

LOCATION MAP

SCALE: 1"=1,000'

"PRELIMINARY / FINAL" LAND DEVELOPMENT PLAN FOR SOLID ROCK MISSIONARY BAPTIST CHURCH

PREPARED BY:
SKELLY AND LOY, INC.
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PENNSYLVANIA 17111
MAY 21, 2019
(REVISED JULY 5, 2019)

PROPERTY INFORMATION

OWNER: SOLID ROCK MISSIONARY BAPTIST CHURCH
8000 DERRY STREET
SUITES C & D
HARRISBURG, PA 17111
ATTN: MR. KENNETH L. MICKENS, ESQ.
(717) 558-0133

TAX PARCEL #: 62-026-029

DEED INFO: INSTRUMENT # 20170000318

AREA OF TRACT (EXCLUDING ROAD R/W'S): 4.59 ACRES

UTILITY LISTING

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE PA ONE-CALL AT 800-242-1776 TO FIELD VERIFY AND MARK THE LOCATION OF EXISTING FACILITIES IN THE PROJECT AREA PRIOR TO ANY CONSTRUCTION ACTIVITIES. THE FOLLOWING UTILITIES HAVE BEEN NOTIFIED UNDER THE DESIGN ONE-CALL SERIAL NUMBER 20190042347.

PPL ELECTRIC UTILITIES CORPORATION 1801 BROOKWOOD STREET
HARRISBURG, PA 17104
800-242-1776

SUEZ WATER PENNSYLVANIA INC. 4211 EAST PARK CIRCLE
HARRISBURG, PA 17111
717-564-3662

UGI UTILITIES INC 1500 PAXTON STREET
HARRISBURG, PA 17104
800-242-1776

COMCAST CABLE COMMUNICATIONS, INC. 5094 JONESTOWN ROAD
HARRISBURG, PA 17112
800-266-2278

SUSQUEHANNA TOWNSHIP AUTHORITY 1900 LINGLESTOWN ROAD
HARRISBURG, PA 17110
717-545-0116

VERIZON PENNSYLVANIA INC. 11TH FLOOR STRAWBERRY SQUARE
HARRISBURG, PA 17101
800-242-1776

REPAIR OF DAMAGES TO ANY UNDERGROUND OR ABOVE GROUND UTILITIES, STRUCTURES, AND APPURTENANCES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND AT THE CONTRACTOR'S EXPENSE.

PURPOSE STATEMENT:

THE INTENT OF THIS LAND DEVELOPMENT PLANS IS TO DEVELOP TAX PARCEL 62-026-029 (2400 LOCUST LANE) INTO WORSHIP AND COMMUNITY CENTER. SOLID ROCK MISSIONARY BAPTIST CHURCH IS THE OWNER AND DEVELOPER OF THE TRACT. ALL UTILITIES ARE ADJACENT TO THE SITE AND WILL BE EXTENDED INTO THE SITE.

LIST OF APPROVALS REQUIRED

SUSQUEHANNA TOWNSHIP BOARD OF SUPERVISORS:	LAND DEVELOPMENT
SUSQUEHANNA TOWNSHIP SEWER AUTHORITY:	SANITARY SEWER
DAUPHIN COUNTY CONSERVATION DISTRICT:	NPDES

WAIVERS REQUESTED

SALDO SECTION: 22-404 PRELIMINARY PLAN SUBMISSION

INDEX OF DRAWING

DWG. NO.	SHEET NO.	TITLE
C-1	1 OF 21	COVER SHEET
C-2	2 OF 21	GENERAL NOTES AND SITE ANALYSIS
C-3	3 OF 21	EXISTING CONDITIONS PLAN
C-4	4 OF 21	SITE PLAN
C-5	5 OF 21	GRADING PLAN
C-6	6 OF 21	STORMWATER PLAN
C-7	7 OF 21	STORM SEWER PROFILES
C-8	8 OF 21	CONSTRUCTION-OPERATION AND MAINTENANCE STORMWATER BMPS
C-9	9 OF 20	STORMWATER DETAILS
C-10	10 OF 21	STORMWATER DETAILS
C-11	11 OF 21	STORMWATER INFILTRATION BED 1 AND 2 DETAILS
C-12	12 OF 21	SITE UTILITIES PLAN
C-13	13 OF 21	SITE UTILITIES PROFILES
C-14	14 OF 21	SITE UTILITIES DETAILS
C-15	15 OF 21	LANDSCAPE PLAN
C-16	16 OF 21	LANDSCAPING PLAN DETAILS
C-17	17 OF 21	LIGHTING PLAN
C-18	18 OF 21	LIGHTING PLAN DETAILS
C-19	19 OF 21	CONSTRUCTION DETAILS
C-20	20 OF 21	CONSTRUCTION DETAILS
C-21	21 OF 21	CONSTRUCTION DETAILS

EROSION AND SEDIMENT CONTROL PLAN INDEX OF DRAWINGS

DRAWING NO.	TITLE
ES-2	EROSION AND SEDIMENT CONTROL PLAN
ES-3	EROSION AND SEDIMENT CONTROL NOTES
ES-4	EROSION AND SEDIMENT CONTROL NOTES
ES-5	EROSION AND SEDIMENT CONTROL DETAILS
ES-6	EROSION AND SEDIMENT CONTROL DETAILS

PA ONE-CALL

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE PA ONE-CALL SYSTEM AT 1-800-242-1776 NO LESS THAN THREE (3) WORKING DAYS PLUS TWO (2) HOURS PRIOR TO THE BEGINNING OF WORK. PA ONE-CALL SITE SERIAL NUMBER 20190042347 HAS BEEN ASSIGNED TO THIS PROJECT FOR DESIGN PHASE.

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF _____

ON THIS THE _____ DAY OF _____, 20____ BEFORE ME
THE UNDERSIGNED PERSONALLY APPEARED.

OWNER _____
(SIGNATURE)

OWNER _____
(PRINTED NAME)

WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY THAT THEY ARE THE OWNERS OF THE PROPERTY SHOWN ON THIS PLAN AND THAT THEY ACKNOWLEDGE THE SAME TO BE THEIR ACT AND DEED AND DESIRE THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW.

WITNESS MY HAND AND NOTORIAL SEAL THE DAY AND THE DATE ABOVE WRITTEN:

NOTARY PUBLIC MY COMMISSION EXPIRES _____

IT IS HEREBY CERTIFIED THAT THE UNDERSIGNED ARE THE OWNERS OF THE PROPERTY SHOWN ON THIS PLAT AND THAT ALL STREETS OR PARTS THEREOF, IF NOT PREVIOUSLY DEDICATED, ARE HEREBY TENDERED FOR DEDICATION TO PUBLIC USE.

OWNER _____
(SIGNATURE)

OWNER _____
(PRINTED NAME)

THIS PLAN REVIEWED BY THE DAUPHIN COUNTY PLANNING COMMISSION
THIS _____ DAY OF _____, 20____.

CHAIRMAN _____
SECRETARY _____

THIS PLAN REVIEWED BY THE SUSQUEHANNA TOWNSHIP ENGINEER
THIS _____ DAY OF _____, 20____.

TOWNSHIP ENGINEER _____

THIS PLAN RECOMMENDED FOR APPROVAL BY THE SUSQUEHANNA TOWNSHIP PLANNING COMMISSION
THIS _____ DAY OF _____, 20____.

CHAIRMAN _____
SECRETARY _____

THIS PLAN APPROVED BY THE SUSQUEHANNA TOWNSHIP BOARD OF COMMISSIONERS, AND ALL CONDITIONS IMPOSED WITH RESPECT TO SUCH APPROVAL WERE COMPLETED ON
THIS _____ DAY OF _____, 20____.

PRESIDENT _____
SECRETARY _____

THIS PLAN RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS IN AND FOR DAUPHIN COUNTY THIS _____ DAY OF _____, 20____.

INSTRUMENT # _____

I HEREBY CERTIFY THIS PLAN TO BE CORRECT AS SHOWN.

GERALD GROVE, P.E., P.L.S.
PROFESSIONAL ENGINEER
ADDRESS: SKELLY AND LOY, INC.
449 EISENHOWER BLVD., SUITE 300
HARRISBURG, PA 17111
717-232-0593 SEAL: _____

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE SURVEY AND PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE SUSQUEHANNA TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

GERALD GROVE, P.E., P.L.S.
PROFESSIONAL SURVEYOR
ADDRESS: SKELLY AND LOY, INC.
449 EISENHOWER BLVD., SUITE 300
HARRISBURG, PA 17111
717-232-0593 SEAL: _____

WETLAND STATEMENT:

1. I, _____, HEREBY CERTIFY THAT THERE ARE NO WETLANDS ON THE SUBJECT PROPERTY, THE PROPOSED PROJECT WILL NOT IMPACT OFF-SITE WETLANDS, AND PERMITS ARE NOT REQUIRED FROM THE STATE OR FEDERAL GOVERNMENT.

STORMWATER MANAGEMENT PLAN NOTES:

1. I, _____, ACKNOWLEDGE THAT THE STORMWATER BMP'S PROPOSED FOR THIS PLAN ARE FIXTURES THAT CANNOT BE ALTERED OR REMOVED WITHOUT PRIOR APPROVAL BY SUSQUEHANNA TOWNSHIP.

2. A STORMWATER BMP OPERATIONS AND MAINTENANCE (O&M) AGREEMENT HAS BEEN PREPARED FOR THIS PLAN AND IS PART OF THE STORMWATER MANAGEMENT PLAN FOR THIS PROJECT. SAID AGREEMENT SHALL BE RECORDED AS A RESTRICTIVE DEED COVENANT THAT RUNS WITH THE LAND. RECORD DRAWINGS WILL BE PROVIDED FOR ALL STORMWATER MANAGEMENT FACILITIES PRIOR TO OCCUPANCY OR RELEASE OF FINANCIAL SECURITY.

3. RECORD DRAWINGS WILL BE PROVIDED FOR ALL STORMWATER MANAGEMENT FACILITIES PRIOR TO OCCUPANCY OR RELEASE OF FINANCIAL SECURITY.

4. I, _____, HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF SUSQUEHANNA TOWNSHIP'S STORMWATER MANAGEMENT ORDINANCE.

DRAWING NO. C-1	SHEETS: 1 OF 21	"LAND DEVELOPMENT PLAN" FOR SOLID ROCK MISSIONARY BAPTIST CHURCH 2400 LOCUST LANE Susquehanna Township Dauphin County Pennsylvania	COVER SHEET
DSGN	G.C.C.G.	BY	DATE
DFTSMN	D.J.J.	D.J.J.	7/5/19
CHKR	BR.A.S.		
APPV	G.C.C.G.		
	SCALE	AS SHOWN	
	1 AS PER TOWNSHIP COMMENTS		
	REV DESCRIPTION		
<p>449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0593 FAX: (717) 232-1799 www.skelloy.com</p>			
PROJECT NUMBER: R18-0633.000	TASK: 4	DATE: MAY 21, 2019	



GENERAL NOTES

- WORK IN THIS PROJECT SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATIONS OF SUSQUEHANNA TOWNSHIP PLUS PENNDOT STANDARDS AND SPECIFICATIONS. IN CASE OF CONFLICT, THE MOST STRINGENT SHALL GOVERN.
- THE CONTRACTOR, DURING THE PERFORMANCE OF ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT, IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, CODES, AND REGULATIONS.
- THE DEVELOPER WILL COMPLY WITH ALL APPLICABLE SUSQUEHANNA TOWNSHIP ORDINANCES IN EFFECT AT THE TIME OF THE SUBMISSION OF THE PLANS.
- THE CONTRACTOR SHALL NOTIFY SUSQUEHANNA TOWNSHIP AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK AND 72 HOURS PRIOR TO EACH REQUEST FOR INSPECTION.
- THE LOCATION OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ALL EXISTING UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL CALL THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 AT LEAST 3 WORKING DAYS PLUS 2 HOURS PRIOR TO ANY EXCAVATION.
- ELEVATIONS, DIMENSIONS, AND THE LOCATIONS OF LINEAR FEATURES SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
- THE BASE MAP INFORMATION CONTAINED IN THESE DRAWINGS WAS TAKEN FROM A SKELLY AND LOY SURVEY PERFORMED IN 2018-2019.
- THE SOURCE OF TITLE FOR THE PARCEL (T.M.P. # 62-026-029) IS INSTRUMENT # 2017000031.
- THE PROJECT SITE IS SERVED BY PUBLIC WATER SUPPLY.
- THE PROJECT SITE IS SERVED BY PUBLIC SEWER.
- THE CONTRACTOR SHALL NOTIFY THE DAUPHIN COUNTY CONSERVATION DISTRICT 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLANS.
- ANY SOIL EROSION CONTROL MEASURES, IN ADDITION TO THOSE OUTLINED IN THESE PLANS, WHICH ARE DEEMED NECESSARY BY THE TOWNSHIP OR THE DAUPHIN COUNTY CONSERVATION DISTRICT SHALL BE IMPLEMENTED IMMEDIATELY BY THE CONTRACTOR, AS DIRECTED BY AN AUTHORIZED OFFICIAL.
- HEAVY, SOLID CONTOUR LINES WITH ELEVATIONS LABELED REPRESENT FINAL GRADE OF IMPROVED SURFACE.
- ALL CUT SLOPES TO BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL. ALL FILL SLOPES TO BE NO STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL UNLESS SATISFACTORILY STABILIZED AS APPROVED BY THE DAUPHIN COUNTY CONSERVATION DISTRICT.
- ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED WITH A MINIMUM OF 6 INCHES OF TOPSOIL AND SEEDED.
- ALL MATERIALS USED FOR FILL OR BACKFILL SHALL BE FREE OF WOOD, ROOTS, ROCKS, BOULDERS OR ANY OTHER NONCOMPACTIBLE SOIL TYPE MATERIAL. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN-MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY SOURCE.
- MATERIALS USED TO CONSTRUCT EMBANKMENTS FOR ANY PURPOSE OR USED TO BACKFILL AROUND DRAINAGE STRUCTURES, IN UTILITY TRENCHES, OR IN ANY OTHER DEPRESSION REQUIRING FILL OR BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST SPECIFIED IN ASTM STANDARD D-698. THE CONTRACTOR SHALL, PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACKFILLING, SUBMIT THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CERTIFICATION THAT THE SOIL TESTED IS REPRESENTATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. TESTS SHALL BE CONDUCTED BY A CERTIFIED MATERIALS TESTING LABORATORY AND THE CERTIFICATIONS MADE BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE LABORATORY.
- ALL EXCAVATIONS, INCLUDING TRENCHES, SHALL BE KEPT DRY TO PROTECT THEIR INTEGRITY.
- ALL CONSTRUCTION DEBRIS INCLUDING EXCESS EXCAVATED MATERIAL, SCRAP WOOD, BRICKS, BLOCKS, ETC. SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- THE HORIZONTAL DATUM FOR THIS PROJECT IS NAD 83 AND VERTICAL DATUM IS NAVD 88. SURVEY CONTROL POINTS AND COORDINATE TABLE ARE SHOWN ON DRAWING NO. C-3.
- THE PA ONE-CALL HAS BEEN CONTACTED AND ANY KNOWN EASEMENTS, RIGHTS-OF-WAY, AND UTILITIES HAVE BEEN SHOWN ON THE PLANS. THE PA ONE-CALL SERIAL NUMBER FOR THIS PROJECT IS 20190042347.
- THE APPLICANT/DEVELOPER IS RESPONSIBLE FOR THE PAYMENT AND PLACEMENT OF ALL STREET AND TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS REQUIRED FOR THIS PROJECT AS DEEMED NECESSARY BY SUSQUEHANNA TOWNSHIP.
- THE OWNER OF THE LAND IS RESPONSIBLE FOR OPERATION AND MAINTENANCE OF STORMWATER FACILITIES.
- THERE ARE NO FLOODPLAINS ON THIS PROPERTY PER FLOOD INSURANCE RATE MAP, MAP NUMBER 42043C0340D.
- A SEWAGE FACILITIES PLANNING MODULE HAS BEEN SUBMITTED TO THE SUSQUEHANNA TOWNSHIP SEWER AUTHORITY IN COMPLIANCE WITH THE REQUIREMENTS OF THE PA SEWAGE FACILITIES ACT AND CHAPTER 71 OF TITLE 25 OF THE PA CODE.
- SANITARY SEWER PLANS AS CONTAINED IN THIS PLAN SET HAVE BEEN SUBMITTED TO THE SUSQUEHANNA TOWNSHIP SEWER AUTHORITY FOR REVIEW AND APPROVAL.
- A ZONING PERMIT SHALL BE REQUIRED FOR THE PLAN.
- PRIOR TO THE ERECTION OF ANY SIGNS, A SIGN PLAN SHALL BE SUBMITTED TO THE TOWNSHIP FOR REVIEW AND APPROVAL.
- ALL TREES IDENTIFIED TO BE PRESERVED SHALL BE FIELD MARKED AND FENCED OFF FOR PROTECTION DURING CONSTRUCTION.
- NOTHING SHALL BE PLANTED, CONSTRUCTED, OR INSTALLED WITHIN AN EASEMENT THAT WILL AFFECT THE FUNCTIONALITY OF SAID EASEMENT.
- THE OWNER OF THE LAND GRANTS THE TOWNSHIP OR THEIR DESIGNEE ACCESS TO THE STORMWATER MANAGEMENT FACILITIES IN THE CASE OF AN EMERGENCY TO REPAIR FAILING FACILITY AND THE RIGHT TO INSPECT SAID STORMWATER FACILITIES LOCATED ON THE SITE FROM THE NEAREST PUBLIC RIGHT-OF-WAY UPON THE TOWNSHIP NOTIFYING SAID PROPERTY OWNERS.
- THE OVERFLOW PARK AREA AS SHOWN ON THE PLANS SHALL BE CONSTRUCTED AS A STABILIZED VEGETATIVE AREA.
- BUILDING PERMIT IS REQUIRED FOR ANY RETAINING WALL OVER FOUR (4) FEET IN HEIGHT PER PA UCC REGULATIONS.
- THE STREET ADDRESS NUMBER WILL COMPLY WITH SECTION 22-1112 OF SALDO.
- ALL OUTSIDE STORAGE OF MATERIALS IS PROHIBITED.
- STORAGE OF MAINTENANCE VEHICLES AND RELATED APPARATUSES SHALL BE WITHIN WHOLLY ENCLOSED BUILDINGS.
- ALL ROOF-TOP MOUNTED EQUIPMENT WILL BE SCREENED FROM VIEW.
- ALL ELECTRIC AND TELEPHONE LINES INCLUDING STREET LIGHTING, SHALL BE PLACED UNDERGROUND.
- SIDEWALKS SHALL BE INSPECTED BY THE MUNICIPAL ENGINEER OR HIS DESIGNATED AGENT AFTER THE FORMS HAVE BEEN PLACED, JUST PRIOR TO THE POURING OF CONCRETE AND AFTER THE COMPLETION OF ALL WORK.
- THERE ARE NO EXISTING OR PROPOSED COVENANTS RUNNING WITH THE LAND.

TABLE OF SITE DATA

TYPE OF DEVELOPMENT:	WORSHIP CENTER AND COMMUNITY CENTER
ZONING DISTRICT:	R-4 RESIDENTIAL URBAN DISTRICT
TOTAL TRACT AREA:	4.59 AC
TOTAL AREA TO BE DEVELOPED:	4.59 AC
TOTAL AREA OF PROPOSED RECREATION:	N/A
TOTAL NUMBER OF LOTS:	1
TOTAL NUMBER OF DWELLING UNITS:	N/A
MINIMUM LOT SIZE PROPOSED:	N/A
PROPOSED WATER SUPPLY:	PUBLIC
PROPOSED SEWAGE DISPOSAL:	PUBLIC

ENVIRONMENTAL NOTES:

- CLEAN FILL IS DEFINED AS UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT SOLID MATERIAL. THIS INCLUDES SOIL, ROCK, STONE, AND DREDGED MATERIAL.
- ENVIRONMENTAL DUE DILIGENCE - REGARDING CLEAN FILL IS DEFINED AS INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS.
- ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- 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 FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.

SITE ANALYSIS

ZONING DISTRICT:	R-4 RESIDENTIAL URBAN DISTRICT
USE:	EXISTING: VACANT PROPOSED: WORSHIP CENTER AND COMMUNITY CENTER
WATER SUPPLY SOURCE:	PUBLIC WATER
SEWAGE DISPOSAL SOURCE:	PUBLIC SEWER
LIMIT OF DISTURBANCE:	3.05 AC.

ZONING REQUIREMENT:

	REQUIREMENT	PROPOSED
MIN. LOT AREA:	20,000 SF	199,940.40 SF
MIN LOT WIDTH AT BSL:	100'-0"	241.28'
MAX. BUILDING COVERAGE:	30%	6.32%
MIN. VEGETATIVE COVER:	30%	69.07%
MAX. IMPERVIOUS COVERAGE:	70%	30.94%
MAX. BUILDING HEIGHT:	35'-0"	18'-9 3/4"

BUILDING SETBACKS REQUIREMENT

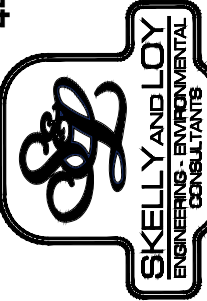
MIN. FRONT YARD:	50'-0"
MIN. SIDE YARD:	20'-0"
MIN. REAR YARD:	50'-0"
LANDSCAPE BUFFER:	15'-0"

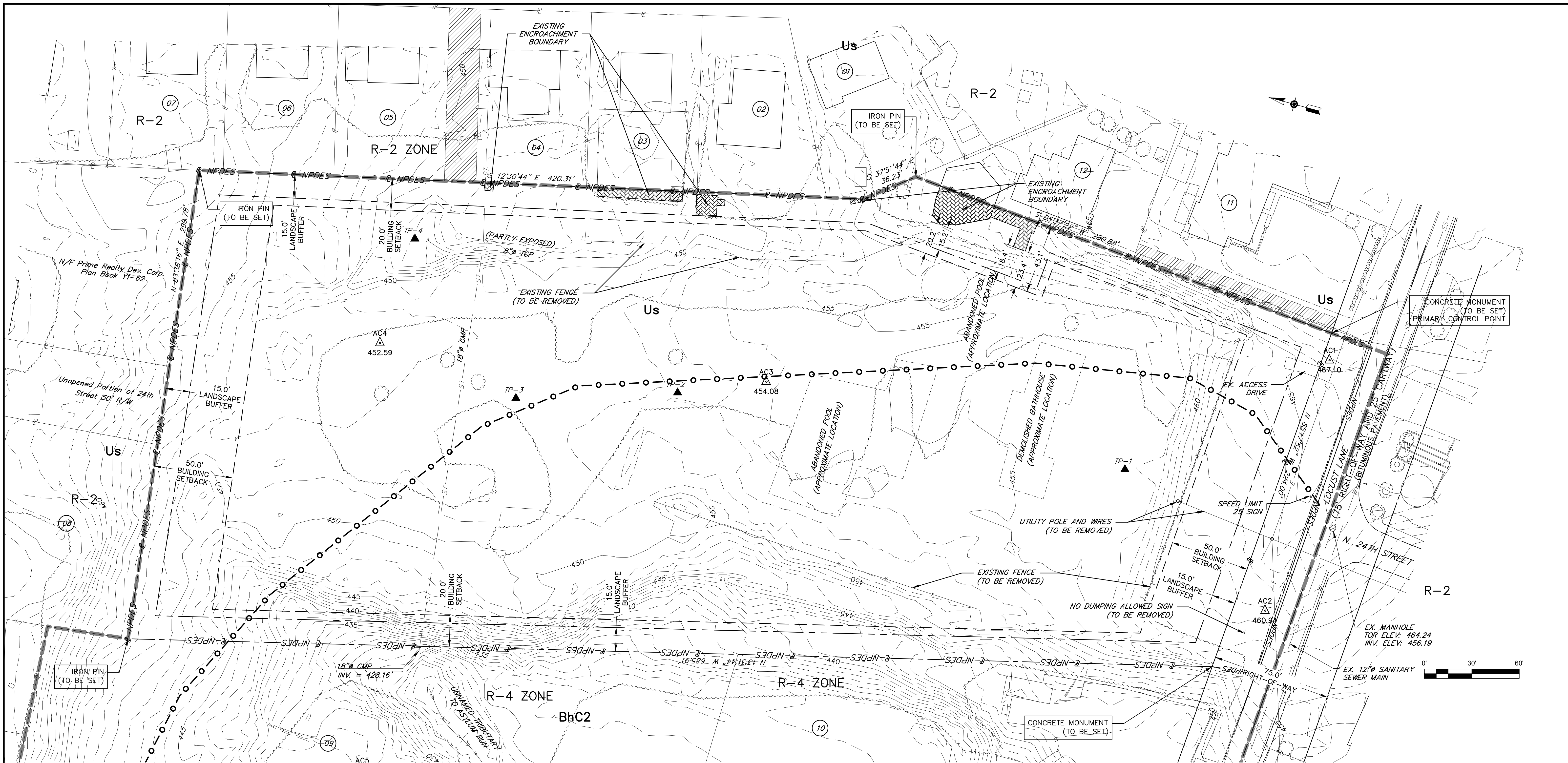
PARKING CALCULATIONS

CHURCH AND RELIGIOUS INSTITUTIONS:	1 SPACE FOR EACH 3.5 SEATS IN A PLACE OF WORSHIP
384 OCC / 3.5 =	110 SPACES
HANDICAP SPACES:	5 SPACES
	110 SPACES
	6 SPACES

AREA CALCULATIONS (POST DEVELOPMENT) EXCLUDING ROAD R/W'S

	ACRES	PERCENT OF LOT AREA
BUILDING AREA:	0.29 AC	6.32%
PAVEMENT / SIDEWALKS:	1.13 AC	24.62%
VEGETATED AREA:	3.17 AC	69.06%
TOTAL LOT AREA:	4.59 AC	100.00%

DRAWING NO. C-2	SHEETS: 2 OF 21	"LAND DEVELOPMENT PLAN" FOR SOLID ROCK MISSIONARY BAPTIST CHURCH 2400 LOCUST LANE Susquehanna Township Dauphin County Pennsylvania
DSGN	G.C.C.G.	
DFTSMN	D.J.J.	
CHKR	B.A.S.	
APPV	G.C.C.G.	
SCALE	NO SCALE	
BY	DATE	
1	AS PER TOWNSHIP COMMENTS	
REV	DESCRIPTION	
PROJECT NUMBER: R18-0633.000	SUBTASK: -	
TASK: 4	DATE: MAY 21, 2019	
449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0593 FAX: (717) 232-1799 www.skellyjoy.com 		



LEGEND

- AC4 452.59 SURVEY CONTROL POINTS
- PROPERTY AND NPDES BOUNDARY LINE
- LEGAL RIGHT-OF-WAY (75')
- ROAD CENTER LINE (LOCUST LANE)
- ADJACENT PROPERTY LINE
- EASEMENT ZONES
- BUILDING SETBACK LINE
- LANDSCAPE BUFFER LINE
- ZONING BOUNDARY
- EXISTING BUILDINGS
- EXISTING RUINS
- EXISTING ROADS
- EXISTING CURBING
- EXISTING FENCING
- EXISTING TREE AND BRUSH LINE
- EXISTING TREE
- EXISTING HEDGE ROW
- EXISTING OVERHEAD UTILITIES LINE
- EXISTING UTILITIES POLE
- EXISTING UNDERGROUND GAS LINE
- EXISTING UNDERGROUND STORM SEWER LINE
- EXISTING UNDERGROUND SANITARY SEWER LINE
- EXISTING UNDERGROUND WATER SUPPLY LINE
- EXISTING INDEX CONTOUR LINE
- EXISTING INTERMEDIATE CONTOUR LINE
- EXISTING SOIL LIMITS
- EXISTING ENCROACHMENT BOUNDARY

NOTES:

1. ABANDONED POOL LOCATIONS SHOWN HEREON ARE ASSUMED TO HAVE BEEN "FILLED-IN" OR "BROKEN-UP" AND DEMOLISHED.
2. SOIL TEST RESULTS

	LIMITING ZONE	INFILTRATION RATE
▲ TP-1	EL. 448.5	3.5 in/hr
▲ TP-2	EL. 443.8	3.5 in/hr
▲ TP-3	EL. 443.8	3.5 in/hr
▲ TP-4	-	3.5 in/hr

ON-SITE SOILS			
MAP UNIT SYMBOL	HSG	MAP UNIT NAME	
BhC2	B	BERKS CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES	
Us	B	URBAN LAND, SHALE MATERIALS	

SURVEY CONTROL POINT LIST

NOTE: ALL MAPPING AND COORDINATES ARE LOCATED IN PENNSYLVANIA STATE PLANE NAD 83 SOUTH ZONE DATUM, AND ELEVATION DATA IS IN NAVD 88 DATUM.

DESCRIPTION	NORTHING	EASTING	ELEVATION
AC1	348,437.4850	2,218,404.7130	467.10
AC2	348,435.7970	2,218,241.1170	460.94
AC3	348,778.0080	2,218,299.3660	454.08
AC4	349,020.3140	2,218,259.8260	452.59
AC5	348,961.1310	2,217,995.8750	436.16

ADJACENT PROPERTY TABLE

PROPERTY ID	PROPERTY OWNER	DEED BOOK & PAGE	Plan Book/Page
01	MARGIE L. LAWSON	INS# 20100030195	W/12
02	LEONARD F. EVANS	3490 & 465	W/12
03	AMIE L. YAGER	INS# 20120038119	W/12
04	DEBBIE J. SEELEY	INS# 20150026198	W/12
05	CRYSTAL R. SMITH	2286 & 112	W/12
06	JOHN T. MADDEN	M-53 & 347	W/12
07	MAMIE L. WALKER	1151 & 248	W/12
08	JENELLE S. ROACH	INS# 20180017479	Y/62
09	SUSQUEHANNA TWP.	0-54 & 181	n/a
10	ROKITA PROP., LLC.	INS# 20130037963	n/a
11	EDDIE L. RUTH, SR.	INS# 20170004273	U/15
12	IVELISSE CLASS	INS# 20160034097	n/a

DRAWING NO. **C-3**
SHEETS: **3 OF 21**

"LAND DEVELOPMENT PLAN"
FOR
Solid Rock Missionary Baptist Church
2400 LOCUST LANE
Susquehanna Township Dauphin County
Pennsylvania

EXISTING CONDITIONS PLAN

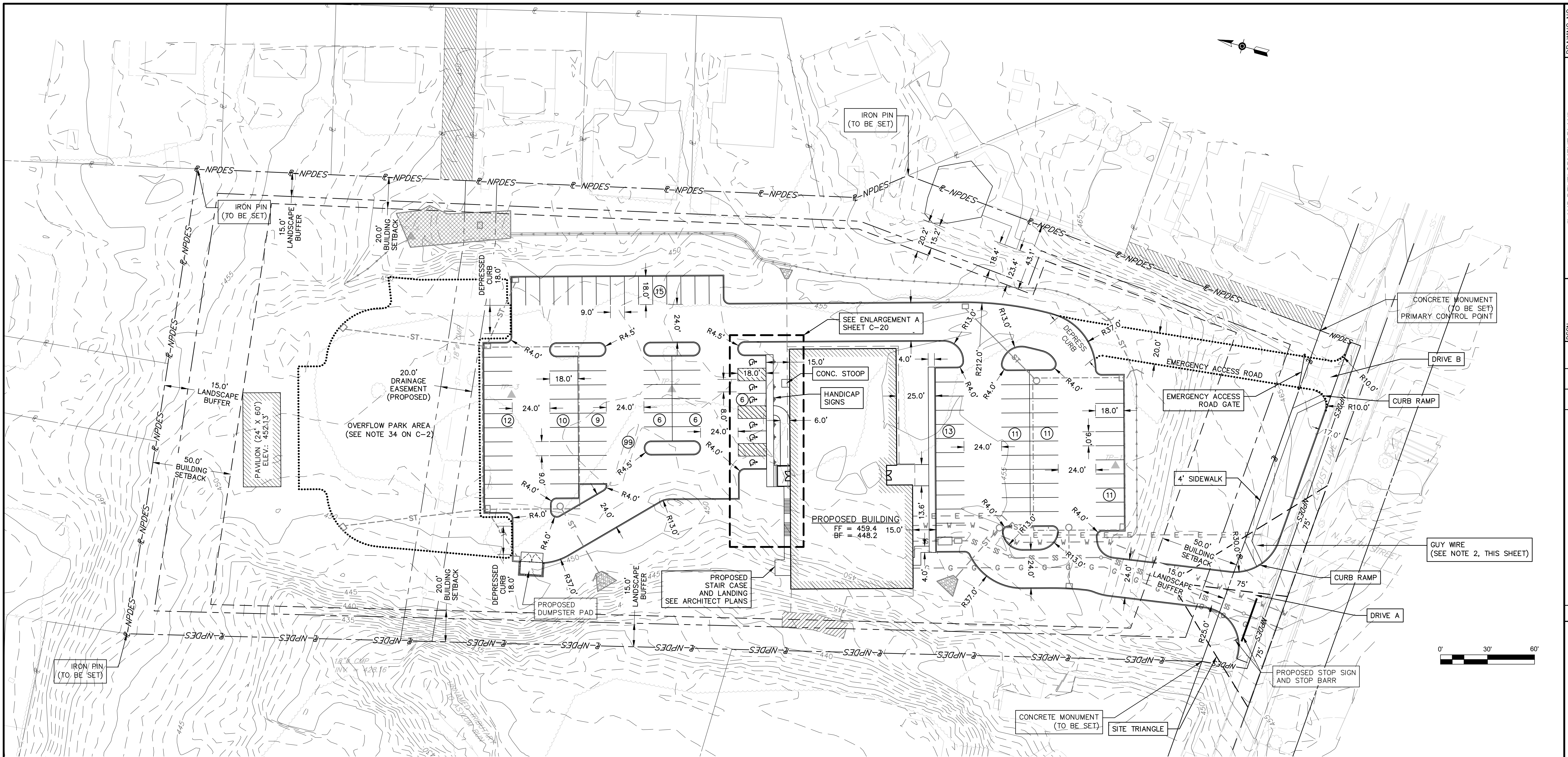
DSGN	G.C.C.G.	DATE	
DTSW	D.J.J.	DATE	
CHKR	B.A.S.	DATE	
APPV	G.C.C.G.	DATE	
BY	G.C.C.G.	DATE	

SCALE 1" = 30'

1 REVISED PER HRG COMMENTS LETTER DATED JUNE 13, 2019 ZEG GCG 7/1/19
REV DESCRIPTION

449 EISENHOWER BOULEVARD
SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593
FAX: (717) 232-1799
www.skellyjoy.com

PROJECT NUMBER: **R18-0633.000**
SUBTASK: **4**
DATE: **MAY 21, 2019**



LEGEND

--- R-NPDES ---	PROPERTY AND NPDES BOUNDARY LINE	-----	PROPOSED LIMIT OF DISTURBANCE
-----	LEGAL RIGHT-OF-WAY (75')	-----	PROPOSED BUILDING LIMITS
-----	ROAD CENTER LINE (LOCUST LANE)	-----	PROPOSED EDGE OF ASPHALT
-----	ADJACENT PROPERTY LINE	-----	PROPOSED EDGE OF STABILIZED GRASS AREA
-----	EASEMENT ZONES	-----	PROPOSED RETAINING WALL
-----	BUILDING SETBACK LINE	-----	PROPOSED HANDICAP SIGNS
-----	LANDSCAPE BUFFER LINE	-----	PROPOSED CONTOURS
-----	ZONING BOUNDARY	-----	PROPOSED STORMWATER SUBSURFACE INFILTRATION BASIN
-----	EXISTING BUILDINGS	-----	PROPOSED STORMWATER INLET
-----	EXISTING RUINS	-----	PROPOSED STORMWATER PIPE END TREATMENTS
-----	EXISTING ROADS	-----	PROPOSED STORMWATER ROCK APRONS
-----	EXISTING CURBING	-----	PROPOSED STORMWATER MANHOLE
-----	EXISTING FENCING	-----	PROPOSED STORMWATER UNDERGROUND PIPES
-----	EXISTING TREE AND BRUSH LINE	-----	PROPOSED STORMWATER ROOF DRAIN CLEANOUTS
-----	EXISTING TREE	-----	PROPOSED STORMWATER ROOF DRAIN PIPES
-----	EXISTING HEDGE ROW	-----	PROPOSED SANITARY SEWER LINE
-----	EXISTING OVERHEAD UTILITIES LINE	-----	PROPOSED SANITARY SEWER CLEANOUT
-----	EXISTING UTILITIES POLE	-----	PROPOSED WATER LINE
-----	EXISTING UNDERGROUND GAS LINE	-----	PROPOSED GAS LINE
-----	EXISTING UNDERGROUND STORM SEWER LINE	-----	PROPOSED ELECTRIC LINE
-----	EXISTING UNDERGROUND SANITARY SEWER LINE	-----	
-----	EXISTING UNDERGROUND WATER SUPPLY LINE	-----	
-----	EXISTING INDEX CONTOUR LINE	-----	
-----	EXISTING INTERMEDIATE CONTOUR LINE	-----	

NOTES:

1. THE AREA WITHIN THE SIGHT TRIANGLE SHALL BE KEPT CLEAR OF ANY VEGETATION EXCEEDING 30" IN HEIGHT.
2. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY TO RELOCATE GUY WIRE TO AVOID CONFLICT WITH PROPOSED SIDEWALK.
3. NOTHING SHALL BE PLANTED OR PLACED WITHIN THE DRAINAGE EASEMENT WHICH WOULD ADVERSELY AFFECT THE FUNCTION OF THE DRAINAGE EASEMENT, OR CONFLICT WITH ANY CONDITIONS ASSOCIATED WITH SUCH DRAINAGE EASEMENT.
4. BUILDING PERMIT IS REQUIRED FOR ANY RETAINING WALL OVER FOUR (4) FEET IN HEIGHT PER PA UCC REGULATIONS.
5. ALL ELECTRIC AND TELEPHONE LINES INCLUDING STREET LIGHTING, SHALL BE PLACED UNDERGROUND.

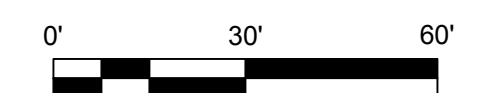
SIGHT DISTANCE
LOCUST LANE - SPEED LIMIT 25 MPH

DRIVE 'A'	REQ'D	ACTUAL
SIGHT DISTANCE LEFT	250'	400'+
SIGHT DISTANCE RIGHT	195'	250'+*

* TREE / BRUSH REMOVAL REQUIRED TO ACHIEVE THE MINIMUM REQ'D OF 195'. ONCE TREES / BRUSH REMOVED, SIGHT DISTANCE SHOULD EXCEED 250'.

DRIVE 'B'

NO SIGHT DISTANCE OR SIGHT TRIANGLE REQUIRED SINCE DRIVE 'B' IS ENTRANCE ONLY FOR EMERGENCY VEHICLE ACCESS.



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SKELLY AND JOY
 ENGINEERS AND ARCHITECTS

DESIGN: G.C.C.G.
 DTSMM: D.J.J.
 CHKR: E.A.S.
 APPV: G.C.C.G.

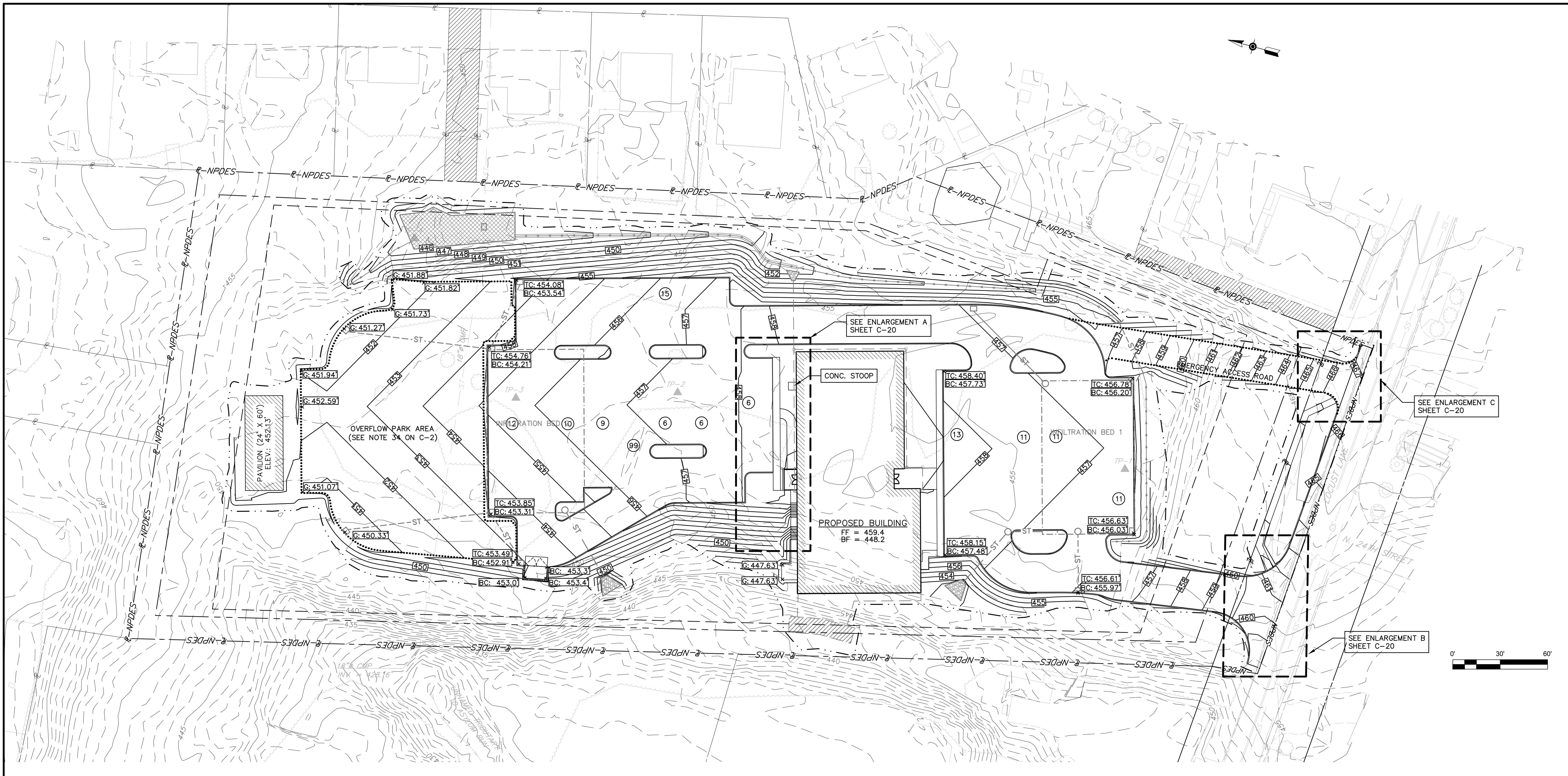
"LAND DEVELOPMENT PLAN"
 FOR
 Solid Rock Missionary Baptist Church
 2400 LOCUST LANE
 Susquehanna Township Dauphin County Pennsylvania

SITE PLAN
 SCALE: 1" = 30'

BY: D.J.J. G.C.C.G. 7/5/19
 DATE: 7/5/19

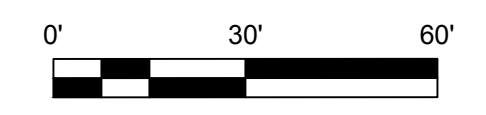
REV. DESCRIPTION
 1 AS PER TOWNSHIP COMMENTS

