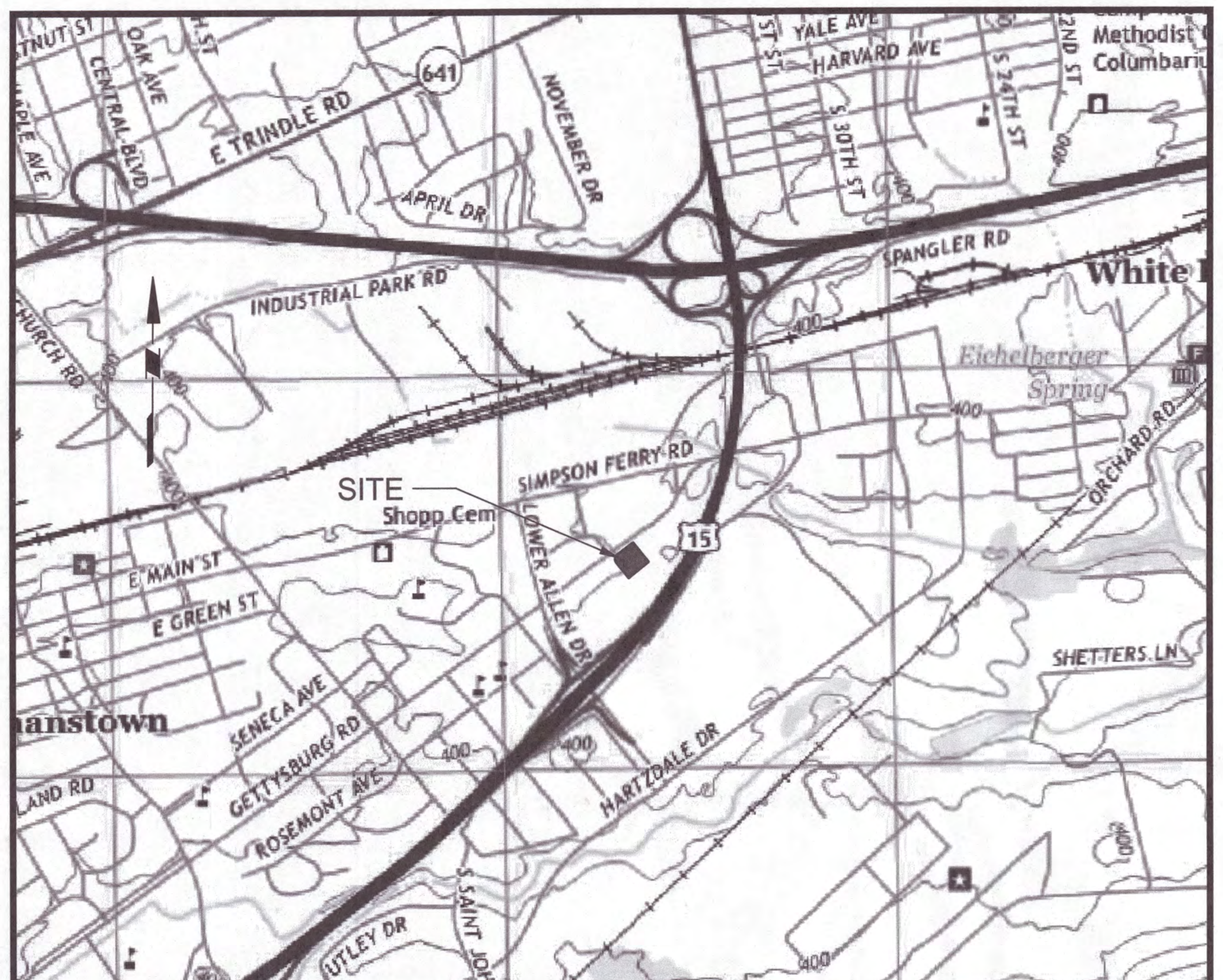
FINAL MINOR LAND DEVELOPMENT PLAN

LOWER ALLEN COMMONS-PAD SITE @ CONDOMINIUM #1

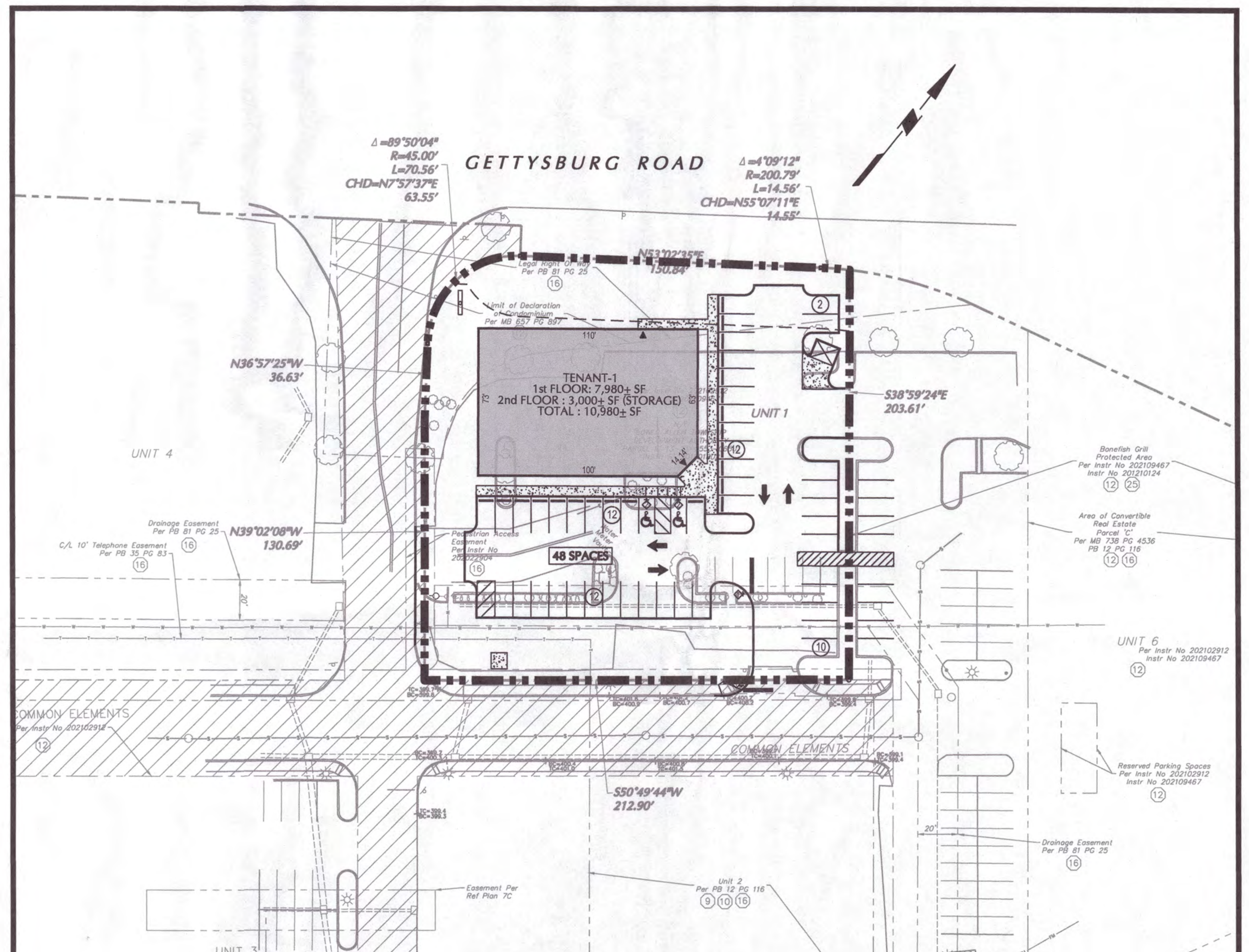
3521 GETTYSBURG ROAD

LOWER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA



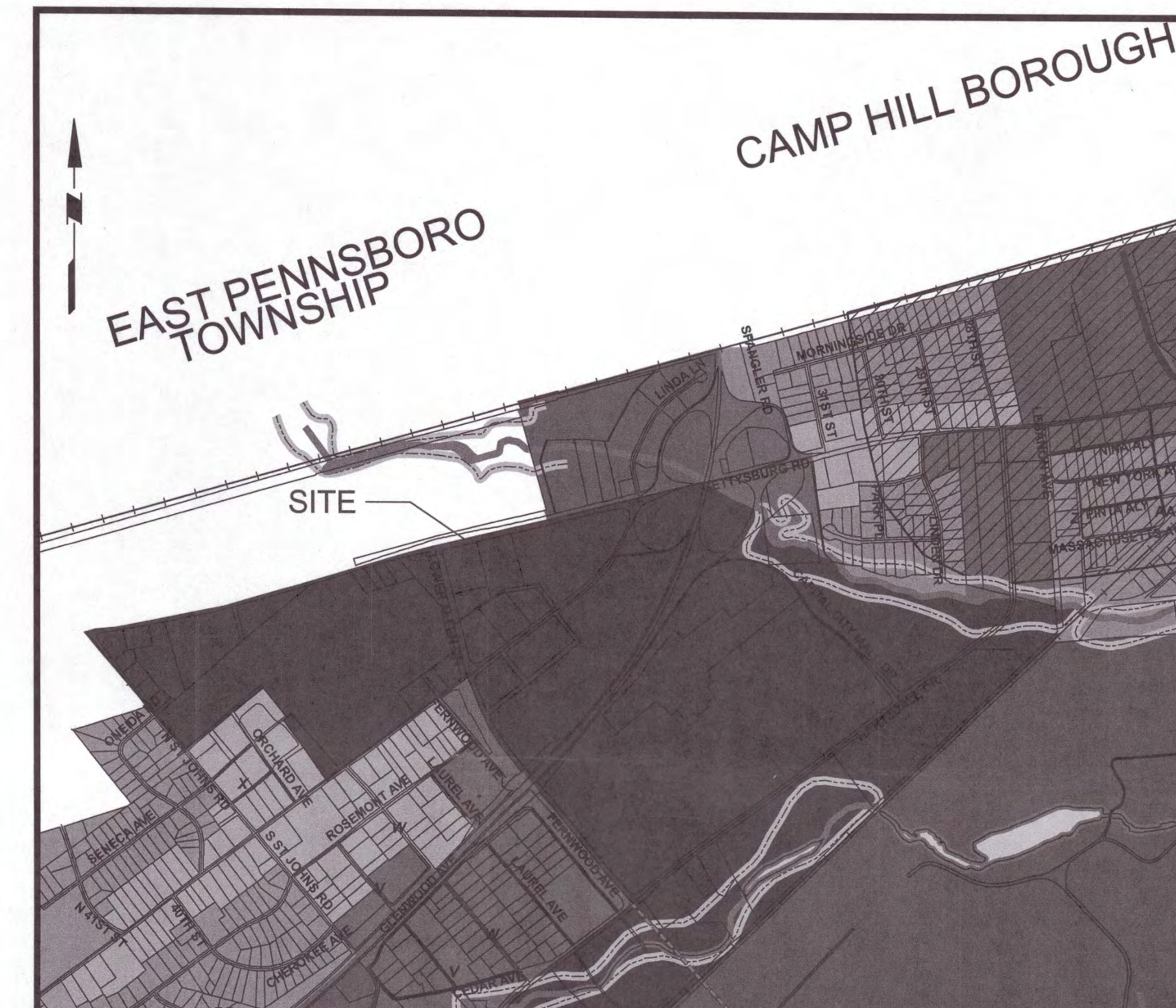
KEY MAP

SCALE : 1" = 1,000'



SITE MAP

SCALE : 1" = 50'



ZONING MAP

SCALE : 1" = 400'

CONTACT LIST

LOWER ALLEN TOWNSHIP
ADMINISTRATION OFFICE
2233 GETTYSBURG ROAD
CAMP HILL, PA 17011
717-975-7575

FIRE SERVICE
LOWER ALLEN TOWNSHIP FIRE CO 12
2233 GETTYSBURG ROAD
CAMP HILL, PA 17011

POLICE DEPARTMENT
2233 GETTYSBURG ROAD
CAMP HILL, PA 17011
717-238-9676

CUMBERLAND COUNTY CONSERVATION DISTRICT
310 ALLEN ROAD #301
CARLISLE, PA 17013
717-240-7812

WATER
PENNSYLVANIA AMERICAN WATER
852 WESLEY DRIVE
MECHANICSBURG, PA 17055

SEWER
LOWER ALLEN TOWNSHIP AUTHORITY
120 LIMEKILN ROAD
NEW CUMBERLAND, PA 17070

ELECTRIC
PPL ELECTRIC UTILITIES COORPORATION
503 NEW MARKET STREET
WILKES BARRE, PA 18702

GAS AND ELECTRIC
UGI UTILITIES INC
1301 AIP DRIVE
MIDDLETOWN, PA 17057

TELECOMMUNICATIONS
FRONTIER COMMUNICATIONS OF PA INC.
67 SOUTH MAIN STREET
SHICKSHINNY, PA 18655

VERIZON PENNSYLVANIA LLC
1026 HAY STREET
PITTSBURG, PA 15221

COMCAST
4601 SMITH STREET
HARRISBURG, PA 17109

CENTURY LINK
122 BALTIMORE STREET PO BOX 896
HANOVER, PA 17331

Sheet No.	Drawing No.	Drawing Title	Last Revised
1	GI-001	Cover Sheet	7/21/2022
2	DM-100	Demolition Plan	7/21/2022
3	CS-101	Site Plan	7/21/2022
4	CS-501	Site Details	7/21/2022
5	CS-502	Truck Turn and Pavement Plan	7/21/2022
6	CG-100	Grading and Drainage Plan	7/21/2022
7	CG-501	Grading and Drainage Details	7/21/2022
8	CE-100	Soil Erosion and Sediment Control Plan	7/21/2022
9	CE-501	Soil Erosion and Sediment Control Notes and Details	7/21/2022
10	CU-100	Utility Plan	7/21/2022
11	CU-300	Utiltity Profiles	7/21/2022
12	CU-501	Utility Details	7/21/2022
13	LP-100	Landscape and Lighting Plan	7/21/2022
14	LP-501	Landscape and Lighting Details	7/21/2022

Supplemental Drawings:

1. ALTA/NSPS LAND TITLE SURVEY, prepared by BL Companies, dated 2/8/2022

ACT 187

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 187 TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION. TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION. CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!

PENNSYLVANIA LAW REQUIRES (3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND (10) WORKING DAYS IN DESIGN STAGE -- STOP & CALL --

Pennsylvania One Call System, Inc. 1-800-242-1776

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP-CALL BEFORE YOU DIG!

SERIAL NUMBER 20220411615

CIVIL ENGINEER:

arna Engineering Inc.
1456 Ferry Road, Suite 603
Doylestown, PA 18901
Phone: 215.766.8280
Fax: 215.434.5280
ATTN: Chirag V. Thakkar, P.E.

OWNER:

Lower Allen Township Development Authority
2233 Gettysburg Road
Camp Hill, PA 17011
Phone: 717.975.7575
ATTN: Max Stoner

APPLICANT:

Tonia Ulsh and/or her assigns
3780 Trindle Road
Camp Hill, PA 17011
Phone:717.763.1199
ATTN: Tonia Ulsh

SURVEYOR:

BL Companies
2601 Market Place, Suite 350
Harrisburg, PA 17110
Phone: 717.651.9850
ATTN: Ron Lewis

2.	July 21, 2022
1.	May 16, 2022

Drawing Title

NOT ISSUED FOR CONSTRUCTION

GI-001

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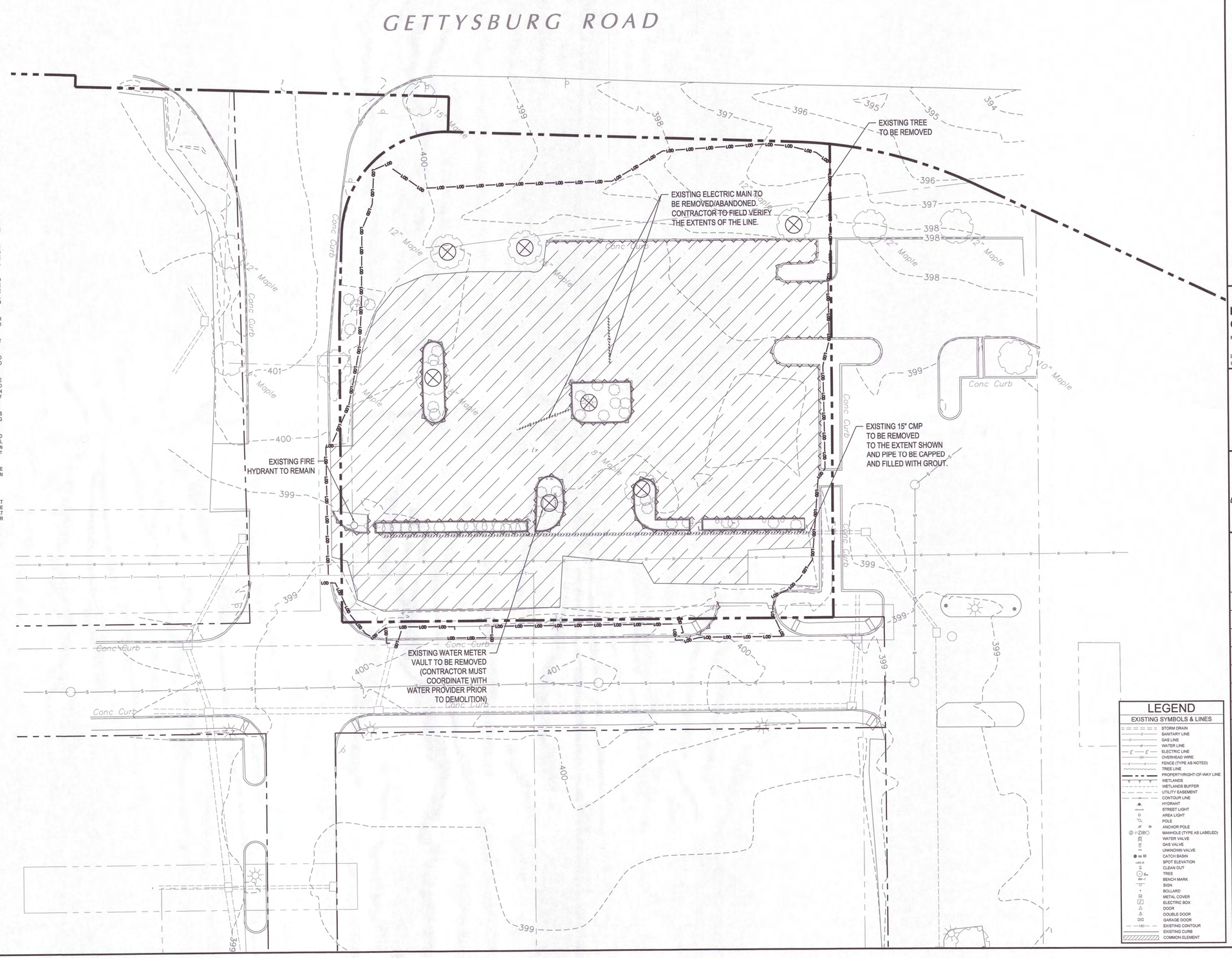
DEMOLITION PLAN NOTES:

1. THIS PLAN IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S).
2. THIS PLAN IS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY TO IDENTIFY THE LIMITS OF DEMOLITION AND SHALL NOT BE CONSIDERED ALL INCLUSIVE. ADDITIONAL ITEMS MAY BE FOUND THAT SHALL BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACTUAL LIMITS & EXTENTS OF DEMOLITION.
3. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL PROVISIONS OF LOWER ALLEN TOWNSHIP AND OTHER JURISDICTIONAL AGENCIES. DEMOLITION AND REMOVAL SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AS WELL AS THE EROSION CONTROL PLANS, SPECIFICALLY THE CONSTRUCTION STAGING.
4. THE CONTRACTOR MUST INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES PER THE APPROVED PLAN PRIOR TO THE START OF EARTH DISTURBING ACTIVITIES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS INCLUDING, BUT NOT LIMITED TO SIDEWALK CLOSING, DEMOLITION, DISPOSAL AND ASBESTOS ABETMENT.
6. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALK DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY CONSTRUCTION MANAGER. CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES. CONTRACTOR SHALL COORDINATE/PHASE ALL CONSTRUCTION ACTIVITY AND EXISTING FACILITIES. CONTRACTOR SHALL COORDINATE/PHASE ALL CONSTRUCTION ACTIVITY AND UTILITY INTERRUPTIONS WITH THE OWNER TO MINIMIZE DISTURBANCE.
7. THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL OFFSITE PROPERTIES AND STRUCTURES FROM ANY AND ALL DAMAGE DURING THE DEMOLITION OPERATION. THE CONTRACTOR SHALL USE ANY NECESSARY PROTECTION SCREENS, PLATFORMS, BRACING, UNDERPINNING, ETC. TO PROTECT OFFSITE PROPERTY. ANY DAMAGE CAUSED BY THE CONSTRUCTOR OR HIS/HER AGENTS SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE COST AND INSTALLATION OF DEMOLITION / CONSTRUCTION FENCE. THE CONTRACTOR IS RESPONSIBLE FOR LIMITS AND THE AMOUNT OF FENCE REQUIRED IN ADDITION TO THE SECURITY OF THE WORK AREA.
9. THE CONTRACTOR SHALL INSPECT THE SITE THOROUGHLY AND FIELD VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND LATERALS. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND /OR ELEVATION OF EXISTING UTILITIES ARE SHOWN ON THESE PLANS IS BASED ON THE SURVEY PREPARED BY OTHERS. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. ADDITIONAL UTILITIES MAY ALSO EXIST. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
10. ALL EXISTING UTILITIES SHOWN MUST NOT TO BE INTERPRETED AS OF THE EXACT SIZE, DEPTH, MATERIAL, LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR MUST THOROUGHLY VERIFY EXISTING CONDITIONS, AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES, GIVE NOTICE TO THE ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK. UTILITIES DETERMINED TO BE ABANDONED AND LEFT IN PLACE SHALL BE ROUTED IF UNDER BUILDING.
11. ALL EXISTING UTILITIES TO BE REMOVED ARE TO BE DISCONNECTED PRIOR TO THE START OF DEMOTION. ELECTRICAL TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. CONTRACTOR MUST PROVIDE ADEQUATE TIME FOR RELOCATION AND COORDINATION WITH THE UTILITY COMPANIES TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.
12. THE CONTRACTOR SHALL COORDINATE THE RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND /OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
13. THE CONTRACTOR SHALL COORDINATE WATER WORK WITH THE UTILITY DEPARTMENT TO PLAN PROPOSED IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE THROUGH OUT THIS SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING /PROVIDING ANY REQUIRED WATER MAIN SHUT OFFS DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATER MAIN SHUTOFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION WILL BE PROVIDED.
14. THE DEMOLITION CONTRACTOR SHALL COORDINATE DECOMMISSIONING AND REMOVAL OF UTILITY LINES WITH THE UTILITY CONTRACTOR AS TO LOCATION AND CONDITION OF CAPPING. THE ACCESS SHALL REMAIN OPEN AND OPERATION AT ALL TIMES.
15. THE CONTRACTOR SHALL MAINTAIN UNINTERRUPTED UTILITY SERVICE TO THE SURROUNDING PROPERTIES AT ALL TIMES.
16. ALL EXISTING UTILITIES THAT ARE NOT TO BE MAINTAINED IN SERVICE SHOULD EITHER BE REMOVED AND REPLACED WITH APPROVED COMPACTED FILL, OR BE ABANDONED IN PLACE BY FILLING WITH GROUT AND CAPPING, PROVIDED THAT THEY DO NOT INTERFERE WITH ANY OF THE PROPOSED CONSTRUCTION.
17. ALL EXISTING BITUMINOUS AND CONCRETE PAVEMENT MUST BE REMOVED COMPLETELY THROUGHOUT THE SITE TO PERMIT PROPER GRADING AND FILL PLACEMENT AS WELL AS FACILITATE BUILDING CONSTRUCTION AND UTILITY INSTALLATIONS. THE REUSE OF EXISTING PAVEMENT/SLAB MATERIALS AFTER PROCESSING SHOULD BE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS AND ENVIRONMENTAL STATUES AND AT THE DIRECTION OF THE OWNER AND GEOTECHNICAL ENGINEER.
18. CONTRACTOR MAY LIMIT SAW-CUT & PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IT'S REMOVAL AND REPAIR.
19. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL , AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC. SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIALS AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATION.
20. THE CONTRACTOR SHALL PREPARE AND IMPLEMENT A WASTE MANAGEMENT PLAN IN ACCORDANCE WITH THE STATE, FEDERAL, & LOCATION REGULATION IF CONTAMINATED MATERIAL IS ENCOUNTERED DURING DEMOLITION AND/OR CONSTRUCTION.
21. LANDSCAPING TO REMAIN IS TO BE PROTECTED DURING ALL SITE WORK. REFER TO THE LANDSCAPE PLAN.
22. SHOULD REMOVAL AND/OR RELOCATION ACTIVITIES DAMAGE FENCING, LIGHTING AND/OR STORM INLET STRUCTURES, THE CONTRACTOR SHALL PROVIDE NEW MATERIALS / STRUCTURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE, EXCEPT FOR MATERIAL DESIGNED TO BE RELOCATED ON THIS PLAN, ALL OTHER CONSTRUCTION MATERIALS SHALL BE NEW.



