

<b>SOURCE OF TITLE</b>	
DEED BOOK: 0001465353 PARCEL: 27-032627-07466 ADDRESS: 24-18-18	DEED BOOK: 2081 PAGE: 4714 PARCEL: 27-032627-07466 ADDRESS: 24-18-18
<b>ZONING COMPLIANCE CHART</b>	
ZONING DISTRICT: I INDUSTRIAL ZONING DISTRICT	
BUILDING AREA	10,000 SF
PROPOSED FUTURE	50,000 SF
ACTUAL	17,000 SF
<b>BUILDING SETBACKS</b>	
FRONT YARD	100' BDC
REAR YARD	20'
ADJUTING RESIDENTIAL	30'
<b>PARKING SETBACKS</b>	
FRONT YARD	100' BDC
REAR YARD	20'
ADJUTING RESIDENTIAL	30'

<b>SITE DATA</b>	
SITE AREA	60.3 AC
SITE ZONING	INDUSTRIAL II
PROPOSED USE	AGRICULTURAL, MANUFACTURE & TRAILER STORAGE
SOURCE OF WATER	PUBLIC
SOURCE OF SEWER	PUBLIC
SITE ADDRESS	2225 E CUMBERLAND ST, LEBANON, PA 17042

<b>PARKING DATA</b>	
NORTH LEBANON TOWNSHIP	
MIN. LOADING & UNLOADING SPACE DIMENSIONS - 12'X50' (800 S.F.)	
NO. OF EMPLOYEES	16 (INITIAL CONSTRUCTION) 57 (ADDITIONAL FOLLOWING EXPANSION)
<b>DANGER SPACES PROVIDED</b>	
15' (INITIAL CONSTRUCTION)	40' (ADDITIONAL FOLLOWING EXPANSION)
TRAILER	50' (INITIAL CONSTRUCTION)
EMPLOYEE	206 (INITIAL CONSTRUCTION)
ADA	7' (INITIAL CONSTRUCTION)

**STANDARD SYMBOLS**

<p><b>EXISTING</b></p>	<p><b>PROPOSED</b></p>
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**ABBREVIATIONS:**

ADJ ADJUST	GI GRATE INLET	REM REMOVAL
AGG AGGREGATE GRAVEL	GV GATE VALVE	RT RIGHT-OF-WAY
BCG BACK OF CURB	HDPE HIGH DENSITY POLYETHYLENE	RR RAILROAD
BFR BARRIER FREE RAMP	HORZ HORIZONTAL	RT RIGHT
BLDG BUILDING	HP HIGH POINT	SAN SANITARY SEWER
BOP BOTTOM OF PIPE	HWL HIGH WATER LEVEL	SF SQUARE FOOT
BVC BEGIN VERTICAL CURVE	HYD FIRE HYDRANT	SHT SHEET
SW BOTTOM OF WALL	ICV IRRIGATION CONTROL VALVE	SSMH SANITARY SEWER MANHOLE
CB CATCH BASIN	INL INLET	STA STATION
CI CURB INLET	INV INVERT	STD STANDARD
CL CENTERLINE	JB JUNCTION BOX	STM STORM SEWER
CMP CORRUGATED METAL PIPE	LP LIGHT POLE	STMH STORM SEWER MANHOLE
CO CLEANOUT	LT LOW POINT	SW SIDEWALK
CONC CONCRETE	LT LEFT	SY SQUARE YARDS
CONN CONNECTION	MAX MAXIMUM	T TELEPHONE
CY CUBIC YARD	MIN MINIMUM	TB THRUST BLOCK
D DITCH	OS OFFSET FROM CENTERLINE	TBR TO BE REMOVED
DCA DOUBLE CLEANOUT	P PAVEMENT	T/C TOP OF CURB
DIA DIAMETER	PC POINT OF CURVE	TEMP TEMPORARY
DIP DUCTILE IRON PIPE	PCC POINT OF COMPOUND CURVE	TF TOP OF FOUNDATION
DOM DOMESTIC	PI POINT OF INTERSECTION	TI TOP OF INLET
ELEV ELEVATION	PL PROPERTY LINE	TOP TOP OF PIPE
EP EDGE OF PAVEMENT	PP POWER POLE	TP TELEPHONE PEDESTAL
EVC END VERTICAL CURVE	PROP PROPOSED	TRANS TRANSFORMER
EX EXISTING	PT POINT OF TANGENCY	T/WALL TOP OF WALL
FDC FIRE DEPARTMENT CONNECTION	PVC POLYVINYL CHLORIDE PIPE	TYP TYPICAL
FES FLARED END SECTION	PVC POINT OF VERTICAL CURVATURE	WM WATER MAIN
FF FINISHED FLOOR	PVI POINT OF VERTICAL INTERSECTION	WSE WATER SURFACE ELEVATION
FG FINISHED GRADE	PVT POINT OF VERTICAL TANGENCY	WV WATER VALVE
FL FLOW LINE	R RADIUS	
FM FORCE MAIN	RCP REINFORCED CONCRETE PIPE	

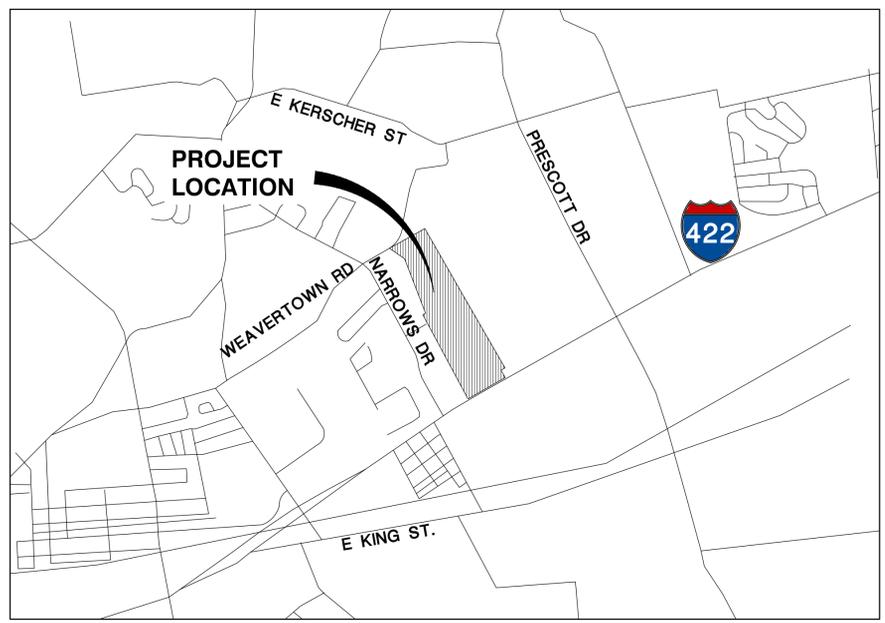
**PRELIMINARY/FINAL LAND DEVELOPMENT PLAN**

FOR

**R+L CARRIERS - LEBANON**

2225 E CUMBERLAND ST, LEBANON, PA 17042  
NORTH LEBANON TOWNSHIP, PENNSYLVANIA

NOVEMBER 21, 2025



LOCATION MAP  
N.T.S.

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**NOTES:**

- THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A SURVEY PREPARED BY HB ENGINEERING, INC. DATED MARCH 1, 2025. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF ANY DIFFERING CONDITIONS. MANHARD CONSULTING HAS NOT VERIFIED THIS SURVEY AND IS NOT RESPONSIBLE FOR THE ACCURACY OF THE SURVEY BOUNDARY AND/OR TOPOGRAPHY.

KEY CONTACTS	
<b>DEVELOPER</b> R+L CARRIERS, INC. P.O. BOX 800 600 GILLAM ROAD WILMINGTON, OH 45177 PHONE: (937)382-1494 CONTACT: KEVIN GASKALLA	<b>ENGINEER</b> MANHARD CONSULTING 333 E BUTTERFIELD RD, SUITE 600 LOMBARD, IL 60148 (972)972-4209 CONTACT: JASON GUTSHALL
<b>ARCHITECT</b> PDMS DESIGN GROUP 4201 CRUMS MILL ROAD, SUITE 100 HARRISBURG, PA 17112 (717)220-0011 CONTACT: SUZANNE HOFFER	<b>SURVEYOR</b> HB ENGINEERING, INC. 4201 CRUMS MILL ROAD, SUITE 100 HARRISBURG, PA 17112 (717)220-0011 CONTACT: SUZANNE HOFFER
<b>LANDSCAPE ARCHITECT</b> MANHARD CONSULTING 333 EAST BUTTERFIELD RD, SUITE 600 LOMBARD, IL 60148 (630)691-8500	<b>WATER</b> CITY OF LEBANON AUTHORITY CONTACT: BOB SENTZ BSENTZ@LEBANONAUTHORITY.ORG
<b>SEWER</b> NORTH LEBANON TOWNSHIP SEWER AUTHORITY (717)273-7132 CONTACT: SCOTT RIGHTS	<b>ELECTRIC</b> MET-ED (800)545-7741
<b>GAS</b> UGI (717)673-6544 CONTACT: DAVID SHULTZ	<b>TELEPHONE</b> VERIZON (717)954-8621

MANHARD CONSULTING, LTD. IS NOT RESPONSIBLE FOR THE SAFETY OF ANY PARTY AT OR ON THE CONSTRUCTION SITE. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY OTHER PERSON OR ENTITY PERFORMING WORK OR SERVICES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE JOB SITE SAFETY OF PERSONS ENGAGED IN THE WORK OR THE MEANS OR METHODS OF CONSTRUCTION.

**OWNERS CERTIFICATION AND ACKNOWLEDGMENT**  
COMMONWEALTH OF PENNSYLVANIA )  
COUNTY OF )

ON THIS, \_\_\_\_\_ DAY OF \_\_\_\_\_, BEFORE ME, \_\_\_\_\_, NOTARY PUBLIC, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED \_\_\_\_\_, KNOWN TO ME (OR SATISFACTORILY PROVEN) TO BE THE PERSON(S) WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY THAT HE/THY ARE THE OWNERS OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE PLAN AND THE SAME AS MADE AT HIS/HER DIRECTION, THAT HE/THY ACKNOWLEDGE THE SAME TO BE HIS/HER ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED, AND THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE HEREBY DEDICATED TO PUBLIC USE.

Name/Title: \_\_\_\_\_ DATE: \_\_\_\_\_  
Company: \_\_\_\_\_

NOTARY PUBLIC

**LEBANON COUNTY PLANNING DEPARTMENT**

REVIEWED: \_\_\_\_\_ DATE: \_\_\_\_\_

**CERTIFICATION OF PLAN ACCURACY**  
HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE NORTH LEBANON TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND THE NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.

I, STEPHEN A. SHERK, CERTIFY THAT THE PROPOSED DETENTION BASIN(S) UNDERLAIN BY LIMESTONE.

STEPHEN A. SHERK, P.E. DATE: \_\_\_\_\_

**CERTIFICATION OF SURVEY ACCURACY**  
HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, THE SURVEY SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE NORTH LEBANON TOWNSHIP, NORTH LEBANON TOWNSHIP AND THE CITY OF LEBANON SUBDIVISION AND LAND DEVELOPMENT ORDINANCES.

**NORTH LEBANON TOWNSHIP PLANNING COMMISSION**  
AT A MEETING HELD ON \_\_\_\_\_, THE PLANNING COMMISSION OF NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA APPROVED THE FINAL LAND DEVELOPMENT PLAN FOR THE PROJECT AS SHOWN HEREON. A COPY OF THE REVIEW COMMENTS IS ON FILE IN THE TOWNSHIP OFFICE.

CHAIRMAN OR VICE CHAIRMAN DATE: \_\_\_\_\_

**NORTH LEBANON TOWNSHIP SUPERVISORS**  
AT A MEETING HELD ON \_\_\_\_\_, THE BOARD OF SUPERVISORS OF NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA APPROVED THE FINAL LAND DEVELOPMENT PLAN FOR THE PROPERTY AS SHOWN HEREON. NO OTHER PLAN OR PLANS SHALL BE RECOGNIZED. APPROVAL INCLUDES ALL DOCUMENTATION INCLUDING THE COMMENTS OR REQUIREMENTS OF OTHER AGENCIES, ORDINANCES, RULES AND REGULATIONS, AND SHALL NOT BE CONSTRUED AS A GUARANTEE TO ANY PERSON OR ORGANIZATION THAT THE DESIGN OR ANY PART OF THE PLAN WILL FUNCTION AS ANTICIPATED UNDER ANY OR APPROVAL OF THE PLAN, THE TOWNSHIP EXPRESSLY DISCLAIMS THE ASSUMPTION OF LIABILITY FOR ERRORS, OMISSIONS OR DEFICIENCIES IN THE DESIGN, ENGINEERING CONSTRUCTION, OR EXPECTED FUNCTION OF THE MATTERS REVIEWED AND/OR APPROVED.

APPROVED DATE: \_\_\_\_\_

APPROVED DATE: \_\_\_\_\_

APPROVED DATE: \_\_\_\_\_

**NORTH LEBANON TOWNSHIP SUPERVISORS**  
AT A MEETING HELD ON \_\_\_\_\_, THE BOARD OF SUPERVISORS OF NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA APPROVED THE FINAL LAND DEVELOPMENT PLAN OF THE PROPERTY AS SHOWN HEREON.

REVIEWED & APPROVED DATE: \_\_\_\_\_

REVIEWED & APPROVED DATE: \_\_\_\_\_

REVIEWED & APPROVED DATE: \_\_\_\_\_

**NORTH LEBANON TWP PLANNING COMMISSION**  
AT A MEETING HELD ON \_\_\_\_\_, THE PLANNING COMMISSION OF NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PENNSYLVANIA RECOMMENDED FOR APPROVAL THE LAND DEVELOPMENT PLAN OF THE PROPERTY AS SHOWN HEREON.

CHAIRPERSON DATE: \_\_\_\_\_

**NORTH LEBANON TOWNSHIP ENGINEER REVIEW CERTIFICATION**  
REVIEWED BY THE NORTH LEBANON TOWNSHIP ENGINEER THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

REVIEWED DATE: \_\_\_\_\_

**NORTH LEBANON TOWNSHIP ENGINEER**  
REVIEWED BY THE NORTH LEBANON TOWNSHIP ENGINEER THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

REVIEWED DATE: \_\_\_\_\_

**R+L CARRIERS - LEBANON**  
NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
COVER SHEET

PROJ. MGR.: JG  
PROJ. ASSOC.: SF  
DRAWN BY: CA  
DATE: 11/21/2025

SHEET  
**1 OF 48**  
611.172001





# MANHARD CONSULTING STANDARD SPECIFICATIONS

## GENERAL CONDITIONS

CONTRACTOR acknowledges and agrees that the use and reliance of these Plans and Specifications is sufficient consideration for CONTRACTOR'S covenants stated herein.

### DEFINITION OF TERMS

- a. "CLIENT" shall mean R+L CARRIERS, which is the person or entity with whom Manhard Consulting has contracted with to prepare Civil Engineering PLANS and SPECIFICATIONS.
- b. "ENGINEER" shall mean Manhard Consulting, a Civil Engineering consultant on the subject project.
- c. "PLANS and SPECIFICATIONS" shall mean the Civil Engineering PLANS and SPECIFICATIONS prepared by the ENGINEER, which may be a part of the contract documents for the subject project.
- d. "CONTRACTOR" shall mean any person or entity performing any work described in the PLANS and SPECIFICATIONS.
- e. "JURISDICTIONAL GOVERNMENTAL ENTITY" shall mean any municipal, county, state or federal unit of government, from whom an approval, permit and/or review is needed for any subject project.

### INTENT OF THE PLANS AND SPECIFICATIONS

The intent of the PLANS and SPECIFICATIONS is to set forth certain requirements of performance, type of equipment and structures, and standards of materials and construction. They may also identify labor and materials, equipment and transportation necessary for the proper execution of the work but are not intended to be infinitely determined so as to include minor items obviously required as part of the work. The PLANS and SPECIFICATIONS require new material and equipment unless otherwise indicated, and to require complete performance of the work in spite of omissions of specific references to any minor component part. It is not intended, however, that materials or work not described by or properly inferred from any heading, branch, class or trade of the SPECIFICATIONS shall be supplied unless distinctly so noted. Materials or work not covered in those, which so applied have a well-known technical or trade meaning, shall be held to refer to such recognized standards.

### INTERPRETATION OF PLANS AND SPECIFICATIONS

- a. The CLIENT and/or CONTRACTOR shall promptly report any errors or ambiguities in the PLANS and SPECIFICATIONS to the ENGINEER. Questions as to meaning of PLANS and SPECIFICATIONS shall be interpreted by the ENGINEER, whose decision shall be final and binding on all parties concerned.
- b. The ENGINEER will provide the CLIENT with such information as may be required to show revised or additional details of construction.
- c. Should any discrepancies or conflicts on the PLANS or SPECIFICATIONS be discovered either prior to or after award of the contract, the ENGINEER'S attention shall be called to the same before the work is begun thereon and the proper corrections made. Neither the CLIENT nor the CONTRACTOR may take advantage of any error or omissions in the PLANS and SPECIFICATIONS. The ENGINEER will provide information when errors or omissions are discovered.

### GOVERNING BODIES

All works herein proposed shall be completed in accordance with all requirements of any JURISDICTIONAL GOVERNMENTAL ENTITY, and all such pertinent laws, directives, ordinances and the like shall be considered to be a part of these SPECIFICATIONS. If a discrepancy is noted between the PLANS and SPECIFICATIONS and requirements of any JURISDICTIONAL GOVERNMENTAL ENTITY, the CLIENT and/or the CONTRACTOR shall immediately notify the ENGINEER in writing.

### LOCATION OF UNDERGROUND FACILITIES AND UTILITIES

When the PLANS and SPECIFICATIONS include information pertaining to the location of existing underground facilities and utilities (including but not limited to water mains, sanitary sewers, storm sewers, electric, telephone, gas and cable TV lines), such information represents only the opinion of the ENGINEER as to the approximate location and elevation of such facilities and utilities. At the locations where detailed positions of these facilities and utilities become necessary to the new construction, including all points of connection, the CONTRACTOR shall furnish all labor and tools to verify or definitely establish the horizontal location, elevation, size and material (if appropriate) of the facilities and utilities. The CONTRACTOR shall notify the ENGINEER at least 48-hours prior to construction if any discrepancies in existing utility information or conflicts with existing utilities exist. The ENGINEER assumes no responsibility whatever with respect to the sufficiency or accuracy of the information shown on the PLANS and SPECIFICATIONS relative to the location of underground facilities and utilities, nor the manner in which they are removed or adjusted.

It shall be the CONTRACTOR'S responsibility prior to construction, to notify all Utility Companies of the intent to begin construction and to verify the actual location of all such facilities and utilities. The CONTRACTOR shall also obtain from the respective Utility Companies the working schedules for removing or adjusting these facilities.

### UNUSABLE SOILS

The PLANS have been prepared by the ENGINEER based on the assumption that all soils on the project are suitable to support the proposed improvements. If the CLIENT or CONTRACTOR shall immediately notify the ENGINEER if he discovers or encounters an obstruction that prevents the installation of the improvement according to the line and grades shown on the PLANS.

### PROTECTION OF TREES

All trees that are not to be removed shall be protected from damage. Trees shall not be removed unless requested to do so in writing by the CLIENT.

### NOTIFICATION OF OWNERS OF FACILITIES AND UTILITIES

The CONTRACTOR shall notify all applicable Jurisdictional Governmental Entities or utility companies, i.e., water, sewer, electric, telephone, gas and cable TV prior to beginning any construction so that said entity or company can establish the location and elevation of underground pipes, conduits or cables adjoining or crossing proposed construction.

### TRAFFIC CONTROL

The CONTRACTOR shall provide when required by any JURISDICTIONAL GOVERNMENTAL ENTITY, all signs, equipment, and personnel necessary to provide for safe and efficient traffic flow in all areas where the work will interrupt, interfere or cause to change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. The CLIENT may, at his discretion, require the CONTRACTOR to furnish traffic control under these or other circumstances, including but not limited to, the presence of utility work, emergency vehicle access shall be maintained at all times. Unless authorized by the CLIENT or CLIENT'S construction representative, all existing access points shall be maintained at all times by the CONTRACTOR. The need for traffic control shall be anticipated by the CLIENT.

### WORK AREA

The CONTRACTOR, his agents and employees and their employees and all equipment, machinery and vehicles shall confine their work within the boundaries of the project or areas specified by the Client. The CONTRACTOR shall be solely liable for damage caused by him or his agents and employees and their equipment, machinery and vehicles on adjacent property or areas outside designated work areas.