DRAWING NO. C-4
 SHEETS: 4 OF 21

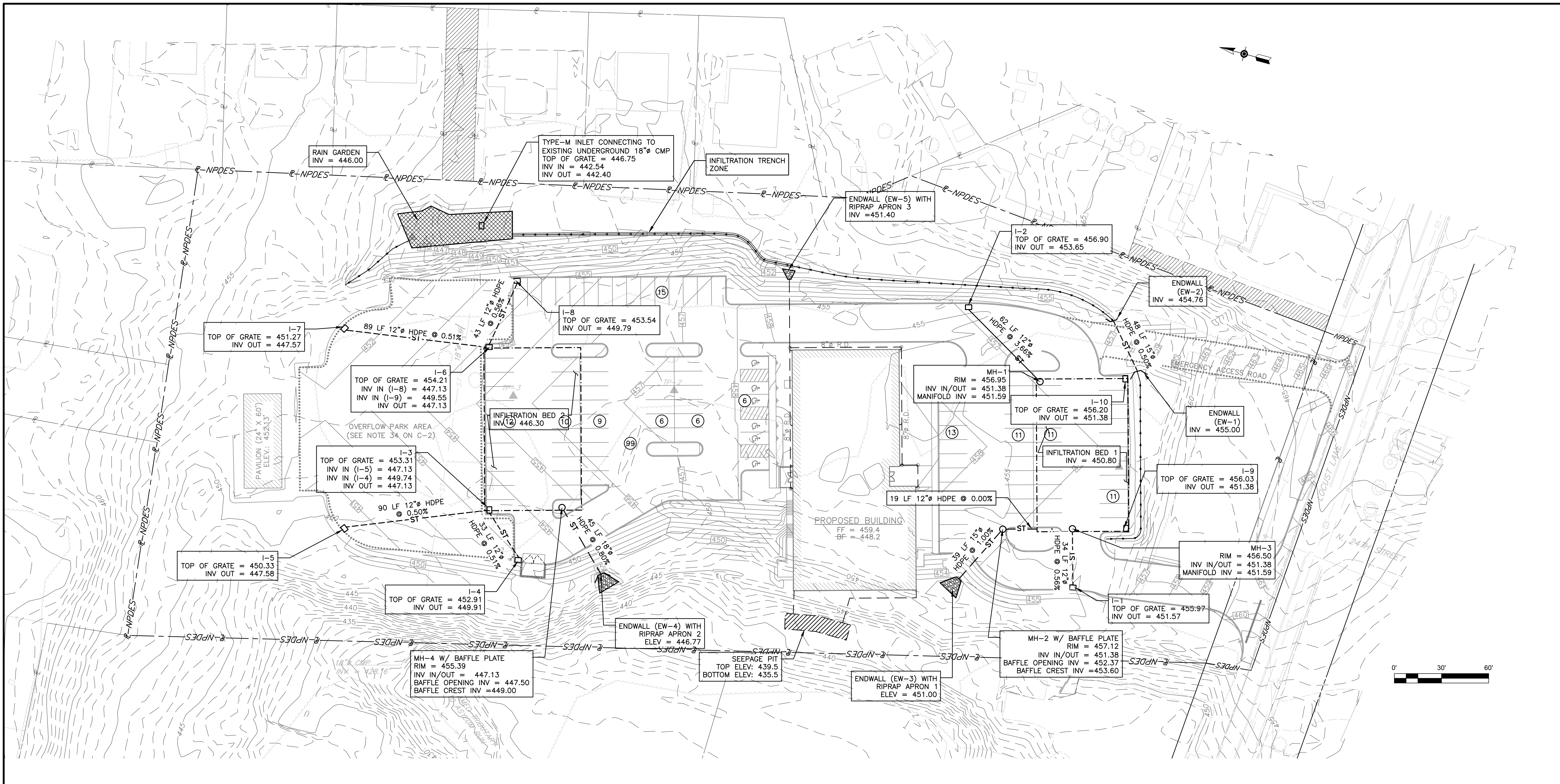


LEGEND

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| <ul style="list-style-type: none"> --- R-NPDES --- PROPERTY AND NPDES BOUNDARY LINE --- LEGAL RIGHT-OF-WAY (75') --- --- ROAD CENTER LINE (LOCUST LANE) --- --- ADJACENT PROPERTY LINE --- --- EASEMENT ZONES --- --- BUILDING SETBACK LINE --- --- LANDSCAPE BUFFER LINE --- --- ZONING BOUNDARY --- --- EXISTING BUILDINGS --- --- EXISTING RUINS --- --- EXISTING ROADS --- --- EXISTING CURBING --- --- EXISTING FENCING --- --- EXISTING TREE AND BRUSH LINE --- --- EXISTING TREE --- --- EXISTING HEDGE ROW --- --- EXISTING OVERHEAD UTILITIES LINE --- --- EXISTING UTILITIES POLE --- --- G --- EXISTING UNDERGROUND GAS LINE --- ST --- EXISTING UNDERGROUND STORM SEWER LINE --- SS --- EXISTING UNDERGROUND SANITARY SEWER LINE --- W --- EXISTING UNDERGROUND WATER SUPPLY LINE --- 450 --- EXISTING INDEX CONTOUR LINE --- --- EXISTING INTERMEDIATE CONTOUR LINE | <ul style="list-style-type: none"> --- PROPOSED LIMIT OF DISTURBANCE --- --- PROPOSED BUILDING LIMITS --- --- PROPOSED EDGE OF ASPHALT --- --- PROPOSED EDGE OF STABILIZED GRASS AREA --- --- PROPOSED RETAINING WALL --- --- PROPOSED HANDICAP SIGNS --- --- 450 --- PROPOSED CONTOURS --- PROPOSED STORMWATER SUBSURFACE INFILTRATION BASIN --- PROPOSED STORMWATER INLET --- PROPOSED STORMWATER PIPE END TREATMENTS --- PROPOSED STORMWATER ROCK APRONS --- PROPOSED STORMWATER MANHOLE --- ST --- PROPOSED STORMWATER UNDERGROUND PIPES --- PROPOSED STORMWATER ROOF DRAIN CLEANOUTS --- PROPOSED STORMWATER ROOF DRAIN PIPES |
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PROJECT NUMBER: R18-0633.000	TASK: 4	DATE: MAY 21, 2019	449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0593 FAX: (717) 232-1799 www.stekeljoy.com
"LAND DEVELOPMENT PLAN" FOR Solid Rock Missionary Baptist Church 2400 LOCUST LANE Susquehanna Township Dauphin County Pennsylvania			
DSGN G.C.C.G. D.J.J. G.C.C.G. 17/5/19 DFTSMN D.J.J. E.A.S. CHKR E.A.S. APPV G.C.C.G. SCALE 1" = 30' BY: D.J.J. DATE:			
DRAWING NO. C-5 SHEETS: 5 OF 21 GRADING PLAN			



LEGEND

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| <ul style="list-style-type: none"> ---R-NPDES--- PROPERTY AND NPDES BOUNDARY LINE ---L--- LEGAL RIGHT-OF-WAY (75') ---C--- ROAD CENTER LINE (LOCUST LANE) ---A--- ADJACENT PROPERTY LINE ---E--- EASEMENT ZONES ---S--- BUILDING SETBACK LINE ---L--- LANDSCAPE BUFFER LINE ---Z--- ZONING BOUNDARY ---B--- EXISTING BUILDINGS ---R--- EXISTING RUINS ---Rd--- EXISTING ROADS ---C--- EXISTING CURBING ---F--- EXISTING FENCING ---T--- EXISTING TREE AND BRUSH LINE ---T--- EXISTING TREE ---H--- EXISTING HEDGE ROW ---U--- EXISTING OVERHEAD UTILITIES LINE ---P--- EXISTING UTILITIES POLE ---G--- EXISTING UNDERGROUND GAS LINE ---ST--- EXISTING UNDERGROUND STORM SEWER LINE ---SS--- EXISTING UNDERGROUND SANITARY SEWER LINE ---W--- EXISTING UNDERGROUND WATER SUPPLY LINE ---450--- EXISTING INDEX CONTOUR LINE ------ EXISTING INTERMEDIATE CONTOUR LINE | <ul style="list-style-type: none"> --- PROPOSED LIMIT OF DISTURBANCE --- PROPOSED BUILDING LIMITS --- PROPOSED EDGE OF ASPHALT --- PROPOSED EDGE OF STABILIZED GRASS AREA --- PROPOSED RETAINING WALL --- PROPOSED HANDICAP SIGNS --- PROPOSED CONTOURS --- PROPOSED STORMWATER SUBSURFACE INFILTRATION BASIN --- PROPOSED STORMWATER INLET --- PROPOSED STORMWATER PIPE END TREATMENTS --- PROPOSED STORMWATER ROCK APRONS --- PROPOSED STORMWATER MANHOLE --- PROPOSED STORMWATER UNDERGROUND PIPES --- PROPOSED STORMWATER ROOF DRAIN CLEANOUTS --- PROPOSED STORMWATER ROOF DRAIN PIPES |
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- NOTE:
1. A BLANKET STORMWATER EASEMENT IS PROVIDED ON THE ENTIRE SITE. NOTHING SHALL BE PLANTED OR CONSTRUCTED THAT WOULD AFFECT THE FUNCTIONALITY OF SAID EASEMENT.
 2. ALL STORMWATER CONVEYANCE PIPING SHALL HAVE WATERTIGHT JOINTS.
 3. ALL FRAMES, CONCRETE TOPS, AND GRADE ADJUSTMENT RINGS SHALL BE SET IN A FULL BED OF MORTAR

PROJECT NUMBER: R18-0633.000	TASK: 4	DATE: MAY 21, 2019	449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0693 FAX: (717) 232-1799 www.stekeljoy.com
STORMWATER PLAN			
"LAND DEVELOPMENT PLAN" FOR Solid Rock Missionary Baptist Church 2400 LOCUST LANE Susquehanna Township, Dauphin County, Pennsylvania			
C-6 SHEETS: 6 OF 21			
DSGN	G.C.C.G.	D.J.J.	SCALE: 1" = 30'
CHKR	APPV	G.C.C.G.	BY: DATE
			1 AS PER TOWNSHIP COMMENTS
			REV DESCRIPTION

[CONSTRUCTION SEQUENCE OF EACH STRUCTURAL BMP]

[PA DEP BMP 6.7.2] RE-VEGETATE DISTURBED AREAS/LANDSCAPE RESTORATION

- 1. CONFIRM SITE IS SUITABLE FOR RESTORATION, SHOULD BE SUNNY, OPEN AND WELL-VENTILATED.
2. EVALUATE SITE'S PHYSICAL CONDITIONS (SOIL ATTRIBUTES, GEOLOGY, TERRAIN)
3. EVALUATE SITE'S VEGETATIVE FEATURES (DESIRABLE AND UNDESIRABLE SPECIES, NATIVE SPECIES, AND SENSITIVE HABITATS).
4. AREAS WITH A HISTORY OF HEAVY WEED GROWTH MAY REQUIRE A FULL YEAR OR LONGER TO PREPARE FOR PLANTING
5. SELECT PLANTS THAT ARE WELL ADAPTED TO THE SPECIFIC SITE CONDITIONS. MEADOW PLANTS MUST BE ABLE TO OUT COMPETE WEED SPECIES IN THE FIRST FEW YEARS AS THEY BECOME ESTABLISHED.
6. ALL WEEDS OR EXISTING VEGETATION MUST BE ELIMINATED PRIOR TO SEEDING.
7. PERENNIAL WEEDS MAY REQUIRE YEAR LONG SMOTHERING, REPEATED SPRAYINGS WITH HERBICIDES, OR REPEATED TILLAGE WITH EQUIPMENT THAT CAN UPROOT AND KILL PERENNIAL WEEDS.
8. PLANTING CAN TAKE PLACE FROM SPRING THAW THROUGH JUNE 30 OR FROM SEPTEMBER 1 THROUGH SOIL FREEZE-UP ('DORMANT SEEDING')
9. PLANTING IN JULY AND AUGUST IS GENERALLY NOT RECOMMEND DUE TO THE FREQUENCY OF DROUGHT DURING THIS TIME.
10. SEEDING CAN BE ACCOMPLISHED BY A VARIETY OF METHODS: NO-TILL SEEDER FOR MULTI-ACRE PLANTING; BROADCAST SEEDER; HAND BROADCAST FOR SMALL AREAS OF ONE ACRE OR LESSS.
11. SEED QUALITY IS CRITICAL AND A SEED MIX SHOULD BE USED WITH A MINIMUM PERCENTAGE OF NON-SEED PLANT PARTS.

[PA DEP BMP 6.4.3] SUBSURFACE INFILTRATION BED

- 1. PROTECT INFILTRATION BASIN AREA FROM COMPACTION PRIOR TO INSTALLATION.
2. IF POSSIBLE, INSTALL INFILTRATION BASIN DURING LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY.
3. THE EXISTING SUBGRADE UNDER THE BED AREAS SHOULD NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC PRIOR TO GEOTEXTILE AND STONE BED PLACEMENT.
4. WHERE EROSION OF SUBGRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING, THIS MATERIAL SHOULD BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE (OR EQUIVALENT) AND LIGHT TRACTOR. ALL FINE GRADING SHOULD BE DONE BY HAND. ALL BED BOTTOMS SHOULD BE AT LEVEL GRADE.
5. INSTALL UPSTREAM AND DOWNSTREAM CONTROL STRUCTURES, CLEANOUTS, PERFORATED PIPING, AND ALL OTHER NECESSARY STORMWATER STRUCTURES.
6. GEOTEXTILE AND BED AGGREGATE SHOULD BE PLACED IMMEDIATELY AFTER APPROVAL OF SUBGRADE PREPARATION AND INSTALLATION OF STRUCTURES. GEOTEXTILE SHOULD BE PLACED IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDATIONS. ADJACENT STRIPS OF GEOTEXTILE SHOULD OVERLAP A MINIMUM OF 16 INCHES. IT SHOULD ALSO BE SECURED AT LEAST 4 FEET OUTSIDE OF BED IN ORDER TO PREVENT ANY RUNOFF OR SEDIMENT FROM ENTERING THE STORAGE BED. THIS EDGE STRIP SHOULD REMAIN IN PLACE UNTIL ALL BARE SOILS CONTIGUOUS TO BEDS ARE STABILIZED AND VEGETATED. AS THE SITE IS FULLY STABILIZED, EXCESS GEOTEXTILE ALONG BED EDGES CAN BE CUT BACK TO THE EDGE OF THE BED.
7. INSTALL AND MAINTAIN ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES (AS PER THE PENNSYLVANIA EROSION AND SEDIMENTATION CONTROL PROGRAM MANUAL) DURING CONSTRUCTION.
8. CLEAN-WASHED, UNIFORMLY GRADED AGGREGATE SHOULD BE PLACED IN THE BED IN MAXIMUM 8-INCH LIFTS. EACH LAYER SHOULD BE LIGHTLY COMPACTED, WITH CONSTRUCTION EQUIPMENT KEPT OFF THE BED BOTTOM AS MUCH AS POSSIBLE.
9. FOR PRIORITY INFILTRATION SYSTEMS FOLLOW MANUFACTURE CONSTRUCTION SEQUENCE/SPECIFICATIONS.
10. AFTER INSTALLATION, PREVENT SEDIMENT-LADEN WATER FROM ENTERING INLETS AND PIPES.
11. AFTER INSTALLATION, FENCE OFF INFILTRATION BED UNTIL SUCH TIME AS SITE IS READY FOR PERMANENT STABILIZATION (PAVED). VEHICLE TRAVEL OVER BEDS IS PROHIBITED DURING THIS TIME.
12. IF NECESSARY, EXCAVATE INFILTRATION BASIN BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE.
13. IF APPLICABLE SEED AND STABILIZE TOPSOIL.
14. IF POSSIBLE, DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.

[PA DEP BMP 6.4.4] INFILTRATION TRENCH / VEGETATED CHANNEL

- 1. PROTECT INFILTRATION TRENCH AREA FROM COMPACTION PRIOR TO INSTALLATION.
2. IF POSSIBLE, INSTALL INFILTRATION TRENCH DURING LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT LADEN WATER FROM ENTERING INLETS AND PIPES.
3. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
4. EXCAVATE INFILTRATION TRENCH BOTTOM TO A UNIFORM UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE. GRADE BOTTOM OF CHANNEL AS INDICATED ON CONSTRUCTION DRAWINGS
5. PLACE NONWOVEN GEOTEXTILE ALONG BOTTOM AND SIDES OF TRENCH*. NONWOVEN GEOTEXTILE ROLLS SHOULD OVERLAP BY A MINIMUM OF 16 INCHES WITHIN THE TRENCH. FOLD BACK AND SECURE EXCESS GEOTEXTILE DURING STONE PLACEMENT.
6. INSTALL UPSTREAM AND DOWNSTREAM CONTROL STRUCTURES, CLEANOUTS, ETC.
7. PLACE UNIFORMLY GRADED, CLEAN-WASHED AGGREGATE IN 8-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS.
8. IF APPLICABLE INSTALL CONTINUOUSLY PERFORATED PIPE AS INDICATED ON PLANS. BACKFILL WITH UNIFORMLY GRADED, CLEAN-WASHED AGGREGATE IN 8-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS.
9. FOLD AND SECURE NONWOVEN GEOTEXTILE OVER INFILTRATION TRENCH, WITH MINIMUM OVERLAP OF 16-INCHES.
10. PLACE 6-INCH LIFT OF APPROVED TOPSOIL OVER INFILTRATION TRENCH, AS INDICATED ON PLANS.
11. SEED AND STABILIZE TOPSOIL.
12. DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.
13. ANY SEDIMENT THAT ENTERS INLETS DURING CONSTRUCTION IS TO BE REMOVED WITHIN 24 HOURS.

[PA DEP BMP 6.4.5] RAIN GARDEN/BIO-INFILTRATION

- 1. EXISTING SUB-GRADE IN BIORETENTION AREAS SHALL NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC.
2. INITIAL EXCAVATION CAN BE PERFORMED DURING ROUGH SITE GRADING BUT SHALL NOT BE CARRIED TO WITHIN ONE FEET OF THE FINAL BOTTOM ELEVATION. FINAL EXCAVATION SHOULD NOT TAKE PLACE UNTIL ALL DISTURBED AREAS IN THE DRAINAGE AREA HAVE BEEN STABILIZED.
3. WHERE EROSION OF SUB-GRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING IN THE GRADED BOTTOM, THIS MATERIAL SHALL BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE OR EQUIVALENT BY LIGHT TRACTOR.
4. BRING SUB-GRADE OF BIORETENTION AREA TO LINE, GRADE, AND ELEVATIONS INDICATED. FILL AND LIGHTLY REGRADE ANY AREAS DAMAGED BY EROSION, PONDING, OR TRAFFIC COMPACTION. ALL BIORETENTION AREAS SHALL BE LEVEL GRADE ON THE BOTTOM.
5. HALT EXCAVATION AND NOTIFY ENGINEER IMMEDIATELY IF EVIDENCE OF SINKHOLE ACTIVITY OR PINNACLES OF CARBONATE BEDROCK ARE ENCOUNTERED IN THE BIORETENTION AREA.

- 6. UPON COMPLETION OF SUB-GRADE WORK, THE ENGINEER SHALL BE NOTIFIED AND SHALL INSPECT AT HIS/HER DISCRETION BEFORE PROCEEDING WITH BIORETENTION INSTALLATION.
7. FOR THE SUBSURFACE STORAGE/INFILTRATION BED INSTALLATION, AMENDED SOILS SHOULD BE PLACED ON THE BOTTOM TO THE SPECIFIED DEPTH
8. PLANTING SOIL SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUB-GRADE PREPARATION/BED INSTALLATION. ANY ACCUMULATION OF DEBRIS OR SEDIMENT THAT TAKES PLACE AFTER APPROVAL OF SUB-GRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF PLANTING SOIL AT NO EXTRA COST TO THE OWNER.
9. INSTALL PLANTING SOIL (EXCEEDING ALL CRITERIA) IN 18-INCH MAXIMUM LIFTS AND LIGHTLY COMPACT (TAMP WITH BACKHOE BUCKET OR BY HAND). KEEP EQUIPMENT MOVEMENT OVER PLANTING SOIL TO A MINIMUM - DO NOT OVER COMPACT. INSTALL PLANTING SOIL TO GRADES INDICATED ON THE DRAWINGS.
10. PLANT TREES AND SHRUBS ACCORDING TO SUPPLIER'S RECOMMENDATIONS AND ONLY FROM MID-MARCH THROUGH THE END OF JUNE OR FROM MID-SEPTEMBER THROUGH MID-NOVEMBER.
11. INSTALL 2-3" SHREDDED HARDWOOD MULCH (MINIMUM AGE 6 MONTHS) OR COMPOST MULCH EVENLY AS SHOWN ON PLANS. DO NOT APPLY MULCH IN AREAS WHERE GROUND COVER IS TO BE GRASS OR WHERE COVER WILL BE ESTABLISHED BY SEEDING.
12. PROTECT RAIN GARDENS FROM SEDIMENT AT ALL TIMES DURING CONSTRUCTION. HAY BALES, DIVERSION BERMS AND/OR OTHER APPROPRIATE MEASURES SHALL BE USED AT THE TOE OF SLOPES THAT ARE ADJACENT TO RAIN GARDENS TO PREVENT SEDIMENT FROM WASHING INTO THESE AREAS DURING SITE DEVELOPMENT.
13. WHEN THE SITE IS FULLY VEGETATED AND THE SOIL MANTLE STABILIZED THE PLAN DESIGNER SHALL BE NOTIFIED AND SHALL INSPECT THE RAIN GARDEN DRAINAGE AREA AT HIS/HER DISCRETION BEFORE THE AREA IS BROUGHT ONLINE AND SEDIMENT CONTROL DEVICES REMOVED
14. INSPECT WATER VEGETATION AT THE END OF EACH DAY FOR TWO WEEKS AFTER PLANTING IS COMPLETED

[PA DEP BMP 6.4.6] DRY WELL/SEEPAGE PIT

- 1. PROTECT INFILTRATION AREA FROM COMPACTION PRIOR TO INSTALLATION.
2. IF POSSIBLE, INSTALL DRY WELLS DURING LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY.
3. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AS PER THE PENNSYLVANIA EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (MARCH 2000, OR LATEST EDITION).
4. EXCAVATE DRY WELL BOTTOM TO A UNIFORM, LEVEL UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE. TO THE GREATEST EXTENT POSSIBLE, EXCAVATION SHOULD BE PERFORMED WITH THE LIGHTEST PRACTICAL EQUIPMENT. EXCAVATION EQUIPMENT SHOULD BE PLACED OUTSIDE THE LIMITS OF THE DRY WELL.
5. COMPLETELY WRAP DRY WELL WITH NONWOVEN GEOTEXTILE. (IF SEDIMENT AND/OR DEBRIS HAVE ACCUMULATED IN DRY WELL BOTTOM, REMOVE PRIOR TO GEOTEXTILE PLACEMENT.) GEOTEXTILE ROLLS SHOULD OVERLAP BY A MINIMUM OF 24 INCHES WITHIN THE TRENCH. FOLD BACK AND SECURE EXCESS GEOTEXTILE DURING STONE PLACEMENT.
6. INSTALL CONTINUOUSLY PERFORATED PIPE, OBSERVATION WELLS, AND ALL OTHER DRY WELL STRUCTURES. CONNECT ROOF LEADERS TO STRUCTURES AS INDICATED ON PLANS.
7. PLACE UNIFORMLY GRADED, CLEAN-WASHED AGGREGATE IN 6-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS.
8. FOLD AND SECURE NONWOVEN GEOTEXTILE OVER TRENCH, WITH MINIMUM OVERLAP OF 12-INCHES.
9. PLACE 12-INCH LIFT OF APPROVED TOPSOIL OVER TRENCH, AS INDICATED ON PLANS.
10. SEED AND STABILIZE TOPSOIL.
11. CONNECT SURCHARGE PIPE TO ROOF LEADER AND POSITION OVER SPLASHBOARD.
12. DO NOT REMOVE EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.

[OPERATION AND MAINTENANCE OF BMPS]

NOT ALL OF THE BMPS REQUIRE MAINTENANCE SUCH AS CERTAIN NON-STRUCTURAL BMPS. THOSE THAT DO AND ALL STRUCTURAL BMPS ARE LISTED BELOW.

- 1. [PADEP BMP 5.4.3] PROTECT/UTILIZE NATURAL FLOW PATHWAYS
A. OPERATION
THIS BMP EMPLOYS USE OF THE EXISTING DRAINAGEWAYS (CHANNELS) AND INFILTRATION SUMP ON THE EASTSIDE OF THE SITE IN ORDER TO ALLOW STORMWATER TO FOLLOW PRE-DEVELOPMENT DRAINAGE PATTERNS. THEY ARE PRESENTLY CLUTTERED WITH JUNK, DEAD AND OVERGROWN VEGETATION. THIS PROJECT PROPOSED TO CLEAN AND ENHANCE THEM. PLANTING VEGETATIVE BUFFER ON SIDE SLOPES, REF. BMP MAPS DS-1 AND DS-4 APPENDIX B
B. MAINTENANCE REQUIREMENTS
ONCE CLEANED, ENHANCED AND RE-VEGETATED THIS BMP SHOULD REQUIRE VERY LITTLE MAINTENANCE. HOWEVER, PERIODIC INSPECTIONS AND MAINTENANCE ACTIONS SHOULD TAKE PLACE. INSPECTIONS SHOULD ASSESS EROSION, BANK STABILITY, SEDIMENT/DEBRIS ACCUMULATION AND VEGETATIVE CONDITIONS INCLUDING PRESENCE OF INVASIVE SPECIES. PROBLEMS SHOULD BE CORRECTED IN A TIMELY MANNER. IF VEGETATION IS BEING REESTABLISHED IT MAY REQUIRE WATERING, WEEDING, MULCHING AND REPLANTING, ETC.- DURING THE FIRST FEW YEARS. UNDESIRABLE SPECIES SHOULD BE REMOVED AND DESIRABLE REPLACEMENTS PLANTED, IF NECESSARY.
2. [PA DEP BMP 5.6.3/6.7.2] RE-VEGETATE DISTURBED AREAS/LANDSCAPE RESTORATION
A. OPERATION
THIS BMP IS PRIMARILY EMPLOYED IN THE FRINGE AREAS AROUND THE PERIMETER OF THE DISTURBED AREA. THESE AREAS WILL BE PLANTED WITH MEADOW GRASS SIMILAR TO WHAT IS PRESENTLY ON THE SITE. WHEN MATURE, THIS VEGETATION WILL REDUCE RUNOFF VOLUME AND RATE AND SERVES AS A NON-POINT SOURCE LOAD REDUCTION/PREVENTION. APPLICATION OF CHEMICAL FERTILIZERS IS NOT REQUIRED WHICH IS IMPORTANT FOR WATER QUALITY.
B. MAINTENANCE REQUIREMENTS
- MINIMUM MAINTENANCE IS REQUIRED IN THE LONG-TERM; ANNUAL MOWING IS RECOMMENDED.
- IN THE FIRST YEAR, WEEDS MUST BE CAREFULLY CONTROLLED AND CONSISTENTLY CUT BACK TO 4 TO 6 INCHES WHEN THEY REACH 12 INCHES IN HEIGHT.
- IN THE SECOND YEAR, WEEDS SHOULD CONTINUE TO BE MONITORED AND MOWED AND RHIZOMATOUS WEEDS SHOULD BE HAND-TREATED WITH HERBICIDE.
- WEEDS SHOULD NOT BE SPRAYED WITH HERBICIDE AS THE DRIFT FROM THE SPRAY MAY KILL LARGE PATCHES OF DESIRABLE PLANTS, ALLOWING WEEDS TO MOVE INTO THESE NEW OPEN AREAS.
- IN THE BEGINNING OF THE THIRD SEASON, THE YOUNG VEGETATION SHOULD BE BURNED OFF IN MID-SPRING. IF BURNING IS NOT POSSIBLE, THE VEGETATION SHOULD INSTEAD BE MOWED VERY CLOSELY TO THE GROUND. THE MOWED MATERIAL SHOULD BE REMOVED FROM THE SITE TO EXPOSE THE SOIL TO THE SUN.

[PA DEP BMP 5.9.1] STREETSWEEEPING

- A. LOCATION AND FUNCTION
THIS BMP WILL BE EMPLOYED FOR ALL THE PAVED AREAS, PERVIOUS AND IMPERVIOUS, WITHIN ALL OF THE DRAINAGE AREAS (ENTIRE SITE). THIS BMP WILL EMPLOY THE USE OF A VACUUM FILTER STREETSWEEPER WHICH WILL RESULT IN REMOVING LARGER DEBRIS AND SMALLER PARTICULATE POLLUTANTS, PREVENTING THIS MATERIAL FROM CLOGGING STORMWATER MANAGEMENT SYSTEMS AND WASHING INTO RECEIVING WATERWAYS.
B. MAINTENANCE REQUIREMENTS

- PAVEMENTS SHALL BE VACUUMED BIANNUALLY AT A MINIMUM, IN THE SPRING AND FALL OF THE YEAR.

4. [PA DEP BMP 6.4.3] SUBSURFACE INFILTRATION BED

- A. OPERATION
TWO (2) SUBSURFACE INFILTRATION BEDS WILL BE EMPLOYED IN DRAINAGE AREAS 3 AND 4 OF THIS PROJECT. ONE BED WILL BE LOCATED IN THE PARKING AREA IN FRONT OF THE CHURCH BUILDING AND ONE TO THE REAR OF THE BUILDING. THESE BEDS WILL CONSIST OF UNIFORMLY GRADED AGGREGATE COMBINED WITH PREFABRICATED POLYETHYLENE "SHELL" STRUCTURES, WHICH INCOMING FLOW AND ALLOWS FOR STORAGE AND INFILTRATION OF THE DIFFERENCE BETWEEN THE 2-YEAR POST- AND THE 2-YEAR PRE-DEVELOPMENT RUNOFF VOLUMES. THE STORAGE VOLUME IN THE BED IN CONJUNCTION WITH OUTLET CONTROLS IS LARGE ENOUGH TO ATTENUATE THE PEAK RATE OF RUNOFF TO REQUIRED PRE-DEVELOPMENT LEVELS FOR THE 1- THROUGH 100-YEAR STORM EVENTS REF. DS-4 APPENDIX B
B. MAINTENANCE
ALL CATCH BASINS AND INLETS ASSOCIATED WITH THE BED SHOULD BE INSPECTED AND CLEANED AT LEAST 2 TIMES PER YEAR.

5. [PA DEP BMP 6.4.4] INFILTRATION TRENCH / VEGETATED CHANNEL

- A. OPERATION
CHANNEL 1 LOCATED ALONG THE EAST SIDE OF THE SITE ADJACENT TO THE PARKING LOT IS DESIGNED AS VEGETATED INFILTRATION CHANNEL. WHAT STORMWATER FLOW THROUGH IT THAT IS NOT INFILTRATED WILL FLOW INTO A RAIN GARDEN. THIS BMP ALLOWS FOR INFILTRATION OF STORMWATER.
B. MAINTENANCE
MAINTENANCE STRATEGY SHOULD FOCUS ON SUSTAINING THE HYDRAULIC AND POLLUTION REMOVAL EFFICIENCY OF THE CHANNEL, AS WELL AS MAINTAINING A DENSE VEGETATIVE COVER. MAINTENANCE ACTIVITIES TO BE DONE ANNUALLY AND WITHIN 48 HOURS AFTER EVERY MAJOR STORM EVENT (> 1 INCH RAINFALL DEPTH):
- INSPECT AND CORRECT EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION (ADDRESS WHEN > 3 INCHES AT ANY SPOT OR COVERING VEGETATION)
- INSPECT VEGETATION ON SIDE SLOPES FOR EROSION AND FORMATION OF RILLS OR GULLIES, CORRECT AS NEEDED
- INSPECT FOR POOLS OF STANDING WATER; DEWATER AND DISCHARGE TO AN APPROVED LOCATION AND RESTORE TO DESIGN GRADE
- MOW AND TRIM VEGETATION TO ENSURE SAFETY, AESTHETICS, PROPER SWALE OPERATION, OR TO SUPPRESS WEEDS AND INVASIVE VEGETATION; DISPOSE OF CUTTINGS IN A LOCAL COMPOSTING FACILITY; MOW ONLY WHEN SWALE IS DRY TO AVOID RUTTING
- INSPECT FOR LITTER; REMOVE PRIOR TO MOWING
- INSPECT FOR UNIFORMITY IN CROSS-SECTION AND LONGITUDINAL SLOPE, CORRECT AS NEEDED
- INSPECT SWALE INLET (CURB CUTS, PIPES, ETC.) AND OUTLET FOR SIGNS OF EROSION OR BLOCKAGE, CORRECT AS NEEDED.

MAINTENANCE ACTIVITIES TO BE DONE AS NEEDED:

- PLANT ALTERNATIVE GRASS SPECIES IN THE EVENT OF UNSUCCESSFUL ESTABLISHMENT
- RESEED BARE AREAS: INSTALL APPROPRIATE EROSION CONTROL MEASURES WHEN NATIVE SOIL IS EXPOSED OR EROSION CHANNELS ARE FORMING
- ROTOTILL AND REPLANT SWALE IF DRAW DOWN TIME IS MORE THAN 48 HOURS
- INSPECT AND CORRECT CHECK DAMS, IF APPLICABLE, WHEN SIGNS OF ALTERED WATER FLOW (CHANNELIZATION, OBSTRUCTIONS, EROSION, ETC.) ARE IDENTIFIED
- WATER DURING DRY PERIODS, FERTILIZE, AND APPLY PESTICIDE ONLY WHEN ABSOLUTELY NECESSARY

6. [PA DEP BMP 6.4.5] RAIN GARDEN/BIO-INFILTRATION

- A. OPERATION
THIS BMP WILL BE EMPLOYED WITHIN DRAINAGE AREA 6 OF THE PROJECT. THE GARDEN IS AN EXCAVATED SURFACE DEPRESSION PLANTED WITH SPECIALLY SELECTED VEGETATION. THE VEGETATION FILTERS POLLUTANTS AND PROVIDES SOME VOLUME REDUCTION BY EVAPOTRANSPIRATION BUT PRIMARILY BY ALLOWING INFILTRATION THE DIFFERENCE BETWEEN THE 2-YEAR POST- AND THE 2-YEAR PRE-DEVELOPMENT RUNOFF VOLUMES THROUGH THE FLOOR OF THE GARDEN INTO SUBSOIL AND GROUNDWATER. IN ADDITION THIS BMP WILL EFFECTIVELY AVOID, MINIMIZE AND OR MITIGATE THERMAL IMPACTS FROM STORMWATER RUNOFF AND PROVIDE A HABITAT FOR WILDLIFE. REF. DS-4 APPENDIX B
B. MAINTENANCE REQUIREMENTS

PROPERLY DESIGNED AND INSTALLED BIO-RETENTION AREAS REQUIRE SOME REGULAR MAINTENANCE

- WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED.
- DETRITUS MAY ALSO NEED TO BE REMOVED EVERY YEAR. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING SEASON.
- MULCH SHOULD BE RE-SPREAD WHEN EROSION IS EVIDENT AND BE REPLENISHED AS NEEDED. ONCE EVERY 2 TO 3 YEARS THE ENTIRE AREA MAY REQUIRE MULCH REPLACEMENT.
- BIO-RETENTION AREAS SHOULD BE INSPECTED AT LEAST TWO TIMES PER YEAR FOR SEDIMENT BUILDUP, EROSION, VEGETATIVE CONDITIONS, ETC.
- DURING PERIODS OF EXTENDED DROUGHT, BIO-RETENTION AREAS MAY REQUIRE WATERING.
- TREES AND SHRUBS, IF CALLED FOR IN THE DESIGN, SHOULD BE INSPECTED TWICE PER YEAR TO EVALUATE HEALTH.

7. [PA DEP BMP 6.4.6] DRY WELL/SEEPAGE PIT

- A. OPERATION
THIS BMP WILL BE EMPLOYED AT TWO LOCATIONS, ONE EACH IN DRAINAGE AREA 3 AND 4 OF THE PROJECT. THEY ARE DESIGNED TO TEMPORARILY STORE AND INFILTRATE THE DIFFERENCE BETWEEN THE 2-YEAR POST- AND THE 2-YEAR PRE-DEVELOPMENT RUNOFF VOLUMES FROM TWO SMALL SECTIONS OF ROOF THAT CANNOT BE CONNECTED TO THE ROOFTOP DRAINAGE SYSTEM THAT CONVEYS RUNOFF TO CHANNEL 1. IN ADDITION THIS BMP WILL EFFECTIVELY AVOID, MINIMIZE AND OR MITIGATE THERMAL IMPACTS FROM STORMWATER RUNOFF. REF. DS-4 APPENDIX B
B. MAINTENANCE REQUIREMENTS
- INSPECT DRY WELLS AT LEAST FOUR TIMES A YEAR, AS WELL AS AFTER EVERY STORM EXCEEDING 1 INCH.
- DISPOSE OF SEDIMENT, DEBRIS/TRASH, AND ANY OTHER WASTE MATERIAL REMOVED FROM A DRY WELL AT SUITABLE DISPOSAL/RECYCLING SITES AND IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL WASTE REGULATIONS.
- EVALUATE THE DRAIN-DOWN TIME OF THE DRY WELL TO ENSURE THE MAXIMUM TIME OF 72 HOURS IS NOT BEING EXCEEDED. IF DRAIN-DOWN TIMES ARE EXCEEDING THE MAXIMUM, DRAIN THE DRY WELL VIA PUMPING AND CLEAN OUT PERFORATED PIPING, IF INCLUDED. SLOW DRAINAGE PERSISTS, THE SYSTEM MAY NEED REPLACING.
- REGULARLY CLEAN OUT GUTTERS AND ENSURE PROPER CONNECTIONS TO FACILITATE THE EFFECTIVENESS OF THE DRY WELL.
- REPLACE FILTER SCREEN THAT INTERCEPTS ROOF RUNOFF AS NECESSARY.

- IF AN INTERMEDIATE SUMP BOX EXISTS, CLEAN IT OUT AT LEAST ONCE PER YEAR.

[APPLICANT/OWNER/ RESPONSIBLE PARTY]

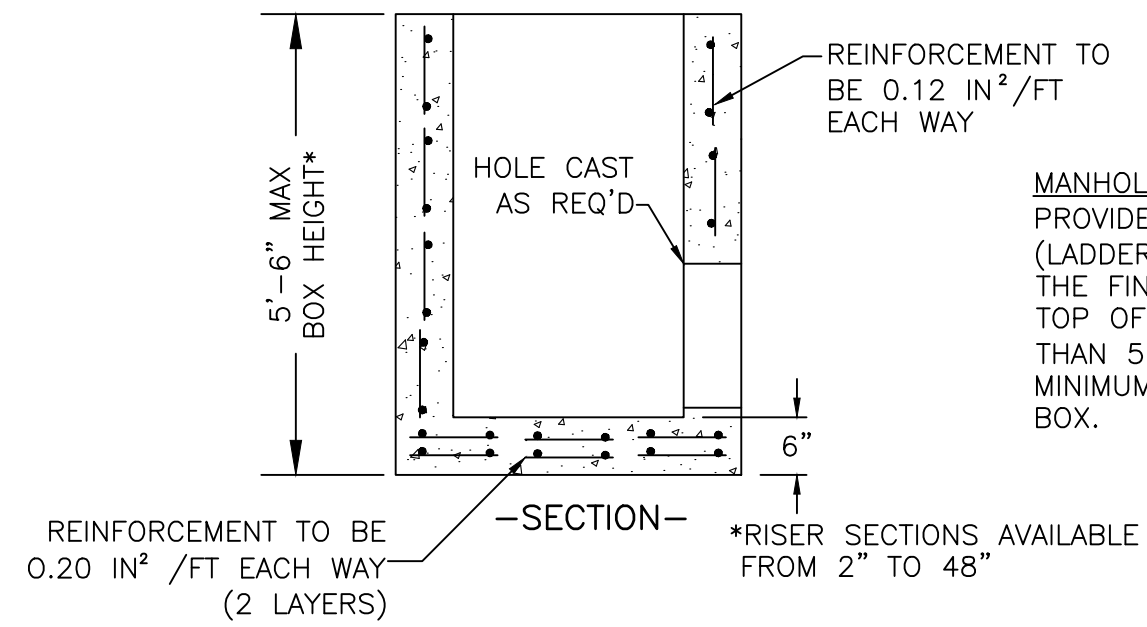
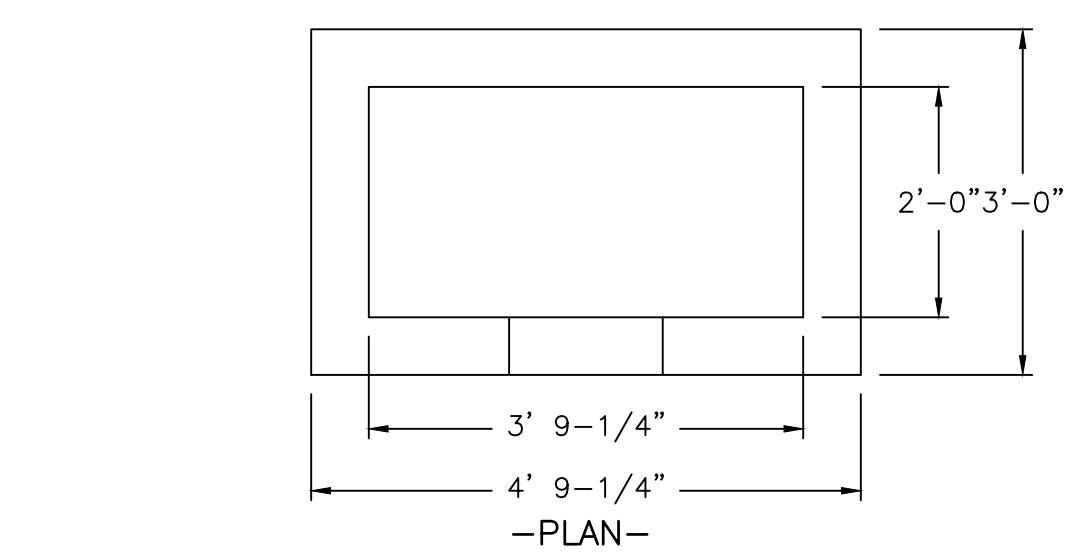
SOLID ROCK MISSIONARY BAPTIST CHURCH

8000 DERRY STREET, SUITES C & D
HARRISBURG, PENNSYLVANIA 17111
717-558-0133
ATTENTION: MR. KENNETH L. MICKENS, ESQ.

[SITE SPECIFIC SEQUENCE OF BMP INSTALLATION]

- BMPs SHALL BE INSTALLED IN THE FOLLOWING SEQUENCE
1. [PADEP BMP 5.4.3] PROTECT/UTILIZE NATURAL FLOW PATHWAYS
A. THE CLEAN-UP OF EXISTING DRAINAGEWAYS (CHANNELS) AND INFILTRATION SUMP ON THE EASTSIDE OF THE SITE.
2. PA DEP BMP 6.4.3] SUBSURFACE INFILTRATION BEDS: THIS IS A CRITICAL STAGE BMP INSTALLATION REQUIRING DESIGN ENGINEER INSPECTION
A. THE FRONT INFILTRATION BED BENEATH THE PARKING LOT SHALL BE INSTALLED FIRST FOLLOWED BY THE REAR BED.
3. [PA DEP BMP 6.4.4] INFILTRATION TRENCH / VEGETATED CHANNELS 1A AND 1B
4. [PA DEP BMP 6.4.6] RAIN GARDEN/BIO-INFILTRATION BED: THIS IS A CRITICAL STAGE BMP INSTALLATION REQUIRING DESIGN ENGINEER INSPECTION
5. [PA DEP BMP 5.8.1] ROOFTOP DISCONNECTION
A. INSTALLATION OF ROOFTOP PERIMETER DRAINAGE SYSTEM (COORDINATE WITH BUILDING CONSTRUCTION)
6. [PA DEP BMP 6.4.6] DRY WELL/SEEPAGE PIT: THIS IS A CRITICAL STAGE BMP INSTALLATION REQUIRING DESIGN ENGINEER INSPECTION
A. INSTALLATION OF SEEPAGE PITS OFF OF THE NORTHEAST AND SOUTHWEST CORNERS OF THE BUILDING (COORDINATE WITH BUILDING CONSTRUCTION)
7. [PA DEP BMP 5.6.3/6.7.2] RE-VEGETATE DISTURBED AREAS/LANDSCAPE RESTORATION

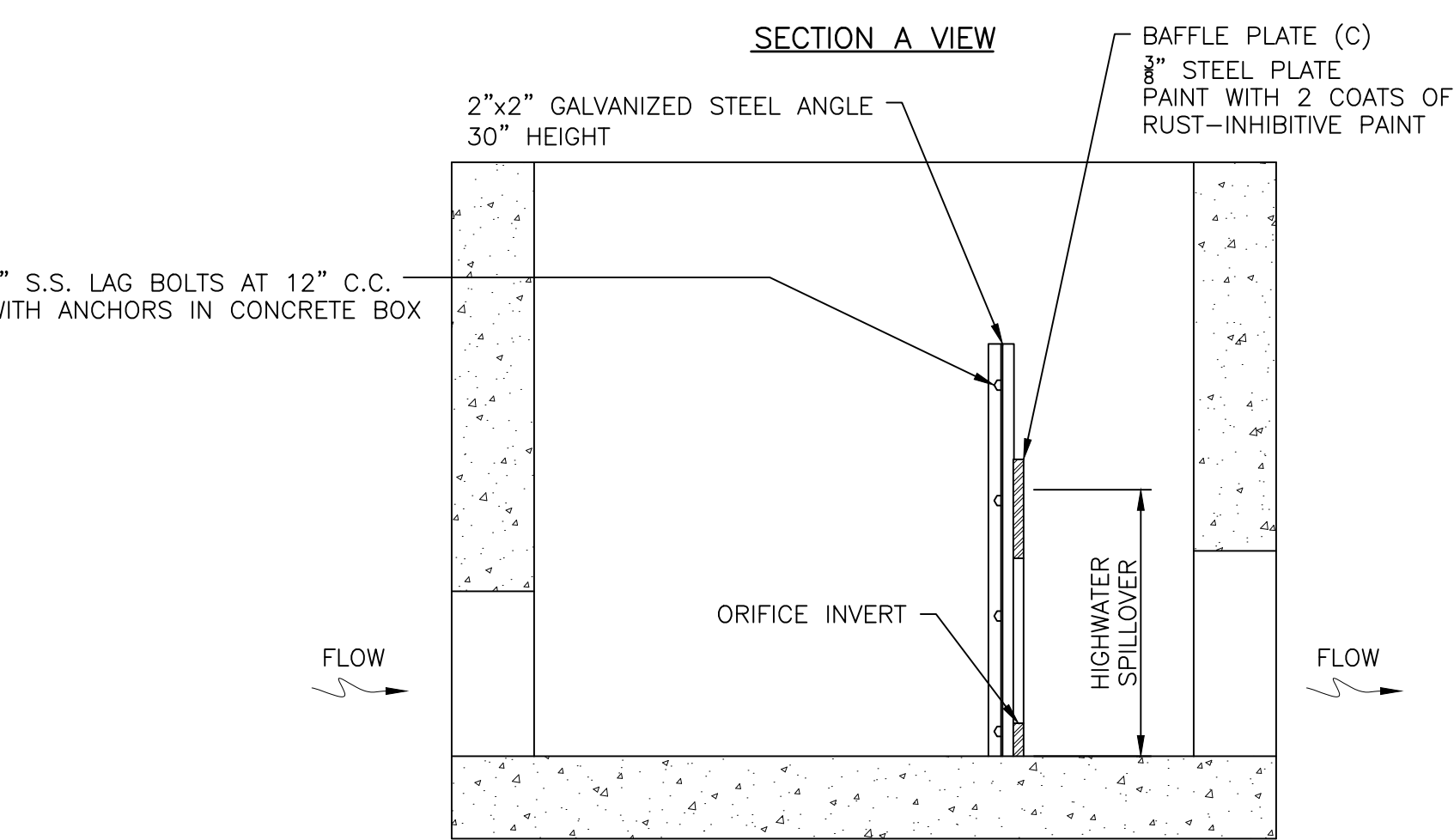
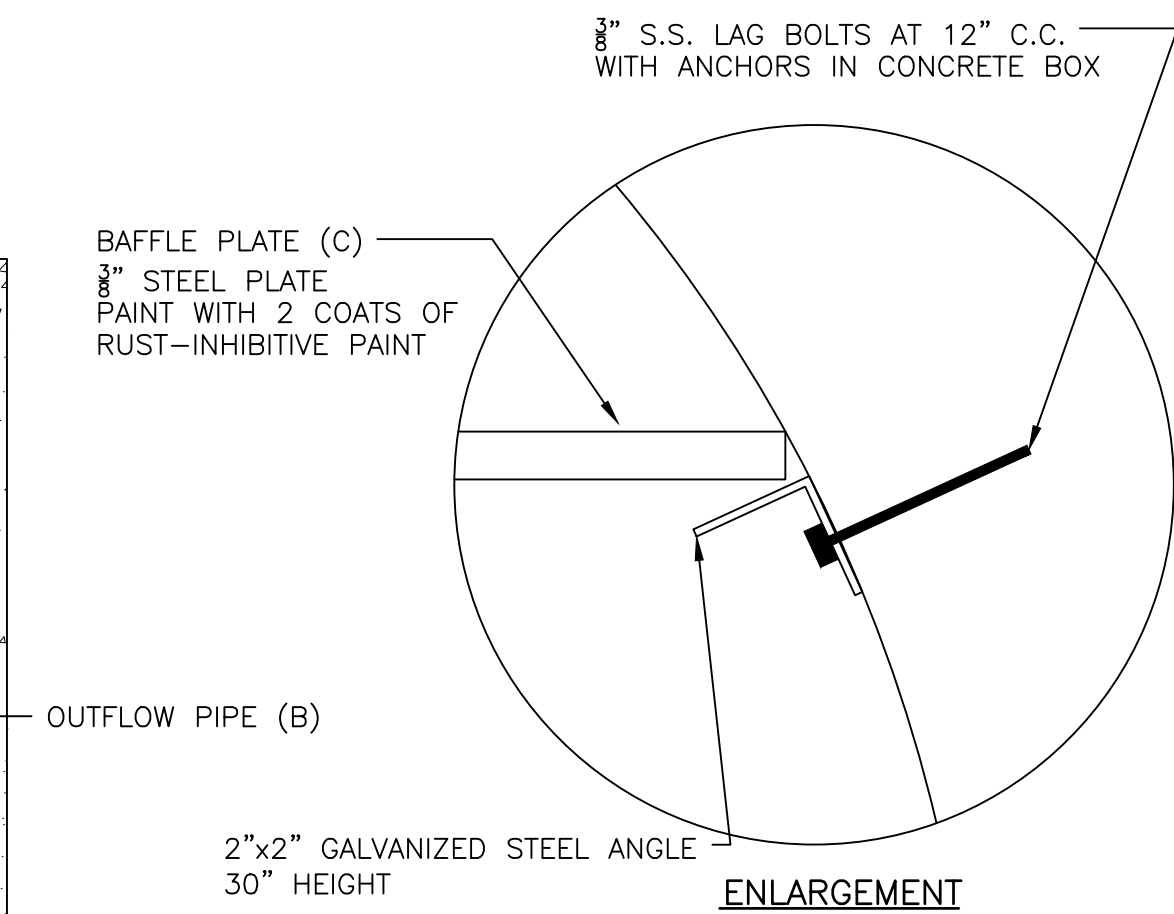
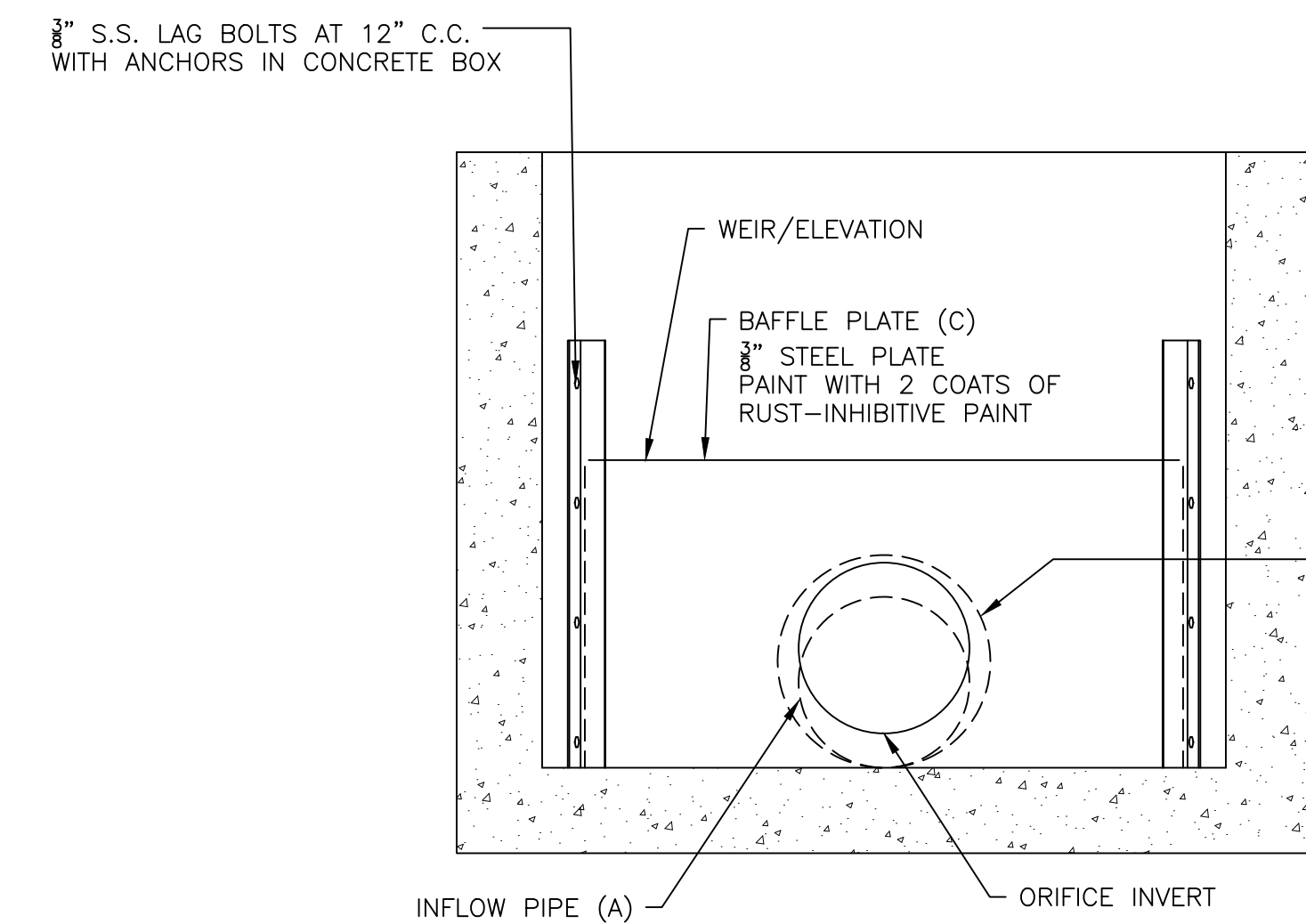
DRAWING NO. C-8 SHEETS: 8 OF 21
LAND DEVELOPMENT PLAN FOR Solid Rock Missionary Baptist Church 2400 LOCUST LANE Daughin County Pennsylvania
CONSTRUCTION-OPERATION AND MAINTENANCE STORMWATER BMPS
DSGN G.C.C. DTSMN D.J.J. CHKR E.A.S. APPV G.C.C. SCALE NO SCALE BY: DATE
449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0593 FAX: (717) 232-1799 www.skellyjoy.com
PROJECT NUMBER: R18-0633.000 TASK: 4 DATE: MAY 21, 2019



MANHOLE/INLET BOX STEPS: PROVIDE MANHOLE/INLET BOX STEPS (LADDER RUNGS) WHEN THE DEPTH BETWEEN THE FINISHED GRADE ELEVATION AND THE TOP OF BOTTOM SLAB ELEVATION IS GREATER THAN 5'-0". LOCATE THE TOP STEP 6" MINIMUM BELOW THE TOP OF THE INLET BOX.

