CITY OF GOODLETTSVILLE
MUNICIPAL PLANNING COMMISSION
MEETING AGENDA

Monday May 4, 2026 5:00 PM

ITEM#1 Approval of May 4, 2026 Agenda

ITEM#2 Approval of April 6, 2026 Meeting Minutes

ITEM#3 Public Forum on Planning Related Topics

ITEM#4 Dry Creek LLC, Cedar Side at Dry Creek Section Two (2): Requests performance bond one-year extension.

ITEM#5 Community Development Staff: Requests recommendation to the Goodlettsville City Commission to amend the Zoning Ordinance Sections 14-201(3), 14-208 (1)(b) to define provisions for fence regulations.

ITEM#6 Ironwood Residential Development, Phillips Builders/Development Management Group, LLC: Requests final master plan approval for sixty-six (66) one family detached dwelling unit lots. The properties are referenced as Sumner County Tax Map 140 Parcels 124 and 124.01. Property Owner: William B Ralph JR Trustee (15-24)

GOODLETTSVILLE CITY HALL MASSIE CHAMBERS

A government committed to operating with efficiency and integrity in all we do as we strive to enhance the quality of life for the community we serve.

105 S. Main Street – Goodlettsville, TN 37072 – 615-851-2202

CITY OF GOODLETTSVILLE
MUNICIPAL PLANNING COMMISSION
AGENDA STAFF REPORT

MONDAY MAY 4, 2026 5:00 PM

ITEM#1 Approval of May 4, 2026 Agenda

STAFF NOTES: N/A

MOTION OPTIONS:

1. Approve as listed

2. Approve with agenda amendments as determined by the Planning Commission

ITEM#2 Approval of April 6, 2026 Meeting Minutes

STAFF NOTES: N/A

MOTIONS OPTIONS:

1. Approve as listed

2. Approve with minute amendments as determined by the Planning Commission

ITEM#3 Public Forum on Planning Related Topics

STAFF NOTES: N/A

MOTION OPTIONS: N/A

ITEM#4 Dry Creek LLC, Cedar Side at Dry Creek Section Two (2): Requests performance bond one-year extension.

STAFF NOTES:

The current $190,000 performance bond expires June 3, 2026. The project developer has requested a one-year bond extension. The requested bond amount is based on the estimated cost of remaining improvements and Public Works identified items based on construction damage to the roadway asphalt binder layer, curbs, and sidewalks.

The project phase includes sixty-two (62) attached townhouse type units. Sixty-two (62) of the units are completed. The property phase unit completion is at one hundred (100) percent. At the Planning Commission's 2025 bond review, the project phase unit completion was at fifty-eight (58%) percent. The subdivision plat was recorded August 2023.

The remaining project items include final street paving and striping, sidewalks, finish grading and bio retention storm water quality feature construction maintenance and finish work, and sewer line final testing.

MOTION OPTIONS:

1. Approval of the requested one-year bond extension at $190,000.
2. Approval of one-year bond extension including an additional two (2%) inflation to the existing bond amount at $193,800.
3. Approval of one-year bond extension at amount determined by Planning Commission based on information provided during meeting.
4. Denial of one-year bond extension to direct staff to notify property owner to complete the remaining items prior to bond expiration data or request payment on bond to prioritize and complete the remaining project improvements.

Staff recommendation to be provided at meeting

ITEM#5 Community Development Staff: Requests recommendation to the Goodlettsville City Commission to amend the Zoning Ordinance Sections 14-201(3), 14-208 (1)(b) to define provisions for fence regulations.

STAFF NOTES:

The City's Board of Zoning and Sign Appeals recently reviewed an administrative appeal regarding the fence section of the Zoning Ordinance. The appeal was based on the ordinance section limiting solid fences over four (4') feet in the front yard of the property and the percentage of open portions of the fence that would be required to not be considered a solid type fence.

A Board of Zoning and Signs Appeals member provided the following Zoning Ordinance amendment suggestion to address the open and solid fence ordinance text.

At the March Planning Commission meeting, staff discussed the proposed ordinance amendments to clarify open fencing and the ordinance amendment researched and prepared by a Board of Zoning and Sign Appeals member.

Zoning Ordinance Amendments: Fence Regulations

14-201(3) Definitions

Fence. A freestanding structure, or a structure attached to posts, columns, or pilasters, erected to enclose, screen, separate, secure, or mark a boundary on a lot. A fence includes gates. A fence does not include vegetation used alone.

Fence, decorative. An open style fence constructed of customary decorative materials and design compatible with surrounding development. Examples include finished wrought iron, aluminum tubing, wood picket, split rail, brick, and stone.

Fence, open style. A fence designed to allow visibility through the fence area. Openness is measured as a percentage of open area compared to the total fence area, excluding posts and columns. Examples include chain link without slats, wrought iron, aluminum tubing designed to simulate wrought iron, split rail, and spaced picket fences.

Fence, solid style. A fence designed to substantially block visibility through the fence area. Examples include stockade wood privacy fences, vinyl privacy fences, composite privacy fences, masonry privacy walls, and chain link fencing with slats or inserts intended to block views.

Opacity. The percentage of the fence area that obscures views into the lot when viewed perpendicular to the fence. A fence with 50 percent opacity obscures no more than 50 percent of the view into the land.

Wall. A masonry, stone, brick, concrete, or similar constructed barrier serving the same boundary, screening, or security purposes as a fence.

14-208(1)(b) Fences and Walls

(b) Fences, walls, and hedges. Notwithstanding other provisions of this title, fences, walls, and hedges may be permitted in any required yard, or along the edge of any yard except as prohibited in subsection 14-208(1)(a) above.

In any residential district, no fence or wall shall exceed eight feet (8') in height and shall not extend past the front of the principal building. Between the front of the principal building and the street right-of-way, no open type fence shall exceed six feet (6') in height and solid type fence, or wall are limited to four feet (4') in height.

Between the front of the principal building and the street right-of-way, any fence exceeding four feet (4') ***in height shall be an open-style fence and shall not exceed fifty percent (50%) opacity***.

In commercial or industrial districts, no fence or wall shall exceed fifteen feet (15') in height. Between the front of the principal building and the street right-of-way, no fence or wall shall exceed six feet (6') in height.

For purposes of administration and enforcement, fences shall be classified as open style or solid style in accordance with the definitions set forth in § 14-201(3).

The height of such fences and walls shall be measured from the finished grade to top of the individual sections. Such sections may be measured separately and averaged. When applicable, fences shall be constructed in compliance with the design guidelines. Fences shall be constructed of materials listed below:

- Woven wire chain link - excluding any barb wire type fencing.

- Wrought iron or similar aluminum design.

- Wood, vinyl, steel, or aluminum slats of no more than one inch by six inches in width when hung vertically, horizontally, or diagonally between steel, wood or vinyl posts. Unfinished fence materials and the framing members of all fences shall not be directly visible from the street on which it is located. Placement of the framing members of board fences on the outside face of the

fence directly visible from the street may be approved by the planning department if it is determined that it enhances the architectural character of the fence. NOTE: There is no requirement to face framing members of board fences between adjoining properties that are not directly visible from the street.

- Masonry consisting of brick, concrete block, split-face block, dry-stack stones, or stones and mortar.

- Wire fencing that is secondary in nature and located on the interior side of the fence may be allowed in combination with any fence that would otherwise meet the above material requirements.

- Any other combination of materials listed above or other materials which the planning department determines to be equivalent to the above in terms of quality and appearance.

- Property line and agricultural type fencing including woven wire, single wire fence, and barb wire are only permitted in existing non-conforming installations and on properties zoned agricultural or five acres or larger as permitted by the provisions of the zoning ordinance. The planning department may review a property line single wire fence not including barb wire on vacant properties less than five acres to define property lines. Woven wire chain link fences including barb wire at the top of a fence constructed to meet the above material requirements may be approved by the planning department in industrial zoned properties when the installation is not located along a public street.

MOTION OPTIONS:

1. Recommend approval to the City Commission for the amendment of the Zoning Ordinance to include provisions for fence regulations as presented by staff or with ordinance revisions determined by the Planning Commission
2. Recommend denial to the City Commission to not include provisions for fence regulations section in the Zoning Ordinance
3. Defer request to include additional information as determined by the Planning Commission

Staff recommendation to be provided at the meeting

ITEM#6 Ironwood Residential Development, Phillips Builders/Development Management Group, LLC: Requests final master plan approval for sixty-six (66) one family detached dwelling unit lots. The properties are referenced as Sumner County Tax Map 140 Parcels 124 and 124.01. Property Owner: William B Ralph JR Trustee (15-24)

STAFF NOTES:

At the October 6, 2025 meeting, the Planning Commission recommended to the Goodlettsville City Commission to annex and rezone the 45.02-acre properties at 4408 Long Hollow Pike from

Sumner County RR, Rural Residential to LDRPUD, Low Density Residential Planned Unit and preliminary master plan approval for sixty-nine (69) one family detached dwelling unit lots. In addition, the Planning Commission recommended to the City Commission to approve the plan of services for the proposed annexation of 45.02 acres at 4408 Long Hollow Pike and a 1,770 feet section of Long Hollow.

At the December 11, 2025 meeting, the City Commission adopted Resolution 25-1294 adopting a plan of service for annexation of 45.02 acres on Long Hollow Pike and Resolution 25-1296, a resolution annexing 1,770 feet of Long Hollow Pike/SR 174 right of way and roadway.

The plan of service defines the extension of City services including police, fire, trash, planning and code services, and park and recreation to the property and the proposed timing. The developer is required to extend utility services (water, sewer, electric) and complete required Long Hollow Pike improvements required per the TDOT, Tennessee Department of Transportation requirements.

The preliminary master plan proposal for 1.53 units per acre was consistent with the Low-Density designation of the prior Comprehensive Land Use Plan within the one to two (2) units per acre range. Since the approval of the preliminary master plan, the City adopted an update the Comprehensive Land Use Plan. The final master plan proposal remains consistent with the Comprehensive Land Use Plan as it lies within the Residential Rural district that aims to preserve areas in Goodlettsville that are used primarily for low-density residential, open space preservation, and in some instances farming. These areas provide a quieter, more spacious alternative to denser development, and are typically found on the city's periphery.

The proposal is zoned LDRPUD, Low Density Residential Planned Unit Development. The adjacent Wynridge Development is zoned LDRPUD, Low Density Residential Planned Unit Development and the Copper Creek Development is zoned both LDRPUD, Low Density Residential Planned Unit Development and MDRPUD, Medium Density Residential Planned Unit Development.

The preliminary master plan consisted of sixty-nine (69) lots for single-family homes. The final master plan proposes sixty-six (66) lots for single-family homes, three less lots than the prior submittal. Thus, the updated proposal is a slight decrease in dwelling units per acre from 1.53 to 1.49.

Staff received a water service utility commitment letter from the White House Utility District (WHUD) including required water main improvements required by the project developer. The City’s Sewer Department has approved sewer capacity availability to the development, and is currently reviewing the proposal regarding main extension and connection requirements to be completed by the project developer.

Staff anticipates TDOT to maintain the Long Hollow Pike turn lane improvements requirements previously discussed with the latest proposal of sixty-six (66) lots.

The revised project design does not include a roadway connection to the N. Maple Ridge Lane public road right of way. The roadway connection is not shown on the revised project proposal

due to the comments the developer received about concerns with the roadway connection. The City's adopted Fire Code requires a second point of access for the proposed number of lots. City staff requests for emergency services reasons that a gated connection limited access drive with a minimum twelve (12') feet width be installed within a dedicated twenty (20') feet access easement.

The final master plan proposes twenty-nine (29) percent of the subdivision as open space, significantly higher than the required ten (10) percent dedicated to open space. Open space includes amenity area with a pavilion and playground.

The final master plan meets setback requirements, and exceeds rear setback requirements for lots that abut the Wynridge subdivision and the west side of the property.

The final master plan meets parking requirements, with four spaces per unit and thirteen (13) visitor parking spaces provided at the mail kiosk and pavilion and playground.

The City's engineer consultant review of the final master plan identified substantial comments that will need to be addressed to satisfy the City's requirements. Any remaining major items will be presented at the meeting and will be included as an agenda item motion stipulation.

MOTION OPTIONS:

1. Approve the final master plan with the defined staff stipulations.

2. Deny the final master plan and define the needed plan amendments based on the Planning Commission's determination during the meeting that the final master plan does not meet the City's Subdivision Regulations and Zoning Ordinance

3. Defer the request for the applicant to provide additional requested information as determined by the Planning Commission during the meeting discussion.

Staff recommendation to be provided at the meeting

OFFICIAL MINUTES OF THE MEETING

GOODLETTSVILLE PLANNING AND ZONING COMMISSION

April 6, 2026 Goodlettsville City Hall

5:00 p.m. Massie Chambers-Auditorium

Present: Chairman Scott Trew, Billy Barnfield, Terry Coats, Commissioner Cisco Gilmore, Jeff Parnell, Mayor Rusty Tinnin, and Judy Wheeler.

Absent: N/A

Also Present: Sean Pfalzer (Staff), Tim Ellis-City Manager, Sharon Reed (Staff), Jenni Spivey (Staff), and Alex West (Staff).

Trew called the meeting to order and Barnfield offered prayer.

Item #1 Approval of Agenda: Parnell made a motion to approve the agenda, Coats seconded the motion. The motion passed.

Item #2 Approval of March 2, 2026 Meeting Minutes: Mayor Tinnin made a motion to approve the minutes of the March 2, 2026 meeting, Barnfield seconded the motion. The motion passed.

Item #3 Trew opened the Public Forum on Planning Related Topics.

David Degrella – 202 Pear Orchard Drive
David Degrella is the next door neighbor to the property on 7723 Old Springfield Hwy. Degrella is opposed to the rezoning of this property to commercial in a residential neighborhood. Degrella states that Hitt Lane and Old Springfield Hwy. are narrow country roads with heavy traffic now and adding commercial would make it worse. Degrella opposed the rezoning of this property.

Rick Rowe – 315 Isaac Drive
Rowe wants to know what the intent is for the 7723 Old Springfield Hwy property. Rowe has concerns about the traffic situation if the roads are not improved for a commercial business. Rowe discussed the term “commercial” what does that mean and can that be defined. Rowe discussed bringing in possible food service does that mean outside areas with music and noise?

Chris Howard – 1810 Baker Road
Howard states she supports the rezoning for 7723 Old Springfield Hwy property and it will not increase the traffic in the area.

Jeanette Clark – 6216 Lickton Pike
Clark states the home at 7723 Old Springfield Hwy is a beautiful home and special to her. Clark wants the home to stay like it is in the neighborhood with no commercial business.

Tim Tinnin – 2007 Baker Road

Tinnin stated the property at 7723 Old Springfield Hwy if sold commercial or residential there is a bigger problem with traffic. Tinnin discussed the issues with traffic flow and asked if there was a goal for long term to redirect traffic. Tinnin stated suggestions for the two (2) entry and exits on the property that would help the business and traffic flow.

Susan Tinnin – Hitt Lane
Tinnin discussed the need for a turn lane going up Hwy 31W/41. Tinnin stated that she came to the meeting and was opposed to the rezone of 7723 Old Springfield Hwy but after speaking with the prospective buyer she thinks the business will be a great fit for the property.

Jane Coats – 226 Swift Drive
Coats stated she has lived in Goodlettsville her entire life. Coats states this corner 7723 Old Springfield Hwy is a beautiful corner with a nice park across the street. Coats discussed concerns with parking spaces on the corner and traffic in a residential area. Coats stated we do not need to add commercial property on the corner.

Mindy Manley – 304 Mystic Hill Drive
Manley stated that traffic is a huge concern on Hitt Lane. Manley stated that if the property at 7723 Old Springfield Hwy is zoned commercial where does it end, what happens in five years if it is zoned commercial and they sell what would they be looking at a MAPCO? Manley opposed commercial property in the neighborhood.

Curtis Benz – 7723 Old Springfield Hwy. Executor
Benz stated that his parents have been at this house for 40 years, restored it, and have made it what it is today. Benz stated that his parents gave the City the ten (10) acres across the street for the park. Benz stated that one of the reasons they are excited about Chic Artique is that house has been there for over 200 years. The applicant's plan to restore it and keep it similar to the way his parents had it or do you want someone to buy it, knock it down, and build six (6) houses in there because that could happen. Benz stated there's traffic and they're not going to bring in additional traffic. Benz stated they already have a business in the City and they're good people. Benz stated the house was built in 1848 and they're going to keep it that way. Benz supports the rezoning of 7723 Old Springfield Hwy.

Leanne Benz – 7723 Old Springfield Hwy.
Benz stated that what she has heard from the neighbors that have spoken is not that they are against the plans that are going in there but they are against the traffic. Benz stated that this business will not be an additional traffic problem and she thinks this business should not be denied because of the traffic problem that exists already. Benz supports the rezoning of 7723 Old Springfield Hwy.

Chuck Howard – 1810 Baker Road
Howard stated if sewer goes to the house than the property could be zoned for multiple homes and a lot more traffic for the area. Howard stated the City could put stipulations there that they keep the house, they don't tear down the house, and they keep it up forever. Howard stated the idea we would deny them keeping the house the way it is and make it something great is beyond him. Howard supports the rezoning of 7723 Old Springfield Hwy.

Mark Paul – 7965 Old Springfield Pike

Paul stated he has lived on Springfield Pike for years and have watched the rehab of this property over the years and surprised to find it proposed for rezone commercial. Paul stated his problem is two (2) things. The commercialization of it and once it becomes a planned unit development you can't unplan the development and the other problem is traffic. Paul stated a serious problem getting emergency vehicles in there and once the door opens to commercial it can be whatever the people want it to be. Paul opposed the rezoning of this property.

Tori Wilt – 575 Brick Church Pike
Wilt stated that she has been in the Goodlettsville area for 50 years. Wilt stated she has concerns about once you zone that commercial and the business did not work out the property will stay commercial and who knows what would go up in that area. Wilt discussed the problem with traffic and the growth in the City. Wilt opposed the rezoning of this property.

Trew asked for additional comments and no additional comments were received.
Wheeler made a motion to close the public forum, seconded by Parnell. The motion passed.

The Public Forum was closed.

AGENDA

Item #4 Jonathan and Jenna Rummel: Requests recommendation to the City Commission to rezone the 4.54-acre properties at 7723 Old Springfield Highway referenced as Davidson County Tax Map/Parcels# 01808001000 and 01808001100 from A, Agricultural to CPUDL, Commercial Planned Unit Development Limited Property Owner: William W. Benz.

Item Representative: Jenna and Jonathan Rummel

Staff Discussion:
-The request is to rezone the 4.54-acre property from A, Agricultural to CPUDL, Commercial Planned Unit Development Limited to permit the proposed use of the property as a retail and possible food service commercial use.
-The rezoning request would permit all the permitted uses in the CPUDL, Commercial Planned Unit Development Limited zoning district.
-A proposed parking plan was submitted as part of the request to add additional parking to support commercial uses as well as provide ADA accessible parking spaces.
-Motion Option-Recommend to the Goodlettsville City Commission approval of the CPUDL, Commercial Planned Unit Development Limited zoning district based on the Planning Commission's determination during the meeting that the proposal is in compliance with the City's Comprehensive Plan. (Staff Recommendation)
-Motion Option-Recommend to the Goodlettsville City Commission denial of the CPUDL, Commercial Planned Unit Development Limited zoning designation based on the Planning Commission's determination during the meeting that the proposal is not in compliance with the City's Comprehensive Plan.
-Motion Option-Defer the request to include additional information as determined by the Planning Commission.

Planning Commission Discussion:

-Jenna Rummel stated they currently own Chic Artique on Main Street in Goodlettsville and have been in business for 10 years and shares all of the concerns about traffic.
-Jenna Rummel stated that they would love to relocate the business to this beautiful old home.
-Jenna Rummel stated that they love the home as it is and plan on renovating most cosmetic and keeping it as much like it is.
-Jenna Rummel discussed the circular drive and parking plan with a designated in and a designated out.
-Jenna Rummel stated they hope to put a coffee shop in the back building.
-Coats asked what is your current commercial property across the street and are you moving that to the Springfield Highway location.
-Jenna Rummel responded it is Home Décor and yes we are relocating.
-Jenna Rummel stated they have sold to a boutique who sells mainly clothing and will be coming in February of next year.
-Parnell discussed issues with lighting and noise that might flood the neighborhood.
-Jenna Rummel stated that there's already one (1) parking light on the property and they hope that works and the latest they have remained open for an after-hour event is 7pm.
-Jonathan Rummel stated any lighting they would need for the parking area would be tastefully done that's more streetlamp style complimentary to the historic nature of the house.
-Trew asked Sean Pfalzer would there have to be a lighting plan for this?
-Pfalzer responded they could look at that as part of the preliminary site plan.
-Commissioner Gilmore asked Rummel what the times for delivery would be?
-Jenna Rummel responded it would definitely be within the open hours of 10 am to 5 pm and they generally receive deliveries around noon to 2 pm.
-Trew asked what kind of delivery is this a semi-truck or delivery truck like Amazon?
-Jenna Rummel responded they get delivery from all kinds of businesses but most of them are FedEx and UPS trucks and occasionally get larger deliveries but not every day.
-Commissioner Gilmore discussed operating hours for store and coffee shop.
-Jenna Rummel responded right now 10 am to 5 pm and closed on Sundays. She thinks the coffee shop will mimic their hours unless they have something earlier in the day.
-Commissioner Gilmore discussed the lot on Pear Orchard Drive remaining residential and putting a buffer there.
-Jenna Rummel responded that lot will stay residential in addition to landscaping to create a buffer that's currently not there.
-Commissioner Gilmore discussed concerns about the protection of the Garrett house and the history of that in Goodlettsville if this passes because it's not on a historical register and maybe put in the motion that the house would never be torn down so 5 years down the road a commercial developer could not tear it down.
-Jonathan Rummel responded they would not be opposed to a deed restriction added to the property.
-Commissioner Gilmore discussed keeping the circular drive coming off Old Springfield Hwy and exiting on Hitt Lane.
-Jenna Rummel responded it enters on Old Springfield Hwy and would exit on Old Springfield Hwy.
-Jonathan Rummel discussed the number of parking spaces based on the square footage of the buildings 28 parking spaces would be required and 1 handicap spot and they believe they can accommodate up to 30 spots.
-Wheeler asked if they have talked with the Goodlettsville Fire Department related to access for emergency vehicles to the property?

-Jenna Rummel responded not beyond their conservation with Addam McCormick when he met them on the property and they did go through what would be necessary.
-Mayor Tinnin asked if they spoke with Addam McCormick regarding drainage issues and water retention gravel or asphalt?
-Jonathan Rummel responded asphalt will be required and the square footage was below the threshold for the required detention pond.
-Parnell asked to review the Existing and Proposed Zoning matrix of what's allowed.
-Parnell stated he did not have concerns about anything listed and appreciates the third residential lot staying residential creating the buffer with additional landscaping and leaning to make a motion to approve.

Motion: Motion by Parnell to approve the request as presented.
-Mayor Tinnin as a conflict of interest will abstain from the vote.
-Trew stated if they approve the zoning change this is just a recommendation from the Planning Commission for the City Board of Commissioners to approve.
Motion: Motion by Parnell to approve the request as presented, seconded by Barnfield.
-Coats will abstain from the vote.
-Commissioner Gilmore asked to amend Parnell's motion adding the stipulation to remove Food Service Drive-in & Drive-thru option from proposed zoning.
-City Manager Ellis asked for clarification on Community Assembly and Entertainment & Amusement Services generally, what would that be?
-Pfalzer responded Community Assembly includes activities performed by or at institutions for various social or athletic or recreational purposes, such as civic, social, fraternal associations, private clubs, lodges, meeting halls or temporary nonprofit festivals. Entertainment & Amusement includes the provision of cultural entertainment, educational, athletic services other than those classified as community facility activities, such as batting, golfing, driving ranges, bowling alleys, auditoriums, exhibition halls, movie theaters and skating rinks.
-Trew stated he liked Commissioner Gilmore's recommendation, and would it be a problem taking out options on the zoning?
-City Manager Ellis responded that it's part of the Planned Unit Development (PUD) and an individual adoption for that rezoning on the property so this board recommends that to the City Board of Commissioners and it goes forward then those zoning options would limit the ability to use for those uses.
-Commissioner Gilmore asked for clarification on Convenience Commercial.
-Pfalzer responded Convenience Commercial includes retail sale from the premises of groceries, drugs and other frequently needed personal convenience items, bakeries, barber shops, beauty shops, drug stores, grocery stores, hardware stores, laundry, dry cleaning, shoe repair services, news stands, self-service gasoline pumps, excluding fuel services for trucks 10,000 lbs and gross vehicle weight, automated
car washes.
-Parnell asked are they allowed to limit it to only food and beverage services and general retail trade?
-Pfalzer responded yes we are.
-Parnell asked the Rummel's if they are okay with limiting it to food and beverage services and general retail trade?
-Jenna Rummel responded that is what we're doing so, yes.

Motion: Revised motion by Parnell to approve the request with the revision of zoning only allowing food and beverage services and general retail trade under the proposed zoning request, seconded by Barnfield. The motion passed with five (5) yes votes and two (2) Mayor Tinnin, and Coats abstained.

Mayor Tinnin excused himself from the meeting.

Item #5 Community Development Staff: Requests recommendation to the Goodlettsville City Commission to amend the Zoning Ordinance Sections 14-205 (3)(b), 14-213 (9)(h)(iv), and Appendix A, Table 1 define provisions for limited secondary residential dwelling units.

Item Representative: Sean Pfalzer, Staff

Staff Discussion:

-The Planning Commission at the February 2nd meeting discussed a citizen requested Zoning Ordinance amendment to permit secondary dwelling units on larger acreage properties with defined limitations.
-The Planning Commission discussed site design options and deed restrictions to prevent future subdivision of the property under the current property zoning designations and regulations.
-The Planning Commission has previously discussed and denied Zoning Ordinance requests to incorporate accessory dwelling units in the residential zoning districts.
-The key difference between secondary and accessory dwelling units is secondary dwellings units would only be permitted on properties with dimensions and acreage that permit a subdivision of the property per the property designated zoning.
-The proposed amendment Zoning Ordinance includes the defined administrative application process including conditional use review by the City's Board of Zoning and Sign Appeals Board for a secondary dwelling unit on a property.
-The secondary dwelling unit would only be an option in the case of properties including sufficient roadway frontage and property dimensions to permit a subdivision of the property for a separate lot per the Zoning Ordinance and designated property zoning.
-The intention of the secondary dwelling unit would be to maintain the consistent building setting of the surrounding area and maintain the property size.
-The application of the secondary dwelling units would not apply to a majority of residential properties due to the minimum property dimension requirements and private neighborhood property restrictions.
-The Planning Commission previously discussed limiting the application of the secondary dwelling units to larger properties which would further limit the application of the ordinance section to only defined areas of the city based on designated property zoning and property dimensions.
-There is currently a proposal being reviewed this legislative session that if approved could alter and possibly eliminate the need of this Zoning Ordinance amendment.
-If the bill passes, cities will have defined limited regulations available for accessory dwellings units.
-Staff presented the proposed Zoning Ordinance Amendments: Secondary Dwelling Unit Sections 14-205 (3)(b) Table 1 and 14-213 (9)(h)(iv).
-Staff presented the proposed defined administrative application process for Secondary One Family Detached Residential Dwelling Unit.

-The following items are standards that shall apply to all one family detached secondary residential family dwelling units: 1. No more than one secondary residential dwelling unit shall be permitted in conjunction with the primary detached dwelling unit on a property. 2. No attached secondary residential dwelling unit shall be permitted. 3. A secondary unit shall be owned by the same person(s) as the primary dwelling unit. 4. The maximum size of all buildings including primary and secondary

dwelling units, and accessory buildings on a property shall be limited to the maximum lot coverage and floor area ratio requirements of the Zoning Ordinance. 5. The secondary dwelling unit minimum building square footage dimensions and attached garage requirements for the secondary unit shall be determined by the designated property zoning and the Zoning Ordinance. The Board of Zoning and Sign Appeals may review and permit proposed site designs that are intended for the secondary unit to be a detached extension of the primary dwelling unit due to the close proximity of less than a thirty (30') feet separation between the closest exterior wall of the secondary dwelling unit and the primary dwelling unit and in this setting the minimum square footage of the secondary dwelling unit may be permitted to be reduced to 1,000 square feet. 6. The secondary dwelling unit minimum building setbacks shall be the same as the minimum building setbacks of the designated property zoning and Zoning Ordinance. The Board of Zoning and Sign Appeals may review a proposed site design that is intended for the secondary unit to be a detached extension of the primary dwelling unit due to the close proximity of less than a thirty (30') feet separation between the closest exterior wall of the secondary dwelling unit and the primary dwelling unit. 7. The property shall contain adequate off-street parking for both the primary and secondary residential dwelling units per the parking requirements of the Zoning Ordinance. 8. A secondary dwelling unit shall not be located in front of the primary dwelling unit on the property. 9. A secondary dwelling unit shall not be located on a property less than two (2) acres.

-Motion Option-Recommend approval to the City Commission for the amendment of the Zoning Ordinance to include the Secondary Dwelling Units section as presented by staff or with ordinance revisions determined by the Planning Commission. (Staff Recommendation)
-Motion Option-Recommend denial to the City Commission to not include the Secondary Dwelling Units section in the Zoning Ordinance.
-Motion Option-Defer the request to include additional information as determined by the Planning Commission.

Planning Commission Discussion:
-Trew commented he did not see anything in there regarding the style of the secondary unit having to be like the primary unit so could you have something totally different, different brick, different structure, different roof lines?
-Pfalzer responded I think the intent was to match the primary unit.
-Parnell discussed Conditional Use approval for all the agricultural, residential and low density residential limiting it to a two (2) acre track.
-Trew commented on how often this comes up in a year, what is a secondary dwelling, who can live there, what does it have to look like, what are the setbacks and standards.
-Barnfield commented he thinks he was one of the ones who recommended the lot size so maybe they should change some the P's on the Land Use Activity Matrix to N's so we're not accepting all of them.

Motion: Motion by Parnell to approve the request with the change of R10 and R7 to N, Not permitted instead of C, Conditional on the Land Use Activity Matrix, seconded by Barnfield. The motion passed.

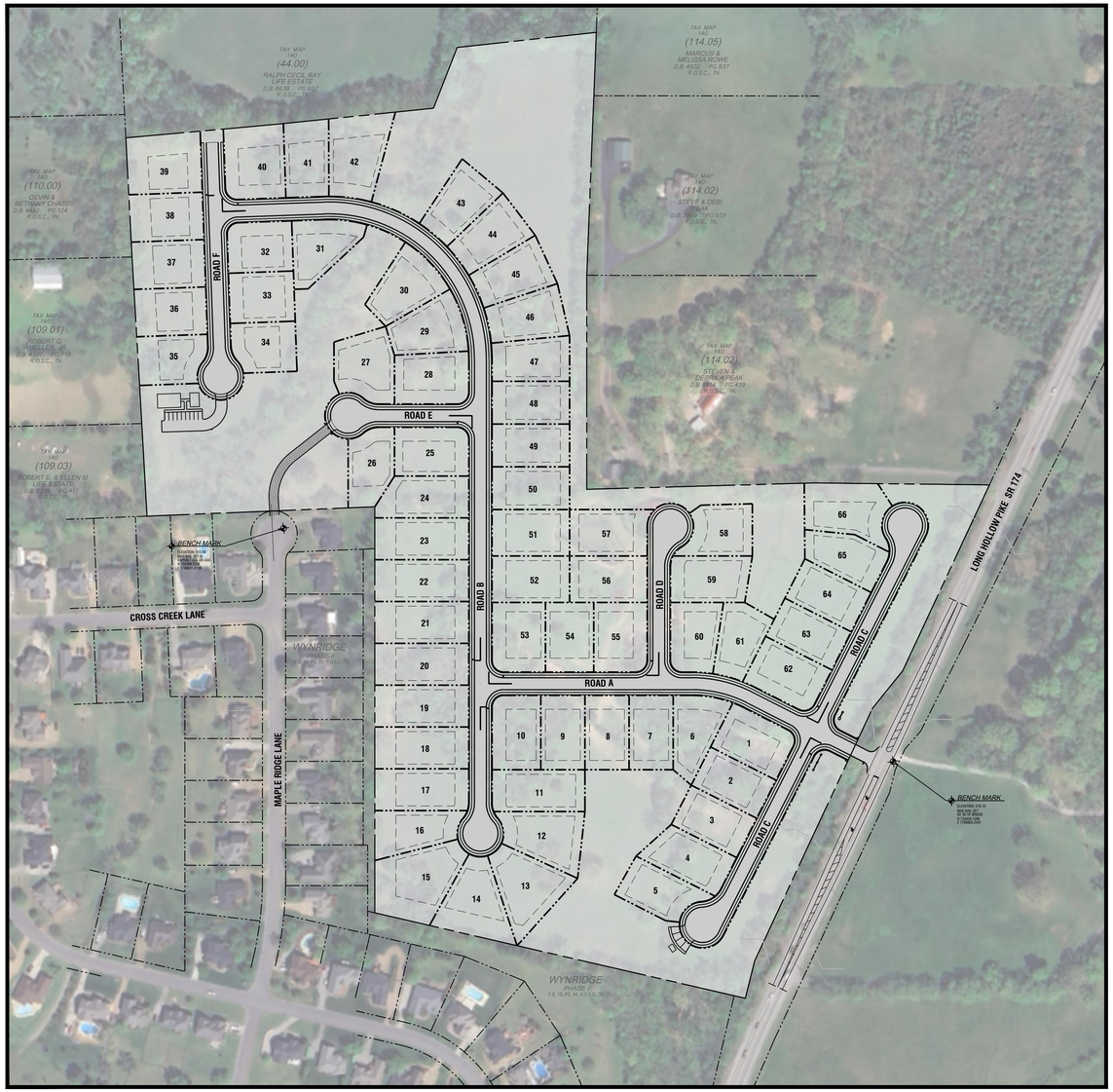
With no further business, the meeting was adjourned at 6:41 pm.

_____ _____

Scott Trew, Chairman Sharon Reed, Planning Assistant

FINAL MASTER DEVELOPMENT PLAN
FOR
IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
GOODLETTSVILLE, SUMNER COUNTY, TENNESSEE

SITE DATA	
JURISDICTION:	CITY OF GOODLETTSVILLE
ZONING CLASSIFICATION:	LDRPUD - LOW DENSITY RESIDENTIAL PLANNED UNIT DEVELOPMENT
ADJACENT ZONING:	WEST - R-40 LOW DENSITY RESIDENTIAL WEST / SOUTH - LDRPUD LOW DENSITY RESIDENTIAL NORTH - SUMNER COUNTY RR RURAL RESIDENTIAL
PROPOSED USE:	SINGLE FAMILY RESIDENTIAL SUBDIVISION
PROJECT AREA:	44.31± ACRES or 1,930,190 SF±
LOT COUNT:	66 LOTS
ALLOWED DENSITY:	LDRPUD - 0.0 TO 1.7 UNITS PER ACRE
PROPOSED DENSITY:	1.49 UNITS PER ACRE
MIN. LOT SIZE:	15,000 SF
OPEN SPACE:	MINIMUM - 10%; PROVIDED - 29±% (12.9± ACRES)
MIN. YARD REQUIREMENTS:	
FRONT:	30'
SIDE:	10'
REAR:	20' (LOTS 14-26 and 35-42 HAVE A 45' REAR BUILDING SETBACK)
MIN. LOT WIDTH AT BUILDING SETBACK	VARIES - SEE PROTO TYPICAL LOT LAYOUT
PARKING REQUIREMENTS:	
SINGLE AND TWO-FAMILY:	4 SPACES PER UNIT WITH 3 OR MORE BEDROOMS
VISITOR PARKING:	REQUIRED: 1 PARKING SPACE PER 5 RESIDENTIAL UNITS REQUIRED - 66/5 =13 SPACES; PROVIDED 13 SPACES



JURISDICTION CONTACT

PLANNING DEPARTMENT
CITY OF GOODLETTSVILLE
318 NORTH MAIN STREET
GOODLETTSVILLE, TN 37072
615-851-2202

WASTEWATER SERVICES
CITY OF GOODLETTSVILLE
215 CARTWRIGHT STREET
GOODLETTSVILLE, TN 37072
615-851-3470

ELECTRIC
NASHVILLE ELECTRIC SERVICE
1214 CHURCH STREET
NASHVILLE, TN 37246
615-736-6900

WATER
WHITE HOUSE UTILITY DISTRICT
3303 HWY 31W
WHITE HOUSE, TN 37188
615-672-4110

NATURAL GAS
PIEDMONT NATURAL GAS
83 CENTURY BLVD
NASHVILLE, TN 37214
615-872-2310

OWNER
WILLIAM B. RALPH, JR. TRUSTEE
122 POSTWOOD PLACE
NASHVILLE, TN 37205

DEVELOPER
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
CONTACT: JASON PHILLIPS
(615) 922-3313

ENGINEER/APPLICANT
DEVELOPMENT MANAGEMENT GROUP, LLC
4209 GALLATIN PIKE
NASHVILLE, TENNESSEE 37216
CONTACT: DAVID ABBEY
(615) 227-5863

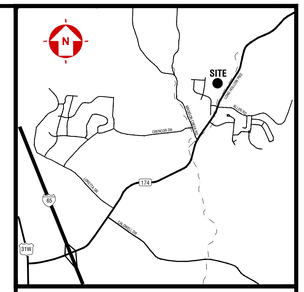
811 Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

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L1.4	ENTRY LAYOUT AND DETAILS

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY
REGISTERED
LICENSED PROFESSIONAL ENGINEER
STATE OF TENNESSEE
2026

REVISIONS		
NO.	DATE	DESCRIPTION

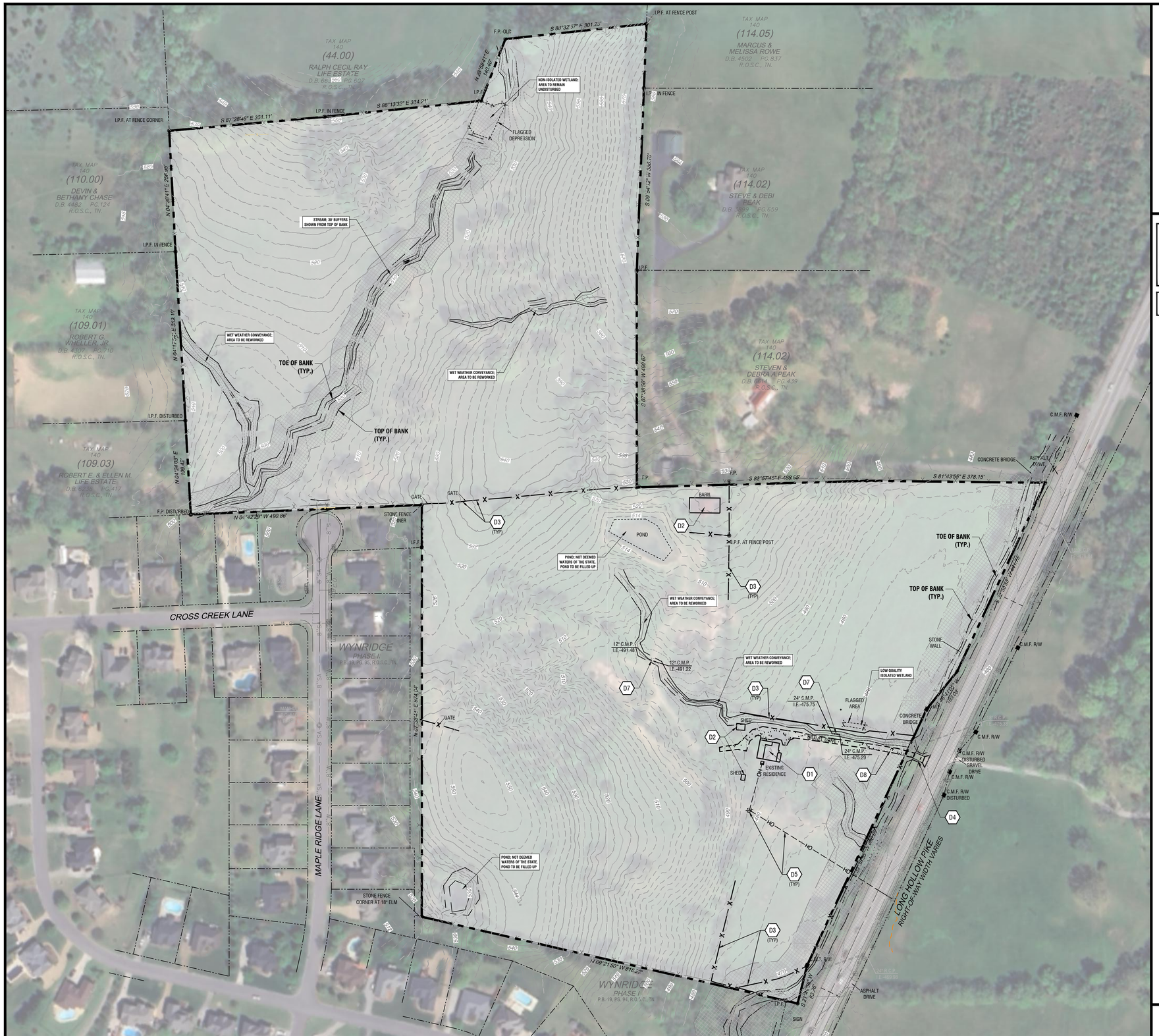
DATE:	04/23/26
DMG Project No:	25184

COVER SHEET

C0.0

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Philips Builders – Residential Development – 4408 Long Hollow Pike – Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C0.0 – Cov.dwg–Layout1 Apr 23, 2026 – 8:21am GoryEmerson



ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

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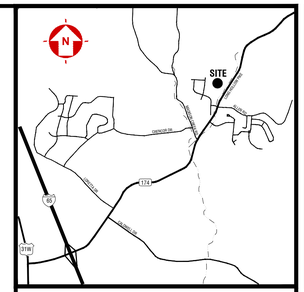

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BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

DEMOLITION NOTES:

CONTRACTOR TO USE EXTREME CARE NOT TO DAMAGE ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE TO REMAIN AND/OR BE REUSED.

ANY CONCRETE CURB, CONCRETE PAVEMENT, ASPHALT PAVEMENT, GUARDRAILS, UTILITIES, STREET SIGNS, ETC. THAT ARE TO REMAIN THAT ARE DAMAGED DURING SITE IMPROVEMENTS SHALL BE REPLACED TO PRE CONSTRUCTION SPECIFICATIONS.

CONTRACTOR TO COORDINATE WITH CITY OF NORTH MYRTLE BEACH AND SCDOT FOR ALL WORK DONE IN THE RIGHT-OF-WAY.

ANY EXISTING UTILITY METERS ARE TO BE REMOVED. ALL EXISTING UTILITIES ARE TO BE CAPPED AT PROPERTY LINE.

DEMOLITION NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
D1	REMOVE EXISTING RESIDENCE AND ALL SUPPORTING STRUCTURES	
D2	REMOVE EXISTING SHEDS AND BARNS AND ALL SUPPORTING STRUCTURES	
D3	REMOVE EXISTING FENCING AND GATES	
D4	REMOVE EXISTING BRIDGE/CONCRETE BOX	
D5	REMOVE EXISTING OVERHEAD ELECTRICAL SERVICE AND APPURTENANCES SERVING EXISTING RESIDENCE, TERMINATE SERVICE PER UTILITY PROVIDER SPECIFICATIONS	
D6	REMOVE EXISTING UTILITY SERVICES SERVING EXISTING RESIDENCE AND SHEDS/BARN, TERMINATE SERVICES PER UTILITY PROVIDER SPECIFICATIONS	
D7	REMOVE EXISTING STORM DRAINAGE PIPE	
D8	REMOVE EXISTING GRAVE DRIVE	
D9	REMOVE EXISTING TREE; SEE LANDSCAPE PLAN FOR ADDITIONAL INFORMATION	

NOTE:
REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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SUMNER COUNTY, TENNESSEE

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

EXISTING CONDITIONS

C0.1

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C0.1 Ex Cond.dwg–Layout1 Apr 23, 2026 – 8:35am GaryEmerson

GENERAL NOTES

1. ALL DISTANCES WERE MEASURED WITH E.D.M. EQUIPMENT AND HAVE BEEN ADJUSTED FOR TEMPERATURE AND PRESSURE.
2. THE PROPERTY (BOUNDARY) LINE SURVEY EXCEEDS THE MINIMUM REQUIREMENTS OF AN URBAN LAND SURVEY CATEGORY 1 AS PER STANDARDS OF PRACTICE ADOPTED BY THE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS FOR THE STATE OF TENNESSEE THE PRECISION OF THE UNADJUSTED SURVEY IS GREATER THAN 1 FOOT IN 10,000 FEET.
3. UTILITIES HAVE BEEN PLOTTED FROM SURFACE FEATURES FOUND AT THE TIME OF SURVEY AND AVAILABLE MAPS AND RECORDS. THERE MAY BE OTHER UTILITIES, THE EXISTENCE OF WHICH ARE NOT KNOWN TO THE UNDERSIGNED. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES MUST BE VERIFIED BY THE APPROPRIATE UTILITY COMPANY PRIOR TO ANY CONSTRUCTION.
4. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN THE CITY OF GOODLETTESVILLE. ALL MATTERS PERTAINING TO CONSTRUCTION, USE, LOCATION OF IMPROVEMENTS, SIGNAGE, PARKING, NOISE, VIBRATION, EMISSIONS, FIRE HAZARDS, RADIATION, ILLUMINATION, SETBACK PROVISIONS, ETC., ARE SUBJECT TO THE CITY OF GOODLETTESVILLE ZONING REGULATIONS AS INTERPRETED AND REGULATED BY THE DEPARTMENT OF PLANNING AND CODES.
5. THE TOTAL AREA OF THE PARCELS AS SHOWN HEREON IS 44.31 ACRES OR 1,930,190.08 SQUARE FEET.
6. THIS PROPERTY CURRENTLY IDENTIFIED AS TAX MAP NO. 140 PARCELS 124.00 & 124.01.
7. OWNER REFERENCE – PARCEL 124.00: WILLIAM B. RALPH, JR., DEED BOOK 1422, PAGE 202, R.O.S.C., TN.

   OWNER REFERENCE – PARCEL 124.00: WILLIAM B. RALPH, JR. TRUSTEE, DEED BOOK 1422, PAGE 191, R.O.S.C., TN.
8. THIS DRAWING WAS PREPARED IN ACCORDANCE WITH OUR FIELD SURVEY NOTES. IT SHOWS IMPROVEMENTS AS THEY EXIST TO THE BEST OF OUR KNOWLEDGE, BUT IS NOT GUARANTEED TO BE CORRECT IN EACH AND EVERY DETAIL.
9. THIS SURVEY WAS PREPARED FROM CURRENT DEEDS OF RECORD AND DOES NOT REPRESENT A TITLE SEARCH OR A GUARANTEE OF TITLE, AND IS SUBJECT TO ANY STATE OF FACTS A CURRENT AND ACCURATE SEARCH MAY REVEAL.
10. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS, OR ENTITY, IF ANY, NAMED ON THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SAID PERSON.
11. THE CERTIFICATION AS PROVIDED ON THIS SURVEY, IS PURELY A STATEMENT OF PROFESSIONAL OPINION BASED ON KNOWLEDGE, INFORMATION AND BELIEF, BASED ON EXISTING FIELD EVIDENCE AND DOCUMENTARY EVIDENCE PROVIDED BY OTHERS.
12. THE CERTIFICATION IS NOT AN EXPRESSED OR IMPLIED WARRANTY OR GUARANTEE.
13. THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON F.E.M.A. FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 417165C381H, DATED FEBRUARY 26, 2021.

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS IS A CATEGORY 1 SURVEY AND THE SURVEY WAS PERFORMED IN ACCORDANCE WITH THE CURRENT STANDARDS OF PRACTICE AND UNDER THE AUTHORITY OF TCA 62-18-126 FOR SURVEYORS IN TENNESSEE AND THE UNADJUSTED CLOSURE IS GREATER THAN 1 : 10,000.

1-24-26
Date

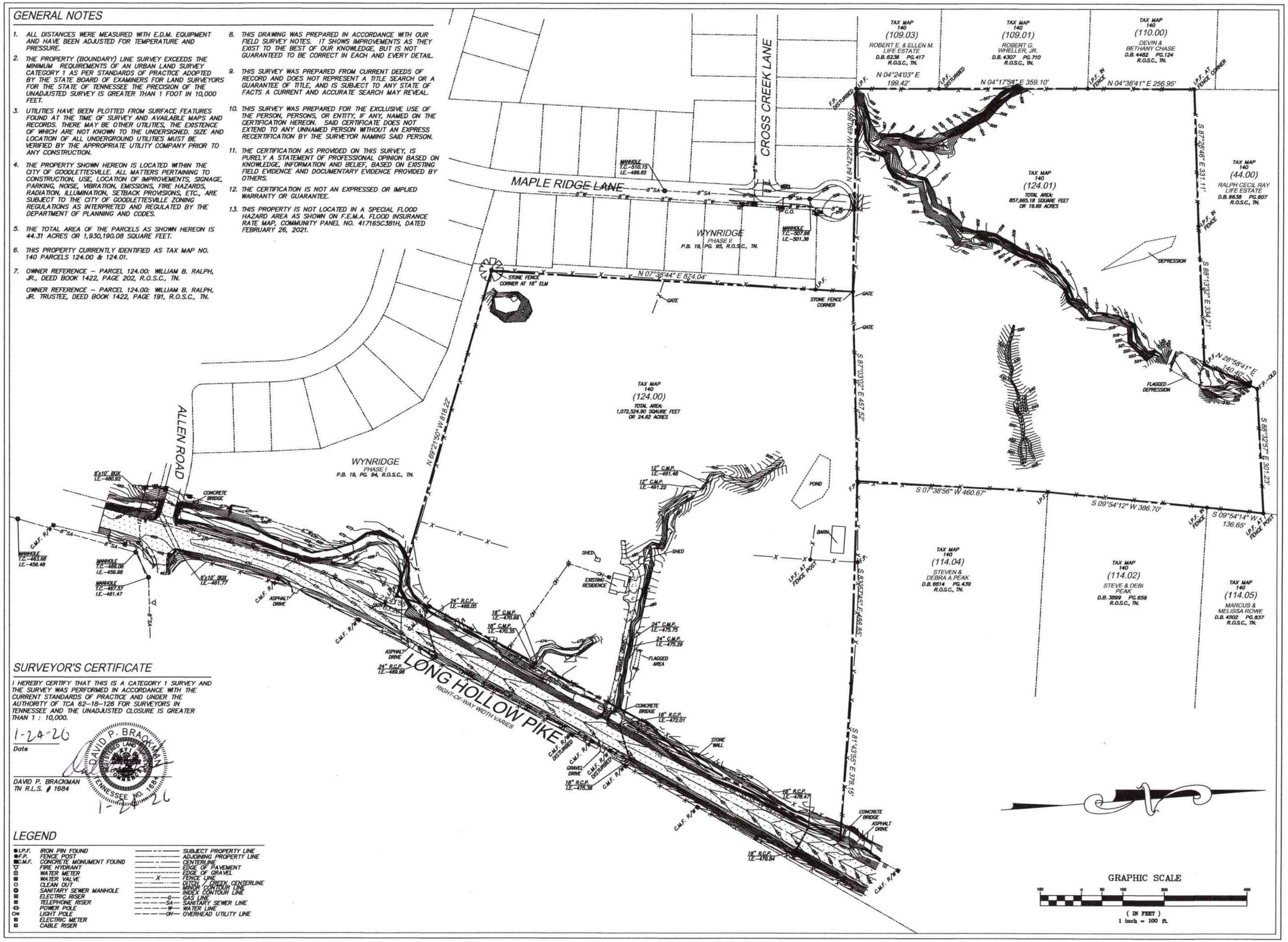
DAVID P. BRACKMAN
TN R.L.S. # 1684

DAVID P. BRACKMAN — REGISTERED LAND SURVEYOR — TENNESSEE NO. 1684 — 1-24-26

LEGEND

- ● I.P.F. IRON PIN FOUND
- ● F.P. FENCE POST
- ■ C.M.F. CONCRETE MONUMENT FOUND
- FIRE HYDRANT
- WATER METER
- WATER VALVE
- CLEAN OUT
- SANITARY SEWER MANHOLE
- ELECTRIC RISER
- TELEPHONE RISER
- POWER POLE
- LIGHT POLE
- ELECTRIC METER
- CABLE RISER

- SUBJECT PROPERTY LINE
- ADJOINING PROPERTY LINE
- CENTERLINE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- FENCE LINE
- DITCH / CREEK CENTERLINE
- MINOR CONTOUR LINE
- INDEX CONTOUR LINE
- GAS LINE
- SANITARY SEWER LINE
- WATER LINE
- OVERHEAD UTILITY LINE



BRACKMAN
LAND SURVEYING
1707 Gale Ln.
Nashville, TN 37212
PH (615) 476-8107
FAX (615) 298-2605
Email: david@brackmansurvey.com

BOUNDARY & PARTIAL TOPOGRAPHIC SURVEY

RALPH PROPERTY

4408 LONG HOLLOW PIKE

TAX MAP 140 PARCELS 124.00 & 124.01

GOODLETTESVILLE, SUMNER COUNTY, TENNESSEE

REVISION

DATE: JAN. 24, 2026

FILE NO: 25182

SHEET NO. 1 OF 1

SITE IMPROVEMENT NOTES:

1. THE SITE LAYOUT IS BASED ON DIMENSIONS AS NOTED.

2. THE CONTRACTOR SHALL CHECK ALL EXISTING CONDITIONS, (i.e. INVERTS, UTILITY ROUTINGS, UTILITY CROSSINGS, AND DIMENSIONS) IN THE FIELD PRIOR TO COMMENCEMENT OF UTILITY WORK. REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.

3. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.

4. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES AND RECEIVE APPROVAL WHERE NECESSARY BEFORE CONSTRUCTION.

5. EXISTING PAVEMENT OF PUBLIC ROADWAYS SHALL BE PATCHED OR AS OTHERWISE DIRECTED IN ACCORDANCE WITH LOCAL AGENCY STANDARDS WHEREVER UTILITY INSTALLATION REQUIRES REMOVAL OF THE EXISTING PAVEMENT.

6. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. SLIGHT FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. WHERE IT BECOMES NECESSARY TO REMOVE EXISTING PAVEMENT, IT SHALL BE ACCOMPLISHED WITH A SAW CUT TO ACHIEVE A SMOOTH TRANSITION.

7. DIMENSIONS ARE TO EDGE OF PAVEMENT, FACE OF CURB AND/OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.

8. CONCRETE FOR CURBS AND SIDEWALKS SHALL BE 3,500 PSI CONCRETE.

9. ANY WORK UNACCEPTABLE TO THE OWNER'S REPRESENTATIVE OR TO THE LOCAL GOVERNING AUTHORITY SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

10. ADA ACCESSIBLE RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12.

11. THE CONTRACTOR SHALL PAVE IN THE DIRECTION OF TRAFFIC.

12. THE CONTRACTOR SHALL NOT BE REQUIRED TO ADJUST GRADES OF INTERSECTING STREETS, ALLEYS, ENTRANCES AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.

13. ALL ROADWAY AND SIDEWALK CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF LOCAL GOVERNING AGENCY.

14. ALL CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO LOCAL GOVERNING AGENCY REGULATIONS AND SPECIFICATIONS.

15. ALL PAVEMENT MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE LOCAL GOVERNING AGENCY AND STATE DOT STANDARDS AND SPECIFICATIONS.

16. ALL CURBING WILL BE REQUIRED TO ADJUST TO THE GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES, AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.

17. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING THE SITE UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE OWNER.

18. ANY DEFICIENCIES WITHIN THE SITE PRIOR TO TOTAL ACCEPTANCE BY THE OWNER MUST BE REPLACED IN KIND PER STANDARD DRAWINGS.

19. CURBS SHALL BE PARALLEL TO THE CENTERLINE OF DRIVES. THE CURB SHALL BE PLACED ONLY AFTER HAVING ALL BREAK POINTS (PC & PT OF CURVES) LOCATED AT THE FACE OF CURB OR AT A CONSISTENT OFFSET BY A REGISTERED LAND SURVEYOR.

20. THE PROPOSED BUILDING SHALL BE LAID OUT PER THE DIMENSIONS PROVIDED AND THE ARCHITECTURAL PLANS. DIMENSIONS SHOWN TO THE PROPOSED BUILDING ARE CALCULATED TO THE FACE OF THE EXTERIOR WALL. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.

CITY OF GOODLETTSVILLE GRADING AND EROSION CONTROL NOTES:

AN EROSION PREVENTION SILTATION CONTROL PLAN (EP&SC) AND LAND DISTURBANCE PERMIT SHALL BE IN PLACE PRIOR TO ANY GRADING, CLEARING AND/OR ANY OTHER CONSTRUCTION ACTIVITY. EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD; GENERALLY CONSIDERED TO BE THROUGH THE COMPLETION OF RESTORATION. A COPY OF THE EP&SC PLAN ALONG WITH AN INSPECTION CHECKLIST AND STORMWATER PERMIT MUST BE AT THE PROJECT SITE AT ALL TIMES. THE INSPECTION CHECKLIST SHALL HAVE A RECORD OF DATES EP&SC DEVICES ARE INSPECTED AND ANY CORRECTION ACTION TAKEN OR MAJOR OBSERVATIONS. BMPS MUST BE INSPECTED BY A QUALIFIED PERSON AS NOTED BY THE CITY WHO HAS TAKEN AN APPROVED EROSION AND SEDIMENTATION COURSE (MIN. TDEC LEVEL 1).

ALL EP&SC DEVICES ARE TO REMAIN IN PLACE UNTIL THE SITE HAS BEEN STABILIZED AND A GOOD STAND OF GRASS HAS BEEN ESTABLISHED.

EROSION PREVENTION AND SEDIMENT CONTROLS MUST BE INSPECTED BEFORE A RAIN EVENT, WEEKLY, AND 24 HOURS AFTER A 0.25 INCH RAIN EVENT AND DOCUMENTED IN THE INSPECTION SITE CHECKLIST.

SILT FENCE OR OTHER SEDIMENT BARRIERS ARE TO BE INSTALLED PROPERLY ALONG TOPOGRAPHICAL CONTOURS DOWN SLOPE OF THE AREA TO BE DISTURBED PRIOR TO ANY GRADING, CLEARING AND/OR ANY OTHER CONSTRUCTION ACTIVITY.

EXCAVATED TOPSOIL TO BE REUSED MUST BE STOCKPILED AND ENCIRCLED WITH SILT FENCING.

THIS SITE SHALL CONTAIN A TEMPORARY STONE CONSTRUCTION ENTRANCE THAT CONFORMS TO THE CITY OF GOODLETTSVILLE'S STORMWATER ORDINANCE AND BEST MANAGEMENT PRACTICE MANUAL WITHIN 24 HOURS OF GRADING COMMENCEMENT OR THE LAND DISTURBANCE PERMIT WILL BE REVOKED. THE STONE SHALL BE 2 -3 INCH IN DIAMETER AND SHALL BE KEPT CLEAN BY ADDING STONE AS NEEDED. IT SHALL BE AT LEAST 6 INCHES DEEP UNDERLAIN WITH FILTER FABRIC AND 20 FEET WIDE.

APPROVED INLET PROTECTIONS FOR NEARBY STORM SEWER CURB AND DROP INLETS MUST BE INSTALLED WITHIN 24 HOURS OF GRADING COMMENCEMENT.

VEGETATIVE BUFFERS OR OTHER PROTECTION MUST BE PROVIDED ALONG STREAMS, RIVERS, AND PONDS TO AVOID EROSION OF BANKS.

STABILIZATION MEASURES MUST BE PERFORMED WITHIN SEVEN (7) DAYS IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND WITHIN FIFTEEN (15) DAYS AFTER FINAL GRADING.

ALL TREES DESIGNATED TO REMAIN, MUST BE PROTECTED. HEAVY EQUIPMENT SHOULD NOT BE OPERATED OR STORED, NOR MATERIALS HANDLED OR STORED, WITHIN THE DRIP LINE OF TREES.

SEDIMENT MUST BE REMOVED FROM SEDIMENT BARRIERS, PONDS AND OTHER SEDIMENT CONTROLS WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 33%.

SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN THE STREET OR DRAINAGE STRUCTURES MUST IMMEDIATELY BE PHYSICALLY REMOVED.

BUILDING AND WASTE MATERIALS, AND NON-STORM WATER DISCHARGES, SUCH AS CONCRETE, PAINT WASH WATER, OR MACHINERY LEAKAGE OR SPILLAGE MUST BE MANAGED TO PREVENT THEM FROM ENTERING THE STORM WATER SYSTEM, GROUND WATER OR NEARBY WATER BODY.

THE PROJECT IS SUBJECT TO INSPECTION BY THE CITY OF GOODLETTSVILLE AT ANY TIME AND ITEMS FOUND DEFICIENT SHALL BE IMMEDIATELY CORRECTED. THE CITY MAY STOP CONSTRUCTION ON PROPERTIES, OR ADMINISTER OTHER ENFORCEMENT ACTIONS AS DEFINED BY GOODLETTSVILLE'S *STORMWATER MANAGEMENT ORDINANCE* INCLUDING CIVIL PENALTIES OF $50 TO $5,000 PER DAY OF VIOLATION.

SITE DEMOLITION NOTES

1. THE CONTRACTOR SHALL CONFORM TO LOCAL CODES, OBTAIN ALL PERMITS AND GIVE ALL NOTICES REQUIRED FOR EXECUTION OF THE WORK.

2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL CHARTED AND UNCHARTED UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN, REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.

3. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE LIMITS OF DEMOLITION WITH THE OWNER'S REPRESENTATIVE.

4. SAW CUT TO PROVIDE A CLEAN EDGE IN AREAS WHERE EXISTING PAVEMENT, WALKS, OR CURBS ARE TO BE REMOVED. THE EXTENT OF PAVEMENT DEMOLITION SHALL BE COORDINATED WITH THE LIMIT OF NEW IMPROVEMENTS ON THE PROPOSED SITE IMPROVEMENT PLANS.

5. THE CONTRACTOR SHALL COORDINATE PHASING OF THE DEMOLITION WITH THE OWNER'S REPRESENTATIVE AND LOCAL GOVERNING AGENCY PRIOR TO BEGINNING WORK. DISRUPTION OF EXISTING UTILITY SERVICES AND TRAFFIC PATTERNS SHALL BE MINIMIZED TO THE EXTENT POSSIBLE AND INITIATED ONLY AFTER APPROVAL BY THE LOCAL GOVERNING AGENCY AND THE UTILITY COMPANIES.

6. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE SUITABLY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS AND SPECIFICATIONS.

7. THE CONTRACTOR SHALL USE WATER SPRINKLING AND/OR OTHER SUITABLE METHODS AS NEEDED TO CONTROL DUST CAUSED BY THE DEMOLITION WORK.

8. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND REMOVAL NECESSARY TO ACCOMPLISH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

9. THE CONTRACTOR SHALL PRESERVE AND PROTECT SURVEY CONTROL POINTS AND SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY DISTURBED CONTROL POINTS AT NO COST TO THE OWNER. ANY REPLACEMENT OF DISTURBED CONTROL POINTS TO BE PERFORMED BY A REGISTERED LAND SURVEYOR.

10. SITE LIGHTING DEMOLITION AND LAYOUT SHALL BE COORDINATED WITH THE ELECTRICAL DRAWINGS.

11. RELOCATION OF EXISTING PLANT MATERIALS SHALL BE COORDINATED WITH THE OWNER AND RELOCATED TO A DESIGNATED AREA ON SITE.

12. EXISTING SHRUBS TO BE PRESERVED ARE TO BE BARRICADED BEFORE BEGINNING CONSTRUCTION.

13. NO UTILITY OR STORM SEWER LINES SHALL BE DEMOLISHED UNTIL THE NEW LINES HAVE BEEN INSTALLED, INSPECTED, AND ARE PLACED INTO OPERATION.

14. THE CONTRACTOR SHALL INCORPORATE INTO HIS WORK ANY ISOLATION VALVES OR TEMPORARY PLUGS REQUIRED TO CONSTRUCT NEW UTILITY LINES WHILE DEMOLISHING EXISTING UTILITY LINES.

CITY OF GOODLETTSVILLE STORMWATER ORDINANCE:

1. CONTRACTOR SHALL ALSO REFER TO SECTION 18 CHAPTER 3 FOR ANY ADDITIONAL REQUIREMENTS AS SET FORTH WITHIN THE CITY OF GOODLETTSVILLE ORDINANCE AS IT RELATES TO STORMWATER MANAGEMENT. ANY ITEMS THAT ARE MORE RESTRICTIVE WITHIN THE CITY ORDINANCE THAN THE TDEC MANUAL SHALL BE FOLLOWED.

CITY OF GOODLETTSVILLE WASTEWATER DEPARTMENT NOTES:

1. ALL LABOR, MATERIALS, SUPPLIES, AND EQUIPMENT REQUIRED TO COMPLETE THE SANITARY SEWER WORKS OF THIS PROJECT SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OF THE CITY OF GOODLETTSVILLE WASTEWATER DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE CITY OF GOODLETTSVILLE TO VERIFY THE REQUIRED MINIMUM STANDARDS OF CONSTRUCTION.

SITE GRADING & EROSION CONTROL NOTES:

1. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE CODES AND OBTAIN APPROVAL AS NECESSARY BEFORE BEGINNING CONSTRUCTION.

2. CONSTRUCT SILT BARRIERS BEFORE BEGINNING GRADING OPERATIONS.

3. REMOVE SEDIMENT FROM ALL DRAINAGE STRUCTURES BEFORE ACCEPTANCE BY LOCAL GOVERNING AGENCY, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

4. CLEAN SILT BARRIERS WHEN THEY ARE APPROXIMATELY 50% FILLED WITH SEDIMENT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. SILT BARRIERS SHALL BE REPLACED AS EFFECTIVENESS IS SIGNIFICANTLY REDUCED, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

5. REMOVE THE TEMPORARY EROSION AND WATER POLLUTION CONTROL DEVICES ONLY AFTER A SOLID STAND OF GRASS HAS BEEN ESTABLISHED ON GRADED AREAS AND WHEN IN THE OPINION OF THE OWNER'S REPRESENTATIVE, THEY ARE NO LONGER NEEDED.

6. PROVIDE TEMPORARY CONSTRUCTION ACCESS(ES) AT THE POINT(S) WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. MAINTAIN PUBLIC ROADWAYS FREE OF TRACKED DEBRIS.

7. THE CONTRACTOR SHALL CHECK ALL EXISTING GRADES AND DIMENSIONS IN THE FIELD PRIOR TO BEGINNING WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

8. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA, INC. AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.

9. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF AN ENGINEERED GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE AND MOVEMENT OF MATERIALS. SHOULD THE CONTRACTOR HAVE ANY QUESTION OF THE INTENT OR ANY PROBLEM WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.

10. ALL PIPES UNDER EXISTING PAVED AREAS SHALL BE BACKFILLED TO THE TOP OF SUBGRADE WITH CRUSHED STONE.

11. THIS GRADING & DRAINAGE PLAN IS NOT A DETERMINATION OR GUARANTEE OF THE SUITABILITY OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED. A GEOTECHNICAL ENGINEER MAY BE REQUIRED TO REVIEW THE SUITABILITY AS NEEDED. DETERMINATION OF THE SUBSURFACE CONDITION FOR THE WORK INDICATED IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

12. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO COMPACT FILL SUFFICIENTLY AROUND AND OVER ALL PIPES, STRUCTURES, VALVE STEMS, ETC., INSIDE THE PROPOSED PAVED AREAS TO AVOID SETTLEMENT. ANY SETTLEMENT DURING THE WARRANTY PERIOD SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

13. IN NO CASE SHALL SLOPE, HEIGHT, SLOPE INCLINATION, OR EXCAVATION DEPTH, INCLUDING TRENCH CONSTRUCTION, EXCEED THOSE SPECIFIED IN LOCAL, STATE AND FEDERAL REGULATIONS, SPECIFICALLY THE CURRENT OSHA HEALTH AND SAFETY STANDARDS FOR EXCAVATIONS (29 CRF PART 1926) SHALL BE FOLLOWED.

14. POSITIVE DRAINAGE SHALL BE ESTABLISHED AS THE FIRST ORDER OF WORK AND SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION. SOIL SOFTENED BY PERCHED WATER IN FOUNDATION AND PAVEMENT AREAS MUST BE UNDERCUT AND REPLACED WITH SUITABLE FILL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER. IF GROUNDWATER INFILTRATION IS ENCOUNTERED, THE WATER SHALL BE REMOVED USING GRAVITY DRAINAGE OR PUMPING.

15. ALL FILL MATERIAL SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. THIS MATERIAL SHALL BE PLACED IN LIFTS DIRECTED BY A GEOTECHNICAL ENGINEER AND COMPACTED TO REQUIREMENTS NOTED IN THE GEOTECHNICAL REPORT. ALL GRADING AND FILLING WORK SHALL BE ACCOMPLISHED AS DIRECTED BY A GEOTECHNICAL ENGINEER.

16. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES IS TO BE PLACED AT A SITE APPROVED BY THE ENGINEER. IT SHALL BE TREATED IN A MANNER SO THAT THE AREA AROUND THE DISPOSAL SITE WILL NOT BE CONTAMINATED OR DAMAGED BY THE SEDIMENT IN THE RUN-OFF. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR EARTHWORK. THE CONTRACTOR SHALL OBTAIN THE DISPOSAL SITE AS PART OF THIS WORK.

17. ANY SITE USED FOR DISPOSAL AND/OR STOCKPILE OF ANY MATERIAL SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEE THAT ALL REQUIRED PERMITS ARE SECURED FOR EACH PROPERTY UTILIZED. A COPY OF THE APPROVED PERMIT MUST BE PROVIDED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK ON ANY PROPERTY. FAILURE TO DO SO MAY RESULT IN THE CONTRACTOR REMOVING ANY ILLEGALLY PLACED MATERIAL AT HIS OWN EXPENSE.

18. CONTRACTOR SHALL PROVIDE MINIMUM 6" TOPSOIL IN LAWN AREAS. CONTRACTOR SHALL PROVIDE MINIMUM 8" SOIL MIXTURE WITHIN LANDSCAPE BEDS AND ADDITIONAL DEPTH FOR SHRUBS AND TREES PER PLANTING DETAILS.

19. STRIP TOPSOIL FROM ALL CUT & FILL AREAS AND STOCKPILE UPON COMPLETION OF GENERAL GRADING OVER ALL DISTURBED AREAS, TO A MINIMUM DEPTH OF 6". CONTRACTOR SHALL FURNISH & INSTALL ADDITIONAL TOPSOIL IF INSUFFICIENT QUANTITIES EXIST ONSITE.

20. ALL DRAINAGE CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFIRM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE LOCAL GOVERNING AGENCY.

21. MULCH & SOD ALL DISTURBED AREAS NO LATER THEN 14 DAYS AFTER FINAL GRADING IS COMPLETED. UNLESS OTHERWISE NOTED HEREON, THE CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.

22. THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.

23. ALL CUT/FILL SLOPES SHALL BE 3 HORIZONTAL AND 1 VERTICAL OR FLATTER UNLESS NOTED OTHERWISE HEREON.

24. ALL EARTHWORK, INCLUDING THE EXCAVATED SUBGRADE AND EACH LAYER OF FILL SPECIFIED WITHIN THE GEOTECHNICAL REPORT SHALL BE MONITORED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER, OR HIS REPRESENTATIVE. ALL FILL MATERIALS SHALL BE APPROVED BY T HE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. ALL MATERIALS SHALL BE PLACED IN LIFTS AS DIRECTED BY THE GEOTECHNICAL ENGINEER AND COMPACTED TO 95% STANDARD PROCTOR. ALL GRADING AND FILLING WORK SHALL BE ACCOMPLISHED AS DIRECTED BY A GEOTECHNICAL ENGINEER. THE GENERAL CONTRACTOR WILL BE PROVIDED WITH A COPY OF THE GEOTECHNICAL REPORT DURING THE BIDDING PROCESS AND PRIOR TO ANY CONSTRUCTION.

25. IF ANY SPRINGS OR UNDERGROUND STREAMS ARE ENCOUNTERED OR EXPOSED DURING CONSTRUCTION, PERMANENT FRENCH DRAINS MAY BE REQUIRED. THE DRAINS SHALL BE SPECIFIED AND LOCATED DURING CONSTRUCTION AS REQUIRED BY THE CONDITIONS WHICH ARE ENCOUNTERED AND SHALL ALSO REQUIRE APPROVAL FROM THE ENGINEER.

26. DO NOT DISTURB VEGETATION OR REMOVE TREES EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.

27. FILL SLOPES 3:1 AND GREATER SHALL BE PLACED AND COMPACTED 5' BEYOND PROPOSED LIMITS AND THEN EXCAVATED BACK TO THE PROPOSED LOCATION.

28. STOCKPILED TOPSOIL OR FILL MATERIAL IS TO BE TREATED SO THE SEDIMENT RUN-OFF WILL NOT CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.

29. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO WASTE EXCESS EARTH MATERIAL OFFSITE AT NO ADDITIONAL COST TO THE OWNER. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO IMPORT SUITABLE MATERIALS (AT NO ADDITIONAL COST TO THE OWNER) FOR EARTHWORK OPERATIONS IF SUFFICIENT AMOUNTS OF EARTH MATERIALS ARE NOT AVAILABLE ONSITE.

SITE UTILITY NOTES:

1. THE SANITARY SEWER SHALL BE SCH. 40 PVC UNLESS NOTED OTHERWISE. CONTRACTOR SHALL MARK THE LOCATION OF ALL NEW PVC LINES WITH #8 WIRE (16 GAUGE).

2. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED AROUND UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS.

3. PROVIDE A MINIMUM 36" OF COVER OVER ALL WATER LINES.

4. THE CONTRACTOR SHALL MAINTAIN 10' HORIZONTAL SEPERATION BETWEEN SANITARY SEWER LINES AND WATER LINES. WHERE THIS CRITERIA CANNOT BE MET, THE CONTRACTOR SHALL MAINTAIN 18" VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES.

5. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL CHARTED AND UNCHARTED UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE GOVERNING UTILITY COMPANY.

6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES DO NOT CONFLICT WITH SANITARY SEWERS, SANITARY SEWER SERVICES, STORM SEWERS, OR ANY OTHER UTILITY OR STRUCTURE, EXISTING OR PROPOSED.

7. THE LOCATIONS OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.

8. BEFORE CONNECTIONS ARE MADE INTO EXISTING UTILITIES, THE NEW LINES ARE TO BE FLUSHED AND TESTED BY THE CONTRACTOR IN ACCORDANCE WITH APPROPRIATE GOVERNING UTILITY PROVIDER SPECIFICATIONS.

9. ALL TRENCHES CUT IN EXISTING ROADS OR DRIVES SHALL UTILIZE A CLEAN SAW CUT AND SHALL BE BACKFILLED (100%) TO FINAL SUBGRADE WITH #57 STONE.

10. REPAIR ALL DAMAGE TO EXISTING FEATURES (i.e. DRIVES, ROADS, YARDS, LANDSCAPING, ETC...,) TO PRE-CONSTRUCTION CONDITION.

11. THE CONTRACTOR SHALL PROVIDE ALL HORIZONTAL AND VERTICAL BENDS TO ATTAIN THE ALIGNMENT INDICATED ON THE PLANS. PROVIDE VERTICAL BENDS WHERE NECESSARY TO ALLOW WATER LINES TO PASS UNDER OR OVER OTHER UTILITY LINES. (ALL BENDS AND BRACES NEEDED MAY NOT BE ACTUALLY SHOWN). PROVIDE BRACING AND/OR RODDING AT ALL BENDS AND TEES AS REQUIRED BY APPROPRIATE GOVERNING UTILITY PROVIDER SPECIFICATIONS.

12. REDUCED PRESSURE BACKFLOW PREVENTER (RPBP) OR DUAL CHECK WILL BE REQUIRED ON ALL TESTS AND FILL LINES (JUMPER) NEEDED FOR WATER MAIN CONSTRUCTION AND MUST BE APPROVED BY APPROPRIATE GOVERNING UTILITY PROVIDER.

13. COORDINATE THE EXACT LOCATION OF ALL UTILITIES ENTERING THE BUILDING WITH THE PLUMBING PLANS.

14. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA.

15. THE CONTRACTOR SHALL VERIFY REQUIRED PIPE LENGTHS, EXISTING PIPE MATERIAL AND SIZES AS SHOWN ON PLANS.

16. REPAIR EXISTING SITE FEATURES THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES TO A LIKE NEW CONDITION AT NO ADDITIONAL COST TO THE OWNER.

17. THE PROPOSED ELECTRIC, GAS, AND TELEPHONE LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE APPROPRIATE GOVERNING UTILITY AGENCY BY THE CONTRACTOR.

18. WHERE DRAINAGE OR UTILITY LINES OCCUR IN FILL AREAS, THE FILL MATERIAL IS TO BE PLACED AND COMPACTED TO (95%) OF MAXIMUM DRY DENSITY ACCORDING TO ASTM (D-698) PRIOR TO INSTALLATION OF DRAINAGE OR UTILITY LINES. FILL IS TO BE INSPECTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER TESTING FIRM EMPLOYED BY THE OWNER. RESULTS OF THE TEST SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE. CONTRACTOR TO PAY FOR ALL TESTING.

19. THE CONTRACTOR SHALL ADJUST THE ALIGNMENT OF THE WATER LINES (HORIZONTALLY AND/OR VERTICALLY) TO ALLOW THE REQUIRED BRACING AT BENDS AND TEES.

20. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFE GUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.

21. CONTRACTORS FOR PUBLIC WATER AND SEWER WORK MUST BE APPROVED BY THE LOCAL UTILITY AGENCY.

22. ALL WATER LINES AND APPURTENANCES SHALL BE OF MATERIALS AND CONSTRUCTION THAT CONFORM TO LOCAL UTILITY AGENCY SPECIFICATIONS.

23. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF EXISTING MANHOLES OR SANITARY SEWER LINES AT THE POINT OF CONNECTION PRIOR TO THE COMMENCEMENT OF ORDERING OF MATERIALS, CONSTRUCTION OR REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

24. CONTRACTOR TO REFER TO ELECTRICAL PLANS FOR LOCATION OF ANY ELECTRICAL SERVICE TO THE BUILDING.

25. MAIN LINE WATER & SEWER TAPS WILL BE COORDINATED WITH APPROPRIATE GOVERNING UTILITY PROVIDER.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION 328.46

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION 326.06

BM 3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION 319.98

UTILITY NOTES AND OWNERS

The utility information shown hereon was taken from actual field evidence, utility agency records, or any other available evidence. Other utilites may exist and may not be shown, or may vary from where shown. No guarantee is expressed or implied in reguard to the utility locations shown hereon. The Owner(s) and Contractor(s) should assume responsibility to verify utility existence, size, location, depth, and availability of service, and be soley responsible for contacting the utility location service prior to commencing construction.

SEWER
GOODLETTSVILLE WASTEWATER
215 CARTWRIGHT STREET
GOODLETTSVILLE, TN 37072
(615) 851-3470

WATER
WHITE HOUSE UTILITY DISTRICT
PO BOX 608
WHITE HOUSE, TN 37188
(615) 672-4110 EXT. 257

GAS
PIEDMONT NATURAL GAS
541 SPENCE LANE
NASHVILLE, TN 37210
(615) 872-2349

ELECTRIC
NASHVILLE ELECTRIC SERVICE
1214 CHURCH STREET
NASHVILLE, TN 37246
(615) 747-3289

ISSUED FOR: ☐ CHECKSET ▒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY — REGISTERED AGENCY — ARCHITECT — TENNESSEE — STATE OF TENNESSEE — 04/23/26

REVISIONS

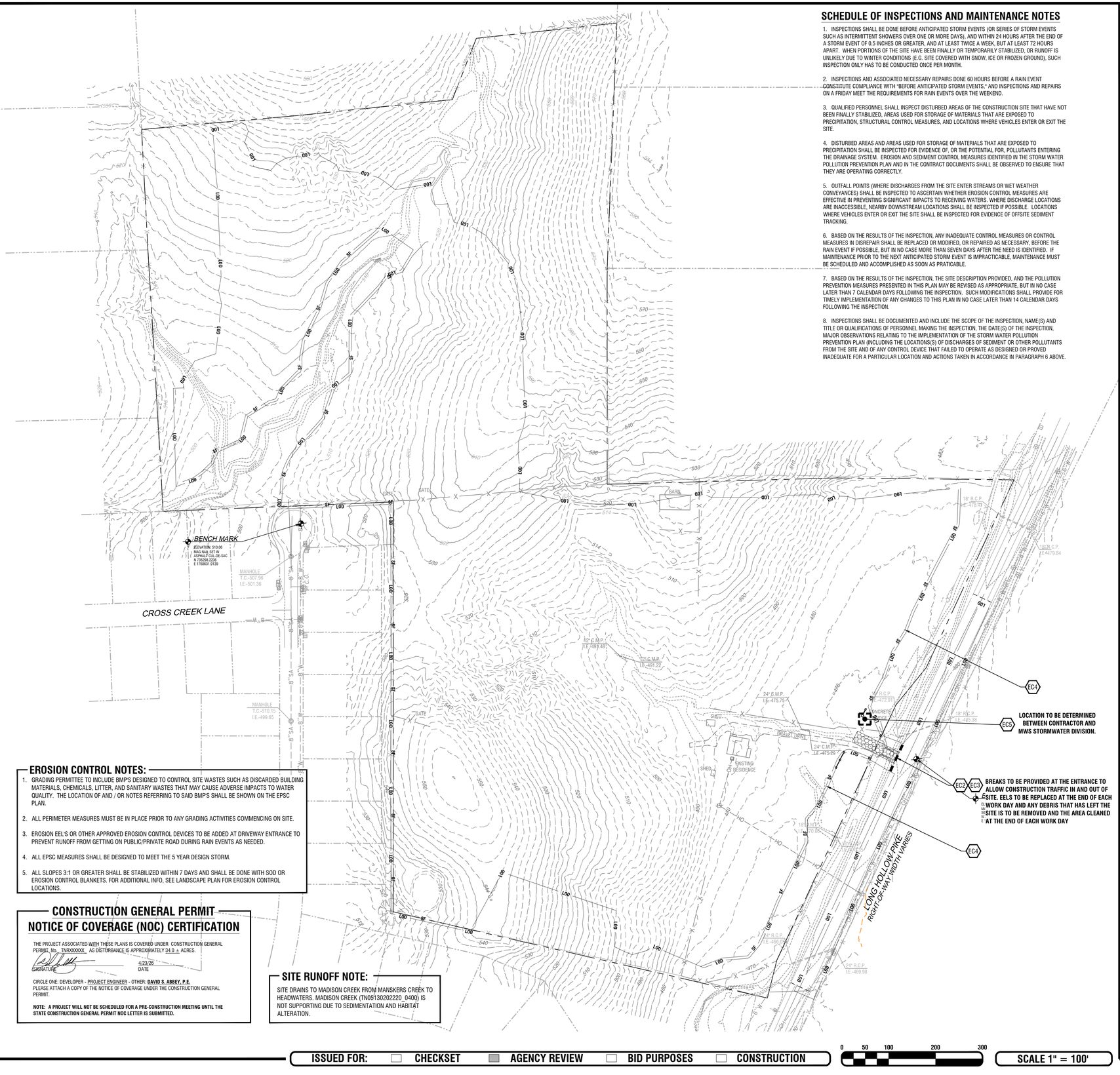
NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

GENERAL NOTES

C1.0

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C1.0 – Note.dwg–Layout1 Apr 23, 2026 – 8:23am GaryEmerson



SCHEDULE OF INSPECTIONS AND MAINTENANCE NOTES

1. INSPECTIONS SHALL BE DONE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF STORM EVENTS SUCH AS INTERMITTENT SHOWERS OVER ONE OR MORE DAYS), AND WITHIN 24 HOURS AFTER THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST TWICE A WEEK, BUT AT LEAST 72 HOURS APART. WHEN PORTIONS OF THE SITE HAVE BEEN FINALLY OR TEMPORARILY STABILIZED, OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (E.G. SITE COVERED WITH SNOW, ICE OR FROZEN GROUND), SUCH INSPECTION ONLY HAS TO BE CONDUCTED ONCE PER MONTH.

2. INSPECTIONS AND ASSOCIATED NECESSARY REPAIRS DONE 60 HOURS BEFORE A RAIN EVENT CONSTITUTE COMPLIANCE WITH "BEFORE ANTICIPATED STORM EVENTS," AND INSPECTIONS AND REPAIRS ON A FRIDAY MEET THE REQUIREMENTS FOR RAIN EVENTS OVER THE WEEKEND.

3. QUALIFIED PERSONNEL SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

4. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN AND IN THE CONTRACT DOCUMENTS SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY.

5. OUTFALL POINTS (WHERE DISCHARGES FROM THE SITE ENTER STREAMS OR WET WEATHER CONVEYANCES) SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED IF POSSIBLE. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

6. BASED ON THE RESULTS OF THE INSPECTION, ANY INADEQUATE CONTROL MEASURES OR CONTROL MEASURES IN DISREPAIR SHALL BE REPLACED OR MODIFIED, OR REPAIRED AS NECESSARY, BEFORE THE RAIN EVENT IF POSSIBLE, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE NEED IS IDENTIFIED. IF MAINTENANCE PRIOR TO THE NEXT ANTICIPATED STORM EVENT IS IMPRACTICABLE, MAINTENANCE MUST BE SCHEDULED AND ACCOMPLISHED AS SOON AS PRATICABLE.

7. BASED ON THE RESULTS OF THE INSPECTION, THE SITE DESCRIPTION PROVIDED, AND THE POLLUTION PREVENTION MEASURES PRESENTED IN THIS PLAN MAY BE REVISED AS APPROPRIATE, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. SUCH MODIFICATIONS SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THIS PLAN IN NO CASE LATER THAN 14 CALENDAR DAYS FOLLOWING THE INSPECTION.

8. INSPECTIONS SHALL BE DOCUMENTED AND INCLUDE THE SCOPE OF THE INSPECTION, NAME(S) AND TITLE OR QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (INCLUDING THE LOCATIONS(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE AND OF ANY CONTROL DEVICE THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION AND ACTIONS TAKEN IN ACCORDANCE IN PARAGRAPH 6 ABOVE.

EROSION CONTROL NOTES:

1. GRADING PERMITTEE TO INCLUDE BMPS DESIGNED TO CONTROL SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY. THE LOCATION OF AND / OR NOTES REFERRING TO SAID BMPS SHALL BE SHOWN ON THE EPSC PLAN.
2. ALL PERIMETER MEASURES MUST BE IN PLACE PRIOR TO ANY GRADING ACTIVITIES COMMENCING ON SITE.
3. EROSION EEL'S OR OTHER APPROVED EROSION CONTROL DEVICES TO BE ADDED AT DRIVEWAY ENTRANCE TO PREVENT RUNOFF FROM GETTING ON PUBLIC/PRIVATE ROAD DURING RAIN EVENTS AS NEEDED.
4. ALL EPSC MEASURES SHALL BE DESIGNED TO MEET THE 5 YEAR DESIGN STORM.
5. ALL SLOPES 3:1 OR GREATER SHALL BE STABILIZED WITHIN 7 DAYS AND SHALL BE DONE WITH SOD OR EROSION CONTROL BLANKETS. FOR ADDITIONAL INFO, SEE LANDSCAPE PLAN FOR EROSION CONTROL LOCATIONS.

CONSTRUCTION GENERAL PERMIT
NOTICE OF COVERAGE (NOC) CERTIFICATION

THE PROJECT ASSOCIATED WITH THESE PLANS IS COVERED UNDER CONSTRUCTION GENERAL PERMIT, NO.: TNRXXXXXX. AS DISTURBANCE IS APPROXIMATELY 34.0 ± ACRES.

SIGNATURE — 4/23/26 DATE

CIRCLE ONE: DEVELOPER - PROJECT ENGINEER - OTHER: **DAVID S. ABBEY, P.E.**
PLEASE ATTACH A COPY OF THE NOTICE OF COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT.

NOTE: A PROJECT WILL NOT BE SCHEDULED FOR A PRE-CONSTRUCTION MEETING UNTIL THE STATE CONSTRUCTION GENERAL PERMIT NOC LETTER IS SUBMITTED.

SITE RUNOFF NOTE:

SITE DRAINS TO MADISON CREEK FROM MANSKERS CREEK TO HEADWATERS. MADISON CREEK (TN05130202220_0400) IS NOT SUPPORTING DUE TO SEDIMENTATION AND HABITAT ALTERATION.

LOCATION TO BE DETERMINED BETWEEN CONTRACTOR AND MWS STORMWATER DIVISION.

BREAKS TO BE PROVIDED AT THE ENTRANCE TO ALLOW CONSTRUCTION TRAFFIC IN AND OUT OF SITE. EELS TO BE REPLACED AT THE END OF EACH WORK DAY AND ANY DEBRIS THAT HAS LEFT THE SITE IS TO BE REMOVED AND THE AREA CLEANED AT THE END OF EACH WORK DAY

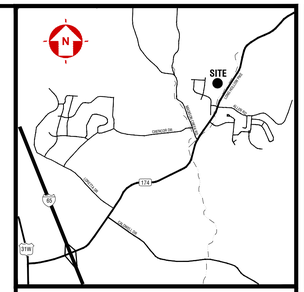
Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:

TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:

BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

TYPICAL NOTES

1. ALL CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS AND THE CONTRACT DOCUMENTS. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INAPPROPRIATELY OR INCORRECTLY, THE CONTRACTOR MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS.
2. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS. PERMITTEES SHALL NOT INITIATE REMEDIATION/RESTORATION OF A STREAM WITHOUT CONSULTING THE REGULATING AGENCY FIRST. THIS PERMIT DOES NOT, HOWEVER, AUTHORIZE ACCESS TO PRIVATE PROPERTY.
3. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT TRAPS, SILT FENCES, SEDIMENTATION PONDS, AND OTHER SEDIMENT CONTROLS AS NECESSARY, AND MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
3. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
4. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 7 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
5. CLEARING AND GRUBBING MUST BE HELD TO THE MINIMUM NECESSARY FOR GRADING AND EQUIPMENT OPERATION.
6. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED AREAS.
7. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT MUST BE REPLACED AT THE END OF THE WORK DAY.
8. THE FOLLOWING RECORDS SHALL BE MAINTAINED ON SITE; THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
9. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED, EXCEPT IN THE FOLLOWING TWO SITUATIONS: (1). WHERE THE INITIATION OF STABILIZATION MEASURES BY THE SEVENTH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL; OR (2). WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 7 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE.
10. CONSTRUCTION MUST BE PHASED FOR PROJECTS IN WHICH OVER 50 ACRES OF SOIL WILL BE DISTURBED. AREAS OF THE COMPLETED PHASE MUST BE STABILIZED WITHIN 7 DAYS AFTER ANOTHER PHASE HAS BEEN INITIATED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES: AFTER USE, SILT FENCES SHOULD BE REMOVED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
11. TEMPORARY OR PERMANENT SOIL STABILIZATION SHALL BE ACCOMPLISHED WITHIN 7 DAYS AFTER FINAL GRADING OR OTHER EARTH WORK. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE, NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE.
12. NO SOLID MATERIALS INCLUDING BUILDING MATERIAL, SHALL BE DISCHARGED TO WATERS OF THE UNITED STATES EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT AND/OR TENNESSEE AQUATIC RESOURCE ALTERATION PERMIT
13. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED.

NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
EC1	LIMIT OF DISTURBANCE	
EC2	TEMPORARY CONSTRUCTION ENTRANCE	1/C2.3
EC3	EROSION EEL	2/C2.3
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EC8	SEDIMENT BASIN	7/C2.3

PROPOSED FEATURE LEGEND

EROSION EEL
LIMITS OF DISTURBANCE — LOD
SILT FENCE — SF
CONCRETE WASHOUT STRUCTURE
INLET PROTECTION
ROCK CHECK DAM

NOTE: REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
COMMISSION
STATE OF TENNESSEE
4/23/26

REVISIONS

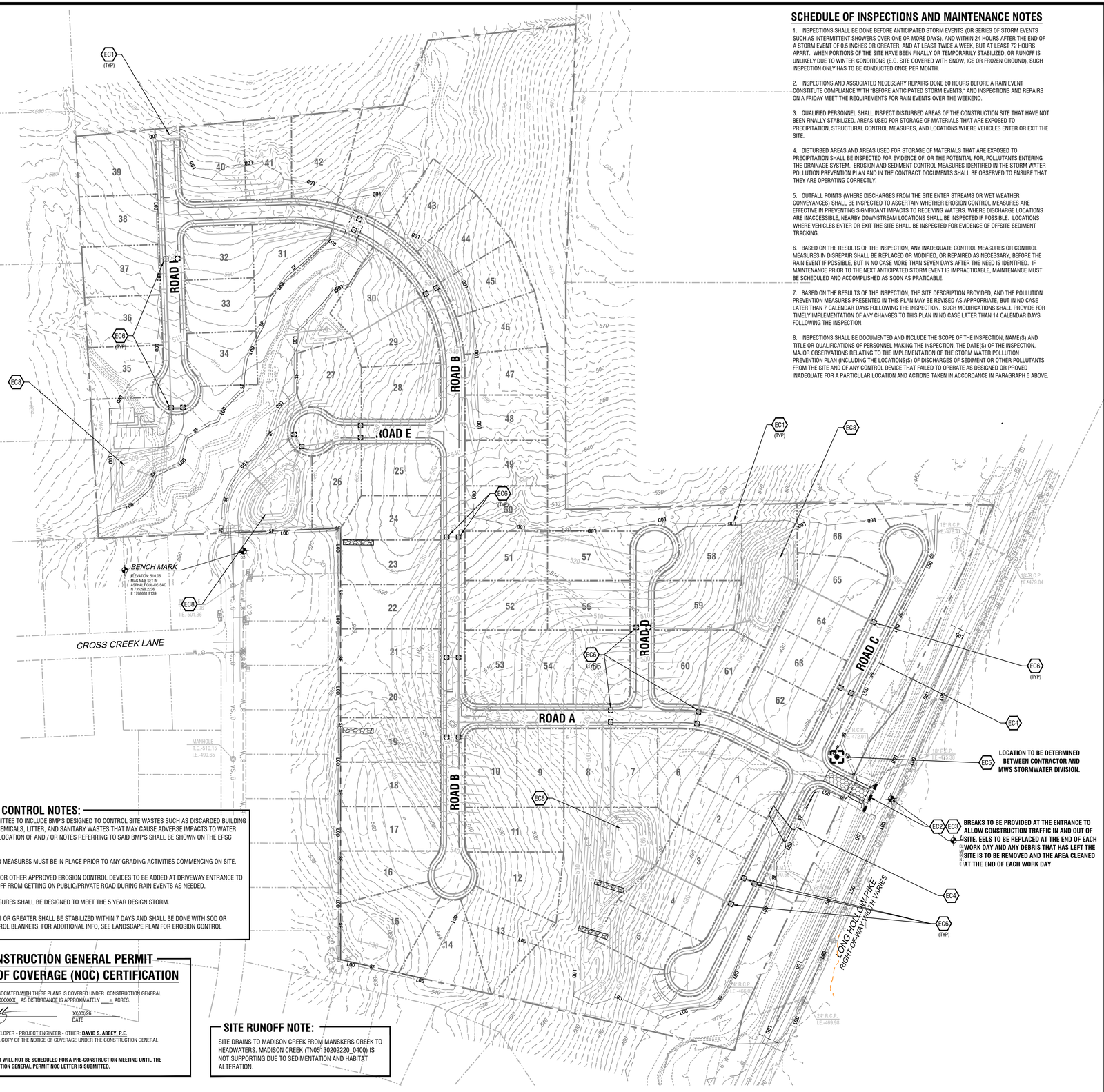
NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

EROSION & SEDIMENT CONTROL PLAN (PHASE I)

C2.0

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C2.0 – Ero.dwg–C2.0 Apr 23, 2026 – 8:37am GaryEmerson



SCHEDULE OF INSPECTIONS AND MAINTENANCE NOTES

1. INSPECTIONS SHALL BE DONE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF STORM EVENTS SUCH AS INTERMITTENT SHOWERS OVER ONE OR MORE DAYS), AND WITHIN 24 HOURS AFTER THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST TWICE A WEEK, BUT AT LEAST 72 HOURS APART. WHEN PORTIONS OF THE SITE HAVE BEEN FINALLY OR TEMPORARILY STABILIZED, OR RUNOFF IS UNLIKELY DUE TO WINTER CONDITIONS (E.G. SITE COVERED WITH SNOW, ICE OR FROZEN GROUND), SUCH INSPECTION ONLY HAS TO BE CONDUCTED ONCE PER MONTH.

2. INSPECTIONS AND ASSOCIATED NECESSARY REPAIRS DONE 60 HOURS BEFORE A RAIN EVENT CONSTITUTE COMPLIANCE WITH "BEFORE ANTICIPATED STORM EVENTS," AND INSPECTIONS AND REPAIRS ON A FRIDAY MEET THE REQUIREMENTS FOR RAIN EVENTS OVER THE WEEKEND.

3. QUALIFIED PERSONNEL SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

4. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN AND IN THE CONTRACT DOCUMENTS SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY.

5. OUTFALL POINTS (WHERE DISCHARGES FROM THE SITE ENTER STREAMS OR WET WEATHER CONVEYANCES) SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED IF POSSIBLE. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

6. BASED ON THE RESULTS OF THE INSPECTION, ANY INADEQUATE CONTROL MEASURES OR CONTROL MEASURES IN DISREPAIR SHALL BE REPLACED OR MODIFIED, OR REPAIRED AS NECESSARY, BEFORE THE RAIN EVENT IF POSSIBLE, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE NEED IS IDENTIFIED. IF MAINTENANCE PRIOR TO THE NEXT ANTICIPATED STORM EVENT IS IMPRACTICABLE, MAINTENANCE MUST BE SCHEDULED AND ACCOMPLISHED AS SOON AS PRATICABLE.

7. BASED ON THE RESULTS OF THE INSPECTION, THE SITE DESCRIPTION PROVIDED, AND THE POLLUTION PREVENTION MEASURES PRESENTED IN THIS PLAN MAY BE REVISED AS APPROPRIATE, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. SUCH MODIFICATIONS SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THIS PLAN IN NO CASE LATER THAN 14 CALENDAR DAYS FOLLOWING THE INSPECTION.

8. INSPECTIONS SHALL BE DOCUMENTED AND INCLUDE THE SCOPE OF THE INSPECTION, NAME(S) AND TITLE OR QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (INCLUDING THE LOCATIONS(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE AND OF ANY CONTROL DEVICE THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION AND ACTIONS TAKEN IN ACCORDANCE IN PARAGRAPH 6 ABOVE.

EROSION CONTROL NOTES:

1. GRADING PERMITTEE TO INCLUDE BMP'S DESIGNED TO CONTROL SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY. THE LOCATION OF AND / OR NOTES REFERRING TO SAID BMP'S SHALL BE SHOWN ON THE EPSC PLAN.
2. ALL PERIMETER MEASURES MUST BE IN PLACE PRIOR TO ANY GRADING ACTIVITIES COMMENCING ON SITE.
3. EROSION EEL'S OR OTHER APPROVED EROSION CONTROL DEVICES TO BE ADDED AT DRIVEWAY ENTRANCE TO PREVENT RUNOFF FROM GETTING ON PUBLIC/PRIVATE ROAD DURING RAIN EVENTS AS NEEDED.
4. ALL EPSC MEASURES SHALL BE DESIGNED TO MEET THE 5 YEAR DESIGN STORM.
5. ALL SLOPES 3:1 OR GREATER SHALL BE STABILIZED WITHIN 7 DAYS AND SHALL BE DONE WITH SOD OR EROSION CONTROL BLANKETS. FOR ADDITIONAL INFO, SEE LANDSCAPE PLAN FOR EROSION CONTROL LOCATIONS.

CONSTRUCTION GENERAL PERMIT
NOTICE OF COVERAGE (NOC) CERTIFICATION

THE PROJECT ASSOCIATED WITH THESE PLANS IS COVERED UNDER CONSTRUCTION GENERAL PERMIT, No. TNR0XXXXX. AS DISTURBANCE IS APPROXIMATELY ___ ± ACRES.

SIGNATURE — XX/XX/26 DATE

CIRCLE ONE: DEVELOPER - PROJECT ENGINEER - OTHER: **DAVID S. ABBEY, P.E.**
PLEASE ATTACH A COPY OF THE NOTICE OF COVERAGE UNDER THE CONSTRUCTION GENERAL PERMIT.

NOTE: A PROJECT WILL NOT BE SCHEDULED FOR A PRE-CONSTRUCTION MEETING UNTIL THE STATE CONSTRUCTION GENERAL PERMIT NOC LETTER IS SUBMITTED.

SITE RUNOFF NOTE:

SITE DRAINS TO MADISON CREEK FROM MANSKERS CREEK TO HEADWATERS. MADISON CREEK (TN05130202220_0400) IS NOT SUPPORTING DUE TO SEDIMENTATION AND HABITAT ALTERATION.

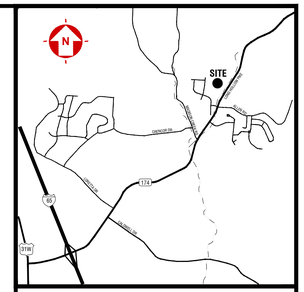
Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:

TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:

BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

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3. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
4. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 7 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
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9. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED, EXCEPT IN THE FOLLOWING TWO SITUATIONS: (1). WHERE THE INITIATION OF STABILIZATION MEASURES BY THE SEVENTH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL; OR (2). WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 7 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE.
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NOTES BY SYMBOL

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EC6	INLET PROTECTION	5/C2.3
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PROPOSED FEATURE LEGEND

EROSION EEL
LIMITS OF DISTURBANCE — LOD
SILT FENCE — SF
CONCRETE WASHOUT STRUCTURE
INLET PROTECTION
ROCK CHECK DAM

NOTE: REFER TO SHEET C1.0 FOR GENERAL NOTES

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PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

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4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — STATE OF TENNESSEE — 26

REVISIONS

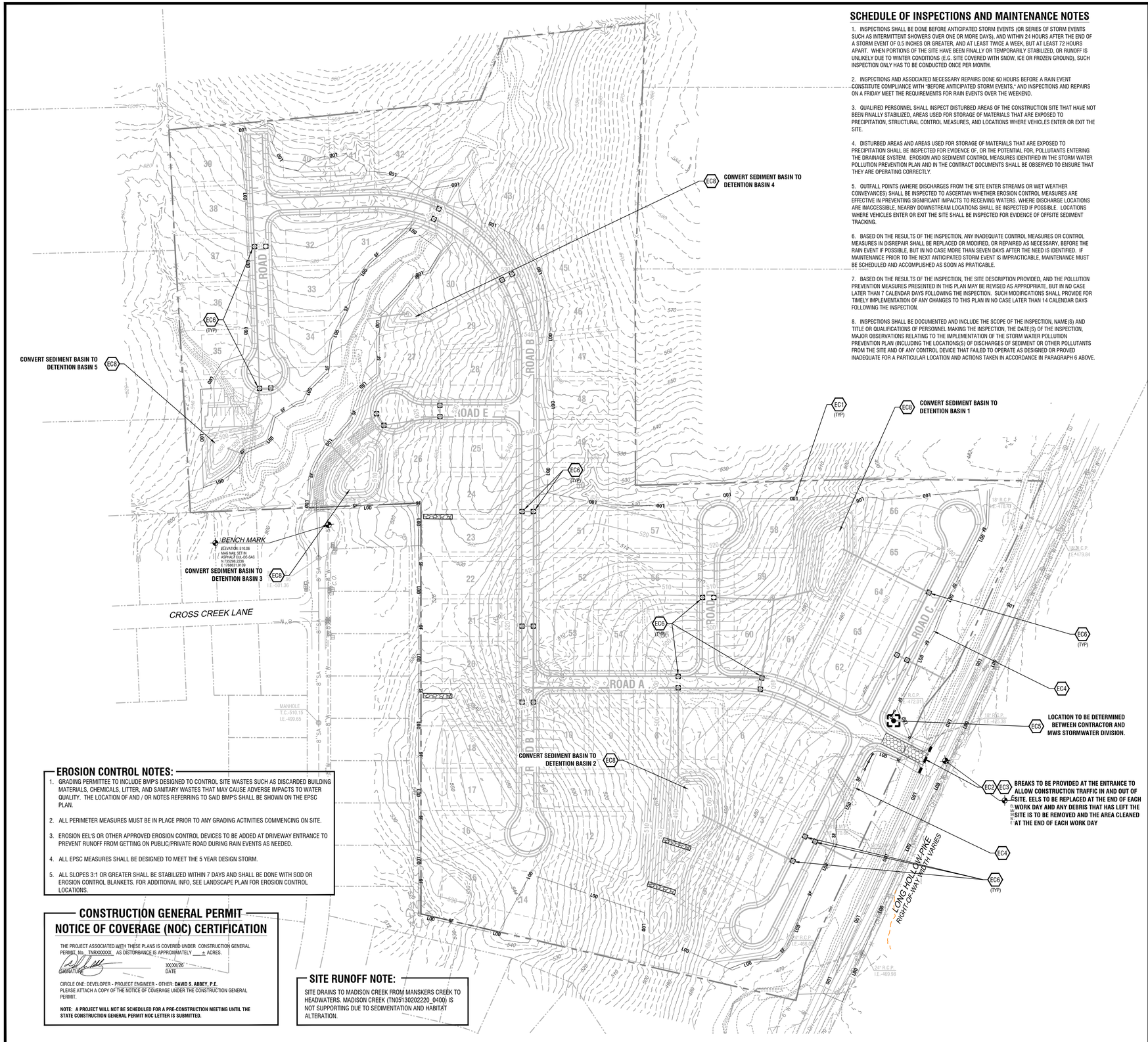
NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

EROSION & SEDIMENT CONTROL PLAN (PHASE II)

C2.1

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C2.0 – Ero.dwg–C2.1 Apr 23, 2026 – 8:41 am GaryEmerson



SCHEDULE OF INSPECTIONS AND MAINTENANCE NOTES

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7. BASED ON THE RESULTS OF THE INSPECTION, THE SITE DESCRIPTION PROVIDED, AND THE POLLUTION PREVENTION MEASURES PRESENTED IN THIS PLAN MAY BE REVISED AS APPROPRIATE, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. SUCH MODIFICATIONS SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THIS PLAN IN NO CASE LATER THAN 14 CALENDAR DAYS FOLLOWING THE INSPECTION.

8. INSPECTIONS SHALL BE DOCUMENTED AND INCLUDE THE SCOPE OF THE INSPECTION, NAME(S) AND TITLE OR QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (INCLUDING THE LOCATIONS(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE AND OF ANY CONTROL DEVICE THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION AND ACTIONS TAKEN IN ACCORDANCE IN PARAGRAPH 6 ABOVE.

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4. ALL EPSC MEASURES SHALL BE DESIGNED TO MEET THE 5 YEAR DESIGN STORM.
5. ALL SLOPES 3:1 OR GREATER SHALL BE STABILIZED WITHIN 7 DAYS AND SHALL BE DONE WITH SOD OR EROSION CONTROL BLANKETS. FOR ADDITIONAL INFO, SEE LANDSCAPE PLAN FOR EROSION CONTROL LOCATIONS.

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NOTICE OF COVERAGE (NOC) CERTIFICATION

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SIGNATURE — XX/XX/26 DATE

CIRCLE ONE: DEVELOPER - PROJECT ENGINEER - OTHER: **DAVID S. ABBEY, P.E.**
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Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
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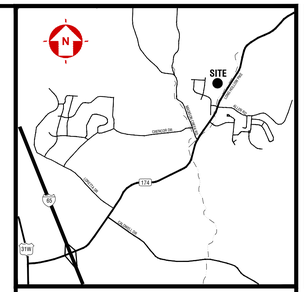
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:

TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:

BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

TYPICAL NOTES

1. ALL CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS AND THE CONTRACT DOCUMENTS. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INAPPROPRIATELY OR INCORRECTLY, THE CONTRACTOR MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS.
2. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS. PERMITTEES SHALL NOT INITIATE REMEDIATION/RESTORATION OF A STREAM WITHOUT CONSULTING THE REGULATING AGENCY FIRST. THIS PERMIT DOES NOT, HOWEVER, AUTHORIZE ACCESS TO PRIVATE PROPERTY.
3. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT TRAPS, SILT FENCES, SEDIMENTATION PONDS, AND OTHER SEDIMENT CONTROLS AS NECESSARY, AND MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
3. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER SHALL BE PICKED UP PRIOR TO ANTICIPATED STORM EVENTS, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
4. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 7 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
5. CLEARING AND GRUBBING MUST BE HELD TO THE MINIMUM NECESSARY FOR GRADING AND EQUIPMENT OPERATION.
6. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED AREAS.
7. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT MUST BE REPLACED AT THE END OF THE WORK DAY.
8. THE FOLLOWING RECORDS SHALL BE MAINTAINED ON SITE; THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
9. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. EXCEPT IN THE FOLLOWING TWO SITUATIONS: (1). WHERE THE INITIATION OF STABILIZATION MEASURES BY THE SEVENTH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL; OR (2). WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 7 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE.
10. CONSTRUCTION MUST BE PHASED FOR PROJECTS IN WHICH OVER 50 ACRES OF SOIL WILL BE DISTURBED. AREAS OF THE COMPLETED PHASE MUST BE STABILIZED WITHIN 7 DAYS AFTER ANOTHER PHASE HAS BEEN INITIATED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES: AFTER USE, SILT FENCES SHOULD BE REMOVED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES.
11. TEMPORARY OR PERMANENT SOIL STABILIZATION SHALL BE ACCOMPLISHED WITHIN 7 DAYS AFTER FINAL GRADING OR OTHER EARTH WORK. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE, NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE.
12. NO SOLID MATERIALS INCLUDING BUILDING MATERIAL, SHALL BE DISCHARGED TO WATERS OF THE UNITED STATES EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT AND/OR TENNESSEE AQUATIC RESOURCE ALTERATION PERMIT
13. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED.

NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
EC1	LIMIT OF DISTURBANCE	
EC2	TEMPORARY CONSTRUCTION ENTRANCE	1/C2.3
EC3	EROSION EEL	2/C2.3
EC4	SILT FENCE W/WIRE BACKING	3/C2.3
EC5	CONCRETE WASHOUT	4/C2.3
EC6	INLET PROTECTION	5/C2.3
EC7	ROCK CHECK DAM	6/C2.3
EC8	SEDIMENT BASIN	7/C2.3

PROPOSED FEATURE LEGEND

EROSION EEL
LIMITS OF DISTURBANCE — LOD
SILT FENCE — SF
CONCRETE WASHOUT STRUCTURE
INLET PROTECTION
ROCK CHECK DAM

NOTE: REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

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PLANS PREPARED BY:
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IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — STATE OF TENNESSEE — 26

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

EROSION & SEDIMENT CONTROL PLAN (PHASE III)

C2.2

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C2.0 – Ero.dwg–C2.2 Apr 23, 2026 – 8:46am GaryEmerson

MATERIAL PROPERTY DATA SHEET

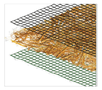
WESTERN GREEN

EroNet™ SC150®

Extended Term • Double Net • Coconut/Straw Matrix • Erosion Control Blanket

DESCRIPTION

The Coconut/Straw SC150 extended term Erosion Control Blanket consists of 30% coconut fibers and 70% weed free agricultural straw manufactured into a continuous matrix. The coconut/straw matrix is confined by a photodegradable, synthetic net on top and bottom, mechanically (stitch) bound on two-inch centers. SC150 is intended for applications requiring up to twenty-four months of functional longevity. The material is fully degradable. The net and thread are photodegradable and the fiber matrix is biodegradable. Actual field longevity is dependent on soil and climatic conditions.



Each roll of SC150 is made in the USA and manufactured under Western Green's Quality Assurance Program to ensure a continuous distribution of fibers and consistent thickness.

Material Content		
Matrix	Straw/ Coconut Blend	
Netting	Top Net: Medium weight, Synthetic, Regular Degradable Bottom Net: Lightweight, Synthetic Regular Degradable	Double Net (black)
Thread	Synthetic, Regular Degradable	

Standard Roll Sizes				
Width	8 ft	(2.4 m)	16 ft	(4.9 m)
Length	112 ft	(34.1 m)	563 ft	(171.0 m)
Weight ± 10%	53 lb	(24.1 kg)	530 lb	(241.0 kg)
Area	100 sy	(83.6 m^2)	1000 SY	(836.0 m^2)

Material available in custom roll sizes

Approvals & Classification	
Classification	FHWA: Type 3.B / ECTC: Type 3.B
TTI Approvals	N/A
NTPEP Number	ECP-2019-03-013

Index Property	Test Method	Typical	
Thickness	ASTM D6525	0.30 in.	(8 mm)
Mass/Unit Area	ASTM D6566	8.5 oz/sy	(290 g/m)
Tensile Strength – MD	ASTM D6818	150 lbs/ft	(2.2 kN/m)
Tensile Strength – TD	ASTM D6818	130 lbs/ft	(1.9 kN/m)
Elongation - MD	ASTM D6818	25%	
Elongation – TD	ASTM D6818	25%	
Density/Specific Gravity	D792	N/A	
Light Penetration	ASTM D6567	12%	
Biomass Improvement	ASTM D7322	500%	
Water Absorption	ASTM D1117	350%	

Design Parameters		
Property	**Unvegetated**	**Vegetated[3]**
RUSLE C Factor[2]	0.03	N/A
Slope Maximum Gradient[1]	2H:1V	N/A
Permissible Shear Stress[2]	2.0 psf (95 Pa)	N/A
Permissible Velocity[2]	8.0 fps (2.4 m/s)	N/A

Manning's n Roughness (HEC-15)		
T_{lower}	T_{mid}	T_{upper}
0.045	0.036	0.031

1 Maximum Gradient a recommendation for typical installations.
2 Hydraulic thresholds compliant with ASTM D6459/D6460 but generalized for typical applications.
3 Vegetated values dependent on established stand of vegetation

Disclaimer: The information contained herein may represent product index data, performance ratings, bench scale testing or other material utility quantifications. Each representation may have unique utility and limitations. Every effort has been made to ensure accuracy, however, no warranty is claimed and no liability shall be assumed by Western Green or its affiliates regarding the completeness, accuracy or fitness of these values for any particular application or interpretation. While testing methods are provided for reference, values shown may be derived from interpolation or adjustment to be representative of intended use. For further information, please feel free to contact Western Green.

