

# PRELIMINARY / FINAL PLAN

## 2854 LINDEN STREET

14th WARD  
CITY OF BETHLEHEM  
NORTHAMPTON COUNTY  
PENNSYLVANIA

### OWNER'S STATEMENT

We the owners of 2854 Linden Street, being duly sworn according to law, depose and say that we are the sole owners of the above property in peaceful possession of the same and that there are no suits pending affecting the title thereof.

Dino P. Cantelmi, Jr.

Joanna Cantelmi

Sworn and Subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 2022.

Notary Public

### PLANNING COMMISSION APPROVAL

The within plot or plan located in the City of Bethlehem, Lehigh County, Pennsylvania, was approved by the Planning Commission on the \_\_\_\_\_ day of \_\_\_\_\_, 2022.

Chairman \_\_\_\_\_ Date \_\_\_\_\_

Secretary \_\_\_\_\_ Date \_\_\_\_\_

### REVIEWED BY THE LEHIGH VALLEY PLANNING COMMISSION

LVPIC Staff Person Responsible for Review \_\_\_\_\_ Date \_\_\_\_\_

### RECORDING CERTIFICATION

Plan Recorded in the Office for the Recording of Deeds in and for the County of Lehigh, at Allentown, Pennsylvania, as instrument No. \_\_\_\_\_ on the \_\_\_\_\_ day of \_\_\_\_\_, 2022.

Lehigh County Recorder of Deeds

### ENGINEER'S CERTIFICATION

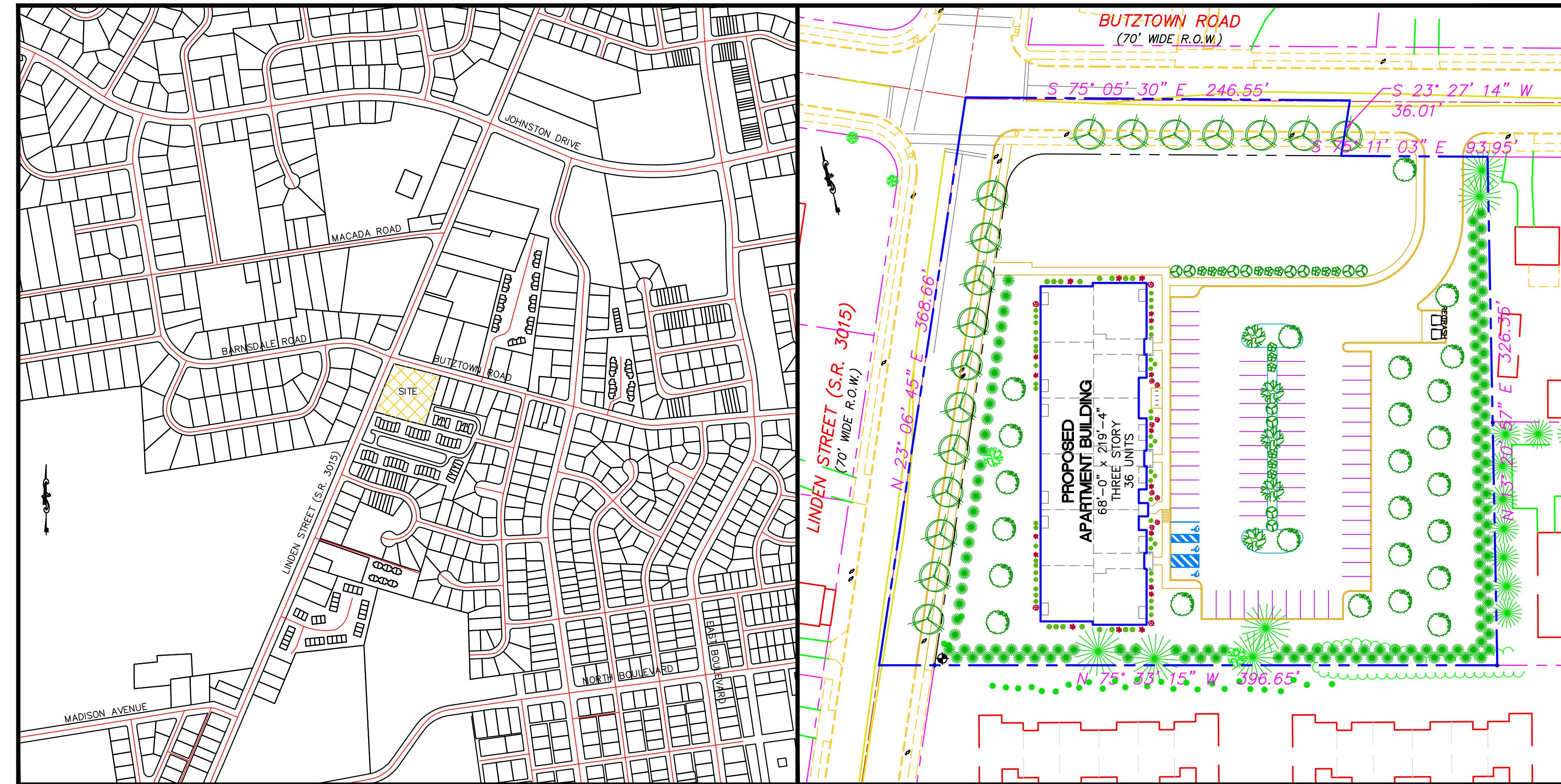
I, Thomas J. Serpico, a registered Professional Engineer in the Commonwealth of Pennsylvania, hereby certify that the accompanying application, plans and supporting documentation are true and correct, to the best of my knowledge and belief.

Thomas J. Serpico, PE No. PE085075  
Pennoni Associates, Inc.  
2041 Avenue C, Suite 100  
Bethlehem, Pa. 18017  
(610) 231-0600

### SURVEYOR'S CERTIFICATION

I, Stephen J. Kerbacher, Jr., a registered Professional Surveyor in the Commonwealth of Pennsylvania, hereby certify that this plan, prepared from a field survey, correctly represents the property boundary of the proposed subdivision or land development, to the best of my knowledge and belief.

Stephen J. Kerbacher, Jr., PLS #6U075146  
DMS Real Estate Designs & Plans, Inc.  
190 Broadhead Road, Suite 110  
Bethlehem, Pa. 18017  
(610) 997-8204



LOCATION MAP

SCALE : 1" = 500'

SITE MAP

SCALE : 1" = 50'

### EQUITABLE OWNER:

DINO P. CANTELM, JR.  
JOANNA CANTELM  
2854 LINDEN STREET  
BETHLEHEM, PA. 18017

### DEVELOPER:

RONCA DEVELOPMENT, LLC  
693 CLEARFIELD ROAD  
NAZARETH, PA. 18064  
PHONE: (610) 972-2008

### STATEMENT OF INTENT:

THE INTENT OF THIS PLAN IS TO CONSTRUCT A THREE-STORY (3) STRUCTURE CONTAINING THIRTY-SIX (36) MULTI-FAMILY DWELLINGS, A 72 CAR PARKING LOT, SITE APPURTENANCES AND LANDSCAPING.

OUTSIDE AGENCY PERMITS		APPROVAL DATE
AGENCY		
LEHIGH VALLEY PLANNING COMMISSION		
LEHIGH COUNTY CONSERVATION DISTRICT		
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (NFPDES)		
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (PLANNING MODULE)		
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION		

DRAWING INDEX			
NO.	SHEET TITLE	DWG. DATE	REVISED
C-1	COVER PLAN**	3/22/2022	10/07/2022
C-2	LAND DEVELOPMENT PLAN**	3/22/2022	10/07/2022
C-3	EXISTING FEATURES/DEMOLITION PLAN	3/22/2022	10/07/2022
C-4	GRADING PLAN	3/22/2022	10/07/2022
C-5	UTILITY PLAN	3/22/2022	10/07/2022
C-6	LIGHTING & LANDSCAPING PLAN	3/22/2022	10/07/2022
C-7	SOIL EROSION & SEDIMENTATION CONTROL PLAN	3/22/2022	10/07/2022
C-8	SOIL EROSION & SEDIMENTATION CONTROL NOTES PLAN	3/22/2022	
C-9	SOIL EROSION & SEDIMENTATION CONTROL DETAILS PLAN	3/22/2022	
C-10	PROFILES PLAN	3/22/2022	10/07/2022
C-11	CONSTRUCTION DETAILS PLAN	3/22/2022	
C-12	CONSTRUCTION DETAILS PLAN	3/22/2022	10/07/2022
C-13	CONSTRUCTION DETAILS PLAN	3/22/2022	10/07/2022
C-14	PRE-DEVELOPMENT WATERSHEDS PLAN	3/22/2022	10/07/2022
C-15	POST-DEVELOPMENT WATERSHEDS PLAN	3/22/2022	10/07/2022
PCSM-1	PCSM - SITE PLAN**	10/07/2022	
PCSM-2	PCSM - NOTES PLAN**	10/07/2022	
PCSM-3	PCSM - DETAIL'S PLAN**	10/07/2022	
PCSM-4	PCSM - DATA & DETAIL'S PLAN**	10/07/2022	
PCSM-5	PCSM - PUMP & DETAIL'S PLAN**	10/07/2022	
PCSM-6	PCSM - DETAIL'S PLAN**	10/07/2022	
PCSM-7	PCSM - O & M SCHEDULE PLAN**	10/07/2022	

\*\*DENOTES DRAWING TO BE RECORDED

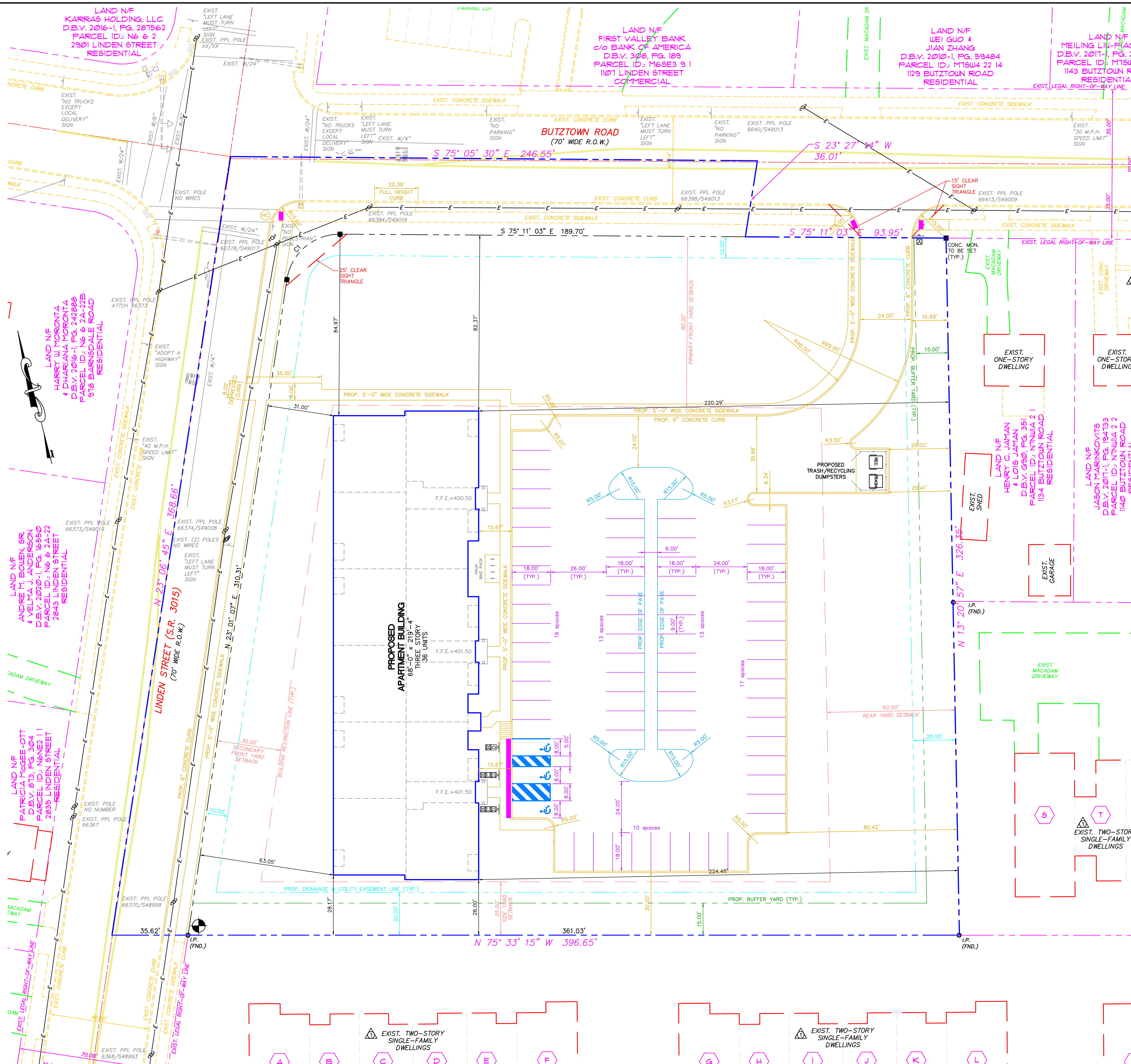
BENCHMARK:  
TOP OF IRON PIN AT SOUTHWEST  
CORNER OF PROPERTY  
ELEV.= 400.39(KEYNET GPS)

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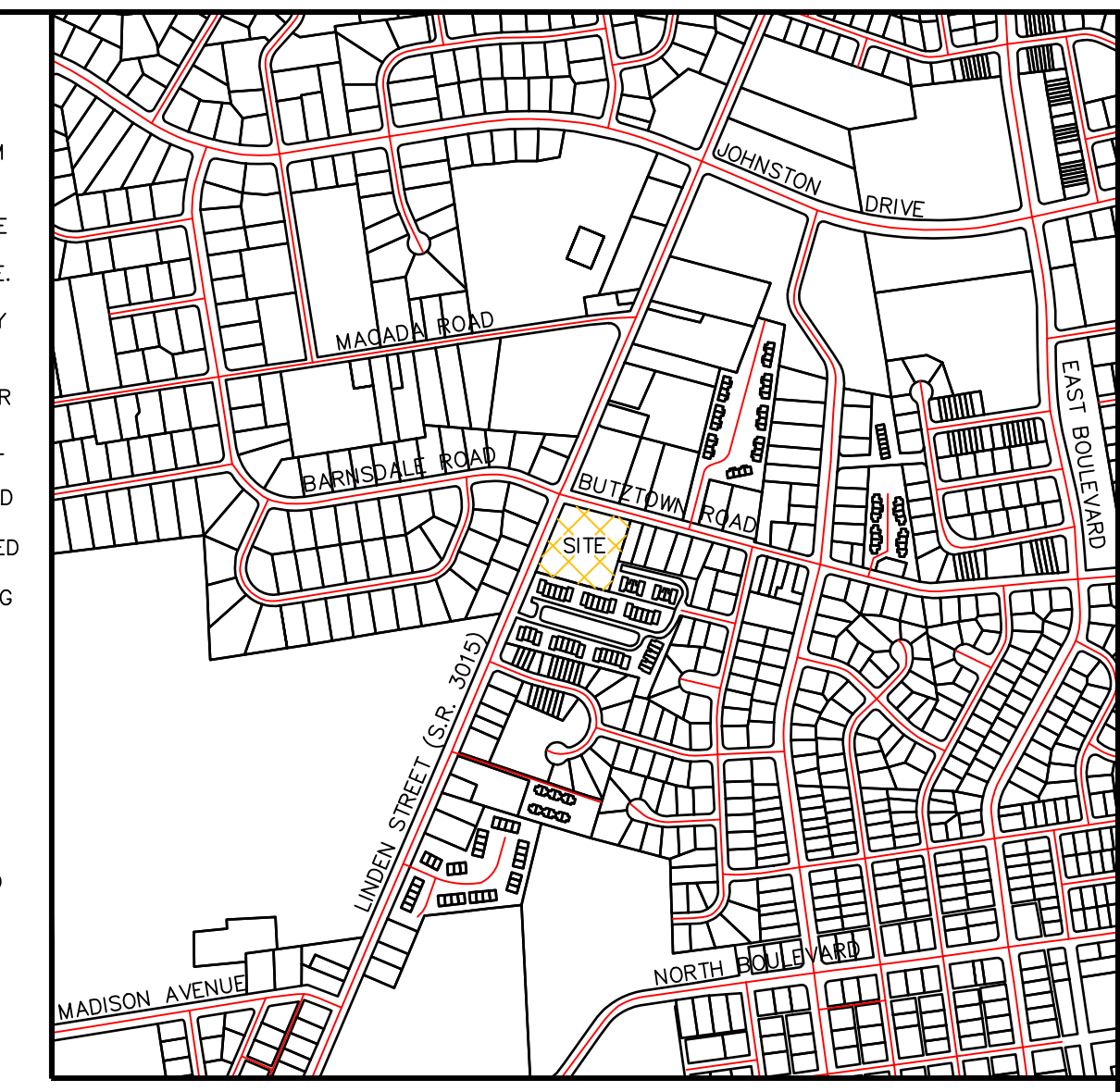
REVISIONS		DATE	DESCRIPTION	BY
1	10/7/22	PER CITY OF BETHLEHEM REVIEW LETTER DATED 5/10/22	SJK	
NO.	DATE	DESCRIPTION	BY	

<b>COVER SHEET</b> 2854 LINDEN STREET	
CITY OF BETHLEHEM 14th WARD NORTHAMPTON COUNTY PENNSYLVANIA	
DATE: 3/22/2022	DRAWING NUMBER: C-1
DRAWN BY: S.J.K.	CHECKED BY: S.J.K.
SCALE: AS NOTED	ACAD ID: 2022-08-24 Land Development Plans
 REAL ESTATE DESIGNS & PLANS 190 BROADHEAD ROAD, SUITE #110 BETHLEHEM, PA. 18017 PHONE: (610) 997-8204	
SHEET: 1 OF 15	
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**GENERAL NOTES:**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF BETHELEM'S LATEST CONSTRUCTION STANDARDS.
- PRIOR TO ANY WORK WITHIN THE RIGHT-OF-WAY PERMITS MUST BE OBTAINED FROM THE CITY ENGINEERING OFFICE.
- THE CITY OF BETHELEM MUST BE CALLED AT LEAST 3 DAYS IN ADVANCE FOR CONNECTION TO THE EXISTING STORM SEWER SYSTEM. THE CITY WILL INSPECT THE STORM SEWER AT THE END OF CONSTRUCTION FOR DAMAGE AND DEBRIS. ANY DAMAGED RESULTING FROM CONSTRUCTION WILL BE REPAIRED AT THE DEVELOPER'S EXPENSE AS WELL AS THE REMOVAL OF ANY DEBRIS WHICH HAS ACCUMULATED. IT IS RECOMMENDED THAT THE DEVELOPER INSPECT THE STORM SEWER AND OTHER UTILITIES AT THE END OF CONSTRUCTION.
- CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF BETHELEM'S LATEST CONSTRUCTION STANDARDS.
- CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF BETHELEM'S LATEST CONSTRUCTION STANDARDS.



**LOCATION MAP**  
SCALE: 1" = 800'

**OWNER'S STATEMENT**

The owners of 2854 Linden Street, being duly sworn according to law, depose and say that we are the sole owners of the above property in peaceful possession of the same and that there are no suits pending affecting the title thereto.

Dino P. Cantelmi, Jr.  
Joanna Cantelmi

Sworn and Subscribed before me this \_\_\_\_ day of \_\_\_\_\_, 2022.

Notary Public

**SURVEY NOTES:**

- This Plan is based upon a field survey conducted on September 14, 2021, by DMS Real Estate Design & Plans, using a Trimble S5 Robotic Total Station and represents a retracement of lands of Dino P. Cantelmi & Joanna Cantelmi as described in Deed Book Volume 2001-1, Page 38001.
- Underground utility locations are approximate and are based upon field location of obvious above ground evidence in conjunction with available plans of record. All underground utilities may not be shown. Underground lines not evident on the surface by markings or structures have not been shown. Connecting lines have not been shown to certain structures without corresponding plan data.
- Any and all underground utilities shall be verified in accordance with PA Act 187 prior to any excavation.
- Property owner name, deed and tax parcel identifier information as shown is based upon Northampton County Tax Map records as of September 2021 and is subject to the accuracies or inaccuracies thereof.
- Lines as shown with bearings and distances or curve information indicate lines measured by this survey. Lines without any geometric annotation may have been plotted using record information and are intended for general site orientation only.
- This survey and plan has been prepared without the benefit of a Title Search and are therefore subject to any easements or other pertinent facts which such a search might disclose.
- Plan References:  
 "Declaration Plan for the Court, A Condominium", sheet 2 of 2, prepared by Keystone Consulting Engineers, Inc., dated 11/07/1990, recorded in Map Book Volume 93 Page 8;  
 "Declaration Plan for the Court, A Condominium", sheet 2 of 2, prepared by Keystone Consulting Engineers, Inc., dated 11/07/1990, recorded in Map Book Volume 93 Page 169;  
 "Declaration Plan for the Court, A Condominium", sheet 1 of 2, prepared by Keystone Consulting Engineers, Inc., dated 11/07/1990, recorded in Map Book Volume 93 Page 169A;
- All Vegetation (trees, edges of woods, etc.) on and off the site and topography as shown beyond 10 feet outside of the boundary line - off site, has been shown for general site orientation only and is based upon City of Bethlehem Aerial Mapping conducted circa 1991 and has not been verified by this survey.
- There was no observed evidence of the site being used as a solid waste dump, sump or sanitary landfill at the time of survey.
- There was no observed evidence of any wetlands within the project site at the time of the survey.
- Based on FEMA Flood Insurance Rate Map Community Panel #4209C0244E, map revised July 16, 2014; the subject property lies in Flood Zone X, was determined to be outside the 0.2% Annual Chance Floodplain.

**SITE DATA**

DEED REFERENCE: D.B.V. 2001-1, PAGE 38001  
 TAX MAP REFERENCE: MESES, BLK. 10, LOT 1  
 SITE ADDRESS: 2854 LINDEN STREET, BETHELEM, PA. 18017

**ZONING DATA**

ZONING DISTRICT: RG - MEDIUM DENSITY RESIDENTIAL  
 MULTI-FAMILY DWELLINGS (MORE THAN 2 1/2 STORIES)

**DEVELOPER:** RONCA DEVELOPMENT, LLC  
 693 CLEARFIELD ROAD, NAZARETH, PA. 18064  
 (610) 972-2008

**TRACT AREA:** 129,637.46 S.F. / 2.9761 ACRES (DEED)

**WATER:** PUBLIC  
**SEWER:** PUBLIC

**REQUIRED PROVIDED:**  
 MINIMUM TRACT SIZE: 43,560 S.F. / 105,961.88 S.F.  
 MINIMUM LOT AREA PER DWELLING UNIT: 4,000 S.F. / 4,046.51 S.F.  
 MINIMUM LOT WIDTH: 100 FT. / 318.88 FT.  
 MAXIMUM BUILDING COVERAGE: 70% / 13,328 S.F.  
 MAXIMUM IMPERVIOUS COVERAGE: NONE / 42.76%  
 MAXIMUM BUILDING HEIGHT: 40 FT. OR 32'-3" FT. OR 3 STORIES / 25 FT. 26.00 FT.

**POST CONSTRUCTION STORMWATER BMP's MAINTENANCE AND OPERATION RESPONSIBILITIES**

THE OWNERS OF INDIVIDUAL LOTS SHALL MAINTAIN AND OPERATE THE POST CONSTRUCTION STORMWATER BMP'S LOCATED ON THEIR LOT, INCLUDING THE SHOULDS AND LANDSCAPING AREAS, IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN IN THE POST CONSTRUCTION STORMWATER MANAGEMENT PLANS, THE OWNER'S DEED, AND THE DEEDS TO ANY SUBSEQUENT OWNERS. SHALL NOTE THAT THE OWNER SHALL ACCEPT THE MAINTENANCE RESPONSIBILITIES. THE CITY OF BETHELEM SHALL BE PERMITTED TO INSPECT THE STORM WATER FACILITIES ON AT LEAST AN ANNUAL SCHEDULE TO ENSURE THAT ANY NECESSARY CORRECTIVE WORK IS TO BE PERFORMED IN A TIMELY MANNER.

**LEGEND**

EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE	EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE
○	IRON PIN	○	○	SANITARY SEWER MANHOLE	○
□	CONCRETE MONUMENT	■	---	SANITARY SEWER LINE	---
☆	LIGHT POLE	---	---	WATERLINE	---
---	UTILITY/POWER POLE	---	---	WATER VALVE	---
---	OVERHEAD ELECTRIC LINE	---	---	FIRE HYDRANT	---
---	TREE LINE	---	---	STORM SEWER LINE	---
---	15% TO 25% SLOPES	---	---	STORM INLET	---
---	OVER 25% SLOPES	---	---	STORM SEWER MANHOLE	---
---	ROAD CENTERLINE	---	---	BELL TEL. MANHOLE	---
---	PROPERTY LINE	---	---	STREET SIGN	---
---	RIGHT-OF-WAY LINE	---	---	PIPE ROLLARD	---
---	BUILDING RESTRICTION LINE	---	---	EXISTING WELL	---
---	DRAINAGE & UTILITY EASEMENT	---	---	EXISTING SEPTIC TANK	---
---	CONTOUR (MINOR)	---	---	EXISTING ABSORPTION AREA	---
---	CONTOUR (MAJOR)	---	---	TO BE REMOVED	---
---	SOIL BOUNDARY	---	---	EXISTING	---
---	FENCE	---	---	EXISTING	---
---	STONE ROW	---	---	SOIL TESTING	---
---		---	---	WETLANDS	---

**ZONING VARIANCES:**

ON DECEMBER 15, 2021, THE CITY OF BETHELEM ZONING HEARING BOARD GRANTED THE FOLLOWING VARIANCES FROM THE CITY OF BETHELEM ZONING ORDINANCE, WITH WRITTEN DECISION DATED APRIL 28, 2022:

- SECTION 1306.03: VARIANCE TO LOCATE AN ACCESSORY STRUCTURE (GARBAGE DUMPSTER) WITHIN THE FRONT YARD.
- ON MARCH 23, 2022, THE CITY OF BETHELEM ZONING HEARING BOARD GRANTED THE FOLLOWING VARIANCES FROM THE CITY OF BETHELEM ZONING ORDINANCE, WITH WRITTEN DECISION DATED APRIL 28, 2022:

- SECTION 1306.01(a)(3): TO REDUCE THE LOT AREA PER DWELLING UNIT, FROM 4,000 SF TO 3,601 SF, OR AN INCREASE FROM 32 DWELLING UNITS TO 36 DWELLING UNITS.
- SECTION 1322.03(a)(4): TO INCREASE THE MAXIMUM BUILDING LENGTH FROM 180' TO 220'.

**ADJOINING PROPERTY OWNERS**

OWNER	DEED REF.	PARCEL ID.	ADDRESS
LEONARD B. BISHOP	2895-124358	2895-124358	2895 LINDEN STREET, UNIT 3A
BRETT B. POLKACHAR	2915-124358	2915-124358	2915 LINDEN STREET, UNIT 3B
JAY R. & BRILEY M. KITCHEN	1998-124178	2854-124178	2854 LINDEN STREET, UNIT 3C
JUDITH A. DONOHUE & KEVIN P. O'NEILS	2916-124983	2854-124983	2854 LINDEN STREET, UNIT 3D
DAVID N. LANE & GORRITHA	2920-176311	2854-176311	2854 LINDEN STREET, UNIT 3E
MARGARET COO	2912-124913	2854-124913	2854 LINDEN STREET, UNIT 3F
HUGHES & SUTHER	1920-1244	2854-1244	2854 LINDEN STREET, UNIT 3G
BETH E. & BARBARA A. SCHNEIDER	2926-124913	2854-124913	2854 LINDEN STREET, UNIT 3H
KARL STEINER & SHELLEN	2926-124913	2854-124913	2854 LINDEN STREET, UNIT 3I
FRANK E. & LEAN CORTEPA	2926-122883	2854-122883	2854 LINDEN STREET, UNIT 3J
JOSEPH V. JACOBINE III & POPA AUBRI	2926-124913	2854-124913	2854 LINDEN STREET, UNIT 3K
LENA FLETCHER	2926-124913	2854-124913	2854 LINDEN STREET, UNIT 3L
JOYCE & DAN	2926-124913	2854-124913	2854 LINDEN STREET, UNIT 3M
ROBERT J. JACOBINE III	2926-124913	2854-124913	2854 LINDEN STREET, UNIT 3N
WILLIAM J. GIBBELL & ROBERT	2926-124913	2854-124913	2854 LINDEN STREET, UNIT 3O
FRANK JACOBINE III & POPA AUBRI	2926-124913	2854-124913	2854 LINDEN STREET, UNIT 3P
SABIEL C. LORAGIO JR	2926-124913	2854-124913	2854 LINDEN STREET, UNIT 3Q

**Curve Table**

Curve #	Radius	Delta	Length	Tangent	Chord Bearing	Chord Distance
C1	25.00'	081°47'50"	35.69'	21.65'	N63°55'02"E	35.69'

**DWELLING UNIT CALCULATIONS**

LAND AREA (BASED UPON FIELD SURVEY): 129,488.42 SQ. FT.  
 129,488.42 / 4,000 = 32.37  
 32 DWELLING UNITS PERMITTED

**OFF STREET PARKING TABULATION**

MULTI-FAMILY DWELLING  
 2 PER UNIT  
 36 x 2.0 = 72

REQUIRED NUMBER OF SPACES: 72  
 PROVIDED NUMBER OF SPACES: 72

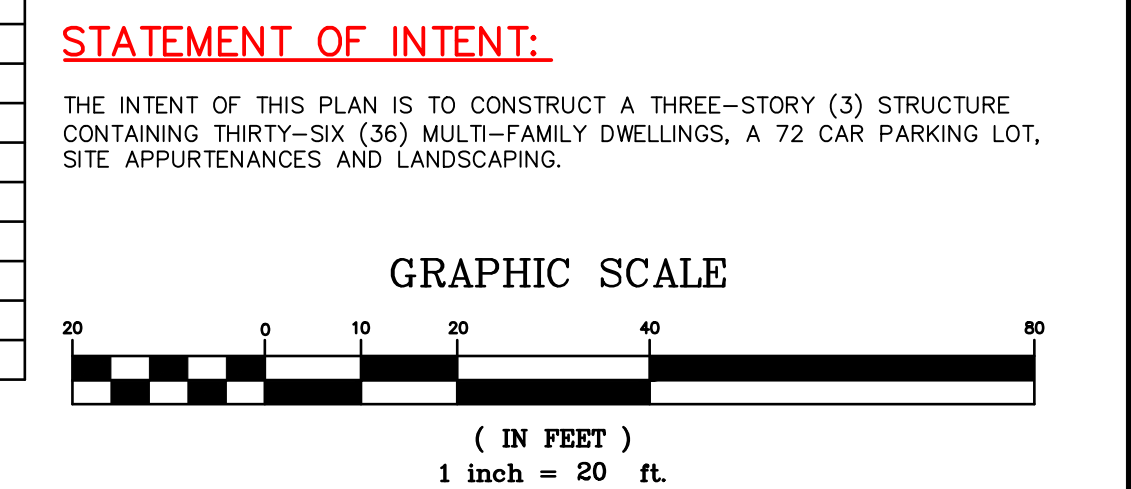
NUMBER OF BICYCLE SPACES PROVIDED: 8

**CALL BEFORE YOU DIG!**  
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 3 WORKING DAYS NOTICE FOR  
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 SERIAL #20212631234

**Pennoni**  
 PENNONI ASSOCIATES INC.  
 2041 Avenue C, Suite 100  
 Bethlehem, PA 18017  
 T 610.231.0600 F 610.231.2033

**REVISIONS**

NO.	DATE	DESCRIPTION	BY
1	10/7/22	PER CITY OF BETHELEM REVIEW LETTER DATED 5/10/22	SKJ
NO.	DATE	DESCRIPTION	BY



**PRELIMINARY/FINAL LAND DEVELOPMENT PLAN FOR 2854 LINDEN STREET**

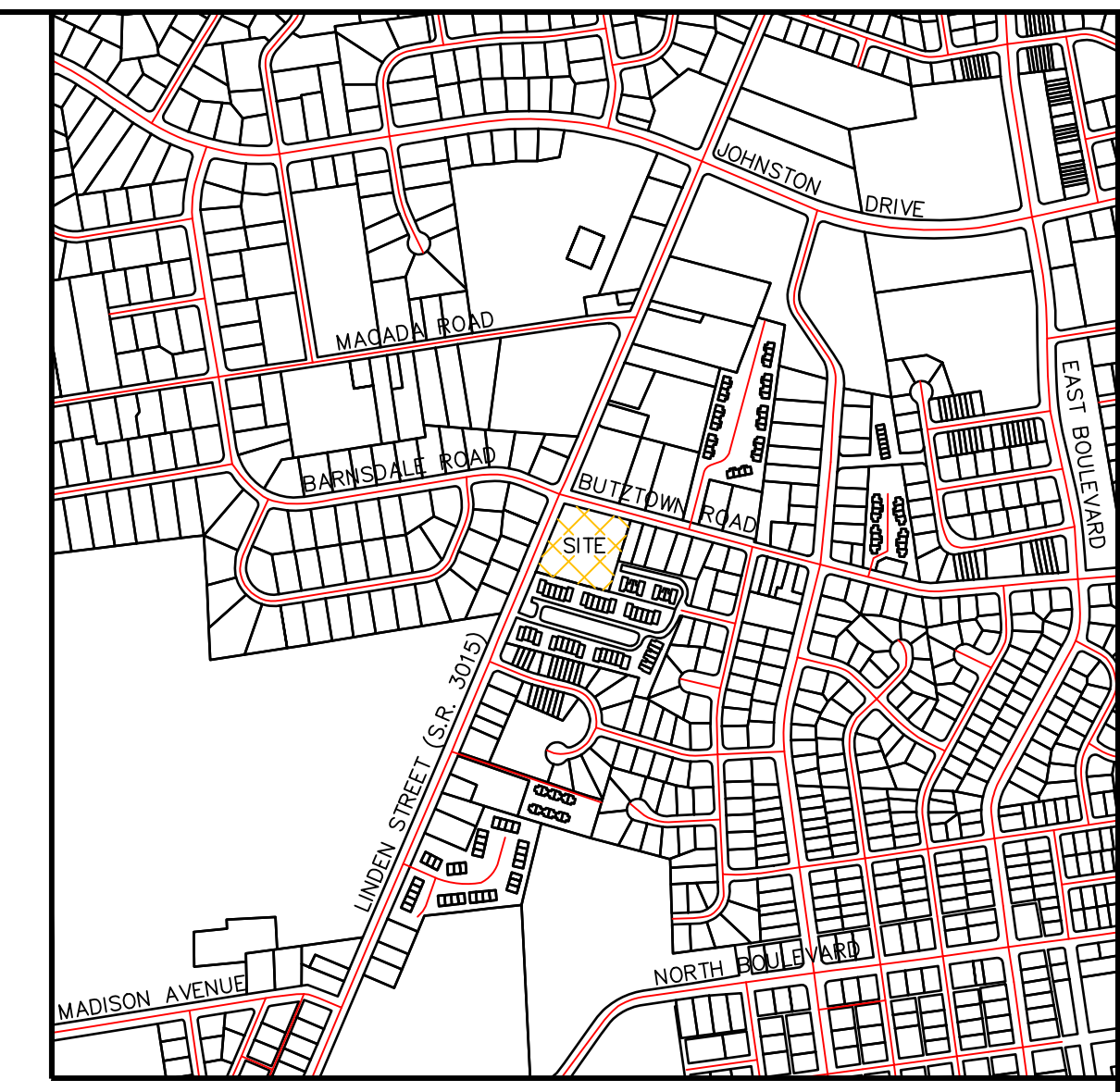
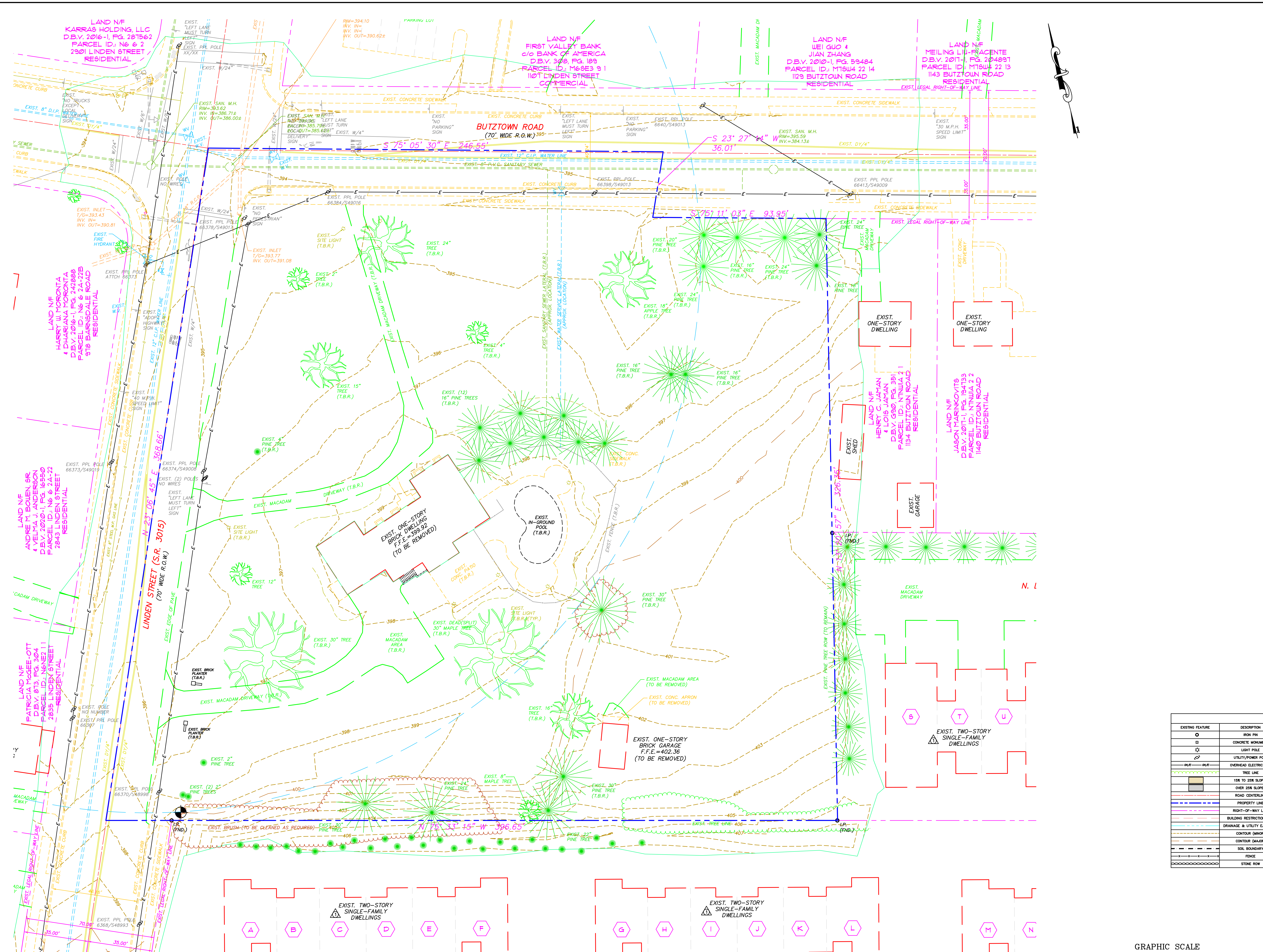
CITY OF BETHELEM  
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DATE: 3/22/2022  
 DRAWN BY: S.K.J.  
 CHECKED BY: S.K.J.  
 SCALE: 1" = 20'  
 ACAD ID: 2022-08-24 and Development Plans

DMS  
 DMS REAL ESTATE DESIGNS & PLANS  
 190 BROADHEAD ROAD, SUITE #110  
 BETHELEM, PA. 18017  
 PHONE: (610) 997-8204

DRAWING NUMBER: C-2  
 SHEET: 2 OF 15

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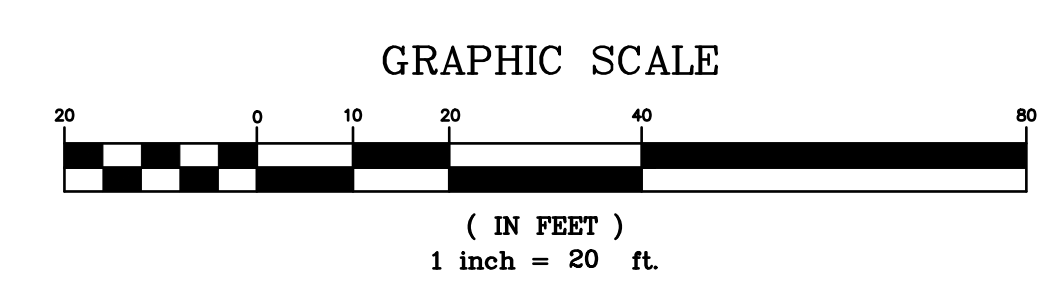
LOCATION MAP  
SCALE: 1" = 800'

**ACT 287 UTILITY LISTING**  
SERIAL #20212631234

- CITY OF BETHLEHEM  
10 EAST CHURCH STREET  
BETHLEHEM, PA. 18018  
(610) 865-7207  
MARKED UP PLANS SENT TO REQUESTOR
- PPL ELECTRIC UTILITIES CORP.  
827 HAUSMAN ROAD  
ALLENTOWN, PA. 18104  
(800) 342-5775  
MARKED UP PLANS SENT TO REQUESTOR
- RCN TELECOM SERVICES, INC.  
2124 AVENUE C  
BETHLEHEM, PA. 18017  
(800) 746-4726  
INSUFFICIENT INFORMATION - DO NOT DIG  
CLEAR - NO FACILITIES
- SERVICE ELECTRIC CABLE TV, INC.  
2260 AVENUE A  
BETHLEHEM, PA. 18017  
(610) 865-9100  
CLEAR - NO FACILITIES
- UGI UTILITIES LEHIGH HAZELTON  
61-99 NORTH POPLAR STREET  
HAZELTON, PA. 18201  
(800) 276-2722  
SEND PLANS
- VERIZON PENNSYLVANIA, LLC  
900 RACE STREET, 8TH FLOOR  
PHILADELPHIA, PA. 19107  
CONFLICT - DIRECT CONTACT TO FOLLOW BY  
FACILITY OWNER
- ZAYO BANDWIDTH FORMERLY PPL TELCOM, LLC  
CLEAR - NO FACILITIES

**LEGEND**

EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE	EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE
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—	DRAINAGE & UTILITY EASEMENT	—	—	EXISTING SEPTIC TANK	—
—	CONTOUR (MANS)	—	—	EXISTING ABSORPTION AREA	—
—	SOIL BOUNDARY	—	—	(T.B.R.)	—
—	FENCE	—	—	EXISTING	—
—	STONE ROW	—	—	SOIL TESTING	—
				WETLANDS	—



**SOILS LEGEND:**  
UkaB - Urban land, 0 to 8 percent slopes  
UoB - Urban land-Duffield complex, 0 to 8 percent slopes

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CORNER OF PROPERTY  
ELEV. = 400.39 (KEYNET GPS)

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**PRELIMINARY/FINAL**  
**EXISTING FEATURES / DEMOLITION PLAN**  
**FOR**  
**2854 LINDEN STREET**

CITY OF BETHLEHEM  
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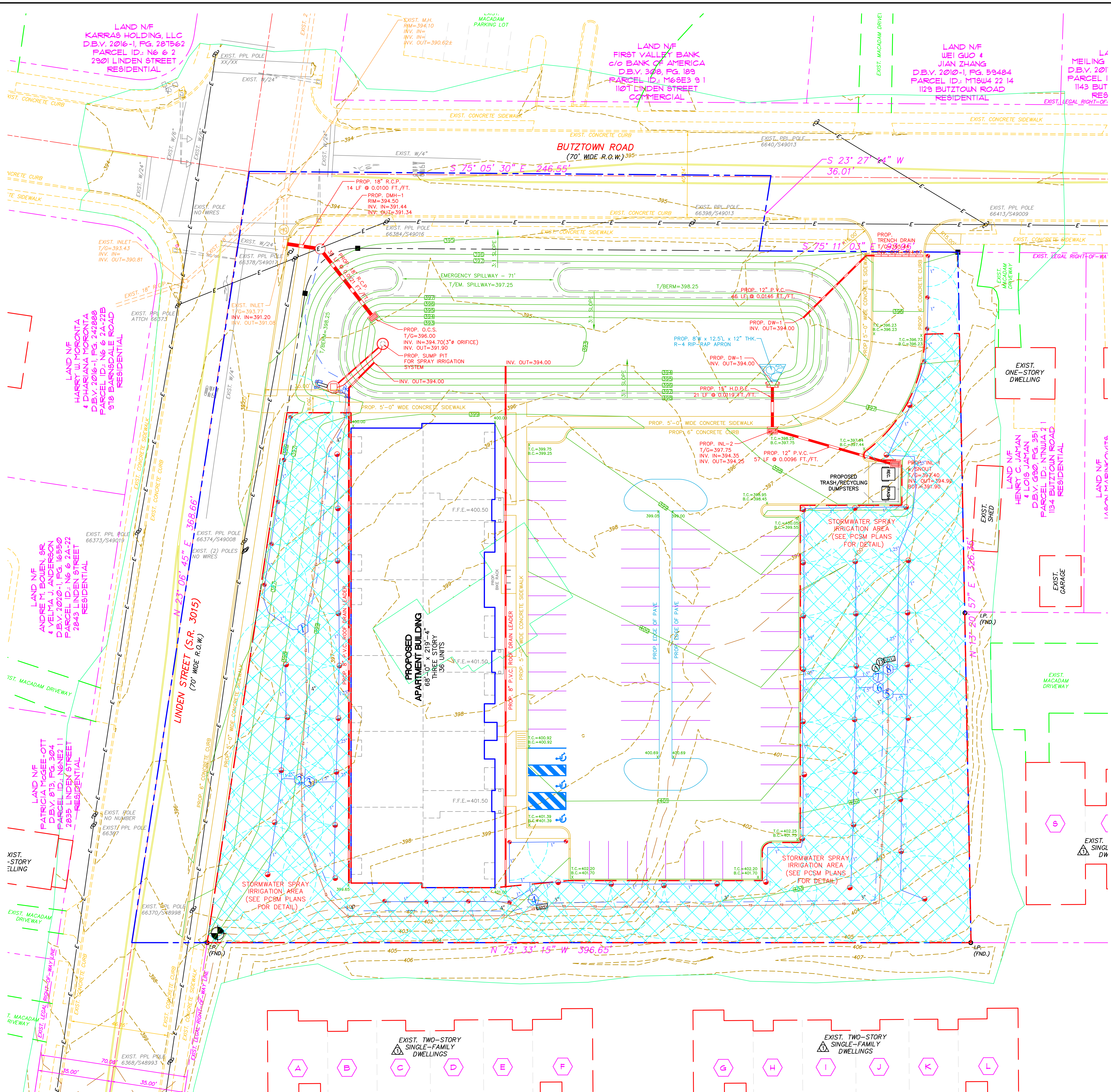
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REAL ESTATE DESIGNS AND PLANS  
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PHONE: (610) 997-8204

DRAWING NUMBER:  
**C-3**

SHEET:  
**3 OF 15**

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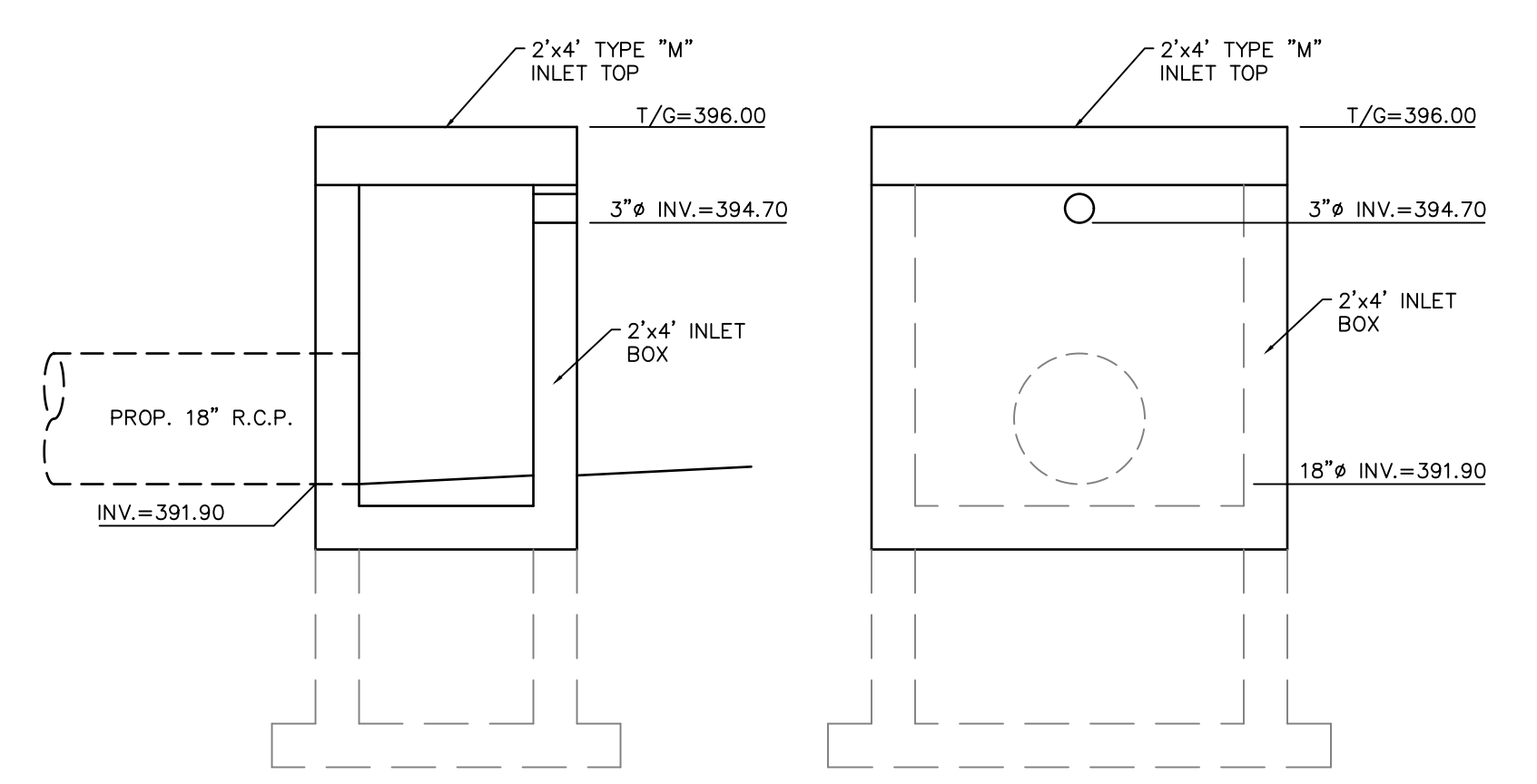


**GENERAL NOTES:**

- Unless a geological survey demonstrates the feasibility of encouraging infiltration in a detention pond, the detention pond shall, generally, be lined with a full 6-inch thick clay liner with a permeability of  $1 \times 10^{-7}$  cm/sec. or less. This clay liner shall, in turn, be covered by a 6-inch layer of viable topsoil on which a healthy growth of grass shall be established (unless rip-rapped). This liner system shall extend from the bottom of the pond to the elevation of the emergency spillway. The liner permeability of  $1 \times 10^{-7}$  cm/sec. shall be verified by lab tests on three field samples or other equivalent procedure acceptable to the City Engineer. Additional tests may be required by the City Engineer should any of the three original tests yield unacceptable results. All testing shall be arranged and paid by the developer, however, the testing lab shall be certified in this area of testing and acceptable to the City Engineer.
- The City Engineer may require a full 12-inch thick clay liner with a permeability of  $1 \times 10^{-7}$  cm/sec. or less, where circumstances such as water depth or nearby utilities necessitate a greater degree of assurance against the formation of sinkholes. Also, the City Engineer may approve a different liner system that is - in the opinion of the City Engineer - equal to or better than the above mentioned liners.
- The maintenance of the storm water facilities, including the detention pond, shall be the owner's responsibility. The owner's deed, and the deeds to any subsequent owner, shall note that the owner shall accept the maintenance responsibilities. The City of Bethlehem shall be permitted to inspect the storm water facilities on at least an annual schedule to ensure that any necessary corrective work is performed in a timely manner.
- The Developer shall ensure that current as-built records are maintained during construction, upon completion of construction, Certified (i.e. P.E. Stamped) as-built drawings shall be submitted by the developer's engineers. These as-built drawings shall be found acceptable by the City Engineer prior to release of any remaining security.
- In order to maintain continuity between plan revisions, any changes to a previous plan submission shall be flagged with a triangle. Any changes not flagged may be considered not approved. Flagged changes shall be referenced to the appropriate revision date.
- By submission of these plans the engineer on record certifies that these plans are in complete conformance with the City of Bethlehem Storm Water Management Ordinance.
- All public inlets shall have inlet markers. The design of the inlet markers shall be approved by the City Engineer.
- The drainage easement provides for the flow of stormwater across lots, and may not be altered without the written permission of the City Engineer. No obstructions such as planting berms or fences may be installed in the drainage easement areas without sufficient provision for the passage of stormwater, and any such proposed provision shall be approved in writing by the City Engineer.
- All retaining walls shall be designed by a Licensed Geotechnical Engineer and approved by the City Engineer prior to construction.
- All roof leaders to be connected to the storm sewer system.
- R.C.P. piping to be Class III, unless noted otherwise.
- All storm sewer shall be constructed with watertight joints.