### UTILITY POLES

It shall be the responsibility of the CONTRACTOR to arrange for the relocation or bracing of existing utility poles that may be within the working limits of this contract. It is expressly understood that all work and costs connected with the maintenance of these utility poles, their temporary relocations, etc., shall be the responsibility of the CLIENT or the CONTRACTOR.

### RESTORATION

It is the intent of these SPECIFICATIONS that clean-up and final restoration shall be performed immediately upon completion of each phase of the work, both inside and outside the Project, or when so directed by the CLIENT so that these areas will be restored as nearly as possible to their original condition or better, and shall include but not be limited to, restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, ditches, bushes, hedges, trees, shrubs, fences, mailboxes, sewers, drain tiles, water mains, etc.

### CLEANING UP

The CONTRACTOR shall at all times keep the premises free from accumulations of waste material or rubbish caused by his employees or work, and at the completion of the work he shall remove all his rubbish, tools, scaffolding and surplus materials and shall leave his work "broom clean" or its equivalent, unless more exactly specified.

### ROAD CLEANING

The CONTRACTOR shall maintain roadways adjoining the project site free from mud and debris at all times. If mud and/or debris is carried onto the roadways from vehicles entering onto the highway from either the CONTRACTOR'S trucks, his employees' vehicles, or his material suppliers, the CONTRACTOR shall immediately remove said mud and/or debris.

### SAFETY AND PROTECTION

The CONTRACTOR shall be solely and completely responsible for the conditions of the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. The CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR'S duties and responsibilities for safety and for protection of the work shall continue until such time as all work is completed and the CLIENT has notified CONTRACTOR that the work is acceptable. The duties of the ENGINEER do not include review of the adequacy of either the CONTRACTOR'S or the general public's safety in, on, or near the construction site.

### HOLD HARMLESS

To the fullest extent permitted by law, any CONTRACTOR, material supplier or other entity by use of these plans and specifications hereby waives any right of contribution and agrees to indemnify, defend, save and hold harmless the CLIENT and ENGINEER and its agents, employees and consultants from and against all claims, damages, losses and expenses, including but not limited to, attorneys' fees arising out of, resulting from or in connection with the performance of any work, pursuant to or with respect to these plans and specifications. However, this indemnity shall not be construed to indemnify ENGINEER, its consultants, agents or employees against its own negligence.

Claims, damages, losses and expenses as these words are used in the Agreement shall mean and include, but not be limited to (1) injury or damage occurring by fire or means of any kind, including, but not limited to, rigging, blocking, scaffolding or any and all other kinds of items of equipment, whether or not the same be owned, furnished or leased by any part or entity, including any contractor; (2) all attorneys' fees and costs incurred in bringing an action to enforce the provisions of this indemnity; (3) costs for time expended by the indemnified party and its employees, at its usual rates plus costs or travel, long distance telephone and reproduction of documents and (4) consequential damages.

In any and all claims against the CLIENT or ENGINEER or either of their agents or employees and consultants by any party, including any employee of the CONTRACTOR or any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount of type of damages, compensation or benefits payable by or for the CONTRACTOR or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts or any insurance maintained by CONTRACTOR or any Subcontractor or any other party.

### INSURANCE

Any party using or relying on these plans, including any contractor, material supplier, or other entity shall obtain, prior to commencing any work) general public liability insurance insuring against all damages and claims for any bodily injuries, death or property damage arising out of any work, including the construction work provided for in these plans, and shall name the CLIENT and ENGINEER and its consultants, agents and representatives as additional insureds to the limits of such insurance policies; provided that any party having obligations to maintain specific insurance by reason of any agreement with CLIENT or any CONTRACTOR or ENGINEER shall provide evidence and certificates of insurance as required by such contract or agreement. Such insurance must contain a clause stating that the insurance is primary coverage for ENGINEER and ENGINEERS other applicable coverage is considered secondary. Policies shall contain a waiver of subrogation against Manhard and Client. Such insurance shall not limit any liability of any party providing work or services or providing materials.

### THIRD PARTY BENEFICIARY

Manhard Consulting, the ENGINEER, is intended to be a third party beneficiary of this willing agreement and requirement.

## DETAILED SPECIFICATIONS

### I. DEMOLITION

The CONTRACTOR shall coordinate with respective utility companies prior to the removal and/or relocation of utilities. The CONTRACTOR shall coordinate with the utility company concerning portions of work which may be performed by the Utility Company's forces and any fees which are to be paid to the utility company for their services. The CONTRACTOR is responsible for paying for all fees and charges.

Should removal and/or relocation activities damage features indicated to remain, the CONTRACTOR shall provide new materials/structures in accordance with the contract documents. Except for materials designed to be relocated on the plan, all other construction materials shall be new.

Prior to demolition occurring, all erosion control devices are to be installed.

All existing utility lines and conduits located under proposed buildings shall be removed and properly backfilled. All utility lines and conduits located under, on-site roads, parking lots or sidewalks shall be filled with a flowable backfill and end plugged. All existing structures shall be removed. All existing utility lines located under landscape areas shall be left in place and capped at all structures.

The CONTRACTOR is responsible for demolition, removal and disposal (in a location approved by all JURISDICTIONAL GOVERNMENTAL ENTITIES) of all structures, pads, walls, flumes, foundations, road, parking lots, drains, drainage structures, utilities, etc., such that the improvements shown on these plans can be constructed. All demolition work shall be in accordance with all applicable federal, state and local requirements. All facilities to be removed shall be undercut to suitable material and brought to grade with suitable compacted fill material per the specifications.

The CONTRACTOR is responsible for obtaining all permits required for demolition and disposal.

Electrical, telephone, cable, water, fire, optic cable and/or gas lines needing to be removed shall be coordinated by the CONTRACTOR with the affected utility company.

CONTRACTOR must protect the public at all times with fencing, barricades, enclosures, and other appropriate best management practices.

Continuous access shall be maintained for surrounding properties at all times during demolition.

All fire access lanes within the project area shall remain in service, clean, clear, and accessible for use by emergency vehicles.

The CONTRACTOR shall coordinate water main work with the Fire Department and the JURISDICTIONAL GOVERNMENTAL ENTITY to plan the proposed improvements and to ensure adequate fire protection is available to the facility and site throughout this specific work and through all phases of construction. CONTRACTOR shall be responsible for any required water main shut offs with the JURISDICTIONAL GOVERNMENTAL ENTITY during construction. Any costs associated with water main shut offs will be the responsibility of the CONTRACTOR and no extra compensation will be provided.

CONTRACTOR shall maintain all existing parking areas, sidewalks, drives, etc., clear and free from any construction activity and/or material to ensure easy and safe pedestrian and vehicular traffic to and from the site. CONTRACTOR shall coordinate with the local authority having jurisdiction for construction activity within proximity of the building and utility intersections with the facility manager to minimize disturbance and inconvenience to facility operations.

CONTRACTOR may limit saw-cut and pavement removal to only those areas where it is required as shown on these construction plans, however if any damage is incurred on any of the surrounding pavement, etc., the CONTRACTOR shall be responsible for ITS removal and repair.

All areas where removal has occurred shall have all tracks and solids removed and disposed of by a licensed commercial hauler in accordance with JURISDICTIONAL GOVERNING ENTITY regulations, and the tank and grease traps shall then be filled with suitable material or removed from the site and disposed of by the CONTRACTOR.

Voids left by any item removed under any proposed building, pavement, walk, etc., or within 24" thereof shall be filled and compacted with suitable materials by the CONTRACTOR.

The CONTRACTOR shall be responsible for the disconnection of utility services to the existing buildings prior to demolition of the buildings.

Any material containing asbestos found within existing structures shall be removed from the site and disposed of off-site by the CONTRACTOR in accordance with County, State and Federal regulations.

CONTRACTOR shall develop and implement a daily program of dust control and shall submit and obtain JURISDICTIONAL GOVERNMENTAL ENTITY approval of dust control and erosion control plan. Modification of dust control procedures shall be performed by the CONTRACTOR to the satisfaction of the JURISDICTIONAL GOVERNING ENTITY as requested.

The CONTRACTOR shall coordinate all demolition with the JURISDICTIONAL GOVERNMENTAL ENTITY and CLIENT to ensure protection and maintenance of sanitary sewer and water utilities as necessary and to provide stormwater conveyance until new facilities are constructed, tested and placed into operation.

The locations of all existing utilities shown on the plan have been determined from the best information available and are given for the convenience of the CONTRACTOR and are not to be interpreted as the exact location, or as the only obstacles that may occur on the site. The ENGINEER assumes no responsibility for their accuracy. Prior to the start of any demolition activity, the CONTRACTOR shall notify the utility companies for location of existing utilities and shall verify existing conditions and proceed with caution around any anticipated features.

The CONTRACTOR is responsible for removing the existing irrigation system in the areas of proposed improvements. The contractor shall cap the existing irrigation system to remain such that the remaining system shall continue to function properly.

The parking lot shall be completed in sections such that it does not interrupt the facility operations. The CONTRACTOR shall coordinate with the construction manager for work to be performed.

## II. EARTHWORK

### STANDARDS

This work shall be completed in conformance with the applicable sections of the Specifications, Department of Transportation, Commonwealth of Pennsylvania, latest edition except as modified below.

### SOIL BORING DATA

Copies of results of soil boring and reports, if such borings were taken by the CLIENT in the vicinity of the proposed construction site, should be made available by the client to the CONTRACTOR. These reports are prepared for the best information available and are given for the convenience of the ENGINEER. The ENGINEER makes no representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof.

Further, the ENGINEER does not assume responsibility for the possibility that during construction, the soil and groundwater condition may be different than indicated. Neither does the ENGINEER assume responsibility for variations of soil and groundwater at location between borings. The CONTRACTOR is required to make its own borings, explorations or observations to determine soil and groundwater conditions.

### EARTHWORK CALCULATIONS AND CROSS SECTIONS

The CONTRACTOR understands that any earthwork calculations, quantities or cross sections that have been furnished by the ENGINEER are for information only and are provided without any guarantee by the CLIENT or ENGINEER whatsoever as to their sufficiency or accuracy. CONTRACTOR warrants that he has performed his own subsurface investigations as necessary and his own calculations and cross sections to determine site soil conditions and earthwork volumes. The ENGINEER makes no representation or guarantee regarding earthwork quantities or that the earthwork for this project will balance due to the varying field conditions, changing soil types, allowable construction tolerances and construction methods that are beyond the control of the ENGINEER.

### CLEARING, GRUBBING AND TREE REMOVAL

The site shall be cleared, grubbed, and trees and stumps removed where designated on the PLANS. Trees designated to remain shall be protected from damage.

**TOPSOIL STRIPPING**

Upon completion of demolition, clearing, grubbing and tree removal, all topsoil shall be stripped from under all buildings and pavements areas, and other areas necessary to complete the work. Topsoil stripped shall be placed in stockpiles in locations as designated by the CLIENT.

### TOPSOIL RESPREAD

Upon completion of roadway and/or parking lot improvements and installation of underground utilities a minimum of six inches (6") of topsoil shall be respread over all unpaved areas which have been disturbed by earthwork construction, except building pads and other designated areas, which shall be kept free from topsoil.

### SEEDING

Upon completion of topsoil respread, the CONTRACTOR shall apply seed and fertilizer to all respread areas in accordance with IDOT standards or as designated on landscape drawings and specifications provided by the CLIENT.

### SOODING

Upon completion of topsoil respread, the CONTRACTOR shall install soil to all areas designated on the plans or as designated on the landscape drawings and specifications provided by the CLIENT.

### EXCAVATION AND EMBANKMENT

Upon completion of topsoil stripping, all excavation and embankments shall be completed as shown on the PLANS. All suitable excavated materials shall be hauled, placed, moisture conditioned, and compacted in the embankment areas. The CONTRACTOR shall include all dewatering, temporary ditching and culverts necessary to complete the excavation and embankment.

Specifically included in the scope of Excavation and Embankments is grading and shaping of all cut or fill areas including swales and ditches; handling of sewer pipes, etc., and all work required to provide positive drainage at the end of each working day and upon completion of a section.

The CONTRACTOR shall be responsible for the excavation of all swales and ditches for the excavation or filling of the roads, building pads and parking lots within the work limits to lines & grades shown on the plans. He shall be responsible for obtaining compaction in accordance with the minimum values listed in the table below for all embankments unless more stringent values are listed in the soils report or are approved by the CLIENT.

Type Material	Compaction		Pavement & Floor Slabs		Grass Areas
	Standard	Modified Proctor	95%	90%	
Sandy Soils	Modified Proctor	95%	90%		
Clayey Soils	Standard Proctor	95%	90%		

The CONTRACTOR shall notify the CLIENT if proper compaction cannot be obtained so that the CLIENT may determine what remedial measures may be needed.

A soils testing firm employed by the CLIENT and/or CONTRACTOR shall determine which soils are unsuitable. Materials within their natural state being defined as unsuitable that would be suitable material if moisture conditioned, shall be conditioned by the CONTRACTOR and used as suitable embankment material or hauled from the site.

For purposes of definition, unsuitable material shall be as follows unless determined otherwise by the Soils Engineer:

1. Any soil whose optimum moisture content exceeds 25%.
2. Any cohesive soil with an unconfined compressive strength of 1.5 tons per square foot or less.
3. Any soil whose silt content exceeds 60% by weight.
4. Any soil whose maximum density is less than 100 pounds per cubic foot.
5. Any soil containing organic, deleterious, or hazardous material.

Upon completion of excavation and shaping of the water retention areas intended to maintain a permanent pool of water, all silt seams and granular or sandy soils shall be removed to a minimum depth of three feet below the substrate and replaced with an impermeable clay liner, including adjacent to and under storm sewer inlets and outlets. It is the intent of these PLANS and SPECIFICATIONS that the CONTRACTOR shall prepare the lake bottom, side slopes, and embankments to the same standards as those specified in the PLANS, and a representative from the local conservation district to an on-site preconstruction meeting.

Ditches and swales are to be excavated to the lines and grades indicated on the PLANS. All suitable materials excavated from the ditches shall be used in construction of the embankments.

The CONTRACTOR shall notify the CLIENT immediately upon encountering groundwater during excavation. If in the opinion of the CLIENT or the JURISDICTIONAL GOVERNMENTAL ENTITY this condition necessitates the installation of perforated drain tile bedded in washed gravel or open storm sewer joints wrapped with fabric, the CONTRACTOR shall install the same.

During excavation and embankment, gradins may be adjusted to achieve an overall site earthwork balance. The CONTRACTOR shall coordinate fully with the CLIENT in adjusting the earthwork methods and placement of material to meet the above goals and shall immediately advise CLIENT if he believes that the earthwork will not balance.

It is the intent of these PLANS that storm waters falling on the site be diverted into sedimentation / lake / detention basins during construction. The CONTRACTOR shall construct and maintain any temporary ditches or swales that are necessary to accomplish this prior to beginning mass excavation.

### EROSION CONTROL

Stable erosion control practices shall be maintained by the CONTRACTOR in accordance with the Pennsylvania Department of Environmental Protection Erosion & Sediment Pollution Control Manual, and all applicable Soil Erosion and Sedimentation Control ordinances and the PLANS.

### UNDERCUTTING DURING EARTHWORK

If the substrate cannot be dried adequately by discing as outlined above for placement of material to planned grades and if the CLIENT determines that the substrate does not meet the standards set forth above, the CLIENT may require undercutting.

### MISCELLANEOUS CONTRACT ITEMS

The following items may be required at the CLIENT'S option, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNMENTAL ENTITY:

- (1) **GEOTEXTILE FABRIC**  
Geotextile fabric or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNMENTAL ENTITY where proper compaction over existing soft soils is not possible. Geotextile fabric shall meet the material specifications of and shall be installed in accordance with the above standards.
- (2) **EROSION CONTROL BLANKET**

Erosion control blanket or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNMENTAL ENTITY for the stabilization of disturbed areas. Erosion control blankets shall meet the material specifications of and shall be installed in accordance with the above standards. The Pennsylvania Department of Environmental Protection Erosion & Sediment Pollution Control Manual, and/or the details shown on the PLANS.

## III. UNDERGROUND IMPROVEMENTS

### A. GENERAL

#### STANDARDS

All underground improvements shall be constructed and tested in accordance with the Standard Specifications for the local Authority Having Jurisdiction (AHJ). In the event of conflicting guidelines, the more restrictive shall govern.

#### SELECTED GRANULAR BACKFILL

Selected Granular Backfill shall be required for all sewer and water main trenches lying under existing or proposed streets, driveways, parking lots and within 24" thereof, and where noted on PLANS. All material placed in such trenches shall be in accordance with the above standards.

#### MANHOLES, CATCH BASIN, INLETS & VALVE VAULTS

All Manholes, Catch Basins, Inlets, and Valve Vaults shall be constructed of reinforced precast concrete ring construction with tongue and groove joints in conformance with the latest revision of ASTM designation C-478. All joints between sections and frames (except sanitary manholes, see Section III.B Manholes, below) shall be sealed with mastic type bituminous jointing compound. CONTRACTOR shall remove all excess mastic on inside of structure and butter joints with mortar. Manholes are to have offset corners such that no one shall be used on frames exceeding 6'-0" deep or less in which case a reinforced concrete flat top section shall be used, and Valve Vaults shall have concentric cones. Only concrete adjustment rings will be permitted where necessary and shall be limited to two adjustment rings totaling not more than 8" in height. All manholes and catch basin steps shall be compound polypropylene with continuous 1/2" steel reinforcement as manufactured by MA Industries, or approved equal.

#### AUGERBORING AND CASING

Casing pipe shall be welded steel pipe, installed where shown on the PLANS. The carrier pipe shall be securely blocked and banded and sanitary and storm sewers shall maintain the specified gradient. Upon installing the carrier pipe the ends shall be sealed with hydraulic cement.

### AUGER (OPEN BORE)

The CONTRACTOR shall auger (open bore) where noted on PLANS.

### HORIZONTAL AND VERTICAL SEPARATION OF WATER AND SEWER MAINS

Horizontal and vertical separation of water and sewer mains shall be in accordance with local AHJ.

### STRUCTURE ADJUSTMENTS

Structures shall be adjusted to the finished grade as shown on PLANS.

### \* B. SANITARY SEWERS AND APPURTENANCES - INTENTIONALLY OMITTED

### \* C. WATER MAINS AND APPURTENANCES - INTENTIONALLY OMITTED

## D. STORM SEWERS AND APPURTENANCES

### STORM SEWER PIPE

Storm sewer pipe shall conform to the following:

- (5) High Density Polyethylene Pipe (HDPE) Smooth Interior, AASHTO Designation M252 and M294, maximum diameter of 48 inches. Pipe joints and fittings shall be watertight gasketed joints. No band seals will be allowed. (Only permitted in landscape areas with Municipality Approval and/or where specifically indicated on PLANS).

Precast tees, bends, and manholes may be used if permitted by the JURISDICTIONAL GOVERNMENTAL ENTITY.

Storm sewer shall include bedding and trench backfill.

### \* MANHOLES, INLETS & CATCH BASINS - INTENTIONALLY OMITTED

### FLARED END SECTION

Flared end sections shall be pre-cast reinforced concrete flared end section with an end block cast separate as per the Pennsylvania Department of Transportation Standards or local AHJ and shall be installed where shown on the PLANS. All flared end sections for storm sewers 12" in diameter and larger shall be installed with a grating per local AHJ standards and/or as detailed on the PLANS. Work shall include end block.

### RIP RAP

Stone rip rap consisting of pieces of "A" quality stone 4" to 8" in diameter shall be furnished and installed in accordance with IDOT Specifications and shall be placed where shown on the plans, to a minimum thickness of 12" and a width as indicated on the plans. Broken concrete or concrete blocks will not be acceptable.

### FOUNDATION, BEDDING AND HAUNCHING

Foundation, Bedding and Haunching shall be wet coarse aggregate or moist fine aggregate in accordance with the above standards and placed as shown on the detail.

### \* UNDERDRAINS INTENTIONALLY OMITTED

### MISCELLANEOUS

- (1) All existing field drainage tile or storm sewers encountered or damaged during construction shall either be restored to their original condition, properly reconnected and/or connected to the storm sewer system.
- (2) Footing drains shall be connected to sump pumps or discharged directly into storm sewers. Footing drains or drainage tile shall not be connected to the sanitary sewer.