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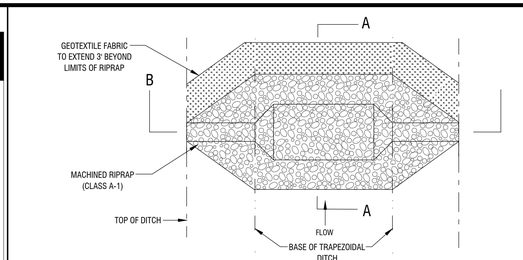
NORTH AMERICAN GREEN

Rev. 4.2023
Scan for additional and updated product information, or click here.

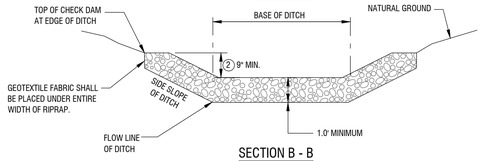
Western Green • 4609 E. Boonville-New Harmony Rd.
Evansville, IN 47725 • (800) 772-2040
westerngreen.com

8 EROSOION CONTROL MATTING

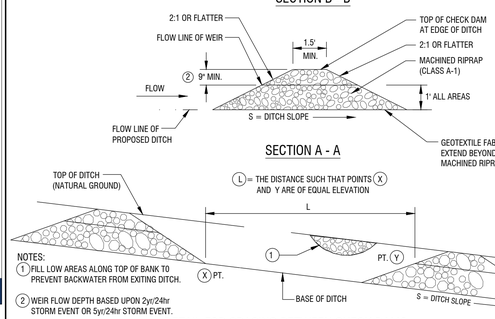
NTS



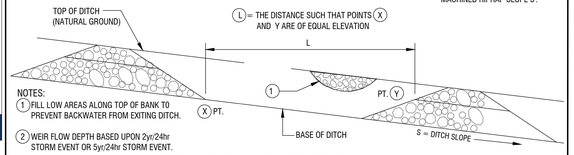
PLAN VIEW



SECTION B - B



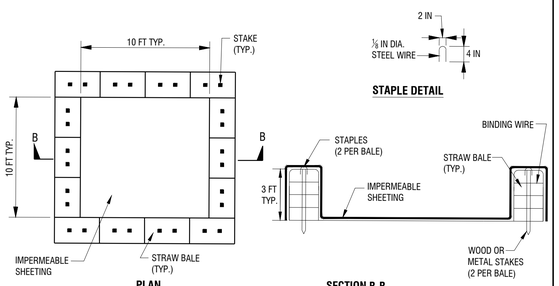
SECTION A - A



DETAIL FOR SPACING BETWEEN CHECK DAMS

6 TEMPORARY ROCK CHECK DAM

NTS



NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

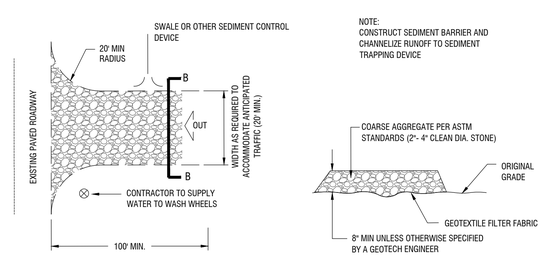
WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

4 CONCRETE WASHOUT STRUCTURE

NTS



1 TEMPORARY CONSTRUCTION EXIT

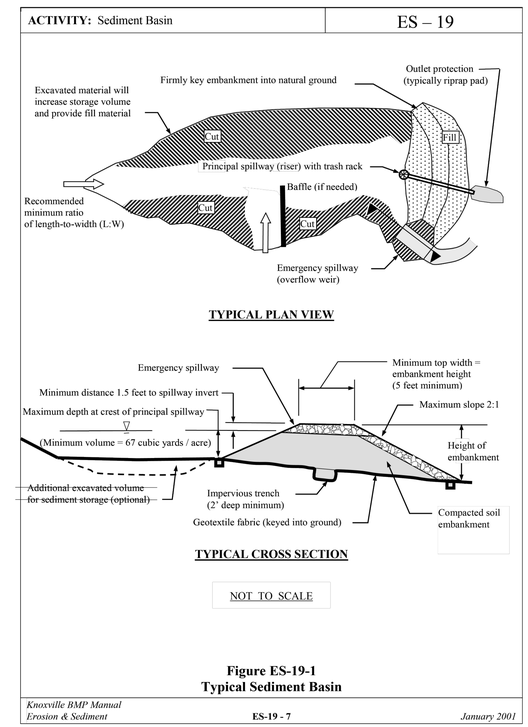
NTS

NOTE:
SILT PROTECTION PLACED IN ASPHALT LOCATIONS SHALL HAVE SAND BAGS PLACED AT POINTS ALONG THE BARRIER. BAGS ARE INTENDED TO PREVENT MOVEMENT AND PROVIDE STABILIZATION FOR THE DEVICE AND SHALL BE PLACED ON TOP, PERPENDICULAR TO RUN. SAND BAG PLACEMENT NOT MORE THAN 8 FEET APART.

NOTE:
UTILIZE THE EROSION EEL BY JEN HILL OR APPROVED EQUAL

2 EROSION EEL

NTS



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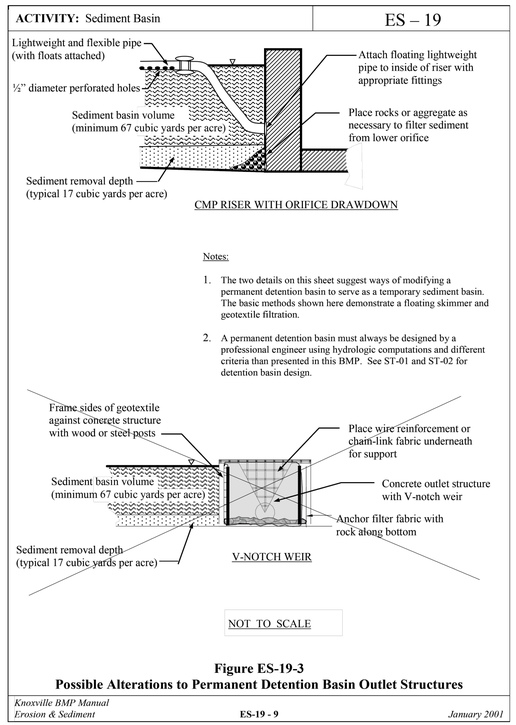
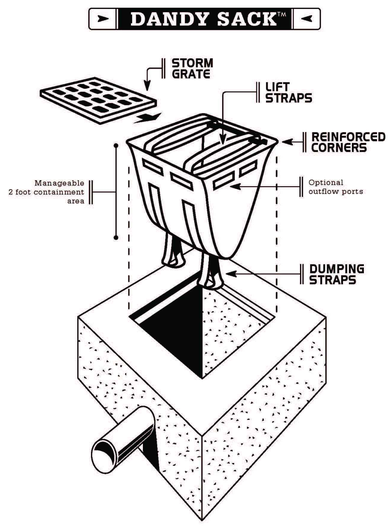
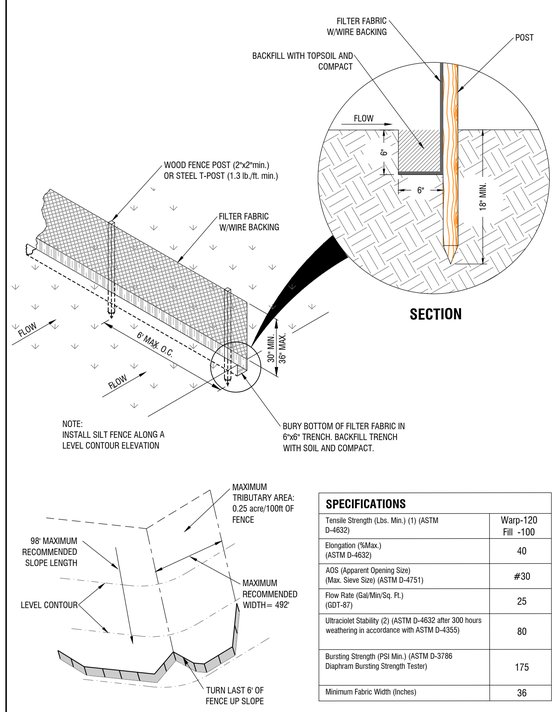




5 INLET PROTECTION

NTS



SPECIFICATIONS	
Tensile Strength (Lbs. Min.) (1) (ASTM D-4632)	Warp-120 Fill -100
Elongation (%Max.) (ASTM D-4632)	40
AOS (Apparent Opening Size) (Max. Sieve Size) (ASTM D-4751)	#30
Flow Rate (Gal/Min/Sq. Ft.) (GDT-87)	25
Ultraciolet Stability (2) (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)	80
Bursting Strength (PSI Min.) (ASTM D-3786 Diaphram Bursting Strength Tester)	175
Minimum Fabric Width (Inches)	36

3 SILT FENCE W/WIRE BACKING

NTS

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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615-922-3313

PLANS PREPARED BY:
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IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

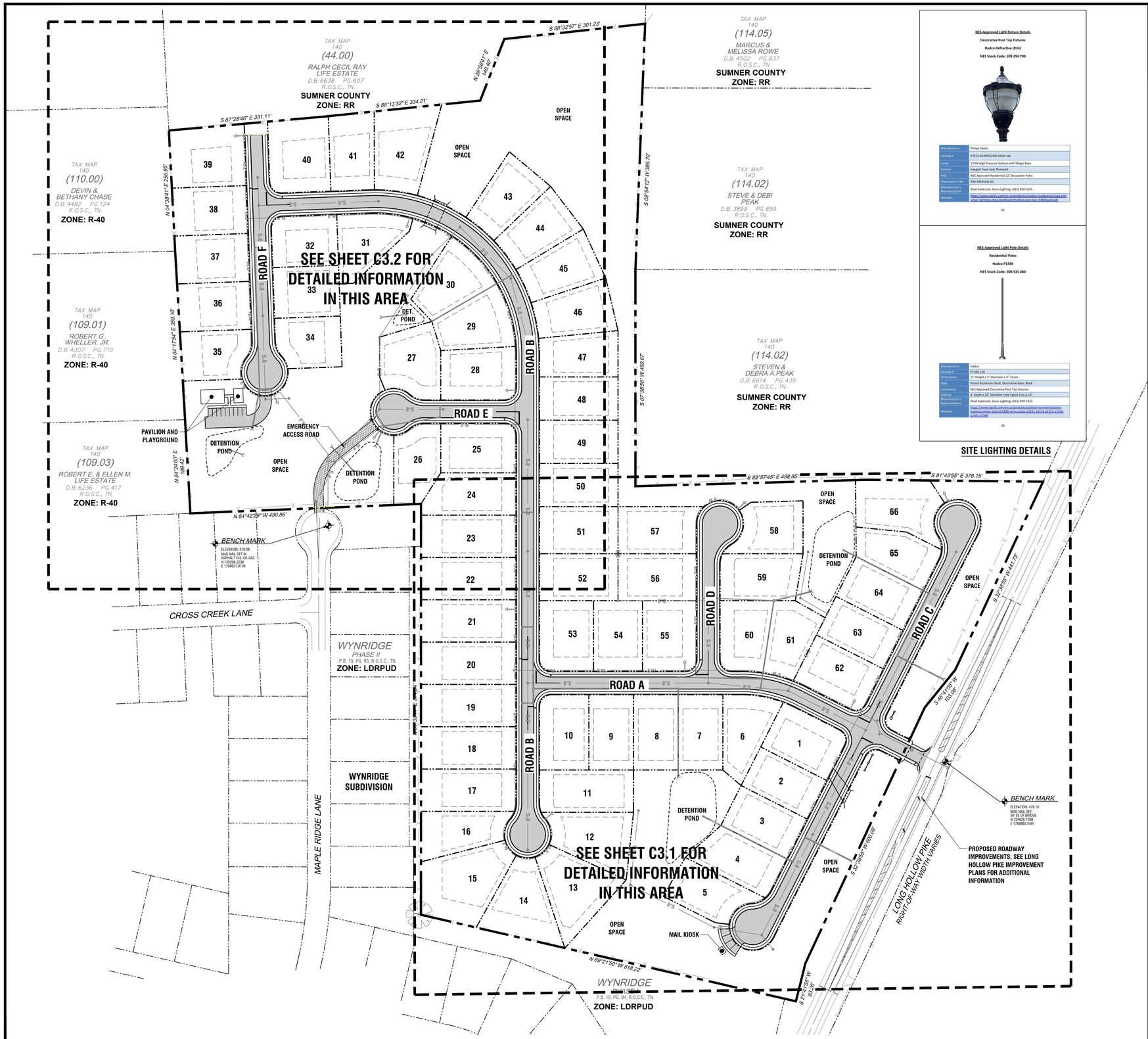
NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

EROSION & SEDIMENT CONTROL DETAILS

C2.3

Z:\PROJECT DATABASE\2025\25184 - Philips Builders - Residential Development - 4408 Long Hollow Pike - Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C2.3 - EroDtl.dwg-C2.2 Apr 23, 2026 - 8:24am GaryEmerson



SITE LIGHTING DETAILS

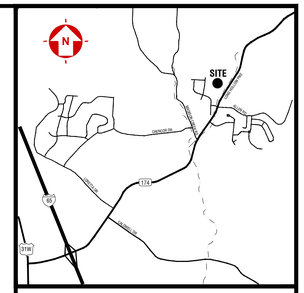
Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

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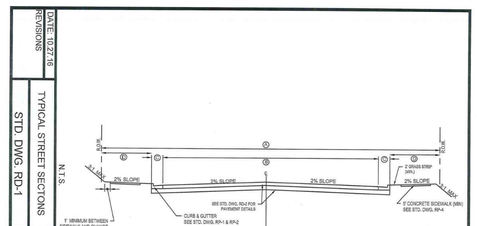
SITE DATA

JURISDICTION:	**CITY OF GOODLETTSVILLE**
ZONING CLASSIFICATION:	**LDRPUD - LOW DENSITY RESIDENTIAL PLANNED UNIT DEVELOPMENT**
ADJACENT ZONING:	**WEST - R-40 LOW DENSITY RESIDENTIAL WEST / SOUTH - LDRPUD LOW DENSITY RESIDENTIAL NORTH - SUMNER COUNTY RR RURAL RESIDENTIAL**
PROPOSED USE:	**SINGLE FAMILY RESIDENTIAL SUBDIVISION**
PROJECT AREA:	**44.31± ACRES or 1,930,190 SF±**
LOT COUNT:	**66 LOTS**
ALLOWED DENSITY:	**LDRPUD - 0.0 TO 1.7 UNITS PER ACRE**
PROPOSED DENSITY:	**1.49 UNITS PER ACRE**
MIN. LOT SIZE:	**15,000 SF**
OPEN SPACE:	**MINIMUM - 10%; PROVIDED - 29±% (12.9± ACRES)**
MIN. YARD REQUIREMENTS:	
FRONT:	**30'**
SIDE:	**10'**
REAR:	**20' (LOTS 14-26 and 35-42 HAVE A 45' REAR BUILDING SETBACK)**
MIN. LOT WIDTH AT BUILDING SETBACK	**VARIES - SEE PROTO TYPICAL LOT LAYOUT**
PARKING REQUIREMENTS:	
SINGLE AND TWO-FAMILY:	**4 SPACES PER UNIT WITH 3 OR MORE BEDROOMS**
VISITOR PARKING:	**REQUIRED: 1 PARKING SPACE PER 5 RESIDENTIAL UNITS REQUIRED - 66/5 =13 SPACES; PROVIDED 13 SPACES**

REVISIONS — DATE: 10.27.16 — TYPICAL STREET SECTIONS — STD. DWG. RD-1 — N.T.S.



ROADWAY CLASSIFICATION	TOTAL RIGHT-OF-WAY (A)	PAVEMENT (B)	CURB & GUTTER (C)	BACK OF CURB TO RIGHT-OF-WAY (D)
MINOR RESIDENTIAL	50'	22'	2'	12'
RESIDENTIAL COLLECTOR	60'	36'	2'	10'
NON-RESIDENTIAL COLLECTOR	80'	36'	2.5'	9.5'
ARTERIAL	AS DETERMINED BY CITY ENGINEER			

OPEN SPACE NOTE:

OPEN SPACE IS ALSO A DRAINAGE AND UTILITY EASEMENT.

NOTE:

REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

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REVISIONS

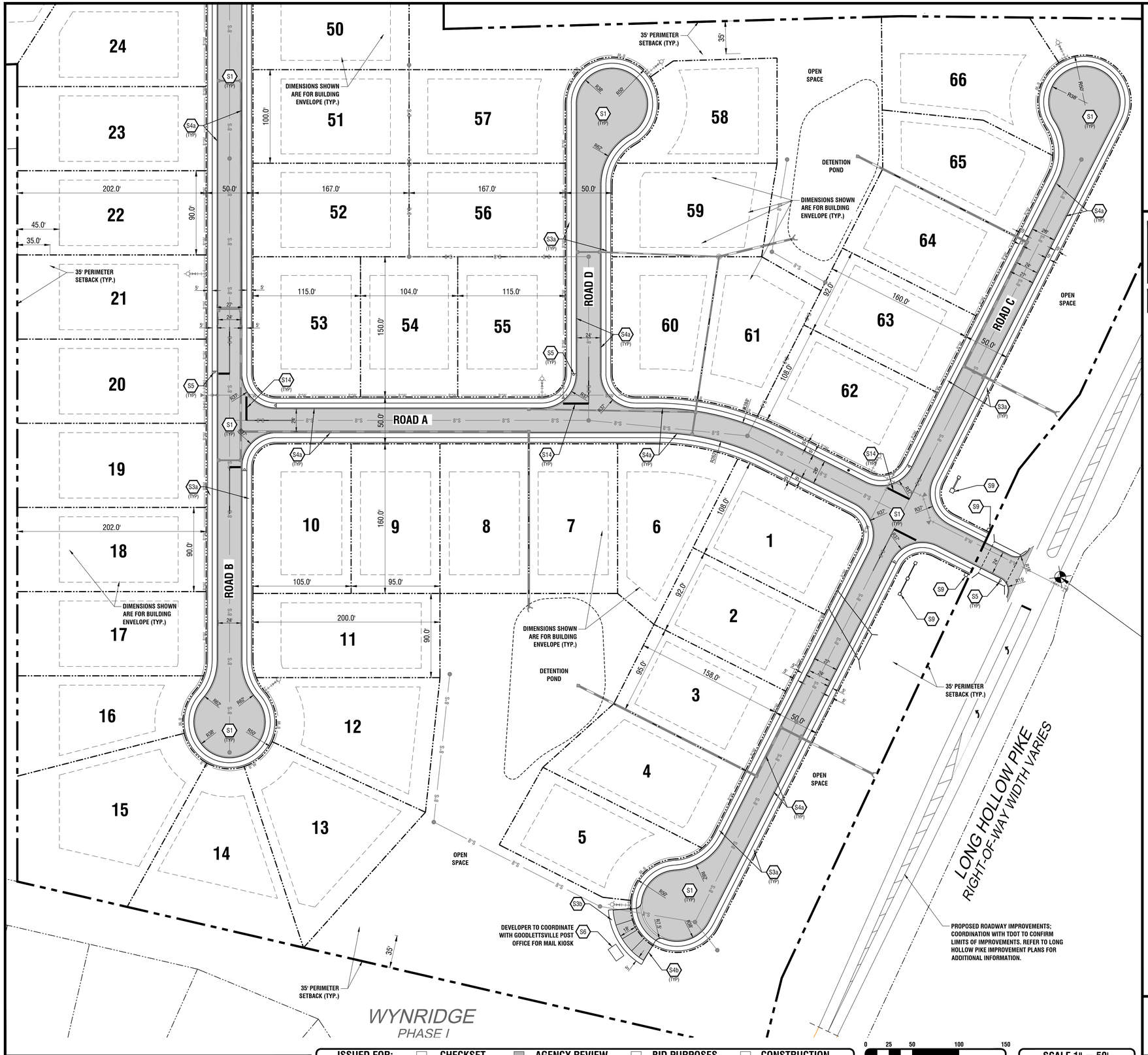
NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

MASTER SITE PLAN

C3.0

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C3.0 – Site.dwg–Layout1 Apr 23, 2026 – 9:04am GaryEmerson



ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

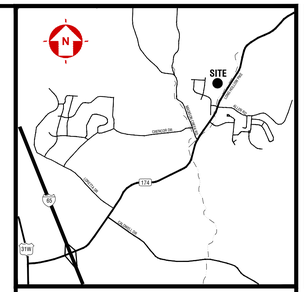
811 Know what's below. Call before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
S1	ASPHALT PAVEMENT SECTION (PER GOODLETTSVILLE STANDARDS)	C7.0
S2	GRAVEL PERVIOUS PAVER SECTION (EMERGENCY ACCESS DRIVEWAY)	C7.0
S3a	CONCRETE SIDEWALK (PER GOODLETTSVILLE STANDARDS)	C7.0
S3b	CONCRETE SIDEWALK	
S4a	CONCRETE CURB AND GUTTER (PER GOODLETTSVILLE STANDARDS)	C7.0
S4b	CONCRETE POST CURB	
S5	STOP SIGN	C7.0
S6	MAIL KIOSK CENTER	C7.0
S7	PAVILION	SEE ARCH. PLANS
S8	PLAYGROUND	SEE ARCH PLANS.
S9	ENTRANCE MONUMENT SIGN	SEE LAND. PLAN
S10	CURB CUT	
S11	EMERGENCY ACCESS ROAD SIGN	
S12	EMERGENCY ACCESS ROAD GATE	
S13	BARRICADE SIGN	
S14	PAINTED STOP BAR	

OPEN SPACE NOTE:
OPEN SPACE IS ALSO A DRAINAGE AND UTILITY EASEMENT.

NOTE:
REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. CASEY — REGISTERED ENGINEER — AGRICULTURE — CIVIL — COMMERCIAL — STATE OF TENNESSEE — 26

REVISIONS

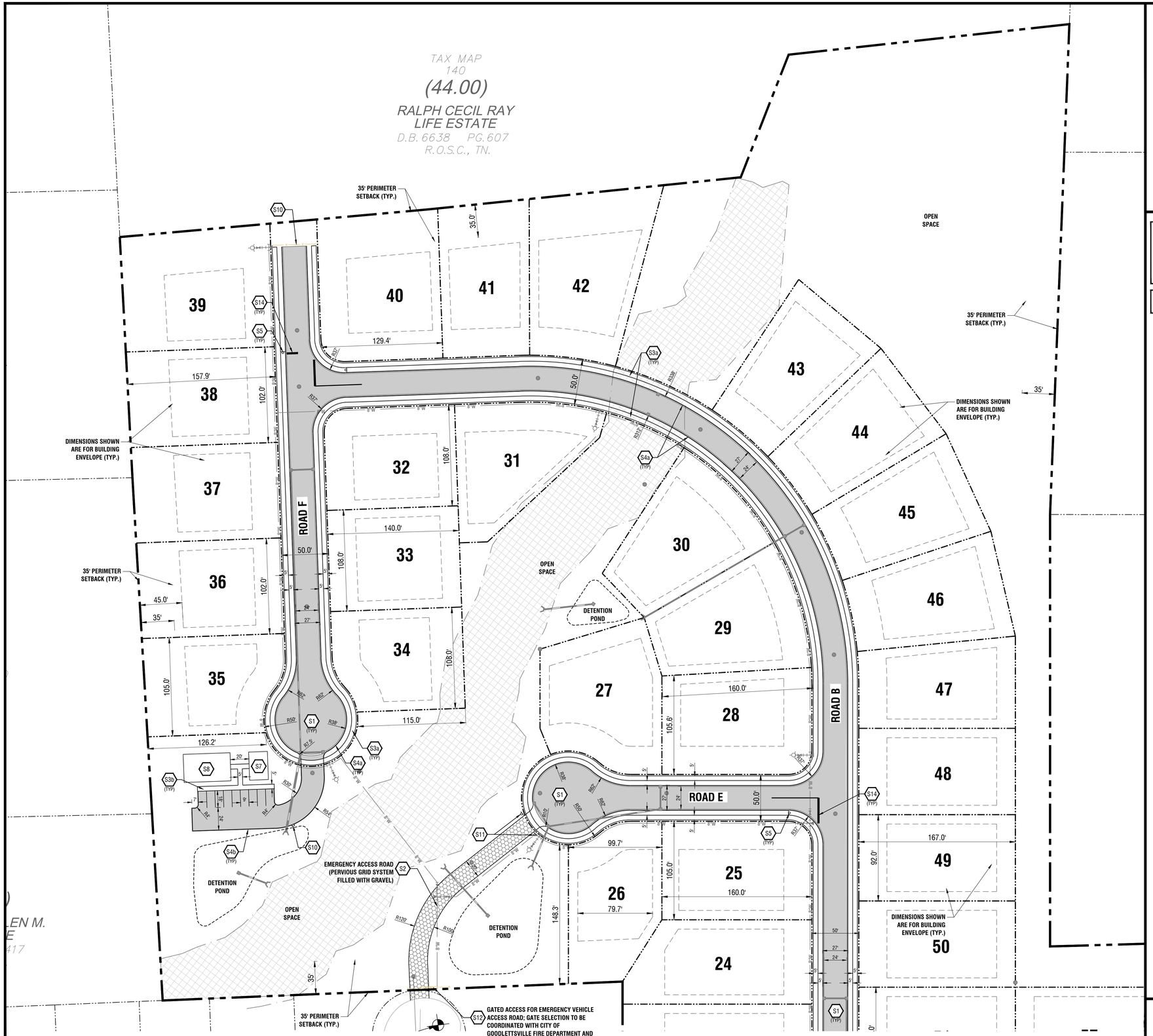
NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

DETAILED SITE PLAN

C3.1

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C3.1 – Det Site.dwg-Layout1 Apr 23, 2026 – 9:15am GaryEmerson



ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

SCALE 1" = 50'

Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

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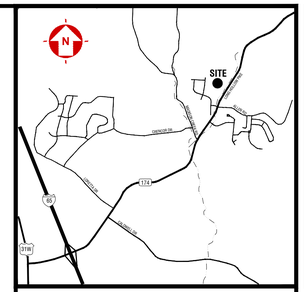
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

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S6	MAIL KIOSK CENTER	C7.0
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S14	PAINTED STOP BAR	

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
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NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

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www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

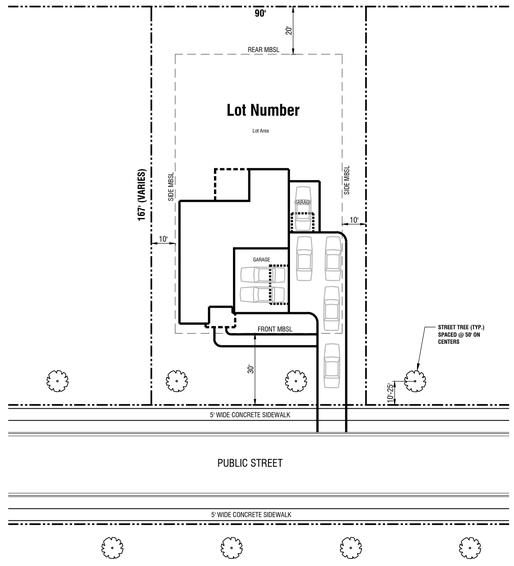
NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

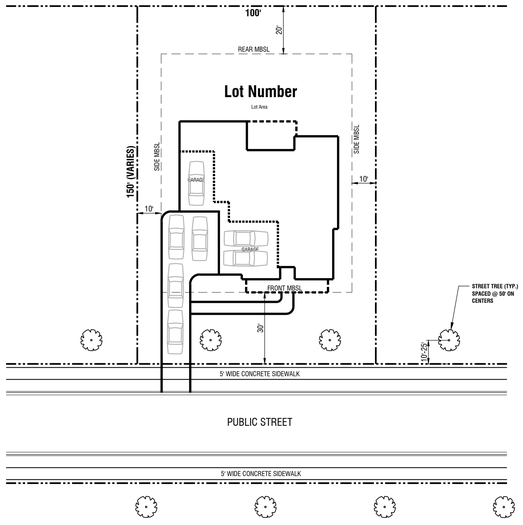
DETAILED SITE PLAN

C3.2

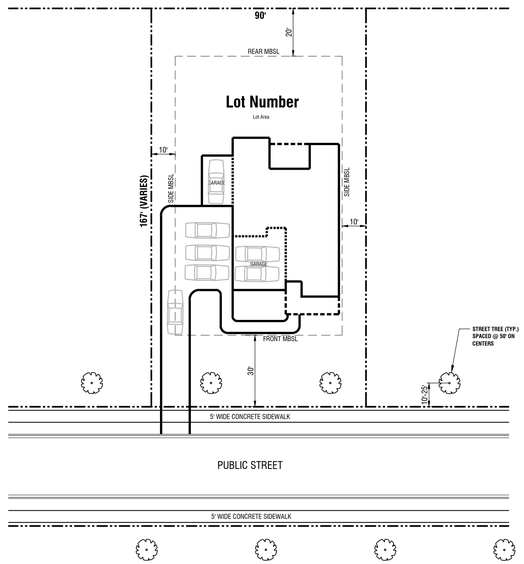
Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C3.2 – Det Site.dwg-Layout1 Apr 23, 2026 – 9:44am GaryEmerson



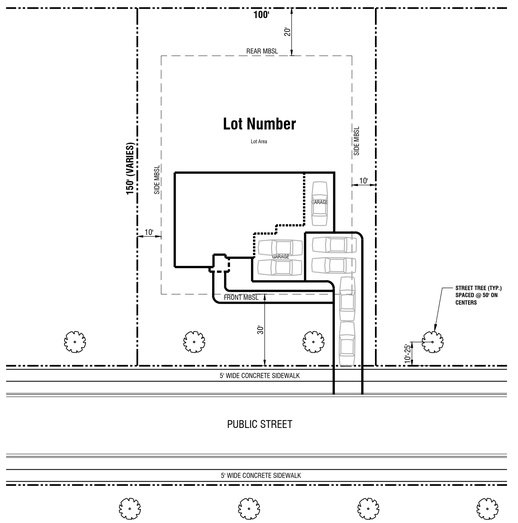
90' WIDE LOT



100' WIDE LOT



90' WIDE LOT



100' WIDE LOT

TYPICAL LOT CRITERIA

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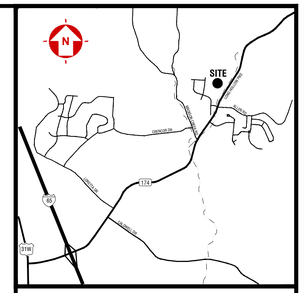

VICINITY MAP

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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DENNIS S. ABBEY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
04/23/26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

TYPICAL LOT CONFIGURATION

C3.3

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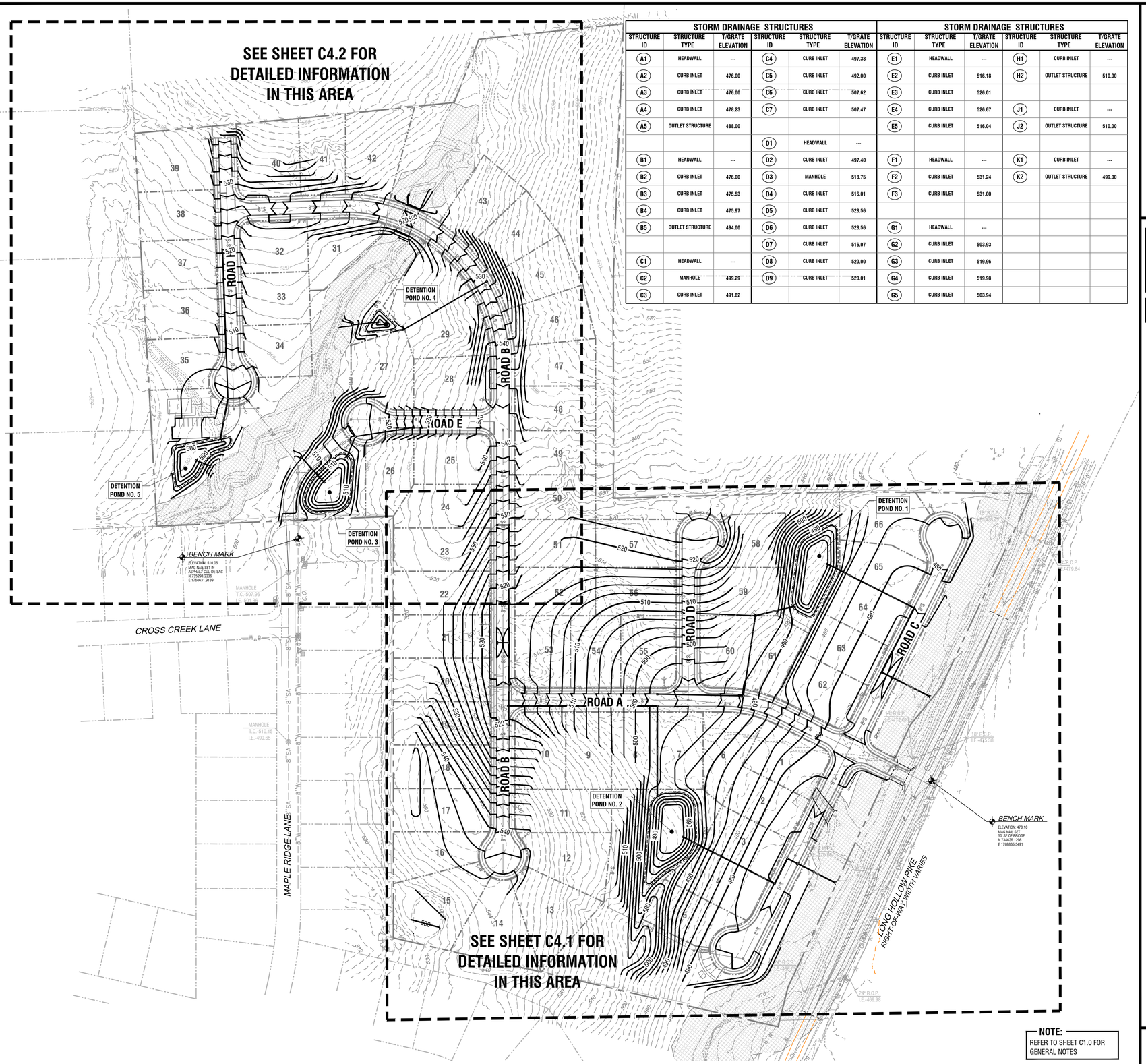

STORM DRAINAGE STRUCTURES

STRUCTURE ID	STRUCTURE TYPE	T/GRATE ELEVATION
A1	HEADWALL	---
A2	CURB INLET	476.00
A3	CURB INLET	476.00
A4	CURB INLET	478.23
A5	OUTLET STRUCTURE	488.00
B1	HEADWALL	---
B2	CURB INLET	476.00
B3	CURB INLET	475.53
B4	CURB INLET	475.97
B5	OUTLET STRUCTURE	494.00
C1	HEADWALL	---
C2	MANHOLE	499.29
C3	CURB INLET	491.82

STORM DRAINAGE STRUCTURES

STRUCTURE ID	STRUCTURE TYPE	T/GRATE ELEVATION
C4	CURB INLET	497.38
C5	CURB INLET	492.00
C6	CURB INLET	507.62
C7	CURB INLET	507.47
D1	HEADWALL	---
D2	CURB INLET	497.40
D3	MANHOLE	518.75
D4	CURB INLET	516.01
D5	CURB INLET	528.56
D6	CURB INLET	528.56
D7	CURB INLET	516.07
D8	CURB INLET	520.00
D9	CURB INLET	520.01

STORM DRAINAGE STRUCTURES

STRUCTURE ID	STRUCTURE TYPE	T/GRATE ELEVATION
E1	HEADWALL	---
E2	CURB INLET	516.18
E3	CURB INLET	526.01
E4	CURB INLET	526.67
E5	CURB INLET	516.04
F1	HEADWALL	---
F2	CURB INLET	531.24
F3	CURB INLET	531.00
G1	HEADWALL	---
G2	CURB INLET	503.93
G3	CURB INLET	519.96
G4	CURB INLET	519.98
G5	CURB INLET	503.94

STORM DRAINAGE STRUCTURES

STRUCTURE ID	STRUCTURE TYPE	T/GRATE ELEVATION
H1	CURB INLET	---
H2	OUTLET STRUCTURE	510.00
J1	CURB INLET	---
J2	OUTLET STRUCTURE	510.00
K1	CURB INLET	---
K2	OUTLET STRUCTURE	499.00

811 Know what's **below.** **Call** before you dig.

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ELEVATION: 466.98

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MAG NAIL SET IN ASPHALT CUL-DE-SAC
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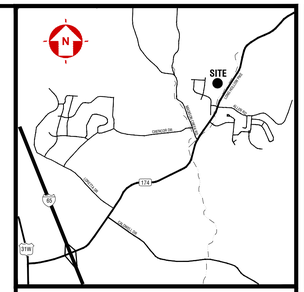

VICINITY MAP

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STORM DRAINAGE PIPE

FROM STRUCTURE ID	TO STRUCTURE ID	PIPE (SIZE/TYPE)	INVERT OUT	INVERT IN	LENGTH (LIN. FT.)	SLOPE (%)
A5	A4	24" HDPP	480.00	475.00	200	2.50
A4	A3	24" HDPP	474.90	472.00	150	2.00
A3	A2	24" HDPP	471.90	471.65	25	1.00
A2	A1	24" HDPP	471.55	469.85	86	2.00
B5	B4	24" HDPP	484.00	472.60	215	5.30
B4	B3	24" HDPP	472.50	471.90	60	1.00
B3	B2	24" HDPP	471.80	471.55	25	1.00
B2	B1	24" HDPP	471.45	469.75	86	2.00
C7	C6	15" HDPP	484.35	504.10	24	1.00
C6	C2	15" HDPP	504.00	486.20	128	14.00
C5	C3	15" HDPP	488.25	488.00	24	1.00
C4	C3	15" HDPP	491.50	488.00	178	2.00
C3	C2	18" HDPP	487.65	485.95	168	1.00
C2	C1	24" HDPP	485.45	484.20	82	1.50
D9	D8	15" HDPP	517.00	516.10	24	3.75
D8	D3	15" HDPP	516.00	513.70	31	7.40
D7	D4	15" HDPP	512.34	512.10	24	1.00
D6	D5	15" HDPP	524.34	524.10	24	1.00
D5	D4	15" HDPP	524.00	512.25	244	4.80
D4	D3	24" HDPP	511.50	508.95	131	2.00
D3	D2	24" HDPP	508.85	494.00	308	4.80
D2	D1	24" HDPP	493.90	490.15	190	2.00
E5	E2	15" HDPP	513.40	512.90	28	1.75
E4	E3	15" HDPP	523.00	522.75	24	1.00
E3	E2	15" HDPP	522.65	513.00	120	8.00
E2	E1	15" HDPP	512.90	510.00	46	6.35
F3	F2	15" HDPP	528.00	527.50	24	2.10
F2	F1	15" HDPP	527.40	512.00	173	7.76
G5	G2	15" HDPP	500.65	500.30	24	1.50
G4	G3	15" HDPP	517.00	516.50	24	2.00
G3	G2	15" HDPP	516.40	500.00	300	5.43
G2	G1	24" HDPP	499.90	499.00	90	1.00

NOTE:
REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

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SUMNER COUNTY, TENNESSEE

DAVID S. ARGO
REGISTERED ARCHITECT
ARCHITECT
No. 102,955
STATE OF TENNESSEE
04/23/26

REVISIONS

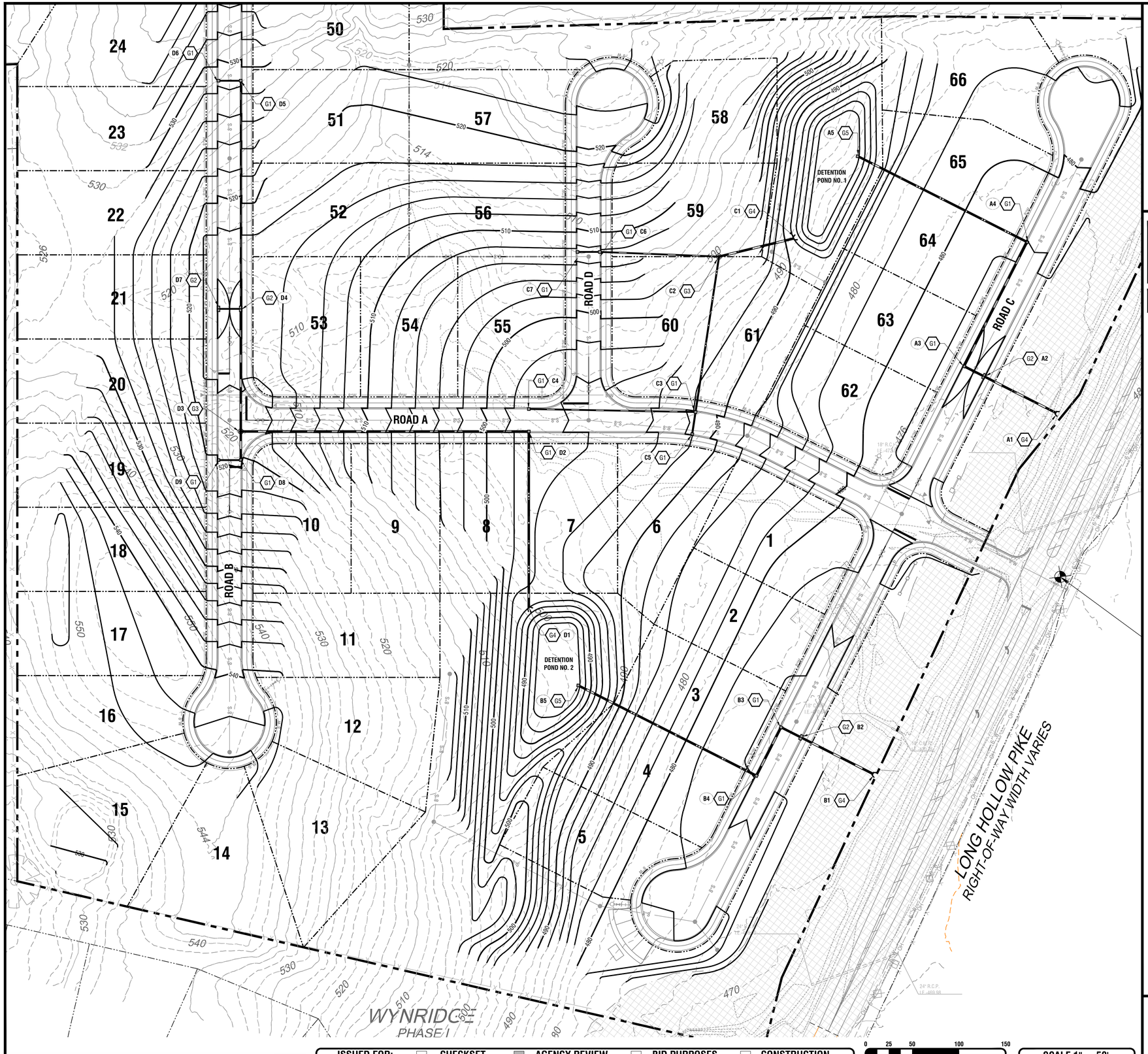
NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

GRADING & DRAINAGE PLAN

C4.0

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C4.0 – Gra.dwg–Layout1 Apr 23, 2026 – 2:21 pm GaryEmerson



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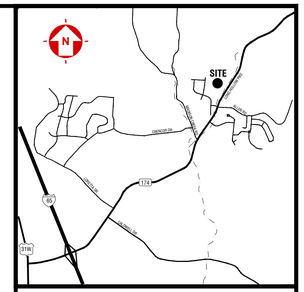

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NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
G1	SINGLE CURB INLET	.
G2	DOUBLE CURB INLET	.
G3	JUNCTION MANHOLE	.
G4	CONCRETE HEADWALL	.
G5	POND OUTLET STRUCTURE	.
G6	CONCRETE CURB CUT	.

NOTE:
REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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REVISIONS

NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

DETAILED GRADING & DRAINAGE PLAN

C4.1

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C4.1 – Det Gro.dwg–Layout1 Apr 23, 2026 – 1:27pm GaryEmerson

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ELEVATION: 466.98

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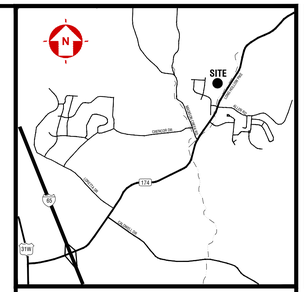
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:

TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:

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NOTES BY SYMBOL

CODE	DESCRIPTION	DETAIL
G1	SINGLE CURB INLET	.
G2	DOUBLE CURB INLET	.
G3	JUNCTION MANHOLE	.
G4	CONCRETE HEADWALL	.
G5	POND OUTLET STRUCTURE	.
G6	CONCRETE CURB CUT	.

NOTE:
REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

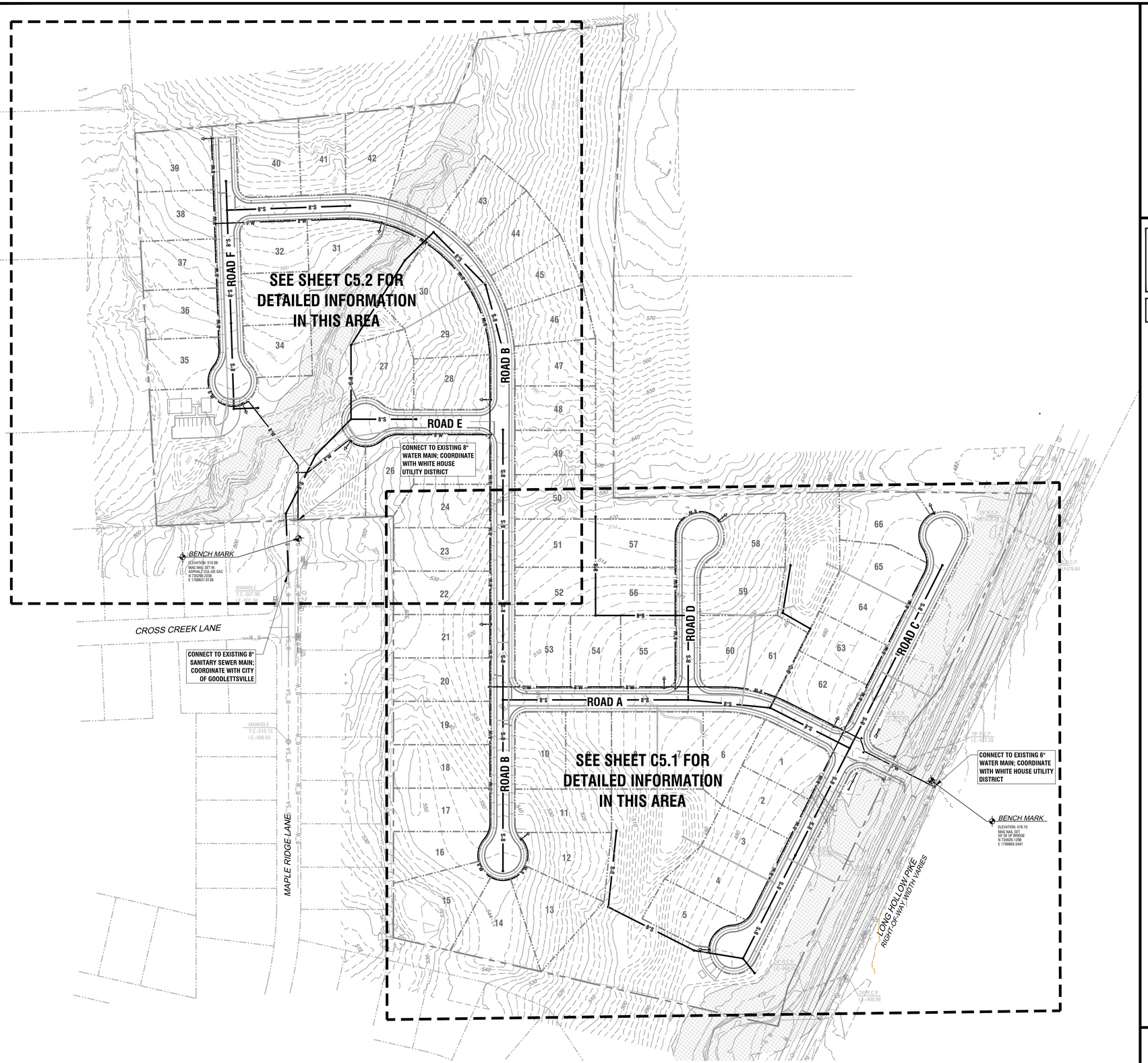
NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

DETAILED GRADING & DRAINAGE PLAN

C4.2

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C4.2 – Det Grd.dwg–Layout1 Apr 23, 2026 – 2:13pm GaryEmerson



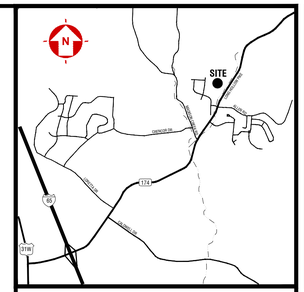
Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

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NOTE:

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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IRONWOOD
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4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID ARBIE BRACKMAN — REGISTERED — AGRICULTURE — SURVEYOR — STATE OF TENNESSEE — 2026

REVISIONS		
NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

SITE UTILITY PLAN

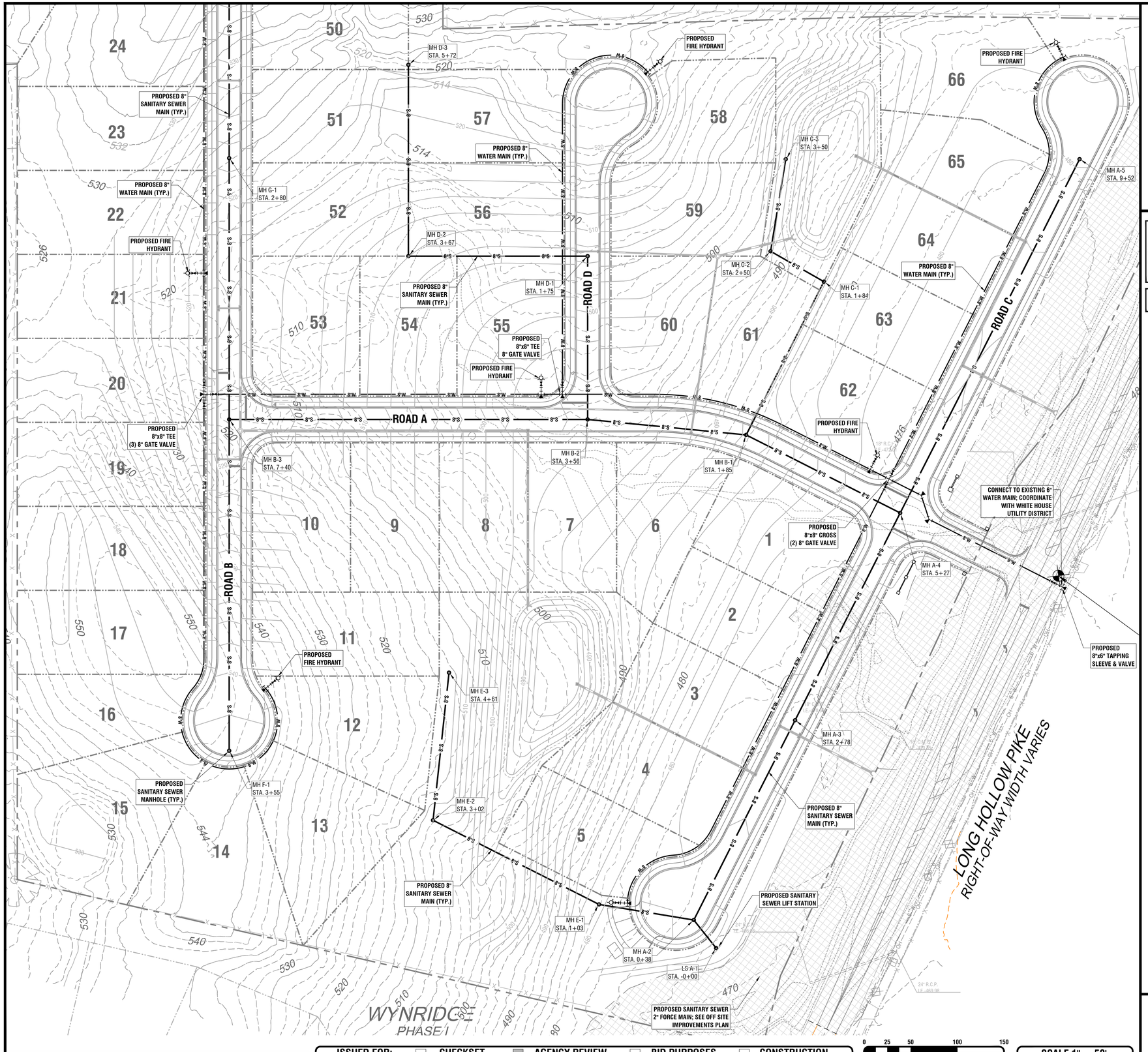
C5.0

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.0 – Util.dwg–Layout1 Apr 23, 2026 – 9:09am GaryEmerson



ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

Know what's below. Call before you dig.

SITE BENCHMARKS:

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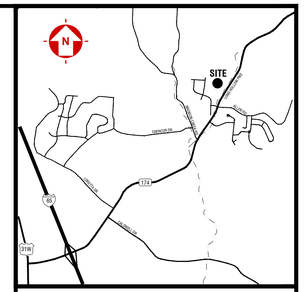
ELEVATION: 510.06



VICINITY MAP

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ASBURY — REGISTERED ENGINEER — AGRICULTURE — CIVIL — COMMERCE — STATE OF TENNESSEE — 26

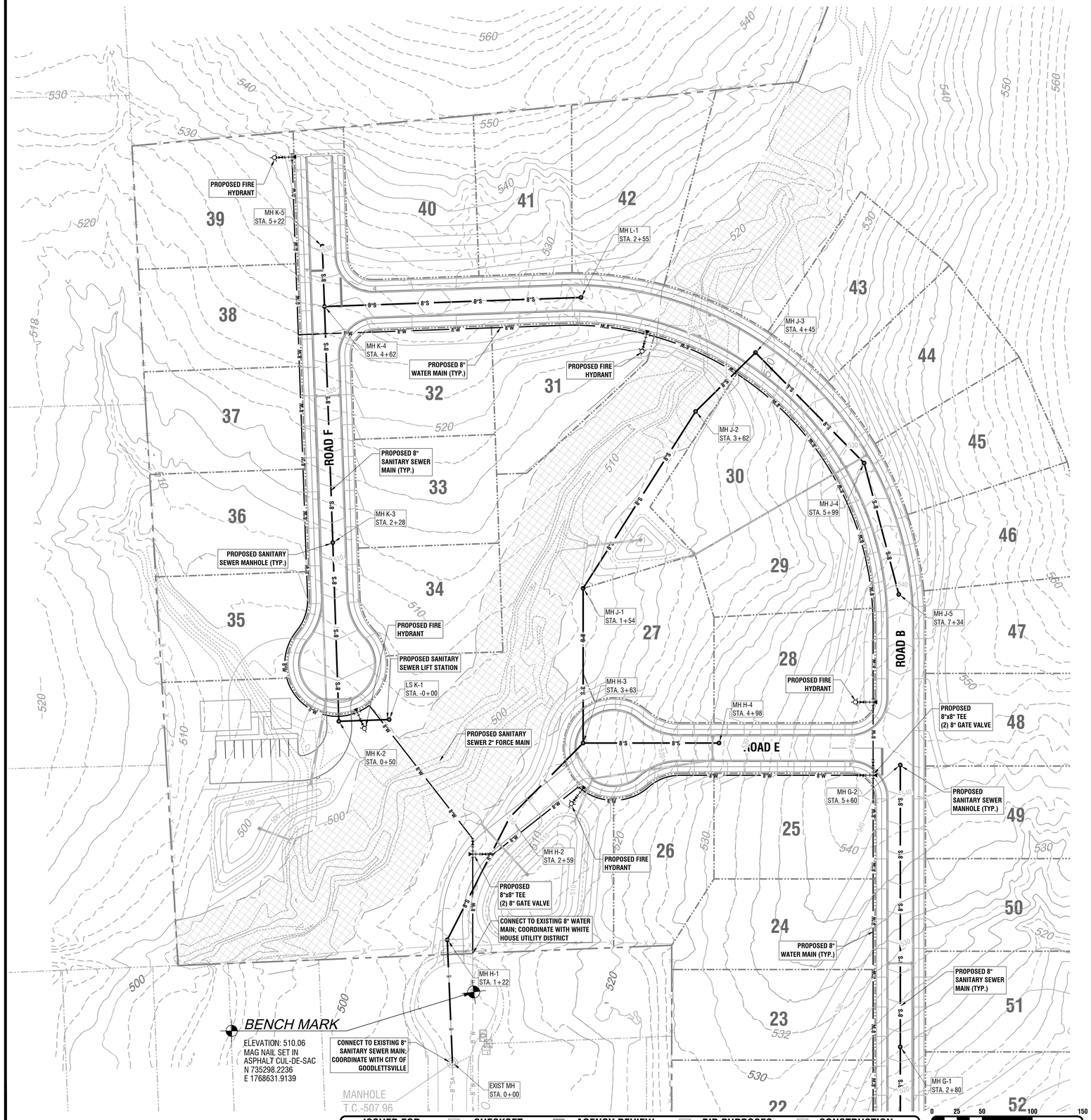
REVISIONS		
NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

DETAILED UTILITY PLAN

C5.1

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.1 – Det Util.dwg–Layout1 Apr 23, 2026 – 10:01am GaryEmerson



ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

SCALE 1" = 50'

Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
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ELEVATION: 466.98

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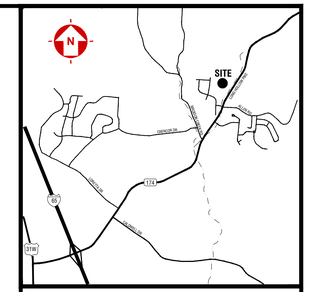
ELEVATION: 510.06



VICINITY MAP

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NOTE:

REFER TO SHEET C1.0 FOR GENERAL NOTES

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:

PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

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DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

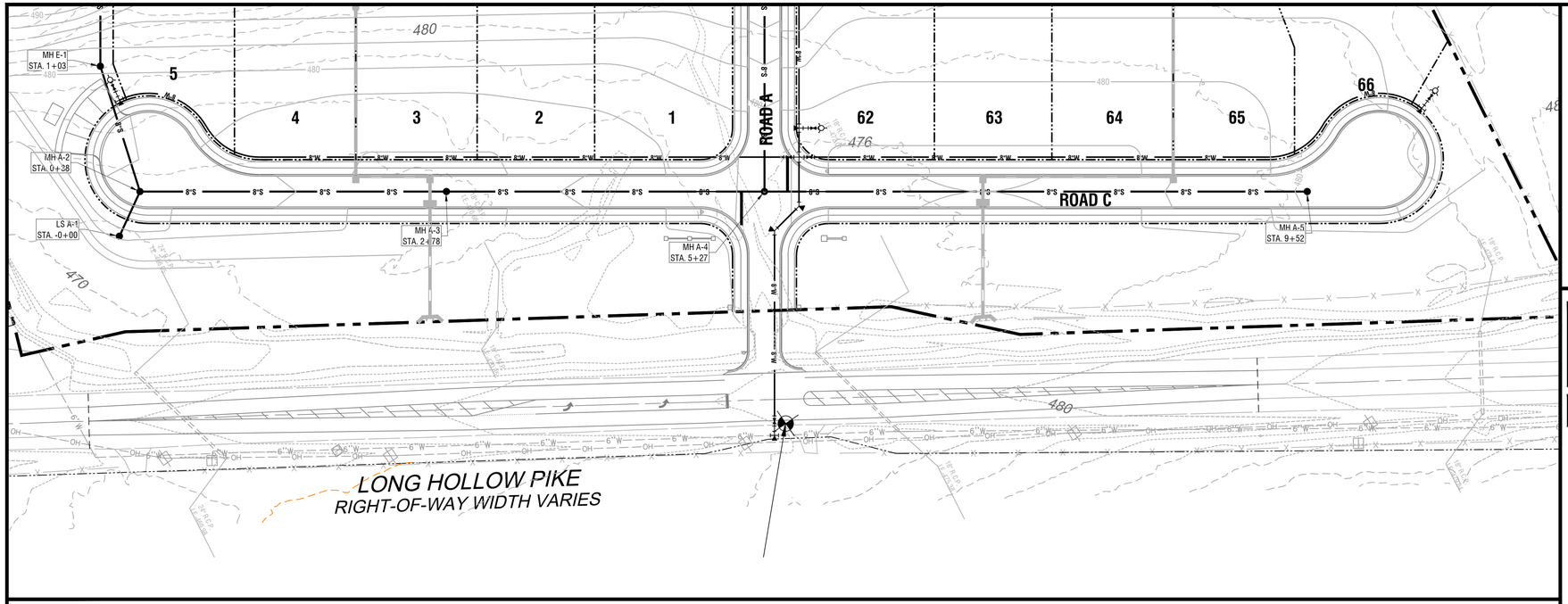
NO.	DESCRIPTION	DATE

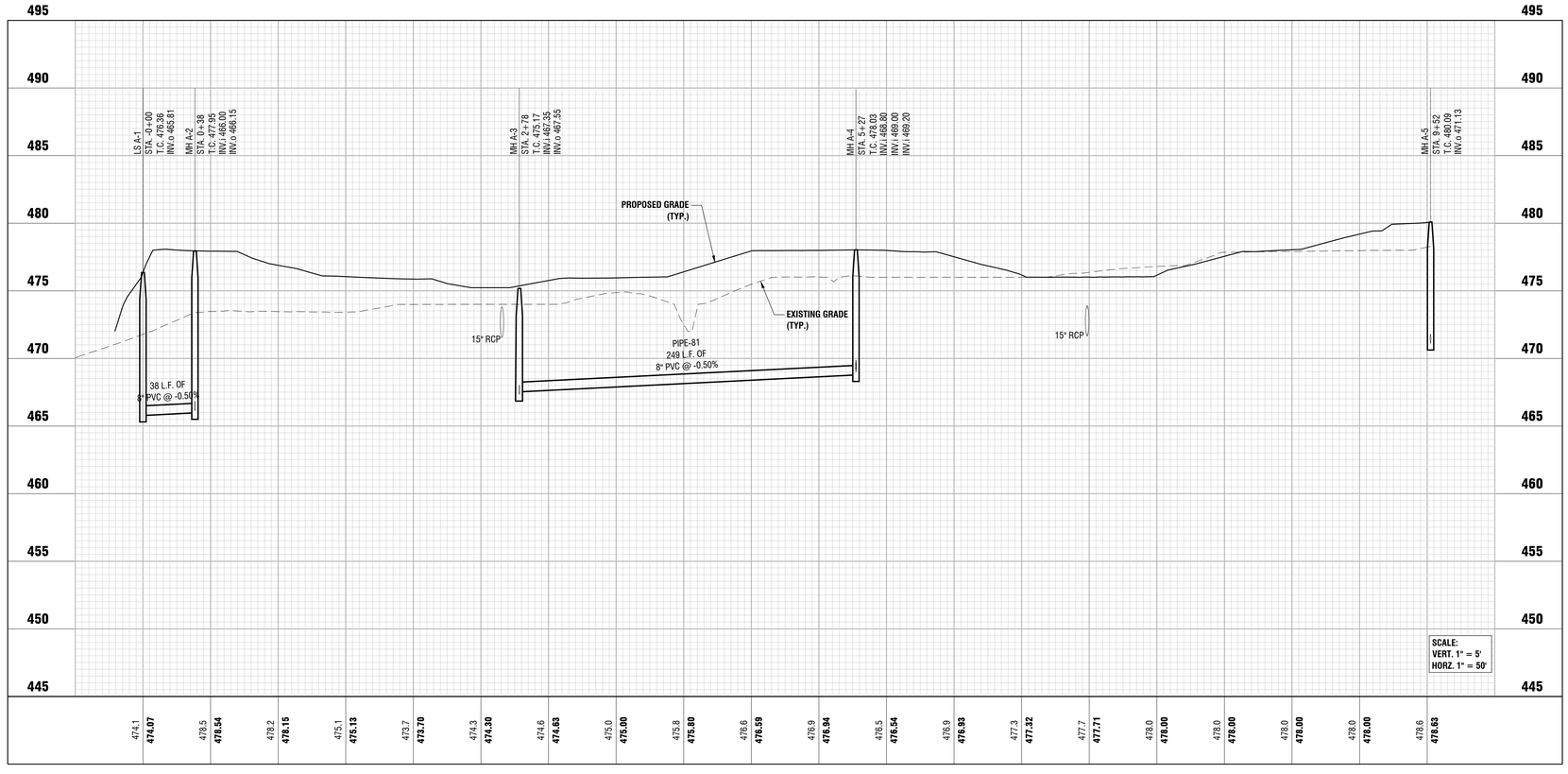
DATE:	04/23/26
DMG Project No:	25184

DETAILED UTILITY PLAN

C5.2

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.2 – Det Util.dwg–Layout1 Apr 23, 2026 – 10:11am GaryEmerson





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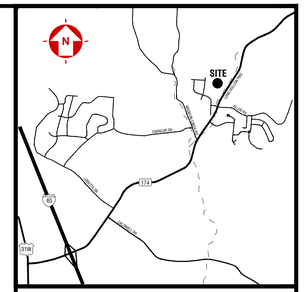

VICINITY MAP

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PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ▩ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

PLANS PREPARED FOR:

PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

4209 GALLATIN PIKE
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DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT

4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID C. BASSETT
REGISTERED ENGINEER
AGRICULTURE
CIVIL
COMMERCIAL
STATE OF TENNESSEE
26

REVISIONS

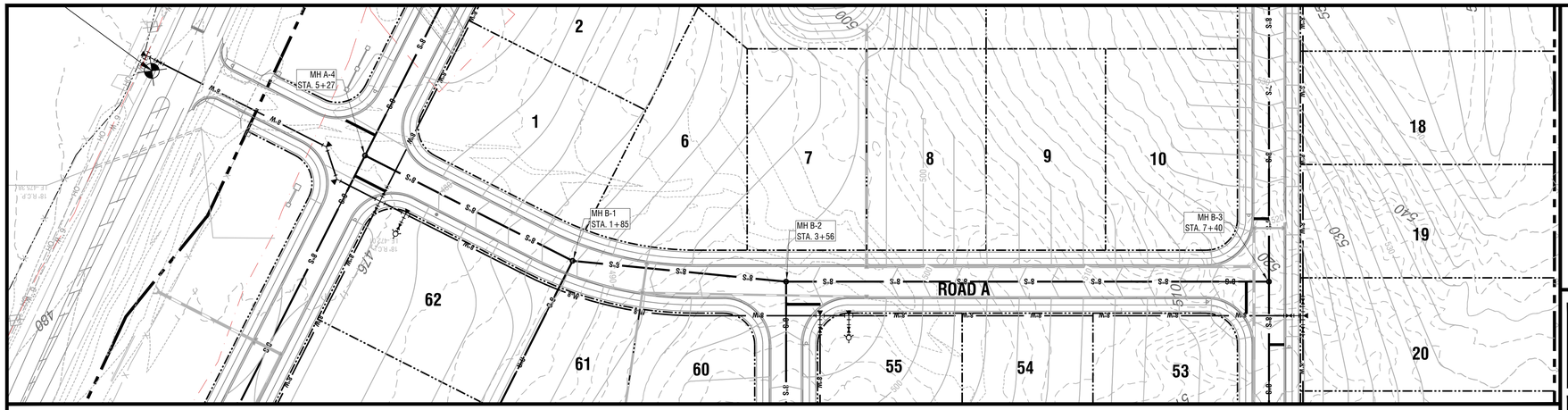
NO.	DATE	DESCRIPTION

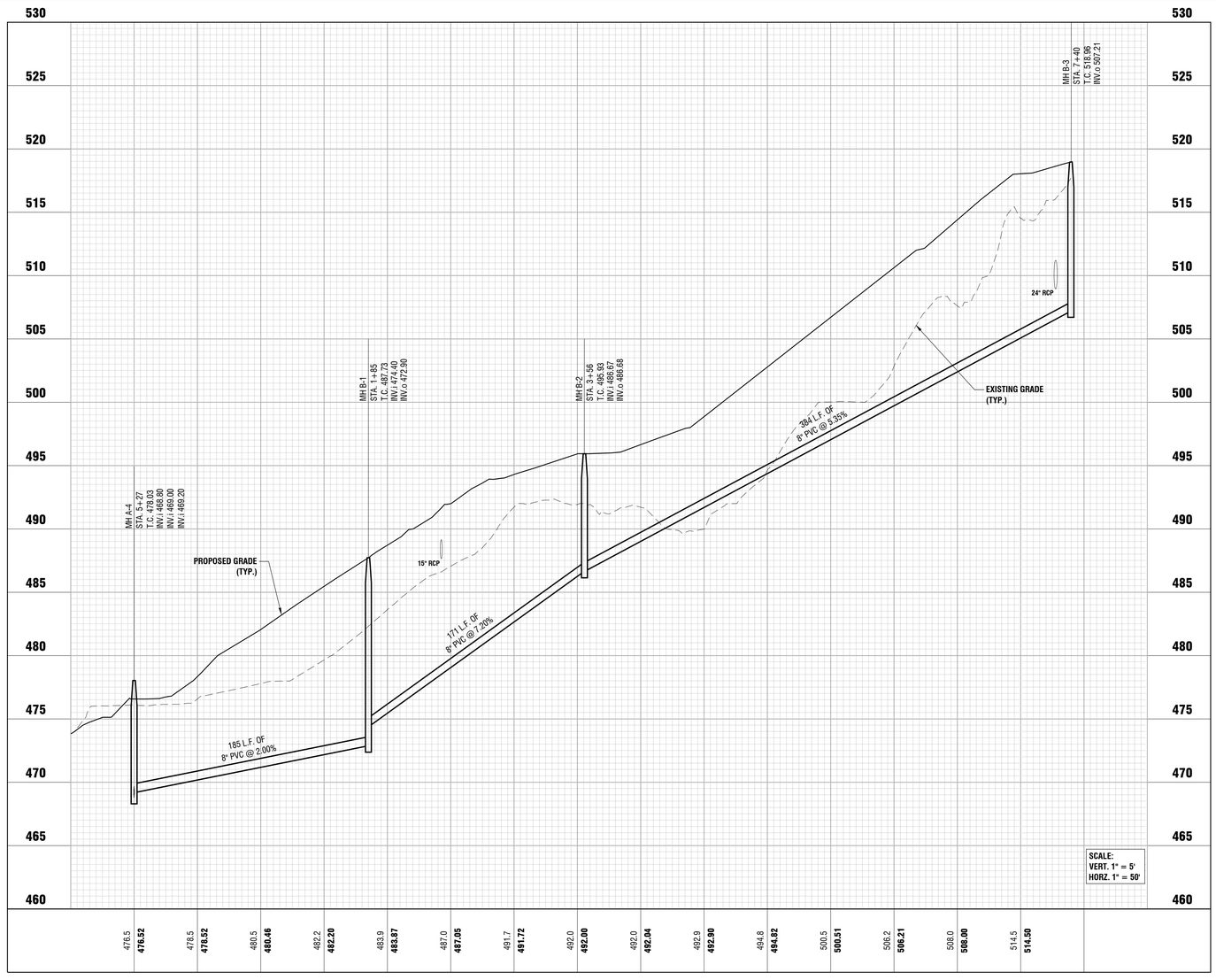
DATE:	04/23/26
DMG Project No:	25184

SANITARY SEWER LINE A
PLAN & PROFILE

C5.3

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.3 San A P&P.dwg–Layout1 Apr 23, 2026 – 11:08am GaryEmerson





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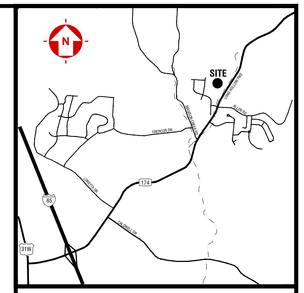

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0 25 50 100 150

SCALE 1" = 50'

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DAVID S. ABSHIER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
26

REVISIONS

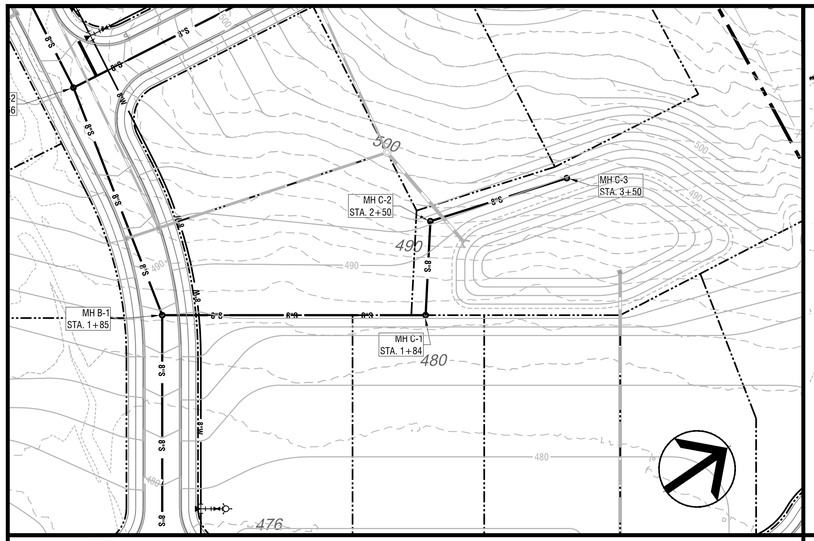
NO.	DESCRIPTION	DATE

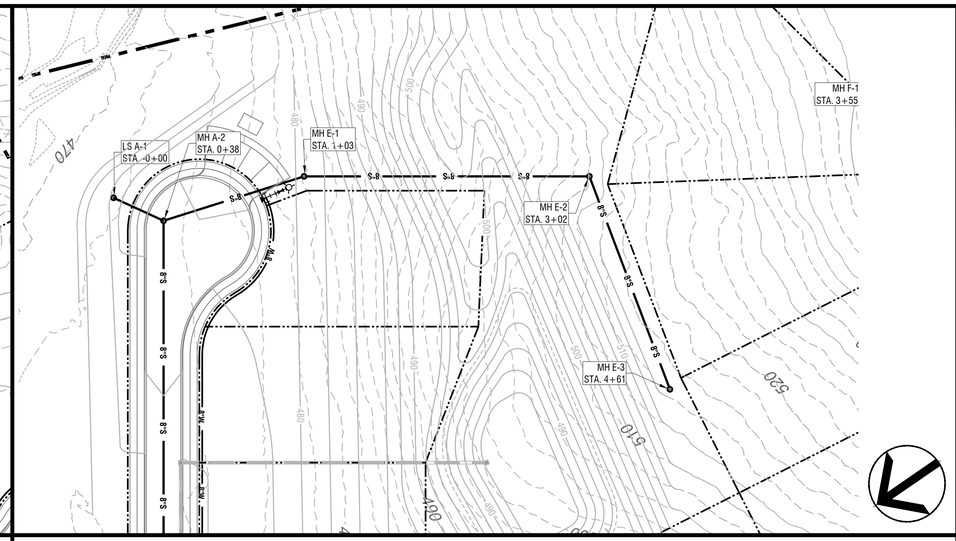
DATE:	04/23/26
DMG Project No:	25184

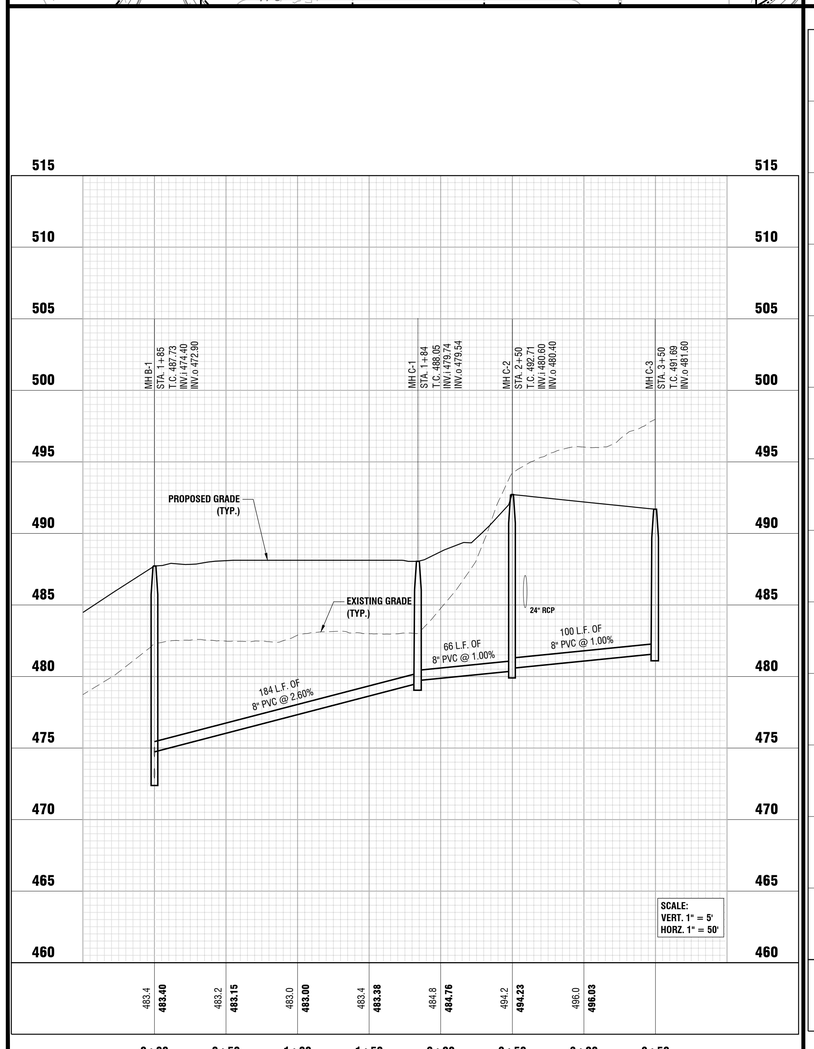
SANITARY SEWER LINE A
PLAN AND PROFILE

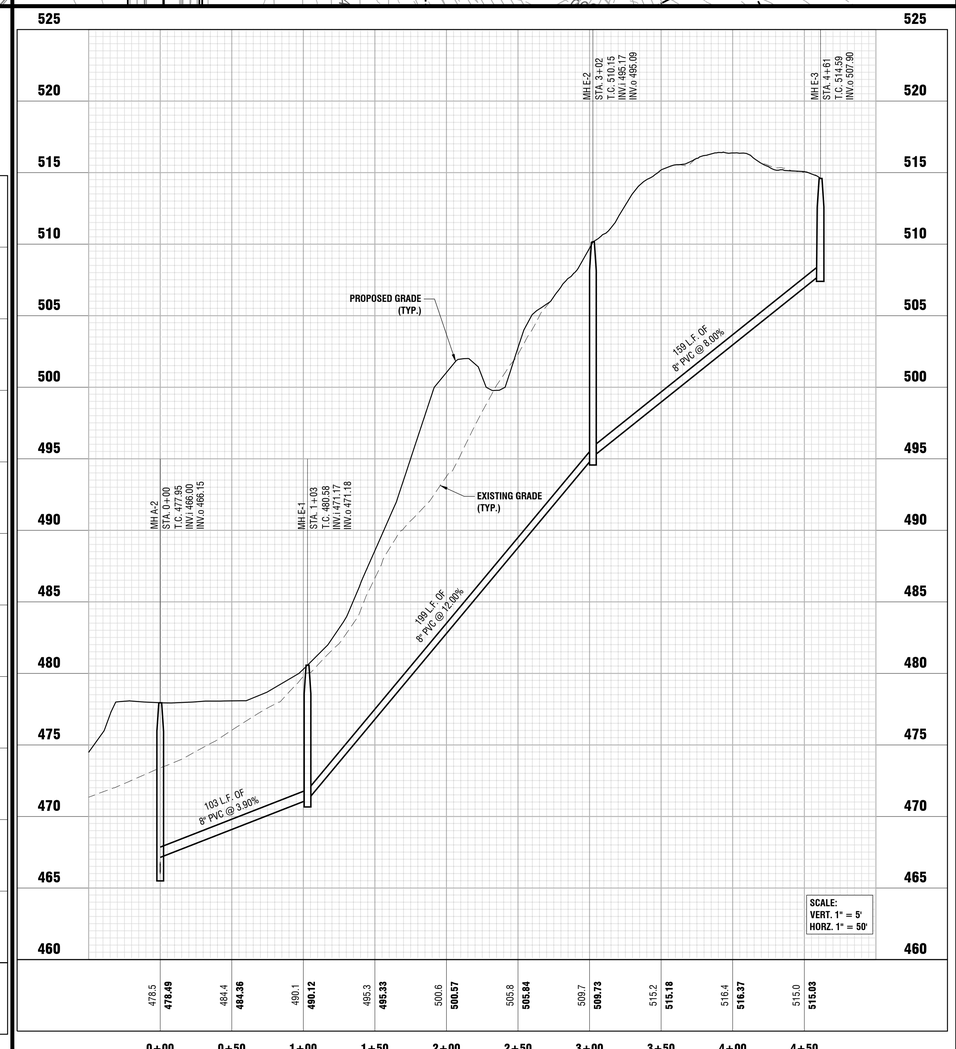
C5.4

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.4 San B P&P.dwg–Layout1 Apr 23, 2026 – 11:10am GaryEmerson









ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

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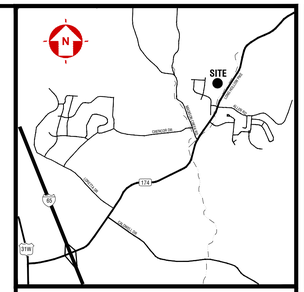

VICINITY MAP

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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SUMNER COUNTY, TENNESSEE

DAVID S. ARBER
REGISTERED
LICENSED PROFESSIONAL ENGINEER
STATE OF TENNESSEE
26

REVISIONS

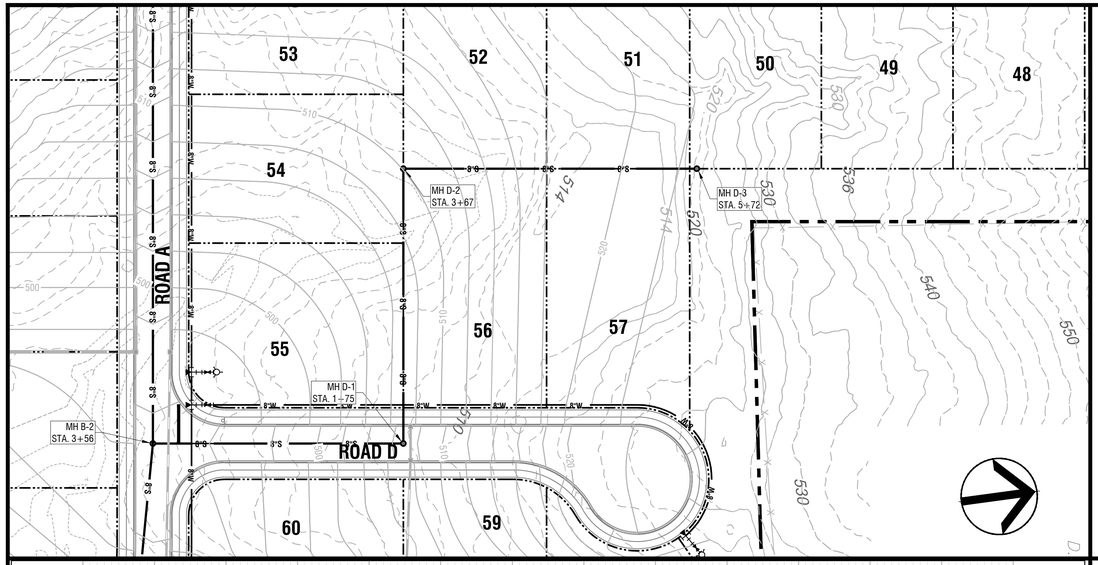
NO.	DESCRIPTION	DATE

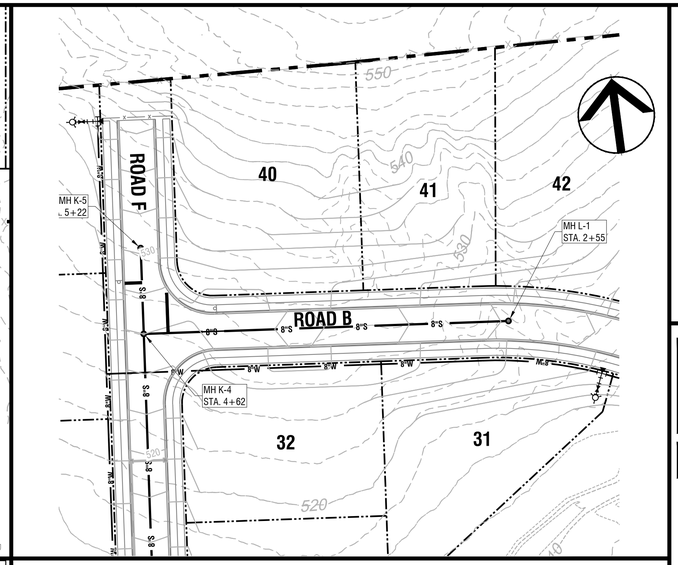
DATE:	04/23/26
DMG Project No:	25184

SANITARY SEWER LINE C & LINE E
PLAN & PROFILE

C5.5

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike – Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.5 San C P&P.dwg–Layout1 Apr 23, 2026 – 11:15am GaryEmerson





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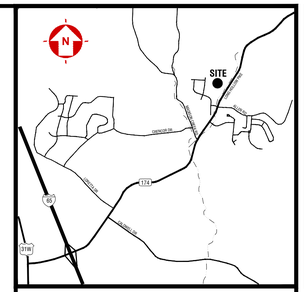
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:
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DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
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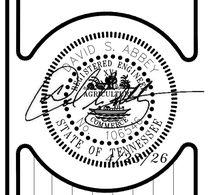
TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE



REVISIONS

NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

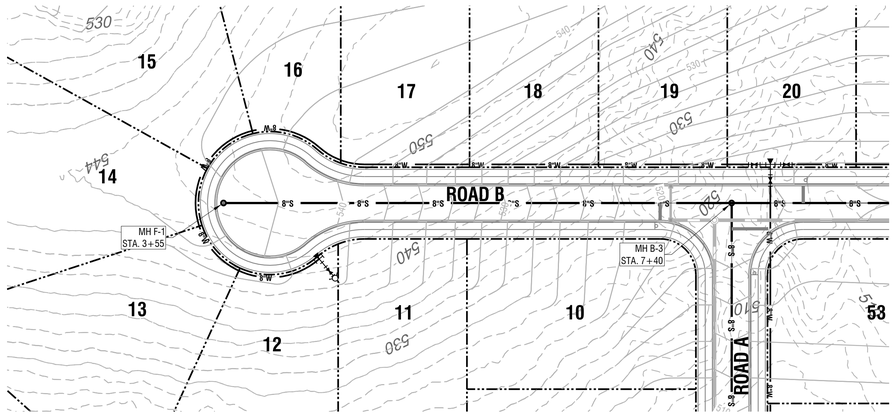
SANITARY SEWER LINE D & LINE L
PLAN & PROFILE
C5.6

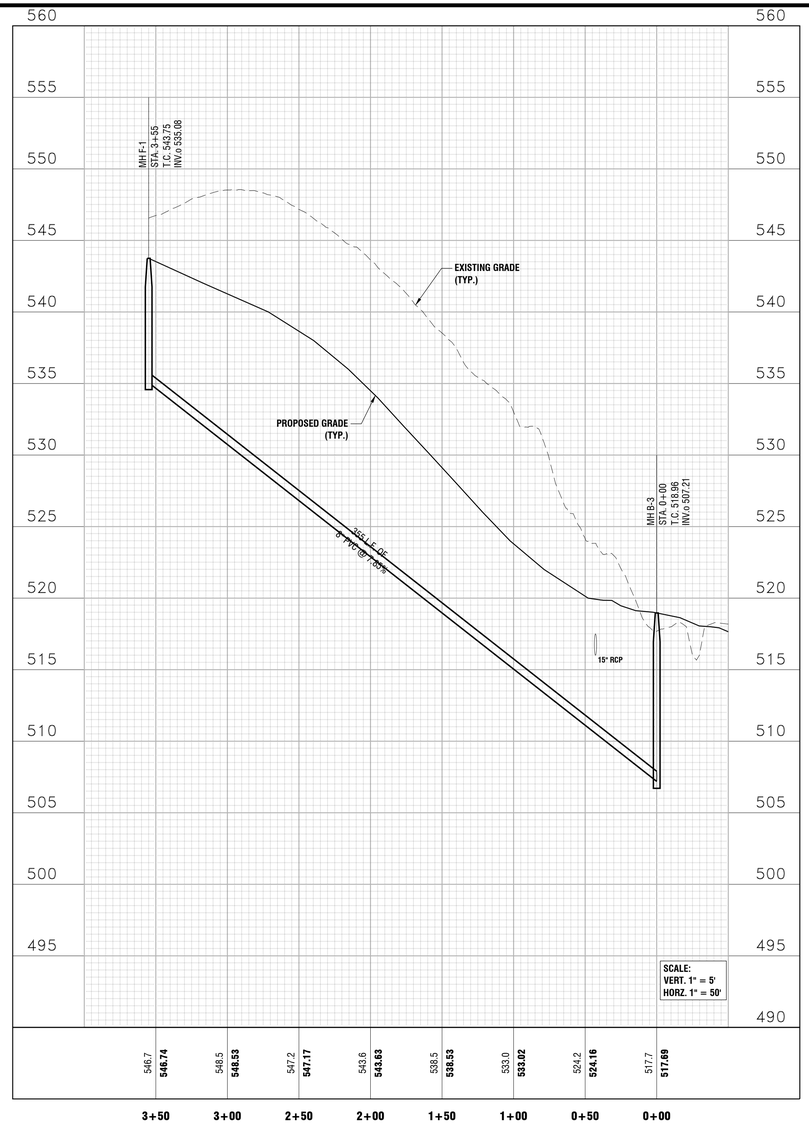
ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C5.6 Son D P&P.dwg-Layout1 Apr 23, 2026 - 11:20am GaryEmerson





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SITE BENCHMARKS:

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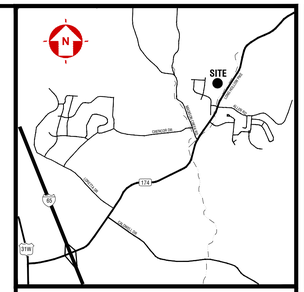

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REVISIONS

NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

SANITARY SEWER LINE F
PLAN & PROFILE

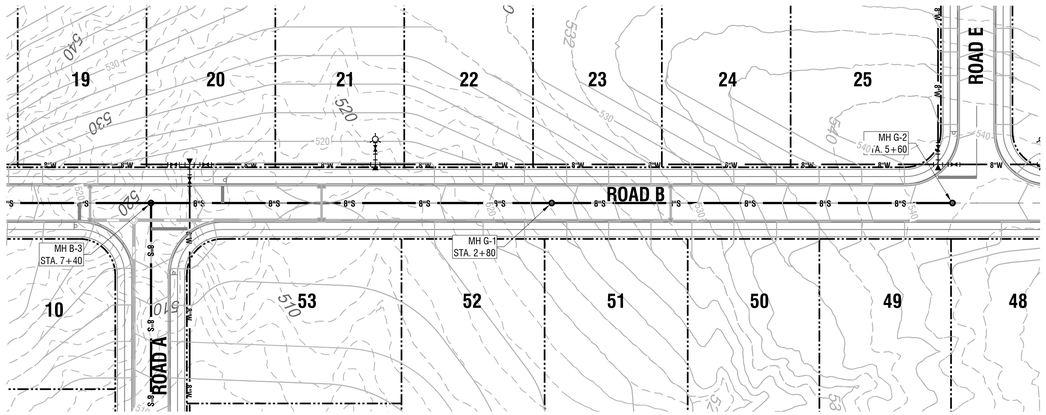
C5.7

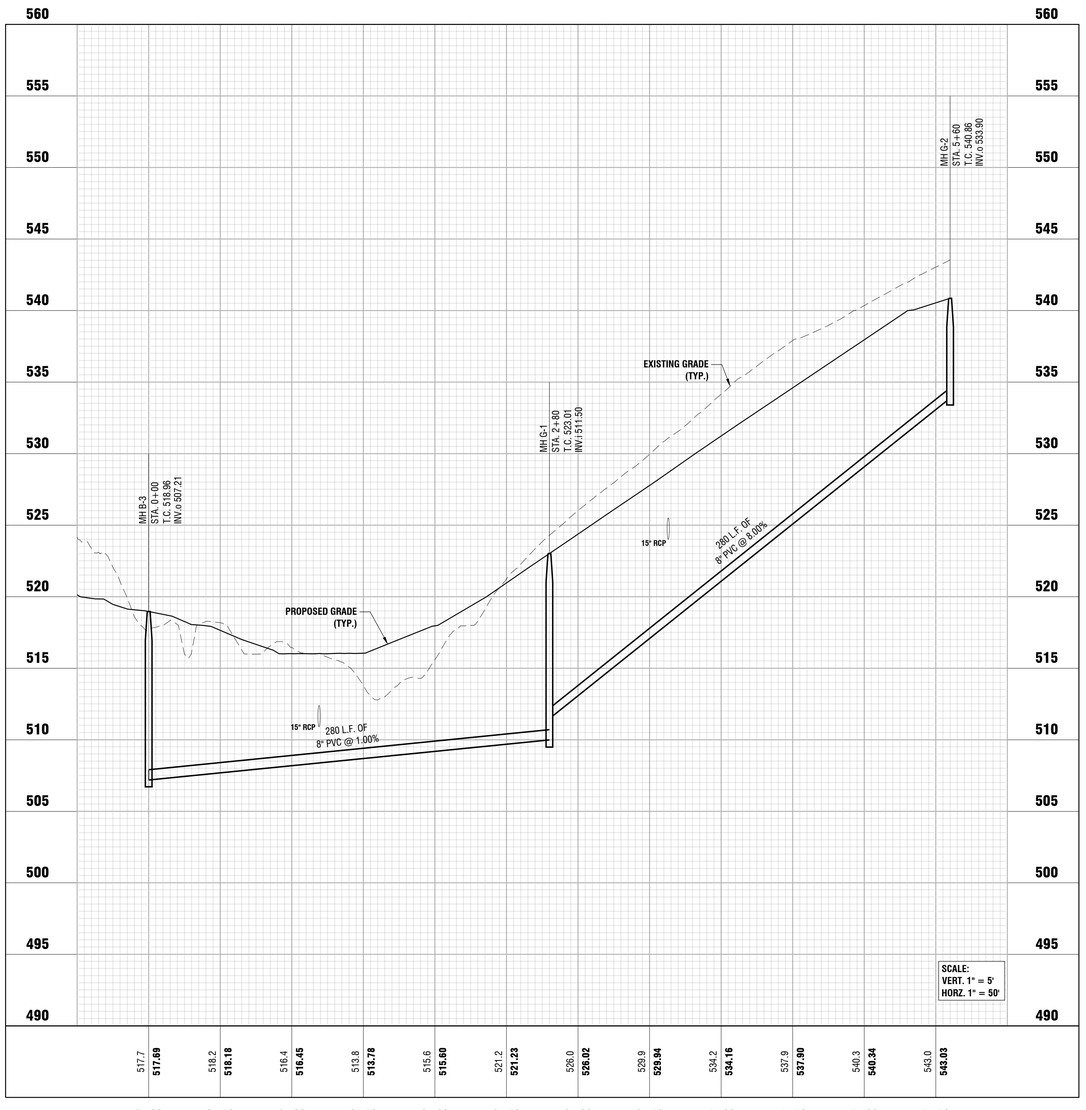
ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

Z:\PROJECT DATABASE\2025\25.184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.7 San F P&P.dwg–Layout1 Apr 23, 2026 – 11:23am GaryEmerson





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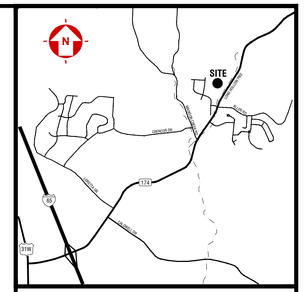

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ZONING: LDRPUD

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REVISIONS

NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

SANITARY SEWER LINE G
PLAN & PROFILE

C5.8

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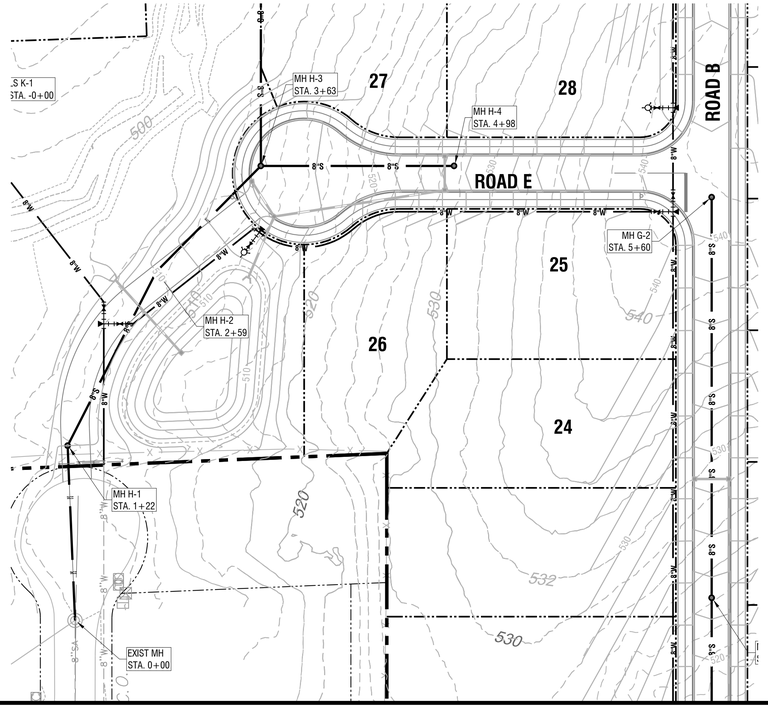

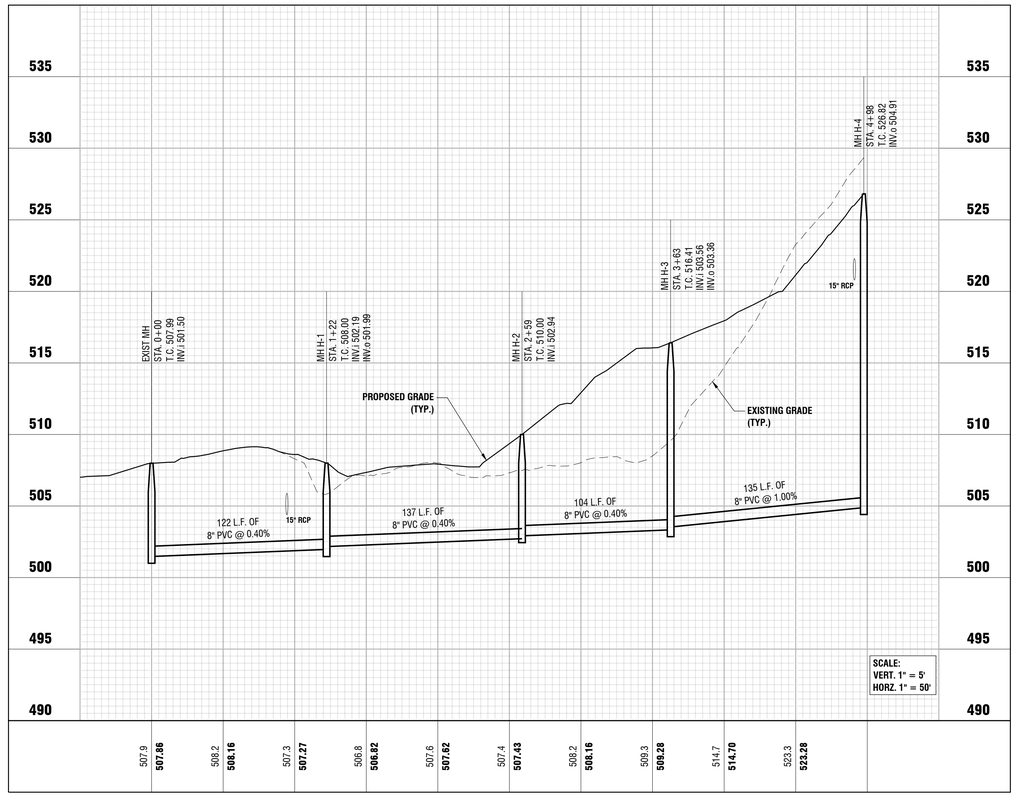

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

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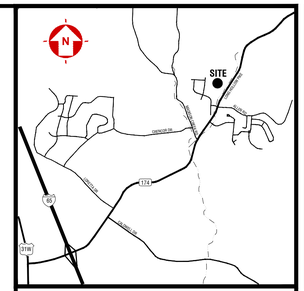

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ZONING: LDRPUD

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DAVID S. CASSETTY
REGISTERED ENGINEER
AGRICULTURE
CIVIL
COMMERCIAL
LAND DEVELOPMENT
STATE OF TENNESSEE
26

REVISIONS

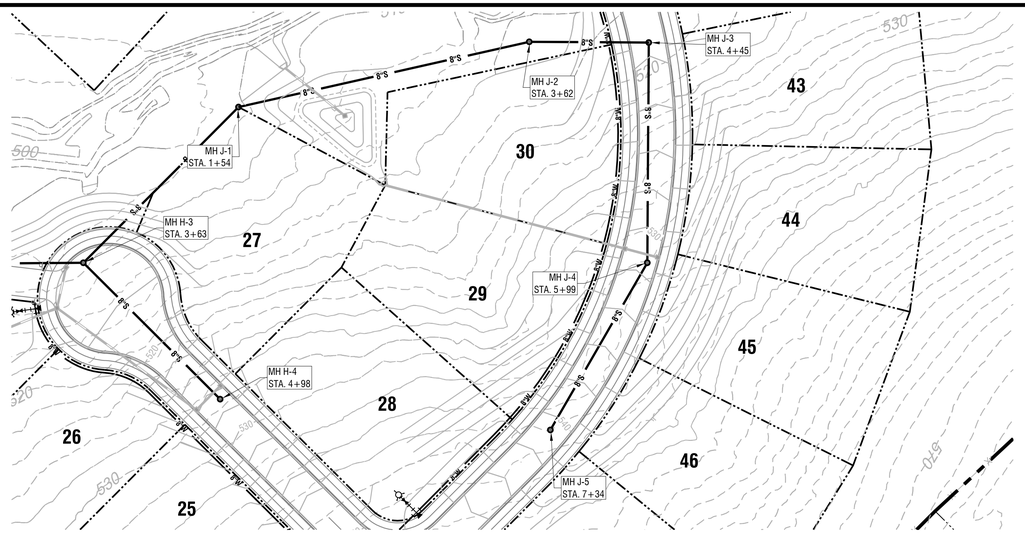
NO.	DATE	DESCRIPTION

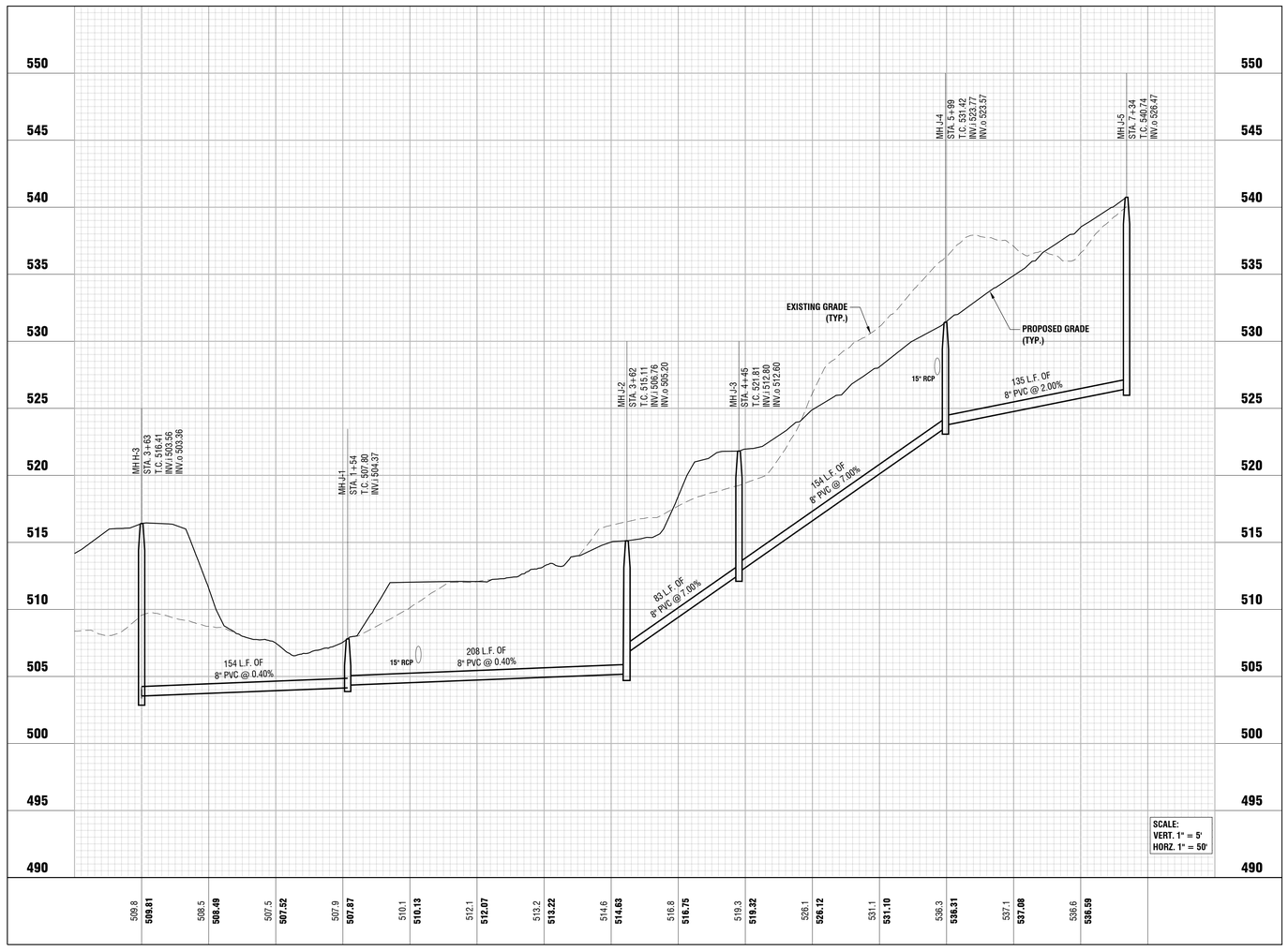
DATE:	04/23/26
DMG Project No:	25184

SANITARY SEWER LINE H
PLAN & PROFILE

C5.9

Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C5.9 San H P&P.dwg-Layout1 Apr 23, 2026 - 11:39am GaryEmerson





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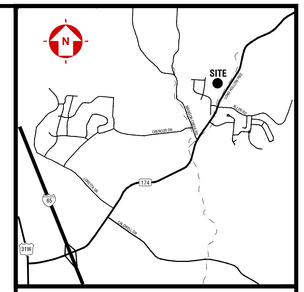

VICINITY MAP

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IRONWOOD
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DAVID S. ABBEY
REGISTERED ENGINEER
AGRICULTURE
CIVIL
COMMERCE
STATE OF TENNESSEE
2026

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

SANITARY SEWER LINE J
PLAN & PROFILE

C5.10

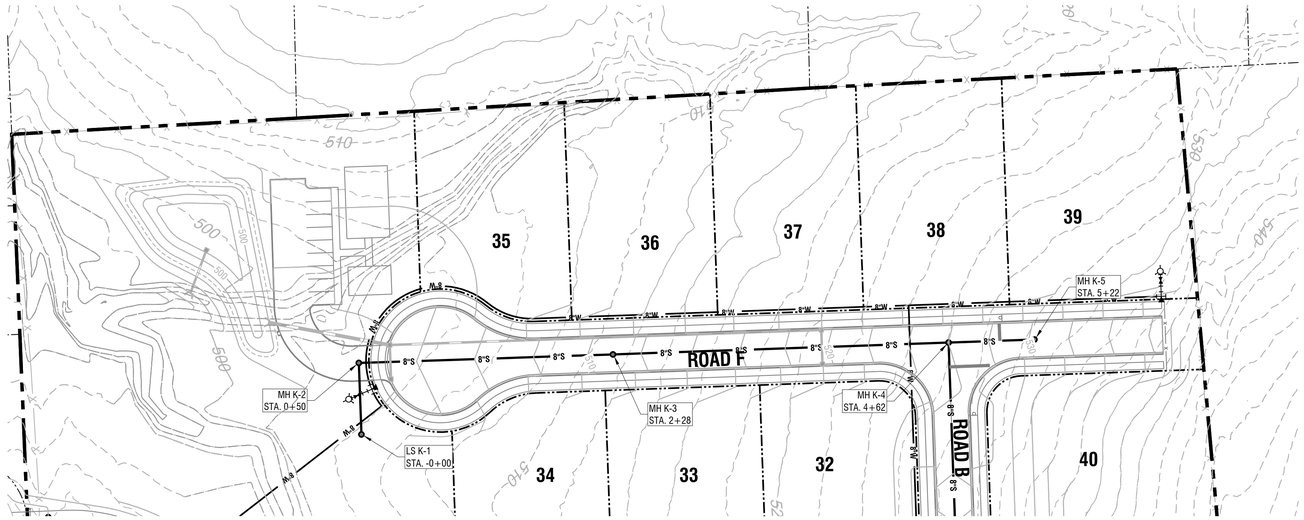
TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

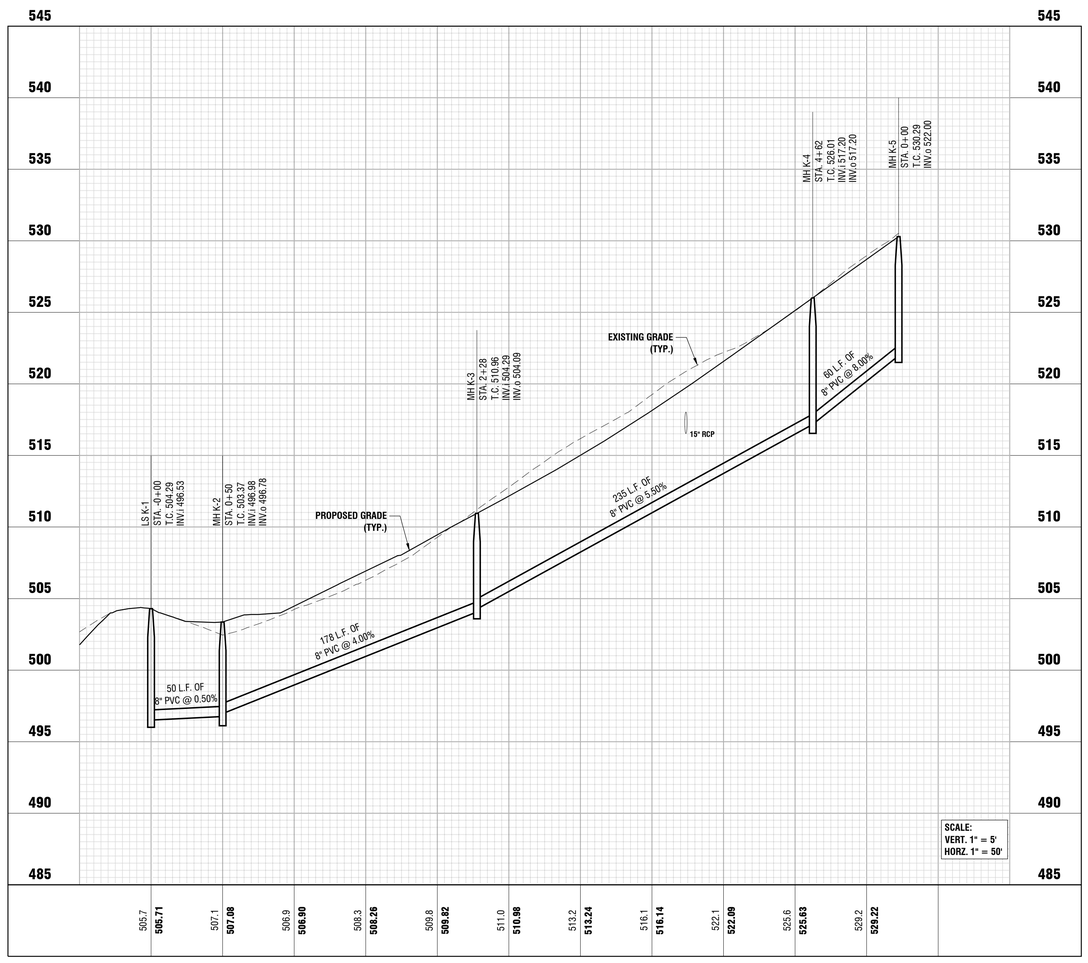
ISSUED FOR: ☐ CHECKSET ▩ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C5.10 San J P&P.dwg-Layout1 Apr 23, 2026 - 11:42am GaryEmerson





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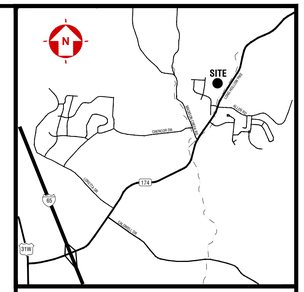

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CIVIL
COMMERCE
STATE OF TENNESSEE
4/23/26

REVISIONS
NO. | DATE | DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

SANITARY SEWER LINE K
PLAN & PROFILE

C5.11

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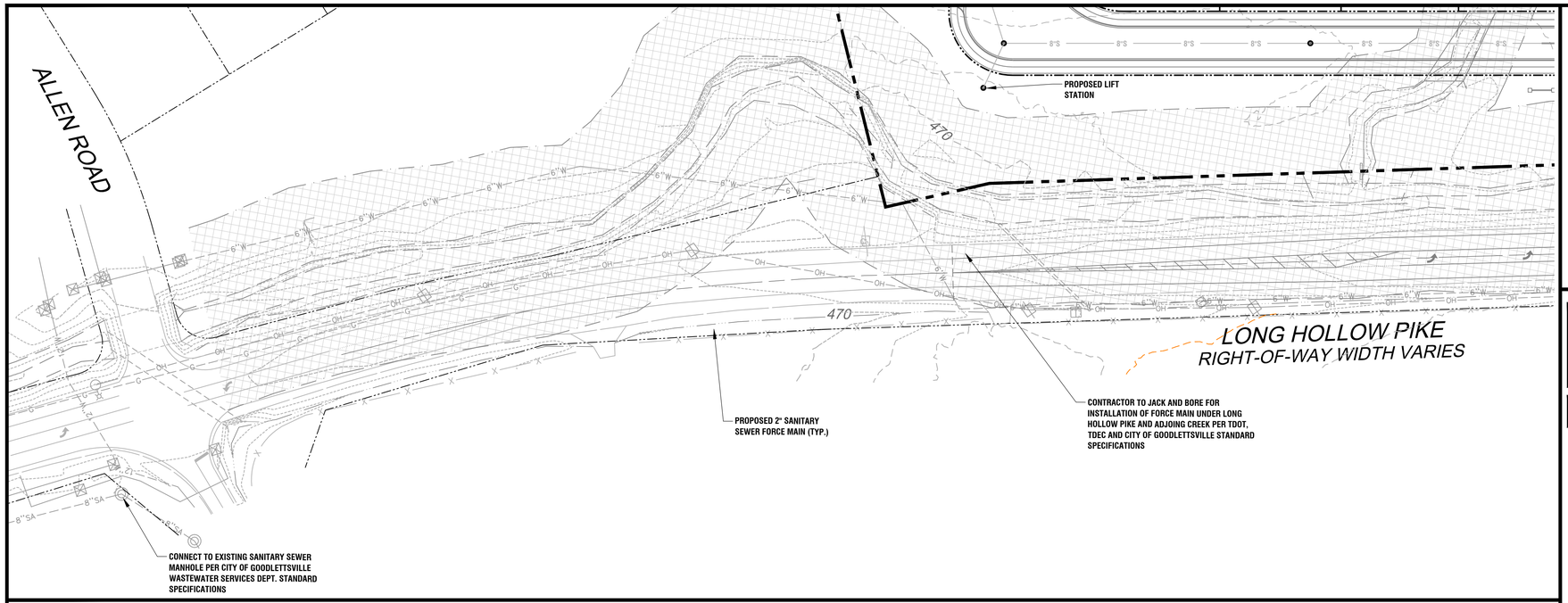

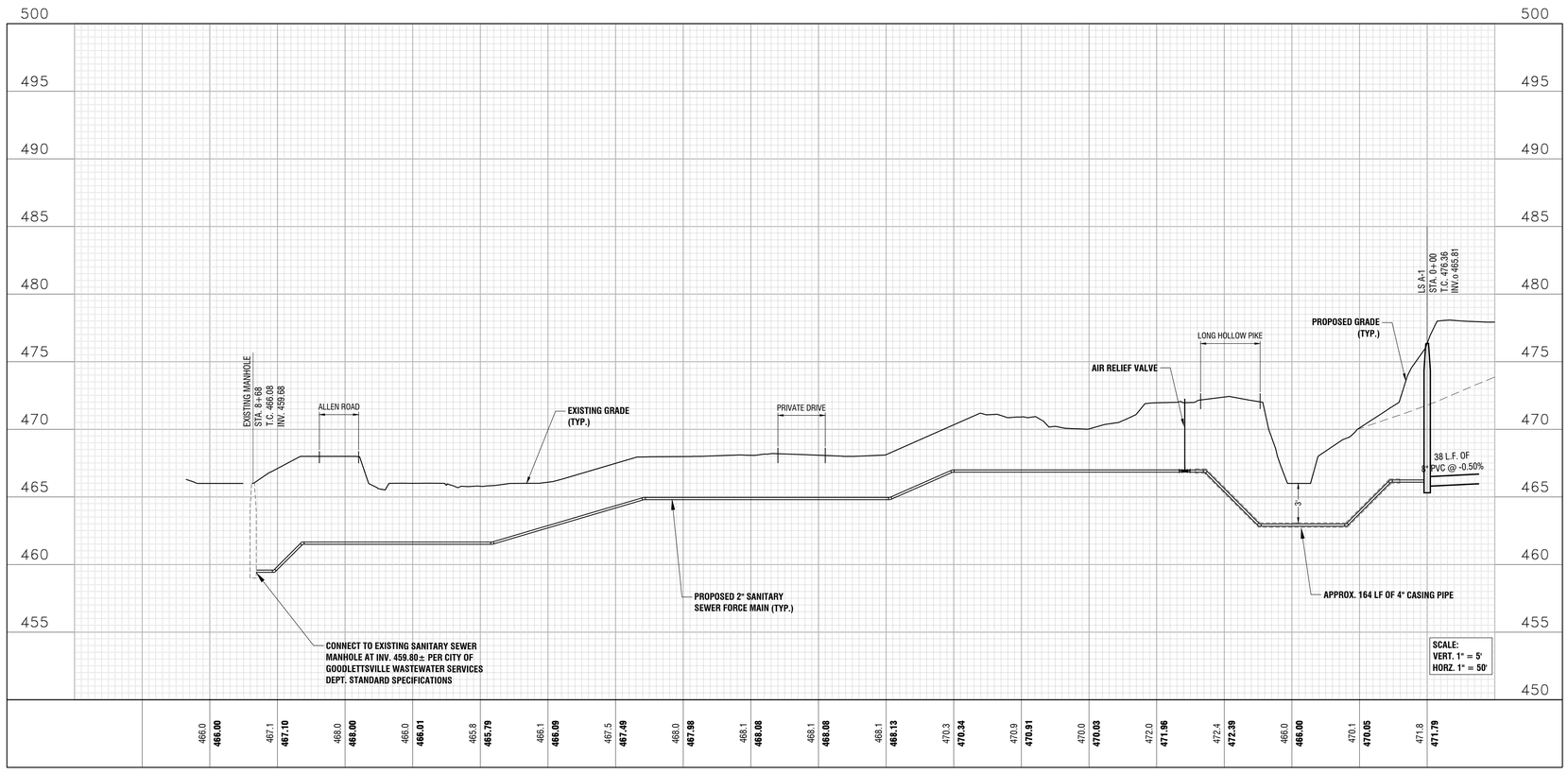

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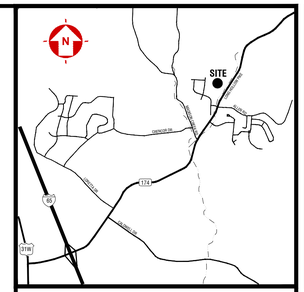

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SCALE 1" = 50'

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LAND DEVELOPMENT
STATE OF TENNESSEE
26

REVISIONS

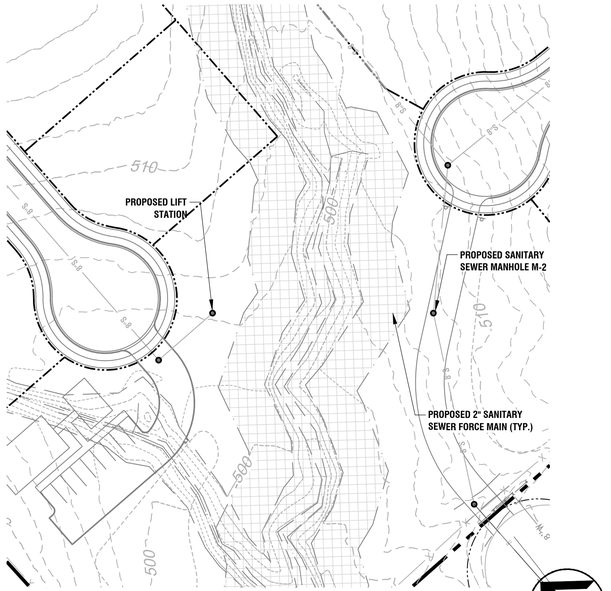
NO.	DESCRIPTION	DATE

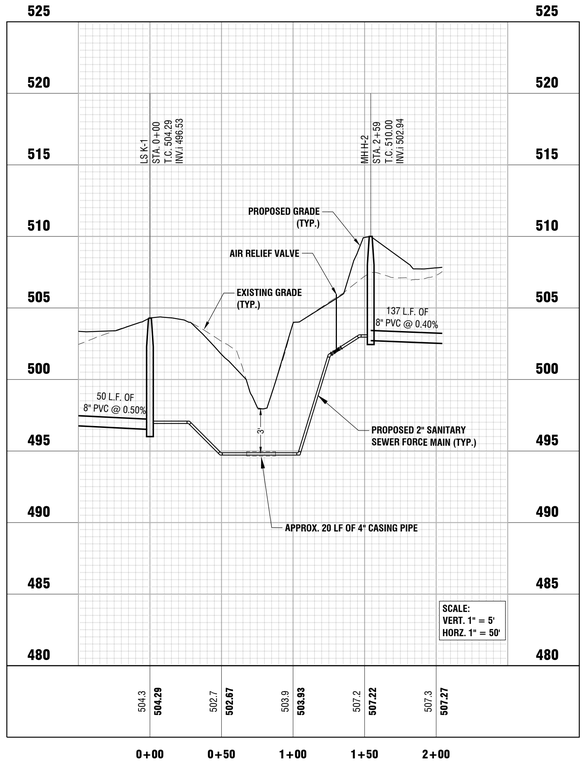
DATE:	04/23/26
DMG Project No:	25184

SANITARY SEWER FORCE MAIN 1

C5.12

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.12 Son FM1 P&P.dwg–Layout1 Apr 23, 2026 – 11:50am GaryEmerson





INFORMATION HAS BEEN PROVIDED TO EONE SEWER SYSTEMS TO DESIGN THE LIFT STATIONS. DETAILS AND INFORMATION WILL BE ADDED TO THIS SHEET ONCE AVAILABLE.

