

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

LOT 8

1550 SPILLMAN DRIVE

WARD 17

CITY OF BETHLEHEM

NORTHAMPTON COUNTY

PENNSYLVANIA

Record Notes

1. LVP IS THE DEVELOPER AND OWNER OF THE TRACT OF LAND ENCOMPASSED IN THIS LAND DEVELOPMENT.
2. THE LOT SHOWN IS SUBJECT TO ALL EASEMENTS VISIBLE, OR ON RECORD, OR AS REQUIRED BY A UTILITY TO SERVE SAID LOT AT SUCH TIME AS THE UTILITY IS INSTALLED.
3. ALL PUBLIC IMPROVEMENTS IN THIS PROJECT SHALL BE CONSTRUCTED TO THE STANDARDS OF THE CITY OF BETHLEHEM, THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION AND THE APPROPRIATE PUBLIC UTILITY AUTHORITIES, UNLESS SAID IMPROVEMENTS ARE APPROVED OTHERWISE.
4. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL STREET IDENTIFICATION AND TRAFFIC SIGNS AS DEEMED NECESSARY BY THE CITY. PLACEMENT SHALL COMPLY WITH ALL CITY STANDARDS REGARDING LOCATION, HEIGHT, SIZE AND TYPE.
5. EXISTING UTILITY POLES REQUIRED TO BE RELOCATED FOR CONSTRUCTION OF IMPROVEMENTS SHALL BE RELOCATED IN ACCORDANCE WITH ALL UTILITY COMPANY, CITY AND PENNDOT REGULATIONS AND SPECIFICATIONS.
6. IN ACCORDANCE WITH THE NATIONAL FLOOD INSURANCE PROGRAM, FIRM (FLOOD INSURANCE RATE MAP), FOR THE CITY OF BETHLEHEM, NORTHAMPTON COUNTY, COMMUNITY PANEL NUMBERS 420950263E, EFFECTIVE DATE JULY 16, 2014, THE PROJECT SITE IS LOCATED IN THE ZONE "X" AREA OF MINIMAL FLOOD HAZARD.
7. SINKHOLE REPAIRS AND CLOSURES SHALL BE COMPLETED IN ACCORDANCE WITH THE DETAILS PROVIDED ON THE PROJECT DRAWINGS.
8. THE SANITARY SEWER LATERAL IS PROPOSED TO BE PRIVATELY OWNED.
9. NO UTILITY WILL BE ACCEPTED BY THE CITY WITH A STRUCTURE OR REMNANT THEREOF ON TOP OF THE UTILITY. NO STRUCTURE SHOULD BE CONSTRUCTED OVER A UTILITY.
10. ALL ELECTRICAL WORK WILL REQUIRE AN ELECTRICAL PERMIT AND A "PPL" JOB REQUEST NUMBER. DEVELOPER MUST FOLLOW CITY OF BETHLEHEM'S REQUIREMENTS FOR PARKING LOT AREA LIGHTING. POLE HEIGHTS MAY NOT BE GREATER THAN 25 FEET. ANY ARTIFICIAL LIGHT MUST NOT INFRRINGE ON ADJACENT PROPERTY. ALL LIGHT FIXTURES SHALL HAVE A CUT OFF DESIGN THAT AIMS LIGHT DIRECTLY DOWNWARD.
11. AT THE TIME OF ANY FUTURE EXPANSION THE DESIGNER SHALL VERIFY AND PROVIDE ANY FEATURES NECESSARY TO ASSURE THAT THE DOWNSTREAM STORM SYSTEM HAS ADEQUATE CONVEYANCE CAPACITY AND MEETS CITY OF BETHLEHEM STANDARDS.
12. THE OWNER SHALL INSTALL KNOX BOX FOR CITY OF BETHLEHEM FIRE DEPARTMENT ACCESS.
13. ALL APPROVED AUDIBLE DEVICES SHALL BE CONNECTED TO EVERY AUTOMATIC SPRINKLER SYSTEM. SUCH SPRINKLER WATERFLOW ALARM DEVICES SHALL BE ACTIVATED BY WATERFLOW EQUIVALENT TO THE FLOW OF A SINGLE SPRINKLER OF THE SMALLEST ORIFICE SIZE INSTALLED IN THE SYSTEM. ALARM DEVICES SHALL BE PROVIDED ON THE EXTERIOR OF THE BUILDING IN AN APPROVED LOCATION. WHERE A FIRE ALARM SYSTEM IS INSTALLED, ACTUATION OF THE AUTOMATIC SPRINKLER SYSTEM SHALL ACTUATE THE BUILDING FIRE ALARM SYSTEM. IN AUTOMATIC SPRINKLER SYSTEMS WHERE MULTIPLE SPRINKLER RISERS ARE REQUIRED, AND THE RISERS ARE LOCATED IN SEPARATE AREAS WITHIN THE BUILDING, AN OUTSIDE VISIBLE ALARM NOTIFICATION APPLIANCE SHALL BE REQUIRED FOR EACH RISER. SUCH APPLIANCE SHALL BE A WHITE STROBE (MINIMUM 95 CANDELA STROBE RATING) PLACED IN AN APPROVED LOCATION ON THE EXTERIOR WALL, AS CLOSE AS PRACTICABLE, TO EACH SPRINKLER RISER. THE STROBE WILL ACTIVATE WHEN THE WATER FLOW ALARM FOR ITS RESPECTIVE RISER IS ACTIVATED. (ORD. 2014-21 - PASSED 8/5/14)
14. THE SUBJECT WAS PREVIOUSLY DEVELOPED AS THE BETHLEHEM STEEL AND PRIOR SUBDIVISION WAS SLAG AND IMPERVIOUS AREA. THUS, NO NEW IMPERVIOUS COVERAGE IS PROPOSED.
15. ANY CHANGE IN THE LOCATION OF THE FIRE DEPARTMENT CONNECTION MUST BE APPROVED BY THE CITY OF BETHLEHEM FIRE DEPARTMENT.
16. THE CONTRACTOR SHALL COMPLY WITH CHAPTER 33 OF THE IFC "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION" DURING THE CONSTRUCTION OF THE PROJECT.
17. A RECREATION FEE OF \$_____ SHALL BE PAID PRIOR TO FINALIZING THE DEVELOPER'S AGREEMENT.
18. ARCHITECT IS RESPONSIBLE FOR ADA COMPLIANCE FOR ALL ENTRANCES/EXITS FOR THE PROPOSED STRUCTURE/BUILDING.
19. THE CONTRACTOR SHALL PROVIDE BARRIER AT ALL GRADING DIFFERENCES OVER 30".

NPDES Note

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

As-Built Note

ACCURATE AS-BUILT PLANS SHALL BE KEPT UP TO DATE DURING THE CONSTRUCTION PROCESS. AT THE COMPLETION OF THE PROJECT, RECORD DRAWINGS SHALL BE DEVELOPED FROM AS-BUILT PLANS AND SUBMITTED TO THE CITY ENGINEER'S OFFICE. ALL FINAL DRAWINGS SHALL SHOW NORTH AMERICAN DATUM(NAD) 1983 STATE PLANE COORDINATES IN FEET (PENNSYLVANIA SOUTH, RIPS ZONE 3702) AND THE DIGITAL FILE SHALL BE IN STATE PLANE FEET COORDINATES AS APPLICABLE. THE HARD COPY OF THE RECORD DRAWINGS SHALL BE IN FORM OF MYLAR COPY. THE ENGINEER OF RECORD SHALL CERTIFY(I.E. P.E. STAMPED AND SIGNED) THAT THE RECORD DRAWINGS COMPLY SUBSTANTIALLY WITH THE APPROVED PLAN AND THAT THEY CONFORM TO INDUSTRY STANDARDS. ALL DIGITAL FILES SHALL RESIDE ON PC COMPATIBLE CD ROM CONTAINING THE DIGITAL REPRESENTATION OF THE FINAL PLAN AS PRESENTED ON THE TWENTY-FOUR (24) INCH BY THIRTY-SIX (36) INCH SHEETS. THE DIGITAL MAP SHALL BE AUTOCAD COMPATIBLE. ALL LAYERS INCLUDED IN THE DIGITAL MAPS SHALL BE THE STANDARDIZED LAYERS PREPARED AND UTILIZED BY THE CITY OF BETHLEHEM TO ENSURE COMPATIBILITY WITH THE CITY'S EXISTING CADD STANDARDS AND AS DESCRIBED IN APPENDIX A OF THE CITY'S SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

Revisions Note

IN ORDER TO MAINTAIN CONTINUITY BETWEEN PLAN REVISIONS, ANY CHANGES TO A PREVIOUS PLAN SUBMISSION SHALL BE FLAGGED WITH A TRIANGLE. ANY CHANGES NOT FLAGGED MAY BE CONSIDERED NOT APPROVED. FLAGGED CHANGES SHALL BE REFERENCED TO THE APPROPRIATE REVISION DATE IN THE REVISION BLOCK.

Engineering Permits Note

PRIOR TO ANY WORK WITHIN THE RIGHT-OF-WAY, PERMITS MUST BE OBTAINED FROM CITY ENGINEERING OFFICE, INCLUDING BUT NOT LIMITED TO WORK ON DRIVEWAYS, SIDEWALKS, CURB, UTILITY CONNECTIONS, ETC.

Stormwater Notes

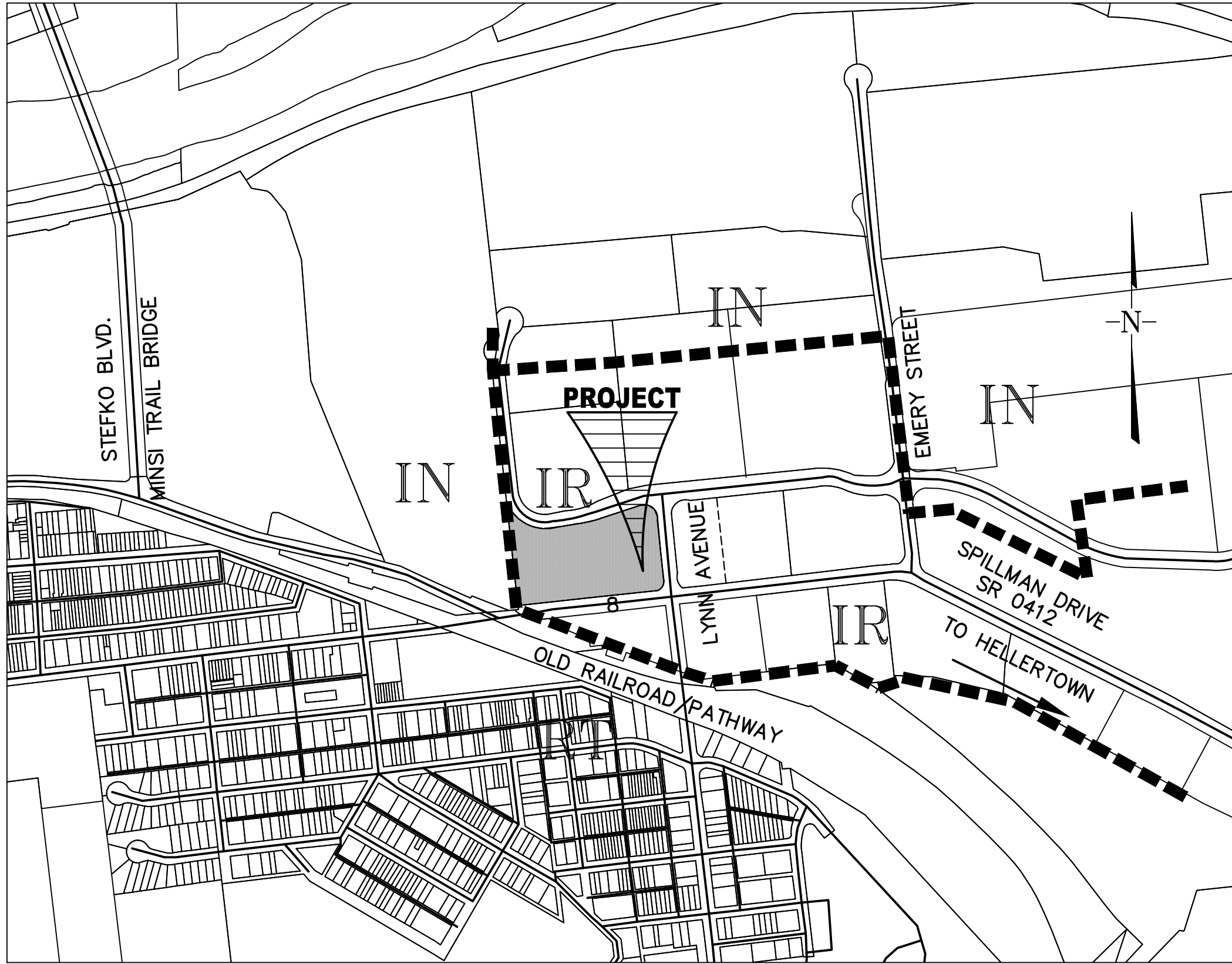
1. THE MAINTENANCE OF STORM WATER FACILITIES NOT DEDICATED TO AND ACCEPTED BY THE CITY, SHALL BE THE OWNER'S RESPONSIBILITY. THE OWNER'S DEED, AND THE DEED TO ANY SUBSEQUENT OWNER, SHALL NOTE THAT THE OWNER SHALL ACCEPT THE MAINTENANCE RESPONSIBILITIES. THE CITY OF BETHLEHEM SHALL BE PERMITTED TO INSPECT THE STORM WATER FACILITIES ON AT LEAST AN ANNUAL SCHEDULE TO ENSURE THAT ANY NECESSARY CORRECTIVE WORK IS PERFORMED IN A TIMELY MANNER.
2. THE DRAINAGE EASEMENT PROVIDES FOR THE FLOW OF STORMWATER ACROSS LOTS, AND MAY NOT BE ALTERED WITHOUT THE WRITTEN PERMISSION OF THE CITY ENGINEER. NO OBSTRUCTIONS SUCH AS PLANTING BERMS OR FENCES MAY BE INSTALLED IN THE DRAINAGE EASEMENTS AREAS WITHOUT SUFFICIENT PROVISION FOR THE PASSAGE OF STORMWATER, AND ANY SUCH PROPOSED PROVISION SHALL BE APPROVED IN WRITING BY THE CITY ENGINEER.

Inlet Marker Note

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

Building Stakeout Note

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



Location Map
SCALE 1" = 500'

Site Data For Lot 8

PARCELS:	P7-6-6H-8-0204	5.06 ACRES
WARD:	17	
TAX MAP REFERENCED:	MAP P7, BLOCK 6, LOT 6H-8	
DEED REFERENCED:	2004-1-797777	
ZONING DISTRICT:	IR (INDUSTRIAL REDEVELOPMENT)	
EXISTING USE:	VACANT LOT	
PROPOSED USE:	FLEX INDUSTRIAL USE	
WATER:	PUBLIC	
SEWER:	PUBLIC	
	CITY REQUIRED/ALLOWED IR DISTRICT	ALLOWED BY LVP COVENANTS
MINIMUM DEVELOPMENT AREA:	20,000 S.F.	N/A
MAXIMUM BUILDING COVERAGE:	90%	50%
MAXIMUM BUILDING HEIGHT:	200 FT	N/A
IMPERVIOUS COVERAGE:	90%	70%
MINIMUM LOT WIDTH:	60 FT	N/A
SETBACKS:		
FRONT YARD:	10 FT	40 FT
REAR YARD:	20 FT	15 FT
SIDE YARD:	10 FT	15 FT
PARKING SETBACKS:		
FRONT YARD:	15 FT	25 FT
REAR YARD:	N/A	10 FT
SIDE YARD:	N/A	10 FT
CURBLINE TO PARKING:	15 FT	N/A
PARKING REQUIREMENTS:		
MINIMUM SIZE:	9' X 18'	9' X 18'
SPACES REQUIRED:		
FLEX INDUSTRIAL USE	1 SPACE PER 1,000 S.F. OF BLDG.	50,000/1,000=50 SPACES
TOTAL SPACES REQUIRED:	50 SPACES	
ACCESSIBLE PARKING:	3 SPACES	
TOTAL SPACES:		57 SPACES PROVIDED
BICYCLE PARKING:	.05 X 57 = 2.9/3 SPACES	4 SPACES
(5% OF PARKING SPACES)		

Benchmarks for this Plan

1. CONCRETE MONUMENT -NORTH END OF CURB RETURN AT THE NORTHEAST CORNER OF THE INTERSECTION OF SPILLMAN AND LYNN-TOP ELEVATION=320.30
2. CONCRETE MONUMENT -SOUTH END OF CURB RETURN AT THE NORTHEAST CORNER OF THE INTERSECTION OF SPILLMAN AND LYNN-TOP ELEVATION=321.19



"CALL BEFORE YOU DIG"

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

PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776

THIS PROJECT'S DESIGNER INQUIRY NO.
20250941787

BETHLEHEM CITY DEPT. OF WATER/SEWER RESOURCES
MORAVIAN COLLEGE
PPL ELECTRIC
SERVICE ELECTRIC CABLE TV INC
UGI UTILITIES INC.
RCN TELECOM
VERIZON

PROJECT / SERIAL NUMBERS/ EXCAVATION-DEMOLITION / TYPE OF ONE CALL / DATE / ADDRESS / NEAREST INT. / TOWNSHIP / COUNTY
4415 20162023156 EXCAVATION ROUTINE 7/20/2016 SPILLMAN DRIVE LYNN AVE CITY OF BETHLEHEM NORTHAMPTON

PPL ELEC LEHIGH (PH) / BETHLEHEM C DWS (QX) / SVC ELEC CATV (SE) / RCN TELECOM (TCC) / UGI LEHIGH (UG) / VERIZON EASTERN (YN)

Land Development Plans

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

Supplemental Plans

VEHICLE MOVEMENT EXHIBIT - 1 OF 1

Statement of Intent

TO CONSTRUCT A FLEX INDUSTRIAL USE BUILDING WITH ASSOCIATED PARKING AND INFRASTRUCTURE.

Owner/ Applicant

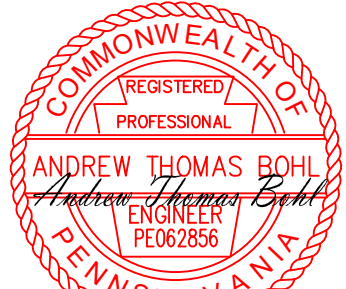
LVP, INC
1720 SPILLMAN DRIVE
BETHLEHEM, PA 18015
PHONE 610.866.4600

Site Address

1550 SPILLMAN DRIVE
BETHLEHEM, PA 18015

I, ANDREW THOMAS BOHL, P.E., A PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS THE PROPOSED DEVELOPMENT AS DESIGNED BY HANOVER ENGINEERING ASSOCIATES, INC.

ANDREW THOMAS BOHL, P.E. (PE-062856)
HANOVER ENGINEERING ASSOCIATES, INC.
252 BRODHEAD ROAD, SUITE 100
BETHLEHEM, PA 18107-8944
(610) 691-5644



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



Bethlehem Office
252 Brodhead Road, Suite 100
Bethlehem, PA 18017-8944
P: 610.691.5644
F: 610.691.0568
hanovereng.com

CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

THIS DOCUMENT IS THE PROPERTY OF HANOVER ENGINEERING ASSOCIATES, INC. ANY USE OF A COPY OF THIS DOCUMENT FOR ANY OTHER PROJECT OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF HANOVER ENGINEERING ASSOCIATES, INC. IS PROHIBITED. ANY SUCH VIOLATION SHALL BE CONSIDERED A BREACH OF THE PROFESSIONAL ETHICS OF THE ENGINEER AND WILL BE SUBJECT TO THE DISCIPLINARY ACTION OF THE BOARD OF PROFESSIONAL ENGINEERS OF THE COMMONWEALTH OF PENNSYLVANIA.

COVER SHEET

PROJECT TITLE:
Lot 8 - LVP VI - 1550 SPILLMAN DRIVE



SEAL

NO.

REVISIONS

DATE

DRAWN BY

SCALE

DATE

CHECKED BY

DATE

PROJECT NO.

5207

DATE

07/01/25

PROJECT NO.

5207

DATE

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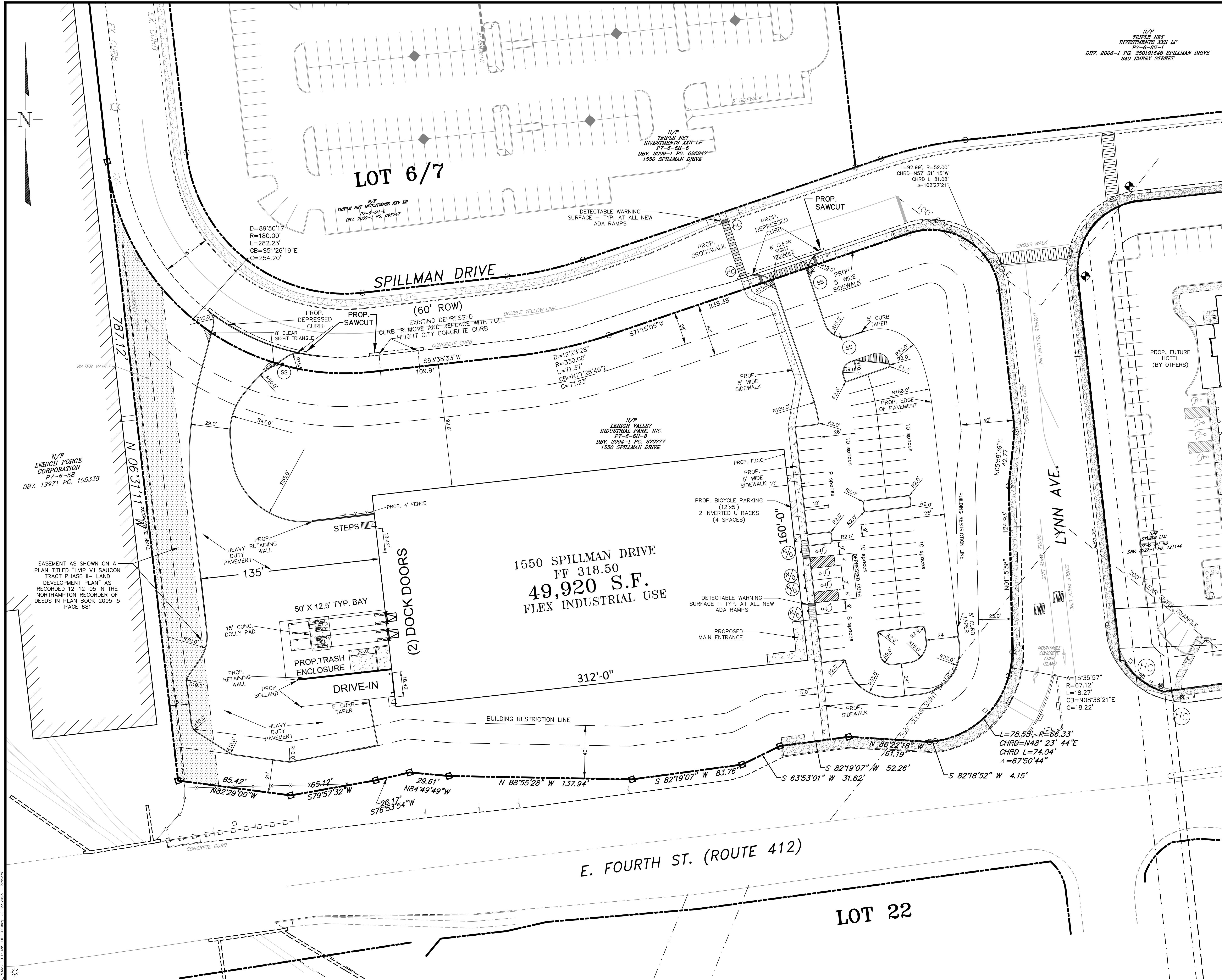
PROJECT NO.

5207

DATE

07/01/25

PROJECT NO.



AT THE MEETING ON _____, 2025, THE BETHLEHEM CITY PLANNING COMMISSION, BETHLEHEM, PENNSYLVANIA, DULY ENACTED AND APPROVED THIS PLAN OF THE PROPERTY LOT 8, LVP VII, 1550 SPILLMAN DRIVE LOCATED IN NORTHAMPTON COUNTY AS SHOWN HEREIN.

CHAIRMAN _____

SECRETARY _____

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

LVP/C STAFF PERSON RESPONSIBLE FOR REVIEW _____ DATE _____

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

Owner Signature:
LVP
COMMONWEALTH OF PENNSYLVANIA } SS:
COUNTY OF NORTHAMPTON }
I, _____ OF _____ LVP CORPORATION NAME
BEING DULY SWORN ACCORDING TO LAW, AND ACTING IN MY CAPACITY AS _____ DEPOSE AND SAY THAT THE ABOVE NAMED CORPORATION IS THE TRUE AND LAWFUL OWNER OF PROPERTY KNOWN AS _____ THAT THE ABOVE DESCRIBED PROPERTY IS IN THE PEACEFUL POSSESSION OF SAID CORPORATION AND THAT THERE ARE NO LIENS PENDING AFFECTING THE TITLE THEREOF.

_____ LVP CORPORATION
_____ CORPORATION OFFICIAL
SWORN AND SUBSCRIBED TO BEFORE ME THIS _____ DAY OF _____
_____ NOTARY PUBLIC
MY COMMISSION EXPIRES ON _____

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

RECORD PLAN

LOT 8 - LVP VII - 1550 SPILLMAN DRIVE

PLAN TITLE: LOT 8 - LVP VII - 1550 SPILLMAN DRIVE

PROJECT TITLE: LOT 8 - LVP VII - 1550 SPILLMAN DRIVE

NO. _____

CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

City of Bethlehem
Northampton County
Pennsylvania

City of Bethlehem
Northampton County
Pennsylvania

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City of Bethlehem
Northampton County
Pennsylvania

Legend	
	PROPERTY LINE
	EXISTING STORM SEWER
	EXISTING CURB
	EXISTING RIGHT-OF-WAY
	EXISTING UTILITY POLE
	EXISTING GUY WIRE
	EXISTING LIGHT POLE
	EXISTING IRON PIN
	EXISTING SIGN
	EXISTING TREES
	EXISTING STORM INLETS
	EXISTING STORM SEWER MANHOLE
	EXISTING SANITARY SEWER MANHOLE
	EXISTING CONCRETE SIDEWALK
	PROPOSED CONCRETE CURB
	PROPOSED DEPRESSED CONCRETE CURB
	PROPOSED PAINTED RED CURB FOR FIRE LANE
	PROPOSED CONCRETE SIDEWALK
	PROPOSED SIGN
	PROPOSED HANDICAP RAMP
	PROPOSED RETAINING WALL

Benchmarks for this Plan

- CONCRETE MONUMENT - NORTH END OF CURB RETURN AT THE INTERSECTION OF SPILLMAN AND LYNN - TOP ELEVATION=320.30
- CONCRETE MONUMENT - SOUTH END OF CURB RETURN AT THE INTERSECTION OF SPILLMAN AND LYNN - TOP ELEVATION=321.19



"CALL BEFORE YOU DIG"

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 THIS PROJECT'S DESIGNER INQUIRY NO. 20250941787

BETHLEHEM CITY DEPT. OF WATER/SEWER RESOURCES MORAVIAN COLLEGE PPL ELECTRIC SERVICE ELECTRIC CABLE TV INC. UGI UTILITIES INC. RCN TELECOM VERIZON

PROJECT / SERIAL NUMBERS / EXCAVATION-DEMOLITION / TYPE OF ONE CALL / DATE / ADDRESS / NEAREST INT. / TOWNSHIP / COUNTY 4415 20162023156 EXCAVATION ROUTINE 7/20/2016 SPILLMAN DRIVE LYNN AVE CITY OF BETHLEHEM NORTHAMPTON PPL ELEC LEHIGH (PI) / BETHLEHEM C DWS (OX) / SVC ELEC CATV (SET) / RCN TELECOM (TCC) / UGI LEHIGH (UG) / VERIZON EASTERN (YI)

SIGN SCHEDULE

SYMBOL	QUANTITY	DESCRIPTION	AREA	HEIGHT
	3	PENNDOT R1-1 "STOP"	30"x30"	9"
	4	PENNDOT R7-8 "RESERVED PARKING"	12"x18"	8.5"
	4	PENNDOT R7-8A "VAN ACCESSIBLE"	12"x18"	8.5"

SIGNAGE NOTE:

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

ADA RAMP DETAILS

NOTES:

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

Owner/ Applicant

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

Site Address

1550 SPILLMAN DRIVE
BETHLEHEM, PA 18015

I, ANDREW THOMAS BOHL, P.E., A PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS THE PROPOSED DEVELOPMENT AS DESIGNED BY HANOVER ENGINEERING ASSOCIATES, INC.