DEMOLITION PLAN LEGEND

- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- EXISTING FEATURE/TREE TO BE REMOVED
- EXISTING CONCRETE CURB TO BE REMOVED
- EXISTING UTILITY LINE TO BE REMOVED
- LOD LOD LOD — LIMIT OF DISTURBANCE

LEGEND

EXISTING SYMBOLS & LINES

- STORM DRAIN
- SANITARY LINE
- GAS LINE
- WATER LINE
- ELECTRIC LINE
- OVERHEAD WIRE
- FENCE (TYPE AS NOTED)
- TREE LINE
- PROPERTY/RIGHT-OF-WAY LINE
- WETLANDS
- WETLANDS BUFFER
- UTILITY EASEMENT
- CONTOUR LINE
- HYDRANT
- STREET LIGHT
- AREA LIGHT
- POLE
- ANCHOR POLE
- MANHOLE (TYPE AS LABELED)
- WATER VALVE
- GAS VALVE
- UNKNOWN VALVE
- CATCH BASIN
- SPOT ELEVATION
- CLEAN OUT
- TREE
- BENCH MARK
- SIGN
- BOLLARD
- METAL COVER
- ELECTRIC BOX
- DOOR
- DOUBLE DOOR
- GARAGE DOOR
- EXISTING CONTOUR
- EXISTING CURB
- COMMON ELEMENT

arna ENGINEERING CIVIL ENGINEERS

arna Engineering Inc.
1456 Ferry Road, Suite 603
Doylestown, PA 18901
T: 215.766.8280
F: 215.434.5280

20 0 10 20
SCALE IN FEET

Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0563-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

DEMOLITION PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHIRAG V. THAKKAR No. 075153

CHIRAG V. THAKKAR
PROFESSIONAL ENGINEER
PA LIC. No. 075153

DATE	COMMENTS	NO.
07/21/22	REVISED PLANS	1.

REVISIONS

Project No.	230015001
Date	05/16/2022
Scale	1" = 20'
Drawn By	AG
Checked By	CT

Drawing No.

DM-100

Sheet 2 of 14

CUMBERLAND COUNTY PLANNING DEPARTMENT REVIEW CERTIFICATION

REVIEWED THIS 6 DAY OF June 2022 BY THE CUMBERLAND COUNTY PLANNING DEPARTMENT.

DIRECTOR Kirk Stewart

LOWER ALLEN BOARD OF COMMISSIONERS APPROVAL

APPROVED BY THE BOARD OF COMMISSIONERS, LOWER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA.
APPROVED THE 8th DAY OF August 2022

CONDITIONS OF APPROVAL COMPLETED THIS 13th DAY OF February 2023

PRESIDENT Glenn W. Villone

SECRETARY Thomas B. Penney Jr.

CERTIFICATION OF ACCURACY

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE SURVEY SHOWN AND DESCRIBED IS TRUE AND CORRECT.

10/12/22 DATE

Ron Lewis SIGNATURE

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL RONALD LEE LEWIS LAND SURVEYOR LS-065196-E PENNSYLVANIA

OFFICE OF THE RECORDER OF DEEDS

RECORDED IN THE CUMBERLAND COUNTY COUTHOUSE

RECORDED THIS 4th DAY OF March 2022

Instrument No. 202207299

ENGINEER'S CERTIFICATION

I, CHIRAG THAKKAR P.E., A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THIS PLAN IS ACCURATE AND CORRECT AS INDICATED.

10/12/22 DATE

SIGNATURE

LOWER ALLEN TOWNSHIP ACT 167 STORMWATER DESIGN CERTIFICATION

_____, DESIGN ENGINEER, ON THIS DATE _____, HAVE REVIEWED AND HEREBY CERTIFY THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE LOWER ALLEN TOWNSHIP ACT 167 STORMWATER MANAGEMENT ORDINANCE.

CERTIFICATE OF OWNERSHIP AND ACKNOLEDGEMENT OF PLAN

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CUMBERLAND

ON THIS THE 11 DAY OF Nov 2022 BEFORE ME, Katharine E Keiser THE UNDERSIGNED OFFICER, PERSONALLY APPEARED John D Ulsh KNOWN TO ME (OR SATISFACTORY PROVEN) TO BE THE PERSON(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT, AND ACKNOWLEDGE THAT John D Ulsh EXECUTED THE SAME FOR THE PURPOSES THEREIN CONTAINED.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND OFFICIAL SEAL.

OWNER John D. Ulsh

NOTARY PUBLIC

MY COMMISSION EXPIRES Nov 21 2024

Commonwealth of Pennsylvania - Notary Seal
Katharine E. Keiser, Notary Public
Cumberland County
My Commission Expires November 21, 2024
Commission Number 1210510

SITE PLAN NOTES:

1. THIS PLAN IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S).
2. THE SUBJECT SITE IS LOCATED IN LOWER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA AND HAS A PROPERTY IDENTIFICATION No. 13-23-0553-065U1. THE POSTAL ADDRESS IS 3521 GETTYSBURG ROAD, CAMP HILL, PA 17011.
3. EXISTING FEATURES AS SHOWN ARE BASED ON A FIELD SURVEY PERFORMED BY BL COMPANIES ON FEBRUARY 02 OF 2022.
4. NO CERTIFICATION IS MADE BY THE UNDERSIGNED AS TO THE ACTUAL UNDERGROUND POSITION OF ANY UTILITIES OF TO THE COMPLETENESS AND / OR ACCURACY OF UTILITY INFORMATION PROVIDED BY OTHERS.
5. PRIOR TO CONSTRUCTION IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE BENCHMARKS ILLUSTRATED ON THE " SURVEY" PREPARED BY BL COMPANIES IN FEBRUARY 02 OF 2022.
6. BEARING BASIS AND COORDINATE VALUES SHOWN ARE PA STATE PLANE, SOUTH ZONE, COORDINATE SYSTEM UTILIZING NORTH AMERICAN DATUM OF 1983 (NAD83) AND ARE BASED ON GPS OBSERVATIONS BY BL COMPANIES IN FEBRUARY 2022.
7. THE PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X (AREA OF MINIMAL FLOOD HAZARD) AS DEPICTED ON F.I.R.M. COMMUNITY - PANEL NUMBER 42041C0281E, EFFECTIVE DATE 03/16/2009.
8. THERE ARE NO WETLANDS PRESENT ON SITE.
9. REFER TO ARCHITECTURAL PLANS FOR DETAILS OF PROPOSED BUILDINGS & UTILITY TIE IN LOCATIONS.
10. THE SUBJECT SITE WILL BE SERVICED BY PUBLIC WATER AND SEWER.
11. CONTRACTOR SHALL PROVIDE WRITTEN REQUESTS FOR INFORMATION TO THE OWNER AND OWNERS ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM IF ANY SPECIFIC SITEWORK ITEM DEPICTED ON THE PLANS WARRANTS ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION AND IS NOT RELATED TO MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFIC SITE WORK ITEMS INSTALLED DIFFERENTLY THAN INTENDED AS DEPICTED ON THE PLANS IN THE ABSENCE OF SUBMITTING AND ADDRESSING WRITTEN REQUESTS FOR INFORMATION.
12. ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES/ FACILITIES PRIOR TO THE START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS LAST AMENDED ON OCTOBER 9, 2008, PENNSYLVANIA ACT 121.
13. THE CONTRACTOR SHALL PROVIDE ALL APPLICABLE JURISDICTIONAL AUTHORITIES/AGENCIES REQUIRED NOTICE BEFORE BEGINNING ANY ON-SITE OR OFF-SITE WORK.
14. ALL TOPSOIL MUST REMAIN ON THE SITE.
15. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ADHERING TO ALL REGULATIONS RELATED TO HEALTH AND SAFETY AS WELL AS ALL APPLICABLE STATE, FEDERAL AND LOCAL RULES AND REGULATIONS.
16. ALL DEMOLITION MUST BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.
17. ALL TOWNSHIP PERMITS MUST BE OBTAINED PRIOR TO THE START OF CONSTRUCTION.

GENERAL NOTES:

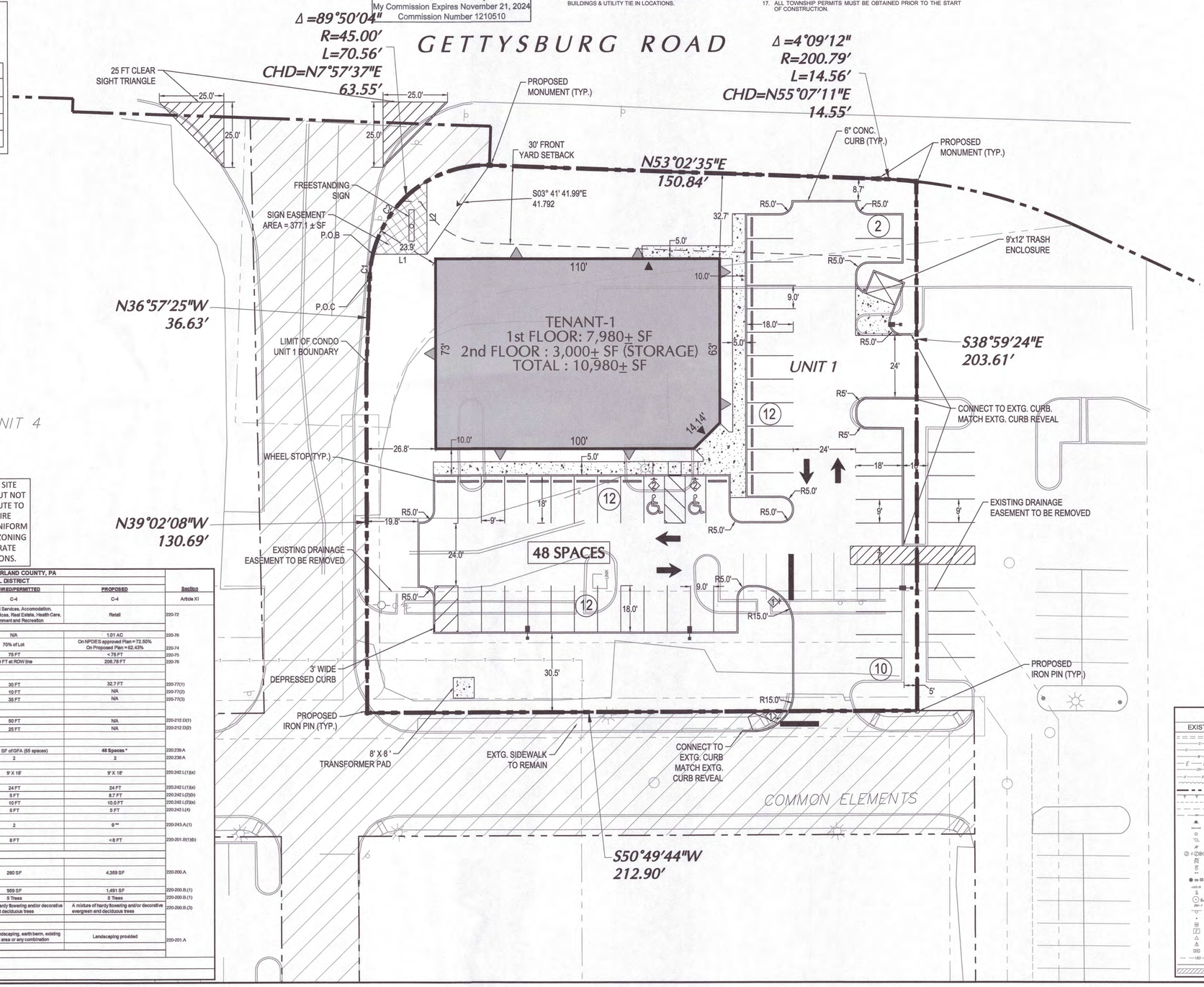
1. THE PURPOSE OF THIS PLAN IS TO PERMIT FOR THE CONSTRUCTION OF A JEWELRY STORE (RETAIL USE) AT LOWER ALLEN COMMONS WITH ASSOCIATED SITE IMPROVEMENTS SUCH AS PARKING, STORMWATER, UTILITIES, ETC. ON LANDS LOCATED IN LOWER ALLEN TOWNSHIP.
2. THE TOPOGRAPHIC SURVEY DATA IS BASED ON "ALTA/NSPS LAND TITLE SURVEY" PREPARED BY BL COMPANIES AND DATED 02/08/2022.
3. THE PROPERTY BOUNDARY DATA IS BASED ON "ALTA/NSPS LAND TITLE SURVEY" PREPARED BY BL COMPANIES AND DATED 02/08/2022.
4. A PA. ONE-CALL SYSTEM NOTIFICATION HAS BEEN MADE, SERIAL NO. 20220411615
5. A RIGHT-OF-WAY PERMIT IS REQUIRED BEFORE STARTING ANY WORK WITHIN THE PUBLIC STREET RIGHT-OF WAY.
6. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS. PAVEMENT MARKINGS SHALL BE LONG LIFE WATER BORNE PAINT.
7. TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH ALL PENNDOT STANDARDS AND REGULATIONS IN EFFECT AT THE TIME OF STREET DEDICATION. (SUBDIVISION PLANS)
8. ALL STORM DRAINAGE PIPE SHALL BE SMOOTH INTERIOR UNLESS OTHERWISE NOTED.
9. INDIVIDUAL LOT GRADING PLANS SHALL BE REQUIRED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THE RESPECTIVE LOT. (SUBDIVISION PLANS)
10. LOT OWNERS ARE REQUIRED TO MAINTAIN LOT GRADING AND SURFACE DRAINAGE PATTERNS AND CHARACTERISTICS IN ACCORDANCE WITH THE APPROVED PLAN.
11. LOT OWNER SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF SOIL EROSION CONTROL MEASURES.
12. MANHOLE COVERS FOR STORM MANHOLES SHALL BE CAST WITH THE WORD "STORM" FOR IDENTIFICATION PURPOSES.
13. CONSTRUCTION OF ALL WORK WITHIN THE PUBLIC STREET RIGHT-OF-WAY AND WORK RELATED TO STORM DRAINAGE FACILITIES REQUIRES INSPECTION BY THE TOWNSHIP. PROVIDE A MINIMUM 48 HOURS NOTICE TO THE TOWNSHIP BEFORE STARTING WORK.
14. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION SITE MEETING WITH THE TOWNSHIP ENGINEER AT LEAST 48 HOURS PRIOR TO STARTING SITE CONSTRUCTION ACTIVITIES.
15. SITE DISTURBANCE IS PERMITTED TO START ONLY IF AND WHEN SUFFICIENT TIME IS AVAILABLE TO STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PADEP REQUIREMENTS AND WITH THE APPROVED PLAN.

CONSTRUCTION NOTES:

1. ALL CONCRETE STRUCTURES TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI UNLESS OTHERWISE NOTED.
2. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE PERMANENT WATERBORNE PAINT.
3. ALL DISTURBED AREAS ARE TO RECEIVE MINIMUM OF 12 INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
4. ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND SHALL BE DESIGNED IN ACCORDANCE WITH THE "PENNDOT GUIDELINES", LATEST EDITION.
5. ALL CURB AND EDGE PAVEMENT RADII SHALL BE 5 FT, UNLESS OTHERWISE NOTED.
6. ALL DIMENSIONS AND RADII ARE TO THE FACE OF THE CURB UNLESS OTHERWISE NOTED.
7. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH THE CONSTRUCTION.
8. CONTRACTOR SHALL PROVIDE WRITTEN REQUESTS FOR INFORMATION TO THE OWNER AND OWNER'S ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM, IF ANY SPECIFIC SITEWORK ITEM DEPICTED ON THE PLANS WARRANTS ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION AND IS NOT RELATED TO MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFIC SITE WORK ITEMS INSTALLED DIFFERENTLY THAN INTENDED AS DEPICTED ON THE PLANS IN THE ABSENCE OF SUBMITTING AND ADDRESSING WRITTEN REQUESTS FOR INFORMATION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS INCLUDING, BUT NOT LIMITED TO, SIDEWALK CLOSING, GRADING AND DEMOLITION.
10. THE CONTRACTOR SHALL PROVIDE ALL APPLICABLE JURISDICTIONAL AUTHORITIES / AGENCIES REQUIRED NOTICE PRIOR TO ANY LAND DISTURBANCES.
11. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ADHERING TO ALL REGULATIONS RELATED TO HEALTH AND SAFETY AS WELL AS ALL APPLICABLE STATE, FEDERAL AND LOCAL RULES AND REGULATIONS.
12. THE CONTRACTOR SHALL FOLLOW ALL LOCAL, STATE, AND FEDERAL REGULATIONS IN DISPOSING OF DEMOLISHED MATERIALS REMOVED FROM THE SITE.
13. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT, ACCURATE OR COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY WORK. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES LOCATED WITHIN THE LIMITS OF IMPROVEMENTS DURING ENTIRE CONSTRUCTION PERIOD. IF NECESSARY, CONTRACTOR SHALL RELOCATE AND/OR MODIFY ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES.
14. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ALL IMPROVEMENTS WITHIN 5 FEET OF THE BUILDINGS AND/OR WITHIN PERIMETER SIDEWALKS AROUND THE BUILDINGS, WHICH EVER IS GREATER INCLUDING BUT NOT LIMITED TO, ACTUAL LOCATIONS, SIZE, MATERIAL AND DEPTH OF INSTALLATION OF ALL UTILITY ENTRANCES, DOORS, BOLLARDS, SIDEWALKS, UTILITY APPARATUS, SIGNS, ADA ACCESS RAMPS & ROUTES, ETC. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE REGULATORY AGENCIES AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES. UTILITY SERVICES TO EXISTING USERS (IF ANY) AT THE SITE SHALL BE MAINTAINED AT ALL TIMES.
15. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS AND INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S ENGINEER.
16. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS/SUBMITTALS TO OWNER AND OWNER'S ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PROCURING ANY MATERIAL OR CONSTRUCTION OF ANY IMPROVEMENTS SHOWN HEREON.
17. CONTRACTOR MUST COORDINATE THE INSTALLATION OF PROPOSED LIGHT POLES BASES PRIOR TO ORDERING OR INSTALLATION.

SIGN EASEMENT - P.O.C TO P.O.B			
Line #/Curve #	Length	Direction/Delta	Radius
C1	9.379	011° 56' 30"	45.000

SIGN EASEMENT METES & BOUNDS			
Line #/Curve #	Length	Direction/Delta	Radius
L1	20.988	N51° 00' 45.88"E	
L2	28.001	N38° 59' 14.16"W	
C2	35.941	045° 45' 43"	45.000



APPLICANT AND OWNER ACKNOWLEDGE THAT CERTAIN SITE IMPROVEMWENTS DEPICTED ON THIS PLAN, INCLUDING BUT NOT LIMITED TO ACCESSIBLE PARKING SPACES, ACCESSIBLE ROUTE TO THE BUILDING AND FREESTANDING SIGNS, THAT REQUIRE APPROVAL UNDER REGULATIONS CONTAINED IN THE PA UNIFORM CONSTRUCTION CODE AND/OR LOWER ALLEN TOWNSHIP ZONING CODE MUST BE INSTALLED IN ACCORDANCE WITH SEPARATE PERMIT APPROVALS GRANTED UNDER THOSE REGULATIONS.

TOWNSHIP OF LOWER ALLEN, CUMBERLAND COUNTY, PA C-4 : REGIONAL COMMERCIAL DISTRICT			
ITEM	REQUIRED/PERMITTED	PROPOSED	Section
Zoning District:	C-4	C-4	Article XI
Principal Permitted Use:	Retail, Food Services, Accomodation, Educational Services, Real Estate, Health Care, Entertainment and Recreation	Retail	220-72
Bulk Requirements:			
Min. Lot Area	N/A	1.01 AC	220-76
Max. Impervious Coverage	70% of Lot	On NPDES approved Plan = 72.60% On Proposed Plan = 62.43%	220-74
Max. Building Height Limit	75 FT	< 75 FT	220-75
Min. Lot Width	50 FT at ROW line	208.78 FT	220-76
Yards:			
Front Yard Depth	30 FT.	32.7 FT	220-77(1)
Side Yard Depth	10 FT.	N/A	220-77(2)
Rear Yard Depth	35 FT	N/A	220-77(3)
Distance between principal structure façade			
front to front, rear to rear, front to rear	50 FT	N/A	220-212.D(1)
end façade to end façade	25 FT	N/A	220-212.D(2)
Parking:			
Parking Requirement for Retail Establishment (10,980 SF)	1 per 200 SF of GFA (55 spaces)	48 Spaces *	220.239.A
Min. Accessible spaces for parking spaces between 26-50	2	2	220.238.A
Parking Stall Size:			
90° Parking	9' X 18'	9' X 18'	220.242.L(1)(a)
Aisle Width:			
2-way Aisle width with 90° Parking	24 FT	24 FT	220.242.L(1)(a)
Parking/Access drives Setback from any Lot Line	5 FT	8.7 FT	220.242.L(2)(b)
Parking/Access drives Setback from any non-residential building	10 FT	10.0 FT	220.242.L(2)(a)
Min. Curb Radius	5 FT	5 FT	220.242.L(4)
Loading:			
Required Loading Spaces for non-residential (6,000 - 20,000 SF building area)	2	6 **	220-243.A.(1)
Max. height of screening fence (required for dumpster) - rear and side yards	8 FT	< 8 FT	220-201.B(1)(b)
Landscaping Requirements:			
Front Yard Landscaping:			
5% of area in the front yard of any nonresidential or multifamily development shall be landscaped (5,601 SF)	280 SF	4,369 SF	220-200.A
Parking Lot Landscaping:			
5% of interior parking area (19,184 SF)	959 SF	1,491 SF	220-200.B.(1)
One tree/10 parking spaces (48 parking spaces)	5 Trees	5 Trees	220-200.B.(1)
Plant Type	A mixture of hardy flowering and/or decorative evergreen and deciduous trees	A mixture of hardy flowering and/or decorative evergreen and deciduous trees	220-200.B.(3)
Screening:			
Dumpster and trash-handling areas shall be screened from adjacent properties and from public view from a public street	A fence, wall, landscaping, earth berm, existing vegetation area or any combination	Landscaping provided	220-201.A

* - Special exception for the reduction in parking spaces based on code section 220-241

** - Variance Requested

SIGN LEGEND

STOP

BOLLARD MOUNTED VAN ACCESSIBLE PARKING

LEGEND

EXISTING SYMBOLS & LINES

STORM DRAIN
SANITARY LINE
GAS LINE
WATER LINE
ELECTRIC LINE
OVERHEAD WIRE
FENCE (TYPE AS NOTED)
TREE LINE
PROPERTY/RIGHT-OF-WAY LINE
WETLANDS
WETLANDS BUFFER
UTILITY EASEMENT
CONTOUR LINE
HYDRANT
STREET LIGHT
AREA LIGHT
POLE
ANCHOR POLE
MANHOLE (TYPE AS LABELED)
WATER VALVE
GAS VALVE
UNKNOWN VALVE
CATCH BASIN
SPOT ELEVATION
CLEAN OUT
TREE
BENCH MARK
SIGN
BOLLARD
METAL COVER
ELECTRIC BOX
DOOR
DOUBLE DOOR
GARAGE DOOR
EXISTING CONTOUR
EXISTING CURB
COMMON ELEMENT

PROPOSED SYMBOLS & LINES

SITE

SETBACK LINE
BUILDING
CURB LINE
DEPRESSED CURB LINE
TRAFFIC SIGN
CURB RAMP
PARKING ROW COUNT
DOOR
LOT BOUNDARY
PROPOSED MONUMENT
PROPOSED IRON PIN
LIGHT POLE
WALL MOUNT LIGHT FIXTURE

GRADING AND DRAINAGE

STORM PIPE
CATCH BASIN
PROPOSED CONTOUR
SPOT GRADE
TOP OF CURB ELEVATION
BOTTOM OF CURB ELEVATION
FLOW ARROW

UTILITY

WATER LINE
GAS LINE
TELEPHONE & ELECTRIC LINE
VALVE
CLEANOUT
SANITARY MANHOLE
PROPOSED SANITARY PIPE
PROPOSED ELECTRIC TRANSFORMER

arna ENGINEERING CIVIL ENGINEERS

arna Engineering Inc.
1456 Ferry Road, Suite 603
Doylestown, PA 18901
T: 215.766.8280
F: 215.434.5280

20 0 10 20
SCALE IN FEET

Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0553-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

SITE PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHIRAG V. THAKKAR ENGINEER
CHIRAG V. THAKKAR P.E. No. 075153
PROFESSIONAL ENGINEER
PA LIC. No. 075153

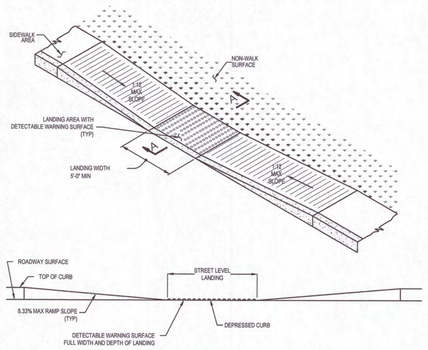
DATE	COMMENTS	NO.
07/21/22	REVISED PLANS	1.