NOTE: 1. ALL INLETS ARE SIZED TO ACCEPT THE SPECIFIED PIPE SIZES WITHOUT KNOCKING OUT ANY OF THE INLET CORNERS.

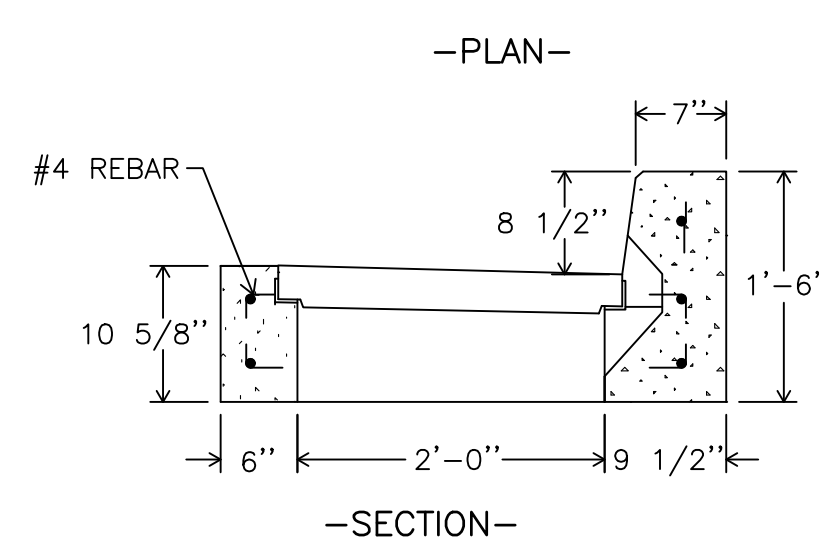
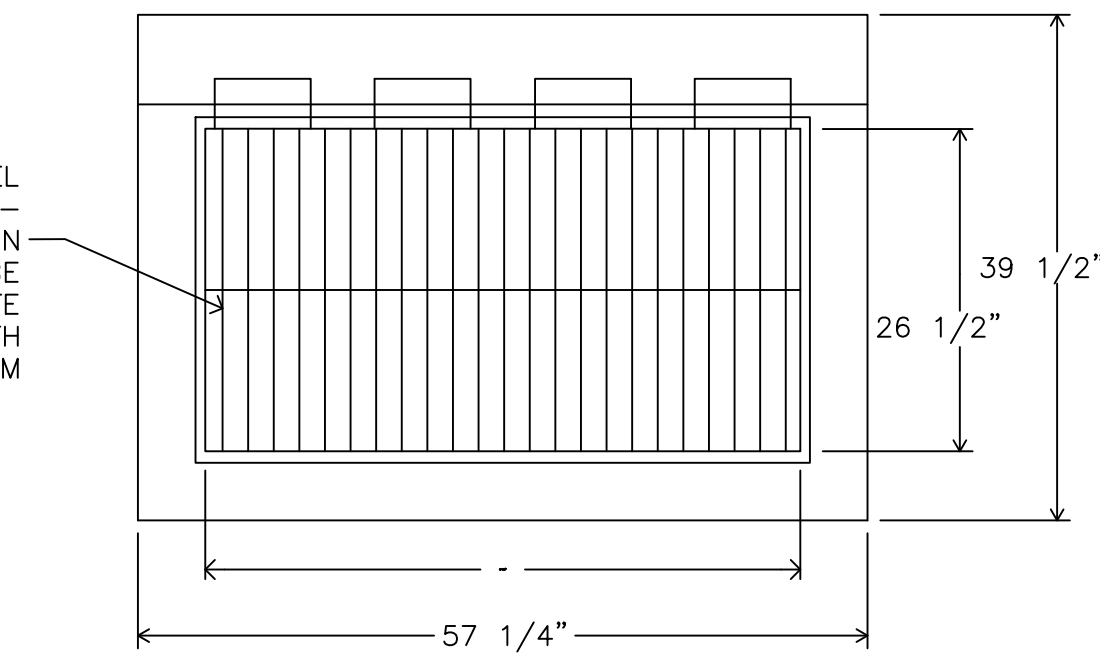
PRECAST INLET BOX FOR PENNDOT INLET TOPS
NO SCALE



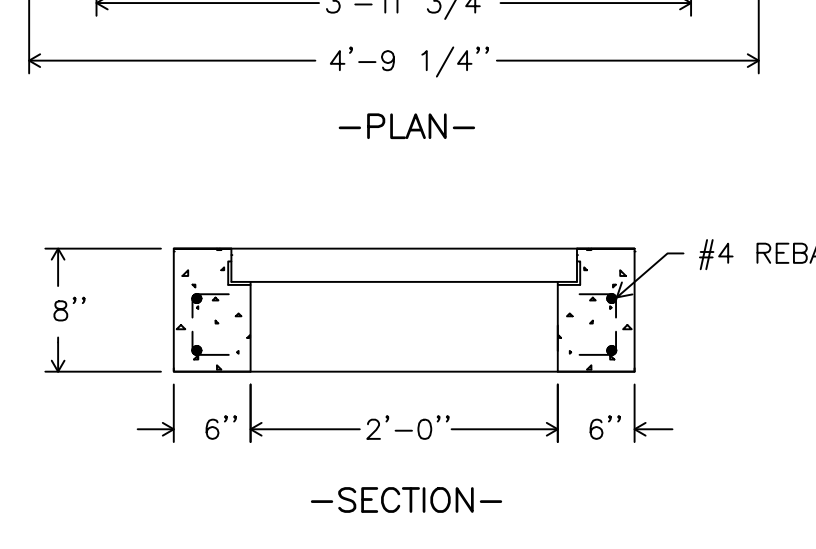
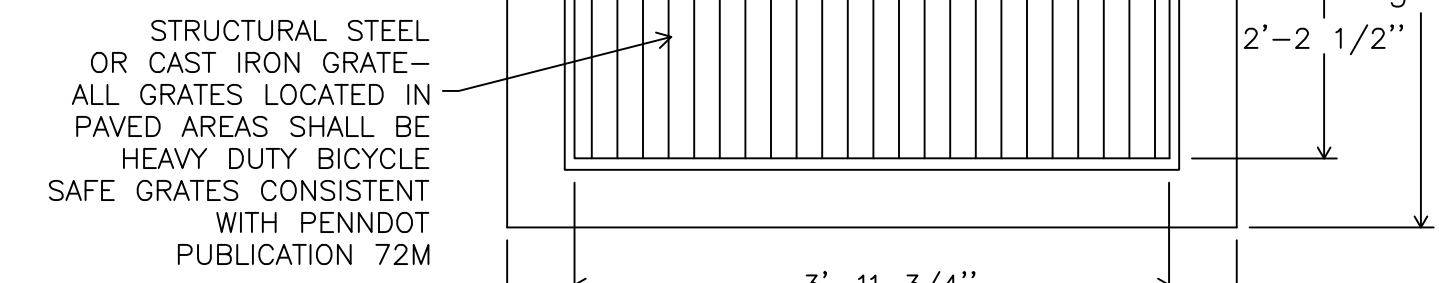
SECTION B VIEW

INFILTRATION BED (INFILTRATION BED) OUTLET WORKS									
INFILTRATION BED NO.	MANHOLE NO.	INFLOW PIPE (A)		OUTFLOW PIPE (B)		WEIR/BAFFLE PLATE			
		DIA. (INCHES)	INVERT ELEVATION	DIA. (INCHES)	INVERT ELEVATION	LENGTH (INCHES)	WEIR ELEVATION	ORIFICE OPENING DIA. (INCHES)	ORIFICE INVERT ELEVATION
INFILTRATION BED 1	MH-1	12	451.38	15	451.38	42	453.6	12	452.37
INFILTRATION BED 2	MH-2	12	447.13	18	447.13	42	449.00	12	447.50

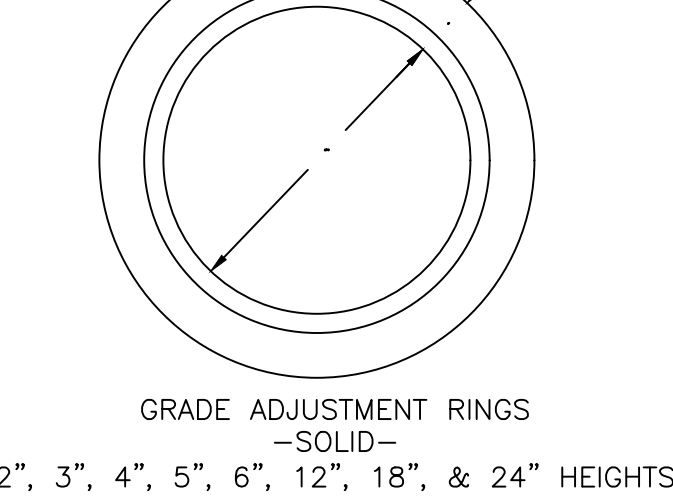
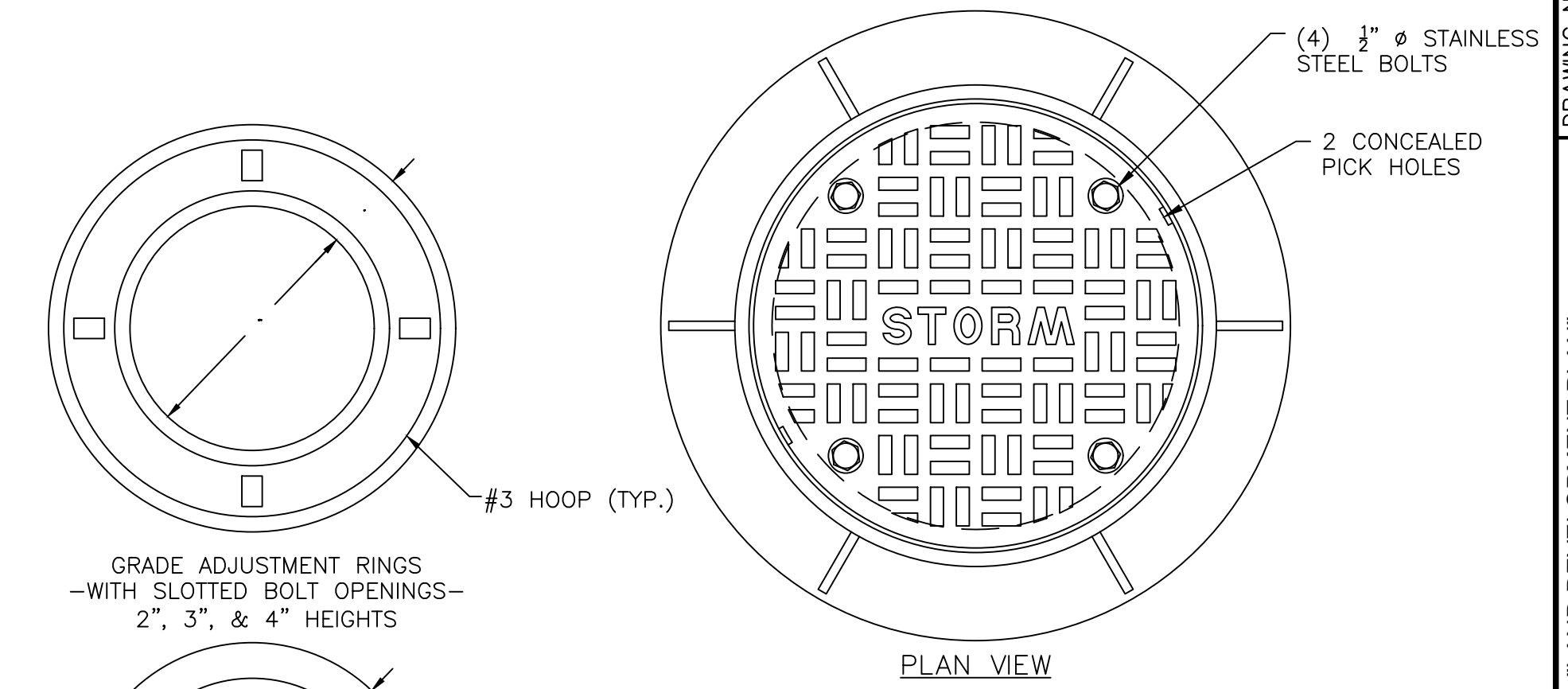
MANHOLE WITH BAFFLE PLATE DETAIL
NO SCALE



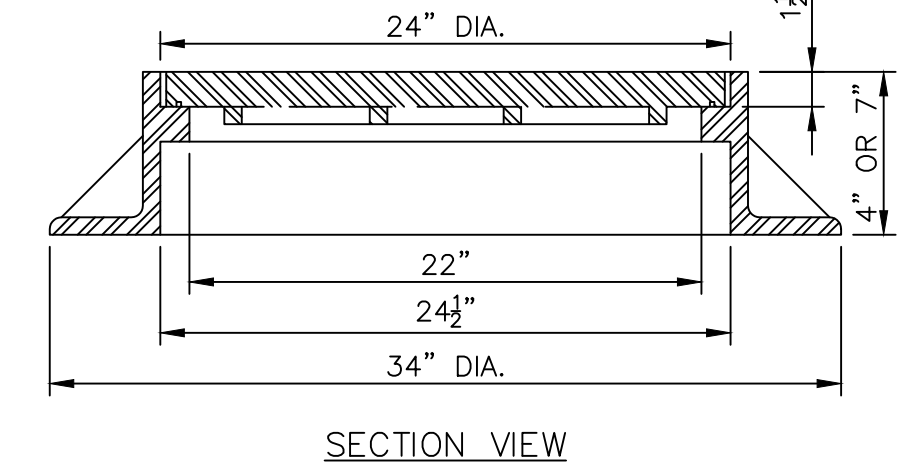
PENNDOT TYPE C CONCRETE INLET TOP
NO SCALE



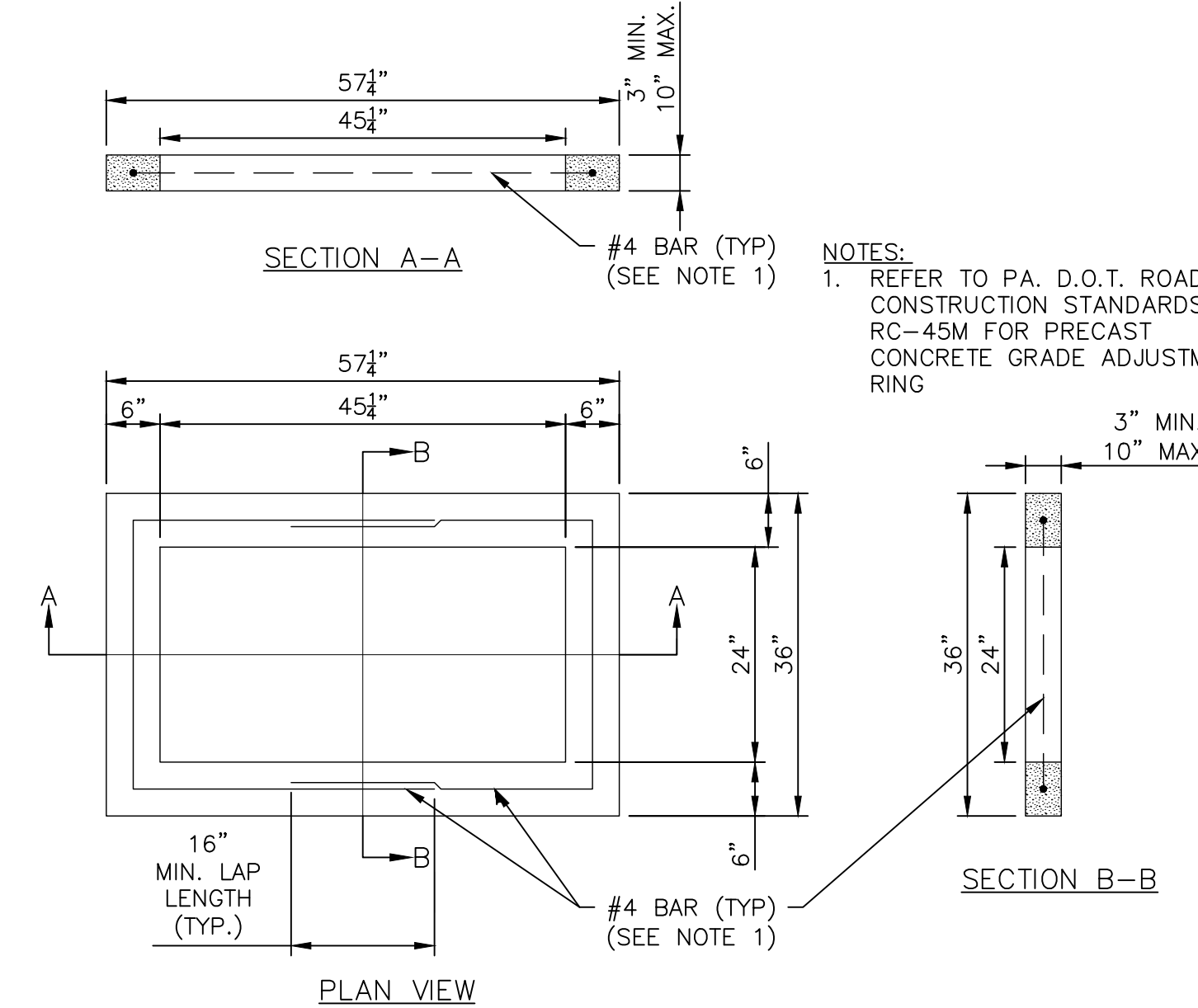
PENNDOT TYPE M CONCRETE INLET TOP
NO SCALE



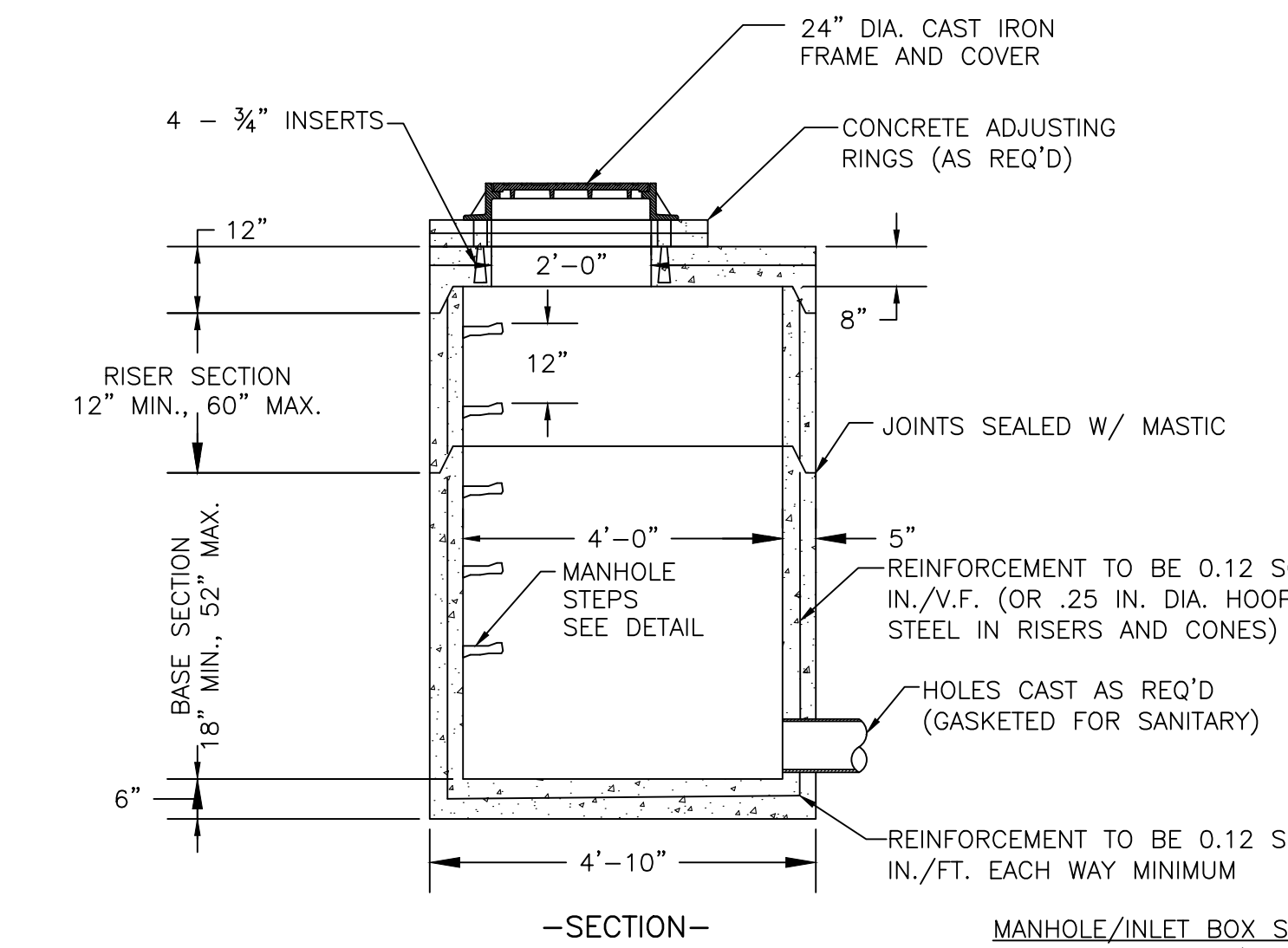
MANHOLE GRADE ADJUSTING RINGS
NO SCALE



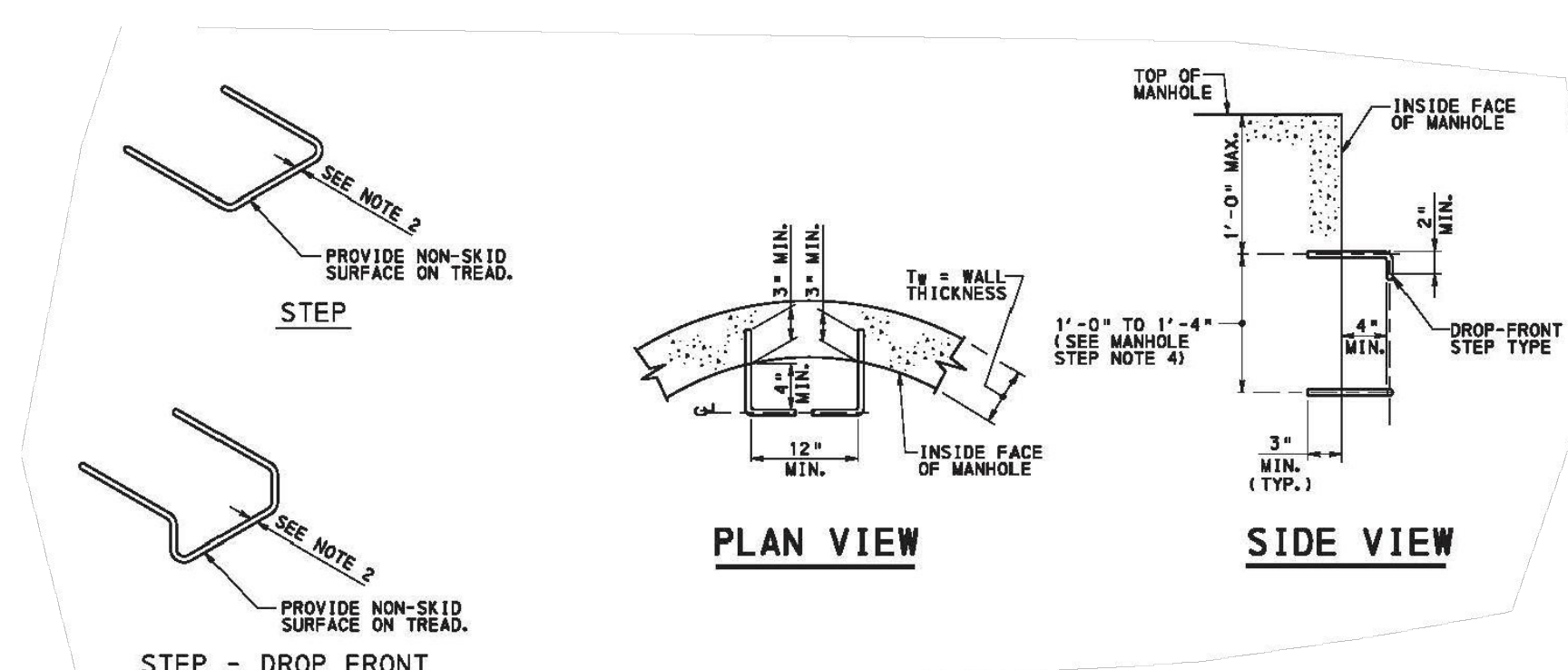
24" DIA. MANHOLE FRAME AND COVER
NO SCALE



PRECAST CONCRETE GRADE ADJUSTMENT RING
NO SCALE



PRECAST CONCRETE MANHOLE
4 FT. DIAMETER W/ FLAT LID
NO SCALE



NOTES:
1. PROVIDE MINIMUM 1" SECTION DIMENSION FOR METAL STEPS. PROVIDE 3/4" SECTION DIMENSION FOR NON-DETERIORATING MATERIAL STEPS.
2. SECURELY EMBED STEPS INTO INSERTS CAST INTO THE WALLS OR PREFORMED HOLES.
3. PROVIDE UNIFORM SPACING OF MANHOLE STEPS WITHIN A MANHOLE/INLET ASSEMBLY.

MANHOLE/INLET BOX STEP DETAIL
NO SCALE

DRAWING NO. **C-9** SHEETS: **9 OF 21**

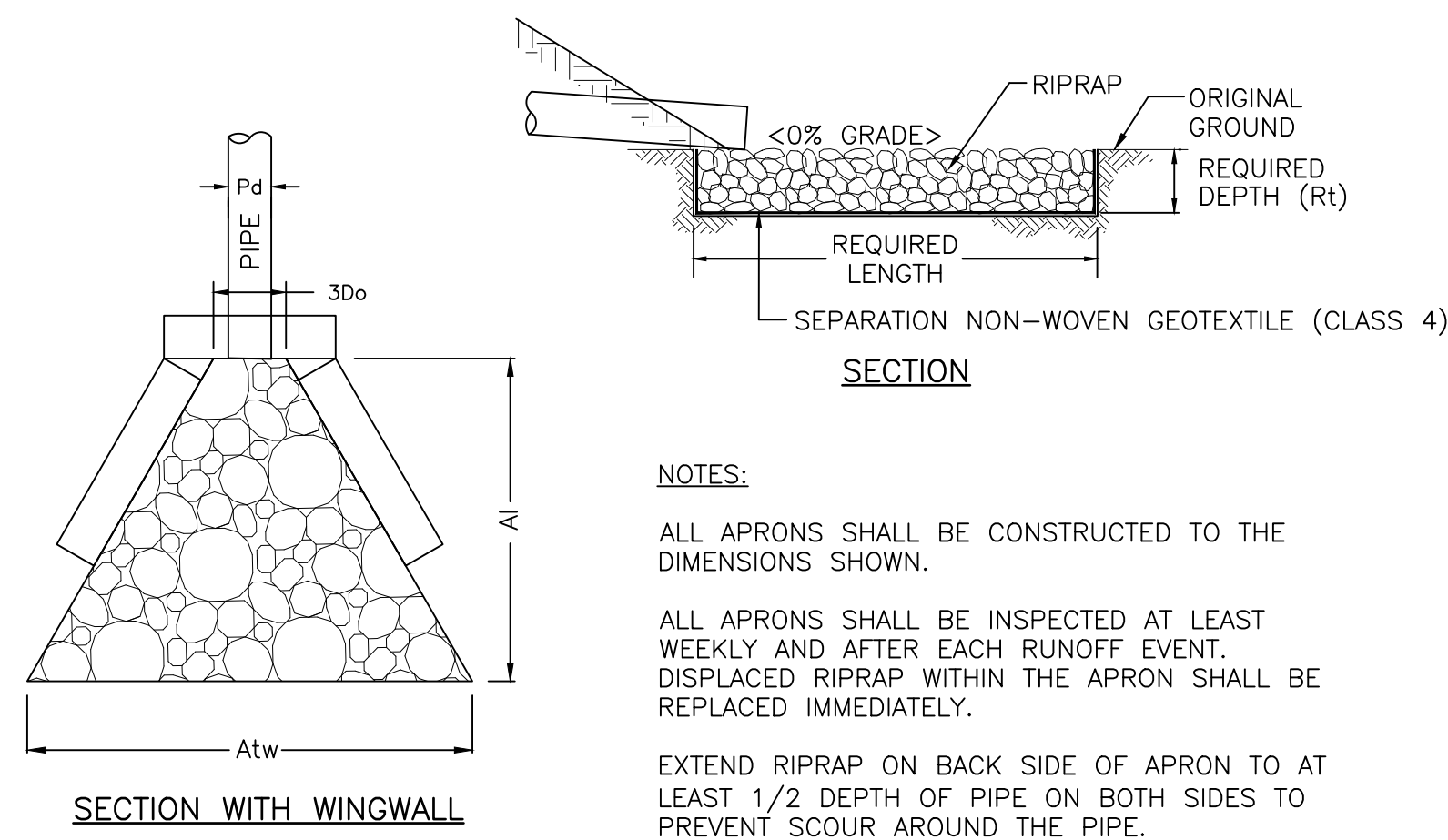
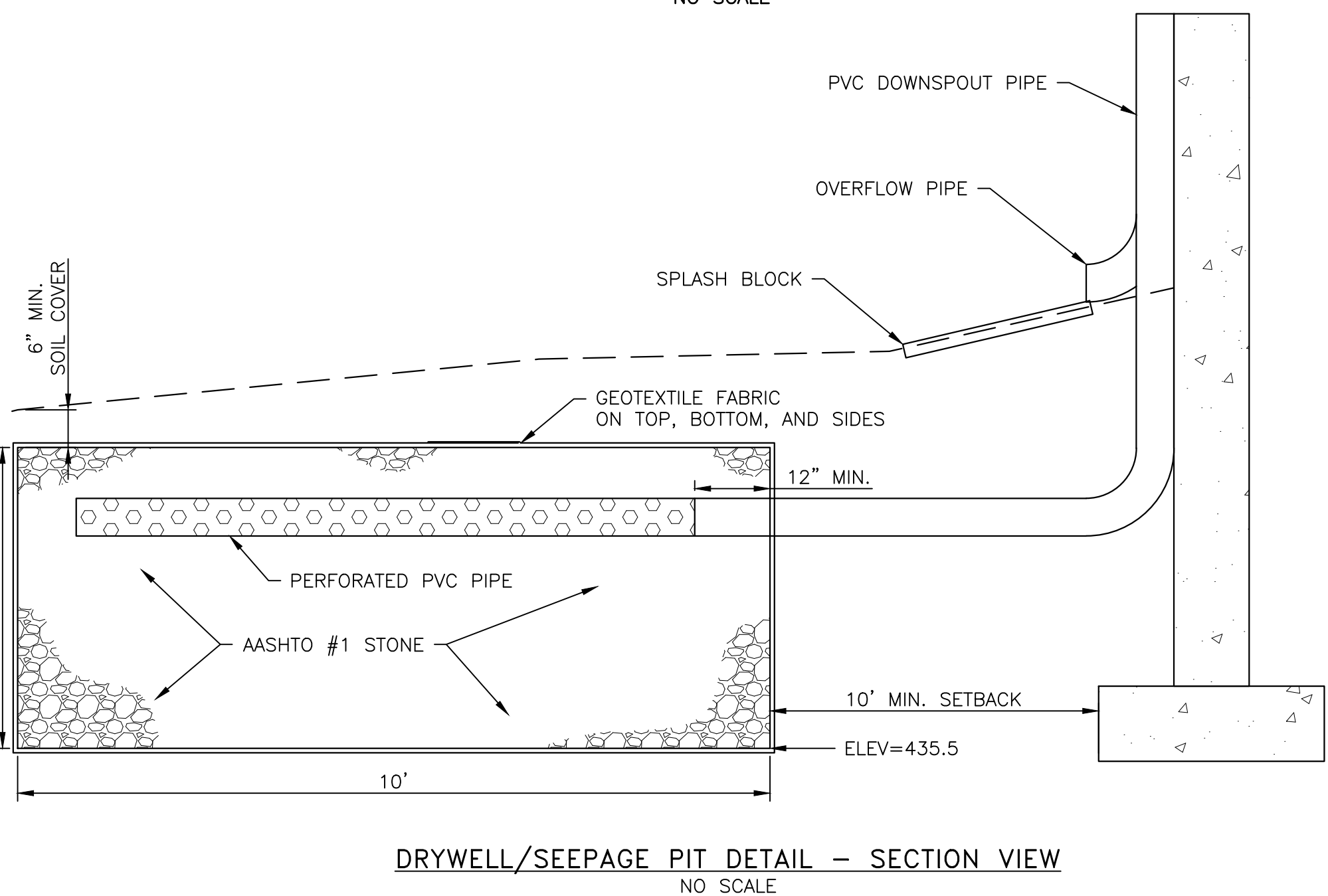
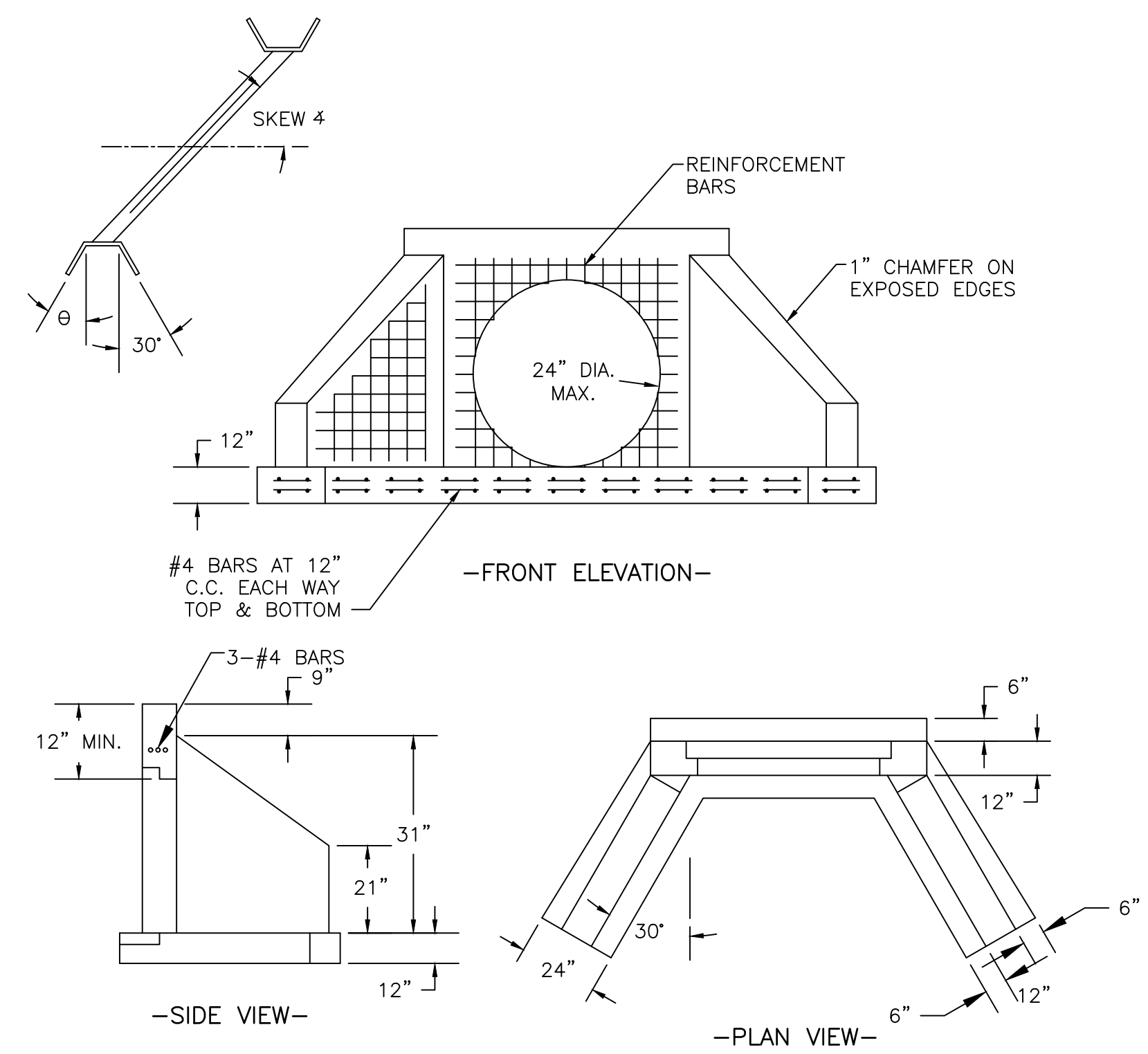
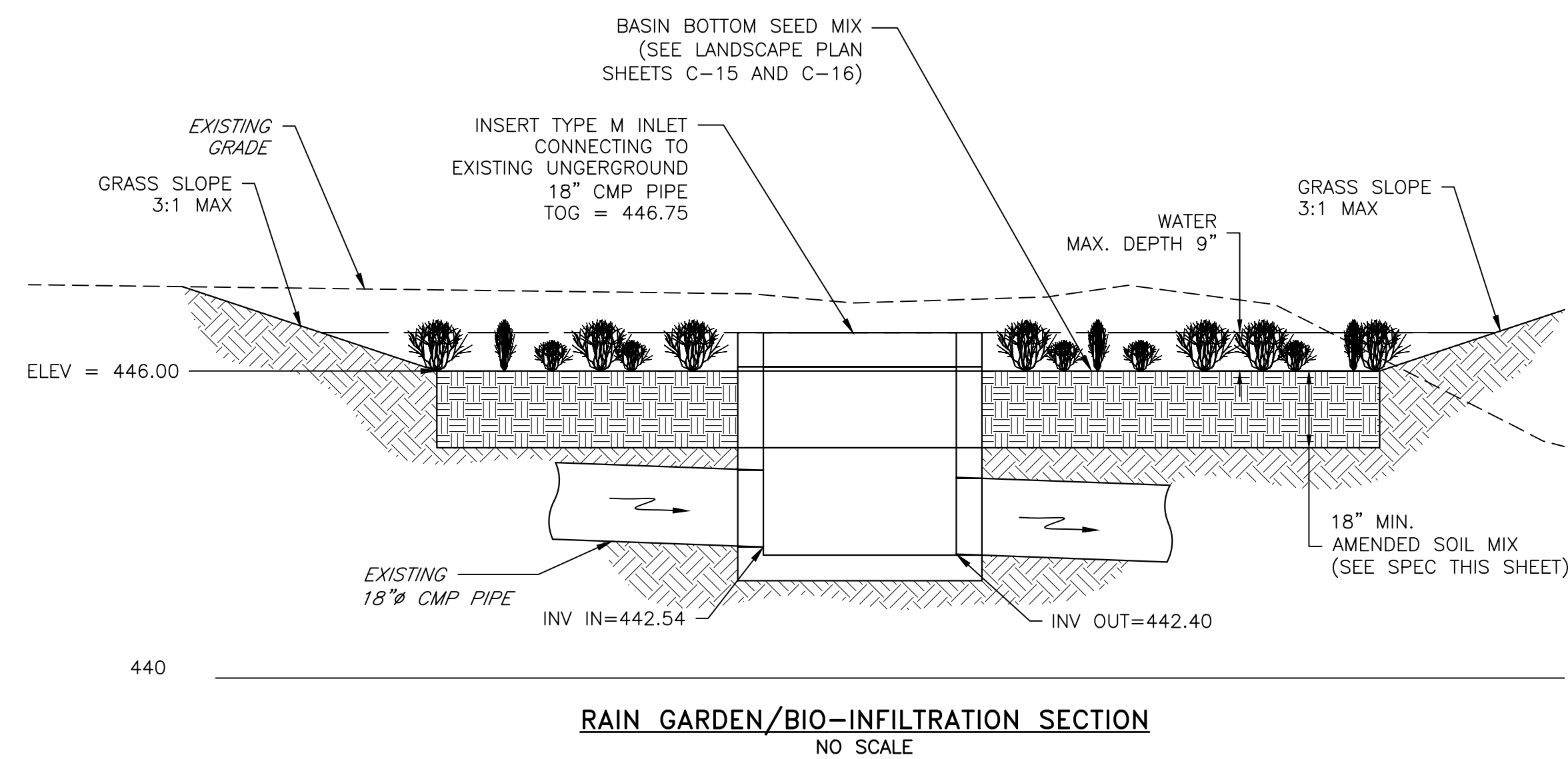
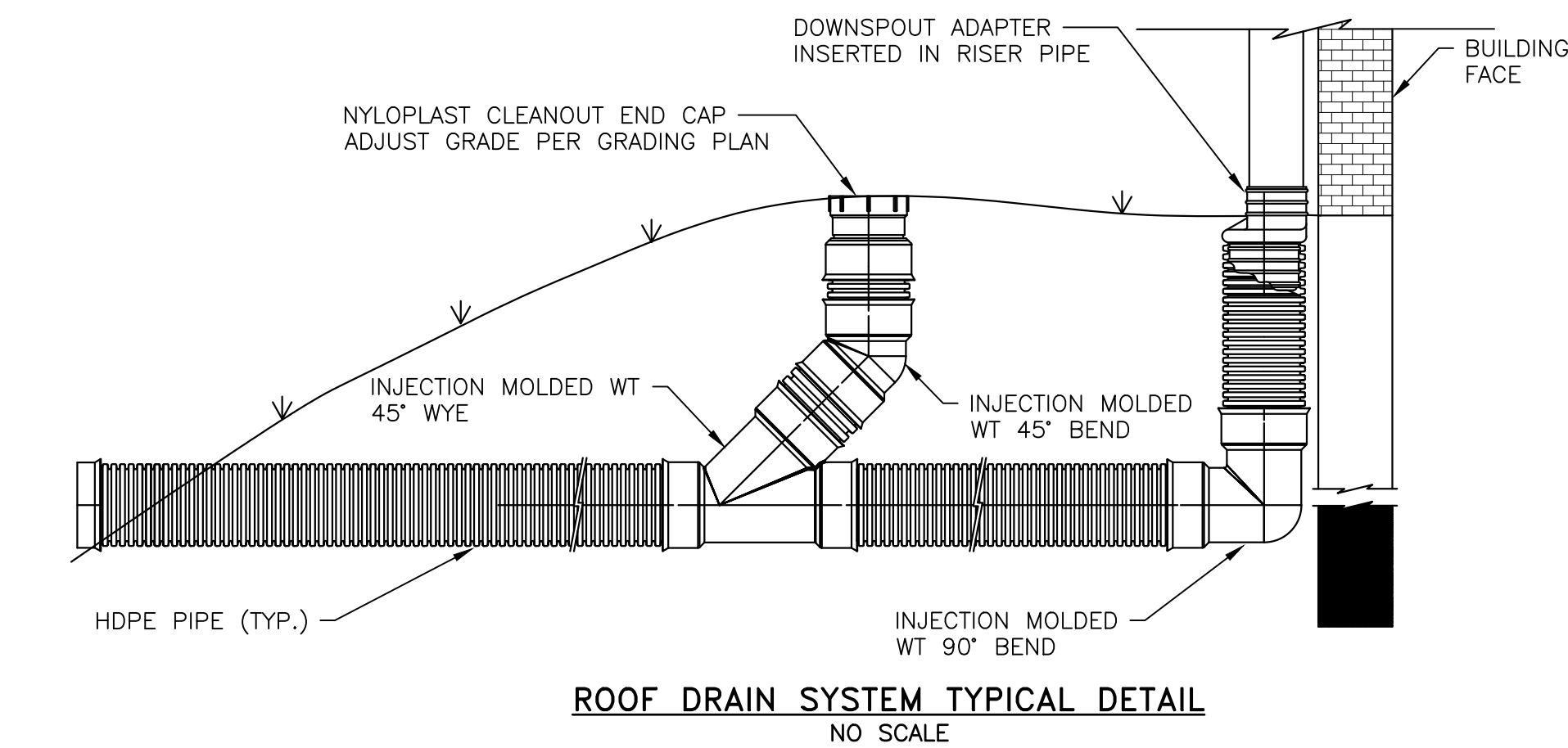
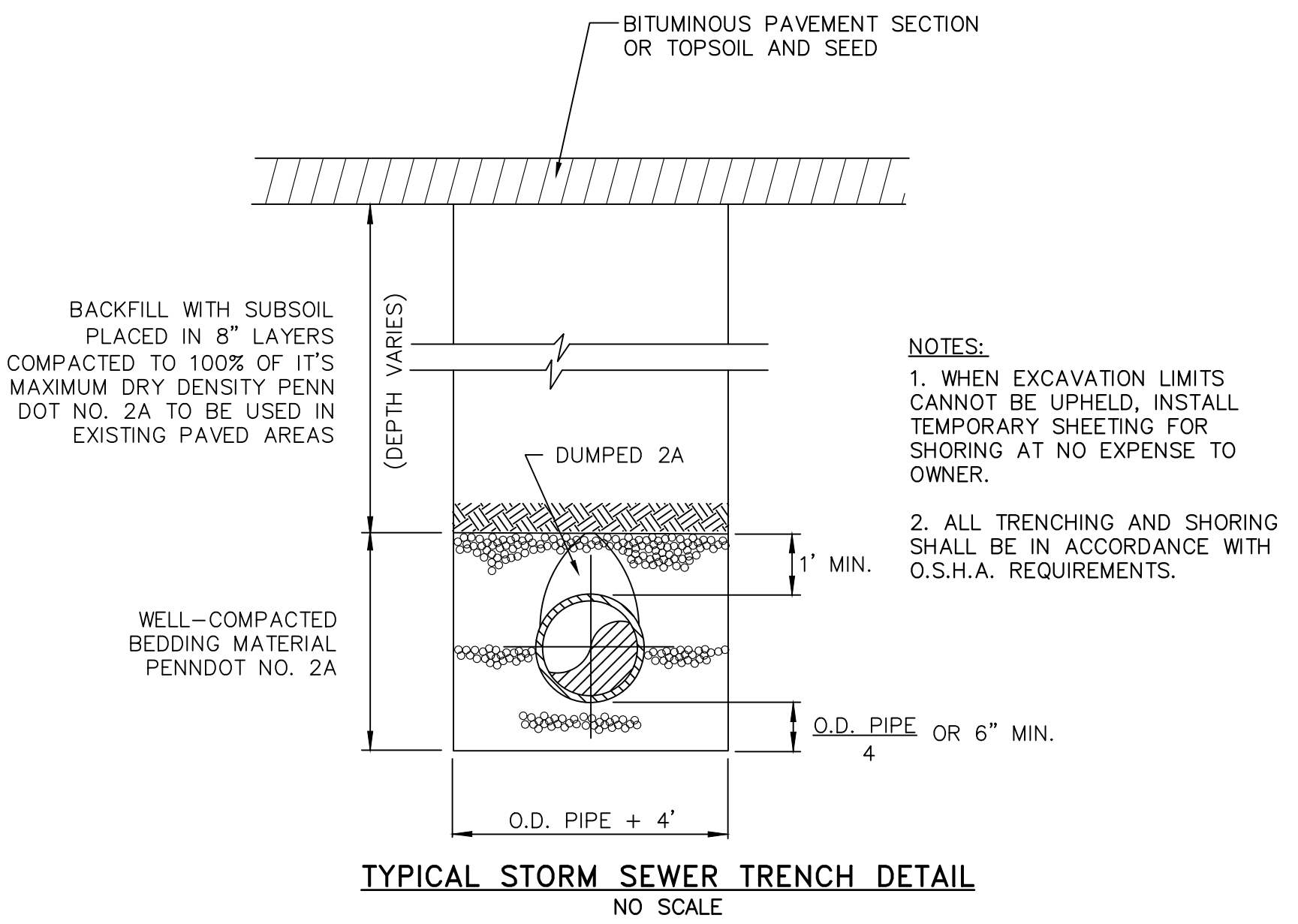
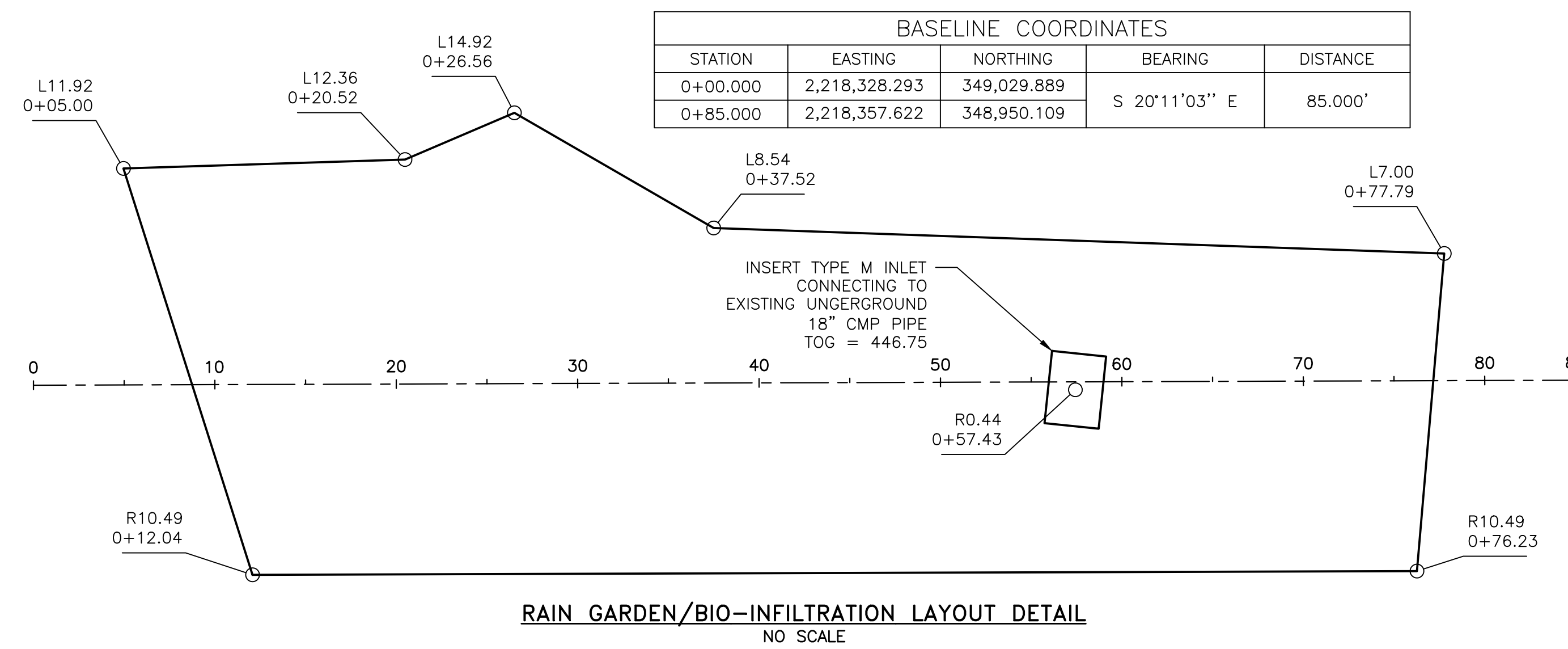
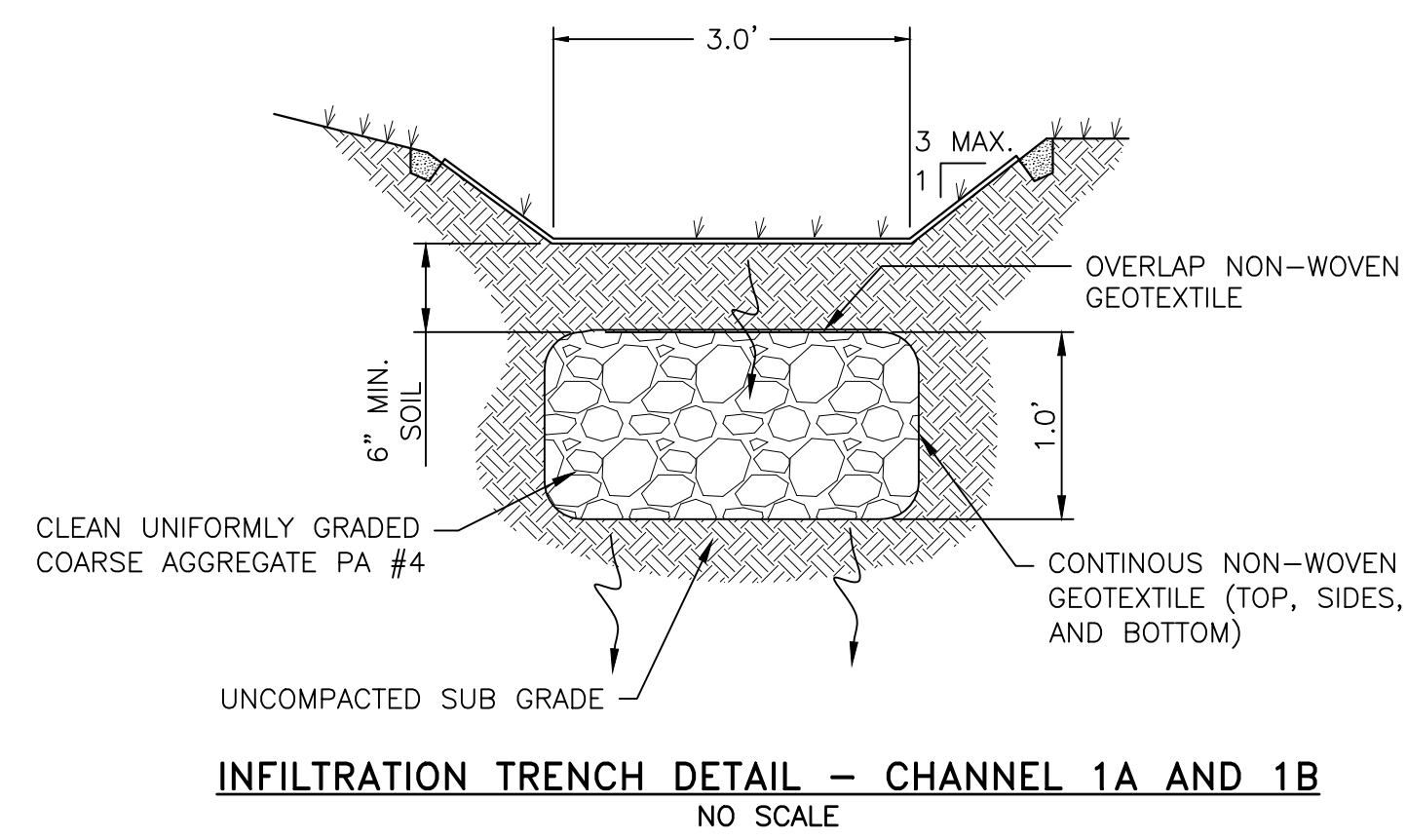
"LAND DEVELOPMENT PLAN" FOR Solid Rock Missionary Baptist Church 2400 LOCUST LANE Susquehanna Township Dauphin County Pennsylvania

