

PROJECT TITLE: MAJOR MODIFICATION TO NPDES PERMIT #PAG02000614051 PENN HILLS PHASES 3 & 4

SCHEDULE OF PCSM BMP CONSTRUCTION INSPECTIONS

DESCRIPTION OF WORK	LOCATION	NOTIFICATION LEAD TIME
CONSTRUCTION OF ON LOT INFILTRATION TRENCHES	LOTS 12-17, 34-54, AND 57-70	48 HOURS
CONSTRUCTION OF ON LOT AMENDED SOIL AREAS	THE DESIGNATED AREAS ON LOTS 12-17, 34-54, AND 57-70	48 HOURS
CONSTRUCTION OF INFILTRATION BED NO. 1	REAR OF LOTS 51-53	48 HOURS
CONSTRUCTION OF INFILTRATION BED NO. 2	LOT 23	48 HOURS
CONVERSION OF SEDIMENT BASIN TO A PERM DETENTION/WATER QUALITY BASIN (THIS SHALL TAKE PLACE AFTER THE COMPLETION OF THE PHASE 3 & 4 LOTS TRIBUTARY TO THE BASIN)	EXISTING DETENTION BASIN	48 HOURS

- NOTES:**
- THE PERMITTEE OR CO-PERMITTEE (CONTRACTOR) SHALL NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT (BCCD) PER THE TABLE ABOVE TO ALLOW FOR COORDINATION OF THE CONSTRUCTION OBSERVATION AND INSPECTION OF THE SPECIFIED WORK REQUIRED BY THE NPDES PERMIT CONDITIONS.
 - ALTHOUGH THE DESCRIPTION OF WORK IS GENERAL IN NATURE, THE CONSTRUCTION OF EACH PCSM BMP REQUIRES OBSERVATION AND INSPECTION OF MULTIPLE STAGES OF CONSTRUCTION. THE CONTRACTOR SHALL KEEP BCED APPRAISED OF PROGRESS IN A TIMELY MANNER TO ADEQUATELY ALLOW FOR THE OBSERVATION AND INSPECTION OF ALL CRITICAL STAGES OF CONSTRUCTION (SEE NOTE 4).
 - IN THE EVENT THE SPECIFIED WORK IS NOT BEING CONSTRUCTED PER THE APPROVED PLAN OR AS INTENDED BY THE DESIGN, ALL CONSTRUCTION OF THE SPECIFIED WORK SHALL CEASE, AND MAY NOT RESUME UNTIL AUTHORIZED BY BCED.
 - IT IS RECOMMENDED THAT THE PERMITTEE AND/OR CO-PERMITTEE (CONTRACTOR) REVIEW THE PCSM BMP CONSTRUCTION INSPECTION CHECKLISTS PRIOR TO PCSM BMP CONSTRUCTION.
 - THE DATE OF INSPECTION IS TO BE ENTERED BY THE INSPECTOR ON THE MOST CURRENT, APPROVED (STAMPED BY BCED) EROSION AND SEDIMENT CONTROL PLAN, WHICH MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
 - CONVERSION OF SEDIMENT BASINS SHALL NOT TAKE PLACE UNTIL APPROVAL HAS BEEN OBTAINED FROM BCED. THE CONTRACTOR IS RESPONSIBLE TO TAKE COLOR PHOTOGRAPHS THROUGH CONSTRUCTION OF SEDIMENT/DETENTION BASINS, SEDIMENT TRAPS AND PCSM BMP FOR THE PURPOSE OF VERIFYING THE WORK IS COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS. COPIES OF THE PHOTOGRAPHS SHALL BE SUBMITTED TO BCED.

- PCSM PLAN NOTES:**
- ALL PROPOSED LOTS ARE TO RECEIVE A MINIMUM OF 2,000 SQ. FT. OF SOIL AMENDMENT. THE SOIL AMENDMENT PLACEMENT SHALL BEGIN WITHIN THE LIMIT OF CONSTRUCTION DISTURBED AREA OF EACH INDIVIDUAL HOUSE AND EXTEND AWAY FROM THE HOUSE UNTIL THE MINIMUM OF 2,000 SQ. FT. OF AMENDMENT IS ACHIEVED.
 - SEE DRAWING NOS. D-PCSM-3 AND D-PCSM-4 FOR PCSM CONSTRUCTION DETAILS AND NOTES.
 - THIS PLAN IS FOR THE IMPLEMENTATION OF PERMANENT PCSM BMPs ONLY. THIS PLAN DOES NOT DEPEND UPON ANY OTHER PERMITS AND SHOULD NOT BE USED FOR NON-PCSM PLAN IMPROVEMENTS.
 - THE DESIGN OF THE PERMANENT STORMWATER INFILTRATION AND/OR STORMWATER QUALITY BMPs IS BASED ON REPRESENTATIVE SOIL TESTING PROCEDURES ACCEPTED BY PA DEP. DUE TO POSSIBLE VARIANCES IN THE SOIL PROPERTIES ENCOUNTERED WITHIN THE AREA OF THE ACTUAL BMP FACILITY, AND THE POTENTIAL ALTERATION OF PERCOLATION PROPERTIES OF THE SOIL DURING CONSTRUCTION, BOGIA ENGINEERING, INC. DOES NOT GUARANTEE OR WARRANT THAT THE BMPs WILL FUNCTION IN ACCORDANCE WITH THE PARAMETERS USED TO DESIGN THE BMPs.
 - THE CONTRACTOR SHOULD REVIEW THE CONSTRUCTION DETAILS AND NOTES FOR EACH PROPOSED POST-CONSTRUCTION STORMWATER MANAGEMENT BMP NOTED ON THIS PLAN TO ENSURE PROPER CONSTRUCTION AND NOTIFICATION FOR INSPECTIONS AT CRITICAL STAGES OF CONSTRUCTION. AS-BUILT CERTIFICATION OF THE BMPs ARE REQUIRED BY THE NPDES PERMIT CONDITIONS TO BE SUBMITTED TO THE BERKS COUNTY CONSERVATION DISTRICT AND THEREFORE MUST BE PROPERLY INSPECTED. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT IN ACCORDANCE WITH THE DEADLINES NOTED IN THE "SCHEDULE OF PCSM BMP CONSTRUCTION INSPECTIONS" NOTED ON THE PCSM PLANS.
 - PROPOSED LOTS, ROAD, EXISTING AND PROPOSED GRADING, AND STORMWATER FACILITIES SHOWN ON THIS PLAN ARE DERIVED FROM THE PREVIOUSLY APPROVED PENN HILLS SUBDIVISION, RECORDED IN BERKS COUNTY RECORDER OF DEEDS OFFICE PLAN BOOK VOLUME 300, PAGE 497, AND FROM PREVIOUSLY APPROVED NPDES PERMIT PLANS FOR PHASES 1 & 2, BY STACKHOUSE BENSINGER, INC. RECORDED AS INSTRUMENT NO. 201509249, BERKS COUNTY RECORDER OF DEEDS OFFICE.

LOCATION #	EX. GROUND ELEV.	TEST "A" ELEVATION	TEST "A" INFILT. RATE	TEST "B" ELEVATION	TEST "B" INFILT. RATE
1	395.50	393.00	0.4000 IN/MIN	389.50	0.4000 IN/MIN
2	371.00	373.00	0.4000 IN/MIN	371.00	0.2438 IN/MIN
3	402.00	398.00	0.4000 IN/MIN	398.00	0.4000 IN/MIN
4	375.00	371.00	0.1625 IN/MIN	369.00	0.4000 IN/MIN
5	377.00	373.00	0.1750 IN/MIN	371.00	0.4000 IN/MIN
6	381.00	377.00	0.4000 IN/MIN	375.00	0.1500 IN/MIN
7	397.00	391.00	0.4000 IN/MIN	389.00	0.1563 IN/MIN
8	402.00	398.00	0.4000 IN/MIN	398.00	0.4000 IN/MIN
9	406.00	402.00	0.4000 IN/MIN	402.00	0.4000 IN/MIN
10	389.00	385.00	0.2333 IN/MIN	381.00	0.4000 IN/MIN
11	387.00	383.00	0.2750 IN/MIN	380.00	0.4000 IN/MIN
12	387.00	383.00	0.4000 IN/MIN	381.00	0.4000 IN/MIN
13	387.40	383.40	0.4000 IN/MIN	381.40	0.4000 IN/MIN
14	380.20	376.20	0.4000 IN/MIN	374.20	0.4000 IN/MIN
15	385.00	381.00	0.4000 IN/MIN	379.00	0.4000 IN/MIN
16	385.00	381.00	0.4000 IN/MIN	379.00	0.4000 IN/MIN
17	393.75	389.75	0.4000 IN/MIN	387.75	0.2625 IN/MIN

NPDES PERMIT OWNERSHIP, OPERATIONS & MAINTENANCE PROCEDURES

- INFILTRATION BED NO. 1 AND NO. 2 AND SUMPED INLETS MAINTENANCE/INSPECTION GUIDELINES**
THE GENERAL OBJECTIVES OF MAINTENANCE ARE TO PREVENT CLOGGING OF THE INFILTRATION BED:
- STORM STRUCTURE SUMPS AND GRATES SHALL BE INSPECTED ON A QUARTERLY BASIS AND SHALL BE CLEANED BETWEEN MARCH 1ST AND APRIL 1ST AND BETWEEN SEPTEMBER 1ST AND OCTOBER 1ST OF EACH YEAR, AND ALSO AT SUCH TIMES WHEN SEDIMENT REACHES A LEVEL OF SIX (6) INCHES BELOW THE LOWEST PIPE OUTFALL ELEVATION. ALL REMOVED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH THE GENERAL E&S NOTES.
 - THE PERMANENT COMPOST FILTER SOCK SHALL BE INSPECTED AT THE SAME TIME AS THE STORM STRUCTURES. ANY SEDIMENT AND/OR DEBRIS ACCUMULATION SHALL BE REMOVED FROM THE COMPOST SOCK AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE GENERAL E&S NOTES. IF THE COMPOST SOCK IS DAMAGED, IT SHALL BE REPAIRED OR REPLACED AND RESEED IMMEDIATELY.
 - AFTER ANY RAINFALL EVENT OF A 2-YR (3.18 INCHES) OR GREATER MAGNITUDE, THE INFILTRATION BED SHALL BE INSPECTED TO ENSURE THAT THE FACILITY IS DEWATERING WITHIN 72 HOURS OF THE END OF RAINFALL EVENT. IF THE FACILITY IS NOT DEWATERING IN LESS THAN 72 HOURS, THE CONSERVATION DISTRICT AND THE DESIGNER SHALL BE CONTACTED TO DETERMINE THE APPROPRIATE REMEDIATION MEASURES. ANY PORTION OF THE INFILTRATION BED OR ITS COMPONENTS THAT IS FOUND TO BE DAMAGED IS TO BE REPAIRED TO BE CONSISTENT WITH THE ORIGINAL DESIGN DETAILS FOUND ON THESE PLANS.
 - UPON STARTING ANY BULK EARTHWORK IN PHASES 3 AND 4 IN AREAS THAT ARE TRIBUTARY TO THE INFILTRATION BED, INLET FILTER BAGS SHALL BE INSTALLED AS INDICATED ON THE PLANS UNTIL THE TRIBUTARY AREAS ACHIEVE PERMANENT STABILIZATION OR UNTIL ADEQUATE SEDIMENT CONTROL BMPs ARE IMPLEMENTED ON THE INDIVIDUAL LOTS.