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252 BROOKHEAD ROAD, SUITE 100
BETHLEHEM, PA 18017-8944
(610) 691-5644



SEAL

Grading and Utility Notes

- SEE STORMWATER MANAGEMENT DESIGN REPORT FOR THE PRE AND POST WATERSHED LIMITS.
- ALL PROPOSED UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROPER CITY'S SPECIFICATIONS.
- ALL PIPE LENGTHS ARE FROM CENTER OF THE MANHOLE OR INLET.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS. WHERE CONFLICTS EXIST WITH THESE PLANS, THE ENGINEER OF RECORD SHALL BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE. SERVICE SIZES TO BE DETERMINED BY THE ARCHITECT.
- ANY UTILITY CROSSING WITH LESS THAN MINIMUM OF EIGHTEEN INCHES (18") VERTICAL CLEARANCE SHALL BE CONCRETE ENCASED.
- STRUCTURAL DETAILS FOR ALL STORMWATER MANAGEMENT STRUCTURES INCLUDING INLETS, JUNCTION BOXES, HEADWALLS, DETENTION BASINS, BAFFLES, AND SPILLWAYS, SHALL BE DESIGNED BY A STRUCTURAL ENGINEERING REGISTERED IN THE STATE OF PENNSYLVANIA AND SUBMITTED TO THE ENGINEER OF RECORD FOR A REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXEMPTIONS TO THIS REQUIREMENT SHALL BE PERMITTED FOR ALL STANDARD STRUCTURES DESIGNED AND DETAILED IN EXISTING PENNDOT STANDARD DRAWINGS. IN THOSE CASES, THE STANDARD STRUCTURAL DETAIL TO BE USED FOR THE STRUCTURE SHALL BE SUBMITTED TO THE ENGINEER FOR RECORD, FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- ALL SANITARY SEWER AND WATERLINES AND LATERALS SHALL HAVE A MINIMUM OF TEN FEET (10') SEPARATION.
- ANY EXISTING UTILITY POLES INTERFERING WITH CONSTRUCTION SHALL BE RELOCATED TO A LOCATION IN ACCORDANCE WITH UTILITY OWNERS, AND CITY'S REGULATIONS AND SPECIFICATIONS.
- ALL ELECTRIC, TELEPHONE, CABLE TELEVISION AND NATURAL GAS DISTRIBUTION LINES SHALL BE PLACED UNDERGROUND.
- THE SANITARY SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY'S RULES AND REGULATIONS.
- ALL ROOF LEADERS ARE TO BE PVC PIPE OR APPROVED EQUAL WITH A MINIMUM SLOPE OF 1.50% AS SHOWN ON THE PLAN.
- THE SITE CONTRACTOR SHALL INSTALL THE FIRE AND DOMESTIC WATER SERVICE INTO THE MECHANICAL ROOM AND STOP AT THE FLANGE INSIDE THE BUILDING. COORDINATE FINAL FLANGE LOCATION WITH PLUMBING AND FIRE PROTECTOR CONTRACTOR.
- ALL PROPOSED STORM SEWER PIPE SHALL BE HOPE PIPE WITH O-RING GASKETS UNLESS NOTED OTHERWISE ON THE PLAN.
- STRUCTURAL DETAILS FOR ALL STORM WATER STRUCTURES SHALL BE DESIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF PENNSYLVANIA AND SUBMITTED TO THE CITY OF BETHLEHEM FOR REVIEW AND APPROVAL, AT LEAST THIRTY (30) DAYS BEFORE CONSTRUCTION.
- ABANDONMENT OF EXISTING UTILITIES AND ASSOCIATED STRUCTURES WITHIN STREET RIGHTS-OF-WAY OR EASEMENTS TO BE DEDICATED TO THE CITY, SHALL BE COMPLETED IN ACCORDANCE WITH METHODS APPROVED BY THE CITY.
- THE DEVELOPER SHALL ENSURE THAT CURRENT AS-BUILT RECORDS ARE MAINTAINED DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION, CERTIFIED (I.E., P.E. STAMPED) AS-BUILT DRAWINGS SHALL BE SUBMITTED BY THE DEVELOPER'S ENGINEERS. THESE AS-BUILT DRAWINGS SHALL BE FOUND ACCEPTABLE BY THE CITY ENGINEER PRIOR TO RELEASE OF ANY REMAINING SECURITY.
- THE MAINTENANCE OF THE STORM WATER FACILITIES, SHALL BE THE OWNER'S RESPONSIBILITY UNTIL SUCH TIME AS SAID FACILITIES ARE DEDICATED TO THE CITY. THE OWNER'S DEED, AND THE DEEDS TO ANY SUBSEQUENT OWNER, SHALL NOTE THAT THE OWNER SHALL ACCEPT THE MAINTENANCE RESPONSIBILITIES OF ANY FACILITIES NOT DEDICATED. THE CITY OF BETHLEHEM SHALL BE PERMITTED TO INSPECT THE STORM WATER FACILITIES ON AT LEAST AN ANNUAL SCHEDULE TO ENSURE THAT ANY NECESSARY CORRECTIVE WORK IS PERFORMED IN A TIMELY MANNER.
- IN ORDER TO MAINTAIN CONTINUITY BETWEEN PLAN REVISIONS, ANY CHANGES TO A PREVIOUS PLAN SUBMISSION SHALL BE FLAGGED WITH A TRIANGLE. ANY CHANGES NOT FLAGGED MAY BE CONSIDERED NOT APPROVED. FLAGGED CHANGES SHALL BE REFERENCED TO THE APPROPRIATE REVISION DATE.
- FOR STORM SEWER MANHOLES/BOXES, THE ACTUAL RIM/ GRATE ELEVATION SHALL BE FINAL ADJUSTED PRIOR TO PAVING.
- SLAG BACKFILL IS PROHIBITED IN WATER LINE TRENCH.
- SEE PROFILE SHEET FOR THE STORM AND SANITARY PIPE SIZE, PIPE SLOPE, INVERTS, RIM ELEVATION AND GRATE ELEVATION.
- THE CONTRACTOR SHALL SUPPLY THE REQUIRED SIZE AND QUANTITY OF CONDUITS TO MEET THE DEMANDS FOR POWER, DATA, CABLE AND COMMUNICATIONS.
- THE EXISTING CONDUIT FOR THE EXISTING STREET LIGHTING MAY NEED TO BE LOWERED AT THE TIME OF DRIVEWAY CONSTRUCTION AT THE DISCRETION OF THE CITY ENGINEERING DEPARTMENT.
- THE CONTRACTOR SHALL CUT AND CAP THE EXISTING ABANDONED WATER MAIN OR ANY OTHER UTILITY IF THE UTILITY LINE CONFLICTS WITH THE CONSTRUCTION OF THE BUILDING OR ANY OTHER SITE IMPROVEMENT FOR THIS PROJECT.
- MATERIAL SHOP DRAWINGS SHALL BE REVIEWED/APPROVED BY LVP OR THEIR REPRESENTATIVE.
- FINISH PAVEMENT AT THE LOADING DOCKS SHALL BE 48" BELOW FINISH FLOOR.
- THE PROPOSED FIRE AND DOMESTIC WATER SERVICES SHALL BE ENCASED WITH A POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH AWWA C105/A21.5-B2, SECTION 5.4.
- THE PROPOSED ELEVATIONS HAVE BEEN PROVIDED FOR THE PROPOSED RETAINING WALLS FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE ENGINEERED DRAWINGS TO THE CITY OF BETHLEHEM BUILDING DEPARTMENT FOR APPROVAL PRIOR TO CONSTRUCTION.
- A FOUR FOOT (4') TALL FENCE SHALL BE INSTALLED WHERE THE RETAINING WALL EXCEEDS 30" IN HEIGHT.

Legend

- PROPERTY LINE
EXISTING STORM SEWER
EXISTING CURB
EXISTING SANITARY SEWER
EXISTING OVERHEAD ELECTRIC LINE
EXISTING GAS MAIN
EXISTING WATER LINE
EXISTING RIGHT-OF-WAY
EXISTING MAJOR CONTOURS
EXISTING MINOR CONTOURS
EXISTING STORM INLET
EXISTING STORM MANHOLE
EXISTING SANITARY MANHOLE
EXISTING WATER VALVE
EXISTING FIRE HYDRANT
EXISTING UTILITY POLE
EXISTING GUY WIRE
EXISTING LIGHT POLE
EXISTING IRON PIN
EXISTING SIGN
EXISTING LIGHT POST
EXISTING TREES
EXISTING CONCRETE SIDEWALK
PROPOSED CONCRETE CURB
PROPOSED DEPRESSED CONCRETE CURB
PROPOSED PAINTED RED CURB FOR FIRE LANE
PROPOSED CONCRETE SIDEWALK
PROPOSED MAJOR CONTOURS
PROPOSED MINOR CONTOURS
PROPOSED STORM INLET
PROPOSED SANITARY MANHOLE
PROPOSED UNDERGROUND ELECTRIC
PROPOSED UNDERGROUND CABLE
PROPOSED GAS LATERAL
PROPOSED SANITARY LATERAL
PROPOSED WATER LATERAL
PROPOSED STORM SEWER
PROPOSED STORM SEWER MANHOLE
PROPOSED RETAINING WALL
PROP. 4' FENCE
PROPOSED FIRE HYDRANT

Benchmarks for this Plan

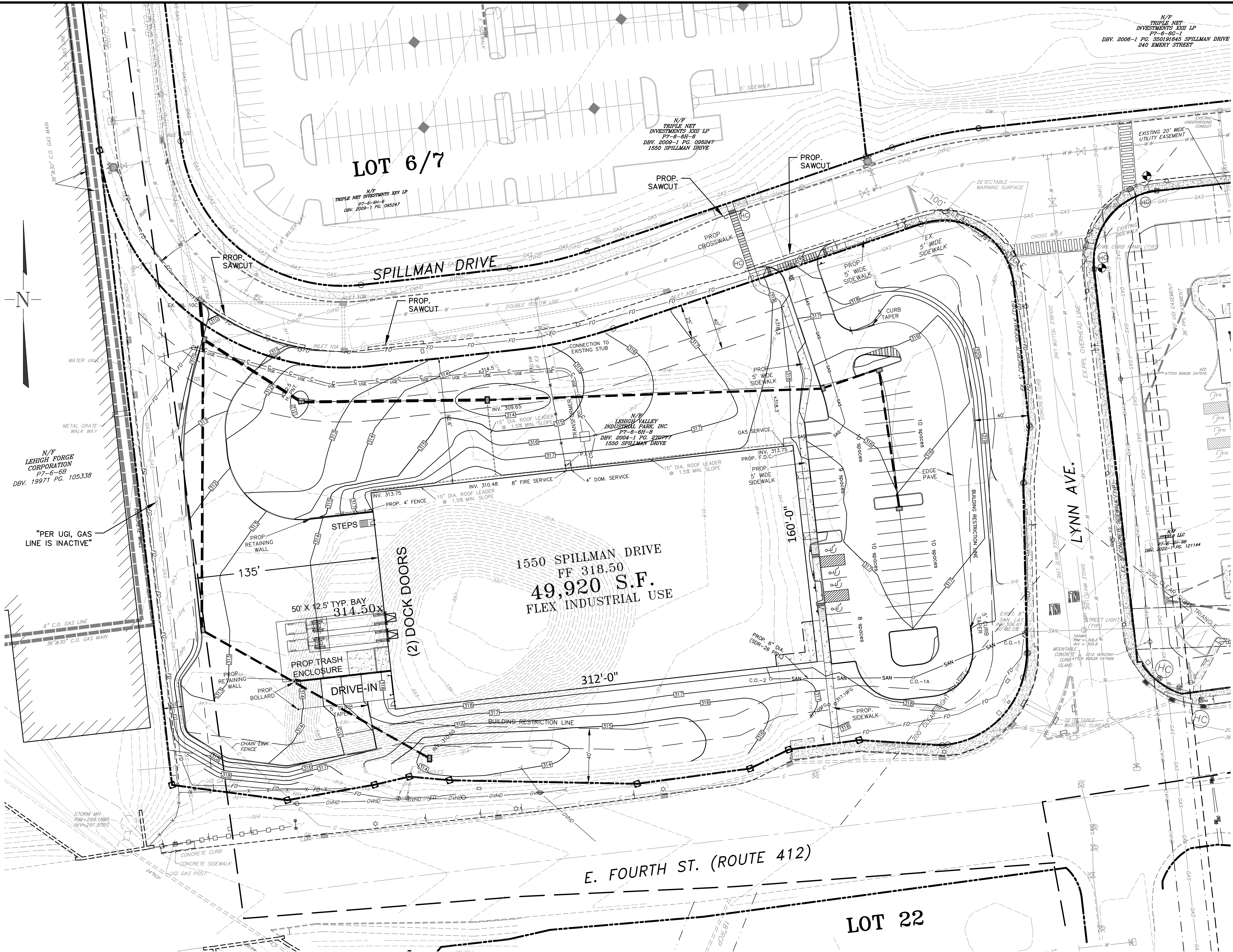
- CONCRETE MONUMENT - NORTH END OF CURB RETURN AT THE NORTHEAST CORNER OF THE INTERSECTION OF SPILLMAN AND LYNN - TOP ELEVATION=320.30
- CONCRETE MONUMENT - SOUTH END OF CURB RETURN AT THE NORTHEAST CORNER OF THE INTERSECTION OF SPILLMAN AND LYNN - TOP ELEVATION=321.19



"CALL BEFORE YOU DIG"
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776
THIS PROJECT'S DESIGNER INQUIRY NO.
20250941787

BETHLEHEM CITY DEPT. OF WATER/SEWER RESOURCES
MORAVIAN COLLEGE
PPL ELECTRIC
SERVICE ELECTRIC CABLE TV INC
UGI UTILITIES INC.
RON TELECOM
VERIZON

PROJECT / SERIAL NUMBERS / EXCAVATION-DEMOLITION / TYPE OF ONE CALL / DATE / ADDRESS / NEAREST INT. / TOWNSHIP / COUNTY
4415 / 20162023156 / EXCAVATION / ROUTINE / 7/20/2016 / SPILLMAN DRIVE / LYNN AVE/CITY OF BETHLEHEM / NORTHAMPTON
PPL ELEC LEHIGH (PH) / BETHLEHEM C DWS (QX) / SVC ELEC CATV (SET) / RON TELECOM (TCC) / UGI LEHIGH (LU) / VERIZON EASTERN (V)



N/F
TRIPLE NET
INVESTMENTS XIV LP
P7-6-BG-1
DBV. 2008-1 PG. 0050181645 SPILLMAN DRIVE
840 EMERY STREET

N/F
TRIPLE NET
INVESTMENTS XIV LP
P7-6-BG-1
DBV. 2008-1 PG. 0050181645 SPILLMAN DRIVE
1550 SPILLMAN DRIVE

N/F
LEHIGH VALLEY
INDUSTRIAL PARK INC.
P7-6-BG-1
DBV. 2004-1 PG. 002071 1550 SPILLMAN DRIVE

PRELIMINARY/FINAL LAND DEVELOPMENT

PLAN TITLE: GRADING AND UTILITY PLAN

PROJECT TITLE: LOT 8 - LVP VII - 1550 SPILLMAN DRIVE

SCALE: 1" = 30'

CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

HanoverEngineering

Bethlehem Office
252 Brodhead Road, Suite 100
Bethlehem, PA 18017-8514
P: 610.691.5644
F: 610.691.0968
hanovereng.com

SEAL

NO.

REVISIONS

DATE

CHECKED BY

DRAWN BY

SCALE

DATE

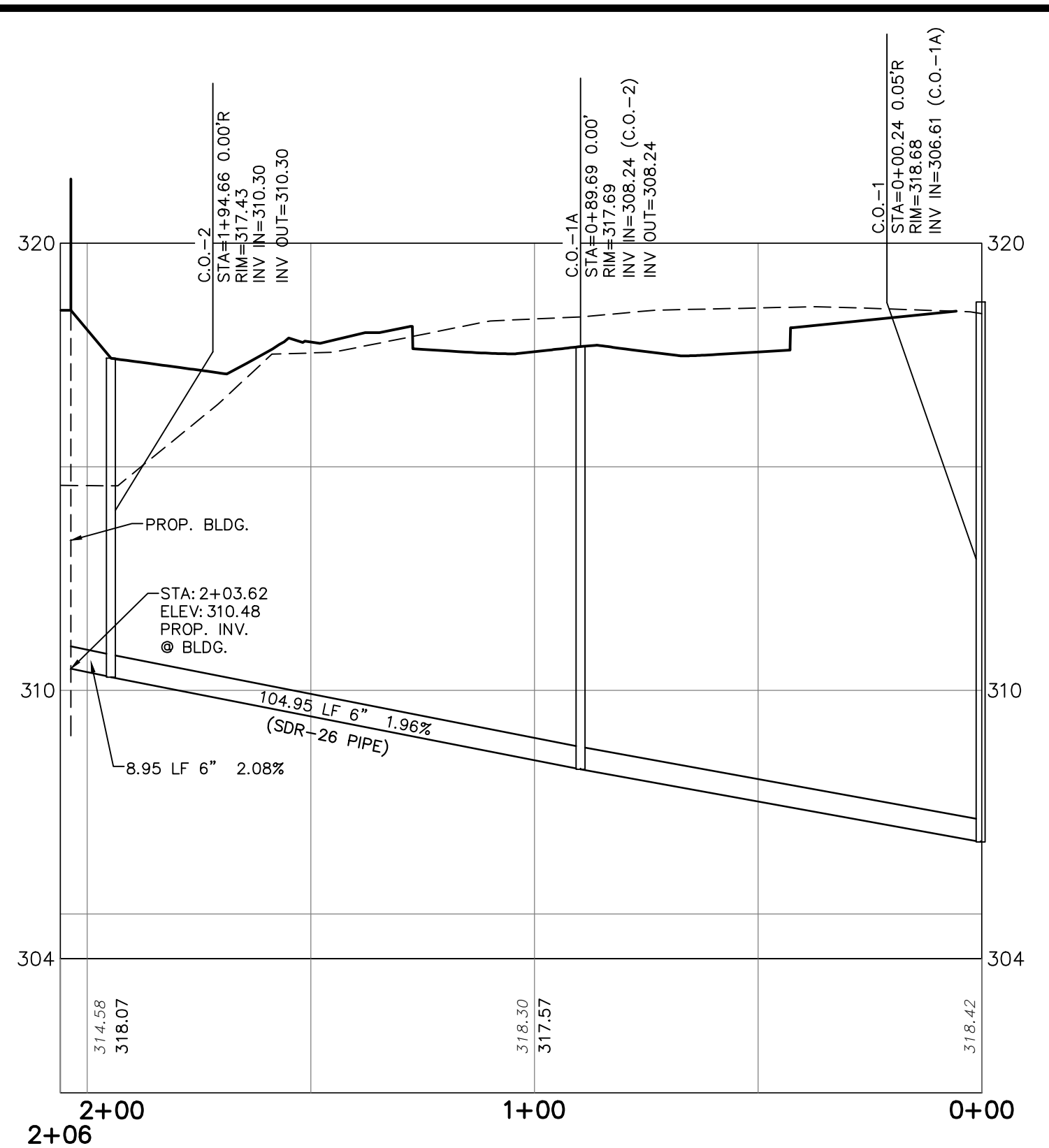
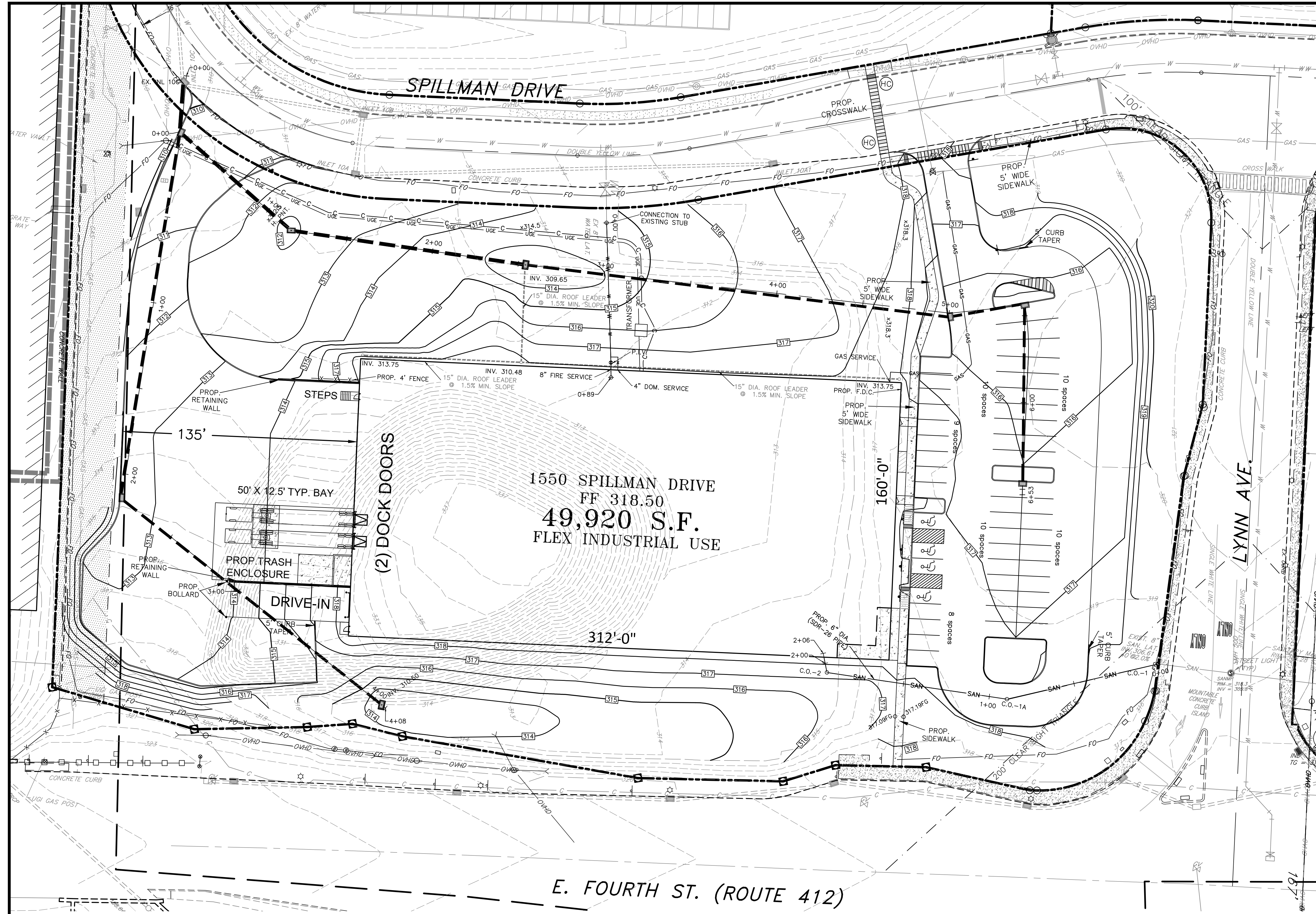
PROJECT NO.

SHEET NO.

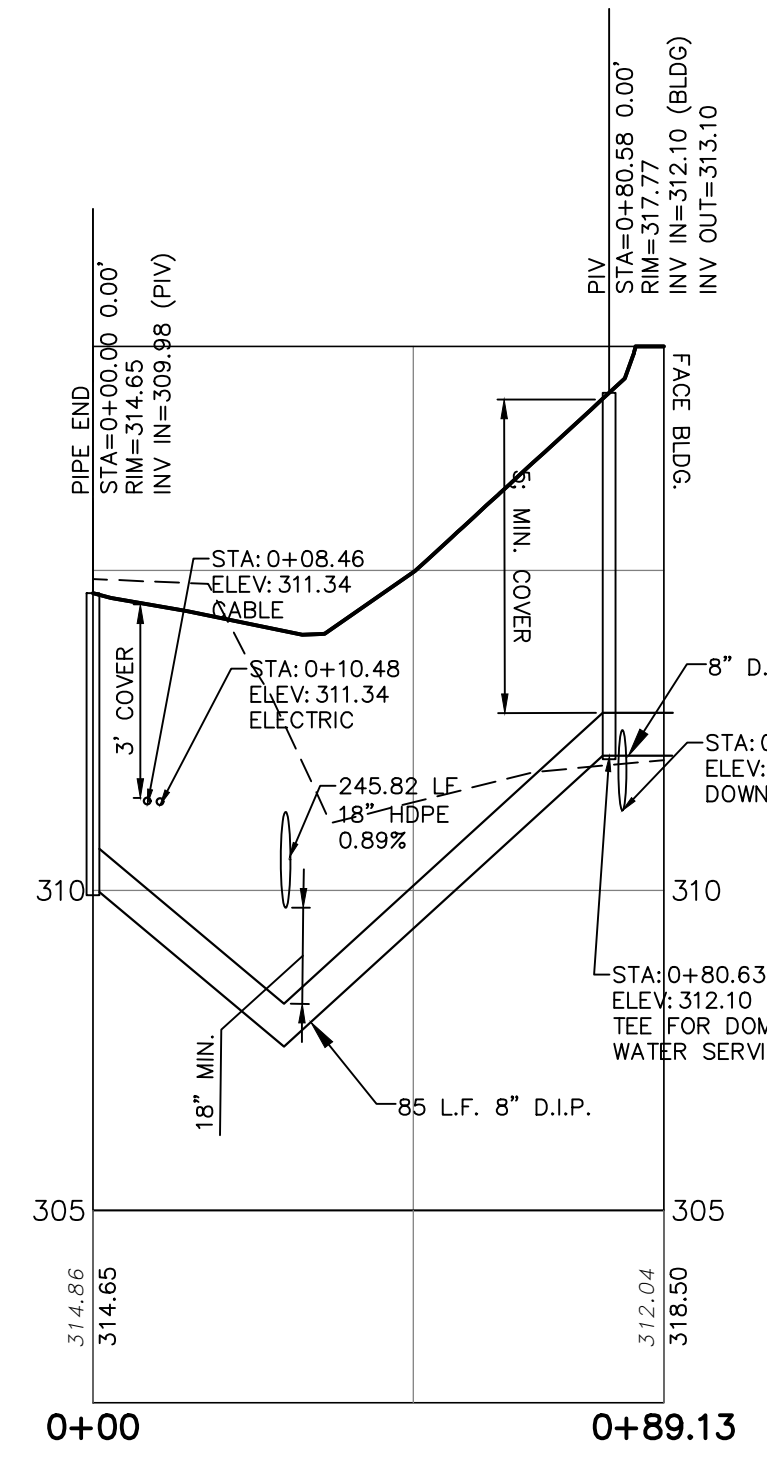
04 of 15

NORTH CHART

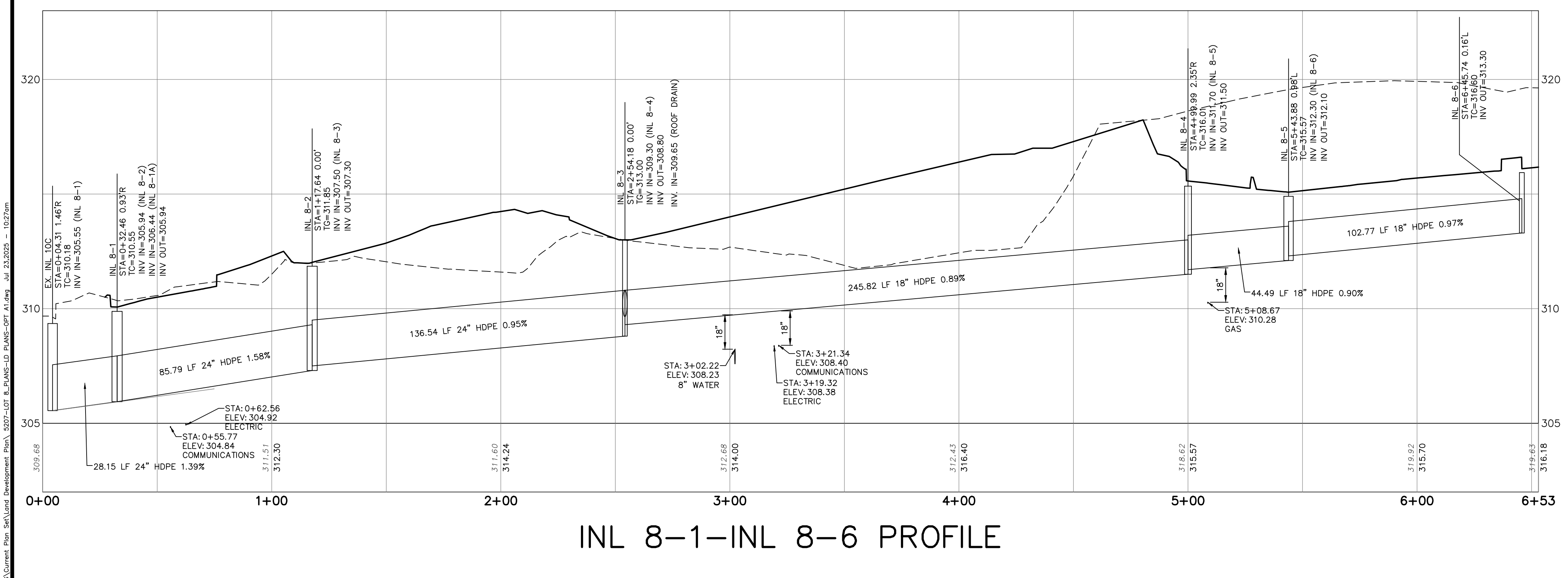
NAME	TYPE	TOP	INV. IN	INV. OUT	PIPE DIA.	LENGTH	MATERIAL	SLOPE	DOWNSTREAM STRUCTURE
EX. INL 10C	STD BOX, C TOP	TC=310.02	305.55 (INL 8-1)						
INL 8-1	STD BOX, C TOP	TC=310.55	305.94 (INL 8-2) 306.44 (INL 8-1A)	305.94	24"	28.15'	HDPE	1.39%	EX. INL 10C
INL 8-1A	STD BOX, C TOP	TC=313.10	308.50 (INL 8-1B)	308.30	18"	213.56'	HDPE	0.87%	INL 8-1
INL 8-1B	STD BOX, M TOP	TG=313.00		310.30	18"	192.37'	HDPE	0.94%	INL 8-1A
INL 8-2	STD BOX, M TOP	TG=311.85	307.50 (INL 8-3)	307.30	24"	85.79'	HDPE	1.58%	INL 8-1
INL 8-3	STD BOX, M TOP	TG=313.00	309.30 (INL 8-4) 309.65 (ROOF DR.)	308.80	24"	136.54'	HDPE	0.95%	INL 8-2
INL 8-4	STD BOX, C TOP	TC=316.01	311.70 (INL 8-5)	311.50	18"	245.82'	HDPE	0.89%	INL 8-3
INL 8-5	STD BOX, C TOP	TC=315.57	312.30 (INL 8-6)	312.10	18"	44.49'	HDPE	0.90%	INL 8-4
INL 8-6	STD BOX, C TOP	TC=316.60		313.30	18"	102.77'	HDPE	0.97%	INL 8-5