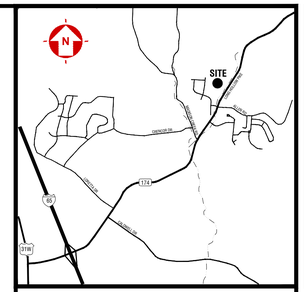
811 Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DAVID S. ABBEY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
04/23/26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

SANITARY SEWER FORCE MAIN 2 & DETAILS

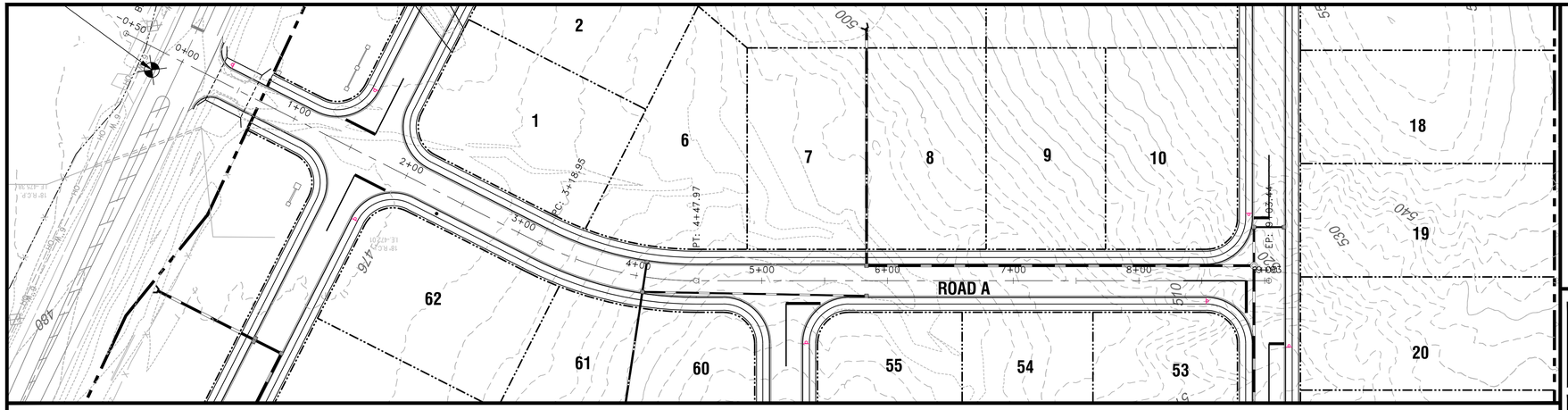
C5.13

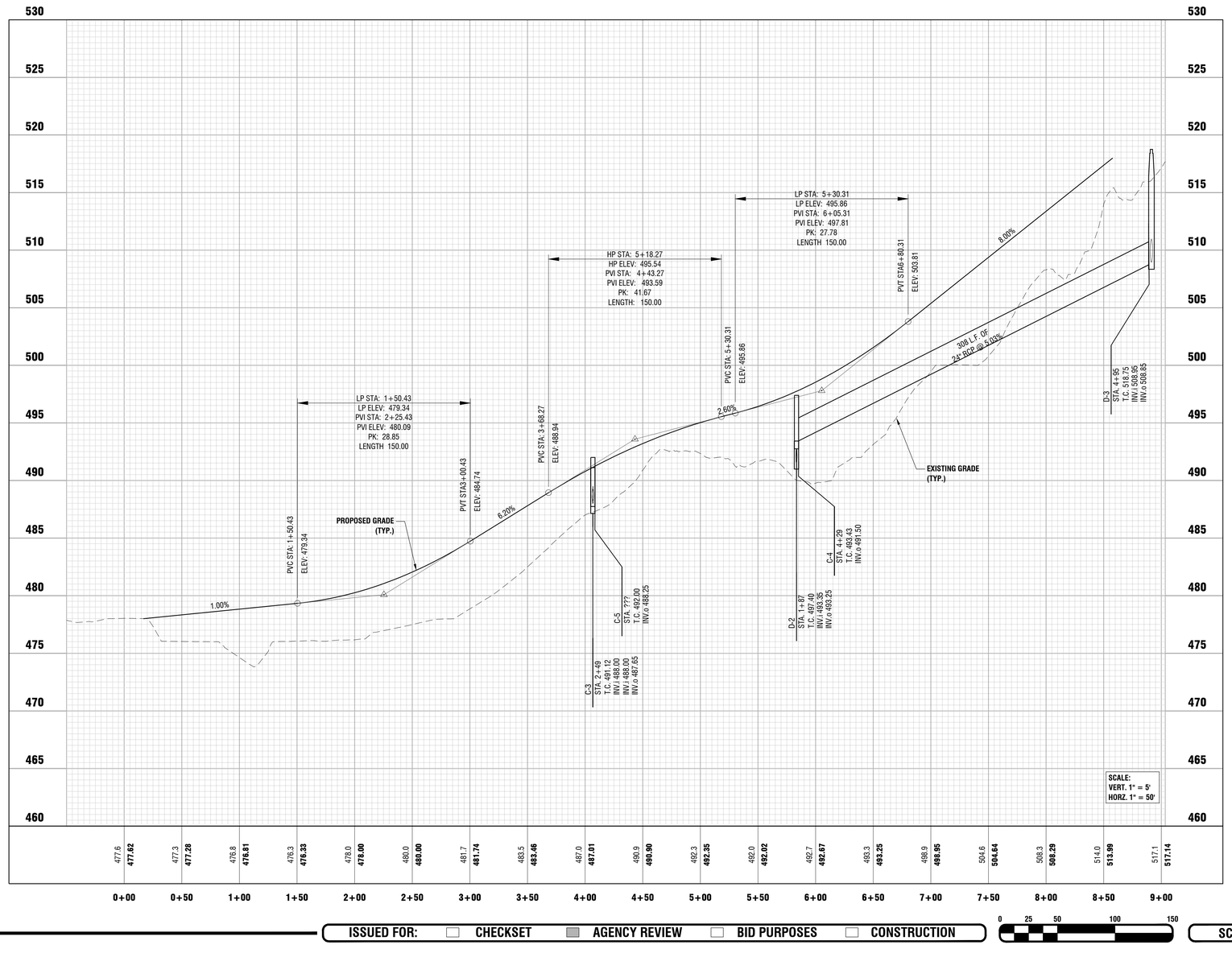
ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C5.13 San FM2 P&P.dwg—Layout1 Apr 23, 2026 – 11:56am GaryEmerson





ISSUED FOR: ☐ CHECKSET ▨ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

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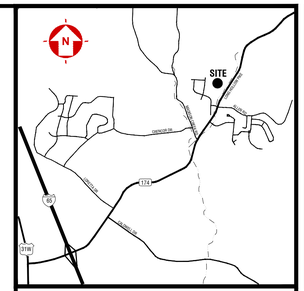

VICINITY MAP

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ZONING: LDRPUD

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REGISTERED ENGINEER
AGENCY
LICENSED
PROFESSIONAL
STATE OF TENNESSEE
26

REVISIONS

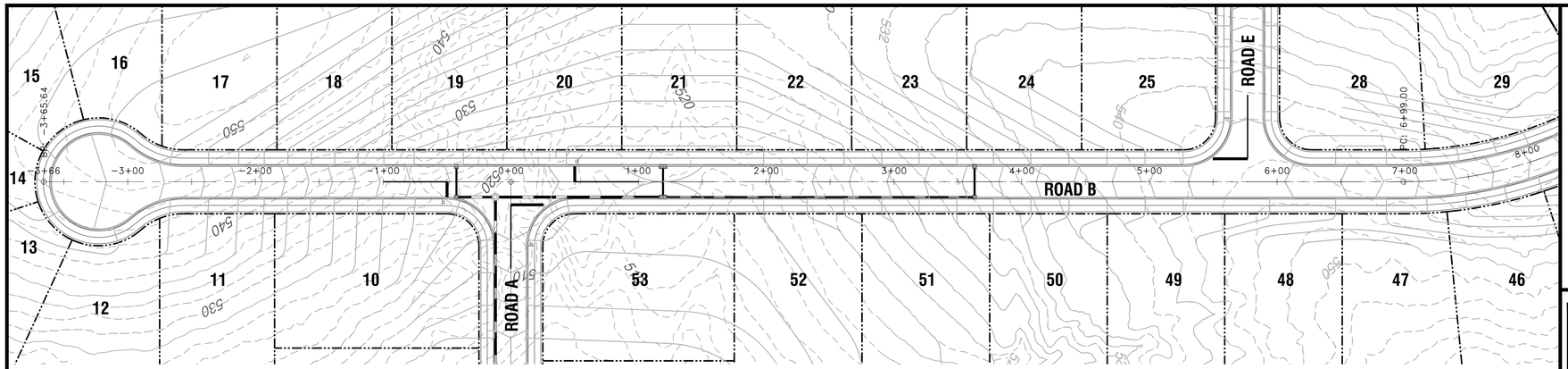
NO.	DATE	DESCRIPTION

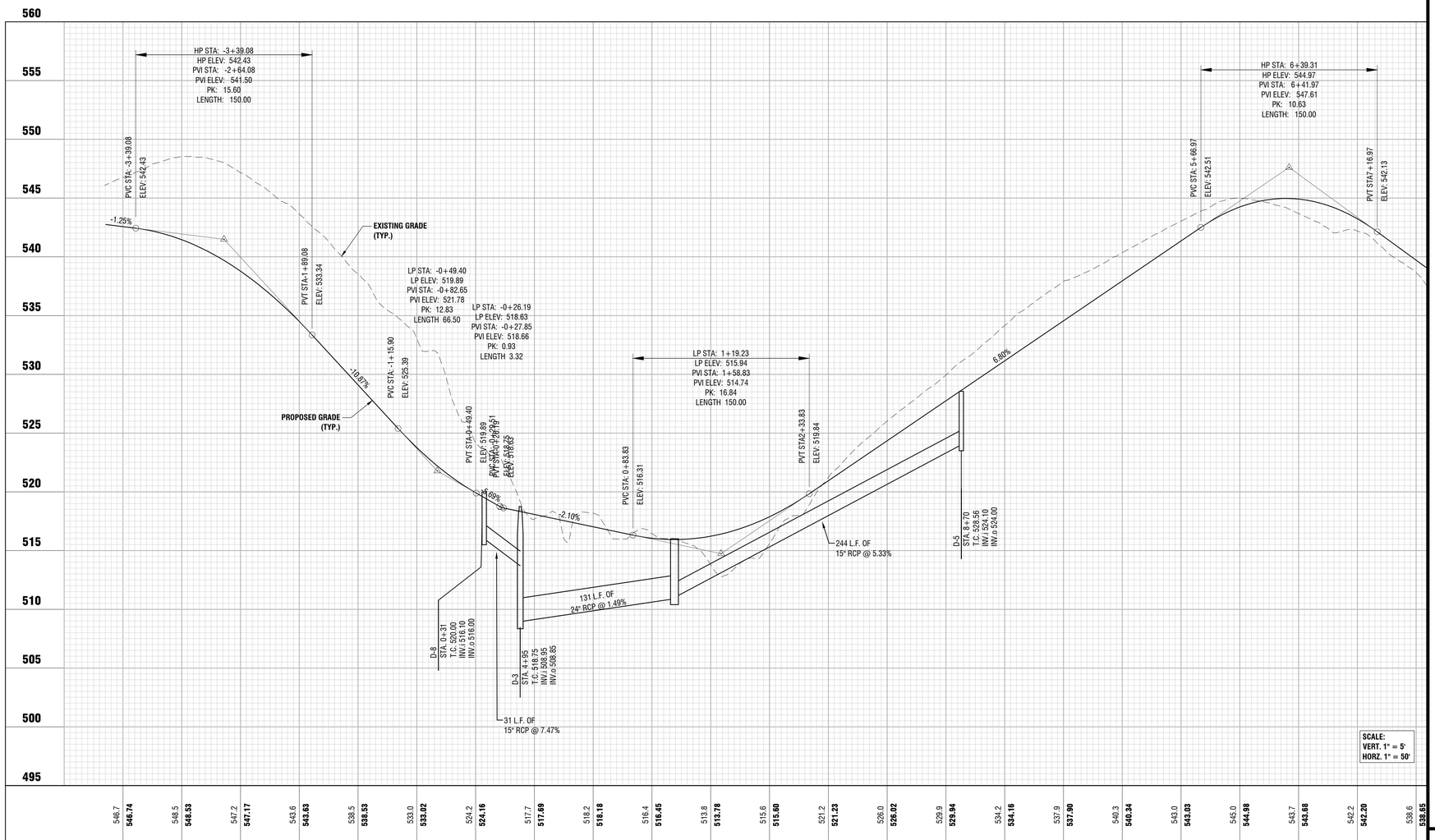
DATE:	04/23/26
DMG Project No:	25184

ROAD A
PLAN AND PROFILE

C6.0

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C6.0 – Road A P&P.dwg—Layout1 Apr 23, 2026 – 12:03pm GaryEmerson





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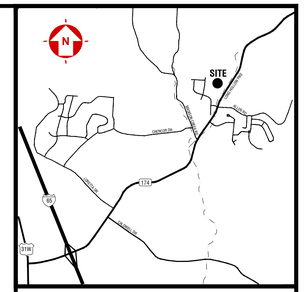

VICINITY MAP

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TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

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REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
26

REVISIONS

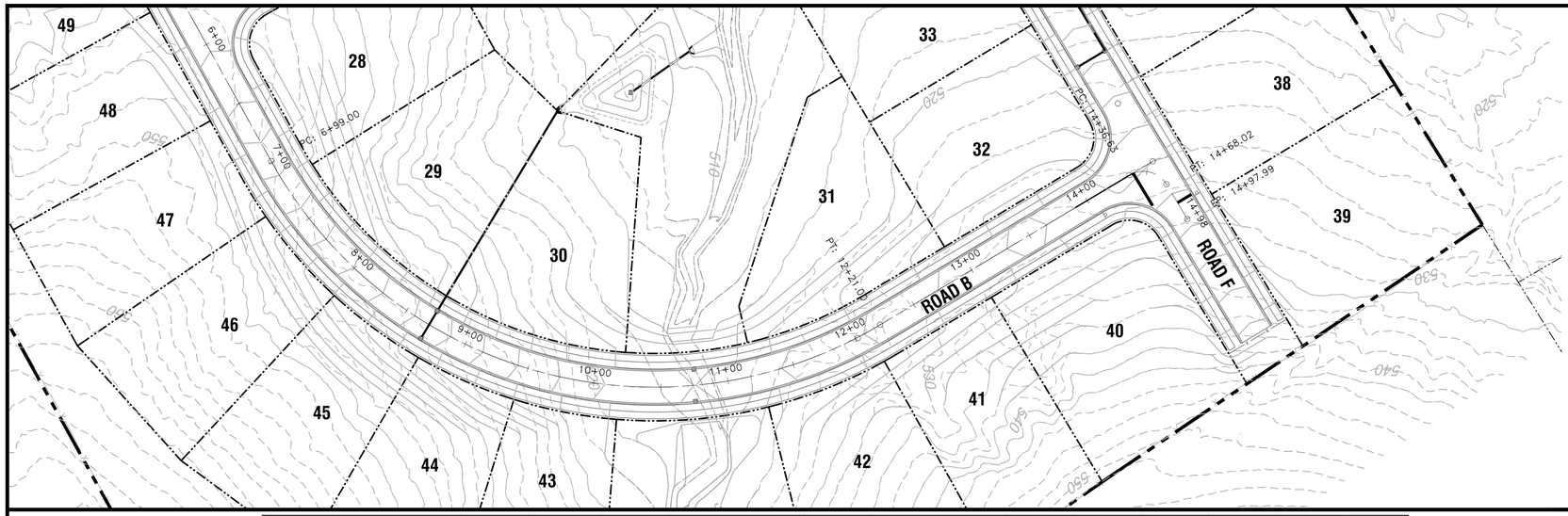
NO.	DATE	DESCRIPTION

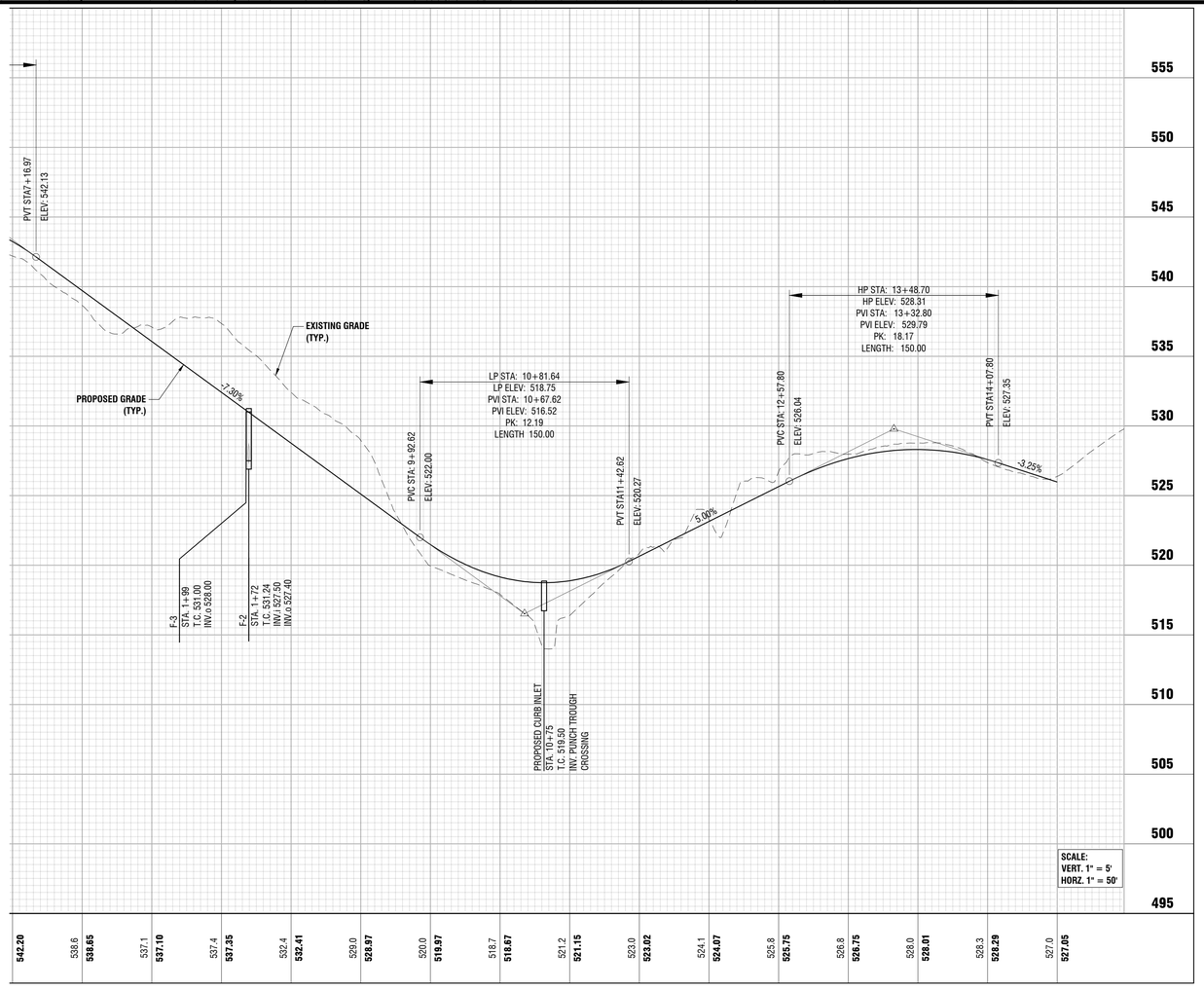
DATE:	04/23/26
DMG Project No:	25184

ROAD B
PLAN & PROFILE

C6.1

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C6.1 – Road B P&P.dwg–Layout1 Apr 23, 2026 - 12:23pm GaryEmerson





0 25 50 100 150

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

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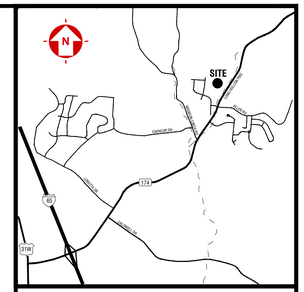
ELEVATION: 510.06



VICINITY MAP

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PARCELS: 124 & 124.01
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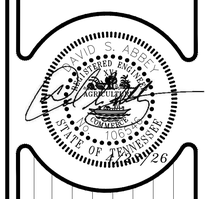

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

ROAD B
PLAN & PROFILE

C6.2

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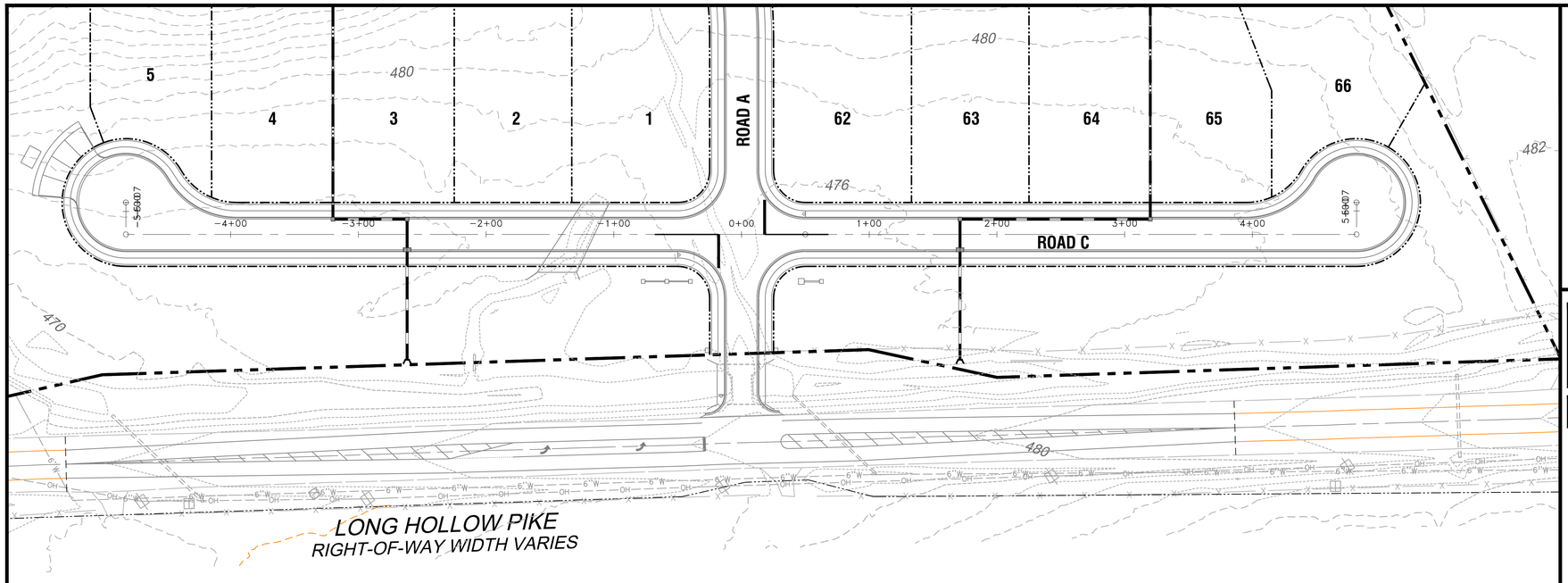

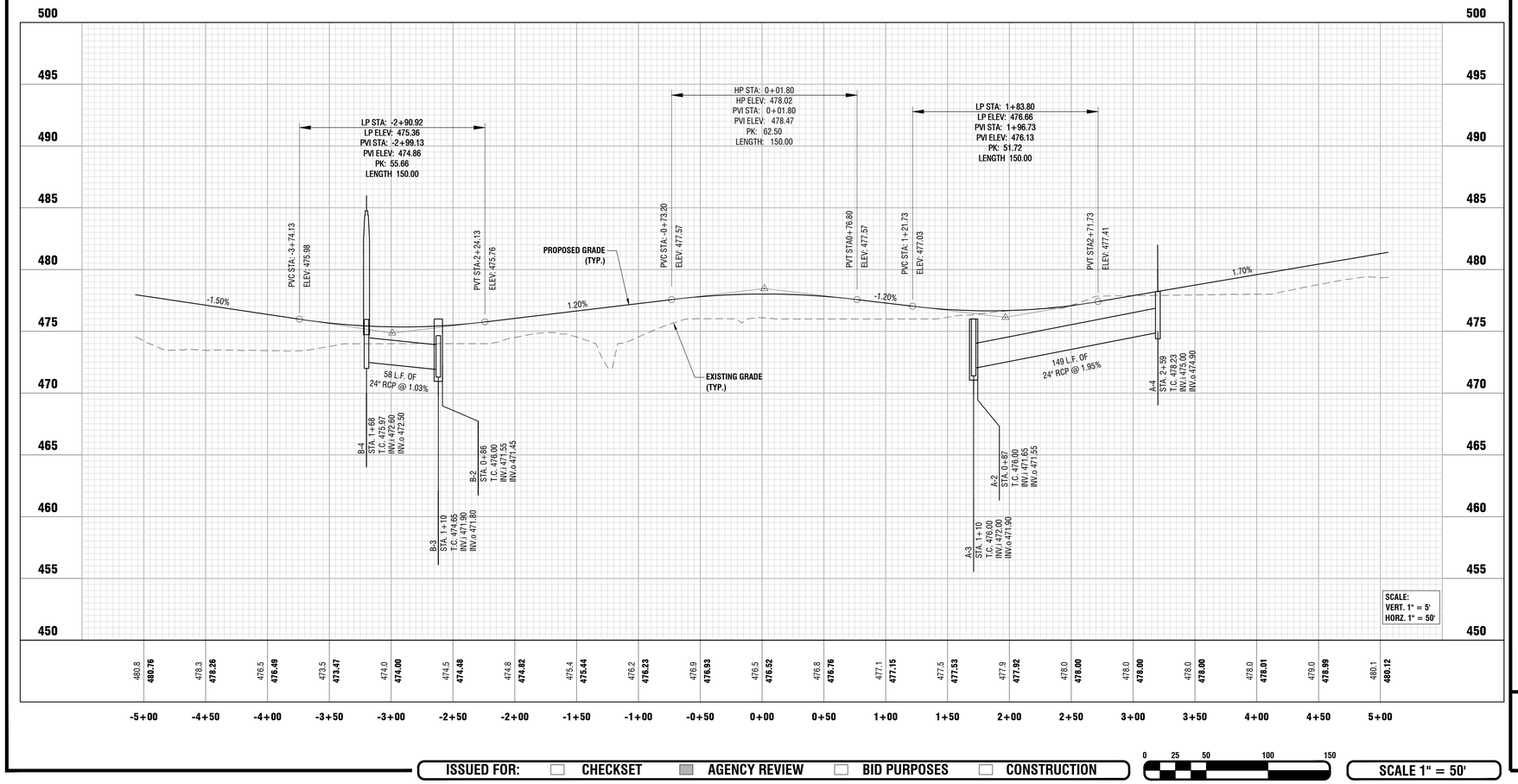

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

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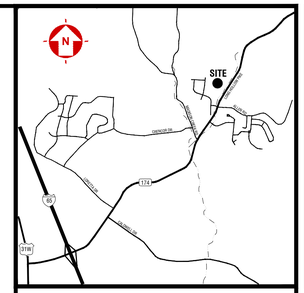

VICINITY MAP

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PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:

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PLANS PREPARED BY:

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IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

ROAD C
PLAN & PROFILE

C6.3

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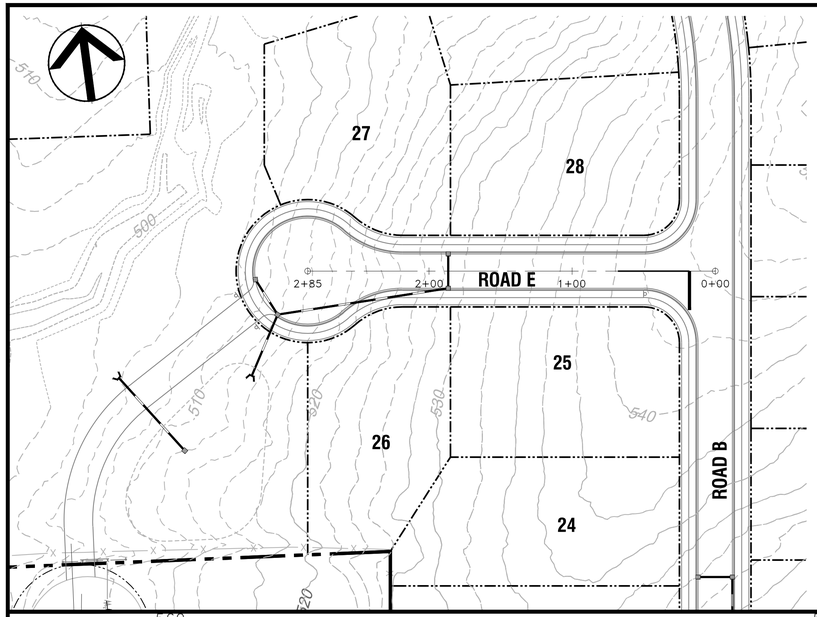

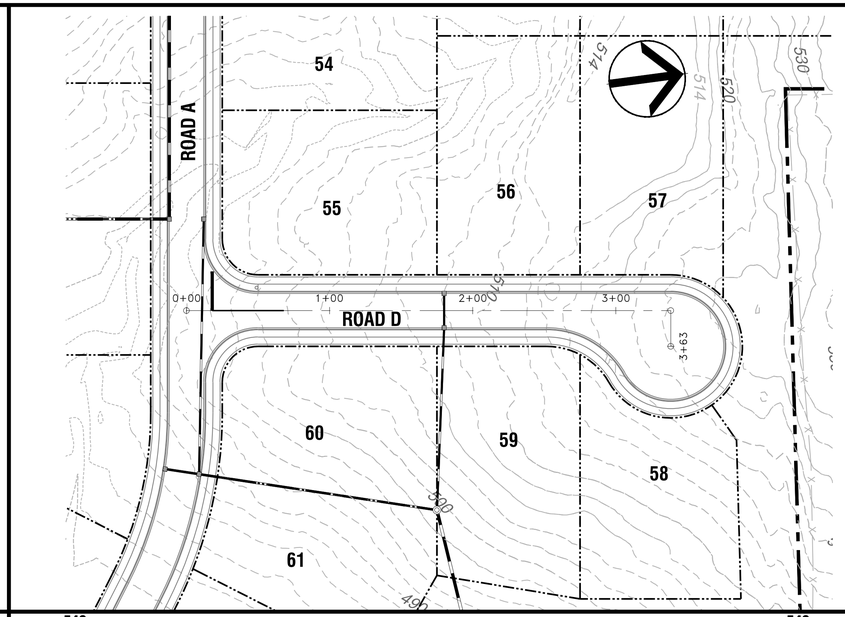

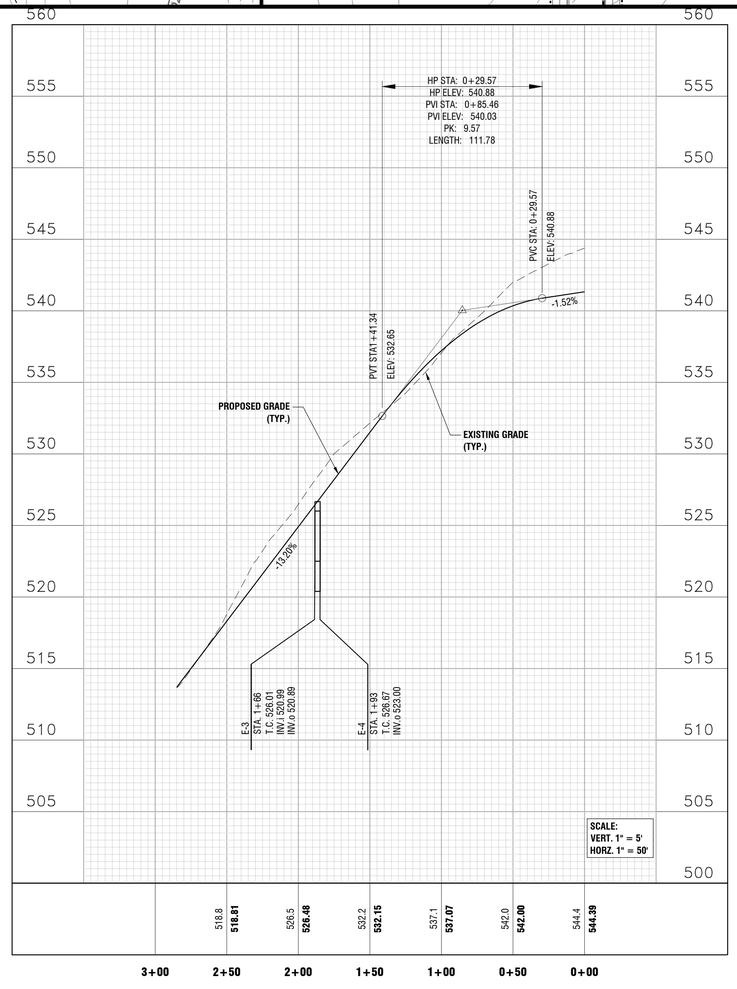

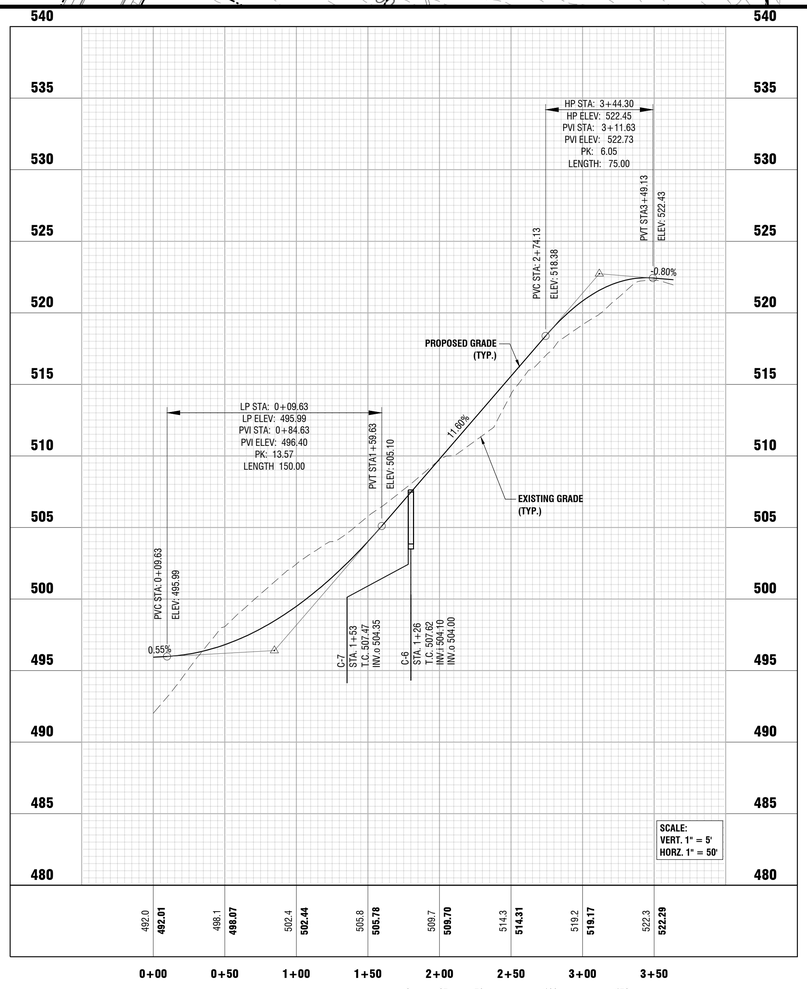

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

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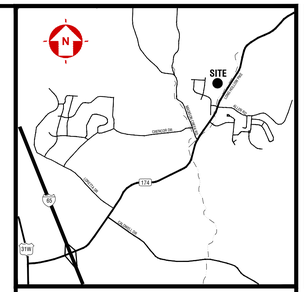

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26

REVISIONS

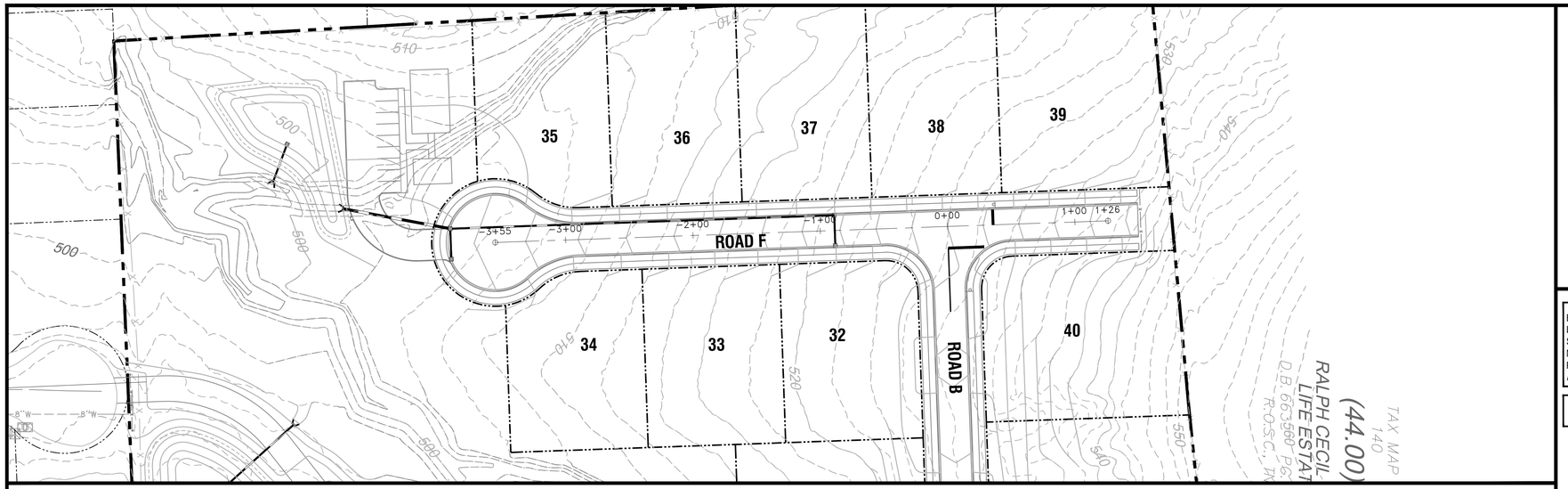
NO.	DESCRIPTION	DATE

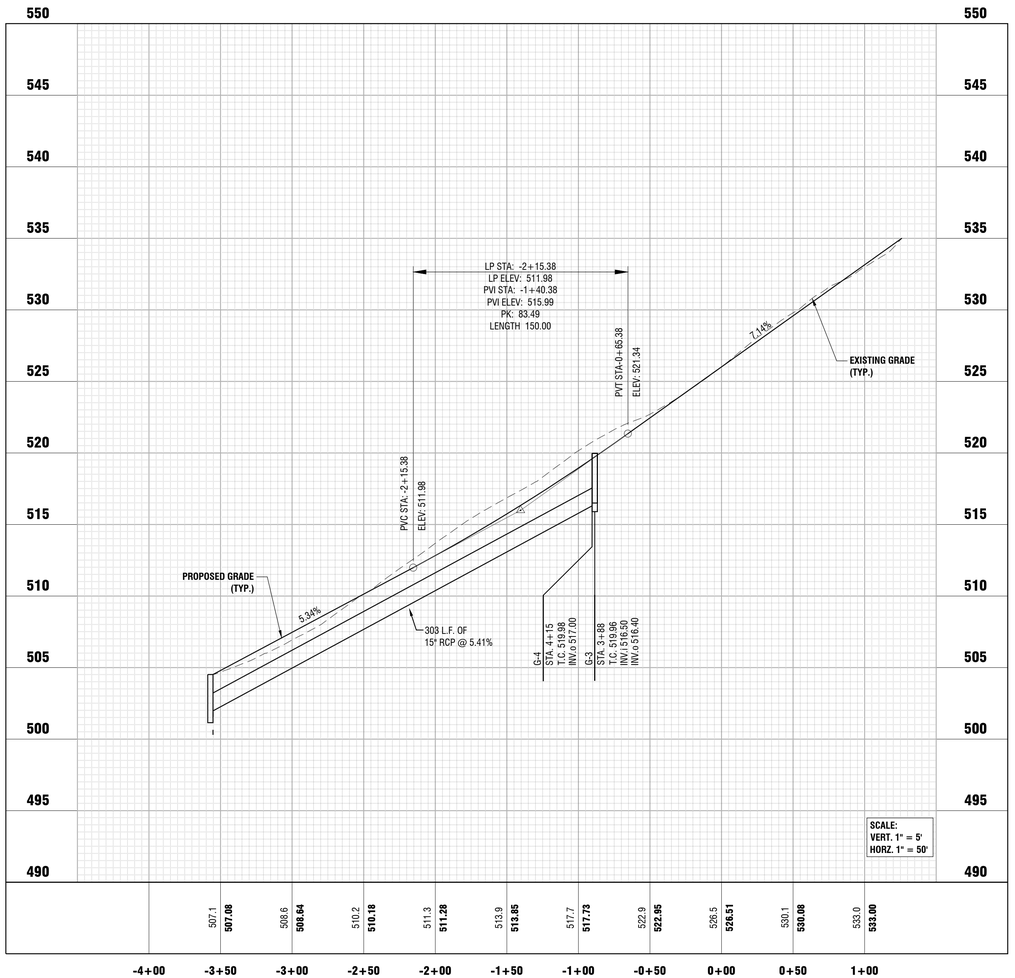
DATE:	04/23/26
DMG Project No:	25184

ROAD D & E
PLAN & PROFILE

C6.4

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C6.4 – Road D P&P.dwg–Layout1 Apr 23, 2026 - 12:32pm GaryEmerson





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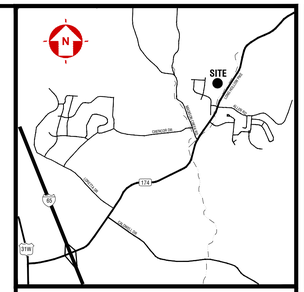


VICINITY MAP

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:
TOTAL DISTURBED AREA = 34.0 ACRES±

SURVEY NOTE:
BASE INFORMATION WAS TAKEN FROM A BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY PRPARED BY BRACKMAN LAND SURVEYING DATED JANUARY 24, 2026, AND LIDAR INFORMATION. DEVELOPMENT MANAGEMENT GROUP, LLC SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

DENNIS C. ABBY
REGISTERED ENGINEER
AGRICULTURE
CIVIL
COMMERCE
STATE OF TENNESSEE
4/23/26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

ROAD F
PLAN & PROFILE

C6.5

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

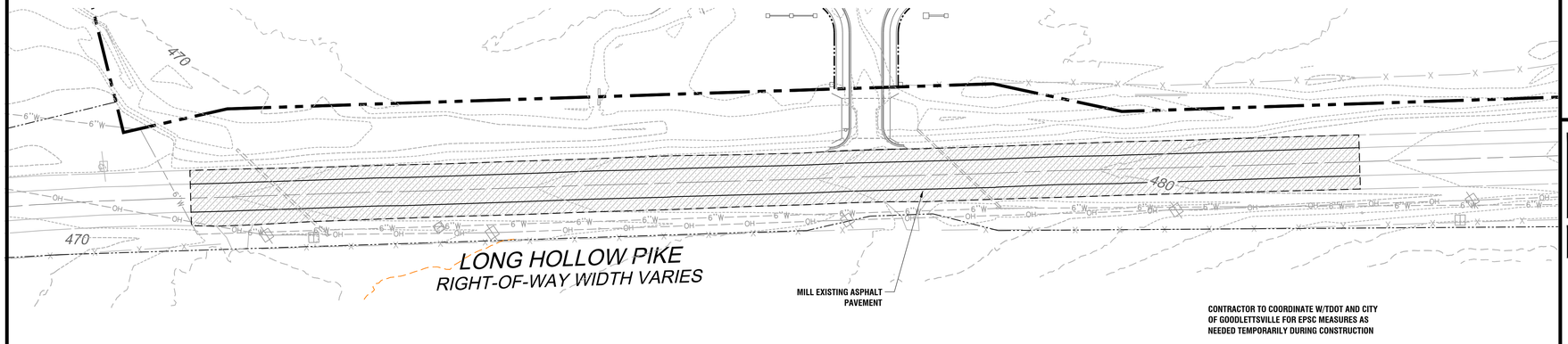
0 25 50 100 150

SCALE 1" = 50'

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C6.5 – Road F P&P.dwg–Layout1 Apr 23, 2026 – 12:35pm GaryEmerson

TDOT CONTROL ACCESS NOTES:

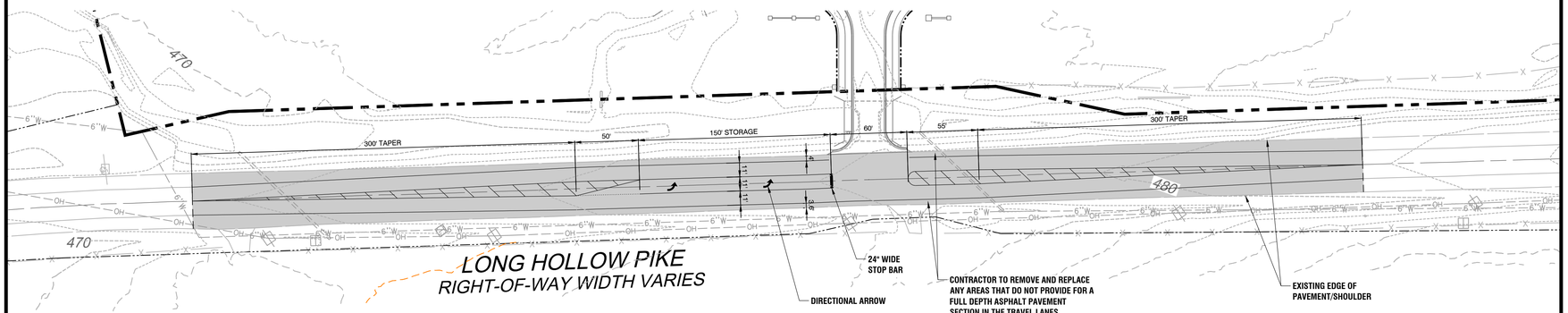
- NO PORTION OF THE TDOT CONTROLLED ACCESS FENCE SHALL BE PERMANENTLY REMOVED.
- ANY PORTION OF THE TDOT CONTROLLED ACCESS FENCE REMOVED DURING CONSTRUCTION SHALL BE REINSTALLED IN THE EXACT LOCATION IT WAS REMOVED IN ACCORDANCE WITH TDOT STD DRAWING S-F-108.



PRESENT LAYOUT / DEMOLITION PLAN

TDOT NOTES:

- ALL DRIVEWAY CONNECTIONS SHALL MEET AASHTO INTERSECTION SITE DISTANCE REQUIREMENTS
- ALL PAVEMENT MARKINGS WITHIN THE RIGHT-OF-WAY SHALL BE THERMOPLASTIC INCLUDING BUT NOT LIMITED TO STOP BAR, DIRECTIONAL ARROWS, STRIPING, ETC. & SHALL CONFORM TO TDOT STNDARD DRAWING T-M-1, T-M-2, T-M-3, & T-M-4.



PROPOSED LAYOUT

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

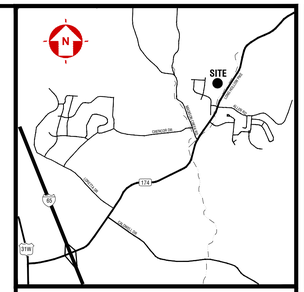
811 Know what's **below.** **Call** before you dig.

SITE BENCHMARKS:

BM 1
MAG NAIL SET 50' SE OF BRIDGE
ELEVATION: 478.10

BM 2
BRASS DISC 30.1' NE OF BRIDGE
ELEVATION: 466.98

BM3
MAG NAIL SET IN ASPHALT CUL-DE-SAC
ELEVATION: 510.06



VICINITY MAP

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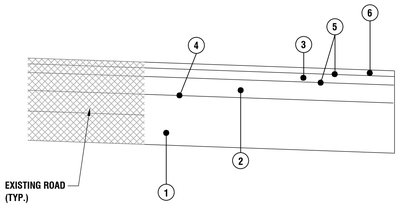
PROPOSED PAVEMENT SCHEDULE

1	MINERAL AGGREGATE BASE 10"± DEPTH UNDER ROADWAY ITEM NO. 303-01 MINERAL AGGREGATE TYPE 'A' BASE GRADING 'D'
2	BASE MODIFIED AT 4± THICK (APPROXIMATELY 460 LBS/SQ YD) ITEM NO. 307-01.01 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING 'A' MIXTURE ITEM NO. 307-02.01 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING 'A' MIXTURE
3	BINDER MODIFIED 2"± THICK (APPROXIMATELY 226 LBS/SQ YD) ITEM NO. 307-01.06 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING 'B' MIXTURE ITEM NO. 307-02.06 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING 'B' MIXTURE
4	PRIME COAT AT 0.30 - 0.35 GAL. PER SQ. YD. ITEM NO. 402-01 BITUMINOUS MATERIAL FOR PRIME COAT
5	TACK COAT AT 0.05 - 0.01 GAL. PER SQ. YD. ITEM NO. 403-01 BITUMINOUS MATERIAL FOR TACK COAT
6	BITUMINOUS SURFACING AT 1.25"± THICK (APPROXIMATELY 132.5 LBS/SQ YD) ITEM NO. 411-01.01 ACS MIX (PG64-22) GRADING 'D' MIXTURE ITEM NO. 411-02.10 ACS MIX (PG70-22) GRADING 'D' MIXTURE



TDOT PROPOSED PAVEMENT SECTION

NOTE:

CONTRACTOR MAY NEED TO FIELD ADJUST SLIGHTLY TO TIE BACK TO EXISTING GRADES OUTSIDE THE LIMITS SHOWN AND MAINTAIN POSITIVE DRAINAGE FLOW AS NEEDED.

TDOT HYDRAULIC DESIGN CRITERIA:

50-YR DESIGN FLOWS TO TDOT RIGHT-OF-WAY WILL NOT INCREASE DUE TO THE PROPOSED CONSTRUCTION ACTIVITIES:

- EXISTING 50-YR FLOW: ___ CFS
- PROPOSED 50-YR FLOW: ___ CFS

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:

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NASHVILLE, TN 37204
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STATE OF TENNESSEE
4/23/26

REVISIONS

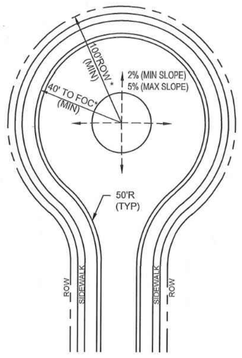
NO.	DESCRIPTION	DATE

DATE:	04/23/26
DMG Project No:	25184

LONG HOLLOW PIKE
PLAN & PROFILE

C6.6

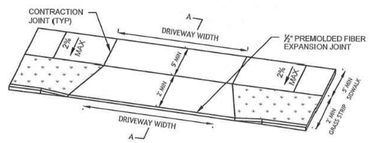
Z:\PROJECT DATABASE\2025\25.184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C6.6 – Road Long Hollow Pike.dwg–Layout1 Apr 23, 2026 – 1:15pm GaryEmerson

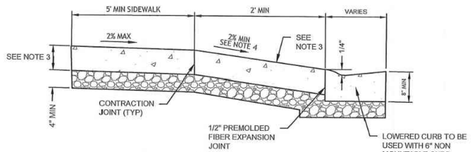


* FOR COMMERCIAL OR INDUSTRIAL APPLICATIONS. PAVEMENT RADIUS IS 140' WITH 160' R.O.W.

N.T.S.

DATE: 10.27.16	STANDARD CUL-DE-SAC	GOODLETTSVILLE TENNESSEE
REVISIONS	STD. DWG. SD-1	



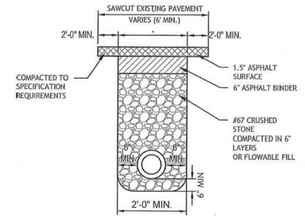


SECTION A-A

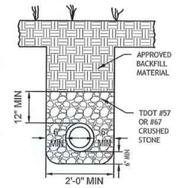
GENERAL NOTES
1. 5' MINIMUM SIDEWALK WITH A MAXIMUM CROSS SLOPE OF 2% THROUGH DRIVEWAYS
2. 4" MINIMUM BASE STONE REQUIRED UNDER ALL DRIVEWAYS.
3. RESIDENTIAL DRIVEWAYS SHALL BE A MINIMUM 6" OF CLASS "A" CONCRETE WITH SYNTHETIC FIBER REINFORCEMENT.
   COMMERCIAL DRIVEWAYS SHALL BE A MINIMUM 8" OF CLASS "A" CONCRETE WITH SYNTHETIC FIBER REINFORCEMENT.
4. DRIVEWAY RAMP GRADE VARIES, 8.33% MAXIMUM APRON GRADE FOR RESIDENTIAL DRIVEWAYS. 6.0% MAXIMUM APRON GRADE FOR COMMERCIAL DRIVEWAYS.
5. CLASS "A" CONCRETE, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH SYNTHETIC MICROFIBER REINFORCEMENT.

N.T.S.

DATE: 10.27.16	STANDARD CONCRETE DRIVEWAYS (WITH GRASS STRIP)	GOODLETTSVILLE TENNESSEE
REVISIONS	STD. DWG. RP-3	



INSIDE ROADWAY



OUTSIDE ROADWAY

* EXACT DEPTH TO BE PER UTILITY SPECIFICATIONS

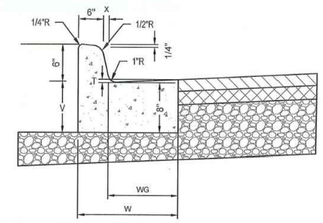
REFER TO CITY OF GOODLETTSVILLE UTILITY CUT REPAIR GUIDELINES AND SPECIFIATIONS FOR REQUIREMENTS. (APPENDIX A)

N.T.S.

DATE: 10.27.16	UTILITY TRENCH REPAIR DETAIL	GOODLETTSVILLE TENNESSEE
REVISIONS	STD. DWG. RD-3	

TYPE	TOTAL WIDTH W (in)	WIDTH OF GUTTER WG (in)	CURB OFFSET X (in)	VERTICAL DROP T (in)	VERTICAL DEPTH V (in)
*6 - 24	24	18	1	1.5	8.5
6 - 30	30	23.5	0.5	2	6.47

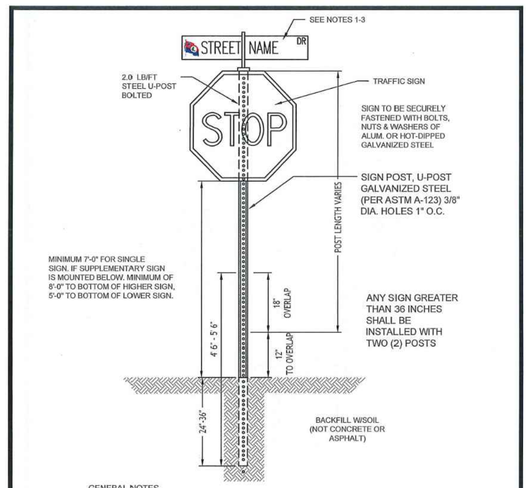
* 6-24 CURB TO BE USED ON MINOR RESIDENTIAL STREETS ONLY



GENERAL NOTES
1. 6-24 CURB & GUTTER TO BE USED WITH JOHN BOUCHARD & SON 3080
2. 6-30 CURB & GUTTER TO BE USED WITH JOHN BOUCHARD & SON 3123
3. FOR SPECIFICATIONS SEE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION, SECTION 702 - CEMENT CONCRETE CURB, GUTTER AND COMBINED CURB AND GUTTER.
4. CONCRETE EXPANSION JOINT MATERIAL IS TO BE 3/4" PREMOLDED FIBER IN ACCORDANCE WITH SECTION 905 - JOINT MATERIALS OF THE TDOT STANDARD SPECIFICATIONS.
5. CONTRACTION JOINTS ARE TO BE SPACED AT 10 FEET. THE SPACING OF 10 FEET MAY BE REDUCED FOR CLOSURES, BE NOT LESS THAN 6 FEET.
6. EXPANSION JOINTS ARE TO BE PLACED AS FOLLOWS: AT TANGENT JOINTS OF CIRCULAR CURBS, BETWEEN CURBS AND ABUTTING RIGID OBJECTS, AT OTHER PLACES WHERE STRESSES MAY DEVELOP, SO AS TO LINE UP WITH PAVEMENT JOINTS WHERE THE ADJACENT PAVEMENT IS CONCRETE. MAXIMUM SPACING IS TO BE 100 FEET.
7. CLASS "A" CONCRETE, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH SYNTHETIC MICROFIBER REINFORCEMENT.

N.T.S.

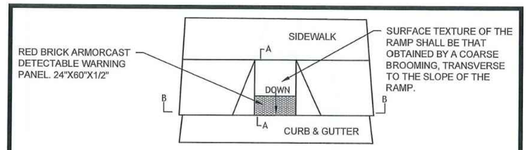
DATE: 10.27.16	STANDARD 6" NON MOUNTABLE CURBS & GUTTERS	GOODLETTSVILLE TENNESSEE
REVISIONS	STD. DWG. RP-1	



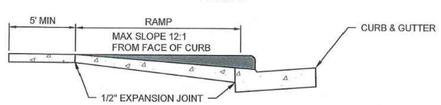
GENERAL NOTES
1. ALL PROPOSED SIGNAGE TO MATCH CURRENT CITY OF GOODLETTSVILLE VERSION OF STREET SIGNS
2. OVERHEAD TRAFFIC SIGNALS WITH ROAD NAME SIGNS :
   12 " TALL ALUMINUM WITH 6" WHITE REFLECTIVE LETTERS. THE BLUE BACKGROUND IS 3M ELECTROCUT FILM BLUE 1175C
3. ROAD NAME SIGNS: THE BLUE BACKGROUND IS OROCAL 651G-098 GENTIAN BLUE 35 MPH OR HIGHER REQUIRES 9" BLANK WITH 5.75" WHITE REFLECTIVE LETTERS LESS THAN 35 MPH REQUIRES 6" BLANK WITH 3.75" WHITE REFLECTIVE LETTERS

N.T.S.

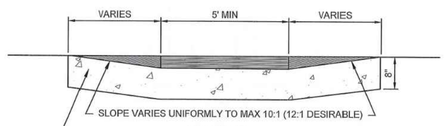
DATE: 10.27.16	TYPICAL STREET SIGN	GOODLETTSVILLE TENNESSEE
REVISIONS	STD. DWG. SD-3	



DETAIL "A"



SECTION A-A

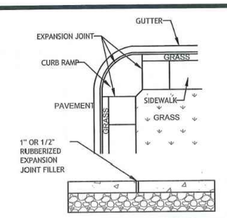


SECTION B-B

GENERAL NOTES
1. A VARIATION OF THE RAMP MAY BE USED IN CERTAIN CIRCUMSTANCES BUT MUST COMPLY WITH ACCESSIBILITY CODE REQUIREMENTS.
2. DESIREABLE SLOPE TO BE USED UNLESS OTHERWISE DIRECTED BY THE CITY OF GOODLETTSVILLE.
3. MINIMUM LANDING AT TOP OF RAMP IS 5'
4. RAMPS SHALL BE PROVIDED AT ALL STREET INTERSECTIONS, WALK LOCATIONS AND MID-BLOCK LOCATIONS
5. RAMPS SHALL BE 8" CLASS "A" CONCRETE WITH SYNTHETIC MICROFIBER REINFORCEMENT.
6. 4" BASE STONE REQUIRED UNDER ALL RAMPS

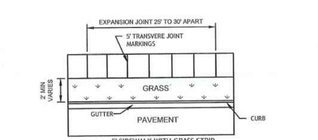
N.T.S.

DATE: 10.27.16	PERPENDICULAR CURB RAMP DETAIL	GOODLETTSVILLE TENNESSEE
REVISIONS	STD. DWG. RP-5	



DETAIL OF EXPANSION JOINT

GENERAL NOTES
1. ONE-INCH JOINTS TO BE PLACED WHERE THE SIDEWALK IS IN CONTACT WITH CIRCULAR CURB, BUILDINGS AND RETAINING WALLS. HALF-INCH JOINTS TO BE USED IN OTHER LOCATIONS.
2. ONE LONGITUDINAL JOINT MARKING REQUIRED ON SIDEWALK GREATER THAN 5' IN WIDTH.



GENERAL NOTES
1. CLASS "A" CONCRETE, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH SYNTHETIC MICROFIBER REINFORCEMENT.
2. ROOT BARRIERS REQUIRED ON BOTH SIDES OF GRASS STRIP AROUND TREES.

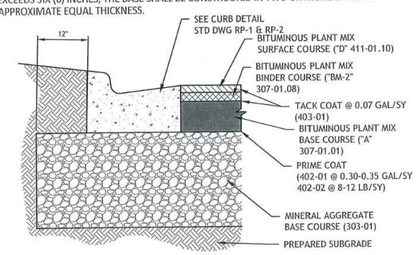
N.T.S.

DATE: 10.27.16	TYPICAL 5' CONCRETE SIDEWALK	GOODLETTSVILLE TENNESSEE
REVISIONS	STD. DWG. RP-4	

COMBINATION ASPHALT CONCRETE AND AGGREGATE BASE (MINIMUM REQUIRED THICKNESS)

CLASSIFICATION	MINERAL AGGREGATE BASE COURSE	ASPHALT PAVEMENT			TOTAL THICKNESS
		BASE/BINDER		SURFACE COURSE	
		"A"	"B"-M2	"D"	
RESIDENTIAL COLLECTORS, & LOCAL STREETS	8"	-	3"	1.5"	12.5"
NON-RESIDENTIAL COLLECTORS & MINOR ARTERIALS	8"	3"	2.5"	1.5"	15"
MAJOR ARTERIALS & INDUSTRIAL	10"	4"	2.5"	1.5"	18"

1. THE CITY ENGINEER MAY REQUIRE PERFORMANCE GRADE ASPHALT BASED ON PROJECTED TRAFFIC LOADINGS. ADDITIONAL THICKNESS OR A DETAILED PAVEMENT DESIGN BASED ON A GEOTECHNICAL ANALYSIS MAY ALSO BE REQUIRED.
2. COMPACTED SUBGRADE SHALL BE INSPECTED AND ACCEPTED BY THE CITY PRIOR TO PLACEMENT OF ANY AGGREGATE OR PAVEMENT LAYERS.
3. IF THE REQUIRED COMPACTED DEPTH OF THE MINERAL AGGREGATE BASE COURSE EXCEEDS SIX (6) INCHES, THE BASE SHALL BE CONSTRUCTED IN TWO OR MORE LAYERS OF APPROXIMATE EQUAL THICKNESS.



N.T.S.

DATE: 10.27.16	TYPICAL PAVEMENT THICKNESS	GOODLETTSVILLE TENNESSEE
REVISIONS	STD. DWG. RD-2	

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

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DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
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SUMNER COUNTY, TENNESSEE

REVISIONS NO.	DATE	DESCRIPTION

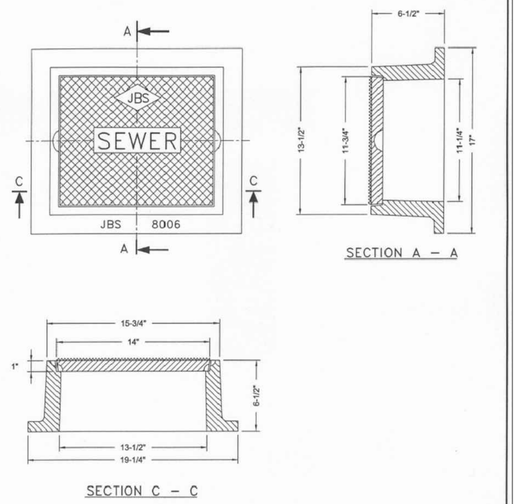
DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS (CITY OF GOODLETTSVILLE)
C7.0

Z:\PROJECT DATABASE\2025\25184 - Philips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C7.0 - Dtl.dwg-C7.0 Apr 23, 2026 - 8:27am GaryEmerson

Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C7.0 - Dtl.dwg-C7.1 Apr 23, 2026 - 8:28am GaryEmerson

Traffic Bearing Cleanout Frame & Cover



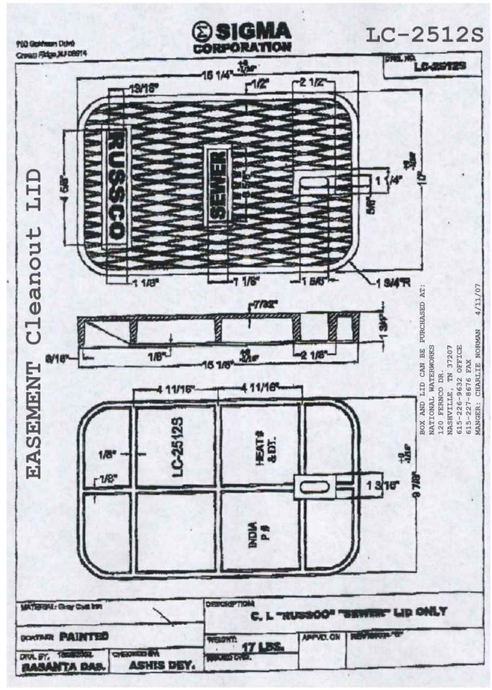
METRO STANDARD TRAFFIC DUTY

John Bouchard & Sons Co.
1024 Harrison Street, Nashville, TN 37203
Tel: 615-256-0112 Fax: 615-327-2427

8006 FRAME & COVER

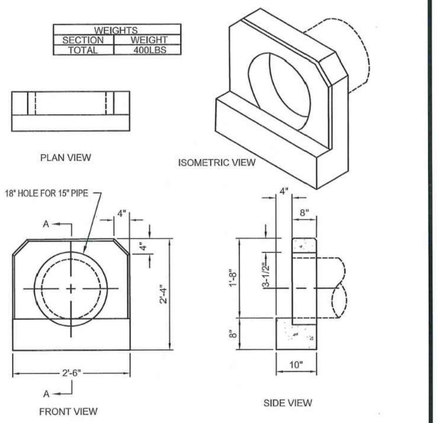
LC-2512S

SIGMA CORPORATION
150 Gaither Drive
Cranbury Ridge, NJ 08514



STANDARD DRIVEWAY CULVERT ENDWALL

WEIGHTS	
SECTION	WEIGHT
TOTAL	400LBS



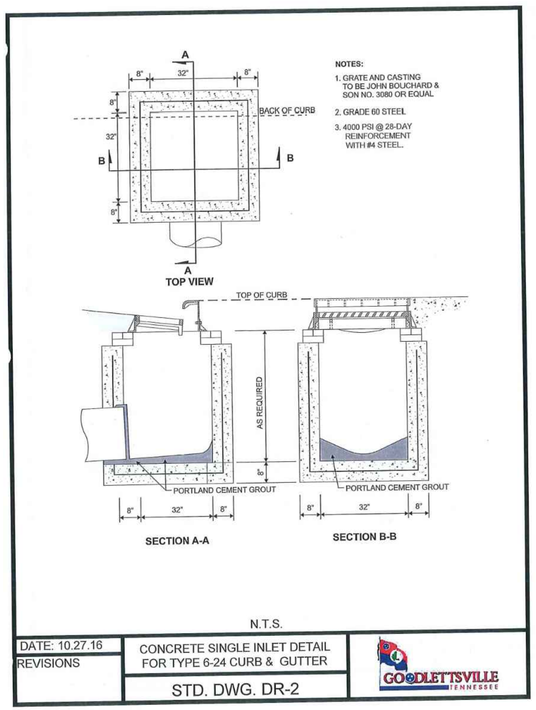
GENERAL NOTES:
1. CONCRETE MINIMUM COMPRESSION STRENGTH: F'c=5,000 PSI @ 28 DAYS
2. REINFORCING STEEL: ASTM A615, Fy= 60,000 PSI
3. HEADWALL TO BE USED FOR 15" DRIVEWAY CULVERTS ONLY. FOR LARGER PIPES UP TO 24", USE STRAIGHT TYPE ENDWALLS PER TDOT STANDARD DRAWING D-PE-4. PIPES LARGER THAN 24" REQUIRE SAFETY TYPE ENDWALLS WITH GRATES, PER TDOT STANDARD DRAWING D-SEW-1A.

N.T.S.

DATE: 10.27.16
REVISIONS

STD. DWG. DR-6

GOODLETTSVILLE TENNESSEE



N.T.S.

DATE: 10.27.16
REVISIONS

CONCRETE SINGLE INLET DETAIL FOR TYPE 6-24 CURB & GUTTER

STD. DWG. DR-2

GOODLETTSVILLE TENNESSEE

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

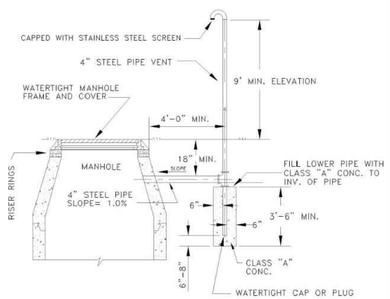
NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS
(CITY OF GOODLETTSVILLE)
C7.1

INSERTION OF VENT PIPE INTO MANHOLE

MANHOLE CONE TO BE PRECAST FOR INSERTION OF VENT PIPE OR CONE CAN BE CORE DRILLED. USE KOR-N-SEAL I & II TOGGLE KORGBAND CONNECTOR FOR WATERTIGHT FIT.



PIPE LOCATION & FINISH

VENT PIPE SHALL BE LOCATED OUT OF A TRAVEL WAY, IN BACK OF A CURB OR SIDEWALK, OR AS CALLED FOR ON PLANS. PIPE SURFACE PREPARATION SHALL BE DONE USING SSPC-SP10 NEAR-WHITE BLAST CLEANING. ONLY ONE COAT IS REQUIRED: TNEMEC 435 PERMA-GLAZE AT 30.0 – 40.0 MILS D.F.T.

CITY OF GOODLETTSVILLE, TENNESSEE
SEWER DEPARTMENT

NOT TO SCALE | 3/1/06

VENT PIPE ASSEMBLY DETAILS

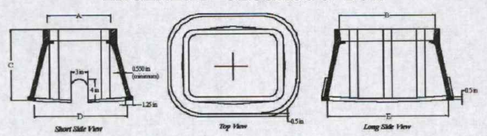
DEPARTMENT OF PUBLIC WORKS Goodlettsville

Mid-States Plastics, Inc.

Customer Service: KY 800-444-7615 TX 800-521-6554
Fax: KY 859-488-7919 TX 936-760-1357
Web: www.msmeterboxes.com Email: productinfo@msmeterboxes.com

MSBC Series Meter Boxes

EASEMENT Cleanout BOX



Part Number	A	B	C	D	E	Weight
MSBC1015-12	10.25"	15.5"	12"	15.5"	20.75"	13 lbs
MSBC1015-18	10.25"	15.5"	18"	15.5"	20.75"	20 lbs
MSBC1015-24	10.25"	15.5"	24"	15.5"	20.75"	26 lbs
MSBC1118-12	11.25"	18.125"	12"	16.75"	23.125"	18 lbs
MSBC1118-26	11.25"	18.125"	26"	16.75"	23.125"	30 lbs
MSBC1416-12	14.5"	16.5"	12"	17"	17.5"	14 lbs
MSBC1324-12	13.75"	23.1875"	12"	19"	27.625"	25 lbs
MSBC1730-18	17.625"	30.5"	18"	22.875	35"	40 lbs

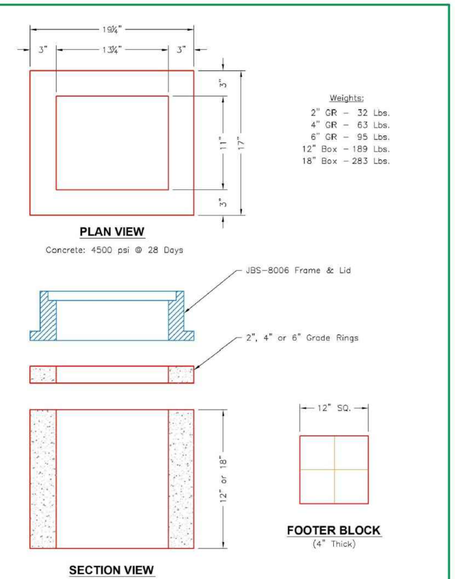
All dimensions and weights are nominal and subject to change without notice

Typical Specification:

The meter box shall be high-density Polyethylene of one-piece molded construction for durability and impact strength with dimensions as shown in the referenced drawing. The meter box must have a minimum wall thickness of .550" and have been tested to withstand a 15,000 lb. vertical load freestanding and a 200lb side load, applied with a 4"x4" plate 1" down for the top center of the box, without deflecting more than 1". All edges shall be clean and smooth for safety during handling and installation. Inner and outer walls are to be smooth with a bright white interior to ease meter reading with a black exterior to retard UV degradation. The meter box shall an anti-settling flange on the bottom for stability and pre-molded pipe entry areas on each end. The box shall weigh no more than listed weight for each meter size for safety and ease of handling, transport and installation. The meter box shall be MSBC style as manufactured by Mid-States Plastics Inc. or equal.

© Mid-States Plastics, Inc.♦ 280 Midland Trail, Mt. Sterling, KY 40353 ♦ 101 East Ave M, Conroe, TX 77301 0203

TRAFFIC BEARING Cleanout BOX



Weights:
2" GR – 32 Lbs.
4" GR – 63 Lbs.
6" GR – 95 Lbs.
12" Box – 189 Lbs.
18" Box – 283 Lbs.

Oldcastle Precast
Cloud Concrete Products
125 International Blvd., LaVergne, TN 37086
Phone: 615-793-1920 Fax: 615-793-9625

VALVE
FILE NAME: 382UWVALVE_DET.DWG
ISSUE DATE: January 2002
www.oldcastleprecast.com

Valve Box
Part # UT-045

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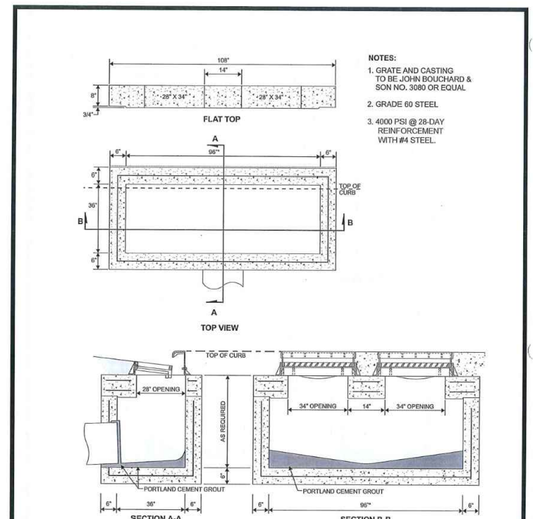


N.T.S.

DATE: 10.27.16
REVISIONS

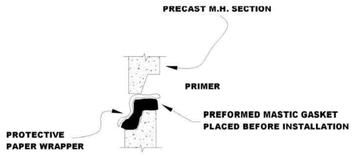
CONCRETE DOUBLE INLET DETAIL FOR TYPE 6-24 CURB & GUTTER

STD. DWG. DR-3

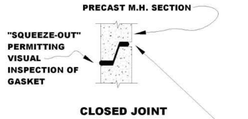
GOODLETTSVILLE TENNESSEE

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED



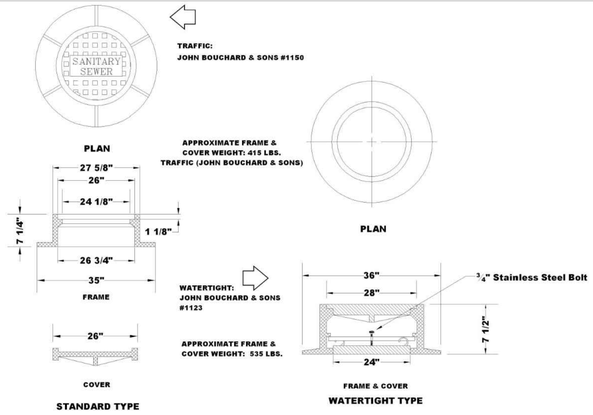
OPEN JOINT



CLOSED JOINT

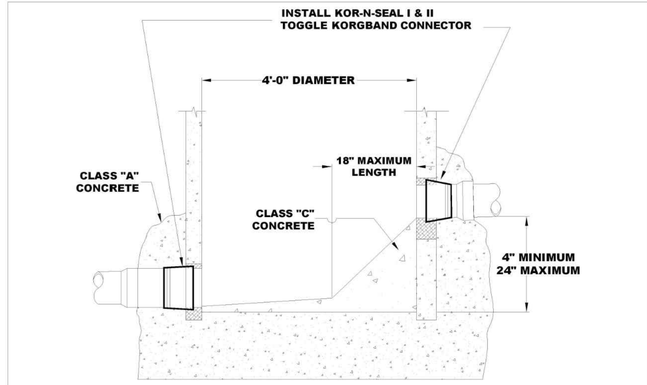
NOTE: WHERE MASTIC DOES NOT PROTRUDE, EITHER INSIDE OR OUTSIDE, POINT UP JOINT WITH GROUT.

DETAILS OF MASTIC GASKET FOR PRECAST MANHOLE SECTIONS



MANHOLE FRAMES AND COVERS

NOT TO SCALE



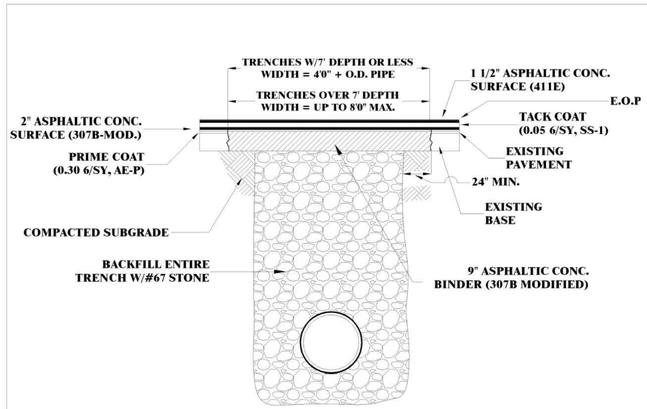
4" TO 24" DROP STRUCTURE INVERT DETAIL

NOTE: SEE STANDARD PRECAST MANHOLE FOR TYPICAL DEMENSIONS.

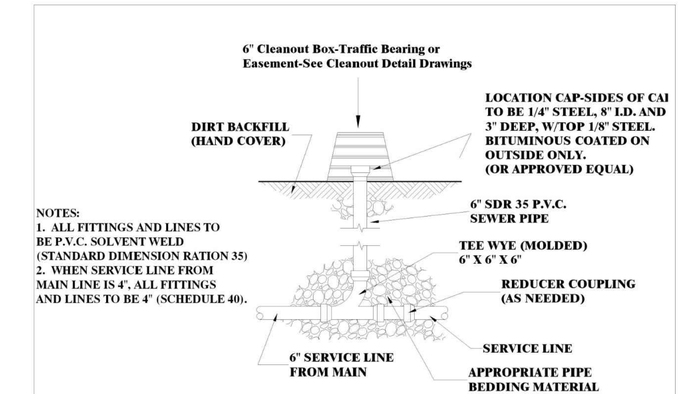
RIP-RAP STABILIZATION WHERE NOTED WILL CONSIST OF HAND-PLACED NATIVE LIMESTONE, HAVING A MAXIMUM LENGTH/WIDTH DIMENSION OF 12" IN EITHER DIRECTION AND A MAXIMUM THICKNESS OF 6". TREATMENT WILL BE PLACED IN TWO INTERLOCKING (NESTING) LAYERS. RIP-RAP SHALL BE PLACED FOR THE FULL WIDTH OF AREA DISTURBED BY PIPE LAYING OPERATIONS. LIMIT OF WIDTH FOR PAYMENT OF RIP-RAP SHALL BE AS FOLLOWS:

PIPE DIAMETER	RIP-RAP WIDTH
8"	5'
10"	5.5'
12"	6'
15"-16"	8'
18"	8.5'
21"	9'
24"	10'

RIP-RAP DETAIL

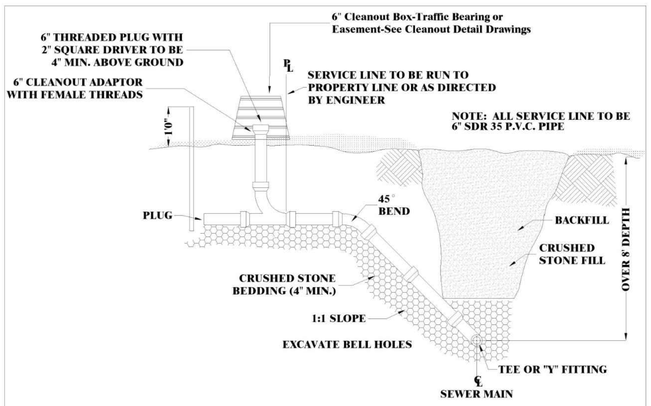


FULL WIDTH PAVEMENT REPLACEMENT



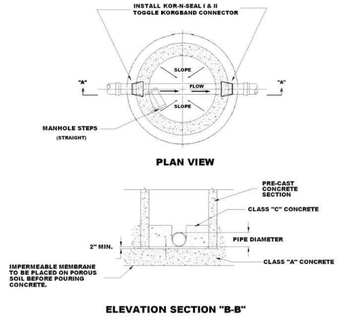
NOTES:
1. ALL FITTINGS AND LINES TO BE P.V.C. SOLVENT WELD (STANDARD DIMENSION RATION 35)
2. WHEN SERVICE LINE FROM MAIN LINE IS 4", ALL FITTINGS AND LINES TO BE 4" (SCHEDULE 40).

CLEANOUT



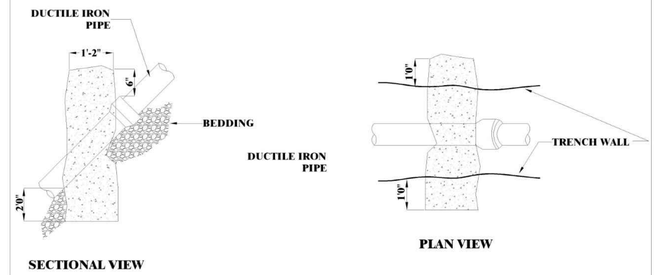
SERVICE LINE DETAIL FOR DEEP TRENCHES

(ONLY WHEN CALLED FOR ON PLANS OR DIRECTED BY CITY ENGINEER)



ELEVATION SECTION "B-B"

NOTE: CONCRETE WILL BE READY MIX AND SHALL COMPLY WITH THE SPECIFICATIONS ASTM DESIGNATION 94 FOR THE CLASSES A, B, AND C AS OUTLINED IN THE STANDARD SPECS.



COLLAR DETAIL

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
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IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

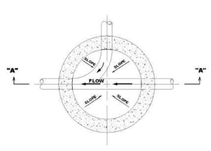
SITE DETAILS
(CITY OF GOODLETTSVILLE)

C7.2

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

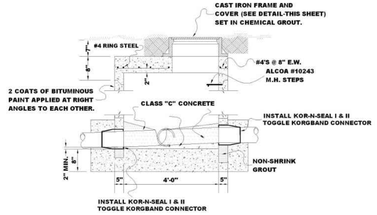
AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C7.0 – Dtl.dwg–C7.2 Apr 23, 2026 – 8:28am GaryEmerson

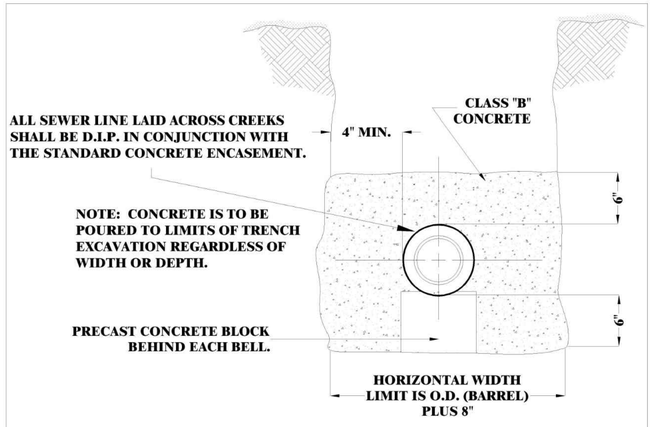


PLAN VIEW

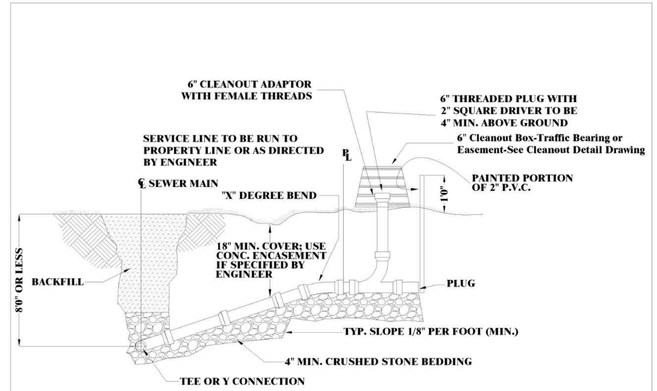
TOP SLAB REINFORCING BARS



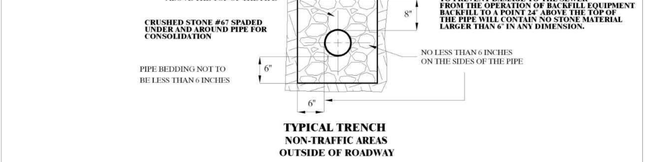
STANDARD SHALLOW MANHOLE (A-A)



STANDARD CONCRETE ENCASEMENT

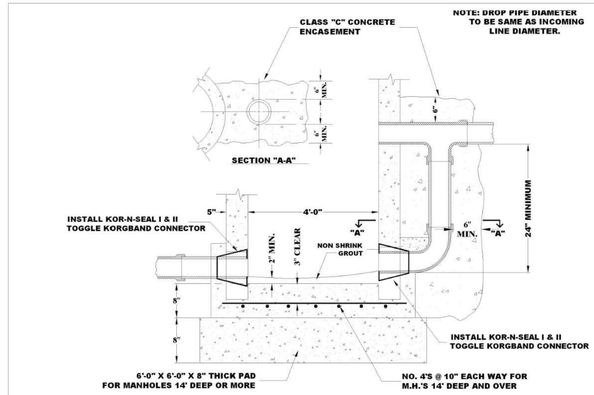


TYPICAL SERVICE LINE DETAIL



ASPHALTIC CONCRETE SURFACE

TRENCH REPAIR PAVEMENT REPLACEMENT

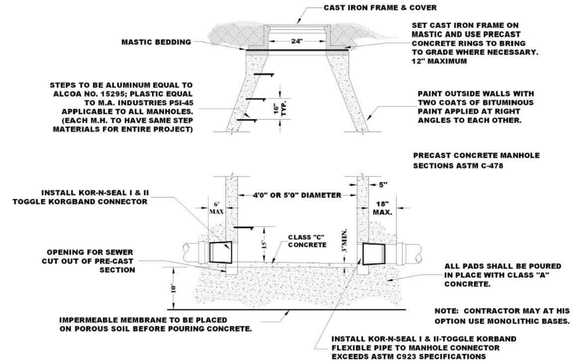


STANDARD DROP STRUCTURE

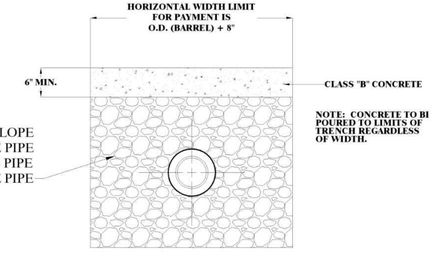
1. BACKFILL ON SERVICE LINES TO BE AS DESCRIBED IN PROJECT SPECS.
2. SERVICE LINES FOR DEEP TRENCHES TO BE USED WHERE SHOWN ON PLANS OR AS DIRECTED BY ENGINEER. SERVICE FOR DEEP TRENCHES SHALL BE CONSTRUCTED AS SHOWN IN DETAIL ABOVE IN LIEU OF VERTICAL STACKS ENCASED IN CONCRETE.
3. BATTER BOARDS NO REQUIRED FOR LAYING PIPE, BUT GRADE TO BE REASONABLY UNIFORM AND ALIGNMENT STRAIGHT. GRADE SHALL BE THAT WHICH IS SUFFICIENT TO PROVIDE SERVICE TO BUILDING OR AS DIRECTED BY ENGINEER WITH MINIMUM TO BE THAT ALLOWED BY LOCAL PLUMBING CODE OR 1/8" PER FOOT MINIMUM OR AS NOTED ON PLANS.
4. MARKING ROD SHALL EXTEND FROM BOTTOM OF END OF SERVICE LINE TO 1'0" ABOVE GROUND.

SERVICE LINE TRENCHING DETAILS

TYPICAL TRENCH
NON-TRAFFIC AREAS
OUTSIDE OF ROADWAY



STANDARD PRECAST MANHOLE (A-A)



STANDARD CONCRETE CAP

PLANS PREPARED FOR:
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SUMNER COUNTY, TENNESSEE

REVISIONS		
NO.	DATE	DESCRIPTION

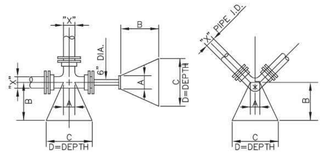
DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS
(CITY OF GOODLETTSVILLE)
C7.3

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike –Goodlettsville TN\Plans\Engineer\25184 – Ironwood_C7.0 – Dtl.dwg–C7.3 Apr 23, 2026 – 8:29am GaryEmerson



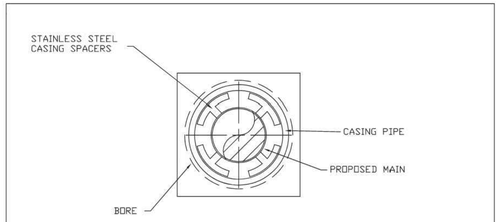
100 PSI TEST PRESSURE (SANITARY SEWER FORCE MAIN)
200 PSI TEST PRESSURE (WATER MAIN)
2000 PSF SOIL BEARING

BLOCKING DIMENSIONS						
	X*	A	B	C	D
DEAD END & TEES	10"	1'-0"	2'-6"	4'-0"	2'-6"
	8"	0'-10"	2'-3"	3'-9"	2'-0"
	6"	0'-8"	1'-6"	2'-6"	1'-6"
BENDS 90°	10"	1'-0"	3'-6"	5'-0"	2'-9"
	8"	0'-10"	2'-9"	4'-0"	2'-3"
	6"	0'-8"	2'-0"	3'-0"	1'-9"
BENDS 45°	10"	1'-0"	1'-9"	3'-0"	2'-6"
	8"	0'-10"	1'-6"	2'-6"	2'-0"
	6"	0'-8"	1'-3"	2'-0"	1'-6"
BENDS 22½°	10"	1'-0"	1'-4"	2'-6"	1'-6"
	8"	0'-10"	1'-0"	2'-0"	1'-3"
	6"	0'-8"	0'-9"	1'-6"	1'-0"
BENDS 11¼°	10"	1'-0"	0'-6"	1'-6"	1'-3"
	8"	0'-10"	0'-6"	1'-4"	1'-0"
	6"	0'-8"	0'-6"	1'-0"	0'-9"

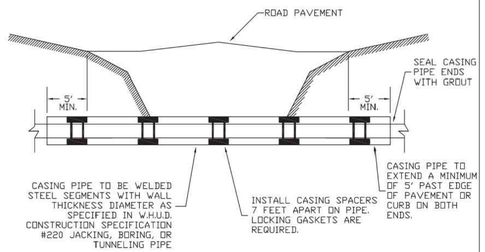
X* = DIAMETER OF PIPE TO BE BLOCKED

NOTES:
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI.
2. SEE APPROVED WHUD MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	TYPICAL BLOCKING DETAIL	STD-G-09



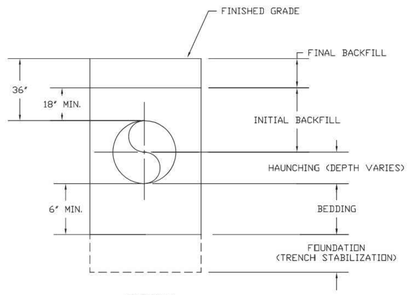
END VIEW



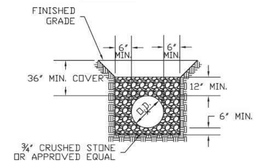
PROFILE VIEW

NOTES:
1. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	CASING PIPE FOR ROAD CROSSING DETAIL	STD-G-07



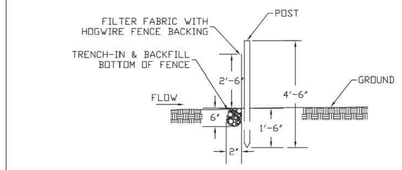
TYPICAL



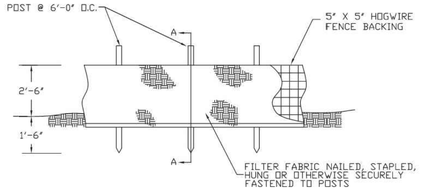
ROCK / EARTH TRENCH

NOTES:
1. BEDDING, HAUNCHING AND INITIAL BACKFILL LAYERS SHALL BE ¾" CRUSHED STONE OR APPROVED EQUAL.
2. TRENCH SLOPE TO MEET CURRENT OSHA AND STATE GUIDELINES.
3. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	PIPE TRENCHING, BEDDING, AND HAUNCHING DETAILS	STD-G-05



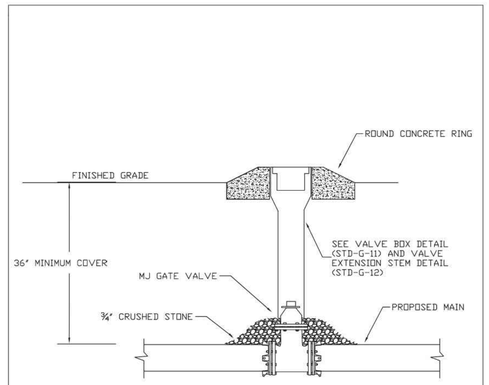
SECTION A-A



ELEVATION

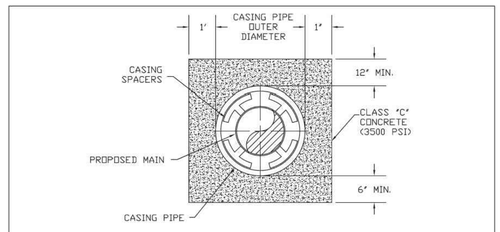
NOTES:
1. MINIMUM FABRIC WIDTH TO BE 36".
2. POSTS CAN BE 2" X 4" WOODEN POST, 1½" X 1½" OAK POST, OR STEEL POST (1.3 LB/FT MIN).
3. SILT FENCE TO BE INSTALLED AS PER CURRENT TDEC EROSION & SEDIMENTATION CONTROL HANDBOOK.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	EROSION CONTROL: SILT FENCE DETAIL	STD-G-01

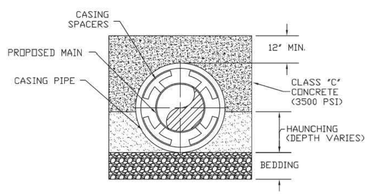


NOTES:
1. VALVE STEM AND BOX EXTENSION TO COMPLY WITH CURRENT W.H.U.D. CONSTRUCTION SPECIFICATIONS.
2. IF MAIN IS DUCTILE IRON PIPE, INSTALL MECHANICAL JOINT RESTRAINTS AS PER MANUFACTURER'S SPECIFICATIONS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	GATE VALVE INSTALLATION DETAIL	STD-G-10



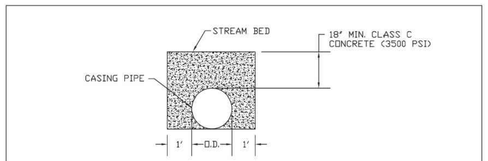
CONCRETE ENCASEMENT



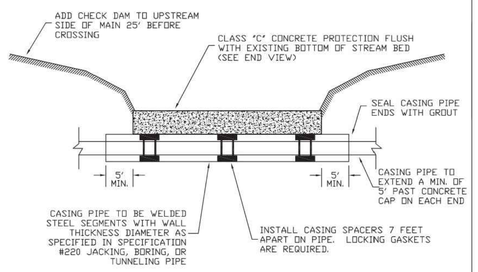
CONCRETE CAP

NOTES:
1. BAG CONCRETE IS NOT TO BE USED.
2. BEDDING AND HAUNCHING MATERIALS ARE DEPENDENT ON AREA SOIL CONDITIONS. MATERIAL WILL BE DETERMINED AT THE JOB SITE BY W.H.U.D. INSPECTOR.
3. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	CONCRETE ENCASEMENT AND CONCRETE CAP DETAIL	STD-G-08



END VIEW



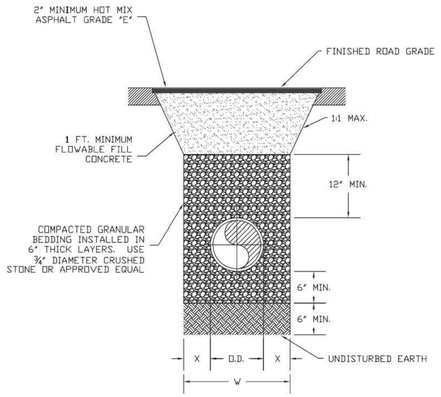
PROFILE VIEW

NOTES:
1. BAG CONCRETE IS NOT TO BE USED.
2. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	CASING PIPE AND CONCRETE CAP FOR STREAMS OR LARGE DRAINAGE CHANNEL CROSSING DETAIL	STD-G-06

TABLE #1	
PIPE SIZE	X
LESS THAN 12"	**
12" - 30"	12"
30" - 42"	15"
42" AND LARGER	18"

** TRENCH WIDTH (W) SHALL BE 3'0" MAX.



NOTES:
1. WIDTH OF TRENCH (W) = O.D. + 2X WHERE 'X' IS THE DISTANCE FROM OUTSIDE PIPE TO THE EDGE OF TRENCH
2. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	PAVEMENT REPLACEMENT: ASPHALT REPLACEMENT DETAIL	STD-G-03

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

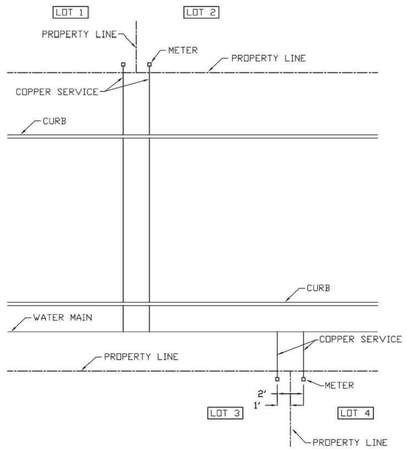
REVISIONS		
NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS
(WHITE HOUSE UTILITY DIST.)
C7.4

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

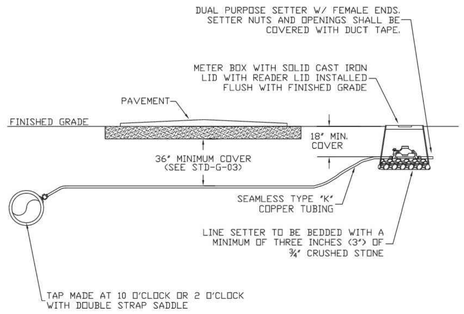
Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike - Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C7.0 - Dtl.dwg-C7.4 Apr 23, 2026 - 8:30am GaryEmerson



DUAL SERVICE LINE AND METER

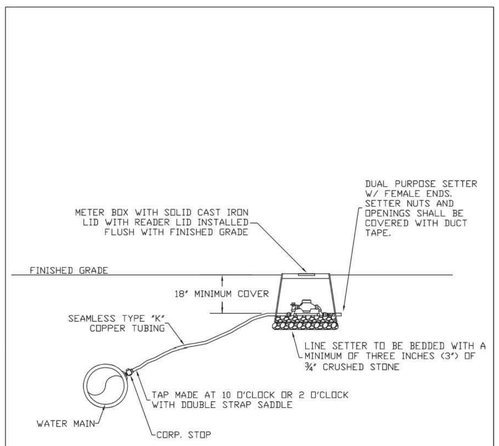
NOTES:
1. SEE APPROVED W.H.U.D. MATERIALS LIST..