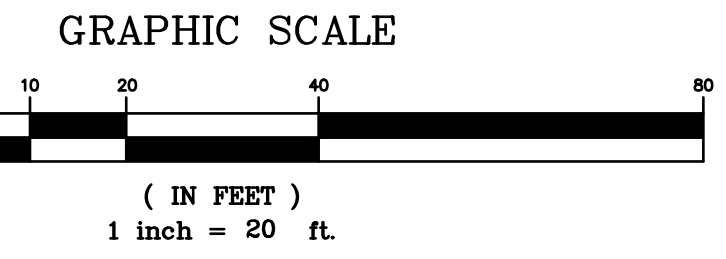
**DETENTION BASIN INFORMATION**

DESIGN YEAR - 100  
 CAPACITY - 27,042 CF  
 SIDE SLOPE - 3:1 (INTERIOR)  
 DEPTH = 5.25 FEET



OUTLET CONTROL STRUCTURE DETAIL  
NO SCALE

LEGEND				
EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE	EXISTING FEATURE	DESCRIPTION
○	IRON PIN	●	○	SANITARY SEWER MANHOLE
■	CONCRETE MONUMENT	■	○	SANITARY SEWER LINE
⊙	LIGHT POLE	—	—	WATERLINE
⊕	UTILITY/POWER POLE	—	—	WATER VALVE
—	OVERHEAD ELECTRIC LINE	—	—	FIRE HYDRANT
—	TREE LINE	—	—	STORM SEWER LINE
—	15% TO 20% SLOPES	—	—	STORM INLET
—	OVER 20% SLOPES	—	—	STORM SEWER MANHOLE
—	ROAD CENTERLINE	—	—	BILL TALL MANHOLE
—	PROPERTY LINE	—	—	STREET SIGN
—	RIGHT-OF-WAY LINE	—	—	PIPE BOLLARD
—	BUILDING RESTRICTION LINE	—	—	EXISTING WELL
—	DRAINAGE & UTILITY EASEMENT	—	—	EXISTING SEPTIC TANK
—	CONTOUR (MINOR)	—	—	EXISTING ABSORPTION AREA
—	CONTOUR (MAJOR)	—	—	TO BE REMOVED
—	SOIL BOUNDARY	—	—	EXISTING
—	FENCE	—	—	SOIL TESTING
—	STONE ROW	—	—	WETLANDS



**PRELIMINARY/FINAL**  
**GRADING PLAN**  
 FOR  
**2854 LINDEN STREET**  
 CITY OF BETHLEHEM  
 14th WARD  
 NORTHAMPTON COUNTY  
 PENNSYLVANIA

CALL BEFORE YOU DIG!  
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 3 WORKING DAYS NOTICE FOR  
 CONSTRUCTION PHASE AND TO WORKING  
 DAYS IN DESIGN STAGE - STOP CALL  
 Pennsylvania One Call System, Inc.  
 1-800-242-1776  
 SERIAL #20212631234

BENCHMARK:  
 TOP OF IRON PIN AT SOUTHWEST  
 CORNER OF PROPERTY  
 ELEV. = 400.39 (NET/NET GPS)

**Pennoni**  
 PENNONI ASSOCIATES INC.  
 2041 Avenue C, Suite 100  
 Bethlehem, PA 18017  
 T 610.231.0600 F 610.231.2033

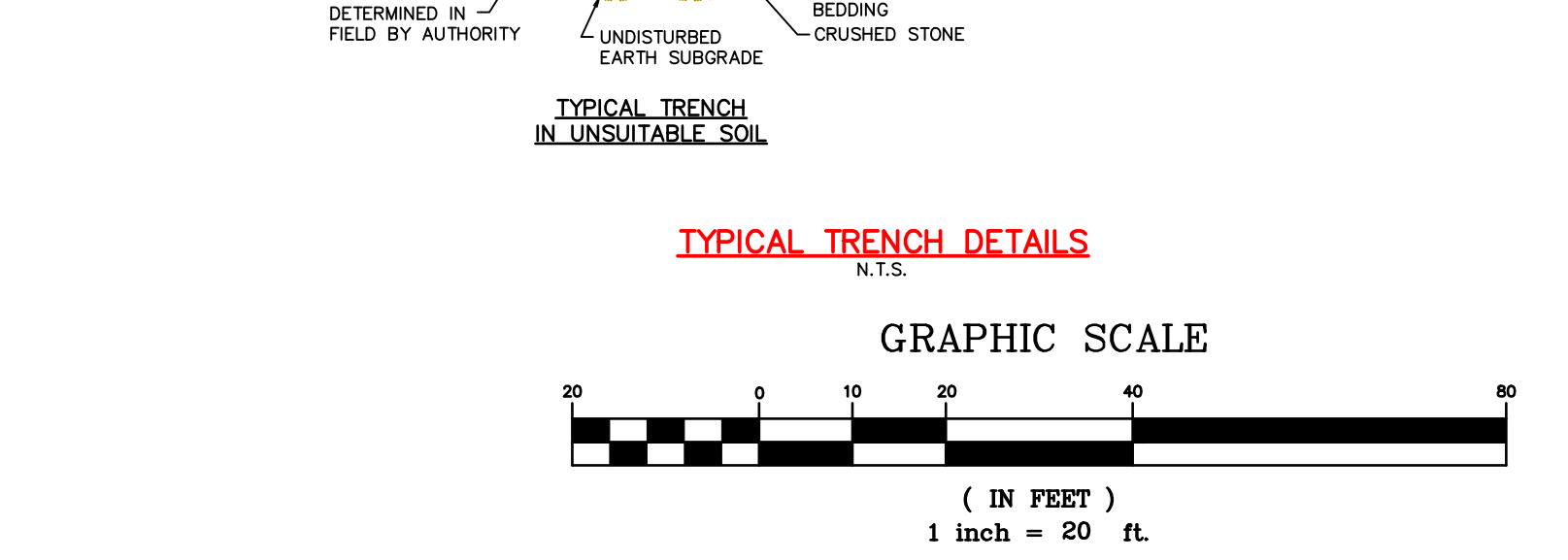
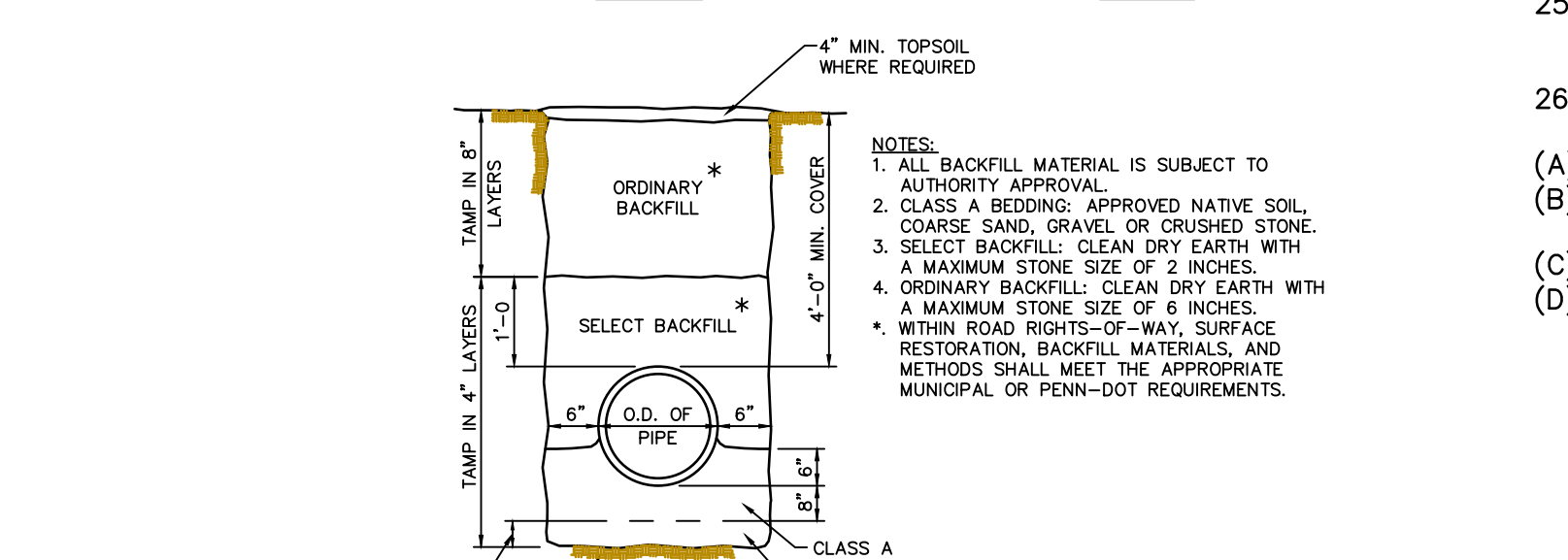
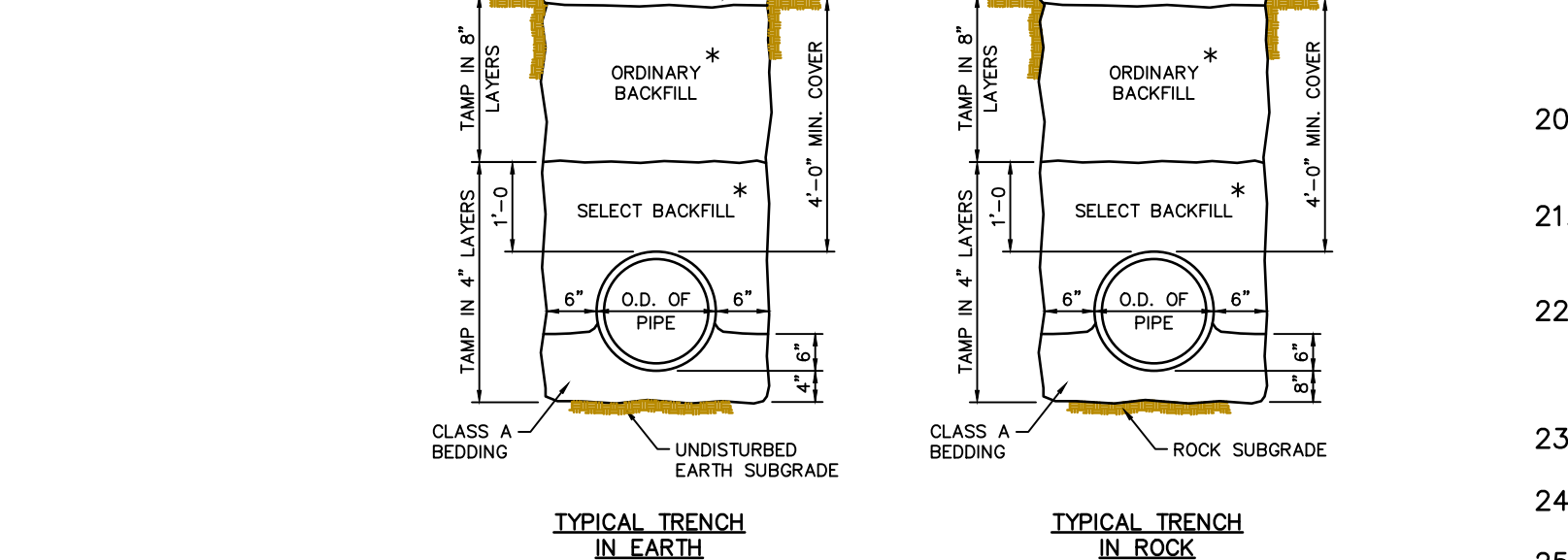
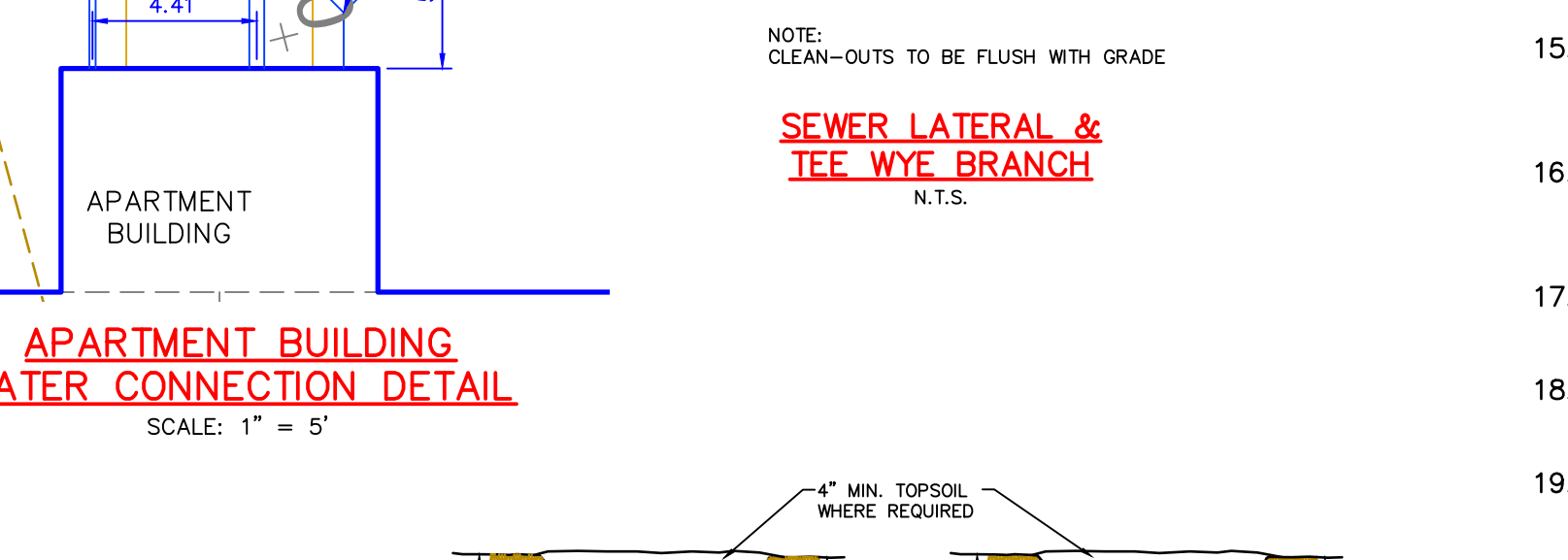
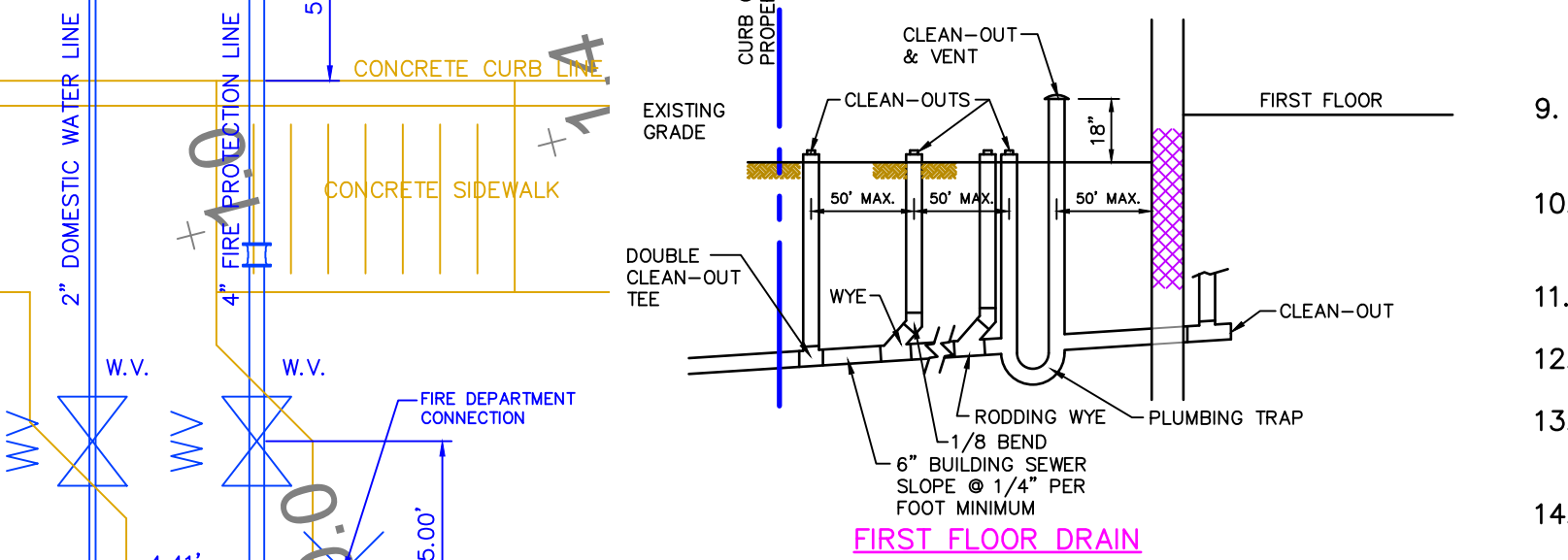
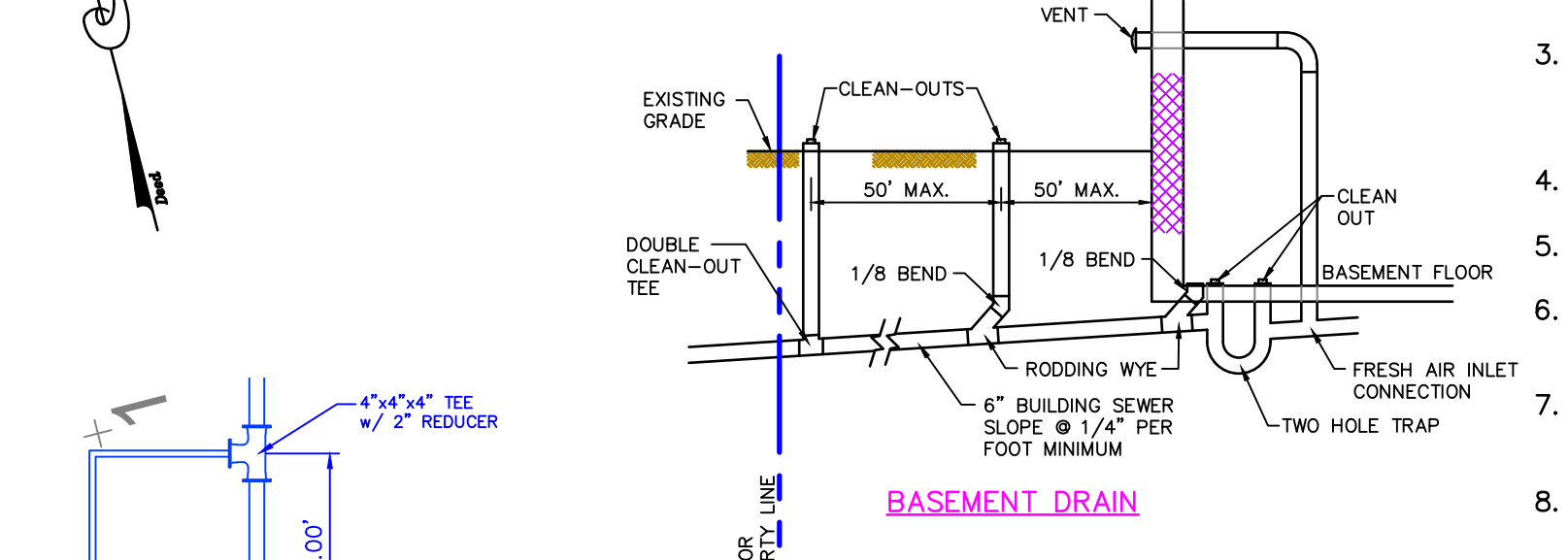
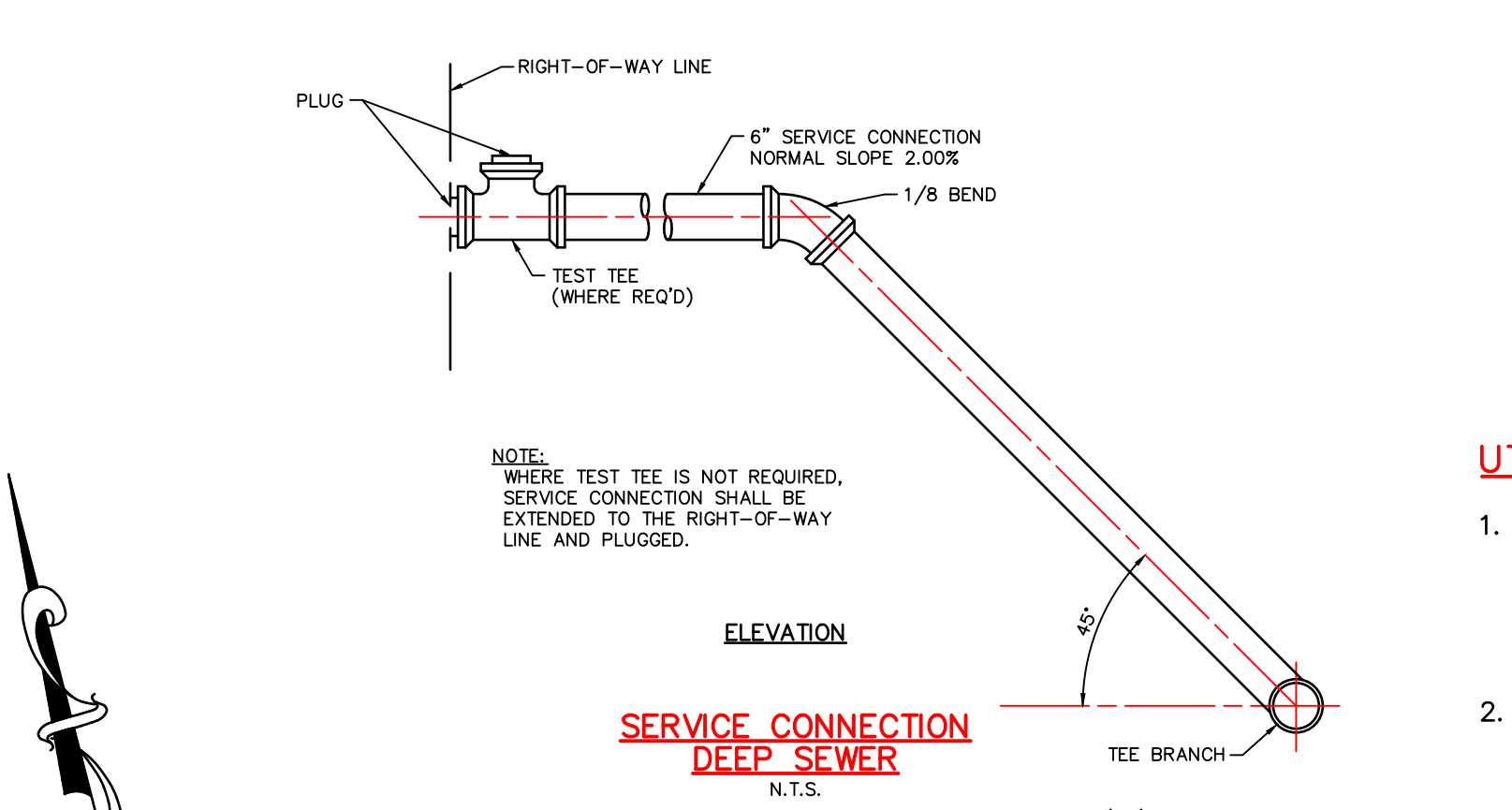
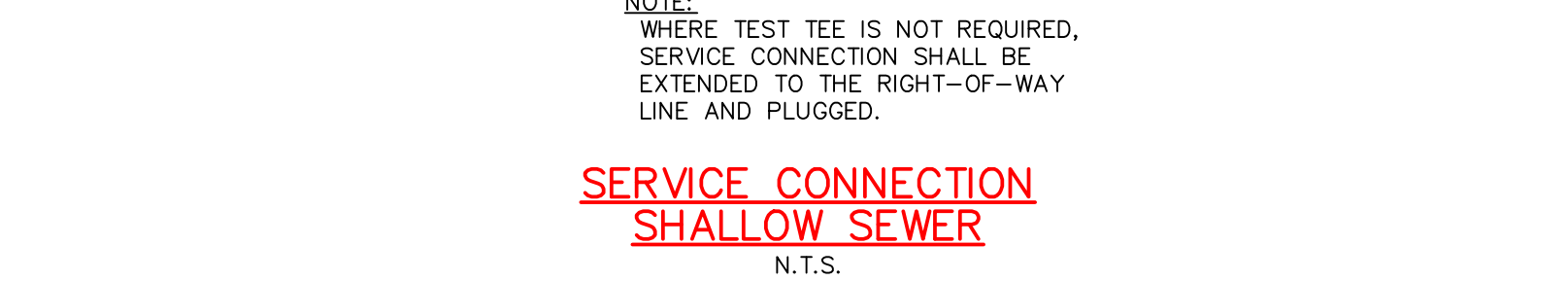
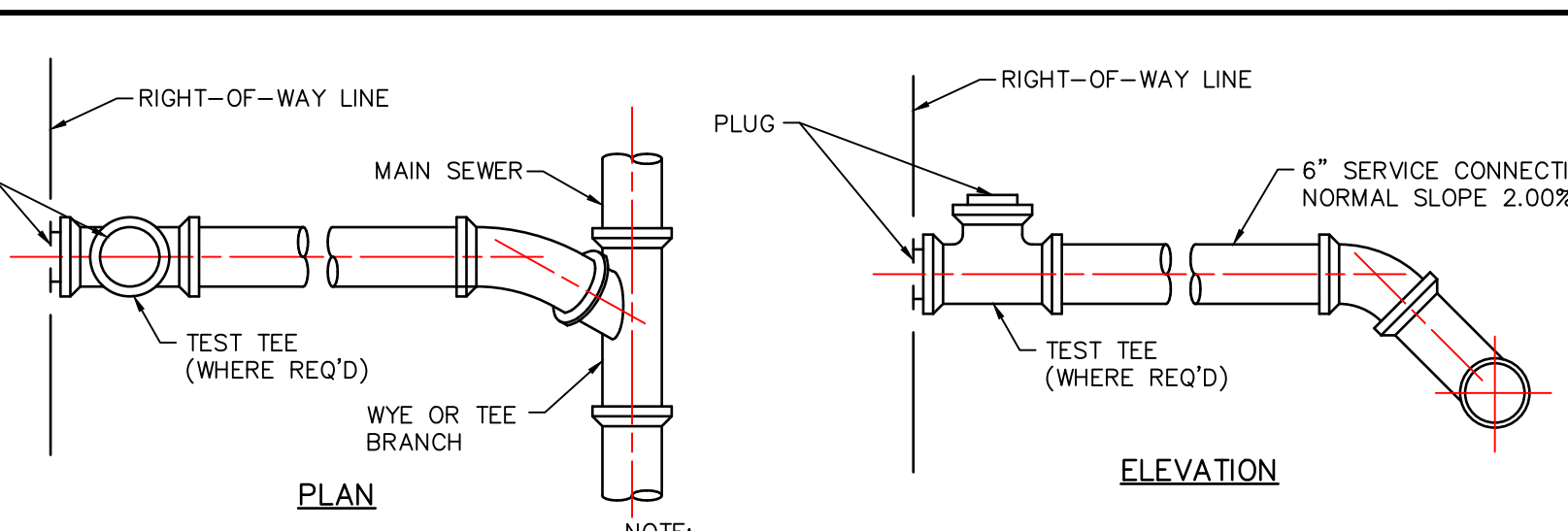
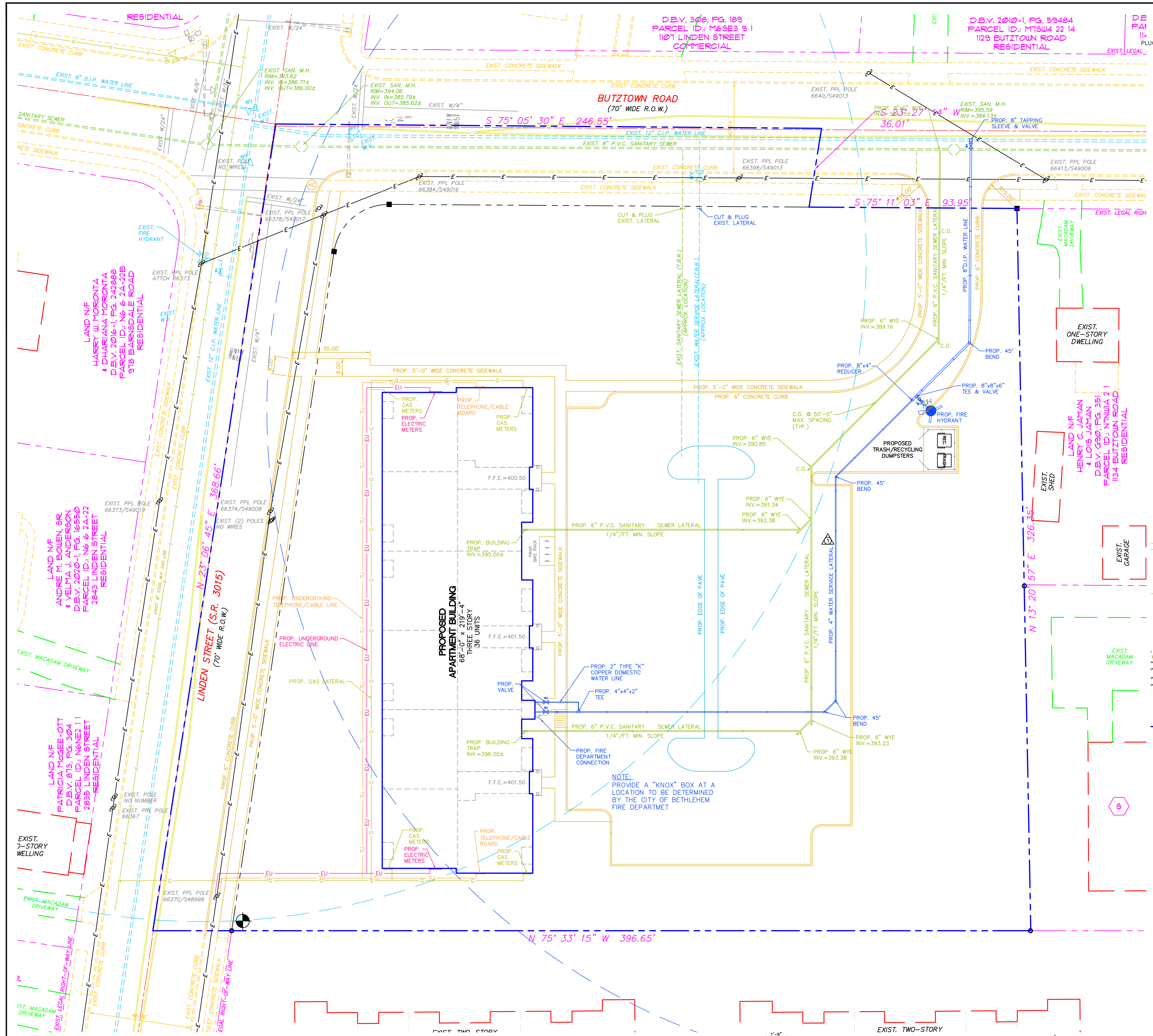
REVISIONS		
NO.	DATE	DESCRIPTION
1	10/7/22	PER CITY OF BETHLEHEM REVIEW LETTER DATED 5/10/22
NO.	DATE	DESCRIPTION

DATE: 3/22/2022  
 DRAWN BY: S.J.K.  
 CHECKED BY: S.J.K.  
 SCALE: 1" = 20'  
 ACAD ID: 2022-08-24 Land Development Plans

**DMS**  
 REAL ESTATE DESIGNS AND PLANS  
 190 BROOKHEAD ROAD, SUITE #110  
 BETHLEHEM, PA, 18017  
 PHONE: (610) 997-8204

DRAWING NUMBER: **C-4**  
 SHEET: **4 OF 15**

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LOCATION MAP  
SCALE: 1" = 800'

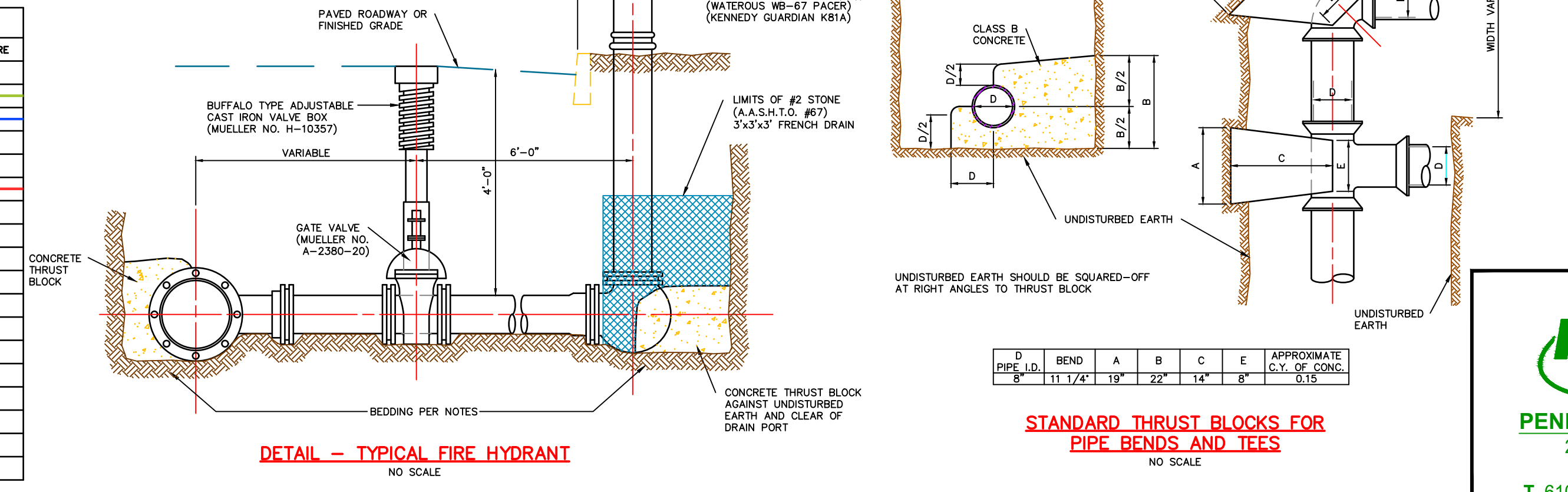
UTILITY NOTES:

- The Developer shall ensure that current as-built records are maintained during construction. Upon completion of construction, Certified (i.e. P.E. Stamped) as-built drawings shall be submitted by the developer's engineers. These as-built drawings shall be found acceptable by the City Engineer prior to release of any remaining security.
- In order to maintain continuity between plan revisions, any changes to a previous plan submission shall be flagged with a triangle. Any changes not flagged may be considered not approved. Flagged changes shall be referred to the appropriate revision date.
- All water lines, sanitary sewer lines, storm sewer lines and related appurtenances shall be constructed and installed in accordance with the approved plans and to the standards of the City of Bethlehem.
- Sanitary sewer mains shall be 8" P.V.C. unless noted otherwise.
- Sanitary sewer laterals shall be 6" P.V.C. unless noted otherwise.
- Sanitary sewer system extension is to be designed and constructed in accordance with the City of Bethlehem Sanitary Standard specifications.
- Eight (8") and six (6") water lines shall be Ductile Iron Pipe (D.I.P.), Class 52.
- A minimum separation distance of 18" vertical and 10' horizontal shall be maintained between water line and storm/sanitary sewer lines, as an alternative, the sewer line shall be encased for a minimum length of 15' centered on either side of the water line.
- All valve box and manhole covers shall have the word "WATER" cast on the top.
- All concrete shall have a minimum compression strength of 3000 PSI at the end of 28 days.
- All reinforcing steel to be deformed bars.
- No coupling of joints shall be covered with concrete.
- Water system extension is to be designed and constructed in accordance with the City of Bethlehem Water system standards and specifications.
- All construction methods and materials shall be in accordance with PennDOT Form 408, RC Standards and the City of Bethlehem standards.
- All building utilities, including Electrical power, Telephone and Cable Television lines, shall be installed underground, in accordance with prevailing agency standards.
- Exact depth and location of existing utilities to be field verified and adjustments to be made as required and as approved by the City Engineer.
- Relocation of existing utilities, if required, will be coordinated with respective utility companies.
- Utility service to buildings shown in approximate location. Actual location to be coordinated with and approved by the respective utility companies.
- Any inconsistencies or ambiguities in the drawings shall be immediately reported to DMS/Pennoni in writing, who shall promptly address such inconsistencies or ambiguities. Work performed by the contractor after his discovery of such inconsistencies or ambiguities shall be done at the contractor's sole risk.
- The owner/developer is responsible for construction of all improvements shown on these plans.
- The contractor shall inspect the existing site/project area conditions and verify all quantities and materials prior to the start of construction.
- All excavation, trenching, backfilling, and pavement restoration shall conform to applicable portions of the City of Bethlehem specifications for "Excavation, Trenching, and Backfilling for Utility Systems", current revision.
- All Backfill material is subject to City of Bethlehem approval.
- Class A Bedding: sand or screenings.
- All utility trench backfilling to be done in accordance with the City of Bethlehem specifications.
- PA, No. 2RC backfill (minimum 1'-6") shall normally be required in the following instances:
  - In Roadway pavement or paved shoulders.
  - In unpaved shoulders when the edge of the trench is less than 3 feet from the edge of pavement.
  - In driveways, Entrances, and parking areas, whether paved or unpaved.
  - In sidewalks.

