

EVANS STREET APARTMENT BUILDING

PREPARED FOR
HH EVANS STREET, LLC
SUBJECT PROPERTY LOCATED AT:
934-940, 942-944, 946, 1004 EVANS STREET, BETHLEHEM
CITY OF BETHLEHEM, NORTHAMPTON COUNTY, PENNSYLVANIA
TMP: P6SE2A 14 1 0204, P6SE2A 14 2 0204, P6SE2A 14 3 0204, P6SE2A 15 1 0204

GENERAL NOTES:

1. MEANS AND METHODS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER SHALL NOT SUPERVISE, DIRECT, OR HAVE CONTROL OVER CONTRACTOR'S WORK. THE ENGINEER SHALL NOT HAVE AUTHORITY OVER OR RESPONSIBILITY FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS ASSOCIATED WITH THE WORK.
3. ALL NOTES ARE TYPICAL, UNLESS NOTED OTHERWISE.
4. ALL WORK SHALL CONFORM TO THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE, 2021 INTERNATIONAL EXISTING BUILDING CODE, AND TO ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
5. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
6. IF ANY GENERAL NOTE CONFLICTS WITH ANY DETAIL OR NOTE ON THE PLANS OR IN THE SPECIFICATIONS, THE STRICTEST PROVISIONS SHALL GOVERN.
7. THE STRUCTURAL DRAWINGS ARE FOR THE PLACEMENT AND SIZE OF STRUCTURAL COMPONENTS ONLY. REQUIREMENTS MADE BY OSHA AND ALL OTHER APPLICABLE SAFETY CODES ARE TO BE DETERMINED AND PROVIDED BY THE CONTRACTOR.
8. CONTRACTOR SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE.
9. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
10. WHERE ALTERATIONS INVOLVE AN EXISTING SUPPORTING STRUCTURE, THE CONTRACTOR SHALL PROVIDE SHORING AND PROTECTION REQUIRED TO ENSURE THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE.
11. BRACING, SHEETING, SHORING, ETC., REQUIRED TO SUPPORT EXISTING BUILDINGS, SIDEWALKS, UTILITIES, ETC., SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER ENGAGED BY THE CONTRACTOR; DETAILED SHOP DRAWINGS SHALL BE PREPARED INDICATING ALL WORK TO BE PERFORMED.
12. USE OF CONSTRUCTION DOCUMENTS AS ERECTION OR SHOP DRAWINGS BY THE CONTRACTOR IS EXPRESSLY PROHIBITED.
13. THE CONTRACTOR IS RESPONSIBLE TO REMOVE ALL WASTE OFF-SITE AND CLEAN UP THE SITE BEFORE COMPLETION OF STRUCTURAL WORK.

GRADING & DRAINAGE NOTES:

1. ALL CONSTRUCTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH PENN-DOT FORM 408 SPECIFICATIONS AND RC STANDARDS, LATEST EDITION.
2. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR ENSURING ALL CONSTRUCTION ACTIVITIES ARE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND POLICIES OF THE LOCAL CONSERVATION DISTRICT.
3. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR ENSURING ALL CONSTRUCTION ACTIVITIES ARE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND POLICIES OF THE OCCUPATIONAL SAFETY AND HEALTH ADMIN (OSHA).
4. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL UTILITIES AND COMPLYING WITH THE PENNSYLVANIA ACT 38 AND ACT 187, AS AMENDED.
5. THE CONTRACTOR, DURING THE PERFORMANCE OF ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF THE PROJECT IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL STATE AND LOCAL LAWS, CODES AND REGULATIONS.
6. ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND.
7. IT IS IMPERATIVE THAT UTILITY COMPANIES ARE NOTIFIED PRIOR TO ANY EXCAVATION AND/OR CONSTRUCTION: ALL CONTRACTORS WORKING ON THIS PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF P.I. 852, NO. 287, 12/10/74, AS AMENDED 12/12/86, P.L. 1574, NO. 172, CONTRACTOR MUST NOTIFY PA-1 CALL SYSTEM, INC. 3 DAYS PRIOR TO CONSTRUCTION. CALL 1-800-242-1776 TO ORDER UTILITY MARK OUTS BY OTHERS.
8. CONTRACTOR SHALL NOT ENCROACH ONTO ADJUTING PROPERTIES UNLESS A TEMPORARY CONSTRUCTION EASEMENT HAS BEEN GRANTED BY ADJOINING PROPERTY OWNER. CONTRACTOR SHALL HAVE PROPERTY LINES CLEARLY MARKED IN AREAS WHERE GRADING WILL ENCROACH WITHIN 5 FEET OF THE PROPERTY LINE AND SHALL CONSTRUCT SUCH BARRIERS WHERE NECESSARY TO PREVENT ENCROACHMENT ONTO ADJACENT PROPERTIES.
9. NATURAL RESOURCE PROTECTION LAND REQUIRED TO BE PROTECTED, AS SHOWN IN WITHIN THE "ENVIRONMENTALLY SENSITIVE LAND STANDARDS FOR WATERSHED DISTRICT" TABLE SHALL NOT BE DISTURBED.
10. BURYING OF TREES, STUMPS, OR CONSTRUCTION MATERIAL IS PROHIBITED. TREES AND STUMPS MAY BE CHIPPED OR GROUND AND SPREAD ON THE SITE. ALL CONSTRUCTION DEBRIS INCLUDING EXCESS EXCAVATED MATERIAL, SCRAP WOOD, BRICKS, BLOCKS, ETC. SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.
11. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN THE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
12. TOPSOIL SHALL BE RETURNED AT A MINIMUM DEPTH OF 6".
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SILT AND SEDIMENT LADEN RUNOFF WITHIN THE LIMITS OF DISTURBANCES INDICATED ON THE PLAN.
14. IMMEDIATE STABILIZATION IS REQUIRED TO BE PROVIDED UPON TEMPORARY CESSATION OF WORK - 4 OR MORE DAYS - OR AS SOON AS ANY GRADED AREA REACHES FINAL GRADE.



AERIAL MAP

1" = 800'

CONSTRUCTION SEQUENCE FOR SITE WORK

PRE CONSTRUCTION ACTIVITIES:

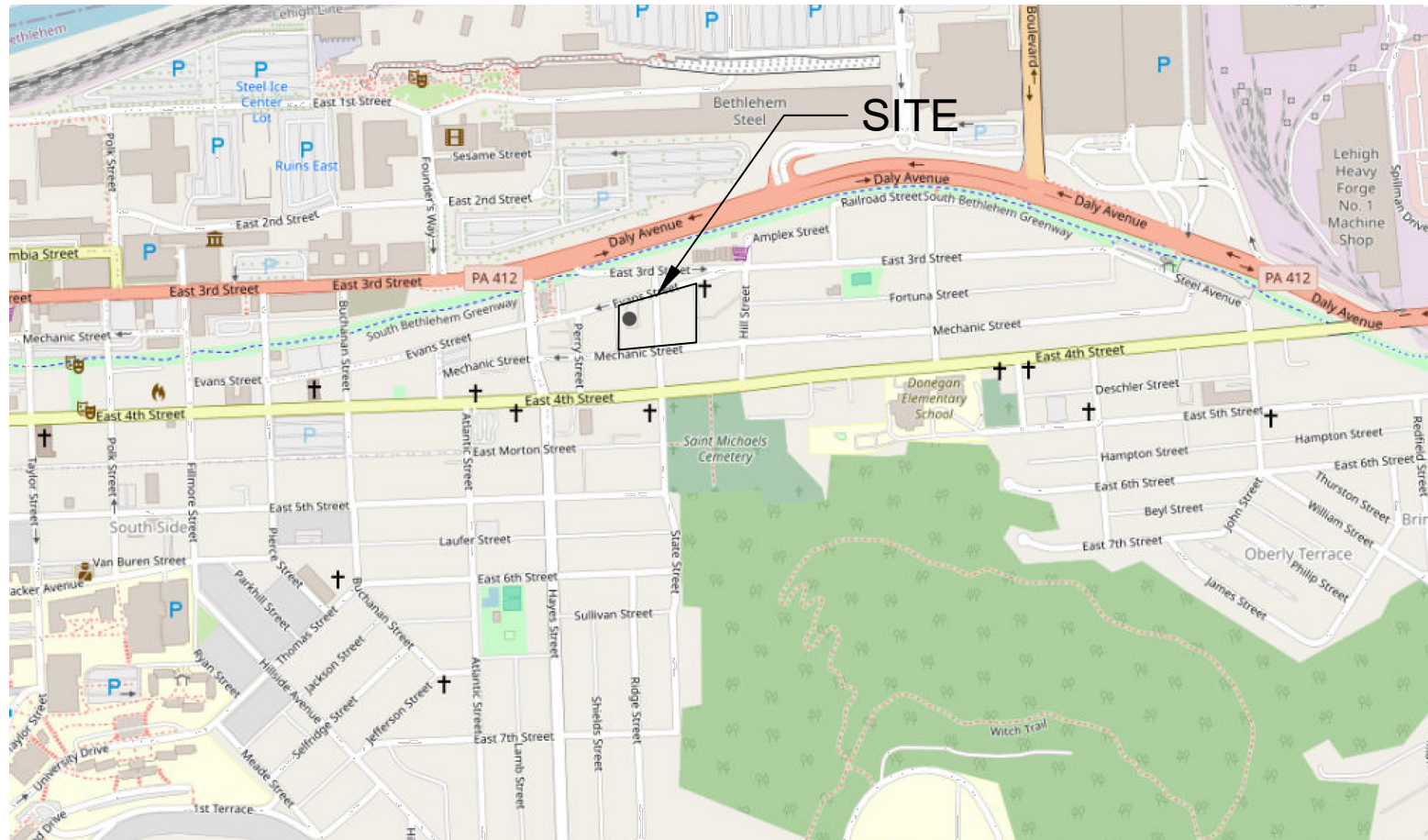
1. CALL PA-ONE PRIOR TO THE START OF THE PROJECT.
2. NOTIFY THE TOWNSHIP ENGINEER A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
3. INSPECT AND SECURE EXISTING EROSION CONTROL MEASURES BEFORE PROCEEDING WITH DISTURBANCE ACTIVITIES.

CONSTRUCTION:

1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO ANY DISTURBANCE ACTIVITIES IN ACCORDANCE WITH THE DRAWINGS.
2. DEMO EXISTING BUILDING. REMOVE EXISTING ASPHALT AND CONCRETE FLATWORK AS REQUIRED IN ACCORDANCE WITH THE SCHEDULE. ONE SIDEWALK TO REMAIN OPEN AT ALL TIMES ALONG STATE STREET LOT FRONTAGES.
3. INSTALL RETAINING WALLS IN ACCORDANCE WITH THE PLAN SET.
4. GRADE SIDE IN ACCORDANCE WITH PLAN SET. INSTALL PIPING AND UTILITIES IN ACCORDANCE WITH PLAN SET.
5. ERECT BUILDING IN ACCORDANCE WITH ARCHITECTURAL PLANS.
6. INSTALL CURBING AND FLAT WORK IN ACCORDANCE WITH SPECIFICATIONS.
7. CONNECT PROPOSED LIGHTING AS REQUIRED. ELECTRICAL AND WIRING DESIGNED BY OTHERS.
8. INSTALL DRIVE LANES AND PARKING AREAS IN ACCORDANCE WITH DETAILS.
9. GRADE GREEN SPACES AS REQUIRED. INSTALL PROPOSED SIGNAGE AND LANDSCAPING IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
10. STRAW AND SEED DISTURBED AREAS.

POST-CONSTRUCTION

1. NOTIFY THE ENGINEER AND TOWNSHIP ONE WEEK IN ADVANCE OF COMPLETION TO PERFORM FINAL INSPECTION.
2. ALL EROSION AND SEDIMENTATION MEASURES SHALL BE REMOVED UPON PROVIDING PERMANENT STABILIZATION OF ALL DISTURBED AREAS AND AT THE DIRECTION OF THE CONSERVATION DISTRICT REPRESENTATIVE AND/OR ENGINEER.



STREET MAP

1" = 800'

OWNER:

HH EVANS STREET LLC
C/O DAVID HITZEL
621 BROOKE LANE, GLEN MILLS, PA 19342
(484) 903-3658
hhproperties.us@gmail.com

SURVEYOR:

CAVANAUGH SURVEYING SERVICES
C/O PATRICK CAVANAUGH, PLS
28 EAST OAKLAND AVENUE, DOYLESTOWN, PA 18901
(215) 348-8359

ARCHITECT:

EGGMAN INK DESIGN
C/O SCOTT VOELKER, AIA
7790 SEEMSVILLE ROAD, NORTHAMPTON, PA 18067
(610) 704-7541
info@eggmanink.com

SHEET INDEX

- | | | |
|----|------|-------------------------------|
| 1 | CS | COVER SHEET |
| 2 | EF | EXISTING FEATURES PLAN |
| 3 | RP | RECORD PLAN |
| 4 | DP | DEMOLITION PLAN |
| 5 | PF | PROPOSED SITE PLAN |
| 6 | GU | GRADING UTILITY PLAN |
| 7 | LA | LANDSCAPING PLAN |
| 8 | LP | LIGHTING PLAN |
| 9 | D1 | DETAILS |
| 10 | D2 | DETAILS |
| 11 | SP | SIGNAGE PLAN |
| 12 | ES | EROSION AND SEDIMENT CONTROLS |
| 13 | TR | TRAFFIC CONTROL PLAN |
| 14 | FR | FIRE TRUCK TURNING PLAN |
| 15 | LC 1 | LOT 1 CONSOLIDATION PLAN |
| 16 | LC 2 | LOT 2 CONSOLIDATION PLAN |

PRELIMINARY PLAN

Drawing Notes

BEFORE YOU DIG CONTACT
PA. ONE-CALL
1-800-242-1776



PENNSYLVANIA ONE CALL SYSTEM
PA ACT 172 OF 1986 REQUIRES THREE
WORKING DAYS NOTICE
SIN: 2025-05322113

B	PLANNING COMM.	JND	07.08.2025
A	FOR PERMIT	JND	03.26.2025
No.	Description	Revised By	Date



BUSTAMANTE
ENGINEERS INC.

Firm Name and Address

BUSTAMANTE
ENGINEERS, INC

875 N. EASTON, SUITE 3B
DOYLESTOWN, PA 18902

Client:

HH PROPERTIES
405 MURRAY LANE
MEDIA, PA 19063

Project:

EVANS STREET APARTMENT
BUILDING

Revision

PLANNING COMM.

Date

July 8, 2025

Scale

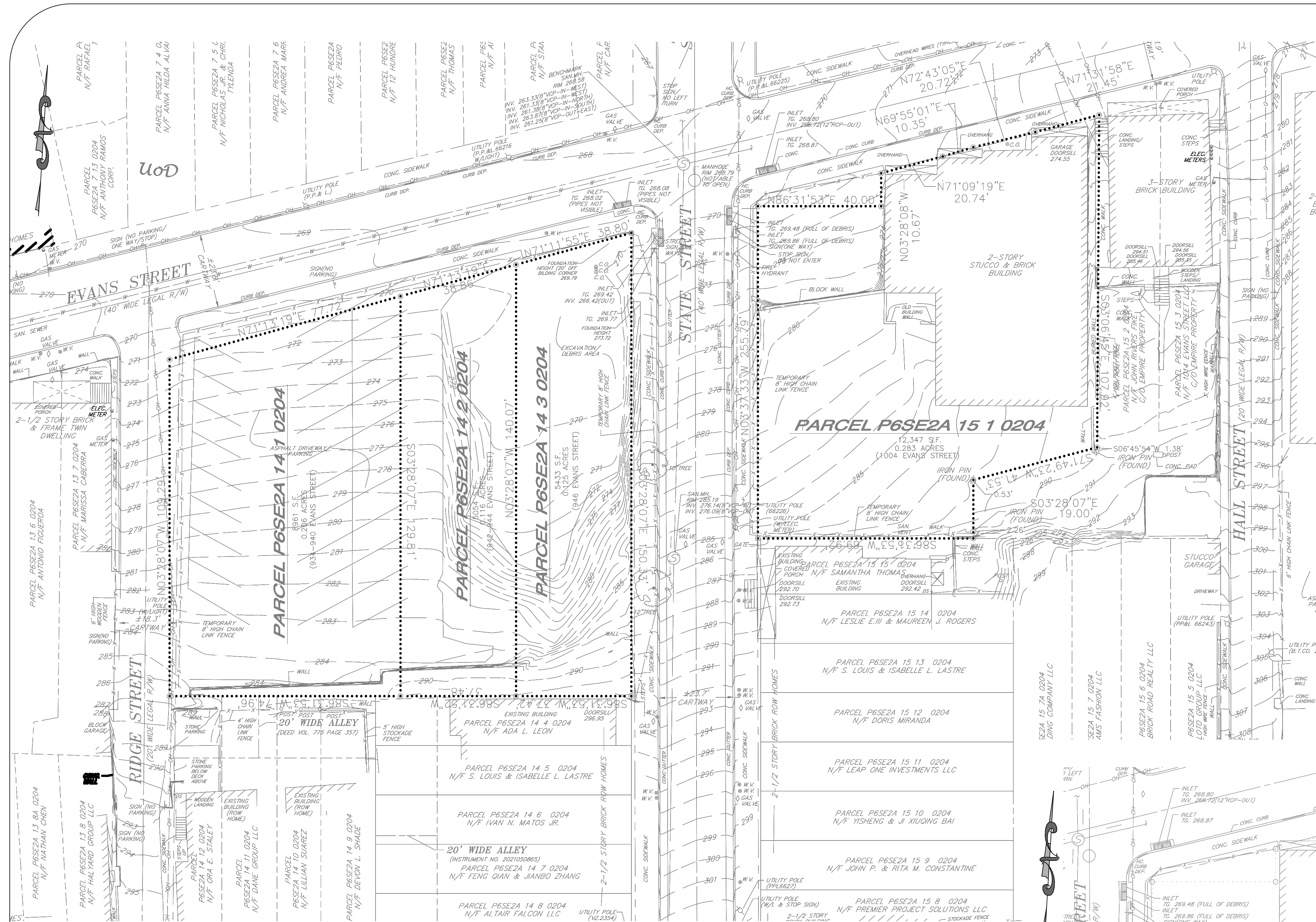
As Noted

Sheet

COVER SHEET

CS

1 of 16



EXISTING FEATURES PLAN

ADDITIONAL PARCEL INFORMATION: NONE OF THE SUBJECT PARCELS ARE LOCATED WITHIN THE FLOODWAY NOR ANY SPECIAL FLOOD HAZARD AREA; REF. FEMA FIRM 42095C0326E, EFFECTIVE ON 7/16/2014.

PA-ONE CALL LIST

ACT 187 USERS LIST	ADDRESS	TELEPHONE
USER		
City of Bethlehem	10 E. Church Street Bethlehem, PA 18018	610-865-7077
PPL Electric Utilities	827 Hausman Road Allentown, PA 18104	1-800-342-5775
First Light Fiber	12 Metro Park Road Albany, NY 12205	1-888-832-4976
UGI Corporation	P.O. Box 13009 Reading, PA 19612	1-800-276-2722

SETBACK NOTES:
BUILDING SETBACKS ARE BASED ON REDRAFTED PROPERTY LINES THAT MATCH THE STREET RIGHT OF WAYS.

SOILS:
UkaB - Urban Land, 0 to 8 percent slopes
UoD - Urban Land-Duffield complex, 8 to 25 percent slopes
UpD - Urban Land-Gladstone complex, 8 to 25 percent slopes

SITE INFORMATION:

PARCEL	WARD	CITY BLOCK	AREA (AC)	DEED BOOK
P6SE2A 14 1 0204	5	14 (3A)	0.206	2023-1 149875
P6SE2A 14 2 0204	5	14 (3A)	0.116	2023-1 149875
P6SE2A 14 3 0204	5	14 (3A)	0.125	2023-1 149875
P6SE2A 15 1 0204	5	15 (4B)	0.283	2023-1 149875

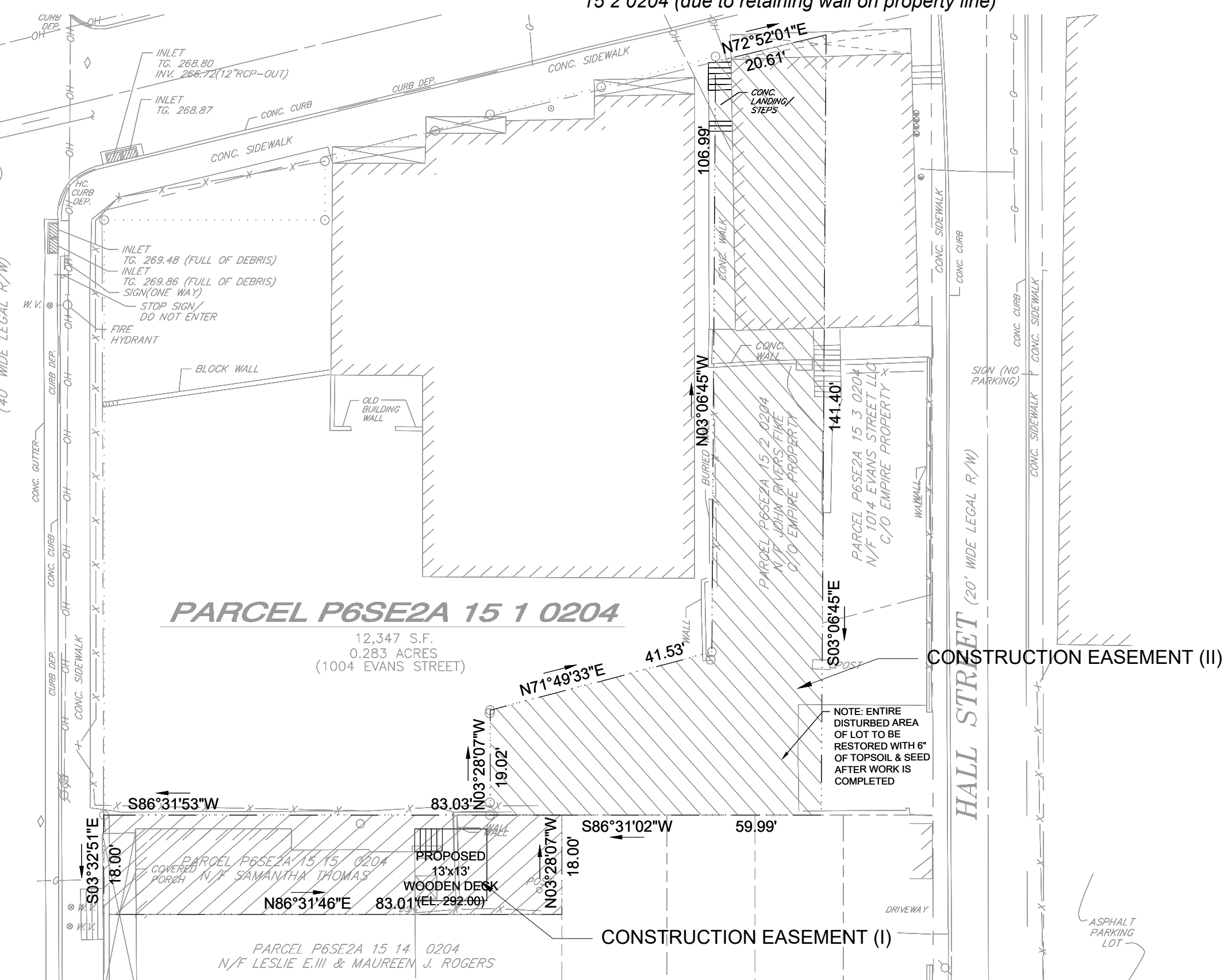
DISTRICT: RT HIGH DENSITY RESIDENTIAL DISTRICT

ZONING TABLE (RT DISTRICT)				
ZONING REQUIREMENT	ALLOWED	EXISTING		
		LOT 1	LOT 2	
LOT SIZE (SF)	9,000	17,448	12,347	
LOT AREA PER DWELLING (SF)	1,200	-	-	
LOT WIDTH (FT)	90	155.37	114.63	
FRONT YARD (FT)	10	-	0	
SIDE YARD (FT)	15	-	3.21	
REAR YARD (FT)	20	-	14.1	
HEIGHT (STORIES)	3.5	-	2	
HEIGHT (FT)	40	-	~25	
MAX BLDG. COV.	0.8	-	0.386	
* FOR EACH ONE (1) FOOT IN HEIGHT OVER THIRTY-FIVE (35) FEET, THE SIDE AND REAR YARDS SHALL BE INCREASED BY NOT LESS THAN ONE-HALF (1/2) FOOT				

2

EASEMENT PLAN

SCALE: 1" = 20' - 0"



GENERAL NOTES

- THE BOUNDARY AND EXISTING FEATURES AS SHOWN ARE BASED ON A FIELD SURVEY PERFORMED BY CAVANAUGH'S SURVEYING SERVICES ON NOVEMBER 13, & 14, 2023. ADDITIONAL TOPOGRAPHY ADDED BASED ON A FIELD SURVEY PERFORMED BY CAVANAUGH'S SURVEYING SERVICES ON MARCH 7, & 8 2024.
- DESIGNATIONS OF EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKOUTS BY UTILITY OWNERS, AND/OR ABOVE GROUND OBSERVATION OF THE SITE. NO EXCAVATION WERE PERFORMED IN PREPARATION OF THESE DRAWINGS; THEREFORE ALL UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES/FACILITIES TO BE PRESENT WHICH ARE NOT SHOWN ON THESE DRAWINGS. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES/FACILITIES AT THE TIME OF FIELD SURVEY SHALL BE CONSIDERED TRUE AND ACCURATE. COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES/FACILITIES ARE NOT GUARANTEED BY CAVANAUGH'S SURVEYING SERVICES.
- ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES/FACILITIES PRIOR TO THE START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS LAST AMENDED ON OCTOBER 9, 2008, PENNSYLVANIA ACT 121.
- VERTICAL DATUM IS NAVD 88 AND WAS ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE TOPCON TOPSURV GPS BASE STATION NETWORK.
- HORIZONTAL DATUM IS BASED ON 1983 STATE PLANE COORDINATE SYSTEM ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEM (GPS), WITH OBSERVATIONS REFERENCED TO THE TOPCON TOPSURV GPS BASE STATION NETWORK.
- METES AND BOUNDS AS SHOWN ARE BASED ON PA. STATE PLAN COORDINATE SYSTEM.

REQUESTED WAIVERS:

- \$1349.08(c): Buffer Yard planting requirements
- \$1349.08(f)(2): Side foundation shrub plantings

GRANTED VARIANCES AT THEIR SEPTEMBER 18, 2024 HEARING, WITH WRITTEN DECISION DATED OCTOBER 28, 2024, THE ZONING HEARING BOARD GRANTED RELIEF FROM THE FOLLOWING SECTIONS:

- \$1318.23(l): 8' Buffer Strip at public streets and parking lots
Granted partial Buffer Strips
- \$1319.01(a)(iii): Parking space requirements
Granted a reduction to 1.35 spots per unit
- \$1319.02(j)(1): Street tree requirements
Granted 2 trees along Evans St. on Eastern Lot
- \$1306.01(a): Lot Area per Dwelling Unit
Granted 859 SF per Dwelling Unit
Front Yard Setback
Granted setback of 1"
Side Yard Setbacks
Granted Setback of 9" & 9"
- \$1319.02(g)(6): 15-foot buffer between curblene and parking lot
Granted reduction to 11.8' & 8.5' for Eastern Lot
Fencing around parking areas
Granted relief for fencing along Eastern end of lot adjacent to Parcel P6SE2A 15 2 0204 (due to retaining wall on property line)
- \$1319.03(h):

Drawing Notes

BEFORE YOU DIG CONTACT
PA. ONE-CALL
1-800-242-1776

PENNSYLVANIA ONE CALL SYSTEM
1-800-242-1776
CALL BEFORE YOU DIG!

PENNSYLVANIA ONE CALL SYSTEM
PA ACT 172 OF 1986 REQUIRES THREE
WORKING DAYS NOTICE
SIN: 2025-0532213

B	PLANNING COMM.	JND	07.08.2025
A	FOR PERMIT	JND	03.26.2025
No.	Description	Revised By	Date

BUSTAMANTE ENGINEERS INC.

Firm Name and Address

BUSTAMANTE ENGINEERS, INC

875 N. EASTON, SUITE 3B
DOYLESTOWN, PA 18902

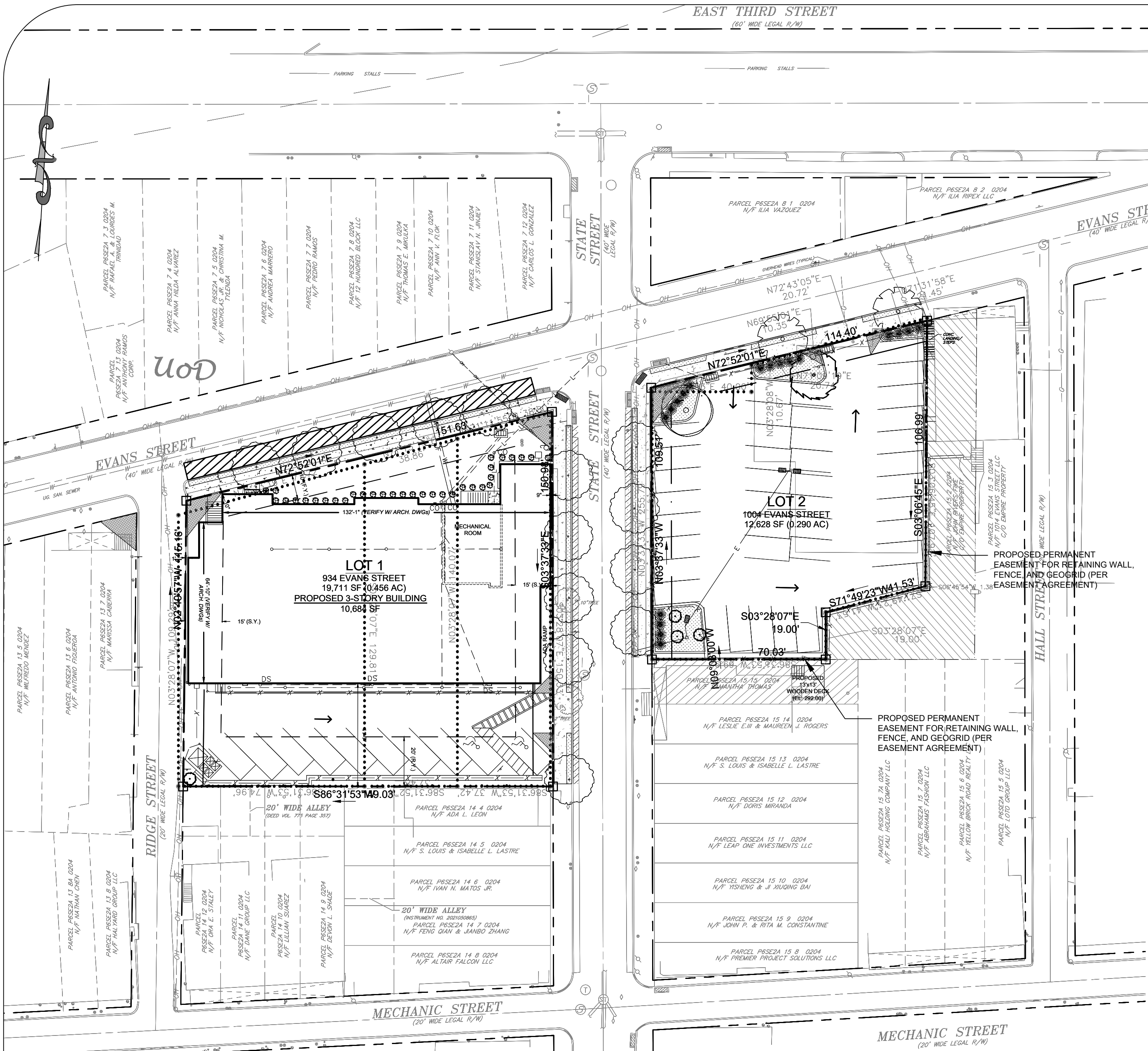
Client:

HH PROPERTIES
405 MURRAY LANE
MEDIA, PA 19063

Project:

EVANS STREET APARTMENT
BUILDING

Revision	Sheet
PLANNING COMM.	EXISTING FEATURES PLAN
Date	July 8, 2025
Scale	As Noted
	2 of 16



3 RECORD PLAN
SCALE: 1" = 30' - 0"

ZONING TABLE (RT DISTRICT)				
ZONING REQUIREMENT	ALLOWED	EXISTING	PROPOSED	
			LOT 1	LOT 2
LOT SIZE (SF)	9,000	VARIES	19,711	12,628
LOT AREA PER DWELLING (SF)	1,200	-	859 #	
LOT WIDTH (FT)	90	-	151.63	114.40
FRONT YARD (FT)	10	-	0.83	-
SIDE YARD (FT)	15	-	1 0.75	-
REAR YARD (FT)	20	-	41.58	-
HEIGHT (STORIES)	3.5	-	3.5	-
HEIGHT (FT)	40 *	-	35	-
MAX BLDG. COV.	0.8	-	0.54	-

* FOR EACH ONE (1) FOOT IN HEIGHT OVER THIRTY-FIVE (35) FEET, THE SIDE AND REAR YARDS SHALL BE INCREASED BY NOT LESS THAN ONE-HALF (1/2) FOOT
TOTAL SF OF BOTH LOTS WERE USED IN DWELLING DENSITY CALCULATION AS PART OF APPROVED VARIANCE

NOTE: THE PARCEL 1004 EVANS STREET SHALL NOT BE SEPARATELY CONVEYED AND SHALL BE MAINTAINED AS OFF-STREET PARKING EXCLUSIVELY FOR THE DWELLINGS AT 934-946 EVANS STREET, AS LONG AS 934-946 EVANS STREET CONTAINS MULTI-FAMILY DWELLINGS.