### CONNECTION FOR STORM SERVICE TO STORM MAIN

Connections of storm sewer service to storm main shall be made with manufactured tees when available. Availability of manufactured tees will be a function of the storm sewer material and pipe diameter size of the service sewer and main. If manufactured tees are not reasonably available, connections should be made in accordance with manufacturer's recommendations for all storm sewer other than concrete pipe. For concrete pipe connections without manufactured tees the storm sewer main shall be machine cored and the service sewer connected using non-drink grout for the void between pipes. The service sewer shall be cut flush with the inside wall of the sewer main and not extend into the inside flow area of the main or otherwise impede flow.

## IV. ROADWAY AND PARKING LOT IMPROVEMENTS

### STANDARDS

Work shall be completed in accordance with the applicable sections of the Specifications, Department of Transportation, Commonwealth of Pennsylvania, latest edition (hereinafter referred to collectively as the "Standard Specifications") except as modified below and except that payment will be defined as detailed in the contract documents between the CLIENT and the CONTRACTOR. Supplementing the Specifications shall be the applicable sections of the latest editions of the "Manual on Uniform Traffic Control Devices for Streets and Highways" and the Pennsylvania Supplement Publication 212 thereto. Hereinafter referred to collectively as the "MUTCD". Any references to "ENGINEER" in the "Standard Specifications" shall be interpreted as the CLIENT or CLIENT'S Construction Representative.

### SUBGRADE PREPARATION

The CONTRACTOR shall be responsible for all subgrade compaction and preparation per soils report to the lines and grades shown on the plans.

### AGGREGATE BASE COURSE TYPE 'B'

Aggregate Base Course Type B shall be limited to CA-6 or CA-10 gradation. Aggregate base courses shall be proof rolled as outlined below.

### PROOF ROLL

The CONTRACTOR shall proof roll the subgrade with either a 2-axis truck loaded to 27,000 lbs. or a 3-axis truck loaded to 45,000 lbs. or as specified by the JURISDICTIONAL GOVERNMENTAL ENTITY. The CLIENT and JURISDICTIONAL GOVERNMENTAL ENTITY shall observe and approve the proof rolling of the subgrade and the base course. Proof rolling tolerances shall be a maximum deflection of 1" for the subgrade and 1/2" for the base course. The above criteria is intended as a maximum deflection standard and that proof rolling of a majority of the area will have less deflection than specified above. In any case of deficiency, the subgrade and/or base course shall be repaired and retested before proceeding with the pavement construction.

Pavement subgrade material shall not be removed, placed or disturbed after a proof roll testing has been completed prior to the pavement construction. Additional testing will be required if the pavement subgrade is disturbed and/or material is removed from or placed on the pavement subgrade after proof rolling approval.

Trucks or heavy equipment shall not travel on any pavement subgrade after final testing prior to pavement construction.

### \* HOT-MIX ASPHALT BASE COURSE - INTENTIONALLY OMITTED

### \* HOT-MIX ASPHALT BINDER AND SURFACE COURSE - INTENTIONALLY OMITTED

















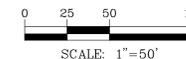
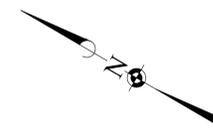
S29°53'26"E 1763.56'

OWNER: ARNOLD ACRES, INC.

STANDARD DUTY CONCRETE PAVEMENT (REF. CONSTRUCTION DETAILS FOR TRAILER PARKING WALKWAY)

PROP. FENCE (REF. CONSTRUCTION DETAILS)

FUTURE BUILDING EXPANSION



**SITE DIMENSIONAL AND PAVING NOTES:**

1. ALL DIMENSIONS ARE FACE OF CURB TO FACE OF CURB OR BUILDING FOUNDATION UNLESS NOTED OTHERWISE.
2. ALL PROPOSED CURB AND GUTTER SHALL BE POURED INTEGRALLY, UNLESS OTHERWISE NOTED.
3. ALL CURB RADI SHALL BE 3' MEASURED TO FACE OF CURB UNLESS OTHERWISE NOTED.
4. TIE ALL PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH 2-#8 BARS x 18" LONG DOWELED INTO EXISTING CURB.
5. BUILDING DIMENSIONS AND ADJACENT PARKING HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. BUILDING DIMENSIONS SHOWN SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT OF BUILDING.
6. IMPROVEMENTS ADJACENT TO BUILDING, IF SHOWN, SUCH AS TRUCK DOCK, RETAINING WALLS, SIDEWALKS, CURBING, FENCES, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTERS, AND TRANSFORMERS ETC. HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS AND DETAILS.
7. LOCATION OF PRIVATE SIDEWALKS SHALL BE COORDINATED WITH PROPOSED DOORWAY. CONTRACTOR TO VERIFY ACTUAL BUILDING PLAN LOCATIONS WITH ARCHITECT/DEVELOPER PRIOR TO CONSTRUCTING THE SIDEWALKS.
8. ALL ROADWAY AND PARKING LOT SIGNAGE, STRIPING, SYMBOLS, ETC. SHALL BE IN ACCORDANCE WITH LATEST JURISDICTIONAL GOVERNMENTAL ENTITY DETAILS.
9. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
10. PROVIDE DEPRESSED CURB AND RAMP AT ALL HANDICAP ACCESSIBLE SIDEWALK AND PATH LOCATIONS PER FEDERAL AND STATE STANDARDS.
11. THE CONTRACTOR SHALL CONTACT PENNSYLVANIA 811 PRIOR TO ANY WORK, TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
12. ALL ROADWAY AND PARKING LOT IMPROVEMENTS SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DEPARTMENT OF TRANSPORTATION, STATE OF PENNSYLVANIA, LATEST EDITION.

**PAVING LEGEND**

	ASPHALT
	HEAVY DUTY ASPHALT
	HEAVY DUTY CONCRETE PAVEMENT
	STANDARD DUTY PAVEMENT (SIDEWALKS)

**SITE DATA**

SITE AREA	90.20 ACRES
EMPLOYEE PARKING PROVIDED	256 SPACES
ADA PARKING PROVIDED	7 SPACES
TRAILER PARKING (12'x55')	103 SPACES
PROPOSED TRACTOR PARKING	125 SPACES
FUTURE TRACTOR PARKING	48 SPACES

MATCHLINE SEE SHEET 13

MATCHLINE SEE SHEET 11

50' GAS LINE EASEMENT

EX. 50' ELEC BUFFER

PROP. FENCE (REF. CONSTRUCTION DETAILS)

EX. ELEC TOWER (1071-190)

150' BUILDING SETBACK

N21°09'52"W 1370.99'

OWNER: CORNWALL-LEBANON SCHOOL DISTRICT

N61°53'50"E 74.58'

N28°22'12"W 2244.58'

Plot Date: 11/21/25 Desc Name: P:\611172\844\_Carriers\001\_North\_Lebanon\_Township\_Territorial\Xva\Ena\Plan\_Sat\_Drawings\Final\_Drawings\Site\_Om\_PAV.dwg Updated By: cvoanex

DATE	REVISIONS

**Manhard CONSULTING**  
 333 East Butterfield Road, Suite 600, Lombard, IL 60148  
 630.931.8800  
 manhard.com  
 Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers  
 Construction Managers • Environmental Scientists • Landscape Architects • Planners

**R+L CARRIERS - LEBANON**  
 NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
 LAYOUT PLAN - C

PROJ. MGR.: JG  
 PROJ. ASSOC.: SF  
 DRAWN BY: CA  
 DATE: 11/21/2025

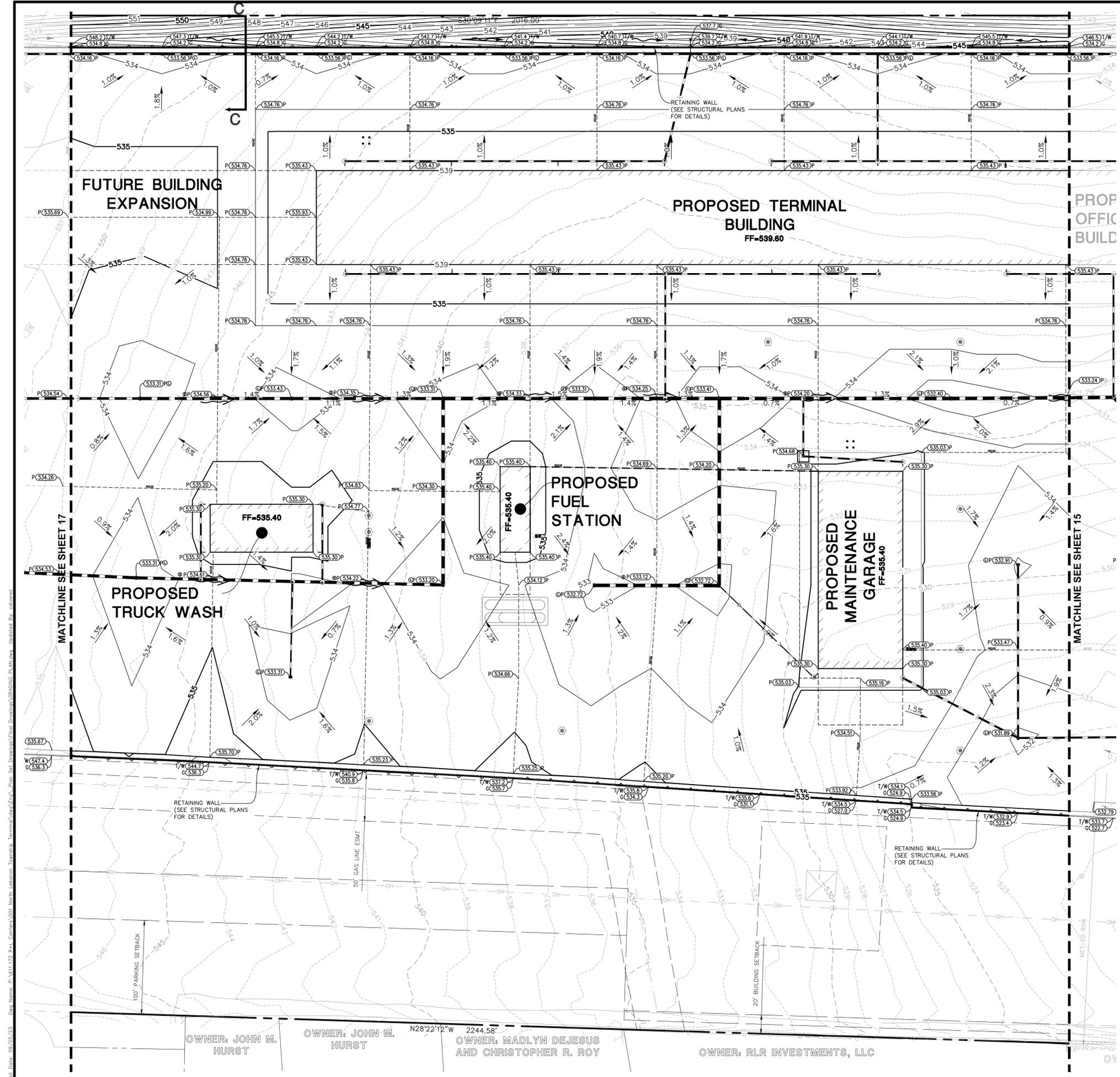
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**12 OF 48**  
 611.172001

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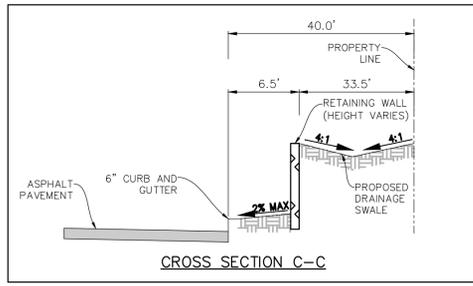




**GRADING PLAN LEGEND**

	PROPOSED 1 FOOT CONTOURS
	PROPOSED SPOT ELEVATION
	PROPOSED FINISHED FLOOR ELEVATION
	PROPOSED GRADE AT FOUNDATION
	PROPOSED PAVEMENT ELEVATION
	PROPOSED TOP OF CURB
	PROPOSED TOP OF WALL
	MEET EXISTING
	PROPOSED GROUND GRADE OR GROUND
	AT BASE OF RETAINING WALL
	PROPOSED DITCH OR SWALE
	PROPOSED DIRECTION OF FLOW
	OVERFLOW RELIEF SWALE
	PROPOSED RIDGE LINE
	PROPOSED DEPTH OF PONDING
	RETAINING WALL
	PROPOSED SWALE LOW POINT
	PROPOSED SWALE SUMMIT

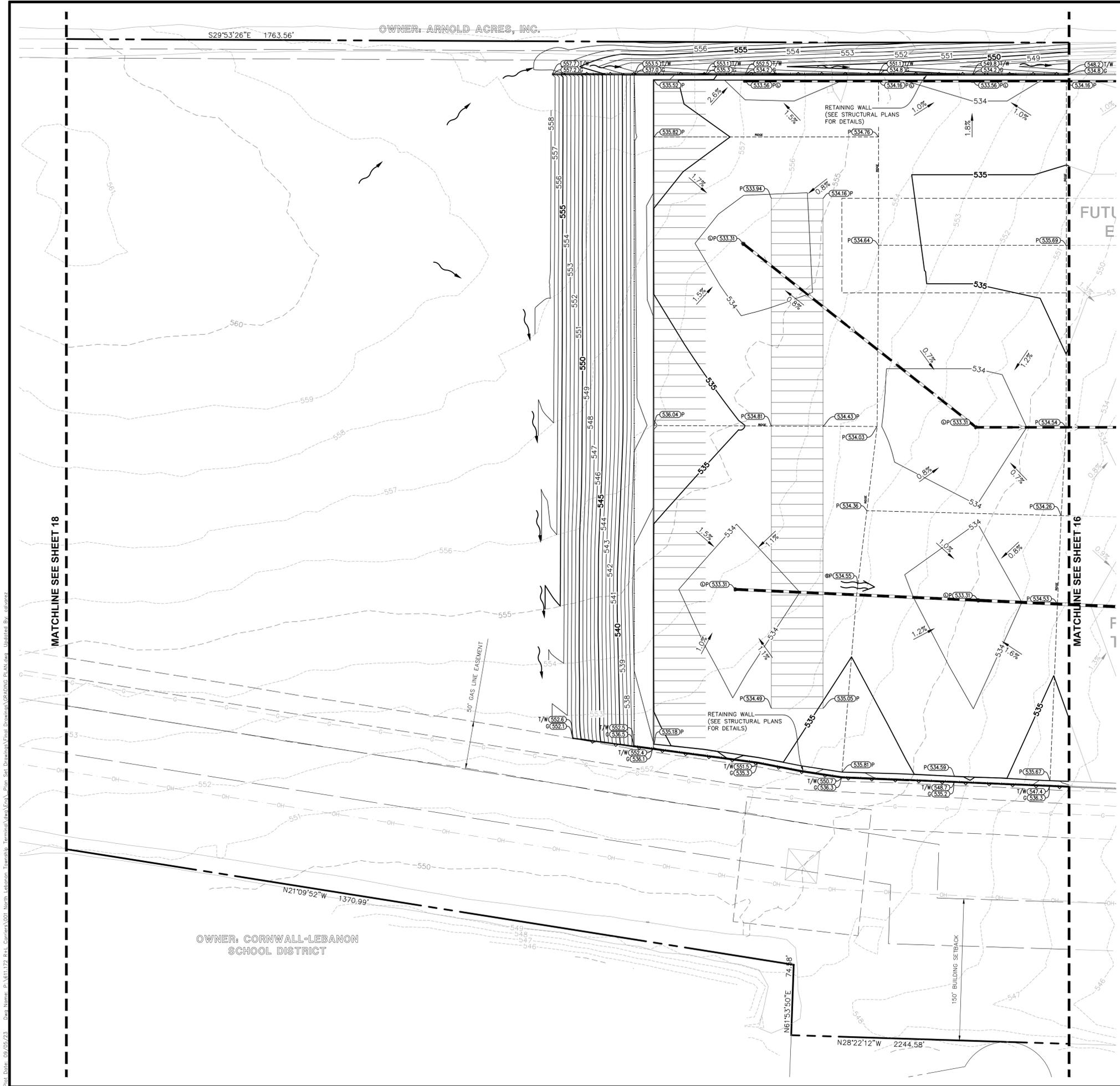
- GRADING NOTES:**
- RETAINING WALL DESIGN TO BE DESIGNED BY STRUCTURAL ENGINEER.
  - PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
  - ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
  - MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
  - CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
  - THE CONTRACTOR SHALL CONTACT 811 PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
  - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
  - IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
  - ALL UNPAVED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
  - EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY HB ENGINEERING ON 3/1/2025 AND CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
  - TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 2H:1V UNLESS OTHERWISE NOTED.



Plot Date: 09/05/23 - Draw Name: P:\811172\_R+L\_Carriers\Drawings\Terminal\Grading\_Plan.dwg - Updated By: calvarez

OWNER: JOHN M. HURST      OWNER: JOHN M. HURST      N28°22'12"W 2244.58'      OWNER: MADLYN DEJESUS AND CHRISTOPHER R. ROY      OWNER: RLR INVESTMENTS, LLC

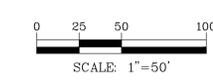
<p>MANHARD CONSULTING</p> <p>333 East Butterfield Road, Suite 600, Lombard, IL 60148          Phone: 630.961.1880          Fax: 630.961.1885          Email: info@manhard.com</p> <p>Civil Engineers • Surveyors • Water Resources Engineers • Water &amp; Wastewater Engineers          Construction Managers • Environmental Scientists • Landscape Architects • Planners</p>	<p><b>R+L CARRIERS - LEBANON</b></p> <p>NORTH LEBANON TOWNSHIP, PENNSYLVANIA</p> <p><b>POST CONSTRUCTION STORMWATER MANAGEMENT PLAN - B</b></p> <hr/> <p>PROJ. MGR.: JG          PROJ. ASSOC.: SF          DRAWN BY: CA          DATE: 11/21/2025</p> <p>SHEET  <b>16 OF 48</b>          611.172001</p>
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S29°53'26"E 1763.56'

OWNER: ARNOLD ACRES, INC.

OWNER: CORNWALL-LEBANON SCHOOL DISTRICT



**GRADING PLAN LEGEND**

	PROPOSED 1 FOOT CONTOURS
	PROPOSED SPOT ELEVATION
	PROPOSED FINISHED FLOOR ELEVATION
	PROPOSED GRADE AT FOUNDATION
	PROPOSED PAVEMENT ELEVATION
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	OVERFLOW RELIEF SWALE
	PROPOSED RIDGE LINE
	PROPOSED DEPTH OF PONDING
	RETAINING WALL
	PROPOSED SWALE LOW POINT
	PROPOSED SWALE SUMMIT

- GRADING NOTES:**
- RETAINING WALL DESIGN TO BE DESIGNED BY STRUCTURAL ENGINEER.
  - PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
  - ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
  - MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
  - CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
  - THE CONTRACTOR SHALL CONTACT 811 PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
  - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
  - IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
  - ALL UNPAVED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
  - EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY HB ENGINEERING ON 3/1/2025 AND CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
  - TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 2H:1V UNLESS OTHERWISE NOTED.

Plot Date: 09/25/23 - Draw Name: P:\811172\_R+L\_Carriers\001\_North\_Lebanon\_Township\_Territorial\Task\Exc\Plan\_Sat\_Drainage\Final\_Drawing\GRADING\_PLN.dwg - Updated By: calvarez

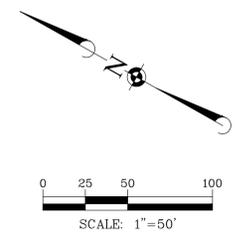
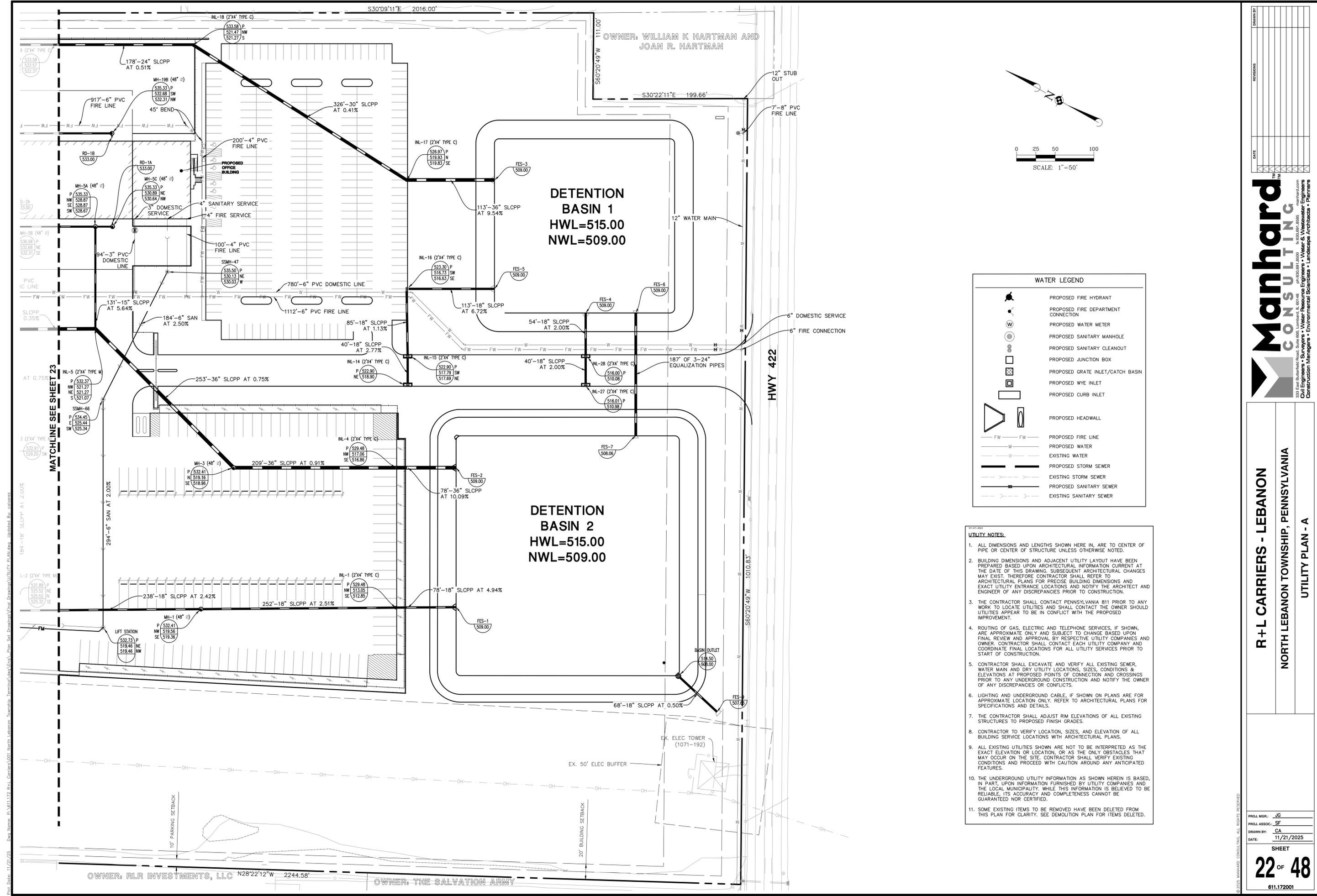
DRAWN BY REVISIONS DATE	<p><b>Manhard CONSULTING</b></p> <p>333 East Butterfield Road, Suite 600, Lombard, IL 60148        Cell Engineers • Surveyors • Water Resource Engineers • Water &amp; Wastewater Engineers        Construction Managers • Environmental Scientists • Landscape Architects • Planners</p>
<p><b>R+L CARRIERS - LEBANON</b></p> <p>NORTH LEBANON TOWNSHIP, PENNSYLVANIA</p> <p>POST CONSTRUCTION STORMWATER MANAGEMENT PLAN - C</p>	
PROJ. MGR.: JG PROJ. ASSOC.: SF DRAWN BY: CA DATE: 11/21/2025	
SHEET <p style="font-size: 2em; font-weight: bold;">17 OF 48</p> <p style="font-size: 0.8em;">611.172001</p>	











**WATER LEGEND**

	PROPOSED FIRE HYDRANT
	PROPOSED FIRE DEPARTMENT CONNECTION
	PROPOSED WATER METER
	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY CLEANOUT
	PROPOSED JUNCTION BOX
	PROPOSED GRATE INLET/CATCH BASIN
	PROPOSED WYE INLET
	PROPOSED CURB INLET
	PROPOSED HEADWALL
	PROPOSED FIRE LINE
	PROPOSED WATER
	EXISTING WATER
	PROPOSED STORM SEWER
	EXISTING STORM SEWER
	PROPOSED SANITARY SEWER
	EXISTING SANITARY SEWER

- UTILITY NOTES:**
- ALL DIMENSIONS AND LENGTHS SHOWN HERE IN, ARE TO CENTER OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
  - BUILDING DIMENSIONS AND ADJACENT UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
  - THE CONTRACTOR SHALL CONTACT PENNSYLVANIA 811 PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
  - ROUTING OF GAS, ELECTRIC AND TELEPHONE SERVICES, IF SHOWN, ARE APPROXIMATE ONLY AND SUBJECT TO CHANGE BASED UPON FINAL REVIEW AND APPROVAL BY RESPECTIVE UTILITY COMPANIES AND OWNER. CONTRACTOR SHALL CONTACT EACH UTILITY COMPANY AND COORDINATE FINAL LOCATIONS FOR ALL UTILITY SERVICES PRIOR TO START OF CONSTRUCTION.
  - CONTRACTOR SHALL EXCAVATE AND VERIFY ALL EXISTING SEWER, WATER MAIN AND DRY UTILITY LOCATIONS, SIZES, CONDITIONS & ELEVATIONS AT PROPOSED POINTS OF CONNECTION AND CROSSINGS PRIOR TO ANY UNDERGROUND CONSTRUCTION AND NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS.
  - LIGHTING AND UNDERGROUND CABLE, IF SHOWN ON PLANS ARE FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS AND DETAILS.
  - THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED FINISH GRADES.
  - CONTRACTOR TO VERIFY LOCATION, SIZES, AND ELEVATION OF ALL BUILDING SERVICE LOCATIONS WITH ARCHITECTURAL PLANS.
  - ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT ELEVATION OR LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES.
  - THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREIN IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED.
  - SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.

**REVISIONS**

NO.	DATE	DESCRIPTION

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**R+L CARRIERS - LEBANON**

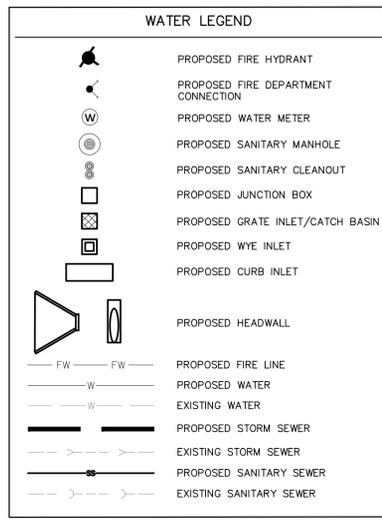
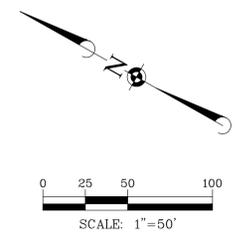
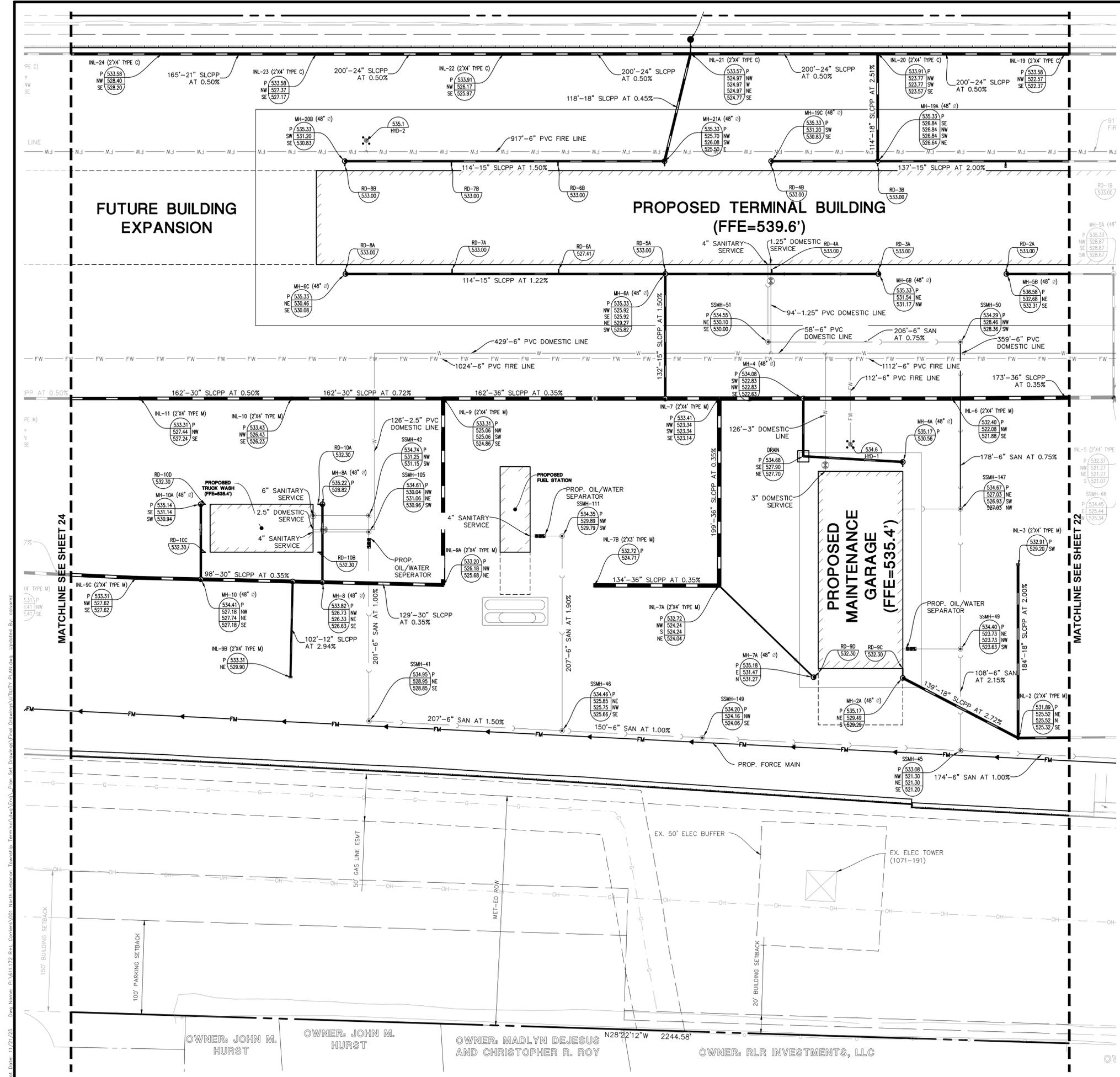
**NORTH LEBANON TOWNSHIP, PENNSYLVANIA**

**UTILITY PLAN - A**

PROJ. MGR.: JG  
 PROJ. ASSOC.: SF  
 DRAWN BY: CA  
 DATE: 11/21/2025

SHEET  
**22** OF **48**  
 611.172001

Plot Date: 11/21/25 Doc Name: P:\611172\8-L Carriers\001 North Lebanon, Tomahawk\Final Drawings\Utility Plan.dwg Updated By: colozzo



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NO.	DATE	REVISIONS

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**R+L CARRIERS - LEBANON**  
 NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
 UTILITY PLAN - B

PROJ. MGR.	JG
PROJ. ASSOC.	SF
DRAWN BY	CA
DATE	11/21/2025
SHEET	23 OF 48
611.172001	

Plot Date: 11/21/25 Doc Name: P:\611172\8-L Carriers\001 North Lebanon Township Terminal\Utility Plan.dwg Updated By: calvarez

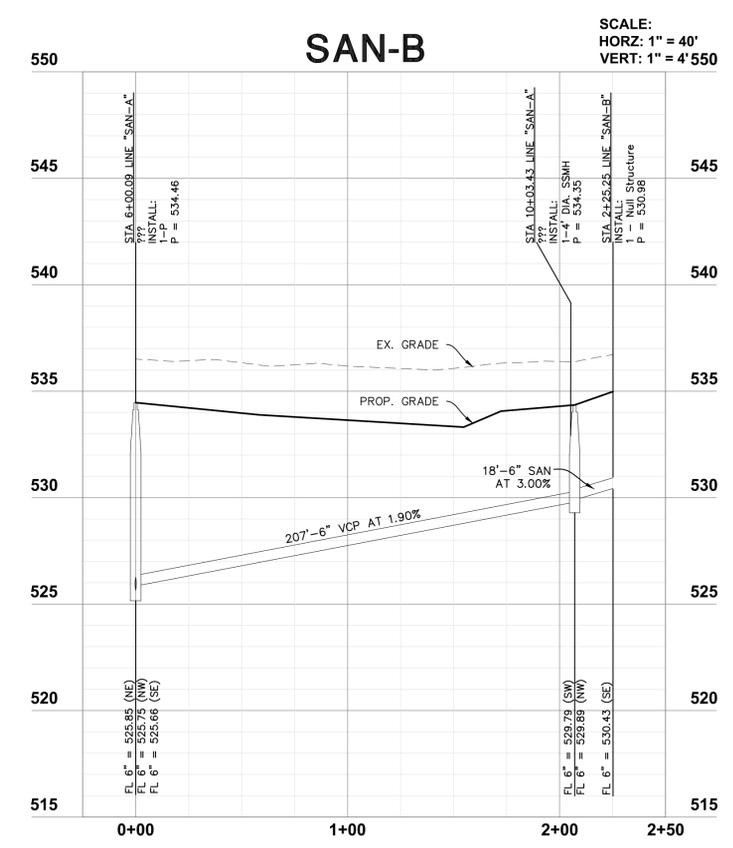
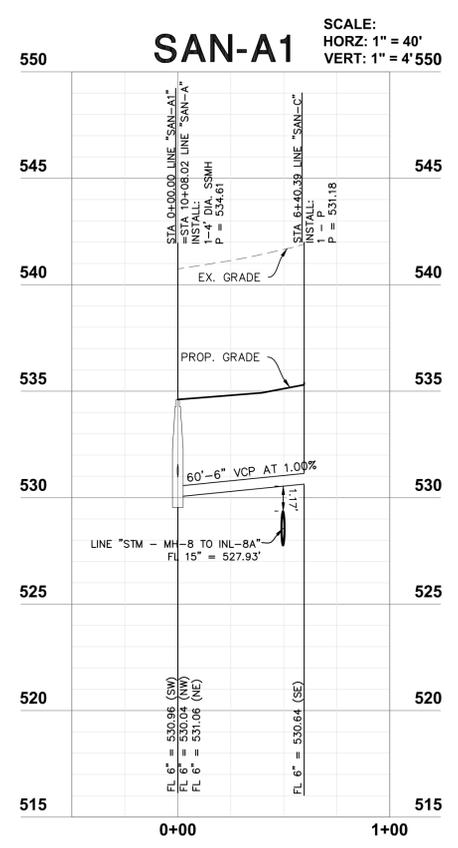
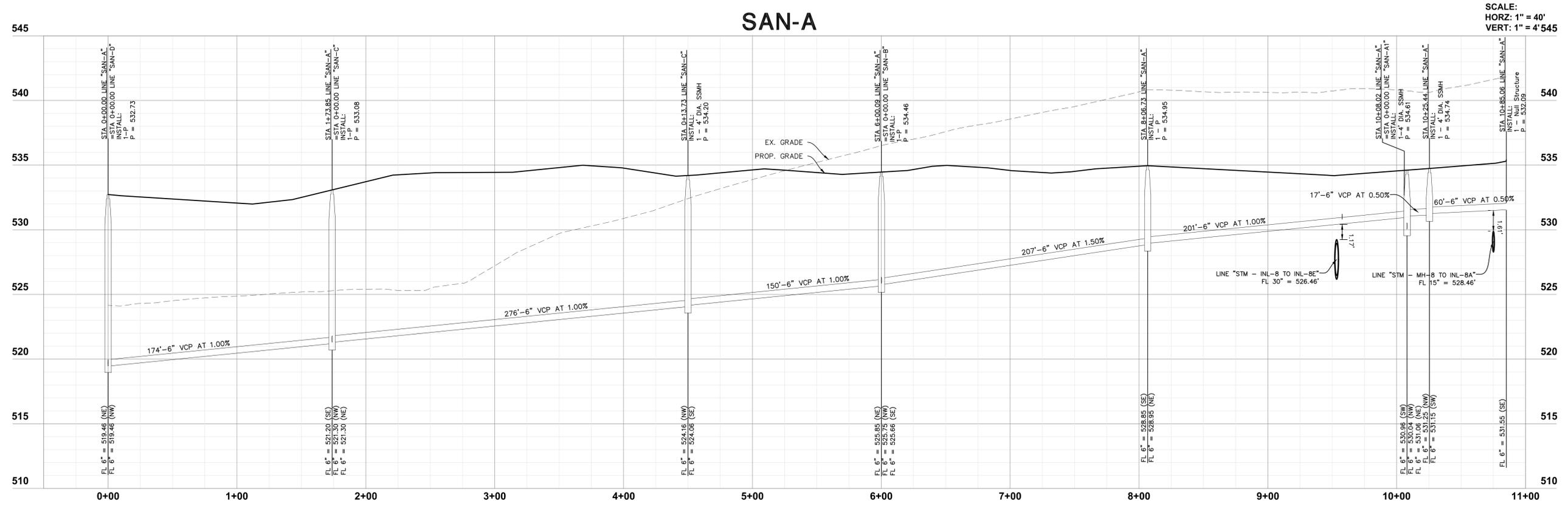
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Plot Date: 11/21/25 Draw Name: P:\11172\25 R+L Carriers\001 North Lebanon\_Township\_Territorial\Sanitary\_Profiles.dwg Updated By: FBuz



DATE	REVISIONS	DRAWN BY

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## R+L CARRIERS - LEBANON

### NORTH LEBANON TOWNSHIP, PENNSYLVANIA

#### SANITARY PROFILES

PROJ. MGR.: JG	PROJ. ASSOC.: SF	DATE: 11/21/2025
SHEET		
27 OF 48		
611.172001		

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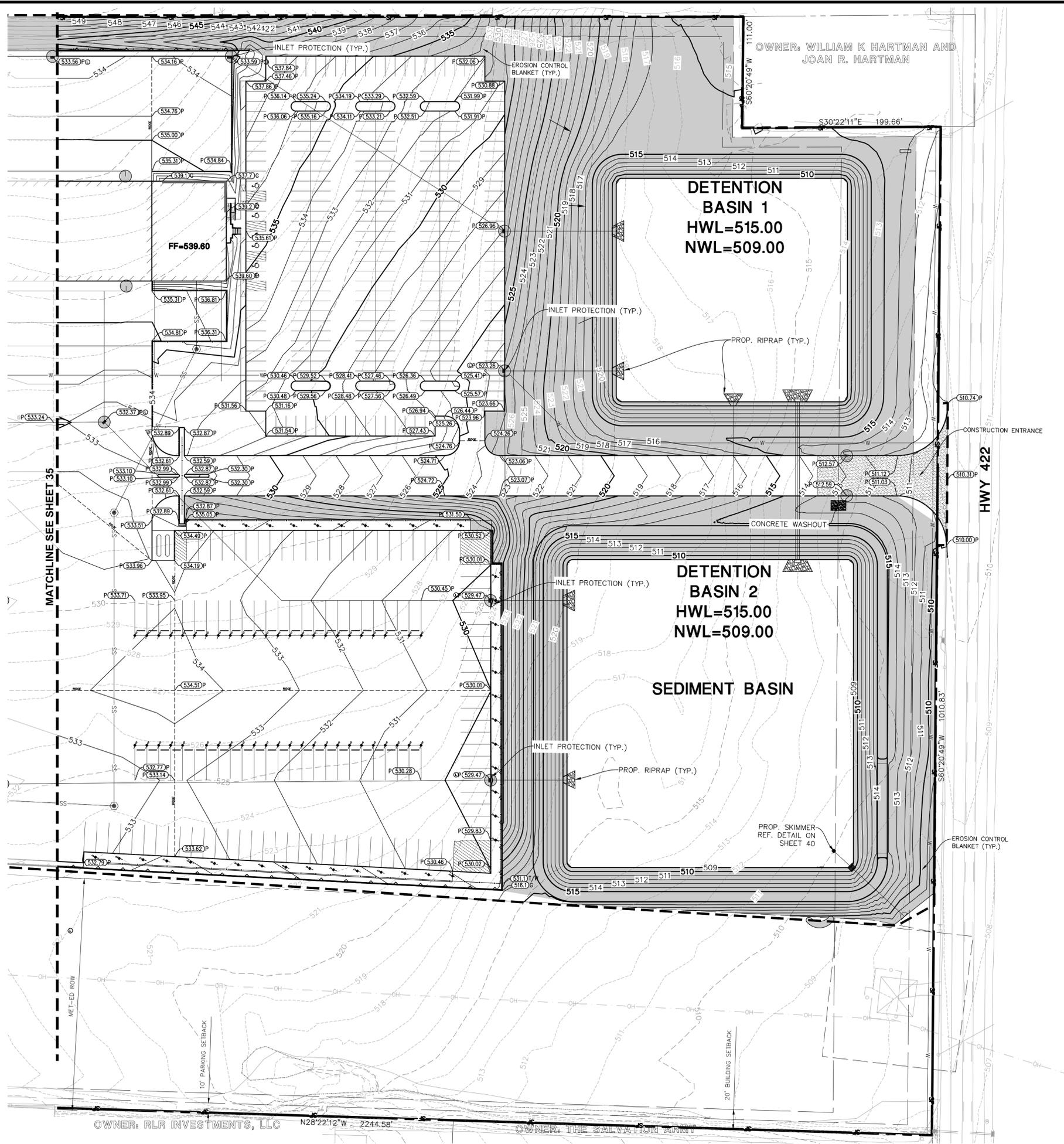












**LEGEND**

- TEMPORARY SILT FENCE (PERIMETER EROSION BARRIER)
- EROSION CONTROL BLANKET
- TEMPORARY ROCK CONSTRUCTION ENTRANCE
- TEMPORARY STORM STRUCTURE PROTECTION
- TEMPORARY CULVERT INLET PROTECTION
- TEMPORARY PERFORATED RISER
- PAVEMENT DRAINAGE FLOW
- SWALE DRAINAGE FLOW
- LIMITS OF DISTURBANCE/CONSTRUCTION

SCALE: 1"=50'

0 25 50 100

- EROSION AND SEDIMENT POLLUTION CONTROL NOTES:**
- ALL VEGETATIVE AND STRUCTURAL EROSION CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF NORTH LEBANON TOWNSHIP, PA.
  - MAINTENANCE AND REPLACEMENT OF EROSION CONTROL ITEMS, WHEN DIRECTED BY THE OWNER, SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.
  - THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER OR EQUIVALENT SNOWFALL. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF SAID MEASURES SHALL BE MADE IMMEDIATELY.
  - INSTALL ALL PERIMETER SILT FENCING PRIOR TO ANY CLEARING OR GRADING. ONSITE SEDIMENT CONTROL MEASURES AS SHOWN AND SPECIFIED BY THIS EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE CONSTRUCTED AND FUNCTIONAL PRIOR TO INITIATING CLEARING, GRADING, STRIPPING, EXCAVATION OR FILLING ACTIVITIES ON THE SITE.
  - STORM WATERS FALLING ON THE ENTIRE SITE SHALL BE DIVERTED INTO THE DETENTION BASIN. PRIOR TO BEGINNING MASS EXCAVATION, THE CONTRACTOR SHALL CONSTRUCT DITCHES, SWALES, SEDIMENTATION TRAPS AND SILTATION CONTROL MEASURES AS REQUIRED TO INTERCEPT SURFACE WATERS BEFORE THEY FLOW ONTO ADJACENT PROPERTY AND CONVEY THEM TO THE DETENTION BASIN.
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  - TEMPORARY SEED MIXTURE SHALL BE APPLIED AT 64 LBS/ACRE.
  - INLET PROTECTION SHALL BE INSTALLED UNDER THE GRATING OF EACH DRAINAGE STRUCTURE.
  - STABILIZATION OF TOPSOIL STOCKPILES SHALL BE INITIATED IMMEDIATELY UPON COMPLETION UNLESS THEY WILL BE DISTURBED WITHIN FOURTEEN (14) CALENDAR DAYS. STABILIZATION OF STOCKPILES MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION WORK IN AN AREA. ALL SOIL STORAGE PILES SHALL BE PROTECTED FROM EROSION WITH SILT FENCE ON THE DOWN SLOPE SIDE OF THE PILES.
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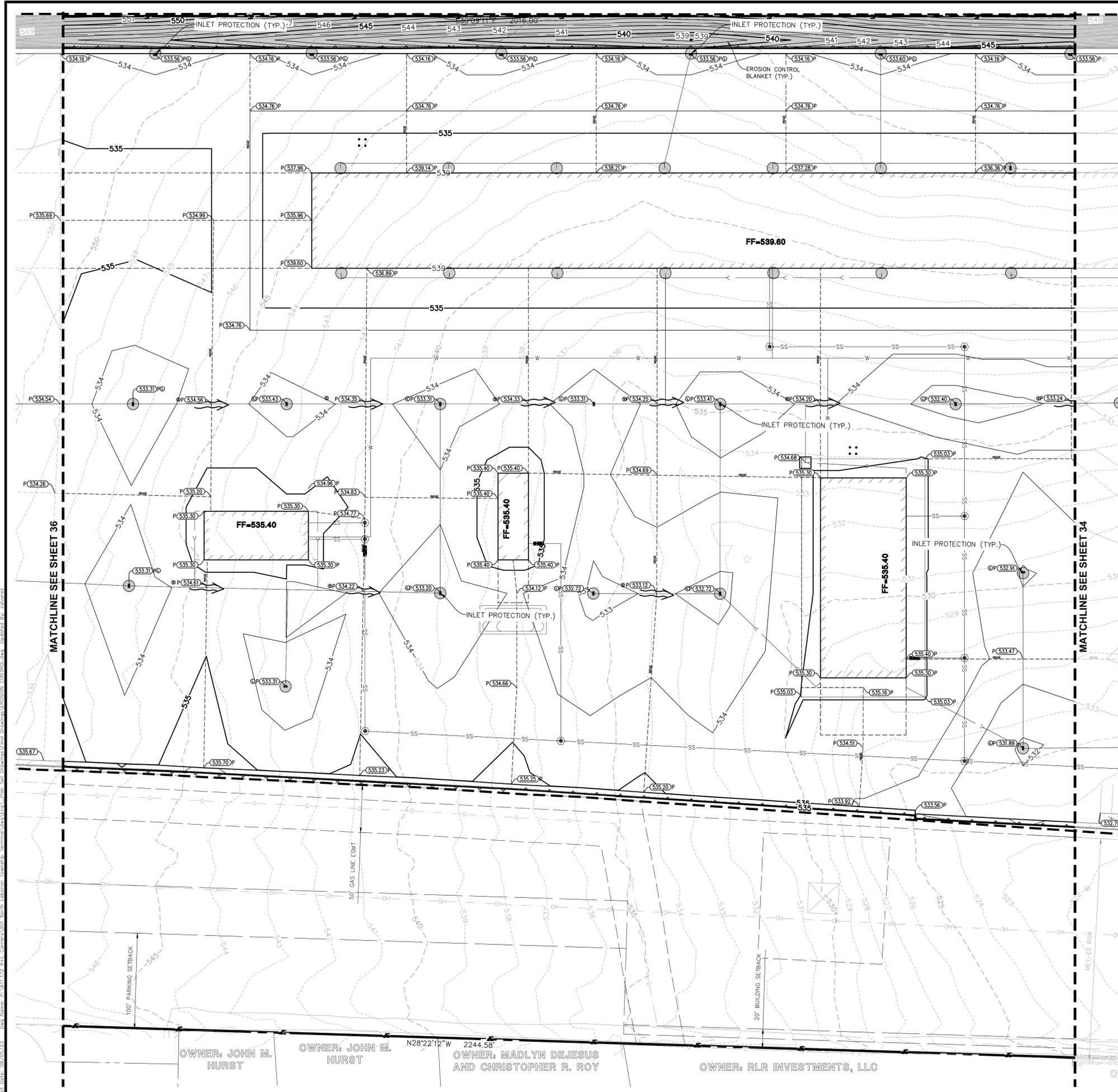
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**R+L CARRIERS - LEBANON**  
 NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
 EROSION CONTROL - A

PROJ. MGR.: JG  
 PROJ. ASSOC.: SF  
 DRAWN BY: CA  
 DATE: 11/21/2025

SHEET  
**34 OF 48**  
 611.172001



**LEGEND**

- TEMPORARY SILT FENCE (PERIMETER EROSION BARRIER)
- EROSION CONTROL BLANKET
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
- TEMPORARY STORM STRUCTURE PROTECTION
- TEMPORARY CULVERT INLET PROTECTION
- TEMPORARY PERFORATED RISER
- PAVEMENT DRAINAGE FLOW
- SWALE DRAINAGE FLOW
- LIMITS OF DISTURBANCE/CONSTRUCTION

0 25 50 100  
SCALE: 1"=50'

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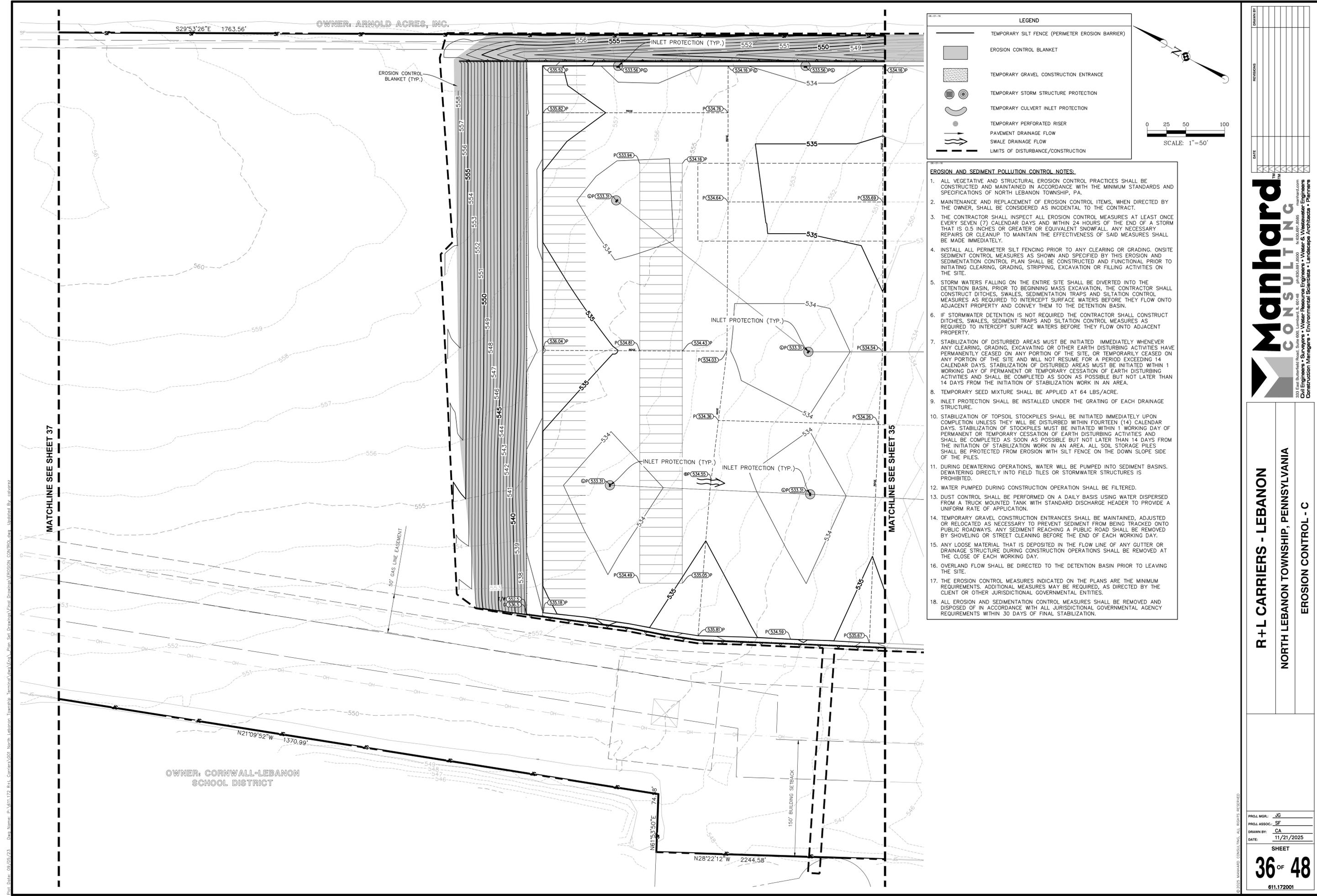
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**R+L CARRIERS - LEBANON**  
 NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
 EROSION CONTROL - B

PROJ. MGR.: JG  
 PROJ. ASSOC.: SF  
 DRAWN BY: CA  
 DATE: 11/21/2025

SHEET  
**35 OF 48**  
 611.172001

Plot Date: 09/05/23 Draw Name: P:\81172\_R+L\_Carriers\01\_North\_Lebanon\_Township\_Territorial\Map\Err\Plan\_Sat\_Domain\Final\_Drawing\EROSION\_CONTROL.dwg Updated By: cshwarz



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S29°53'26"E 1763.56'

OWNER: CORNWALL-LEBANON SCHOOL DISTRICT

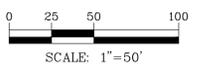
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N28°22'12"W 2244.58'

06-21-16

**LEGEND**

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- EROSION CONTROL BLANKET
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
- TEMPORARY STORM STRUCTURE PROTECTION
- TEMPORARY CULVERT INLET PROTECTION
- TEMPORARY PERFORATED RISER
- PAVEMENT DRAINAGE FLOW
- SWALE DRAINAGE FLOW
- LIMITS OF DISTURBANCE/CONSTRUCTION



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1. ALL VEGETATIVE AND STRUCTURAL EROSION CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF NORTH LEBANON TOWNSHIP, PA.
  2. MAINTENANCE AND REPLACEMENT OF EROSION CONTROL ITEMS, WHEN DIRECTED BY THE OWNER, SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.
  3. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER OR EQUIVALENT SNOWFALL. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF SAID MEASURES SHALL BE MADE IMMEDIATELY.
  4. INSTALL ALL PERIMETER SILT FENCING PRIOR TO ANY CLEARING OR GRADING. ONSITE SEDIMENT CONTROL MEASURES AS SHOWN AND SPECIFIED BY THIS EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE CONSTRUCTED AND FUNCTIONAL PRIOR TO INITIATING CLEARING, GRADING, STRIPPING, EXCAVATION OR FILLING ACTIVITIES ON THE SITE.
  5. STORM WATERS FALLING ON THE ENTIRE SITE SHALL BE DIVERTED INTO THE DETENTION BASIN. PRIOR TO BEGINNING MASS EXCAVATION, THE CONTRACTOR SHALL CONSTRUCT DITCHES, SWALES, SEDIMENTATION TRAPS AND SILTATION CONTROL MEASURES AS REQUIRED TO INTERCEPT SURFACE WATERS BEFORE THEY FLOW ONTO ADJACENT PROPERTY AND CONVEY THEM TO THE DETENTION BASIN.
  6. IF STORMWATER DETENTION IS NOT REQUIRED THE CONTRACTOR SHALL CONSTRUCT DITCHES, SWALES, SEDIMENT TRAPS AND SILTATION CONTROL MEASURES AS REQUIRED TO INTERCEPT SURFACE WATERS BEFORE THEY FLOW ONTO ADJACENT PROPERTY.
  7. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION WORK IN AN AREA.
  8. TEMPORARY SEED MIXTURE SHALL BE APPLIED AT 64 LBS/ACRE.
  9. INLET PROTECTION SHALL BE INSTALLED UNDER THE GRATING OF EACH DRAINAGE STRUCTURE.
  10. STABILIZATION OF TOPSOIL STOCKPILES SHALL BE INITIATED IMMEDIATELY UPON COMPLETION UNLESS THEY WILL BE DISTURBED WITHIN FOURTEEN (14) CALENDAR DAYS. STABILIZATION OF STOCKPILES MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION WORK IN AN AREA. ALL SOIL STORAGE PILES SHALL BE PROTECTED FROM EROSION WITH SILT FENCE ON THE DOWN SLOPE SIDE OF THE PILES.
  11. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.
  12. WATER PUMPED DURING CONSTRUCTION OPERATION SHALL BE FILTERED.
  13. DUST CONTROL SHALL BE PERFORMED ON A DAILY BASIS USING WATER DISPERSED FROM A TRUCK MOUNTED TANK WITH STANDARD DISCHARGE HEADER TO PROVIDE A UNIFORM RATE OF APPLICATION.
  14. TEMPORARY GRAVEL CONSTRUCTION ENTRANCES SHALL BE MAINTAINED, ADJUSTED OR RELOCATED AS NECESSARY TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC ROADWAYS. ANY SEDIMENT REACHING A PUBLIC ROAD SHALL BE REMOVED BY SHOVELING OR STREET CLEANING BEFORE THE END OF EACH WORKING DAY.
  15. ANY LOOSE MATERIAL THAT IS DEPOSITED IN THE FLOW LINE OF ANY GUTTER OR DRAINAGE STRUCTURE DURING CONSTRUCTION OPERATIONS SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY.
  16. OVERLAND FLOW SHALL BE DIRECTED TO THE DETENTION BASIN PRIOR TO LEAVING THE SITE.
  17. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE CLIENT OR OTHER JURISDICTIONAL GOVERNMENTAL ENTITIES.
  18. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL JURISDICTIONAL GOVERNMENTAL AGENCY REQUIREMENTS WITHIN 30 DAYS OF FINAL STABILIZATION.

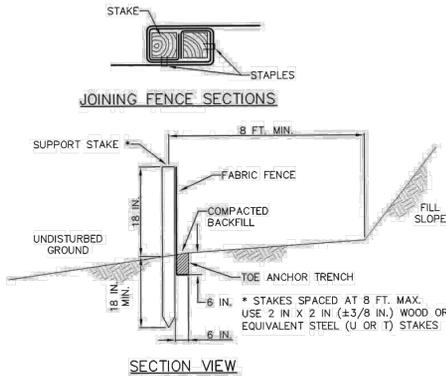
<p><b>Manhard CONSULTING</b></p> <p>333 East Butterfield Road, Suite 600, Lombard, IL 60148          Phone: (630) 961-1800          Fax: (630) 961-1895          Email: info@manhard.com          manhard.com</p> <p><b>Civil Engineers • Surveyors • Water Resource Engineers • Water &amp; Wastewater Engineers</b>  <b>Construction Managers • Environmental Scientists • Landscape Architects • Planners</b></p>	<p><b>R+L CARRIERS - LEBANON</b></p> <p><b>NORTH LEBANON TOWNSHIP, PENNSYLVANIA</b></p> <p><b>EROSION CONTROL - C</b></p>
<p>PROJ. MGR.: JG          PROJ. ASSOC.: SF          DRAWN BY: CA          DATE: 11/21/2025</p>	
<p>SHEET</p> <p><b>36 OF 48</b></p> <p>611.172001</p>	

Plot Date: 09/05/23 - Dwg Name: P:\811172\_R+L\_Carriers\01\_North\_Lebanon\_Township\_Territorial\Map\Exc\Plan\_Sat\_Donovan\Final\_Drawing\EROSION\_CONTROL.dwg - Updated By: cshanz

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**NOTES:**

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.

SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

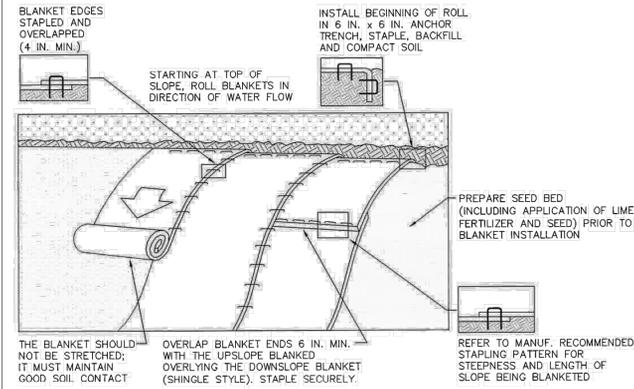
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

**STANDARD CONSTRUCTION DETAIL #4-7  
STANDARD SILT FENCE (18" HIGH)**

NOT TO SCALE



**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.

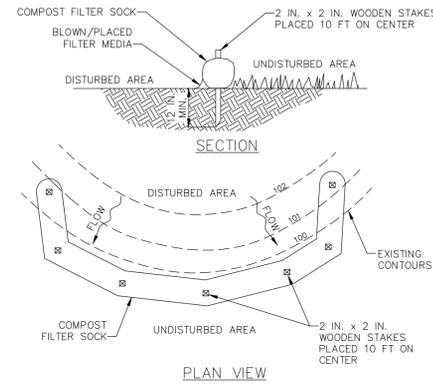
BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

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**

NOT TO SCALE



**NOTES:**

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

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

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

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

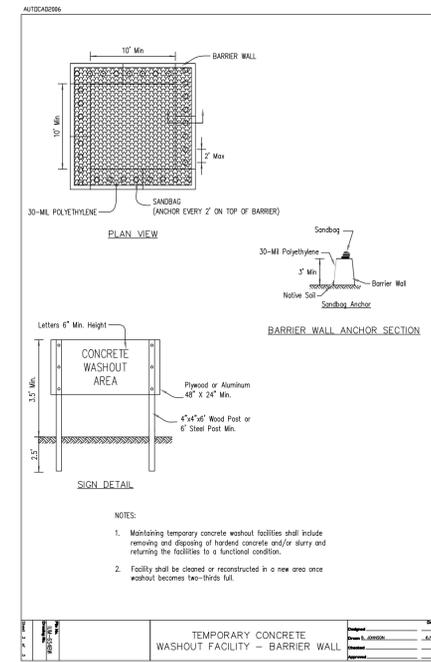
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

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

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

**STANDARD CONSTRUCTION DETAIL #4-1  
COMPOST FILTER SOCK**

NOT TO SCALE

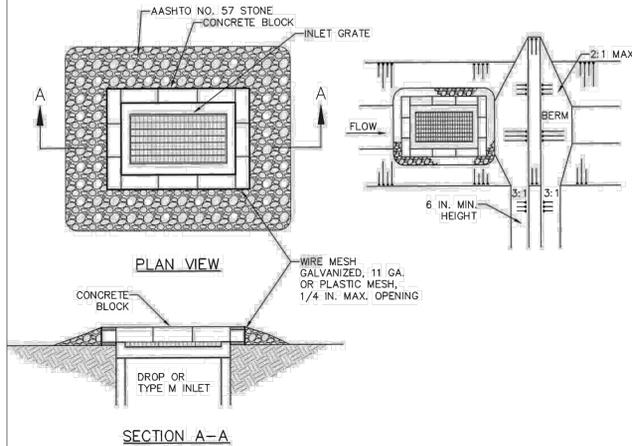


**NOTES:**

1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and/or slurry and returning the facilities to a functional condition.

2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.

TEMPORARY CONCRETE WASHOUT FACILITY - BARRIER WALL



**NOTES:**

MAXIMUM DRAINAGE AREA = 1 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.

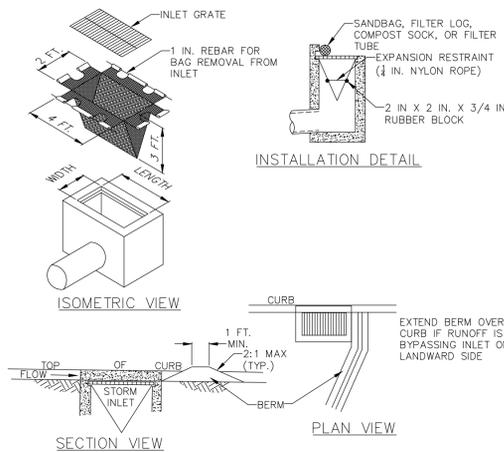
TOP OF BLOCK SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.

SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 INCH THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

**STANDARD CONSTRUCTION DETAIL #4-18  
STONE AND CONCRETE BLOCK INLET PROTECTION - TYPE M INLET**

NOT TO SCALE



**NOTES:**

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

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

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

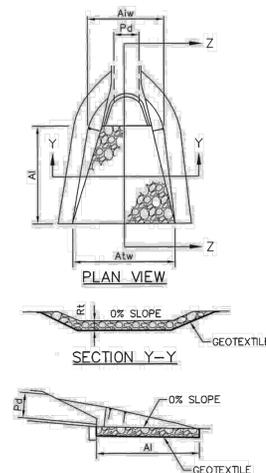
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS. A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

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

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

**STANDARD CONSTRUCTION DETAIL #4-15  
FILTER BAG INLET PROTECTION - TYPE C INLET**

NOT TO SCALE



OUTLET NO.	PIPE DIA. (IN)	RIPRAP			APRON	
		SIZE R-4	THICK R1 (IN)	LENGTH A1 (FT)	INITIAL WIDTH A1w (FT)	TERMINAL WIDTH A1w (FT)
FES-1	18"	R-4	18	16	4	12
FES-2	36"	R-4	18	16	4	12
FES-3	36"	R-4	18	16	4	12
FES-4	18"	R-4	18	16	4	12
FES-5	18"	R-4	18	16	4	12

**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**

NOT TO SCALE

Plot Date: 11/21/25 Doc Name: P:\11.172\25 R+L Carriers\001 North Lebanon\_Township\_Territorial\Drawings\Final Drawings\EROSION AND SEDIMENT POLLUTION CONTROL NOTES.dwg Updated By: caboraz

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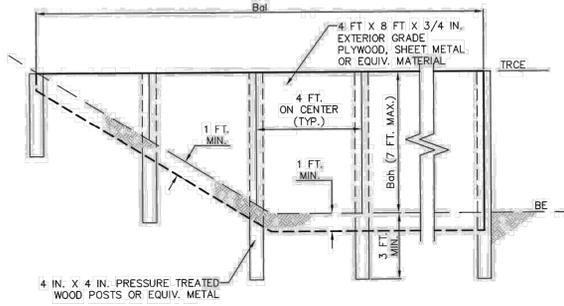
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 Professional Engineers - Maine  
 Professional Engineers - Alaska  
 Professional Engineers - Hawaii

**R+L CARRIERS - LEBANON**  
 NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
 EROSION AND SEDIMENT POLLUTION CONTROL DETAILS

PROJ. MGR.: JG  
 PROJ. ASSOC.: SF  
 DRAWN BY: CA  
 DATE: 11/21/2025

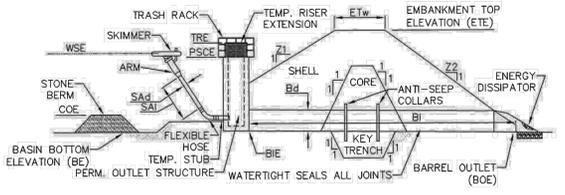
SHEET  
**39** OF **48**  
 611.172001



BASIN OR TRAP NO.	BAFFLE LENGTH (FT)	BAFFLE HEIGHT (FT)	TEMPORARY RISER CREST ELEV. (FT)	BOTTOM ELEV. BE (FT)
88	88	88	8888.88	8888.88

**NOTES:**  
 SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.  
 AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION  
 IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.  
 BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.  
 SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.  
 DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.  
 BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

**STANDARD CONSTRUCTION DETAIL #7-14**  
**BAFFLE**  
 NOT TO SCALE

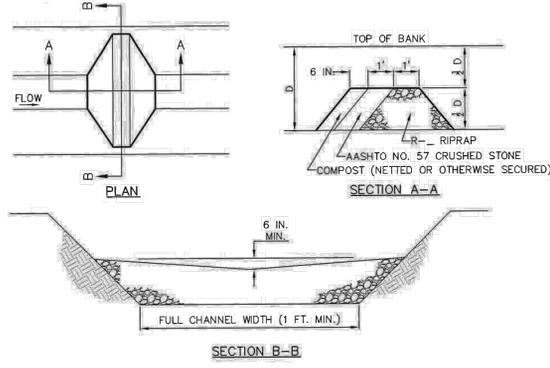


BASIN NO.	Z1 (FT)	Z2 (FT)	TEMP. RISER EXT. ELEV. TRC (FT)	EMBANKMENT				CLEAN OUT ELEV. BE (FT)	BOTTOM ELEV. BE (FT)
				TOP ELEV. ETE (FT)	TOP WIDTH ETW (FT)	KEY TRENCH DEPTH (FT)	KEY TRENCH WIDTH (FT)		
88	88	88	8888.88	8888.88	88	88	88	8888.88	8888.88

SKIMMER			OUTLET BARREL			
DIA. SAd (IN)	LENGTH SAI (FT)	MAT'L	DIA. Bd (IN)	INLET ELEV. BIE (FT)	LENGTH BI (FT)	OUTLET ELEV. BOE (FT)
88	88.8	12345	888	8888.88	12345	8888.88

**NOTES:**  
 SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS.  
 AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. IN ORDER TO FACILITATE MAINTENANCE AND RESTORATION, THE POOL AREA SHALL BE CLEARED OF ALL BRUSH, TREES, AND OBJECTIONABLE MATERIAL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.  
 UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED, MULCHED, BLANKETED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.  
 INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PROVIDE ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN.  
 BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE INSPECTED FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE IMMEDIATELY DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY.  
 ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

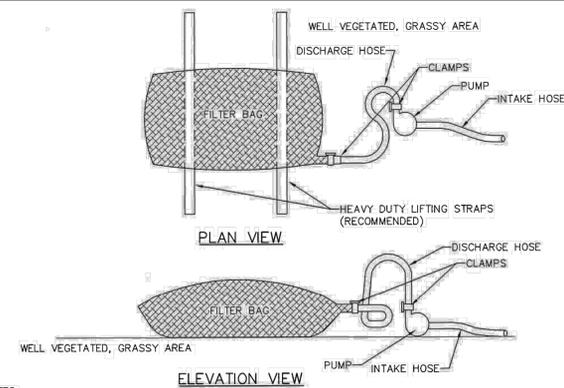
**STANDARD CONSTRUCTION DETAIL #7-4**  
**SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS - SKIMMER**  
 NOT TO SCALE



ROCK FILTER NO.	LOCATION	D (FT)	RIPRAP SIZE (R-)
88	1234567890	88	B

**NOTES:**  
 SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.  
 IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

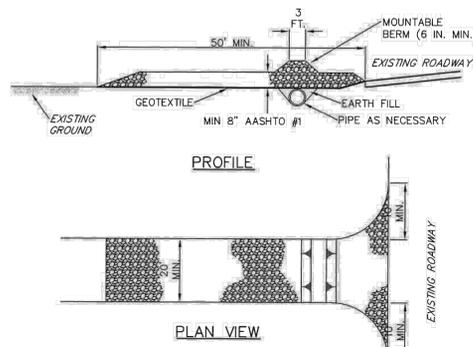
**STANDARD CONSTRUCTION DETAIL #4-14**  
**ROCK FILTER**  
 NOT TO SCALE



**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 OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.  
 NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.  
 THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.  
 THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE 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.

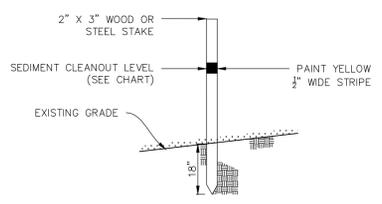
PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4984	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

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



**NOTES:**  
 \* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE.  
 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 BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.  
 MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE 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**  
 NOT TO SCALE



SEDIMENT BASIN CLEANOUT LEVEL	
BASIN	ELEVATION (FT)
1	510
2	510

**CLEANOUT STAKE DETAIL**  
 NOT TO SCALE

Plot Date: 11/21/25    Doc Name: P:\11172 R+L Carriers\001 North Lebanon, Tennessee, Terminal\New\Enr\Plan Set Drawings\Final Drawings\EROSION AND SEDIMENT POLLUTION CONTROL NOTES.dwg    Updated By: catherine

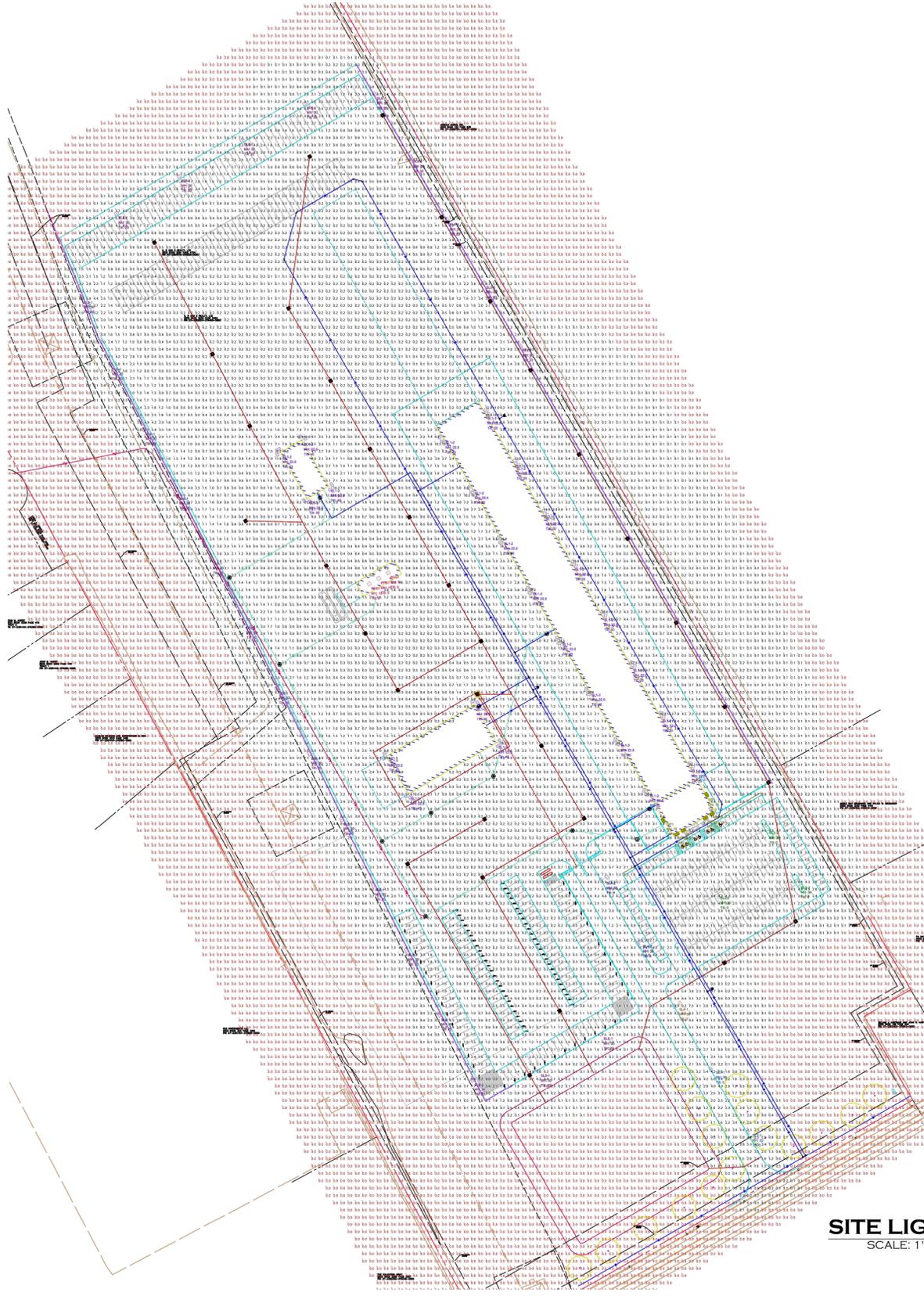
DRAWN BY: \_\_\_\_\_  
 REVISIONS: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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**R+L CARRIERS - LEBANON**  
 NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
 EROSION AND SEDIMENT POLLUTION CONTROL DETAILS

PROJ. MGR.: JG  
 PROJ. ASSOC.: SF  
 DRAWN BY: CA  
 DATE: 11/21/2025

SHEET  
**40 OF 48**  
 611.172001



FC READINGS @ 0' AFG

Symbol	Qty	Label	Arrangement	Lum. Watts	Lum. Lumens	LLF	Description
[Symbol]	3	PFG1	SINGLE	82.29	10930	0.910	LL-PGF-50K-80W
[Symbol]	24	SL1-2	2 @ 90 degrees	255	40788	0.910	SL2-A1-38K-LG-50-70-TFTM-LV
[Symbol]	3	SL2-2	Back-Back	143	24124	0.910	SL2-A1-21K-MD-50-70-TS-LV
[Symbol]	1	SL4-1	Single	255	41105	0.910	SL2-A1-38K-LG-50-70-T4-LV
[Symbol]	2	SL4-2	Back-Back	255	41105	0.910	SL2-A1-38K-LG-50-70-T4-LV
[Symbol]	24	SL6-1	Single	322	49434	0.900	SL2-A1-46K-LG-50-70-TFTM-LV
[Symbol]	3	SL7-1	Single	255	42013	0.910	SL2-A1-38K-LG-50-70-T2-LV
[Symbol]	6	WP1	SINGLE	78.13	10231	0.910	AL-WP1-80W-50K-F-UNV-PC

CALCULATION SCHEDULE

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
OVERALL SITE	Illuminance	Fc	0.65	26.4	0.0	N.A.	N.A.
CAR PARKING	Illuminance	Fc	1.67	7.1	0.1	16.70	71.00
TRUCK LOT	Illuminance	Fc	3.15	11.3	0.1	31.50	113.00

**SITE LIGHTING**  
SCALE: 1" = 120'

**IMPORTANT**  
PRESENTATION PLANS ONLY.  
DO NOT USE FOR CONSTRUCTION.

**NOTES:**  
1. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SPECIFIED.  
2. ALL FIXTURES ARE TO BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.  
3. ALL FIXTURES ARE TO BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.  
4. ALL FIXTURES ARE TO BE INSTALLED AS SHOWN UNLESS OTHERWISE SPECIFIED.

**REVISIONS:**

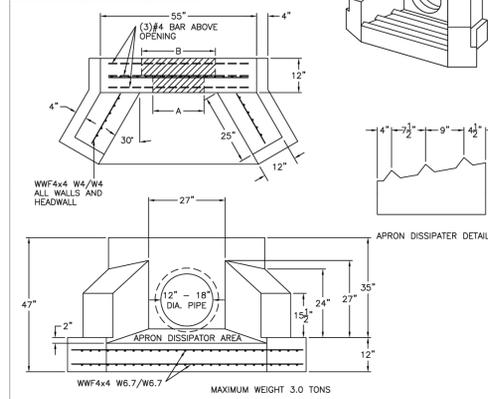
NO.	DATE	DESCRIPTION

R&L CARRIERS LEBANON, PA		SHEET NO. <b>E101</b>	
DRAWING	DATE	DRAWN BY	REVIEWED BY
PRELIM	7-13-25	CS	CS
REV 1	8-14-25	CS	CS

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**R+L CARRIERS - LEBANON**  
NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
**SITE LIGHTING PLAN (FOR REF. ONLY)**

PIPE SIZE	A	B
12" Ø	12" Ø	18" Ø
15" Ø	15" Ø	21" Ø
18" Ø	18" Ø	26" Ø



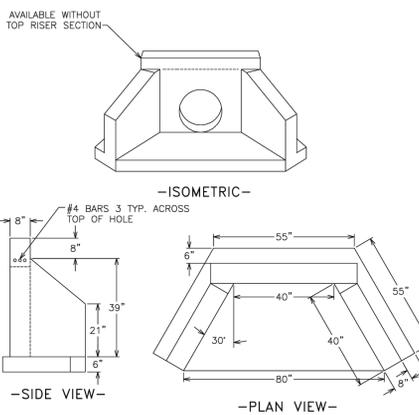
**SPECIFICATIONS:**  
 MINIMUM CONCRETE STRENGTH 4000 PSI @ 28 DAYS (PENNDOT CLASS AA)  
 DW ENDWALL DESIGNED AS PER PENNDOT SPECIFICATION  
 EXPOSED EDGES TO HAVE 1" x 1" CHAMFER  
 MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE REQUIREMENTS OF  
 PENNDOT PUBLICATION 408 SECTION 605 & 714  
 STEEL REINFORCEMENT #615 GRADE 60 HORIZONTAL AND VERTICAL

**Continental Concrete Products, Inc.**  
 1 South Conestoga Rd.  
 Pottsville, PA 17864  
 Phone: (610) 327-3700  
 Fax: (610) 327-9485

**PENNDOT TYPE 'DW' ENDWALL FOR 12" Ø, 15" Ø & 18" Ø PIPE**

DATE	REV.	DESCRIPTION
2/28/16	DW1218	STRUCTURE

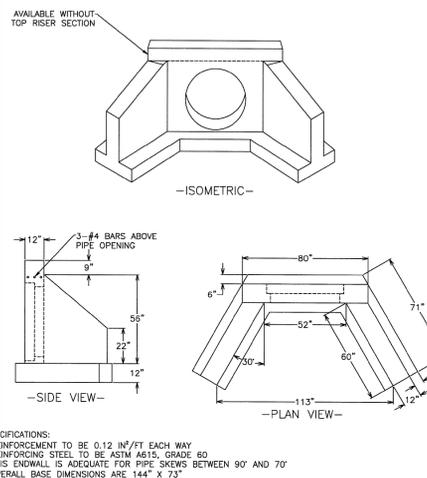
MONARCH PRODUCTS COMPANY, INC.  
 YORK HAVEN, PA.



NOTE: REINFORCEMENT TO BE 0.12 IN<sup>2</sup>/FT. EACH WAY

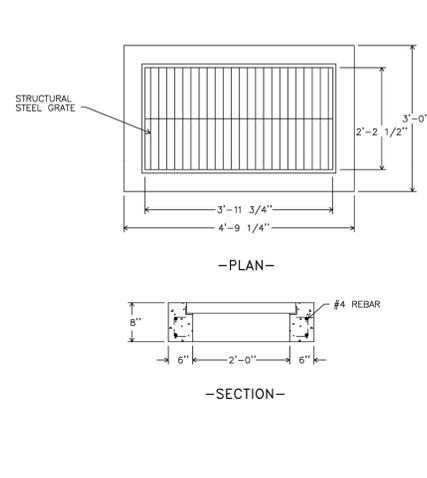
**TYPE D-W ENDWALL**  
 MONARCH PRODUCTS COMPANY, INC.  
 YORK HAVEN, PA.

MONARCH PRODUCTS COMPANY, INC.  
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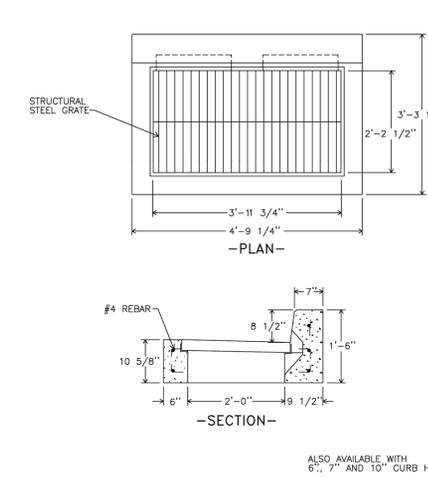
**TYPE D-W ENDWALL**  
 MAXIMUM PIPE SIZE - 48" R.C.P.

MONARCH PRODUCTS COMPANY, INC.  
 YORK HAVEN, PA.

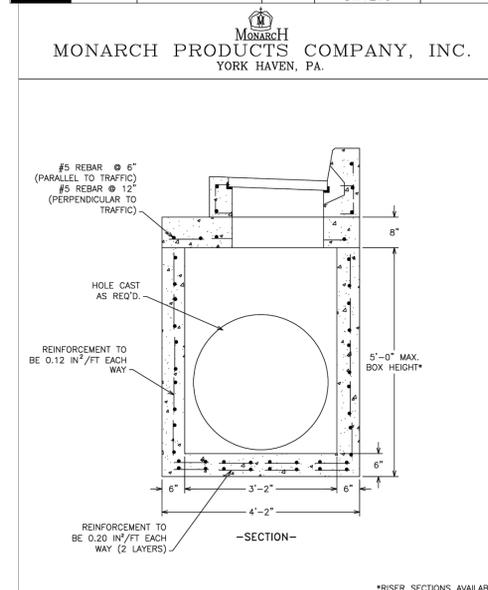


**PENNDOT TYPE M**  
 CONCRETE INLET TOP

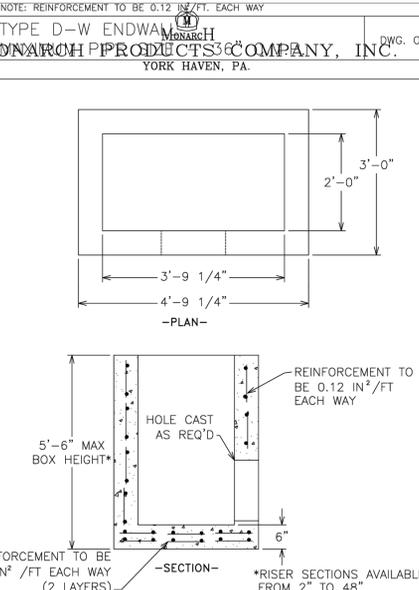
MONARCH PRODUCTS COMPANY, INC.  
 YORK HAVEN, PA.



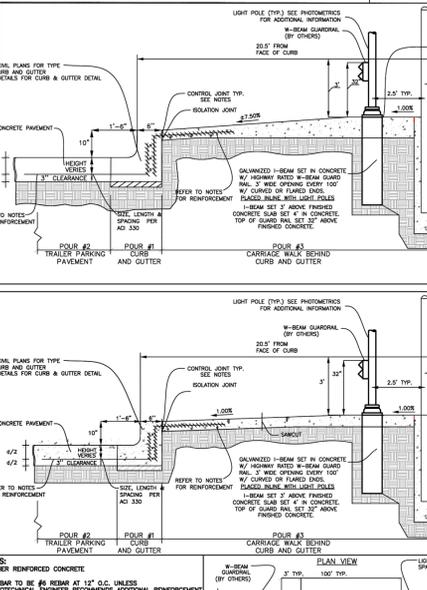
**PENNDOT TYPE C**  
 CONCRETE INLET TOP



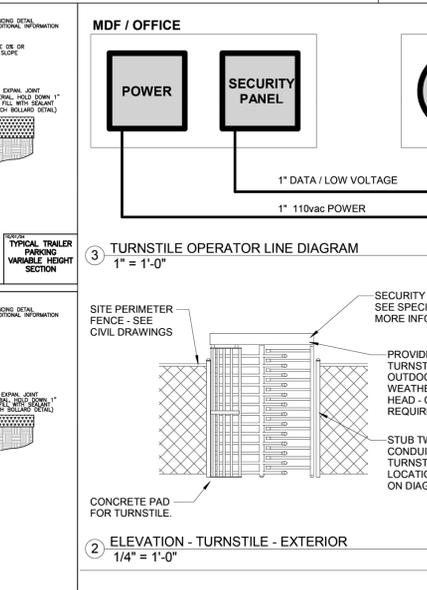
**PRECAST INLET BOX 38" X 45"**  
 FOR PENNDOT INLET TOPS



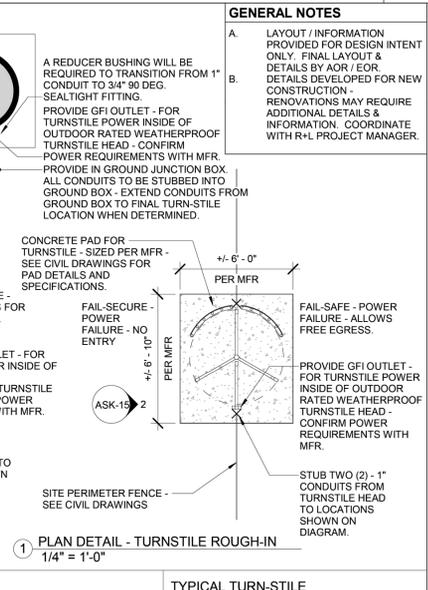
**PRECAST INLET BOX 24" X 45"**  
 FOR PENNDOT INLET TOPS



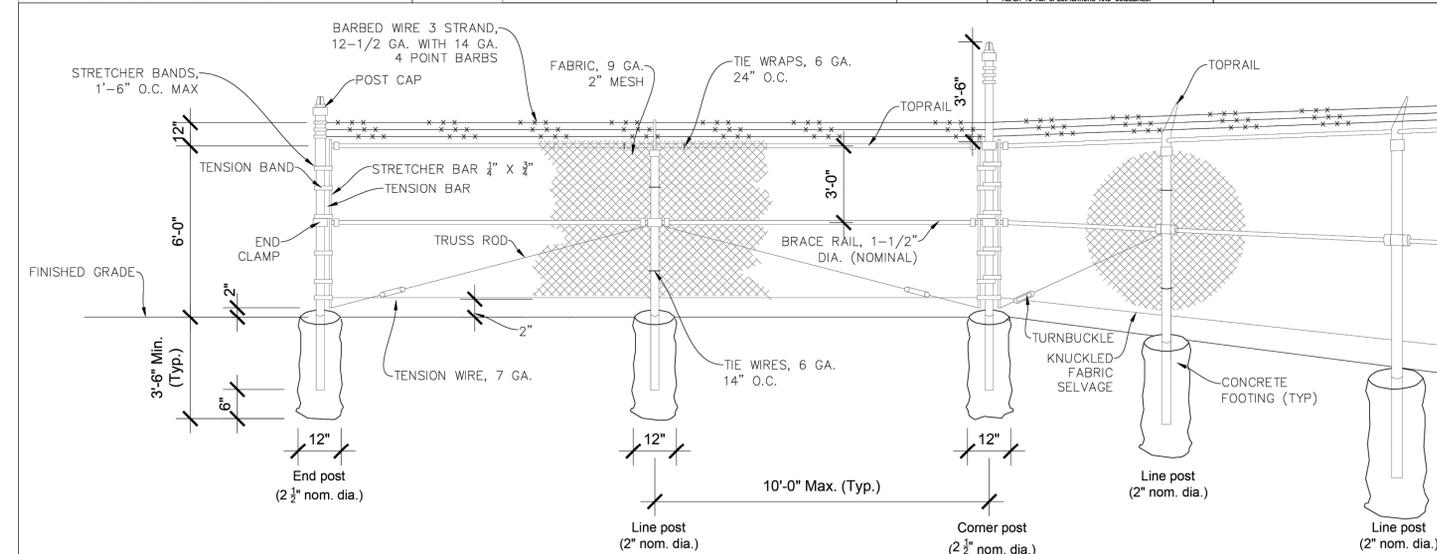
**TURNSTILE OPERATOR LINE DIAGRAM**  
 1" = 1'-0"



**ELEVATION - TURNSTILE - EXTERIOR**  
 1/4" = 1'-0"

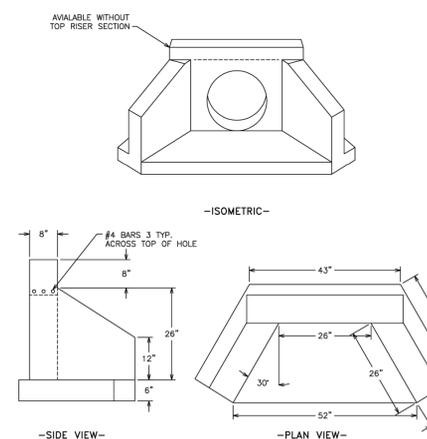


**PLAN DETAIL - TURNSTILE ROUGH-IN**  
 1/4" = 1'-0"



**Notes:**  
 1. Weights of all pipe members shall meet the minimum requirements of A.N.S.I. schedule 40.  
 2. Barbed wire extension arms angled from the vertical shall lean away from site at a 45° angle.  
 3. Contractor shall use 12" Ø snotube casings on all concrete fence post footings.

MONARCH PRODUCTS COMPANY, INC.  
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**TYPE D-W ENDWALL**  
 MAXIMUM PIPE SIZE - 21" C.M.P.

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**R+L CARRIERS - LEBANON**  
 NORTH LEBANON TOWNSHIP, PENNSYLVANIA

**CONSTRUCTION DETAILS**

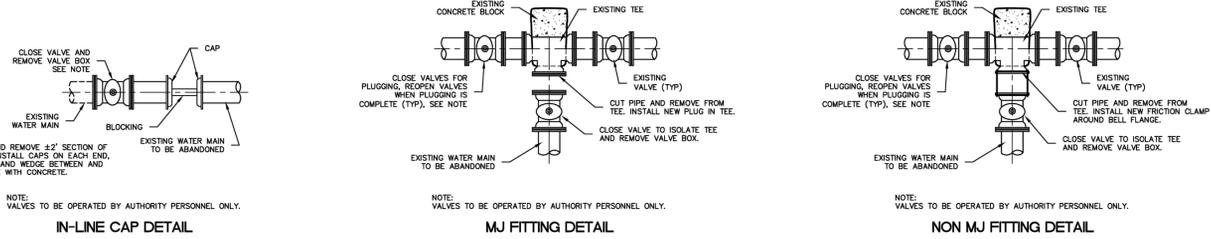
PROJ. MGR.: JG  
 PROJ. ASSOC.: SF  
 DRAWN BY: CA  
 DATE: 11/21/2025

SHEET  
**42 OF 48**  
 611.172001







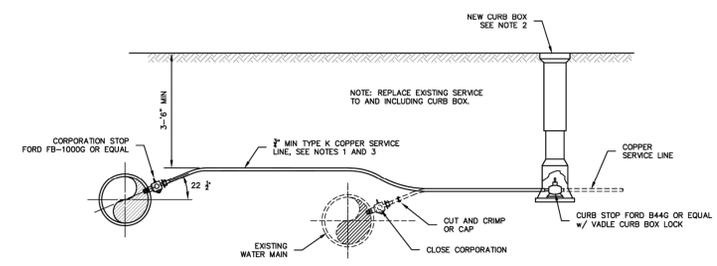


**CUTTING, CAPPING and BLOCKING DETAIL**  
N.T.S.

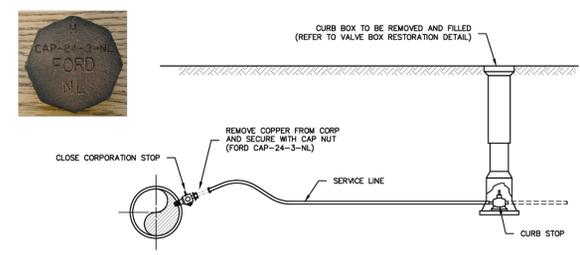
ALTERNATE RESTRAINING METHODS MAY BE USED IN PLACE OF CONCRETE THRUST BLOCKS WITH APPROVAL BY THE CITY OF LEBANON AUTHORITY.

**CITY OF LEBANON AUTHORITY**  
2311 Ridgeview Road Lebanon, PA 17042  
Phone (717) 272-2841 Fax (717) 675-2121  
www.lebanonauthority.org

**GENERAL SPECIFICATIONS**  
CUTTING, CAPPING, PLUG  
and BLOCK DETAILS  
February 2025

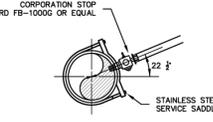


**TYPICAL WATER SERVICE RECONNECTION DETAIL**  
N.T.S.



**TYPICAL WATER SERVICE DISCONNECTION DETAIL**  
N.T.S.

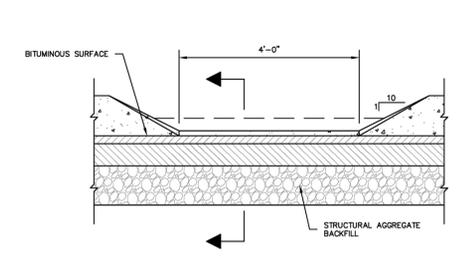
- NOTES:**
1. REPLACE EXISTING WATER SERVICE LINES WITH MINIMUM 3/4" COPPER, IF EXISTING SERVICE IS LARGER DIAMETER, REPLACE WITH SAME SIZE.
  2. CURB STOP LOCATION NO MORE THAN 1'-0" BEHIND CURB.
  3. NEW SERVICE LINES - FROM CORPORATION TO CURB STOP, INCLUDING NEW CURB BOX.
  4. SERVICE LINES TO BE INSULATED WHEN 18" OF SEPARATION CANNOT BE MAINTAINED.
  5. ANY METER PITS REQUIRED FOR SERVICE LINES WILL BE AT THE AUTHORITY'S DISCRETION.
  6. SERVICE SADDLE SHALL BE REQUIRED FOR ALL CONNECTIONS LARGER THAN 1".



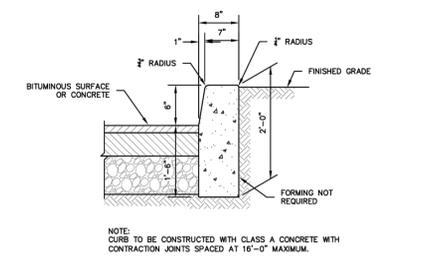
**SERVICE SADDLE**  
N.T.S.

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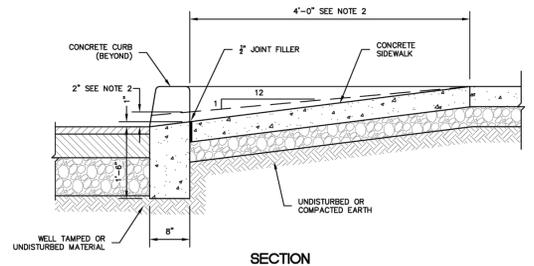
**GENERAL SPECIFICATIONS**  
WATER SERVICE CONNECTION DETAILS  
March 2025



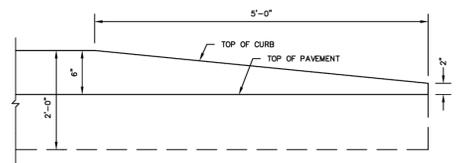
**ELEVATION**



**CONCRETE CURB SECTION**  
N.T.S.



**SECTION**



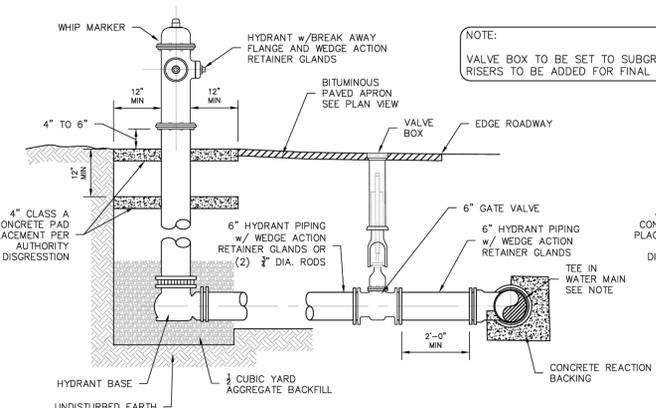
**END OF CURB DETAIL**  
N.T.S.

**CURB CUT RAMP DETAIL**  
N.T.S.

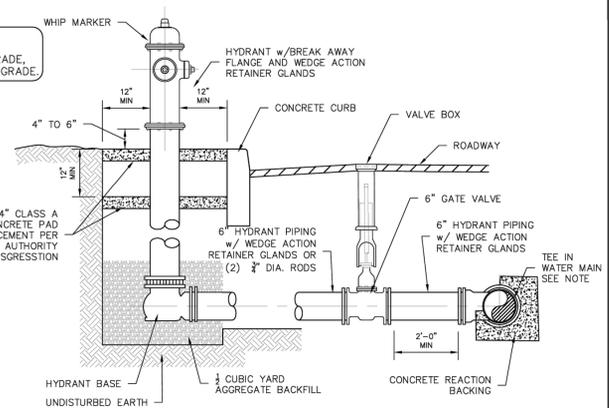
- NOTES:**
1. CURB CUT TO BE CONSTRUCTED IN ACCORDANCE WITH MHC AND ADA REQUIREMENTS.

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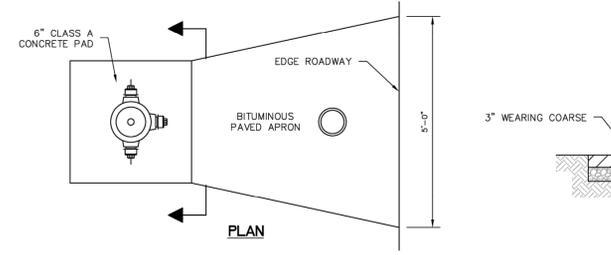
**GENERAL SPECIFICATIONS**  
CURB DETAILS  
February 2025



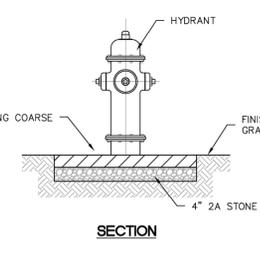
**HYDRANT DETAIL NON-CURBED AREAS**  
N.T.S.



**HYDRANT DETAIL AT CURB**  
N.T.S.



**HYDRANT APRON**  
N.T.S.



**SECTION**

**NOTE: FIRE HYDRANT TO BE DARLING STYLE**

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**GENERAL SPECIFICATIONS**  
FIRE HYDRANT DETAIL  
February 2025

NO.	DATE	REVISIONS

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**R+L CARRIERS - LEBANON**  
NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
CONSTRUCTION DETAILS

PROJ. MGR.: JG  
PROJ. ASSOC.: SF  
DRAWN BY: CA  
DATE: 11/21/2025

SHEET  
**46 OF 48**  
611.172001

Plot Date: 11/21/25 Doc Name: P:\611.172 R+L Carriers\001 North Lebanon\_Township\_Terminal\Drawings\CONSTRUCTION DETAILS.dwg Updated By: calvarez





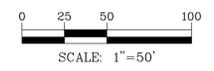
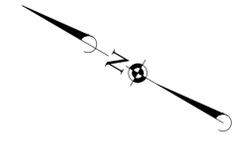
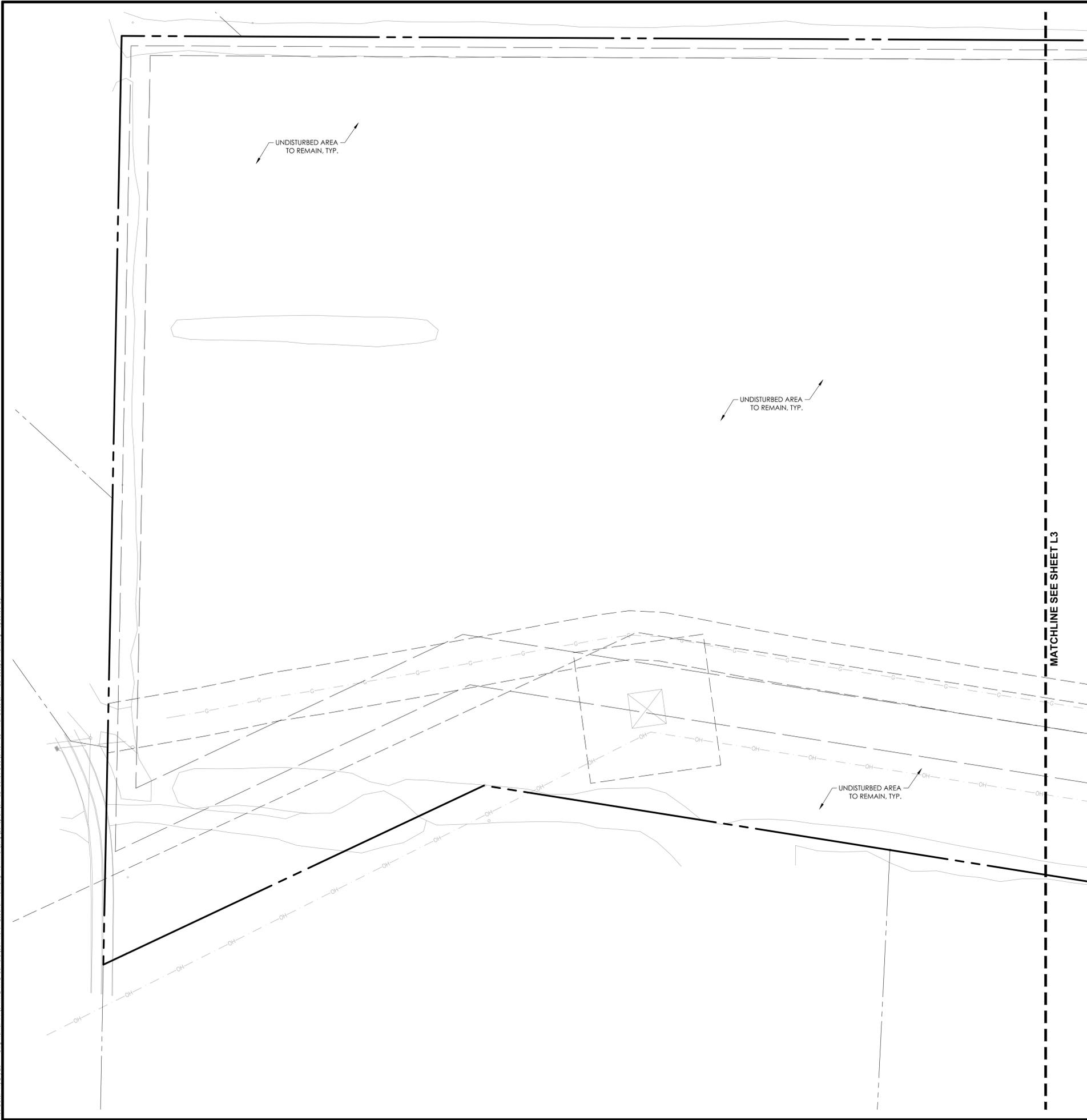








Plot Date: 11/21/25 Draw Name: P:\11172\841\_Carriers\001\_North\_Lebanon\_Township\_Territorial\Views\Landplan\07\_CD\_Const\_Doc\07.01\_CD\_Final\_Doc\01--Landscape\_Plan.dwg Updated By: maburko

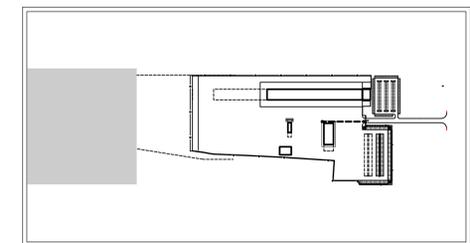


**PLANT SCHEDULE**

CODE	QTY	BOTANICAL NAME	COMMON NAME
<b>DECIDUOUS TREES</b>			
CA	10	Carpinus caroliniana	American Hornbeam
GA	8	Ginkgo biloba 'Autumn Gold' TM	Autumn Gold Maidenhair Tree
GS	11	Gleditsia triacanthos inermis 'Skyline'	Skyline Honey Locust
NS	7	Nyssa sylvatica	Tupelo
QB	8	Quercus bicolor	Swamp White Oak
TM	8	Toxodium distichum 'Mickelson' TM	Shawnee Brave Bald Cypress
ZS	5	Zelkova serrata	Japanese Zelkova
<b>EVERGREEN TREES</b>			
PF	21	Picea pungens 'Fat Albert'	Fat Albert Colorado Spruce
PF2	18	Pinus flexilis 'Vanderwolf's Pyramid'	Vanderwolf's Pyramid Limber Pine
TI	13	Thuja x 'Green Giant'	Green Giant Arborvitae
<b>DECIDUOUS SHRUBS</b>			
AO	33	Azalea x 'Roblex'	Autumn Lily@ Encore® Azalea
FL	95	Forsythia x intermedia 'Lynwood Gold'	Lynwood Gold Forsythia
IS	10	Itea virginica 'Sprich'	Little Henry@ Sweetspire
LG	57	Lagerstroemia indica 'Conlagras'	Bellini® Raspberry Crape Myrtle
PT	28	Physocarpus opulifolius 'SMPOTW'	Tiny Wine@ Ninebark
VC	84	Viburnum carlesii	Koreanspice Viburnum
<b>EVERGREEN SHRUBS</b>			
BG	105	Buxus x 'Green Mountain'	Green Mountain Boxwood
IY	54	Ilex x 'Rutzan'	Red Beauty@ Holly
IP	96	Ilex x meserveae 'Blue Prince'	Blue Prince Holly
PS	134	Prunus laurocerasus 'Schipkaensis'	Schipka English Laurel
TD2	30	Taxus x media 'Densiflora'	Dense Anglo-Japanese Yew

**CONCEPT PLANT SCHEDULE**

	<b>TURF AREA</b>	<b>1,043,707 sf</b>
	<b>STORMWATER SEED MIX</b> REF. SHEET L5 FOR SPECIFICATIONS	<b>53,941 sf</b>
	<b>WETLAND EMERGENT SEED MIX</b> REF. SHEET L5 FOR SPECIFICATIONS	<b>141,033 sf</b>



**KEY MAP**

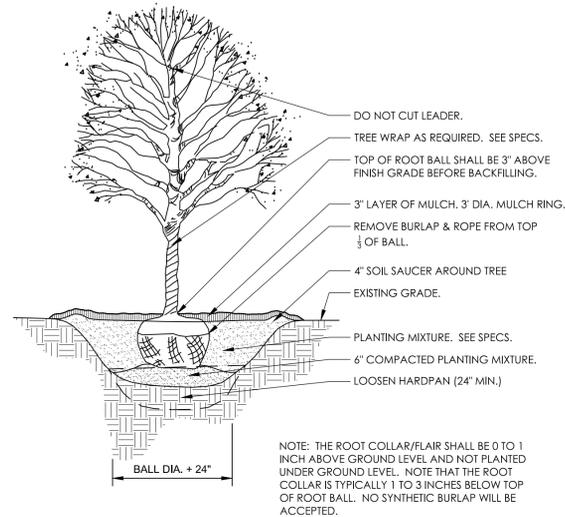


**R+L CARRIERS - LEBANON**  
NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
LANDSCAPE PLAN

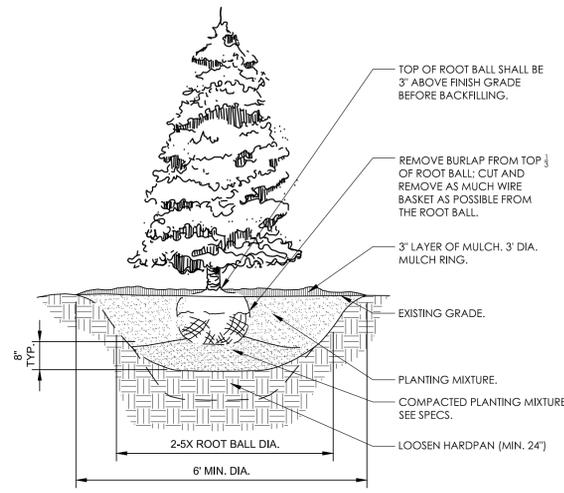
PROJ. MGR.: JG  
PROJ. ASSOC.: MJA  
DRAWN BY: MJA  
DATE: 11/21/2025

SHEET  
**L4**  
611.172001

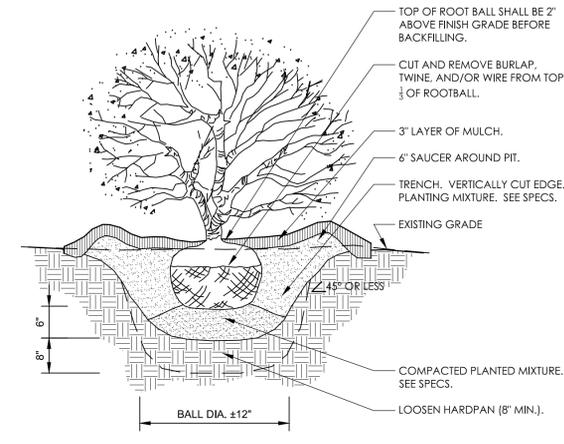
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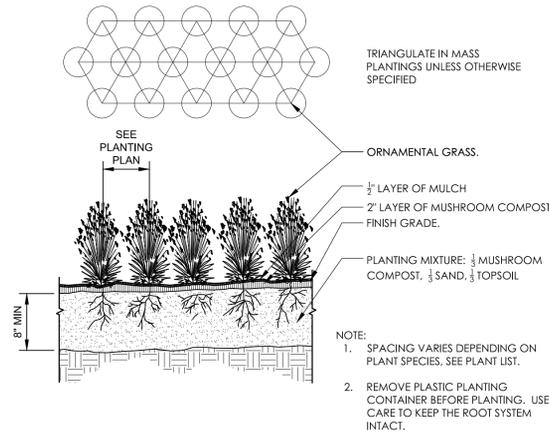
**1 DECIDUOUS TREE PLANTING**  
1/4" = 1'-0" 329343.33-20



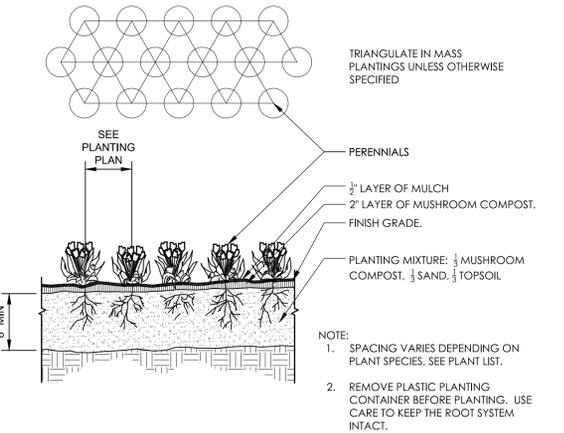
**2 CONIFER TREE PLANTING**  
1/4" = 1'-0" 32 9343.23-01



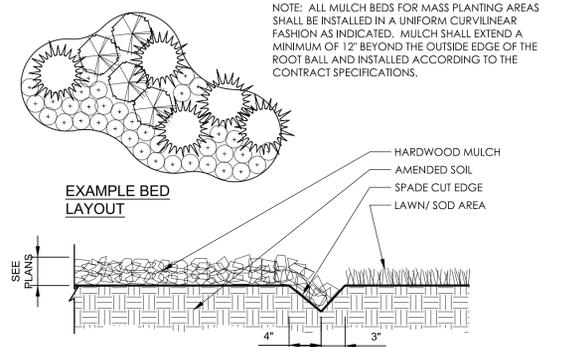
**3 SHRUB PLANTING DETAIL**  
3/4" = 1'-0" 329333.16-05



**4 ORNAMENTAL GRASS PLANTING**  
1" = 1'-0" 329313-01



**5 PERENNIAL / ANNUAL PLANTING**  
1" = 1'-0" 329313-02



**6 CONTINUOUS MULCH EDGING**  
1" = 1'-0" 329113.26-01

**Wetland Emergent Seed Mix**  
Provided by Stantec or Equal

**Note: Double installation rates shown below (do not double cover crop)**

Application Rate	36.88 PLS Lbs/AC	
Botanical Name	Common Name	Ounces/Acre (PLS)
<b>Permanent Grasses:</b>		
<i>Bolboschoenus fluviatilis</i>	River Bulrush	4.00
<i>Carex comosa</i>	Bristly Sedge	2.50
<i>Carex lacustris</i>	Common Lake Sedge	0.50
<i>Carex lurida</i>	Bottlebrush Sedge	2.00
<i>Carex stricta</i>	Common Tussock Sedge	1.00
<i>Carex vulpinoidea</i>	Brown Fox Sedge	2.00
<i>Eleocharis palustris</i>	Great Spike Rush	1.00
<i>Juncus effusus</i>	Common Rush	1.00
<i>Leersia oryzoides</i>	Rice Cut Grass	3.00
<i>Schoenoplectus acutus</i>	Hard-stemmed Bulrush	1.50
<i>Schoenoplectus pungens</i>	Chairmaker's Rush	1.50
<i>Schoenoplectus tabernaemontani</i>	Great Bulrush	6.00
	<b>Total</b>	<b>26.00</b>
<b>Forbs:</b>		
<i>Acorus americanus</i>	Sweet Flag	1.00
<i>Allisma subcordatum</i>	Common Water Plantain	2.00
<i>Asclepias incarnata</i>	Swamp Milkweed	1.00
<i>Boehmeria cylindrica</i>	False Nettle	2.00
<i>Cephalanthus occidentalis</i>	Buttonbush	1.00
<i>Decodon verticillatus</i>	Swamp Loosestrife	0.50
<i>Eutrochium maculatum</i>	Spotted Joe-Pye Weed	0.50
<i>Hibiscus spp.</i>	Rosemallow (Various Mix)	4.00
<i>Iris virginica v. shrevei</i>	Blue Flag	6.00
<i>Lobelia cardinalis</i>	Cardinal Flower	0.25
<i>Lobelia siphilitica</i>	Great Blue Lobelia	0.25
<i>Lycopus americanus</i>	Common Water Horehound	1.00
<i>Mimulus ringens</i>	Monkey Flower	1.00
<i>Peltandra virginica</i>	Arrow Arum	12.00
<i>Penthorum sedoides</i>	Ditch Stonecrop	0.50
<i>Persicaria spp.</i>	Pinkweed (Various Mix)	2.00
<i>Pontederia cordata</i>	Pickeral Weed	8.00
<i>Sagittaria latifolia</i>	Common Arrowhead	2.00
<i>Sparganium eurycarpum</i>	Common Bur Reed	6.00
<i>Verbena hastata</i>	Blue Vervain	1.00
	<b>Total</b>	<b>52.00</b>
<b>Temporary Cover (do not double):</b>		
<i>Avena sativa</i>	Common Oat	512.00
	<b>Total</b>	<b>512.00</b>

- Notes:
- 1) For best results install Myco Seed Treat inoculum to above seed mix at 4 oz per 100 lbs of seed, or equal
  - 2) Install proper erosion control (blanket or heavy hydro-mulching) immediately after installation
  - 3) Do not seed in standing water. If location has perpetually standing water install plugs
  - 4) If site needs to be well vegetated in first season, install Echinochloa crus-galli at 2lbs/ac. Manage closely

**Stormwater Seed Mix**  
Provided by Stantec or Equal

**Note: Double seed installation rates (do not double cover crop)**

Application Rate (including cover crop)	42.63 PLS Lbs/AC	
Botanical Name	Common Name	Ounces/Acre (PLS)
<b>Permanent Grasses:</b>		
<i>Bolboschoenus fluviatilis</i>	River Bulrush	4.00
<i>Carex cristatella</i>	Crested Oval Sedge	0.50
<i>Carex lurida</i>	Bottlebrush Sedge	2.00
<i>Carex vulpinoidea</i>	Brown Fox Sedge	2.00
<i>Eleocharis obtusa</i>	Blunt Spike Rush	0.50
<i>Elymus virginicus</i>	Virginia Wild Rye	24.00
<i>Glyceria striata</i>	Fowl Manna Grass	1.00
<i>Juncus effusus</i>	Common Rush	1.00
<i>Leersia oryzoides</i>	Rice Cut Grass	1.00
<i>Panicum virgatum</i>	Switch Grass	2.00
<i>Schoenoplectus tabernaemontani</i>	Great Bulrush	3.00
<i>Scirpus atrovirens</i>	Dark Green Rush	2.00
<i>Scirpus cyperinus</i>	Wool Grass	1.00
	<b>Total</b>	<b>44.00</b>
<b>Forbs:</b>		
<i>Allisma subcordatum</i>	Common Water Plantain	2.50
<i>Asclepias incarnata</i>	Swamp Milkweed	2.00
<i>Bidens spp.</i>	Bidens (Various Mix)	2.00
<i>Eupatorium perfoliatum</i>	Common Boneset	1.00
<i>Helenium autumnale</i>	Sneezeweed	2.00
<i>Iris spp.</i>	Blue Flag Species	4.00
<i>Lycopus americanus</i>	Common Water Horehound	0.50
<i>Mimulus ringens</i>	Monkey Flower	1.00
<i>Penthorum sedoides</i>	Ditch Stonecrop	0.50
<i>Polygonum spp.</i>	Pinkweed Species	2.00
<i>Rudbeckia subtomentosa</i>	Sweet Black-Eyed Susan	1.00
<i>Rudbeckia triloba</i>	Brown-Eyed Susan	1.50
<i>Sagittaria latifolia</i>	Common Arrowhead	1.00
<i>Senna hebecarpa</i>	Wild Senna	2.00
<i>Symphyotrichum lanceolatum</i>	Panicled Aster	0.50
<i>Symphyotrichum novae-angliae</i>	New England Aster	0.50
<i>Thalictrum dasycarpum</i>	Purple Meadow Rue	2.00
	<b>Total</b>	<b>26.00</b>
<b>Temporary Cover:</b>		
<i>Avena sativa</i>	Common Oat	512.00
<i>Lolium multiflorum</i>	Annual Rye	100.00
	<b>Total</b>	<b>612.00</b>

Notes:

- 1) For best results install Myco Seed Treat inoculum to above seed mix at 4 oz per 100 lbs of seed, or equal
- 2) Install proper erosion control (blanket or heavy hydro-mulching) immediately after installation

Plot Date: 11/21/25 Draw Name: P:\611.172\8-1\_Carriers\001\_North Lebanon\_Township\_Territorial\Views\Landplan\07\_CD\_Const\_Doc\07.01\_CD\_Final\_Docs\01\_Landscape\_Plan.dwg Updated By: maburke

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**R + L CARRIERS - LEBANON**  
NORTH LEBANON TOWNSHIP, PENNSYLVANIA  
LANDSCAPE DETAILS

PROJ. MGR.: JG  
PROJ. ASSOC.: MJA  
DRAWN BY: MJA  
DATE: 11/21/2025  
SHEET  
**L5**  
611.172001