REVISIONS

Project No.	230015001
Date	05/16/2022
Scale	1" = 20'
Drawn By	AG
Checked By	CT

Drawing No.

CS-100



ELEVATION

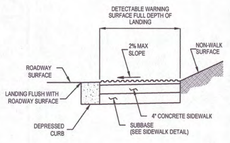
NOTES:
1. CONTRACTOR SHALL REFER TO THE LATEST ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG) TO ENSURE THAT DETAILS ARE CURRENT AT THE TIME OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF DISCREPANCIES ARE FOUND.

2. CONTRACTOR SHALL VERIFY IF ADDITIONAL REQUIREMENTS OR ACCESSIBILITY REGULATIONS ARE USED BY THE LOCAL MUNICIPALITY BUILDING DEPARTMENT OR CONSTRUCTION DEPARTMENT. IF THOSE REGULATIONS DIFFER FROM ADA, CONTRACTOR SHALL NOTIFY DESIGN ENGINEER PRIOR TO CONSTRUCTION.

3. ALL RAMPS TO HAVE A SLIP RESISTANT SURFACE (SEE ADA DETECTABLE WARNING SURFACE DETAIL). A DETECTABLE WARNING MUST COMPLY WITH ADA. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.

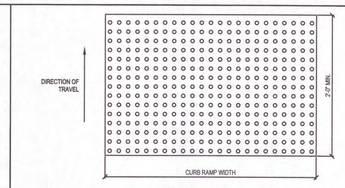
4. ALL RAMPS SHALL HAVE A BROOM FINISH IN ACCORDANCE WITH ADA REQUIREMENTS.

5. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.

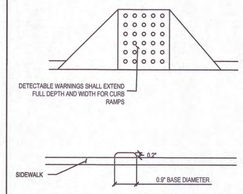


SECTION A-A

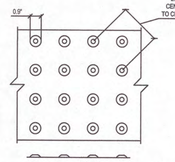
ALTERNATE CURB RAMP NTS



PLAN VIEW



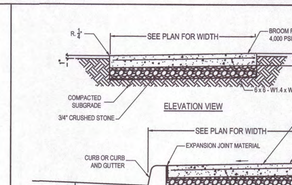
DOME ELEVATION



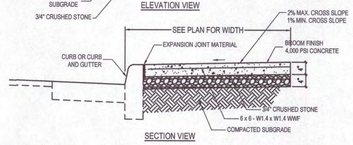
DOME SPACING

NOTES:
1. DETECTABLE WARNINGS SHALL BE CONSTRUCTED PER MANUFACTURER'S SPECIFICATIONS.
2. WIDTH OF DETECTABLE WARNING AREA SHALL BE FULL WIDTH OF RAMP.
3. LENGTH OF DETECTABLE WARNING AREA SHALL BE MINIMUM 2 FEET REGARDLESS OF SECTION WIDTH. FOR CURB RAMPS, THE DETECTABLE WARNING SHALL EXTEND THE FULL DEPTH OF THE RAMP AND COMPLY WITH ADAAG 4.29.2.
4. DETECTABLE WARNING AREA CAN BE SQUARE WHERE USED IN A CURB RADIUS.
5. DETECTABLE WARNING DOMES SHALL BE ALIGNED ON A SQUARE GRID PARALLEL ALIGNMENT IN THE PREDOMINANT DIRECTION OF OF TRAVEL TO PERMIT WHEELS TO TRAVEL BETWEEN DOMES.
6. DETECTABLE WARNING DOMES SHALL BE PLACED SO THE EDGE NEAREST THE CURB IS 6 INCHES TO 8 INCHES FROM CURB LINE.
7. MAT EDGES SHALL BE BEVELED TO ELIMINATE TRIP HAZARD.
8. DETECTABLE WARNING COLOR SHALL CONTRAST WITH ADJOINING SURFACES PER CURRENT ADA REGULATIONS. CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR APPROVAL.
9. CONTRACTOR SHALL OBTAIN LOCAL AUTHORITY, OWNER'S ENGINEER, AND OWNER'S APPROVAL FOR COLOR AND MANUFACTURER PRIOR TO INSTALLATION.

ADA DETECTABLE WARNING SURFACE NTS



ELEVATION VIEW



SECTION VIEW

NOTE:
1. TRANSVERSE SCORE JOINTS SHALL BE PROVIDED EVERY 4' O/C. EXPANSION JOINTS SHALL BE 3/4" WIDE AND SHALL BE PROVIDED EVERY 16' O/C, RECESSED 1/4" FROM THE TOP OF FACE AND SHALL BE PREFORMED BITUMINOUS IMPREGNATED FIBER JOINT FILLER PER AASHTO SPEC. M-213 IN ACCORDANCE WITH TOWNSHIP STANDARDS.

2. ALL SIDEWALKS TO HAVE A BROOM FINISH TO ENSURE A SLIP RESISTANT SURFACE.

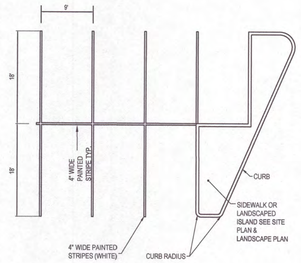
3. CLASS "A" CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRESS OF 4,000 PSI.

4. CONTRACTOR TO PROVIDE SMOOTH TROWEL EDGE FOR THE BROOM FINISH OF THE SIDEWALK. CONTRACTOR MUST PROVIDE SHOP DRAWING TO DESIGN ENGINEER PRIOR TO CONSTRUCTION.

5. ALL SIDEWALKS SHALL BE CONSTRUCTED WITH 4,000 PSI CONCRETE AND SEALED/CURED WITH AQUIRON 2000 OR APPROVED EQUAL AS SOON AS FORMS ARE REMOVED.

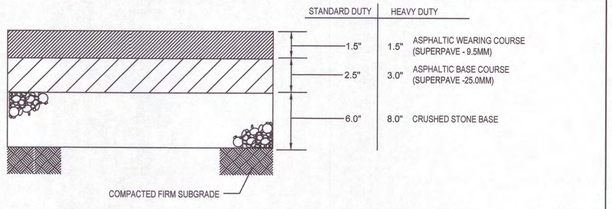
SIDEWALK NTS

NOTE:
SEE SITE PLAN FOR DIMENSIONS.

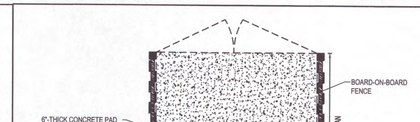


PARKING SPACE STRIPING NTS

NOTE:
CONTRACTOR MUST REFER TO PROJECT GEOTECHNICAL REPORT FOR PAVEMENT INSTALLATION RECOMMENDATIONS AND DETAILS. THE PAVEMENT PROFILE SHOWN ON THIS DETAIL IS FOR INFORMATIONAL PURPOSES ONLY.

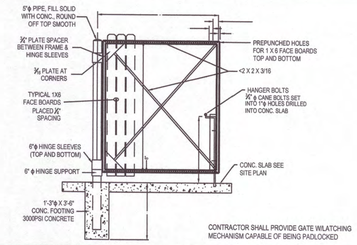


BITUMINOUS CONC. PAVEMENT SECTION NTS



NOTES:
1. TRASH ENCLOSURE GATES SHALL BE INSTALLED PER DETAIL PROVIDED ON THIS PLAN.
2. TRASH ENCLOSURES SHALL BE A MINIMUM OF 6 FEET IN HEIGHT.

TRASH ENCLOSURE NTS



TRASH ENCLOSURE GATE NTS

R1-1
30"x30"
(SIGN 1)

R7-8 & R7-8a
(SIGN 2)

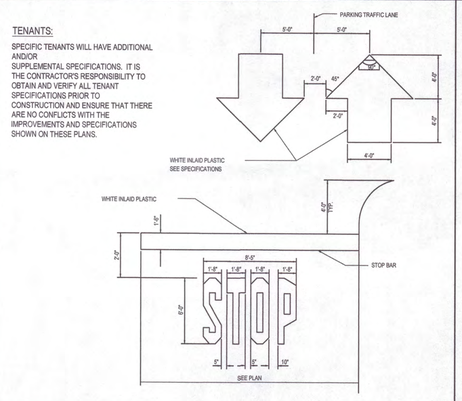
TRAFFIC CONTROL SIGNS NTS

NOTE:
1. CONCRETE MONUMENTS SHALL BE PERMANENTLY MARKED ON TOP WITH AN INDENTED CROSS OR DRILL HOLE OF NOT MORE THAN 1/4 INCH IN DIAMETER, WHICH SHALL COINCIDE EXACTLY WITH THE POINT OF INTERSECTION OF THE LINES BEING MONUMENTED.

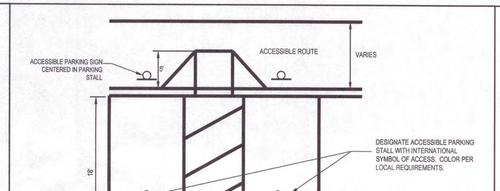
MONUMENT DETAIL NTS

TENANTS:

SPECIFIC TENANTS WILL HAVE ADDITIONAL AND/OR SUPPLEMENTAL SPECIFICATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND VERIFY ALL TENANT SPECIFICATIONS PRIOR TO CONSTRUCTION AND ENSURE THAT THERE ARE NO CONFLICTS WITH THE IMPROVEMENTS AND SPECIFICATIONS SHOWN ON THESE PLANS.

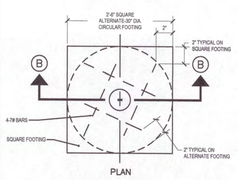


TRAFFIC CONTROL PAVEMENT STRIPING NTS

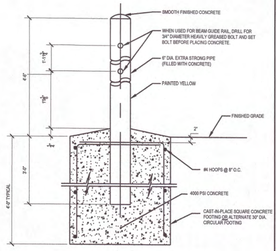


NOTES:
1. ACCESSIBLE PARKING SPACES SHALL BE AT LEAST 96 INCHES WIDE. PARKING ACCESS AISLES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE. TWO ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE. PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS.
2. THE ACCESS AISLE SHALL BE A MINIMUM OF 60 INCHES WIDE FOR CARS OR A MINIMUM OF 96 INCHES WIDE FOR VANS. THE ACCESSIBLE ROUTE CONNECTED TO THE ACCESS AISLE AT THE FRONT OF THE PARKING SPACES SHALL BE A MINIMUM OF 36 INCHES.
3. PARKING SPACES FOR VANS, ACCESS AISLES SERVING THEM, AND VEHICULAR ROUTES FROM AN ENTRANCE TO THE VAN PARKING SPACES, AND FROM THE VAN PARKING SPACES TO A VEHICULAR EXIT SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF 98 INCHES MINIMUM.
4. CONTRACTOR SHALL REFER TO THE LATEST ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES AND ANSI 117.1 TO ENSURE THAT DETAILS ARE CURRENT AT THE TIME OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF DISCREPANCIES ARE FOUND PRIOR TO COMMENCEMENT OF WORK.

ACCESSIBLE PARKING STALL DETAIL NTS



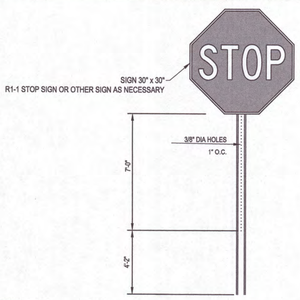
PLAN



SECTION B-B

NOTES:
1. COMPACT BACKFILL AROUND FOOTING.
2. REINFORCING BARS-ASTM A615, GRADE 60.
3. WHERE EXCAVATING IS DONE BY AUGERING, PRECAST FOOTINGS WILL NOT BE PERMITTED. DIAMETER OF AUGERED HOLE SHALL NOT EXCEED DIAMETER OF FOOTING BY MORE THAN 3 INCHES.

BOLLARD WITH FOOTING NTS



NOTES:

ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".

ALL POSTS SHALL BE EMBEDDED 4'-2" MINIMUM BELOW GRADE.

ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).

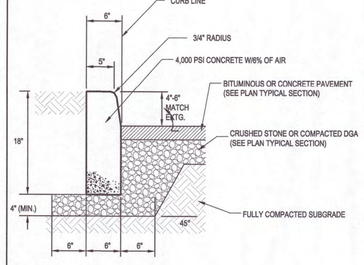
POSTS MAY BE STEEL, ALUMINUM, OR TWO-PIECE U-POST.

SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL.

BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.

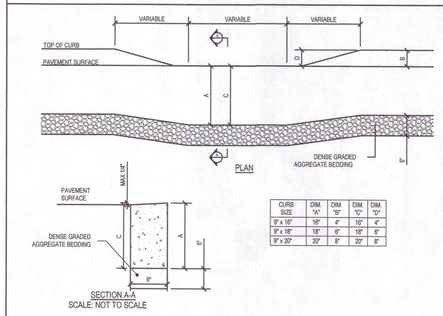
ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

STOP SIGN DETAIL NTS



NOTES:
1. CONCRETE TO TEST 4,000 P.S.I. MINIMUM ON 28 DAY TEST. AIR ENTRAINMENT 5% TO 7%, SLUMP TO BE 3" ± 1".
2. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS JOINT FILLER.
3. EXPOSED CONCRETE SURFACE IS TO BE RUBBED TO PROVIDE SMOOTH FINISHED SURFACE.
4. ALL SUBSOIL SHALL BE FULLY COMPACTED TO 95% OF MODIFIED PROCTOR DRY DENSITY PER ASTM D1557.
5. PROVIDE FOR ALL ON-SITE CURBING.

6" CONCRETE CURB DETAIL NTS



CURB SIZE	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"
9" x 18"	18"	4"	10"	4"
9" x 18"	18"	6"	18"	6"
9" x 20"	20"	8"	20"	8"

DEPRESSED CURB DETAIL NTS

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Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0553-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

SITE DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHIRAG V. THAKKAR
ENGINEER

CHIRAG V. THAKKAR P.E. No. 075153
PROFESSIONAL ENGINEERS
PA LIC. No. 075153

DATE	COMMENTS	NO.
07/21/22	REVISED PLANS	1.

REVISIONS

Project No.	230015001
Date	05/16/2022
Scale	NOT TO SCALE
Drawn By	AG
Checked By	CT

Drawing No.

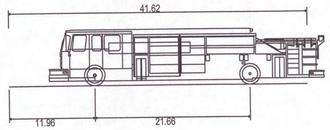
CS-501

Sheet 4 of 14

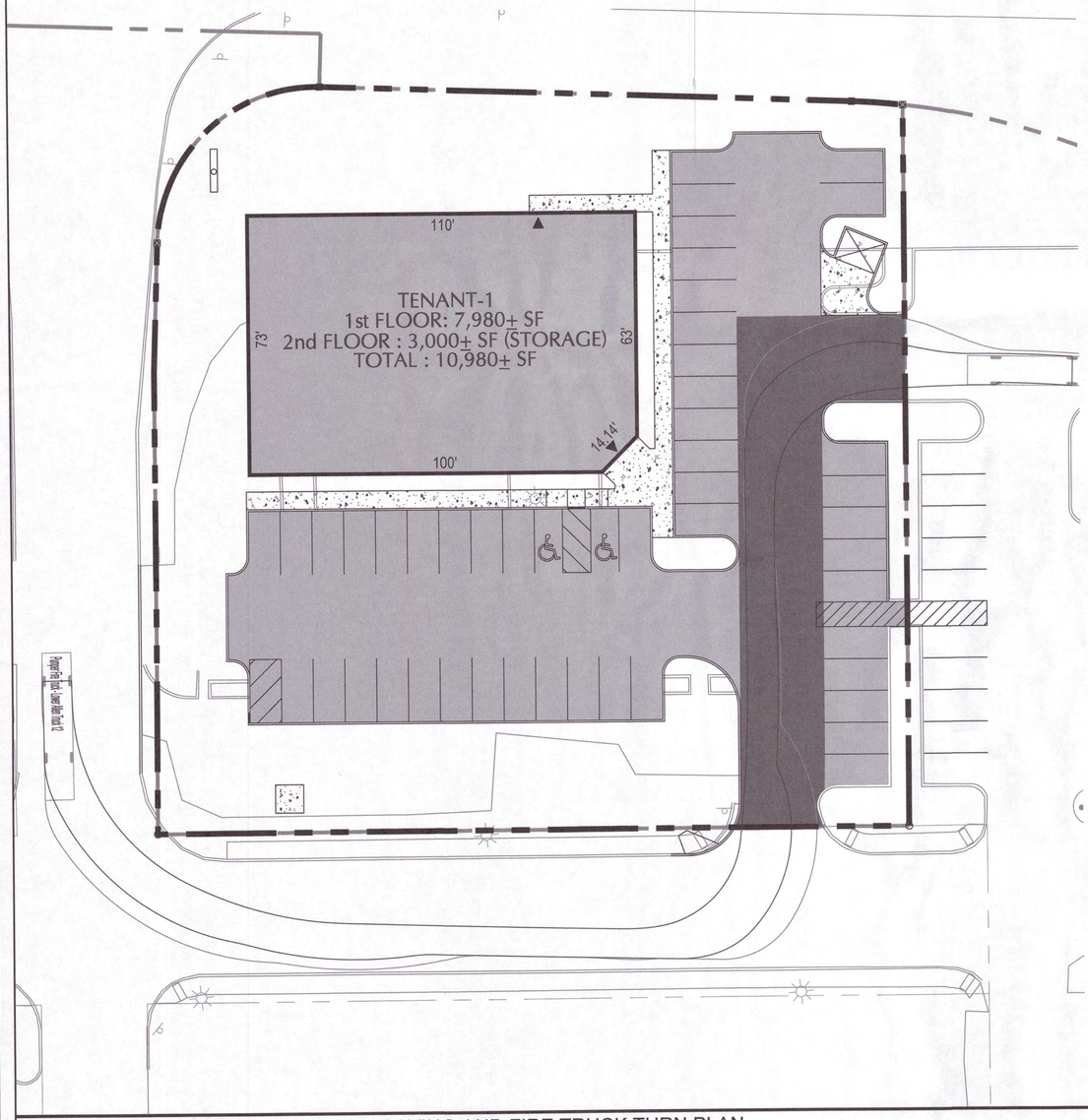
HEAVY DUTY PAVEMENT

STANDARD DUTY PAVEMENT

CONCRETE



Pumper Fire Truck - Lower Allen Truck 12	
Overall Length	41.620ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	40.400ft

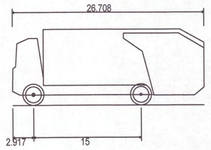


PAVING AND FIRE TRUCK TURN PLAN

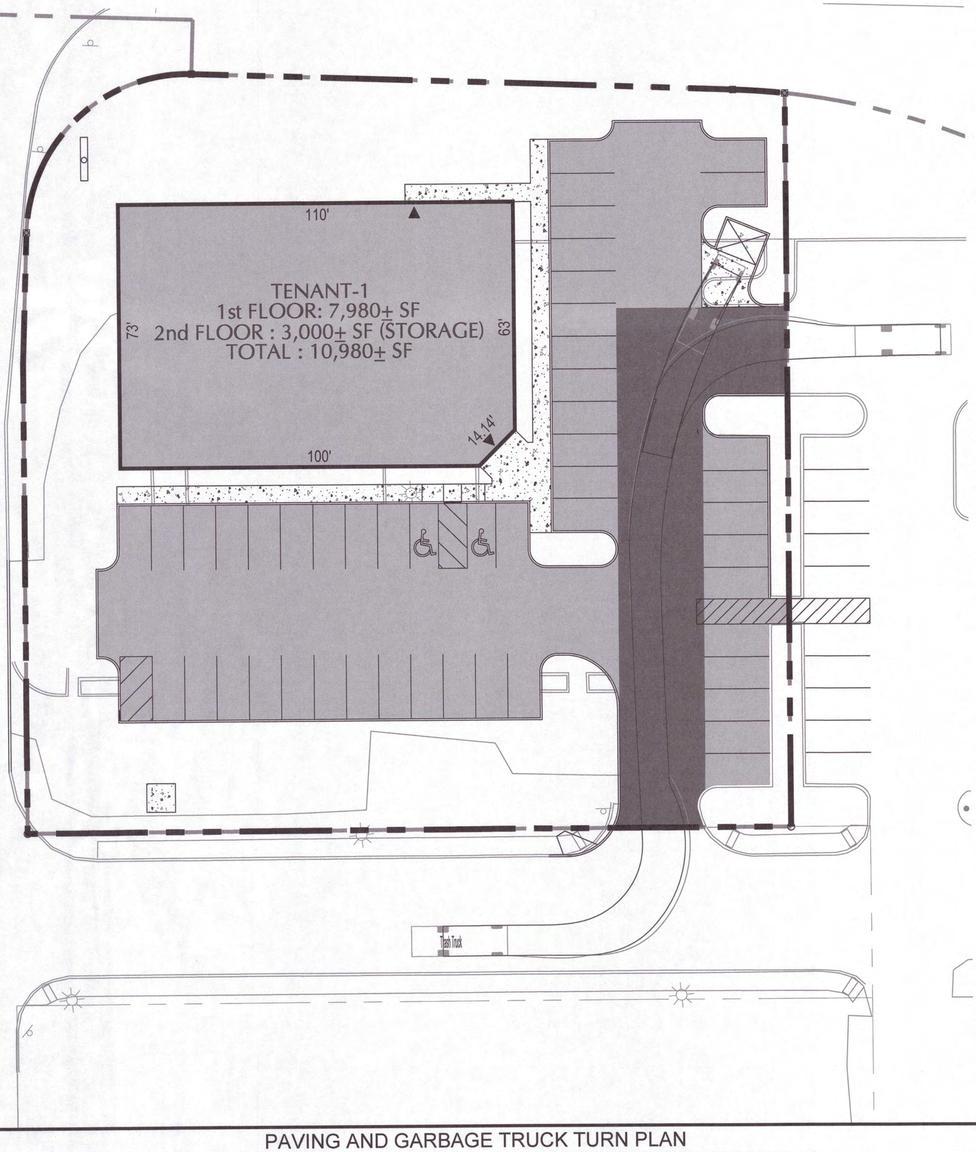
HEAVY DUTY PAVEMENT

STANDARD DUTY PAVEMENT

CONCRETE



Trash Truck	
Overall Length	26.708ft
Overall Width	8.375ft
Overall Body Height	10.546ft
Min Body Ground Clearance	1.376ft
Track Width	8.375ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	29.300ft



PAVING AND GARBAGE TRUCK TURN PLAN

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20 0 10 20
SCALE IN FEET

Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0553-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

TRUCK TURN AND PAVEMENT PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFFESIONAL
CHIRAG V. THAKKAR
ENGINEER
No. 075153

CHIRAG V. THAKKAR
PROFESSIONAL ENGINEER
PA LIC. No. 075153

DATE	COMMENTS	NO.
07/21/22	REVISED PLANS	1.

REVISIONS

Project No.	230015001
Date	05/16/2022
Scale	1" = 20'
Drawn By	AG
Checked By	CT

Drawing No.