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	TYPICAL ¾" WATER SERVICE ARRANGEMENT	STD-W-03



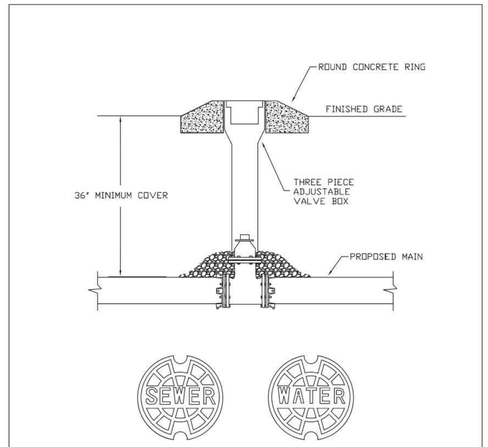
NOTES:
1. ¾" AND 1" METERS FURNISHED BY W.H.U.D.
2. SEE STD-W-03 AND STD-W-04 FOR ¾" WATER SERVICE ARRANGEMENTS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	3/4" AND 1" LONG TAP ASSEMBLY DETAIL	STD-W-02



NOTES:
1. ¾" AND 1" METERS FURNISHED BY W.H.U.D.
2. SEE STD-W-03 AND STD-W-04 FOR ¾" WATER SERVICE ARRANGEMENTS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

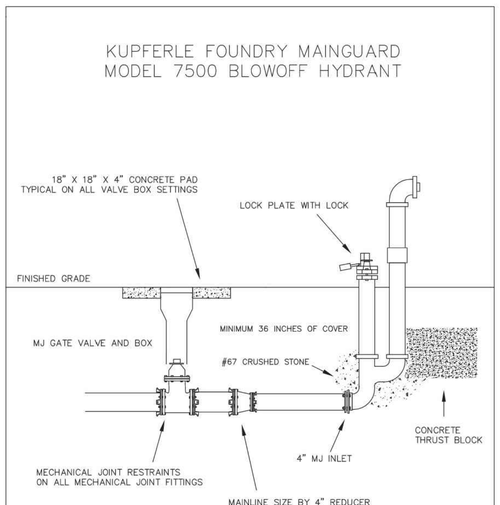
White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	3/4" AND 1" SHORT TAP ASSEMBLY DETAIL	STD-W-01



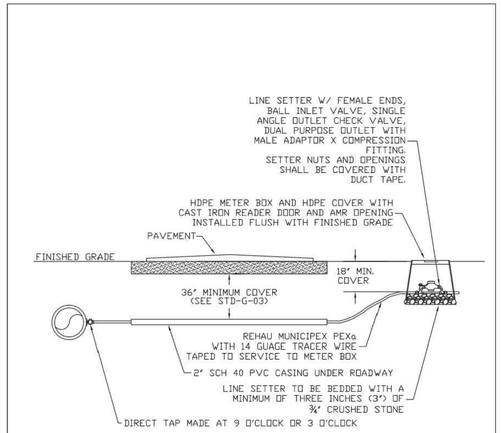
ROUND CAST-IRON, VALVE BOX LID SHALL BE LABELED WITH APPROPRIATE CALLOUT, 'SEWER' OR 'WATER'

NOTES:
1. EXTENSION STEMS ARE REQUIRED IF BURY DEPTH FROM VALVE OPERATING NUT TO FINISHED GRADE IS GREATER THAN 48" (SEE STD-G-12).
2. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	VALVE BOX DETAIL	STD-G-11

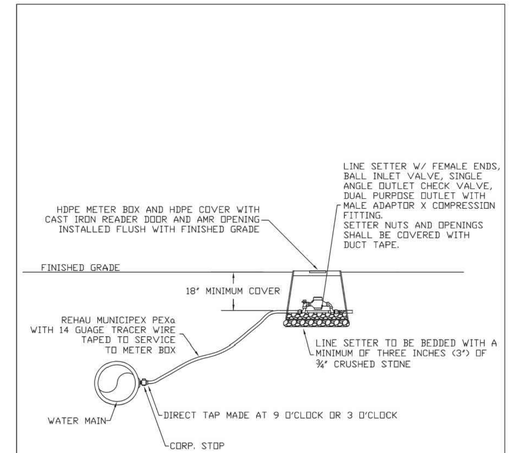


White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	4" PERMANENT DEAD-END DETAIL	STD-W-09



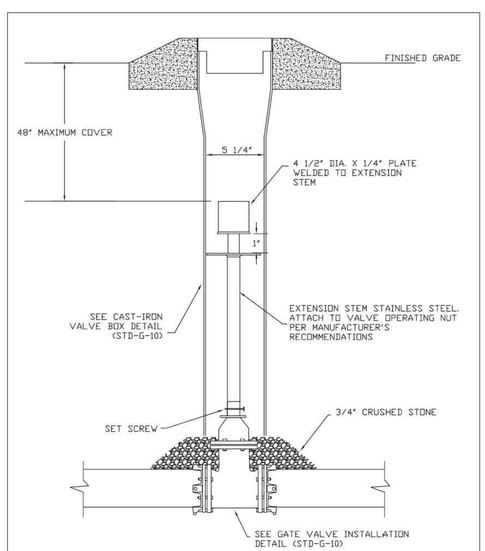
NOTES:
1. ¾" AND 1" METERS FURNISHED BY W.H.U.D.
2. SEE STD-W-03 AND STD-W-04 FOR ¾" WATER SERVICE ARRANGEMENTS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	3/4" AND 1" LONG TAP ASSEMBLY DETAIL	STD-W-02P



NOTES:
1. ¾" AND 1" METERS FURNISHED BY W.H.U.D.
2. SEE STD-W-03 AND STD-W-04 FOR ¾" WATER SERVICE ARRANGEMENTS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	3/4" AND 1" SHORT TAP ASSEMBLY DETAIL	STD-W-01P



NOTES:
1. SEE APPROVED W.H.U.D. MATERIALS LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025 SCALE : N.T.S.
	VALVE EXTENSION STEM DETAIL	STD-G-12

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

NO.	DATE	REVISIONS DESCRIPTION

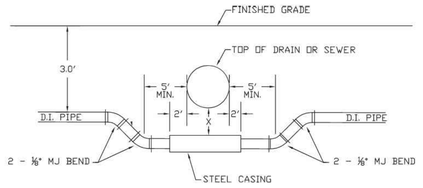
DATE:	04/23/26
DMG Project No:	25184

SITE DETAILS
(WHITE HOUSE UTILITY DIST.)
C7.5

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

Z:\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C7.0 - Dtl.dwg-C7.5 Apr 23, 2026 - 8:30am GaryEmerson

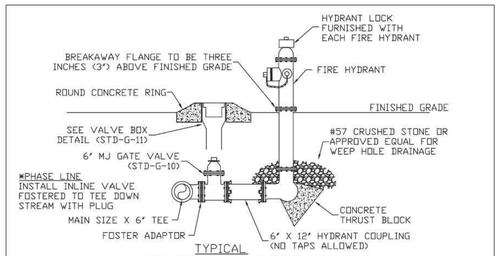


SIDE VIEW
(THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL)

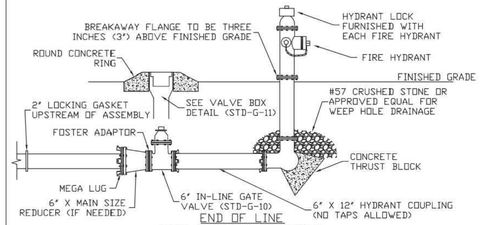
WATER CROSSING	
PIPE SIZE	MIN. CASING SIZE
6"	12"
8"	16"
12"	20"
16"	24"
24"	36"
30"	42"

NOTES:
1. THE MINIMUM CASING LENGTH SHALL BE TEN LINEAR FEET (10 L.F.).
2. THE MINIMUM SEPARATION DISTANCE BETWEEN THE WATER MAIN AND THE STORM DRAIN/SANITARY SEWER (X') SHALL BE EIGHTEEN INCHES (18").
3. CONTRACTOR SHALL MAINTAIN A MINIMYM FOUR FEET (4') SEPARATION DISTANCE BETWEEN ALL FITTINGS.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	STORM DRAIN OR SANITARY SEWER MAIN & WATER MAIN CROSSING DETAIL	SCALE : N.T.S.
		STD-W-20



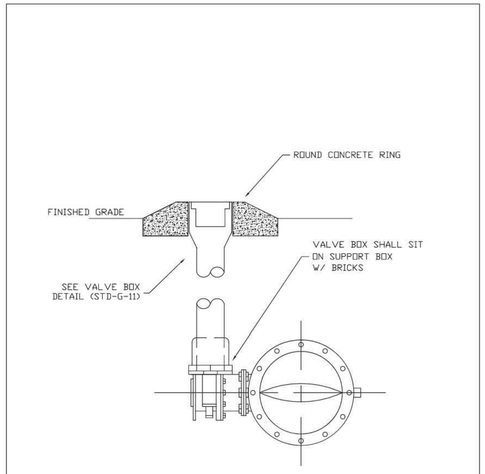
TYPICAL
FIRE HYDRANT ASSEMBLY



END OF LINE
FIRE HYDRANT ASSEMBLY

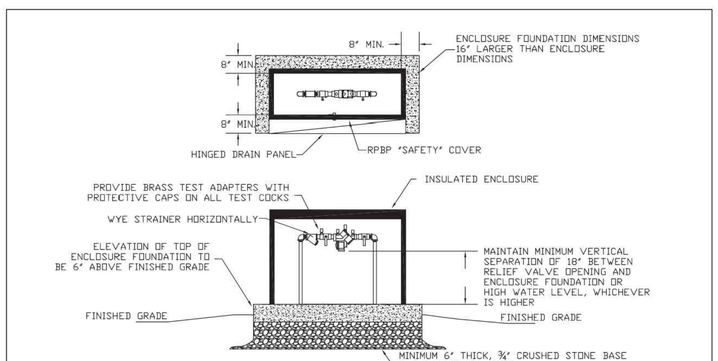
NOTES:
1. IF FIRE HYDRANT ASSEMBLY IS INSTALLED WITH NEW DEVELOPMENT, THE DEVELOPER SHALL SUPPLY A MINIMUM OF ONE (1) FIRE HYDRANT WRENCH EACH TO W.H.U.D. INSPECTOR AND THE LOCAL FIRE DEPARTMENT.
2. SERVICE LINES ARE NOT PERMITTED ON FIRE HYDRANT ASSEMBLY SECTION.
3. THE 6" GATE VALVE CAN BE ATTACHED TO A TEE OR REDUCER IF FOSTER COUPLINGS ARE USED.
4. MECHANICAL JOINT RESTRAINTS SHALL BE USED ON ALL MECHANICAL JOINT FITTINGS.
5. CONCRETE THRUST BLOCKS ARE REQUIRED FOR TEE AND 90° BEND ON FIRE HYDRANT ASSEMBLIES. SEE DETAIL STD-G-09 FOR TYPICAL CONCRETE BLOCKING REQUIREMENTS.
6. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	FIRE HYDRANT ASSEMBLY DETAIL	SCALE : N.T.S.
		STD-W-18



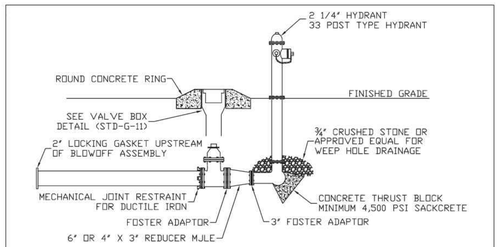
NOTES:
1. THE VALVE BOX SHALL NOT REST DIRECTLY ON VALVE.
2. BUTTERFLY VALVES ARE ONLY ALLOWED ON 24" DIAMETER OR LARGER WATER MAINS.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	BUTTERFLY VALVE INSTALLATION DETAIL	SCALE : N.T.S.
		STD-W-14

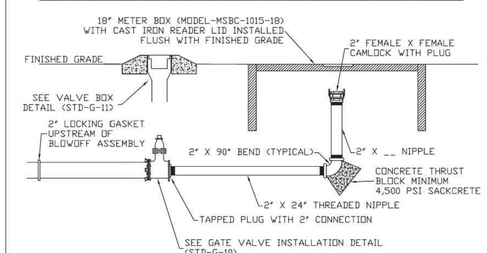


NOTES:
1. A THREE FOOT (3') MINIMUM HORIZONTAL SEPARATION BETWEEN RPBP FOUNDATION AND ALL OTHER ITEMS SHALL BE MAINTAINED.
2. CONDUIT AND ELECTRICAL CIRCUIT FOR HEAT TRACING OF RPBP ASSEMBLY INSTALLATION SHALL BE PROVIDED BY CONTRACTOR.
3. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	SMALL RPBP PLAN & PROFILE VIEW DETAIL (3/4" - 2")	SCALE : N.T.S.
		STD-W-10



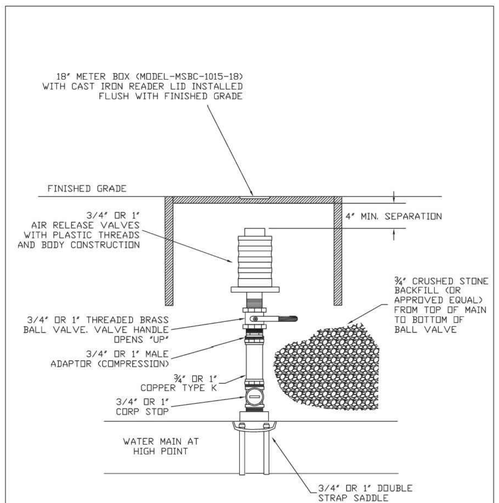
2" DEAD-END ABOVE GROUND ASSEMBLY FOR 4" - 6" WATER MAIN



2" DEAD-END BELOW GROUND ASSEMBLY FOR 4" - 6" WATER MAIN

NOTES:
1. SERVICE LINES ARE NOT PERMITTED DOWNSTREAM OF MAIN-SIZE GATE VALVE.
2. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	2" DEAD END ASSEMBLY DETAIL (MAINS 2" - 6")	SCALE : N.T.S.
		STD-W-19



NOTES:
1. METER BOX TO BE INSTALLED PARALLEL WITH ROADWAY WHENEVER POSSIBLE.
2. FOR MAINS WITH A DIAMETER OF 2" TO 6", A ¾" AIR RELEASE VALVE ASSEMBLY IS REQUIRED.
3. FOR MAINS WITH A DIAMETER OF 8" TO 10", A 1" AIR RELEASE VALVE ASSEMBLY IS REQUIRED.
4. SEE APPROVED W.H.U.D. MATERIAL LIST.

White House Utility District	WHITE HOUSE UTILITY DISTRICT	DATE : Sept-2025
	3/4" AND 1" AIR RELEASE VALVE ASSEMBLY DETAIL	SCALE : N.T.S.
		STD-W-15

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
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4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

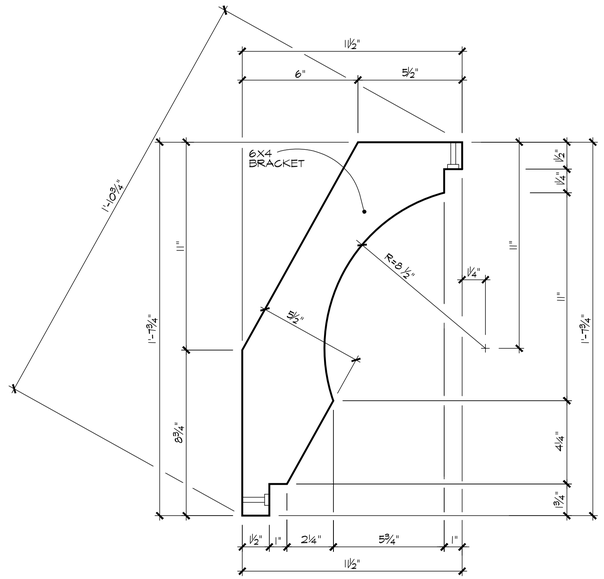
REVISIONS		
NO.	DATE	DESCRIPTION

DATE:	04/23/26
DMG Project No:	25184

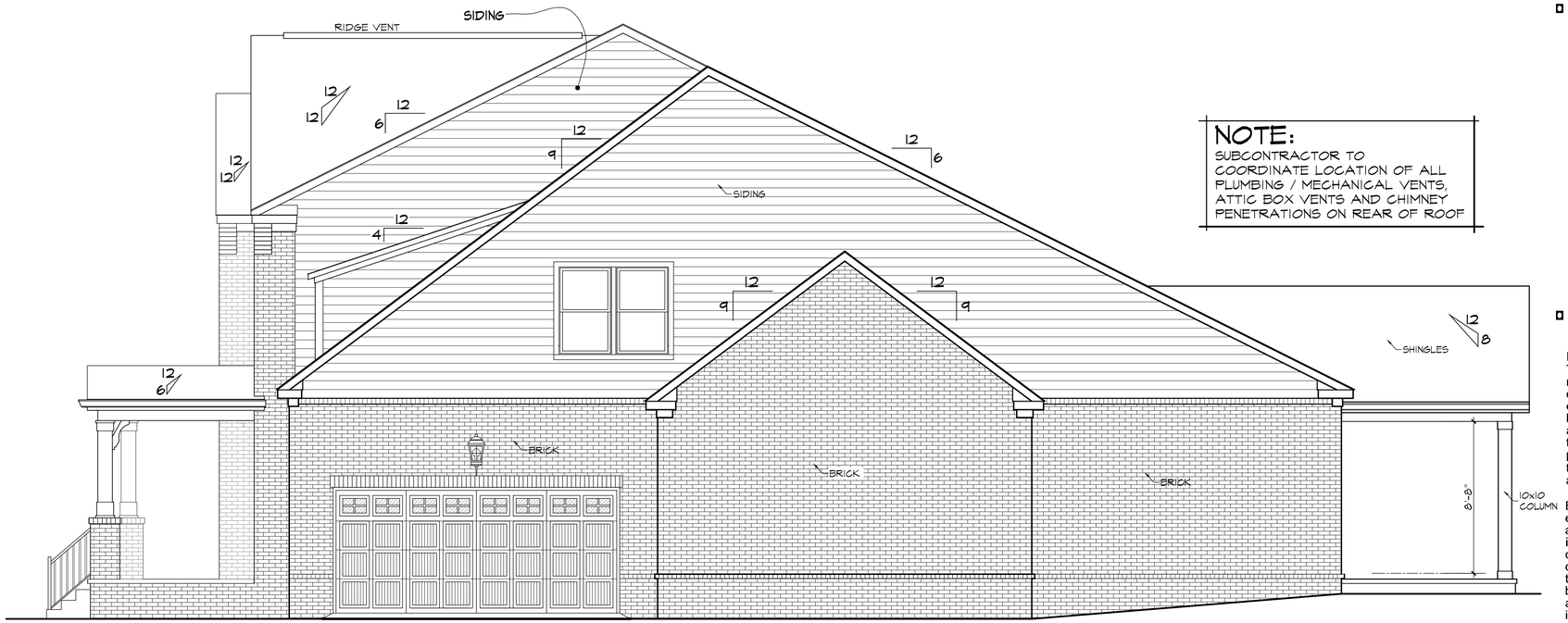
SITE DETAILS
(WHITE HOUSE UTILITY DIST.)
C7.6

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION — AS NOTED

Z:\PROJECT DATABASE\2025\25184 - Philips Builders - Residential Development - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\25184 - Ironwood_C7.0 - Dtl.dwg-C7.6 Apr 23, 2026 - 8:31am GaryEmerson

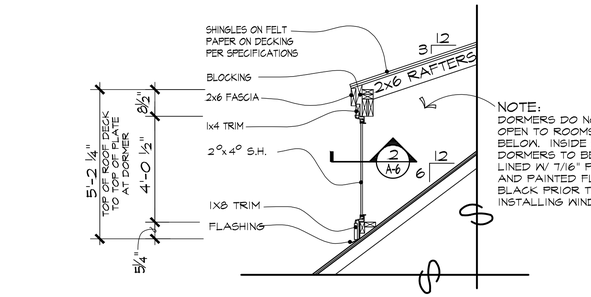


① DETAIL OF BRACKET
SCALE: 3"=1'-0"

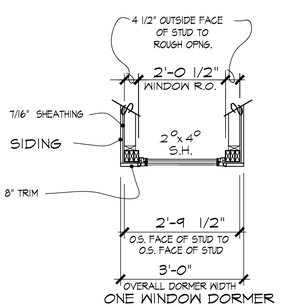


RIGHT SIDE ELEVATION
22X34 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"

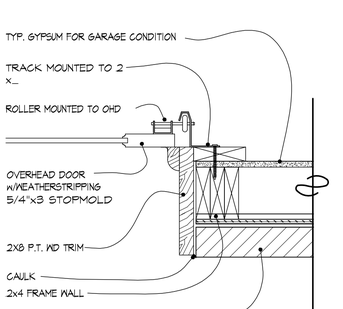
NOTE:
SUBCONTRACTOR TO COORDINATE LOCATION OF ALL PLUMBING / MECHANICAL VENTS, ATTIC BOX VENTS AND CHIMNEY PENETRATIONS ON REAR OF ROOF



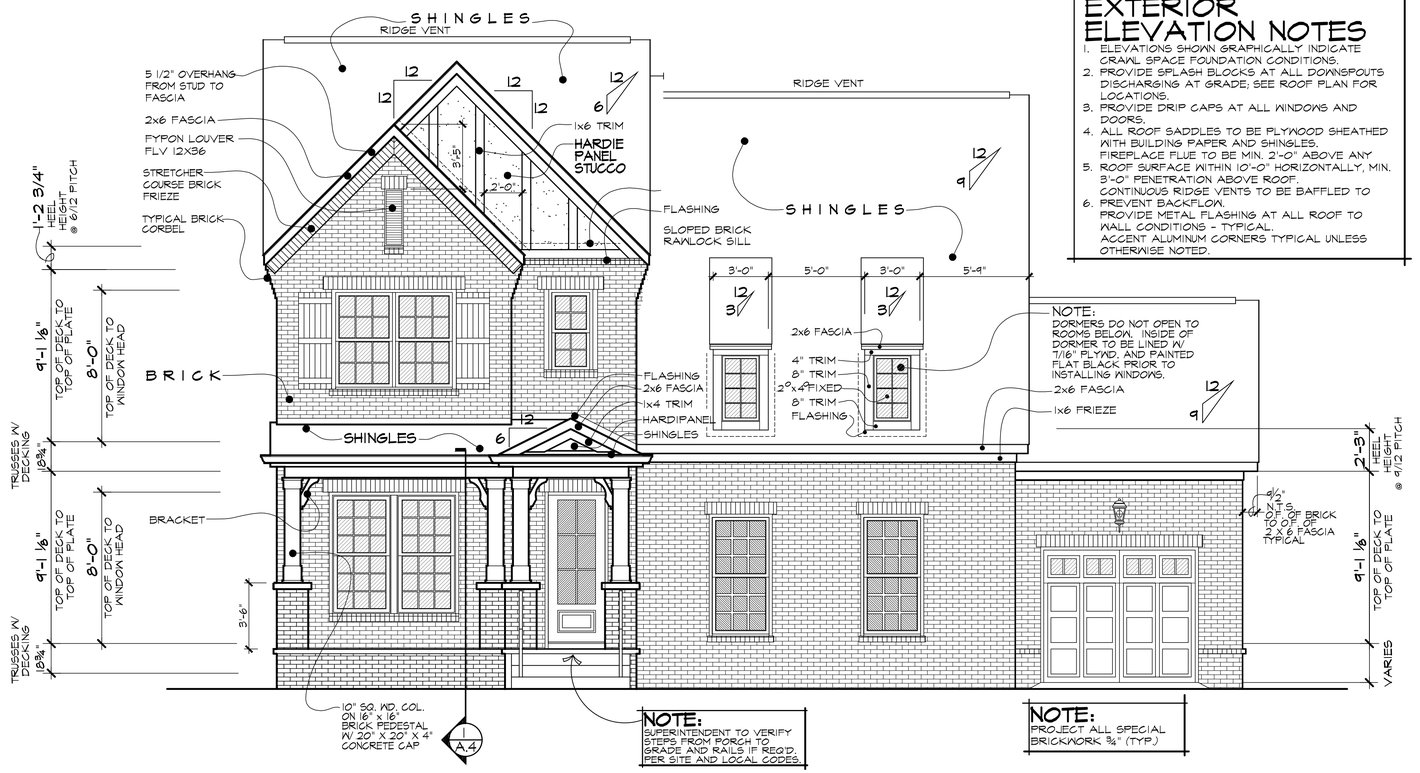
② DORMER DETAIL
SCALE: 1/2"=1'-0"



③ JAMB AT DORMER
SCALE: 1/2"=1'-0"



④ TYPICAL GARAGE DETAIL
SCALE: 3"=1'-0"



FRONT ELEVATION
22X34 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"

EXTERIOR ELEVATION NOTES
1. ELEVATIONS SHOWN GRAPHICALLY INDICATE CRAWL SPACE FOUNDATION CONDITIONS.
2. PROVIDE SPLASH BLOCKS AT ALL DOWNSPOUTS DISCHARGING AT GRADE; SEE ROOF PLAN FOR LOCATIONS.
3. PROVIDE DRIP CAPS AT ALL WINDOWS AND DOORS.
4. ALL ROOF SADDLES TO BE PLYWOOD SHEATHED WITH BUILDING PAPER AND SHINGLES. FIREPLACE FLUE TO BE MIN. 2'-0" ABOVE ANY
5. ROOF SURFACE WITHIN 10'-0" HORIZONTALLY, MIN. 3'-0" PENETRATION ABOVE ROOF. CONTINUOUS RIDGE VENTS TO BE BAFFLED TO
6. PREVENT BACKFLOW. PROVIDE METAL FLASHING AT ALL ROOF TO WALL CONDITIONS - TYPICAL. ACCENT ALUMINUM CORNERS TYPICAL UNLESS OTHERWISE NOTED.

NOTE:
SUPERINTENDENT TO VERIFY STEPS FROM PORCH TO GRADE AND RAILS IF REQ'D. PER SITE AND LOCAL CODES.

NOTE:
PROJECT ALL SPECIAL BRICKWORK ¾" (TYP.)

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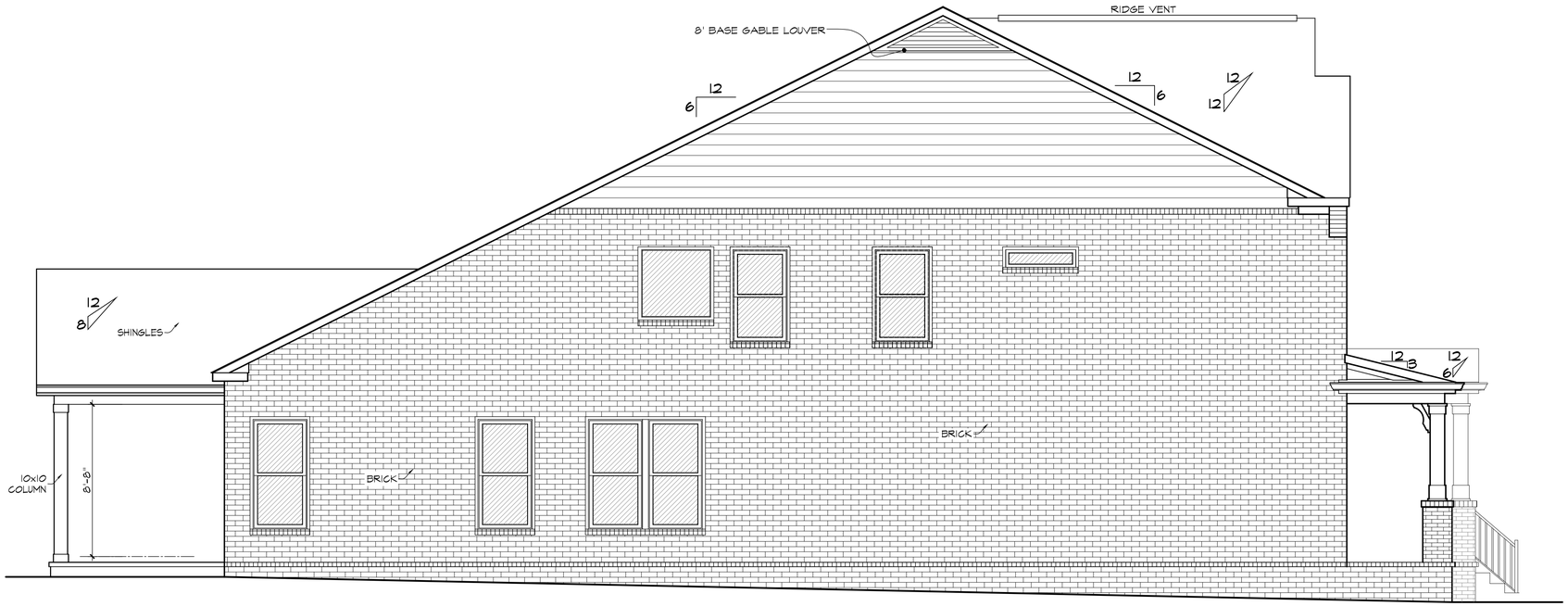
Market Residence

Plan Name:
"Styles-B"
RHSF.

DATE 23 JAN 2024
DRAWN BY: BB

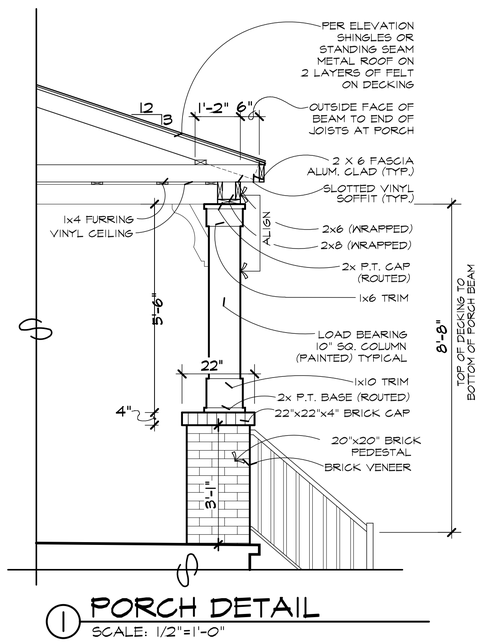
REVISIONS
1 PLAN REVISIONS 16 APR 2024
2
3

SHEET
EXTERIOR ELEVATIONS
5



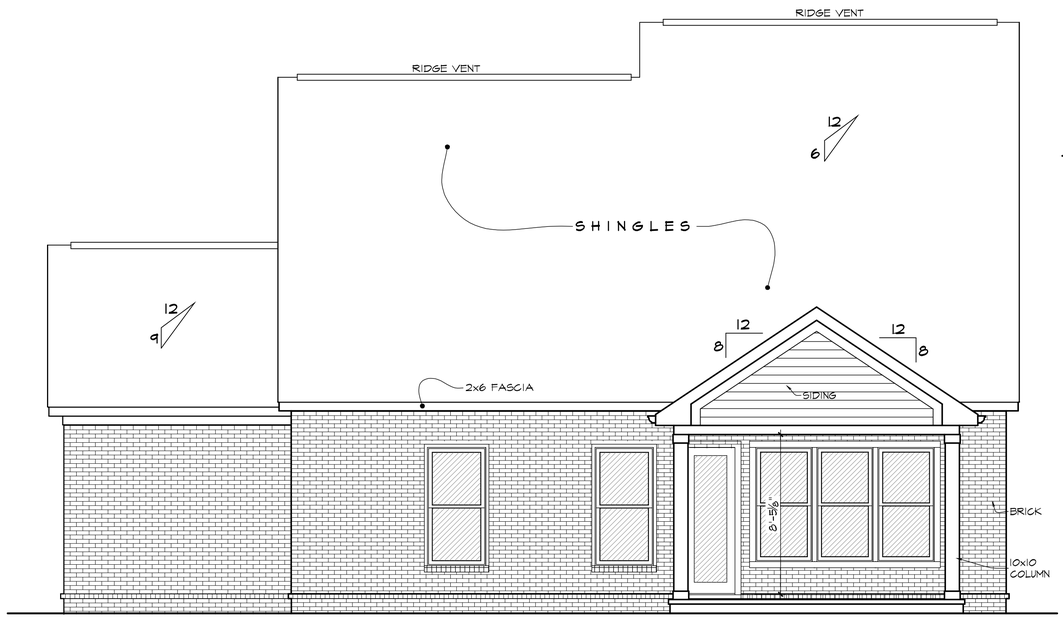
LEFT SIDE ELEVATION

22X34 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"



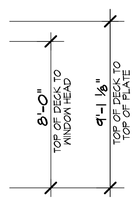
1 PORCH DETAIL

SCALE: 1/2"=1'-0"



REAR ELEVATION

22X34 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"



EXTERIOR ELEVATION NOTES

1. ELEVATIONS SHOWN GRAPHICALLY INDICATE CRAWL SPACE FOUNDATION CONDITIONS.
2. PROVIDE SPLASH BLOCKS AT ALL DOWNSPOUTS DISCHARGING AT GRADE; SEE ROOF PLAN FOR LOCATIONS.
3. PROVIDE DRIP CAPS AT ALL WINDOWS AND DOORS.
4. ALL ROOF SADDLES TO BE PLYWOOD SHEATHED WITH BUILDING PAPER AND SHINGLES. FIREPLACE FLUE TO BE MIN. 2'-0" ABOVE ANY
5. ROOF SURFACE WITHIN 10'-0" HORIZONTALLY, MIN. 3'-0" PENETRATION ABOVE ROOF. CONTINUOUS RIDGE VENTS TO BE BAFFLED TO
6. PREVENT BACKFLOW. PROVIDE METAL FLASHING AT ALL ROOF TO WALL CONDITIONS - TYPICAL. ACCENT ALUMINUM CORNERS TYPICAL UNLESS OTHERWISE NOTED.

NOTE:

SUBCONTRACTOR TO COORDINATE LOCATION OF ALL PLUMBING / MECHANICAL VENTS, ATTIC BOX VENTS AND CHIMNEY PENETRATIONS ON REAR OF ROOF

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Market Residence

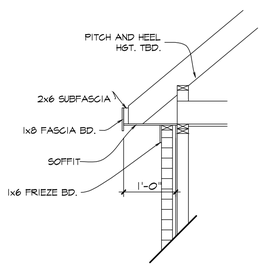
Plan Name:

"Styles-B"
RHSE

DATE 23 JAN 2024
DRAWN BY: BB

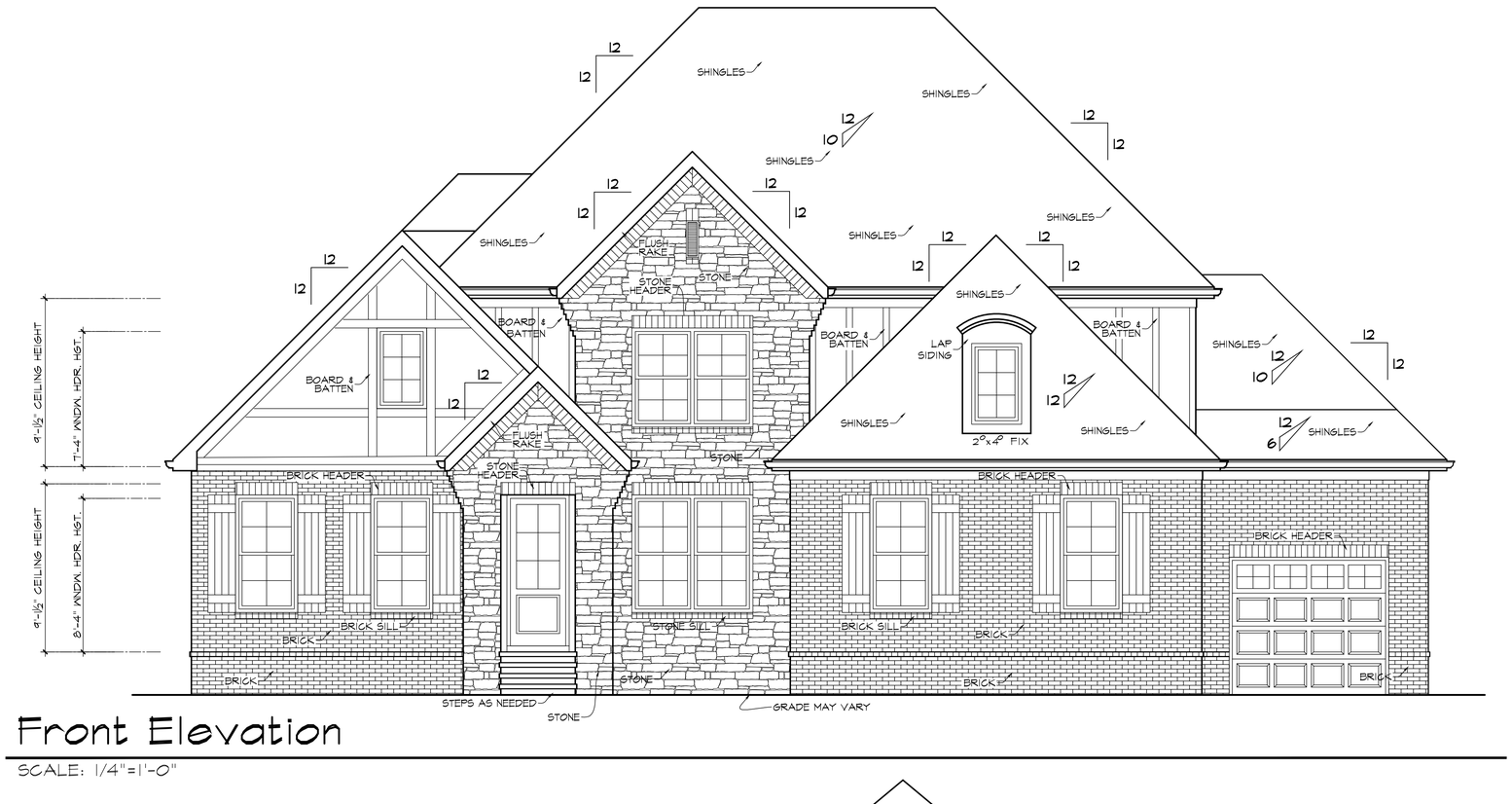
REVISIONS
1 PLAN REVISIONS 16 APR 2024
2
3

SHEET
EXTERIOR ELEVATIONS
6



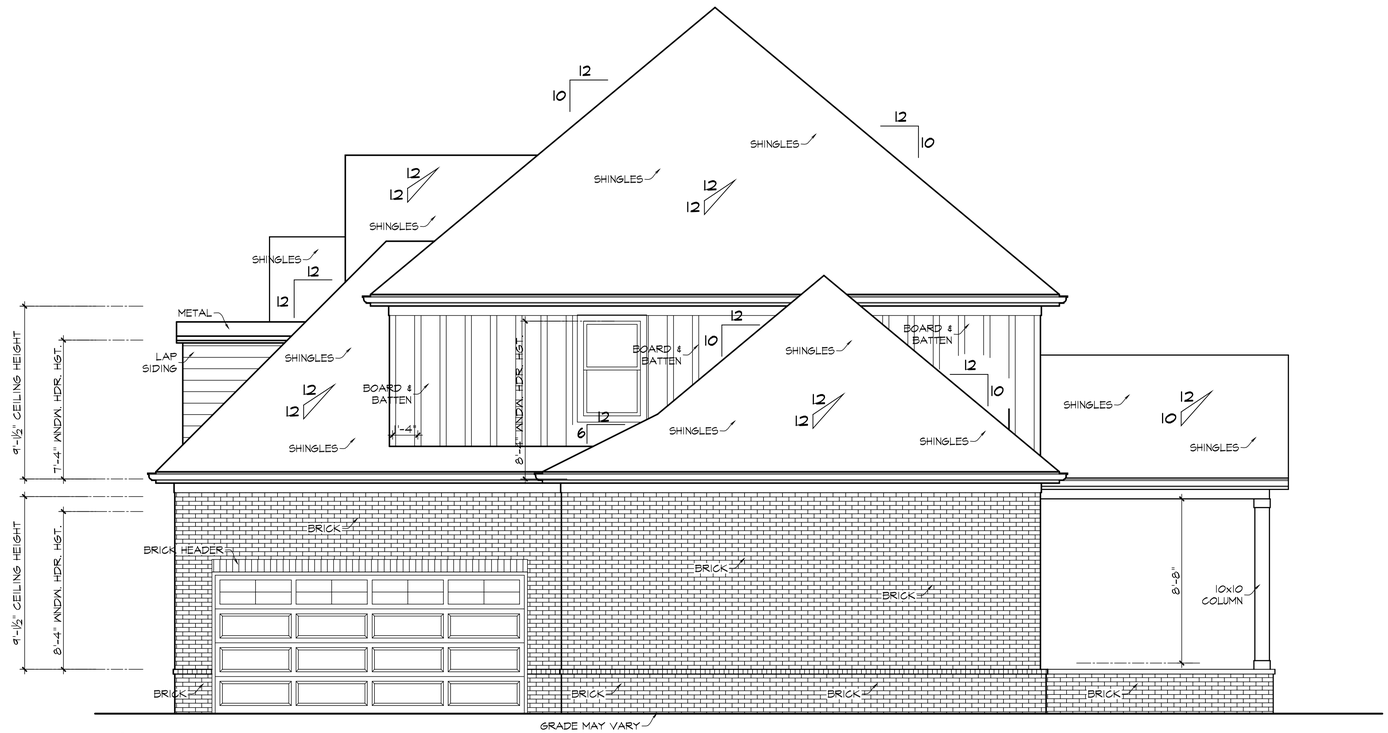
Typ. Section

SCALE: NOT TO SCALE



Front Elevation

SCALE: 1/4"=1'-0"



Right Side Elevation

SCALE: 1/4"=1'-0"

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Market Residence

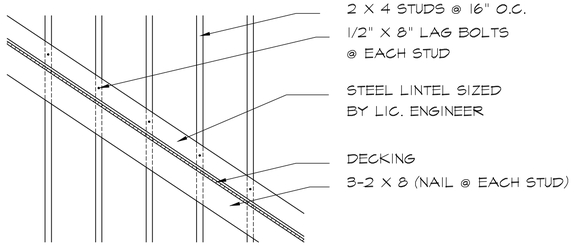
Plan Name:

"Whitney A-S"

DATE 30 MAR 2026
DRAWN BY: BB

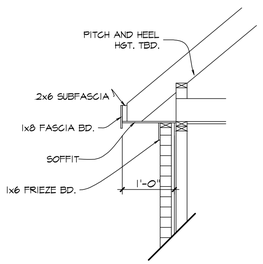
REVISIONS
1 REVISED CR.SP. PER ENGNRING. 08 AUG 2024
2 REVISED 3 CAR GARAGE 19 SEP 2024
3

SHEET
EXTERIOR ELEVATIONS
5



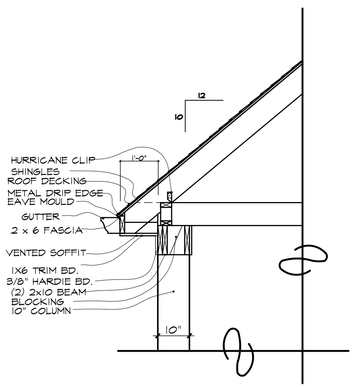
Lintel Detail

SCALE: 1/4"=1'-0"



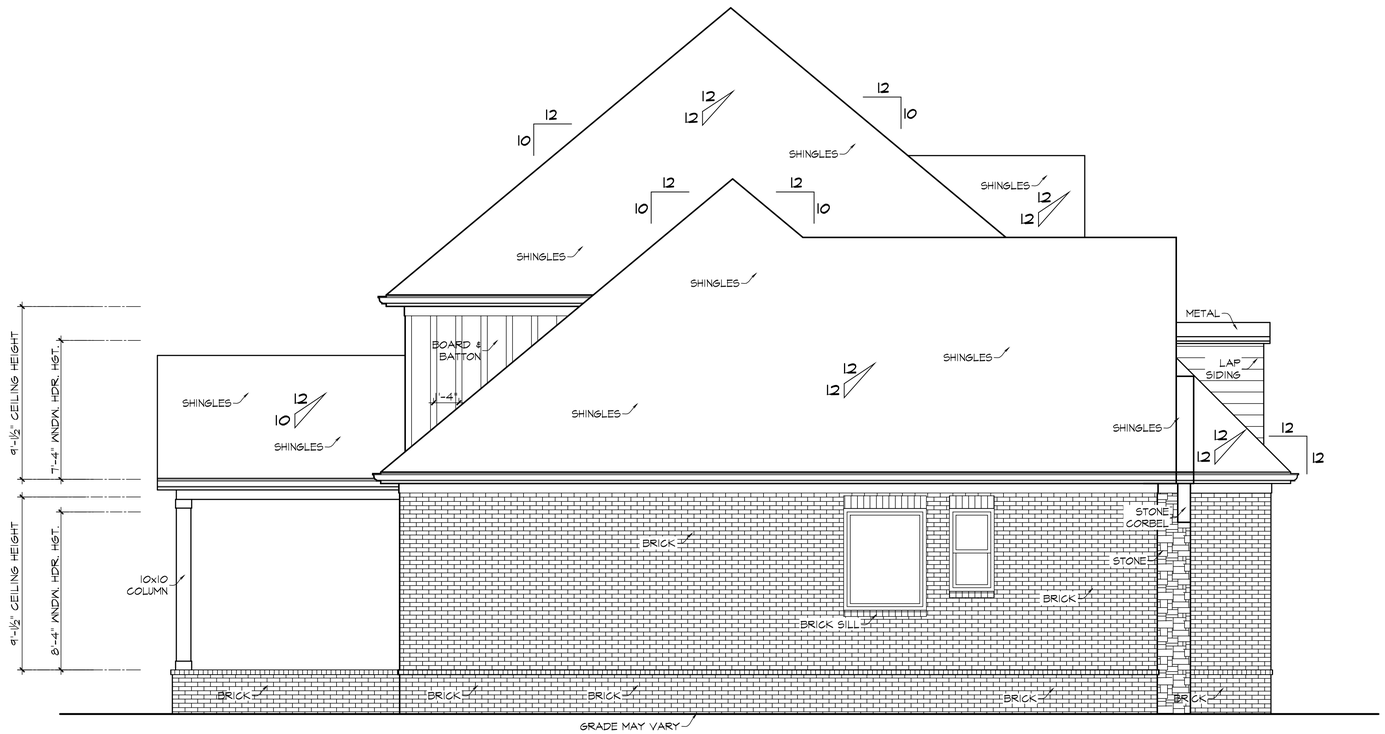
Typ. Section

SCALE: NOT TO SCALE



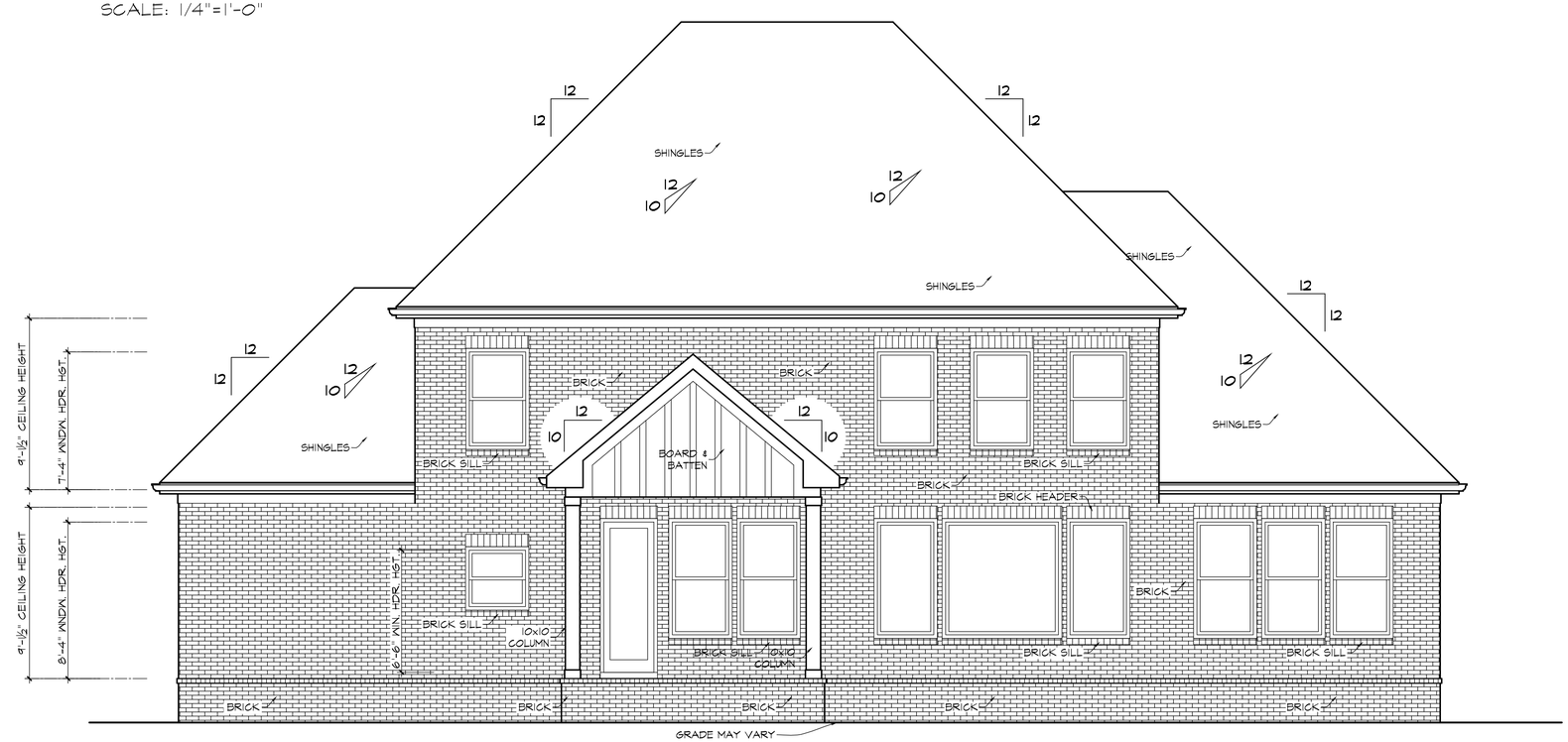
Porch Detail

SCALE: NOT TO SCALE



Left Side Elevation

SCALE: 1/4"=1'-0"



Rear Elevation

SCALE: 1/4"=1'-0"

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Market Residence

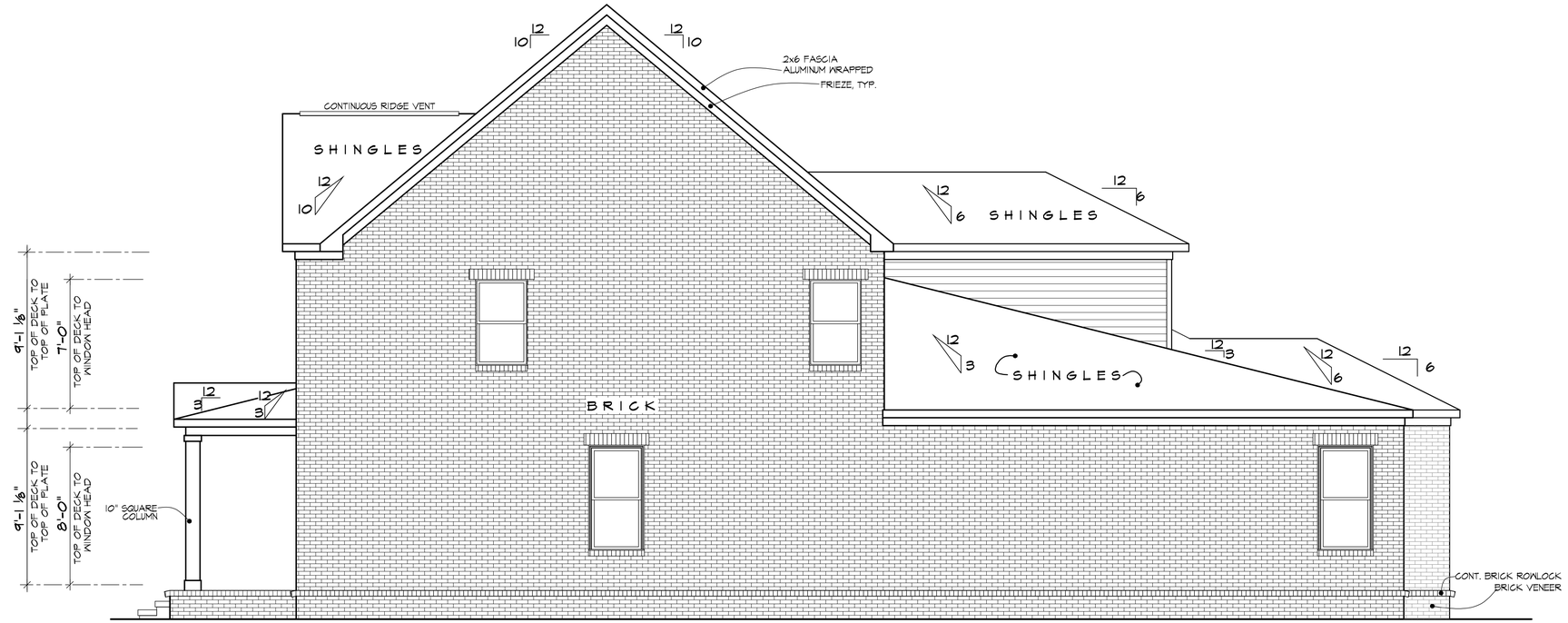
Plan Name:

"Whitney A-S"

DATE 30 MAR 2026
DRAWN BY: BB

REVISIONS
1 REVISED CR.SP. PER ENGNRING. 08 AUG 2024
2 REVISED 3 CAR GARAGE 19 SEP 2024
3

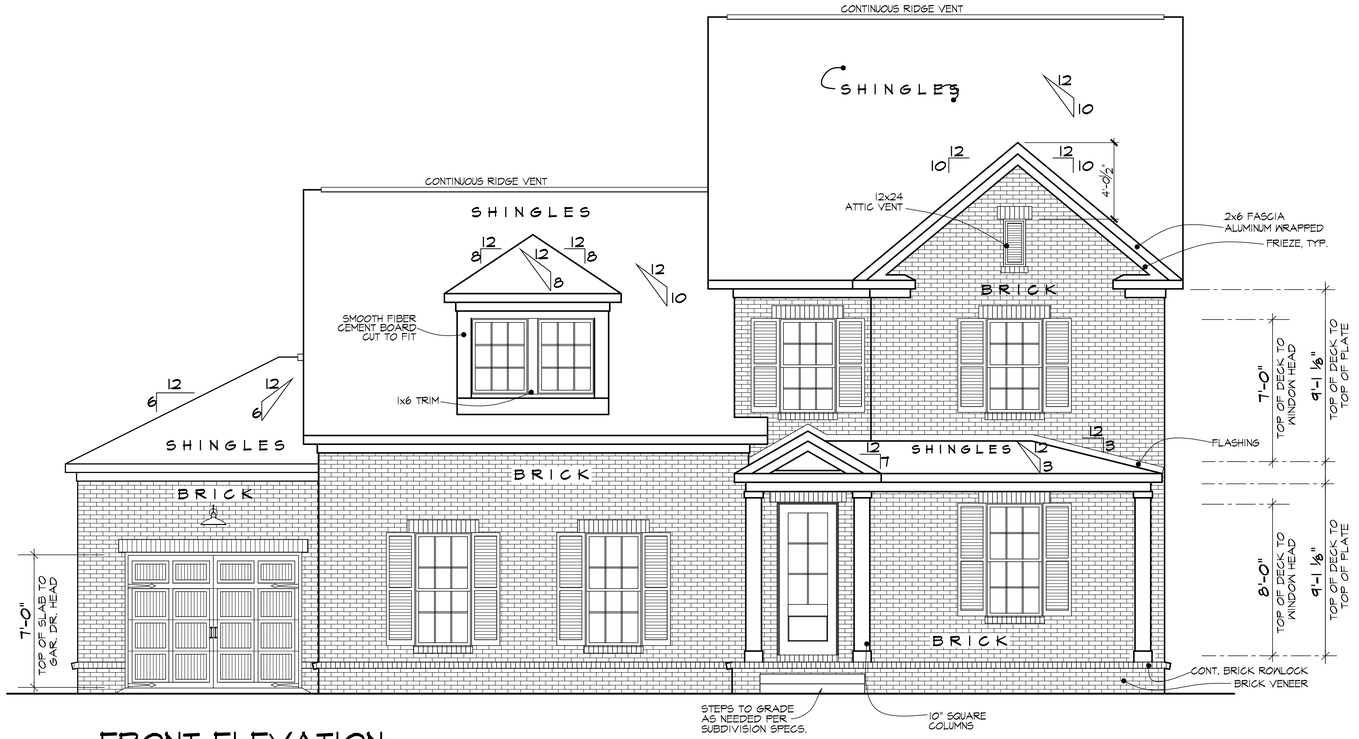
SHEET
EXTERIOR ELEVATIONS
6



RIGHT SIDE ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"

11X17 SHEET = SCALE: 1/8"=1'-0"



FRONT ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"

11X17 SHEET = SCALE: 1/8"=1'-0"

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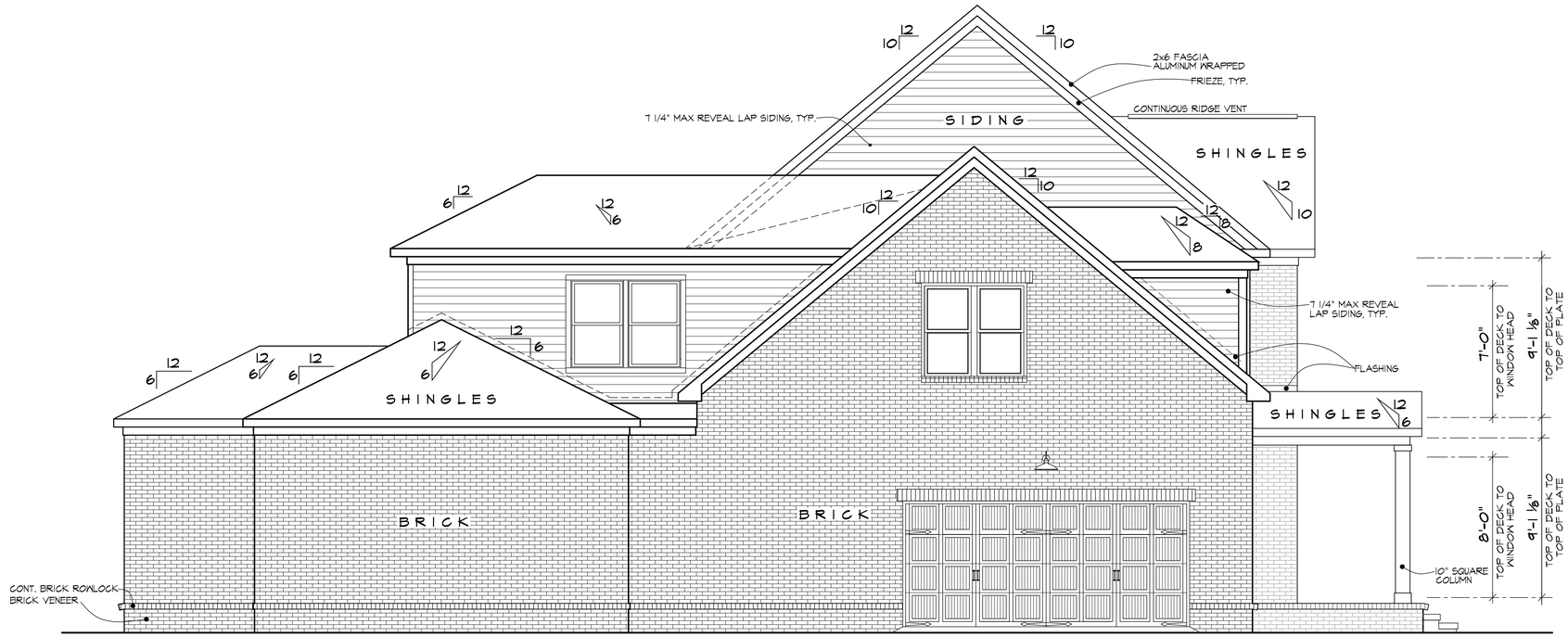
Market Residence

Plan Name:
"Fleetwood - B"
LHSE

DATE 02 APR 2026
DRAWN BY: BB

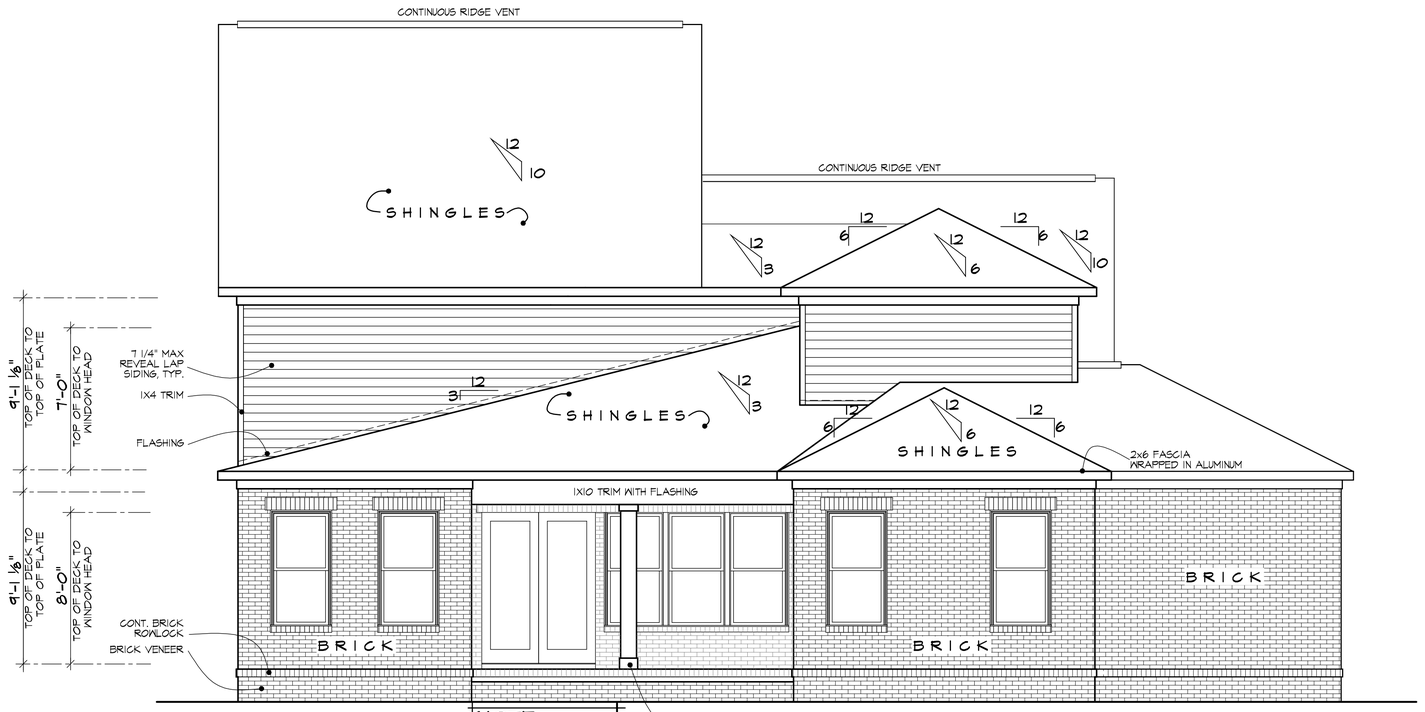
REVISIONS
1
2
3

SHEET
ELEVATIONS
5 B.R. OPT.
A.5



LEFT SIDE ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"



REAR ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"

NOTE:
SUPERINTENDENT TO LOCATE STEPS FROM DECK TO GRADE AS PER SITE AND LOCAL CODES AS REQUIRED.

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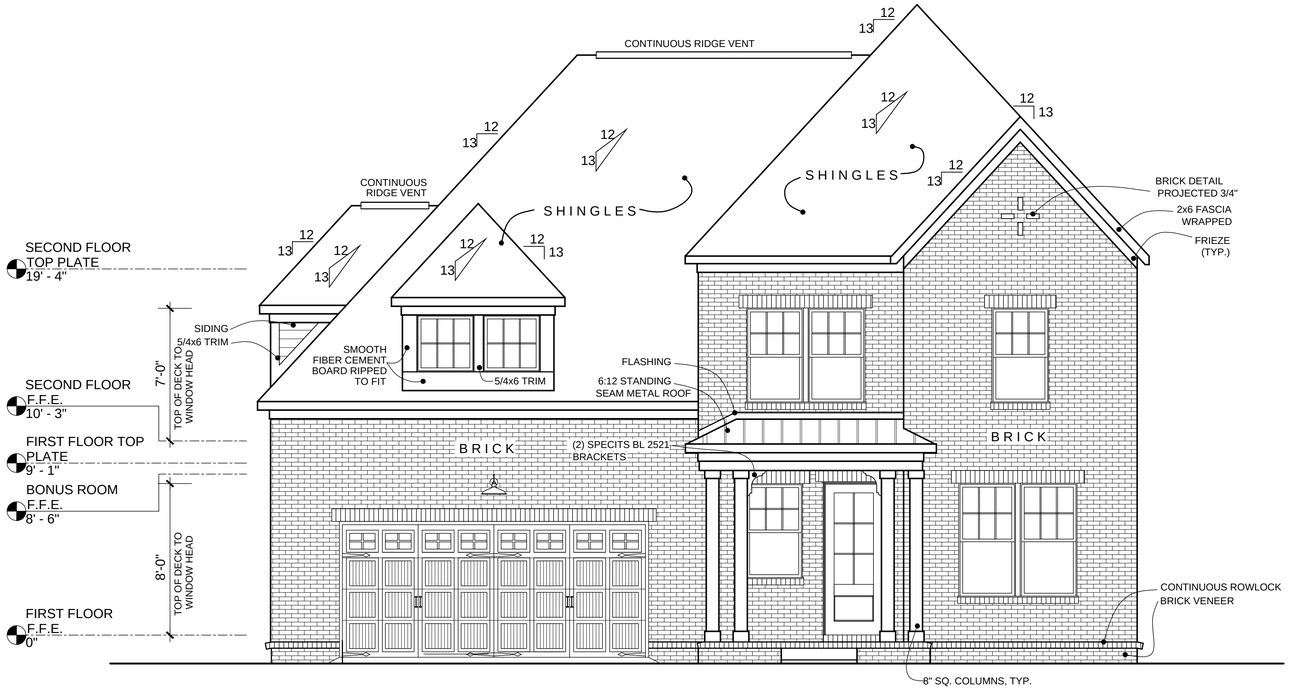
Market Residence

Plan Name:
"Fleetwood - B"
LHSE

DATE 02 APR 2026
DRAWN BY: BB

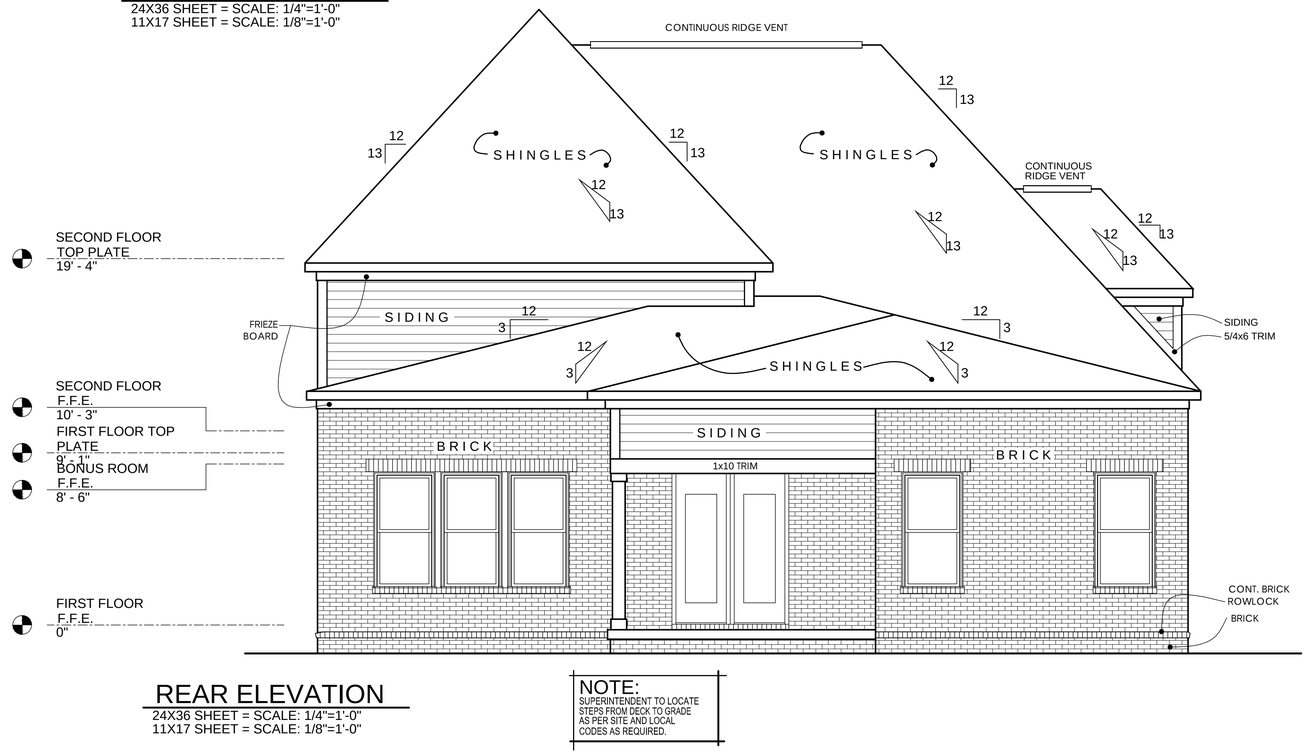
REVISIONS
1
2
3

SHEET
ELEVATIONS
5 B.R. OPT.
A.6



FRONT ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"



REAR ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"

NOTE:
SUPERINTENDENT TO LOCATE STEPS FROM DECK TO GRADE AS PER SITE AND LOCAL CODES AS REQUIRED.

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Market Home Plan Name: "Crosby"

DATE 02 JAN 2024
DRAWN BY: BB

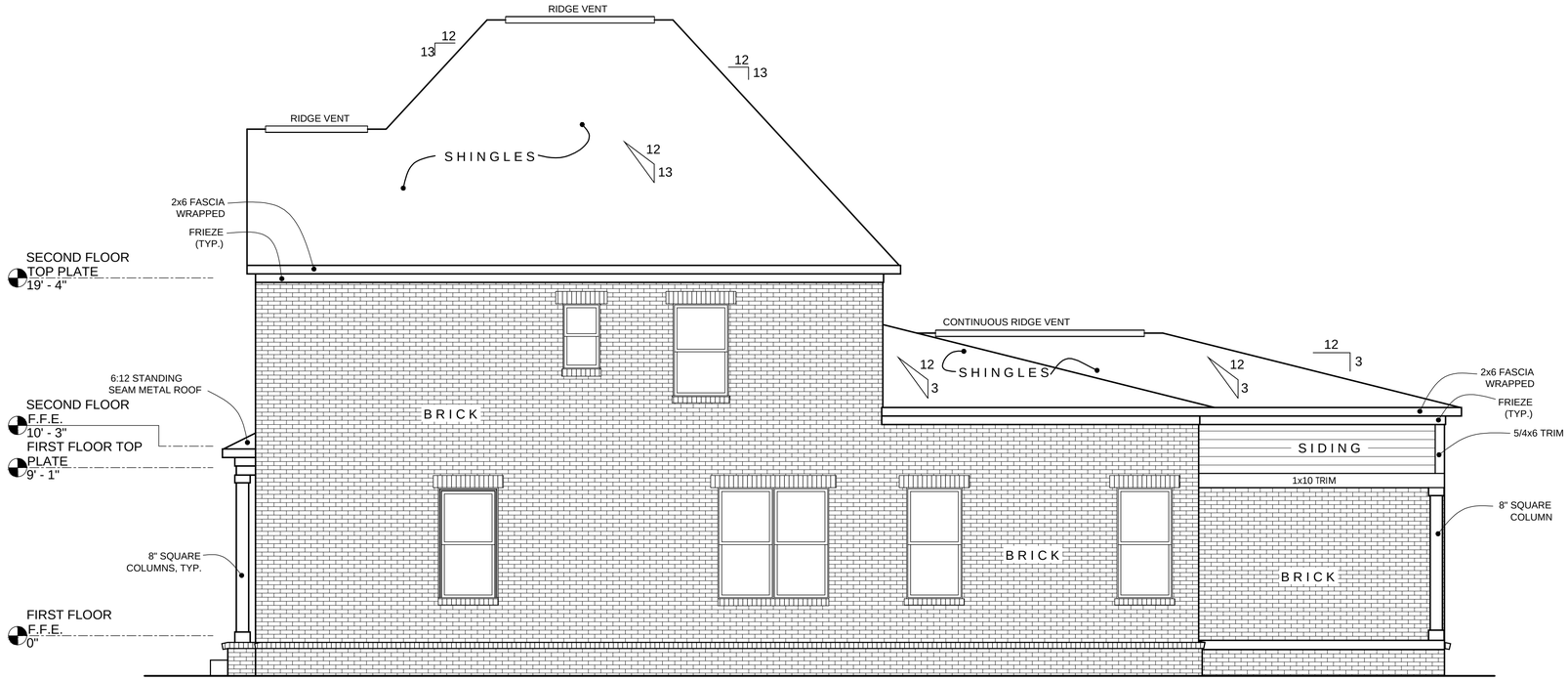
REVISIONS

1. 5-15-22 KNEEWALL CHANGES ON ELEVATION B IN BONUS
2. CHANGE BONUS PITCH TO 13/12 ON B ELEVATION
3. CORRECTED SIDE ENTRY PARTIALS 5-25-22
4. REVERSED R.A.G. AND PULL DOWN ADDED CHASE IN LINEN 7-20-22
5. ADD PRIMARY UP OPTION 09-30-24
6. REVISE FOUNDATION FOR GARAGE DOOR OPENING 05-14-25

SHEET

FRONT/REAR ELEVATION "B"

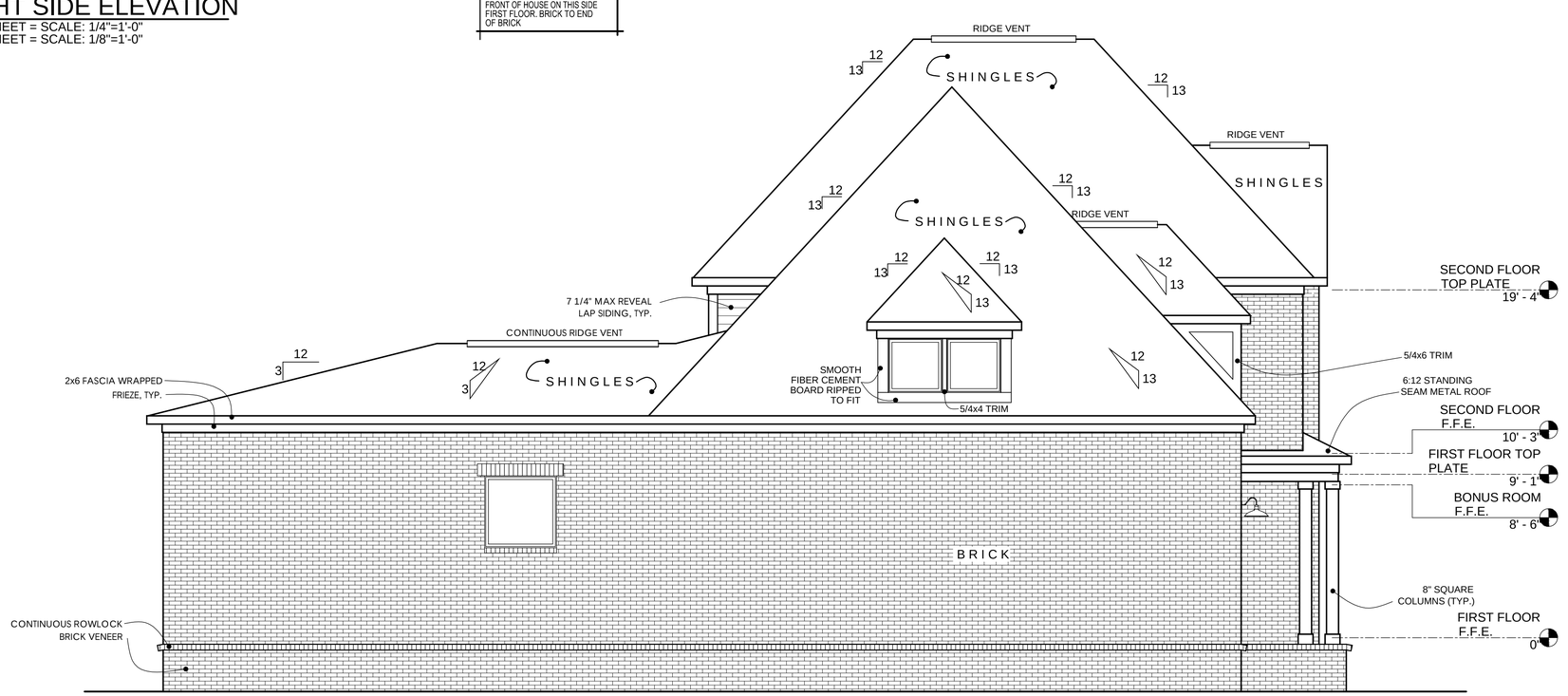
A . 4



RIGHT SIDE ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"

NOTE:
BRICK STOPS 33'-11" FROM FRONT OF HOUSE ON THIS SIDE FIRST FLOOR. BRICK TO END OF BRICK



LEFT SIDE ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"

NOTE:
BRICK STOPS 33'-0" FROM FRONT OF HOUSE ON THIS SIDE FIRST FLOOR. BRICK TO END OF BRICK

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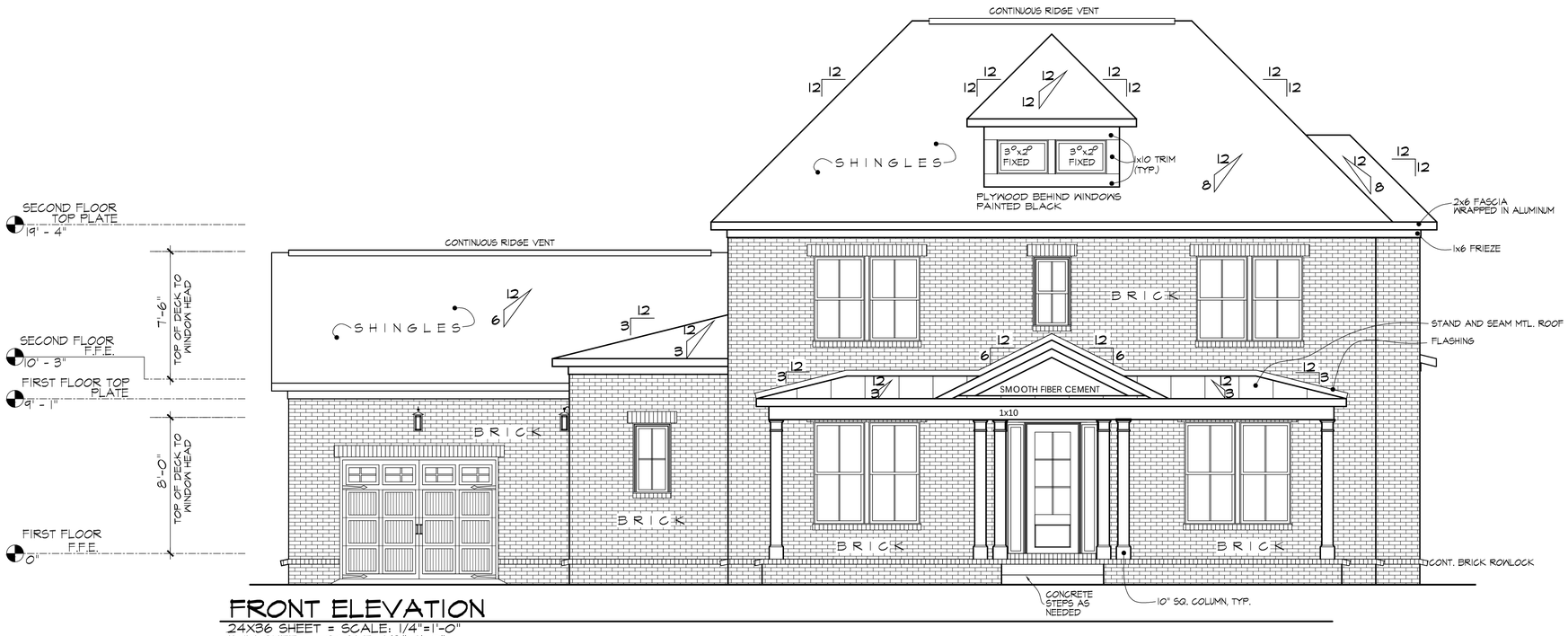
Market Home Plan Name: "Crosby"

DATE 02 JAN 2024
DRAWN BY: BB

REVISIONS

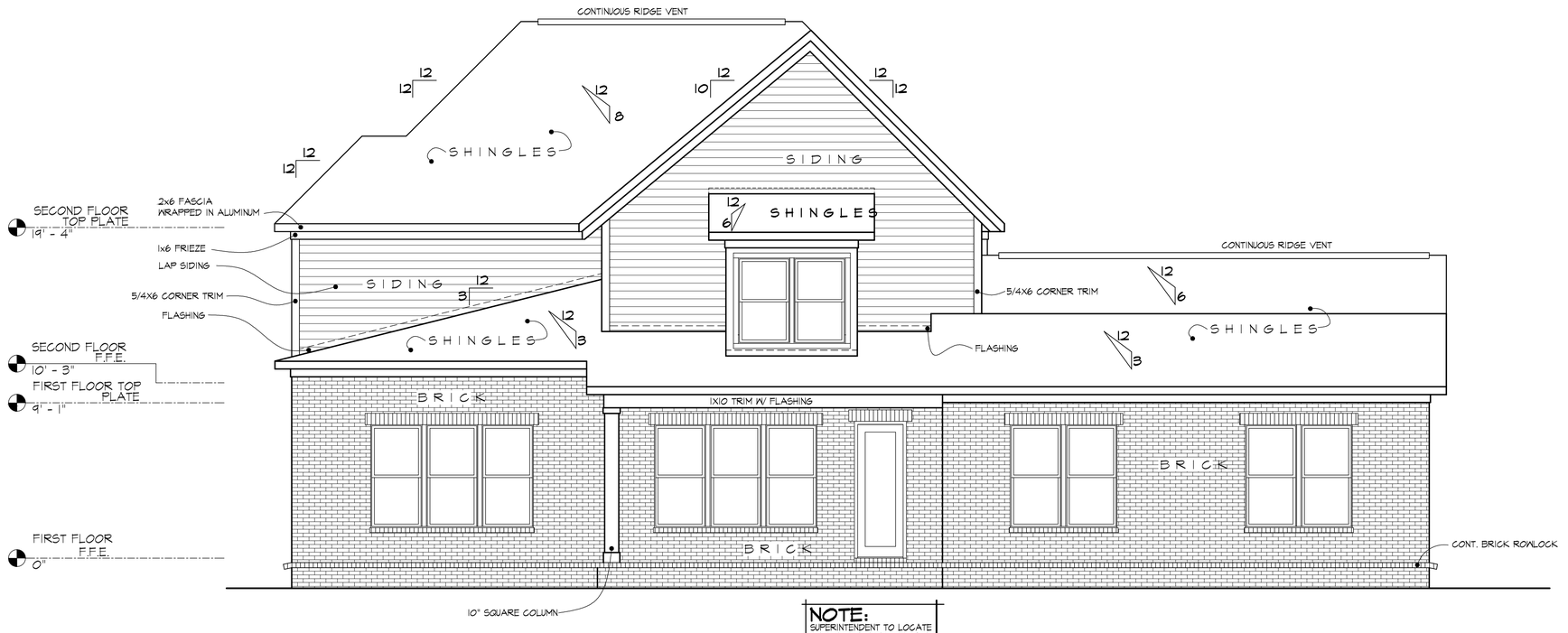
1. 5-15-22 KNEEWALL CHANGES ON ELEVATION B IN BONUS
2. CHANGE BONUS PITCH TO 13/12 ON B ELEVATION
3. CORRECTED SIDE ENTRY PARTIALS 5-25-22
4. REVERSED R.A.G. AND PULL DOWN ADDED CHASE IN LINEN 7-20-22
5. ADD PRIMARY UP OPTION 09-30-24
6. REVISE FOUNDATION FOR GARAGE DOOR OPENING 05-14-25

SHEET
LEFT/RIGHT ELEVATION "B"
A . 5



FRONT ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"



REAR ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"

NOTE:
SUPERINTENDENT TO LOCATE STEPS FROM DECK TO GRADE AS PER SITE AND LOCAL CODES AS REQUIRED.

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Duncan Residence

Plan Name:

"McCartney-B"

DATE 07 OCT 2024
DRAWN BY: BB

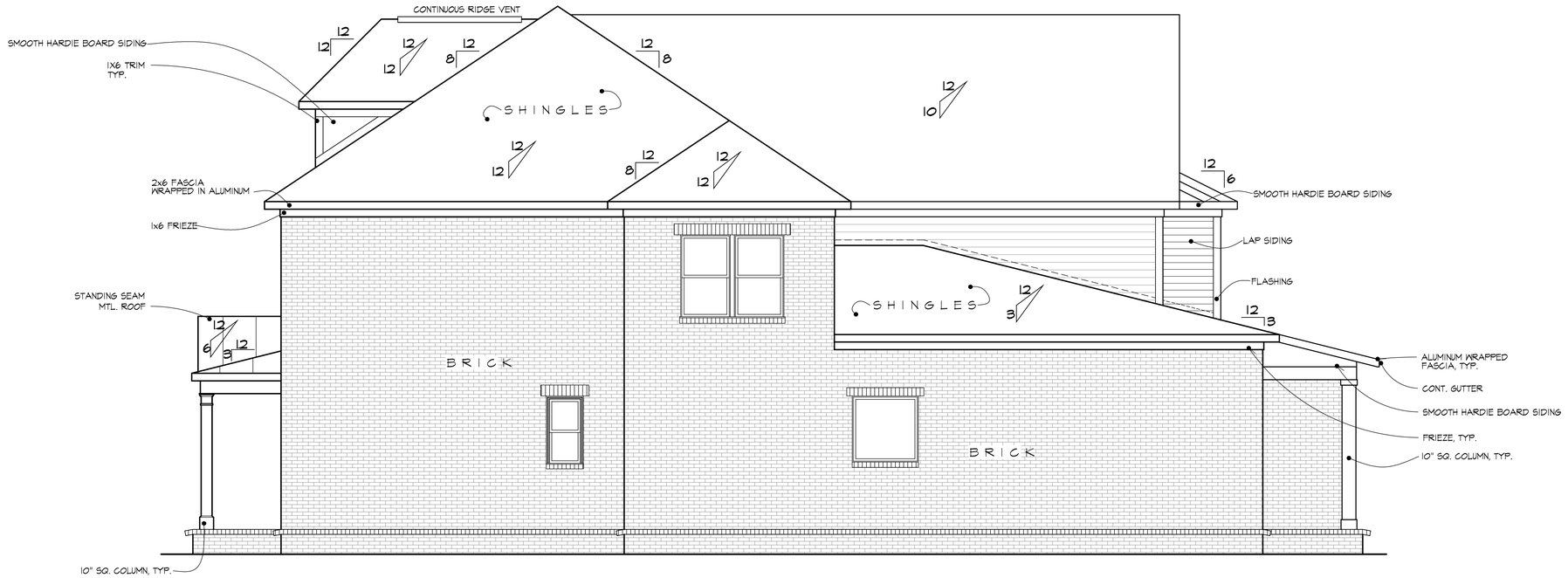
REVISIONS

1	REVISED PRIMARY BATH	08 FEB 2023
2	REVISED PRIMARY TOILET COMP.	16 OCT 2023
3	REVISED 5TH B. R. OPTION	01 FEB 2024

SHEET

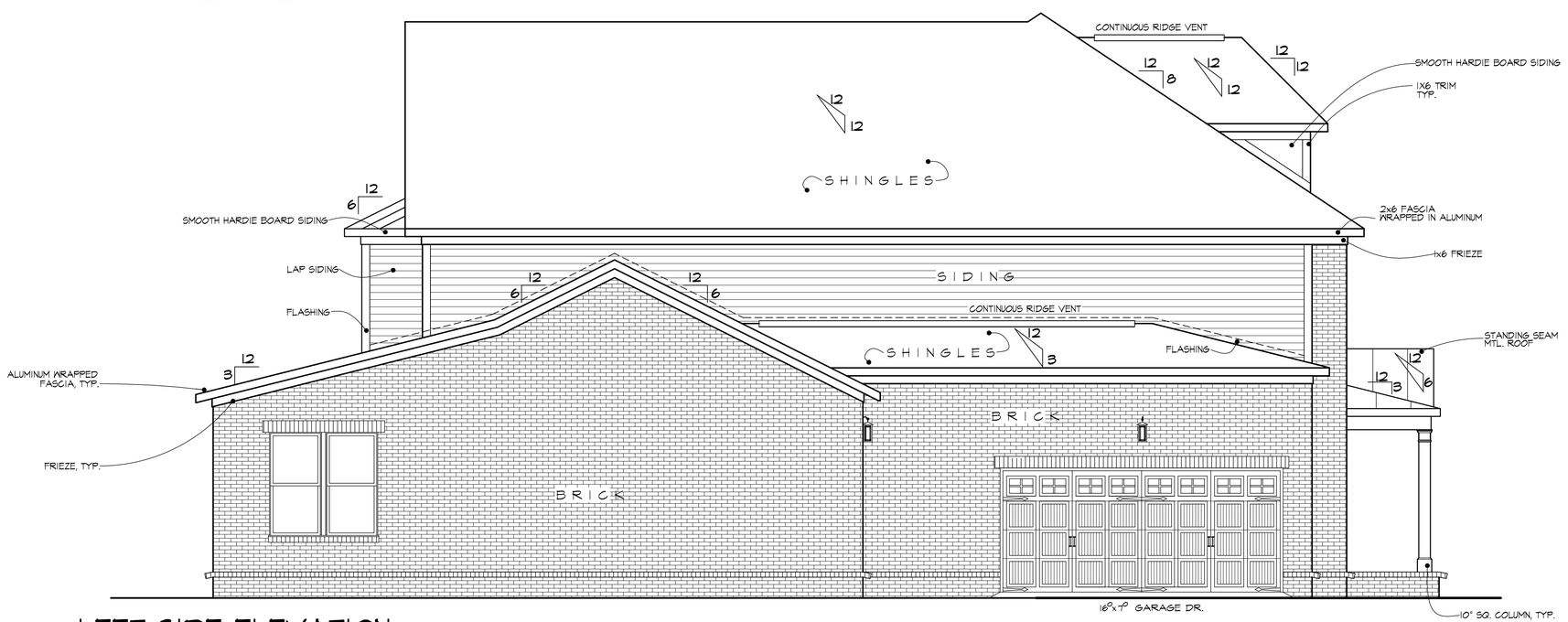
FRONT/REAR ELEVATIONS
5 B.R. OPTION

A.5



RIGHT SIDE ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"



LEFT SIDE ELEVATION

24X36 SHEET = SCALE: 1/4"=1'-0"
11X17 SHEET = SCALE: 1/8"=1'-0"

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Duncan Residence

Plan Name:

"McCartney-B"

DATE 07 OCT 2024
DRAWN BY: BB

REVISIONS

1	REVISED PRIMARY BATH	08 FEB 2023
2	REVISED PRIMARY TOILET COMP.	16 OCT 2023
3	REVISED 5TH B. R. OPTION	01 FEB 2024

SHEET
LEFT/RIGHT SIDE ELEVATIONS
5 B.R. OPTION

A.6

ISSUED FOR: ☐ CHECKSET ▨ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DAVELLO MEEKS MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

KYLE B. SMITH
REGISTERED LANDSCAPE ARCHITECT
TENNESSEE NO. 1301
4/29/26

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	03/30/26
DMG Project No:	25184

TREE PRESERVATION AND REMOVAL PLAN

L0.0

TREE #	DBH	SPECIES	REMOVE/SAVE
1	36	OAK	REMOVE
2	8	BEECH	REMOVE
3	15	OAK	REMOVE
4	8	OAK	REMOVE
5	24	PIN OAK	REMOVE
6	24	OAK	REMOVE
7	8	MAPLE	REMOVE
8	12	OAK	REMOVE
9	24	OAK	REMOVE
10	40	PINE	REMOVE
11	30	PINE	REMOVE
12	30	BEECH	REMOVE
13	36	BEECH	REMOVE
14	24	CEDAR	REMOVE
15	24	HACKBERRY	REMOVE
16	15	HACKBERRY	REMOVE
17	30	BEECH	REMOVE
18	36	BEECH	REMOVE
19	30	WEEPING WILLOW	REMOVE
20	30	WEEPING WILLOW	REMOVE
21	40	HACKBERRY	REMOVE
22	24	HOP-HORNBEAM	REMOVE
23	36	OAK	REMOVE
24	24	OAK	REMOVE
25	24	OAK	REMOVE
26	8	HACKBERRY	REMOVE
27	15	OAK	REMOVE
28	23	HACKBERRY	REMOVE
29	24	HACKBERRY	REMOVE
30	24	HACKBERRY	REMOVE
31	24	PIN OAK	REMOVE
32	36	OAK	REMOVE
33	36	PIN OAK	REMOVE
34	24	MAPLE	REMOVE
35	24	OAK	REMOVE
36	24	OAK	REMOVE
37	24	OAK	REMOVE
38	24	PIN OAK	REMOVE
39	36	OAK	REMOVE
40	15	OAK	REMOVE
41	60	MAGNOLIA	REMOVE
42	36	OAK	REMOVE
43	30	OAK	REMOVE
44	24	PIN OAK	REMOVE
45	8	MAPLE	REMOVE
46	8	WALNUT	REMOVE
47	8	MAPLE	REMOVE
48	18	OAK	REMOVE
49	18	MAPLE	REMOVE
50	20	HACKBERRY	SAVE
51	36	HACKBERRY	REMOVE
52	30	MAGNOLIA	REMOVE
53	36	BEECH	REMOVE
54	30	OAK	REMOVE
55	30	OAK	REMOVE
56	30	HACKBERRY	REMOVE
57	30	CEDAR	REMOVE
58	18	BEECH	REMOVE
59	36	MAPLE	REMOVE
60	24	OAK	REMOVE
61	24	OAK	REMOVE
62	12	DOGWOOD	REMOVE
63	24	MAPLE	REMOVE
64	18	OAK	REMOVE
65	24	MAPLE	SAVE
66	18	MAPLE	REMOVE
67	12	BEECH	SAVE
68	8	HACKBERRY	SAVE
69	36	HACKBERRY	SAVE
70	12	HACKBERRY	SAVE
71	8	HACKBERRY	SAVE
72	8	HACKBERRY	SAVE
73	18	OAK	SAVE
74	30	OAK	SAVE
75	12	HACKBERRY	SAVE
76	12	HACKBERRY	SAVE
77	12	HACKBERRY	SAVE
78	12	HACKBERRY	SAVE
79	8	MAPLE	SAVE
80	12	OAK	SAVE
81	12	HACKBERRY	SAVE
82	12	HACKBERRY	SAVE
83	12	HACKBERRY	SAVE
84	12	OAK	SAVE
85	8	MAPLE	SAVE
86	8	BEECH	SAVE
87	8	MAPLE	SAVE
88	18	HACKBERRY	SAVE
89	18	HACKBERRY	SAVE
90	12	MAPLE	SAVE
91	12	MAPLE	SAVE
92	12	MAPLE	SAVE
93	12	OAK	SAVE
94	12	HACKBERRY	SAVE
95	12	HACKBERRY	SAVE
96	12	HACKBERRY	SAVE
97	12	HACKBERRY	SAVE
98	12	HACKBERRY	SAVE
99	12	HACKBERRY	OFF PROPERTY
100	12	HACKBERRY	SAVE
101	18	OAK	SAVE
102	18	OAK	SAVE
103	12	HACKBERRY	SAVE
104	18	HACKBERRY	SAVE
105	12	HACKBERRY	SAVE
106	12	HACKBERRY	SAVE
107	8	HACKBERRY	SAVE
108	18	OAK	SAVE
109	30	OAK	OFF PROPERTY
110	30	OAK	SAVE
111	30	OAK	SAVE
112	8	HACKBERRY	SAVE

TREE #	DBH	SPECIES	REMOVE/SAVE
201	18	OAK	OFF PROPERTY
202	15	BASSWOOD	OFF PROPERTY
203	24	OAK	OFF PROPERTY
204	24	OAK	OFF PROPERTY
205	24	HACKBERRY	OFF PROPERTY
206	12	HACKBERRY	OFF PROPERTY
207	12	OAK	OFF PROPERTY
208	12	OAK	OFF PROPERTY
209	12	OAK	OFF PROPERTY
210	12	OAK	OFF PROPERTY
211	8	OAK	OFF PROPERTY
212	8	HACKBERRY	SAVE
213	8	HACKBERRY	SAVE
214	13	PINE	SAVE
215	8	OAK	SAVE
216	30	HACKBERRY	SAVE
217	24	OAK	SAVE
218	18	HACKBERRY	SAVE
219	18	HACKBERRY	SAVE
220	24	HACKBERRY	SAVE
221	30	OAK	SAVE
222	12	OAK	SAVE
223	8	OAK	SAVE
224	30	PINE	SAVE
225	12	OAK	SAVE
226	12	HACKBERRY	SAVE
227	12	OAK	SAVE
228	18	HACKBERRY	SAVE
229	18	HACKBERRY	SAVE
230	8	OAK	SAVE
231	8	PINE	SAVE
232	8	OAK	SAVE
233	8	OAK	SAVE
234	8	OAK	SAVE
235	24	OAK	SAVE
236	12	HACKBERRY	SAVE
237	12	HACKBERRY	SAVE
238	18	HACKBERRY	SAVE
239	30	OAK	SAVE
240	30	OAK	SAVE
241	12	OAK	SAVE
242	8	BEECH	SAVE
243	12	HACKBERRY	SAVE
244	8	PINE	SAVE
245	8	OAK	SAVE
246	8	HACKBERRY	SAVE
247	24	OAK	SAVE
248	12	OAK	SAVE
249	12	OAK	SAVE
250	12	HACKBERRY	SAVE
251	12	OAK	SAVE
252	8	OAK	SAVE
253	18	OAK	SAVE
254	18	OAK	SAVE
255	12	MAPLE	SAVE
256	18	MAPLE	SAVE
257	18	OAK	SAVE
258	18	OAK	SAVE
259	18	OAK	OFF PROPERTY
260	24	ELM	OFF PROPERTY
261	12	MAPLE	OFF PROPERTY
262	12	HACKBERRY	OFF PROPERTY
263	8	CEDAR	OFF PROPERTY
264	12	MAPLE	OFF PROPERTY
265	12	OAK	OFF PROPERTY
266	8	OAK	OFF PROPERTY
267	8	HACKBERRY	OFF PROPERTY
268	12	OAK	OFF PROPERTY
269	12	OAK	OFF PROPERTY
270	30	MAPLE	OFF PROPERTY
271	12	SASSAFRAS	OFF PROPERTY
272	8	MAPLE	OFF PROPERTY
273	8	OAK	OFF PROPERTY
274	18	BEECH	OFF PROPERTY
275	12	MAPLE	OFF PROPERTY
276	15	OAK	OFF PROPERTY
277	12	HACKBERRY	OFF PROPERTY
278	18	OAK	OFF PROPERTY
279	12	MAPLE	OFF PROPERTY
280	8	BEECH	OFF PROPERTY
281	12	BEECH	OFF PROPERTY
282	24	PINE	OFF PROPERTY
283	8	PINE	OFF PROPERTY
284	30	POPLAR	OFF PROPERTY
285	12	MAPLE	OFF PROPERTY
286	12	OAK	OFF PROPERTY
287	12	ASH	OFF PROPERTY
288	12	MAPLE	OFF PROPERTY
289	12	MAPLE	OFF PROPERTY
290	18	OAK	OFF PROPERTY
291	12	MAPLE	OFF PROPERTY
292	15	BEECH	OFF PROPERTY
293	12	SASSAFRAS	OFF PROPERTY
294	30	SYCAMORE	OFF PROPERTY
295	12	SASSAFRAS	OFF PROPERTY
296	12	HACKBERRY	OFF PROPERTY
297	12	MAPLE	OFF PROPERTY
298	12	MAPLE	OFF PROPERTY
299	12	ASH	OFF PROPERTY
300	12	HACKBERRY	OFF PROPERTY
301	18	PINE	OFF PROPERTY
302	18	OAK	OFF PROPERTY
303	18	OAK	OFF PROPERTY
304	18	HACKBERRY	OFF PROPERTY
305	18	HACKBERRY	OFF PROPERTY
306	12	OAK	OFF PROPERTY
307	18	OAK	OFF PROPERTY
308	30	OAK	OFF PROPERTY
309	18	HACKBERRY	OFF PROPERTY
310	18	OAK	OFF PROPERTY
311	18	PINE	OFF PROPERTY
312	24	OAK	OFF PROPERTY

TREE #	DBH	SPECIES	REMOVE/SAVE
401	15	OAK	REMOVE
402	15	HACKBERRY	REMOVE
403	15	HACKBERRY	REMOVE
404	15	OAK	REMOVE
405	12	HACKBERRY	REMOVE
406	12	OAK	REMOVE
407	8	CEDAR	REMOVE
408	15	OAK	REMOVE
409	12	HACKBERRY	REMOVE
410	12	HACKBERRY	REMOVE
411	12	PINE	REMOVE
412	12	PINE	REMOVE
413	24	PINE	REMOVE
414	24	OAK	REMOVE
415	24	OAK	REMOVE
416	36	OAK	REMOVE
417	24	PINE	SAVE
418	12	OAK	SAVE
419	12	OAK	SAVE
420	8	HACKBERRY	SAVE
421	8	PIN OAK	SAVE
422	24	PIN OAK	SAVE
423	24	OAK	SAVE
424	15	CHERRY	SAVE
425	15	HACKBERRY	SAVE
426	15	HACKBERRY	SAVE
427	8	HACKBERRY	SAVE
428	8	12	HACKBERRY
429	8	OSAGE-ORANGE	SAVE
430	36	HACKBERRY	SAVE
431	48	ELM	SAVE
432	8	PINE	SAVE
433	8	PINE	SAVE
434	12	OAK	SAVE
435	8	CEDAR	SAVE
436	8	CEDAR	SAVE
437	8	CEDAR	SAVE
438	8	CEDAR	SAVE
439	8	CEDAR	SAVE
440	12	OAK	REMOVE
441	12	CEDAR	REMOVE
442	12	LOCUST	REMOVE
443	8	CEDAR	REMOVE
444	8	HACKBERRY	REMOVE
445	8	OAK	REMOVE
446	8	HACKBERRY	REMOVE
447	8	CEDAR	REMOVE
448	8	MAPLE	REMOVE
449	18	OAK	REMOVE
450	24	OAK	REMOVE
451	12	HACKBERRY	REMOVE
452	18	HACKBERRY	REMOVE
453	12	HACKBERRY	SAVE
454	12	HACKBERRY	OFF PROPERTY
455	12	HACKBERRY	OFF PROPERTY
456	8	OSAGE-ORANGE	OFF PROPERTY
457	24	OAK	REMOVE
458	30	OAK	REMOVE
459	24	OAK	REMOVE
460	8	HACKBERRY	REMOVE
461	12	HACKBERRY	REMOVE
462	12	HACKBERRY	REMOVE
463	12	HACKBERRY	OFF PROPERTY
464	8	HACKBERRY	SAVE
465	24	PERSIMMON	REMOVE
466	24	OAK	OFF PROPERTY
467	8	HACKBERRY	OFF PROPERTY
468	12	OAK	OFF PROPERTY
469	12	HACKBERRY	OFF PROPERTY
470	12	HACKBERRY	OFF PROPERTY
471	12	HACKBERRY	OFF PROPERTY
472	30	OAK	SAVE
473	60	OAK	OFF PROPERTY
474	24	OAK	OFF PROPERTY
475	48	OAK	OFF PROPERTY
476	8	CEDAR	OFF PROPERTY
477	48	OAK	OFF PROPERTY
478	60	OAK	OFF PROPERTY
479	24	OAK	OFF PROPERTY
480	24	OAK	OFF PROPERTY
481	8	HACKBERRY	OFF PROPERTY
482	24	OAK	OFF PROPERTY
483	30	OAK	OFF PROPERTY
484	24	OAK	OFF PROPERTY
485	24	OAK	SAVE
486	24	OAK	OFF PROPERTY
487	30	OAK	OFF PROPERTY
488	12	HACKBERRY	OFF PROPERTY
489	12	HACKBERRY	OFF PROPERTY
490	30	OAK	OFF PROPERTY
491	15	HACKBERRY	OFF PROPERTY
492	15	HACKBERRY	OFF PROPERTY
493	30	OAK	OFF PROPERTY
494	24	HACKBERRY	OFF PROPERTY
495	24	OAK	OFF PROPERTY
496	18	HACKBERRY	OFF PROPERTY
497	18	HACKBERRY	OFF PROPERTY
498	12	HACKBERRY	OFF PROPERTY
499	12	HACKBERRY	OFF PROPERTY
500	12	HACKBERRY	OFF PROPERTY
501	12	HACKBERRY	OFF PROPERTY
502	12	HACKBERRY	REMOVE
503	8	OAK	SAVE
504	8	OAK	SAVE
505	18	HACKBERRY	SAVE
506	12	OAK	SAVE
507	18	OAK	SAVE
508	18	HACKBERRY	SAVE
509	30	OAK	SAVE
510	12	HACKBERRY	SAVE
511	12	HACKBERRY	SAVE
512	12	LOCUST	SAVE

TREE #	DBH	SPECIES	REMOVE/SAVE
601	12	ELM	REMOVE
602	15	OAK	REMOVE
603	8	OAK	REMOVE
604	12	HACKBERRY	REMOVE
605	12	HACKBERRY	REMOVE
606	12	HACKBERRY	REMOVE
607	12	LOCUST	REMOVE
608	12	OAK	REMOVE
609	8	HACKBERRY	REMOVE
610	15	HACKBERRY	REMOVE
611	15	HACKBERRY	REMOVE
612	12	HACKBERRY	REMOVE
613	12	LOCUST	REMOVE
614	12	HACKBERRY	REMOVE
615	12	HACKBERRY	REMOVE
616	8	HACKBERRY	REMOVE
617	24	OAK	REMOVE
618	15	HACKBERRY	REMOVE
619	18	OAK	REMOVE
620	15	OAK	REMOVE
621	8	ASH	REMOVE
622	15	HACKBERRY	REMOVE
623	12	OAK	REMOVE
624	8	OAK	REMOVE
625	18	OAK	REMOVE
626	8	HACKBERRY	REMOVE
627	12	HACKBERRY	REMOVE
628	8	12	HACKBERRY
629	12	HACKBERRY	REMOVE
630	12	OAK	REMOVE
631	8	HACKBERRY	REMOVE
632	12	HACKBERRY	REMOVE
633	8	HACKBERRY	REMOVE
634	8	HACKBERRY	REMOVE
635	8	HACKBERRY	REMOVE
636	8	HACKBERRY	REMOVE
637	8	HACKBERRY	REMOVE
638	8	OAK	REMOVE
639	12	MAPLE	REMOVE
640	8	HACKBERRY	REMOVE
641	8	HACKBERRY	REMOVE
642	8	HACKBERRY	REMOVE
643	12	HACKBERRY	REMOVE
644	8	HACKBERRY	REMOVE
645	8	HACKBERRY	REMOVE
646	10	HACKBERRY	REMOVE
647	12	MAPLE	REMOVE
648	12	HACKBERRY	REMOVE
649	18	OAK	REMOVE
650	18	LOCUST	REMOVE
651	30	LOCUST	REMOVE
652	12	HACKBERRY	REMOVE
653	8	ELM	REMOVE
654	12	ELM	REMOVE
655	18	HACKBERRY	REMOVE
656	18	HACKBERRY	REMOVE
657	8	CEDAR	REMOVE
658	12	HACKBERRY	REMOVE
659	8	ASH	REMOVE
660	36	OAK	REMOVE
661	8	CEDAR	REMOVE
662	36	HACKBERRY	REMOVE
663	8	CEDAR	REMOVE
664	20	HACKBERRY	REMOVE
665	8	HACKBERRY	REMOVE
666	13	ELM	REMOVE
667	8	ELM	REMOVE
668	24	REMOVE	REMOVE
669	8	HACKBERRY	REMOVE
670	8	HACKBERRY	REMOVE
671	8	ELM	REMOVE
672	40	OAK	REMOVE
673	8	HACKBERRY	REMOVE
674	24	OAK	REMOVE
675	48	OAK	REMOVE
676	12	HACKBERRY	REMOVE
677	12	HACKBERRY	REMOVE
678	18	OAK	REMOVE
679	24	OAK	REMOVE
680	24	ELM	REMOVE
681	8	HACKBERRY	REMOVE
682	24	OAK	REMOVE
683	12	CEDAR	REMOVE
684	40	ELM	REMOVE
685	30	OAK	REMOVE
686	12	OAK	REMOVE
687	30	ELM	REMOVE
688	40	ELM	REMOVE
689	12	ELM	REMOVE
690	8	CEDAR	REMOVE
691	10	HACKBERRY	REMOVE
692	10	HACKBERRY	REMOVE
693	10	HACKBERRY	REMOVE
694	24	OAK	REMOVE
695	12	HACKBERRY	REMOVE
696	12	HACKBERRY	REMOVE
697	12	HACKBERRY	REMOVE
698	12	HACKBERRY	REMOVE
699	12	HACKBERRY	REMOVE
700	12	HACKBERRY	REMOVE
701	24	ELM	REMOVE
702	18	HACKBERRY	REMOVE
703	8	HACKBERRY	REMOVE
704	8	HACKBERRY	REMOVE
705	8	HACKBERRY	REMOVE
706	8	HACKBERRY	REMOVE
707	8	HACKBERRY	REMOVE
708	8	HACKBERRY	REMOVE
709	8	HACKBERRY	REMOVE
710	10	CHERRY	REMOVE
711	10	OAK	REMOVE
712	18	HACKBERRY	REMOVE

TREE #	DBH	SPECIES	REMOVE/SAVE
801	8	HACKBERRY	REMOVE
802	8	HACKBERRY	REMOVE
803	8	ELM	REMOVE
804	8	HACKBERRY	REMOVE
805	8	LOCUST	REMOVE
806	8	HACKBERRY	REMOVE
807	12	ASH	REMOVE
808	8	HACKBERRY	REMOVE
809	8	HACKBERRY	REMOVE
810	8	HACKBERRY	REMOVE
811	8	HACKBERRY	REMOVE
812	8	HACKBERRY	REMOVE
813	12	LOCUST	REMOVE
814	8	CEDAR	REMOVE
815	12	LOCUST	REMOVE
816	12	HACKBERRY	REMOVE
817	36	OAK	REMOVE
818	18	HACKBERRY	REMOVE
819	8	OAK	REMOVE
820	12	OAK	REMOVE
821	8	ASH	REMOVE
822	8	OAK	REMOVE
823	15	OAK	REMOVE
824	8	HACKBERRY	REMOVE
825	8	HACKBERRY	REMOVE
826	8	OAK	REMOVE
827	40	OAK	REMOVE
828	8	HACKBERRY	REMOVE
829	8	HACKBERRY	REMOVE
830	12	OAK	REMOVE
831	8	OAK	REMOVE
832	8	OAK	REMOVE
833	8	OAK	REMOVE
834	12	HACKBERRY	REMOVE
835	12	HACKBERRY	REMOVE
836	8	HACKBERRY	REMOVE
837	8	HACKBERRY	REMOVE
838	12	HACKBERRY	REMOVE
839	12	MAPLE	REMOVE
840	8	HACKBERRY	REMOVE
841	8	HACKBERRY	REMOVE
842	8	HACKBERRY	REMOVE
843	15	MAPLE	REMOVE
844	8	HACKBERRY	REMOVE
845	12	HACKBERRY	REMOVE
846	8	CEDAR	REMOVE
847	60	OAK	REMOVE
848	12	HACKBERRY	REMOVE
849	30	ASH	REMOVE
850	12	MAPLE	REMOVE
851	15	ELM	REMOVE
852	12	MAPLE	REMOVE
853	12	ELM	REMOVE
854	12	ELM	REMOVE
855	12	ELM	REMOVE
856	15	CEDAR	REMOVE
857	15	CEDAR	REMOVE
858	12	HACKBERRY	REMOVE
859	8	ASH	REMOVE
860	36	OAK	REMOVE
861	8	CEDAR	REMOVE
862	36	HACKBERRY	REMOVE
863	8	CEDAR	REMOVE
864	20	HACKBERRY	REMOVE
865	12	ELM	REMOVE
866	12	ELM	REMOVE
867	8	ELM	REMOVE
868	8	ELM	REMOVE
869	15	HACKBERRY	REMOVE
870	8	ELM	REMOVE
871	8	ELM	REMOVE
872	18	HACKBERRY	REMOVE
873	18	HACKBERRY	REMOVE
874	24	HACKBERRY	REMOVE
875	36	HACKBERRY	REMOVE
876	18	HACKBERRY	REMOVE
877	18	ELM	REMOVE
878	18	MAPLE	REMOVE
879	24	OAK	REMOVE
880	8	HACKBERRY	REMOVE
881	15	OAK	REMOVE
882	12	HACKBERRY	REMOVE
883	8	HACKBERRY	REMOVE
884	8	HACKBERRY	REMOVE
885	8	HACKBERRY	REMOVE
886	8	HACKBERRY	REMOVE
887	24	HACKBERRY	REMOVE
888	15	PEAR	REMOVE
889	8	PINE	REMOVE
890	8	CEDAR	REMOVE
891	8	CEDAR	REMOVE
892	30	ELM	REMOVE
893	8	CEDAR	REMOVE
894	8	CEDAR	REMOVE
895	60	OAK	REMOVE
896	36	OAK	REMOVE
897	36	OAK	REMOVE
898	36	OAK	REMOVE
899	60	OAK	REMOVE
900	8	CEDAR	REMOVE
901	36	OAK	REMOVE
902	24	OAK	REMOVE
903	8	CEDAR	REMOVE
904	24	OAK	REMOVE
905	24	OAK	REMOVE
906	42	OAK	REMOVE
907	15	OAK	REMOVE
908	15	OAK	REMOVE
909	8	HACKBERRY	REMOVE
910	8	OAK	REMOVE
911	30	OAK	REMOVE
912	8	OAK	REMOVE

TREE #	DBH	SPECIES	REMOVE/SAVE
1001	18	MAPLE	REMOVE
1002	24	OAK	REMOVE
1003	18	OAK	REMOVE
1004	12	HACKBERRY	REMOVE
1005	12	HACKBERRY	REMOVE
1006	12	HACKBERRY	REMOVE
1007	12	HACKBERRY	REMOVE
1008	12	HACKBERRY	REMOVE
1009	12	HACKBERRY	REMOVE
1010	8	HACKBERRY	REMOVE
1011	8	CEDAR	REMOVE
1012	8	CEDAR	REMOVE
1013	12	LOCUST	REMOVE
1014	12	LOCUST	REMOVE
1015	18	OAK	REMOVE
1016	8	LOCUST	REMOVE
1017	12	HACKBERRY	REMOVE
1018	12	HACKBERRY	REMOVE
1019	12	LOCUST	REMOVE
1020	8	LOCUST	REMOVE
1021	8	LOCUST	SAVE
1022	8	LOCUST	SAVE
1023	40	HACKBERRY	REMOVE
1024	24	HACKBERRY	REMOVE
1025	24	HACKBERRY	REMOVE
1026	24	HACKBERRY	REMOVE
1027	24	HACKBERRY	REMOVE
1028	30	OSAGE-ORANGE	REMOVE
1029	36	HACKBERRY	REMOVE
1030	15	HACKBERRY	REMOVE
1031	15	OAK	REMOVE
1032	8	OAK	REMOVE
1033	36	PIN OAK	REMOVE
1034	36	PIN OAK	REMOVE
1035	8	OAK	REMOVE
1036	8	HACKBERRY	REMOVE
1037	24	HACKBERRY	REMOVE
1038	24	OSAGE-ORANGE	REMOVE
1039	24	OSAGE-ORANGE	REMOVE
1040	24	HACKBERRY	SAVE
1041	12	CEDAR	SAVE
1042	8	LOCUST	SAVE
1043	8	CEDAR	SAVE
1044	15	MAPLE	REMOVE
1045	18	OAK	REMOVE
1046	18	HACKBERRY	SAVE
1047	12	LOCUST	SAVE
1048	12	LOCUST	SAVE
1049	18	OAK	SAVE
1050	8	CEDAR	SAVE
1051	12	LOCUST	SAVE
1052	12	LOCUST	SAVE
1053	12	OAK	REMOVE
1054	12	LOCUST	REMOVE
1055	12	HACKBERRY	REMOVE
1056	8	OSAGE-ORANGE	REMOVE
1057	18	OAK	REMOVE
1058	8	OSAGE-ORANGE	REMOVE
1059	36	OAK	REMOVE
1060	12	CEDAR	REMOVE
1061	12	OSAGE-ORANGE	REMOVE
1062	30	OAK	REMOVE
1063	12	OSAGE-ORANGE	REMOVE
1064	8	OAK	REMOVE
1065	12	LOCUST	SAVE
1066	8	HACKBERRY	SAVE
1067	24	MAPLE	REMOVE
1068	12	OSAGE-ORANGE	REMOVE
1069	24	HACKBERRY	REMOVE
1070	12	HACKBERRY	REMOVE
1071	24	OAK	REMOVE
1072	24	OAK	REMOVE
1073	12	HACKBERRY	OFF PROPERTY
1074	24	HACKBERRY	SAVE
1075	24	HACKBERRY	SAVE
1076	18	OAK	SAVE
1077	24	HACKBERRY	SAVE
1078	30	HACKBERRY	SAVE
1079	8	OAK	SAVE
1080	12	HACKBERRY	SAVE
1081	24	HACKBERRY	SAVE
1082	12	HACKBERRY	SAVE
1083	18	OAK	SAVE
1084	24	HACKBERRY	SAVE
1085	12	HACKBERRY	SAVE
1086	24	HACKBERRY	SAVE
1087	24	HACKBERRY	SAVE
1088	24	HACKBERRY	SAVE
1089	18	HACKBERRY	SAVE
1090	18	HACKBERRY	SAVE
1091	24	HACKBERRY	SAVE
1092	24	HACKBERRY	SAVE
1093	8	OAK	SAVE
1094	12	CEDAR	SAVE
1095	24	HACKBERRY	SAVE
1096	24	HACKBERRY	SAVE
1097	12	HACKBERRY	SAVE
1098	12	HACKBERRY	SAVE
1099	18	HACKBERRY	SAVE
1100	18	HACKBERRY	SAVE
1101	8	CEDAR	SAVE
1102	18	HACKBERRY	SAVE
1103	18	HACKBERRY	SAVE
1104	18	HACKBERRY	SAVE
1105	18	HACKBERRY	SAVE
1106	18	HACKBERRY	SAVE
1107	18	HACKBERRY	SAVE
1108	18	HACKBERRY	SAVE
1109	18	HACKBERRY	SAVE
1110	8	CEDAR	SAVE
1111	30	HACKBERRY	SAVE
1112	18	HACKBERRY	SAVE
1113	12	MAPLE	REMOVE
1114	18	HACKBERRY	SAVE
1115	18	HACKBERRY	SAVE
1116	24	HACKBERRY	SAVE
1117	12	HACKBERRY	SAVE
1118	24	HACKBERRY	SAVE
1119	24	OAK	SAVE
1120	12	HACKBERRY	SAVE
1121	12	HACKBERRY	SAVE
1122	12	HACKBERRY	SAVE
1123	8	HACKBERRY	SAVE
1124	12	HACKBERRY	SAVE
1125	18	MAPLE	SAVE
1126	18	HACKBERRY	SAVE
1127	24	CEDAR	SAVE
1128	24	HACKBERRY	SAVE
1129	18	HACKBERRY	SAVE
1130	30	HACKBERRY	SAVE
1131	24	HACKBERRY	SAVE
1132	18	HACKBERRY	SAVE
1133	8	SAVE	SAVE
1134	24	HACKBERRY	SA

