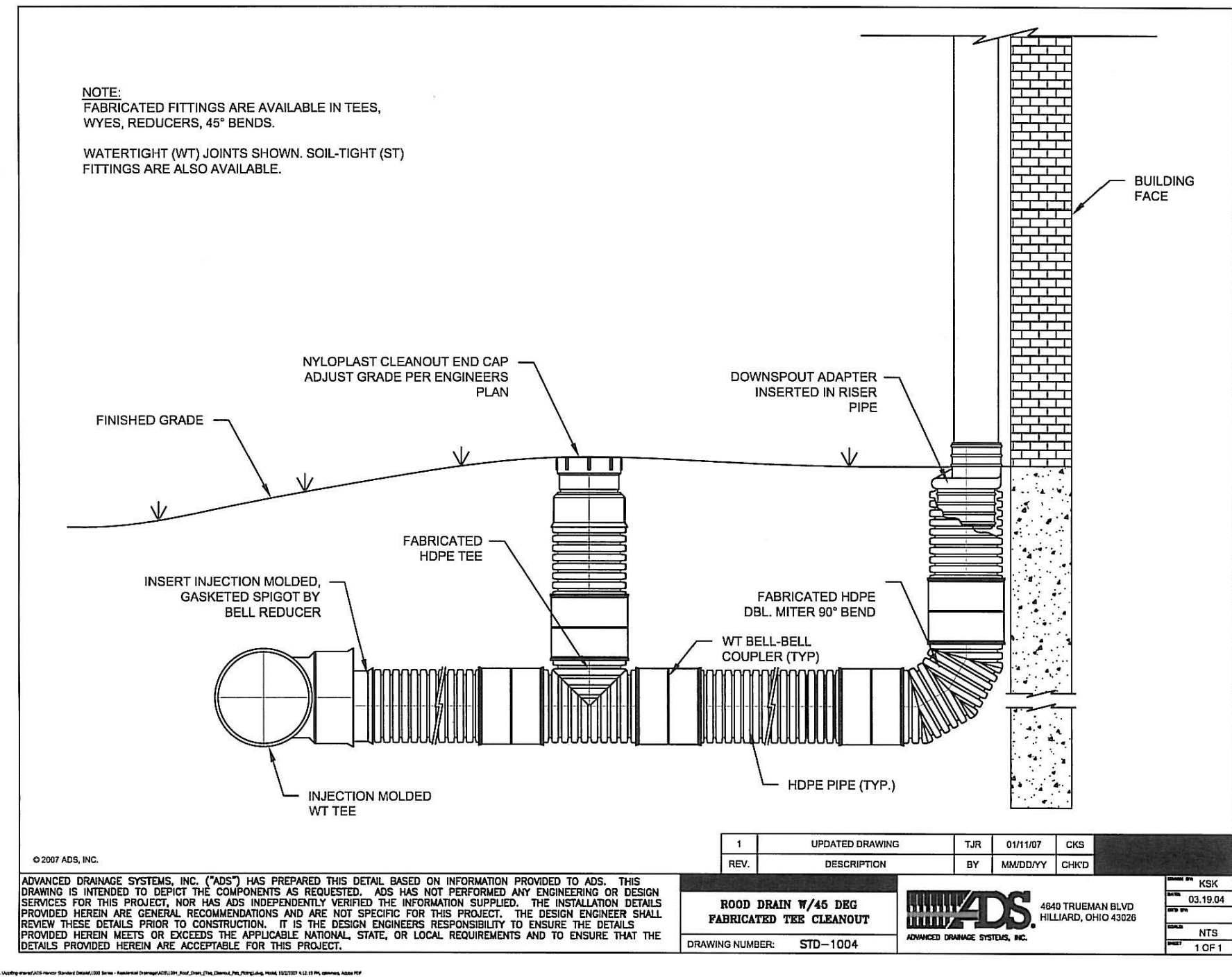
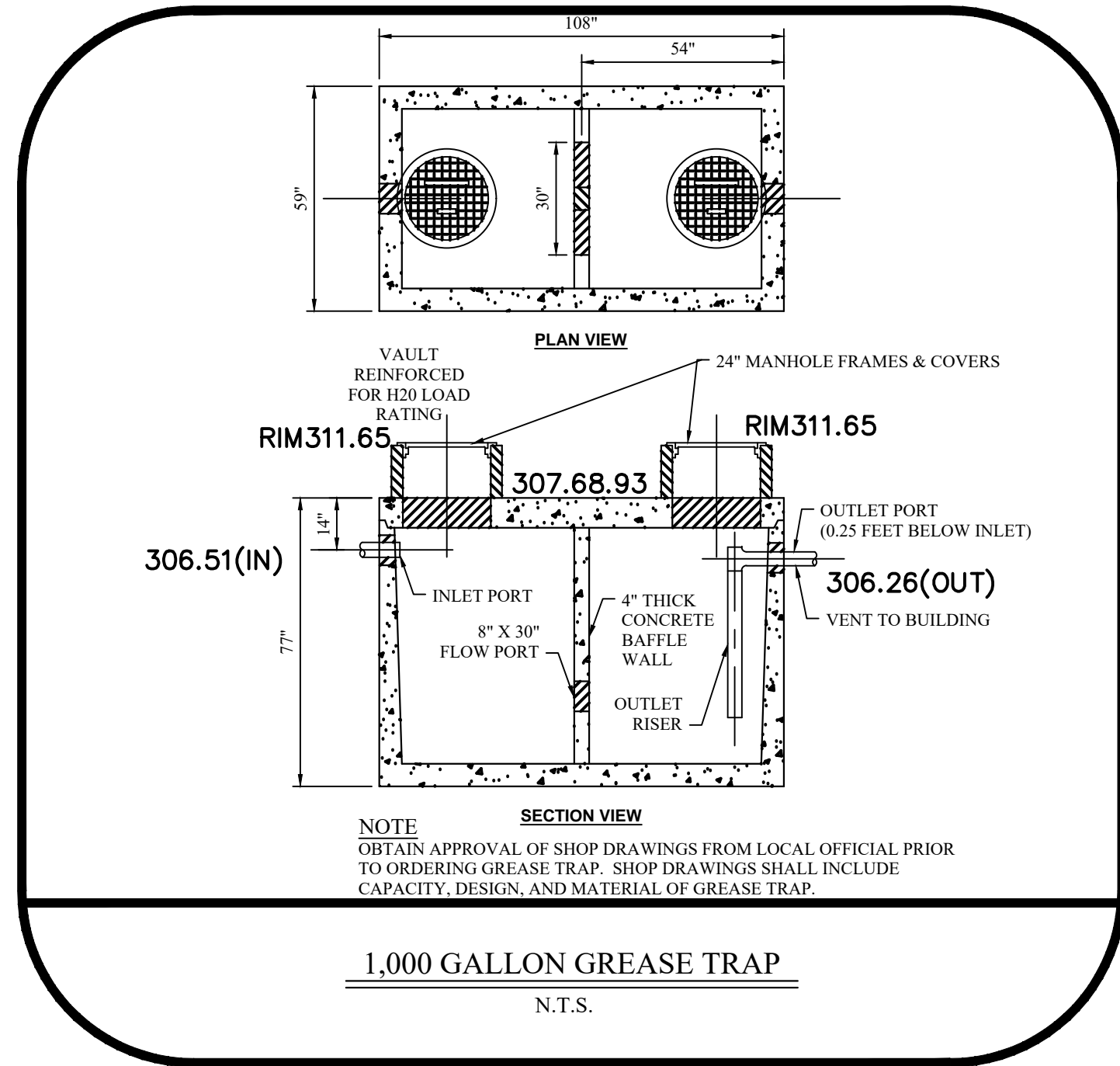
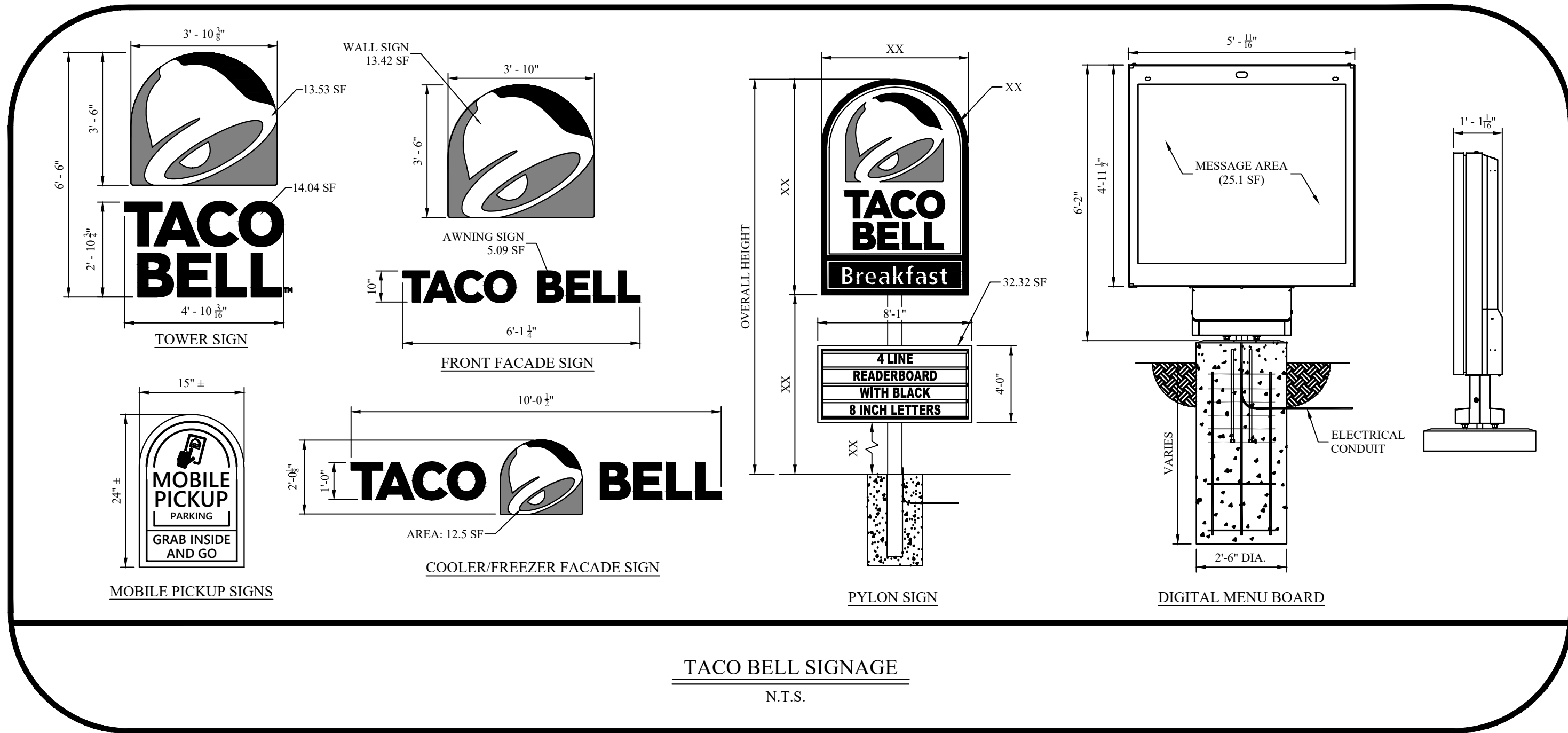
SECTION OF BACKBONE ROAD
ORIGINALLY CONSTRUCTED