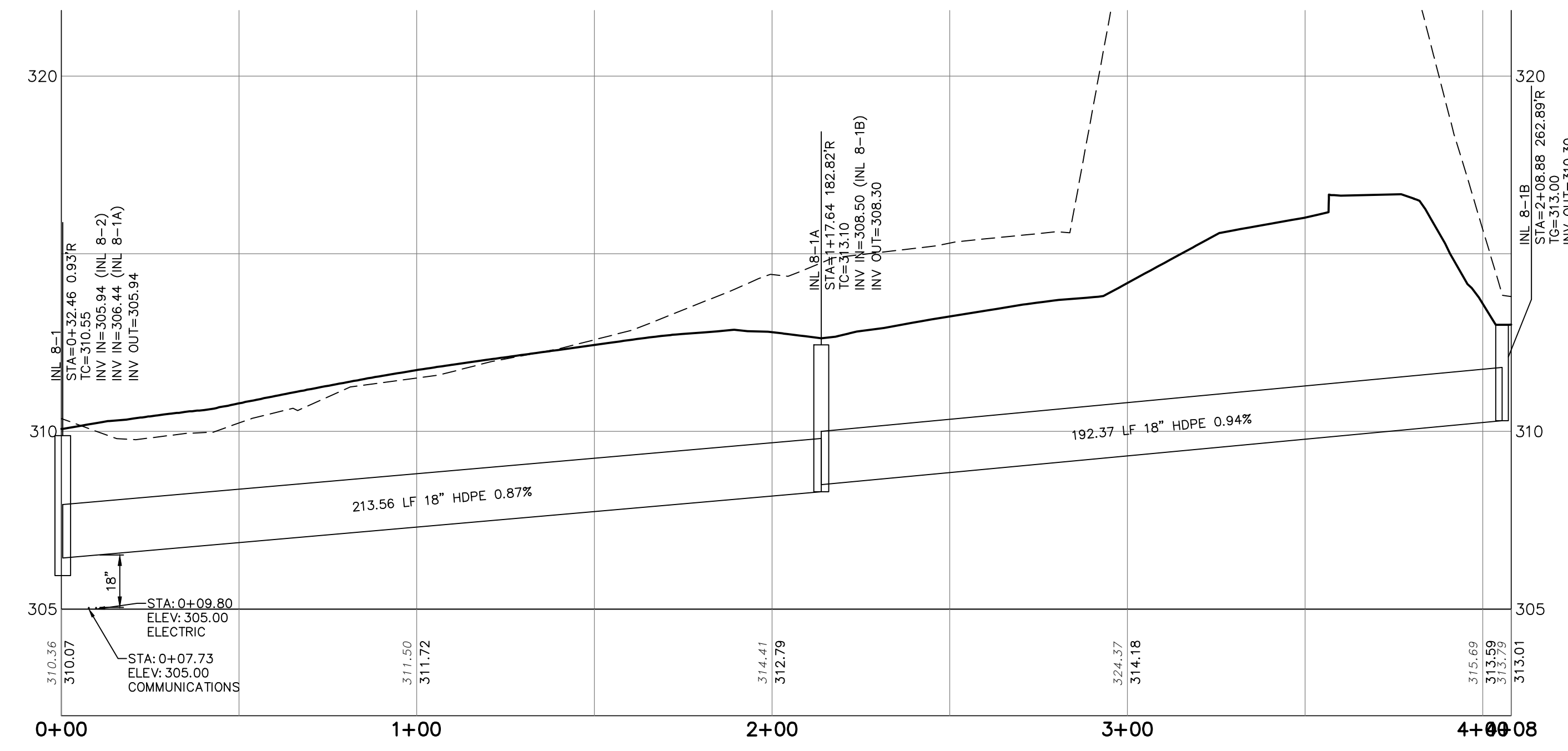
SANITARY LATERAL PROFILE
SANITARY SEWER LATERAL PROFILE
HORIZONTAL SCALE = 1"=30'
VERTICAL SCALE = 1"=6'



WATER SERVICE PROFILE
WATER SERVICE PROFILE
HORIZONTAL SCALE = 1"=30'
VERTICAL SCALE = 1"=6'



STORM SEWER SYSTEM PROFILE
HORIZONTAL SCALE = 1"=30'
VERTICAL SCALE = 1"=6'



STORM SEWER SYSTEM PROFILE
HORIZONTAL SCALE = 1"=30'
VERTICAL SCALE = 1"=6'

PRELIMINARY/FINAL LAND DEVELOPMENT

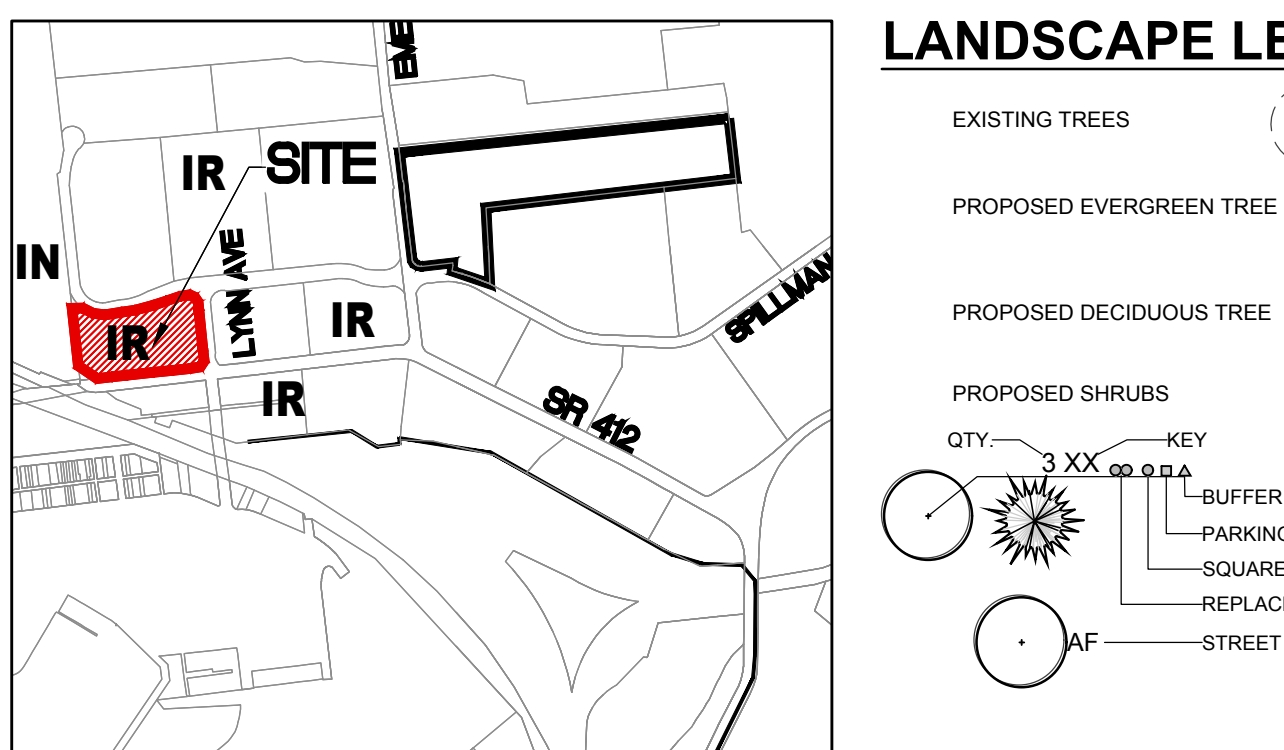
UTILITY PROFILE PLAN
LOT 8 - LVP VII - 1550 SPILLMAN DRIVE

CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

Sanitary Sewer
Water Service
Storm Sewer

5207
05 15

252 Brodhead Road, Suite 100
Bethlehem, PA 18017-8514
P: 610.691.5644
F: 610.691.0968
hanovereng.com



Location Map
SCALE: 1" = 100'

PLANT SCHEDULE						
STREET TREE SCHEDULE						
DECIDUOUS TREES						
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
PL	3	Platanus x acerifolia 'Bloodgood'	Trident Maple	Min. 3 1/2" cal.	B&B	7' Clear branch Ht.
ZS	8	Zelkova serrata 'Haka'	Haka Zelkova	Min. 3 1/2" cal.	B&B	7' Clear branch Ht.

PARKING TREE SCHEDULE						
DECIDUOUS TREES						
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
UP	4	Ulmus parvifolia 'Emer II'	Alleé Elm	Min. 3" cal.	B&B	7' Clear branch Ht.

BUFFER SCHEDULE						
DECIDUOUS TREES						
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
NS	4	Nyssa sylvatica 'Green Gable'	Green Gable Nyssa	Min. 3" cal.	B&B	

SHRUBS						
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
JS	24	Juniperus x pfitzeriana 'Sea Green'	Sea Green Juniper	Min. 12" Ht.	Cont. B&B	
VP	19	Viburnum 'Pragense'	Prague Viburnum	Min. 30" Ht.	Cont. B&B	

SQUARE FOOT AREA LANDSCAPE SCHEDULE						
DECIDUOUS TREES						
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
AR	9	Acer rubrum 'F-S-KW78'	Armstrong Gold Maple	Min. 3" cal.	B&B	

EVERGREEN TREES						
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
CJ	12	Quercus macrocarpa 'Radicata'	Radiata Japanese Cedar	Min. 7" Ht.	B&B	

SHRUBS						
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
PF	3	Pinus flexilis 'Vanderwolf's Pyramid'	Vanderwolf's Pyramid Pine	Min. 18" Ht.	Cont. B&B	

PERENNIALS/GROUNDCOVERS/GRASSES						
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
HP	11	Hydrangea paniculata 'Little Quick Fire'	Little Quick Fire Hydrangea	Min. 30" Ht.	Cont. B&B	

REPLACEMENT TREE SCHEDULE						
DECIDUOUS TREES						
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
LS	5	Liquidambar styraciflua 'Rotundifolia'	Roundleafed Sweetgum	Min. 2 1/2" cal.	B&B	7' Clear branch Ht.

SHRUBS						
KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPEC.	NOTES
QJ	3	Quercus macrocarpa 'Radicata'	Radiata Japanese Cedar	Min. 7" Ht.	B&B	

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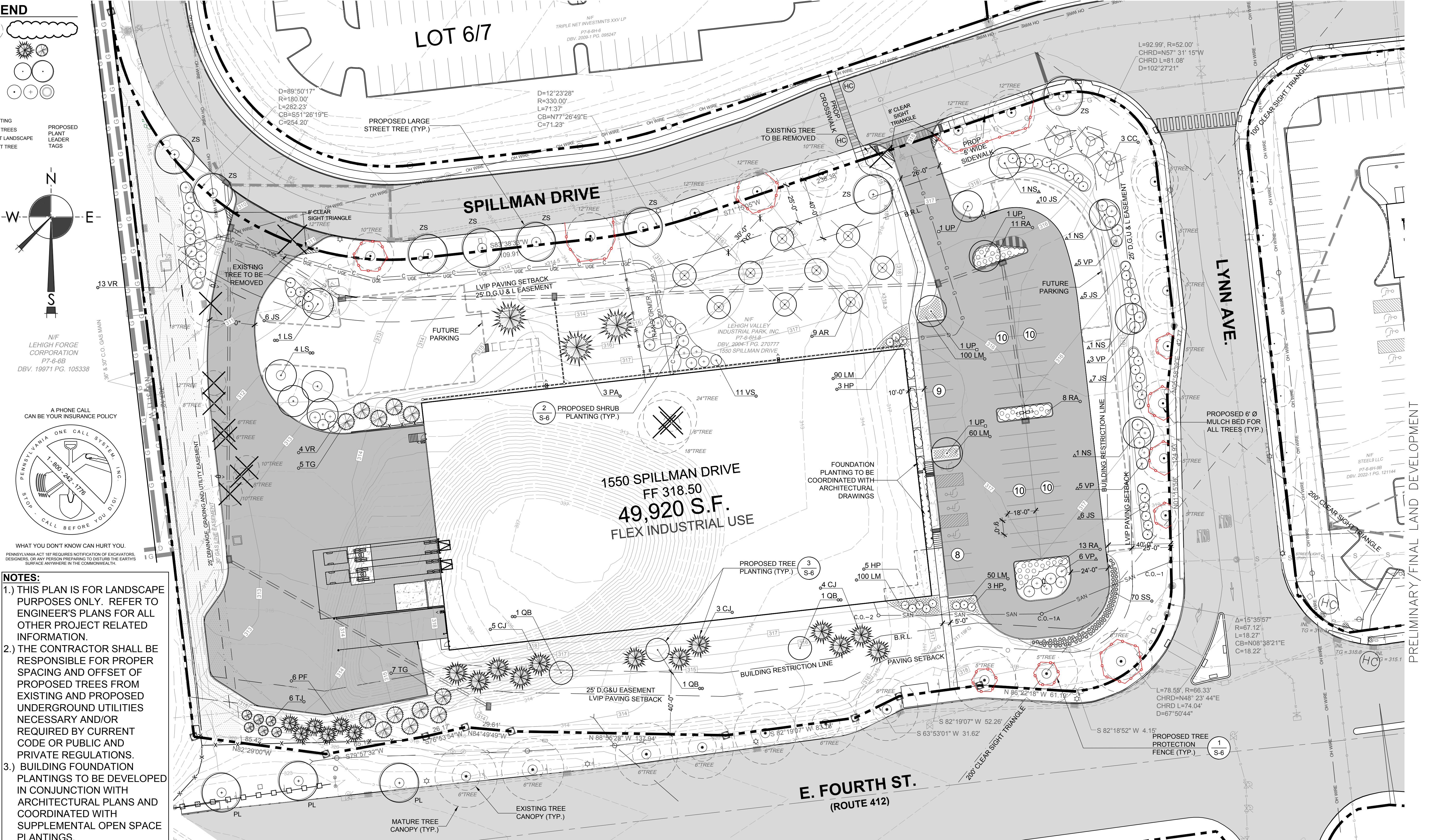
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1550 SPILLMAN DRIVE
FF 318.50
49,920 S.F.
FLEX INDUSTRIAL USE

E. FOURTH ST.
(ROUTE 412)

LYNN AVE.

SPILLMAN DRIVE

1550 SPILLMAN DRIVE

FF 318.50

49,920 S.F.

FLEX INDUSTRIAL USE

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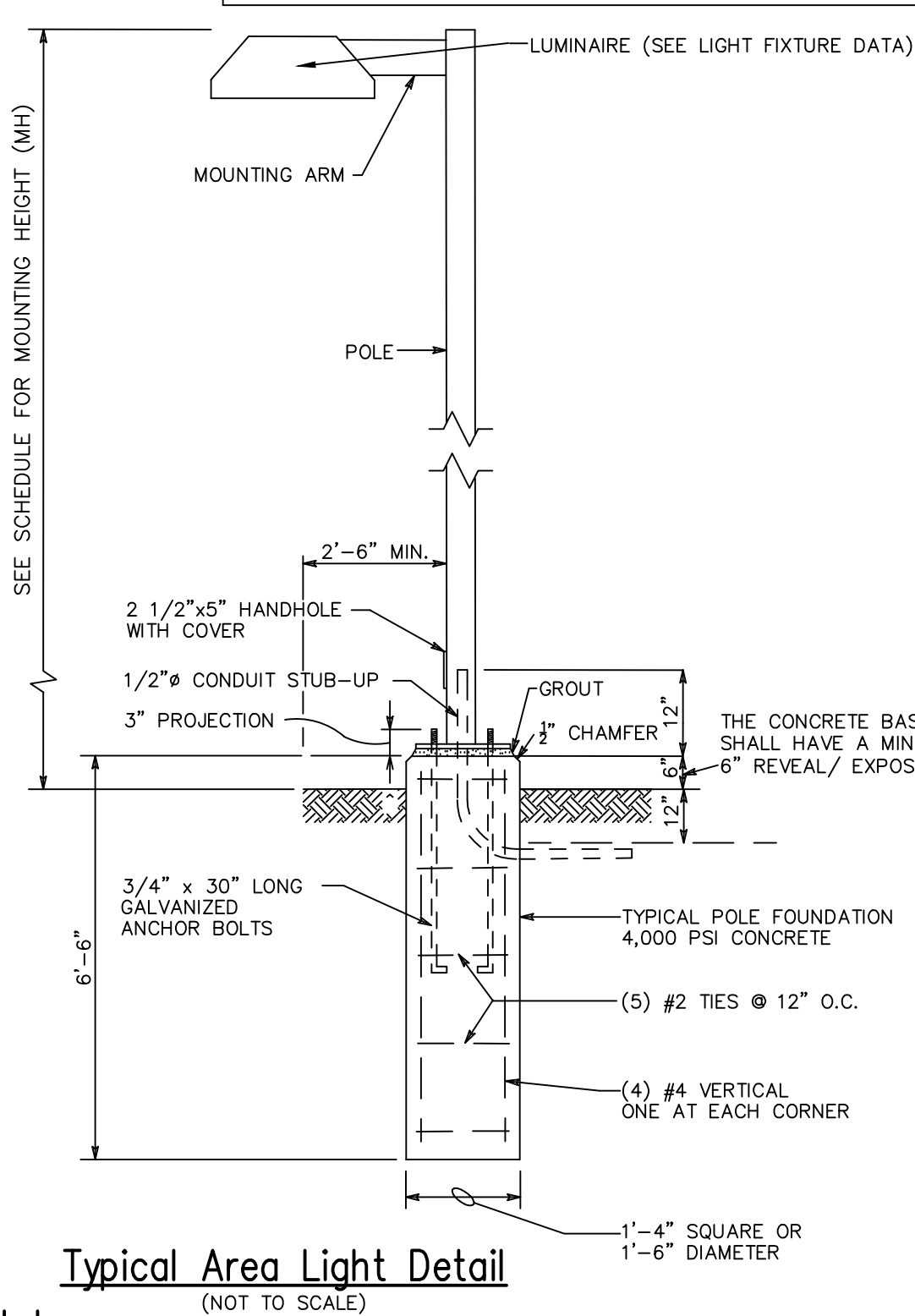
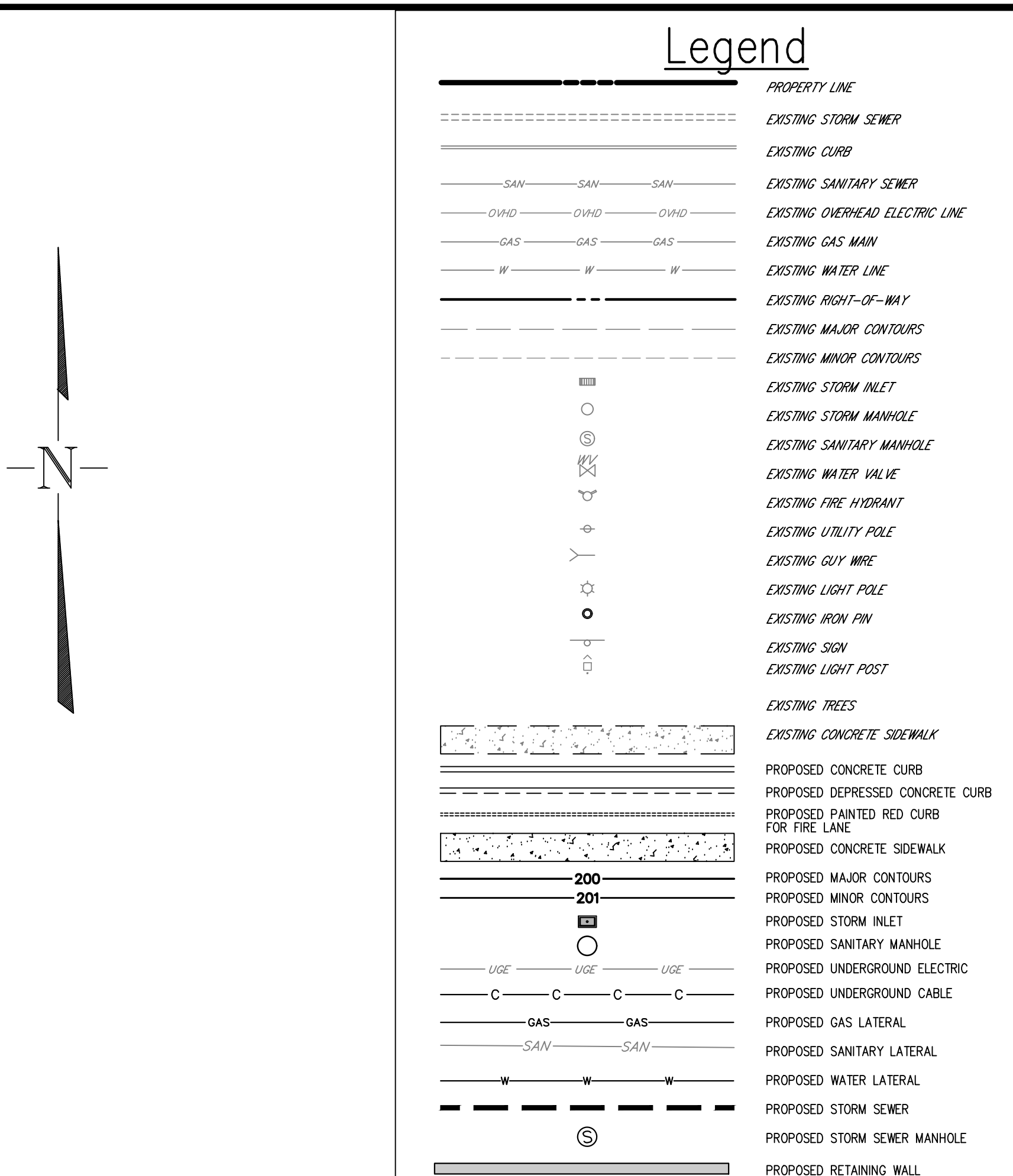
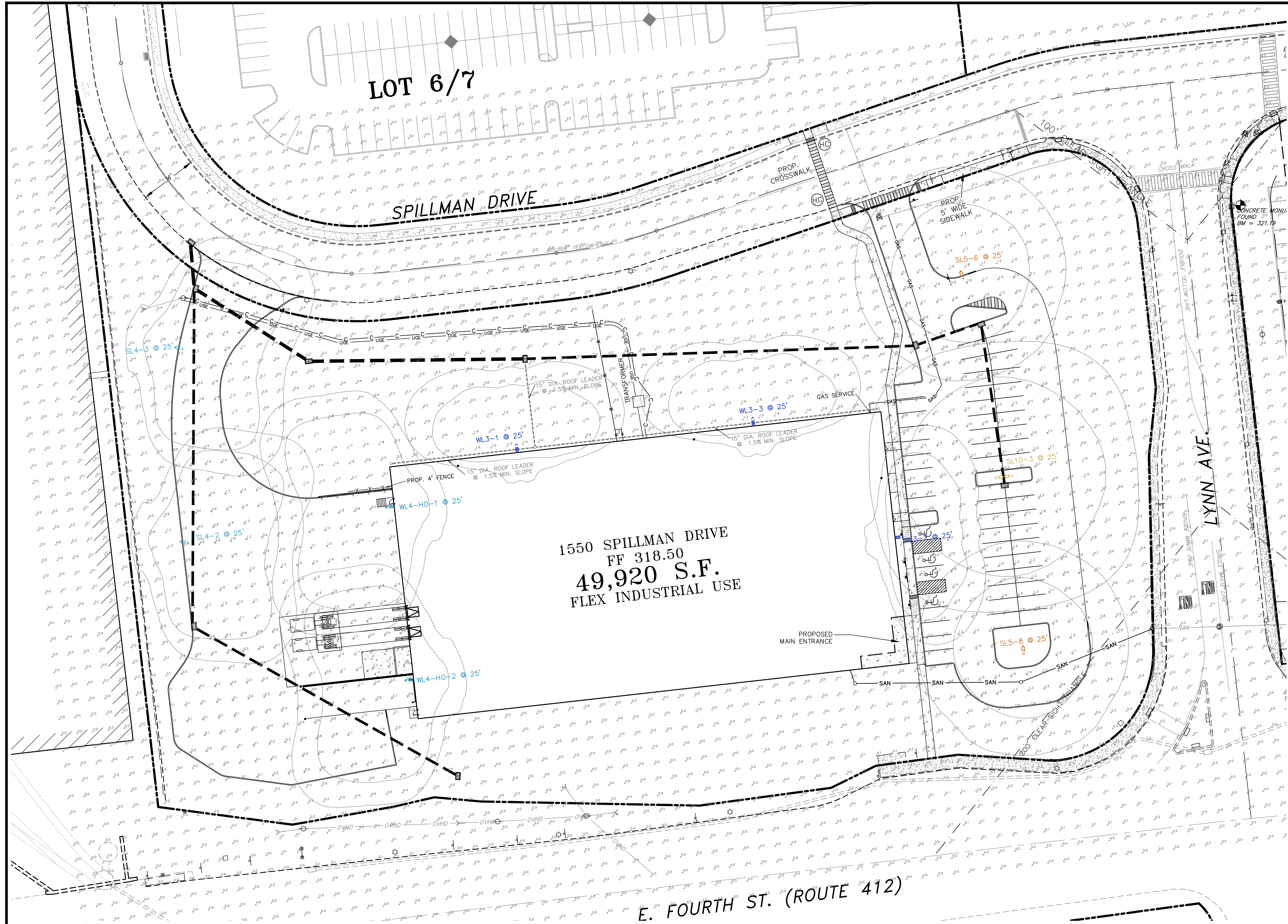
FF 318.50

49,920 S.F.

FLEX INDUSTRIAL USE

1550 SPILLMAN DRIVE

FF 318.50



Light Pole Footing Notes

COMPACTED FILL

1. ALL FILL SHALL BE PLACED ON VIRGIN SOIL THAT DOES NOT CONTAIN ANY ORGANIC MATTER. BEFORE PROCEEDING WITH ANY FILLING OPERATIONS, STRIP ALL TOPSOIL AND COMPACT THE EXISTING MATERIAL WITH A HEAVY VIBRATORY COMPACTOR MAKING A MINIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.

2. COMPACT FILL AND BACKFILL IN MAXIMUM 12" LAYERS (LOOSE) TO AT LEAST 95 PERCENT MAXIMUM MODIFIED DENSITY (ASTM D-1557) UNDER THE SUPERVISION OF A TESTING LABORATORY APPROVED BY THE ARCHITECT/ENGINEER, AND PAID FOR BY THE GENERAL CONSTRUCTION CONTRACTOR.

FOUNDATION

1. ALL FOOTINGS SHALL BEAR UPON UNDISTURBED SOIL HAVING MINIMUM BEARING CAPACITY OF 1.50 TONS PER SQUARE FOOT (3,000 KSF). THIS REQUIRED BEARING CAPACITY TO BE VERIFIED IN FIELD DURING EXCAVATION. IF ANY UNUSUAL CONDITION IS REVEALED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY. FOUNDATION DESIGN WILL BE MODIFIED IF REQUIRED BY SUCH A SITUATION.

2. BACKFILLING SHALL BE DONE CAREFULLY WITH SMALL COMPACTION EQUIPMENT AFTER TEMPORARY BRACES AND SUPPORTS ARE PROVIDED. NO TRUCK OR BULLDOZER, ETC. SHALL BE ALLOWED CLOSER THAN SIX (6) FEET TO ANY FOOTING.

3. ALL FOOTINGS SHALL BE ADEQUATELY PROTECTED TO PREVENT HEAVING AND/OR MOVEMENT DUE TO FROST UNTIL AFTER BACKFILL/PAVING OPERATIONS.

SOILS NOTES

1. FOOTING DESIGN BASED ON ASSUMED MAXIMUM ALLOWABLE SOILS BEARING CAPACITY OF 2,000 PSF. CONTRACTOR RESPONSIBLE TO VERIFY ADEQUACY OF ASSUMED BEARING CAPACITY PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED IF INCONSISTENCIES EXIST.