LANDSCAPE CALCULATIONS

LOT AREA	45.02 ACRES	
ACI: EXISTING TREES TO BE PRESERVED	10,477	
	REQUIRED	PROVIDED
REQUIRED TREES:		
70 ACI / ACRE	3151.40	5,238
REQUIRED REPLACEMENT TREES:	4727.10	5,238
STREET YARD:		
LONG HOLLOW PIKE (1201 LF)		
1 TREE/50 LF FRONTAGE	24.02	31

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

PLANS PREPARED FOR:

PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:

DEVELOPMENT MANAGEMENT GROUP, LLC
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5663
www.dmgnashville.com

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

KYLE B SMITH
REGISTERED LANDSCAPE ARCHITECT
TENNESSEE
4/29/26

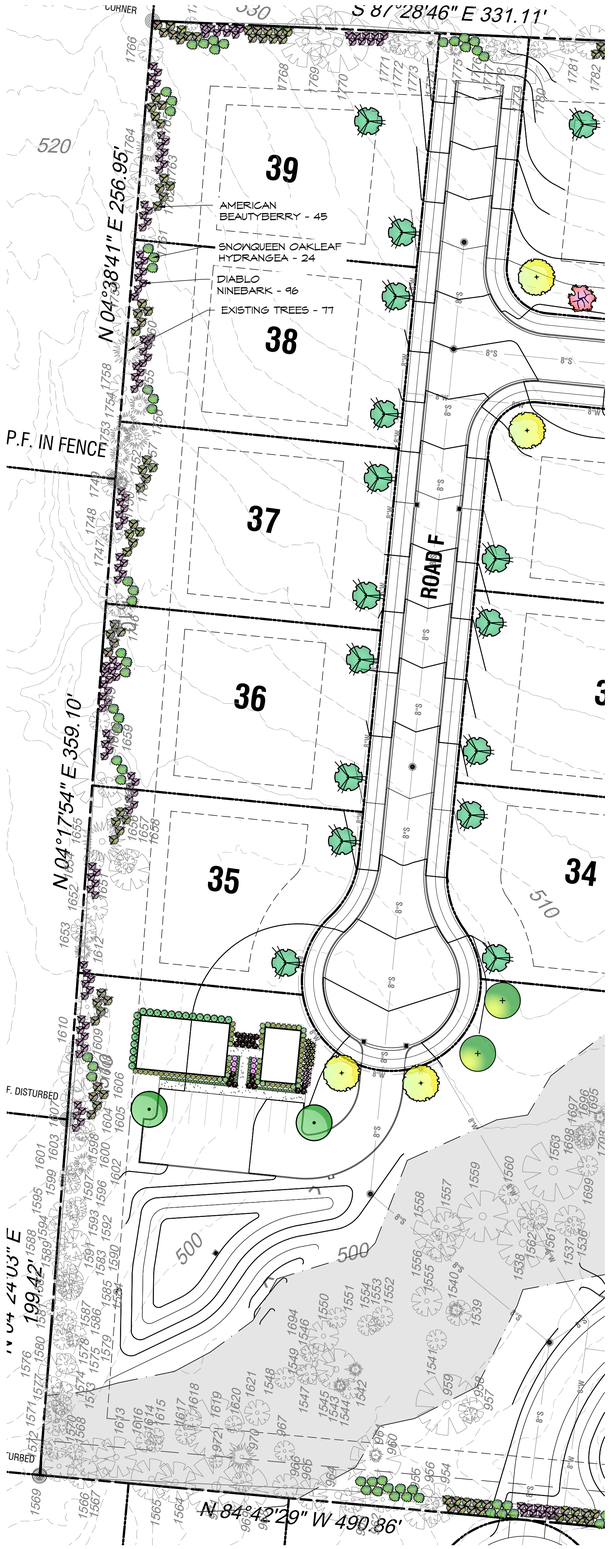
REVISIONS

NO.	DESCRIPTION	DATE

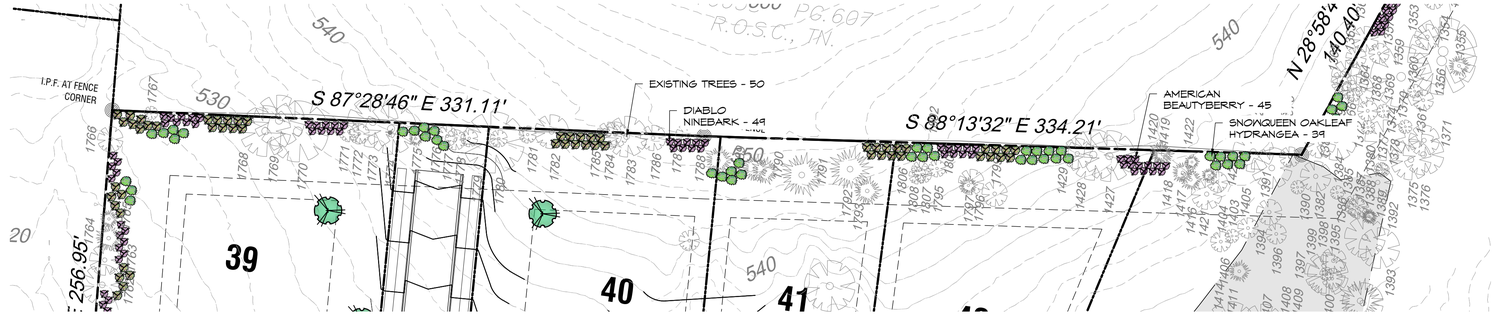
DATE:	03/30/26
DMG Project No:	25184

LANDSCAPE PLAN

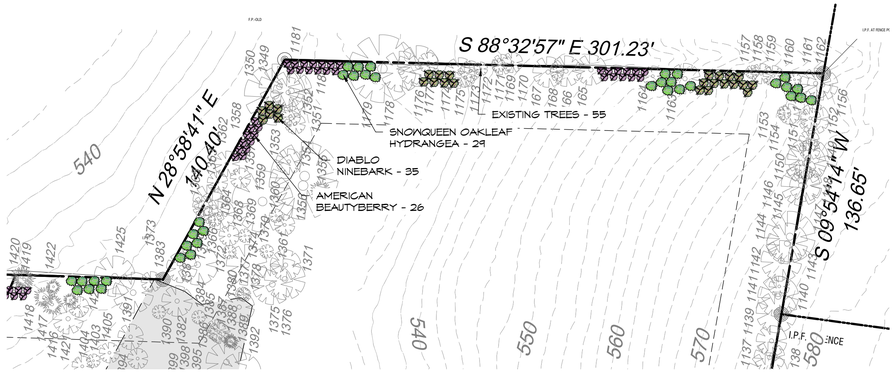
L1.0



BUFFER A



BUFFER B



BUFFER C

BUFFER D

BUFFER A: TYPE 1		
TYPE 1 BUFFER 815.47 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	48.93	77 EXISTING
20 SHRUBS / 100 LF	163.09	165

BUFFER B: TYPE 1		
TYPE 1 BUFFER 665.32 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	39.92	50 EXISTING
20 SHRUBS / 100 LF	133.06	133

BUFFER C: TYPE 1		
TYPE 1 BUFFER 441.63 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	26.50	55 EXISTING
20 SHRUBS / 100 LF	88.33	90

BUFFER D: TYPE 1		
TYPE 1 BUFFER 490.86 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	29.45	33 EXISTING
20 SHRUBS / 100 LF	98.17	99

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0 10 20 30 40 80 120

SCALE 1" = 40'

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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2819 BRANSFORD AVE.
NASHVILLE, TN 37204
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PLANS PREPARED BY:
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TELE:(615) 227-5863
www.dmgnashville.com
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SUMNER COUNTY, TENNESSEE

KYLE B. SMITH
REGISTERED
LANDSCAPE ARCHITECT
4/29/26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	03/30/26
DMG Project No:	25184

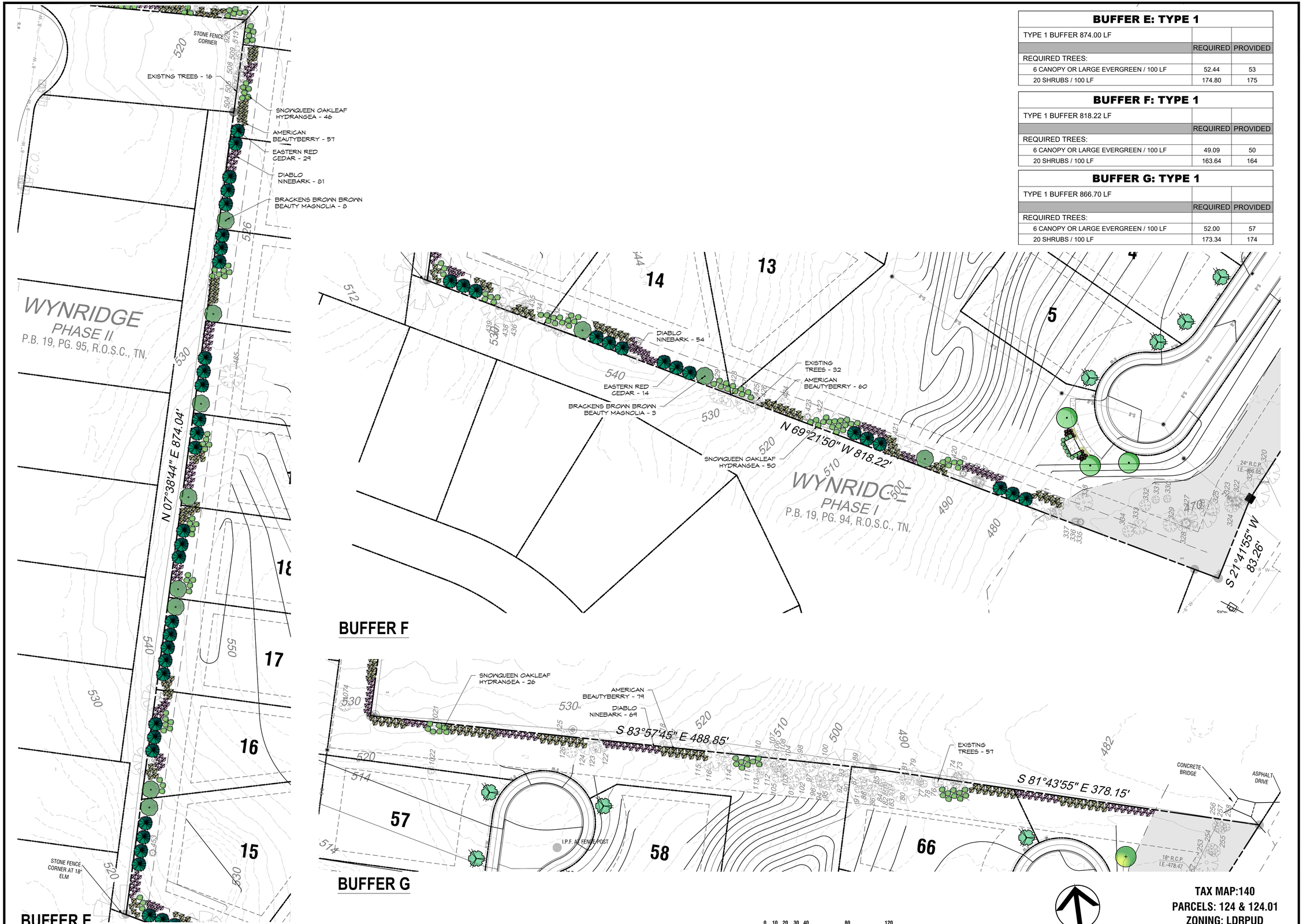
BUFFER PLAN

L1.1

BUFFER E: TYPE 1		
TYPE 1 BUFFER 874.00 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	52.44	53
20 SHRUBS / 100 LF	174.80	175

BUFFER F: TYPE 1		
TYPE 1 BUFFER 818.22 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	49.09	50
20 SHRUBS / 100 LF	163.64	164

BUFFER G: TYPE 1		
TYPE 1 BUFFER 866.70 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	52.00	57
20 SHRUBS / 100 LF	173.34	174



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TENNESSEE LANDSCAPE ARCHITECT
4/29/26

REVISIONS		
NO.	DATE	DESCRIPTION

DATE:	03/30/26
DMG Project No:	25184

BUFFER PLAN

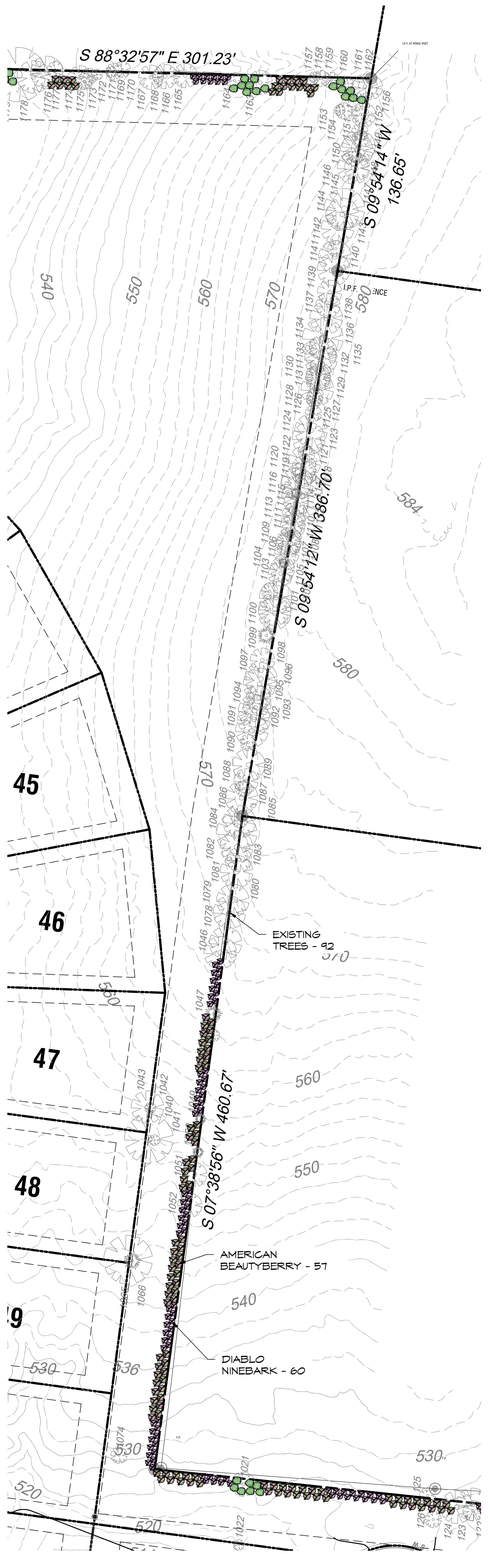
L1.11

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 10 20 30 40 80 120

SCALE 1" = 40'



BUFFER H: TYPE 1		
TYPE 1 BUFFER 984.00 LF		
	REQUIRED	PROVIDED
REQUIRED TREES:		
6 CANOPY OR LARGE EVERGREEN / 100 LF	59.04	92
20 SHRUBS / 100 LF	196.80	117

BUFFER H

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 25 50 100 150

SCALE 1" = 50'

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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TENNESSEE
LANDSCAPE ARCHITECT
4/29/26

REVISIONS

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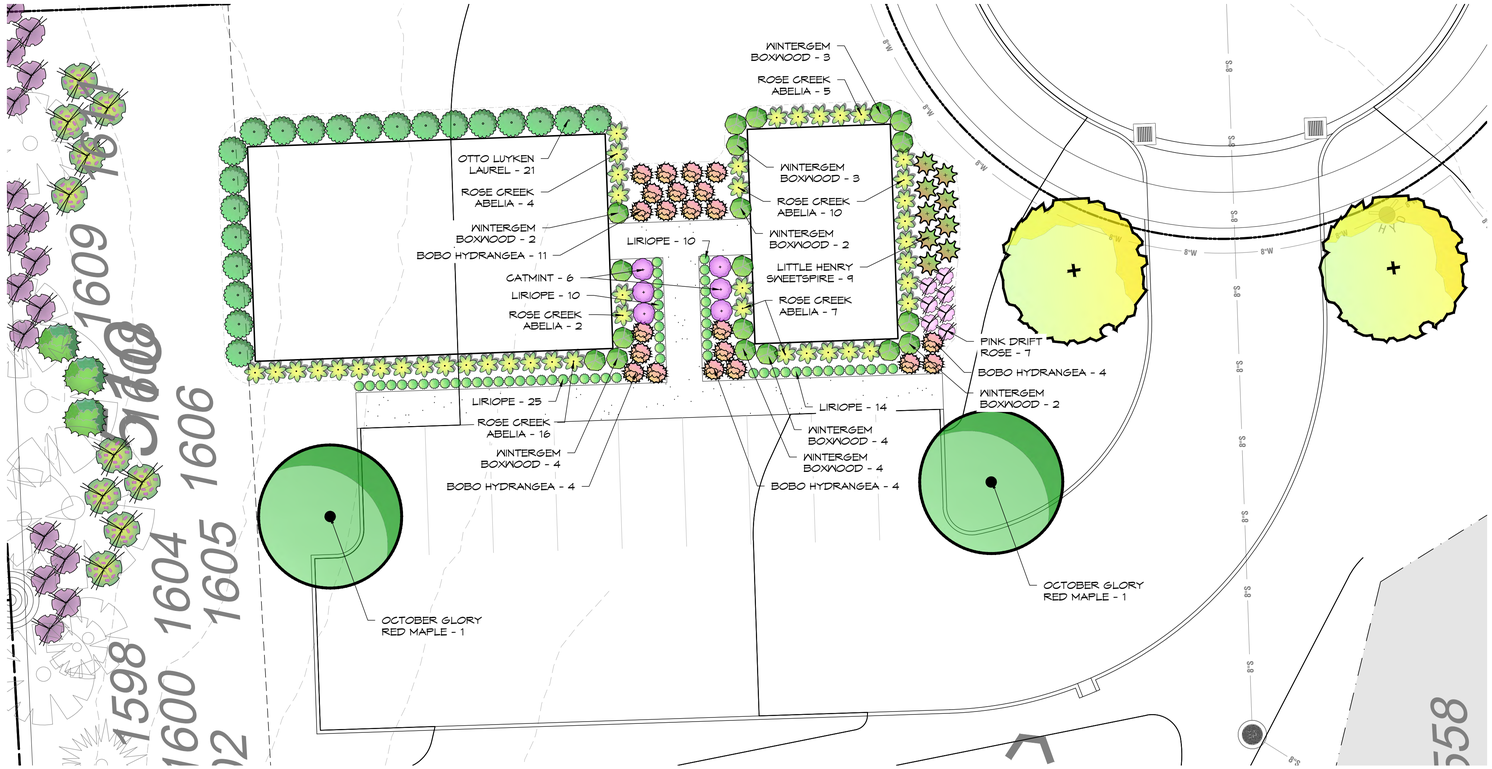
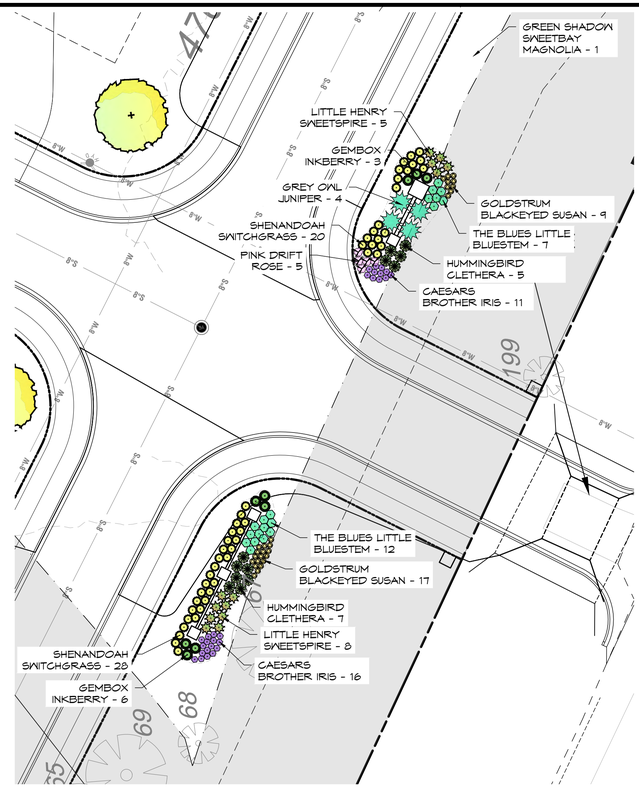
DATE:	03/30/26
DMG Project No:	25184

BUFFER PLAN

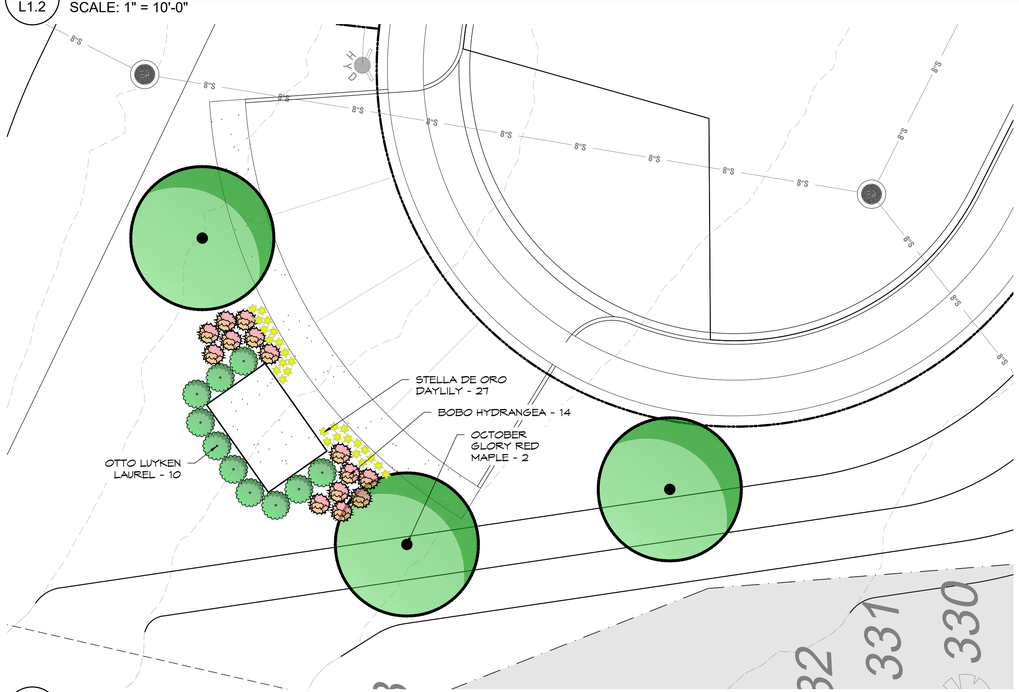
L1.11



1 L1.2 AMENITY CENTER PLANTING PLAN
SCALE: 1" = 10'-0"



2 L1.2 ENTRY MONUMENT PLANTING
SCALE: 1" = 10'-0"



3 L1.2 MAIL KIOSK PLANTING PLAN
SCALE: 1" = 10'-0"

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REGISTERED LANDSCAPE ARCHITECT
TENNESSEE
4/29/26

REVISIONS

NO.	DATE	DESCRIPTION

DATE:	03/30/26
DMG Project No:	25184

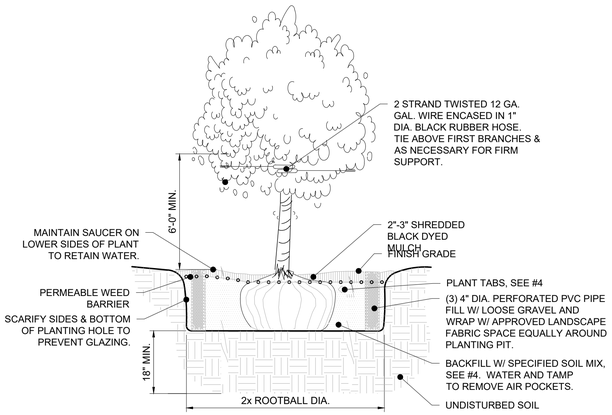
AMENITY PLANTING PLAN
L1.2

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

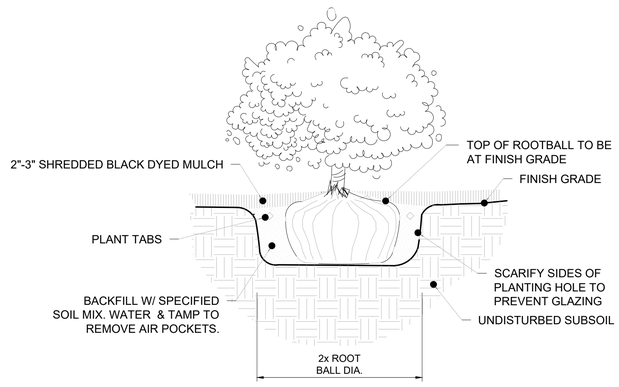
AS NOTED

NOTES:
1. TOP OF ROOTBALL TO BE AT FINISHED GRADE.
2. RUN (1) DRIP TUBE TO EACH 4" DIA. DRAIN PIPE.
3. SIDES OF PLANTER PIT ARE TO BE VERTICAL, BOTTOM IS TO BE FLAT AND UNCOMPACTED.
4. FILL PLANTER PITS WITH WATER PRIOR TO PLANTING. ANY PITS THAT DO NOT DRAIN ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER.



TYPICAL TREE PLANTING DETAIL
NOT TO SCALE

NOTES:
1. TOP OF ROOTBALL TO BE AT FINISHED GRADE.
2. SIDES OF PLANTER PIT ARE TO BE VERTICAL, BOTTOM IS TO BE FLAT AND UNCOMPACTED.
3. FILL PLANTER PITS WITH WATER PRIOR TO PLANTING. ANY PITS THAT DO NOT DRAIN ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER.
4. EXCAVATE WIDTH OF PLANTING PIT TO 2 TIMES THE WIDTH OF ROOTBALL.



SHRUB PLANTING DETAIL
NOT TO SCALE

LANDSCAPE GENERAL NOTES:

1. NO PLANT SUBSTITUTIONS, TYPE OR QUANTITY DEVIATION FROM THE APPROVED LANDSCAPE PLANS SHALL BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT, AND THE CITY OF GOODLETTSVILLE.
2. ALL PLANT MATERIAL AND SPECIFICATIONS TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1)
3. COORDINATE WORK WITH ALL TRADES.
4. CONTRACTOR SHALL HAVE PROJECT BLUE STAKED PRIOR TO COMMENCEMENT OF WORK.
5. ALL PLANT MATERIALS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT, OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
   TREE HEIGHT AND CALIPER SIZE IS TO COMPLY WITH STANDARD FOR NURSERY STOCK (ANSI Z60.1)
6. PER TREE SPECIES. NURSERY ASSOCIATION STANDARDS PER TREE SPECIES.
7. CONTRACTOR TO STAKE LOCATIONS OF ALL PLANT MATERIAL FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
8. TOP OF SHREDDED BLACK DYED MULCH SHALL BE 1" BELOW ADJACENT TOP OF CURBS OR PAVEMENT.
9. LANDSCAPE AREAS SHALL BE AT +/- .10 OF A FOOT FROM FINISHED GRADE PRIOR TO THE COMMENCEMENT OF WORK. ALL GRADING SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO THE INSTALLATION OF PLANT MATERIALS, OR THE IRRIGATION SYSTEM.
10. ALL TREES TO BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE.
11. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL WALLS AND STRUCTURES.
12. ALL SLOPES NOT TO EXCEED 4:1 IN LANDSCAPED AREAS.
13. CONTRACTOR IS TO VERIFY ALL QUANTITIES BASED ON THE APPROVED LANDSCAPE PLAN.
14. CONTRACTOR TO VISIT SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK. ALL POTENTIAL CONFLICTS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, OR OWNER'S REPRESENTATIVE IMMEDIATELY.
15. CONTRACTOR SHALL PROTECT ALL EXISTING PAVEMENT AND LANDSCAPE TO REMAIN THROUGHOUT CONSTRUCTION ALL DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT NO EXPENSE TO THE OWNER.
16. CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN. ANY AND ALL DEVIATION WILL SERVICES PRIOR TO CERTIFICATE OF OCCUPANCY BEING ISSUED.
17. ALL LANDSCAPE AREAS & MATERIALS SHALL BE MAINTAINED IN A HEALTHY, NEAT, CLEAN, AND WEED-FREE CONDITION DURING CONSTRUCTION. THIS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
18. AREAS WITHIN THE SIGHT DISTANCE TRIANGLE SHALL BE KEPT CLEAR OF ANY OBSTRUCTIONS WITH A HEIGHT GREATER THAN 2'-0". TREE CANOPIES SHALL BE KEPT HIGHER THAN 7'-0"
19. COMMON LANDSCAPE AREAS SHALL BE MAINTAINED BY THE OWNER AND/OR ASSOCIATION.
20. ALL PLANTING SHALL BE MAINTAINED IN HEALTHY GROWING CONDITION. FERTILIZATION, CULTIVATION, AND PRUNING SHALL BE CARRIED OUT ON A REGULAR BASIS.
21. DEAD OR DYING PLANTS SHALL BE REMOVED AND REPLACED PROMPTLY.

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

ISSUED FOR: ☐ CHECKSET ☒ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

AS NOTED

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4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

KYLE B. SMITH — REGISTERED — TENNESSEE — LANDSCAPE ARCHITECT
4/29/26

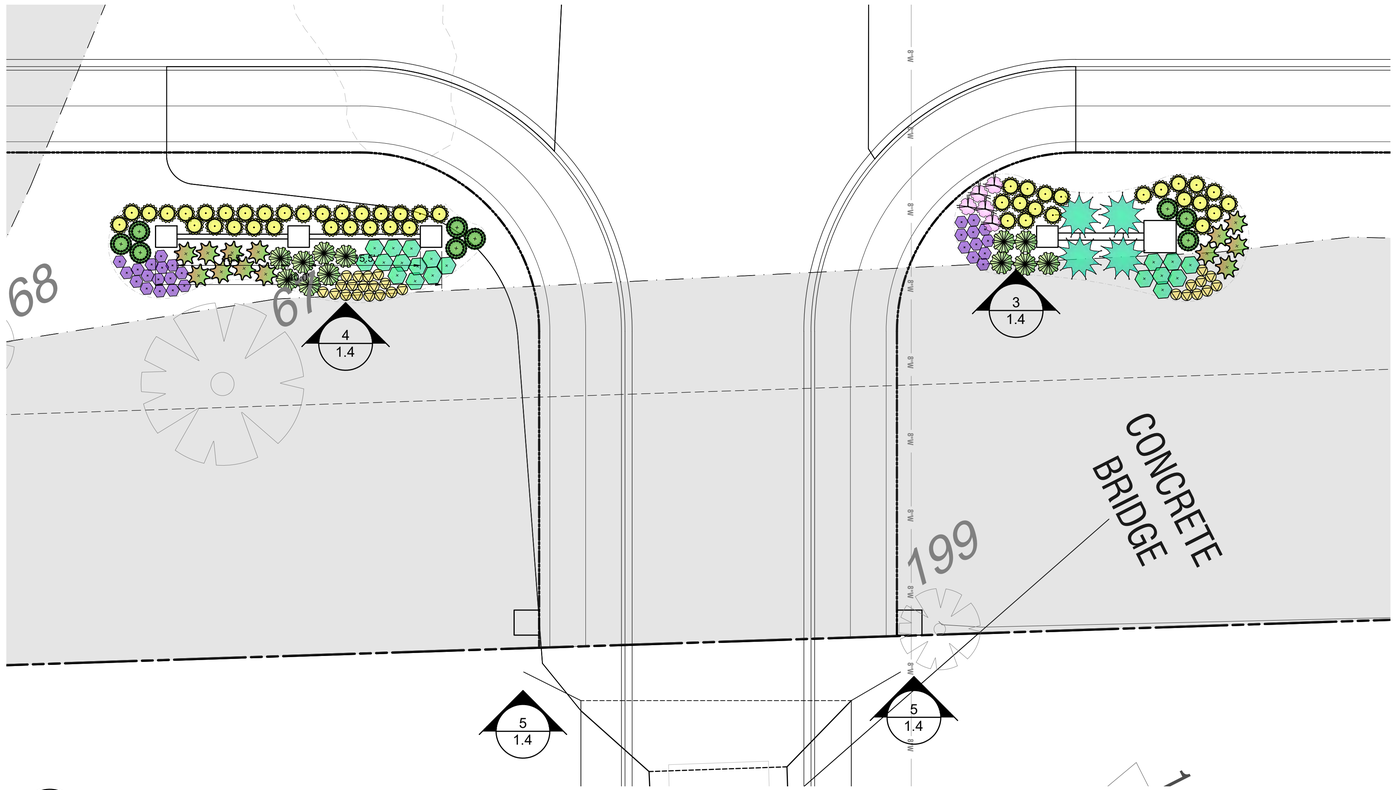
REVISIONS:

NO.	DESCRIPTION	DATE

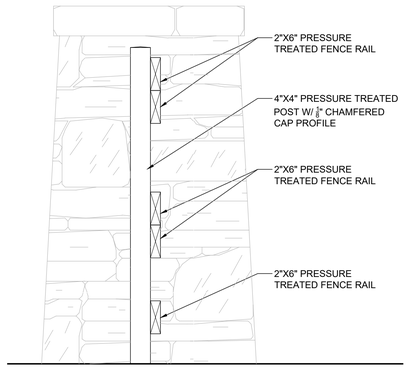
DATE:	03/30/26
DMG Project No:	25184

PLANTING NOTES, DETAILS, & SCHEDULE

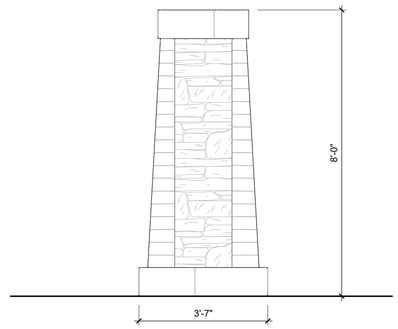
L1.3



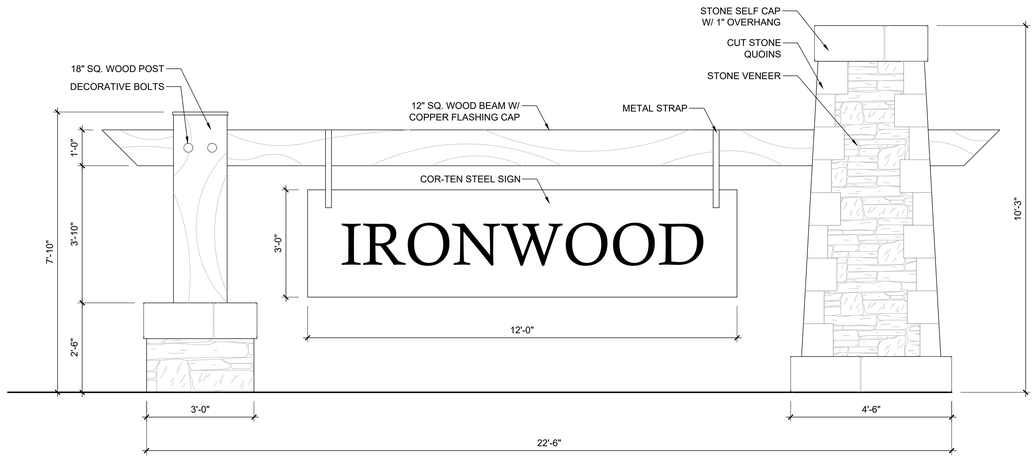
1 / L1.4 IRONWOOD ENTRY MONUMENT LAYOUT
SCALE: 1" = 10'-0"



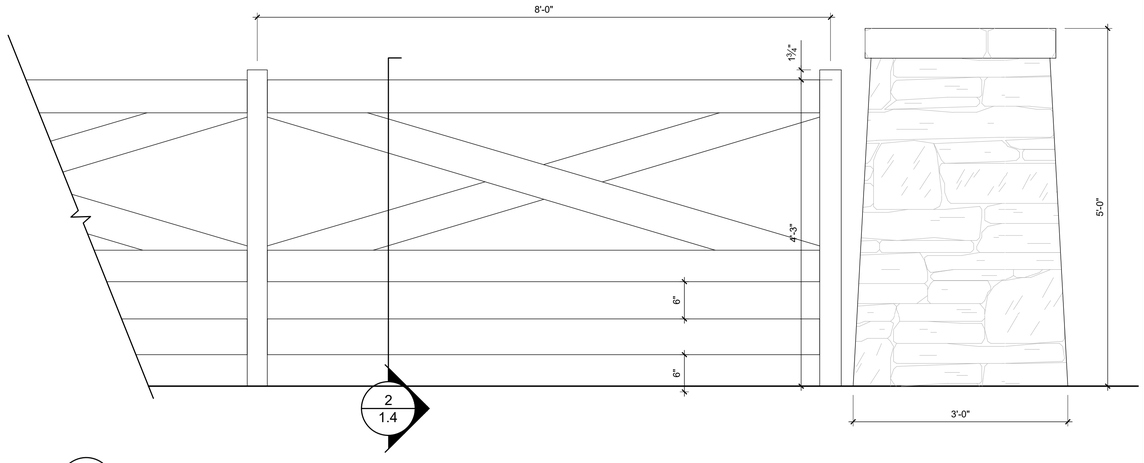
2 / L1.4 5 RAIL FENCE SECTION
SCALE: 1" = 1'-0"



5 / L1.4 ENTRY MONUMENT
SCALE: ½" = 1'-0"



3 / L1.4 ENTRY SIGNAGE MONUMENT
SCALE: ½" = 1'-0"



4 / L1.4 5 RAIL FENCE ELEVATION
SCALE: 1" = 1'-0"

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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ENTRY LAYOUT AND DETAILS

L1.4

STORM WATER DRAINAGE CALCULATIONS

Prepared for

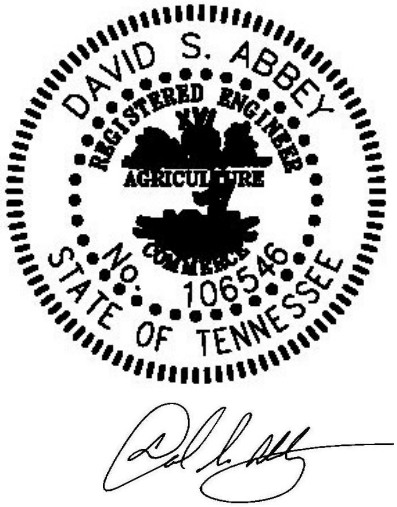
Ironwood Residential Development

4408 Long Hollow Pike
Goodlettsville, Sumner County, Tennessee

April 06, 2026

Prepared By

David S. Abbey, PE
4209 Gallatin Pike
Nashville, Tennessee 37216



Ironwood Residential Development
4408 Long Hollow Pike
Goodlettsville, Sumner County, Tennessee
Stormwater Hydraulic Calculations

Prepared by
DMG; Project No. 25184

Overview

Proposed on the subject property is a subdivision development, creating multiple new roadways, utility appurtenances, and stormwater conveyance improvement for the development of 66 single family residential lots. The project site is located north of Wynridge subdivision, past the Long Hollow Pike / Madison Creek Rd intersection in Goodlettsville, Tn. The existing site is zoned as Low Density Residential Planned Unit Development (LDRPUD) and currently is existing farmland. The proposed parcel is bordered to the north by residential property, to the east by Long Hollow Pike, to the south by Wynridge, and to the west by more single-family residential. Access for the site will be provided by a curb cut along Long Hollow Pike.

The existing site is being utilized as farmland and has a single farmhouse with some disconnected barns and storage sheds. The existing site has two drainageways, an unnamed perennial stream (Existing Area 1) to the rear of the site and Madison Creek (Existing Area 2) which runs along Long Hollow Pike. The site has an existing ridgeline through the middle of the site, separating the two areas to drain east and west to the respective conveyances. Both waterways converge downstream into a lower area of Madison Creek (TN05130202220_0400). Madison Creek is not supporting and is impaired by sedimentation and habitat alteration.

The proposed site will be treated by a network of dry detention basins in series with water quality units downstream of the pond. Ponds 1 and 2 will drain to Madison Creek (Proposed Area 2), while Ponds 3, 4, and 5 will discharge to the perennial stream in the rear of the site (Proposed Area 1). The site has been designed to follow existing drainage areas to the best extent possible. See Attachment 1 in the appendix for existing and proposed drainage maps.

The proposed project lies within 'Flood Zone X', per graphical analysis of the FEMA FIRM map, which is outside of the 100-yr regulatory floodplain. (See Attachment 5 in the appendix).

Storm Water Design

Due to the natural drainage pattern of the project site, the outfall criteria falls under the City of Goodlettsville jurisdiction. The proposed development will add impervious area, which makes the post-development CN value greater than the pre-development CN value for the site. Therefore, the proposed project will be required to meet both water quality and quantity requirements, as set forth in the current regulations.

Existing Conditions

Under existing conditions, the 44.31-acre site consists of two main drainage areas. USGS soils maps indicate primarily C-type soils, with A and B-type soils near Madison Creek. Both drainage areas were evaluated using SCS methodology for CN and Tc values, which are shown on the drainage maps and in the hydrographs report provided in Attachment 2. CN values were approx. 79 for the ± 20.44-ac Area 1 and 72 for the ± 23.87-ac Area 2. Tc Values were calculated at 13.2-mins and 10.1-mins, respectively. Using the AutoCAD Hydrographs extension, the existing peak flows for the two areas are as follows:

Return Period of Storm	Existing Outfall 1 Pre-Development Flow (cfs)	Existing Outfall 2 Pre-Development Flow (cfs)
1 year	31.82	23.45
2 year	44.07	35.56
5 year	61.77	53.39
10 year	76.87	69.04
25 year	98.39	92.34
50 year	116.09	111.95
100 year	134.43	132.55

Proposed Conditions

Under proposed conditions, the five (5) proposed ponds will treat runoff conveyed as either sheet flow, or by a system of pipe networks. Areas not captured by the ponds are intended to bypass. These areas have been quantified and are included with the overall areas to the two outfalls.

Each Pond was set up in a similar manner. The 1-year volume was run through a 4” orifice set at the bottom of the pond. The water surface elevation for that routing was used to set a 6” weir to control higher event storms. The top of the outlet structure was set 2 ft below the top of pond, and a 10-ft emergency overflow weir was set 1 foot below the top of berm. Pond areas and heights were then adjusted to meet attenuation of the 100-yr event storms, while still maintaining 12” of freeboard. Actual values for each outlet control structure are shown on the ‘pond report’ sheets in the Hydrographs report. Once released through the control structure, the discharge will enter a 50% water quality unit. The detention pond and water quality unit will work in series of each other to provide 80% TSS removal, per the amended stormwater management ordinance 23-1071 of the City of Goodlettsville section 18-305 part 4. The proposed peak flows are as follows:

Return Period of Storm	Proposed Outfall 1 Post-Development Flow (cfs)	Proposed Outfall 2 Post-Development Flow (cfs)
1 year	30.52	11.89
2 year	42.05	17.89
5 year	63.59	28.47
10 year	76.52	43.59
25 year	94.25	74.85
50 year	111.39	101.27
100 year	128.58	131.31

Water Quality

The upsized 50% TSS water quality unit, in conjunction with the dry pond providing 60% TSS removal, the treatment train will provide 80% TSS removal for the site. TR = A + (1-A) x B = [0.5 + (1-0.5) x 0.6] x 100 = 80% Detention-only facilities must be used in a treatment train approach with other structural controls that provide treatment of the WQv. This type of facility should provide 60% TSS removal under typical urban post-development runoff when sized, designed, constructed and maintained in accordance with the specifications provided in the design manual.

Pipe Network

Using AutoCAD's Storm Sewers extension, the 7 traditional pipe networks on site were sized for the 10-yr event. The results of this analysis, along with profiles and hydraulic grade lines, are provided in Attachment 3.

Attachments

Attachment 1 Drainage Plan & Map

Attachment 2 Hydrographs Model

Attachment 3 Storm Sewers Model

Attachment 4 Hydrologic Soil Information

Attachment 5 FEMA FIRM

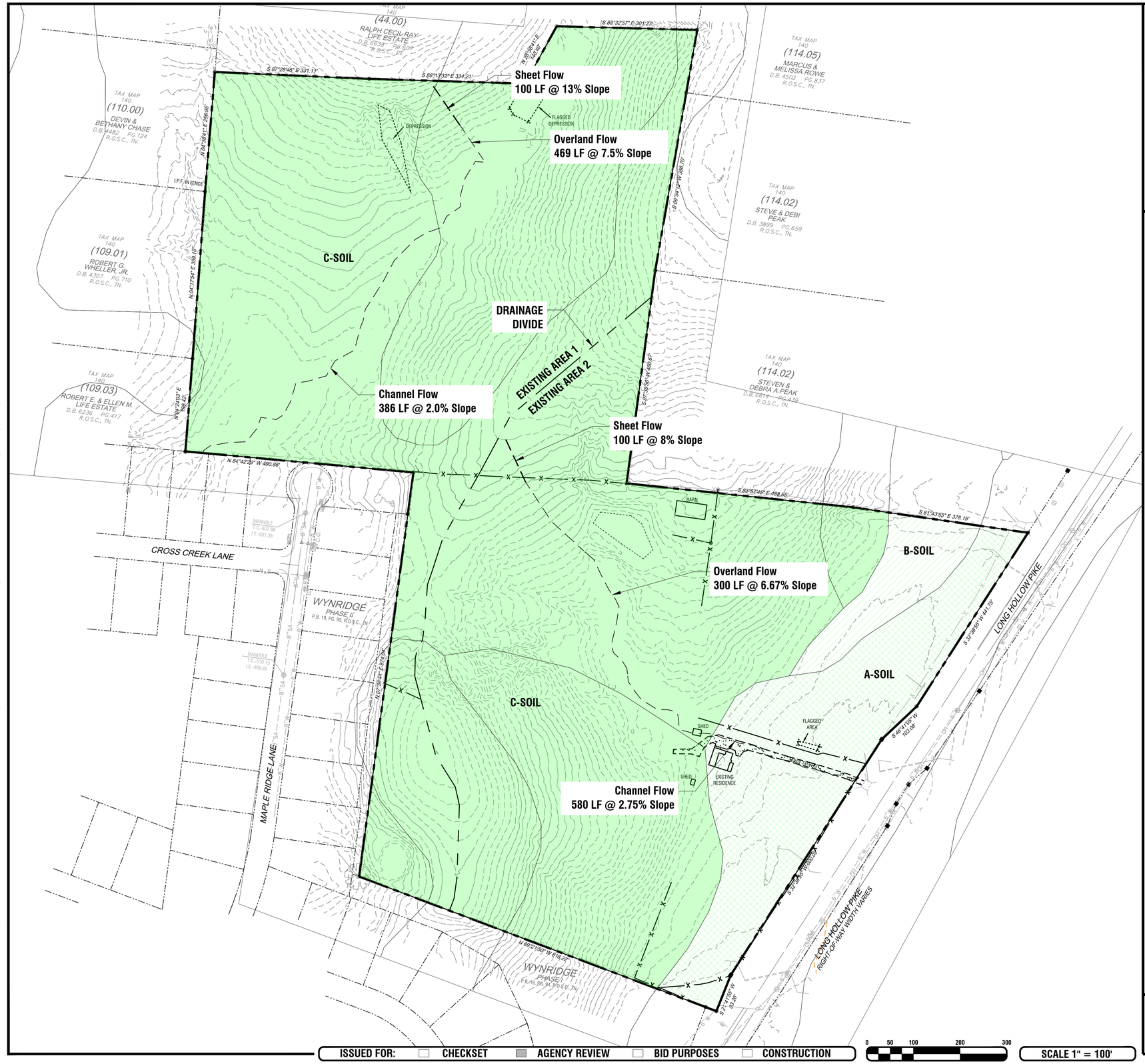
Attachment 6 Atlas 14 Precipitation/Intensity Data

Attachment 7 Vendor Supplied Calculations

Attachment 8 NJCAT Testing for Water Quality Unit

Attachment 1

Proposed Drainage Plan & Maps



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0 50 100 200 300

SCALE 1" = 100'

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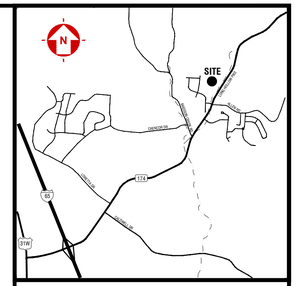

VICINITY MAP

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/2017.

DISTURBED AREA:
TOTAL DISTURBED AREA = ____ ACRES±

SURVEY NOTE:
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EXISTING AREA 1				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		0.000	98	0.0
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	20.442	79	79.0
		20.442		79.0

EXISTING AREA 2				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		0.000	98	0.0
Pervious	A	4.978	49	10.2
Pervious	B	1.088	69	3.1
Pervious	C	17.804	79	58.9
		23.869		72.3

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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NASHVILLE, TN 37204
615-922-3313

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NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

NO.	DATE	DESCRIPTION

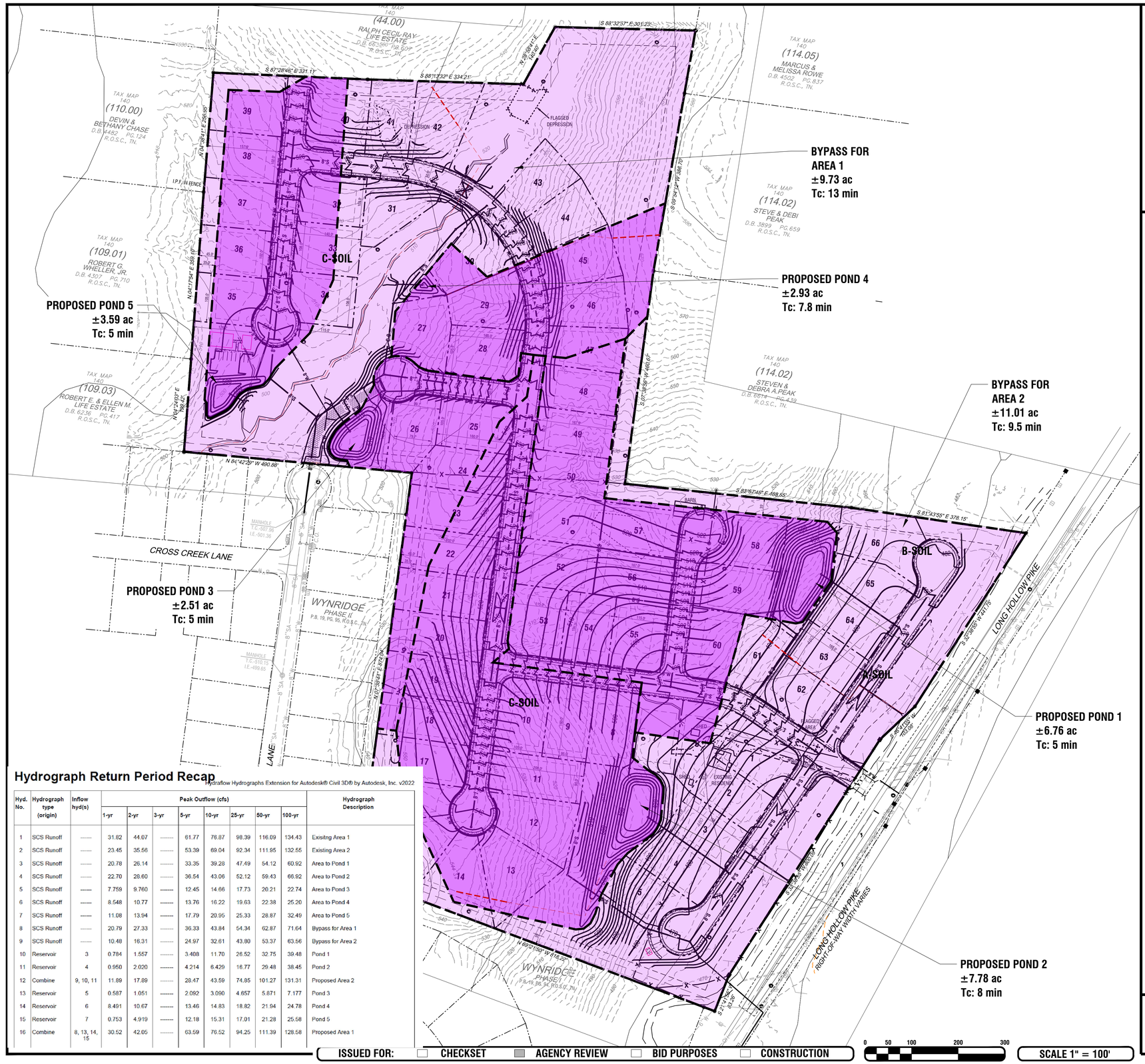
DAVID S. OBEY — REGISTERED ENGINEER — AGRICULTURE — STATE OF TENNESSEE — 2026

DATE:	03/30/26
DMG Project No:	25184

EXISTING DRAINAGE MAP

EXHIBIT

\\192.168.1.7\data\PROJECT DATABASE\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike - Goodlettsville TN\Plans\Engineer\25184 - Ironwood - Stormwater.dwg-Existing Drainage Map Apr 06, 2026 - 2:35pm MarkAnno



Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

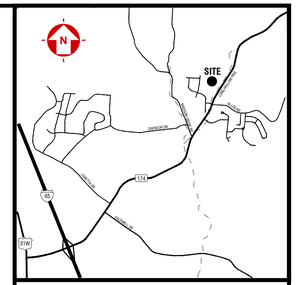
Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs) 1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	Hydrograph Description
1	SCS Runoff	-------	31.82	44.07	-------	61.77	78.87	98.39	116.09	134.43	Exisitng Area 1
2	SCS Runoff	-------	23.45	35.56	-------	53.39	69.04	92.34	111.85	132.55	Existing Area 2
3	SCS Runoff	-------	20.78	26.14	-------	33.35	39.28	47.49	54.12	60.92	Area to Pond 1
4	SCS Runoff	-------	22.70	28.60	-------	36.54	43.06	52.12	59.43	66.92	Area to Pond 2
5	SCS Runoff	-------	7.759	9.760	-------	12.45	14.66	17.73	20.21	22.74	Area to Pond 3
6	SCS Runoff	-------	8.548	10.77	-------	13.76	16.22	19.63	22.38	25.20	Area to Pond 4
7	SCS Runoff	-------	11.08	13.94	-------	17.79	20.95	25.33	28.87	32.49	Area to Pond 5
8	SCS Runoff	-------	20.79	27.33	-------	36.33	43.84	54.34	62.87	71.64	Bypass for Area 1
9	SCS Runoff	-------	10.48	16.31	-------	24.97	32.61	43.80	53.37	63.56	Bypass for Area 2
10	Reservoir	3	0.784	1.557	-------	3.408	11.70	26.52	32.75	39.48	Pond 1
11	Reservoir	4	0.950	2.020	-------	4.214	6.429	16.77	29.48	38.45	Pond 2
12	Combine	9, 10, 11	11.89	17.89	-------	28.47	43.59	74.85	101.27	131.31	Proposed Area 2
13	Reservoir	5	0.587	1.051	-------	2.092	3.090	4.657	5.871	7.177	Pond 3
14	Reservoir	6	8.491	10.67	-------	13.46	14.83	18.82	21.94	24.78	Pond 4
15	Reservoir	7	0.753	4.919	-------	12.18	15.31	17.01	21.28	25.58	Pond 5
16	Combine	8, 13, 14, 15	30.52	42.05	-------	63.59	76.52	94.25	111.39	128.58	Proposed Area 1

ISSUED FOR: ☐ CHECKSET ▩ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

Know what's below. Call before you dig.



VICINITY MAP

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POND 1				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		4.054	98	58.8
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	2.703	79	31.6
Pervious	D	0.000	84	0.0
		6.757		90.4

POND 2				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		4.666	98	58.8
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	3.111	79	31.6
Pervious	D	0.000	84	0.0
		7.777		90.4

POND 3				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		1.508	98	58.8
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	1.005	79	31.6
Pervious	D	0.000	84	0.0
		2.513		90.4

POND 4				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		1.758	98	58.8
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	1.172	79	31.6
Pervious	D	0.000	84	0.0
		2.930		90.4

POND 5				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		2.156	98	58.8
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	1.437	79	31.6
Pervious	D	0.000	84	0.0
		3.593		90.4

BYPASS FOR AREA 1				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		2.920	98	29.4
Pervious	A	0.000	49	0.0
Pervious	B	0.000	69	0.0
Pervious	C	6.813	79	55.3
Pervious	D	0.000	84	0.0
		9.733		84.7

BYPASS FOR AREA 2				
Land Cover	HSG (Soil Type)	Area (ac)	CN	
Impervious		2.965	98	26.4
Pervious	A	4.978	49	22.2
Pervious	B	1.088	69	6.8
Pervious	C	1.977	79	14.2
Pervious	D	0.000	84	0.0
		11.007		69.6

TAX MAP:140
PARCELS: 124 & 124.01
ZONING: LDRPUD

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REGISTERED ENGINEER
AGRICULTURE
COMMERCIAL
RESIDENTIAL
STATE OF TENNESSEE
03/26

REVISIONS

NO.	DESCRIPTION	DATE

DATE: 03/30/26
DMG Project No: 25184

PROPOSED DRAINAGE MAP

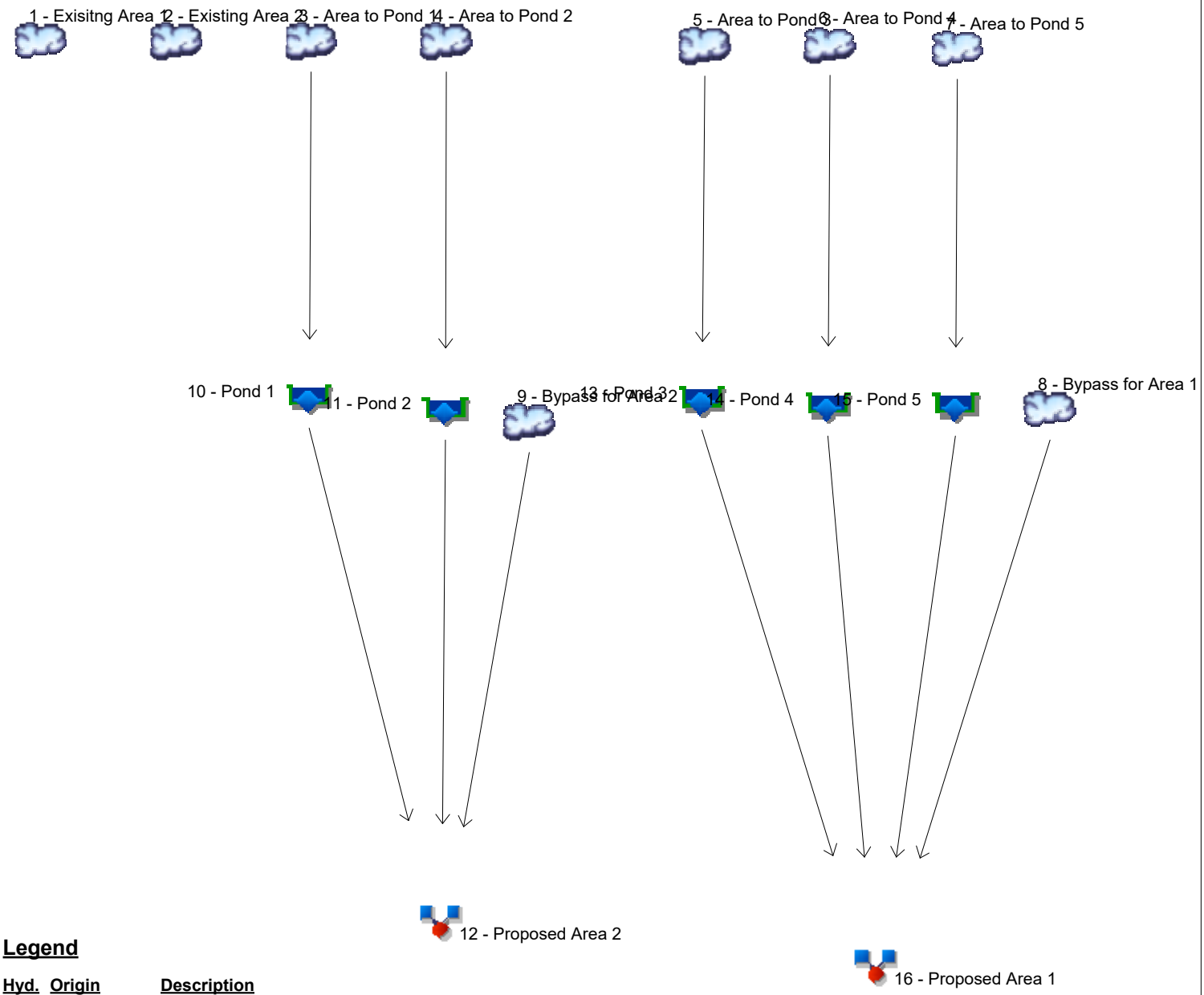
EXHIBIT

\\192.168.1.7\data\PROJECT DATABASE\2025\25184 – Phillips Builders – Residential Development – 4408 Long Hollow Pike – Goodlettsville TN\Plans\Engineer\25184 – Ironwood – Stormwater.dwg–Proposed Drainage Map Apr 06, 2026 – 2:37pm MarkAno

Attachment 2

Hydrographs Model

Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	SCS Runoff	Exisitng Area 1
2	SCS Runoff	Existing Area 2
3	SCS Runoff	Area to Pond 1
4	SCS Runoff	Area to Pond 2
5	SCS Runoff	Area to Pond 3
6	SCS Runoff	Area to Pond 4
7	SCS Runoff	Area to Pond 5
8	SCS Runoff	Bypass for Area 1
9	SCS Runoff	Bypass for Area 2
10	Reservoir	Pond 1
11	Reservoir	Pond 2
12	Combine	Proposed Area 2
13	Reservoir	Pond 3
14	Reservoir	Pond 4
15	Reservoir	Pond 5
16	Combine	Proposed Area 1

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	------	31.82	44.07	-------	61.77	76.87	98.39	116.09	134.43	Exisitng Area 1
2	SCS Runoff	------	23.45	35.56	-------	53.39	69.04	92.34	111.95	132.55	Existing Area 2
3	SCS Runoff	------	20.78	26.14	-------	33.35	39.28	47.49	54.12	60.92	Area to Pond 1
4	SCS Runoff	------	22.70	28.60	-------	36.54	43.06	52.12	59.43	66.92	Area to Pond 2
5	SCS Runoff	------	7.759	9.760	-------	12.45	14.66	17.73	20.21	22.74	Area to Pond 3
6	SCS Runoff	------	8.548	10.77	-------	13.76	16.22	19.63	22.38	25.20	Area to Pond 4
7	SCS Runoff	------	11.08	13.94	-------	17.79	20.95	25.33	28.87	32.49	Area to Pond 5
8	SCS Runoff	------	20.79	27.33	-------	36.33	43.84	54.34	62.87	71.64	Bypass for Area 1
9	SCS Runoff	------	10.48	16.31	-------	24.97	32.61	43.80	53.37	63.56	Bypass for Area 2
10	Reservoir	3	0.784	1.557	-------	3.408	11.70	26.52	32.75	39.48	Pond 1
11	Reservoir	4	0.950	2.020	-------	4.214	6.429	16.77	29.48	38.45	Pond 2
12	Combine	9, 10, 11	11.89	17.89	-------	28.47	43.59	74.85	101.27	131.31	Proposed Area 2
13	Reservoir	5	0.587	1.051	-------	2.092	3.090	4.657	5.871	7.177	Pond 3
14	Reservoir	6	8.491	10.67	-------	13.46	14.83	18.82	21.94	24.78	Pond 4
15	Reservoir	7	0.753	4.919	-------	12.18	15.31	17.01	21.28	25.58	Pond 5
16	Combine	8, 13, 14, 15	30.52	42.05	-------	63.59	76.52	94.25	111.39	128.58	Proposed Area 1

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	31.82	2	722	83,733	------	------	------	Exisitng Area 1
2	SCS Runoff	23.45	2	722	65,397	------	------	------	Existing Area 2
3	SCS Runoff	20.78	2	716	42,844	------	------	------	Area to Pond 1
4	SCS Runoff	22.70	2	718	52,673	------	------	------	Area to Pond 2
5	SCS Runoff	7.759	2	716	15,995	------	------	------	Area to Pond 3
6	SCS Runoff	8.548	2	718	19,837	------	------	------	Area to Pond 4
7	SCS Runoff	11.08	2	716	22,850	------	------	------	Area to Pond 5
8	SCS Runoff	20.79	2	720	53,895	------	------	------	Bypass for Area 1
9	SCS Runoff	10.48	2	720	25,731	------	------	------	Bypass for Area 2
10	Reservoir	0.784	2	810	42,821	3	485.75	24,653	Pond 1
11	Reservoir	0.950	2	814	52,652	4	490.63	30,609	Pond 2
12	Combine	11.89	2	720	121,204	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	0.587	2	750	15,981	5	508.29	7,849	Pond 3
14	Reservoir	8.491	2	720	19,836	6	511.40	1,979	Pond 4
15	Reservoir	0.753	2	754	22,841	7	501.59	11,083	Pond 5
16	Combine	30.52	2	720	112,552	8, 13, 14, 15	------	------	Proposed Area 1

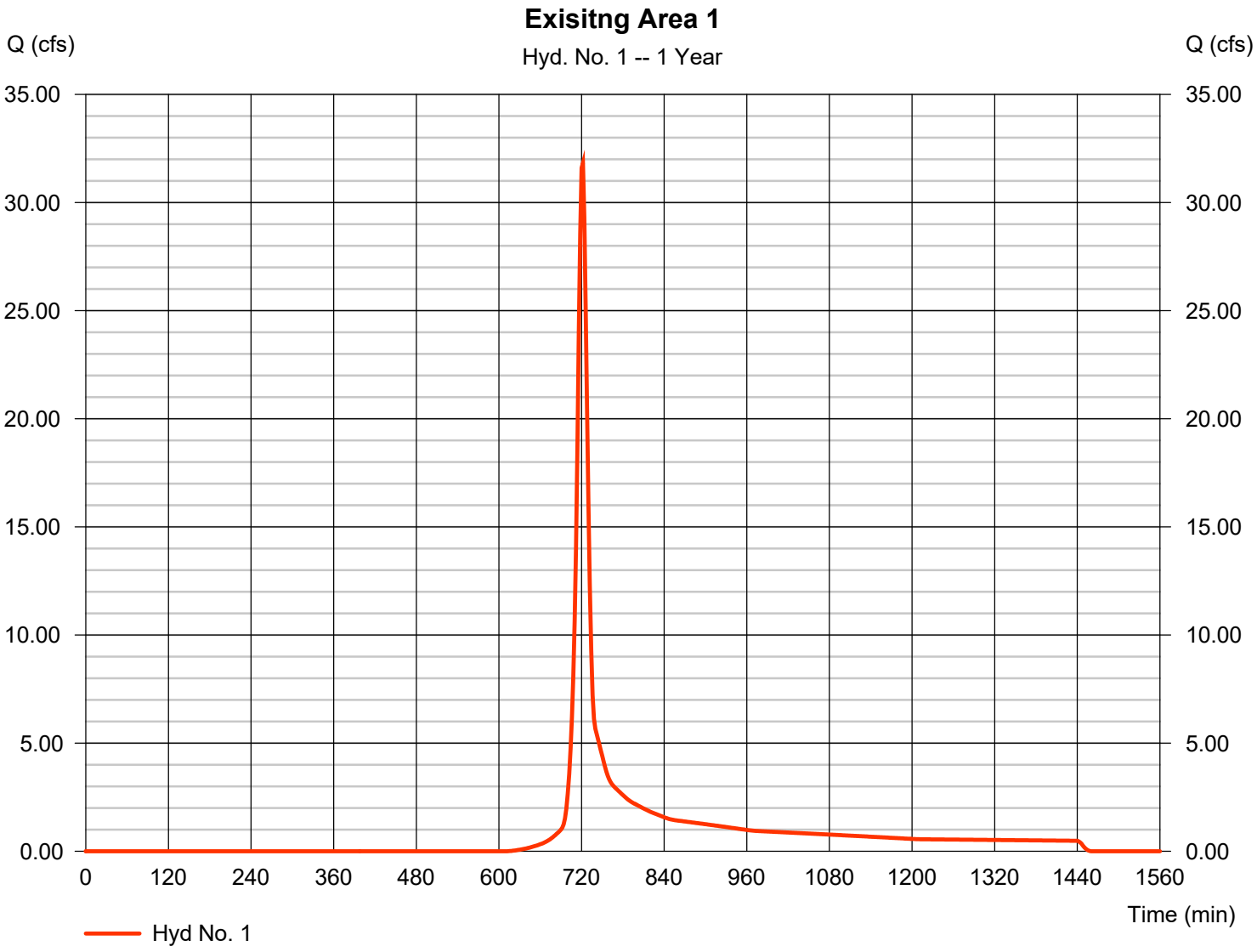
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	31.82 cfs
Storm frequency	=	1 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	83,733 cuft
Drainage area	=	20.440 ac	Curve number	=	79*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.20 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



TR55 Tc Worksheet

Hyd. No. 1

Exisitng Area 1

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.42		0.00		0.00		
Land slope (%)	= 14.00		0.00		0.00		
Travel Time (min)	**= 6.34**	**+**	**0.00**	**+**	**0.00**	**=**	**6.34**
Shallow Concentrated Flow							
Flow length (ft)	= 90.00		961.00		0.00		
Watercourse slope (%)	= 11.00		2.30		0.00		
Surface description	= Unpaved		Unpaved		Paved		
Average velocity (ft/s)	=5.35		2.45		0.00		
Travel Time (min)	**= 0.28**	**+**	**6.55**	**+**	**0.00**	**=**	**6.83**
Channel Flow							
X sectional flow area (sqft)	= 0.00		0.00		0.00		
Wetted perimeter (ft)	= 0.00		0.00		0.00		
Channel slope (%)	= 0.00		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	=0.00						
			0.00				
					0.00		
Flow length (ft)	({0})0.0		0.0		0.0		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**

Total Travel Time, Tc ..... 13.20 min

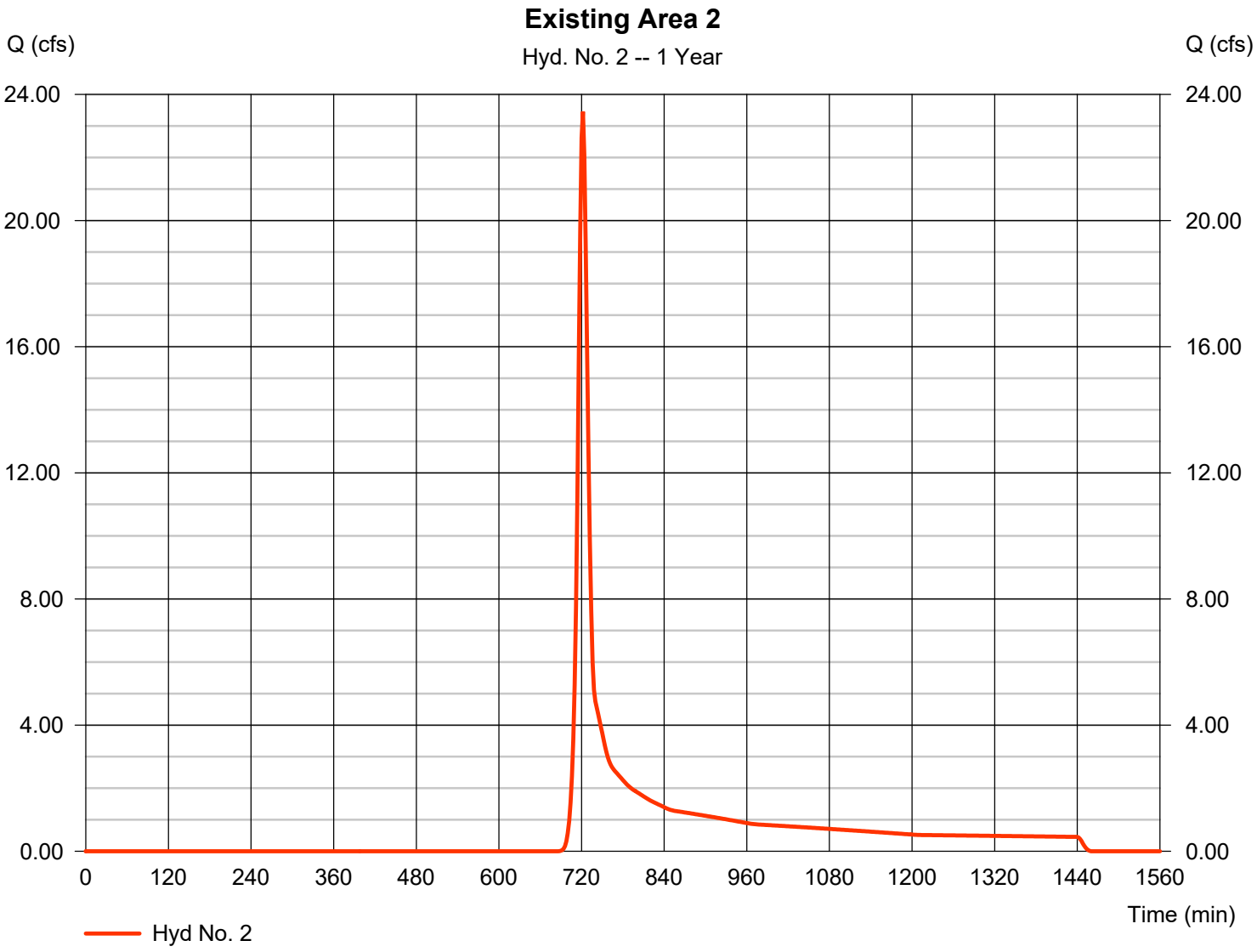
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 23.45 cfs
Storm frequency	= 1 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 65,397 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 2.87 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



TR55 Tc Worksheet

Hyd. No. 2

Existing Area 2

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.42		0.00		0.00		
Land slope (%)	= 8.00		0.00		0.00		
Travel Time (min)	**= 7.93**	**+**	**0.00**	**+**	**0.00**	**=**	**7.93**
Shallow Concentrated Flow							
Flow length (ft)	= 300.00		0.00		0.00		
Watercourse slope (%)	= 6.67		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=4.17		0.00		0.00		
Travel Time (min)	**= 1.20**	**+**	**0.00**	**+**	**0.00**	**=**	**1.20**
Channel Flow							
X sectional flow area (sqft)	= 20.00		0.00		0.00		
Wetted perimeter (ft)	= 15.00		0.00		0.00		
Channel slope (%)	= 2.75		0.00		0.00		
Manning's n-value	= 0.030		0.015		0.015		
Velocity (ft/s)	=9.99						
			0.00				
					0.00		
Flow length (ft)	({0})580.0		0.0		0.0		
Travel Time (min)	**= 0.97**	**+**	**0.00**	**+**	**0.00**	**=**	**0.97**

Total Travel Time, Tc ..... 10.10 min

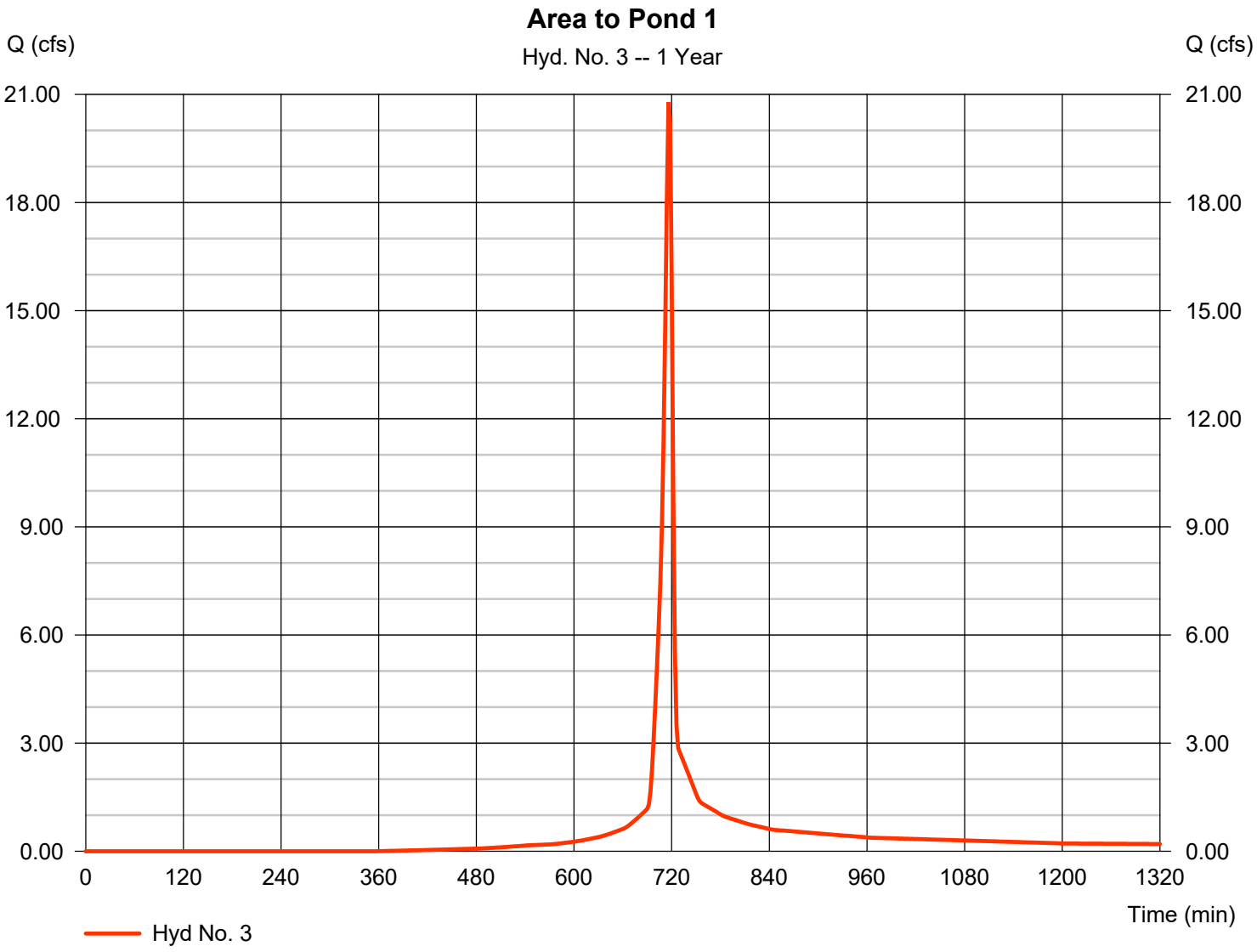
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	20.78 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	42,844 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



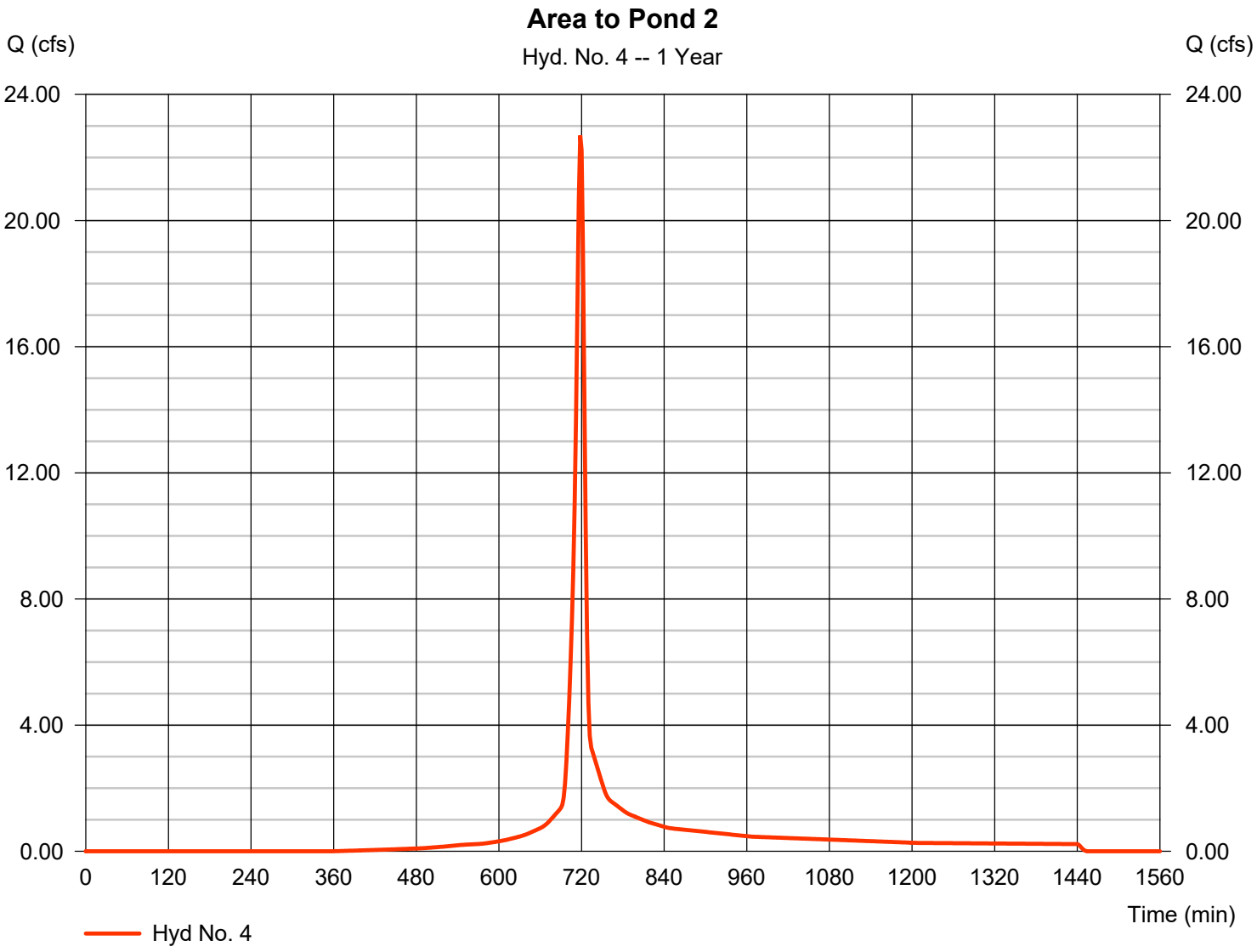
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	22.70 cfs
Storm frequency	=	1 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	52,673 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



TR55 Tc Worksheet

Hyd. No. 4

Area to Pond 2

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.42		0.00		0.00		
Land slope (%)	= 12.00		0.00		0.00		
Travel Time (min)	**= 6.74**	**+**	**0.00**	**+**	**0.00**	**=**	**6.74**
Shallow Concentrated Flow							
Flow length (ft)	= 260.00		127.00		0.00		
Watercourse slope (%)	= 16.25		5.70		0.00		
Surface description	= Unpaved		Unpaved		Paved		
Average velocity (ft/s)	=6.50		3.85		0.00		
Travel Time (min)	**= 0.67**	**+**	**0.55**	**+**	**0.00**	**=**	**1.22**
Channel Flow							
X sectional flow area (sqft)	= 0.00		0.00		0.00		
Wetted perimeter (ft)	= 0.00		0.00		0.00		
Channel slope (%)	= 0.00		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	=0.00						
			0.00				
					0.00		
Flow length (ft)	({0})0.0		0.0		0.0		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**

Total Travel Time, Tc ..... 8.00 min

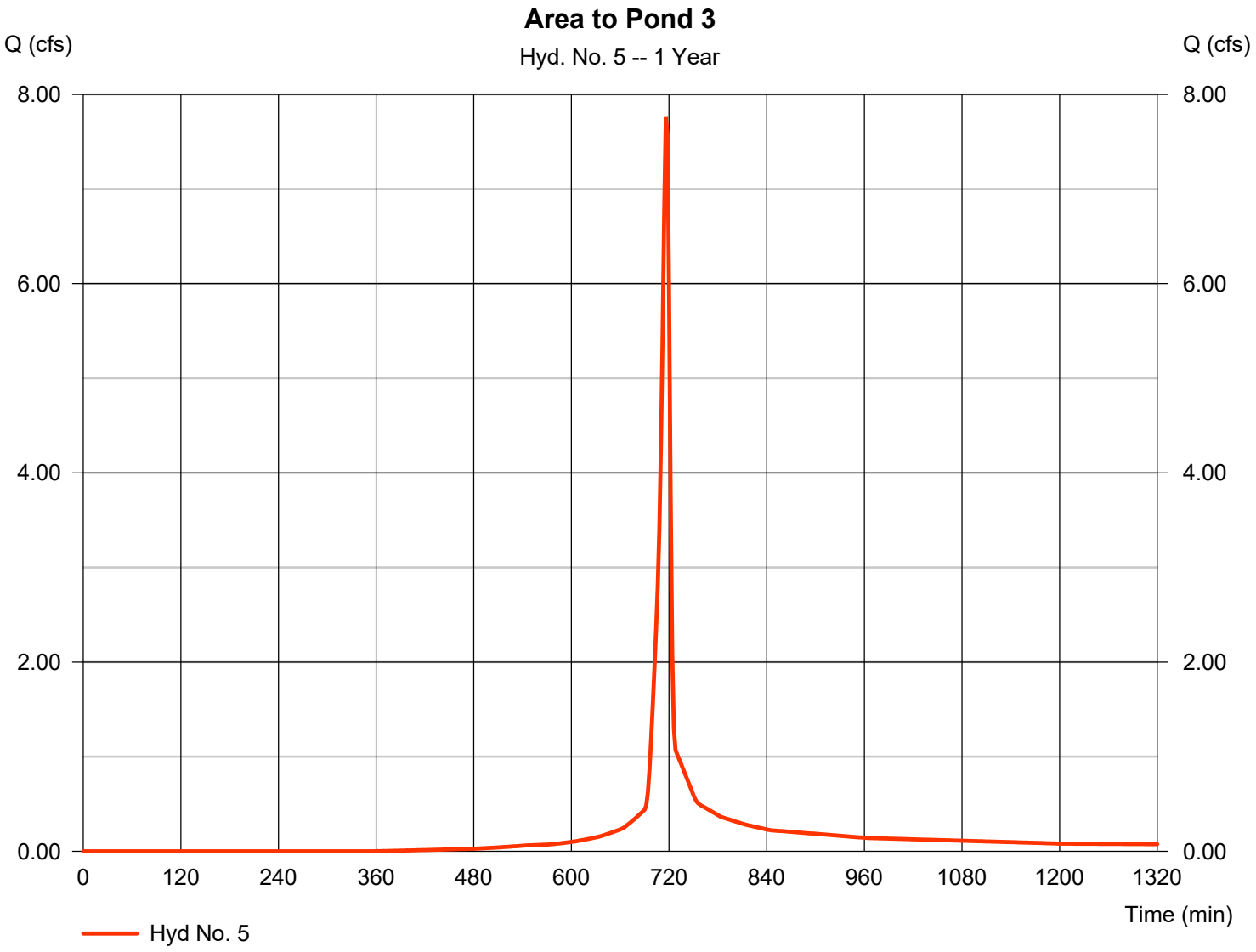
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	7.759 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	15,995 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



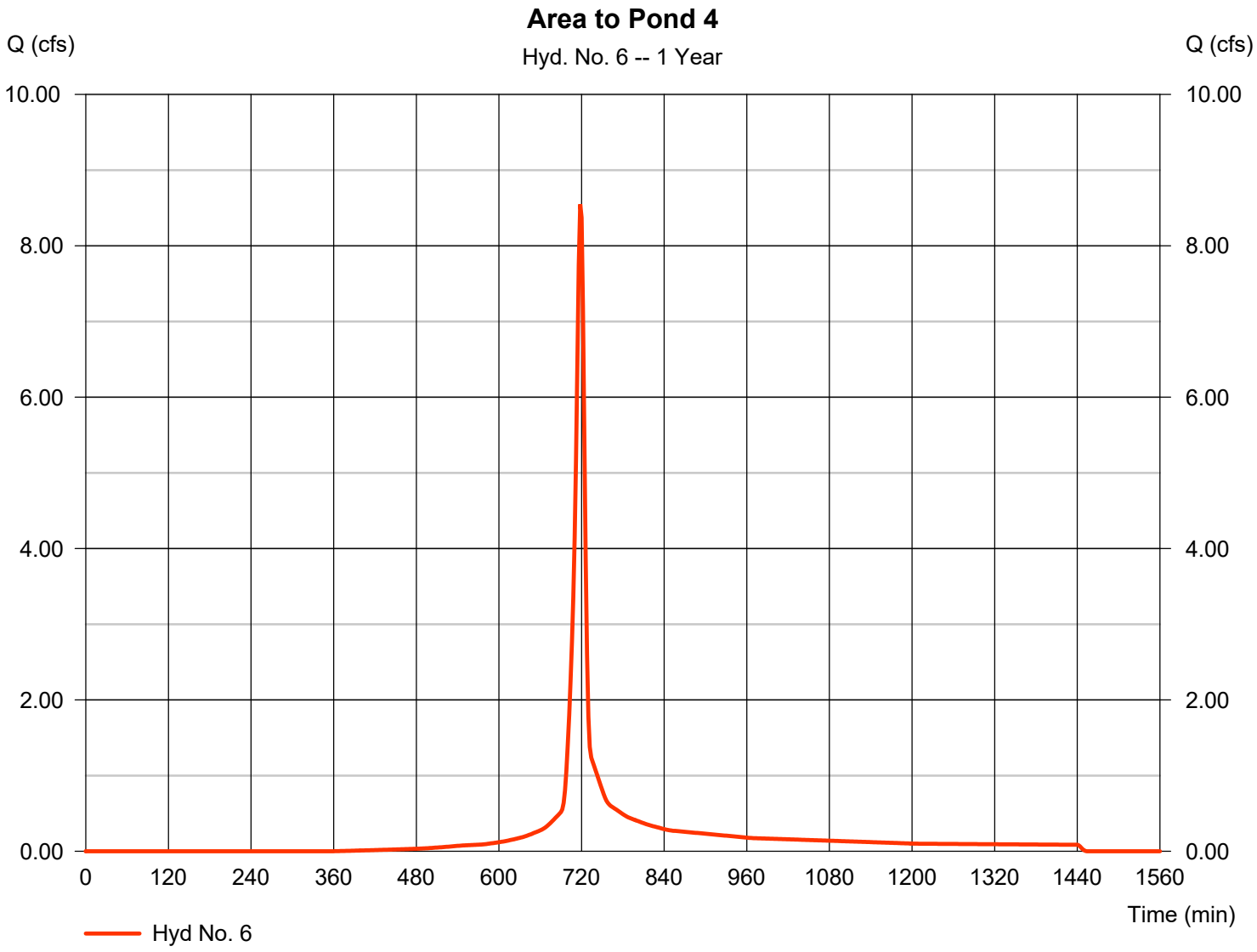
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	8.548 cfs
Storm frequency	=	1 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	19,837 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



TR55 Tc Worksheet

Hyd. No. 6

Area to Pond 4

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.42		0.00		0.00		
Land slope (%)	= 12.00		0.00		0.00		
Travel Time (min)	**= 6.74**	**+**	**0.00**	**+**	**0.00**	**=**	**6.74**
Shallow Concentrated Flow							
Flow length (ft)	= 380.00		0.00		0.00		
Watercourse slope (%)	= 12.60		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=5.73		0.00		0.00		
Travel Time (min)	**= 1.11**	**+**	**0.00**	**+**	**0.00**	**=**	**1.11**
Channel Flow							
X sectional flow area (sqft)	= 0.00		0.00		0.00		
Wetted perimeter (ft)	= 0.00		0.00		0.00		
Channel slope (%)	= 0.00		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	=0.00						
			0.00				
					0.00		
Flow length (ft)	({0})0.0		0.0		0.0		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**

Total Travel Time, Tc ..... 7.80 min

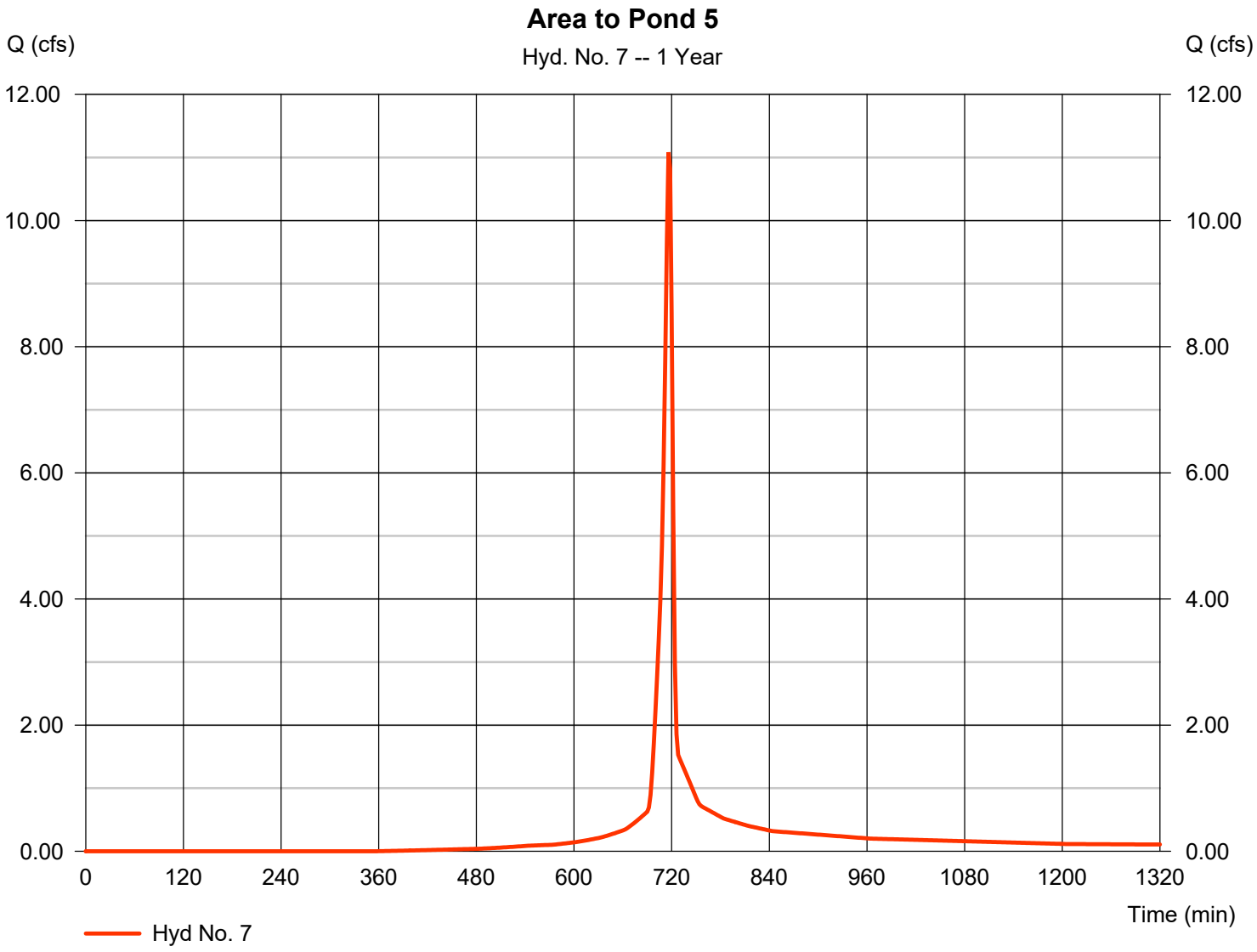
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	= SCS Runoff	Peak discharge	= 11.08 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 22,850 cuft
Drainage area	= 3.600 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.87 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



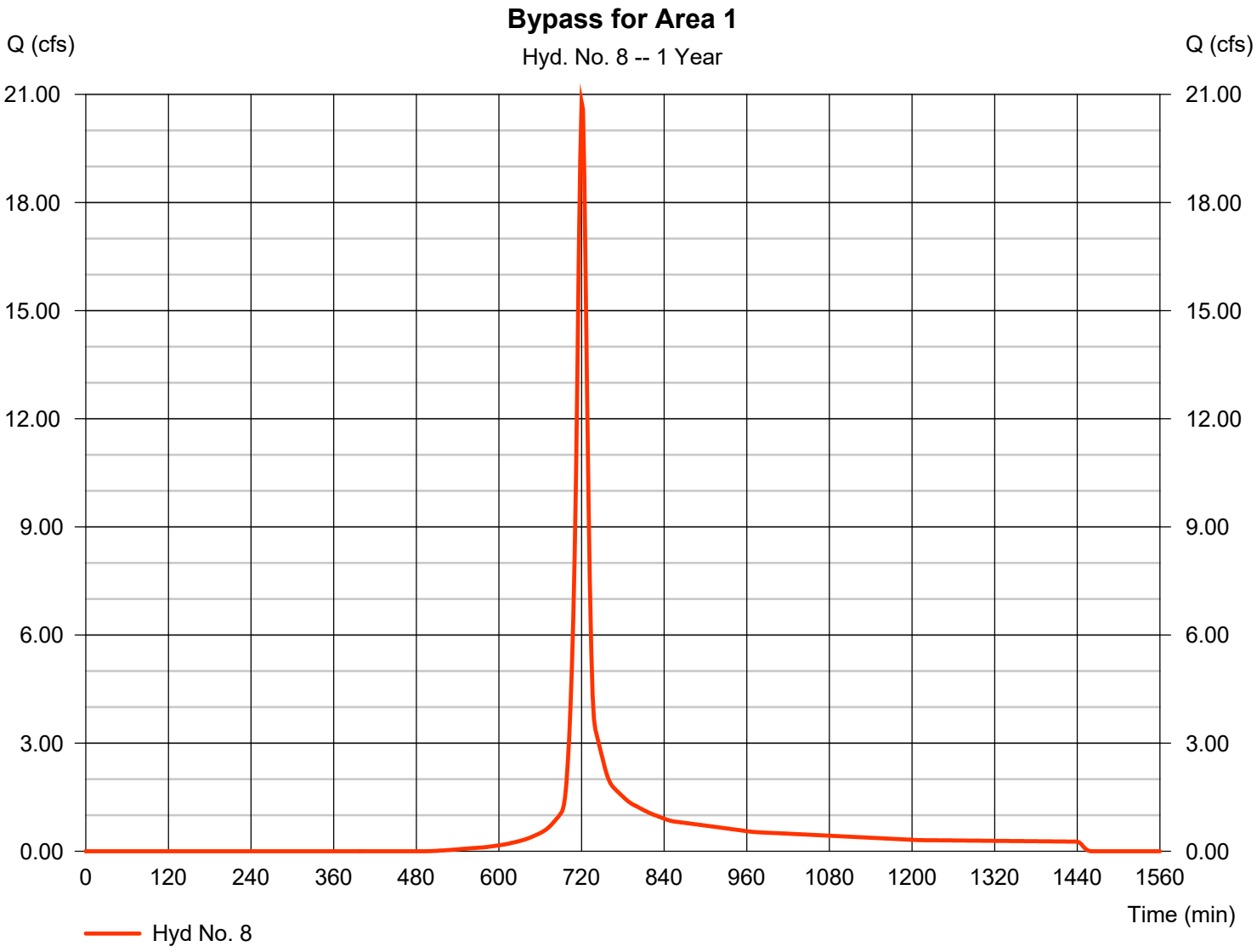
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	20.79 cfs
Storm frequency	=	1 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	53,895 cuft
Drainage area	=	9.730 ac	Curve number	=	85*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.00 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



TR55 Tc Worksheet

Hyd. No. 8

Bypass for Area 1

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.42		0.00		0.00		
Land slope (%)	= 14.00		0.00		0.00		
Travel Time (min)	**= 6.34**	**+**	**0.00**	**+**	**0.00**	**=**	**6.34**
Shallow Concentrated Flow							
Flow length (ft)	= 90.00		944.00		0.00		
Watercourse slope (%)	= 11.11		2.30		0.00		
Surface description	= Unpaved		Unpaved		Paved		
Average velocity (ft/s)	=5.38		2.45		0.00		
Travel Time (min)	**= 0.28**	**+**	**6.43**	**+**	**0.00**	**=**	**6.71**
Channel Flow							
X sectional flow area (sqft)	= 0.00		0.00		0.00		
Wetted perimeter (ft)	= 0.00		0.00		0.00		
Channel slope (%)	= 0.00		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	=0.00						
			0.00				
					0.00		
Flow length (ft)	({0})0.0		0.0		0.0		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**

Total Travel Time, Tc ..... 13.00 min

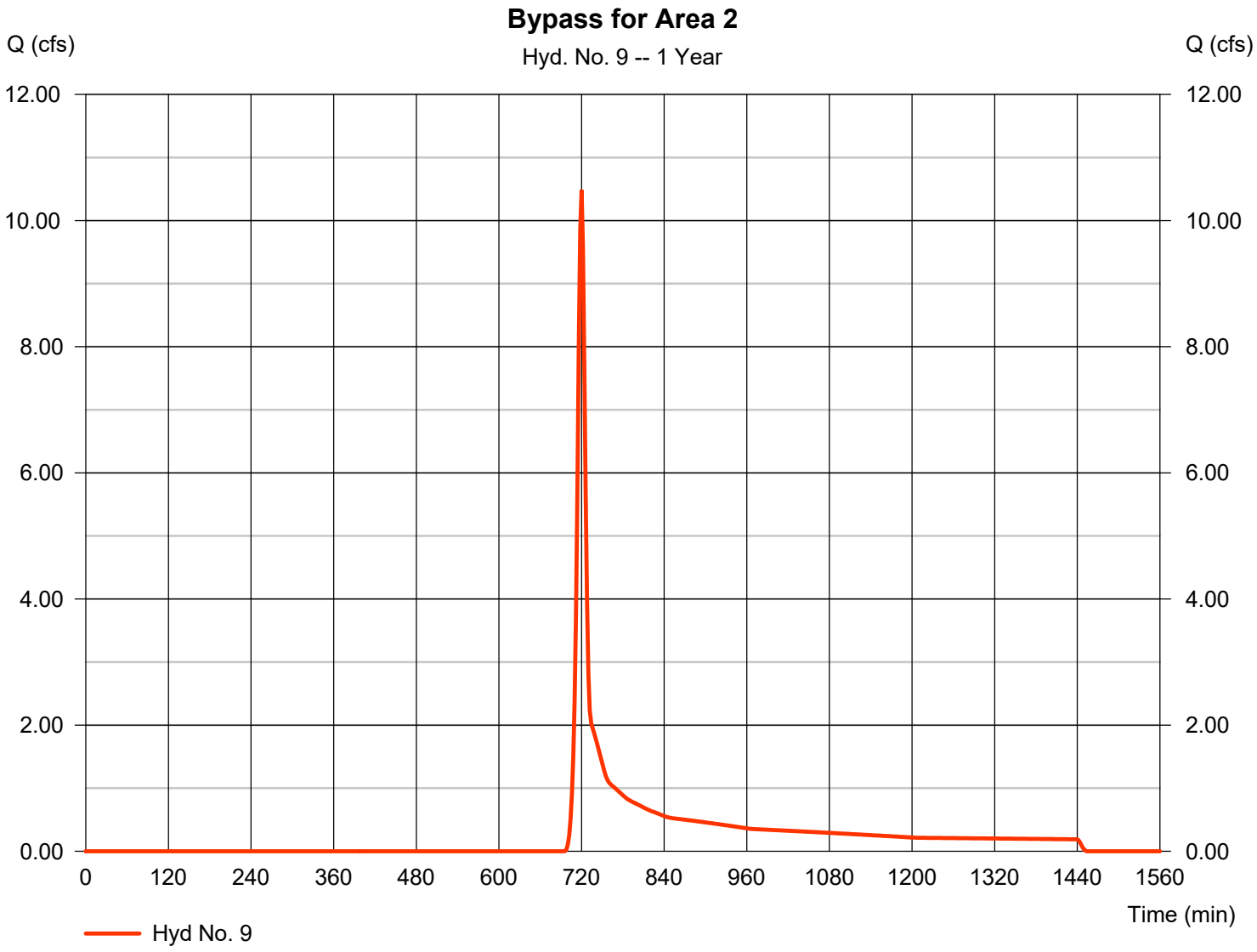
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.48 cfs
Storm frequency	=	1 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	25,731 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	2.87 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



TR55 Tc Worksheet

Hyd. No. 9

Bypass for Area 2

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.42		0.00		0.00		
Land slope (%)	= 9.00		0.00		0.00		
Travel Time (min)	**= 7.56**	**+**	**0.00**	**+**	**0.00**	**=**	**7.56**
Shallow Concentrated Flow							
Flow length (ft)	= 240.00		40.00		0.00		
Watercourse slope (%)	= 2.00		2.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	=2.28		2.87		0.00		
Travel Time (min)	**= 1.75**	**+**	**0.23**	**+**	**0.00**	**=**	**1.98**
Channel Flow							
X sectional flow area (sqft)	= 0.00		0.00		0.00		
Wetted perimeter (ft)	= 0.00		0.00		0.00		
Channel slope (%)	= 0.00		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	=0.00						
			0.00				
					0.00		
Flow length (ft)	({0})0.0		0.0		0.0		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**

Total Travel Time, Tc ..... 9.50 min

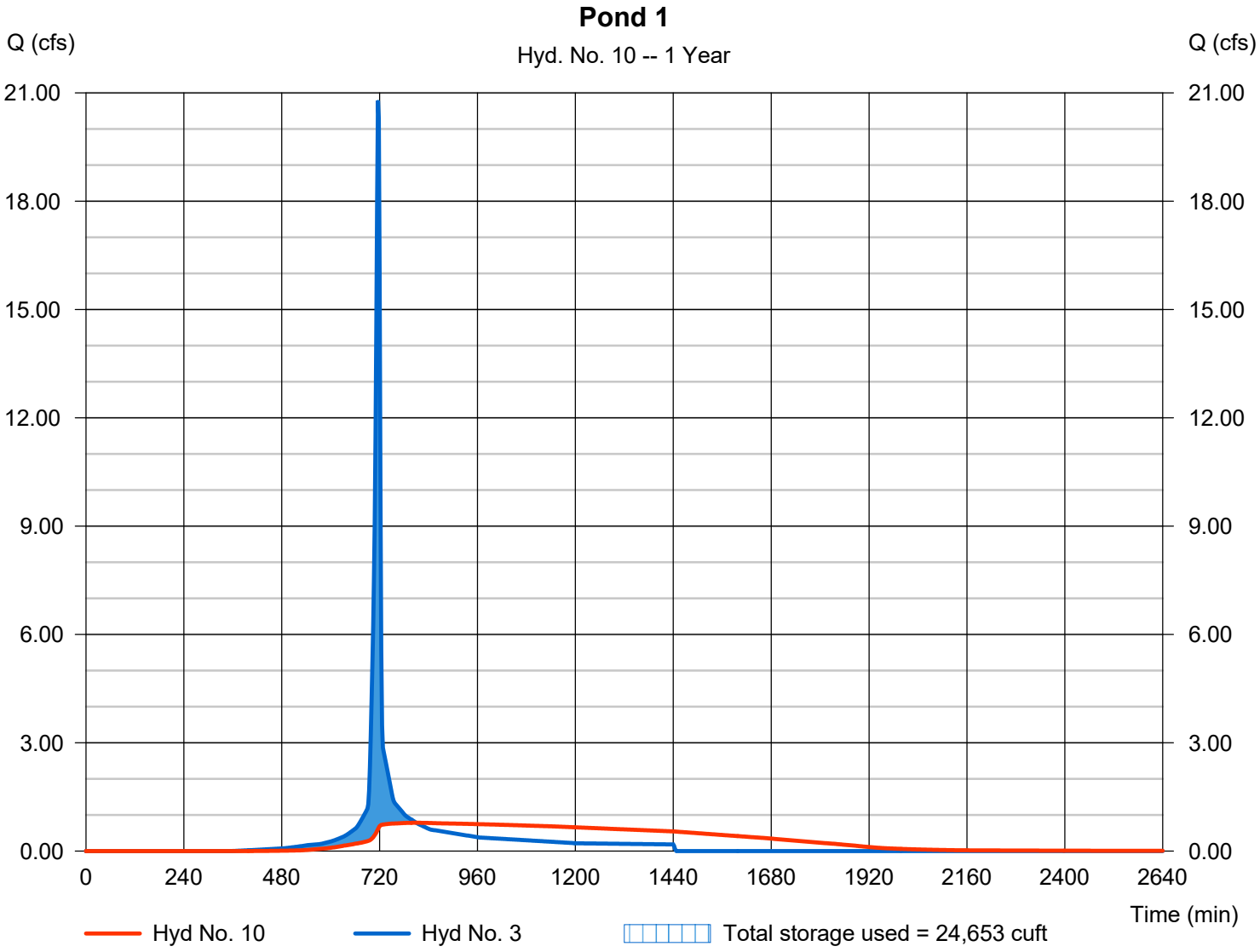
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	0.784 cfs
Storm frequency	=	1 yrs	Time to peak	=	810 min
Time interval	=	2 min	Hyd. volume	=	42,821 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	485.75 ft
Reservoir name	=	Pond 1	Max. Storage	=	24,653 cuft

Storage Indication method used.