PROJECT NUMBER: **R18-0633.000** TASK: **4** DATE: **MAY 21, 2019**

449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0593 FAX: (717) 232-1799 www.skeljoy.com

SKELJOY AND LOY ENGINEERS ARCHITECTS

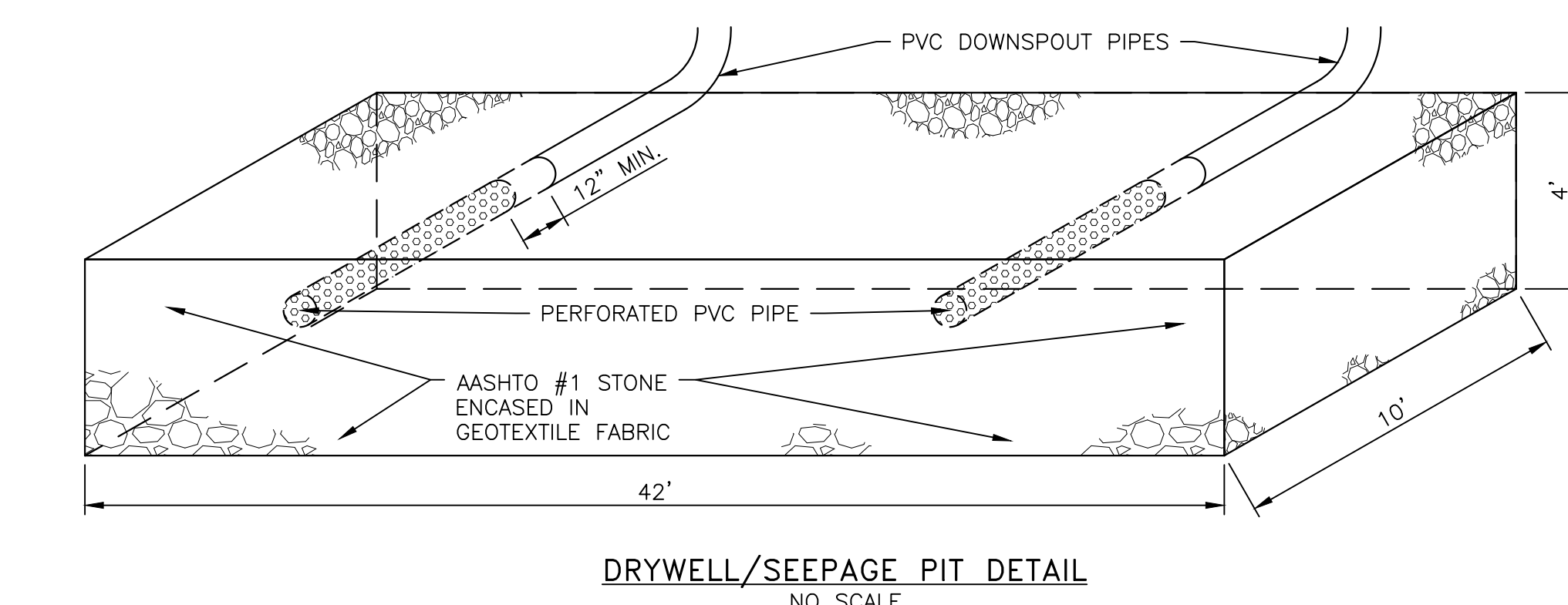
DESIGN: G.C.C. DTS/SM: D.J.J. CHK: B.A.S. APP: G.C.C. SCALE: NO SCALE BY: APPV: DATE:



RIPRAP APRON TABLE

DESIGNATION	Pd	3Dp	At*	Atw*	SIZE	REQUIRED DEPTH
RIPRAP APRON #1	1.25'	3.75'	12'	16'	R-4	18"
RIPRAP APRON #2	1.50'	4.50'	11'	16'	R-3	9"
RIPRAP APRON #3	0.67'	2'	6'	8'	R-3	9"

* MINIMUM DIMENSIONS
 CLASS R-3 RIPRAP SHALL HAVE A D50=3" RANGING FROM 2" TO 6".
 CLASS R-4 RIPRAP SHALL HAVE A D50=6" RANGING FROM 3" TO 12".



NOTE:
 TYPE D-W ENDWALL TO BE CONSTRUCTED TO MEET THE MINIMUM RIPRAP APRON SIZES SHOWN ON THE RIPRAP APRON DETAIL.

SPECIFICATIONS:
 - CONCRETE TO BE 3750 PSI MINIMUM @ 28 DAYS (PENNDOT CLASS AA)
 - MATERIAL AND CONSTRUCTION TO COMPLY WITH PENNDOT PUBLICATION 408
 - REINFORCING STEEL TO BE ASTM A615, GRADE 60
 - PIPE OPENING SIZE TO BE AT LEAST 2" BUT NOT MORE THAN 4" LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE
 - THIS ENDWALL IS ADEQUATE FOR PIPE SKEWS BETWEEN 90° AND 60°

AMENDED SOIL MIX MATERIAL SPECIFICATION
 AMENDED SOIL MIX SHALL CONSIST OF 20% ORGANIC MATERIAL (SUCH AS COMPOST), 30% SAND, PEA GRAVEL OR CRUSHED SLAG, AND 50% TOPSOIL (ALL ROCKS AND FOREIGN MATERIAL SHALL BE REMOVED). AMENDED SOIL MIX SHALL CONTAIN LESS THAN 10% CLAY. DO NOT COMPACT SOIL MIX AT ALL DURING CONSTRUCTION. DO NOT USE ARBITRARY FILL MATERIAL.

NOTE:
 1. PRECAST INLET BOX, INLET TOPS, STORM MANHOLES, GRADE ADJUSTMENT RINGS, AND D-W ENDWALL, AS MANUFACTURED BY MONARCH PRODUCTS COMPANY, INC. OR APPROVED EQUAL.

PROJECT NUMBER: R18-0633.000
 TASK: 4
 DATE: MAY 21, 2019

449 EISENHOWER BOULEVARD
 SUITE 300
 HARRISBURG, PA 17111
 TEL: (717) 232-0593
 FAX: (717) 232-1799
 www.skellyjoy.com

SKELLY AND JOY
 ENGINEERS ARCHITECTS

LAND DEVELOPMENT PLAN FOR
 Solid Rock Missionary Baptist Church
 2400 LOCUST LANE
 Susquehanna Township Dauphin County Pennsylvania

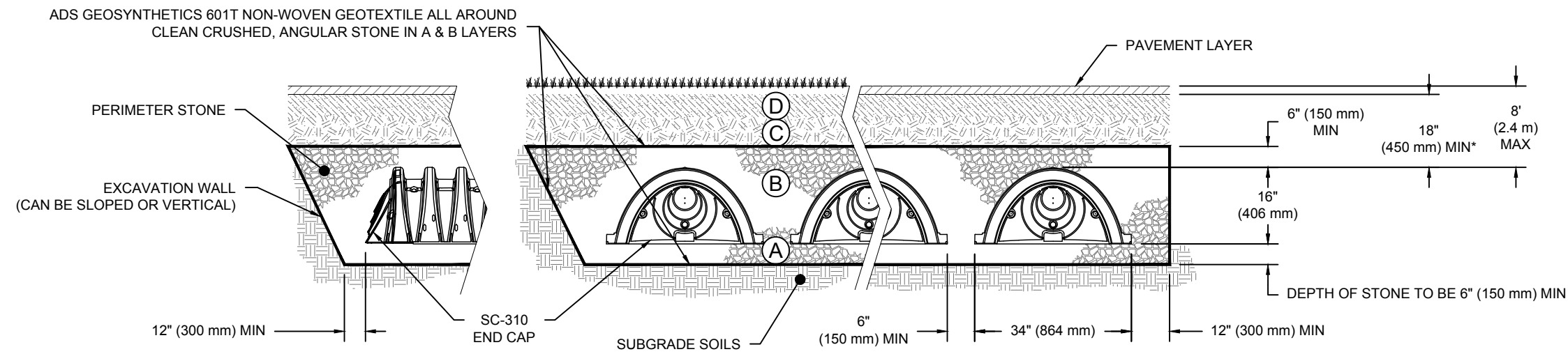
DRAWING NO. C-10
 SHEETS: 10 OF 21

DESIGN: G.C.C.
 CHECKED: D.J.J.
 APPR: E.A.S.
 SCALE: NO SCALE
 DATE: 7/1/19
 REVISION: 1 REVISED PER HRG COMMENTS LETTER DATED JUNE 13, 2019

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M14S ¹ A-1, A-2.4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (63 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 4. ONCE LAYER 'C' IS PLACED, ANY SOLID MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



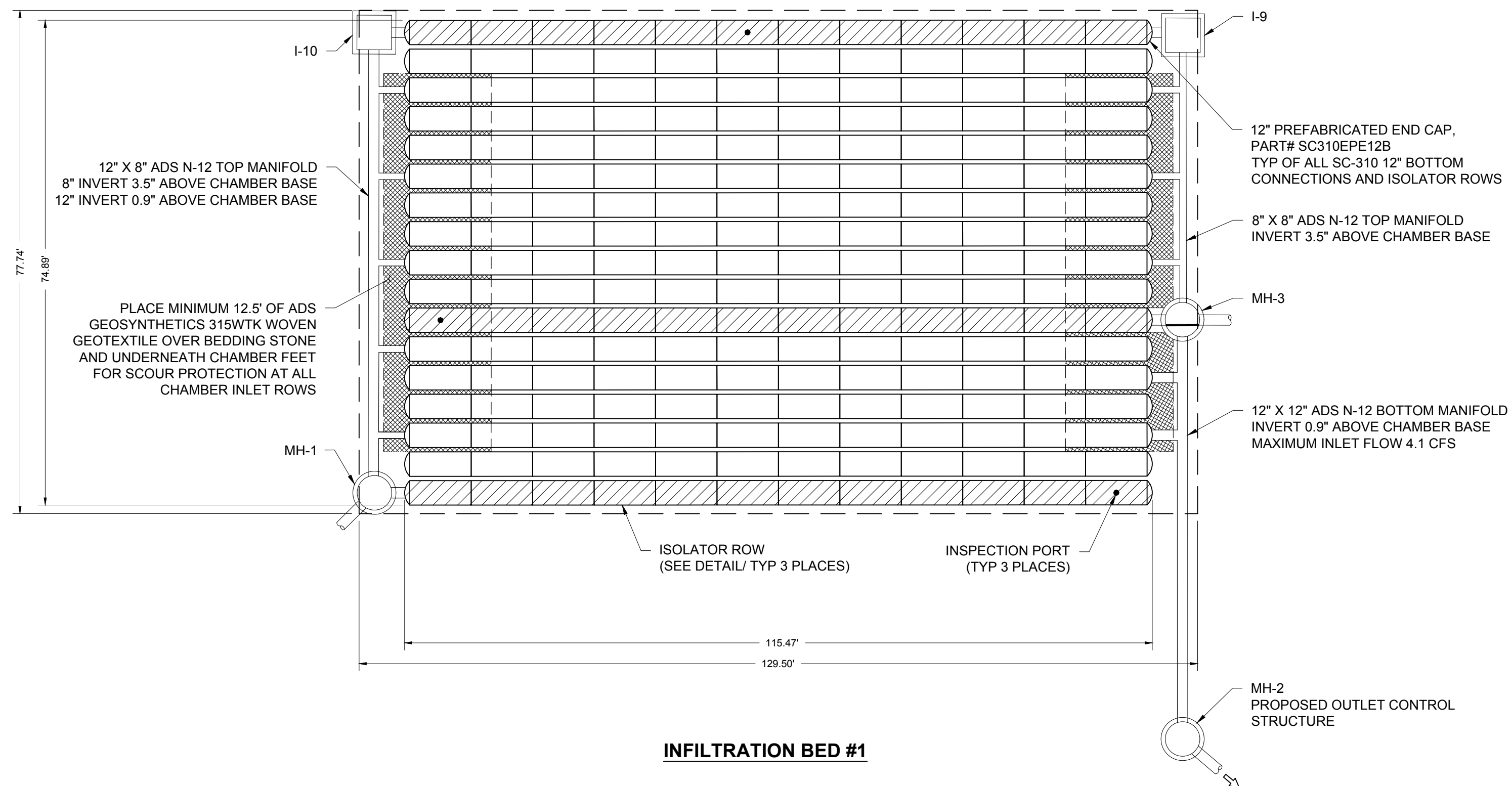
NOTES FOR THE INSTALLATION OF THE SC-310 SYSTEM

- STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.
- ADS REPRESENTATIVE SHALL BE CONTACTED PRIOR TO CONSTRUCTION AND BE IN ATTENDANCE DURING PRE-CONSTRUCTION CONFERENCE.

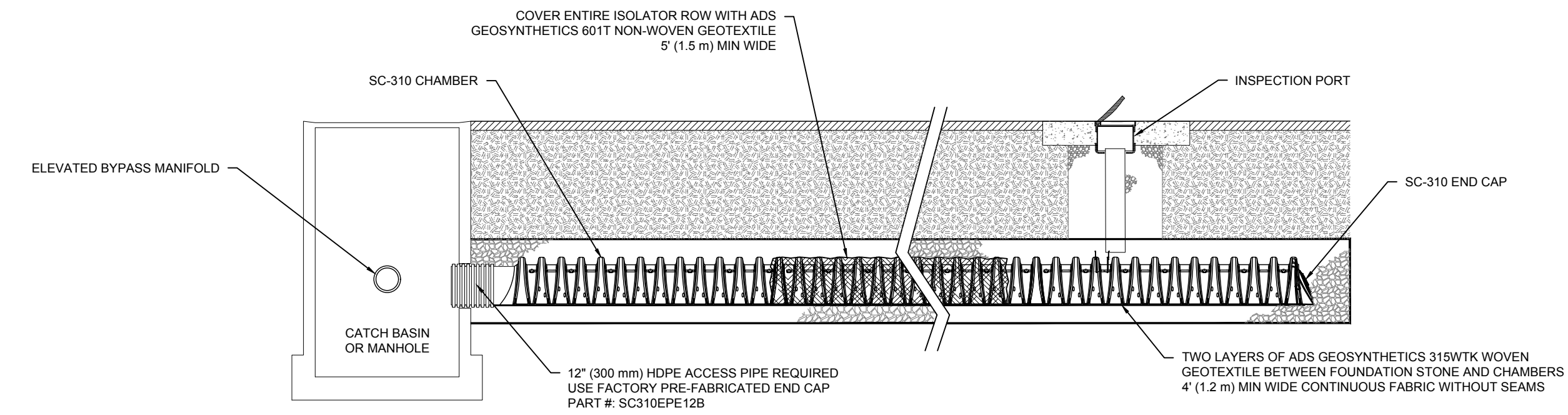
NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.



INFILTRATION BED #1



SC-310 ISOLATOR ROW DETAIL
NTS

PROPOSED LAYOUT - INFILTRATION BED-1

204	STORMTECH SC-310 CHAMBERS
34	STORMTECH SC-310 END CAPS
6	STONE ABOVE (in)
6	STONE BELOW (in)
40	% STONE VOID
7091	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
5662	SYSTEM AREA (ft ²)
311	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS - INFILTRATION BED-1

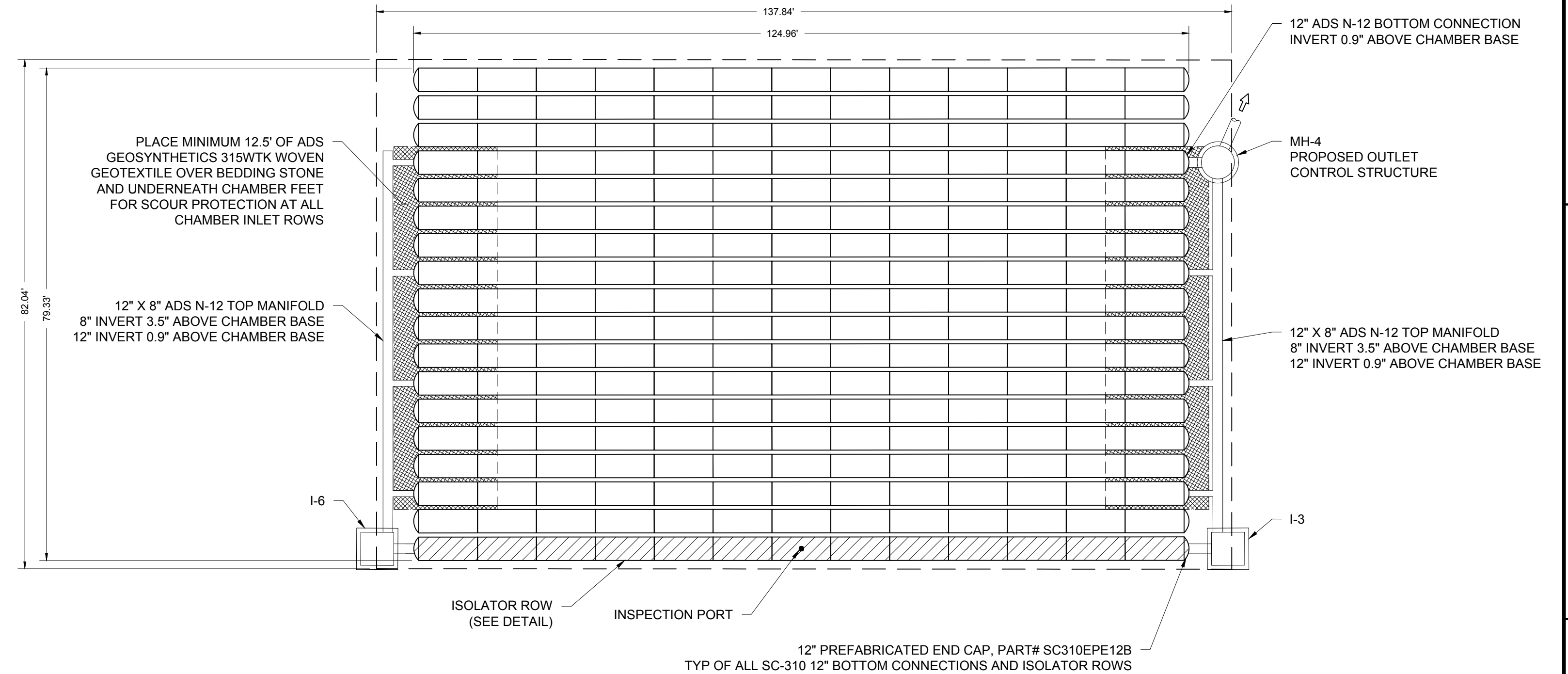
460.63	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
454.63	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
454.13	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
454.13	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
454.13	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
453.13	TOP OF STONE
452.63	TOP OF SC-310 CHAMBER
451.59	8" TOP MANIFOLD INVERT
451.38	12" ISOLATOR ROW CONNECTION INVERT
451.38	12" BOTTOM MANIFOLD TRUNK INVERT
451.30	BOTTOM OF SC-310 CHAMBER
450.80	BOTTOM OF STONE

PROPOSED LAYOUT - INFILTRATION BED-2

234	STORMTECH SC-310 CHAMBERS
36	STORMTECH SC-310 END CAPS
6	STONE ABOVE (in)
9	STONE BELOW (in)
40	% STONE VOID
8645	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
6361	SYSTEM AREA (ft ²)
330	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS - INFILTRATION BED-2

456.38	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
450.38	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
449.88	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
449.88	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
449.88	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
448.88	TOP OF STONE
448.38	TOP OF SC-310 CHAMBER
447.34	8" TOP MANIFOLD INVERT
447.13	12" ISOLATOR ROW/OUTLET CONNECTION INVERT
447.13	12" BOTTOM MANIFOLD TRUNK INVERT
447.05	BOTTOM OF SC-310 CHAMBER
446.30	BOTTOM OF STONE



INFILTRATION BED #2

DRAWING NO. **C-11**
SHEET NO. **11 OF 21**

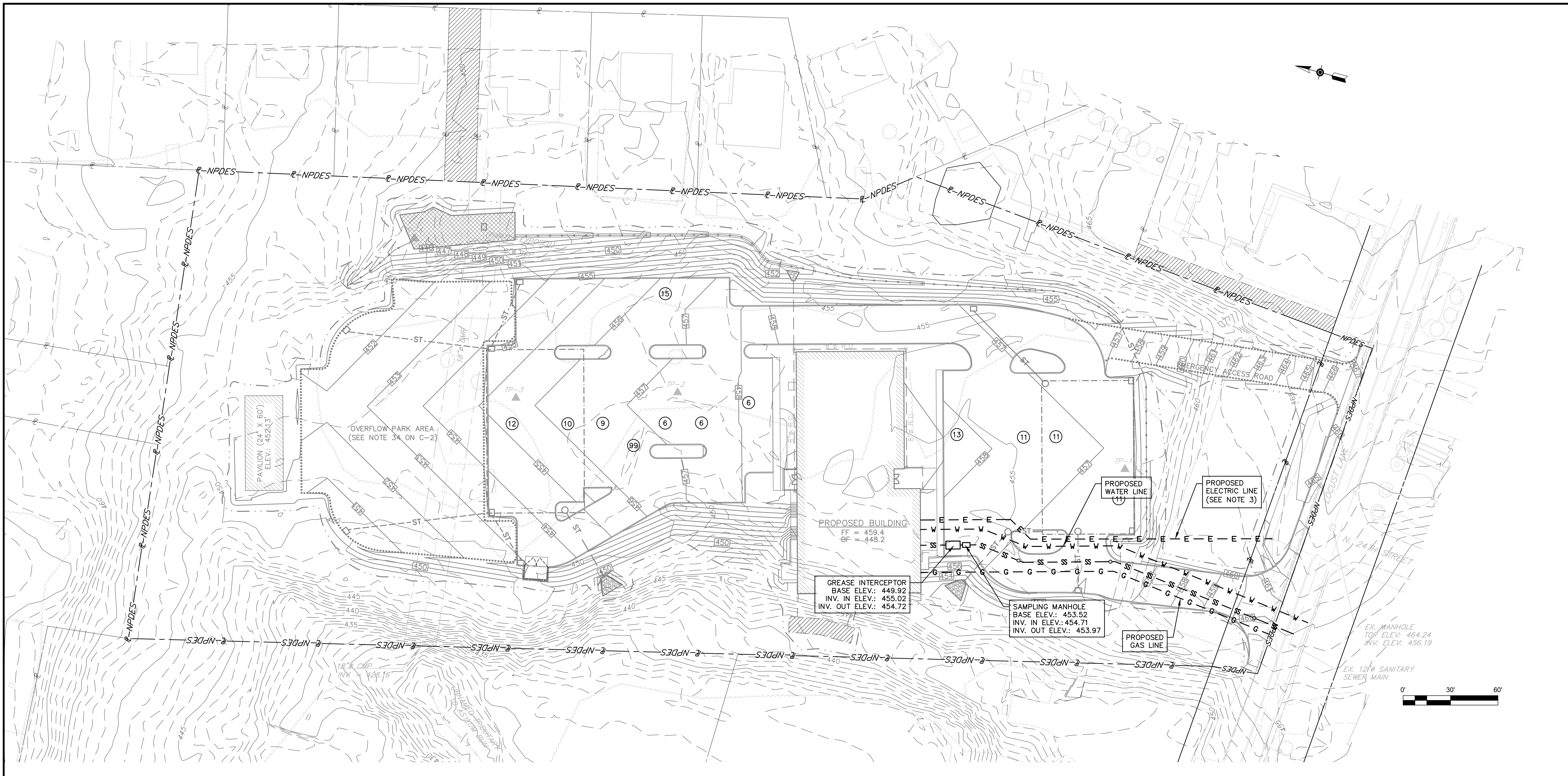
"LAND DEVELOPMENT PLAN" FOR
 Solid Rock Missionary Baptist Church
 2400 LOCUST LANE
 Susquehanna Township, Dauphin County, Pennsylvania

DSGN	G.C.C.G.	DFTSMN	CHKR	APPV	SCALE	NO. SCALE	BY	DATE	REV	DESCRIPTION
		D. J. J.	E. A. S.	G. C. C.						

449 EISENHOWER BOULEVARD
 SUITE 300
 HARRISBURG, PA 17111
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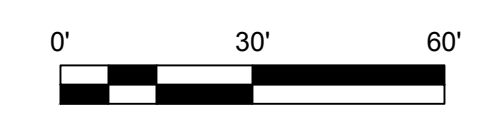
PROJECT NUMBER: **R18-0633.000**
 TASK: **4**
 DATE: **MAY 21, 2019**



LEGEND

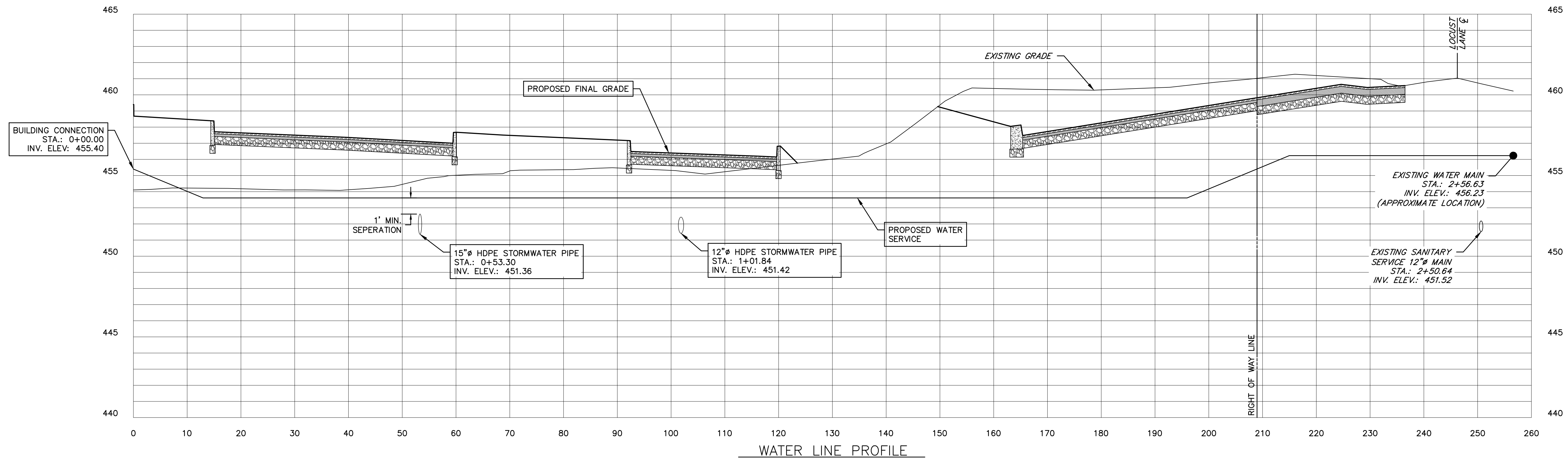
--- R-NPDES ---	PROPERTY AND NPDES BOUNDARY LINE	---	PROPOSED LIMIT OF DISTURBANCE
---	LEGAL RIGHT-OF-WAY (75')	---	PROPOSED BUILDING LIMITS
---	ROAD CENTER LINE (LOCUST LANE)	---	PROPOSED EDGE OF ASPHALT
---	ADJACENT PROPERTY LINE	---	PROPOSED EDGE OF STABILIZED GRASS AREA
---	EASEMENT ZONES	---	PROPOSED RETAINING WALL
---	BUILDING SETBACK LINE	---	PROPOSED HANDICAP SIGNS
---	LANDSCAPE BUFFER LINE	---	PROPOSED CONTOURS
---	ZONING BOUNDARY	---	PROPOSED STORMWATER SUBSURFACE INFILTRATION BASIN
---	EXISTING BUILDINGS	---	PROPOSED STORMWATER INLET
---	EXISTING RUINS	---	PROPOSED STORMWATER PIPE END TREATMENTS
---	EXISTING ROADS	---	
---	EXISTING CURBING	---	PROPOSED STORMWATER ROCK APRONS
---	EXISTING FENCING	---	
---	EXISTING TREE AND BRUSH LINE	---	PROPOSED STORMWATER MANHOLE
---	EXISTING TREE	---	PROPOSED STORMWATER UNDERGROUND PIPES
---	EXISTING HEDGE ROW	---	PROPOSED STORMWATER ROOF DRAIN CLEANOUTS
---	EXISTING OVERHEAD UTILITIES LINE	---	PROPOSED STORMWATER ROOF DRAIN PIPES
---	EXISTING UTILITIES POLE	---	PROPOSED SANITARY SEWER LINE
---	EXISTING UNDERGROUND GAS LINE	---	PROPOSED SANITARY SEWER CLEANOUT
---	EXISTING UNDERGROUND STORM SEWER LINE	---	PROPOSED WATER LINE
---	EXISTING UNDERGROUND SANITARY SEWER LINE	---	PROPOSED GAS LINE
---	EXISTING UNDERGROUND WATER SUPPLY LINE	---	PROPOSED ELECTRIC LINE
---	EXISTING UNDERGROUND WATER SUPPLY LINE	---	
---	EXISTING INDEX CONTOUR LINE	---	
---	EXISTING INTERMEDIATE CONTOUR LINE	---	

- NOTES:**
- CONTRACTOR SHALL COORDINATE FINAL LOCATION AND CONSTRUCTION OF WATER AND GAS LINES WITH SERVICING UTILITY.
 - SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH SEWER AUTHORITY SPECIFICATIONS. CONTRACTOR SHALL COORDINATE CONSTRUCTION WITH SEWER AUTHORITY.
 - APPROXIMATE LOCATION OF PROPOSED ELECTRIC SERVICE LINE IS SUBJECT TO CHANGE PENDING PPL REVIEW AND COORDINATION.