ON-LOT INFILTRATION TRENCH MAINTENANCE/INSPECTION GUIDELINES

- THE GENERAL OBJECTIVES OF MAINTENANCE ARE TO PREVENT CLOGGING OF THE INFILTRATION TRENCH:
- AT LEAST ONE EVERY 6 MONTHS, INSPECT THE INFILTRATION TRENCH AND REMOVE ANY SEDIMENT AND DEBRIS ACCUMULATION FROM THE IN-LINE DRAIN. THE ROOF GUTTERS DRAINING TO THE UNDERGROUND INFILTRATION TRENCH SHALL ALSO BE INSPECTED AND CLEANED OF ANY DEBRIS. ALL REMOVED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH THE GENERAL E&S NOTES.
 - AFTER ANY RAINFALL EVENT OF A 2-YR (3.18 INCHES) OR GREATER MAGNITUDE, THE INFILTRATION TRENCH SHALL BE INSPECTED TO ENSURE THAT THE FACILITY IS DEWATERING WITHIN 72 HOURS OF THE END OF RAINFALL EVENT. IF THE FACILITY IS NOT DEWATERING IN LESS THAN 72 HOURS, THE CONSERVATION DISTRICT AND THE DESIGNER SHALL BE CONTACTED TO DETERMINE THE APPROPRIATE REMEDIATION MEASURES. ANY PORTION OF THE INFILTRATION BED OR ITS COMPONENTS THAT IS FOUND TO BE DAMAGED IS TO BE REPAIRED TO BE CONSISTENT WITH THE ORIGINAL DESIGN DETAILS FOUND ON THESE PLANS.

AMENDED SOIL AREAS MAINTENANCE GUIDELINES

- THE GENERAL OBJECTIVES OF MAINTENANCE ARE TO ENSURE PROPER FUNCTION OF THE AMENDED SOILS:
- COMPACTION OF THE AMENDED SOILS SHALL BE AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE. IF COMPACTION OCCURS, THE AMENDED SOILS SHALL BE AERATED.

RIGHT OF ACCESS

- ALL POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) BEST MANAGEMENT PRACTICES (BMPs) MAY BE INSPECTED AT ANY TIMES BY THE MUNICIPALITY OR ITS REPRESENTATIVES AFTER NOTIFYING THE PROPERTY OWNER AT LEAST 24 HOURS PRIOR TO THE INSPECTION.

RESPONSIBLE PERSONS

- PROPER MAINTENANCE OF THE ON-LOT INFILTRATION TRENCHES AND AMENDED SOIL AREAS ARE THE RESPONSIBILITY OF THE INDIVIDUAL LOT OWNERS AND THEIR SUCCESSORS AND ASSIGNS.

PROPER MAINTENANCE OF INFILTRATION BED NO.1 AND NO.2 IS THE RESPONSIBILITY OF THE OWNER, ITS SUCCESSORS AND ASSIGNS, OF THE LOT ON WHICH THE INFILTRATION BED AND ITS COMPONENTS IS SITUATED. HOWEVER, UNTIL SAID LOTS ARE SOLD, THE CONTRACTOR AND/OR THE PERMITTEE NOTED IN THE NPDES PERMIT HAVE THIS RESPONSIBILITY.

INFILTRATION IN KARST GEOLOGY:

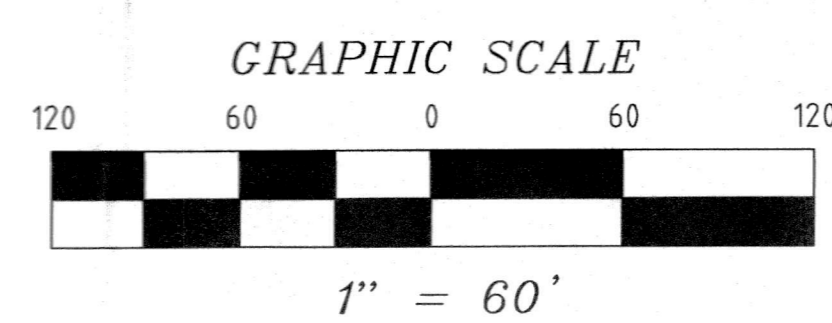
- ANY BEST MANAGEMENT PRACTICE (BMP) THAT INFILTRATES, INCLUDING DETENTION BASINS, INFILTRATION BASINS, INFILTRATION BEDS, INFILTRATION TRENCHES, DRY WELLS, RAIN GARDENS, ETC., IN LIMESTONE AREAS IS THE RESPONSIBILITY OF THE PROPERTY OWNER/DEVELOPER AND SIGNING OF THIS PLAN ACKNOWLEDGES SUCH.

NAME/TITLE _____



SOILS TYPES FROM THE SOIL SURVEY OF BERKS COUNTY, PENNSYLVANIA

B&B - BERKS-WEIKERT COMPLEX, 3 TO 8 PERCENT SLOPES
B&C - BERKS-WEIKERT COMPLEX, 8 TO 15 PERCENT SLOPES
Ca - CALVIN-KLINESVILLE CHANNERY SILT LOAMS, 8 TO 15 PERCENT SLOPES
CaD - CALVIN-KLINESVILLE CHANNERY SILT LOAMS, 15 TO 25 PERCENT SLOPES
CpB - COMLY SILT LOAM, 3 TO 8 PERCENT SLOPES
WeD - WEIKERT-BERKS COMPLEX, 15 TO 25 PERCENT SLOPES



BOGIA ENGINEERING INC.
 1340 PENN AVENUE WYOMISSING, PA 19380
 PHONE: 610-678-3071 FAX: 610-678-3517
 WWW.BOGIAENG.COM

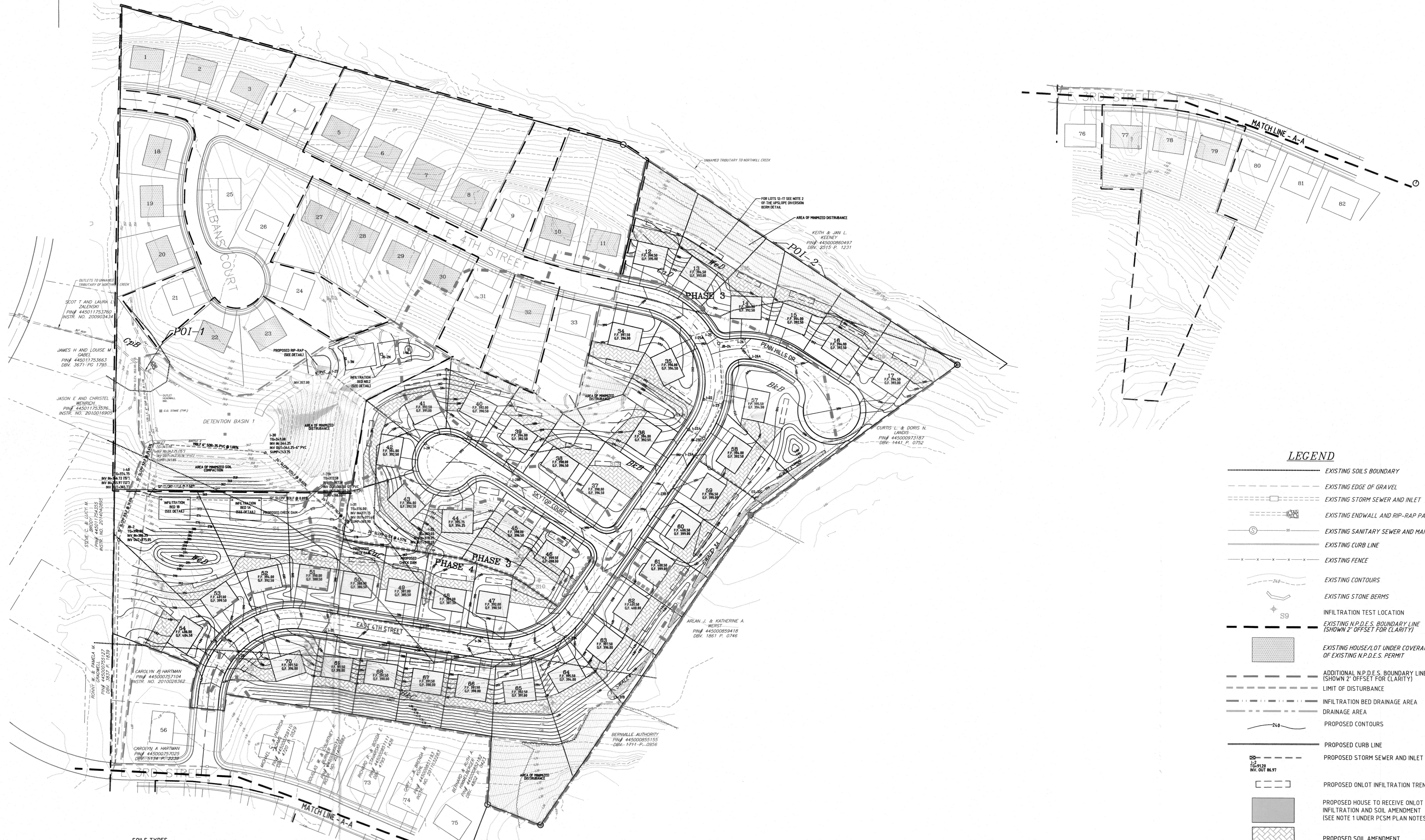
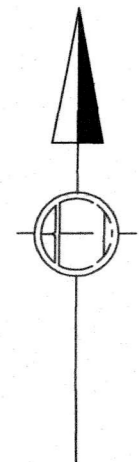
MAJOR MODIFICATION TO NPDES PERMIT #PAG02000614051
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

FALLA DEVELOPMENT, LP
 105 LAKEVIEW DR
 HARLEYSVILLE, PA
 JOB: PENN HILLS PHASES 3 & 4
 PENN TOWNSHIP
 BERKS COUNTY
 PENNSYLVANIA

CHECKED BY: MAM
 DRAWN BY: RTL
 DATE: 2016-02-15
 SCALE: 1"=60'
 DRAWING: D-PCSM-1
 PROJECT: 2015-072
 SHEET: 1 OF 5

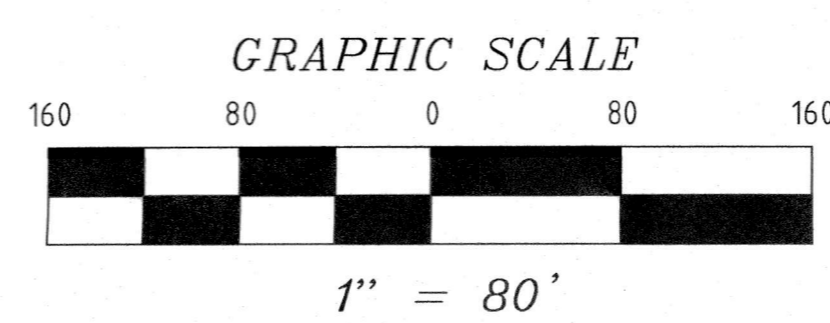
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 REVISED PER BCCD COMMENTS LETTER DATED 07-04-2016
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 PENN HILLS PHASES 3 & 4



SOILS TYPES
 FROM THE SOIL SURVEY OF BERKS COUNTY, PENNSYLVANIA

- BkB - BERKS-WEIKERT COMPLEX, 3 TO 8 PERCENT SLOPES
- BkC - BERKS-WEIKERT COMPLEX, 8 TO 15 PERCENT SLOPES
- CaC - CALVIN-KLINESVILLE CHANNERY SILT LOAMS, 8 TO 15 PERCENT SLOPES
- CaD - CALVIN-KLINESVILLE CHANNERY SILT LOAMS, 15 TO 25 PERCENT SLOPES
- CpB - COMLY SILT LOAM, 3 TO 8 PERCENT SLOPES
- WeD - WEIKERT-BERKS COMPLEX, 15 TO 25 PERCENT SLOPES



- LEGEND**
- EXISTING SOILS BOUNDARY
 - - - EXISTING EDGE OF GRAVEL
 - - - EXISTING STORM SEWER AND INLET
 - - - EXISTING ENDWALL AND RIP-RAP PAD
 - - - EXISTING SANITARY SEWER AND MANHOLE
 - - - EXISTING CURB LINE
 - - - EXISTING FENCE
 - - - EXISTING CONTOURS
 - - - EXISTING STONE BERMS
 - - - INFILTRATION TEST LOCATION
 - - - EXISTING N.P.D.E.S. BOUNDARY LINE (SHOWN 2' OFFSET FOR CLARITY)
 - - - EXISTING HOUSE/LOT UNDER COVERAGE OF EXISTING N.P.D.E.S. PERMIT
 - - - ADDITIONAL N.P.D.E.S. BOUNDARY LINE (SHOWN 2' OFFSET FOR CLARITY)
 - - - LIMIT OF DISTURBANCE
 - - - INFILTRATION BED DRAINAGE AREA
 - - - DRAINAGE AREA
 - - - PROPOSED CONTOURS
 - - - PROPOSED CURB LINE
 - - - PROPOSED STORM SEWER AND INLET
 - - - PROPOSED ONLOT INFILTRATION TRENCHS
 - - - PROPOSED HOUSE TO RECEIVE ONLOT INFILTRATION AND SOIL AMENDMENT (SEE NOTE 1 UNDER PCSM PLAN NOTES)
 - - - PROPOSED SOIL AMENDMENT
 - - - AREA OF MINIMIZED DISTURBANCE
 - - - AREA OF MINIMIZED SOIL COMPACTION

REVISED PER RECORD COMMENTS VIA EMAIL DATED 12-28-2016
 REVISED PER RECORD COMMENTS VIA EMAIL DATED 12-28-2016
 DATE

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 1340 PENN AVENUE, WYOMISSING, PA 19610
 PHONE: 610-678-3071 - FAX: 610-678-3517
 WWW.BOGIAENG.COM

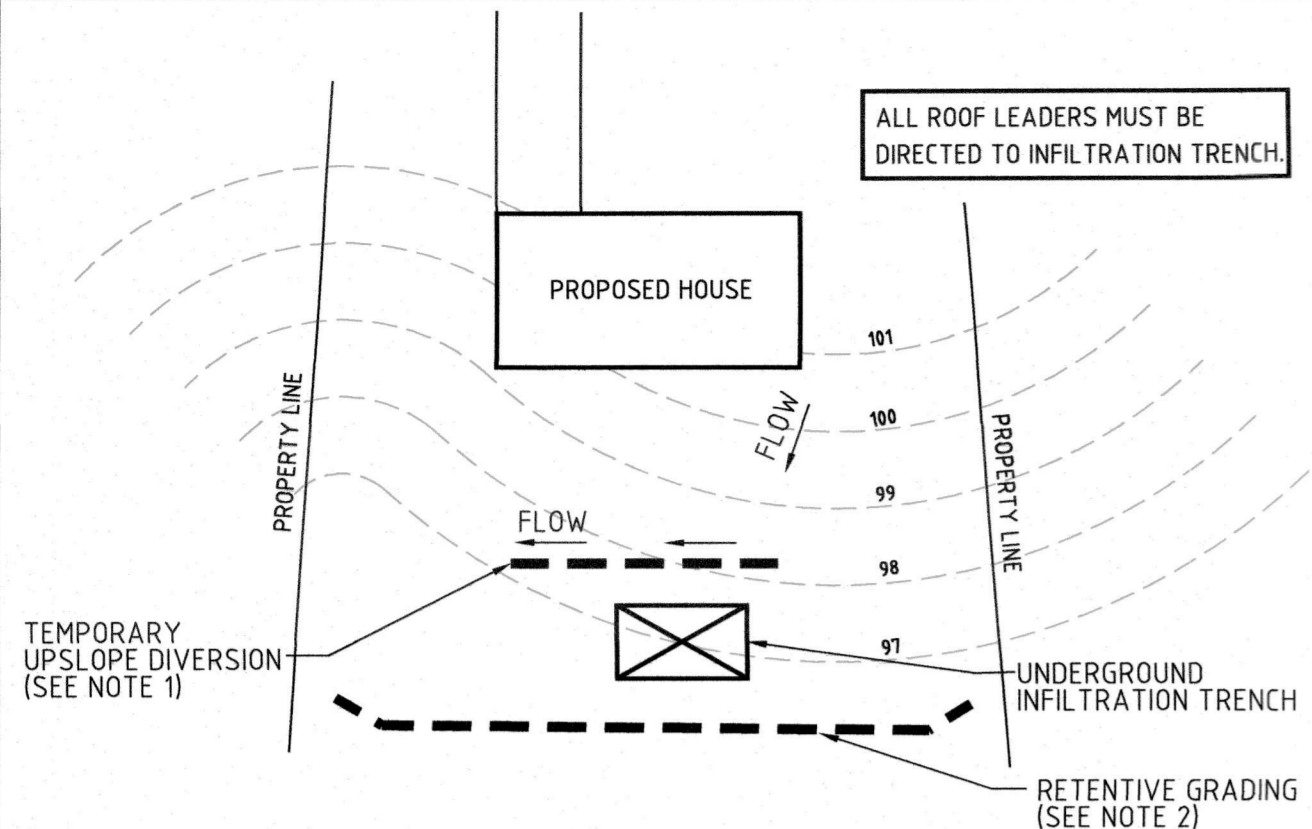
MAJOR MODIFICATION TO NPDES PERMIT #PAG02000614051
 PENN HILLS

NPDES BOUNDARY

FALLA DEVELOPMENT, LP
 105 LAKEVIEW DR
 HARLEYSVILLE, PA
 JOB: PENN HILLS PHASES 3 & 4
 PENN TOWNSHIP
 BERKS COUNTY
 PENNSYLVANIA

PIN: _____

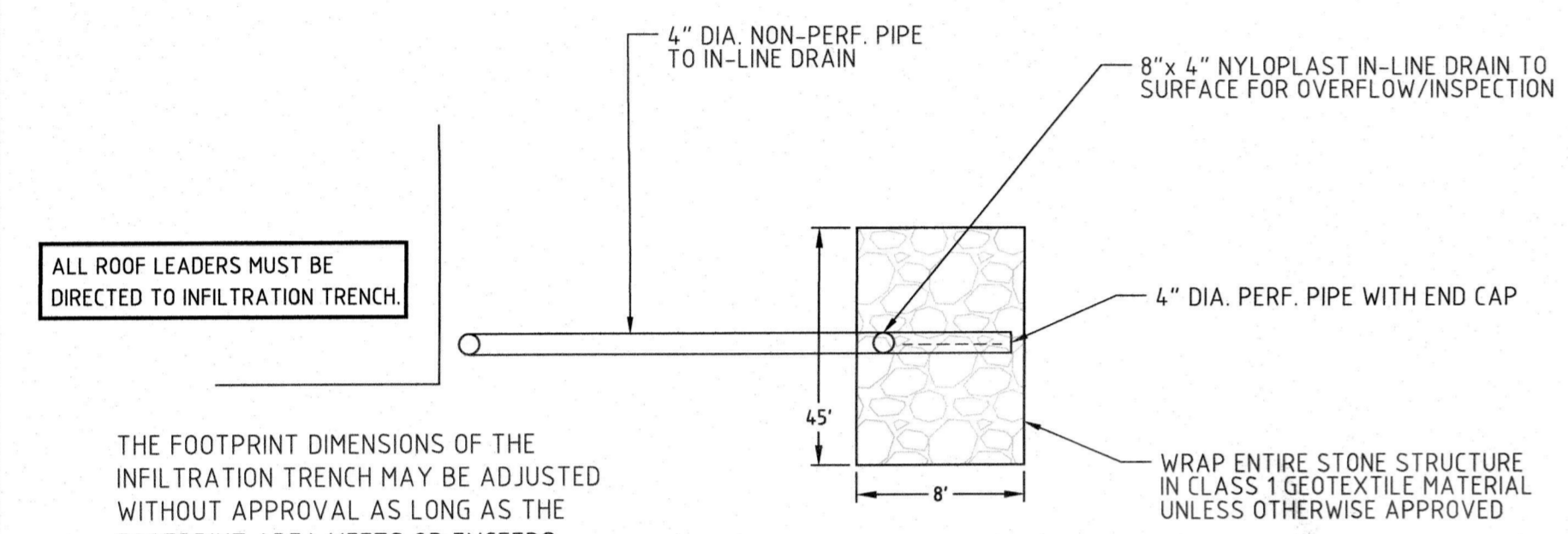
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 SHEET: 2 OF 5



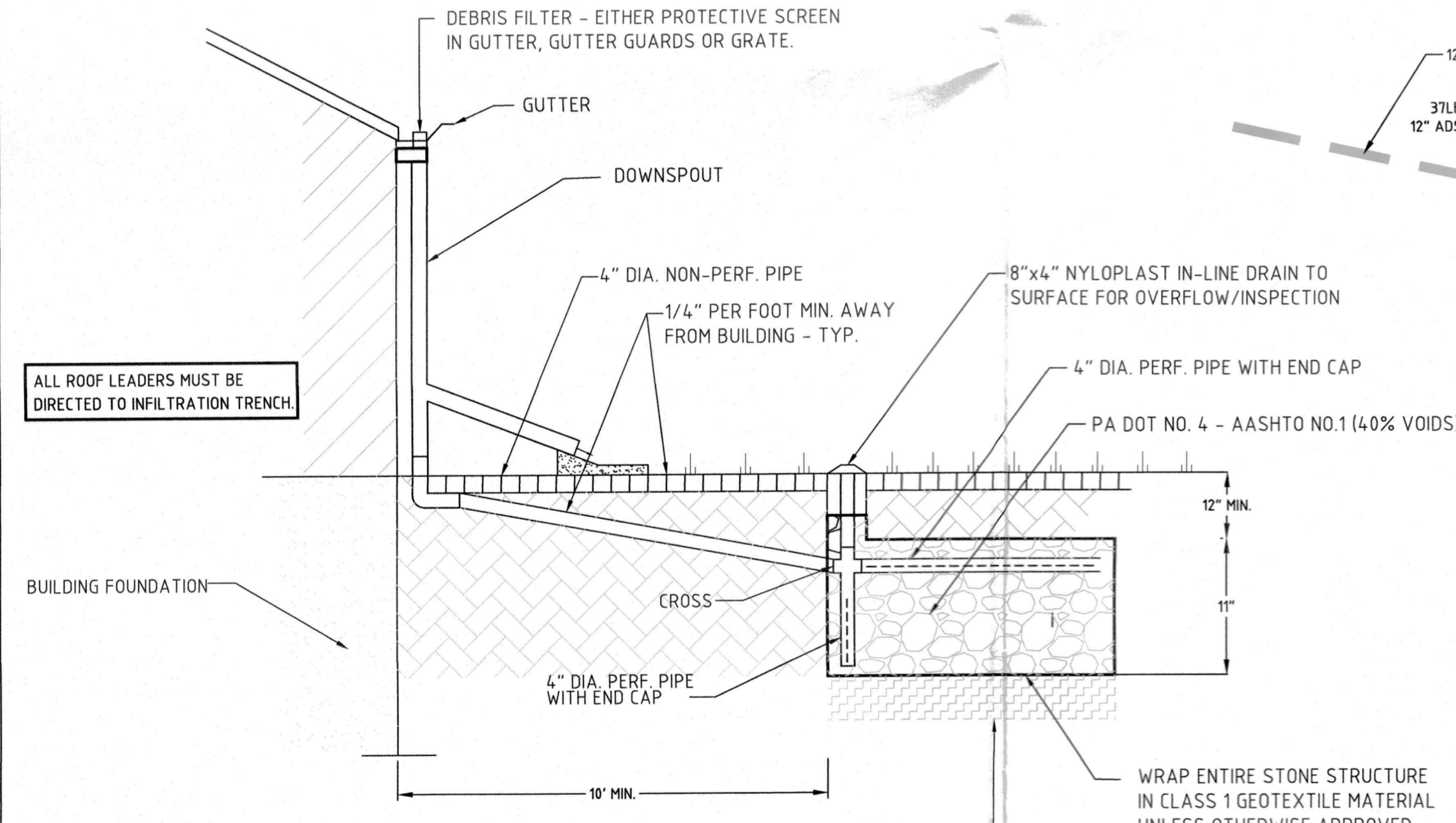
NOTES:

- DURING CONSTRUCTION OF THE UNDERGROUND INFILTRATION FACILITIES, STORMWATER RUNOFF SHALL BE DIVERTED AWAY FROM THE EXCAVATION AREA BY TEMPORARY DIVERSION CHANNELS, BERMS, SANDBAIRES, ETC. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT THE DEPOSITION OF SEDIMENT OR SEDIMENT-LOADED WATERS INTO THE FACILITY AND ASSOCIATED STRUCTURES.
- FOR LOTS 12-17 ONLY, CONSTRUCT A 12" HIGH BERM WITH SIDE SLOPES OF 6:1 DOWNSLOPE AND PARALLEL TO THE INFILTRATION TRENCH, EXTENDING TO THE PROPERTY LINE ON EITHER SIDE OF THE INFILTRATION TRENCH, WITH ENDS DIRECTED UP SLOPE.

UPSLOPE DIVERSION PLAN VIEW



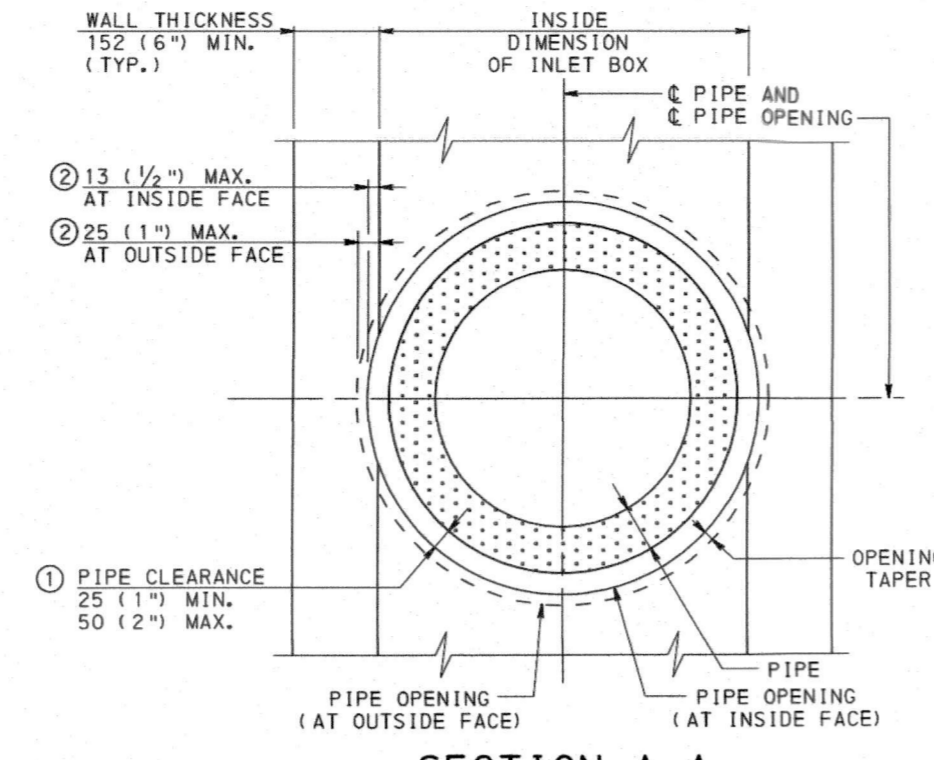
PLAN VIEW



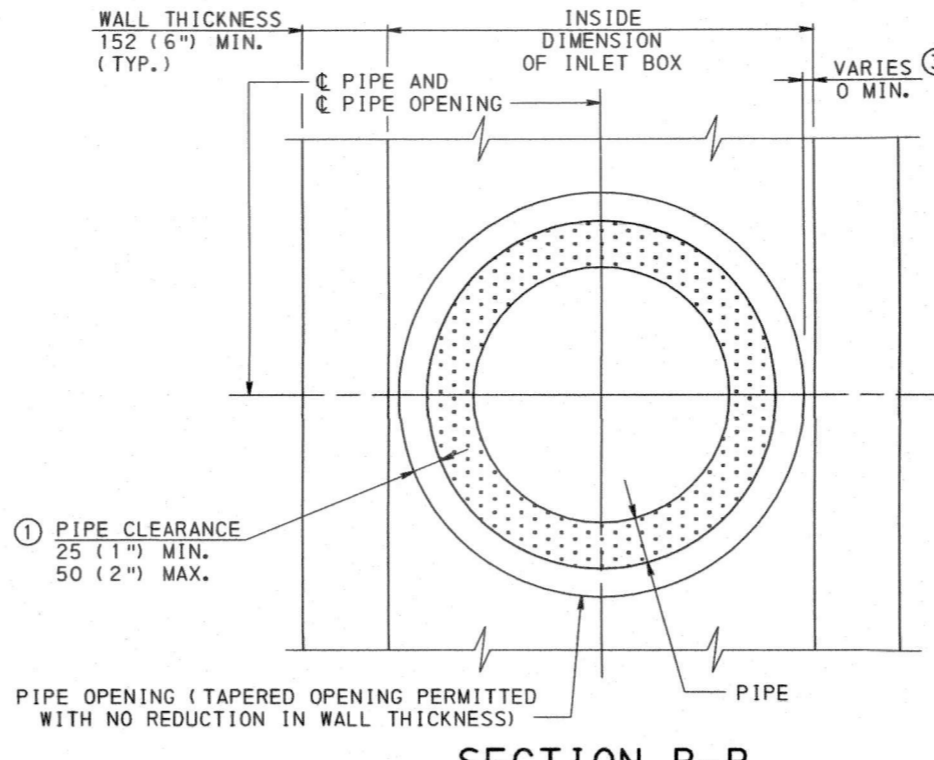
ON-LOT INFILTRATION TRENCH (TYP.)

BMP 6.4.4 INFILTRATION TRENCH INSTALLATION

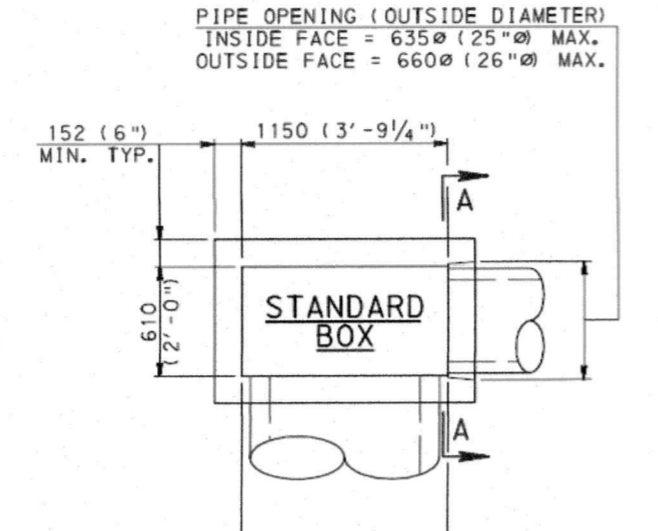
- INSTALL INFILTRATION BED AFTER UPSLOPE CONSTRUCTION IS COMPLETED. PROTECT INFILTRATION LOCATION FROM COMPACTION AND SEDIMENTATION DURING LAND DEVELOPMENT ACTIVITIES.
- EXCAVATE TO BOTTOM OF BED ELEVATION WITH ANY HEAVY EQUIPMENT REMAINING OUTSIDE BED AREA. REMOVE ANY ACCUMULATED FINES. SCARIFY TO 6" BELOW BED INVERT. FINE GRADE.
- INSTALL ANY STORMWATER STRUCTURES.
- INSTALL CLASS 1 NONWOVEN GEOTEXTILE PER MANUFACTURER'S RECOMMENDATIONS, WITH A MINIMUM 16" OVERLAP. EXTEND GEOTEXTILE AT LEAST 4' BEYOND BED AND SECURE.
- INSTALL CLEAN WASHED STONE AASHTO #3 AGGREGATE WITH A MINIMUM 40% VOID VOLUME IN MAXIMUM 6" LIFTS, LIGHTLY COMPACTING.
- INSTALL PERFORATED PIPE, CLEANOUTS, AND/OR DRAIN BASINS PER PLAN.
- FOLD AND SECURE CLASS 1 NON-WOVEN GEOTEXTILE, WITH MINIMUM 16" OVERLAP ON TOP OF STONE.
- INSTALL 12" MINIMUM DEPTH APPROVED BACKFILL IN MAXIMUM 6" LIFTS.
- SEED AND STABILIZE TOPSOIL TO PROVIDE HEALTHY COVER.



SECTION A-A (STANDARD INLET BOX ONLY)

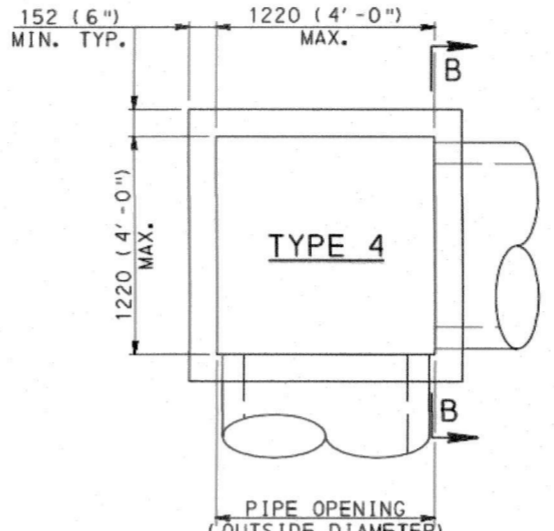


SECTION B-B (TYPICAL ALL TYPES EXCEPT STANDARD)



BOX TYPE	A	B	C
4	4'-0"	48" MAX.	6" MIN.
5	5'-0"	60" MAX.	6" MIN.
6	6'-0"	72" MAX.	6" MIN.
7	7'-0"	84" MAX.	8" MIN.
8	8'-0"	96" MAX.	8" MIN.
9	9'-0"	108" MAX.	8" MIN.
10	10'-0"	120" MAX.	8" MIN.

PIPE OPENING (OUTSIDE DIAMETER)
INSIDE FACE = 635ø (25"ø) MAX.
OUTSIDE FACE = 660ø (26"ø) MAX.



PIPE OPENING (OUTSIDE DIAMETER)
INSIDE FACE = 1220ø (48"ø) MAX.
OUTSIDE FACE (TYP.)

PRECAST CONCRETE INLET & JUNCTION BOXES

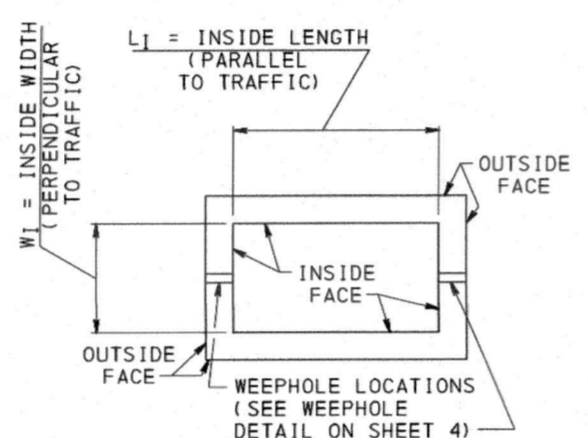
PRECAST CONCRETE INLET & JUNCTION BOX NOTES:

- REFER TO PennDOT PUB. 72M, RC-46M, SHEETS 1-45 FOR ADDITIONAL REQUIREMENTS.
- REFER TO RC-45M FOR INLET GRATE, FRAME AND TOP UNIT REQUIREMENTS AND RC-39M FOR JUNCTION BOX MANHOLE FRAME AND LID REQUIREMENTS.
- SEE "FIELD CONSTRUCTION NOTES" ON RC-46M, SHEET 1 OF 45, FOR CONCRETE FLOW CHANNELS, SUBBASE AND OTHER REQUIREMENTS.
- INLET BOXES CONSTRUCTED IN STREETS OR DRIVEWAYS SHALL BE SET LEVEL WITH THE TOP UNIT SET TO CONFORM TO THE STREET OR DRIVEWAY GRADE ON SLOPES GREATER THAN 2%.
- WHILE NOT PREFERRED, CORNER PIPE OPENINGS ARE PERMITTED IN ONE CORNER. A MINIMUM OF 8" OF CONCRETE MUST BE PROVIDED BETWEEN THE PRECAST PIPE OPENING AND THE TOP OF THE BOX.
- PRECAST MANUFACTURER SHALL ENSURE THAT STEPS DO NOT CONFLICT WITH PIPE HOODS, "SNOUT" HOODS, BAFFLES, AND/OR PIPE OPENINGS.
- ALL PRECAST STRUCTURES AND APPURTENANCES MUST BE SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15.

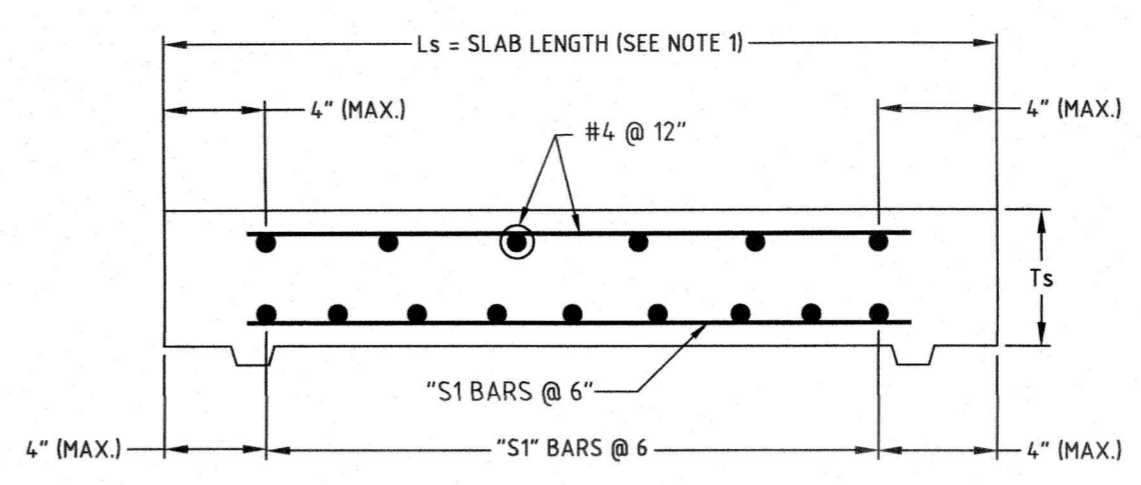
LEGEND

- OUTSIDE DIAMETER OF PIPE TO PIPE OPENING
- REDUCTION IN WALL THICKNESS DIMENSION
- INSIDE FACE OF BOX WALL TO OUTSIDE DIAMETER OF PIPE OPENING

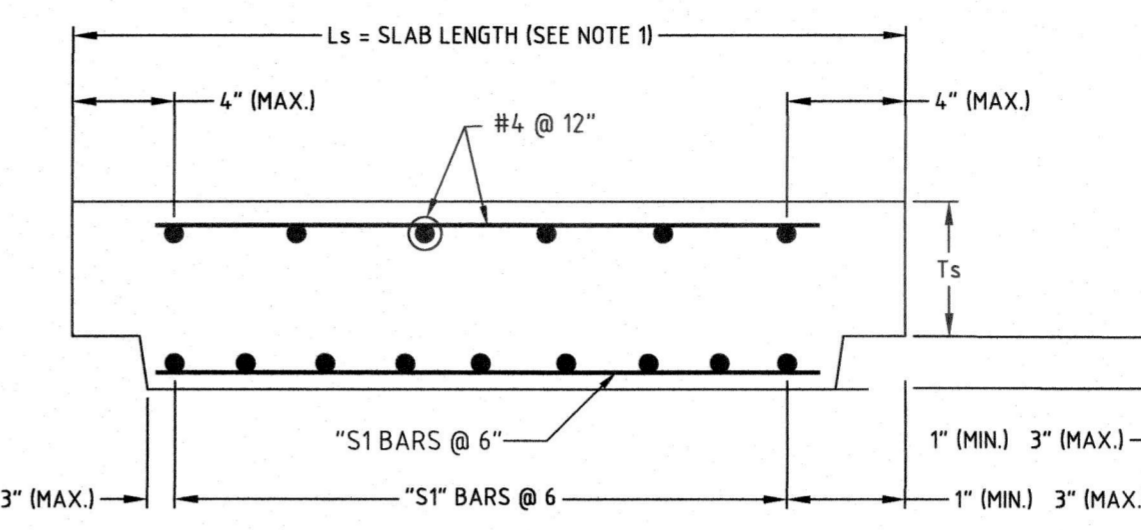
NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.



INLET BOX SCHEMATIC



TOP SLAB WITH KEYED JOINT



TOP SLAB WITH SHIPLAP JOINT

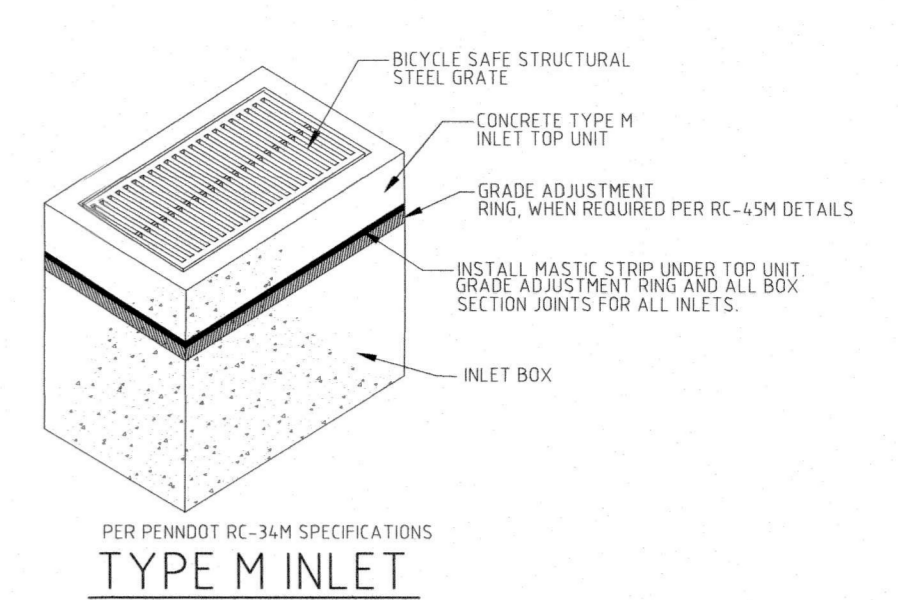
NOTES FOR TOP SLABS:

- OUT TO OUT DIMENSIONS OF TOP SLAB TO MATCH SIZE OF INLET OR JUNCTION BOX.
- SET EDGE OF OPENING AT INSIDE FACE OF INLET OR JUNCTION BOX FOR ACCESS, IF POSSIBLE.
- TOP SLABS SHALL MEET HS-25 LOADING.

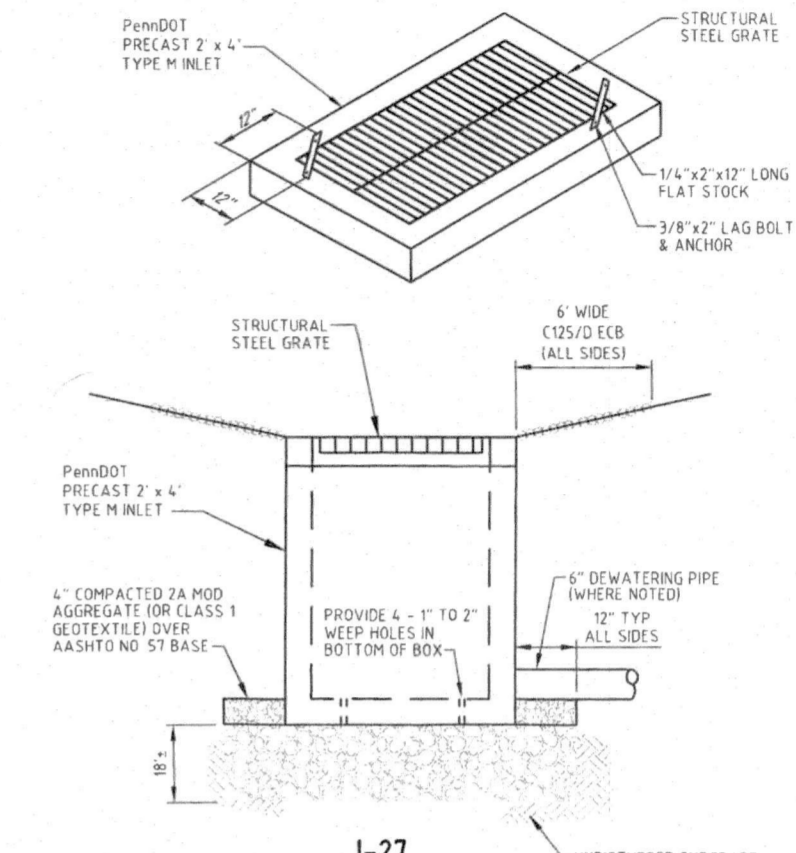
PRECAST CONCRETE TOP SLAB

BOX TYPE	Ts (IN)	S1 (BAR SIZE)
STANDARD	8	#6
TYPE 4	10	#8
TYPE 5	12	#9
TYPE 6	12	#9
TYPE 7	14	#9
TYPE 8	14	#9
TYPE 9	14	#9
TYPE 10	14	#9

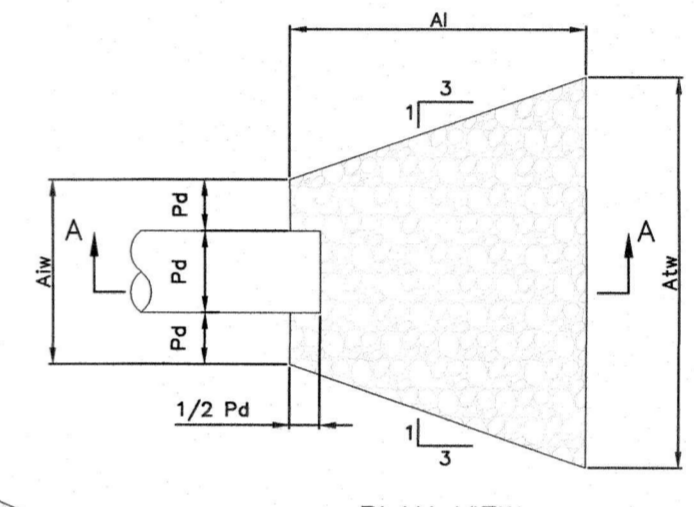
TOP SLAB FOR PRECAST BOXES



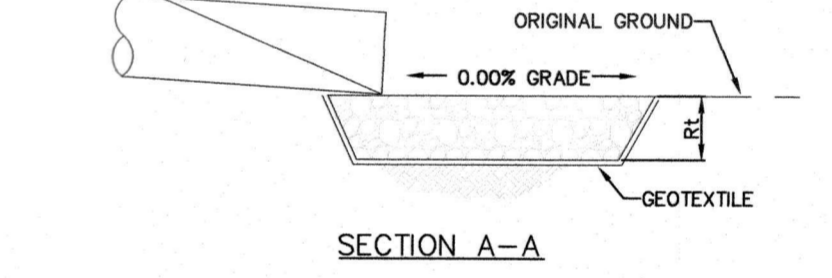
TYPE M INLET



TYPICAL BUBBLING INLET



PLAN VIEW



SECTION A-A

NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

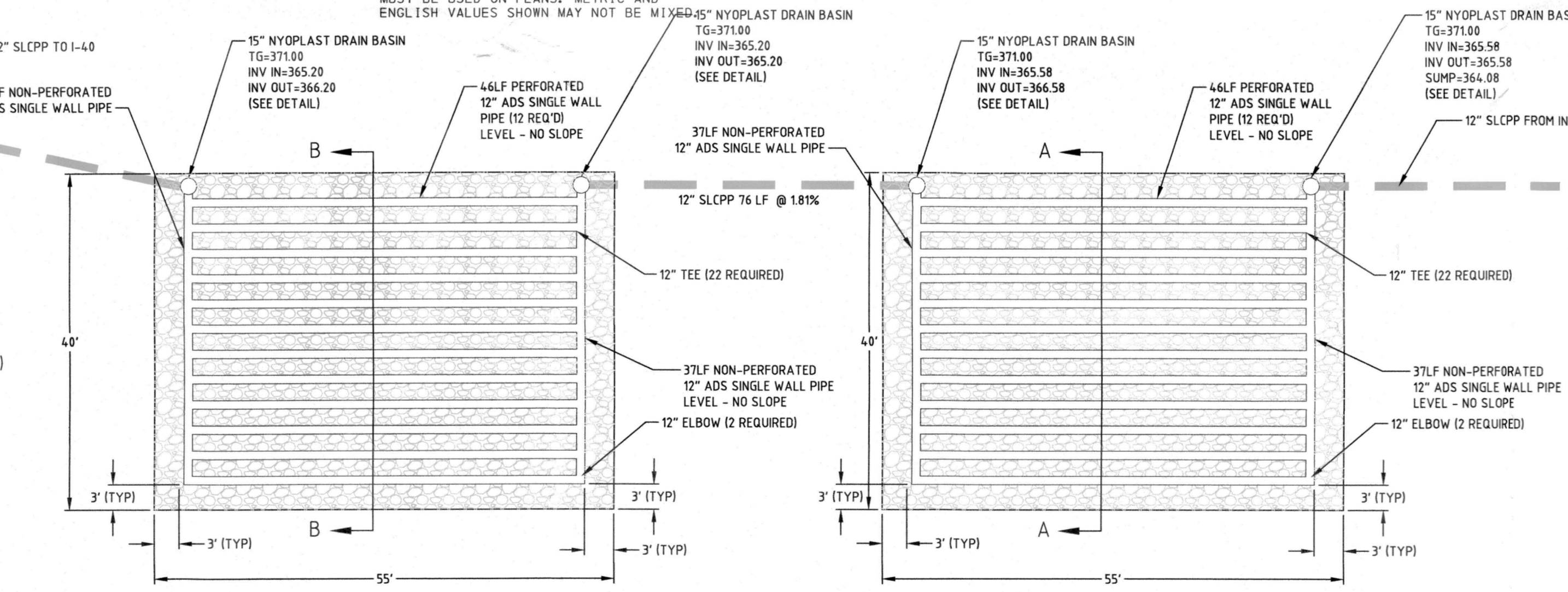
ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

EXTEND RIPRAP ON BACK SIDE OF APRON TO AT LEAST 1/2 DEPTH OF PIPE ON BOTH SIDES TO PREVENT SCOUR AROUND THE PIPE.

STANDARD CONSTRUCTION DETAIL #9-2 RIPRAP APRON AT PIPE OUTLET NO FLARED ENDWALL

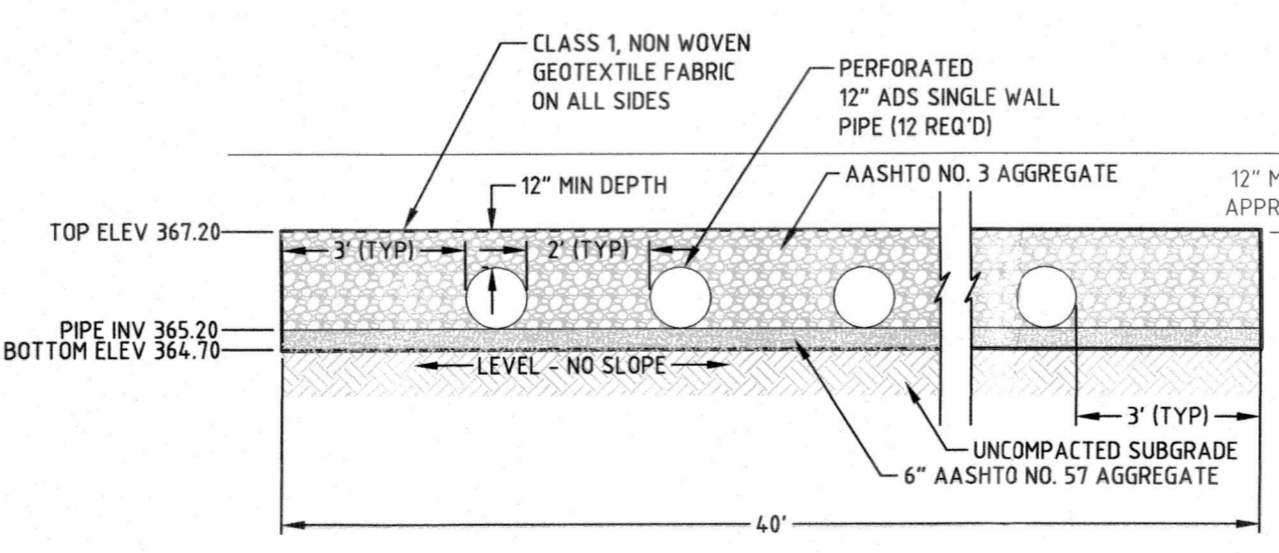
BMP 6.4.3 SUBSURFACE INFILTRATION BED INSTALLATION

- INSTALL INFILTRATION BED AFTER UPSLOPE CONSTRUCTION IS COMPLETED. PROTECT INFILTRATION LOCATION FROM COMPACTION AND SEDIMENTATION DURING LAND DEVELOPMENT ACTIVITIES.
- EXCAVATE TO BOTTOM OF BED ELEVATION WITH ANY HEAVY EQUIPMENT REMAINING OUTSIDE BED AREA. REMOVE ANY ACCUMULATED FINES. SCARIFY TO 6" BELOW BED INVERT. FINE GRADE.
- INSTALL ANY STORMWATER STRUCTURES.
- INSTALL CLASS 1 NONWOVEN GEOTEXTILE PER MANUFACTURER'S RECOMMENDATIONS, WITH A MINIMUM 16" OVERLAP. EXTEND GEOTEXTILE AT LEAST 4' BEYOND BED AND SECURE.
- INSTALL 6" AASHTO #57 AGGREGATE ON PREPARED LEVEL SUBGRADE.
- INSTALL PERFORATED PIPE, CLEANOUTS, AND/OR DRAIN BASINS PER PLAN.
- INSTALL CLEAN WASHED STONE AASHTO #3 AGGREGATE IN MAXIMUM 6" LIFTS, LIGHTLY COMPACTING.
- FOLD AND SECURE CLASS 1 NON-WOVEN GEOTEXTILE, WITH MINIMUM 16" OVERLAP ON TOP OF STONE.
- INSTALL 12" MINIMUM DEPTH APPROVED BACKFILL IN MAXIMUM 6" LIFTS.
- SEED AND STABILIZE TOPSOIL TO PROVIDE HEALTHY COVER.

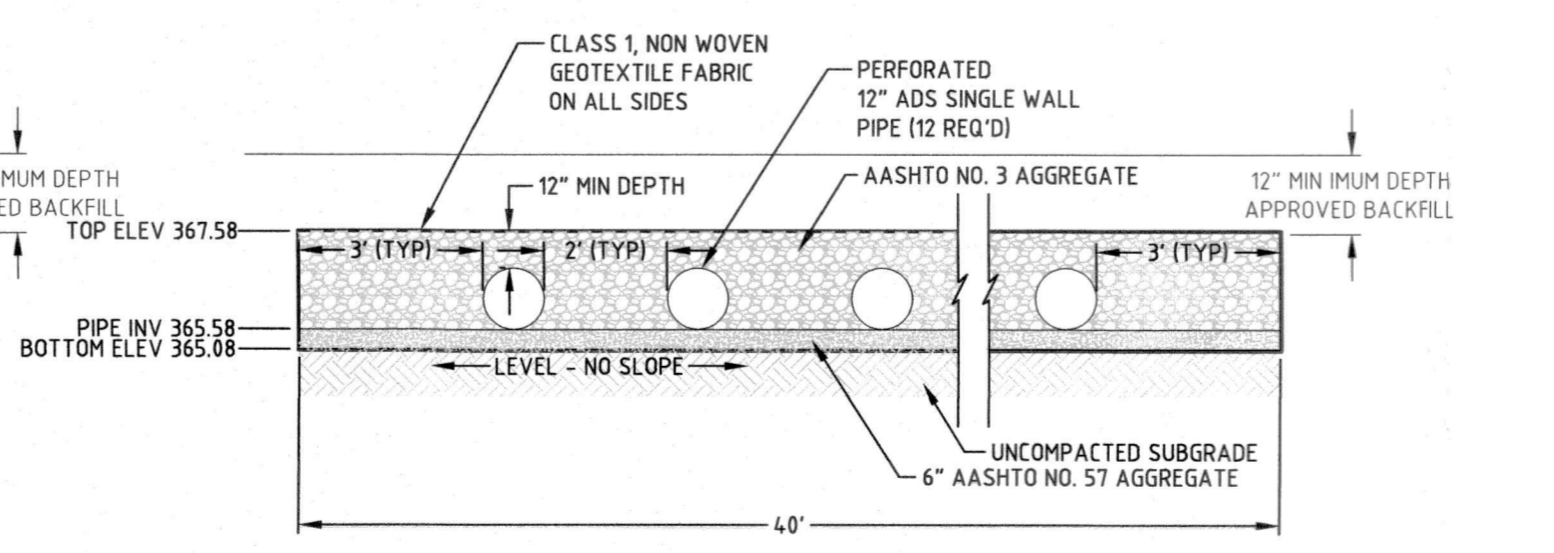


PLAN VIEW INFILTRATION BED 1B

PLAN VIEW INFILTRATION BED 1A



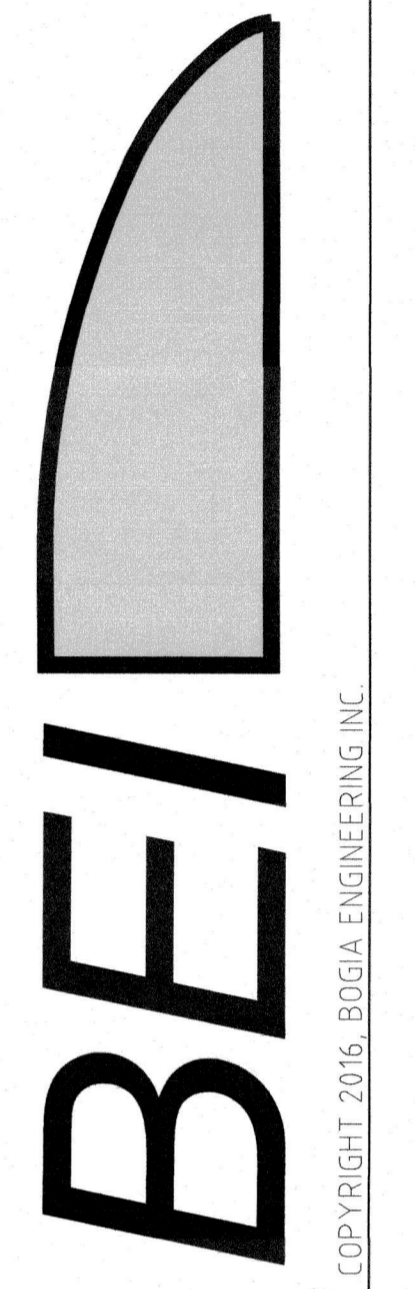
SECTION B-B



SECTION A-A

REVISIONS

NO.	DATE	DESCRIPTION
1	2016-02-15	ISSUED FOR PERMITS
2	2016-02-15	REVISED PER BCCD COMMENT LETTER DATED 02-06-2016
3	2016-02-29	REVISED PER BCCD COMMENT LETTER DATED 02-06-2016
4	2016-02-29	REVISED PER BCCD COMMENT LETTER DATED 02-06-2016



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1340 PENN AVENUE WYOMISSING PA 19610
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FINAL PLAN

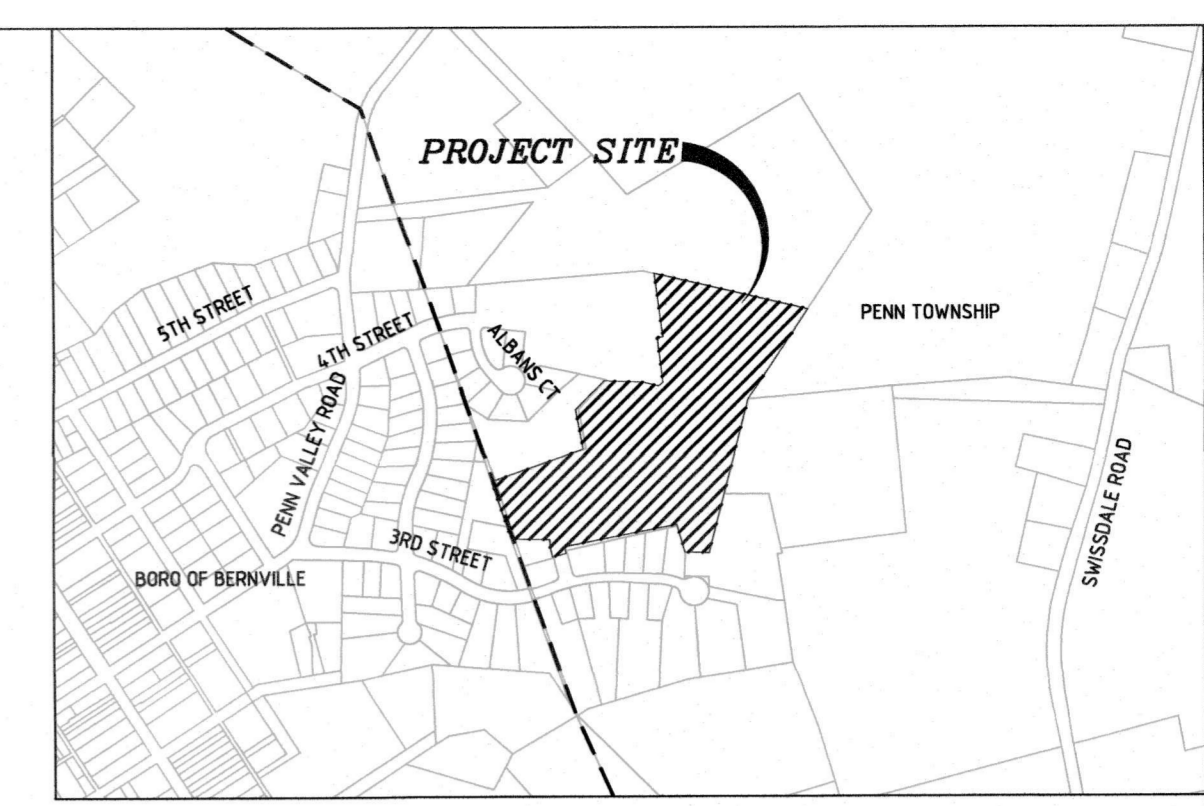
MAJOR MODIFICATION TO NPDES PERMIT #PA02000614051

PCSM DETAILS SHEET

FALLA DEVELOPMENT, LP
105 LAKEVIEW DR
HARLEYSVILLE, PA
JOB: PENN HILLS PHASES 3 & 4
PENN TOWNSHIP
BERKS COUNTY
PENNSYLVANIA

PIN: -
CHECKED BY: MAM
DRAWN BY: RTL
DATE: 2016-02-15
SCALE: NONE
DRAWING: D-PCSM.3
PROJECT: 2015-072
SHEET: 3 OF 5

PROJECT TITLE: MAJOR MODIFICATION TO NPDES PERMIT #PAG02000614051
 PENN HILLS PHASES 3 & 4



LOCATION MAP
 SCALE: 1" = 800'

DATE	2016-02-15	REVISED PER BCO COMMENTS VIA EMAIL DATED 02-28-2016
DATE	2016-02-15	REVISED PER BCO COMMENT LETTER DATED 02-08-2016
DATE	2016-02-28	REVISED PER BCO COMMENT LETTER DATED 04-12-2016
DATE	2016-03-31	REVISED PER BCO COMMENT LETTER DATED 04-15-2016

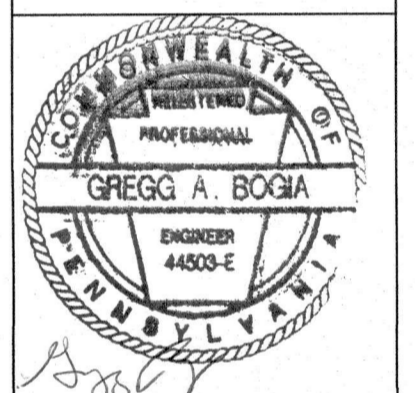
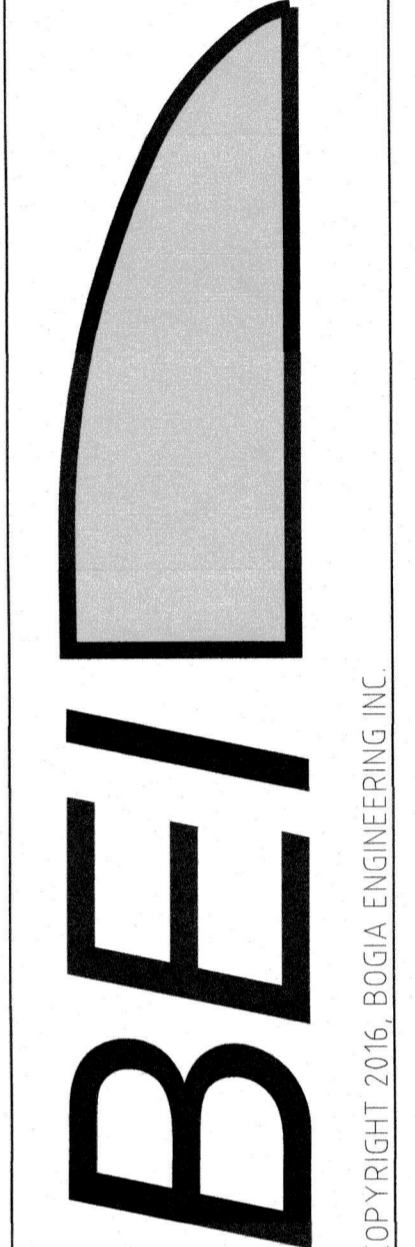
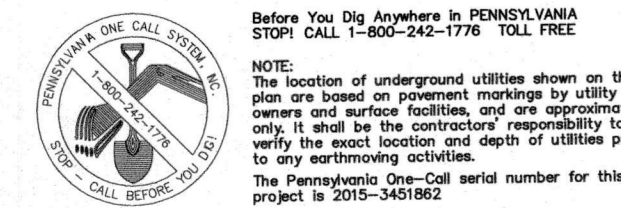
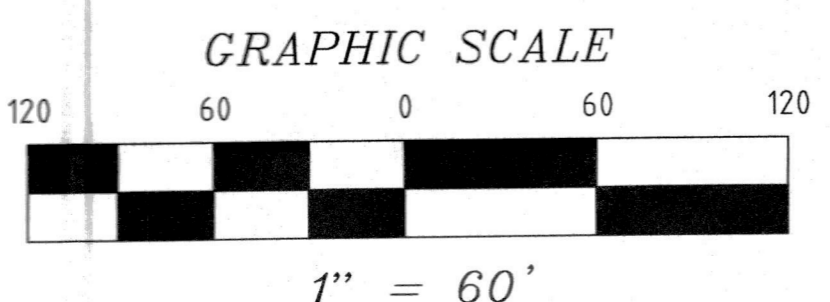


LEGEND

- EXISTING SOILS BOUNDARY
- EXISTING EDGE OF GRAVEL
- EXISTING STORM SEWER AND INLET
- EXISTING ENDWALL AND RIP-RAP PAD
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING CURB LINE
- EXISTING FENCE
- EXISTING CONTOURS
- EXISTING STONE BERMS
- INFILTRATION TEST LOCATION
- NPDES BOUNDARY LINE (SHOWN 2' OFFSET FOR CLARITY)
- EXISTING HOUSE/LOT UNDER COVERAGE OF EXISTING NPDES PERMIT
- ADDITIONAL NPDES BOUNDARY LINE (SHOWN 2' OFFSET FOR CLARITY)
- LIMIT OF DISTURBANCE
- DRAINAGE AREA
- PROPOSED CONTOURS
- PROPOSED CURB LINE
- PROPOSED STORM SEWER AND INLET
- PROPOSED ONLOT INFILTRATION TRENCHES
- PROPOSED HOUSE TO RECEIVE ONLOT INFILTRATION AND SOIL AMENDMENT (SEE NOTE 1 UNDER PCSM PLAN NOTES)
- DETENTION BASIN DRAINAGE AREA
- INFILTRATION BED DRAINAGE AREA
- TRIBUTARY DRAINAGE AREAS
- PROPOSED SOIL AMENDMENT
- AREA OF MINIMIZED DISTURBANCE
- AREA OF MINIMIZED SOIL COMPACTION

SOILS TYPES
 FROM THE SOIL SURVEY OF BERKS COUNTY, PENNSYLVANIA

Bk-B - BERKS-WEIKERT COMPLEX, 3 TO 8 PERCENT SLOPES
 Bk-C - BERKS-WEIKERT COMPLEX, 8 TO 15 PERCENT SLOPES
 Ca-C - CALVIN-KLINESVILLE CHANNERY SILT LOAMS, 8 TO 15 PERCENT SLOPES
 Ca-D - CALVIN-KLINESVILLE CHANNERY SILT LOAMS, 15 TO 25 PERCENT SLOPES
 Co-L - COMLY SILT LOAM, 3 TO 8 PERCENT SLOPES
 We-D - WEIKERT-BERKS COMPLEX, 15 TO 25 PERCENT SLOPES



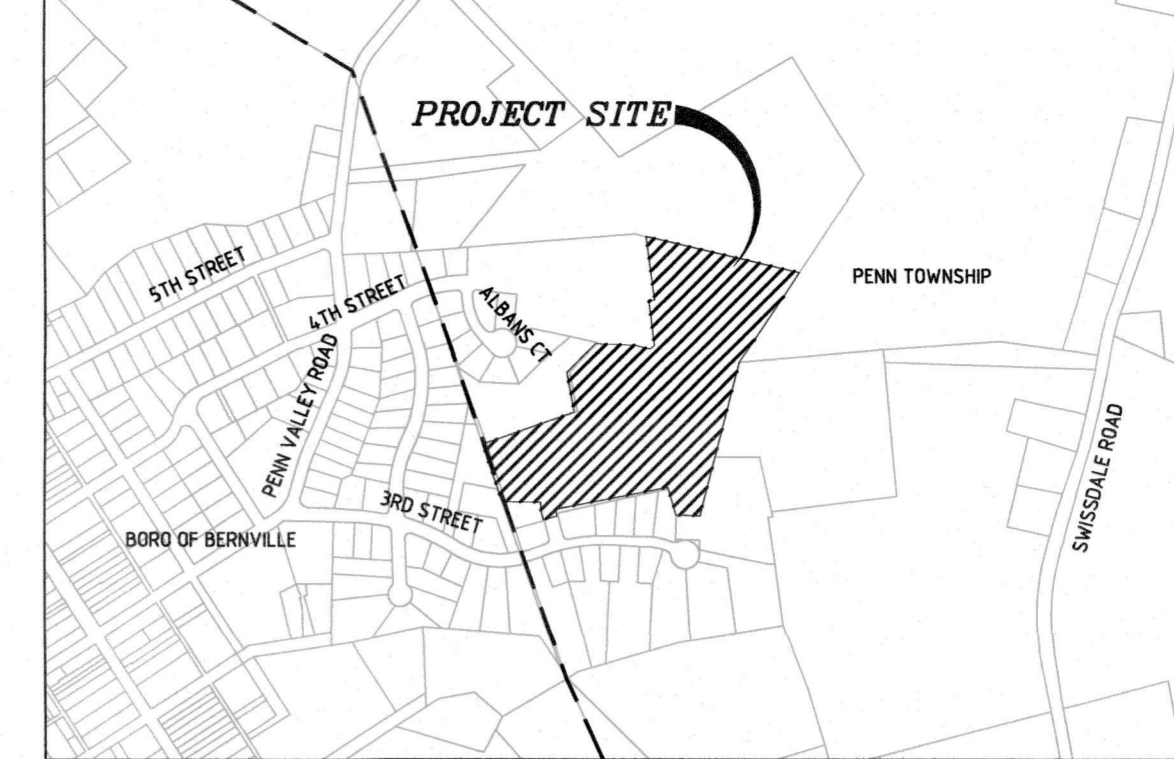
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 BERKS COUNTY
 PENNSYLVANIA

CHECKED BY: MAM
 DRAWN BY: RTL
 DATE: 2016-02-15
 SCALE: 1"=60'
 DRAWING: D-PCSM.5
 PROJECT: 2015-072
 SHEET: 5 OF 5

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PROJECT TITLE: MAJOR MODIFICATION TO NPDES PERMIT #PAG02000614051
 PENN HILLS PHASES 3 & 4



LOCATION MAP
 SCALE: 1" = 800'



SCOT T AND LAURA L. ZALENSKI
 PIN# 445011753760
 INSTR. NO. 200903434

JAMES H AND LOUISE M. GABEL
 PIN# 445011753663
 DBV. 3671-PG 1795

JASON E AND CHRISTEL WENRICH
 PIN# 445011753876
 INSTR. NO. 2010016905

STEVE C. & LUCY M. ROYNT
 PIN# 4450075127
 INSTR. NO. 2014040863

CAROLYN A. HARTMAN
 PIN# 44500757025
 INSTR. NO. 2010026362

WICKER C. & PATRICK A. WICKER
 PIN# 44500759110
 INSTR. NO. 2014032887

DOUGLAS W. & JENNIFER R. WILSON
 PIN# 44500851111
 INSTR. NO. 2014032887

RICHARD P. & BROOK E. SHAW
 PIN# 44500851111
 INSTR. NO. 2014032887

CAROL J. & BRENDIA M. KOPPEL
 PIN# 44500851111
 INSTR. NO. 2014032887

BERNARD & BETH A. JIMMERBERGER
 PIN# 44500851111
 INSTR. NO. 2014032887

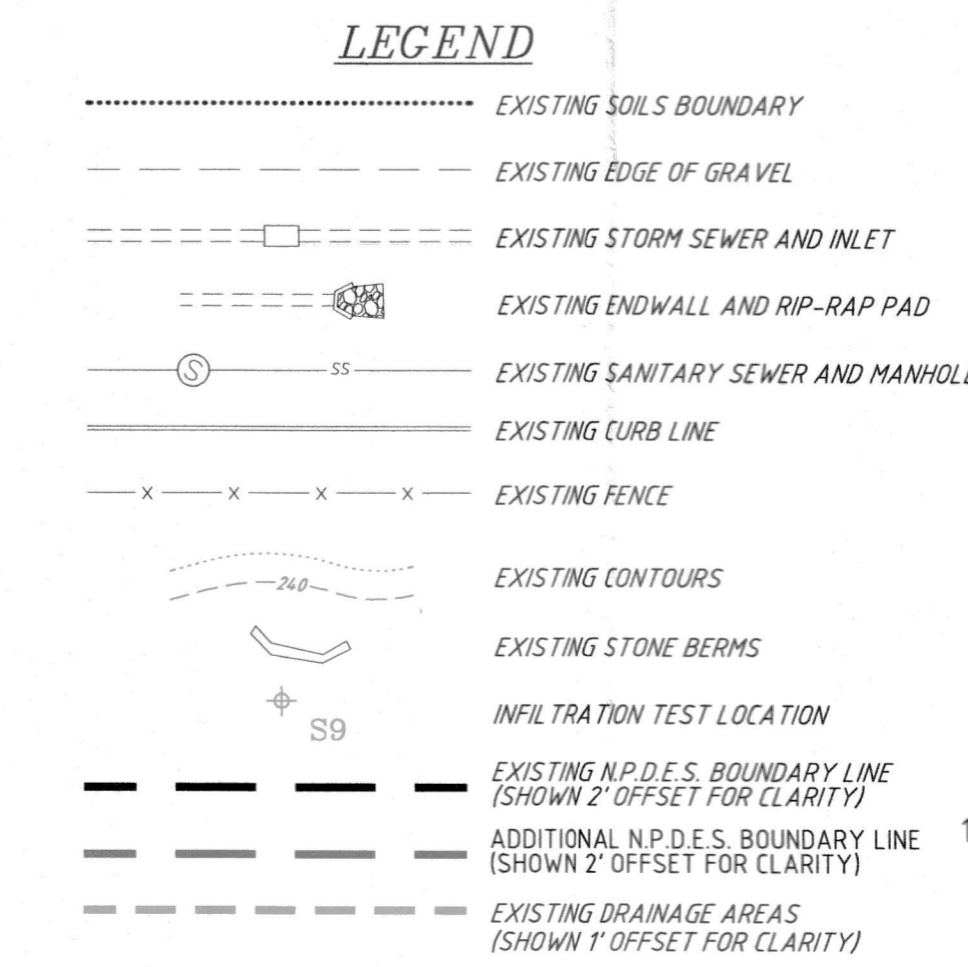
BERNARD & BETH A. JIMMERBERGER
 PIN# 44500851111
 INSTR. NO. 2014032887

ARLAN J. & KATHERINE A. WERST
 PIN# 44500850418
 DBV. 1861-P. 0746

BERNVILLE AUTHORITY
 PIN# 44500851111
 DBV. 1711-P. 0356

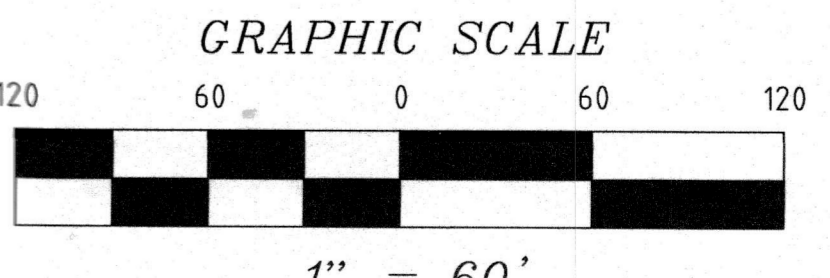
CURTIS L. & DORIS N. LANDIS
 PIN# 44500973187
 DBV. 1441-P. 0752

KEITH & JAN L. KEENEY
 PIN# 44500860497
 DBV. 2515-P. 1231



SOILS TYPES
 FROM THE SOIL SURVEY OF BERKS COUNTY, PENNSYLVANIA

BkB - BERKS-WEIKERT COMPLEX, 3 TO 8 PERCENT SLOPES
BkC - BERKS-WEIKERT COMPLEX, 8 TO 15 PERCENT SLOPES
CaC - CALVIN-KLINESVILLE CHANNERY SILT LOAMS, 8 TO 15 PERCENT SLOPES
CaD - CALVIN-KLINESVILLE CHANNERY SILT LOAMS, 15 TO 25 PERCENT SLOPES
CoB - COMLY SILT LOAM, 3 TO 8 PERCENT SLOPES
WeD - WEIKERT-BERKS COMPLEX, 15 TO 25 PERCENT SLOPES



Before You Dig Anywhere in PENNSYLVANIA, CALL 1-800-248-1776 TOLL FREE

The location of underground utilities shown on this plan are based on information provided by utility owners and surface facilities, and are approximate only. It shall be the contractor's responsibility to verify the exact location and depth of utilities prior to any earthmoving activities.

The Pennsylvania Department of Transportation (PA DOT) has a public website for this project at: www.pa.gov

BEG

BOGIA ENGINEERING INC.
 1340 PENN AVENUE WYOMISSING, PA 19610
 PHONE: 610-678-3071 FAX: 610-678-3517
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MAJOR MODIFICATION TO NPDES PERMIT #PAG02000614051
 PRE-CONSTRUCTION CONDITIONS PLAN
 FINAL PLAN

FALLA DEVELOPMENT, LP
 105 LAKEVIEW DR
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 JOB: PENN HILLS PHASES 3 & 4
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 BERKS COUNTY
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 SCALE: 1"=60'
 DRAWING: D-PCC-1
 PROJECT: 2015-072
 SHEET: 1 OF 1

REVISIONS:

NO.	DATE	DESCRIPTION
1	2015-04-14	REVISED PER BCO COMMENTS VIA EMAIL DATED 12-28-2016
2	2016-02-15	REVISED PER BCO COMMENTS LETTER DATED 02-04-2016
3	2016-02-26	REVISED PER BCO COMMENTS LETTER DATED 02-04-2016
4	2016-02-27	REVISED PER BCO COMMENTS LETTER DATED 02-04-2016

DATE: 2/16/17

2016-02-15

2016-02-26

2016-02-27

DATE

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