Pond Report

Pond No. 1 - Pond 1

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 482.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	482.00	4,533	0	0
1.00	483.00	5,540	5,028	5,028
2.00	484.00	6,638	6,080	11,108
3.00	485.00	7,806	7,213	18,321
4.00	486.00	9,030	8,410	26,731
5.00	487.00	10,342	9,678	36,408
6.00	488.00	11,709	11,017	47,426
7.00	489.00	13,100	12,397	59,823

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	4.00	0.00	0.00
Span (in)	= 24.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 482.00	482.00	0.00	0.00
Length (ft)	= 200.00	0.00	0.00	0.00
Slope (%)	= 2.50	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

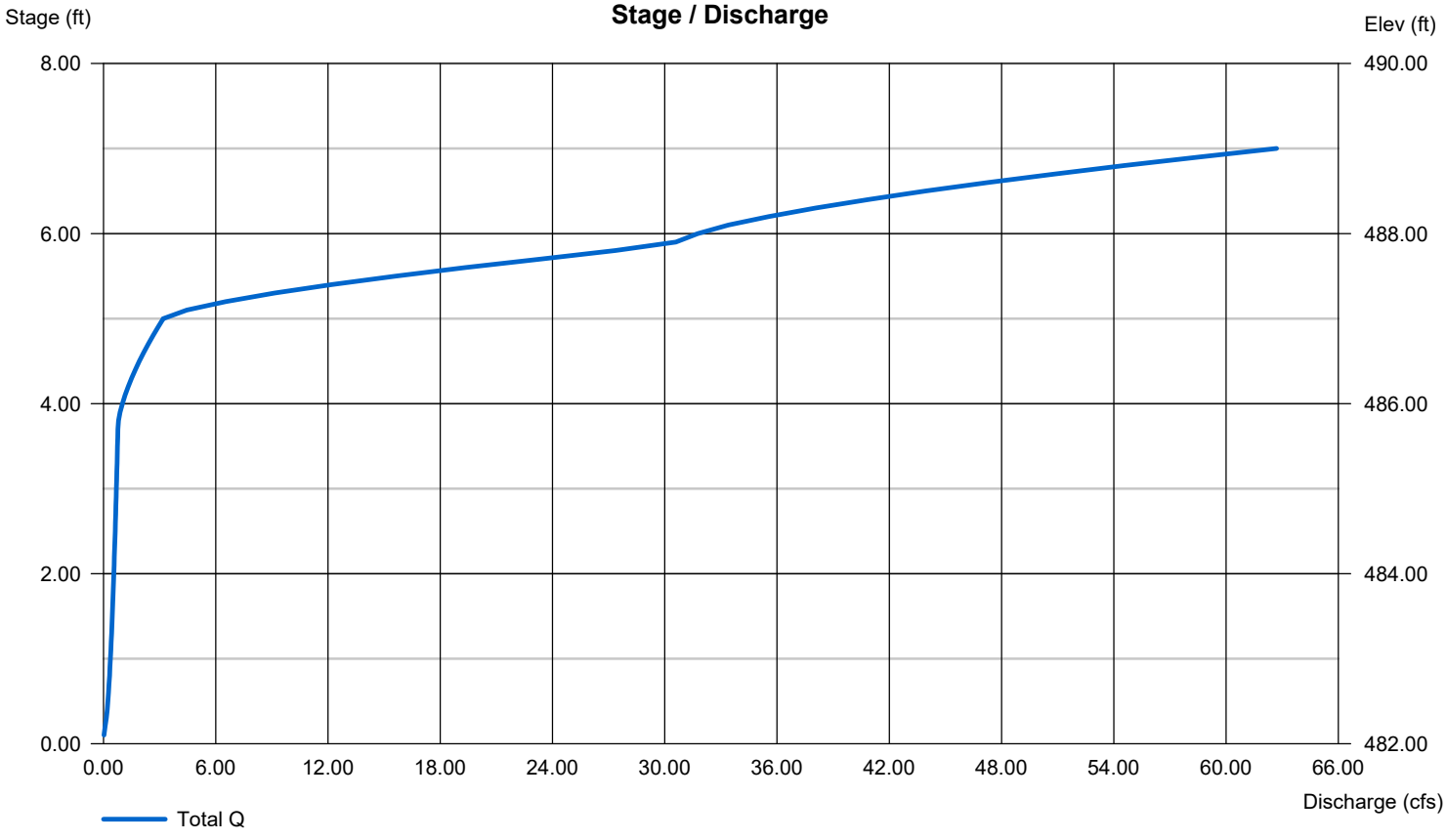
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.50	9.32	10.00	0.00
Crest El. (ft)	= 485.75	487.00	488.00	0.00
Weir Coeff.	= 3.33	3.33	2.60	3.33
Weir Type	= Rect	Ciplti	Broad	---
Multi-Stage	= Yes	Yes	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



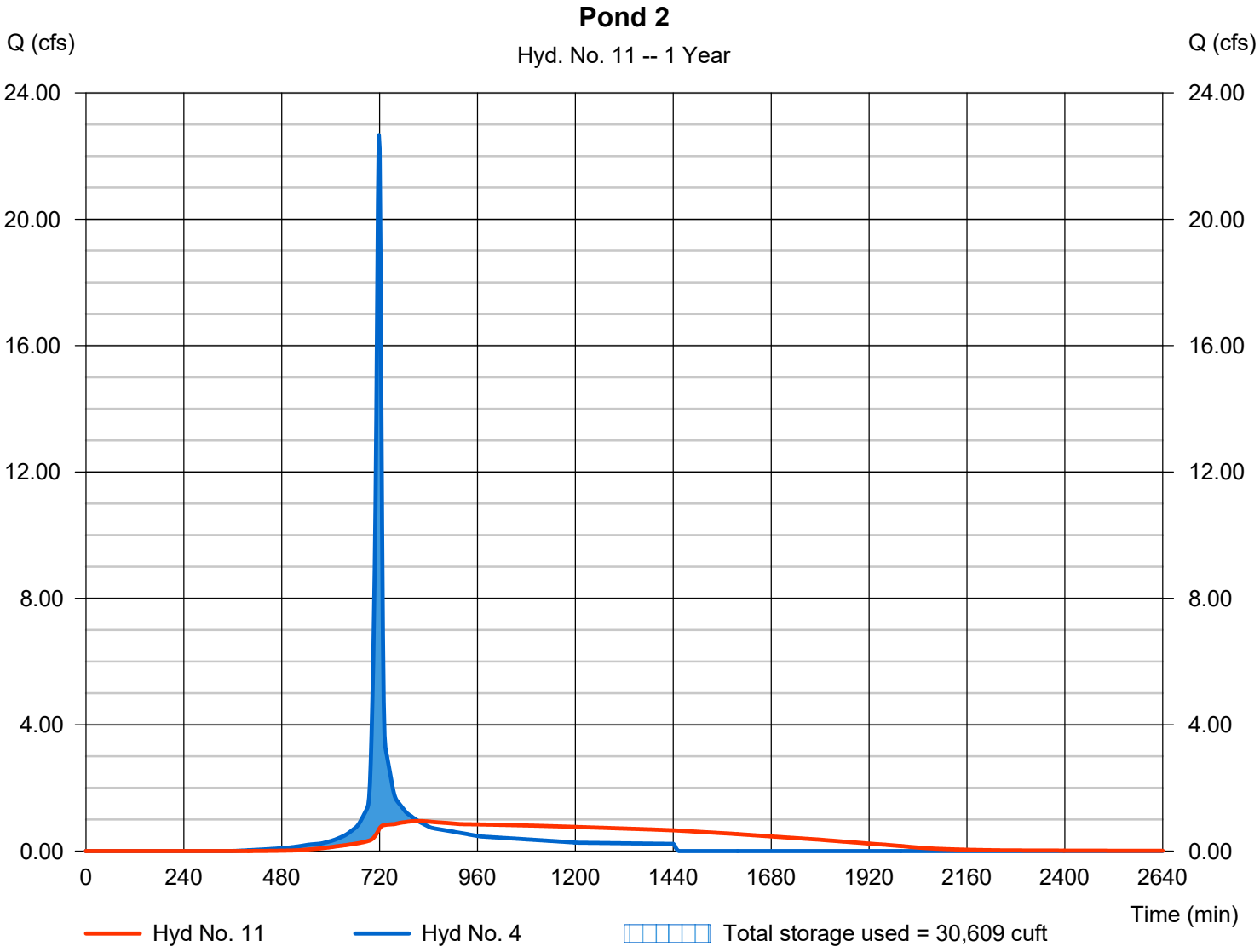
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	0.950 cfs
Storm frequency	=	1 yrs	Time to peak	=	814 min
Time interval	=	2 min	Hyd. volume	=	52,652 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	490.63 ft
Reservoir name	=	Pond 2	Max. Storage	=	30,609 cuft

Storage Indication method used.



Pond Report

Pond No. 2 - Pond 2

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 486.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	486.00	4,234	0	0
1.00	487.00	5,268	4,741	4,741
2.00	488.00	6,185	5,720	10,461
3.00	489.00	7,160	6,666	17,127
4.00	490.00	8,413	7,777	24,904
5.00	491.00	9,619	9,008	33,912
6.00	492.00	10,949	10,276	44,188
7.00	493.00	12,319	11,626	55,814
8.00	494.00	13,842	13,072	68,886
9.00	495.00	15,431	14,628	83,514

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	4.00	0.00	0.00
Span (in)	= 24.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 486.00	486.00	0.00	0.00
Length (ft)	= 214.00	0.00	0.00	0.00
Slope (%)	= 5.32	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

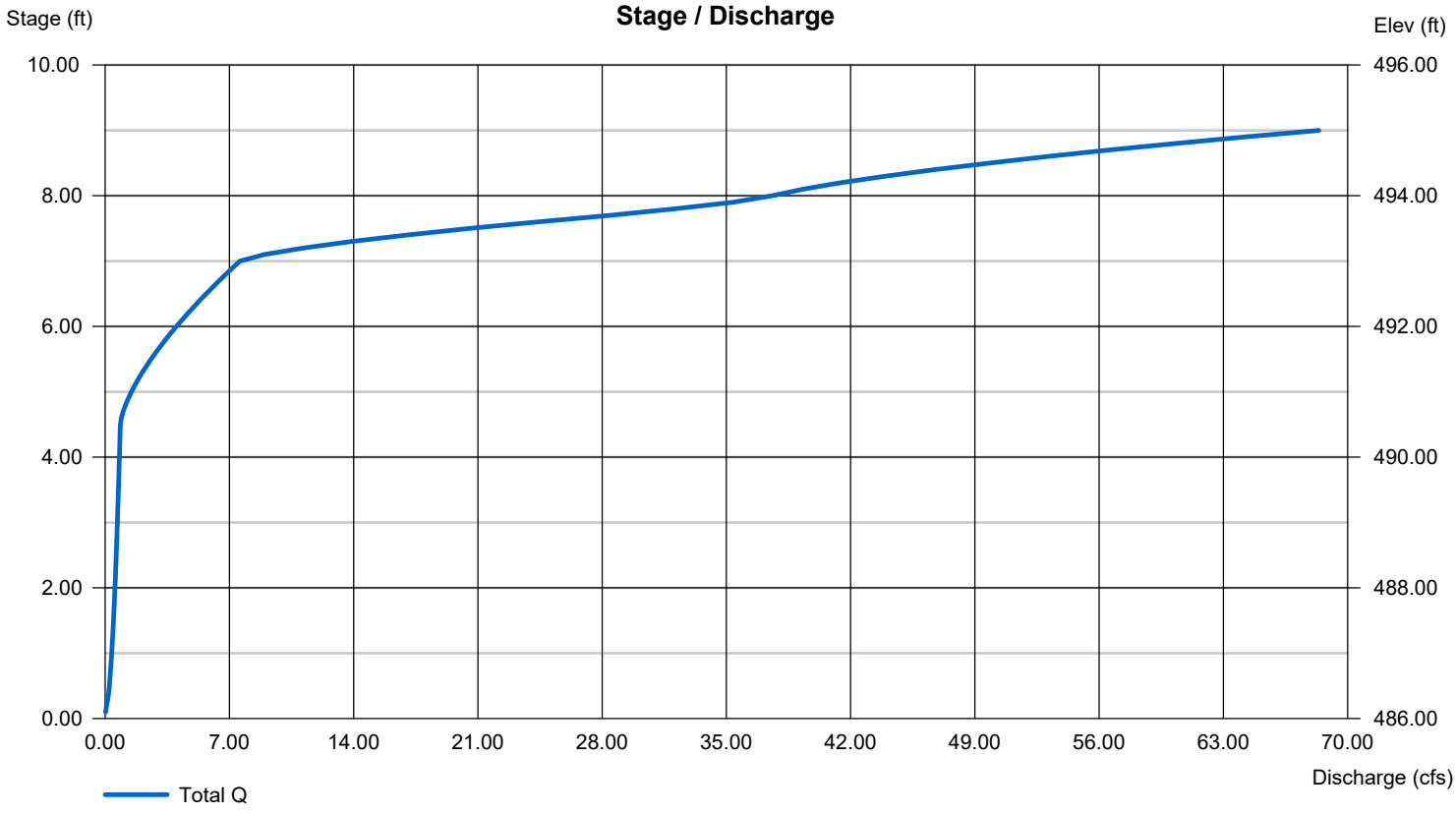
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.50	9.32	10.00	0.00
Crest El. (ft)	= 490.50	493.00	494.00	0.00
Weir Coeff.	= 3.33	3.33	2.60	3.33
Weir Type	= Rect	Ciplti	Broad	---
Multi-Stage	= Yes	Yes	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

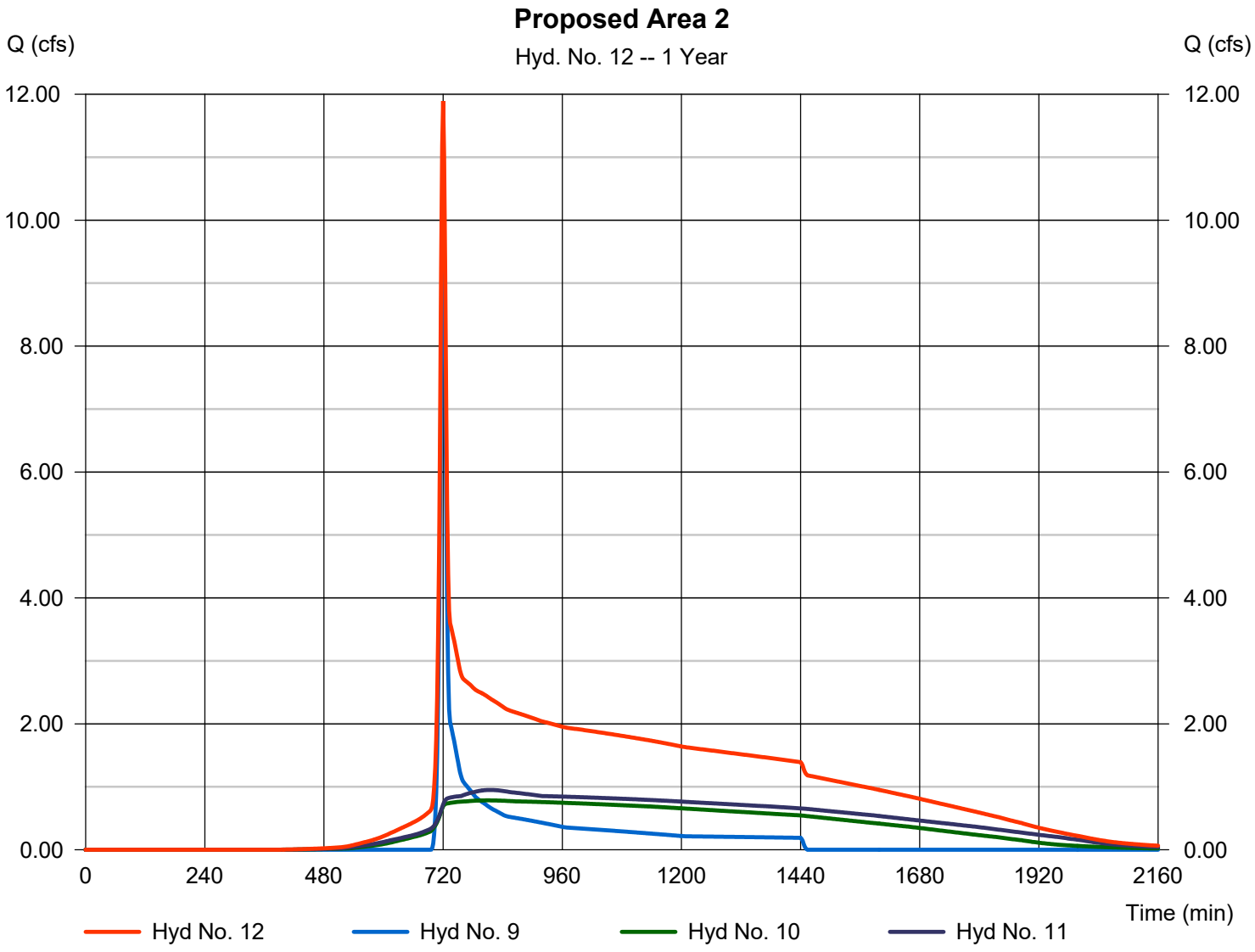


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 11.89 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 121,204 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



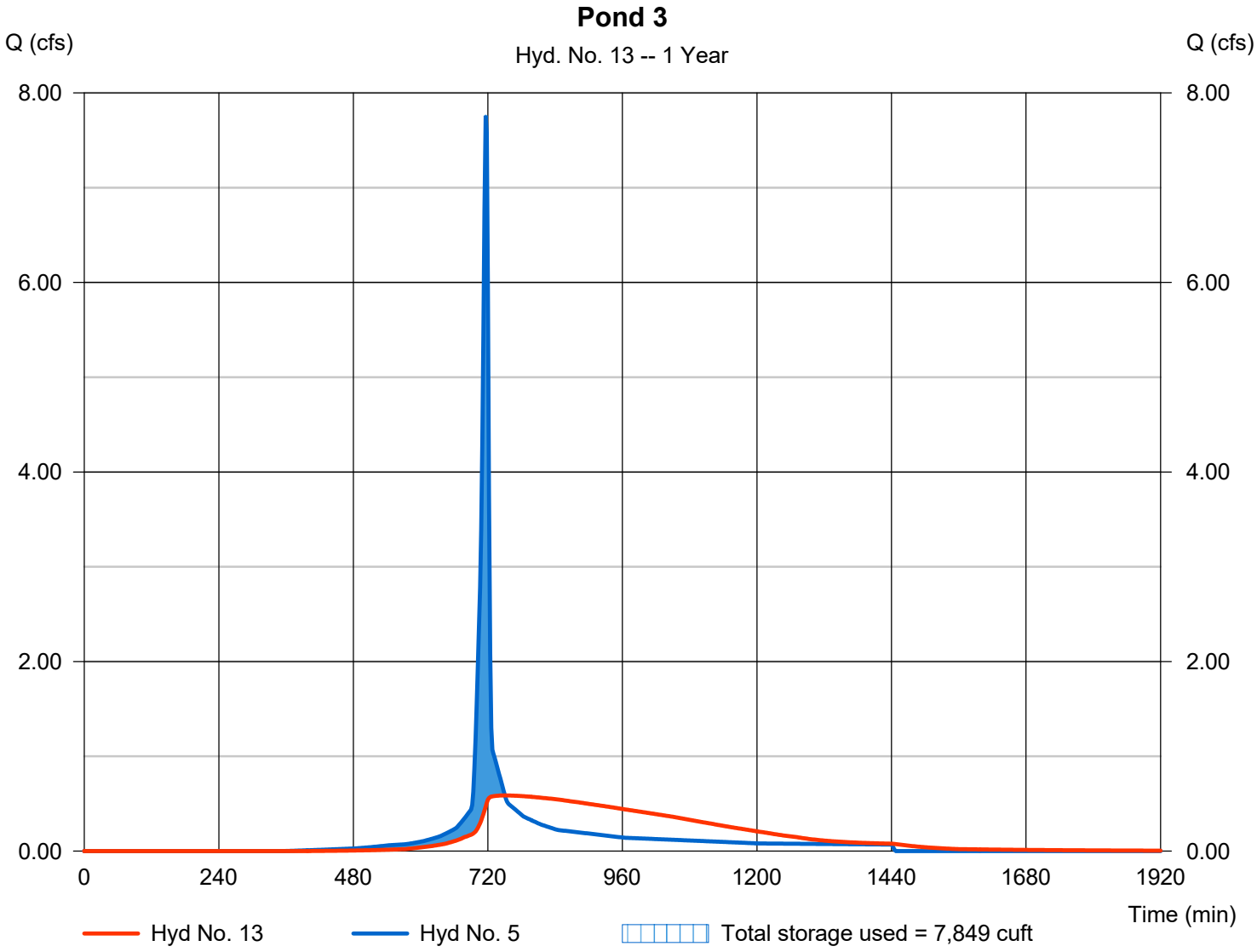
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	0.587 cfs
Storm frequency	=	1 yrs	Time to peak	=	750 min
Time interval	=	2 min	Hyd. volume	=	15,981 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	508.29 ft
Reservoir name	=	Pond 3	Max. Storage	=	7,849 cuft

Storage Indication method used.



Pond Report

Pond No. 3 - Pond 3

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 506.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	506.00	2,589	0	0
1.00	507.00	3,276	2,925	2,925
2.00	508.00	4,008	3,635	6,561
3.00	509.00	4,920	4,456	11,017
4.00	510.00	5,788	5,348	16,364
5.00	511.00	6,807	6,290	22,654
6.00	512.00	7,805	7,300	29,954
7.00	513.00	8,860	8,326	38,280

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	4.00	0.00	0.00
Span (in)	= 18.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 506.00	506.00	0.00	0.00
Length (ft)	= 67.00	0.00	0.00	0.00
Slope (%)	= 3.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

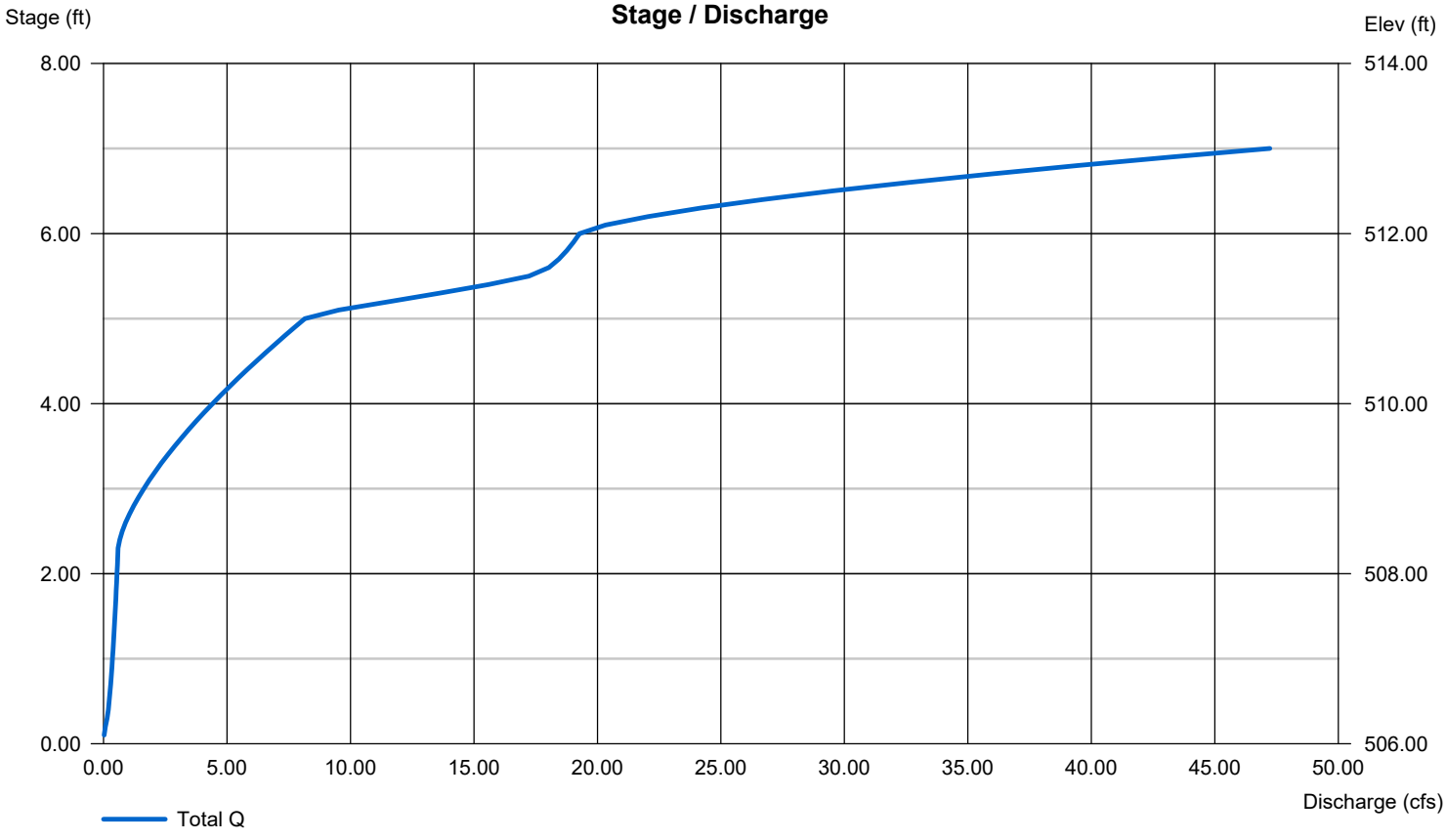
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.50	9.32	10.00	0.00
Crest El. (ft)	= 508.30	511.00	512.00	0.00
Weir Coeff.	= 3.33	3.33	2.60	3.33
Weir Type	= Rect	Ciplti	Broad	---
Multi-Stage	= Yes	Yes	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



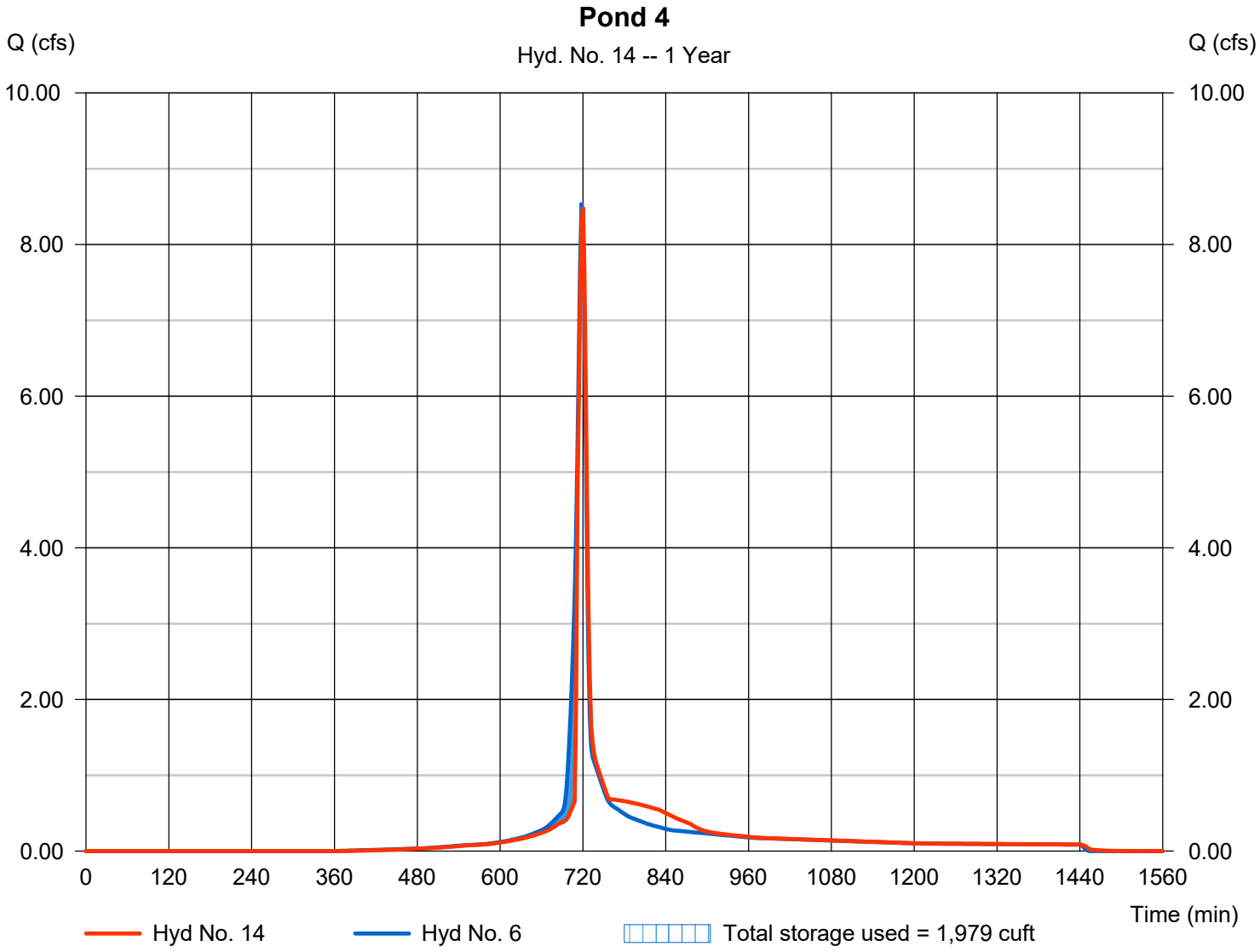
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	8.491 cfs
Storm frequency	=	1 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	19,836 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	511.40 ft
Reservoir name	=	Pond 4	Max. Storage	=	1,979 cuft

Storage Indication method used.



Pond Report

Pond No. 4 - Pond 4

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 508.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	508.00	120	0	0
1.00	509.00	331	217	217
2.00	510.00	601	459	676
3.00	511.00	1,023	803	1,479
4.00	512.00	1,472	1,241	2,719
5.00	513.00	1,977	1,718	4,437

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	4.00	0.00	0.00
Span (in)	= 18.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 508.00	508.00	0.00	0.00
Length (ft)	= 50.00	0.00	0.00	0.00
Slope (%)	= 4.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

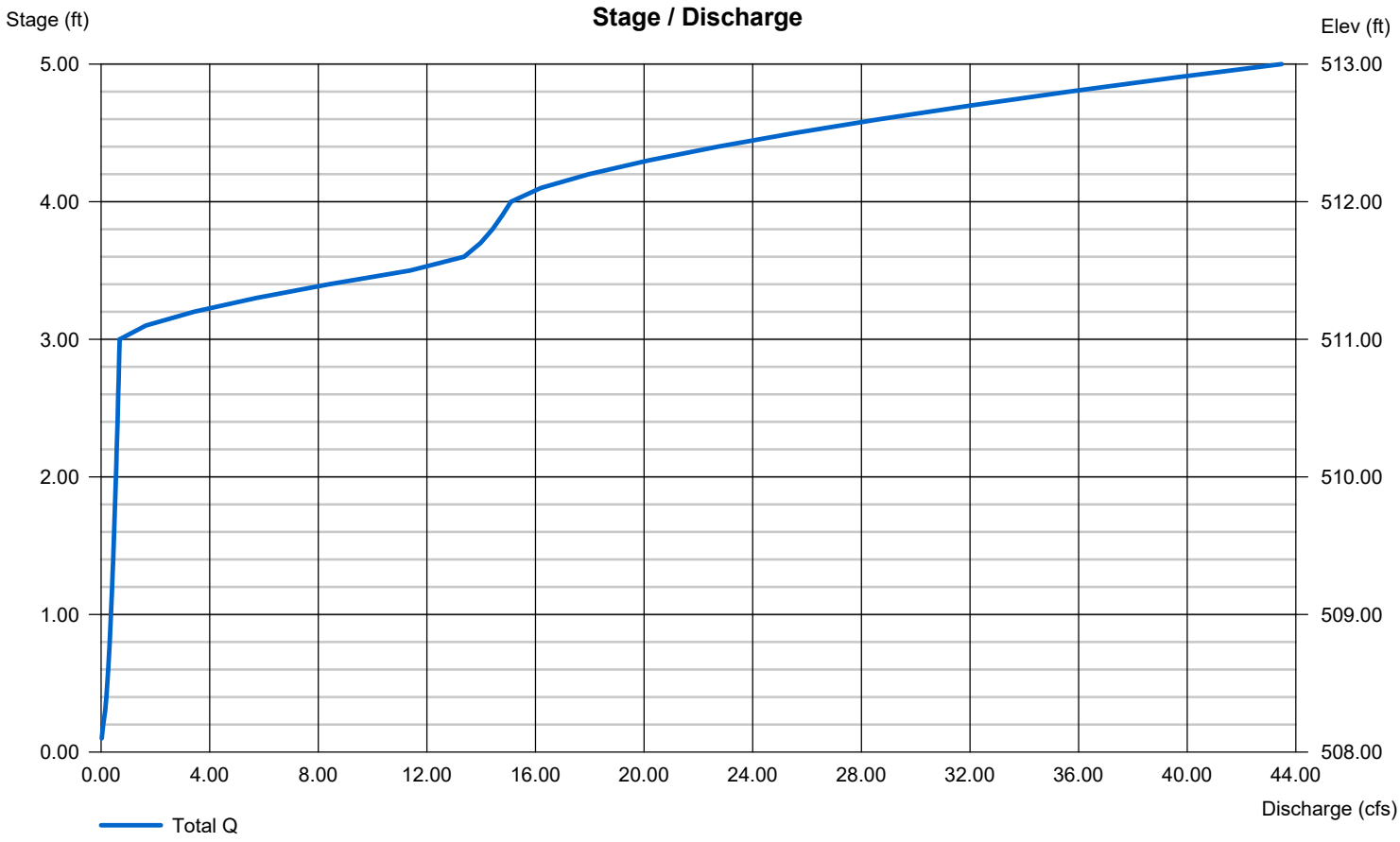
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 9.32	10.00	0.00	0.00
Crest El. (ft)	= 511.00	512.00	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= Ciplti	Broad	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



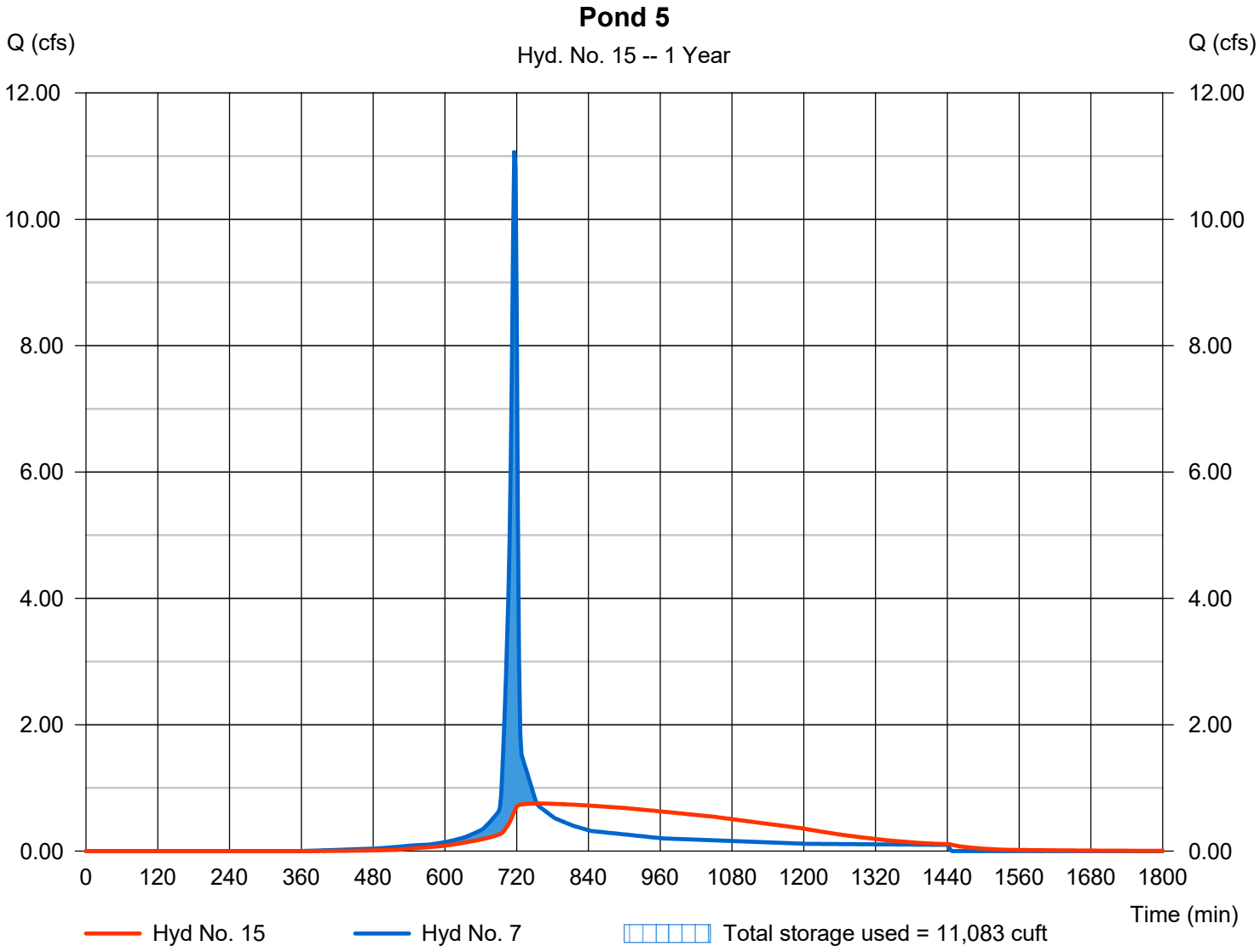
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	0.753 cfs
Storm frequency	=	1 yrs	Time to peak	=	754 min
Time interval	=	2 min	Hyd. volume	=	22,841 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	501.59 ft
Reservoir name	=	Pond 5	Max. Storage	=	11,083 cuft

Storage Indication method used.



Pond Report

Pond No. 5 - Pond 5

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 498.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	498.00	1,625	0	0
1.00	499.00	2,275	1,941	1,941
2.00	500.00	3,192	2,720	4,661
3.00	501.00	4,170	3,670	8,331
4.00	502.00	5,200	4,675	13,006
5.00	503.00	6,275	5,729	18,734
5.60	503.60	6,947	3,964	22,699

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	4.00	0.00	0.00
Span (in)	= 18.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 498.00	498.00	0.00	0.00
Length (ft)	= 32.00	0.00	0.00	0.00
Slope (%)	= 2.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

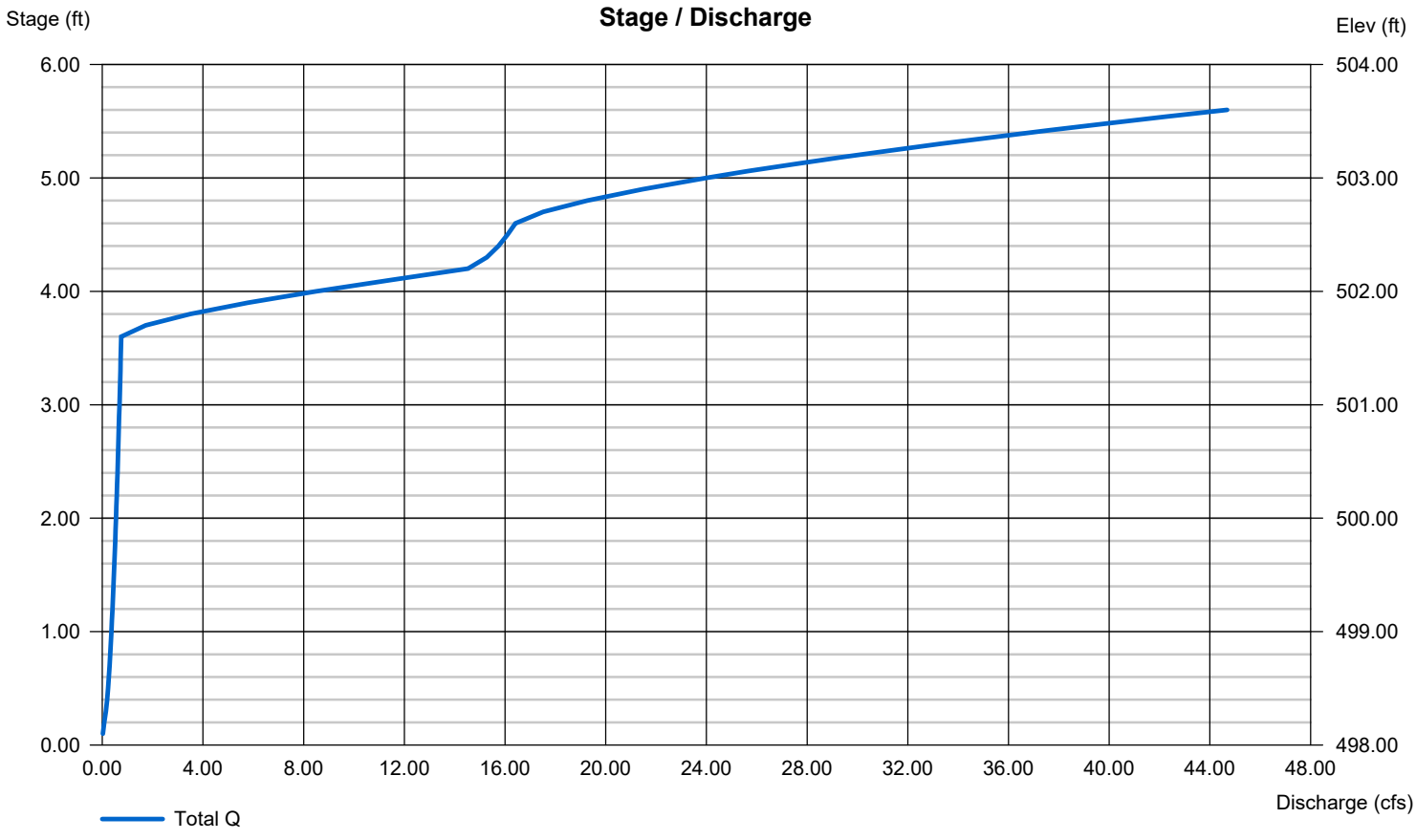
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 9.32	10.00	0.00	0.00
Crest El. (ft)	= 501.60	502.60	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= Ciplti	Broad	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

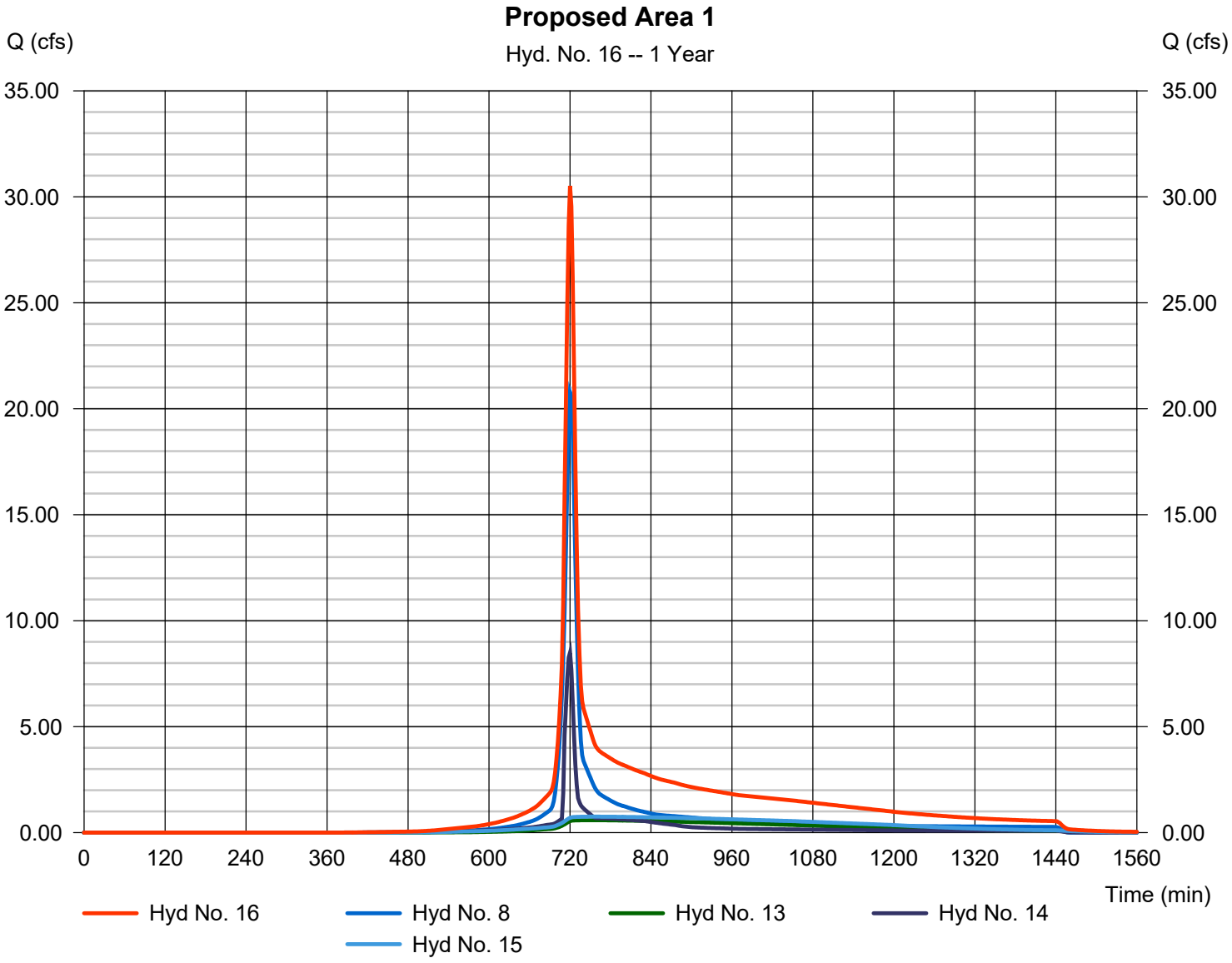


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 30.52 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 112,552 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	44.07	2	720	115,087	------	------	------	Exisitng Area 1
2	SCS Runoff	35.56	2	722	95,516	------	------	------	Existing Area 2
3	SCS Runoff	26.14	2	716	54,515	------	------	------	Area to Pond 1
4	SCS Runoff	28.60	2	718	67,022	------	------	------	Area to Pond 2
5	SCS Runoff	9.760	2	716	20,352	------	------	------	Area to Pond 3
6	SCS Runoff	10.77	2	718	25,241	------	------	------	Area to Pond 4
7	SCS Runoff	13.94	2	716	29,074	------	------	------	Area to Pond 5
8	SCS Runoff	27.33	2	720	70,912	------	------	------	Bypass for Area 1
9	SCS Runoff	16.31	2	720	38,365	------	------	------	Bypass for Area 2
10	Reservoir	1.557	2	762	54,492	3	486.33	29,917	Pond 1
11	Reservoir	2.020	2	760	67,000	4	491.26	36,614	Pond 2
12	Combine	17.89	2	720	159,857	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	1.051	2	738	20,338	5	508.70	9,679	Pond 3
14	Reservoir	10.67	2	720	25,240	6	511.48	2,069	Pond 4
15	Reservoir	4.919	2	724	29,065	7	501.86	12,361	Pond 5
16	Combine	42.05	2	722	145,556	8, 13, 14, 15	------	------	Proposed Area 1

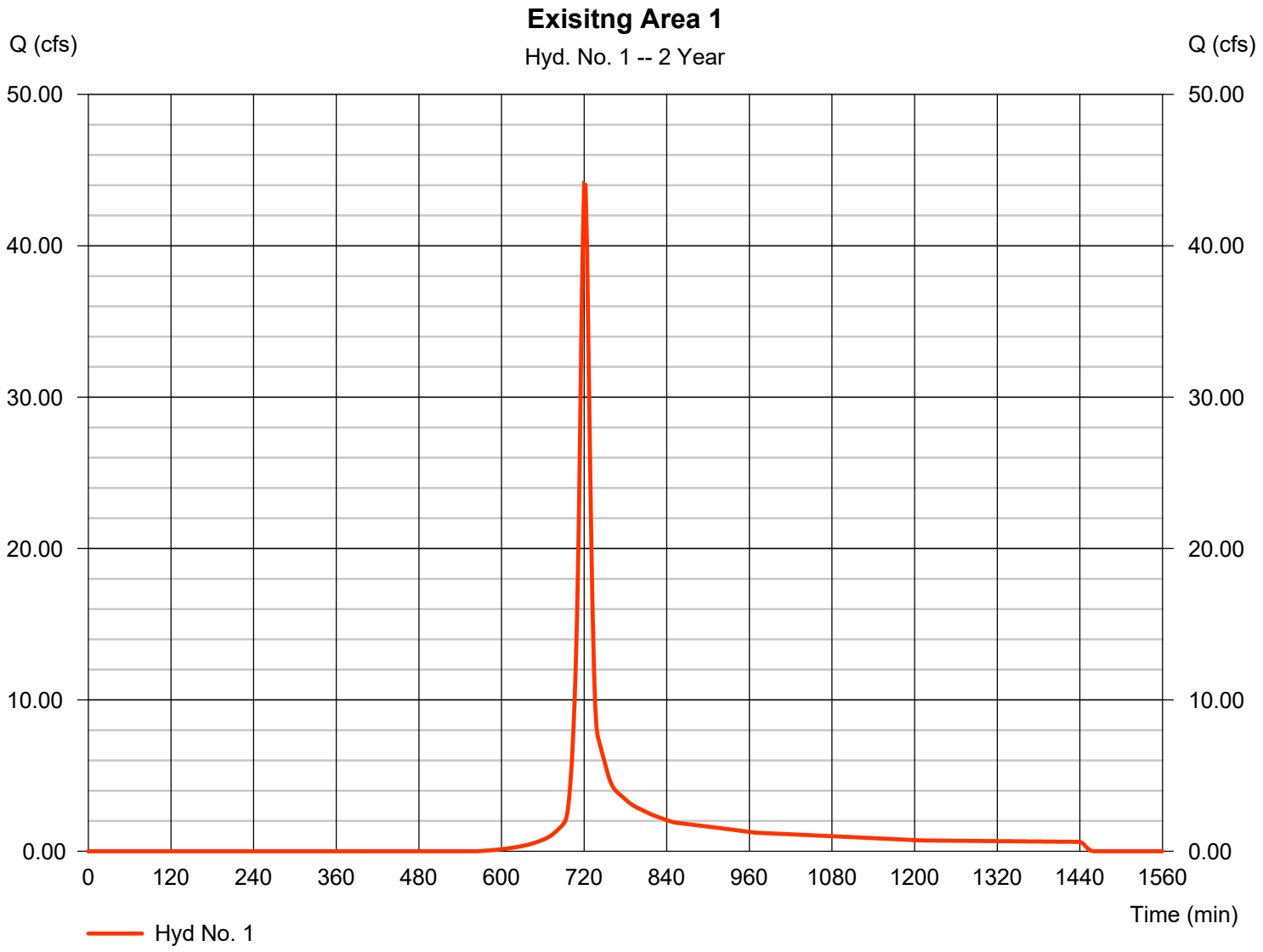
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	= SCS Runoff	Peak discharge	= 44.07 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 115,087 cuft
Drainage area	= 20.440 ac	Curve number	= 79*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.20 min
Total precip.	= 3.42 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



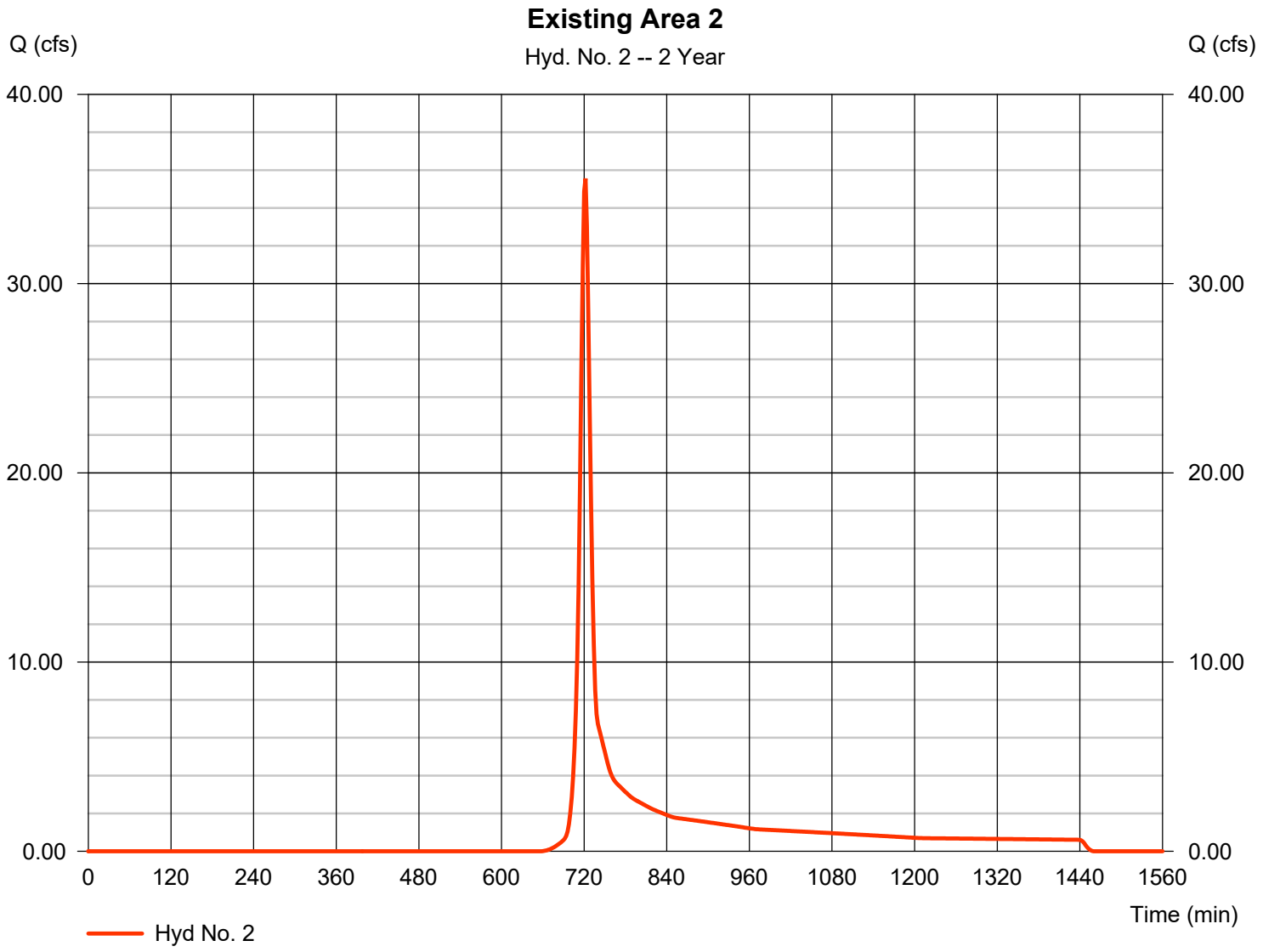
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 35.56 cfs
Storm frequency	= 2 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 95,516 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 3.42 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



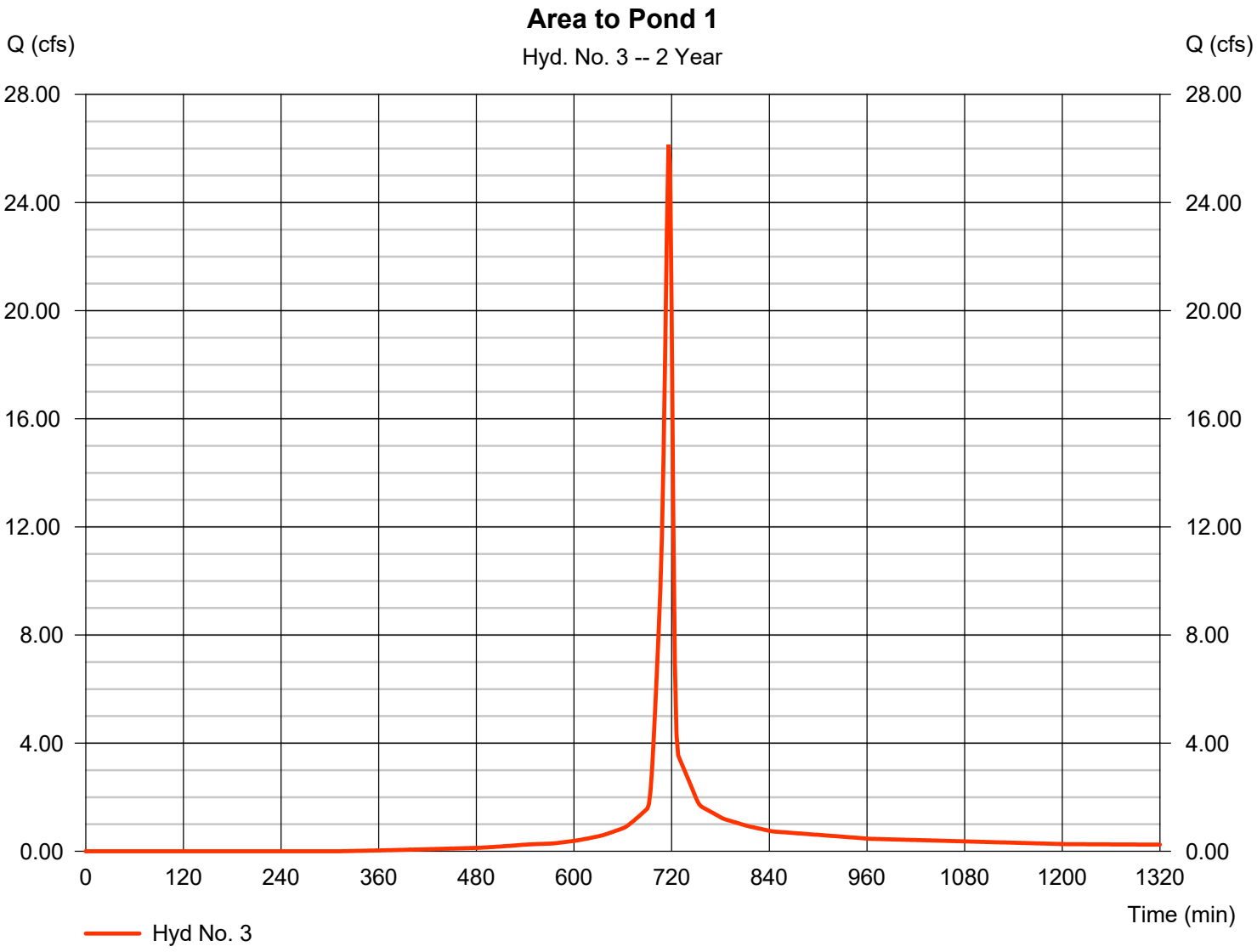
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	= SCS Runoff	Peak discharge	= 26.14 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 54,515 cuft
Drainage area	= 6.750 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.42 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



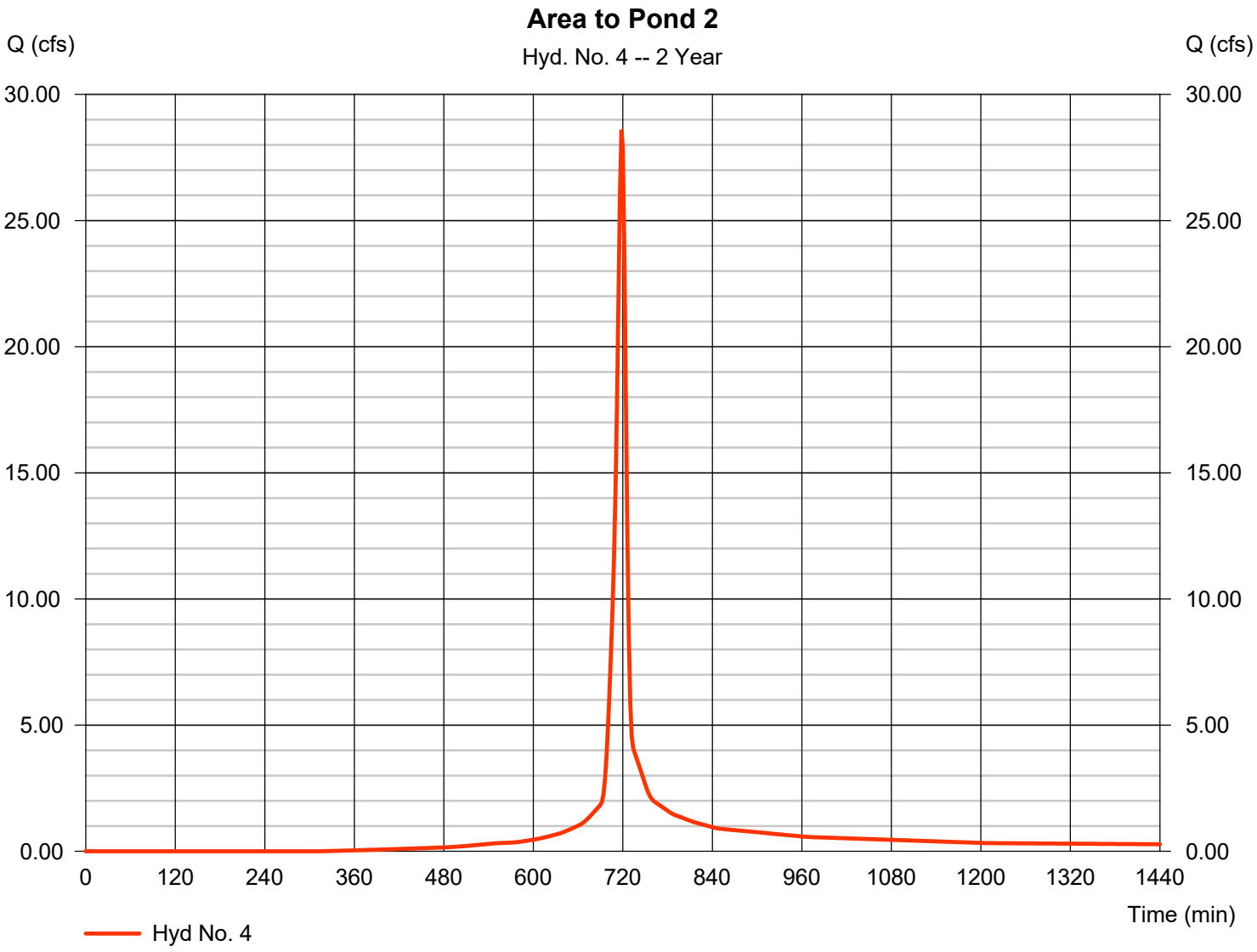
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	28.60 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	67,022 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



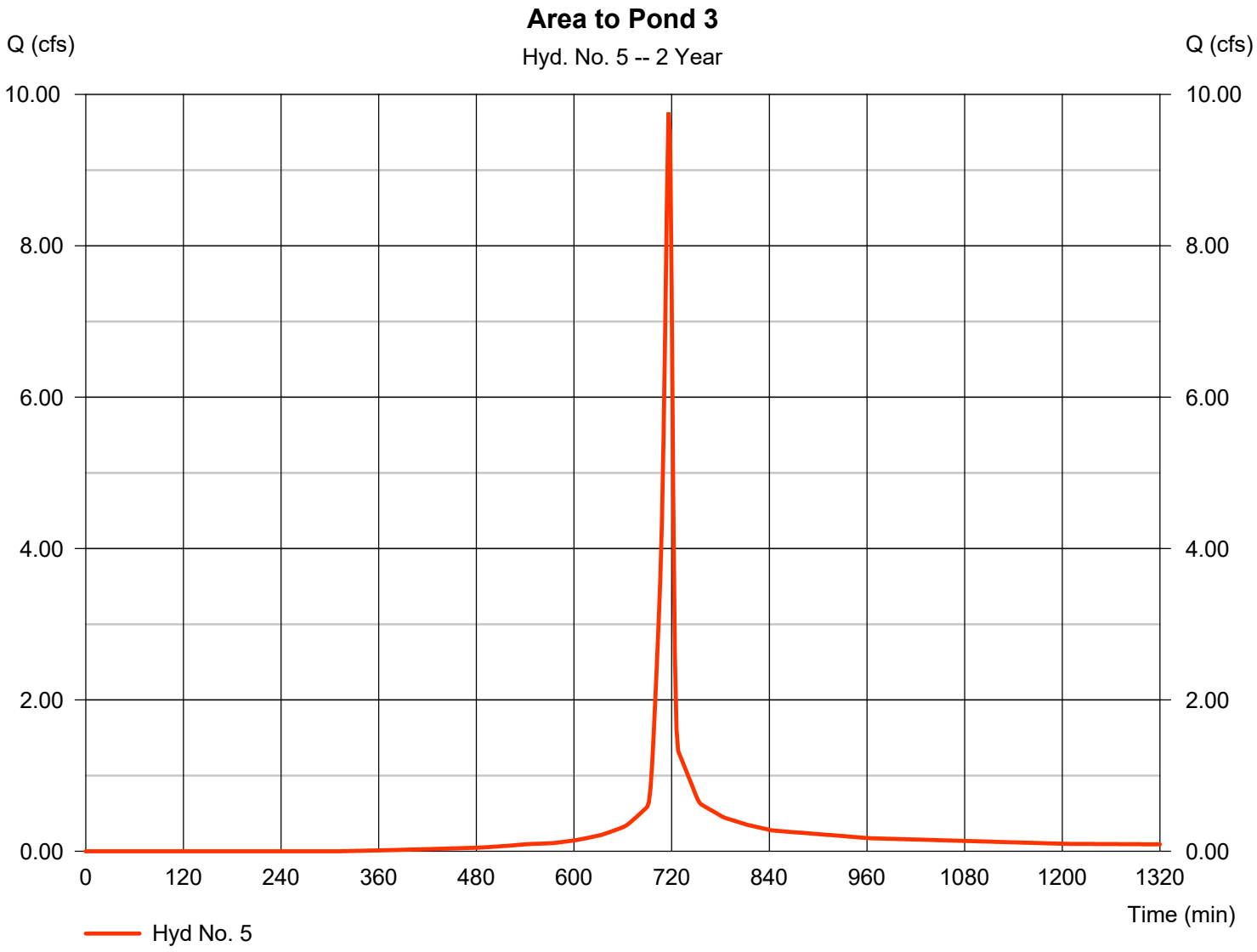
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	9.760 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	20,352 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



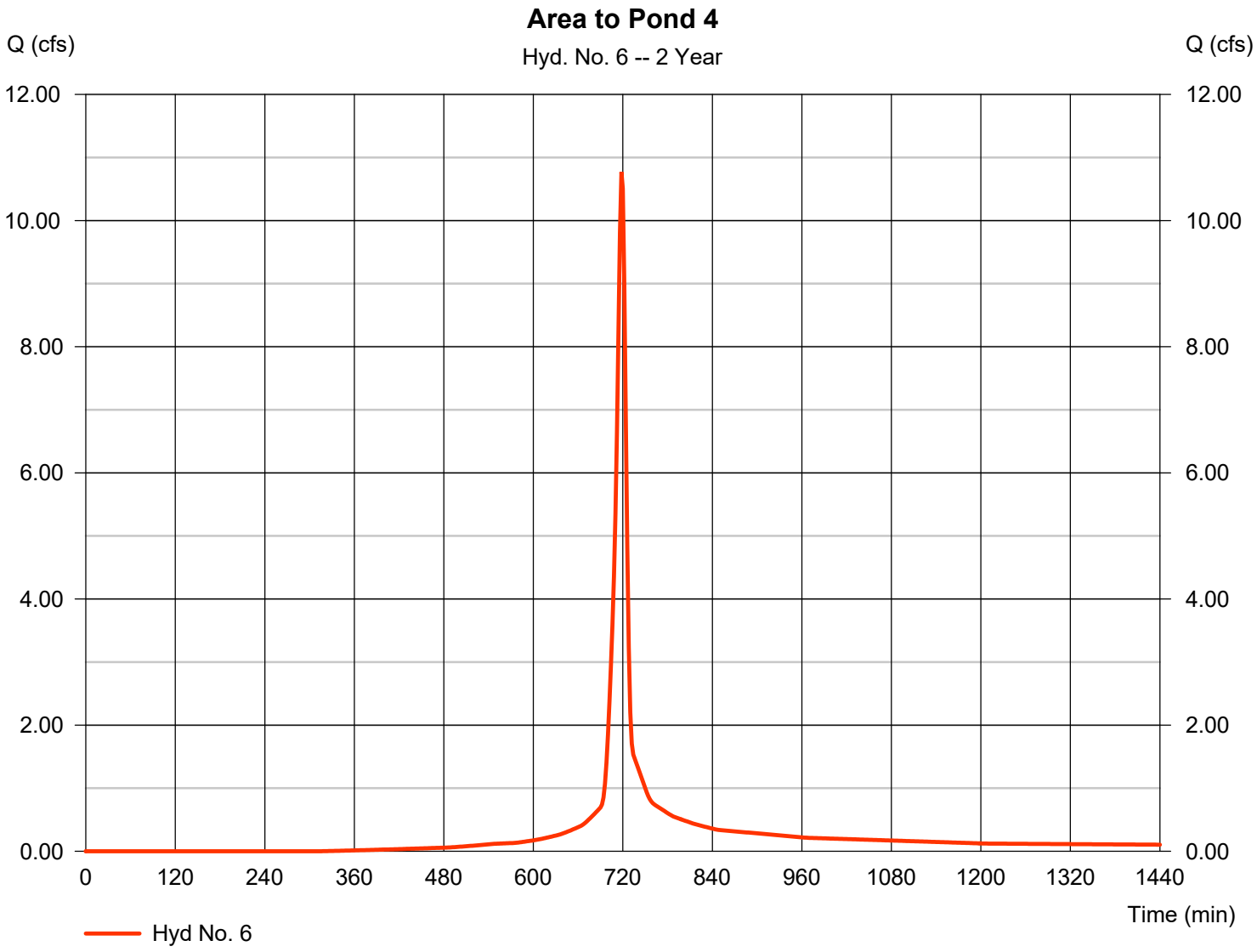
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.77 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	25,241 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



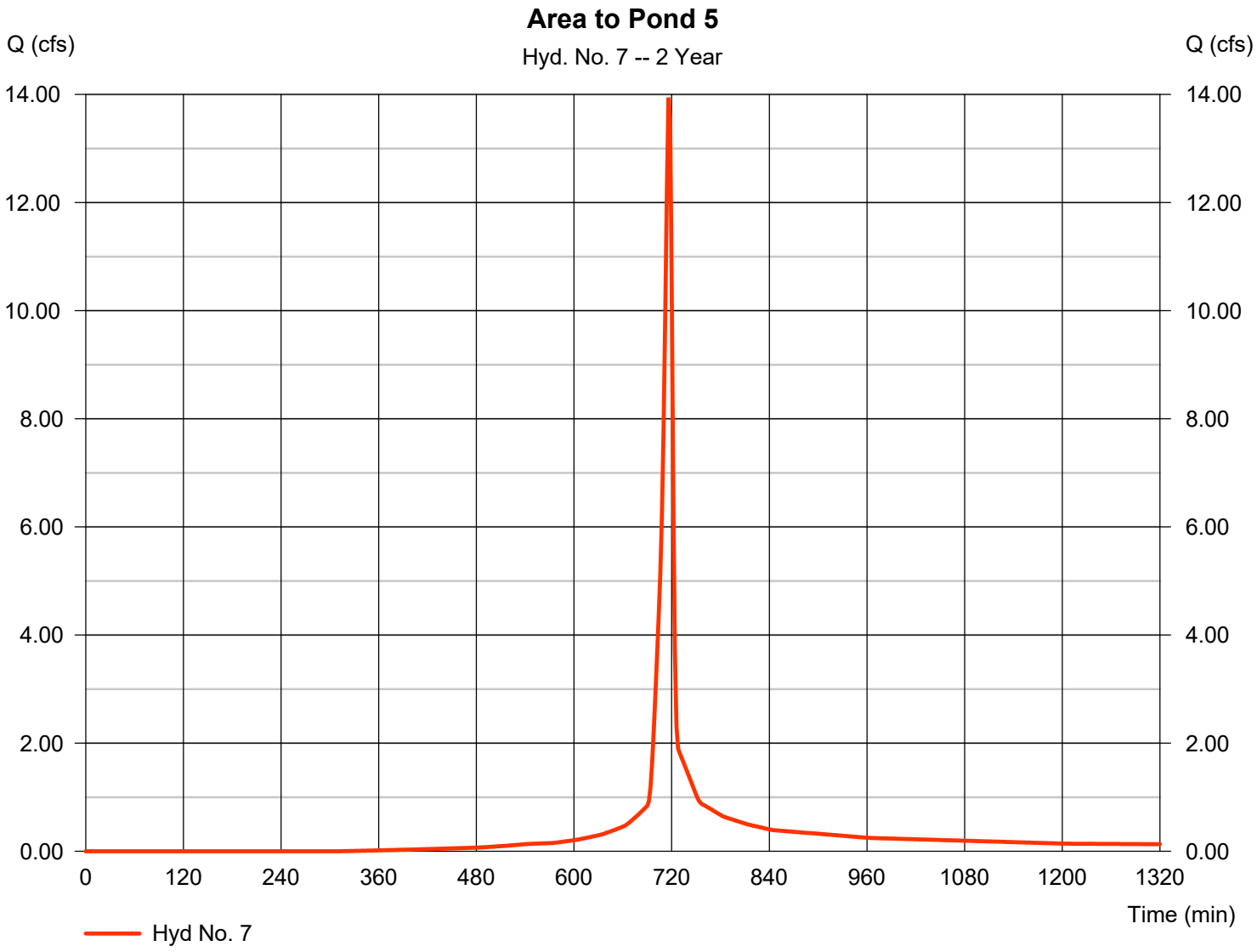
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	= SCS Runoff	Peak discharge	= 13.94 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 29,074 cuft
Drainage area	= 3.600 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.42 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



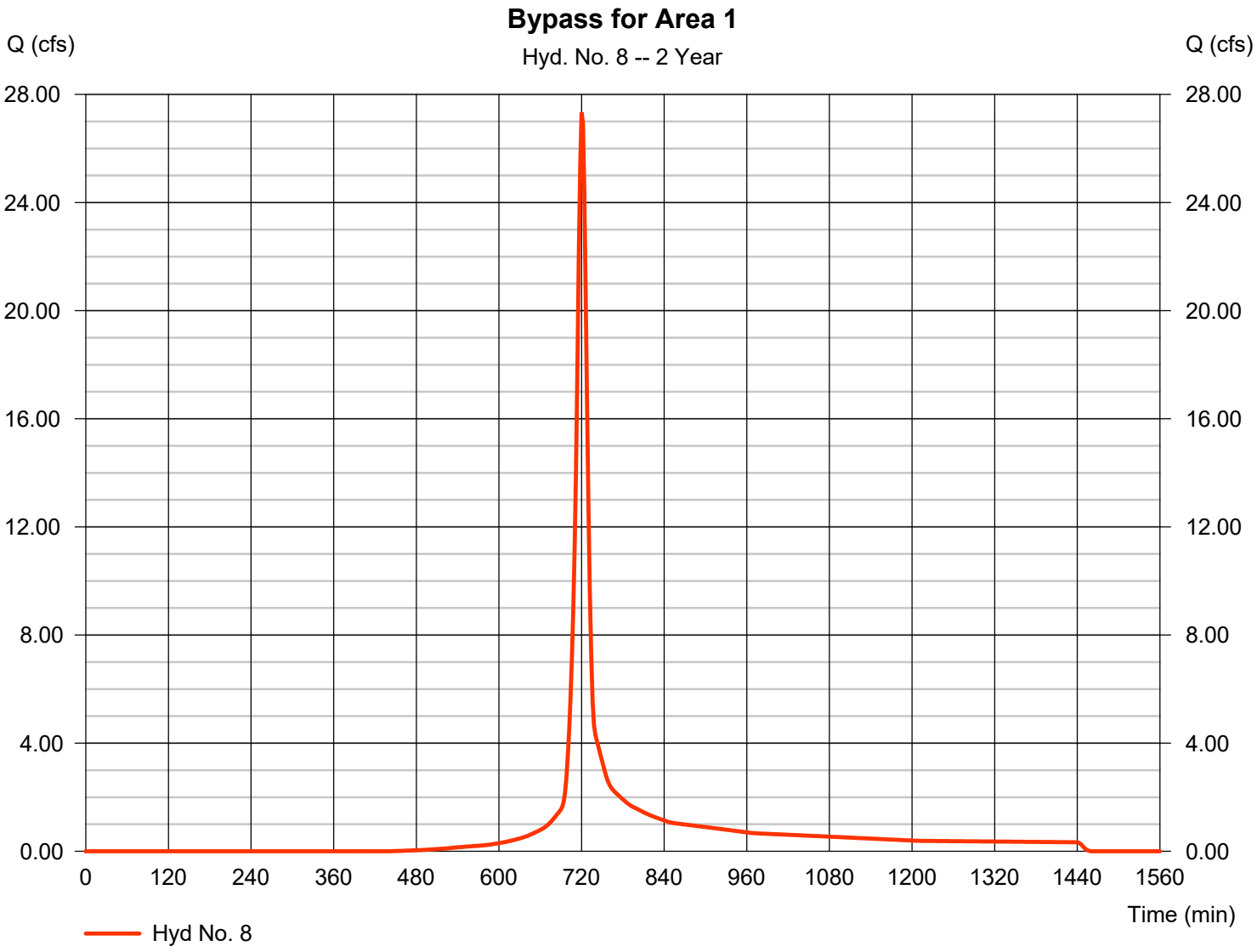
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	= SCS Runoff	Peak discharge	= 27.33 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 70,912 cuft
Drainage area	= 9.730 ac	Curve number	= 85*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.00 min
Total precip.	= 3.42 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



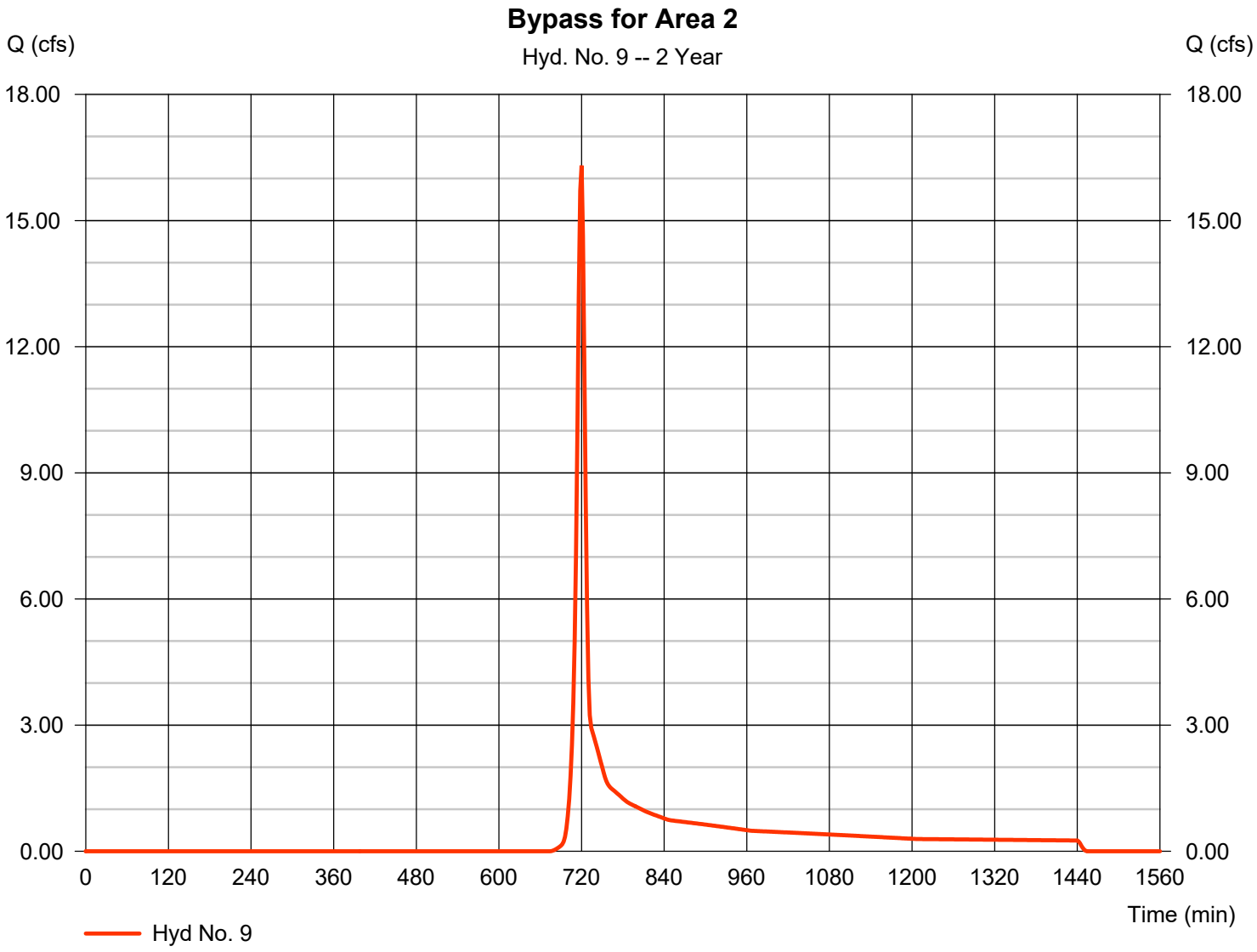
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	16.31 cfs
Storm frequency	=	2 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	38,365 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	3.42 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



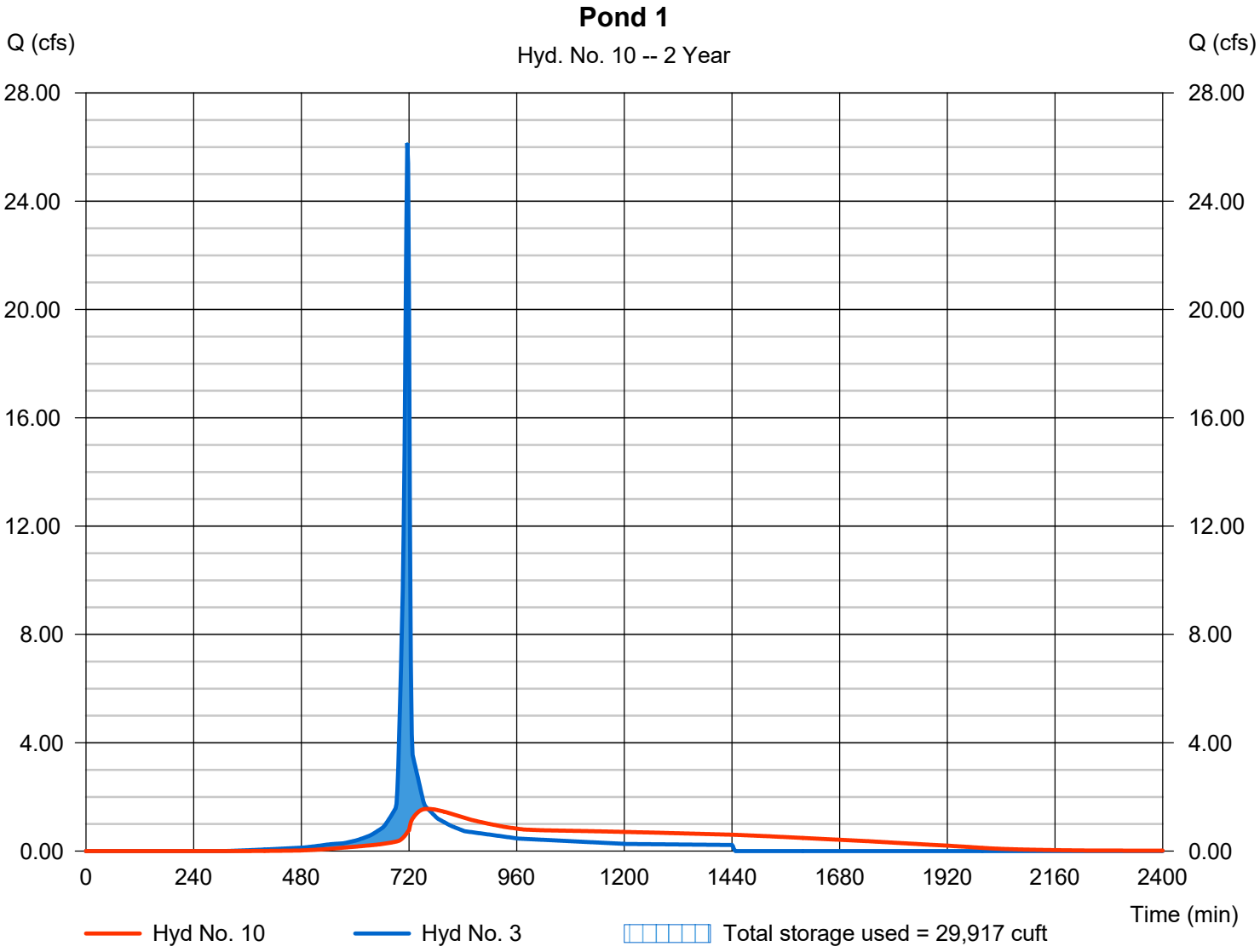
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	1.557 cfs
Storm frequency	=	2 yrs	Time to peak	=	762 min
Time interval	=	2 min	Hyd. volume	=	54,492 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	486.33 ft
Reservoir name	=	Pond 1	Max. Storage	=	29,917 cuft

Storage Indication method used.



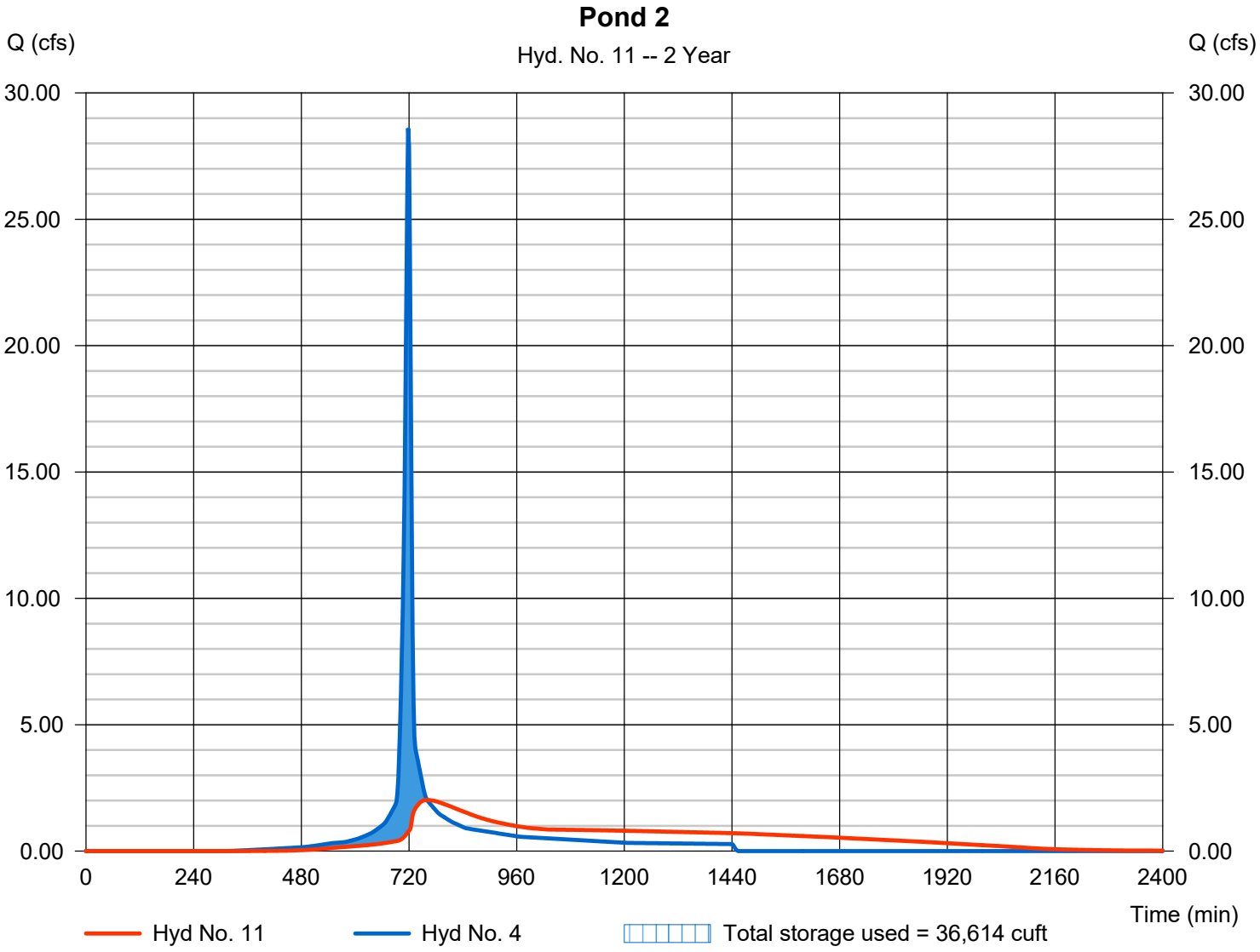
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	2.020 cfs
Storm frequency	=	2 yrs	Time to peak	=	760 min
Time interval	=	2 min	Hyd. volume	=	67,000 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	491.26 ft
Reservoir name	=	Pond 2	Max. Storage	=	36,614 cuft

Storage Indication method used.

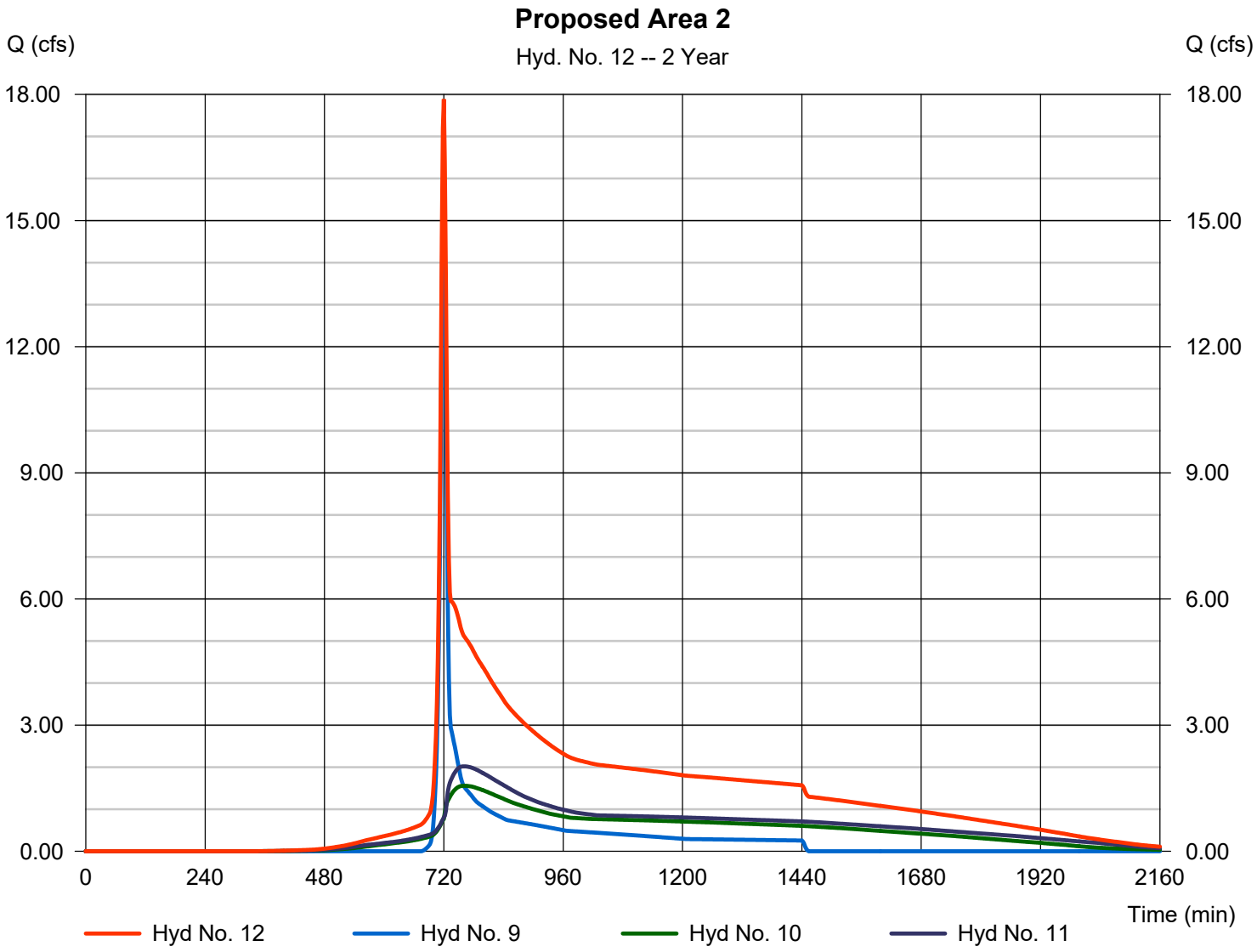


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 17.89 cfs
Storm frequency	= 2 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 159,857 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



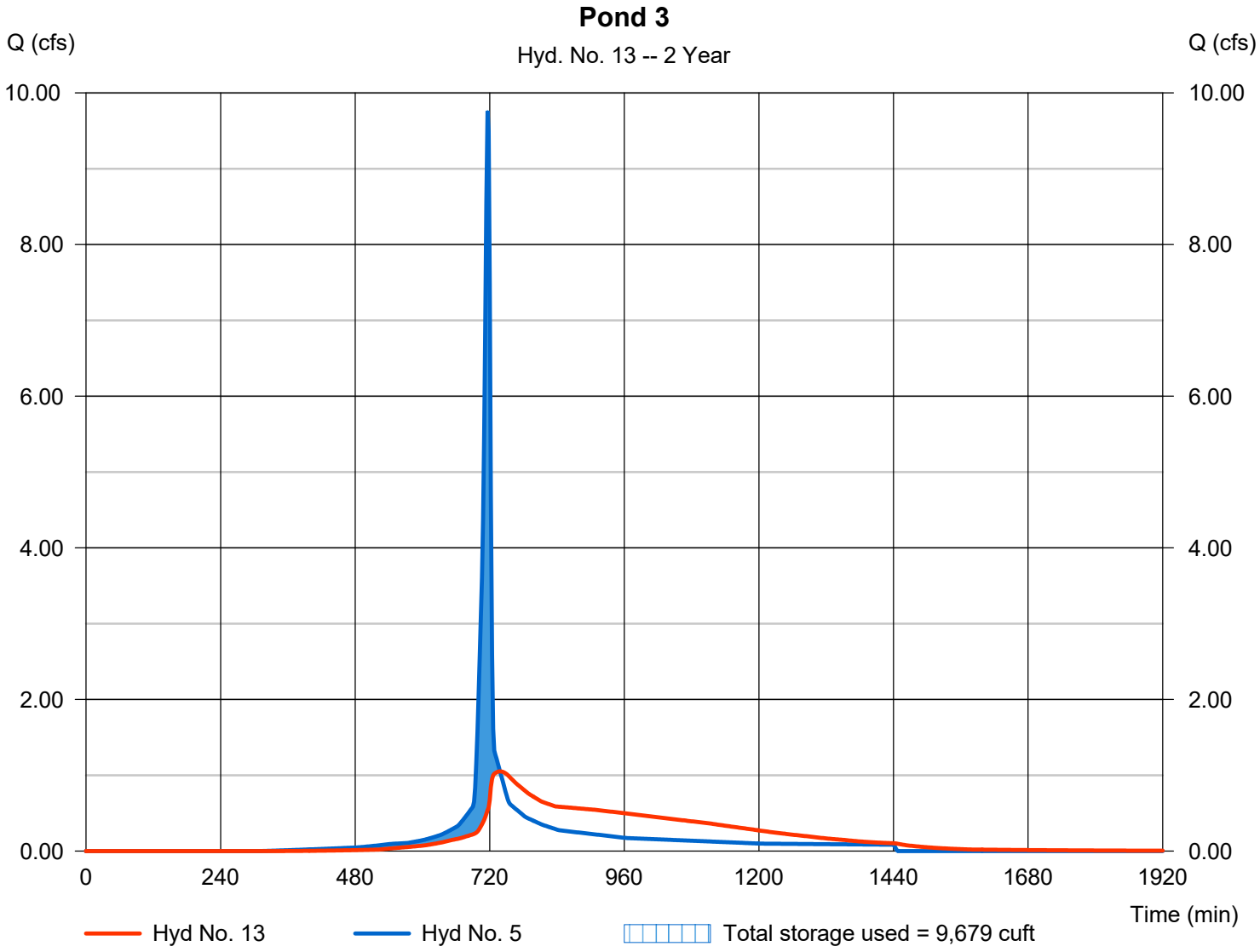
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	1.051 cfs
Storm frequency	=	2 yrs	Time to peak	=	738 min
Time interval	=	2 min	Hyd. volume	=	20,338 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	508.70 ft
Reservoir name	=	Pond 3	Max. Storage	=	9,679 cuft

Storage Indication method used.



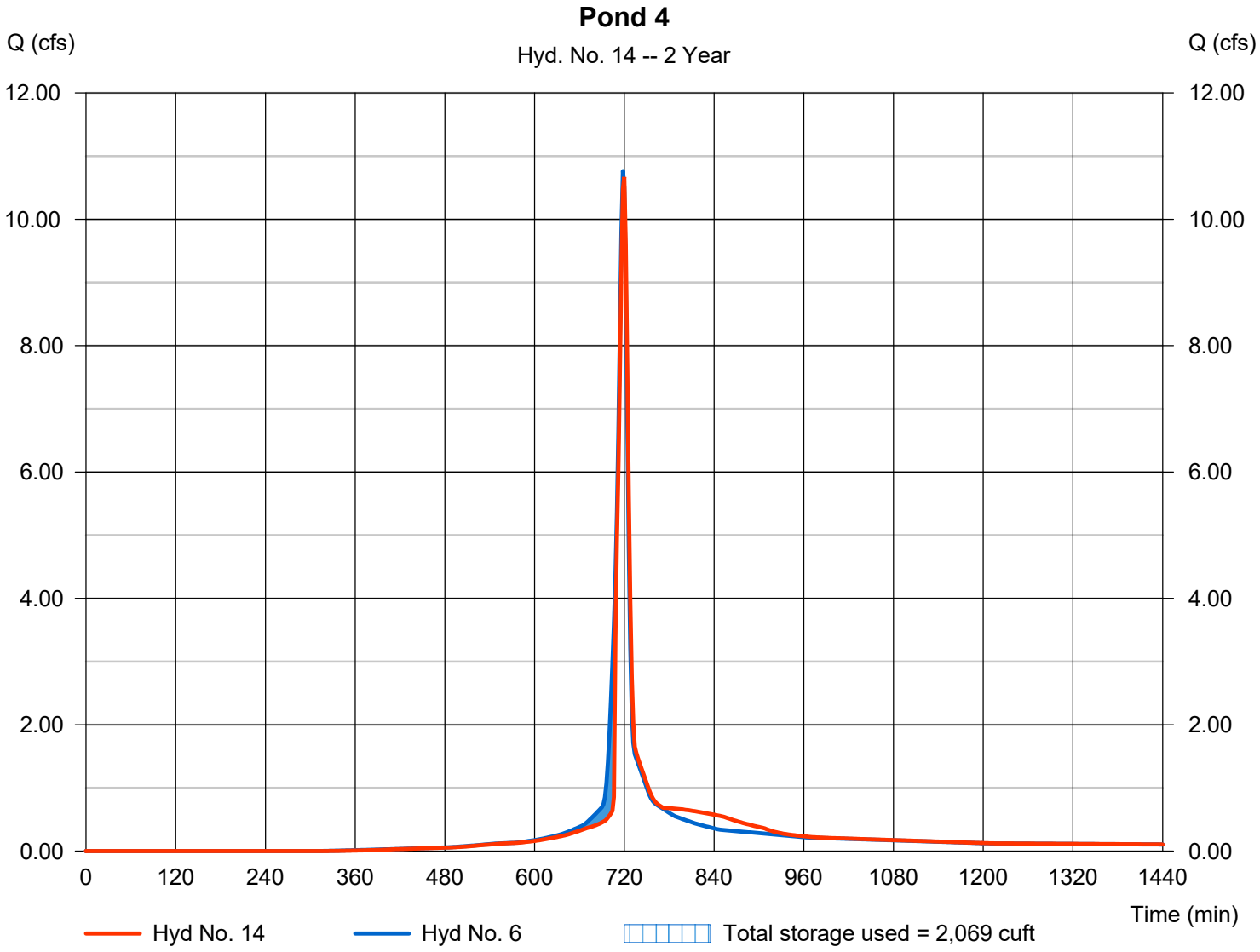
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	10.67 cfs
Storm frequency	=	2 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	25,240 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	511.48 ft
Reservoir name	=	Pond 4	Max. Storage	=	2,069 cuft

Storage Indication method used.



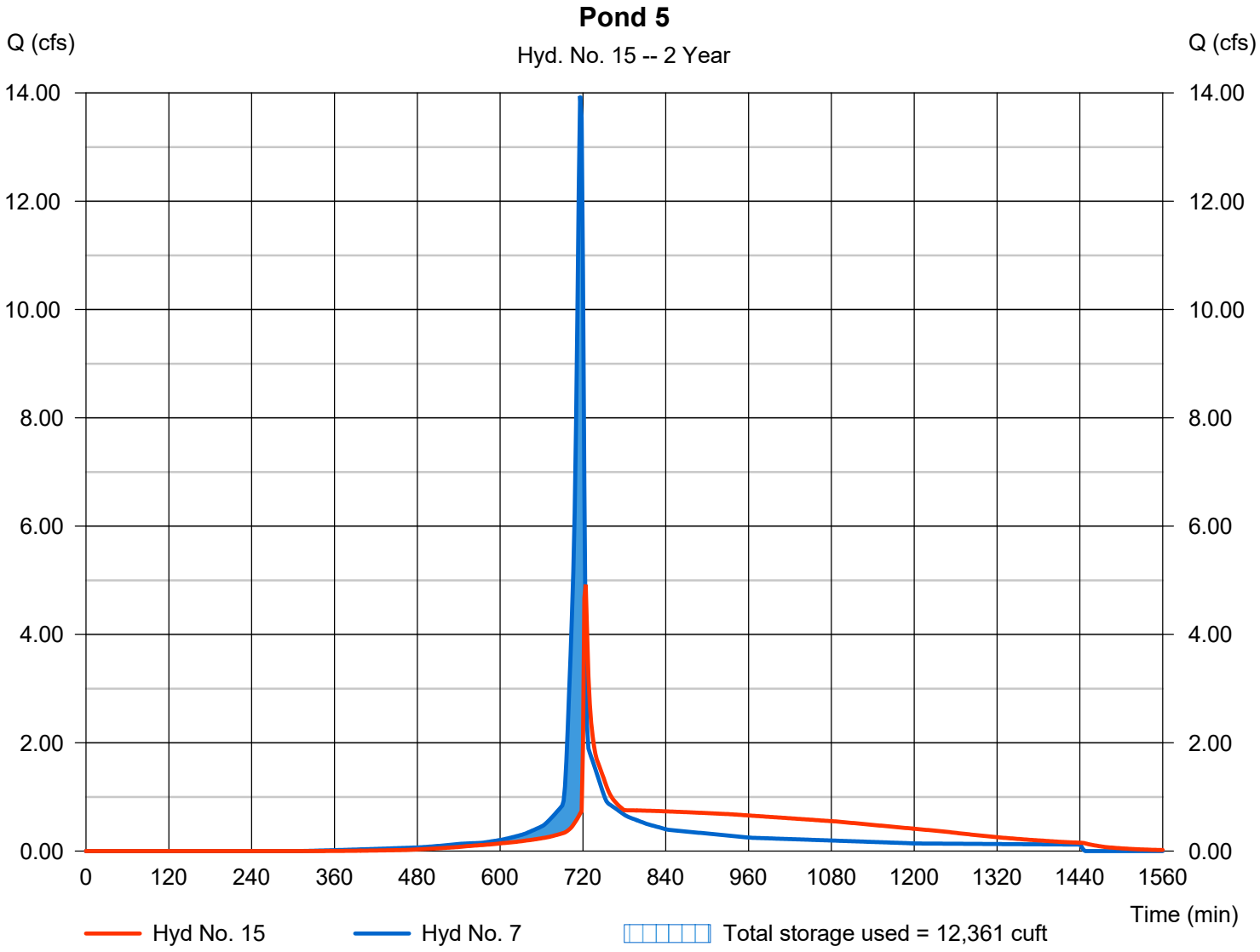
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	4.919 cfs
Storm frequency	=	2 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	29,065 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	501.86 ft
Reservoir name	=	Pond 5	Max. Storage	=	12,361 cuft

Storage Indication method used.

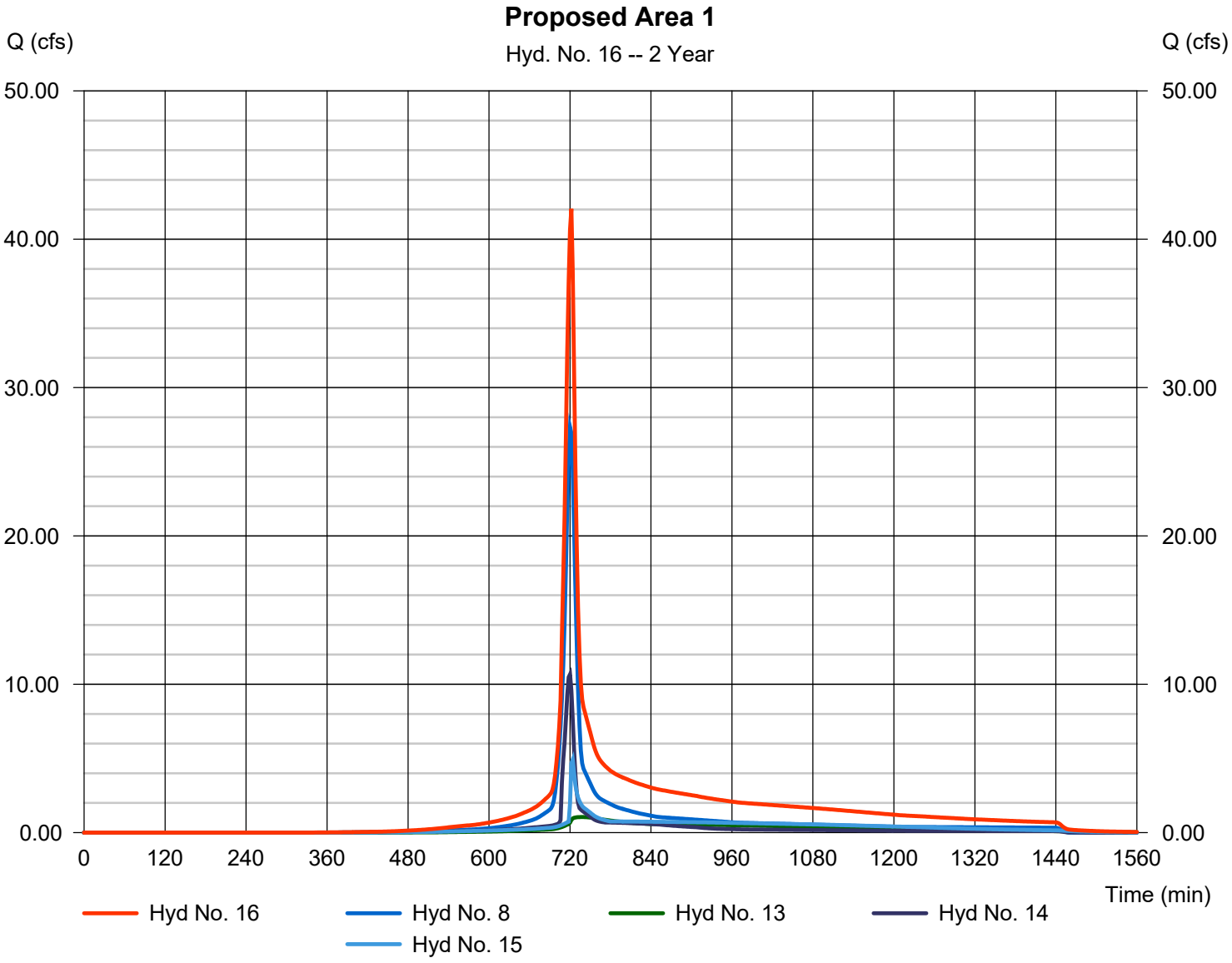


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 42.05 cfs
Storm frequency	= 2 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 145,556 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	61.77	2	720	160,235	------	------	------	Exisitng Area 1
2	SCS Runoff	53.39	2	722	140,581	------	------	------	Existing Area 2
3	SCS Runoff	33.35	2	716	70,549	------	------	------	Area to Pond 1
4	SCS Runoff	36.54	2	718	86,735	------	------	------	Area to Pond 2
5	SCS Runoff	12.45	2	716	26,338	------	------	------	Area to Pond 3
6	SCS Runoff	13.76	2	718	32,665	------	------	------	Area to Pond 4
7	SCS Runoff	17.79	2	716	37,626	------	------	------	Area to Pond 5
8	SCS Runoff	36.33	2	720	94,748	------	------	------	Bypass for Area 1
9	SCS Runoff	24.97	2	720	57,505	------	------	------	Bypass for Area 2
10	Reservoir	3.408	2	740	70,526	3	487.02	36,596	Pond 1
11	Reservoir	4.214	2	742	86,713	4	492.06	44,928	Pond 2
12	Combine	28.47	2	720	214,744	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	2.092	2	726	26,324	5	509.20	12,087	Pond 3
14	Reservoir	13.46	2	720	32,664	6	511.61	2,241	Pond 4
15	Reservoir	12.18	2	720	37,617	7	502.12	13,709	Pond 5
16	Combine	63.59	2	720	191,352	8, 13, 14, 15	------	------	Proposed Area 1

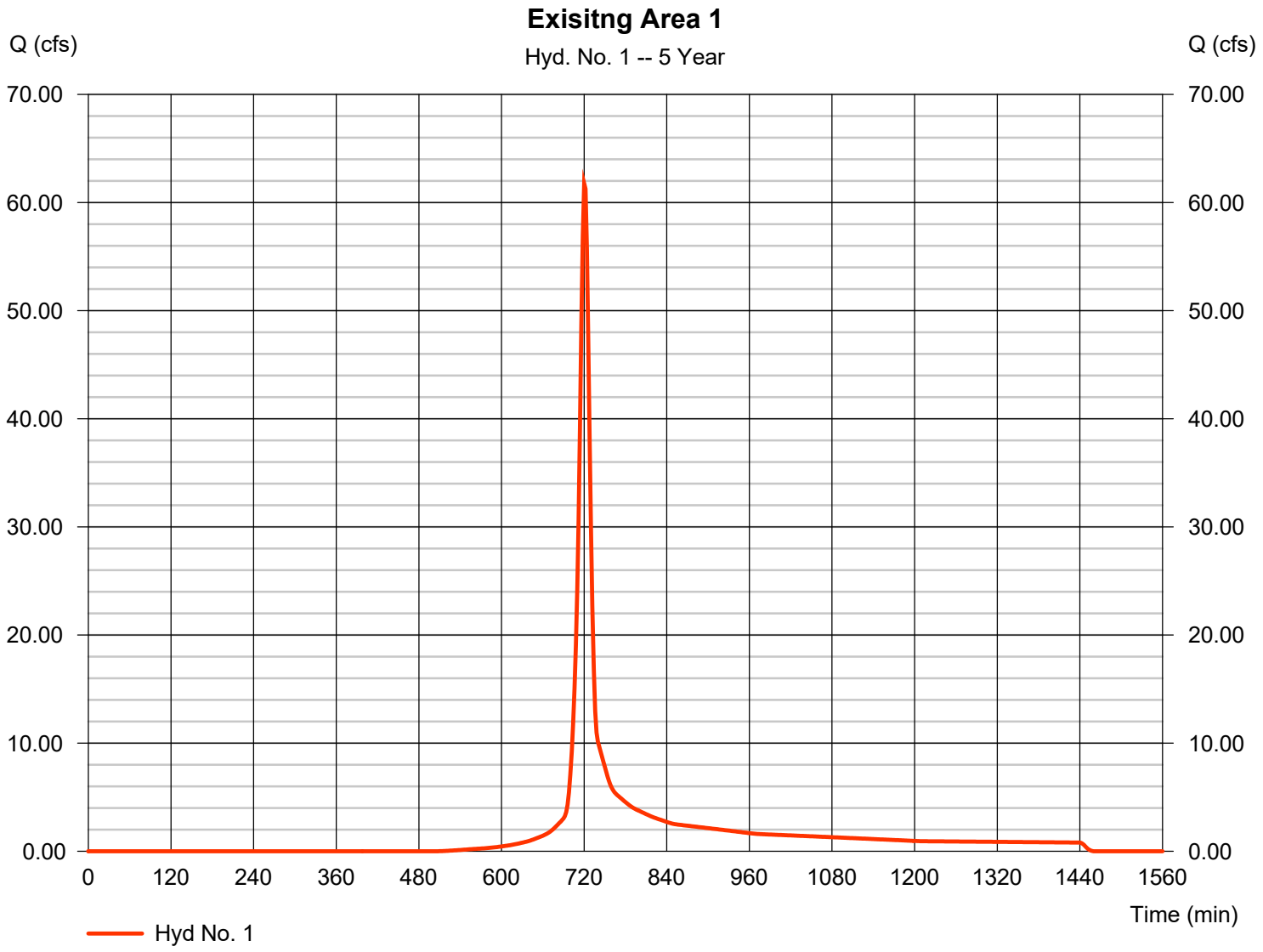
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	= SCS Runoff	Peak discharge	= 61.77 cfs
Storm frequency	= 5 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 160,235 cuft
Drainage area	= 20.440 ac	Curve number	= 79*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.20 min
Total precip.	= 4.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



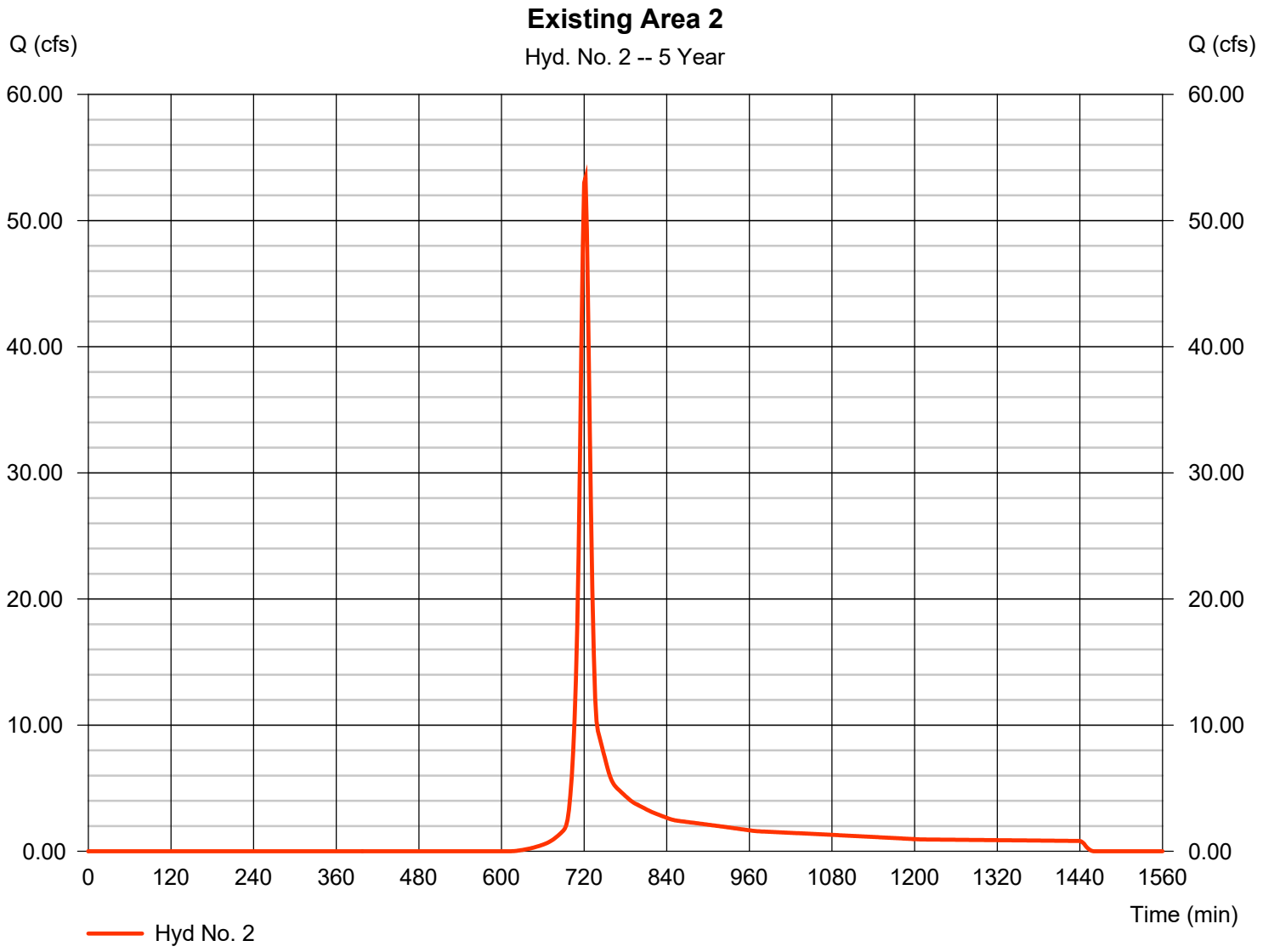
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 53.39 cfs
Storm frequency	= 5 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 140,581 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 4.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



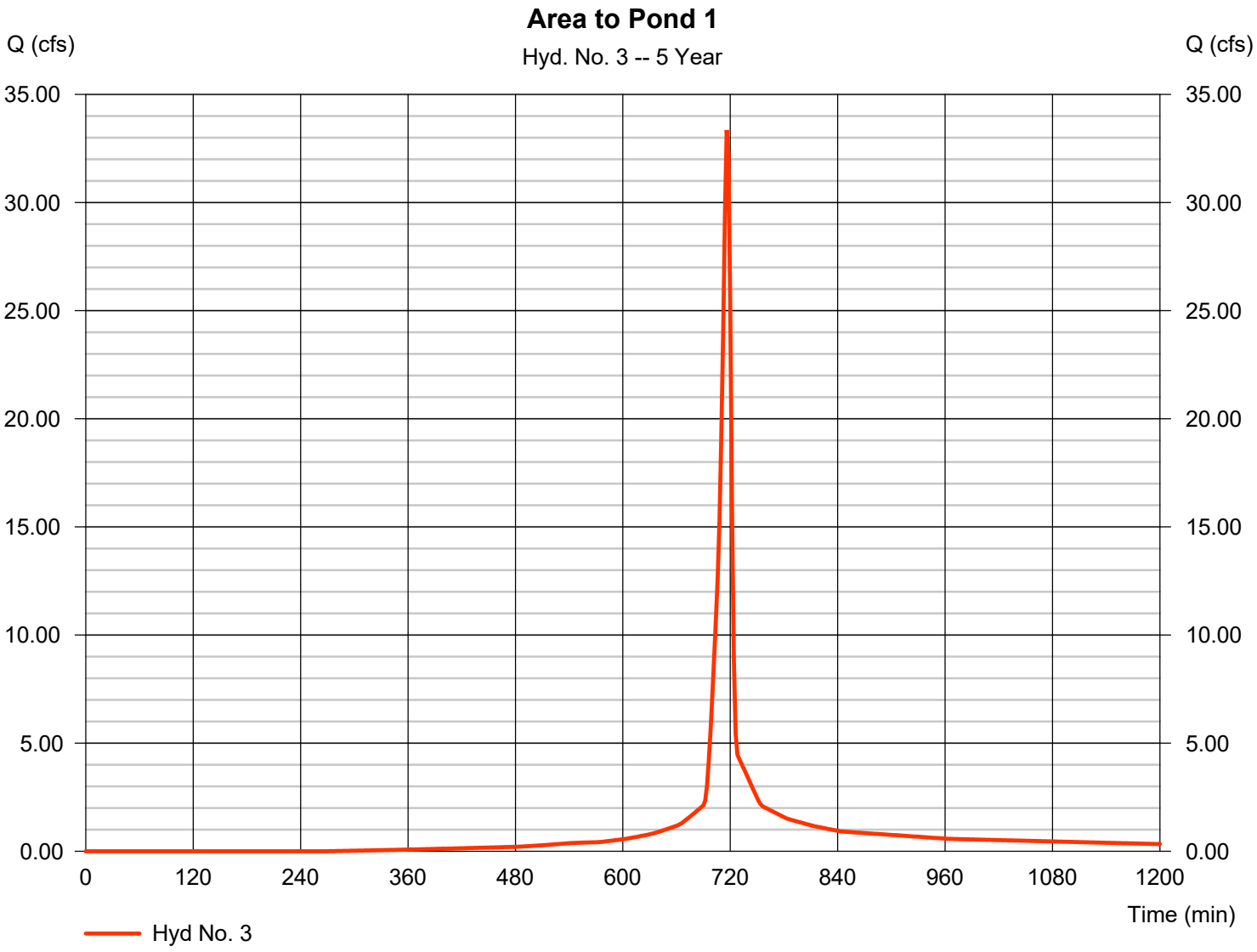
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	33.35 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	70,549 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



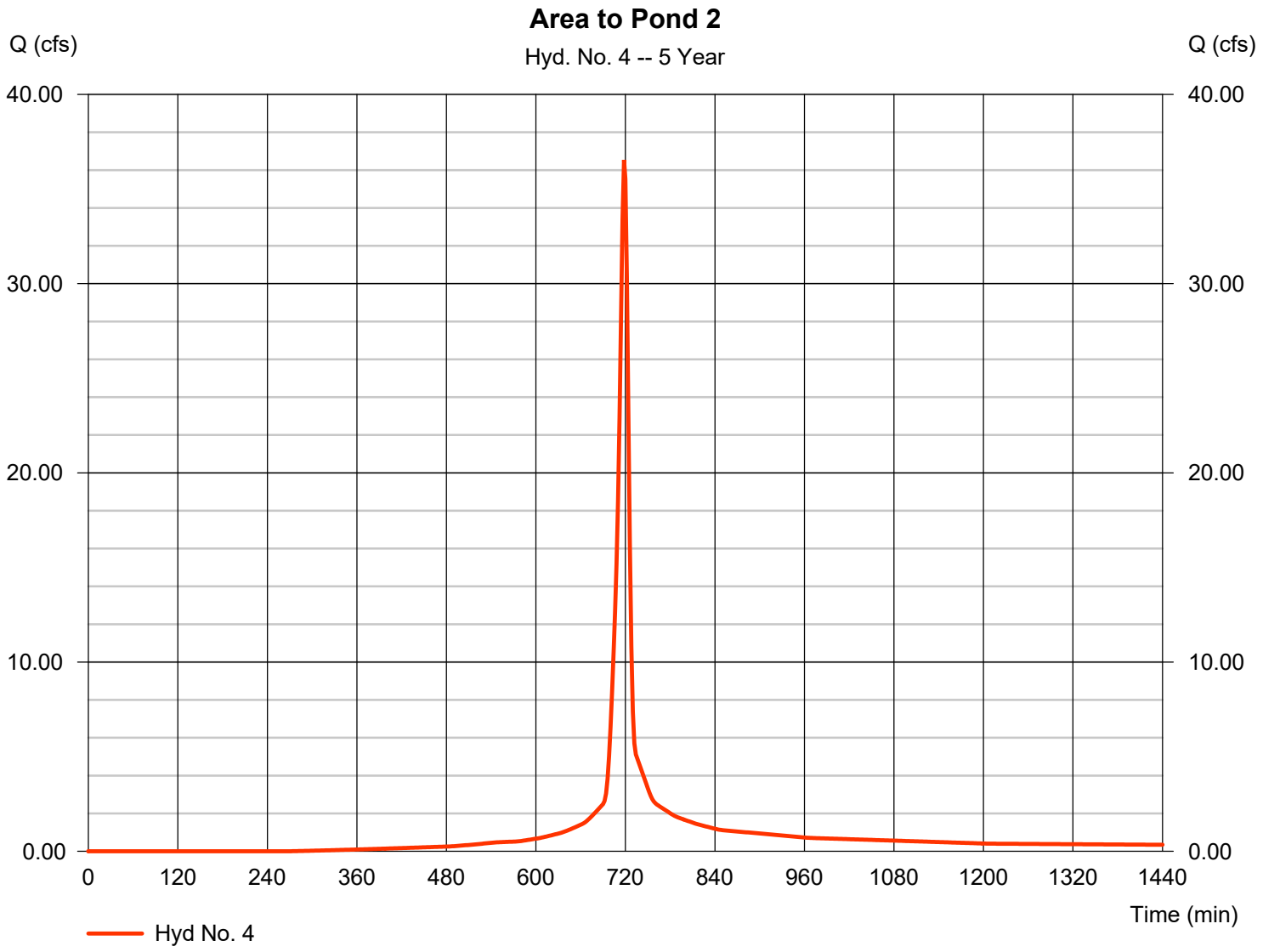
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	36.54 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	86,735 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



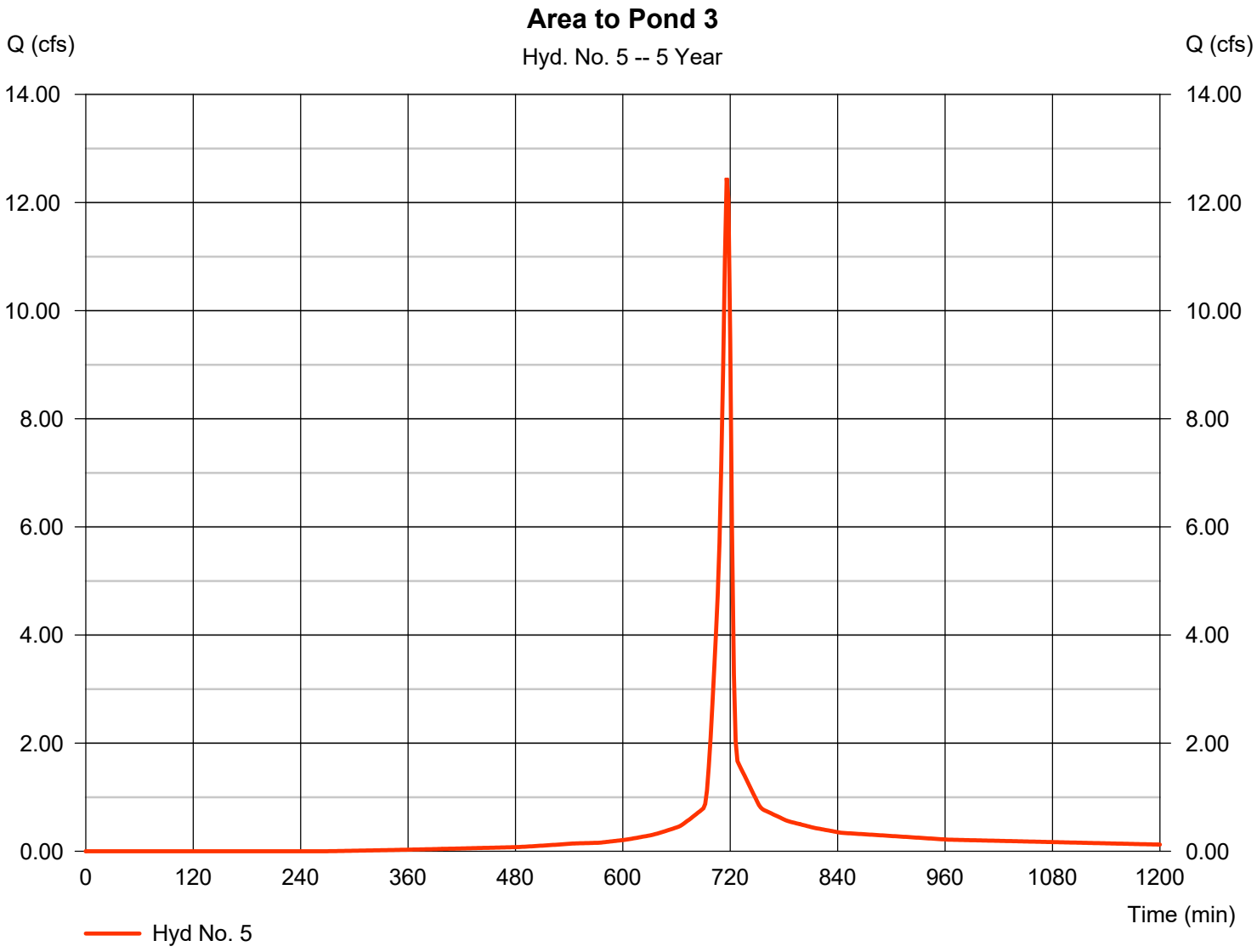
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	12.45 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	26,338 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



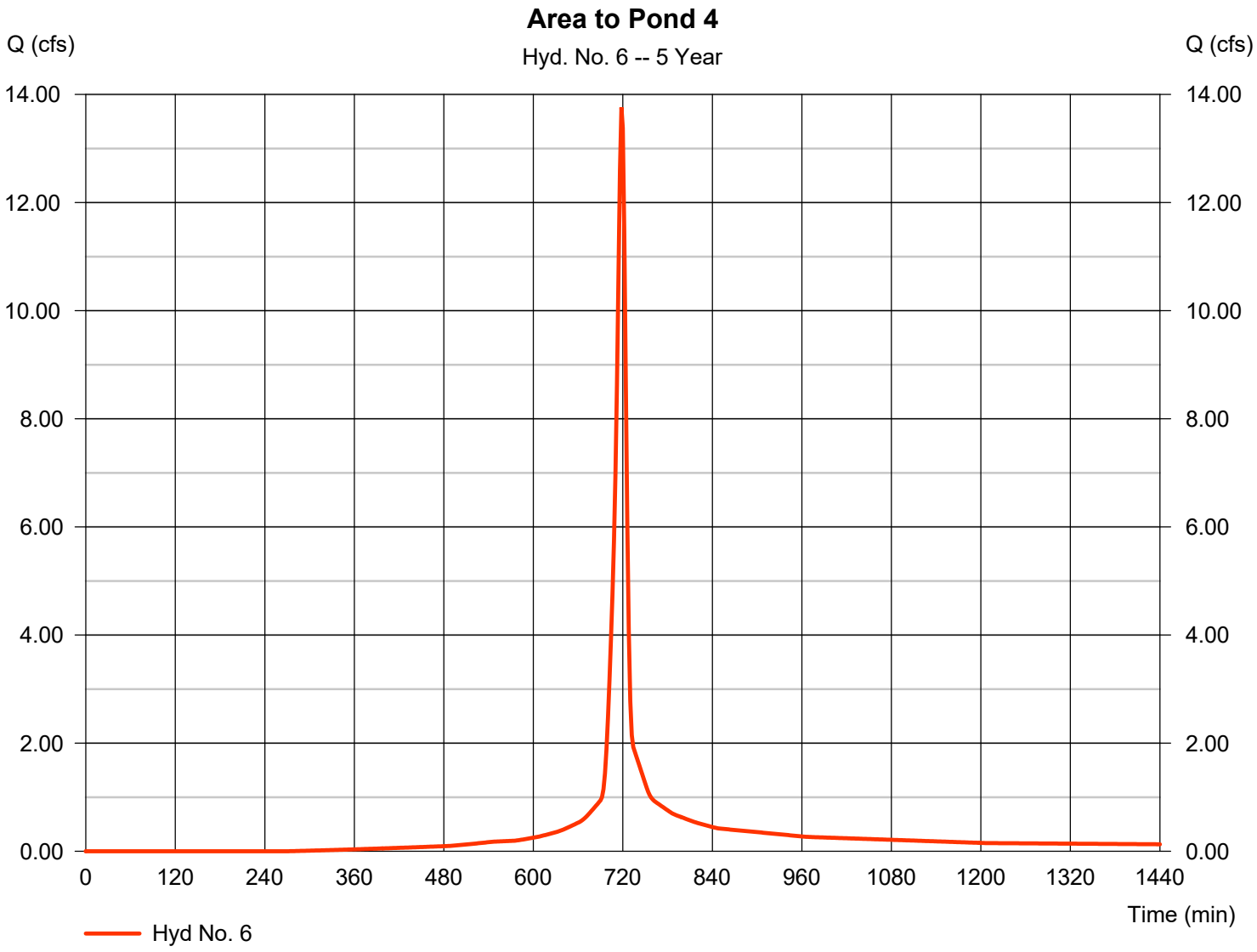
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	= SCS Runoff	Peak discharge	= 13.76 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 32,665 cuft
Drainage area	= 2.930 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 7.80 min
Total precip.	= 4.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



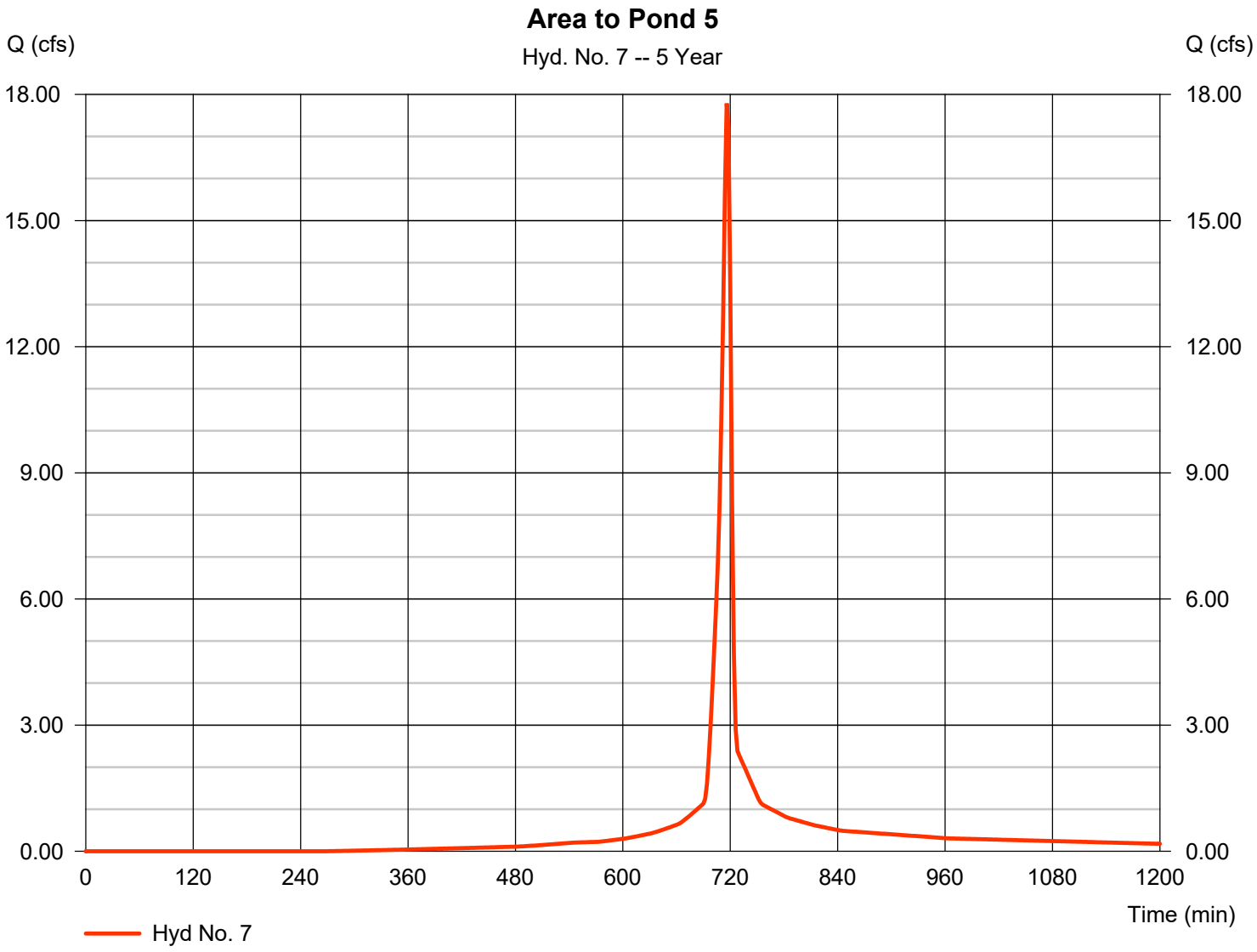
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	= SCS Runoff	Peak discharge	= 17.79 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 37,626 cuft
Drainage area	= 3.600 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.16 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



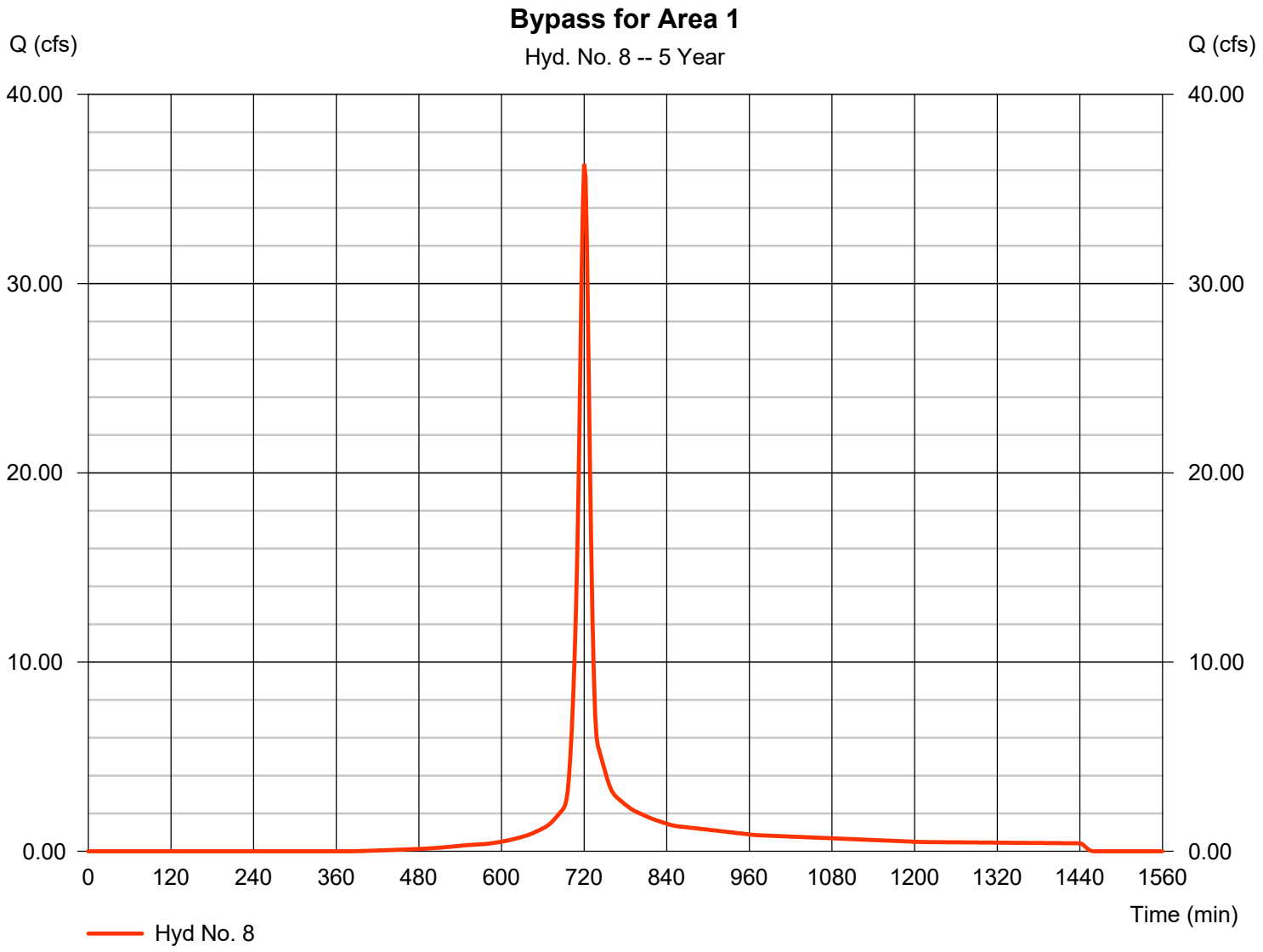
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	36.33 cfs
Storm frequency	=	5 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	94,748 cuft
Drainage area	=	9.730 ac	Curve number	=	85*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.00 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



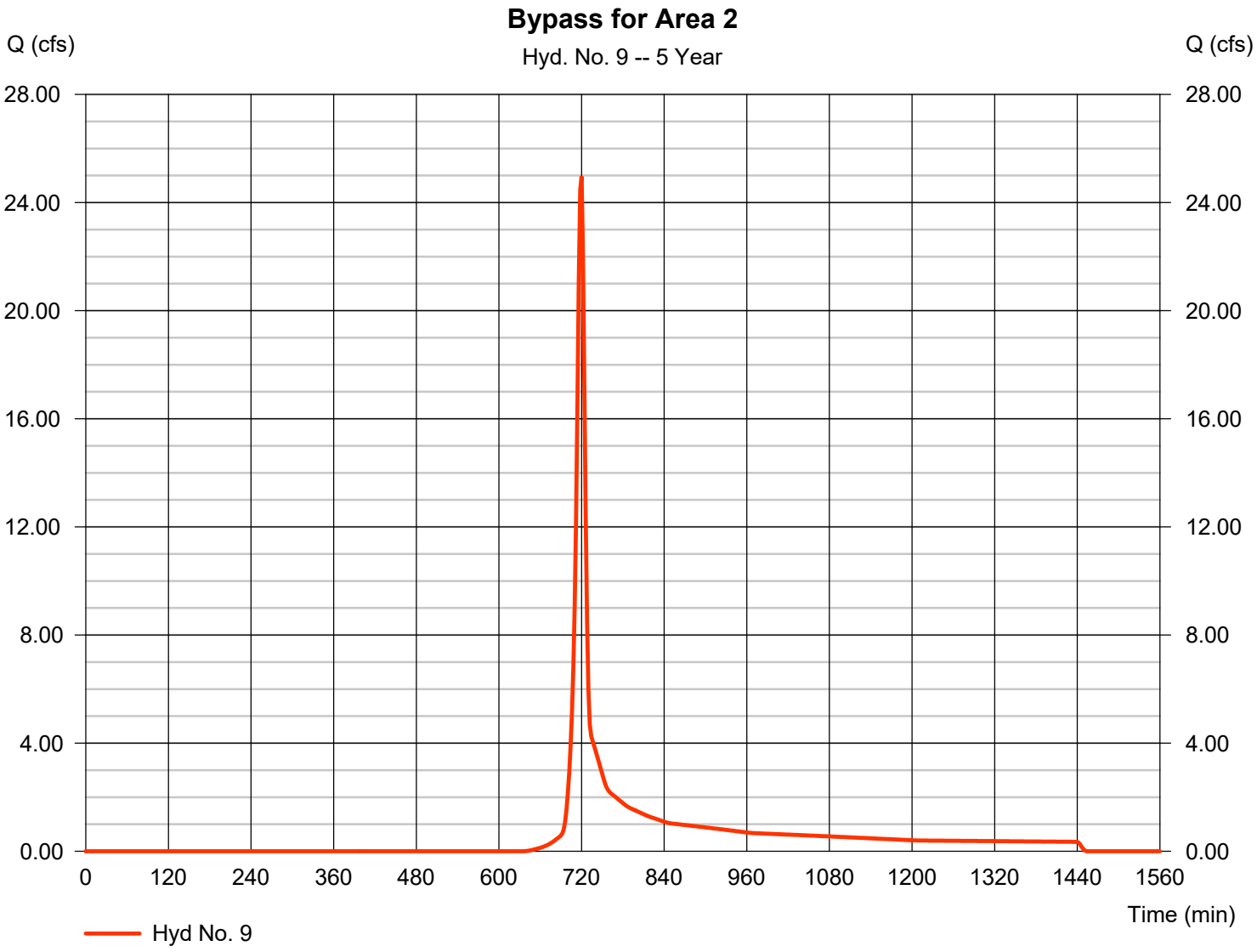
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	24.97 cfs
Storm frequency	=	5 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	57,505 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	4.16 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



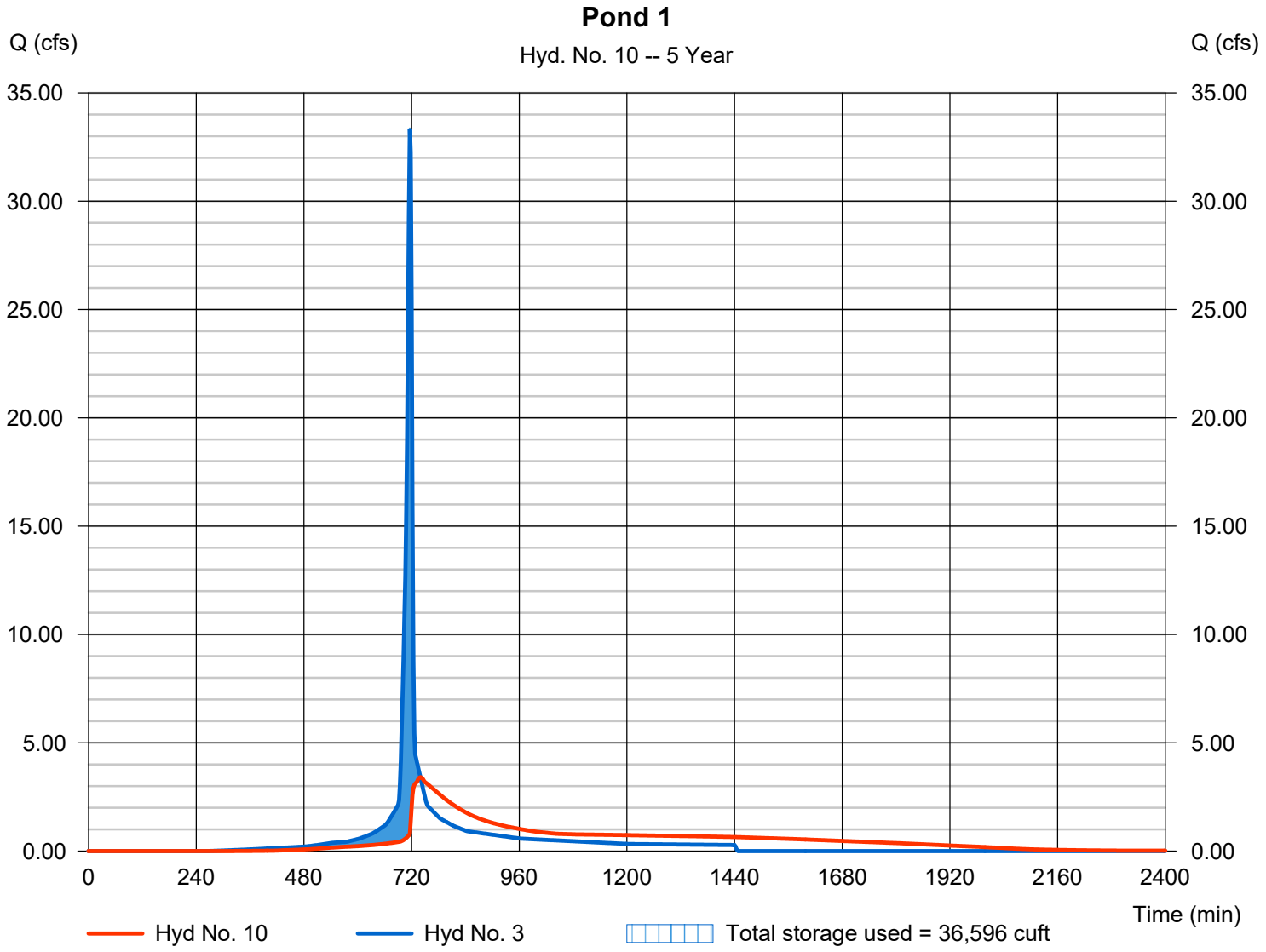
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	3.408 cfs
Storm frequency	=	5 yrs	Time to peak	=	740 min
Time interval	=	2 min	Hyd. volume	=	70,526 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	487.02 ft
Reservoir name	=	Pond 1	Max. Storage	=	36,596 cuft

Storage Indication method used.



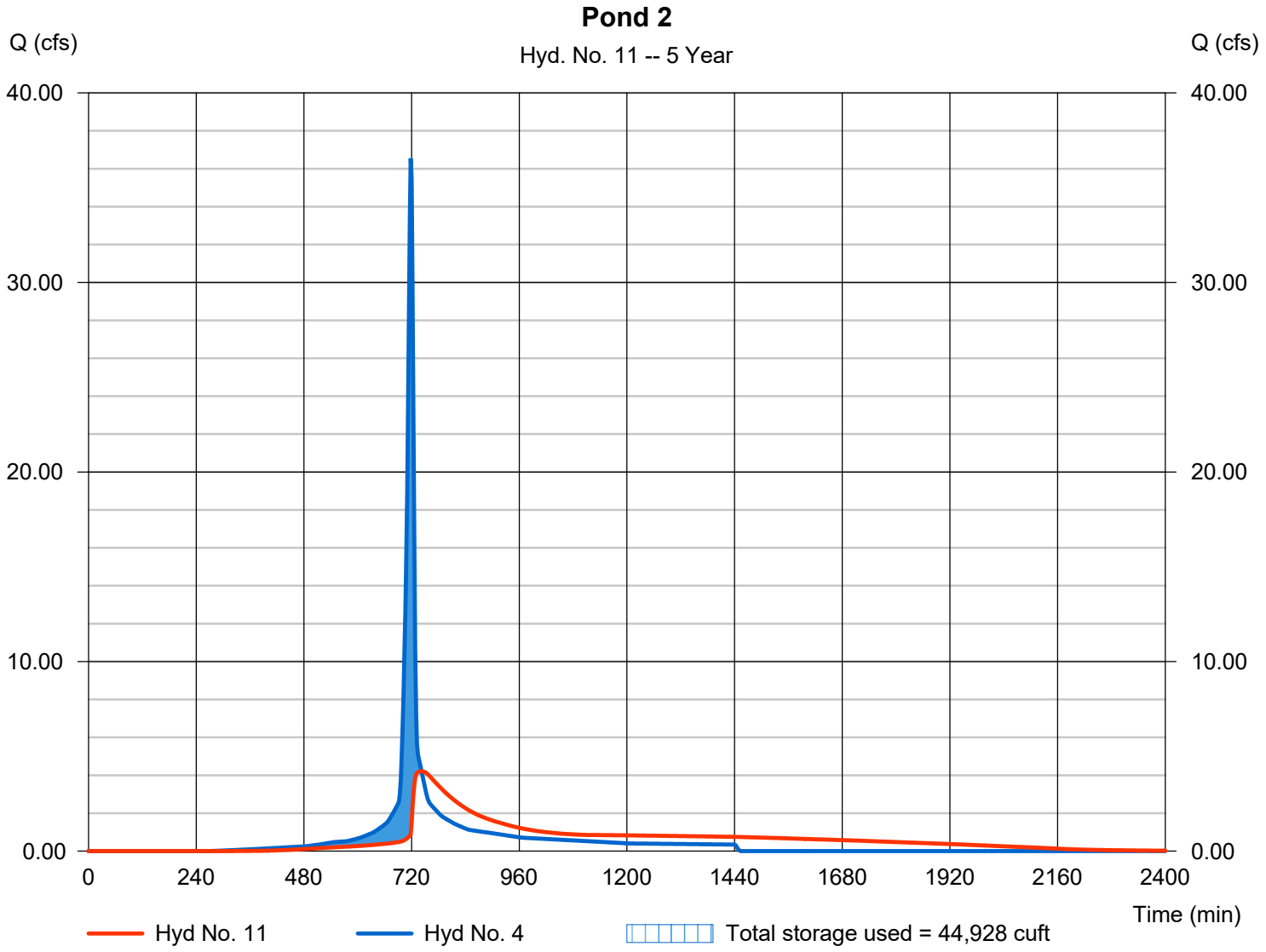
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	4.214 cfs
Storm frequency	=	5 yrs	Time to peak	=	742 min
Time interval	=	2 min	Hyd. volume	=	86,713 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	492.06 ft
Reservoir name	=	Pond 2	Max. Storage	=	44,928 cuft

Storage Indication method used.

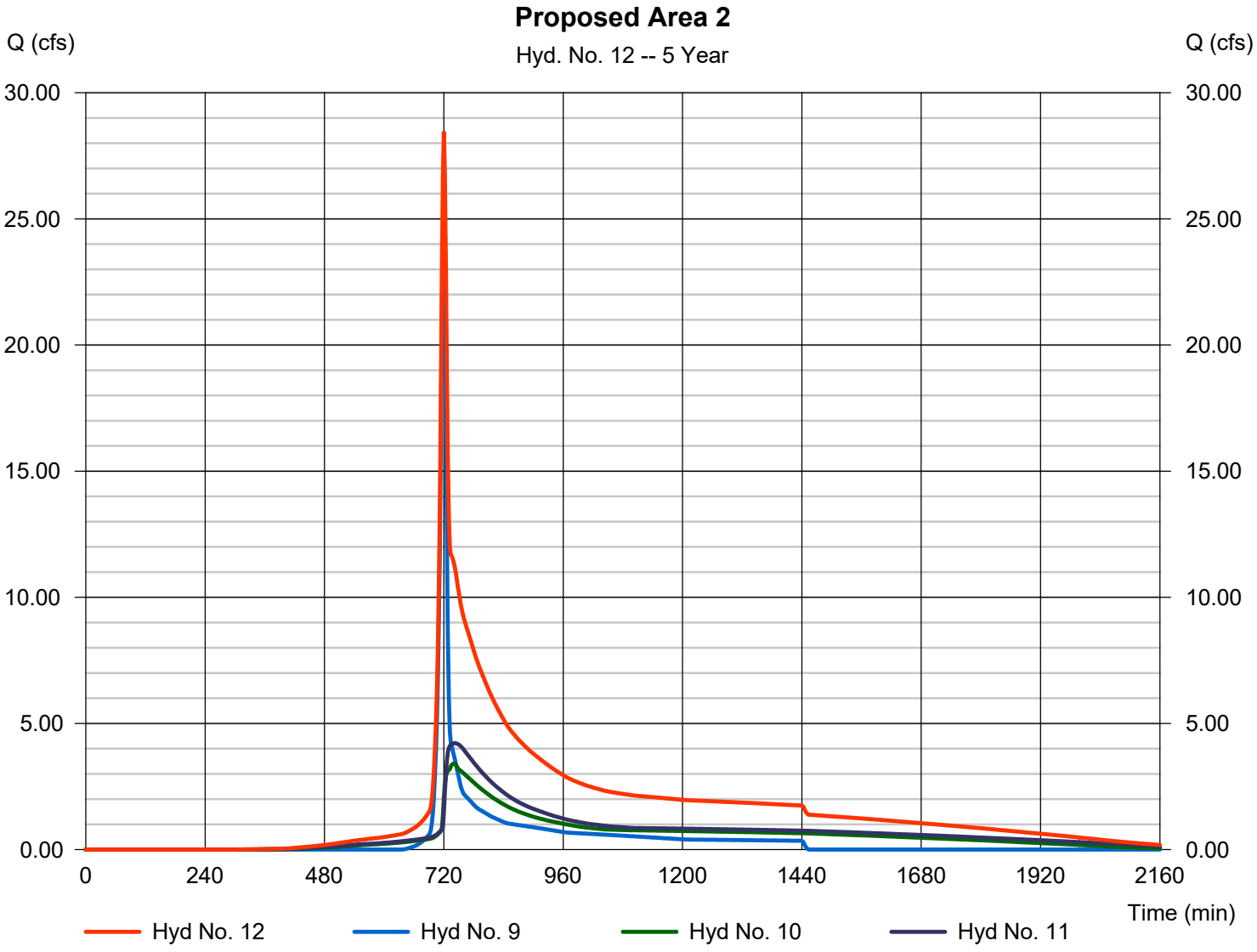


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 28.47 cfs
Storm frequency	= 5 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 214,744 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



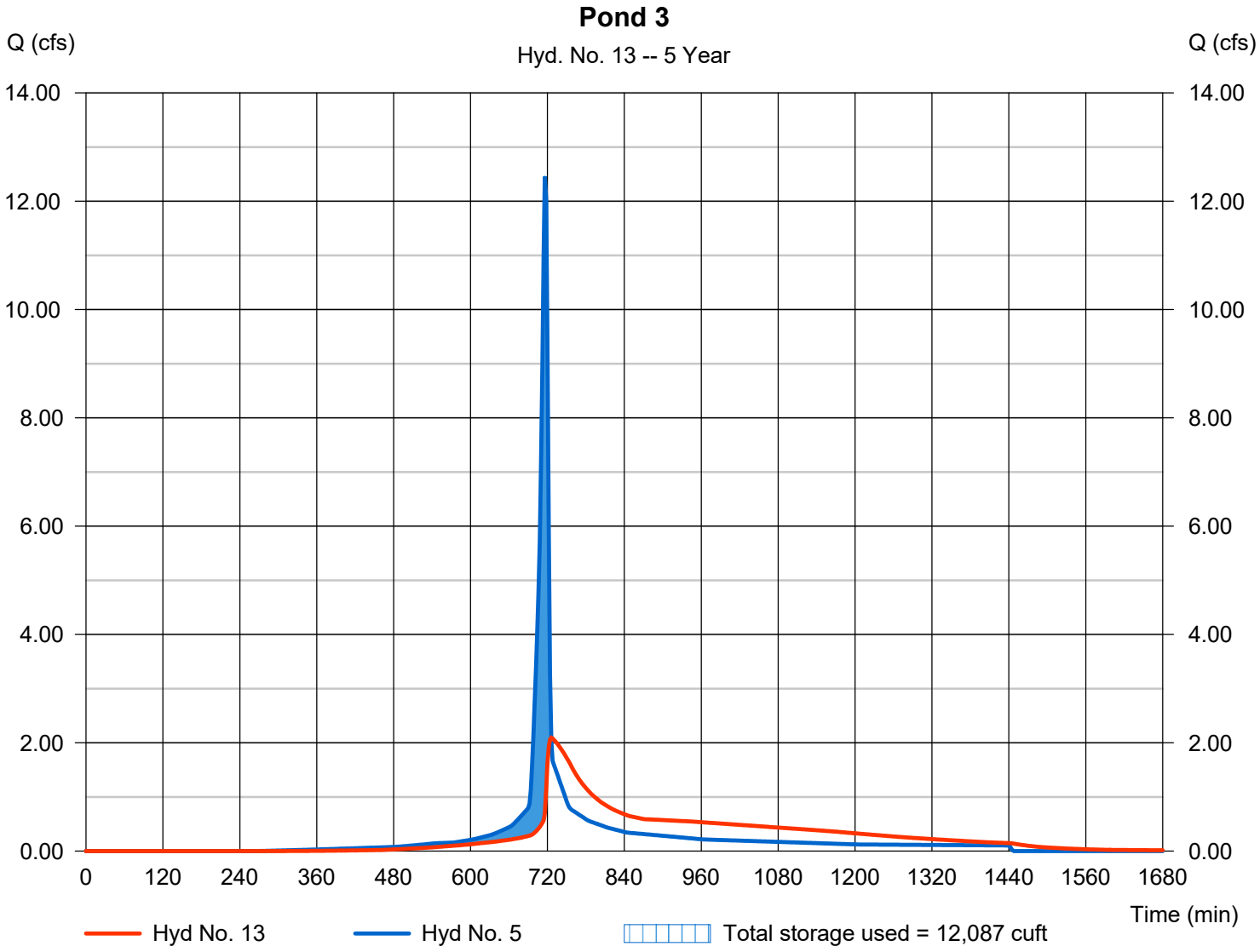
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	2.092 cfs
Storm frequency	=	5 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	26,324 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	509.20 ft
Reservoir name	=	Pond 3	Max. Storage	=	12,087 cuft

Storage Indication method used.



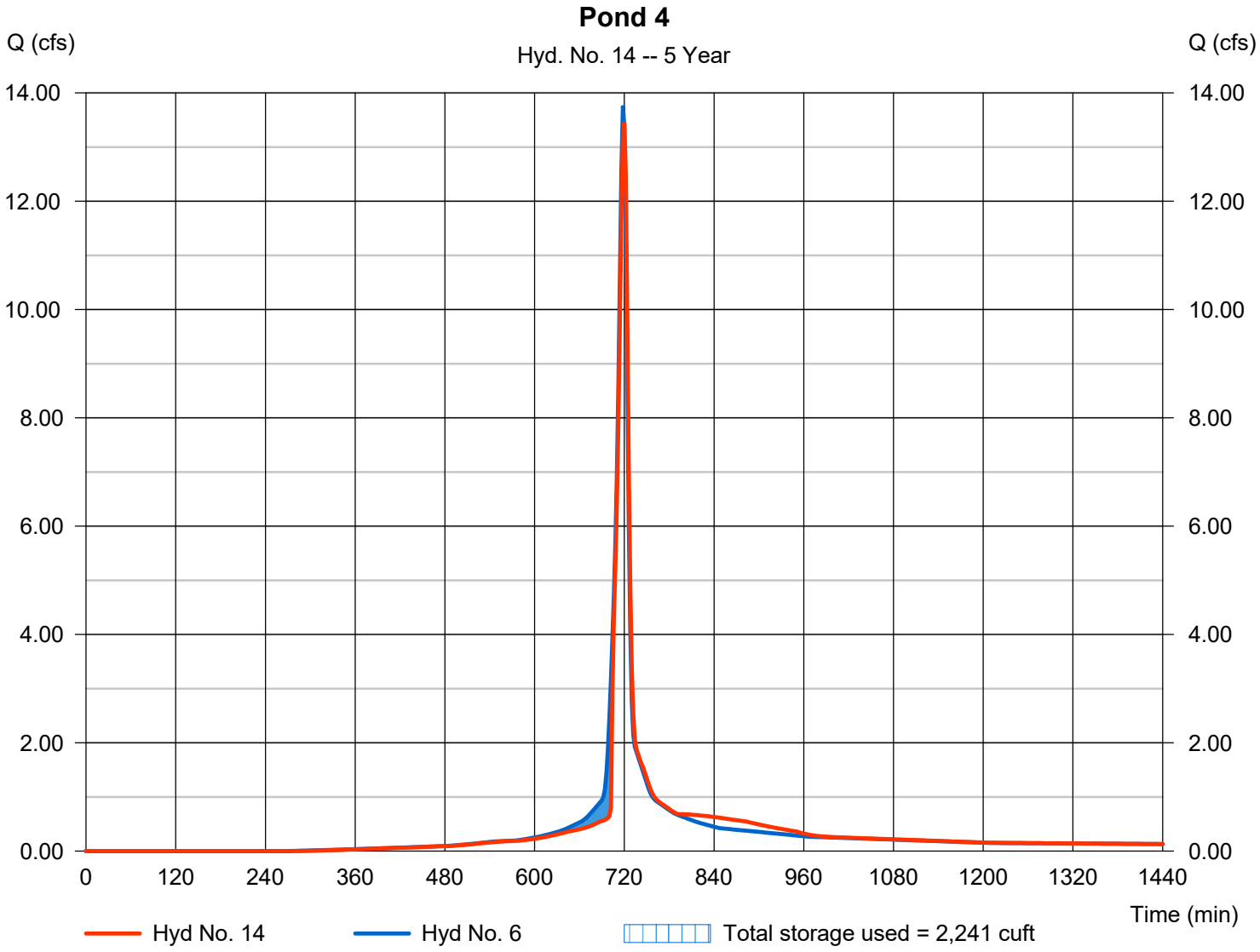
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	13.46 cfs
Storm frequency	=	5 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	32,664 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	511.61 ft
Reservoir name	=	Pond 4	Max. Storage	=	2,241 cuft

Storage Indication method used.



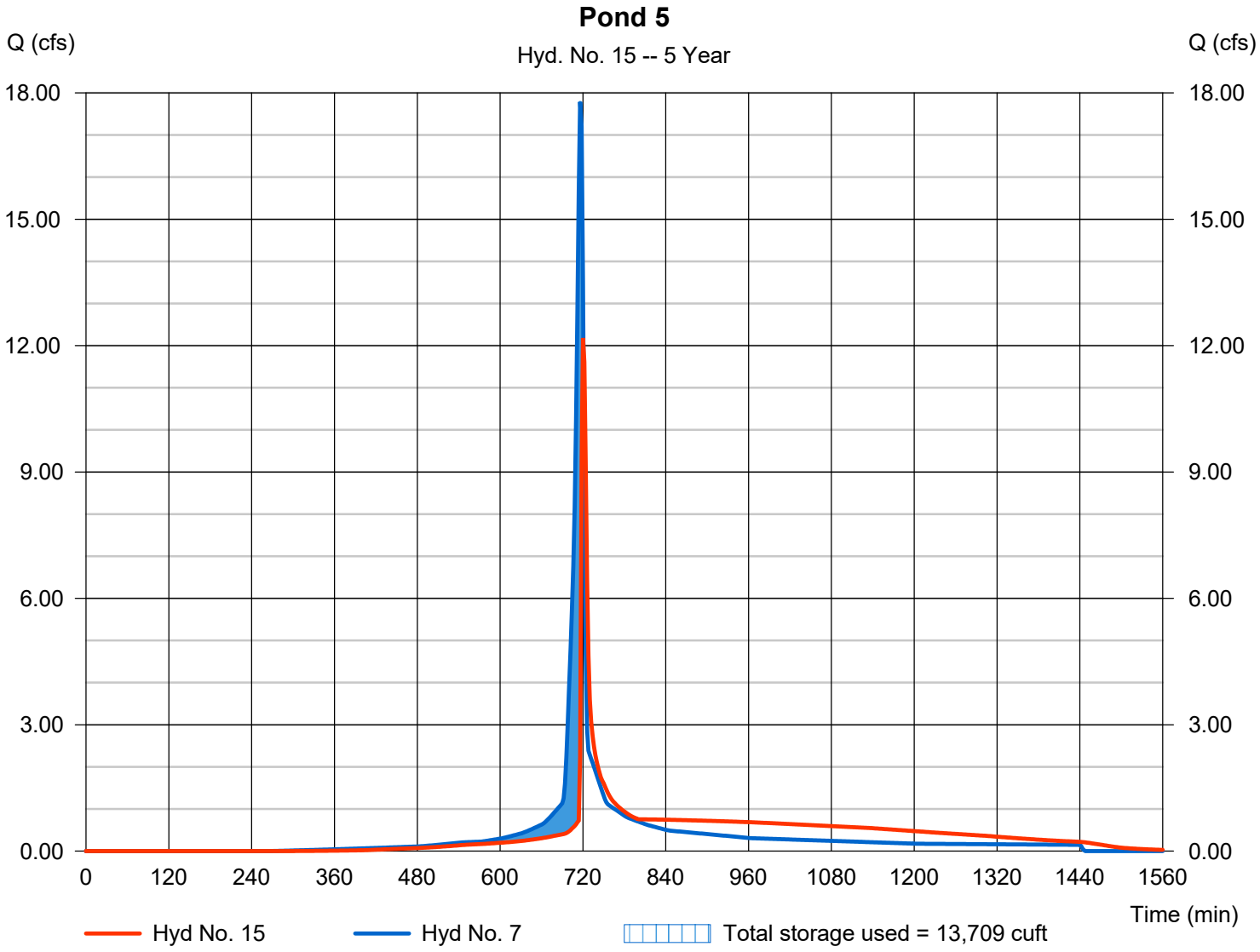
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	12.18 cfs
Storm frequency	=	5 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	37,617 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	502.12 ft
Reservoir name	=	Pond 5	Max. Storage	=	13,709 cuft

Storage Indication method used.

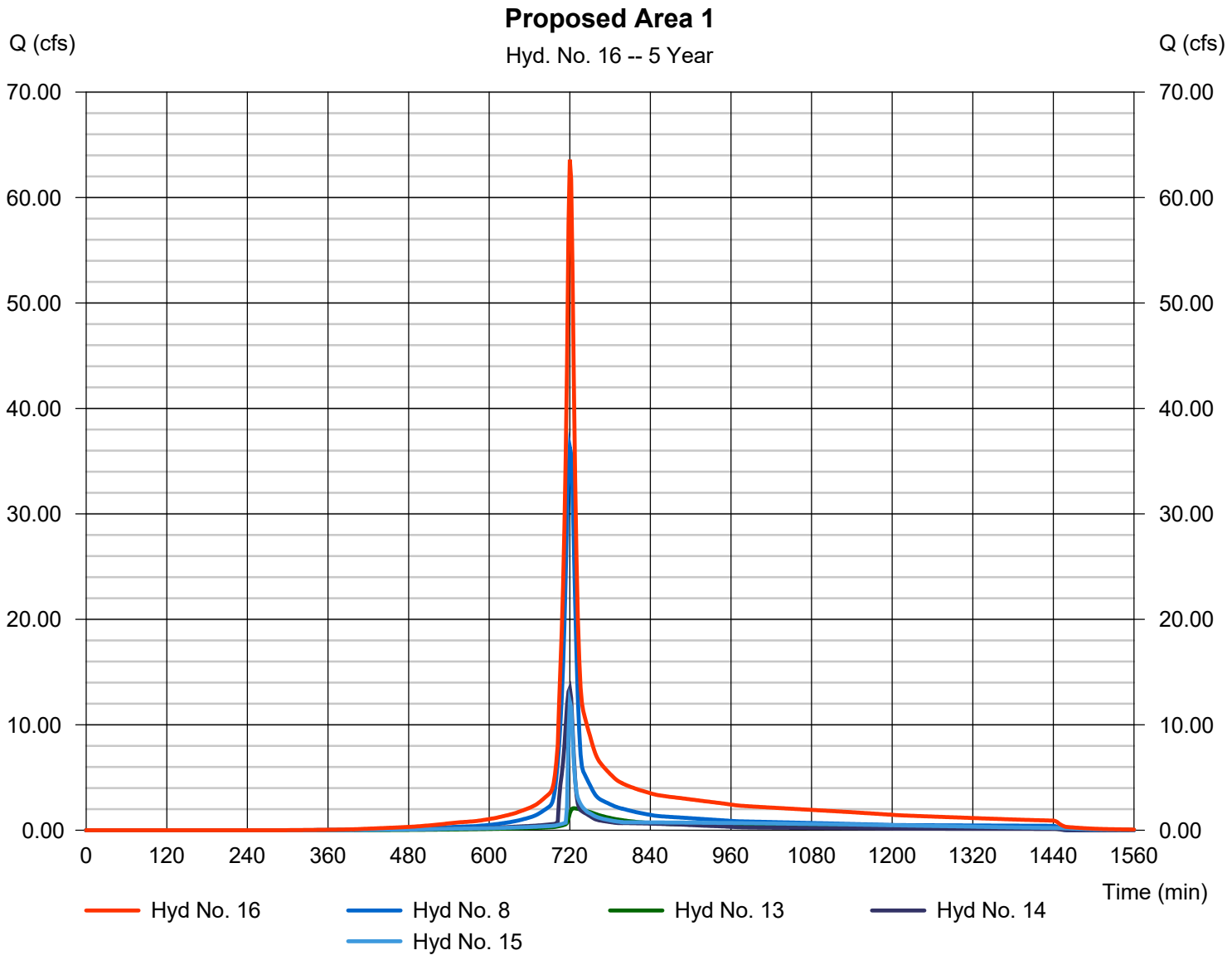


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 63.59 cfs
Storm frequency	= 5 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 191,352 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	76.87	2	720	199,302	------	------	------	Exisitng Area 1
2	SCS Runoff	69.04	2	722	180,703	------	------	------	Existing Area 2
3	SCS Runoff	39.28	2	716	83,955	------	------	------	Area to Pond 1
4	SCS Runoff	43.06	2	718	103,218	------	------	------	Area to Pond 2
5	SCS Runoff	14.66	2	716	31,343	------	------	------	Area to Pond 3
6	SCS Runoff	16.22	2	718	38,872	------	------	------	Area to Pond 4
7	SCS Runoff	20.95	2	716	44,776	------	------	------	Area to Pond 5
8	SCS Runoff	43.84	2	720	114,957	------	------	------	Bypass for Area 1
9	SCS Runoff	32.61	2	720	74,703	------	------	------	Bypass for Area 2
10	Reservoir	11.70	2	724	83,933	3	487.38	40,636	Pond 1
11	Reservoir	6.429	2	732	103,196	4	492.70	52,334	Pond 2
12	Combine	43.59	2	722	261,832	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	3.090	2	726	31,329	5	509.57	14,081	Pond 3
14	Reservoir	14.83	2	720	38,871	6	511.92	2,615	Pond 4
15	Reservoir	15.31	2	720	44,767	7	502.31	14,773	Pond 5
16	Combine	76.52	2	720	229,925	8, 13, 14, 15	------	------	Proposed Area 1

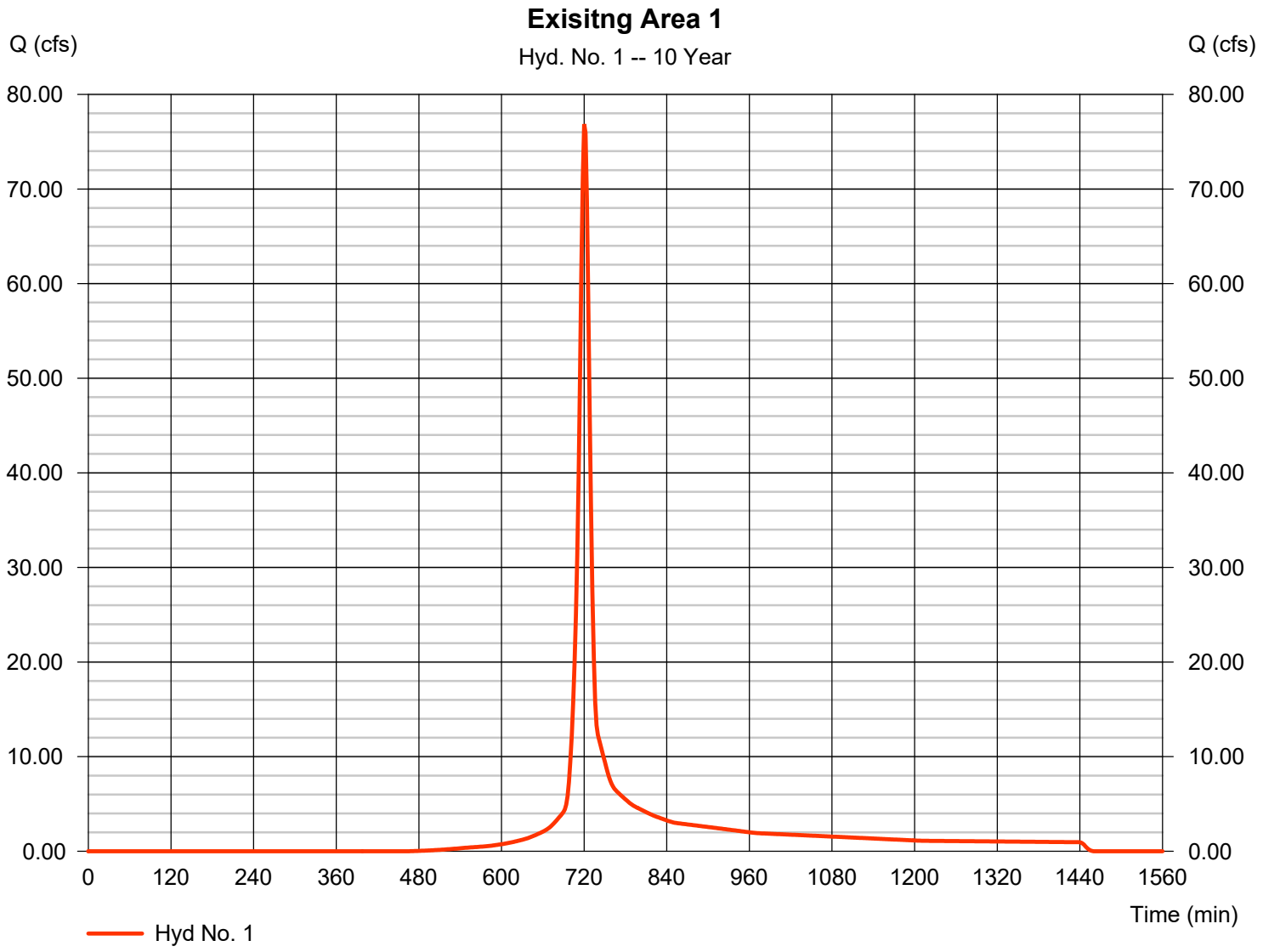
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	76.87 cfs
Storm frequency	=	10 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	199,302 cuft
Drainage area	=	20.440 ac	Curve number	=	79*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.20 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



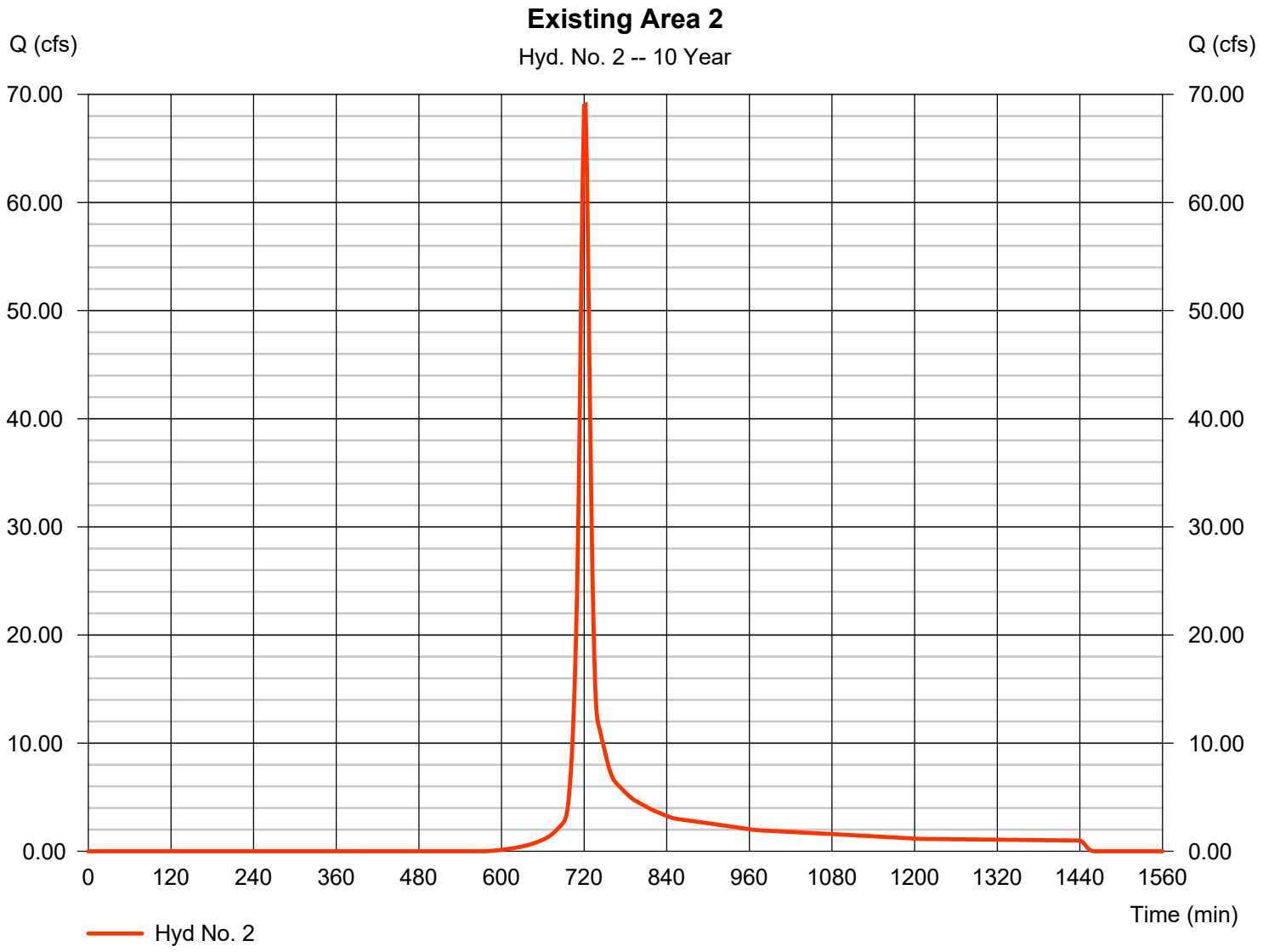
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 69.04 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 180,703 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



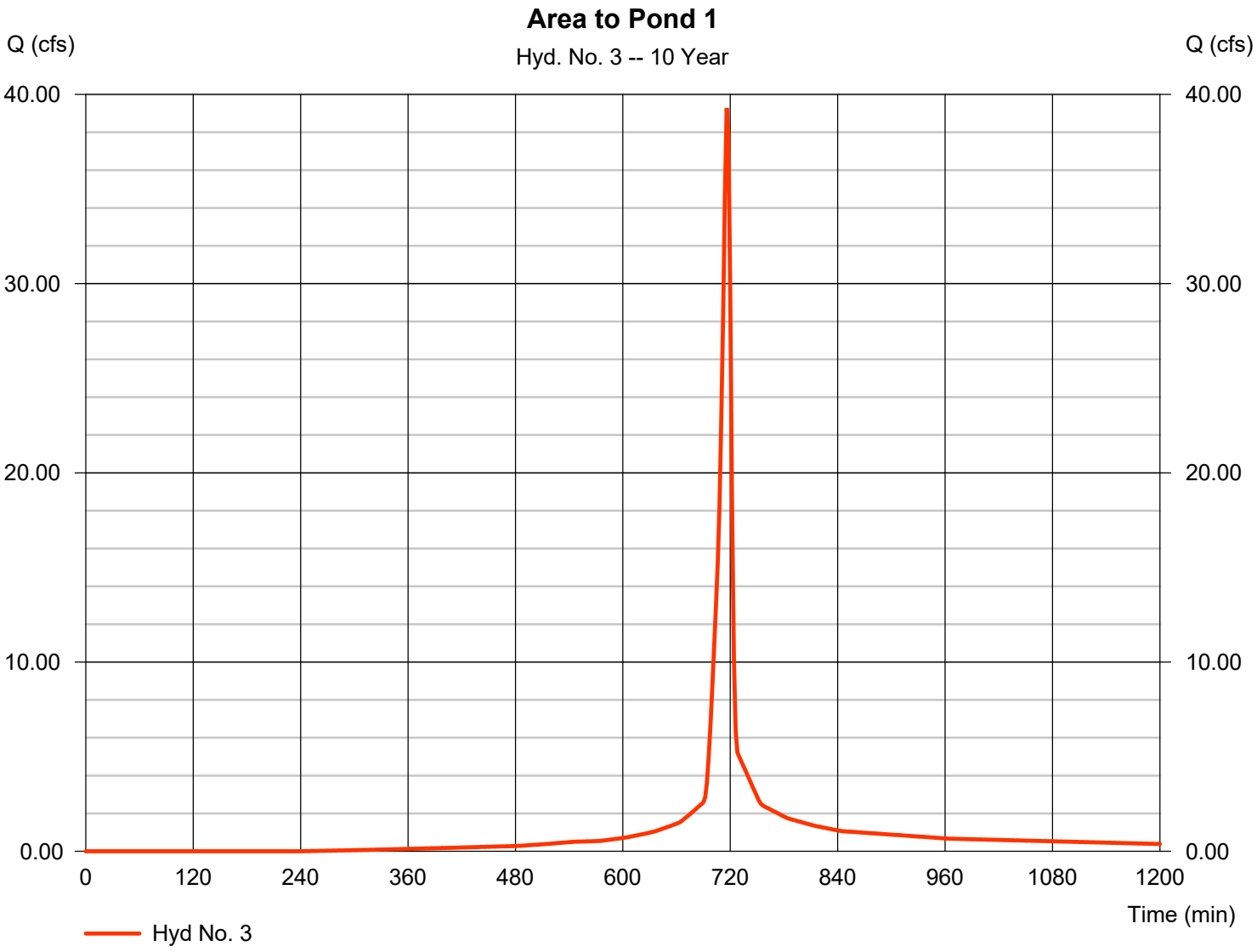
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	39.28 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	83,955 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



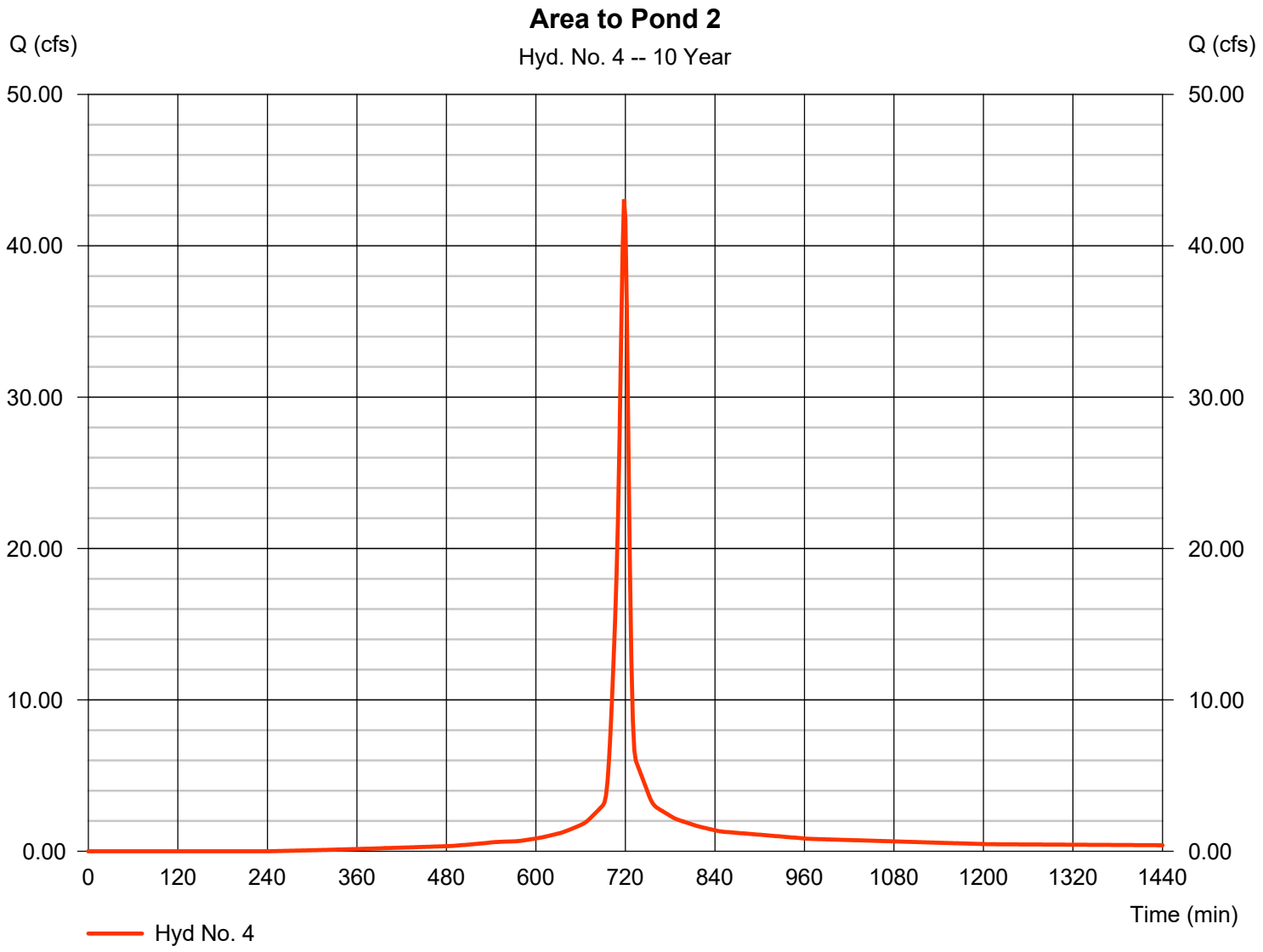
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	= SCS Runoff	Peak discharge	= 43.06 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 103,218 cuft
Drainage area	= 7.780 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.00 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



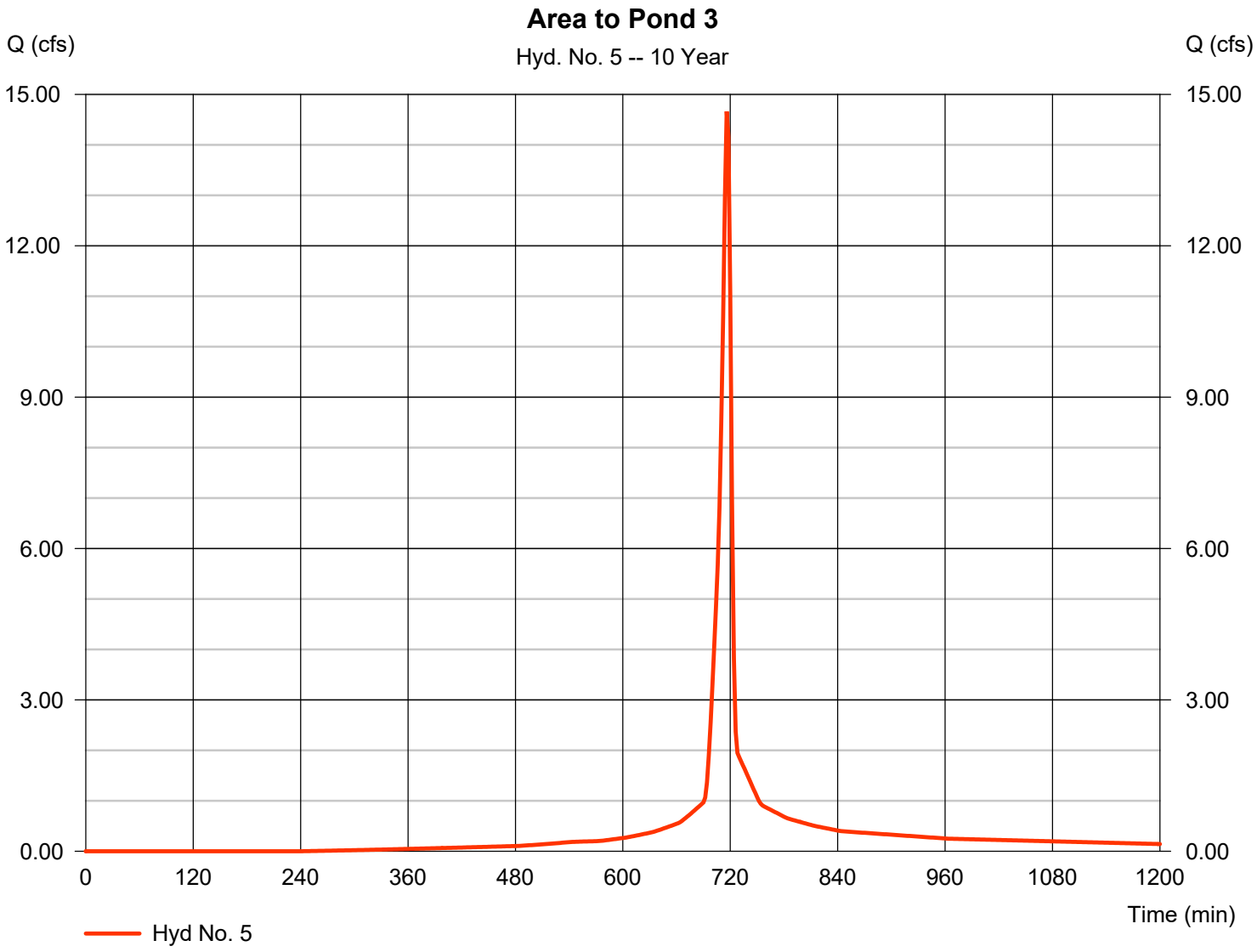
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	14.66 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	31,343 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



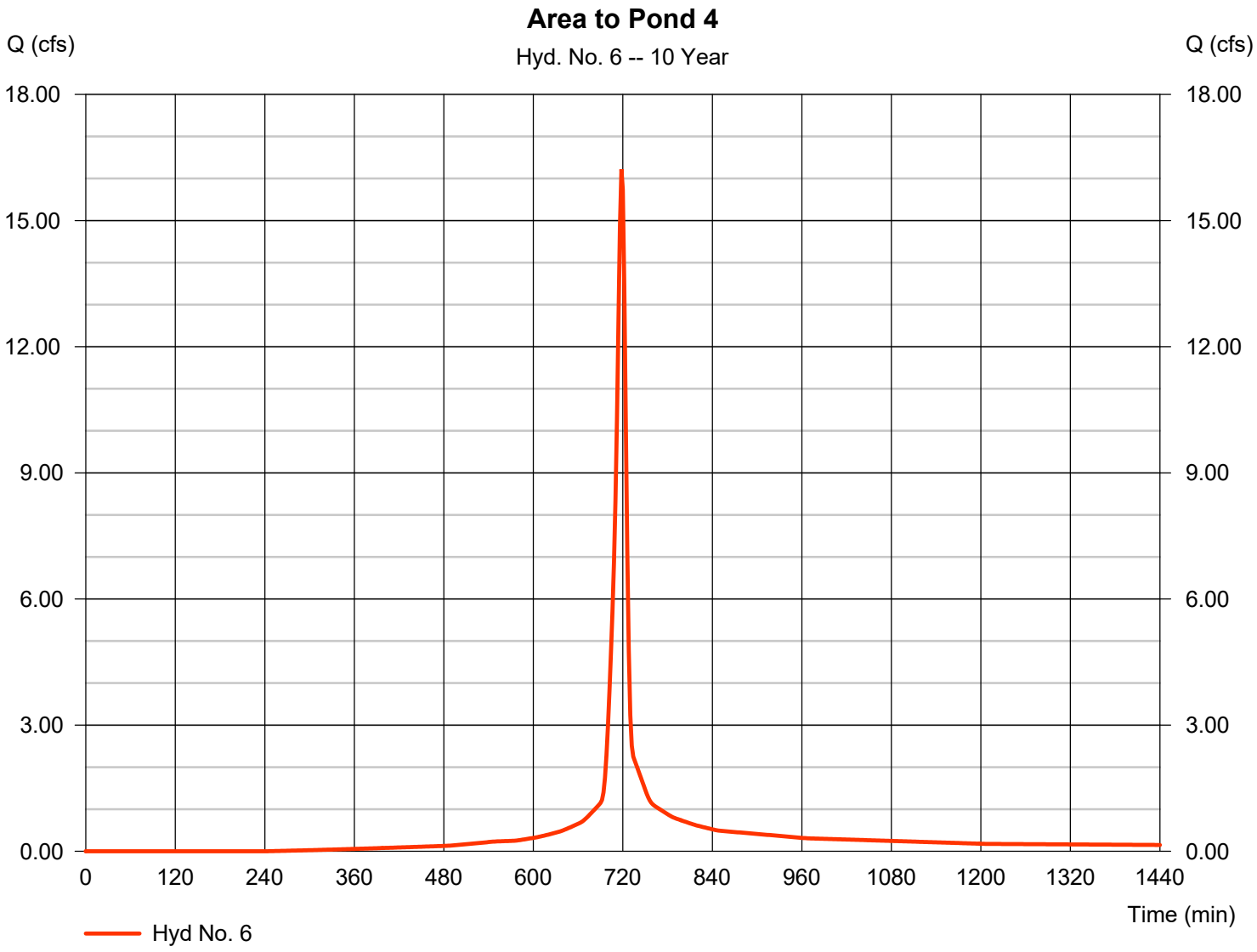
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	= SCS Runoff	Peak discharge	= 16.22 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 38,872 cuft
Drainage area	= 2.930 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 7.80 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



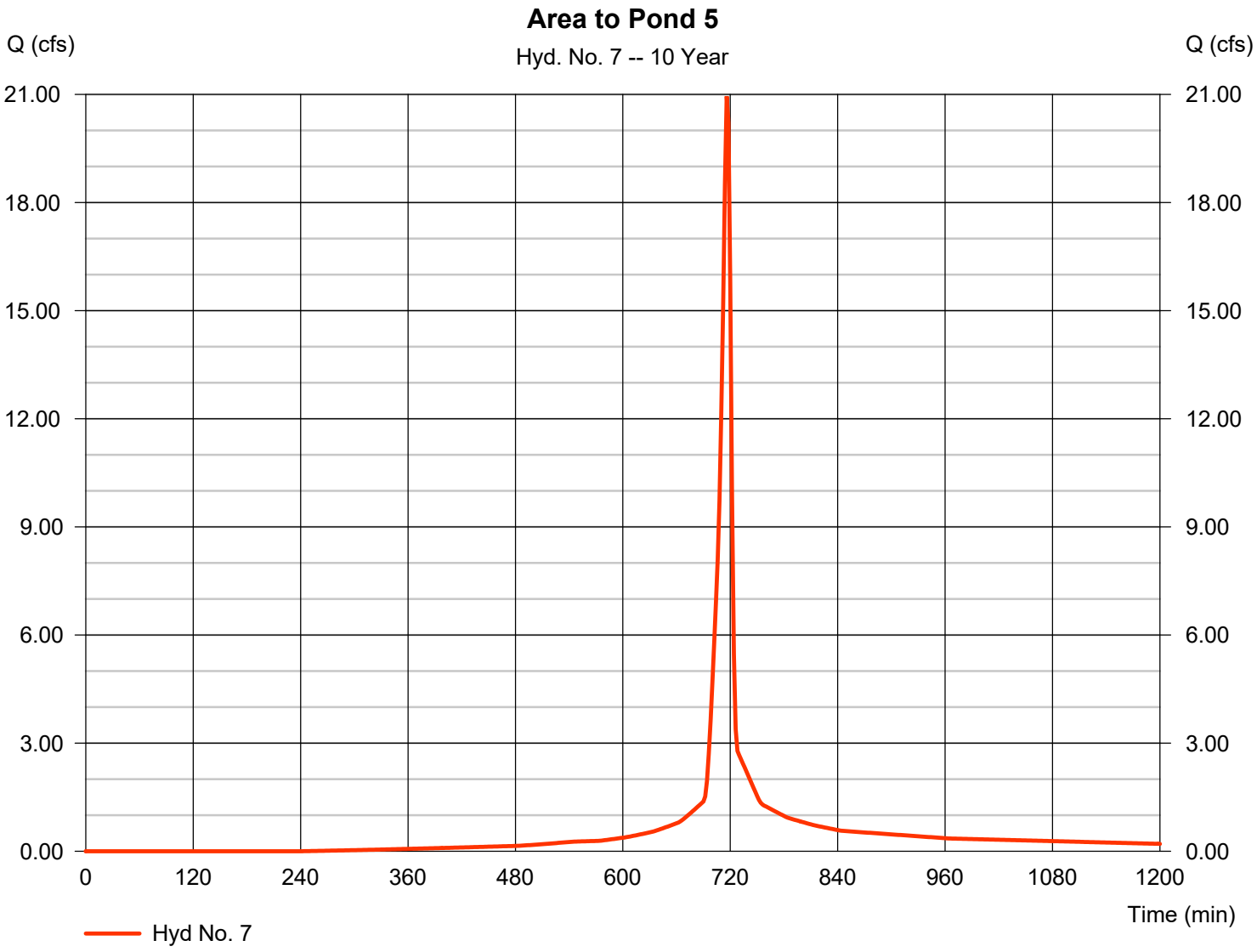
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	20.95 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	44,776 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



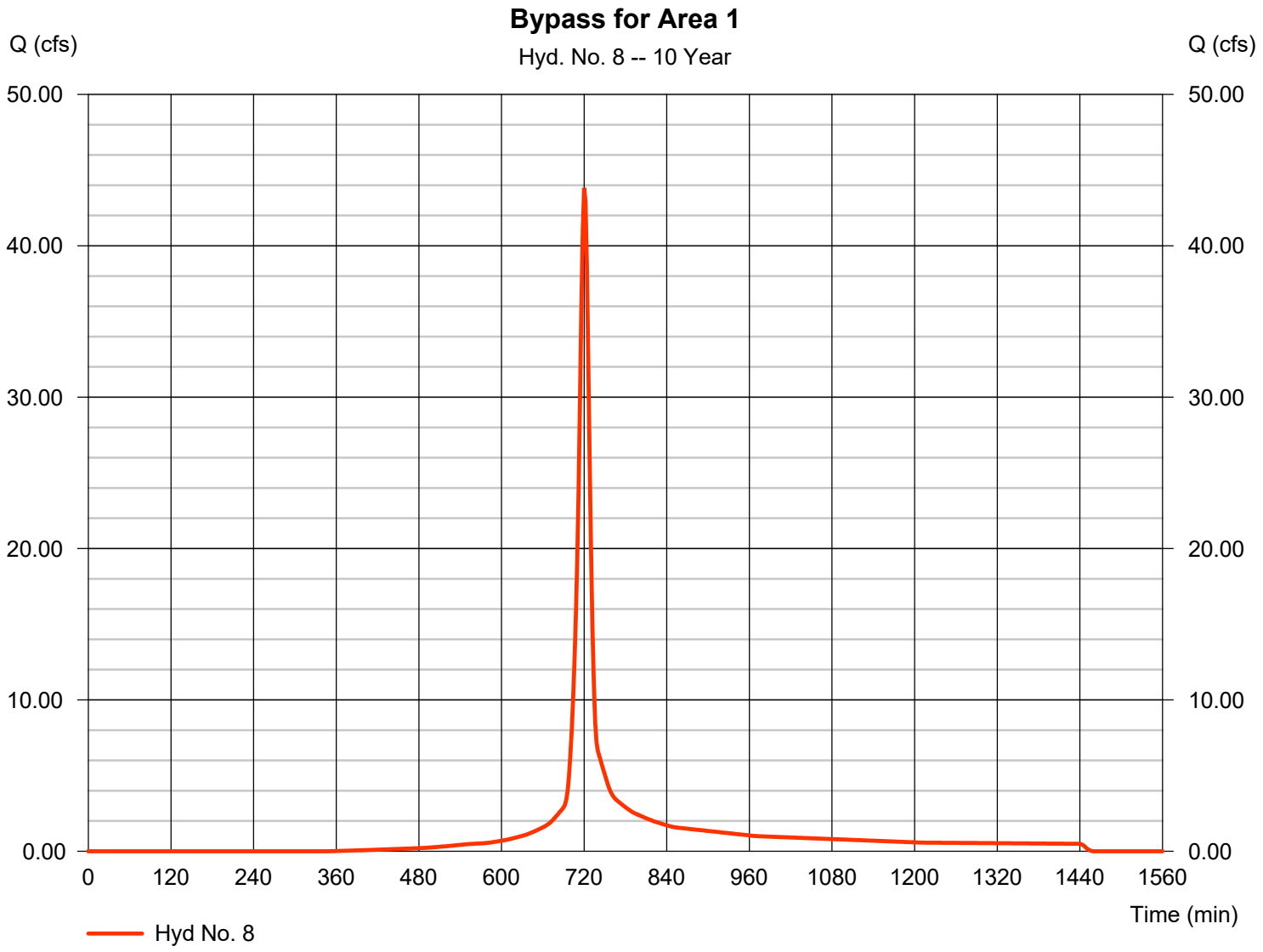
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	= SCS Runoff	Peak discharge	= 43.84 cfs
Storm frequency	= 10 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 114,957 cuft
Drainage area	= 9.730 ac	Curve number	= 85*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.00 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



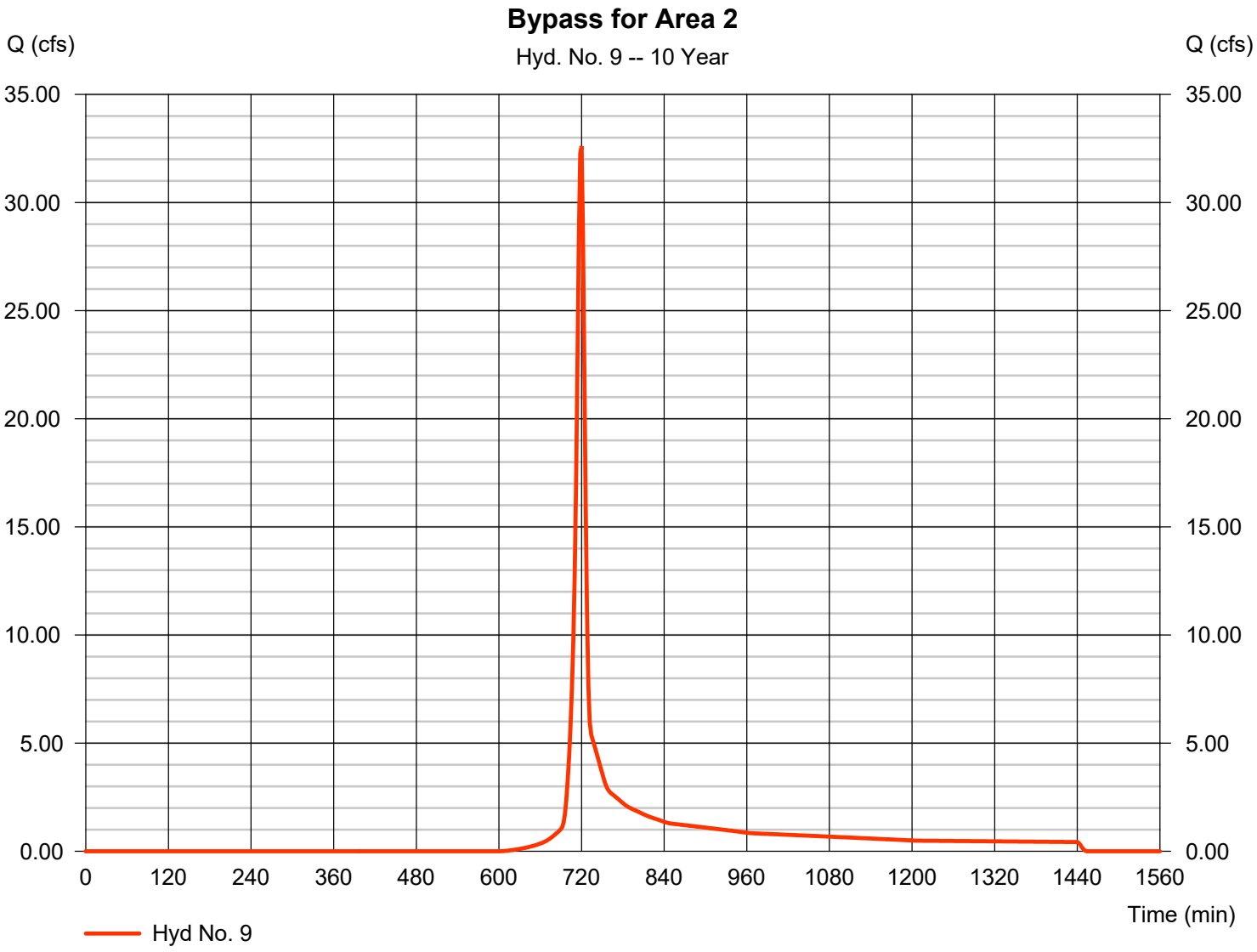
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	32.61 cfs
Storm frequency	=	10 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	74,703 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



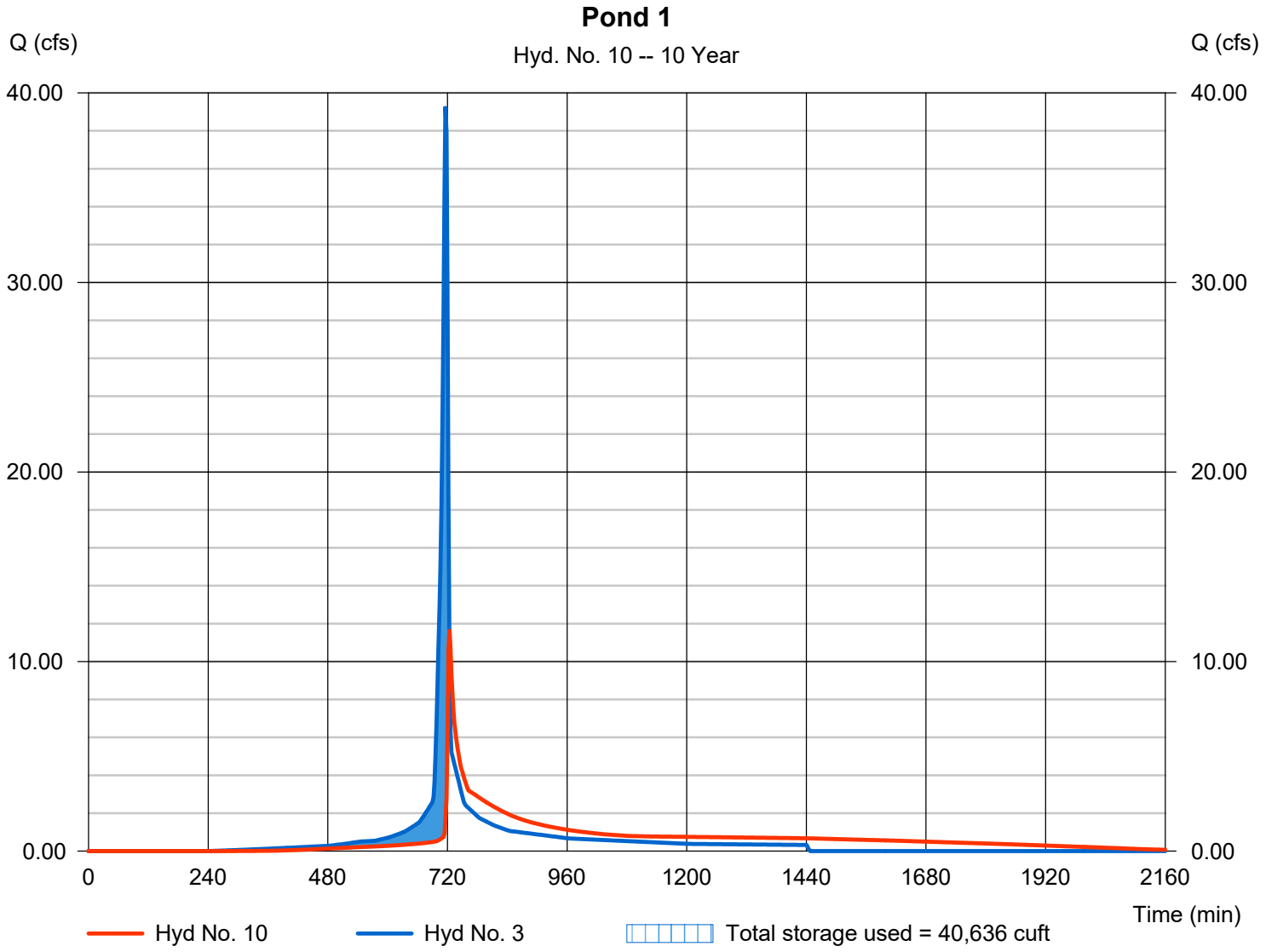
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	11.70 cfs
Storm frequency	=	10 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	83,933 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	487.38 ft
Reservoir name	=	Pond 1	Max. Storage	=	40,636 cuft

Storage Indication method used.



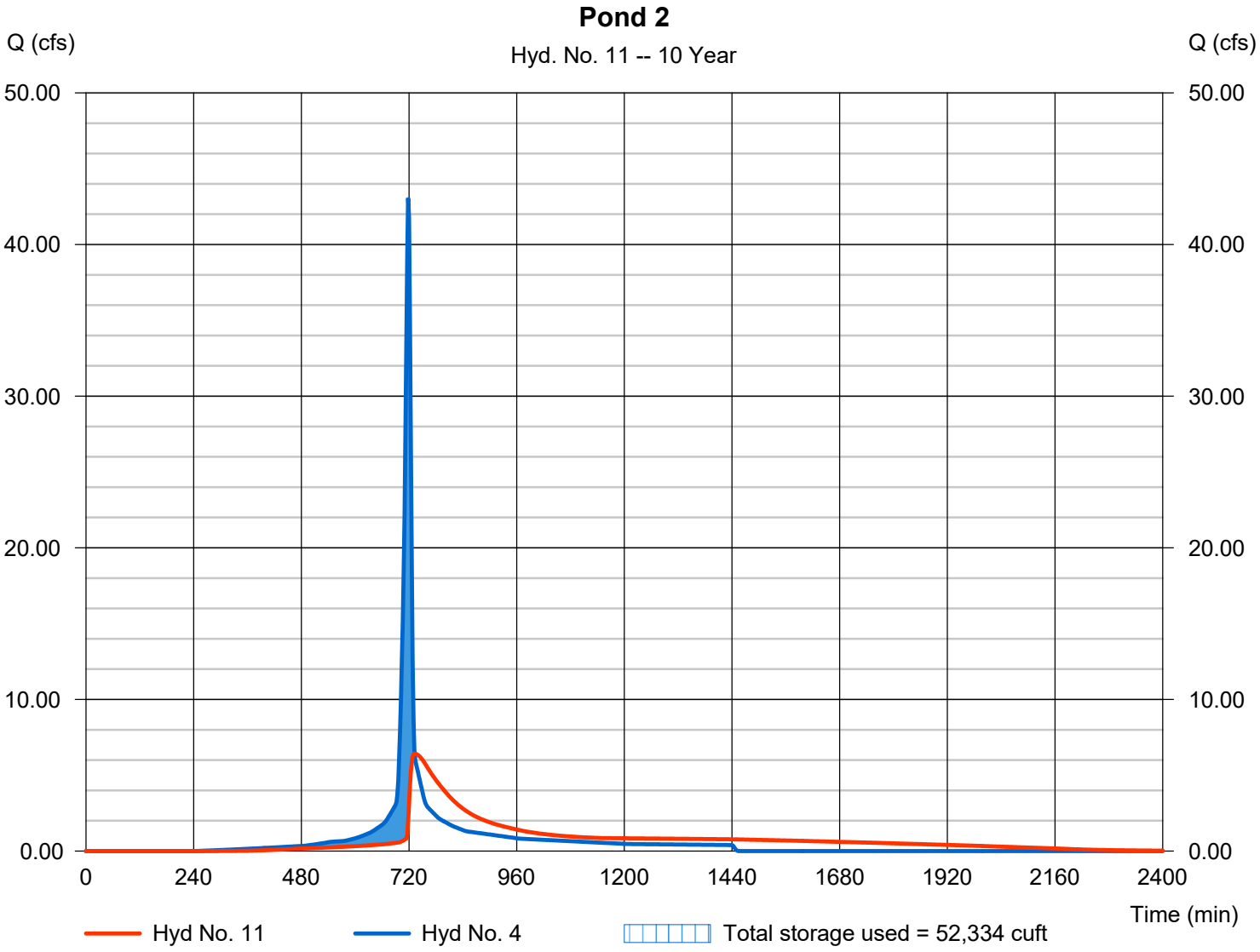
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	= Reservoir	Peak discharge	= 6.429 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 103,196 cuft
Inflow hyd. No.	= 4 - Area to Pond 2	Max. Elevation	= 492.70 ft
Reservoir name	= Pond 2	Max. Storage	= 52,334 cuft

Storage Indication method used.

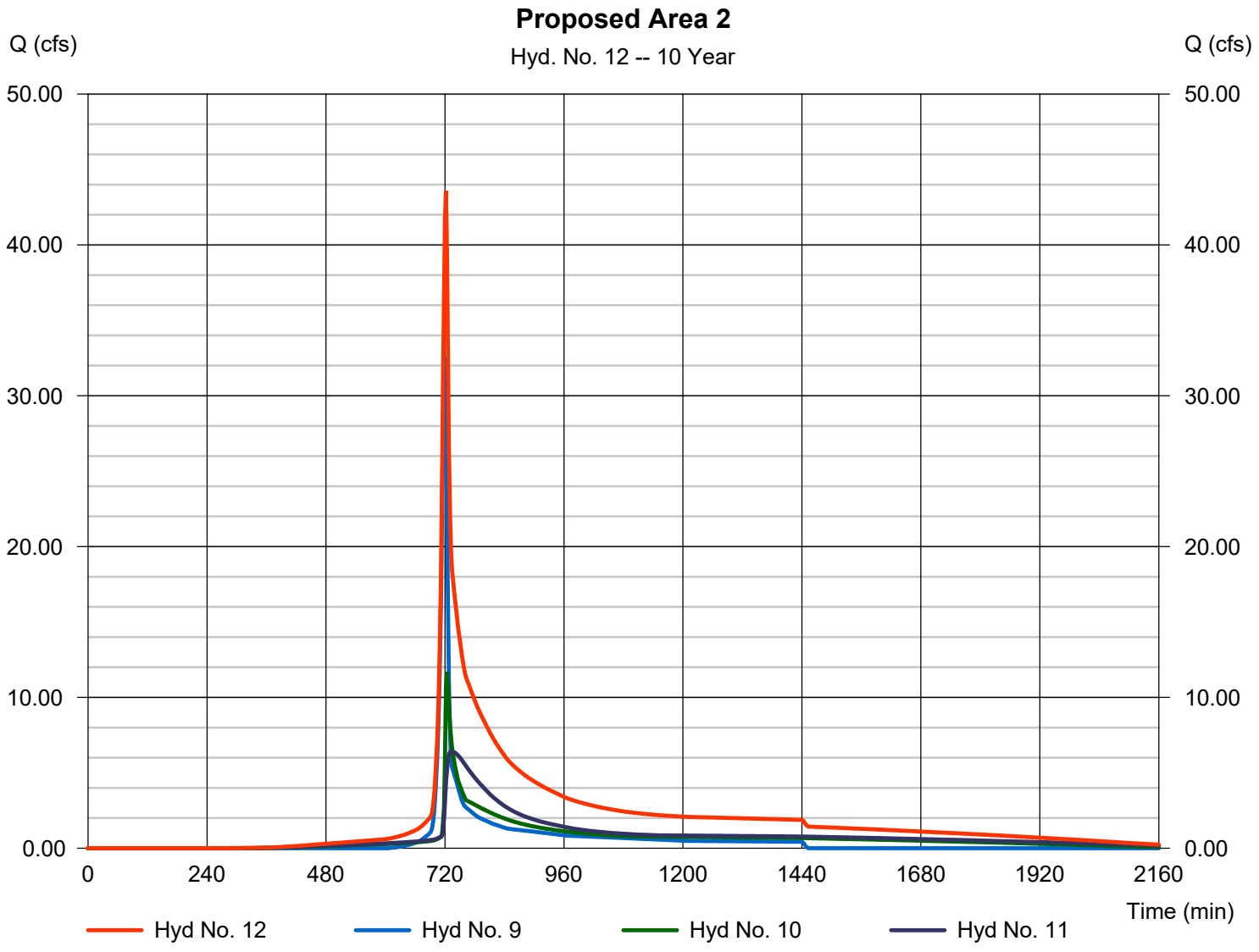


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 43.59 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 261,832 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



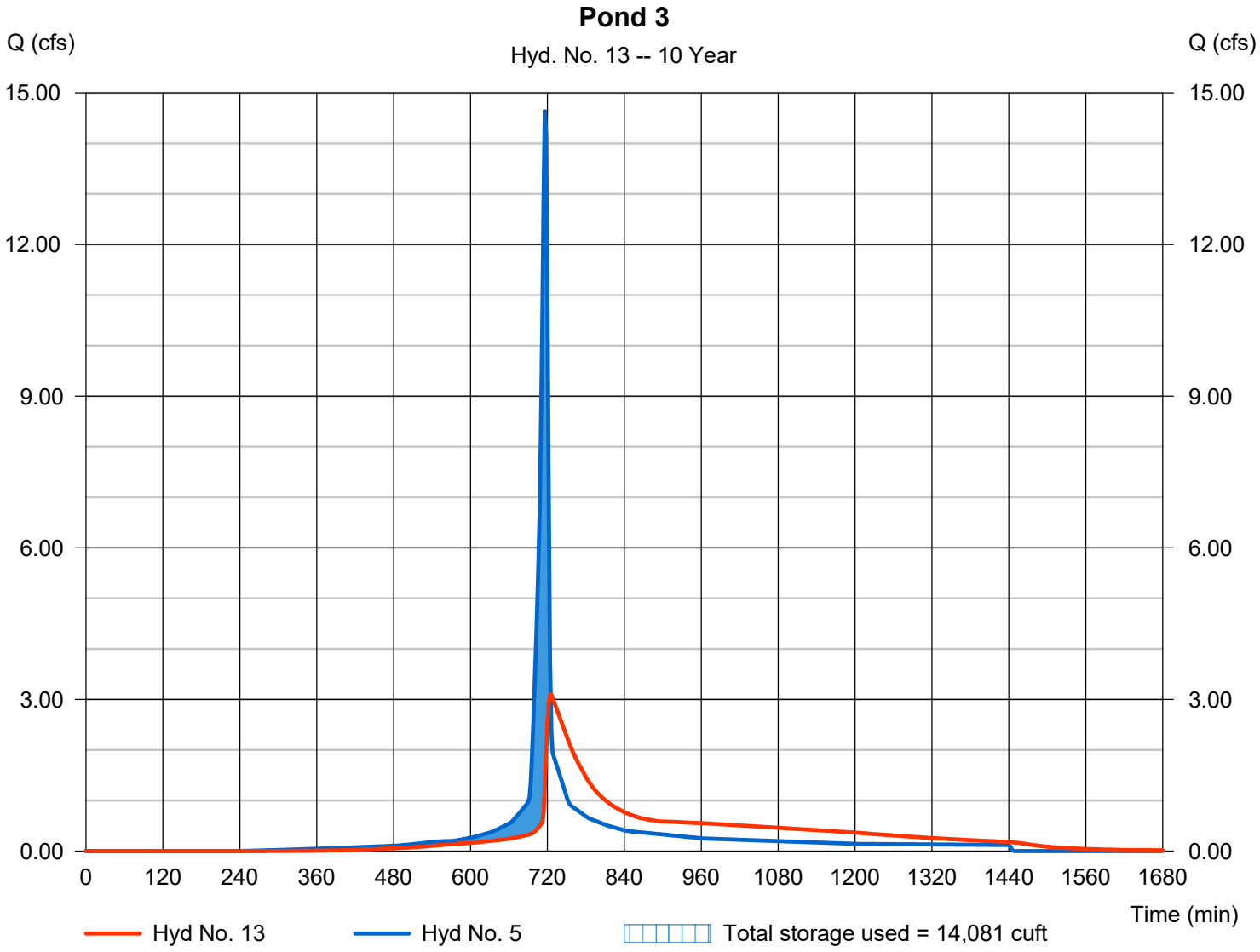
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	3.090 cfs
Storm frequency	=	10 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	31,329 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	509.57 ft
Reservoir name	=	Pond 3	Max. Storage	=	14,081 cuft

Storage Indication method used.



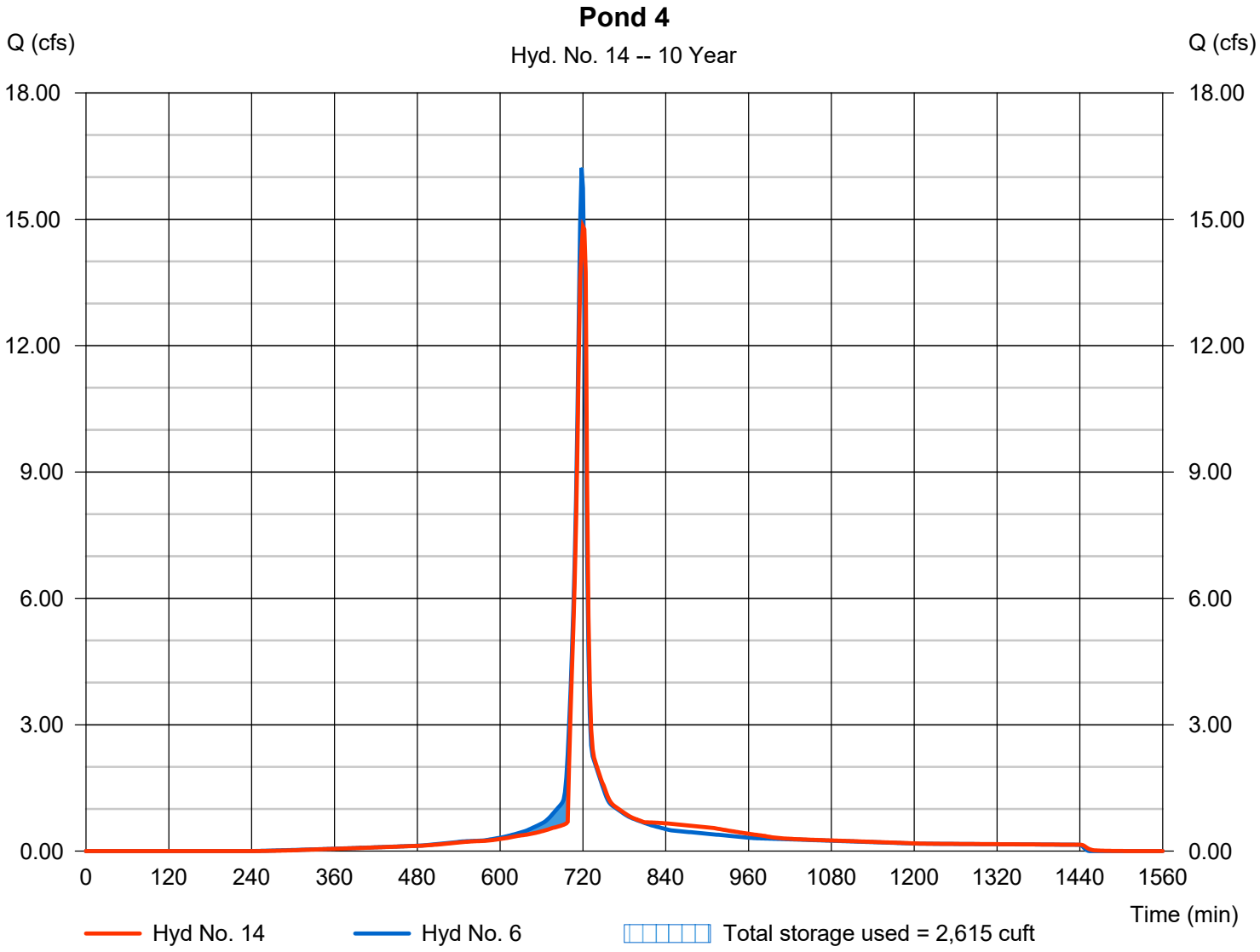
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	14.83 cfs
Storm frequency	=	10 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	38,871 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	511.92 ft
Reservoir name	=	Pond 4	Max. Storage	=	2,615 cuft

Storage Indication method used.



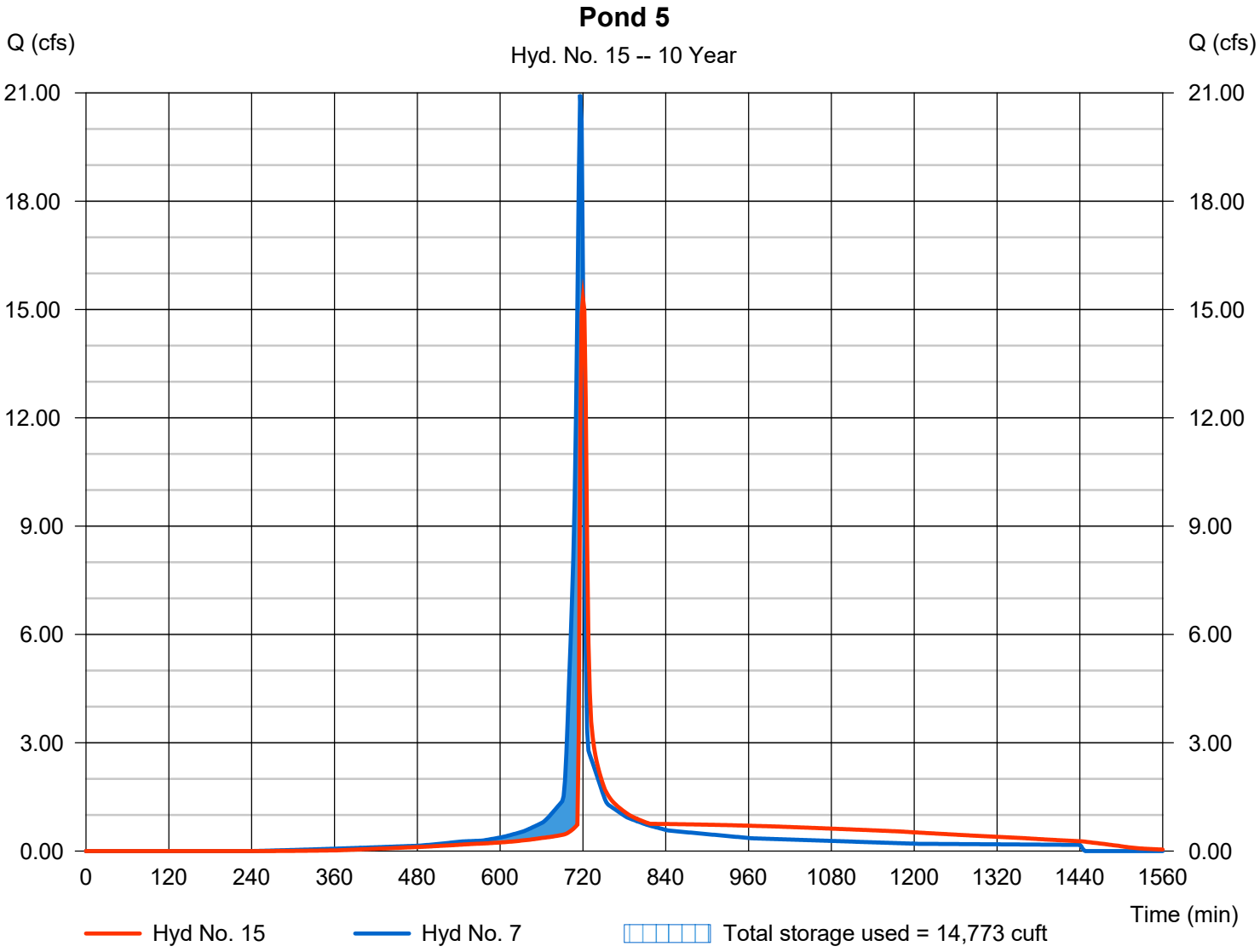
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	15.31 cfs
Storm frequency	=	10 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	44,767 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	502.31 ft
Reservoir name	=	Pond 5	Max. Storage	=	14,773 cuft

Storage Indication method used.

