# FINAL LAND DEVELOPMENT PLAN PROPOSED REDEVELOPMENT FOR

# TWO FARMS, INC.

732 EAST FORREST AVENUE SHREWSBURY TOWNSHIP, YORK COUNTY, PENNSYLVANIA

> PREPARED FOR: TWO FARMS, INC. 3611 ROLAND AVENUE BALTIMORE, MD 21211

UNIFORM PARCEL IDENTIFIER						
LOT NO. STREET ADDRESS U.P.I.						
LOT #2	732 E. FORREST AVE.					



MODIFICATION REQUESTS

REQUESTED AND ACTED UPON BY THE SHREWSBURY TOWNSHIP BOARD OF SUPERVISORS AT A MEETING HELD ON:

1) SECTION 22-505.12: WHICH REQUIRES THAT THE REQUIRED AND PROPOSED SAFE STOPPING SIGHT DISTANCE AT EACH INTERSECTION BE INDICATED ON THE PLAN FOR BOTH EXISTING AND PROPOSED INTERSECTIONS. WAIVER IS REQUESTED TO NOT PROVIDE THE SAFE STOPPING SIGHT DISTANCES ON THE PLAN.

JUSTIFICATION - DUE TO THE CURRENT PENNDOT CONSTRUCTION PROJECT ALONG EAST FORREST AVENUE, THREE (3) OF THE FOUR (4) EXISTING ACCESS DRIVES WILL BE CLOSED IN THE NEAR FUTURE OR HAVE BEEN CLOSED. THE INTERSECTION TO REMAIN IS SIGNALIZED. THE TWO PROPOSED ACCESS POINTS WILL BE A RIGHT-IN-ONLY DRIVEWAY WITH A DECELERATION LANE INTO THE SITE AND A FULL-MOVEMENT DRIVEWAY AT A SIGNALIZED INTERSECTION AT WOLFE ROAD. AFE STOPPING SIGHT DISTANCE REQUIREMENTS DO NOT APPLY TO BOTH PROPOSED ACCESS DRIVES ONTO EAST FORREST

2) SECTION 22-621.2.D: WHICH REQUIRES INSTALLATION OF A POROUS PAVER SYSTEM OR POROUS CONCRETE FOR NOT LESS THAN 10% OF THE PARKING SPACES, OR THE DOWNHILL EDGES OF THE PARKING LOT, WHICHEVER IS GREATER, WHEREVER WAIVER IS REQUESTED TO NOT INSTALL POROUS CONCRETE OR PAVERS AS PART OF THIS PROJECT.

JUSTIFICATION - SUBSURFACE STONE INFILTRATION BEDS HAVE BEEN PROPOSED ON LOT #1 IN AREAS WHERE SOILS ALLOW FOR ADEQUATE INFILTRATION. INFILTRATION WITHIN LOT #2 SHOULD NOT BE DONE PER DIRECTION OF PA DEP. 3) SECTION 22-710.4.A: WHICH REQUIRES PERIMETER BUFFERS ALONG ALL COLLECTOR STREETS AND SHALL BE 35 FEET DEEP. WAIVER IS REQUESTED TO NOT INSTALL THIS REQUIRED PERIMETER BUFFER ALONG EAST FORREST AVENUE IN ORDER TO MAINTAIN ADEQUATE VISIBILITY FOR MOTORISTS ENTERING AND EXITING THE SITE FROM EAST FORREST AVENUE, MAINTAIN ADEQUATE VISIBILITY FOR MOTORISTS USING THIS INTERSTATE 83 INTERCHANGE AND MAINTAIN ADEQUATE VISIBILITY FOR THE

JUSTIFICATION - ADDING SIGNIFICANT LANDSCAPING ALONG THIS SECTION OF EAST FORREST AVENUE WOULD MAKE IT DIFFICULT FOR MOTORISTS TO SEE THE PROPOSED ACCESS POINTS AS WELL AS RECOGNIZE WHERE THEY WANT TO TRAVEL TO WITHIN THE PROPOSED DEVELOPMENT. THIS MAY LEAD TO MOTORIST INDECISION ALONG EAST FORREST AVENUE, WHICH CAN LEAD TO ACCIDENTS. ADDITIONAL LANDSCAPING IS ALSO PROVIDED IN OTHER AREAS OF THE DEVELOPMENT.

4) SECTION 22-710.4.B: WHICH REQUIRES A 10' WIDE LANDSCAPED PERIMETER BUFFER TO BE INSTALLED TO SEPARATE WAIVER IS REQUESTED TO NOT INSTALL LANDSCAPE PERIMETER BUFFER ALONG THE SOUTHERN PROPERTY LINE AND BETWEEN

JUSTIFICATION - THE ELEVATION DIFFERENCE BETWEEN THE DEVELOPED PORTION OF THE SITE AND THE ADJACENT SOUTHERN PROPERTY IS SUFFICIENT TO PROVIDE VISUAL SEPARATION AND BUFFERING. LOTS 1 AND 2 UTILIZE SHARED ACCESS DRIVES FOR SITE INGRESS AND EGRESS AND IT IS DESIRED TO MAINTAIN CONSISTENCY THROUGH THE SITE. 5) SECTION 22-711.2.A(1): WHICH REQUIRES ONE PLANTING ISLAND BEING 10' WIDE AND 20' LONG BE LOCATED AT THE END OF EACH PARKING SPACE AISLE.

WAIVER IS REQUESTED TO INSTALL PAINTED ISLANDS AT THE END OF THE PARKING SPACE AISLE ALONG THE FRONT OF THE JUSTIFICATION - WAIVER IS REQUIRED IN ORDER TO ALLOW CLEAR LINES OF SIGHT FROM THE STORE TO THE FUELING AREAS ON THE SITE AND FOR EASE OF MAINTENANCE OF THE PARKING AREA.

6) SECTION 22-711.2.C: WHICH REQUIRES THAT ONE PLANTING ISLAND SHALL BE LOCATED AT THE END OF EACH PARKING SPACE ROW AND AT INTERVALS OF NO GREATER THAN 100 FEET APART, OR EVERY 10 PARKING STALLS, IN SINGLE OR

WAIVER IS REQUESTED TO INSTALL PAINTED ISLANDS AT THE END OF THE PARKING SPACE ROW ALONG THE FRONT OF THE PROPOSED CONVENIENCE STORE AND ALSO NOT INSTALL A PLANTING ISLAND IN THE MIDDLE OF THIS SAME PARKING ROW JUSTIFICATION — WAIVER IS REQUIRED IN ORDER TO ALLOW CLEAR LINES OF SIGHT FROM THE STORE TO THE FUELING AREAS ON THE SITE AND FOR EASE OF MAINTENANCE OF THE PARKING AREA.

WAIVER IS REQUESTED TO NOT INSTALL PLANTINGS BETWEEN LOT 2 PARKING LOT AND BUILDING. JUSTIFICATION - THE ARCHITECTURAL DESIGN OF THE STORE PROVIDES NUMEROUS WINDOWS IN CERTAIN AREAS SO THAT FUEL DISPENSING THAT OCCURS AT THE OUTSIDE FUELING AREA CAN BE PROPERLY MONITORED BY CONVENIENCE STORE EMPLOYEES IN ACCORDANCE WITH STATE FUEL STATION REGULATIONS. IT SHOULD ALSO BE NOTED THAT THE STORE'S EXTERIOR WALL IS DESIGNED WITH EXTERIOR FINISHES, AWNINGS, ROOFLINES, ETC THAT SOFTEN THE VIEW OF THE STORE FROM BOTH ON-SITE AND OFF-SITE AREAS, WHICH IS THE MAIN INTENT OF THIS LANDSCAPING REGULATION. A

3-DIMENSIONAL ARCHITECTURAL RENDERING OF THE STORE'S EXTERIOR IS ATTACHED TO FURTHER DOCUMENT THE VIEW OF

THE FOLLOWING MODIFICATIONS FROM THE SHREWSBURY TOWNSHIP STORMWATER MANAGEMENT ORDINANCE HAVE BEEN REQUESTED AND ACTED UPON BY THE SHREWSBURY TOWNSHIP BOARD OF SUPERVISORS AT A MEETING HELD ON:

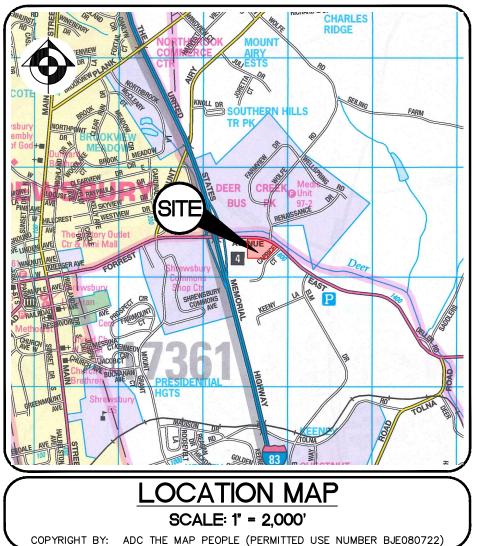
7) SECTION 22-711.4: WHICH REQUIRES PLANTINGS BE INSTALLED BETWEEN PARKING LOTS AND BUILDINGS.

1) SECTION 25-303: WHICH REQUIRES ALL LAND DEVELOPMENT PROJECTS TO NOT INCREASE THE POST DEVELOPMENT TOTAL RUNOFF VOLUME FOR ALL STORMS EQUAL TO OR LESS THAN THE TWO-YEAR, TWENTY-FOUR HOUR DURATION PRECIPITATION. WAIVER IS REQUESTED TO NOT INFILTRATE ON LOT #2 ONLY.

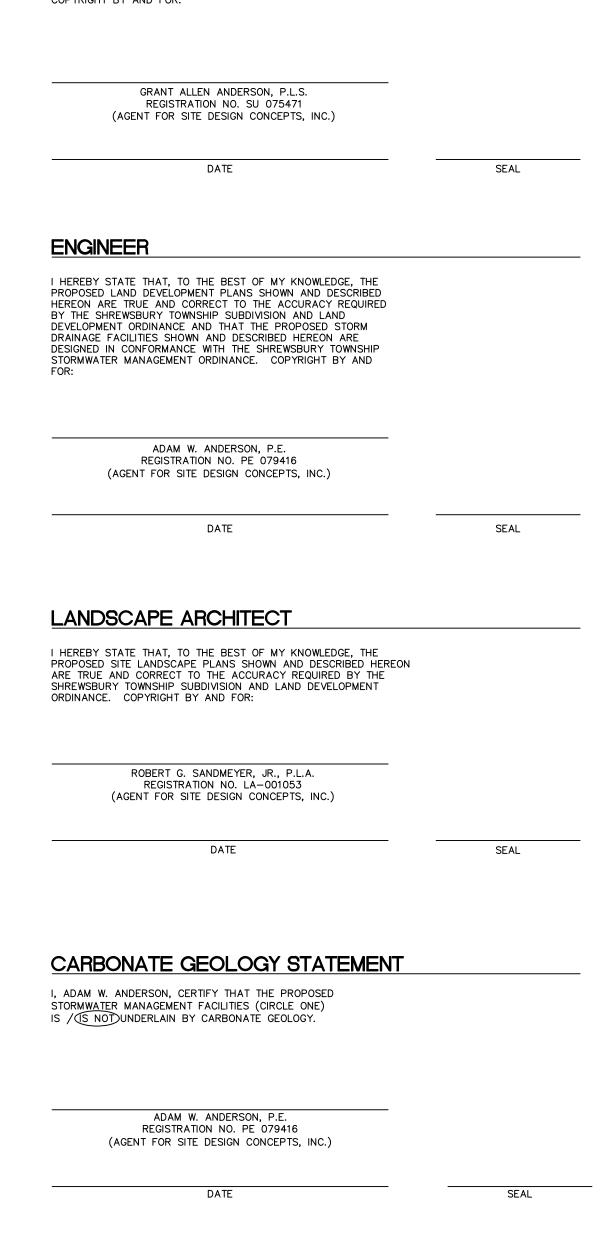
JUSTIFICATION - WAIVER IS REQUIRED DUE TO THE PA DEP'S DIRECTION TO NOT INFILTRATE STORMWATER ON THE LOT #2 SITE IN ACCORDANCE WITH AN ENVIRONMENTAL COVENANT RECORDED AGAINST LOT #2 (FORMERLY PARCEL CJ-37.G). REFER TO ATTACHED EMAIL THREAD FROM PA DEP, DATED SEPTEMBER 7, 2021. IN LIEU OF VOLUME CONTROL, LOT #2 STORMWATER MANAGEMENT BMP'S HAVE BEEN DESIGNED TO MEET THE TOWNSHIP'S AND DEP'S RATE CONTROL AND WATER QUALITY REQUIREMENTS, INCLUDING THE USE OF PA DEP'S MANAGED RELEASE CONCEPT (MRC) THAT MIMICS INFILTRATION OF

THE FOLLOWING VARIANCE FROM THE SHREWSBURY TOWNSHIP ZONING ORDINANCE HAVE BEEN APPROVED BY THE SHREWSBURY TOWNSHIP ZONING HEARING BOARD AT A MEETING HELD ON

1. SECTION 27-1301.3: WHICH REQUIRES CRITICAL ENVIRONMENTAL AREAS (CEA) - STEEP SLOPES, AS DEFINED BY THE ZONING ORDINANCE, NOT TO BE DISTURBED. VARIANCE GRANTED TO ALLOW DISTURBANCE TO THE STEEP SLOPE AREAS IN THE CEA



FINAL LAND DEVELOPMENT						
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DRAWING						
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RECORDER OF DEEDS CERTIFICATE

RECORDED IN THE OFFICE FOR RECORDING OF DEEDS, IN AND FOR YORK COUNTY,

PENNSYLVANIA, IN LAND RECORD BOOK \_\_\_\_\_\_, PAGE \_\_\_\_\_,

ON THIS \_\_\_\_\_\_, DAY OF \_\_\_\_\_\_, 20\_\_\_\_\_\_,

**SURVEYOR** 

SURVEY AND PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND

CORRECT TO THE ACCURACY REQUIRED BY THE SHREWSBURY TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.



## YORK COUNTY PLANNING COMMISSION

THE YORK COUNTY PLANNING COMMISSION, AS REQUIRED BY THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, ACT 247 OF 1968, AS AMENDED, REVIEWED THIS PLAN ON \_\_, 20\_\_\_\_, AND A COPY OF THE REVIEW IS ON FILE AT THE OFFICE OF THE PLANNING COMMISSION IN YCPC FILE NO. \_ THE CERTIFICATE DOES NOT INDICATE APPROVAL OR DISAPPROVAL OF THE PLAN BY THE YORK COUNTY PLANNING COMMISSION, AND THE COMMISSION DOES NOT REPRESENT NOR GUARANTEE THAT THIS PLAN COMPLIES WITH THE VARIOUS ORDINANCES, RULES, REGULATIONS, OR LAWS OF THE LOCAL MUNICIPALITY, THE COMMONWEALTH OR THE FEDERAL GOVERNMENT.

DIRECTOR, YORK COUNTY PLANNING COMMISSION

#### CERTIFICATE OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN AND OFFER OF DEDICATION

COMMONWEALTH OF PENNSYLVANIA

, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED

SHIPLEY FAMILY LIMITED PARTNERSHIP , \_\_\_\_\_\_, THE PROPERTY SHOWN ON THIS PLAN, THAT HE IS AUTHORIZED TO EXECUTE SAID PLAN ON BEHALF OF THE LIMITED PARTNERSHIP, THAT THE PLAN IS THE ACT AND DEED OF THE LIMITED PARTNERSHIP, THAT THE LIMITED PARTNERSHIP DESIRES THE SAME TO BE RECORDED AND, ON BEHALF OF THE LIMITED PARTNERSHIP, FURTHER ACKNOWLEDGES THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY ARE HEREBY DEDICATED TO THE PUBLIC USE, EXCEPT THOSE AREAS LABELED "NOT FOR DEDICATION."

SHIPLEY FAMILY LIMITED PARTNERSHIP	
415 NORWAY STREET	
YORK, PA 17405	OFFICER
	NOTARY PUBLIC

NOTARY STAMP SEAL

#### CERTIFICATE OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN AND OFFER OF DEDICATION

FORM OF AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA COUNTY OF YORK \_\_\_\_\_, 20\_\_\_\_, BEFORE ME, \_\_\_\_\_, THE UNDERSIGNED NOTARY PUBLIC, PERSONALLY \_\_\_\_\_ TO ME KNOWN OR PROVEN, BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT THE CORPORATION IS THE EQUITABLE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE PLAN THEREOF WAS MADE AT HIS/HER DIRECTION, THAT HE/SHE ACKNOWLEDGES THE SAME TO BE THE CORPORATION'S ACT AND PLAN, THAT THE CORPORATION DESIRES THE SAME TO BE RECORDED AND THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE HEREBY DEDICATED TO THE PUBLIC USE.

WO FARMS, INC.	CORRORATE OFFICER
611 ROLAND AVENUE	CORPORATE OFFICER
ALTIMORE, MD 21211	
	TITLE
	NOTARY PUBLIC

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993.1B-FLD-LOT2

AS NOTED

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NOTARY STAMP SEAL:

THE PROPERTY LOCATED AT 732 EAST FORREST AVE. (UPI 45-000-CJ-0037.G0-00000

ACTIVITIES AND USE LIMITATIONS: THE PROPERTY IS SUBJECT TO THE FOLLOWING

A. GROUNDWATER OF THE PROPERTY SHALL NOT BE USED, FOR ANY PURPOSE

COMPLETED ATOP A SLAB-ON-GRADE FOUNDATION; NO BASEMENT OR

IS SUBJECT TO AN ENVIRONMENTAL COVENANT WHICH WAS RECORDED IN

ACTIVITY AND USE LIMITATIONS (AULs), WHICH THE OWNER AND EACH

B. CONSTRUCTION OF BUILDINGS AT THE PROPERTY SHALL ONLY BE

SUBSURFACE LEVEL MAY BE CONSTRUCTED ON THE PROPERTY

MINIMUM WOODLAND RETENTION REQUIREMENTS FOR COMMERCIAL USE = 15%

SUBSEQUENT OWNER OF THE PROPERTY SHALL ABIDE BY:

DEED/RECORD BOOK 2199, PAGE 6020.

SHREWSBURY TOWNSHIP

SHREWSBURY TOWNSHIP

PLANNING COMMISSION REVIEW

PLANNING COMMISSION RECOMMENDED APPROVAL OF THIS PLAN.

BOARD OF SUPERVISORS PLAN APPROVAL

SHREWSBURY TOWNSHIP ENGINEER REVIEW

SHREWSBURY TOWNSHIP CODE ENFORCEMENT

SHREWSBURY TOWNSHIP SEWAGE ENFORCEMENT

STORMWATER BMPS ARE PERMANENT FIXTURES THAT CANNOT BE ALTERED OR REMOVED WITHOUT

\_\_\_\_, AM AWARE OF AND ACCEPT THAT

REVIEWED BY THE SHREWSBURY TOWNSHIP CODE ENFORCEMENT OFFICER.

REVIEWED BY THE SHREWSBURY TOWNSHIP SEWAGE ENFORCEMENT OFFICER.

STORMWATER BMP MODIFICATION NOTE

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

CODE ENFORCEMENT OFFICER

SEWAGE ENFORCEMENT OFFICER

REVIEWED BY THE SHREWSBURY TOWNSHIP ENGINEER.

OFFICER REVIEW

TOWNSHIP ENGINEER

AT A MEETING ON \_\_\_\_\_\_, 20 \_\_\_\_\_, THE SHREWSBURY TOWNSHIP BOARD OF SUPERVISORS APPROVED THIS PLAN.

PRIOR APPROVAL BY THE MUNICIPALITY.

- STORM DRAIN PIPES SHALL BE ADS N-12 HDPE PIPE WITH ADS PRO-LINK ULTRA (IN-LINE BELL) PIPE JOINTS (FOR WATER TIGHT CONNECTIONS), ADS PRO-LINK WT (FOR WATER TIGHT CONNECTIONS), AND/OR ASTM C-76 RCP WITH BELL AND SPIGOT JOINTS OR APPROVED EQUAL. REFER TO PLAN AND PROFILES FOR MATERIALS
- . CURVILINEAR INSTALLATION OF ADS (N-12) PIPE SHALL USE PRO-LINK WT JOINTS FOR WATER TIGHT CONNECTIONS AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND INSTALLATION REQUIREMENTS. CURVILINEAR PIPE WITH PRO-LINK WT BELL/BELL COUPLER OR MITERED BELL COUPLER SHAL BE INSTALLED WITH A MAXIMUM THREE INCH (3") DEFLECTION AT EACH JOINT. TO ACHIEVE A RADIUS OF LESS THAN 200 FEET, INSTALL TEN FOOT (10') PIPE LENGTHS WITH A GASKETED BELL/BELL COUPLER. ALL INSTALLATION MUST BE COORDINATED WITH A MANUFACTURER'S REPRESENTATIVE.
- ALL EMBEDMENT MATERIALS USED FOR BEDDING, HAUNCHING AND INITIAL BACKFILL FOR HDPE PIPE SHALL CONFORM TO AASHTO SECTION 30 AND ASTM D-2321 PER MANUFACTURER'S INSTALLATION REQUIREMENTS.

## GEOTECHNICAL INVESTIGATION NOTE

BASED UPON A REPORT OF PRELIMINARY GEOTECHNICAL EXPLORATION PREPARED BY GEO-TECHNOLOGY ASSOCIATES INC. (GTA). DATED OCTOBER 1. 2019. THE SITE IS GENERALLY SUITABLE FOR CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS. ALL CONSTRUCTION AND INSPECTION PROCEDURES AND PROTOCOLS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY GEO-TECHNOLOGY ASSOCIATES, INC., DATED OCTOBER 1, 201 SHALL BE FOLLOWED DURING SITE DEVELOPMENT. CONTRACTOR SHALL THOROUGHLY REVIEW THE GEO-TECHNOLOGY ASSOCIATES. INC. REPORT AND ANY QUESTIONS OR CONCERNS SHALL BE BROUGHT TO THE ATTENTION OF SITE DESIGN CONCEPTS, INC. AND GEO-TECHNOLOGY ASSOCIATES, INC. PRIOR TO THE START OF CONSTRUCTION.

- WHERE ANY PART OF THE PROPOSED STORM DRAIN SYSTEM IS TO BE CONSTRUCTED WITHIN A FILL 7. ALL SANITARY SEWERS SHALL BE CONSTRUCTED FROM SDR-35 PVC UNLESS OTHERWISE NOTED ON SECTION, THE CONTRACTOR SHALL COMPACT ALL SELECT FILL MATERIAL TO 95% OF ASTM D-698 (AASHTO T-99) WITH A MOISTURE CONTENT  $\pm$  3% OF OPTIMUM UP TO THE PIPE BEDDING.
- CONTRACTOR SHALL TEST PIT ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. SITE DESIGN CONCEPTS. INC. MAKES NO GUARANTEE THAT THE EXISTING UTILITIES ARE EXACTLY AS SHOWN. UTILITIES SHOWN HEREON ARE SURVEYED AND SUPPLEMENTED WITH INFORMATION OBTAINED FROM AVAILABLE RECORD DRAWINGS. CONCERNS AND DISCREPANCIES REGARDING LOCATION OF SUC
- NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING UTILITY SERVICES AND MAINS. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY AT HIS OWN EXPENSE. CONTRACTOR SHALL NOT INTERRUPT EXISTING UTILITY SERVICES WITHOUT PRIOR APPROVAL FROM THE UTILITY PROVIDER. ALL AFFECTED USERS OF THE
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF ONE (1) FOOT OF CLEARANCE BETWEEN ALL UTILITIES AND A MINIMUM TWO (2) FEET OF CLEARANCE BETWEEN UTILITIES AND UTILITY POLES UNLESS OTHERWISE NOTED HEREON. CONTRACTOR SHALL CONTACT SITE DESIGN CONCEPTS, INC. IF THESE MINIMUM CLEARANCES CANNOT BE ACHIEVED. A MINIMUM VERTICAL SEPARATION OF EIGHTEEN (18) 12 INCHES SHALL BE MAINTAINED BETWEEN ALL WATER AND SANITARY SEWER CROSSINGS. IF THIS ` CLEARANCE CANNOT BE MAINTAINED, A CONCRETE ENCASEMENT SHALL BE PROVIDED, UPON
- APPROVAL BY MUNICIPALITY AND SITE DESIGN CONCEPTS, INC. 5. ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE MUNICIPALITY OR THE SEWER AUTHORITY.
- 6. THE CONTRACTOR SHALL MAINTAIN FIELD RECORDS OF THE LOCATION AND DEPTH OF ALL UTILITY LOCATIONS AND SHALL PROVIDE THIS INFORMATION TO SITE DESIGN CONCEPTS, INC. FOR OWNER'S RECORDS AND/OR PREPARATION OF RECORD DRAWINGS.
- THE PLANS. IN AREAS WHERE COVER EXCEEDS 14 FEET, SDR-26 PVC SHALL BE USED FOR BOTH MAINS AND LATERALS. 8. UNLESS OTHERWISE INDICATED, ALL GRAVITY SANITARY SEWER MAINS SHALL BE CONSTRUCTED FROM
- SDR-35 PVC WITH FOUR (4) FEET MINIMUM COVER TO TOP OF PIPE IN UNPAVED AREAS AND FIVE (5) FEET MINIMUM COVER TO TOP OF PIPE IN PAVED AREAS.
- FACILITIES SHALL BE BROUGHT TO THE ATTENTION OF SITE DESIGN CONCEPTS, INC. IMMEDIATELY. 9. SANITARY SEWER COSTS AND ENGINEERING EXPENSES SHALL BE TABULATED SEPARATELY BY MANHOLE SECTION TO ACCOMMODATE CALCULATIONS UNDER PA ACT NO. 57, IF THE DEVELOPER
  - DESIRES REIMBURSEMENT AT A LATER DATE.
- 10. ALL UTILITY ELEVATIONS ARE AT THE INVERT UNLESS OTHERWISE NOTED. UTILITY SCHEDULED TO BE INTERRUPTED SHALL BE NOTIFIED IN A TIMELY MANNER, AS REQUIRED. 11. ALL WATER MAIN, VALVE, AND HYDRANT LOCATIONS ARE SUBJECT TO CHANGE BASED UPON FINAL
  - DESIGN REQUIREMENTS AND CONSTRUCTION SPECIFICATIONS OF THE PUBLIC WATER SUPPLIER. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE PUBLIC WATER SUPPLIER'S CONSTRUCTION STANDARDS AND SPECIFICATIONS. TYPES OF STRUCTURES REFER TO THE LATEST PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
  - STANDARD DETAILS, UNLESS OTHERWISE NOTED. 13. ALL UTILITY STRUCTURES (I.E. SEWER MANHOLES, INLETS, VALVE BOXES, ETC.) LOCATED WITHIN THE PROPOSED STREETS OR PÀVED AREAS SHALL BÉ ADJUSTED TO MEET PROPOSED FINISHED GRADES. 14. EXISTING UTILITIES, ROADS, DRIVEWAYS, AND STRUCTURES SHOWN ARE FROM THE BEST AVAILABLE

RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO

EXISTING UTILITY SERVICES AND MAINS. 15. THE CONTRACTOR SHALL ADJUST ALL EXISTING UTILITIES AS NECESSARY TO MATCH PROPOSED GRADES AND/OR PROVIDE THE REQUIRED MINIMUM COVER.

CONSTRUCTION. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT

## STORMWATER MANAGEMENT FACILITIES

**CONSTRUCTION NOTES** 

2. EARTH FILL

- 1. SITE PREPARATION AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORK SHALL BE CLEARED GRUBBED AND STRIPPED OF TOPSOIL. WHERE POSSIBLE, ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. UNLESS RESTRICTED FROM SUCH, ALL TREES SHALL BE CLEARED AND GRUBBED MTHIN 15 FEET OF THE TOE OF THE EMBANKMENT. AREAS TO BE COVERED BY THE STORMWATER FACILITIES SHALL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH, AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 25-FOOT RADIUS AROUND THE OUTLET STRUCTURE SHALL BE CLEARED. ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND THE STORMWATER FACILITIES AS DIRECTEI BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.
- THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT, AND CUTOFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL AND MUST HAVE AT LEAST 30% PASSING THE 200 SIEVE. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT F DESIGNED BY A GEOTECHNICAL ENGINEER. SUCH SPECIAL DESIGNS MUST HAVE CONSTRUCTION SUPERVISED BY A GEOTECHNICAL ENGINEER. MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE EMBANKMENT.
- AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT
- THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF HEAVY EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FII MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT. WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/-2% OF THE OPTIMUM. FACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 (STANDARD
- THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE COVERNED BY THE FOLIPMENT LISED FOR EXCAVATION WITH THE MINIMUM WIDTH BEING FOLIR FEFT. THE DEPTH SHALL BE AT LEAST TWO FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF HE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.
- 4. FMBANKMENT CORF THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE HEIGHT SHALL EXTEND UP TO AT LEAST THE 10 YEAR WATER SURFACE ELEVATION OR AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OF FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SHELL OF EMBANKMENT.
- 5. STRUCTURE BACKFILL WITH FLOWABLE FILL BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTE COMPACTION EQUIPMENT. THE MATERIAL SHALL COMPLETELY FILL ALL SPACES UNDER AND ADJACENT TO TH PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL FOUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE. UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE. THE MIXTURE SHALL HAVE A 100-200 PSI, 28 DAY UNCONFINED COMPRESSIVE STRENGTH, THE FLOWABLE FILL SHALL HAVE A MINIMUM of OF 4.0 AND A MINIMUM RESISTIVITY OF 2,000 OHM-CM. MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6" (MEASURED PERPENDICULAR TO THE OUTSIDE OF THE PIPE) OF FLOWABLE FILL SHALL BE UNDER (BEDDING), OVER, AND ON THE SIDES OF THE PIPE, IT ONLY NEEDS TO EXTEND UP TO THE SPRING LINE FOR RIGID CONDUITS. AVERAGE SLUMP OF THE FILL SHALL BE 7" TO ASSURE FLOWABILITY OF THE MATERIAL. ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC.) TO PREVENT FLOATING THE PIPE. THE MATERIAL SHALL COMPLETELY FILL ALL VOIDS ADJACENT TO THE FLOWABLE FILL ZONE. BACKFILL MATERIAL OUTSIDE THE STRUCTURAL BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE CORE OF THE EMBANKMENT OR OTHER EMBANKMENT MATERIALS.
- 6. PIPE CONDUITS
  ALL PIPES SHALL BE CIRCULAR IN CROSS—SECTION UNLESS OTHERWISE SPECIFIED.
- 7. REINFORCED CONCRETE PIPE
- A. MATERIALS REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361.
- B. BEDDING REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING/CRADLE FOR THEIR ENTIRE LENGTH. THIS BEDDING/CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES. WHERE A CONCRETE CRADLE IS NOT SPECIFIED, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE "STRUCTURE BACKFILL" SECTION OF THIS STANDARD. GRAVEL BEDDING IS NOT PERMITTED.
- C. LAYING PIPE BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND
- D. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL", ABOVE.
- A. MATERIALS PVC PIPE SHALL BE A MINIMUM OF SDR-35 CONFORMING TO ASTM D-1785 OR ASTM D-2241. CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE, COUPLINGS AND FITTINGS SHALL CONFORM TO THE FOLLOWING: 4" THROUGH 10" PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M252 TYPE S, AND 12" THROUGH 60" SHALL MEET THE REQUIREMENTS OF AASHTO M294 TYPE S OR ASTM F2306.
- B. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.
- ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT. D. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL", ABOVE.
- 9. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS, OR AS REQUIRED BY MUNICIPAL CONSTRUCTION STANDARDS AND SPECIFICATIONS.
- A. CONCRETE SHALL MEET THE REQUIREMENTS OF LATEST EDITION PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408, SECTIONS 605, 606 AND 714; AND AS MODIFIED HEREON
- B. REINFORCEMENT SHALL MEET THE MINIMUM REQUIREMENTS OF LATEST EDITION PENNSYLVANIA DEPARTMENT
- ROCK RIP-RAP SHALL MEET THE REQUIREMENTS OF LATEST EDITION PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408.

## SIGNAGE NOTES

- 1. ALL SIGNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PENNSYLVANIA UNIFORM CONSTRUCTION CODE ACT (UCC), IF APPLICABLE AND:
- A. SHALL BE MAINTAINED IN GOOD CONDITION. B. SHALL BE KEPT FREE OF DEFECTS OR HAZARDS, INCLUDING, BUT NOT LIMITED TO, FAULTY WIRING, LOOSE
- FASTENINGS, BEING IN AN UNSAFE CONDITION OR DETRIMENTAL TO PUBLIC HEALTH, SAFETY OR GENERAL
- C. SHALL NOT BE ALLOWED TO BECOME DILAPIDATED OR DETERIORATED. 2. SIGNS SHALL BE ILLUMINATED ONLY IN ACCORDANCE WITH THE FOLLOWING REGULATIONS AS AUTHORIZED IN AN
- A. LIGHT SOURCES SHALL NOT BE OF SUCH INTENSITY AS TO CAUSE GLARE THAT MAY BE HAZARDOUS TO PEDESTRIANS OR MOTORISTS; AND LIGHT SOURCES SHALL COMPLY WITH THE SHREWSBURY TOWNSHIP
- ZONING ORDINANCE REQUIREMENTS FOR GLARE.
- B. INDIVIDUAL, SOLID LETTERS WITH INTERNAL LIGHTING TUBES WHICH BACKLIGHT A WALL IN A HALO EFFECT 3. NO SIGN SHALL CREATE A PUBLIC NUISANCE BY EMITTING SMOKE, SOUND, VAPOR, BEAMS OR RAYS, PARTICLE
- EMISSIONS OR ODORS, OR BY CREATING A SAFETY OR TRAFFIC HAZARD. 4. SIGNS SHALL NOT BE ERECTED WITHIN OR EXTEND INTO THE ROAD RIGHT-OF-WAY, WHICH FOR THE PURPOSES OF THIS PART SHALL BE CONSTRUED TO EXTEND TO AND INCLUDE THE SIDEWALKS ON BOTH SIDES OF EVERY STREET. UNLESS THE TOWNSHIP HAS GIVEN PRIOR WRITTEN APPROVAL, THE TOWNSHIP HAS THE RIGHT TO REMOVE AND DISPOSE OF ANY SIGN LOCATED IN THE TOWNSHIP OR COMMONWEALTH OF PENNSYLVANIA
- PLACED THERE BY THE PROPERTY OWNER, OR OF THE SIGN OWNER. 5. THE BOTTOMMOST PART OF A PROJECTING SIGN SHALL BE AT LEAST 10 FEET ABOVE THE GROUND OR
- 6. MOBILE SIGNS, INCLUDING PERSONS IN COSTUMES USED TO ATTRACT PUBLIC ATTENTION, ARE NOT PERMITTED

RIGHT-OF-WAY, WITH ALL COSTS OF REMOVAL BECOMING THE RESPONSIBILITY OF THE PROPERTY OWNER, IF

- WITHIN ANY PUBLIC RIGHT-OF-WAY. 7. EXCEPT IN THE CASE OF BILLBOARDS, ALL SIGNS MUST RELATE TO A USE THAT IS LOCATED AND/OR
- CONDUCTED WITHIN SHREWSBURY TOWNSHIP. 8. ALL PERMANENT FREESTANDING SIGNS SHALL MEET THE LANDSCAPE REQUIREMENTS OF ARTICLE 700
- (LANDSCAPING) OF THE SHREWSBURY TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.
- 9. FREESTANDING BUSINESS SIGNS

A. ONE PERMITTED PER STREET FRONTAGE.

- B. MAXIMUM AREA PERMITTED: 1 SQUARE FOOT PER LINEAL FOOT OF LOT FRONTAGE; NOT TO EXCEED 32 SQUARE FEET SIGN MODIFICATION: A MODIFICATION HAS BEEN GRANTED BY THE SHREWSBURY TOWNSHIP BOARD OF SUPERVISORS. AT A MEETING HELD ON: FEBRUARY 2, 2022, REGARDING THE "TYPE P-12A" SIGN
- REQUIREMENT TO PERMIT A FREE STANDING SIGN WITH A MAXIMUM AREA OF 162 S.F. C. MINIMUM SETBACK FROM RIGHT-OF-WAY: 5 FEET.
- D. MAXIMUM HEIGHT (FREESTANDING): 25 FEET
- 10. ATTACHED BUSINESS SIGNS
- A. TWO PERMITTED PER WALL OF BUILDING. B. MAXIMUM AREA PERMITTED: NOT TO EXCEED 50 SQUARE FEET PER WALL.
- C. MAXIMUM HEIGHT (ATTACHED): HEIGHT OF WALL/ROOF.
- D. MAXIMUM PROJECTION FROM BUILDINGS: 12 INCHES.
- 11. BILLBOARDS A. ONE PERMITTED PER LOT.
- B. MAXIMUM AREA PERMITTED: 150 SQUARE FEET.
- C. MINIMUM SETBACK FROM RIGHT-OF-WAY: 25 FEET. D. MAXIMUM HEIGHT (FREESTANDING): 35 FEET.
- E. NO BILLBOARD SHALL BE LOCATED WITHIN 1,000 RADIAL FEET OF ANOTHER BILLBOARD. BILLBOARDS SHALL E SET BACK AT LEAST 100 FEET FROM ANY LAND ZONED AGRICULTURAL, RURAL RESIDENTIAL, OR SUBURBAN RESIDENTIAL DISTRICTS, OR FROM ANY RESIDENTIAL USE. ALL BILLBOARDS SHALL BE A MINIMUM OF 50 FEET FROM ALL SIDE AND REAR PROPERTY LINES. NO BILLBOARD SHALL OBSTRUCT THE VISION OF MOTORISTS OF ADJOINING COMMERCIAL OR INDUSTRIAL USES THAT DEPEND UPON VISIBILITY FOR IDENTIFICATION. PROPERTIES UPON WHICH A BILLBOARD IS ERECTED SHALL BE REGULARLY MAINTAINED SO AS NOT TO CREATE A NUISANCE BY MEANS OF WEEDS, LITTER OR CRITTER HABITATION.

#### GENERAL CONSTRUCTION NOTES

- . PRIOR TO COMMENCEMENT OF PROJECT, CONTRACTOR SHALL COORDINATE CONSTRUCTION SCHEDULE OF PROPOSED IMPROVEMENTS WITH THE OWNER, PROJECT ENGINEER, MUNICIPALITY, AND ALL ADJOINING PROPERTY OWNERS THAT WILL BE AFFECTED BY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL ADHERE TO THE SEQUENCE OF CONSTRUCTION OUTLINED IN THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN, UNLESS
- 2. ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO SITE DESIGN
- 3. EXTREME CARE SHOULD BE TAKEN DURING SITE DEMOLITION AND CONSTRUCTION ACTIVITIES SO AS NOT TO

APPROVED OTHERWISE BY THE LOCAL CONSERVATION DISTRICT, THE MUNICIPALITY, AND SITE DESIGN CONCEPTS,

- DISTURB EXISTING PROPERTY CORNER MONUMENTATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH REPLACEMENT OF ANY PROPERTY CORNERS DAMAGED DURING SITEWORK OPERATIONS.
- 4. UNLESS NOTED OTHERWISE HEREIN, MISCELLANEOUS SIGNS, MAILBOXES, FENCES, ETC. LOCATED WITHIN

5. IF DISCREPANCIES BETWEEN SCALED AND LABELED DIMENSIONS SHOWN ON THESE PLANS ARE DISCOVERED, THE

- CONTRACTOR SHALL IMMEDIATELY CONTACT SITE DESIGN CONCEPTS. INC. FOR CLARIFICATION 6. UNLESS NOTED OTHERWISE, IN CASE OF CONFLICTS BETWEEN THE PLANS AND DETAILS SHOWN HEREIN AND MUNICIPAL ORDINANCES OR CONSTRUCTION SPECIFICATIONS, THE MUNICIPAL REQUIREMENTS SHALL TAKE
- 7. ANY EXISTING BITUMINOUS PAVING, CONCRETE CURB, CONCRETE PADS, SIDEWALK, UTILITY OR OTHER EXISTING IMPROVEMENT (SCHEDULED TO REMAIN) THAT IS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REMOVED AND REPLACED, OR REPAIRED WITH MÁTERIAL EQUAL TO OR EXCEEDING THAT WHICH WAS DISTURBED, OR AS SPECIFIED BY THE OWNER, PROJECT OR MUNICIPAL ENGINEER, AS APPLICABLE. WHEN REMOVING AND
- JOINTS AND INSTALL NEW EXPANSION JOINT MATERIAL AS REQUIRED 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC AND TRAFFIC CONTROL, AS APPLICABLE. THE CONTRACTOR SHALL COORDINATE ANY TEMPORARY ROAD CLOSING WITH THE MUNICIPALITY AND OR PENNDOT
- 9. TEMPORARY TRAFFIC CONTROLS AND TRAFFIC SIGNS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

REPLACING CONCRETE CURB, CONCRETE PADS AND/OR SIDEWALK, REMOVAL SHALL BE TO THE NEAREST

EXPANSION JOINT IF POSSIBLE, TO CREATE A CLEAN, TOOLED (NON-SAWCUT) JOINT. PROVIDE DOWELS AT

- 10. CONTRACTOR SHALL MONITOR CONSTRUCTION VEHICLES AS REQUIRED TO AVOID TRACKING MUD AND DEBRIS ONTO ANY PAVED STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP THE STREET(S) AND/OR
- ACCESS DRIVE(S) CLEARED AND THE SITE IN AN APPROPRIATE WORKMAN-LIKE MANNER. 11. ALL EXISTING LAWN AREAS DISTURBED BY PROPOSED CONSTRUCTION SHALL BE RESTORED TO PROVIDE A
- MINIMUM NINE INCHES (9") TOPSOIL, GRADED TO SMOOTH, TRUE LINES AND SEEDED AND MULCHED PER
- 12. ANY LAND AREA THAT CANNOT BE ADEQUATELY STABILIZED WITH SEEDING AND MULCHING SHALL BE STABILIZED WITH AN EROSION CONTROL OR TURF REINFORCEMENT MATTING.
- 13. HANDICAP CURB RAMPS SHALL BE PROVIDED TO PROPOSED SIDEWALKS AT ALL PROPOSED STREET INTERSECTIONS AND AT LOCATIONS INDICATED ON THE SITE PLAN(S). RAMPS SHALL BE CONSTRUCTED PER
- MUNICIPAL AND A.D.A REQUIREMENTS. 14. PROPOSED STORMWATER MANAGEMENT FACILITIES:
- PROPOSED STORMWATER MANAGEMENT FACILITIES HAVE BEEN DESIGNED TO MANAGE POST DEVELOPMENT STORM RUNOFF FROM PROPOSED IMPERVIOUS AREAS SHOWN ON THIS PLAN. NO PROVISIONS HAVE BEEN MADE TO MANAGE STORMWATER RUNOFF FROM ADDITIONAL FUTURE IMPERVIOUS AREAS NOT SHOWN ON THIS PLAN ALL PROPOSED STORM INLETS LOCATED WITHIN EXISTING/PROPOSED PUBLIC RIGHTS-OF-WAY SHALL BE PENNDOT 2'x4' TYPE M OR C AS SPECIFIED ON THE PROFILES, UNLESS OTHERWISE NOTED OR REQUIRED DUE TO PIPE SIZES, CONFIGURATIONS OR GEOMETRY. THE REAR EDGE OF THE TOP OF GRATE OF ALL TYPE-C INLETS LOCATED IN PROPOSED STREETS SHALL BE DEPRESSED ONE AND ONE—HALF (1—1/2) INCHES BELOW THE FLOWLINE. VANE GRATES SHALL BE PROVIDED ON INLETS AS SPECIFIED ON THE PRÓFILES. ALL INLETS LINED CORRUGATED POLYETHYLENE (SLCP) UNLESS NOTED OTHERWISE.
- SHALL INCLUDE A BICYCLE-SAFE INLET GRATE. ALL PROPOSED STORM PIPES SHALL BE WATERTIGHT SMOOTH THE DESIGN OF THE PERMANENT STORMWATER INFILTRATION AND/OR STORMWATER QUALITY BMPS IS BASED ON REPRESENTATIVE SOIL TESTING PROCEDURES ACCEPTED BY PA DEP. DUE TO POSSIBLE VARIANCES IN THE SOIL PROPERTIES ENCOUNTERED WITHIN THE AREA OF THE ACTUAL BMP FACILITY, AND THE POTENTIAL ALTERATION OF PERCOLATION PROPERTIES OF THE SOIL DURING CONSTRUCTION, SITE DESIGN CONCEPTS, INC. DOES NOT UARANTEE OR WARRANTY THAT THE BMPS WILL FUNCTION IN ACCORDANCE WITH THE PARAMETERS USED TO
- 15. PROPOSED SITE GRADING HAS BEEN SHOWN TO PROVIDE A GENERAL REPRESENTATION OF THE FINISHED GROUND CONTOUR AND DRAINAGE PATTERNS FOR STORMWATER DESIGN PURPOSES.
- 16. ALL DIMENSIONS IN AREAS OF PROPOSED CURBING ARE FACE OF CURB TO FACE OF CURB UNLESS OTHERWISE
- 17. ALL ELEVATIONS ARE AT THE CENTER OF STRUCTURE AT THE FLOWLINE OF THE FACE OF CURB OR AT THE CENTER OF STRUCTURE IN GRASSED AREAS. UNLESS OTHERWISE NOTED
- 18. FAILURE TO SPECIFICALLY MENTION ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE
- PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK. 19. THE MEASURES REQUIRED IN THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN SHALL APPLY AS IF
- SHOWN ON THIS PLAN AND SHALL BE COMPLETED AND IN SERVICE PRIOR TO THE COMMENCEMENT OF ANY SITE 20. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES,
- 21. CURB AND PAVEMENT SHALL BE INSTALLED IN A MANNER AS TO ENSURE POSITIVE DRAINAGE IN ALL AREAS. 22. FIELD ADJUSTMENTS SHALL BE MADE AS NECESSARY TO PROVIDE A SMOOTH TRANSITION BOTH HORIZONTALLY
- 23. WHERE IT IS NECESSARY TO CONNECT TO OR EXTEND AN EXISTING ROAD OR PAVEMENT, SAW CUT THE EXISTING EDGE OF PAVEMENT AND MILL AND OVERLAY AT THE POINT OF TIE-IN TO ENSURE A SMOOTH

AND PRIVATE) FOR PROJECT ENGINEER'S USE IN PREPARATION OF RECORD DRAWINGS.

24. SITE CONTRACTOR SHALL PROVIDE DETAILED AS-BUILT INFORMATION TO PROJECT ENGINEER FOR ALL PROPOSED

SANITARY SEWER AND STORMWATER MANAGEMENT, CONVEYANCE AND B.M.P. STRUCTURES / FACILITIES (PUBLIC

## GEOTECHNICAL NOTES

- THE SITE IS GENERALLY SUITABLE FOR CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS. THE FOLLOWING
- 1. CLEARING, GRUBBING, DEMOLITION OF EXISTING STRUCTURES, AND THE STRIPPING OF ORGANIC SURFACE SOILS SHOULD BE PERFORMED IN ADVANCE OF ANY GRADING OPERATIONS IN STRUCTURAL AREAS 2. AFTER CLEARING, GRUBBING, AND STRIPPING HAVE BEEN COMPLETED, THE RESULTING STRUCTURAL FILI SUBGRADE SHOULD BE PROOFROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK TO LOCATE ANY UNSUITABLE OR UNSTABLE AREAS PRIOR TO STRUCTURAL FILL PLACEMENT. ANY SUBGRADE SOILS IDENTIFIED AS BEING UNSUITABLE OR UNSTABLE SHOULD BE UNDERCUT TO A STABLE SOIL STRATUM AND BACKFILLED WITH
- CONTROLLED, COMPACTED STRUCTURAL FILL. 3. SOILS SHALL BE DRIED BY PLACING IN LIFTS NOT TO EXCEED EIGHT (8) INCHES IN LOOSE THICKNESS AND DISCING AND AERATING THE SOIL OR TREATING WITH LIME OR CEMENT ÚNTIL MOISTURE FALLS WITHIN THE
- 4. SPRINGS AND AREAS OF HIGH GROUNDWATER TABLE ENCOUNTERED DURING CONSTRUCTION SHALL BE DEWATERED USING A PUMPED WATER FILTER BAG. IN AREAS OF PERMANENT EXCAVATION, CEASE WORK AND CONTACT THE PROJECT AND GEOTECHNICAL ENGINEER.
- 5. STRUCTURAL FILLS SUPPORTING FOUNDATIONS, SLABS, AND ROADWAYS AND WITHIN EMBANKMENT SLOPES STEEPER THAN 3(H):1(V) SHALL BE PLACED IN LIFTS NOT TO EXCEED EIGHT (8) INCHES IN LOOSE THICKNESS AND SHALL BE COMPACTED TO 95% OF ASTM D-698 (AASHTO T-99) AT +/- 3% OF THE OPTIMUM MOISTURE CONTENT. WHERE HAND—GUIDED COMPACTION EQUIPMENT SUCH AS JUMPING—JACKS OR PLATE—TAMPERS ARE
- USED, THE LOOSE LIFT THICKNESS SHOULD NOT EXCEED FOUR (4) INCHES. 6. STRUCTURAL FILLS WITHIN THE TOP ONE (1) FOOT OF PAVEMENT SUBGRADE SHALL BE PLACED IN LIFTS NOT TO EXCEED EIGHT (8) INCHES IN LOOSE THICKNESS AND SHALL BE COMPACTED TO 98% OF ASTM D-698 (AASHTO  $^-$ 99) AT +/- 2% OF THE OPTIMUM MOISTURE CONTENT. WHERE HAND-GUIDED COMPACTION EQUIPMENT SUCH
- AS JUMPING-JACKS OR PLATE-TAMPERS ARE USED, THE LOOSE LIFT THICKNESS SHOULD NOT EXCEED FOUR (4) 7. STRUCTURAL FILLS IN STORMWATER MANAGEMENT FACILITIES SHALL BE PLACED IN LIFTS NOT TO EXCEED EIGHT (8) INCHES IN LOOSE THICKNESS AND SHALL BE COMPACTED TO 95% OF ASTM D-698 (AASHTO T-99) AT 2 TO 5% OF THE OPTIMUM MOISTURE CONTENT. WHERE HAND-GUIDED COMPACTION EQUIPMENT SUCH AS

JUMPING-JACKS OR PLATE-TAMPERS ARE USED, THE LOOSE LIFT THICKNESS SHOULD NOT EXCEED FOUR (4)

- 8. UNLESS OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER, THE MAXIMUM PARTICLE SIZE FOR STRUCTURAL FILLS WITHIN THE UPPERMOST ONE (1) FOOT OF FLOOR SLAB SUBGRADE AND PAVEMENT AND FILLS IN THE VICINITY OR UTILITIES SHOULD BE LIMITED TO FOUR (4) INCHES. FOR FILLS BELOW THE UPPERMOST ONE (FOOT AND FILLS WITHIN NON-STRUCTURAL AND LANDSCAPED AREAS, THE MAXIMUM PARTICLE SIZE SHOULD BI
- 9. ALL BLASTING REQUIRED FOR ROCK REMOVAL FOR SITE GRADING, INSTALLATION OF PROPOSED SANITARY SEWER AND OTHER UTILITIES OR FACILITIES SHALL BE COMPLETED AT THE SAME TIME IN ACCORDANCE WITH ALL
- GOVERNING REGULATORY REQUIREMENTS. 10. PAVEMENT SUBGRADE SHOULD BE GRADED AND SEALED AT THE END OF EACH WORKDAY. PLACEMENT OF SUBBASE AND ASPHALT PAVING SHOULD BE PERFORMED AS QUICKLY AS POSSIBLE TO MINIMIZE THE IMPACT OF REPEATED SATURATION OF THE SUBGRADE SOILS.
- 11. ALL NEW FILL SLOPES STEEPER THAN 5(H):1(V) SHOULD BE KEYED INTO THE EXISTING SLOPES TO PROTECT THE
- 12. FILL CONTAINING A MAJORITY OF ROCKY MATERIAL MAY BE DIFFICULT TO EXCAVATE IF LOCATED IN AREAS OF JILITY TRENCH AND FOOTING EXCAVATIONS. THEREFORE, THE CONTRACTOR MAY WANT TO CONSIDER LIMITING

HE USE OF ROCK FILL IN AREAS OF PROPOSED EXCAVATION, OR TO STAGE THE EARTHWORK OPERATIONS TO

ALLOW THE PLACEMENT OF ROCK FILL AT THE BOTTOM OF THE DEEPER FILL AREAS, BELOW ANY ANTICIPATED

- 13. ALL UNSUITABLE MATERIAL MUST BE REMOVED AND REPLACED WITH SUITABLE MATERIAL TO A DEPTH AS DIRECTED BY THE GEOTECHNICAL ENGINEER AND/OR PROJECT ENGINEER.
- 14. A GEOTECHNICAL ENGINEER OR OTHER TECHNICAL PROFESSIONAL SHALL BE PRESENT DURING THE CONSTRUCTION OF SLOPES EXCEEDING 3:1 FILL OR 2:1 CUT.

FACILITIES. RESULTS OF ALL COMPACTION TESTS SHALL BE PROVIDED TO THE OWNER, PROJECT ENGINEER AND

- 15. AVOID RUNNING UTILITIES ALONG FOUNDATIONS LINES.
- 16. MINIMIZE IRRIGATED LANDSCAPED AREAS ADJACENT TO BUILDINGS. 17. COMPACTION TESTING TO ENSURE, ADEQUATE COMPACTION IS ACHIEVED PER REQUIREMENTS NOTED HEREIN OF THOSE OF ANY AGENCY WITH JURISDICTION, IS REQUIRED AT THE BASE OF ALL STORM, SANITARY SEWER AND WATER SYSTEM STRUCTURES AND PIPES THAT ARE LOCATED IN FILL AREAS, PRIOR TO INSTALLATION OF SAID

## LAND DEVELOPMENT GENERAL NOTES

- 1. THE PURPOSE OF THIS FINAL LAND DEVELOPMENT PLAN IS TO DEPICT THE PROPERTY LOCATED AT 732 EAST FORREST AVE. IN SHREWSBURY TOWNSHIP, YORK COUNTY, PA, AND THE CONSTRUCTION OF A CONVENIENCE STORE AND ASSOCIATED IMPROVEMENTS.
- 2. PARCEL INFORMATION:
- UNIFORM PARCEL IDENTIFIER: DEED REFERENCE: DEED BOOK \_\_\_\_\_, PAGE \_\_\_\_\_
- 3. EXISTING LAND TRACT IS ZONED: COMMERCIAL
- 4. ADJACENT LAND TRACTS ARE ZONED: NORTH: AGRICULTURAL
- SOUTH: COMMERCIAL
- COMMERCIAL
- 5. EXISTING LAND TRACT(S) USE: VACANT PROPOSED LAND TRACT USE: LOT #2 = CONVENIENCE STORE (WILL MEET ALL APPLICABLE CRITERIA OF SECTIONS 27-1404 AND 27-1002.2 OF THE ZONING ORDINANCE)
- 6. EXISTING LOT IS SERVED BY AN EXISTING PUBLIC WATER SUPPLY PROVIDED BY YORK WATER COMPANY AND AN EXISTING PUBLIC SANITARY SEWAGE DISPOSAL SYSTEM PROVIDED BY SHREWSBURY BOROUGH.
- 7. MINIMUM REQUIRED LOT AREA: 20,000 S.F. WITH PUBLIC WATER AND SEWAGE EXISTING LOT AREA: 190,555 S.F. (4.375 AC.) GROSS
- 187,111 S.F. (4.295 AC.) NET 8. MINIMUM LOT WIDTH (PUBLIC WATER AND SEWER): 100 FT
- 9. MINIMUM REQUIRED SETBACKS: PRINCIPAL BUILDINGS & STRUCTURES:

LOT #2 WIDTH: 620 FT.

- SIDE/REAR: 10 FT. FUEL PUMPS MUST BE SET BACK 25 FT. FROM RIGHT-OF-WAY OR 50 FT. FROM CENTERLINE, WHICHEVER IS
- GREATER, AND 30 FT. FROM PARKING AREAS. 10. MAXIMUM BUILDING HEIGHT: 45 FT.; HOWEVER, THE MAXIMUM BUILDING HEIGHT MAY BE EXTENDED TO 90 FEET IF SIDE AND REAR SETBACK AREAS ARE INCREASED FIVE (5) FEET FOR EACH CORRESPONDING TWENTY (20) FEET IN ADDITIONAL BUILDING HEIGHT LOT #2 PROPOSED BUILDING HEIGHT: <45 FT.
- 11. MAXIMUM LOT COVERAGE: 75% EXISTING LOT COVERAGE:

ACCESSORY BUILDINGS & STRUCTURES:

- LOT #2 EXISTING COVERAGE: 33% (62,228 S.F./187,111 S.F.) PROPOSED LOT COVERAGE:
- LOT #2 PROPOSED COVERAGE: 45% (83,653 S.F./187,111 S.F.) 12. MINIMUM WOODLAND RETENTION REQUIREMENTS FOR COMMERCIAL USE = 15%
- EXISTING WOODLAND AREA: 54.545 S.F. REQUIRED WOODLAND RETENTION AREA: 54.545 x 15% = 2.332 S.F.
- PROPOSED WOODLAND RETENTION AREA: 18% (9,606 S.F./54,545 S.F.) 13. PARKING REQUIREMENTS:
- CONVENIENCE STORE 1 SPACE PER 100 S.F. GROSS FLOOR AREA + 1 SPACE PER EMPLOYEE
- LOT #2 REQUIRED NO. OF SPACES = (5,122 S.F./100 S.F.) + 4 EMPLOYEES = 56 LOT #2 PROPOSED NO. OF SPACES = 59 REQUIRED NO. OF ADA HANDICAP PARKING SPACES = 3 LOT #2 PROPOSED NO. OF ADA HANDICAP PARKING SPACES = 3
- MINIMUM PARKING SPACE = 10' WIDE X 20' LONG 14. INTERIOR PARKING LOT LANDSCAPE AREA: ALL PARKING LOTS WITH TEN (10) OR MORE SPACES SHALL PROVIDE LANDSCAPED AREAS WITHIN THE PAVED AREA LOCATED AT THE END OF EACH PARKING SPACE ROW AND AT INTERVALS OF NO GREATER THAN ONE HUNDRED (100) FEET ALONG EACH PARKING SPACE ROW.
- 15. LOADING REQUIREMENTS: TOTAL REQUIRED NO. OF LOADING SPACES = 1 SPACE PER 6,000 - 20,000 S.F. OF FLOOR. 1 ADDITIONAL SPACE/BERTH FOR EACH 60,000 S.F. ABOVE 20,000 S.F.
- LOT #2 REQUIRED NO. OF LOADING SPACES: 0 LOT #2 PROPOSED NO. OF LOADING SPACES: 0 MINIMUM LOADING SPACE SIZE = 65'L. x 12'W. x 14'H.
- ASIS: PROVIDE 100 S.F. OF SNOW STORAGE AREA FOR EVERY 1,000 S.F. OF PLOWABLE AREA.
- REQUIRED SNOW STORAGE AREA = 71,340 S.F. OF PLOWABLE AREA/100 S.F. = 7,134 S.F. PROPOSED SNOW STORAGE AREA = 7,915 S.I
- 17. PROJECT SITE IS NOT LOCATED WITHIN A MAPPED 100 YEAR FLOOD PLAIN BASED UPON A REVIEW OF THE FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWNSHIP OF SHREWSBURY, COMMUNITY NUMBER 422230, PANEL 468, SUFFIX E, MAP NUMBER 42133C0468E, EFFECTIVE DATE: SEPTEMBER 25, 2009.
- TOP NUT OF EXISTING FIRE HYDRANT ALONG WEST SIDE OF CAPRICE COURT. ELEV.= 825.47 (NAVD88) VERTICAL ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM FROM 1988 (NAVD 88 DATUM) AND ESTABLISHED BY USING GPS TECHNOLOGY.

20. THIS PROPERTY WAS SURVEYED AND THIS PLAN WAS PREPARED USING DEEDS AND PLANS OF RECORD WITHOUT

- 19. SITE PROPERTY LINE AND TOPOGRAPHIC INFORMATION IS BASED ON AN ACTUAL FIELD SURVEY BY SITE DESIGN CONCEPTS, INC., COMPLETED IN SEPTEMBER, 2019.
- THE BENEFIT OF A TITLE SEARCH. THIS SURVEY IN NO WAY GUARANTEES, WARRANTS OR IMPLIES THAT THE PROPERTY IS NOT AFFECTED BY RIGHTS-OF-WAY, EASEMENTS, RESTRICTIONS, ETC. WHICH MAY BE DISCOVERED

ARE NO EXISTING WETLAND AREAS THAT WILL BE AFFECTED BY THIS PROJECT

21. THE NATIONAL WETLANDS INVENTORY MAP DEPICTS NO EXISTING WETLAND AREAS ON THIS SITE. BASED UPON SITE RECONNAISSANCE COMPLETED BY SITE DESIGN CONCEPTS, INC. IN SEPTEMBER, 2019, THERE

150 FT. ALONG CENTERLINE OF ARTERIAL STREET

22. CLEAR SIGHT TRIANGLE REQUIREMENTS

- 75 FT. ALONG CENTERLINE OF COLLECTOR STREETS WHERE AN ACCESS DRIVE INTERSECTS WITH A STREET, THE CLEAR SIGHT TRIANGLE SHALL BE MEASURED ALONG THE CENTERLINE OF THE ACCESS DRIVE FROM WHERE IT MEETS THE CARTWAY OF THE STREET FOR 50 FEET AND ALONG THE CENTERLINE OF THE STREET IN BOTH DIRECTIONS FROM THE INTERSECTION WITH THE ACCESS DRIVE FOR 75 FT. FOR COMMERCIAL ACCESS DRIVES.
- WITHIN SUCH TRIANGLES, NO STRUCTURE, GRADING, OR LANDSCAPING GREATER THAN THREE FEET IN HEIGHT OR GREATER THAN ONE FOOT IN DIAMETER THAT WOULD OBSCURE THE VISION OF A MOTORIST SHALL EXIST OR BE

23. A HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945 (PL

- 1242 NO. 428) KNOWN AS THE 'STATE HIGHWAY LAW,' OR AMENDMENTS THEREOF, BEFORE ANY IMPROVEMENTS ARE INITIATED WITHIN A STATE HIGHWAY, OR A STREET, ACCESS DRIVE, OR DRIVEWAY INTERSECTION TO A STATE 24. TOPSOIL SHALL BE STOCKPILED AT THE SITE ALONG WITH ADEQUATE VOLUME OF SUBSOIL SO A MINIMUM OF NINE (9) INCHES OF TOPSOIL AND EIGHTEEN (18) INCHES OF SUBSOIL CAN BE PROVIDED OVER ALL GRADED OR DISTURBED AREAS. ANY EXCESS TOPSOIL WILL BE HAULED OFF SITE TO AN APPROVED STOCKPILE/FILL SITE.
- QUALITY TO ESTABLISH NATIVE VEGETATION. 25. NO TOPSOIL SHALL BE REMOVED FROM THE SITE WITHOUT PRIOR WRITTEN PERMISSION FROM THE TOWNSHIP CEO. 26. ALL STORMWATER MANAGEMENT FACILITIES FOR THIS SITE SHALL BE OWNED, OPERATED, AND MAINTAINED BY TH LOT OWNER OR A HOMEOWNERS' ASSOCIATION RECOGNIZED BY THE TOWNSHIP. MAINTENANCE SHALL CONSIST OF KEEPING THE INLET GRATES FREE OF DEBRIS, REPAIRING OR REPLACING PIPES, AND ANY OTHER EFFORT NECESSARY TO ENSURE THAT ALL STRUCTURES REMAIN FUNCTIONAL AT ALL TIMES. IF THE TOWNSHIP DETERMINES AT ANY TIME THE STORMWATER MANAGEMENT FACILITIES HAVE BEEN ELIMINATED, ALTERED, OR IMPROPERLY MAINTAINED, THE OWNER OF THE PROPERTY SHALL BE ADVISED OF CORRECTIVE MEASURES

REQUIRED AND GIVEN 60 DAYS FROM THE DATE SUCH NOTICES ARE SENT TO TAKE NECESSARY CORRECTIV

TOPSOIL RETAINED ONSITE WILL BE THAT WHICH IS NECESSARY TO PROVIDE THE THICKNESS (MINIMUM 9") AND

- ACTION, AND THE PROCEDURES OF SECTION 22-517, SUBSECTION 8 OF THE SHREWSBURY TOWNSHIP ORDINANCE,
- 27. NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE, OR ALTER ANY SWM BMPs, FACILITIES, AREAS, OR STRUCTURES IN A MANNER WITHOUT THE WRITTEN APPROVAL OF THE TOWNSHIP, WITH THE EXCEPTION OF NECESSARY MAINTENANCE ACTIVITIES SUCH AS MOWING. 28. A "KNOX" BOX SHALL BE INSTALLED AT THE MAIN PUBLIC ENTRANCE TO THE PROPOSED BUILDING AT A HEIGHT BETWEEN 48 AND 60 INCHES.
- COMPLETE CONSTRUCTION END OF 2022 30. LEGAL RIGHTS-OF-WAY FOR S.R. 0083 AND S.R. 0851 ARE BASED ON COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION DRAWINGS REESTABLISHING LIMITED ACCESS HIGHWAY AND AUTHORIZING ACQUISITION AND ACCEPTING DEDICATION OF RIGHT-OF-WAY FOR STATE ROUTE 0083, SECTION 074 R/W, ISTRICT 8—0, YORK COUNTY, SHREWSBURY BOROUGH, SHREWSBURY TOWNSHIP, AND HOPEWELL TOWNSHIP RECORDED IN YORK COUNTY RECORDER OF DEEDS RECORD BOOK 2426, PAGE 692, SHEETS 4 THROUGH 9, 18
- THROUGH 20, 25, 51 THROUGH 53, AND 58 THROUGH 59. 31. NO VEGETATION MAY BE PLANTED WITHIN 10 FEET OF ANY FIRE HYDRANT WHICH MAY OBSTRUCT THE USE OF THE HYDRANT. NO ALTERATION, INCLUDING PAINTING, SHALL BE ALLOWED. 32. EIGHT (8) EQUIVALENT DWELLING UNITS (EDUs) ARE CURRENTLY ALLOCATED TO THE PROJECT SITE (PARCEL 37.B = 5 EDUs AND PARCEL 37.G = 3 EDUs), PER SHREWSBURY BOROUGH. EACH EDU IS 350 GALLONS PER DAY

PER A LETTER FROM THE PA DEP, DATED JANUARY 16, 2020, NO ADDITIONAL SEWAGE FACILITIES PLANNING WILL

ADDITIONAL CAPACITY IS REQUIRED, ADDITIONAL EDUS WILL NEED TO BE ALLOCATED TO THE PROPERTY AND PA DEP SEWAGE FACILITIES PLANNING WILL BE REQUIRED. FOUR (4) EDUS ARE ALLOCATED FOR THIS PROJECT 33. THE OWNER HEREBY GRANTS THE YORK WATER COMPANY A 18-FOOT WIDE EASEMENT CENTERED ON ALL WATER MAINS AND CURB STOPS. SAID EASEMENT SHALL RUN WITH THE LAND, AND SHALL GRANT THE YORK WATER COMPANY THE RIGHT TO EXCAVATE, LAY, INSPECT, MAINTAIN, OPERATE, AND USE FOR ANY LAWFUL PURPOSE ITS

34. EACH BUILDING SHALL BE PROTECTED BY A FIRE ALARM SYSTEM THAT TRANSMITS A SIGNAL TO A CERTIFIED

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732 EAST FORREST AVE

NEW FREEDOM, PA 17349

BE REQUIRED SO LONG AS THERE WILL BE NO INCREASE IN SEWAGE FLOWS OF MORE THAN 1 EDU. IF

ALARM COMPANY MONITORING SYSTEM WHICH CONTACTS THE YORK COUNTY 911 SYSTEM IF A FIRE ALARM IS SHIPLEY FAMILY LIMITED PARTNERSHIP 415 NORWAY STREE

POTABLE WATER PIPES AND APPURTENANT EQUIPMENT.

29. ESTIMATED TIMETABLE OF CONSTRUCTION ACTIVITY

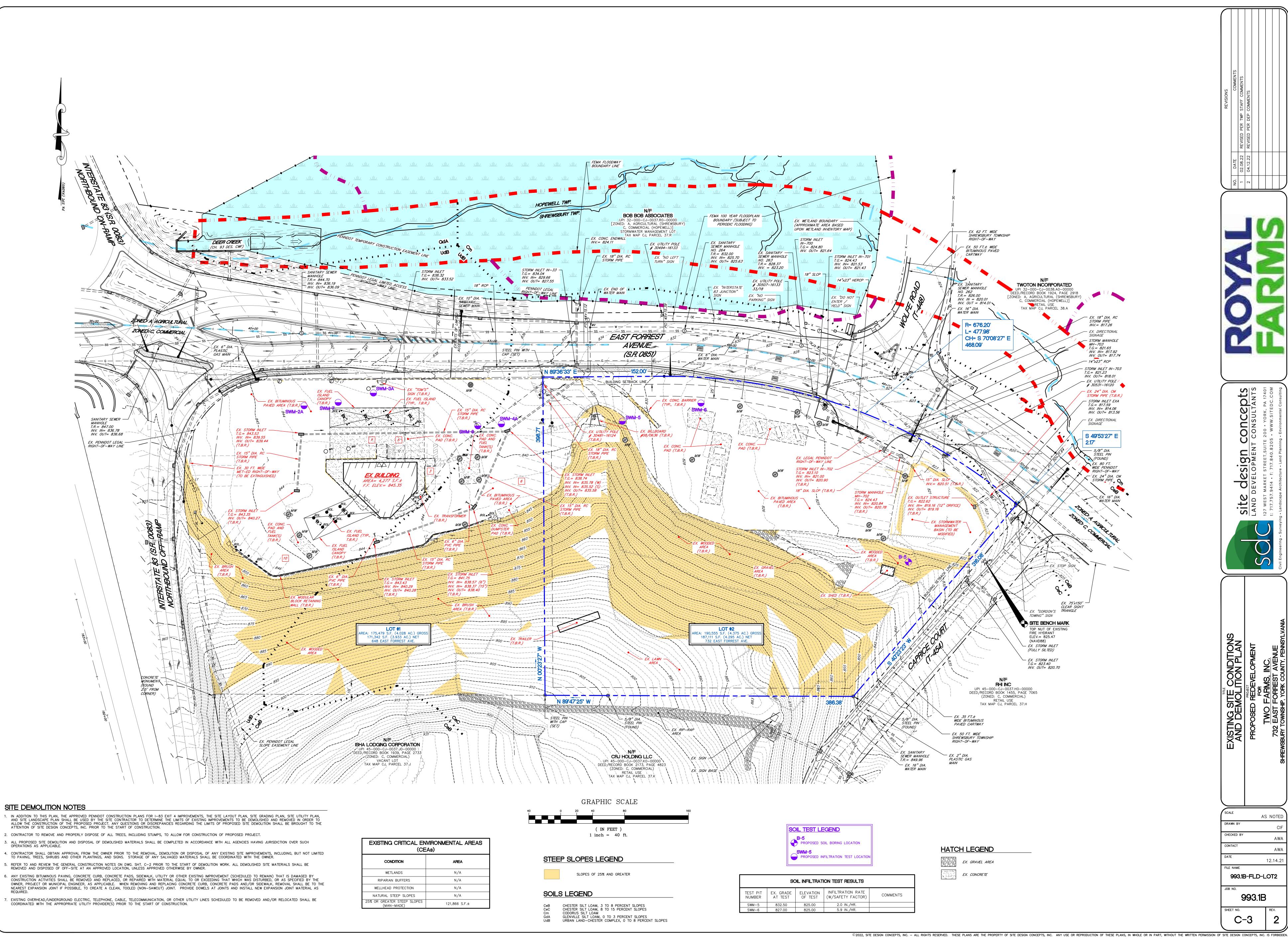
DEVELOPER: 3611 ROLAND AVENUE BALTIMORE, MD 21211

S S

1010 = 5

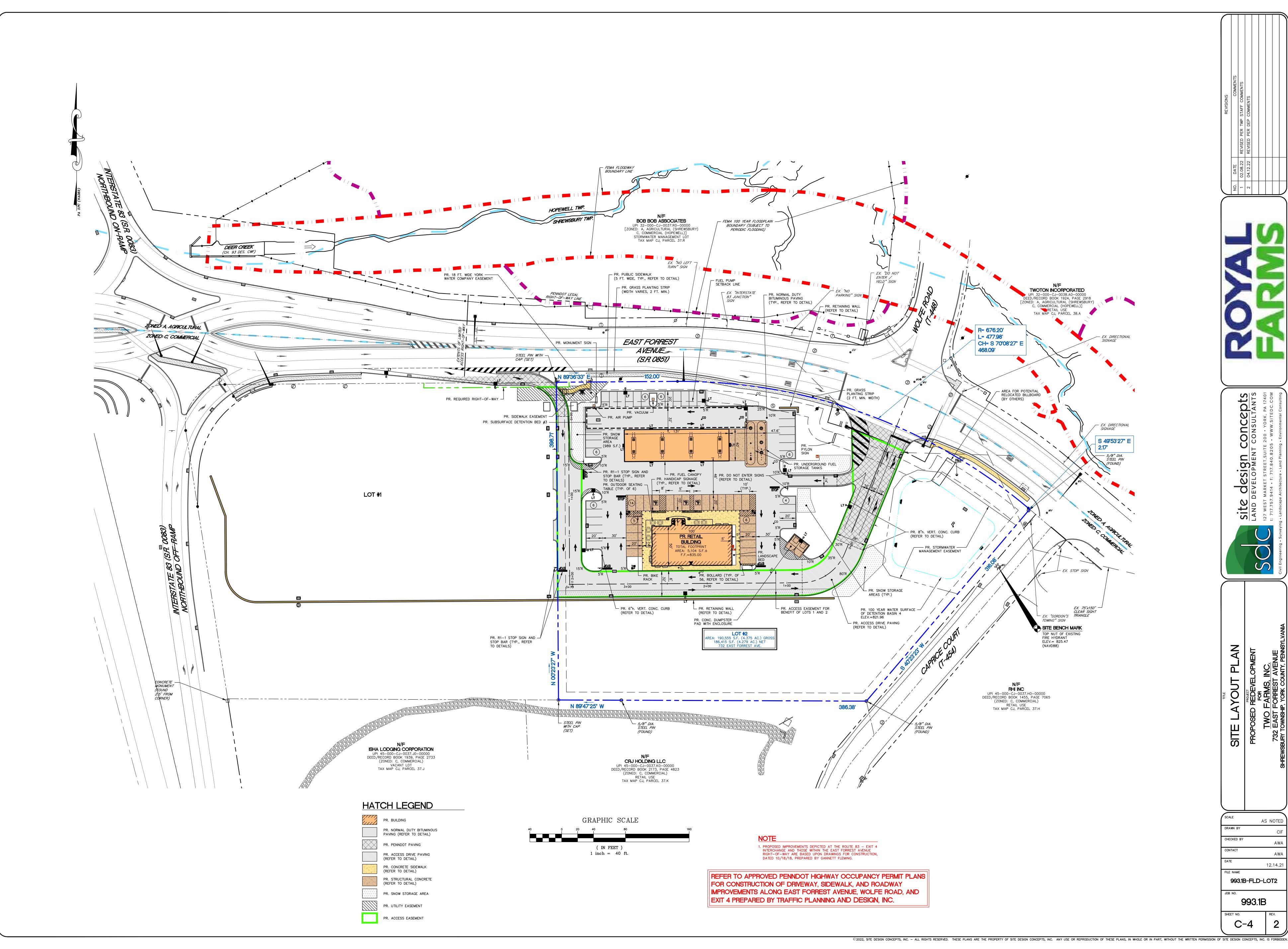
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12.14.2



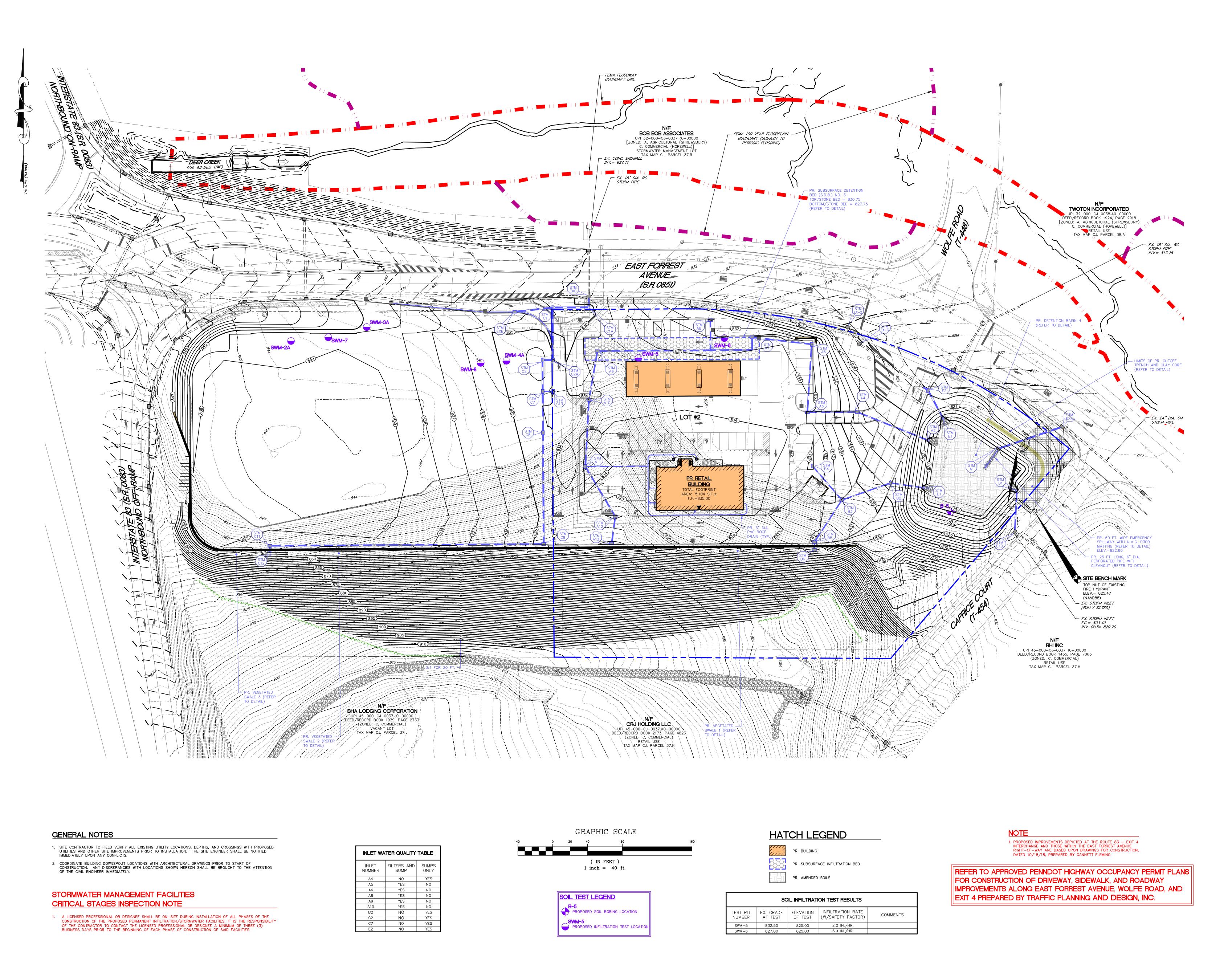
OA **8** 8 Sign 

AS NOTED DRAWN BY 12.14.21



AS NOTED

12.14.21 993.1B-FLD-LOT2



O2.08.22 REVISED PER TWP STAFF COMMENTS

04.12.22 REVISED PER DEP COMMENTS



Site design concepts
LAND DEVELOPMENT CONSULTANTS
LAND MEKET STREET, SUITE 200 · YORK, PA 17401



GRADING PLAN

PROPOSED REDEVELOP
FOR
TWO FARMS, INC
732 FAST FORFEST AVI

SCALE AS NOTED

DRAWN BY

CIF

CHECKED BY

AWA

CONTACT

12.14.21

FILE NAME

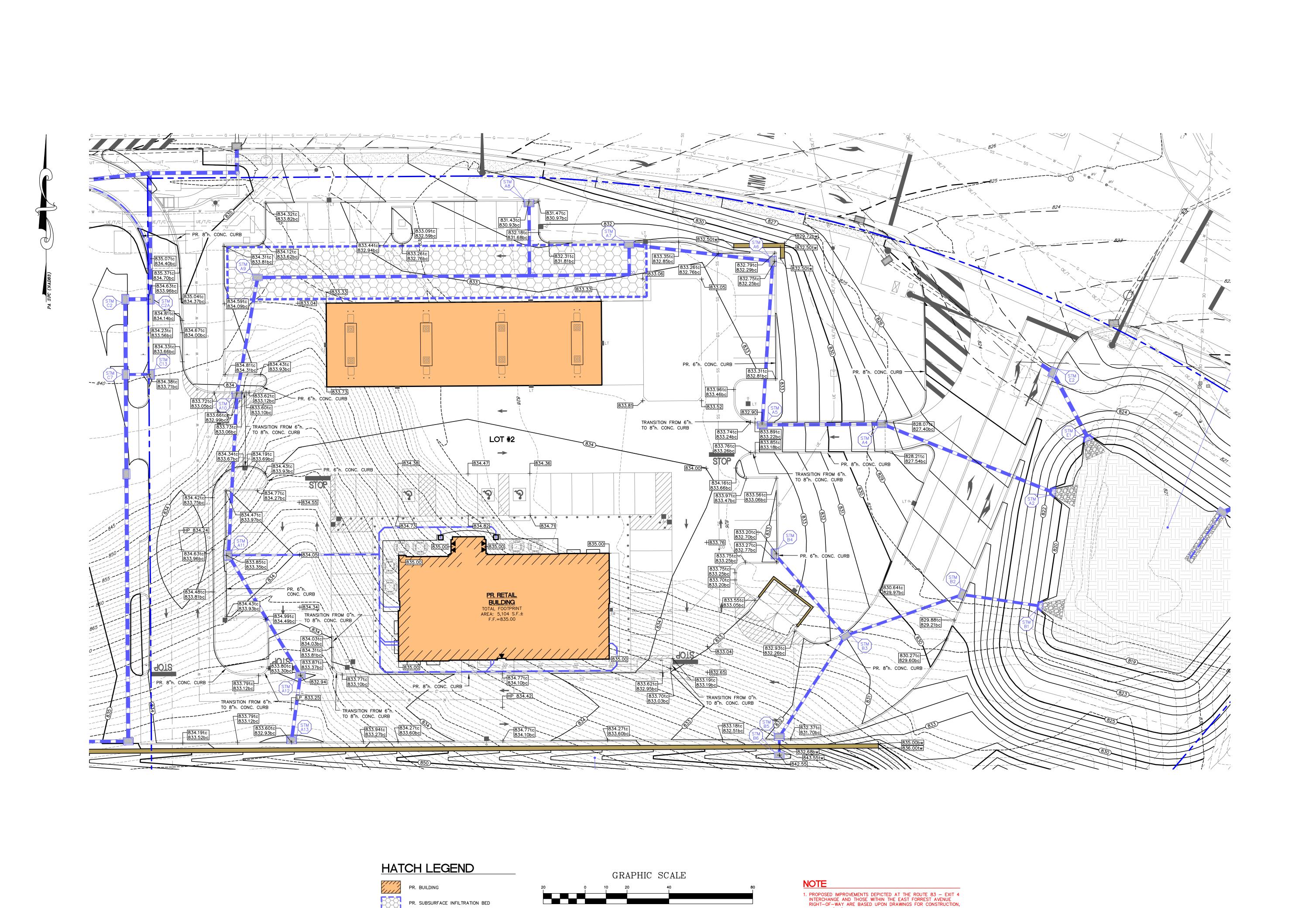
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993.1B

SHEET NO. REV

C-5 2

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( IN FEET )

1 inch = 20 ft.

DATED 10/18/18, PREPARED BY GANNETT FLEMING.

PR. SUBSURFACE INFILTRATION BED

PR. AMENDED SOILS

Site design concepts

LAND DEVELOPMENT CONSULTANTS

127 WEST MARKET STREET, SUITE 200 · YORK, PA 17401

t: 717.757.9414 · f: 717.840.8205 · WWW.SITEDC.COM

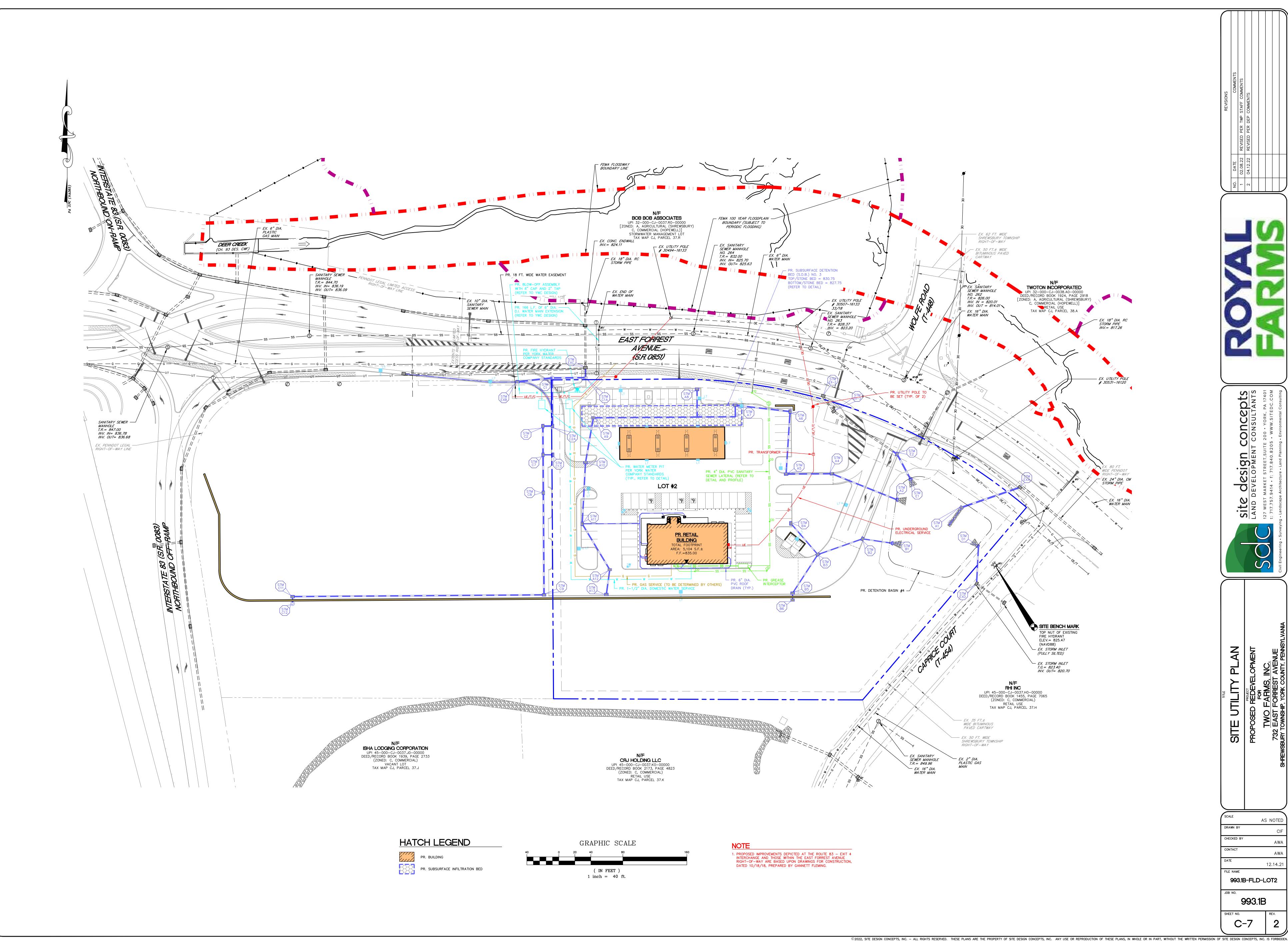
GRADING

ARGED SITE

AS NOTED 12.14.21

993.1B-FLD-LOT2

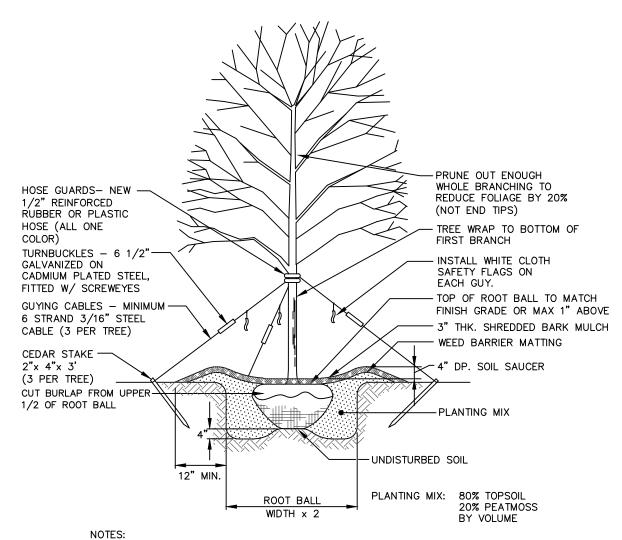
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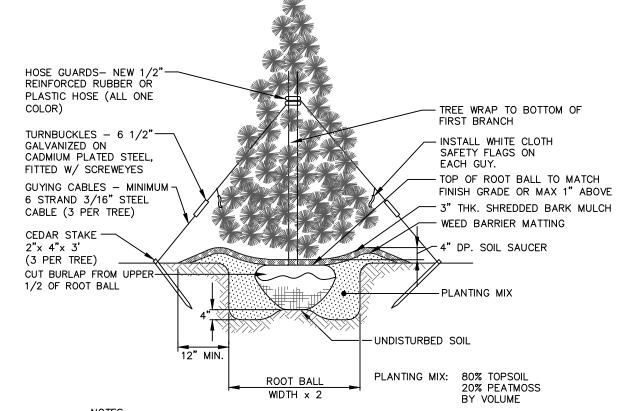
VELOPMENT CONSULTANTS
VET STREET, SUITE 200 · YORK, PA 17401 

AS NOTED 12.14.21



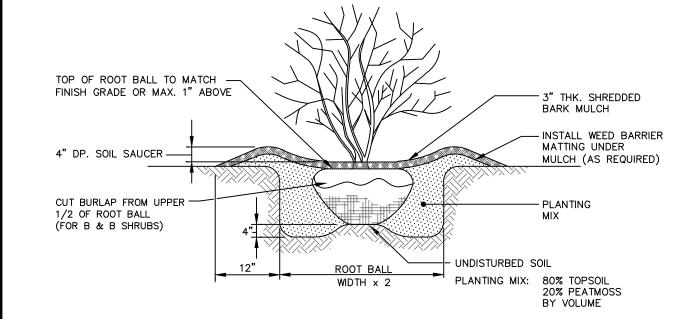
- 1. SCARIFY PLANT PIT BOTTOM BEFORE SETTING PLANT AND ADDING
- 2. CUT AWAY AND REMOVE ALL PLASTIC COVERINGS AND ALL NYLON
- 3. PROVIDE GUY WIRES ONLY AS REQUIRED BY OWNER/ENGINEER/ LANDSCAPE ARCHITECT. 4. PLANTING PER SHREWSBURY TOWNSHIP CONSTRUCTION AND MATERIALS

#### TYPICAL DECIDUOUS TREE PLANTING DETAIL NO SCALE



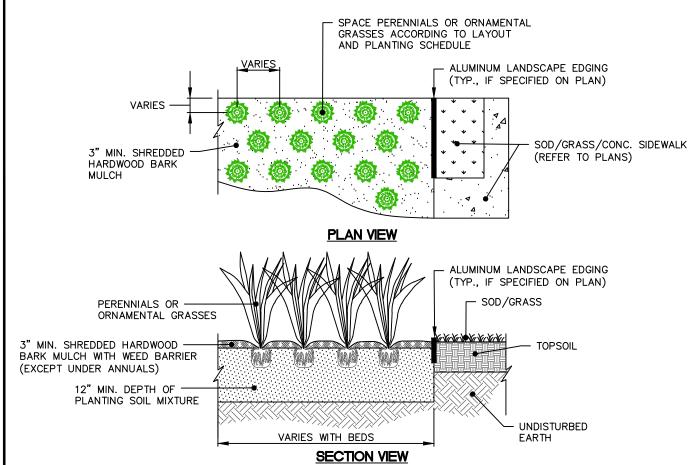
- NOTES:
  1. SCARIFY PLANT PIT BOTTOM BEFORE SETTING PLANT AND ADDING
- 2. CUT AWAY AND REMOVE ALL PLASTIC COVERINGS AND ALL NYLON
- PROVIDE GUY WIRES ONLY AS REQUIRED BY OWNER/ENGINEER/ LANDSCAPE ARCHITECT.

## TYPICAL EVERGREEN TREE PLANTING DETAIL



 SCARIFY PLANT PIT BOTTOM BEFORE SETTING PLANT AND ADDING PLANT MIX. 2. CUT AWAY AND REMOVE ALL PLASTIC COVERINGS AND ALL NYLON CORDS.

## TYPICAL SHRUB PLANTING DETAIL NO SCALE



PERENNIAL/GROUNDCOVER PLANTING DETAIL

#### TREE PROTECTION STANDARDS

- 1. EVERY EFFORT SHALL BE MADE TO REDUCE THE LOSS OR DAMAGE OF TREES EXISTING ON SITE WHICH ARE TO REMAIN. A TREE SHALL BE CONSIDERED PRESERVED IF:
- A. THERE IS NO DISTURBANCE WITHIN THE TREE'S CRITICAL ROOT ZONE.

MEET WITH THE TOWNSHIP TO FURTHER DETERMINE METHODS TO MINIMIZE TREE LOSS

- B. THE CRITICAL ROOT ZONE EXTENDS FROM THE TREE TRUNK A DISTANCE EQUAL TO 12 TIMES THE
- TRUNK DIAMETER OR TO THE TREE'S DRIPLINE PLUS FIVE (5) FEET, WHICHEVER IS GREATER.
- C. THE TOWNSHIP'S LANDSCAPE PROFESSIONAL DETERMINES IT IS THE VIABLE CONDITION AT THE END OF THE GUARANTEE PERIOD. 2. PRIOR TO ANY CLEARING OR DISTURBANCE ACTIVITIES, THE APPLICANT AND/OR SITE CONTRACTOR MUST
- 3. ALL TREES, NATURAL FEATURES, AND OTHER VEGETATION TO BE PRESERVED SHALL BE PROTECTED FROM EQUIPMENT DAMAGE BY SNOW FENCING OR OTHER EFFECTIVE BARRIERS APPROVED BY THE TOWNSHIP. FENCING OR BARRIERS AROUND TREES SHALL BE PLACED OUTSIDE THE DRIPLINE, UNLESS APPROVED BY THE TOWNSHIP TO BE APPROPRIATE AT ANOTHER LOCATION. TREE PROTECTION INSTALLATION MUST BE APPROVED BY THE TOWNSHIP'S LANDSCAPE PROFESSIONAL PRIOR TO THE START OF ANY CLEARING, GRADING, OR OTHER EARTH DISTURBANCE AND MONITORED PERIODICALLY. THE TREE PROTECTION FENCING SHALL BE MAINTAINED BY THE APPLICANT WHILE IN PLACE. IT SHALL BE REMOVED AFTER ALL
- 4. WHEN DISTURBANCE WITHIN THE CRITICAL ROOT ZONE IS UNAVOIDABLE, APPLICANTS SHALL MINIMIZE ENCROACHMENT AND USE THE BEST AVAILABLE METHODS AS APPROVED BY THE TOWNSHIP'S LANDSCAPE PROFESSIONAL TO MINIMIZE DAMAGE AND PRESERVE TREES. THESE METHODS MAY INCLUDE UTILITY TUNNELING, USE OF GEOTEXTILES, MULCHING, HAND ROOT PRUNING, AND SOIL AERATION. APPLICANTS SHALL CONSULT REFERENCES SUCH AS "A GUIDE TO PRESERVING TREES IN DEVELOPMENT PROJECTS,"

EARTHMOVING AND CONSTRUCTION ACTIVITIES THAT MAY IMPACT TREE ROOTS ARE COMPLETED.

- PUBLISHED BY THE PENN STATE COLLEGE OF AGRICULTURAL SCIENCES COOPERATIVE EXTENSION. 5. SHOULD ANY MATURE, VIABLE TREES ON THE SITE NOT SCHEDULED TO BE REMOVED BE IRREPARABLY DAMAGED DURING SITE PREPARATION ACTIVITIES AND, AS A CONSEQUENCE THEREOF, DIE OR DECLINE, AS DETERMINED BY THE TOWNSHIP LANDSCAPE PROFESSIONAL. WITHIN 18 MONTHS OF THE CONCLUSION OF CONSTRUCTION ACTIVITIES, SUCH TREES SHALL BE REPLACED WITH NURSERY-GROWN MATERIAL IN
- A. FOR DECIDUOUS TREES OF SIX INCHES UP TO 12 INCHES DBH, ONE INCH OF NEW TREE CALIPER SHALL BE PROVIDED FOR EVERY SIX INCHES OF EXISTING TREE DIAMETER CUT OR REMOVED.
- B. FOR DECIDUOUS TREES OF 12 INCHES UP TO 24 INCHES DBH, ONE INCH OF NEW TREE DIAMETER SHALL BE PROVIDED FOR EVERY THREE INCHES OF EXISTING TREE DIAMETER CUT OR REMOVED.
- C. FOR DECIDUOUS OR EVERGREEN TREES OF 24 INCHES AND GREATER DBH, ONE INCH OF NEW TREE DIAMETER SHALL BE PROVIDED FOR EVERY ONE INCH OF EXISTING TREE DIAMETER CUT OR REMOVED.

## LANDSCAPING NOTES

ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

- 1. LANDSCAPING PLAN SHALL INCLUDE FURNISHING AND INSTALLING MULCHED BEDS AND PLANT MATERIALS SHOWN ON THE LANDSCAPING SCHEDULE AND COMPLYING WITH THE LANDSCAPING NOTES AND PLANTING DETAILS.
- 2. PLANT MATERIAL SHALL COMPLY WITH ANSI Z60.1-1990. PLANT SIZES AND CONTAINER SIZES SHOWN ARE
- 3. CONTRACTOR SHALL LABEL AT LEAST ONE (1) PLANT OF EACH VARIETY WITH A SECURED, ATTACHED TAG BEARING THE LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME TO HELP CONFIRM PLANT TYPE.
- 4. SUBSTITUTIONS, ADDITIONS, AND DELETIONS ARE PERMISSIBLE UPON APPROVAL FROM OWNER/ENGINEER/ LANDSCAPE ARCHITECT AND MUNICIPALITY (WHERE REQUIRED).
- 5. LANDSCAPING CONTRACTOR TO WARRANT LANDSCAPE PLANTS FOR A ONE (1) YEAR PERIOD FROM THE DATE OF SUBSTANTIAL COMPLETION OF THE PLANT MATERIALS INSTALLATION. SUBSTANTIAL COMPLETION DATE SHALL BE DETERMINED BY THE OWNER. CONTRACTOR TO WARRANT ALL PLANTS AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH AS DETERMINED BY THE OWNER OR OWNER'S AGENT. CONTRACTOR TO REMOVE AND REPLACE DEAD PLANTINGS IMMEDIATELY UNLESS REQUIRED TO PLANT IN THE SUCCEEDING
- 6. MULCH IS TO BE SHREDDED BARK. MULCH BED THICKNESS SHALL BE (TWO) 2 INCHES MINIMUM AFTER LIGHT TAMPING, EXCEPT THAT MULCH DEPTH AT ANNUAL FLOWERS SHALL BE 1-1/2". PLACE MULCH BED OVER
- WEED BARRIER MAT OR EQUAL, UNLESS NOTED OTHERWISE. 7. WEED BARRIER MAT SHALL BE EXCLUDED FROM AREA AROUND ANNUAL FLOWERS OR AS NOTED.
- 8. BED PREPARATION FOR ANNUALS ONLY: TILL THOROUGHLY. ADD ONE INCH (I") DEPTH OF 'GLATCO-LITE' (OR APPROVED EQUAL) SOIL CONDITIONER AND INCORPORATE INTO TOP 5" OF SOIL. TOP DRESS SOIL SURFACE AFTER PLANTING WITH OSMOCOTE 14-14-14 SLOW RELEASE FERTILIZER, AT 18 LB/1000 SF OF
- FLOWER AREA. PLANT FLOWERS AT PROPER DEPTH. 9. ALL LANDSCAPE PLANTING SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH ACCEPTED PRACTICES AS RECOGNIZED BY THE AMERICAN ASSOCIATION OF NURSERYMEN IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 1973. AS AMENDED. PLANTING AND MAINTENANCE OF VEGETATION SHALL INCLUDE. BUT NOT NECESSARILY BE LIMITED TO, PROVISIONS FOR SURFACE MULCH, GUYWIRES AND STAKES, IRRIGATION, FERTILIZATION, INSECT AND DISEASE CONTROL, PRUNING, MULCHING, WEEDING, AND WATERING.
- 10. SEEDING SHOULD TAKE PLACE EITHER BETWEEN MARCH 15 AND JUNE 1 OR AUGUST 15 AND OCTOBER 15, OR AS SPECIFIED BY THE SEED DISTRIBUTOR. PLANTING AREAS SHALL BE SOAKED TO MAINTAIN A CONSISTENT LEVEL OF MOISTURE FOR AT LEAST FOUR TO SIX WEEKS AFTER PLANTING.
- 11. TOPSOIL STRIPPED DURING EARTHMOVING ACTIVITIES WILL BE STOCKPILED ONSITE IN ORDER TO RESPREAD AFTER MASS GRADING OPERATIONS HAVE BEEN COMPLETED. ANY EXCESS TOPSOIL WILL BE HAULED OFF SITE TO AN APPROVED STOCKPILE/FILL SITE. TOPSOIL RETAINED ONSITE WILL BE THAT WHICH IS NECESSARY TO PROVIDE THE THICKNESS (MIN. 9") AND QUALITY TO ESTABLISH NATIVE VEGETATION.

#### PERMANENT SEEDING AND MULCHING SPECIFICATIONS AND NOTES

## PERMANENT GRASS OR LEGUME COVER.

KY. BLUEGRASS

PERENNIAL RYEGRASS 15%

- A. ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED SHALL BE COVERED WITH GRASS OR A LEGUME IN ORDER TO MINIMIZE EROSION, UNLESS OTHERWISE DIRECTED BY THE OWNER.
- B. MULCHING SHALL BE USED TO PROTECT SEEDING AND TO REDUCE RUNOFF. STRAW MULCH SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 3 TONS/ACRE.
- C. THE BELOW PERMANENT SEEDING MIXTURES ARE FROM THE PENN STATE AGRONOMY GUIDE. THE SEED MIXTURES SHALL CONSIST OF: SEEDING DATES

MARCH 15 TO JUNE 1

AUGUST 1 TO OCTOBER 15

- D. IN THE ABSENCE OF SOIL TEST RESULTS, FERTILIZER OF 10-20-20 AT AN APPLICATION RATE OF 1,000 LB./ACRE SHALL BE APPLIED WITH THE PERMANENT SEEDING.
- E. IN THE ABSENCE OF SOIL TEST RESULTS, LIME AT AN APPLICATION RATE OF 4 TONS/ACRE OF
- . STRAW AND HAY MULCH SHOULD BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO CRIMP THE STRAW OR HAY INTO THE SOIL.

  THIS METHOD IS LIMITED TO SLOPES NO STEEPER THAN 3:1. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR. (NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED). A WOOD CELLULOSE FIBER MAY BE SPREAD OVER THE STRAW MULCH AT A RATE OF 1,500

## DETENTION BASIN BOTTOM SEEDING SPECIFICATION

SEED MIX		
F.M. BROWN'S - CONSERVE LOW MAINTENANCE	BASIN MIXTURE	
*PROVIDED BY F.M. BROWN'S SONS, INC, SINKIN - WWW.FMBROWN.COM OR APPROVED EQUAL BY		ATION DISTRICT.
<u>ПЕМ</u>	BOTANICAL NAME	MIXTURE(%)
TALL FESCUE —	- SCHEDONORUS ARUNDINACEA SCHREB ———	<b>—</b> 50
HARD FESCUE	FESTUCA BREVIPILA ——————	<u> </u>
PERENNIAL RYE	- LOLIUM PERENNE	<u> </u>
CREEP RED FESCUE -	- FESTUCA RUBRA	<b>—</b> 10

- TRIFOLIUM REPENS-

– AGROSTIS GIGANTEA —

#### SEEDING RATE 150 LB PER ACRE, OR 7.5 LB PER 1,000 S.F.

THIS MIX SHOULD ONLY BE MOWED EVERY SIX (6) WEEKS IN THE FIRST YEAR AND THE YEARS FOLLOWING THIS MIX SHOULD ON BE MOWED DURING THE DORMANT SEASON (EARLY WINTER) UNLESS REQUIRED BY THE MUNICIPALITY TO BE MAINTAINED AT A SPECIFIC HEIGHT.

## STEEP SLOPE SEEDING SPECIFICATIONS

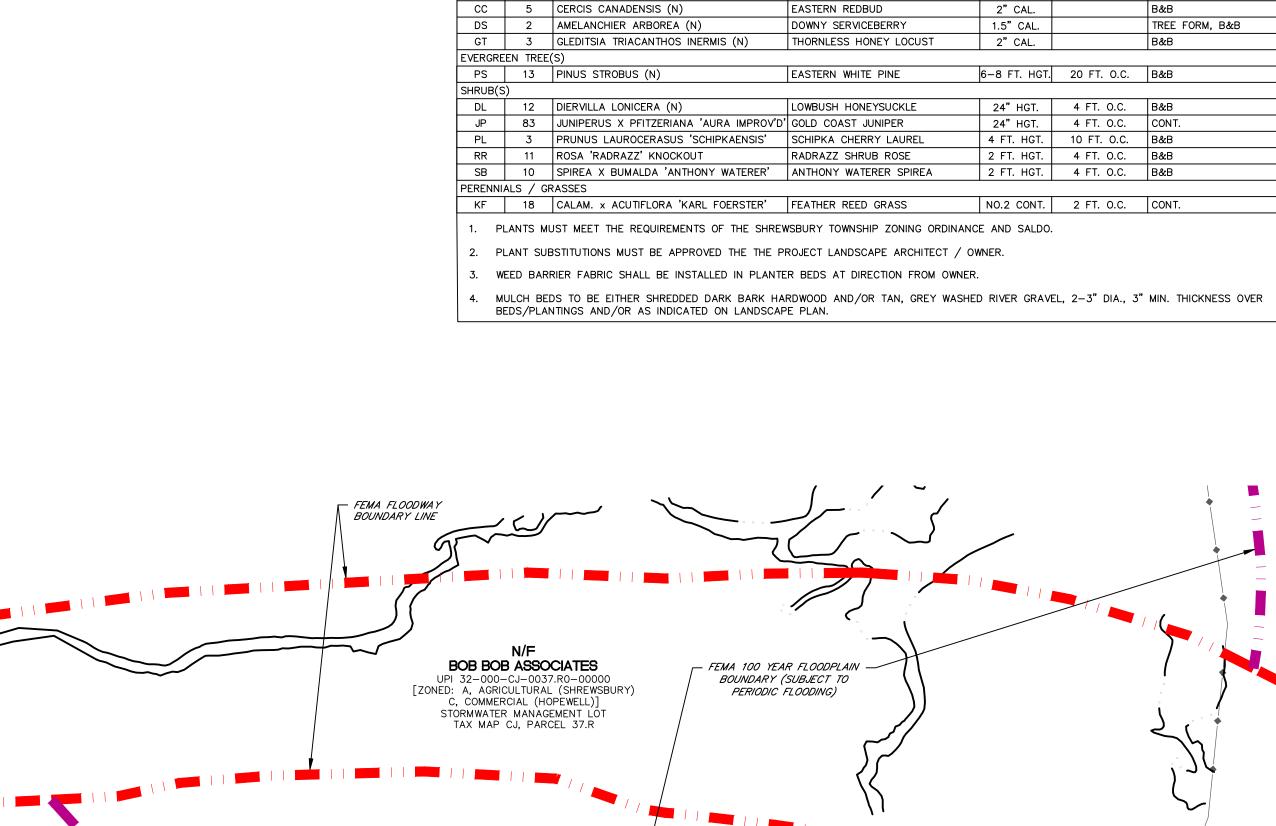
## ERNMX-102-1

	SEEDS AND ERNST SOUTHERN NATIVE SEED EQUAL BY SITE ENGINEER AND COUNTY.	S, MEADVILLE, PA
<u>ITEM</u>	<b>BOTANICAL NAME</b>	MIXTURE(%)
PANICUMN VIRGATUM	SWITCHGRASS	33
FESTUCA RUBRA	CREEPING RED FESCUE	25
LOLIUM MULTIFLORUM	ANNUAL RYEGRASS	18
PHLEUM PRATENSE -	TIMOTHY	16
TRIFOLIUM HYBRIDUM	ALSIKE CLOVER	5
AGROSTIS ALBA	REDTOP —	3

#### SEEDING RATE 40 LB PER ACRE

THIS MIX SHOULD ONLY BE MOWED DURING THE DORMANT SEASON.

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENTS
DECIDUC	US TREE	(S) - (N) DENOTES NATIVE				•
AH	2	CARPINUS CAROLINIANA (N)	AMERICAN HORNBEAM	1.5" CAL.		B&B
AR	3	ACER RUBRUM 'OCTOBER GLORY' (N)	OCTOBER GLORY RED MAPLE	2" CAL.		B&B
СС	5	CERCIS CANADENSIS (N)	EASTERN REDBUD	2" CAL.		B&B
DS	2	AMELANCHIER ARBOREA (N)	DOWNY SERVICEBERRY	1.5" CAL.		TREE FORM, B&B
GT	3	GLEDITSIA TRIACANTHOS INERMIS (N)	THORNLESS HONEY LOCUST	2" CAL.		B&B
EVERGRE	EN TREE	(S)				•
PS	13	PINUS STROBUS (N)	EASTERN WHITE PINE	6-8 FT. HGT.	20 FT. O.C.	B&B
SHRUB(S	S)					•
DL	12	DIERVILLA LONICERA (N)	LOWBUSH HONEYSUCKLE	24" HGT.	4 FT. O.C.	B&B
JP	83	JUNIPERUS X PFITZERIANA 'AURA IMPROV'D'	GOLD COAST JUNIPER	24" HGT.	4 FT. O.C.	CONT.
PL	3	PRUNUS LAUROCERASUS 'SCHIPKAENSIS'	SCHIPKA CHERRY LAUREL	4 FT. HGT.	10 FT. O.C.	B&B
RR	11	ROSA 'RADRAZZ' KNOCKOUT	RADRAZZ SHRUB ROSE	2 FT. HGT.	4 FT. O.C.	B&B
SB	10	SPIREA X BUMALDA 'ANTHONY WATERER'	ANTHONY WATERER SPIREA	2 FT. HGT.	4 FT. O.C.	B&B
PERENNI	IALS / GI	RASSES				•
KF	18	CALAM. x ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	NO.2 CONT.	2 FT. O.C.	CONT.

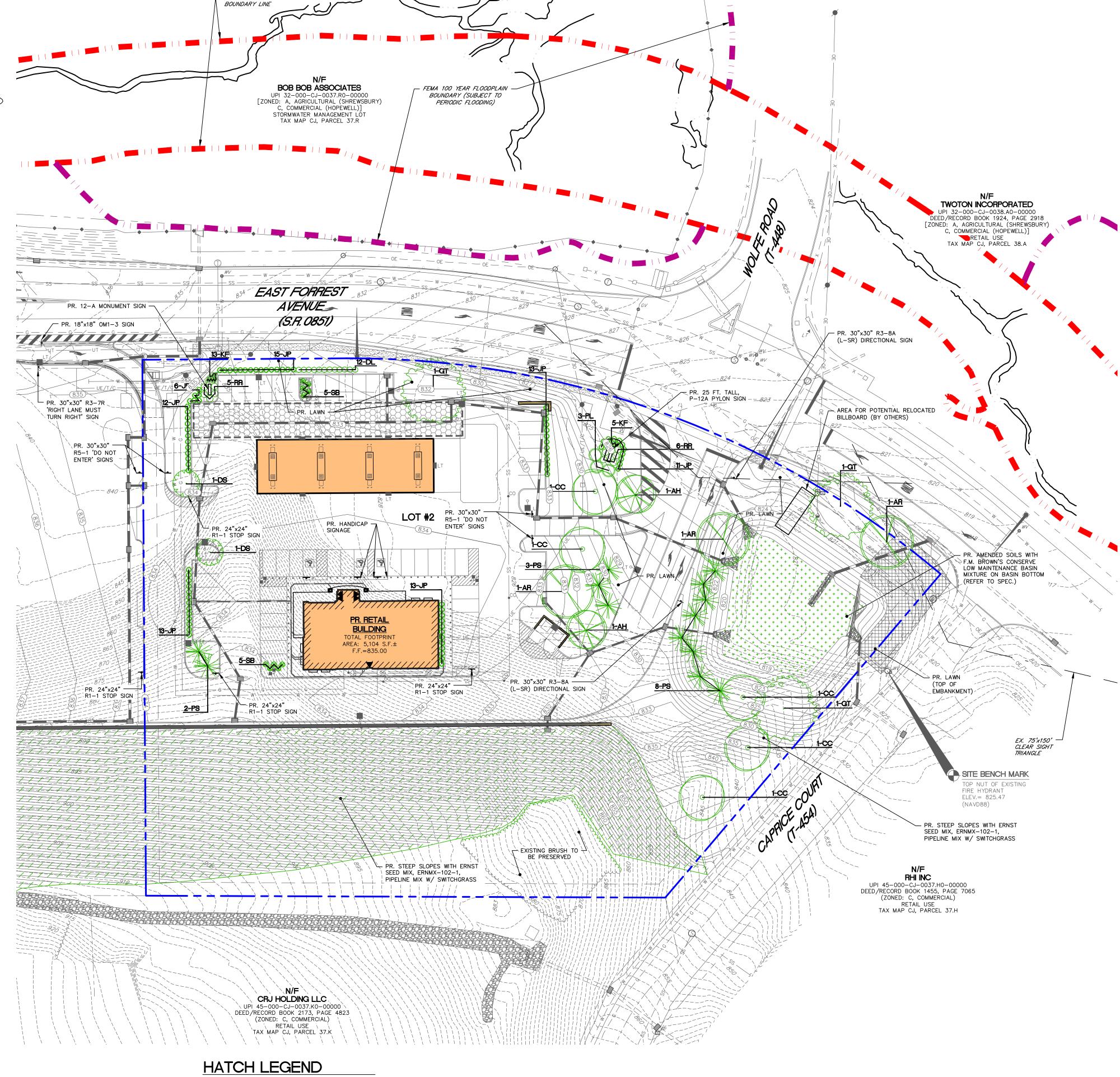


PR. BUILDING

PR. SUBSURFACE INFILTRATION BED

PR. STEEP SLOPE SEED MIX

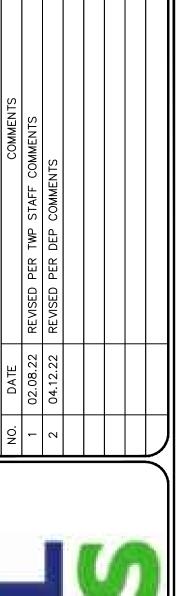
PR. BASIN BOTTOM SEED MIX



GRAPHIC SCALE

( IN FEET )

1 inch = 40 ft.





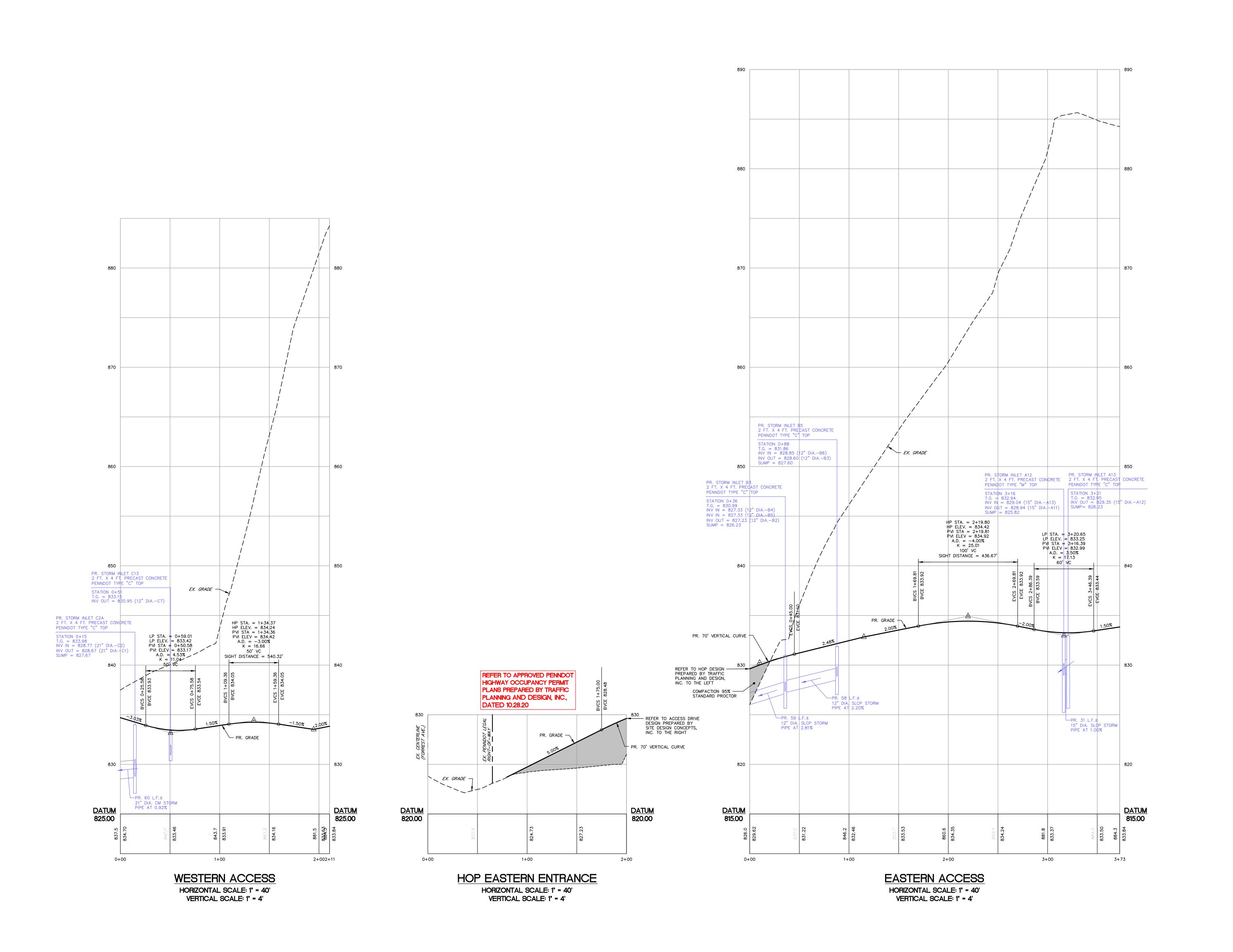
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E ACCESS PROFILES
PROPOSED REDEVELOPMENT

PROF 732 SHREWSBURY T

DRAWN BY

CIF

CHECKED BY

AWA

CONTACT

AWA

DATE

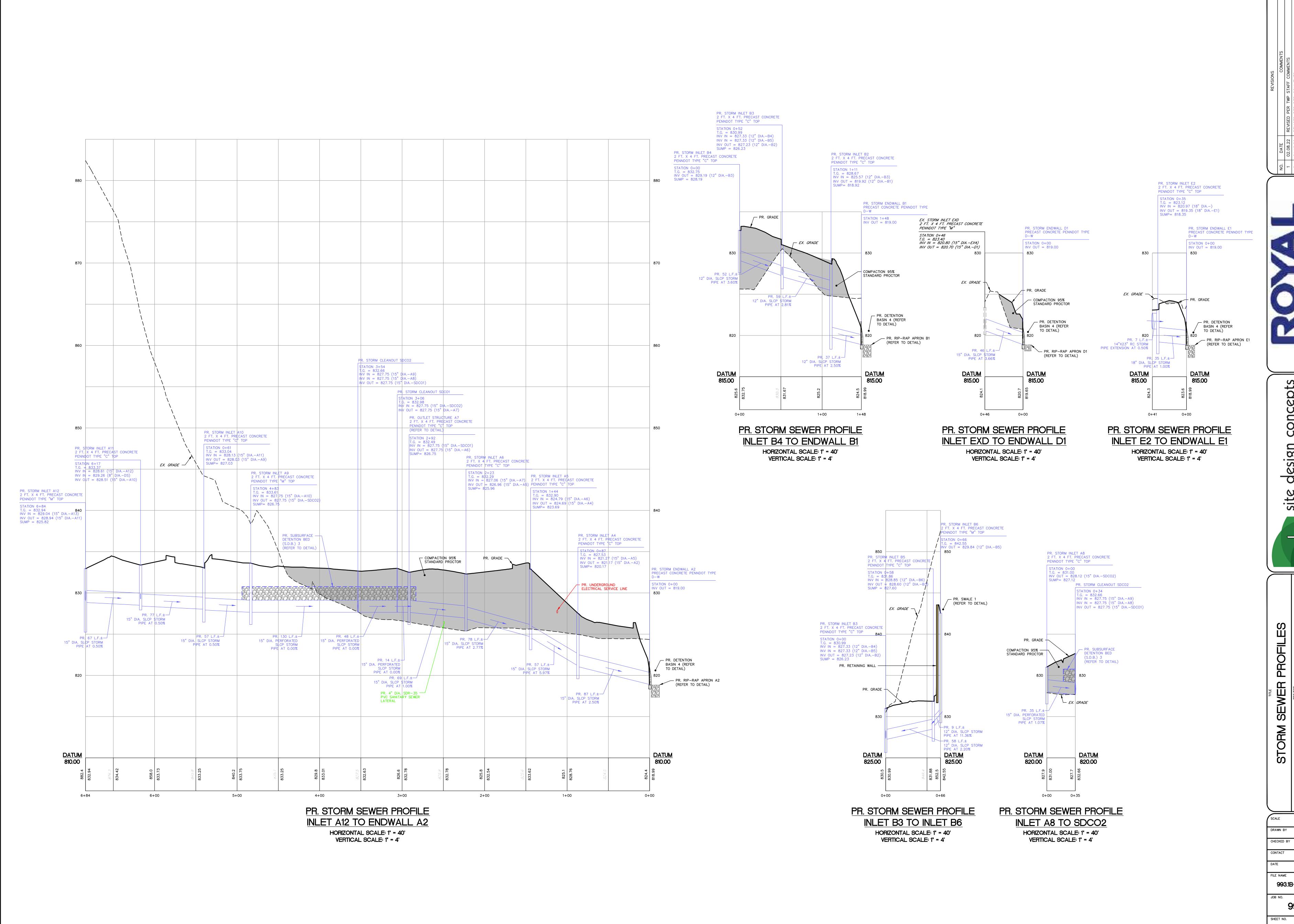
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2Sign concepts
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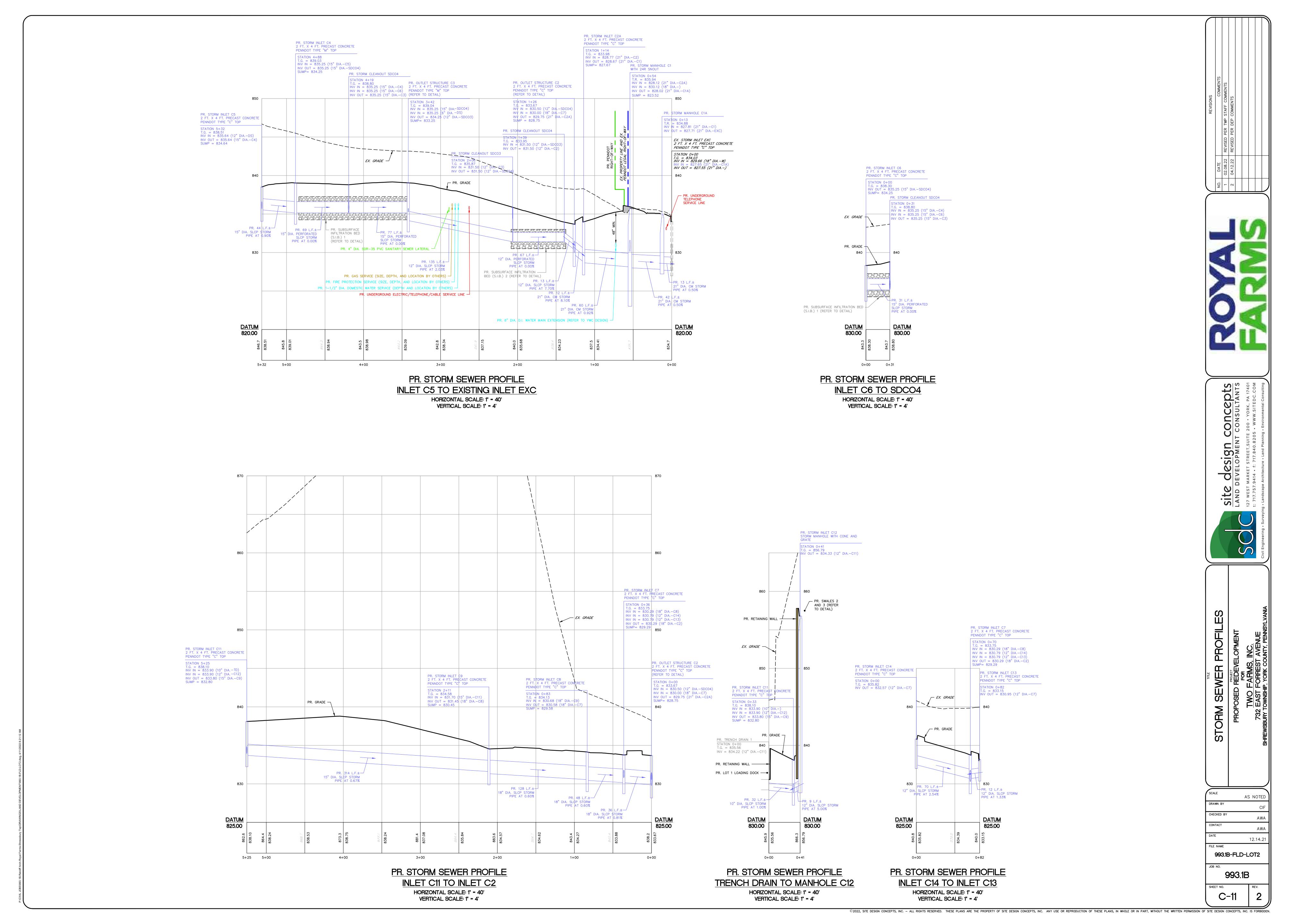
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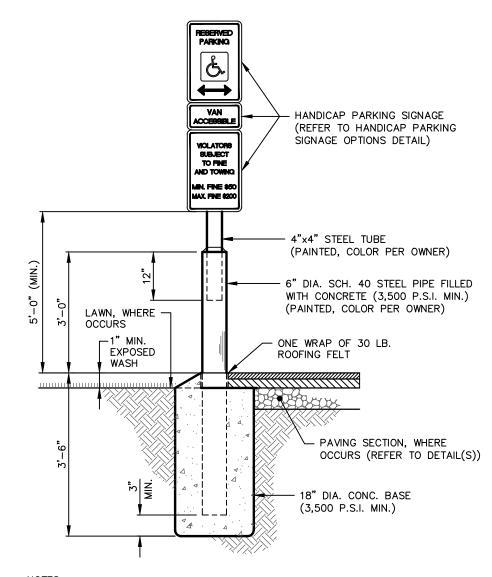


MARKING DETAIL

NO SCALE

1. ALL TRAFFIC ARROWS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS. SURFACES SHALL BE DRY, CLEAN AND FREE OF TRAFFIC. ALL LINES SHALL BE STRAIGHT, TRUE AND NEAT. PAINT SHALL BE APPLIED IN TWO COATS HAVING A FINAL DRY THRICKNESS OF 12 MILS. MINIMUM. 2. LINE PAINTING, AS INDICATED ON DRAWINGS, SHALL BE HIGHWAY APPROVED TYPE, IN ACCORDANCE WITH SECTION 962, OF PENN DOT 408 SPECIFICATIONS. 3. REFER TO SITE PLAN(S) FOR SPECIFIC ARROW PAVEMENT MARKING LOCATIONS AND 4. FOR ONE WAY FLOW, DIRECTIONAL ARROW(S) SHALL BE CENTERED IN CARTWAY/TRAVEL LANE.