CS-502

GRADING AND DRAINAGE PLAN NOTES

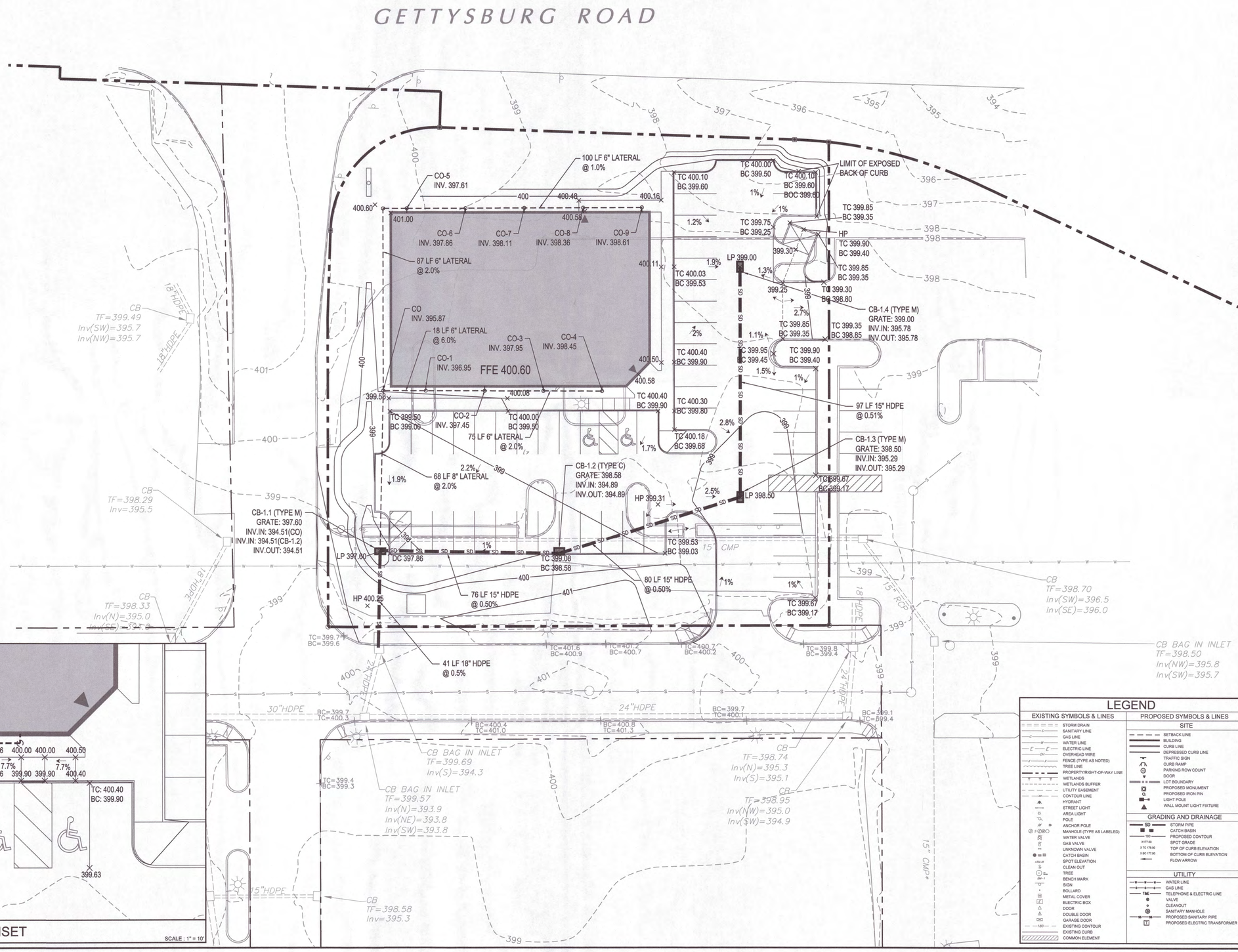
1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES, WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ENSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY COMPANIES AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
3. PVC = POLYVINYLCHORIDE PIPE
   HDPE = HIGH DENSITY POLYETHYLENE PIPE
   RCP = REINFORCED CONCRETE PIPE
4. STORM DRAINAGE PIPING TO UTILIZE WATER TIGHT JOINTS.
5. ALL STORM DRAINAGE FACILITIES AND CONSTRUCTION PROCEDURES SHALL CONFORM TO THE PENNDOT FORM 408 AND RC STANDARDS, LATEST EDITIONS.
6. COMPACTION CRITERIA FOR FILL PLACEMENT IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA SPECIFIED IN THE GEOTECHNICAL REPORT FOR THE PROJECT;

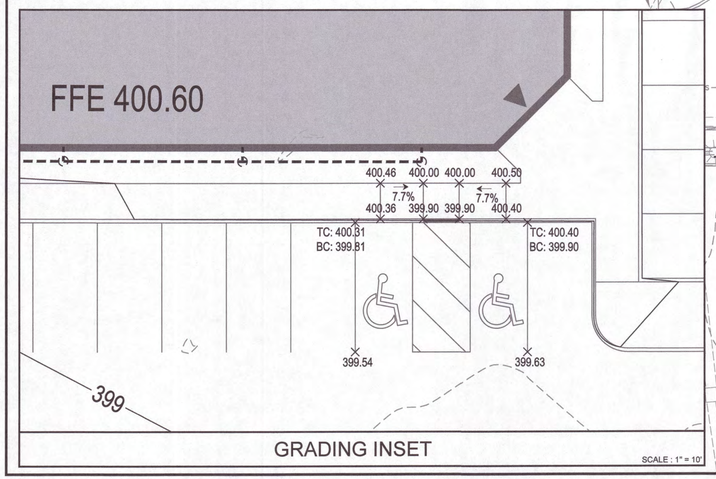
FILL AREA	PERCENT OF MAXIMUM MODIFIED PROCTOR DRY DENSITY
BUILDING FOOTPRINT	95%
PAVEMENT AND ROADWAYS	95%
SIDEWALKS	95%
LANDSCAPE AREAS	93%
TRENCH BACKFILL	SAME AS SURROUNDING AREA

7. PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
8. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THEN BEST SUBGRADE MATERIAL ONSITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE AND TRUE TO GRADE AND CROSS SECTION.
9. ALL CONCRETE, UNLESS OTHERWISE NOTED OR SPECIFIED BY REGULATORY AUTHORITIES, SHALL BE A MINIMUM OF 4,000 PSI.
10. THE CONTRACTOR SHALL REVIEW THE STORM DRAINAGE CONNECTIONS TO THE INLETS, MANHOLES, ETC. AND PROVIDE THE APPROPRIATE BOX SIZE, MANHOLES SIZE, ETC. AS NECESSARY TO ACCOMMODATE THE PROPOSED INLET AND OUTLET PIPES.
11. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE OWNER FOR ALL DRAINAGE AND UTILITY IMPROVEMENTS SHOWN ON THIS PLAN SET.
12. ALL STORMWATER MANAGEMENT FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED OR MODIFIED WITHOUT PRIOR APPROVAL FROM TOWNSHIP.
13. A NOTICE OF TERMINATION (NOT) WILL BE REQUIRED TO BE SUBMITTED FOLLOWING APPROVAL OF THE FINAL AS-BUILT PLANS. PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION TO ENSURE SITE STABILIZATION.
14. NO TOPSOIL WHICH IS STRIPPED WITHIN THE LAND DEVELOPMENT PROJECT PROPERTY SHALL BE DISPOSED OF OFFSITE EXCEPT THE ORGANIC WASTE RETRIEVED FROM THE TOPSOIL.
15. ALL PROPOSED RETAIL BUILDINGS ARE PROPOSED TO BE CONSTRUCTED SLAB-ON-GRADE AND WITHOUT ANY BASEMENTS.
16. PROPOSED STORM PIPES SHALL NOT ENTER THE CORNER OF INLET BOX.
17. BASED ON THE SOIL SURVEY FOR CUMBERLAND COUNTY AND A FIELD INVESTIGATION OF THE PROJECT SITE, IT IS LIKELY THAT GEOLOGICAL CONDITIONS DO NOT EXIST ON-SITE THAT WOULD INTERFERE WITH THE PROPOSED DEVELOPMENT. IF ANY ISSUES ARISE DURING EARTH MOVING ACTIVITIES, LAND CLEARING, CONSTRUCTION ACTIVITIES OR ASSOCIATED ACTIVITIES WITH DEVELOPING THE SITE, ALL WORK SHALL IMMEDIATELY CEASE AND MCCD SHALL BE NOTIFIED.
18. ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP's SOLID WASTE REGULATIONS (25 PA Code 260.1 et seq., 271.1 et seq., and 287.1 et seq.) AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
19. ANTICIPATED WASTE FOR THE SITE IS GENERAL WASTE ASSOCIATED WITH THE REMOVAL OF CURBS AND ASPHALT PAVEMENT.

ACCESSIBLE PLAN NOTES:

1. CONTRACTOR SHALL REFER TO THE LATEST ADA ACCESSIBILITY GUIDELINES AND ANSI A117.1-2003 FOR BUILDINGS AND FACILITIES (ADAAG) TO ENSURE THAT ADA DETAILS ARE CURRENT AT THE TIME OF CONSTRUCTION. CONTRACTOR SHALL CONSTRUCT AREAS DESIGNATED FOR ACCESSIBLE ROUTES (INCLUDING CURB RAMPS, SIDEWALKS, HANDICAP PARKING STALLS, CROSSWALKS AND INLETS) BY FOLLOWING THE MOST CURRENT ADA ACCESSIBILITY GUIDELINES AND ANSI A117.1-2003.
2. ALL ACCESSIBLE PARKING SPACES AREA SHALL NOT EXCEED 2% IN ALL DIRECTIONS.
3. ALL ACCESSIBLE ROUTE AND RAMP CROSS SLOPES SHALL NOT EXCEED 2%.
4. ALL ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM RUNNING SLOPE OF 5%. IF ANY PART OF THE ACCESSIBLE ROUTE HAS A RUNNING SLOPE EXCEEDING 5%, IT IS CONSIDERED A RAMP.
5. RAMPS SHALL HAVE A MAXIMUM RUNNING SLOPE OF 8.33% (1:12 SLOPE) AND A MAXIMUM CROSS SLOPE OF 2%. SEE SHEET CS-002 FOR RAMP DETAILS.
6. CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING LONGITUDINAL SLOPE (ALONG THE DIRECTION OF TRAVEL) DOES NOT EXCEED 5% AND CROSS SLOPE DOES NOT EXCEED 2% FOR ACCESSIBLE ROUTES (TYP.). CONTRACTOR SHALL NOTIFY THE OWNER AND OWNER'S ENGINEER IF ANY ACCESSIBLE ROUTES (I.E. SIDEWALK, PAVED AREAS, ETC.) DOES NOT COMPLY WITH THE ABOVE ADA REQUIREMENTS.
7. CURB RAMP TYPES SHOWN ON THE SITE PLANS ARE BASED ON PENNDOT CURB RAMP CLASSIFICATION.





LEGEND

EXISTING SYMBOLS & LINES	PROPOSED SYMBOLS & LINES
STORM DRAIN	SITE: SETBACK LINE
SANITARY LINE	BUILDING
GAS LINE	CURB LINE
WATER LINE	DEPRESSED CURB LINE
ELECTRIC LINE	TRAFFIC SIGN
OVERHEAD WIRE	CURB RAMP
FENCE (TYPE AS NOTED)	PARKING ROW COUNT
TREE LINE	DOOR
PROPERTY/RIGHT-OF-WAY LINE	LOT BOUNDARY
WETLANDS	PROPOSED MONUMENT
WETLANDS BUFFER	PROPOSED IRON PIN
UTILITY EASEMENT	LIGHT POLE
CONTOUR LINE	WALL MOUNT LIGHT FIXTURE
HYDRANT	GRADING AND DRAINAGE: STORM PIPE
STREET LIGHT	CATCH BASIN
AREA LIGHT	PROPOSED CONTOUR
POLE	SPOT GRADE
ANCHOR POLE	TOP OF CURB ELEVATION
MANHOLE (TYPE AS LABELED)	BOTTOM OF CURB ELEVATION
WATER VALVE	FLOW ARROW
GAS VALVE	UTILITY: WATER LINE
UNKNOWN VALVE	GAS LINE
CATCH BASIN	TELEPHONE & ELECTRIC LINE
SPOT ELEVATION	VALVE
CLEAN OUT	CLEANOUT
TREE	SANITARY MANHOLE
BENCH MARK	PROPOSED SANITARY PIPE
SIGN	PROPOSED ELECTRIC TRANSFORMER
BOLLARD	
METAL COVER	
ELECTRIC BOX	
DOOR	
DOUBLE DOOR	
GARAGE DOOR	
EXISTING CONTOUR	
EXISTING CURB	
COMMON ELEMENT	

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SCALE IN FEET: 20 0 10 20

Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0553-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

GRADING AND DRAINAGE PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHIRAG V. THAKKAR
ENGINEER

CHIRAG V. THAKKAR, P.E. No. 075153
PROFESSIONAL ENGINEER
PA LIC. No. 075153

DATE	COMMENTS	NO.
07/21/22	REVISED PLANS	1.

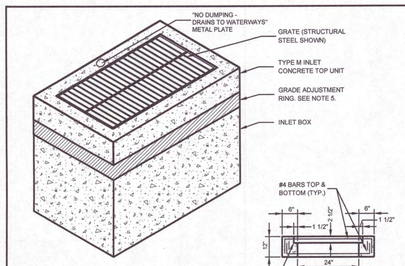
REVISIONS

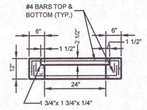
Project No.	230015001
Date	05/16/2022
Scale	1" = 20'
Drawn By	AG
Checked By	CT

Drawing No.

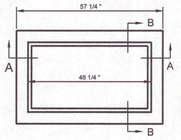
CG-100

Sheet 6 of 14

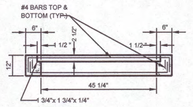




SECTION B-B



PLAN



SECTION A-A

NTS

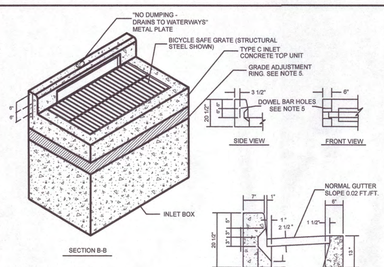
NOTES:

1. CONSTRUCTION REQUIREMENTS
   A. CONSTRUCT IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SPECIFICATIONS. SECTIONS 605, 606, 714 AND AS MODIFIED HEREIN.
   B. MINIMUM CONCRETE CLASS: CAST-IN-PLACE CLASS A PRECAST CLASS AA
   C. PROVIDE STEEL REINFORCEMENT IN ACCORDANCE WITH SEC. 709. PROVIDE MINIMUM YIELD STRENGTH OF 60,000 P.S.I.
   D. CLEAR COVER FOR STEEL:

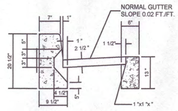
WALLS:	CAST-IN-PLACE	2"
	PRECAST	1"
FOOTINGS:	CAST-IN-PLACE	2 "-(TOP BARS) 3"-(BOTTOM BARS) 2"-(SIDE COVER)
	PRECAST	2"-(TOP BARS) 1 "-(BOTTOM BARS) 1 "-(SIDE COVER)
SLABS:	CAST-IN-PLACE	2"-(TOP & BOTTOM BARS)

2. CAST-IN-PLACE TOP UNITS MAY BE MONOLITHIC WITH THE INLET BOX.
3. PROVIDE ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE FOR ALL TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT.
4. THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET ASSEMBLY IS THE CONTRACTOR'S RESPONSIBILITY.
5. USE PRECAST CONCRETE OR STEEL GRADE ADJUSTMENT RINGS WHEN REQUIRED. (REHABILITATION PROJECTS.)
6. FOR WALL REINFORCEMENT, BOTH DIRECTIONS, USE 0.12 IN./FT. MIN. EACH WAY, EACH FACE.
7. FOR FOOTING REINFORCEMENT, TOP AND BOTTOM, USE #4 BARS AT 12" CENTERS EACH WAY OR 0.20 IN./FT. W.W.F. 18" MAX. SPACING.
8. WEEPHOLES ARE TO BE PROVIDED ALONG THE INLET PERIMETER AT THE PAVEMENT SUBBASE ELEVATIONS.

TYPE M INLET



SECTION B-B



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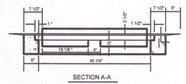
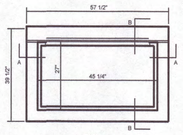


SECTION A-A



PLAN

NOTES:

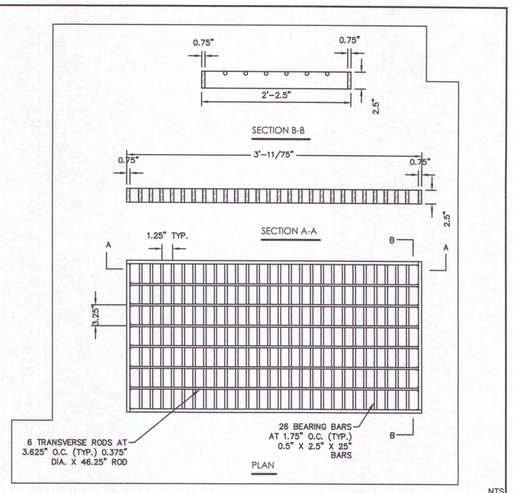
1. CONSTRUCTION REQUIREMENTS
   A. CONSTRUCT IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SPECIFICATIONS. SECTIONS 605, 606, 714 AND AS MODIFIED HEREIN.
   B. MINIMUM CONCRETE CLASS: CAST-IN-PLACE CLASS A PRECAST CLASS AA
   C. PROVIDE STEEL REINFORCEMENT IN ACCORDANCE WITH SEC. 709. PROVIDE MINIMUM YIELD STRENGTH OF 60,000 P.S.I.
   D. CLEAR COVER FOR STEEL:

WALLS:	CAST-IN-PLACE	2"
	PRECAST	1"
FOOTINGS:	CAST-IN-PLACE	2 "-(TOP BARS) 3"-(BOTTOM BARS) 2"-(SIDE COVER)
	PRECAST	2"-(TOP BARS) 1 "-(BOTTOM BARS) 1 "-(SIDE COVER)
SLABS:	CAST-IN-PLACE	2"-(TOP & BOTTOM BARS)

2. CAST-IN-PLACE TOP UNITS MAY BE MONOLITHIC WITH THE INLET BOX.
3. PROVIDE ANGLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE FOR ALL TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT.
4. THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET ASSEMBLY IS THE CONTRACTOR'S RESPONSIBILITY.
5. USE PRECAST CONCRETE OR STEEL GRADE ADJUSTMENT RINGS WHEN REQUIRED. (REHABILITATION PROJECTS.)
6. FOR WALL REINFORCEMENT, BOTH DIRECTIONS, USE 0.12 IN./FT. MIN. EACH WAY, EACH FACE.
7. FOR FOOTING REINFORCEMENT, TOP AND BOTTOM, USE #4 BARS AT 12" CENTERS EACH WAY OR 0.20 IN./FT. W.W.F. 18" MAX. SPACING.
8. WEEPHOLES ARE TO BE PROVIDED ALONG THE INLET PERIMETER AT THE PAVEMENT SUBBASE ELEVATIONS.
9. DOWEL TYPE C INLET TOP UNITS WITH 2-#8 x 1'-0" DOWEL BARS AND PLACE " PREMOLDED EXPANSION JOINT FILLER WHEN CONNECTING TO ADJACENT CURB SECTIONS.
10. ALL INLETS WITHIN THE CARTWAY SHALL BE INSTALLED WITH BICYCLE SAFE GRATES.

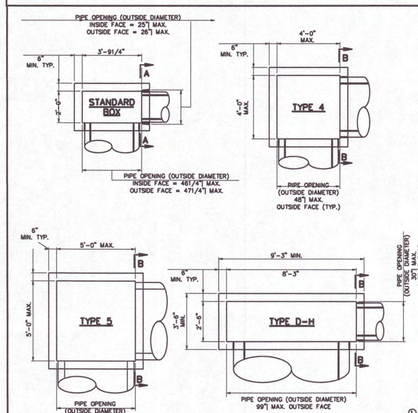
TYPE C INLET

NTS



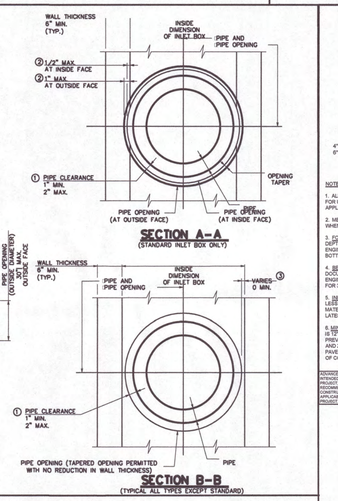
NTS

BICYCLE SAFE GRATE



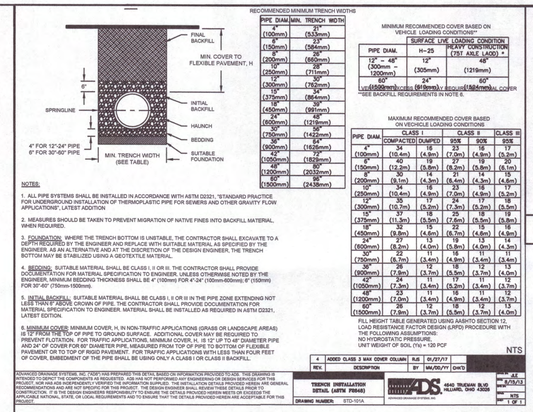
LEGEND

① OUTSIDE DIAMETER OF PIPE TO PIPE OPENING
② REDUCTION IN WALL THICKNESS DIMENSION
③ INSIDE FACE OF BOX WALL TO OUTSIDE DIAMETER OF PIPE OPENING



INLET BOX DETAILS

NTS



RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	21" (533mm)
15" (375mm)	24" (584mm)
18" (450mm)	26" (660mm)
21" (525mm)	28" (711mm)
24" (600mm)	30" (762mm)
27" (675mm)	34" (864mm)
30" (750mm)	39" (991mm)
36" (900mm)	48" (1219mm)
42" (1050mm)	56" (1422mm)
48" (1200mm)	64" (1625mm)
54" (1350mm)	72" (1829mm)
60" (1500mm)	80" (2032mm)
66" (1650mm)	88" (2438mm)

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS*

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	"HEAVY CONSTRUCTION" (75T AXLE LOAD) *
12" – 48" (300mm – 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)
66" (1650mm)	36" (914mm)	72" (1829mm)

*SEE BACKFILL REQUIREMENTS IN NOTE 6.

MAXIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	CLASS I		CLASS II		CLASS III
	COMPACTED	DUMPED	90%	85%	85%
4" (100mm)	34 (10.4m)	18 (4.9m)	23 (7.0m)	16 (4.9m)	17 (5.2m)
6" (150mm)	40 (12.2m)	19 (5.8m)	27 (8.2m)	19 (5.8m)	20 (6.1m)
8" (200mm)	45 (13.7m)	14 (4.3m)	29 (8.8m)	14 (4.3m)	15 (4.6m)
10" (250mm)	34 (10.4m)	14 (4.3m)	26 (7.9m)	14 (4.3m)	15 (4.6m)
12" (300mm)	35 (10.7m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	18 (5.5m)
15" (375mm)	37 (11.3m)	18 (5.5m)	25 (7.6m)	18 (5.5m)	19 (5.8m)
18" (450mm)	32 (9.8m)	15 (4.6m)	22 (6.7m)	15 (4.6m)	16 (4.9m)
24" (600mm)	27 (8.2m)	13 (4.0m)	19 (5.8m)	13 (4.0m)	14 (4.3m)
30" (750mm)	22 (6.7m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	12 (3.7m)
36" (900mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	12 (3.7m)	13 (4.0m)
42" (1050mm)	24 (7.3m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)
48" (1200mm)	23 (7.0m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	12 (3.7m)
54" (1350mm)	23 (7.0m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	12 (3.7m)
60" (1500mm)	23 (7.0m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	12 (3.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE,
UNIT WEIGHT OF SOIL (γs) = 120 PCF

NTS

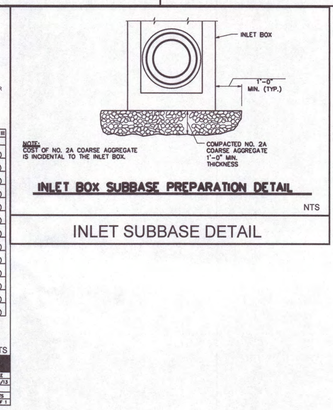
REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
4	ADDED CLASS 3 MAX COVER COLUMN	RJS	01/27/17	

TRENCH INSTALLATION DETAIL (ASTM F counterpart)
DRAWING NUMBER: STD-101A

ADS 4640 TRUEMAN BLVD. HILLIARD, OHIO 43026

AT 3/19/13
STD 101A
SHT 1 OF 1

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT. NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO INCORPORATION INTO THE PROJECT PLANS TO ENSURE THAT THEY ARE ACCEPTABLE FOR USE ON THIS PROJECT AND COMPLY WITH THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.



NOTE:
COST OF NO. 2A COARSE AGGREGATE IS INCIDENTAL TO THE INLET BOX.

INLET BOX SUBBASE PREPARATION DETAIL

NTS

INLET SUBBASE DETAIL

arna ENGINEERING CIVIL ENGINEERS

arna Engineering Inc.
1456 Ferry Road, Suite 603
Doylestown, PA 18901
T: 215.766.8280
F: 215.434.5280

Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0563-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

GRADING AND DRAINAGE DETAILS

CHIRAG V. THAKKAR
REGISTERED PROFESSIONAL ENGINEER
No. 075153
COMMONWEALTH OF PENNSYLVANIA

CHIRAG V. THAKKAR, P.E.
PROFESSIONAL ENGINEER
PA LIC. No. 075153

DATE	COMMENTS	NO.
07/21/22	REVISED PLANS	1.