REQUESTED WAIVERS:

- \$1349.08(c): Buffer Yard planting requirements
\$1349.08(f)(2): Side foundation shrub plantings

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Granted Setback of 9" & 9"
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Granted reduction to 11.8' & 8.5' for Eastern Lot
Fencing around parking areas
Granted relief for fencing along Eastern end of lot adjacent to Parcel P6SE2A 15 2 0204 (due to retaining wall on property line)
\$1319.03(h):

STATEMENT OF INTENT:

The project proposes to include the consolidation of three parcels into one ~0.4461 acres or 19,434 SF parcel and the construction of a three-story structure containing a total of 37 multi-family dwellings (apartments). This includes (1) one studio, (27) twenty-seven one-bedrooms, and (9) nine two-bedroom dwellings. The total off-street parking of (50) fifty spaces, forty of which are on an adjacent parcel with (10) ten spaces on the parcel that contains the proposed building. Each unit will be fitted with in-unit laundry and dryer. A bike rack will be located at the front of the proposed building.

GENERAL NOTES:

- ANY AND ALL IMPROVEMENTS PROPOSED HEREIN (i.e. SANITARY SEWER AND WATER SERVICE LATERALS, DRIVEWAYS, AND CONCRETE APRONS, CURB AND SIDEWALK, ROADWAY WIDENING AND TRENCH RESTORATION, ETC.) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF BETHLEHEM CONSTRUCTION STANDARDS IN EFFECT AT THE TIME OF SUBDIVISION APPROVAL.
- MATERIALS AND CONSTRUCTION FOR PROPOSED BUILDING SHALL CONFORM TO INTERNATIONAL BUILDING CODE STANDARDS, LATEST EDITION.
- CLEAR SIGHT TRIANGLES, AS DELINEATED HEREIN, SHALL BE MAINTAINED.
- ALL SUBJECT LOTS ARE TO BE REDEEDED IN ACCORDANCE WITH THE PLAN SET HEREIN AND SHALL BE DEEDED TOGETHER.
- BY SUBMISSION OF THESE PLANS, THE ENGINEER OF RECORD CERTIFIES THAT THESE PLANS ARE IN COMPLETE CONFORMANCE WITH THE CITY OF BETHLEHEM STORMWATER MANAGEMENT ORDINANCE.
- PRIOR TO ANY WORK WITHIN PUBLIC RIGHT-OF-WAYS, PERMITS MUST BE OBTAINED FROM THE CITY OF BETHLEHEM ENGINEERING OFFICE.
- ACCURATE AS-BUILT PLANS SHALL BE KEPT CURRENT DURING THE CONSTRUCTION PROCESS. AT THE COMPLETION OF THE PROJECT, RECORD DRAWINGS SHALL BE PREPARED FROM AS-BUILT PLANS AND SUBMITTED TO THE CITY ENGINEER'S OFFICE. ALL FINAL DRAWINGS SHALL SHOW NORTH AMERICAN DATUM (NAD) 1983 STATE PLAN COORDINATES IN FEET AND THE DIGITAL FILE SHALL BE IN STATE PLANE FEET COORDINATES AS APPLICABLE. HARD COPIES OF RECORD DRAWINGS SHALL BE IN THE FORM OF MYLAR COPIES. THE ENGINEER OF RECORD SHALL CERTIFY (i.e. P.E. STAMPED AND SIGNED) THAT THE RECORD DRAWINGS COMPLY SUBSTANTIALLY WITH THE APPROVED PLANS AND THAT THEY CONFORM TO INDUSTRY STANDARDS.
- PROPOSED TREES TO BE LOCATED WITHIN PUBLIC RIGHT-OF-WAY OF EVANS STREET AND STATE STREET ARE SUBJECT TO ANY AND ALL CITY OF BETHLEHEM CODES PERTAINING TO SAME. PROPERTY OWNERS SHALL BE RESPONSIBLE TO MAINTAIN AND REPLACE AS NECESSARY PROPOSED 'STREET TREES' IN ACCORDANCE WITH APPLICABLE CITY OF BETHLEHEM STANDARDS.
- PROPOSED STORMWATER SEWER INLET AND PIPING LOCATED ON THE SUBJECT PROPERTY OUTSIDE PUBLIC RIGHT-OF-WAY WILL BE PRIVATELY OWNED AND MAINTAINED IN ACCORDANCE WITH THE TERMS AND CONDITIONS DESCRIBED IN THE AGREEMENT TO BE RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF NORTHAMPTON COUNTY.

FIRE DEPARTMENT NOTES:

- A KNOX BOX FOR CITY OF BETHLEHEM FIRE DEPARTMENT ACCESS SHALL BE INSTALLED, LOCATION TO BE DETERMINED.
- FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF BUILDINGS, FULLY VISIBLE AND RECOGNIZABLE FROM THE STREET OR NEAREST POINT OF FIRE DEPARTMENT VEHICLE ACCESS OR AS OTHERWISE APPROVED BY THE FIRE MARSHALL.
- ANY CHANGE IN THE LOCATION OF FIRE DEPARTMENT CONNECTION MUST BE APPROVED BY THE CITY OF BETHLEHEM FIRE DEPARTMENT.
- FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION WILL BE ENFORCED FOR THE DURATION OF THE CONSTRUCTION PROJECT.

BICYCLE RACK NOTE: BICYCLE PARKING MAINTENANCE, THE CURRENT LANDOWNER SHALL BE RESPONSIBLE TO ENSURE THAT THE HITCH, RACK OR LOCKER CONTINUES TO BE AVAILABLE AND IS WELL MAINTAINED AND IS REPLACED IF DAMAGED OR REMOVED. IF THE HITCH, RACK OR LOCKER IS WITHIN A STREET RIGHT OF WAY, A CITY ENCROACHMENT PERMIT SHALL BE REQUIRED.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THE BOUNDARY RETRACEMENT SURVEY, AS DEPICTED ON THIS PLAN, WAS CONDUCTED UNDER MY SUPERVISION TO THE LOCAL STANDARDS OF CARE; IS BASED ON A FIELD SURVEY COMPLETED AS OF THE DATES INDICATED IN THE NOTES ABOVE; THAT IT REPRESENTS A RETRACEMENT SURVEY OF LANDS DESCRIBED IN THE DEEDS OF RECORD MENTIONED IN THE NOTES ABOVE; AND THAT THE SURVEY MEASUREMENTS AS SHOWN ARE CORRECT IN THE FIELD AS INDICATED HEREON AND SUBSTANTIALLY MEETS THE PRECISION STANDARDS FOR A "SUBURBAN" SURVEY AS PUBLISHED BY THE AMERICAN CONGRESS ON SURVEYING AND MAPPING IN 1992. THIS SURVEY AND PLAN HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH AND IS THEREFORE SUBJECT TO ANY EASEMENTS OR PERTINENT FACTS THAT A TITLE SEARCH MIGHT DISCLOSE.

FURTHERMORE, I HEREBY CERTIFY THAT THIS PLAN CORRECTLY AND ACCURATELY REPRESENTS THE LAND OF THE OWNER AND, WHERE APPLICABLE, THE LOTS, BUILDINGS, STREETS, PARKING AREAS, WALKWAYS AND OTHER STRUCTURES AND IMPROVEMENTS SHOWN THEREON.

PATRICK CAVANAUGH, P.L.S.

DATE

LEGEND:

- EXIST. WATER LINE
- EXIST. WATER SERVICE
- EXIST. GAS LINE
- EXIST. ELECTRIC LINE
- EXIST. TELEPHONE LINE
- EXIST. SANITARY LATERAL
- EXIST. SOILS LINE
- EXIST. FENCE LINE
- EXIST. FLOOD PLAIN
- EXIST. STREAM
- EXIST. EASEMENT
- EXIST. TRACT BOUNDARY
- EXIST. RIGHT-OF-WAY
- EXIST. ADJOINING PROPERTY LINE
- EXIST. EDGE OF ROAD
- EXIST. DRIVES
- EXIST. CENTERLINE
- EXIST. ZONING LINE/TOWNSHIP BOUNDARY
- EXIST. STORM SEWER LINE
- EXIST. SANITARY SEWER LINE
- EXIST. CONTOUR
- EXIST. INDEX CONTOUR
- EXIST. CURB
- PROP. CURB
- PROP. WATER LINE
- PROP. WATER SERVICE
- PROP. SANITARY LATERAL
- PROP. FORCE MAIN LATERAL
- PROP. EASEMENT
- PROP. EDGE OF ROAD
- PROP. CENTERLINE
- PROP. STORM SEWER
- PROP. SANITARY SEWER
- PROP. RIGHT-OF-WAY
- PROP. LOT LINES
- PROP. BUILDING SETBACK LINE
- PROP. BUFFER LINE

PLANNING BUREAU REVIEW

REVIEWED AND ACCEPTED FOR RECORDING BY THE CITY OF BETHLEHEM PLANNING BUREAU THIS _____ DAY OF _____, 20____.

DIRECTOR OF PLANNING

DATE

L.V.P.C. REVIEW

REVIEWED BY THE LEHIGH VALLEY PLANNING COMMISSION.

L.V.P.C. STAFF PERSON
RESPONSIBLE FOR REVIEW

DATE

CERTIFICATE OF OWNERSHIP

I (WE) THE UNDERSIGNED, BEING THE OWNER(S) IN PEACEFUL POSSESSION OF THE LAND HEREIN PLATTED AND BEING THAT THERE ARE NO SUITS PENDING AFFECTING THE TITLE OF SAME, DO HEREBY ADOPT THIS PLAN OF PROPERTY SITUATED IN THE CITY OF BETHLEHEM, NORTHAMPTON COUNTY, PENNSYLVANIA.

OWNER

DATE

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF NORTHAMPTON

SWORN AND SUBSCRIBED TO ME THIS _____ DAY OF _____, 20____.

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

NOTARY PUBLIC

PLAN OF RECORD

RECORDED THIS _____ DAY OF _____, 20____ IN THE OFFICE OF THE RECORDING OF DEEDS, ETC. IN AND FOR THE COUNTY OF NORTHAMPTON PENNSYLVANIA, IN PLAN BOOK NO. _____, PAGE _____.

RECORDER

ENGINEER'S CERTIFICATION

I, JOSEPH P. INGAGLIO, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE, SUBJECT TO ANY EASEMENTS OF RECORD AND OTHER PERTINENT FACTS WHICH A TITLE SEARCH MIGHT DISCLOSE.

JOSEPH P. INGAGLIO, PE
PE093357

DATE

PRELIMINARY PLAN

Drawing Notes

BEFORE YOU DIG CONTACT
PA. ONE-CALL
1-800-242-1776



PENNSYLVANIA ONE CALL SYSTEM
PA. ACT 172 OF 1986 REQUIRES THREE
WORKING DAYS NOTICE
SIN: 0025-0532213

B	PLANNING COMM.	JND	07.08.2025
A	FOR PERMIT	JND	03.26.2025
No.	Description	Revised By	Date



Firm Name and Address

BUSTAMANTE
ENGINEERS, INC

875 N. EASTON, SUITE 3B
DOYLESTOWN, PA 18902

Client:

HH PROPERTIES
405 MURRAY LANE
MEDIA, PA 19063

Project:

EVANS STREET APARTMENT
BUILDING

Revision

PLANNING COMM.

Date

July 8, 2025

Scale

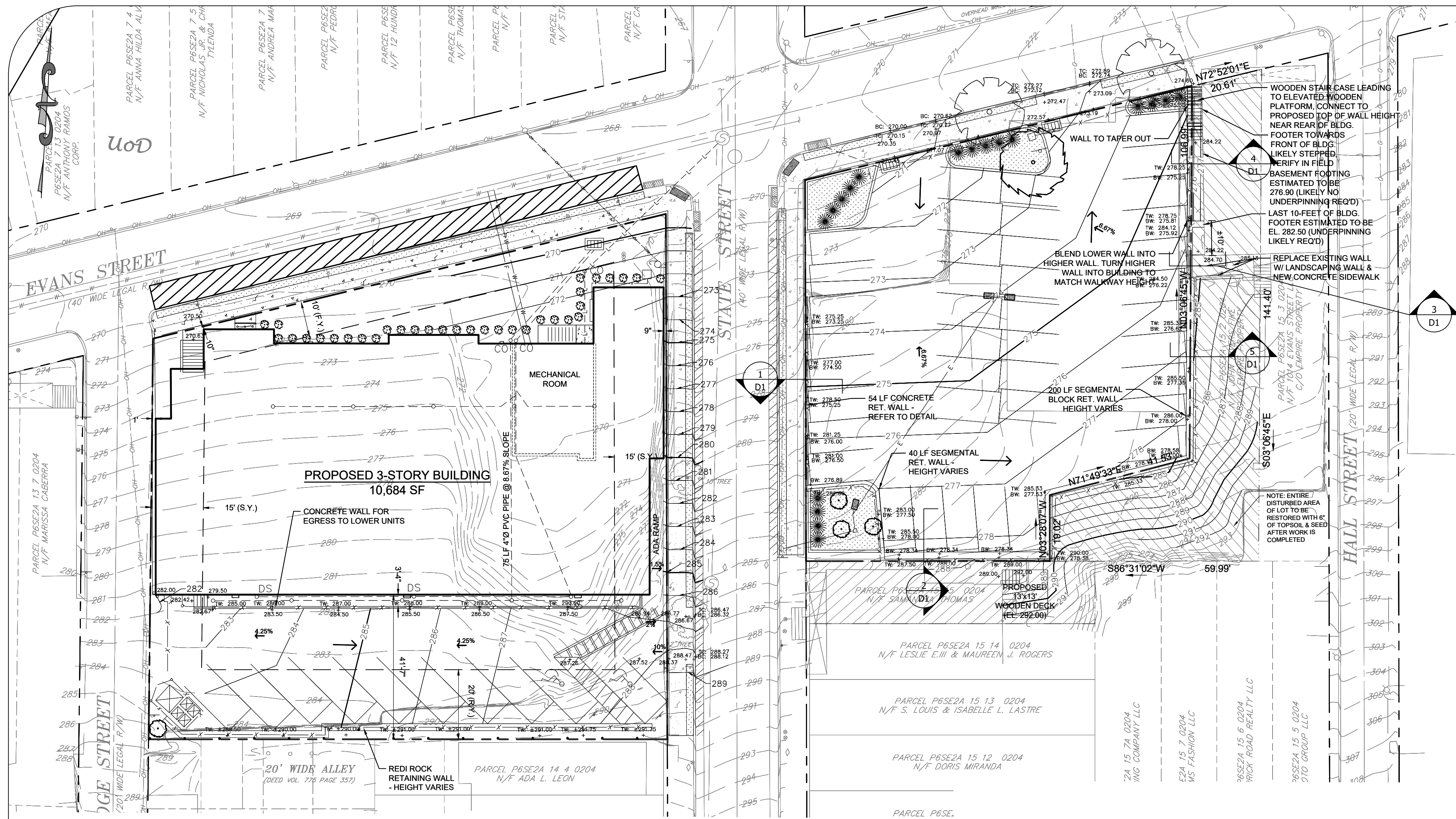
As Noted

Sheet

RECORD PLAN

RP

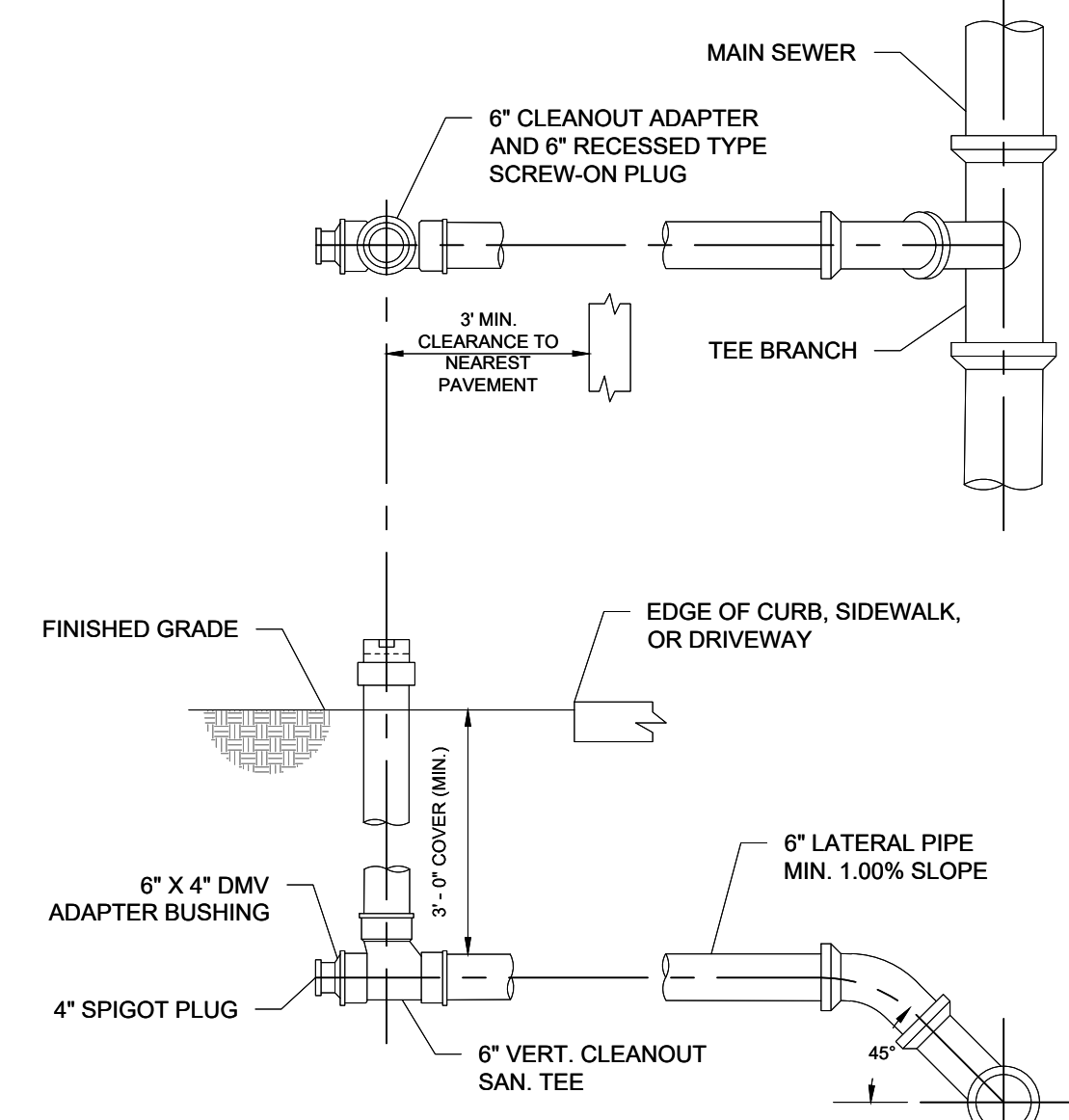
3 of 16



- UTILITY NOTES:**
1. ANY AND ALL IMPROVEMENTS PROPOSED HEREIN WITHIN PUBLIC RIGHT-OF-WAY (I.E.: SANITARY SEWER LATERALS, WATER LATERALS, DRIVEWAY APRONS, CURBING, SIDEWALKS, ROADWAY OVERLAY AND TRENCH RESTORATION, ETC.) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY OF BETHLEHEM CONSTRUCTION STANDARDS AND SPECIFICATIONS.
 2. PROVIDE A MINIMUM 10-FOOT HORIZONTAL SETBACK BETWEEN PROPOSED UTILITY LATERALS AND TREES, UTILITY POLES, ETC.
 3. PERMITS MUST BE OBTAINED FROM THE CITY OF BETHLEHEM PRIOR TO ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.

- SANITARY SEWER NOTES:**
1. SANITARY SEWER SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF BETHLEHEM, DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND PENNSYLVANIA DEPARTMENT OF TRANSPORTATION STANDARDS AND REGULATION AS APPLICABLE.
 2. SANITARY SEWER LATERALS SHALL BE 8-IN. DIAMETER SCHEDULE 40 P.V.C. PIPE WITH SOLDER WELDED JOINTS. SANITARY SEWER SYSTEM MATERIALS AND APPURTENANCES SHALL MEET ALL APPLICABLE CITY OF BETHLEHEM AND PENNDP PERFORMANCE STANDARDS.

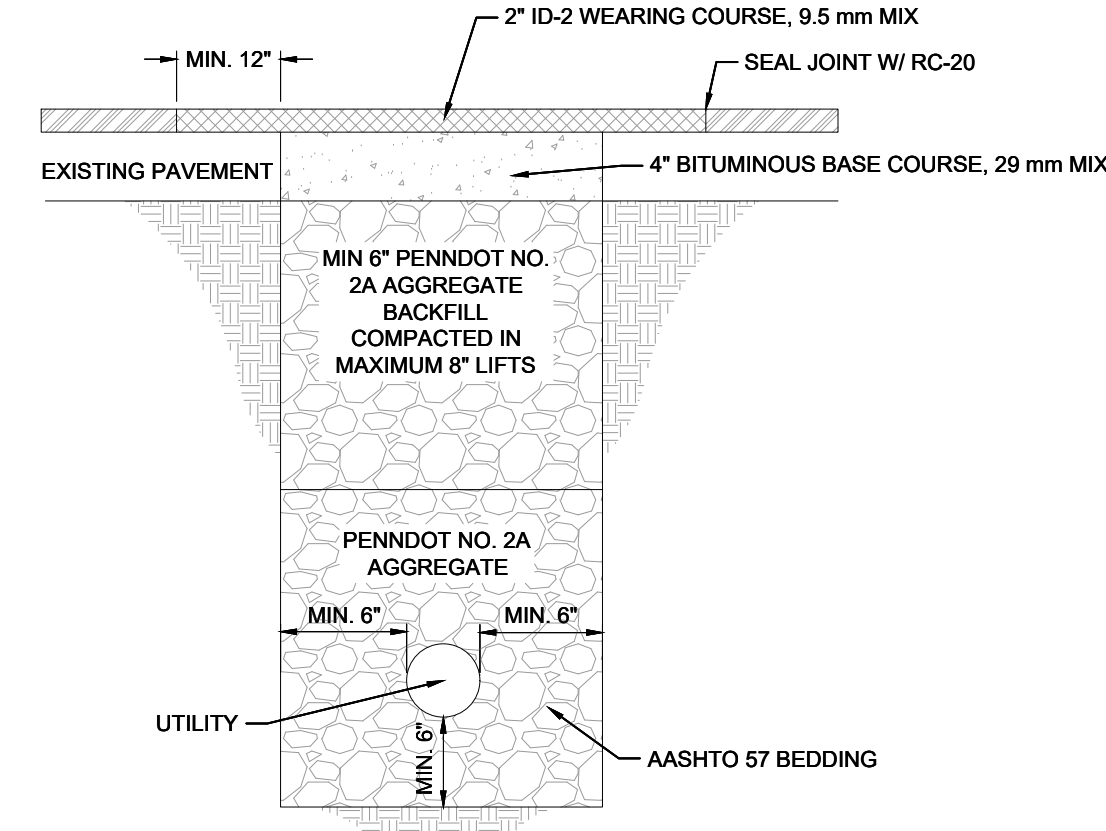
- WATERLINE NOTES:**
1. WATER SERVICE LATERALS SHALL BE 2-INCH TYPE 'K' FLEXIBLE COPPER TUBING. WATER SYSTEM MATERIALS AND APPURTENANCES SHALL MEET CITY OF BETHLEHEM AND AMERICAN WATER WORKS ASSOCIATION PERFORMANCE STANDARDS.
 2. PROVIDE A MINIMUM 18-INCH HORIZONTAL SEPARATION BETWEEN WATER SERVICE LATERALS AND SANITARY OR STORM SEWERS, WHEREVER PRACTICABLE. WHERE A WATER SERVICE LATERAL CROSSES A SANITARY OR STORM SEWER, PROVIDE A MINIMUM 18-INCH VERTICAL SEPARATION BETWEEN PIPES.
 3. INSTALL WATER SERVICE LATERALS AT LEAST FOUR FEET BELOW FINISH GRADE.



NOTES:
CLEANOUTS SHOULD NOT TYPICALLY BE INSTALLED IN OR NEAR PAVED AREAS. UNDER SPECIAL CONDITIONS, A CLEANOUT LOCATED IN, OR LESS THAN 2 FEET FROM A PAVED AREA MAY BE INSTALLED IF A PROTECTION SLEEVE AS SHOWN IN THE CLEANOUT DETAIL IS PROVIDED.

SHALLOW LATERAL CONNECTION

6 GRADING PLAN
SCALE: 1" = 20' - 0"

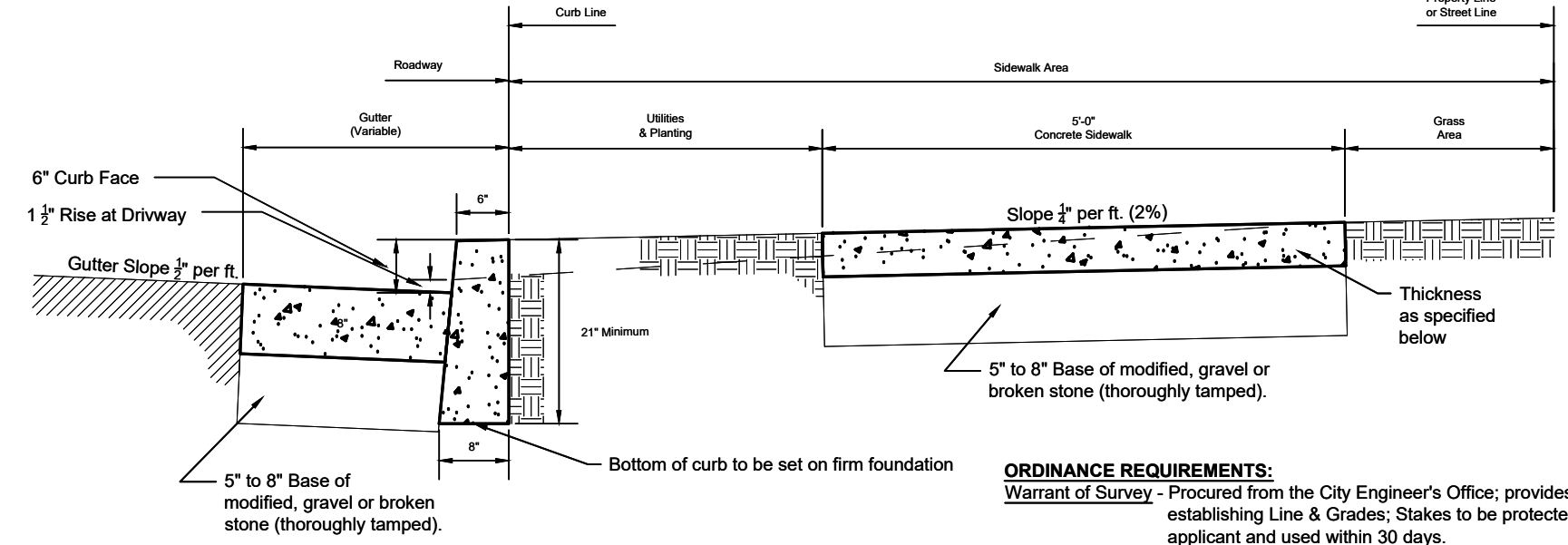


UTILITY TRENCH RESTORATION

TEMPORARY AND PERMANENT SEEDING SPECIFICATIONS - LAWN & SLOPE AREAS:

- SURFACE STABILIZATION CRITERIA: DENUDED AREAS SHALL BE STABILIZED TEMPORARILY OR PERMANENTLY, IMMEDIATELY FERTILIZE, LIME AND MULCH AS BELOW. MINIMUM 90% PURITY AND 85% GERMINATION.
- A. TEMPORARY COVER: SEED WITH 50% WINTER RYE 50% ANNUAL RYE GRASS AT 7 LBS./1,000 S.F.
1. MULCH WITH HAY - 3 TONS/ACRE
- B. PERMANENT COVER: SEED WITH 60% PENNSTAR KENTUCKY BLUEGRASS, 10% PENNFINE RED FESCUE AT 5 LBS./1,000 S.F.
1. MULCH WITH HAY - 3 TONS/ACRE

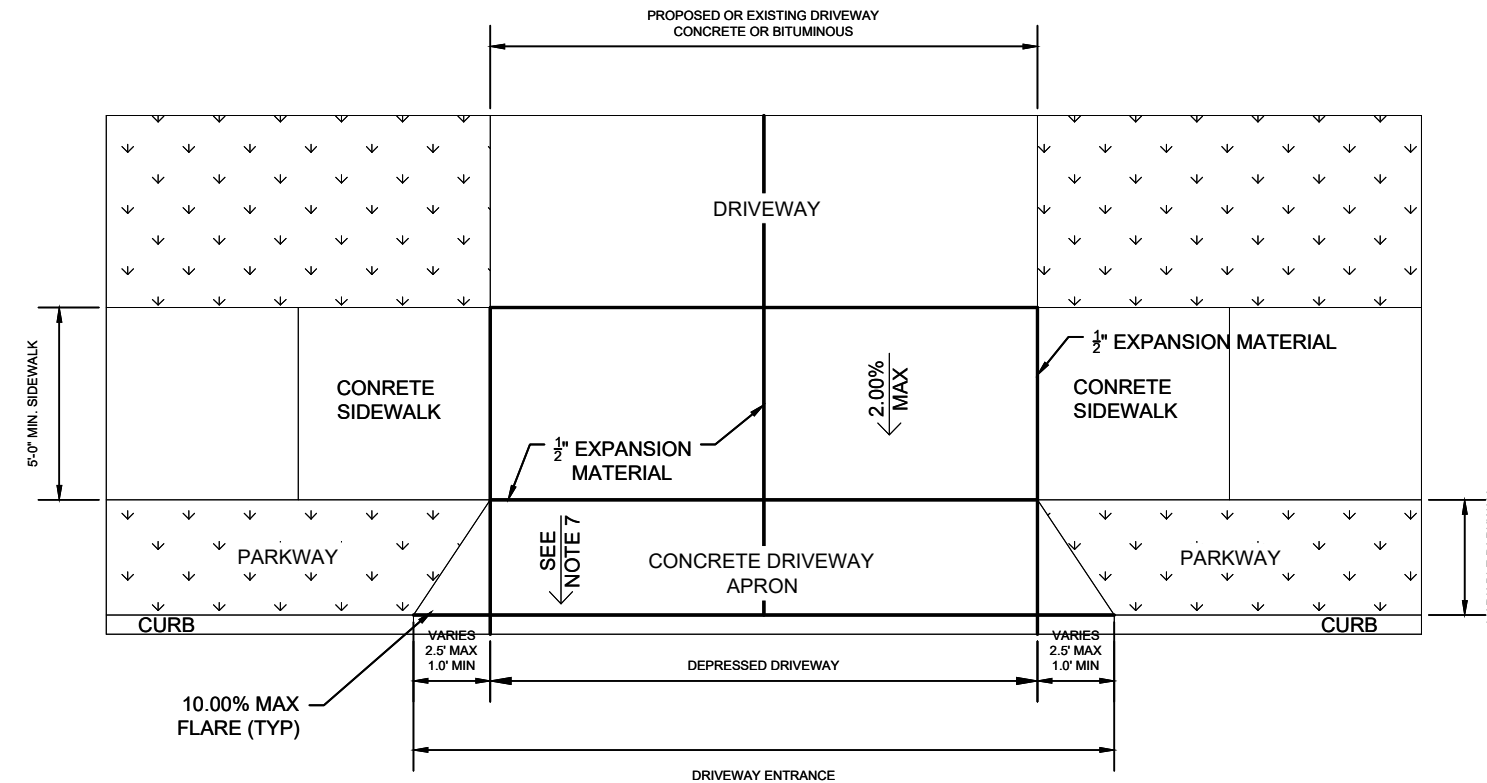
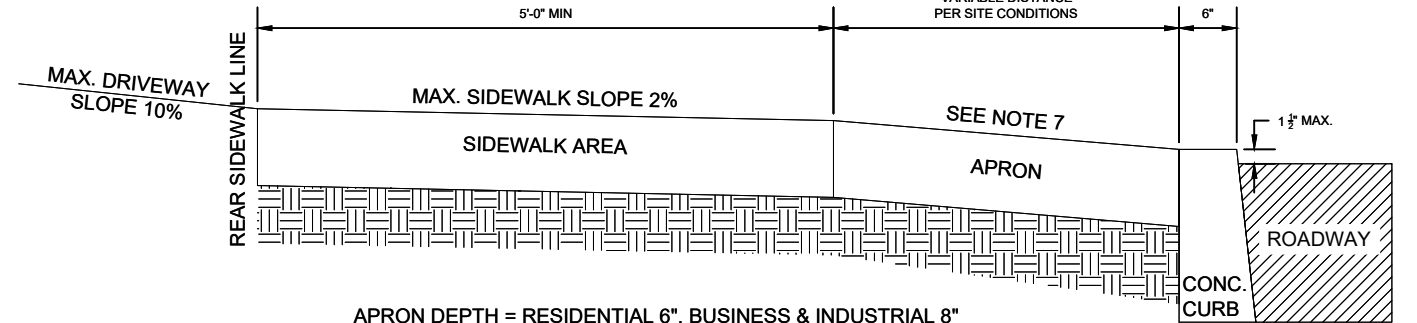
SOIL AMENDMENT	PERMANENT SEEDING APPLICATION RATE			NOTES
	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	
AGRICULTURAL LIME	6 TONS	240 LB	2,480 LB	OR AS PER SOIL TEST; MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS
10-10-20 FERTILIZER	1,000 LB	25 LB	210 LB	OR AS PER SOIL TEST; MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS
TEMPORARY SEEDING APPLICATION RATE				
AGRICULTURAL LIME	1 TON	40 LB	410 LB	TYPICALLY NOT REQUIRED FOR TOPSOIL STOCKPILES
10-10-20 FERTILIZER	500 LB	12.5 LB	100 LB	TYPICALLY NOT REQUIRED FOR TOPSOIL STOCKPILES



GENERAL REQUIREMENTS:
One Course (Monolithic) Construction for all Curb, Gutter and Sidewalk.
Concrete Mix: To be Class A Concrete 3300f 6 Bag Mix - 5.6 Gal. Water per bag throughout; use power batch mixer. No slag.
Curb: 21" Depth with approved finish on top and exposed face.
Gutter: 6" Depth - Slope of Gutter 1/2" rise per foot away from curb.
Sidewalk: Thickness - Residential Areas - 5", Business and Industrial Areas - 6"
At Residential Driveways - 6", At Business and Industrial Driveways - 8"
Finish - Use a float and broom finish to produce skid resistant surface.
On Grades of 5% or more, produce a rougher finish.
Slope - Walk and Parkway Areas 1/2" per foot (2%) toward curb.
Expansion and Contraction Joints: See City Construction Standard No. 1A.
Handicapped Ramps: Required on all Ramps in accordance with current ADA requirements.
Driveways: See City Standard Driveway Entrance and Apron Sketch.
Excavation in Cartway: When excavating in the cartway of a City street, a clean, full depth cut - by jack hammering or sawcutting - shall be made in the street between the affected and the unaffected work areas. Further, final restoration in the affected area of the street shall consist of creating a new clean cut by sawcutting 12" beyond the edge of any affected work areas, backfilling with Penndot 2A Modified stone, and properly compacting this stone to the elevation of the top of the subbase (i.e. bottom of the base course of the macadam), but no higher than 3-inches below the finish grade - except as required to provide reasonable temporary access at driveways.