 HanoverEngineering Bethlehem Office 252 Brodhead Road, Suite 100 Bethlehem, PA 18017-8944 P: 610.691.5644 F: 610.691.6968 HanoverEng.com	CITY OF BETHLEHEM NORTHAMPTON COUNTY PENNSYLVANIA	PLAN TITLE: CONSTRUCTION DETAIL PLAN PROJECT TITLE: LVP VII – LOT 23B 1620 EAST 4th STREET		NO. REVISIONS 1 MOD. SUBMISSION 2 CITY REVIEW COMMENTS	DATE 6/28/23 7/12/23	DRAWN BY: SEWELL SCALE: AS NOTED DATE: 03/07/23	CHECKED BY: DATE:
		PRELIMINARY/FINAL LAND DEVELOPMENT					
		SHEET NO. 16 OF 18					

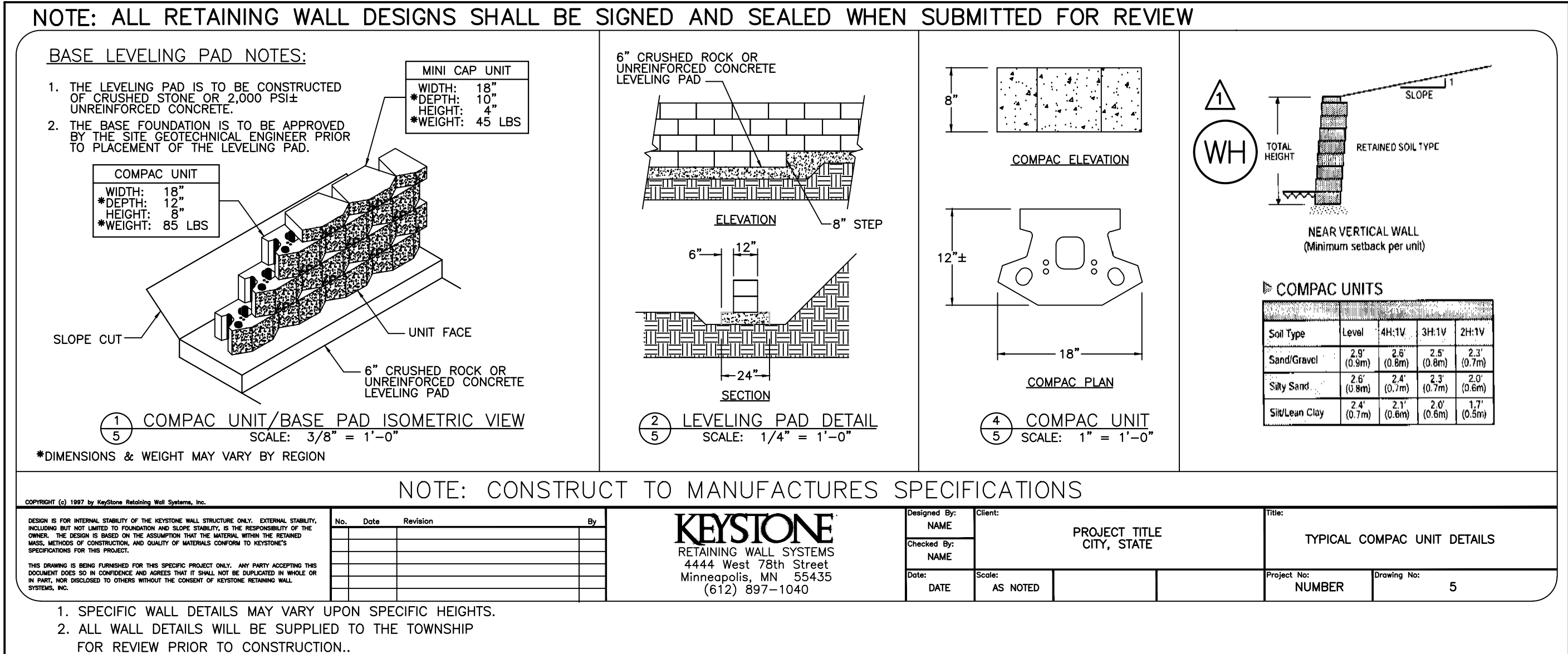
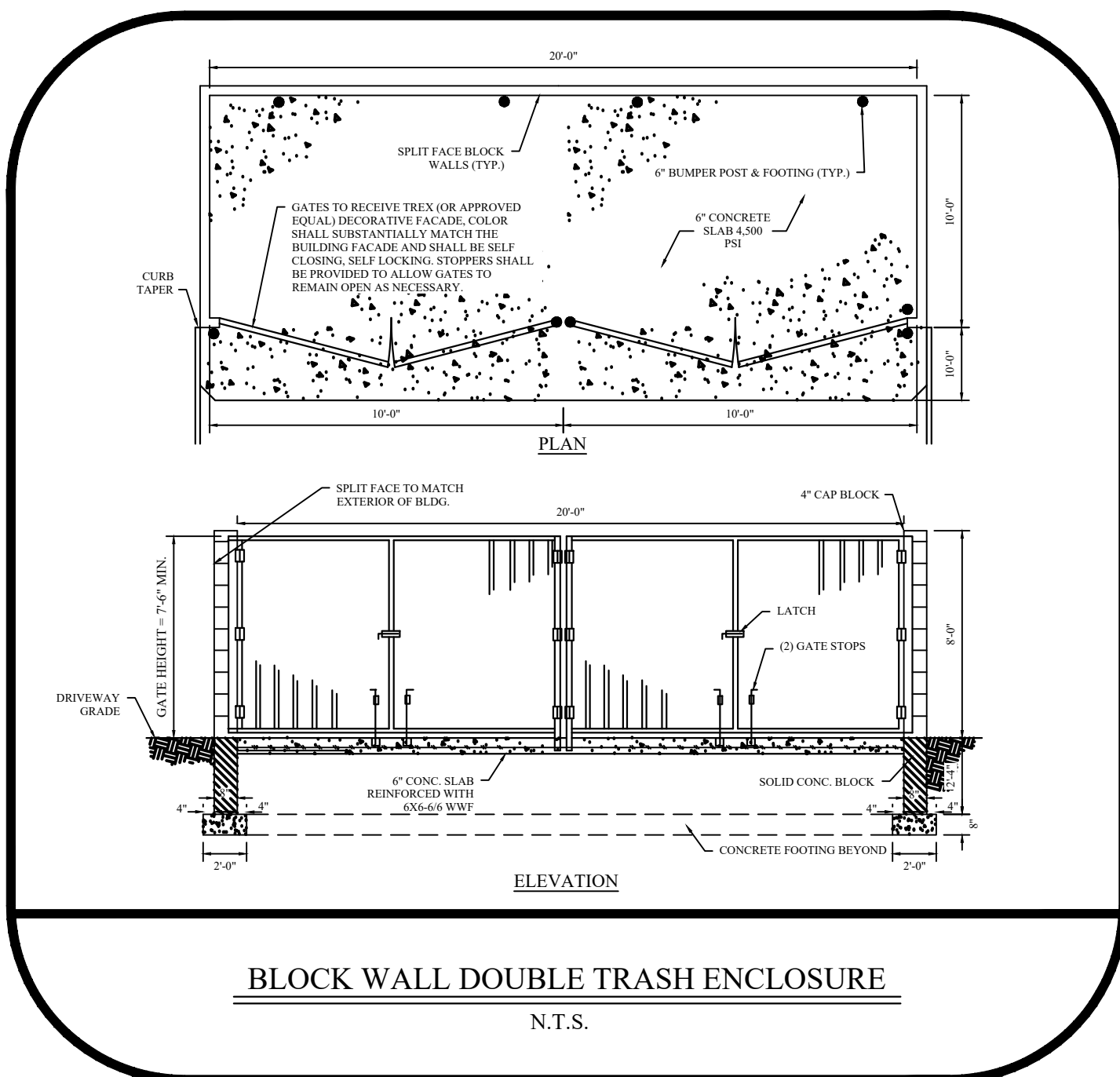