REVISIONS

Project No.	230015001
Date	05/16/2022
Scale	N.T.S
Drawn By	AG
Checked By	CT

Drawing No.

CG-501

Sheet 7 of 14

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GENERAL NOTES:

1. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RELIEVE APPROVAL OF THE REVISIONS FROM THE CUMBERLAND COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL OF ACCELERATED EROSION AND /OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND /OR SEDIMENT POLLUTION.(SECTION 102.4(5)(xiv))
2. 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.
3. ALL PUMPING OF SEDIMENT LADEN WATER OR POTENTIALLY SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMPS, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS. (SECTION 102.4(5)(xiv))
4. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOIL WATER MANAGEMENT REGULATIONS AT 25 Pa. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY/NO, DUMP, OR DISCHARGE ANY BUILDING MATERIALS OR WATERS AT THE SITE .(SECTION 102.4(5)(xi))
5. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. ADDITIONALLY THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, AND HAS BEEN APPROVED BY THE CUMBERLAND COUNTY CONSERVATION DISTRICT AND/OR LOCAL MUNICIPALITY IN COMPLIANCE WITH CHAPTER 102 RULES & REGULATIONS, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL OFF SITE SOIL AND/OR SPOIL AND/OR BORROW AREAS (SECTION 102.4(5)(xiv))
6. CONTRACTOR SHALL MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE AT ANY GIVEN TIME.
7. THE E&S PLAN HAS BEEN DESIGNED TO :
   - 7.1. MAXIMIZE THE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION.
   - 7.2. MINIMIZE SOIL COMPACTION.
   - 7.3. UTILIZE OTHER MEASURES OR CONTROL THAT PREVENT OR MINIMIZE GENERATION OF INCREASE STORMWATER RUNOFF.
8. BASED ON THE SOIL SURVEY FOR CUMBERLAND COUNTY AND A FIELD INVESTIGATION OF THE PROJECT SITE, IT IS LIKELY THAT GEOLOGICAL CONDITIONS DO NOT EXIST ON-SITE THAT WOULD INTERFERE WITH THE PROPOSED DEVELOPMENT. IF ANY ISSUES ARISE DURING EARTH MOVING ACTIVITIES, LAND CLEARING, CONSTRUCTION ACTIVITIES OR ASSOCIATED ACTIVITIES WITH DEVELOPING THE SITE, ALL WORK SHALL IMMEDIATELY CEASE AND CUMBERLAND COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED.
9. ALL PAVING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP's SOLID WASTE REGULATIONS (25 PA Code 260.1 et seq., 271.1 et seq., and 287.1 et seq.) AND/OR ANY ADDITIONAL, LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
10. ANTICIPATED WASTE FOR THE SITE IS CONCRETE, ASPHALT, AND LIGHT POLES.
11. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL.

STORMWATER MANAGEMENT STATEMENT:

THE ORIGINAL PCSM PLANS DATED 03/05/2020 FOR THE LOWER ALLEN COMMON WAS APPROVED TO INCLUDE 90% OF IMPERVIOUS FROM ALL CONDO UNITS. THE PROPOSED DEVELOPMENT WILL HAVE 62.43% OF IMPERVIOUS AREA. THE PROPOSED PERCENTAGE OF IMPERVIOUS AREA COMPLY WITH THE PREVIOUS APPROVED NPDES PERMIT CRITERIA. HENCE, NO ADDITIONAL STORMWATER MANAGEMENT IS REQUIRED.

LIMIT OF DISTURBANCE = 0.93 AC

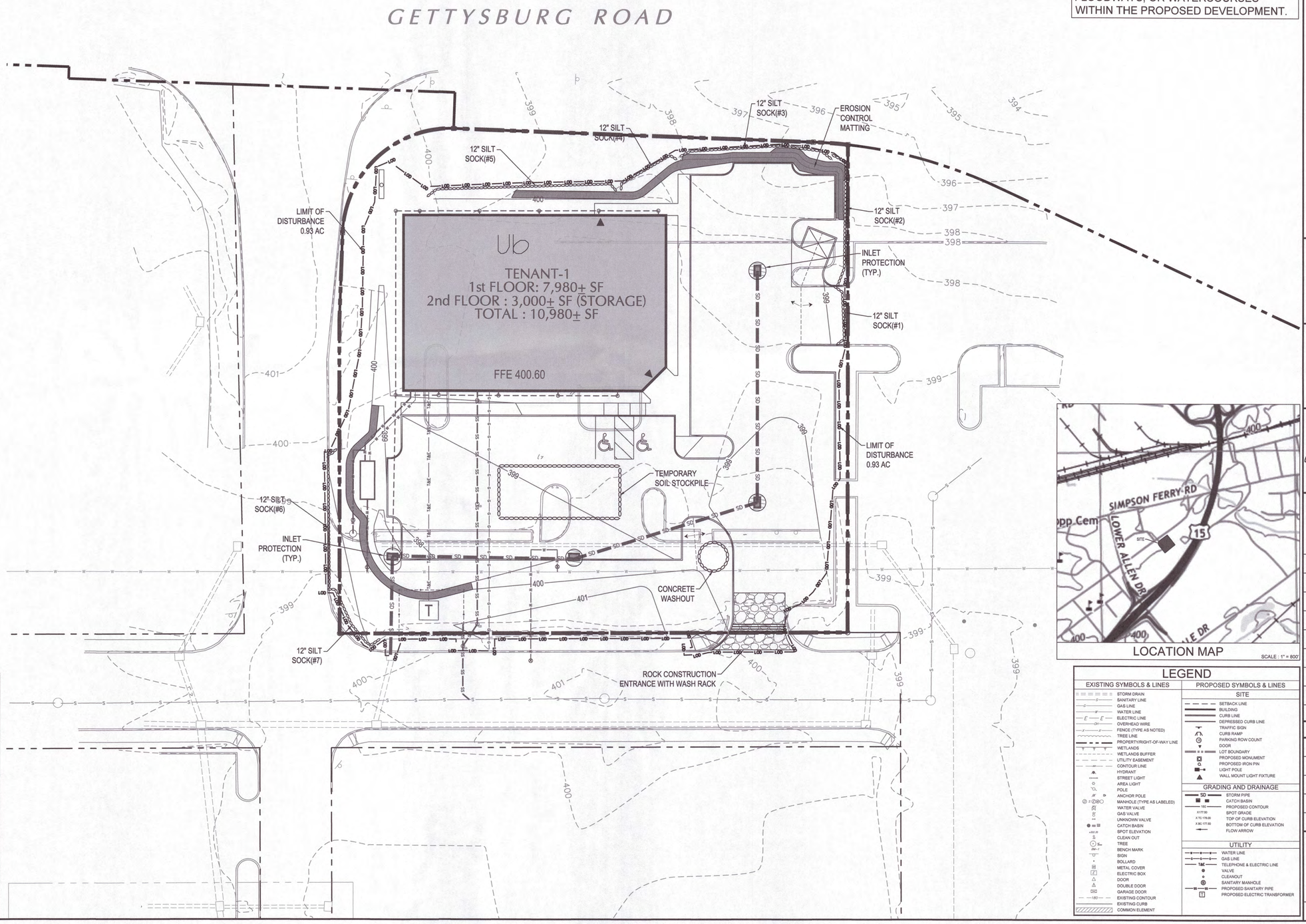
THE SOIL WITHIN THE OVERALL PROJECT SITE IS DESIGNATED AS Ub - URBAN LAND AND UDORTHENTS.

THE RECEIVING STREAM IS CEDAR RUN WATERSHED - DESIGNATION CWF, MF. THIS STREAM IS LOCATED APPROXIMATELY 1,800 FT SOUTHEAST OF THE PROJECT SITE.

THERE ARE NO STREAMS, WETLANDS, FLOODWAYS, OR WATERCOURSES WITHIN THE PROPOSED DEVELOPMENT.

SOIL EROSION LEGEND

- COMPOST FILTER SOCK
- LIMIT OF DISTURBANCE — LOD LOD LOD
- CONSTRUCTION ENTRANCE
- EXISTING CONTOUR — 400
- PROPOSED CONTOUR — 400
- EROSION CONTROL MATTING
- TOPSOIL STOCKPILE
- INLET PROTECTION
- SOILS TYPE — Ub



LOCATION MAP

SCALE : 1" = 800'

ACT 187

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 187 TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION. TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION. CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!

PENNSYLVANIA LAW REQUIRES (3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND (10) WORKING DAYS IN DESIGN STAGE – STOP & CALL –

Pennsylvania One Call System, Inc. 1-800-242-1776

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 STOP-CALL BEFORE YOU DIG

SERIAL NUMBER 20220411615

LEGEND

EXISTING SYMBOLS & LINES	PROPOSED SYMBOLS & LINES
STORM DRAIN	SETBACK LINE
SANITARY LINE	BUILDING
GAS LINE	CURB LINE
WATER LINE	DEPRESSED CURB LINE
ELECTRIC LINE	TRAFFIC SIGN
OVERHEAD WIRE	CURB RAMP
FENCE (TYPE AS NOTED)	PARKING ROW COUNT
TREE LINE	DOOR
PROPERTY/RIGHT-OF-WAY LINE	LOT BOUNDARY
WETLANDS	PROPOSED MONUMENT
WETLANDS BUFFER	PROPOSED IRON PIN
UTILITY EASEMENT	LIGHT POLE
CONTOUR LINE	WALL MOUNT LIGHT FIXTURE
HYDRANT	
STREET LIGHT	
AREA LIGHT	
POLE	
ANCHOR POLE	
MANHOLE (TYPE AS LABELED)	
WATER VALVE	
GAS VALVE	
UNKNOWN VALVE	
CATCH BASIN	
SPOT ELEVATION	
CLEAN OUT	
TREE	
BENCH MARK	
SIGN	
BOLLARD	
METAL COVER	
ELECTRIC BOX	
DOOR	
DOUBLE DOOR	
GARAGE DOOR	
EXISTING CONTOUR	
EXISTING CURB	
COMMON ELEMENT	

SITE	GRADING AND DRAINAGE	UTILITY
SETBACK LINE	STORM PIPE	WATER LINE
BUILDING	CATCH BASIN	GAS LINE
CURB LINE	PROPOSED CONTOUR	TELEPHONE & ELECTRIC LINE
DEPRESSED CURB LINE	SPOT GRADE	VALVE
TRAFFIC SIGN	TOP OF CURB ELEVATION	CLEANOUT
CURB RAMP	BOTTOM OF CURB ELEVATION	SANITARY MANHOLE
PARKING ROW COUNT	FLOW ARROW	PROPOSED SANITARY PIPE
DOOR		PROPOSED ELECTRIC TRANSFORMER
LOT BOUNDARY		
PROPOSED MONUMENT		
PROPOSED IRON PIN		
LIGHT POLE		
WALL MOUNT LIGHT FIXTURE		

arna ENGINEERING CIVIL ENGINEERS

arna Engineering Inc.
1456 Ferry Road, Suite 603
Doylestown, PA 18901
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20 0 10 20
SCALE IN FEET

Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0553-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

EROSION AND SEDIMENT CONTROL PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFFESIONAL CHIRAG V. THAKKAR ENGINEER

CHIRAG V. THAKKAR, PE No. 075153
PROFESSIONAL ENGINEER
PA LIC. No. 075153

DATE	COMMENTS	NO.
07/21/22	REVISED PLANS	1.

REVISIONS

Project No.	230015001
Date	05/16/2022
Scale	1" = 20'
Drawn By	AG
Checked By	CT

Drawing No.

CE-100

Sheet 8 of 14

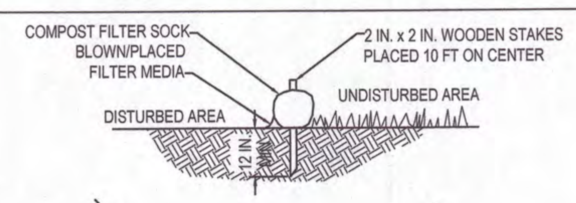
UTILITY TRENCH EXCAVATION GUIDELINES

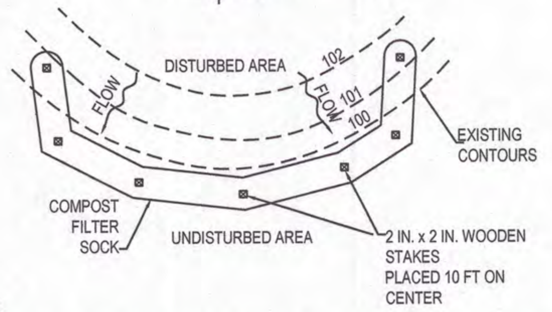
1. Construction requirements

1.a. Limit advance clearing and grubbing operations to a distance equal to two times the length of pipe installation that can be completed in one day.
1.b. Work crews and equipment for trenching, placement of pipe, plug construction and backfilling will be self contained and separate from clearing and grubbing and site restoration and stabilization operations.
1.c. Limit daily trench excavation to the length of pipe placement, plug installation and backfilling that can be completed the same day.
1.d. Trench plugs will be spaced and be constructed of the materials shown on Drawing CS-501.
1.d.1. At all crossings of waters of the Commonwealth, trench plugs will be installed at the banks after trench excavation. The plugs may be temporarily removed when placing the pipe, but then replaced.
1.d.2. Construction of the crossing will be in accordance with the requirements of PADEP.
1.e. Water which accumulates in the open trench will be completely removed by pumping, as required, to a facility for removal of sediment in accordance with PADEP guidelines.
1.f. On the day following pipe placement and trench backfilling, the disturbed area will be graded to final contours and appropriate temporary erosion and sediment pollution control measures/facilities will be installed. Seeding and mulching of all disturbed areas will be done at the end of each week.

2. Exceptions - In certain cases trenches cannot be backfilled until the pipe is hydrostatically tested, or anchors and other permanent features are installed in these cases, all of the requirements listed under item 1 will remain in effect with the following exceptions:

2.a. Daily backfilling of the trench may be delayed for six days All pressure testing and the complete backfilling of the open trench must be completed by the seventh working day.
2.b. If daily backfilling is delayed, the disturbed area will be graded to final contours, appropriate temporary erosion and sediment control measures/facilities will be installed, and the areas seeded and mulched within the next two calendar days.





NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK
NOT TO SCALE

SILT SOCK

SOIL USE LIMITATIONS AND RESOLUTIONS

BASED ON THE WEB SOIL REPORT OF CUMBERLAND COUNTY, THE EXISTING SOILCLASSIFICATION WITHIN THE PROJECT AREA IS URBAN LAND, Ub. Ub IS NOT LISTED ASHYDRIC SOIL. THE SOIL USE LIMITATIONS FOR Ub IS UNKNOWN. WHEN ISSUES OCCUR DURINGCONSTRUCTION, USE BELOW RESOLUTIONS OR CONSULTANT WITH THE ENGINEERS.
SOIL USE LIMITATIONS:

1. CUTBANKS CAVE
2. CORROSIVE TO CONCRETE AND STEEL
3. DROUGHTY
4. EASILY ERODIBLE
5. DEPTH TO SATURATED ZONE
6. HYDRIC/HYDRIC INCLUSIONS
7. LOW STRENGTH/LANDSLIDE PRONE
8. SLOW PERCOLATION
9. PIPING
10. POOR SOURCE OF TOPSOIL
11. FROST ACTION
12. POTENTIAL SINKHOLE
13. WETNESS

RESOLUTION:

1. CUTBANKS CAVE: EXCAVATIONS WILL BE SHORED IN ACCORDANCE WITH OSHA STANDARDS.
2. CORROSIVE TO CONCRETE/STEEL: CORROSIVE RESISTANT MATERIALS WILL BE USED OR CORROSIVE RESISTANT PRODUCTS WILL BE APPLIED TO THE SURFACE OF STEEL/CONCRETE FEATURES THAT CONTACT THE SOIL.
3. DROUGHTY: COMPOST WILL BE ADDED TO IMPROVE EXISTING SOIL CONDITIONS IF NECESSARY.
4. EASILY ERODIBLE: DISTURBED AREAS WILL BE STABILIZED IMMEDIATELY WITH TEMPORARY/PERMANENT VEGETATION AND EROSION CONTROL BLANKETS.
5. DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE: FILTER BAGS WILL BE USED IF WATER IS ENCOUNTERED DURING CONSTRUCTION.
6. HYDRIC/HYDRIC INCLUSIONS: HYDRIC SOILS ARE NOT EXPECTED ON THIS SITE.
7. LOW STRENGTH/LANDSLIDE PRONE: EXCAVATIONS WILL BE SHORED IN ACCORDANCE WITH OSHA STANDARDS, AND DISTURBED AREAS WILL BE STABILIZED WITH TEMPORARY/PERMANENT VEGETATION AND EROSION CONTROL BLANKETS.
8. SLOW PERCOLATION: NO INFILTRATION IS PROPOSED.
9. PIPING: ALL PIPE EXCAVATIONS WILL BE SHORED IN ACCORDANCE WITH OSHA STANDARDS.
10. POOR SOURCE OF TOPSOIL: ADD COMPOST TO IMPROVE SOIL CONDITION. USE SOILS FROM TOPSOIL STOCKPILES. IF NECESSARY, IMPORT TOPSOIL.
11. FROST ACTION: ALL PIPING WILL BE INSTALLED BELOW FROST LINE.
12. POTENTIAL SINKHOLE: MAINTAIN SEPARATION FROM INFILTRATION OF STORMWATER. MITIGATE POTENTIAL VOIDS DURING CONSTRUCTION.
13. WETNESS: CONSULT ENGINEERS WHEN ENCOUNTER DURING CONSTRUCTION.

MAINTENANCE PROGRAM

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION STABILIZATION, AND MAINTENANCE OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE PROPER CONSTRUCTION AND STABILIZATION OF PERMANENT CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN.

THE OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL PERMANENT CONTROL MEASURES.

SOIL SEDIMENT REMOVED FROM ANY TEMPORARY CONTROL MEASURE DURING REGULAR MAINTENANCE WILL BE INCORPORATED BACK INTO THE EARTHWORK AS FILL ON THE SITE. SOIL SEDIMENT MATERIAL SHALL BE DISTRIBUTED ON-SITE IN SUCH A WAY AS TO NOT TO CHANGE DRAINAGE PATTERNS DURING A SPECIFIC CONSTRUCTION STAGE.

ALL COMPOST FILTER SOCKS INSTALLED ON THE PROJECT SITE SHALL BE MAINTAINED AS FOLLOWS:

1. THE COMPOST SOCK CONDITIONS WILL BE INSPECTED ONCE A WEEK OR AFTER EVERY STORM EVENT WHICHEVER COMES FIRST. DAMAGED SOCKS WILL BE REPAIRED OR REPLACED IMMEDIATELY.
2. ACCUMULATED SEDIMENTS WILL BE REMOVED AS REQUIRED TO KEEP THE COMPOST FILTER SOCK FUNCTIONAL. IN ALL CASES, REMOVE DEPOSITS WHEN ACCUMULATIONS REACH 1/3 THE ABOVE-GROUND HEIGHT OF THE SOCK.
3. BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER RECOMMENDATIONS.

THE CONSTRUCTION ENTRANCES WILL BE INSPECTED AT THE END OF EACH WORK DAY. THE THICKNESS WILL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON THE SITE FOR THIS PURPOSED.

SEDIMENT ACCUMULATION IN THE INLET PROTECTION SHALL BE INSPECTED ONCE A WEEK OR AFTER EVERY STORM EVENT, WHICHEVER COMES FIRST. SEDIMENT ACCUMULATION WILL BE MONITORED WITH A CLEARLY MARKED GAUGE. SEDIMENT WILL BE REMOVED FROM THE INLETS WHEN IT REACHES THE SPECIFIED SEDIMENT CLEAN OUT ELEVATION.

AT THE END OF EACH CONSTRUCTION DAY, ANY SEDIMENT DEPOSITED ON PUBLIC ROADWAYS, WILL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. WASHING OF THE ROADWAY WITH WATER WILL NOT BE PERMITTED.

WHEN VEGETATION IS BARE OR SPARSE IN PERMANENT STEEP SLOPE AREAS, THESE AREAS SHALL BE STABILIZED WITH LANDLOCK S2 EROSION CONTROL MATTING OR APPROVE EQUAL. SEDIMENT ACCUMULATION IN THE MATTING SHALL BE INSPECTED ONCE EVERY WEEK OR AFTER EVERY STORM EVENT, WHICHEVER COMES FIRST.

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL TEMPORARY EROSION CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE PROPER CONSTRUCTION AND STABILIZATION OF PERMANENT CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN.

THE CONSTRUCTION ENTRANCES WILL BE INSPECTED AT THE END OF EACH WORK DAY. THE THICKNESS WILL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON THE SITE FOR THIS PURPOSE. SEDIMENT ACCUMULATION IN THE SEDIMENT BASIN AND TRAPS SHALL BE INSPECTED ONCE A WEEK OR AFTER EVERY STORM EVENT, WHICHEVER COMES FIRST. SEDIMENT ACCUMULATION WILL BE CLEARLY MONITORED WITH A GAUGE POLE. SEDIMENT WILL BE REMOVED FROM THE BASIN AND TRAP WHEN IT REACHES THE SPECIFIED SEDIMENT CLEANOUT ELEVATION NOTED ON DRAWING CE-100.

SEEDING NOTES:

TEMPORARY SEEDING NOTES

A) THE FOLLOWING SURFACES OF THE SITE SHALL BE TEMPORARILY SEEDED AND
1) THE SURFACE OF TOPSOIL STOCKPILES.
2) THE SURFACE OF EXPOSED EARTH AREAS NOT SUBJECT TO CONSTRUCTION

B) SEEDING SHALL OCCUR IMMEDIATELY AFTER THE ESTABLISHMENT OF THE TOPSOIL STOCKPILES OR ROUGH GRADED AREAS. THE FOLLOWING SEED SHALL BE PLANTED:
RYEGRASS - BLUE TAG CERTIFIED - 100% PURE LIVE SEED - 4 TO 5 LBS. PER 1,000 SQUARE FOOT.
ANNUAL TYPE - TYPICAL
PERENNIAL TYPE - NOT APPLICABLE

C) PREPARE AREAS TO BE SEEDED AS FOLLOWS:
1) REMOVE ALL DEBRIS, INCLUDING LARGE STONE. TILL SOIL TO A DEPTH OF FOUR INCHES TO SIX INCHES. APPLY PULVERIZED AGRICULTURAL GRADED LIME AT A RATE OF 1 TON PER ACRE.
2) BEFORE AUGUST, SEPTEMBER OR OCTOBER SEEDING, APPLY 12.5 LBS. OF 10-10-10 FERTILIZER PER 1,000 SQUARE FEET. BEFORE FEBRUARY, MARCH, APRIL, MAY, JUNE, JULY OR NOVEMBER SEEDING, APPLY 12.5 LBS. OF 10-10-10 FERTILIZER PER 1,000 SQUARE FEET. WORK INTO TOP INCH OF SOIL.
3) STRAW MULCH SHOULD BE APPLIED AT A RATE OF 3 TONS PER ACRE.

D) SOW SEED AT THE INDICATED RATE. DIVIDE SEED INTO TWO EQUAL LOTS. SOW ONE LOT IN ONE DIRECTION. SOW SECOND LOT AT RIGHT ANGLE TO FIRST LOT.

PERMANENT SEEDING NOTES

LAWN AREAS - AREAS DESIGNATED AS LAWN, OR DISTURBED AREAS NOT DESIGNATED FOR ANY OTHER PLANTING SHALL BE PERMANENTLY STABILIZED BY SEEDING WITH THE FOLLOWING SEED MIXTURE (PURE LIVE SEED) AT A RATE OF 150 POUNDS ACRE.

PURE LIVE SEED - 50% KENTUCKY BLUEGRASS - BARON MIX
PURE LIVE SEED - 25% RED FESCUE - PENNLAWN
PURE LIVE SEED - 20% CHAMPION PERENNIAL RYE
PURE LIVE SEED - 5% ANNUAL RYEGRASS

PREPARE AREAS TO BE SEEDED AS FOLLOWS:
1) REMOVE ALL DEBRIS, INCLUDING LARGE STONE. TILL SOIL TO A DEPTH OF FOUR INCHES TO SIX INCHES. APPLY PULVERIZED AGRICULTURAL GRADED LIME AT A RATE OF 6 TONS PER ACRE.
2) BEFORE AUGUST, SEPTEMBER OR OCTOBER SEEDING, APPLY 25 LBS. OF 10-20-20 FERTILIZER PER 1,000 SQUARE FEET. BEFORE FEBRUARY, MARCH, APRIL, MAY, JUNE, JULY OR NOVEMBER SEEDING, APPLY 25 LBS. OF 10-20-20 FERTILIZER PER 1,000 SQUARE FEET. WORK INTO TOP INCH OF SOIL.
3) STRAW MULCH SHOULD BE APPLIED AT A RATE OF 3 TONS PER ACRE.