ORDNANCE REQUIREMENTS:
Warrant of Survey - Procured from the City Engineer's Office; provides for establishing Line & Grades; Stakes to be protected by applicant and used within 30 days.
Excavation Permit - Procured from the City Engineer's Office; for Sidewalk and driveway construction.
DETAIL REQUIREMENTS:
For further details and other requirements see the following documents on file in the Office of the City Engineer:
"Standard Specifications for the Construction of Concrete Curb, Gutter, and Sidewalk"
Codified Ordinances of the City of Bethlehem, Articles 903 and 909.

- NOTES:**
- + Whenever a curb, gutter and/or sidewalk is located in a Historic District, special requirements may apply.
 - + Changes to dimensional requirements may be considered in cases where obstructions or encroachments exist. Any exceptions must be approved by the City Engineer. Current ADA requirements must be met in all cases.



- NOTES:**
1. No driveway allowed within 25 feet of the street line intersection.
 2. An off street parking area shall be at least 5' wide by 19' deep on private property.
 3. One driveway entrance allowed for each 100' of property frontage.
 4. Maximum slope for driveway behind public right-of-way shall be 10%.
 5. A monolithic driveway apron and curb may be permitted.
 6. Changes to dimensional requirements may be considered in cases where obstructions or encroachments exist. Any exceptions must be approved by the City Engineer. Current ADA requirements must be met in all cases.
 7. Desired 8% max. allowable change in grade between road surface and driveway apron. 10% max. grade for driveway aprons.

NOTE: Whenever a curb, gutter and/or sidewalk is located in a Historic District, special requirements may apply.

Drawing Notes
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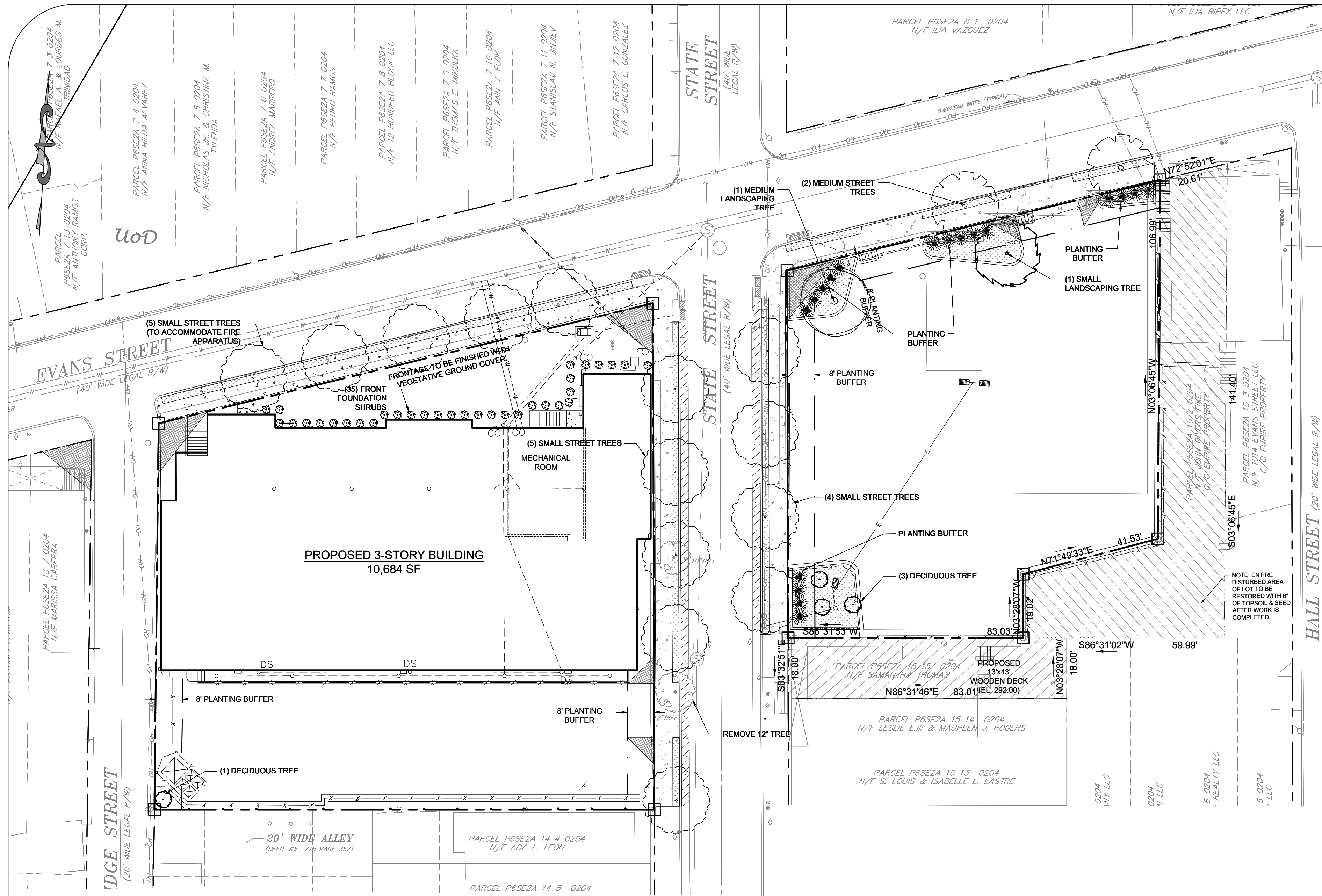
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BUSTAMANTE ENGINEERS, INC
875 N. EASTON, SUITE 3B
DOYLESTOWN, PA 18902

Client:
HH PROPERTIES
405 MURRAY LANE
MEDIA, PA 19063

Project:
EVANS STREET APARTMENT BUILDING

Revision	PLANNING COMM.	Sheet	GRADING UTILITIES PLAN
Date	July 8, 2025	GU 6 of 16	
Scale	As Noted		

PRELIMINARY PLAN



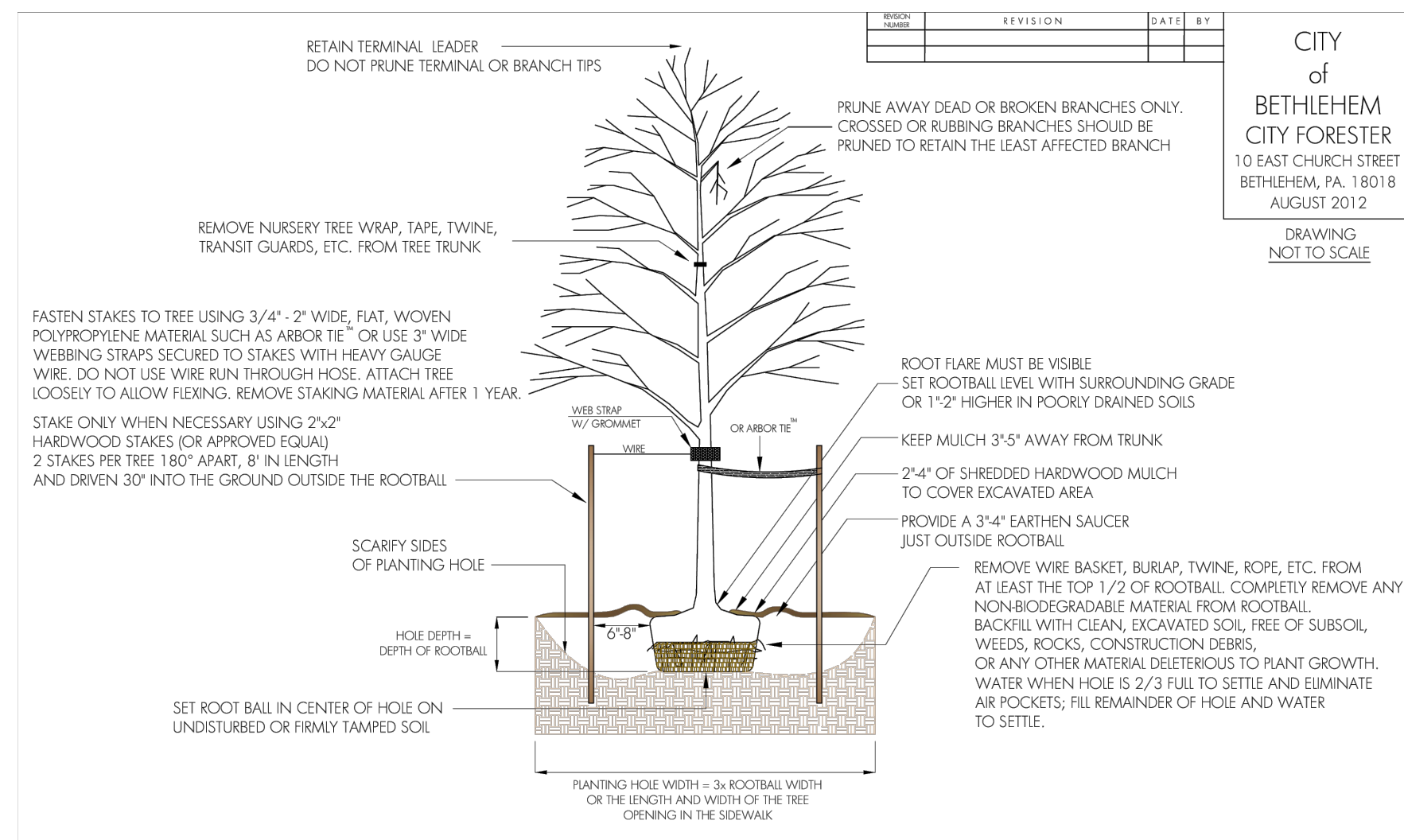
7

LANDSCAPING PLAN

SCALE: 1" = 20' - 0"



- FLOWERING DECIDUOUS SHRUB
Rhododendron calendulaceum - Flame Azalea
QTY. - 35
SIZE - 4 FT
SPACING - 48" (O.C.)
- DECIDUOUS TREE
Sorbus alnifolia - Korean Mountain Ash
QTY. - 4
SIZE - 3" CAL
- SMALL STREET TREE
Acer buergerianum - Trident Maple
QTY. - 14
SIZE - 3" CAL
SPACING - 20'-25' (staggered)
- MEDIUM STREET TREE
Acer campestre - Hedge Maple
QTY. - 2
SIZE - 3" CAL
SPACING - 25'-35' (O.C.)
- MEDIUM LANDSCAPING TREE
Acer truncatum X *A. plantanoides* 'Kieftshorn' - Norwegian Sunset
QTY. - 1
SIZE - 3" CAL
- SMALL LANDSCAPING TREE
Sorbus alnifolia - Korean Mountain Ash
QTY. - 1
SIZE - 3" CAL
- EVERGREEN BUFFER TREE
Pseudotsuga menziesii - Douglas Fir
QTY. - 18
HEIGHT - 8 FT
- LARGE/MEDIUM BUFFER TREE
Quercus rubra - Northern Red Oak
QTY. - 4
SIZE - 3" CAL



CITY OF BETHLEHEM LANDSCAPE/GRADING NOTES:

- NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBANCE IS ALLOWED IN THE TREE PROTECTION ZONE UNLESS INDICATED ON THE PLAN.
- BARRICADES MUST BE INSTALLED PRIOR TO ANY DESTRUCTION AND/OR CONSTRUCTION ACTIVITY.
- THE ROOT PROTECTION ZONE SHALL BE THE AREA ENCOMPASSED BY A CIRCLE WITH A RADIUS EXTENDING 1.25 FT FROM THE TRUNK OF THE TREE FOR EVERY INCH DBH (DIAMETER AT BREAST HEIGHT) OF THE TREE.
- VIOLATIONS OF TREE PROTECTION REQUIREMENTS ARE SUBJECT TO PENALTY PER CITY ORDINANCE.
- ALL TREE ON PUBLIC PROPERTY ARE PROTECTED BY ORDINANCE: NO PRUNING, ROOT PRUNING OF ROOTS OVER ONE INCH IN DIAMETER, AND/OR TREE REMOVAL IS TO BE PERFORMED WITHOUT A PERMIT AND WORK MUST BE PERFORMED BY A CITY LICENSED TREE CONTRACTOR.
- ALL PLANT MATERIALS ARE TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION, AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
- STREET AND PARKING LOT TREES SHALL BE A MINIMUM OF 14 FEET IN HEIGHT AND HAVE A SINGLE STRAIGHT TRUNK WITH THE FIRST LATERAL BRANCH AT 7 FEET ABOVE THE ROOT BALL. TREES WITH AN UPRIGHT BRANCHING HABIT, SUCH AS ZELKOVA, MAY HAVE THE FIRST LATERAL BRANCH AT 6 FEET ABOVE THE ROOT BALL.
- ALL LANDSCAPING SHALL CONFORM TO THE CURRENT EDITION OF THE ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE OF THE CITY OF BETHLEHEM.

NURSERY STOCK SPECIFICATIONS:

- QUALITY: ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY; THEY SHALL HAVE NORMAL, WELL-DEVELOPED BRANCHES AND VIGOROUS FIBROUS ROOT SYSTEMS. ALL PLANTS SHALL BE NURSERY GROWN UNLESS OTHERWISE STATED; THEY SHALL HAVE BEEN GROWING UNDER THE SAME CLIMATE CONDITIONS AS THE SITE FOR AT LEAST TWO (2) YEARS PRIOR TO DATE OF PLANTING. ALL PLANTS WHICH ARE FOUND UNSUITABLE IN GROWTH OR CONDITION OF WHICH ARE NOT TRUE TO NAME SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE PLANTS.
- MEASUREMENTS. PLANTS SHALL BE MEASURED AS THEY STAND IN THEIR NATURAL POSITION. STOCK FURNISHED SHALL BE A FAIR AVERAGE OF THE MINIMUM SIZES SPECIFIED OR OF THE RANGE GIVEN IN THE "U.S.D.A. STANDARDS OF NURSERY STOCK". LARGER PLANTS CUT BACK TO SIZES SPECIFIED SHALL BE ACCEPTED.
- PREPARATION OF PLANTS. ALL PRECAUTIONS CUSTOMARY IN GOOD TRADE PRACTICE SHALL BE TAKEN IN PREPARING PLANTS FOR MOVING. ALL BALLED AND BURLAPPED PLANTS SHALL BE DUG TO MEET OR EXCEED THE "U.S.D.A. STANDARDS OF NURSERY STOCK".
- DELIVERY. PLANTS SHALL BE PACKED, TRANSPORTED AND HANDLED WITH UTMOST CARE TO INSURE ADEQUATE PROTECTION AGAINST INJURY.

LANDSCAPING REQUIREMENTS:

§1349.08(f)(1) - "landscaped off-street parking and loading areas shall have a minimum of ten (10%) percent of the area represented by approved plantings. These plantings shall be in addition to any buffer plantings which may be necessary."

LOT 1 REQUIREMENTS:

LOT SIZE: 19,711 SF
REQ'D LANDSCAPING: 1,971.1 SF

LOT 1 LANDSCAPED AREAS: 2,848 SF

LOT 2 REQUIREMENTS:

LOT SIZE: 12,347 SF
REQ'D LANDSCAPING: 1,234.7 SF

LOT 2 LANDSCAPED AREAS: 1,004 SF
CREDITED PLANTINGS:

LARGE TREE: 200 SF
MEDIUM TREE: 150 SF
SMALL TREE: 100 SF

(1) ONE SMALL & (1) ONE MEDIUM TREE REQ'D TO MEET CODE

STREET TREE REQUIREMENTS:

1 street tree per 30 feet of street frontage

EASTERN LOT

Evans St. Lot Frontage: ±114'
3.8 TREES*
State St. Lot Frontage: ±109'
3.6 TREES

WESTERN LOT

Evans St. Lot Frontage: ±150'
5 TREES
State St. Lot Frontage: ±155'
5 TREES

* - VARIANCE FROM THIS SECTION GRANTED

ADDITIONAL PARKING LOT TREE REQUIREMENTS:

§1319.02(j)(2): "... In addition, a minimum average of one deciduous tree shall be required for every 15 surface parking spaces..."

EASTERN LOT PARKING LOT TREES REQ'D: 2.7 TREES
WESTERN LOT PARKING LOT TREES REQ'D: 0.7 TREES

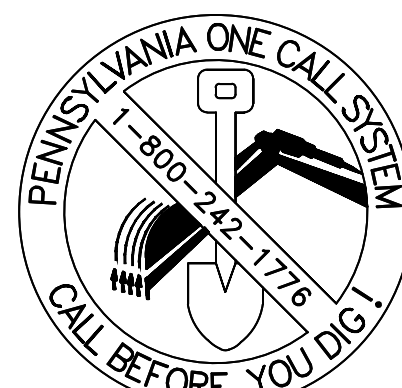
BUFFER YARDS:

§1318.23(1): "In addition, an 8 feet minimum width buffer strip along a public street shall be required where new parking spaces for 10 or more vehicles are proposed to be adjacent to and visible from a public street. Such buffer strip shall include plants with an anticipated mature height of at least 4 feet and deciduous shade trees..." *

* - WAIVER FROM THIS SECTION REQUESTED

Drawing Notes

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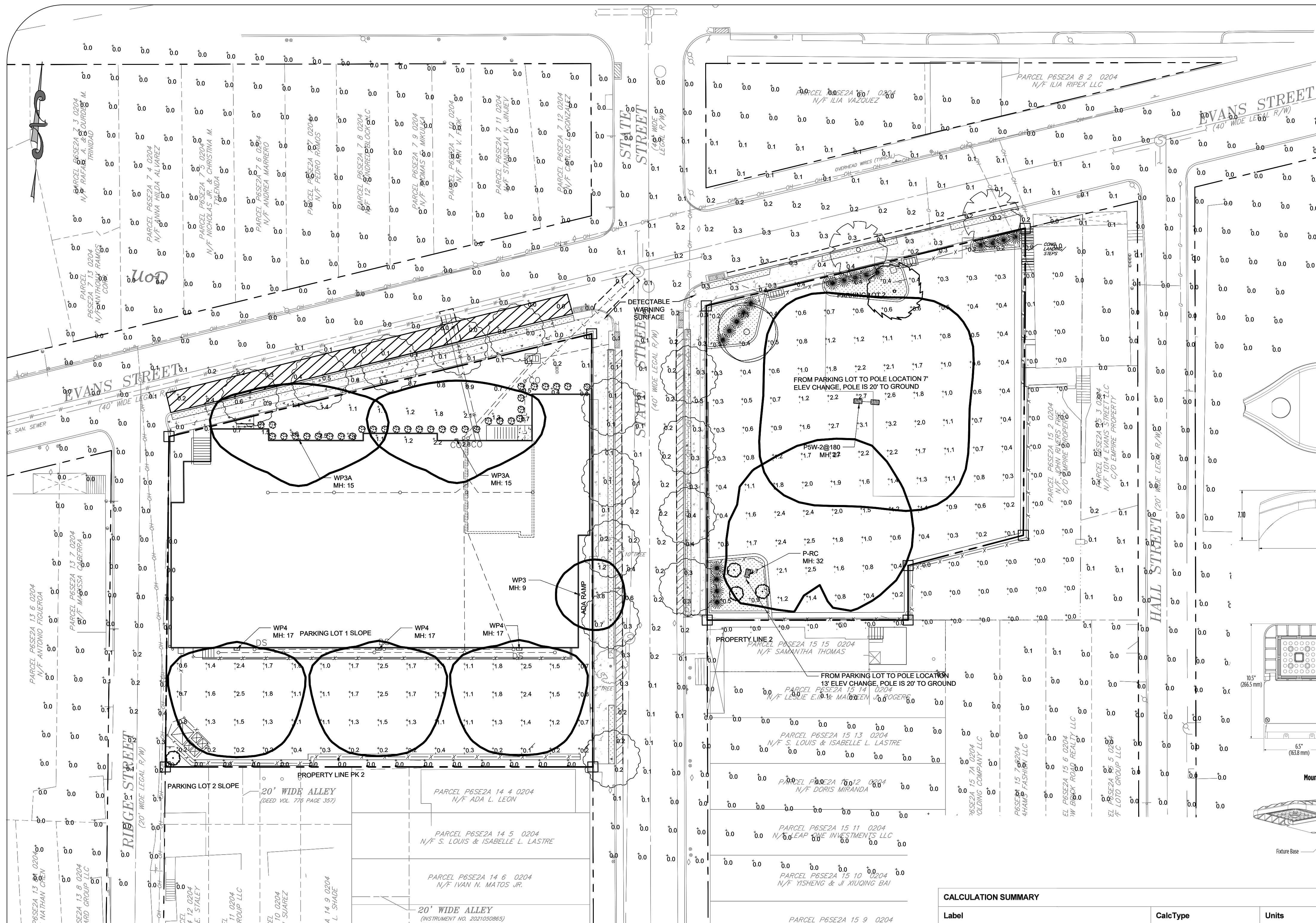
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LANDSCAPING PLAN

LA

7 of 16

PRELIMINARY PLAN



8 LIGHTING PLAN
SCALE: 1" = 20' - 0"

LUMINAIRE SCHEDULE **REFER TO LIGHTING FIXTURE CUTSHEETS FOR COMPLETE CATALOG NUMBERS**

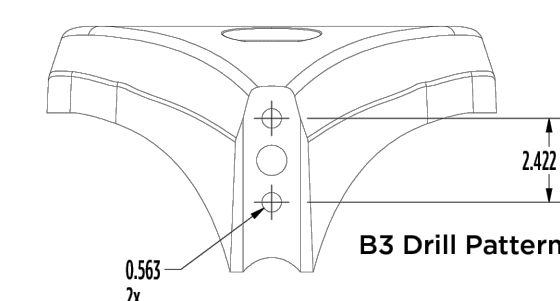
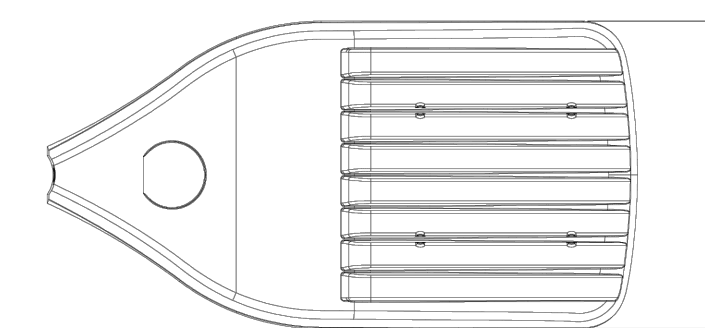
Symbol	Qty	Arrangement	Fixture Type	Description	Manufacturer	Catalog Number	CCT	LLF	Total Watts	Delivered Lumens
	1	Single	P-RC	FULL CUTOFF AREA LIGHT, TYPE RIGHT CORNER THROW 5964 LUMENS, POLE MOUNTED AT 20FT	LSI INDUSTRIES, INC.	MRS-LED-06L-SIL-RC-(VOLTAGE)-DIM-30-70CRI-(FINISH)	3000	0.900	39	5964
	1	Back-Back	P5W-2@180	FULL CUTOFF AREA LIGHT, TYPE 5W-2@180, POLE MOUNTED AT 20FT	LSI INDUSTRIES, INC.	2@180-MRS-LED-06L-SIL-RC-(VOLTAGE)-DIM-30-70CRI-(FINISH)	3000	0.900	78	11380
	1	Single	WP3	WALL PACK SMALL, 1180 LUMENS	LSI INDUSTRIES, INC.	WP3LS-01L-30-(FINISH)	3000	0.900	12	1180
	2	Single	WP3A	WALL PACK SMALL TYPE 3, 3080 LUMENS	LSI INDUSTRIES, INC.	SSW-LED-03L-3-UNV-DIM-30	3000	0.900	23	3080
	3	Single	WP4	WALL PACK SMALL TYPE 4, 3050 LUMENS	LSI INDUSTRIES, INC.	SSW-LED-03L-FT-UNV-DIM-30	3000	0.900	23	3050

LIGHTING PLAN NOTES:

- PLANS WERE PREPARED BY DIVERSIFIED. CALCULATIONS WERE PERFORMED ACCORDING TO IESNA & CE STANDARDS AND GOOD PRACTICE.
- SOME DIFFERENCES BETWEEN MEASURES VALUES AND CALCULATED RESULTS MAY OCCUR TO CHANGES IN THE PROVIDE INFORMATION AND TOLERANCES IN CALCULATION METHODS, TESTING PROCEDURES, COMPONENT PERFORMANCE, MEASUREMENT TECHNIQUES AND FIELD CONDITIONS SUCH AS VOLTAGE AND TEMPERATURE VARIATIONS.
- INPUT DATA USED TO GENERATE THE CALCULATION SUCH AS ROOM DIMENSIONS, REFLECTANCE, FURNITURE AND ARCHITECTURAL ELEMENTS SIGNIFICANTLY AFFECT THE LIGHTING CALCULATION. IF REAL ENVIRONMENT CONDITIONS DO NOT MATCH THE INPUT DATA, DIFFERENCES WILL OCCUR BETWEEN MEASURES VALUES AND CALCULATED VALUES.

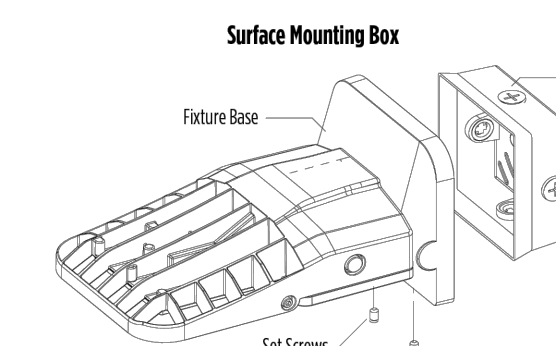
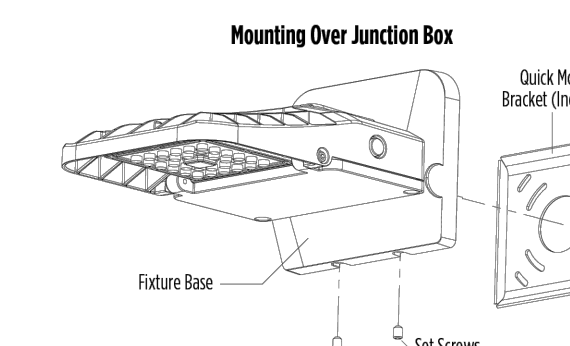
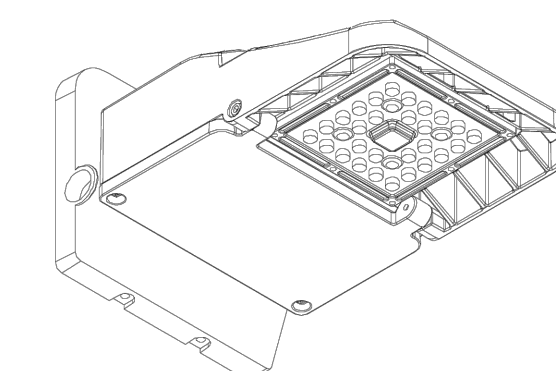
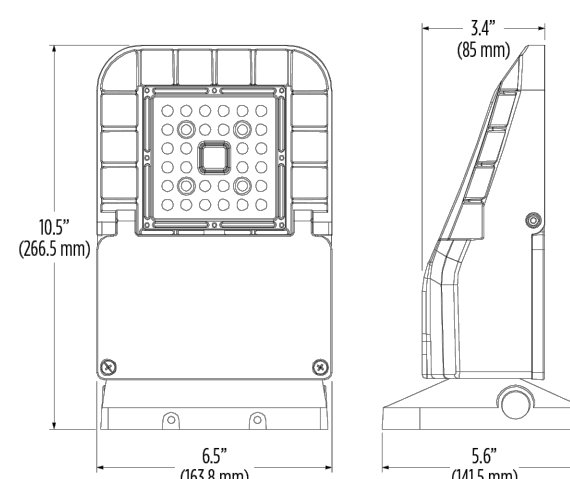
GENERAL NOTES:

- MH: IS THE LIGHTING FIXTURE MOUNTING HEIGHT
- REFLECTANCES OF 80/50/20 ARE USED UNLESS OTHERWISE NOTED (FOR INTERIOR CALCULATIONS)
- CALCULATION POINTS ON THE WORKPLANE ARE AT 2.5' (INTERIOR) OR GROUND AT 0.0' (EXTERIOR) UNLESS OTHERWISE NOTED.



Luminaire EPA Chart					
Tilt Degree	0°	15°	30°	45°	
	Single	0.5	0.8	1.3	1.8
	D180°	0.9	1.1	1.3	1.8
	D90°	0.9	1.3	1.8	2.2
	T90°	1.4	1.9	2.3	2.6
	TW120°	1.4	2.1	1.9	2.3
	O90°	1.4	1.9	2.3	2.6

MRS P5W-2



WP3A, WP4

CALCULATION SUMMARY										
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	PtSpclr	PtSpTb	
ADA RAMP	Illuminance	Fc	1.9	6.1	0.2	9.5	30.5	5	N.A.	
PARKING LOT 1 SLOPE	Illuminance	Fc	0.8	3.7	0.0	N.A.	N.A.	10	10	
PARKING LOT 2 SLOPE	Illuminance	Fc	1.1	2.5	0.1	11.3	25.0	10	10	
PROPERTY LINE PK 2	Illuminance	Fc	0.0	0.0	0.0	N.A.	N.A.	10	N.A.	
SITE TO ZERO	Illuminance	Fc	0.1	3.8	0.0	N.A.	N.A.	10	10	
StatArea_PARKING LOT 1	Illuminance	Fc	1.1	3.2	0.2	5.5	16.0			
StatArea_PROPERTY LINE 2	Illuminance	Fc	0.0	0.1	0.0	N.A.	N.A.			