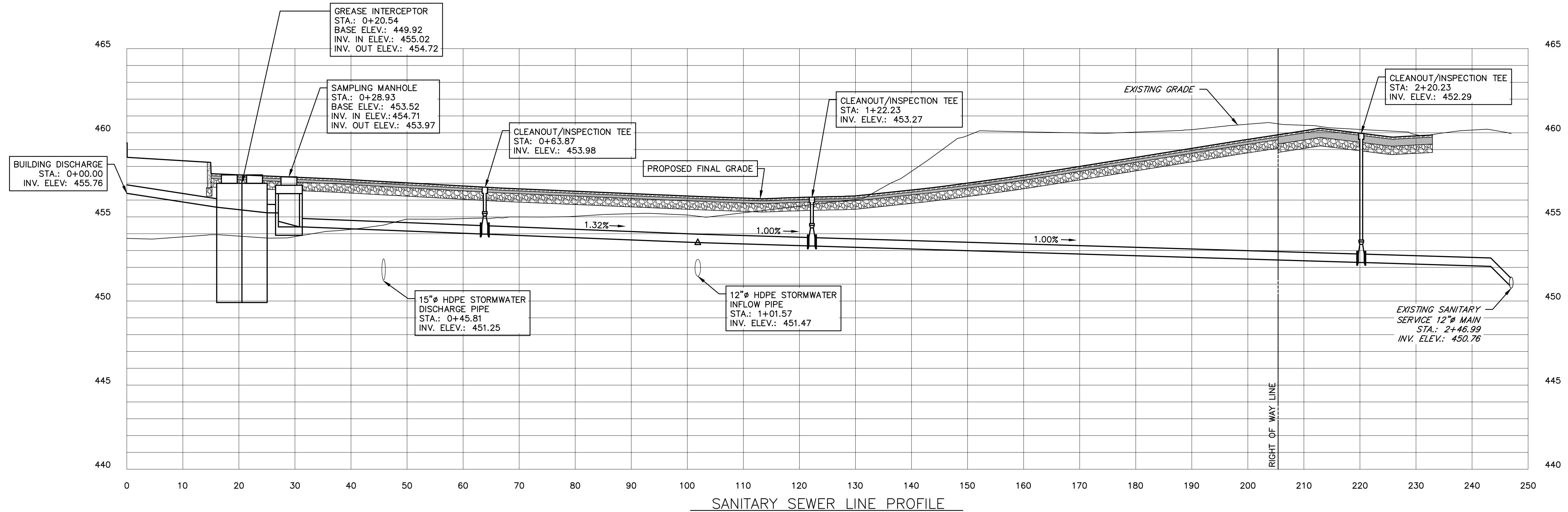


PROJECT NUMBER: R18-0633.000	SUBTASK: 4	DATE: MAY 21, 2019		449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0693 FAX: (717) 232-1799 www.skelloy.com	DSGN G.C.C.G. DFTSMN D.J.J. CHKR B.A.S. APPV G.C.C.G. D.J.J. G.C.C.G. 7/5/19 SCALE 1" = 30' BY: APPV DATE	"LAND DEVELOPMENT PLAN" FOR Solid Rock Missionary Baptist Church 2400 LOCUST LANE Susquehanna Township Dauphin County Pennsylvania	DRAWING NO. C-12 SHEETS: 12 OF 21 SITE UTILITIES PLAN
						1 AS PER TOWNSHIP COMMENTS REV DESCRIPTION	

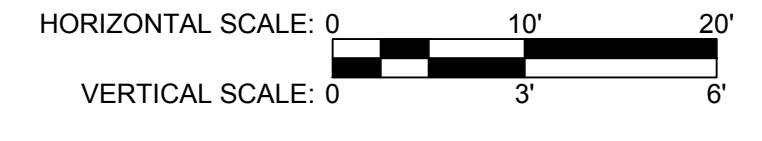
Plotted on: 2019-07-03 Plotted By: Johnston, Don File Name: R:\Projects\2018 Projects and Proposals\R18-0633.000 Solid Rock Missionary Baptist Church Land Development Plan Drawings\CADD\Design Package\012 SITE UTILITIES PLAN.dwg



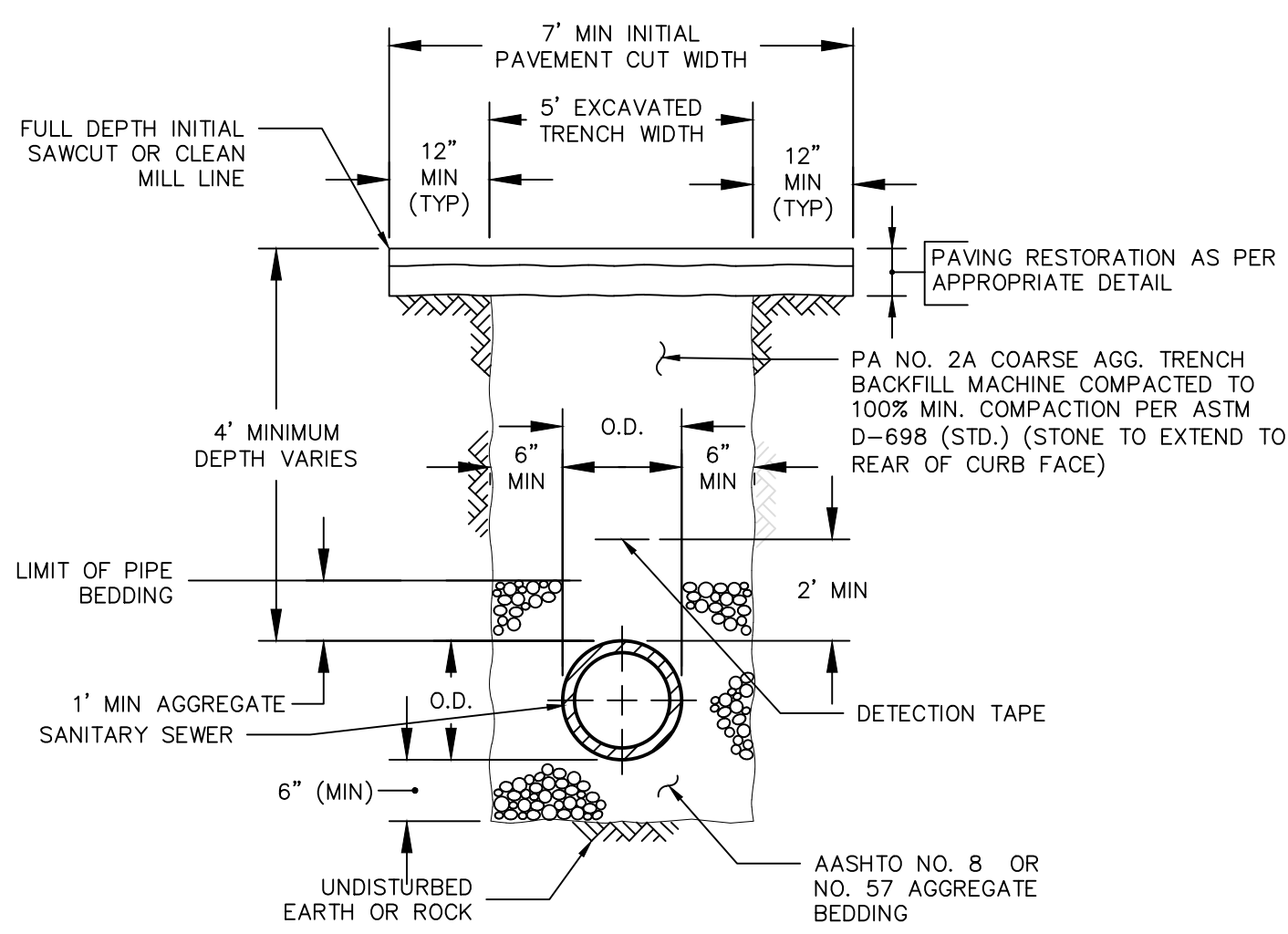
WATER LINE PROFILE



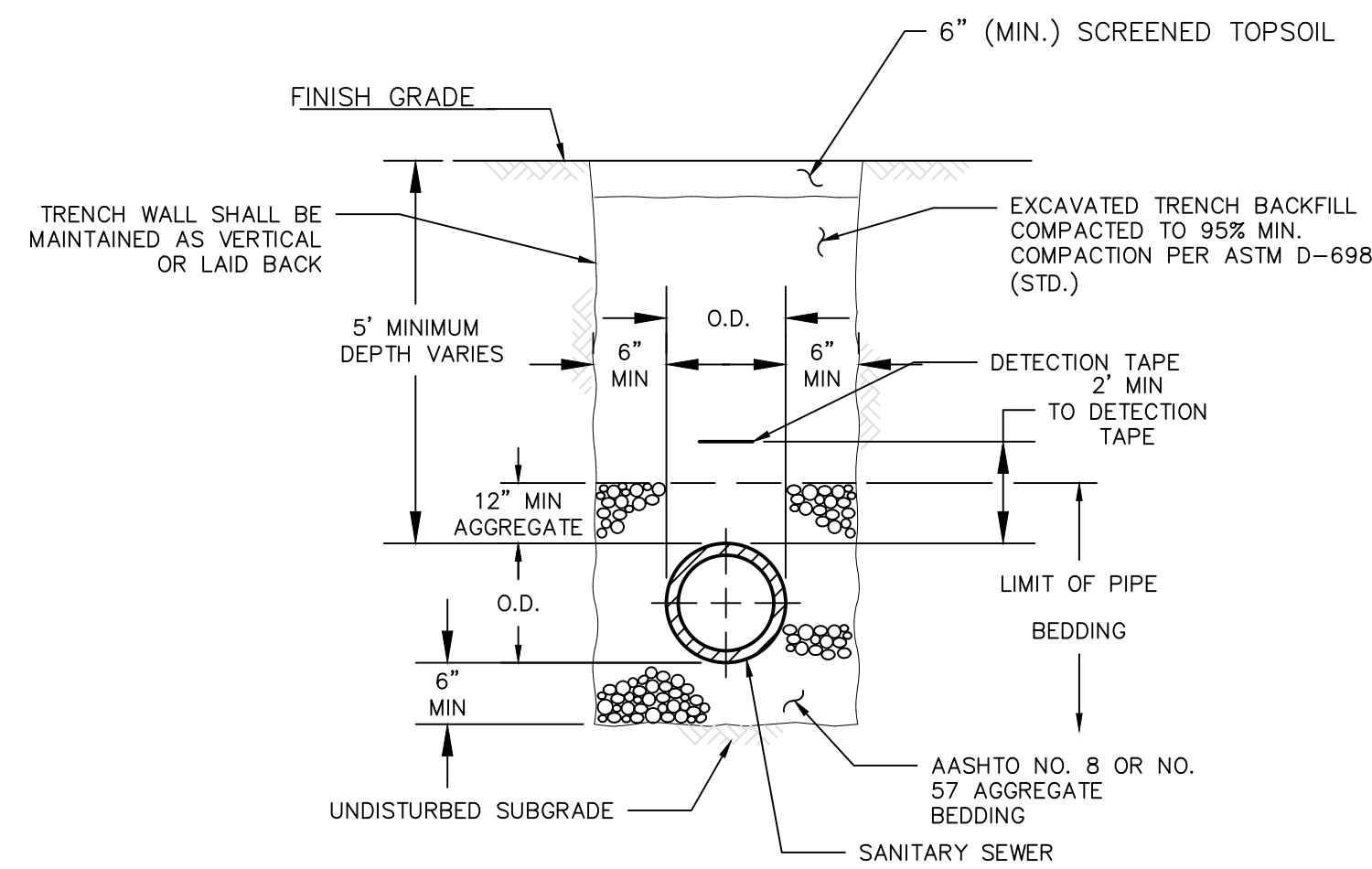
SANITARY SEWER LINE PROFILE



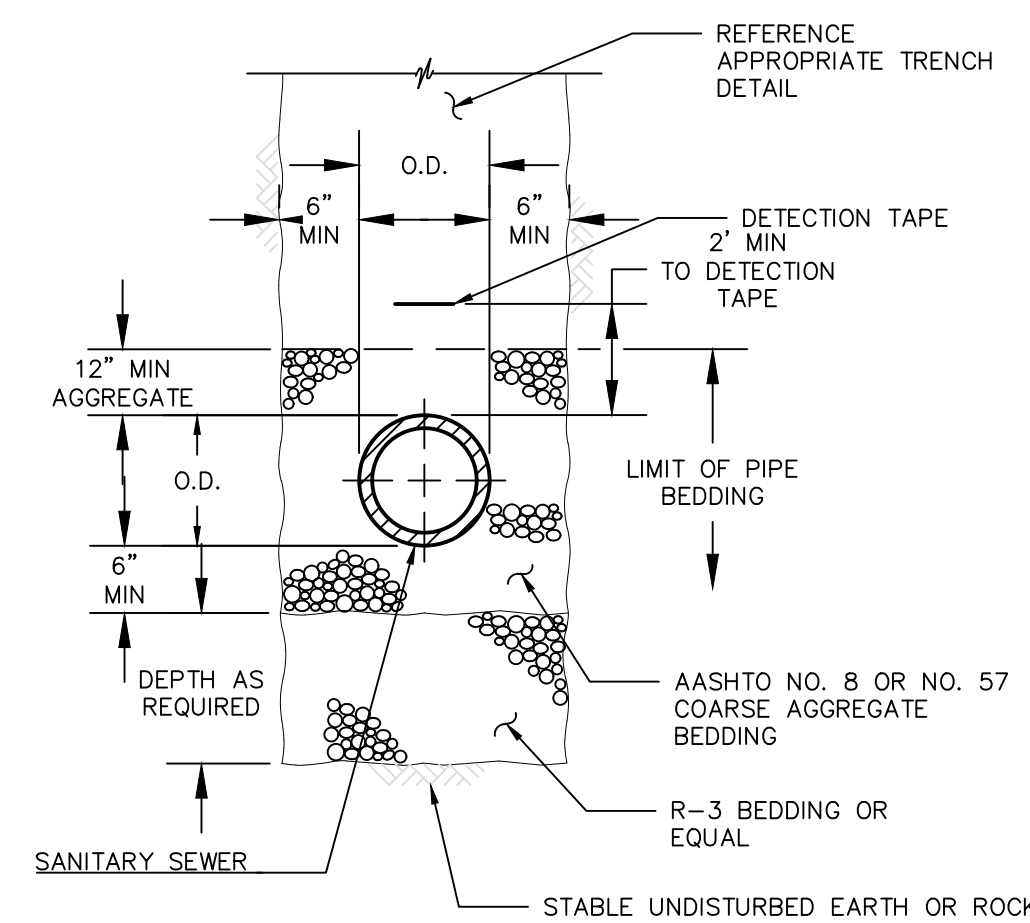
DRAWING NO. C-13		SHEETS: 13 OF 21	
"LAND DEVELOPMENT PLAN" FOR Solid Rock Missionary Baptist Church 2400 LOCUST LANE Susquehanna Township, Dauphin County, Pennsylvania			
DSGN	G.C.C.G.	CHKR	SCALE AS SHOWN
DFTSMN	D.J.J.	APPV	BY: APPV DATE
BY	DATE	REV	DESCRIPTION
449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0593 FAX: (717) 232-1799 www.stekeljoy.com			
PROJECT NUMBER: R18-0633.000	TASK: 4	DATE: MAY 21, 2019	



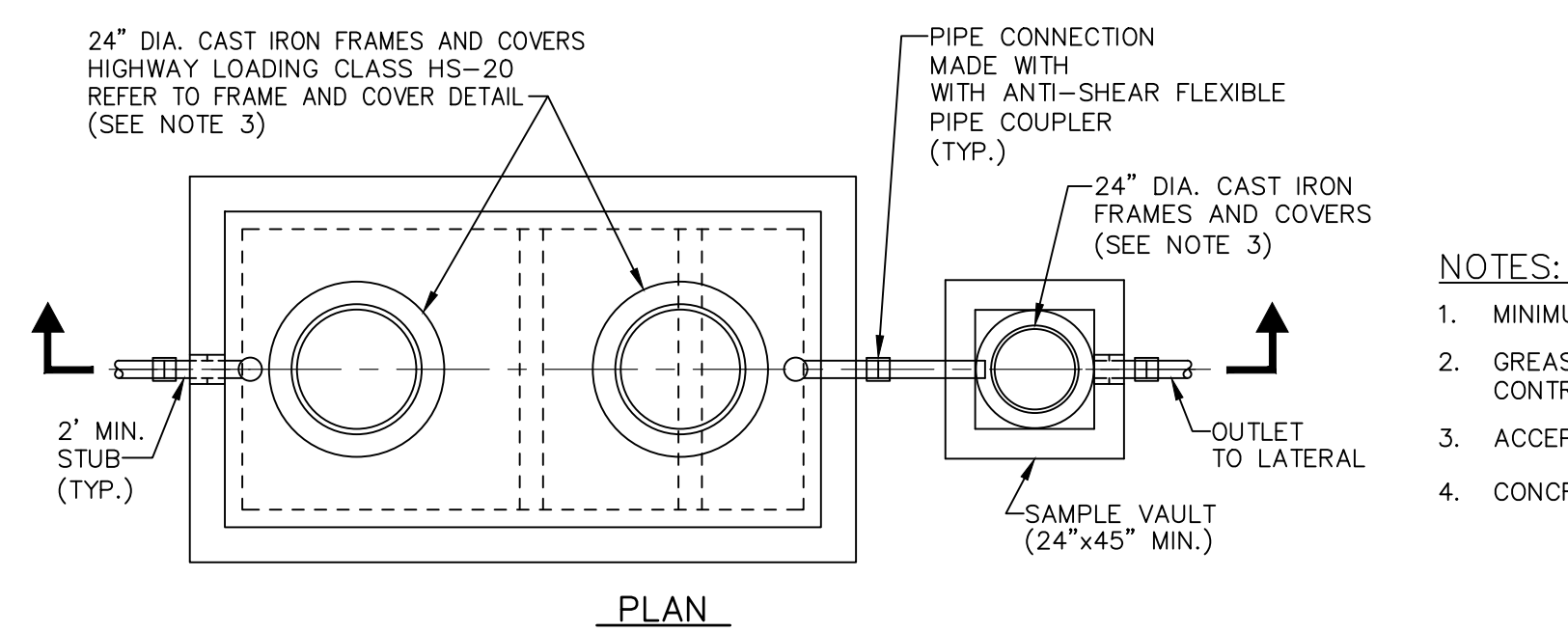
TRENCH DETAIL IN PAVED AREAS
NO SCALE



TRENCH DETAIL IN UNPAVED AREAS
NO SCALE



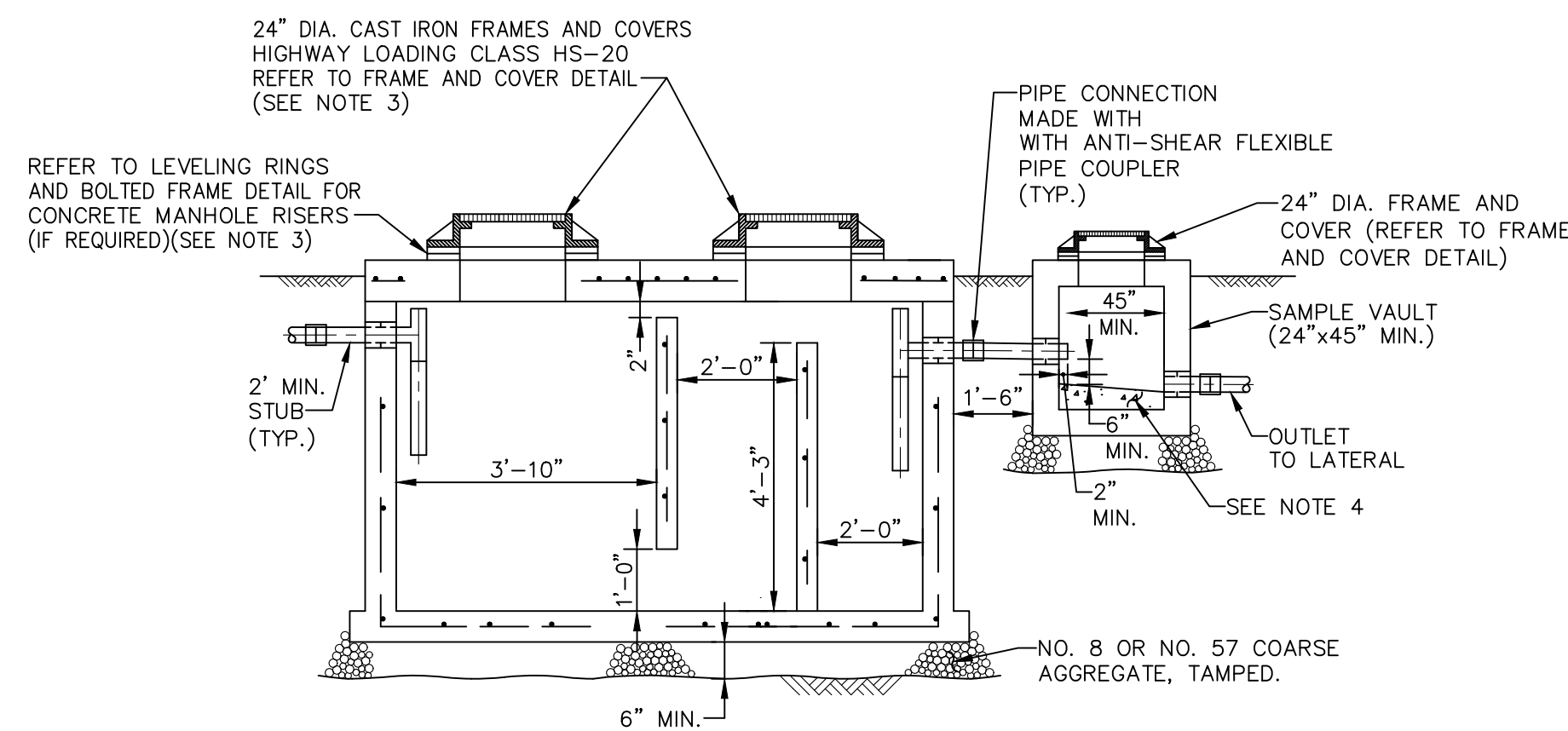
UNSUITABLE MATERIAL EXCAVATION
NO SCALE



PLAN

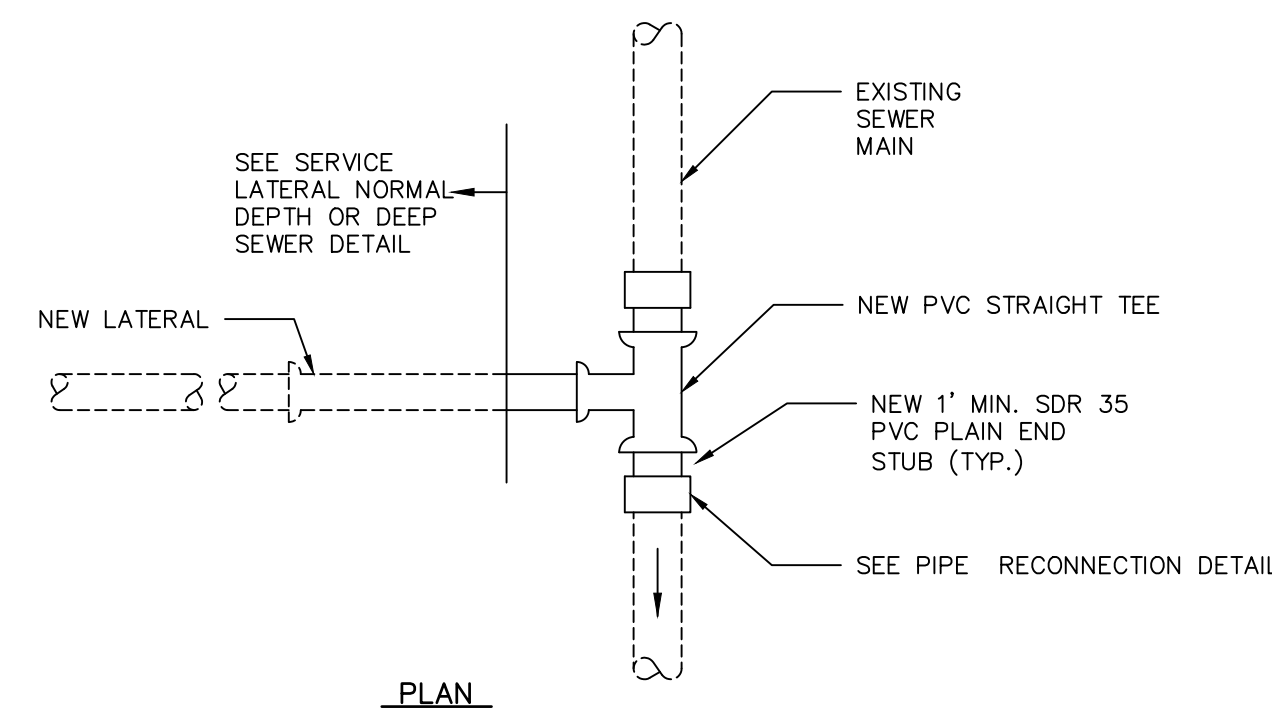
NOTES:

1. MINIMUM SIZE OF GREASE TRAP PERMITTED IS 1,000 GALLONS.
2. GREASE INTERCEPTOR SIZE AND DESIGN SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. ACCEPTABLE MANUFACTURERS: MONARCH PRODUCTS OR APPROVED EQUAL.
4. CONCRETE FOR SLOPE TO BE 3500 psi MIX DESIGN.

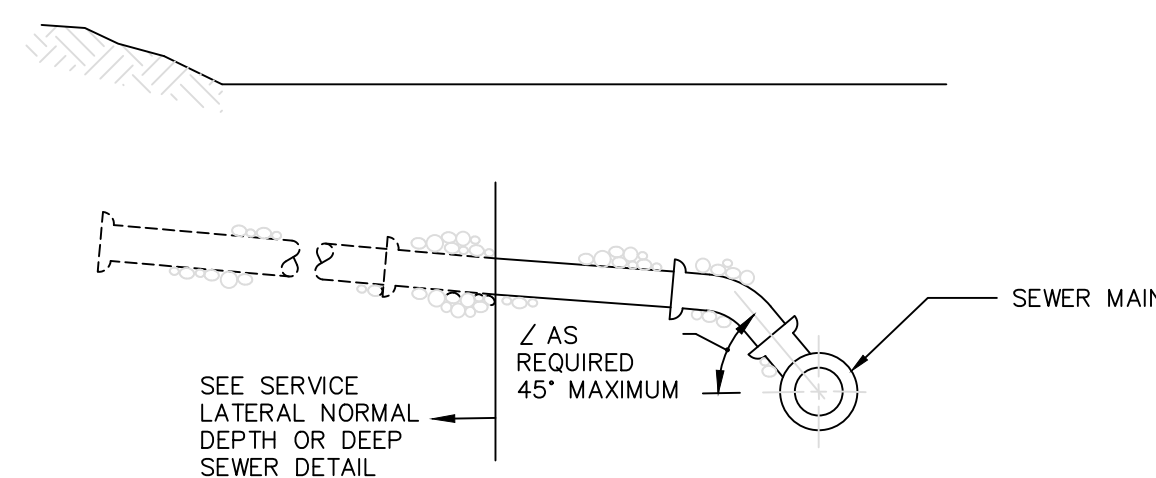


SECTION

TYPICAL GREASE INTERCEPTOR TO SAMPLING MANHOLE CONNECTION
NO SCALE



PLAN

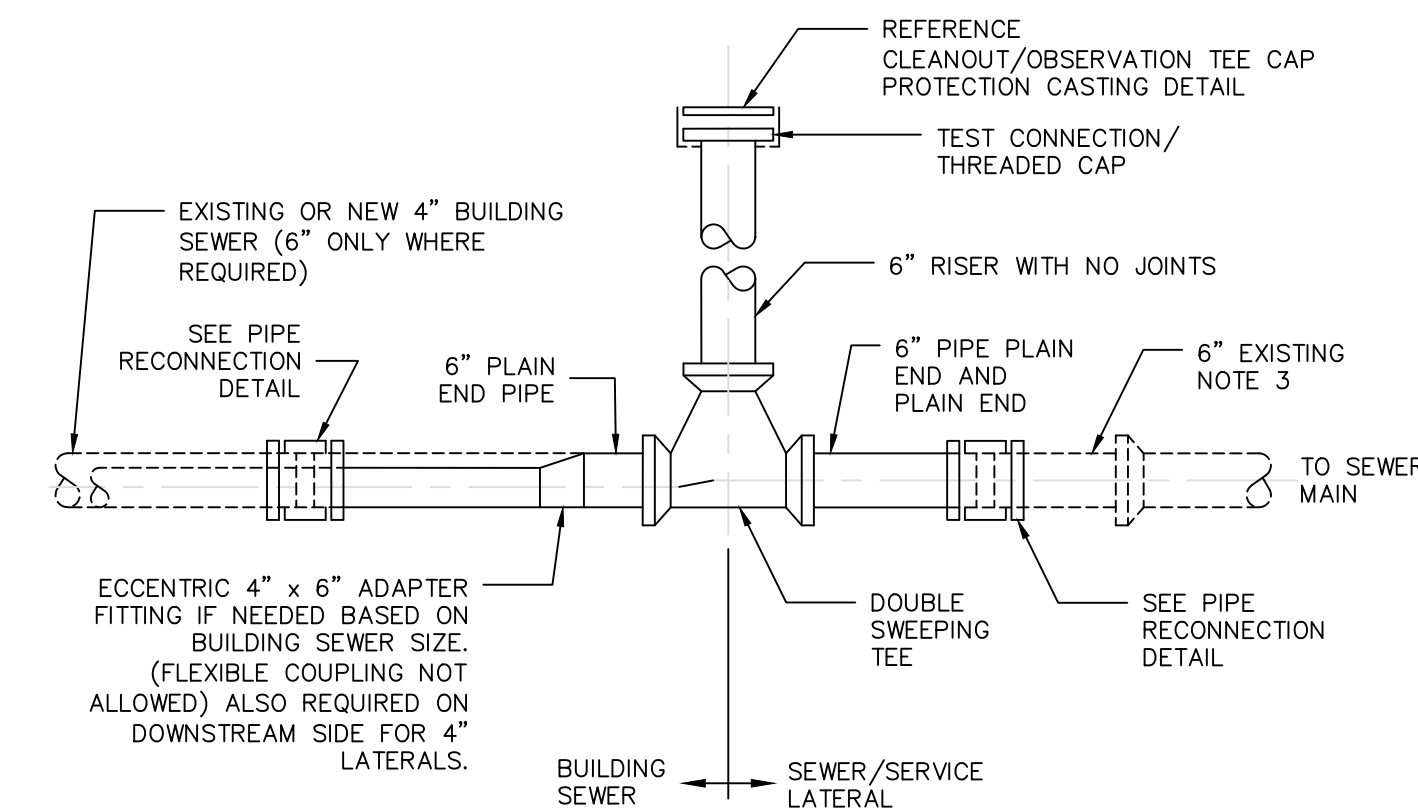


ELEVATION

NOTES:

1. EXISTING MAIN SEWER TO BE SAW CUT.

SERVICE LATERAL CONNECTION TO EXISTING SEWER MAIN
NO SCALE



ELEVATION

NOTES:

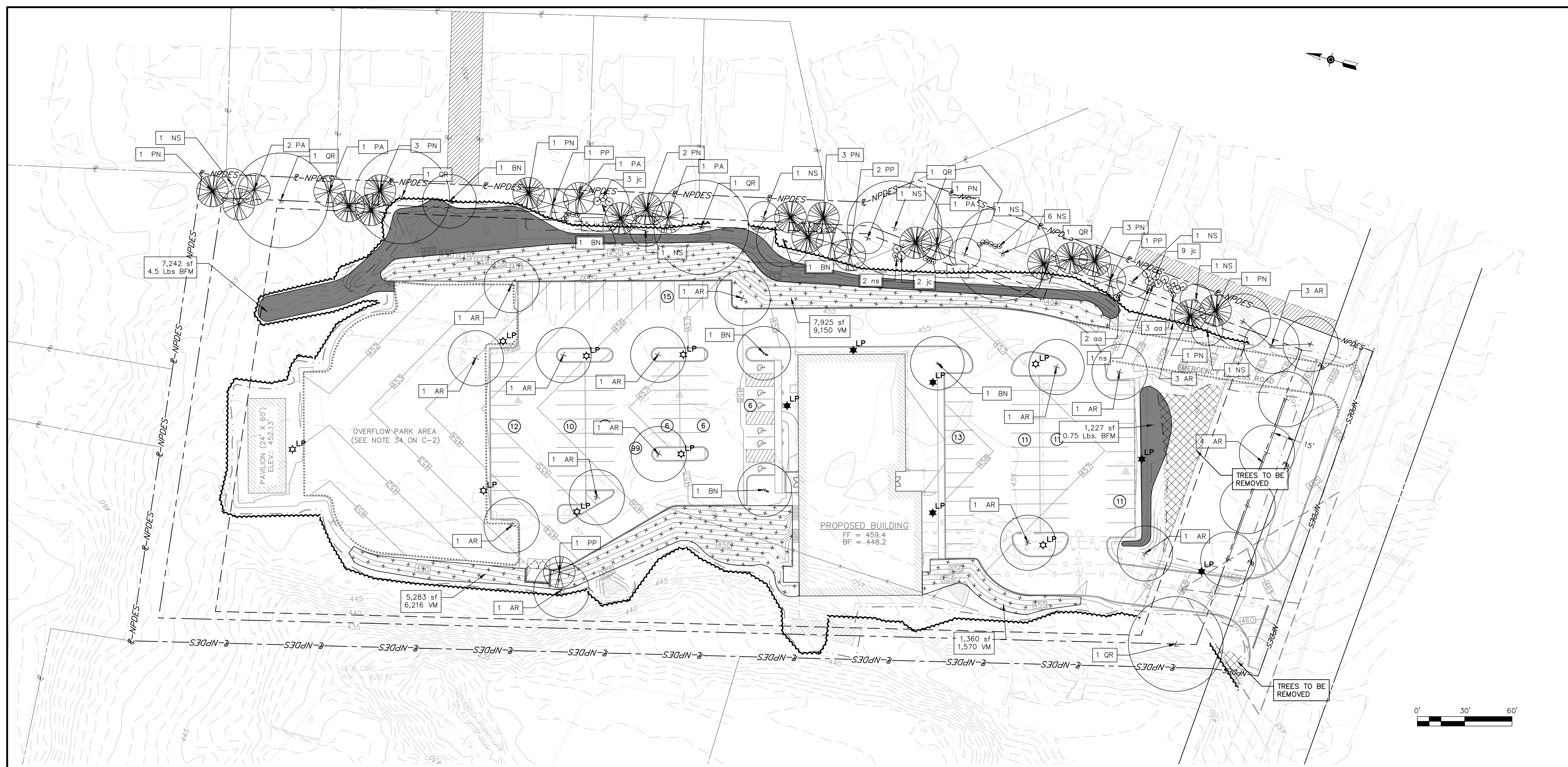
1. REFER TO APPROPRIATE DWG'S. FOR CLEANOUT CAP DETAILS.
2. LOCATE OBSERVATION TEE 5'-0" (MAX.) FROM CURB, OR AT THE CONNECTION POINT BETWEEN SEWER LATERAL AND BUILDING SEWER IF KNOWN.
3. IF 4" LATERAL EXISTS, USE ECCENTRIC 4" x 6" ADAPTER FITTING FOR TRANSITION TO OBSERVATION TEE (4" x 6" FLEXIBLE COUPLING NOT ALLOWED).

CLEANOUT/OBSERVATION TEE
NO SCALE

SANITARY SEWER NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH PA ACT 287, NOTIFICATION OF UTILITIES BEFORE EXCAVATION IN WORK AREA BY CONTACTING THE PA ONE-CALL NUMBER AT 800-242-1776.
2. THE LOCATION, DEPTH, SIZE, AND TYPE OF EXISTING UTILITIES (ELECTRIC, GAS, WATER, SANITARY SEWERS, STORM SEWERS, ETC.) SHOWN ON THE DRAWINGS MAY NOT BE ACCURATE.
3. LENGTHS AND SLOPE (GRADE) OF PIPE AND MANHOLE INVERT ELEVATIONS SHOWN ARE FROM MANHOLE CENTER TO MANHOLE CENTER. CONTRACTOR SHALL ADJUST ACTUAL GRADES ACCORDINGLY TO ALLOW FOR DISTANCE FROM MH CENTERS TO INSIDE OF MANHOLE WALLS.
4. MANHOLE TOP ELEVATIONS SHOWN ARE APPROXIMATE. MANHOLES ARE TO BE SET AT GRADE IN IMPROVED AREAS. MANHOLES IN WOODED OR SECLUDED AREAS SHALL BE SET TWO- FEET ABOVE GRADE WHEN INDICATED ON DRAWINGS OR WHEN DIRECTED BY ENGINEER.
5. MANHOLE FRAMES AND COVERS IN PAVEMENT SHALL BE LOCATED OUT OF THE WHEEL PATH OF VEHICLES.
6. CONTRACTOR TO SURVEY AND VERIFY NEW AND EXISTING MANHOLES, GRADES, ETC AS REQUIRED FOR CONSTRUCTION AND BEFORE ORDERING MATERIALS.
7. CONTRACTOR IS RESPONSIBLE FOR BYPASS PUMPING OF SEWAGE WHEN REPLACING AND/OR CONNECTING EXISTING SANITARY SEWER SYSTEMS.
8. ALL MANHOLES SHALL BE 4 FEET IN DIAMETER, UNLESS OTHERWISE NOTED. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED DOWN WATER TIGHT FRAMES AND COVERS.
9. HORIZONTAL AND VERTICAL SEPARATION BETWEEN NEW SANITARY SEWERS AND NEW OR EXISTING WATER MAINS SHALL CONFORM WITH SECTION 28.3 OF DEP'S "DOMESTIC WASTEWATER FACILITIES MANUAL". IF POSSIBLE, SEWERS CROSSING WATER MAINS SHALL BE CONSTRUCTED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN.
10. ALL MATERIALS USED AND CONSTRUCTION METHODS EMPLOYED ARE TO BE IN ACCORDANCE WITH THE LATEST STANDARDS OF THE SUSQUEHANNA TOWNSHIP AUTHORITY.
11. CONTRACTOR SHALL TEST PIT ALL EXISTING UTILITY CROSSINGS PRIOR TO INSTALLING ANY SANITARY SEWER PIPE TO VERIFY EXISTING HORIZONTAL AND VERTICAL ELEVATIONS TO ASSURE NO CONFLICT WITH NEW SEWER.
12. LATERAL LOCATIONS TO BE PLACED 10 FEET FROM ANY WATER SERVICE AND FIVE FEET FROM ANY STREET TREE.

DRAWING NO. C-14		SHEETS: 14 OF 21	
"LAND DEVELOPMENT PLAN" FOR Solid Rock Missionary Baptist Church 2400 LOCUST LANE Susquehanna Township Dauphin County Pennsylvania			
DSGN	G.C.C.G.	SCALE	AS NOTED
DFTSMN	D.J.J.	BY	APPLY DATE
CHKR	B.A.S.	REV	DESCRIPTION
APPV	G.C.C.G.		
449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0593 FAX: (717) 232-1799 www.skellyjoy.com			
PROJECT NUMBER: R18-0633.000	TASK: 4	DATE: MAY 21, 2019	



LEGEND

- R-NPDES --- PROPERTY AND NPDES BOUNDARY LINE
- LEGAL RIGHT-OF-WAY (75') ---
- ROAD CENTER LINE (LOCUST LANE) ---
- ADJACENT PROPERTY LINE ---
- EASEMENT ZONES ---
- BUILDING SETBACK LINE ---
- LANDSCAPE BUFFER LINE ---
- ZONING BOUNDARY ---
- EXISTING BUILDINGS ---
- EXISTING RUINS ---
- EXISTING ROADS ---
- EXISTING CURBING ---
- EXISTING FENCING ---
- EXISTING TREE AND BRUSH LINE ---
- EXISTING TREE ---
- EXISTING HEDGE ROW ---
- EXISTING OVERHEAD UTILITIES LINE ---
- EXISTING UTILITIES POLE ---
- EXISTING UNDERGROUND GAS LINE ---
- EXISTING UNDERGROUND STORM SEWER LINE ---
- EXISTING UNDERGROUND SANITARY SEWER LINE ---
- EXISTING UNDERGROUND WATER SUPPLY LINE ---
- EXISTING INDEX CONTOUR LINE ---
- EXISTING INTERMEDIATE CONTOUR LINE ---
- PROPOSED LIMIT OF DISTURBANCE ---
- PROPOSED BUILDING LIMITS ---
- PROPOSED EDGE OF ASPHALT ---
- PROPOSED EDGE OF STABILIZED GRASS AREA ---
- PROPOSED RETAINING WALL ---
- PROPOSED HANDICAP SIGNS ---
- PROPOSED CONTOURS ---
- PROPOSED STORMWATER SUBSURFACE INFILTRATION BASIN ---
- PROPOSED STORMWATER INLET ---
- PROPOSED STORMWATER PIPE END TREATMENTS ---
- PROPOSED STORMWATER ROCK APRONS ---
- PROPOSED STORMWATER MANHOLE ---
- PROPOSED STORMWATER UNDERGROUND PIPES ---
- PROPOSED STORMWATER ROOF DRAIN CLEANOUTS ---
- PROPOSED STORMWATER ROOF DRAIN PIPES ---
- PROPOSED SANITARY SEWER LINE ---
- PROPOSED SANITARY SEWER CLEANOUT ---
- PROPOSED WATER LINE ---
- PROPOSED GAS LINE ---
- PROPOSED ELECTRIC LINE ---
- PROPOSED LIGHT POLES - S5 LIGHTS ---
- PROPOSED LIGHT POLES - S3 LIGHTS ---
- PROPOSED BASIN BOTTOM SEED MIX AREA ---
- PROPOSED PERIWINKLE SEED AREA ---
- PROPOSED EVERGREEN TREE OR SHRUB PLANTING ---
- PROPOSED DECIDUOUS TREE OR SHRUB PLANTING ---
- PROPOSED TREELINE AFTER CONSTRUCTION ---

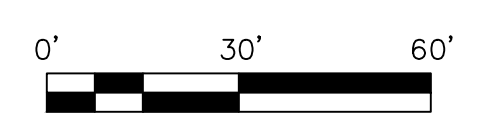
- PROPOSED BASIN BOTTOM SEED MIX AREA ---
- PROPOSED PERIWINKLE SEED AREA ---
- PROPOSED EVERGREEN TREE OR SHRUB PLANTING ---
- PROPOSED DECIDUOUS TREE OR SHRUB PLANTING ---
- PROPOSED TREELINE AFTER CONSTRUCTION ---

STREET TREES

REQUIREMENTS: 1 TREE PER 40 FEET OF FRONTAGE
 LENGTH OF FRONTAGE: 224 FEET
 NUMBER OF TREES REQUIRED: 6
 NOTE: STREET TREES SHALL BE PLACED NO CLOSER THAN 5 FEET FROM RIGHT-OF-WAY LINE.

TREE AND SHRUB LIST

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME
SHRUBS			
<u>DECIDUOUS</u>			
5	aa	Aronia arbutifolia	RED CHOKEBERRY
8	iv	Ilex verticillata	WINTERBERRY
<u>EVERGREEN</u>			
14	jc	Juniperus chinensis 'Monlep'	MINT JULEP JUNIPER
9	ns	Picea abies 'Nidiformis'	NEST SPRUCE
TREES			
<u>DECIDUOUS</u>			
20	AR	Acer Rubrum	RED MAPLE
6	BN	Betula Nigra	RIVER BIRCH
8	NS	Nyssa Sylvatica	BLACK TUPELO
6	QR	Quercus rubra	RED OAK
<u>EVERGREEN</u>			
6	PA	Picea Abies	NORWAY SPRUCE
5	PP	Picea Pungens	COLORADO BLUE SPRUCE
16	PN	Pinus Nigra	AUTRIAN PINE



DRAWING NO. **C-15**
 SHEETS: **15 OF 21**

"LAND DEVELOPMENT PLAN"
 FOR
 Solid Rock Missionary Baptist Church
 2400 LOCUST LANE
 Susquehanna Township Dauphin County
 Pennsylvania

LANDSCAPE PLAN

DSGN	G.C.C.G.
DFTSMN	D.J.J.
CHKR	E.A.S.
APPV	G.C.C.G.
SCALE	1" = 30'
BY	D.J.J.
DATE	7/5/19
REV	DESCRIPTION
1	AS PER TOWNSHIP COMMENTS

**449 EISENHOWER BOULEVARD
 SUITE 300
 HARRISBURG, PA 17111**

TEL: (717) 232-0593
 FAX: (717) 232-1799
 www.skellyjoy.com

**SKELLY AND JOY
 LANDSCAPE ARCHITECTS**

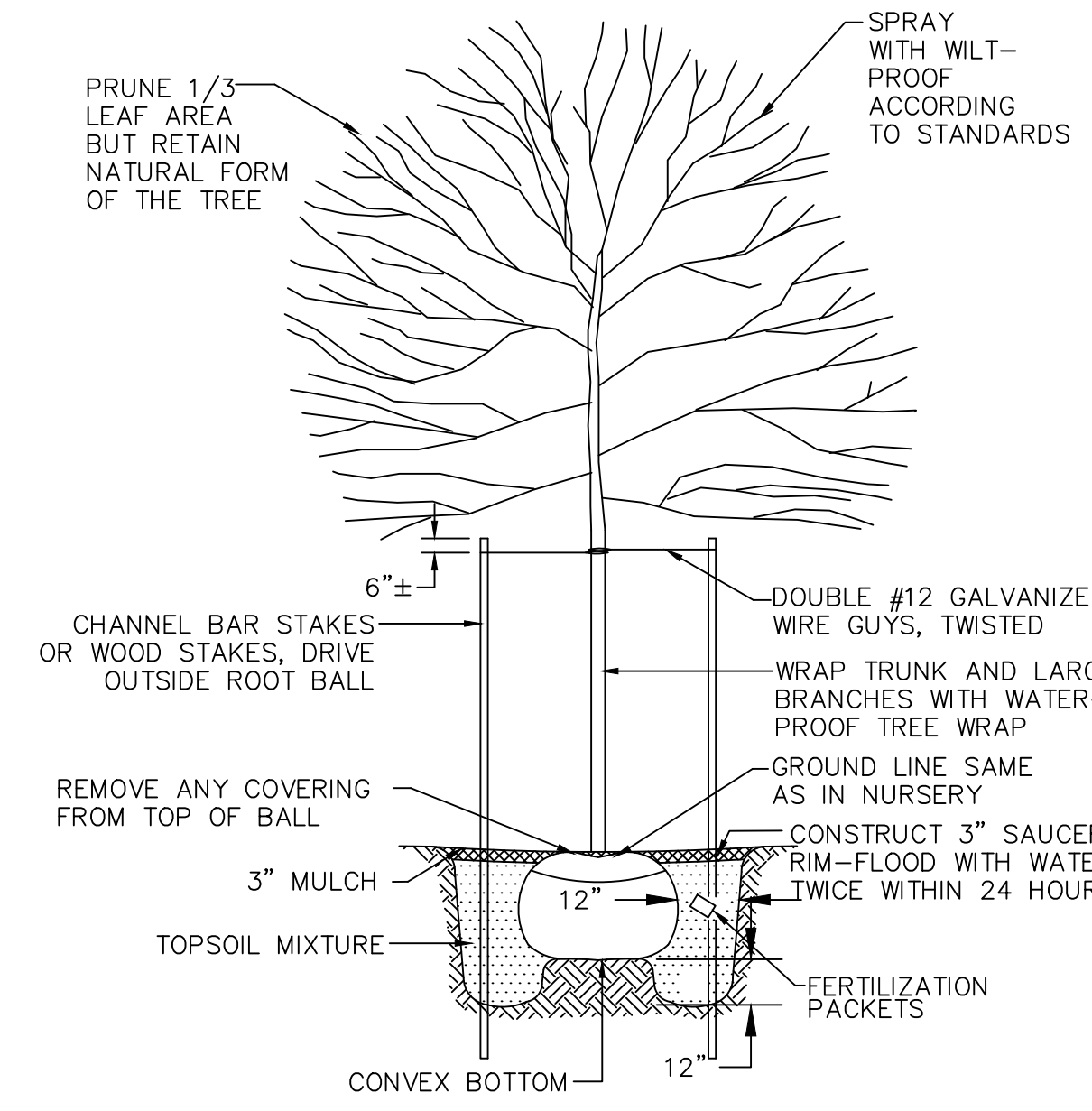
PROJECT NUMBER: **R18-0633.000**
 TASK: **4**
 DATE: **MAY 21, 2019**

STREET TREES

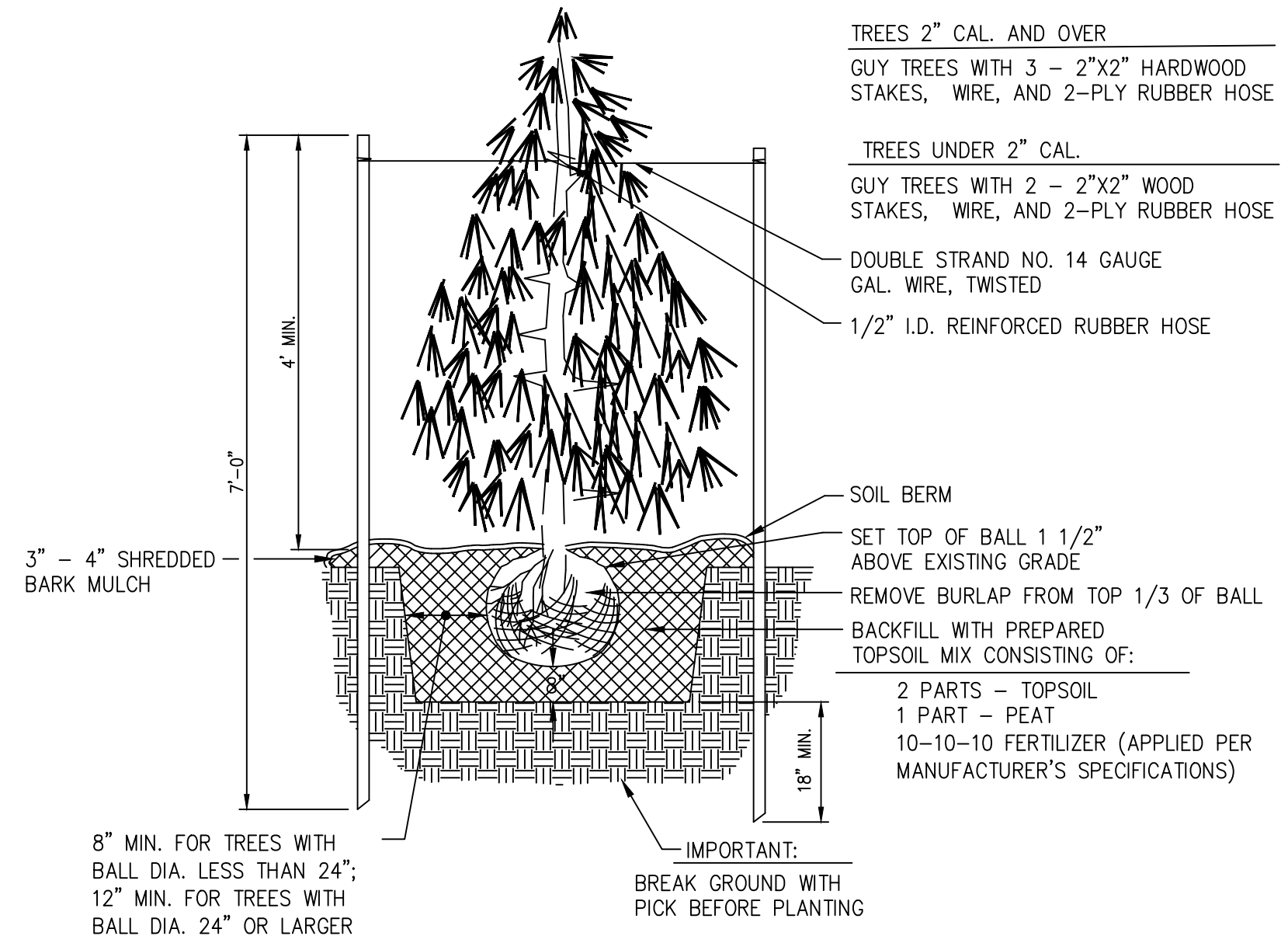
REQUIREMENTS: 1 TREE PER 40 FEET OF FRONTAGE
 LENGTH OF FRONTAGE: 224 FEET
 NUMBER OF TREES REQUIRED: 6
 NOTE: STREET TREES SHALL BE PLACED NO CLOSER THAN 5 FEET FROM RIGHT-OF-WAY LINE.