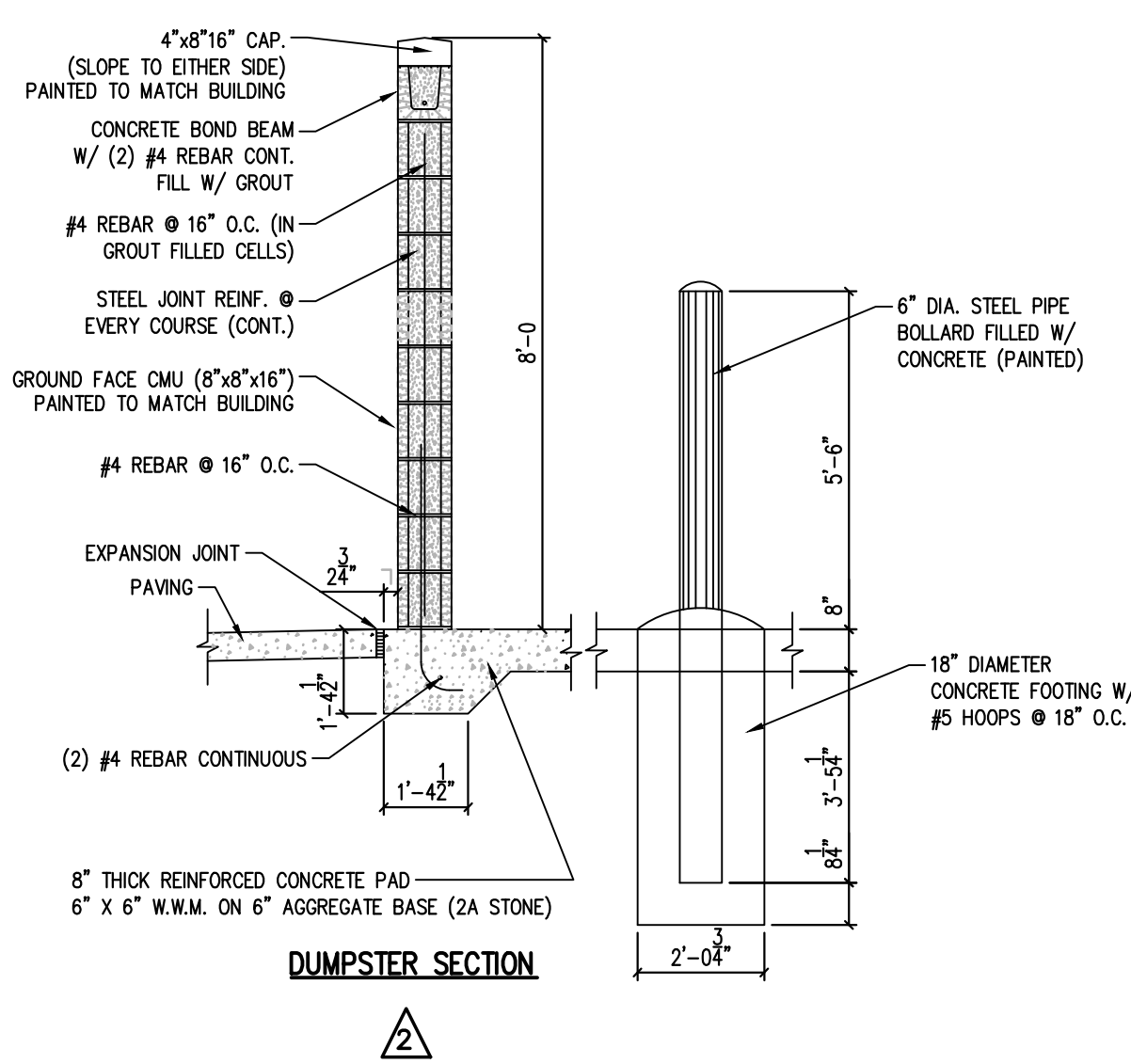
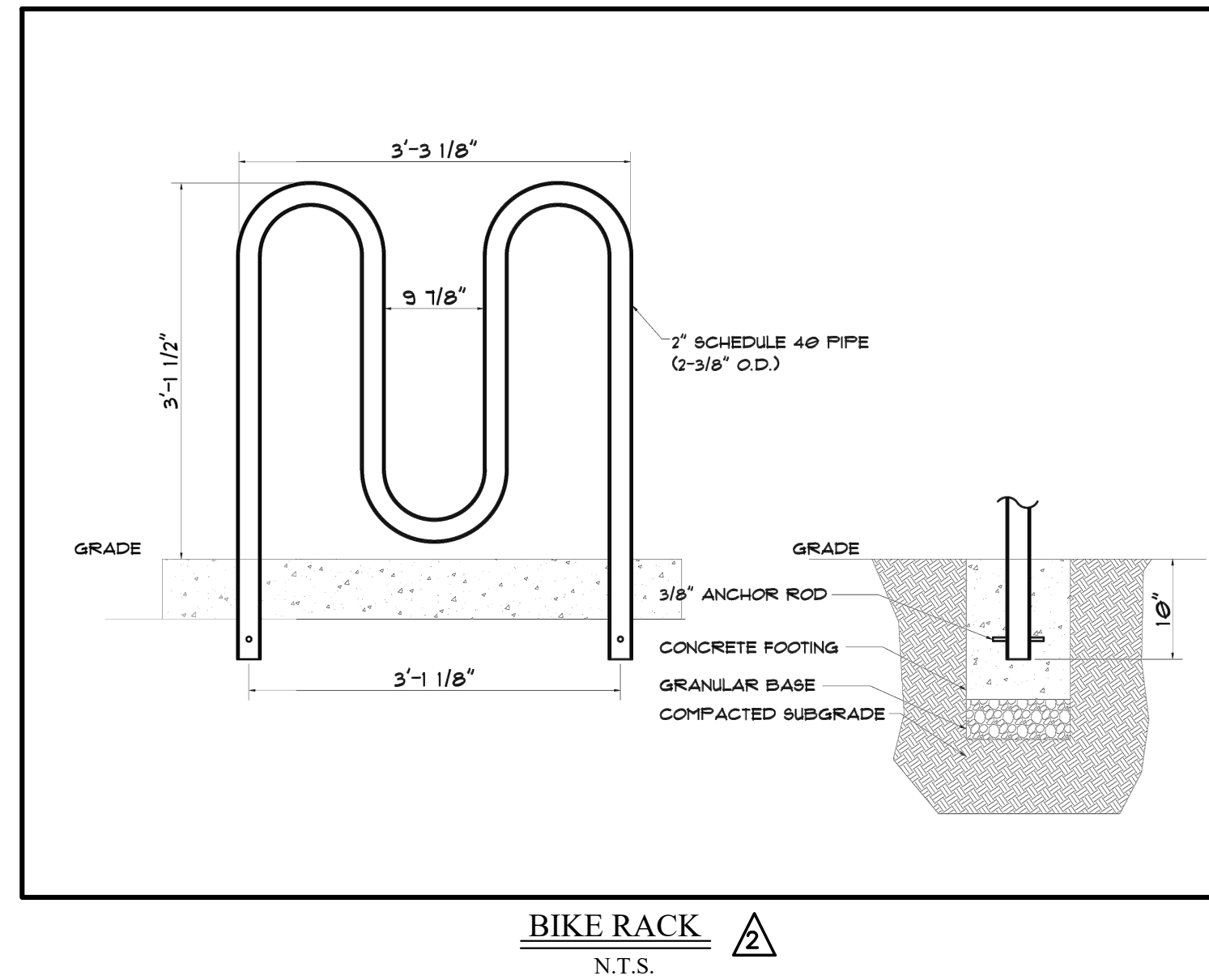


8" FERGUSON Mechanical Global Ductile Iron Tapped Cap





NOTE:
ALL MATERIAL AND FITTINGS SHALL BE APPROVED BY THE OWNER
IN WRITING PRIOR TO ANY INSTALLATION.



NOTE:
MAXIMUM HEIGHT IS 3.71 FT., WALL HEIGHT VARIES.
SEE SHEET 6 FOR DETAILED GRADES.

PRELIMINARY/FINAL LAND DEVELOPMENT

CONSTRUCTION DETAIL PLAN

LVP VII - LOT 23B
1620 EAST 4th STREET

CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

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