PRELIMINARY PLAN

Drawing Notes

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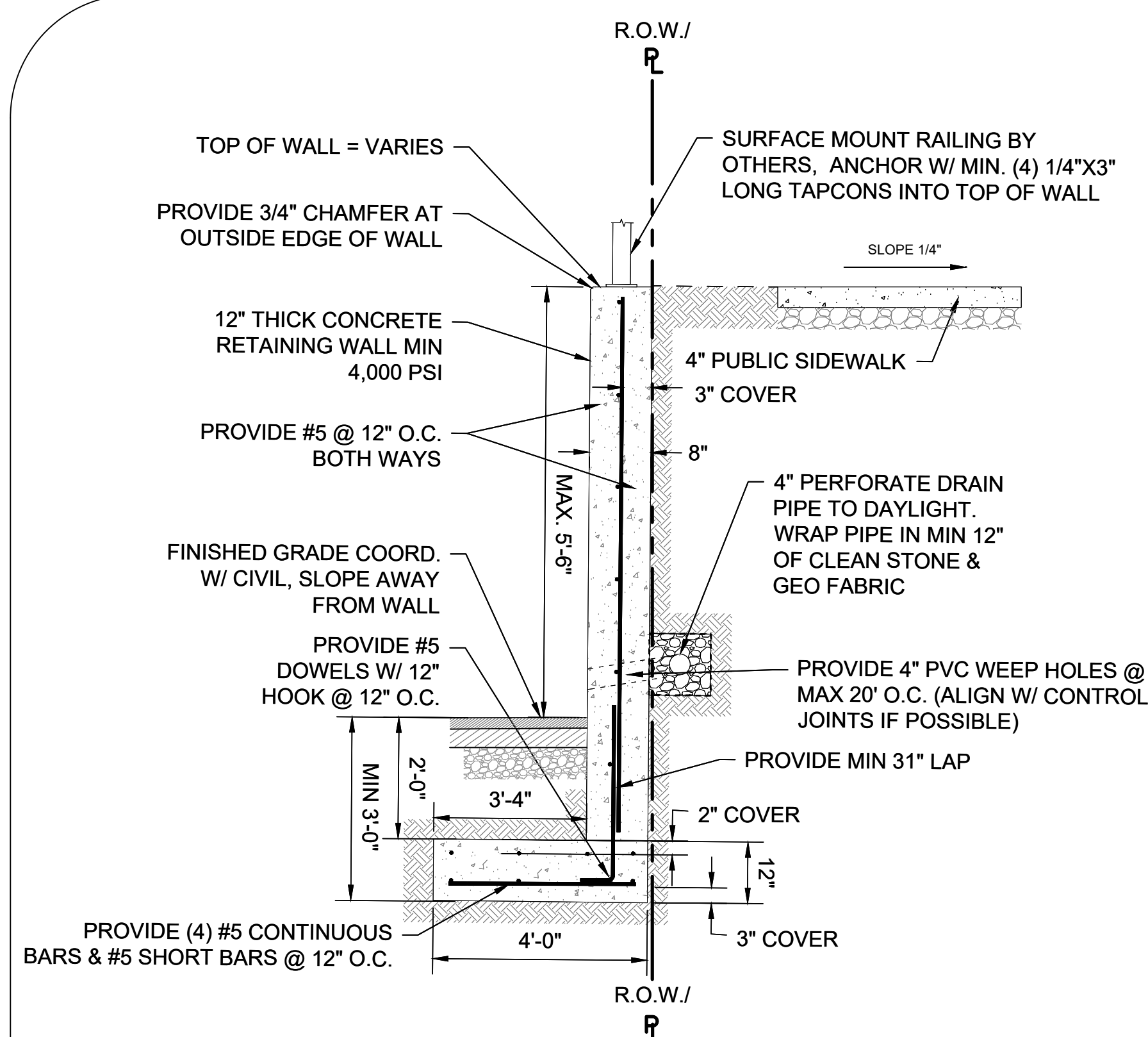
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405 MURRAY LANE
MEDIA, PA 19063

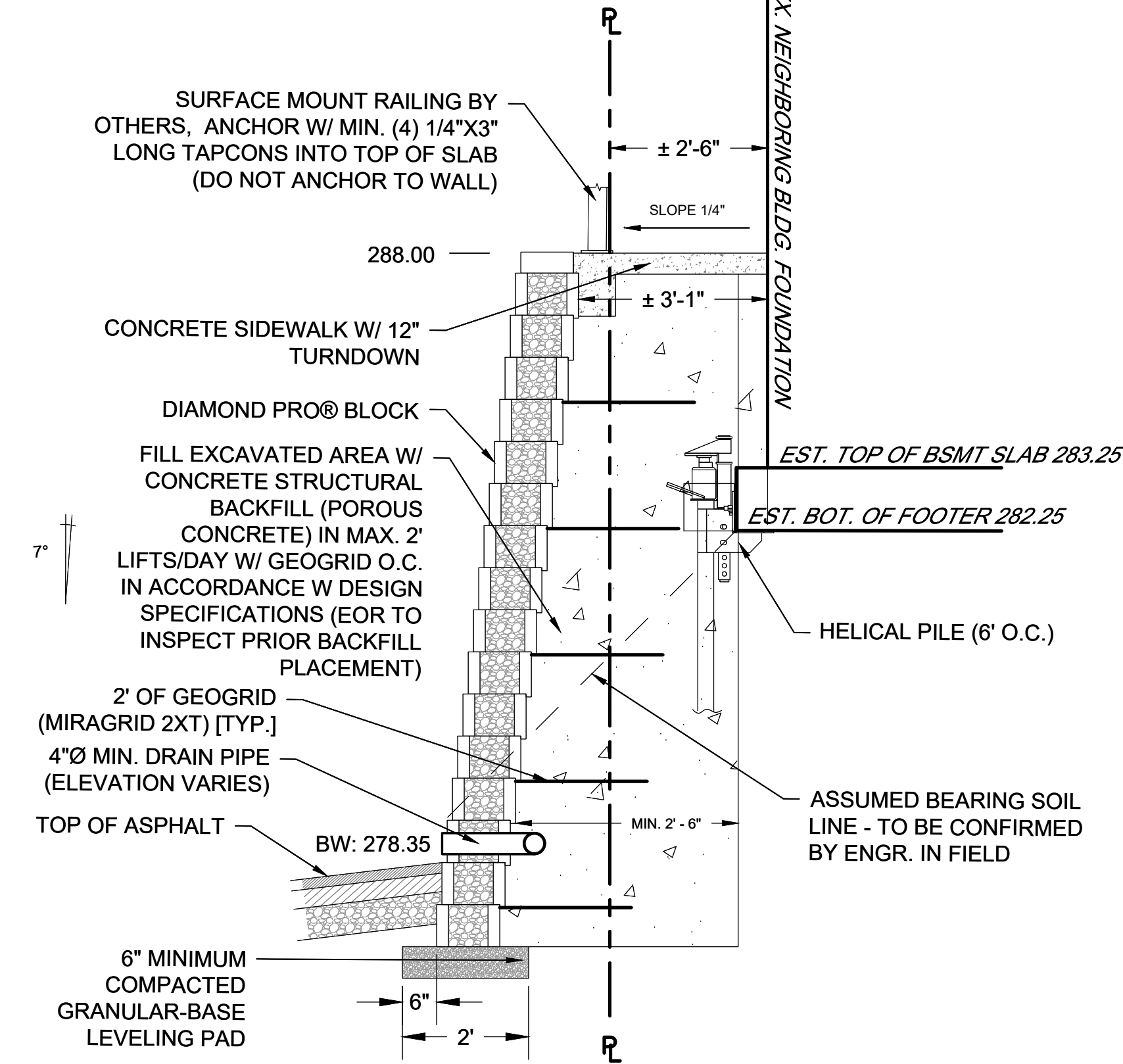
Project:

EVANS STREET APARTMENT
BUILDING

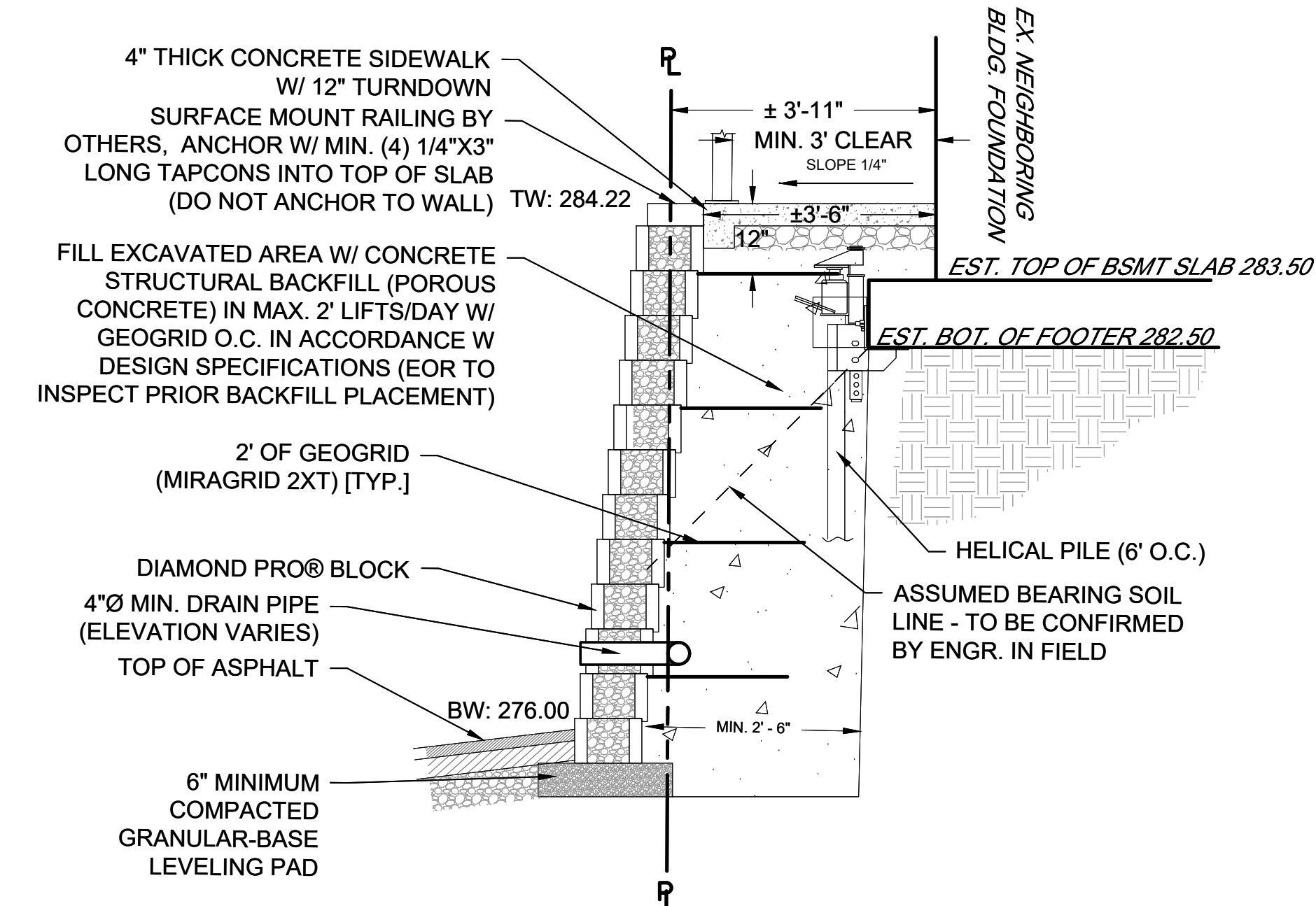
Revision	Sheet
PLANNING COMM.	LIGHTING PLAN
Date	LP
July 8, 2025	
Scale	8 of 16
As Noted	



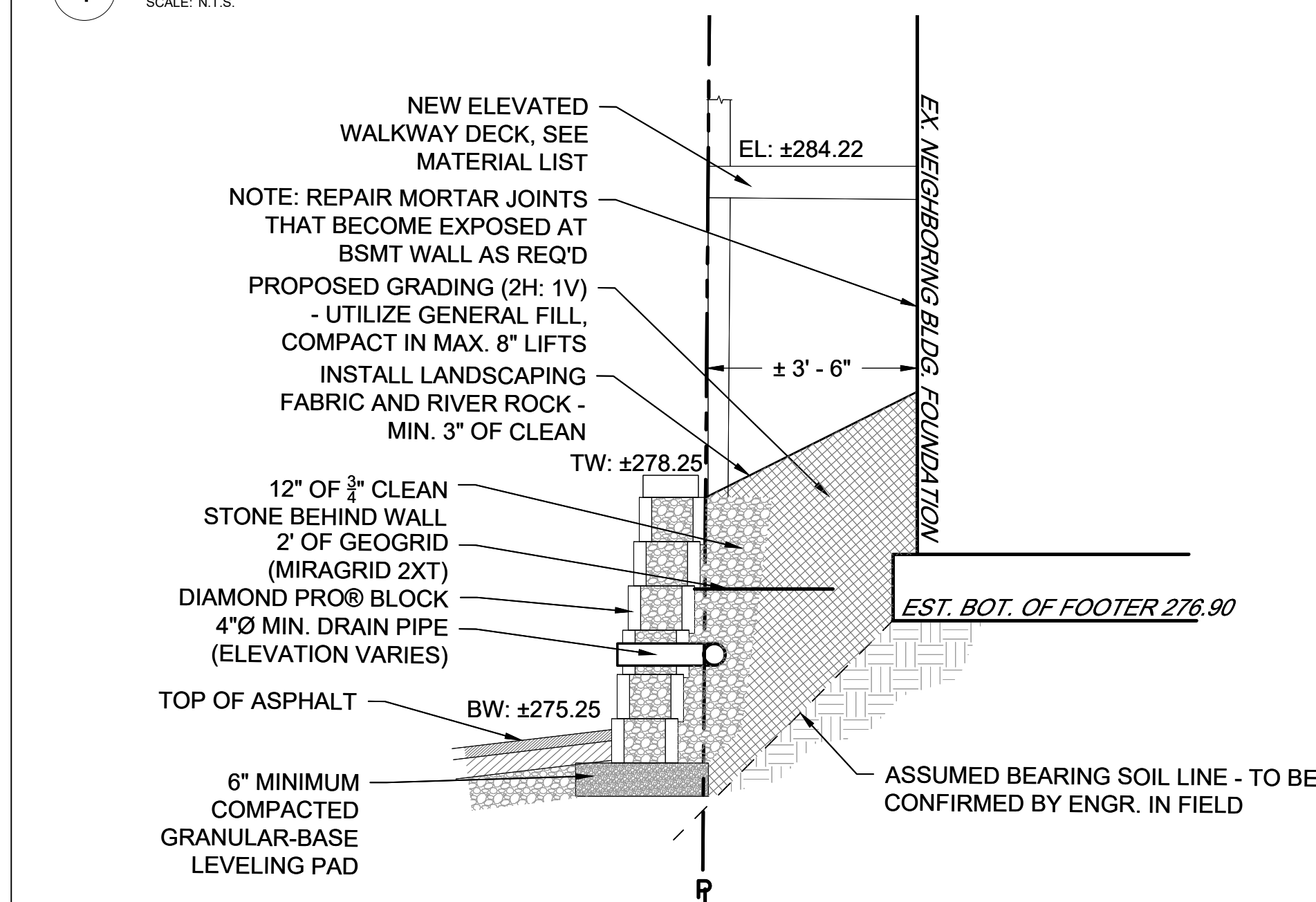
1 CONCRETE WALL AT R.O.W. LINE
SCALE: N.T.S.



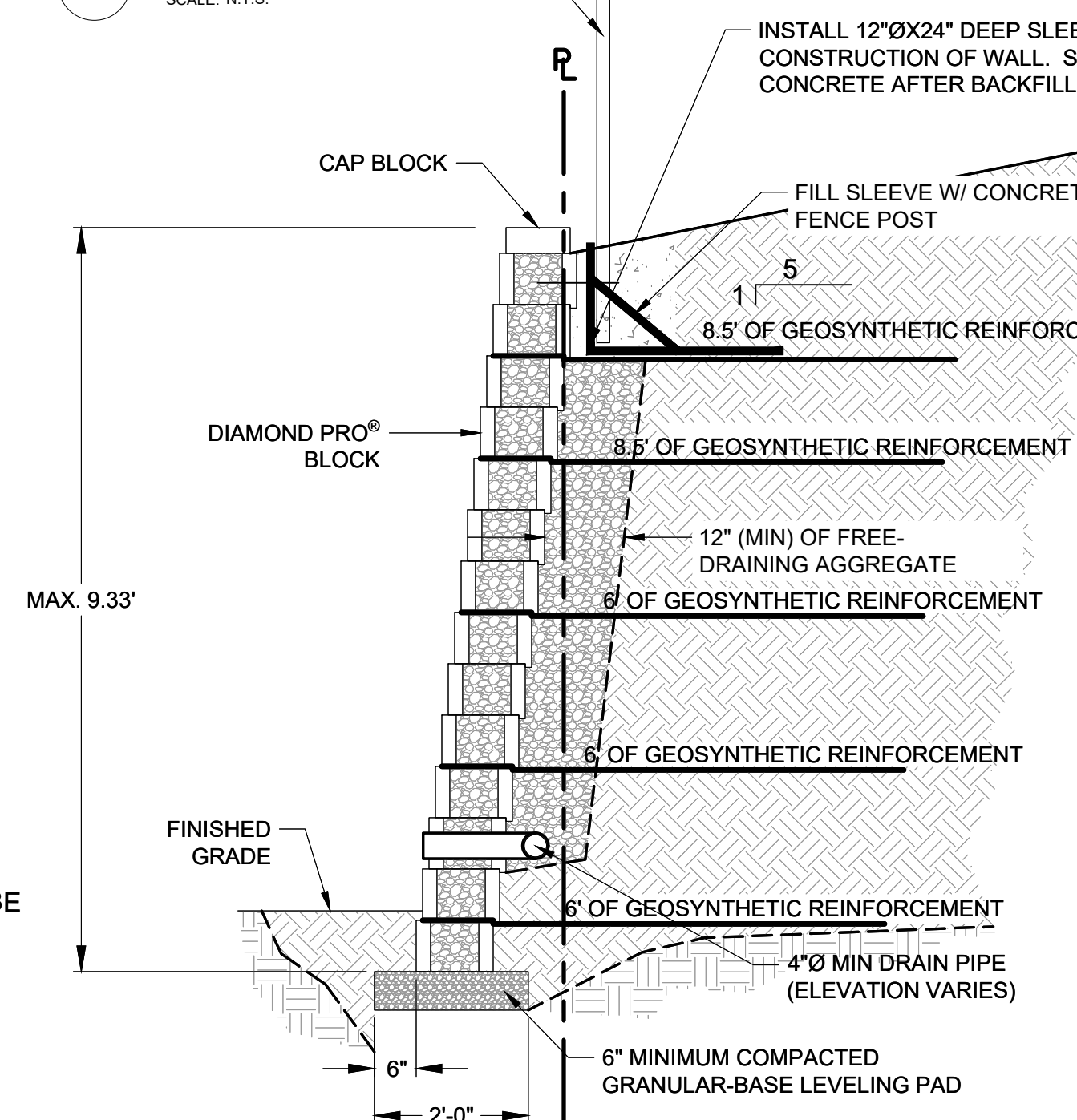
2 SEGMENTAL BLOCK WALL AT PARCEL P6SE2A 15 15 0204
SCALE: N.T.S.



3 SEGMENTAL BLOCK WALL AT PARCEL P6SE2A 15 2 0204
SCALE: N.T.S.



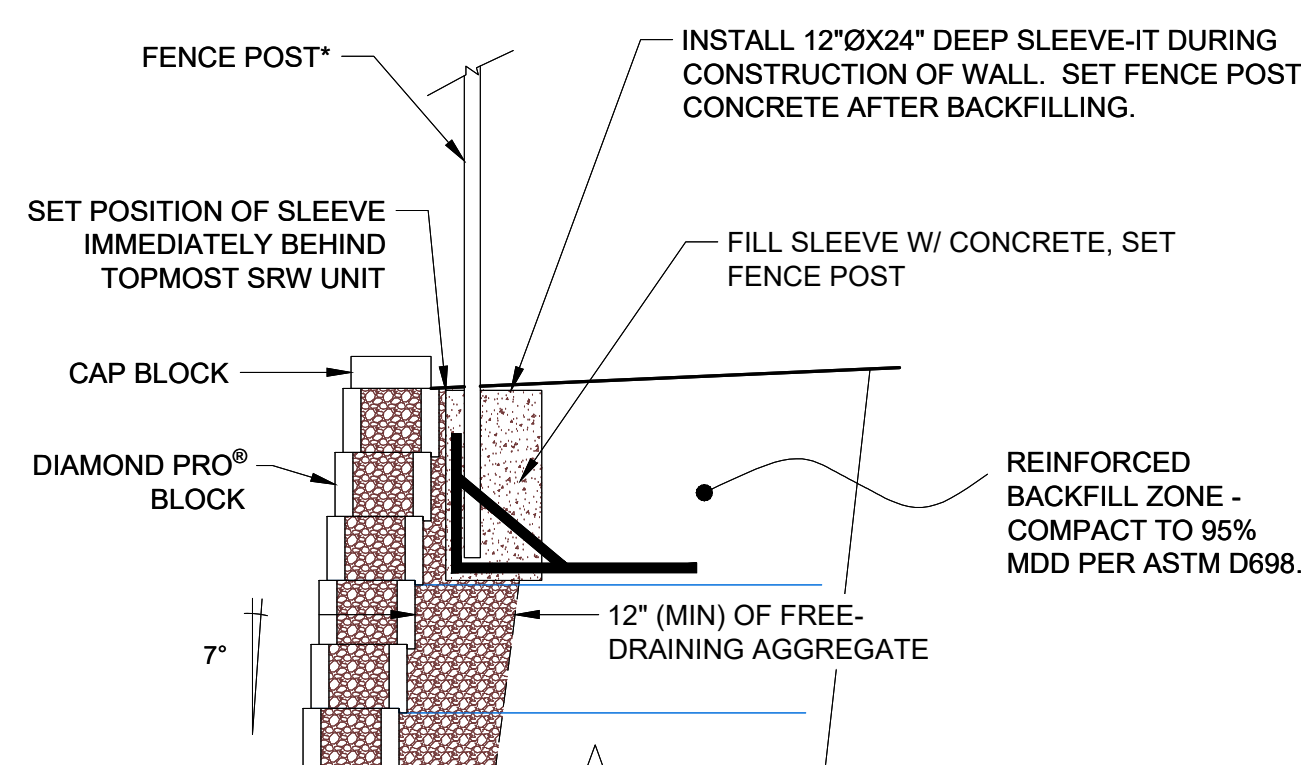
4 SEGMENTAL BLOCK WALL AT PARCEL P6SE2A 15 2 0204
SCALE: N.T.S.



5 CROSS SECTION OF SEGMENTAL WALL (TYP.)
SCALE: N.T.S.

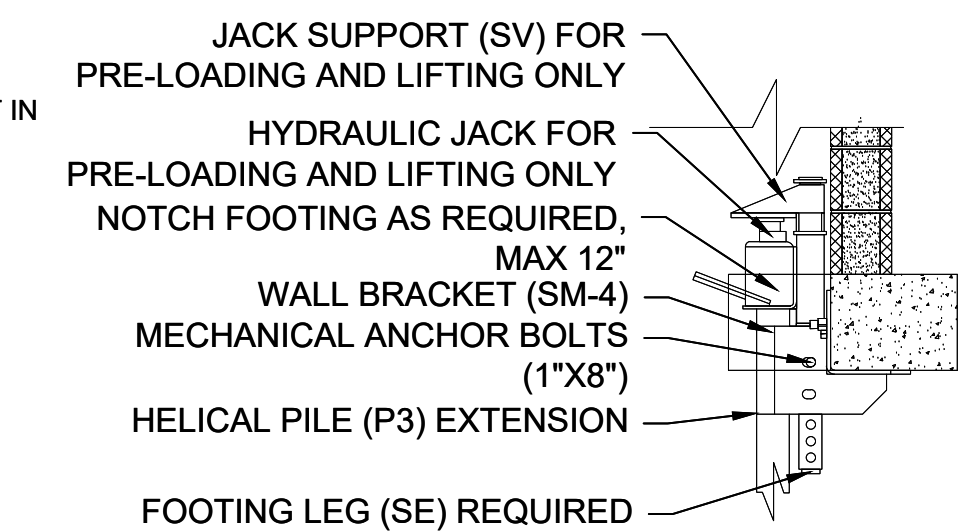
THE SLEEVE-IT SYSTEM SHALL BE EVENLY SPACED. USE OF THE SLEEVE-IT SYSTEM IS LIMITED TO THE FOLLOWING FENCING APPLICATIONS WITHOUT CONSIDERATION OF WIND LOAD:

- 8-FOOT HIGH AND UNDER CHAIN LINK FENCES
- 6-FOOT HIGH AND UNDER WOOD FENCE WITH GAPS BETWEEN BOARDS
- 6-FOOT HIGH AND UNDER BALUSTRADE PVC, STEEL, ALUMINUM, OR WROUGHT IRON FENCES

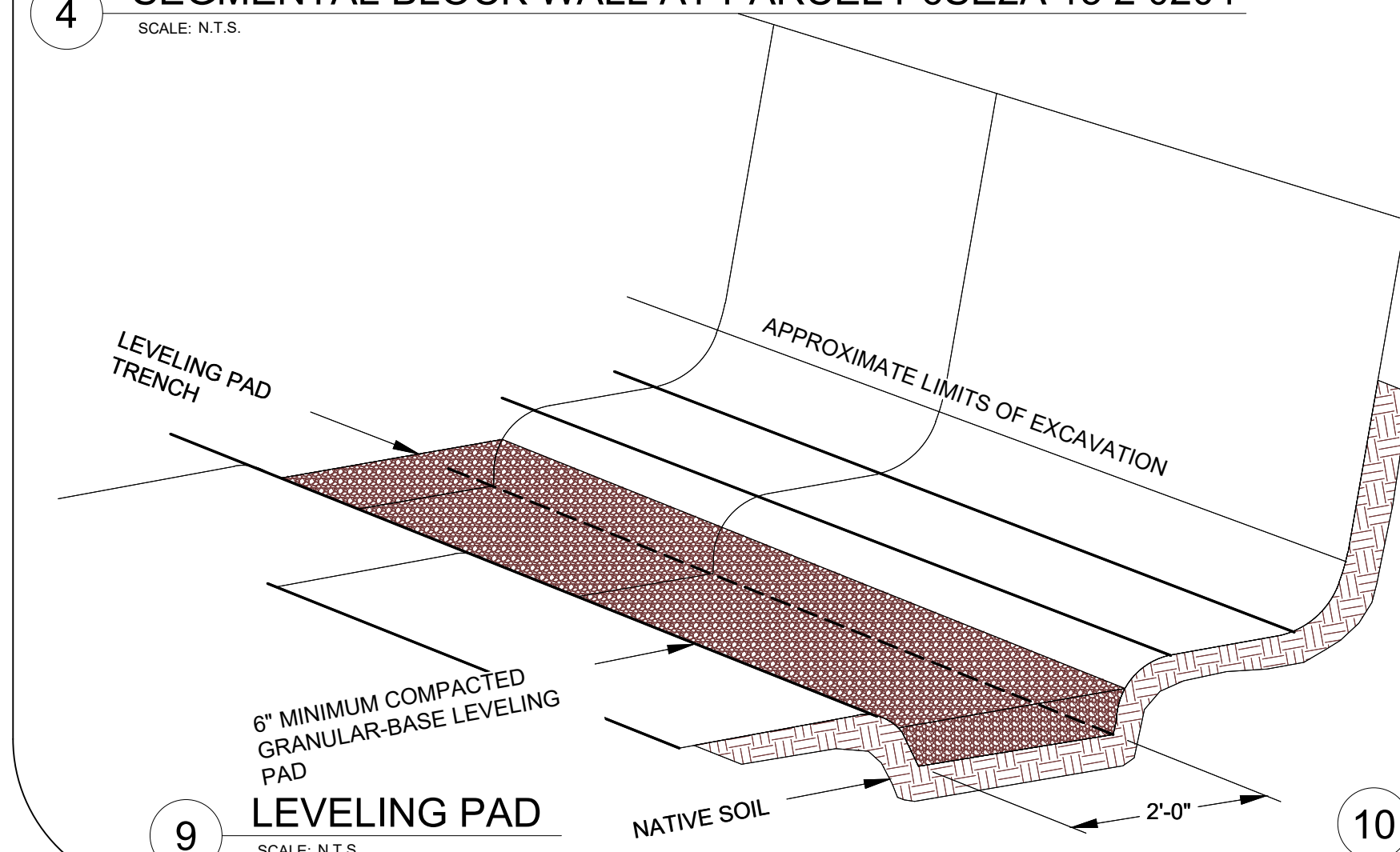


6 SLEEVE-IT DETAIL (TYP.)
SCALE: N.T.S.

7 STEP UP FOOTER DETAIL (TYP.)
SCALE: N.T.S.

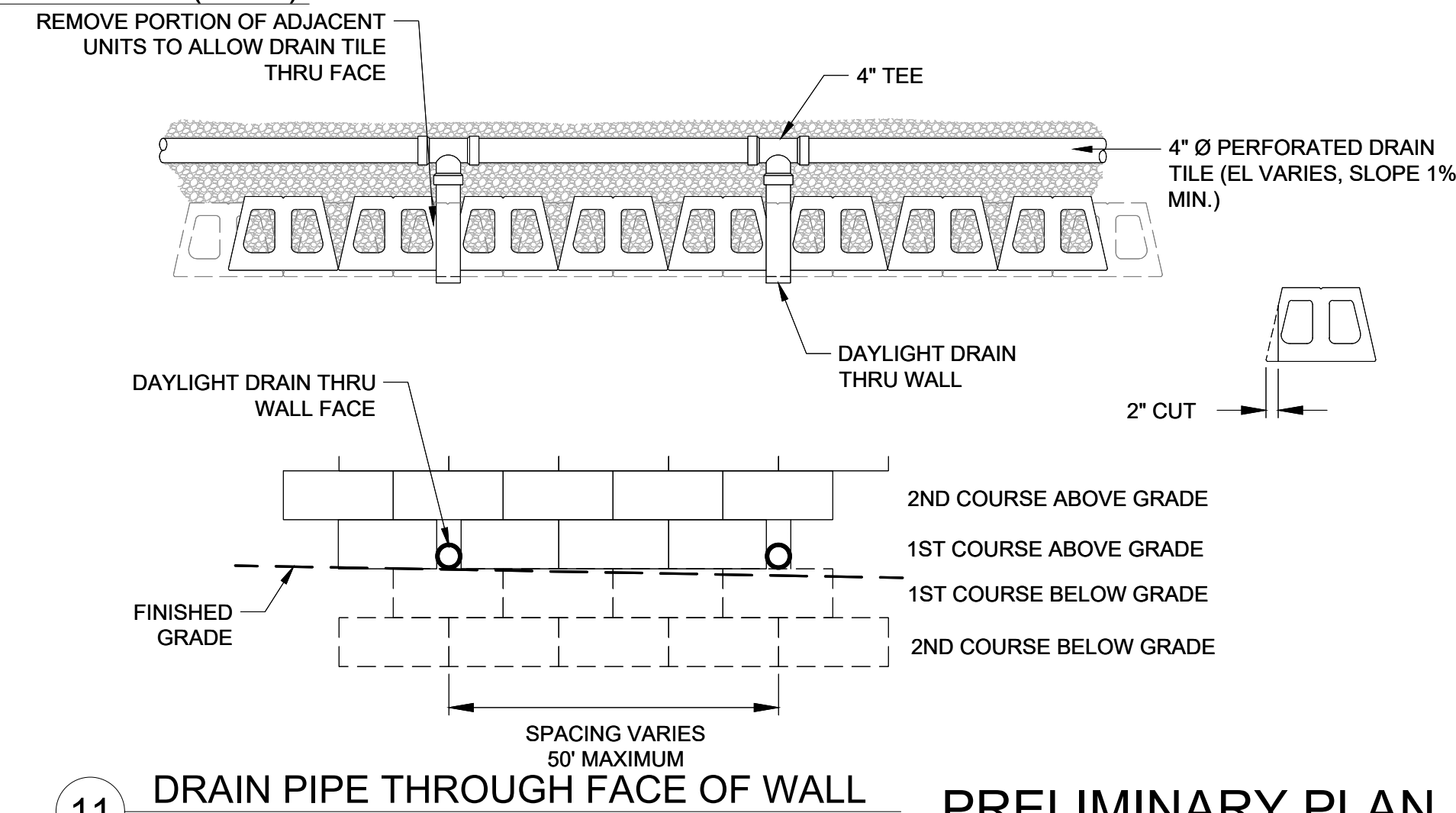


8 HELICAL PILE (TYP.)
SCALE: N.T.S.



9 LEVELING PAD
SCALE: N.T.S.

10 REINFORCEMENT CONNECTION DETAIL
SCALE: N.T.S.

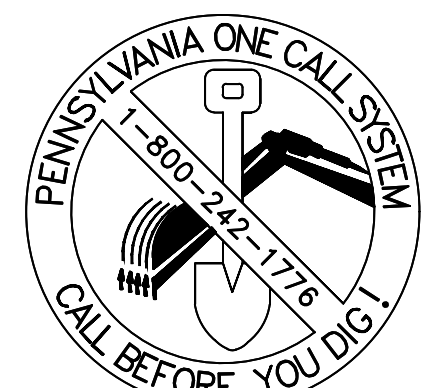


11 DRAIN PIPE THROUGH FACE OF WALL
SCALE: N.T.S.

PRELIMINARY PLAN

Drawing Notes

BEFORE YOU DIG CONTACT
PA. ONE-CALL
1-800-242-1776



PENNSYLVANIA ONE CALL SYSTEM
PA. ACT 172 OF 1986 REQUIRES THREE
WORKING DAYS NOTICE
SIN: 2025-0532213

B	PLANNING COMM.	JND	07.08.2025
A	FOR PERMIT	JND	03.26.2025
No.	Description	Revised By	Date



Firm Name and Address
BUSTAMANTE ENGINEERS, INC
875 N. EASTON, SUITE 3B
DOYLESTOWN, PA 18902

Client: HH PROPERTIES
405 MURRAY LANE
MEDIA, PA 19063
Project: EVANS STREET APARTMENT BUILDING

Revision	PLANNING COMM.	Sheet	DETAILS
Date	July 8, 2025		
Scale	As Noted		

D1
9 of 16

CONCRETE SEGMENTAL RETAINING WALL SYSTEM

- 1.01 DEFINITIONS**
- A. Segmental Retaining Wall (SRW) Units: Dry-stacked concrete masonry units used as the retaining wall fascia.
 - B. Reinforced Fill: Soil which is used as fill behind the SRW unit and within the reinforced soil mass (if applicable).
 - C. Unit Fill and Drainage Aggregate: Material used (if applicable) within, between, and directly behind the concrete retaining wall units.
 - D. Geotextile Separation Fabric: Material used for separation and filtration of dissimilar soil types.
 - E. Foundation Soil: Soil mass supporting the leveling pad and reinforced soil zone of the retaining wall system.
 - F. Retained Soil: The soil mass located behind the reinforced soil zone, either undisturbed native soils or compacted fill.
 - G. Leveling Pad: A level surface consisting of crushed stone, sand and gravel or unreinforced concrete placed to provide a working surface for placement of the SRW unit.
 - H. Geosynthetic Reinforcement: Polymeric material designed specifically to reinforce the soil mass.
 - I. Pre-fabricated Drainage Composite: Three-dimensional geosynthetic drainage medium encapsulated in a geotextile filter, used to transport water.
 - J. Subsurface Drainage System: horizontal pipe encapsulated within drainage aggregate (free draining material) at or near the base of the reinforced soil to facilitate removal of water from the wall system.
 - K. Low Permeability Soil: Clay soil or low permeability geosynthetic used to prevent water percolation into the drainage zone and reinforced backfill behind the wall.
 - L. Global Stability: The general mass movement of a soil reinforced segmental retaining wall structure and adjacent soil mass.
 - M. Project Geotechnical Engineer: A registered engineer who provides site observations, recommendations for foundation support/stability, and verifies soil shear strength parameters.

1.02 SUBMITTALS / CERTIFICATION

- Product Data**
- Product Data: Material description and installation instructions for each manufactured product specified.
 - Name and address of the production facility where the proposed facing units will be manufactured. All units shall be manufactured at the same facility.
 - Notarized letter from the facing unit manufacturer stating that the units supplied for this project are manufactured in complete compliance with this specification. The letter shall state that the units shown in the attached test reports are representative samples of the plants normal mix design and regular production runs.
 - Notarized letter from the reinforcement manufacturer stating that the geosynthetic reinforcement has been manufactured in complete compliance with the reinforcement manufacturer's current NITEP report.
- Samples**
- Contractor shall submit to the owner for approval, and retain for the balance of the project, a minimum of one SRW unit that represents the range of texture and color permitted.
- C. Retaining Wall Design**
- Shop Drawings: One digitally signed set of the retaining wall system design, including wall elevation views, geosynthetic reinforcement layout, pertinent details, and drainage provisions. A registered professional engineer licensed in the state of wall installation shall sign and certify that the shop drawings are designed in accordance with the project civil plans and specifications.
 - Design Calculations: One digitally signed set of engineering design calculations prepared in accordance with the NCEM Design Manual for Segmental Retaining Walls, 3rd Edition or the AASHTO Standard Specifications for Highway Bridges (whichever is applicable). Analysis shall include Internal, External and Bearing Capacity Calculations and include the short term and long term loading conditions on the wall. A Global Stability analysis should be coordinated with the project geotechnical engineer and incorporated into the wall design.