TREE COUNT ALONG EAST SIDE OF PROPERTY

REQUIREMENTS: 1 DECIDUOUS PER 50 FEET
 1 EVERGREEN PER 40 FEET
 LENGTH OF PROPERTY SIDE: 764 FEET
 NUMBER OF TREES REQUIRED: 15 DECIDUOUS TREES
 19 EVERGREEN TREES
 NUMBER OF PROVIDED TREES: 19 DECIDUOUS TREES
 26 EVERGREEN TREES

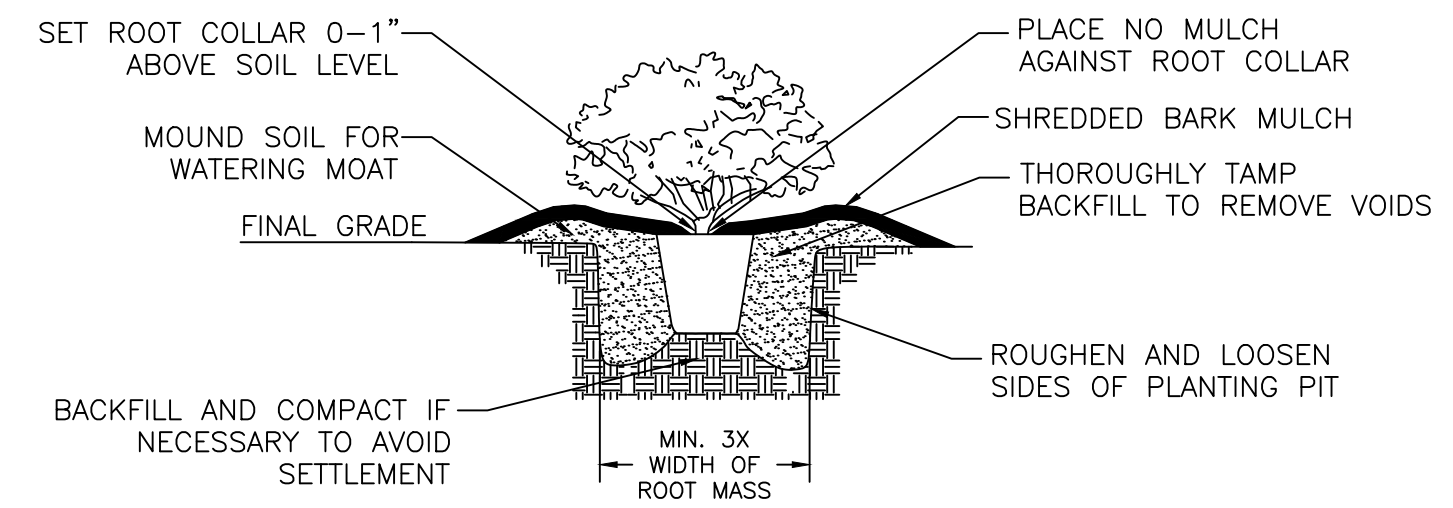


TYPICAL DECIDUOUS TREE PLANTING DETAIL
NO SCALE



- PLANT SPECIFICATIONS :**
1. THE TREES SHALL BE NURSERY GROWN IN A CLIMATE SIMILAR TO THAT OF THE LOCALITY OF THE PROJECT.
 2. ALL TREES SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY AND VIGOROUS, THEY SHALL BE FREE FROM DISEASE, INSECTS, INSECT EGGS, AND LARVAE.
 3. ALL PLANTING SHALL BE PERFORMED IN CONFORMANCE WITH GOOD NURSERY AND LANDSCAPE PRACTICE. REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING, AND THE BURLAPPING OF TREES SHALL FOLLOW THE CODE OF STANDARDS RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60, CURRENT EDITION, AS AMENDED.
 4. ALL PLANTING SHALL BE PERFORMED IN CONFORMANCE WITH GOOD NURSERY AND LANDSCAPE PRACTICE. REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING, AND THE BURLAPPING OF TREES SHALL FOLLOW THE CODE OF STANDARDS RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60, CURRENT EDITION, AS AMENDED.

TYPICAL EVERGREEN TREE PLANTING DETAIL
NO SCALE



CONTAINER PLANTING DETAIL
NO SCALE

STEEP SLOPES: 14,568 SQUARE FEET

GROUND COVERS

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SUN	CONDITION	PLANTING SIZE	"MATURE SIZE (HEIGHT X WIDTH)"	FLOWER COLOR	FALL COLOR	COMMENT
313	VM	Vinca Minor	PERIWINKLE	FULL SHADE TO FULL	B&B	50-PLANT FLATS	8" x 3'	PURPLE	EVERGREEN	TOTAL INDIVIDUAL PLANTS: 15,650 PLANTS 12" O.C. STAGGERED
TREE AND SHRUB LIST										
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SUN	CONDITION	PLANTING SIZE	"MATURE SIZE (HEIGHT X WIDTH)"	FLOWER COLOR	FALL COLOR	COMMENT
SHRUBS										
5	aa	Aronia arbutifolia	RED CHOKEBERRY	FULL-PART	#3 CONT	18-24"	2-8' x 3-6'	WHITE-PINK	RED	FLOWER MID-MAY
8	iv	Ilex verticillata	WINTERBERRY	FULL	#3 CONT	48"	1-15' x 3-12'			SEMI-EVERGREEN RED BERRIES
TREES										
DECIDUOUS										
14	je	Juniperus chinnsis 'Monlep'	MINT JULEP JUNIPER	FULL	#3 CONT	24-30"	4-6' x 6-8'		EVERGREEN	
9	ns	Picea abies 'Nidiformis'	NEST SPRUCE	FULL-PART	#3 CONT	24-30"	3-5' x 4-6'		EVERGREEN	
EVERGREEN										
20	AR	Acer Rubrum	RED MAPLE	FULL	B&B	2-1/2" CALIPER	35-60' x 30'-50'	RED	RED	
6	BN	Betula Nigra	RIVER BIRCH	FULL-PART	B&B	2-1/2" CALIPER	30-50' x 25-35'		YELLOW	
8	NS	Nyssa Sylvatica	BLACK TUPELO	FULL	B&B	2-1/2" CALIPER	25-30' x 15-20'		RED	
6	QR	Quercus rubra	RED OAK	FULL	B&B	2-1/2" CALIPER	60-75" x 40-50'		RED	
EVERGREEN										
6	PA	Picea Abies	NORWAY SPRUCE	FULL	B&B	6' HEIGHT	40-60' x 25-30'		EVERGREEN	
5	PP	Picea Pungens	COLORADO BLUE SPRUCE	FULL	B&B	6' HEIGHT	90-135' x 20-30'		EVERGREEN	
16	PN	Pinus Nigra	AUTRIAN PINE	FULL	B&B	6' HEIGHT	50-60' x 20-40'		EVERGREEN	

RAINGARDEN AND SWALE FLOOR AREA: 8,467 SQUARE FEET
 BFM: BASIN FLOOR MIX
 SEEDING RATE: 0.6 POUNDS PER 1,000 SQUARE FEET

QUANTITIES	%PLS	BOTANICAL NAME	COMMON NAME
5.25 Lbs.	6%	agrostis hyemalis	WINTER BENTGRASS
	7%	carex vulpinoidea	FOX SEDGE
	20%	elymus virginicus	VIRGINIA WLDRYE
	3%	juncus effusus	SOFT RUSH
	30%	panicum anceps	BEAKED PANICGRASS
	18%	panicum clandestinum	DEERTONGUE
	16%	panicum rigidulum	REDTOP PANICGRASS

OVERFLOW PARKING AND EMERGENCY ACCESS DRIVE MIX
 THREE-WAY TALL FESCUE MIX
 MIX COMPOSITION
 34.0% FESTUCA ARUNDINACEA, 'TITANIUM LS' (TALL FESCUE, 'TITANIUM LS')
 33.0% FESTUCA ARUNDINACEA, 'NINJA III' (TALL FESCUE, 'NINJA III')
 33.0% FESTUCA ARUNDINACEA, 'RAPTOR III' (TALL FESCUE, 'RAPTOR III'(TURF TYPE))
 GENERAL PRODUCT INFORMATION:
 ITEM NUMBER: ERNMX-136
 PRODUCT CATEGORIES:
 LAWN & TURFGRASS SITES

NOTE: PLANT SUBSTITUTION IS PERMITTED AT THE DIRECTION OF THE OWNER AND AUTHORIZATION OF SUSQUEHANNA TOWNSHIP.

DRAWING NO. **C-16** SHEETS: **16 OF 21**

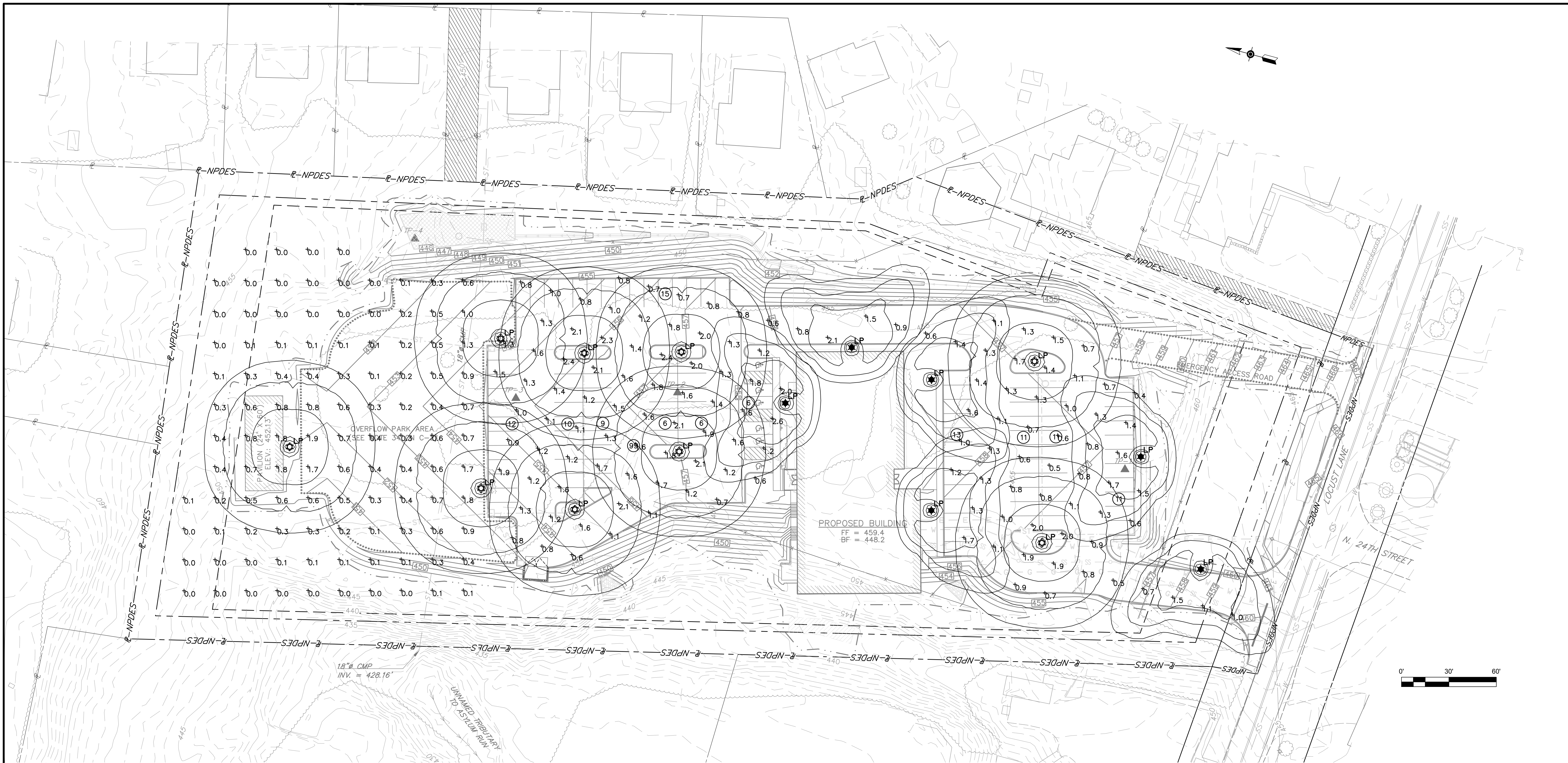
"LAND DEVELOPMENT PLAN" FOR
 Solid Rock Missionary Baptist Church
 2400 LOCUST LANE
 Susquehanna Township Dauphin County Pennsylvania

DESIGN: G.C.G. D.J.J. D.J.J. D.J.J.
 CHECK: CHKR BR.A.S. APPV G.C.G.
 SCALE: NO SCALE
 DATE: D.J.J. G.C.G. 7/5/19
 BY: APPV DATE

1 AS PER TOWNSHIP COMMENTS
 REV DESCRIPTION

449 EISENHOWER BOULEVARD
 SUITE 300
 HARRISBURG, PA 17111
 TEL: (717) 232-0593
 FAX: (717) 232-1799
 www.skellyjoy.com

PROJECT NUMBER: R18-0633.000
 TASK: 4
 DATE: MAY 21, 2019



LEGEND

- R-NPDES PROPERTY AND NPDES BOUNDARY LINE
- LEGAL RIGHT-OF-WAY (75')
- ROAD CENTER LINE (LOCUST LANE)
- ADJACENT PROPERTY LINE
- EASEMENT ZONES
- BUILDING SETBACK LINE
- LANDSCAPE BUFFER LINE
- ZONING BOUNDARY
- EXISTING BUILDINGS
- EXISTING RUINS
- EXISTING ROADS
- EXISTING CURBING
- EXISTING FENCING
- EXISTING TREE AND BRUSH LINE
- EXISTING TREE
- EXISTING HEDGE ROW
- EXISTING OVERHEAD UTILITIES LINE
- EXISTING UTILITIES POLE
- EXISTING UNDERGROUND GAS LINE
- ST EXISTING UNDERGROUND STORM SEWER LINE
- SS EXISTING UNDERGROUND SANITARY SEWER LINE
- W EXISTING UNDERGROUND WATER SUPPLY LINE
- 450 EXISTING INDEX CONTOUR LINE
- EXISTING INTERMEDIATE CONTOUR LINE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED BUILDING LIMITS
- PROPOSED EDGE OF ASPHALT
- PROPOSED EDGE OF STABILIZED GRASS AREA
- PROPOSED RETAINING WALL
- PROPOSED HANDICAP SIGNS
- PROPOSED CONTOURS
- PROPOSED STORMWATER SUBSURFACE INFILTRATION BASIN
- PROPOSED STORMWATER INLET
- PROPOSED STORMWATER PIPE END TREATMENTS
- PROPOSED STORMWATER ROCK APRONS
- PROPOSED STORMWATER MANHOLE
- PROPOSED STORMWATER UNDERGROUND PIPES
- PROPOSED STORMWATER ROOF DRAIN CLEANOUTS
- PROPOSED STORMWATER ROOF DRAIN PIPES
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY SEWER CLEANOUT
- PROPOSED WATER LINE
- PROPOSED GAS LINE
- PROPOSED ELECTRIC LINE
- LP PROPOSED LIGHT POLES - S5 LIGHTS
- LP PROPOSED LIGHT POLES - S3 LIGHTS

STATISTICS

DESCRIPTION	SYMBOL	AVG	MAX	MIN	MAX/MIN	AVG/MIN
DESIGN AREA	+	1.3 FC	2.6 FC	0.4 FC	6.5:1	3.3:1

MEETS ILLUMINATION ENGINEERING RECOMMENDED PRACTICE PER RP-20 FOR PARKING LOT LIGHTING

NOTE: ALTERNATIVE LIGHTING FIXTURES ARE ALLOWED PROVIDED THAT ALL FIXTURES AND PHOTOMETRICS ARE COMPARABLE TO WHAT IS SHOWN HEREON AND MEET REQUIREMENTS OF SECTION 22-0506 OF SUSQUEHANNA TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT CODE.

SCHEDULE

LABEL	QUANTITY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP	NUMBER LAMPS	LUMENS PER LAMP	LIGHT LOSS FACTOR	WATTAGE
S5	9	HOLOPHANE	PUCL2 P40 40K XX L5	UTILITY POSTOP FCO LED 2, P40, 4000KM TYPE 5 OPTIC	LED	1	9328	0.9	89
S3	6	HOLOPHANE	PUCL2 P40 40K XX L3 HSS	UTILITY POSTOP FCO LED 2, P40, 4000K, TYPE 3 OPTIC, WITH HOUSE SIDE SHIELD	LED	1	6244	0.9	89

DRAWING NO. **C-17**
SHEETS: **17 OF 21**

"LAND DEVELOPMENT PLAN"
FOR
Solid Rock Missionary Baptist Church
2400 LOCUST LANE
Susquehanna Township, Dauphin County, Pennsylvania

DESIGN: G.C.C.G.
DRAFTSMAN: D.J.J.
CHECKER: B.A.S.
APPRAISER: G.C.C.G.
SCALE: 1" = 30'
DATE: D.J.J./G.C.C.G./7/5/19
BY: APPV. DATE

PROJECT NUMBER: **R18-0633.000**
SUBTASK: **4**
DATE: **MAY 21, 2019**

**449 EISENHOWER BOULEVARD
SUITE 300
HARRISBURG, PA 17111**
TEL: (717) 232-0593
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www.skellyjoy.com



Colorado Aluminum Pole
Utility Postop FCO LED

POLE ATTRIBUTES:

Description The lighting post shall be all aluminum, one-piece construction, with a classic octagonal base design. **Materials** The base shall be heavy wall, cast aluminum produced from certified ASTM 356.1 Ingot per ASTM B-179-95a or ASTM B26-95. The tapered shaft shall be extruded from aluminum, ASTM 6063 alloy, heat treated to a T6 temper. All hardware shall be temper resistant stainless steel. **Construction** The shaft shall be double welded to the base casting and shipped as one piece for maximum structural integrity. The shaft shall be welded inside the base casting at the top of the access door, and externally where the shaft exits the base. All welding shall be per ANSI/AWS D1.1. **Dimensions** The post shall be X'-XX" in height with a 12" octagonal base. At the top of the post, an integral tenon with a transitional donut shall be provided for luminaire mounting. **Installation** The post has an option to have four L-Type hot dip galvanized anchor bolts shipped with it. A door shall be provided in the base for anchorage and wiring access. A grounding screw shall be provided inside the base opposite the door.

FIXTURE ATTRIBUTES:

GENERAL DESCRIPTION The Utility Postop® LED is designed for ease of maintenance with the plug-in electrical module common to each of the luminaires in Holophane's Utility Luminaire Series. A precision optical system maximizes post spacings while maintaining uniform illumination.

OPTICAL SYSTEM The optical system consists of precisely engineered LED circuit board located in the top cover. A gasket between the cover and ring along with a flat glass plate and gasket beneath the reflector create a sealed optical compartment that meets an IP rating. Optics designed to provide and I.E.S. Asymmetric or Symmetric full cutoff distribution are available.

LUMINAIRE HOUSING The Luminaire housing, cast of aluminum, anchors the optical system and provides an enclosure for the plug in electrical module. The electrical enclosure conforms to an IP55 rating. For use with units with an E.E.I.-N.E.M.A. twist lock photocell receptacle, the housing contains a glass "window" to allow light to reach the cell. The nickel-plated lamp grip socket and the three-station incoming line terminal block are pre-wired to a five-conductor receptacle for ease in connecting the electrical module. A splitter will accept a 3" high by 2 7/8" to a 3 1/8" O.D. pole tenon.

LUMINAIRE HOUSING DOOR Cast of aluminum, the housing door is hinged and latched to the housing. The door forms the mount for the electrical module, and allows easy access during maintenance.

ELECTRICAL MODULE The electrical components are mounted to an aluminum plate that is removable with standard tools. A matching five-plug connector connects the electrical components to the surge protector for quick replacement. For Photoelectric operation, the electrical module is provided with an E.E.I.-N.E.M.A. Twist lock photocell receptacle.

TOP COVER The top cover, cast of aluminum, is attached to the top ring of the Luminaire housing by a stainless steel hinge pin. The cover is latched by an over center, positive action, stainless steel latch which allows tool-less entry to the lamp chamber for re-lamping.

DRIVER (Refer to the Driver Data Sheet for specific operating characteristics). 50 or 60 HZ voltage sensing 120-277V >90% efficient electronic. Potted for increased thermal management. Removable through hinged door housing.

FINISH The Luminaire is finished with polyester powder paint applied to ensure maximum durability.

UL The Luminaire is UL listed as suitable for wet location at a maximum of 40 degrees C ambient temperature. **Luminaire Mounts to P07 (3X3) Tenon Configure Entire Pole Package Assembly For Pole and Arm Combinations**



An Acuity Brands Company

SPECIFICATIONS

FIXTURE
 *PUCL2 P40 40K AS BK L5 S AO
 Prefix: PUCL2
 Source & Wattage: LED Performance Package P40
 Color Temperature: 4000 series CCT
 Voltage: Auto-sensing voltage (120 thru 277)
 Finish: Black
 Optics: Type 5 Full Cutoff LED distribution
 Finish: Spike Finish
 Prewired Leads: None
 Photocontrol Receptacle: None
 Photocontrol: None
 NEMA Label: None
 Part Night Dimming: None
 Surge Protection: None
 Adjustable Output: Field Adjustable Output
 Factory Programmed Driver: None
 Shield: None
 Surge Protection Accessory: None
 Shield Accessory: None
 Luminaire EPA: 1.24
 Luminaire Weight: 39

POLE
 Colorado Aluminum Pole
 *COA 14 S4J 12 P07 ABG BK
 Prefix: Colorado, Aluminum Pole
 Height: 14 feet (Actual Height: 14'-0")
 Shaft Size: 54.4 inch diameter smooth, .25 wall
 Base: 12 inch Octagonal Base
 Tension: 3 X 3 Tension
 Pole Mounting: Anchor bolts, galvanized steel
 Finish: Powder Coat Paint Finish, Black
 Base EPA: 0.7125
 Base Weight: 14
 Anchor Bolt: AB-31-4

Your Assembly Wind Load status: Pass
 Passed for wind speed: 50 MPH
 For further details, review the Structural Analysis Report.

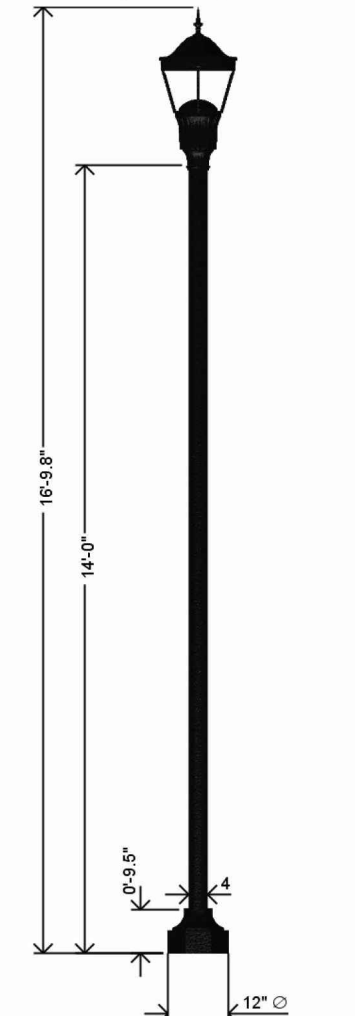
Customer Approval:

signature _____ date _____
 Job Name: Solid Rock Baptist Church
 Client Name: Skelly & Loy
 Created By: Ken Roth Date: 02-Jul-19

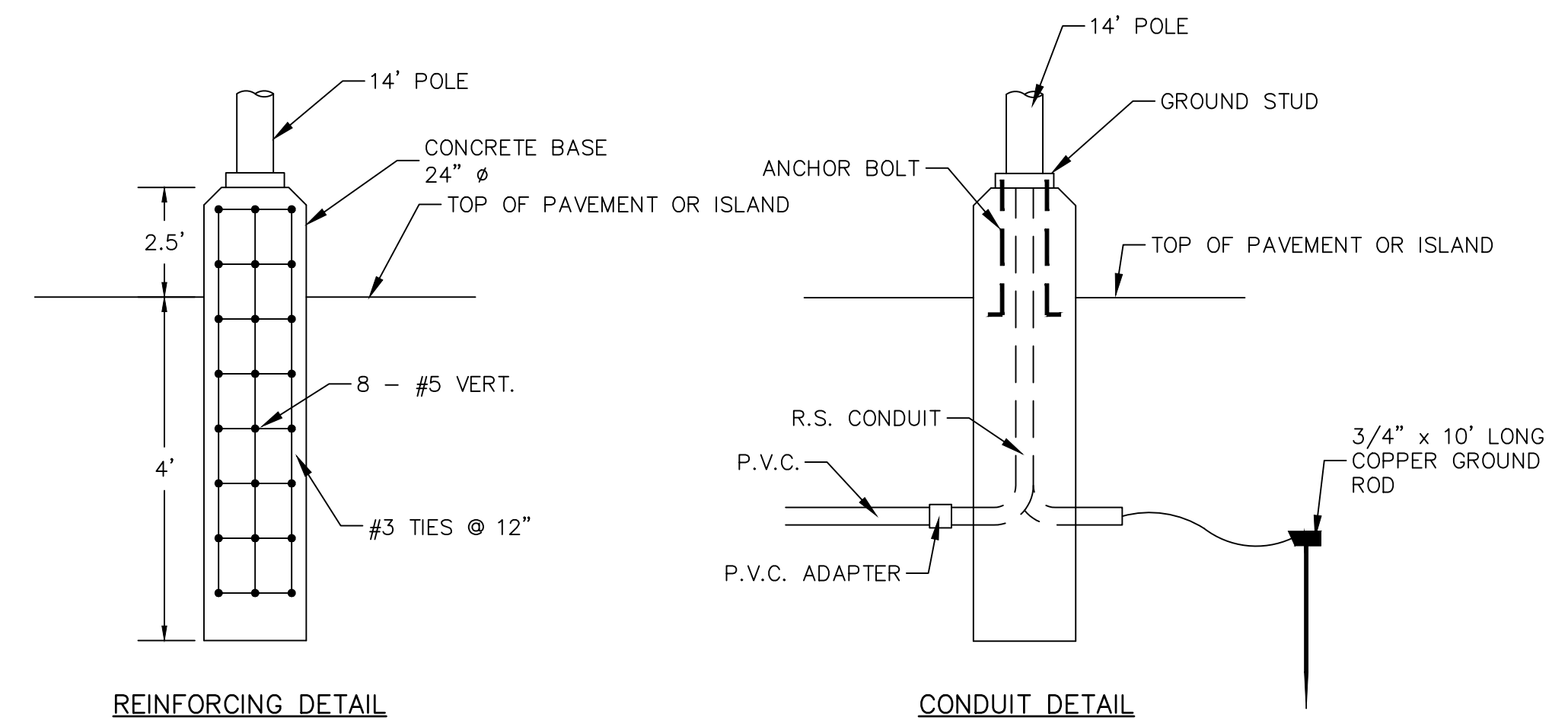
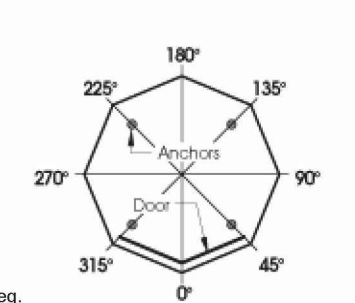
Catalog #PUCL2 P40 40K AS BK L5 S AO COA 14 S4J 12 P07 ABG BK Dwg. # HLP-52334 Page: 2 of 2

Catalog Number	PUCL2 P40 40K AS BK L5 S AO COA 14 S4J 12 P07 ABG BK
Type:	Notes:

Colorado Aluminum Pole
Utility Postop FCO LED

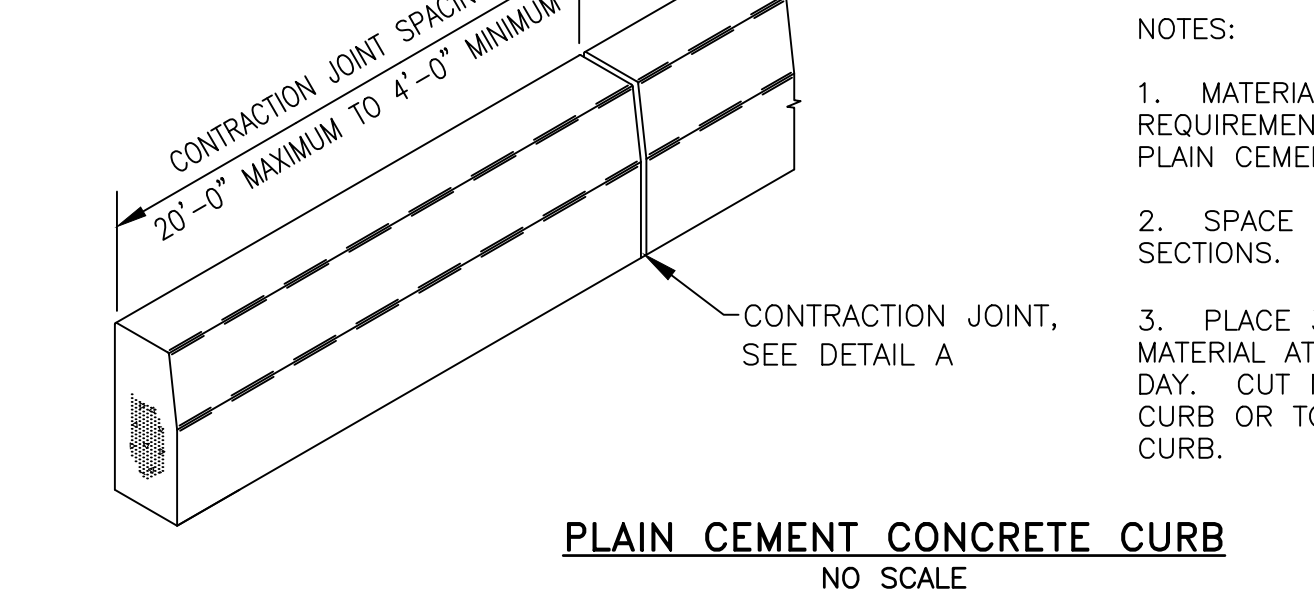
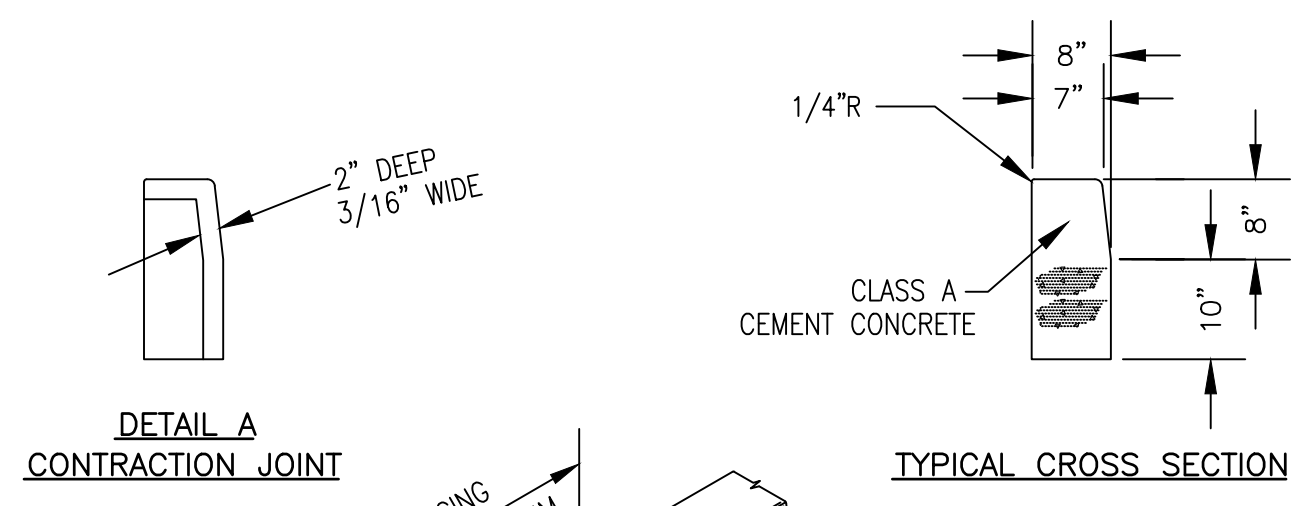


Anchorage/Orientation Plan

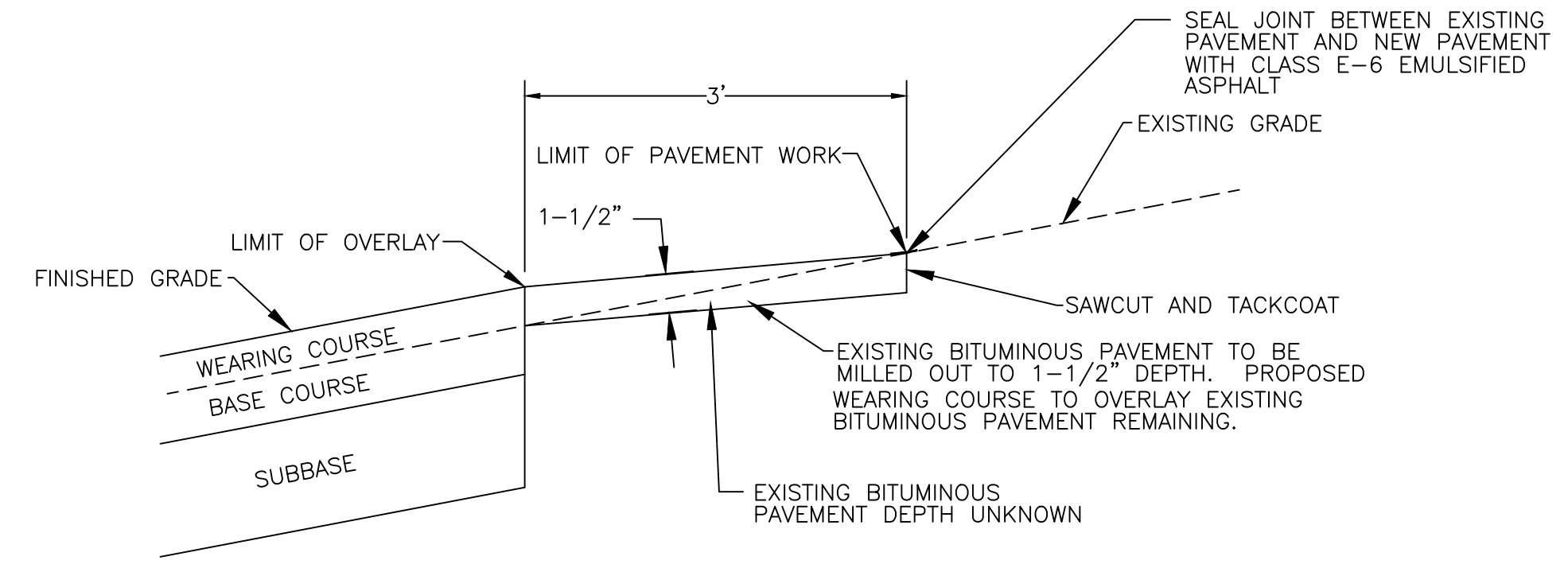


LIGHT STANDARD DETAIL
NO SCALE

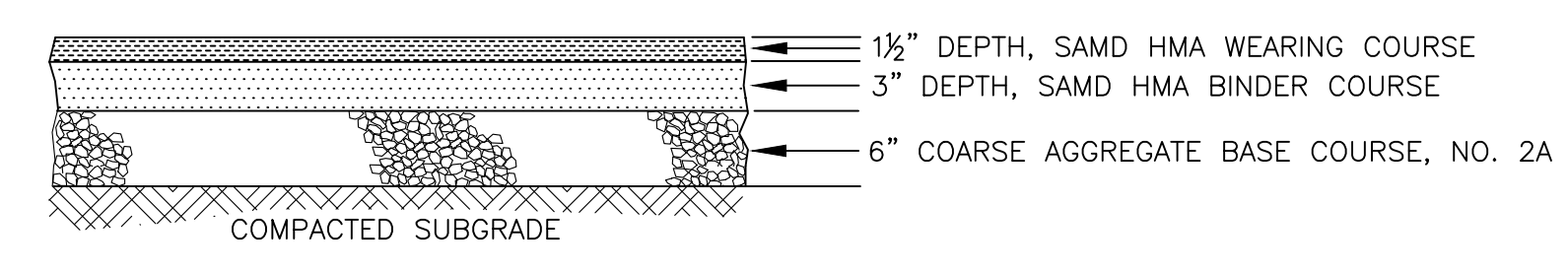
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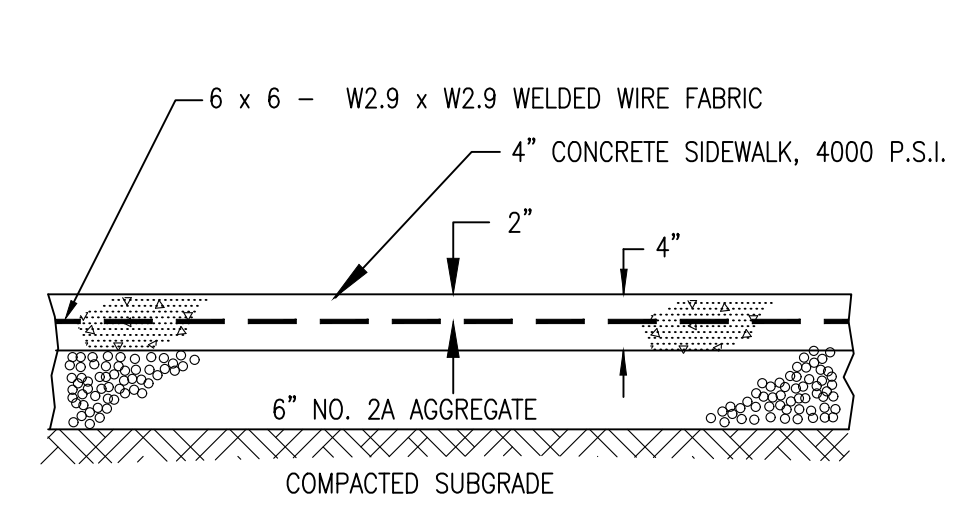
- NOTES:
1. MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 FOR PLAIN CEMENT CONCRETE CURB.
 2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.
 3. PLACE 3/4" PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.



STANDARD PAVEMENT NOTCH DETAIL
NO SCALE

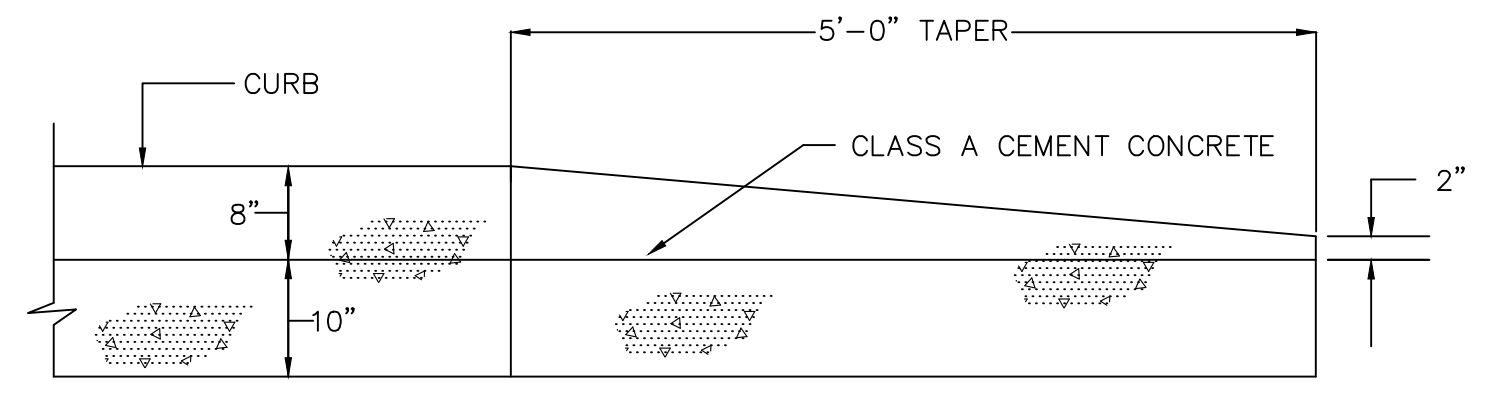


BITUMINOUS PAVEMENT SECTION
(ON-SITE)
NO SCALE

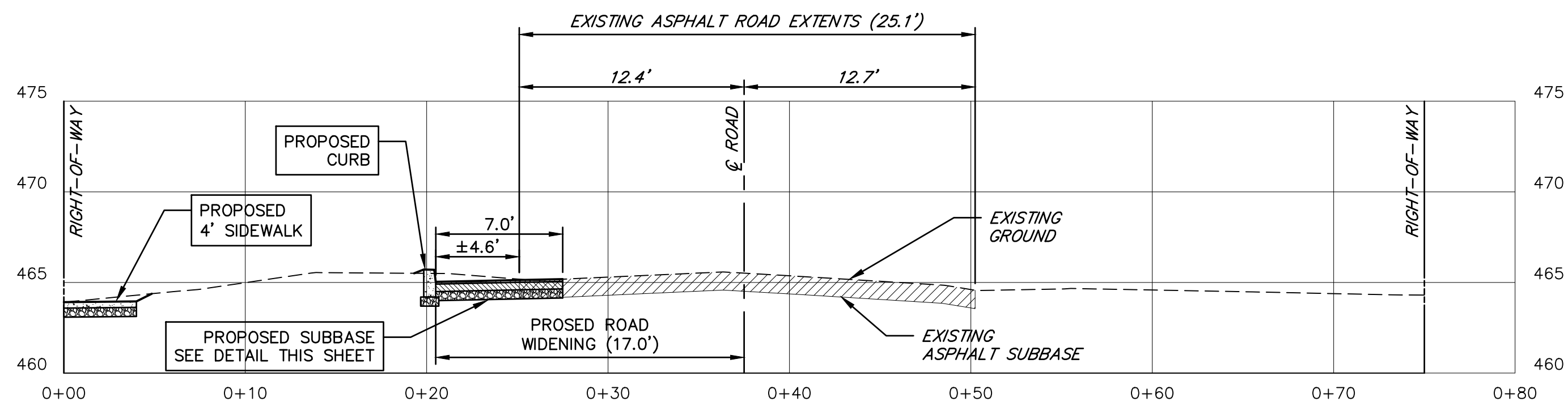


TYPICAL SIDEWALK SECTION
NO SCALE

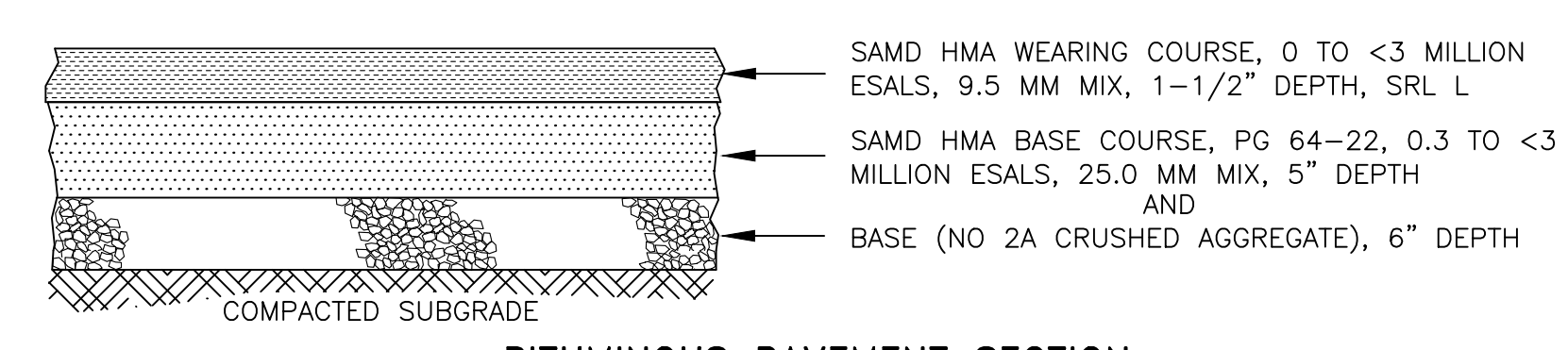
- NOTES:
1. CONTRACTION CONTROL JOINTS ACROSS THE SIDEWALK SHALL BE CONSTRUCTED AT 4'-0" ON CENTER.
 2. NON-BITUMINOUS, PREMOLDED EXPANSION JOINTS WITH A 1/2" DEEP SEALANT SHALL BE CONSTRUCTED AT 20'-0" ON CENTER ACROSS THE SIDEWALK.
 3. SIDEWALKS AND RAMPS SHALL BE SLOPED TO DRAIN AND WOOD FLOATED WITH A LIGHT BROOM FINISH.
 4. WHEN CONCRETE ABUTS BUILDING, A NON-BITUMINOUS, PRE-MOLDED EXPANSION JOINT WITH A 1/2" DEEP SEALANT SHALL BE CONSTRUCTED BETWEEN BUILDING AND WALK.