2. SUBGRADE TO BE FREE OF ORGANICS AND BE SUITABLE COMPACTED MATERIAL.

CONCRETE NOTES

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS WITH A MINIMUM CEMENT CONTENT OF 600 POUNDS PER CUBIC YARD FOR ALL FOOTINGS.

2. ALL CONCRETE SHALL HAVE A SLUMP OF NO GREATER THAN 4"; TO WITHIN A TOLERANCE OF 1.0".

3. ALL EXPOSED CONCRETE SHALL BE AIR-ENTRAINED 6 PERCENT (WITHIN 1 PERCENT TOLERANCE) CONFORMING TO ASTM C260.

4. REINFORCING STEEL BARS SHALL BE A MINIMUM ASTM A615, GRADE 60, AND SHALL BE FIELD WIRED IN PLACE.

ALL FRAMEWORK AND PLACEMENT CONCRETE SHALL COMPLY WITH GOOD CONSTRUCTION PRACTICES AND BE IN ACCORDANCE WITH ALL LOCAL GOVERNING CODES AND REGULATIONS AS WELL AS THE ACI AND UNIFORM BUILDING CODE.

LIGHTING NOTES:

- SPECIAL CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING CURBS AND PAVEMENT NOT TO DAMAGE THE EXISTING CONDUITS FOR THE STREET LIGHTS.
- ALL STREET LIGHTS SHALL REMAIN IN OPERATION DURING THE RELOCATION OF ANY STREET LIGHTS.
- NO STREET LIGHTING ELECTRICAL JUNCTION BOXES SHALL BE ALLOWED IN THE DRIVEWAY.
- THE CONTRACTOR SHALL COORDINATE WITH GREG CRYDER, CITY ELECTRICIAN @ gcryder@bethlehem-pa.gov PRIOR TO RELOCATION OF ANY EXISTING STREET LIGHTS.
- PRICING CAN BE OBTAINED THROUGH ILLUMINATIONS, INC. CONTACT AARON BROWN AT 610-320-2220
- ALL PROPOSED LIGHT SOURCES SHALL BE PROPERLY DIFFUSED WITH A TRANSLUCENT OR SIMILAR COVER TO PREVENT EXPOSED BULBS FROM BEING DIRECTLY VISIBLE FROM THE ADJUTING STREET OR ADJACENT PARCELS.
- ALL PROPOSED LIGHT SOURCES SHALL BE SHIELDED AROUND THE LIGHT SOURCE TO PREVENT SPILLAGE ONTO ADJACENT ROADWAYS.

Benchmarks for this Plan

- CONCRETE MONUMENT - NORTH END OF CURB RETURN AT THE NORTHEAST CORNER OF THE INTERSECTION OF SPILLMAN AND LYNN - TOP ELEVATION=320.30
- CONCRETE MONUMENT - SOUTH END OF CURB RETURN AT THE NORTHEAST CORNER OF THE INTERSECTION OF SPILLMAN AND LYNN - TOP ELEVATION=321.19



"CALL BEFORE YOU DIG"

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

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776

THIS PROJECT'S DESIGNER INQUIRY NO. 20250941787

BETHLEHEM CITY DEPT. OF WATER/SEWER RESOURCES MORAVIAN COLLEGE PPL ELECTRIC SERVICE ELECTRIC CABLE TV INC UGI UTILITIES INC. RCN TELECOM VERIZON

PROJECT / SERIAL NUMBERS / EXCAVATION-DEMOLITION / TYPE OF ONE CALL / DATE / ADDRESS / NEAREST INT. / TOWNSHIP / COUNTY
4415 20162023156 EXCAVATION ROUTINE 7/20/2016 SPILLMAN DRIVE LYNN AVE CITY OF BETHLEHEM NORTHAMPTON

PPL ELEC LEHIGH (P) / BETHLEHEM C DWS (QX) / SVC ELEC CATV (SET) / RCN TELECOM (TCC) / UGI LEHIGH (UJ) / VERIZON EASTERN (Y)

Schedule						
Symbol	Label	Quantit y	Catalog Number	Lumens Per Lamp	Light Loss Factor	Wattage
	SL4	2	ALQ-S-4M-18-135-3K7-MVOLT-BZ-UM-P7-DIM10-087-06-A / SSP25-4.0-11-DM10-BRZ-BC	17071	0.95	136.5
	SL5	2	ALQ-S-5MQ-20-160-3K7-MVOLT-BZ-UM-P7-DIM10-087-06-A / SSP25-4.0-11-DM10-BRZ-BC	17583	0.95	160
	SL10	1	ALQ-S-5MQ-18-135-3K7-MVOLT-BZ-UM-P7-DIM10-087-06-A / SSP25-4.0-11-DM2180-BRZ-BC	15826	0.95	273
	WL3	3	ALQ-S-3M-10-75-3K7-MVOLT-BZ-WM-P7-DIM10-087-06-A	9375	0.95	73.52
	WL4-HO	2	ALQ-S-4M-20-160-3K7-MVOLT-BZ-WM-P7-DIM10-087-06-A	18968	0.95	136.5

Note

- Lighting calculations are on 10' X 10' grid & measured at grade.
- Calculations are estimations only and may vary with field conditions.
- All mounting heights are 25' above grade.
- Maximum foot-candle levels do not exceed 4.2 per covenant.
- Minimum foot-candle levels falls below .6 per covenant.
- Average to minimum does not meet 4:1 ratio per covenant.
- 3000K LED CCT is used to most closely resemble HPS per covenant.
- All fixtures are full cutoff per covenant.

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
East Employee & Customer Parking		1.4 fc	3.4 fc	0.3 fc	11.3:1	4.7:1
West Loading Dock & Access Roads		1.4 fc	4.0 fc	0.0 fc	N/A	N/A

PRELIMINARY/FINAL LAND DEVELOPMENT

LIGHTING PLAN AND DETAILS

PROJECT TITLE: LOT 8 - LVP VII - 1550 SPILLMAN DRIVE

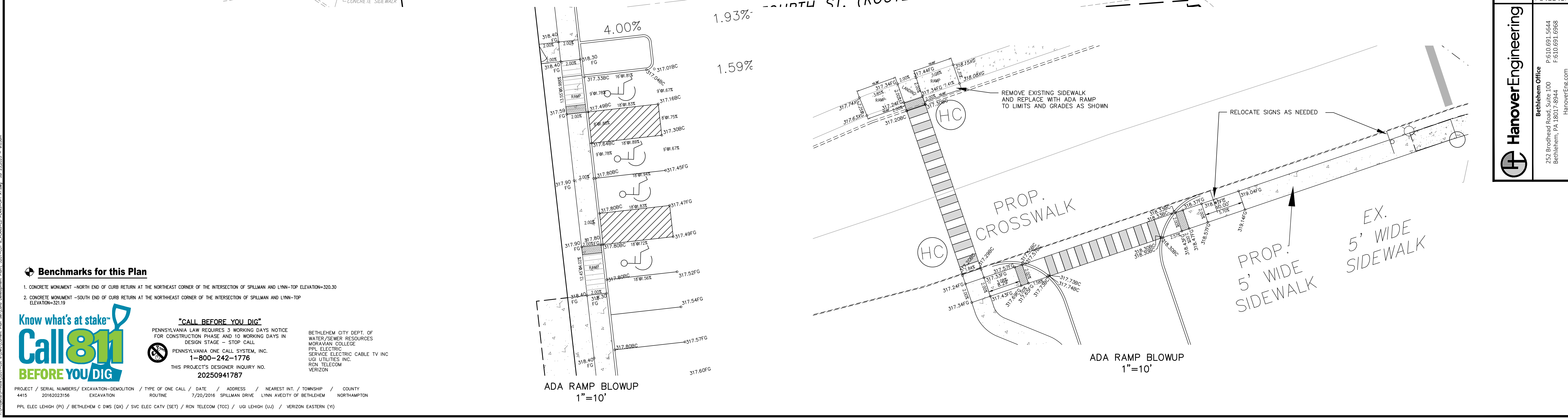
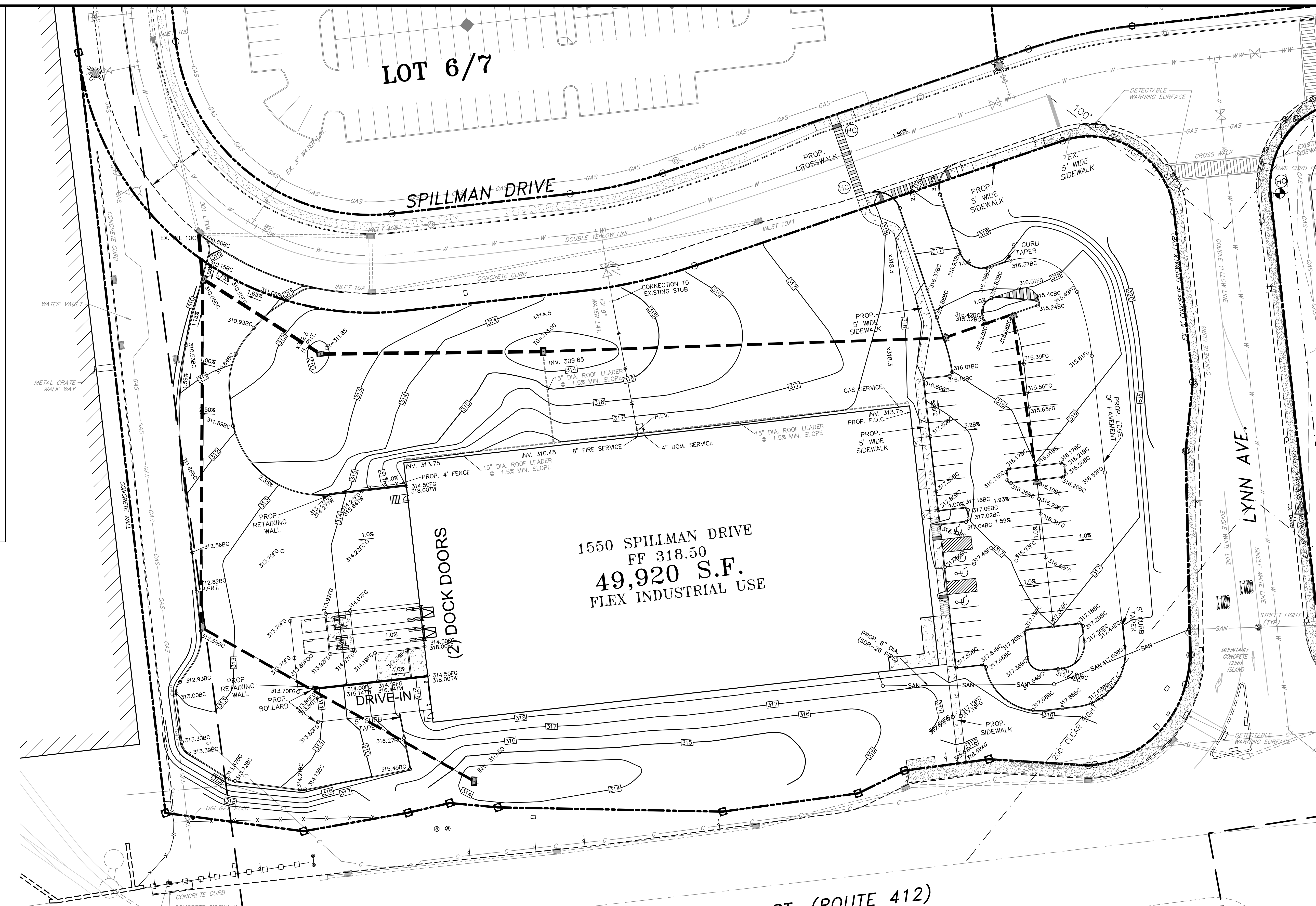
CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

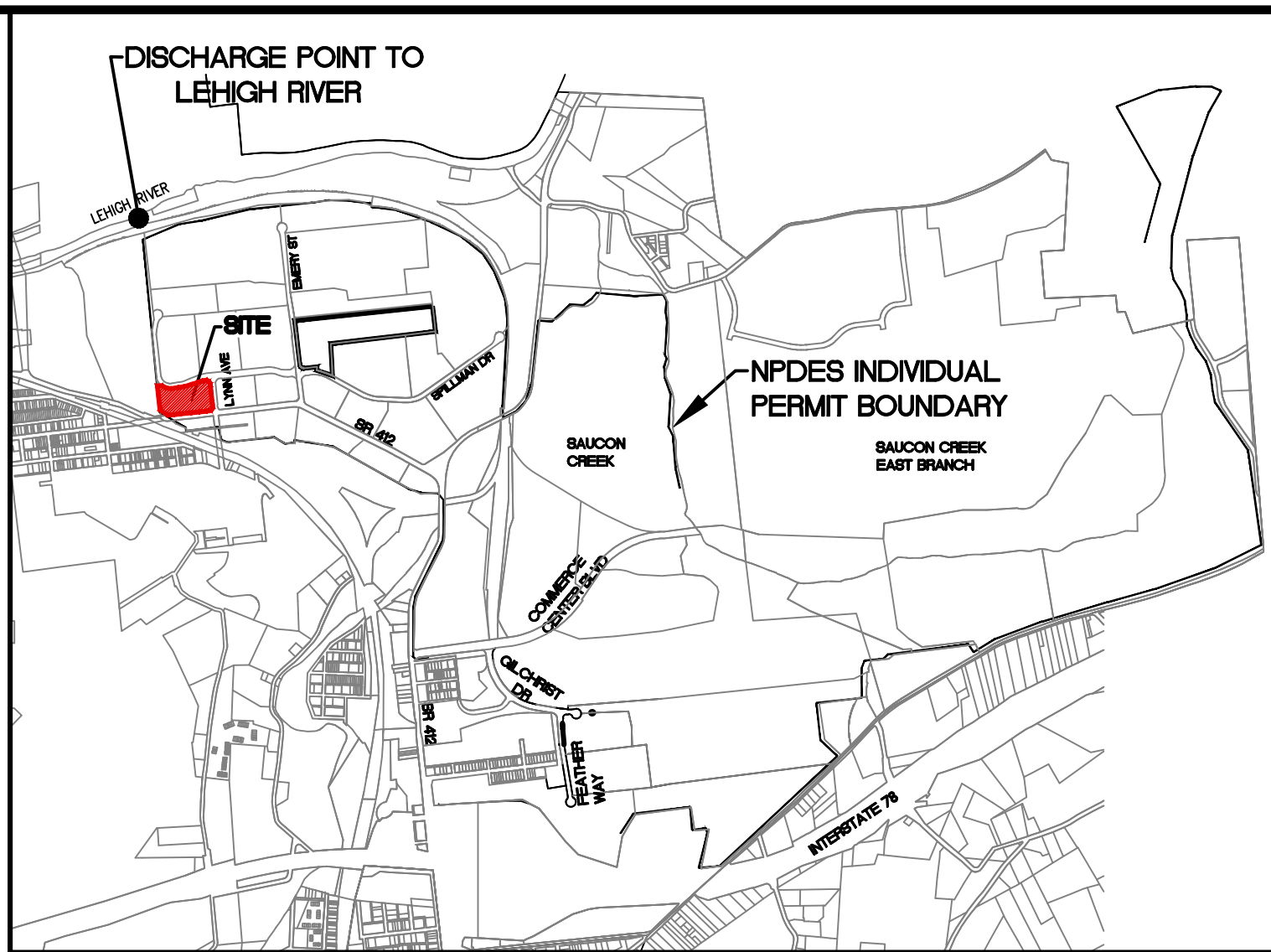
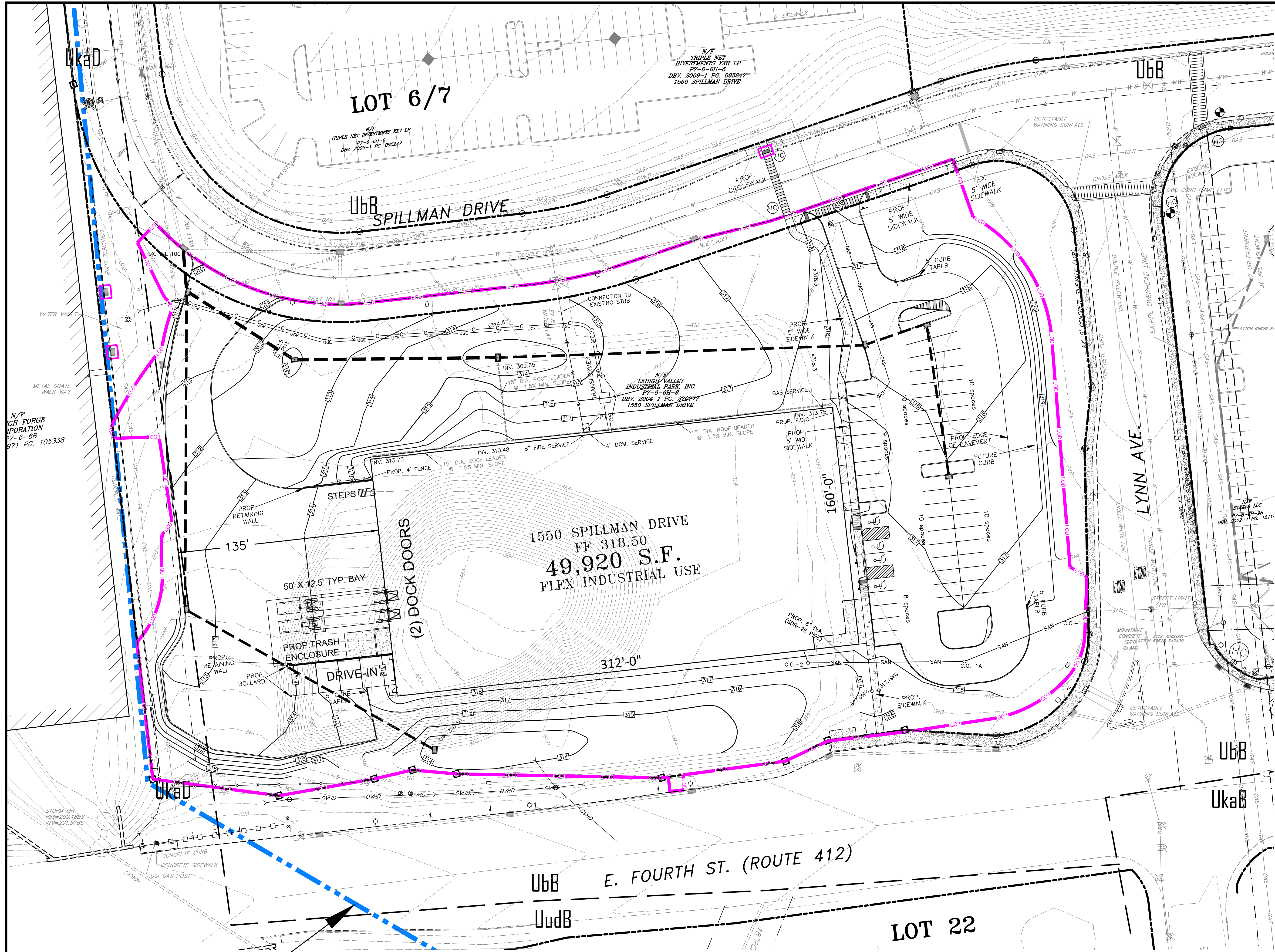
HanoverEngineering

Bethlehem Office
252 Brodhead Road, Suite 100
Bethlehem, PA 18017-6514
P: 610.091.1564
F: 610.091.0968
hanovereng.com



NO.	REVISIONS	DATE	CHECKED BY:		DATE	PROJECT NO.	SHEET NO.
			DRWN BY	AS			
			SCALE:	1"=30'	07/01/25	5207	07 15





Location Map
SCALE: 1" = 2,000'

PCSM Standard Notes:

GENERAL

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

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

PERMIT TERMINATION

UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER §102.22(a)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMPs IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH §102.2 AND §102.8 RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS, AND PCSM REQUIREMENTS, THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.

THE NOTICE OF TERMINATION MUST INCLUDE:

- (1) THE FACILITY NAME, ADDRESS AND LOCATION.
- (2) THE OPERATOR NAME AND ADDRESS.
- (3) THE PERMIT NUMBER.
- (4) THE REASON FOR PERMIT TERMINATION.
- (5) IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs IN ACCORDANCE WITH §102.8(m) AND PROOF OF COMPLIANCE WITH §102.8(m)(2).

PCSM REQUIREMENTS

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

LICENSED PROFESSIONAL OVERSIGHT OF CRITICAL STAGES: A LICENSED PROFESSIONAL OR A DESIGNER SHALL BE PRESENT ON-SITE AND BE RESPONSIBLE DURING CRITICAL STAGES OF IMPLEMENTATION OF THE APPROVED PCSM PLAN. THE CRITICAL STAGES MAY INCLUDE THE INSTALLATION OF UNDERGROUND TREATMENT OR STORAGE BMPs, STRUCTURALLY ENGINEERED BMPs, OR OTHER BMPs AS DEEMED APPROPRIATE BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

FINAL CERTIFICATION: THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS: "I, (NAME), DO HEREBY CERTIFY PURSUANT TO THE PROVISIONS OF 18 PA.C.S.A. §404(a) TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES."

- (1) THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.

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

PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

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

THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs.

FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE PRIMARY COPIES OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST BE FILED BY THE PCSM BMP PROVIDER FOR NECESSARY ACCESS RIGHTS TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMPs AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEES, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER §102.70(3) RELATING TO PERMIT TERMINATION.

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

A PERMITTEE OR CO-PERMITTEE THAT FAILS TO TRANSFER LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL BE SOLELY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs LOCATED ON THE PROPERTY.

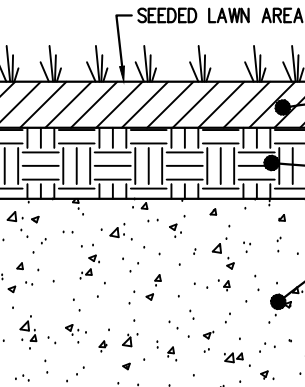
Critical Stages

A LICENSED PROFESSIONAL OR DESIGNER SHALL BE PRESENT FOR THE FOLLOWING CRITICAL STAGES OF CONSTRUCTION FOR THE CLEAN FILL/TOPSOIL CAP:

1. VERIFICATION OF INSTALLATION
- A. VERIFICATION OF PLACEMENT OF CLEAN FILL/TOPSOIL CAP.

Long-Term BMP Operations and Maintenance

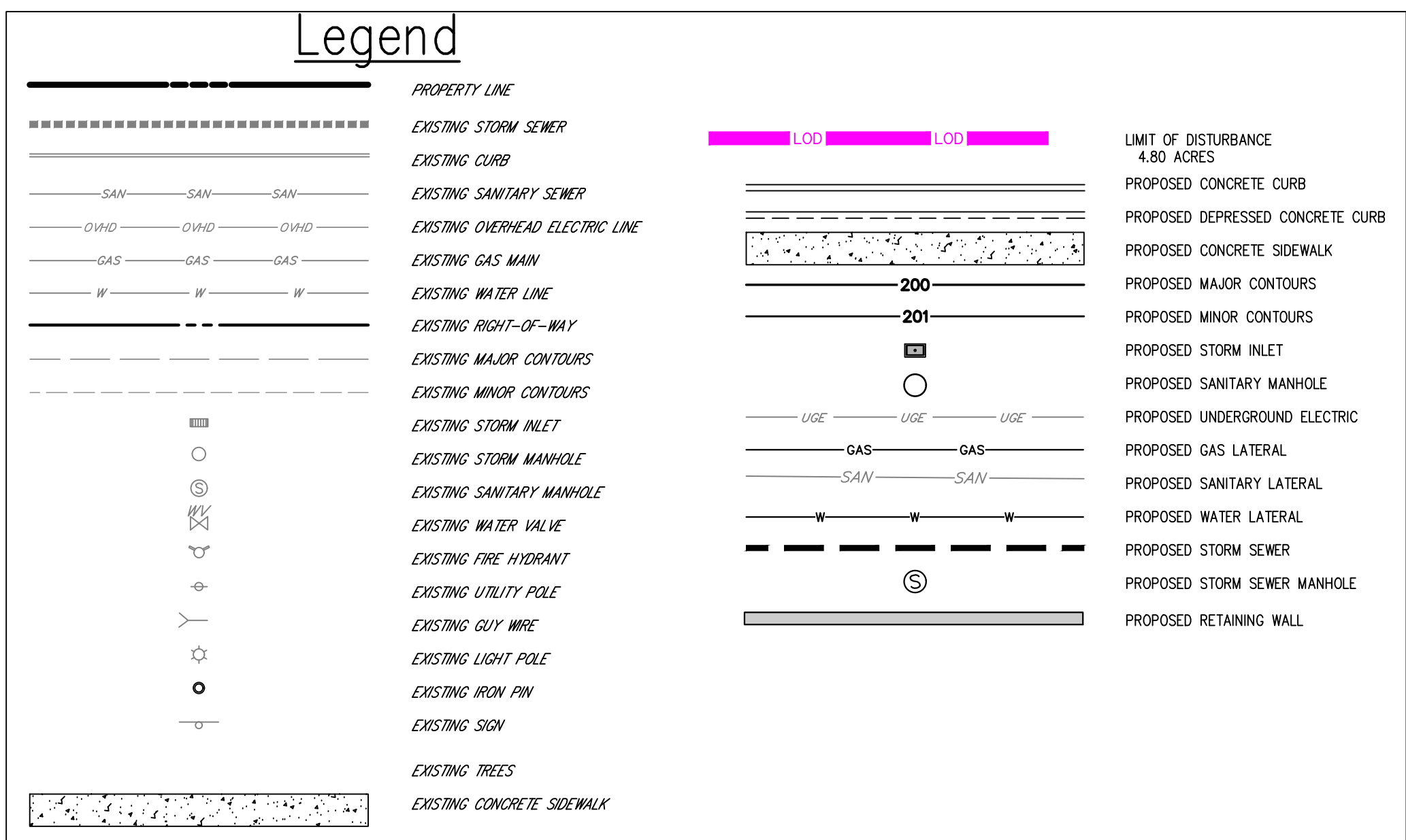
THE OPERATIONS AND MAINTENANCE OF THE POST CONSTRUCTION STORMWATER MANAGEMENT BMP'S IS THE RESPONSIBILITY OF THE OWNER. THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE POST CONSTRUCTION STORMWATER MANAGEMENT BMP'S IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEES.



SOIL CAPPING DETAIL
(FOR USE: SOIL AREAS TO BE LANDSCAPED/SEEDED)

NOT TO SCALE

LVIP NPDES PERMIT BOUNDARY (SEE LOCATION MAP FOR ENTIRE NPDES BOUNDARY)



Soil Type

- U6B Urdorthens, limestone, 0 to 8 percent slopes
- UkaB Urban Land, 0 to 8 percent slopes
- UkaD Urban Land, 8 to 25 percent slopes
- UudB Urban Land-Urdorthens, limestone complex, 0 to 8 percent slopes

SOIL LIMITATIONS

LIMITATIONS	RESOLUTIONS
CUTBANKS CAVE	LAYBACK SLOPES
CORROSIVE TO CONCRETE/STEEL	CATHODIC PROTECTION AND/OR CORROSION RESISTANT
DEPTH TO SATURATED ZONE (SEASONAL HIGH WATER TABLE)	KNOW DEPTH TO SATURATION ZONE AND AVOID
HYDRIC / HYDRIC INCLUSIONS	AVOID
LOW STRENGTH / LANDSLIDE PRONE	LAYBACK SLOPES - DESIGN FOR CONDITION
SLOW PERCOLATIONS	DRAINAGE DITCH
PIPING	TEMPORARILY LOWER GROUND WATER TABLE OR PROVIDE FILTERS
FROST ACTION	LOWER FOOTINGS BELOW FROST DEPTHS, PROVIDE POSITIVE SUBGRADE
SHRINK - SWELL	AVOID USE OF HIGHLY PLASTIC CLAYS IN BUILDING AREA
POTENTIAL SINKHOLE	PLUG OR MITIGATE KNOWN SINKHOLES, PROVIDE POSITIVE SURFACE
DROUGHTY	APPLY COMPOST IF MOISTURE RETENTION IS REQUIRED
EASILY ERODABLE	TAKE EXTRA CARE IN IMPLEMENTATION OF ESPC PLAN
FLOODING	USE PUMPED WATER FILTER BAG OR AVOID
POOR SOURCE OF TOPSOIL	IMPORT TOPSOIL
PONDING	USE PUMPED WATER FILTER BAG OR AVOID

Benchmarks for this Plan

1. CONCRETE MONUMENT - NORTH END OF CURB RETURN AT THE NORTHEAST CORNER OF THE INTERSECTION OF SPILLMAN AND LYNN-TOP ELEVATION=320.30
2. CONCRETE MONUMENT - SOUTH END OF CURB RETURN AT THE NORTHEAST CORNER OF THE INTERSECTION OF SPILLMAN AND LYNN-TOP ELEVATION=321.19



"CALL BEFORE YOU DIG"

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

PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776
THIS PROJECT'S DESIGNER INQUIRY NO.
20250941787

BETHLEHEM CITY DEPT. OF WATER/SEWER RESOURCES
MORRIS COLLEGE
PPL ELECTRIC SERVICE
VERIZON

PROJECT / SERIAL NUMBERS / EXCAVATION-DEMOLITION / TYPE OF ONE CALL / DATE / ADDRESS / NEAREST INT. / TOWNSHIP / COUNTY
4415 20160223156 EXCAVATION ROUTINE 7/20/2016 SPILLMAN DRIVE LYNN AVE/CITY OF BETHLEHEM NORTHAMPTON

PPL ELEC LEHIGH (PI) / BETHLEHEM C DWS (OX) / SVC ELEC CATV (SET) / R/N TELECOM (TCC) / UGI LEHIGH (UG) / VERIZON EASTERN (VY)

PRELIMINARY/FINAL LAND DEVELOPMENT

PLAN TITLE: POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
PROJECT TITLE: LOT 8 - LVIP VI - 1550 SPILLMAN DRIVE

CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

HanoverEngineering
Bethlehem Office
252 Broadhead Road, Suite 100
Bethlehem, PA 18017-8544
P: 610.691.5644
F: 610.691.0968
hanovereng.com



Stormwater Management BMP's

SOIL AMENDMENT & RESTORATION (BMP 6.7.3)

Receiving Waters

LEHIGH RIVER (WW, W)

Property Identification

1550 SPILLMAN DRIVE
BETHLEHEM, PA 18015
TAX MAP P7 BLOCK 8 LOT 8B-8
DBV 2004-1, PG 270777

Applicant

LVP, INC.
1720 SPILLMAN DRIVE, SUITE 150
BETHLEHEM, PA 18015
PHONE: 610.866.4600

Plan Preparer

ANDREW BOHL, PE
HANOVER ENGINEERING ASSOCIATES, INC.
252 BROADHEAD ROAD, SUITE 100
BETHLEHEM, PA 18017-8544
PHONE: (610) 691-5644
FAX: (610) 691-6968

Owner/Co-Permittee

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

LVP, INC. AS THE LANDOWNER ACKNOWLEDGES THAT THE STORMWATER BMPs ARE FIXTURES THAT CANNOT BE ALTERED OR REMOVED WITHOUT APPROVAL BY THE MUNICIPALITY.

OWNER'S SIGNATURE DATE

SWORN AND SUBSCRIBED BEFORE ME THIS DAY OF , 20

NOTARY PUBLIC

PCSM Standard Notes:

GENERAL

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

PERMIT TERMINATION

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

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- (2) THE OPERATOR NAME AND ADDRESS.
- (3) THE PERMIT NUMBER.
- (4) THE REASON FOR PERMIT TERMINATION.
- (5) IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs IN ACCORDANCE WITH §102.8(m) AND PROOF OF COMPLIANCE WITH §102.8(m)(2).

PCSM REQUIREMENTS

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

(1) THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.

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PCSM LONG-TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

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

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

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

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

Applicant

LVP, INC.
1720 SPILLMAN DRIVE, SUITE 150
BETHLEHEM, PA 18015-2164
PHONE 610.866.4600

Owner/Co-Permittee

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

LVP, INC AS THE LANDOWNER ACKNOWLEDGES THAT THE STORMWATER BMPs ARE FIXTURES THAT CANNOT BE ALTERED OR REMOVED WITHOUT APPROVAL BY THE MUNICIPALITY.

OWNER'S SIGNATURE _____ DATE _____

SWORN AND SUBSCRIBED BEFORE ME THIS _____ DAY OF _____, 20____

NOTARY PUBLIC

Critical Stages

A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT FOR THE FOLLOWING CRITICAL STAGES OF CONSTRUCTION FOR THE CLEAN FILL/TOPSOIL CAP.

1. VERIFICATION OF INSTALLATION.
 - A. VERIFICATION OF PLACEMENT OF CLEAN FILL/TOPSOIL CAP.

Responsible Party

1. DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE CLEAN FILL/TOPSOIL CAP AND RESTORATION AREAS.
2. ONCE ALL CONSTRUCTION HAS BEEN COMPLETED, THE PROPERTY OWNER WILL BECOME RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE TOPSOIL CAP AND RESTORATION AREAS.

Maintenance And Operation Schedule

1. INSPECT TOPSOIL CAP AREAS ANNUALLY. IF THE AREA HAS BECOME COMPACTED, THE SOIL AMENDMENT AND RESTORATION PROCESS SHOULD BE REPEATED.

Permanent Stabilization

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

Permanent Seeding

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

- A. RAKED FREE OF STONES;
- B. LIMED AND FERTILIZED AS NECESSARY;
- C. PLANTED WITH GRASS OR OTHER SPECIFIED SEED;
- D. MULCHED OR MATTED TO PROTECT THE SEED FROM DRYNESS AND EROSION (STRAW OR HAY AT 1,240 LB. PER 1,000 SQ. YD.).

IT IS RECOMMENDED THAT THE CONTRACTOR TAKE SOIL SAMPLES TO ENSURE THE PROPOSED SEED MIXTURE WILL PROVIDE ADEQUATE COVER.

PERMANENT SEEDING SHALL BE UNDERTAKEN IN ACCORDANCE WITH PENNDOT, FORM 408 SPECIFICATIONS AS FOLLOWS:

- A. PENNDOT FORMULA "B" (PRIMARYLY KENTUCKY BLUEGRASS AND CREEPING RED OR CHEWING FESCUE) SPREAD AT A RATE OF 21 POUNDS PER 1,000 SQUARE YARDS, OR OTHER SEED MIX APPROVED FOR THE AREA. SPREAD FORMULA "B" FROM MARCH 15 TO JUNE 1, OR FROM AUGUST 1 TO OCTOBER 15.
- B. ALTERNATE SEED MIXES, BASED ON SECTION IX OF THE "PENN STATE AGRONOMY GUIDE", MAY BE USED ONLY IF APPROVED IN WRITING IN ADVANCE OF PLACEMENT BY THE PROJECT ENGINEER AND THE LOCAL COUNTY CONSERVATION DISTRICT.

Lime And Fertilizer Specifications

PULVERIZED AGR. LIMESTONE, 800 LBS. PER 1,000 S.Y.
ANALYSIS COMMERCIAL 10-20-20, 140 LBS. PER 1,000 S.Y.
UREA/FORM FERTILIZER 38-0-0-0, 50 LBS. PER 1,000 S.Y.
BIFURFERTILIZER 31-0-0-0, 61 LBS. PER 1,000 S.Y.

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

RECYCLING AND DISPOSAL OF MATERIALS

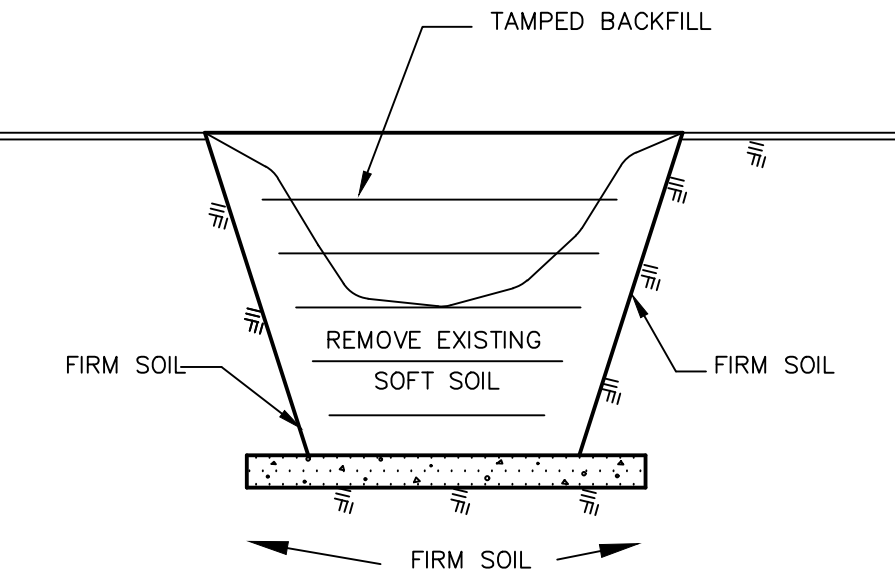
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH, AND TO INFORM HIS WORKERS OF ALL LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS REGARDING THE CONDUCT OF WORK AND HANDLING OF MATERIALS ON THE PROJECT, AND TO PERFORM ALL ACTIVITIES IN ACCORDANCE WITH THOSE REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING EMERGENCY RESPONSE PLANS FOR ANY HAZARDOUS OR POLLUTING MATERIALS USED IN THE WORK.

ALL RUBBISH OR WASTE MATERIALS PRODUCED BY CONTRACTOR'S WORKERS SHALL BE PROTECTED FROM DISSEMINATION BY WIND, RAIN, OR ANIMALS, AND SHALL BE LEGALLY DISPOSED OF REGULARLY. ANY CONSTRUCTION DEBRIS OR OTHER UNSUITABLE MATERIALS TRAPPED BY SILT BARRIER FACILITIES SHALL BE SEPARATED FROM SOIL MATERIALS AND DISPOSED OF IN A LAWFUL MANNER.

SEDIMENT WHICH HAS BEEN TRAPPED BY SILT BARRIER FACILITIES MUST BE REMOVED AND STOCKPILED OR REDISTRIBUTED ON THE PROJECT SITE. SEDIMENT WHICH COLLECTS TO THE SPECIFIED CLEAN-OUT ELEVATION IN THE BOTTOM OF STORMWATER MANAGEMENT PONDS, OR THE SPECIFIED ELEVATIONS IN SEDIMENT TRAPS, MUST BE REMOVED AND STOCKPILED OR REDISTRIBUTED AND STABILIZED ON THE PROJECT SITE.

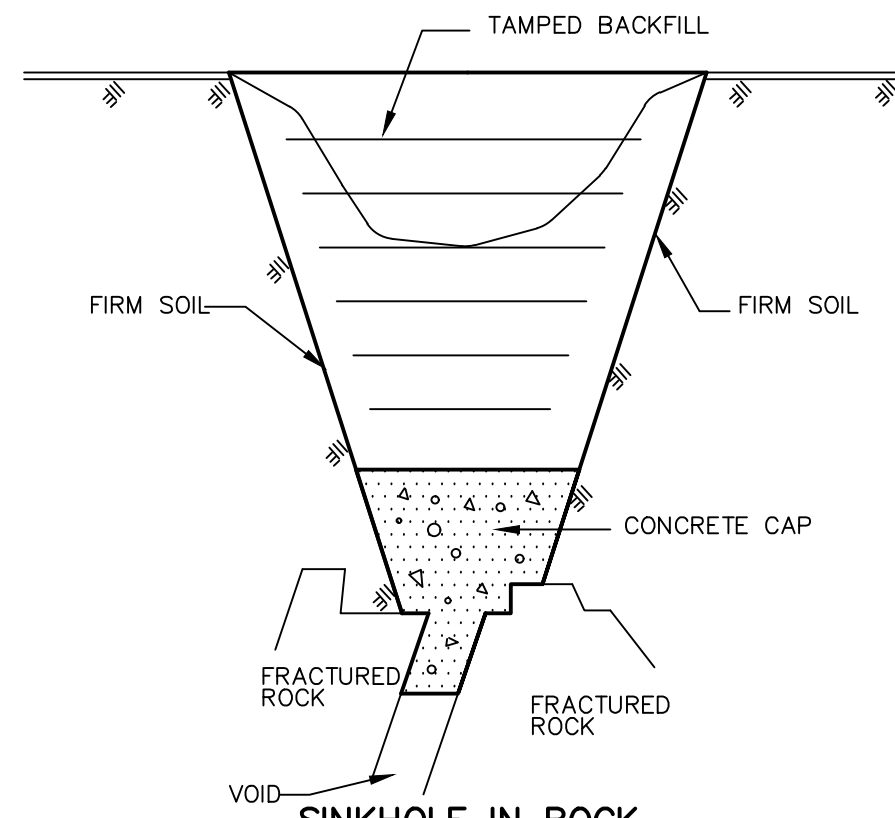
WASHING OF FILTER STONE AND RE-DISTRIBUTION OF WET SEDIMENT FROM BASINS, TRAPS OR OTHER FACILITIES SHALL BE ONLY PERMITTED UPRIILL OF AN EFFECTIVE SEDIMENT FILTER FACILITY. SILT LOSEN RUNOFF SHALL NOT BE ALLOWED TO FLOW DIRECTLY TO UNPROTECTED CATCH BASINS, PONDS, ADJACENT PROPERTIES, ROADS, STREAMS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

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



1. EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 15 FEET BELOW GRADE, WHICHEVER OCCURS FIRST.
2. IF ROCK IS ENCOUNTERED WITHIN 10 FEET, STOP EXCAVATION. THE LIMIT OF EXCAVATION SHALL BE DETERMINED BY THE ENGINEER. GENERALLY, A ZONE OF SOFT, IN-FILL MATERIAL WILL BE FOUND WHICH COVERS MOST OF THE BOTTOM OF THE EXCAVATION. COVER THIS AREA WITH FOUR (4) FEET OF CONCRETE EXTENDING AT LEAST 1 FOOT INTO FIRM SOIL. IF THE SOFT ZONE IS LARGE (+3FT.), REINFORCING STEEL SHOULD BE INCLUDED WITHIN THE CONCRETE CAP WITH 1" DIAMETER REBAR AT 24" ON CENTER EACH WAY. THE LIMIT OF CONCRETE SHOULD BE DETERMINED BY THE ENGINEER.
3. AFTER CONCRETE HAS SET OVERNIGHT, BACKFILL HOLE WITH RELATIVELY IMPERMEABLE CLAY SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER. THE TOP THREE (3) FEET SHALL BE BACKFILLED WITH 20% CRUSHED AGGREGATE.
4. BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.
5. WHEN SINKHOLE IS UNDER A PROPOSED UTILITY, CONCRETE IS TO BE SET 6" BELOW THE UTILITY TO ALLOW FOR A STONE BEDDING.

SINKHOLE REPAIR DETAILS
N . T . S .



1. EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 15 FEET BELOW GRADE, WHICHEVER OCCURS FIRST.
2. IF ROCK IS ENCOUNTERED, EXPOSE THE ROCK SURFACE AND INSTALL HIGH SLUMP CEMENT INTO VOIDS AND CREVICES UNTIL VOIDS ARE FILLED AND A CAP COVERS THE AREA. THE LIMIT OF EXCAVATION AND CONCRETE SHALL BE DETERMINED BY THE ENGINEER.
3. AFTER CONCRETE HAS SET OVERNIGHT, BACKFILL HOLE WITH RELATIVELY IMPERMEABLE CLAY SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER. THE TOP THREE (3) FEET SHALL BE BACK FILLED WITH 20% CRUSHED AGGREGATE.
4. BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.
5. WHEN SINKHOLE IS UNDER A PROPOSED UTILITY, CONCRETE IS TO BE SET 6" BELOW THE UTILITY TO ALLOW FOR A STONE BEDDING.

SOIL LIMITATIONS

LIMITATIONS	RESOLUTIONS
CUTBANKS CAVE	LAYBACK SLOPES
CORROSIVE TO CONCRETE/STEEL	CATHODIC PROTECTION AND/OR CORROSION RESISTANT
DEPTH TO SATURATED ZONE (SEASONAL HIGH WATER TABLE)	KNOW DEPTH TO SATURATION ZONE AND AVOID
HYDRIC / HYDRIC INCLUSIONS	AVOID
LOW STRENGTH / LANDSLIDE PRONE	LAYBACK SLOPES – DESIGN FOR CONDITION
SLOW PERCOLATIONS	DRAINAGE DITCH
PIPING	TEMPORARILY LOWER GROUND WATER TABLE OR PROVIDE FILTERS
FROST ACTION	LOWER FOOTINGS BELOW FROST DEPTHS, PROVIDE POSITIVE SUBGRADE
SHRINK – SWELL	AVOID USE OF HIGHLY PLASTIC CLAYS IN BUILDING AREA
POTENTIAL SINKHOLE	PLUG OR MITIGATE KNOWN SINKHOLES, PROVIDE POSITIVE SURFACE
DROUGHTY	APPLY COMPOST IF MOISTURE RETENTION IS REQUIRED
EASILY ERODABLE	TAKE EXTRA CARE IN IMPLEMENTATION OF ESPC PLAN
FLOODING	USE PUMPED WATER FILTER BAG OR AVOID
POOR SOURCE OF TOPSOIL	IMPORT TOPSOIL
PONDING	USE PUMPED WATER FILTER BAG OR AVOID

PRELIMINARY/FINAL LAND DEVELOPMENT

PLAN TITLE:
POST CONSTRUCTION STORMWATER MANAGEMENT NOTES & DETAILS

PROJECT TITLE:
LOT 8 – LVP VI – 1550 SPILLMAN DRIVE

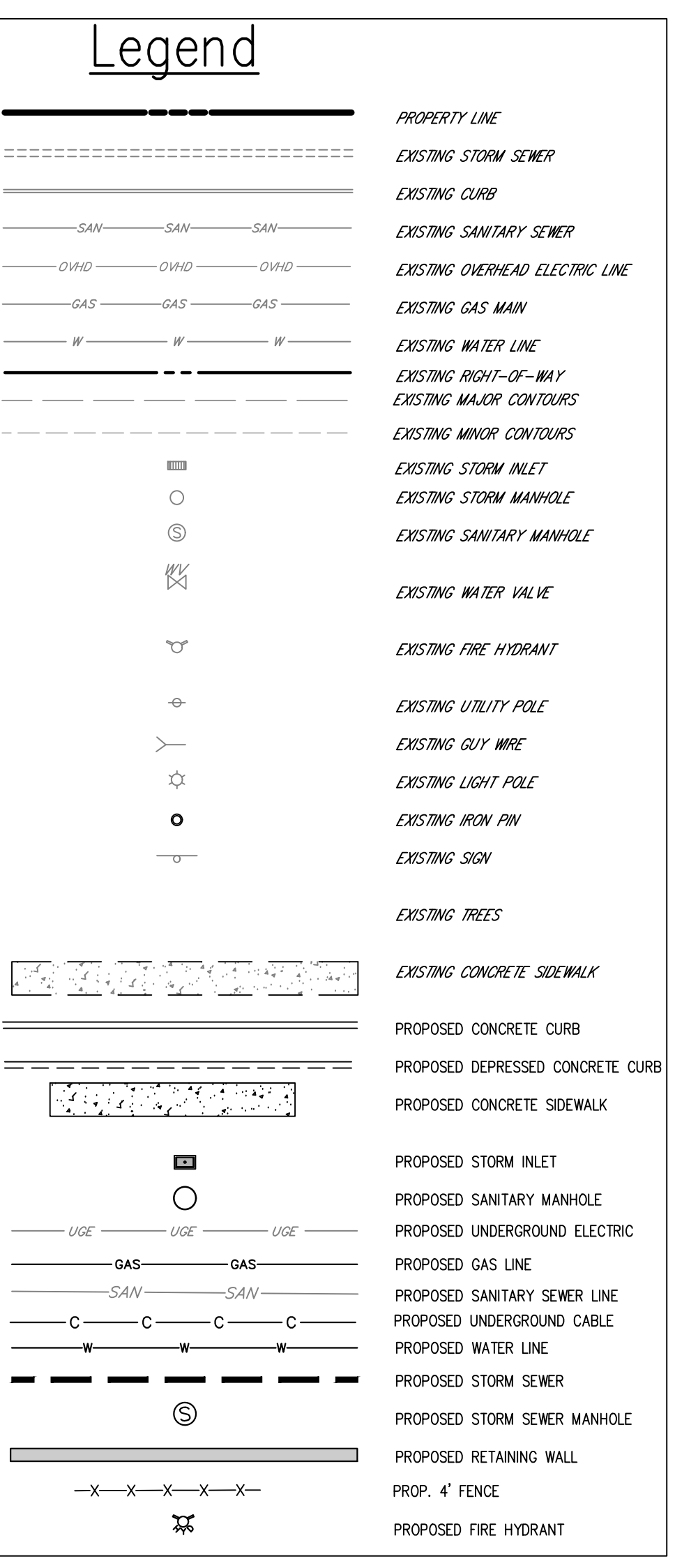
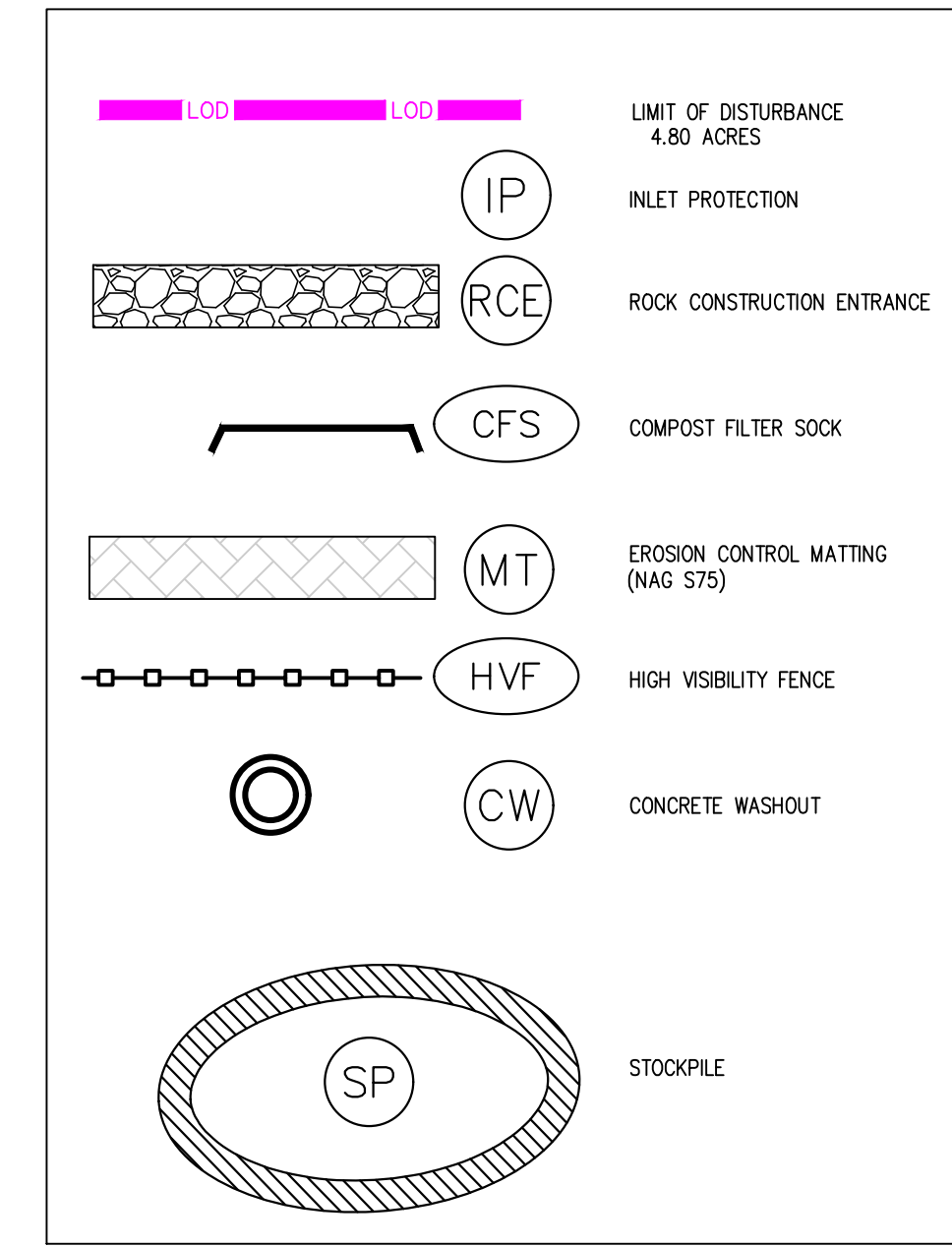
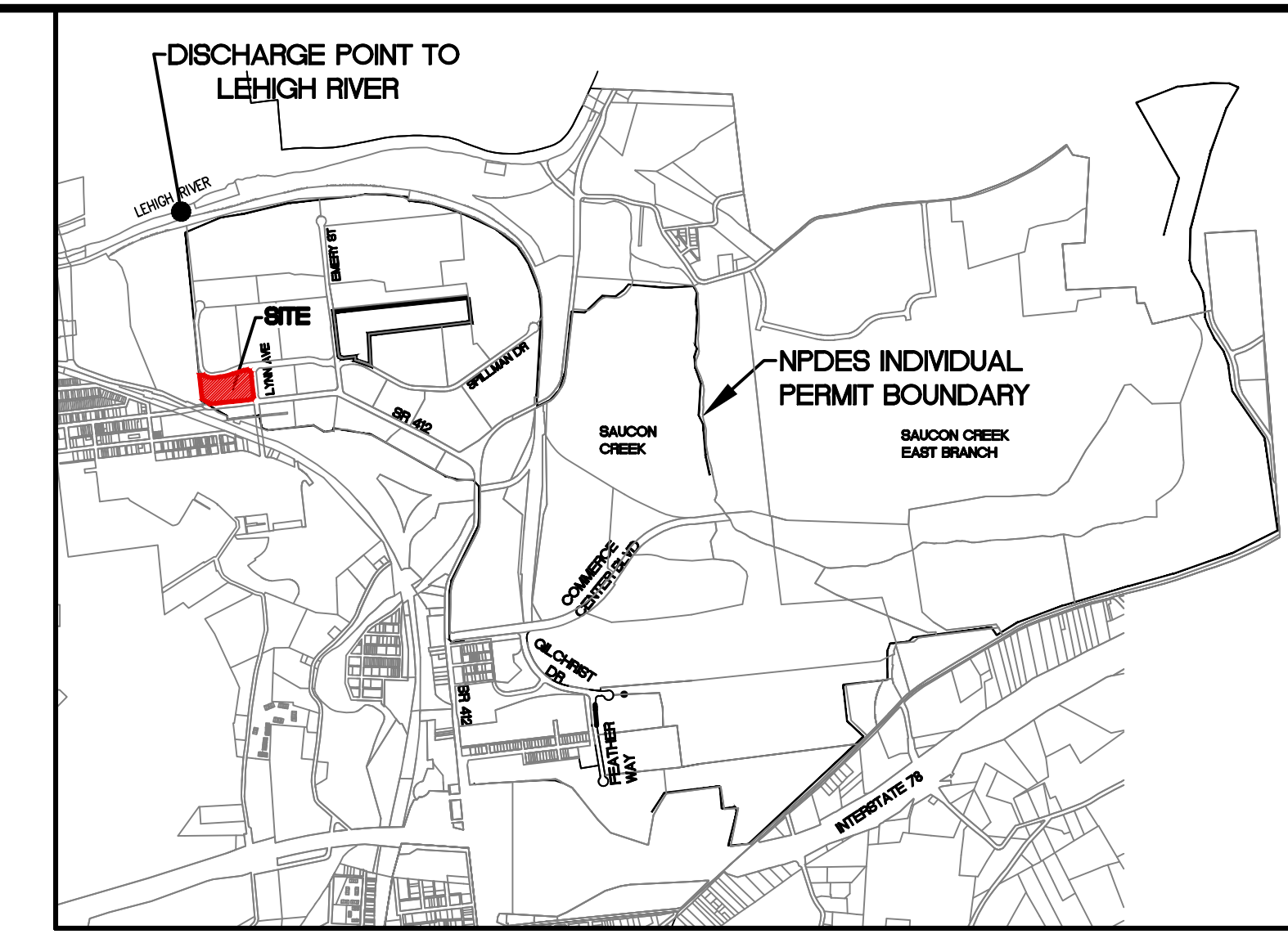
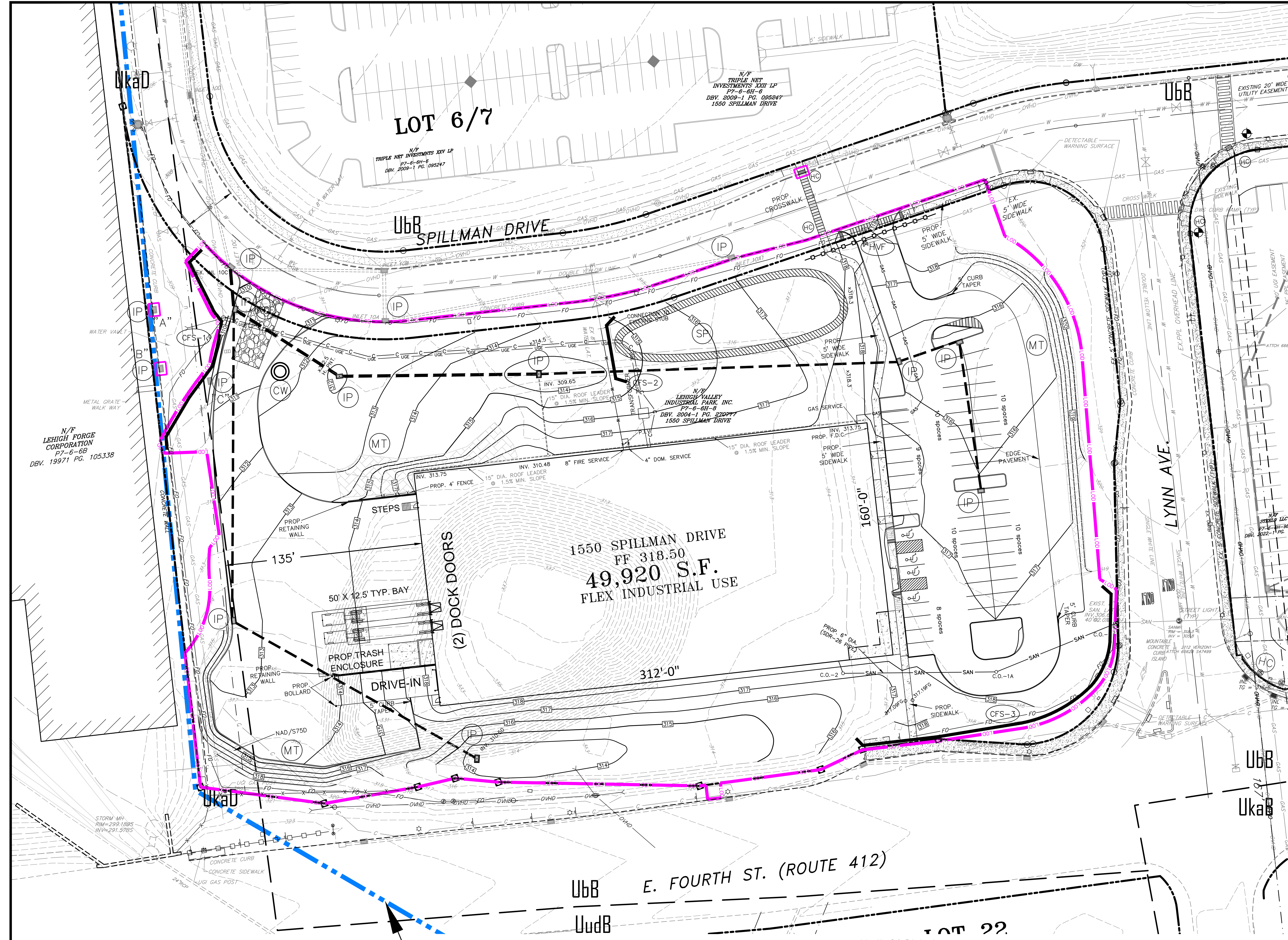
CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

HanoverEngineering

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Compost Filter Sock Table	
CFS ID	SIZE
CFS-1	24"
CFS-2	12"
CFS-2	12"

Inlet Protection Table	
STRUCTURE	DRAINAGE AREA (AC)
INL 8-1A	0.67 *
INL 8-1B	0.58 *
INL 8-1	0.48
INL 8-2	0.18
INL 8-3	1.69 *
INL 8-4	0.14
INL 8-5	0.69 *
INL 8-6	0.57 *
EX. INL 10C	0.14
EX. INL 10A	0.16
EX. INL 10A1	0.14
STORM INLET A	0.10
STORM INLET B	0.14
STORM INLET C	0.01

* THESE STRUCTURES ARE TO RECEIVE STONE AND BLOCK INLET PROTECTION (STD #18 OR STD #4-19)

THE PROPOSED PROJECT IS LOCATED IN THE VICINITY OF FEDERALLY LISTED BAT SPECIES AND/OR THEIR CRITICAL HABITAT. AS SUCH, TO ENSURE THE "TAKE" (AS DEFINED IN THE ENDANGERED SPECIES ACT) BROADLY AS TO HARASS, HARM, PURSUE, HUNT, SHOOT, WOUND, KILL, TRAP, CAPTURE, COLLECT, OR TO ATTEMPT TO ENGAGE IN ANY SUCH CONDUCT) OF A FEDERALLY LISTED BAT SPECIES, OR THE CRITICAL HABITAT, IS NOT REASONABLY CERTAIN TO OCCUR, THE APPLICANT AND THEIR CONTRACTOR(S) HAVE AGREED TO IMPLEMENT AN AVOIDANCE MEASURE WHICH PROHIBITS TREE REMOVAL FROM APRIL 1 THROUGH OCTOBER 31.

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

LVIP NPDES PERMIT BOUNDARY (SEE LOCATION MAP FOR ENTIRE NPDES BOUNDARY)

Soil Limitations & Resolutions

Limit Of Disturbance
4.80 ACRES

Soil Type

UdbB Udarthenis, limestone, 0 to 8 percent slopes

UkaB Urban Land, 0 to 8 percent slopes

UkaD Urban Land, 8 to 25 percent slopes

UudB Urban Land-Udarthenis, limestone complex, 0 to 8 percent slopes

Soil Limitations & Resolutions

Limitations:

1. CUBANKS CAVE
2. CORROSION TO STEEL
3. DROUGHTY
4. EASILY ERODABLE
5. LOW STRENGTH / LANDSLIDE PRONE
6. SLOW PERCOLATION
7. FROST ACTION

Resolutions:

1. LAYBACK SLOPES
2. CATHODIC PROTECTION AND/OR CORROSION RESISTANT CONCRETE
3. APPLY COMPOST IF MOISTURE RETENTION IS REQUIRED
4. TAKE EXTRA CARE IN IMPLEMENTATION OF EROSION CONTROL PLAN
5. LAYBACK SLOPES - DESIGN FOR CONDITION
6. DRAINAGE DITCH
7. LOWER FOOTINGS BELOW FROST DEPTHS, PROVIDE POSITIVE SUBGRADE

THIS SOIL TYPE HAS A LOW TO MEDIUM PH FACTOR AND SHOULD BE TESTED FOR PROPER LIME AND FERTILIZER APPLICATION RATES.

IF UNDERGROUND WATER IS ENCOUNTERED, A PUMPED WATER FILTER BAG (DETAIL ON SHEET 13 OF 16) SHALL BE UTILIZED.

IF SINKHOLES ARE ENCOUNTERED, A SINKHOLE REPAIR DETAIL HAS BEEN SUPPLIED ON THE PROJECT DRAWINGS.

WASHINGTON SOILS ARE FAIRLY WELL SUITED FOR WINTER GRADING.

Types Of Land Cover

1. CURRENTLY, THE PROPERTY IS TEMPORARILY STABILIZED AS MEADOW. PRIOR TO THIS CONDITION, THE PROPERTY WAS A PARKING AREA FOR BETHLEHEM STEEL.

RECEIVING WATERS:

LEHIGH RIVER (WNF, MF)

Plan Preparer

ANDREW BOHL, PE
HANOVER ENGINEERING ASSOCIATES, INC.
252 BROOKHEAD ROAD, SUITE 100
BETHLEHEM, PA 18015-2164
PHONE (610) 691-5544
FAX (610) 691-6968

Applicant / Owner

LVP, INC.
1720 SPILLMAN DRIVE, SUITE 150
BETHLEHEM, PA 18015-2164
PHONE (610) 666-4600

Owner/Co-Permittee

LVP, INC.
1720 SPILLMAN DRIVE, SUITE 150
BETHLEHEM, PA 18015-2164
PHONE (610) 666-4600

Benchmarks for this Plan

1. CONCRETE MONUMENT - NORTH END OF CURB RETURN AT THE NORTHEAST CORNER OF THE INTERSECTION OF SPILLMAN AND LYNN - TOP ELEVATION=320.30
2. CONCRETE MONUMENT - SOUTH END OF CURB RETURN AT THE NORTHEAST CORNER OF THE INTERSECTION OF SPILLMAN AND LYNN - TOP ELEVATION=321.19



"CALL BEFORE YOU DIG"

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

PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776

THIS PROJECT'S DESIGNER INQUIRY NO.
20250941787

BETHLEHEM CITY DEPT. OF WATER/SEWER RESOURCES
MORRISAN COLLEGE
PPL ELECTRIC
SERVICE ELECTRIC CABLE TV INC
UGI UTILITIES INC.
RON TELECOM
VERIZON

PROJECT / SERIAL NUMBERS / EXCAVATION-DEMOLITION / TYPE OF ONE CALL / DATE / ADDRESS / NEAREST INT. / TOWNSHIP / COUNTY
4415 20162023156 EXCAVATION ROUTINE 7/20/2016 SPILLMAN DRIVE LYNN AVE CITY OF BETHLEHEM NORTHAMPTON

PPL ELEC LEHIGH (PI) / BETHLEHEM C DWS (OX) / SVC ELEC CATV (SET) / RON TELECOM (TCC) / UGI LEHIGH (UG) / VERIZON EASTERN (NY)

PRELIMINARY/FINAL LAND DEVELOPMENT

PLAN TITLE: EROSION & SEDIMENTATION CONTROL PLAN
PROJECT TITLE: LOT 8 - LVP VI - 1550 SPILLMAN DRIVE

CITY OF BETHLEHEM
NORTHAMPTON COUNTY
PENNSYLVANIA

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Bethlehem Office
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P: 610.691.5544
F: 610.691.6968
hanovereng.com

NO.	REVISIONS	DATE	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO.	SHEET NO.
					1"=30'	07/01/25	5207	11 of 15

Standard Erosion And Sediment Control Plan
Notes

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARED, THE PCSM PLAN PREPARED, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE UNTIL THAT STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPs SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT EROSION AND SEDIMENT POLLUTION MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BE ACTIVATED.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM PP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL, OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
14. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RESETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
15. A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
16. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
17. ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
18. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES -- 6 TO 12 INCHES ON COMPACTED SOILS -- PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
19. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SUPPLAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
20. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
21. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
22. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
23. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
24. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
25. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. OUT SLOPES IN COMPLETE BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDING AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
26. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
27. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
28. E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
29. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.
30. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPs. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPs SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
31. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
32. FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
33. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
34. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
35. FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS.

Temporary Stabilization & Permanent Stabilization

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

102.40(b)(5)(v) "A MAINTENANCE PROGRAM WHICH PROVIDES FOR INSPECTION OF BMPs ON A WEEKLY BASIS AND AFTER EACH MEASURABLE RAINFALL EVENT, INCLUDING THE REPAIR OF THE BMPs TO ENSURE EFFECTIVE AND EFFICIENT OPERATION."

4. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING, AND RE-NETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED. E&S/PCSM P168
5. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.

102.40(b)(5)(v) "PROCEDURES WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE WILL BE UNDERTAKEN IN ACCORDANCE WITH THIS TITLE."

6. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.
7. SOIL/ROCK DISPOSAL AREAS SHOULD BE ADDRESSED IN THE NARRATIVE AND ON THE DRAWINGS WITH APPROPRIATE BMPs (E.G. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE CONSERVATION DISTRICT AND IS BEING MAINTAINED AND MAINTAINED FOR ALL PROPOSED SOIL/ROCK SPOIL AND BORROW AREAS (ON OR OFFSITE)).

REFER TO NARRATIVE FOR PENN DOT PUBL. 408 DATA

Temporary Seeding

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

DATE	TYPE OF MIXTURE	PER 1,000 SQ. FT.	PER 1,000 SQ. YD.
MARCH 1 TO JUNE 15	ANNUAL RYEGRASS	100%	1.0 LB. 40 LB.
JUNE 15 TO AUG. 15	SUDANGRASS	100%	1.0 LB. 40 LB.
AUG. 15 TO SEPT. 15	ANNUAL RYEGRASS	100%	0.7 LB. 30 LB.
MARCH 1 TO AUG. 15	WINTER WHEAT	100%	4.1 LB. 180 LB.
AUG. 15 TO OCT. 15	HAY OR STRAW MULCH		3.0 TONS
OCT. 15 TO MARCH 1	LIME AND FERTILIZER AND MULCH SPECIFICATIONS		
	TEMPORARY SEEDING		
	- APPLY ONE TON OF LIME PER ACRE AND FERTILIZER 50-50-50 PER ACRE		
	- MULCH, HAY OR STRAW - 3 TONS PER ACRE		
	STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.		

- A. FORMULA "B" - PRIMARILY KENTUCKY BLUEGRASS & CREEPING RED OR CHEWINGS FESCUE, SPREAD AT A SEEDING RATE OF 21 LB. PER 1000 SQ. YDS. SPREAD FORMULA "B" FROM MARCH 15 TO JUNE 1 OR FROM AUGUST 1 TO OCTOBER 15.
- B. FORMULA "C" - CROWNVEITCH AND ANNUAL RYEGRASS (45% - 55%) SPREAD AT A RATE OF 9.0 LB. PER 1000 SQ. YDS. ON ALL SLOPES 2 HORIZONTAL TO 1 VERTICAL AND STEEPER. SPREAD FORMULA "C" RYEGRASS PORTION FROM MARCH 1 TO OCTOBER 15 AND CROWNVEITCH PORTION ANYTIME EXCEPT SEPTEMBER AND OCTOBER.

- C. FORMULA "W"-MIXTURE OF TALL FESCUE, BIRDSFOOT TREFOL, AND REDTOP, SPREAD AT A SEEDING RATE OF 10.5 LB. PER 1000 SQ. YDS. ON THE DETENTION POND. SPREAD THIS FORMULA FROM APRIL 1 TO JUNE 15 OR FROM AUGUST 16 TO SEPTEMBER 15.
- D. ALTERNATE SEED MIXES, BASED ON SECTION IX OF THE "PENN STATE AGRONOMY GUIDE", MAY BE USED ONLY IF APPROVED IN WRITING IN ADVANCE OF PLACEMENT.

Note:

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

Permanent Seeding

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

- A. RAKED FREE OF STONES;
- B. LIMED AND FERTILIZED AS NECESSARY;
- C. PLANTED WITH GRASS OR OTHER SPECIFIED SEED;
- D. MULCHED OR MATTED TO PROTECT THE SEED FROM DRYNESS AND EROSION (STRAW OR HAY AT 1,240 LB. PER 1,000 SQ. YD.).

IT IS RECOMMENDED THAT THE CONTRACTOR TAKE SOIL SAMPLES TO ENSURE THE PROPOSED SEED MIXTURE WILL PROVIDE ADEQUATE COVER.

PERMANENT SEEDING SHALL BE UNDERTAKEN IN ACCORDANCE WITH PENNDOT, FORM 408 SPECIFICATIONS AS FOLLOWS:

- A. PENNDOT FORMULA "B" (PRIMARILY KENTUCKY BLUEGRASS AND CREEPING RED OR CHEWING FESCUE) SPREAD AT A RATE OF 21 POUNDS PER 1,000 SQUARE YARDS, OR OTHER SEED MIX APPROVED FOR THE AREA. SPREAD FORMULA "B" FROM MARCH 15 TO JUNE 1, OR FROM AUGUST 1 TO OCTOBER 15.

- B. ALTERNATE SEED MIXES, BASED ON SECTION IX OF THE "PENN STATE AGRONOMY GUIDE", MAY BE USED ONLY IF APPROVED IN WRITING IN ADVANCE OF PLACEMENT BY THE PROJECT ENGINEER AND THE LOCAL COUNTY CONSERVATION DISTRICT.

Lime And Fertilizer Specifications

PULVERIZED AGR. LIMESTONE, 2,480 LBS. PER 1,000 S.Y.
ANALYSIS COMMERCIAL 10-20-20, 210 LBS. PER 1,000 S.Y.
UREATEFORM FERTILIZER 38-0-0, 50 LBS. PER 1,000 S.Y.
BIOFERTILIZER 31-0-0, 100 LBS. PER 1,000 S.Y.

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

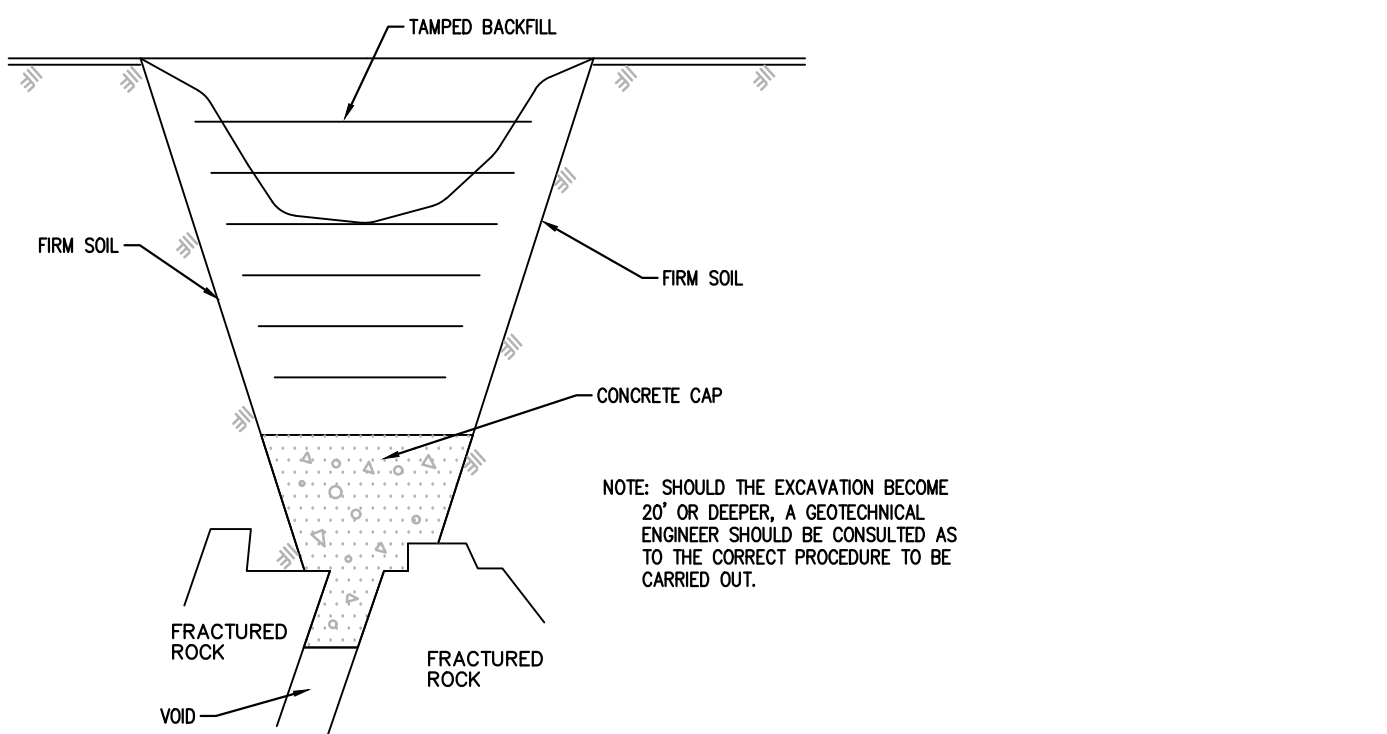
Location Of Measures And Facilities

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

Dimensioned Details Of The Facilities

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

102.50(b)(8) MAINTENANCE OF CONTROL FACILITIES



Sinkhole In Rock

1. THE REPAIR TECHNIQUES AS DESCRIBED BELOW ARE SUITABLE ONLY IF THE SINKHOLE IS LOCATED IN AN OPEN AREA. IF THE SINKHOLE IS LOCATED UNDER OR NEAR A STRUCTURE OR A BUILDING, COMPACTION GROUTING MAY BE NECESSARY FOR REMEDIATION. AS DETERMINED BY A GEOTECHNICAL ENGINEER LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA.
2. EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 15 FEET BELOW GRADE, WHICHEVER OCCURS FIRST.
3. IF ROCK IS ENCOUNTERED WITHIN 10 FEET, STOP EXCAVATION. THE LIMIT OF EXCAVATION SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER. GENERALLY, A ZONE OF SOFT, IN-FILL MATERIAL WILL BE FOUND WHICH COVERS MOST OF THE BOTTOM OF THE EXCAVATION. COVER THIS AREA WITH A GRADED ROCK FILTER AS SHOWN ABOVE.
4. BACKFILL HOLE WITH RELATIVELY IMPERMEABLE CLAY SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER TO AT LEAST 95% OF THE STANDARD PROCTOR.
5. BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.
6. WHEN SINKHOLE IS UNDER A PROPOSED UTILITY, CONCRETE IS TO BE SET 6" BELOW THE UTILITY TO ALLOW FOR A STONE BEDDING.

Disposal Of Materials From The Control Facilities

SEDIMENT WHICH HAS BEEN TRAPPED BY SILT BARRIER FACILITIES MUST BE REMOVED AND STOCKPILED OR REDISTRIBUTED ON THE PROJECT SITE. ALL CONSTRUCTION DEBRIS OR OTHER UNSUITABLE MATERIALS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A LAWFUL MANNER.

WASHING OF FILTER STONE AND REDISTRIBUTION OF WET SEDIMENT SHALL BE ONLY PERMITTED UPHILL OF AN EFFECTIVE SEDIMENT FILTER FACILITY. SILT LADEN RUN-OFF SHALL NOT BE ALLOWED TO FLOW DIRECTLY TO UNPROTECTED INLETS, BASINS, ADJACENT PROPERTIES, ROADWAYS, OR WETLANDS.

ALL SILT BARRIER FACILITIES MUST BE CHECKED FOR CAPACITY AND PROPER FUNCTION WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL ALL UPSTREAM AREAS HAVE A UNIFORM PERENNIAL VEGETATIVE COVER OF OVER SEVENTY (70) PERCENT.

RECYCLING AND/OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE MUST BE ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Recycling And Disposal Of Materials

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH, AND TO INFORM HIS WORKERS OF, ALL LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS REGARDING THE CONDUCT OF WORK AND HANDLING OF MATERIALS ON THE PROJECT, AND TO PERFORM ALL ACTIVITIES IN ACCORDANCE WITH THOSE REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING EMERGENCY RESPONSE PLANS FOR ANY HAZARDOUS OR POLLUTING MATERIALS USED IN THE WORK.

ALL RUBBISH OR WASTE MATERIALS PRODUCED BY CONTRACTOR'S WORKERS SHALL BE PROTECTED FROM DISSEMINATION BY WIND, RAIN, OR ANIMALS, AND SHALL BE LEGALLY DISPOSED OF REGULARLY. ANY CONSTRUCTION DEBRIS OR OTHER UNSUITABLE MATERIALS TRAPPED BY SILT BARRIER FACILITIES SHALL BE SEPARATED FROM SOIL MATERIALS AND DISPOSED OF IN A LAWFUL MANNER.

SEDIMENT WHICH HAS BEEN TRAPPED BY SILT BARRIER FACILITIES MUST BE REMOVED AND STOCKPILED OR REDISTRIBUTED ON THE PROJECT SITE. SEDIMENT WHICH COLLECTS TO THE SPECIFIED CLEAN-OUT OR WASHOUT AREA OF THE PROJECT, MUST BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A LAWFUL MANNER. SEDIMENT TRAPS, MUST BE REMOVED AND STOCKPILED OR REDISTRIBUTED AND STABILIZED ON THE PROJECT SITE.

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

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

Sequence of Construction

1. SCHEDULE A PRE-CONSTRUCTION CONFERENCE AND PROVIDE AT LEAST SEVEN (7) WORKING DAYS' NOTICE TO THE FOLLOWING AGENCIES PRIOR TO COMMENCEMENT OF SITE GRADING WORK:
 - I. PROJECT ENGINEER: 610-691-5644
 - II. NORTHAMPTON COUNTY CONSERVATION DISTRICT: 610-762-1030
 - III. PA ONE CALL: 1-800-242-1776
2. THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER AT LEAST FORTY-EIGHT HOURS (48 HOURS) IN ADVANCE OF EROSION CONTROL FACILITIES COMPONENT INSTALLATIONS.
3. THE CONTRACTOR SHALL REFER TO THE POST CONSTRUCTION STORMWATER MANAGEMENT PLANS FOR LOW IMPACT/NO COMPACTION TECHNIQUES FOR THE EXCAVATION AND PLACEMENT OF PROPOSED FILL MATERIALS.
4. PRIOR TO THE REMOVAL OF TOPSOIL, REFER TO PLAN SHEET 12 FOR THE LOCATION OF SOIL STOCKPILES. TEMPORARY AND PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH REQUIREMENTS LISTED AND AS NOTED IN THE PROJECT NARRATIVE AND AS LISTED ON THE E&S PLAN SHEET. COMPOST FILTER SOCKS SHALL BE INSTALLED DOWNSLOPE OF ALL TOPSOIL STOCKPILES.
 - I. PRIOR TO ANY SEEDING AND LIME AND FERTILIZER APPLICATION, A SOIL TEST SHALL BE PERFORMED TO DETERMINE THE PH FACTOR. ADDITIONAL LIME AND FERTILIZER MAY BE REQUIRED.
 5. DISTURBED AREAS SHALL NOT BE STRIPPED OF TOPSOIL FOR MORE THAN FOUR (4) DAYS WITHOUT TEMPORARY STABILIZATION.
 6. REMOVE THE TREE OBSTRUCTING THE LOCATION OF THE PROPOSED ROCK CONSTRUCTION ENTRANCE AND INSTALL THE ROCK CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS. ALL CONSTRUCTION TRAFFIC FOR THE SITE IS TO ENTER AT THIS LOCATION. ALTERNATE ENTRANCES ARE PROHIBITED.
 7. INSTALL CONCRETE WASHOUT SOUTHWEST OF THE ROCK CONSTRUCTION ENTRANCE.
 8. INSTALL CFS 1 THROUGH CFS 3 AND IMMEDIATELY STABILIZE ANY DISTURBED AREAS.
 9. CLEAR AND GRUB THE ENTIRETY OF THE SITE WITHIN THE LIMIT OF DISTURBANCE PRIOR TO ANY EARTH MOVING ACTIVITIES. REMOVE ALL WASTE MATERIALS AS OUTLINED ON SHEET 3.
 10. INSTALL STORM SEWER RUN BETWEEN EXISTING INLET 10C AND PROPOSED INLET 8-18. INSTALL INLET PROTECTION, BACKFILL AND STABILIZE AREA OF EXCAVATION. INSTALL STORM SEWER RUN FROM INLET 8-1 TO INLET 8-6. INSTALL INLET PROTECTION AND BACKFILL AND STABILIZE AREA OF EXCAVATION. SOIL SUPPLEMENTS, SEED AND MULCH MUST BE APPLIED ACCORDING TO 25 PA. CODE 102.22.
 11. IF STORMWATER FILLS IN EXCAVATION PITS, UTILIZE FILTER BAG TO REMOVE AS SHOWN ON DETAIL SHEET 13.
 12. THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME SHALL NOT BE GREATER THAN THE TOTAL LENGTH OF UTILITY LINE THAT CAN BE PLACED IN THE TRENCH AND BACKFILLED IN ONE (1) WORKING DAY.
 13. NO MORE THAN 50 LINEAL FEET OF OPEN TRENCH SHALL EXIST WHEN UTILITY LINE INSTALLATION CEASES AT THE END OF THE WORKDAY.
11. INSTALL ROOF LEADER CONNECTIONS TO INLETS 8-18 AND INLET 8-3 AND RUN TO BUILDING. INSTALL ROOF LEADER CONNECTIONS USING A PROPOSED TEE TO THE PROPOSED STORM SEWER AND RUN TO BUILDING LOCATION. BACKFILL AND IMMEDIATELY STABILIZE AREA OF EXCAVATION. CAP ROOF LEADER STUB FOR FUTURE CONNECTION.
12. INSTALL SANITARY SEWER AND PROPOSED CLEANOUT. IMMEDIATELY STABILIZE DISTURBED AREA.
13. INSTALL WATER SERVICE. IMMEDIATELY STABILIZE DISTURBED AREA.
14. GRADE IN BUILDING PAD AND START THE CONSTRUCTION OF THE BUILDING. IMMEDIATELY STABILIZE.
15. INSTALL GAS LATERAL. IMMEDIATELY STABILIZE DISTURBED AREA.
16. INSTALL UNDERGROUND ELECTRIC UTILITY LINES AND PROPOSED TRANSFORMER. IMMEDIATELY STABILIZE DISTURBED AREA.
17. INSTALL UNDERGROUND COMMUNICATION LINES. IMMEDIATELY STABILIZE THE AREA.
18. ROUGH GRADE THE ACCESS DRIVEWAYS AND THE PARKING AREA ON THE EAST OF THE PROJECT SITE. IMMEDIATELY STABILIZE ANY DISTURBED AREAS.
19. INSTALL ALL CONCRETE CURBING, SIDEWALKS, AND TRASH ENCLOSURE PAD. STABILIZE ANY AREAS THAT WERE DISTURBED DURING CONSTRUCTION OF THESE ITEMS.
20. PLACE SUBBASE STONE AGGREGATE FOR ALL AREAS TO BE PAVED.
21. FINISH PAVE ALL PARKING AND DRIVEWAYS. IMMEDIATELY STABILIZE ANY AREA DISTURBED.
22. INSTALL CAPPING MATERIAL AND PROPOSED LANDSCAPING. IMMEDIATELY STABILIZE ALL AREAS, THIS IS A CRITICAL STAGE, AND A LICENSED PROFESSIONAL MUST BE ALLOWED TO OVERSEE THE INSTALLATION.
23. ONCE 70% STABILIZATION OF ALL DISTURBED AREAS HAS BEEN ACHIEVED WITH UNIFORM PERENNIAL VEGETATIVE COVER, EROSION CONTROLS CAN BE REMOVED AND PROPERLY DISPOSED OF/RECYCLED. ALL AREAS DISTURBED DURING THE REMOVAL OF THE EROSION CONTROL BMPs SHALL BE IMMEDIATELY REPAIRED AND PERMANENTLY STABILIZED.
24. NO SOIL IS TO BE HAULED OFF SITE WITHOUT SEPARATE EROSION AND SEDIMENTATION POLLUTION CONTROL PLAN REVIEWED AND APPROVED BY THE DISTRICT PRIOR TO BEING ACTIVE. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A UNIFORM MINIMUM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.