SEEDING DATES FOR THIS MIXTURE SHALL BE APRIL 1 TO JUNE 1 OR SEPTEMBER 1 TO OCTOBER 30.

TYPE OF ANCHORING MULCH SHALL BE BY WAY OF TRACKING.

MINIMUM THICKNESS OF TOPSOIL IN ALL LANDSCAPE AREAS SHALL BE 6".

SEQUENCE OF CONSTRUCTION

THE FOLLOWING SEQUENCE OF CONSTRUCTION IS INDICATED ON THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN:

NOTE: SITE DEVELOPMENT OPERATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GENERAL SEQUENCE OF OPERATIONS. THE CONTRACTOR MAY DEVIATE FROM THE STAGING OF PERMANENT SITE IMPROVEMENT CONSTRUCTION ITEMS, WITH APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR. DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENT CONTROL MEASURES SHOULD NOT OCCUR WITHOUT APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR AND SITE ENGINEER.

THE FOLLOWING SEQUENCE OF CONSTRUCTION IS INDICATED ON THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN:

NOTE: SITE DEVELOPMENT OPERATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GENERAL SEQUENCE OF OPERATIONS. THE CONTRACTOR MAY DEVIATE FROM THE STAGING OF PERMANENT SITE IMPROVEMENT CONSTRUCTION ITEMS, WITH APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR. DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENT CONTROL MEASURES SHOULD NOT OCCUR WITHOUT APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR AND SITE ENGINEER.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED IN COMPLIANCE WITH CHAPTER 102 REGULATIONS BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENTATION CONTROL PLAN PREPARER, AND A REPRESENTATIVE OF THE CUMBERLAND COUNTY CONSERVATION DISTRICT TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR BURIED UTILITIES LOCATION. NO SITE WORK CAN COMMENCE UNTIL AFTER THE PRE-CONSTRUCTION MEETING IS HELD AT THE BRISTOL TOWNSHIP BUILDING.

BEFORE IMPLEMENTING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CUMBERLAND COUNTY CONSERVATION DISTRICT.

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1-E. SEQ. AND 287.1 ET SEQ.

BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE OPERATOR MUST ASSURE THAT EACH SOIL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE CUMBERLAND COUNTY CONSERVATION DISTRICT, AND WHICH IS BEING IMPLEMENTED AND MAINTAINED ACCORDING TO CHAPTER 102 REGULATIONS. THE OPERATOR SHALL ALSO NOTIFY THE CUMBERLAND COUNTY CONSERVATION DISTRICT IN WRITING OF ALL RECEIVING SOIL AND BORROW AREAS WHEN THEY HAVE BEEN IDENTIFIED.

ALL BLASTING ACTIVITY, IF REQUIRED, SHOULD BE DONE IN ACCORDANCE WITH THE LOCAL, STATE AND FEDERAL REGULATIONS. CONTRACTOR SHOULD NOTIFY OWNER AND ALL REGULATORY AGENCIES IN WRITING PRIOR AND OBTAIN ANY NECESSARY PERMITS PRIOR TO ANY BLASTING ACTIVITIES.

SEQUENCE OF CONSTRUCTION

THE FOLLOWING SEQUENCE OF CONSTRUCTION IS INDICATED ON THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN:

1. INSTALL AND MAINTAIN THE ROCK CONSTRUCTION ENTRANCE. INSTALL TEMPORARY COMPOST FILTER SOCKS WHERE INDICATED ON THE PLAN. ALL VEHICLES ENTERING THE SITE SHALL DO SO VIA THE CONSTRUCTION ENTRANCE. TRACKING OF MUD ONTO PUBLIC ROADS IS NOT ALLOWABLE.
2. TOPSOIL MATERIAL STOCKPILE AREAS SHOULD BE DECOMPACTED AFTER REMOVAL OF THE SOIL.
3. DEMOLISH ONSITE PAVING, CURBS AND CLEAR AREAS AS INDICATED ON THE DEMOLITION PLAN.
4. STRIP TOPSOIL WITHIN THE AREA OF PROPOSED IMPROVEMENTS AND STOCKPILE AT THE TEMPORARY AREAS PROVIDED. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET AND SIDE SLOPES MUST BE 2:1 OR FLATTER. SEED WITH A TEMPORARY COVER, AND MULCH. SURROUND WITH FILTER SOCKS. BEGIN FILLING AREAS AS NEEDED TO ACHIEVE THE GRADES AS SHOWN ON THE PLAN.
5. EXCAVATE, FILL AND ROUGH GRADE THE SITE TO THE PROPOSED ELEVATIONS AS SHOWN ON THE GRADING PLAN.
6. INSTALL THE PROPOSED SANITARY AND WATER LATERALS AS SHOWN ON THE PLAN. TRENCHES MUST BE BACKFILLED AT THE COMPLETION OF EACH DAY.
7. INSTALL STORM SEWER INLETS AND PIPES BEGINNING AT THE DOWNSTREAM CONNECTIONS AND WORKING UPSTREAM. TRENCHES MUST BE BACKFILLED AT THE COMPLETION OF EACH DAY. ALL STORM SEWER CONSTRUCTION INCLUDES TRENCHING, BACKFILLING, APPLYING FINAL STABILIZATION AND INSTALL INLET PROTECTION.
8. CONSTRUCT THE PROPOSED COMMERCIAL BUILDING.
9. CONCURRENTLY CONSTRUCT DRIVEWAYS, SIDEWALK AND UTILITY SERVICE CONNECTIONS.
10. PAVE ROADWAYS WITH PERMANENT ASPHALT BASE COURSE AS SOON AS PRACTICAL TO PREVENT EROSION. PAVE ROADWAYS WITH PERMANENT ASPHALT WEARING COURSE.
11. FINISH GRADING. PLACE REMAINING TOPSOIL, APPLY SOD AND LANDSCAPING.
12. ONCE ALL AREAS ARE STABILIZED WITH VEGETATION OR PAVEMENT, FLUSH AND CLEAN ALL ACCUMULATED SEDIMENT IN PIPES AND INLETS.
13. CONTACT CUMBERLAND COUNTY CONSERVATION DISTRICT FOR FINAL INSPECTION AND APPROVAL OF STABILIZATION. REMOVE ALL REMAINING SOIL EROSION AND SEDIMENT CONTROL MEASURES, ONLY AFTER THE SITE IS COMPLETELY STABILIZED.

ENVIRONMENTAL DUE DILIGENCE NOTES

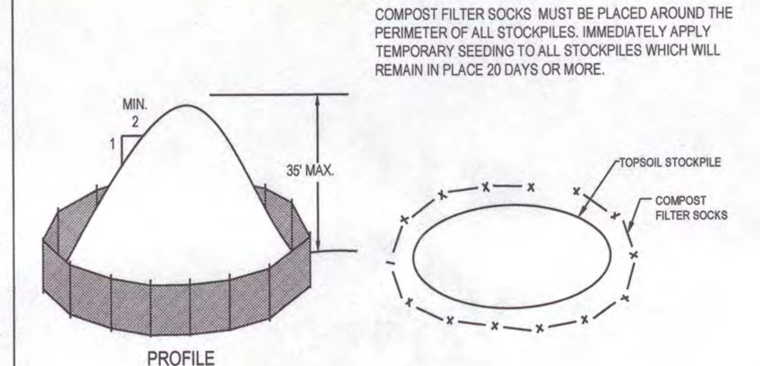
1. INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, USUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF DEP'S "MANAGEMENT OF FILL" POLICY.
2. FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH DEP'S RESIDUAL OR MUNICIPAL WASTE REGULATIONS IN 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.

MULCHING

1. MULCH SHOULD BE APPLIED AT THE RATE SHOWN BELOW:
a. STRAW MULCH - 3 TONS/ACRE
b. HAY MULCH - 3 TONS/ACRE
c. WOOD CHIPS - 4 TO 6 TONS/ACRE
d. HYDROMULCH - 1 TON/ACRE
2. STRAW AND HAY MULCH SHOULD BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL - ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V.
3. POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED ACCORDING TO MANUFACTURERS RECOMMENDATION MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24-HOUR CURING PERIOD AND A SOIL TEMPERATURE HIGHER THAN 45°f ARE TYPICALLY REQUIRED.
4. MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH AS PER MANUFACTURERS RECOMMENDATION.

EROSION & SEDIMENT CONTROL PLAN STANDARD NOTES

1. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2:1.
2. THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
3. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
4. THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED AND APPROVED BY THE CUMBERLAND COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOILS AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR LOCATIONS.
5. ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER AN UNDISTURBED AREA.
6. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.
7. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS.
8. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMPS MUST BE STABILIZED IMMEDIATELY.
9. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER AND THE CUMBERLAND COUNTY CONSERVATION DISTRICT TO A PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. AT 1-800-242- 1776 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.
10. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE NOT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.
11. DISTURBED AREAS THAT ARE AT A FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
12. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% VEGETATIVE OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
13. UPON THE INSTALLATION OF TEMPORARY SEDIMENT BASIN RISER(S), A QUALIFIED SITE REPRESENTATIVE SHALL CONDUCT AN IMMEDIATE INSPECTION OF THE RISER(S), WHEREUPON THE CUMBERLAND COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING THAT THE RISER IS SEALED (WATERTIGHT).
14. AT STREAM CROSSINGS, A 50-FOOT BUFFER SHALL BE MAINTAINED. ON BUFFERS, CLEARINGS, SOD DISTURBANCES AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITY SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGED RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES.
15. UNTIL A SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING AND REONETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.
16. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.
17. ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.) AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.



COMPOST FILTER SOCKS MUST BE PLACED AROUND THE PERIMETER OF ALL STOCKPILES. IMMEDIATELY APPLY TEMPORARY SEEDING TO ALL STOCKPILES WHICH WILL REMAIN IN PLACE 20 DAYS OR MORE.

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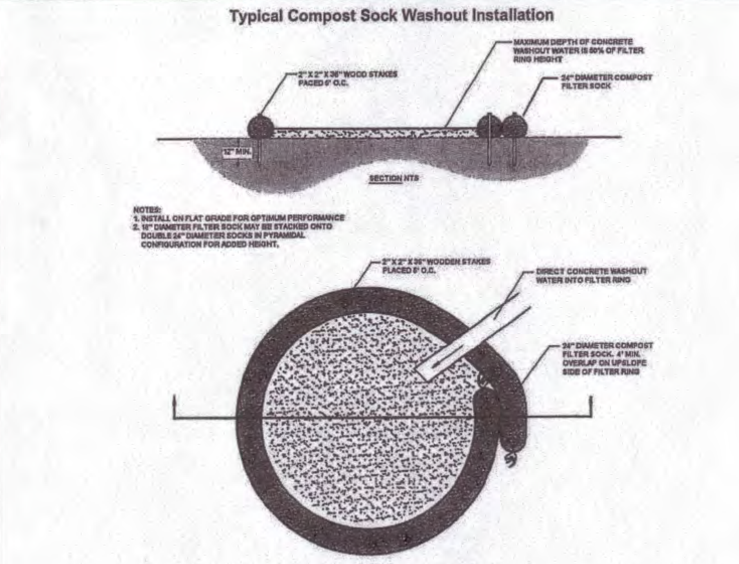
TOPSOIL STOCKPILE AREA

Typical Compost Sock Washout Installation



A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks.
Adapted from Filtrexx

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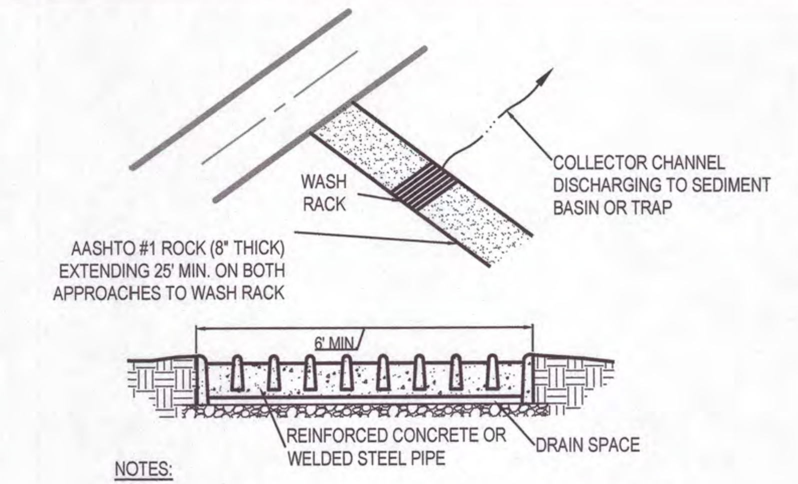
CONCRETE WASHOUT



NOTES:

WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.

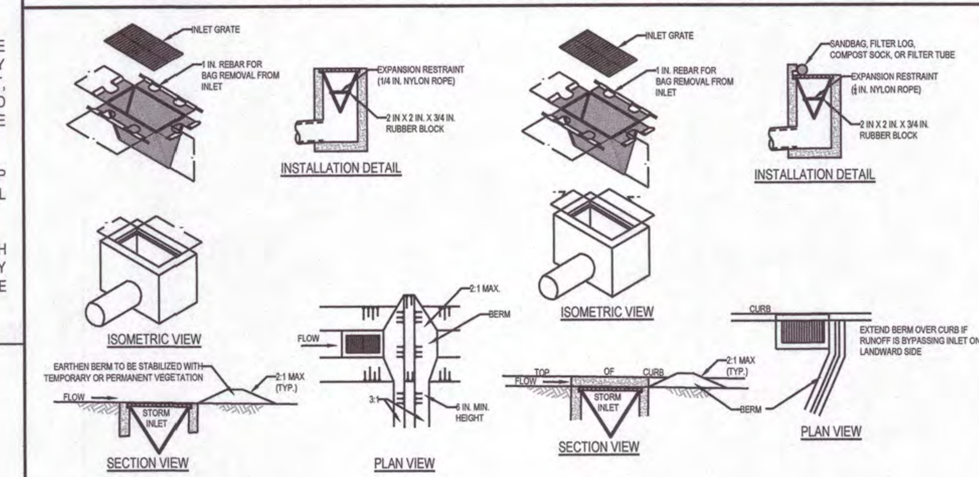
WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.

A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.

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

NOT TO SCALE

ROCK CONSTRUCTION ENTRANCE WITH WASH RACK



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.

INLET PROTECTION

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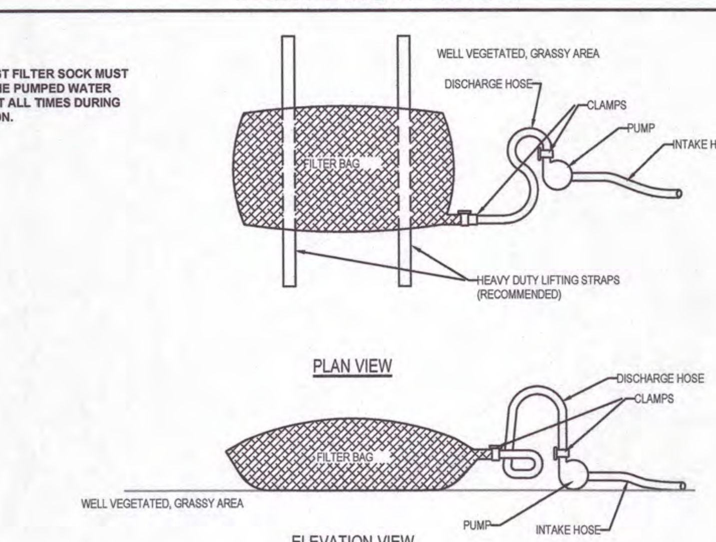
NOTES:

A 12" COMPOST FILTER SOCK MUST SURROUND THE PUMPED WATER FILTER BAG AT ALL TIMES DURING CONSTRUCTION.



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.

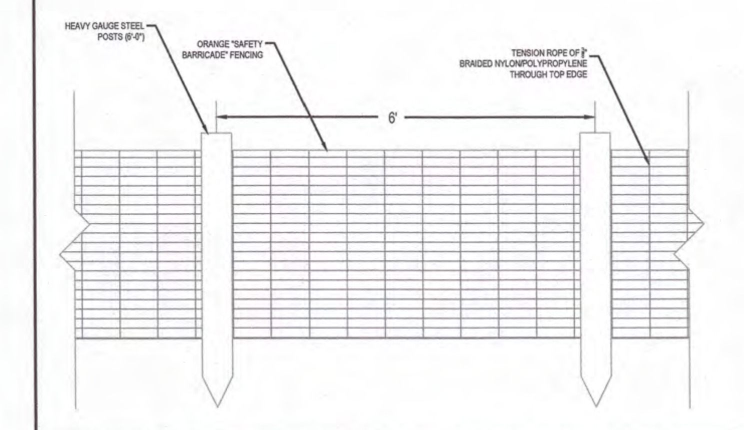
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

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.

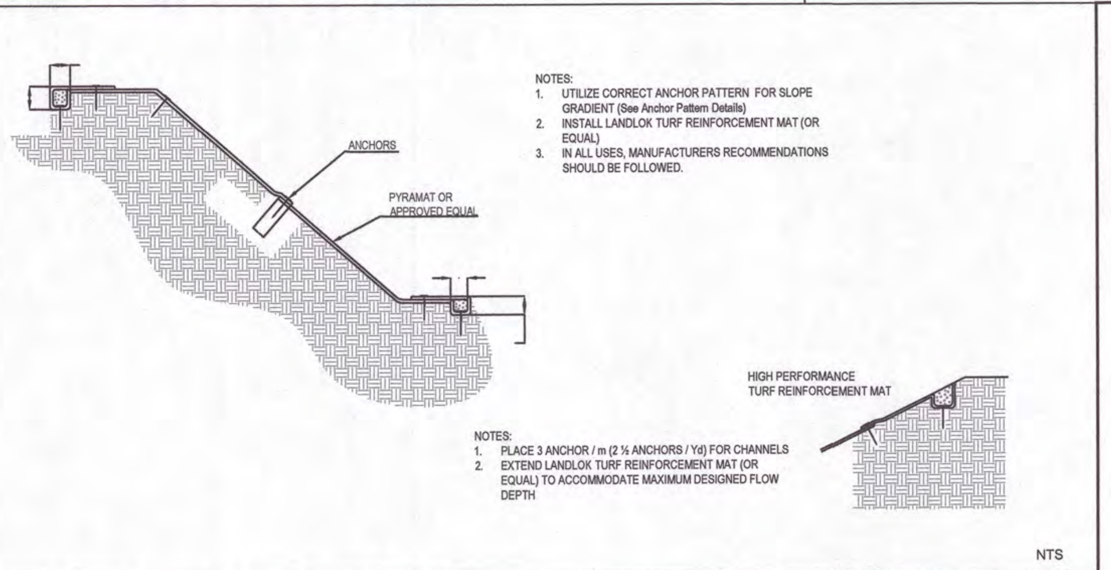
FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16
PUMPED WATER FILTER BAG
NOT TO SCALE

PUMPED WATER FILTER BAG



TEMPORARY CONSTRUCTION FENCE



NOTES:
1. UTILIZE CORRECT ANCHOR PATTERN FOR SLOPE GRADIENT (See Anchor Pattern Details)
2. INSTALL LANDLOK TURF REINFORCEMENT MAT (OR EQUAL)
3. IN ALL USES, MANUFACTURERS RECOMMENDATIONS SHOULD BE FOLLOWED.

NOTES:
1. PLACE 3 ANCHOR / m (2 ½ ANCHORS / Yd) FOR CHANNELS
2. EXTEND LANDLOK TURF REINFORCEMENT MAT (OR EQUAL) TO ACCOMMODATE MAXIMUM DESIGNED FLOW DEPTH

NTS

Please note that the information presented herein is general information only. It is for conceptual use only and not intended to be used for construction. While every effort has been made to ensure its accuracy, this information should not be used for a specific application without independent professional examination and verification of its suitability, applicability and accuracy.

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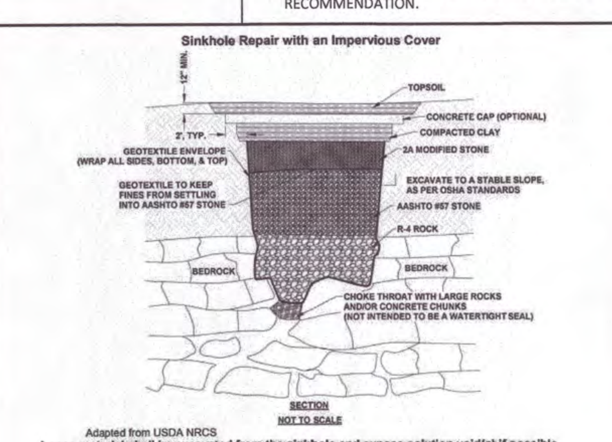
LANDLOK S2 LINER - EROSION CONTROL BLANKET

Sinkhole Repair with an Impervious Cover



Adapted from USDA NRCS

Loose material shall be excavated from the sinkhole and expose solution void(s) if possible. Enlarge sinkhole if necessary to allow for installation of filter materials. OSHA regulations must be followed at all times during excavation.

Geotextile shall be non-woven with a burst strength between 100 and 200 psi.

Select field stone(s) about 1.5 times larger than solution void(s) to form "bridge." Place rock(s) so no large openings exist along the sides. Stones used for the "bridge" and filters shall have a moderately hard rock strength and be resistant to abrasion and degradation. Shale and similar soft and/or non-durable rock are not acceptable.

Minimum thickness of R-4 rock is 18." AASHTO #57 stone thickness shall be ¼ to ½ that of the R-4 rock. Minimum thickness of 2A modified crushed stone shall be 9". AASHTO #57 stone and 2A modified crushed stone shall be compacted after each placement.

Compacted clay seal shall be a minimum of 12" thick. Clay shall be placed in 6" to 9" lifts and thoroughly compacted.

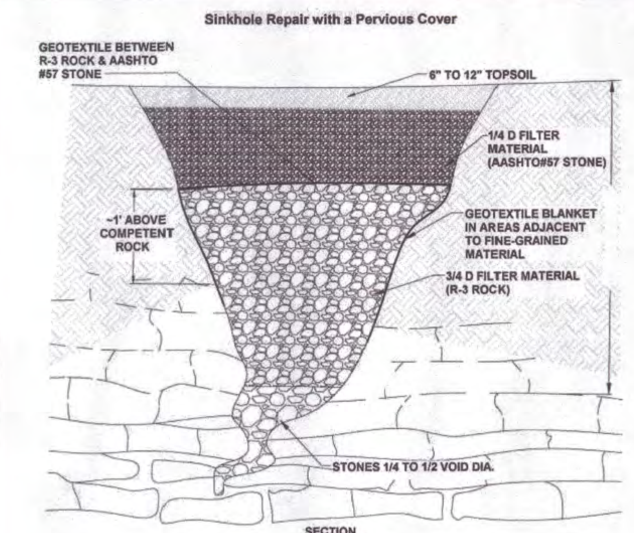
Concrete cap, which is optional, shall be a minimum of 8" thick. Use 4,000 psi concrete with 6" X 6" - 6 gauge welded wire fabric, or # 3 rebar on 18" O.C. both ways.

Topsoil shall be a minimum of 12" thick. Grade for positive drainage away from sinkhole area.

NTS

SINKHOLE REPAIR - IMPERVIOUS COVER

Sinkhole Repair with a Pervious Cover



Adapted from USDA NRCS

Loose material shall be excavated from the sinkhole and expose solution void(s) if possible. Enlarge sinkhole if necessary to allow for installation of filter materials. OSHA regulations must be followed at all times during excavation.

Stones used for the "bridge" and filters shall have a moderately hard rock strength and be resistant to abrasion and degradation. Shale and similar soft and/or non-durable rock are not acceptable.

SINKHOLE REPAIR - IMPERVIOUS COVER

NTS

arna ENGINEERING CIVIL ENGINEERS

arna Engineering Inc.
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F: 215.434.5280

Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0553-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFFESIONAL CHIRAG V. THAKKAR ENGINEER No. 075153

CHIRAG V. THAKKAR, P.E.
PROFESSIONAL ENGINEERS
PA LIC. No. 075153

07/21/22	REVISED PLANS	1.
DATE	COMMENTS	NO.