BENCHMARK:  
TOP OF IRON PIN AT SOUTHWEST  
CORNER OF PROPERTY  
ELEV. = 400.39(KEYNET GPS)

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SERIAL #2012631234

LEGEND					
EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE	EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE
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□	CONCRETE MONUMENT	■	□	SANITARY SEWER LINE	□
○	LIGHT POLE	○	○	WATERLINE	○
○	UTILITY/POWER POLE	○	○	WATER VALVE	○
○	OVERHEAD ELECTRIC LINE	○	○	FIRE HYDRANT	○
○	TREE LINE	○	○	STORM SEWER LINE	○
○	15% TO 20% SLOPES	○	○	STORM INLET	○
○	OVER 20% SLOPES	○	○	STORM SEWER MANHOLE	○
○	ROAD CENTERLINE	○	○	BELL TEL. MANHOLE	○
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○	CONTOUR (MAJOR)	○	○	TO BE REMOVED	○
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○	STONE ROW	○	○	WETLANDS	○



**PENNONI ASSOCIATES INC.**  
2041 Avenue C, Suite 100  
Bethlehem, PA 18017  
T 610.231.0600 F 610.231.2033

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	10/7/22	PER CITY OF BETHLEHEM REVIEW LETTER DATED 5/10/22	SJK
NO.	DATE	DESCRIPTION	BY

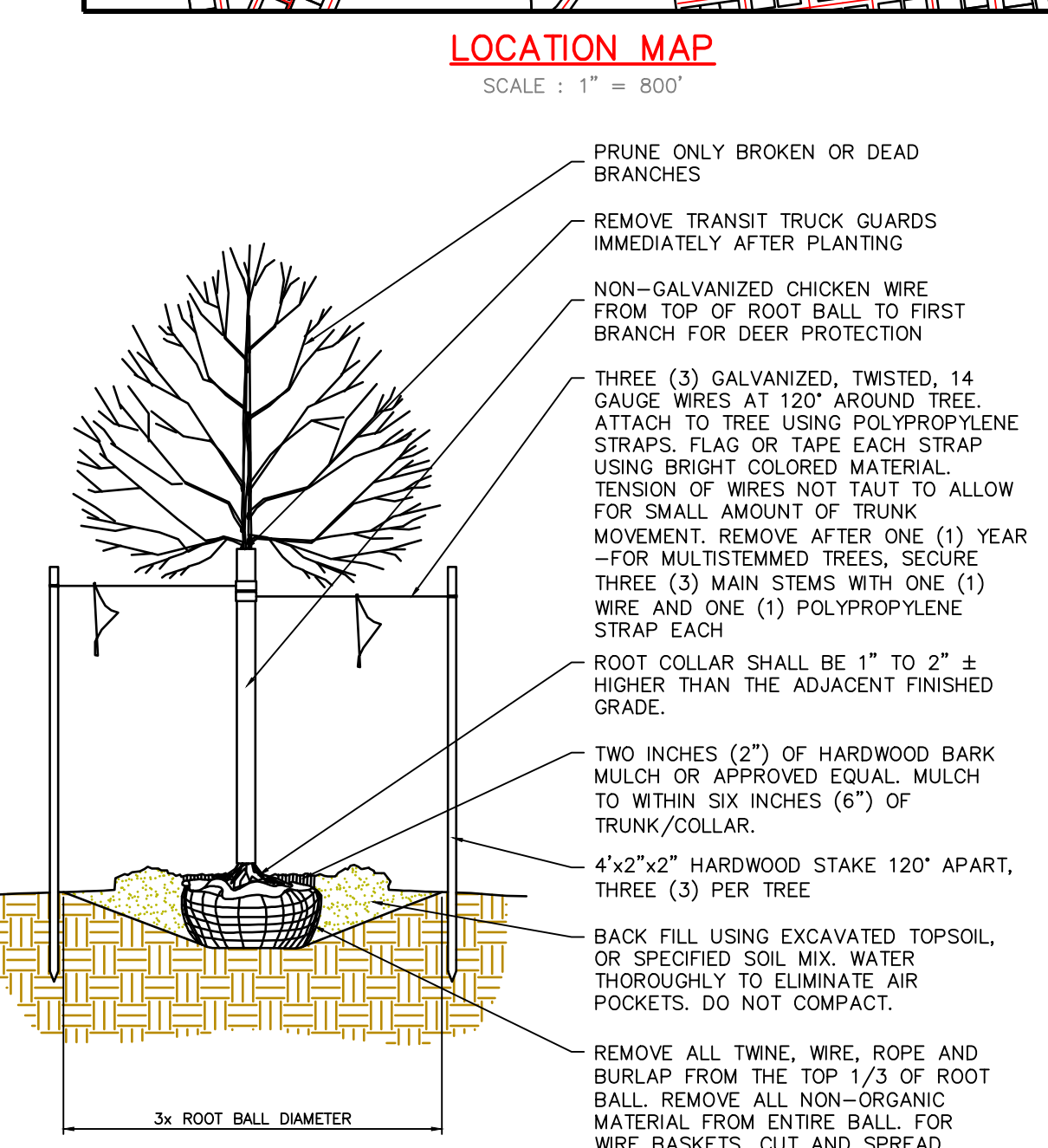
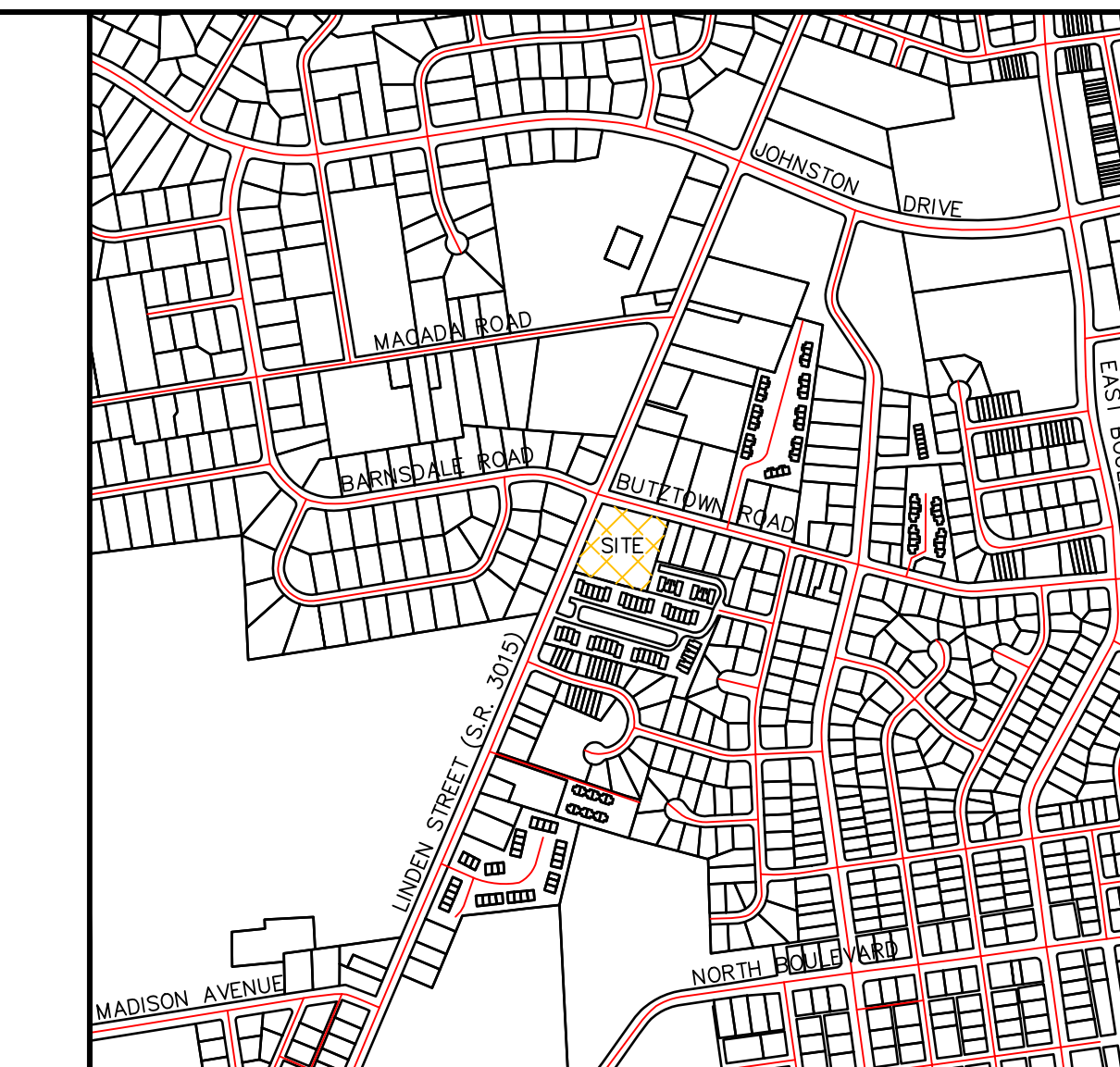
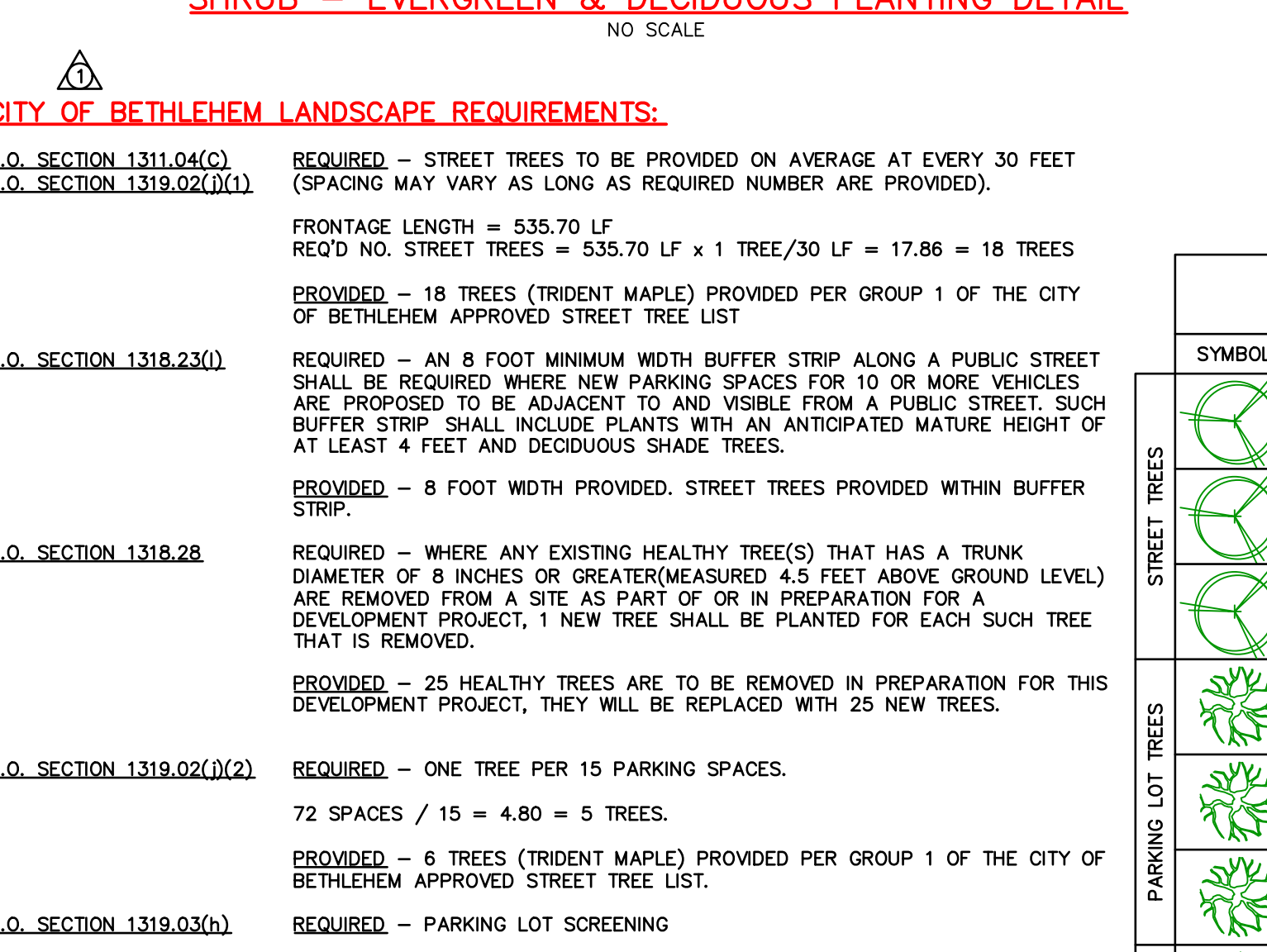
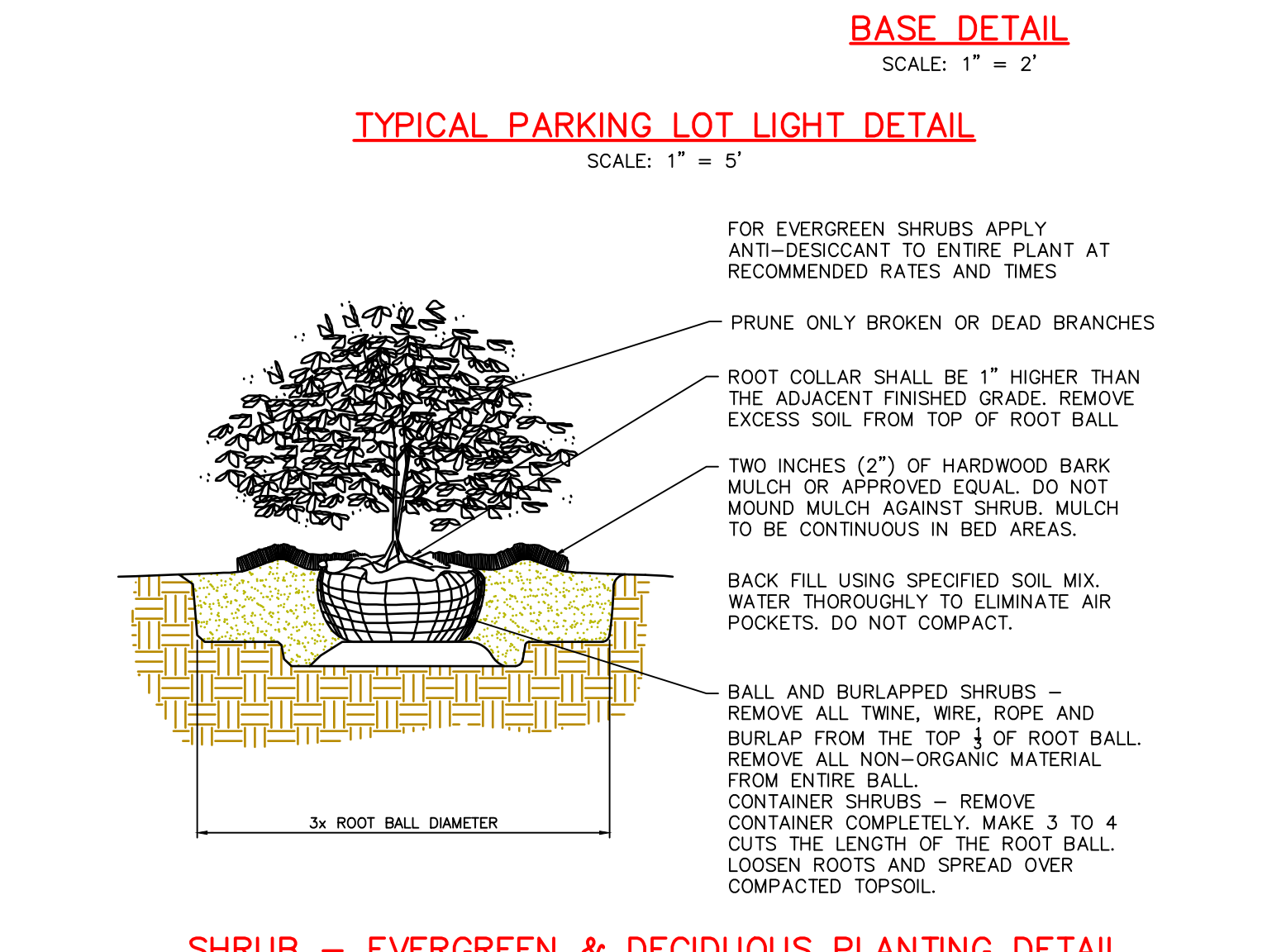
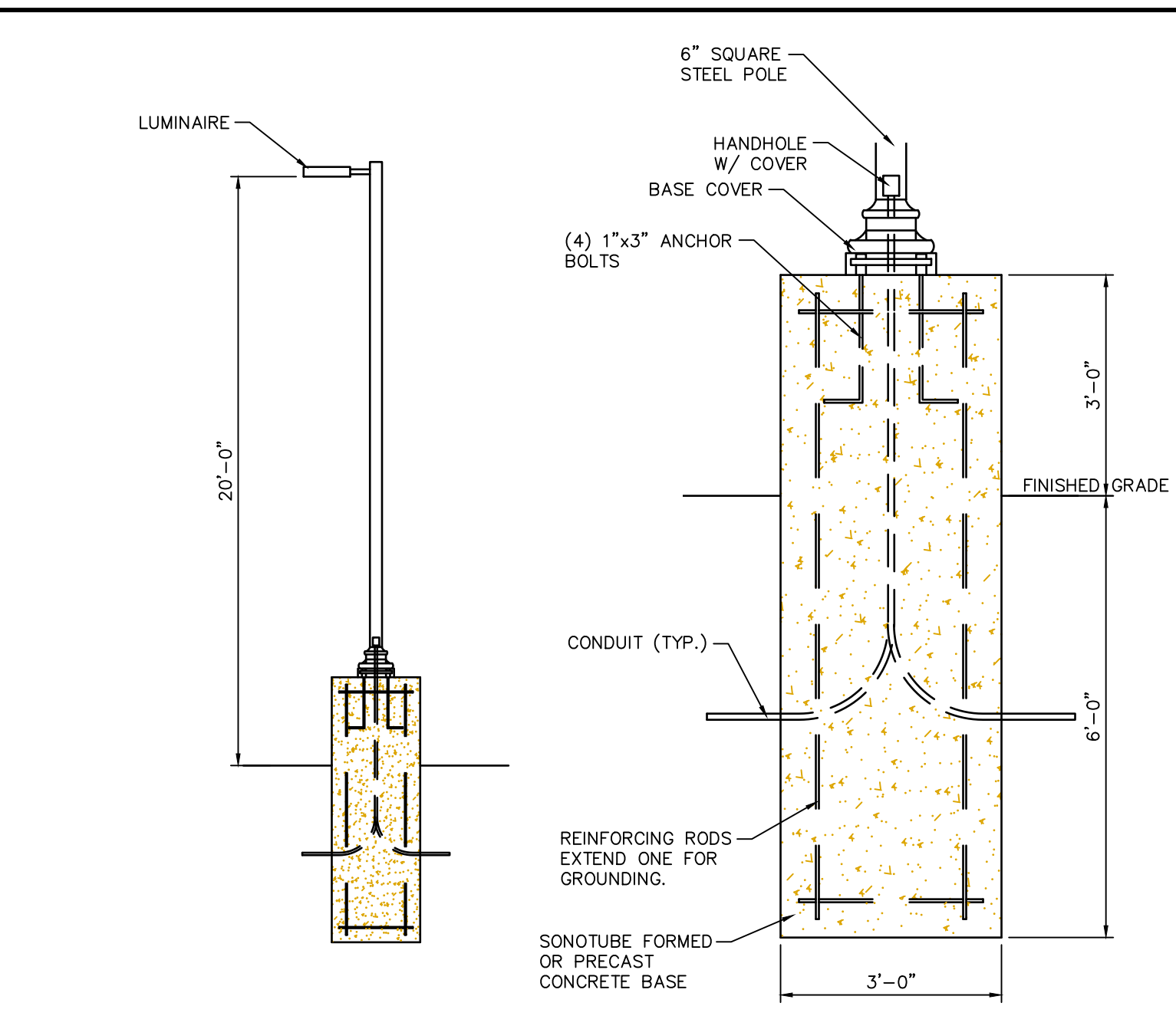
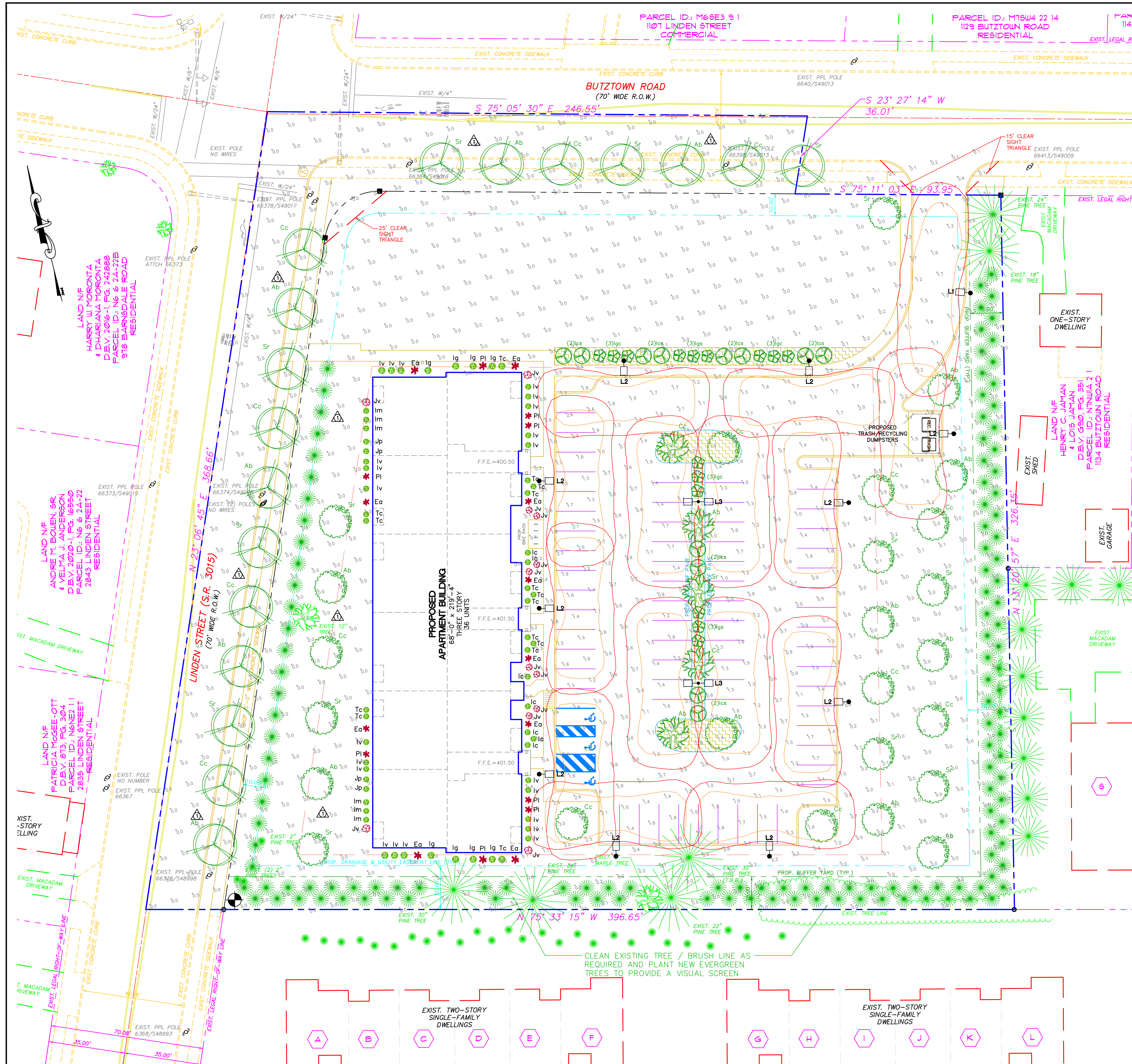
DATE: 3/22/2022  
DRAWN BY: S.J.K.  
CHECKED BY: S.J.K.  
SCALE: 1" = 20'  
ACAD ID: 2022-08-24 Land Development Plans

**UTILITY PLAN FOR 2854 LINDEN STREET**  
CITY OF BETHLEHEM  
14th WARD  
NORTHAMPTON COUNTY  
PENNSYLVANIA

**DMS**  
REAL ESTATE DESIGNS AND PLANS  
190 BROOKVIEW ROAD, SUITE #110  
BETHLEHEM, PA 18017  
PHONE: (610) 997-8204

DRAWING NUMBER:  
**C-5**  
SHEET:  
**5 OF 15**

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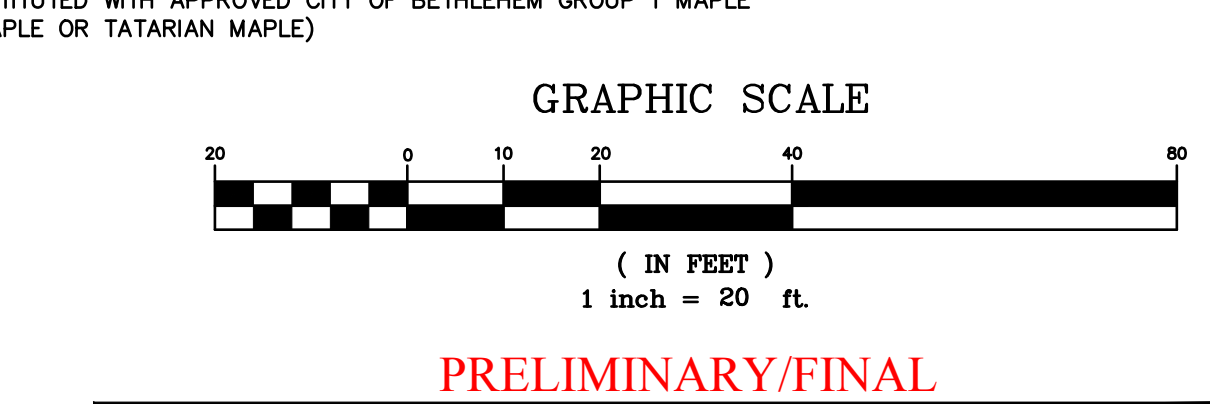


- CITY OF BETHLEHEM LANDSCAPE REQUIREMENTS:**
- Z.O. SECTION 1311.04(C) REQUIRED - STREET TREES TO BE PROVIDED ON AVERAGE AT EVERY 30 FEET (SPACING MAY VARY AS LONG AS REQUIRED NUMBER ARE PROVIDED).
  - Z.O. SECTION 1319.02(K)(1) FRONTAGE LENGTH = 535.70 LF  
REQ'D NO. STREET TREES = 535.70 LF x 1 TREE/30 LF = 17.86 = 18 TREES  
PROVIDED - 18 TREES (TRIDENT MAPLE) PROVIDED PER GROUP 1 OF THE CITY OF BETHLEHEM APPROVED STREET TREE LIST
  - Z.O. SECTION 1318.23(1) REQUIRED - AN 8 FOOT 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.  
PROVIDED - 8 FOOT WIDTH PROVIDED. STREET TREES PROVIDED WITHIN BUFFER STRIP.
  - Z.O. SECTION 1318.28 REQUIRED - WHERE AN EXISTING HEALTHY TREE(S) THAT HAS A TRUNK DIAMETER OF 8 INCHES OR GREATER (MEASURED 4.5 FEET ABOVE GROUND LEVEL) ARE REMOVED FROM A SITE AS PART OF OR IN PREPARATION FOR A DEVELOPMENT PROJECT, 1 NEW TREE SHALL BE PLANTED FOR EACH SUCH TREE THAT IS REMOVED.
  - Z.O. SECTION 1319.02(N)(2) PROVIDED - 25 HEALTHY TREES ARE TO BE REMOVED IN PREPARATION FOR THIS DEVELOPMENT PROJECT. THEY WILL BE REPLACED WITH 25 NEW TREES.  
REQUIRED - ONE TREE PER 15 PARKING SPACES.  
72 SPACES / 15 = 4.80 = 5 TREES.  
PROVIDED - 6 TREES (TRIDENT MAPLE) PROVIDED PER GROUP 1 OF THE CITY OF BETHLEHEM APPROVED STREET TREE LIST.
  - Z.O. SECTION 1319.03(h) REQUIRED - PARKING LOT SCREENING  
PROVIDED - ROW OF HOLLY TYPE SHRUBS PROVIDED ALONG NORTH SIDE OF PARKING AREA.  
REQUIRED - 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.
  - S.A.L.D.O. SECTION 1349.08(D)(1) PARKING LOT LANDSCAPE AREA  
REQUIRED - 2,802.37 SF (AREA HATCHED ON PLAN)

- CITY OF BETHLEHEM LANDSCAPING 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 TREE PROTECTION ZONE SHALL BE THE AREA ENCOMPASSED BY A CIRCLE WITH A RADIUS EXTENDING 1.25 FEET FROM THE TRUNK OF THE TREE FOR EVERY INCH DBH (DIAMETER AT BREAST HEIGHT) OF THE TREE.
  - VIOLATIONS OF THE TREE PROTECTION REQUIREMENTS ARE SUBJECT TO PENALTY PER CITY ORDINANCE.
  - ALL TREES ON PUBLIC PROPERTY ARE PROTECTED BY ORDINANCE. NO PRUNING, ROOT PRUNING OF ROOTS OVER ONE INCH (1") 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 PLANTS 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' IN HEIGHT AND HAVE A STRAIGHT TRUNK WITH THE FIRST LATERAL BRANCH AT 7' ABOVE THE ROOT BALL. TREES WITH AN UPRIGHT BRANCHING HABIT, SUCH AS ZELKOVA, MAY HAVE THE FIRST LATERAL BRANCH AT 6' ABOVE THE ROOT BALL.
  - ALL LANDSCAPING SHALL CONFORM TO THE CURRENT EDITION OF THE ARBORICULTURAL SPECIFICATIONS AND STANDARDS OR PRACTICE OF THE CITY OF BETHLEHEM.

**LANDSCAPE SCHEDULE**

SYMBOL	QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT
Ab*	6	Ab*	ACER BUERGERIANUM	TRIDENT MAPLE	2 1/2"	B & B
Cc	6	Cc	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2 1/2"	B & B
Sr	6	Sr	SYRINGA RETICULATA	JAPANESE LILAC	2 1/2"	B & B
Ab*	2	Ab*	ACER BUERGERIANUM	TRIDENT MAPLE	2 1/2"	B & B
Cc	2	Cc	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2 1/2"	B & B
Sr	1	Sr	SYRINGA RETICULATA	JAPANESE LILAC	2 1/2"	B & B
Ab*	9	Ab*	ACER BUERGERIANUM	TRIDENT MAPLE	2 1/2"	B & B
Cc	8	Cc	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2 1/2"	B & B
Sr	8	Sr	SYRINGA RETICULATA	JAPANESE LILAC	2 1/2"	B & B
lca	12	lca	ILEX CRANATA	JAPANESE HOLLY	36" SPREAD	B & B
lga	6	lga	ILEX GLABRA SHAMROCK	SHAMROCK HKBERRY HOLLY	24" SPREAD	CONTAINER
lgc	9	lgc	ILEX GLABRA COMPACTA	DWARF HKBERRY HOLLY	24" SPREAD	CONTAINER
			S.E.A.L.D.O. SECTION 1349.08(D)(1)	PARKING LOT LANDSCAPE AREA		



**LEGEND**

EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE	DESCRIPTION	PROPOSED FEATURE
○	IRON PIN	●	SANITARY SEWER MANHOLE	○
□	CONCRETE MONUMENT	■	SANITARY SEWER LINE	—
○	LIGHT POLE	—	WATERLINE	—
○	UTILITY/POWER POLE	—	WATER VALVE	—
—	OVERHEAD ELECTRIC LINE	—	FIRE HYDRANT	—
—	TREE LINE	—	STORM SEWER LINE	—
—	15% TO 25% SLOPES	—	STORM INLET	—
—	OVER 25% SLOPES	—	STORM SEWER MANHOLE	—
—	ROAD CENTERLINE	—	BELL TEL. MANHOLE	—
—	PROPERTY LINE	—	STREET SIGN	—
—	RIGHT-OF-WAY LINE	—	PIPE BOLLARD	—
—	BUILDING RESTRICTION LINE	—	EXISTING WELL	—
—	DRAINAGE & UTILITY EASEMENT	—	EXISTING SEPTIC TANK	—
—	CONTOUR (MINOR)	—	EXISTING ASPHALT AREA	—
—	CONTOUR (MAJOR)	—	TO BE REMOVED	—
—	SOIL BOUNDARY	—	EXISTING	—
—	FENCE	—	EXISTING	—
—	STONE ROW	—	SOIL TESTING	—
—		—	WETLANDS	—

**TREE PLANTING SCHEDULE**

REF.	QTY.	COMMON NAME	BOTANICAL NAME	SIZE	HEIGHT	COMMENT
Ab	24	Acer Buergerianum	Trident Maple	2 1/2"	---	B & B
Cc	13	Carpinus Caroliniana	American Hornbeam	2 1/2"	---	B & B
Pp	11	Blue Spruce	Picea pungens	6' - 7'	---	B & B
Pi	8	Euroygnus alatus	Burning Bush	---	---	Container
Pi	8	Prunus laurocerasus	Skip Cherry Laurel	---	---	Container
Iv	26	Ilex verticillata	Winterberry Laurel	---	---	Container
Ig	8	Ilex glabra	Hollyberry Holly	---	---	Container
Tc	12	Taxus cuspidata	Spreading Yew	---	---	Container
Jp	4	Juniperus x pfitzeriana	Gold Coast Juniper	---	---	Container
Pg	1	Picea glauca 'Conica'	Dwarf Alberta Spruce	---	---	Container
Jv	8	Juniperus virginiana	Grey Owl Juniper	---	---	Container
Iv	10	Ilex x meserveae	Blue Princess Holly	---	---	Container
Ic	10	Ilex crenata	Japanese Holly	---	---	Container

NOTE: TREE CALIPER SHALL BE MEASURED AT 6" ABOVE FINISHED GRADE.

**LUMINAIRE SCHEDULE**

SYMBOL	QTY.	TAG	ARRANGEMENT	FIXTURE TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	CCT	LLF	TOTAL WATTS	DELIVERED LUMENS
□	1	L1	SINGLE	P3-BC	AREA LIGHT TYPE 3 W/BACK SHIELD	BEACON PRODUCTS	VP-1-160L-35-4K7-3-BC	4000K	0.900	34.9	3969
□	2	L2	BACK TO BACK	P4W-BC	VP-1-160L-35-4K7-4W-BC	HUBBELL OUTDOOR	VP-1-160L-35-4K7-4W-BC	4000K	0.900	69.8	7076
□	10	L3	SINGLE	VP-1-160L-35-4K7-4W-BC	VP-1-160L-35-4K7-4W-BC	HUBBELL OUTDOOR	VP-1-160L-35-4K7-4W-BC	4000K	0.900	34.9	3538

FIXTURE MOUNTING HEIGHT: 20 FT.



**REVISIONS**

NO.	DATE	DESCRIPTION	BY
1	10/7/22	PER CITY OF BETHLEHEM REVIEW LETTER DATED 5/10/22	SJK
NO.	DATE	DESCRIPTION	BY

**PRELIMINARY/FINAL**  
**LANDSCAPING & LIGHTING PLAN**  
FOR  
**2854 LINDEN STREET**

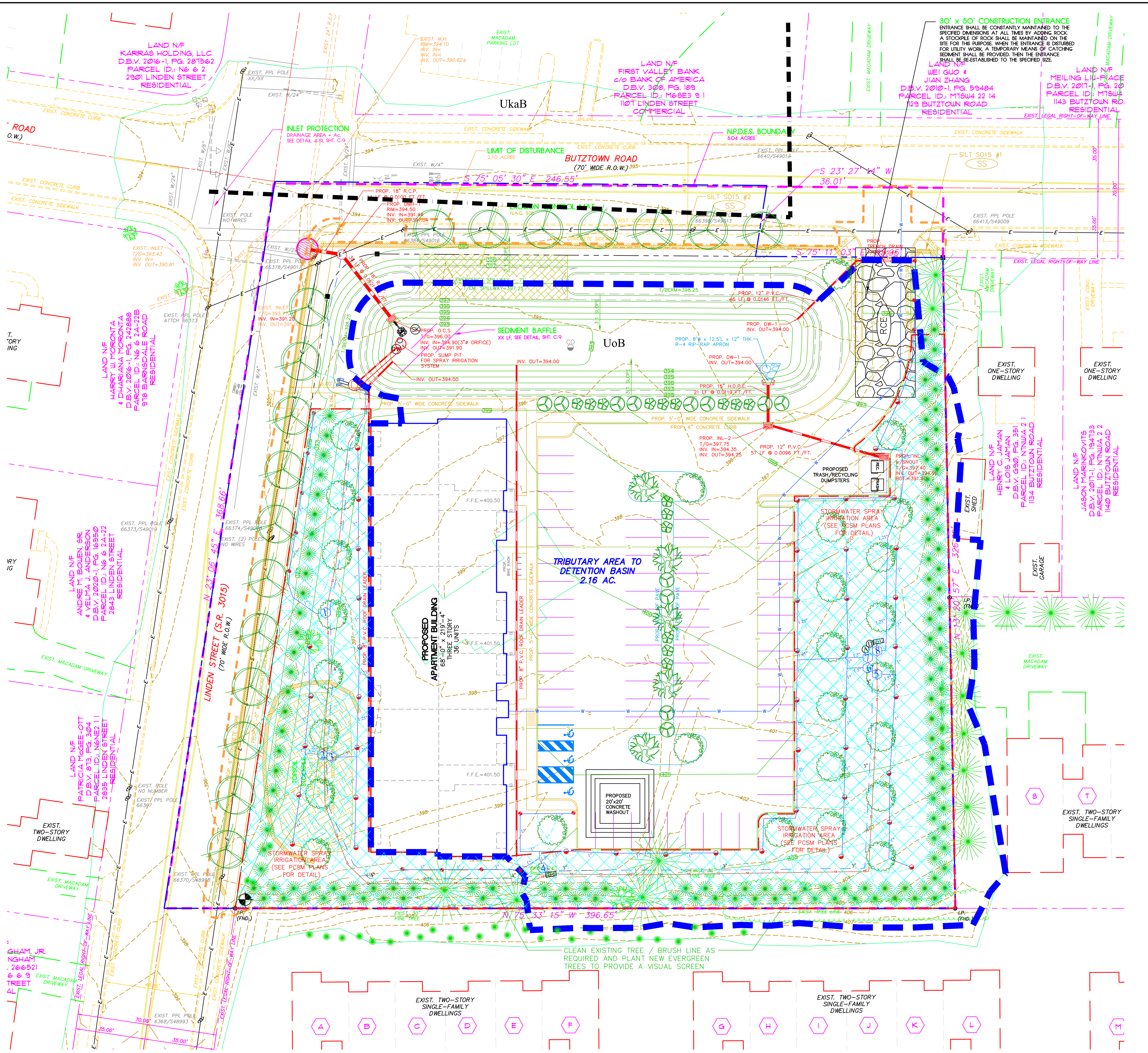
CITY OF BETHLEHEM  
14th WARD  
NORTHAMPTON COUNTY  
PENNSYLVANIA

DATE: 3/22/2022  
DRAWN BY: SJK  
CHECKED BY: SJK  
SCALE: 1" = 20'  
ACAD ID: 2022-08-24 Land Development Plan

DMS  
degrees minutes seconds  
REAL ESTATE DESIGNS AND PLANS  
190 BRODHEAD ROAD, SUITE #110  
BETHLEHEM, PA 18017  
PHONE: (610) 997-8204

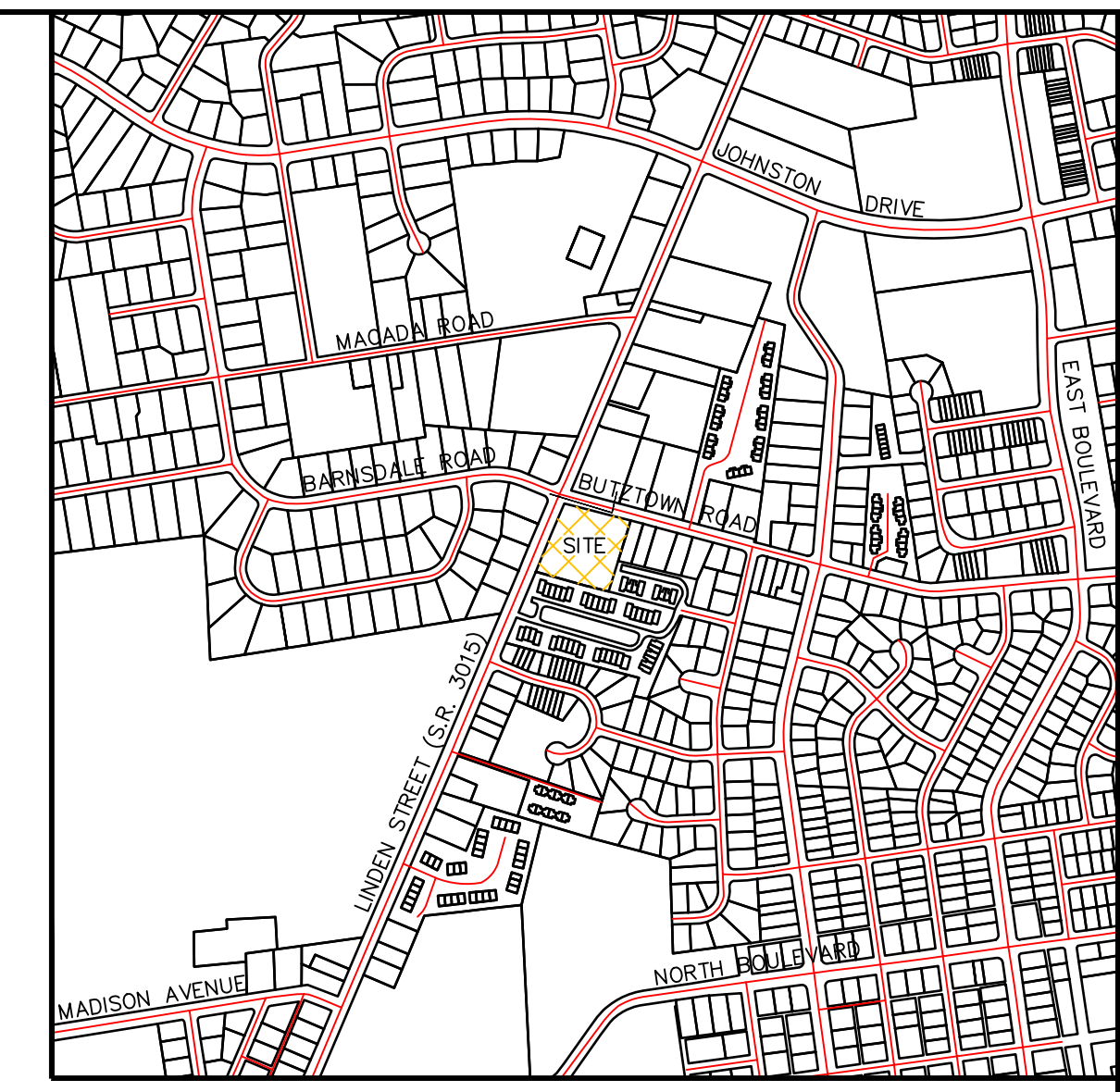
DRAWING NUMBER:  
**C-6**  
SHEET:  
**6 OF 15**

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**SOIL EROSION & SEDIMENTATION CONTROL LEGEND**

MEASURE/FACILITY	ILLUSTRATION	SYMBOL
RIP-RAP APRON	[Symbol]	RR
ROCK CONSTRUCTION ENTRANCE	[Symbol]	RE
ROCK FILTERS	[Symbol]	RF
CLEAN OUT STAKE	[Symbol]	CS
TEMPORARY SKIMMER	[Symbol]	TS
DE-WATERING FACILITY	[Symbol]	DF
SILT SO15 - 18"	[Symbol]	SS
TEMPORARY SEEDING	[Symbol]	SE
INLET PROTECTION	[Symbol]	IP
TEMPORARY CONSTRUCTION (ORANGE) FENCE	[Symbol]	CF
LIMIT OF DISTURBANCE	[Symbol]	LD
N.P.D.E.S. PERMIT BOUNDARY	[Symbol]	NPD
MAX. DURING CONST. TRIBUTARY AREA TO SED. BASIN	[Symbol]	TA
TEMPORARY GRADING	[Symbol]	TG
EROSION CONTROL MAT N.A.G. = S75BN	[Symbol]	EM
STAPLE PATTERN "D"	[Symbol]	SD
EROSION CONTROL MAT N.A.G. = S75	[Symbol]	EM
STAPLE PATTERN "C"	[Symbol]	SC



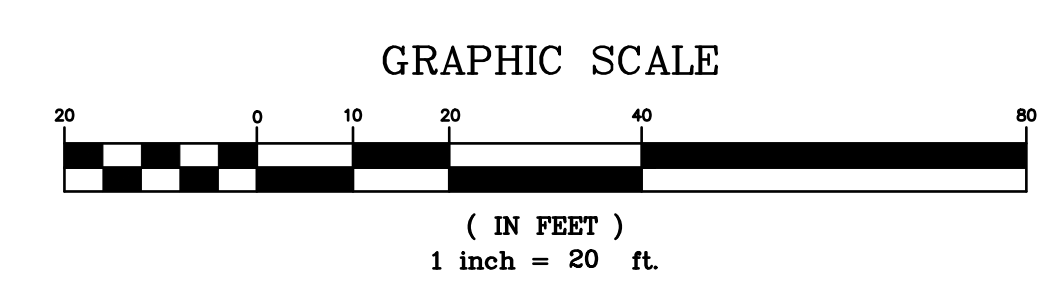
**NOTE:**  
 AT LEAST SEVEN (7) DAYS PRIOR TO THE START OF ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LAND OWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND A REPRESENTATIVE OF THE NORTHAMPTON COUNTY CONSERVATION DISTRICT TO AN ON-SITE MEETING.

- GENERAL NOTES:**
- The Contractor shall clean all accumulated sediment and silt from the pond at the end of the construction, and return the pond to its original design condition.
  - The maintenance of the storm water facilities, including the detention pond, shall be the owner's responsibility. The owner's deed, and the deeds to any subsequent owner, shall note that the owner shall accept the maintenance responsibilities. The City of Bethlehem shall be permitted to inspect the storm water facilities on at least an annual schedule to ensure that any necessary corrective work is performed in a timely manner.
  - In order to maintain continuity between plan revisions, any changes to a previous plan revision shall be flagged with a triangle. Any changes not referenced to the appropriate revision date.
  - By submission of these plans the engineer on record certifies that these plans are in complete conformance with the City of Bethlehem Storm Water Management Ordinance.
  - All public inlets shall have inlet markers. The design of the inlet markers shall be approved by the City Engineer.
  - The drainage easement provides for the flow of stormwater across lots, and may not be altered without the written permission of the City Engineer. No obstructions such as planting berms or fences may be installed in the drainage easements areas without sufficient provision for the passage of stormwater, and any such proposed provision shall be approved in writing by the City Engineer.

**SURFACE WATERS & CHAPTER 93 CLASSIFICATION**  
 THE CHAPTER 93 WATERCOURSE RECEIVING THE RUNOFF FROM THIS SITE IS THE NANCY RUN CREEK.  
 CHAPTER 93 CLASSIFICATION: HQ-CWF, MF.

**LEGEND**

EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE	EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE
[Symbol]	IRON PIN	[Symbol]	[Symbol]	SANITARY SEWER MANHOLE	[Symbol]
[Symbol]	CONCRETE MONUMENT	[Symbol]	[Symbol]	SANITARY SEWER LINE	[Symbol]
[Symbol]	LIGHT POLE	[Symbol]	[Symbol]	WATERLINE	[Symbol]
[Symbol]	UTILITY/POWER POLE	[Symbol]	[Symbol]	WATER VALVE	[Symbol]
[Symbol]	OVERHEAD ELECTRIC LINE	[Symbol]	[Symbol]	FIRE HYDRANT	[Symbol]
[Symbol]	TREE LINE	[Symbol]	[Symbol]	STORM SEWER LINE	[Symbol]
[Symbol]	10% TO 25% SLOPES	[Symbol]	[Symbol]	STORM WELLS	[Symbol]
[Symbol]	ROAD CENTERLINE	[Symbol]	[Symbol]	STORM SEWER MANHOLE	[Symbol]
[Symbol]	PROPERTY LINE	[Symbol]	[Symbol]	BELL TEL. MANHOLE	[Symbol]
[Symbol]	RIGHT-OF-WAY LINE	[Symbol]	[Symbol]	STREET SIGN	[Symbol]
[Symbol]	BUILDING RESTRICTION LINE	[Symbol]	[Symbol]	PIPE BOLLARD	[Symbol]
[Symbol]	DRAINAGE & UTILITY EASEMENT	[Symbol]	[Symbol]	EXISTING WELL	[Symbol]
[Symbol]	CONTOUR (MAJOR)	[Symbol]	[Symbol]	EXISTING SEPTIC TANK	[Symbol]
[Symbol]	CONTOUR (MINOR)	[Symbol]	[Symbol]	EXISTING ABSORPTION AREA	[Symbol]
[Symbol]	SOIL BOUNDARY	[Symbol]	[Symbol]	TO BE REMOVED	[Symbol]
[Symbol]	FENCE	[Symbol]	[Symbol]	EXISTING	[Symbol]
[Symbol]	STONE ROW	[Symbol]	[Symbol]	SOIL TESTING	[Symbol]
[Symbol]		[Symbol]	[Symbol]	WETLANDS	[Symbol]



**CALL BEFORE YOU DIG!**  
 PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND TO WORKING DAYS IN DESIGN STAGE - STOP CALL  
 Pennsylvania One Call System, Inc.  
 1-800-242-1776  
 SERIAL #2012631234

**BENCHMARK:**  
 TOP OF IRON PIN AT SOUTHWEST CORNER OF PROPERTY  
 ELEV. = 400.39 (KEYNET GPS)

**PENNONI ASSOCIATES INC.**  
 2041 Avenue C, Suite 100  
 Bethlehem, PA 18017  
 T 610.231.0600 F 610.231.2033

**REVISIONS**

NO.	DATE	DESCRIPTION	BY
1	10/7/22	PER CITY OF BETHLEHEM REVIEW LETTER DATED 5/10/22	SJK

**PRELIMINARY/FINAL**  
**SOIL EROSION & SEDIMENTATION POLLUTION CONTROL PLAN**  
 FOR  
**2854 LINDEN STREET**  
 CITY OF BETHLEHEM  
 14th WARD  
 NORTHAMPTON COUNTY  
 PENNSYLVANIA

DATE: 3/22/2023  
 DRAWN BY: S.J.K.  
 CHECKED BY: S.J.K.  
 SCALE: 1" = 20'  
 ACAD ID: 2022-08-24 Land Development Plans

**DMS**  
 REAL ESTATE DESIGNS AND PLANS  
 190 BROADHEAD ROAD, SUITE #110  
 BETHLEHEM, PA 18017  
 PHONE: (610) 997-8204

DRAWING NUMBER: **C-7**  
 SHEET: **7 OF 15**

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**EROSION AND SEDIMENTATION 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 E&S PLAN, INCLUDING ACTIVITIES SUCH AS STOCKPILE MANAGEMENT (MINIMUM BUFFER DISTANCE), STABILIZATION OF EXPOSED SOILS, EROSION CONTROL, AND DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE ACCOMPLISHED OUTSIDE OF THE BUFFERS.
- ALL WETLANDS MUST BE DELINEATED AND PROTECTED WITH ORANGE SAFETY FENCE PRIOR TO ANY EARTH MOVING ACTIVITY.
- STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
- CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
- ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION AND CONSTRUCTION MATERIALS/WASTES.
- UNDERGROUND UTILITIES CUTTING THROUGH AND ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LININGS SHALL BE INSTALLED AND PROTECTED IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
- CHANNELS HAVING RIP-RAP, RENO MATTRASS, OR CABON LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
- SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
- SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THRU PARTIES.
- BAFFLES MUST BE INSTALLED TO ALLOW BASIN MAINTENANCE AND CLEAN OUT.
- ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
- UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 2:1V OR STEEPER, WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN DRAWINGS AND/OR DETAIL SHEETS.
- FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROCKS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE FILL MATERIAL SHALL BE COMPACTED IN MAXIMUM 4" LAYERED LIFTS AT 95% DENSITY.

**FILL MATERIALS**

WHEN FILL IS TO BE IMPORTED FROM OFF-SITE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THAT THE FILL IS CLEAN FILL AND TO PERFORM THE ENVIRONMENTAL DUE DILIGENCE. MATERIAL THAT IS BEING USED FROM ON-SITE IS NOT REQUIRED TO BE DETERMINED AS CLEAN FILL BY THE CONTRACTOR. HOWEVER, IT IS A BELIEF THAT A SPILL OR RELEASE OF A REGULATED SUBSTANCE OCCURRED ON-SITE. CLEAN FILL IS DEFINED AS UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIALS. THE TERM INCLUDES SOIL, ROCK, STABILIZED MATERIAL, USE ASPHALT, AND BRICK. BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION MATERIALS IS SEPARATE FROM OTHER WASTE AND IS BEING PROCESSED FOR RE-USE. THIS TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATER OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. THE TERM "USE ASPHALT" DOES NOT INCLUDE MULCHED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)

ENVIRONMENTAL DUE DILIGENCE: INVESTIGATIVE TECHNIQUES, INCLUDING BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANDBORN SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LATEST INVESTIGATIVE REPORT INDICATES THAT THE FILL MAY HAVE BEEN SUBJECT TO A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY THE SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEP'S POLICY "MANAGEMENT OF FILL".

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEP'S MUNICIPAL OR REGIONAL WASTE REGULATIONS BASED ON 25 PA. CODE 2601.1 ET. SEQ. 271 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.

**STABILIZATION NOTES**

UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY, THE OPERATOR SHALL STABILIZE IMMEDIATELY THE DISTURBED AREAS TO PROTECT FROM ACCELERATED EROSION. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATE. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MAY BE STABILIZED IN ACCORDANCE WITH TEMPORARY SEEDING SPECIFICATIONS. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN 1 YEAR, MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS. ALL TOPSOIL STOCKPILES MUST BE STABILIZED IMMEDIATELY.

HAY OR STRAW MULCH MUST BE APPLIED AT RATES OF AT LEAST 3.0 TONS PER ACRE.

UNTIL THE SITE HAS ACHIEVED FINAL STABILIZATION, THE OWNER AND/OR CONTRACTOR SHALL PROPERLY IMPLEMENT, OPERATE AND MAINTAIN ALL THE BEST MANAGEMENT PRACTICES. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROL MEASURES 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. REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY IF THE E&S BMP'S FAIL TO PERFORM EXPECTED FUNCTIONS. A REPLACEMENT BMP'S, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

16. A LOG SHOWING DATES THAT E&S BMP'S 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.

17. 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 SEDIMENT BE SHOVED, OR SHOVED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

18. ALL SEDIMENT REMOVED FROM BMP'S SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. SEDIMENT REMOVED FROM BMP'S SHALL BE DISPOSED OF IN LANDSCAPED AREAS, SUCH AS WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.

19. 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 THE PLACEMENT OF TOPSOIL AREAS TO BE VEGETATED SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL. IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.

20. 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.

21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

22. 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.

23. FROZEN MATERIALS OR SOFT, MUCKY, OF HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

25. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

26. 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.

27. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUB-AREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR OTHER PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THIS 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 REVEALED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.

28. 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.

29. EROSION AND SEDIMENT BMP'S MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMP'S. E&S BMP'S 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.

30. 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 THE REMOVAL/CONVERSION OF THE BMP'S.

**SEEDING SPECIFICATIONS:**

**SPECIFICATIONS:**  
 THE DEPARTMENT RECOMMENDS THE USE OF THE PENN STATE AGRONOMY GUIDE AS THE STANDARD TO USE FOR SELECTION OF SPECIES, SEED SPECIFICATIONS, MIXTURES, LIMING AND FERTILIZING, TIME OF SEEDING, AND SEEDING METHODS. SPECIFICATIONS FOR THESE ITEMS MAY ALSO BE OBTAINED FROM THE PENN STATE EROSION CONTROL & CONSERVATION PLANTINGS ON NON-CROPLAND OR BY CONTACTING THE APPLICABLE COUNTY CONSERVATION DISTRICT. UPON THAT REFERENCE MUST BE USED TO SELECTION OF A REFERENCE, PROVIDE ALL SPECIFICATIONS FOR SEEDING, MULCHING, AND SOIL AMENDMENTS.

THE FOLLOWING SPECIFICATION WILL BE USED FOR THIS PROJECT:

TEMPORARY	
SPECIES:	ANNUAL RYEGRASS
APPLICATION RATE:	40 lbs/ac
FERTILIZER TYPE:	10-10-10
FERTILIZER APPLICATION RATE:	500 lbs/ac
LIMING TYPE:	AGRICULTURAL LIME
MULCH TYPE:	1 1/2" HAY OR STRAW
MULCHING RATE:	6 t/ac
MULCHING RATE:	1 1/2" HAY OR STRAW
ANCHOR MATERIAL:	WOOD CELLOLASE
ANCHORING METHOD:	BROADCAST
SEEDING SEASON DATES:	MARCH 15 - NOV 15

PERMANENT	
TOPSOIL PLACEMENT DEPTH:	6 INCHES
SPECIES:	PERENNIAL RYEGRASS MIX, CREEPING RED FESCUE, KENTUCKY BLUEGRASS MIX
% PURE LIME SEED:	90-85-81%
APPLICATION RATE:	40 lbs/ac
FERTILIZER TYPE:	10-20-20
FERTILIZER APPLICATION RATE:	1,000 lbs/ac
LIMING TYPE:	AGRICULTURAL LIME
MULCH TYPE:	6 t/ac
MULCHING RATE:	1 1/2" HAY OR STRAW
MULCHING RATE:	6 t/ac
ANCHOR MATERIAL:	NON-EMULSIFIED ASPHALT
ANCHORING METHOD:	SPRAY
RATE OF ANCHOR MATERIAL APPLICATION:	31 GAL/1,000 sq
SEEDING SEASON DATES:	MARCH 15-JUN, AUG 1-NOV 15

PERMANENT STEEP SLOPES	
TOPSOIL PLACEMENT DEPTH:	6 INCHES
SPECIES:	PERENNIAL RYEGRASS MIX, CREEPING RED FESCUE, KENTUCKY BLUEGRASS MIX
% PURE LIME SEED:	90-85-81%
APPLICATION RATE:	40 lbs/ac
FERTILIZER TYPE:	10-20-20
FERTILIZER APPLICATION RATE:	1,000 lbs/ac
LIMING TYPE:	AGRICULTURAL LIME
MULCH TYPE:	6 t/ac
MULCHING RATE:	1 1/2" HAY OR STRAW
MULCHING RATE:	6 t/ac
ANCHOR MATERIAL:	NON-EMULSIFIED ASPHALT
ANCHORING METHOD:	SPRAY
RATE OF ANCHOR MATERIAL APPLICATION:	31 GAL/1,000 sq
SEEDING SEASON DATES:	MARCH 15-JUN, AUG 1-NOV 15

**E&S BMP'S MAINTENANCE**

THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITH THIS PLAN.

MAINTENANCE ITEMS INCLUDED:

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

TOPSOIL STOCKPILE - STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER. SEDIMENT REMOVED FROM ALL E&S FACILITIES SHALL BE PLACED ON TOPSOIL STOCKPILE AND SEED AND MULCHED IMMEDIATELY.

COMPOSITE FILTER SOCK - CLEAN OUT UPON SEDIMENT REACHING ONE HALF THE SOCK HEIGHT. REPLACING ANY DAMAGED PORTS OR SOCKS IMMEDIATELY.

ROCK FILTER - SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH ONE-HALF THE HEIGHT OF THE FILTER. IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER AND STABILIZE ANY DISTURBANCE.

CONCRETE WASHOUT FACILITY - MUST BE MAINTAINED SO THAT NO WASH WATER FROM VEHICLES CAN REACH ANY SURFACE WATER. THEY MUST NOT BE LOCATED WITHIN 50' OF STORM DRAINS, OPEN DITCHES, OR SURFACE WATERS. ONCE FULL, PROPERLY DISPOSE OF THE MATERIALS BY RECYCLING.

PUMPED WATER FILTER BAG - A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR FILTER BAGS MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL. FILTER BAGS SHALL BE LOCATED IN WELL-VEGETATED AREAS AND DISCHARGE INTO STABLE, EROSION RESISTANT AREAS WITH SLOPES GREATER THAN 2:1. ADDITIONAL MEASURES SHALL BE INSTALLED IF ANY PROBLEMS ARISE. PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

ROCK FILTER OUTLET - THE ROCK FILTER OUTLET SHALL BE REMOVED WHEN CLOGGED WITH SEDIMENT. MATERIALS MUST BE WASHED COMPLETELY FREE OF ALL CONSTRUCTION MATERIALS OR NEW ROCK USED TO RE-BUILD THE FILTER. UNDER NO CIRCUMSTANCES IS THIS SEDIMENT REMOVED FROM THE FILTER DURING CLEANING TO BE WASHED OFF OF THE SITE.

TEMPORARY SEEDING AND MULCHING - ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED SHALL BE SEEDED AND MULCHED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. REFER TO SPECIFICATIONS FOR SEEDING AND MULCHING.

SEDIMENT REMOVED DURING BMP MAINTENANCE - SEDIMENT REMOVED FROM BMP'S SHALL BE PLACED ON THE TOPSOIL STOCKPILE AND STABILIZED IMMEDIATELY.

UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY BY THE CONTRACTOR. MAINTENANCE MUST INCLUDE INSPECTION OF ALL E&S FACILITIES AFTER EACH RUNOFF EVENT AND ON A MINIMUM OF A WEEKLY BASIS. ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, AND REMULCHING MUST BE PERFORMED IMMEDIATELY. ANY MEASURES INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE, OR OF STABILIZING THE SURFACE, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS.

INSPECTIONS FOR ALL E&S BMP'S SHALL BE DONE BY QUALIFIED PERSONNEL TO ENSURE THAT THE E&S BMP'S ARE WORKING CORRECTLY. A LOG SHOWING DATES THAT ALL E&S BMP'S 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.

**MAINTENANCE PROGRAM**

THE SOIL EROSION AND SEDIMENT POLLUTION CONTROL MEASURES/DEVICES INSTALLED SHALL BE ADEQUATELY MAINTAINED UNTIL SUCH MEASURES ARE PERMANENTLY STABILIZED.

ALL EROSION AND SEDIMENTATION CONTROL FACILITIES SHALL BE INSPECTED WEEKLY AND FOLLOWING EACH RUNOFF EVENT. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND REMEDIATION, MUST BE PERFORMED IMMEDIATELY. MAINTENANCE MEASURES ARE INCLUDED WITH THE CONSTRUCTION SPECIFICATIONS MENTIONED EARLIER. PROPER INSTALLATION, MAINTENANCE AND REPAIR OF ALL EROSION AND SEDIMENT POLLUTION CONTROL MEASURES (BOTH TEMPORARY AND PERMANENT) IS THE RESPONSIBILITY OF THE CONTRACTOR. MAINTENANCE INVOLVES REPAIR AND/OR REPLACEMENT (AS REQUIRED) OF ALL THE DEVICES INSTALLED ON THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ANY ADDITIONAL FACILITIES THAT MAY BE REQUIRED DUE TO SITE CONDITIONS SHALL BE INSTALLED AND MAINTAINED AS NEEDED BY THE CONTRACTOR.

ANY DRY FILL OR SEDIMENT HALVED OFF-SITE MUST BE TAKEN TO A LOCATION WITH AN EROSION AND SEDIMENT CONTROL PLAN WHICH HAS BEEN REVIEWED BY THE LOCAL CONSERVATION DISTRICT FOR ADEQUACY.

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS IN ACCORDANCE WITH THE DEPARTMENT'S SOIL WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 2601.1 ET. SEQ. 271.1 ET. SEQ. AND 287.1 ET. SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON THE SITE.

THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL PROPOSED SOIL AND/OR ROCK SLOPES AND BARRIERS, REGARDLESS OF THEIR LOCATION. COMPLETE INSPECTION REPORTS AFTER EACH RUNOFF EVENT.

**RECYCLING/DISPOSAL OF PROJECT WASTES**

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOIL WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 2601.1 ET. SEQ. 271.1 ET. SEQ. AND 287.1 ET. SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP OR DISCHARGE ANY BUILDING MATERIAL WASTES ON THE SITE.

"PROCEDURES WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE WILL BE UNDERTAKEN IN ACCORDANCE WITH DEPARTMENT REGULATIONS."

INDIVIDUALS RESPONSIBLE FOR EARTH DISTURBANCE ACTIVITIES MUST ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS. CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. MEASURES SHOULD BE PLANNED AND IMPLEMENTED FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL, WHICHEVER APPLICABLE. RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL.

HAZARDOUS MATERIALS OR WASTES ARE NOT ANTICIPATED FROM THE CONSTRUCTION OF THE SITE. THE SITE CONTRACTOR MUST HOWEVER MAKE PROVISIONS FOR WASTE ASSOCIATED WITH EARTH MOVING AND CONSTRUCTION EQUIPMENT AS REQUIRED AND IN ACCORDANCE WITH REGULATIONS BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DEPARTMENT OF ENVIRONMENTAL RESOURCES, FEDERAL, STATE, AND LOCAL REGULATIONS REGARDING THE TRANSPORTATION, STORAGE, AND USE OF FUELS, CONSTRUCTION MATERIALS, AND EQUIPMENT.

SHOULD IT BE REQUIRED THAT RECYCLING OR DISPOSAL OF MATERIALS IS NECESSARY, THE CONTRACTOR MUST CONTACT THE COUNTY CONSERVATION DISTRICT AND/OR THE LOCAL PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICES FOR FURTHER ASSISTANCE TO OBTAIN THE REQUIRED INSTRUCTIONS AND/OR PERMITS FOR TRANSPORTING, STORING, USING OR DISPOSING CONSTRUCTION WASTES.

MATERIALS ASSOCIATED WITH BMP INSTALLATION AND REMOVAL SHALL BE REMOVED FROM THE SITE AT THE END OF STABILIZATION/MATERIAL WHICH CANNOT BE RECYCLED BY THE CONTRACTOR FOR FUTURE USE MUST BE DISPOSED OF IN AN APPROPRIATE MANNER AS DICTATED BY DEPARTMENT REGULATIONS. THESE ANY INCLUDE SILT FENCE, PLASTIC LINERS, CONCRETE, EXTRANEOUS MATERIALS, AND OTHER NON-REUSABLE ITEMS. MATERIALS SUCH AS SUPER SILT FENCE, CHAIN LINK FENCE, TREE PROTECTION, OR OTHER MATERIALS, WHICH HAVE NOT BEEN USED OR CAN BE RETAINED BY THE CONTRACTOR FOR FUTURE USE, UPON APPROVAL AND AGREEMENT OF THE OWNER, AND BE REMOVED FROM THE SITE IN AN APPROPRIATE MANNER.

EXTRANEOUS SOIL AND ROCK MATERIAL DUE TO BMP INSTALLATION, USE, AND REMOVAL SHALL BE DISPOSED OF IN A PROPER MANNER. IT IS RECOMMENDED THAT THESE MATERIALS EITHER BE DISTRIBUTED THROUGHOUT THE SITE AS NEEDED, OR A MINOR STOCKPILE BE MAINTAINED ON THE SITE. IF THESE MATERIALS ARE MAINTAINED, THEY ARE REQUIRED FOR MAINTENANCE OF IMPLEMENTED BMP'S.

THE OWNER SHALL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS RELATED ITEMS INCLUDED IN THIS PLAN.

**RECYCLING/DISPOSAL OF PROJECT WASTES NOTE**

DURING CONSTRUCTION, WASTE SUCH AS: BRICKS, CONCRETE, PLASTERBOARD, TIMBER, SOIL, AND ALL OTHER CONSTRUCTION SITE WASTES MUST BE PROPERLY MANAGED AND DISPOSED TO REDUCE THE RISK OF POLLUTION FROM SUCH MATERIALS. PREVENTION AND CLEANUP MEASURES CAN REDUCE THE POTENTIAL FOR STORMWATER RUNOFF TO MOBILIZE CONSTRUCTION SITE WASTES AND CONTAMINATE SURFACE OR GROUND WATER.

PROPER MANAGEMENT AND DISPOSAL OF WASTES SHOULD BE PRACTICED AT THE CONSTRUCTION SITE. WASTES SHOULD BE STORED IN COVERED MATERIALS THAT WILL BE DISPLACED BY RAIN FALL OR STORM WATER RUNOFF.

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOIL WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 2601.1 ET. SEQ. 271.1 ET. SEQ. AND 287.1 ET. SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP OR DISCHARGE ANY BUILDING MATERIAL WASTES ON THE SITE.

**BMP SEDIMENT REMOVAL NOTE**

SEDIMENT REMOVED FROM BMP'S SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS, OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.

**CONSTRUCTION SEQUENCE**

CONSTRUCTION IS ANTICIPATED BEGIN UPON PLAN APPROVAL.

THE FOLLOWING SCHEDULE IS TO BE USED FOR STAGING AND INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES.

ALL EROSION & SEDIMENTATION CONTROLS MUST BE IMPLEMENTED BEFORE CONSTRUCTION BEGINS.

ANY DEVIATION FROM THIS SCHEDULE MUST BE DISCUSSED WITH THE ARCHITECT/ENGINEER AND THE LOCAL COUNTY CONSERVATION DISTRICT.

MULCHING, WITHOUT SEEDING, CAN BE USED AS AN INTERIM STABILIZATION CONTROL DURING NON-GROWING SEASONS OF THE YEAR.

NO CLEARING AND/OR GRUBBING OF THIS SITE MAY TAKE PLACE UNTIL ALL EROSION AND SEDIMENTATION CONTROLS AS OUTLINED, HAVE BEEN INSTALLED AND ARE FUNCTIONAL.

UNKNOWN SUCH AS WEATHER CONDITIONS, EXACT START DATE, CONTRACTOR, ETC., DO NOT ALLOW FOR DELINEATION OF SPECIFIC TIME FRAMES.

AT THE END OF EACH CONSTRUCTION DAY, ANY SEDIMENT DEPOSITED ON COMMERCE PARK DRIVE IS TO BE REMOVED RETURNED TO THE SITE, STOCKPILED AND STABILIZED.

ALL STRUCTURES ASSOCIATED WITH THE CONSTRUCTION OF SEDIMENT REMOVAL FACILITIES MUST BE AVAILABLE ON-SITE PRIOR TO ANY EARTH MOVING.

ANY CESSATION OF ACTIVITY FOR 4 DAYS OR LONGER WILL REQUIRE TEMPORARY STABILIZATION.

IF AT ANY TIME PRIOR TO STABILIZATION ANY E&S PROBLEMS OCCUR AND REQUIRE ADDITIONAL MEASURES, IMMEDIATE ACTION MUST BE TAKEN TO CORRECT THE PROBLEM.

**IDENTIFICATION OF THE NATURALLY OCCURRING GEOLOGIC FORMATIONS**

THE SOILS ON-SITE ARE SUSCEPTIBLE TO SINKHOLE FORMATION. A SINKHOLE REMEDIATION DETAIL HAS BEEN ADDED TO THE PLAN SET. PROPER CARE SHOULD BE TAKEN TO PREVENT SINKHOLE FORMATION. SINKHOLES, IF THEY DEVELOP, SHOULD BE APPROPRIATELY HANDLED.

IN THE EVENT OF SINKHOLE DISCOVERY, A PROFESSIONAL GEOLOGIST, THE TOWNSHIP AND THE TOWNSHIP ENGINEER SHALL BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, THE LOCAL CONSERVATION DISTRICT SHALL BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.

**THERMAL IMPACT NOTE:**

DURING CONSTRUCTION THE THERMAL IMPACTS WILL BE AVOIDED AND MITIGATED BY OVERLAND FLOWING TO THE DETENTION BASIN. CONSTRUCTION AREAS WILL HAVE RUNOFF DRAIN OVERLAND OR THROUGH A PIPE SYSTEM LEADING TO A BASIN WHICH WILL ALLOW STORMWATER TO DECREASE IN TEMPERATURE BEFORE LEAVING THE BASIN AND ENTERING THE STREAM.

**CRITICAL STAGES NOTES**

THE CRITICAL STAGES OF IMPLEMENTATION OF PCSM BMP'S FOR WHICH A LICENSED PROFESSIONAL OR DESIGNER SHALL BE PRESENT ON SITE INCLUDE:

- INSTALLATION OF THE DETENTION BASIN
- STABILIZATION OF THE DETENTION BASIN
- STABILIZATION OF THE DETENTION BASIN
- STABILIZATION OF THE DETENTION BASIN

THESE BMP'S ARE REQUIRED TO BE INSPECTED DURING INSTALLATION AND MUST BE SIGNED OFF ON PRIOR TO NOTICE OF TERMINATION. THE RESPONSIBLE PARTY, THE OWNER OR AGENT OF SUCH AS WELL AS THE DESIGN PROFESSIONAL, MUST BE PRESENT AT THE LOCAL CONSERVATION DISTRICT SHALL BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.

**SURFACE WATERS AND CHAPTER 93 CLASSIFICATION**

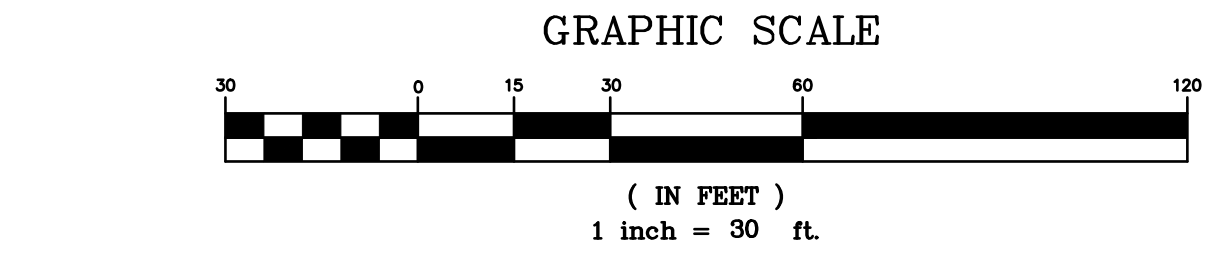
THE CHAPTER 93 WATER COURSE RECEIVING THE RUNOFF FROM THIS SITE IS NANCY RUN.

CHAPTER 93 CLASSIFICATION - HQ-CWF, M

**PAST, PRESENT AND PROPOSED LAND USES**

PAST/PRESENT LAND USE: RESIDENTIAL. THE SITE CURRENTLY CONTAINS A SINGLE FAMILY DWELLING WHICH WAS CONSTRUCTED IN 1953.

PROPOSED LAND USE: RESIDENTIAL. THE PROJECT PROPOSES TO CONSTRUCTION A 32 UNIT APARTMENT BUILDING.



CITY OF BETHLEHEM  
 14th Ward  
 NORTHAMPTON COUNTY  
 PENNSYLVANIA

**SOIL EROSION & SEDIMENTATION POLLUTION CONTROL NOTES PLAN**

FOR  
**2854 LINDEN STREET**

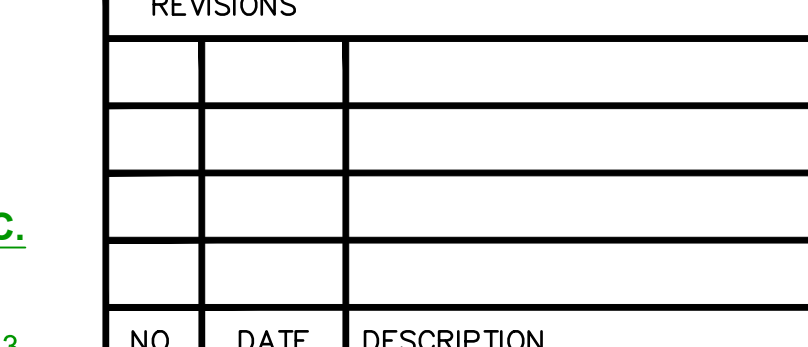
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 CHECKED BY: SJK  
 SCALE: NONE  
 ACAD ID: 2022-08-21 Land Development Plan

DMS  
 DESIGN SERVICES

190 BROOKSIDE ROAD, SUITE #110  
 BETHLEHEM, PA. 18017  
 PHONE: (610) 997-8204

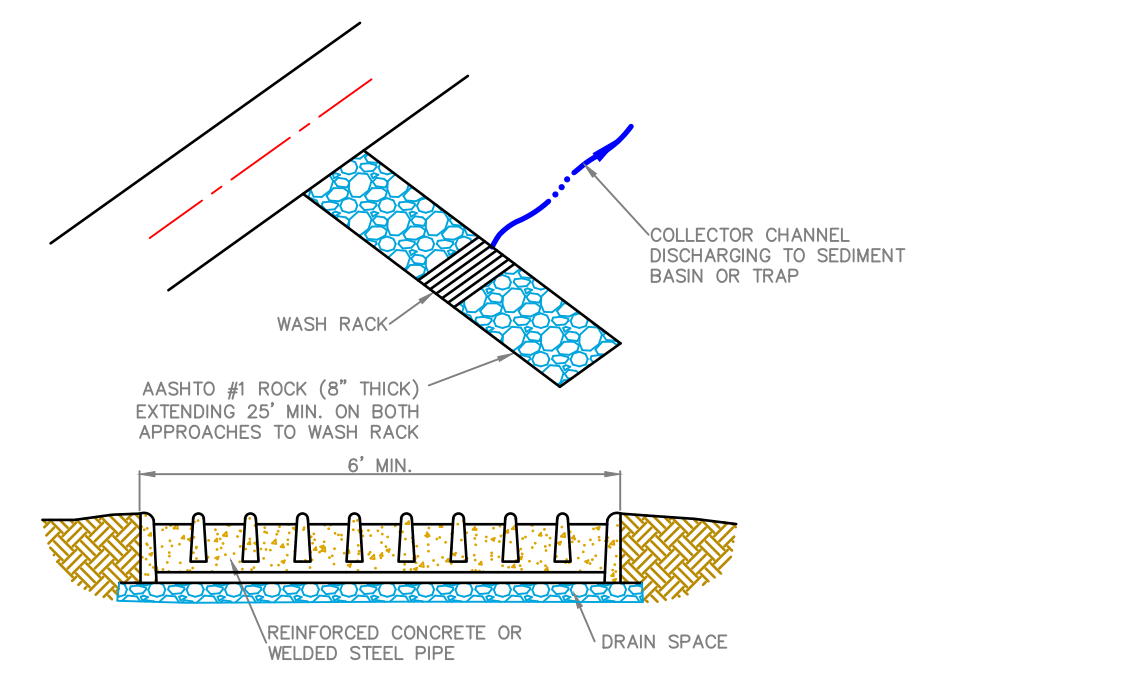
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NO.	DATE	DESCRIPTION	BY



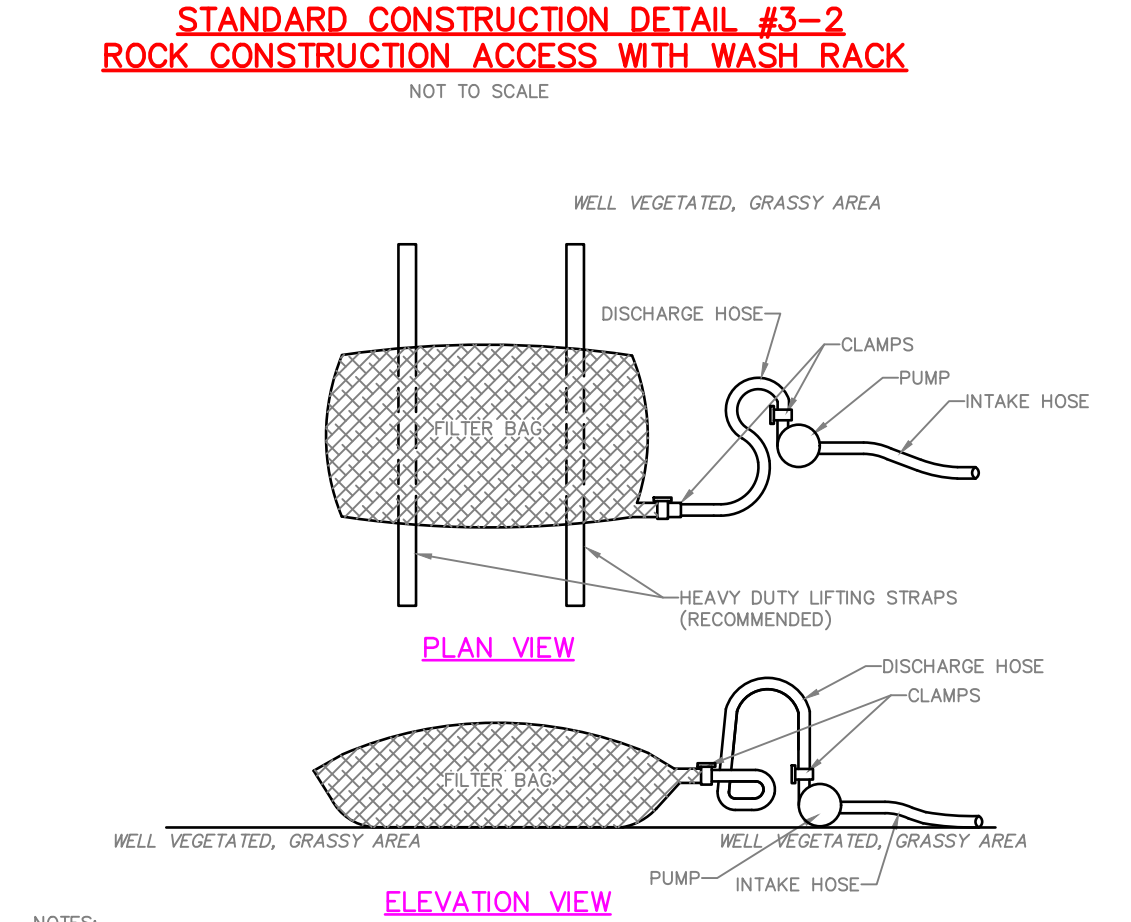
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**NOTES:**  
WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.  
WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.  
A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXTING THE SITE.

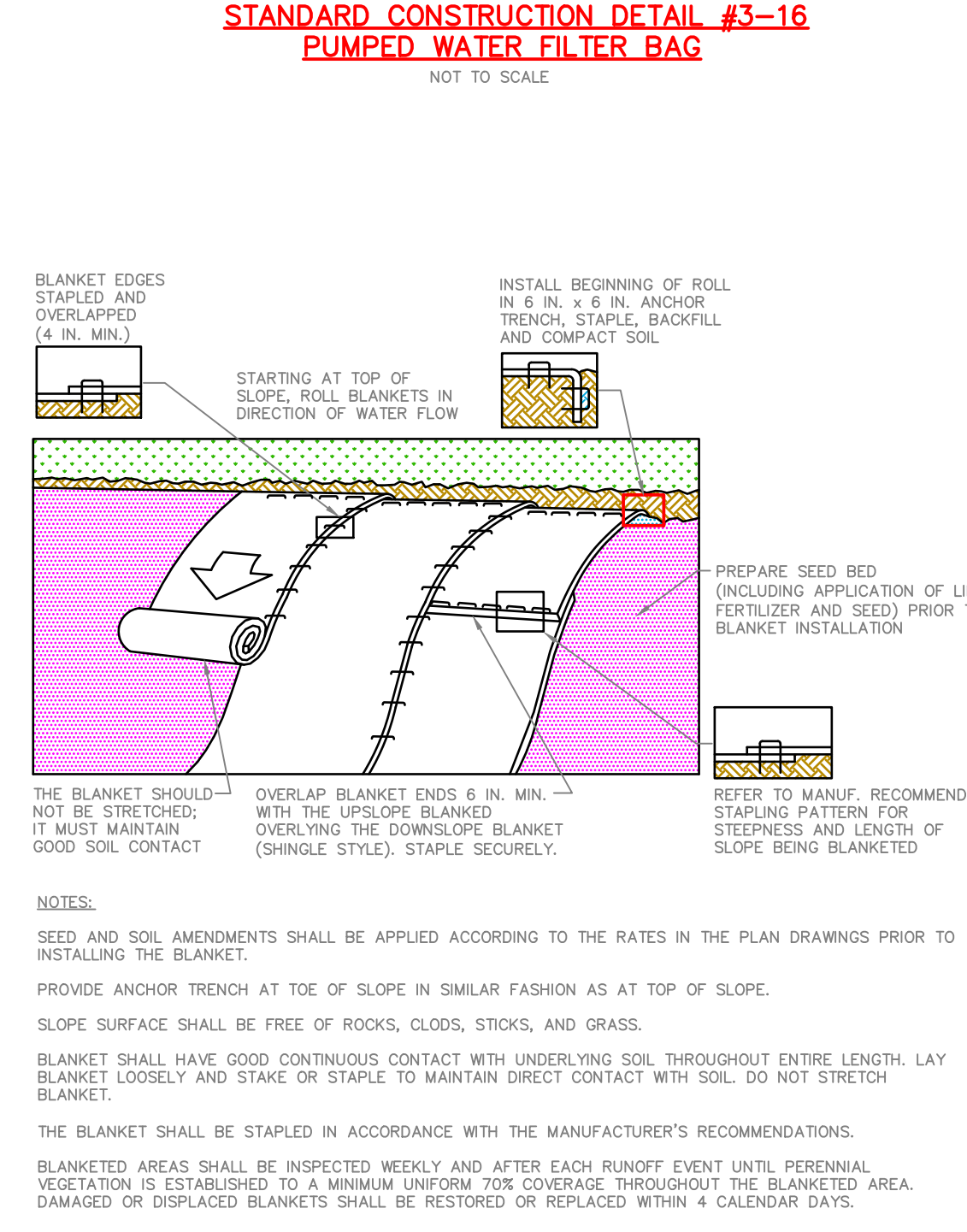
**STANDARD CONSTRUCTION DETAIL #3-2  
ROCK CONSTRUCTION ACCESS WITH WASH RACK**  
NOT TO SCALE



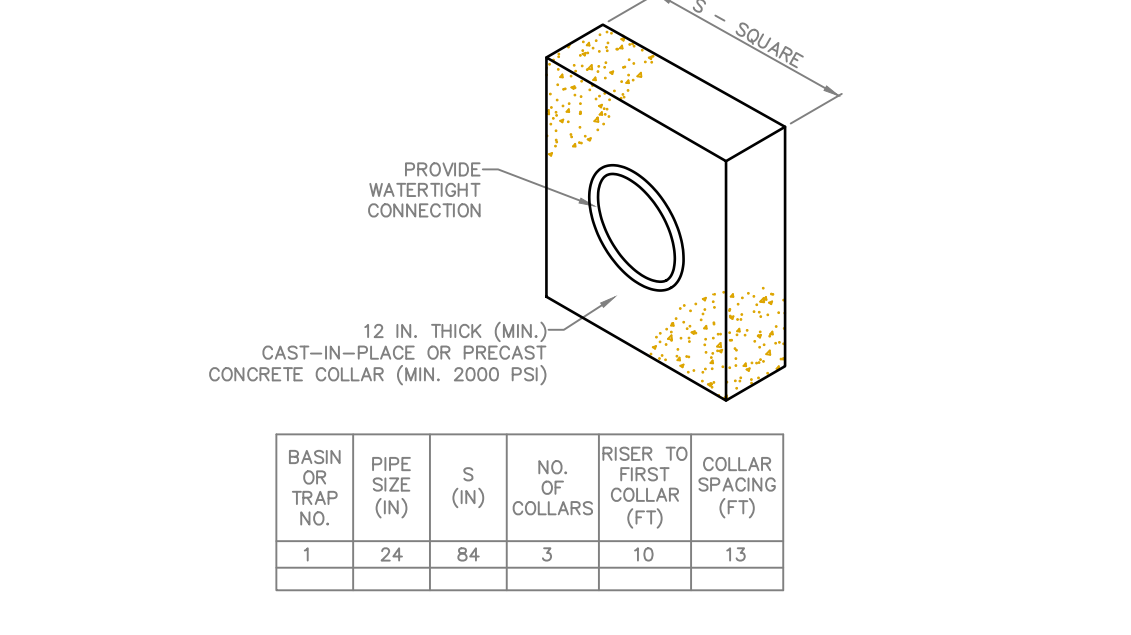
**NOTES:**  
LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH DOUBLE STITCHED "T" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRID TENSILE	ASTM D-4832	200 LB
PUNCTURE	ASTM D-4833	110 LB
MILLION BURST	ASTM D-3785	350 PSF
UV RESISTANCE	ASTM D-4355	70%
AGE 3 RETAINED	ASTM D-7571	80 SEIVE

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



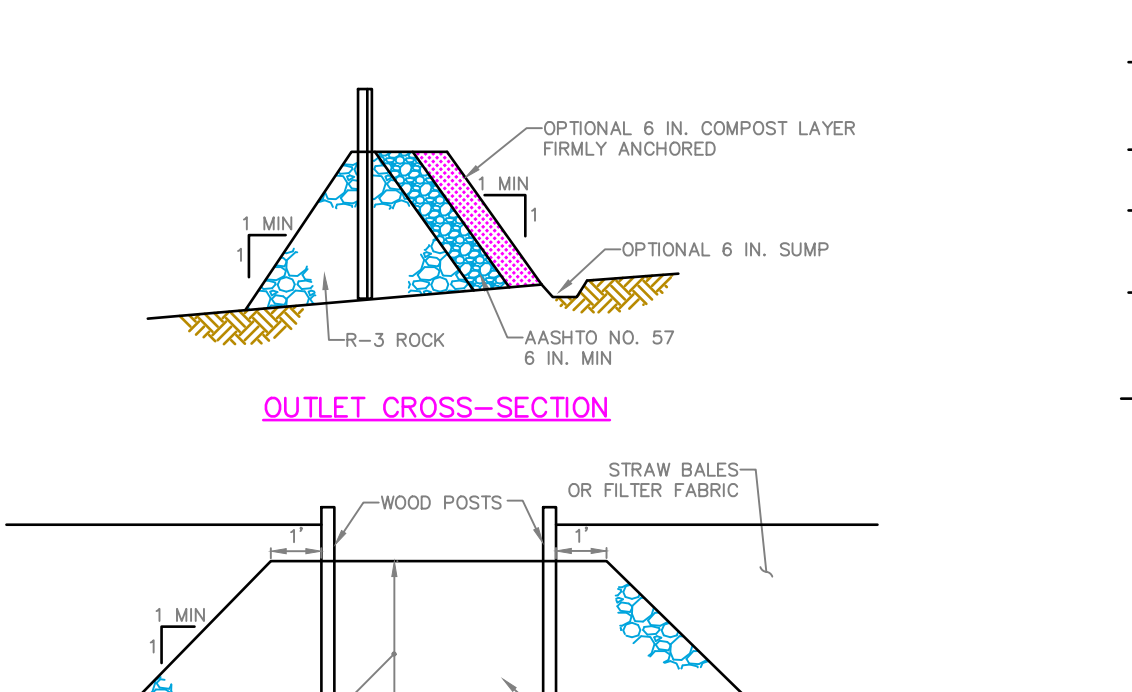
**STANDARD CONSTRUCTION DETAIL #7-12  
CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS**  
NOT TO SCALE



**STANDARD CONSTRUCTION DETAIL #7-16  
PUMPED WATER FILTER BAG**  
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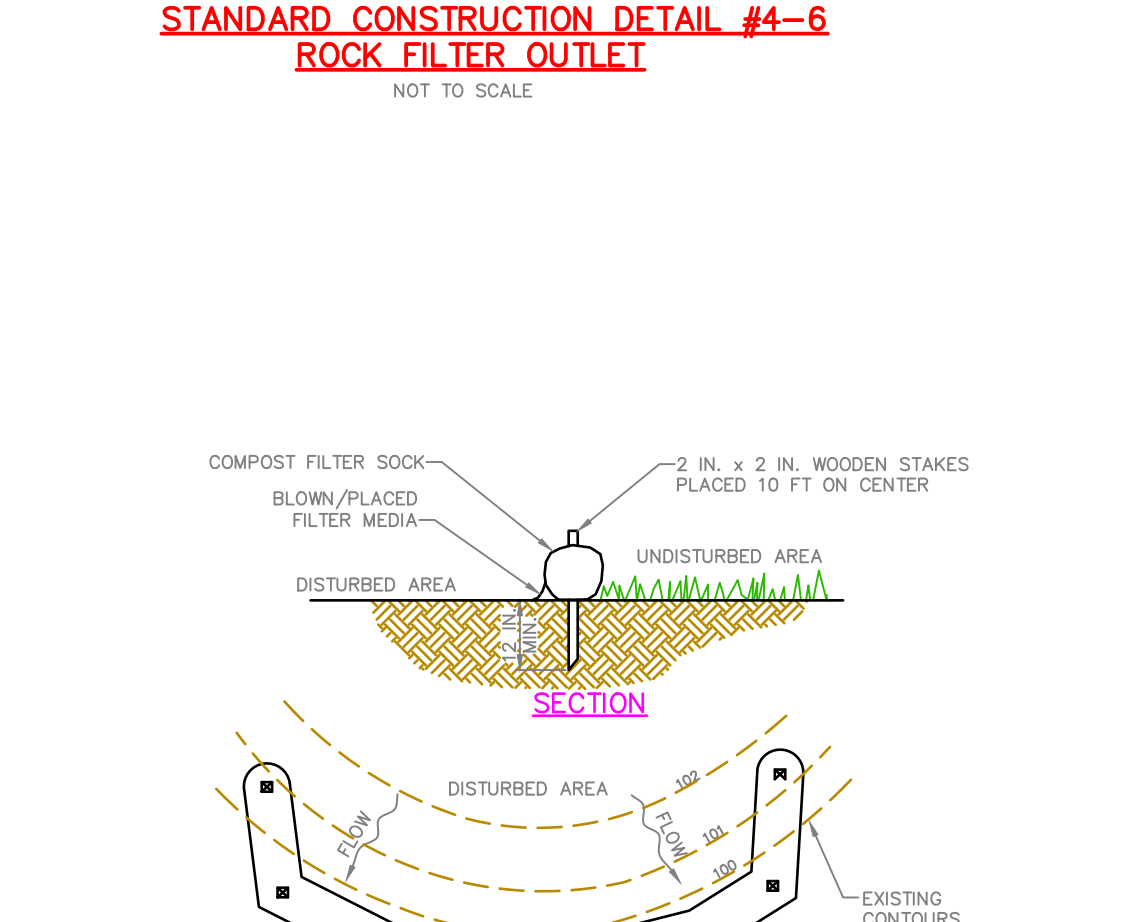
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**STANDARD CONSTRUCTION DETAIL #7-16  
PUMPED WATER FILTER BAG**  
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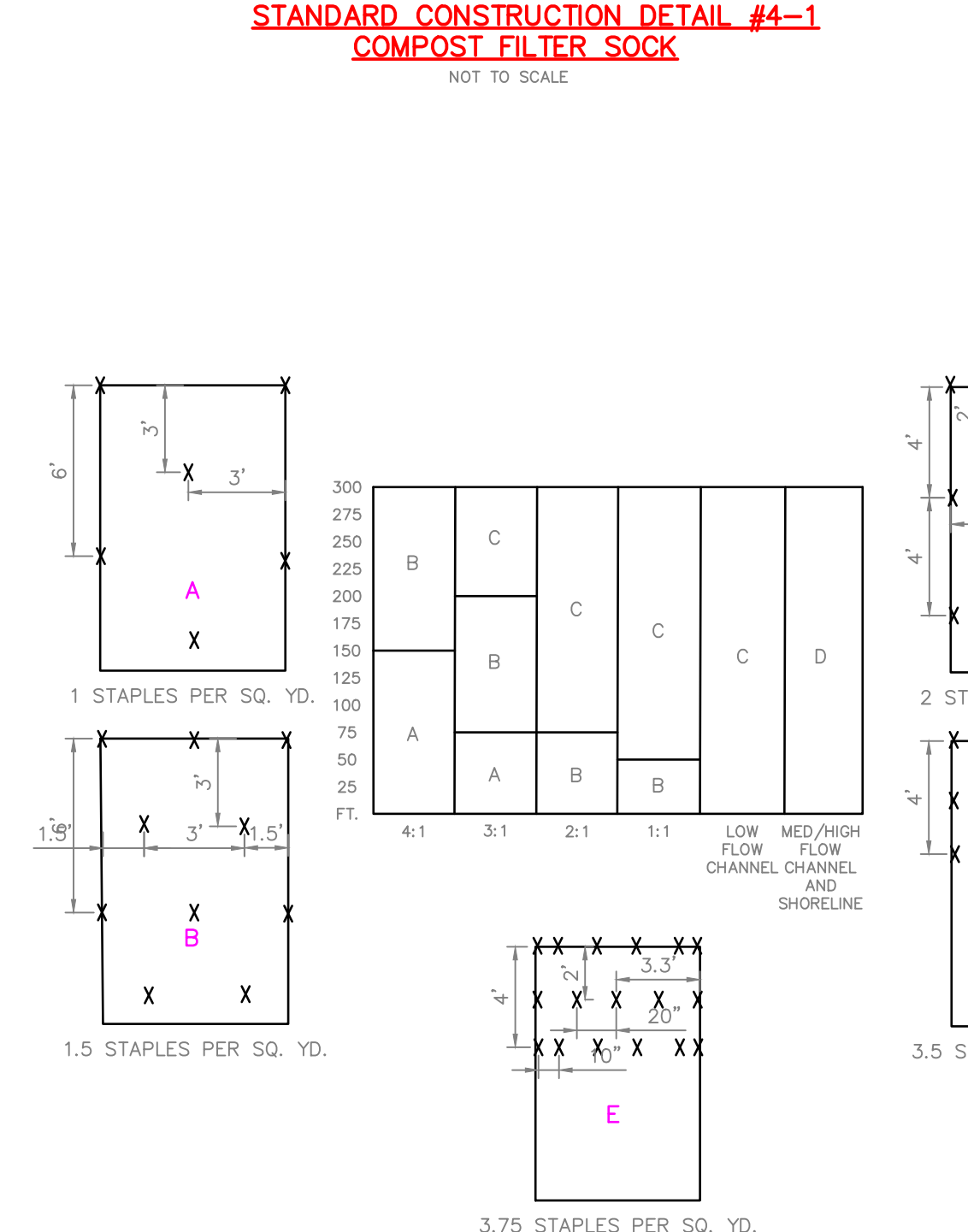
**STANDARD CONSTRUCTION DETAIL #4-6  
ROCK FILTER OUTLET**  
NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #4-14  
ROCK FILTER**  
NOT TO SCALE



**STANDARD CONSTRUCTION DETAIL #4-19  
STONE INLET PROTECTION AND BERM - TYPE C INLET**  
NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #4-19  
STONE INLET PROTECTION AND BERM - TYPE C INLET**  
NOT TO SCALE



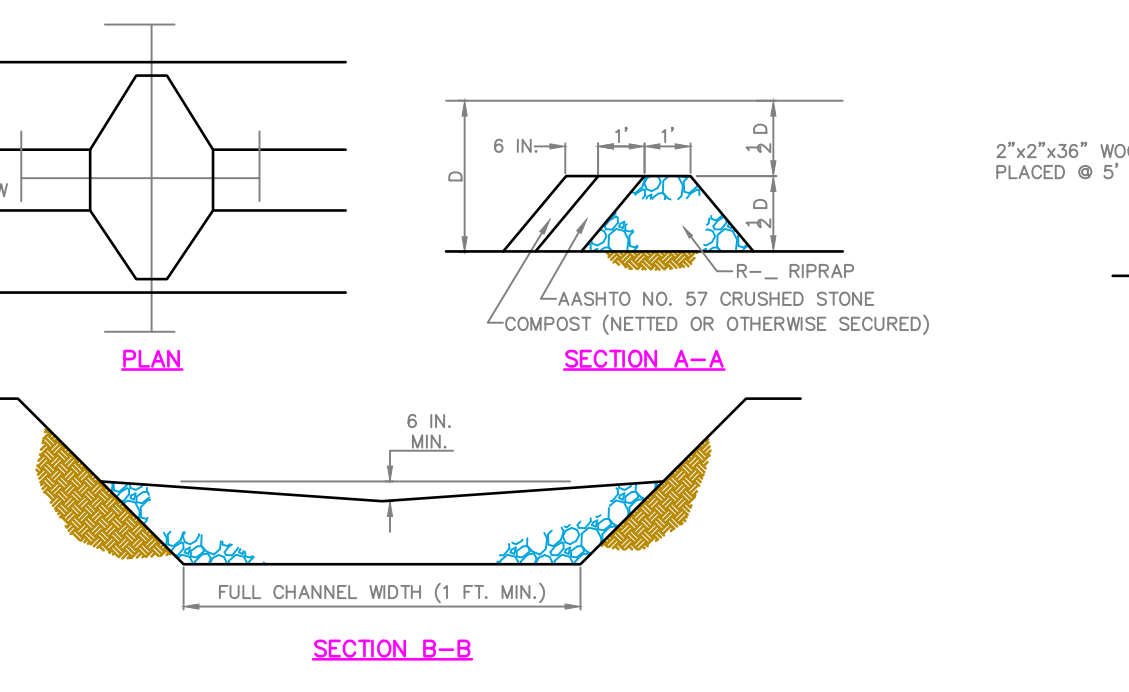
**STANDARD CONSTRUCTION DETAIL #7-4  
SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS - SKIMMER**  
NOT TO SCALE



**STANDARD CONSTRUCTION DETAIL #7-4  
SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS - SKIMMER**  
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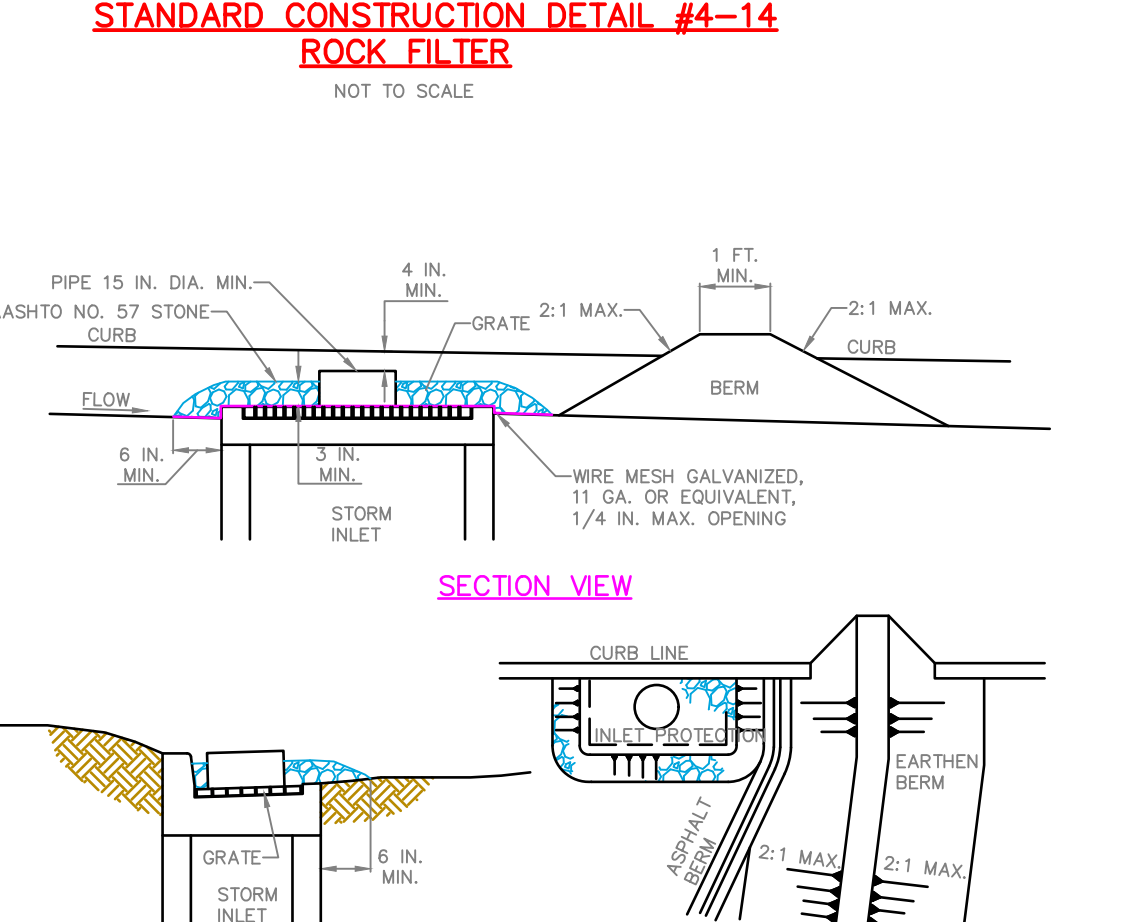
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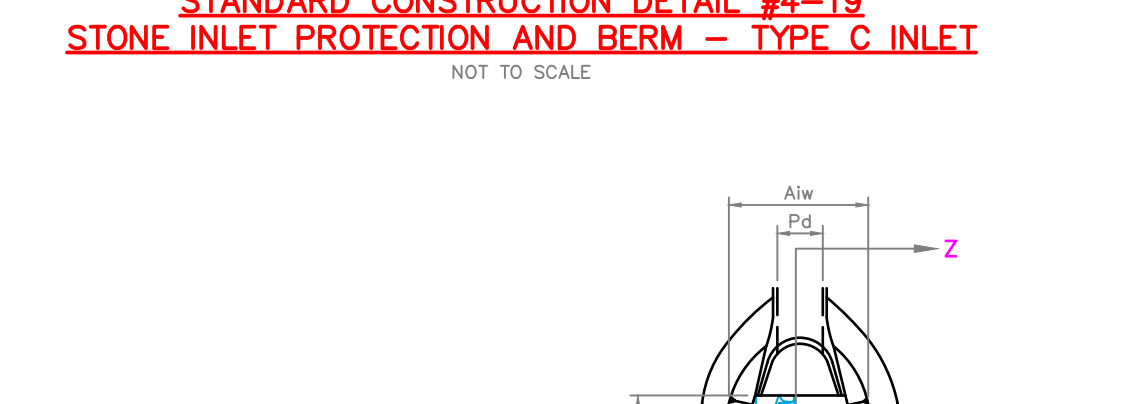
**FIGURE 3.18  
COMPOST SOCK WASHOUT**  
NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #7-3  
SKIMMER WITH STONE LANDING BERM**  
NOT TO SCALE

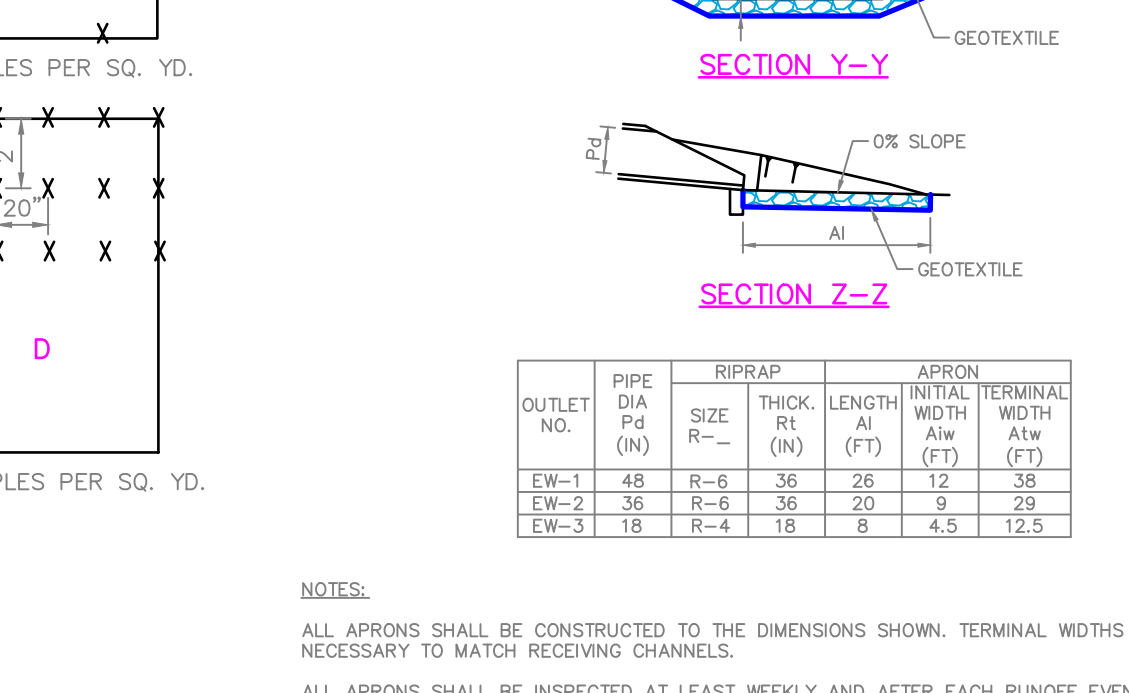


**STANDARD CONSTRUCTION DETAIL #7-3  
SKIMMER WITH STONE LANDING BERM**  
NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #7-3  
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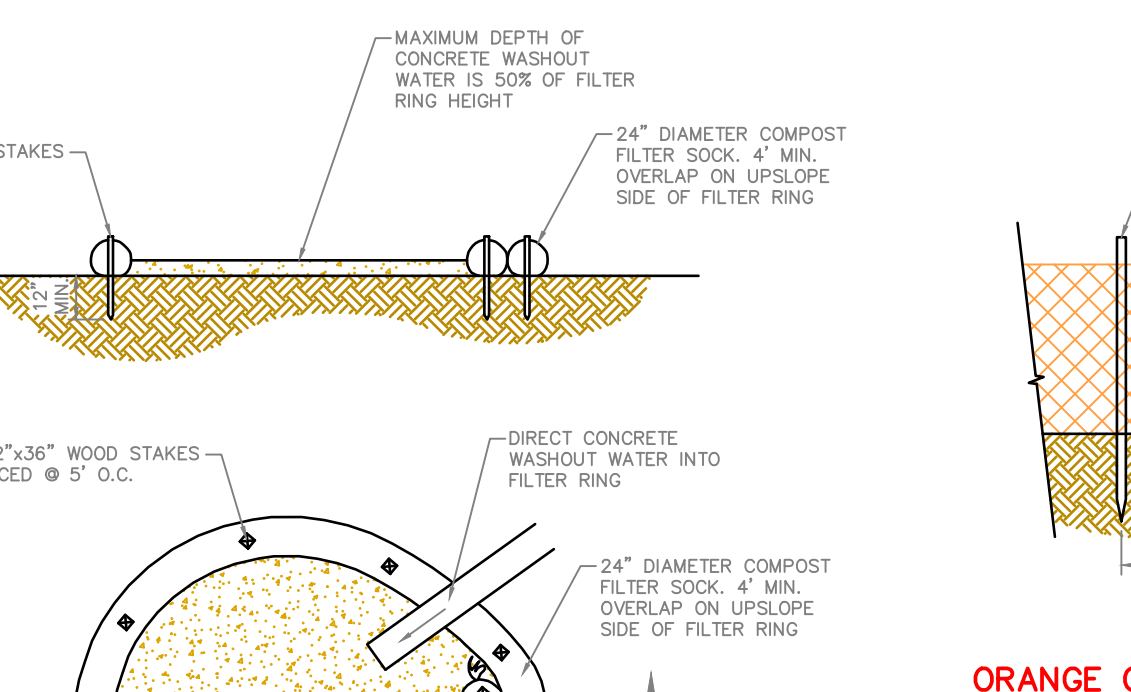
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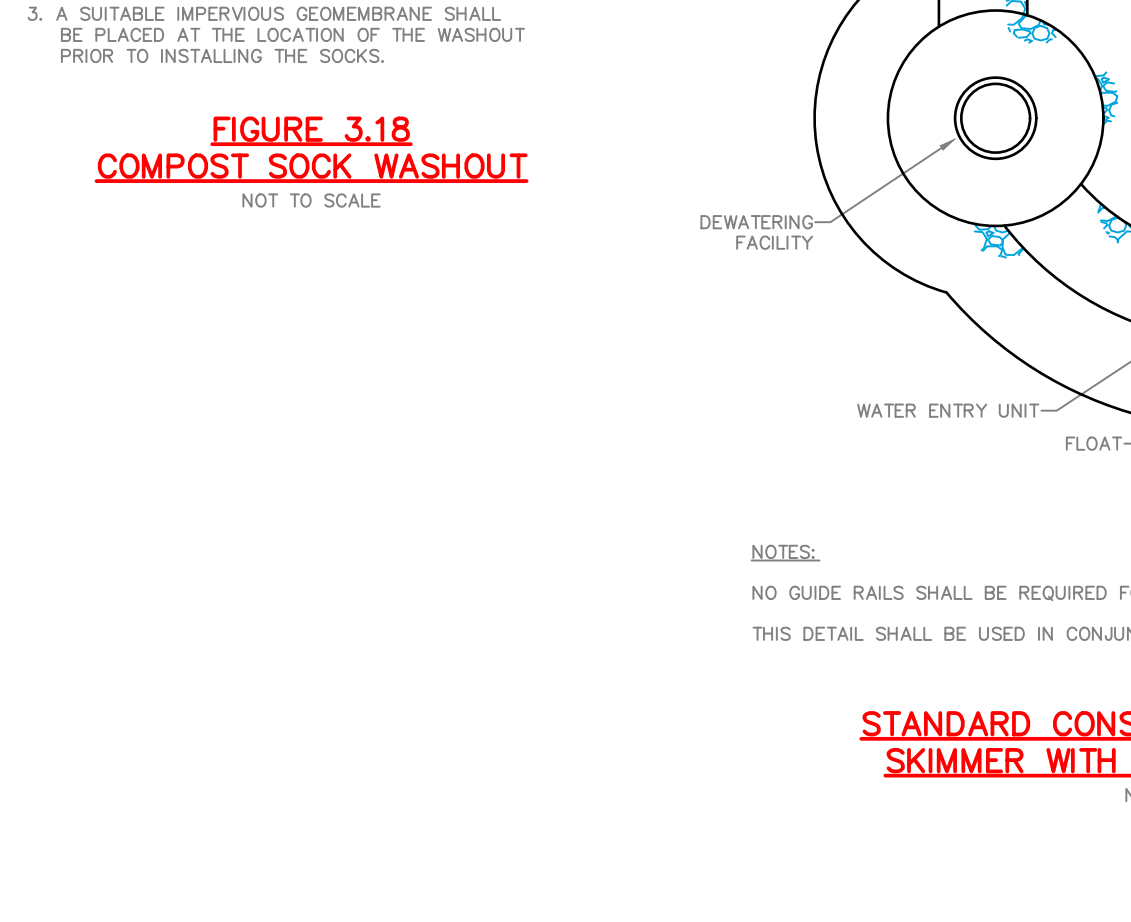
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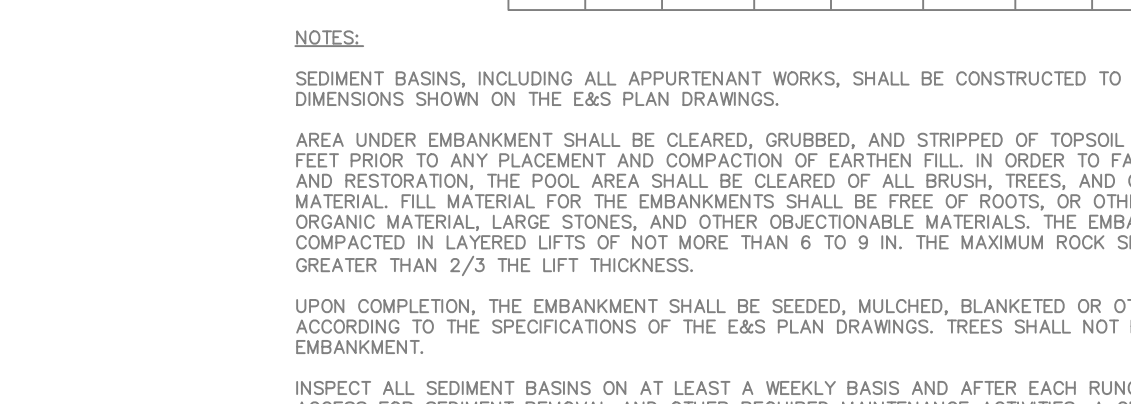
**STANDARD CONSTRUCTION DETAIL #7-18  
SEDIMENT BASIN OR SEDIMENT TRAP  
SEDIMENT STORAGE DEWATERING FACILITY**  
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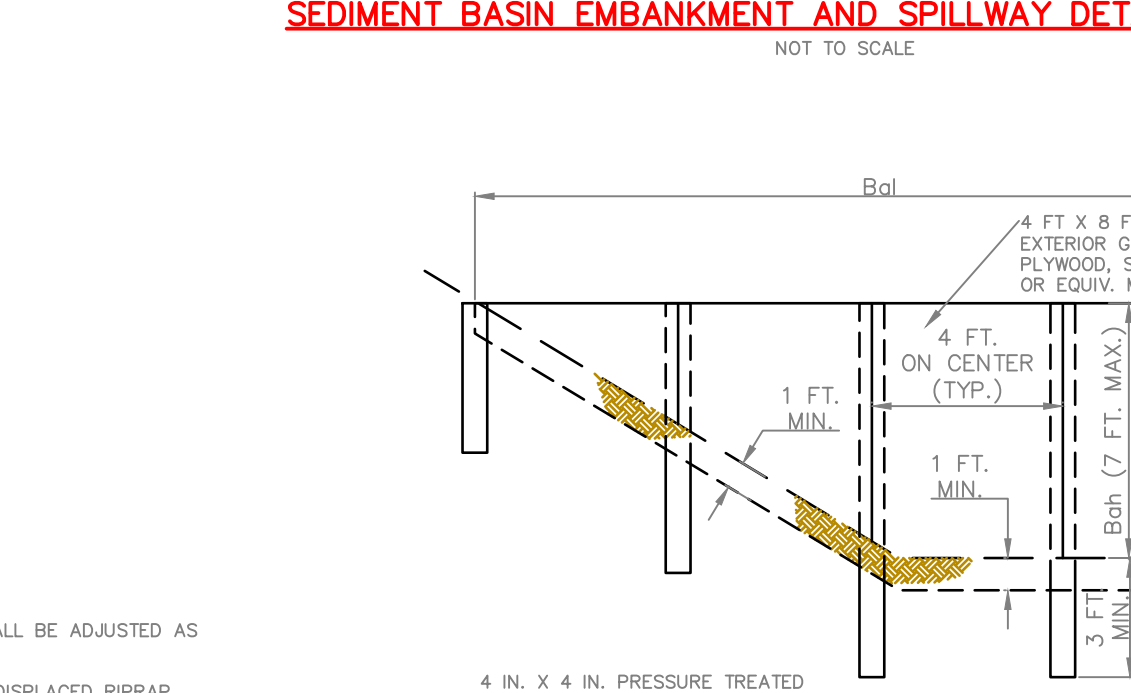


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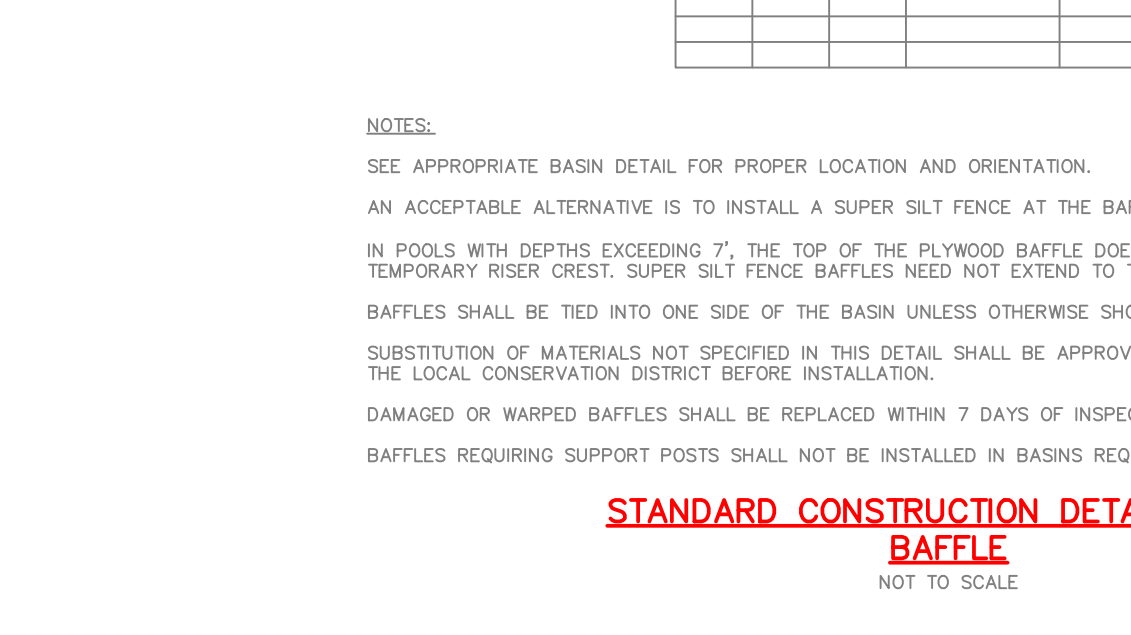
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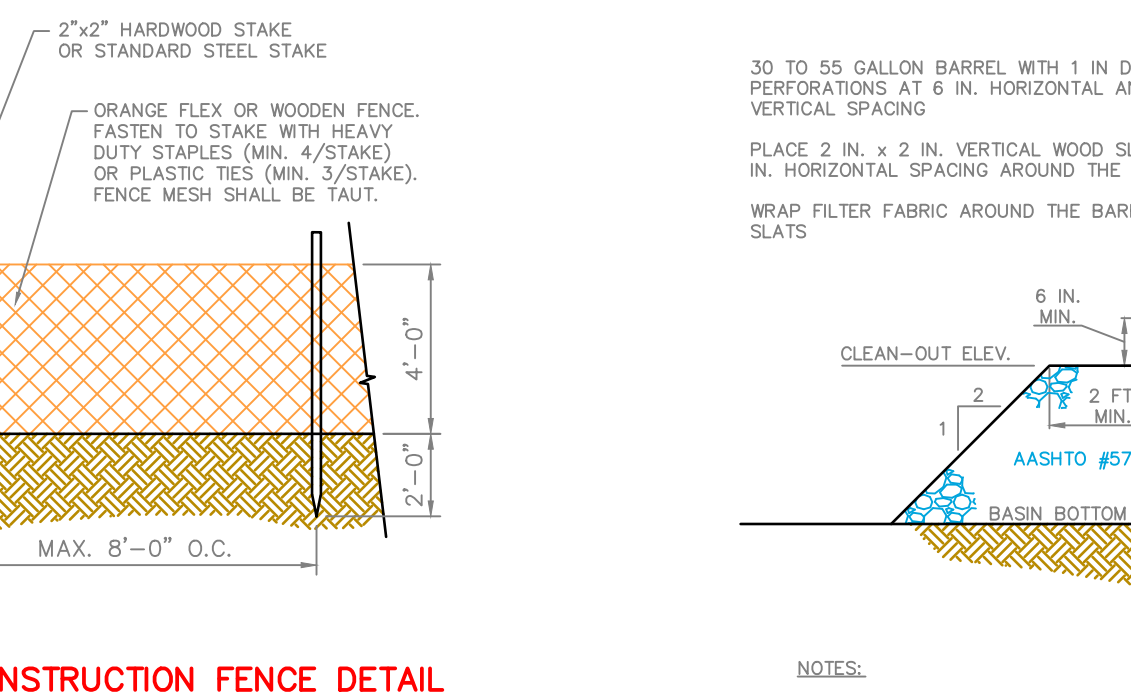
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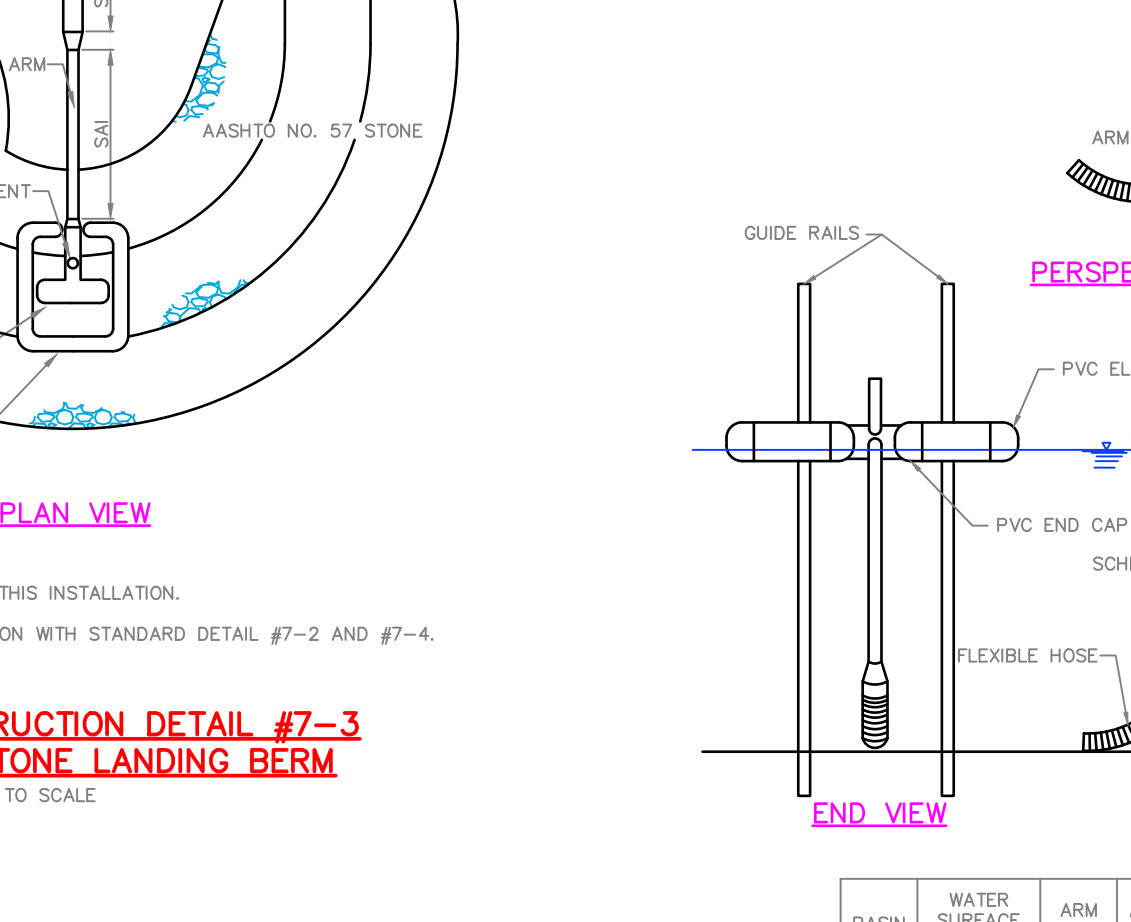
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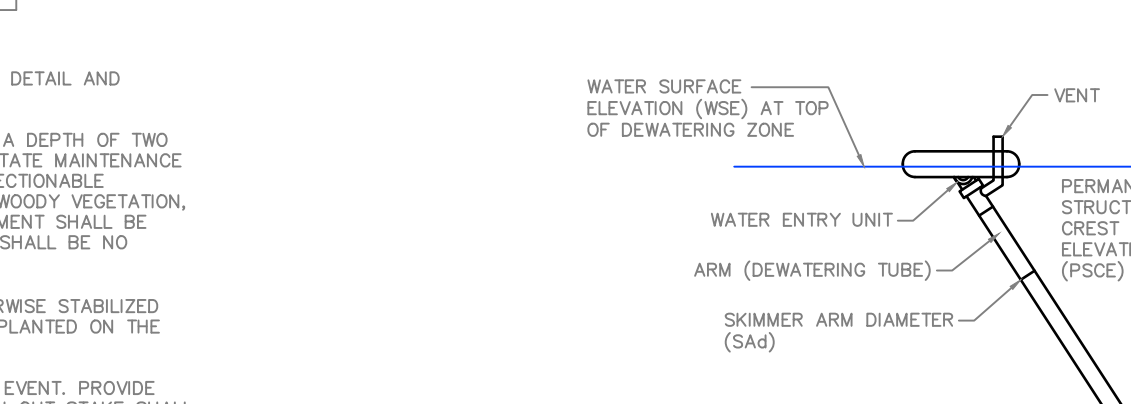
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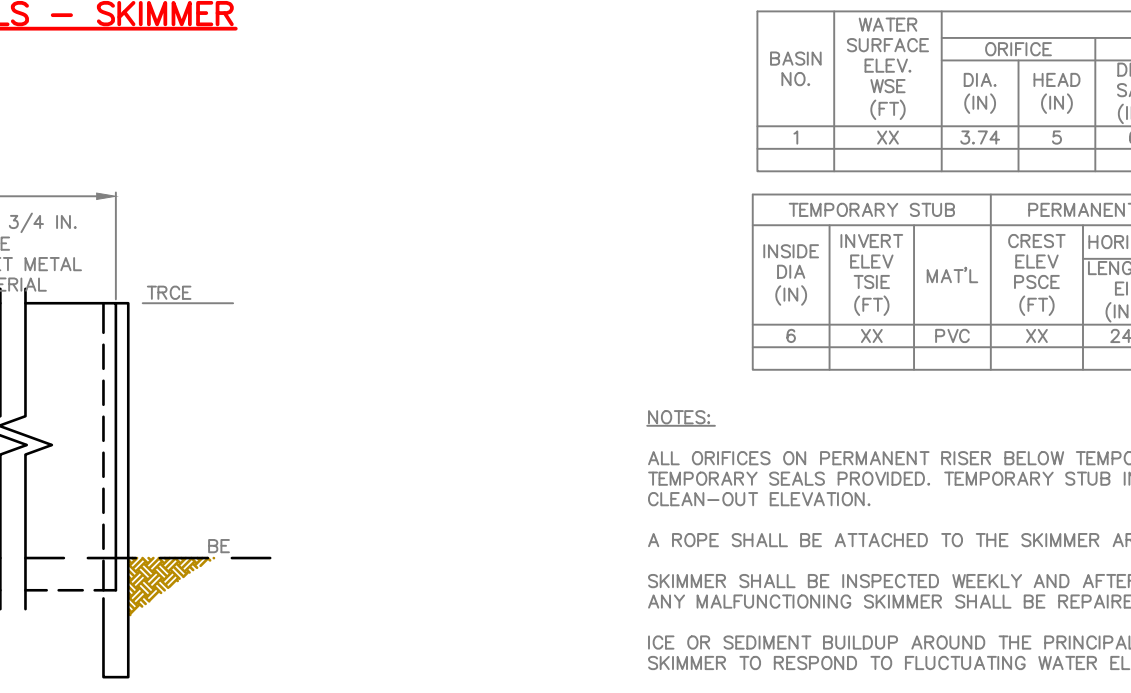


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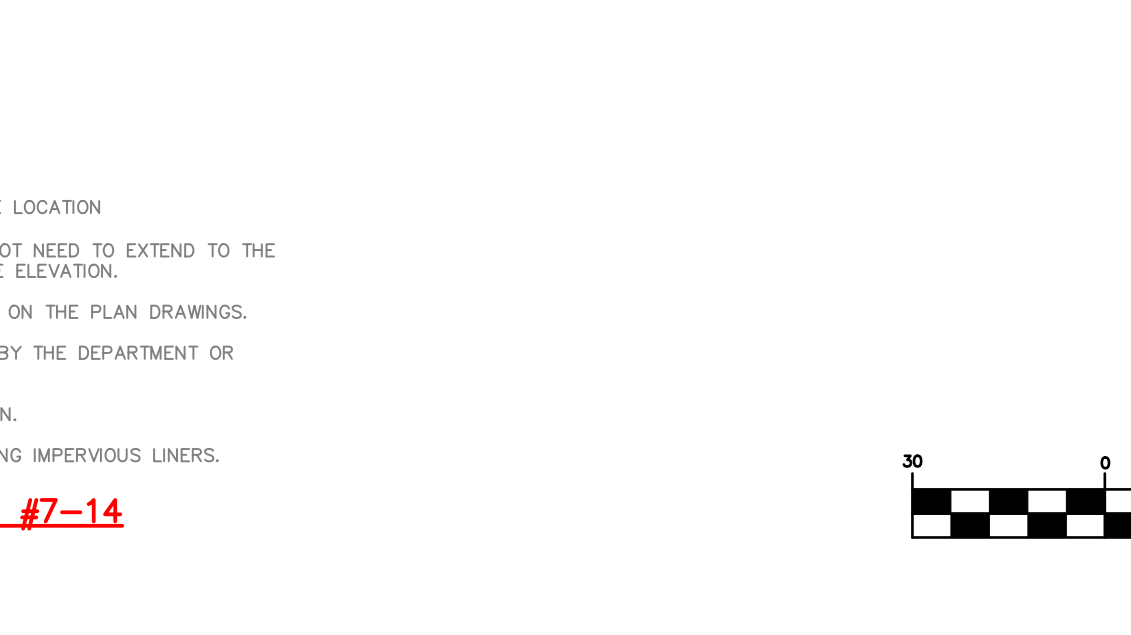
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**STANDARD CONSTRUCTION DETAIL #7-18  
SEDIMENT BASIN OR SEDIMENT TRAP  
SEDIMENT STORAGE DEWATERING FACILITY**  
NOT TO SCALE



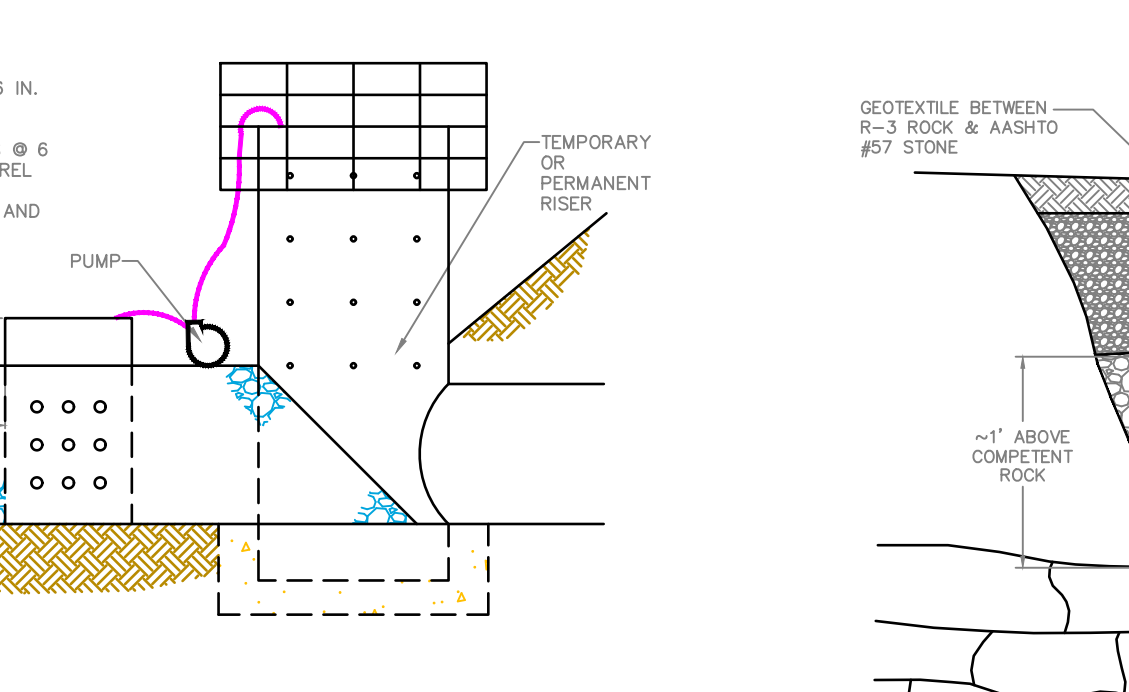
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SEDIMENT STORAGE DEWATERING FACILITY**  
NOT TO SCALE



**STANDARD CONSTRUCTION DETAIL #7-18  
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SEDIMENT STORAGE DEWATERING FACILITY**  
NOT TO SCALE

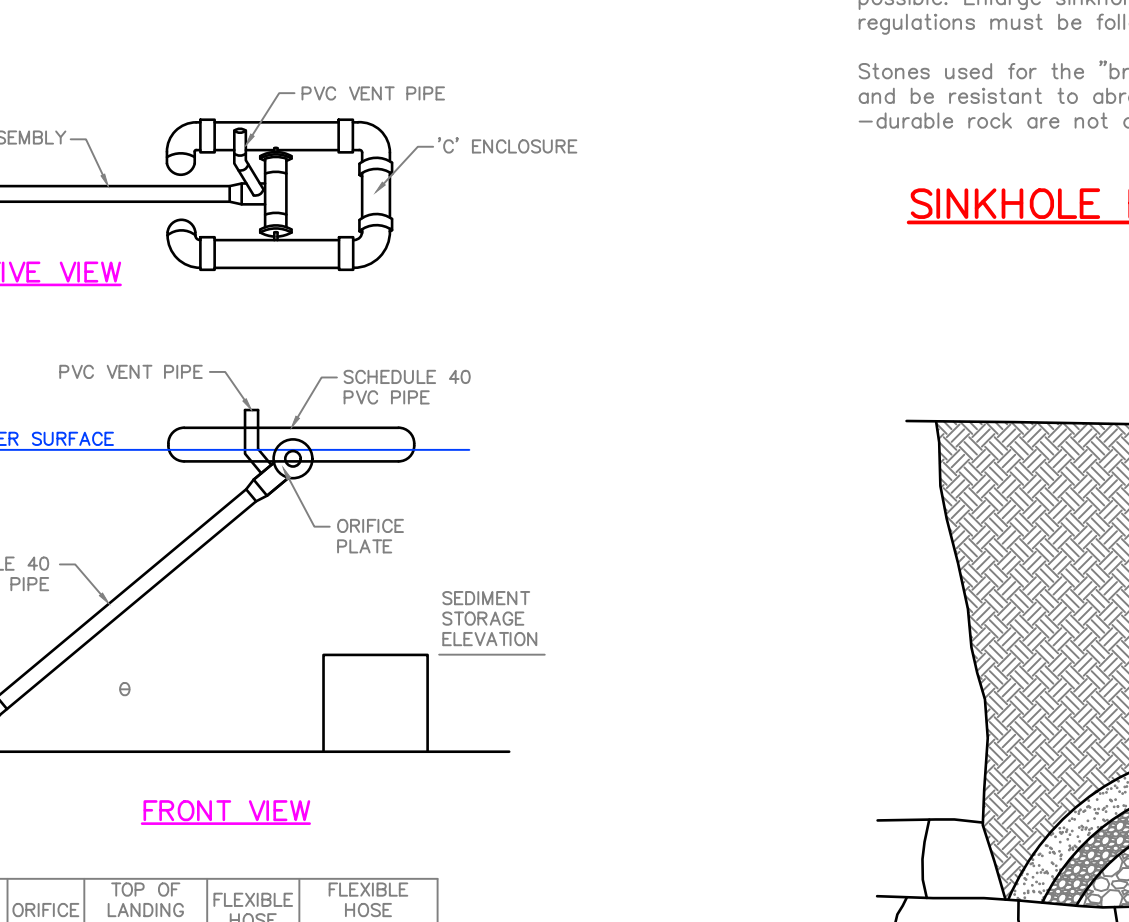
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SEDIMENT STORAGE DEWATERING FACILITY**  
NOT TO SCALE

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SEDIMENT STORAGE DEWATERING FACILITY**  
NOT TO SCALE



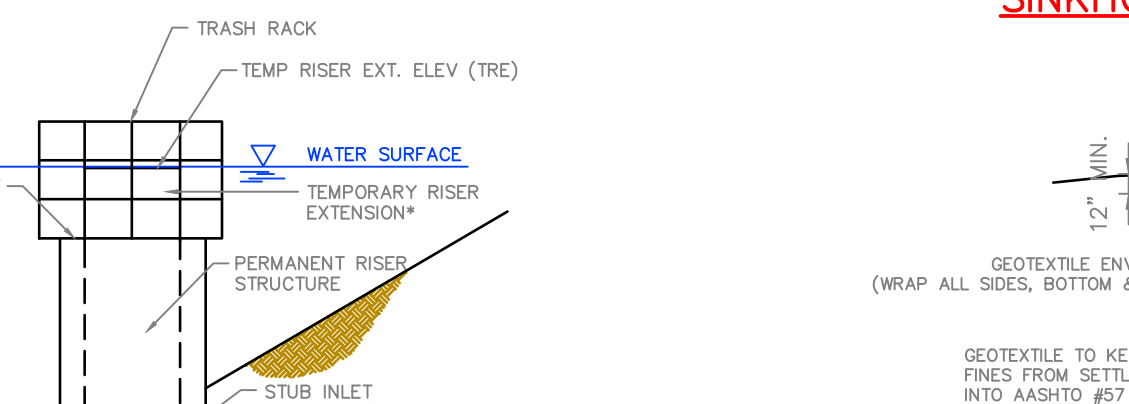
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SEDIMENT STORAGE DEWATERING FACILITY**  
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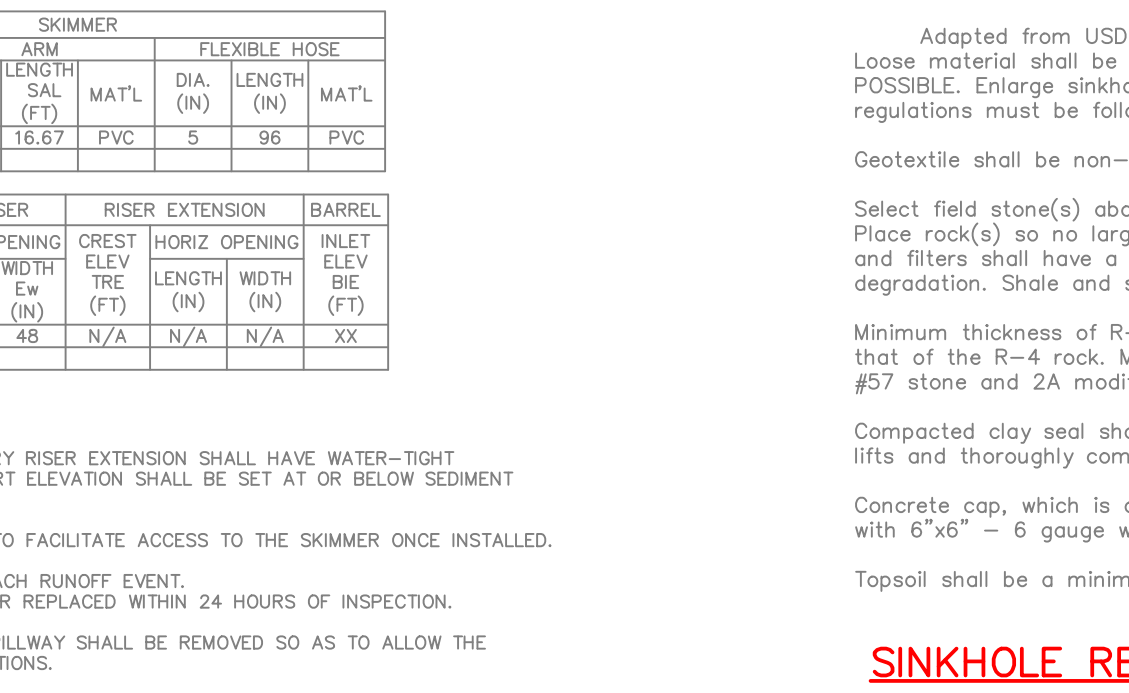


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SEDIMENT BASIN OR SEDIMENT TRAP  
SEDIMENT STORAGE DEWATERING FACILITY**  
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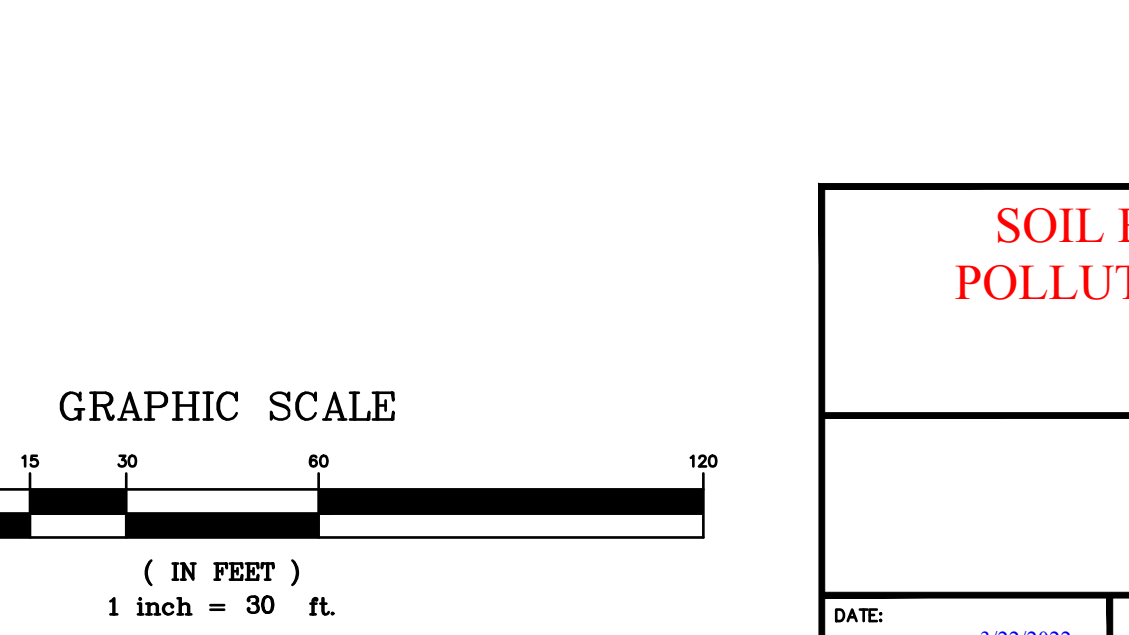
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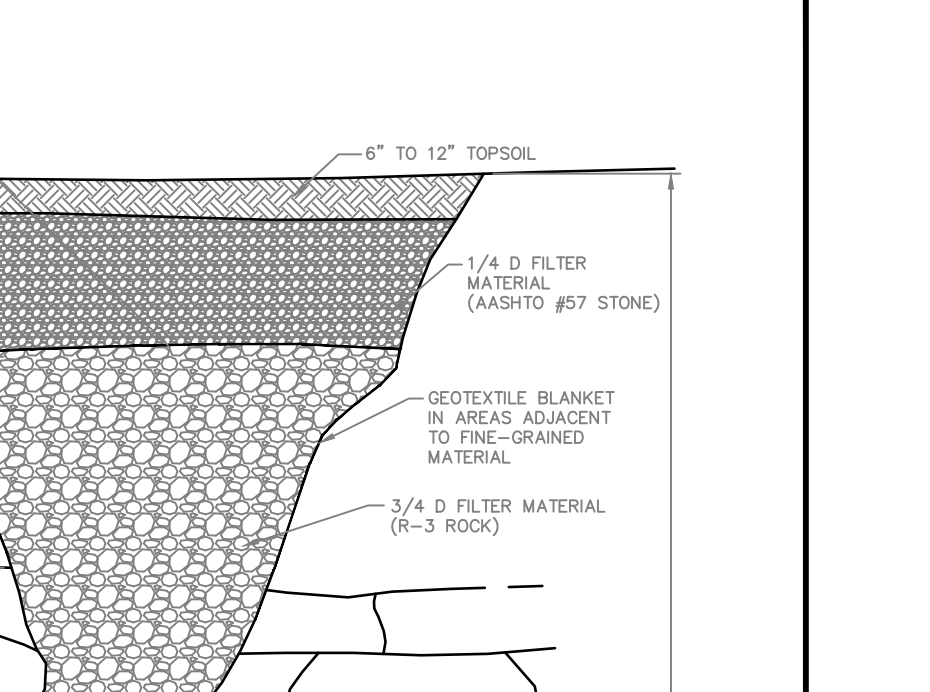
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SEDIMENT BASIN OR SEDIMENT TRAP  
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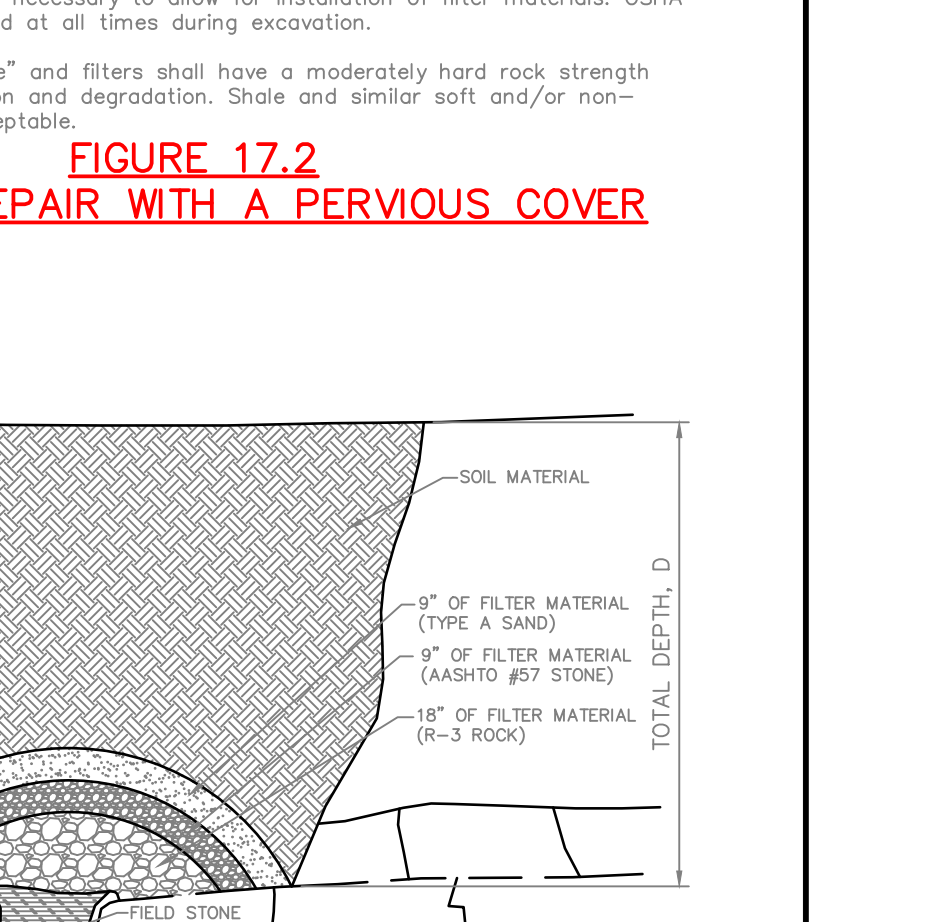
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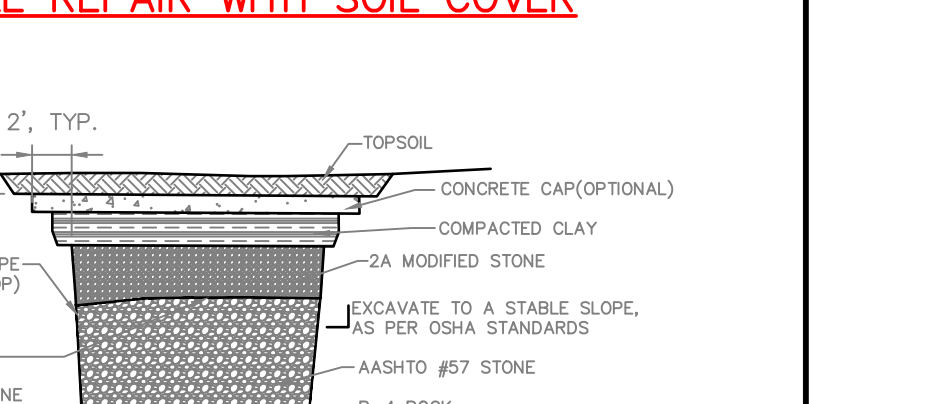
**FIGURE 17.2  
SINKHOLE REPAIR WITH A PERVIOUS COVER**  
NOT TO SCALE

**FIGURE 17.2  
SINKHOLE REPAIR WITH A PERVIOUS COVER**  
NOT TO SCALE

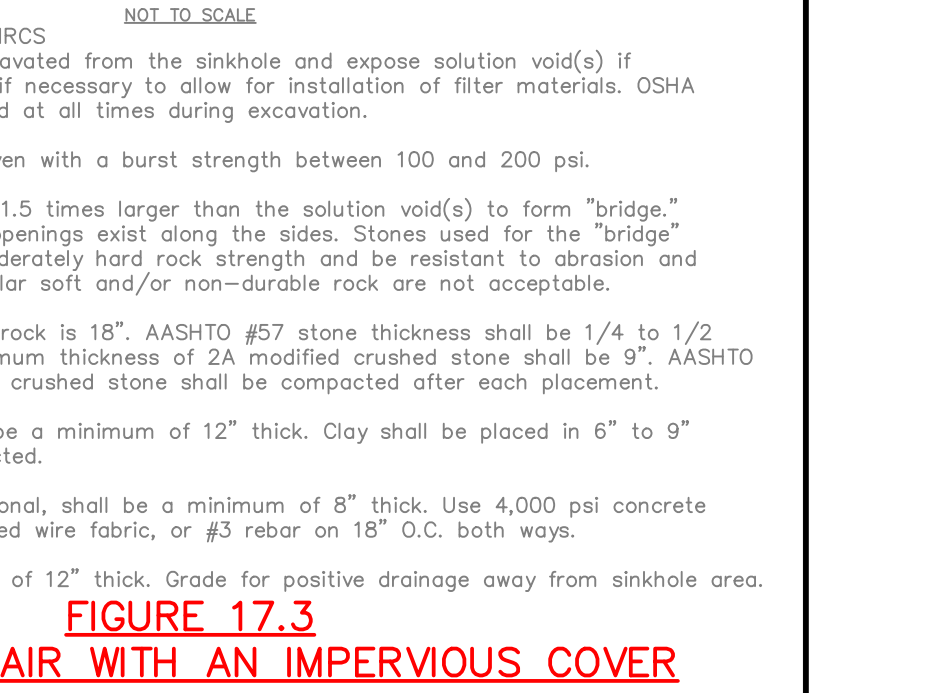


**FIGURE 17.2  
SINKHOLE REPAIR WITH A PERVIOUS COVER**  
NOT TO SCALE

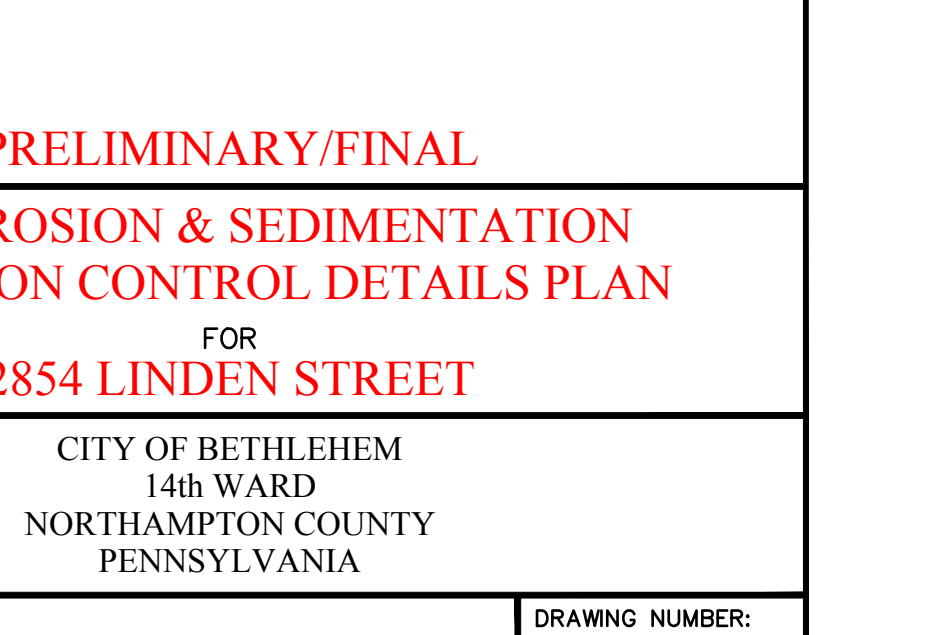
**FIGURE 17.2  
SINKHOLE REPAIR WITH A PERVIOUS COVER**  
NOT TO SCALE



**FIGURE 17.2  
SINKHOLE REPAIR WITH A PERVIOUS COVER**  
NOT TO SCALE



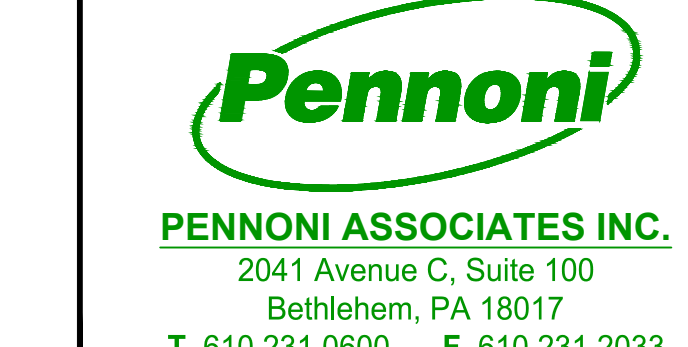
**FIGURE 17.2  
SINKHOLE REPAIR WITH A PERVIOUS COVER**  
NOT TO SCALE



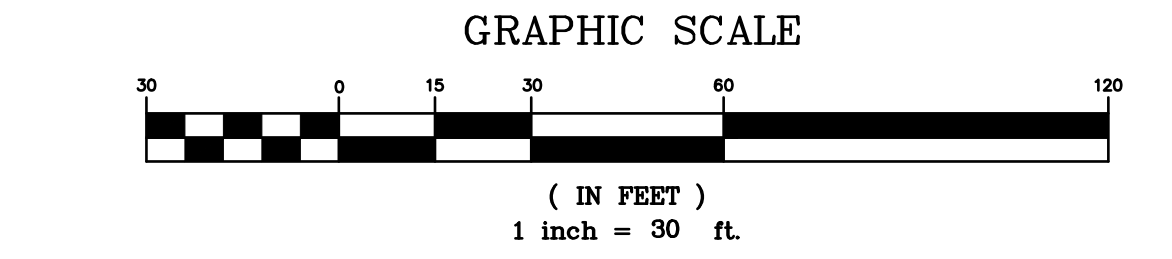
**FIGURE 17.2  
SINKHOLE REPAIR WITH A PERVIOUS COVER**  
NOT TO SCALE

**FIGURE 17.2  
SINKHOLE REPAIR WITH A PERVIOUS COVER**  
NOT TO SCALE

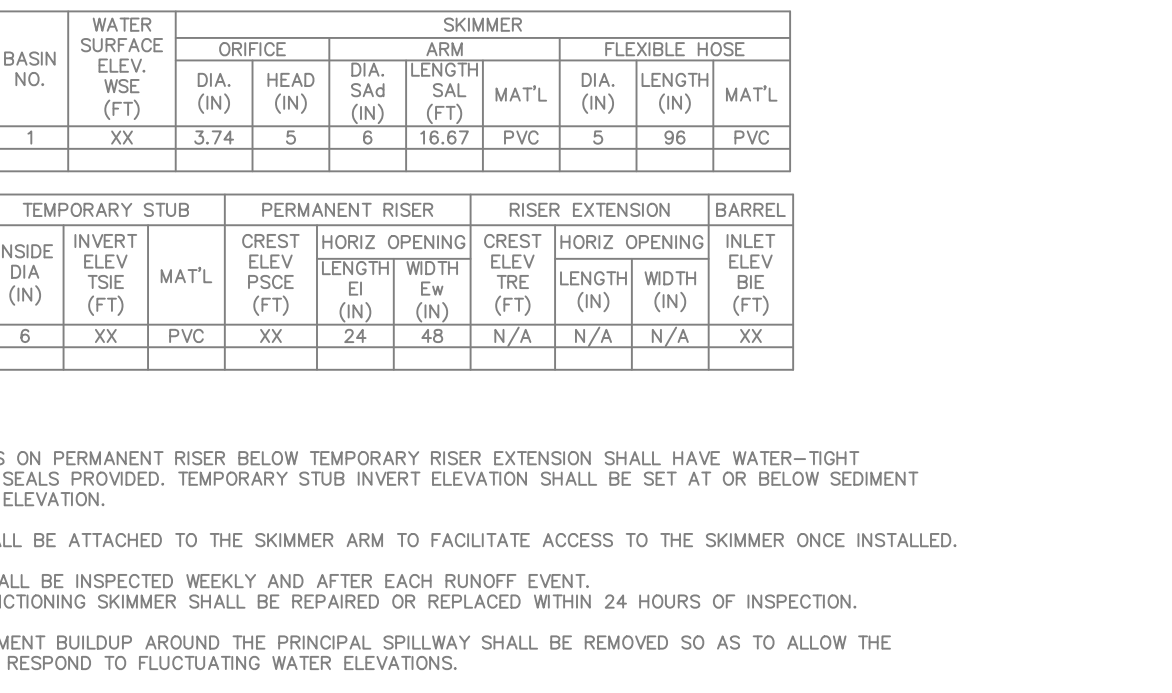
**FIGURE 17.2  
SINKHOLE REPAIR WITH A PERVIOUS COVER**  
NOT TO SCALE



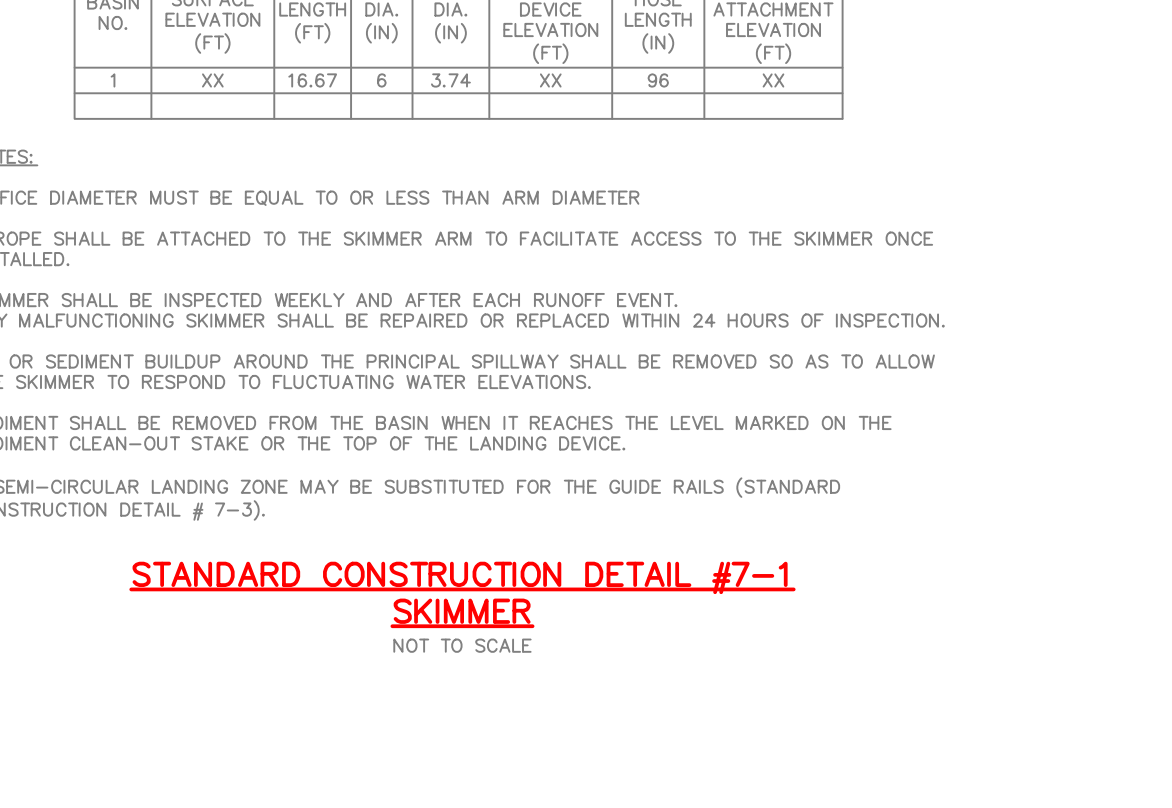
NO.	DATE	DESCRIPTION	BY



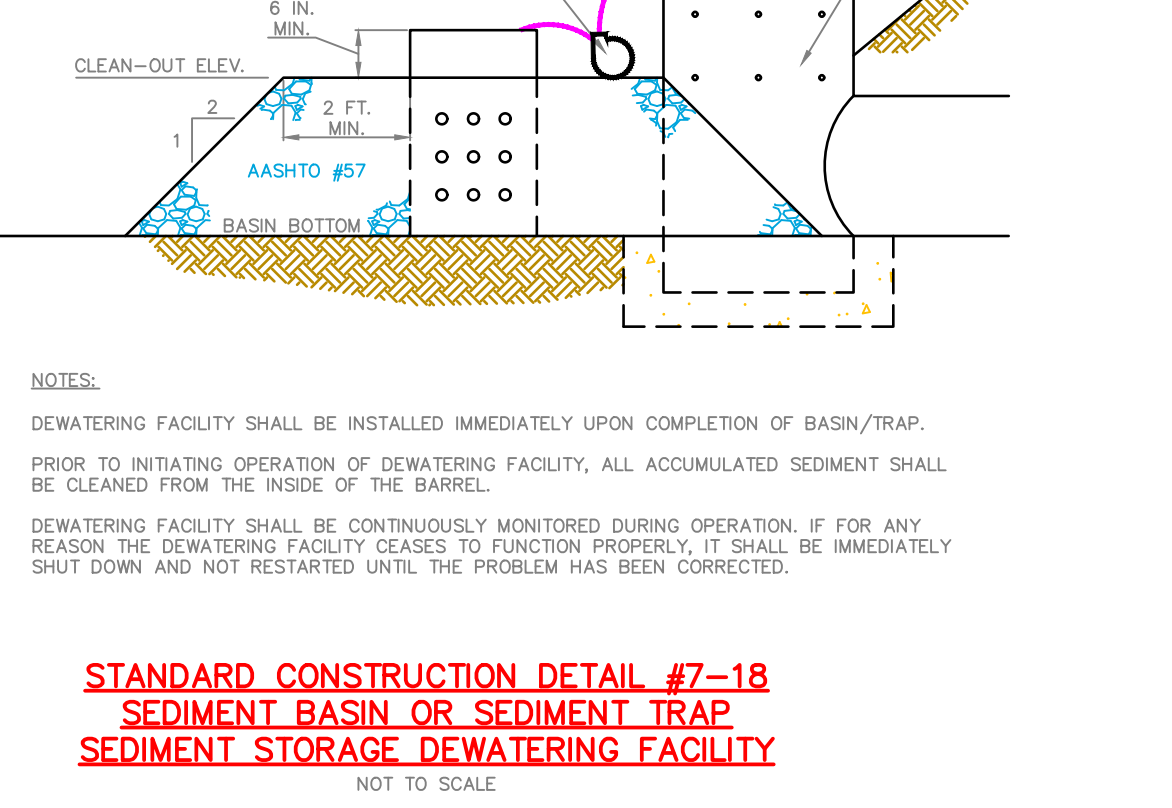
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SKIMMER ATTACHED TO PERMANENT RISER**  
NOT TO SCALE



**STANDARD CONSTRUCTION DETAIL #7-2  
SKIMMER ATTACHED TO PERMANENT RISER**  
NOT TO SCALE



**STANDARD CONSTRUCTION DETAIL #7-2  
SKIMMER ATTACHED TO PERMANENT RISER**  
NOT TO SCALE



**STANDARD CONSTRUCTION DETAIL #7-18  
SEDIMENT BASIN OR SEDIMENT TRAP  
SEDIMENT STORAGE DEWATERING FACILITY**  
NOT TO SCALE

**PRELIMINARY/FINAL**  
**SOIL EROSION & SEDIMENTATION  
POLLUTION CONTROL DETAILS PLAN**  
FOR  
**2854 LINDEN STREET**  
CITY OF BETHLEHEM  
14th WARD  
NORTHAMPTON COUNTY  
PENNSYLVANIA

**DMS**  
DESIGN SERVICES

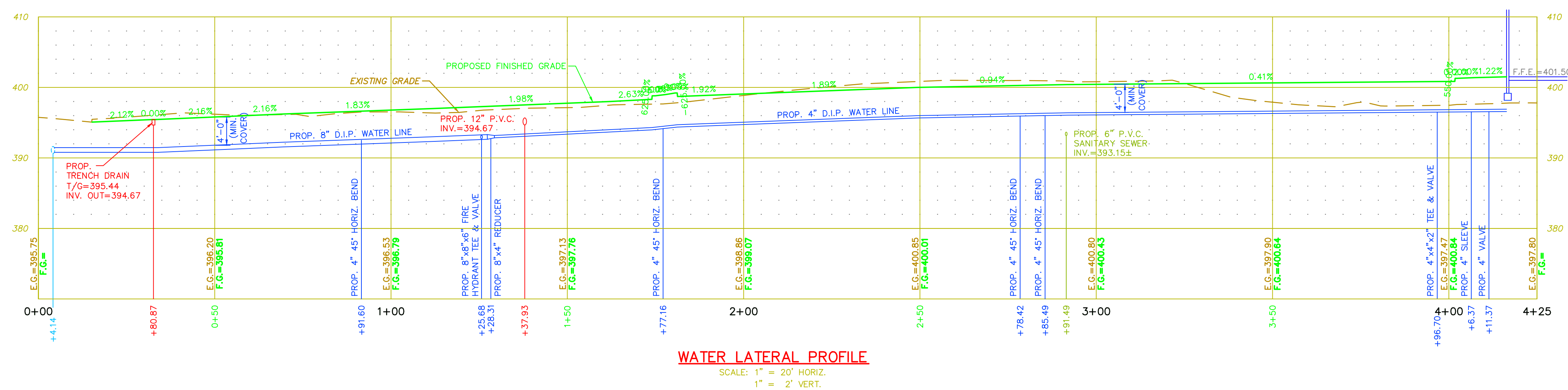
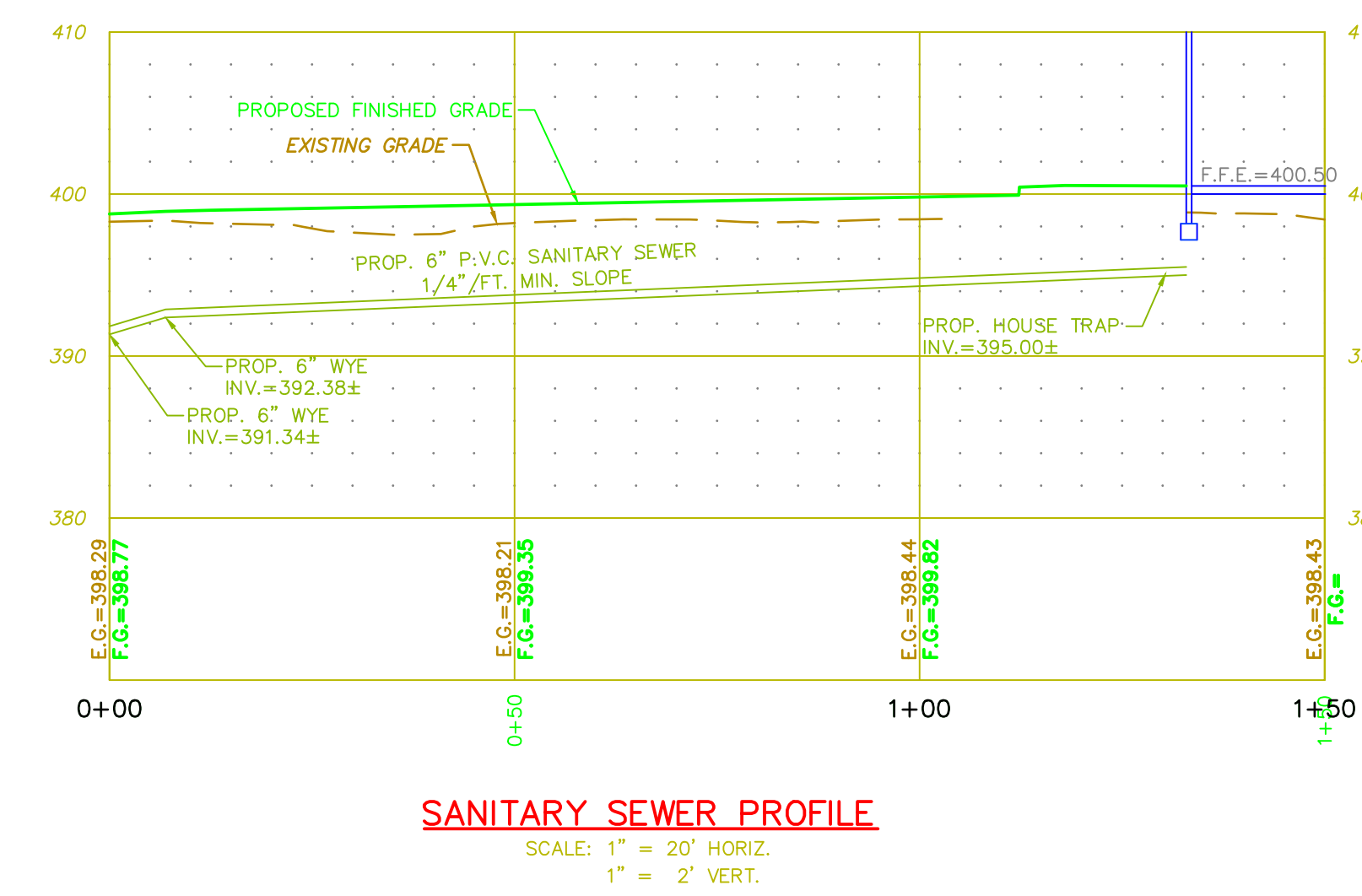
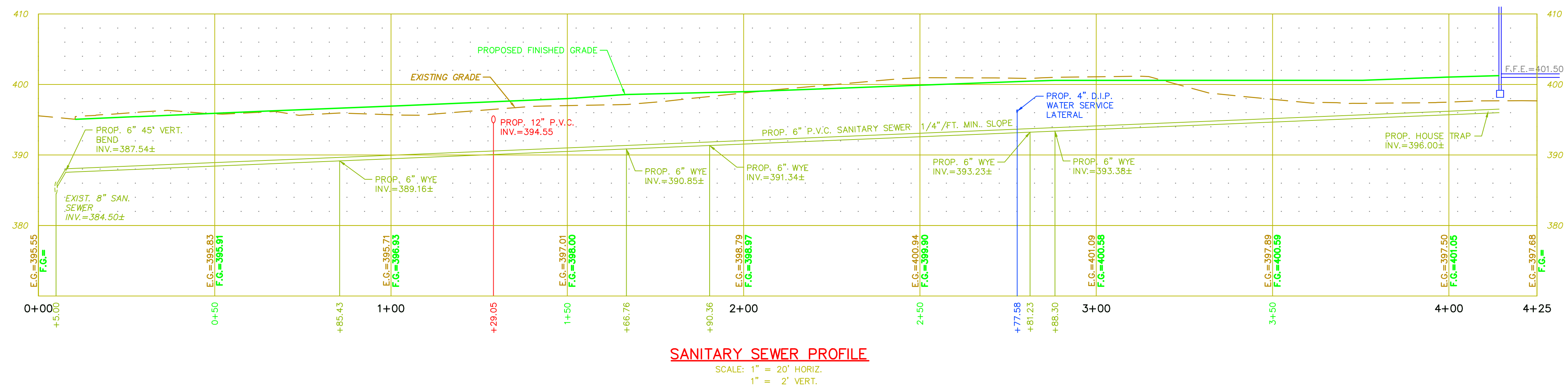
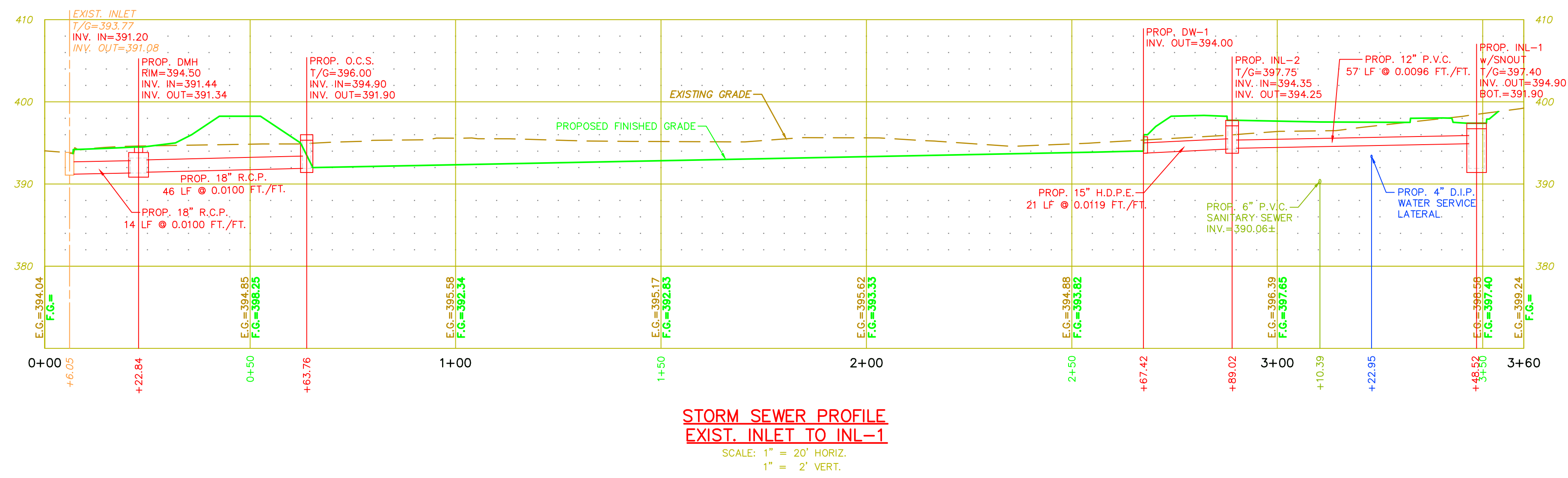
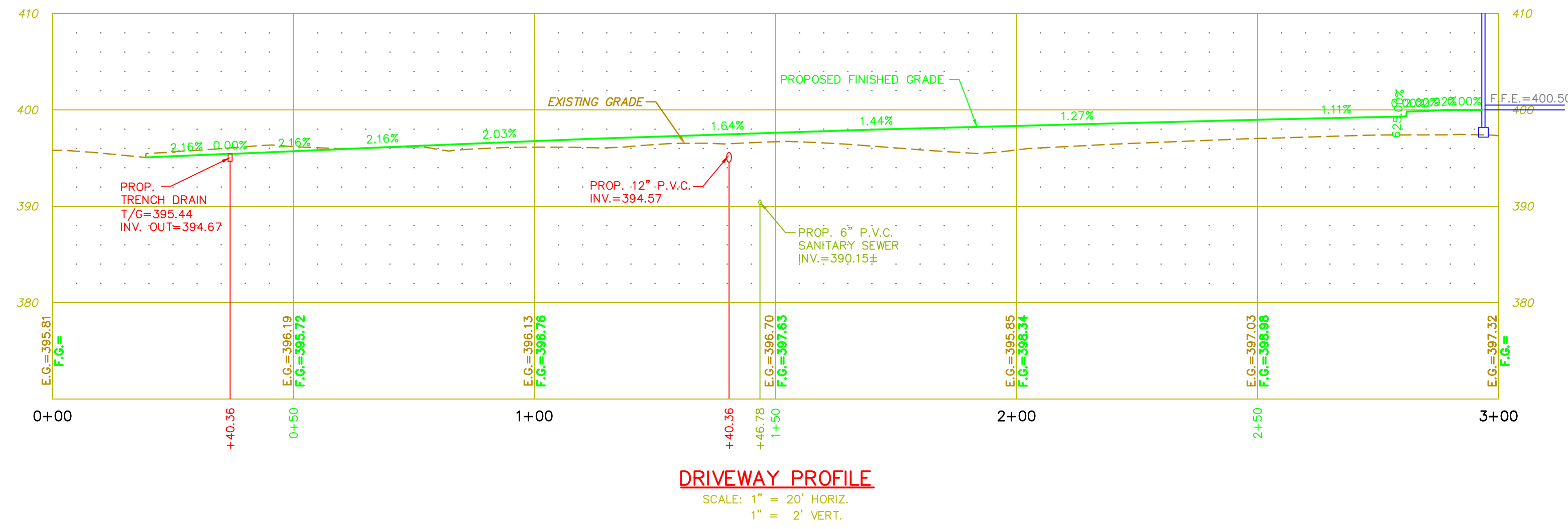
**C-9**

SHEET:  
**9 OF 15**

DRAWING NUMBER:  
**C-9**

DATE: 3/22/2022  
DRAWN BY: S.J.K.  
CHECKED BY: S.J.K.  
SCALE: AS NOTED  
ACAD ID: 2022-08-24 Land Development Plans

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**PROFILES PLAN**  
**2854 LINDEN STREET**  
FOR  
CITY OF BETHLEHEM  
14th WARD  
NORTHAMPTON COUNTY  
PENNSYLVANIA

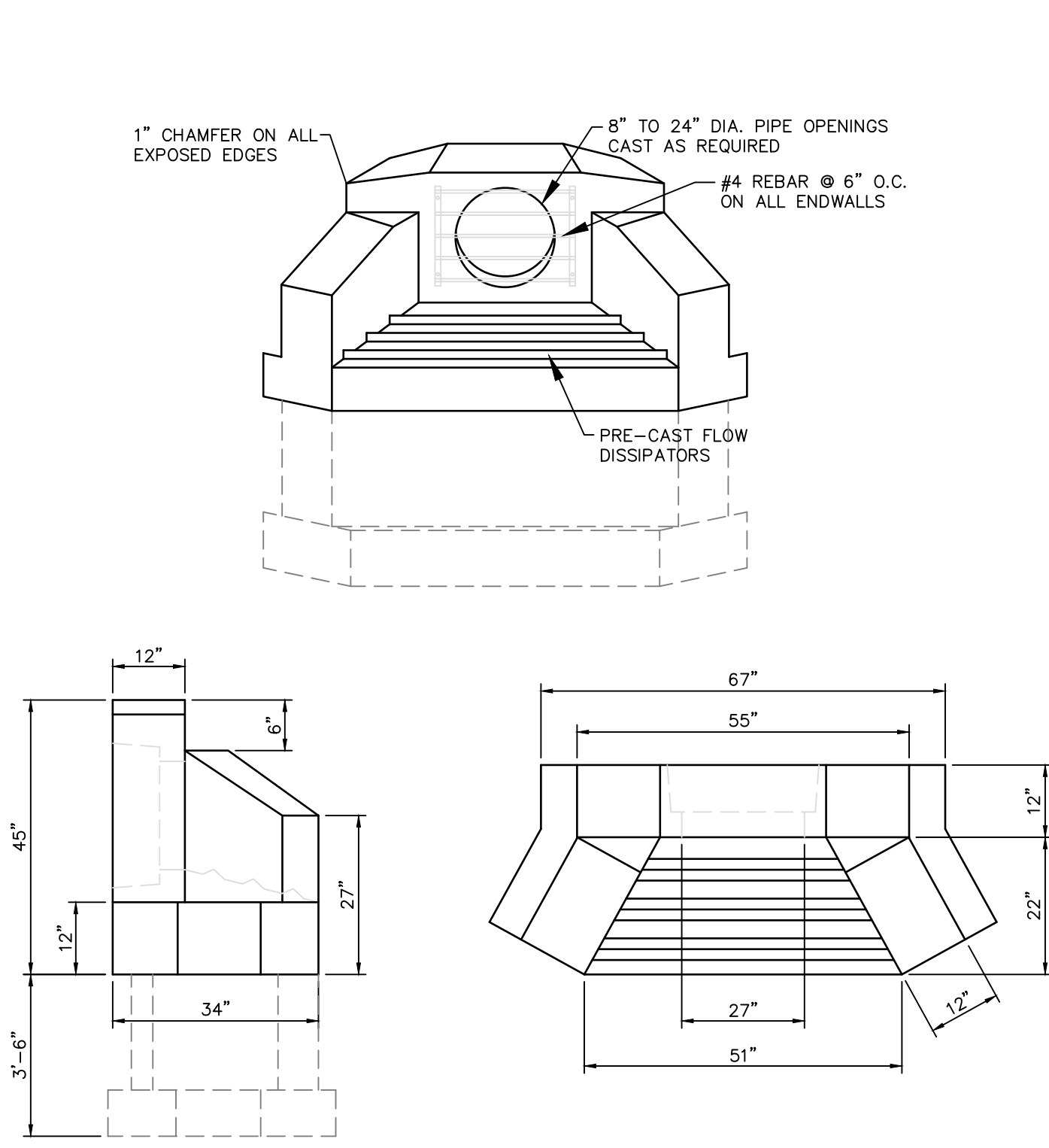
DATE: 3/22/2022  
DRAWN BY: S.J.K.  
CHECKED BY: S.J.K.  
SCALE: AS NOTED  
ACAD ID: 2022-08-24 Land Development Plans

DMS  
REAL ESTATE DESIGNS AND PLANS  
190 BRODHEAD ROAD, SUITE #110  
BETHLEHEM, PA. 18017  
PHONE: (610) 997-8204

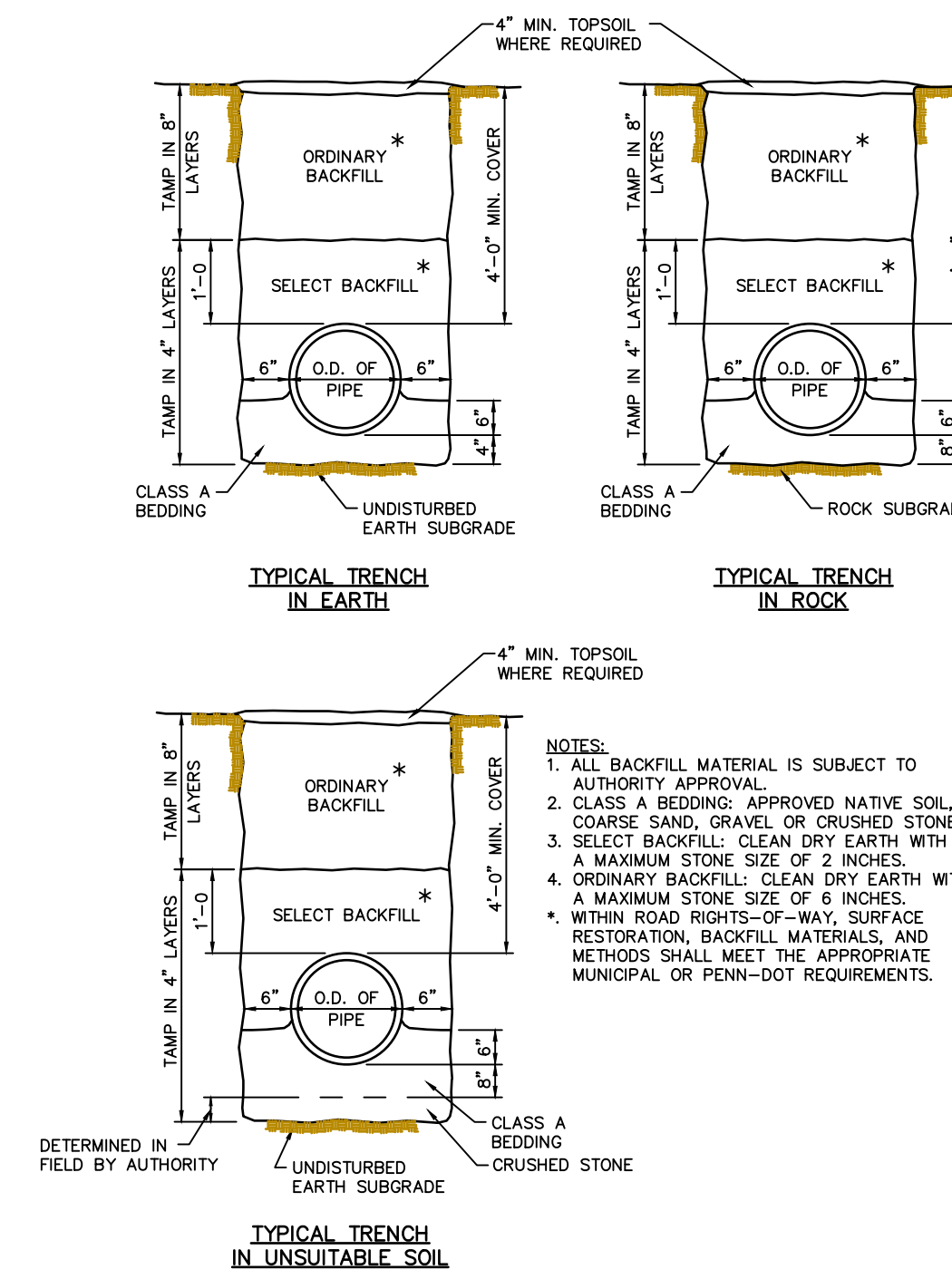
DRAWING NUMBER:  
**C-10**  
SHEET:  
**10 OF 15**

<b>Pennoni</b>		<b>REVISIONS</b>			
<b>PENNONI ASSOCIATES INC.</b> 2041 Avenue C, Suite 100 Bethlehem, PA 18017 T 610.231.0600 F 610.231.2033		1	10/7/22	PER CITY OF BETHLEHEM REVIEW LETTER DATED 5/10/22	SJK
		NO.	DATE	DESCRIPTION	BY

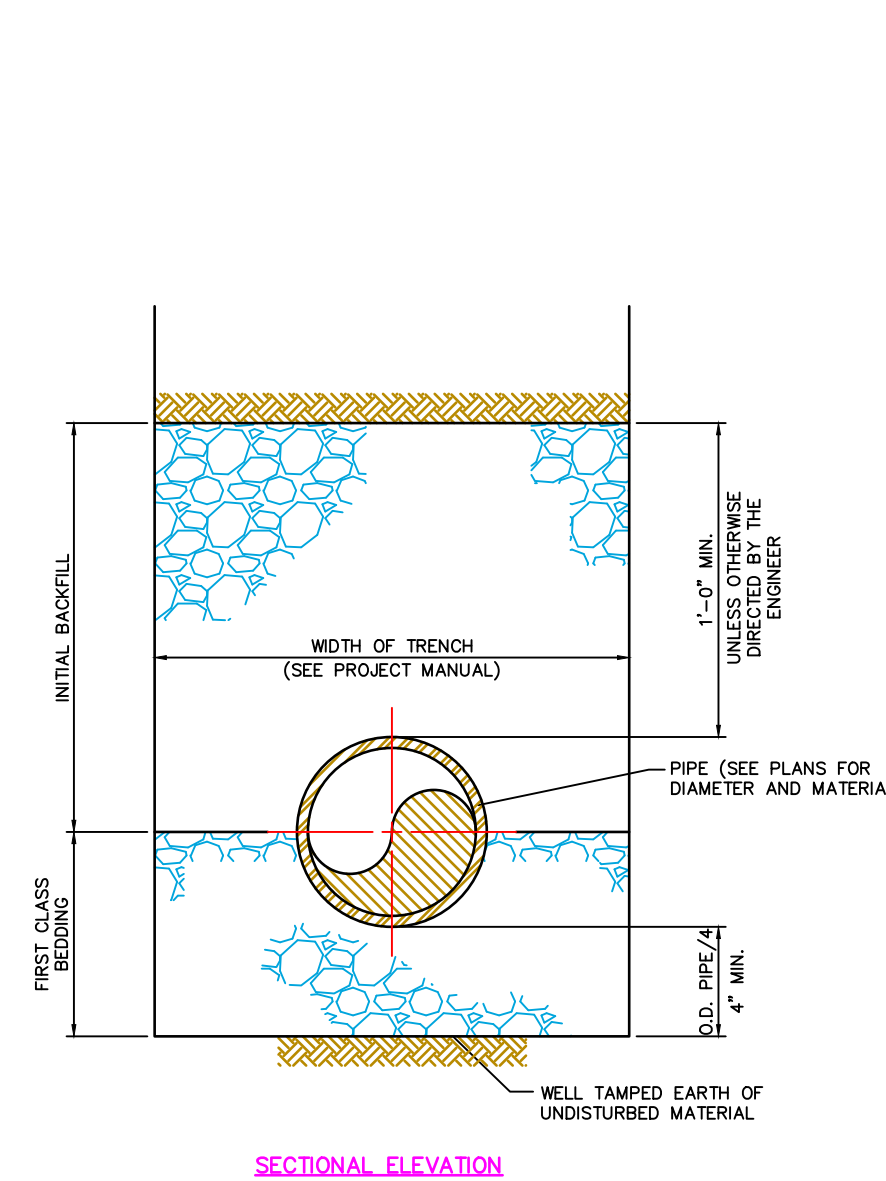
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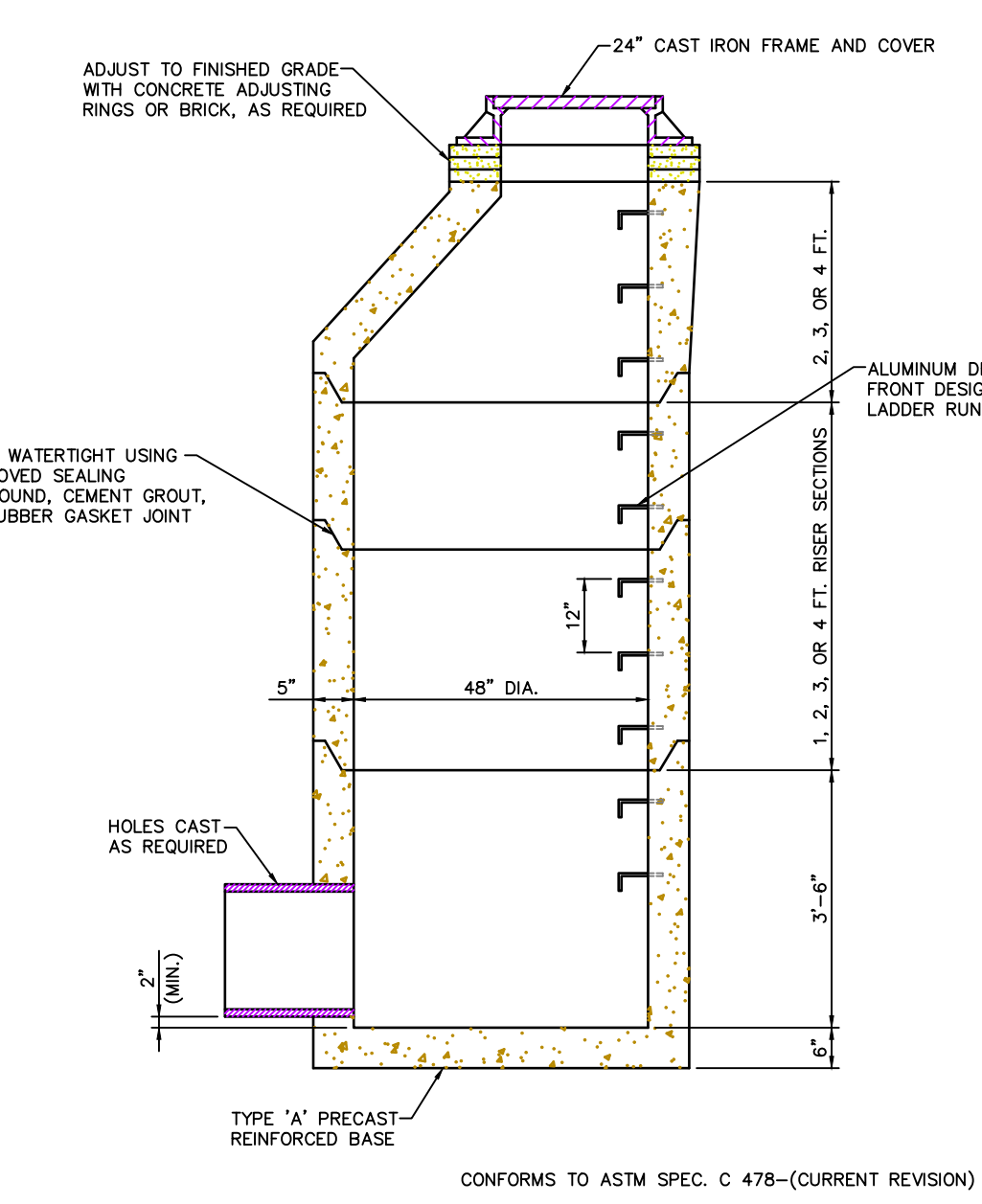
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N.T.S.



**TYPICAL TRENCH DETAILS**  
N.T.S.

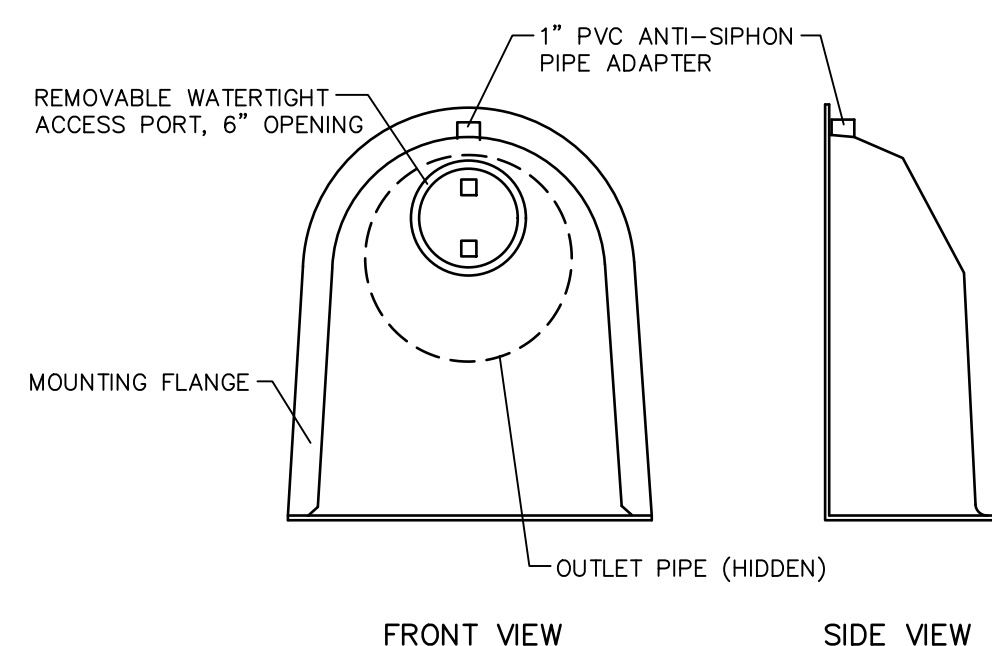


**SECTIONAL ELEVATION**  
**FIRST CLASS BEDDING**  
**AND INITIAL BACKFILL**  
N.T.S.



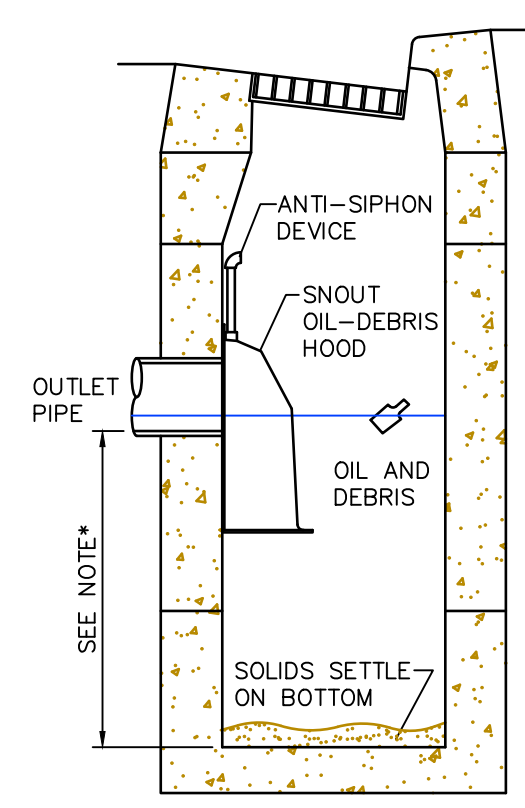
**TYPICAL MANHOLE DETAIL**  
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**CONFIGURATION DETAIL**

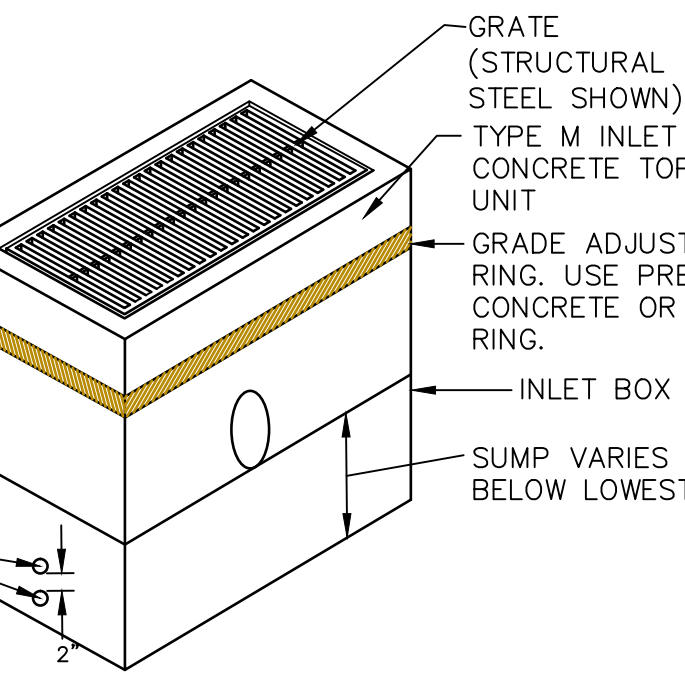


FRONT VIEW SIDE VIEW

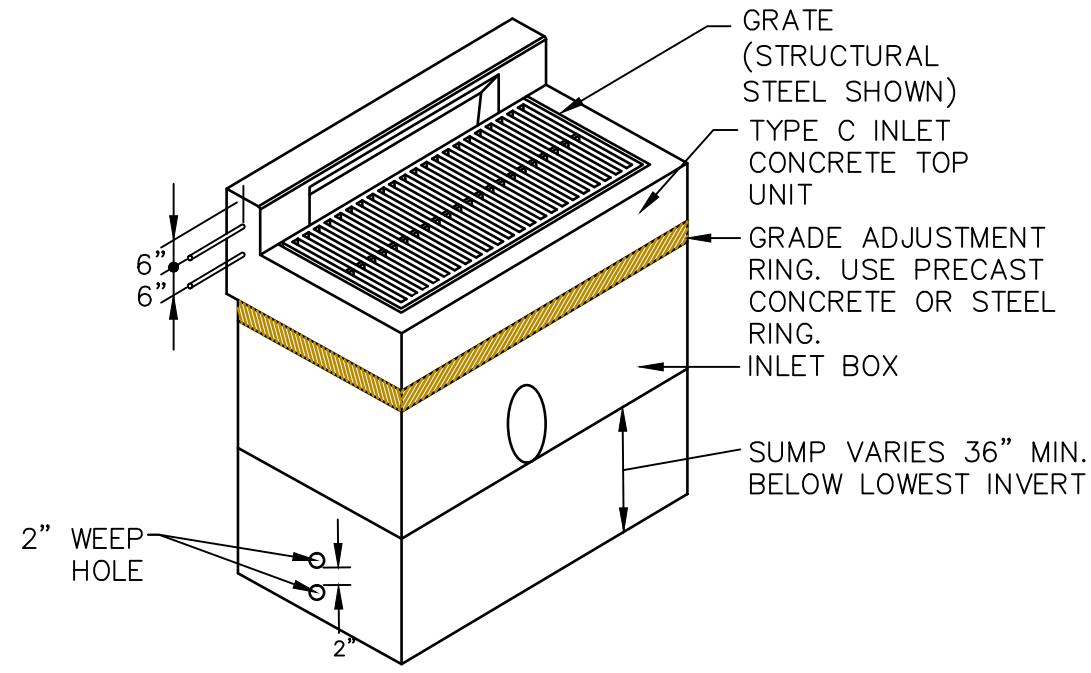
**TYPICAL INSTALLATION**



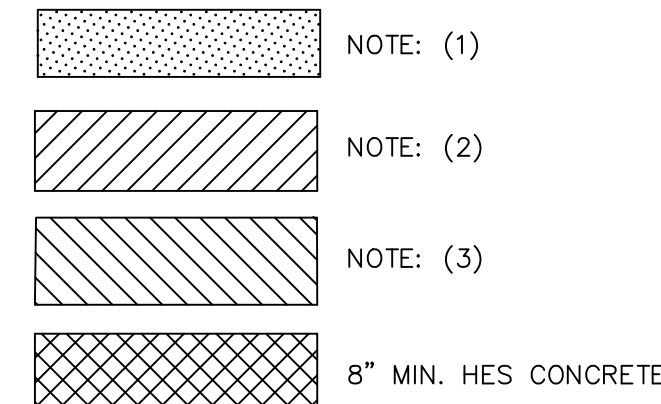
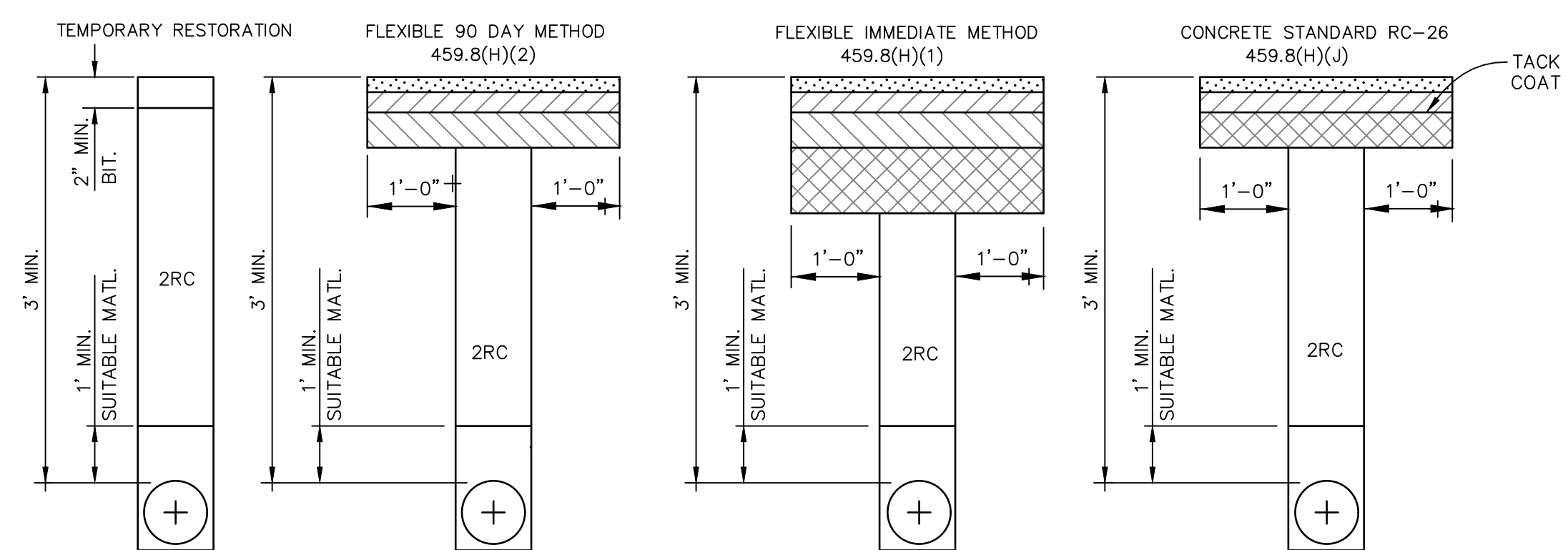
\*NOTE: SUMP DEPTH OF 36\"/>



**TYPE M INLET WITH SUMP**  
N.T.S.



**TYPE C INLET WITH SUMP**  
N.T.S.

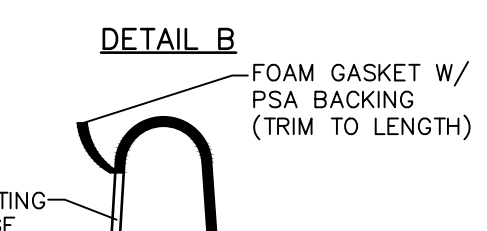
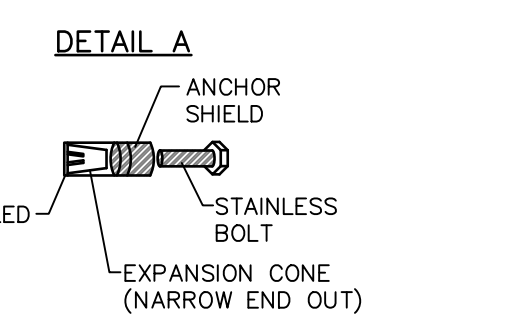
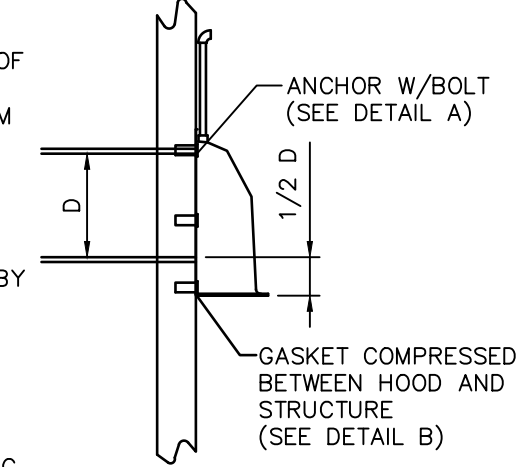


**PAVEMENT RESTORATION METHODS**

**NOTES:**

1. SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 3 - 10 MILLION ESALS, SRL H, 9.5 MM MIX, 1 1/2\"/>
2. SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 3 - 10 MILLION ESALS, 19 MM MIX, 2\"/>
3. SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 3 - 10 MILLION ESALS, 25 MM MIX, 6\"/>

**INSTALLATION DETAIL**



INSTALLATION NOTE: POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES <12\"/>

**INLET SNOOT DETAIL INSTALLED IN INLET 3**

N.T.S.



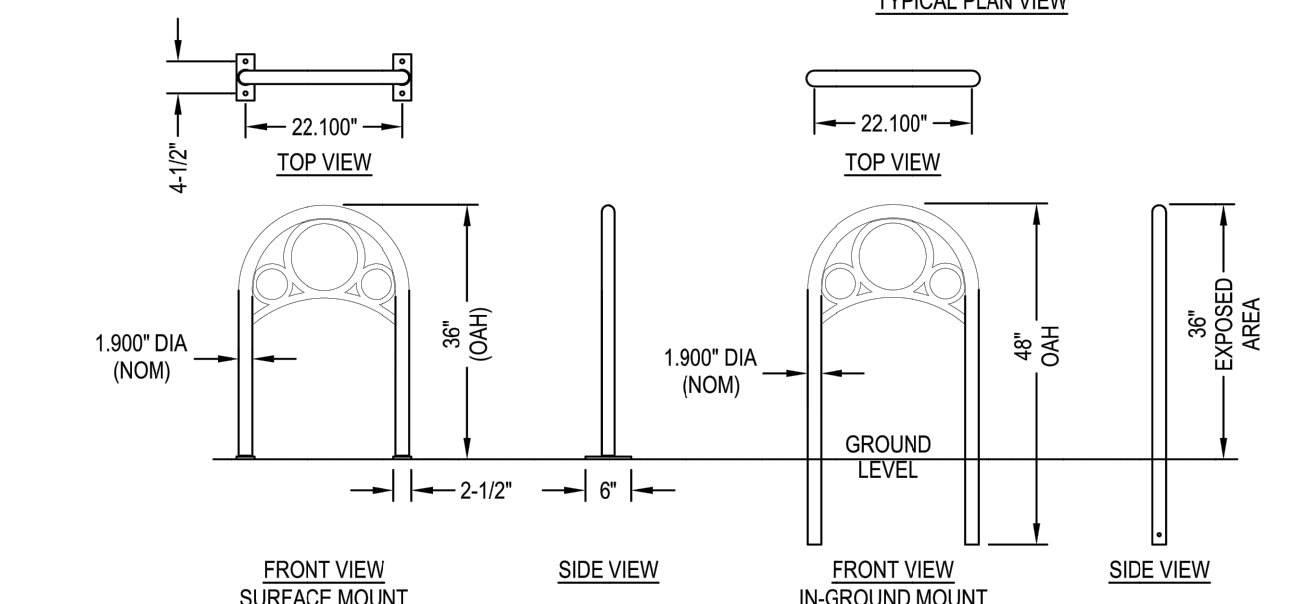
CYCLE-SAFE, INC.  
5211 CASCADE RD SE, SUITE 210  
GRAND RAPIDS, MI 49546  
TOLL FREE: (888) 950-6531  
PHONE: (616) 954-9977  
FAX: (616) 954-0290  
www.cyclesafe.com

**SELECT DESIRED INSTALLATION METHOD:**

- IN-GROUND
- SURFACE
- RAIL

**SELECT DESIRED COLOR:**

- TRAFFIC BLACK, RAL 9017 (STANDARD)
- MOSS GREEN, RAL 6005
- TRAFFIC RED, RAL 3020
- BLACK BROWN, RAL 8022
- SIGNAL WHITE, RAL 9003
- SAPPHIRE BLUE, RAL 5003
- WHITE ALUMINUM, RAL 9006
- CUSTOM



- NOTES:**
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
  2. DO NOT SCALE DRAWING.
  3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
  4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
  5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT [www.CADdetails.com/info](http://www.CADdetails.com/info) AND ENTER REFERENCE NUMBER 655-032

**HORIZONTAL BIKE RACKS**

655-032

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REVISION DATE 2/12/2019  
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**CONSTRUCTION DETAILS PLAN**  
FOR  
**2854 LINDEN STREET**

CITY OF BETHLEHEM  
14th WARD  
NORTHAMPTON COUNTY  
PENNSYLVANIA

DATE: 3/22/2022

DRAWN BY: S.J.K.

CHECKED BY: S.J.K.

SCALE: AS NOTED

ACAD ID: 2022-08-24 Land Development Plans

**DMS**  
REAL ESTATE DESIGNS AND PLANS  
190 BROOKHURST ROAD, SUITE #110  
BETHLEHEM, PA, 18017  
PHONE: (610) 997-8204

DRAWING NUMBER:

**C-11**

SHEET:

**11 OF 15**

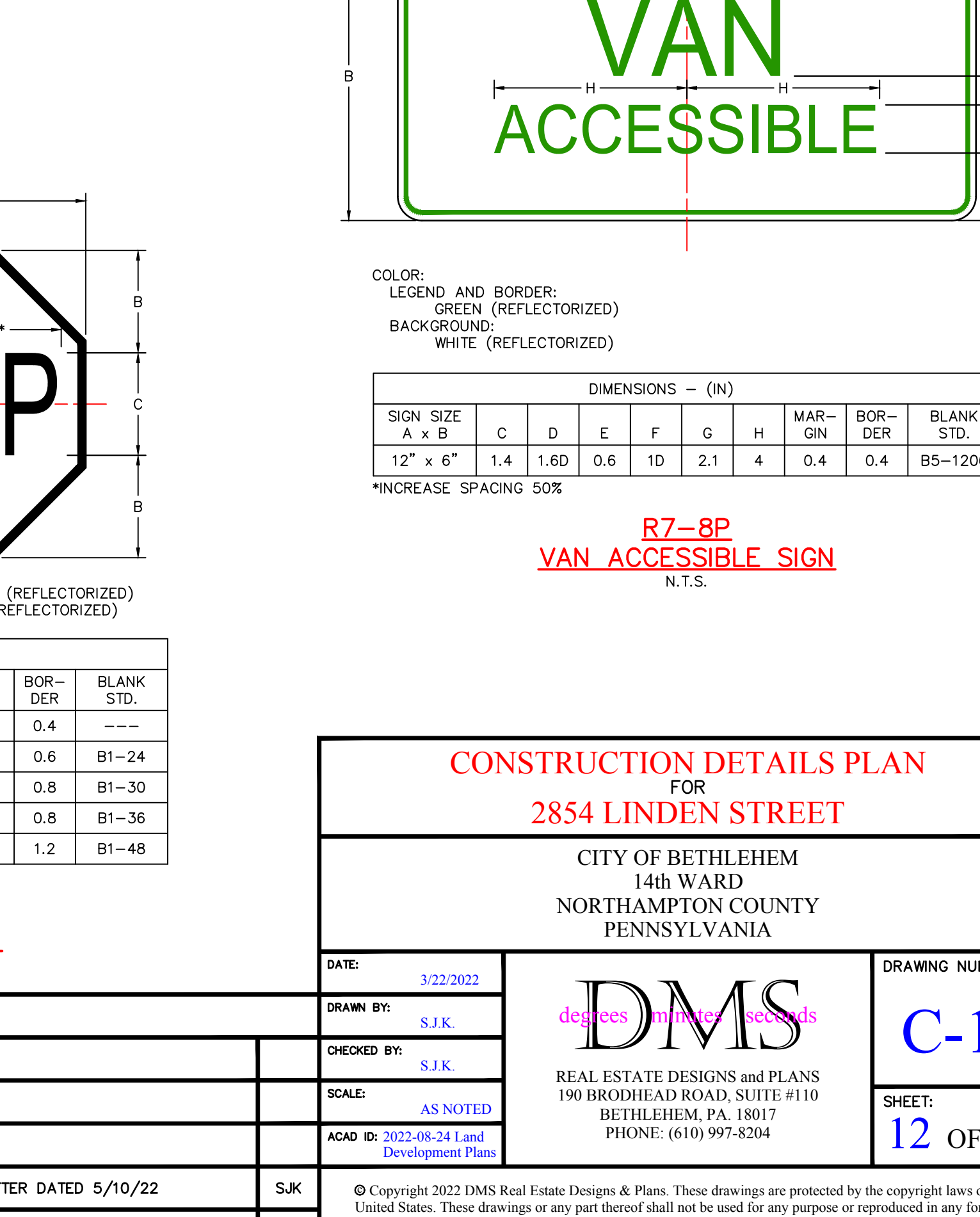
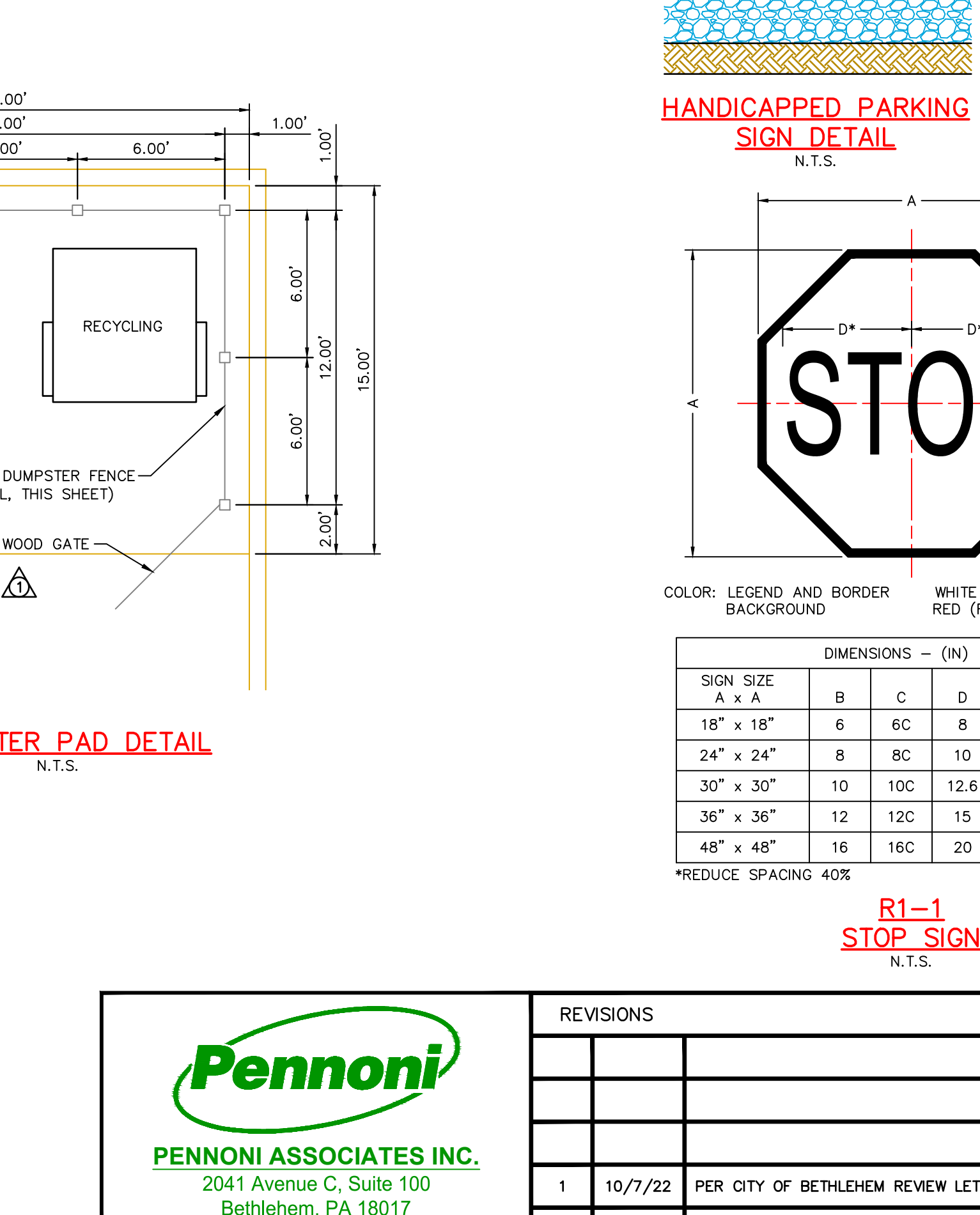
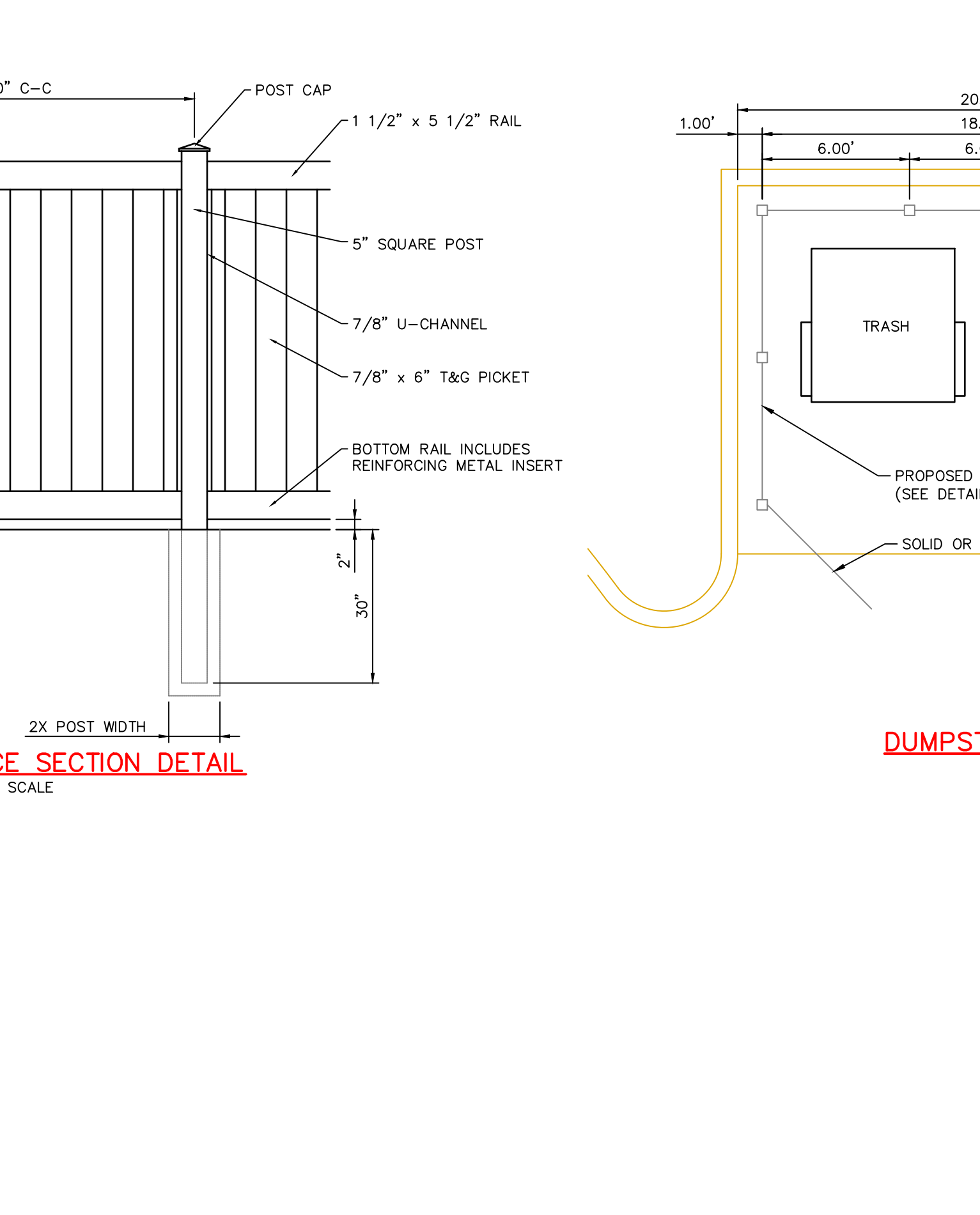
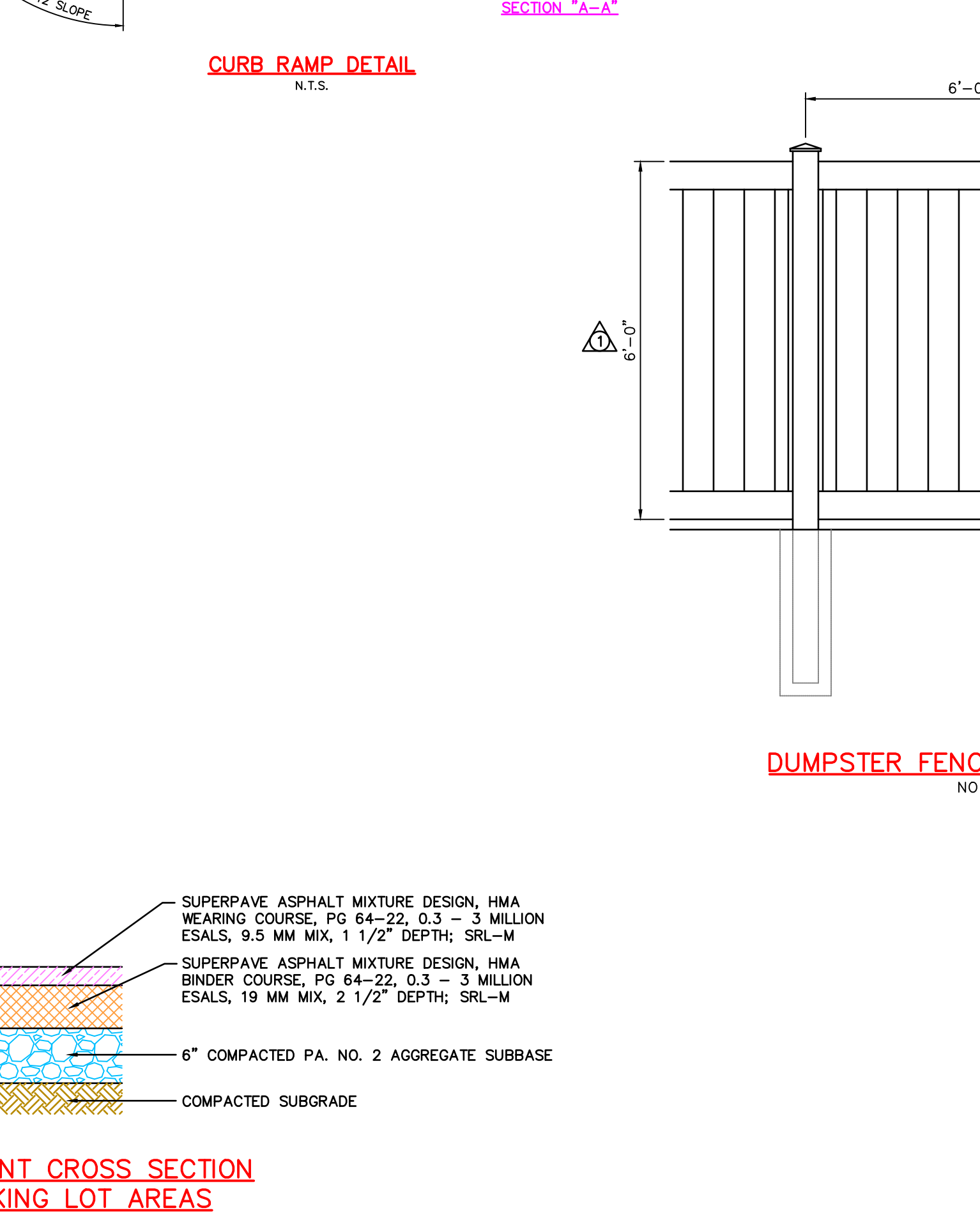
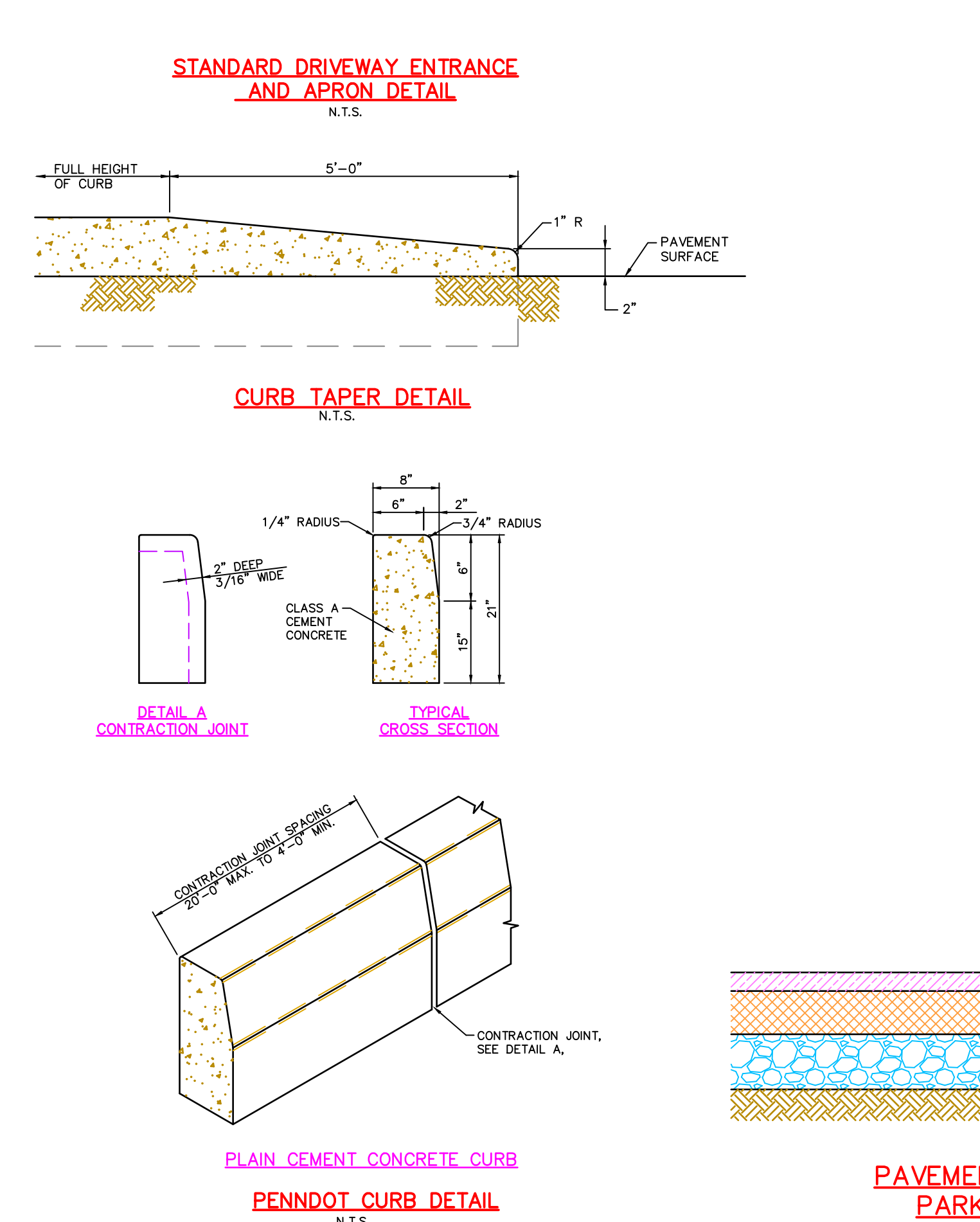
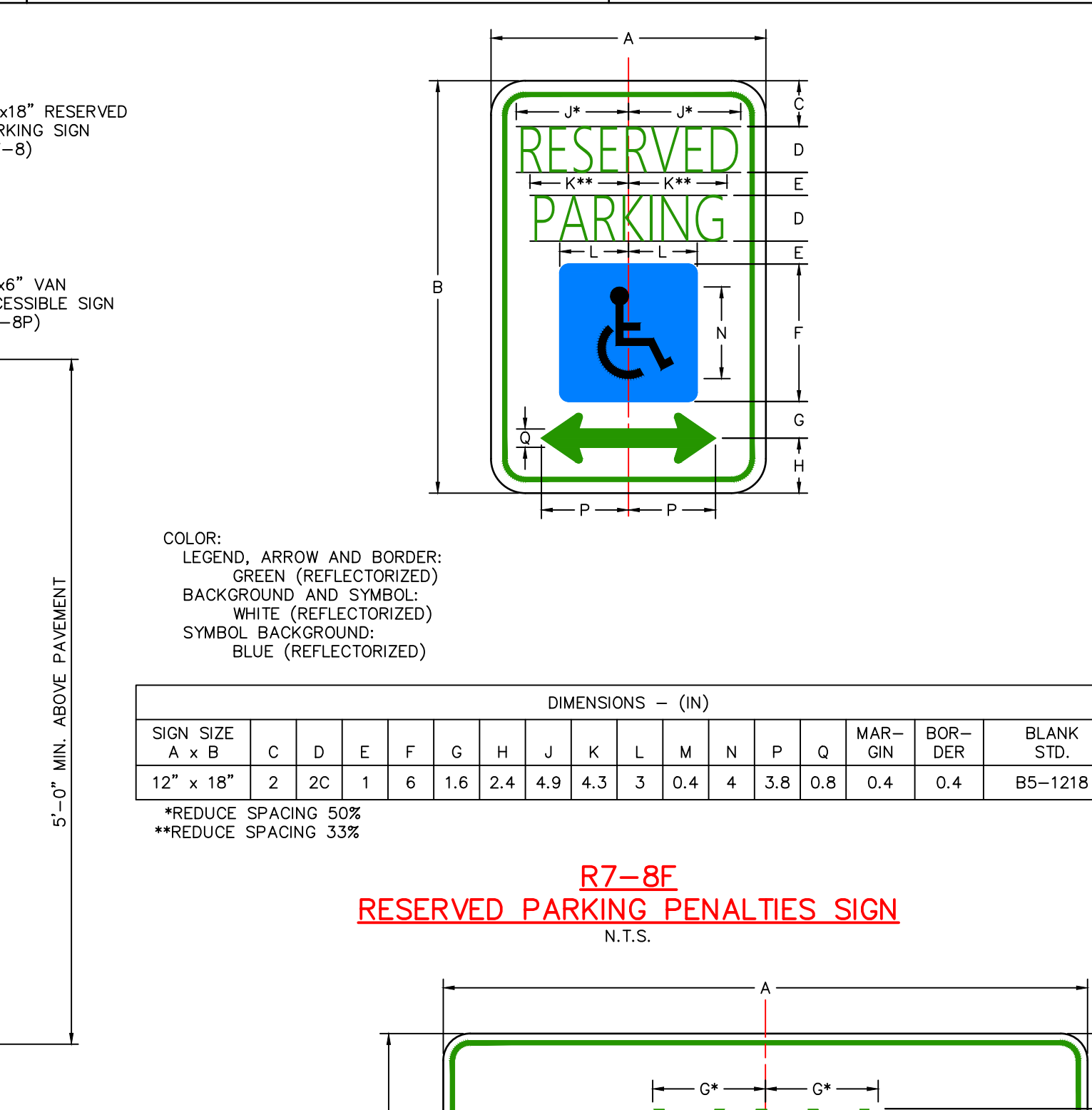
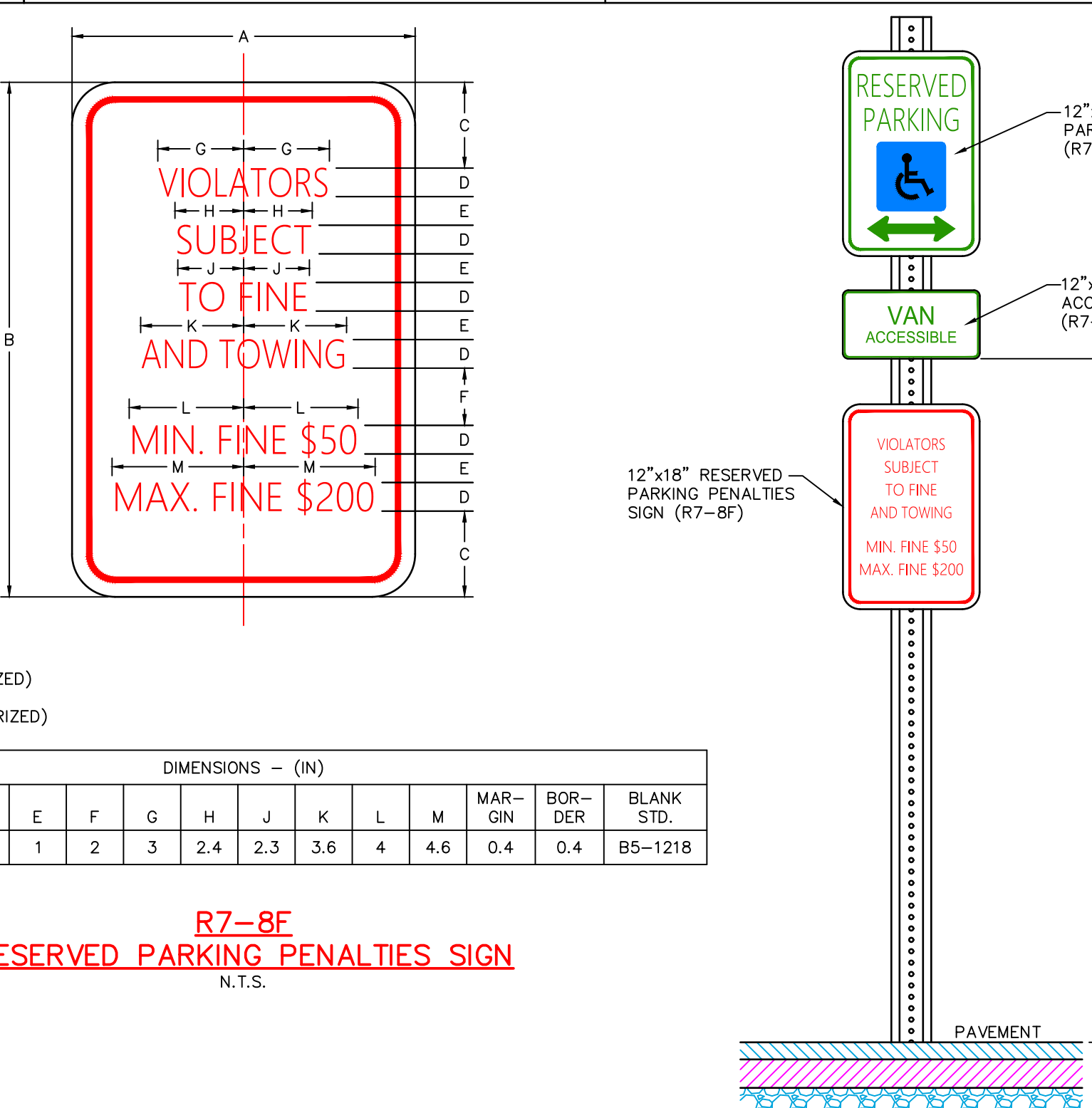
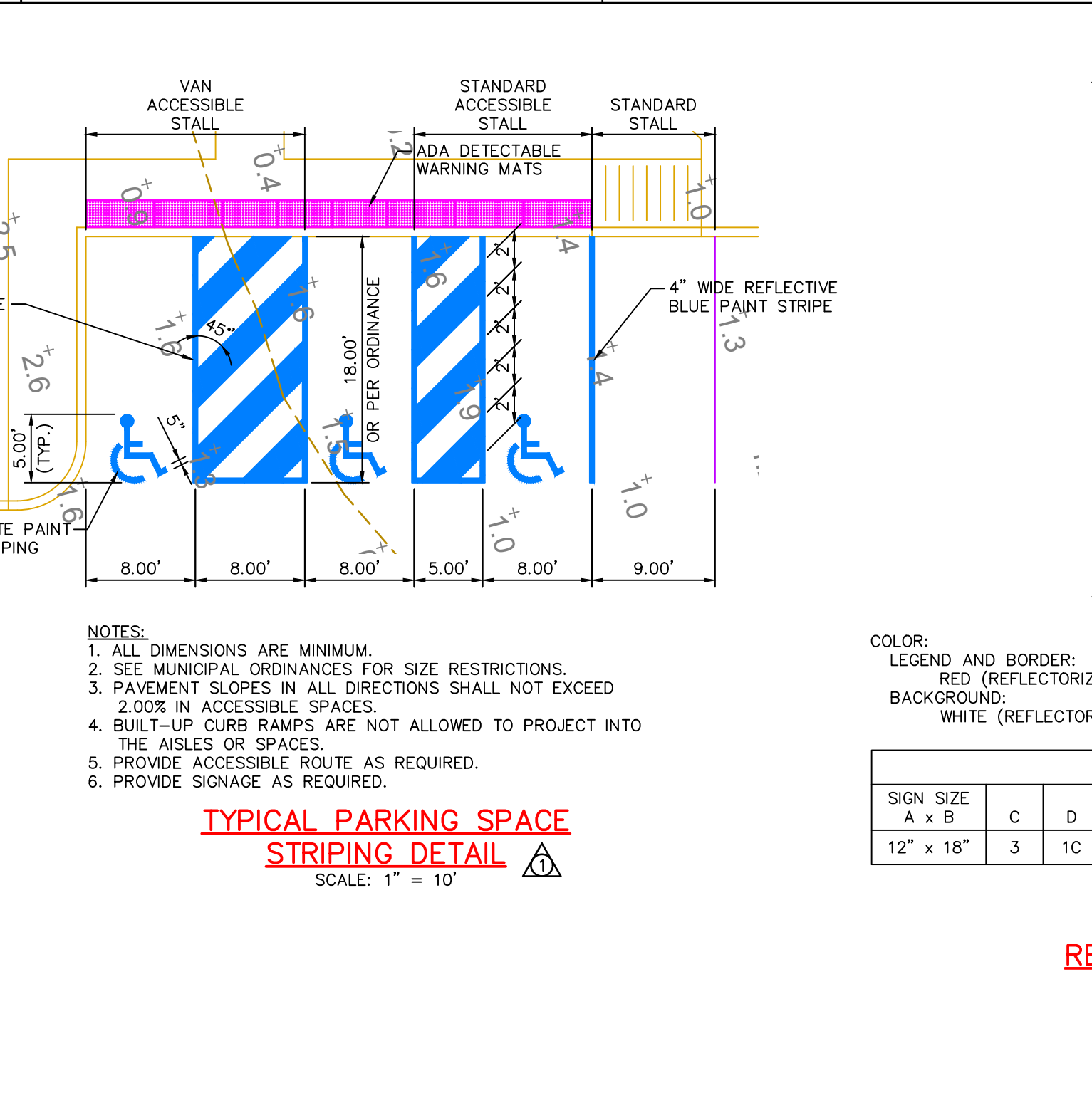
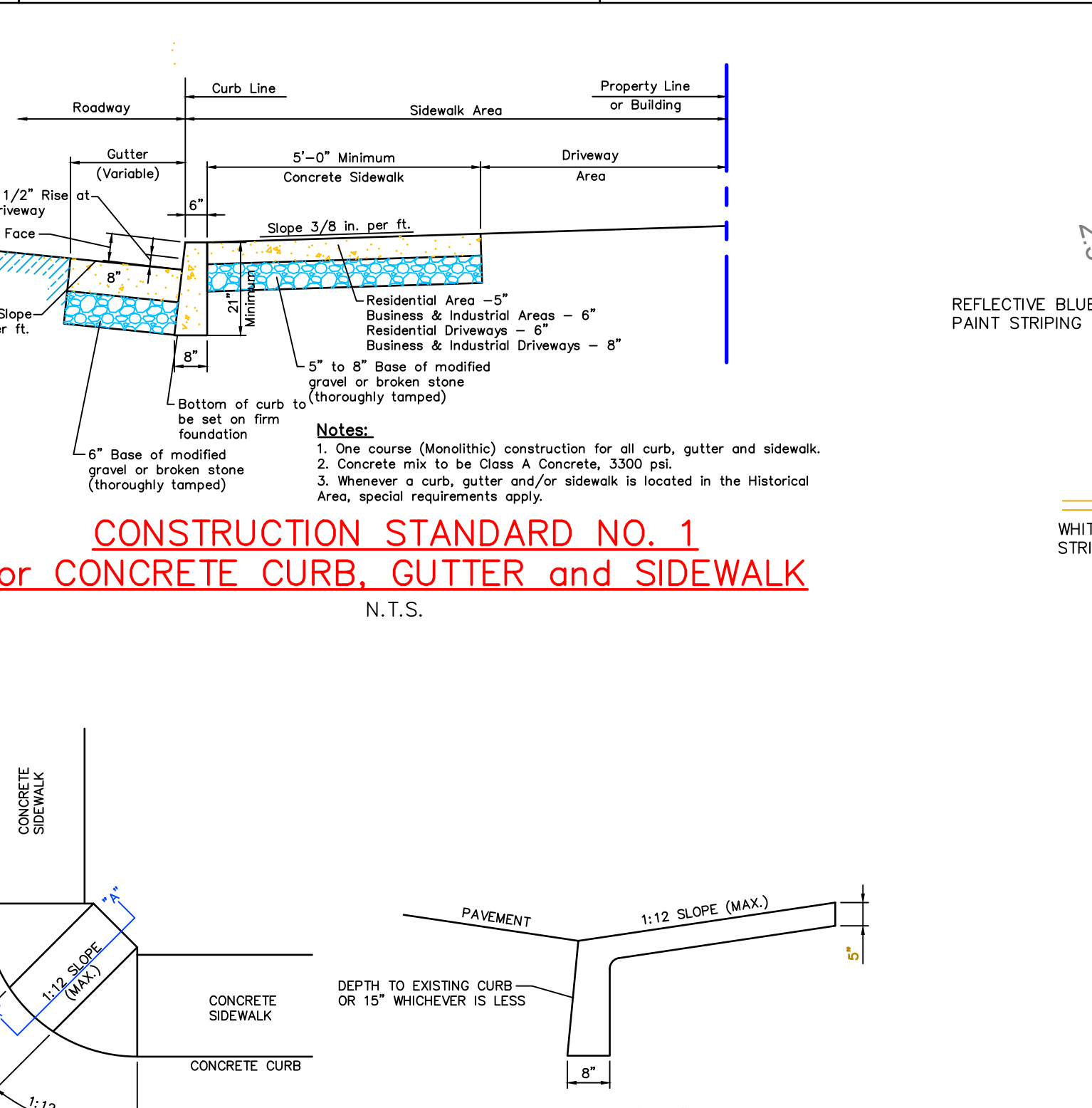
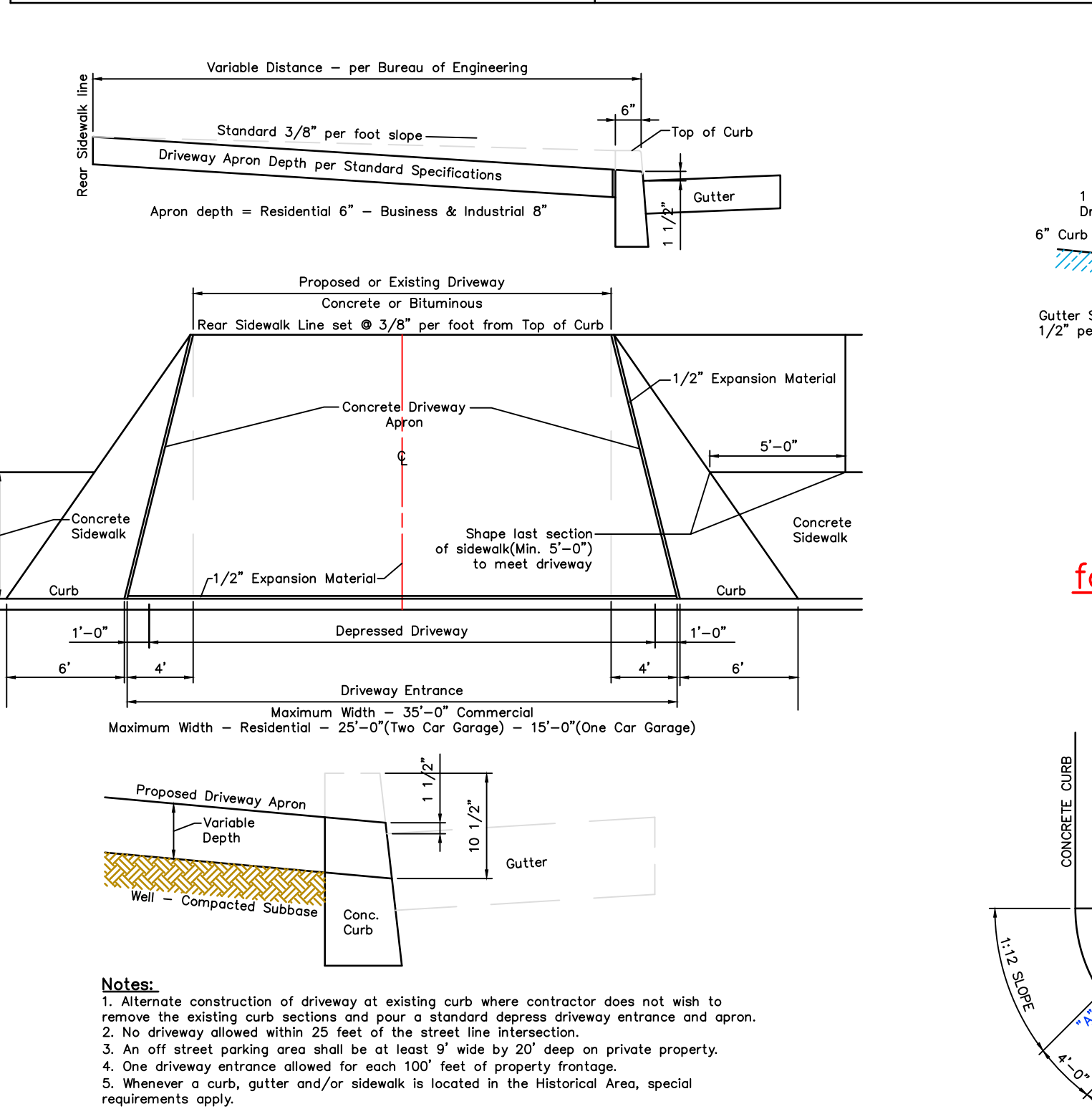
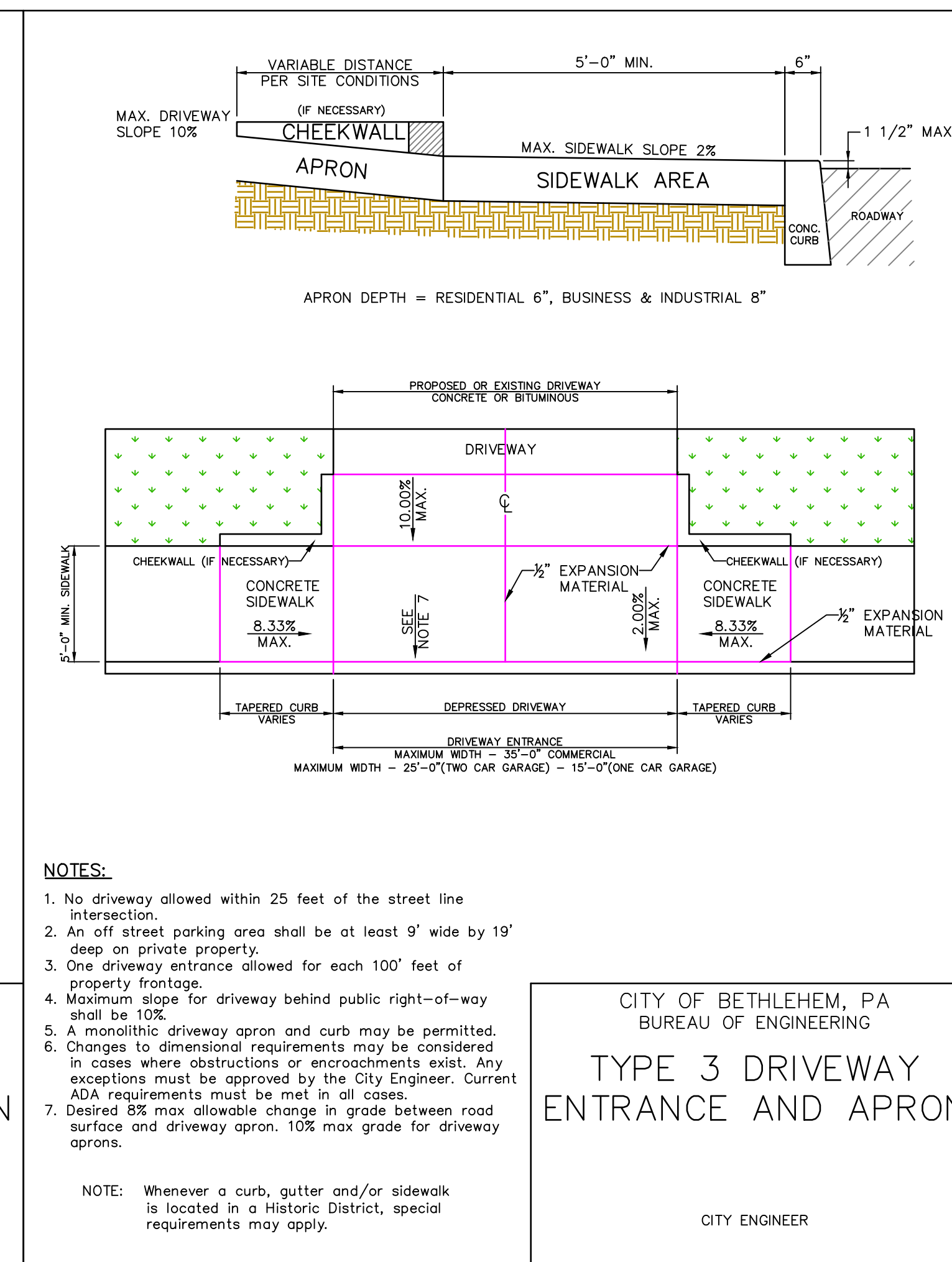
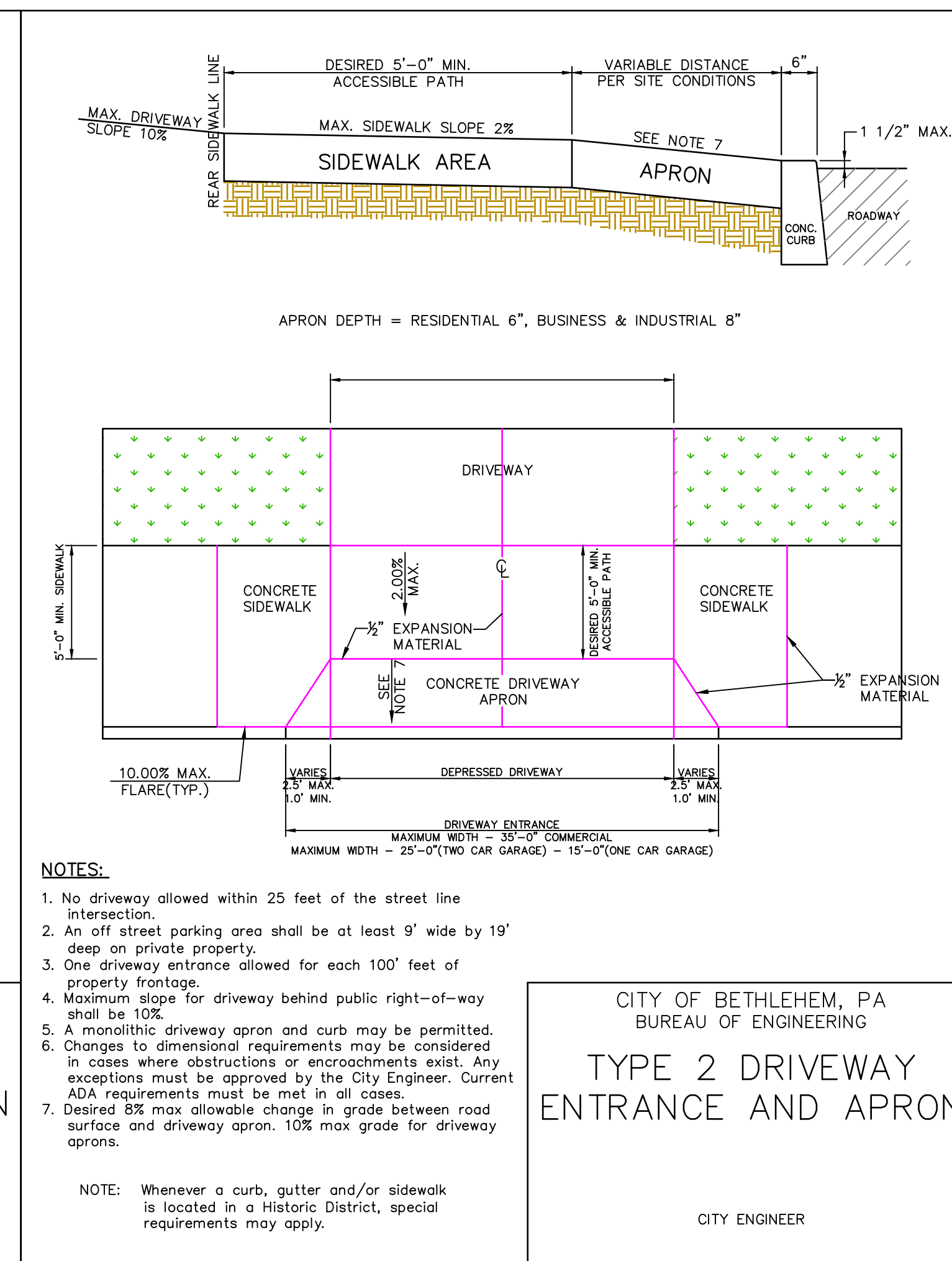
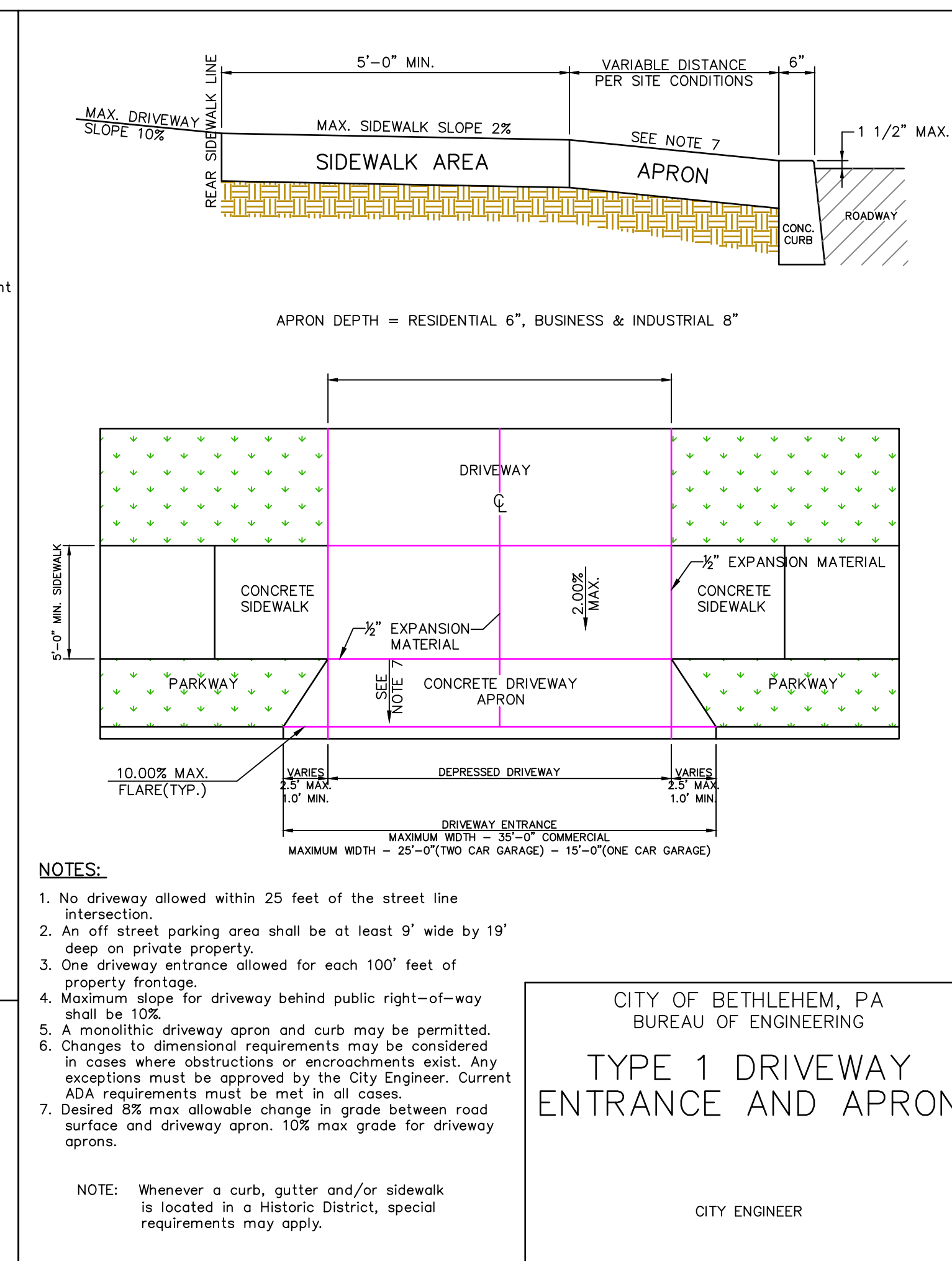
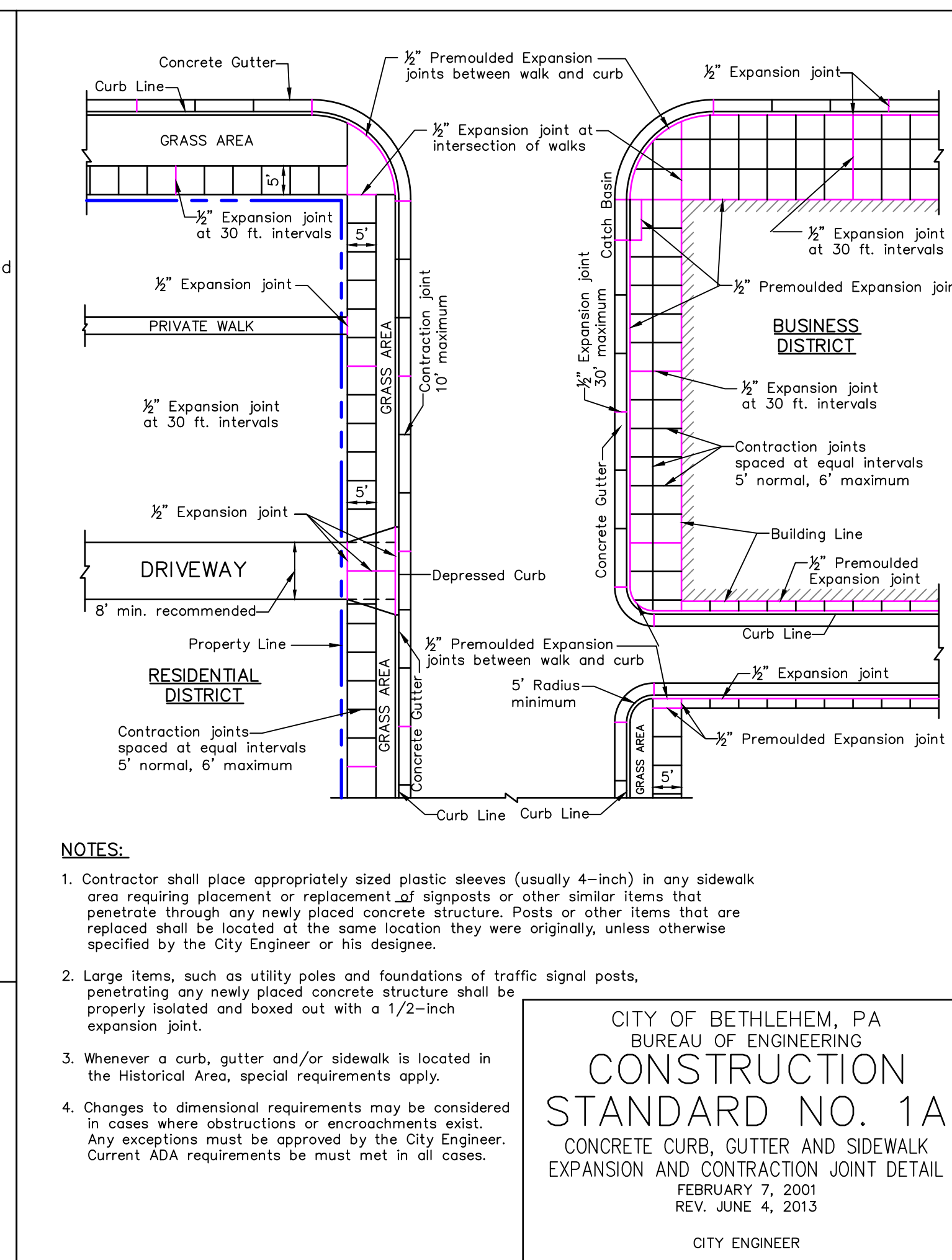
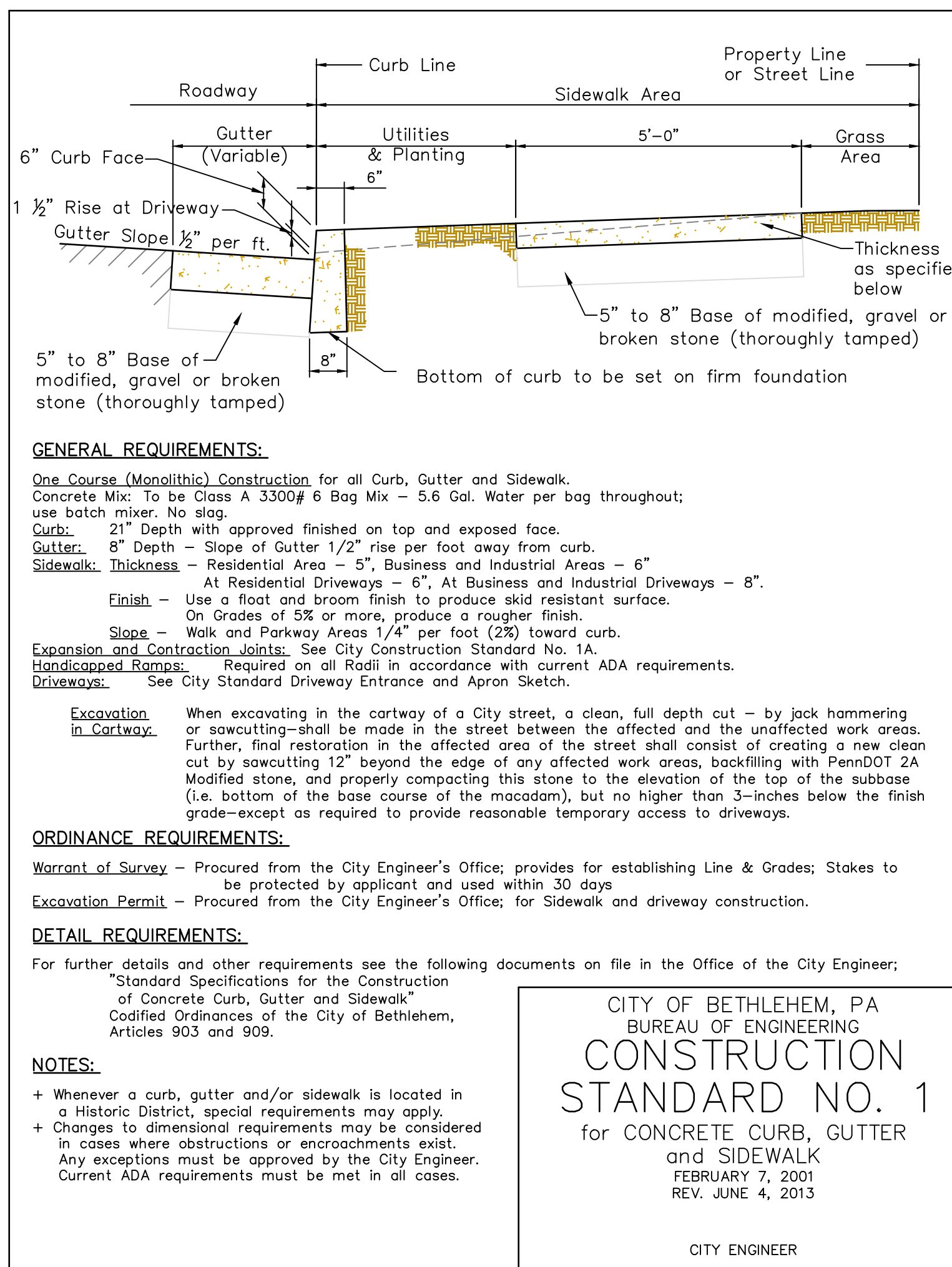


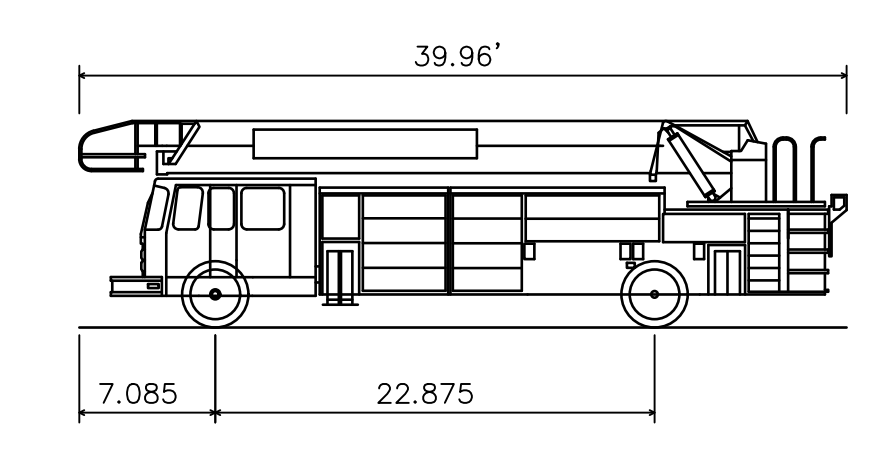
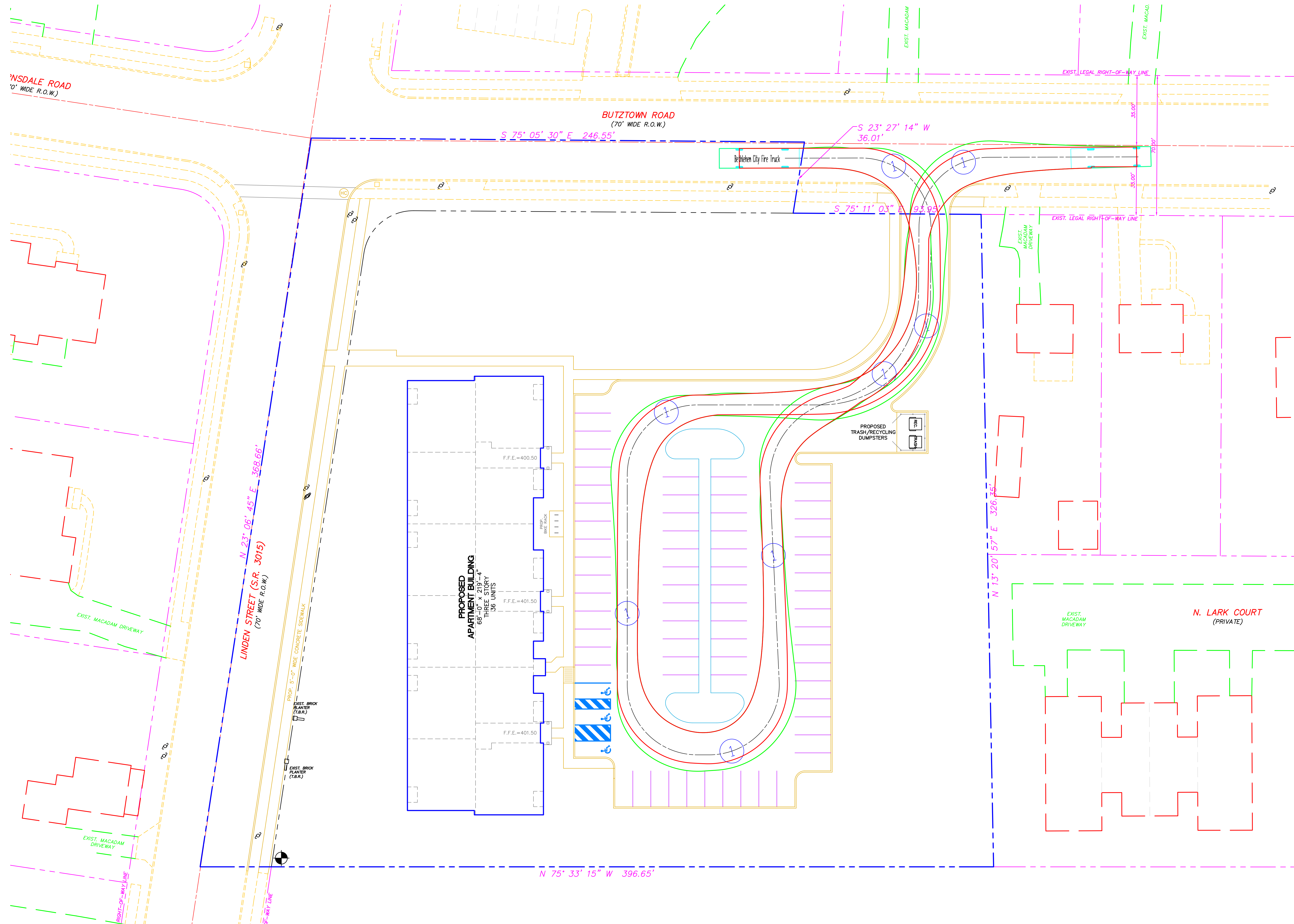
**PENNONI ASSOCIATES INC.**  
2041 Avenue C, Suite 100  
Bethlehem, PA 18017  
T 610.231.0600 F 610.231.2033

**REVISIONS**

NO.	DATE	DESCRIPTION	BY

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Bethlehem City Fire Truck	
Overall Length	39.96ft
Overall Width	9.86ft
Overall Body Height	10.75ft
Min Body Ground Clearance	1.88ft
Track Width	9.86ft
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	38.750ft

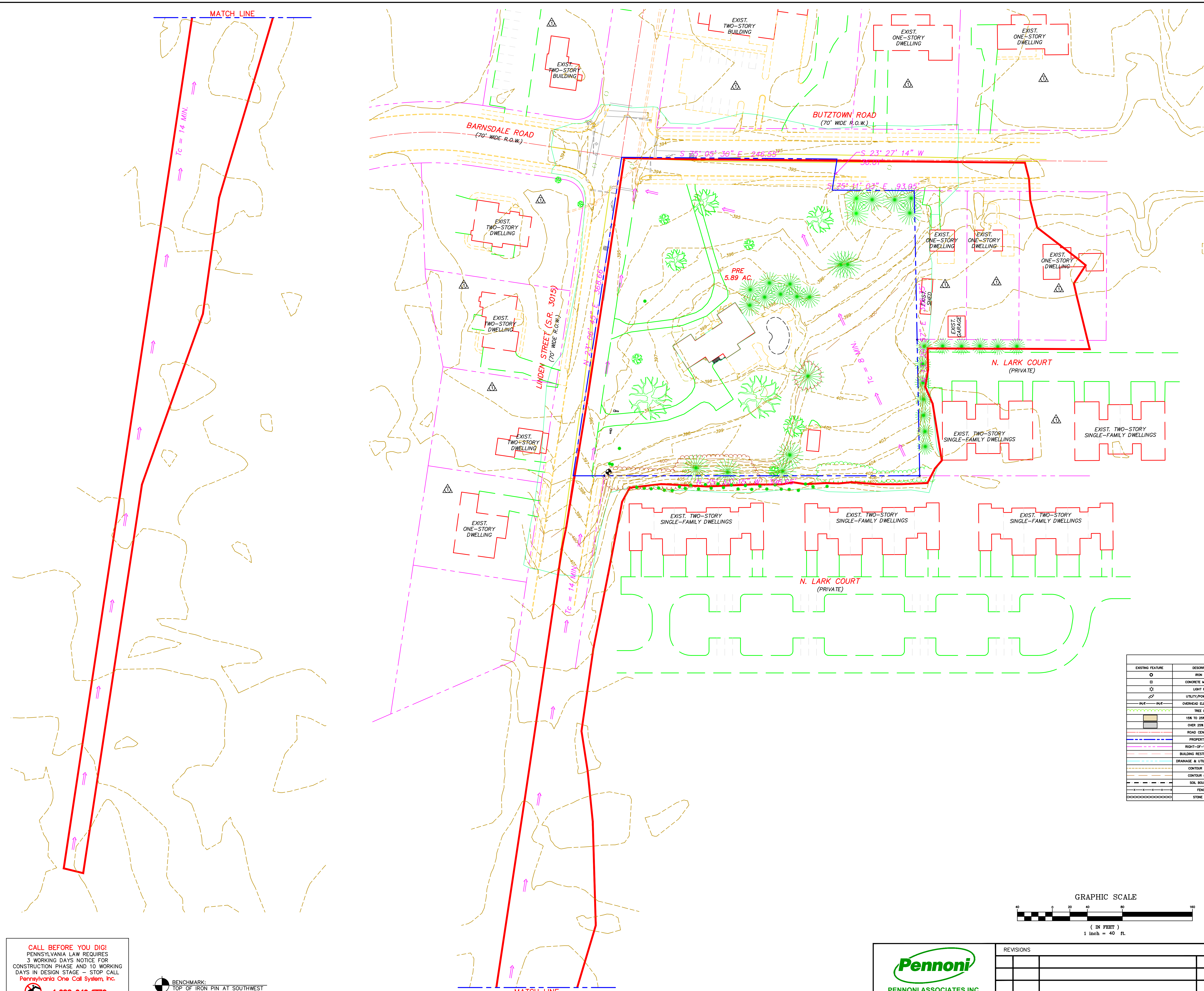
**TRUCK TURNING RADIUS PLAN**  
**FOR**  
**2854 LINDEN STREET**  
 CITY OF BETHLEHEM  
 14th WARD  
 NORTHAMPTON COUNTY  
 PENNSYLVANIA

DATE:	3/22/2022	DRAWING NUMBER:	C-13
DRAWN BY:	S.J.K.		
CHECKED BY:	S.J.K.		
SCALE:	1" = 30'		
ACAD ID:	2022-08-24 Land Development Plans		

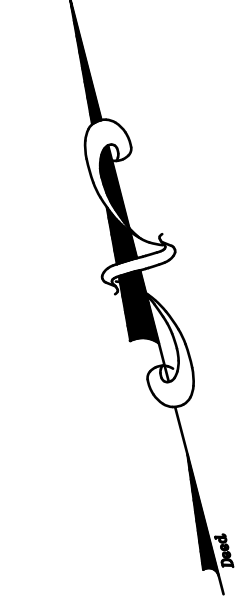
**Pennonni**  
**PENNONNI ASSOCIATES INC.**  
 2041 Avenue C, Suite 100  
 Bethlehem, PA 18017  
 T 610.231.0600 F 610.231.2033

REVISIONS		NO.	DATE	DESCRIPTION	BY
1	10/7/22			PER CITY OF BETHLEHEM REVIEW LETTER DATED 5/10/22	SJK

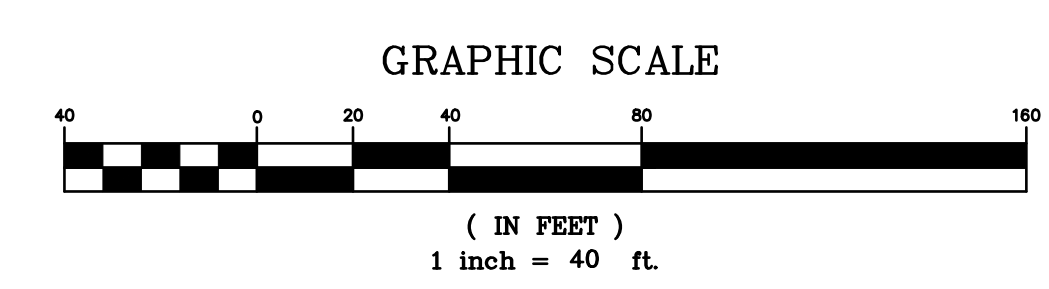
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LOCATION MAP  
SCALE: 1" = 800'



LEGEND					
EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE	EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE
○	IRON PIN	●	○	SANITARY SEWER MANHOLE	○
□	CONCRETE MONUMENT	■	—	SANITARY SEWER LINE	—
☆	LIGHT POLE	—	—	WATERLINE	—
⊕	UTILITY/POWER POLE	—	—	WATER VALVE	—
—	OVERHEAD ELECTRIC LINE	—	—	PIPE HYDRANT	—
—	TREE LINE	—	—	STORM SEWER LINE	—
—	10% TO 20% SLOPES	—	—	STORM INLET	—
—	OVER 20% SLOPES	—	—	STORM SEWER MANHOLE	—
—	ROAD CENTERLINE	—	—	BELL TEL. MANHOLE	—
—	PROPERTY LINE	—	—	STREET SIGN	—
—	RIGHT-OF-WAY LINE	—	—	PIPE BOLLARD	—
—	BUILDING RESTRICTION LINE	—	—	EXISTING WELL	—
—	DRAINAGE & UTILITY EASEMENT	—	—	EXISTING SEPTIC TANK	—
—	CONTOUR (MINOR)	—	—	EXISTING ABSORPTION AREA	—
—	CONTOUR (MAJOR)	—	—	TO BE REMOVED	—
—	SOIL BOUNDARY	—	—	EXIST.	—
—	FENCE	—	—	SOIL TESTING	—
—	STONE ROW	—	—	WETLANDS	—



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1-800-242-1776  
SERIAL #20212631234

BENCHMARK:  
TOP OF IRON PIN AT SOUTHWEST  
CORNER OF PROPERTY  
ELEV. = 400.39 (KEYNET GPS)

**Pennonni**  
PENNONNI ASSOCIATES INC.  
2041 Avenue C, Suite 100  
Bethlehem, PA 18017  
T 610.231.0600 F 610.231.2033

REVISIONS		
NO.	DATE	DESCRIPTION
1	10/7/22	PER CITY OF BETHLEHEM REVIEW LETTER DATED 5/10/22

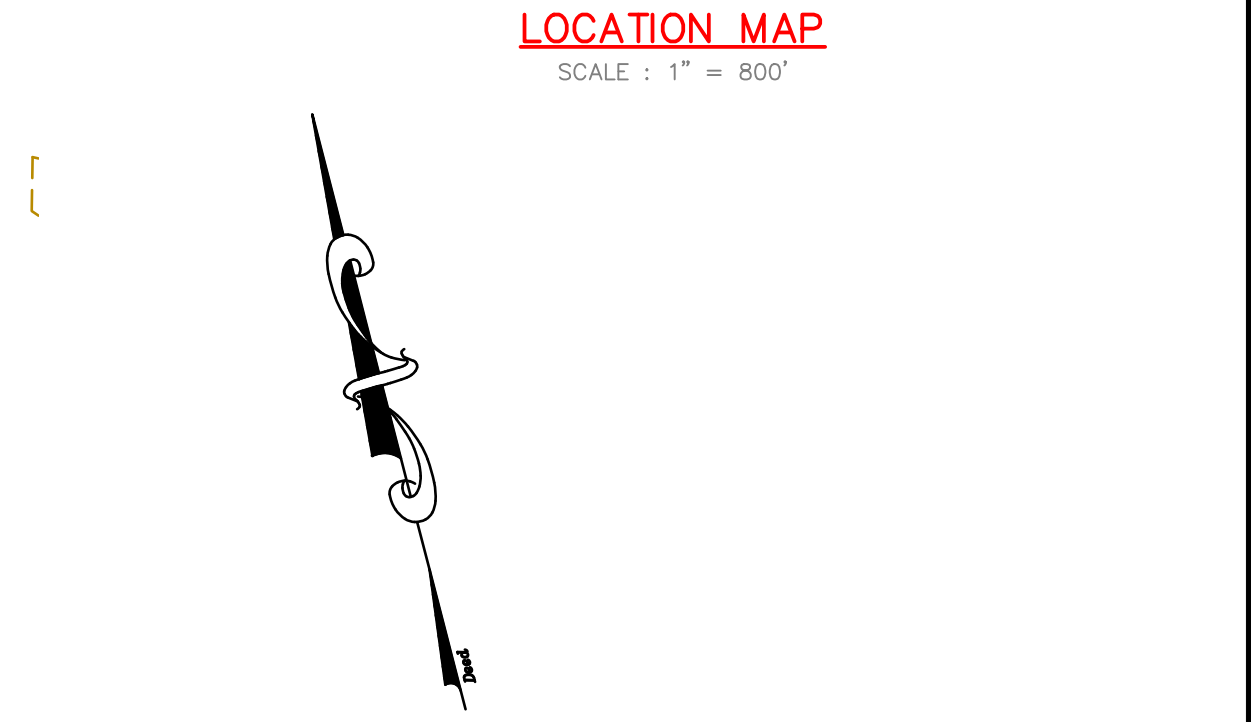
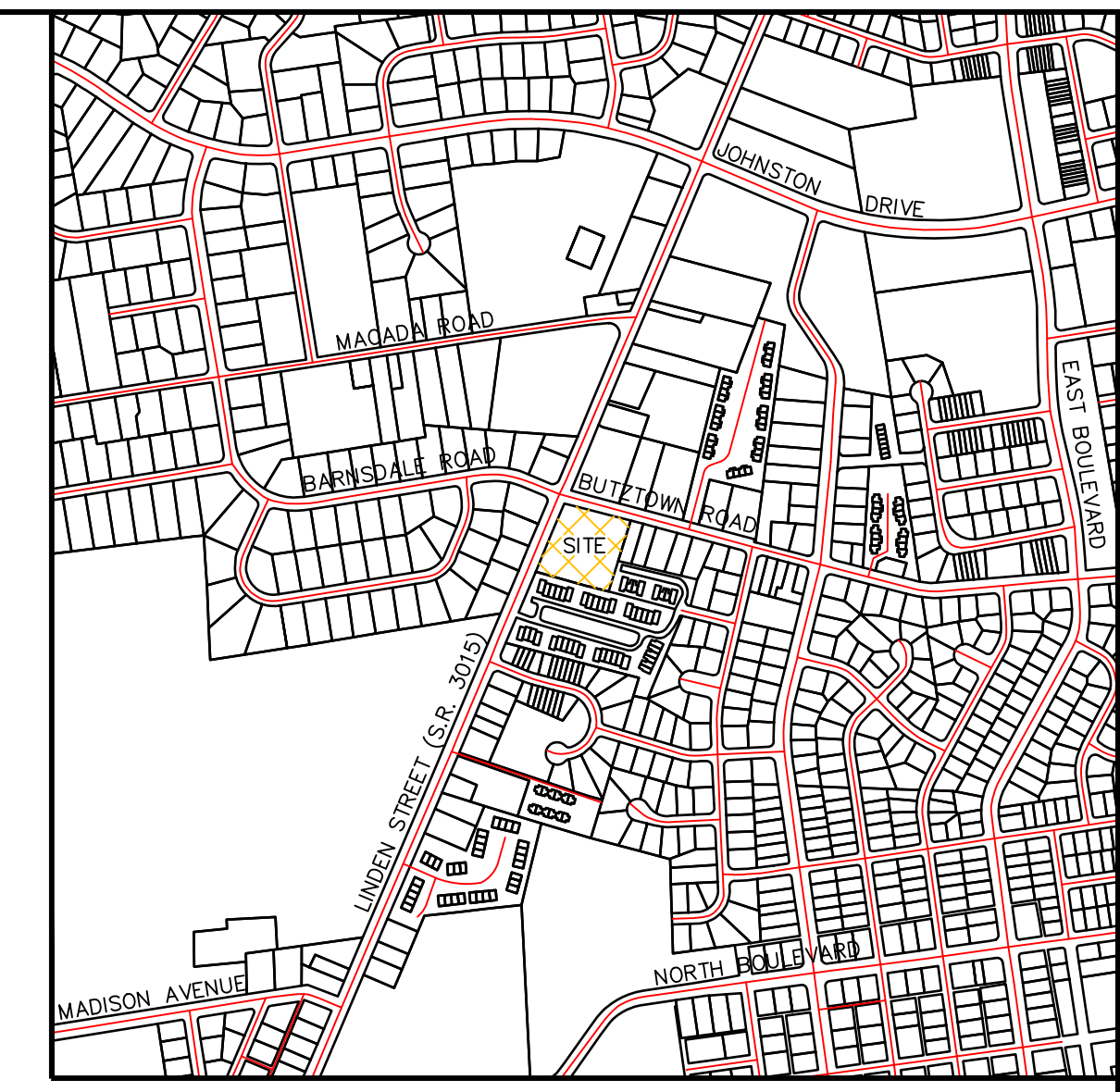
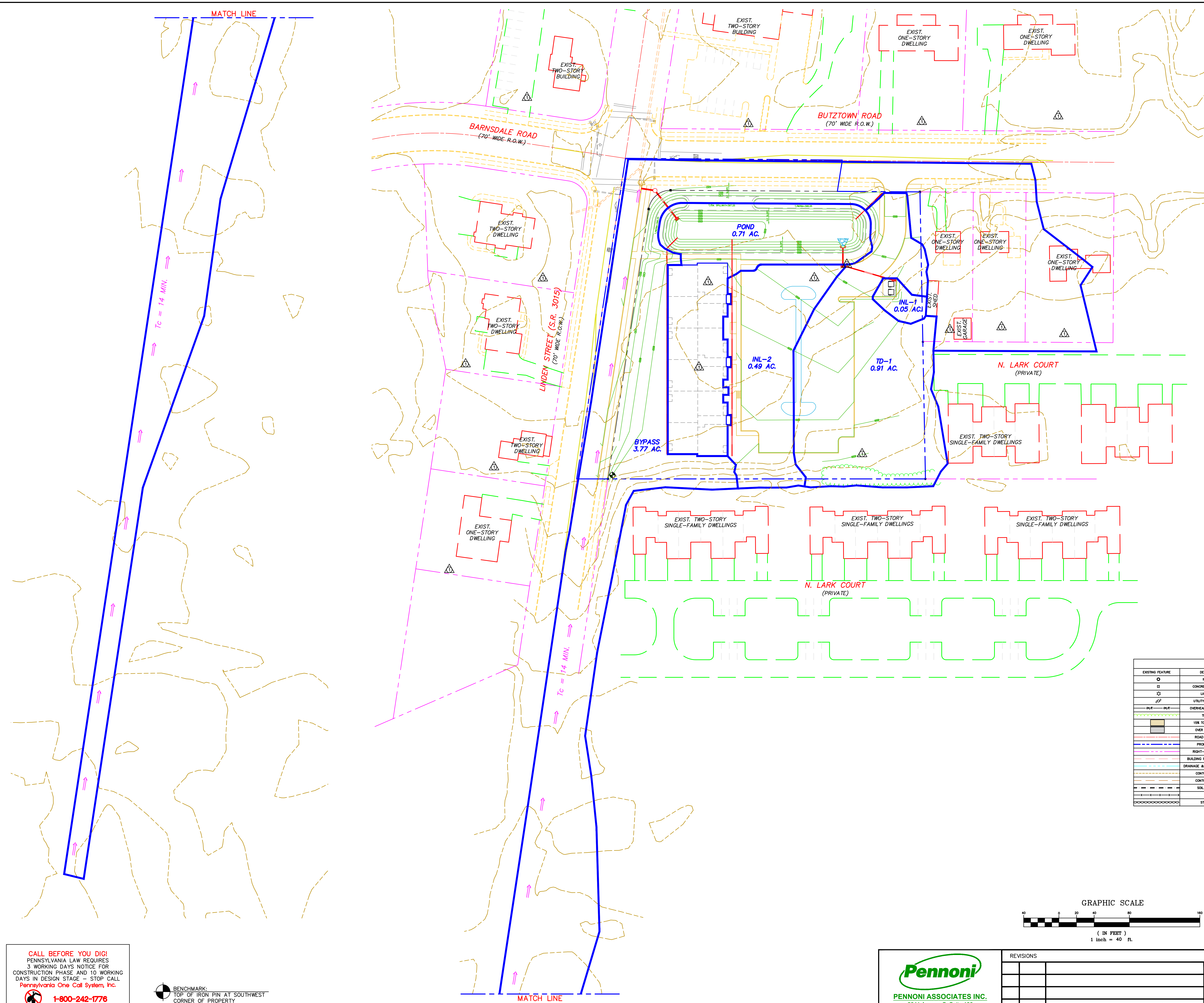
PRELIMINARY/FINAL  
PRE DEVELOPMENT WATERSHEDS PLAN  
FOR  
2854 LINDEN STREET  
CITY OF BETHLEHEM  
14th WARD  
NORTHAMPTON COUNTY  
PENNSYLVANIA

DATE: 3/22/2022  
DRAWN BY: S.J.K.  
CHECKED BY: S.J.K.  
SCALE: 1" = 40'  
ACAD ID: 2022-08-21 Land Development Plans

**DMS**  
REAL ESTATE DESIGNS AND PLANS  
199 CEDAR PARK BOULEVARD  
EASTON, PA 18042  
PHONE: (484) 456-9510  
FAX: (484) 821-3495

DRAWING NUMBER:  
**C-14**  
SHEET:  
14 OF 15

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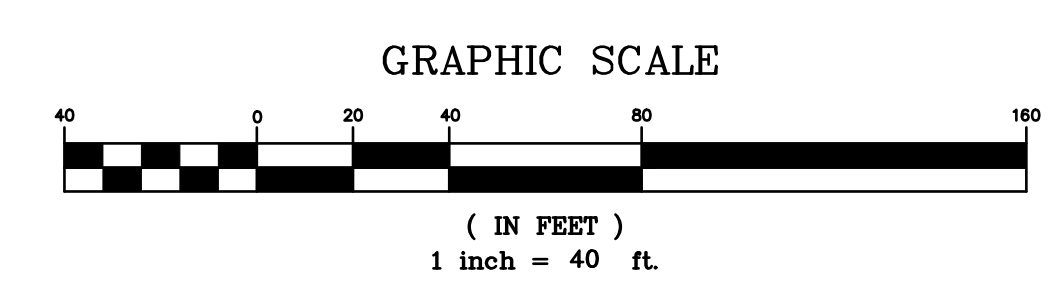


**Stage vs. Storage Information**  
2854 Linden Street  
Basin 1

Stage (ft)	Area (sf)	Area (avg) (sf)	Incremental Volume (cf)	Total Volume (cf)	Total Volume (acre-ft)
392	0		0	0	0
393	2025.21	1,012.61	1,012.61	1,012.61	0.0232
394	5279.03	3,652.12	3,652.12	4,664.73	0.1071
395	6659.19	5,969.11	5,969.11	10,633.84	0.2441
396	8096.4	7,377.80	7,377.80	18,011.63	0.4135
397	9588.35	8,842.38	8,842.38	26,854.01	0.6165
397.25	9970.17	9,779.26	2,444.82	29,298.82	0.6726

**LEGEND**

EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE	EXISTING FEATURE	DESCRIPTION	PROPOSED FEATURE
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NO.	DATE	DESCRIPTION	BY
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SHEET: **15 OF 15**

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