SYNTHETIC BINDERS, OR CHEMICAL BINDERS MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES.

MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STARTLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

SHREDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5% WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE OF HYDROMULCH SHOULD BE 2,000 LB./ACRE AT A MINIMUM.

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

Assurance Of Design Performance

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

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

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

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

Anticipated Project Specific Waste

SEDIMENT TRAPPED BY EROSION CONTROL BMPs

PLANT WASTE CREATED DURING CLEARANCE OF SITE

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

PRELIMINARY/FINAL LAND DEVELOPMENT

PLAN TITLE: EROSION & SEDIMENTATION CONTROL NOTES & DETAILS
PROJECT TITLE: LOT 8 - LVP VI - 1550 SPILLMAN DRIVE

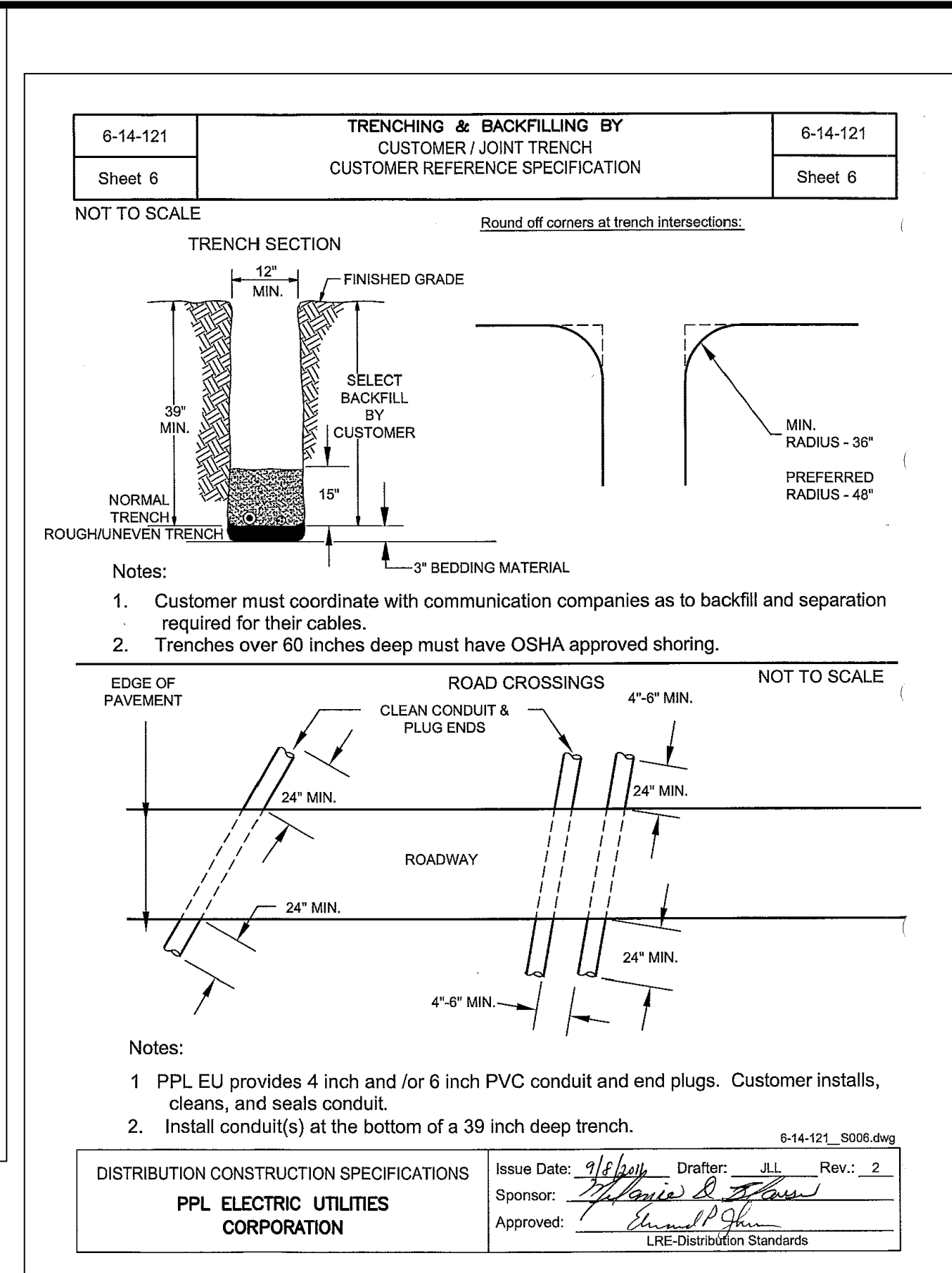
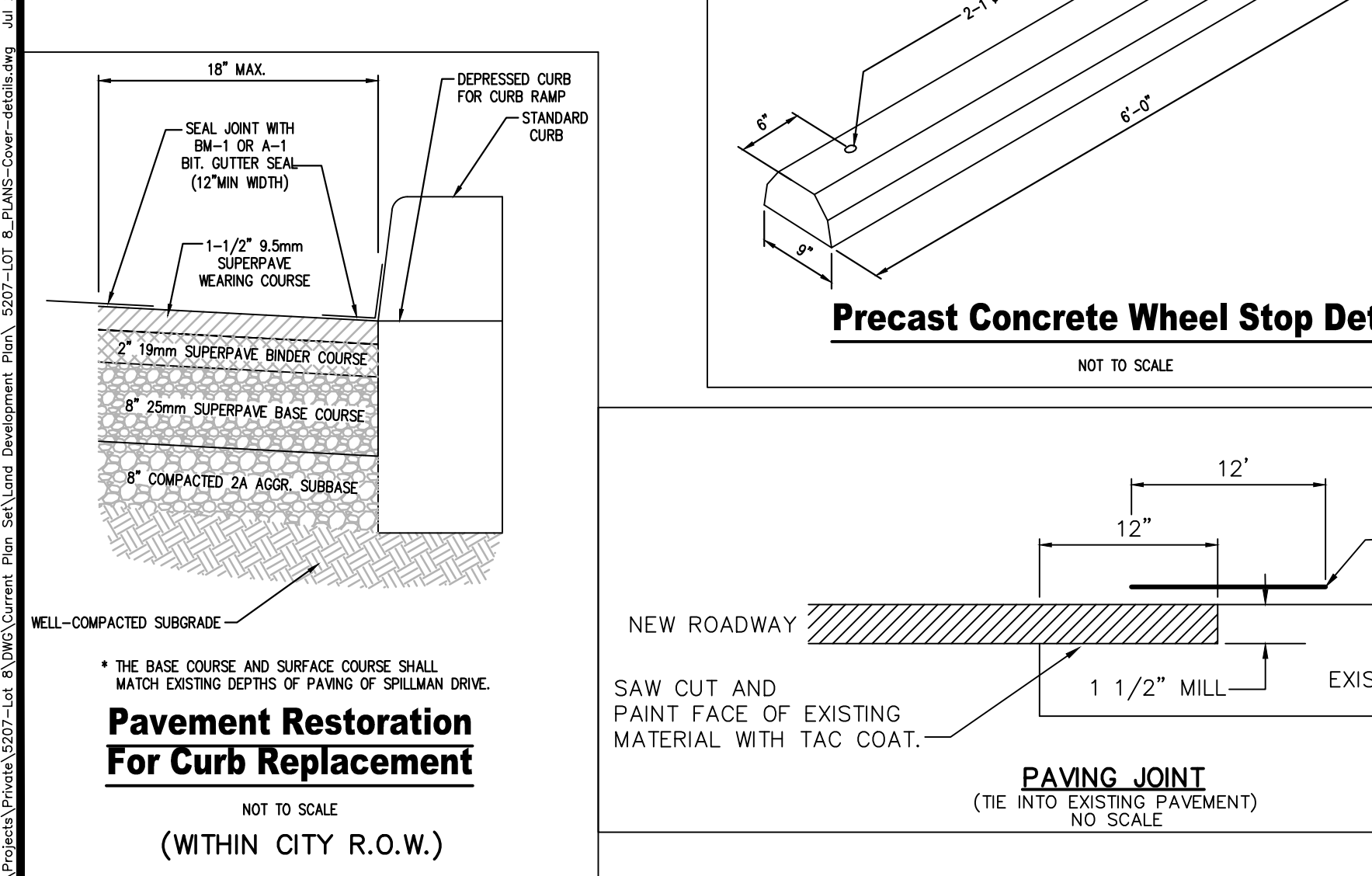
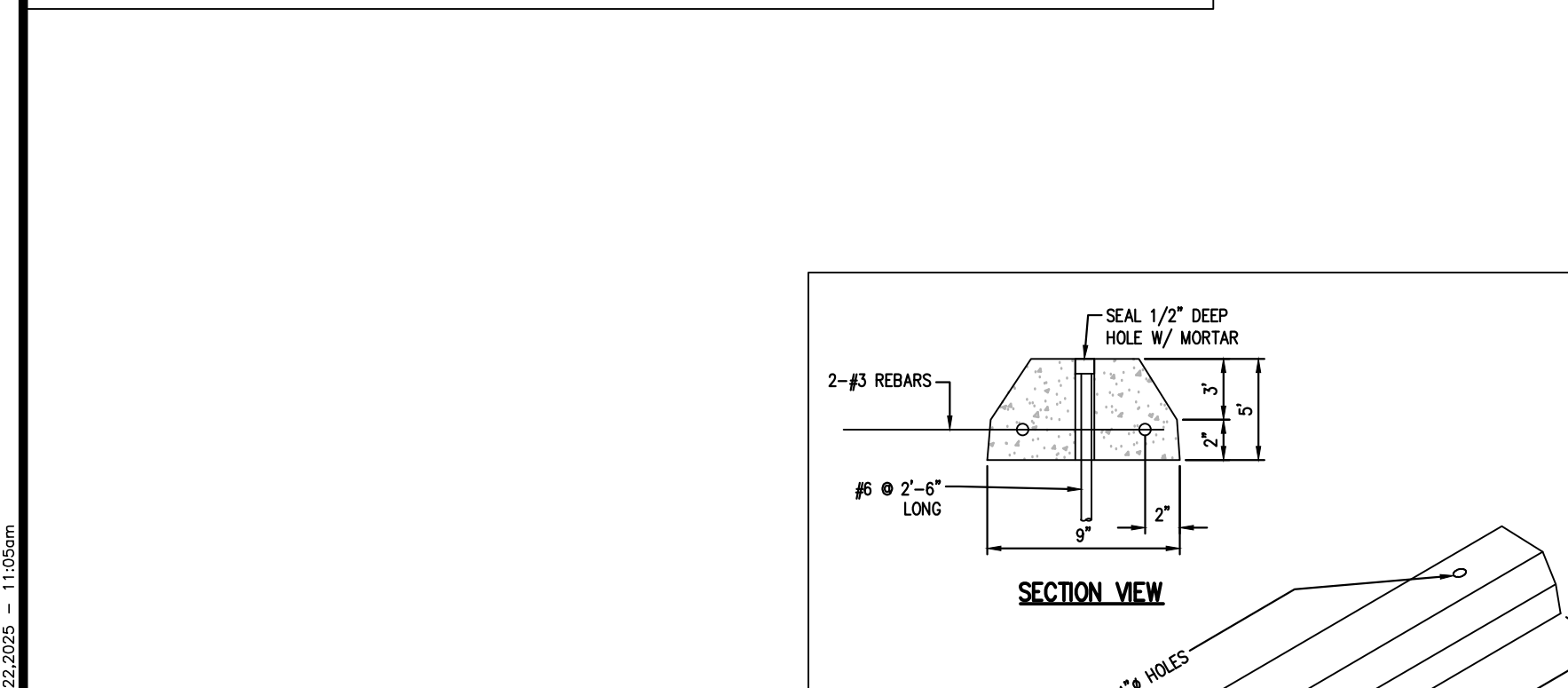
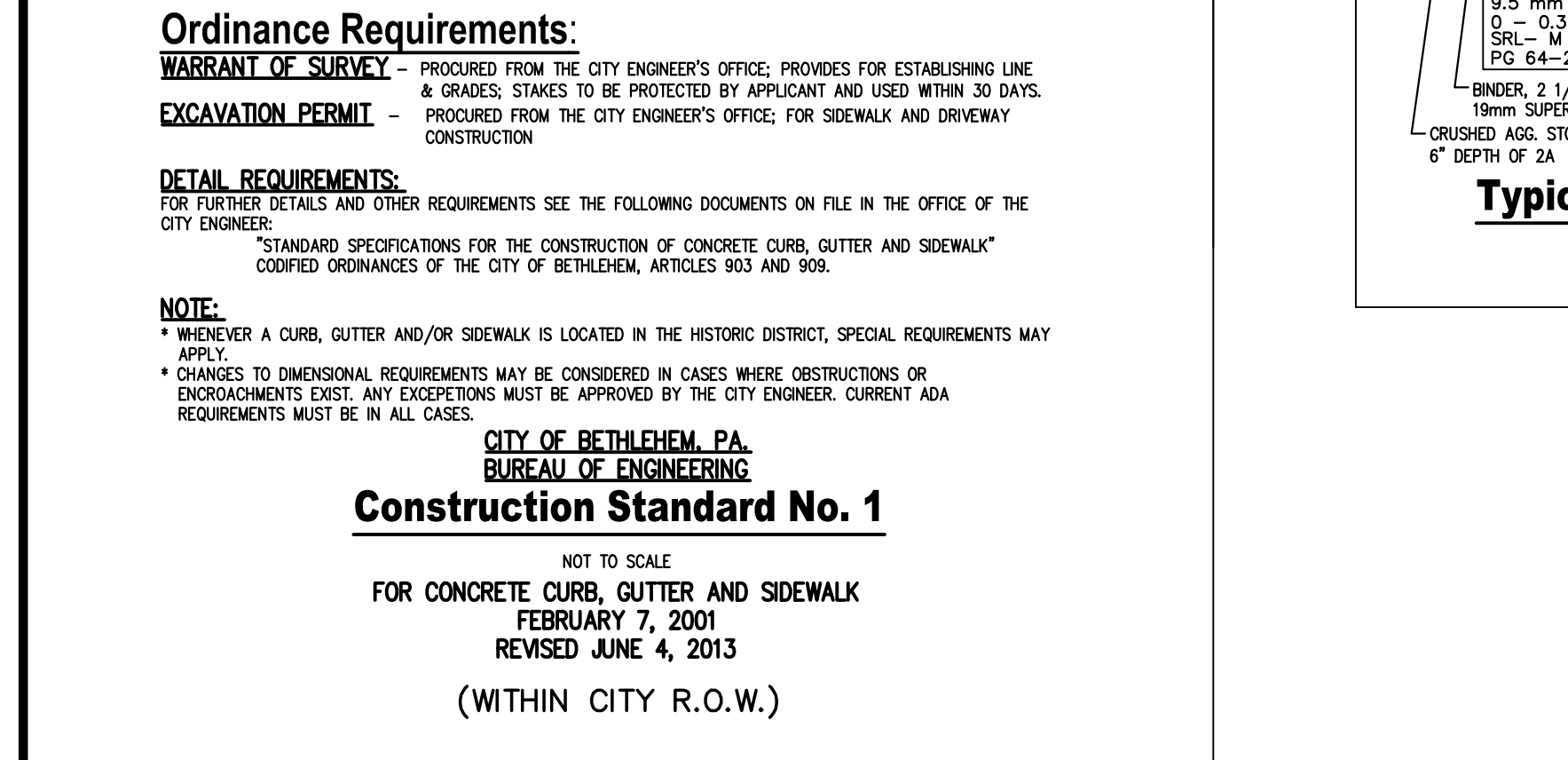
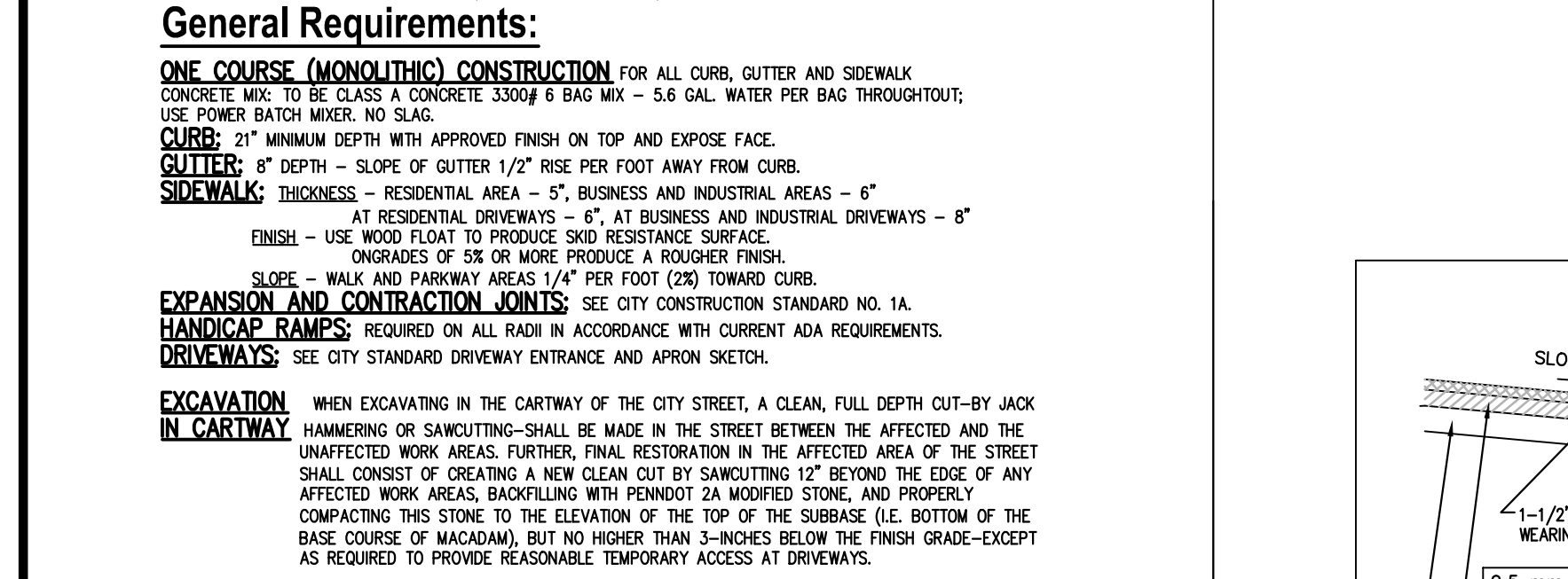
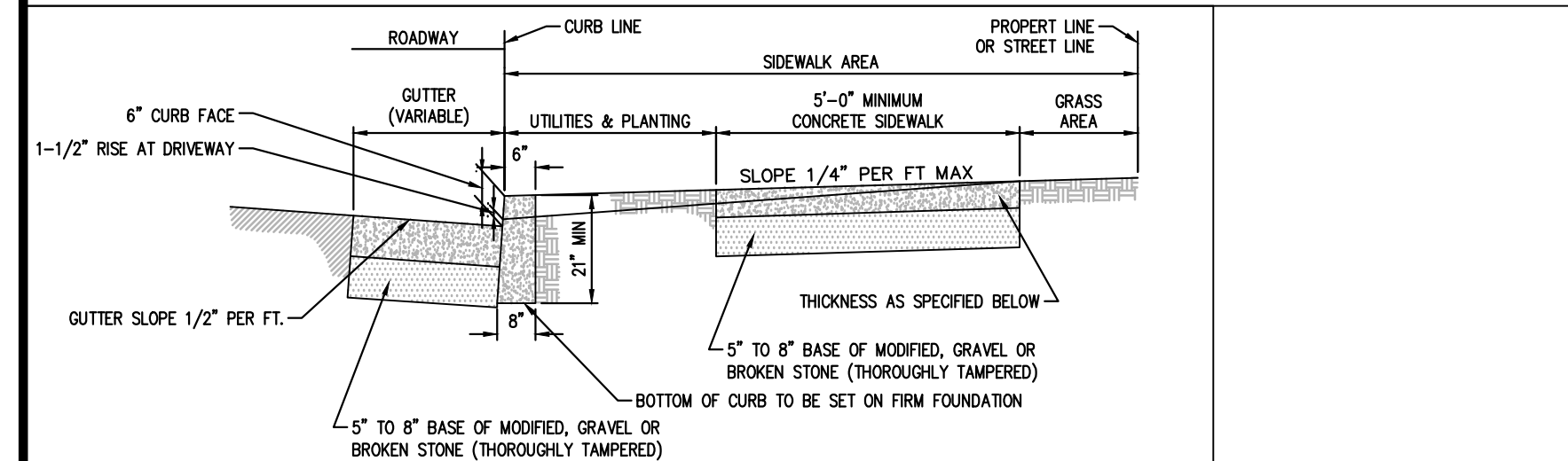
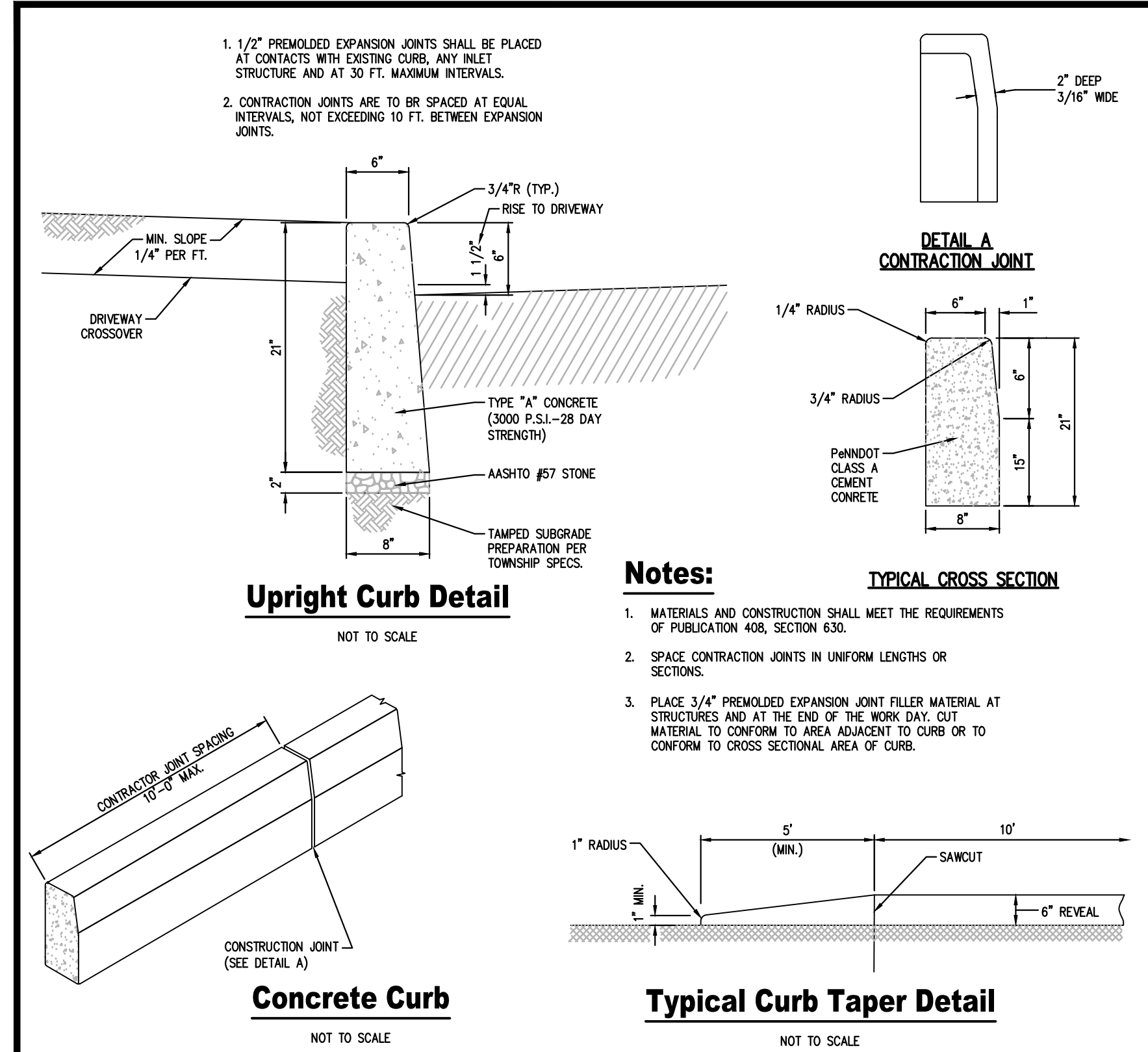
CITY OF BETHLEHEM
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PENNSYLVANIA