REVISIONS

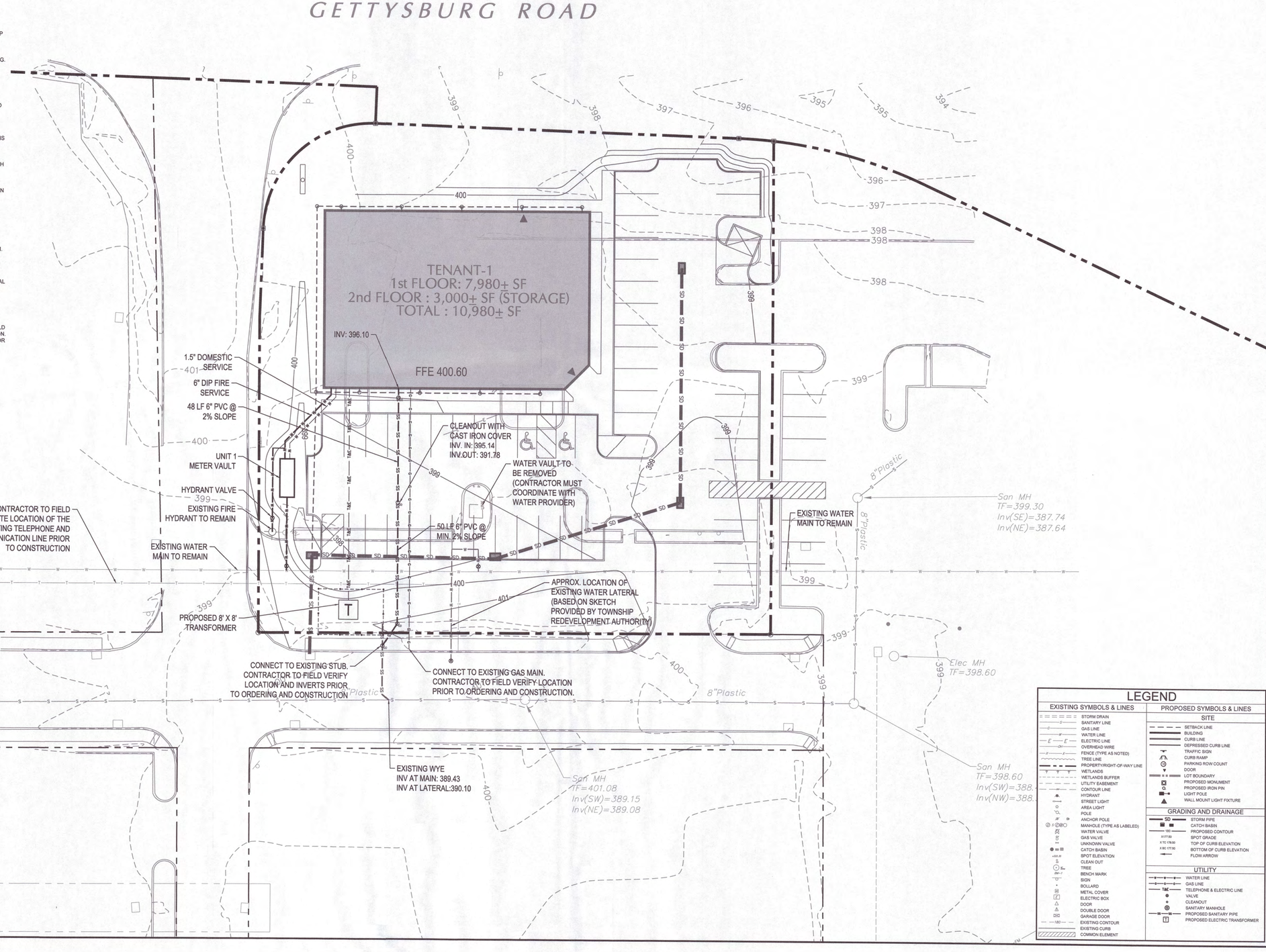
Project No.	230015001
Date	05/16/2022
Scale	NOT TO SCALE
Drawn By	AG
Checked By	CT

Drawing No.

CE-501

UTILITY PLAN NOTES:

1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL SIZE AND LOCATION OF ALL UTILITY SERVICE ENTRANCES TO INCLUDE SANITARY SEWER LATERAL, WATER SERVICE, ELECTRICAL, TELEPHONE AND CABLE SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY COMPANIES AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
2. CONTRACTOR MUST ENSURE THAT UNINTERRUPTED UTILITY SERVICES INCLUDING BUT NOT LIMITED TO SANITARY SEWER, WATER, ELECTRIC, GAS, COMMUNICATION SERVICE TO EXISTING BUILDINGS TO REMAIN ON SITE AS WELL AS ADJOINING PROPERTY OWNERS IS MAINTAINED AT ALL TIMES.
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS INCLUDING INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING.
4. CONTRACTOR TO COORDINATE CONSTRUCTION OF ALL UTILITY INSTALLATION WITH APPROPRIATE UTILITY COMPANIES. ALL CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, UTILITY TRENCHING DETAILS, DEPTH OF INSTALLATION, MATERIAL(S), GROUND SLOPE, UTILITY CROSSINGS, CONNECTIONS TO MAIN, SEPARATION DISTANCES, ETC., SHALL BE PERFORMED PER STANDARDS, SPECIFICATIONS AND REQUIREMENTS OF UTILITY COMPANIES AS WELL AS ANY APPLICABLE LOCAL, STATE AND FEDERAL RULES AND REQUIREMENTS.
5. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND UNLESS OTHERWISE SPECIFIED.
6. ALL LATERAL CONSTRUCTIONS SHALL BE IN ACCORDANCE WITH LOWER ALLEN TOWNSHIP AUTHORITY'S CONSTRUCTION AND MATERIAL SPECIFICATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING PENNSYLVANIA ONE CALL SYSTEM AS REQUIRED BY PA ACT 38 OF 1991 THREE (3) WORKING DAYS PRIOR TO DIGGING. CALL TOLL FREE 1-800-242-1776.
8. CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT ALL CONSTRUCTION IS COMPLETED IN ACCORDANCE WITH THE LATEST OSHA REQUIREMENTS AND REQUIREMENTS OF UTILITY PROVIDERS.
9. ANY EXISTING WELL FOUND ON THE SUBJECT SITE SHALL BE ABANDONED ACCORDING TO PADEP REQUIREMENTS.
10. THE SUBJECT SITE SHALL BE SERVICED BY PUBLIC WATER AND PUBLIC SEWER.
11. CONTRACTOR SHALL COMPLY WITH WATER AND SEWER PROVIDERS RULES, REGULATIONS AND CONSTRUCTION SPECIFICATIONS, LATEST REVISION.
12. CONTRACTOR MUST PROVIDE REQUIRED NOTICE IN ADVANCE OF WORK TO WATER AND SEWER PROVIDERS IN ORDER TO SCHEDULE INSPECTION OF ALL WORK ASSOCIATED WITH WATER AND SANITARY SEWER LINE WORK.
13. ALL WATER MAINS AND SERVICE LINES ARE TO HAVE A MINIMUM COVER OF 4 FEET FROM THE TOP OF THE PIPE TO THE PROPOSED SURFACE ELEVATION. CONSTRUCT WATER MAIN AT A CONSISTENT DEPTH BELOW THE PROPOSED SURFACE AND MAINTAIN PROPER VERTICAL CLEARANCE BETWEEN SANITARY AND STORM SEWERS.
14. THRUST BLOCKS MUST BE INSTALLED AT ALL WATER MAIN BENDS AND FITTINGS.
15. EXISTING UTILITY EASEMENTS TO BE ABANDONED / MODIFIED AS SHOWN ON LAND DEVELOPMENT PLANS.
16. ALL SANITARY LATERALS MUST CONNECT TO THE SEWER MAINS BY A "WYE" CONNECTION.
17. CONTRACTOR MUST REFER TO ARCHITECTURAL PLANS FOR SIZE AND LOCATION OF ALL UTILITY TIE-IN INTO THE BUILDINGS.
18. LOCATION OF EXISTING UTILITIES SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIAL OR CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN ON THESE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING.
19. MANHOLE, RIM, INVERTS AND PIPE SIZE ASSOCIATED WITH EXISTING SANITARY SEWER SYSTEM LOCATED ON SITE HAS BEEN TAKEN FROM PLAN TITLED "ALTA/NSPS LAND TITLE SURVEY" AND PREPARED BY "BL COMPANIES", DATED 02/08/2022. CONTRACTOR MUST FIELD VERIFY THIS EXISTING SANITARY SEWER SYSTEM PRIOR TO ORDERING OR CONSTRUCTION. IF DISCREPANCIES ARE NOTED BETWEEN FIELD SURVEY AND DESIGN PLANS, CONTRACTOR MUST NOTIFY THE DESIGN ENGINEER IN WRITING.



LEGEND

EXISTING SYMBOLS & LINES	PROPOSED SYMBOLS & LINES
STORM DRAIN	SITE
SANITARY LINE	SETBACK LINE
GAS LINE	BUILDING
WATER LINE	CURB LINE
ELECTRIC LINE	DEPRESSED CURB LINE
OVERHEAD WIRE	TRAFFIC SIGN
FENCE (TYPE AS NOTED)	CURB RAMP
TREE LINE	PARKING ROW COUNT
PROPERTY/RIGHT-OF-WAY LINE	DOOR
WETLANDS	LOT BOUNDARY
WETLANDS BUFFER	PROPOSED MONUMENT
UTILITY EASEMENT	PROPOSED IRON PIN
CONTOUR LINE	LIGHT POLE
HYDRANT	WALL MOUNT LIGHT FIXTURE
STREET LIGHT	
AREA LIGHT	GRADING AND DRAINAGE
POLE	STORM PIPE
ANCHOR POLE	CATCH BASIN
MANHOLE (TYPE AS LABELED)	PROPOSED CONTOUR
WATER VALVE	SPOT GRADE
GAS VALVE	TOP OF CURB ELEVATION
UNKNOWN VALVE	BOTTOM OF CURB ELEVATION
CATCH BASIN	FLOW ARROW
SPOT ELEVATION	
CLEAN OUT	UTILITY
TREE	WATER LINE
BENCH MARK	GAS LINE
SIGN	TELEPHONE & ELECTRIC LINE
BOLLARD	VALVE
METAL COVER	CLEANOUT
ELECTRIC BOX	SANITARY MANHOLE
DOOR	PROPOSED SANITARY PIPE
DOUBLE DOOR	PROPOSED ELECTRIC TRANSFORMER
GARAGE DOOR	
EXISTING CONTOUR	
EXISTING CURB	
COMMON ELEMENT	

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20 0 10 20
SCALE IN FEET

Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0553-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

UTILITY PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFFESIONAL
CHIRAG V. THAKKAR
ENGINEER
CHIRAG V. THAKKAR P.E. No. 075153
PROFESSIONAL ENGINEER
PA LIC. No. 075153

DATE	COMMENTS	NO.
07/21/22	REVISED PLANS	1.

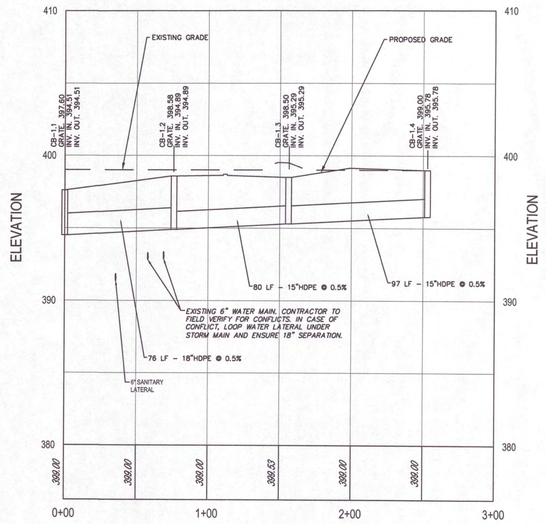
REVISIONS

Project No.	230015001
Date	05/16/2022
Scale	1" = 20'
Drawn By	AG
Checked By	CT

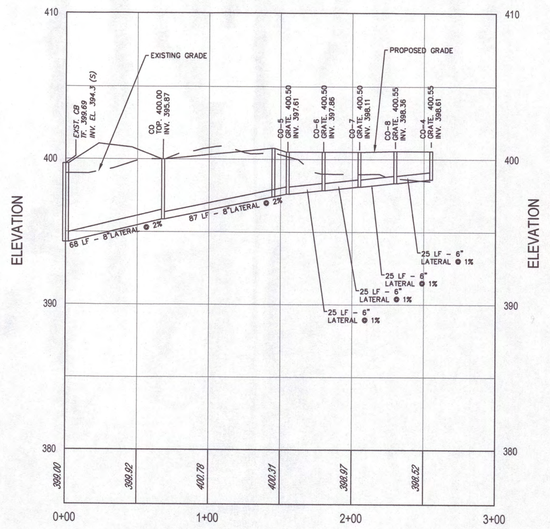
Drawing No.

CU-100

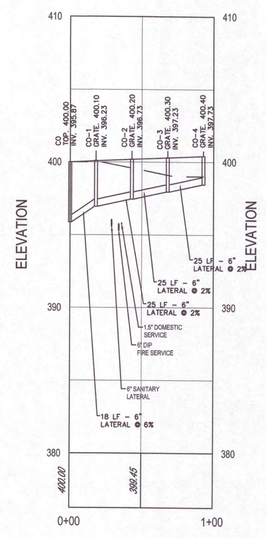
STORM PROFILES



CB-1.1 TO CB-1.4

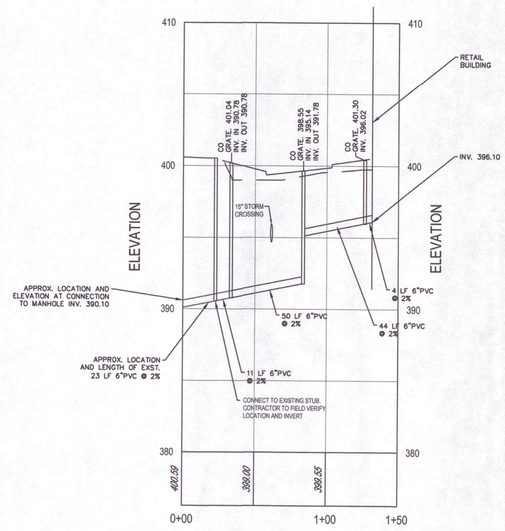


EX-CB TO CO-9



CO TO CO-4

SANITARY LATERAL PROFILE



SANITARY STUB TO RETAIL

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS INCLUDING INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING.

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VERTICAL SCALE IN FEET: 5 0 1 2 5

HORIZONTAL SCALE IN FEET: 50 0 20 50

Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0553-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

UTILITY PROFILES

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFFESIONAL CHIRAG V. THAKKAR ENGINEER

CHIRAG V. THAKKAR, P.E.
PROFESSIONAL ENGINEER
PA LIC. No. 075153

DATE	COMMENTS	NO.
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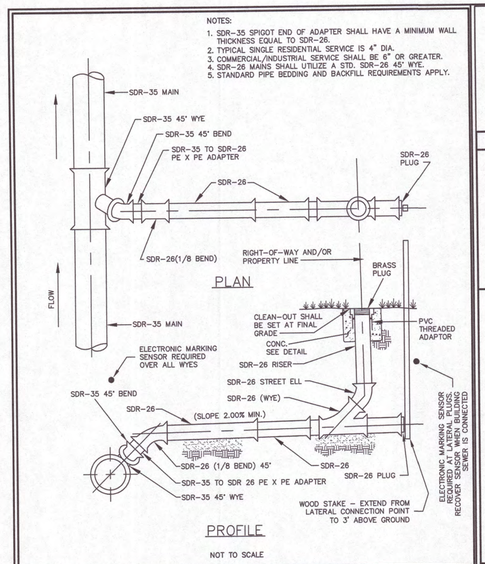
REVISIONS

Project No.	230015001
Date	05/16/2022
Scale	HORIZONTAL 1" = 50' VERTICAL 1" = 10'
Drawn By	AG
Checked By	CT

Drawing No.

CU-300

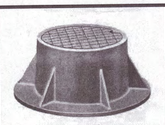


DENNIS E. BLACK ENGINEERING, INC.
2400 PHILADELPHIA AVE.
CHAMBERSBURG, PA. 17201
PHONE: (717) 263-8794

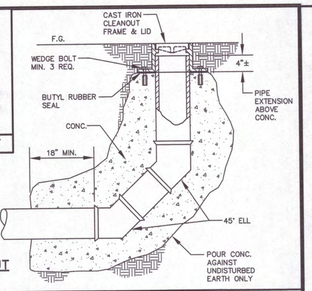
C.F.J.M.A. STANDARD DETAIL

4" & 6" CONVENTIONAL GRAVITY SEWER SERVICE LATERAL

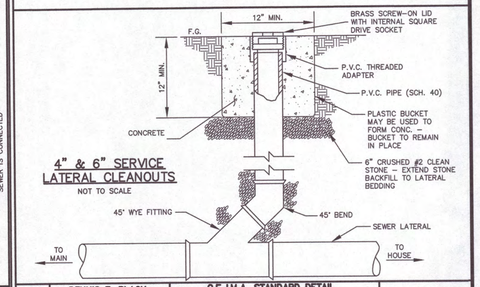
DWG. DATE: 2-4-02
REV. DATE: 6-3-10
DWG NO.: 1.310



TYPICAL C.I. CLEANOUT



MAIN LINE CLEANOUT
NOT TO SCALE



4" & 6" SERVICE LATERAL CLEANOUTS
NOT TO SCALE

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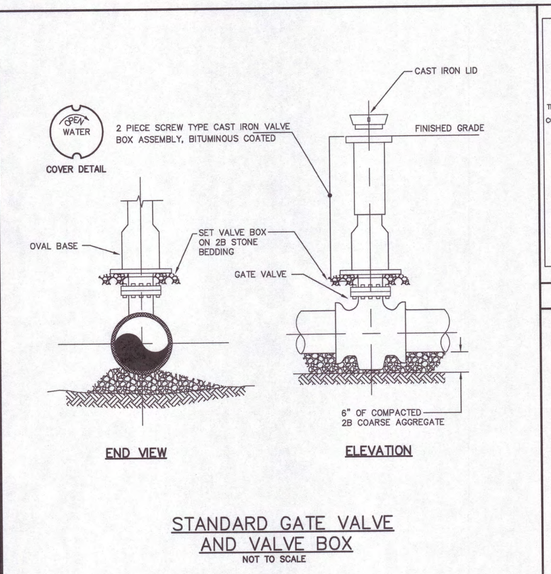
2400 PHILADELPHIA AVE.
CHAMBERSBURG, PA. 17201
PHONE: (717) 263-8794

C.F.J.M.A. STANDARD DETAIL

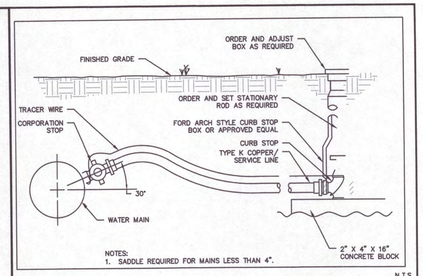
TYPICAL SANITARY SEWER CLEANOUTS

DWG. DATE: 2-4-02
REV. DATE:
DWG NO.: 1.225

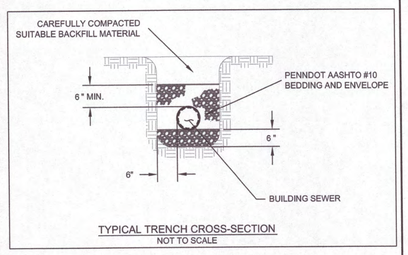


STANDARD GATE VALVE AND VALVE BOX
NOT TO SCALE

STANDARD GATE VALVE AND VALVE BOX DETAIL



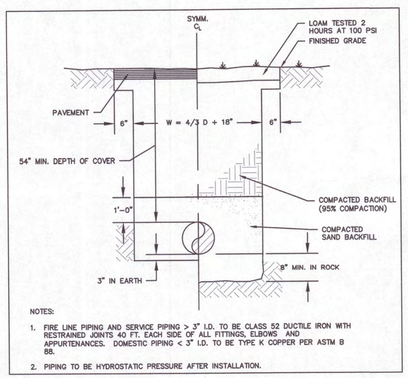
TYPICAL WATER SERVICE INSTALLATION



TYPICAL TRENCH CROSS-SECTION
NOT TO SCALE

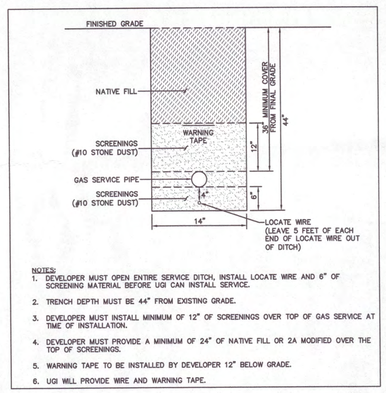
N.T.S.

SEWER LATERAL TRENCH



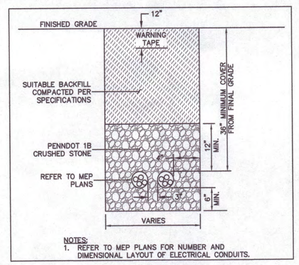
N.T.S.

WATER MAIN AND SERVICE TRENCH DETAIL



N.T.S.

GAS TRENCH DETAIL



N.T.S.

ELECTRIC & COMMUNICATIONS CONDUIT TRENCH DETAIL

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Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0553-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

UTILITY DETAILS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHIRAG V. THAKKAR
ENGINEER
No. 075153

CHIRAG V. THAKKAR
PROFESSIONAL ENGINEER
PA LIC. No. 075153

07/21/22	REVISED PLANS	1.
DATE	COMMENTS	NO.

REVISIONS

Project No.	230015001
Date	05/16/2022
Scale	N.T.S
Drawn By	AG
Checked By	CT

Drawing No.

CU-501

Sheet 12 of 14

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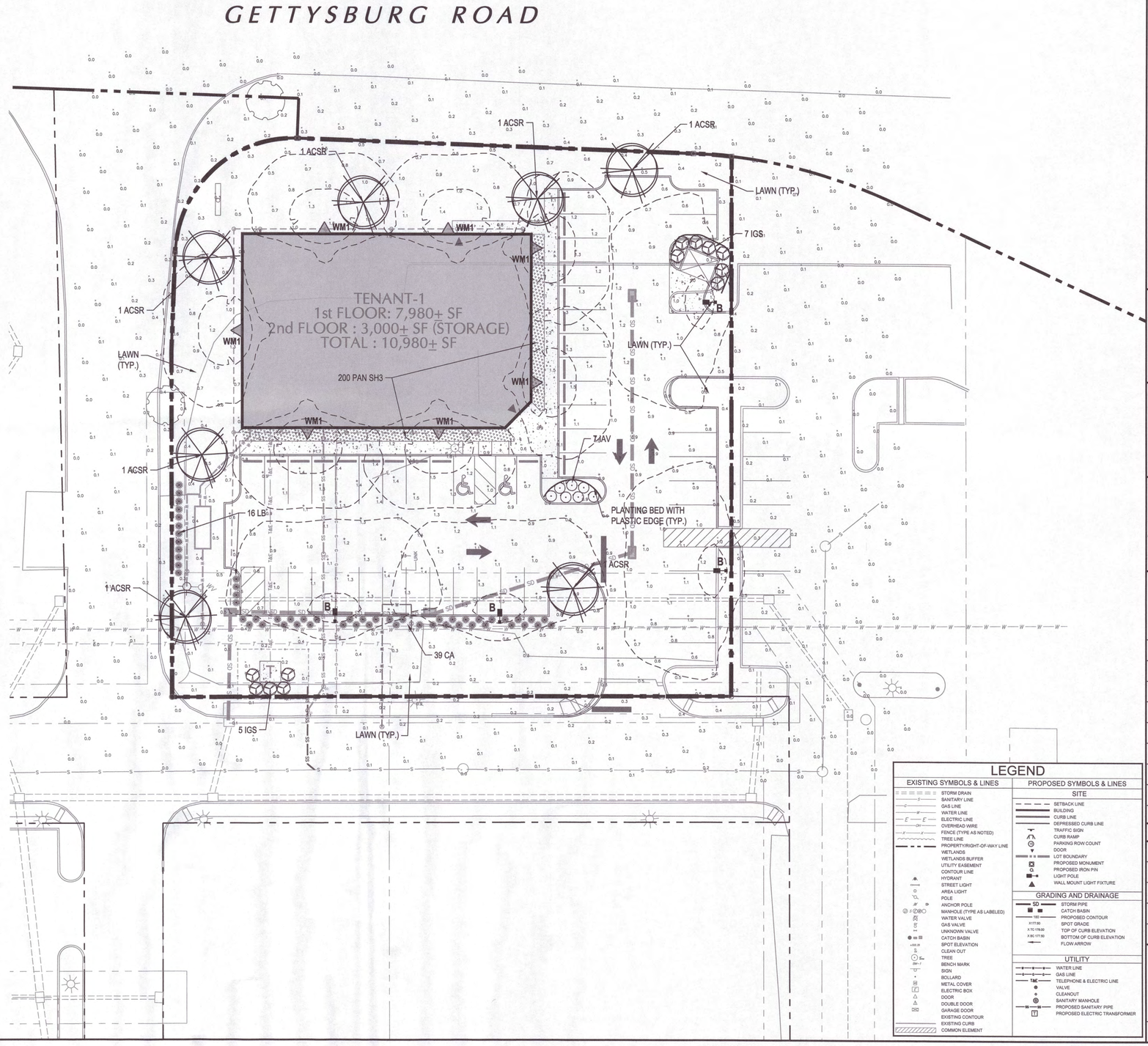

PLANT MATERIAL SCHEDULE

ABB.	SYMBOL	SCIENTIFIC NAME	COMMON NAME	QTY.	SIZE
TREES - DECIDUOUS					
ACSR		*Acer saccharum*	Sugar Maple	7	2"-2.5" Cal.
EVERGREEN SHRUBS					
IGS		*Ilex glabra 'Shamrock'*	Shamrock Inkberry Holly	12	30"-36" Ht.
IAV		*Ilex verticillata*	Winterberry	7	30"-36" Ht.
GROUND COVERS					
LB		*Liriope Muscari "Big Blue"*	Big Blue LilyTurf	16	1 Gal. spaced 18" o.c.
CA		*Calamagrostis acutiflora*	Karl Foerster	39	1 Gal. spaced 36" o.c.
ORNAMENTAL GRASS					
PAN SH3		*Panicum virgatum 'Shenandoah'*	Switch Grass	200	

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
	B	4	Lithonia Lighting	OSX0 LED P2 30K T3M MVOLT	OSX0 LED P2 30K T3M MVOLT	1	5416	0.95	49
	WM1	7	Lithonia Lighting	WDGE2 LED P3 30K 80CRI T4M	WDGE2 LED WITH P3 - PERFORMANCE PACKAGE, 3000K, 80CRI, TYPE 4 MEDIUM OPTIC	1	2997	0.95	32.1375

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking and Drives		1.1 fc	1.5 fc	0.5 fc	3.0:1	2.2:1
Site		0.5 fc	1.8 fc	0.0 fc	N/A	N/A

Note

1. Fixtures Mounted at 25' (Pole) and 15' (Wall)
2. Calculations Taken at Grade
3. Calculations are estimations based on the information provided and may vary with actual conditions

LEGEND

EXISTING SYMBOLS & LINES

STORM DRAIN
SANITARY LINE
GAS LINE
WATER LINE
ELECTRIC LINE
OVERHEAD WIRE
FENCE (TYPE AS NOTED)
TREE LINE
PROPERTY/RIGHT-OF-WAY LINE
WETLANDS
WETLANDS BUFFER
UTILITY EASEMENT
CONTOUR LINE
HYDRANT
STREET LIGHT
AREA LIGHT
POLE
ANCHOR POLE
MANHOLE (TYPE AS LABELED)
WATER VALVE
GAS VALVE
UNKNOWN VALVE
CATCH BASIN
SPOT ELEVATION
CLEAN OUT
TREE
BENCH MARK
SIGN
BOLLARD
METAL COVER
ELECTRIC BOX
DOOR
DOUBLE DOOR
GARAGE DOOR
EXISTING CONTOUR
EXISTING CURB
COMMON ELEMENT

PROPOSED SYMBOLS & LINES

SITE

SETBACK LINE
BUILDING
CURB LINE
DEPRESSED CURB LINE
TRAFFIC SIGN
CURB RAMP
PARKING ROW COUNT
DOOR
LOT BOUNDARY
PROPOSED MONUMENT
PROPOSED IRON PIN
LIGHT POLE
WALL MOUNT LIGHT FIXTURE

GRADING AND DRAINAGE

SD STORM PIPE
CATCH BASIN
100 PROPOSED CONTOUR
X177.60 SPOT GRADE
X TC 178.00 TOP OF CURB ELEVATION
X BC 177.60 BOTTOM OF CURB ELEVATION
FLOW ARROW

UTILITY

WATER LINE
GAS LINE
T&C TELEPHONE & ELECTRIC LINE
VALVE
CLEANOUT
SANITARY MANHOLE
PROPOSED SANITARY PIPE
T PROPOSED ELECTRIC TRANSFORMER

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SCALE IN FEET

Project

LOWER ALLEN COMMONS-CONDO#1

PROPERTY IDENTIFICATION # 13-23-0563-065U1

LOWER ALLEN TOWNSHIP
CUMBERLAND COUNTY PENNSYLVANIA

Drawing Title

LANDSCAPE AND LIGHITNG PLAN

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL CHIRAG V. THAKKAR ENGINEER No. 075153

CHIRAG V. THAKKAR P.E.
PROFESSIONAL ENGINEER
PA LIC. No. 075153

DATE	COMMENTS	NO.
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REVISIONS

Project No.	230015001
Date	05/16/2022
Scale	1" = 20'
Drawn By	CT
Checked By	CT

Drawing No.

LP-100

D-Series Size 0
LED Area Luminaire

d*series

Buy American

Catalog Number
Notes
Type

Specifications

EPA:	0.95 ft² (.09 m²)
Length:	26" (66.0 cm)
Width:	13" (33.0 cm)
Height$_L$:	3" (7.62 cm)
Height$_H$:	7" (17.8 cm)
Weight (max):	16 lbs (7.0 kg)

Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 70% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSXB0 LED						
Series	LEDs	Color temperature	Distribution	Voltage	Mounting	
DSXB0 LED	**Forward optics** P1 P5 P2 P6 P3 P7 P4 [1] **Rotated optics** P10 [1] P12 [1] P11 [1] P13 [1,2]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short [3]	MVOLT (120V-277V) [4] XVOLT (277V-480V) [5,6] 120° [7] 208° [7] 240° [7] 277° [7] 347° [7] 480° [7]	**Shipped included** SPA Square pole mounting [8] RPA Round pole mounting [8] WBA Wall bracket [9] SPUMBA Square pole universal mounting adaptor [10] RPUMBA Round pole universal mounting adaptor [10] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish) [11]	

Control options			Other options		Finish
Shipped installed NLTAIR2 nLight AIR generation 2 enabled [12,13] PIRHN Network, high/low ambient sensor [14] PER NEMA twist-lock receptacle only (control ordered separate) [15] PER5 Five-pin receptacle only (control ordered separate) [16] PE57 Seven-pin receptacle only (leads exit fixture) (control ordered separate) [16] DMG 0-10V dimming extend out back of housing for external control (control ordered separate) [16]	PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc [14] PIR1 High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc [14] PIR1FC3V High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [14] PIRH1FC3V High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [14] FAO Field adjustable output [17]	**Shipped installed** WG Visor-side shield [18] SF Single fuse (120, 277, 347V) [19] DF Double fuse (208, 240, 480V) [19] L90 Left rotated optics [7] R90 Right rotated optics [7] DDL Diffused drop lens [18] BAA 50°C ambient operation [7] BAA Buy America(n) Act Compliant **Shipped separately** BS Bird spikes [20] EGS External glare shield	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone	

Ordering Information

Accessories

Ordered and shipped separately.

DLL127 1.5 CI	Photocell - SSL twist-lock (120-277V) [21]
DLL347 1.5 CI JU	Photocell - SSL twist-lock (347V) [21]
DLL480 1.5 CI JU	Photocell - SSL twist-lock (480V) [21]
DSHS SBT B	Shorting cap [22]
DSHSS DD B	House-side shield for P1,P2,P3 and P4 [23]
DSHSS DD2 B	House-side shield for P10,P11,P12 and P13 [23]
DSHSS KD B	House-side shield for P5,P6 and P7 [23]
DSHSS B	Diffused drop lens (polycarbonate) [24]
PUMBA DDBXD U	Square and round pole universal mounting bracket adapter (specify finish) [25]
RAKA1000 U	Square and round pole universal mounting bracket adapter (specify finish) [25]
DSXEGS DWHGXD U	External glare shield

For more control options, visit DTL and ROAM online. See pg 3 for ordering info.

NOTES
1. Not available with P4, P7, and P13.
2. P10, P11, P12 and P13 and rotated options (L90 or R90) only available together.
3. Only available with NLTAIR2 PIRHN. Bluetooth is not available with TFTM.
4. Not available with HS or DDL.
5. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
6. XVOLT driver operates on 277V, 347V, or 480V (50/60 Hz). Fuse (SF) requires 208V, 240V or 480V. XVOLT not available with fusing (DF or SF).
7. Shipped only (available for use with P4, P7 and P13).
8. HVOLT operates with any voltage between 277V and 480V.
9. SVOLT not available with fusing (SF or DF) or photocontrol options PIR, PIR1, PIR1FC3V, PIRH1FC3V.
10. Suitable for mounting to round poles with outside diameters 3.5" and 10" diameter.
11. Universal mounting bracket intended for retrofit on existing pre-drilled poles only. 1.5 G vibration load rating per ANSI C136.31. Only usable when pole's drill pattern is NOT Uniform template #8.
12. Must order fixture with SPA mounting. Must be ordered as a separate accessory; see Accessories information. For use with 3-3/8" diameter mast arm (not included).
13. Sensor cover available only in dark bronze, black, white and natural aluminum colors.
14. Must be ordered with NLTAIR2. For more information on nLight AIR 2 and this feature, see the DSXB0 LED nLight AIR 2 guide.
15. Must be ordered with fixture for factory pre-drilling. Includes one (1) NEMA twist-lock receptacle. Control options other than 0-10V or Bluetooth require an additional separate receptacle.
16. Must be ordered with fixture for factory pre-drilling.
17. Requires luminaire to be specified with PER, PER5 or PER7 option. See Controls Table on page 4.
18. For retrofit use only. Only usable when pole's drill pattern is NOT Uniform template #8.
19. Not available with HVOLT.
20. Not available with any dimming controls options.
21. Not available with PIR, PIR1, PER, PER5, PER7, PIRHN or PIR1FC3V.
22. Not available with fusing (DF or SF).
23. Reference Motion Sensor Default Table on page 4 to see functionality.
24. Not available with other dimming controls options.
25. Not available with P5, P6, P7, P12 or P13.
26. Must be ordered with fixture for factory pre-drilling.
27. Requires luminaire to be specified with PER, PER5 or PER7 option. See Controls Table on page 4.
28. For retrofit use only. Only usable when pole's drill pattern is NOT Uniform template #8.

Ordering Information

EXAMPLE: DSX0 LED P3 40K 80CRI VF MVOLT SPA DDBXD

DSX0 LED								
Series	Package	Color temperature	CRI	Distribution	Voltage	Mounting		
DSX0 LED	P1 [1] P2 [1] P3 [1] P4 [1] P5 [1] P6 [1] P7 [1] AMP Amber	30K 3000K 40K 4000K 50K 5000K	70CRI* 70 CRI 80CRI 80 CRI LW* Limited Wavelength	T1S Type I Short T2M Type II Medium T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium	MVOLT 347 480*	**Shipped included** SPA Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (qty 2 clamp brackets only) [2]	**Shipped separately** AWS 3.5inch Architectural wall spacer PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.	

Options			Finish
E10WH Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 0°C min)	**Standalone Sensors/Controls** PIR Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.		DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone
E20WC Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, -20°C min)	PIR1 Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.	
PE* Photocell, Button Type	PIRH Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.	
DMG* 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)	PIR1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.	
BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.	PIRH1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.	
BAA Buy America(n) Act Compliant	**Networked Sensors/Controls**	
	NLTAIR2 PIR nLight AIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.	
	NLTAIR2 PIR1 nLight AIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights. See page 4 for out of the box functionality	

RSA Round Straight Aluminum Poles

Catalog Number
Notes
Type

Anchor Base Poles

RSA

ROUND STRAIGHT ALUMINUM

FEATURES & SPECIFICATIONS

INTENDED USE — These specifications are for RSA standards only. Round Straight Aluminum is a general purpose light pole for up to 30-foot mounting heights. This pole provides a lighter and naturally corrosion-resistant option for mounting fixtures and floodlights.

CONSTRUCTION —

Pole Shaft: The pole shaft is of uniform wall thickness and is one-piece extruded 6063 aluminum alloy with T6 temper. The shaft is uniform in cross-section down length of pole with no taper. Available shaft diameters are 4", 4.5", 5", and 6".

Pole Top: Options include tenon top, drilled for side mount fixture, tenon with drilling (includes extra handhole) and open top. Side drilled and open top poles include a removable aluminum top cap secured with three stainless-steel screws. The top cap resists intrusion of moisture or environmental contaminants.

Handhole: A non-reinforced handhole with grounding provision is provided near the base. Standard positioning varies with shaft width as follows: 4", 4.5", and 5" shaft, handhole at 12"; 6" shaft, handhole at 18" on side A. Positioning the handhole lower than standard may not be possible and requires engineering review; consult Tech Support Outdoor for further information. All handholes for a pole specified with openings for 4" through 6" shaft width has nominal dimension of 2" x 4" with surface mount overlap design. Standard and extra handholes come with cover and attachment hardware.

Bolt Caps/Base Cover: Pole base plate utilizes cast aluminum A365 bolt caps to cover anchor bolt and nut assembly. Spun aluminum covers available as an option.

Anchor Base/Bolts: Anchor base is cast from 356 alloy aluminum and is heat treated to a T6 temper after welding. Anchor bolts are manufactured to ASTM F1554 Standards Grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Upper portion of anchor bolt is galvanized per ASTM A-153; bolts have an "L" bend on bottom end and are galvanized a minimum of 12" on the threaded end. Each hot-dipped galvanized anchor bolt is furnished with two hex nuts and two flat washers.

HARDWARE — All structural and non-structural fasteners are stainless-steel.

FINISH — Extra durable painted finish is coated with TGIC (Triglycidyl Isocyanurate) Polyester powder that meets S4 and S8 classifications of ASTM B1039. Standard powder-coat finishes include Dark Bronze, White, Black, and Natural Aluminum colors. Other finishes include Brushed Aluminum, and Anodized Dark Bronze, Anodized Natural Aluminum and Anodized Black. Architectural Colors and Special Finishes are available by quote and include, but are not limited to RAL Colors, Custom Colors and Extended Warranty Finishes. Factory-applied primer paint finish is available for customer field-paint applications.

INSTALLATION — Do not erect poles without having fixtures installed. Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates. If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage. Lithonia Lighting is not responsible for the foundation design.

WARRANTY — 1-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

NOTE: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.

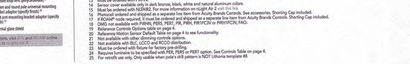
Ordering Information

Lead times will vary depending on options selected. Consult with your sales representative. **Example:** RSA 16 4-5C DM19 BA

RSA						
Series	Nominal fixture mounting height	Nominal shaft base size/wall thickness	Mounting	Options	Finish*	
RSA	8'-30' (for 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.) (See technical information table for complete ordering information.)	4C 4" (.125") 4-5C 4 1/2" (.125") 4-5G 4 1/2" (.188") 5C 5" (.125") 5E 5" (.156") 5G 5" (.188") 6E 6" (.156") 6G 6" (.188") (See technical information table for complete ordering information.)	**Tenon mounting** PT Open top T20 2-3/8" O.D. (2" NPS) T25 2-7/8" O.D. (2-1/2" NPS) T30 3-1/2" O.D. (3" NPS) T35 4" O.D. (3-1/2" NPS) KAC/KADJ/KSJ/KSV/KVJ/KVF Drill mounting[1] DM19 1 at 90° DM28 2 at 180° DM28PL 2 at 180° with one side plugged DM29 2 at 90° DM32 3 at 120° DM39 3 at 90° DM49 4 at 90° CSA/DSJ/KSJ/ADJ/KVJ**/OMERO**/HLA/KAX Drill mounting[2] DM19AS 1 at 90° DM28AS 2 at 180° DM29AS 2 at 90° DM32AS 3 at 120° DM39AS 3 at 90° DM49AS 4 at 90° RAD drill mounting[3] DM19RAD 1 at 90° DM28RAD 2 at 180° DM29RAD 2 at 90° DM32RAD 3 at 120° DM39RAD 3 at 90° DM49RAD 4 at 90° ESX Drill mounting[3] DM19ESX 1 at 90° DM28ESX 2 at 180° DM29ESX 2 at 90° DM39ESX 3 at 90° DM49ESX 4 at 90° AERO** Suspend drill mounting[3,4] DM19AST_ 1 at 90° DM28AST_ 2 at 180° DM29AST_ 2 at 90° DM39AST_ 3 at 90° DM49AST_ 4 at 90° OMERO** Suspend drill mounting[3,4] DM19MRT_ 1 at 90° DM28MRT_ 2 at 180° DM29MRT_ 2 at 90° DM39MRT_ 3 at 90° DM49MRT_ 4 at 90°	**Shipped installed** LHB Less anchor bolts (include when anchor bolts are not needed) VD Vibration damper TP Tamper resistant handhole cover fasteners HAxy Horizontal arm bracket (1 fixture)[5] FDLxy Festoon outlet less electrical[6,7] CPL12/xy 1/2" coupling[8] CPL34/xy 3/4" coupling[8] CPL1/xy 1" coupling[8] NPL12/xy 1/2" threaded nipple[8] NPL34/xy 3/4" threaded nipple[8] NPL1/xy 1" threaded nipple[8] EHRxy Extra handhole[9,10] BAA Buy America(n) Act Compliant[11] UL UL listed with label (includes NEC compliant cover) NEC NEC 410.30 compliant gasketed handhole (Not UL Labeled) **Shipped separately (replacement kit available)** (blank) BLTC Bolt caps FBC Full base cover (spun aluminum) (blank) TC Top cap (with drill-mount poles) (blank) HHC Handhole cover	**Super durable paint colors** DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white **Brushed finish** BA Brushed aluminum **Clear 1 architectural anodized** ABL Black ADB Dark bronze ANA Natural **Architectural colors and special finishes** Duranodic Anodize, Paint over Duranodic Anodize, RAL Colors, Custom Colors and Extended Warranty Finishes available.	

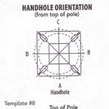
NOTES:
1. Wall thickness will be signified with a "C, "E" or a "G" in nomenclature. "C" - 0.125 | "E" - 0.156 | "G" - 0.188.
2. PT open top poles include top cap. When ordering tenon mounting and drill mounting for the same pole, follow this example: DM28T20. The combination includes a required extra handhole.
3. Refer to the fixture spec sheet for the correct drilling template pattern and orientation compatibility.
4. Insert "1" or "2" to designate fixture size; e.g. DM19AST2.
5. Specify location and orientation when ordering option.
   Example: HA12/90 = 1 and 2 inch horizontal arm, 90° side to front and inches; separate feet and inches with a "/".
   Example: 3R = 3 and 3RR 3H = 3 H
   Part "x" specify orientation from handhole (A,B,C,D). Refer to the Handhole Orientation diagram below.
   Example: 1/2" coupling at 3' 3" orientation C = CPL12/3-4C
6. Horizontal arm is 18" x 2-3/8" O.D. tenon standard with radius curve providing 12" rise. If ordering two horizontal arm at the same height, specify with XHxy. Example: HA2/XH3
7. FDL does not come with additional covering. Fixtures must be a minimum of 3ft (36in) from the base in any orientation. Distance between any fixtures and/or handhole must be at least 1ft and 4in (16in) apart in any orientation.
8. Combination of tenon-top and drill mount includes extra handhole. Extra Handholes must be a minimum of 3ft (36in) from the base in any orientation. Distance between any fixtures and/or handhole must be at least 1ft and 4in (16in) apart in any orientation.
9. Use when mill certifications are required. Some configurations may be excluded, consult factory.
10. Finish must be specified. Additional colors available; see Architectural Colors brochure linked here (Form No. 794.3).

EGS – External Glare Shield



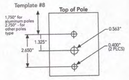
Drilling

HANDHOLE ORIENTATION
(from top of pole)



Handhole

Template #8



Top of Pole

0.563"
0.406" (2 PLCS)
1.625"
2.650"

Tenon Mounting Slipfitter

Tenon O.D.	Wall	Shallow Insert	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
2-3/8"	105	AST4-3-105	AST4-2-285	AST4-2-290	AST4-3-290	AST4-3-320	AST4-3-490
2-7/8"	105	AST5-3-105	AST5-2-285	AST5-2-290	AST5S-290	AST5S-320	AST5S-490
4"	083	AST6S-190	AST6S-285	AST6S-290	AST7S-290	AST7S-320	AST7S-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19BG	DM28BG	DM29BG	DM39BG	DM32AG	DM49BG
Maximum Acceptable Outside Pole Dimension							
SPA	#8	3-7/8"	3-7/8"	3.5"	3.5"	3.5"	3.5"
RPA	#8	3-7/8"	3-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#8	3-7/8"	3"	4"	4"	3"	4"
RPUMBA	#8	3-7/8"	3.5"	3.5"	3.5"	3.0"	3.5"

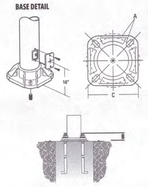
DSX0 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

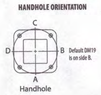
Fixture Quantity & Mounting Configuration						
Mounting Type		1 @ 90°	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
DSXB0 LED		0.950	1.900	1.800	2.850	2.850	3.544

RSA Round Straight Aluminum Poles

BASE DETAIL



HANDHOLE ORIENTATION



Handhole

IMPORTANT INSTALLATION NOTES:
- **Do not** erect poles without having fixtures installed.
- Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use factory template.
- If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage.
- Lithonia Lighting is not responsible for the foundation design.

POLE DATA						
Shaft base size	Bolt circle A	Bolt projection B	Base diameter C	Template description	Anchor bolt description
4"	6.75" - 8.00"	3.25"	8.99"	ASTEMPLATE PTS0057	AB18-0
4.5"	7.06" - 8.62"	3.25"	9.26"	ASTEMPLATE PTS0040	AB18-0
5"	7.75" - 8.00"	3.25"	9.61"	ASTEMPLATE PTS0058	AB18-0
6"	9.00" - 10.00"	3.50"	10.32"	ASTEMPLATE PTS0059	AB30-0

WDGE2 LED
Architectural Wall Sconce
Precision Refractive Optic

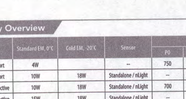
Buy American

Catalog Number
Notes
Type

Use the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D):	7"
Depth (D2):	1.5"
Height:	9"
Width:	11.5"
Weight (without options)	13.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 with industry leading precision refractive optics provides great uniform distribution and optical control. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI)						
					P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		–	750	1,200	2,000	–	–	–	–
WDGE2 LED	Visual Comfort	10W		–	1,200	2,000	3,000	4,500	6,000	–	–
WDGE3 LED	Precision Refractive	15W		18W Standalone / nLight	700	1,200	2,000	3,200	4,200	–	–
WDGE3 LED	Precision Refractive	15W		18W Standalone / nLight	–	7,500	8,500	10,000	12,000	–	–
WDGE4 LED	Precision Refractive			Standalone / nLight	–	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT SRM DDBXD

Series	Package	Color temperature	CRI	Distribution	Voltage	Mounting	
WDGE2 LED	P0 [1] P1 [1] P2 [1] P3 [1] P4 [1] AMP Amber	27K 2700K 30K 3000K 40K 4000K 50K 5000K	70CRI* 70 CRI 80CRI 80 CRI LW* Limited Wavelength	T1S Type I Short T2M Type II Medium T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium	MVOLT 347* 480*	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (qty 2 clamp brackets only) [2]	**Shipped separately** AWS 3.5inch Architectural wall spacer PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.

Options			Finish
E10WH Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 0°C min)	**Standalone Sensors/Controls** PIR Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.		DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone
E20WC Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, -20°C min)	PIR1 Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.	
PE* Photocell, Button Type	PIRH Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.	
DMG* 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)	PIR1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.	
BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.	PIRH1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.	
BAA Buy America(n) Act Compliant	**Networked Sensors/Controls**	
	NLTAIR2 PIR nLight AIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.	
	NLTAIR2 PIR1 nLight AIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights. See page 4 for out of the box functionality	

CAUTION: These specifications are intended for general purposes only. Lithonia Lighting reserves the right to change material or design, without prior notice, in a continuing effort to upgrade its products.

GENERAL LANDSCAPE NOTES:

1. NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1942 EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
2. STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
3. NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB, STAKE AS NECESSARY, AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.
4. LANDSCAPE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.
5. THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE AND REPLACE WITH PLANT MATERIAL SPECIFIED HEREIN AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
6. DELIVERY, STORAGE, AND HANDLING

   A. PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETERIORATION DURING DELIVERY, AND WHILE STORED AT SITE.

   B TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSIT. DO NOT DROP BALLED AND BURLAPPED STOCK DURING DELIVERY OR HANDLING.

   C ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOTBALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP-1/3 OF THE BALL AT THE TIME OF PLANTING. IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 6 INCHES INTO THE PLANTING HOLE. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.

   D. THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.
7. ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.
8. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE