

# MODWASH - UPPER ALLEN TOWNSHIP, PA

## PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

### GENERAL NOTES:

- THE PURPOSE OF THIS PLAN IS TO CONSTRUCT A CAR WASH LOCATED AT 127 KIM ACRES DRIVE, MECHANICSBURG, PA 17055 (TAX PARCEL NUMBER 42-29-2454-181).
- BEFORE STARTING WORK, THE CONTRACTORS SHALL EXAMINE THE JOB SITE AND THE DRAWINGS AND BE THOROUGHLY FAMILIAR WITH THE ENTIRE CONSTRUCTION, THE FACILITIES, ANY DIFFICULTIES IN THE WORK TO BE COMPLETED, THE ACCURACY OF THE DRAWINGS AND DETAILS, AND QUANTITY OF LABOR AND MATERIALS REQUIRED.
- CONTRACTORS SHALL NOT SCALE THESE DRAWINGS FOR CONSTRUCTION OR BIDDING PURPOSES. IN THE EVENT OF OMISSIONS OF NECESSARY DIMENSIONS OR INFORMATION, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OR ENGINEER FIGURED AND CALCULATED DIMENSIONS TAKE PRECEDENCE OVER SCALED MEASUREMENTS. DETAILED DRAWINGS AND LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALED DRAWINGS.
- ALL PLAN DETAILS AND WALL SECTIONS ARE CONSIDERED "TYPICAL" INDUSTRY DETAILS UNLESS NOTED OTHERWISE AS SITE SPECIFIC.
- TRAFFIC SHALL BE MAINTAINED ON ALL ADJOINING STREETS AND DRIVES AT ALL TIMES. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH PENNDOT'S REQUIREMENTS.
- CONTRACTOR SHALL VERIFY THE LOCATION AND INVERT ELEVATION OF ALL EXISTING UTILITIES WITH PROPOSED CONNECTIONS PRIOR TO CONSTRUCTION AND GRADING OF THE SITE. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY DESIGN CONFLICTS.
- ALL MATERIALS AND WORKMANSHIP INVOLVED IN THIS SITE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION, INCLUDING SUPPLEMENTS, OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS PUB. FORM 408, UNLESS OTHERWISE NOTED.
- A PENNDOT HIGHWAY OCCUPANCY PERMIT, PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945 (P.L. 1242 NO. 428), KNOWN AS THE "STATE HIGHWAY LAW" IS REQUIRED FOR DRIVEWAY ACCESS TO ANY STATE ROADWAY.
- A FINAL EROSION AND SEDIMENTATION CONTROL PLAN AND PERMIT PURSUANT TO THE RULES AND REGULATIONS OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (TITLE 25, PART 1, SUBPART C, ARTICLE II, CHAPTER 102 OF THE PENNSYLVANIA CODE) IS REQUIRED BEFORE ANY EARTH MOVING ACTIVITIES ON THE PROPOSED LOTS IS ALLOWED.
- ALL PROPOSED ACCESSIBLE FACILITIES ARE TO BE CONSTRUCTED TO CURRENT ADA REQUIREMENTS AND STANDARDS.
- ALL PROPOSED ON-SITE LIGHTING SHALL BE DIRECTED INWARD AND DOWNWARD AWAY FROM RESIDENTIAL PROPERTIES AND ALL STREET RIGHT-OF-WAYS.
- LAND DEVELOPMENT PLAN APPROVAL DOES NOT RELIEVE THE OWNER FROM ALL APPLICABLE SIGN REGULATIONS. ALL PROPOSED ON-SITE SIGNAGE SHALL CONFORM TO THE MUNICIPAL ZONING ORDINANCES. ALL SIGNAGE MUST COMPLY WITH CHAPTER 245, ARTICLE XVII OF THE ZONING ORDINANCE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES, INCLUDING EARTHWORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNER AND ENGINEER DURING THE BIDDING PROCESS OF ANY QUANTITY DISCREPANCIES IN THE BID DOCUMENTS. ONCE THE CONSTRUCTION CONTRACT IS ISSUED, THE CONTRACTOR ACKNOWLEDGES THE CONTRACT PRICE COVERS ALL LABOR, MATERIALS AND INCIDENTALS TO SUBSTANTIALLY COMPLETE THE PROJECT ACCORDING TO THE CONSTRUCTION PLANS.
- IT IS THE INTENTION OF THE ENGINEER THAT THE DRAWINGS AND SPECIFICATIONS PROVIDE FOR A COMPLETELY FINISHED PROJECT. ANYTHING OR MATTER SHOWN ON THE DRAWINGS OR DESCRIBED BY THE SPECIFICATIONS OR FAIRLY IMPLIED BY EITHER OR BOTH, SHALL BE CONSIDERED A PART OF THE WORK THE SAME AS IF NOTED, SHOWN AND DESCRIBED. SHOULD THE CONTRACTORS FIND ANY DISCREPANCIES OR OMISSIONS IN THE DRAWINGS OR SPECIFICATIONS, OR BE IN DOUBT AS TO THEIR MEANING, THEY SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. ANY CLARIFICATIONS FROM THE ENGINEER WILL BE WRITTEN AND THE CONTRACTORS SHALL BE RESPONSIBLE AT NO COST TO THE OWNER OR ENGINEER FOR ANY WORK WHICH MUST BE REDONE BECAUSE OF THEIR FAILURE TO COMPLY WITH THE PRECEDING.
- FURTHER EXPLANATORY DRAWINGS OR DETAILS WILL ALSO BE CONSIDERED PART OF THE PROJECT AND WORK EXECUTED WITHOUT SUCH DETAILS SHALL BE AT THE CONTRACTOR'S RISK.
- THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND MEASUREMENTS. ANY DISCREPANCIES BETWEEN THE DRAWING AND ACTUAL EXISTING CONDITIONS SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING. ANY CHANGES OR CORRECTIONS WILL BE WRITTEN, AND THE CONTRACTORS SHALL BE RESPONSIBLE FOR ANY WORK COMPLETED BEFORE RECEIVING SAID CORRECTION.
- IN THE CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY AN ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE ENGINEER AND THE OWNER'S REPRESENTATIVES INTERPRETATION.
- THE CONTRACTOR SCHEDULE A PRE-CONSTRUCTION SITE MEETING WITH THE UPPER ALLEN TOWNSHIP ENGINEER AND THE CUMBERLAND COUNTY CONSERVATION DISTRICT AT LEAST 48 HOURS PRIOR TO STARTING SITE CONSTRUCTION ACTIVITIES.
- ALL WORK WITHIN THE PUBLIC STREET RIGHT-OF-WAY AND WORK RELATED TO STORM DRAINAGE AND SANITARY SEWER FACILITIES REQUIRES INSPECTION BY THE TOWNSHIP. PROVIDE A MINIMUM 48 HOURS NOTICE TO THE TOWNSHIP BEFORE STARTING WORK.
- AS-BUILT MYLAR PLANS AND ELECTRONIC DATA FILES SHALL BE PROVIDED TO THE TOWNSHIP. ALL DRAWINGS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR LAND SURVEYOR ATTESTING TO THE CORRECTNESS OF THE FACILITY INFORMATION SHOWN, IN ACCORDANCE WITH SECTION 220-4.2.C(3) OF THE CODIFIED ORDINANCES OF THE TOWNSHIP.
- NOTHING SHALL BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF AN EASEMENT OR PLANTING STRIP THAT WOULD ADVERSELY AFFECT THE FUNCTION OF THE EASEMENT OR PLANTING STRIP OR CONFLICT WITH AN EASEMENT AGREEMENT. NO STRUCTURES SHALL BE PLACED IN ANY EASEMENT OR PLANTING STRIP UNLESS OTHERWISE NOTED IN AN AGREEMENT.

### UTILITY COMPANIES

#### SANITARY

UPPER ALLEN TOWNSHIP  
100 GETTYSBURG PIKE  
MECHANICSBURG, PA. 17055  
KODI HOCKENBERRY  
khockenberry@cutwp.org

#### GAS

UGI UTL LANCASTER  
1301 AIP DRIVE  
MIDDLETOWN, PA. 17057  
STEPHEN BATEMAN  
sbateman@ugi.com

#### WATER

SUEZ WATER  
PENNSYLVANIA INC.  
6310 ALLENTOWN BLVD  
HARRISBURG, PA. 17112  
NAT SHEFFER  
nathaniel.sheffer@suez.com

#### TELEPHONE/FIBER OPTICS

VERIZON PENNSYLVANIA LLC  
1026 HAY ST  
PITTSBURGH, PA. 15221  
DEBORAH BARUM  
deborah.d.delia@verizon.com

#### ELECTRICITY

SUEZ WATER  
PENNSYLVANIA INC.  
6310 ALLENTOWN BLVD  
HARRISBURG, PA. 17112  
NAT SHEFFER  
nathaniel.sheffer@suez.com

#### CABLE

COMCAST  
4601 SMITH STREET  
HARRISBURG, PA. 17109  
MICHAEL SWEIGARD  
mike\_sweigard@cable.comcast.com



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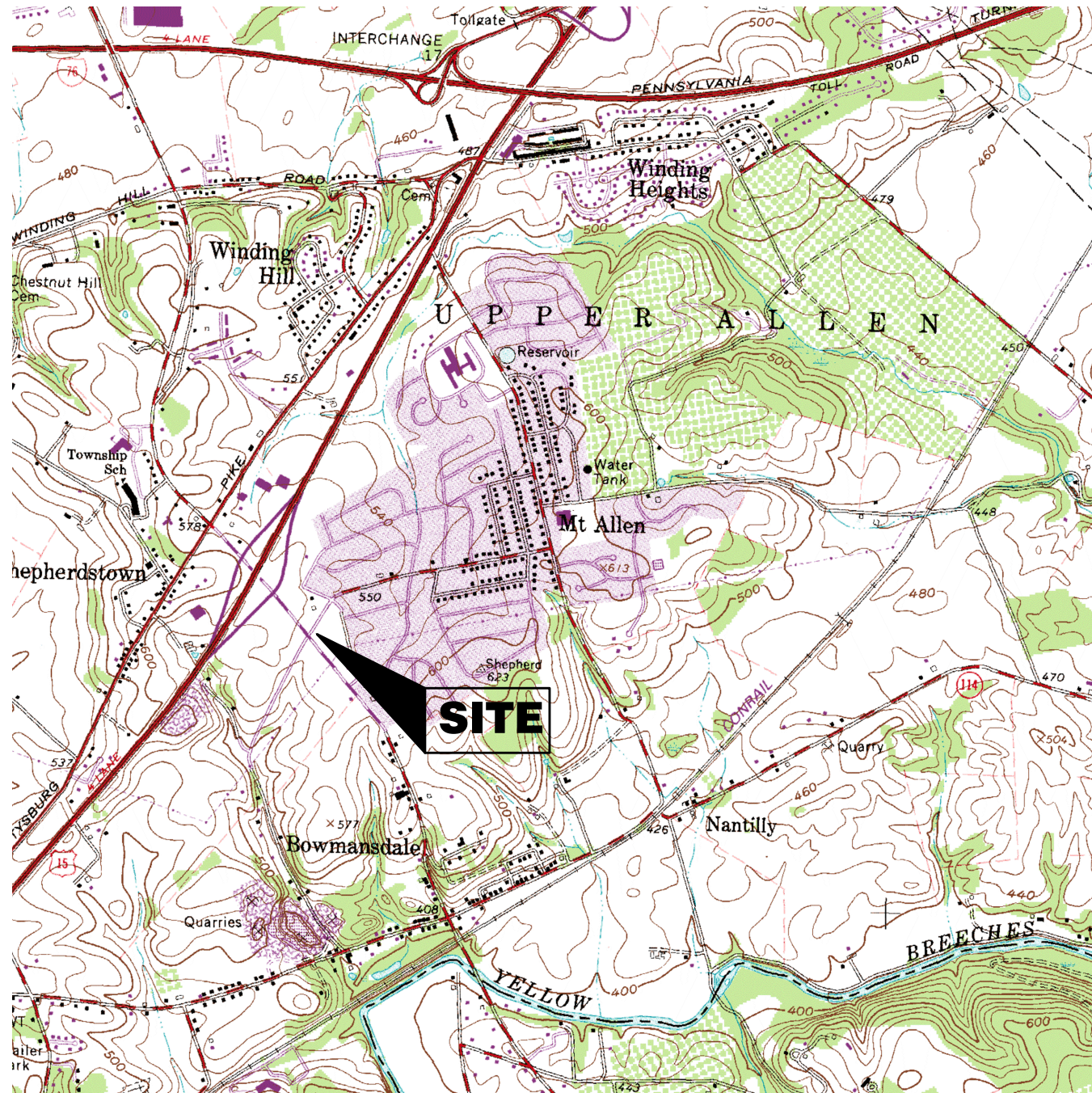
THE GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED IN THE SITE NO MORE TEN DAYS AND NO LESS THAN THREE DAYS IN ADVANCE OF EXCAVATION (PA ACT 287 OF 1974 AMENDED BY ACT 50 OF 2018). PA STATE LAW REQUIRES 3 WORKING DAYS NOTICE

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY CHANGES IN DESIGN PLANS UNLESS WRITTEN CONSENT IS GIVEN BY THE ENGINEER. THE CONTRACTOR AND/OR THE OWNER WILL BE HELD RESPONSIBLE FOR ANY FIELD MODIFICATIONS MADE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER AND NECESSARY APPROVALS BY PERMITTING AGENCIES.

THE LOCATION OF EXISTING UTILITIES WERE TAKEN FROM RECORDS AND MARKING PROVIDED BY OTHERS AND OBSERVED EVIDENCE. THE LOCATIONS SHOWN MAY BE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS, SIZES AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO ALL EXISTING UTILITIES.

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127 KIM ACRES DRIVE, MECHANICSBURG, PA 17055  
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA  
JANUARY 5, 2022



LOCATION MAP  
SCALE: 1"=2000'  
USGS QUADRANGLE MAP  
LEMOYNE, PA

PREPARED FOR:

## HUTTON MECHANICSBURG PA ST, LLC

736 CHERRY ST  
CHATTANOOGA, TN 37402  
ATTN - ALEJANDRO QUINTANA  
PHONE - 404-805-0797

PREPARED BY:



Morris Knowles & Associates, Inc.

Consulting Engineers & Land Surveyors

443 ATHENA DRIVE DELMONT, PA 15626

TELEPHONE: (724) 468-4622 FAX: (724) 468-8940

I, TROY A. LEIGHTY, HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR IN COMPLIANCE WITH THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA; THAT THIS PLAN CORRECTLY REPRESENTS A SURVEY COMPLETED BY ME ON JULY 23, 2021; THAT ALL THE MONUMENTS SHOWN THEREON ACTUALLY EXIST; AND THAT THEIR LOCATION, SIZE, TYPE AND MATERIAL ARE ACCURATELY SHOWN.

(SEAL)  
ATTEST: \_\_\_\_\_

CONDITIONALLY APPROVED BY THE BOARD OF COMMISSIONERS OF UPPER ALLEN TOWNSHIP, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_, THE CONDITIONS OF APPROVAL WERE SATISFIED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

(SEAL)  
ATTEST: \_\_\_\_\_ SECRETARY \_\_\_\_\_ PRESIDENT \_\_\_\_\_

APPROVED BY THE BOARD OF COMMISSIONERS OF UPPER ALLEN TOWNSHIP, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

(SEAL)  
ATTEST: \_\_\_\_\_ SECRETARY \_\_\_\_\_ PRESIDENT \_\_\_\_\_

REVIEWED BY THE PLANNING COMMISSION OF UPPER ALLEN TOWNSHIP, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

(SEAL)  
ATTEST: \_\_\_\_\_ SECRETARY \_\_\_\_\_ PRESIDENT \_\_\_\_\_

REVIEWED BY THE CUMBERLAND COUNTY PLANNING DEPARTMENT, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

ATTEST: \_\_\_\_\_ DIRECTOR OF PLANNING

I, ELIZABETH M. CLAWSON, ON THIS DATE JANUARY 4, 2022, HAVE REVIEWED AND HEREBY CERTIFY THAT THE SWM SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE UPPER ALLEN TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

ATTEST: \_\_\_\_\_

### INDEX OF SHEETS

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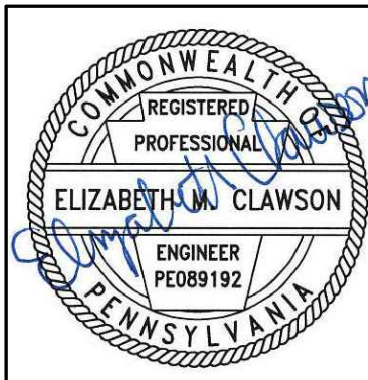
### ADDITIONAL SHEETS

SITE LIGHTING PLAN	1
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Morris Knowles & Associates, Inc.  
(A Hammontree Company)  
Consulting Engineers and Land Surveyors  
443 Athena Drive  
Delmont, PA 15626  
Telephone: (724) 468-4622  
Fax: (724) 468-8940  
info@morrisknowles.com www.morrisknowles.com

**TITLE SHEET**  
**MODWASH - UPPER ALLEN TOWNSHIP, PA**  
prepared for  
**HUTTON MECHANICSBURG PA ST, LLC**  
situated in  
**UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA**

SHEET NO.  
C000



DWG PATH: C:\Users\moran\Documents\modwash\modwash.dwg - 127 Kim Acres, Upper Allen Twp, PA - E.dwy  
LAST SAVE: Feb 08, 2022 - 10:00am



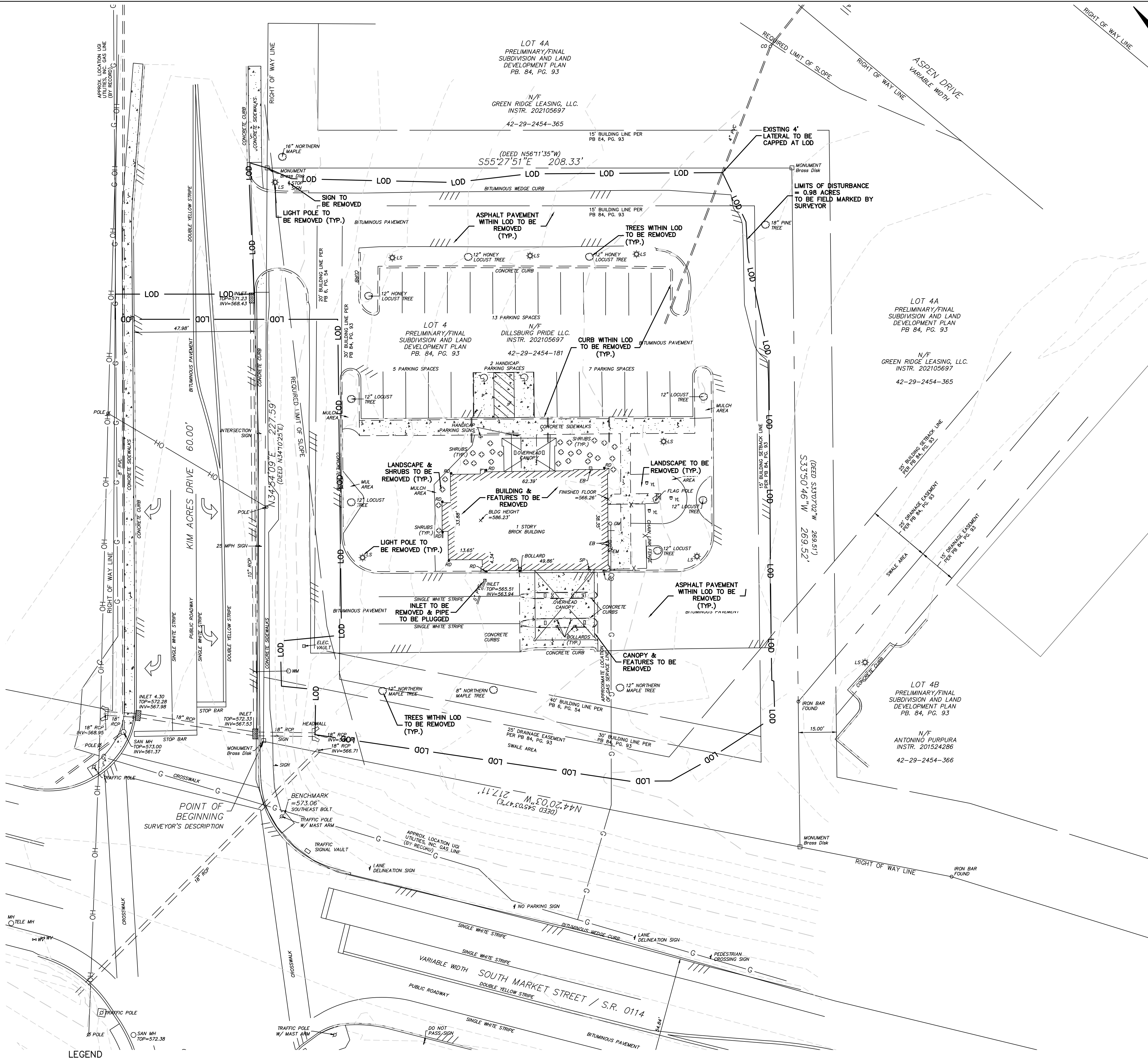
NOTE:

1. THE SUBJECT PROPERTIES ARE NOT LOCATED WITHIN A 100 YEAR FLOOD PLAIN ACCORDING TO FEMA FLOOD MAP NUMBER 42041C0286E, LAST REVISED MARCH 16, 2009.

DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION WORK.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITY CONNECTIONS PRIOR TO CONSTRUCTION/DEMOLITION AT THIS SITE. THE CONTRACTOR SHALL ALSO COORDINATE ALL UTILITY CONNECTIONS WITH LOCAL PROVIDERS.
3. ALL EXISTING PAVEMENT, CURB AND SIDEWALK TO BE REMOVED SHALL BE SAW CUT AS SHOWN ON PLANS.
4. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL DRIVES, WALKS, EXISTING PAVEMENT AND CURBING WITHIN THE LIMITS AS SHOWN. ALL DEBRIS IS TO BE HAULED OFF-SITE TO AN APPROVED LANDFILL.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE ROADWAYS AND ASSOCIATED STRUCTURES AND SHALL MAKE REPAIRS AS NECESSARY TO THE SATISFACTION OF THE MUNICIPALITY OF UPPER ALLEN TOWNSHIP. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF TRAFFIC THROUGH THE CONSTRUCTION PERIOD.

SOIL MAP UNIT LEGEND		
MAP UNIT SYMBOL	MAP UNIT NAME	PERCENT WITHIN LOD
BdB	BEDINGTON SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES	100

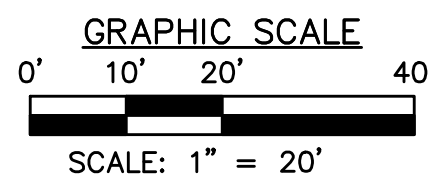


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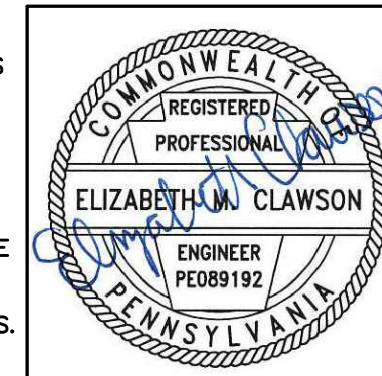
SAN - SANITARY	- G - GAS LINE
ST - STORM	- W - WATER LINE
MH - MANHOLE	- T - SUBSURFACE TELEPHONE LINE
TOP - TOP OF CASTING	- E - SUBSURFACE ELECTRIC LINE
INV - INVERT / FLOW LINE	- - - - - EXISTING CONTOURS
WV - WATER VALVE	- - - - - EXISTING INLET
GV - GAS VALVE	- - - - - EXISTING MANHOLE
GM - GAS METER	- - - - - EXISTING SEWER
EM - ELECTRIC METER	- X - X - FENCE
S.R. - STATE ROUTE	
TELE - TELEPHONE	
RCF - REINFORCED CONCRETE PIPE	
CPP - CORRUGATED PLASTIC PIPE	



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**EXISTING CONDITIONS/DEMOLITION PLAN**  
**MODWASH - UPPER ALLEN TOWNSHIP, PA**  
prepared for  
**HUTTON MECHANICSBURG PA ST, LLC**  
situated in  
**UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA**

**MKA Morris Knowles & Associates, Inc.**  
(A Hammontree Company)  
Consulting Engineers and Land Surveyors  
443 Altema Drive  
Upper Allen, PA 16808  
Telephone: (724) 468-8840  
Fax: (724) 468-8840  
info@morrisknowles.com www.morrisknowles.com

DESIGNED BY: EMC  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 18566.66

SCALE:  
1" = 20'

REVISION BY:	DATE:	DESCRIPTION:

REVISION BY:	DATE:	DESCRIPTION:



SITE NOTE:

1. THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS AS SHOWN ON THE PLANS.
2. NO WETLANDS EXIST WITHIN THE PROJECT BOUNDARY.
3. MINE OPENINGS ARE NOT ANTICIPATED. IF MINE SPOILS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL EITHER REWORK THE MATERIAL PER GEOTECHNICAL ENGINEERS RECOMMENDATIONS OR REMOVE THE MATERIAL TO A PERMITTED AREA.
4. NO SIGNIFICANT CULTURAL OR SENSITIVE ENVIRONMENTAL FEATURES EXIST WITHIN THE PROJECT BOUNDARY. NO FURTHER ENVIRONMENTAL STUDIES WILL BE NECESSARY.
5. NO WATER RESOURCES EXIST WITHIN THE PROJECT BOUNDARY.

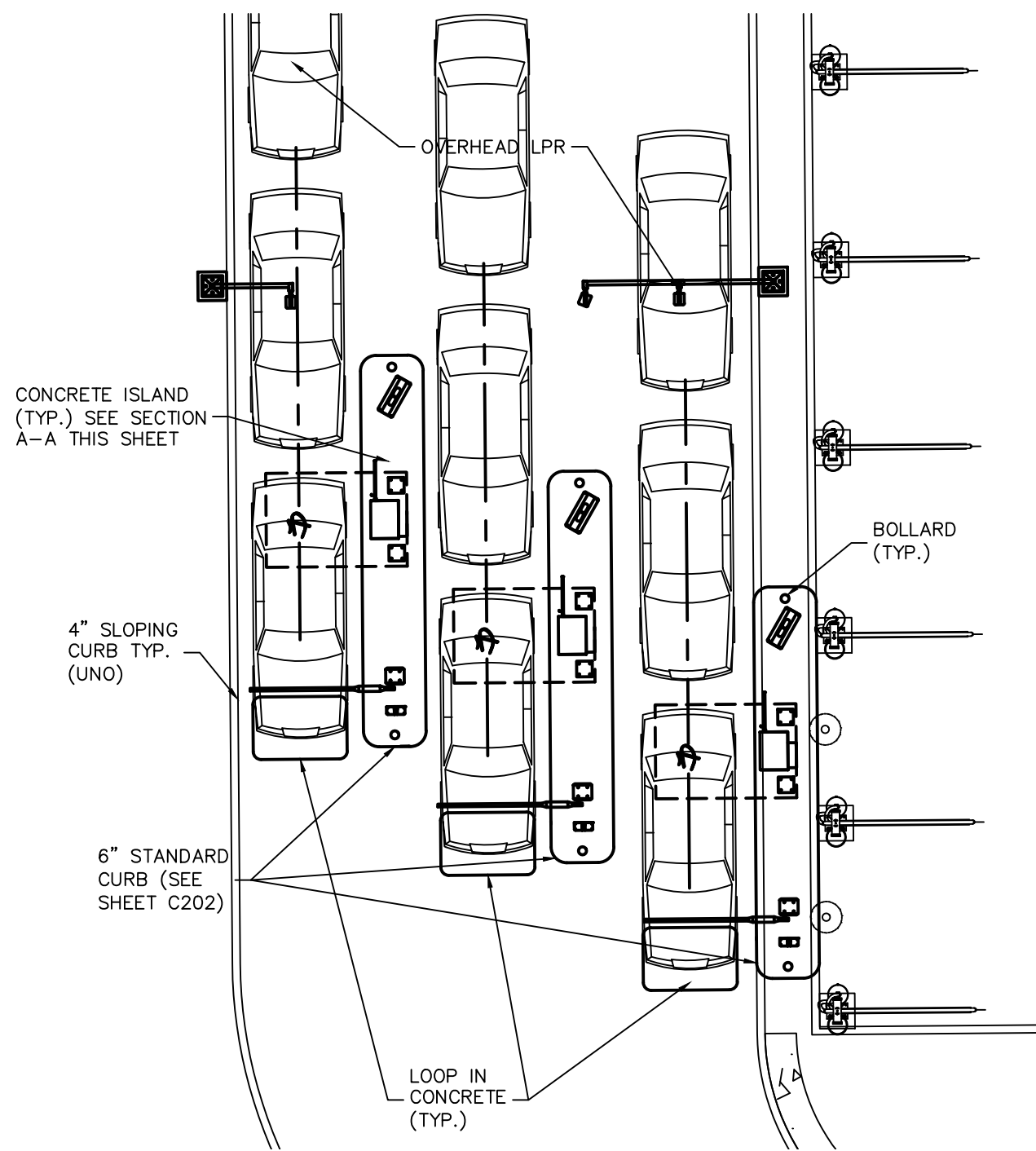
ZONING INFORMATION

LOCATION:	127 KIM ACRES DRIVE, MECHANICSBURG, PA	
ZONE:	C-2 HIGHWAY COMMERCIAL	
USE:	CAR WASH	
ITEM	REQUIREMENTS	PROPOSED
MINIMUM LOT AREA	N/A	---
MINIMUM LOT WIDTH	N/A	---
MINIMUM FRONT SETBACK	50 FEET	50 FEET
MINIMUM SIDE SETBACK	25 FEET	25 FEET
MINIMUM REAR SETBACK	25 FEET	25 FEET
MINIMUM DRIVE AISLE SETBACK	10 FEET	10 FEET
MAXIMUM BUILDING HEIGHT	35 FEET	<35 FEET
MAXIMUM BUILDING COVERAGE	50 PERCENT	<50 PERCENT
MAXIMUM SITE COVERAGE	70 PERCENT	<70 PERCENT
LOT ACREAGE	---	1.20

PARKING INFORMATION

REQUIREMENT DESCRIPTION:  
VEHICLE WASHING USE SHALL PROVIDE 3 PARKING SPACES FOR EACH WASH BAY.

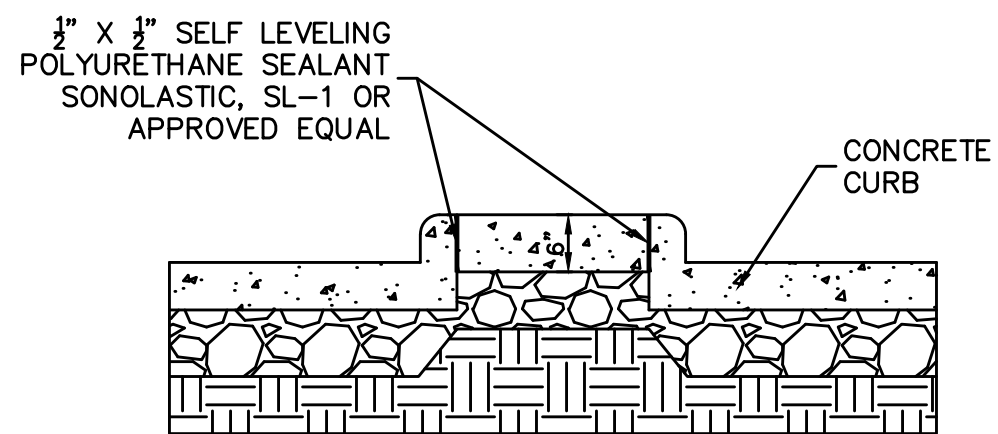
ITEM	REQUIREMENTS	PROPOSED
PARKING SPACES:	3/BAY=3	24



PAY STATION DETAIL

SCALE: 1" = 10'

1. SEE ARCHITECTURAL PLANS FOR ELECTRICAL LAYOUT, EQUIPMENT, AND CANOPY DETAILS.



SECTION A-A  
CONCRETE ISLAND DETAIL

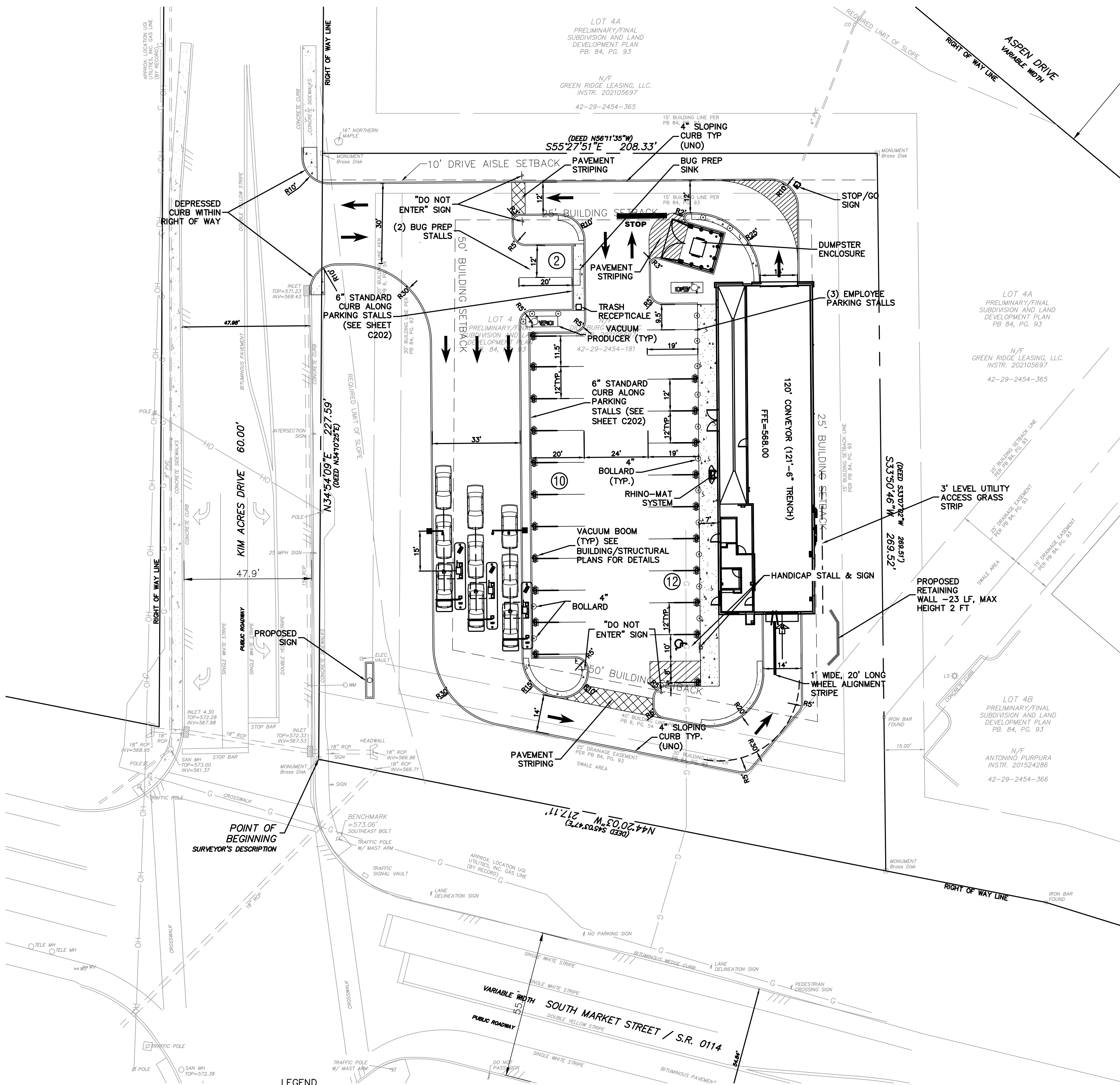
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LEGEND

- |      |   |                          |     |   |                           |
|------|---|--------------------------|-----|---|---------------------------|
| SAN  | - | SANITARY                 | G   | - | GAS LINE                  |
| ST   | - | STORM                    | W   | - | WATER LINE                |
| MH   | - | MANHOLE                  | T   | - | SUBSURFACE TELEPHONE LINE |
| TOP  | - | TOP OF CASTING           | E   | - | SUBSURFACE ELECTRIC LINE  |
| INV  | - | INVERT / FLOW LINE       | OH  | - | OVERHEAD WIRES            |
| WV   | - | WATER VALVE              | --- | - | EXISTING CONTOURS         |
| GV   | - | GAS VALVE                | --- | - | EXISTING INLET            |
| GM   | - | GAS METER                | --- | - | EXISTING MANHOLE          |
| EM   | - | ELECTRIC METER           | --- | - | EXISTING SEWER            |
| S.R. | - | STATE ROUTE              | --- | - | FENCE                     |
| TELE | - | TELEPHONE                |     |   |                           |
| RCP  | - | REINFORCED CONCRETE PIPE |     |   |                           |
| OPP  | - | CORRUGATED PLASTIC PIPE  |     |   |                           |

GRAPHIC SCALE

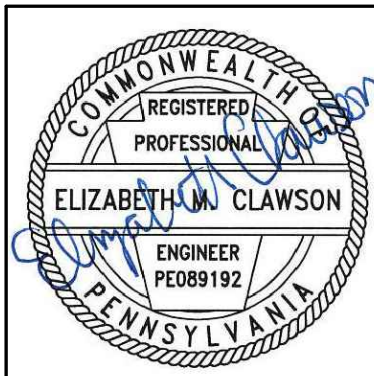
0' 10' 20' 40'

SCALE: 1" = 20'

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SITE PLAN

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prepared for  
HUTTON MECHANICSBURG PA ST, LLC

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**MA** Morris Knowles & Associates, Inc.  
(A Hammontree Company)  
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443 Altema Drive  
Mechanicsburg, PA 17055  
Telephone: (724) 468-8846  
Fax: (724) 468-8840  
info@morrisknowles.com www.morrisknowles.com

SCALE:  
1" = 20'

DESIGNED BY: EMC  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 1856.66

REVISION BY: MMZ  
REVISION BY: GJV  
REVISION BY: GJV  
REVISION BY: GJV  
REVISION BY: GJV

DATE: 02/09/22  
DESCRIPTION: REVISED PER TOWNSHIP COMMENTS/OWNER  
DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_

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LAST SAVE: Feb 08, 2022 - 10:00am

SHEET NO.  
C200



PAVEMENT LEGEND

- CONCRETE SIDEWALK
- STANDARD DUTY CONCRETE  
5" PORTLAND CEMENT CONCRETE  
4" AGGREGATE BASE
- HEAVY DUTY CONCRETE  
8" PORTLAND CEMENT CONCRETE (NON-REINFORCED)  
4" AGGREGATE BASE
- HEATED CONCRETE WITH WELDED WIRE MESH  
(REFER TO MECHANICAL/PLUMBING PLANS FOR TUBING DETAILS)  
5" PORTLAND CEMENT CONCRETE  
4" AGGREGATE BASE



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THE GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED IN THE SITE NO MORE TEN DAYS AND NO LESS THAN THREE DAYS IN ADVANCE OF EXCAVATION (PA ACT 287 OF 1974 AMENDED BY ACT 50 OF 2018). PA STATE LAW REQUIRES 3 WORKING DAYS NOTICE

LEGEND

- SAN - SANITARY  
ST - STORM  
MH - MANHOLE  
TOP - TOP OF CASTING  
INV - INVERT / FLOW LINE  
WV - WATER VALVE  
GV - GAS VALVE  
GM - GAS METER  
EM - ELECTRIC METER  
S.R. - STATE ROUTE  
TELE - TELEPHONE  
RCP - REINFORCED CONCRETE PIPE  
CPP - CORRUGATED PLASTIC PIPE
- C - GAS LINE  
W - WATER LINE  
T - SUBSURFACE TELEPHONE LINE  
E - SUBSURFACE ELECTRIC LINE  
OH - OVERHEAD WIRES  
--- --- EXISTING CONTOURS  
--- --- EXISTING INLET  
--- --- EXISTING MANHOLE  
--- --- EXISTING SEWER  
-X-X- FENCE

GRAPHIC SCALE  
0' 10' 20' 40'  
SCALE: 1" = 20'

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PAVEMENT PLAN  
MODWASH - UPPER ALLEN TOWNSHIP, PA  
prepared for  
HUTTON MECHANICSBURG PA ST, LLC  
situated in  
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

Morris Knowles & Associates, Inc.  
(A Hammontree Company)  
Consulting Engineers and Land Surveyors  
443 Athena Drive  
Pottsville, PA 17866  
Telephone: (724) 468-4840  
Fax: (724) 468-8940  
info@morrisknowles.com www.morrisknowles.com

DESIGNED BY: EMC  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 1856.66

SCALE:  
1" = 20'

REVISION BY: MMZ  
REVISION BY: GJV  
REVISION BY: GJV  
REVISION BY: GJV  
REVISION BY: GJV

DATE: 02/09/22  
DATE: 02/09/22  
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DESCRIPTION: REVISED PER TOWNSHIP COMMENTS/OWNER  
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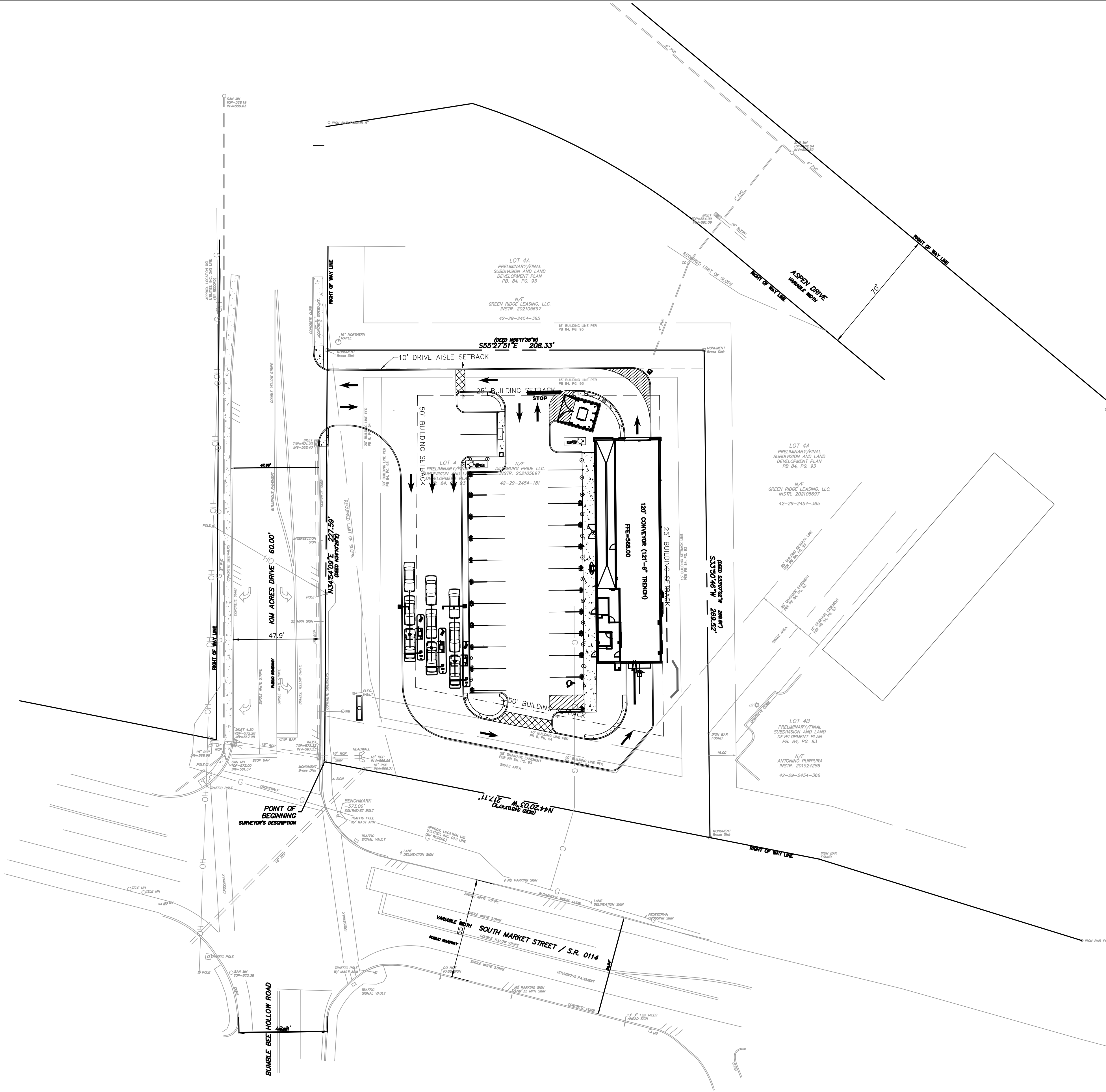
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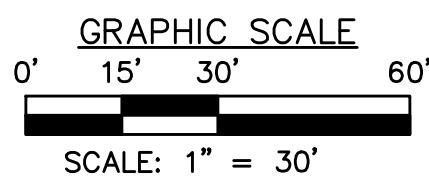
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EM - ELECTRIC METER  
S.R. - STATE ROUTE  
TELE - TELEPHONE  
RCP - REINFORCED CONCRETE PIPE  
OPP - CORRUGATED PLASTIC PIPE

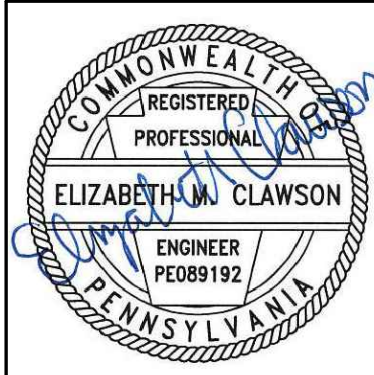
- G - GAS LINE  
W - WATER LINE  
T - SUBSURFACE TELEPHONE LINE  
E - SUBSURFACE ELECTRIC LINE  
OH - OVERHEAD WIRES  
- - 908 - - EXISTING CONTOURS  
- - - - - EXISTING INLET  
- - - - - EXISTING MANHOLE  
- - - - - EXISTING SEWER  
- X - X - FENCE



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**SITE OVERVIEW**  
**MODWASH - UPPER ALLEN TOWNSHIP, PA**  
*prepared for*  
**HUTTON MECHANICSBURG PA ST, LLC**  
*situated in*  
**UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA**

**MKA** **Morris Knowles & Associates, Inc.**  
*Consulting Engineers and Land Surveyors*  
(A Hammontree Company)  
443 Athena Drive  
Pottsville, PA 17854  
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info@morrisknowles.com www.morrisknowles.com

DESIGNED BY: EMC  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 1856.66

SCALE:  
1" = 30'

REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:

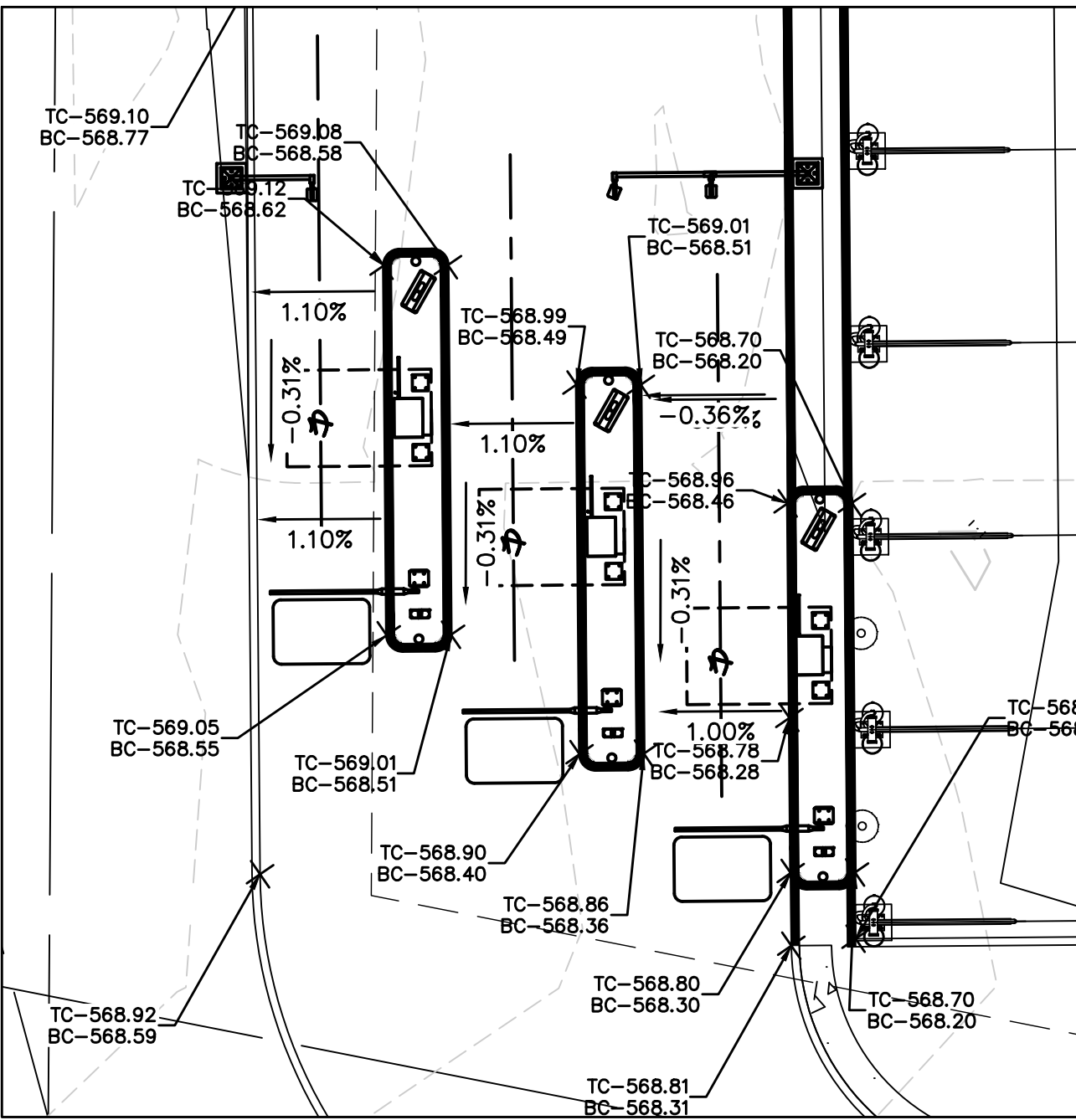
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GRADING NOTES:

1. THE CONTRACTOR SHALL COMPACT ALL FILL MATERIALS OUTSIDE OF PROPOSED BUILDING AREAS, PLACED IN LIFTS, AND COMPACTED TO 90% OF MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR) OR 95% BY ASTM-D698 (STANDARD PROCTOR). PLACE FILL IN EIGHT-INCH LIFTS AND COMPACT WITH AN IMPACT-TYPE ROLLER (I.E. SHEEPSFOOT ROLLER). PROVIDE FOR INSPECTION OF ALL FILL AS IT IS PLACED FOR PROPER DENSITY BY A GEOTECHNICAL TESTING FIRM.
2. ALL CUT AND FILL OPERATIONS SHALL FOLLOW THE "PENNSYLVANIA HANDBOOK OF BEST MANAGEMENT PRACTICES" FOR DEVELOPING AREAS.
3. THE CONTRACTOR SHALL NOT EXCEED A MAXIMUM GRADE BREAK OF 8% IN THE PROPOSED DRIVEWAYS.
4. THE CONTRACTOR SHALL CONTROL DUST ON THE SITE IN ACCORDANCE WITH PA DEP REQUIREMENTS.
5. THE CONTRACTOR SHALL NOT REMOVE SOIL FROM THE SITE. IF THE CONTRACTOR DISCOVERS CONTAMINATED SOIL ON THE SITE DURING CONSTRUCTION ACTIVITIES, THEN THE SOILS SHALL BE CLEANED AND DISPOSED OF AT AN APPROVED LANDFILL IN ACCORDANCE WITH PADEP RULES, REGULATIONS AND REQUIREMENTS.
6. HANDICAPPED SPACES AND ACCESS ISLES MAXIMUM SLOPE IS 2% IN ALL DIRECTIONS.



PAY STATION DETAIL

SCALE: 1" = 10'



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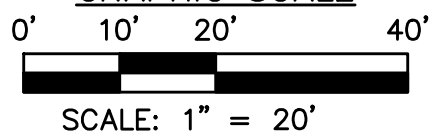
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LEGEND

- |      |   |                          |   |    |   |                           |
|------|---|--------------------------|---|----|---|---------------------------|
| SAN  | - | SANITARY                 | - | G  | - | GAS LINE                  |
| ST   | - | STORM                    | - | W  | - | WATER LINE                |
| MH   | - | MANHOLE                  | - | T  | - | SUBSURFACE TELEPHONE LINE |
| TOP  | - | TOP OF CASTING           | - | E  | - | SUBSURFACE ELECTRIC LINE  |
| INV  | - | INVERT / FLOW LINE       | - | OH | - | OVERHEAD WIRES            |
| WV   | - | WATER VALVE              | - | -  | - | EXISTING CONTOURS         |
| GV   | - | GAS VALVE                | - | -  | - | EXISTING INLET            |
| GM   | - | GAS METER                | - | -  | - | EXISTING MANHOLE          |
| EM   | - | ELECTRIC METER           | - | -  | - | EXISTING SEWER            |
| S.R. | - | STATE ROUTE              | - | -  | - | EXISTING FENCE            |
| TEL  | - | TELEPHONE                | - | -  | - |                           |
| RCP  | - | REINFORCED CONCRETE PIPE | - | -  | - |                           |
| CPP  | - | CORRUGATED PLASTIC PIPE  | - | -  | - |                           |

GRAPHIC SCALE



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GRADING/DRAINAGE PLAN

MODWASH - UPPER ALLEN TOWNSHIP, PA

HUTTON MECHANICSBURG PA ST, LLC

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

Morris Knowles & Associates, Inc.

(A Hammontree Company)

Consulting Engineers and Land Surveyors

443 Altema Drive  
P.O. Box 100  
Pottsville, PA 17860  
Telephone: (724) 688-8640  
Fax: (724) 688-8640  
info@morrisknowles.com www.morrisknowles.com

SCALE:  
1" = 20'

DESIGNED BY: EMC  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 1856.66

REVISION BY: MMZ  
DATE: 02/09/22

REVISION BY:	DATE:	DESCRIPTION:	REVISION BY:	DATE:	DESCRIPTION:

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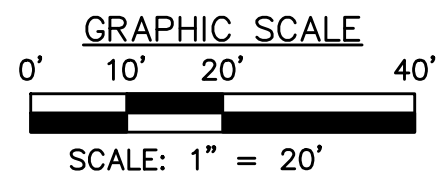


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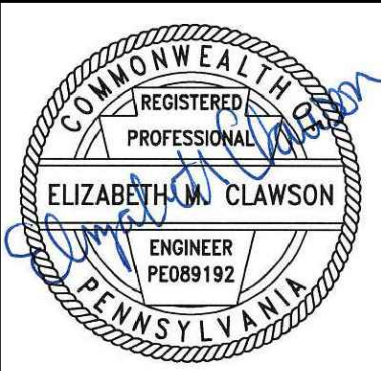
LEGEND	
SAN - SANITARY	G - GAS LINE
ST - STORM	W - WATER LINE
MH - MANHOLE	T - SUBSURFACE TELEPHONE LINE
TOP - TOP OF CASTING	E - SUBSURFACE ELECTRIC LINE
INV - INVERT / FLOW LINE	OH - OVERHEAD WIRES
WV - WATER VALVE	- - 908 - - EXISTING CONTOURS
GV - GAS VALVE	- - 908 - - EXISTING INLET
GM - GAS METER	--- EXISTING MANHOLE
EM - ELECTRIC METER	--- EXISTING SEWER
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TELE - TELEPHONE	
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**CAR WASH TUNNEL ENTRANCE GRADING PLAN**  
**MODWASH - UPPER ALLEN TOWNSHIP, PA**  
prepared for  
**HUTTON MECHANICSBURG PA ST, LLC**  
situated in  
**UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA**

**Morris Knowles & Associates, Inc.**  
(A Hammontree Company)  
Consulting Engineers and Land Surveyors  
443 Athena Drive  
Pottsville, PA 17866  
Telephone: (724) 468-8840  
Fax: (724) 468-8840  
info@morrisknowles.com www.morrisknowles.com

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DESIGNED BY: GJV  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 1856.66

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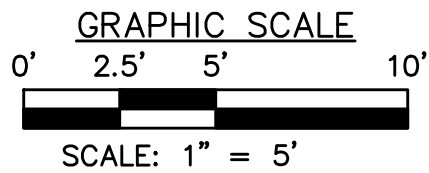


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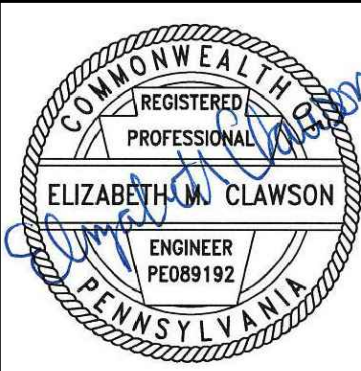
- LEGEND**
- |      |   |                          |     |   |                           |
|------|---|--------------------------|-----|---|---------------------------|
| SAN  | - | SANITARY                 | G   | - | GAS LINE                  |
| ST   | - | STORM                    | W   | - | WATER LINE                |
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| TOP  | - | TOP OF CASTING           | E   | - | SUBSURFACE ELECTRIC LINE  |
| INV  | - | INVERT / FLOW LINE       | OH  | - | OVERHEAD WIRES            |
| WV   | - | WATER VALVE              | 908 | - | EXISTING CONTOURS         |
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| S.R. | - | STATE ROUTE              | --- | - | FENCE                     |
| TELE | - | TELEPHONE                | X-X | - |                           |
| RCP  | - | REINFORCED CONCRETE PIPE |     | - |                           |
| CPP  | - | CORRUGATED PLASTIC PIPE  |     | - |                           |



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**KIM ACRES DR SIDEWALK DETAILS**  
**MODWASH - UPPER ALLEN TOWNSHIP, PA**  
prepared for  
**HUTTON MECHANISBURG PA ST, LLC**  
situated in  
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

**MKA Morris Knowles & Associates, Inc.**  
(A Hammontree Company)  
Consulting Engineers and Land Surveyors  
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Telephone: (724) 468-4626  
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info@morrisknowles.com www.morrisknowles.com

DESIGNED BY: EMC  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 18566.66

SCALE:  
1" = 20'

REVISION BY:	MMZ	DATE:	02/09/22
REVISION BY:		DATE:	
REVISION BY:		DATE:	
REVISION BY:		DATE:	
REVISION BY:		DATE:	

DESCRIPTION:	REVISED PER TOWNSHIP COMMENTS/OWNER
DESCRIPTION:	
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DESCRIPTION:	

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WATERLINE NOTES:

1. WATERLINE SHALL CONFORM TO AWWA C900 FOR PVC PLASTIC PIPE. PVC WATERLINE PIPE SHALL BE CLASS 200, DR-14 PVC PIPE. FITTINGS SHALL CONFORM TO AWWA C110.
2. WATERLINES CROSSING SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATERLINE AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATERLINE IS EITHER ABOVE OR BELOW THE SEWER. AT CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.
3. ALL TYPES OF INSTALLED WATER PIPE SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C600.
4. ALL NEW, CLEANED OR REPAIRED WATERLINES SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651.
5. ALL WATERLINE PIPES, FITTINGS AND ACCESSORIES SHALL CONFORM TO THE REQUIREMENTS OF THE FOLLOWING STANDARD SPECIFICATIONS: A.21.10 ANSI, A.21.11 ANSI, A.21.50 ANSI, A.21.51 ANSI, AND A.21.4 ANSI.
6. SHOP DRAWINGS AND CATALOG CUTS FOR ALL MATERIALS USED IN CONSTRUCTION MUST BE APPROVED BY THE AUTHORITY PRIOR TO THE START OF WORK.
7. ALL MATERIALS FOR THE PROPOSED WATERLINE SHALL BE PURCHASED FROM THE MUNICIPAL AUTHORITY OF CUMBERLAND COUNTY.
8. THE PROPOSED WATERLINE SHALL BE IN ACCORDANCE WITH THE MUNICIPAL AUTHORITY OF CUMBERLAND COUNTY SPECIFICATIONS. THE AUTHORITY WILL INSPECT THE INSTALLATION OF WATERLINES AND CONNECTIONS.