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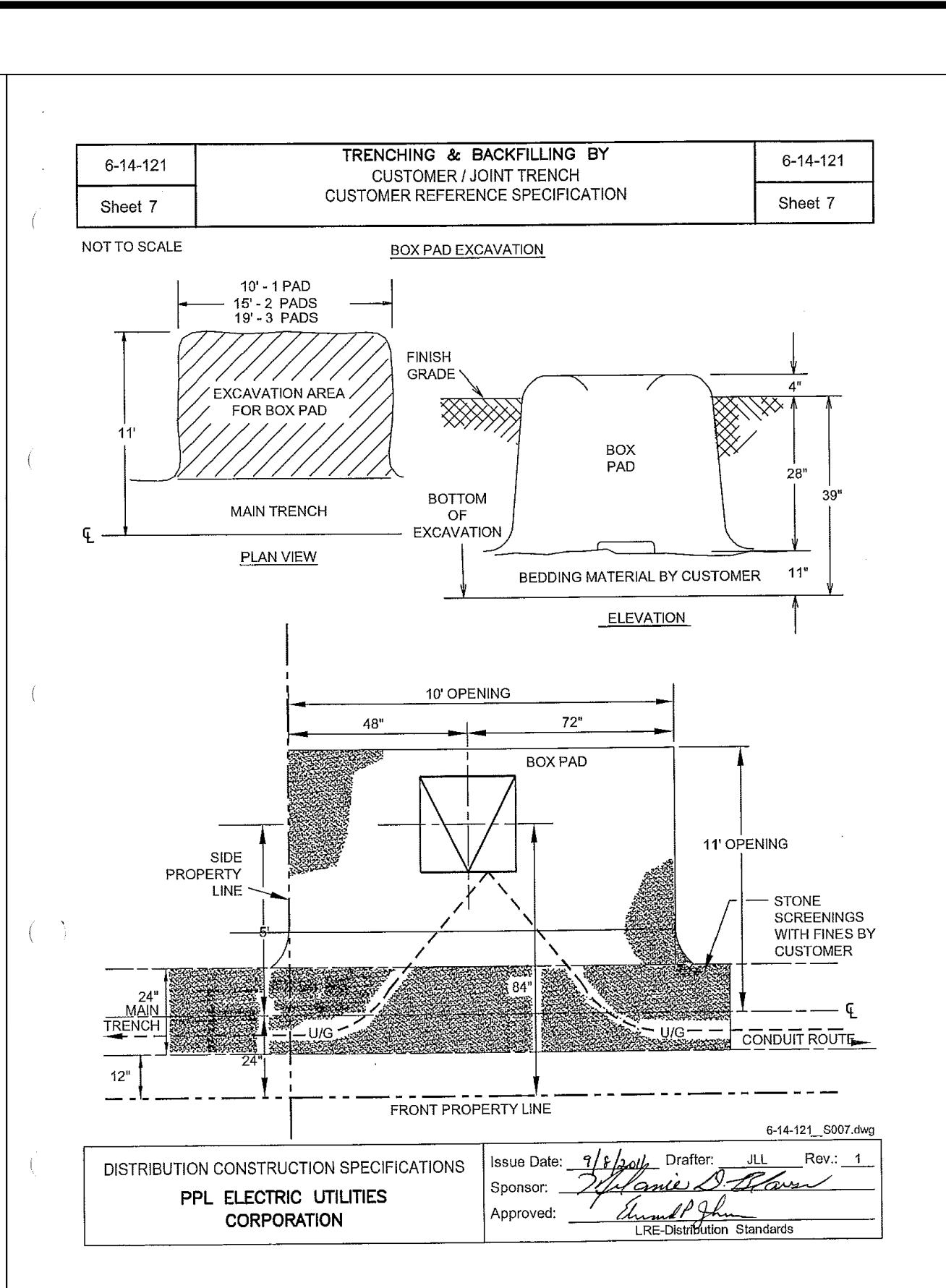
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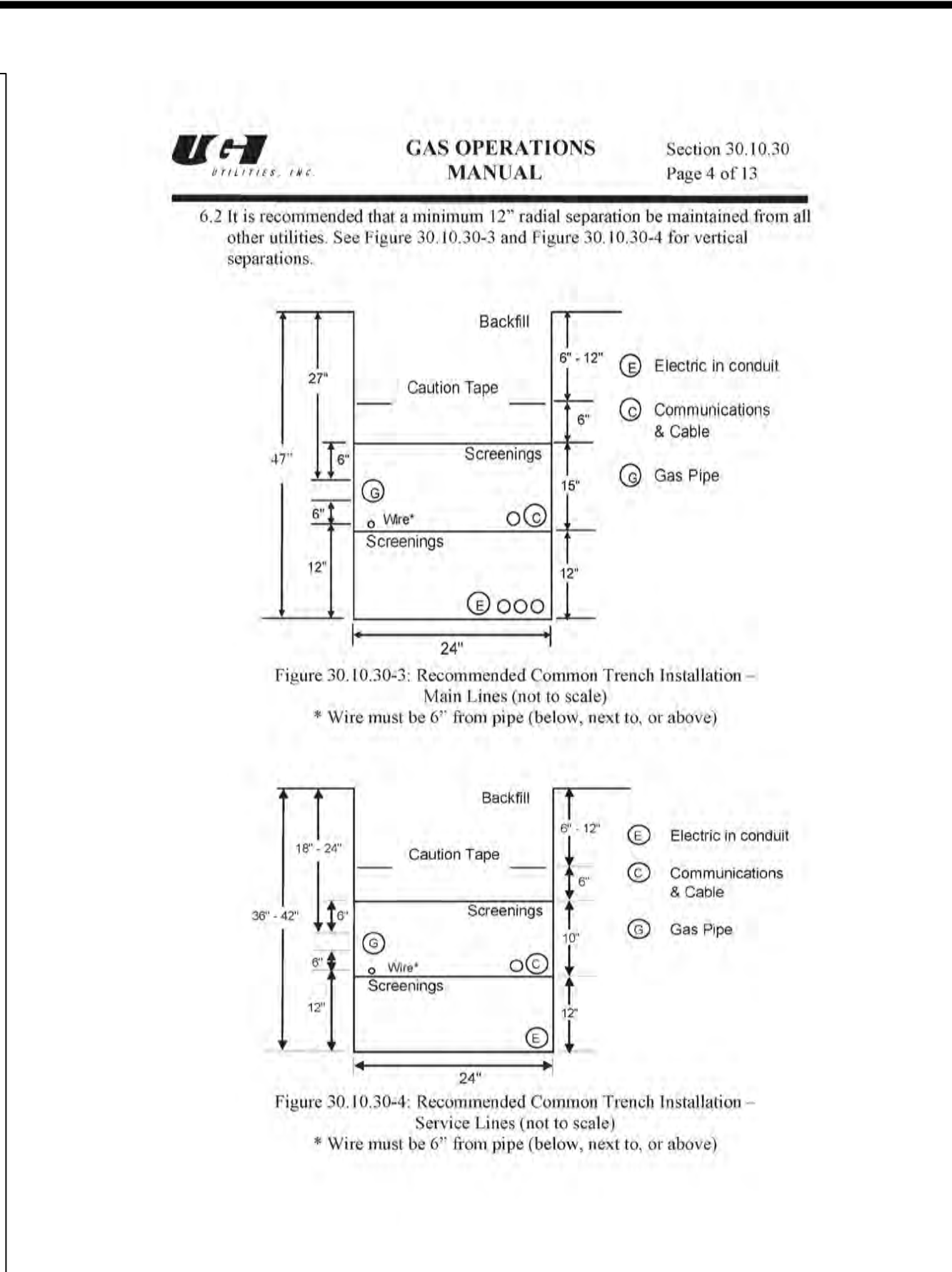
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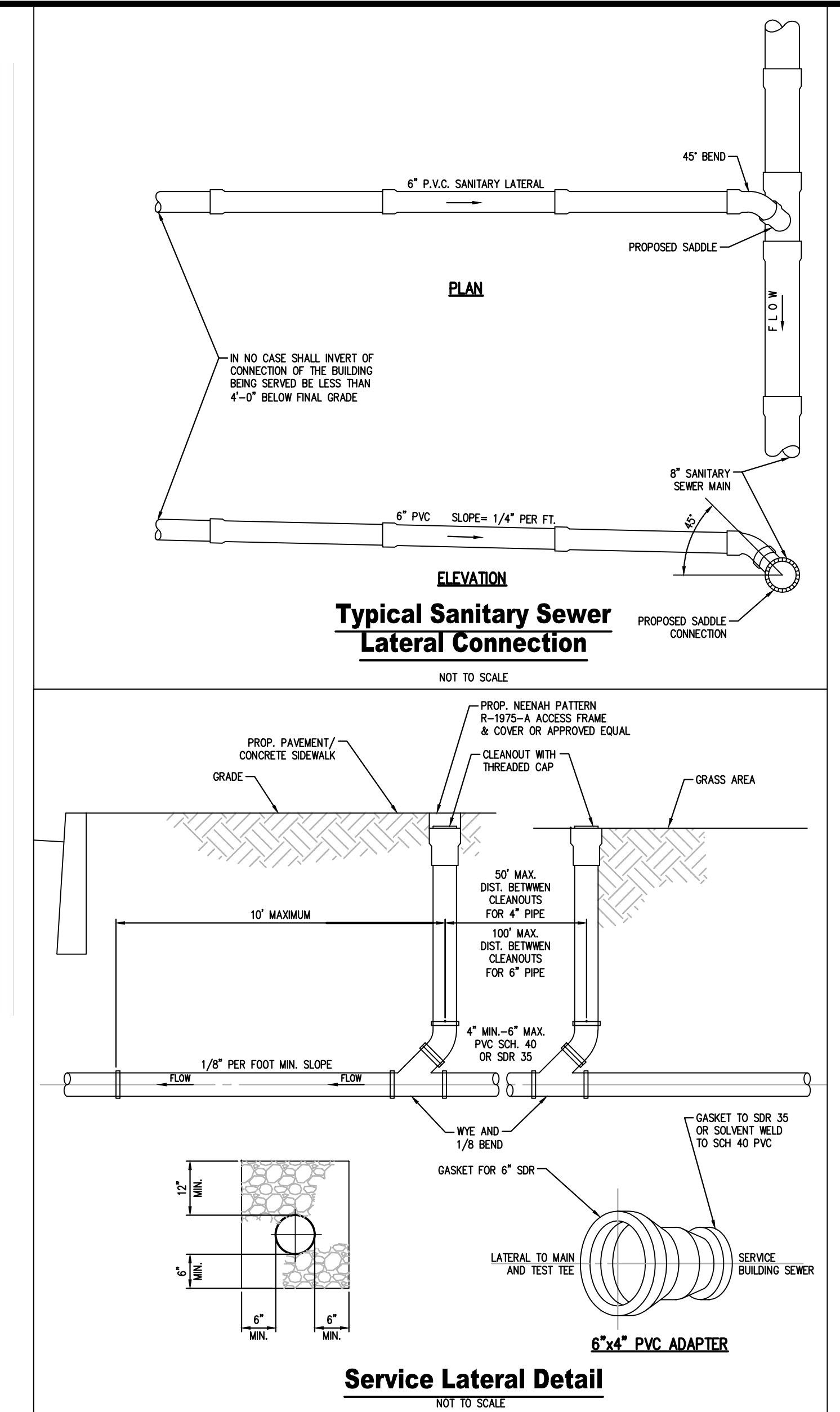
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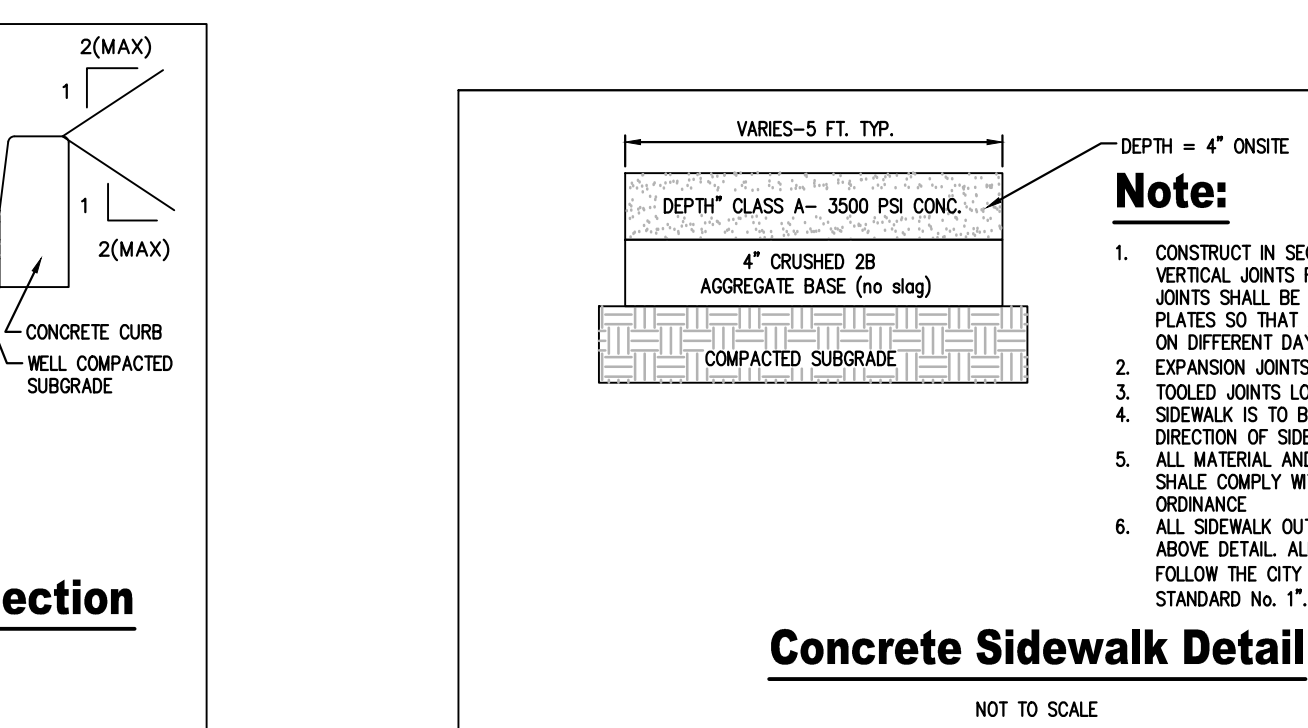
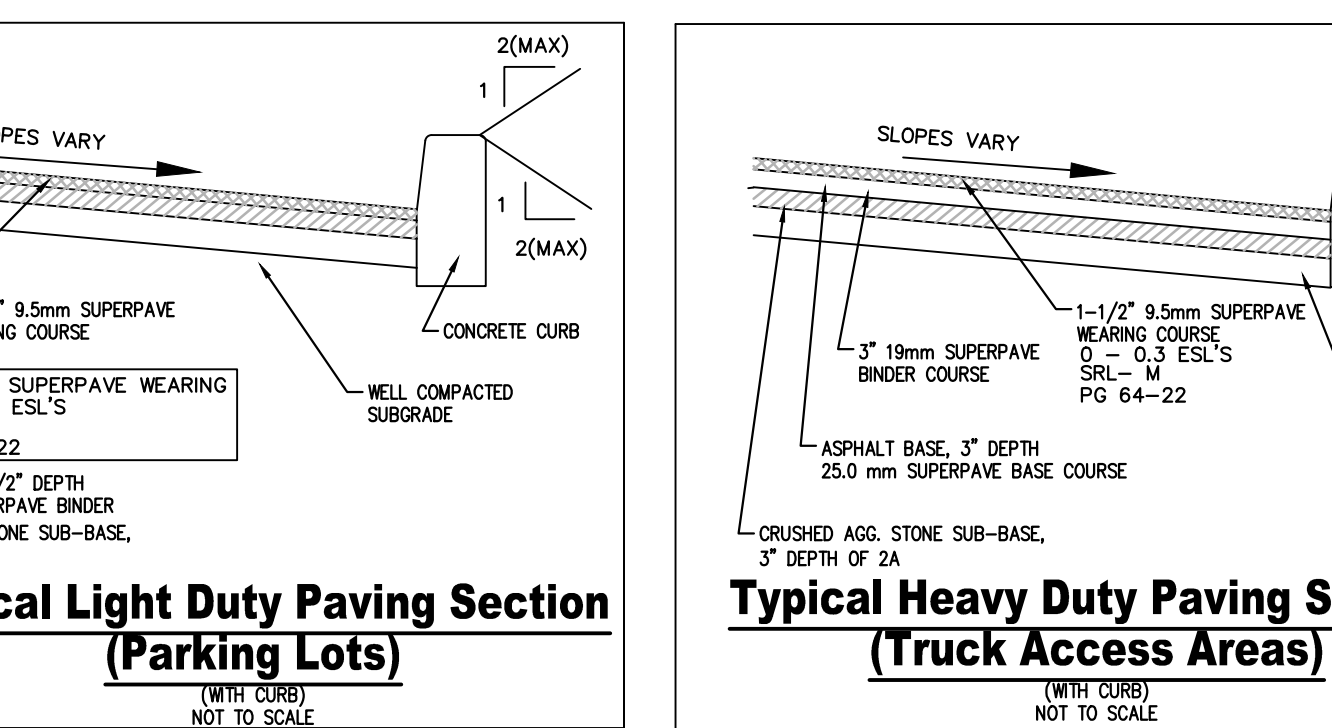
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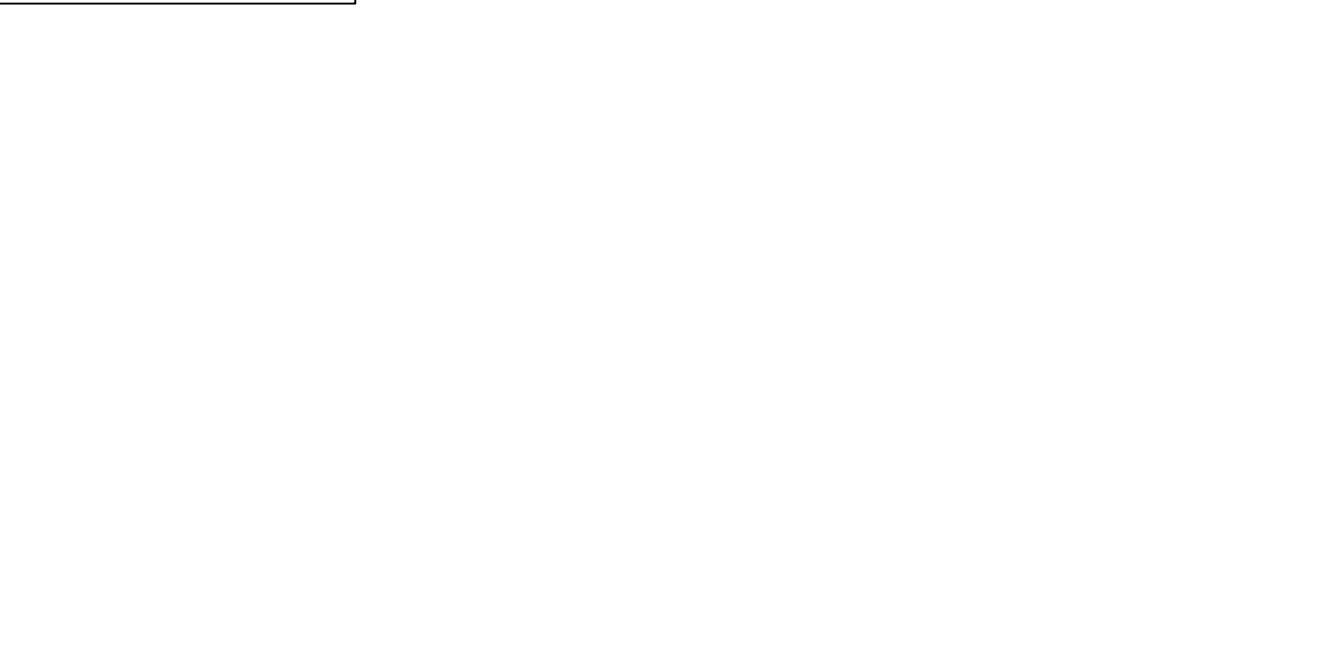
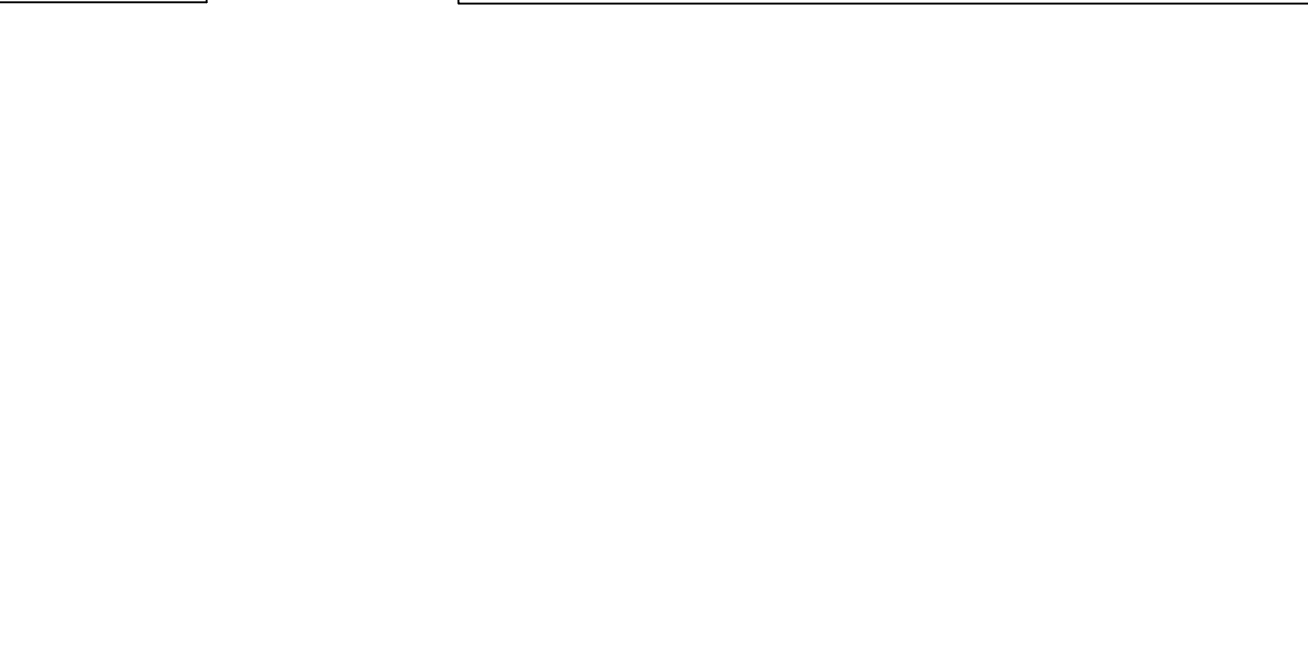
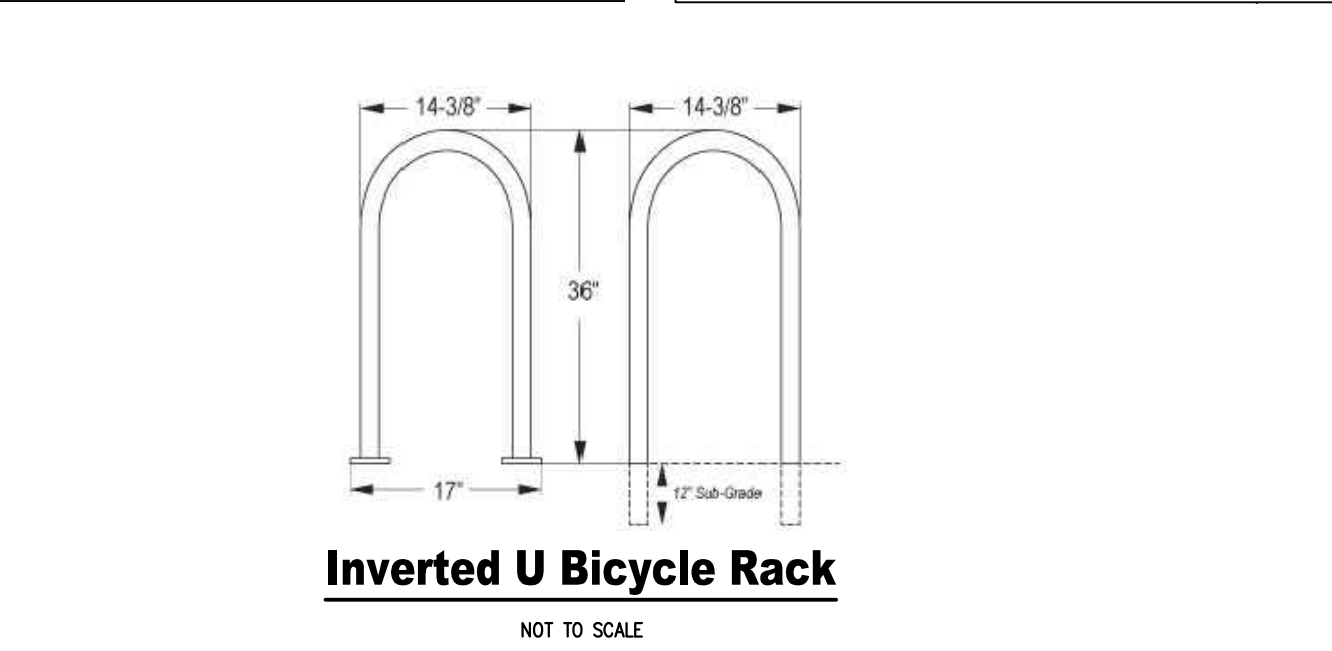
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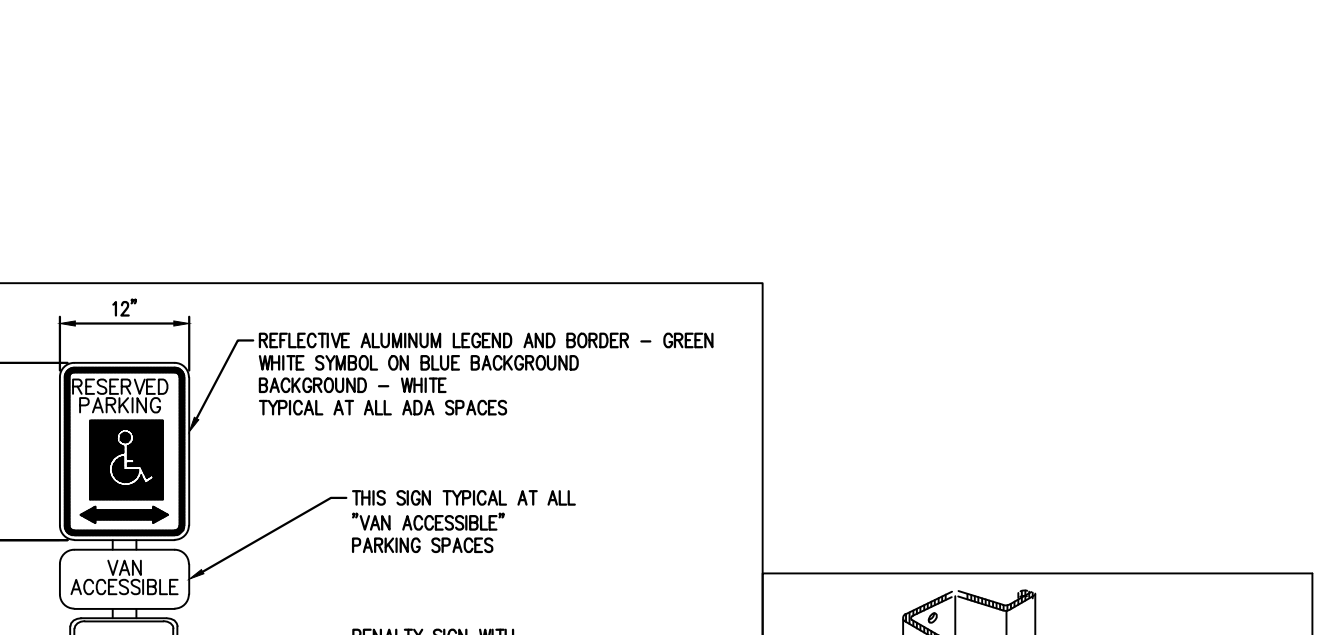
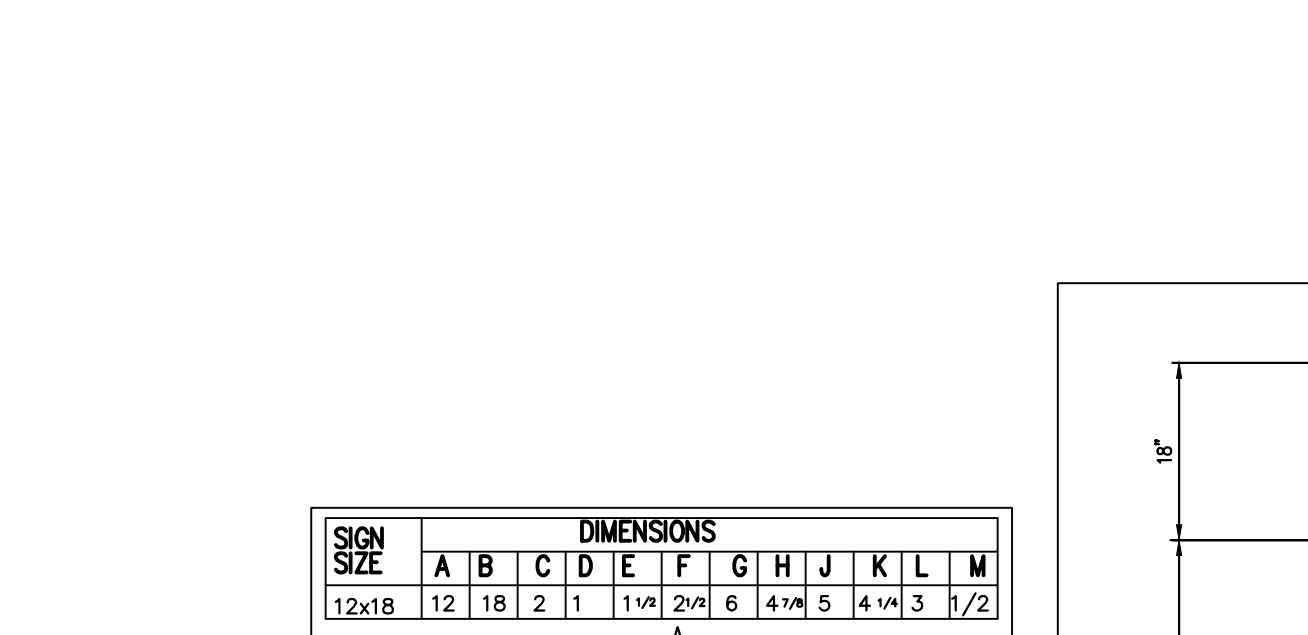
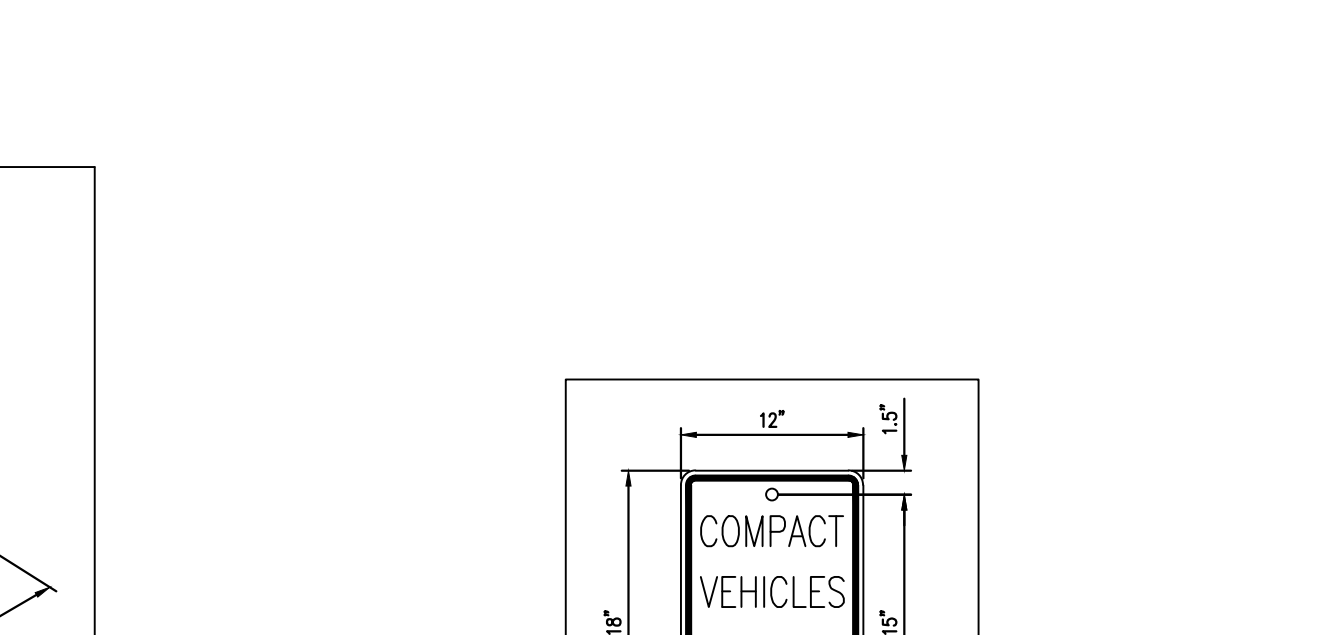
UGI TRENCHING AND BACKFILLING (LATEST VERSION)



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