#### TYPICAL TWO WAY TRAFFIC FLOW ARROW PAVEMENT MARKING NO SCALE



1. WHERE HANDICAP PARKING IS FACING A BUILDING WALL AND/OR CONCRETE WALK, SIGN MAY BE MOUNTED ON THE BUILDING WALL AT THE PROPER HEIGHT. UPON OWNER APPROVAL. 2. ANY FREESTANDING SIGN IN PARKING LOT SHALL BE MOUNTED AS 3. PROVIDE SIGNAGE ON BOTH SIDES OF POST WHEN REQUIRED. 4. USE EXTREME CARE WHEN INSTALLING SIGNS NEAR/OVER EXISTING 5. PRIOR TO INSTALLATION, CONTRACTOR SHALL CONFIRM THE INTERPRETATION OF THE MUNICIPAL BUILDING INSPECTOR REGARDING A.D.A. ACCESSIBLE PARKING SPACE STRIPING AND SIGNAGE INSTALLATION REQUIREMENTS.

#### TYPICAL HANDICAP PARKING SIGN WITH BOLLARD PROTECTION NO SCALE



**VIOLATORS** 

SUBJECT

TO FINE

**AND TOWING** 

MIN. FINE \$50

12" x 18"

PENNDOT R7-8F

RESERVED PARKING

FINE PLACARD

**RESERVED** PARKING VAN **ACCESSIBLE** 12" x 18"

RESERVED PARKING "VAN ACCESSIBLE" SIGN

**VIOLATORS** SUBJECT TO FINE AND TOWING MIN. FINE \$50 12" x 18"

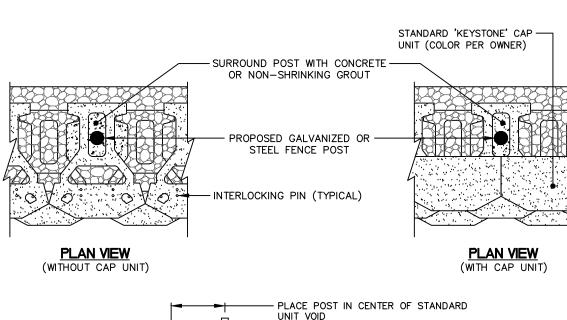
PENNDOT R7-8F RESERVED PARKING FINE PLACARD

MIN. FINE \$50 12" x 18" RESERVED PARKING FINE PLACARD

1. HANDICAP SIGNAGE SHALL BE PROVIDED AND INSTALLED PER PENNDOT (TITLE 67, CH. 212, OFFICIAL TRAFFIC-CONTROL DEVICES) AND/OR MUNICIPAL REQUIREMENTS, AS APPLICABLE. 2. A.D.A. STANDARDS FOR ACCESSIBLE DESIGN, LISTED IN APPENDIX A OF THE TITLE III REGULATIONS, SECTION 4.1.2(5)(B) STATES ONE IN EVERY EIGHT ACCESSIBLE SPACES, BUT NO LESS THAN ONE SHALL BE SERVED BY AN ACCESS AISLE 96" MIN. WIDE AND SHALL BE DESIGNATED "VAN ACCESSIBLE" AS REQUIRED BY 4.6.4. IN THIS CASE A "VAN ACCESSIBLE" SIGN MUST BE PROVIDED IN ADDITION TO A "RESERVED PARKING" SIGN. 3. WHERE HANDICAP PARKING IS FACING A BUILDING WALL AND/OR CONCRETE WALK, SIGN MAY BE MOUNTED ON BLDG. WALL AT PROPER HEIGHT, UPON APPROVAL FROM OWNER.

4. PRIOR TO INSTALLATION, CONTRACTOR SHALL CONFIRM THE INTERPRETATION OF THE MUNICIPAL BUILDING INSPECTOR REGARDING A.D.A. ACCESSIBLE PARKING SPACE STRIPING AND SIGNAGE INSTALLATION REQUIREMENTS. 5. WHERE NON-"VAN ACCESSIBLE" HANDICAP PARKING SPACES ARE REQUIRED, USE SIGN OPTION 'A'. WHERE HANDICAP PARKING SPACES ARE RESERVED FOR "VAN ACCESSIBLE" USE, OPTION 'B' OR 'C'. IN PROJECTS UNDER PENNDOT JURISDICTION, USE OPTION 'C' FOR SIGNING "VAN ACCESSIBLE" HANDICAP PARKING SPACES.

TYPICAL HANDICAP PARKING SIGNAGE OPTIONS



- PR. FENCE, INSTALLED PER MANUFACTURER'S SPECS. FOR FOOTING DEPTHS. REFER TO SITE PLAN FOR LOCATIONS OF REQUIRED FENCING PROPOSED FENCING SHALL MEET ALL APPLICABLE MUNICIPAL REQUIREMENTS. (REFER TO SITE PLANS) STANDARD 'KEYSTONE' CAP ----UNIT (COLOR PER OWNER) 2 FT. MIN. DEPTH -REDIRECT GRID AROUND PIPE AS REQUIRED IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS FIBERGLASS PIN RETAINED BACKFILL (TYPICAL) COMPACTED REINFORCED BACKFILL MIN. HORIZONTÀL PER 8" VERTICAL) GEOGRID REINFORCEMENT STANDARD ATTACHED TO INTERLOCKING 'KEYSTONE' CONCRETE FIBERGLASS PINS (LENGTH, MODULE (COLOR PER LAYERS VARIES W/ WALL FINISH GRADE (PAVEMENT OR LAWN AS APPLICABLE) PR. STORM SEWER PIPE, WHERE OCCURS (SEE SITE UTILITY PLAN AND STORM PROFILES FOR LOCATION AND X0202020

- UNDERDRAIN (CONNECT DIRECTLY TO PROPOSED STORM INLET OR DRAINAGE FACILITY OR DAYLIGHT IF CONNECTION TO INLET OR DRAINAGE

WALL DESIGN AND INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS. S CONTRACTOR SHALL PROVIDE DETAILED ENGINEERED DRAWINGS OF PROPOSED WALL INSTALLATIONS STAMPED BY A REGISTERED 2. CONTRACTOR SHALL COORDINATE INSTALLATION OF FENCE FOOTINGS, LIGHT STANDARDS, OR OTHER STRUCTURES LOCATED AT THE BACK OF THE WALL W/ RETAINING WALL GEOGRID PLACEMENT PRIOR TO CONSTRUCTION.

CROSS-SECTION

COMPACTED GRANULAR DRAINAGE ----

ENTER

STONE (PA NO. 2A STONE; 6" MIN. AT BASE, 12" MIN. BEHIND WALL)

## TYPICAL 'KEYSTONE' RETAINING WALL DETAIL WITH HORIZONTAL BACKFILL

STANDARD PENNDOT 30"x30" R5-1

PENNDOT SPECIFICATIONS) - SIGNS TO BE FASTENED TO

TYPE B OR APPROVED EQUAL

WITH BREAKAWAY BASE, PER

- BREAKAWAY BASE TO BE

OF 24" DEEP

1. ANY FREESTANDING SIGN IN PARKING LOT SHALL BE MOUNTED AS SHOWN.

TYPICAL DO NOT ENTER SIGN

WITH STEEL POST DETAIL

NO SCALE G-106

2. REFER TO SITE PLAN FOR LOCATION AND TYPE OF SIGN.

DRIVEN INTO THE EXISTING

PAVEMENT/GROUND A MIN.

STANDARD PENNDOT 24"x24" R1.1 STOP SIGN WITH HIGH INTENSITY SHEETING

SIGNS TO BE FASTENED TO

TYPE B OR APPROVED EQUAL

DRIVEN INTO THE EXISTING

PAVEMENT/GROUND A MIN.

WITH BREAKAWAY BASE, PER

PENNDOT STANDARDS

BREAKAWAY BASE TO BE

OF 24" DEEP

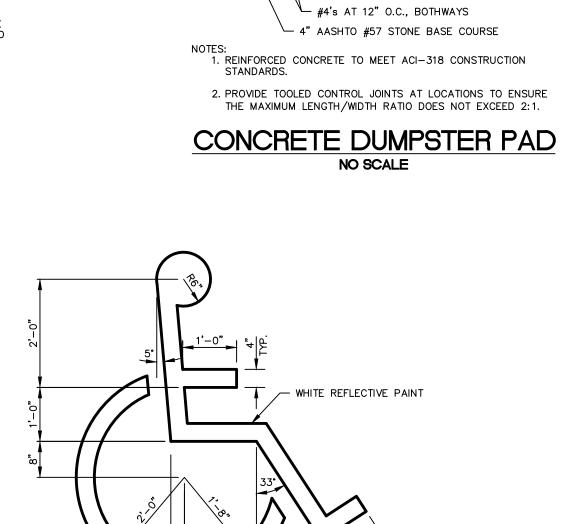
POST PER PENNDOT STANDARDS

(MOUNT AS PER PENNDOT SPECIFICATIONS)

PENNDOT STANDARDS

POST PER PENNDOT STANDARDS

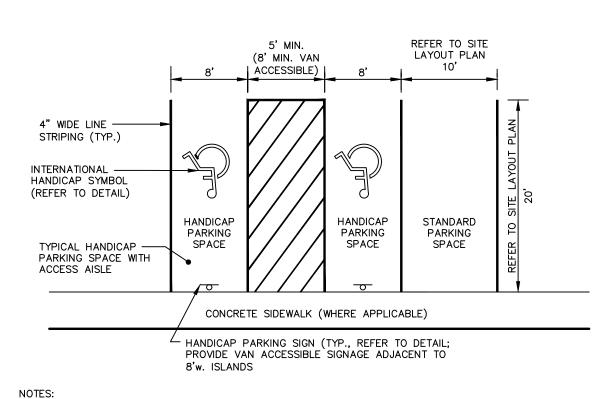
DO NOT ENTER SIGN (MOUNT AS PER



PARKING SPACE NOTES:
1. REFER TO SITE PLAN FOR SYMBOL LOCATIONS. 2. PRIOR TO INSTALLATION, CONTRACTOR SHALL CONFIRM THE INTERPRETATION

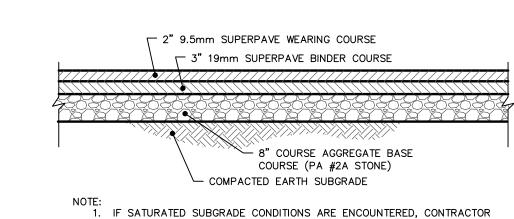
#### INTERNATIONAL HANDICAP PAINTED PARKING SPACE SYMBOL NO SCALE

OF THE MUNICIPAL BUILDING INSPECTOR REGARDING A.D.A. ACCESSIBLE PARKING SPACE STRIPING AND SIGNAGE INSTALLATION REQUIREMENTS.

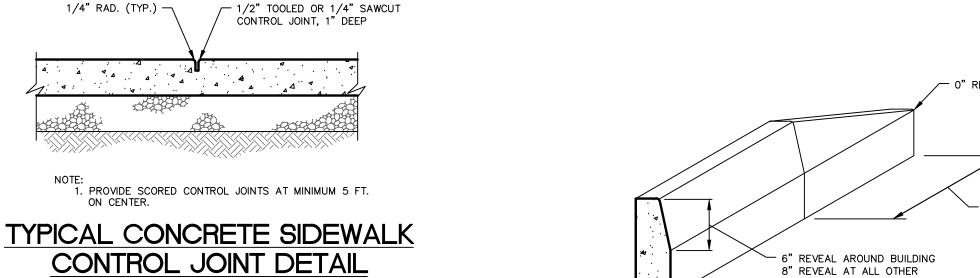


- 1. A.D.A. ACCESSIBLE VEHICLE STANDING (PARKING) SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS. 2. LINE WIDTH SHALL BE 4" UNLESS INDICATED OTHERWISE. COLOR SHALL BE WHITE, SURFACES SHALL BE DRY, CLEAN AND FREE OF TRAFFIC. ALL LINES SHALL BE STRAIGHT, TRUE AND NEAT. PAINT SHALL BE APPLIED IN TWO COATS HAVING A FINAL DRY THICKNESS OF 12 MILS. MINIMUM. 3. LINE PAINTING, AS INDICATED ON DRAWINGS, SHALL BE HIGHWAY APPROVED TYPE, IN ACCORDANCE WITH
- UNIFORM ACCESSIBILITY STANDARDS AND DETAIL PROVIDED BY THE ENGINEER. 5. A.D.A. STANDARDS FOR ACCESSIBLE DESIGN, LISTED IN APPENDIX A OF THE TITLE III REGULATIONS, SECTION 4.1.2(5)(B) STATES ONE IN EVERY EIGHT ACCESSIBLE SPACES, BUT NO LESS THAN ONE SHALL BE SERVED BY AN ACCESS AISLE 96" MIN. WIDE AND SHALL BE DESIGNATED "VAN ACCESSIBLE" AS REQUIRED BY 4.6.4. IN THIS CASE A "VAN ACCESSIBLE" SIGN MUST BE PROVIDED IN ADDITION TO A
- 6. PRIOR TO INSTALLATION, CONTRACTOR SHALL CONFIRM THE INTERPRETATION OF THE MUNICIPAL BUILDING INSPECTOR REGARDING A.D.A. ACCESSIBLE PARKING SPACE STRIPING AND SIGNAGE INSTALLATION

TYPICAL HANDICAP PARKING SPACE STRIPING NO SCALE



SHOULD NOTIFY ENGINEER IMMEDIATELY. TYPICAL NORMAL DUTY BITUMINOUS PAVING SECTION



- TOOLED RADIUS EDGE (TYP.)

1/4" BELOW SURFACE

1. PROVIDE EXPANSION JOINTS AT MINIMUM 20' ON CENTER,

OR AS SPECIFIED OTHERWISE ON THE PLANS/DETAILS.

NO. 4 REBAR SPACED AT 24" ON CENTER (MAXIMUM) — ONE END TO BE RENDERED BONDLESS.

TYPICAL CONCRETE

**EXPANSION JOINT DETAIL** 

NO SCALE

NO SCALE

SEE SITE PLAN FOR FOR EXACT CONFIGURATION

- COMPACTED EARTH SUBGRADE

- 8" THK. CONCRETE PAD,

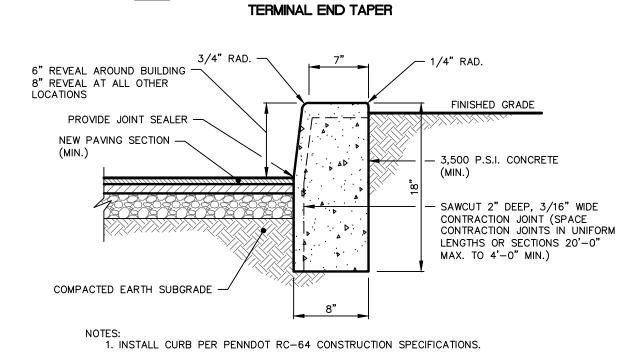
3,500 P.S.I. (MIN.),

BROOM FINISH

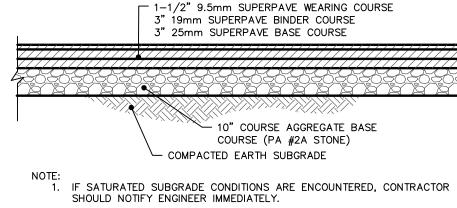
DISCONTINUE WIRE MESH

AT EXPANSION JOINTS

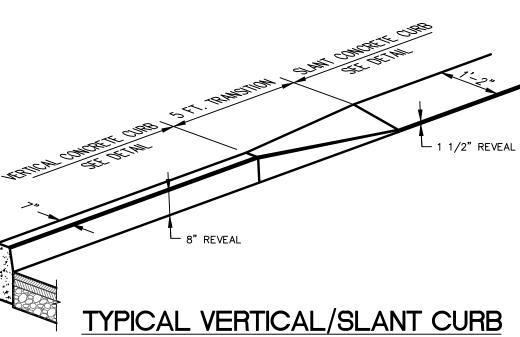
/ 1/2" EXPANSION JOINT MATERIAL



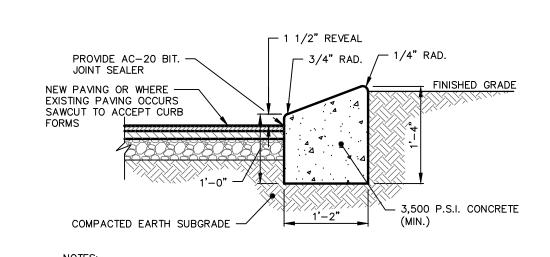
2. ALL MATERIAL SHALL COMPLY WITH PENNDOT 408 SPECIFICATIONS, CURRENT EDITION. TYPICAL 18" VERTICAL CONCRETE CURB WITH TERMINAL END TAPER DETAIL



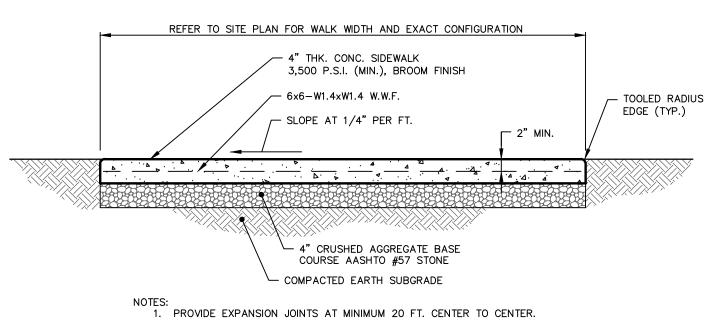
TYPICAL ACCESS DRIVE PAVING SECTION NO SCALE



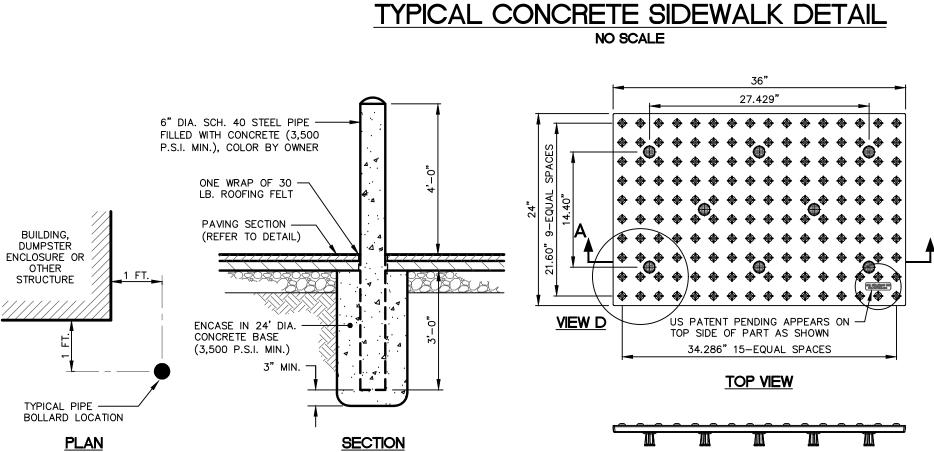
TRANSITION DETAIL NO SCALE

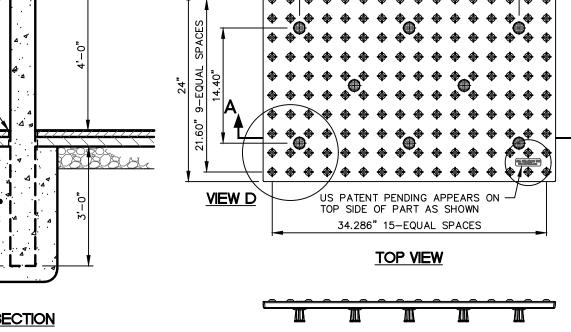


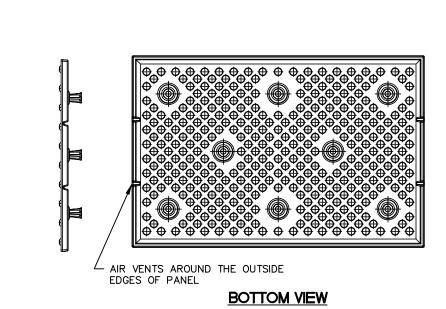
- WHERE NEW CURB IS TO BE INSTALLED WITHIN EXISTING PAVING, PROVIDE NEW BASE AND PAVING TO MATCH EXISTING. 2. INSTALL 3/4" PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES, THE BEGINNING & END OF ALL CURVES AND AT THE END OF THE WORK DAY. PROVIDE SAWCUT CONTRACTION JOINTS AT 20'-0" C.C. MAX
- 3. PROVIDE SMOOTH TRANSITION FROM SLANT CURB TO PENNDOT TYPE 'C' INLET TOP UNITS ON STORM CATCH BASINS. 4. ALL CONCRETE SHALL COMPLY WITH PENNDOT 408 SPECIFICATIONS, CURRENT
- TYPICAL SLANT CONCRETE CURB



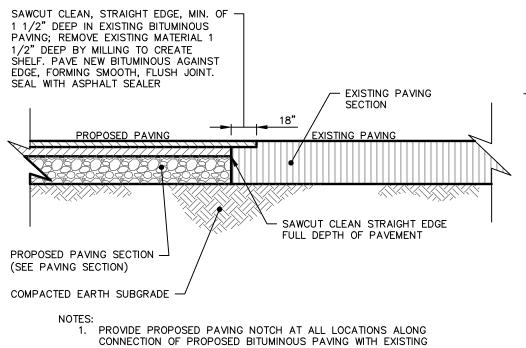
2. PROVIDE SCORED CONTROL JOINTS AT MINIMUM 5 FT. CENTER TO CENTER. 3. ALL CONCRETE IS TO MEET ACI-318 CONSTRUCTION STANDARDS. 4. PROVIDE TOOLED RADIUS EDGES ON ALL EXPOSED EDGES/CORNERS.







TYPICAL PIPE BOLLARD DETAIL



2. CONTRACTOR TO VERIFY THAT SUFFICIENT PAVEMENT DEPTH OF EXISTING ASPHALT UNDERLINES BITUMINOUS OVERLAP. PROPOSED BITUMINOUS PAVING SAWCUT AND MILLING AT JOINT WITH EXISTING PAVING

NO SCALE

.090 DEG. POINTS 0.45 DIA. TOP OF DOMES TYP. .045 HIGH, TYP. CAP COVER VIEW B-1

SIDE VIEW

1. DETECTABLE WARNING SURFACES SHALL COMPLY WITH ADA REGULATIONS. IT SHALL BE

TYPICAL DETECTABLE WARNING SURFACE

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MADE OF GLASS AND CARBON COMPOSITE MATERIAL, HOMOGENEOUS THROUGHOUT AND SECURED WITH 1/2"x1 1/2" STAINLESS STEEL BOLTS. BOLT ANCHORS SHALL BE CORROSION RESISTANT. THE DETECTABLE WARNING SURFACE SHALL BE REPLACEABLE, SUCH AS MANUFACTURED BY ADA SOLUTIONS. NO SCALE

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FIELD DOT 7 DOME LAYOUT

**RESERVED PARKING**  $\longleftrightarrow$ 12" x 18" PENNDOT R7-8 RESERVED PARKING SIGN VAN ACCESSIBLE 12" x 6" PENNDOT R7-8P

"VAN ACCESSIBLE" SIGN **VIOLATORS** SUBJECT TO FINE AND TOWING

NOTES:
1. ANY FREESTANDING SIGN IN PARKING LOT SHALL BE MOUNTED AS SHOWN.

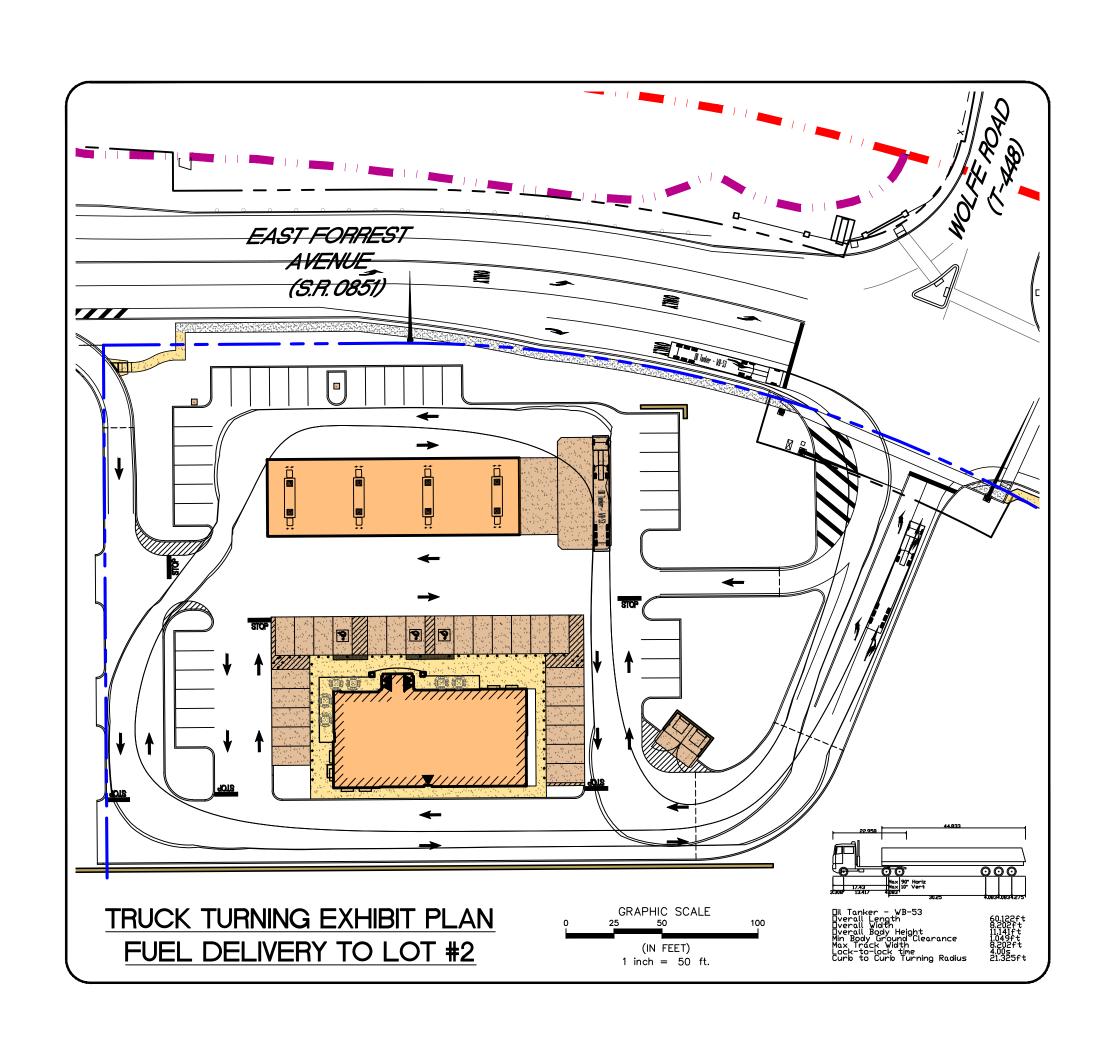
TYPICAL STOP SIGN WITH STEEL POST DETAIL

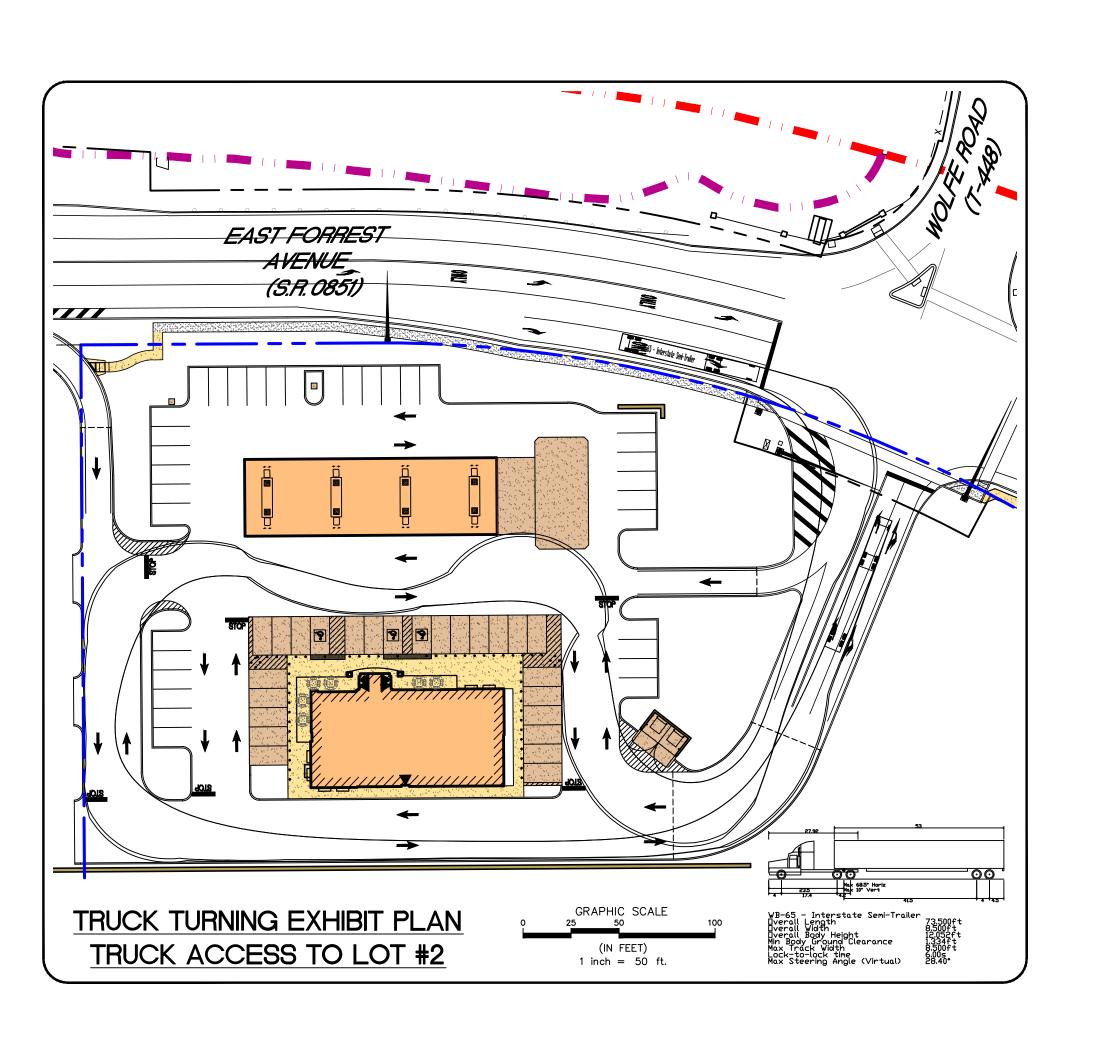
NO SCALE

2. REFER TO SITE PLAN FOR LOCATION AND TYPE OF SIGN.

PENNDOT SPECIFICATIONS.

4. STANDARD HANDICAP SYMBOL SHALL BE PAINTED WHITE ON BLUE PAINTED CIRCLE AS REQUIRED BY "RESERVED PARKING" SIGN.







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TURNING MOVEMENT EXHIBITS

PROPOSED REDEVELOPME

SCALE

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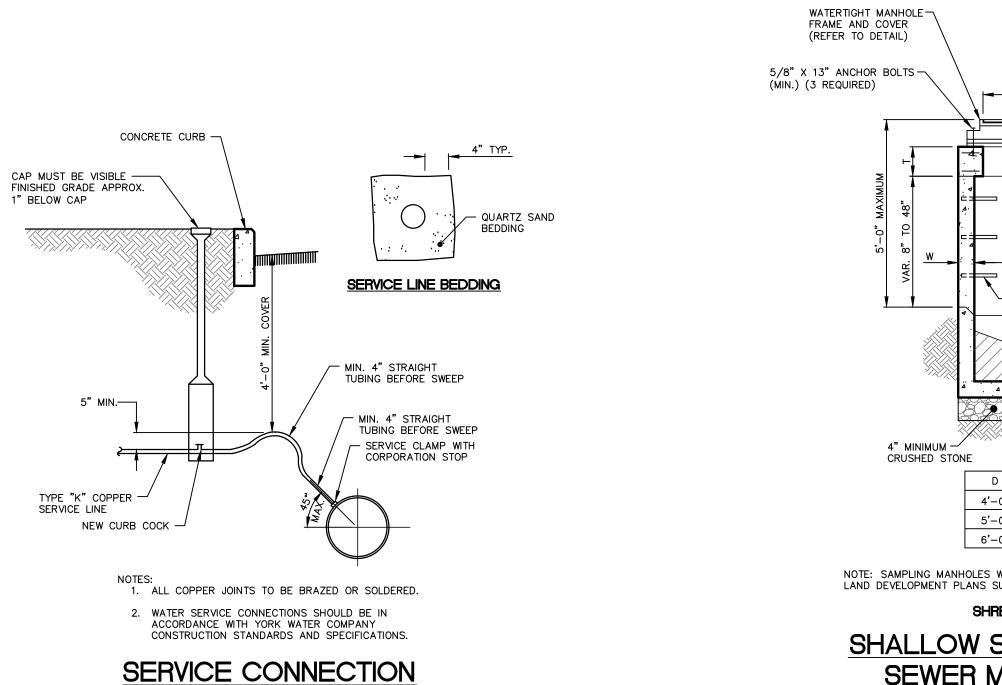
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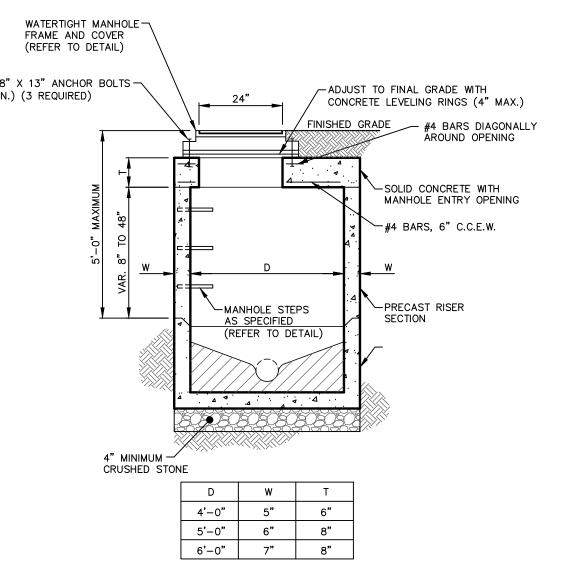
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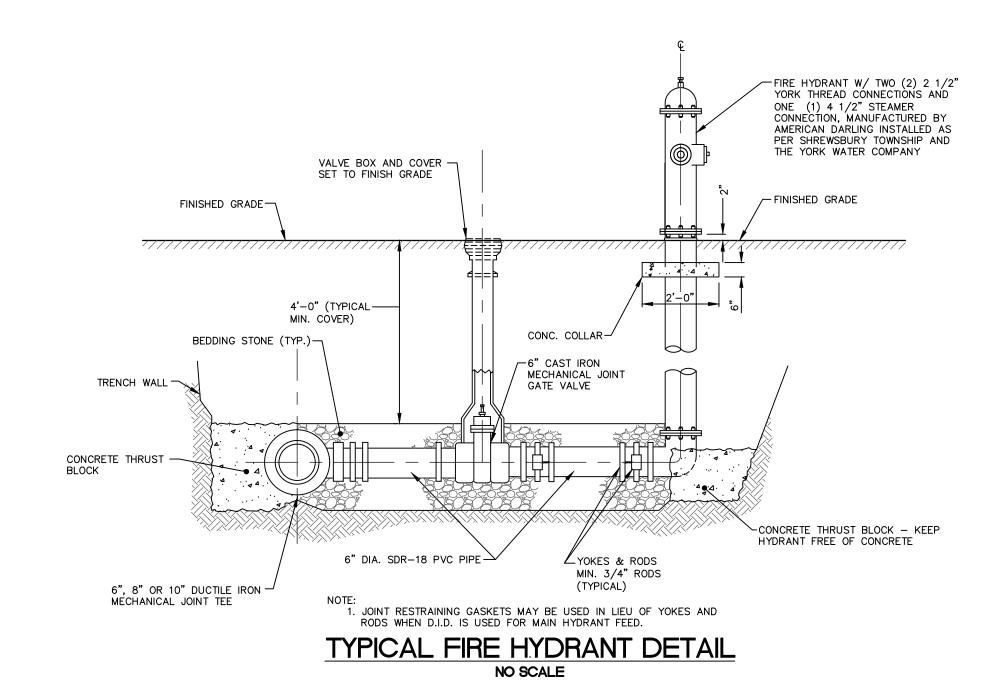


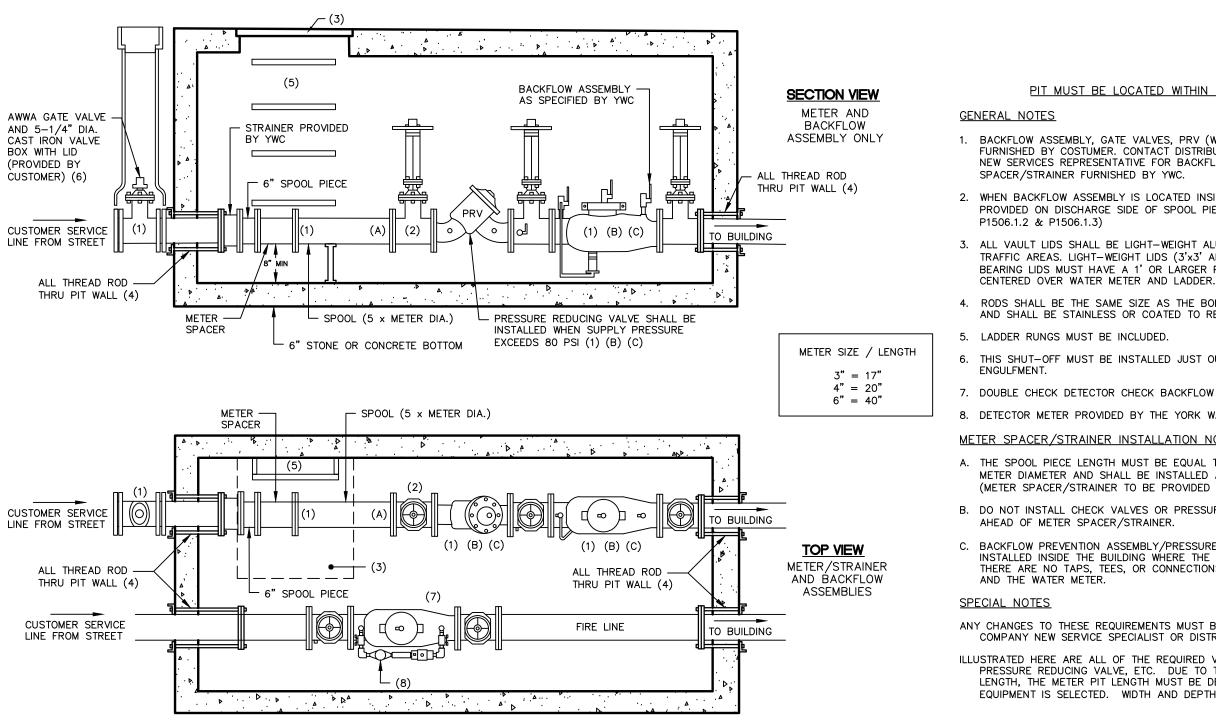
NO SCALE



NOTE: SAMPLING MANHOLES WILL BE DESIGNED AND INSTALLED WITH THE FINAL LAND DEVELOPMENT PLANS SUBMITTED BY FUTURE USERS OF LOTS 1 AND 2. SHREWSBURY BOROUGH

SHALLOW SAMPLING SANITARY SEWER MANHOLE DETAIL NO SCALE





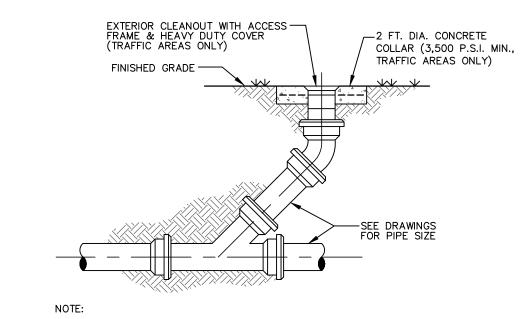
PIT INSTALLATION OF 3" AND LARGER METERED SERVICE LINE, FIRELINE, AND BACKFLOW PREVENTION ASSEMBLIES (RADIO FREQUENCY READ) YORK WATER COMPANY TYPICAL METER PIT DETAIL

## PIT MUST BE LOCATED WITHIN 10' OF YWC CURB STOP

- GENERAL NOTES
- 1. BACKFLOW ASSEMBLY, GATE VALVES, PRV (WHEN NEEDED), AND SPOOL PIECES FURNISHED BY COSTUMER. CONTACT DISTRIBUTION SERVICES REPRESENTATIVE OR NEW SERVICES REPRESENTATIVE FOR BACKFLOW ASSEMBLY REQUIRED. METER SPACER/STRAINER FURNISHED BY YWC.
- . WHEN BACKFLOW ASSEMBLY IS LOCATED INSIDE BUILDING, A GATE VALVE SHALL BE PROVIDED ON DISCHARGE SIDE OF SPOOL PIECE AFTER THE WATER METER. (BOCA
- 3. ALL VAULT LIDS SHALL BE LIGHT-WEIGHT ALUMINUM, EXCEPT FOR VAULT LIDS IN TRAFFIC AREAS. LIGHT-WEIGHT LIDS (3'x3' ALUM.) MUST HAVE HANDLE. TRAFFIC BEARING LIDS MUST HAVE A 1' OR LARGER PICK HOLE. ALL LIDS SHALL BE
- 4. RODS SHALL BE THE SAME SIZE AS THE BOLT HOLES IN THE NEAREST FLANGE AND SHALL BE STAINLESS OR COATED TO REDUCE CORROSION.
- 5. LADDER RUNGS MUST BE INCLUDED. THIS SHUT-OFF MUST BE INSTALLED JUST OUTSIDE METER VAULT TO ELIMINATE
- 7. DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTION ASSEMBLY.
- 8. DETECTOR METER PROVIDED BY THE YORK WATER COMPANY.
- METER SPACER/STRAINER INSTALLATION NOTES A. THE SPOOL PIECE LENGTH MUST BE EQUAL TO OR GREATER THAN 5 TIMES THE METER DIAMETER AND SHALL BE INSTALLED AFTER THE METER SPACER/STRAINER
- (METER SPACER/STRAINER TO BE PROVIDED BY YWC.). B. DO NOT INSTALL CHECK VALVES OR PRESSURE REDUCING VALVES UPSTREAM OR
- C. BACKFLOW PREVENTION ASSEMBLY/PRESSURE REDUCING VALVES SHOULD BE INSTALLED INSIDE THE BUILDING WHERE THE SERVICE FIRST ENTERS, PROVIDED THERE ARE NO TAPS, TEES, OR CONNECTIONS OF ANY KIND BETWEEN THIS POINT AND THE WATER METER.
- ANY CHANGES TO THESE REQUIREMENTS MUST BE APPROVED BY THE YORK WATER COMPANY NEW SERVICE SPECIALIST OR DISTRIBUTION SERVICE REPRESENTATIVE ILLUSTRATED HERE ARE ALL OF THE REQUIRED VALVES, BACKFLOW PREVENTION DEVICES, PRESSURE REDUCING VALVE, ETC. DUE TO THE LARGE VARIATION IN EQUIPMENT LENGTH, THE METER PIT LENGTH MUST BE DETERMINED AFTER THE REQUIRED EQUIPMENT IS SELECTED. WIDTH AND DEPTH ARE SIX (6) FEET MINIMUM.

## **GENERAL NOTES**

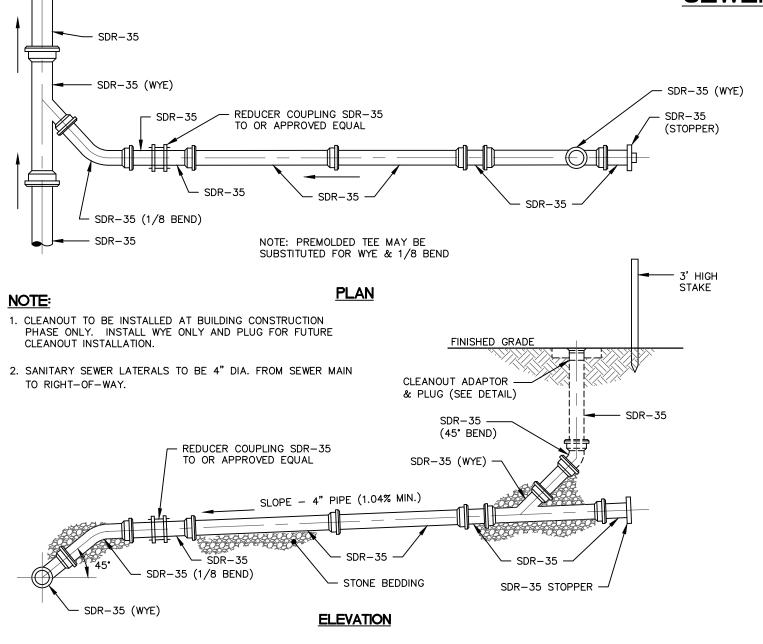
- 1. SITE CONTRACTOR SHALL PROVIDE DETAILED AS-BUILT INFORMATION TO PROJECT ENGINEER FOR ALL PROPOSED SANITARY SEWER, WATER AND STORMWATER MANAGEMENT, CONVEYANCE AND B.M.P. STRUCTURES / FACILITIES (PUBLIC AND PRIVATE) FOR PROJECT ENGINEER'S USE IN PREPARATION OF RECORD DRAWINGS.
- 2. COMPACTION TESTING IS REQUIRED AT THE BASE OF ALL STORM, SANITARY SEWER AND WATER SYSTEM STRUCTURES AND PIPES THAT ARE LOCATED IN FILL AREAS, PRIOR TO INSTALLATION OF SAID FACILITIES.
- 3. REFER TO PROJECT NOTES ON DWG. SHT. 2 AND THE SITE LAYOUT, UTILITY AND GRADING PLANS, AND SITE DETAILS FOR ADDITIONAL REQUIREMENTS.
- 4. REFER TO PENNDOT HIGHWAY OCCUPANCY PERMIT PLANS FOR ADDITIONAL INFORMATION, REGARDING PROPOSED IMPROVEMENTS.



1. INSTALL SANITARY SEWER CLEANOUTS IN ACCORDANCE WITH ALL APPLICABLE REGULATORY AGENCY/MUNICIPALITY/AUTHORITY CONSTRUCTION

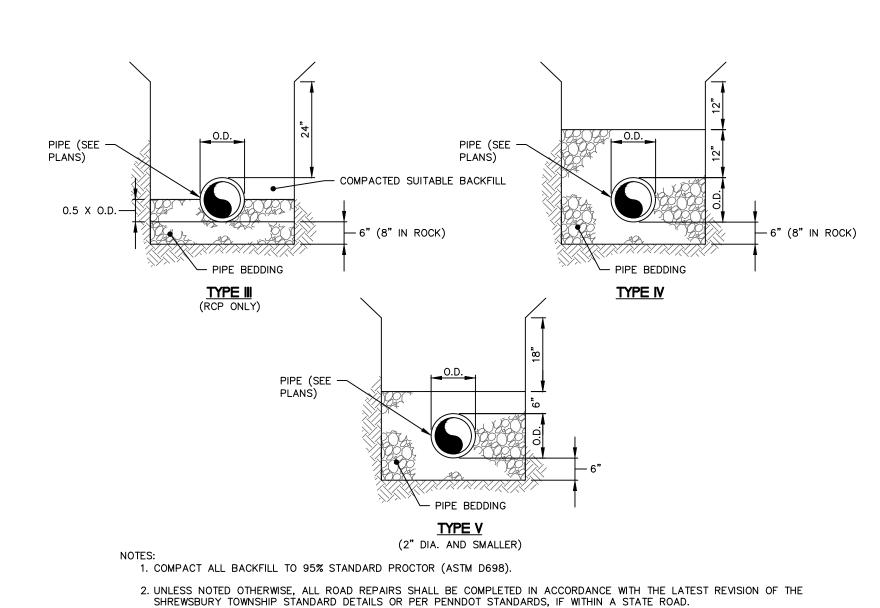
TYPICAL EXTERIOR SANITARY SEWER CLEANOUT DETAIL

NO SCALE



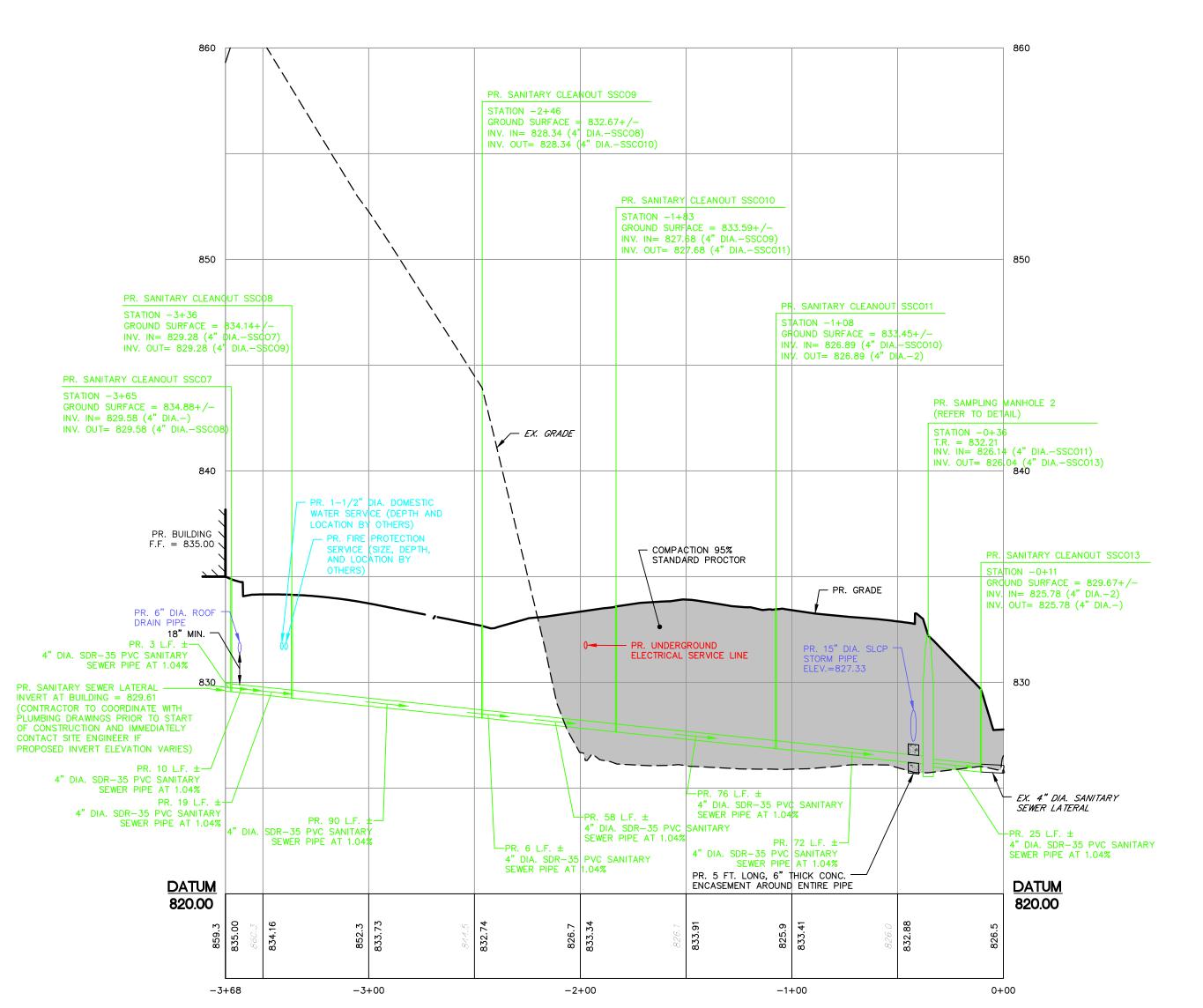


TYPICAL SANITARY SEWER LATERAL CONNECTION
NO SCALE



TYPICAL SANITARY SEWER PIPE TRENCH BEDDING AND BACKFILLING DETAIL

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PR. LOT 2 SANITARY SEWER LATERAL PROFILE HORIZONTAL SCALE: 1" = 40" VERTICAL SCALE: 1" = 4"

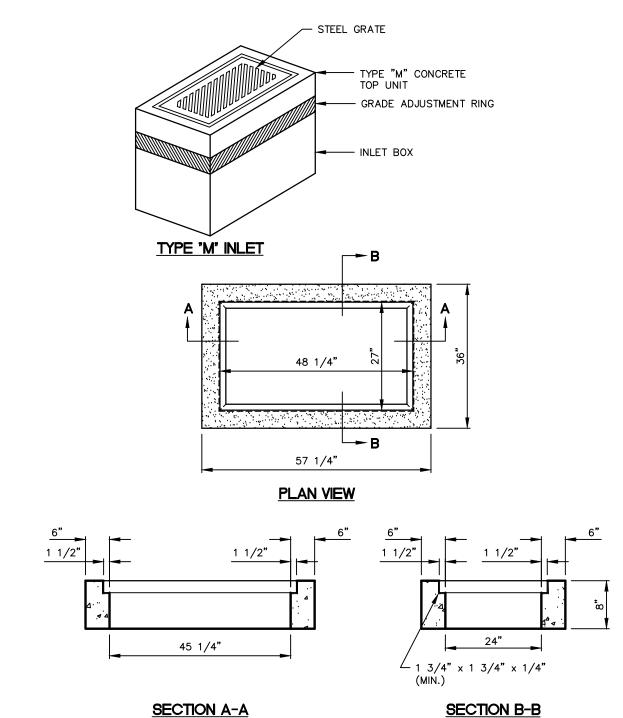


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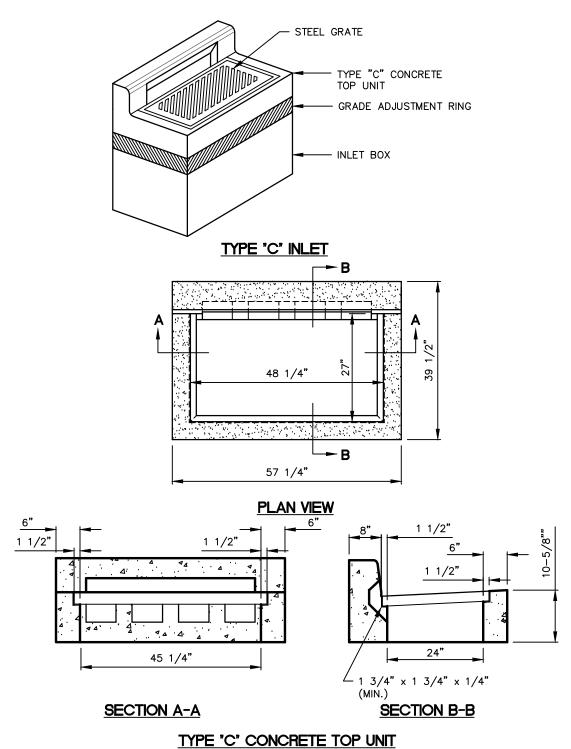
NOTES:
1. CUT HOLE IN EXISTING INLET WITH CORING MACHINE. 2. INSTALL RESILIENT GASKET TYPE SEAL PER ASTM C-923. 3. CAULK ANNULAR SPACE WITH PREFORMED PLASTIC SEALING COMPOUND.

#### CONNECTION OF PROPOSED STORM SEWER TO EXISTING INLET DETAIL NO SCALE



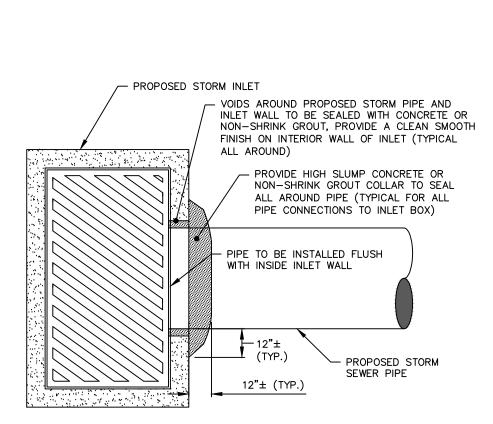
TYPE "M" CONCRETE TOP UNIT STRUCTURE SHALL BE CONSTRUCTED PER PENNDOT RC-34 STANDARDS FOR ROADWAY CONSTRUCTION

## PENNDOT 2'x4' TYPE "M" STORM INLET

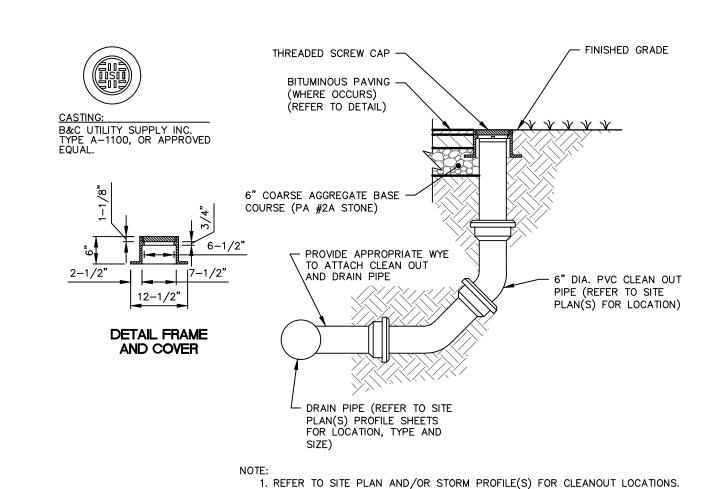


1. STRUCTURE SHALL BE CONSTRUCTED PER PENNDOT RC-34 STANDARDS FOR ROADWAY PENNDOT 2'x4' TYPE "C" STORM INLET

NO SCALE



TYPICAL GROUTING/ENCASEMENT AT STORM INLET/BOX



TYPICAL EXTERIOR STORM SEWER CLEANOUT

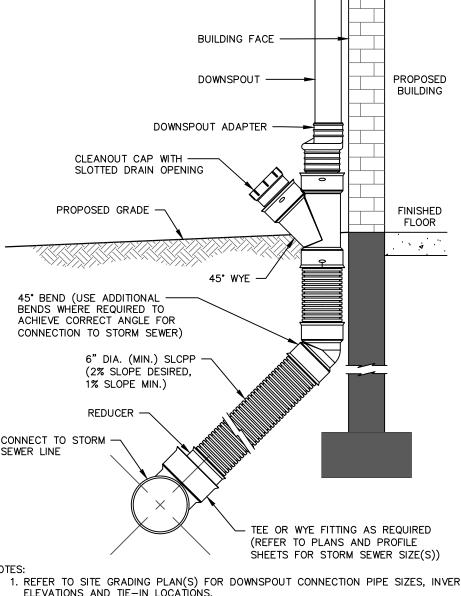
## - OIL AND DEBRIS INLET WATER QUALITY TABLE INLET FILTERS AND SUMP NUMBER SUMP - TYPICAL PRECAST CONC. 2'x4' STORM ON BOTTOM - PROVIDE 1" DIAMETER WEEP HOLE AT BOTTOM OF STRUCTURE -SUMP DEPTH VARIES. REFER TO STORM SEWER

**SECTION VIEW** 

1. CHECK SEDIMENT DEPTH AND NOTE THE SURFACE POLLUTANTS IN THE STRUCTURE. THE POLLUTANTS COLLECTED IN THE SUMP WILL CONSIST O FLOATABLE DEBRIS AND OILS ON THE SURFACE OF THE CAPTURED WATER, AND GRIT AND SEDIMENTS ON THE BOTTOM OF THE STRUCTURE.

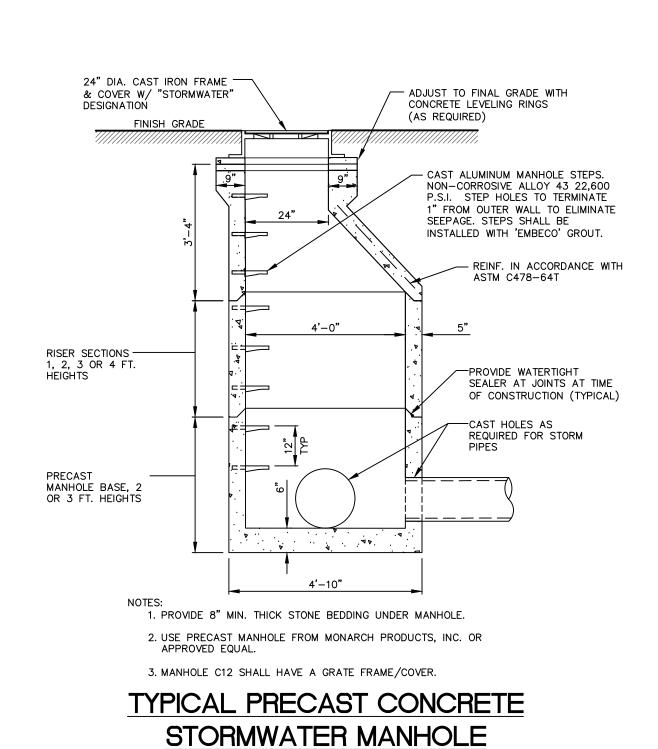
- 2. IT IS BEST TO SCHEDULE MAINTENANCE BASED ON THE SOLIDS COLLECTED IN THE SUMP. OPTIMALLY, THE STRUCTURE SHOULD BE CLEANED WHEN THE SUMP IS HALF FULL (E.G. WHEN 6 INCHES OF MATERIAL COLLECTS IN A 12 INCH SUMP, CLEAN IT OUT).
- 3. STRUCTURE SHOULD ALSO BE CLEANED IF A SPILL OR OTHER INCIDENT CAUSES A LARGER THAN NORMAL ACCUMULATION OF POLLUTANTS IN A
- 4. MAINTENANCE IS BEST DONE WITH A VACUUM TRUCK.
- 5. ALL COLLECTED WASTES SHALL BE DISPOSED OFF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS (NOT ON-SITE).

## TYPICAL INLET SUMP DETAIL

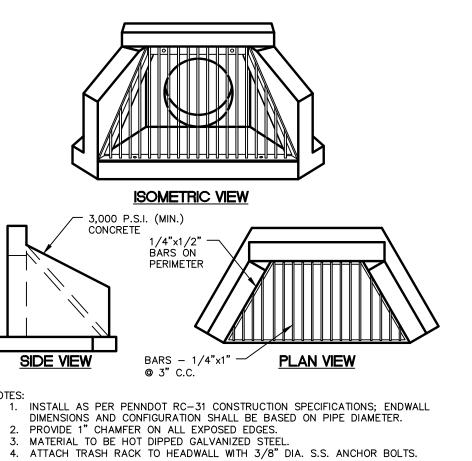


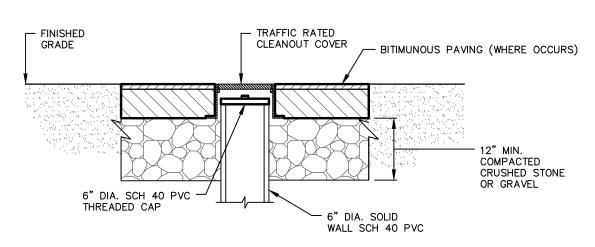
1. REFER TO SITE GRADING PLAN(S) FOR DOWNSPOUT CONNECTION PIPE SIZES, INVERT ELEVATIONS AND TIE-IN LOCATIONS 2. IF BUILDING DOWNSPOUT LOCATIONS ARE NOT SHOWN ON THE SITE PLANS, CONTRACTOR SHALL DETERMINE THE LOCATIONS BASED UPON THE ARCHITECTURAL PLANS AND VERIFY THE FINAL PIPE SIZES AND CONNECTION POINTS WITH THE SITE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.

# TO PROPOSED STORM SEWER

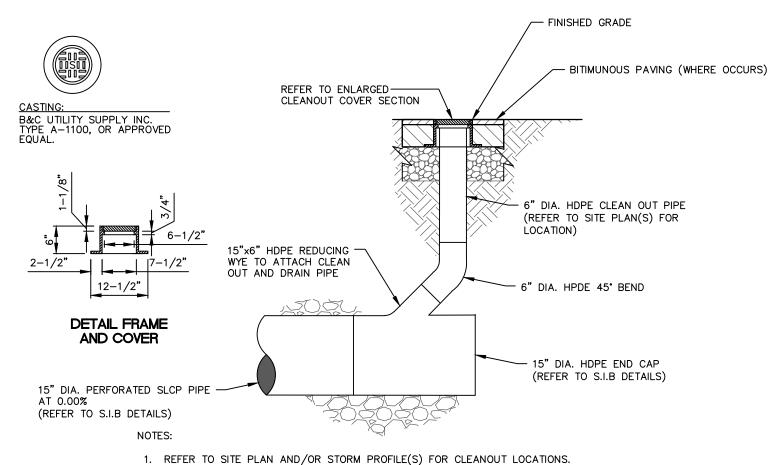


NO SCALE





#### **ENLARGED STORM CLEANOUT COVER DETAIL** NO SCALE



## TYPICAL SUBSURFACE INFILTRATION BED CLEANOUT

NO SCALE

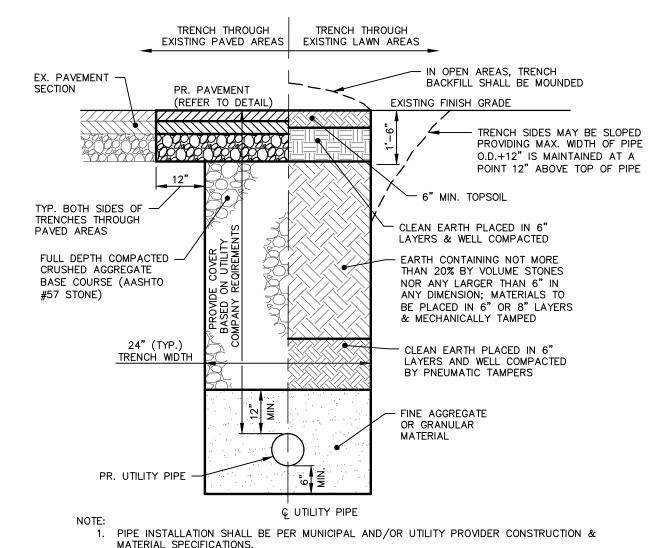
## STORMWATER MANAGEMENT FACILITIES OPERATION AND MAINTENANCE NOTES

- 1. THE OWNER OF THE PROPERTY ON WHICH THE STORMWATER MANAGEMENT FACILITIES (DETENTION BASIN SUBSURFACE INFILTRATION BEDS AND SUBSURFACE DETENTION BEDS) ARE CONSTRUCTED SHALL MAINTAIN THE BMPS IN GOOD CONDITION AND PROMPTLY REPAIR AND RESTORE ALL GRADE SURFACES, DRAINS, INLET STRUCTURES, VEGETATION AND OTHER PROTECTIVE DEVICES. SUCH REPAIRS OR RESTORATIONS, AND MAINTÉNANCE SHALL BE IN ACCORDANCE WITH APPROVED PLANS.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR AND MAINTENANCE OF THE BMPS UNTIL RELEASED FROM THIS PROJECT. THE LAND OWNERS/RESPONSIBLE PARTY (AS DEFINED BELOW) SHALL MAINTAIN THE BMPS THEREAFTER. 3. UPON RELEASE OF THE CONTRACTOR FROM REPAIR AND MAINTENANCE OF THE BMPS, THE OWNER, HIS HEIRS OR ASSIGNS SHALL BE RESPONSIBLE FOR REPAIRING ANY STRUCTURAL DAMAGES OR FAILURES TO THE BMPS WHICH MAY OCCUR AS A RESULT OF NEGLIGENCE, ACCIDENT OR MISUSE. IN THE EVENT OF STRUCTURAL DAMAGE, OWNER SHALL BE RESPONSIBLE TO MAKE NECESSARY REPAIRS AS QUICKLY AS POSSIBLE, BUT, IN ANY CASE, WITHIN A PERIOD NOT EXCEEDING 60 DAYS.
- 4. MAINTAIN AREAS DRAINING TO THE BMPS TO PREVENT SOIL WASHOUT INTO THE FACILITIES. IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. IMMEDIATELY REMOVE ALL TRASH OR OTHER LITTER. 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC WITHIN THE AREAS OF INFILTRATION TO ONLY THAT IS
- NECESSARY FOR MOWING OR BMP REPAIRS. 6. PROHIBIT STORAGE OF SOIL, MULCH OR HAZARDOUS MATERIALS ON THE BMPS OR WITHIN AREAS THAT DRAIN TO
- 7. THE OWNER SHALL NOT CONSTRUCT, PLANT, OR MAINTAIN ANY STRUCTURES, FENCES, TREES, SHRUBBERY, ETC. WITHIN THE SANITARY SEWER, STORM WATER OR UTILITY RIGHTS-OF-WAY/EASEMENTS, TO ENSURE A FREE AND
- CLEAR ACCESS TO ALL FACILITIES. BITUMINOUS PAVING, COMMINGLING OF SANITARY SEWER, STORM WATER, OR UTILITIES, OR CHANGE IN GROUND CONTOURS WITHIN THE RIGHTS-OF-WAY/EASEMENTS MAY BE PERMITTED ONLY WITH WRITTEN CONSENT OF THE MUNICIPALITY.
- 8. ALL INSPECTION RECORDS SHALL BE MAINTAINED BY THE LAND OWNER FOR NOT LESS THAN FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO THE MUNICIPALITY WITHIN FIVE (5) CALENDAR DAYS, OF RECEIPT OF WRITTEN REQUEST BY THE MUNICIPALITY.

#### SOIL EROSION AND SEDIMENTATION CONTROL STABILIZATION SPECIFICATIONS

9. RESPONSIBLE PARTY: TWO FARMS, INC., HEIRS OR ASSIGNS.

- 1. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION
- PENDING FUTURE EARTH DISTURBANCE ACTIVITIES. 2. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS
- 3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN DRAWINGS IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. TOPSOIL STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 2:1 OR FLATTER.
- 4. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES 6 TO 12 INCHES ON COMPACTED SOILS PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 6 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING.
- 5. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHENEVER POSSIBLE PRIOR TO SEEDING.
- 6. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- 7. AN EROSION CONTROL BLANKET MUST BE INSTALLED ON ALL DISTURBED SLOPES 3:1 OR GREATER, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50 FT. OF A SURFACE WATER.
- 8. STRAW AND HAY MULCH SHOULD BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO CRIMP THE STRAW OR HAY INTO THE SOIL. THIS METHOD IS LIMITED TO SLOPES NO STEEPER THAN 3:1. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR. (NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED). A WOOD CELLULOSE FIBER MAY BE SPREAD OVER THE STRAW MULCH AT A RATE OF 1,500
- 9. TRACKING SLOPES IS DONE BY RUNNING TRACKED MACHINERY ACROSS AND ALONG THE SLOPE, LEAVING TREAD MARKS PARALLEL TO THE CONTOUR (NOTE: IF A BULLDOZER IS USED, THE BLADE SHALL BE UP). CARE SHOULD BE EXERCISED ON SOILS HAVING A HIGH CLAY CONTENT TO AVOID OVER-COMPACTION.
- 10. REPLACE TOPSOIL AND SPREAD OVER THE PREPARED SUBGRADE, TO A MINIMUM TOPSOIL DEPTH OF SIX (6) INCHES ON ALL DISTURBED LAND AREAS. DO NOT PLACE TOPSOIL WHEN SUBGRADE IS FROZEN, EXCESSIVELY WET, OR EXTREMELY DRY. DO NOT HANDLE TOPSOIL WHEN FROZEN OR MUDDY. ALL ROCKS OVER 1" IN DIA. AND OTHER DEBRIS SHALL BE REMOVED FROM TOPSOIL.



TYPICAL UTILITY TRENCH BACKFILLING AND PERMANENT RESTORATION DETAIL

#### INSPECTION / MAINTENANCE / REPAIRS FOR BMP FACILITIES

#### STORMWATER MANAGEMENT BMP'S SHALL BE INSPECTED BY THE LANDOWNER OR THE OWNER'S DESIGNEE ACCORDING TO THE FOLLOWING LIST OF MINIMUM FREQUENCIES:

1. AT LEAST FOUR TIMES EACH YEAR. 2. DURING OR IMMEDIATELY AFTER THE CESSATION OF A STORM EVENT EXCEEDING 1 INCH OF RAINFALL. · ALL WASTE AND MATERIALS DEPOSITED IN AND REMOVED FROM POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM)

BMP FACILITIES AND FROM IMPERVIOUS AREAS (EX. SWEEPING OF STREETS AND PARKING LOTS) DURING OPERATION AND MAINTENANCE SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENTS SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE. **DETENTION BASINS** 

#### MAINTENANCE & INSPECTION

- INSPECTION SHALL INCLUDE DETENTION BASIN MEADOW OR GRASS AREAS, OUTLET CONTROL STRUCTURE, INLET STRUCTURES, AND AREAS DRAINING TO BASINS. · IF FOUND DURING INSPECTIONS, REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM DETENTION BASIN MEADOW AND
- GRASS AREAS, INLET STRUCTURES AND AREAS DRAINING TO BASINS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR • DURING INSPECTIONS AFTER RAIN EVENTS, INSPECT DETENTION BASIN MEADOW OR GRASS AREAS AND INLETS TO
- DETERMINE IF THE FACILITIES DRAIN BETWEEN 24 AND 72 HOURS. MAINTAIN DETENTION BASIN MEADOW AREAS IN GOOD CONDITION (I.E. UNIFORM PERENNIAL VEGETATIVE COVERAGE). IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING OF BASIN MEADOW AREAS TO ONCE EACH
- SPRING AND ONCE EACH FALL, DURING DRY PERIODS GREATER THAN 72 HOURS AFTER STORM/RAINFALL EVENTS. MAINTAIN DETENTION BASIN GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. >75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE). IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING TO DRY PERIODS
- GREATER THAN 72 HOURS AFTER STORM/RAINFALL EVENTS. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON DETENTION AREAS TO ONLY THAT NECESSARY FOR MOWING OR
- PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON ANY AREA THAT DRAINS TO DETENTION BASINS. REPAIR OR REPLACEMENT - DETENTION BASIN
- IF OUTLET STRUCTURE IS DAMAGED OR WORN IN ANY WAY THAT ALTERS THE INTENDED FUNCTIONALITY, REPAIR OR REPLACE AS NECESSARY TO RETURN STRUCTURE TO FUNCTIONING ORDER INCLUDING WEIR PLATE, SEALS, AND GRATES.

## SUBSURFACE DETENTION BEDS

#### MAINTENANCE & INSPECTION • INSPECTION SHALL INCLUDE SUBSURFACE DETENTION BED MEADOW OR GRASS AREAS, OUTLET CONTROL STRUCTURE, INLET

- STRUCTURES, AND AREAS DRAINING TO BEDS.

   IF FOUND DURING INSPECTIONS, REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE DETENTION BED MEADOW AND GRASS AREAS, INLET STRUCTURES AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED
- DURING INSPECTIONS AFTER RAIN EVENTS, INSPECT SUBSURFACE DETENTION BED MEADOW OR GRASS AREAS AND INLETS TO DETERMINE IF THE FACILITIES DRAIN BETWEEN 24 AND 72 HOURS. MAINTAIN SUBSURFACE DETENTION BED MEADOW AREAS IN GOOD CONDITION (I.E. UNIFORM PERENNIAL VEGETATIVE COVERAGE). IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING OF BED MEADOW AREAS TO
- ONCE EACH SPRING AND ONCE EACH FALL, DURING DRY PERIODS GREATER THAN 72 HOURS AFTER STORM/RAINFALL • MAINTAIN SUBSURFACE DETENTION BED GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. >75% UNIFORM
- PERENNIAL 3"-6" GRASS COVERAGE). IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING TO DRY PERIODS GREATER THAN 72 HOURS AFTER STORM/RAINFALL EVENTS. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON DETENTION AREAS TO ONLY THAT NECESSARY FOR MOWING OR
- PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON ANY AREA THAT DRAINS TO SUBSURFACE DETENTION BEDS. REPAIR OR REPLACEMENT - SUBSURFACE DETENTION BEDS
- IF OUTLET STRUCTURE IS DAMAGED OR WORN IN ANY WAY THAT ALTERS THE INTENDED FUNCTIONALITY, REPAIR OR REPLACE AS NECESSARY TO RETURN STRUCTURE TO FUNCTIONING ORDER INCLUDING WIER PLATE, SEALS, AND GRATES. • IF CHAMBER SYSTEM BECOMES DAMAGED OR WORN, NEW PARTS SHALL BE OBTAINED FROM THE ORIGINAL SYSTEM

## INLET FILTER BASKETS (MANUFACTURE'S SPECIFICATION)

(NOVEMBER, MARCH AND JULY).

RECOMMENDED FREQUENCY OF SERVICE: DRAINAGE PROTECTION SYSTEMS (DPS) RECOMMENDS THAT INSTALLED FLO-GARD+PLUS® CATCH BASIN INSERT FILTERS BE SERVICED ON A RECURRING BASIS. IT IS RECOMMENDED THAT EACH INSTALLATION BE SERVICED A MINIMUM OF THREE TIMES PER YEAR, WITH A CHANGE OF FILTER MEDIUM ONCE PER YEAR.

## RECOMMENDED TIMING OF SERVICE:

- DPS GUIDELINES FOR THE TIMING OF SERVICE ARE AS FOLLOWS: 1. FOR AREAS SUBJECT TO YEAR-ROUND RAINFALL: ON A RECURRING BASIS, THREE TIMES PER YEAR
- 2. FOR AREAS WITH WINTER SNOW AND SUMMER RAIN: PRIOR TO AND JUST AFTER THE SNOW SEASON AND DURING THE SUMMER RAIN SEASON.
- 3. FOR AREAS WITH EXCESSIVE DEBRIS AND SEDIMENT, UPON DISCOVERING FULL OR CLOGGED FILTERS INSPECTIONS SHOULD BE DONE MONTHLY AND SERVICE PERFORMED WHEN FILTER IS TWO-THIRDS (2/3) OF THE WAY

## SERVICE PROCEDURES:

- 1. THE CATCH BASIN GRATE SHALL BE REMOVED AND SET TO ONE SIDE. THE CATCH BASIN SHALL BE VISUALLY INSPECTED FOR DEFECTS AND POSSIBLE ILLEGAL DUMPING. IF ILLEGAL DUMPING HAS
- OCCURRED, THE PROPER AUTHORITIES AND PROPERTY OWNER REPRESENTATIVE SHALL BE NOTIFIED AS SOON AS PRACTICABLE 2. USING AN INDUSTRIAL VACUUM, THE COLLECTED MATERIALS SHALL BE REMOVED FROM THE LINER. (NOTE: DPS USES A
- TRUCK-MOUNTED VACUUM FOR SERVICING FLO-GARD+PLUS® CATCH BASIN INSERTS.) 3. WHEN ALL OF THE COLLECTED MATERIALS HAVE BEEN REMOVED. THE FILTER MEDIUM POUCHES SHALL BE REMOVED BY UNSNAPPING THE TETHER FROM THE D-RING AND SET TO ONE SIDE. THE FILTER LINER, GASKETS, STAINLESS STEEL FRAME AND MOUNTING BRACKETS, ETC. SHALL BE INSPECTED FOR CONTINUED SERVICEABILITY. MINOR DAMAGE OR DEFECTS FOUND SHALL BE CORRECTED ON-THE-SPOT AND A NOTATION MADE ON THE MAINTENANCE RECORD. MORE
- EXTENSIVE DEFICIENCIES THAT AFFECT THE EFFICIENCY OF THE FILTER (TORN LINER, ETC.), IF APPROVED BY THE CUSTOMER REPRESENTATIVE, WILL BE CORRECTED AND AN INVOICE SUBMITTED TO THE REPRESENTATIVE ALONG WITH 4. THE FILTER MEDIUM POUCHES SHALL BE INSPECTED FOR DEFECTS AND CONTINUED SERVICEABILITY AND REPLACED AS NECESSARY AND THE POUCH TETHERS RE-ATTACHED TO THE LINER'S D-RING. SEE BELOW.

#### 5. THE GRATE SHALL BE REINSTALLED. REPLACEMENT AND DISPOSAL OF EXPOSED FILTER MEDIUM AND COLLECTED DEBRIS:

DURING THE APPROPRIATE SERVICE, THE FILTER MEDIUM POUCHES WILL BE REPLACED WITH NEW POUCHES. ONCE THE EXPOSED POUCHES AND DEBRIS HAVE BEEN REMOVED, IT MUST DISPOSE OF IT IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCY REQUIREMENTS.

#### INLET SUMPS MAINTENANCE & INSPECTION

- INLETS SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION. POST-CONSTRUCTION, THEY SHALL BE EMPTIED WHEN OVER HALF FULL OF SEDIMENT (AND TRASH) AND CLEANED AT LEAST TWICE A YEAR.
- THEY SHALL BE INSPECTED AFTER RUNOFF EVENTS OF 1 INCH OR GREATER. . CHECKING SEDIMENT DEPTH AND NOTING THE SURFACE POLLUTANTS IN THE STRUCTURE WILL BE HELPFUL IN PLANNING MAINTENANCE. THE POLLUTANTS COLLECTED IN STRUCTURES WILL CONSIST OF GRIT AND SEDIMENT ON THE BOTTOM OF • IT IS BEST TO SCHEDULE MAINTENANCE BASED ON THE SOLIDS COLLECTED IN THE SUMP. OPTIMALLY, THE STRUCTURE SHOULD BE CLEANED WHEN THE SUMP IS HALF FULL (e.g. WHEN 6 INCHES OF MATERIAL COLLECTS IN A 12 INCH SUMP,
- STRUCTURES SHOULD ALSO BE CLEANED IF A SPILL OR OTHER INCIDENT CAUSES A LARGER THAN NORMAL ACCUMULATION OF POLLUTANTS IN A STRUCTURE.

#### MAINTENANCE IS BEST DONE WITH A VACUUM TRUCK. ALL COLLECTED WASTES SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL AGENCY

## PERMANENT VEGETATED SWALES AND DIVERSION BERMS

## MAINTENANCE & INSPECTION

- INSPECTION SHALL INCLUDE SWALE BOTTOM AND SIDE SLOPE GRASS AREAS. • IF FOUND DURING INSPECTIONS, REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SWALE. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS. MAINTAIN SWALE GRASS AREAS IN GOOD CONDITION (I.E. UNIFORM PERENNIAL VEGETATIVE COVERAGE). IMMEDIATELY
- STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING OF SWALE GRASS AREAS TO ONCE EACH SPRING AND ONCE EACH FALL, DURING DRY PERIODS GREATER THAN 72 HOURS AFTER STORM/RAINFALL EVENTS. · SWALES SHOULD BE KEPT FREE OF ALL WEEDY, BRUSHY, OR WOODY GROWTH.
- PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON ANY AREA THAT DRAINS TO SWALE AND SURFACE WATERS.

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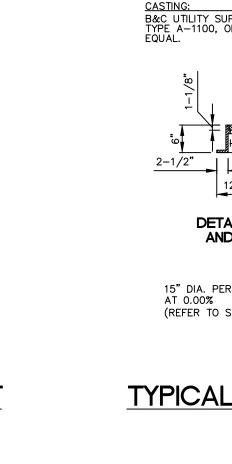
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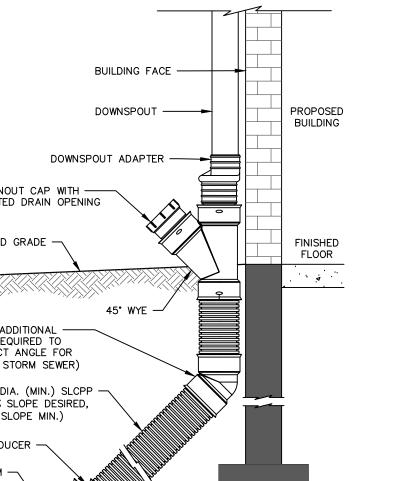
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STORMWATER AND DETAILS

UCTION NOTES



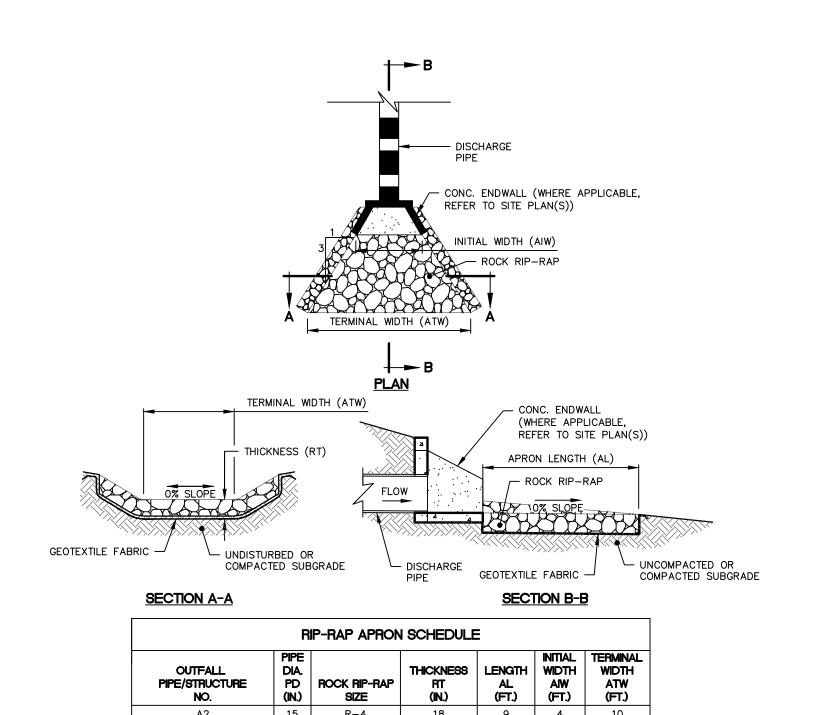


TYPICAL DOWNSPOUT CONNECTION

5. HINGED VERSION AVAILABLE.

'DW' ENDWALL WITH TRASH RACK

NO SCALE



1. ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN, END WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS. ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIP—RAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

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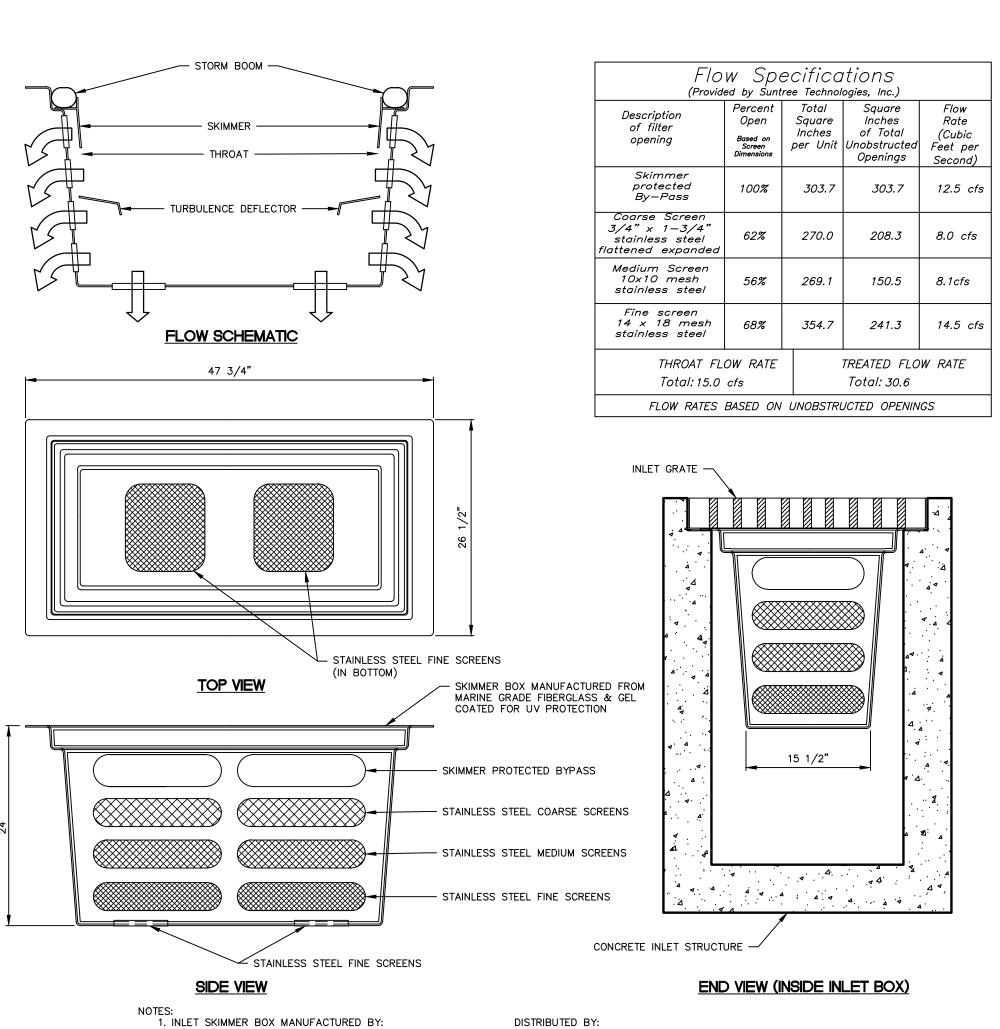
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12 R-4

15 R-3

PERMANENT RIP-RAP APRON **OUTFLOW PROTECTION DETAIL** 



SUNTREE TECHNOLOGIES, INC ACF ENVIRONMENTAL 789 CLEARLAKE ROAD, SUITE 2 Tel: (888) 856-4505

Tel: (321) 637-7552 Fax: (321) 637-7554

2. INSTALLATION SHALL BE IN CONFORMANCE W/ MANUFACTURER'S RECOMMENDATIONS. 3. REFER TO SITE GRADING PLAN(S) AND/OR NOTES THEREON FOR SPECIFIC LOCATIONS OF PROPOSED GRATE INLET SKIMMER

4. MAINTENANCE RECOMMENDATIONS ARE AS FOLLOWS: A. GRATE INLET SKIMMER BOXES SHALL BE SERVICED ON A MINIMUM QUARTERLY BASIS THROUGHOUT THE YEAR, OR ON A MORE FREQUENT BASIS AS NECESSITATED BY SITE CONDITIONS (COLLECTION OF DEBRIS) AND SIZE / DURATION OF STORM EVENTS. B. SERVICING WHALL BE COMPLETED AS FOLLOWS:

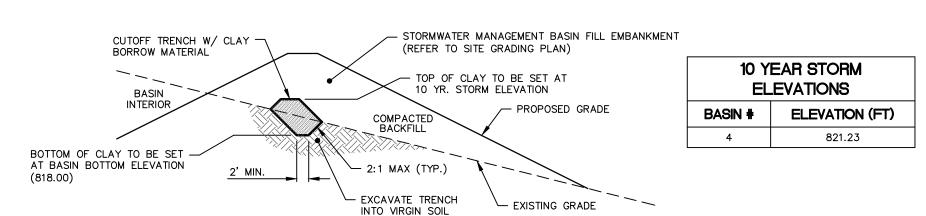
1.) MANUAL SERVICING: a. REMOVE THE INLET GRATE.

c. CUT ZIP TIES AND REMOVE THE STORM BOOM FROM THE SKIMMER TRAY. REMOVE ALL DEBIRS FROM THE SKIMMER TRAY AND PLACE IN A SUITABLE CONTAINER FOR DISPOSAL AT AN APPROVED FACILITY. d. ATTACH NEW STORM BOOM TO SKIMMER TRAY WITH ZIP TIES PROVIDED. e. REMOVE THE FILTRATION BOX FROM THE INLET, DUMP CONTENTS INTO A SUITABLE CONTAINER, BRUSH ALL SCREENS

CLEAN, AND DISPOSE OF ALL REMOVED CONTENTS AT AN APPROVED FACILITY. f. REPLACE FILTRATION BOX INTO THE INLET AND PLACE SKIMMER TRAY INTO FILTRATION BOX. g. REPLACE INLET GRATE.

a. FOLLOW THE ABOVE PROCEDURES, HOWEVER THE FILTRATION BOX CAN BE LEFT IN PLACE AND VACUUMED OUT WHILE IN PLACE. BRUSH SCREENS AND VACUUM REMAINING RESIDUE. 5. OTHER TYPES OF STORM INLET SKIMMER BOXES OR BMP'S MAY BE USED AS A SUBSTITUTE TO THIS PRODUCT UPON APPROVAL FROM THE PROJECT ENGINEER, MUNICIPAL ENGINEER AND LOCAL COUNTY CONSERVATION DISTRICT, AS APPLICABLE.

"SUNTREE TECHNOLOGIES, INC." STORM GRATE INLET SKIMMER BOX FOR PENNDOT TYPE "M" AND "C" GRATES



CLAY SPECIFICATIONS							
PROPERTY	TEST METHOD (OR EQUAL)	UNIT	SPECIFICATION				
PERMEABILITY	ASTM D-2434	CM/SEC	1 X 10 <sup>-6</sup>				
CLAY PLASTICITY INDEX	ASTM D-423 AND D-424	%	NOT LESS THAN 15				
LIQUID LIMIT OF CLAY	ASTM D-2216	%	NOT LESS THAN 30				
CLAY PARTICLES PASSING	ASTM D-422	%	NOT LESS THAN 30				
CLAY COMPACTION	ASTM D-2216	%	95% OF STANDARD PROCTOR DESNSITY				

PROVIDE CUTOFF TRENCH FOR STORMWATER MANAGEMENT BASIN'S FILL EMBANKMENT AS SHOWN ON THE GRADING AND UTILITY PLAN.

#### TYPICAL DETENTION BASIN CUTOFF TRENCH DETAIL NO SCALE

#### ORGANIC AND NON-ORGANIC AMENDED SOILS NOTES AND SPECIFICATIONS

- 1. REFER TO OTHER PLAN SHEETS HEREIN FOR LIMITS OF PLACEMENT OF AMENDED SOILS. 2. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY UPON DISCOVERY OF SATURATED CONDITIONS OR ROCK WITHIN THE SWM FACILITY BED
- 3. LANDSCAPING WITHIN SWM FACILITIES SHALL BE PROVIDED IN ACCORDANCE WITH THE SITE PLAN, DETAILS AND MAINTENANCE NOTES. 4. SWM FACILITIES AND OUTLET STRUCTURES SHALL BE MAINTAINED PER STORMWATER MANAGEMENT SYSTEM/BMP FACILITY MAINTENANCE
- REQUIREMENTS FOR THE PROJECT. THE ORGANIC AMENDED SOIL MIX: 30% SAND (CLEAN SAND FREE OF DELETERIOUS MATERIALS MEETING AASHTO M-6 OR ASTM C-33) 50% SOIL (LOAMY SAND OR SANDY LOAM USDA CLASSIFICATION, WITH A CLAY CONTENT OF LESS
- 20% ORGANIC LEAF COMPOST OR MUSHROOM COMPOST (TO INCREASE WATER HOLDING CAPACITY) 6. THE ORGANIC AMENDED SOIL MIXTURE SHALL BE TESTED PRIOR TO PLACEMENT AND SHALL MEET THE FOLLOWING CRITERIA:

THE ORGANIC AMENDED SOIL MIXTORE SHALL BE TESTED FRIOR TO FLACEMENT AND SHA				
	COMPOST	SAND	SILT LOAM	
PERMEABILITY (CM/HR)	-	3.30	0.1-0.40	
WATER HOLDING CAPACITY (CM/CM)	ı	0.14	0.07-0.10	
BULK DENSITY (G/CM)	1.0-2.0	2.65	1.25	
рН	7.8	ı	5.7	
ORGANIC MATTER (%)	30-70	0.0-1.0	0.0-20.0	
CATION EXCHANGE CAPACITY	66	1–3	12–18	
TOTAL PHOSPHORUS (%)	0.00-0.10	0.0	0.09	
TOTAL NITROGEN (%)	0.0-1.0	0.0	0.15	
FILTRATION EFFICIENCY AFTER 18"(%)	16	93	94	

- A. SHOULD THE PH FALL OUTSIDE OF THE ACCEPTABLE RANGE, IT MAY BE MODIFIED WITH LIME (TO RAISE) OR IRON SULFATE PLUS SULFUR (TO LOWER). THE LIME OR IRON SULFATE MUST BE MIXED UNIFORMLY INTO THE ASM PRIOR TO USE IN INFILTRATION/DETENTION BASIN AND FOREBAYS. 3. SHOULD THE ASM NOT MEET THE MINIMUM REQUIREMENT FOR MAGNESIUM, IT MAY BE MODIFIED WITH MAGNESIUM SULFATE. LIKEWISE, SHOULD THE ASM NOT MEET THE MINIMUM REQUIREMENT FOR POTASSIUM, IT MAY BE MODIFIED WITH POTASH. MAGNESIUM SULFATE AND POTASH MUST BE MIXED UNIFORMLY INTO THE ASM PRIOR TO USE IN INFILTRATION BASIN. C. PLANTING SOIL AND/OR ASM THAT FAILS TO MEET THE MINIMUM REQUIREMENT SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER. MIXING OF THE CORRECTIVE ADDITIVES TO THE ASM IS INCIDENTAL AND SHALL BE AT NO ADDITIONAL COST TO THE
- D. MIXING OF THE ASM TO A HOMOGENEOUS CONSISTENCY SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER.

  E. ALL TESTING AGENCY RESULTS SHALL BE PROVIDED TO THE OWNER, UPON RECEIPT BY THE CONTRACTOR.
- 7. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE ABOVE ORGANIC SOIL MIXTURE TESTING RESULTS IF MIXED ON—SITE AND/OR SUPPLYING THE PRE—MIX CERTIFICATION FROM THE SUPPLIER TO THE SITE ENGINEER PRIOR TO INSTALLATION. 8. THE ORGANIC AMENDED SOIL MIXTURE SHALL BE TESTED PRIOR TO PLACEMENT AND SHALL MEET THE FOLLOWING CRITERIA:

PERMISSIBLE SOIL TYPES FOR AMENDED SOIL, BASED ON USDA CLASSIFICATION	RANGES OF USDA PARTICLE SIZE PERCENTAGES			TYPICAL INFILTRATION RATES FOR PERMISSIBLE SOIL TYPES (IN/HR)*				
	SA	SAND SILT CLAY			MINI			
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN. MAX.	
SAND, LOAMY SAND,	50	100	0	50	0	20	0.5	8.3

\*THEORETICAL INFILTRATION RATES AS DESIGNED BY RAWLS, BRAKENSIEK, AND SAXTON (1982)

- THE AMENDED SOIL MIXTURE (ASM) SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES, EXCLUDING MULCH. NO OTHER MATERIAL OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE SWM FACILITY AREAS THAT MAY NEGATIVELY IMPACT STABILITY, POROSITY, AND/OR COMPACTION OF NON-ORGANIC AMENDED SOILS.
- 10. INSTALLATION OF AMENDED SOILS MUST BE COMPLETED IN A MANNER THAT WILL ENSURE ADEQUATE INFILTRATION. AFTER SCARIFYING THE BOTTOM OF THE SWM FACILITIES IN AREA OF THE AMENDED SOILS, INSTALL SOIL IN 8"-12" LIFTS.

  A. FOR ORGANIC AMENDED SOILS, LIGHTLY WATER EACH LIFT TO ENCOURAGE NATURAL COMPACTION. ORGANIC AMENDED SOIL LIFTS SHALL NOT BE COMPACTED BY ANY OTHER MEANS. OVERFILL ABOVE THE PROPOSED FINISH GRADE TO ACCOMMODATE NATURAL SETTLEMENT TO PROPER GRADE (UP TO 20% NATURAL COMPACTION MAY OCCUR). B. FOR NON-ORGANIC AMENDED SOILS, COMPACT LIFTS TO 95% STANDARD PROCTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE ABOVE NON-ORGANIC SOIL MIXTURE TESTING RESULTS IF MIXED ON-SITE AND/OR SUPPLYING THE PRE-MIX CERTIFICATION FROM THE SUPPLIER TO THE SITE ENGINEER PRIOR TO INSTALLATION.

F UNIT IS PRECAST IN TWO PIECES, SEAL WITH A NON-SHRINK GROUT AND WATERPROOF SEALANT AROUND THE PIPE, PIN SEPARATE PIECES WITH

— 4,000 P.S.I. CONCRETE

W/ 6x6, 1.4x1.4 W.W.F.

REFER TO PLAN

SUBSOIL -

1. REFER TO SITE PLAN(S) AND/OR BASIN OUTLET PIPE

2. COLLARS SHOULD NOT BE PLACED WITHIN 4 FT. OF ANY PIPE

TYPICAL CONCRETE

ANTI-SEEPAGE COLLAF

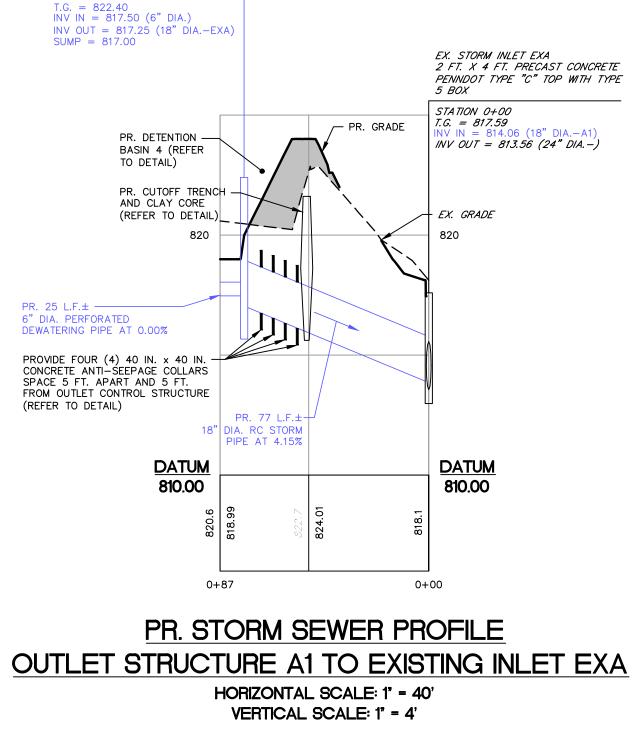
SUBSTRATUM

PROPOSED SOIL PROFILE

PROFILE(S)/DETAILS FOR COLLAR LOCATIONS, EXACT SIZE AND

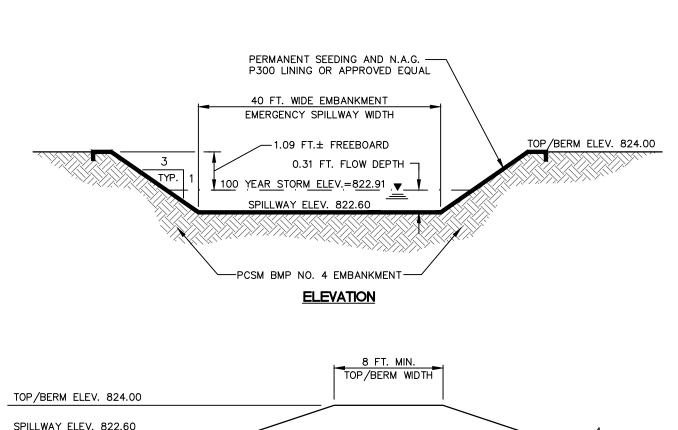
-PROPOSED GRADE

11. CONTRACTOR SHALL INSTALL AMENDED SOILS IN BASIN 4 WITH A VOID RATIO OF 30% OR GREATER



PR. BASIN OUTLET STRUCTURE A1 2 FT. X 4 FT. PRECAST CONCRETE PENNDOT TYPE "M" TOP (REFER TO DETAIL)

STATION 0+77



SPILLWAY ELEV. 822.60 INTERIOR OF BASIN EXTERIOR OF BASIN 1. REFER TO SITE GRADING PLAN FOR EMERGENCY SPILLWAY LOCATION AND GRADING DETAILS.

PCSM BMP NO. 4 EMERGENCY SPILLWAY AND EMBANKMENT CROSS-SECTION DETAIL

0 8

S

AS NOTED

12.14.2

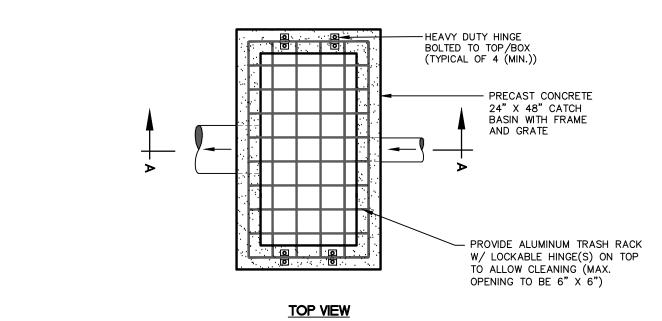
993.1B-FLD-LOT2

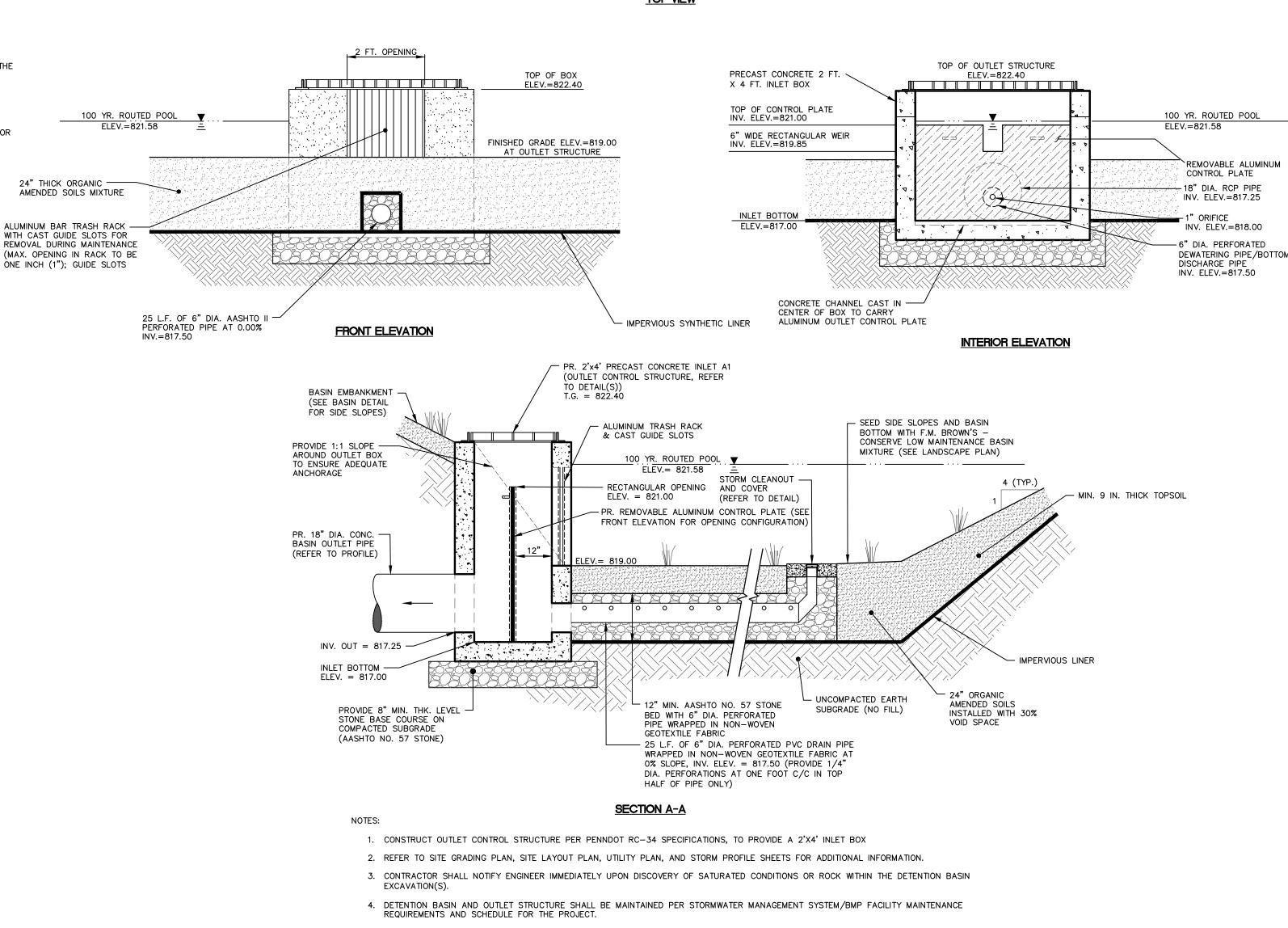
DRAWN BY

CHECKED B

2. GEOTEXTILE FABRIC TO BE INSTALLED/ANCHORED ON SPILLWAY BOTTOM, SIDE SLOPES AND OUTSIDE

EMBANKMENT SLOPE PER MANUFACTURER'S RECOMMENDATIONS.



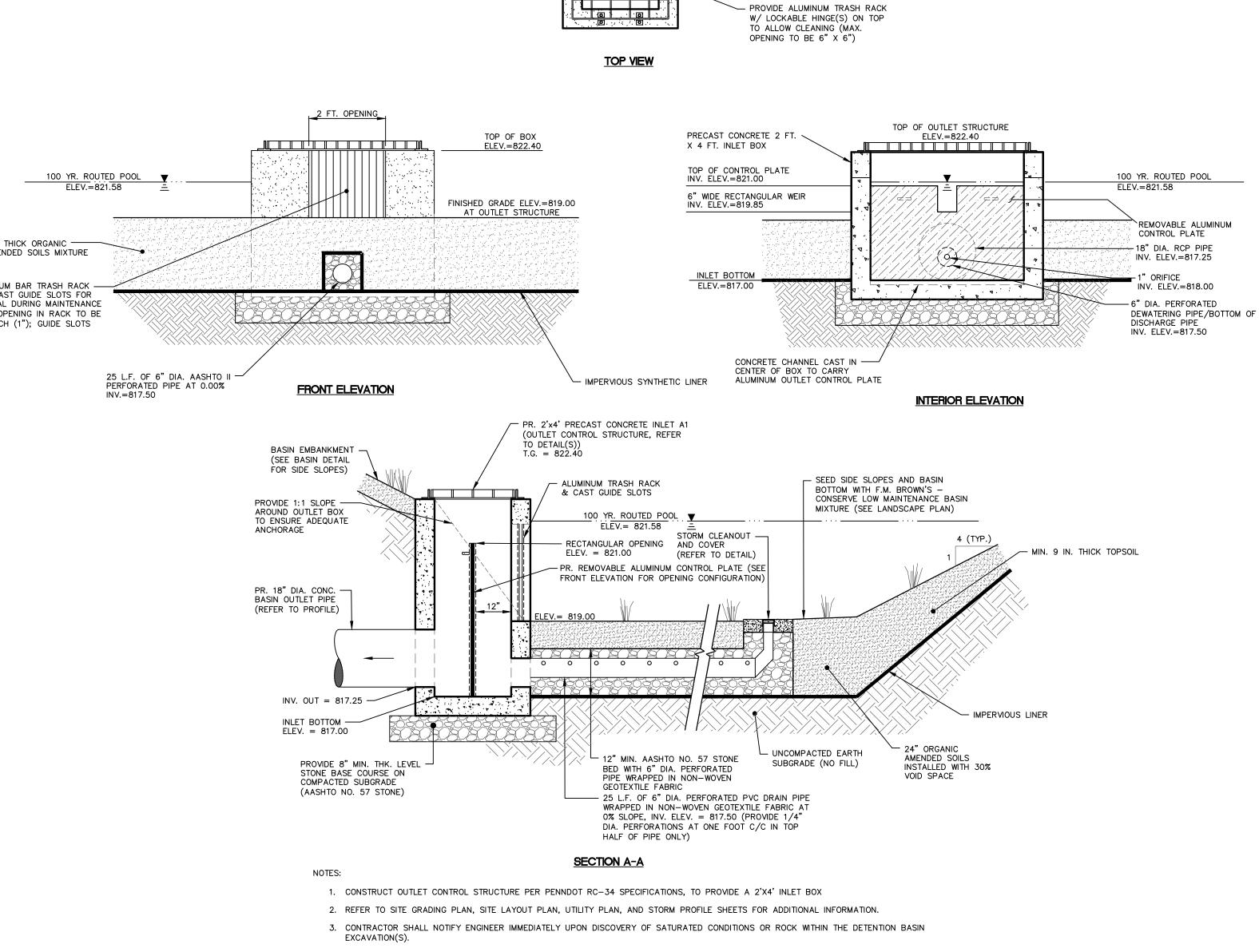


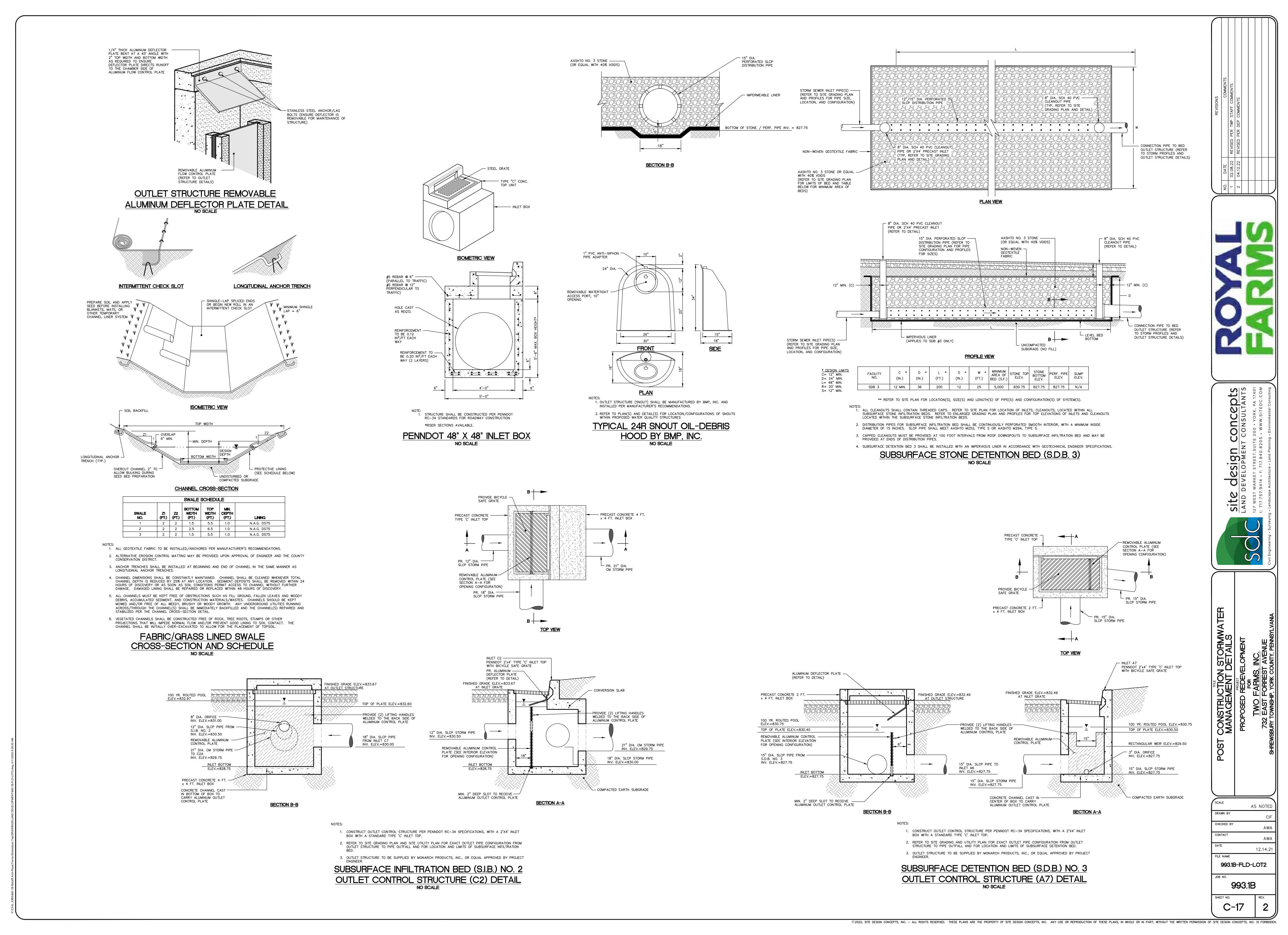
DETENTION BASIN NO. 4 CROSS-SECTION AND

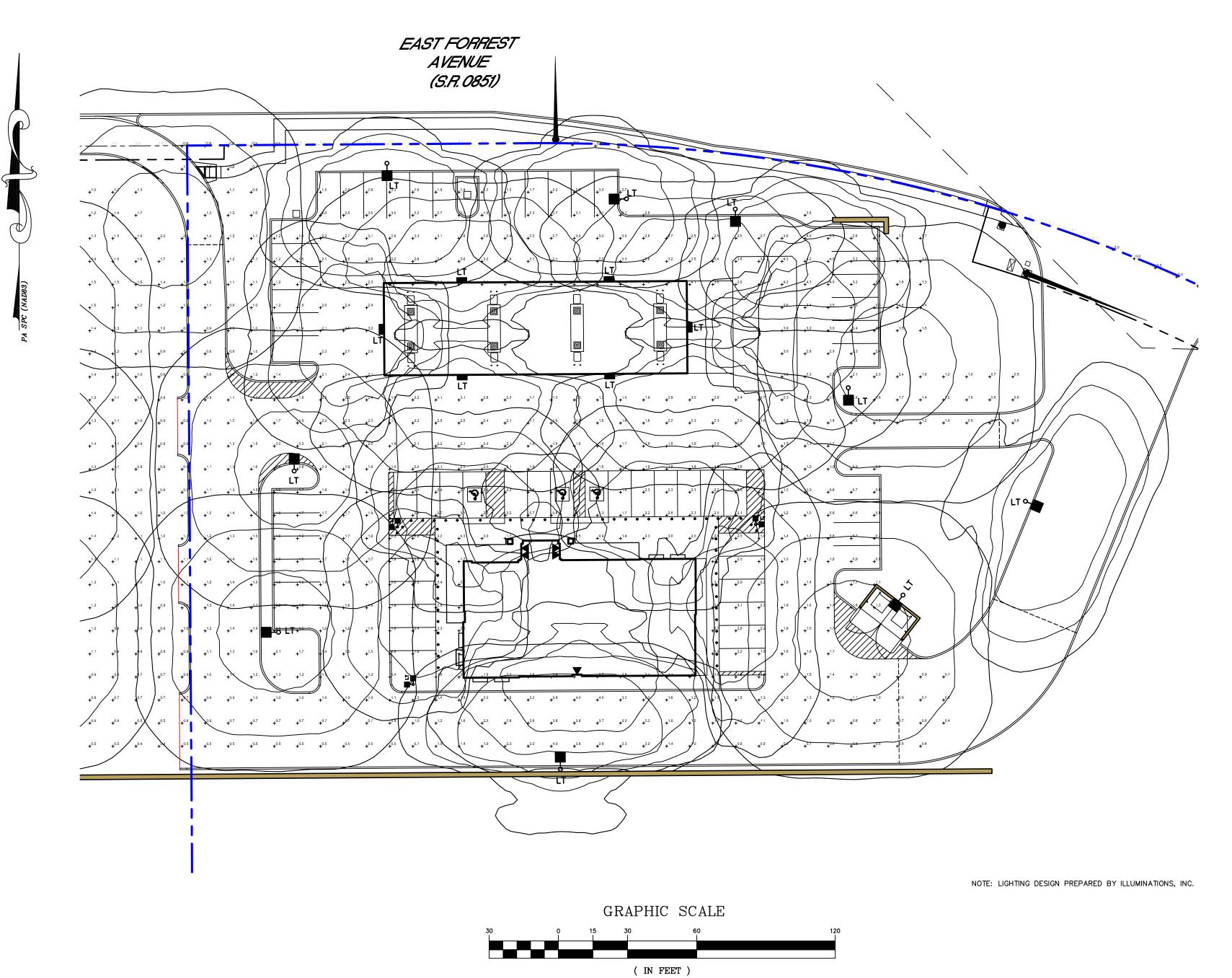
NO SCALE

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OUTLET CONTROL STRUCTURE (A1) DETAIL







1" CHAMFER — (TYP.)

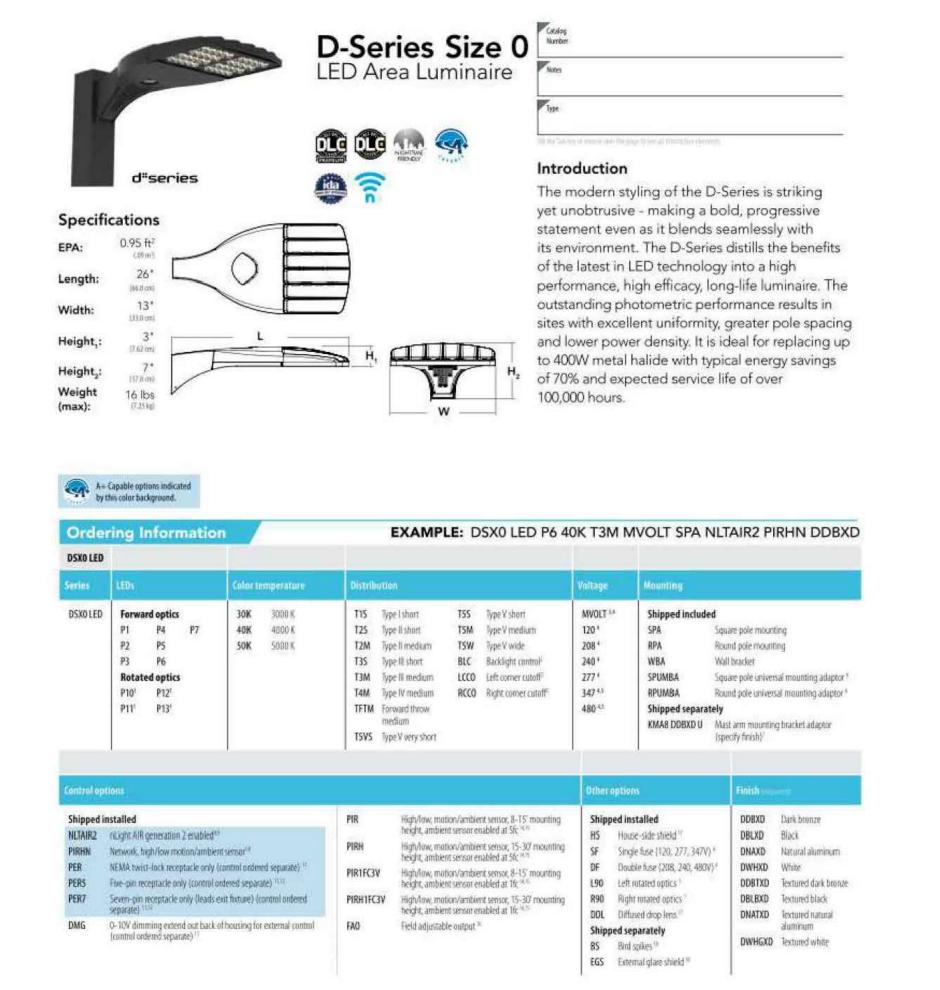
FINISHED GRADE —

BARE #6 COPPER GROUND
WIRE, CONNECTED TO METAL
POLE & BRANCH CONDUIT
GROUND CONDUCTOR. USE
INSULATED CONDUCTOR OR
SCH. 80 PVC CONDUIT WHERE
IN CONTACT WITH CONCRETE

UNDERGROUND CONDUITS -

ROD TO BE 6" MIN. BELOW

AS REQUIRED (TYP.)





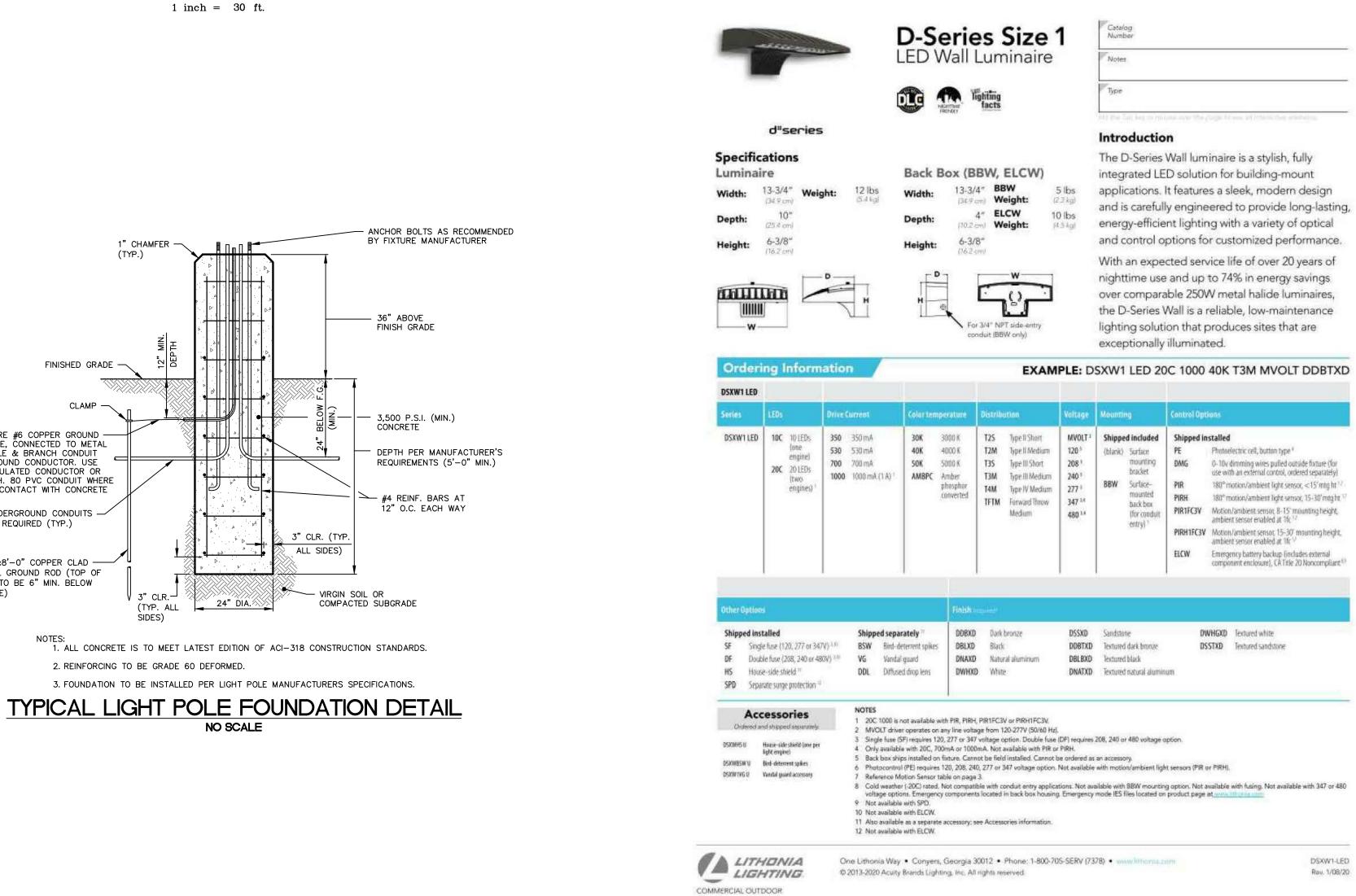
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LITHONIA LIGHTING

COMMERCIAL OUTDOOR

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TYPICAL LIGHTING DETAIL 'B'

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**LIGHTING** 

AS NOTED 12.14.21