UTILITY NOTES:

1. ALL EXISTING UTILITIES SERVING THIS PROPERTY SHALL BE PROPERLY TERMINATED AT THE RIGHT-OF-WAY LINE IN COMPLIANCE WITH TOWNSHIP AND COUNTY REGULATIONS. CONTRACTOR SHALL PROVIDE EVIDENCE OF COMPLIANCE WITH ALL STATE AND FEDERAL LAWS REGARDING THE DEMOLITION OF STRUCTURES AND ABANDONMENT OF UTILITIES.
2. ANY UTILITIES FOUND DURING EXCAVATION, NOT SHOWN ON PLAN, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
3. EACH SUBCONTRACTOR SHALL OBTAIN HIS OR HER OWN PERMITS AND CONTACT THE UTILITY COMPANY FOR VERIFICATION AND LOCATION OF HOOK-UP PRIOR TO ANY WORK BEING DONE.
4. UTILITIES SHOWN WERE TAKEN IN PART FROM RECORDS OF RESPECTIVE UTILITY COMPANIES AND PART FROM A SURVEY AND DO NOT NECESSARILY REPRESENT ALL UNDERGROUND OR OVERHEAD UTILITIES ADJACENT TO OR UPON THE PREMISES SHOWN ON THE PLAN.
5. THE CONTRACTOR SHALL COORDINATE UTILITY CONNECTIONS AND SIZE AT THE BUILDING WITH THE MECHANICAL DRAWINGS AND PROVIDE CONNECTIONS WITH EXISTING UTILITIES IN ACCORDANCE WITH THE UTILITY PROVIDER'S REQUIREMENTS.
6. ALL UTILITIES SHALL BE UNDERGROUND.
7. ALL UTILITIES SHALL BE CONSTRUCTED, INSPECTED AND TESTED IN ACCORDANCE WITH THE BOROUGH, CITY, AUTHORITY, OR COUNTY STANDARDS AND REGULATIONS. THE ENGINEERING DEPARTMENT SHALL BE NOTIFIED A MINIMUM OF 24 HOURS IN ADVANCE FOR SCHEDULING OF AN INSPECTOR IF REQUIRED.
8. ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
9. CONTRACTOR SHALL VERIFY THE LOCATION AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS AND SHUT-OFFS WITH UTILITY PROVIDERS.
11. THE CONTRACTOR SHALL COORDINATE THE ARCHITECTURAL ROOF DRAIN LOCATIONS WITH THE SITE PLAN AND OUTLET THEM INTO THE NEAREST INLET BOX.

SANITARY SEWER NOTES:

1. SANITARY SEWER LATERAL SHALL BE 6" DIAMETER OF PVC ASTM D-3034, SDR-35 WITH RUBBER GASKET JOINTS OR APPROVED EQUAL. LATERALS SHALL BE CONSTRUCTED WITH MINIMUM 1.0% SLOPE AND HAVE A MINIMUM OF 4'-0" COVER.
2. SANITARY SEWER MAINS SHALL BE 8" DIAMETER OF PVC ASTM D-3034, SDR-35 WITH RUBBER GASKET JOINTS OR APPROVED EQUAL. LATERALS SHALL BE CONSTRUCTED WITH MINIMUM 1.0% SLOPE AND HAVE A MINIMUM OF 4'-0" COVER.
3. ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
4. SANITARY SEWERS SHALL BE TESTED BY LOW PRESSURE AIR TESTS AND/OR OTHER TESTS AS REQUIRED BY THE AUTHORITY.
5. MANHOLE UDS SHALL BE EQUIPPED WITH SELF-SEALING GASKETS.
6. SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED.
7. THE MUNICIPAL AUTHORITY WILL INSPECT ALL SANITARY SEWER LINES AND LATERALS.
8. THE CONTRACTOR SHALL INSTALL NEW SANITARY SEWER LATERALS FROM THE BUILDING TO THE SANITARY SEWER MAIN LINE. EXISTING LATERALS UNDER EXISTING ROADS MAY BE USED, BUT THEY MUST BE VIDEOED AND LINED IN ACCORDANCE WITH THE AUTHORITY'S REQUIREMENTS.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY CHANGES IN DESIGN PLANS UNLESS WRITTEN CONSENT IS GIVEN BY THE ENGINEER. THE CONTRACTOR AND/OR THE OWNER WILL BE HELD RESPONSIBLE FOR ANY FIELD MODIFICATIONS MADE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER AND NECESSARY APPROVALS BY PERMITTING AGENCIES.

THE LOCATION OF EXISTING UTILITIES WERE TAKEN FROM RECORDS AND MARKING PROVIDED BY OTHERS AND OBSERVED EVIDENCE. THE LOCATIONS SHOWN MAY BE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS, SIZES AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO ALL EXISTING UTILITIES.

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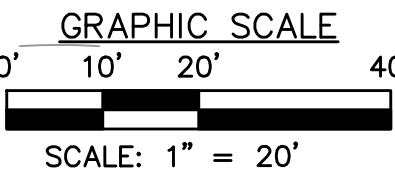
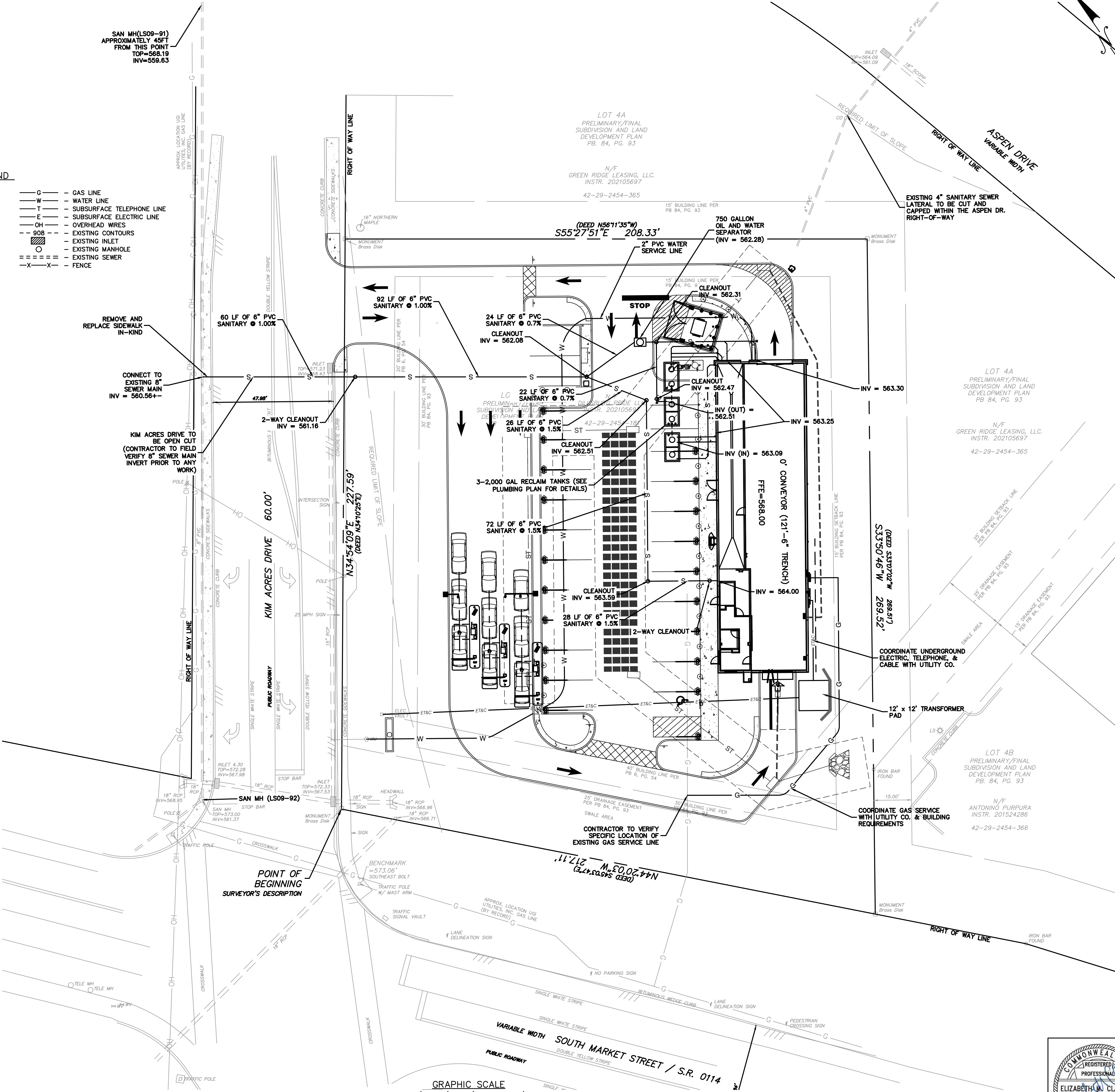
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THE GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED IN THE SITE NO MORE TEN DAYS AND NO LESS THAN THREE DAYS IN ADVANCE OF EXCAVATION (PA ACT 287 OF 1974 AMENDED BY ACT 50 OF 2018). PA STATE LAW REQUIRES 3 WORKING DAYS NOTICE

LEGEND

- |      |   |                          |   |           |   |                           |
|------|---|--------------------------|---|-----------|---|---------------------------|
| SAN  | - | SANITARY                 | - | G         | - | GAS LINE                  |
| ST   | - | STORM                    | - | W         | - | WATER LINE                |
| MH   | - | MANHOLE                  | - | T         | - | SUBSURFACE TELEPHONE LINE |
| TOP  | - | TOP OF CASTING           | - | E         | - | SUBSURFACE ELECTRIC LINE  |
| INV  | - | INVERT / FLOW LINE       | - | OH        | - | OVERHEAD WIRES            |
| WV   | - | WATER VALVE              | - | -- 908 -- | - | EXISTING CONTOURS         |
| GV   | - | GAS VALVE                | - | ///       | - | EXISTING INLET            |
| GM   | - | GAS METER                | - | ○         | - | EXISTING MANHOLE          |
| EM   | - | ELECTRIC METER           | - | ==        | - | EXISTING SEWER            |
| S.R. | - | STATE ROUTE              | - | -X-X-     | - | FENCE                     |
| TELE | - | TELEPHONE                | - |           |   |                           |
| RCP  | - | REINFORCED CONCRETE PIPE | - |           |   |                           |
| CPP  | - | CORRUGATED PLASTIC PIPE  | - |           |   |                           |

- |           |   |                           |
|-----------|---|---------------------------|
| -G-       | - | GAS LINE                  |
| -W-       | - | WATER LINE                |
| -T-       | - | SUBSURFACE TELEPHONE LINE |
| -E-       | - | SUBSURFACE ELECTRIC LINE  |
| -OH-      | - | OVERHEAD WIRES            |
| -- 908 -- | - | EXISTING CONTOURS         |
| ///       | - | EXISTING INLET            |
| ○         | - | EXISTING MANHOLE          |
| ==        | - | EXISTING SEWER            |
| -X-X-     | - | FENCE                     |



UTILITY PLAN

MODWASH - UPPER ALLEN TOWNSHIP, PA

prepared for  
HUTTON MECHANICSBURG PA ST, LLC

situated in  
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

**MKA** Morris Knowles & Associates, Inc.  
(A Hammontree Company)  
Consulting Engineers and Land Surveyors

443 Athena Drive  
Pottsville, PA 17866  
Telephone: (724) 468-4626  
Fax: (724) 468-8640  
info@morrisknowles.com www.morrisknowles.com

SCALE:  
1" = 20'

DESIGNED BY: EMC  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 1856.66

REVISION BY: MMZ  
REVISION BY: EMC  
REVISION BY: GJV  
REVISION BY: GJV  
REVISION BY: GJV

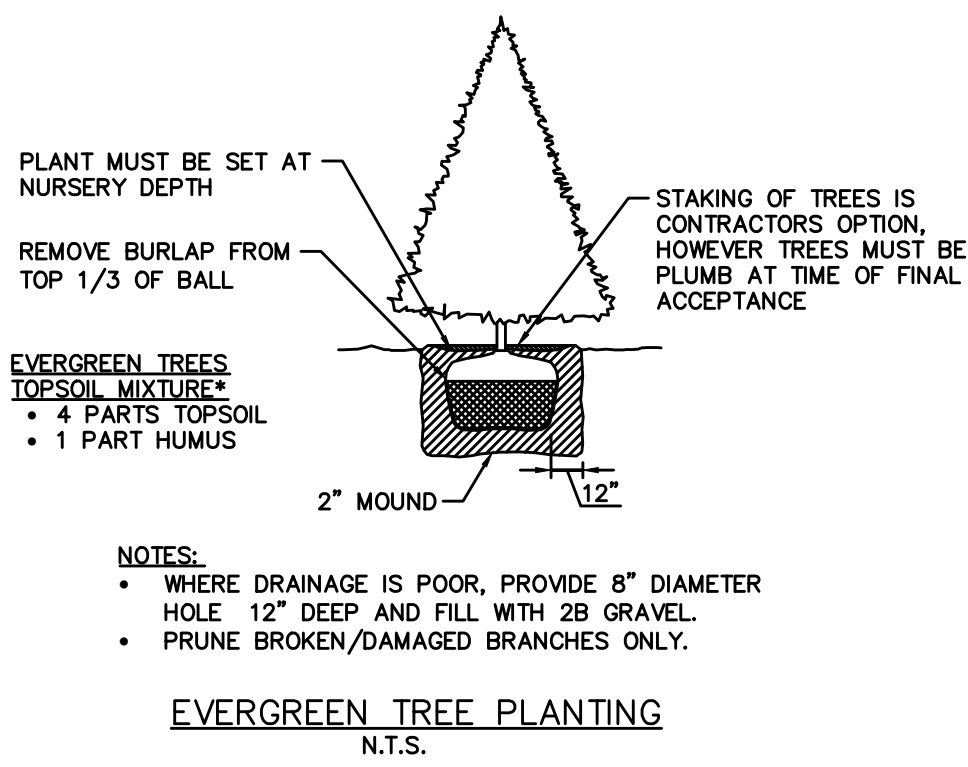
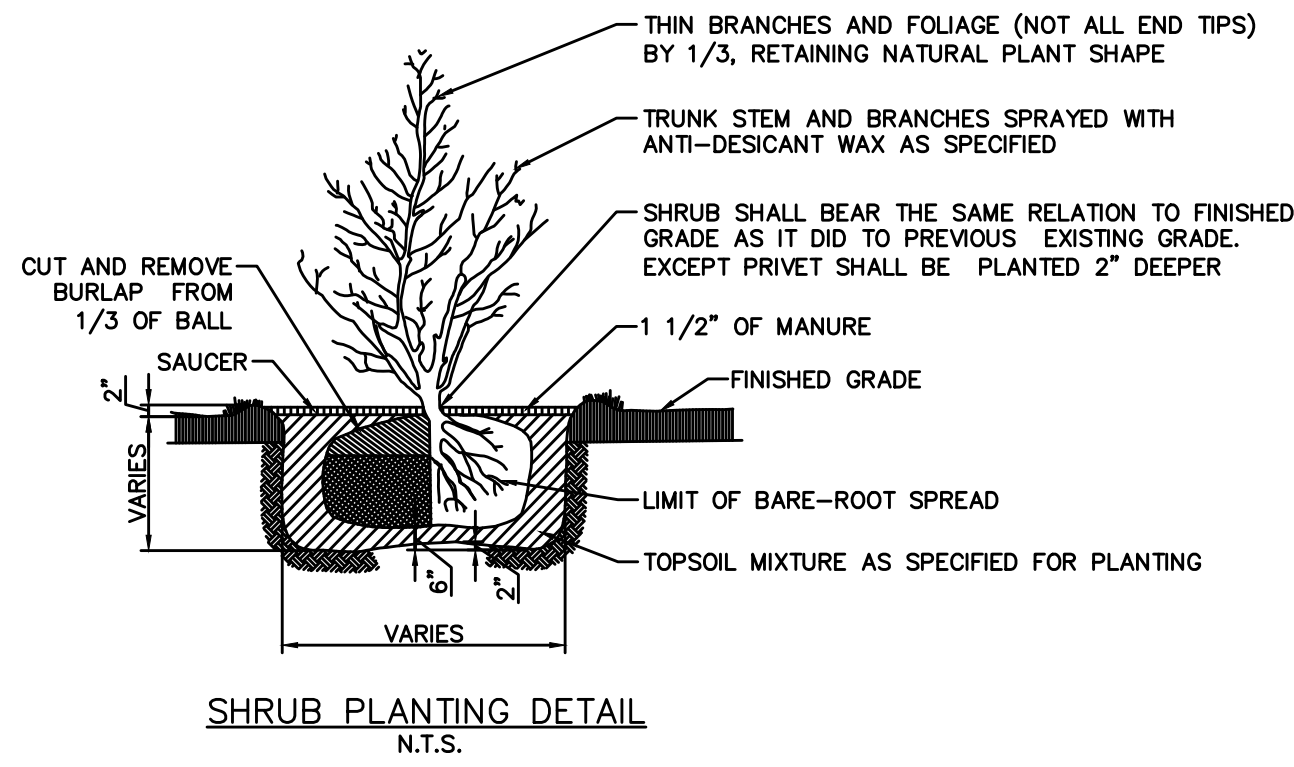
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LAST SAVE: Feb 08, 2022 - 10:00am



LANDSCAPING NOTES:

- ALL PLANTING BEDS SHALL RECEIVE 3" DOUBLE SHREDDED BARK MULCH.
- ALL PLANTING BEDS SHALL BE BACKFILLED WITH 6" DEPTH CLEAN TOPSOIL FREE OF BUILDING DEBRIS, CRUSHED ROCK, MORTAR MIX, ETC.
- REPAIR/RESEED ALL DISTURBED AREAS WITH SPECIFIED SEED MIXTURES.
- SEED ALL 2:1 OR STEEPER SLOPES WITH BIRDSFOOT TREFLOID AND TALL FESCUE MIX.
- ALL DISTURBED AREAS LESS 2:1 SLOPE SHALL BE SEED WITH LAWN SEEDING MIXTURE.
- ALL LAWN AREAS SHALL BE BACKFILLED WITH 6" DEPTH CLEAN TOPSOIL FREE OF BUILDING DEBRIS, CRUSHED ROCK, MORTAR MIX, ETC.
- ALONG SIDEWALKS, FOUNDATIONS AND CURBINGS, UNDER-RUN FROM CONCRETE FORMS SHALL BE BROKEN AWAY AND REMOVED.
- PRIOR TO CONSTRUCTION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE IN THE FIELD THE LOCATIONS OF ALL EXISTING UTILITIES.
- ALL PLANT MATERIALS SHALL BE OF SPECIMEN QUALITY AND COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK (MOST CURRENT EDITION).
- ALL PLANT MATERIAL TO BE RE-USED SHALL BE TAGGED BY OWNER. ALL EXISTING PLANT MATERIAL TO BE RE-USED SHALL BE STORED AS SHOWN ON PLAN PRIOR TO PLANTING DURING CONSTRUCTION.
- TREE TRUNKS AND EXPOSED ROOTS DAMAGED DURING EQUIPMENT OPERATIONS SHALL BE TREATED IN ACCORDANCE WITH ARBORICULTURAL STANDARDS. DAMAGED TREE LIMBS SHALL BE CUT BACK TO THE NEXT LATERAL BRANCH OR PARENT STEM AT THE BRANCH COLLAR.
- ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT TIME OF PLANTING.
- THE OWNER RESERVES THE RIGHT TO REJECT ANY AND ALL PLANT MATERIAL DEEMED NOT ACCEPTABLE.
- ALL PLANTS AND STAKES SHALL BE SET PLUMB UNLESS OTHERWISE SPECIFIED.
- REMOVE BURLAP, ROSES, WIRE, AND OTHER NON-BIODEGRADABLE MATERIALS FROM THE ROOT BALLS AFTER FINAL POSITIONING.
- SPADE CUT ALL BED EDGES AND MULCHED RINGS ARE TO BE SPADE CUT TO A DEPTH OF 6", CUT AT 90° TO THE FINISHED GRADE AND THEN BACK TOWARD THE PLANT BED AT 45°.
- TOPSOIL SHALL BE FROM A NATURALLY WELL DRAINED SITE WHERE SOIL OCCURS AT A DEPTH OF AT LEAST 4". TOPSOIL SHOULD HAVE A PH OF 5.5 TO 7 WITH 4 PERCENT ORGANIC MATERIAL MINIMUM AND BE FREE OF STONES 1" DIAMETER OR LARGER, ROOTS, PLANTS, CLAY LUMPS AND OTHER MATERIALS HARMFUL TO PLANT GROWTH.
- ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY, IF NECESSARY, DURING THE FIRST GROWING SEASON.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DEAD PLANT MATERIAL FROM NATURAL CAUSES INSTANTLY THESE REQUIREMENTS FOR A PERIOD OF ONE (1) YEAR AFTER THE INSTALLATION DATE. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/APPLICANT TO ASSURE THE CONTINUED GROWTH OF ALL REQUIRED LANDSCAPING AND/OR TO REPLACE THE SAME IN THE EVENT OF FROST, VANDALISM, DISEASE, OR OTHER REASONS FOR DISCONTINUED GROWTH OF THE REQUIRED TREES, SHRUBS, AND BRUSHES. IT IS THE OWNER'S RESPONSIBILITY FOR ALL FUTURE MAINTENANCE. NO PERSON SHALL REMOVE ANY LANDSCAPING (i.e. TREES, SHRUBS, OR BRUSHES) AFTER THE SAME HAS BEEN PLANTED UNLESS THE SAME ARE REPLACED WITH AN EQUIVALENT TREE, SHRUB, OR BUSH.
- PERMANENT SEEDING SHALL BE REQUIRED FOR ALL DISTURBED SLOPE AREAS WITHIN FOURTEEN (14) DAYS OF COMPLETION OF GRADING OPERATIONS, WEATHER PERMITTING.
- THE CONTRACTOR SHALL NOT PLANT SHRUBS IN AREAS UNDERLAIN BY SHALLOW DEPTH TO ROCK.
- AFTER PLANTS ARE ESTABLISHED, ALL PLANT STAKING SHALL BE REMOVED.



PERMANENT STABILIZATION

- SPECIES :
- POA PRATENSIS (KENTUCKY BLUEGRASS) 90% PURE LIVE SEED, APPLICATION RATE 50LBS/AC
  - FESTUCA RUBRA VAR. 'PENNLAWN' (PENNLAWN RED FESCUE) 98% PURE LIVE SEED, APPLICATION RATE 30LBS/AC
  - LOLIUM PERENNE (PERENNIAL RYEGRASS) 98% PURE LIVE SEED, APPLICATION RATE 20LBS/AC
- FERTILIZER: COMMERCIAL FERTILIZER, 10-20-20, 1,000 LBS./ACRE
- LIMING: 4,000 LBS./ACRE
- MULCH: WHEAT OR OAT STRAW WELL CURED TO LESS THAN 20% MOISTURE BY WEIGHT, 5,800 POUNDS PER ACRE
- SEEDING DATES: SPRING - MARCH TO MAY 30, FALL - SEPTEMBER 1 TO OCTOBER 15

PERMANENT-STEEP SLOPE

- SPECIES: BIRDSFOOT TREFLOID AND TALL FESCUE MIX
- % PURE LIVE SEED: 99%
- APPLICATION RATE: 10 AND 50 LBS./ACRE, RESPECTIVELY
- FERTILIZER TYPE: COMMERCIAL FERTILIZER 5-10-10
- FERTILIZER APPL. RATE: (PER TESTING) 30 LBS./ACRE
- LIMING RATE: 1 TONS/ACRE MULCH TYPE: HAY & STRAW
- MULCHING RATE: 3 TONS/ACRE
- ANCHORING MATERIAL: NONASPHALTIC MATERIAL
- ANCHORING METHOD: SPRAY
- RATE OF ANCHORING MATERIAL APPL.: 1000 GAL/SQ.YD.
- SEEDING DATES: APRIL-SEPT.

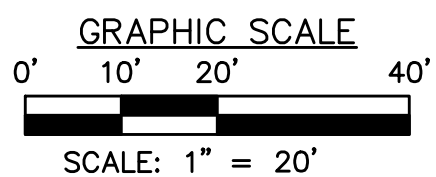


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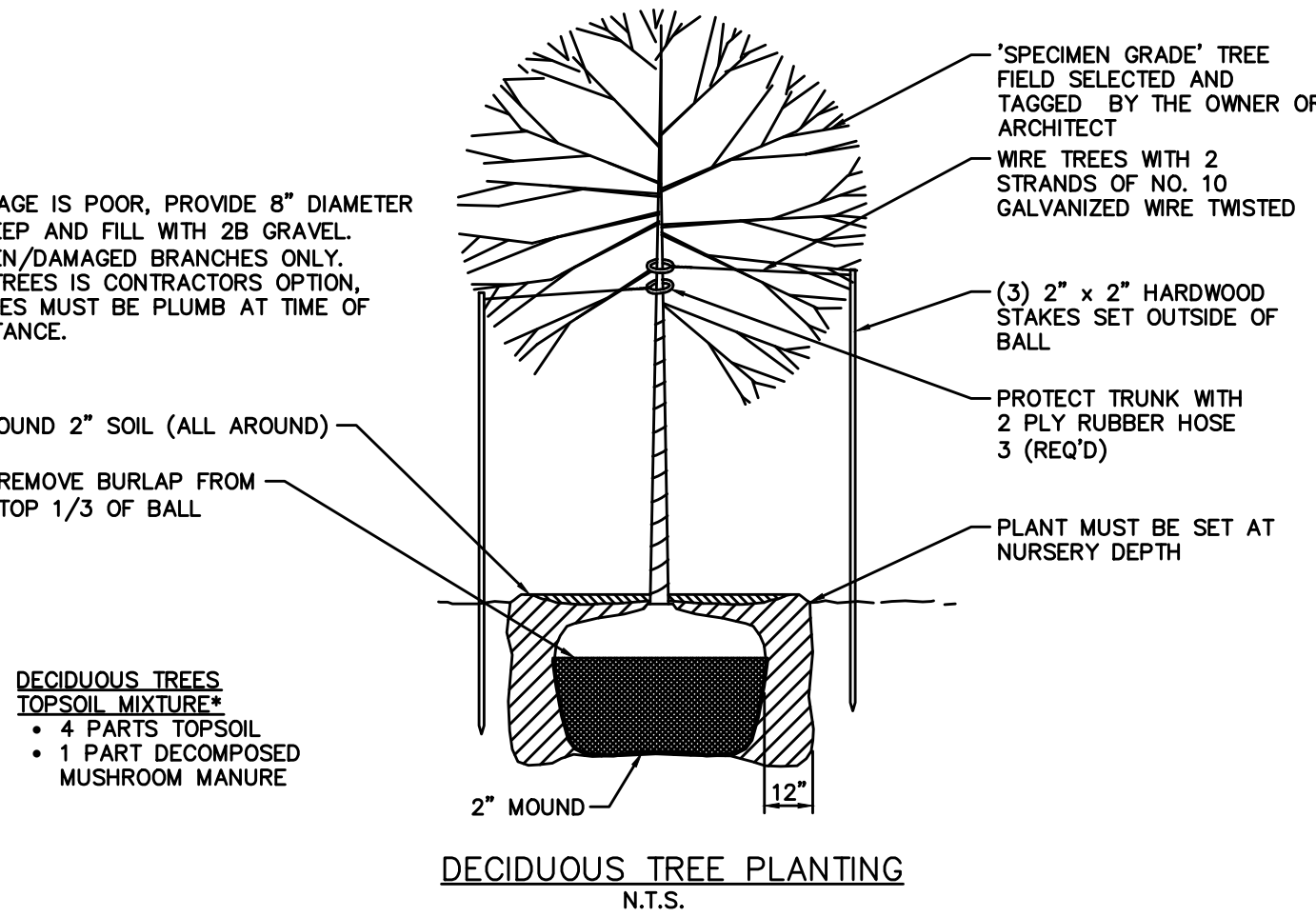
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ST - STORM  
MH - MANHOLE  
TOP - TOP OF CASTING  
INV - INVERT / FLOW LINE  
WV - WATER VALVE  
GV - GAS VALVE  
GM - GAS METER  
EM - ELECTRIC METER  
SR - STATE ROUTE  
TEL - TELEPHONE  
RCP - REINFORCED CONCRETE PIPE  
CPP - CORRUGATED PLASTIC PIPE
- G — GAS LINE  
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— OH — OVERHEAD WIRES  
— — — — — EXISTING CONTOURS  
— — — — — EXISTING INLET  
— — — — — EXISTING MANHOLE  
— — — — — EXISTING SEWER  
— X — FENCE



PLANTING SCHEDULE

LEGEND	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	HEIGHT
	BUXMW	14	Buxus microphylla 'Wintergreen'	Littleleaf Boxwood	36"	Evergreen	4'-5' 3'-4'
	ILGO	28	Ilex glabra 'Densa'	Densa Compact Inkberry	15"	Evergreen	3'-4' 4'-5'
	CERC	8	Cotinus coggygria	Common Smoketree	6" B & B	Deciduous Clump Form	25'-30' 20'-25'
	PICG	5	Pinus strobus	Eastern White Pine	4' Ht. B & B	Evergreen	40'-60' 10'-20'

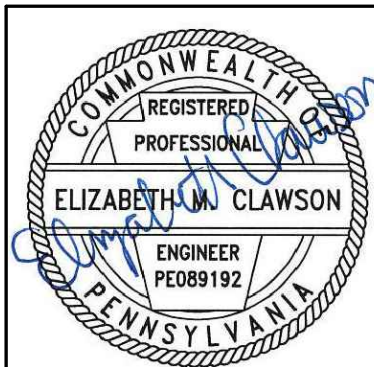
LEGEND



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LANDSCAPE PLAN

MODWASH - UPPER ALLEN TOWNSHIP, PA

HUTTON MECHANICSBURG PA ST, LLC

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

Morris Knowles & Associates, Inc.

Consulting Engineers and Land Surveyors

443 Athena Drive  
Pottsville, PA 17864  
Telephone: (724) 868-4822  
Fax: (724) 868-8940  
info@morrisknowles.com www.morrisknowles.com

SCALE:

1" = 20'

DESIGNED BY: EMC

REVIEWED BY: EMC

DRAWN BY: GJV

DATE: NOV 2021

REVISION BY:

REVISION BY:

REVISION BY:

REVISION BY:

DATE:

DATE:

DATE:

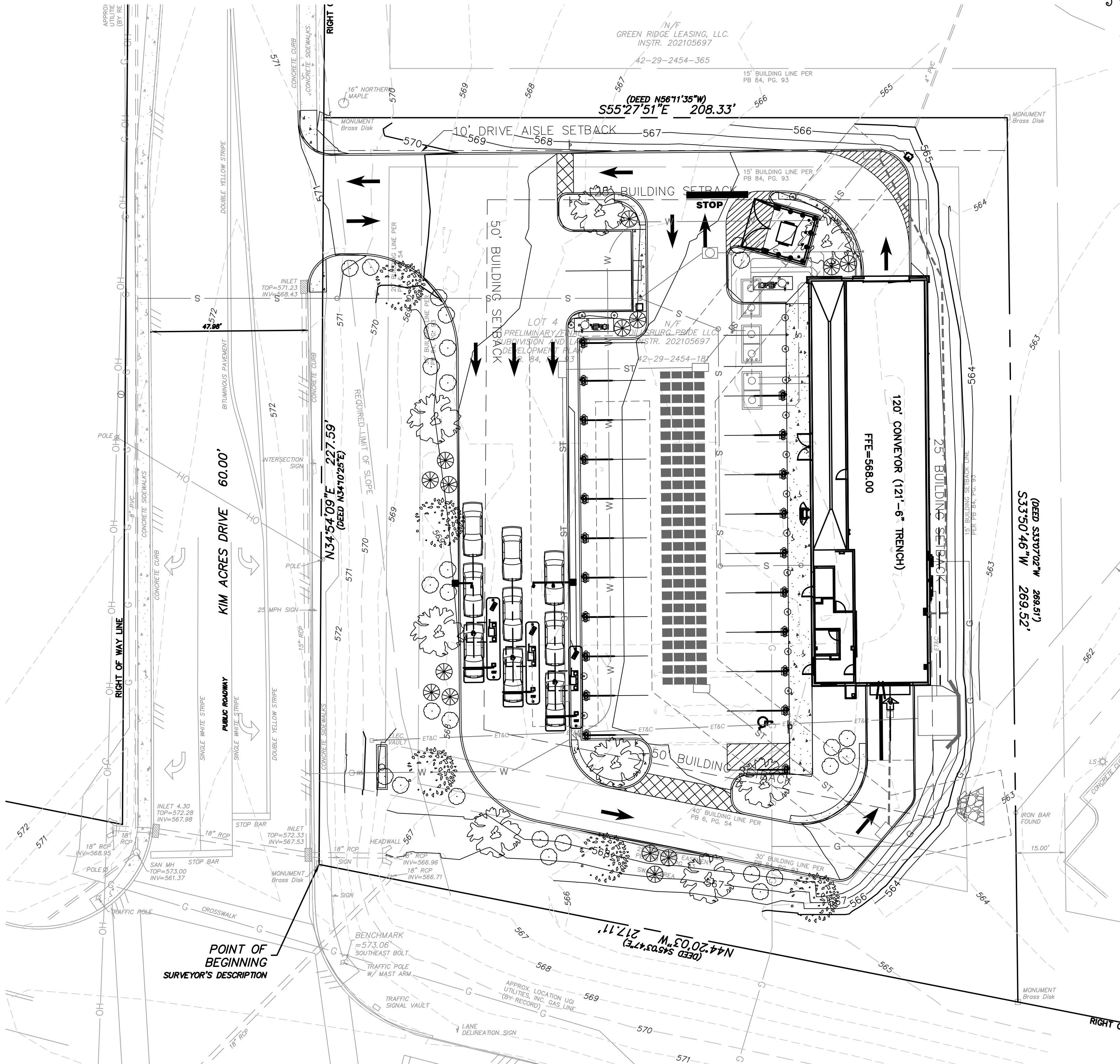
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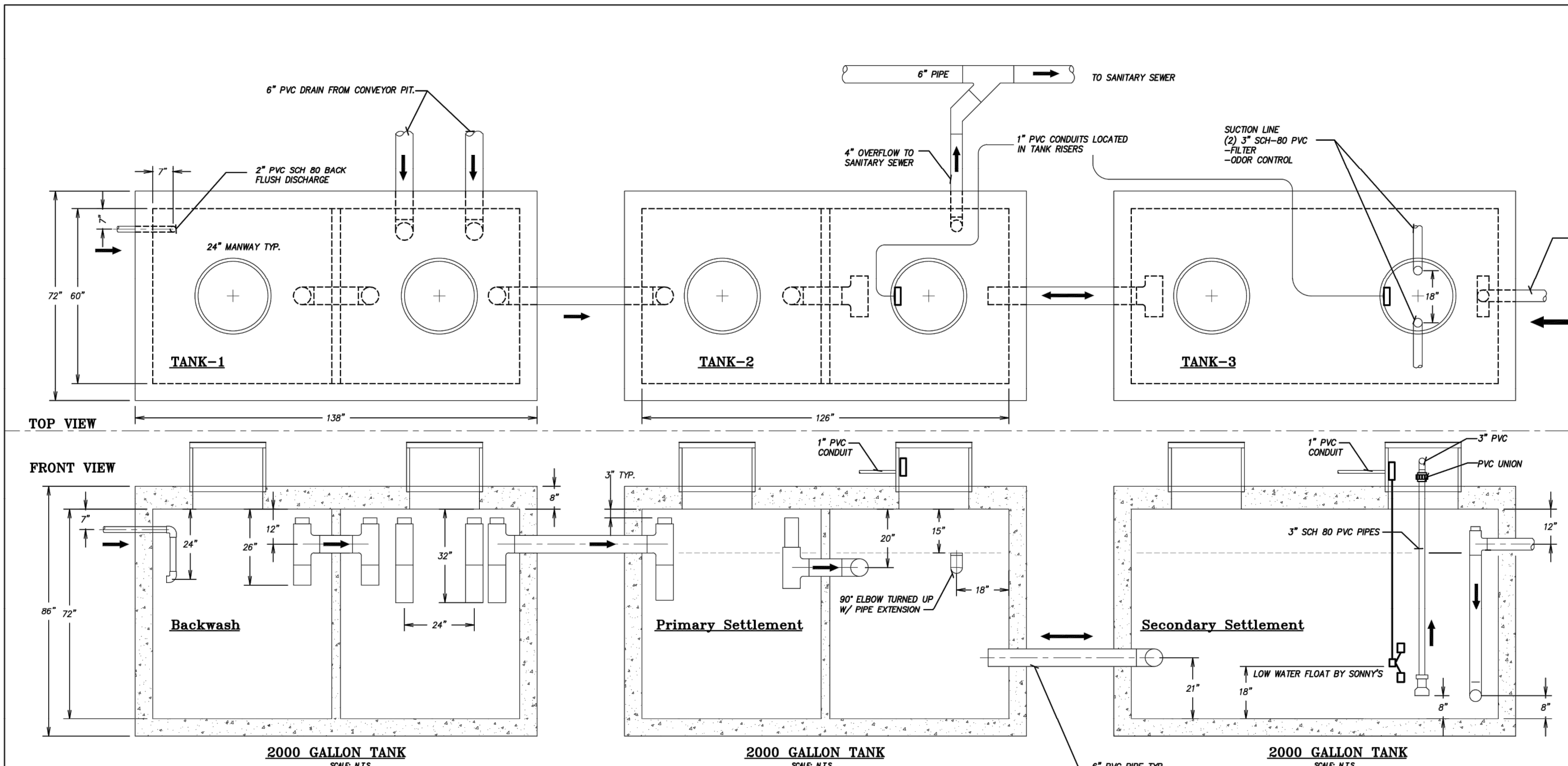
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- NOTE:**
1. Pressure Test All Suction Lines Upon Installation @ 10-15 PSI max.
  2. Keep pressure on Suction Lines for the entire DURATION of construction.
  3. Pressure should NOT drop more than 2 PSI.
  4. Watch for problems when excavating driveways.
  5. If reclaim tanks are located more than 60 feet away from reclaim unit, then increase suction line to 3" sch 80 PVC.
  6. Placement of suction lines is critical
  7. Do NOT put screens on the suction lines
  8. ANY QUESTIONS CONTACT SONNY'S.

**CAR WASH RECLAIM SYSTEM  
STANDARD Sobrite RECLAIM  
3 TANK**  
(SEE RECLAIM SHEET FOR DETAIL)

- NOTE:**
1. ALL UNDERGROUND TANKS AND PIPING BY CONTRACTOR
  2. PIPE LOCATIONS SHOULD BE USED FOR ANY TANK
  3. ALL INTERNAL TANK PLUMBING TO BE 6" sch 40 PVC UNLESS NOTED OTHERWISE
  4. ALL TANK BOTTOMS SHOULD BE LEVEL
  5. THIS DRAWING IS TO SHOW TANK HOLDING CAPACITY AND PIPING RELATIONSHIPS ONLY. THEY ARE NOT INTENDED TO ADDRESS TANK STRUCTURE ENGINEERING.

NOT FOR CONSTRUCTION UNTIL APPROVED BELOW.  
APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**DISCLAIMER**  
ALTHOUGH BUILDING CODES HAVE BEEN CONSIDERED IN DEVELOPING THIS DRAWING, VERIFICATION OF SITE SPECIFIC CONDITIONS AND COMPLIANCE WITH FEDERAL, STATE AND LOCAL BUILDING CODES IS THE EXCLUSIVE RESPONSIBILITY OF THE CUSTOMER AND/OR ARCHITECT AND ENGINEER. THESE DRAWINGS REFLECT REQUIREMENTS FOR SONNY'S FURNISHED EQUIPMENT ONLY UNLESS OTHERWISE NOTED. PLEASE REFER TO OTHER MANUFACTURERS, IF ANY, FOR THEIR EQUIPMENT REQUIREMENTS.

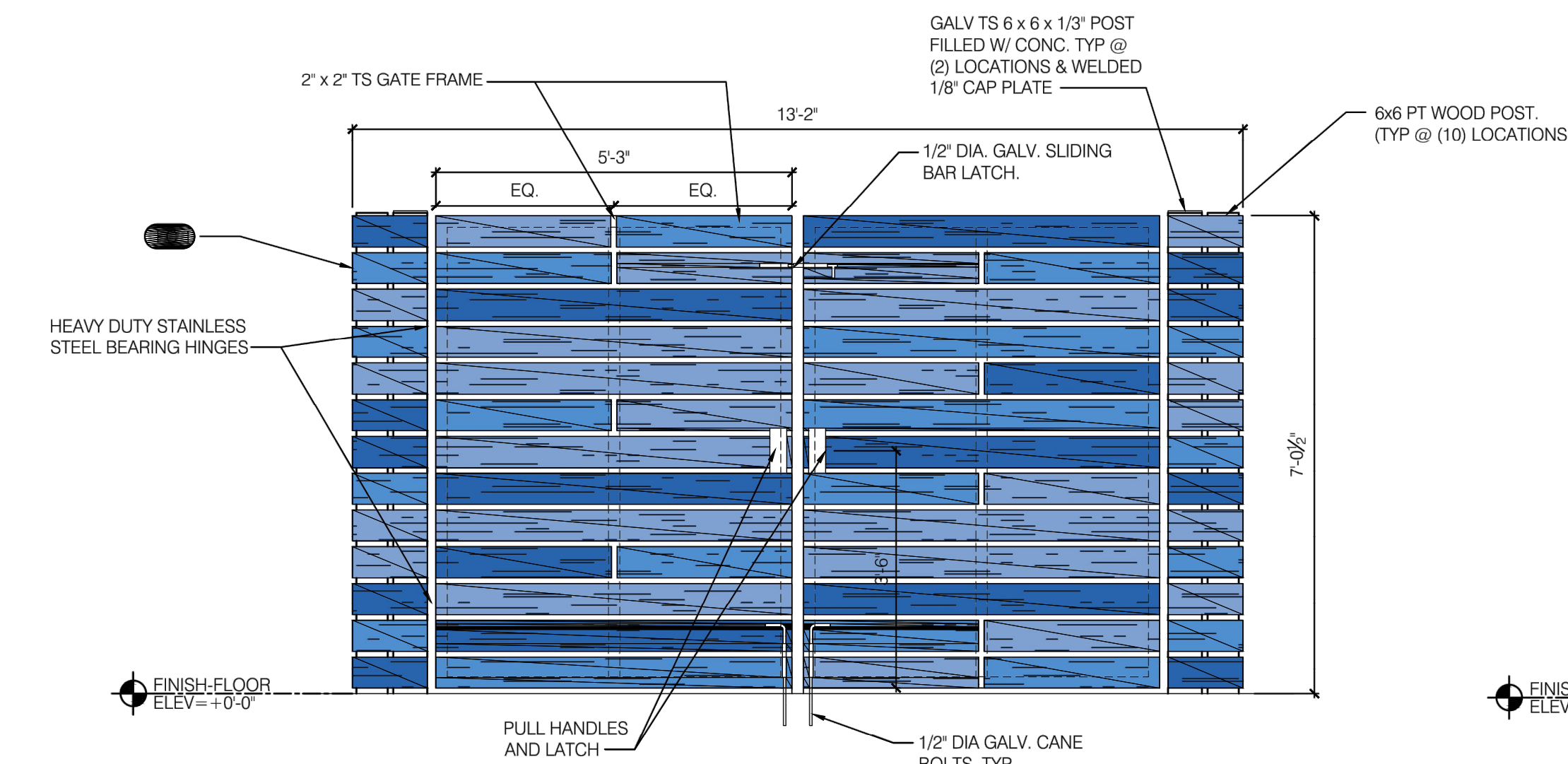
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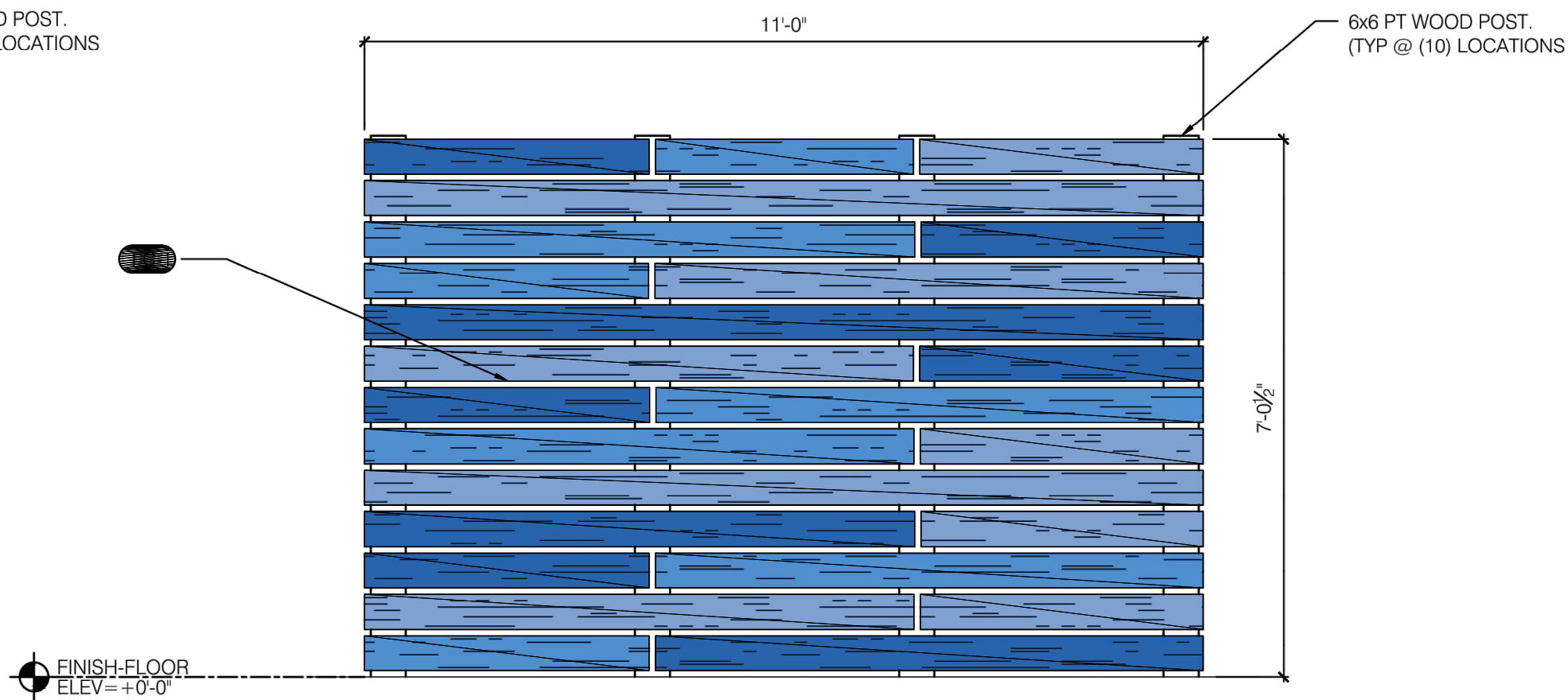
Sheet Rev.  
4.3 --

RECLAIM TANK SYSTEM; GC

DATE: 05.08.20  
REVISION DATE: 06.16.20  
DESIGNED BY: LCH  
CHECKED BY: Luis V.  
SONNY'S The CarWash Factory  
http://www.SonnyDirect.com  
© 2020 SONNY'S ENTERPRISES, INC. | 5605 Hulse Road, Tamarac, FL 33321 USA TEL 800-337-8723



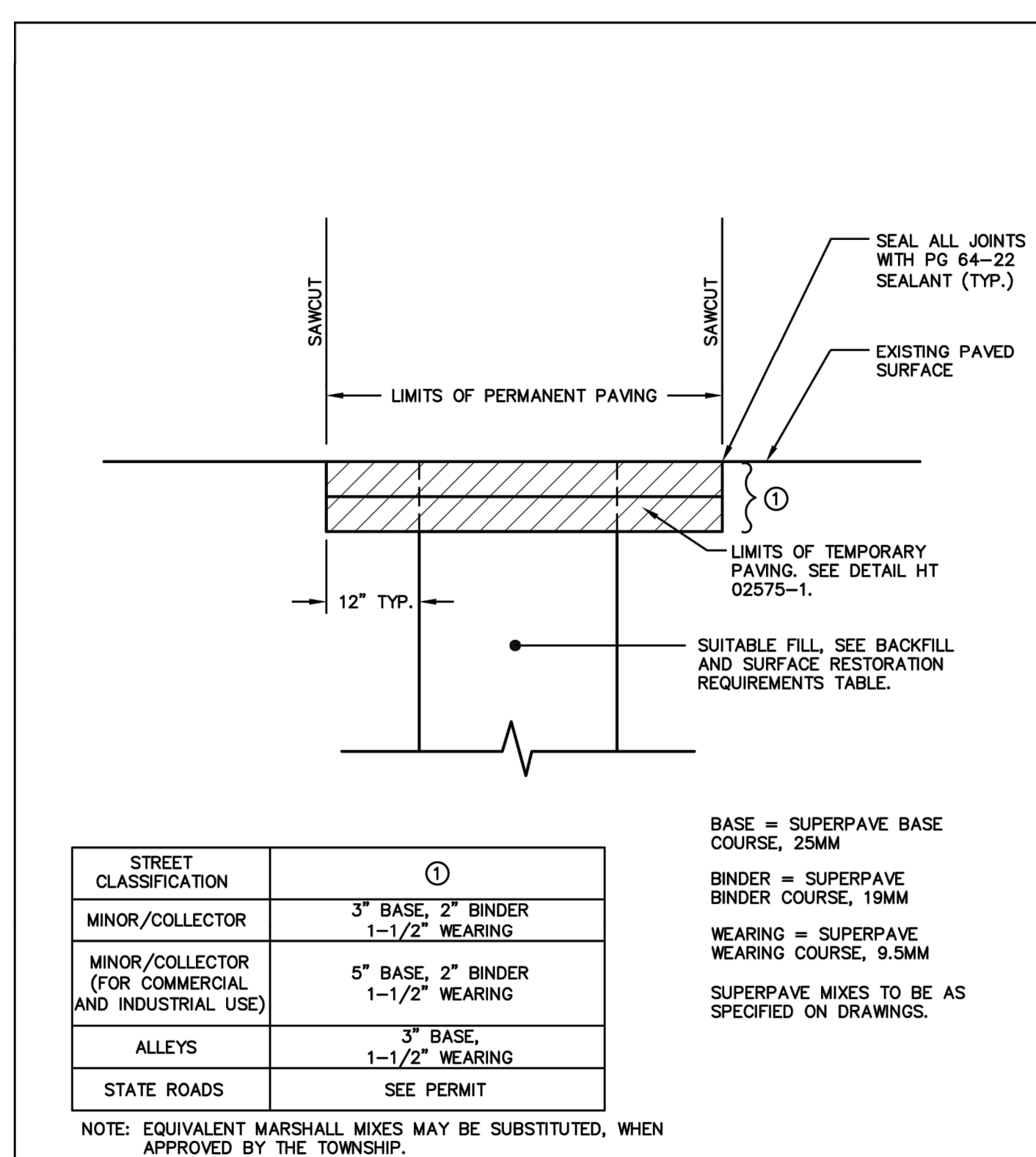
1  
A-403  
DUMPSTER ENCLOSURE  
FRONT ELEVATION  
SCALE: 1/2"=1'-0"



2  
A-403  
DUMPSTER ENCLOSURE  
SIDE ELEVATION  
SCALE: 1/2"=1'-0"

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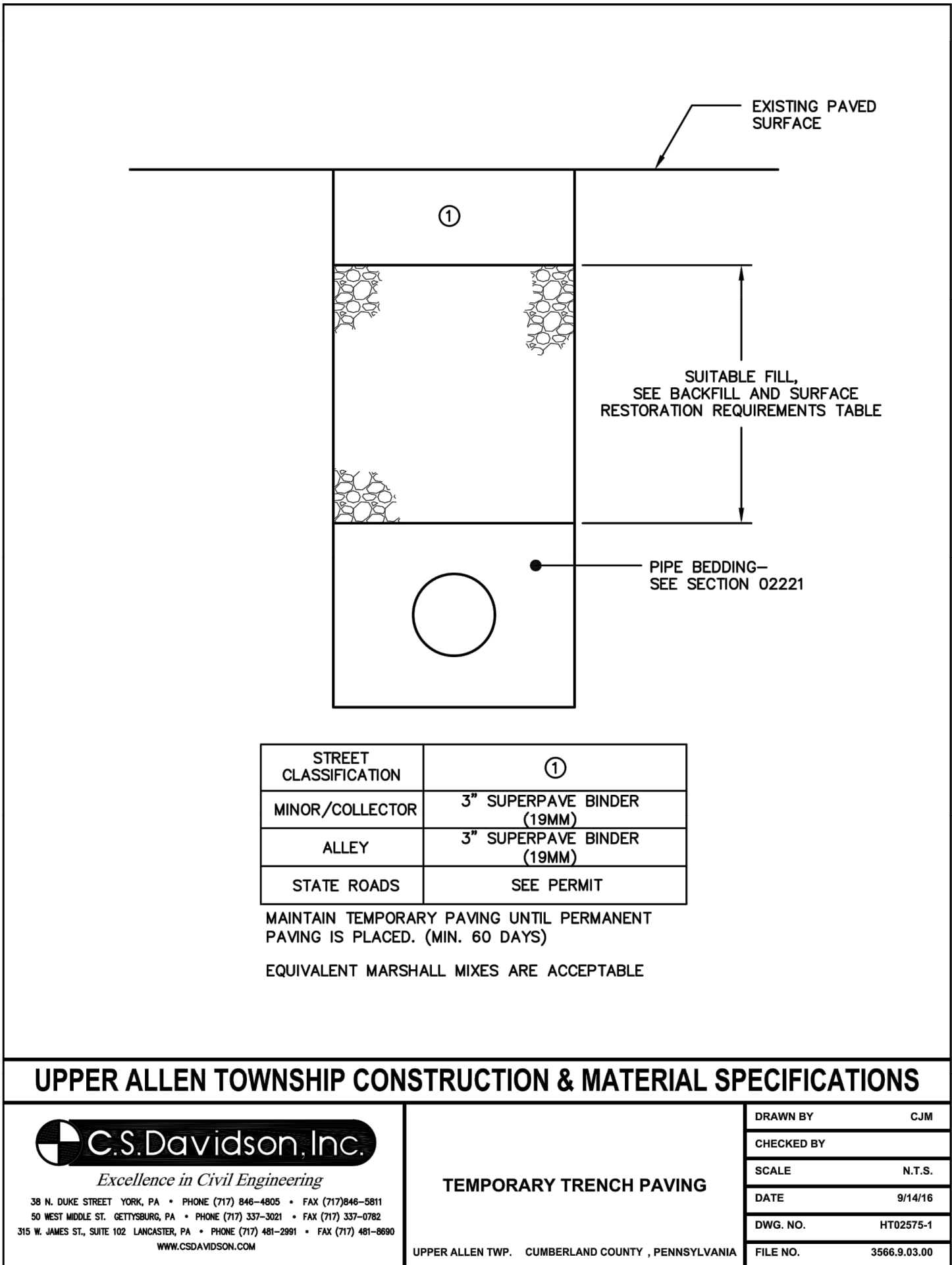
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STREET CLASSIFICATION		①
MINOR/COLLECTOR	3" BASE, 2" BINDER 1-1/2" WEARING	
MINOR/COLLECTOR (FOR COMMERCIAL AND INDUSTRIAL USE)	5" BASE, 2" BINDER 1-1/2" WEARING	
ALLEYS	3" BASE, 1-1/2" WEARING	
STATE ROADS	SEE PERMIT	

NOTE: EQUIVALENT MARSHALL MIXES MAY BE SUBSTITUTED, WHEN APPROVED BY THE TOWNSHIP.

UPPER ALLEN TOWNSHIP CONSTRUCTION & MATERIAL SPECIFICATIONS	
<b>C.S. Davidson, Inc.</b> <i>Excellence in Civil Engineering</i> 30 N. DUKE STREET YORK, PA • PHONE (717) 846-4805 • FAX (717) 846-5811 50 WEST MOORE ST. GETTYSBURG, PA • PHONE (717) 337-3021 • FAX (717) 337-0702 310 W. JAMES ST., SUITE 102 LANCASTER, PA • PHONE (717) 481-2001 • FAX (717) 481-8880 WWW.CSDAVIDSON.COM	
PERMANENT TRENCH PAVING	
DRAWN BY	CJM
CHECKED BY	
SCALE	N.T.S.
DATE	9/14/16
DWG. NO.	HT02575-2
FILE NO.	3566.9.03.00



STREET CLASSIFICATION		①
MINOR/COLLECTOR	3" SUPERPAVE BINDER (19MM)	
ALLEY	3" SUPERPAVE BINDER (19MM)	
STATE ROADS	SEE PERMIT	

MAINTAIN TEMPORARY PAVING UNTIL PERMANENT PAVING IS PLACED. (MIN. 60 DAYS)  
EQUIVALENT MARSHALL MIXES ARE ACCEPTABLE

UPPER ALLEN TOWNSHIP CONSTRUCTION & MATERIAL SPECIFICATIONS	
<b>C.S. Davidson, Inc.</b> <i>Excellence in Civil Engineering</i> 30 N. DUKE STREET YORK, PA • PHONE (717) 846-4805 • FAX (717) 846-5811 50 WEST MOORE ST. GETTYSBURG, PA • PHONE (717) 337-3021 • FAX (717) 337-0702 310 W. JAMES ST., SUITE 102 LANCASTER, PA • PHONE (717) 481-2001 • FAX (717) 481-8880 WWW.CSDAVIDSON.COM	
TEMPORARY TRENCH PAVING	
DRAWN BY	CJM
CHECKED BY	
SCALE	N.T.S.
DATE	9/14/16
DWG. NO.	HT02575-1
FILE NO.	3566.9.03.00

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DESIGNED BY: EMC  
REVIEWED BY: EMC  
DATE: 02/09/22  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 1856.66

SCALE:  
N/A

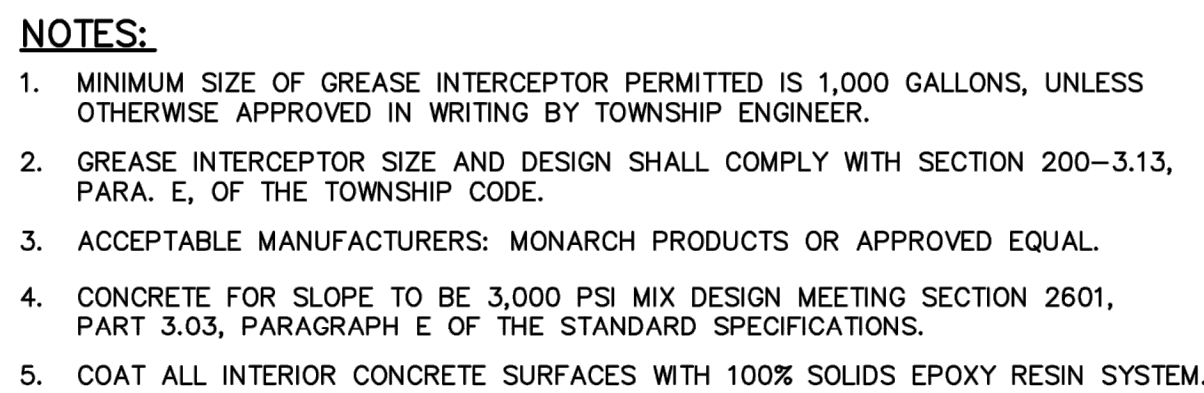
**GENERAL DETAILS**  
**MODWASH - UPPER ALLEN TOWNSHIP, PA**  
prepared for  
**HUTTON MECHANICSBURG PA ST, LLC**  
situated in  
**UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA**

**Morris Knowles & Associates, Inc.**  
(A Hammontree Company)  
Consulting Engineers and Land Surveyors  
443 Altema Drive  
Lancaster, PA 17602  
Telephone: (724) 468-4822  
Fax: (724) 468-8840  
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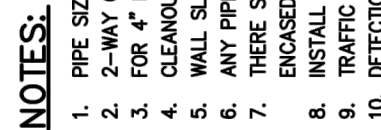
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LAST SAVE: 06/08/2022 - 10:46am

SHEET NO.  
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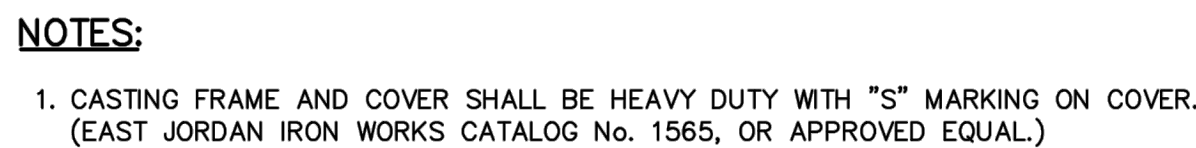




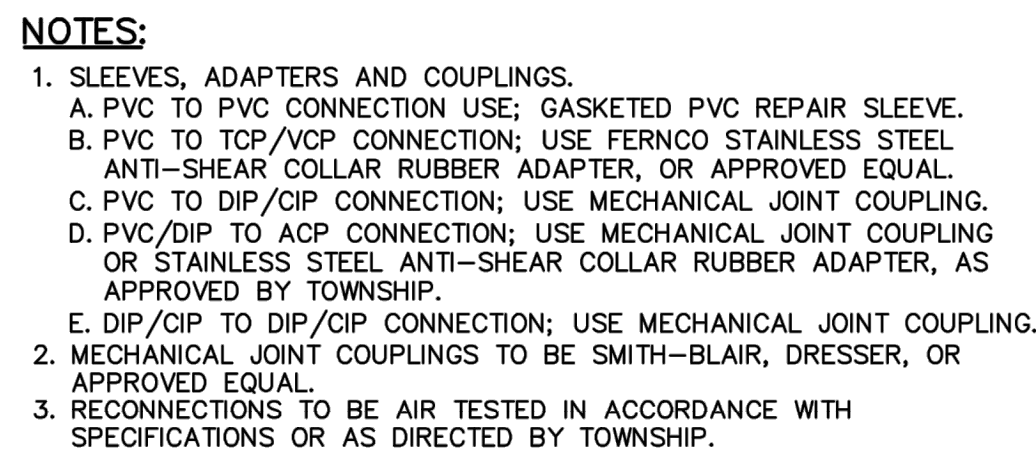
STANDARD DETAILS  
TYPICAL GREASE INTERCEPTOR  
AND SAMPLING VAULT  
UPPER ALLEN TOWNSHIP



STANDARD DETAILS  
BUILDING SEWER DETAIL  
UPPER ALLEN TOWNSHIP

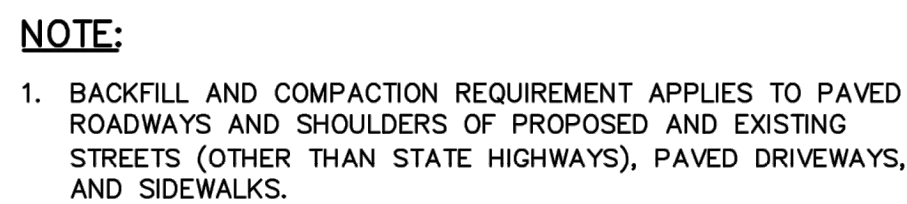


STANDARD DETAILS  
CAP PROTECTION CASTING FOR  
CLEANOUT COVER IN VEHICULAR TRAFFIC AREAS  
UPPER ALLEN TOWNSHIP



# PIPE REPAIR/RECONNECTION DETAIL

## UPPER ALLEN TOWNSHIP



STANDARD DETAILS  
TRENCH BACKFILL DETAIL  
IN PAVED AREAS  
UPPER ALLEN TOWNSHIP



1. UNPAVED AREAS OUTSIDE ROADWAYS - SUITABLE ON-SITE BACKFILL COMPACTED AS INDICATED ABOVE TO BOTTOM OF TOPSOIL. REPLACE TOPSOIL TO APPROXIMATE DEPTH OF EXISTING OR MIN. 4".
2. UNPAVED AREAS WITHIN R/W LIMITS OF STATE HIGHWAYS - CONFORMING TO REQUIREMENTS OF PA DOT PUBLICATION 408.
3. UNPAVED SHOULDERS OF PROPOSED AND EXISTING STREETS OTHER THAN STATE HIGHWAYS - AGGREGATE BACKFILL COMPACTED AS INDICATED ABOVE.
4. STONE DRIVEWAYS AND PARKING AREAS - PA NO. 2A COARSE AGGREGATE BACKFILL COMPACTED AS INDICATED ABOVE.
5. UNIMPROVED STREETS - AGGREGATE BACKFILL COMPACTED AS INDICATED ABOVE.

STANDARD DETAILS  
TRENCH BACKFILL DETAIL  
IN UNPAVED AREAS  
UPPER ALLEN TOWNSHIP

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY CHANGES IN DESIGN PLANS UNLESS WRITTEN CONSENT IS GIVEN BY THE ENGINEER. THE CONTRACTOR AND/OR THE OWNER WILL BE HELD RESPONSIBLE FOR ANY FIELD MODIFICATIONS MADE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER AND NECESSARY APPROVALS BY PERMITTING AGENCIES.

THE LOCATION OF EXISTING UTILITIES WERE TAKEN FROM RECORDS AND MARKING PROVIDED BY OTHERS AND OBSERVED EVIDENCE. THE LOCATIONS SHOWN MAY BE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS, SIZES AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO ALL EXISTING UTILITIES.

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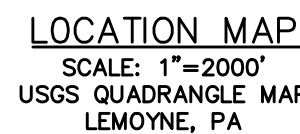
**GENERAL DETAILS**  
**MODWASH - UPPER ALLEN TOWNSHIP, PA**  
*prepared for*  
HUTTON MECHANICSBURG PA ST, LLC  
*situated in*  
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

SHEET NO.  
C602

DWG. PATH: C:\Users\markz\AppData\Local\Temp\AcPublish\_2432A\856.66 - 127 Kim Acres, Upper Allen Twp, PA - E.dwg  
LAST SAVE: Feb 09, 2022 - 10:41am markz



EROSION AND SEDIMENTATION CONTROL PLAN  
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA  
NOVEMBER 2021



<u>SHEET NO.</u>	<u>TITLE</u>
C700	EROSION & SEDIMENTATION CONTROL TITLE SHEET
C701	EROSION & SEDIMENTATION CONTROL PLAN
C702	EROSION & SEDIMENTATION CONTROL DETAILS

**DEVELOPER:**  
HUTTON MECHANICSBURG PA ST, LLC  
746 CHERRY STREET  
CHATTANOOGA, TN 37402  
PHONE NO.: 404-805-0797  
REP.: ALEJANDRO QUINTANA

## CHAPTER 93 RECEIVING WATER COURSE:

1. THE RECEIVING WATER COURSE IS UNNAMED TRIBUTARY TO YELLOW BREECHES CREEK WHICH IS DESIGNATED AS A COLD WATER FISHERY (CWF), BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, CHAPTER 93.

**NOTES:**  
THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY CHANGES IN DESIGN PLANS UNLESS WRITTEN CONSENT IS GIVEN BY ENGINEER, CONTRACTOR AND/OR OWNER WILL BE HELD RESPONSIBLE FOR ANY FIELD MODIFICATIONS MADE WITHOUT WRITTEN CONSENT OF ENGINEER. ALL UTILITIES SHOWN ON PLANS ARE IN APPROXIMATE LOCATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO GAIN EXACT LOCATIONS AND DEPTHS OF ALL UTILITIES PRIOR TO ANY CONSTRUCTION.

EROSION AND SEDIMENTATION CONTROL PLAN NOTES:

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE KEPT ON THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY WILL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW.
2. AT 2-3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN REVIEWER, AND THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
3. AT 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITY LINES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
6. CLEARED AREAS, TOPSOIL STOCKPILES AND STOCKPILES OF OTHER AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE, GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE CONSTRUCTION SEQUENCE UNTIL THE PREVIOUS STAGE HAS BEEN COMPLETED. STOCKPILES HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE SECURED BY STOCKPILING TOPSOIL AND/OR MULCH TO PREVENT VEHICLES FROM BEGINNING TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISHED EARTH SURFACE. STOCKPILES SHALL BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
8. IN THE EVENT OF UNFORESEEN UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT IMMEDIATELY.
9. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 P.S. CODE 260.1 ET. SECT. 260.1 AND 268.1. ET. SECT. 268.1. ALL WASTE MATERIALS, INCLUDING OR NUSED BUILDING MATERIALS SHALL BE BURIED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. MATERIALS MUST BE RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE PLAN. MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MAY QUALIFY AS CLEAN FILL DUE TO ANALYTICAL TESTING.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PLAN. THE DESIGNER SHALL BE NOTIFIED OF THIS PUMPING OF WATER.
14. VEHICLES AND EQUIPMENT MAY ENTER DIRECTLY ONTO KIM ACRES DRIVE.
15. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. THE DESIGNER SHALL BE NOTIFIED OF ANY DAMAGE TO ANY OF THESE BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RETENING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMP IS DAMAGED TO PERFORM EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS TO THOSE INSTALLED WILL BE REQUIRED.
16. A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND CORRECTED. THE LOG SHALL BE MAINTAINED ON THE PROJECT SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION. INSPECTIONS SHALL BE LOGGED ON THE MOST CURRENT DEP FORM 3150-FM-BWE0083 AND KEPT ON SITE AT ALL TIMES.
17. SEDIMENT CONTROLLED BY THE PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED OF IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED OFF THE ROADWAY OR SIDEWALK INTO THE ADJACENT WATERWAY OR TO THE WATER.
18. ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
19. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES. AREAS WHICH ARE TO BE TOPSOILED ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL, ARE TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM 2 INCHES OF TOPSOIL.
20. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDING STRUCTURES AND HIGHWAYS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
22. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOO, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
23. FROZEN STRUCTURE, OR OTHER MATERIALS, OR MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
25. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
26. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED EARTH SURFACE. THE STABILIZATION OF THESE AREAS WILL BE REQUIRED TO BE VEGETATED. SEEDS AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
27. EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF A PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS, DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS REQUIRED. IN THE EVENT OF A PROLONGED PERIOD OF DRY WEATHER, ACTIVATION WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS, THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION, CUT AND FILL SLOPES SHALL BE CAPABLE OF WITHSTANDING FAILURE UNDER THE STANDARD SPECIFICATIONS FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
28. E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIMPT TO BE ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP COMING ON LINE BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
29. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL OF ANY OF THE E&S BMPs.
31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STABILIZATION MAINTENANCE AND MONITORING ACTIVITIES. THE E&S PLAN SHALL BE STABILIZED IMMEDIATELY, IN ORDER TO ENSURE RAPID

REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.

UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT EROSION CONTROL MEASURES, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION. FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF, AND/OR FAILURE TO MAINTAIN EROSION CONTROL MEASURES WILL IMMEDIATELY CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES THAT ANY VIOLATION OF THE E&S BMPs MAY BE CONSIDERED AS A FIRST-OR SECOND-DEGREE CRIMINAL PENALTIES, AND UP TO \$25,000 IN MIDDLEBEND CRIMINAL PENALTIES FOR EACH VIOLATION.

CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN AND SHALL BE ALLOWED TO PERMEATE INTO THE SURFACE WATERS OR GROUNDWATER SYSTEMS.

ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, LOGS, BRUSH, AND OTHER DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTE.

UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND CHANNEL ALIGNMENT. ANY OTHER CHANNELS SHALL BE RESTORED TO THEIR ORIGINAL STATE AND THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.

IF HAVING RIPRAP, PENO MATTRESS, OR GABION LINES MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.

SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, DEBRIS, AND OTHER OBSTRUCTIONS THAT HAVE THE POTENTIAL TO CLOG THE BASIN-TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.

SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES. ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP FAILURE SHALL BE THE RESPONSIBILITY OF THE PARTY RESPONSIBLE FOR THE DAMAGE IN A MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.

IF THE CONTRACTOR HAS A TRAP, HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.

EROSION CONTROL, BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER TO PREVENT EROSION OF SURFACE WATER AND ON OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.

FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY MATERIALS, AND SHALL BE FREE OF STONES AND OTHER OBJECTIONABLE MATERIALS.

NO WETLANDS EXIST WITHIN THE PROJECT BOUNDARY.

NO MINE OPENINGS ARE NOT ANTICIPATED. IF MINE SPOILS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL EITHER REWORK THE MATERIAL PER RECOMMENDATIONS OF A PROFESSIONAL ENGINEERS RECOMMENDATIONS OR REMOVE THE MATERIAL TO A PERMITTED AREA.

NO SIGNIFICANT CULTURAL OR SENSITIVE ENVIRONMENTAL FEATURES EXIST WITHIN THE PROJECT BOUNDARY. NO FURTHER ENVIRONMENTAL STUDIES WILL BE NECESSARY.

NO WATER RESOURCES EXIST WITHIN THE PROJECT BOUNDARY.

### EROSION AND SEDIMENT CONTROL FACILITIES MAINTENANCE SCHEDULE

1. ALL EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL A UNIFORM 70% PERENNIAL VEGETATIVE COVER IS ESTABLISHED.

ROCK CONSTRUCTION ENTRANCE

1. THE ROCK CONSTRUCTION ENTRANCES ARE TO BE INSPECTED AT THE END OF EACH WORKING DAY AND REPAIRED IMMEDIATELY.
2. THE THICKNESS OF THE ROCK CONSTRUCTION ENTRANCE SHALL BE CONSTANTLY MAINTAINED AT 8".
3. A ROCK STOCKPILE IS TO BE READILY AVAILABLE ON THE SITE AT ALL TIMES FOR IMMEDIATE REPAIR.

COMPOST FILTER SOCK

1. THE COMPOST FILTER SOCK CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EACH STORM (RUNOFF) EVENT AND REPAIRED IMMEDIATELY.
2. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN DEPOSITS REACH 1/2 THE ABOVE STANDING HEIGHT OF THE SOCK.
3. SILT DEPOSITS SHALL BE TAKEN TO THE TOPSOIL STOCKPILE AREA. THE SILT SHALL THEN BE SPREAD OVER STOCKPILE, SEEDED AND MULCHED.
4. ALL UNDERCUTTING OR EROSION OF THE COMPOST FILTER SOCK TOE ANCHOR SHALL BE REPAIRED IMMEDIATELY.
5. ANY COMPOST FILTER SOCK SECTION WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.

## VEGETATION

1. THE CONTRACTOR SHALL INSPECT VEGETATED AREAS WEEKLY AND AFTER EACH STORM (RUNOFF) EVENT.
2. THE CONTRACTOR SHALL INSPECT THE SITE FOR RILLS OR GULLIES ON CUT OR FILL SLOPES. THE CONTRACTOR SHALL FILL RILLS AND GULLIES, REGRADE DISTURBED AREAS TO PROVIDE A UNIFORM SLOPE, THEN RESEED/MULCH AND REPAIR/REPLACE MATS TO ORIGINAL SPECIFICATIONS.
3. THE REPAIRS SHALL BE MADE WITHIN 2 DAYS OF DISCOVERING PROBLEM.

## PUMPED WATER FILTERING DEVICE

1. THE CONTRACTOR SHALL INSPECT FILTER BAGS DAILY AND AFTER EACH STORM (RUNOFF) EVENT TO ENSURE THEY ARE WORKING PROPERLY.
2. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.
3. ALL SEDIMENT REMOVED FROM THE FILTER BAGS SHALL BE TAKEN TO THE TOPSOIL STOCKPILE, SPREAD, SEEDED AND MULCHED.

### PERMANENT-STEEP SLOPE

SPECIES: BIRDFOOT TREFOIL AND TALL FESCUE MIX  
% PURE LIVE SEED: 99%  
APPLICATION RATE: 10 AND 50 LBS./ACRE, RESPECTIVELY  
FERTILIZER TYPE: COMMERCIAL FERTILIZER 5-10-10  
FERTILIZER APPL. RATE: (PER TESTING) 30 LBS./ACRE  
LIMING RATE: 1 TONS/ACRE MULCH TYPE: HAY & STRAW  
MULCHING RATE: 3 TONS/ACRE  
ANCHORING MATERIAL: NONASPHALTIC MATERIAL  
ANCHORING METHOD: SPRAY  
RATE OF ANCHORING MATERIAL APPL.: 1000 GAL./SQ.YD.  
SEEDING DATES: APRIL-SEPT.

GENERAL NOTES:

1. THE GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED IN THE SITE NO MORE THAN TEN DAYS AND NO LESS THAN THREE DAYS IN ADVANCE OF EXCAVATION (PA ACT 287 OF 1974 AMENDED BY ACT 121 OF 2008).
2. TRAFFIC SHALL BE MAINTAINED ON ALL ADJOINING STREETS AND DRIVES AT ALL TIMES.
3. EXCAVATED AREAS SHALL BE MAINTAINED TO PREVENT PENNDOT'S REQUIREMENTS.
4. CONTRACTOR SHALL USE ASPHALT WEDGE CURBS, UNLESS NOTED, OUTSIDE OF THE PUBLIC RIGHT-OF-WAY.
5. CONTRACTOR SHALL VERIFY THE LOCATION AND INVERT ELEVATION OF ALL EXISTING UTILITIES WITH ADJACENT AGENCIES PRIOR TO CONSTRUCTION AND GRADING OF THE SITE.
6. THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS AS SHOWN ON THE PLANS.

GRADING NOTES:

1. THE CONTRACTOR SHALL REMOVE ALL EXISTING ASPHALT PAVEMENT AND CONCRETE SLABS FROM THE SITE.
2. THE CONTRACTOR SHALL PROOF ROLL THE SITE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER AND REMOVE ANY SOFT MATERIAL PRIOR TO THE IMPORTING OF ANY FILL MATERIAL.
3. THE CONTRACTOR SHALL PROOF ROLL ALL EXISTING SECTIONS, SIDEWALKS, AND PAVEMENT WHICH HAS BEEN CUT AND DISTURBED WITHIN THE RIGHT-OF-WAY WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION'S STANDARD MATERIALS.
4. THE CONTRACTOR SHALL ADJUST TO GRADE ALL WATER AND GAS VALVES.
5. THE CONTRACTOR SHALL COMPACT ALL FILL MATERIALS OUTSIDE OF PROPOSED BUILDING AREAS IN EIGHT-INCH LIFTS AND COMPACTED TO 90% OF MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR) OR 95% BY ASTM-D698 (STANDARD PROCTOR), PLACE FILL IN EIGHT-INCH LIFTS AND COMPACT WITH AN IMPACT-TYPE ROLLER (I.E. SHEEPSFOOT ROLLER). PROVIDE FOR INSPECTION OF ALL FILL AS IT IS PLACED FOR PROPER DENSITY BY A GEOTECHNICAL TESTING FIRM.
6. THE CONTRACTOR SHALL COMPACT ALL FILL MATERIALS WITHIN PROPOSED BUILDING AREAS, PLACED IN LIFTS, AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR) OR 100% BY ASTM-D698 (STANDARD PROCTOR), PLACE FILL IN EIGHT-INCH LIFTS AND COMPACT WITH AN IMPACT-TYPE ROLLER (I.E. SHEEPSFOOT ROLLER). PROVIDE FOR INSPECTION OF ALL FILL AS IT IS PLACED FOR PROPER DENSITY BY A GEOTECHNICAL TESTING FIRM.
7. ALL CUT AND FILL OPERATIONS SHALL FOLLOW THE "PENNSYLVANIA HANDBOOK OF BEST MANAGEMENT PRACTICES FOR DEVELOPING AREAS."
8. THE CONTRACTOR SHALL USE PENNDOT'S LATEST REFERENCES OF PUBLICATION 408/2000 AND ROADWAY CONSTRUCTION STANDARDS.

SITE STABILIZATION INSTALLATION AND MAINTENANCE  
(TEMPORARY AND PERMANENT)

1. TILL SOIL TO DEPTH OF 2". REMOVE ALL OBJECTS 2" OR LARGER.
2. BLEND COMMERCIAL FERTILIZER INTO THE SOIL TO A DEPTH OF 2". FERTILIZER MAY BE BLENDED DURING TILLING.
3. SOW REQUIRED SEED MIXTURE UNIFORMLY ON THE PREPARED AREA BY HYDRAULIC SEEDING, HAND SOWING, OR ANY OTHER APPROPRIATE METHOD.
4. AFTER SEEDING ROLL TOPSOILED AREAS THAT ARE TO BE MOWED. USE A ROLLER WEIGHING NOT MORE THAN 65 LBS./FT. WIDTH.
5. FOR PERMANENT SITE STABILIZATION APPLY SLOW RELEASE NITROGEN FERTILIZER TO THE SURFACE OF SEEDED AREAS.
6. PLUG CUTS IMMEDIATELY AFTER SEEDING OR WITHIN 48 HOURS AFTER SEEDING IS COMPLETED. PLACE HAY & STRAW UNIFORMLY, IN A CONTINUOUS BLANKET AT THE MINIMUM RATE SPECIFIED ABOVE. AN ACCEPTABLE MECHANICAL BLOWER MAY BE USED TO APPLY MULCH. MACHINES WHICH CUT MULCH INTO SHORT PIECES WILL PERFORM.
7. MAINTENANCE - SATISFACTORILY MAINTAIN GRASS AREAS WITHIN GRADING LIMITS, UNTIL THE ENTIRE PROJECT HAS BEEN COMPLETED. MOW, AS INDICATED AND WHEN DIRECTED. CONTROL PROHIBITED AND NOXIOUS WEED GROWTH BY HERBICIDES. SPRAY OR CUT WEEDS THAT ARE NOT CONTROLLED BY HERBICIDES. WHEN A SLOPE HAS BEEN SATISFACTORILY COMPLETED, IF A SLOPE FAILURE OCCURS, ONE WHICH REQUIRES REDRESSING, EXCAVATION, OR ESTABLISHMENT OF A NEW SLOPE, REAPPLY SOIL SUPPLEMENTS, THEN RESEED, AS SPECIFIED FOR THE PERMANENT TREATMENT.
8. A SITE WILL BE CONSIDERED TO BE PERMANENTLY STABILIZED WHEN ALL PERMANENT CONTROL MEASURES AND FACILITIES HAVE BEEN COMPLETED AND ARE OPERATIONAL, TEMPORARY CONTROL MEASURES AND FACILITIES REMOVED, AND 70% TOXIC POLYMER OR VEGETATION COVERED TO THE POINT WHERE THE SURFACE SOIL IS CAPABLE OF RESISTING EROSION DURING RUNOFF EVENTS. THE STANDARD FOR THIS VEGETATIVE COVER WILL BE A UNIFORM COVERAGE OR UNIFORMITY OF 70% ACROSS THE DISTURBED AREA.
9. CONTRACTOR SHALL MAINTAIN COMPLIANCE WITH THE PROVISIONS OF THIS PLAN UNTIL PERMANENT STABILIZATION IS ESTABLISHED.

## TEMPORARY STABILIZATION

SPECIES: ANNUAL RYEGRASS  
% PURE LIVE SEED: 98%  
APPLICATION RATE: 50 LBS/ACRE  
FERTILIZER TYPE: COMMERCIAL FERTILIZER 10-20-20  
FERTILIZER APPL. RATE: 678 LBS/ACRE  
LIMING RATE: 2 TONS/ACRE  
MULCH TYPE: HAY & STRAW  
MULCHING RATE: 3 TONS/ACRE

PERMANENT STABILIZATION

SPECIES :  
 • POA PRATENSIS (KENTUCKY BLUEGRASS) 90% PURE LIVE SEED,  
 APPLICATION RATE 50LBS/AC  
 • FESTUCA RUBRA VAR. "PENNLAWN" (PENNLAWN RED RESCUE)  
 98% PURE LIVE SEED, APPLICATION RATE 30LBS/AC  
 • LOLIUM PERENNE (PERENNIAL RYEGRASS) 98% PURE LIVE SEED,  
 APPLICATION RATE 20LBS/AC  
 FERTILIZER: COMMERCIAL FERTILIZER, 10–20–20, 1,000 LBS./ACRE  
 LIMING: 4,000 LBS./ACRE  
 MULCH: WHEN OR OAT STRAW WELLED CURED TO LESS THAN 20%  
 MOISTURE BY WEIGHT, 5.0 TONS PER ACRE  
 SEEDING DATES: SPRING – MARCH TO MAY 30,  
 FALL – SEPTEMBER 1 TO OCTOBER 15

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY CHANGES IN DESIGN PLANS UNLESS WRITTEN CONSENT IS GIVEN BY THE ENGINEER. THE CONTRACTOR AND/OR THE OWNER WILL BE HELD RESPONSIBLE FOR ANY FIELD MODIFICATIONS MADE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER AND NECESSARY APPROVALS BY PERMITTING AGENCIES.

THE LOCATION OF EXISTING UTILITIES WERE TAKEN FROM RECORDS AND MARKING PROVIDED BY OTHERS AND OBSERVED EVIDENCE. THE LOCATIONS SHOWN MAY BE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS, SIZES AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO ALL EXISTING UTILITIES.

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**EROSION AND SEDIMENTATION CONTROL TITLE SHEET**  
**MODWASH - UPPER ALLEN TOWNSHIP, PA**

*preparation*  
HUTTON MECHANICSBURG PA ST, LLC

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

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Feb 09, 2022 - 10:41am markz

DWG. PATH: C:\  
LAST SAVE: Feb

DESIGNED BY: EMC	REVISION BY: _____	DATE: _____	DESCRIPTION: _____
REVIEWED BY: EMC	REVISION BY: _____	DATE: _____	DESCRIPTION: _____
DRAWN BY: GJV	REVISION BY: _____	DATE: _____	DESCRIPTION: _____
DATE: NOV 2021	REVISION BY: _____	DATE: _____	DESCRIPTION: _____
PROJ. NO.: 1856.66	REVISION BY: _____	DATE: _____	DESCRIPTION: _____

SCALE:  
N/A

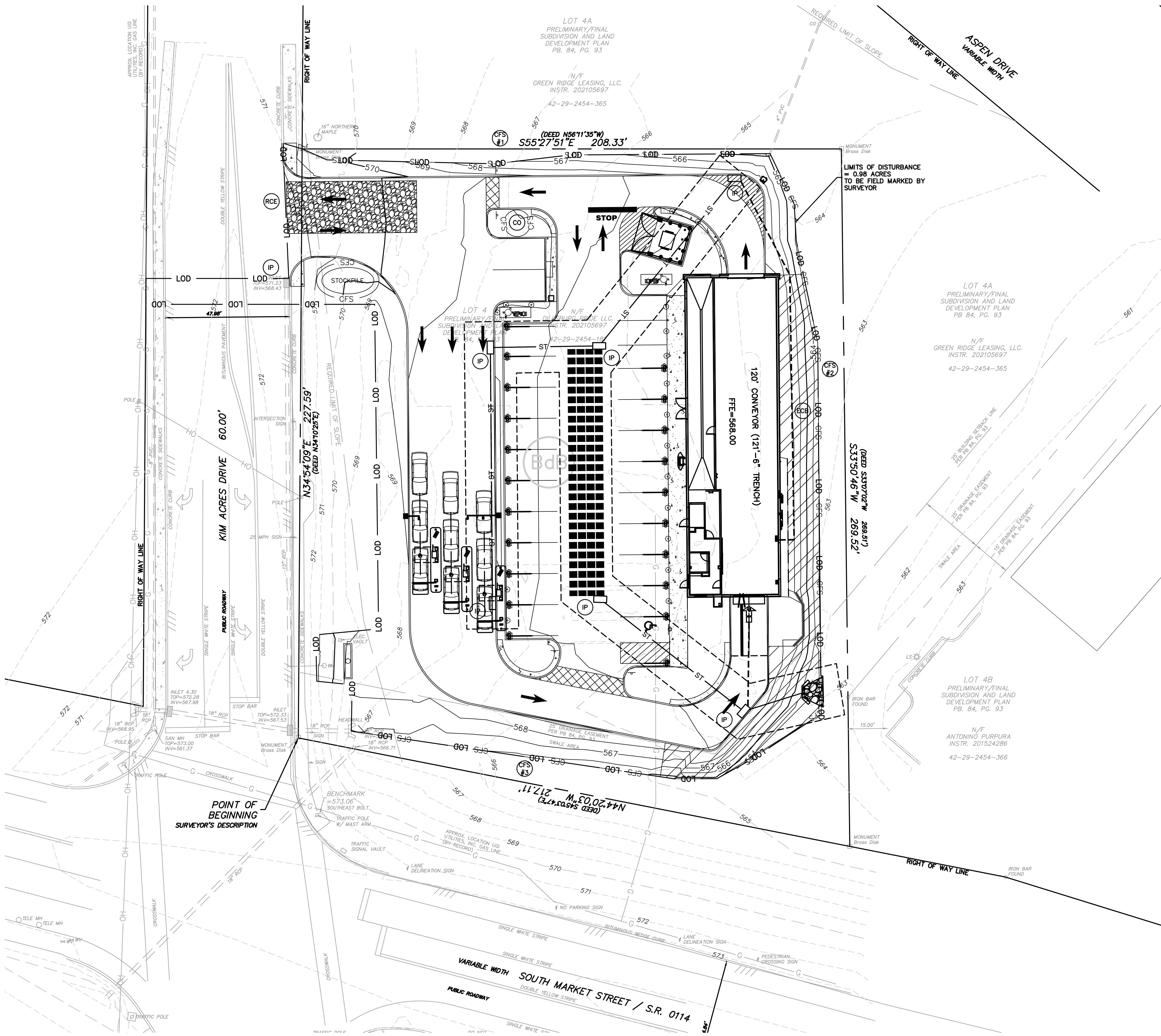
**MKA**  
**Morris Knowles & Associates, Inc.**  
(A Hammontree Company)  
*Consulting Engineers and Land Surveyors*  
443 Athena Drive  
Delmont, PA 15626  
Telephone: (724) 468-4622  
Fax: (724) 468-8940  
info@morrisknowles.com  
www.morrisknowles.com



LEGEND:

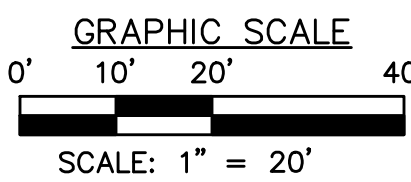
- (S) SEEDING & MULCHING  
(IP) INLET PROTECTION  
(CFS 12) 12" COMPOST FILTER SOCK  
(RCE) ROCK CONSTRUCTION ENTRANCE  
(CO) CONCRETE WASHOUT  
(ECB) EROSION CONTROL BLANKET

SOIL MAP UNIT LEGEND	
MAP UNIT SYMBOL	MAP UNIT NAME
BdB	BEDINGTON SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES



LEGEND

- SAN - SANITARY  
ST - STORM  
MH - MANHOLE  
TOP - TOP OF CASTING  
INV - INVERT / FLOW LINE  
WV - WATER VALVE  
GV - GAS VALVE  
GM - GAS METER  
EM - ELECTRIC METER  
S.R. - STATE ROUTE  
TELE - TELEPHONE  
RCP - REINFORCED CONCRETE PIPE  
CPP - CORRUGATED PLASTIC PIPE
- G - GAS LINE  
W - WATER LINE  
T - SUBSURFACE TELEPHONE LINE  
E - SUBSURFACE ELECTRIC LINE  
OH - OVERHEAD WIRES  
--- 008 --- EXISTING CONTOURS  
--- EXISTING INLET  
O --- EXISTING MANHOLE  
--- EXISTING SEWER  
-X-X- FENCE



THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY CHANGES IN DESIGN PLANS UNLESS WRITTEN CONSENT IS GIVEN BY THE ENGINEER. THE CONTRACTOR AND/OR THE OWNER WILL BE HELD RESPONSIBLE FOR ANY FIELD MODIFICATIONS MADE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER AND NECESSARY APPROVALS BY PERMITTING AGENCIES.

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THE GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED IN THE SITE NO MORE TEN DAYS AND NO LESS THAN THREE DAYS IN ADVANCE OF EXCAVATION (PA ACT 287 OF 1974 AMENDED BY ACT 50 OF 2018). PA STATE LAW REQUIRES 3 WORKING DAYS NOTICE

EROSION AND SEDIMENTATION CONTROL PLAN  
MODWASH - UPPER ALLEN TOWNSHIP, PA  
prepared for  
HUTTON MECHANICSBURG PA ST, LLC  
situated in  
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

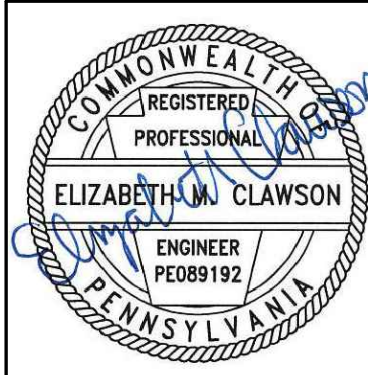
**MKA** Morris Knowles & Associates, Inc.  
(A Hammontree Company)  
Consulting Engineers and Land Surveyors  
443 Altema Drive  
Pottsville, PA 17854  
Telephone: (724) 468-8840  
Fax: (724) 468-8840  
info@morrisknowles.com www.morrisknowles.com

SCALE:  
1" = 20'

DESIGNED BY: EMC  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 1856.66

REVISION BY: MMZ  
REVISION BY: MMZ  
REVISION BY: MMZ  
REVISION BY: MMZ  
REVISION BY: MMZ

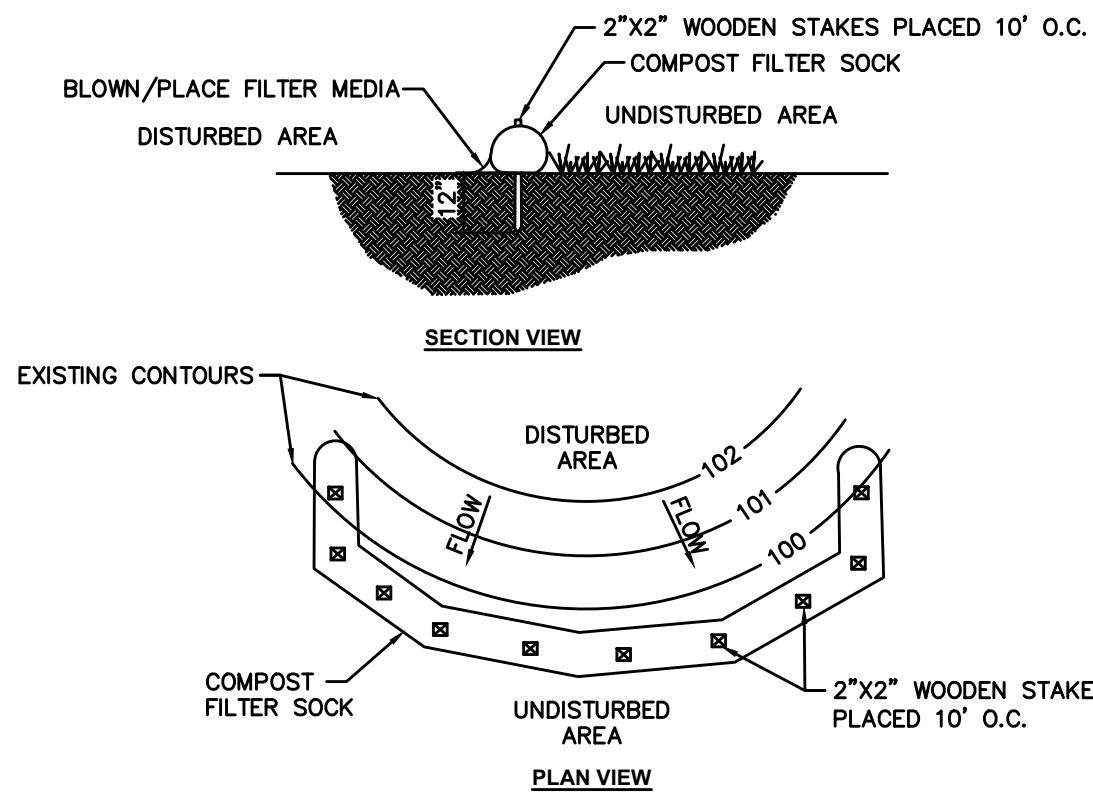
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SHEET NO.  
C701

DWG PATH: C:\Users\mka\Documents\2021\Modwash\_A324\A324.dwg - 127 Kim Acres, Upper Allen Twp, PA - Eday  
LAST SAVE: Feb 08, 2022 - 10:00am





NOTES:

Sock fabric shall meet standards of Table 4.1. Compost shall meet the standards of Table 4.2.

Compost filter sock shall be placed at existing level grade. Both ends of the sock shall be extended at least 8 feet up slope at 45 degrees to the main sock alignment (Figure 4.1). Maximum slope length above any sock shall not exceed that shown on Figure 4.2. Stakes may be installed immediately downslope of the sock if so specified by the manufacturer.

Traffic shall not be permitted to cross filter socks.

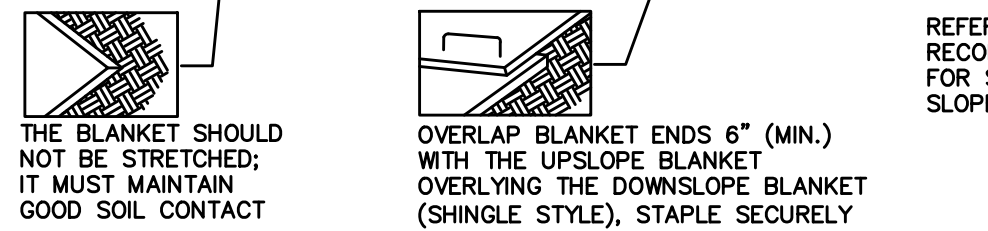
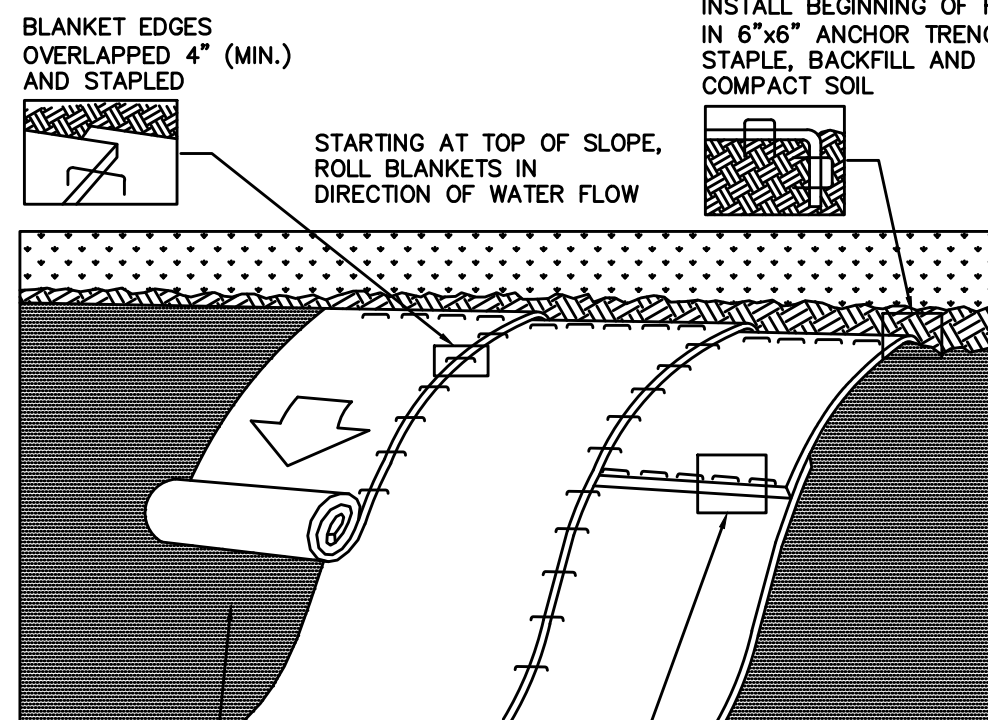
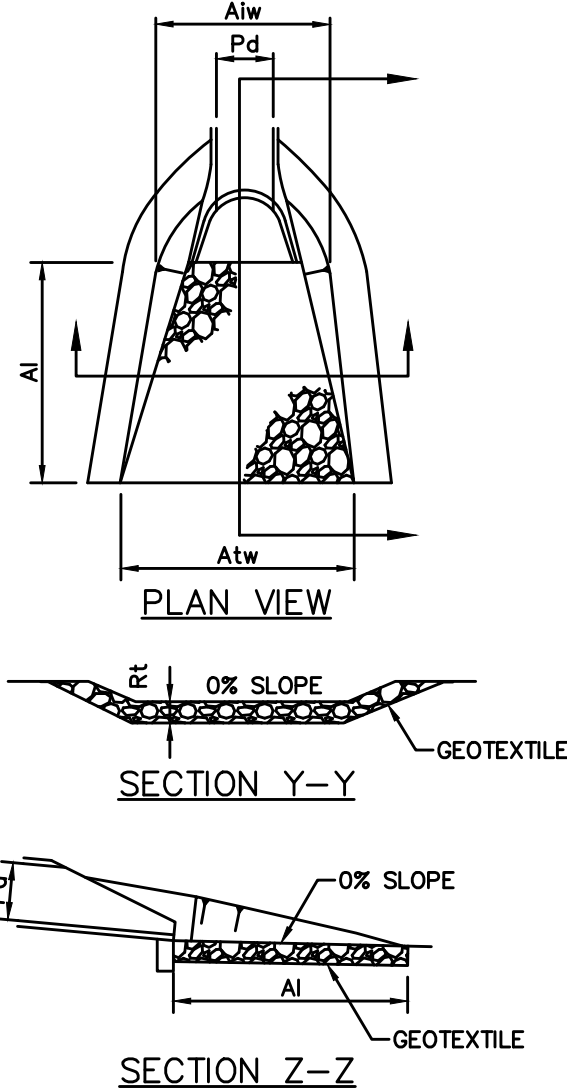
Accumulated sediment shall be removed when it reaches half the aboveground height of the sock and disposed in the manner described elsewhere in the plan.

Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection.

Biodegradable filter socks shall be replaced after 6 months: photodegradable socks after 1 year. Polypropylene socks shall be replaced according to manufacturer's recommendations.

Upon stabilization of the area tributary to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed. In the latter case, the mesh shall be cut open and the mulch spread as a soil supplement.

STANDARD CONSTRUCTION DETAIL #4-1  
COMPOST FILTER SOCK  
N.T.S.



NOTES:

Seed and soil amendments shall be applied according to the rates in the plan drawings prior to installing the blanket.

Provide anchor trench at toe of slope in similar fashion as at top of slope.

Slope surface shall be free of rocks, clods, sticks, and grass.

Blanket shall have good continuous contact with underlying soil throughout entire length. Lay blanket loosely and stake or staple to maintain direct contact with soil. Do not stretch blanket.

The blanket shall be stapled in accordance with the manufacturer's recommendations.

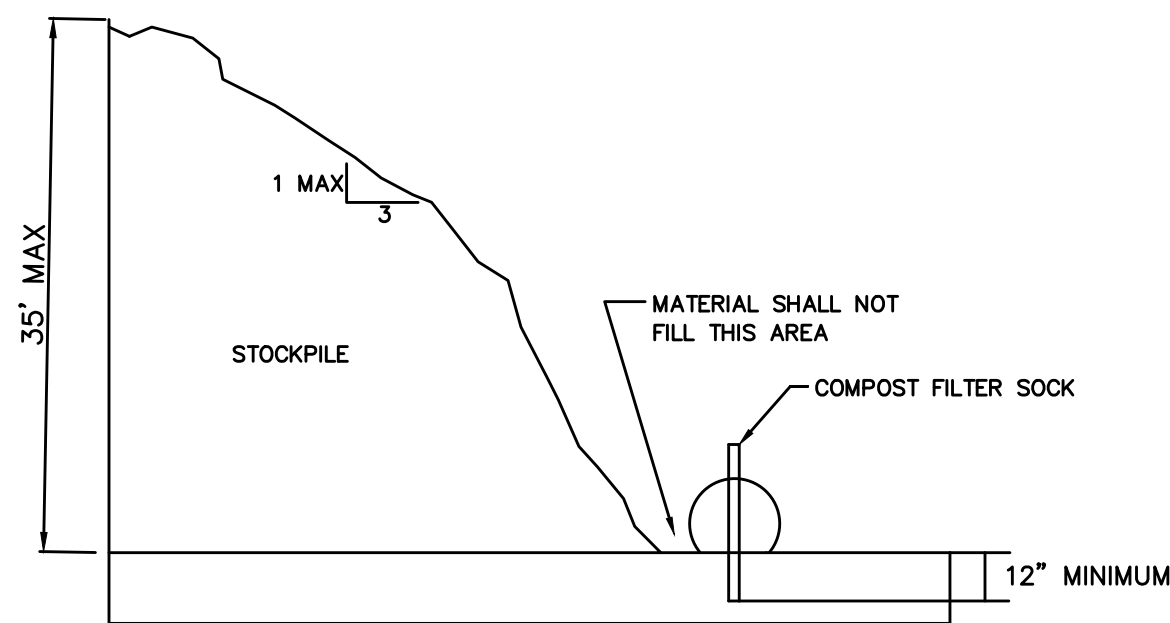
Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 70% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 4 calendar days.

STANDARD CONSTRUCTION DETAIL #11-1  
EROSION CONTROL BLANKET INSTALLATION  
N.T.S.

MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	8"	8"	8"	8"	8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR	23% AT 1000 HR		100% AT 1000 HR	100% AT 1000 HR
MINIMAL FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS
TWO-PLY SYSTEMS					
INNER CONTAINMENT NETTING	HDPE BIAXIAL NET CONTINUOUSLY WOUND				
	FUSION-WELDED JUNCTURES				
	8" X 8" MAX. APERTURE SIZE				
OUTER FILTRATION MESH	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)				
	8" X 8" MAX. APERTURE SIZE				
	SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.				

TABLE 4.2  
COMPOST STANDARDS

ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.5
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	30% - 50% PASS THROUGH 8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 dS/m (MMHOS/CM) MAXIMUM



SOIL STOCKPILE DETAIL  
N.T.S.

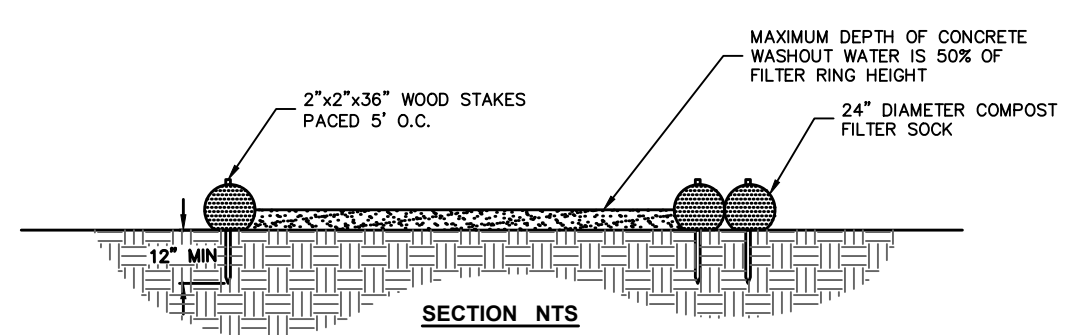
NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

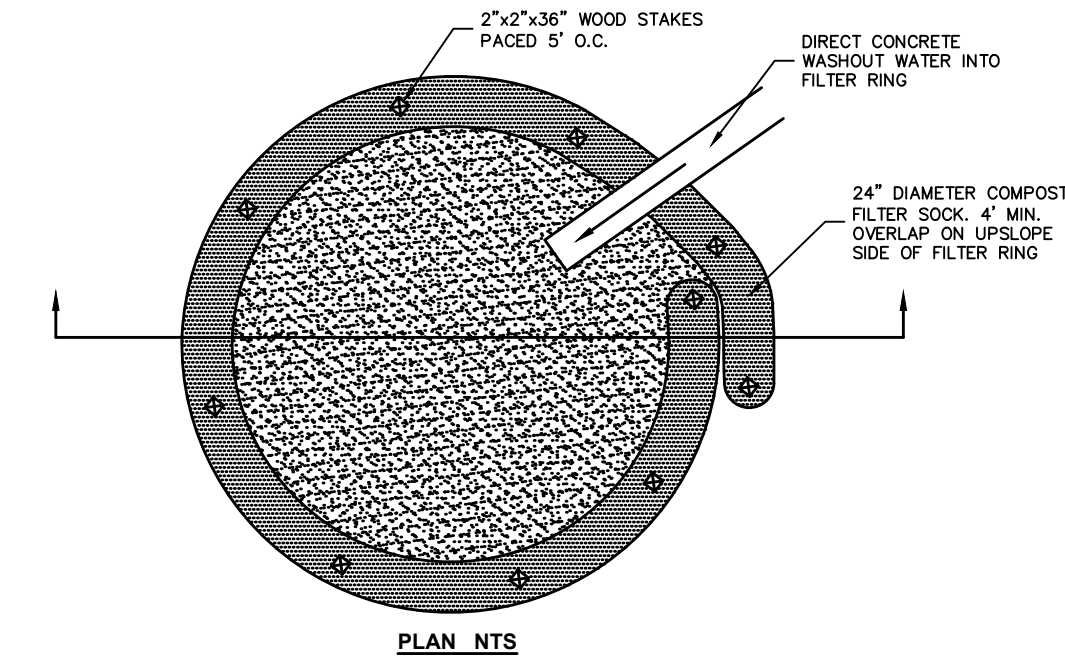
ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-1  
RIPRAP APRON AT PIPE OUTLET  
WITH FLARED END SECTION OR ENDWALL  
N.T.S.

FIGURE 3.18  
TYPICAL COMPOST SOCK WASHOUT INSTALLATION



NOTES:  
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.  
2. 16" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.



A SUITABLE IMPERIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS. ADAPTED FROM FILTREXX

COMPOST FILTER SOCK CONCRETE WASHOUT  
N.T.S.

- A. LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.  
B. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF-CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.  
C. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.  
D. TRENCH PLUGS WILL BE SPACED IN ACCORDANCE WITH THE TABLE BELOW:

TRENCH SLOPE %	LENGTH (FEET)	PLUG MATERIAL
0 - 5	----	NONE
5 - 15	500	EARTH FILLED SACKS
15 - 25	300	EARTH FILLED SACKS
25 - 35	200	EARTH FILLED SACKS
35 - 100	100	EARTH FILLED SACKS
OVER 100	50	CEMENT FILLED BAGS (WETTED)

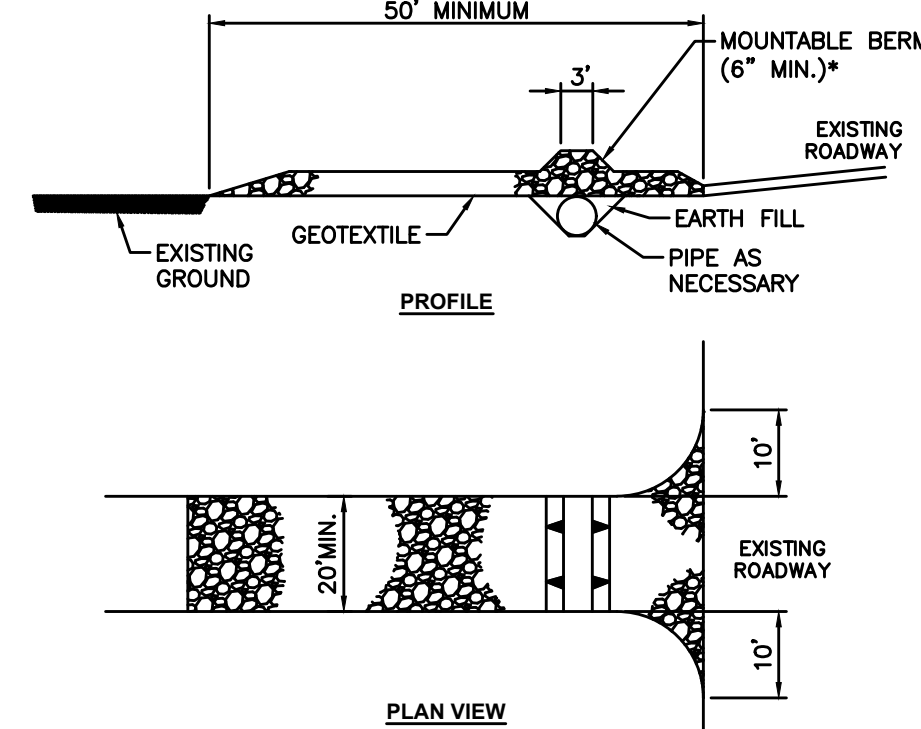
E. WATER WHICH ACCUMULATES IN AN OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING ACCORDING TO LOCAL CONSERVATION DISTRICT REGULATIONS PRIOR TO PIPE PLACEMENT OR BACKFILLING.

F. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND APPROPRIATE TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES/FACILITIES WILL BE INSTALLED. SEEDING AND MULCHING OF ALL DISTURBED AREAS WILL BE DONE AT THE END OF EACH WEEK.

WILL REMAIN IN EFFECT WITH THE FOLLOWING EXCEPTIONS:  
1. DAILY BACKFILLING OF THE TRENCH MAY BE DELAYED FOR SIX DAYS.  
2. DAILY BACKFILLING IS DELAYED, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS

FOR UTILITIES THAT REQUIRE TESTING BEFORE THE TRENCH IS BACKFILLED, ALL OF THE ABOVE ITEMS APPROPRIATE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES/FACILITIES WILL BE INSTALLED AND THE AREAS SEEDING AND MULCHED WITHIN THE NEXT TWO DAYS.

UTILITY TRENCH EXCAVATING GUIDELINES



\* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

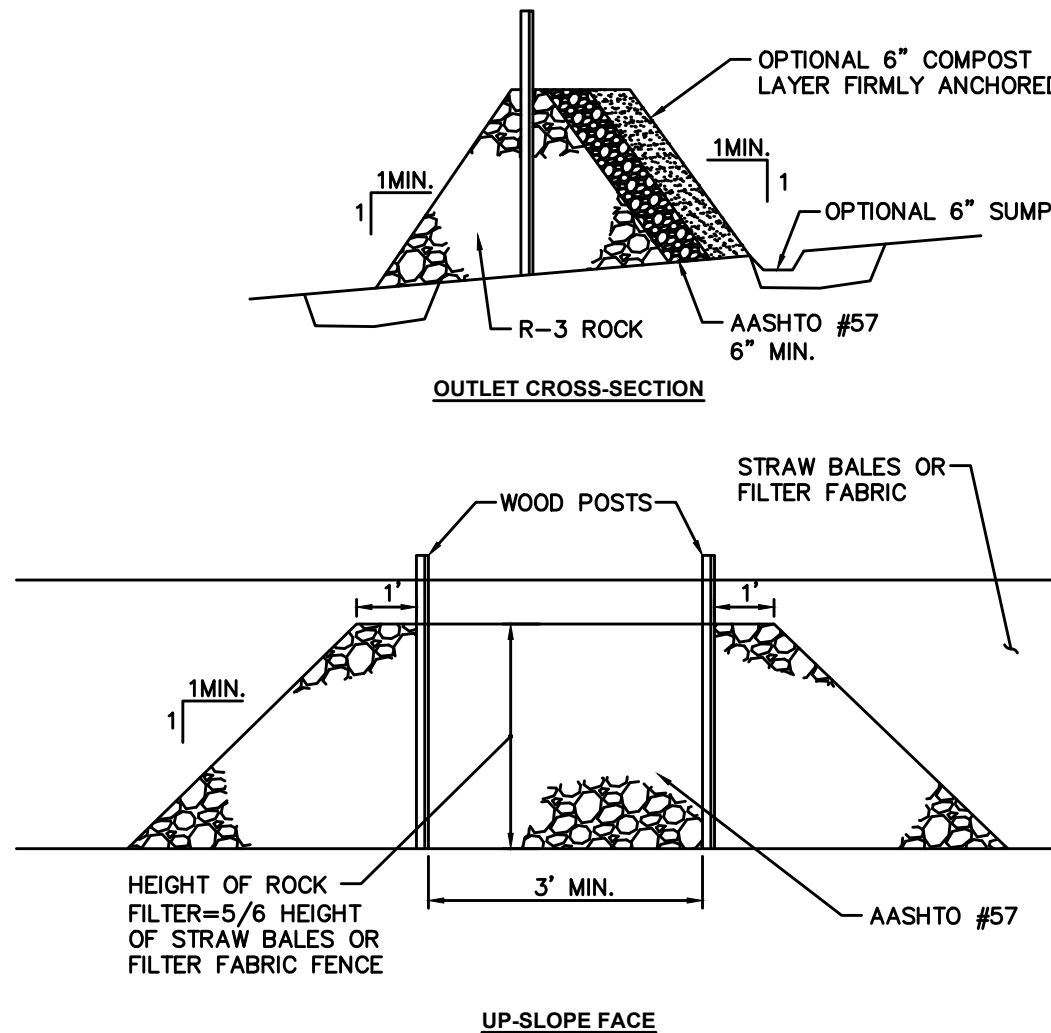
Remove topsoil prior to installation of rock construction entrance. Extend rock over full width of entrance.

Runoff shall be diverted from roadway to a suitable sediment removal bmp prior to entering rock construction entrance.

Mountable berm shall be installed wherever optional culvert pipe is used and proper pipe cover as specified manufacturer is not otherwise provided. Pipe shall be sized appropriately for size of ditch being crossed.

MAINTENANCE: Rock Construction Entrance thickness shall be constantly maintained to the specified dimensions by adding rock. A stockpile shall be maintained on site for this purpose. At the end of each construction day, all sediment deposited on paved roadways shall be removed and returned to the construction site immediately. If excessive amounts of sediment are being deposited on roadway, extent length of rock construction entrance by 50 foot increments until condition is alleviated or install wash rack. Washing the roadway or sweeping the deposits into roadway ditches, sewers, culverts, or other drainage courses is not acceptable.

STANDARD CONSTRUCTION DETAIL #3-1  
ROCK CONSTRUCTION ENTRANCE  
N.T.S.

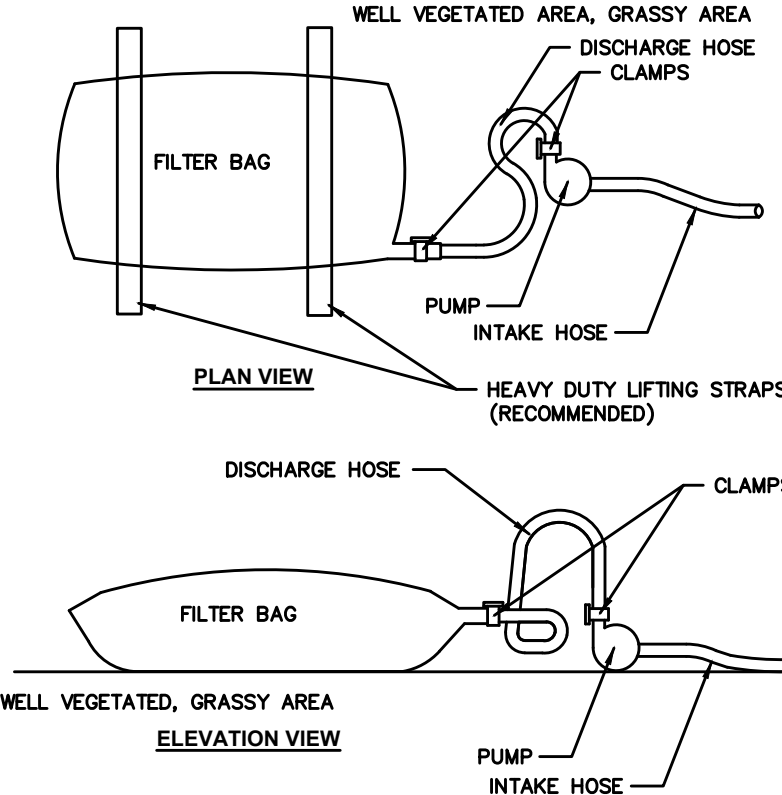


NOTES:

A rock filter outlet shall be installed where failure of a silt fence or straw bale barrier has occurred due to concentrated flow. Anchored compost layer shall be used on upslope face in H2 and EV watersheds.

Sediment shall be removed when accumulations reach 1/3 the height of the outlet.

STANDARD CONSTRUCTION DETAIL #4-6  
ROCK FILTER OUTLET  
N.T.S.



NOTES:

Low volume filter bags shall be made from non-woven geotextile material sewn with high strength double stitched "J" type seams. They shall be capable trapping particles larger than 150 microns. High volume filter bags shall be made from woven geotextiles that meet the following standards:

Property	Test Method	Minimum Standard
Avg. wide width strength	ASTM D-4884	60 lb/in
Grab tensile	ASTM D-4832	250 lb
Puncture	ASTM D-4833	110 lb
Mullen burst	ASTM D-3786	350 psi
UV resistance	ASTM D-4355	70%
AOS % retained	ASTM D-4751	80 sieve

A suitable means of accessing the bag with machinery required for disposal purposes shall be provided. Filter bags shall be replaced when they become 1/2 full of sediment. Spare bags shall be kept available for replacement of those that have failed or are filled. Bags shall be placed on straps to facilitate removal unless bags come with lifting straps already attached.

Bags shall be located in well-vegetated (grassy) area, and discharge onto stable, erosion resistant areas. Where this is not possible, a geotextile underlayer and flow path shall be provided. Bags may be placed on filter stone to increase discharge capacity. Bags shall not be placed on slopes greater than 5%. For slopes exceeding 5%, clean rock or other non-erodible and non-polluting material may be placed under the bag to reduce slope steepness.

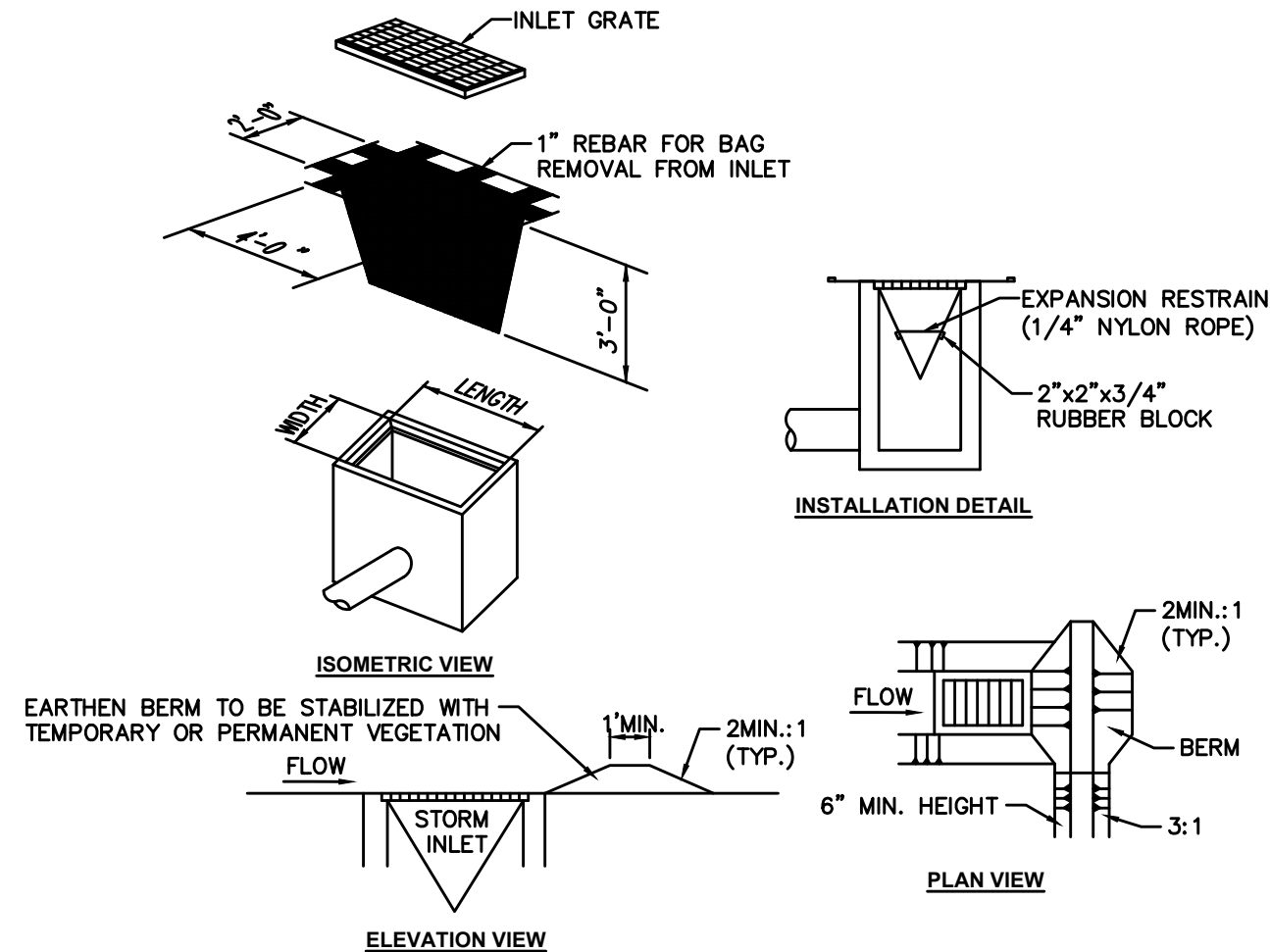
No downslope sediment barrier is required for most installations. Compost berm or compost filter sock shall be installed below bags located in H2 or EV watersheds, within 50 feet of any receiving surface water or where grassy area is not available.

The pump discharge hose shall be inserted into the bags in the manner specified by the manufacturer and securely clamped. A piece of PVC pipe is recommended for this purpose.

The pumping rate shall be no greater than 750 gpm or 1/2 the maximum specified by the manufacturer, whichever is less. Pump intakes shall be floating and screened.

Filter bags shall be inspected daily. If any problem is detected, pumping shall cease immediately and not resume until the problem is corrected.

STANDARD CONSTRUCTION DETAIL #3-16  
PUMPED WATER FILTER BAG  
N.T.S.



NOTES:

Maximum drainage area = 1/2 acre.

Inlet protection shall not be required for inlet tributary to sediment basin or trap. Berms shall be required for all installations.

Roller earthen berm shall be maintained until roadway is stoned. Road subbase berm shall be maintained until roadway is paved. Earthen berm in channel shall be maintained until permanent stabilization is completed or remain permanently.

At a minimum, the fabric shall have a minimum grab tensile strength of 120 lbs, a minimum burst strength of 200 psi, and a minimum trapezoidal tear strength of 50 lbs. Filter bags shall be capable of trapping all particles not passing a No. 40 Sieve.

Inlet filter bags shall be inspected on a weekly basis and after each runoff event. Bags shall be emptied and rinsed or replaced when half full or when flow capacity has been reduced so as to cause flooding or bypassing of the inlet. Damaged or clogged bags shall be replaced. A supply shall be maintained on site for replacement of bags. All needed repairs shall be initiated immediately after the inspection. Dispose of accumulated sediment as well as all used bags according to the plan notes.

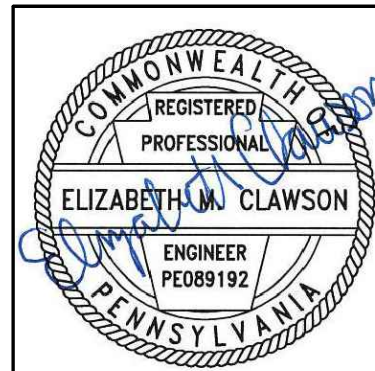
DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-16  
FILTER BAG INLET PROTECTION - TYPE M INLET  
N.T.S.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY CHANGES IN DESIGN PLANS UNLESS WRITTEN CONSENT IS GIVEN BY THE ENGINEER. THE CONTRACTOR AND/OR THE OWNER WILL BE HELD RESPONSIBLE FOR ANY FIELD MODIFICATIONS MADE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER AND NECESSARY APPROVALS BY PERMITTING AGENCIES.

THE LOCATION OF EXISTING UTILITIES WERE TAKEN FROM RECORDS AND MARKING PROVIDED BY OTHERS AND OBSERVED EVIDENCE. THE LOCATIONS SHOWN MAY BE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS, SIZES AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGE TO ALL EXISTING UTILITIES.

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EROSION AND SEDIMENTATION CONTROL DETAILS  
MODWASH - UPPER ALLEN TOWNSHIP, PA  
prepared for  
HUTTON MECHANISBURG PA ST, LLC  
situated in  
UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

SHEET NO.  
C702

DWG. PATH: C:\Users\morris\Documents\Modwash\Modwash.dwg - 127 Elm Ave., Upper Allen Twp, PA - E.dwy  
LAST SAVE: Feb 08, 2022 - 10:46am - mork

DESIGNED BY: EMC  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 18566.66

SCALE:  
N/A

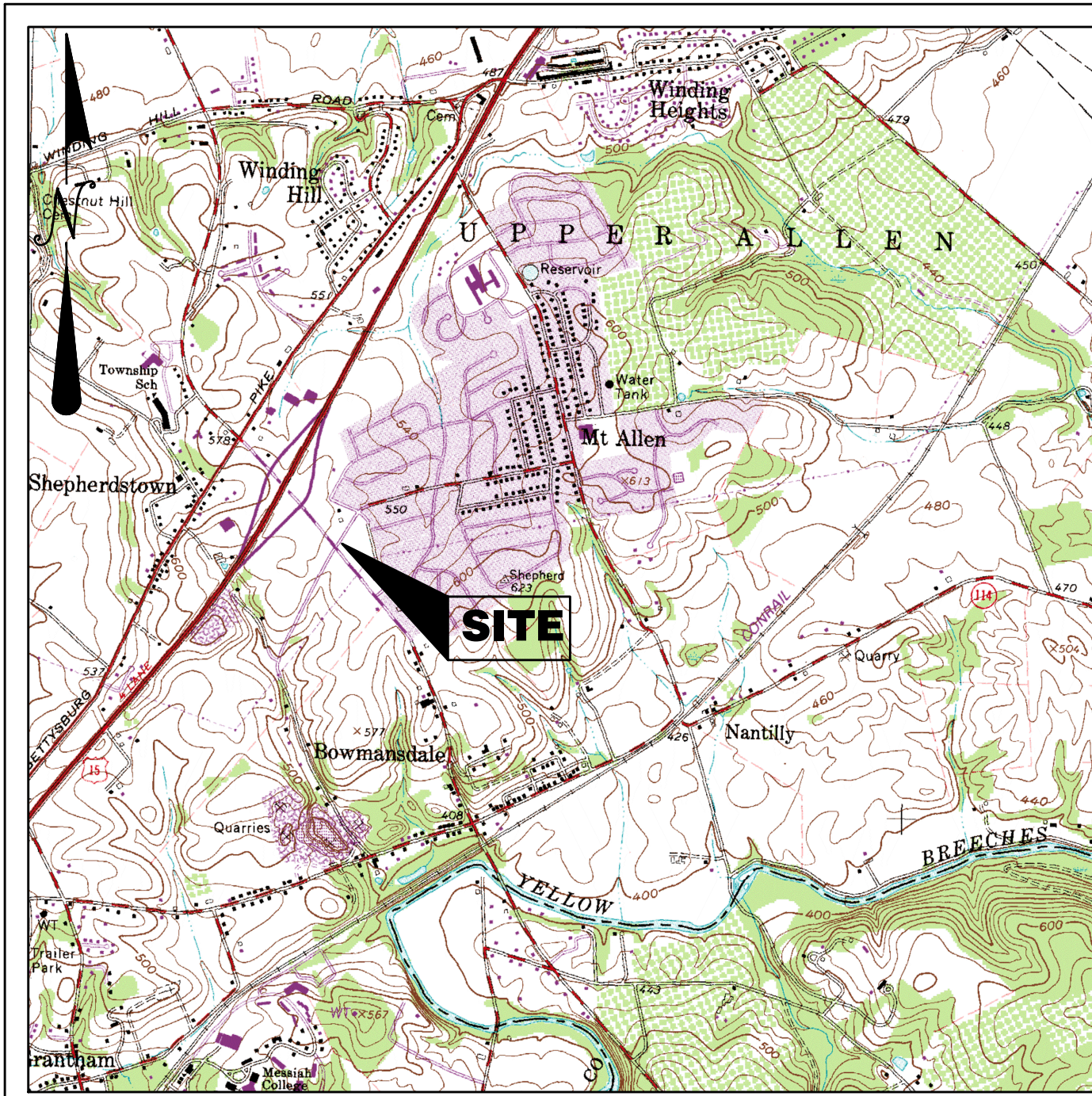
Morris Knowles & Associates, Inc.  
(A Hammontree Company)  
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Pottsville, PA 17854  
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Fax: (724) 468-8640  
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LOCATION MAP  
SCALE: 1"=2000'  
USGS QUADRANGLE MAP  
LEMOYNE, PA

NOTES:

- THE OWNER OF THE PROPERTY IS THEREBY THE OWNER OF ALL PERMANENT STORMWATER FACILITIES AND SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND OPERATION OF ALL SUCH FACILITIES.
- THE RECEIVING WATER COURSE IS UNNAMED TRIBUTARY TO YELLOW BREECHES CREEK WHICH IS DESIGNATED AS A COLD WATER FISHERY (CWF) BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, CHAPTER 93.
- ALL BUILDING MATERIALS AND CONSTRUCTION WASTES SUCH AS EXCESS OR UNSUITABLE SOIL, ASPHALT MILLINGS, CONCRETE, ETC. SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET. SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION. INSPECTIONS SHALL BE LOGGED ON THE MOST CURRENT DEP FORM 3150-FM-BWEO083 AND KEPT ON SITE AT ALL TIMES.
- CLEAN SEDIMENT COLLECTED FROM BMPs SHALL BE SPREAD OUT IN AN AREA UPSLOPE FROM E&S BMPs IN ORDER TO BE DRIED OUT AND THEN REUSED OR STOCKPILED. ALL MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF PROPERLY IN AN APPROVED C&D LANDFILL. IF CLEAN FILL MATERIAL IS REMOVED FROM THE SITE, IT SHALL BE TAKEN TO AN APPROVED C&D LANDFILL OR IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AN APPROVED E&S PLAN FOR THE OTHER SITE.
- THERE ARE NO ANTICIPATED OR KNOWN GEOLOGIC FORMATIONS THAT COULD CAUSE POLLUTION. HOWEVER, COMPOST FILTER SOCK AND UTILITY TRENCHING GUIDELINE WILL BE FOLLOWED TO MINIMIZE ANY IMPACTS.
- THERMAL IMPACTS: APPROPRIATELY SPACED INLETS WILL MINIMIZE PAVEMENT OVERLAND FLOW AND MINIMIZE THERMAL IMPACTS TO DISCHARGING STORMWATER RUNOFF. AREAS THAT ARE NOT PAVED WILL BE LAWN COVERED. STORMWATER RUNOFF WILL DISCHARGE INTO AN UNDERGROUND DETENTION FACILITY TO COOL THE WATER PRIOR TO LEAVING THE SITE.

STORMWATER MANAGEMENT CONSTRUCTION SEQUENCE:

STAGE 1: INSTALLATION OF UNDERGROUND DETENTION FACILITY

- A. WHEN SITE IS STABILIZED WITH UNIFORM 70% PERENNIAL VEGETATIVE COVER OVER PROJECT AREA, INSTALL STORMWATER MANAGEMENT FACILITY.

STAGE 2: INSTALL UNDERGROUND DETENTION FACILITY PER DETAIL AND SPECIFICATION. CONTRACTOR SHALL PREVENT COMPACTION WITHIN INFILTRATION AREA TO THE GREATEST EXTEND POSSIBLE. IN THE EVENT OF COMPACTION, WITHIN THE INFILTRATION ZONE, THE CONTRACTOR SHALL SCARIFY THE SOIL TO PROMOTE INFILTRATION.

- A. INSTALL NON-WOVEN GEOTEXTILE ALONG BOTTOM OF INFILTRATION AREA.  
B. INSTALL OUTLET STRUCTURE AND WEIR PLATES ACCORDING TO THE PLAN SHEET C801.  
C. INSTALL AND CONNECT PERFORATED HDPE PIPES TO OUTLET STRUCTURE. BACKFILL WITH 2B STONE PER SPECIFICATIONS ON C801.  
D. CONNECT STORM SEWER PIPING TO THE UNDERGROUND DETENTION FACILITY.  
E. \*\*THE CRITICAL STAGE IN WHICH LICENSED PROFESSIONAL OR RESIGNEE MUST BE ON-SITE IS PRIOR TO THE STONE BEDDING BEING LAID, INSTALLATION OF PERFORATED HDPE PIPES AND OUTLET STRUCTURE, AND BACKFILLING OF PERFORATED HDPE PIPES.\*\*

LANDSCAPE RESTORATION SEQUENCE:

- A. PERMANENT SEEDING SHALL BE ERNST SEED MIX ERNWX-181 NATIVE STEEP SLOPE MIX OR EQUIVALENT.  
B. DISTURBED AREA TO BE RE-PLANTED WITH VEGETATION AS SHOWN ON PLAN.

LEGEND

SAN - SANITARY	G - GAS LINE
ST - STORM	W - WATER LINE
MH - MANHOLE	T - SUBSURFACE TELEPHONE LINE
TOP - TOP OF CASTING	E - SUBSURFACE ELECTRIC LINE
INV - INVERT / FLOW LINE	OH - OVERHEAD WIRES
WV - WATER VALVE	908 - EXISTING CONTOURS
GV - GAS VALVE	EXISTING INLET
GM - GAS METER	EXISTING MANHOLE
EM - ELECTRIC METER	EXISTING SEWER
S.R. - STATE ROUTE	X-X - FENCE
TELE - TELEPHONE	
ROP - REINFORCED CONCRETE PIPE	
OPP - CORRUGATED PLASTIC PIPE	



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1-800-242-1776  
DESIGN SN: 20211762062

Know what's below  
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THE GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES INVOLVED IN THE SITE NO MORE TEN DAYS AND NO LESS THAN THREE DAYS IN ADVANCE OF EXCAVATION (PA ACT 287 OF 1974 AMENDED BY ACT 50 OF 2018). PA STATE LAW REQUIRES 3 WORKING DAYS NOTICE

PERMANENT-STEEP SLOPE

SPECIES: BIRDSFOOT TREFOIL AND TALL FESCUE MIX  
% PURE LIVE SEED: 99%  
APPLICATION RATE: 10 AND 50 LBS/ACRE. RESPECTIVELY  
FERTILIZER TYPE: COMMERCIAL FERTILIZER 5-10-10  
FERTILIZER APPL. RATE: (PER TESTING) 30 LBS/ACRE  
LIMING RATE: 1 TONS/ACRE MULCH TYPE: HAY & STRAW  
MULCHING RATE: 3 TONS/ACRE  
ANCHORING MATERIAL: NONASPHALTIC MATERIAL  
ANCHORING METHOD: SPRAY  
RATE OF ANCHORING MATERIAL APPL.: 1000 GAL/SQ.YD.  
SEEDING DATES: APRIL-SEPT.

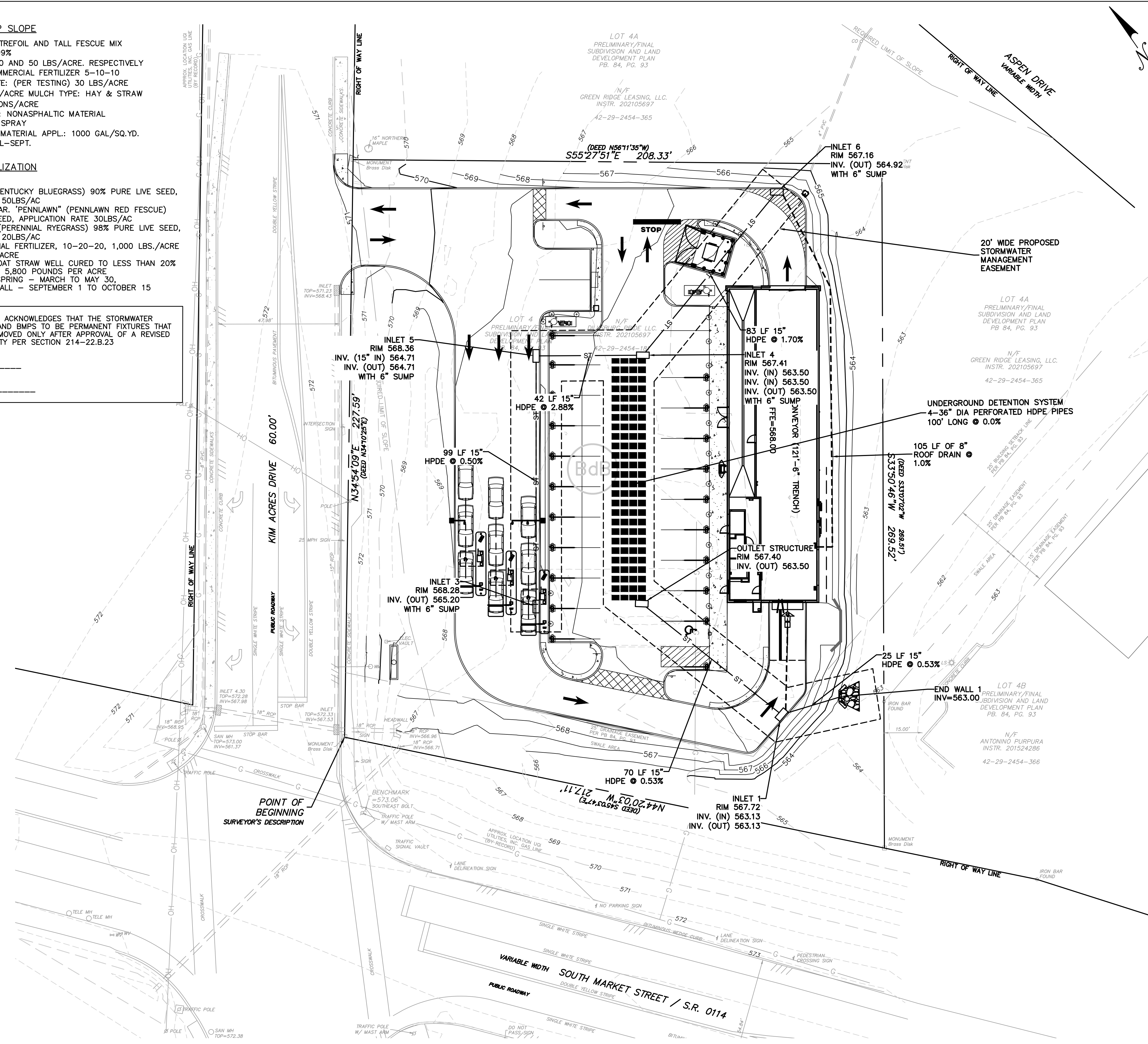
PERMANENT STABILIZATION

SPECIES :  
• POA PRATENSIS (KENTUCKY BLUEGRASS) 90% PURE LIVE SEED, APPLICATION RATE 50LBS/AC  
• FESTUCA RUBRA VAR. 'PENNLAWN' (PENNLAWN RED FESCUE) 98% PURE LIVE SEED, APPLICATION RATE 30LBS/AC  
• LOLIUM PERENNE (PERENNIAL RYEGRASS) 98% PURE LIVE SEED, APPLICATION RATE 20LBS/AC  
FERTILIZER: COMMERCIAL FERTILIZER, 10-20-20, 1,000 LBS./ACRE  
LIMING: 4,000 LBS./ACRE  
MULCH: WHEAT OR OAT STRAW WELL CURED TO LESS THAN 20% MOISTURE BY WEIGHT, 5,800 POUNDS PER ACRE  
SEEDING DATES: SPRING - MARCH TO MAY 30,  
FALL - SEPTEMBER 1 TO OCTOBER 15

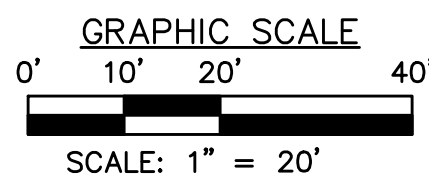
THE LANDOWNER HEREBY ACKNOWLEDGES THAT THE STORMWATER MANAGEMENT FACILITIES AND BMPs TO BE PERMANENT FIXTURES THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED PLAN BY THE MUNICIPALITY PER SECTION 214-22.B.23

NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_



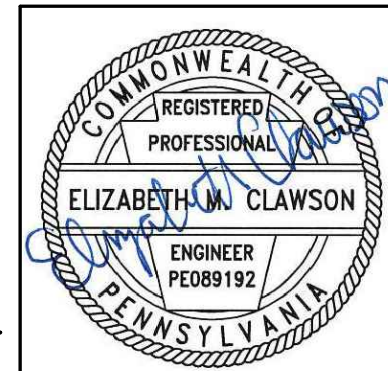
SOIL MAP UNIT LEGEND	
MAP UNIT SYMBOL	MAP UNIT NAME
BdB	BEDINGTON SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES



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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

MODWASH - UPPER ALLEN TOWNSHIP, PA

HUTTON MECHANICSBURG PA ST, LLC

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

**MMA** Morris Knowles & Associates, Inc. (A Hammontree Company)  
Consulting Engineers and Land Surveyors  
443 Altona Drive  
Pittsburgh, PA 15201  
Telephone: (724) 468-8840  
Fax: (724) 468-8840  
info@morrisknowles.com www.morrisknowles.com

SCALE:  
1" = 20'

DESIGNED BY: EMC  
REVIEWED BY: EMC  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 18566.66

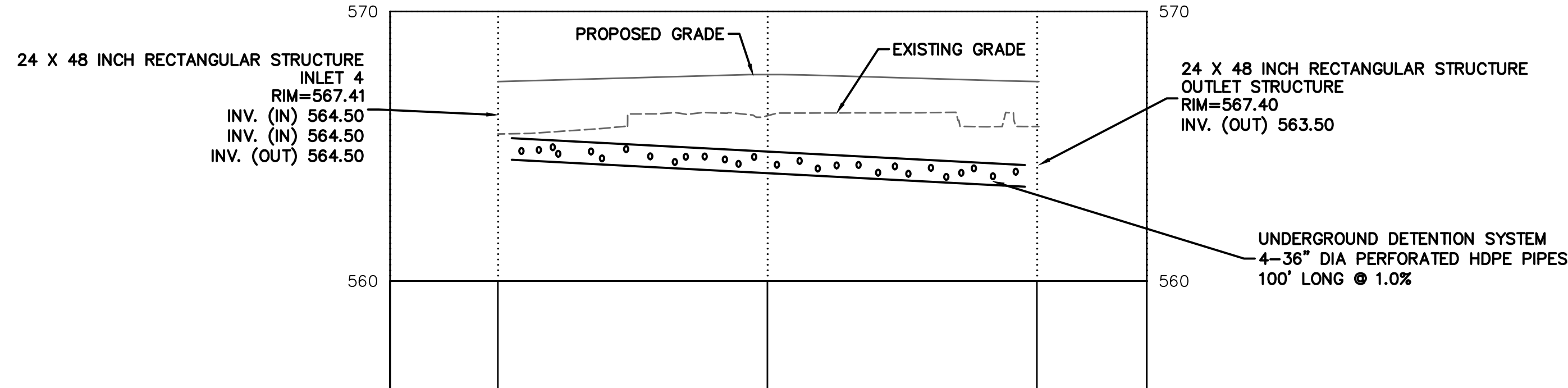
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DWG. PATH: C:\Users\moran\Public\Local\2021\Modwash - 127 Kim Acres, Upper Allen Twp, PA - E.dwg  
LAST SAVE: Feb 08, 2022 - 10:00am

SHEET NO.  
C800





UG DETENTION PROFILE - STA. -0+20 TO STA. 1+20

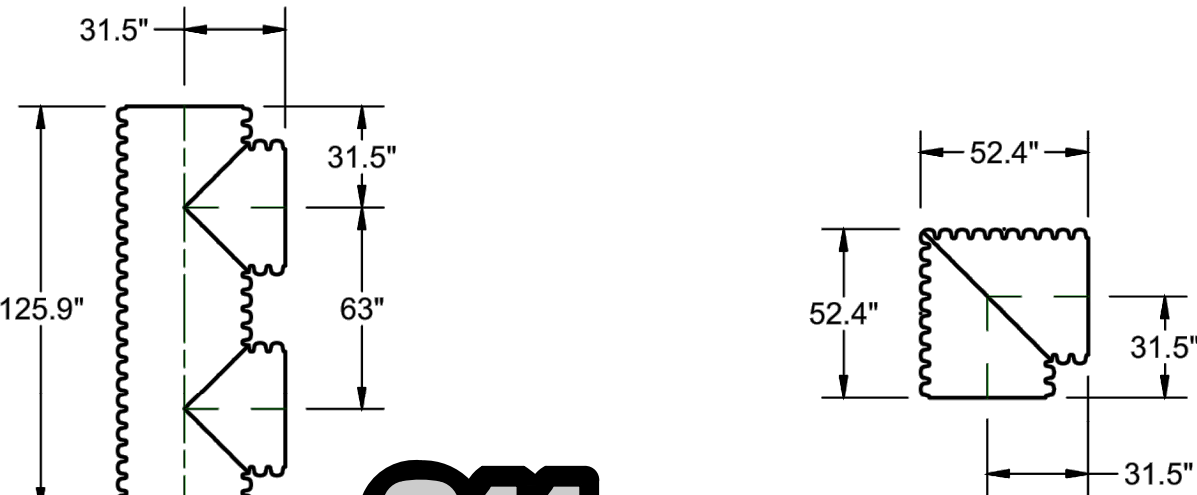
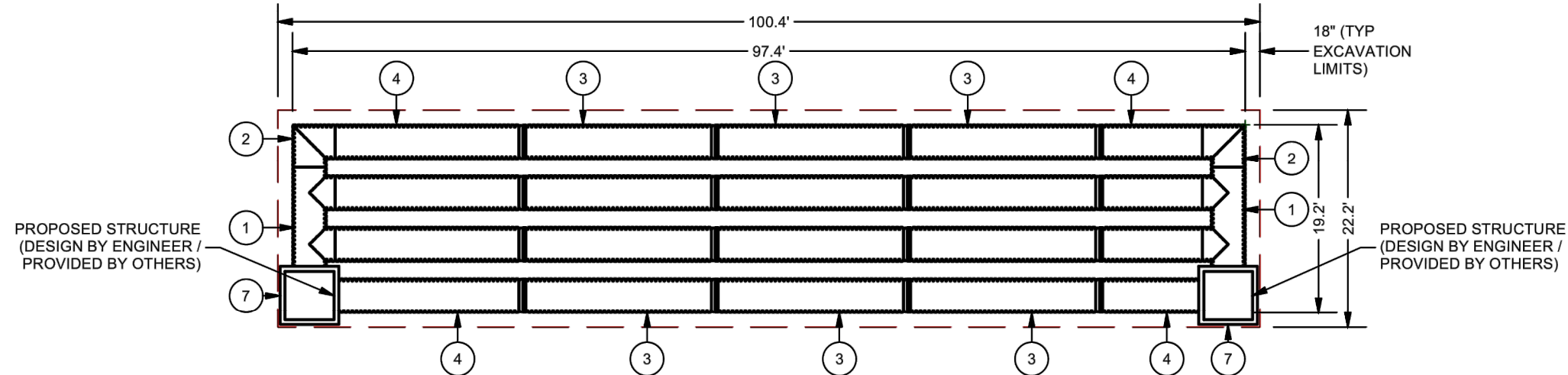
HORIZ SCALE: 1"=20'

VERT SCALE: 1"=4'

ITEM	QTY	ALT. QTY	PART #	DESCRIPTION	STAN.	VENDOR	NOTE
1	2		3652AN	36" DOUBLE MANIFOLD TEE	STAN	ADS	SEE DETAIL
2	2		3698AN	36" MANIFOLD 90 DEG BEND	STAN	ADS	SEE DETAIL
3	12 STICKS	236 LF	36850020IB	36" N12 HWY STB SOLID 20'	STAN	ADS	AS SHOWN
4	7 STICKS	119 LF	36850020IB	36" N12 HWY STB SOLID 20'	STAN	ADS	FIELD CUT
5	8		3681AA	36" SPLIT COUPLER (50/PALLET)	STAN	ADS	NOT SHOWN
6	2 ROLLS	742 SY	0601TG	601.15' X 300' (500 SY) (NTPSP SCAN) (20% OVERAGE)	STAN	ADS	SEE DETAIL
7	2		BY OTHERS	CONCRETE STRUCTURES	NA	BY OTHERS	AS SHOWN
8	9998 CF	371 CY	NA	EXCAVATION	NA	NA	NOT SHOWN

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE PIPE COVER REQUIREMENTS ARE MET.
- STUB SIZES AND INVERTS TO BE VERIFIED BY THE SITE DESIGN ENGINEER PRIOR TO FABRICATION.
- ADS RISERS ARE FABRICATED 36" (900 mm) FROM TOP OF PIPE TO TOP OF RISER DUE TO SHIPPING LIMITATIONS. ADDITIONAL PIPE AND COUPLERS CAN BE USED TO EXTEND THE RISERS TO GRADE.
- ADDITIONAL PIPE AND COUPLERS CAN BE USED TO EXTEND THE RISERS TO GRADE.
- LAYOUT SHOWN DOES NOT INCLUDE ADDITIONAL PIPE & MANIFOLD NEEDED FOR PROPER PIPE INSERTION INTO STRUCTURES.
- NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.



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1-800-242-1776  
DESIGN SN: 20211762062

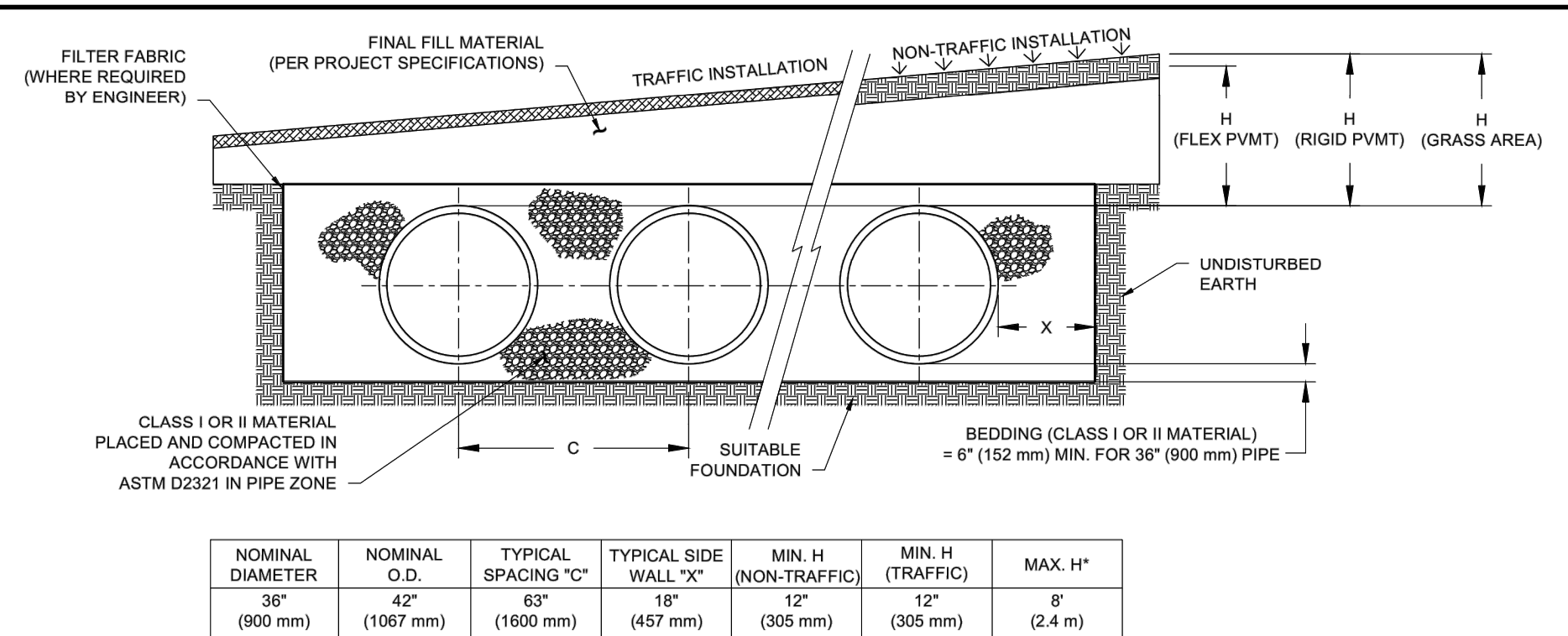
Know what's below  
Call before you dig

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\* MAXIMUM FILL HEIGHTS OVER MANIFOLD FITTINGS, CONTACT MANUFACTURER'S REPRESENTATIVE FOR INSTALLATION CONSIDERATIONS WHEN COVER EXCEEDS 8 FT (2.4 m).

NOTES:

- ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
- ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
- MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
- FILTER FABRIC: A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
- EQUIDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL, AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (102 mm) FOR 4"-24" (100-600 mm), 6" (152 mm) FOR 30"-60" (750-900 mm).
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" (152 mm) ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- COVER: MINIMUM COVER OVER ALL RETENTION/DETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (305 mm) FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" (305 mm) UP TO 36" (900 mm) DIAMETER PIPE AND 24" (610 mm) OF COVER FOR 42"-60" (1050-1500 mm) DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. MAXIMUM FILL HEIGHT LIMITED TO 8 FT (2.4 m) OVER FITTINGS FOR STANDARD INSTALLATIONS. CONTACT A SALES REPRESENTATIVE WHEN MAXIMUM FILL HEIGHTS EXCEED 8 FT (2.4 m) FOR INSTALLATION CONSIDERATIONS.

MAINTENANCE PROGRAM:

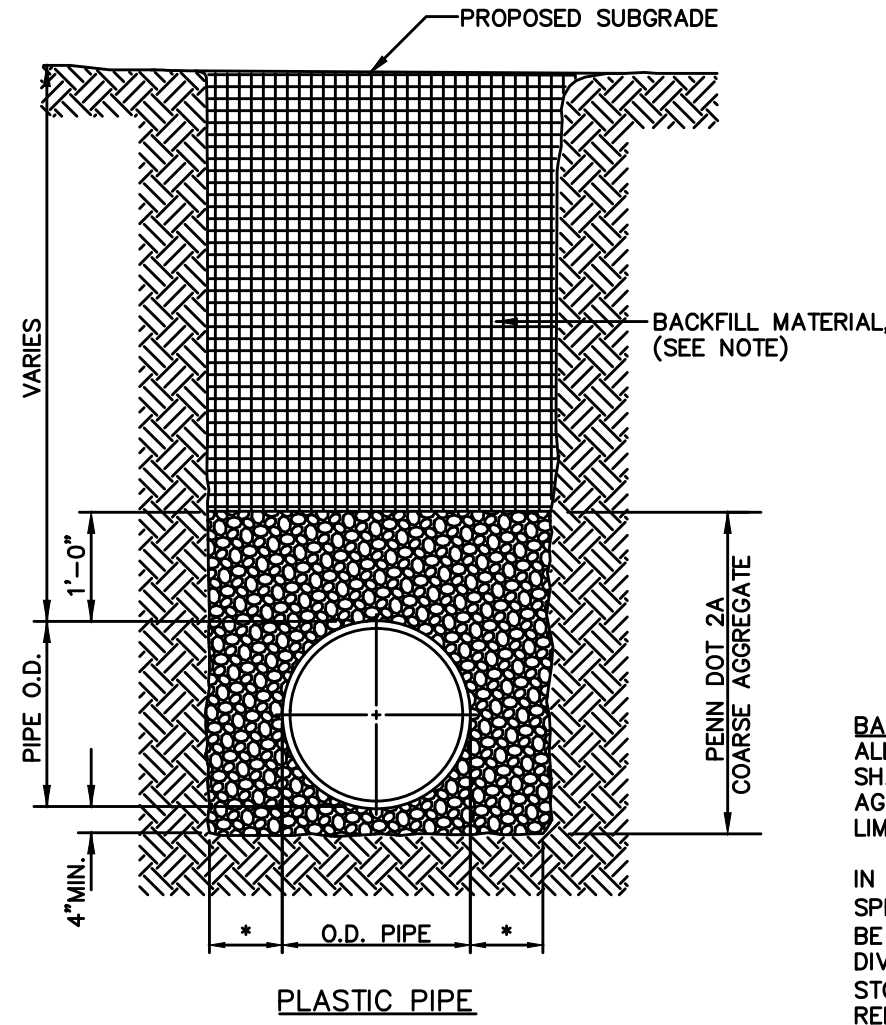
DURING CONSTRUCTION, ALL FILTER FABRIC FENCE AND EROSION AND SEDIMENTATION CONTROL FACILITIES WILL BE INSPECTED, AS NEEDED, TO INSURE ALL SYSTEMS ARE FUNCTIONING PROPERLY. FILTER FABRIC FENCE WILL BE REPLACED, AS NEEDED. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACEMENT AND REPAIR.

DURING CONSTRUCTION, ALL CONSTRUCTION ENTRANCES TO THE SITE WILL BE PROTECTED BY GRAVEL BEDS. THE INFILTRATION SYSTEMS WILL BE INSPECTED PERIODICALLY DURING CONSTRUCTION AND AGAIN UPON PROJECT COMPLETION FOR PROPER OPERATION. THE SYSTEM WILL THEREAFTER BE INSPECTED EACH MONTH BY THE OWNER. IF THE SYSTEM SHOWS ANY SIGNS OF FAILURE OR IMPROPER OPERATION AT ANY TIME, THE OWNER WILL REPLACE AND/OR REPAIR THE AFFECTED AREAS.

INSPECTION OF THE STORMWATER MANAGEMENT SYSTEM WILL INCLUDE:

INSPECTION SHALL BE DONE OF THE ENTIRE STORMWATER MANAGEMENT FACILITY AFTER EVERY STORM EVENT EXCEEDING ONE INCH OF RAINFALL AND AT LEAST ONCE EVERY THREE MONTHS. THIS INSPECTION WILL INCLUDE:

- INSPECTION OF INLET BOXES AND STORM SEWERS FOR ACCUMULATIONS OF DEBRIS AND/OR SEDIMENT.
- MAINTENANCE OF THE FACILITIES SHALL INCLUDE VEGETATION CUTTING AND/OR REMOVAL ALONG WITH ROUTINE MAINTENANCE AS DETERMINED BY THE ENGINEER.
- THE OWNER SHALL CONTACT THE ENGINEER IF ANY SIGNS OF FAILURE HAVE BEEN FOUND DURING THE MONTHLY INSPECTION.
- A RECORD OF THE INSPECTIONS SHOULD BE KEPT BY THE OWNER FOR REVIEW BY THE MUNICIPALITY.

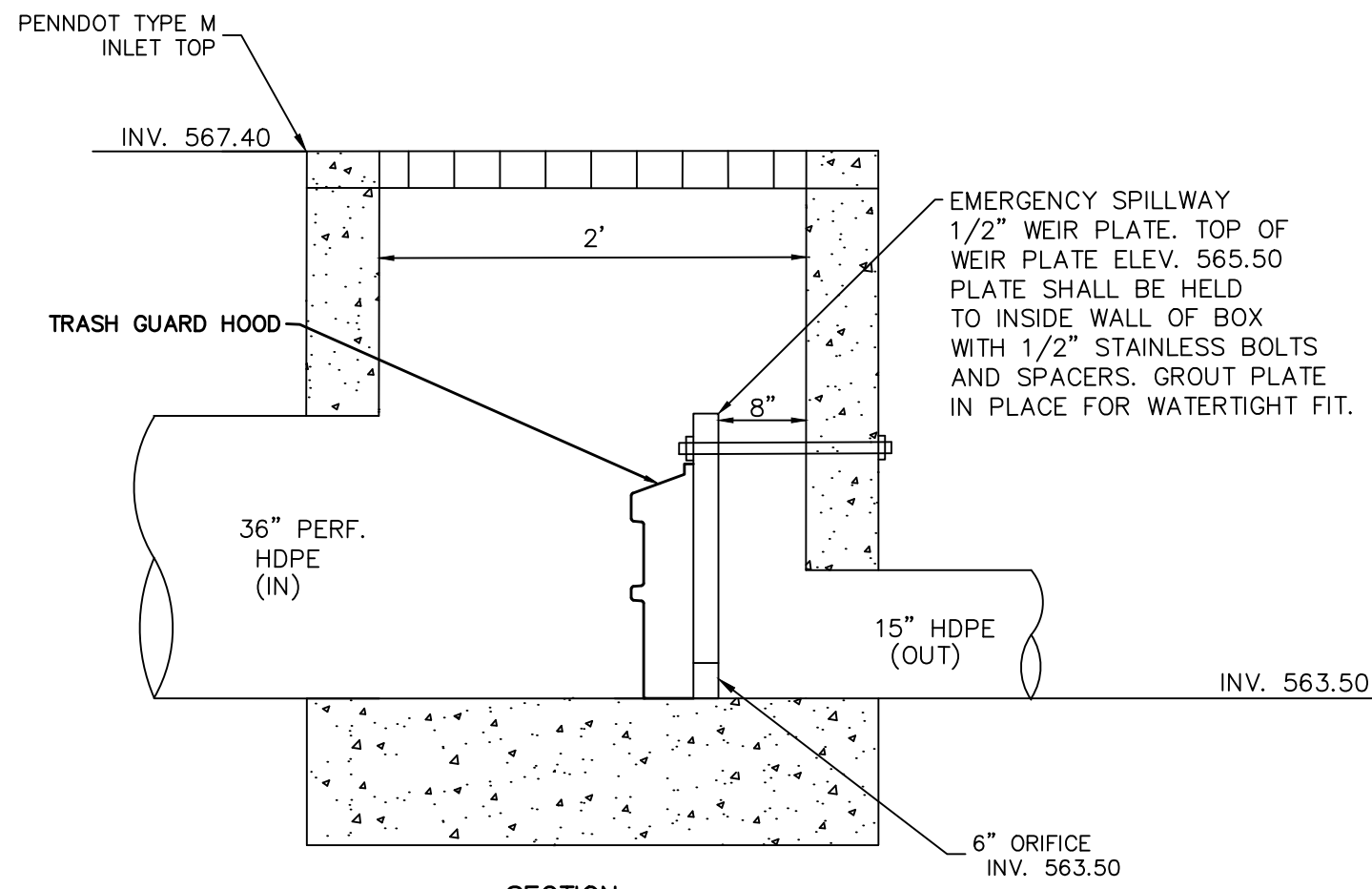
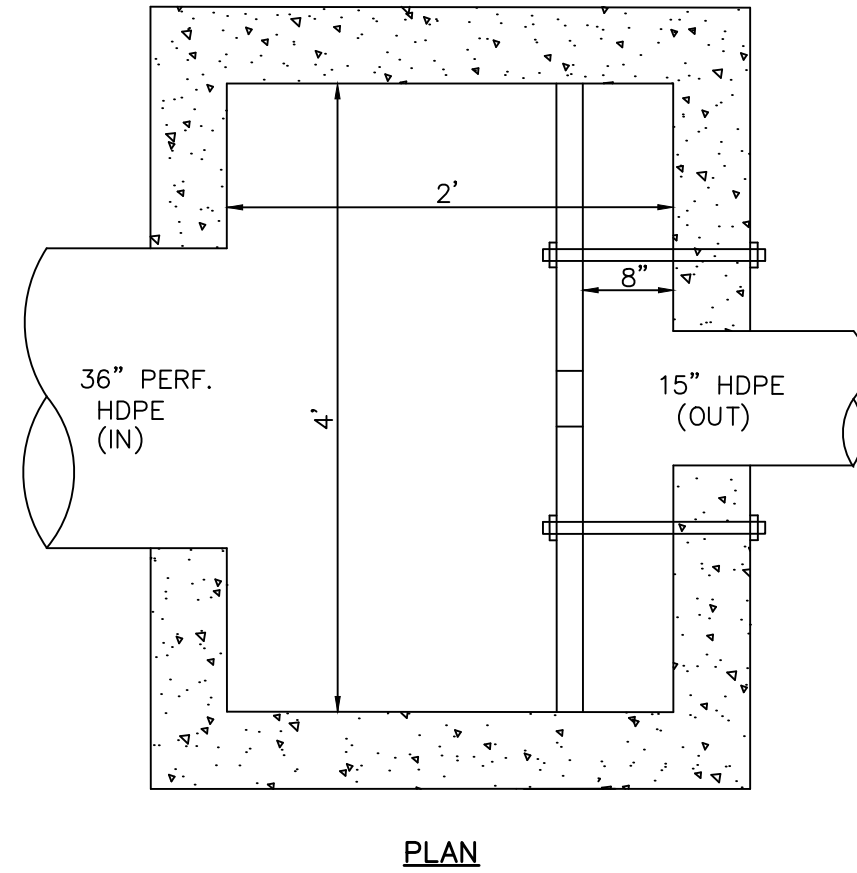


O.D. - OUTSIDE PIPE DIAMETER  
\* 12" IN PENNDOT R.O.W. - 8" MIN. IN ALL OTHER CONDITIONS

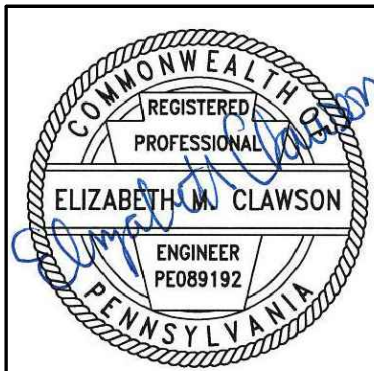
STORM SEWER STANDARD TRENCHING  
N.T.S.

BACKFILL:  
ALL STREET, SIDEWALK AND PARKING AREA CROSSINGS SHALL BE BACKFILLED TO SUBGRADE WITH AASHTO #57 AGGREGATE, GRAVEL OR STONE FOR SEWERS AND 2A LIMESTONE FOR ALL OTHER UTILITIES.

IN ALL OTHER TRENCH AREAS: BACKFILL FROM THE SPRINGLINE TO (1) ONE FOOT ABOVE THE TOP OF PIPE, TO BE SELECTED MATERIAL (SELECTED MATERIAL IS FINELY DIVIDED MATERIAL FREE OF DEBRIS, ORGANIC MATERIAL AND STONES.), TAMPED IN (4) FOUR INCH LAYERS; THEN THE REMAINING BACKFILL FROM THE TRENCH MAY BE PLACED. IF UNSUITABLE BACKFILL IS DETERMINED TO BE PRESENT BY THE OWNER REPRESENTATIVE, IMPORTED BACKFILL WILL BE REQUIRED.



UNDERGROUND DETENTION POND  
OUTLET STRUCTURE  
NO SCALE



POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS

MODWASH - UPPER ALLEN TOWNSHIP, PA

HUTTON MECHANICSBURG PA ST, LLC

UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PA

DESIGNED BY: EMC  
REVIEWED BY: ECM  
DRAWN BY: GJV  
DATE: NOV 2021  
PROJ. NO.: 1856.66

SCALE:  
N/A

Morris Knowles & Associates, Inc.  
(A Hammontree Company)  
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443 Altema Drive  
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Telephone: (724) 468-4822  
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info@morrisknowles.com www.morrisknowles.com

SHEET NO.  
C801

DWG PATH: C:\Users\morris\Documents\2021\Modwash - AS201\Modwash - 127 Rim Area, Upper Allen Twp, PA - E.dwg  
LAST SAVE: Feb 08, 2022 - 10:00am