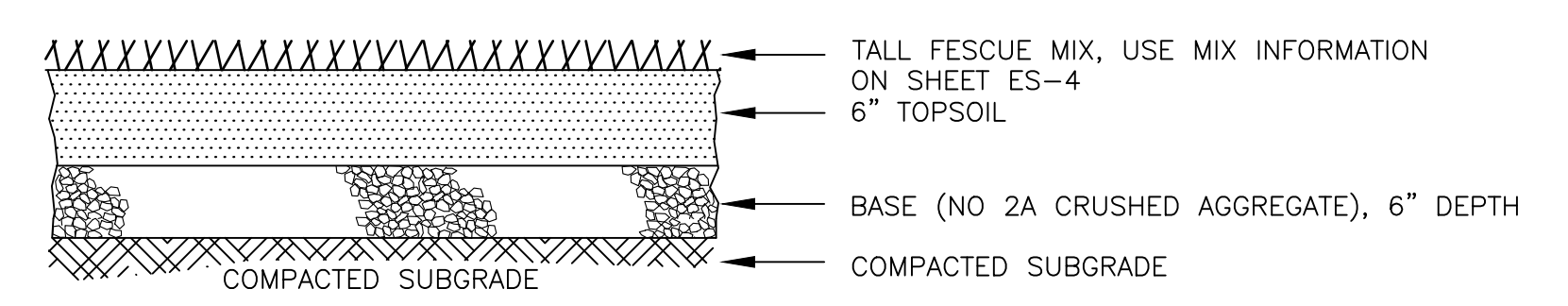
END OF CURB SECTION
NO SCALE



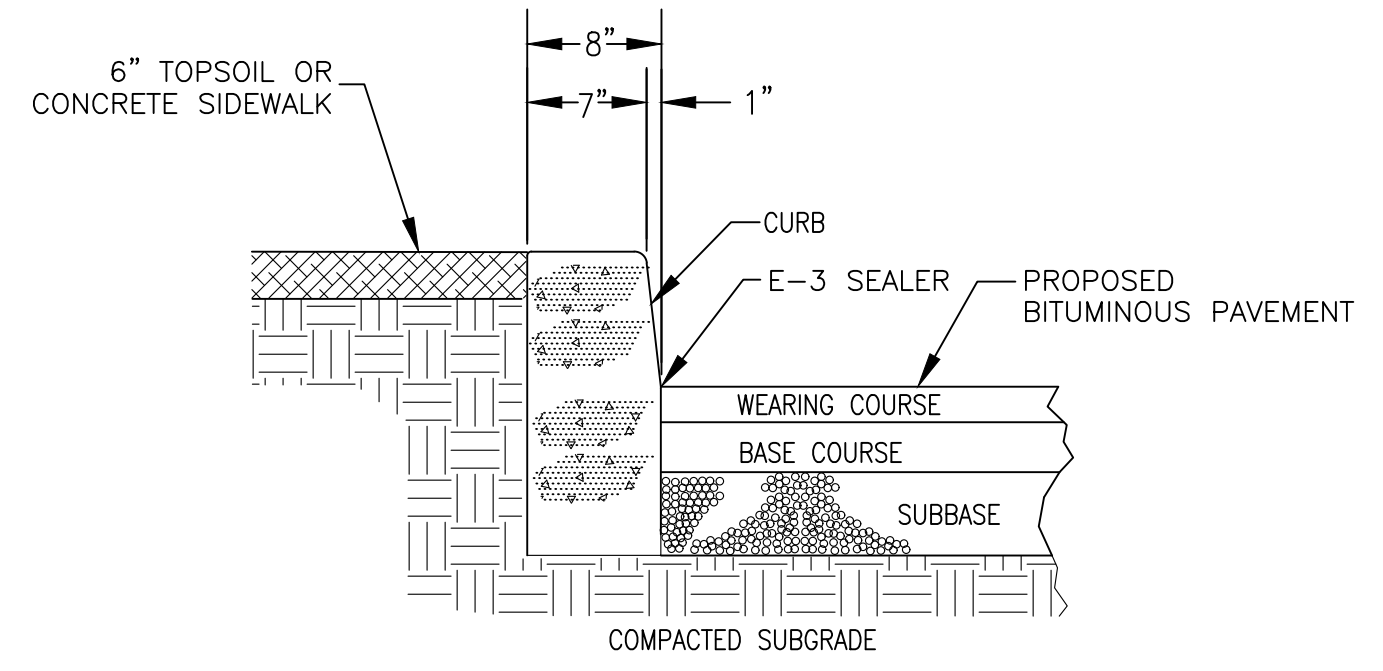
ROAD WIDENING TYPICAL SECTION
(WITHIN LOCUST LANE R/W)
NO SCALE



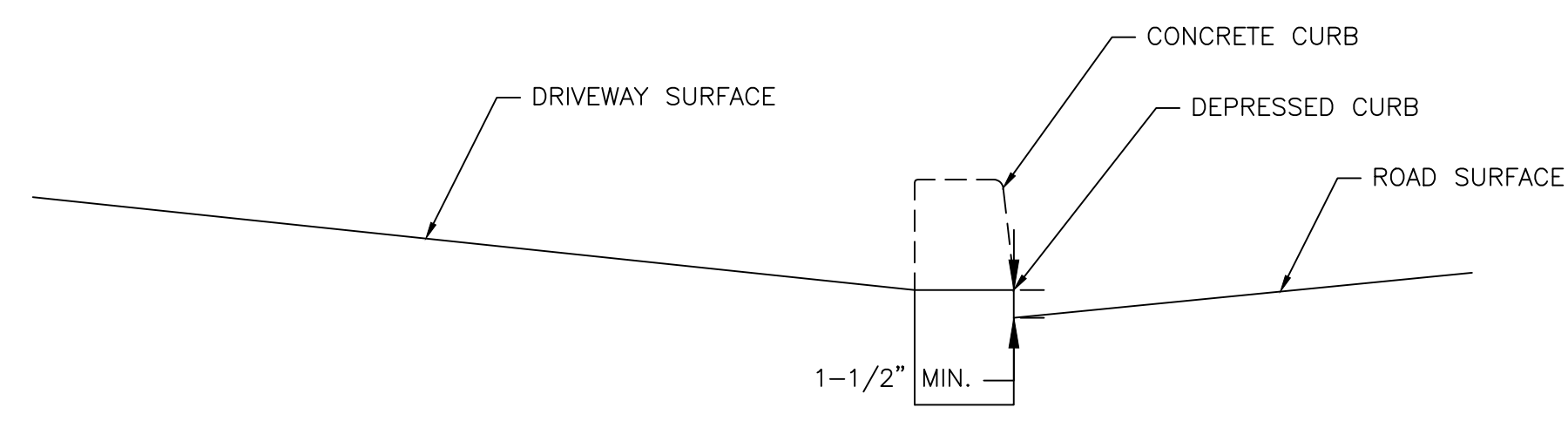
BITUMINOUS PAVEMENT SECTION
(LOCUST LANE R/W)
NO SCALE



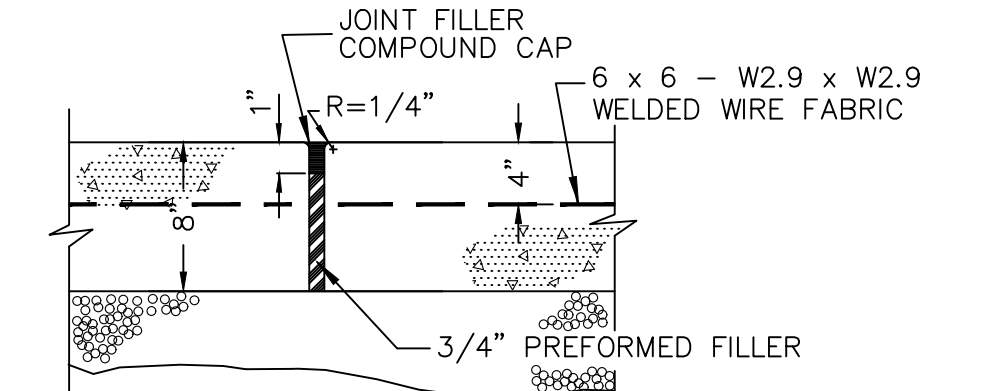
OVERFLOW PARKING AND EMERGENCY ACCESS SECTION
NO SCALE



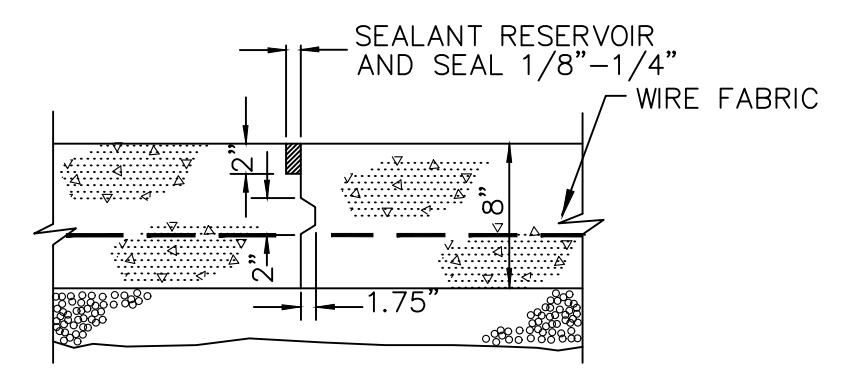
PAVEMENT AND CURB DETAIL
NO SCALE



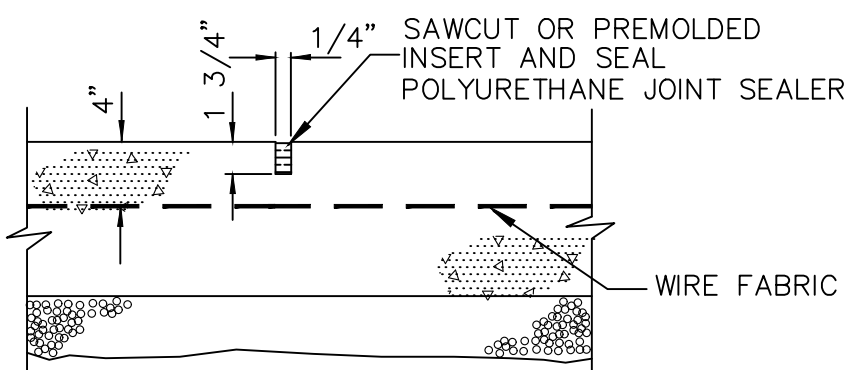
DEPRESSED CURB AT DRIVEWAY OPENING
NO SCALE



EXPANSION JOINT DETAIL



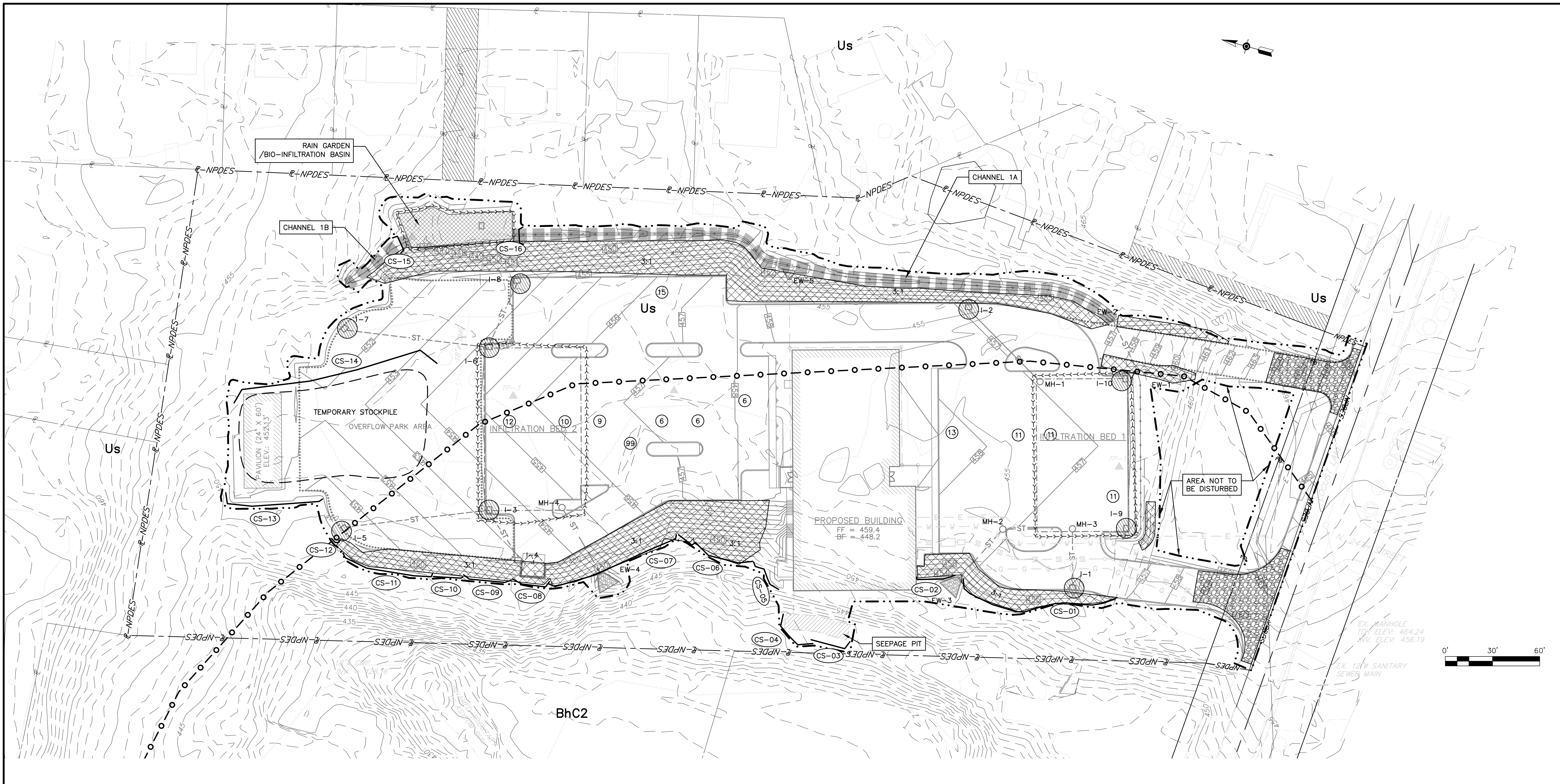
KEYED CONSTRUCTION JOINT DETAIL



CONTRACTION CONTROL JOINT DETAIL

CONCRETE PAVEMENT JOINT DETAILS
NO SCALE

DRAWING NO. C-19		SHEET NO. 19 OF 21	
"LAND DEVELOPMENT PLAN" FOR Solid Rock Missionary Baptist Church 2400 LOCUST LANE Susquehanna Township Dauphin County Pennsylvania			
DSGN	G.C.C.G.	SCALE	NO SCALE
DFTSMN	D.J.J.	BY	DATE
CHKR	E.A.S.	1	AS PER TOWNSHIP COMMENTS
APPV	G.C.C.G.	17/5/19	
PROJECT NUMBER: R18-0633.000			
TASK: 4			
DATE: MAY 21, 2019			
449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0693 FAX: (717) 232-1799 www.stekeljoy.com			



LEGEND

- R-NPDES PROPERTY AND NPDES BOUNDARY LINE
- LEGAL RIGHT-OF-WAY (75')
- ROAD CENTER LINE (LOCUST LANE)
- ADJACENT PROPERTY LINE
- EASEMENT ZONES
- BUILDING SETBACK LINE
- LANDSCAPE BUFFER LINE
- ZONING BOUNDARY
- EXISTING BUILDINGS
- EXISTING RUINS
- EXISTING ROADS
- EXISTING CURBING
- EXISTING FENCING
- EXISTING TREE AND BRUSH LINE
- EXISTING TREE
- EXISTING HEDGE ROW
- EXISTING OVERHEAD UTILITIES LINE
- EXISTING UTILITIES POLE
- EXISTING UNDERGROUND GAS LINE
- EXISTING UNDERGROUND SANITARY SEWER LINE
- EXISTING UNDERGROUND STORM SEWER LINE
- EXISTING UNDERGROUND WATER SUPPLY LINE
- EXISTING INDEX CONTOUR LINE
- EXISTING INTERMEDIATE CONTOUR LINE
- EXISTING SOIL LIMITS
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED BUILDING LIMITS
- PROPOSED EDGE OF ASPHALT
- PROPOSED EDGE OF STABILIZED GRASS AREA
- PROPOSED RETAINING WALL
- PROPOSED HANDICAP SIGNS
- PROPOSED CONTOURS
- PROPOSED STORMWATER SUBSURFACE INFILTRATION BASIN
- PROPOSED STORMWATER INLET
- PROPOSED STORMWATER PIPE END TREATMENTS
- PROPOSED STORMWATER ROCK APRONS
- PROPOSED STORMWATER MANHOLE
- PROPOSED STORMWATER UNDERGROUND PIPES
- PROPOSED STORMWATER ROOF DRAIN CLEANOUTS
- PROPOSED STORMWATER ROOF DRAIN PIPES
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY SEWER CLEANOUT
- PROPOSED WATER LINE
- PROPOSED GAS LINE
- PROPOSED ELECTRIC LINE
- CS-02 COMPOST FILTER SOCK
- I-3 INLET PROTECTION
- EXCLUSION FENCE
- COMPOST APPLICATION AREA
- CHANNEL LINING

NOTE:
 1. CONCRETE WASHOUT FACILITY AND PUMPED WATER FILTER BAGS SHALL BE INSTALLED PER DETAILS AND AT LOCATIONS AS NEEDED WITHIN LIMIT OF DISTURBANCE.

ON-SITE SOILS	
MAP UNIT SYMBOL	MAP UNIT NAME
BhC2	BERKS CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES
Us	URBAN LAND, SHALE MATERIALS

DRAWING NO. **ES-2**
 SHEETS: **2 OF 6**

"EROSION AND SEDIMENT CONTROL PLAN"
 FOR
 Solid Rock Missionary Baptist Church
 2400 LOCUST LANE
 Susquehanna Township Dauphin County Pennsylvania

DESIGN G.C.C.G.
 DTSMM D.J.J.
 CHKR B.A.S.
 APPV G.C.C.G.
 SCALE 1" = 30'
 D.J.J. G.C.C.G. 7/5/19
 BY: APPV DATE

PROJECT NUMBER: **R18-0633.000**
 TASK: **4**
 DATE: **MAY 21, 2019**

449 EISENHOWER BOULEVARD
SUITE 300
HARRISBURG, PA 17111
 TEL: (717) 232-0593
 FAX: (717) 232-1799
 www.stekeljoy.com

EROSION AND SEDIMENT CONTROL PLAN

STANDARD E&S NOTES:

- ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS 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 PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL ENGINEER FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING.
- AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 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 COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPs SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
- AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
- ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.21 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- 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 FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
- ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
- VEHICLES AND EQUIPMENT MUST ENTER AND EXIT SITE THROUGH ROCK CONSTRUCTION ENTRANCES.
- 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 RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR 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 SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES -- 6 TO 12 INCHES ON COMPACTED SOILS -- PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- 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, SOD, 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 IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDS AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- 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, SUCH 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 MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
- NOTES:**
- IF THE CONTRACTOR STORES, USES, OR TRANSPORTS HAZARDOUS WASTES AND MATERIALS, FUELS, CHEMICALS, OR SOLVENTS ONTO, ON, OR FROM THE SITE DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO PREPARE AND HAVE AVAILABLE ON SITE AT ALL TIMES A PPC PLAN, PREPARED IN ACCORDANCE WITH THE PA DEP GUIDELINES FOR THE DEVELOPMENT AND IMPLEMENTATION OF ENVIRONMENTAL EMERGENCY RESPONSE PLANS.
 - WHEREVER FEASIBLE, THE CONTRACTOR SHALL RECYCLE WASTE MATERIALS. THE CONTRACTOR SHALL HAVE MEASURES IN PLACE TO CONTROL WASTE MATERIALS. MEASURES SHALL BE PLANNED AND IMPLEMENTED FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL.
 - BLEND ANY EXCESS MATERIAL INTO THE SITE WHERE FEASIBLE. IF ANY REMAINING EXCESS MATERIAL IS TO BE REMOVED FROM THE SITE, THE CONTRACTOR MUST FIRST OBTAIN APPROVAL BY THE DCCD, AND THE OFF-SITE DISPOSAL AREA MUST HAVE AN APPROVED E&S CONTROL PLAN.
- ENVIRONMENTAL NOTES:**
- CLEAN FILL IS DEFINED AS UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT SOLID MATERIAL. THIS INCLUDES SOIL, ROCK, STONE, AND DREGGED MATERIAL.
 - ENVIRONMENTAL DUE DILIGENCE - REGARDING CLEAN FILL IS DEFINED AS INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS.
- SEEDING AND MULCHING SPECIFICATIONS**
- TEMPORARY SEEDING SPECIFICATIONS: APPLY 1 TON OF AGRICULTURAL-GRADE LIMESTONE PER ACRE, PLUS FERTILIZER AT THE RATE OF 50-50-50 PER ACRE, AND WORK IN WHERE POSSIBLE. APPLY ANNUAL RYEGRASS AT A RATE OF 40 LBS PER ACRE. AFTER SEEDING, MULCH WITH HAY OR STRAW AT A RATE OF 3 TONS PER ACRE. (SOURCE: EROSION CONTROL AND CONSERVATION PLANTINGS ON NONCROPLAND, PENN STATE UNIV.)
 - PERMANENT SEEDING SPECIFICATIONS: FOR MOWED AREAS, APPLY 10 LB PER ACRE ANNUAL RYEGRASS; PLUS 60 LB PER ACRE TALL FESCUE OR 35 LB PER ACRE FINE FESCUE OR 25 LB PER ACRE KENTUCKY BLUEGRASS; PLUS 3 LB PER ACRE REDTOP OR 15 LB PER ACRE PERENNIAL RYEGRASS. FOR NON-MOWED AREAS, APPLY 10 LB PER ACRE ANNUAL RYEGRASS; PLUS 6 LB PER ACRE BIRDSFOOT TREFLO, PLUS 30 LB PER ACRE TALL FESCUE. (ALL RATES ARE GIVEN AS PLS PURE LIVE SEED) APPLY LIME AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. IN THE ABSENCE OF SOIL TEST RECOMMENDATIONS, APPLY AT LEAST 6 TONS OF AGRICULTURAL-GRADE LIMESTONE PER ACRE PLUS FERTILIZER AT A RATE OF 100-200-200 POUNDS PER ACRE. AFTER SEEDING, MULCH WITH HAY OR STRAW AT A RATE OF 3 TONS PER ACRE. (SOURCE: EROSION CONTROL AND CONSERVATION PLANTINGS ON NONCROPLAND, PENN STATE UNIV.)
 - HAY OR STRAW MULCH MUST BE APPLIED AT RATES OF AT LEAST 3 TONS PER ACRE.
- MAINTENANCE SCHEDULE:**
- ALL EROSION CONTROL BMPs SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING THE REGULAR INSPECTIONS OF THE BMPs AND FOR PERFORMING ANY REQUIRED MAINTENANCE.
 - THE INSPECTIONS SHOULD BE RECORDED ON PADEP FORM 3800-FM-BCW0271D, DATED 5/2018. INSPECTION RECORDS SHALL BE KEPT ONSITE AT ALL TIMES.
 - THE MAINTENANCE INSTRUCTIONS, CLEANOUT LEVELS, AND REPAIR TIME FRAMES PROVIDED BELOW SHALL BE STRICTLY ADHERED TO.
- BMP: COMPOST FILTER SOCK AND SILT FENCE**
MAINTENANCE: INSPECT WEEKLY AND AFTER EACH RUNOFF EVENT. INITIATE NEEDED REPAIRS IMMEDIATELY AFTER INSPECTION. ANY SECTION UNDERMINED OR OVERTOPPED SHALL BE REPLACED WITH A ROCK FILTER OUTLET.
CLEANOUT LEVEL: 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK OR FENCE.
REPAIR TIME FRAME: ACCUMULATED SEDIMENT SHALL BE REMOVED WITHIN 24 HOURS. ROCK FILTER OUTLET REPLACEMENTS SHALL BE ACCOMPLISHED BY THE END OF THE WORK DAY.
- BMP: ROCK FILTER OUTLET**
MAINTENANCE: THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE.
CLEANOUT LEVEL: SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.
REPAIR TIME FRAME: THE ROCK FILTER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. CLOGGED FILTER STONE (AASHTO #57) SHALL BE REPLACED AND REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER INSPECTION. ALL SEDIMENT REMOVED FROM BMPs DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE AND INCORPORATED INTO SITE GRADING.
- BMP: ROCK CONSTRUCTION ENTRANCE**
MAINTENANCE: THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE.
CLEANOUT LEVEL: SEDIMENT IS TRACKED ONTO THE ROADWAY.
REPAIR TIME FRAME: SEDIMENT TRACKED ONTO ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE AT THE END OF EACH DAY.
- BMP: FILTER BAG INLET PROTECTION**
MAINTENANCE: INSPECT ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
CLEANOUT LEVEL: CLEAN AND/OR REPLACE FILTER BAG WHEN 1/2 FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET.
REPAIR TIME FRAME: CLEAN AND/OR REPLACE FILTER BAG IMMEDIATELY AFTER INSPECTION.
- BMP: PUMPED WATER FILTER BAG**
MAINTENANCE: INSPECT ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. KEEP PUMP INTAKE SCREENS FLOATING AND FREE OF DEBRIS.
CLEANOUT LEVEL: FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR INSPECTION AND MAINTENANCE GUIDELINES. REPLACE DEWATERING BAGS WHEN TRAPPED SEDIMENT HAS ACCUMULATED TO 50% OF THE BAG CAPACITY OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
DEWATERING BAGS ARE FULL WHEN THEY NO LONGER EFFICIENTLY FILTER SEDIMENT OR PASS WATER AT A REASONABLE RATE. INCOMING FLOW RATES WILL VARY DEPENDING ON THE SIZE OF THE DEWATERING BAG, THE TYPE AND AMOUNT OF SEDIMENT DISCHARGED INTO THE DEWATERING BAG, THE PERMEABILITY OF THE UNDERLYING AGGREGATE, AND THE DEGREE OF SLOPE ON WHICH THE BAG LIES.
REPAIR TIME FRAME: CLEAN AND/OR REPLACE FILTER BAG IMMEDIATELY AFTER INSPECTION. REPLACE SEDIMENT FILTER BAG WITHIN 1 HOUR AFTER BECOMING 1/2 FULL, OR SOONER IF PUMPING CONDITIONS WARRANT.
- BMP: CULVERT INLET PROTECTION**
MAINTENANCE: INSPECT ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. AGGREGATE SHALL BE REPLACED OR CLEANED WHEN INSPECTION REVEALS THAT CLOGGED VOIDS ARE CAUSING PONDING PROBLEMS WHICH INTERFERE WITH ON-SITE CONSTRUCTION.
CLEANOUT LEVEL: SEDIMENT SHALL BE REMOVED AND THE IMPOUNDMENT RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE AND CAUSE SEDIMENTATION PROBLEMS.
REPAIR TIME FRAME: IMMEDIATELY AFTER INSPECTION.
- BMP: RIPRAP APRONS**
MAINTENANCE: INSPECT WEEKLY AND AFTER EACH RUNOFF EVENT. REMOVE ANY SEDIMENT DEPOSITS.
REPAIR TIME FRAME: IMMEDIATELY AFTER INSPECTION.
- BMP: CONCRETE WASHOUT**
MAINTENANCE: REMOVE HARDENED CONCRETE AND HAUL TO AN APPROVED OFF-SITE DISPOSAL SITE.
- BMP: EROSION CONTROL BLANKET AND SITE STABILIZATION REPAIR**
MAINTENANCE: REGULAR INSPECTIONS TO DETERMINE IF FABRIC IS DAMAGED OR HAS COME LOOSE AND APPROPRIATE REPAIRS. RE-SEED AND MULCH DISTURBED SLOPES DAMAGED BY CONCENTRATED FLOWS.
- ADDITIONAL E&S NOTES:**
- 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.

- THE CONTRACTOR SHALL MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENTATION BY LIMITING THE EXTENT AND DURATION OF DISTURBANCE. WHERE PRACTICABLE, THE CONTRACTOR SHALL WORK IN PHASES, DISTURBING ONLY THOSE AREAS NEEDED, COMPLETING THE WORK IN THOSE AREAS, AND THEN EMPLOYING PERMANENT STABILIZATION MEASURES ON THOSE AREAS PRIOR TO DISTURBING OTHER AREAS.
 - IMMEDIATE TEMPORARY STABILIZATION MEASURES, INCLUDING TEMPORARY SEEDING AND MULCHING, SHALL BE EMPLOYED UPON ANY TEMPORARY CESSATION OF WORK OF 4 DAYS OR MORE.
 - IMMEDIATE PERMANENT STABILIZATION MEASURES, INCLUDING PERMANENT SEEDING AND EROSION CONTROL MATTING, SHALL BE EMPLOYED UPON REACHING FINISH GRADE.
 - THE CONTRACTOR SHALL CONTACT THE DAUPHIN COUNTY CONSERVATION DISTRICT THREE (3) DAYS PRIOR TO START OF CONSTRUCTION. THE DAUPHIN COUNTY CONSERVATION DISTRICT MAY BE CONTACTED AT 1451 PETERS MOUNTAIN ROAD, DAUPHIN, PA 17018; PHONE: (717) 921-8100; FAX: (717) 921-8276.
 - EROSION AND SEDIMENT POLLUTION CONTROLS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE WITHIN THE TRIBUTARY AREAS OF THOSE CONTROLS.
 - STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER. STOCKPILES MUST BE STABILIZED IMMEDIATELY.
 - (A) UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION. (B) EROSION AND SEDIMENT CONTROL BMPs SHALL BE IMPLEMENTED AND MAINTAINED UNTIL THE PERMANENT STABILIZATION IS COMPLETED. (C) FOR AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY TO BE CONSIDERED PERMANENTLY STABILIZED, THE DISTURBED AREAS SHALL BE COVERED WITH ONE OF THE FOLLOWING: (1) A MINIMUM OF A UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION. (2) AN ACCEPTABLE BMP WHICH PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION.
 - UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING, MUST BE PERFORMED IMMEDIATELY.
 - AFTER FINAL SITE STABILIZATION (AS INDICATED BY A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF AT LEAST 70% ACROSS ALL VEGETATED AREAS) HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED IMMEDIATELY.
 - IF EROSION AND SEDIMENT CONTROLS FAIL TO PERFORM AS EXPECTED, REPLACEMENT OF CONTROLS, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.
- GENERAL PROJECT NOTES:**
- THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THIS PLAN SET IS BASED ON ABOVE GROUND INDICATIONS, FIELD OBSERVATIONS, RECORD DRAWINGS AND THE RESULT OF A PA ONE CALL. AS SUCH THE ACTUAL LOCATION OF UNDERGROUND UTILITIES MAY VARY FROM THAT SHOWN ON THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE FOR INDEPENDENTLY VERIFYING THE LOCATIONS OF ALL UTILITIES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.
 - THE CONTRACTOR, DURING THE PERFORMANCE OF ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT, IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, CODES, AND REGULATIONS.
 - ALL CONSTRUCTION DEBRIS (ANTICIPATED CONSTRUCTION DEBRIS INCLUDE EXCESS EXCAVATED MATERIAL, SCRAP WOOD, BRICKS, BLOCKS, AND ALL WASTE/RESIDUAL ASSOCIATED BUILDING CONSTRUCTION) SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS.
 - THE CONTRACTOR WILL COMPLY WITH ALL APPLICABLE DAUPHIN COUNTY CONSERVATION DISTRICT REGULATIONS IN EFFECT DURING CONSTRUCTION OF THIS PROJECT.
 - ALL POST-CONSTRUCTION STORMWATER BMPs SHOWN ON THIS PLAN ARE FIXTURES THAT CANNOT BE ALTERED OR REMOVED WITHOUT PRIOR APPROVAL BY THE DAUPHIN COUNTY CONSERVATION DISTRICT.
 - THERMAL IMPACTS SHALL BE MINIMIZED BY USING BMPs WHICH LIMIT STANDING WATER EXPOSURE TO SUNLIGHT AND DIFFUSE DRAINAGE TO VEGETATED AREAS.
 - THERE ARE NO FLOODPLAINS OR WETLANDS ON THE SUBJECT TRACT.
- CONSTRUCTION SEQUENCE FOR EROSION AND SEDIMENT POLLUTION CONTROL :**
- ITEMS IDENTIFIED AS "CRITICAL STAGE CONSTRUCTION" REQUIRE INSPECTION BY THE LICENSED PROFESSIONAL DESIGN ENGINEER. SITE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE ENGINEER TO BE ON-SITE TO OBSERVE AND SUPERVISE CONSTRUCTION.
- FIELD MARK LIMITS OF DISTURBANCE (LOD) AND ENVIRONMENTALLY SENSITIVE AREAS (INCLUDING WETLANDS AND FLOODWAYS) IF PRESENT.
 - INSTALL ROCK CONSTRUCTION ENTRANCE WHERE EXISTING ACCESS DRIVE TO LOCUST LANE IS LOCATED PRIOR TO EARTH MOVING ACTIVITIES.
 - INSTALL COMPOST FILTER SOCK AND PROTECTIVE FENCING AT LOCATIONS INDICATED ON THE PLAN.
 - SITE EARTHWORK
 - CLEAR AND GRUB THE ENTIRE SITE WITHIN THE LOD.
 - STRIP TOPSOIL AND STOCKPILE. PROVIDE COMPOST FILTER SOCK AT THE BASE OF ALL STOCKPILES
 - MASS GRADE THE SITE INCLUDING EAST AND WEST ACCESS DRIVES (BRING TO APPROX. SUBGRADE ELEVATION) DURING THE PROCESS OF MASS GRADING THE INFILTRATION BEDS (BASINS) SHOULD BE EXCAVATED ("CUT") AND USED AS NEEDED "FILL" THROUGHOUT THE SITE. THE CONTRACTOR SHOULD CONSIDER THE FOLLOWING ORDER FOR BED EXCAVATION:
 - "CRITICAL STAGE CONSTRUCTION" - EXCAVATE FRONT PARKING LOT SUBSURFACE INFILTRATION BED (BED/BASIN 1) USE EXCAVATED EARTH FOR NEEDED FILL THROUGHOUT THE SITE. AFTER EXCAVATION IMMEDIATELY INSTALL EXCLUSION FENCING AROUND THE EXCAVATED BED TO PROTECT IT UNTIL THE COMPONENTS OF THE INFILTRATION SYSTEM ARE INSTALLED.
 - "CRITICAL STAGE CONSTRUCTION" - EXCAVATE FRONT PARKING LOT SUBSURFACE INFILTRATION BED (BED/BASIN 1) USE EXCAVATED EARTH FOR NEEDED FILL THROUGHOUT THE SITE. AFTER EXCAVATION IMMEDIATELY INSTALL EXCLUSION FENCING AROUND THE EXCAVATED BED TO PROTECT IT UNTIL THE COMPONENTS OF THE INFILTRATION SYSTEM ARE INSTALLED.
 - AFTER MASS GRADING IS COMPLETE STABILIZE AREAS THAT WILL REMAIN EXPOSED FOR MORE THAN 4 DAYS. **EXPOSED AREAS ARE PROHIBITED AFTER 4 DAYS - ALL AREAS MUST BE COVERED.**
 - COVER PARKING LOT SUBGRADE WITH A MIN 3 INCH OF STONE (PA 2A OR EQUIVALENT).
 - CUT AND FILL SLOPES SHALL BE COVERED WITH TEMPORARY SEED MIX AND BLANKETED.
 - OVERFLOW PARKING AREAS SHALL BE TEMPORARILY COVERED WITH STONE TO ALLOW VEHICLE ACCESS TO AND FROM TOPSOIL STOCKPILE.
 - BARRICADE WEST ENTRANCE DRIVE. RESTRICT ACCESS TO AND FROM THE SITE TO ONLY THE EAST ACCESS.
 - CONSTRUCT BUILDING ANYTIME AFTER PARKING LOT AREA HAS BEEN TEMPORARILY STABILIZED.
 - CONSTRUCT TEMPORARY LOCATION OF CONCRETE WASHOUT FACILITY.
 - CONSTRUCT CHANNELS 1A AND 1B AND PLANT PERMANENT COVER OVER CHANNEL BOTTOM AND ADJACENT SIDE SLOPES (BOTH SIDES) AND UP SLOPE TO PARKING LOT
 - "CRITICAL STAGE CONSTRUCTION" - EXCAVATE AND CONSTRUCT RAIN-GARDEN/BIO-INFILTRATION BASIN
 - IMMEDIATELY PLANT PERMANENT BASIN BOTTOM COVER UPON COMPLETION OF GRADING FOR THE RAIN GARDEN/ BIO-INFILTRATION BASIN.
 - CONSTRUCT SUBSURFACE INFILTRATION BEDS (BASINS) AND DRY WELL SEEPAGE PITS.
 - CONSTRUCTION SHALL BE AS SPECIFIED ON THE PCSM PLAN.
 - SUBSURFACE INFILTRATION BEDS IN PARKING LOTS MUST BE FENCED OFF AFTER THEY ARE CONSTRUCTED UNTIL SUCH TIME AS PARKING LOTS ARE READY FOR PAVING.

- CONSTRUCT STORMWATER COLLECTION AND CONVEYANCE SYSTEM (INLETS, STORM SEWERS, CULVERTS, ROOF DOWNSPOUT PIPING SYSTEM AND INCLUDING INFILTRATION BED OUTLET STRUCTURES.
 - INSTALL RIP RAP APRONS AT DISCHARGE ENDS OF INFILTRATION BED (BASIN) OUTLET STRUCTURES AND AT DISCHARGE END OF ROOF DOWNSPOUT COLLECTION PIPING AT CHANNEL 1A.
 - INSTALL INLET PROTECTION IMMEDIATELY AFTER INLETS ARE INSTALLED.
 - COMPLETE CONSTRUCTION OF EMERGENCY ACCESS DRIVE (EAST DRIVEWAY).
 - PRIOR TO CONSTRUCTION REMOVE ROCK CONSTRUCTION ENTRANCE AND RELOCATE TO THE MAIN ACCESS DRIVE (WEST DRIVEWAY).
 - BARRICADE EAST ACCESS DRIVE.
 - CONSTRUCT LOCUST LANE PAVEMENT WIDENING.
 - TEMPORARILY STABILIZE EXPOSED AREAS UNTIL IT IS PAVED WITH PA 2A STONE.
 - CONSTRUCT CONCRETE CURBING AND SIDEWALK THROUGHOUT THE ENTIRE SITE.
 - REMOVE ANY REMAINING TEMPORARY COVER OVER CUT/FILL SLOPES. FINE GRADE AND PLANT PERMANENT GROUND COVER AS CALLED FOR ON PLAN.
 - REMOVE ROCK CONSTRUCTION ENTRANCE.
 - TOPSOIL, SEED AND MULCH OVERFLOW PARKING AREA WITH PERMANENT SEED MIX.
 - PAVE THE ENTIRE SITE AND PAVEMENT WIDENING ON LOCUST LANE.
- THE ABOVE SEQUENCE IS SUBJECT TO CHANGE PER SELECTED SITE CONTRACTOR'S DISCRETION. ALL CHANGES MUST BE APPROVED BY THE DAUPHIN COUNTY CONSERVATION DISTRICT PRIOR TO IMPLEMENTATION**
- A NOTICE OF TERMINATION (NOT) MUST BE COMPLETED WITHIN 6 MONTHS OF FULL OCCUPANCY OF ALL BUILDINGS ONSITE.**

DRAWING NO.		ES-3		SHEET'S:		3 OF 6	
PROJECT NUMBER:		R18-0633.000		DATE:		MAY 21, 2019	
TASK:		4		SUBTASK:		-	
BY:		APPLY		DATE:			
DESCRIPTION:				REV:			
DESIGN:		G.C.C.G.		DTS/MN:		D.J.J.	
CHECKER:		B.A.S.		CHKR:		E.A.S.	
SCALE:		G.C.C.G.		APPV:		G.C.C.G.	
FOR:		EROSION AND SEDIMENT CONTROL PLAN*		FOR:		EROSION AND SEDIMENT CONTROL NOTES	
PROJECT:		Solid Rock Missionary Baptist Church		PROJECT:		Solid Rock Missionary Baptist Church	
ADDRESS:		2400 LOCUST LANE		ADDRESS:		2400 LOCUST LANE	
CITY:		Dauphin County		CITY:		Dauphin County	
STATE:		Pennsylvania		STATE:		Pennsylvania	

SOIL LIMITATIONS AND CONSTRUCTION TECHNIQUES

LIMITATIONS FOR SRBMC ARE 1,2,3,4,7,9,10,11

SOIL USE LIMITATIONS RESOLUTIONS

LIMITATION	RESOLUTION
1 CUT BANKS CAVE	EXCAVATIONS WILL BE PROPERLY SUPPORTED BY SHEETING AND SHORING TO PREVENT CAVES.
2 CORROSIVE TO CONCRETE OR STEEL	NO CONCRETE OR STEEL PIPING IS PROPOSED WITHOUT APPROPRIATE COATINGS AND PROTECTION.
3 DROUGHTY	EXISTING SUITABLE TOPSOIL AND SOIL AMENDMENTS WILL BE USED DURING CONSTRUCTION AS NECESSARY.
4 EASILY ERODIBLE	TEMPORARY AND PERMANENT E&SC BMPS WILL BE EMPLOYED THROUGHOUT THE CONSTRUCTION AND OPERATION OF THE SITE.
7 "HYDRIC/HYDRIC INCLUSIONS"	A WETLAND INVESTIGATION WAS COMPLETED. NO IMPACTS TO WETLANDS ARE PROPOSED.
9 SLOW PERCOLATION	A FIELD INVESTIGATION OF PERCOLATION RATES AT THE INFILTRATION AREAS DEMONSTRATED INFILTRATIVE CAPACITY. WATERTIGHT PIPE, ANTISEEP COLLARS, CLAY CORES THROUGH BASIN BERMS, AND CONCRETE ENDWALLS WILL BE USED TO MINIMIZE WATER MOVEMENT VIA PIPE BEDDING.
10 PIPING	
11 "POOR SOURCE OF TOPSOIL"	"EXISTING TOPSOIL, WHICH HAS PROVEN TO BE SUITABLE, WILL BE REUSED ON THE SITE. COMPOST AMMENDMENTS WILL BE UTILIZED WHERE INDICATE ON THE PLAN DRAWINGS."

LIMITATIONS TO SOILS

SOIL NAME	1. CUTBANKS CAVE	2. CORROSIVE TO CONCRETE/STEEL	3. DROUGHTY	4. EASILY ERODIBLE	5. FLOODING	6. DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE	7. HYDRIC/HYDRIC INCLUSIONS	8. LOW STRENGTH/ LANDSLIDE PRONE	9. SLOW PERCOLATION	10. PIPING	11. POOR SOURCE OF TOPSOIL	12. FROST ACTION	13. SHRINK - SWELL	14. POTENTIAL SINKHOLE	15. PONDING	16. WETNESS
Berks	X	C	X	X			X		X	X	X					
*Urban, Shale																

*Limitations for Urban Shale soils are undefined

SEEDING AND MULCHING SPECIFICATIONS

THE DEPARTMENT RECOMMENDS THE USE OF THE PENN STATE PUBLICATION, "EROSION CONTROL AND CONSERVATION PLANTINGS ON NONCROPLAND," AS THE STANDARD TO USE FOR THE SELECTION OF SPECIES, SEED SPECIFICATIONS, MIXTURES, LIMING AND FERTILIZING, TIME OF SEEDING, AND SEEDING METHODS. SPECIFICATIONS FOR THESE ITEMS MAY ALSO BE OBTAINED FROM PENNDOT'S PUBLICATION # 408, SECTION 804 OR BY CONTACTING THE APPLICABLE COUNTY CONSERVATION DISTRICT. UPON SELECTION OF A REFERENCE, THAT REFERENCE SHOULD BE USED TO PROVIDE ALL SPECIFICATIONS FOR SEEDING, MULCHING, AND SOIL AMENDMENTS. THE FOLLOWING SPECIFICATION WILL BE USED FOR THIS PROJECT:

(TEMPORARY)	ANNUAL RYE GRASS	(PERMANENT)	LAWN AREAS ONLY
*SPECIES:	THREE-WAY TALL FESCUE (ERNX 136 OR EQUIV.)	*SPECIES:	THREE-WAY TALL FESCUE (ERNX 136 OR EQUIV.)
% PURE LIVE SEED:	89%	% PURE LIVE SEED:	89%
APPLICATION RATE:	40 LB./ACRE	APPLICATION RATE:	400 LB./ACRE
FERTILIZER TYPE:	10-10-10 (N-P-K)	FERTILIZER TYPE:	10-10-10 (N-P-K)
FERTILIZER APPL. RATE:	500 LB./ACRE	FERTILIZER APPL. RATE:	500 LB./ACRE
LIMING RATE:	1.00 TON/ACRE	LIMING RATE:	1.00 TON/ACRE
MULCH TYPE:	HAY, STRAW, MULCH	MULCH TYPE:	HAY, STRAW, MULCH
MULCHING RATE:	3 TON/ACRE	MULCHING RATE:	3 TON/ACRE

SEEDING DATES : APRIL 15 TO OCTOBER 31

THREE-WAY TALL FESCUE MIX
MIX COMPOSITION
34.0% FESTUCA ARUNDINACEA, 'TITANIUM LS' (TALL FESCUE, 'TITANIUM LS')
33.0% FESTUCA ARUNDINACEA, 'NINJA III' (TALL FESCUE, 'NINJA III')
33.0% FESTUCA ARUNDINACEA, 'RAPTOR III' (TALL FESCUE, 'RAPTOR III'(TURF TYPE))

GENERAL PRODUCT INFORMATION:
ITEM NUMBER: ERNMX-136
PRODUCT CATEGORIES:
LAWN & TURFGRASS SITES

GROUND COVERS

QUANTITIES	%PLS	BOTANICAL NAME	COMMON NAME
5.25 Lbs.	6%	agrostis hyemalis	WINTER BENTGRASS
	7%	carex vulpinoidea	FOX SEDGE
	20%	elymus virginicus	VIRGINIA WILDRYE
	3%	juncus effusus	SOFT RUSH
	30%	panicum anceps	BEAKED PANICGRASS
	18%	panicum clandestinum	DEERTONGUE
	16%	panicum rigidulum	REDTOP PANICGRASS

3:1 STEEP SLOPES PLANTING MIX

QUANTITY	BOTANICAL NAME	COMMON NAME	SUN	CONDITION	PLANTING SIZE	"MATURITY SIZE (HEIGHT X WIDTH)"	COMMENT
318	Vinca Minor	PERIWINKLE	FULL SHADE TO FULL	B&B	50-PLANT FLATS	8" x 3'	TOTAL INDIVIDUAL PLANTS: 15,900 PLANTS 12" O.C. STAGGERD

COMPOST STANDARDS

ORGANIC MATTER CONTENT	80% - 100% (dry weight basis)
ORGANIC PORTION	Fibrous and elongated
pH	5.5 - 8.0
MOISTURE CONTENT	35% - 55%
PARTICLE SIZE	98% pass through 1" screen
SOLUBLE SALT CONCENTRATION	5.0 Ds Maximum

NOTE: THE ABOVE COMPOST MIX TO BE BLOWN ON 3:1 SLOPES AS IDENTIFIED ON THE E&S PLAN.

COMPOST APPLICATION RATES

SLOPE LENGTH (FT)	< 3H:1V SLOPES	3H:1V TO 2H:1V SLOPES
20 OR LESS	270 CUBIC YD / ACRE (2" LAYER)	540 CUBIC YD/ACRE (4" LAYER)
20 TO 60	405 CUBIC YD/ACRE (3" LAYER)	675 CUBIC YD/ACRE (5" LAYER)
60 TO 100	540 CUBIC YD/ACRE (4" LAYER)	810 CUBIC YD/ACRE (6" LAYER)

DRAWING NO. ES-4 SHEETS: 4 OF 6

"EROSION AND SEDIMENT CONTROL PLAN" FOR Solid Rock Missionary Baptist Church 2400 LOCUST LANE Susquehanna Township Dauphin County Pennsylvania

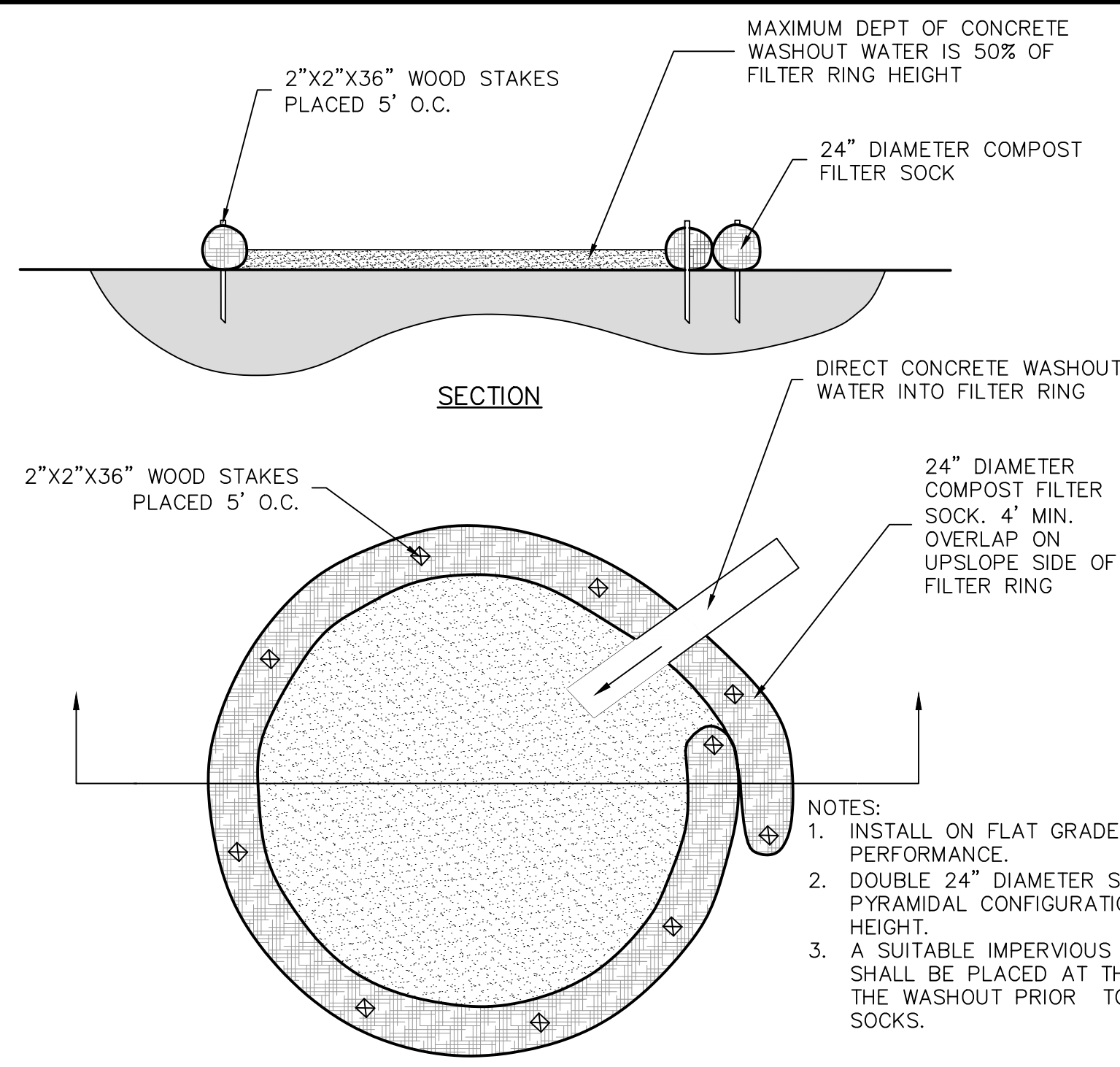
DSGN G.C.C.G. DFTSMN D.J.J. CHKR B.A.S. APPV G.C.C.G. SCALE

REV DESCRIPTION BY APPV DATE

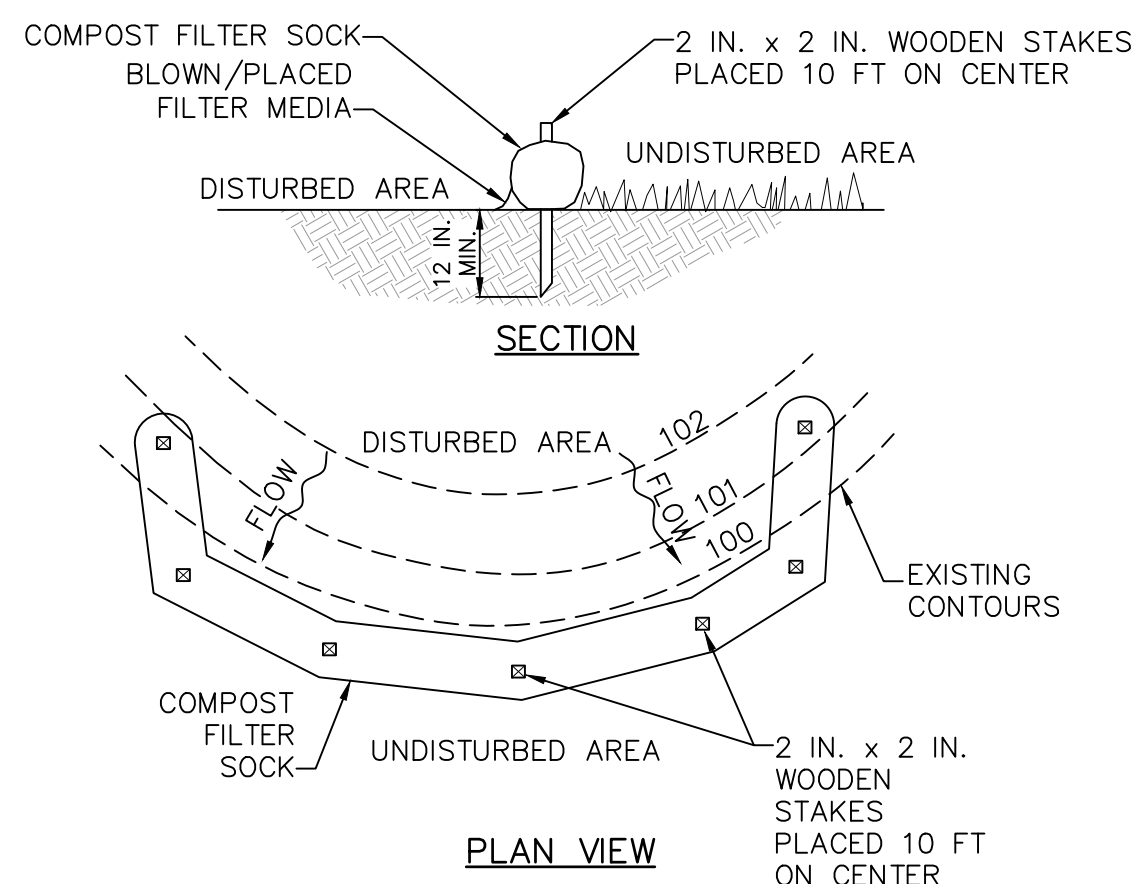
449 EISENHOWER BOULEVARD SUITE 300 HARRISBURG, PA 17111 TEL: (717) 232-0593 FAX: (717) 232-1799 www.skellyjoy.com



PROJECT NUMBER: R18-0633.000 TASK: 4 DATE: MAY 21, 2019



CONCRETE WASHOUT
NO SCALE



COMPOST FILTER SOCK DETAIL
NO SCALE

TABLE 4.1
Compost Sock Fabric Minimum Specifications

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

Two-ply systems

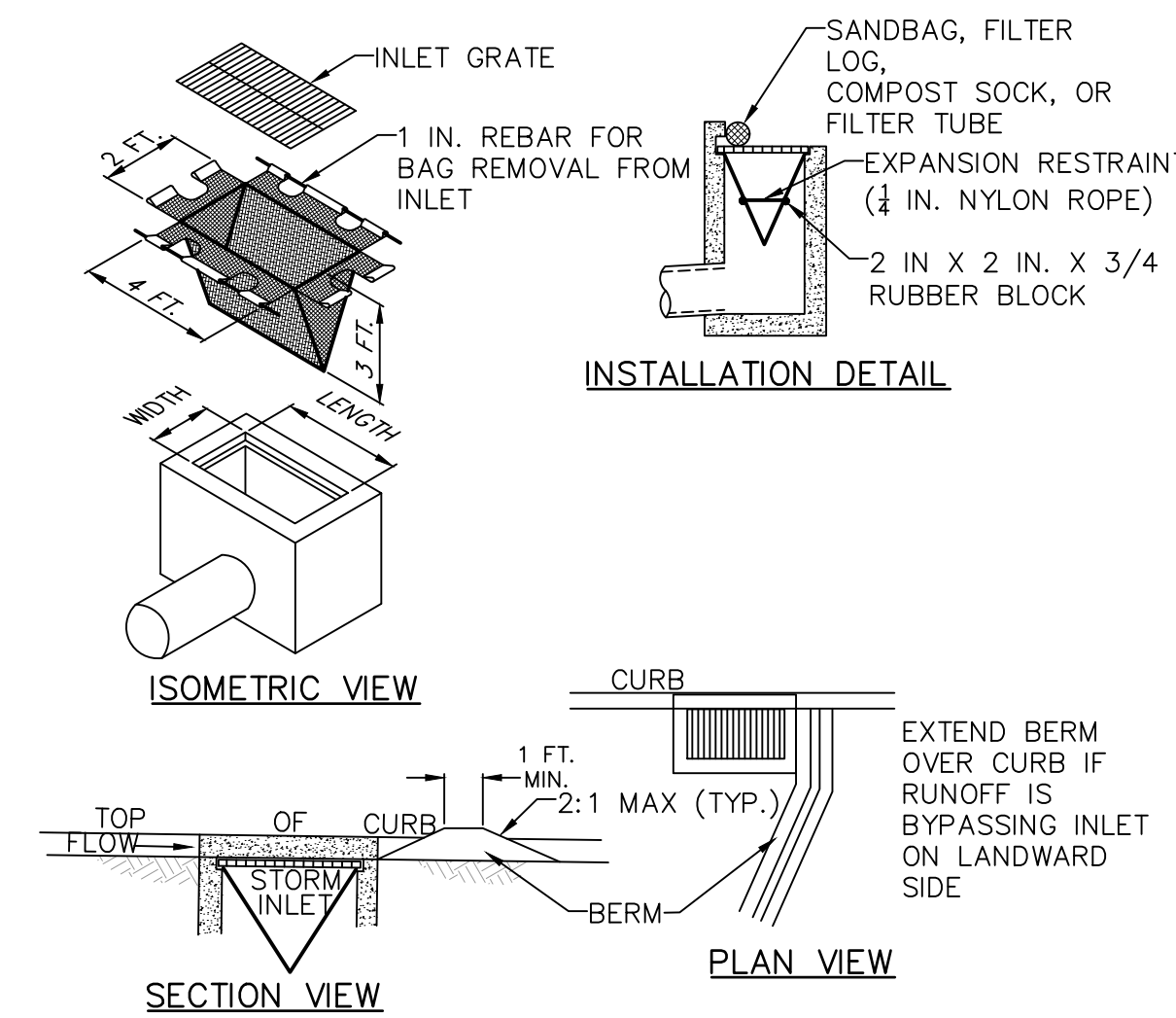
System	Material
Inner Containment Netting	HDPE biaxial net
	Continuously wound Fusion-welded junctures
Outer Filtration Mesh	3/4" X 3/4" Max. aperture size Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch)
	3/16" Max. aperture size

Notes:
Sock fabrics composed of burlap may be used on projects lasting 6 months or less.

TABLE 4.2
COMPOST STANDARDS

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

SOCK FABRIC AND COMPOST STANDARDS
NO SCALE



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

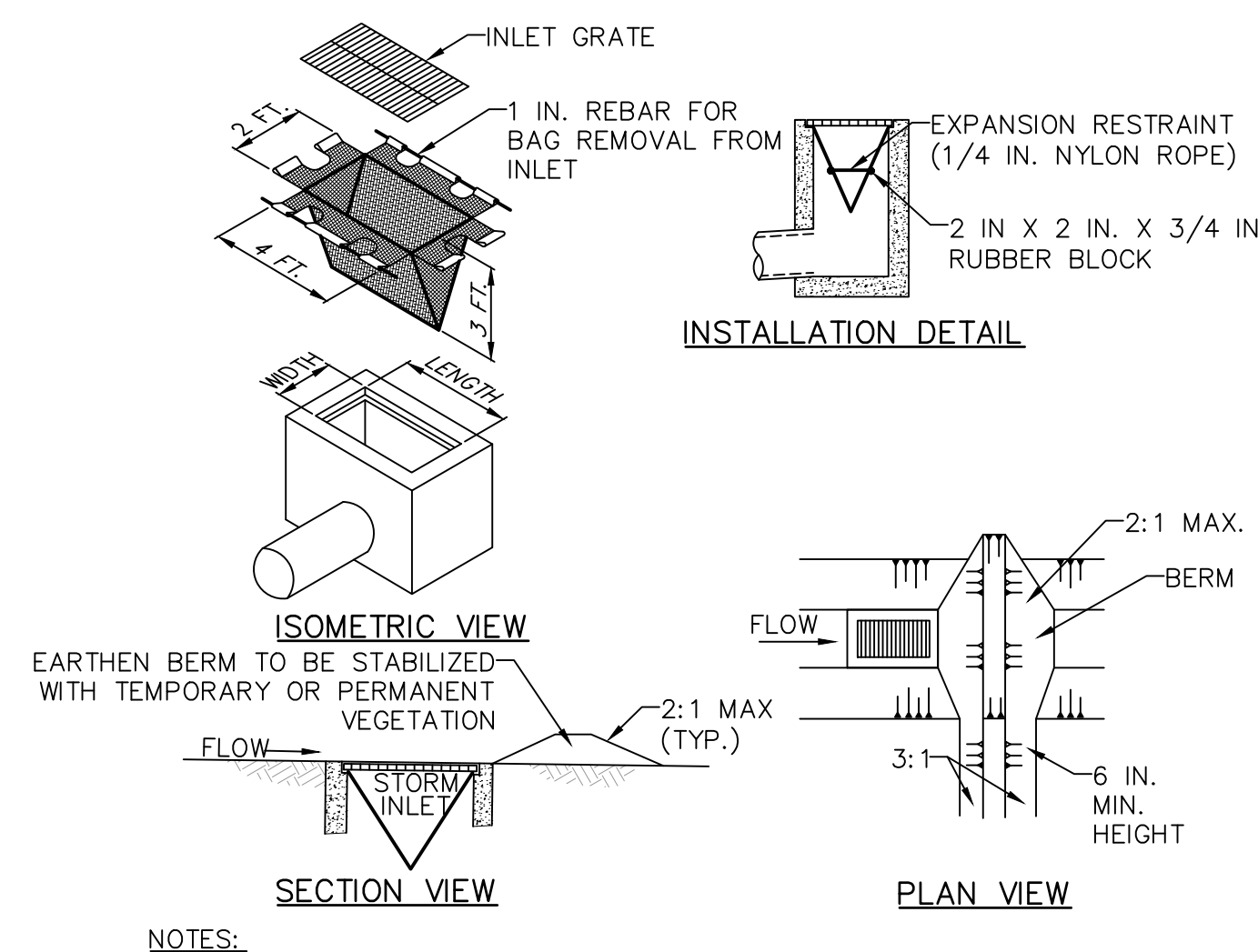
ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE 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.

FILTER BAG INLET PROTECTION—TYPE C INLET
NO SCALE



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

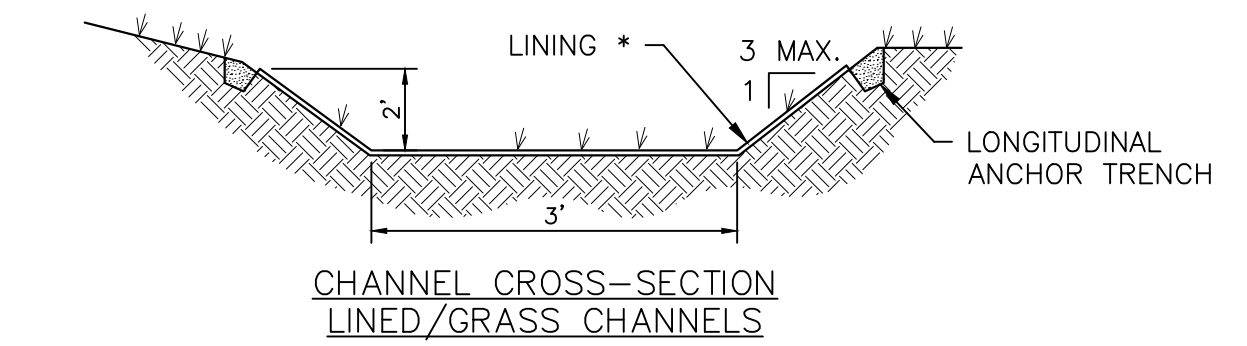
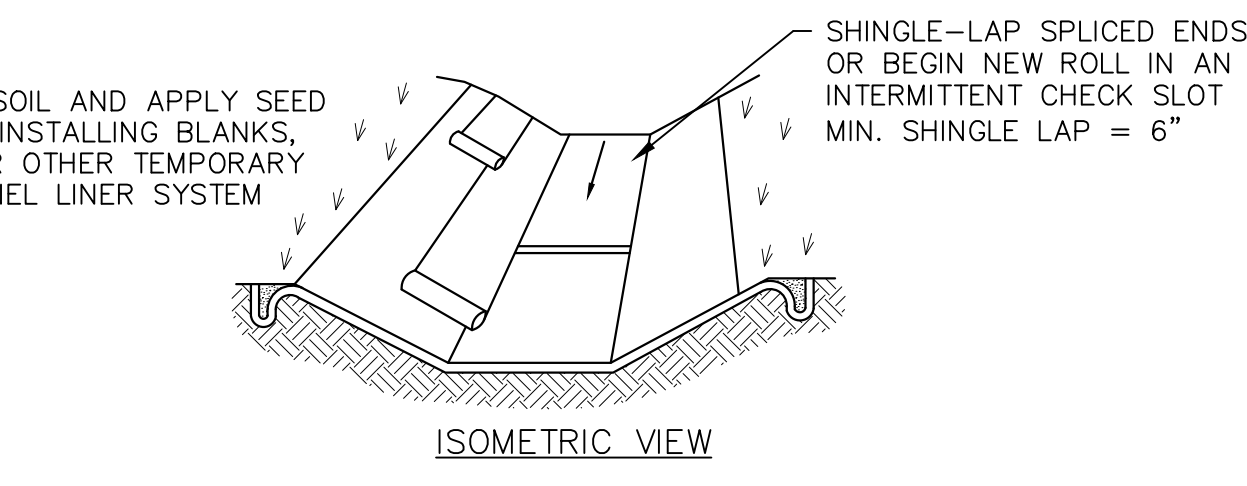
INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

FILTER BAG INLET PROTECTION—TYPE M INLET
NO SCALE

CHANNEL NOTES:

- CHANNEL LINING WILL CONSIST OF BIO-DEGRADABLE TURF REINFORCEMENT MATTING FOR TEMPORARY LINING WHILE GRASS MIXTURE GETS ESTABLISHED FOR PERMANENT LINING.
- ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.
- SEE MANUFACTURER'S LINING INSTALLATION DETAILS FOR STAPLE PATTERN, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS. SEED MIXTURE AND MULCHING INFORMATION.
- CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION.
- SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
- NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.



BOTTOM WIDTH B (FT)	DEPTH D (FT)	Z1 (FT)	Z2 (FT)	LINING*
3	2	3	3	TRM- NAG SBNT50

TYPICAL VEGETATED CHANNEL SECTION
NO SCALE

DRAWING NO. ES-5
SHEET: 5 OF 6

"EROSION AND SEDIMENT CONTROL PLAN" FOR
Solid Rock Missionary Baptist Church
2400 LOCUST LANE
Susquehanna Township Dauphin County Pennsylvania

EROSION AND SEDIMENT CONTROL DETAILS

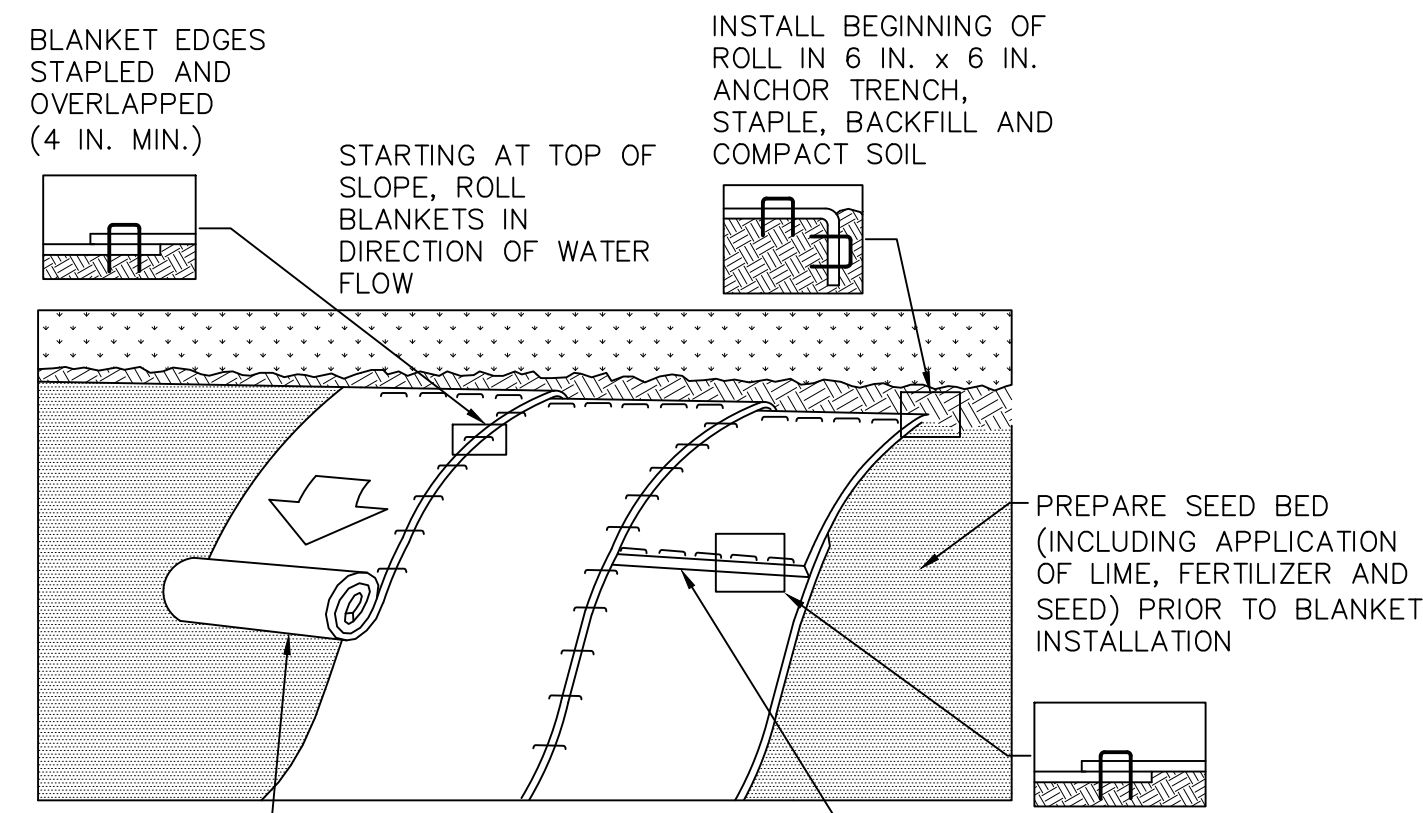
DSGN: G.C.G. DTSMN: D.J.J. CHKR: E.A.S. APPV: G.C.G. SCALE: 7/1/19

1 REVISED PER HRG COMMENTS LETTER DATED JUNE 13, 2019 ZEG
BY: APPV DATE:

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SKELLY AND LOY
EROSION AND SEDIMENT CONTROL

PROJECT NUMBER: R18-0633.000
TASK: 4
DATE: MAY 21, 2019



NOTES:

SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLOUDS, STICKS, AND GRASS.

BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

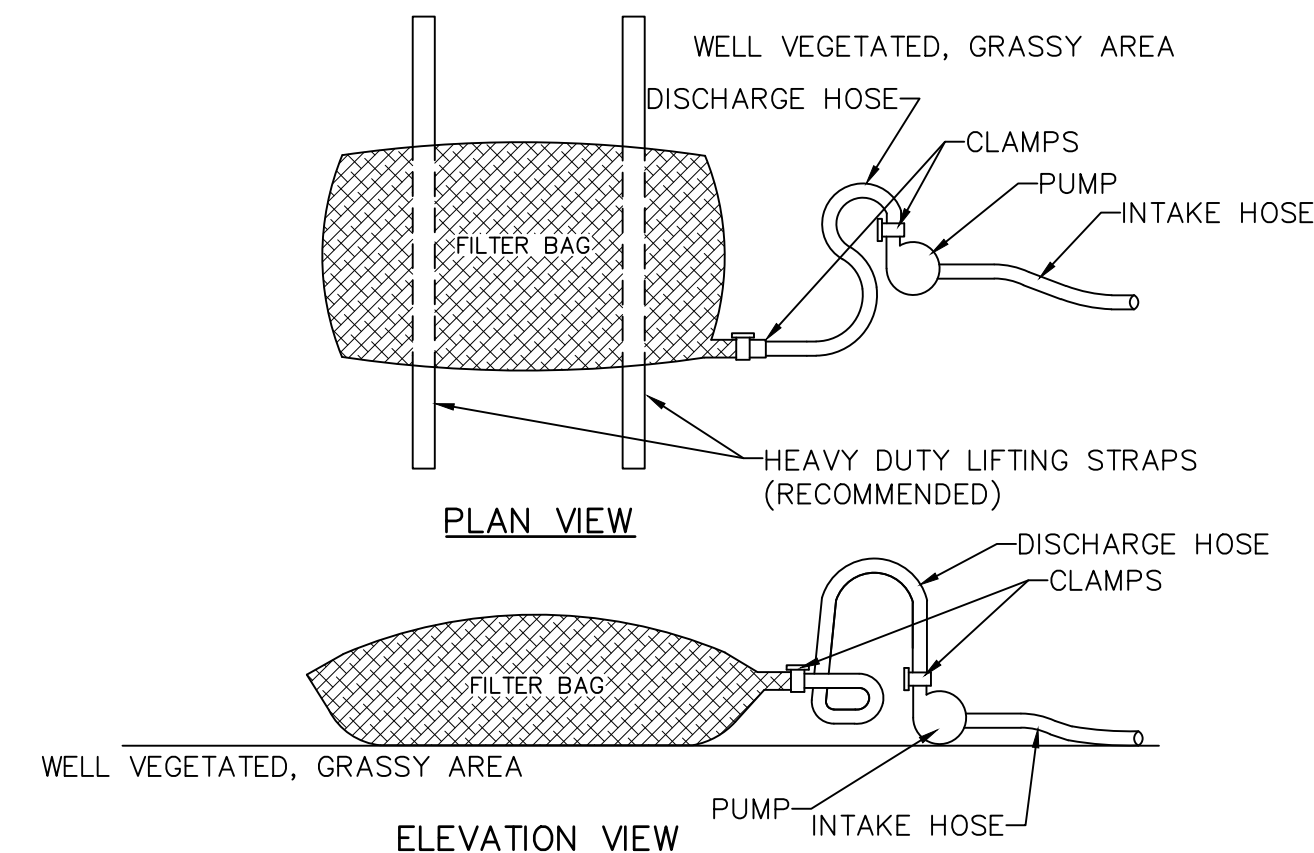
BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

ADDITIONAL NOTES:

HYDRAULICALLY APPLIED BLANKETS MAY BE SUBSTITUTED FOR EROSION CONTROL BLANKETS IN ACCORDANCE WITH THE PA DEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, MARCH 2012.

MANUFACTURER'S INFORMATION ON TYPE OF HYDRAULICALLY APPLIED BLANKET SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.

EROSION CONTROL BLANKET INSTALLATION
NO SCALE



NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

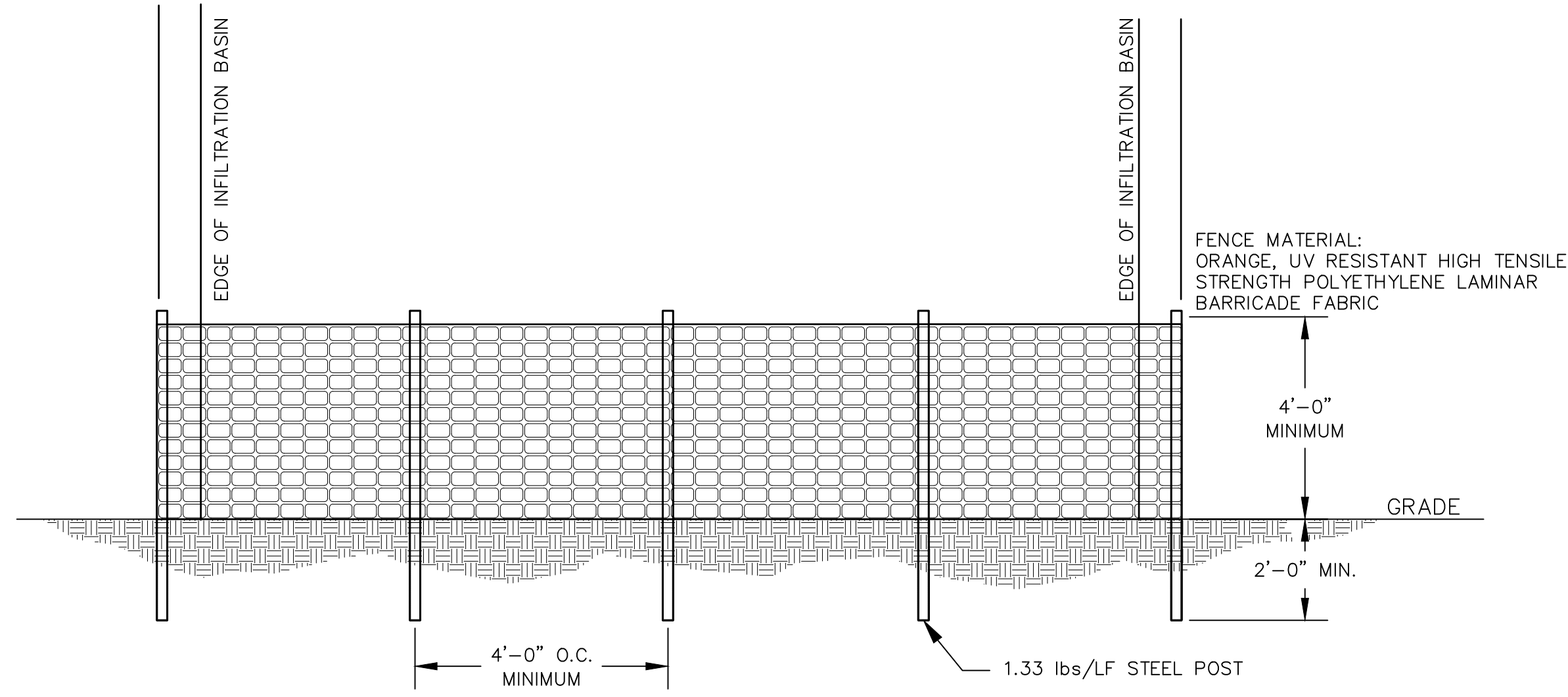
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

CONTRACTOR SHALL UTILIZE PUMPED WATER FILTER BAGS AS NEEDED THROUGHOUT THE CONSTRUCTION PERIOD. BAGS SHALL BE LOCATED WITHIN THE LIMITS OF DISTURBANCE AREA AS NEEDED.

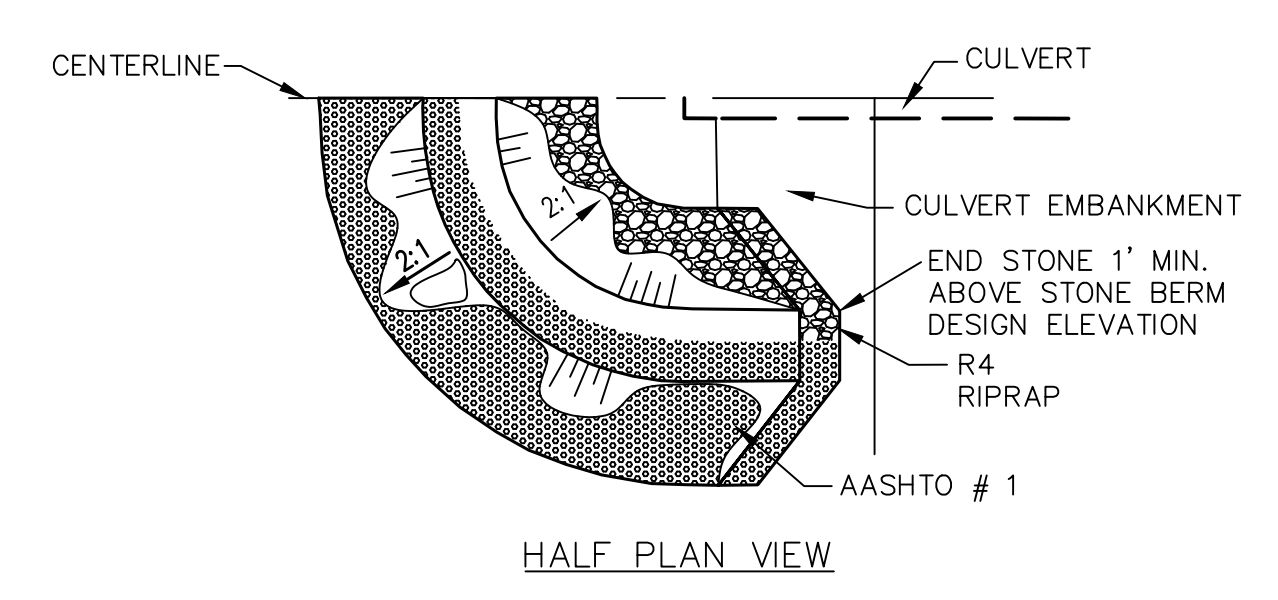
PUMPED WATER FILTER BAG DETAIL
NO SCALE



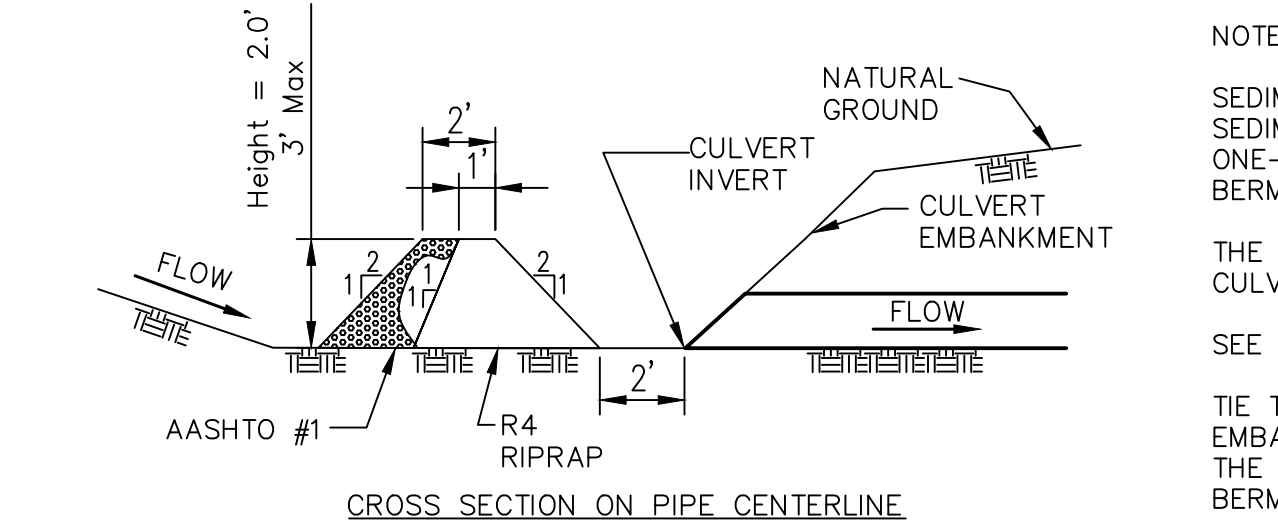
NOTES:

- INSTALL PROTECTION FENCE AT AT EDGE OF THE INFILTRATION BASINS.
- THERE SHALL BE NO STORAGE OF MATERIAL WITHIN THE BOUNDARIES OF THE PROTECTION FENCING.
- PROTECTION FENCING SHALL BE MAINTAINED UNTIL CONSTRUCTION AND BACKFILL OF THE INFILTRATION BASIN IS COMPLETE.

EXCLUSION FENCE
NO SCALE



CULVERT INLET PROTECTION
NO SCALE



ROCK CONSTRUCTION ENTRANCE DETAIL
NO SCALE

NOTES:

SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE HEIGHT OF THE STONE BERM.

THE MAXIMUM DRAINAGE AREA TO THE CULVERT BEING PROTECTED IS 3 ACRES.

SEE PLANS FOR H DIMENSION.

TIE THE STONE BERM INTO THE CULVERT EMBANKMENT A MINIMUM OF 1 FOOT ABOVE THE DESIGN ELEVATION OF THE STONE BERM.

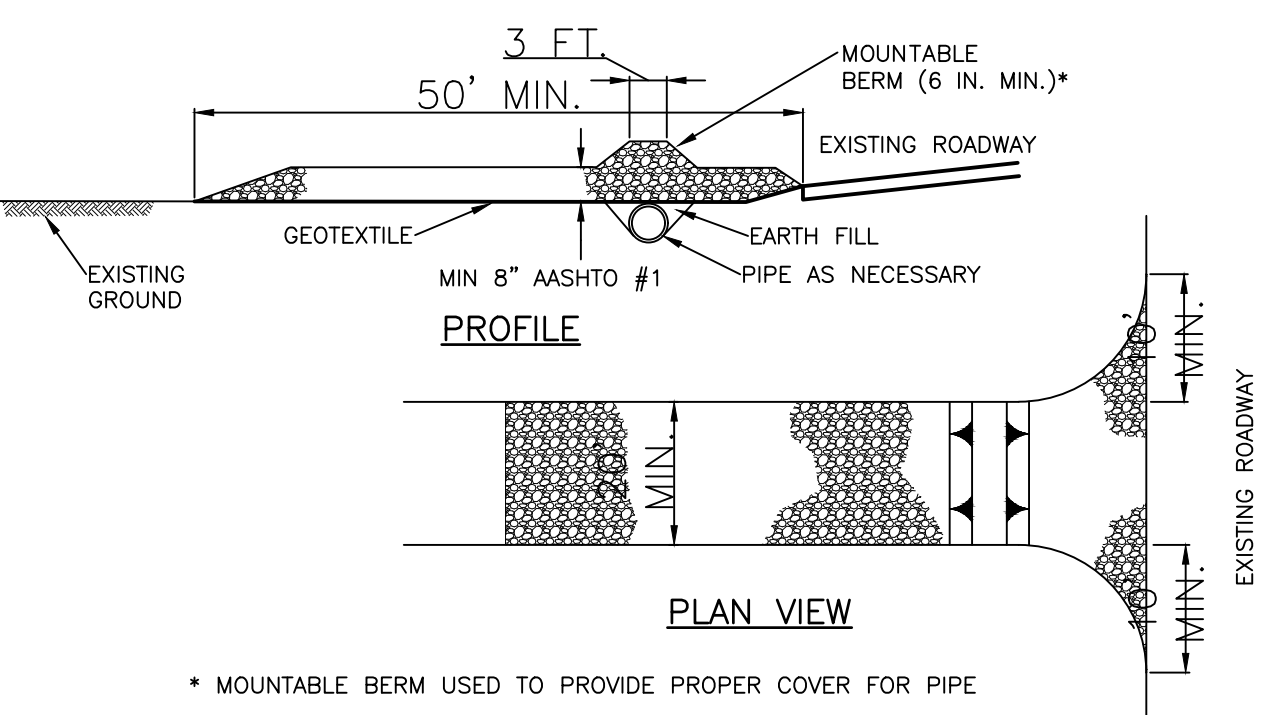
NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

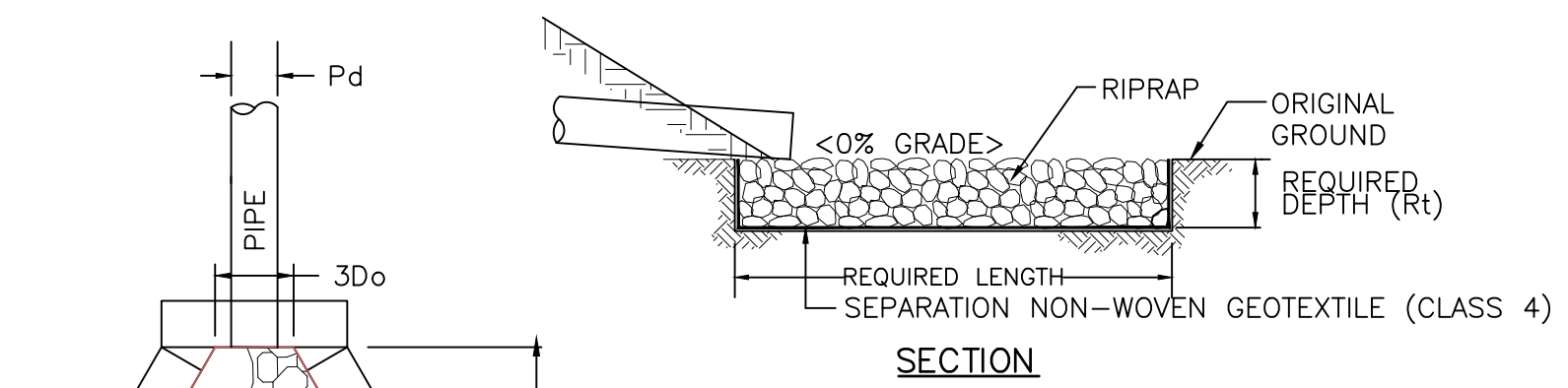
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH ROCK, WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.



ROCK CONSTRUCTION ENTRANCE DETAIL
NO SCALE



RIPRAP APRON DETAIL
NO SCALE

NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN.

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.

DESIGNATION	Pd	3Do	Alt*	Atw*	SIZE	REQUIRED DEPTH
RIPRAP APRON #1	1.25'	3.75'	12'	16'	R-4	18"
RIPRAP APRON #2	1.50'	4.50'	11'	16'	R-3	9"
RIPRAP APRON #3	0.67'	2'	6'	8'	R-3	9"

* MINIMUM DIMENSIONS
CLASS R-3 RIPRAP SHALL HAVE A D50=3" RANGING FROM 2" TO 6".
CLASS R-4 RIPRAP SHALL HAVE A D50=6" RANGING FROM 3" TO 12".

RIPRAP APRON DETAIL
NO SCALE

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SKELLY AND JOY
ENGINEERS AND ARCHITECTS

EROSION AND SEDIMENT CONTROL PLAN FOR Solid Rock Missionary Baptist Church 2400 LOCUST LANE Susquehanna Township Dauphin County Pennsylvania

ES-6 SHEETS: 6 OF 6

EROSION AND SEDIMENT CONTROL DETAILS

DESIGN: G.C.G. DTS/SM: D.J.J. CHK: B.A.S. APP: G.C.G. SCALE: BY: APPV: DATE: REV: DESCRIPTION: