SITE INFORMATION:
1. SITE ADDRESS 4001 PREMIER PARKWAY (ADJUSTED LOT 32)

2. PARCEL ID:
6-0003-D052-00-0032.0000000

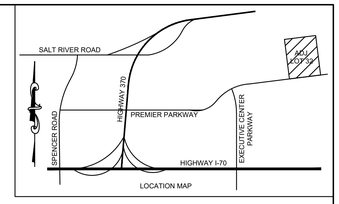
3. EXISTING USE: VACANT AGRICULTURAL LAND
4. SUBDIVISION: PREMIER 370 BUSINESS PARK PLAT ONE
5. PROPOSED PERMITTED USE: MANUFACTURING / OFFICE / WAREHOUSE
6. EXISTING ZONING: SL ST. PETERS LAKESIDE 370 SPECIAL DISTRICT
7. PROPOSED ZONING: SL ST. PETERS LAKESIDE 370 SPECIAL DISTRICT
8. WARD: 3
9. EXISTING ADJUSTED LOT 32 = 29.68 ACRES
10. STRUCTURE SETBACK:
a. THIRTY FEET OFF THE PREMIER PARKWAY RIGHT OF WAY;
b. FIFTEEN FEET SIDE YARD (EAST & WEST PROPERTY LINES);
c. THIRTY FEET REAR YARD (NORTH PROPERTY LINE.
11. PARKING SETBACK:
a. FIFTEEN FEET OFF THE PREMIER PARKWAY RIGHT OF WAY;
b. FIFTEEN FEET SIDE YARD (EAST & WEST PROPERTY LINES);
c. TEN FEET REAR YARD (NORTH PROPERTY LINE);

AXIUM PLASTICS BUILDING EXPANSION
SITE IMPROVEMENT PLAN
ADJUSTED LOT 32

"BOUNDARY ADJUSTMENT PLAT OF LOT 32 OF PREMIER 370 BUSINESS PARK PLAT ONE AS PER PLAT BOOK 45 PAGES 354 THROUGH 362 AND ADJUSTED LOT 31 OF BOUNDARY ADJUSTMENT PLAT OF LOTS 30 AND 31 OF PREMIER BUSINESS PARK PLAT ONE PER PLAT BOOK 48 PAGES 308 THROUGH 309"

CITY OF ST. PETERS, ST. CHARLES COUNTY, MISSOURI

SHEET INDEX	
SHEET #	SHEET NAME
C0.0	COVER SHEET
C0.1	OVERALL SITE PLAN
C1.0	DEMOLITION PLAN
C2.0	SITE DIMENSION PLAN
C2.1	SITE DIMENSION PLAN
C3.0	GRADING PLAN
C3.1	GRADING PLAN
C4.0	UTILITY PLAN
C4.1	UTILITY PLAN
C5.0	SEWER PROFILES
C7.0	CONSTRUCTION DETAILS
C7.1	CONSTRUCTION DETAILS
C8.0	STORMWATER POLLUTION PREVENTION PLAN
C8.1	SWPPP DETAILS
C8.2	SWPPP DETAILS
C8.3	SWPPP DETAILS
C9.0	EXISTING DRAINAGE AREA MAP
C9.1	PROPOSED DRAINAGE AREA MAP



SITE DEVELOPMENT NOTES:
1. ROOFTOP MECHANICAL EQUIPMENT SHALL BE SCREENED ON ALL SIDES
2. ALL BUILDING AND PARKING LOT LIGHTS SHALL BE DOWNCAST, UNLESS DECORATIVE AS APPROVED BY THE PLANNING DEPARTMENT.
3. ALL UTILITIES, INCLUDING ELECTRIC, SHALL BE LOCATED UNDERGROUND.

CITY OF ST. PETERS NOTES:
1. ALL CONTRACTORS AND SUB-CONTRACTORS MUST HAVE A VALID ST. PETERS BUSINESS LICENSE.
2. PREMIER PARKWAY MUST BE KEPT CLEAN AND FREE OF MUD AND DIRT AT ALL TIMES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SWEEP THE STREET(S) DAILY, AS NECESSARY, TO KEEP THEM CLEAN.

PREPARED FOR:

PEAK CONSTRUCTION CORPORATION
9525 W. Bryn Mawr, Suite 810
Rosemont, IL 60018

PREPARED BY:

the clayton engineering company, inc.
ENGINEERS • SURVEYORS • PLANNERS
2268 WELSCH INDUSTRIAL COURT
ST. LOUIS, MISSOURI 63146
(314) 692-8888 FAX: (314) 692-8688

ADDITIONAL CITY OF ST. PETERS NOTES:

THE SITE WILL COMPLY WITH CHAPTER 550 STORMWATER MANAGEMENT REQUIREMENTS.
THE SITE WILL COMPLY WITH CHAPTER 530 GRADING AND SILTATION CONTROL REQUIREMENTS.
THE SITE WILL COMPLY WITH CHAPTER 535 TREE AND LANDSCAPE REQUIREMENTS.

Owner:

PJP Holdings, LLC
9005 Smith's Mill Road
New Albany, Ohio 43054

Developer:
Peak Construction Corporation
9525 W. Bryn Mawr, Suite 810
Rosemont, IL 60018

City of St. Peters:
St. Peters City Hall
One St.Peters Centre Blvd.
St. Peters, Mo. 63376
Phone: 636-278-2244
(or 636-477-6600)

Central County Fire & Rescue
1220 Cave Springs Blvd.,
St. Peters, MO 63376
Phone: 636-970-9700

Water:
City of St. Peters:
St. Peters City Hall
One St.Peters Centre Blvd.
St. Peters, Mo. 63376
Phone: 636-278-2244
(or 636-477-6600)

Electric:
Ameren Missouri
6440 North Hanley Road
Berkeley, Mo. 63134
PO Box 66149, MC 655
Berkeley, Missouri 63134
Phone: 314-992-8602
Fax: 314-992-8615

Gas:
Spire Energy
3950 Forest Park
St. Louis, Mo. 63108
Phone: 314-658-5417
Fax: 314-535-9414

Telephone:
AT&T
402 North Third Street
Floor Ground
St. Charles, MO 63301
Phone: 636-949-4230
Fax: 636-949-1315

Public Water Supply District #2
100 Water Dr., O'Fallon, MO 63368
Phone: 636-561-3737
email:chorvath@waterdistrict2.com

GENERAL CONSTRUCTION NOTES:

1. The original of these drawings are on file at the office of The Clayton Engineering Company. Any modifications to these drawings shall release said Clayton Engineering Company and the Engineer and/or the Surveyor whose seal appears hereon from any liability resulting from said unauthorized modifications.
2. All offsite property owners shall be given notice 48 hours in advance of any work by the Contractor.
3. Any disturbed offsite property (e.g. bushes, fences, mailboxes, etc.) shall be replaced, in kind, at the developer's expense.
4. All existing on-site structures, sidewalks, concrete or asphalt surfaces, curbing, utility poles, sewer structures, utility services, fences, trees, shrubs, and debris noted for removal on the drawings shall be demolished and removed from the site and properly disposed of all in a manner approved by the regulating governmental agencies.
5. Contractor shall be responsible for determining the amount of removals, demolition, clearing and grubbing, stripping of vegetation, pavement breaking, and haul off.
6. Contractor shall be responsible for coordinating and providing all services and fees necessary to obtain the required building demolition permits and for fees by the various utilities associated with the disconnection and termination of their services.
7. Contractor shall obtain all necessary state and local permits required for hauling and disposal of demolition, clearing, and non-suitable materials from the project site. Hauling methods and conditions of the permit shall be strictly adhered to.
8. Contractor shall preserve and protect from damage all existing improvements that are not to be removed within the project limits or adjacent thereto as a result of their activities in the performance of work.
9. Underground facilities, structures and utilities have been plotted from available surveys, records and information and, therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, location or depth of these facilities, structures and utilities. The Contractor shall be responsible for verifying the actual location of all underground facilities, structures and utilities, either shown or not shown on these plans. The underground facilities, structures and utilities shall be located in the field prior to any grading, excavation or construction of improvements. Should the actual location, size or depth or any underground facilities, structures or utilities differ from those indicated on these plans, the Contractor shall immediately notify Clayton Engineering prior to proceeding with the installation of any proposed improvements in the area where the difference exists. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMO.
10. Contractor to verify horizontal and vertical location and flow line of all existing utilities prior to connection. All connections to be made in accordance with local codes and/or utility companies requirements.
11. Contractor shall notify Engineer as soon as possible if site conditions differ from those shown on plans.
12. The developer is advised that utility companies will require compensation for relocation of their utility facilities within the public road right-of-way. Utility relocation cost shall be considered the developer's responsibility. The developer should also be aware of extensive delays in utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of road improvements.
13. The developer is required to provide adequate storm water systems in accordance with City of St. Peters.
14. All construction shall be per most current details located in the City of St. Peters Design Criteria Manual and/or Standards for Erosion & Sediment Management practices.
15. All sidewalks, curb ramps, ramps and accessible parking spaces shall be constructed in accordance with the current approved "American with Disabilities Act Accessibility Guidelines" (ADAAG) along with the required grades, construction materials, specifications and signage. If any conflict occurs between the above information and the plans, the ADAAG guidelines shall take precedence and the Contractor shall contact the Project Engineer prior to any construction.
16. All sidewalks to be constructed to City of St. Peters ADA Standards.
17. There shall be no step at ADA accessible entrances.
18. All proposed improvements shall be constructed to City of St. Peters standards.
19. All sidewalks to be conform and be constructed to City of St. Peters standards.
20. All grading and drainage to be in conformance with City of St Peters standards.
21. All roof drain downspouts will be piped where possible.
22. Storm water shall be discharged at an adequate natural discharge point. Sinkholes are not adequate discharge points.
23. Any rooftop mechanical units will be screened. Any ground mounted units will be screened.
24. Any monument signage shown on these plans is for information only. Approval of these plans does not provide approval of the signage. All signage must be submitted to the City separately.
25. All on-site traffic control devices shall comply with the current edition of the Manual for Uniform Traffic Control Devices (MUTCD).
26. All pole lights to be downcast unless decorative and approved by the Planning Department. All building mounted fixtures to be downcast.
27. All exterior enclosures shall be masonry and match the/compliment the building.
28. All future trash enclosures are to be screened per City Ordinance.
29. The site will obtain a FEMA Letter of Map Revision for the area to be removed from the 100 year floodplain.

GRADING AND CLEARING:

30. See Geotechnical Report by SCI Engineering, Inc., dated May 12, 2025, for design and construction specifications and recommendations. The specifications and requirements contained in this report shall supersede those found in the specification sections and on these Site Construction Plans. The Engineer shall be notified if discrepancies occur between the report and these plans.
31. All grading shall be within 0.2 feet more or less, of the contours shown on the grading plan, unless otherwise directed by the Owner or Engineer, with the following exceptions. All Water Quality Best Management Practices (BMPs) shall be within 0.04 feet of the contours and the spot elevations shown on the plans. All paved areas shall be within 0.08 feet of the contours and the spot elevations shown on the plans. All facilities providing ADA access; including ramps, walks, designated parking spaces, etc., shall be within 0.02 feet of contours and spot elevations shown on plans.
32. Any grading quantities shown on the plans are for permitting purposes only for public review agencies and shall not be used for Bid quantities. The Contractor shall calculate his own quantities for Bidding.
33. No slope shall be greater than 3:1 maximum, unless justified by a Geotechnical Report.
34. Slopes steeper than 5 to 1 and all swales shall be protected by sodding or paving upon completion of construction or compaction. All other areas disturbed by grading operations to be protected by seeding and mulching as soon as possible.
35. All fills are to be left with a temporary lip (berm) at the top of the slope at the end of each day's operations.
36. Additional suitable fill material as needed shall be brought onto the site. Areas which are to be filled shall be compacted to a minimum density of 90% maximum density as determined by the Modified AASHTO Compaction Test, T-180-74 (ASTM D-1557) in the building/pavement areas, and 85% in all other areas. If a Geotechnical Engineer's investigative written report has been prepared for the site setting forth the grading specifications and requirements, those specifications and requirements shall supercede those stated in this note.
37. Before filling, the Contractor shall thoroughly clean out and remove all objectionable material, organic material, rubbish and debris. If acceptable to the Geotechnical Engineer, existing concrete and asphalt paving shall be broken up to a maximum dimension of 6 inches in size, and may be mixed with sufficient excavated soil to eliminate voids and disposed of in fill areas on the site. Broken asphalt or concrete shall not be placed in building areas or utility trenches.
38. If any unsuitable soil is uncovered during the excavation for footings, the Contractor shall remove it and deepen the footings as necessary to build on natural, undisturbed soil or properly compacted fill.
39. All excavated rock material shall remain onsite for use in bank or ditch stabilization as directed by the Geotechnical Engineer. The excavated rock shall only be removed from the site if so directed by the Owner or Geotechnical Engineer.
40. Grading compaction results will be submitted to the City of St. Peters.

Erosion and Siltation Control:

41. Provide adequate off-street parking for construction employees. Parking on non-surfaced areas shall be prohibited in order to eliminate the condition whereby mud from construction and employee vehicles is tracked onto the pavement causing hazardous roadway and driveway conditions.
42. Interim storm water drainage controls in the form of siltation control measures are required.
43. Damage to adjacent properties and downstream properties due to soil erosion or siltation shall be prevented by erecting silt barriers or basins, or by utilizing similar devices to effect soil stabilization prior to the start of any grading operations.
44. Protective measures shall be installed down slope of every location where the original ground is to be disturbed.
45. Storm water pipes, outlets and channels shall be protected by silt barriers and kept free of waste and silt at all times prior to final surface stabilization and paving.
46. Inspection of and necessary repairs to the erosion and silt control measures must be made daily and/or following periods of precipitation.
47. If siltation basins are utilized, they shall remain functional until tributary area to each basin has been seeded or sodded and sufficient growth established to prevent erosion.
48. Additional siltation control shall be installed as required by City of St. Peters and/or MoDNR.
49. The contractor shall be responsible for removing, cleaning and/or remediating any area(s) that are affected by erosion or silt that leave the development site within 24 hours.

STORM AND SANITARY SEWER NOTES:

50. All materials and methods of construction for storm and sanitary sewers to meet requirements of the City of St. Peters Standards & Specifications, current edition and Chapter 550 - Storm Sewer and drainage guidelines of the City Municipal Code.
51. If Reinforced Concrete Pipe is used for sanitary or combined sewers larger than 27", all pipe AND joints shall conform to ASTM C 361. In addition, if the diameter is larger than 48", the joint type must include a gasket that is confined in a groove in the spigot of the pipe.
52. All concrete pipe shall be reinforced concrete pipe and meet current A.S.T.M. Specification C-76 and shall be Class III unless otherwise noted on profiles. All other concrete pipe shall meet current A.S.T.M. Specification C-14 and shall be standard strength unless otherwise noted on profiles.
53. Joints for concrete pipe shall be rubber gasketed meeting ASTM C-443 with a main sealing surface of no less than 3 inches.
54. All High Density Polyethylene Pipe (HDPE) shall meet the material requirements of ASTM F2306 and installation requirements of ASTM D2321. Minimum cover in traffic areas for 12" thru 24" pipe shall be one foot. HDPE that is to be maintained by the City of St. Peters shall be of materials and installed in accordance with current City of St. Peteres specifications.
55. All Polypropylene Pipe: dual wall pipe and fittings 12 inch through 30 inch diameter pipe shall conform to ASTM F2736 and triple wall pipe 30 inch through 60 inch shall conform to ASTM F2764, except as otherwise specified herein. Dual wall polypropylene pipe shall have a smooth interior and annular exterior corrugations. Triple wall polypropylene pipe shall have a smooth interior and exterior with annular inner corrugations. Pipe shall be joined with an integral bell and spigot joint on all sizes. The joints shall be watertight and flexible in conformance with ASTM D3212. Pipe shall have a reinforced bell with a polymer composite band installed by the manufacturer.
56. All fill under storm or sanitary sewer lines constructed above original grade shall be compacted to 90% of maximum dry density as determined by the modified AASHTO Compaction Test T 180 (Current A.S.T.M. Specification D-1557), and verified by a Geotechnical Engineer prior to installing pipe.
57. Location and elevation of field inlets, manholes and culvert pipes to be verified by Engineer after stakeout and prior to construction.
58. All "on-site" storm sewers will remain privately owned and maintained.
59. Maintenance of the sewers designated as "public" shall be the responsibility of the City of St. Peters upon dedication of the sewers to the City.
60. Contractor's Insurance Requirements. Prior to obtaining a construction permit from the City Of St. Peters, the contractor shall be required to provide the City with a copy of an insurance certificate of insurance indicating that the permittee has obtained and will continue to carry commercial general liability and comprehensive auto liability insurance. The requirements and limits shall be as stated in the "Rules and Regulations and Engineering Design Requirements for Sanitary and Stormwater Drainage Facility", Section 10.090 (addendum)
61. ATTENTION SEWER CONTRACTOR: For Sewer Pipe (storm, sanitary, and combined) with a design grade less than one percent (1%), verification of the pipe grade will be required for each installed reach of sewer, prior to any surface restoration or installation of any surface improvements. The Contractor's field supervisor will be required to provide daily documentation verifying that the as-built pipe grade meets the design grade through the submittal of signed cut sheets to the City Inspector upon request. Field surveyed verification must be made under the direction of a licensed land surveyor or registered engineer. The Contractor will be required to remove and replace any sewer reach having an as-built grade which is fatter than the design grade by more than 0.1%. Sewers with grades greater than the design slope may be left in place, provided no other sewer grade is reduced by this variance in the as-built grade. The City also reserves the right to require the Contractor to remove and replace any sewer (at any time prior to construction approval) for which the as-built grade does not comply with the grade tolerance stated above. The Sewer Contractor shall be responsible for any costs associated with the field verification of the sewer grade, or removal and replacement of the sewer pipe or associated appurtenances.
62. All lateral sewer construction methods to conform to latest standards and specificaitons of the City of St. Peters Plumbing code.
63. All sanitary connection pipe and fittings shall be polyvinyl chloride pipe (PVC) with the material meeting and the pipe conforming to current ASTM Specification D-3034, SDR-35, and shall be bedded to meet manufacturer's specifications. Joints for PVC pipe shall conform to current ASTM Specification D-3212.
64. Cleanouts shall be located at all horizontal and vertical changes in direction of flow of house laterals and any sanitary laterla of 100' or longer. 6" & 8" lateral joints to conform to A.S.T.M. standard S.D.R.-35 and C-900 thickwall compression joint for P.V.C.
65. All Manhole frames and covers shall be City standard frame and cover.
66. The minimum vertical distance from the low point of a basement to the flow line of a sanitary sewer at the corresponding house connection shall be not less than the diameter of the sewer plus a vertical distance of two and one half (2-1/2') feet.
67. The sewer contractor may construct the building sewer laterals in conjunction with the sanitary main, trunk or lateral sewers, within a development, so long as the building sewer lateral terminates five (5) feet, or more, outside the proposed, or existing building line or foundation wall.
68. All trenches under areas to be paved shall be granularly filled with ¾" crushed limestone. Backfill shall be placed in accordance with the City of St. Peters Standards and Specifications, current edition.
69. All trench backfills under pavement within Right-Of-Way shall be granular backfill compacted to 90 percent of the Modified AASHTO T-180 Compaction Test A.S.T.M. D-1557.
70. Jetting is not an acceptable method of achieving backfill compaction/ all backfill material shall be mechanically compacted to at least 95% of the material's Standard Proctor Maximum Dry Density.
71. The subcontractor to start laying pipe at downstream end, and work upstream.
72. Type 'C' bedding per City standards required for pipes in rock.
73. Vertical clearance between sewer sewer and water mains shall be a minimum of 2'-0"
74. When an external grease trap is required, grease trap to be located in an accessible location for City inspection. Grease trap to provide means for visual inspection above for both influent and effluent sides. MSD Sampling manhole to be located on private lateral in an accessible location for City sampling. Sampling manhole shall be located downstream of grease trap and all other commercial sanitary laterals to facilitate city sampling. Grease Traps and Sampling Manholes shall be shown on the plans and shall not be located in drive-thru lanes or within parking spaces (refer to plumbing plans).
75. The removal and replacement, or rehabilitation of the existing structure(s) will be determined by the City field inspector. If the structure is determined to remain in place, then the top shall be adjusted to grade if needed.
76. Structures noted to be adjusted to finished grade shall be adjusted by either removal or placement of grade rings, brick work, or mortar bedding by such methods as approved by the City of St. Peters standards and specifications, current edition.
77. All yard drains and associated landscape drainage structures shall be installed per manufacturer's recommendations.
78. Soils engineer will verify that all compressible material has been removed prior to fill placement and that all fill, under sanitary and storm sewer lines constructed above original grade, has been compacted to 90% of "Modified Proctor". Fill is to be placed in accordance with the geotechnical report recommendations. Tests shall be taken a maximum of 50' intervals along the route of the pipe, at a maximum 2' vertically, and laterally on each side of the pipe at a distance equal to the depth of the fill over the pipe.
79. All high density polyethylene pipe (HDPE) shall be Sanitite or approval equal.

Bioretention Basin Notes:

80. Construction site runoff shall not flow into bmp areas. All stormwater flow to BMP areas shall be diverted, plugged or disconnected until the construction site is stable and the City inspector provides approval to place the bmp on-line.
81. Bio-retention infiltration bed: to prevent construction sediment from clogging infiltration bed, at no time may construction sediment enter these facilities. Additionally, these facilities shall not be constructed until all surrounding area that drains to them is fully stable/established.
82. Infiltration testing / When utilizing onsite soils and/or mixing onsite for planting soil, the in-place permeability of the planting soil shall be minimum of 1 ft/day, verified and infiltration test performed per the Maryland Stormwater Manual, appendix D.1, "Infiltration Testing requirements (Field testing required)". A minimum of one percolation test shall be performed per facility.The City field inspector shall be allowed to select the location of percolation tests. The City field inspector shall be provided a copy of all test results, signed and sealed by a Missouri Professional Engineer. Test results shall report in units of ft/day. Results shall demonstrate acceptable permeability prior to construction approval. Note: These tests are not required if utilizing premixed planting soil supplied by a local City approved soils supplier.
83. Maintenance of the sewers designated "public" shall be the responsibility of the City of St. Peters upon dedication of the sewers to the City.

CITY OF ST. PETERS WATER NOTES:

84. A minimum Class 52 ductile iron pipe, conforming to the applicable AWWA standards, is required on any service line that is 4" or greater in size before a meter. Copper piping is required for smaller services from the main through the meter box. For services smaller than 4" in size, flexible or rigid type 'K' or 'I' copper is required to four (4) feet beyond the meter box. For longer services, ductile iron pipe should be run from the main to a point at least six (6) feet beyond the the meter box. From the building foundation, copper or ductile iron pipe must extend a minimum of ten (10) feet outside the building wall. Once a fire line is past a detector check meter it is considered to be metered and any materials can be used that comply with the local plumbing codes (Class 200 PVC is a minimum). A "Master Service" would not be metered.
85. The joints on copper service lines (excluding joints on pre-purchased "meter setters" shall be either flared, compression, or silver soldered.
86. The City of St. Peters does not own, operate, or maintain service lines. As a genral rule the City of St. Peters does not run a water main extension on a project which can be served by a service line.
87. The City of St. Peters requires a detector check valve on all fire protection lines for sprinkler systems. They also require a detector check valve on fire hydrants, with the possible exception of fire hydrants thta are immediately adjacent to and visible from public streets. The City of St. Peters also requires valves on both fire and domestic lines.
88. All means and methods of construction shall be in accordance with the City of St. Peters construction specifications, current edition.
89. Proposed water mains to be constructed with C900 PVC DR18 pipe conforming to ASTM D2241. The pipe shall be pressure rated for a hydrostatic working pressure of 200 PSI at 73.4 degrees Fahrenheit and shall meet all applicable requirements set forth under commercial standards (CS) 256-63.
90. Fire Hydrant shall be a 4 foot bury and no concrete above the weep holes. Public fire hydrants shall be silver barrel and blue bonnets. Private hydrants shall be all red.
91. Fire hydrant and valves must be Mueller, AFC, or Kennedy.
92. Add tracer wire to public and private water mains so they can be located in the future. The City of St. Peters requires 12 gauge insulated copper trace wire.
93. All piping supplying water to the fire suppression system, which does include the looped line around the building, must be AWWA C900 pipe or equivalent.
94. Show valves at the fire hydrant and note on details that no flange joints are allowed.
95. Fire hydrant shall show anchor couplings from Tee to valve and valve to fire hydrant.
96. Valve box detail shall use a water top hat with 6-inch class 200 pipe with no valve extension inside the valve box unless over 12 foot in depth.
97. An approved reduced pressure zone (RPZ) backflow prevention device must be installed on all potable water service lines entering the premises.
98. An approved reduced pressure zone (RPZ) backflow prevention device must be installed on all lawn irrigation and sprinkler systems, and all fire protection systems with chemical additives present. An approved reduced pressure zone (RPZ) or double-check (DC) backflow prevention device must be installed on all fire protection systems without chemical additives. If any of these items are present on your site, you must install the appropriate device(s) as indicated on each applicable item.
99. All backflow devices shall be tested at the time of installation, and the report submitted to the City of St. Peters to the attention of Construction Inspector, within 30 days after completion of the test. The tester must be certified by the Missouri Department of Natural Resources. (Note that all backflow devices must be tested every year, with the reported results submitted to the City prior to June 1st.)

Additional notes per Fire Official:

100. Max fire hydrant spacing = 300' ±
101. A fire hydrant must be located within 150' of FDC.
102. All hydrants required to be located outside the building collapse zone (Eq. to the building height).
103. Private fire hydrants to be painted red unless they are fed by a pump, then they are red with a black cap.
104. All underground fire mains and fire hydrant supplies must be 8" diameter C900 PVC or greater.
105. Minimum fire lane width = 20'

Miscellaneous water notes:

106. A minimum of 42 inches of cover shall be provided from the top of pipe to the proposed finish surface.
107. Thrust blocks shall consist of poured in place concrete and shall be placed at all changes in direction, tees and ends of water lines over 3 inches in diameter, except for Rodded Hydrant lines.
108. All water lines shall be laid at least 10 feet horizontally from any sanitary sewer, storm sewer, or manhole. Whenever water lines must cross sanitary sewers, laterals or storm drains, the water lines shall be laid at such an elevation that a minimum vertical distance of 18 inches between the outside of the water line and the outside of the sewer where the water line crosses the sewer line. This shall be the case where the water line is either above or below the sanitary line. At crossings, the full length of water pipe shall be located so both joints will be as far from the non-potable pipeline as possible but in no case less than ten feet or centered on a 20-foot pipe. This vertical separation shall be maintained for that portion of the water line located within 10 feet, horizontally, of any sewer or drain it crosses. In areas where the recommended separations cannot be obtained either the waterline or the non-potable pipeline shall be constructed of mechanical or manufactured restrained joint pipe, fusion welded pipe, or cased in a continuous casing that extends no less than ten feet on both sides of the crossing. Special structural support for the water and sewer pipes may be required. Casing pipe must be a material that is approved for use as water main. Conventional poured concrete is not an acceptable encasement.
109. All water lines to be tested and disinfected in accordance with the current Missouri State Division of Health and Missouri Department of Natural Resources' requirements and project specifications.

STREETS AND PAVING:

110. All materials and methods of construction for the entrance on Premier Parkway to meet the requirements of the City of St. Peters.
111. All roadway curbs and curbs shall have a minimum compressive strength of 4,000 psi @ 28 days.
112. Street name signs shall be installed in accordance with City of St. Peters specifications.
113. All trenches under, or adjacent to, proposed pavement shall be backfilled to subgrade elevation with compacted 3/4 inch minus crushed limestone. Crushed limestone shall be compacted to 90% density as determined by the Standard Proctor Test AASHTO T-99 (ASTM D-698). All other trenches within the road right-of-way shall be backfilled with suitable earth embankment material free from rubbish and debris and lumps, clods or rocks larger than 2 inches placed in 6 inches layers and compacted to the same density as above. Trenches not in road right-of-way or under or adjacent to pavement may be backfilled with earth embankment material defined above, jetted and neatly mounded to allow for subsequent settlement, unless otherwise directed by the Engineer.
114. City of St Peters Standard Type 'G' joints will be required for all concrete pavement terminations at the end of a working day.
115. Subgrade for pavement shall be compacted with a self-propelled steel wheel roller weighing not less than 10 tons. Concrete pavement shall be 6-inch un-reinforced concrete on a 4-inch stone base with 6-inch concrete curb. Concrete dumpster pad shall be 7-inch un-reinforced concrete on a 4-inch stone base. Heavy Duty Asphalt pavement shall be 2-inch Type "C" Asphaltic Concrete surface course over 3-inch Type "X" Asphaltic Binder Course on an 8-inch type 5 stone aggregate base with 6-inch concrete curb. Light Duty Asphalt pavement shall be 3-inch type "C" aspahltic concrete surface course on an 8-inch Type 5 stone aggregate base with 6-inch concrete curb. Entire subgrade shall be shaped, compacted and rolled prior to placing base course. Local soft spots in subgrade encountered during pavement construction shall be undercut and replaced with a thicker rolled stone base section.
116. All onsite curb shall be 6" high concrete curb, unless noted otherwise (See spot elevaitons on C3.0). Integral curb shall be installed adjacent to concrete pavement and sidewalks, and vertical at all other locations.
117. All striping shall be per City of St. Peters details. All signage will be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD - The most current edition).
118. City of St. Peters standard specifications shall be used for installation of pavements, curbs, sidewalks, etc., unless noted and/or detailed otherwise in this plan set.
119. Contractor shall guarantee paving for one year after final completion of construction against settlement, low spots or raveling out of surface. Contractor shall make any repairs necessary during guarantee period to maintain paving in original condition, including cost of repainting within repaired areas. Repairs shall include but not be limited to removing defective paving and replacing with new paving.
120. The Contractor shall repair any damage to the existing pavement that results from new the construction.
121. Any lane closures or impacts to traffic must be coordinated with both the Engineering and Roads/Traffic divisions of St. Peters. All signage, cones, and other devices used in managing traffic will meet the required minimum standards of the Manual on Uniform Traffic Devices (MUTCD). Notification of any lane closures or traffic impacts shall be provided to the City of St. Peters at least seven (7) days in advance of any work taking place. Any signal adjustments or work that impacts the existing signal agaicnt to this site shall be coordinated with the Road/Traffic division of the City.

St. Charles County Benchmark SC-02
NAVD88 (Geoid18) Elev = 434.62 FtUS

Described by Mo dept of Nat Res 1991 station, azimuth marks and reference ties the station if located on the south slope of the Dardenne Creek levee at the north end of Willowclub road in the SW/4 of Section 16, T47n, R3e in St. Charles County, Mo it is 190 ft north of the center line of the northerly of 3 power transmission lines (mounted on steel towers), 15 ft south of the center line of the levee, 15 ft east of the center line of Willow Club 21.09 ft se of RM no 1 and 37.21 ft ne of RM no 2. Rm's 1 and 2 are copperweld rods with plates to identify them driven 4 in below the surface of the ground. RM no 1 is at the intersection of the center line of the levee and the road. RM no 2 is 49.0 ft (14.9 m) south in the centerline of the road at the base of the levee. Station and azimuth mark to reach to reach the station from the center of I-70 exit 225 (Cave Springs Rd.) in St. Charles County, Mo go north for 0.1 miles (0.2 km) to the north outer road, turn left and go west on the north outer road for 0.8 miles (1.3 km) to Willow Club Road on right, turn right and follow Willow Club northerly for 0.5 miles (0.8 km) to a railroad crossing at the bottom of the grade. Continue northerly on Willow Club (no a raised gravel road thru agricultural fields) for an additional 1.3 miles (2.1 km) to the end just beyond 3 overhead powerlines and at Dardenne Creek levee and station site as described.

Site Benchmarks:
TBM #10205
NAVD88 Elev.=424.96 FtUS

Chiseled Square on the North side of the pavement for Premier Parkway 356 feet West of the signalized Amazon Entrance along the Lot 32 frontage.

SYMBOLS

	Clean Out		Valve or Meter (Gas or Water)
	Catch Basin/Curb Inlet/Area Inlet	CM	Cable TV Box
	Double Catch Basin/Curb Inlet		Electric Co. Box
	Flared End Section	EM	Electric Meter
	Grated Inlet	T	Telephone Co Box
	Manhole		Traffic Signal
	Grated Manhole		Traffic Signal Box
HDS	HDS Unit		Deciduous Tree
	Drain		Evergreen Tree
	Sign		Bush
	Light Standard		Test Hole/ Soil Boring
	Utility Pole		ADA Parking Space
	Faucet	#	Parking Space Count
	Fire Hydrant		Light Pole

ABBREVIATIONS

AI	Area Inlet	L	Length of Curve
Asph	Asphalt	MH	Manhole
BW	Bottom of Wall	N/F	Now or Formerly
B/B	Back to Back	OHE or OHW	Overhead Electric or Wires
CB	Catch Basin	OIP	Old Iron Pipe
ChB	Chord Bearing	PG	Page
CI	Curb Inlet	PB	Plat Book
CL or L	Centerline	PL or t	Property Line
CMP	Corrugated Metal Pipe	PVC	Polyvinyl Chloride Pipe
Conc	Concrete	Pvmt	Pavement
CTV	Underground Cable TV	R	Radius
DB	Deed Book	RCP	Reinforced Concrete Pipe
DCB	Double Catch Basin	R/W	Right of Way
DCI	Double Curb Inlet	Trans	Transformer
DIP	Ductile Iron Pipe	TW	Top of Wall
DS	Downspout	Typ	Typical
FES	Flared End Section	UGE	Underground Electric
FF	Finished Floor	UGFO	Underground Fiber Optic
FL or t	Flow Line	UGT	Underground Telephone
FO	Underground Fiber Optic	VCP	Vitrified Clay Pipe
GM	Gas Meter	WM	Water Meter
GV	Gas Valve	WV	Water Valve
GI	Grated Inlet	321.3017S	Sewer Identification #
HDPE	High Density Polyethylene Pipe		

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MO Corp. Auth. #000314 MO Land Surveying Corp. #000314
IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000879

REVISIONS

Prepared for:
PEAK CONSTRUCTION CORPORATION
9525 W. BRYN MAWR SUITE 810
ROSEMONT, IL 60018

COVER SHEET
AXIUM PLASTICS BUILDING EXPANSION
4001 Premier Pkwy
St. Peters, MO 63376

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STATE OF MISSOURI
JOHN R. WILLHITE
NUMBER PE-2018000295
PROFESSIONAL ENGINEER
12-17-2026
John R. Willhite
Professional Engineer PE-2018000295

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C0.0 of

P.E.B. 1468

FILE: G:\Work\21182\2_JOB\3070\Revit\Axium Building Expansion - COVER & DETS - 21182.2.dwg
PLOTTED:4/17/2026 1:48 PM

N/F
LAKESIDE LEVEE DISTRICT
PARCEL ID
6-0003-A606-00-0006.0000000

Zoned 'SL' - St. Peters Lakeside Special District

R=35.40'
Δ=90°00'00"
L=55.61'

N/F
LAKESIDE LEVEE DISTRICT
PARCEL ID
6-0003-A606-00-0006.0000000

Zoned 'SL' - St. Peters Lakeside Special District

S12°00'00"E 1271.40'

N/F
EXETER 3001 PREMIER LP
3001 PREMIER PARKWAY
PARCEL ID
6-0003-D052-00-0031.0000000

Zoned 'SL' - St. Peters Lakeside Special District

MECHANICAL ROOM
5,000 SF
FF=430.05

ADJUSTED LOT 32
1,292,673 S.F.
29.68 AC.±

WAREHOUSE USE
AREA = 115,157 SF

PRODUCTION USE
AREA = 76,324 SF

PROPOSED
BUILDING
EXPANSION
+63,500 SF
F.F. = 430.05

243 CAR SPACES
42 TRAILER SPACES

ADJ. LOT 32
#4001 PREMIER PARKWAY.
203,176 SF
F.F. = 430.05

2-STORY
OFFICE
(11,695 SF TOTAL)

N77°59'58"E 122.87'

R=48.60'
Δ=90°00'00"
L=76.34'

107.40'
N12°00'00"W

0 50' 100'
SCALE IN FEET

Scale 1" = 50'

Note: Caution should be taken in comparing the written scale to the graphic scale to ascertain if this plan has been enlarged or reduced.

DISTURBANCE LIMITS

100-YEAR FLOODPLAIN
ELEVATION = 423.80
(Per 01/11/18 CLOMR)

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IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000979

REVISIONS

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Prepared for:
PEAK CONSTRUCTION CORPORATION
9525 W. BRYN MAWR SUITE 810
ROSEMONT, IL 60018

OVERALL SITE PLAN
AXIUM PLASTICS BUILDING EXPANSION
4001 Premier Pkwy
St. Peters, MO 63376

STATE OF MISSOURI
JOHN R. WILLHITE
PE-2018000295
PROFESSIONAL ENGINEER
04-17-2026
John R. Willhite
Professional Engineer PE-2018000295

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C0.1 of ____

DEMOLITION PLAN LEGEND:

(ATG) ADJUST TO GRADE
(TBR) TO BE REMOVED
(TBR&R) TO BE REMOVED & REPLACED
(TBRel) TO BE RELOCATED
(UIP) USE IN PLACE
APPROXIMATE SAWCUT LINE

ADJUSTED LOT 32
1,292,673 S.F.
29.68 AC.±

WAREHOUSE USE
AREA = 115,157 SF

PRODUCTION USE
AREA = 76,324 SF

ADJ. LOT 32
#4001 PREMIER PARKWAY.
203,176 SF
F.F. = 430.05

MECHANICAL ROOM
5,000 SF
FF=430.05

2-STORY
OFFICE
(11,695 SF TOTAL)

100-YEAR FLOODPLAIN
ELEVATION = 423.80
(Per 01/11/18 CLOMR)

ADDITIONAL DEMOLITION NOTES:

1. THE DARK ITEMS ON THE DEMOLITION PLAN ARE TO BE REMOVED. THE SCREENED ITEMS ARE EITHER TO REMAIN OR WILL BE CONSTRUCTED.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY COORDINATION AND SCHEDULING.
3. ANY EXISTING LIGHT POLES, UTILITY POLES, OVERHEAD ELECTRIC & TELEPHONE WIRES, AND/OR UNDERGROUND ELECTRIC MARKED TO BE REMOVED AND/OR RELOCATED ARE TO BE DONE SO BY THE CONTRACTOR. THE CONTRACTOR MUST COORDINATE WITH AMEREN MISSOURI, AT&T, AND ANY ADDITIONAL COMPANIES WHO HAVE WIRES ON THESE POLES, PRIOR TO ANY WORK IN THIS AREA. REFER TO THE ELECTRICAL PLANS FOR NEW LOCATIONS AND FURTHER INFORMATION.
4. REMOVALS OF SIDEWALK, CURB & GUTTER, PAVEMENT, ETC. SHALL BE TO NEXT JOINT.
5. CITY OF ST. PETERS PERMITS ARE REQUIRED PRIOR TO THE ABANDONMENT OR REMOVAL OF EXISTING SEWERS. TO RECEIVE MSD PERMITS THE PROJECT MUST HAVE MSD PLAN APPROVAL. NOTIFY MSD 48 HOURS PRIOR TO SEWER ABANDONMENT AND/OR REMOVAL.
6. THE CONTRACTOR IS RESPONSIBLE TO REPAIR AND/OR RESTORE ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED DUE TO CONSTRUCTION ACTIVITIES.
7. ALL PAVEMENT SAWCUT LINES ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE ACTUAL LOCATIONS BASED ON THEIR CONSTRUCTION REQUIREMENTS. ALL PAVEMENT REPLACEMENTS SHALL EXTEND TO THE CONTRACTOR'S SAWCUT LOCATIONS.
8. ALL PAVEMENT MARKING TO BE REMOVED SHALL BE REMOVED BY A WATER BLASTING METHOD APPROVED BY THE CITY THAT WILL NOT LEAVE REMOVAL MARKS ON THE PAVEMENT (GHOST LINES).

0 30' 60'
SCALE IN FEET

Scale 1" = 30'

Note: Caution should be taken in comparing the written scale to the graphic scale to ascertain if this plan has been enlarged or reduced.

N/F
CITY OF ST. PETERS
4000 PREMIER PARKWAY
PARCEL ID 6-0003-4606-00-0039.0000000

N/F
LAKESIDE LEVEE DISTRICT
P/ARCEL I.D
6-0003-4606-00-0006.0000000

PREMIER PARKWAY
(PUBLIC)(90'WIDE)

77°59'58"E 122.87'
R=48.60'
Δ=90°00'00"
L=76.34'

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REVISIONS

PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR SUITE 810
ROSEMONT, IL 60018

Prepared for:

DEMOLITION PLAN
AXIUM PLASTICS
4001 Premier Pkwy
St. Peters, MO 63376

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C1.0 of

FILE: G:\Proj\21182\2_XIUM\3\Plan\Axium Building Expansion_SDP- 21182.3.dwg
PLOTTED: 4/7/2026 1:49 PM

MATCHLINE - SEE SHEET C2.1

S12°00'00"E 1271.40'

N/F
EXETER 2001 PREMIER LP
3001 PREMIER PARKWAY
PARCEL ID
6-0003-D052-00-0031.0000000

N/F
LAKESIDE LEVEE DISTRICT
PARCEL ID
6-0003-A606-00-0006.0000000

SITE DIMENSION NOTES:
1. ALL DIMENSIONS TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.
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77°59'58"E 122.87'
R=48.60'
Δ=90°00'00"
L=76.34'

PROPOSED BUILDING EXPANSION
+63,500 SF
F.F. = 430.05

243 CAR SPACES
42 TRAILER SPACES

ADJUSTED LOT 32
1,292,673 S.F.
29.68 AC.±

ADJ. LOT 32
#4001 PREMIER PARKWAY.
203,176 SF
F.F. = 430.05

WAREHOUSE USE
AREA = 115,157 SF

PRODUCTION USE
AREA = 76,324 SF

2-STORY
OFFICE
(11,695 SF TOTAL)

MECHANICAL ROOM
5,000 SF
FF=430.05

SILO PAD

ELEC. ROOM

PREMIER PARKWAY
(PUBLIC)(90' WIDE)

N/F
CITY OF ST. PETERS
4000 PREMIER PARKWAY
PARCEL ID 6-0003-A606-00-0039.0000000

SCALE IN FEET
Scale 1" = 30'
Note: Caution should be taken in comparing the written scale to the graphic scale to ascertain if this plan has been enlarged or reduced.

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MO Corp. Cert. of Authority: LC-2001014001 MO Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #164.000879

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PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR SUITE 810
ROSEMONT, IL 60018

Prepared for:

SITE DIMENSION PLAN
AXIUM PLASTICS BUILDING EXPANSION
4001 Premier Pkwy
St. Peters, MO 63376

STATE OF MISSOURI
JOHN R. WILLHITE
PE-2018000295
PROFESSIONAL ENGINEER
John R. Willhite
Professional Engineer PE-2018000295
04-17-2026

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C2.0 of ____

MATCHLINE - SEE SHEET C2.1

POLE LIGHT(TYP.)

6" VERTICAL CONC. CURB, TYP.

42

6" VERTICAL CONC. CURB, TYP.

MSD 2 GRATE INLET T=424.35 FL(E)=418.82 FL(W)=418.82

Tree Line, Typ.

MSD 2 GRATE INLET T=424.35 FL(E)=420.62 (TYP.)

MSD 2 GRATE INLET T=424.35 FL(W)=419.63 FL(E)=419.63

10'W. HEAVY DUTY CONCRETE PAVEMENT, TYP.

MSD 2 GRATE INLET T=424.35 FL(W)=420.10

HEAVY DUTY ASPHALT PAVEMENT, TYP.

SUBMERGED END OF PIPE (SEE DETAIL ON SHEET C7.1) FL=416.90

Edge of Water

10' W. PERMANENT STORMWATER EASEMENT, PER REC 2025R-031046

N/F LAKESIDE LEVEE DISTRICT PARCEL ID 6-0003-A606-00-0000.0000000

10' W. PERMANENT STORMWATER EASEMENT, PER REC 2025R-031046

SUBMERGED EOP (SEE DETAIL ON SHEET C7.1) FL=416.90

EP 7-1

AI 7-2 AI T=424.77 SW=423.85 FL=419.50

POP 3-1

BUBBLER (SEE DETAIL ON SHEET C7.2) FL=420.00

BMP UNDERDRAIN CLEANOUT T=423.50 FL 4"=418.67

FIRE HYDRANT & VALVE

VERT. BEND UP/DWN FL=418.67 VERT. BEND INTO INLET FL=419.50

HEAVY DUTY ASPHALT

R30.00'

R30.00'

75.00'

SILO PAD

68.00'

5'x4.5' CONC.

MECHANICAL ROOM

I ELEC. ROOM

20.00'

33.00'

4.25'

21.04'

5.21'

15.00'

165.00'

HC CONC.

25.50'

RAMP WALL W/ GUARDRAIL ON TOP

3" C900 PVC FIRE LINE

FIRE HYDRANT & VALVE (PROTECTED BY FOUR (4) CONC. BOLLARDS)

HEAVY DUTY CONCRETE PAVEMENT, TYP.

24"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID T=425.98 FL(E)=424.64 FL(W)=421.64

NDS 3-3

RAMP WALL W/ GUARDRAIL ON TOP (TYP.)

CONCRETE BOLLARDS TYP.

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID T=430.35 FL(W)=421.87 FL(E)=421.87

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID T=429.60 FL(E)=425.69

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID T=430.05 FL(W)=421.32 FL(N)=421.32

FUTURE ELECTRIC TRANSFORMER BY OWNER

MECHANICAL ROOM 5,000 SF FF=430.05

FUTURE ELECTRIC TRANSFORMER BY AMEREN

10" C900 PVC FIRE SERVICE 4" C900 PVC DOMESTIC WATER SERVICE

10" C900 PVC FIRE LINE TO HYDRANT LOOP

OVERHEAD DOOR

TRASH ENCLOSURE

5'x4.5' CONC. WALK

6.00'

6.00'

31.00' CHILLER

6.00'

OPENING

ELECTRIC TRANSFORMER

PROPOSED CHILLER PAD

SOLID VINYL FENCE, 3 SIDES, 8' HIGH, LIGHT GREY

6" VERTICAL CONC. CURB, TYP.

FIRE HYDRANT & VALVE

8" C900 PVC FIRE LINE

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID T=428.10 FL(W)=424.07 FL(E)=424.07

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID T=428.10 FL(W)=418.43 FL(SE)=418.43

18" FES FL=4416.9

15' Building Setback Per Zoning

SCALE IN FEET

30' 60'

Scale 1" = 30'

Note: Caution should be taken in comparing the written scale to the graphic scale to ascertain if this plan has been enlarged or reduced.

S12°00'00"E 1271.40'

N/F EXETER 2001 PREMIER LP 3001 PREMIER PARKWAY PARCEL ID 6-0003-D052-00-0031.0000000

4x8 ELECTRIC VAULT

4x8 ELECTRIC VAULT

T=424.50 FL(S)=417.46 FL(E)=417.46 FL(NW)=417.46

ELECTRIC SERVICE (2) 4" CONDUIT

ELECTRIC SERVICE (2) 4" CONDUIT

FUTURE ELECTRIC SERVICE

MSD AREA INLET T=424.92 SW=424.00 FL(N)=419.50

VERT. BEND UPWARDS FL=418.67 TO VERT. BEND INTO INLET FL=419.50

FLARED END SECTION w/ STONE DIAPHRAGM (SEE DETAIL ON SHEET C6.0) FL=425.00

4'W. CURB OPENING W/ 8'L.x3'W. STONE DIAPHRAGM W/ CORDGRASS, TYP. (SEE DETAIL)

Tree Line, Typ.

ADJUSTED LOT 32
1,292,673 S.F.
29.68 AC.±

WAREHOUSE USE
AREA = 115,157 SF

PRODUCTION USE
AREA = 76,324 SF

ADJ. LOT 32
#4001 PREMIER PARKWAY.
203,176 SF
F.F. = 430.05

PROPOSED BUILDING EXPANSION
+63,500 SF
F.F. = 430.05

243 CAR SPACES
42 TRAILER SPACES

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5. ALL SIGNAGE TO BE PERMITTED SEPARATELY.

4'W. CURB OPENING W/ 8'L.x3'W. STONE DIAPHRAGM W/ CORDGRASS, TYP. (SEE DETAIL)

HEAVY DUTY ASPHALT PAVEMENT, TYP.

BMP INTENTION #1 (RETENTION) (AREA=3,350 SF)

FIRE HYDRANT & VALVE

MAX. PONDING DEPTH PER WQ CALCS. ELEV. 423.85

15' Building Setback Per Zoning

6" VERTICAL CONC. CURB, TYP.

350.00'

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77°59'58"E 122.87'

R=48.60'
Δ=90°00'00"
L=76.34'

FOUND IP W/ CAP LS-2220

T IRON PIPE W/CAP

N09°31'03"E 0.12'

Variable Width Drainage, Sewer & Utility Easement PB 45 PG 354

Edge of Water

FOUND IP W/ CAP LS-2220

HEAVY DUTY ASPHALT PAVEMENT, TYP.

BMP UNDERDRAIN CLEANOUT T=423.50 FL 4"=418.67

FL=422.04

FL=422.04

3'W. FLAT BOTTOM SWALE w/ 6:1 SIDE SLOPES @ 0.25% (MINIMUM)

3' W. FLAT BOTTOM SWALE w/ 6:1 SIDE SLOPES @ 0.10% (MINIMUM)

5:1 TAPER TO EX. EDGE OF PAVEMENT

5:1 TAPER TO EX. EDGE OF PAVEMENT

RELOCATE EXISTING STREET LIGHT

HEAVY DUTY CONC. PAVEMENT, TYP.

Bike Lane Sign

Bike Lane

EXISTING STREET LIGHT

Concrete Pavement

PREMIER PARKWAY (PUBLIC)(90'WIDE)

Concrete Pavement

Bike Lane

Bike Lane

Solar Energy Maps (Not Field Located)

Water Line Per City Utility Maps (Not Field Located)(Size Undetermined)

Fire Hydrant

Asphalt Pavement

N/F CITY OF ST. PETERS 4000 PREMIER PARKWAY PARCEL ID 6-0003-A606-00-0039.0000000

CONC. SIDEWALK

HD CONC.

HEAVY DUTY CONCRETE PAVEMENT IN ADA PARKING SPACES AREAS, TYP.

ADA RAMP

CONC. WALK

5'x4.5' CONC. WALK

FIRE HYDRANT & VALVE

6" VERTICAL CONC. CURB, TYP.

FIRE DEPARTMENT CONNECTION

OFFICE ENTRANCE

2-STORY OFFICE (11,695 SF TOTAL)

HEAVY DUTY CONCRETE PAVEMENT IN ADA PARKING SPACES AREAS, TYP.

TELECOM SERVICE (2) 4" CONDUIT

PAINTED ADA "ZEBRA" STYLE CROSSING (SEE DETAIL)

PRIMARY SWITCH ON 20'x30' GRAVEL SURFACE

LIGHT DUTY ASPHALT PAVEMENT IN 24' DRIVE AISLE & PARKING AREAS, TYP.

ADA RAMP, TYP.

HEAVY DUTY ASPHALT PAVEMENT, TYP.

2" IRRIGATION METER & BACKFLOW PREVENTOR (REF IRRIGATION PLAN FOR LINE CONTINUATION)

RPZ VALVE (RPZ BACKFLOW PREVENTION) & DOMESTIC WATER METER BOX FOR 4" COMMERCIAL SERVICE PER CITY OF ST. PETERS STANDARDS

ELECTRIC SERVICE (4) 5" CONDUIT

ELECTRIC SERVICE (2) 5" CONDUIT FROM WEST VAULT

ELECTRIC SERVICE (2) 5" CONDUIT FROM EAST VAULT

DETECTOR CHECK IN DETECTOR CHECK VAULT FOR 10" FIRE SERVICE & 2 GATE VALVES (DC BACKFLOW PREVENTION) PER CITY OF ST PETERS STANDARDS

POST INDICATING VALVE W/TAMPER SWITCH

10'W. Electric Easement to Ameren Missouri DB 6588 PG 368 SRB P7, PG 9

30' Drainage, Sewer & Utility Easement PB 45 PG 354

ELECTRIC BOXES

Gravel

30' Building Setback Per Zoning

Signal Mast Arm

Signal Control Boxes Typ.

ADA LANDING

ADA RAMP LANDING

8'W. PERMANENT ROADWAY MAINTENANCE & UTILITY EASEMENT, PER REC 2025R-048853

CONC. SIDEWALK

SILOS ON CONC. SLAB (REF. STRUCT.)

APPROXIMATELY 12-FT DIAMETER, 49-FT TALL PLASTIC PELLET STORAGE SILO (8, TYP)

5'x4.5' CONC. WALK

FIRE HYDRANT & VALVE

MAX. PONDING DEPTH PER WQ CALCS. ELEV. 424.00

BMP UNDERDRAIN CLEANOUT T=423.50 FL 4"=418.67

5'X5' BORE PIT

10" D.I. WATER LINE TO BE BORED UNDER ROADWAY PER CITY REQUIREMENTS, INCLUDING 22" DIA. WELDED STEEL CASING PIPE (MAIN SHALL BE PRIVATE FROM TEE AND INTO SITE)

Solid White Stripe

Solid White Stripe

24" WIDE WHITE STOP BAR

Concrete Pavement

Solid White

WHITE BIKE LANE MARKINGS, PER MUTCD (TYP)

Solid Double Yellow Stripe

Solid Double Yellow Stripe

No Parking Sign

No Parking Sign

Right Lane Must Turn Right Sign

Pushbutton

ADA Ramp

ADA Ramp

Signal Mast Arm

Conc. Walk

APPROX. NEW SIGNAL LOCATION

White Stop Bar

Pushbutton

Mailbox

Bus Stop Sign

Fire Hydrant

Conc. Walk

10"X20' BORE PIT

30' Drainage, Sewer & Utility Easement PB 45 PG 354

Fire Hydrant

12" VALVE

12" VALVE

12" VALVE

CONNECT TO EXISTING 12" WATER WITH CLASS 153 MJ TEE W/ANCHOR COUPLINGS (12"x12"x10" TEE)

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2800 S. BRENTWOOD BLVD., SUITE 200, ST. LOUIS, MISSOURI 63144-2222
(314) 692-8888 FAX: (314) 692-8886 claytoneng.com
MO Corp. Certificate of Authority #000514
IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000879

REVISIONS

FILE: G:\Final\21182.2_AXIUM\3\PrelimPlan\Axium Building Expansion_SDP_21182.2.dwg PLOTTED:5/14/2026 12:18 PM

Prepared for: 4001 Premier Pkwy

PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR SUITE 810
ROSEMONT, IL 60018

SITE DIMENSION PLAN
AXIUM PLASTICS BUILDING EXPANSION
St. Peters, MO 63376

Designed	JRW
Drawn	JRW
Checked	JRW
Date	05-14-2026
Project Number	21182.2
Sheet Number	C2.0 of ____

R=35.40'
0°00'00"
L=55.61'

N/F
LAKESIDE LEVEE DISTRICT
PARCEL ID
6-0003-A606-00-0006.00000000

Edge of Water

FOUND IP W/ CAP
LS-222D
N01°27'48"W 0.12'

FOUND IP W/ CAP
LS-222D
N70°49'52"W 0.06'

30' Building Setback Per Zoning

10'W. Utility Easement
PB 45 PG 354

Tree Line, Typ.

FOUND IP W/ CAP
LS-222D
N05°02'44"E 0.13'

30' Drainage Easement
2021R-21604

5'W. Utility Easement
2021R-21604

0 30' 60'
SCALE IN FEET

Scale 1" = 30'

Note: Caution should be taken in comparing the written scale to the graphic scale to ascertain if this plan has been enlarged or reduced.

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MO Corp. Auth. #000307 • Engineering #000314 • Surveying #000314
IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000879

REVISIONS

F.B. 1468

P:\LE. G:\Axm21812\2_AXIUM\3TP\dn\Axium Building Expansion SSP- 21182.3.dwg
PLOTTED: 4/17/2026 1:48 PM

S12°00'00"E 1271.40'

N/F
EXETER 2001 PREMIER LP
3001 PREMIER PARKWAY
PARCEL ID
6-0003-D052-00-0031.0000000

15' Building Setback Per Zoning

Prepared for:
PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR SUITE 810
ROSEMONT, IL 60018

SITE DIMENSION PLAN
AXIUM PLASTICS BUILDING EXPANSION
4001 Premier Pkwy
St. Peters, MO 63376

STATE OF MISSOURI
JOHN R. WILLHITE
PE-2010000295
PROFESSIONAL ENGINEER
John R. Willhite 04-17-2026
Professional Engineer PE-2010000295

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C2.1 of ____

MATCHLINE - SEE SHEET C2.0

POLE LIGHT(TYP.)

6" VERTICAL CONC. CURB, TYP.

42

MSD 2 GRATE INLET
T=424.35
FL(E)=418.82
FL(W)=418.82

MSD 2 GRATE INLET
T=424.35
FL(E)=420.62

MSD 2 GRATE INLET
T=424.35
FL(W)=419.63
FL(E)=419.63

10'W. HEAVY DUTY CONCRETE PAVEMENT, TYP.

MSD 2 GRATE INLET
T=424.35
FL(W)=420.10

HEAVY DUTY ASPHALT PAVEMENT, TYP.

SUBMERGED END OF PIPE (SEE DETAIL ON SHEET C7.1)
FL=416.90

Edge of Water

PERMANENT STORMWATER EASEMENT, PER 2025R-031046

SUBMERGED END OF PIPE (SEE DETAIL ON SHEET C7.1)
FL=416.90

AI
T-2

AI
T=424.77
SW=423.85
FL=419.50

POP
3-1

BUBBLER (SEE DETAIL ON SHEET C7.2)
FL=420.00

BMP UNDERDRAIN CLEANOUT
T=423.50
FL 4"=418.67

4'W. CURB OPENING W/ 8'L.x3'W. STONE DIAPHRAGM W/ CORDGRASS, TYP. (SEE DETAIL)

FIRE HYDRANT & VALVE

HEAVY DUTY ASPHALT

R30.00'

75.00'

SILO PAD

69.00'

33.00'

4.25'

MECHANICAL ROOM

5'x4.5' CONC.

20.00'

ELEC. ROOM

21.04'

5.21'

R30.00'

15.00'

165.00'

HC CONC.

25.50'

VERT. BEND UPWARDS FL=418.67 TO VERT. BEND INTO INLET FL=419.50

8" C900 PVC FIRE LINE

FIRE HYDRANT & VALVE (PROTECTED BY FOUR (4) CONC. BOLLARDS)

24'DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=425.98
FL(E)=424.64
FL(W)=421.64

NDS 3-3

HEAVY DUTY CONCRETE PAVEMENT, TYP.

RAMP WALL W/ GUARDRAIL ON TOP

RAMP WALL W/ GUARDRAIL ON TOP (TYP.)

CONCRETE BOLLARDS TYP.

18'DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=430.35
FL(W)=421.87
FL(E)=421.87

18'DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=428.76
FL(E)=420.78
FL(E)=420.78

5'x4.5' CONC. WALK

18'DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=429.60
FL(E)=425.69

FUTURE ELECTRIC TRANSFORMER BY OWNER

MECHANICAL ROOM
5,000 SF
FF=430.05

FUTURE ELECTRIC TRANSFORMER BY AMEREN

18'DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=430.05
FL(W)=421.32
FL(N)=421.32

GRAVEL

ELECTRIC TRANSFORMER

10" C900 PVC FIRE LINE TO HYDRANT LOOP

10" C900 PVC FIRE SERVICE

4" C900 PVC DOMESTIC WATER SERVICE

6" VERTICAL CONC. CURB, TYP.

FIRE HYDRANT & VALVE

8" C900 PVC FIRE LINE

18'DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=428.10
FL(W)=424.07
FL(E)=424.07

18'DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=428.10
FL(W)=418.43
FL(SE)=418.43

18" FES
FL=416.9

SUBMERGED END OF PIPE (SEE DETAIL ON SHEET C7.1)
FL=416.90

MSD 42"Dia MANHOLE
T=424.50
FL(S)=417.46
FL(E)=417.46
FL(NW)=417.46

4x8 ELECTRIC VAULT

4x8 ELECTRIC VAULT

MSD AREA INLET
T=424.92
SW=424.00
FL(N)=419.50
VERT. BEND UPWARDS FL=418.67 TO VERT. BEND INTO INLET FL=419.50
FLARED END SECTION w/ STONE DIAPHRAGM (SEE DETAIL ON SHEET C6.0)
FL=423.00

4'W. CURB OPENING W/ 8'L.x3'W. STONE DIAPHRAGM W/ CORDGRASS, TYP. (SEE DETAIL)

ELECTRIC SERVICE (2) 4" CONDUIT

ELECTRIC SERVICE (2) 4" CONDUIT

FUTURE ELECTRIC SERVICE

TRUCK DOCK (TYP)
30"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=425.98
FL(E)=421.23
FL(W)=421.23

NDS 3-2

24"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=425.98
FL(W)=422.06

NDS 3-4

18'DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=425.98
FL(E)=422.69

OVERHEAD DOOR

TRASH ENCLOSURE

5'x4.5' CONC. WALK

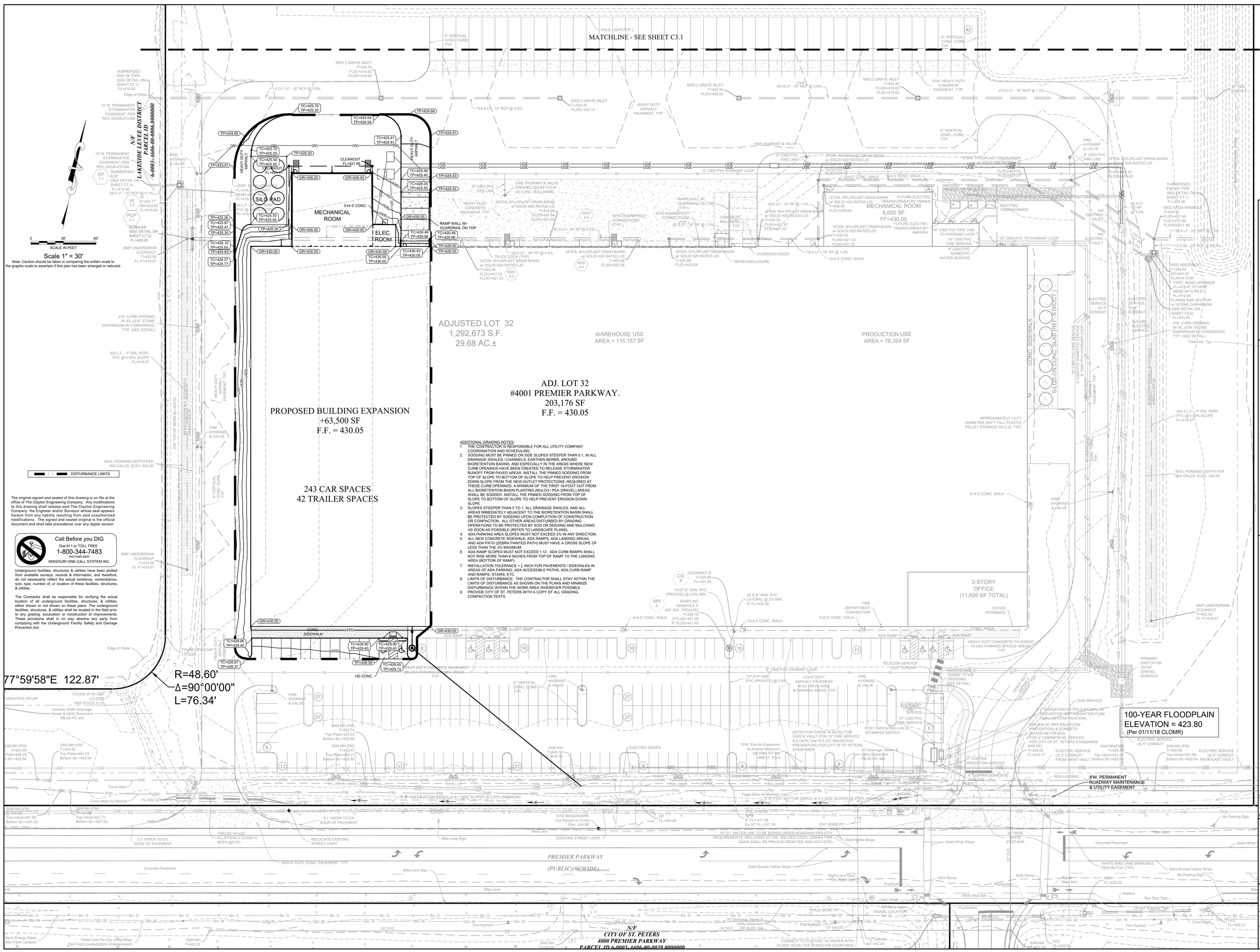
SIDEWALK

TRUCK DOCK (TYP)

ADJUSTED LOT 32
1,292,673 S.F.

WAREHOUSE USE

PRODUCTION USE



SCALE IN FEET
Scale 1" = 30'
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ADDITIONAL GRADING NOTES:
1. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY COORDINATION AND SCHEDULING.
2. SODDING MUST BE PINNED ON SIDE SLOPES STEEPER THAN 5:1, IN ALL DRAINAGE SWALES / CHANNELS, EARTHEN BERMS, AROUND BIORETENTION BASINS, AND ESPECIALLY IN THE AREAS WHERE NEW CURB OPENINGS HAVE BEEN CREATED TO RELEASE STORMWATER RUNOFF FROM PAVED AREAS. INSTALL THE PINNED SODDING FROM TOP OF SLOPE TO BOTTOM OF SLOPE TO HELP PREVENT EROSION DOWN SLOPE FROM THE NEW OUTLET PROTECTIONS, REQUIRED AT THESE CURB OPENINGS. A MINIMUM OF THE FIRST 16-FOOT OUT FROM ALL BIORETENTION BASIN PLANTING (MULCH / PEA GRAVEL) AREAS SHALL BE SODDED. INSTALL THE PINNED SODDING FROM TOP OF SLOPE TO BOTTOM OF SLOPE TO HELP PREVENT EROSION DOWN SLOPE.
3. SLOPES STEEPER THAN 5 TO 1, ALL DRAINAGE SWALES, AND ALL AREAS IMMEDIATELY ADJACENT TO THE BIORETENTION BASIN SHALL BE PROTECTED BY SODDING UPON COMPLETION OF CONSTRUCTION OR COMPACTION. ALL OTHER AREAS DISTURBED BY GRADING OPERATIONS TO BE PROTECTED BY SOD OR SEEDING AND MULCHING AS SOON AS POSSIBLE (REFER TO LANDSCAPE PLANS).
4. ADA PARKING AREA SLOPES MUST NOT EXCEED 2% IN ANY DIRECTION.
5. ALL NEW CONCRETE SIDEWALK, ADA RAMPS, ADA LANDING AREAS, AND ADA PATH (ZEBRA PAINTED PATH) MUST HAVE A CROSS SLOPE OF LESS THAN THE 2% MAXIMUM.
6. ADA RAMP SLOPES MUST NOT EXCEED 1:12. ADA CURB RAMPS SHALL NOT RISE MORE THAN 6 INCHES FROM TOP OF RAMP TO THE LANDING AREA (BOTTOM OF RAMP).
7. INSTALLATION TOLERANCE = ±-INCH FOR PAVEMENTS / SIDEWALKS IN AREAS OF ADA PARKING, ADA ACCESSIBLE PATHS, ADA CURB RAMP AND RAMPS, STAIRS, ETC.
8. LIMITS OF DISTURBANCE: THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS AND MINIMIZE DISTURBANCE WITHIN THE WORK AREA WHEREVER POSSIBLE.
9. PROVIDE CITY OF ST. PETERS WITH A COPY OF ALL GRADING COMPACTION TESTS.

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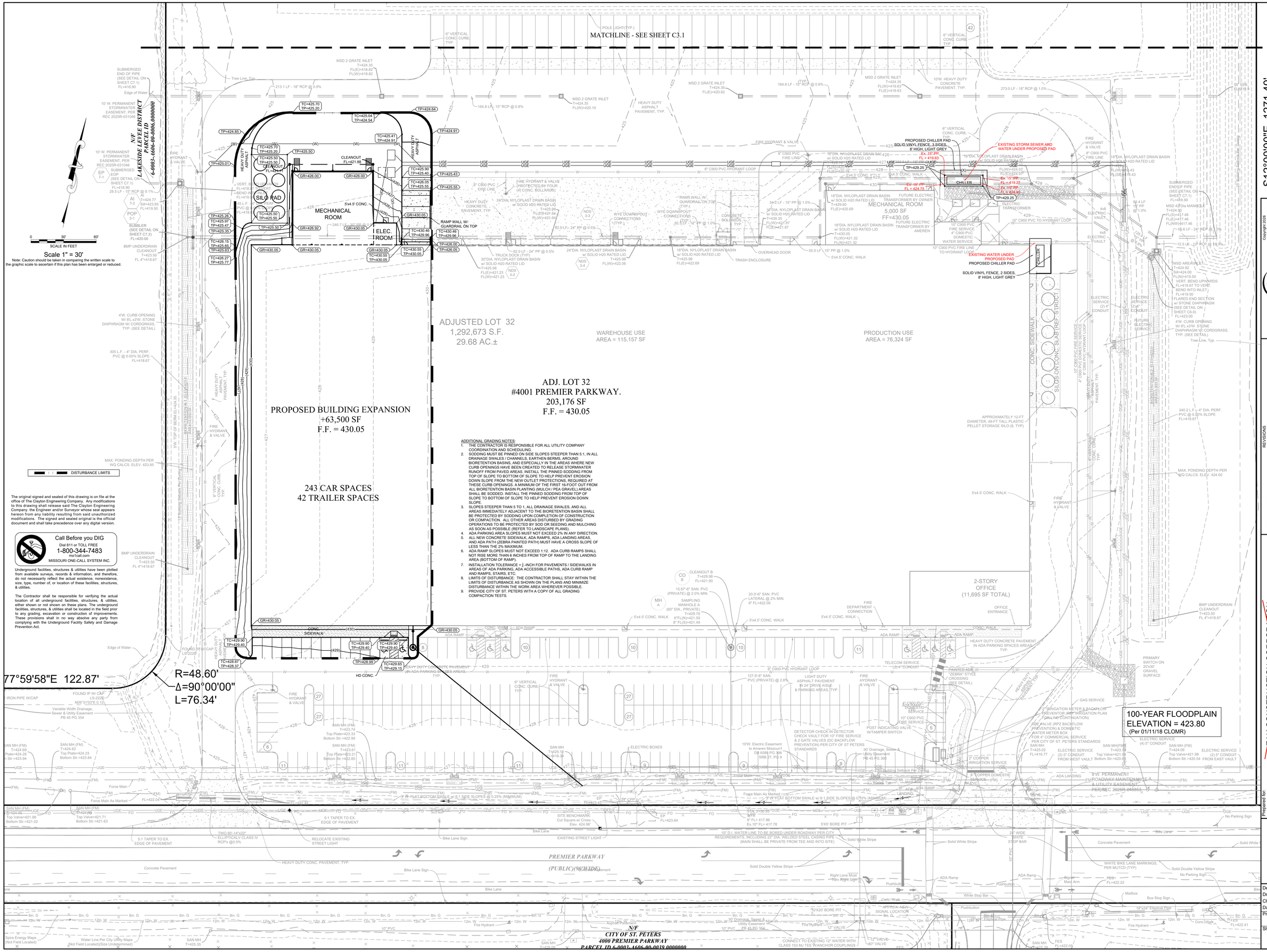

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4. ADA PARKING AREA SLOPES MUST NOT EXCEED 2% IN ANY DIRECTION.
5. ALL NEW CONCRETE SIDEWALK, ADA RAMPS, ADA LANDING AREAS, AND ADA PATH (ZEBRA PAINTED PATH) MUST HAVE A CROSS SLOPE OF LESS THAN THE 2% MAXIMUM.
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REVISIONS

FILE: S:\21x\21x\21x2_XJ0\3057\Prelim\Axium Building Expansion - SSP - 21182.3.dwg
PLOTTED: 3/4/2026 3:16 PM

Prepared for:
PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR SUITE 810
ROSEMONT, IL 60018

GRADING PLAN
AXIUM PLASTICS BUILDING EXPANSION
4001 Premier Pkwy St. Peters, MO 63376

Designed	JRW
Drawn	JRW
Checked	JRW
Date	05-14-2026
Project Number	21182.2
Sheet Number	C3.0 of ____

R=35.40'
0°00'00"
L=55.61'

N/F
LAKESIDE LEVEE DISTRICT
PARCEL ID
6-0003-A606-00-0006.0000000

Edge of Water

FOUND IP W/ CAP
LS-222D
N01°24'E W 0.12'

30' Building Setback Per Zoning

FOUND IP W/ CAP
LS-222D
N70°49'52"W 0.06'

10'W. Utility Easement
PB 45 PG 354

Tree Line, Typ.

Edge of Water

10'W. Utility Easement
PB 45 PG 354

FOUND IP W/ CAP
LS-222D
N05°02'41"E 0.13'

Tree Line, Typ.

30' Drainage Easement
232 R 21604

5'W. Utility Easement
232 R 21604

Edge of Water

Tree Line, Typ.

DISTURBANCE LIMITS

0 30' 60'
SCALE IN FEET

Scale 1" = 30'
Note: Caution should be taken in comparing the written scale to the graphic scale to ascertain if this plan has been enlarged or reduced.

100-YEAR FLOODPLAIN
ELEVATION = 423.80
(Per 01/11/18 CLOMR)

MATCHLINE - SEE SHEET C3.0

POLE LIGHT(TYP.)

6" VERTICAL CONC. CURB, TYP.

MSD 2 GRATE INLET
T=424.35
FL(E)=418.82
FL(W)=418.82

213.1 LF - 18" RCP @ 0.9%

MSD 2 GRATE INLET
T=424.35
FL(W)=420.10

164.8 LF - 15" RCP @ 0.8%

HEAVY DUTY ASPHALT PAVEMENT, TYP.

MSD 2 GRATE INLET
T=424.35
FL(E)=420.62

164.8 LF - 15" RCP @ 0.6%

MSD 2 GRATE INLET
T=424.35
FL(W)=419.63
FL(E)=419.63

10'W. HEAVY DUTY CONCRETE PAVEMENT, TYP.

273.0 LF - 18" RCP @ 1.0%

18" FES
FL=418.9

SUBMERGED END OF PIPE (SEE DETAIL ON SHEET C7.1)
FL=416.90

Edge of Water

PERMANENT STORMWATER EASEMENT, PER 2025R-031046

N/F
LAKESIDE LEVEE DISTRICT
PARCEL ID
6-0003-A606-00-0006.0000000

FIRE HYDRANT & VALVE

TC=425.70
TP=425.20

TC=425.04
TP=424.54

TP=424.64

TP=424.85

TC=425.41
TP=424.91

TP=424.91

TC=425.70
TP=425.20

TP=425.50

TC=425.50
TP=425.50
CLEANOUT
FL=421.88

TP=425.01

HEAVY DUTY ASPHALT

VERT. BEND UPWARDS FL=418.67 TO VERT. BEND INTO INLET FL=418.90

85 LF - 15" RCP @ 9.1%
PVC @ 1.0%
FL=418.90

AI
T=424.77
SB=423.85
FL=419.50

POP
3-1

BUBBLER
(SEE DETAIL ON SHEET C7.2)
FL=420.00

BMP UNDERDRAIN CLEANOUT
T=423.50
FL 4"=418.67

4'W. CURB OPENING W/ 8'L x3'W. STONE DIAPHRAGM W/ CORDGRASS, TYP. (SEE DETAIL)

SILO PAD

MECHANICAL ROOM

5'x4.5' CONC. PAVEMENT, TYP.

I ELEC. ROOM

TC=426.00
TP=425.50

TC=426.05
TP=425.55

TP=425.43

TP=425.58

TC=425.90
TP=425.40

GR=426.00

GR=426.00

GR=430.05

GR=426.92

GR=430.05

GR=430.05

GR=431.05

TC=425.26
TP=425.07

TC=425.07
TP=425.47

TP=425.35

TC=426.15
TP=425.65

TP=425.63

TC=426.27
TP=425.77

TC=430.46
TP=429.96

RAMP WALL W/ GUARDRAIL ON TOP

TC=430.46
TP=429.96

TC=426.00
TP=426.05

TC=430.55
TP=430.05

TC=430.55
TP=430.05

246.7 LF - 24" RCP @ 0.5%

HEAVY DUTY ASPHALT

8" C900 PVC FIRE LINE

8" C900 PVC HYDRANT LOOP

FIRE HYDRANT & VALVE (PROTECTED BY FOUR (4) CONC. BOLLARDS)

HEAVY DUTY CONCRETE PAVEMENT, TYP.

24'DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=425.98
FL(E)=424.64
FL(W)=421.64

NDS 3-3

WYE DOWNSPOUT CONNECTIONS (TYP.)

82.5 LF - 24" PP @ 0.5%

WYE DOWNSPOUT CONNECTIONS (TYP.)

82.5 LF - 12" PP @ 1.0%

RAMP WALL W/ GUARDRAIL ON TOP

CONCRETE BOLLARDS TYP.

54.2 LF - 15" PP @ 1.0%

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=430.35
FL(W)=427.87
FL(E)=421.87

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=430.05
FL(W)=421.32
FL(N)=421.32

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=429.60
FL(E)=425.69

FUTURE ELECTRIC TRANSFORMER BY OWNER

MECHANICAL ROOM
5,000 SF
FF=430.05

FUTURE ELECTRIC TRANSFORMER BY AMEREN

780 SF - 12" RCP @ 0.5%

GRADING

ELECTRIC TRANSFORMER

10" C900 PVC FIRE LINE TO HYDRANT LOOP

10" C900 PVC FIRE SERVICE

4" C900 PVC DOMESTIC WATER SERVICE

10" C900 PVC TO HYDRANT LOOP

4x8 ELECTRIC VAULT

4x8 ELECTRIC VAULT

4x8 ELECTRIC VAULT

ELECTRIC SERVICE (2) 4" CONDUIT

ELECTRIC SERVICE 12"H" CONDUIT

FUTURE ELECTRIC SERVICE

FIRE HYDRANT & VALVE

8" C900 PVC FIRE LINE

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=429.43
FL(E)=418.43

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=424.00
FL(W)=424.00
FL(E)=424.00

90.4 LF - 15" PP @ 1.0%

SUBMERGED END OF PIPE (SEE DETAIL ON SHEET C7.1)
FL=416.90

MSD 4'DIA MANHOLE
T=424.20
FL(S)=417.46
FL(E)=417.46
FL(NW)=417.46

55.6 LF - 24" RCP @ 1.0%

12.5 LF - 12" RCP @ 1.0%

MSD AREAWAY
T=424.92
SB=424.00
FL(N)=419.50

VERT. BEND UPWARDS FL=418.67 TO VERT. BEND INTO INLET FL=419.50

FLARED END SECTION w/ STONE DIAPHRAGM (SEE DETAIL ON SHEET C6.0)
FL=423.00

4'W. CURB OPENING W/ 8'L x3'W. STONE DIAPHRAGM W/ CORDGRASS, TYP. (SEE DETAIL)

S12°00'00"E 1271.40'

N/F
EXETER 2001 PREMIER LP
3001 PREMIER PARKWAY
PARCEL ID
6-0003-D052-00-0031.0000000

ADJUSTED LOT 32
1,292,673 S.F.

WAREHOUSE USE

PRODUCTION USE

OFFICE

CONCRETE SIDEWALK

STEEL STRUCT.

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MO Cert. of Authority #000314 MO Design Firm #000314
IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000979

REVISIONS

FILE: G:\Proj\21182.2_AXIUM\3\PrelimAxium Building Expansion - SSP- 21182.2.dwg
PLOTTED: 4/17/2026 1:50 PM

F.B. 1468

PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR SUITE 810
ROSEMONT, IL 60018

Prepared for:

GRADING PLAN
AXIUM PLASTICS BUILDING EXPANSION
4001 Premier Pkwy
St. Peters, MO 63376

STATE OF MISSOURI
JOHN R. WILLHITE
PE-2018000295
PROFESSIONAL ENGINEER
04-17-2026
John R. Willhite
Professional Engineer PE-2018000295

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C3.1 of ____

MATCHLINE - SEE SHEET C4.1

S12°00'00"E 1271.40'

N/F
EXETER 2001 PREMIER LP
3001 PREMIER PARKWAY
PARCEL ID
6-4003-D052-00-0031.0000000

N/F
LAKESIDE LEVEE DISTRICT
P.ARCEL I.D
6-0003-A606-00-0006.0000000

SCALE IN FEET
0 30' 60'

Scale 1" = 30'

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PROPOSED BUILDING EXPANSION
+63,500 SF
F.F. = 430.05

243 CAR SPACES
42 TRAILER SPACES

ADJUSTED LOT 32
1,292,673 S.F.
29.68 AC.±

WAREHOUSE USE
AREA = 115,157 SF

PRODUCTION USE
AREA = 76,324 SF

ADJ. LOT 32
#4001 PREMIER PARKWAY.
203,176 SF
F.F. = 430.05

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100-YEAR FLOODPLAIN
ELEVATION = 423.80
(Per 01/11/18 CLOMR)

8'W. PERMANENT
ROADWAY MAINTENANCE
& UTILITY EASEMENT

PREMIER PARKWAY
(PUBLIC)(90'WIDE)

N/F
CITY OF ST. PETERS
4000 PREMIER PARKWAY
PARCEL ID 6-0003-A606-00-0039.0000000

R=48.60'
Δ=90°00'00"
L=76.34'

77°59'58"E 122.87'

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REVISIONS

File: D:\21x\21182\2_AXIUM\3Plot\Axium Building Expansion -SDP- 21182.2.dwg
Plotted: 4/17/2026 1:49 PM

PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR SUITE 810
ROSEMONT, IL 60018

Prepared for:

UTILITY PLAN
AXIUM PLASTICS BUILDING EXPANSION
4001 Premier Pkwy
St. Peters, MO 63376

STATE OF MISSOURI
JOHN R. WILLHITE
PE-2010000295
PROFESSIONAL ENGINEER
John R. Willhite 04-17-2026
Professional Engineer PE-2010000295

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C4.0 of ____

MATCHLINE - SEE SHEET C4.1

S12°00'00"E 1271.40'

N/F
EXETER 2001 PREMIER LP
3001 PREMIER PARKWAY #1
PARCEL ID
6-0003-D032-00-0031.0000000

N/F
LAKESIDE LEVEE DISTRICT
P.ARCEL I.D
6-0003-4606-00-0006.0000000

SCALE IN FEET
0 30' 60'
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29.68 AC.±

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100-YEAR FLOODPLAIN
ELEVATION = 423.80
(Per 01/11/18 CLOMR)

PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR SUITE 810
ROSEMONT, IL 60018

Prepared for:
4001 Premier Pkwy
St. Peters, MO 63376

UTILITY PLAN
AXIUM PLASTICS BUILDING EXPANSION

REVISIONS

Designed JRW
Drawn JRW
Checked JRW
Date 05-14-2026
Project Number 21182.2
Sheet Number C4.0 of ____

FILE: I:\21xxx\21182\2_ADMIN\Plan\Axium Building Expansion SDP- 21182.2.dwg
PLOTTED: 5/14/2026 12:16 PM

F. B. 1468

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R=35.40'
0°00'00"
L=55.61'

Edge of Water

N/F
LAKESIDE LEVEE DISTRICT
PARCEL ID
6-0003-A606-00-0006.00000000

Edge of Water

FOUND IP W/ CAP
LS-222D
N01°27'48"W 0.12'

FOUND IP W/ CAP
LS-222D
N70°49'52"W 0.06'

30' Building Setback Per Zoning

10'W. Utility Easement
PB 45 PG 354

Edge of Water

10'W. Utility Easement
PB 45 PG 354

FOUND IP W/ CAP
LS-222D
N05°02'44"E 0.13'

Edge of Water

30' Drainage Easement
2021R-21604

5'W. Utility Easement
2021R-21604

S12°00'00"E 1271.40'

N/F
EXETER 2001 PREMIER LP
3001 PREMIER PARKWAY
PARCEL ID
6-0003-D052-00-0031.00000000

15' Building Setback Per Zoning

IMPORTANT: INSTALLATION OF THE BIORETENTION BMPs SHALL ONLY BE PERFORMED WITH THESE BMPs KEPT OFFLINE, WITH NO RUNOFF PASSING THROUGH THEM. THEY CAN NOT BE BROUGHT ONLINE UNTIL THE PAVEMENT AND GROUND SURFACE, INCLUDING VEGETATION, IS ESTABLISHED OVER THE AREA THAT DRAINS TO IT. CONSTRUCTION SITE RUNOFF SHALL NOT FLOW INTO THESE BMPs. ALL STORMWATER FLOW TO THESE BMPs SHALL BE DIVERTED PLUGGED OR DISCONNECTED AT THE UPSTREAM METERING STRUCTURES OR TEMPORARY GRADING UNTIL THE CONSTRUCTION SITE IS STABLE AND THE CITY INSPECTOR PROVIDES APPROVAL TO PLACE THE BMPs ONLINE.

DURING CONSTRUCTION, PRIOR TO BMP ENGINEERED SOIL FILTER MEDIA INSTALLATION, IF THE CONTRACTOR ELECTS TO USE THE BIORETENTION AREA AS A TEMPORARY SEDIMENT BASIN FOR CONSTRUCTION SITE RUNOFF, THEN AFTER THE TRIBUTARY AREA IS TOTALLY ESTABLISHED AND STABLE, THE BASIN WILL NEED TO BE CLEANED OF ALL SILT, SEDIMENT, AND TRASH THAT HAS ACCUMULATED WITHIN IT. BMP ENGINEERED SOIL FILTER MEDIA CAN BE INSTALLED ONLY AFTER THIS HAS BEEN DONE AND THE CITY INSPECTOR PROVIDES APPROVAL TO DO SO.

100-YEAR FLOODPLAIN
ELEVATION = 423.80
(Per 01/11/18 CLOMR)

0 30' 60'
SCALE IN FEET

Scale 1" = 30'

Note: Caution should be taken in comparing the written scale to the graphic scale to ascertain if this plan has been enlarged or reduced.

MATCHLINE - SEE SHEET C4.0

42

POLE LIGHT (TYP.)

6" VERTICAL CONC. CURB, TYP.

MSD 2 GRATE INLET
T=424.35
FL(E)=418.82
FL(W)=418.82

213.1 LF - 18" RCP @ 0.9%

164.8 LF - 15" RCP @ 0.8%

MSD 2 GRATE INLET
T=424.35
FL(W)=420.10

HEAVY DUTY ASPHALT PAVEMENT, TYP.

MSD 2 GRATE INLET
T=424.35
FL(E)=420.62

(TYP.)
164.8 LF - 15" RCP @ 0.6%

MSD 2 GRATE INLET
T=424.35
FL(W)=419.63
FL(E)=419.63

10'W. HEAVY DUTY CONCRETE PAVEMENT, TYP.

273.0 LF - 18" RCP @ 1.0%

18" FES
FL=416.9

6" VERTICAL CONC. CURB, TYP.

SUBMERGED END OF PIPE (SEE DETAIL ON SHEET C7.1)
FL=416.90

Edge of Water

FIRE HYDRANT & VALVE

ELECTRIC TRANSFORMERS
FUTURE ELECTRIC TRANSFORMER
CLEANOUT
FL=421.88

CLEANOUT
FL=421.77

76.6 LF - 12" PP @ 1.0%

67.0 LF - 12" PP @ 1.0%

MECHANICAL ROOM

ELEC. ROOM

246.7 LF - 30" PP @ 0.5%

WYE DOWNSPOUT CONNECTION
FL=420.95±

WYE DOWNSPOUT CONNECTION
FL=420.44±

WYE DOWNSPOUT CONNECTION
FL=420.41±

VERT. BEND UPWARDS
FL=418.67

45 LF - 18" RCP
PVC @ 1.0%
FL=418.67

AI
7-2
T=424.77
Sill=423.85
FL=419.50

POP
3-1

BUBBLER
(SEE DETAIL ON SHEET C7.2)
FL=420.00

BMP UNDERDRAIN CLEANOUT
T=423.50
FL 4"=418.67

4'W. CURB OPENING W/ 8'L.x3'W. STONE DIAPHRAGM W/ CORDGRASS, TYP. (SEE DETAIL)

FIRE HYDRANT & VALVE

4x8 ELECTRIC VAULT

8" C900 PVC FIRE LINE

8" C900 PVC HYDRANT LOOP

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=429.60
FL(E)=420.78

5'X4.5' CONC. WALK

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=424.00
FL(W)=424.00
FL(E)=418.43

8" C900 PVC FIRE LINE

FIRE HYDRANT & VALVE (PROTECTED BY FOUR (4) CONC. BOLLARDS)

24"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=425.98
FL(E)=421.64
FL(W)=421.64

82.5 LF - 24" PP @ 0.5%

RAMP WALL W/ GUARDRAIL ON TOP (TYP.)

WYE DOWNSPOUT CONNECTIONS (TYP.)

82.5 LF - 12" PP @ 1.0%

CONCRETE BOLLARDS TYP.

54.2 LF - 15" PP @ 1.0%

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=430.35
FL(W)=421.87
FL(E)=421.87

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=430.05
FL(W)=421.32
FL(N)=421.32

FUTURE ELECTRIC TRANSFORMER BY AMEREN

MECHANICAL ROOM
5,000 SF
FF=430.05

FUTURE ELECTRIC TRANSFORMER BY OWNER

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID

280 SF 2" SB 28.0 STONE GRAVEL

ELECTRIC TRANSFORMER

10" C900 PVC FIRE LINE TO HYDRANT LOOP

10" C900 PVC FIRE SERVICE

4" C900 PVC DOMESTIC WATER SERVICE

10" C900 PVC TO HYDRANT LOOP

FIRE HYDRANT & VALVE

8" C900 PVC FIRE LINE

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=424.50
FL(E)=418.43

93.4 LF 15" PP @ 1.0%

4x8 ELECTRIC VAULT

4x8 ELECTRIC VAULT

4x8 ELECTRIC VAULT

SUBMERGED END OF PIPE (SEE DETAIL ON SHEET C7.1)
FL=416.90

MSD 42"Dia MANHOLE
T=424.50
FL(S)=417.46
FL(E)=417.46
FL(NW)=417.46

55.6 LF - 24" RCP @ 1.0%

12.5 LF - 12" RCP @ 16.3%

126.9 LF 18" RCP @ 0.8%

MSD AREA INLET
T=424.92
Sill=424.00
FL(N)=419.50
VERT. BEND UPWARDS
FL=418.67 TO VERT. BEND INTO INLET
FL=419.50
FLARED END SECTION w/ STONE DIAPHRAGM (SEE DETAIL ON SHEET C6.0)
FL=423.00

4'W. CURB OPENING W/ 8'L.x3'W. STONE DIAPHRAGM W/ CORDGRASS, TYP. (SEE DETAIL)

ELECTRIC SERVICE (2) 4" CONDUIT

ELECTRIC SERVICE (2) 4" CONDUIT

FUTURE ELECTRIC SERVICE

TRASH ENCLOSURE

OVERHEAD DOOR

55.0 LF - 15" PP @ 1.0%

5'X4.5' CONC. WALK

92.0 LF - 24" PP @ 0.5%

TRUCK DOCK (TYP.)

30"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=425.98
FL(E)=421.23
FL(W)=421.23

24"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=425.98
FL(W)=422.06

18"DIA. NYLOPLAST DRAIN BASIN w/ SOLID H20 RATED LID
T=425.98
FL(E)=422.69

NDS 3-3

NDS 3-4

NDS 3-2

ADJUSTED LOT 32
1,292,673 S.F.

WAREHOUSE USE

PRODUCTION USE

CONCRETE SIDEWALK

CONCRETE PAVEMENT

PROPERTY LINE

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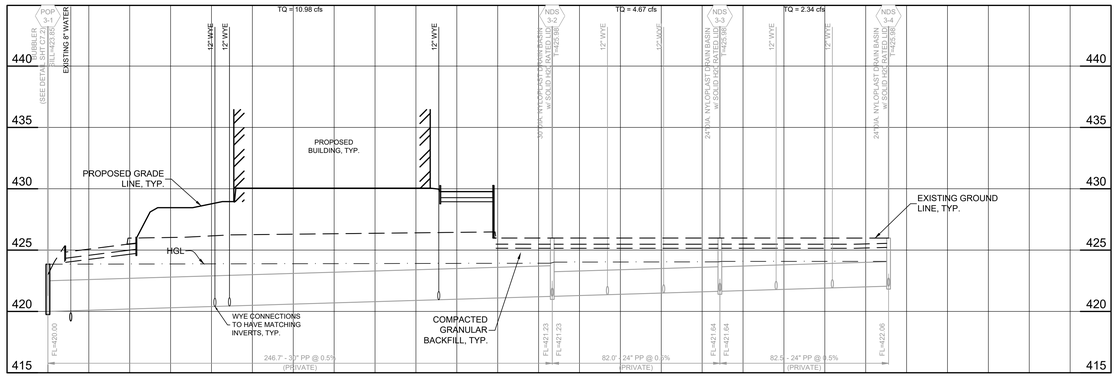
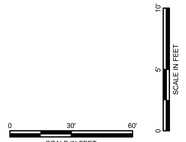
| REVISIONS | | |



STORM SYSTEM 3




```
                    System Name =  STORM SYSTEM 3
                    Description =  Storm System 3
                    Sewer Type =  Storm
                    System Number =  3
                Return Period (yr) =  15
            Rainfall duration (min) =  20
            Runoff Factor Multiplier =  1.000
            Starting HGL Elev. (ft) =  423.85
Use St. Louis Co./MSD Losses? =  Y
```

STRUCTURES UPR/LWR	FLOWLINES UPR/LWR	SIZE/ ANGLE	LENGTH/ CURVED?	n	AREA/ PI	Qadd	Qtotal/ Qfull	ConS/ ReqdS	Yn/ Yc	PARTIAL V/Y	FULL V/Vhead	LOSSES F/C	LOSSES V/T	COND U/L	HGL UPR/LWR	UPR STR TOP/FRBD
NDS 3-4	422.06	24"	82.50	0.009	0.66	2.34	2.34	0.51	0.43	0.74	0.74	0.00	0.01	FP	424.09	425.98
NDS 3-3	421.64	0"	N		3.54		23.38	0.01	0.53	2.44	0.01	0.00	0.00	FF	424.08	1.89
NDS 3-3	421.64	24"	82.00	0.009	0.66	2.34	4.67	0.50	0.61	1.49	1.49	0.02	0.04	FP	424.08	425.98
NDS 3-2	421.23	0"	N		3.54		23.17	0.02	0.76	2.79	0.03	0.00	0.00	FP	424.02	1.90
NDS 3-2	421.23	30"	246.68	0.009	1.78	6.31	10.98	0.50	0.87	2.24	2.24	0.08	0.08	FP	424.02	425.98
POP 3-1	420.00	0"	N		3.55		41.96	0.03	1.11	3.85	0.08	0.00	0.00	FP	423.85	1.96

L E G E N D

```
  UPR - At upper end of pipe                Yn - Normal depth (ft)                COND - Flow condition code at each pipe end:
  LWR - At lower end of pipe                Yc - Critical depth (ft)                    FF - full pipe flow
 SIZE - Sewer size (diam or WxH)                                                       OC - open channel flow
ANGLE - Downstream deflection (deg)     PARTIAL - Conditions at lower end of pipe     ND - set to normal depth
LENGTH - Pipe length (ft)                  FULL - Conditions assuming full pipe flow  CD - set to critical depth
CURVED - Pipe is curved?                    V - Velocity (fps)                        OF - initially set to open channel
     n - Manning's roughness factor         Y - Depth (ft)                                depth then set to full pipe flow
  AREA - Upper drainage area (ac)       Vhead - Velocity head (ft)                    OJ - open channel flow but hydraulic
    PI - Runoff factor (cfs/ac)                                                            jump may occur downstream
  Qadd - Added flowrate (cfs)           LOSSES - Major and minor head losses
Qtotal - Total flowrate (cfs)               F - Friction in pipe (ft)             HGL - Hydraulic grade line elevation (ft)
 Qfull - Pipe full capacity (cfs)           C - Curve in pipe (ft)
  ConS - Construction slope of pipe (%)     V - Velocities in upper structure (ft)  TOP - Elev. of top of upper struct (ft msl)
 ReqdS - Minimum required slope (%)         T - Turns in upper structure (ft)     FRBD - Difference btwn upper HGL and TOP (ft)
```

Notes:
1. Friction losses computed w/ Manning's formula if full pipe flow or back-calculated if open channel flow (simulating flow profile)
2. HGL at upper structure includes structure losses calculated with actual inflowing velocities using iterative procedure
3. Velocity and turn structure loss components only computed for incoming pipes with invert elevations below outlet crown elevation

LEGEND:

FL	-	FLOW LINE OF STRUCTURE
HGL	-	HYDRAULIC GRADE LINE (15-YR, 20-MIN. STORM)
PP	-	POLYPROPYLENE PIPE
P.U.M.I.	-	PRIVATE UNDER MSD INSPECTION
RCP	-	REINFORCED CONCRETE PIPE
R.D.	-	ROOF DRAIN
T	-	TOP OF STRUCTURE
TC	-	TOP OF CURB AT STRUCTURE
TGr	-	TOP OF GRATE
TQ	-	TOTAL FLOW (15-YR, 20-MIN. STORM)
VCP	-	VITRIFIED CLAY PIPE

GRANULAR BACKFILL NOTE:
1. COMPACTED GRANULAR BACKFILL SHALL BE PLACED UNDER PAVEMENT AND CURB FOR ALL ITEMS REQUIRING TRENCH BACKFILL.

EXISTING UTILITY DISCLAIMER:
1. EXISTING UTILITIES (UNDERGROUND ELECTRIC, GAS, AND WATER) ARE SHOWN APPROXIMATELY. THESE LOCATIONS WERE PLOTTED FROM MISSOURI ONE CALL SYSTEM MARKINGS AT THE TIME OF THE SURVEY FIELD WORK OR FROM AVAILABLE UTILITY MAPS. DEPTHS WERE NOT FIELD LOCATED, AND ARE SHOWN AT INDUSTRY STANDARDS IN THESE SEWER PROFILES, U.N.O.

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IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000579

REVISIONS

FILE: D:\Civil\21821_AXIUM\07\Peak\Axium Building Expansion - SSP- 21182.2.dwg
PLOTTED 4/17/2026 1:48 PM

1468

F.B.

St. Peters, MO 63376

PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR SUITE 810
ROSEMONT, IL 60018

Prepared for:

SEWER PROFILES
AXIUM PLASTICS

4301 Premier Pkwy

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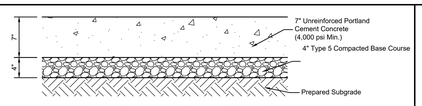
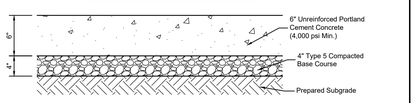
STATE OF MISSOURI
JOHN R. WILLHITE
PE-2018000295
PROFESSIONAL ENGINEER
04-17-2026

John R. Willhite
Professional Engineer PE-2018000295

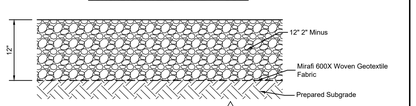
Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C5.0 of _____



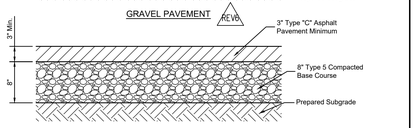
CONCRETE PAVEMENT - DUMPSTER PAD



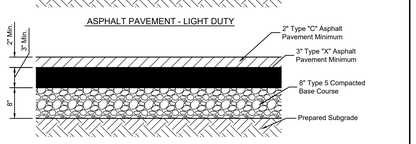
CONCRETE PAVEMENT - HEAVY DUTY



GRAVEL PAVEMENT



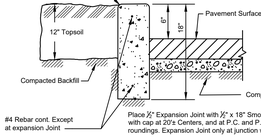
ASPHALT PAVEMENT - LIGHT DUTY



ASPHALT PAVEMENT - HEAVY DUTY

PAVEMENT DETAILS

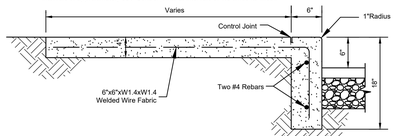
Not to Scale



VERTICAL CONCRETE CURB

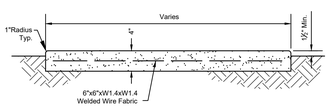
(FOR USE IN ASPHALT PAVEMENT AREAS)

NOTE: Expansion joint material shall be installed in the walk for its full width and depth at intervals of approximately 55'. Control joints at intervals of 1.5 times its width.



INTEGRAL SIDEWALK/CURB

NOT TO SCALE

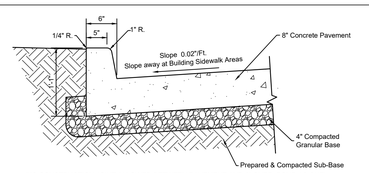


CONCRETE SIDEWALK

NOT TO SCALE

(FOR USE AT ALL ONSITE SIDEWALKS)

NOTE: SIDEWALK CROSS SLOPE SHALL BE LESS THAN 2% PER CURRENT ADA GUIDELINES.

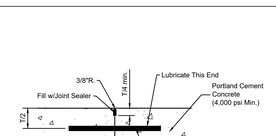


(NO CONSTRUCTION JOINT ALLOWED BETWEEN PAVEMENT AND 6" CURB; POUR AS ONE)

FOR USE AT ALL ONSITE CONCRETE PAVEMENTS, EXCEPT ADJACENT TO SIDEWALKS

INTEGRAL CONCRETE CURB

Not to Scale



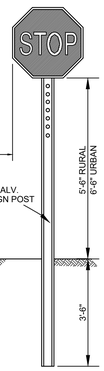
TYPE "D"

TRAVERSE CONSTRUCTION JOINT

(for use at the end of each work day when pouring concrete)

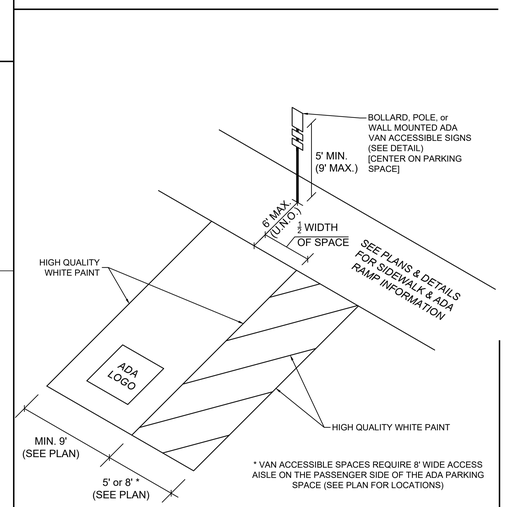
PAVEMENT JOINTS DETAILS

Not to Scale



SIGN INSTALLATION

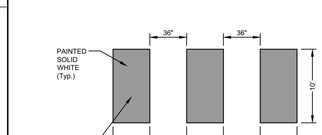
NOT TO SCALE



* VAN ACCESSIBLE SPACES REQUIRE 8' WIDE ACCESS AISLE ON THE PASSENGER SIDE OF THE ADA PARKING SPACE (SEE PLAN FOR LOCATIONS)

ADA ACCESSIBLE PARKING SPACE

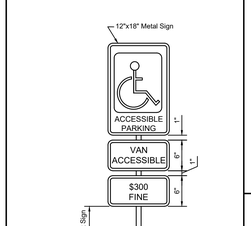
Not to Scale



ZEBRA STYLE CROSSING

(For Use Onsite)

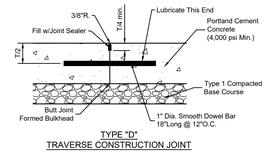
Not to Scale



Standard Sign Face, Standard Highway Department, or City Street Department Gauge,Letters and Borders. The Galvanized U Channel Post, Set 3'-0" into Grade. Set the Bottom of LOWEST SIGN 5'-0" Above Finished Grade. Use Van Accessible Sign Only when Applicable. Sign Should be Centered with Parking Space

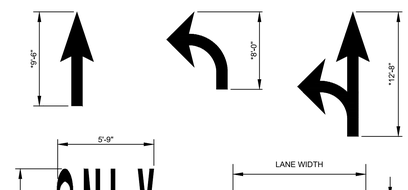
ADA PARKING SIGN

Not to Scale



CONTAINED IN SIDEWALK w/ 1:12 Flared Sides

TYPICAL ADA ACCESSIBLE RAMP (NEAR BUILDING)



PAVEMENT MARKINGS

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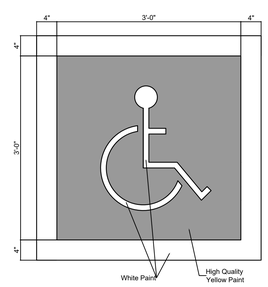
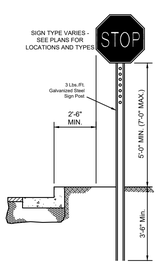


INTERNATIONAL ACCESSIBILY SYMBOL

(Marking Parking Spaces)

Not to Scale

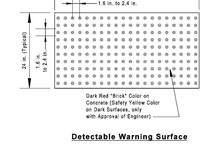


TRAFFIC CONTROL SIGN INSTALLATION

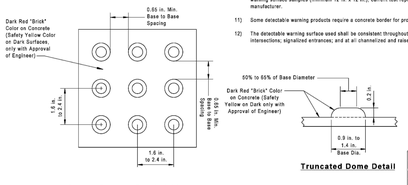
Not to Scale

General Notes

1) Do not scale drawings, follow dimensions.
2) Detectable warning surfaces (truncated domes) shall be preformed and installed as per manufacturer's recommendations. Stamped concrete will not be accepted.
3) All material shall be obtained from a source identified on the Missouri Department of Transportation "Qualified Lists". Specifically, Qualified Truncated Domes, FS-1067 Table 1
4) The detectable warning surface shall contrast visually with adjoining surfaces. Either light-on-dark or dark-on-light.
5) Truncated dome surfaces shall extend a minimum of 24 inches in the direction of sidewalk travel and the full width of the curb ramp (exclusive of flares), the landing, or blended transition. The panels shall be made of a durable material. The panels shall carry a manufacturer warranty covering all defects for a five-year period from the time of installation.
6) Detectable warning surfaces shall be aligned perpendicular or radial to the break between the ramp. Landing or blended transition. And the street.
7) Domes shall have a base diameter of 0.9 to 1.4 inches. The top diameter shall be 50 to 65 percent of the base diameter. The dome height shall be 0.2 inches. Dome center-to-center spacing shall be 1.6 to 2.4 inches with a minimum base-to-base spacing of 0.65 inches. Stamped concrete will not be accepted.
8) The contractor and/or manufacturer must provide a performance warranty on the product and installation of the Detectable Warning Surface for a minimum period of 1-year from the date of project acceptance or installation (whichever date is later). The performance warranty shall guarantee that the Detectable Warning Surface is free from defects in workmanship and material including deformation, breakage, excessive wearing or breakage of truncated domes, color fastness, delamination, or attachment to pavement surface.
9) Truncated dome mats applied with adhesive may be used for retrofit of existing curb ramps only
10) Contractors or manufacturers shall at the request of this Department, provide product literature, installation procedures, maintenance instructions, detectable warning surface samples (minimum 12 in. x 12 in.), current test reports in accordance with ASTM guidelines, and possible test installation by the contractor or manufacturer.
11) Some detectable warning products require a concrete border for proper installation. The concrete border shall not exceed 2 inches per side.
12) The detectable warning surface used shall be consistent throughout the project and are required to be installed on all curb ramps at public and private street intersections; signalized entrances; and at all channelized and raised islands where a curb ramp or cut-through is provided.



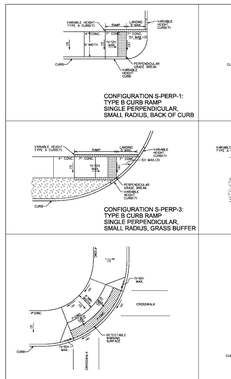
Detectable Warning Surface

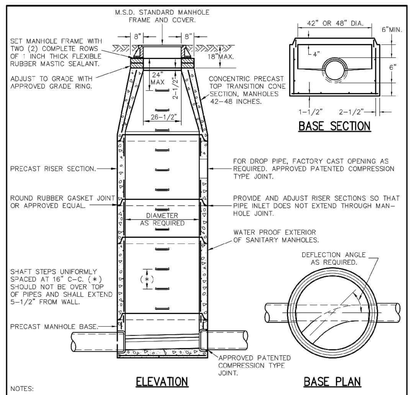


Square Pattern, Parallel Alignment

Truncated Dome Detail

ISSUE DATE			SIDEWALK & CURB RAMP DETAILS		
03/09/2020	THIS IS NOT A CERTIFIED DOCUMENT	Saint Louis COUNTY TRANSPORTATION "A CEA AGENCY"	DETECTABLE WARNING SURFACE FOR NEW CONSTRUCTION AND RETROFITTING OF CURB RAMPS		
REVISIONS			EFFECTIVE 05/01/2020	SHEET 1 OF 1	DRAWING C608.51

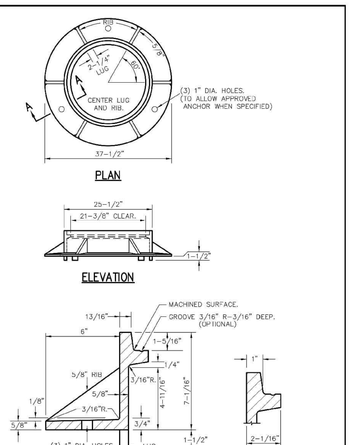

SIDEWALK (VERT.) RAMP FLARE (SLOPE) 10% MAX. 4" CONC. CURB 6" MIN. 12" MIN. 4" MIN. 6" MIN. 4" MIN. 6" MIN. 12" MIN. 4" MIN. 6" MIN. 12" MIN. 4" MIN. 6" MIN. 12



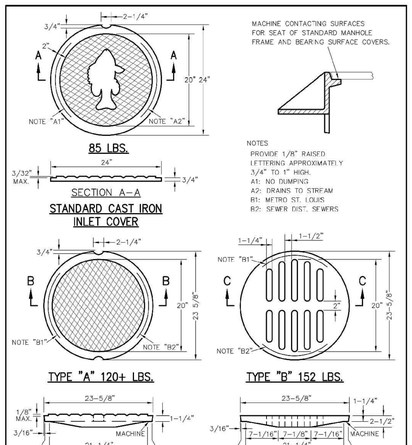
NOTES:

1) THE MINIMUM INSIDE DIAMETER FOR THE BASE AND RISER SECTIONS SHALL BE 42 INCHES FOR 8 INCH DIAMETER SANITARY SEWERS AND ALL STORM SEWERS. THE MINIMUM INSIDE DIAMETER FOR SANITARY SEWERS LARGER THAN 8 INCH DIAMETER IS 48 INCHES. MANHOLE SHALL MEET ASTM C-478 REQUIREMENTS.
2) FLOWLINE ELEVATION OF INCOMING PIPES SHALL BE 1 INCH HIGHER THAN THAT OF OUTGOING PIPE.
3) PIPE SIZES LARGER THAN 24 INCH DIAMETER MAY REQUIRE MANHOLE DIAMETERS OF 60 INCH, 72 INCH OR 96 INCH AS DETERMINED BY OUTSIDE DIAMETERS AND ORIENTATIONS OF CONNECTING PIPES.
4) ECCENTRIC CONES SHALL BE USED ON DIAMETERS 60 INCH AND LARGER. STEPS SHALL EXTEND DOWN VERTICAL WALL OF CONE.
5) PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL OF MAN-HOLES ON PIPE DIAMETERS LARGER THAN 24 INCH AND ALSO FOR THOSE STRUCTURES WITH A DROP PIPE CONNECTION.

PRECAST CONCRETE MANHOLE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. WSH/SAM Ch. J.C.K.	2009	SHEET 21 (REV)

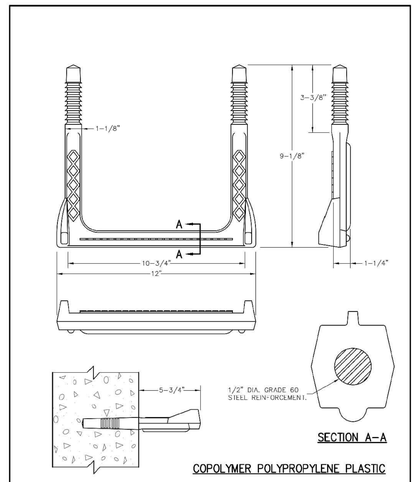


CAST IRON MANHOLE FRAME	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. DAB/SAM Ch. J.C.K.	2009	SHEET 52

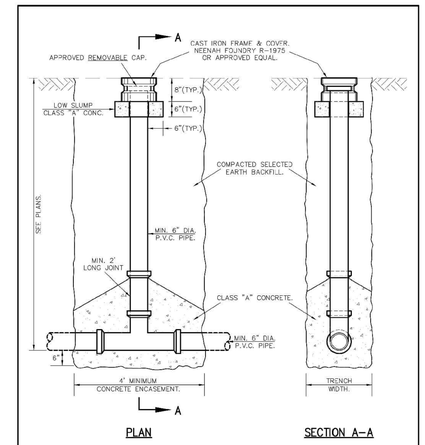


STANDARD CAST IRON MANHOLE COVERS

CAST IRON COVERS FOR MANHOLES AND INLETS	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. RGW/SAM Ch. J.C.K.	2009	SHEET 53



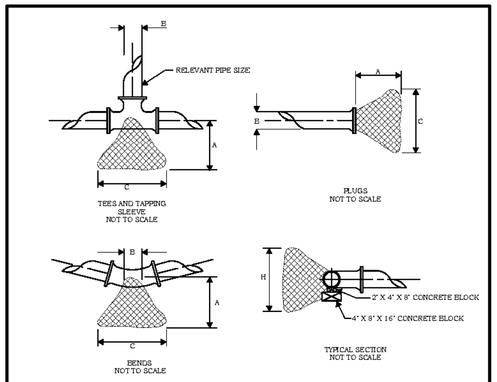
MANHOLE STEP FOR PRECAST & CAST-IN-PLACE MANHOLE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. D.A.B. Ch. J.C.K.	2009	SHEET 58



SAMPLING TEE DETAIL

NOTE:
DO NOT USE WYES

SAMPLING TEE	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. S.A.M. Ch. P.W.S.	2009	SHEET 70



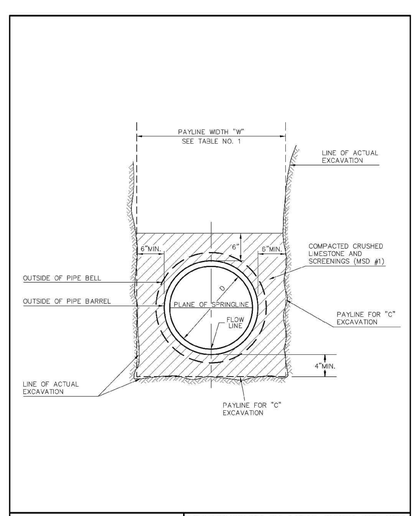
THRUST BLOCK DIMENSIONS - INCHES

PIPE DIA.	ALL FTGS.		TEE PLUG TAPPING		90 DEGREE BEND		45 DEGREE BEND		22-1/2 BEND		11-1/4 BEND	
	A	B	C	H	C	H	C	H	C	H	C	H
4	14	4	24	12	26	15	18	12	12	12	12	12
6	16	6	36	18	36	24	20	18	24	12	12	12
8	20	8	36	30	42	36	36	24	24	18	18	12
10	20	10	48	36	66	36	36	36	28	24	18	18
12	24	12	68	36	62	42	52	36	40	24	28	18

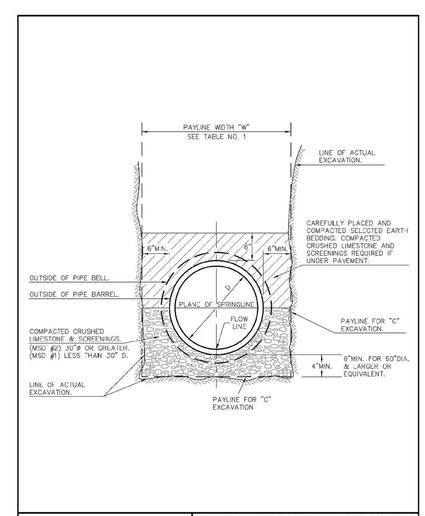
NOTES:

FOR FITTINGS LARGER THAN 12", SPECIAL RESTRAINT DESIGNS ARE REQUIRED.

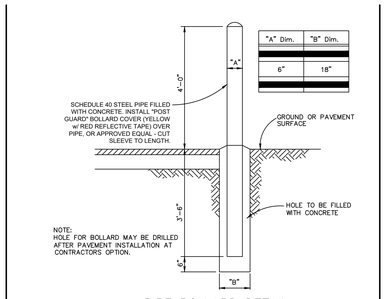
HORIZONTAL THRUST BLOCKING DETAIL "C"



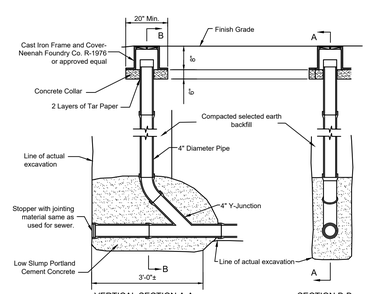
PIPE BEDDING CLASS "C" (FOR ALL 6" to 18" PIPE EXCEPT REINFORCED CONCRETE PIPE)	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. W.S.H. Ch. J.C.K.	2009	SHEET 4



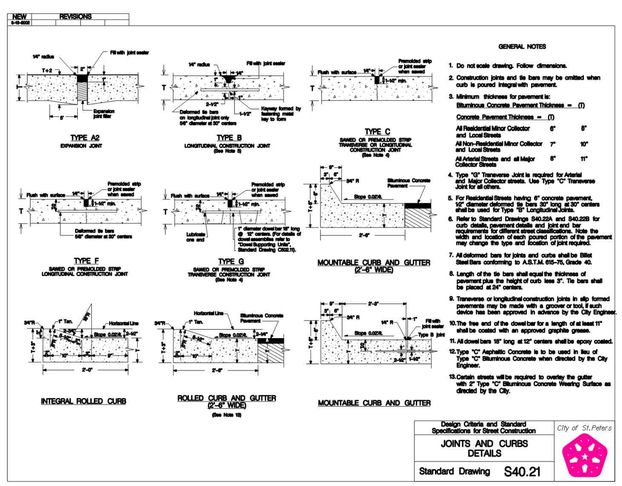
PIPE BEDDING CLASS "C" (MODIFIED FOR REINFORCED CONCRETE PIPE)	METROPOLITAN ST. LOUIS SEWER DISTRICT *Standard Details of Sewer Construction*		
	Dr. W.S.H. Ch. J.C.K.	2009	SHEET 5



PIPE BOLLARD DETAIL
NOT TO SCALE



SEWER CLEANOUT
NOT TO SCALE



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The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMO.

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IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000879

REVISIONS

FILE: G:\Work\1182.2_AXIUM\2Plan\Axium Building Expansion - CO5 & DETS - 21182.2.dwg PLOTTED: 4/17/2026 1:48 PM

E.B. 1468

PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR SUITE 810
ROSEMONT, IL 60018

CONSTRUCTION DETAILS
AXIUM PLASTICS BUILDING EXPANSION
St. Peters, MO 63376

Prepared for:
4001 Premier Pkwy

STATE OF MISSOURI
JOHN R. WILLHITE
PE-2018000295
PROFESSIONAL ENGINEER
John R. Willhite
Professional Engineer PE-2018000295

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C7.1 of ____

(PRINTED ON 30"X42")

SCHEDULE OF OPERATIONS - APPROXIMATE DATE OF WORK TO BEGIN JULY 2026, or 3 WEEKS AFTER PERMIT ISSUANCE

INSTALLATION OF	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY
EROSION / SILT CONTROL								
DEMOLITION								
CLEARING AND GRADING								
TEMP. SEEDING/MULCH								
SOD / LANDSCAPING								
FOUNDATIONS								
UTILITIES / BMPs								
STRUCTURE								
INTERIOR								
PAVEMENT								
REMOVAL OF EROSION/ SILT CONTROL DEVICES *								

LOT 32

QUANTITY	EROSION CONTROL BMP / ITEM	EMERGENCY REPAIR QUANTITY (15%)
1,650 LF	SILTATION CONTROL FENCE	1,897 LF
1 EA	DANDY BAG	1 EA
0.31± Ac.	SEED & MULCH	N/A
1 EA	CONSTRUCTION ENTRANCE & WASHDOWN STATION	1 EA
1 EA	DUST CONTROL	N/A

ALL BMP QUANTITIES FOR PERMITTING PURPOSES ONLY. CONTRACTOR TO CALCULATE OWN QUANTITIES FOR BIDDING; SOD TO USED IN ALL DISTURBED AREAS INCLUDING SLOPES STEEPER THAN 5:1 AND IN DRAINAGE SWALES (SEE NOTES).

NOTE: ALL SWPPP EROSION CONTROL ITEMS ARE TEMPORARY, EXCEPT FOR SOD AREAS. ANY TEMPORARY SEEDING AND MULCHING WILL BE DETERMINED BY THE CONTRACTOR'S CONSTRUCTION SCHEDULING & ANY POSSIBLE WEATHER DELAYS. THEREFORE, QUANTITIES SHOWN ABOVE DO NOT REFLECT TEMPORARY SEEDING & MULCH FOR THIS REASON.

SITE INFORMATION:

AREA OF DISTURBANCE: 2.10± AC.

ESTIMATED EARTHWORK QUANTITIES:
(DO NOT USE FOR BIDDING. QUANTITIES ARE FOR PERMITTING PURPOSES ONLY. THE CONTRACTOR MUST CALCULATE THEIR OWN QUANTITIES FOR BIDDING)

LOT 32:
CUT - 771± CU.YDS.
FILL - 3,441± CU.YDS.
SHORT = 2,734± CU.YDS.*

*DOES NOT INCLUDE SPOILS FROM UTILITY TRENCHES, UTILITY BACKFILL, OR BUILDING FOOTINGS. IT DOES INCLUDE A ROUGH APPROXIMATION OF THE BIORETENTION BASIN SPOILS.

HAUL ROUTE:
A HAUL ROUTE WILL BE PROVIDED TO THE CITY AFTER A GRADING CONTRACTOR HAS BEEN AWARDED THE PROJECT. IF THAT ROUTE IS LATER ALTERED BY SAID CONTRACTOR, THEY MUST SUBMIT A NEW HAUL ROUTE TO THE CITY..

CONSTRUCTION & EROSION CONTROL NOTES:

1. ANY LAND CLEARING, CONSTRUCTION, OR DEVELOPMENT INVOLVING THE MOVEMENT OF EARTH SHALL BE IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN, AND THE PERSON ISSUED A LAND DISTURBANCE PERMIT ASSUMES AND ACKNOWLEDGES RESPONSIBILITY FOR COMPLIANCE WITH THE CITY OF SUNSET HILLS' LAND DISTURBANCE CODE AND THE APPROVED STORM WATER POLLUTION PREVENTION PLAN AT THE SITE OF THE PERMITTED ACTIVITY.
2. LAND DISTURBANCE ACTIVITY RESULTING MORE THAN 1 ACRE OF DISTURBANCE DOES REQUIRE A LAND DISTURBANCE PERMIT FROM THE STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES (MDNR). THIS PROJECT DISTURBS MORE THAN 1 ACRE.
3. CLEARING, EXCEPT THAT NECESSARY TO ESTABLISH SEDIMENT CONTROL DEVICES, SHALL NOT BEGIN UNTIL ALL SEDIMENT CONTROL DEVICES HAVE BEEN INSTALLED AND HAVE BEEN STABILIZED. THE SILT CONTROLS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND DISTURBANCE.
4. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION FROM THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION CONTROL IN ACCORDANCE WITH THE APPROVED PLANS AND AS DIRECTED BY THE CITY AND/OR MDNR.
5. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DURING CONSTRUCTION THAT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING TEMPORARY AND/OR INTERIM EROSION CONTROL MEASURES DURING CONSTRUCTION PROGRESSION OR AS REQUIRED BY THE CITY / MDNR INSPECTOR. ANY CHANGES / ADDITIONS TO THE SWPPP PLAN SHALL BE DOCUMENTED BY THE CONTRACTOR AND REMAIN ON FILE AT THE SITE. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SILT CONTROLS FOR DURATION OF THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR CONTROLLING REGULATORY AGENCY AND ADEQUATE VEGETATIVE GROWTH INSURES NO FURTHER EROSION OF THE SOIL AND WORK IS ACCEPTABLE TO THE OWNER AND/OR CONTROLLING REGULATORY AGENCY.
6. TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE OR UNTIL SUITABLE REPLACEMENT BASINS HAVE BEEN PROVIDED.
7. ALL EXISTING STRUCTURES, SIDEWALKS, CONCRETE OR ASPHALT SURFACES, CURBING, WALLS, SEWERS, FENCES, TREES, SHRUBS, AND DEBRIS NOTED FOR REMOVAL ON THE SITE SHALL BE DEMOLISHED, REMOVED FROM THE SITE, AND PROPERLY DISPOSED OF ALL IN A MANNER APPROVED BY THE REGULATING GOVERNMENTAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AFFECTED OR IN THE VICINITY OF PROPOSED DEMOLITION.
8. CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING IMPROVEMENTS AND VEGETATION (WHICH ARE NOT TO BE REMOVED) WITHIN THE PROJECT LIMITS OR ADJACENT THERETO FROM DAMAGE AS A RESULT OF HIS ACTIVITIES IN THE PERFORMANCE OF WORK.
9. THE CONTRACTOR SHALL KEEP A SURPLUS OF EROSION AND SILTATION CONTROL DEVICES FOR EMERGENCY REPAIR IN THE APPROXIMATE AMOUNT OF 15% OF TOTAL QUANTITY ONSITE AT ALL TIMES.
10. THE CITY MUST BE NOTIFIED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE COMMENCEMENT OF ANY GRADING OPERATIONS.
11. STORM WATER PIPES, OUTLETS AND CHANNELS SHALL BE PROTECTED BY SILT BARRIERS AND KEPT FREE OF WASTE AND SILT AT ALL TIMES PRIOR TO FINAL SURFACE STABILIZATION AND/OR PAVING.
12. SILTATION FENCES, INLET PROTECTION, AND GUTTER BUDDIES SHALL BE INSPECTED EVERY WEEK AND AFTER EVERY STORM FOR DAMAGE AND FOR THE AMOUNT OF SEDIMENT WHICH HAS ACCUMULATED. REMOVAL OF SEDIMENT WILL BE REQUIRED WHEN IT REACHES ½ THE HEIGHT OF THE SILTATION FENCE DEVICE OR 12 INCHES, WHICHEVER IS LESS. REMOVED SEDIMENT WILL BE PLACED ON EXCESS CUT AREAS.
13. GRADING OPERATIONS TO BE PROTECTED BY TEMPORARY SEEDING AND MULCHING AS SOON AS POSSIBLE (SEE SWPPP DETAILS - SEEDING & MULCHING SCHEDULES). SOIL STABILIZATION SHALL BE COMPLETED WITHIN FIVE (5) DAYS OF CLEARING OR INACTIVITY IN CONSTRUCTION.
14. IF TEMPORARY SEEDING OR OTHER VEGETATIVE EROSION CONTROL MEASURE IS USED, IT SHALL BECOME ESTABLISHED WITHIN TWO (2) WEEKS OR THE DEPARTMENT OF PUBLIC WORKS MAY REQUIRE THE SITE TO BE RE-SEEDED OR A NON-VEGETATIVE OPTION EMPLOYED.
15. THE ENTIRE SITE MUST BE STABILIZED, USING A HEAVY MULCH LAYER OR ANOTHER METHOD THAT DOES NOT REQUIRE GERMINATION TO CONTROL EROSION, AT THE CLOSE OF THE CONSTRUCTION SEASON, IF APPLICABLE.
16. TECHNIQUES SHALL BE EMPLOYED TO DIVERT UPLAND RUNOFF PAST DISTURBED SLOPES.
17. IF CUT AND FILL OPERATIONS OCCUR AND/OR END DURING A SEASON NOT FAVORABLE FOR IMMEDIATE ESTABLISHMENT OF PERMANENT GROUND COVER (SODDING & LANDSCAPING), A FAST GERMINATING ANNUAL SUCH AS RYE GRASSES OR SUDAN GRASSES SHALL BE UTILIZED TO RETARD EROSION, IF ADEQUATE TEMPORARY STORM WATER DETENTION AND EROSION CONTROL DEVICES HAVE NOT BEEN ESTABLISHED.
18. UPON COMPLETION OF CONSTRUCTION OR COMPACTION, DISTURBED AREAS SHALL BE PROTECTED BY SODDING OR LANDSCAPING. IN ADDITION, ALL SLOPES STEEPER THAN 5:1 AND ALL DRAINAGE SWALES SHALL BE PROTECTED BY SODDING OR PAVING UPON COMPLETION OF CONSTRUCTION OR COMPACTION (SEE SWPPP DETAILS - SOD INSTALLATION). TEMPORARY MEASURES MAY REQUIRE THESE AREAS SEEDED, MULCHED AND TACKED AT THE RATES DESCRIBED IN THE DETAILS PROVIDED WHEN SEEDED.
19. THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT OCCURS TO THE EXISTING LOCAL PUBLIC STREETS RESULTING FROM WORK ON THIS SITE.
20. A CONCRETE WASHDOWN AREA SHALL BE DEDICATED ON THE SITE. THE CONTRACTOR SHALL COORDINATE THIS LOCATION WITH THE OWNER.
21. DUST CONTROL SHALL BE UTILIZED FOR THIS PROJECT TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
22. CONTRACTOR TO PROVIDE SUFFICIENT TEMPORARY TOILET FACILITIES TO SERVE THE NUMBER OF WORKERS ONSITE.
23. CONTRACTOR SHALL SCHEDULE AND CONDUCT HIS WORK SUCH THAT PARKING FOR CONSTRUCTION WORKERS IS PROVIDED ON EITHER PAVED OR GRAVEL SURFACES. PARKING ON PRIVATE PROPERTY OR PUBLIC STREETS WILL NOT BE ALLOWED.
24. THE EXISTING PAVED ENTRANCE ON PREMIER PARKWAY SHALL BE USED AS A CONSTRUCTION ENTRANCE AND STABILIZED ACCESS TO THE SITE, AS SHOWN ON THE SWPPP. PROVISIONS FOR THE WASHING OF VEHICLES EXITING THE SITE MUST BE MADE. INSTALL THE WASHDOWN STATION AND GRAVEL TEMPORARY CONSTRUCTION ENTRANCE, AS SHOWN ON THIS PLAN FOR CONSTRUCTION ACTIVITIES NEAR THE PROJECT SITE AREA 'A'. ALL GRAVEL MUST BE REMOVED ENTIRELY PRIOR TO INSTALLING SOD OR LANDSCAPING. THE CONTRACTOR SHALL COORDINATE WITH THE SCHOOL DISTRICT TO PROVIDE A WATER SOURCE FROM THE EXISTING BUILDING FOR WASHING OF VEHICLES. THE EXISTING PAVED PARKING AREAS SHALL BE UTILIZED FOR THE OFF-STREET TEMPORARY PARKING. THE PARKING LOCATION SHOWN ON THIS PLAN MUST BE COORDINATED BY THE CONTRACTOR WITH THE SCHOOL DISTRICT.
25. ALL DRIVE LANES MUST REMAIN OPEN TO THE PUBLIC AND EMERGENCY VEHICLES DURING CONSTRUCTION. THE CONTRACTOR MUST NOT BLOCK THESE DRIVES IN ANY WAY. CONTRACTOR TO COORDINATE WITH SCHOOL DISTRICT.
26. ANY DEPOSITING OF SILTS OR MUD OFF-SITE, ON NEW OR EXISTING PAVEMENT OR IN NEW OR EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED IMMEDIATELY AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE CITY AND/OR THE AFFECTED PROPERTY OWNERS.
27. EQUIPMENT AND VEHICLES SHALL BE CLEANED AT THE WASH DOWN STATION PRIOR TO BEFORE ENTERING PUBLIC ROADWAYS SO THAT NO SILT, MUD, OR DEBRIS SHALL BE TRACKED ONTO THE STREETS. A TRACTOR WITH A BLADE, A BROOM TRACTOR, AND A STREET SWEEPER OR A HIGH PRESSURE WASH TRUCK SHALL BE AVAILABLE FOR THE SITE AT ALL TIMES FOR THE REMOVAL OF MUD FROM THE STREETS.
28. THE GROUND ADJOINING THE DEVELOPMENT SITE SHALL BE PROVIDED WITH PROTECTION FROM ACCELERATED AND INCREASED SURFACE WATER, SILT FROM EROSION, AND ANY OTHER CONSEQUENCES OF EROSION. RUNOFF WATER FROM DEVELOPED AREAS (PARKING LOTS, PAVED SITES, BUILDINGS, ETC.) ABOVE THE AREA TO BE DEVELOPED SHALL BE DIRECTED TO DIVERSION DITCHES, CONCRETE GUTTERS AND/OR UNDERGROUND OUTLET SYSTEMS.
29. NO ONSITE TEMPORARY ACTIVITIES ARE PLANNED FOR THIS PROJECT, LIKE CONCRETE OR ASPHALT BATCH PLANTS.
30. NO ANTICIPATED POTENTIAL SOURCES OF POLLUTION (OTHER THAN SEDIMENT), WASTE, OR CONSTRUCTION MATERIALS ARE EXPECTED TO BE STORED ONSITE AND UNPROTECTED. TYPICALLY, SOURCES OF POLLUTANTS OF THIS NATURE DURING CONSTRUCTION INCLUDE SMALL FUELING ACTIVITIES, MINOR EQUIPMENT MAINTENANCE, AND SANITARY FACILITIES. TYPICAL WASTE OR CONSTRUCTION MATERIALS MAY INCLUDE GENERAL BUILDING MATERIALS, SOLVENTS, ADHESIVES, PAVING MATERIALS, PAINTS, AGGREGATES, TRASH, ETC. HOWEVER, FOR THIS PROJECT ANY MATERIALS OF THIS SORT MUST BE STORED EITHER IN ENCLOSED CONSTRUCTION TRAILERS, AND/OR IN APPROPRIATE DUMPSTER FACILITIES.
31. NO ONSITE MAINTENANCE FOR RELATED CONSTRUCTION VEHICLES IS PERMITTED FOR THIS PROJECT. ALL MAINTENANCE MUST BE PERFORMED OFFSITE.
32. ALL TOP SOIL IN THE PROJECT AREA SHALL BE SCRAPED AND STOCKPILED FOR LATER USE. THE STOCKPILE LOCATION SHALL BE CHOSEN BY THE CONTRACTOR WITH PRIOR APPROVAL BY THE SCHOOL DISTRICT. THIS STOCKPILE MUST BE PROTECTED FROM EROSION BY SURROUNDING IT WITH SILT FENCING AND ANY ADDITIONAL CONSTRUCTION BMPs, AS NECESSARY.
33. TEMPORARY STABILIZATION IS TO TAKE PLACE WHERE SOIL DISTURBING ACTIVITIES WILL CEASE ON ANY PORTION OF THE SITE AND ARE NOT PLANNED TO RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. TEMPORARY STABILIZATION MUST BE INITIATED IMMEDIATELY UPON KNOWING THE DURATION IS MORE THAN 14 DAYS. TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS. IF THE SLOPE OF THE AREA IS GREATER THAN 3:1 (3 FEET HORIZONTAL TO 1 FOOT VERTICAL) OR IF THE SLOPE IS GREATER THAN 3% AND GREATER THAN 150 FEET IN LENGTH, THEN THE PERMITTEE MUST ESTABLISH TEMPORARY STABILIZATION WITHIN 7 DAYS OF CEASING OPERATION ON THAT PART OF THE SITE. FINAL STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY AND COMPLETED WITHIN 7 CALENDAR DAYS WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE. ALLOWANCES TO THE 7 DAY COMPLETION PERIOD FOR TEMPORARY AND FINAL STABILIZATION MAY BE MADE DUE TO WEATHER OR EQUIPMENT MALFUNCTIONS. THE USE OF ALLOWANCES SHALL BE DOCUMENTED.
34. PREMIER PARKWAY MUST BE KEPT CLEAN AND FREE OF MUD AND DIRT AT ALL TIMES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SWEEP THE STREET(S) DAILY, AS NECESSARY, TO KEEP THEM CLEAN.

ROUTINE INSPECTION SCHEDULE

The permit-holder shall contact the CITY/MDNR Inspector for a site inspection at least two working days prior to the following:
1. Start of construction;
2. Installation of sediment and erosion control measures;
3. Completion of site clearing;
4. Completion of rough grading;
5. Completion of final grading;
6. Close of construction season;
7. Completion of final landscaping.

Inspections by the permit-holder's inspector shall be regularly performed on land disturbance sites, including all erosion and sediment and other pollutant control measures, outfall and off-site receiving waters per the following schedule:

1. At least once per week;
2. No later than 48 hours after a rainfall that causes storm water runoff to occur onsite.

All inspections shall be documented in writing on weekly reports with copies submitted to the CITY/MDNR, if required.

The permit-holder shall notify the Contractor of any deficiencies identified. The Contractor shall have seven calendar days to correct the deficiencies.
1. ANY LAND CLEARING, CONSTRUCTION OR DEVELOPMENT INVOLVING THE MOVEMENT OF EARTH SHALL BE IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN, AND THE PERSON ISSUED A LAND DISTURBANCE PERMIT ASSUMES AND ACKNOWLEDGES RESPONSIBILITY FOR COMPLIANCE WITH THE LOCAL LAND DISTURBANCE CODE AND THE APPROVED STORM WATER POLLUTION PLAN AT THE SITE OF THE PERMITTED ACTIVITY.
2. NOTIFY ALL CONTRACTORS AND OTHER ENTITIES (INCLUDING UTILITY CREWS, CITY/COUNTY EMPLOYEES, OR THEIR AGENTS) THAT WILL PERFORM WORK AT THE SITE, OF THE EXISTENCE OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND WHAT ACTIONS OR PRECAUTIONS SHALL BE TAKEN WHILE ON SITE TO MINIMIZE THE POTENTIAL FOR EROSION AND THE POTENTIAL FOR DAMAGING ANY BEST MANAGEMENT PRACTICES (BMPS).
3. DETERMINE THE NEED FOR AND ESTABLISH TRAINING PROGRAMS TO ENSURE THAT ALL SITE WORKERS HAVE BEEN TRAINED, AT A MINIMUM, IN EROSION CONTROL, MATERIAL HANDLING AND STORAGE, AND GOOD HOUSEKEEPING;
4. PROVIDE COPIES OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) TO ALL PARTIES WHO ARE RESPONSIBLE FOR INSTALLATION, OPERATION OR MAINTENANCE OF ANY BEST MANAGEMENT PRACTICES (BMPS);
5. MAINTAIN A CURRENT COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ON THE SITE AT ALL TIMES.

AMENDING THE STORM WATER POLLUTION PREVENTION PLAN
THE PERMIT-HOLDER SHALL AMEND THE STORM WATER POLLUTION PREVENTION PLAN WHENEVER:
1. DESIGN, OPERATION OR MAINTENANCE OF BEST MANAGEMENT PRACTICES (BMPS) IS CHANGED.
2. DESIGN OF THE CONSTRUCTION PROJECT IS CHANGED THAT COULD SIGNIFICANTLY AFFECT THE QUALITY OF THE STORM WATER DISCHARGES.
3. SITE OPERATOR'S INSPECTIONS INDICATE DEFICIENCIES IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) OR ANY BEST MANAGEMENT PRACTICES (BMPS).
4. INSPECTIONS BY A LOCAL AUTHORITY OR BY THE MISSOURI DEPARTMENT OF NATURAL RESOURCES INDICATE DEFICIENCIES IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) OR ANY BEST MANAGEMENT PRACTICES (BMPS).
5. AS REQUESTED BY THE CITY ENGINEER OR THEIR DESIGNEE.

DEWATERING PROCEDURES
1. ALTHOUGH NO DEWATERING ACTIVITIES ARE ANTICIPATED FOR THIS PROJECT, IF THEY BECOME NECESSARY DUE TO UNFORESEEN CIRCUMSTANCES, THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE RULES AND REGULATIONS FOR DEWATERING, THESE INCLUDE BUT ARE NOT LIMITED TO MSD, MDNR, THE CITY, AND THE EPA.
2. DURING DEWATERING ACTIVITIES, STANDING "CLEAR, UNPOLLUTED WATER" CAN BE DECANTED AND DISCHARGED TO THE STORM SYSTEM. WATER THAT HAS BECOME TURBID DURING CLEANING SHOULD BE EITHER, (1) PUMPED AND HAULED TO AN ACCEPTABLE WASTEWATER DISPOSAL FACILITY OR (2) TREATED BY FILTRATION, SUCH AS PUMPED THROUGH A BAG FILTER AND DISCHARGED TO THE SANITARY SEWER SYSTEM.
3. A SPECIAL DISCHARGE PERMIT FROM MSD IS NOT REQUIRED FOR DISCHARGING TO THE SANITARY SYSTEM IF THE TOTAL VOLUME IS LESS THAN 10,000 GALLONS. THE FLOW RATE PUMPED INTO THE SANITARY SYSTEM SHALL NOT EXCEED 50 GPM.

DEFINITIONS

CLEAR WATER: WATER THAT HAS SETTLED ITS SOLIDS FOR 24 HOURS AND CAN BE PUMPED OUT OF THE BMP WITHOUT RE-SUSPENDING THE SOLIDS.

UNPOLLUTED WATER: DEFINED BY MSD ORDINANCE 12559 AS MEANING "ANY WATER THAT MAY BE DISCHARGED UNDER NPDES REGULATIONS INTO WATERS OF THE STATE WITHOUT HAVING TO BE AUTHORIZED BY A NPDES PERMIT AND WHICH WILL NOT CAUSE ANY VIOLATIONS OF STATE OR FEDERAL WATER QUALITY STANDARDS.

CONTAINMENT FAILURE PLAN
IN THE EVENT OF ANY LOSS OF CONTAINED SEDIMENT:

1. REPAIR ANY DAMAGED SILTATION FENCES.
2. CLEAN UP ANY NECESSARY SILTED AREAS.
3. RESTORE ANY NECESSARY SILTED AREAS.
4. PROVIDE DOCUMENTATION OF ACTIONS & MANDATORY REPORTING TO THE CITY DEPARTMENT OF PUBLIC WORKS.

Additional erosion control measures may be required during construction that are not shown on these plans. Contractor is responsible for installing and maintaining temporary and/or interim erosion control measures during construction progression or as required by the City and/or MDNR Inspector. Any changes/additions to the Storm Water Pollution Prevention Plan (SWPPP) shall be documented by the contractor and remain on file at the site.

SILT FENCE or OTHER EROSION CONTROL BMP

The original signed and sealed of this drawing is on file at the office of The Clayton Engineering Company. Any modifications to this drawing shall release said The Clayton Engineering Company, the Engineer and/or Surveyor whose seal appears hereon from any liability resulting from said unauthorized modifications. The signed and sealed original is the official document and shall take precedence over any digital version.

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Underground facilities, structures & utilities have been plotted from available surveys, records & information, and therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, or location of these facilities, structures, & utilities.

The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act.

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MO Corp. Cert. of Authority: 000001014
IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000579

REVISIONS

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PEAK CONSTRUCTION CORPORATION
9525 W BRYN MAWR, SUITE 810
ROSEMONT, IL 60018

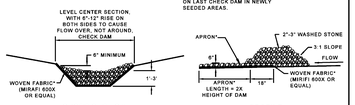
STORMWATER POLLUTION PREVENTION PLAN
AXIUM PLASTICS
4001 Premier Pkwy
St. Peters, MO 63376

Prepared for:

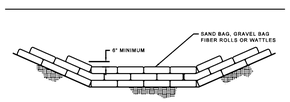
STATE OF MISSOURI
JOHN R. WILLHITE
PE-2018000295
PROFESSIONAL ENGINEER
John R. Willhite
Professional Engineer PE-2018000295

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C8.0 of

NEW	REVISIONS				
1/10/04	10/10/11	1/1/16			

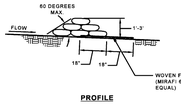


ROCK CHECK DAM



GENERAL NOTES

1. NUMBER OF BAGS AND ARRANGEMENT MAY VARY WITH ON-SITE CONDITIONS.
2. SEE GRAVEL BAG OR WATTLE BMP FOR ADDITIONAL INFORMATION.
3. INSTALL GEOTEXTILE FABRIC PER MANUFACTURER'S SPECIFICATIONS.
4. SEE ADDITIONAL GEOTEXTILE REQUIREMENTS AT THE END OF THE SEDIMENT & EROSION CONTROL MANUAL.



SAND BAG OR GRAVEL BAG FILTER ROLLS OR WATTLES CHECK DAM

ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION CREVE COEUR, MISSOURI

TYPICAL BMP DETAIL

CHECK DAM

REVISION DATE: January 1, 2016

DRAWING 806-35.00

CHECK DAM

PHYSICAL DESCRIPTION - A small dam built within a drainage swale or temporary diversion channel designed to pond water and cause sediment to settle out. Dams can be constructed of rock, sand bags, filter rolls / wattles, triangular dikes, or gravel bags. Silt fence shall not be used to construct check dams.

WHERE BMP IS TO BE INSTALLED - At intervals along drainage swales or channels. The top of the downstream check dam should be level with the base of the upstream check dam.

CONDITIONS FOR EFFECTIVE USE OF BMP:
Type of Flow: Moderate concentrated flow
Contributing Area: Maximum of 2 acres
Channel Slope: Maximum of 2%

WHEN BMP IS TO BE INSTALLED - Prior to disturbance of natural vegetation in contributing drainage area; immediately after construction of drainage way.

For additional information see Section 806.30 of St. Louis County's Standard Specification for Highway Construction.

INSTALLATION / CONSTRUCTION PROCEDURES
- ✓ Grade drainage way and compact area of check dam.
- ✓ Place rock, sand bags, filter rolls / wattles or gravel bags to required configuration perpendicular to flow.

O&M PROCEDURES
- ✓ Inspect every week and after every storm.
- ✓ Remove trash and leaf accumulation.
- ✓ Remove sediment buildup once it reaches ½ depth of check dam or 12" depth, whichever is less.
- ✓ Restore dam structure to original configuration to protect banks.
- ✓ Replace rock on upstream face of dam if ponding does not drain in reasonable timeframe.

SITE CONDITIONS FOR REMOVAL - Remove after contributing drainage areas have been adequately stabilized and vegetation is adequately established in drainage way. Regrade and vegetate area of check dam.

TYPICAL DETAIL - 806-35.00

NON-SEDIMENT POLLUTION CONTROL

PHYSICAL DESCRIPTION - Control measures designed to prohibit chemicals, hazardous materials, solid waste and construction debris from polluting stormwater. Pollutants carried in solution or as surface films on runoff will be carried through most erosion control and sediment capture BMP's. Keeping substances like fuel, oil, asphalt, paint, solvents, fertilizer, soil additives, concrete wash water, solid waste and construction debris from polluting runoff can be accomplished to a large extent through good housekeeping on the site and following the manufacturer's recommendations for disposal.

WHERE BMP IS TO BE INSTALLED - Collection, storage and fueling areas should be located onsite in an area that does not receive a substantial amount of runoff from upland areas and does not drain directly to lakes, creeks, streams, rivers, sewers, groundwater, wetlands, or road ditches.

CONDITIONS FOR EFFECTIVE USE OF BMP:
- ✓ Reduction in pollutants depends heavily on how construction personnel perform their duties. An effective management system requires training and signage to promote proper storage, handling and disposal of materials. Follow up observations of actions and inspection of storage areas by management personnel is also required.
- ✓ Plans should contain notes clearly stating requirements for addressing potential pollutants.
- ✓ Fueling areas and storage areas for hazardous materials should be protected by berms or other means of catching leaks or spills. Do not store hazardous chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and under cover in secondary containment.

WHEN BMP IS TO BE INSTALLED - Immediately following installation of construction entrance and wash station.

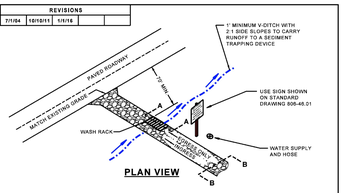
INSTALLATION/CONSTRUCTION PROCEDURES:
- ✓ Place waste receptacles near area of work.
- ✓ Construct protective berm or other devices around fueling and hazardous materials storage areas.
- ✓ Install appropriate signage.
- ✓ Post guidelines for proper handling, storage and disposal of materials, and emergency spill cleanup on site.

O&M PROCEDURES:
- ✓ Inspect activities on regular basis.
- ✓ Inspect storage areas and control devices at least every two weeks and after every storm.
- ✓ Make necessary corrections and repairs.

SITE CONDITIONS FOR REMOVAL - Maintain practices until all construction on the site has been completed

TYPICAL DETAILS - General pollution prevention notes attached.

NEW	REVISIONS				
1/15/04	7/1/04	10/10/11	1/1/16		



ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION CREVE COEUR, MISSOURI

TYPICAL BMP DETAIL

WASHDOWN STATION

REVISION DATE: January 1, 2016

DRAWING 806-46.00

WASHDOWN STATION

PHYSICAL DESCRIPTION - An area located at construction entrances designed to wash sediment from the tires and undercarriage of exiting vehicles and prevent sediment from being tracked onto existing roadways.

WHERE BMP IS TO BE INSTALLED - Across or immediately adjacent to exit paths from unpaved construction sites.

CONDITIONS FOR EFFECTIVE USE OF BMP:
Drainage: Downstream BMP sized to treat dirty runoff from washdown station

WHEN BMP IS TO BE INSTALLED - First order of work, along with construction entrance, prior to vehicles or equipment accessing unpaved areas.

INSTALLATION/CONSTRUCTION PROCEDURES:
- ✓ Grade and compact area for drainage under washdown pad.
- ✓ Install steel-ribbed plate on frame or other support to allow a 2" drain space.
- ✓ Grade and vegetate downstream BMP (v-ditch shown on detail).
- ✓ Install water supply and hose.
- ✓ Post sign in advance of station indicating that all exiting vehicles and equipment must use station prior to exiting site.

O&M PROCEDURES:
- ✓ Remove sediment daily.
- ✓ Repair settled areas.
- ✓ Replace rock if necessary to maintain clean surface.

SITE CONDITIONS FOR REMOVAL - Remove when vehicles and equipment will no longer access unpaved areas

TYPICAL DETAIL: 806-46.00

SODDING

PHYSICAL DESCRIPTION - A ¾ inch to 1inch thick mat of vigorous turf, free of disease, insects and weeds. Sod prevents raindrops from disrupting the soil structure and causing erosion. Sod slows water runoff and acts as a filter when sediment-laden runoff crosses over the sodded area.

WHERE BMP IS TO BE INSTALLED - Typically installed in areas requiring immediate erosion protection, such as swales or detention ponds and as filter strips, around inlets, and adjacent to curbs. Also installed in areas requiring immediate aesthetic appearance or function such as entrances to new subdivision and off site construction areas.

CONDITIONS FOR EFFECTIVE USE OF BMP - Type of Flow: Sheet flow and low concentrated flows with velocities less than 5 fps.

WHEN BMP IS TO BE INSTALLED - Immediately after finish grading, installation of area inlets, and installation of underground services and foundations of new homes.

INSTALLATION / CONSTRUCTION PROCEDURES
- ✓ Finish grade area and remove all debris larger than ½ inch in diameter and concentrated areas of smaller debris.
- ✓ Soil preparation of area to be sodded shall be determined by tests to determine lime and fertilizer requirements. Soil amendments shall be mixed into top 3 to 6 inches of soil by disking or other means.
- ✓ Level and roll soil lightly to provide an even grade and firm the surface. Soil should not be excessively wet or dry.
- ✓ Lay first row of sod perpendicular to the slope or direction of flow. Butt subsequent rows tight against previous rows with strips staggered in brick-like pattern. Fill minor gaps with good soil and roll entire surface to ensure contact.
- ✓ Stake, staple and/or net corners and centers of sod strips as required.
- ✓ Water immediately after installation enough to soak 4 inches into soil without causing runoff.
- ✓ For additional information see Section 803 of St. Louis County's Standard Specification for Highway Construction.
- ✓ Type of sod shall be as specified in the contract or on the approved plans.

O&M PROCEDURES:
- ✓ Water sod daily for 3 weeks - enough to soak 4-inches into soil without causing runoff.
- ✓ Reposition areas of sod that has moved along the slope.
- ✓ Remove sediment accumulations - replace sod if necessary.
- ✓ Repair any eroded areas, replace sod, and stabilize as needed.
- ✓ Do not mow until 3-inches of new growth occur. During the first 4 months, mow no more than ⅓ the grass height.

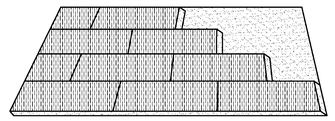
SITE CONDITIONS FOR REMOVAL - Not applicable.

TYPICAL DETAIL - 803-10.00

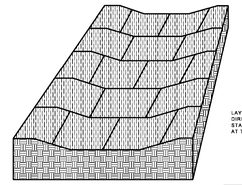
NEW	REVISIONS				
1/15/04	10/10/11	1/1/16	1/1/16		

1) LAY SOD IN A STAGGERED PATTERN WITH STRIPS BUTTED TIGHTLY AGAINST EACH OTHER.

2) ON SLOPES GREATER THAN 4%, USE PEGS OR STAPLES TO FASTEN SOD FIRMLY AT THE CORNERS AND CENTERS.



INSTALLATION OF GRASS SOD



LAY SOD PERPENDICULAR TO THE DIRECTION OF FLOW. USE PEGS OR STAPLES TO FASTEN SOD FIRMLY AT THE CORNERS AND CENTERS.

INSTALLATION OF SOD IN WATERWAYS

NOTE: JUTE MATTING CAN BE USED WHERE ADDITIONAL STABILITY IS REQUIRED.

ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION CREVE COEUR, MISSOURI

TYPICAL BMP DETAIL

SODDING

REVISION DATE: January 1, 2016

DRAWING 803-10.00

EROSION CONTROL PLAN
FOR
PREMIER 370 BUSINESS PARK - ADJUSTED LOT 32
ST. PETERS, MISSOURI

GENERAL STATEMENT AND BEST MANAGEMENT PRACTICE

The control of erosion of soil is important on any site where earth movement is required and un-vegetated slopes are created. No impoundments downstream will be affected.

To guard against erosion, the contractors, engineers, and project owner must work together to properly sequence the placement of siltation controls and diligently maintain their effectiveness. The siltation fences be placed prior to clearing. The placement of the silt fence will serve as a large measure of protection to downstream properties. Next, the storm water collection system to direct drainage to the existing storm system should then be constructed. Siltation protection should be constructed around all storm sewer inlets.

Planting of landscaping materials and establishment of lawn areas will aid in the control of erosion. If landscaping cannot be accomplished in a timely fashion, at a minimum the planting of grass sodding within sensitive areas shall begin as soon as it in place. As other areas around the construction site are finish graded, they too shall have lawns seeded or sodded. Mulch and/or erosion control blankets are alternative for areas unable to immediately establish vegetation.

WORK AREA AND PHASING

Approximately 2.10± AC. will be disturbed, including off site areas. The proposed start date is SUMMER 2026 Site work should commence under approximately four continuous stages. First, the site demolition, clearing and grading will be done. Second, the installation of the site utilities. The third stage will consist of construction of the pavement, curbs, and walkways. The final phase will consist of landscaping and storm water quality BMP installation. The estimated time needed to construct the project is approximately twelve (12) months.

GRADING OPERATION

All access to the development will be by the use of the temporary construction entrance on Premier Parkway, as shown on the SWPPP. Provisions for the washing of vehicles exiting the site must be made at the temporary construction entrance location within the site. Construction parking areas must be on gravel stabilized surfaces. A minimum 8" thick layer of 1" to 2" gravel must be placed over a geogrid and geosynthetic material. If a haul route is necessary for importing fill or removal of excess soil materials, the Contractor shall provide the necessary information prior to permit issuance.

DEVELOPMENT DETAILS

Soils on site appear to be of good quality for vegetation. However, a landscape/soils expert should be consulted to perform soils testing for any additional preparation measures needed prior to re-vegetation. If available, review the Geotechnical Report for further details on soil conditions. Temporary siltation control devices shall remain in place until the establishment of turf. Permanent erosion control measures include the establishment of turf.

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MO Cert. of Authority: Engineering #000514 Surveying #000514
IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000579

REVISIONS

FILE: G:\2\no\21\82\2_AXIUM\STP\ArtAxium Building Expansion - COVER & DETS - 21182.2.dwg
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St. Peters, MO 63376

PEAK CONSTRUCTION CORPORATION
9525 W. BRYN MAWR SUITE 810
ROSEMONT, IL 60018

SWPPP DETAILS
AXIUM PLASTICS BUILDING EXPANSION
4051 Premier Pkwy

Prepared for:

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Underground facilities, structures & utilities have been plotted from available surveys, records & information, and therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, or location of these facilities, structures, & utilities.

The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMO.

Additional erosion control measures may be required during construction that are not shown on these plans. Contractor is responsible for installing and maintaining temporary and/or interim erosion control measures during construction progression or as required by City of Maryland Heights and/or MDNR Inspector. Any changes/additions to the Storm Water Pollution Prevention Plan (SWPPP) shall be documented by the contractor and remain on file at the site.

STATE OF MISSOURI
JOHN R. WILLHITE
PE-2018000295
PROFESSIONAL ENGINEER
04-17-2026

Professional Engineer PE-2018000295

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C8.1 of ____

(PRINTED ON 30"X42")

TABLE 1
PERMANENT SEEDING PLANT CHARACTERISTICS

SPECIES		REGION OF THE STATE	MAINTENANCE		SEEDING COMPETITIVE ABILITY	FERTILITY NEEDS		SEEDING EMERGENCE & VIGOR
			LOW	HIGH		LOW	HIGH	
COOL SEASON GRASSES	TURF FESCUE	ALL		●	H		●	M-H
	TALL FESCUE	ALL	● 1	●	H	●		M-H
	KETUCKY BLUEGRASS	ALL	● 1	●	H	●	● 1	M-H
	PERENNIAL RYEGRASS	ALL	● 1	●	H	●	● 1	M-H
	REDTOP	ALL	●		M	●		M
	REED CANARY	NORTH 2/3	●		L		● 2	L
WARM SEASON GRASSES	COMMON BERMUDAS	SOUTH	●		L	●		M
	HYBRID BERMUDA	SOUTH		●			●	
	BUFFALOGRASS 3	ALL	●			●		
	ZOYSIA 4	SOUTH		●			●	
LEGUMES	BIRDSFOOT TREFOIL	NORTH	●		L			L
	CROWNVETCH	ALL		●		●	● 1	M-H
	COMMON LESPEDEZA 7	ALL		●	M	●		H
	RED CLOVER	ALL	●		H		●	M-H
	WHITE CLOVER	ALL	●		L-M		●	M-H
	SERICEA LESPEDEZA 6	ALL	●		M	●		M
COMPANION CROPS/CEREAL GRAINS	RYEGRASTRYE	ALL	●		L-M		●	H
	OATS	ALL	●		M		●	M

L=LOW, M=MEDIUM, H=HIGH
1. Will be high maintenance in lawn type settings.
2. Responds well to fertilizer, but does not necessarily have to be applied.
3. Usually sprigged, but can be seeded.
4. Usually sprigged, plugged, or sodded.
5. Legumes alone will not provide adequate erosion protection; use with a grass in a mixture.
6. Can be invasive in low fertility fields.
7. Will reseed each year if not mowed until after seed shatter in September.

CITY OF ST. PETERS
STANDARDS FOR EROSION AND SEDIMENT MANAGEMENT PRACTICE

PERMANENT SEEDING
(acres or sq.ft.)
CODE 880

DEFINITION

Establishing permanent vegetative cover to stabilize disturbed areas.

PURPOSE

The purpose of this practice is to reduce erosion and decrease sediment from disturbed areas, and to permanently stabilize such areas in a manner that adopts to site conditions and allows selection of the most appropriate plant materials.

CONDITIONS WHERE PRACTICE APPLIES

1. Disturbed areas where long-lived vegetative cover is needed to stabilize the soil.
2. On other areas where cover is desired.

CRITERIA

Selection of Plant Materials - Selection of plant materials will be based on climate, topography, soils, land use, available light, aesthetics and maintenance. See tables 1, 2 and 5 for selection of grasses and legumes and ground covers. For trees and shrubs see management practice standard 985, TREE AND SHRUB PLANTING.

Seedbed Preparation - Seedbed preparation is essential for the seed to germinate and grow. For broadcast seeding and drilling, loosen the top 3 to 6 inches of soil. If recent tillage or grading operations have resulted in a loose surface, additional tillage may not be required. If rainfall caused the soil surface to become sealed or crusted, till the surface prior to seeding. Avoid preparing the seedbed in excessively wet conditions.

Soil Testing - One soil test will be performed for every 50 acres, or portion thereof, of project area. All tests are to be performed after the completion of grading operations to determine the amount of soil amendments required. All soil testing is to be performed by a testing facility approved by the governing agency. A list of approved testing facilities is shown in Table 6. All soil testing results and recommendations are to be submitted to the governing agency.

Liming - Acid soils with low pH can prevent seeding success. Sites where the pH of the soil is less than 6.0 shall apply lime at a rate of 1-1/2 tons per acre, or as specified by the soils testing agent. The lime application shall be finely ground agricultural limestone.

Fertilizer - Apply 400 lbs./acre of 6-24-24 fertilizer (8 lbs./1000 S.F.) into the top 3 to 6 inches of soil, or as specified by the soils testing agent.

Seeding Rates - Apply seed evenly with a broadcast seeder, drill, or hydroseeder. Grasses and legumes should be planted more than ½" deep. Seeding shall occur at the rates specified in Table 3 and 4, and times specified in Table 5.

Mulching - Mulching shall be required on all seedbeds prior to the placement of seed. Mulch shall be placed in accordance with section 875 of this document.
Irrigation - When an adequate water supply is available, irrigate to keep the seedbed moist (not wet) for 7 to 10 days after seeding. This may require watering daily the first week, especially during hot weather, and less frequently thereafter. Water application rates must be carefully controlled to prevent runoff and erosion. Inadequate or excessive amounts of water can be more harmful than no supplemental water. Irrigation is seldom needed for low-maintenance seedings made at the appropriate time of the year.

OPERATION AND MAINTENANCE

Permanent seeding shall be inspected, at the request of the developer, or his representatives, no sooner than four (4) weeks after planting, to see if stands are of adequate thickness (more than 30% of the ground surface covered). Stands should be uniform and dense for best results. Fertilize, re-seed and mulch bare and sparse areas immediately to prevent erosion.

Inspect all planted areas for failures and make necessary repairs, replacements, re-seedings, and re-mulching within the planting season, if possible. If a stand has less than 40% cover, re-evaluate the choice of plant materials, quantities of lime and fertilizer, seeding or planting methods, time of seeding or planting and available light and moisture. Re-establish the stand following the original specifications, but with modifications based on the evaluation. If vegetation continues to fail to grow, a soil test will be requested to determine the problem.

Do not mow high-maintenance turf seedings until the stand is at least 6 inches tall. Do not mow closer than 3 inches during the year of establishment.

Low-maintenance stands should be mowed only as needed to control weeds. Mowing should be done before weeds go to seed. Keep mowing height above the height of the seeded plants. Vine and shrub type ground covers may need hand weeding until the area is well covered.

Herbicides may also be used for weed control. Apply all herbicides according to rates specified on the label.

Should the plant material to be planted be out of season consult temporary seeding practices in the document for temporary vegetation.

1. Conventional Method - If soil conditions are suitable during the dormant seeding period, apply lime and fertilizer, prepare the seedbed and seed as specified in this specification. Increase the seeding rate at least 50%. Mulch following seeding.

2. Overseeding Method - Liming, fertilizing, seedbed preparation and mulching may be done after August 31. The seed shall be broadcast uniformly over the mulch between November 15 and March 1. When this is done, increase the seeding rates 50%.

ALTERNATE PLANTING METHODS

Sprigging - Some plants cannot be grown from seed and must be planted vegetatively. Sprigs are fragments of horizontal stems or roots, which include at least one node (joint). Sprigs may be planted by either of the following methods:

A. Broadcast sprigs and press into the top 1/2 to 2 inches of soil with a cultipacker or a disk set straight so that the sprigs are not brought back toward the surface.

B. Make furrows 4-6 inches deep and 2 feet apart. On sloping areas, make furrows Perpendicular to the slope (on the contour). Place sprigs in the furrows with one end at or above ground level. Close the furrow when plants have been placed.

C. Plant sprigs in furrows with a tractor-drawn transplanter. Sprigging should be done during specified seeding periods.

Ground covers - Most shrub and vine type ground covers are available as bare root stock, balled and burlapped, or in containers or pots. On flat areas where erosion is not a problem, prepare the site by tilling to a depth of 10-12 inches. On sloping sites, till 2 - 3 inches deep to incorporate needed soil amendments.

Individual plants - Prepare a hole slightly larger than the container or ball and deep enough that the roots can extend to the bottom. Most ground covers should be planted 1/2" to 1" deeper than they have grown in the pot or container.

ESCROW AGREEMENT

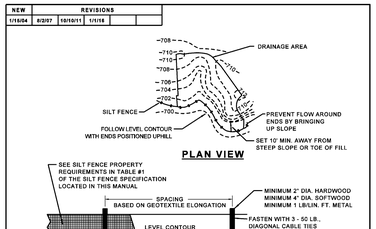
An escrow agreement, to cover the costs to grade, fertilize, place permanent seeding, and irrigate, the completed project shall be established prior to issuance of the construction permit for any residential common ground areas and any non-residential development. The escrow cost estimate must be submitted with the plans and specifications for the project, for approval, prior to the execution of the escrow agreement. The escrowed funds for permanent seeding will be released upon successful completion of an inspection of said revegetation. The inspection may be requested by the developer, or his representative(s) no earlier than one (1) month after the placement of permanent vegetation for the project. Partial escrow releases for permanent seeding may be performed as deemed appropriate by the inspecting agency.

PLANS AND SPECIFICATIONS

The plans and specifications for seeding or planting and mulching shall include the following items:

1. Escrow cost estimate for all proposed permanent seeding.
2. Seeding mixtures and rates or plant species and density.
3. Site preparation.
4. Fertilization mixtures and rates as defined by soil tests.
5. Seeding or planting methods.
6. Seeding or planting periods.
6. Mulching materials and application rates.
7. Schedule for installation, inspection and maintenance.

NEW	REVISIONS				
1/10/04	8/2/07	10/10/11	1/1/16		



NOTE: IF FABRIC IS INSTALLED BY EQUIPMENT DESIGNED TO SLICE INTO THE GROUND, THE TRENCH IS NOT NEEDED.

ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION CREVE COEUR, MISSOURI

TYPICAL BMP DETAIL

SILT FENCE

REVISION DATE: January 1, 2016

DRAWING 806-70.00

CITY OF ST. PETERS
STANDARDS FOR EROSION AND SEDIMENT MANAGEMENT PRACTICE

SILT FENCE

CODE 920

DEFINITION

A temporary barrier of entrenched geotextile fabric (filter fabric) stretched across and attached to supporting posts used to intercept sediment-laden runoff from small drainage areas of disturbed soil.

PURPOSE

The purpose of this practice is to cause deposition of transported sediment load from sheet flows leaving disturbed areas.

CONDITIONS WHERE PRACTICE APPLIES

A silt fence may be used subject to the following conditions:

1. The maximum allowable slope lengths contributing runoff to a silt fence are listed in the table below:

% Slope	Maximum Spacing (ft)
25	50
20	75
15	125
10	175
<10	200

2. The maximum drainage area for overland flow to a silt fence shall not exceed 1/2 acre per 100 feet of fence; and

3. Erosion would occur in the form of sheet erosion; and

4. There is no concentration of water flowing to the barrier; and

5. Where effectiveness is required for more than one construction season or 6 months, whichever is less.

6. As protection for a storm drain inlet refer to management practice standard INLET PROTECTION - FABRIC DROP 860.

CRITERIA

Design computations are not required. All silt fences shall be placed as close to the contour as possible, with the ends extending upslope. The area below the fence must be undisturbed or stabilized.

1. Silt fence fabric shall have a minimum apparent opening size (AOS) of 30 for nonwoven and 50 for woven.

2. Fence posts shall be a minimum of 48 inches long. Wood posts will be of sound quality wood with a minimum cross sectional area of 1.56 square inches (1.25 inches x 1.25 inches). Steel posts will be standard T and U sections weighing not less than 1.0 pound per linear foot. The maximum spacing will be 5 feet. When wire backing is used, the maximum spacing may be increased to 10 feet. The posts shall be driven a minimum of 18 inches into the ground. Spacing may need to be adjusted so that posts are located in low areas where water may pond.

3. Wire fence shall be a minimum 10 gauge top and bottom wires with a maximum 6 inch mesh opening, or as approved by the engineer inspector.

4. The filter fabric should be furnished in a continuous roll cut to the length of the silt fence needed to avoid splices. When splices are necessary, the fabric should be spliced at a support post with a minimum 6 inch overlap, folded over and securely fastened.

5. The height of a silt fence shall be a minimum of 24 inches above the original ground surface and shall not exceed a height of 30 inches above the ground surface. Wire supports shall be used on silt fences exceeding 24 inches in height.

6. The silt fence shall be entrenched to a minimum depth of 6 inches, with an additional 4 inches extending along the bottom of the trench in the upslope direction. The trench shall be backfilled and the soil compacted over the fabric.

7. The filter fabric and wire support, if used, must be securely fastened to the upslope side of the posts using heavy duty wire staples at least one inch long, tie wires or hog rings. The fabric shall not be stapled or wired to the wire support. The fabric shall not be stapled to existing trees.

8. Silt fences shall be used prior to the establishment of erosion controls and installed prior to the clearing of existing vegetation.

CONSIDERATIONS

Silt fences should be considered for trapping sediment where sheet and rill erosion may be expected to occur in small drainage areas. Silt fences should not be placed in areas of concentrated flows.

Research has shown that silt fences can trap a much higher percentage of suspended sediments than straw bale barriers, and in most cases are the preferred option. As with straw bale barriers, improper placement as well as improper installation and maintenance of silt fences have, in many instances, significantly decreased the effectiveness of this practice.

While both woven and non-woven fabrics are commercially available, the woven fabric generally displays higher strength than the non-woven fabrics. When tested under acid and alkaline water conditions, most of the woven fabrics increase in strength. There are a variety of reactions among non-woven fabrics.

The same is true of testing under extensive ultra violet radiation. Permeability rates demonstrate very high filtering efficiencies for sandy sediments, there is considerable variation among both woven and non-woven fabrics when filtering the finer silt and clay particles.

PLANS AND SPECIFICATIONS

Plans and specifications for installing silt fences shall be in keeping with this standard and shall describe the requirements for applying the practice and contain the following minimum requirements:

1. Show the location of all the silt fencing to be installed.
2. The type, size, and spacing of fence posts.
3. The size of woven wire support fences if used.
4. The type of filter fabric used.
5. The method of anchoring the filter cloth.
6. The method of fastening the filter cloth to the fencing support.
7. The installation, inspection and maintenance schedules with the responsible party clearly identified.

OPERATION AND MAINTENANCE

Silt fences shall be removed when they have served their usefulness, but not before the upslope areas have been permanently stabilized.

Silt fences shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.

Should the fabric decompose or become ineffective prior to the end of the expected usable life and the fence still is necessary, the fabric or the entire system shall be replaced promptly.

Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.

Any sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform to the existing grade, a seedbed prepared and the site vegetated.

CITY OF ST. PETERS
STANDARDS FOR EROSION AND SEDIMENT MANAGEMENT PRACTICE

ROCK OUTLET PROTECTION

CODE 910

DEFINITION

A section of rock protection placed at the outlet end of culverts, conduits, or channels.

PURPOSE

The purpose of this practice is to prevent scour erosion at stormwater outlets, to protect the outlet structure, and to minimize the potential for downstream erosion by reducing the velocity and energy of concentrated stormwater flows. The practice also reduces the effects of turbidity and sedimentation downstream.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where discharge velocities and energies at the outlets of culverts, conduits, or channels are sufficient to erode the receiving channel or area. This applies to:

1. Culvert outlets of all types.
2. Pipe conduits from all sediment basins, dry and wet basin detention storm water ponds.
3. New channels constructed as outlets for culverts and conduits.
4. Where outflows from conduits or channels do not exceed 10 fps.

The design of structurally lined aprons at the outlets of pipes and paved channels sections applies to the immediate area or reach below the pipe or channel and does not apply to continuous rock linings of channels or streams.

The design of rock outlet protection depends entirely on the location. Pipe outlets at the top of cuts or on slopes steeper than 10 percent cannot be protected by rock aprons or riprap sections due to re-concentration of flows and high velocities encountered after the flow leaves the apron.

CRITERIA

Tailwater depth - Depth of tailwater immediately below the pipe outlet must be determined for the design capacity of the pipe. Manning's Equation may be used to determine tailwater depth. If the tailwater depth is less than half the diameter of the outlet pipe and the receiving stream is wide enough to accept divergence of the flow, it shall be classified as a Minimum Tailwater Condition. If the tailwater depth is greater than half the pipe diameter and the receiving stream will continue to confine the flow, it shall be classified as a Maximum Tailwater Condition. Pipes which outlet onto a flat area with no defined channel will be assumed to have a Minimum Tailwater Condition.

Apron length - Apron length (La) shall be determined according to the appropriate tailwater condition and velocity out of the conduits.

Apron width - When the pipe discharges directly into a well-defined channel, the apron shall extend across the channel bottom and up the channel banks to an elevation one foot above the maximum tailwater depth or to the top of the bank, whichever is less.

If the pipe discharges onto a flat area with no defined channels, the following criteria will be followed. Apron width will be 3 times the pipe diameter at the upstream location. The downstream width will be the pipe diameter plus the apron length for pipes with minimum tailwater conditions and the pipe diameter plus 0.4 times the apron length for pipes flowing under maximum tailwater conditions.

Bottom grade - The outlet protection apron shall be constructed with no slope (0.0% grade) along its length. There shall be no overfill at the end of the apron. The elevation of the downstream end of the apron shall be equal to the elevation of the receiving channel or adjacent ground.

Alignment - Outlet protection apron shall be located so that there are no bends in the horizontal alignment.

Materials - Outlet protection may be done using rock riprap, concrete block or gabions.

Thickness - The maximum thickness of the riprap layer shall be 1.5 times the maximum stone diameter for d50 of 15 inches or less; and 1.2 times the maximum stone size for d50 greater than 15 inches

Stone quality - Stone for riprap shall consist of field stone or rough unhewn quarry stone. The stone shall be hard and angular and a quality that will not disintegrate on exposure to water or weathering. The specific gravity of the individual stones shall be at least 2.5.

Recycled concrete equivalent may be used provided it has a density of at least 150 pounds per cubic foot, and does not have any exposed steel or reinforcing bars.

Filter Fabric - In all cases, filter fabric shall be placed between the riprap and the underlying soil to protect soil movement into and through the riprap.

Gabions - shall be made of hexagonal triple twist mesh with heavily galvanized steel wire. Gabions shall be fabricated in such a manner that the sides, ends, and lid can be assembled at the construction site into mats of the specified sizes. The mats shall be a minimum of 9 inches thick.

The area on which the gabion is to be installed shall be graded as shown on the drawings. Foundation conditions shall be the same as for placing rock riprap. Where required, a cut off may be needed to prevent undermining of the main gabion structure.

CONSIDERATIONS

The outlets of channels, conduits and other structures are points of high erosion potential, because they frequently carry flows at velocities that exceed the allowable limit for the area downstream. To prevent scour and undermining, an outlet stabilization structure is needed to absorb the impact of the flow and reduce the velocity to non-erosive levels. A riprap-lined apron is the most commonly used practice for this purpose because of its relatively low cost and ease of installation. The riprap apron should be extended downstream until stable conditions are reached even though this may exceed the length calculated for design velocity control.

Riprap-stilling basins or plunge pools reduce flow velocity rapidly. They should be considered in lieu of aprons where overfills exit at the ends of pipes or where high flows would require excessive apron length. Consider other energy dissipaters such as concrete impact basins or paved outlet structures when conduits are flowing more than 10 fps. These will require a special design and table 2 cannot be used.

PLANS AND SPECIFICATIONS

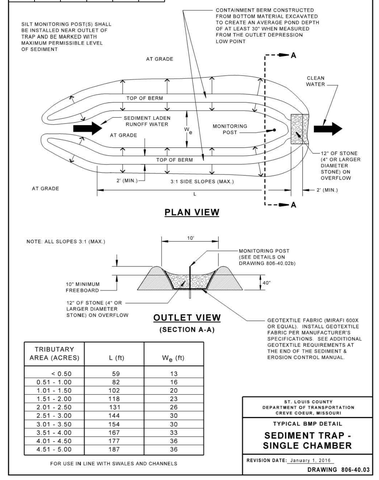
Plans and specification for installing rock outlet protection shall be in keeping with this standard and will describe the requirements for applying the practice. At a minimum include the following:

1. Location where the practice will be installed.
2. Dimensions of the practice.
3. Plan view, profile and cross section of each channel reach between the storm drain outlet under consideration and the existing publicly maintained system or the natural stream channel receiving the discharge flow.
4. Rock size.
5. Rock thickness.
6. Fabric specifications.
7. The installation, inspection and maintenance schedules with the responsible person clearly identified.

OPERATION AND MAINTENANCE

Inspect riprap outlet structures after heavy rains to see if any erosion around or below the riprap has taken place or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.

NEW	REVISIONS				
1/15/04	10/10/11	11/1/14	1/1/16		



TRIBUTARY AREA (ACRES)	L (ft)	W_B (ft)
< 0.50	59	13
0.51 - 1.00	82	16
1.01 - 1.50	102	20
1.51 - 2.00	118	23
2.01 - 2.50	131	26
2.51 - 3.00	144	30
3.01 - 3.50	154	30
3.51 - 4.00	167	33
4.01 - 4.50	177	36
4.51 - 5.00	187	36

FOR USE IN LINE WITH SWALES AND CHANNELS

ST. LOUIS COUNTY
DEPARTMENT OF TRANSPORTATION
CREVE COEUR, MISSOURI
TYPICAL BMP DETAIL
SEDIMENT TRAP - SINGLE CHAMBER
REVISION DATE: January 1, 2016
DRAWING 806.40.03

SEDIMENT TRAP

PHYSICAL DESCRIPTION - A temporary small area of impoundment designed to trap water and allow sediment to settle out. A trap usually consists of an excavated area with a dewatering pipe or surface skimmer and spillway outlet stabilized with fabric and riprap. Due to short retention periods, sediment traps do not typically remove fine particles such as silts and clays.

WHERE BMP IS TO BE INSTALLED - Commonly used at the outlets of BMPs such as storm water diversion devices, channels, temporary slope drains, construction entrances, vehicle wash areas.

CONDITIONS FOR EFFECTIVE USE OF BMPs

Type of Flow:	Sheet flow and concentrated flow.
Contributing Area:	Maximum 5 acres.
Basin Volume:	Silt load of 1,800 cu./ft. per acre.
Length to Width Ratio:	5:1 min.; can be reduced with use of flocculants.

WHEN BMP IS TO BE INSTALLED - Prior to disturbance of natural vegetation.

INSTALLATION / CONSTRUCTION PROCEDURES

- ✓ Excavate to length, width, depth and slopes specified on plan.
- ✓ Install dewatering pipe.
- ✓ Place and compact fill to construct embankment and spillway.
- ✓ Place fabric over dewatering pipe and embankment.
- ✓ Install riprap on embankment and gravel over dewatering pipe or install surface skimmer.
- ✓ Install lathe or post at each end of basin, and at 20-foot intervals. Mark maximum allowable sediment depth as designed.
- ✓ The decision to install a fence around the high slope of the trap should be site specific with public safety in mind.

O&M PROCEDURES

- ✓ Inspect every week and after every storm.
- ✓ Remove trash accumulation.
- ✓ Remove sediment accumulations once sediment reaches design depth, as indicated on monitoring posts.
- ✓ Repair and re-vegetate any erosion damage.
- ✓ Repair settlement, cracking, piping holes, or seepage at embankment.

SITE CONDITIONS FOR REMOVAL - Remove after upstream areas are stabilized with vegetation. Re-grade as appropriate and vegetate immediately.

TYPICAL DETAILS - 806-40.02 (Sediment Trap: for use in open areas.)
806-40.03 (Sediment Trap - Single Cell: for use in line with swales and/or channels.)
806-40.04 (Sediment Trap - Double Cell: for use in line with swales and/or channels.)

CITY OF ST. PETERS
STANDARDS FOR EROSION AND SEDIMENT MANAGEMENT PRACTICE

DUST CONTROL

CODE 825

DEFINITION

Controlling dust blowing and movement on construction sites and roads.

PURPOSE

The purpose of this practice is to prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, to minimize health hazards, and improve traffic safety.

CONDITIONS WHERE PRACTICE APPLIES

This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

CRITERIA

The following are temporary and permanent methods for dust control.

Temporary Methods:

1. Mulches - See management practice standard MULCHING 875. Chemical or wood cellulose fiber binders may be used instead of asphalt to bind mulch material.
2. Vegetative Cover - See management practice standard TEMPORARY SEEDING 965.
3. Spray-on Adhesives - On mineral soils (not effective on muck soils). Keep traffic off these areas.

   Anionic asphalt emulsion Water Dilution: 7:1 coarse spray at 1,200 gal/acre

   Latex emulsion Water Dilution: 12.5:1 fine spray at 235 gal/acre

   Resin-in-water emulsion Water Dilution: 4:1 fine spray at 300 gal/acre.
4. Tillage - Roughen the surface and bring clods to the surface. This is an emergency measure, which should be used before soil blowing starts. Begin tillage on windward side of site. Chisel-type plows spaced about 12"-18" apart and spring-toothed harrows, are examples of equipment which may produce the desired effect.
5. Irrigation - This is commonly used and affords fast protection for haul roads and other heavy traffic roads. The site is sprinkled with water until the surface is moist. Repeat as needed.

6. Barriers - Solid board fences, snow fences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and blowing soil. Barriers placed at right angles to prevailing wind currents at intervals of about 10 times their height are effective in controlling soil blowing.
7. Calcium Chloride - Apply at a rate that will keep the surface moist. This chemical may be applied by a mechanical spreader as loose, dry granules or flakes at a rate that keeps the surface moist but not so much as to cause water pollution or plant damage. Application rates should be strictly in accordance with manufacturer's specified rates. Periodic re-treatment may be needed.
8. Stone - Stone can be used to stabilize roads or other areas during construction using crushed stone or coarse gravel. See management practice standard STABILIZED CONSTRUCTION ENTRANCE 930.
9. Street cleaning - Paved areas that have soil on them from construction sites should be cleaned daily, or as needed, utilizing a street sweeper or bucket-type endloader or scraper.
10. Permanent vegetation - See the management practice standard PERMANENT SEEDING 880 or SODDING 925. Existing trees or large shrubs may afford valuable protection if left in place.

CONSIDERATIONS

The easiest way to control dust is to avoid exposed soil surfaces. This is not possible on most construction sites, but the area exposed can usually be reduced by careful planning of controlled traffic patterns and by phasing of clearing and grading. Consider use of undisturbed vegetative buffers (min. 50 ft.) between graded areas and protected areas.

PLANS AND SPECIFICATIONS

Plans and specifications for dust control shall be in keeping with this standard and shall describe the requirements for applying the practice. At a minimum the following items should be included.

1. The area to be treated.
2. The methods that are acceptable to use.

Specifications should indicate when dust control is needed and the method of control to be used. Appropriate industry standards should be used. The installation, inspection and maintenance schedules with the responsible party clearly identified.

OPERATION AND MAINTENANCE

When temporary dust control measures are used, repetitive treatment should be applied as needed to accomplish control.

CITY OF ST. PETERS
STANDARDS FOR EROSION AND SEDIMENT MANAGEMENT PRACTICE

TOPSOILING

CODE 981

DEFINITION

Methods of preserving and using topsoil to enhance final site stabilization with vegetation.

PURPOSE

The purpose of this practice is to provide a suitable growth medium for final site stabilization with vegetation.

CONDITIONS WHERE PRACTICE APPLIES

1. Where the preservation or importation of topsoil is determined to be the most effective method of providing a suitable growth medium.
2. Where the subsoil or existing soil present any or all of the following problems:
   a. The texture, bulk density, pH, or nutrient balance of the available soil cannot be modified by a reasonable means to provide an adequate growth medium for the desired vegetation.
   b. The soil is too shallow to provide adequate rooting depth or will not supply necessary moisture and nutrients for growth of desired vegetation.
   c. The soil contains substances toxic or potentially toxic to the desired vegetation.
3. Where high-quality turf or ornamental plants are desired.

CRITERIA

Determine if sufficient quantities of suitable topsoil (described in material specification 804 Material for Topsoiling) is available at the site or nearby. Topsoil will be spread at a lightly compacted depth of 2 to 4 inches. Depths of 4 inches or greater are recommended where fine-textured (clayey) subsoils or other root limiting factors are present.

If topsoil is to be stockpiled at the site, select a location so that it will not erode, block drainage, or interfere with work on the site.

During construction of the project, soil stockpiles shall be stabilized or protected with sediment trapping measures such as management practice standards SILT FENCE 920 or TEMPORARY SEEDING 965. Perimeter controls shall be placed around the stockpile immediately; seeding of stockpiles shall be completed within 7 days of formation of the stockpile if it is to remain dormant for longer than 30 days.

Bonding - If topsoil and existing soil surface are not properly bonded, water will not infiltrate evenly, and it will be difficult to establish vegetation.

Care must be taken not to apply topsoil to existing soil surface if the two have contrasting textures. Clayey topsoil over sandy subsoil is a particularly poor combination, as water creeps along the junction between the two soil layers and may cause the topsoil to slough.

Do not apply topsoil to slopes greater than 2:1 to avoid slippage. Topsoiling of steep slopes should be discouraged unless good bonding of the soils can be achieved.

Depending on subsoil conditions, additional measures may be required for ornamental shrub and tree plantings. See management practice standard TREE AND SHRUB PLANTING 985.

CONSIDERATIONS

Topsoil is the surface layer of the soil profile, generally characterized as darker than the subsoil due to the enrichment with organic matter. It is the major zone of root development and biological activity. Microorganisms that enhance plant growth thrive in this layer. Topsoil can usually be differentiated from subsoil by texture as well as color. Clay content usually increases in the subsoil. Where subsoils are high in clay, the topsoil layer may be significantly coarser in texture. The depth of natural topsoil may be quite variable. On severely eroded sites it may be gone entirely.

Advantages of topsoil include its higher organic matter content, friable consistence (soil aggregates can be easily crushed with only moderate pressure), its available water holding capacity, and its nutrient content. Most often it is superior to subsoil in these characteristics. The texture and friability of topsoil are usually much more conducive to seedling germination, emergence, and root growth.

In addition to being a better growth medium, topsoil is often less erodible than subsoils, and the coarser texture of topsoil increases infiltration capacity and reduces runoff.

Although topsoil may provide an improved growth medium, there may be disadvantages, too. Stripping, stockpiling, hauling, and spreading topsoil, or importing topsoil, may not be cost-effective. Handling may be difficult if large amounts of branches or rocks are present, or if the terrain is too rough. Most topsoil contains weed seeds, which compete with desirable species.

In site planning, compare the options of topsoiling with preparing a seedbed in the available subsoil. The clay content of many subsoils retains moisture. When properly limed and fertilized, subsoils may provide a satisfactory growth medium, which is generally free of weed seeds.

Topsoiling is normally recommended where ornamental plants or high-maintenance turf will be grown. It may also be required to establish vegetation on shallow soils, soils containing potentially toxic materials, stony soils, and soils of critically low pH (highly acid).

PLANS AND SPECIFICATIONS

The plans and specifications for installing topsoiling shall be in keeping with this standard and shall describe the requirements for applying the practice. At a minimum include the following items:

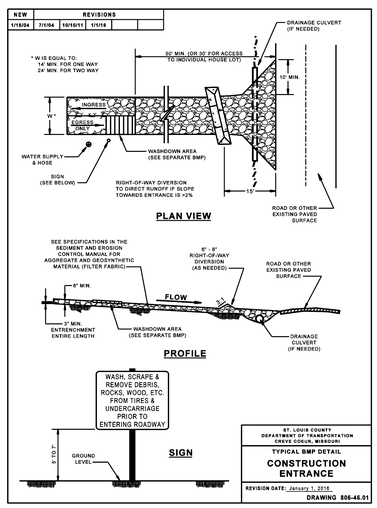
1. Topsoil source.
2. Stockpile location and method of stabilization prior to its use.

3. Topsoil/subsoil bonding procedures.
4. Site preparation plans and method of application, distribution and compaction.
5. Installation, inspection, and maintenance schedules with the responsible party clearly identified.

OPERATION AND MAINTENANCE

After topsoil application, follow procedures for seedbed preparation. Take care to avoid excessive mixing of topsoil into the subsoil. Permanently stabilize the site following appropriate management practice standards as quickly as practicable. Periodically inspect the site until permanent stabilization is achieved. Make necessary repairs to eroded areas or areas of light vegetative cover.

NEW	REVISIONS				
1/18/04	7/1/04	10/10/11	1/1/16		



ST. LOUIS COUNTY
DEPARTMENT OF TRANSPORTATION
CREVE COEUR, MISSOURI
TYPICAL BMP DETAIL
CONSTRUCTION ENTRANCE
REVISION DATE: January 1, 2016
DRAWING 806-46.01

CITY OF ST. PETERS
STANDARDS FOR EROSION AND SEDIMENT MANAGEMENT PRACTICE

STABILIZED CONSTRUCTION ENTRANCE

CODE 930

DEFINITION

A stabilized pad of aggregate underlain with filter fabric located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area.

PURPOSE

The purpose of this standard is to reduce or eliminate the tracking of sediment onto public right-of-ways or streets.

CONDITIONS WHERE PRACTICE APPLIES

A stabilized construction entrance shall be used at all points of construction ingress and egress.

CRITERIA

Stabilized construction entrance shall meet the following requirements:

1. Aggregate size – Minimum 1" clean.
2. Thickness - 6 inches or more.
3. Width - 14 feet minimum but not less than the full width of points where ingress or egress occur.
4. Length - As required, but not less than 70 feet, except on a single residence lot where a 30 feet minimum would apply.
5. Filter fabric shall be used under the aggregate to minimize the migration of stone into the underlying soil by heavy vehicle loads.
6. All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Washing - If conditions on the site are such that a majority of the mud is not removed by the vehicles traveling over the gravel, then the tires of the vehicles must be washed before entering a public road. Wash water must be carried away from the entrance to a sediment trapping facility such as management practice standards IMPOUNDMENT STRUCTURE-ROUTED 842 or TEMPORARY SEDIMENT TRAP 960. All sediment shall be prevented from entering storm drains, ditches, watercourses, or surface waters including wetlands. A wash rack may be used to make washing more convenient and effective.

8. Location - the washing station should be located to provide for maximum utility by all construction vehicles.
9. Timing - the graveled access shall be installed as soon as practical after the start of site disturbance.
10. Removal - the entrance shall remain in place and be maintained until the disturbed area is stabilized by permanent best management practices.

CONSIDERATIONS

Improperly planned and maintained construction entrances can become a continual erosion problem.

The tracking of mud from active building sites onto paved roads by construction vehicles can be greatly reduced, and in some cases eliminated, by the use of a stabilized construction entrance. These entrances provide an area where mud can be removed from construction vehicle tires before they enter a public road.

If the action of the vehicle's tires traveling over the stone is not sufficient to remove the majority of the mud, then the tires must be washed before the vehicle enters a public road. When washing is required it shall be done on an area stabilized with aggregate, or using a wash rack underlain with gravel.
Provisions shall be made to intercept the wash water and trap the sediment before it is carried off-site.

Construction entrances should be used in conjunction with the stabilization of construction roads, and other exposed areas, to reduce the amount of mud picked up by construction vehicles.

PLANS AND SPECIFICATIONS

Plans and specifications for installing stabilized construction entrances shall be in keeping with this standard and shall describe the requirements for applying the practice. At a minimum include the following items:
1. Location
2. Length
3. Width
4. Thickness
5. Type of materials
6. The installation, inspection and maintenance schedules with the responsible party identified.

OPERATION AND MAINTENANCE

The entrance shall be maintained in a condition, which will prevent tracking of sediment onto public right-of-ways or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public right-of-ways must be removed immediately. Periodic inspection and needed maintenance shall be provided after each rain.

Additional erosion control measures may be required during construction that are not shown on these plans. Contractor is responsible for installing and maintaining temporary and/or interim erosion control measures during construction progression or as required by City of Maryland Heights and/or MDNR Inspector. Any changes/additions to the Storm Water Pollution Prevention Plan (SWPPP) shall be documented by the contractor and remain on file at the site.

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the clayton engineering company, inc.
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MO Cert. of Authority: 2001001714 IA Cert. of Authority: 000000714
IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000879

REVISIONS

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P.E.B. 1468

PEAK CONSTRUCTION CORPORATION
9525 W. BRYN MAWR SUITE 810
ROSEMONT, IL 60018

SWPPP DETAILS

AXIUM PLASTICS BUILDING EXPANSION
St. Peters, MO 63376

4001 Premier Pkwy

Prepared for:

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MISSOURI ONE-CALL SYSTEM INC.

Underground facilities, structures & utilities have been plotted from available surveys, records & information, and therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, or location of these facilities, structures, & utilities.

The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMO.

STATE OF MISSOURI
JOHN R. WILLHITE
PE-2018000295
PROFESSIONAL ENGINEER
04-17-2026
John R. Willhite
Professional Engineer PE-2018000295

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C8.2 of ____

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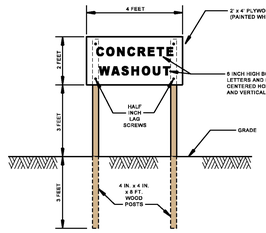
NEW	REVISIONS				
4/18/08	12/18/11	1/1/16			



CONCRETE WASHOUT SIGN DETAIL
(OR EQUIVALENT AS APPROVED BY COUNTY)

GENERAL NOTES

1) DO NOT SCALE DRAWING, FOLLOW DIMENSIONS.
2) ACTUAL LAYOUT DETERMINED IN THE FIELD
3) THE "CONCRETE WASHOUT" SIGN SHALL BE INSTALLED WITHIN 20 FEET OF EACH TEMPORARY CONCRETE WASHOUT FACILITY.

ST. LOUIS COUNTY
DEPARTMENT OF TRANSPORTATION
CREVE COEUR, MISSOURI

TYPICAL BMP DETAIL
CONCRETE WASTE MANAGEMENT
(CONCRETE WASHOUT SIGN)

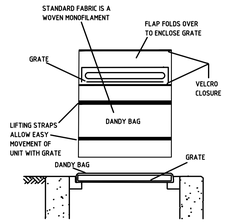
REVISION DATE: January 1, 2016
DRAWING 806-46.03

Dandy Bag® Plan Insert

The patented Dandy Bag® is designed for use with flat grates (including round) and mountable curbs to detain sediment-laden storm water. The suspended solids are allowed to settle out of the slowed flow prior to entering the Dandy Bag®.

Installation

1. Stand the grate on end
2. Place the Dandy Bag® over the grate
3. Roll the grate over so that the open end is up
4. Pull up the slack
5. Tuck the flap in
6. Press the velcro strips together
7. Be sure that the end of the grate is completely covered by the flap or the Dandy Bag® will not work properly
8. Holding the handles, carefully place the Dandy Bag® with the grate inserted into the catch basin frame



Maintenance

To insure proper operation remove silt, sediment, and debris from the surface and the vicinity of the unit with a square point shovel or stiff bristle broom away from environmentally sensitive areas and waterways in manner satisfactory to the engineer/inspector. Remove fine material from inside Dandy Bag® as needed. Dispose of Dandy Bag® no longer in use at an appropriate recycling or solid waste facility.

Inlet Inspection

To inspect inlet, remove Dandy Bag® with grate inside, inspect catch basin and replace Dandy Bag® back into grate frame.

Ponding a likely if sediment is not removed regularly. The Dandy Bag® must never be used where overflow may endanger an exposed slope. The Dandy Bag® is not intended for any other use and should not be used for any other purpose

DANDY PRODUCTS, INC.
2011 Harrisburg Pike, Suite R
Grove City, Ohio 43123

1-800-591-2284
(local) 614-875-2284
FAX: 614-875-6305
E-MAIL: dandy@dandyproducts.com
www.dandyproducts.com

CONCRETE WASTE MANAGEMENT

DESCRIPTION - The purpose of this specification is to set forth procedures and practices designed to eliminate the discharge of concrete waste materials to storm drainage systems, drainage areas, streets or watercourses, which shall be required of the contractor.

APPROPRIATE APPLICATION OF BMP - Concrete waste management procedures and practices will be implemented on construction projects as follows:

- Where concrete is used as a construction material or where concrete dust and debris result from demolition activities.
- Where slurries containing Portland cement concrete (PCC), asphaltic concrete (AC) or bituminous concrete (BC) are generated, such as from saw cutting, coring, grinding, grooving and hydro-concrete demolition.
- Where concrete trucks and other concrete-coated equipment are washed on-site, when approved by the Resident Engineer or Construction Inspector.
- Where mortar-mixing station exist.

AWARENESS / ENFORCEMENT

- Contractor's and / or permit holder's superintendent or representative shall oversee and enforce concrete waste management procedures.
  - Discuss the concrete management techniques described in this BMP (such as handling of concrete waste and washout) with the ready-mix concrete supplier before any deliveries are made.
- The site superintendent shall make drivers aware of the presence of the concrete waste management facilities. The site superintendent should post signage indicating the location and designated use of the concrete waste management areas, and provide careful oversight to inspect for evidence of improper dumping of concrete waste and wash water.

IMPLEMENTATION

- Contractors, private individuals, public agencies, etc. using concrete material, shall incorporate requirements for concrete waste management into material supplier and subcontractor agreements. Include requirements in contracts with concrete delivery companies that drivers must use designated concrete washout facilities.
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete.
- Do not allow excess concrete to be dumped on-site, except in designated areas.
- Cover the structures before predicted rainstorms to prevent overflows.
- Monitor on site concrete waste storage and disposal procedures at least weekly or as directed by the Resident Engineer or Construction Inspector.

- In St. Louis County, the contractor is required by Missouri State Law (10 CSR 10-6.170) and County Ordinance (612.340) to control fugitive dust blown from the construction site, signal installation, etc. Dust control, including saw-cut material etc., on the construction site shall be monitored for safety purposes and to prevent nuisances. The contractor / permitee shall apply reasonable measures to control dust and particulate matter (of any size or source) due to roadway / construction traffic, grading, clearing and grubbing, building demolition, saw-cutting etc. from migrating off the site of origin. Operations residue from grinding, saw-cutting etc. should be picked up (cleaned-up) by means of a vacuum device or swept up. Compressed or blown air may be used to clean negligible residual dust that the vacuum or sweeping did not clean up, as long as the above dust control procedures (and law and ordinance) are met. Saw cutting residue, slurry or dry, should not be allowed to enter storm drains or watercourses. Saw cutting residue should not be allowed to flow across the pavement and should not be left on the surface of the pavement when traffic is present, when precipitation is anticipated before cleanup or overnight. In approved locations, saw-cut slurry may flow into the dirt (where it can soak into the ground) adjacent to the saw-cutting operation and be buried, on site, 2" minimum below finished grade. Other dust control and clean-up procedures may be acceptable as approved by the Engineer or St. Louis County. See additional Concrete Waste Management requirements in this Manual.

WASHOUT AREA PROTOCOL

- Contain concrete washout on site or take it offsite for disposal in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- For onsite washout:
  - Locate washout area on-site at least 50 feet from storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough to contain liquid and solid waste. Locate it in a dirt area where the liquid portion of the washout can soak into the ground. They are preferably built below-grade to prevent breaches and reduce the likelihood of runoff. Discontinue use of the washout once it reaches 75% capacity. Washouts should be sized to handle solids and wash water to prevent overflow. It is estimated that 7 gallons of wash water are used to wash one truck chute and 50 gallons are used to wash out the hopper of a concrete pump. Implement a maintenance schedule for washout areas.
  - Temporary washout facilities should have pit or bermed areas of sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures.
  - Wash out wastes into the pit where the concrete can set, be broken up, and used on site; or buried on site; or disposed of properly.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile or dispose of in the trash.
- Do not place concrete wash water in a pit that is connected to the storm drain system or that drains to nearby waterways.

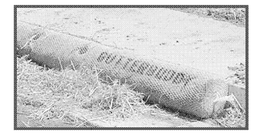
- Locate concrete washout facilities in an area that allows convenient access for concrete trucks, preferably near the area where the concrete is being poured. Appropriate gravel or rock should cover paths to concrete washout facilities if the facilities are located on undeveloped property. These areas should be far enough away from other construction traffic to reduce the likelihood of accidental damage and spills. The number of facilities you install should depend on the expected demand for storage capacity. On large sites with extensive concrete work, place washouts in multiple locations for ease of use. If the dried concrete washout is buried on the site it shall have a 2-foot cover minimum. The 2-foot cover shall match with surrounding finished grade.
- Concrete washed out in areas other than those designated for such activity, shall be cleaned up by the contractor.
- Install signage adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.
- Perform washout of concrete mixers, delivery trucks and other delivery systems in designated areas only.
- Wash out concrete from concrete pumper bins into concrete pumper trucks and discharge into designated washout area.
- Equipment that cannot be easily moved, such as concrete pavers, shall only be washed in designated areas that do not drain to waterways or storm drain systems.
- Backfill and repair holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities.
- Wash out concrete on site into a future designated final concrete pour location. This location cannot be within 50 feet of a storm or sanitary sewer; or water course; or where it can drain off site. The washout cannot jeopardize the integrity of the final concrete pour. Concrete to be removed from the site shall be disposed of in conformance with the provisions in Standard Specification Manual, Section 202, all as directed by the Engineer. No additional payment will be made for complying with the above specification.
- A self-contained and watertight container may be used to control, capture, and contain concrete wastewater and washout material. The container must be portable and temporary, damage resistant, protect against spills and leaks, and sized to handle solids and wash water to prevent overflow. The container should be emptied and cleaned when 75% of its capacity is reached. After all liquids evaporate or are pumped or vacuumed, and the remaining slurry solidified, the Contractor may bury the solids on site. On County roadway projects, the solids may be buried on site if approved by the Engineer. In either case, solids shall be buried a minimum of 2 feet below finished grade. Disposal of container contents that are removed from the site shall be made at an approved landfill. In order to prevent overflows caused by natural occurrences and to provide security for safety purposes and against acts of vandalism, the container shall be covered at the end of each workday and remain covered until the beginning of the next workday. The cover shall remain on site with the container at all times. Container shall be free of liquids during any on-site relocation process or transport to another site. On County roadway projects, location(s) for the container shall be approved by the Engineer.

TYPICAL DETAIL - 806-46.03

GUTTERBUDDY

Curb Inlet Drain Filters

88.2% Reduction in Total Suspended Solids
87.4% Reduction in Hydrocarbons



Gutterbuddy™ Curb Inlet and Ditch Pavement Filters

Gutterbuddy™ Advantages

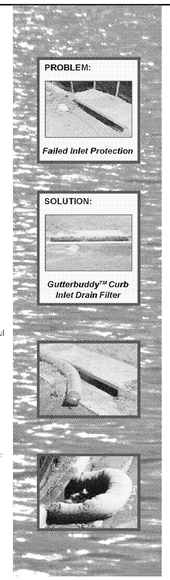
- *Easy to transport, install and maintain*
- *Keeps out sand, asphalt millings and other fine sediment*
- *Available in regular and super flow*
- *Washable*
- *Reusable*

Gutterbuddy™ Curb Inlet Filters effectively prevent sediment, debris and other pollutants from entering storm water systems. The filtering action lets water freely flow through the fiberous material while stopping sediment and debris. Built-in overflows drain water even more quickly during extreme events.

Long lasting Gutterbuddy™ Curb Inlet Filters are 9" in diameter and can be purchased in 4', 6', 8', 10', 12', 14' and 16' lengths. These inlet filters are flexible enough to conform to any curb radius, allowing for quick and easy installation.

Gutterbuddy™ Ditch Pavement Filters effectively prevent sediment, debris and other pollutants from entering storm water systems or other areas that ditch pavement is used to channel water runoff. Their filtering action lets water freely flow through the fiberous material while stopping sediment and debris. Each ditch pavement filter comes with a stake hole at each end and has bendable steel in the middle of the fabric that allows it to conform to all types of ditch pavement.

For more information about Gutterbuddy™ Curb Inlet and Drainage Ditch Filters, call your ACF Environmental or SI Geosolutions distributor.

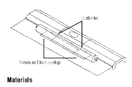


Gutterbuddy™ Specification
For Curb Gutter Storm Drains

1.0 Description

1.1 This work shall consist of furnishing, placing, maintaining and removing the Gutterbuddy™ sediment control device as directed by the engineer and as shown on the contract drawings. The Gutterbuddy™ sediment control system distributed by:

ACF Environmental, Inc.
2831 Cantrell Road
Richmond, Virginia 23234
Phone: 800-448-9606 • Fax: 804-743-7779
www.acfenvironmental.com



2.0 Materials

2.1 GUTTERBUDDY™

The Gutterbuddy™ shall be synthetic filter manufactured from recycled synthetic fibers.

2.1.1 The Gutterbuddy™ will be manufactured to be 9" in diameter and are available in 4', 6', 8', 10', 12', 14' and 16' lengths and a minimum of twenty-four (24) inches longer than the curb inlet opening. This will allow for sufficient length to cover the inlet with twelve (12) inches beyond the inlet on both ends.

3.0 Construction Sequence

3.1 General

3.1.1 Install the Gutterbuddy™ in front of the curb inlet opening. Each end of the Gutterbuddy™ should overlap the curb inlet approximately 12".

3.1.2 The Gutterbuddy™ should be cleaned if a visual inspection shows silt and debris build up around the Gutterbuddy™.

3.1.3 To remove the Gutterbuddy™, lift out of the opening.

3.1.4 The Gutterbuddy™ is reusable. Once the construction project is complete and it is no longer needed for sediment control, remove, clean and store out of the sunlight until needed on the next project.

3.1.5 Pending is likely if sediment is not removed regularly. Inspection of Gutterbuddy™ should be on a regular basis and immediately after major rain events.

4.0 Basis of Payment

4.1 The payment for any Gutterbuddy™ used during the construction is to be included in the bid of the overall erosion and sediment control plan and priced by the linear foot.

ACF Environmental
"Complete Source for Storm Water Solutions"

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www.thebmpstore.com

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www.acfenvironmental.com

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IL Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000879

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REVISIONS

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ROSEMONT, IL 60018

SWPPP DETAILS
AXIUM PLASTICS BUILDING EXPANSION
4001 Premier Pkwy

Prepared for:

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STATE OF MISSOURI
JOHN R. WILLHITE
PE-2018000295
PROFESSIONAL ENGINEER
4/17/2026

John R. Willhite
Professional Engineer PE-2018000295

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C8.3 of ____

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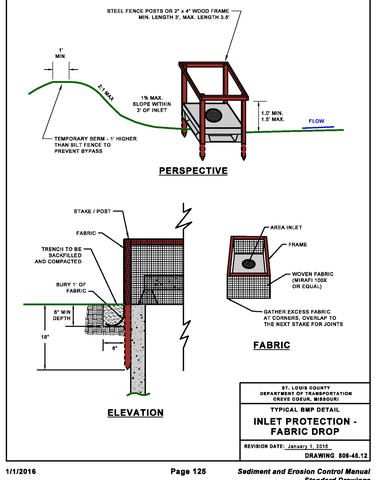


ST. LOUIS COUNTY
DEPARTMENT OF TRANSPORTATION
CREVE COEUR, MISSOURI

TYPICAL BMP DETAIL
INLET PROTECTION - FABRIC DROP

REVISION DATE: January 1, 2016
DRAWING 806-46.12

POLLUTION PREVENTION PROCEDURES

DESCRIPTION - Pollution prevention includes best management practices that need to be set up at the beginning of the project. Pollution prevention practices consist of site management considerations that do not fit into the other categories of erosion or sediment controls, such as materials inventory, good housekeeping, spill prevention and clean up, solid waste management and concrete washout. Building materials and other construction site wastes must be properly managed and disposed of to reduce the risk of pollution from materials such as surplus or refuse building materials or hazardous wastes. Practices such as trash disposal, recycling, proper material handling, and spill prevention and cleanup measures can reduce the potential for storm water runoff to mobilize construction site wastes and contaminate surface or ground water.

APPROPRIATE APPLICATION OF BMP - The proper management and disposal of wastes should be practiced at every construction site to reduce contaminated storm water runoff. Use waste management practices to properly locate refuse piles, to cover materials that might be displaced by rainfall or storm water runoff, and to prevent spills and leaks from hazardous materials that were improperly stored.

Solid Wastes
- Designate a waste collection area on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a water body.
- Dumpsters or other collection containers should be provided as needed and ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible.
- Schedule waste collection to prevent the containers from overfilling.
- Clean up spills immediately. For hazardous materials, follow cleanup instructions on the package.
- During the demolition phase of construction, provide extra containers and schedule more frequent pickups.
- Collect, remove, and dispose of all construction site wastes at authorized disposal areas in accordance with state and local laws and regulations. Contact a local environmental agency to identify these disposal sites.
- Solid waste may not be buried or burned on the site.
- Good Housekeeping on a construction site is very important. Keep the site clean.

Pesticides and Fertilizers
- Follow all federal, state, and local regulations that apply to the use, handling, or disposal of pesticides and fertilizers.
- Do not handle the materials any more than necessary.
- Store pesticides and fertilizers in a dry, covered area.
- Construct berms or dikes to contain stored pesticides and fertilizers in case of spillage.
- Follow the recommended application rates and methods.
- Have equipment and absorbent materials available in storage and application areas to immediately contain and clean up any spills that occur.

Detergents - Phosphorous and nitrogen containing detergents are used in wash water for cleaning vehicles. Excesses of these nutrients can be a major source of water pollution. Use detergents only as recommended, and limit their use on the site. Do not dump wash water containing detergents into the storm drain system; direct it to a sanitary sewer or contain it so that it can be treated at a wastewater treatment plant.

1) HANDLING AND DISPOSAL OF HAZARDOUS MATERIALS

DO
- Prevent spills
- Use products up
- Follow label directions for disposal
- Remove lids from empty bottles and cans when disposing in trash
- Recycle wastes whenever possible

DON'T
- Don't pour waste into sewers or waterways or on the ground
- Don't pour waste down the sink, floor drain or septic tanks
- Don't bury chemicals or containers, or dispose of them with construction debris
- Don't burn chemicals or containers
- Don't mix chemicals together
- Don't remove the original product label from the container

2) Containers shall be provided for collection of all waste material including construction debris, trash, petroleum products and any hazardous materials to be used onsite. All waste material shall be disposed of at facilities approved for that material.
3) No waste materials shall be buried on-site.
4) Mixing, pumping, transferring or otherwise handling construction chemicals such as fertilizer, lime, asphalt, concrete drying compounds, and all other potentially hazardous materials shall be performed in an area away from any water course, ditch or storm drain.
5) Equipment fueling and maintenance, oil changing, etc., shall be performed only in an area designated for that purpose. The designated area is equipped for recycling oil and catching spills.
6) Concrete wash water shall not be allowed to flow directly to storm sewers, streams, ditches, lakes, etc without being treated. A sump or pit shall be constructed to contain concrete wash water. See additional requirements in the "Concrete Waste Management" section of this manual.
7) If substances such as oil, diesel fuel, hydraulic fluid, antifreeze, etc. are spilled, leaked, or released onto soil, the soil shall immediately be dug up and disposed of at a licensed sanitary landfill (not a construction / demolition debris landfill). Spills on pavement shall be immediately absorbed with sawdust, kitty litter or product designed for that purpose and disposed of at a licensed sanitary landfill. Hazardous or industrial wastes such as most solvents, gasoline, oilbased paints, and cement curing compounds require special handling. These materials will be removed from the site and recycled or disposed of in accordance with MoDNR requirements.
8) State law requires the party responsible for a petroleum product spill in excess of 50 gallons to report the spill to Missouri Department of Natural Resources (MoDNR) at (537) 634-2436, as soon as practical after discovery. Federal law requires the responsible party to report any release of oil if it reaches or threatens a sewer, lake, creek, stream, river, groundwater, wetland, or area, like a road ditch, that drains into one of the above.
9) The contractor / permittee should ensure adequate training is provided to the site superintendent and all field personnel, etc, on the proper protocol for reporting and cleaning up spills.
10) Manufacturer's recommended method for spill cleanup should be clearly posted and the site personnel should be made aware of the procedures and the location of the information and clean up supplies.
11) Material and equipment necessary for spill cleanup should be kept in the material storage area on site.
12) Minimize the material inventory stored on-site (e.g., only a few days' supply).
13) Do not store hazardous chemicals, drums, or bagged / boxed materials directly on the ground. Place these items on a pallet and under cover in secondary containment.
14) Storage areas shall be kept clean and well organized.

O&M PROCEDURES - The only way to be sure that waste management practices are being followed is to be aware of worker habits and to inspect storage areas regularly. Extra management time may be required to ensure that all workers are following the proper procedures. Inspect storage and use areas and identify containers or equipment that could malfunction and cause leaks or spills. Check equipment and containers for leaks, corrosion, support or foundation failure, or other signs of deterioration, and test them for soundness. Immediately repair or replace any that are found to be defective.

TYPICAL DETAILS - Not applicable.

CITY OF ST. PETERS
STANDARDS FOR EROSION AND SEDIMENT MANAGEMENT PRACTICE

INLET PROTECTION - FABRIC DROP/STRAW BALES

CODE 860

DEFINITION

A temporary straw bale or fabric barrier placed around a drop inlet.

PURPOSE

The purpose of this practice is to help prevent sediment from entering storm drains during construction operations. This practice allows early use of the storm drainage system.

CONDITIONS WHERE PRACTICE APPLIES

This type of inlet protection may be used where storm drain inlets are to be made operational before permanent stabilization of the disturbed drainage area. This method of inlet protection is effective where the inlet drains a small, nearly level area with slopes generally less than 5% and where shallow sheet flows not exceeding 1 cfs are expected. The immediate land area around the inlet should be relatively flat (less than 1% slope) and located so that accumulated sediment can be easily removed. This method should not be used in areas receiving concentrated flows, such as in street or highway medians.

CRITERIA

The maximum drainage area shall not exceed 1 acre per inlet.

The maximum height of fabric above the crest of the drop inlet shall be 1.5 feet. This height allows a shallow temporary de-silting pool to form behind the fabric but limits the pressure against the fabric if overtopping occurs. The selected height of the top of the barrier should allow overflow to the drop inlet and not let overflow bypass the inlet to unprotected lower areas. It may be necessary to build a temporary dike on the downslope side of the structure to prevent bypass flows.

For fabric barriers, use stakes of 2 x 4-inch wood (preferred) or equivalent metal with a minimum length of 3 feet. Space the stakes a maximum of 3 feet apart, and securely drive them into the ground to a depth of approximately 18 inches.

Drive the stakes close to the drop inlet so that overflow will fall directly into the structure and not on unprotected soil.

To provide needed stability to the installation, make a frame around the stakes a maximum of 1.5 ft above the top of the drop inlet. This will serve as a stable crest for overflow during rainfall. Place the bottom 12 inches of the fabric in a trench and backfill the trench with 12 inches of compacted soil or six inches of crushed gravel.

Fasten fabric securely by staples or wire to the stakes and frames. Joints must be overlapped to the next stake.

Improved performance and sediment storage volume can be obtained by excavating the area. See management practice standard, INLET PROTECTION EXCAVATED DRAIN 855.

CONSIDERATIONS

In developing areas, installation of streets and storm sewer networks usually occur before the construction of homes, businesses or other developments. During this and subsequent phases of construction, unprotected soil is susceptible to erosion. Storm sewers that are operational before their drainage areas are stabilized often carry large amounts of sediment to lakes, detention ponds, streams, or other natural or constructed drainageways. As a result, the water quality of the receiving body of water is detrimentally affected. In cases of extreme sediment loading, the storm sewer may clog completely or lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the system at the inlets.

Storm drain inlet protection consists of several types of inlet filters and traps. Each type differs in application dependant upon site conditions and type of inlet. Not all designs are appropriate in all cases. The user must carefully select a design suitable for the needs and site conditions.

Inlet protection devices are for drainage areas of one acre or less. Runoff from areas larger than one acre should be routed through a properly designed practice such as IMPOUNDMENT STRUCTURE-ROUTED 842 or TEMPORARY SEDIMENT TRAP 960.

In some instances, a wire mesh may be needed to reinforce the fabric and supporting posts. This should be used in areas where concentrated flows may occur or where timely maintenance may be a concern. If used, the wire mesh shall have a maximum opening of 6 inches.

A temporary berm may need to be constructed downstream of the inlet protection device to prevent bypass.

The best way to prevent sediment from entering the storm sewer system is to stabilize the disturbed area of the site as quickly as possible, preventing erosion and stopping sediment at its source.

PLANS AND SPECIFICATIONS

The plans and specifications for installing fabric drop inlet protection shall be in keeping with this standard and shall describe requirements for applying the practice. At a minimum include the following items:
1. Inlet location
2. Type and size support posts.
3. Fabric material requirements
4. Detail around inlet structure
5. Installation, inspection and maintenance schedules with responsible party identified.

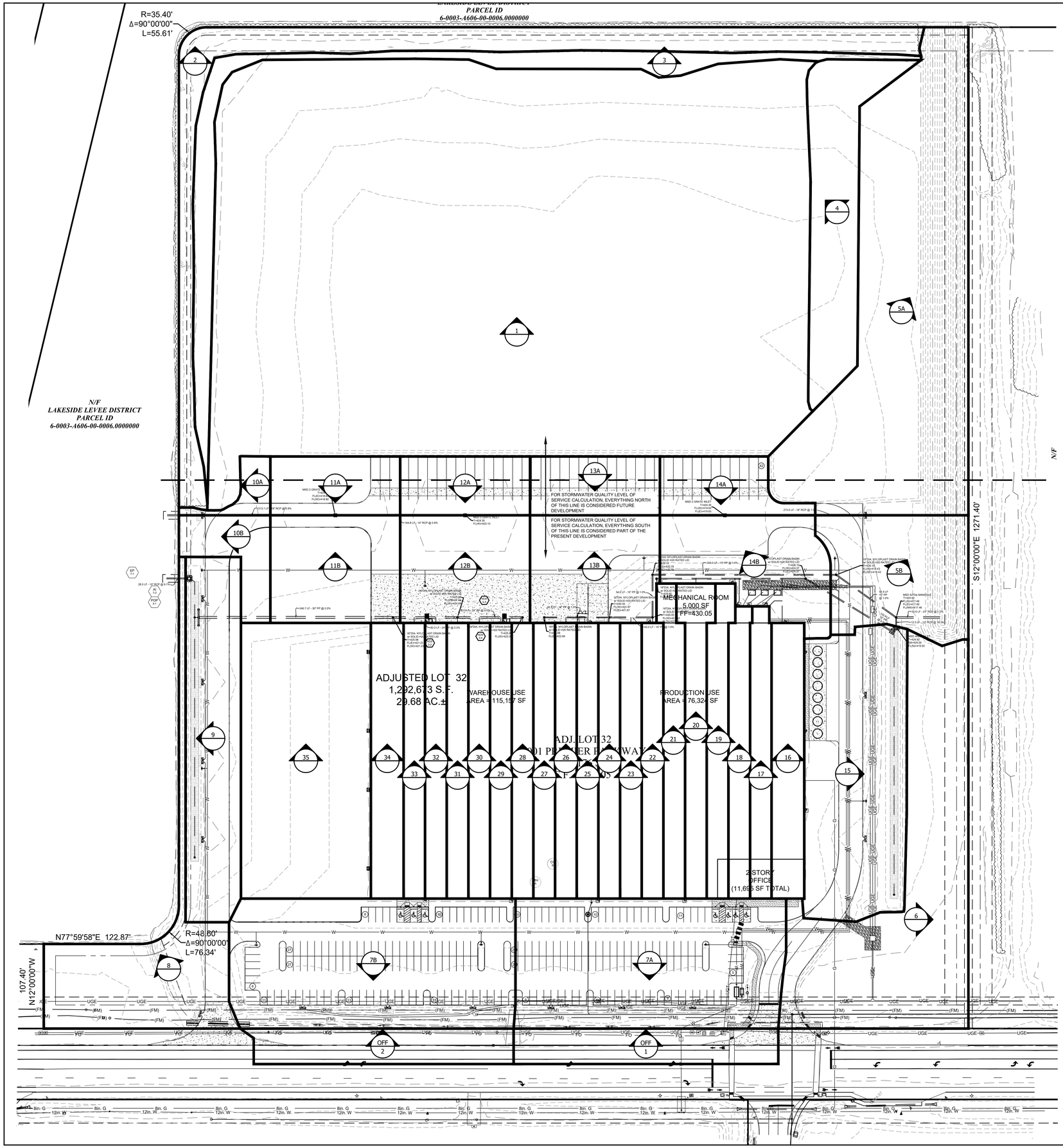
OPERATION AND MAINTENANCE

Inspect the fabric barrier after each rain and make repairs as necessary.

Remove sediment from the pool area as necessary to provide adequate storage volume for the next rain. Take care not to damage or undercut the fabric during sediment removal.

When the contributing drainage area has been adequately stabilized, remove all materials and any unstable sediment and dispose of them properly. Bring the disturbed area to the grade of the drop inlet and smooth and compact it. Appropriately stabilize all bare areas around the inlet.

Additional erosion control measures may be required during construction that are not shown on these plans. Contractor is responsible for installing and maintaining temporary and/or interim erosion control measures during construction progression or as required by City of Maryland Heights and/or MDNR Inspector. Any changes/additions to the Storm Water Pollution Prevention Plan (SWPPP) shall be documented by the contractor and remain on file at the site.



EXISTING DRAINAGE AREAS

I.D.	Total Area (ac.)	Grass (ac.)	Pavement (ac.)	Roof Piped (ac.)	Roof Surf. Disch (ac.)	15-yr Comp. PI	15-yr Flow, Q (cfs)	100yr Flow, Q (cfs)	to Structure
1	8.67	8.67	0.00	0.00	0.00	1.70	14.74	19.90	Straight Row Crop, To Ext. Wet Detention
2	0.99	0.99	0.00	0.00	0.00	1.70	1.68	2.27	Woods/Grass Fair, to Ext. Wet Detention
3	0.57	0.57	0.00	0.00	0.00	1.70	0.97	1.31	Brush-Weeds-Grass Fair, to Ext. Wet Detention
4	0.66	0.66	0.00	0.00	0.00	1.70	1.12	1.51	Ext. Wet Detention
5A	2.18	2.16	0.02	0.00	0.00	1.72	3.74	5.05	Ext. Wet Detention
5B	0.62	0.50	0.12	0.00	0.00	2.06	1.27	1.72	Ext. Wet Detention
6**	1.41	1.29	0.12	0.00	0.00	1.86	2.62	3.53	Ext. Wet Detention
7A	1.29	0.33	0.96	0.00	0.00	3.07	3.96	5.35	Proposed Culvert
7B	1.37	0.47	0.90	0.00	0.00	2.91	3.98	5.38	Proposed Culvert
8	0.73	0.63	0.10	0.00	0.00	1.95	1.43	1.92	Ext. Wet Detention
9	0.74	0.41	0.33	0.00	0.00	2.52	1.87	2.52	Proposed West Bioretention Basin
10A*	0.08	0.01	0.07	0.00	0.00	3.31	0.26	0.36	Ext. Wet Detention
10B*	0.22	0.04	0.18	0.00	0.00	3.21	0.71	0.95	Ext. Wet Detention
11A*	0.28	0.00	0.28	0.00	0.00	3.54	0.99	1.34	Proposed Grate Inlet
11B*	0.52	0.00	0.52	0.00	0.00	3.54	1.84	2.49	Proposed Grate Inlet
12A	0.28	0.00	0.28	0.00	0.00	3.54	0.99	1.34	Proposed Grate Inlet
12B	0.52	0.00	0.52	0.00	0.00	3.54	1.84	2.49	Proposed Grate Inlet
13A	0.28	0.00	0.28	0.00	0.00	3.54	0.99	1.34	Proposed Grate Inlet
13B	0.51	0.12	0.39	0.00	0.00	3.11	1.58	2.14	Proposed Grate Inlet
14A	0.26	0.00	0.26	0.00	0.00	3.54	0.92	1.24	Proposed Grate Inlet
14B**	0.55	0.33	0.22	0.00	0.00	2.44	1.34	1.81	Proposed Grate Inlet
15	1.08	0.71	0.37	0.00	0.00	2.33	2.52	3.40	Proposed East Bioretention Basin
16	0.33	0.00	0.00	0.00	0.33	3.54	1.17	1.58	Downspout to East Bioretention Basin
17	0.23	0.00	0.00	0.00	0.23	3.54	0.81	1.10	Downspout to East Bioretention Basin
18	0.23	0.00	0.00	0.00	0.23	3.54	0.81	1.10	Downspout to East Bioretention Basin
19	0.25	0.00	0.00	0.00	0.25	3.54	0.89	1.19	Downspout to East Bioretention Basin
20	0.28	0.00	0.00	0.00	0.28	3.54	0.99	1.34	Downspout to East Bioretention Basin
21	0.25	0.00	0.00	0.00	0.25	3.54	0.89	1.19	Downspout to East Bioretention Basin
22	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
23	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
24	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
25	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
26	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
27	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
28	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
29	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
30	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
31	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
32	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
33	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
34	0.33	0.00	0.00	0.00	0.33	3.54	1.17	1.58	Downspout to West Bioretention Basin
35*	1.33	0.00	0.00	0.00	1.33	3.54	4.71	6.36	Future Building Expansion to Ext. Wet Detention
	29.68	17.89	5.92	0.00	5.87		72.15		Area & Flow Totals

EXISTING OFFSITE DRAINAGE AREAS

I.D.	Total Area (ac.)	Grass (ac.)	Pavement (ac.)	Roof Piped (ac.)	Roof Surf. Disch (ac.)	15-yr Comp. PI	15-yr Flow, Q (cfs)	100yr Flow, Q (cfs)	to Structure
OFF 1	0.35	0.13	0.22	0.00	0.00	2.86	1.00	1.35	East Proposed Swale
OFF 2	0.34	0.16	0.18	0.00	0.00	2.67	0.91	1.23	West Proposed Swale
	0.69	0.29	0.40	0.00	0.00		1.91		Area & Flow Totals

*INCLUDES FUTURE PAVEMENT & BUILDING ADDITION.
**GRAVEL AREAS ARE CONSERVATIVELY CONSIDERED AS PAVEMENT, FOR HYDRAULIC CALCULATIONS.
DESIGN STORM:
15-yr., 20-min.
Roof (piped) PI=4.20; Roof (surface discharge) PI-3.54, Pavement PI=3.54; Porous Pavement=3.54; Grass PI=1.70.

EXISTING CURVE NUMBER (MARC MANUAL)

Cover Description	Soil HSG	CN from Table 1	Area (Ac.)	Product CN x Area	Weighted CN
NORTH (FUTURE DEVELOPMENT)					
Straight Row Crop	D	89	8.67	772	
Woods/Grass Fair,	D	82	0.99	81	
Brush-Weeds-Grass Fair	D	77	0.57	44	
Open Space (Turf), Good	D	80	2.83	226	
Parking Lots, Roofs, Streets, Etc.	D	98	1.19	117	
SUBTOTAL:			14.25	1240	87
SOUTH (PRESENT DEVLOPMENT)					
Open Space (Turf), Good	D	80	4.83	386	
Parking Lots, Roofs, Streets, Etc.	D	98	10.60	1039	
SUBTOTAL:			15.43	1425	92
GRAND TOTAL:			29.68	2665	90

0 50' 100'
SCALE IN FEET
Scale 1" = 50'
Note: Caution should be taken in comparing the written scale to the graphic scale to ascertain if this plan has been enlarged or reduced.

DISTURBANCE LIMITS

PROPOSED NORTHERN "FOURTH LEG" OF THE TRAFFIC SIGNAL TO BE INSTALLED BY THE DEVELOPER.

100-YEAR FLOODPLAIN
ELEVATION = 423.80
(Per 01/11/18 CLOMR)

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REVISIONS
Building Expansion - DAR - 2/19/26 JRW

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1468
F. B.

Prepared for:
PEAK CONSTRUCTION CORPORATION
9525 W. BRYN MAWR, SUITE 810
ROSEMONT, IL 60018

St. Peters, MO 63376
4001 Premier Pkwy
EXISTING DRAINAGE AREA MAP
AXIUM PLASTICS

The original signed and sealed of this drawing is on file at the office of The Clayton Engineering Company. Any modifications to this drawing shall release said The Clayton Engineering Company, the Engineer and/or Surveyor whose seal appears hereon from any liability resulting from said unauthorized modifications. The signed and sealed original is the official document and shall take precedence over any digital version.

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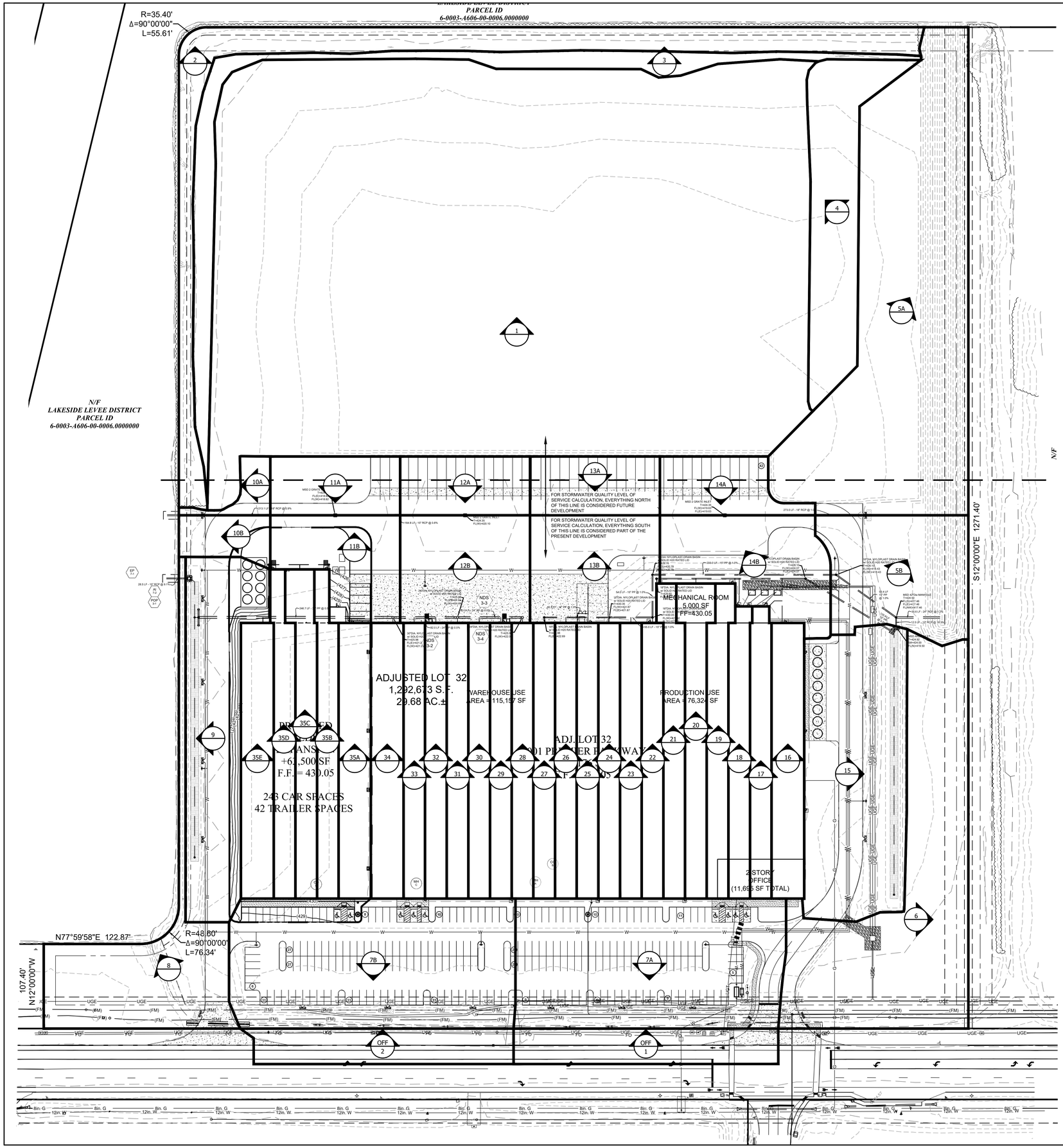
Underground facilities, structures & utilities have been plotted from available surveys, records & information, and therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, or location of these facilities, structures, & utilities.

The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act.

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C9.0 of ____



PROPOSED DRAINAGE AREAS

I.D.	Total Area (ac.)	Grass (ac.)	Pavement (ac.)	Roof Piped (ac.)	Roof Surf. Disch (ac.)	15-yr Comp. PI	15-yr Flow, Q (cfs)	100yr Flow, Q (cfs)	to Structure
1	8.67	8.67	0.00	0.00	0.00	1.70	14.74	19.90	Straight Row Crop, To Ext. Wet Detention
2	0.99	0.99	0.00	0.00	0.00	1.70	1.68	2.27	Woods/Grass Fair, to Ext. Wet Detention
3	0.57	0.57	0.00	0.00	0.00	1.70	0.97	1.31	Brush-Weeds-Grass Fair, to Ext. Wet Detention
4	0.66	0.66	0.00	0.00	0.00	1.70	1.12	1.51	Ext. Wet Detention
5A	2.18	2.16	0.02	0.00	0.00	1.72	3.74	5.05	Ext. Wet Detention
5B	0.62	0.50	0.12	0.00	0.00	2.06	1.27	1.72	Ext. Wet Detention
6**	1.41	1.29	0.12	0.00	0.00	1.86	2.62	3.53	Ext. Wet Detention
7A	1.29	0.33	0.96	0.00	0.00	3.07	3.96	5.35	Proposed Culvert
7B	1.37	0.37	1.00	0.00	0.00	3.04	4.17	5.63	Proposed Culvert
8	0.73	0.63	0.10	0.00	0.00	1.95	1.43	1.92	Ext. Wet Detention
9	0.81	0.40	0.41	0.00	0.00	2.63	2.13	2.88	Proposed West Bioretention Basin
10A*	0.08	0.01	0.07	0.00	0.00	3.31	0.26	0.36	Ext. Wet Detention
10B	0.15	0.03	0.12	0.00	0.00	3.17	0.48	0.64	Ext. Wet Detention
11A*	0.28	0.00	0.28	0.00	0.00	3.54	0.99	1.34	Proposed Grate Inlet
11B	0.40	0.14	0.25	0.00	0.01	2.90	1.16	1.56	Proposed Grate Inlet
12A	0.28	0.00	0.28	0.00	0.00	3.54	0.99	1.34	Proposed Grate Inlet
12B	0.52	0.00	0.52	0.00	0.00	3.54	1.84	2.49	Proposed Grate Inlet
13A	0.28	0.00	0.28	0.00	0.00	3.54	0.99	1.34	Proposed Grate Inlet
13B	0.51	0.12	0.39	0.00	0.00	3.11	1.58	2.14	Proposed Grate Inlet
14A	0.26	0.00	0.26	0.00	0.00	3.54	0.92	1.24	Proposed Grate Inlet
14B**	0.55	0.33	0.22	0.00	0.00	2.44	1.34	1.81	Proposed Grate Inlet
15	1.08	0.71	0.37	0.00	0.00	2.33	2.52	3.40	Proposed East Bioretention Basin
16	0.33	0.00	0.00	0.00	0.33	3.54	1.17	1.58	Downspout to East Bioretention Basin
17	0.23	0.00	0.00	0.00	0.23	3.54	0.81	1.10	Downspout to East Bioretention Basin
18	0.23	0.00	0.00	0.00	0.23	3.54	0.81	1.10	Downspout to East Bioretention Basin
19	0.25	0.00	0.00	0.00	0.25	3.54	0.89	1.19	Downspout to East Bioretention Basin
20	0.28	0.00	0.00	0.00	0.28	3.54	0.99	1.34	Downspout to East Bioretention Basin
21	0.25	0.00	0.00	0.00	0.25	3.54	0.89	1.19	Downspout to East Bioretention Basin
22	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
23	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
24	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
25	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
26	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
27	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to Ext. Wet Detention
28	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
29	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
30	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
31	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
32	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
33	0.22	0.00	0.00	0.00	0.22	3.54	0.78	1.05	Downspout to West Bioretention Basin
34	0.33	0.00	0.00	0.00	0.33	3.54	1.17	1.58	Downspout to West Bioretention Basin
35A	0.33	0.00	0.00	0.00	0.33	3.54	1.17	1.58	Downspout to West Bioretention Basin
35B	0.25	0.00	0.00	0.00	0.25	3.54	0.89	1.19	Downspout to West Bioretention Basin
35C	0.28	0.00	0.00	0.00	0.28	3.54	0.99	1.34	Downspout to West Bioretention Basin
35D	0.25	0.00	0.00	0.00	0.25	3.54	0.89	1.19	Downspout to West Bioretention Basin
35E	0.34	0.00	0.00	0.00	0.34	3.54	1.20	1.62	Downspout to West Bioretention Basin
	29.68	17.91	5.77	0.00	6.00		72.11		Area & Flow Totals

PROPOSED OFFSITE DRAINAGE AREAS

I.D.	Total Area (ac.)	Grass (ac.)	Pavement (ac.)	Roof Piped (ac.)	Roof Surf. Disch (ac.)	15-yr Comp. PI	15-yr Flow, Q (cfs)	100yr Flow, Q (cfs)	to Structure
OFF 1	0.35	0.13	0.22	0.00	0.00	2.86	1.00	1.35	East Proposed Swale
OFF 2	0.34	0.16	0.18	0.00	0.00	2.67	0.91	1.23	West Proposed Swale
	0.69	0.29	0.40	0.00	0.00		1.91		Area & Flow Totals

*INCLUDES FUTURE PAVEMENT.
**GRAVEL AREAS ARE CONSERVATIVELY CONSIDERED AS PAVEMENT, FOR HYDRAULIC CALCULATIONS.
DESIGN STORM:
15-yr., 20-min.
Roof (piped) PI=4.20; Roof (surface discharge) PI-3.54, Pavement PI=3.54; Porous Pavement=3.54; Grass PI=1.70.

PROPOSED CURVE NUMBER (MARC MANUAL)

Cover Description	Soil HSG	CN from Table 1	Area (Ac.)	Product CN x Area	Weighted CN
NORTH (FUTURE DEVELOPMENT)					
Straight Row Crop	D	89	8.67	772	
Woods/Grass Fair,	D	82	0.99	81	
Brush-Weeds-Grass Fair	D	77	0.57	44	
Open Space (Turf), Good	D	80	2.83	226	
Parking Lots, Roofs, Streets, Etc.	D	98	1.19	117	
SUBTOTAL:			14.25	1240	87
SOUTH (PRESENT DEVELOPMENT)					
Open Space (Turf), Good	D	80	4.85	388	
Parking Lots, Roofs, Streets, Etc.	D	98	10.58	1037	
SUBTOTAL:			15.43	1425	92
GRAND TOTAL:			29.68	2665	90

The original signed and sealed of this drawing is on file at the office of The Clayton Engineering Company. Any modifications to this drawing shall release said The Clayton Engineering Company, the Engineer and/or Surveyor whose seal appears hereon from any liability resulting from said unauthorized modifications. The signed and sealed original is the official document and shall take precedence over any digital version.

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Dial 811 Missouri-811.org

Underground facilities, structures & utilities have been plotted from available surveys, records & information, and therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, or location of these facilities, structures, & utilities.

The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act.

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MO Dept. Financial & Prof. Reg. Prof. Design & Engineering Corp. #184.000879

REVISIONS

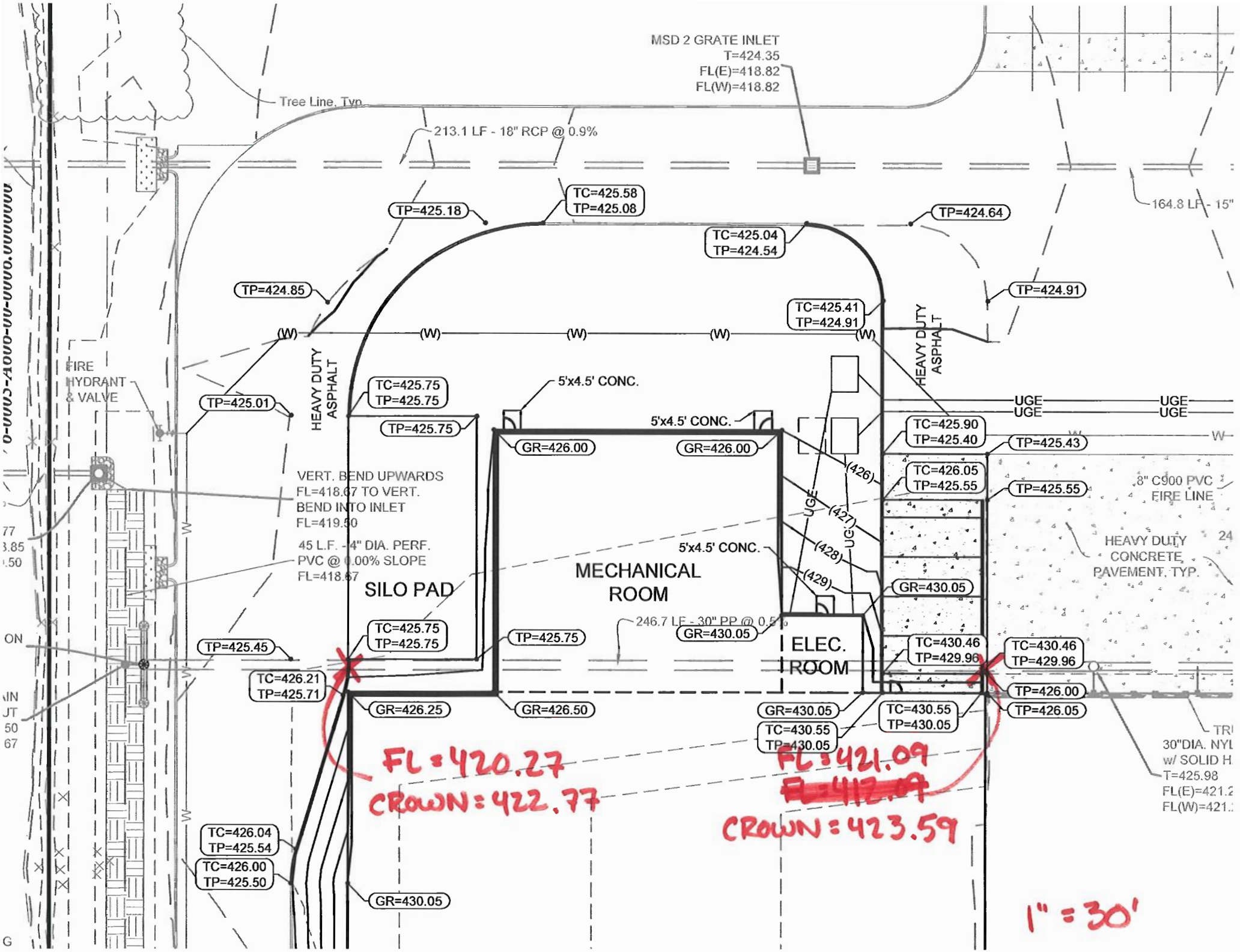
FILE: G:\Proj\21182\2_ASM\3TP\Prem\Axium Building Expansion- DAM - 21182.2.dwg
PLOTTED: 4/17/2026 1:48 PM

Prepared for:
PEAK CONSTRUCTION CORPORATION
9525 W. BRYN MAWR SUITE 810
ROSEMONT, IL 60018

PROPOSED DRAINAGE AREA MAP
AXIUM PLASTICS
4001 Premier Pkwy
St. Peters, MO 63376

Designed	JRW
Drawn	JRW
Checked	JRW
Date	04-17-2026
Project Number	21182.2
Sheet Number	C9.1 of _____

1468
F.B.


MSD 2 GRATE INLET
T=424.35
FL(E)=418.82
FL(W)=418.82
Tree Line, Typ.
213.1 LF - 18" RCP @ 0.9%
164.8 LF - 15"
TC=425.58
TP=425.08
TP=425.18
TC=425.04
TP=424.54
TP=424.64
TP=424.85
TP=424.91
TC=425.41
TP=424.91
(W)
HEAVY DUTY ASPHALT
FIRE HYDRANT & VALVE
TP=425.01
TC=425.75
TP=425.75
TP=425.75
5'x4.5' CONC.
GR=426.00
GR=426.00
UGE
TC=425.90
TP=425.40
TP=425.43
TC=426.05
TP=425.55
TP=425.55
VERT. BEND UPWARDS
FL=418.67 TO VERT.
BEND INTO INLET
FL=419.50
45 L.F. -4" DIA. PERF.
PVC @ 0.00% SLOPE
FL=418.67
SILO PAD
MECHANICAL ROOM
ELEC. ROOM
246.7 LF - 30" PP @ 0.5%
GR=430.05
GR=430.05
TC=425.75
TP=425.75
TP=425.75
TP=425.45
TC=426.21
TP=425.71
GR=426.25
GR=426.50
TC=430.46
TP=429.96
TC=430.46
TP=429.96
TP=426.00
TP=426.05
TC=430.55
TP=430.05
TC=430.55
TP=430.05
8" C900 PVC FIRE LINE
HEAVY DUTY CONCRETE PAVEMENT, TYP.
30"DIA. NYL
w/ SOLID H
T=425.98
FL(E)=421.2
FL(W)=421.
FL = 420.27
CROWN = 422.77
FL = 421.09
CROWN = 423.59
TC=426.04
TP=425.54
TC=426.00
TP=425.50
GR=430.05
1" = 30'

Irrigation Notes:

1) Contractor to provide a design / build irrigation system. The contractor is responsible for the design and performance of the system, based on this plan. Submit drawings of irrigation system and cut sheets of all irrigation equipment to Landscape Architect for approval prior to start of work.

2) Show all sleeve locations on shop drawing for review by Landscape Architect.

3) Irrigation contractor shall be responsible to obtain all permits required by state, city, and local authorities and conform to all codes regarding irrigation systems.

4) Civil and utility information shown for reference only. Refer to Civil Engineer drawings and field locate utilities prior to start of work.

5) Irrigation contractor is responsible for coordination with Plumbing and Electrical Contractors.

6) Irrigation contractor shall coordinate watering requirements with Landscape Contractor to insure proper level of water is provided.

7) No spraying across pavement (Roadways and Sidewalks).

8) Main line and all valves to be located within property.

PROPOSED BUILDING EXPANSION
+63,500 SF
F.F. = 430.05

243 CAR SPACES
42 TRAILER SPACES

ADJ. LOT 32
#4001 PREMIER PARKWAY.
203,176 SF
F.F. = 430.05

228 CAR SPACES
42 TRAILER SPA

Provide irrigation at shrub beds

Provide irrigation at shrub beds

Matchline

Matchline

Matchline

Water. Diagram
SCALE 1"=30'

0 30 60

Key

Proposed irrigated landscape beds: 100% coverage with 12" pop-up heads

Proposed irrigated lawn areas: 100% coverage with 4" pop-up heads

Watering Diagram
SCALE 1"=30'

0 30 60 120

Jerald Saunders - Landscape Architect
MO License # LA-007

4/28/26

Consultants:

BUILDING EXPANSION
Axium Plastics
4001 PREMIER PARKWAY
SAINT PETERS, MISSOURI

Revisions:

Date	Description	No.
4/2/26	Bldg. Addition	3
4/28/26	Bldg. Addition	4

Drawn: KP
Checked: RS

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Loomis Associates Inc.
Missouri State Certificate of Authority #: LAC #000119

Sheet Title: Watering Diagram

Sheet No: L2.01

Date: 4/3/2026
Job #: 1091.001