1.03 DELIVERY, STORAGE AND HANDLING

- F. SRW Units and Accessories: Deliver, store, and handle materials in accordance with manufacturer's recommendations, in such a manner as to prevent damage. Check the materials upon delivery to assure that proper material has been received. Store SRW units above ground on wood pallets or blocking. Remove damaged or otherwise unsuitable material, when so determined, from the site.
- G. Exposed faces of SRW units shall be relatively free of chips, cracks, stains, and other imperfections detracting from their appearance, when viewed from a distance of 20 feet under off-axis lighting.
- H. Prevent mud, wet cement, adhesives and similar materials that may harm appearance of SRW units, from coming in contact with system components.
- I. Geosynthetics (including geosynthetic reinforcement, geotextile filter, pre-fabricated drainage composite) shall be delivered,

stored, and handled in accordance with ASTM D4873.

1.04 EXTRA MATERIALS

- A. Furnish Owner with 3 replacement SRW units identical to those installed on the Project.

2.01 PRODUCTS

2.01 MATERIALS

- A. SRW Units: Anchor Diamond Pro Retaining Wall Units" as manufactured under license from Anchor Wall Systems.
3. Physical Requirements
- Unit Face Area: Not less than 1.0 square foot.
 - Color: Selected by the Association from manufacturer's full range of standard colors.
 - Face Pattern Geometry: Stone Cut®
 - Texture: Split Rock Face.
 - Batter: Include an integral concrete shear connection flange/locator to provide a 1 inch setback for each wall course.
- B. Geosynthetic Reinforcement: Miragrid 3.0XT as shown on the drawings.
- C. Leveling Pad
- Aggregate Base: Crushed stone or granular fill meeting the following gradation as determined in accordance with ASTM D448:

Sieve Size	Percent Passing
1 inch	100
No. 4	35 to 70
No. 40	10 to 35
No. 200	3 to 10
 - Base Thickness: 6 inches (minimum compacted thickness).
- D. Unit Fill and Drainage Aggregate: Clean crushed stone or granular fill meeting the following gradation as determined in accordance with ASTM D448:

Sieve Size	Percent Passing
1 inch	100
3/4 inch	75 to 100
No. 4	0 to 60
No. 40	0 to 5
No. 200	0 to 5
- E. Low Permeability Soil: Clayey soil or other similar material which will prevent percolation into the drainage zone behind the wall.
- F. Drainage Pipe: Perforated or slotted PVC in accordance with D3034 and/or ASTM F405. All connectors and fittings shall match the piping material.
- G. Construction Adhesive: Exterior grade adhesive as recommended by the retaining wall unit manufacturer.

3.02 PREPARATION

3.02 EXAMINATION

- Prior to commencing work, the retaining wall contractor shall examine the areas and conditions under which the retaining wall system is to be erected, and notify the Association in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.
- Priority notify the wall design engineer of site conditions which may affect wall performance, soil conditions observed other than those assumed, or other conditions that may require a reevaluation of the wall design.
- Verify the location of existing structures and utilities prior to excavation.

3.02 PREPARATION

- Ensure surrounding structures are protected from the effects of wall excavation.
- Excavation support, if required, is the responsibility of the Contractor, including the stability of the excavation and its influence on adjacent properties and structures.

3.03 EXCAVATION

- A. Excavate to the lines and grades shown on the Drawings. Over-excavation not approved by the Engineer/Association will not be paid for by the Association. Replacement of these soils with compacted fill and/or wall system components will be required at the Contractor's expense. Use care in excavating to prevent disturbance of the base beyond the lines shown.

3.04 FOUNDATION PREPARATION

- A. Excavate foundation soil as required for footing or base dimension shown on the Drawings, or as directed by the Project geotechnical engineer.
- B. The Project geotechnical engineer will examine foundation soil to ensure that the actual foundation soil strength meets or exceeds that indicated on the Drawings. At the direction of the project geotechnical engineer, remove soil not meeting the required strength. Oversize resulting excavation sufficiently from the front of the block to the back of the reinforcement, and backfill with suitable compacted backfill soils.
- C. The Project geotechnical engineer will determine if the foundation soils will require special treatment or correction to control total and differential settlement.
- D. Fill over-excavated areas with suitable compacted backfill, as recommended by the Project geotechnical engineer.

3.05 LEVELING PAD PREPARATION

- A. Place base materials to the depths and widths shown on the Drawings, upon undisturbed soils, or foundation soils prepared in accordance with Article 3.04.
- Extend the leveling pad laterally at least 6 inches in front and behind the lowermost SRW unit.
 - Provide aggregate base compacted to 6 inches thick (minimum) or as shown on the drawings.
3. Where a reinforced footing is required by local code official, place footing below first depth.
- B. Compact aggregate base material to provide a level, hard surface on which to place the first course of SRW units.
- C. Prepare base materials to ensure complete contact with SRW units. Gaps are not allowed.

3.06 ERECTION

- A. General: Erect SRW units in accordance with manufacturer's instructions and recommendations, and as specified herein.
- B. Place first course of concrete wall units on the prepared base material. Check units for level and alignment. Maintain the same elevation at the top of each unit within each section of the base course.
- C. Ensure that foundation units are in full contact with the leveling pad.
- D. Place concrete wall units side-by-side for full length of wall alignment. Alignment may be done by using a string line measured from the back of the block. Gaps are not allowed between the foundation concrete wall units.
- E. Place drainage aggregate between and directly behind the SRW. Fill any voids in SRW units with drainage aggregate. Provide a drainage zone behind the SRW units a minimum of 12 inches wide to within 8 inches of the final grade. Cap the backfill and drainage aggregate zone with separation fabric and then 8 inches of low permeability soil.
- F. Install drainage pipe at the lowest elevation possible to maintain gravity flow of water to outside of the reinforced zone. Slope the main collection drainage pipe 2 percent (minimum) to provide gravity flow to the daylighted areas. Daylight the main collection drainage pipe through the face of the wall, and/or to an appropriate location away from the wall system at each low point or at 50 foot (maximum) intervals along the wall. Alternatively, the drainage pipe can be connected to a storm sewer system at 50 foot (maximum) intervals.
- G. Remove excess fill from top of SRW units and install next course. Ensure drainage aggregate and backfill are compacted before installation of next course.
- H. Check each course for level and alignment. Adjust SRW units as necessary to maintain level and alignment prior to proceeding with each additional course.
- I. Install each succeeding course. Backfill as each course is completed. Pull the SRW units forward until the locating surface of the SRW unit contacts the locating surface of the SRW units in the preceding course. Interlock wall segments that meet at corners by overlapping successive courses. Attach SRW units at exterior corners with adhesive specified.
- J. Install geosynthetic reinforcement in accordance with geosynthetic manufacturer's recommendations and the shop drawings, then those assumed, or other conditions that may require a reevaluation of the wall design.
- Orient geosynthetic reinforcement with the highest strength axis perpendicular to the wall face.
 - Prior to geosynthetic reinforcement placement, place the backfill and compact to the elevation of the top of the wall units at the elevation of the geosynthetic reinforcement.
 - Place geosynthetic reinforcement at the elevations and to the lengths shown on the Drawings.
 - Lay geosynthetic reinforcement horizontally on top of the SRW units and the compacted backfill soils. Place the geosynthetic reinforcement within one inch of the face of the SRW units. Place the next course of SRW units on top of the geosynthetic reinforcement.

- The geosynthetic reinforcement shall be in tension and free from wrinkles prior to placement of the backfill soils. Pull geosynthetic reinforcement hand-taut and secure in place with staples, stakes, or by hand-tensioning until the geosynthetic reinforcement is covered by 6 inches of loose fill.
- The geosynthetic reinforcements shall be continuous throughout their embedment lengths. Splices in the geosynthetic reinforcement strength testing of the reinforced backfill placed and compacted in the reinforced backfill zone.
- Do not operate tracked construction equipment directly on the geosynthetic reinforcement. At least 6 inches of compacted backfill soil is required prior to operation of tracked vehicles over the geosynthetic reinforcement. Keep turning of tracked construction equipment to a minimum.
- Rubber-tired equipment may pass over the geosynthetic reinforcement at speeds of less than 10 miles per hour. Turning of rubber-tired equipment is not allowed on the geosynthetic reinforcement.

3.07 BACKFILL PLACEMENT

- A. Place reinforced fill, spread and compact in a manner that will minimize slack in the reinforcement.
- B. Place fill within the reinforced zone and compact in lifts not exceeding 6 inches (loose thickness) where hand-operated compaction equipment is used, and not exceeding 12 inches (loose thickness) where heavy, self-propelled compaction equipment is used.
- Only lightweight hand-operated compaction equipment is allowed within 3 feet of the back of the retaining wall units. If the specified compaction cannot be achieved within 3 feet of the back of the retaining wall units, replace the reinforced soil in this zone with drainage aggregate material.
- C. Compaction testing shall be done in accordance with ASTM D1556 or ASTM D2922.
- D. Minimum Compaction Requirements for Fill Placed in the Reinforced and Retained Zone.
- The minimum compaction requirement shall be determined by the project geotechnical engineer testing the compaction. At no time shall the soil compaction requirements be less than 95 percent of the soil's standard Proctor maximum dry density (ASTM D698) [modified Proctor maximum dry density (ASTM D1557)] for the entire wall height.
 - Utility Trench Backfill: Compact utility trench backfill in or below the reinforced soil zone to 98 percent of the soil's standard Proctor maximum dry density (ASTM D698) [modified Proctor maximum dry density (ASTM D1557)], or as recommended by the Project geotechnical engineer. If the height from the utility to finish grade is higher than 30 feet, increase compaction to 100 percent of the standard Proctor density [modified Proctor density].
 - Utilities must be properly designed (by others) to withstand all forces from the retaining wall units, reinforced soil mass, and surcharge loads, if any.
 - Moisture Content: Within 2 percentage points of the optimum moisture content for all wall heights.
 - These specifications may be changed based on recommendations by the Project geotechnical engineer.
 - If changes are required, the Contract Sum will be adjusted by written Change Order.
- E. At the end of each day's operation, slope the last level of compacted backfill away from the interior (concave) face of the wall to direct surface water runoff away from the wall face.
- The General Contractor is responsible for ensuring that the finished site drainage is directed away from the retaining wall system.
 - In addition, the General Contractor is responsible for ensuring that surface water runoff from adjacent construction areas is not allowed to affect the retaining wall area of the construction site.
- F. Refer to Article 3.10 for compaction testing.

3.08 CAP UNIT INSTALLATION

- Apply adhesive to the top surface of the SRW unit below and place the cap unit into desired position.
- Cap SRW units as necessary to obtain the proper fit.
- Backfill and compact to top of SRW unit.

3.09 SITE CONSTRUCTION TOLERANCES

- A. Site Construction Tolerances
- Vertical Alignment: Plus or minus 1-1/2 inches over any 10-foot distance, with a maximum differential of 3 inches over the length of the wall.
 - Horizontal Location Control from Grading Plan:
 - Straight Lines: Plus or minus 1-1/2 inches over any 10-foot distance.
 - Corner and Radius Locations: Plus or minus 12 inches.
 - Curves and Serpentine Radii: Plus or minus 2 feet.
 - Immediate Post Construction Wall Batter: Within 2 degrees of the design batter of the concrete retaining wall units.
 - Bulging: Plus or minus 1-1/4 inches over any 10-foot distance.

3.10 FIELD QUALITY CONTROL

- A. Installer is responsible for quality control of installation of system components.
- B. The Owner or General Contractor, at their expense, will retain a qualified professional to perform quality assurance checks of the installer's work.
- C. Correct work which does not meet these specifications or the requirements shown on the Drawings at the installer's expense.
- D. Perform compaction testing of the reinforced backfill placed and compacted in the reinforced backfill zone.
- Testing Frequency
 - One test for every 2 feet (vertical) of fill placed and compacted, for every 50 linear feet of retaining wall.
 - Vary compaction test locations to cover the entire area of the reinforced soil zone, including the area compacted by the hand-operated compaction equipment.

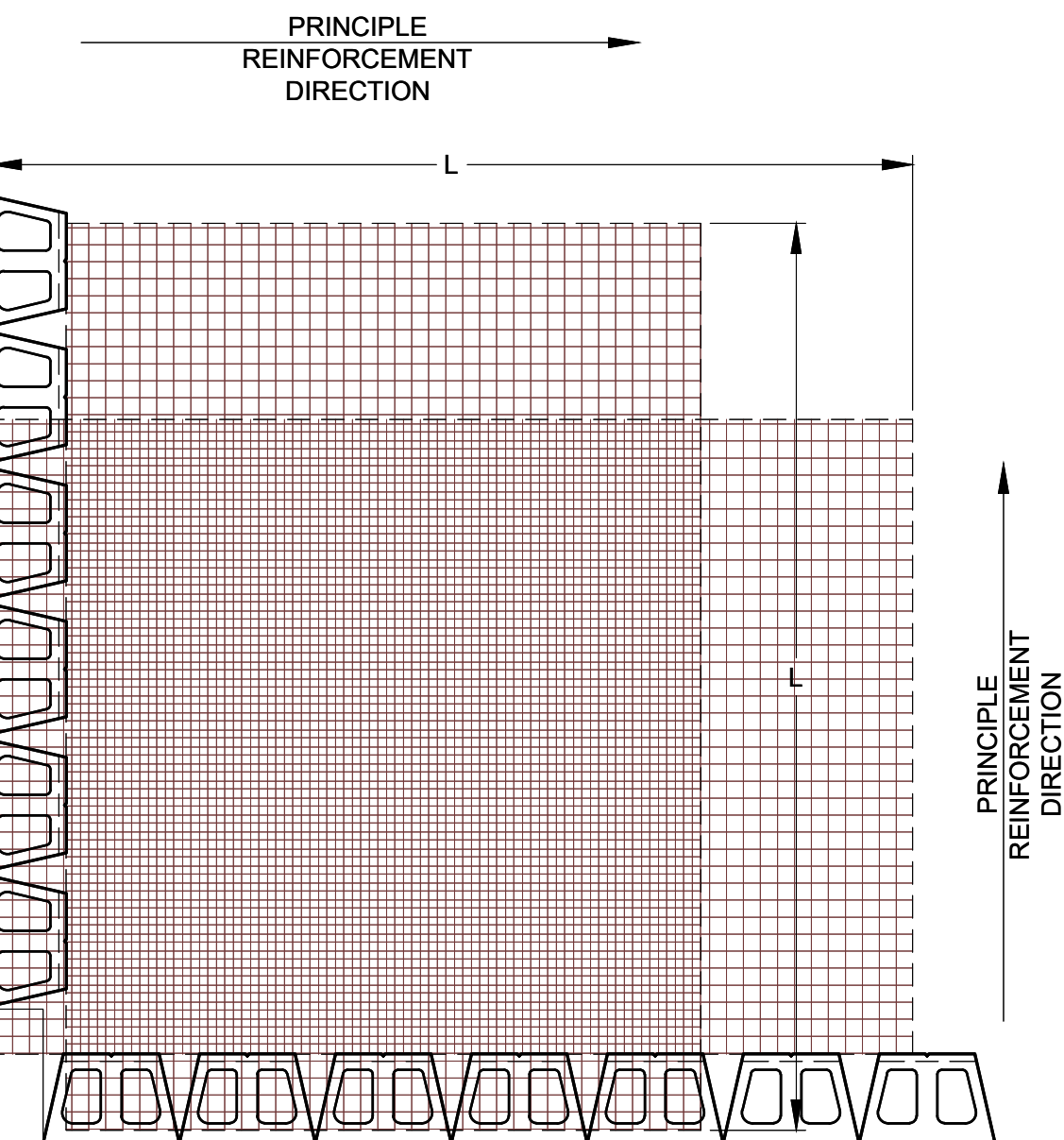
3.11 ADJUSTING AND CLEANING

- A. Replace damaged SRW units with new units as the work progresses.
- B. Remove debris caused by wall construction and leave adjacent paved areas broom clean.

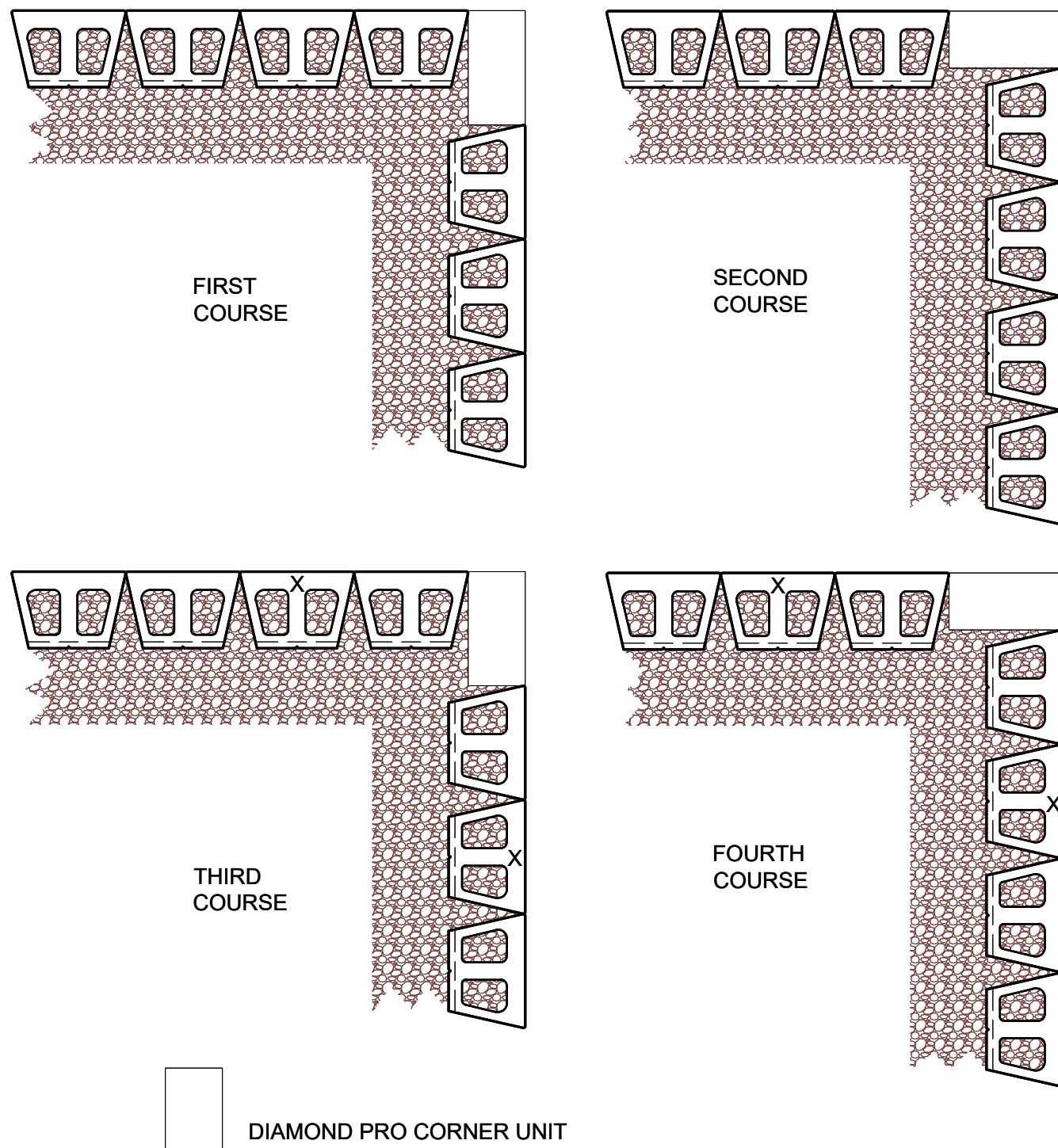
3.12 MEASUREMENT AND PAYMENT

- A. Measurement of segmental retaining wall shall be on an installed square foot basis computed on the total face area of wall installed. Wall face area includes the bottom of the base course to the top of the wall, and the entire length of the wall.
- B. Payment for the wall will be made on a square foot basis at the agreed upon Contract Unit Price.
- Payment should be considered full compensation for labor, materials, equipment and testing required to install the wall in accordance with these specifications and the Drawings.
 - Quantities may vary from that shown on the Drawings depending on existing topography. Change to the total quantity of wall face area will be paid or withheld at the agreed upon Contract Unit Price.

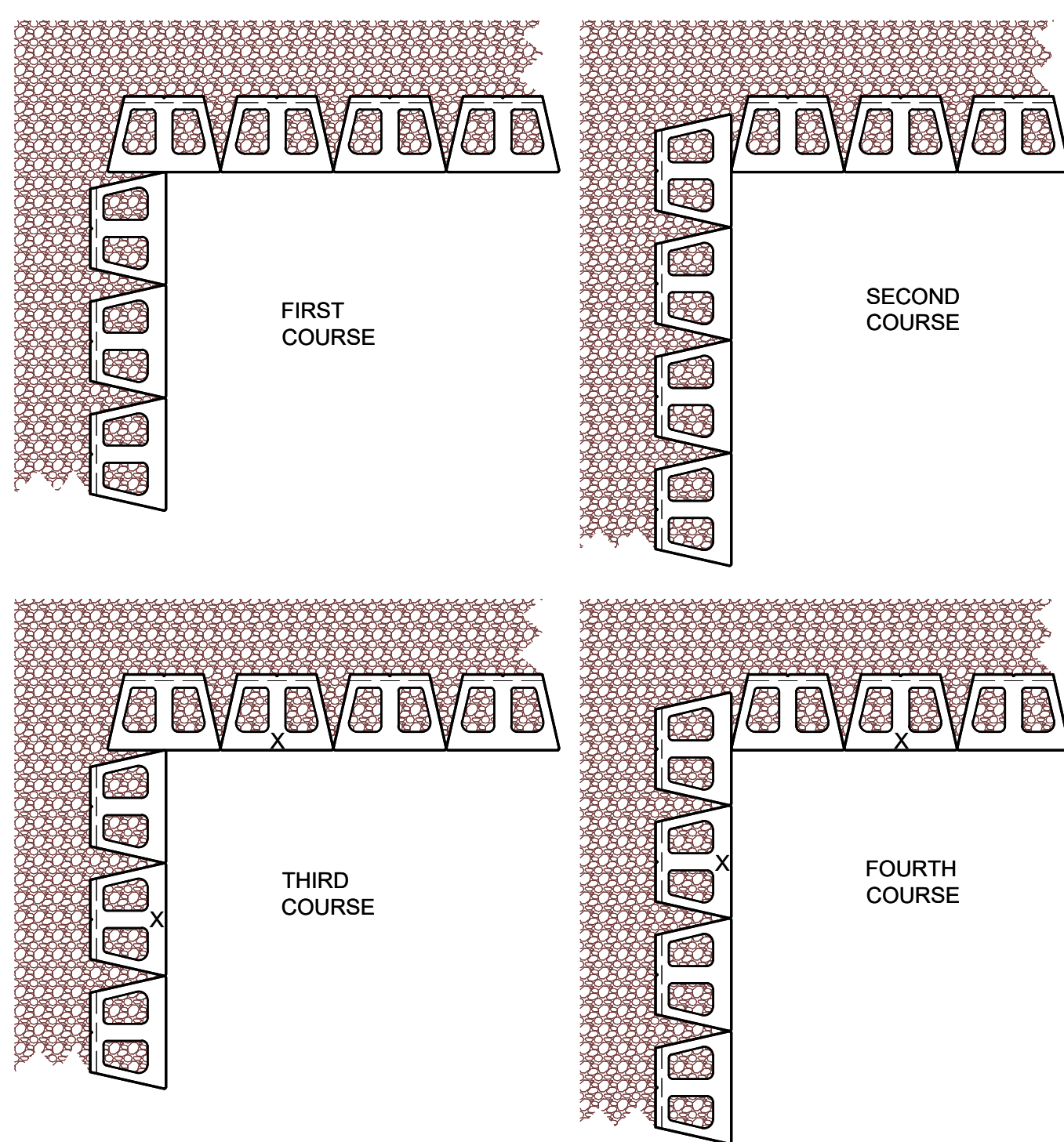
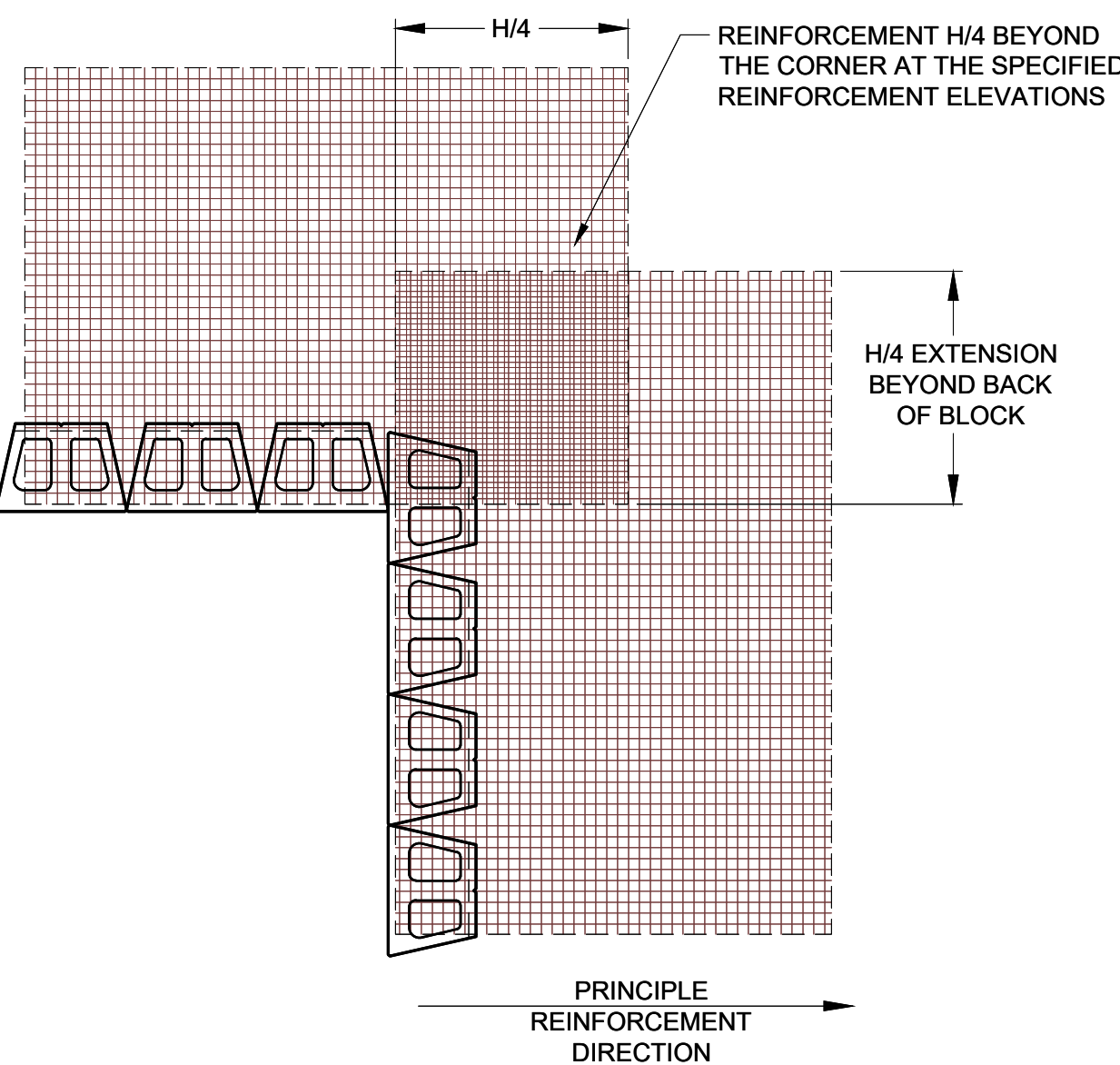
NOTE:
IN THE "CROSS-OVER AREA" OF REINFORCEMENT, ONE OF THE LAYERS OF REINFORCEMENT SHOULD BE LOWERED OR RAISED ONE COURSE TO ALLOW PLACEMENT OF THE REINFORCEMENT WITH THE PRINCIPLE REINFORCEMENT STRENGTH DIRECTION PROPERLY ORIENTATED. THE REINFORCEMENT SHOULD NOT EXTEND INTO THE SEGMENTAL RETAINING WALL UNITS ON THE RETURN LEG OF THE 90-DEGREE CORNER.



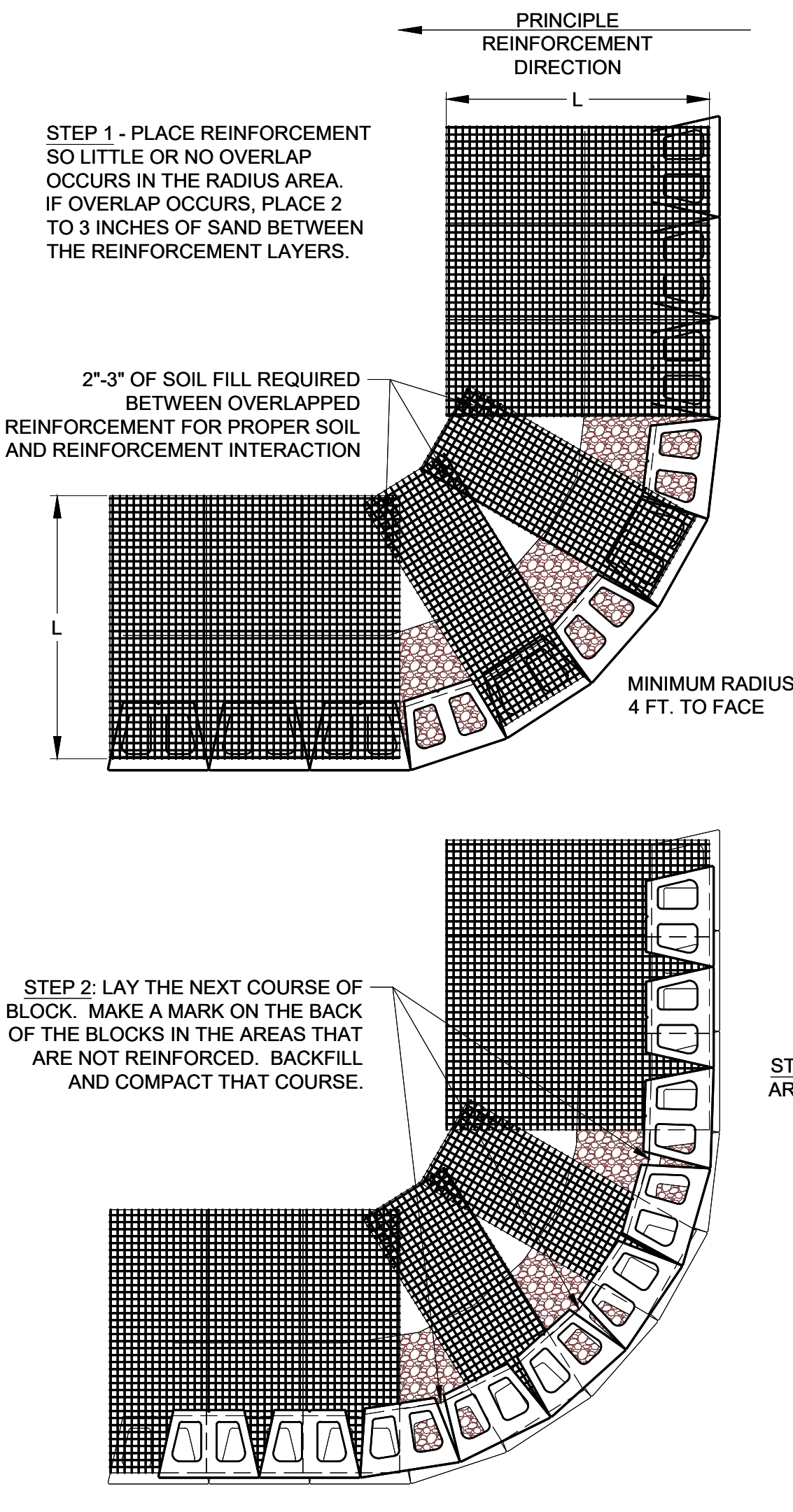
NOTE: USE ADHESIVE ON EXPOSED PARTIAL UNITS CUT UNITS (X) TO MAINTAIN RUNNING BOND



DIAMOND PRO CORNER UNIT



12 INSIDE CORNER DETAIL
SCALE: N.T.S.



13 OUTSIDE CURVES DETAIL
SCALE: N.T.S.

SECTION 03 30 53
MISCELLANEOUS CONCRETE - STRUCTURAL BACKFILL

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. PRODUCT: STRUCTURAL BACKFILL

DEFINITION: A FORMULATED MIX DESIGN OF CLEAN STONE, CEMENT AND WATER THAT CREATES A PERMEABLE, HOMOGENEOUS ZONE (MASS) WHEN PLACED BEHIND THE RETAINING WALL UNITS.

B. CEMENTITIOUS MATERIALS

- USE MATERIALS MEETING THE FOLLOWING REQUIREMENTS
 - HYDRAULIC CEMENT TYPE I: ASTM C 150 OR ASTM C 157
 - FLY ASH: ASTM C 618
 - SLAG: ASTM C 989
- NORMAL-WEIGHT AGGREGATE: ASTM C 33
- WATER: POTABLE
- CHEMICAL MIXTURES:
 - WATER REDUCERS, ACCELERATING AND RETARDING: ASTM C 494
 - AD MIXTURES WITH NO STANDARD DESIGNATION SHALL BE USED ONLY PROFESSIONALS WHEN ITS USE FOR SPECIFIC PROPERTIES IS REQUIRED.

C. STRUCTURAL BACKFILL

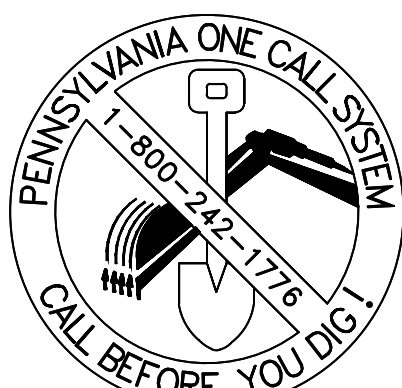
- APPLICATION: RETAINING WALL BACKFILL.
- EXPOSURE: POSSIBLE SULFATE, DEPENDING ON SOIL-SPECIFIC CONDITIONS
 - FOR SULFATE RESISTANCE, USE TYPE II OR TYPE V PORTLAND CEMENT.
- NOMINAL MAXIMUM AGGREGATE SIZE: 3/8 to 3/4-INCH
- AIR VOIDS: 15-25%
- WATER-CEMENTITIOUS MATERIALS RATIO BY WEIGHT 0.3 - 0.5
- AGGREGATE/CEMENTITIOUS MATERIALS RATIO BY WEIGHT: 4.5 - 6.0 : 1
- DESIGN TARGET UNIT WEIGHT (IN-PLACE): 112 pcf (MINIMUM)

14 OUTSIDE CORNER DETAIL
SCALE: N.T.S.

PRELIMINARY PLAN

Drawing Notes

BEFORE YOU DIG CONTACT
PA. ONE-CALL
1-800-242-1776



PENNSYLVANIA ONE CALL SYSTEM
PA. ACT 172 OF 1986 REQUIRES THREE
WORKING DAYS NOTICE
SIN: 2025-0532213

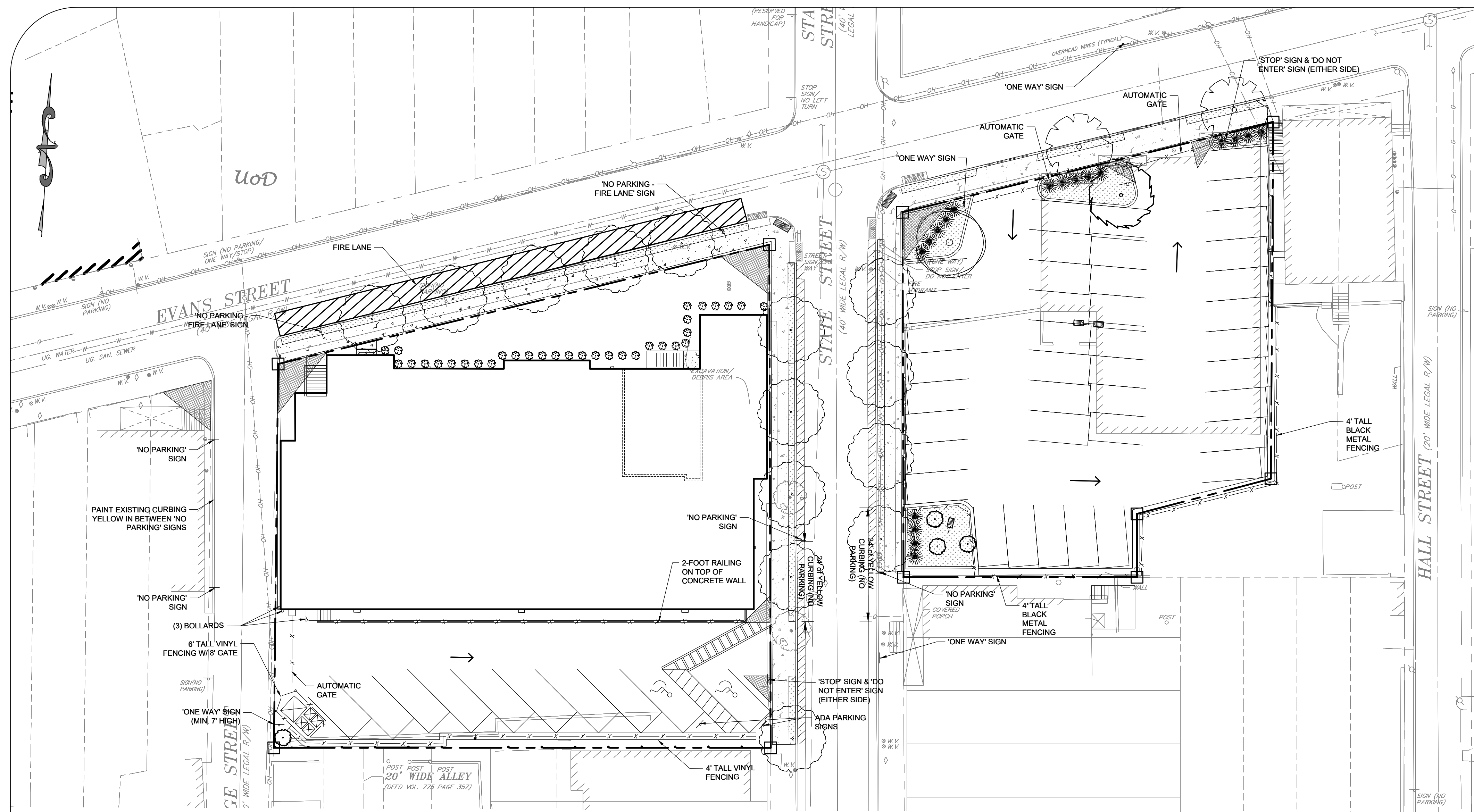
B	PLANNING COMM.	JND	07.08.2025
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Firm Name and Address
BUSTAMANTE ENGINEERS, INC
875 N. EASTON, SUITE 3B
DOYLESTOWN, PA 18902

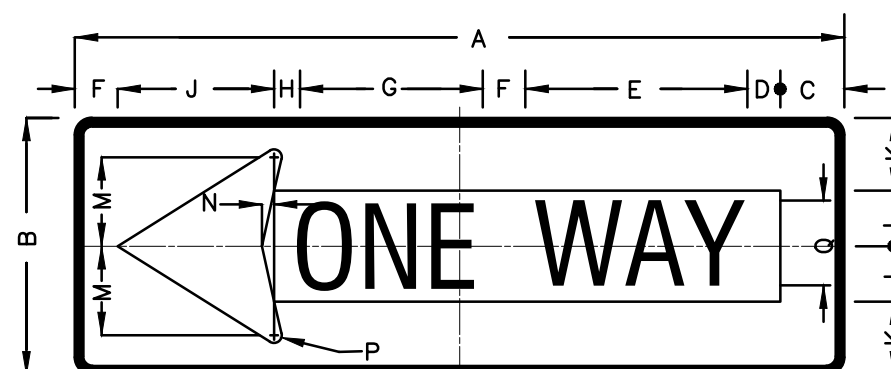
Client: HH PROPERTIES
405 MURRAY LANE
MEDIA, PA 19063
Project: EVANS STREET APARTMENT BUILDING

Revision PLANNING COMM.	Sheet DETAILS
Date July 8, 2025	D2 10 of 16
Scale As Noted	



9 SIGNAGE PLAN

SCALE: 1" = 20' - 0"



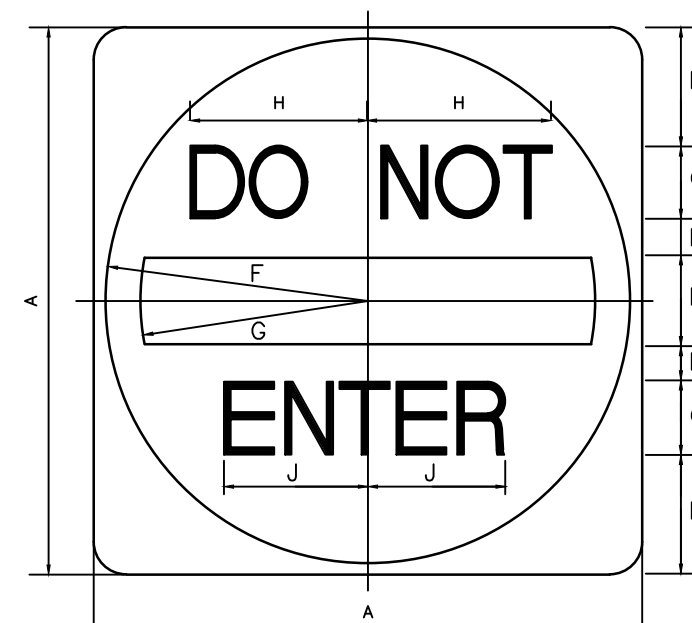
COLOR: ARROW AND BORDER
BACKGROUND AND LEGEND

WHITE (REFLECTORIZED)
BLACK (NON-REFLECTORIZED)

SIGN SIZE	DIMENSIONS IN INCHES													BOR- DER	BLANK STD
A x B	C	D	E	F	G	H	J	K	L	M	N	P	Q		
36x12	3	1.2	10.6*	2.2	9.1*	0.5	7.2	3.4	2.6	4.2	0.6	0.7	40	0.4	B5-3612
54x18	5	3	13.5	4	12.3	2.2	10	5.2	3.8	5.8	0.8	1	50	0.8	-

* REDUCE SPACING 35%

HORIZONTAL LEFT ONE-WAY
SIGN (R6-1L)
(NOT TO SCALE)

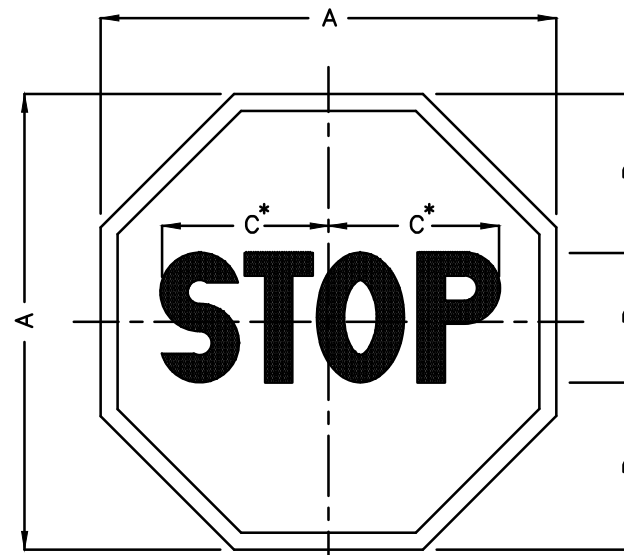


SIGN SIZE	DIMENSIONS IN INCHES										BLANK STD.
A	B	C	D	E	F	G	H	J			
30	6.6	40	1.9	5	14.6	12.4	9.9	7.9	B3-30		

COLOR: LEGEND & BACKGROUND
SYMBOL

WHITE (RETROREFLECTIVE)
RED (RETROREFLECTIVE)

DO NOT ENTER
SIGN (R5-1)
(NOT TO SCALE)



COLOR: LEGEND AND BORDER
BACKGROUND

WHITE (REFLECTORIZED)
RED (REFLECTORIZED)

SIGN SIZE	DIMENSIONS IN INCHES			SER- IES	BOR- DER	BLANK STD
	A	B	C			
30 x 30	30	10	12 $\frac{1}{2}$	C	$\frac{3}{4}$	B1-30

* REDUCE SPACING 40%

STOP SIGN (R1-1)
(NOT TO SCALE)



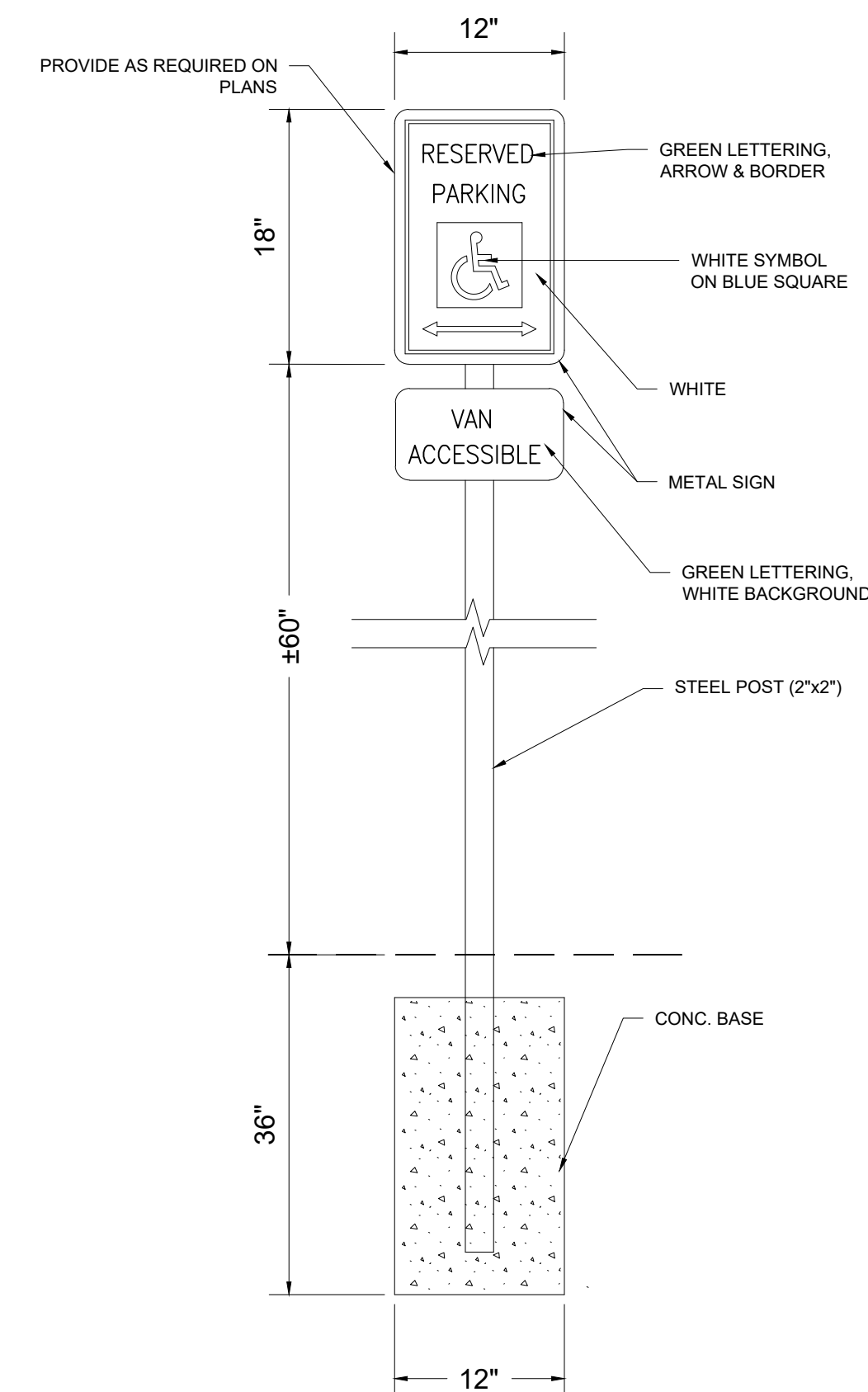
- ALL STRIPING - MIN. 6" THICK LINES, YELLOW PAVEMENT MARKINGS WITH GLASS BEADS. WHEN ON CONCRETE PAVEMENT PLACE ON BLACK BACKGROUND
- OUTER LINE - 3' FROM FACE OF CURB OR EDGE OF ROAD
- CHEVRON - 3' SPACING C/C 45° ANGLE
- NO PARKING FIRE LANE GRAPHIC - MIN. 18" HIGH
- PLACE FIRE LANE SIGNS AS SHOWN

FIRE LANE STRIPING



- SIGN MATERIAL AND LETTERING SHALL BE REFLECTIVE
- GRAPHICS AND BORDER SHALL BE RED ON WHITE BACKGROUND
- BOTTOM OF SIGN SHALL BE INSTALLED 7 FT ABOVE GRADE
- ARROW SHALL POINT IN ONLY ONE DIRECTION TOWARD THE FIRE LANE

PRELIMINARY PLAN



ADA SIGNAGE

Drawing Notes

BEFORE YOU DIG CONTACT
PA. ONE-CALL
1-800-242-1776



PENNSYLVANIA ONE CALL SYSTEM
PA. ACT 172 OF 1986 REQUIRES THREE
WORKING DAYS NOTICE
SIN: 2025-0532213

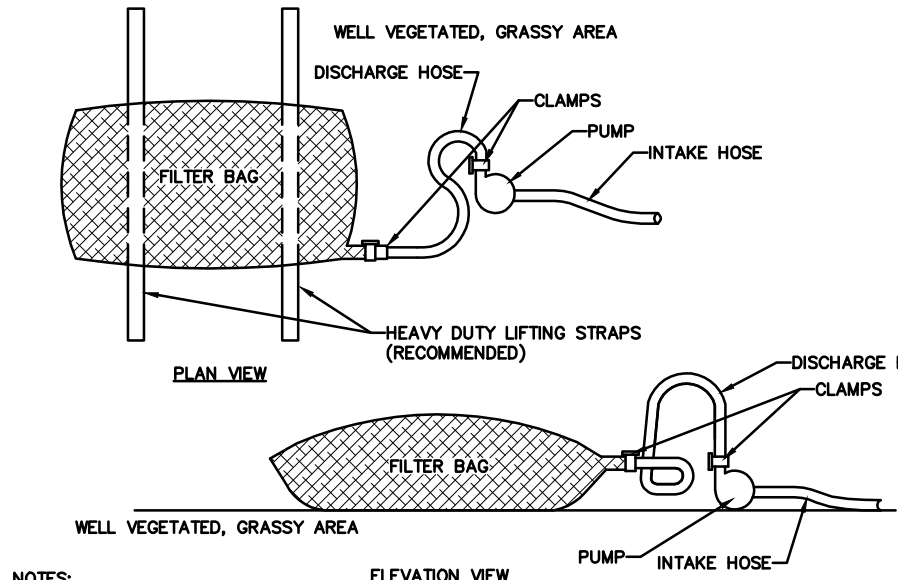
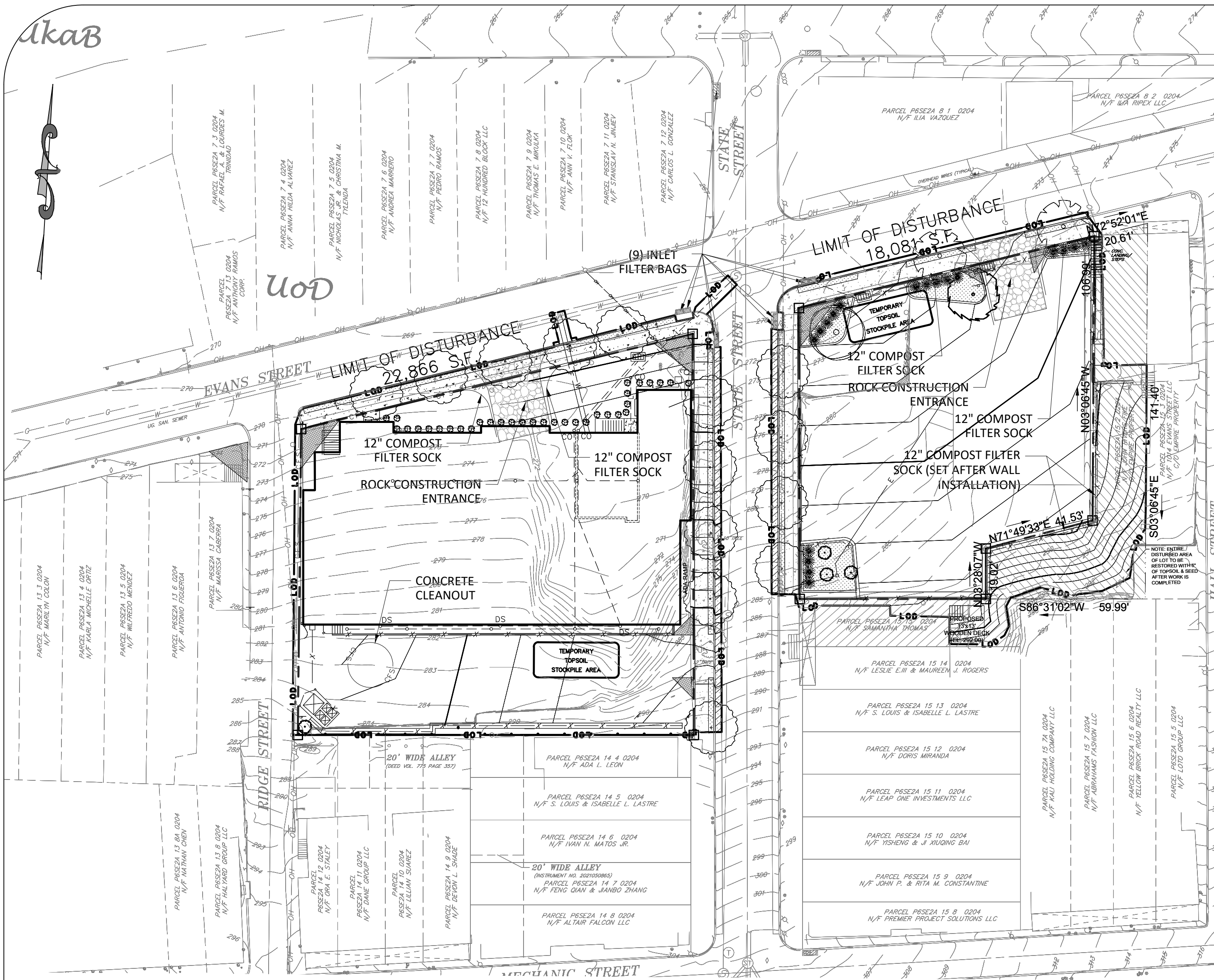
B	PLANNING COMM.	JND	07.08.2025
A	FOR PERMIT	JND	03.26.2025
No.	Description	Revised By	Date



Firm Name and Address
BUSTAMANTE ENGINEERS, INC
875 N. EASTON, SUITE 3B
DOYLESTOWN, PA 18902

Client: HH PROPERTIES
405 MURRAY LANE
MEDIA, PA 19063
Project: EVANS STREET APARTMENT BUILDING

Revision	PLANNING COMM.	Sheet	SIGNAGE PLAN
Date	July 8, 2025		SP
Scale	As Noted		11 of 16



NOTES:
LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED 7" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4832	200 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4555	70%
MOSS & RETAINED	ASTM D-4751	80 SECS

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

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

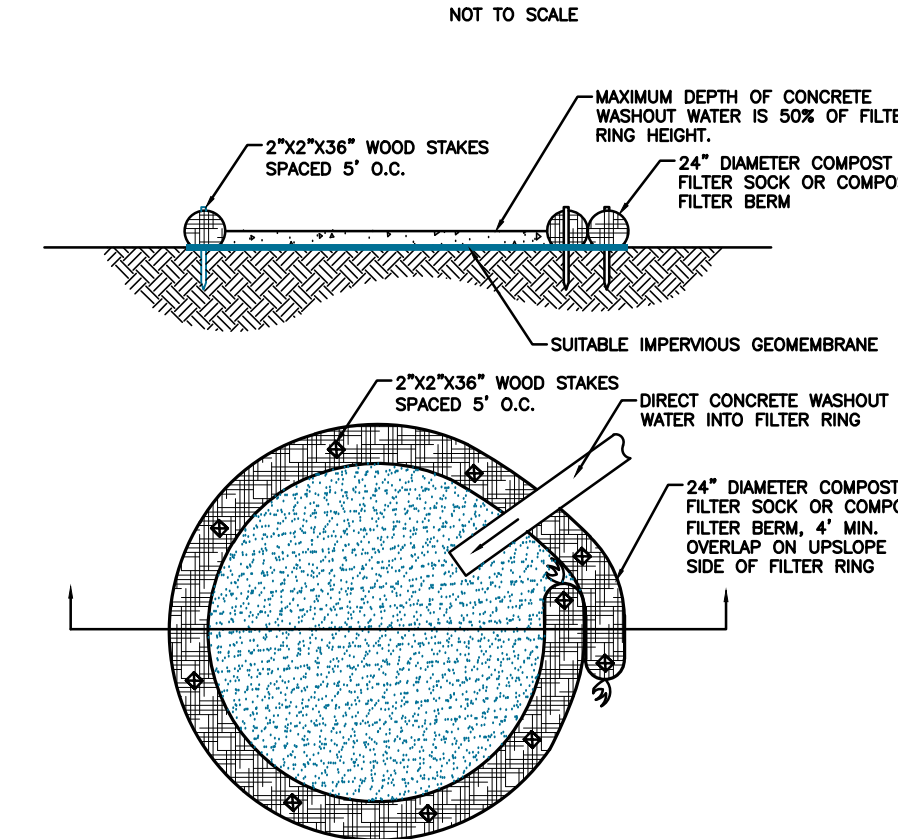
NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

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

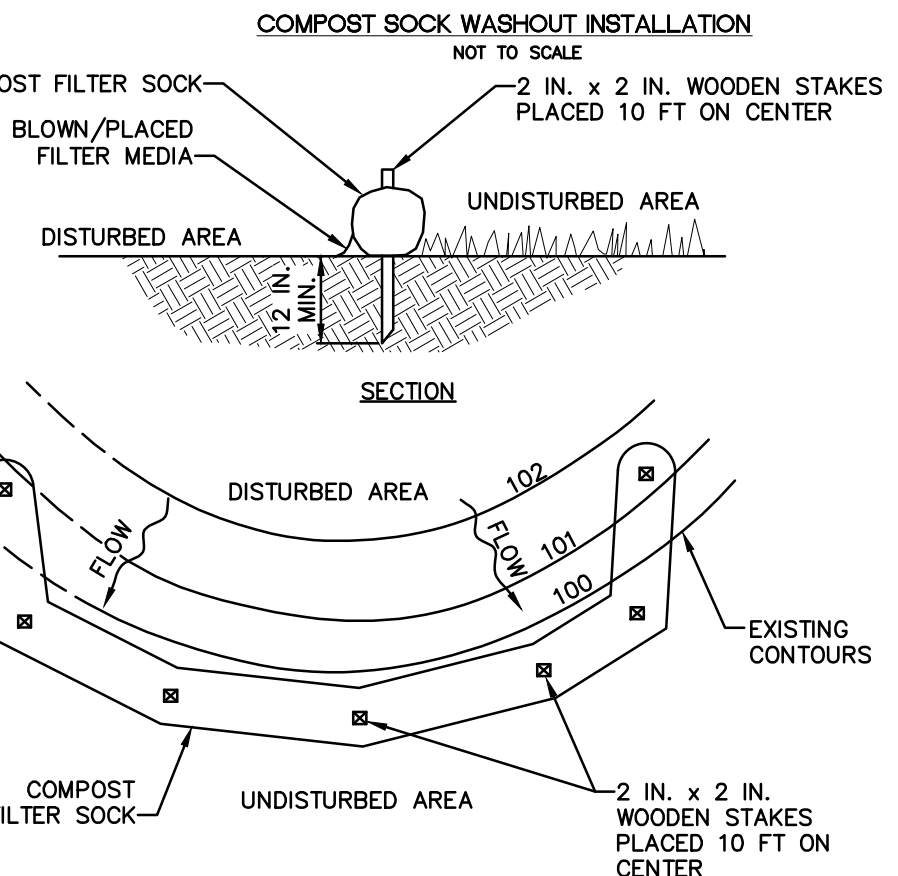
THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE PROTECTED AND SECURED.

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

PUMPED WATER FILTER BAG DETAIL



NOTES:
1. INSTALL ON FLAT GRADE (2% MAXIMUM SLOPE) FOR OPTIMAL PERFORMANCE.
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER FILTER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
3. ALL CONCRETE WASHOUT FACILITIES SHOULD BE INSPECTED DAILY. COMPOST SOCK MUST REMAIN IN CONTINUOUS CONTACT WITH THE GEOTEXTILE AT ALL LOCATIONS. DAMAGED OR LEAKING WASHOUTS SHOULD BE IMMEDIATELY REPAIRED OR REPLACED IMMEDIATELY.
4. ACCUMULATED MATERIALS TO BE REMOVED WHEN THEY REACH 75% CAPACITY.



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

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

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

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

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

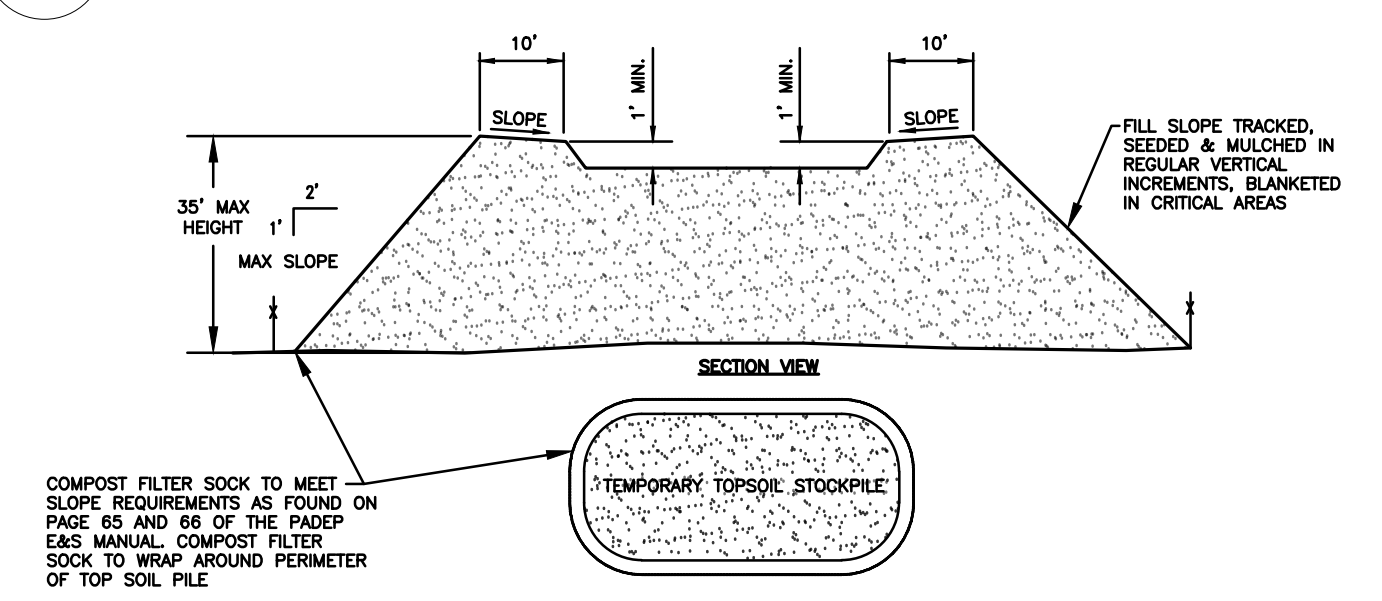
BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

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

COMPOST FILTER SOCK (NOT TO SCALE)

10 EROSION AND SEDIMENT CONTROLS

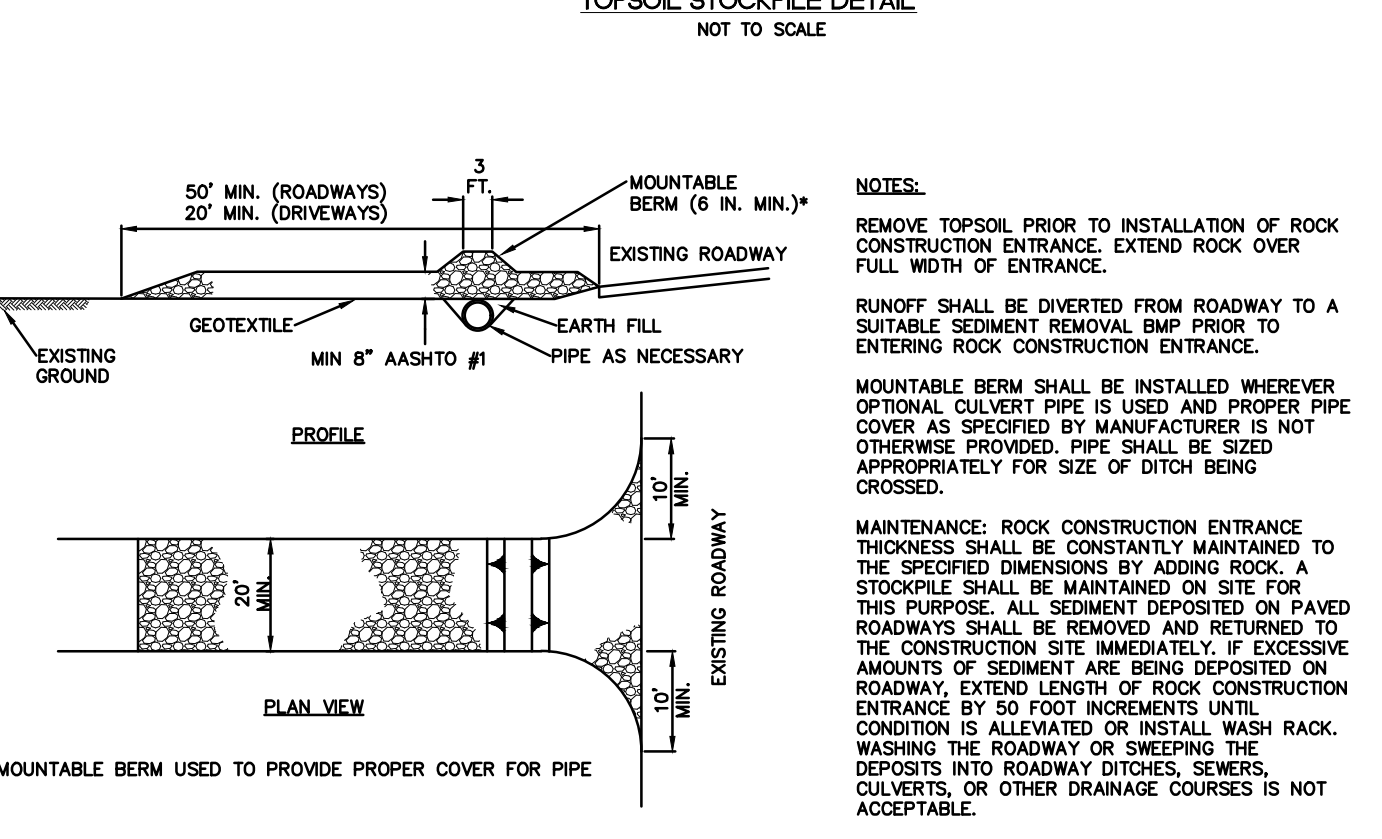
SCALE: 1" = 30' - 0"



TEMPORARY BERMS TO BE PLACED, MAINTAINED, AND ADJUSTED CONTINUOUSLY UNTIL 90% VEGETATIVE GROWTH IS ESTABLISHED ON THE EXTERIOR SLOPES WITH PERMANENT STORM DRAINAGE FACILITIES FUNCTIONING.

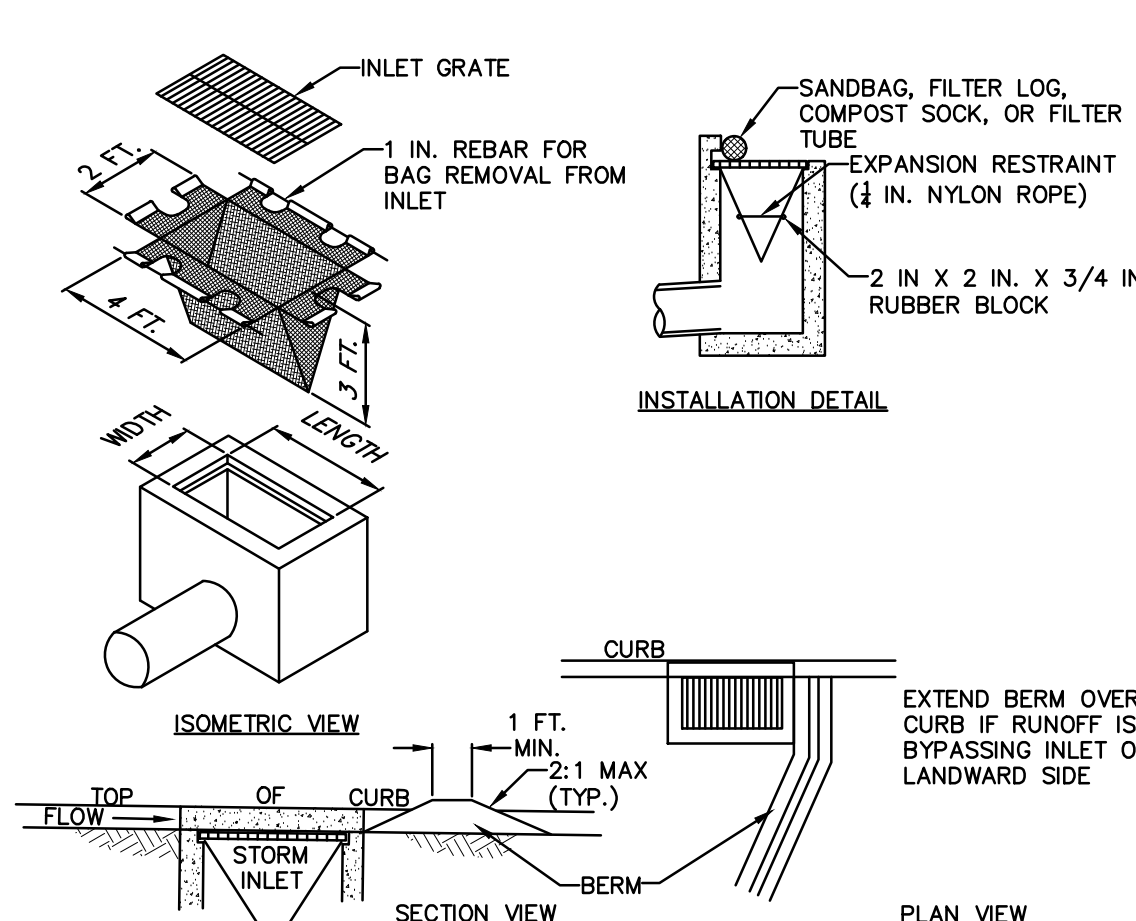
BERMS MUST OUTLET TO TEMPORARY SLOPE PIPES, PERMANENT SLOPE PIPES, TEMPORARY CHANNELS, OR PERMANENT CHANNELS.

TOPSOIL STOCKPILE DETAIL



NOTES:
REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE TO 50 FEET INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SHEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

ROCK CONSTRUCTION ENTRANCE (NOT TO SCALE)



NOTES:
MAXIMUM DRAINAGE AREA = 1/2 ACRE.

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

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

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

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

FILTER BAG INLET PROTECTION - TYPE C INLET (NOT TO SCALE)

STANDARD E&S CONTROL NOTES:

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

Drawing Notes

BEFORE YOU DIG CONTACT
PA. ONE-CALL
1-800-242-1776



PENNSYLVANIA ONE CALL SYSTEM
PA. ACT 172 OF 1986 REQUIRES THREE
WORKING DAYS NOTICE
SIN: 2025-0532213

B	PLANNING COMM.	JND	07.08.2025
A	FOR PERMIT	JND	03.26.2025
No.	Description	Revised By	Date

BUSTAMANTE ENGINEERS INC.

Firm Name and Address

BUSTAMANTE ENGINEERS, INC

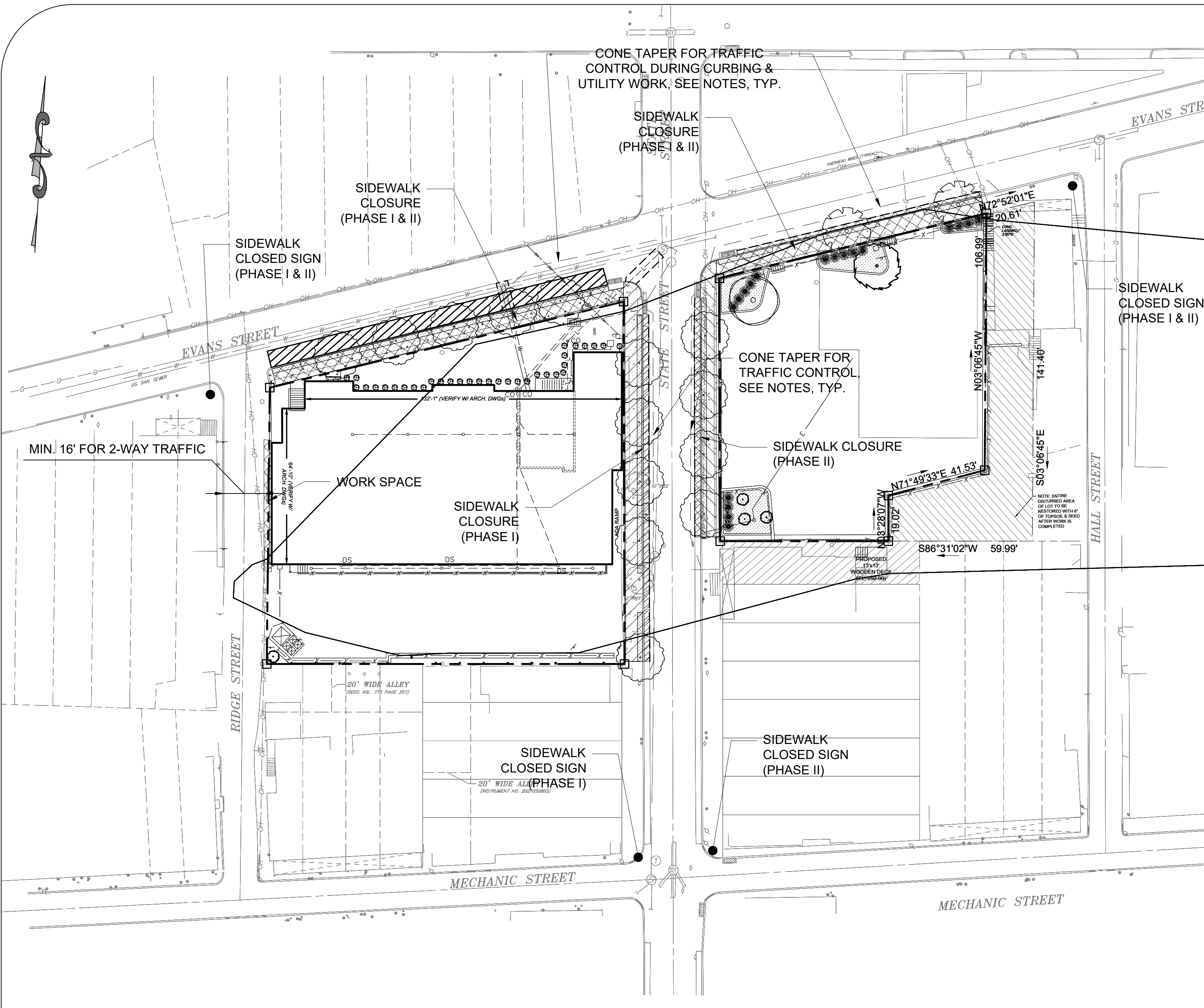
875 N. EASTON, SUITE 3B
DOYLESTOWN, PA 18902

Client: **HH PROPERTIES**
405 MURRAY LANE
MEDIA, PA 19063

Project: **EVANS STREET APARTMENT BUILDING**

Revision	PLANNING COMM.	Sheet	EROSION AND SEDIMENT CONTROLS
Date	July 8, 2025	ES	
Scale	As Noted	12 of 16	

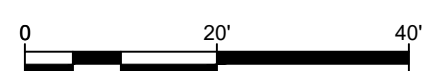
PRELIMINARY PLAN



10

TRAFFIC CONTROL PLAN

SCALE: 1" = 30' - 0"



TTC SETUP AND REMOVAL

1. TTC SHALL BE ESTABLISHED IN ACCORDANCE WITH THE FOLLOWING:
 - 1.1. CUSTOM PLAN CREATED AND APPROVED FOR THE WORK SITE.
 - 1.2. PENNDOT PUBLICATION 213, TEMPORARY TRAFFIC CONTROL GUIDELINES
 - 1.3. FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
2. PATA DRAWINGS MAY BE COMBINED TO MAKE A TTC PLAN WITHOUT PENNDOT DTE APPROVAL, IF STANDARDS ARE SATISFIED.
3. INSTALL TTC COMPONENTS IN THE FOLLOWING ORDER:
 - 3.1. ADVANCE WARNING AREA (INSTALL SIGNS THEN PLACE FLAGGERS, IF USED).
 - 3.2. TRANSITION AREA
 - 3.3. ACTIVITY AREA
 - 3.4. TERMINATION AREA
4. REMOVE TTC COMPONENTS IN THE FOLLOWING ORDER:
 - 4.1. TERMINATION AREA
 - 4.2. ACTIVITY AREA
 - 4.3. TRANSITION AREA (REMOVE CHANNELIZING DEVICES FROM ROADWAY THEN CEASE FLAGGING DUTIES, IF FLAGGERS ARE USED).
 - 4.4. ADVANCE WARNING AREA.
5. SHADOW VEHICLES:
 - 5.1. REQUIRED (EQUIPPED WITH A TMA) ON FREEWAYS AND EXPRESSWAYS WHERE WORKERS ARE PRESENT. WHERE MORE THAN ONE WORK SPACE EXISTS WITHIN A LANE CLOSURE, ADDITIONAL SHADOW VEHICLES MAY BE UTILIZED.
 - 5.2. REQUIRED (EQUIPPED WITH A TMA) ON FREEWAYS AND EXPRESSWAYS WHERE NEEDED TO PROTECT DRIVERS FROM POTENTIALLY HAZARDOUS CONDITIONS WHEN WORKERS ARE NOT PRESENT. WHERE MORE THAN ONE WORK SPACE EXISTS WITHIN A LANE CLOSURE, ADDITIONAL SHADOW VEHICLES MAY BE UTILIZED. REQUIRED ON CONVENTIONAL HIGHWAYS UNLESS LABELED AS "OPTIONAL" ON THE PATA DRAWING OR CORRESPONDING NOTES PAGE.
 - 5.3. SHALL HAVE ACTIVE FLASHING, OSCILLATING, OR REVOLVING LIGHTS DURING OPERATIONS. HAZARD WARNING LIGHTS AND TURN SIGNALS ARE NOT CONSIDERED FLASHING LIGHTS FOR THIS PURPOSE.
 - 5.4. CONSIDER USING TEMPORARY LONGITUDINAL BARRIER TO PROTECT WORKERS IN ALL MULTI-LANE TTC ZONES IF THE SPEED LIMIT IS 45 MPH OR GREATER. WORKERS ARE PRESENT WITHIN ONE LANE WIDTH OF AN ACTIVE LANE, AND A LANE OR SHOULDER IS CLOSED CONTINUOUSLY FOR MORE THAN THREE DAYS. REFER TO PENNDOT PUBLICATION 72M, ROADWAY CONSTRUCTION STANDARDS, FOR BARRIER INSTALLATION DETAILS.
 - 5.5. PAVED SHOULDERS MAY BE USED FOR MOTORISTS IF THEY ARE STRUCTURALLY SOUND, HAVE SUFFICIENT WIDTH AND DEPTH TO SAFELY SUPPORT TRAFFIC, AND ARE FREE OF DEBRIS. SHOULDERS USED FOR TRAFFIC DURING LONG-TERM OPERATIONS MAY REQUIRE EXTRA ATTENTION, SUCH AS:
 - 7.1. MILL AND FILL EXISTING EDGE LINE AND SHOULDER RUMBLE STRIPS.
 - 7.2. ERADICATE AND PAINT NEW WHITE EDGE LINES.
 - 7.3. REVIEW THE CONDITION AND ELEVATION OF INLET GRATES, TACK-WELD GRATE INLETS TO FRAMES.
 - 7.4. REFER TO PENNDOT PUBLICATION 13M, DESIGN MANUAL PART 2, FOR CROSS SLOPE INFORMATION.
 - 5.6. WORKERS ON FREEWAYS AND EXPRESSWAYS SHALL NOT WALK ACROSS LANES OF LIVE TRAFFIC FOR THE PURPOSE OF INSTALLING OR REMOVING TTC DEVICES. METHODS FOR SIGN INSTALLATION AND REMOVAL ALONG BOTH SIDES OF A FREEWAY OR EXPRESSWAY ARE SHOWN ON GA 07.
 - 5.7. WHERE THE RECOMMENDED SPEED LIMIT CHANGES WITHIN A TTC ZONE, USE THE HIGHER LIMIT TO DETERMINE SIGN SPACING AND USE THE LOWER LIMIT TO DETERMINE CHANNELIZING DEVICE SPACING.
 - 5.8. MOST PERMANENT TRAFFIC SIGNALS ARE OWNED, OPERATED, AND MAINTAINED BY THE LOCAL MUNICIPALITY. CONTACT THE MUNICIPALITY PRIOR TO THE START OF WORK TO REQUEST PLACING THE SIGNAL OPERATION IN FLASH MODE, UNLESS A TEMPORARY SIGNAL PERMIT IS IN EFFECT.
 - 5.9. WHERE MULTIPLE TTC ZONES OVERLAP, EFFORTS SHOULD BE MADE TO COORDINATE TTC DEVICE PLACEMENT SO MOTORISTS DO NOT EXPERIENCE A CONFUSING, REPETITIVE, OR CONFLICTING TTC ZONE.
 - 5.10. WHEN AN EXIT RAMP IS CLOSED LONG-TERM, AN EXIT CLOSED SIGN PANEL WITH BLACK LEGEND AND BORDER ON AN ORANGE BACKGROUND SHOULD BE PLACED DIAGONALLY ACROSS THE INTERCHANGE/INTERSECTION GUIDE SIGNS.

TRAFFIC NOTES:

1. THE NEEDS AND CONTROL OF ALL ROAD USERS (MOTORISTS, BICYCLISTS, AND PEDESTRIANS, INCLUDING PERSONS WITH DISABILITIES IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990) THROUGHOUT A TTC ZONE SHALL BE AN ESSENTIAL PART OF HIGHWAY CONSTRUCTION, MAINTENANCE OPERATIONS, UTILITY WORK, AND THE MANAGEMENT OF TRAFFIC INCIDENTS.
2. DO NOT PERFORM WORK OVER LANES OPEN TO LIVE TRAFFIC UNLESS AUTHORIZED BY THE PENNDOT DTE AND/OR MUNICIPALITY. WORK TAKING PLACE ON MAINTENANCE PLATFORMS, CATWALKS, OPEN BOOM TRUCKS, ETC., REQUIRES CLOSURE OF THE LANE(S) IMMEDIATELY BELOW. THIS RESTRICTION DOES NOT APPLY TO WORK WITHIN AN ENCLOSED ENVIRONMENT (E.G. INSIDE A WALK-IN PERMANENT DYNAMIC MESSAGE SIGN).
3. ALL DETOUR ROUTES INVOLVING STATE-DESIGNATED HIGHWAYS SHALL BE APPROVED BY THE APPROPRIATE PENNDOT DTE PRIOR TO BEING POSTED. DETOURS INVOLVING LOCAL HIGHWAYS SHOULD BE APPROVED BY LOCAL AUTHORITIES PRIOR TO BEING POSTED. ALL NECESSARY SIGNS SHALL BE IN PLACE BEFORE ANY DETOUR ROUTE IS OPENED TO TRAFFIC.
4. PAVEMENT MARKINGS (LANE LINE AND/OR CENTER LINE), OF MORE THAN 250 LINEAR FEET ON A HIGHWAY, THAT ARE COVERED OR DESTROYED BY CONSTRUCTION, MAINTENANCE, UTILITY, PERMIT, OR OTHER WORK MUST BE REPLACED BEFORE TERMINATING WORK EACH DAY. THE REPLACEMENT MARKINGS MAY BE STANDARD PAVEMENT MARKINGS OR TEMPORARY MARKINGS AS INCLUDED IN PENNDOT PUBLICATION 40B, SECTION 901.3M(1) OR IN THE MUTCD, SECTION 617.8.
5. WORKERS ENGAGED IN OR ENTERING INTO ANY FIELD OPERATION ARE REQUIRED TO WEAR HARD HATS MEETING ANSI TYPE I REQUIREMENTS AND HIGH-VISIBILITY VESTS, T-SHIRTS, OR SWEATSHIRTS WHICH MEET THE ANSI CLASS 2 OR CLASS 3 SAFETY GARMENT REQUIREMENTS. A RAINCOAT OR JACKET WHICH MEETS ANSI CLASS 2 OR 3 SAFETY GARMENT REQUIREMENTS MAY BE WORN DURING INCLEMENT WEATHER. FURTHERMORE:
 - 5.1. ALL VISITORS AND OTHER PRESENT ON A WORK SITE IN AN OFFICIAL CAPACITY MUST COMPLY WITH THE REQUIREMENTS.
 - 5.2. PENNDOT EMPLOYEES SHALL REFER TO PUBLICATION 445, SAFETY POLICY HANDBOOK, AND ANY APPLICABLE PENNDOT MEMORANDA REGARDING PERSONAL PROTECTIVE EQUIPMENT (PPE) AND WORK ATTIRE.
 - 5.3. EMERGENCY, INCIDENT RESPONDERS, AND LAW ENFORCEMENT PERSONNEL WITHIN TTC ZONES SHOULD WEAR HIGH-VISIBILITY PUBLIC SAFETY VESTS THAT MEET THE PERFORMANCE REQUIREMENTS OF THE ANSI/SEA 201-2011 (REFER TO MUTCD, SECTION 1A.11).
 - 5.4. WORK VEHICLES AND SHADOW VEHICLES ARE AUTHORIZED VEHICLES AS DEFINED IN TITLE 75, SECTION 102. AUTHORIZED VEHICLES ARE APPROVED TO BE EQUIPPED WITH YELLOW OR AMBER FLASHING, OSCILLATING, OR REVOLVING LIGHTS WHICH ARE VISIBLE FROM ANY DIRECTION (360° VISIBILITY). OTHER COLORS SUCH AS WHITE, CLEAR, RED OR BLUE SHALL NOT BE USED ON AUTHORIZED VEHICLES. THE INSTALLATION OR USE OF ADDITIONAL FLASHING LIGHTS (E.G. STROBE LIGHTS) IN EXISTING VEHICULAR LIGHTING MODULES/ASSEMBLIES (I.E. HEADLIGHTS, PARKING LIGHTS, TAILLIGHTS) IS PROHIBITED. REFER TO THE PENNSYLVANIA CODE, CHAPTER 172 FOR MORE INFORMATION.
 - 5.5. PARKING IS PROHIBITED ALONG CONVENTIONAL HIGHWAYS IN CONJUNCTION WITH TTC CONDITIONS. COORDINATE WITH LOCAL AUTHORITIES TO REQUEST TEMPORARY PARKING PROHIBITION SIGNING AND ENFORCEMENT.
 - 5.6. DURING CONSTRUCTION PROJECTS, EXISTING TRAFFIC SIGNALS WITHIN THE TTC ZONE AND ALONG DETOUR ROUTES MAY REQUIRE TIMING AND/OR PHASING MODIFICATIONS TO ACCOMMODATE TEMPORARY TRAFFIC PATTERNS. THE PRIMARY CONTRACTOR IS RESPONSIBLE TO SUBMIT A LETTER TO THE PENNDOT DTE TO EITHER CONFIRM THAT EXISTING TRAFFIC SIGNAL TIMING IS ADEQUATE TO CONTROL TEMPORARY TRAFFIC PATTERNS WITHOUT A SIGNIFICANT DECREASE IN THE LEVEL OF SERVICE, OR THAT A TRAFFIC SIGNAL TIMING WILL REQUIRE MODIFICATION TO MAINTAIN ACCEPTABLE LEVELS OF SERVICE. THIS LETTER SHALL BE RECEIVED PRIOR TO PLACING TTC DEVICES. THE PENNDOT DTE MAY REQUEST A COPY OF THE CAPACITY ANALYSIS REPORT. THE CONTRACTOR IS REQUIRED TO ABIDE BY THE TEMPORARY SIGNAL PERMIT PROCESS PRIOR TO BEGINNING WORK IF SIGNAL MODIFICATIONS ARE RECOMMENDED BY THE PENNDOT DTE. REFER TO PUBLICATION 46, CHAPTER 12 AND PUBLICATION 149, CHAPTER 14.
 - 5.7. WHEN TEMPORARY CONDITIONS WILL RESTRICT OR PROHIBIT TURNING MOVEMENTS AT SIGNALIZED INTERSECTIONS AND THE CONDITION IS EXPECTED TO BE IN PLACE FOR MORE THAN 30 CONSECUTIVE DAYS, THE PENNDOT DTE SHOULD REVIEW THE TRAFFIC SIGNAL PHASING AND TIMING PLAN TO DETERMINE WHETHER AN ALTERNATE PHASING AND TIMING PLAN SHOULD BE USED TO ADDRESS THE TEMPORARY CONDITION. THE ENTITY RESPONSIBLE FOR THE TEMPORARY CONDITION SHALL COMPLY WITH PENNDOT DTE GUIDANCE.
 - 5.8. MOBILE OPERATIONS THAT OCCUPY THE ROADWAY, SHOULDER, OR BERM SHALL PROCEED IN THE DIRECTION OF NORMAL TRAFFIC FLOW.
 - 5.9. TEMPORARY PAVEMENT MARKINGS ARE REQUIRED FOR LONG-TERM OPERATIONS EXCEPT WHERE CHANNELIZING DEVICES ARE PLACED IN ACCORDANCE WITH GENERAL NOTE C-7. IF TEMPORARY EDGE LINES WILL BE APPLIED TO TEMPORARY CONCRETE BARRIER, THE LOWER SLOPING SURFACE OF THE BARRIER SHALL BE THOROUGHLY CLEANED BY HIGH-PRESSURE WATER BLASTING BEFORE APPLYING PAVEMENT MARKING PAINT OR PAVEMENT MARKING TAPE. REFER TO PENNDOT PUBLICATION 46, SECTION 6.7.
 - 5.10. BRIDGE INSPECTION TEAMS WORKING ON FREEWAYS AND EXPRESSWAYS SHALL UTILIZE TWO SHADOW VEHICLES TO PROTECT WORKERS AND WORK VEHICLES. A DISTANCE OF AT LEAST 100' SHOULD BE MAINTAINED BETWEEN SHADOW VEHICLES WHILE REMAINING ON THE SAME SIDE OF THE ROADWAY AS THE INSPECTION TEAM.
 - 5.11. SHADOW VEHICLES MAY BE USED IN EMERGENCY SITUATIONS TO PROTECT CONCRETE BARRIER BLUNT ENDS. PENNDOT DTE APPROVAL IS REQUIRED IF THE SHADOW VEHICLE WILL REMAIN IN PLACE FOR MORE THAN THREE DAYS.
 - 5.12. FLARES (INCENDIARY OR ELECTRONIC) MAY BE PLACED ON THE SHOULDER WITHIN THE ADVANCE WARNING AREA OF A TTC ZONE TO PROVIDE ADDITIONAL CONSPICUITY DUE TO ADVERSE WEATHER, ROADWAY GEOMETRY, ETC. FLARES MAY ONLY BE USED WHILE WORK IS IN ACTIVE PROGRESS. DEBRIS FROM INCENDIARY DEVICES SHALL BE REMOVED UPON WORK COMPLETION. EXCEPT FOR EMERGENCY CONDITIONS OR POLICE ACTIVITY, FLARES SHALL BE NOT BE PLACED ON THE ROADWAY OR WITHIN THE ACTIVITY AREA.
 - 5.13. ALL TTC DEVICES ERECTED FOR MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER NEEDED. WHEN WORK IS SUSPENDED FOR SHORT PERIODS OF TIME, TTC DEVICES ERECTED FOR THE MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE REMOVED OR COVERED WHEN THEY ARE NO LONGER APPROPRIATE.
 - 5.14. TO THE EXTENT PRACTICABLE, THE LENGTH OF WORK ZONES SHALL BE APPROPRIATE TO THE WORK IN PROGRESS SO THAT MOTORISTS DO NOT INCREASE SPEED AFTER PASSING THROUGH A LONG STRETCH WITH NO SIGN OF WORK ACTIVITY. LANE RESTRICTIONS SHALL BE MINIMIZED TO PREVENT TRAFFIC CONGESTION AND UNSAFE TRAFFIC CONDITIONS.
 - 5.15. AN ARROW BOARD OPERATING IN MERGE MODE (DISPLAYING AN ARROW OR CHEVRONS) IS REQUIRED ONLY FOR STATIONARY OR MOVING LANE CLOSURES ON MULTI-LANE ROADWAYS.

CHANNELIZING DEVICES AND DELINEATION

1. CHANNELIZING DEVICES ARE DIVIDED INTO TWO CATEGORIES: SHORT TERM AND LONG-TERM (REFER TO GENERAL APPLICATION 11-A FOR CHANNELIZING DEVICE DETAILS):
 - 1.1. FOR OPERATIONS UP TO 72 HOURS, SHORT TERM OR LONG-TERM DEVICES MAY BE USED.
 - 1.2. FOR OPERATIONS GREATER THAN 72 HOURS, LONG-TERM DEVICES SHALL BE USED.
2. CONES MAY ONLY BE USED AS A CHANNELIZING DEVICE FOR OPERATIONS WHERE WORK IS ACTIVE PROGRESS. IF THE WORK IS IN ACTIVE PROGRESS FOR GREATER THAN 72 HOURS, A LONG-TERM DEVICE SHALL BE USED.
3. CONES SHALL BE MADE OF ANY PLASTIC POLYMER, PLASTIC COPOLYMER, OR RUBBER ELASTOMER THICKER THAN CAN BE COMPOUNDED TO MEET PENNDOT SPECIFICATIONS FOR TRAFFIC CONES.
4. ALL CHANNELIZING DEVICES SHALL HAVE RETROREFLECTIVE SHEETING OF A TYPE APPROVED BY PENNDOT AND LISTED IN PENNDOT PUBLICATION 35 (BULLETIN 15); REFER TO GENERAL APPLICATION 11-A.
5. CHANNELIZING DEVICES THAT FORM TAPERS SHALL BE VISIBLE TO APPROACHING TRAFFIC FOR A DISTANCE EQUAL TO OR GREATER THAN THE SIGN LEGIBILITY DISTANCE SHOWN IN GENERAL NOTE A-2.
6. BARRICADES AND VERTICAL PANELS WITH STRIPES SHALL HAVE ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION OF TRAFFIC TO PASS. REFER TO GENERAL APPLICATION 11-B.
7. CHANNELIZING DEVICES MAY BE SUBSTITUTED FOR TEMPORARY LONGITUDINAL EDGE LINE PAVEMENT MARKINGS AND DOWNSTREAM TAPERS IF THE DEVICES ARE SPACED AT A MAXIMUM DISTANCE IN FEET EQUAL TO THE REGULATORY SPEED LIMIT. CHANNELIZING DEVICES CANNOT BE SUBSTITUTED FOR THE UPSTREAM TAPER, LANE LINE, OR CENTER LINE PAVEMENT MARKINGS.
8. CHANNELIZING DEVICES PLACED ON ROADWAYS SHOULD BE PLACED ON THE SAME SIDE OF THE LINE AS THE WORK SPACE TO REDUCE THE IMPACT TO MOTORISTS IN ADJACENT LANES. MINIMUM LANE WIDTH OF 10' SHALL BE PROVIDED.
9. TAPERS WITHIN A TRAVEL LANE SHALL UTILIZE A MINIMUM OF 6 CHANNELIZING DEVICES. ADDITIONAL CHANNELIZING DEVICES MAY BE REQUIRED BASED ON THE REGULATORY SPEED LIMIT. CHANNELIZING DEVICES SHOULD BE EQUALLY SPACED WITHIN TAPERS.
10. SHOULDER TAPERS ARE REQUIRED DURING NON-FLAGGING OPERATIONS WHEN PAVED SHOULDERS HAVE A WIDTH OF 8' OR MORE.
11. CHANNELIZING DEVICES USED TO FORM A TAPER MAY DIFFER FROM THE LONGITUDINAL SECTION. HOWEVER, ALL OF THE DEVICES USED WITHIN THE TAPER OR LONGITUDINAL SECTION MUST BE OF THE SAME TYPE (E.G. THE SAME TYPE OF CONE) AND USED WITHIN THE TAPER WHILE DRUMS ARE USED WITHIN THE LONGITUDINAL SECTION).
12. TYPE II BARRICADES HAVE NO MAXIMUM AREA REGARDING SIZE OF SIGNS MOUNTED ON THE DEVICE, HOWEVER THE TOTAL WEIGHT OF ALL SIGNS SHALL NOT EXCEED 25 POUNDS.
13. WHEN A LIGHT MOUNTED ON A BARRICADE HAS A SEPARATE BATTERY CASE, THE CASE MUST BE PLACED EITHER ON THE GROUND OR ATTACHED 20" MAXIMUM ABOVE THE GROUND TO THE POST OR BASE LEG.
14. SANDBAG BALLAST SHALL BE PLACED ON THE END OF EACH LEG OF TYPE II AND TYPE III BARRICADES TO PROVIDE STABILITY.
15. TEMPORARY CONCRETE BARRIER SHALL HAVE DELINEATION THAT CONFORMS WITH PENNDOT PUBLICATION 111, TC-8604, SHEET 2 OF 4.

FLAGGING OPERATIONS

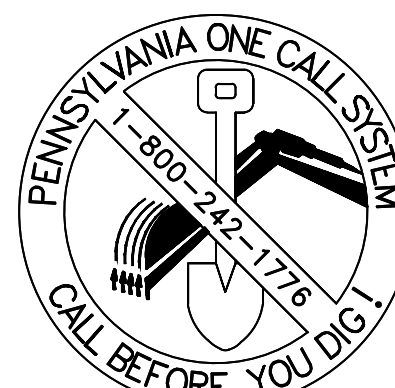
1. ALL FLAGGERS SHALL BE TRAINED AS PER PENNDOT PUBLICATION 40B, SECTION 901.3Y(1). BECAUSE FLAGGERS ARE RESPONSIBLE FOR PUBLIC SAFETY AND MAKE THE GREATEST CONTACT WITH THE PUBLIC, IT IS ESSENTIAL TO PRACTICE SAFE TRAFFIC CONTROL AND PUBLIC CONTACT TECHNIQUES. FLAGGERS MUST DEMONSTRATE THE FOLLOWING ABILITIES:
 - 1.1. RECEIVE AND COMMUNICATE SPECIFIC INSTRUCTIONS CLEARLY, FIRMLY, AND COURTEOUSLY.
 - 1.2. MOVE AND MANUEVER QUICKLY IN ORDER TO AVOID DANGER FROM ERRANT VEHICLES.
 - 1.3. CONTROL SIGNALING DEVICES IN ORDER TO PROVIDE CLEAR AND POSITIVE GUIDANCE.
 - 1.4. MAINTAIN SITUATIONAL AWARENESS, PROTECT THE WORK CREW, AND PROVIDE DIRECTION TO THE TRAVELING PUBLIC.
2. FLAGGERS MUST BE CLEARLY VISIBLE TO TRAFFIC FOR DISTANCE E MINIMUM.
3. FLAGGERS MUST BE AWARE OF THEIR PUBLIC IMAGE AT ALL TIMES. UNPROFESSIONAL BEHAVIOR, SUCH AS UTILIZING ELECTRONIC DEVICES FOR PERSONAL USE, IS PROHIBITED WHILE PERFORMING FLAGGING DUTIES. FLAGGERS SHALL NOT PERFORM WORK UNRELATED TO TRAFFIC CONTROL OR PERFORM DUTIES WHILE SITTING IN OR STANDING NEAR A VEHICLE.
4. UPSTREAM AND DOWNSTREAM FLAGGER STATIONS ARE SHOWN ON PATA AND GA DRAWINGS. ADDITIONAL FLAGGERS MAY BE REQUIRED TO CONTROL TRAFFIC AT SIDE ROADS AND DRIVEWAYS.
5. FLAGGERS MUST BE IN COMMUNICATION WITH EACH OTHER. COMMUNICATION METHODS MAY INCLUDE TWO-WAY RADIOS, HAND SIGNALS, A PILOT VEHICLE DRIVER, ETC.
6. FLAGGER STATIONS SHALL BE ILLUMINATED AT NIGHT. INSTALL TEMPORARY LIGHTING TO ADEQUATELY ILLUMINATE FLAGGER STATIONS WITHOUT CREATING GLARE THAT IS HAZARDOUS TO ROAD USERS. PERMANENT LIGHT SOURCES THAT MAY EXIST IN THE TTC AREA, SUCH AS ROADWAY LUMINARIES, ARE NOT SUFFICIENT TO FULFILL THIS REQUIREMENT.
7. WHEN A HIGHWAY-RAIL GRADE CROSSING EXISTS WITHIN THE WORK ZONE, OR IT IS ANTICIPATED THAT QUEUES RESULTING FROM THE LANE CLOSURE MIGHT EXTEND THROUGH A HIGHWAY-RAIL GRADE CROSSING, PROVISIONS SHALL BE MADE TO ELIMINATE CONFLICTS, WHICH MAY REQUIRE PLACING A FLAGGER AT THE CROSSING. COORDINATION WITH THE RAILROAD IS REQUIRED.
8. FLAGGERS SHALL USE A STOP/SLOW PADDLE, A RED FLAG, OR AN AFAD TO CONTROL ROAD USERS APPROACHING A TTC ZONE. THE USE OF HAND MOVEMENTS ALONG WITH A PADDLE, FLAG, OR AFAD TO CONTROL TRAFFIC IS PROHIBITED EXCEPT FOR LAW ENFORCEMENT PERSONNEL OR EMERGENCY RESPONDERS AT INCIDENT SCENES AS DESCRIBED IN MUTCD, SECTION 6I-01.
9. THE STOP/SLOW PADDLE:
 - 9.1. SHALL BE USED TO CONTROL TRAFFIC APPROACHING FROM A SINGLE DIRECTION.
 - 9.2. SHALL BE HELD BY HAND AND UNDER CONTROL AT ALL TIMES. TRAFFIC CONES, CARTS, ETC. SHALL NOT BE USED TO HOLD THE DEVICE.
 - 9.3. SHALL DISPLAY AN 18" MINIMUM STOP SIGN ON ONE FACE AND A DIAMOND SHAPED SLOW SIGN ON THE OPPOSITE FACE.
 - 9.4. SIGN FACES SHALL HAVE SHEETING OF AN APPROVED TYPE AND LISTED IN PENNDOT PUBLICATION 35 (BULLETIN 15).
 - 9.5. SHALL BE ATTACHED TO A SHAFT THAT HAS A MINIMUM LENGTH OF 72".
 - 9.6. MAY INCORPORATE EITHER WHITE OR RED FLASHING LIGHTS ON THE STOP FACE AND EITHER WHITE OR YELLOW FLASHING LIGHTS ON THE SLOW FACE (REFER TO MUTCD, SECTION 6E-03).
10. THE RED FLAG:
 - 10.1. SHALL BE USED BY A FLAGGER STATIONED WITHIN AN INTERSECTION CONTROLLING TRAFFIC FROM MULTIPLE DIRECTIONS.
 - 10.2. SHALL BE RED OR FLUORESCENT ORANGE/RED IN COLOR (STANDARD ORANGE FLAGS COMMONLY USED ON TTC SIGNS ARE UNACCEPTABLE FOR CONTROLLING TRAFFIC).
 - 10.3. SHALL BE A MINIMUM SIZE OF 24" SQUARE AND SECURELY FASTENED TO A STAFF APPROXIMATELY 30" IN LENGTH.
 - 10.4. SHALL BE RETROREFLECTIVE WHEN USED DURING NIGHT OPERATIONS.
11. FLAGGERS SHALL NOT CONTROL TRAFFIC FROM WITHIN A SIGNALIZED INTERSECTION WHILE THE TRAFFIC SIGNAL IS FUNCTIONING IN AUTOMATIC MODE (CYCLING GREEN/YELLOW/RED). TRAFFIC SIGNALS SHALL BE CHANGED TO FLASHING MODE WHILE A FLAGGER IS STATIONED WITHIN THE SIGNALIZED INTERSECTION. MOST TRAFFIC SIGNALS HAVE A MANUAL MODE, WHICH CAN BE OPERATED FROM THE ROADSIDE, HOWEVER PERMISSION MUST BE RECEIVED FROM THE SIGNAL PERMITTEE. SIGNALS SHALL RESUME AUTOMATIC OPERATION IMMEDIATELY UPON CONCLUSION OF MANUAL FLAGGING. ASSISTANCE FROM THE PENNDOT DTE OR LOCAL OFFICIALS IS REQUIRED TO CHANGE TRAFFIC SIGNAL OPERATIONS.
12. FLAGGERS USED DURING MOBILE OPERATIONS SHOULD PROCEED THROUGH SIGNALIZED INTERSECTIONS IN COMPLIANCE WITH TRAFFIC SIGNALS.
13. FLAGGERS CONTROLLING TRAFFIC APPROACHING FROM A SINGLE DIRECTION SHOULD STAND ON THE SHOULDER OR IN THE CLOSED LANE PRIOR TO STOPPING TRAFFIC. A FLAGGER MAY STAND IN THE OPEN LANE AFTER TRAFFIC HAS STOPPED.
14. A RED WAND (FLASHLIGHT) MAY BE USED TO SUPPLEMENT THE STOP/SLOW PADDLE OR RED FLAG. THE FLASHLIGHT SHALL HAVE A RED GLOW CONE AND EMIT A STEADY-BURN (NON-FLASHING) LIGHT. THE RED WAND SHALL NOT BE USED BY ITSELF TO CONTROL TRAFFIC.
15. FLAGGERS SHOULD HOLD STOPPED TRAFFIC FOR AS LITTLE TIME AS POSSIBLE.

SIGNS

1. SIGNS SHALL BE MOUNTED ON PORTABLE SIGN SUPPORTS, PORTABLE SIGN POSTS, BARRICADES, OR BY METHODS COMMONLY USED WITH PERMANENT SIGNS. REFER TO GENERAL APPLICATION 10 FOR TTC SIGN INSTALLATION.
2. TTC WARNING SIGNS SHALL HAVE AN ORANGE BACKGROUND AND BLACK BORDER/LEGEND. WARNING SIGNS WITH PINK BACKGROUNDS ARE INTENDED FOR INCIDENT MANAGEMENT AREAS, BUT ORANGE WARNING SIGNS MAY BE USED IF PINK SIGNS ARE NOT AVAILABLE.
3. SIGN SHEETING SHALL BE LISTED IN PUBLICATION 35 (BULLETIN 15). SIGNS DESIGNATED FOR PEDESTRIAN OR BICYCLE TRAFFIC ARE PROHIBITED. REFER TO 2011 TRAFFIC SIGN RECOMMENDATIVE SHEETING IDENTIFICATION GUIDE IN APPENDIX B OF THIS PUBLICATION OR PENNDOT PUBLICATION 46, EXHIBITS 2-3 AND 2-4, FOR RETROREFLECTIVE MATERIAL AND LEVEL INFORMATION. SIGNS BEARING TYPE VII THROUGH XI RETROREFLECTIVE MATERIAL ARE CONSIDERED EQUIVALENT AND INTERCHANGEABLE.
4. WHEN TTC SIGNS ARE INSTALLED IN A TTC ZONE, PERMANENT SIGNS THAT PROVIDE A CONFLICTING MESSAGE SHALL BE COVERED OR REMOVED. SEE PENNDOT PUBLICATION 40B, SECTION 901.3M(1) FOR DETAILS ON COVERING SIGNS.
5. WHEN A FLAGGER SYMBOL (W20-7) SIGN IS DISPLAYED, A FLAGGER MUST BE PRESENT. TTC SIGNS MAY BE MOUNTED ON TYPE III BARRICADES. TTC SIGNS FOR PEDESTRIANS AND BICYCLISTS MAY BE MOUNTED ON TYPE I OR TYPE II BARRICADES.
6. DO NOT MOUNT TTC WARNING SIGNS ON EXISTING SIGN INSTALLATIONS. THIS COULD RESULT IN MOUNTING HEIGHTS BELOW THE MINIMUM STANDARD, DISPLAY AN IMPROPER SIGN GROUPING, AND COULD PROVIDE TOO MUCH INFORMATION FOR DRIVERS TO COMPREHEND. DRIVERS NEED ADEQUATE TIME TO READ, COMPREHEND, AND REACT TO INFORMATION PROVIDED ON EACH SIGN. TTC DEVICES SHALL NOT BE ATTACHED TO UTILITY POLES OR OTHER STRUCTURES UNLESS THE OWNER GRANTS WRITTEN PERMISSION AND SIGNS CAN BE PROPERLY POSITIONED.
8. SIGN SIZES ARE SHOWN IN APPENDIX A. REFER TO PENNDOT PUBLICATION 236 FOR ADDITIONAL INFORMATION.
9. DO NOT PLACE SIGN SUPPORTS ON SIDEWALKS, BICYCLE FACILITIES, OR AREAS DESIGNATED FOR PEDESTRIAN OR BICYCLE TRAFFIC UNLESS THERE ARE NO SUITABLE ALTERNATIVE LOCATIONS; AN EXCEPTION IS MADE FOR SIGNS RELATED TO SIDEWALK AND/OR BICYCLE FACILITY CLOSURES WHICH ARE DIRECTED TOWARDS PEDESTRIANS AND BICYCLISTS. IF SIGN SUPPORTS ARE PLACED ON SIDEWALKS, AN ACCESSIBLE PATH OF 48" MINIMUM WIDTH SHALL BE PROVIDED. THIS ACCESSIBLE PATH MUST REMAIN CLEAR FOR PEDESTRIAN USE.
10. INSTALL SUPPLEMENTAL TTC SIGNS PRIOR TO THE FIRST TTC SIGN IN THE ADVANCE WARNING AREA OF TRAFFIC APPROACHING THE TTC ZONE IS QUEUED BEYOND THE FIRST TTC SIGN. STANDARD TTC SIGNS OR A PCMS WITH AN APPROPRIATE MESSAGE MAY BE UTILIZED.
11. ON CONVENTIONAL HIGHWAYS, ADVANCE WARNING TTC SIGNS ARE REQUIRED ALONG THE RIGHT SIDE OF THE HIGHWAY. SUPPLEMENTAL TTC SIGNS MAY BE PLACED ALONG THE LEFT SIDE OF THE ROADWAY IF THE CONVENTIONAL HIGHWAY IS A ONE-WAY OR DIVIDED HIGHWAY.
12. ON FREEWAY/EXPRESSWAYS, TWO OPTIONS ARE PROVIDED FOR ADVANCE WARNING TTC SIGN PLACEMENT:
 - 12.1. OPTION 1 - INSTALL TTC SIGNS ALONG THE LEFT AND RIGHT SIDE OF THE HIGHWAY (REFER TO PATA 400 OR 500 SERIES).
 - 12.2. OPTION 2 - INSTALL TTC SIGNS AND TWO PCMS ON THE RIGHT SIDE OF THE HIGHWAY (REFER TO PATA 400 OR 500 SERIES).
13. ORANGE FLAGS OR YELLOW FLASHING WARNING LIGHTS MAY BE PLACED ON TTC WARNING SIGNS TO INCREASE CONSPICUITY. FLAGS AND LIGHTS SHALL NOT BE USED SIMULTANEOUSLY ON A SIGN. FLAGS OR LIGHTS SHALL NOT BLOCK THE SIGN FACE.
14. TTC SIGNS SPECIFIC TO AN OPERATION MAY BE USED AS AN ALTERNATIVE TO THE ROAD WORK AHEAD (W20-1) SIGN.
15. TTC WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS THAT DO NOT MEET THE MINIMUM MOUNTING HEIGHTS (REFER TO GA 10) SHOULD NOT BE USED FOR A DURATION OF MORE THAN THREE DAYS.
16. DISTANCES POSTED ON TTC SIGNS WITH MILES AS THE UNIT OF MEASURE SHALL UTILIZE WHOLE NUMBERS AND/OR PROPER FRACTIONS WITH DENOMINATORS OF 2, 4, OR 8. THE USE OF DECIMALS IS PROHIBITED.
17. TTC SIGNS MUST BE INSTALLED SO THAT THE ENTIRE SIGN FACE IS VISIBLE TO APPROACHING TRAFFIC. REFER TO THE SIGN LEGIBILITY DISTANCES SHOWN IN GENERAL NOTE A-2.
18. TTC SIGNS SHALL BE INSTALLED SO THAT THE ENTIRE SIGN FACE IS VISIBLE TO APPROACHING TRAFFIC. REFER TO THE SIGN LEGIBILITY DISTANCES SHOWN IN GENERAL NOTE A-2.
19. SANDBAGS ARE THE ONLY ACCEPTABLE FORM OF BALLAST FOR TTC SIGNS AND BARRICADES. BALLAST SHOULD BE KEPT TO THE MINIMUM AMOUNT NEEDED AND PLACED ON THE GROUND.
20. BALLAST SHALL BE PLACED ON THE END OF EACH LEG TYPE III BARRICADES AND PORTABLE SIGN POSTS TO PROVIDE STABILITY.
21. TTC SIGNS PLACED NEAR SIDE ROADS AND DRIVEWAYS SHALL NOT LIMIT SIGHT DISTANCE OF A DRIVER ENTERING THE HIGHWAY.

Drawing Notes

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A	FOR PERMIT	JND	03.26.2025



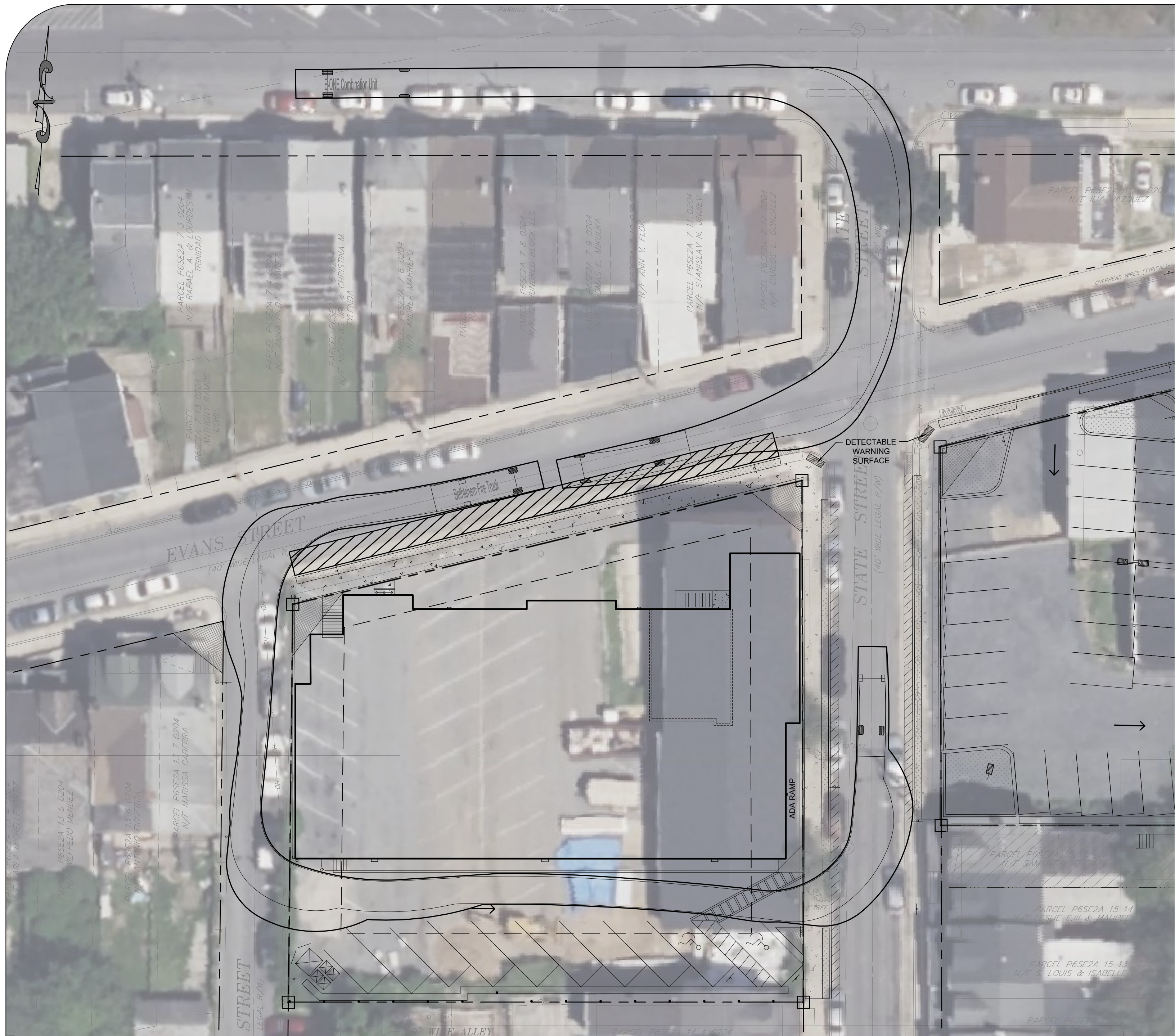
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DOYLESTOWN, PA 18902

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405 MURRAY LANE
MEDIA, PA 19063

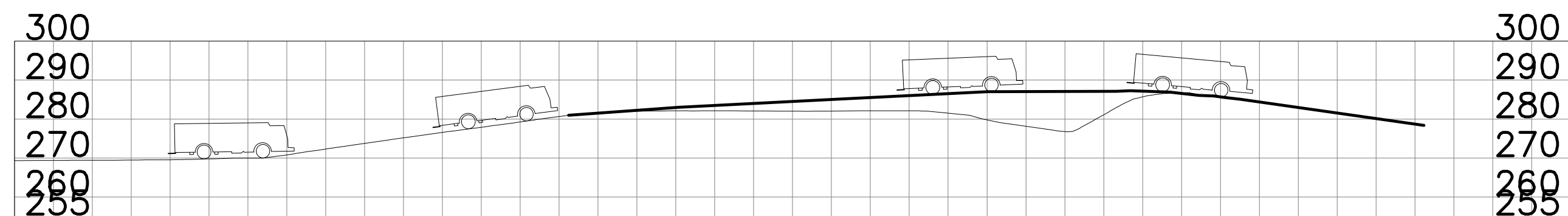
Project:
EVANS STREET APARTMENT BUILDING

Revision	Sheet
PLANNING COMM.	TRAFFIC CONTROL PLAN
Date July 8, 2025	TR
Scale As Noted	13 of 16

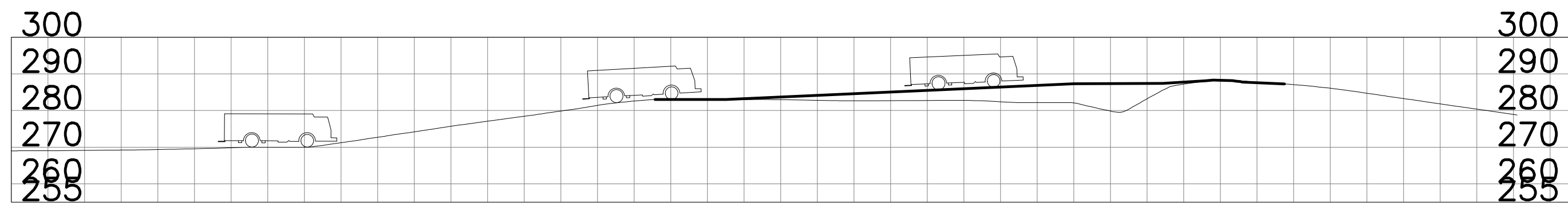
PRELIMINARY PLAN



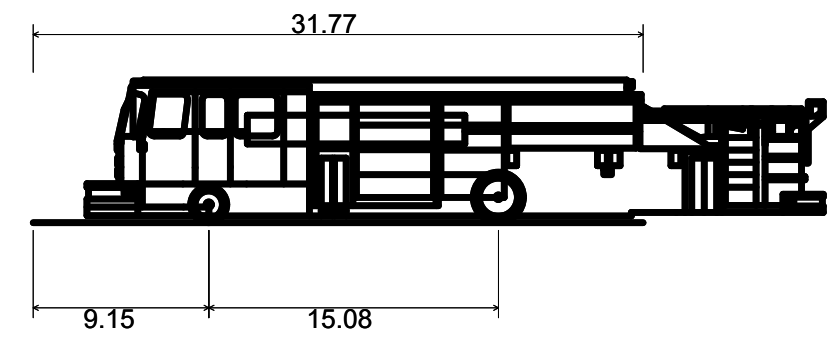
11 VEHICLE TRACKING - BETHLEHEM FD
SCALE: 1" = 20' - 0"



INNER WHEEL PROFILE

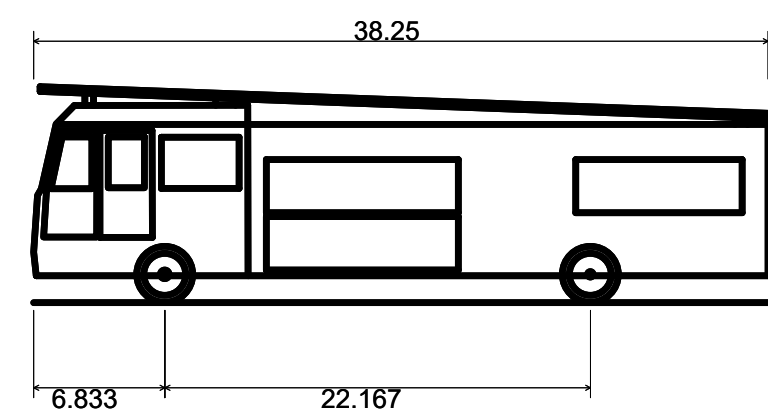


OUTER WHEEL PROFILE



Bethlehem Fire Truck
Overall Length 31.770ft
Overall Width 8.167ft
Overall Body Height 7.440ft
Min Body Ground Clearance 0.352ft
Track Width 7.500ft
Lock-to-lock time 5.00s
Curb to Curb Turning Radius 27.830ft

TRACK 1



E-ONE Combination Unit
Overall Length 38.250ft
Overall Width 8.333ft
Overall Body Height 11.250ft
Min Body Ground Clearance 1.393ft
Track Width 8.333ft
Lock-to-lock time 6.00s
Max Wheel Angle 45.00°

TRACK 2

Drawing Notes

BEFORE YOU DIG CONTACT
PA. ONE-CALL
1-800-242-1776

PENNSYLVANIA ONE CALL SYSTEM
PA. ACT 172 OF 1986 REQUIRES THREE
WORKING DAYS NOTICE
SIN: 2025-0532213

B	PLANNING COMM.	JND	07.08.2025
A	FOR PERMIT	JND	03.26.2025
No.	Description	Revised By	Date

**BUSTAMANTE
ENGINEERS INC.**

Firm Name and Address

**BUSTAMANTE
ENGINEERS, INC**
875 N. EASTON, SUITE 3B
DOYLESTOWN, PA 19002

Client:

HH PROPERTIES
405 MURRAY LANE
MEDIA, PA 19063

Project:

EVANS STREET APARTMENT
BUILDING

Revision	PLANNING COMM.	Sheet	FIRE TRUCK TURNING PLAN
Date	July 8, 2025	FR	14 of 16
Scale	As Noted		



LOT 1 CONSOLIDATION PLAN

SCALE: 1" = 10' - 0"

EXISTING IMPERVIOUS COVERAGE				PROPOSED IMPERVIOUS COVERAGE			
LOT 1				LOT 1			
Building (Demolished)	8,025	SF		Building	10,683	SF	
Asphalt	10,709	SF		Asphalt	6,180	SF	
TOTAL	18,734	SF	95.04%	TOTAL	16,863	SF	85.55%

GENERAL SURVEYING NOTES:

- THE BOUNDARY AND EXISTING FEATURES AS SHOWN ARE BASED ON A FIELD SURVEY PERFORMED BY CAVANAUGH'S SURVEYING SERVICES ON NOVEMBER 13, & 14, 2023. ADDITIONAL TOPOGRAPHY ADDED BASED ON A FIELD SURVEY PERFORMED BY CAVANAUGH'S SURVEYING SERVICES ON MARCH 7, & 8 2024.
- DESIGNATIONS OF EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKOUTS BY UTILITY OWNERS, AND/OR ABOVE GROUND OBSERVATION OF THE SITE. NO EXCAVATION WERE PERFORMED IN PREPARATION OF THESE DRAWINGS; THEREFORE ALL UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES/FACILITIES TO BE PRESENT WHICH ARE NOT SHOWN ON THESE DRAWINGS. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES/FACILITIES AT THE TIME OF FIELD SURVEY SHALL BE CONSIDERED TRUE AND ACCURATE. COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES/FACILITIES ARE NOT GUARANTEED BY CAVANAUGH'S SURVEYING SERVICES.
- ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES/FACILITIES PRIOR TO THE START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS LAST AMENDED ON OCTOBER 9, 2008, PENNSYLVANIA ACT 121.
- VERTICAL DATUM IS NAVD 88 AND WAS ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS) WITH OBSERVATIONS REFERENCED TO THE TOPCON TOPSURV GPS BASE STATION NETWORK.
- HORIZONTAL DATUM IS BASED ON 1983 STATE PLANE COORDINATE SYSTEM ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEM (GPS), WITH OBSERVATIONS REFERENCED TO THE TOPCON TOPSURV GPS BASE STATION NETWORK.
- METES AND BOUNDS AS SHOWN ARE BASED ON PA. STATE PLAN COORDINATE SYSTEM.

SITE INFORMATION:

PARCEL	WARD	CITY BLOCK	AREA (AC)	DEED BOOK
P6SE2A 14 1 0204	5	14 (3A)	0.206	2023-1 149875
P6SE2A 14 2 0204	5	14 (3A)	0.116	2023-1 149875
P6SE2A 14 3 0204	5	14 (3A)	0.125	2023-1 149875

DISTRICT:

RT HIGH DENSITY RESIDENTIAL DISTRICT

ZONING TABLE (RT DISTRICT)					
ZONING REQUIREMENT	ALLOWED	EXISTING			PROPOSED
		14 1 0204	14 2 0204	14 3 0204	
LOT SIZE (SF)	9,000	8,961	5,054	5,433	19,711
LOT AREA PER DWELLING (SF)	1,200	-	-	-	859 *
LOT WIDTH (FT)	90	77.72	38.86	38.80	151.63
FRONT YARD (FT)	10	-	-	-	0.83 *
SIDE YARD (FT)	15	-	-	-	1 0.75 *
REAR YARD (FT)	20	-	-	-	41.58
HEIGHT (STORIES)	3.5	-	-	-	3.5
HEIGHT (FT)	40	-	-	-	35
MAX BLDG. COV.	0.8	0	0	0	0.54

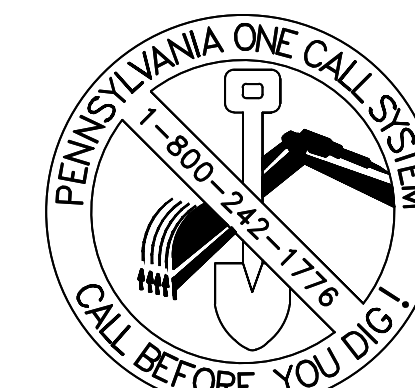
* VARIANCE GRANTED

GRANTED VARIANCES AT THEIR SEPTEMBER 18, 2024 HEARING, WITH WRITTEN DECISION DATED OCTOBER 28, 2024, THE ZONING HEARING BOARD GRANTED RELIEF FROM THE FOLLOWING SECTIONS:

- §1318.23(i): 8' Buffer Strip at public streets and parking lots
Granted partial Buffer Strips
- §1319.01(a)(iii): Parking space requirements
Granted a reduction to 1.35 spots per unit
- §1319.02(j)(1): Street tree requirements
Granted 2 trees along Evans St. on Eastern Lot
- §1306.01(a)4: Lot Area per Dwelling Unit
Granted 859 SF per Dwelling Unit
Front Yard Setback
Granted setback of 1"
Side Yard Setbacks
Granted Setback of 9" & 9"
- §1319.02(g)(6): 15-foot buffer between curblin e and parking lot
Granted reduction to 11.8' & 8.5' for Eastern Lot
- §1319.03(h): Fencing around parking areas
Granted relief for fencing along Eastern end of lot adjacent to Parcel P6SE2A 15 2 0204 (due to retaining wall on property line)

Drawing Notes

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BUSTAMANTE
ENGINEERS INC.

Firm Name and Address

BUSTAMANTE
ENGINEERS, INC

875 N. EASTON, SUITE 3B
DOYLESTOWN, PA 18902

Client:

HH PROPERTIES
405 MURRAY LANE
MEDIA, PA 19063

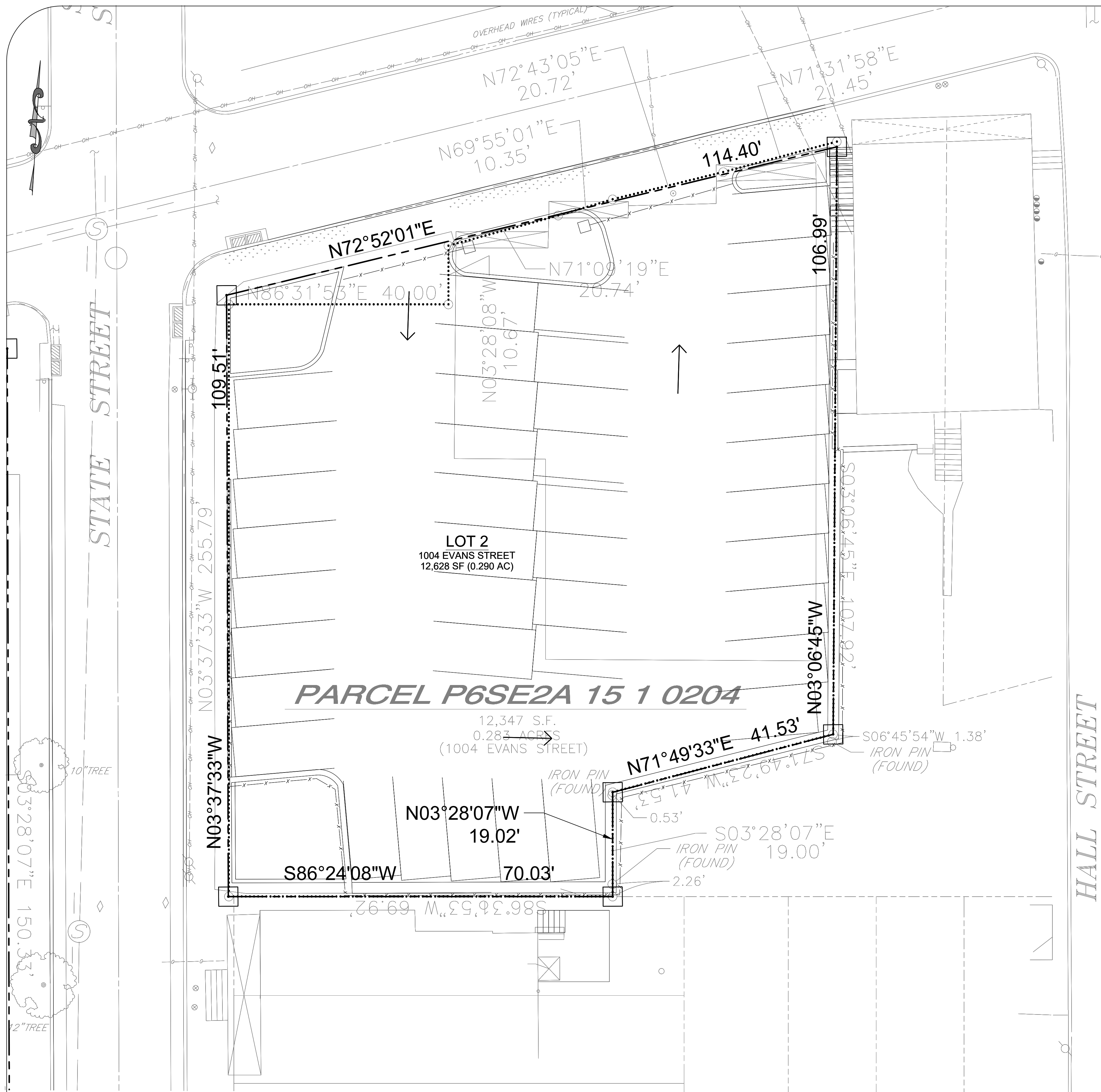
Project:

EVANS STREET APARTMENT
BUILDING

Revision

PLANNING COMM.	Sheet LOT CONSOLIDATION PLAN
Date July 8, 2025	LC 1 15 of 16
Scale As Noted	

PRELIMINARY PLAN



13 LOT 2 CONSOLIDATION PLAN
SCALE: 1" = 10' - 0"

EXISTING IMPERVIOUS COVERAGE			
LOT 2			
Building	4,833	SF	
Gravel/Parking	1,565	SF	
TOTAL	6,398	SF	50.67%

PROPOSED IMPERVIOUS COVERAGE			
LOT 2			
Asphalt	11,084	SF	
TOTAL	11,084	SF	87.77%
NET ADDITIONAL	2,815	SF	

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DISTRICT:

RT HIGH DENSITY RESIDENTIAL DISTRICT

ZONING TABLE (RT DISTRICT)			
ZONING REQUIREMENT	ALLOWED	EXISTING	PROPOSED
		15 1 0204	LOT 2
LOT SIZE (SF)	9,000	12,347	12,628
LOT AREA PER DWELLING (SF)	1,200	-	-
LOT WIDTH (FT)	90	114.66	114.40
FRONT YARD (FT)	10	0	-
SIDE YARD (FT)	15	3.21	-
REAR YARD (FT)	20	14.1	-
HEIGHT (STORIES)	3.5	2	-
HEIGHT (FT)	40	~25	-
MAX BLDG. COV.	0.8	0.386	-

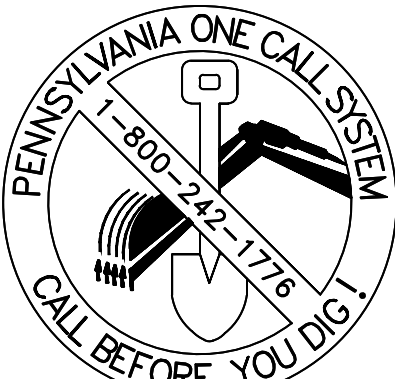
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Project:
EVANS STREET APARTMENT BUILDING

Revision	PLANNING COMM.	Sheet	LOT CONSOLIDATION PLAN
Date	July 8, 2025	LC 2	
Scale	As Noted	16 of 16	

PRELIMINARY PLAN