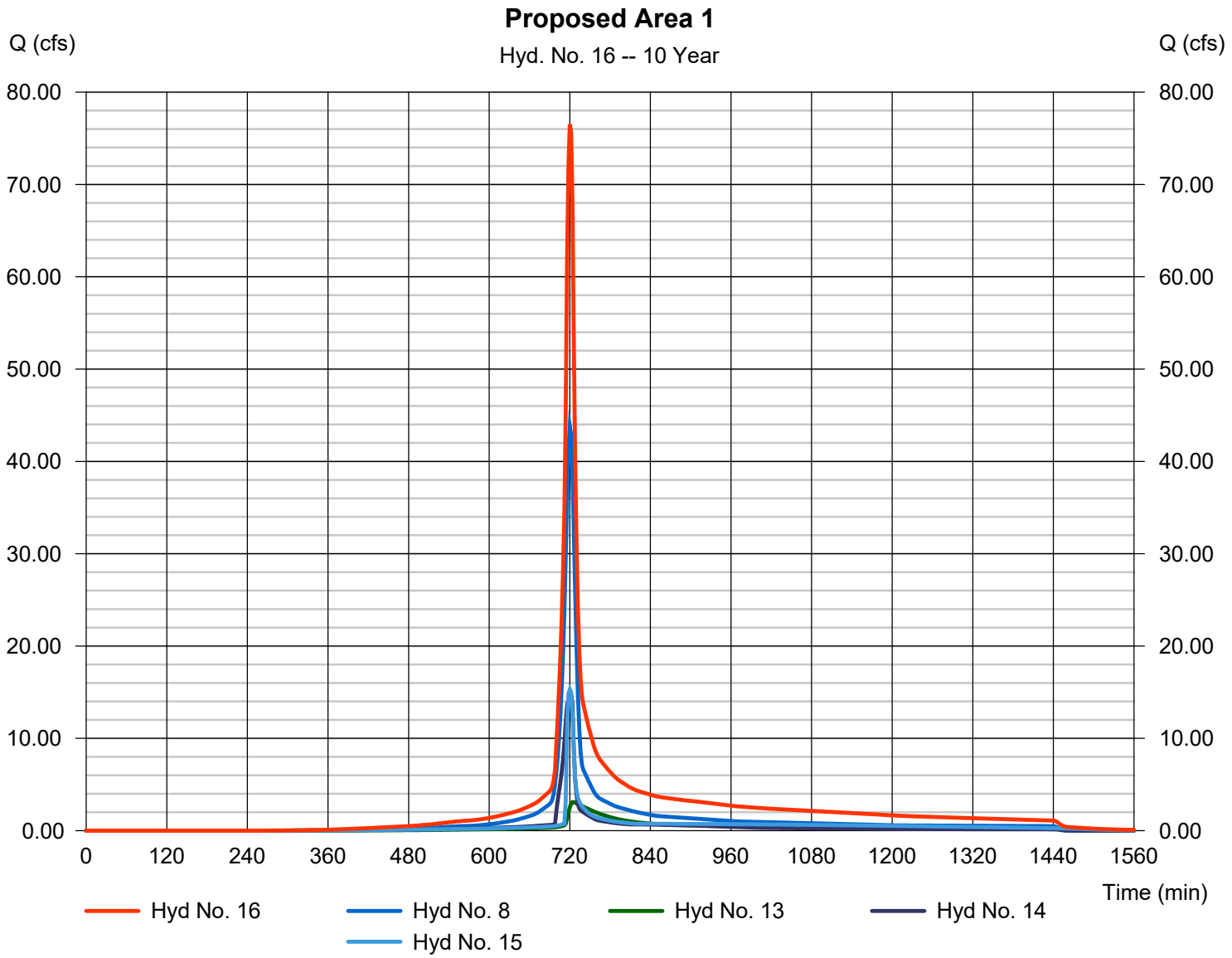


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	=	Combine	Peak discharge	=	76.52 cfs
Storm frequency	=	10 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	229,925 cuft
Inflow hyds.	=	8, 13, 14, 15	Contrib. drain. area	=	9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	98.39	2	720	255,739	------	------	------	Exisitng Area 1
2	SCS Runoff	92.34	2	720	239,962	------	------	------	Existing Area 2
3	SCS Runoff	47.49	2	716	102,826	------	------	------	Area to Pond 1
4	SCS Runoff	52.12	2	718	126,418	------	------	------	Area to Pond 2
5	SCS Runoff	17.73	2	716	38,389	------	------	------	Area to Pond 3
6	SCS Runoff	19.63	2	718	47,610	------	------	------	Area to Pond 4
7	SCS Runoff	25.33	2	716	54,841	------	------	------	Area to Pond 5
8	SCS Runoff	54.34	2	720	143,700	------	------	------	Bypass for Area 1
9	SCS Runoff	43.80	2	720	100,287	------	------	------	Bypass for Area 2
10	Reservoir	26.52	2	722	102,804	3	487.78	44,992	Pond 1
11	Reservoir	16.77	2	728	126,397	4	493.39	60,935	Pond 2
12	Combine	74.85	2	720	329,487	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	4.657	2	724	38,375	5	510.07	16,815	Pond 3
14	Reservoir	18.82	2	720	47,609	6	512.24	3,129	Pond 4
15	Reservoir	17.01	2	720	54,832	7	502.65	16,757	Pond 5
16	Combine	94.25	2	720	284,514	8, 13, 14, 15	------	------	Proposed Area 1

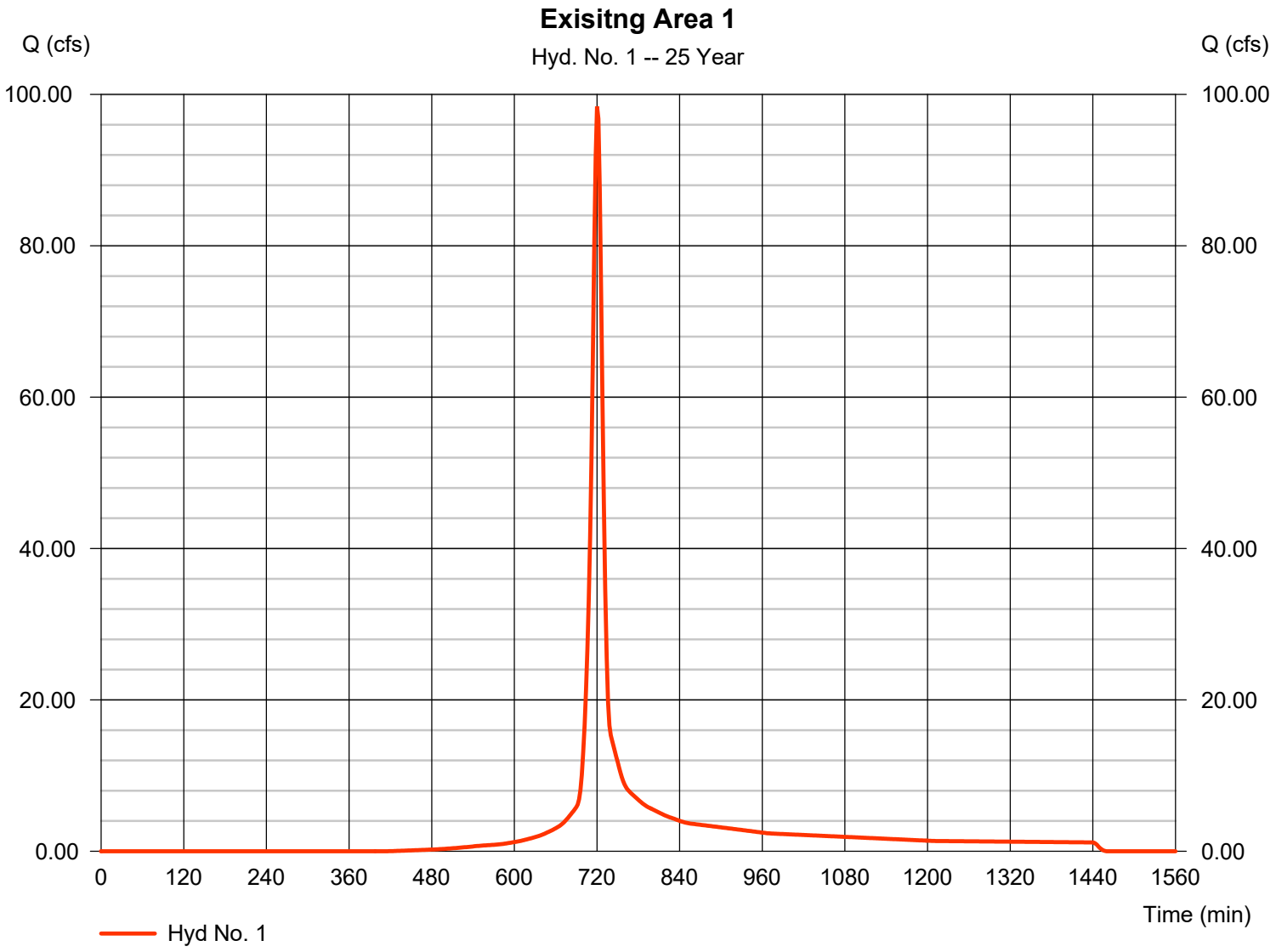
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	= SCS Runoff	Peak discharge	= 98.39 cfs
Storm frequency	= 25 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 255,739 cuft
Drainage area	= 20.440 ac	Curve number	= 79*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.20 min
Total precip.	= 5.62 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



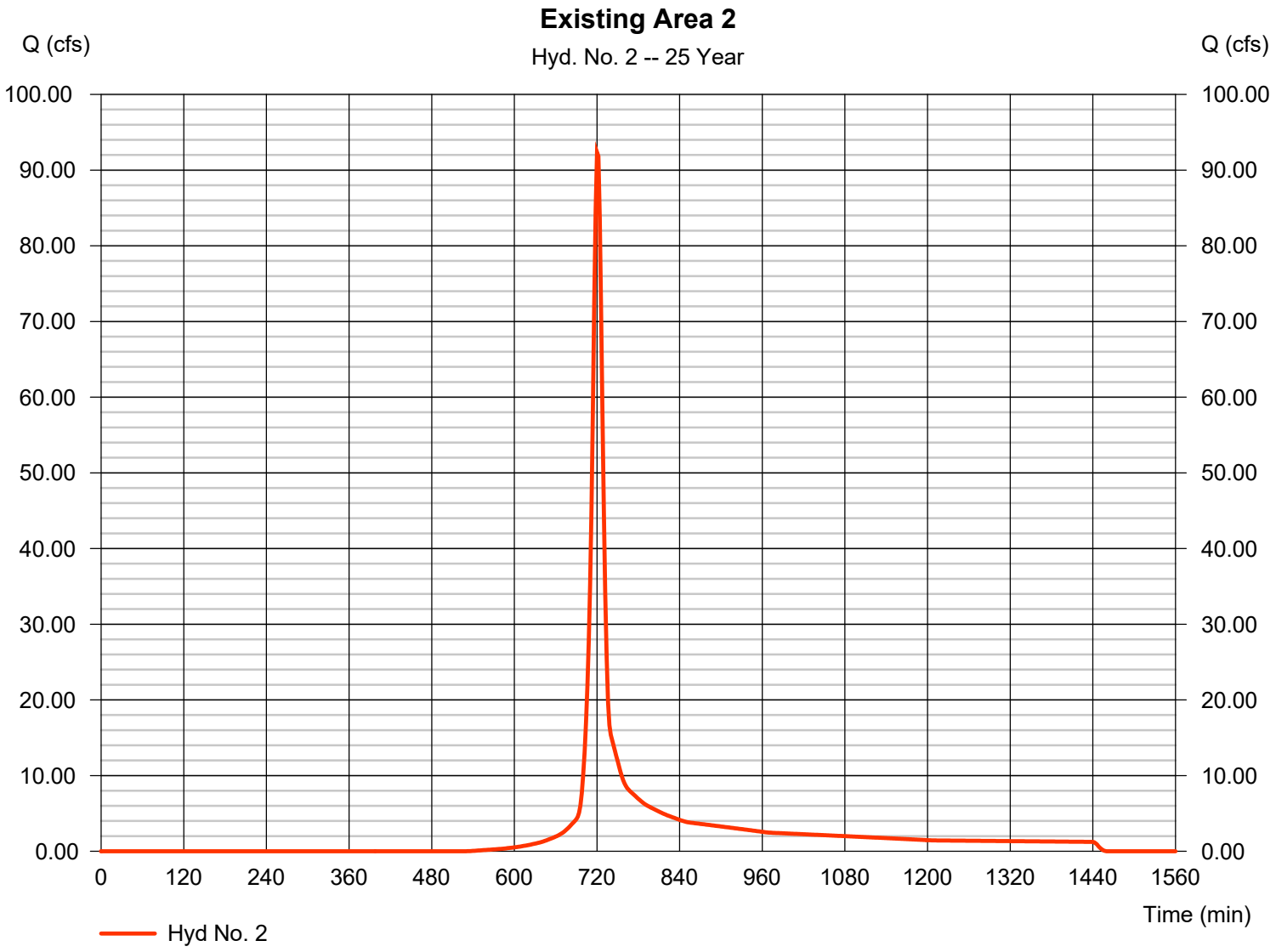
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 92.34 cfs
Storm frequency	= 25 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 239,962 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 5.62 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



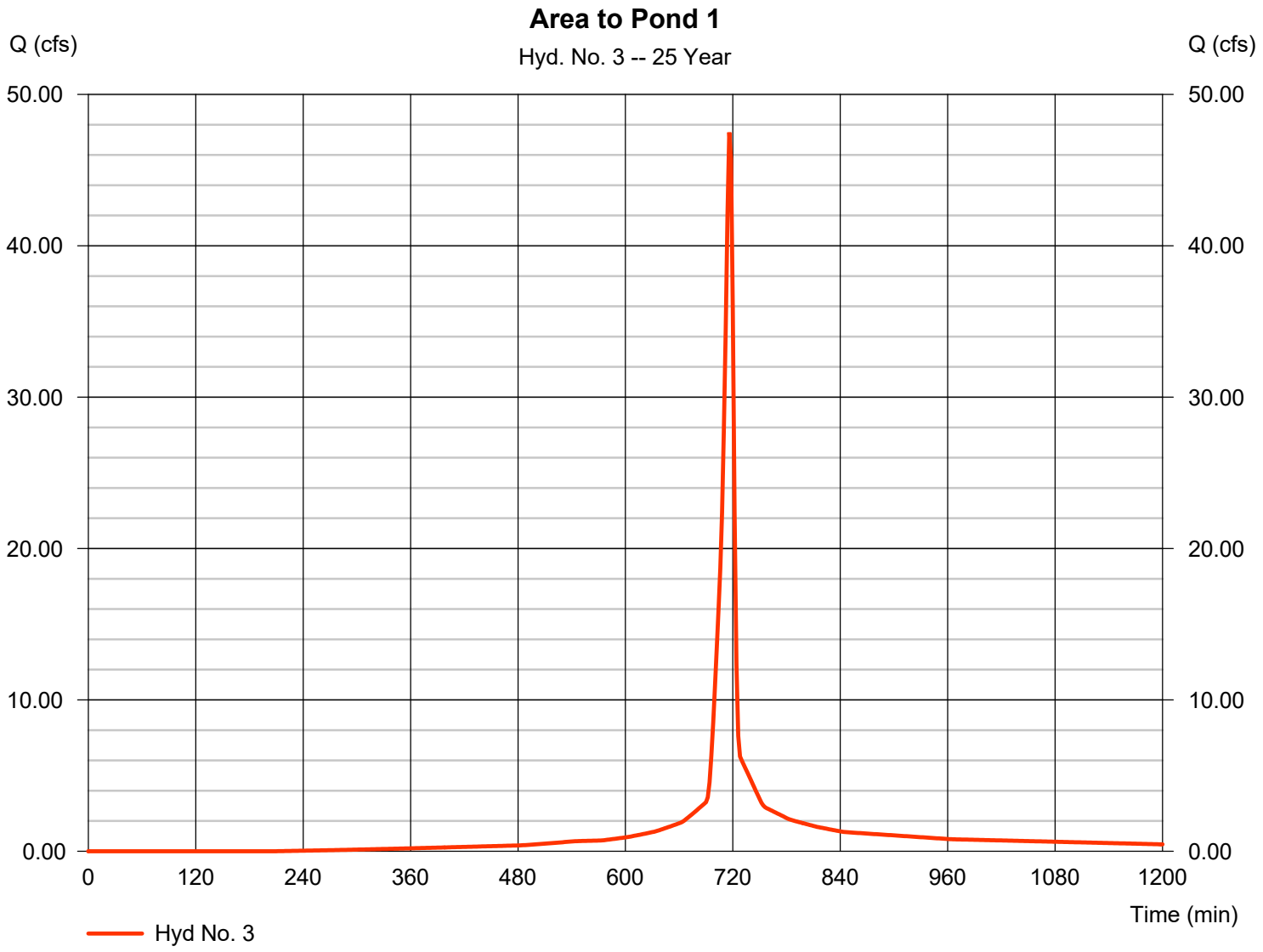
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	= SCS Runoff	Peak discharge	= 47.49 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 102,826 cuft
Drainage area	= 6.750 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.62 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



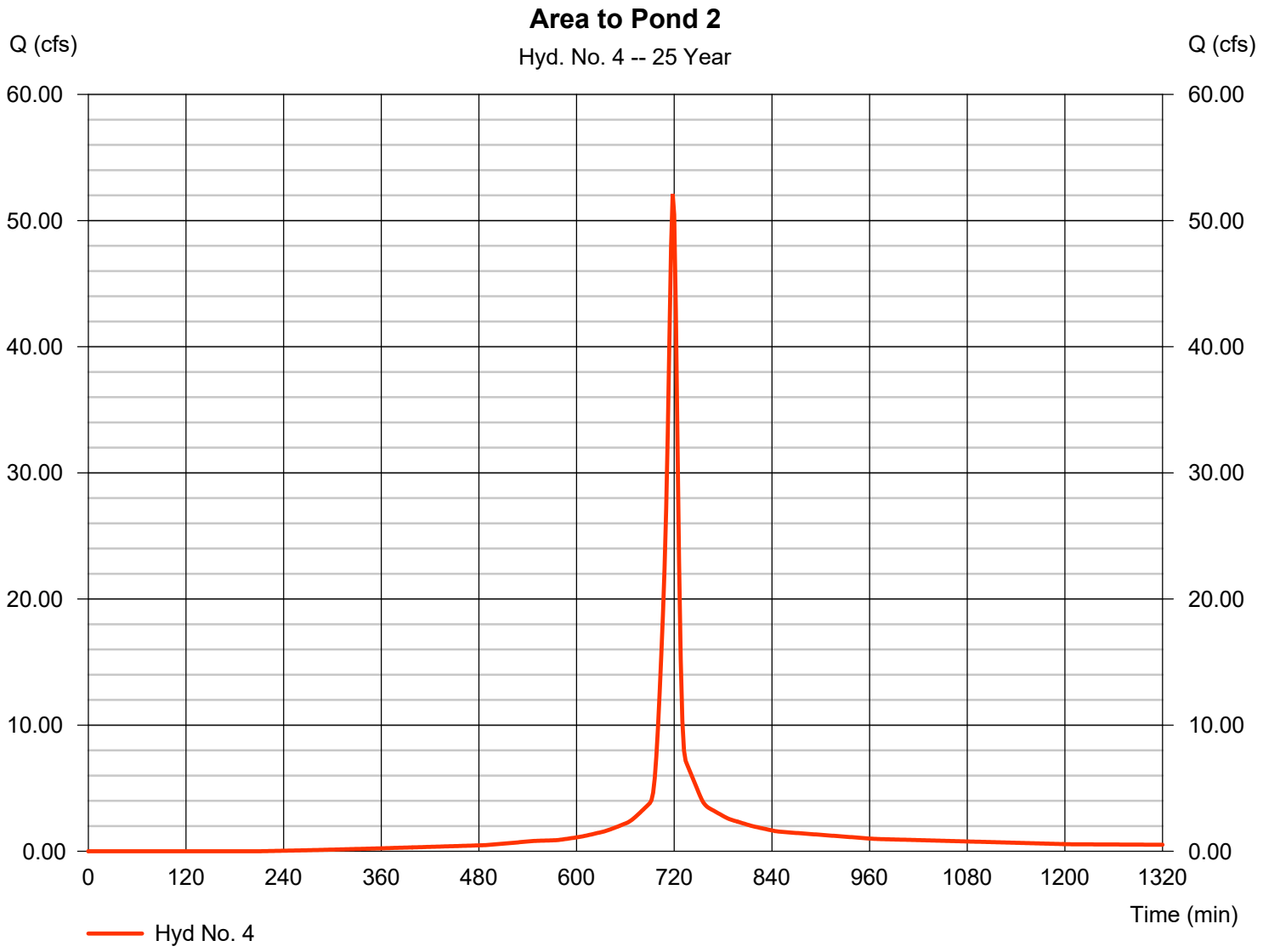
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	= SCS Runoff	Peak discharge	= 52.12 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 126,418 cuft
Drainage area	= 7.780 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.00 min
Total precip.	= 5.62 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



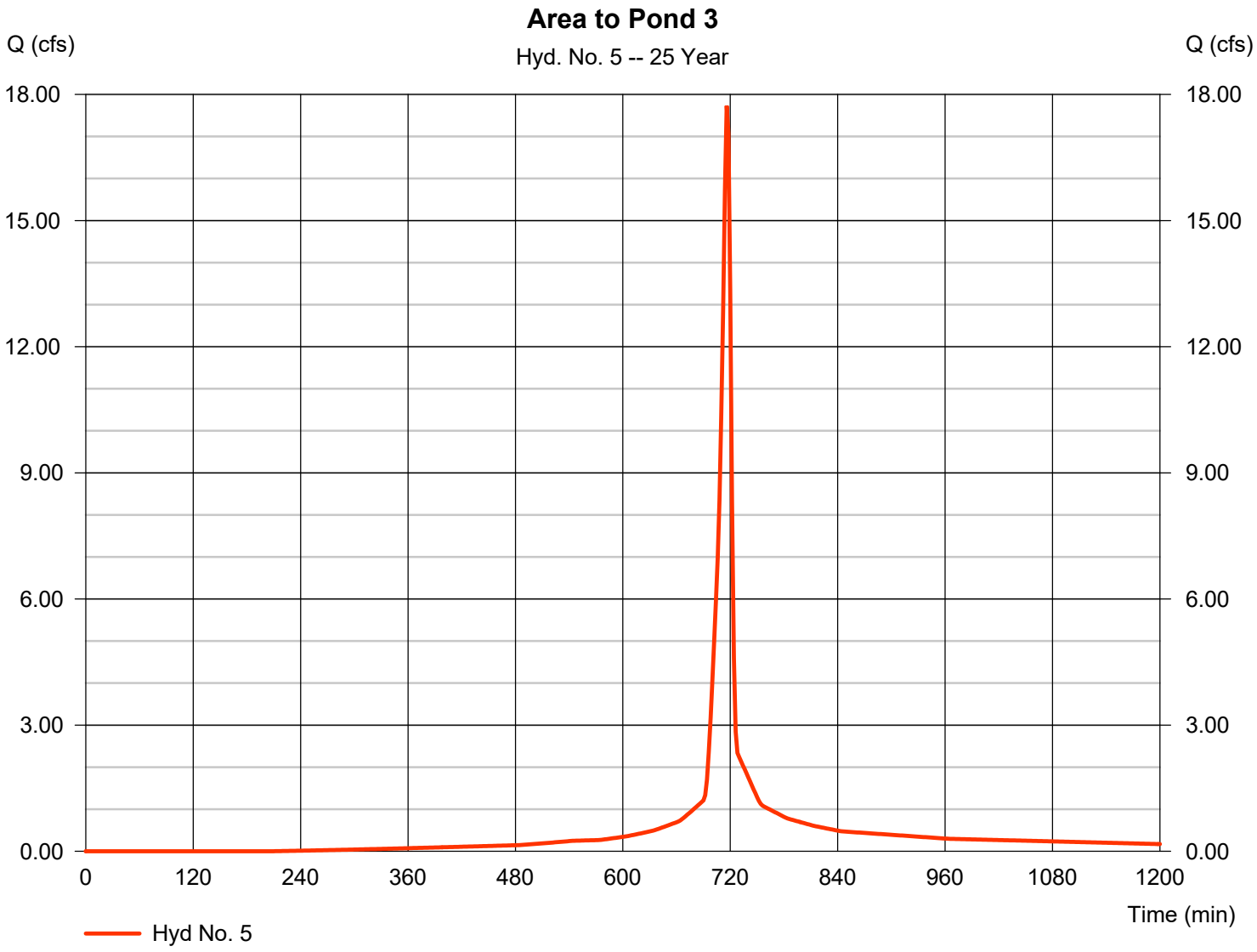
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	= SCS Runoff	Peak discharge	= 17.73 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 38,389 cuft
Drainage area	= 2.520 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.62 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



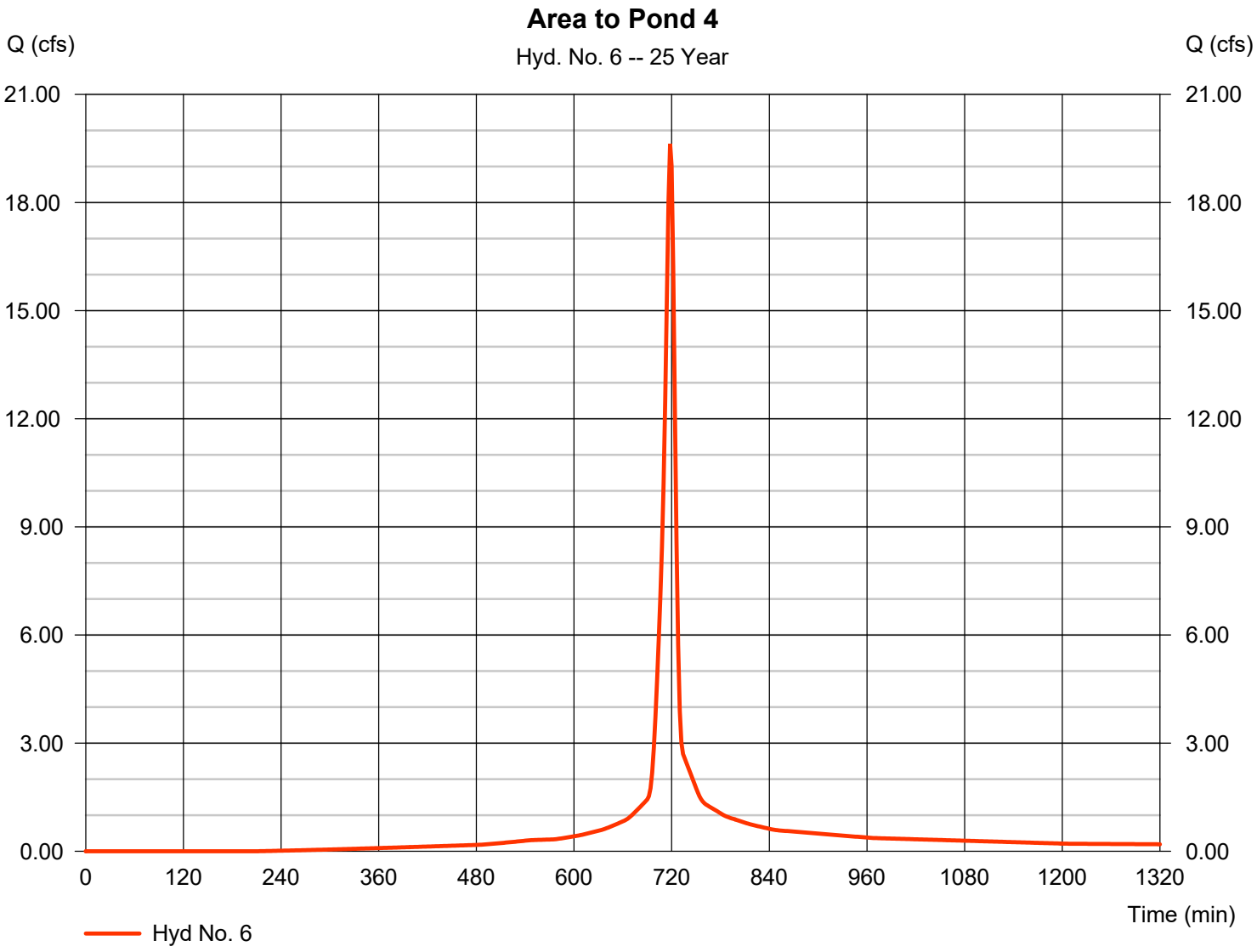
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	19.63 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	47,610 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



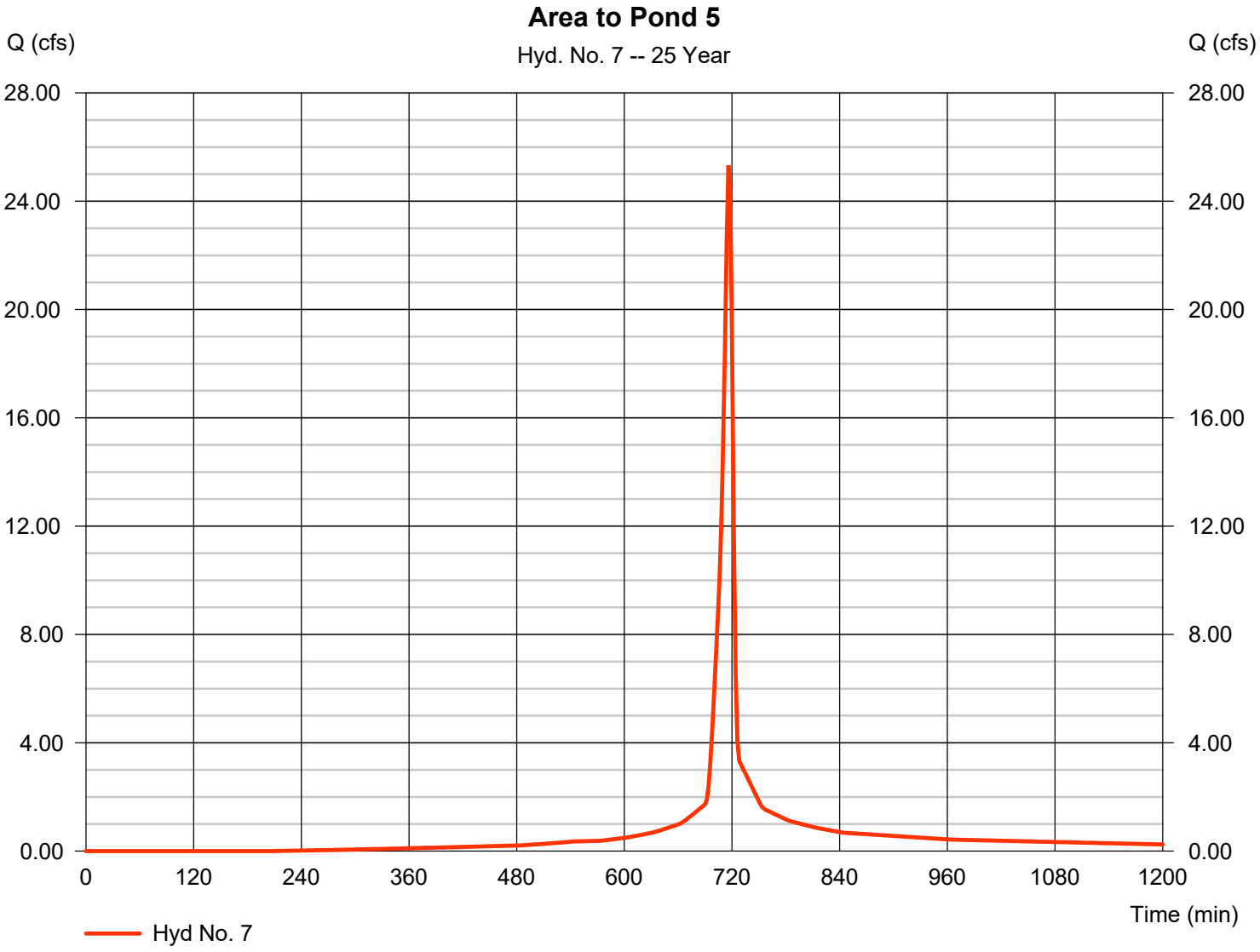
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	25.33 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	54,841 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



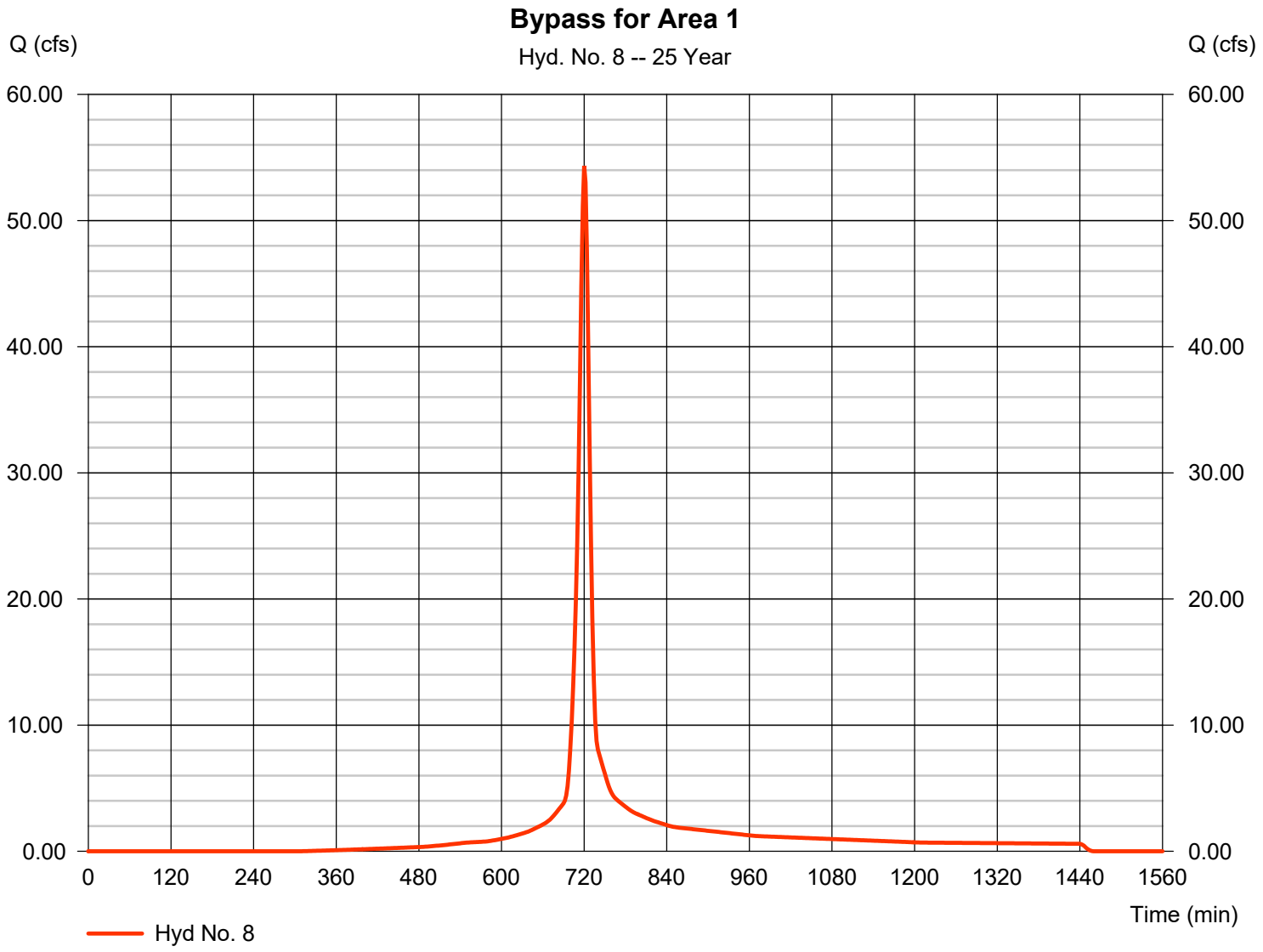
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	54.34 cfs
Storm frequency	=	25 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	143,700 cuft
Drainage area	=	9.730 ac	Curve number	=	85*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.00 min
Total precip.	=	5.62 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



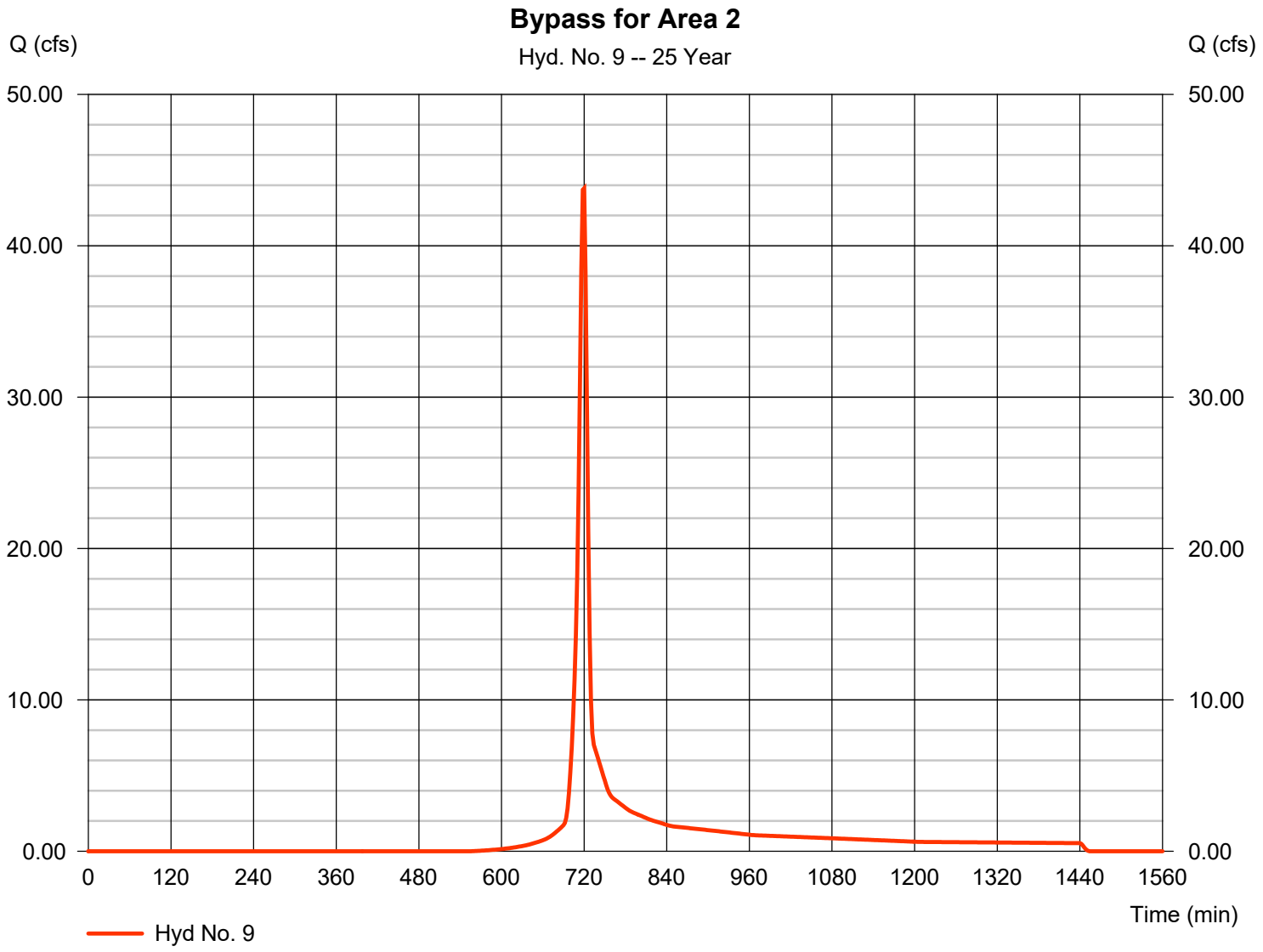
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 43.80 cfs
Storm frequency	= 25 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 100,287 cuft
Drainage area	= 11.020 ac	Curve number	= 70*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 9.50 min
Total precip.	= 5.62 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



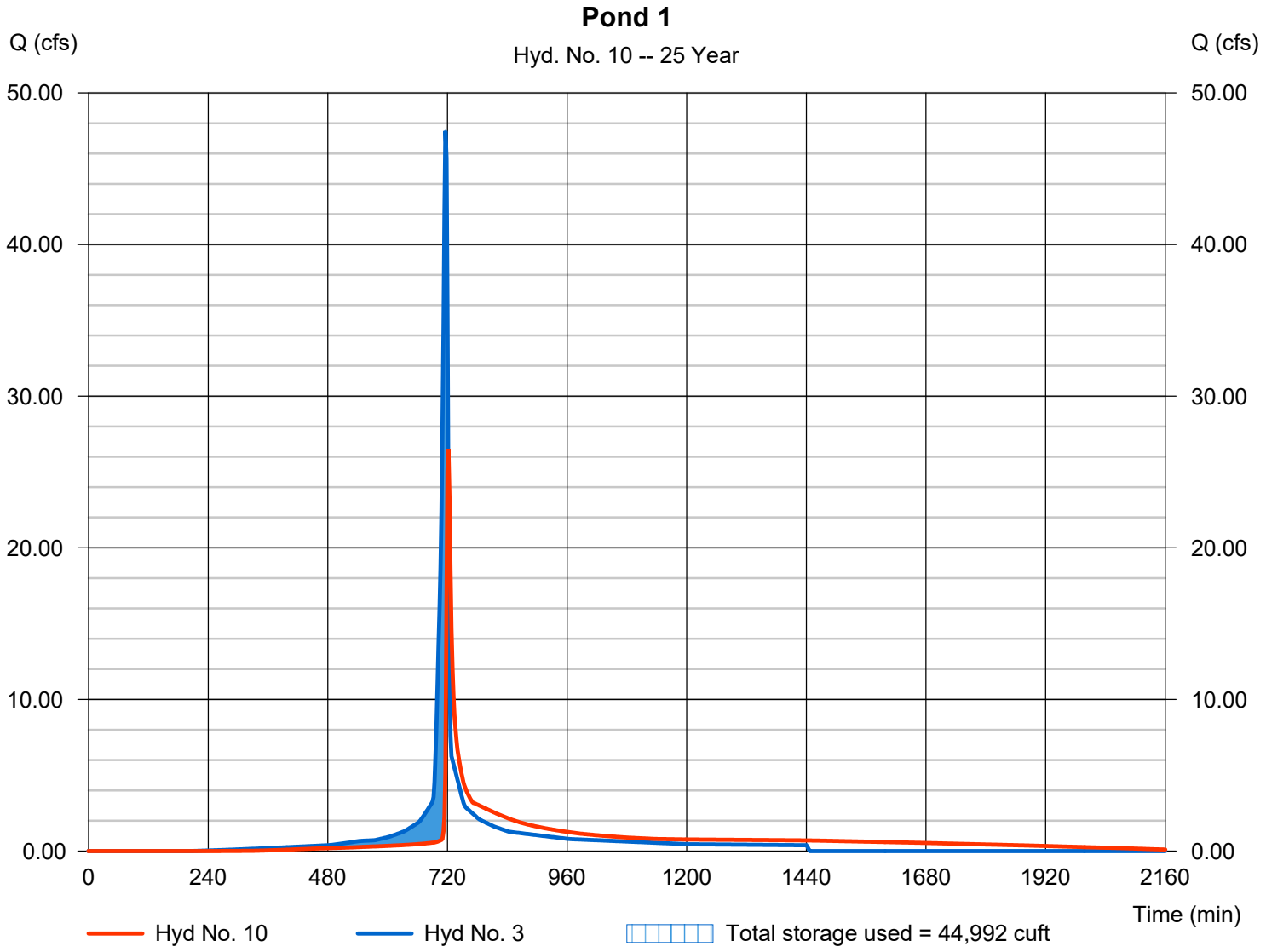
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	26.52 cfs
Storm frequency	=	25 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	102,804 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	487.78 ft
Reservoir name	=	Pond 1	Max. Storage	=	44,992 cuft

Storage Indication method used.



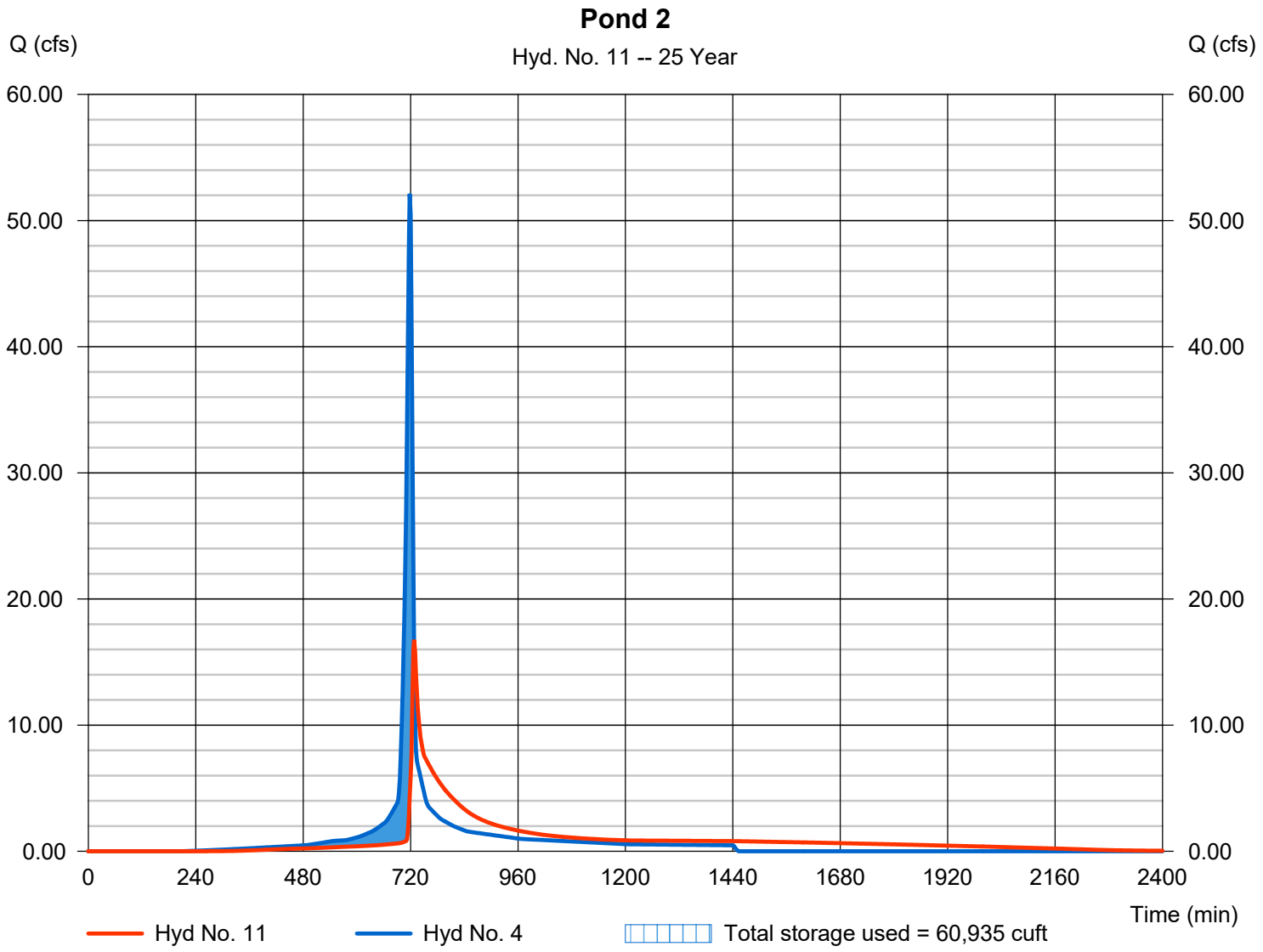
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	16.77 cfs
Storm frequency	=	25 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	126,397 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	493.39 ft
Reservoir name	=	Pond 2	Max. Storage	=	60,935 cuft

Storage Indication method used.

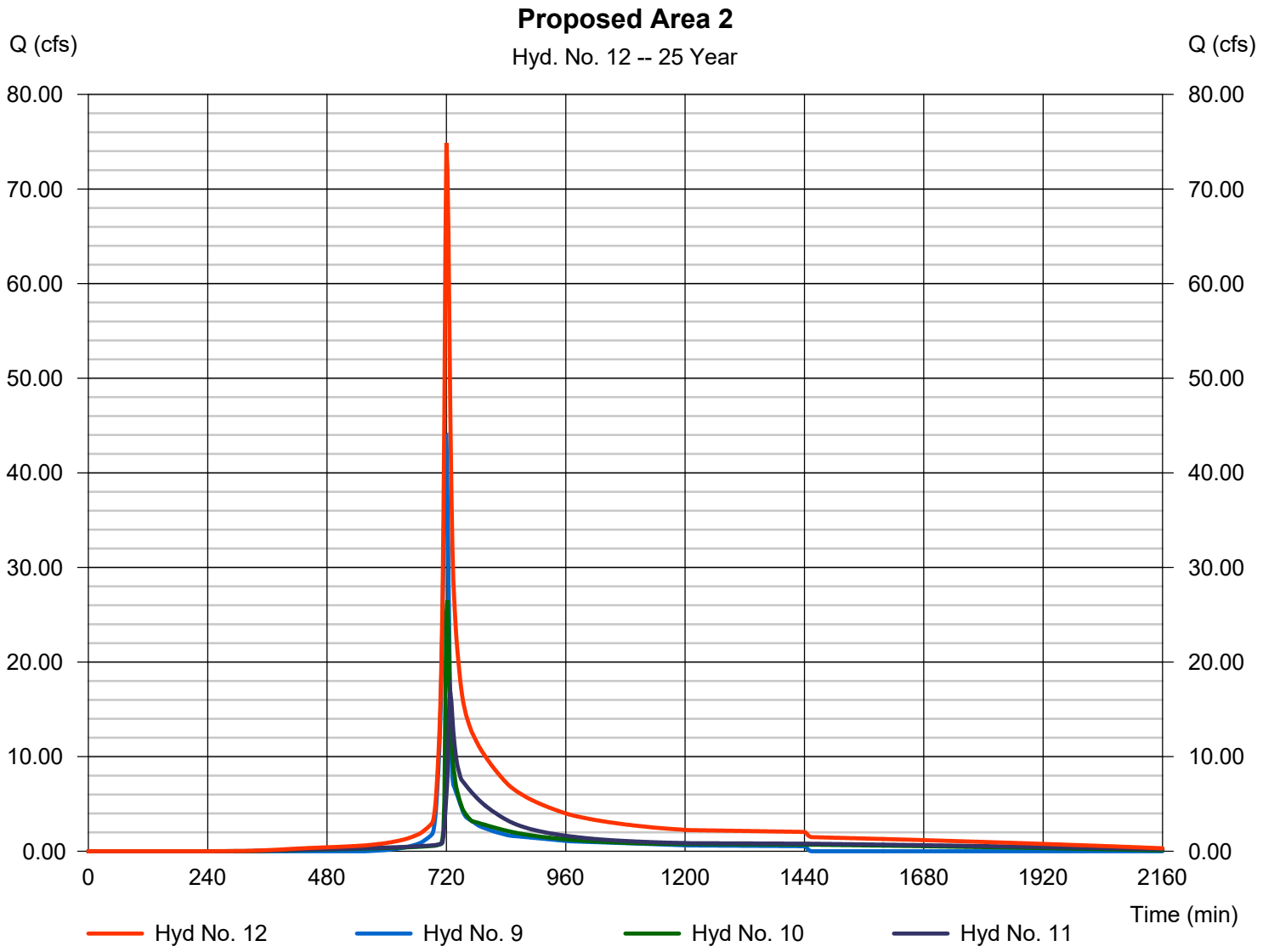


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 74.85 cfs
Storm frequency	= 25 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 329,487 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



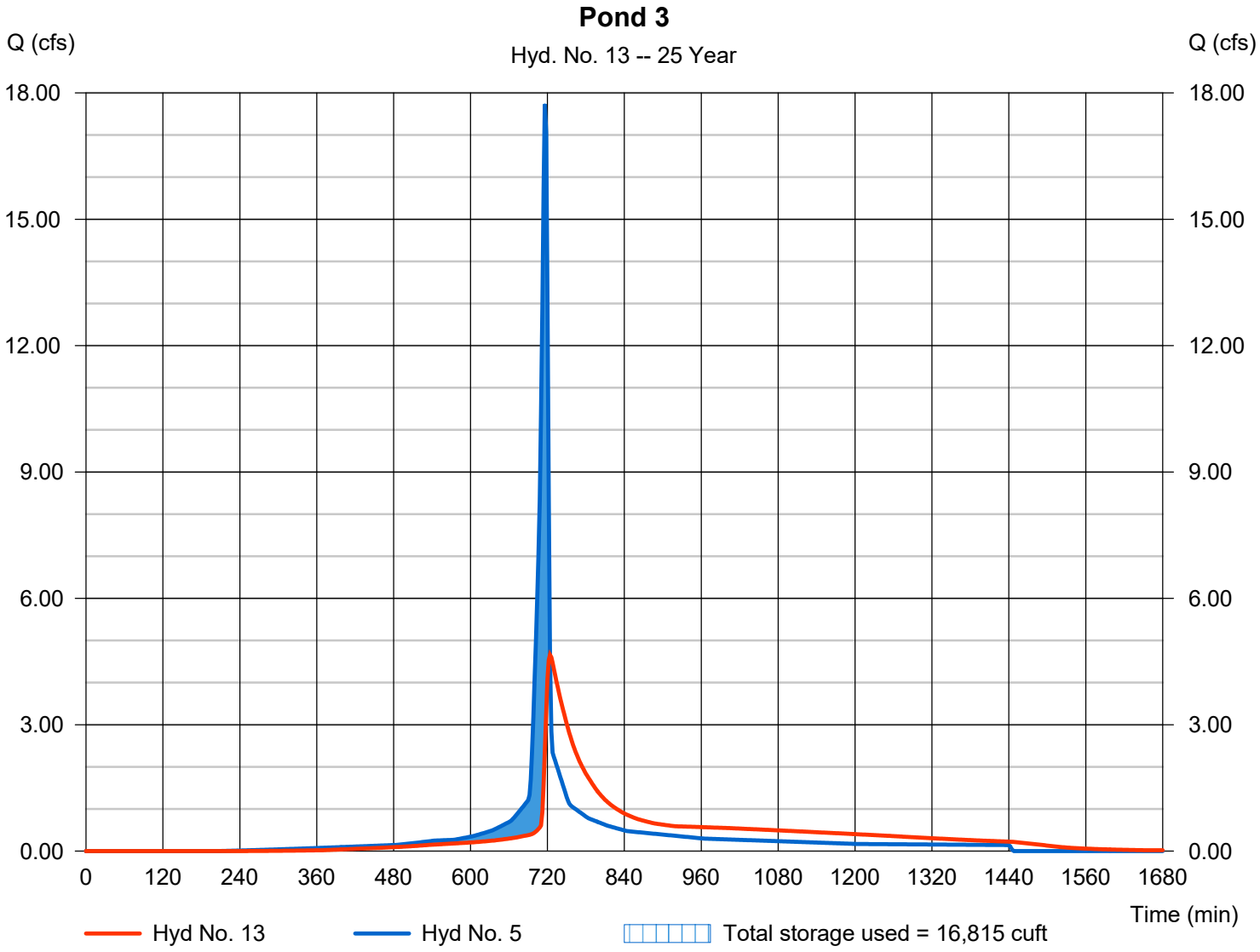
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	4.657 cfs
Storm frequency	=	25 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	38,375 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	510.07 ft
Reservoir name	=	Pond 3	Max. Storage	=	16,815 cuft

Storage Indication method used.



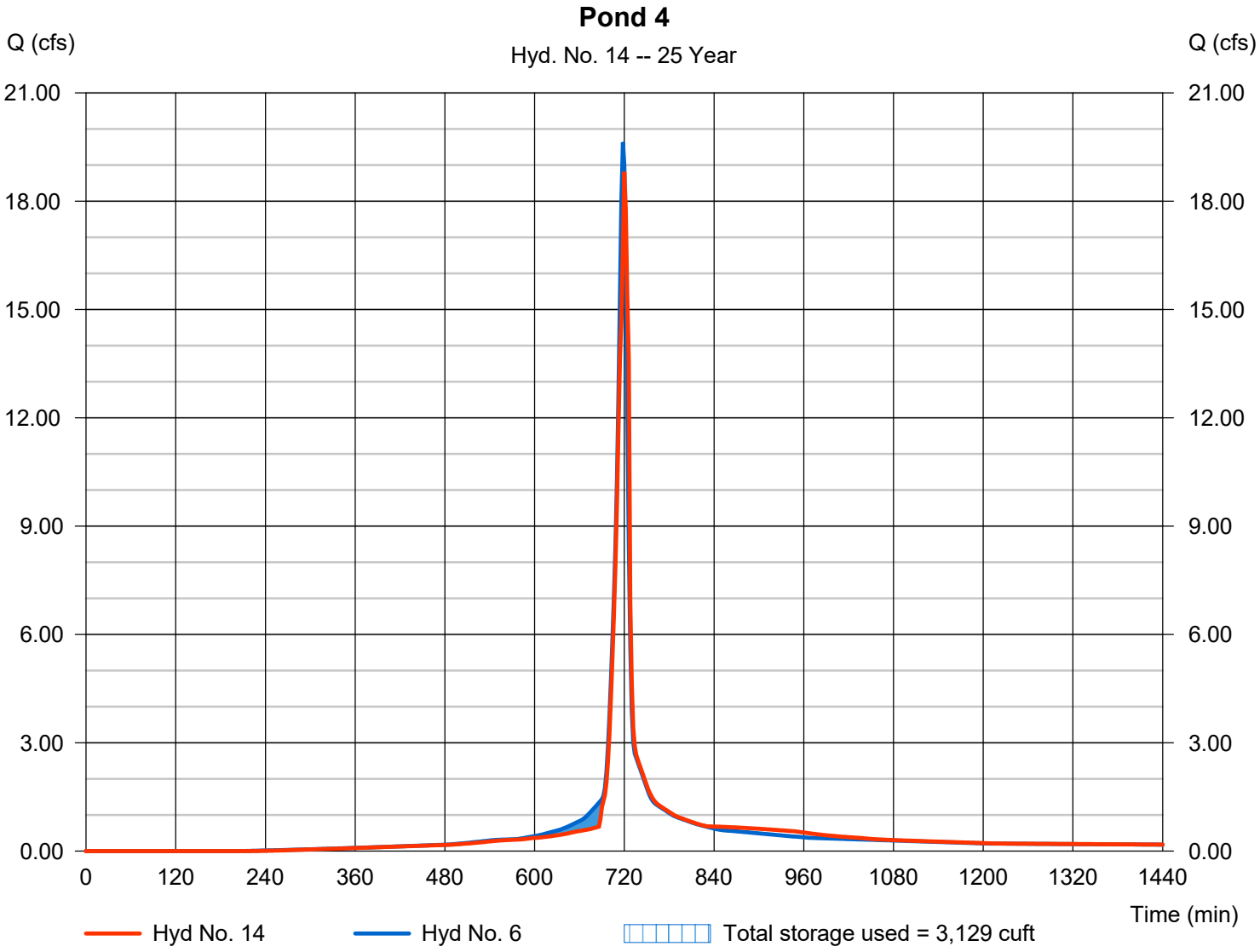
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	18.82 cfs
Storm frequency	=	25 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	47,609 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	512.24 ft
Reservoir name	=	Pond 4	Max. Storage	=	3,129 cuft

Storage Indication method used.



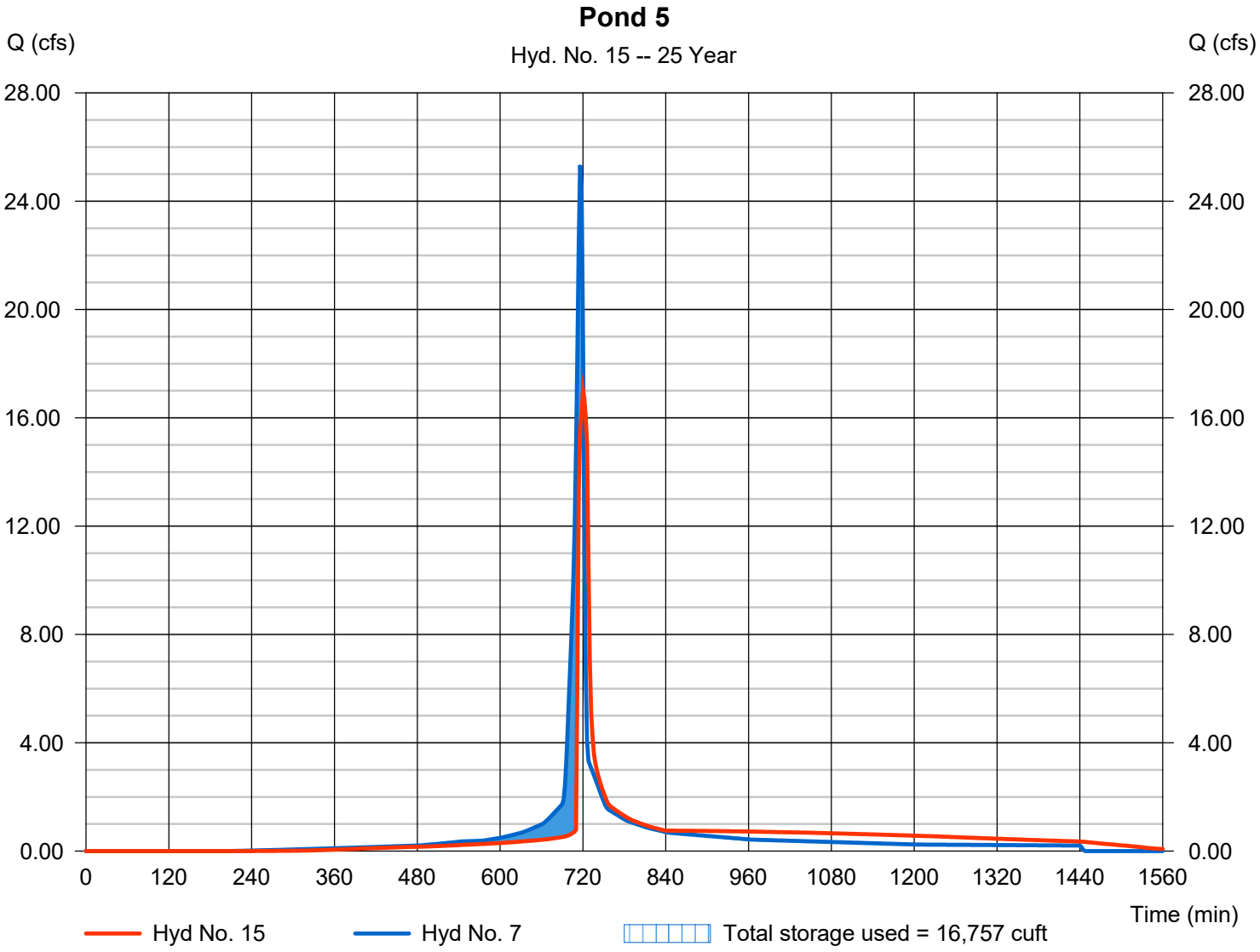
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	17.01 cfs
Storm frequency	=	25 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	54,832 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	502.65 ft
Reservoir name	=	Pond 5	Max. Storage	=	16,757 cuft

Storage Indication method used.

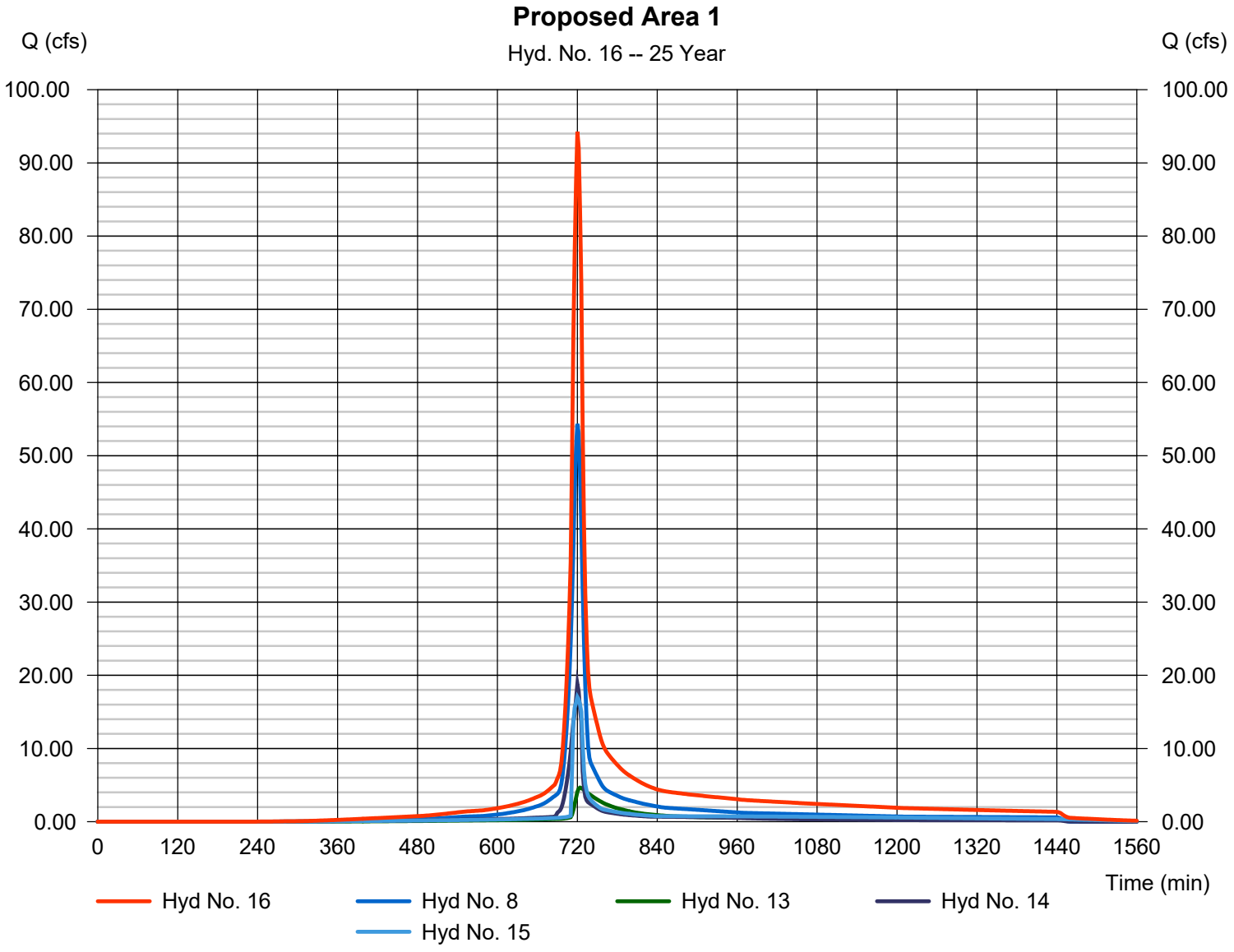


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 94.25 cfs
Storm frequency	= 25 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 284,514 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	116.09	2	720	302,826	------	------	------	Exisitng Area 1
2	SCS Runoff	111.95	2	720	290,282	------	------	------	Existing Area 2
3	SCS Runoff	54.12	2	716	118,259	------	------	------	Area to Pond 1
4	SCS Runoff	59.43	2	718	145,391	------	------	------	Area to Pond 2
5	SCS Runoff	20.21	2	716	44,150	------	------	------	Area to Pond 3
6	SCS Runoff	22.38	2	718	54,755	------	------	------	Area to Pond 4
7	SCS Runoff	28.87	2	716	63,071	------	------	------	Area to Pond 5
8	SCS Runoff	62.87	2	720	167,390	------	------	------	Bypass for Area 1
9	SCS Runoff	53.37	2	718	122,135	------	------	------	Bypass for Area 2
10	Reservoir	32.75	2	722	118,236	3	488.06	48,179	Pond 1
11	Reservoir	29.48	2	726	145,370	4	493.73	65,330	Pond 2
12	Combine	101.27	2	722	385,741	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	5.871	2	724	44,136	5	510.41	18,973	Pond 3
14	Reservoir	21.94	2	720	54,754	6	512.37	3,354	Pond 4
15	Reservoir	21.28	2	720	63,062	7	502.89	18,115	Pond 5
16	Combine	111.39	2	720	329,343	8, 13, 14, 15	------	------	Proposed Area 1

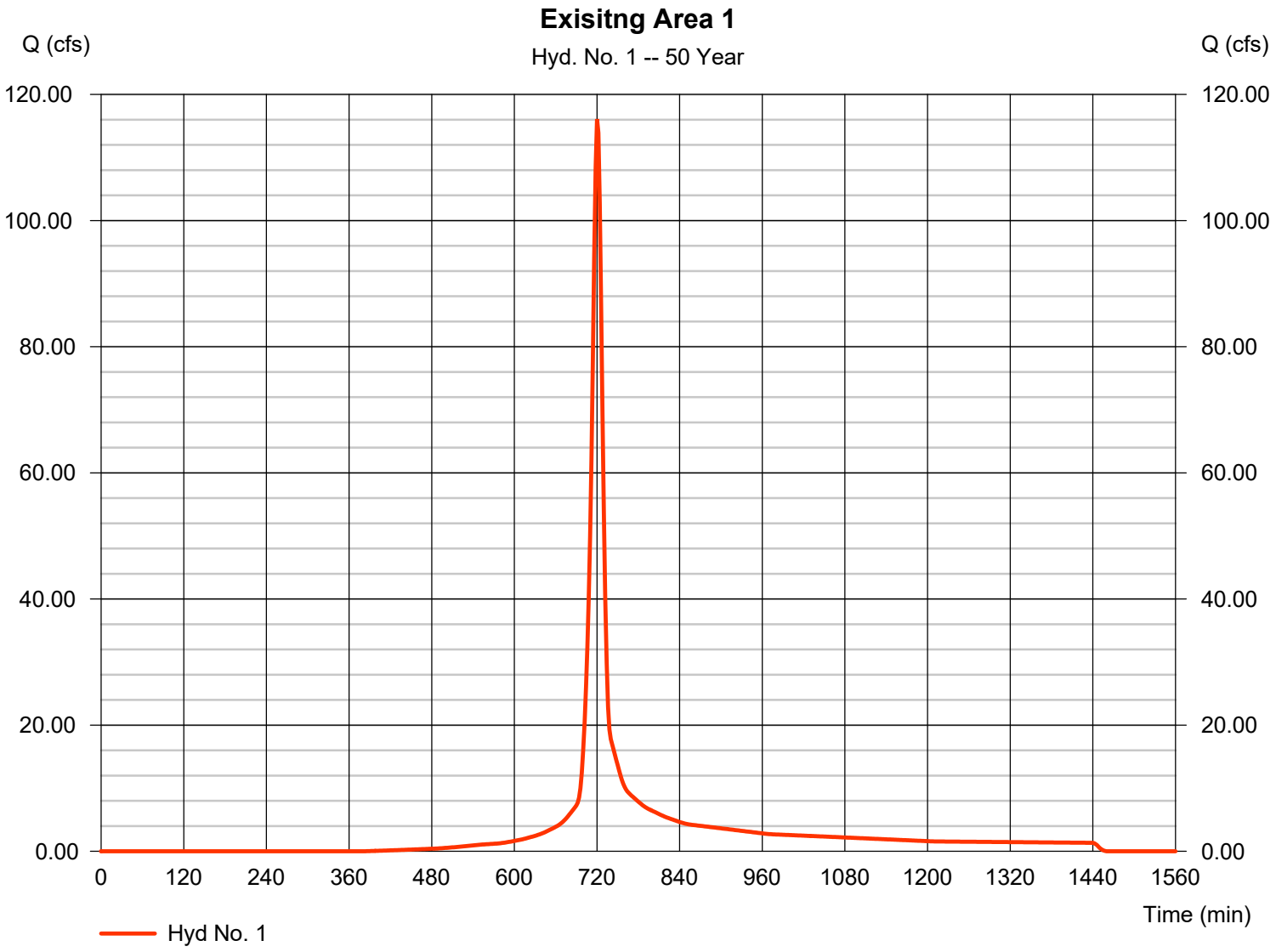
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	= SCS Runoff	Peak discharge	= 116.09 cfs
Storm frequency	= 50 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 302,826 cuft
Drainage area	= 20.440 ac	Curve number	= 79*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 13.20 min
Total precip.	= 6.31 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



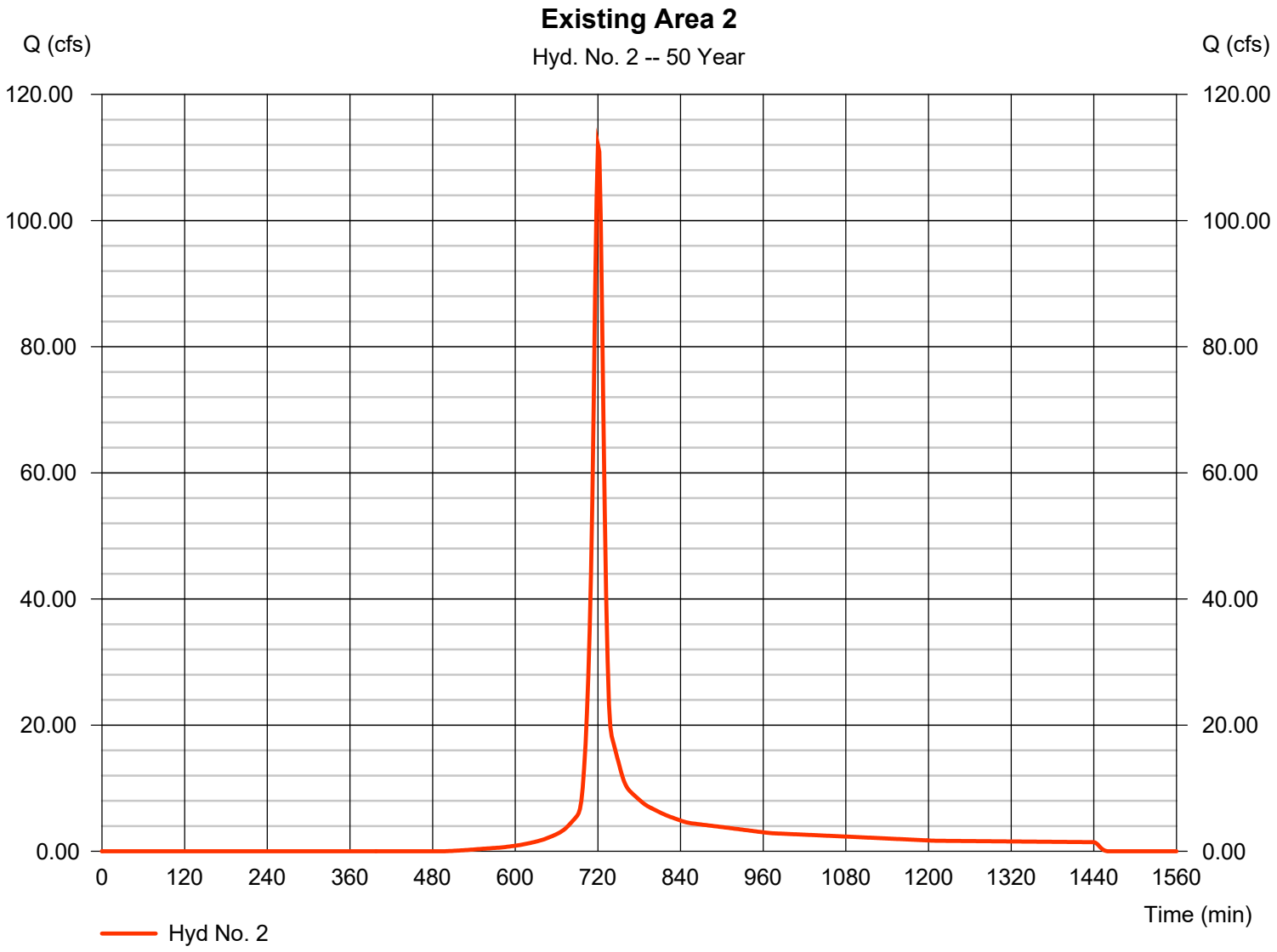
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 111.95 cfs
Storm frequency	= 50 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 290,282 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 6.31 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



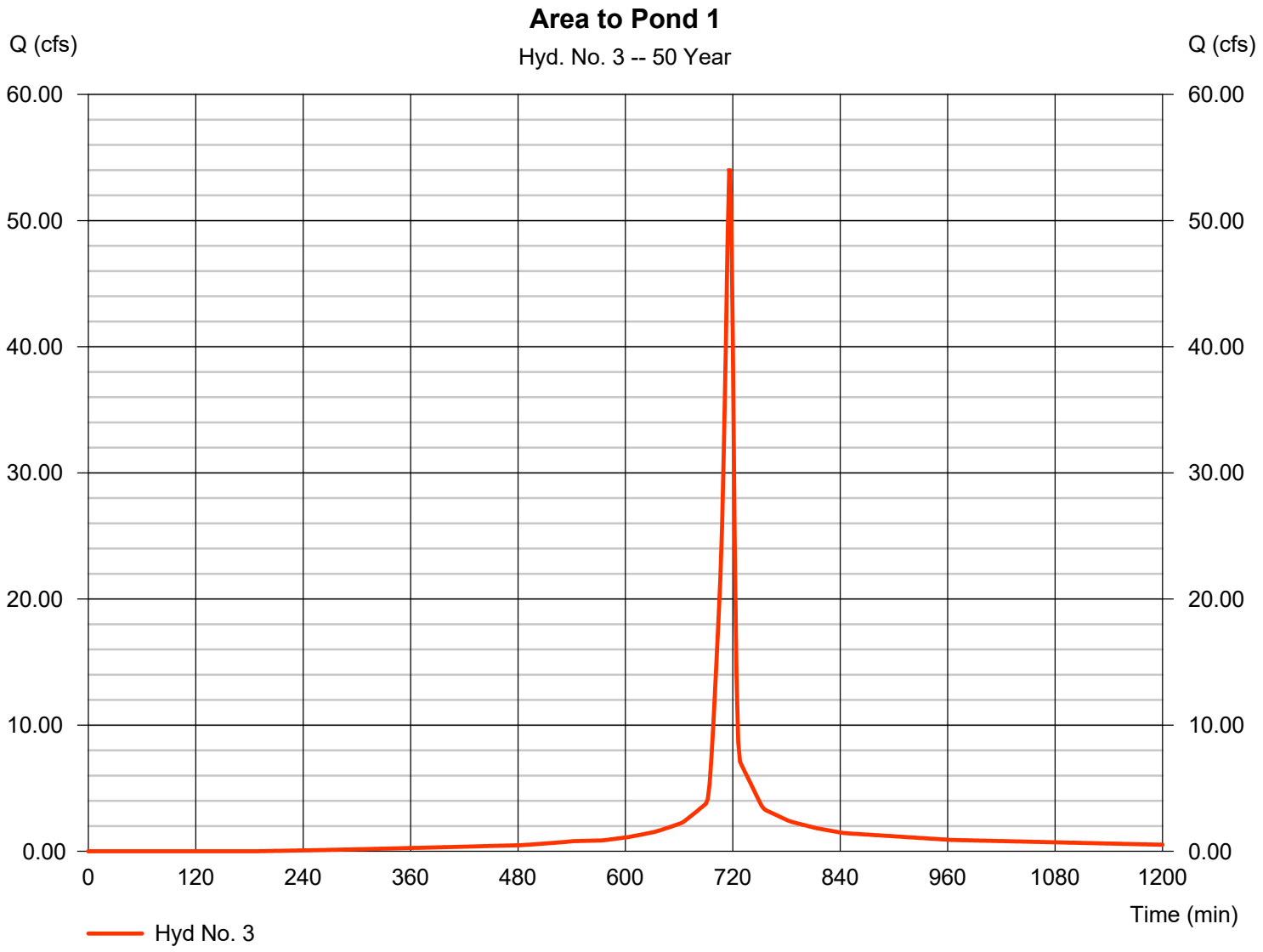
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	= SCS Runoff	Peak discharge	= 54.12 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 118,259 cuft
Drainage area	= 6.750 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.31 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



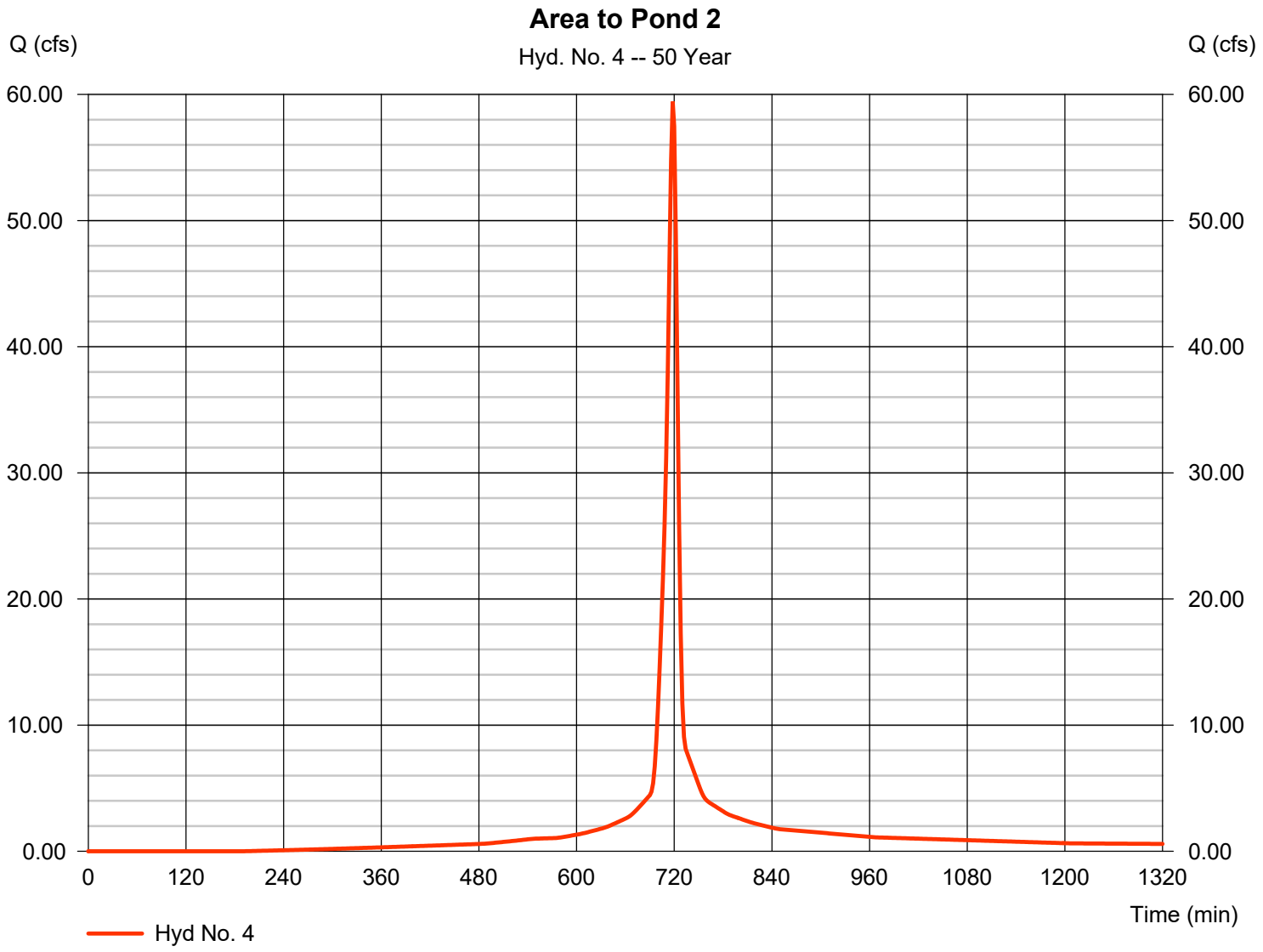
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	= SCS Runoff	Peak discharge	= 59.43 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 145,391 cuft
Drainage area	= 7.780 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 8.00 min
Total precip.	= 6.31 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



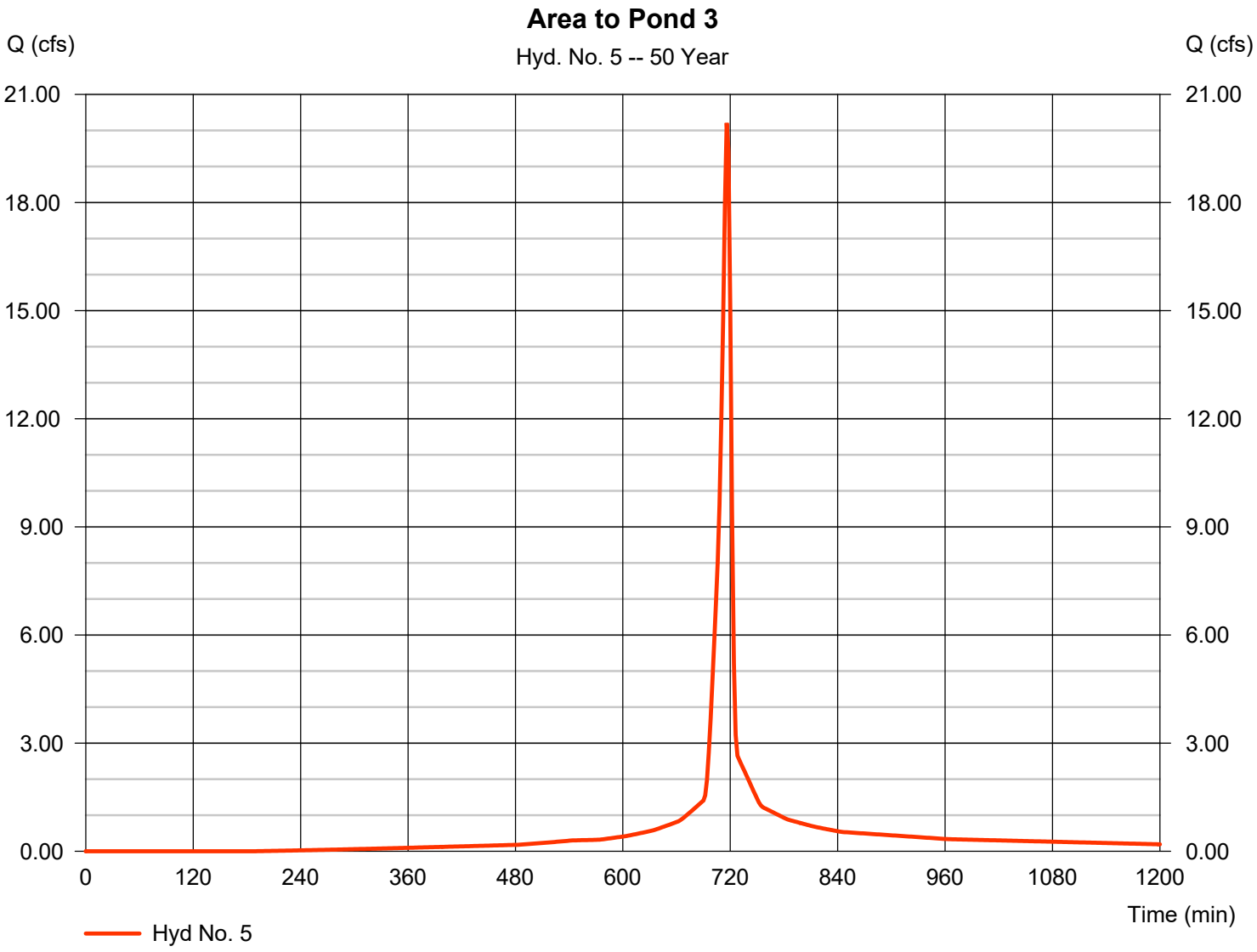
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	20.21 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	44,150 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



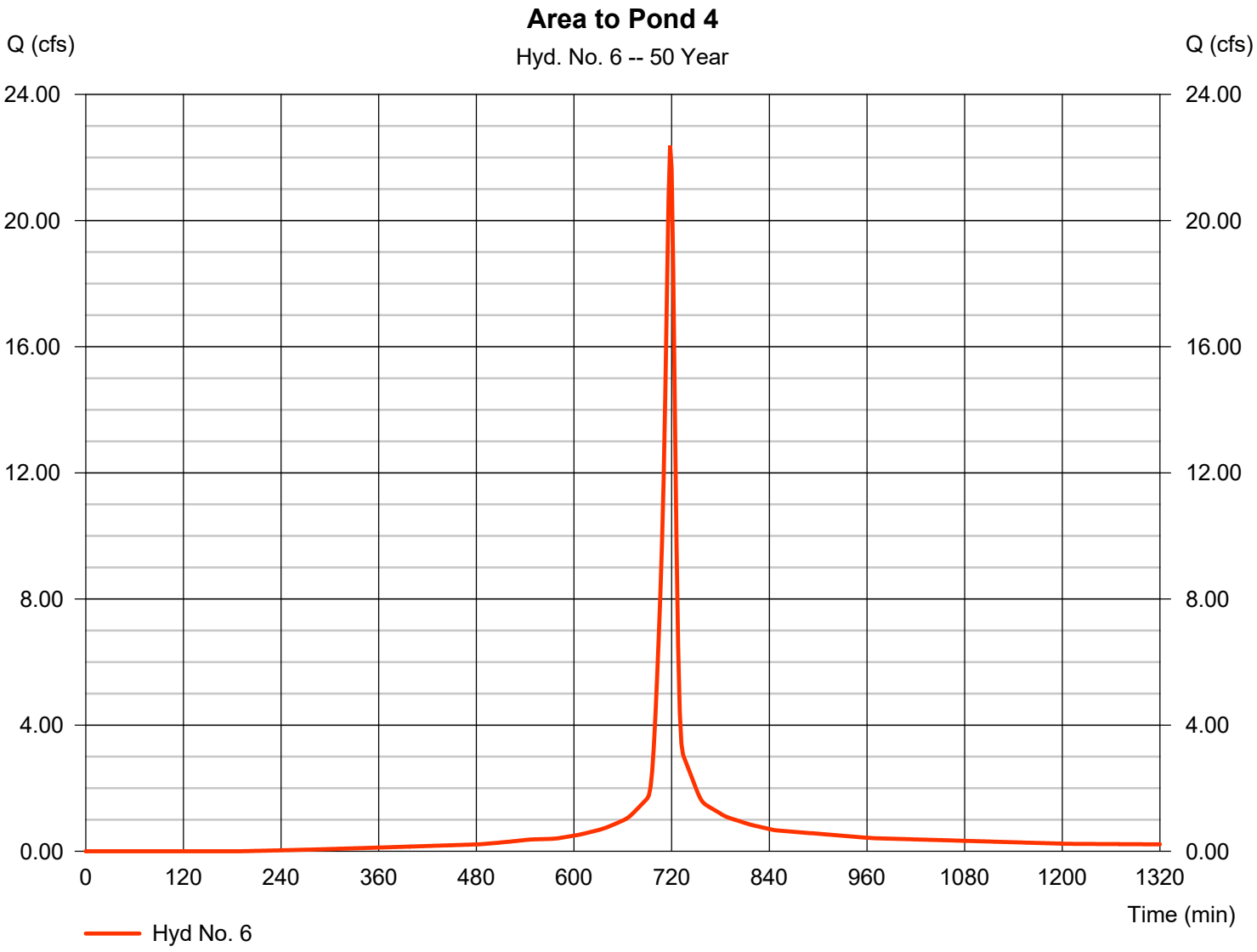
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	=	SCS Runoff	Peak discharge	=	22.38 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	54,755 cuft
Drainage area	=	2.930 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	7.80 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



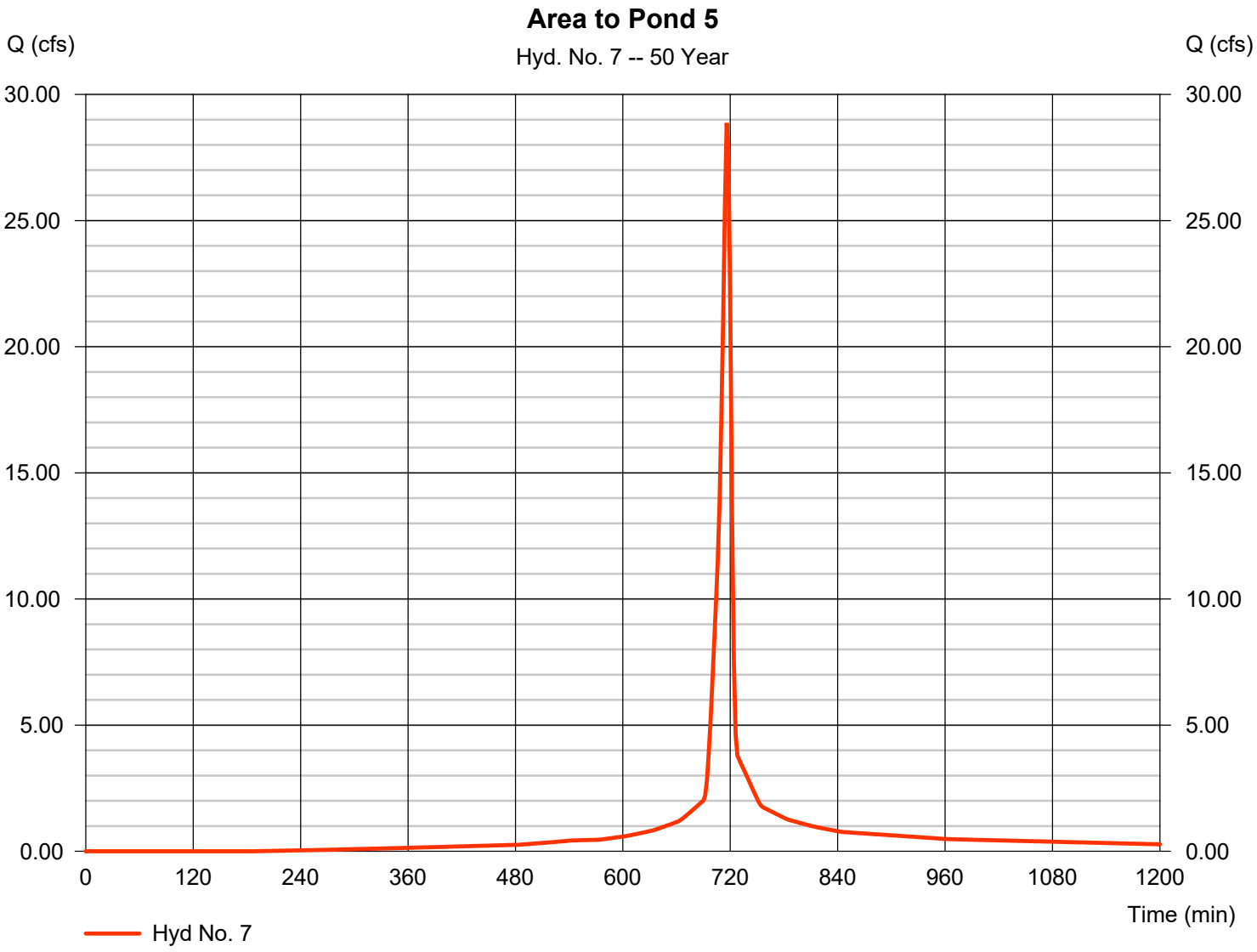
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	28.87 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	63,071 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



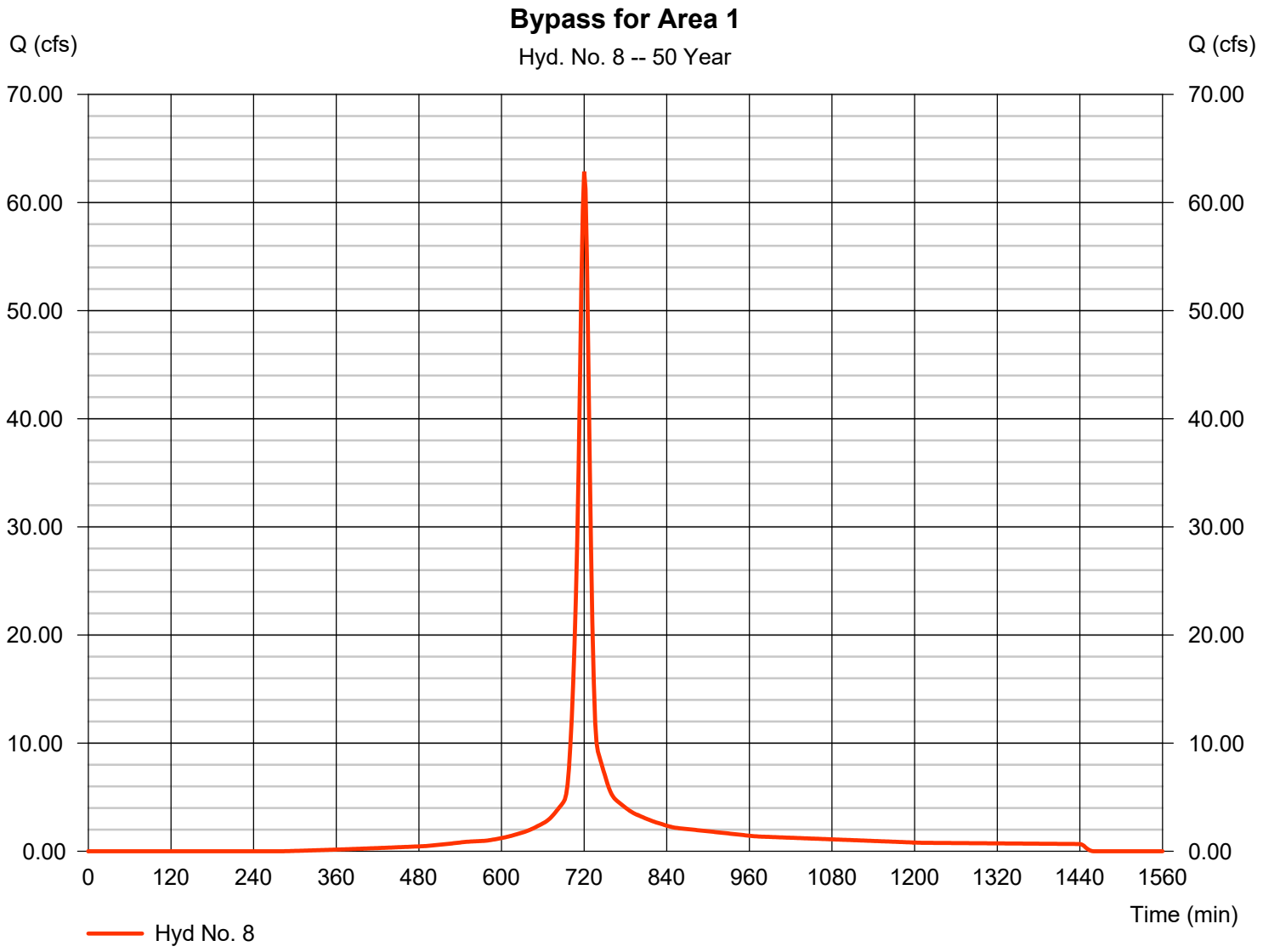
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	62.87 cfs
Storm frequency	=	50 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	167,390 cuft
Drainage area	=	9.730 ac	Curve number	=	85*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.00 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



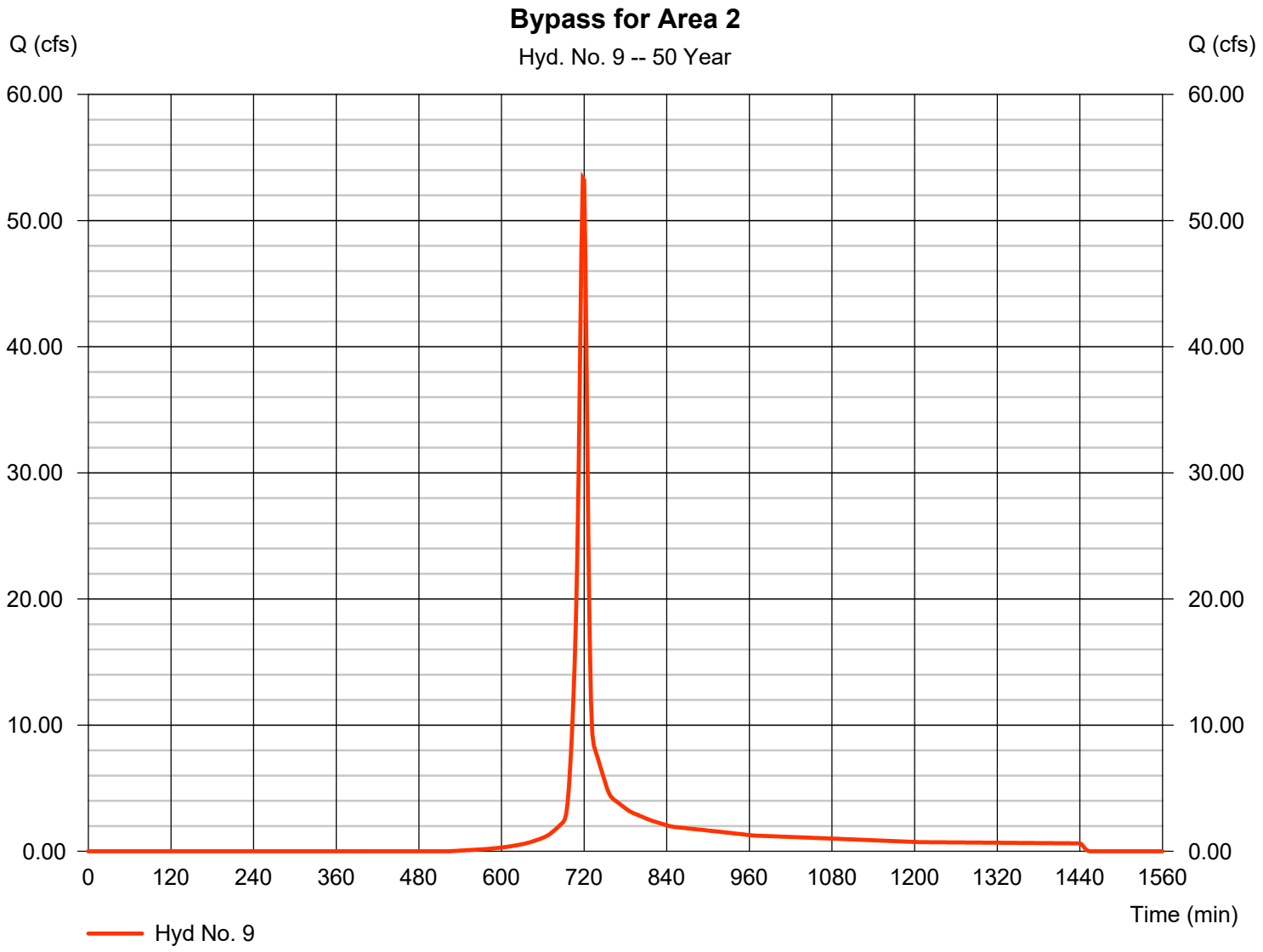
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	53.37 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	122,135 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	6.31 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



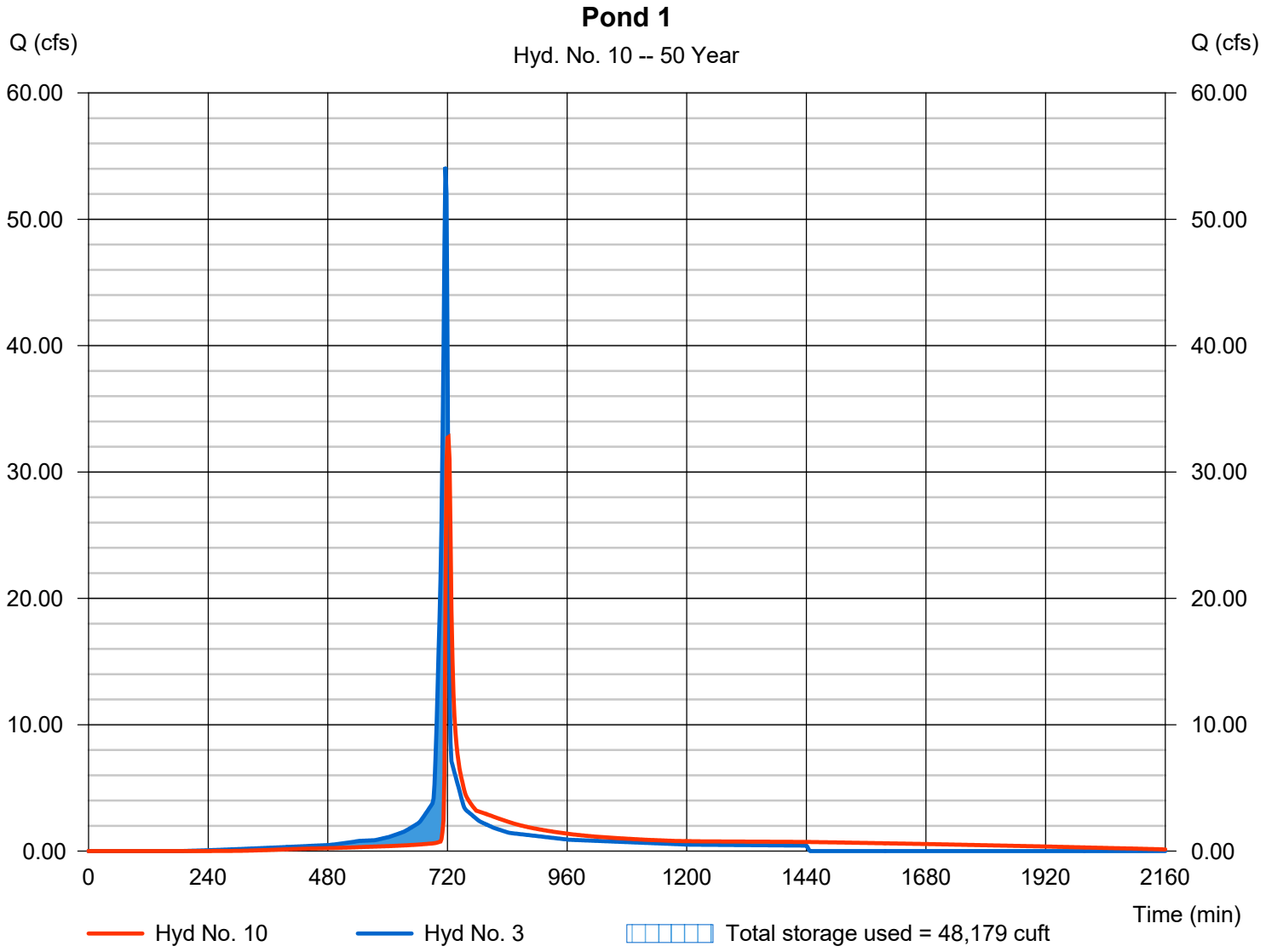
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	32.75 cfs
Storm frequency	=	50 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	118,236 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	488.06 ft
Reservoir name	=	Pond 1	Max. Storage	=	48,179 cuft

Storage Indication method used.



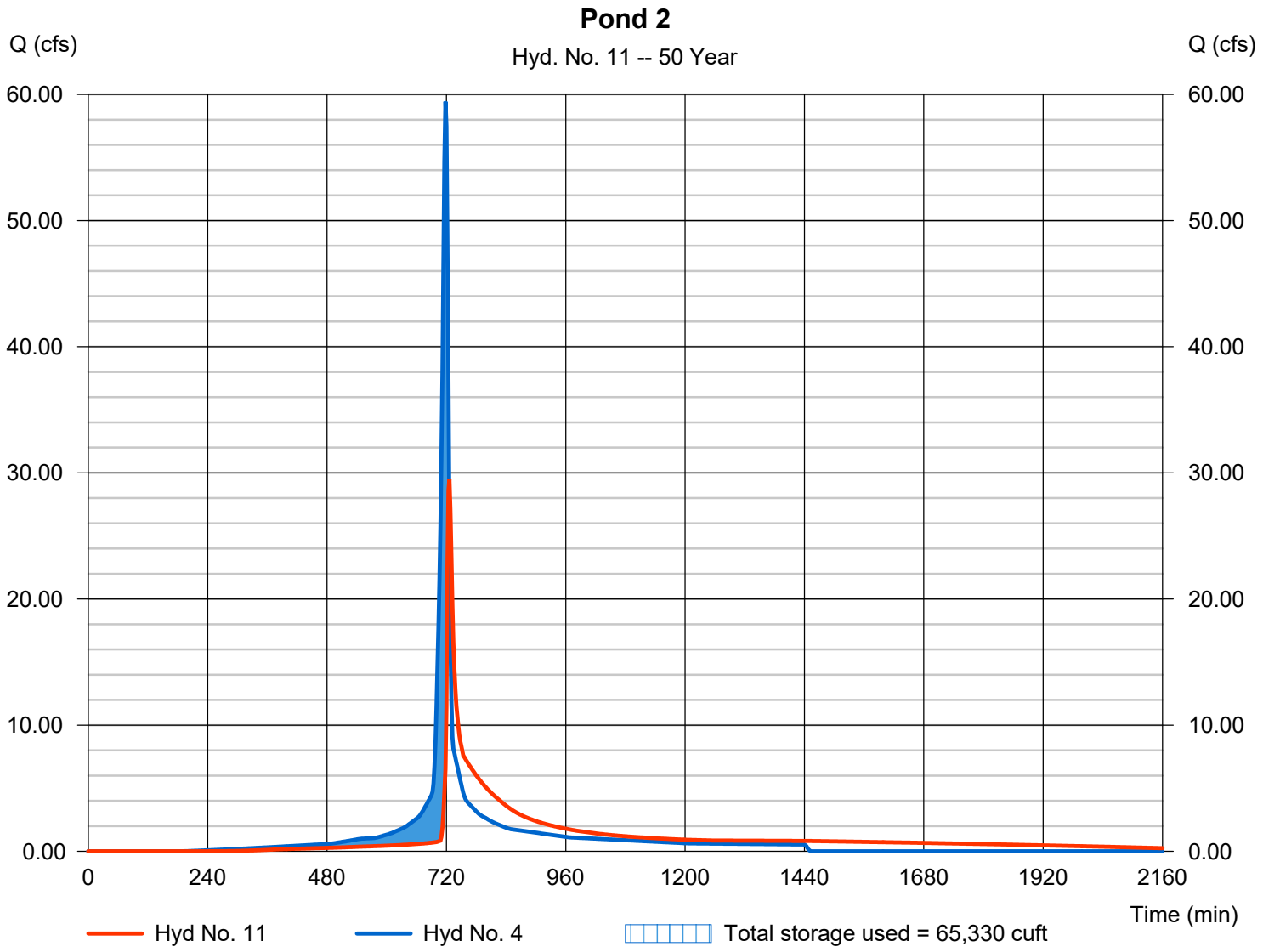
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	29.48 cfs
Storm frequency	=	50 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	145,370 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	493.73 ft
Reservoir name	=	Pond 2	Max. Storage	=	65,330 cuft

Storage Indication method used.

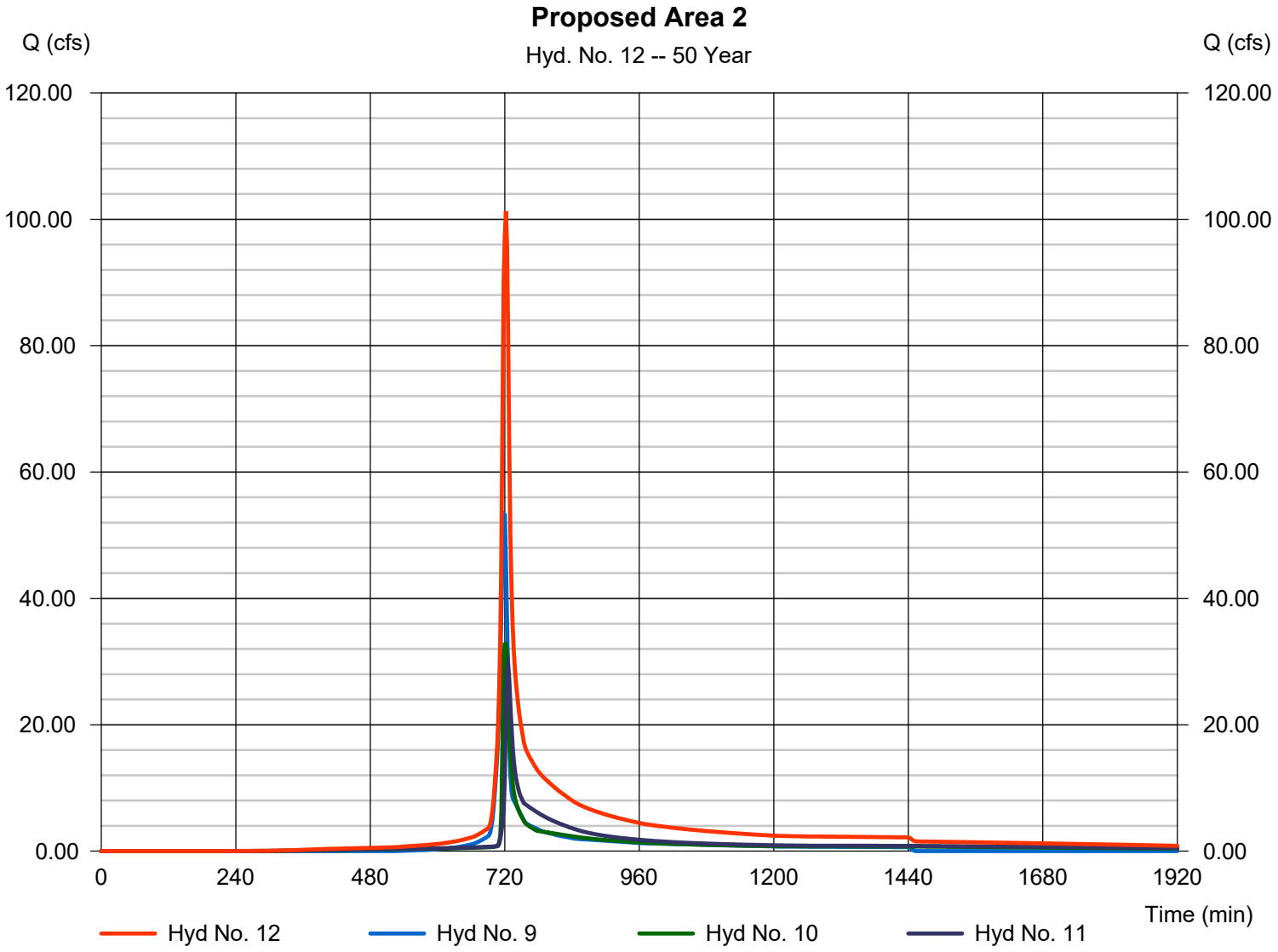


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	=	Combine	Peak discharge	=	101.27 cfs
Storm frequency	=	50 yrs	Time to peak	=	722 min
Time interval	=	2 min	Hyd. volume	=	385,741 cuft
Inflow hyds.	=	9, 10, 11	Contrib. drain. area	=	11.020 ac



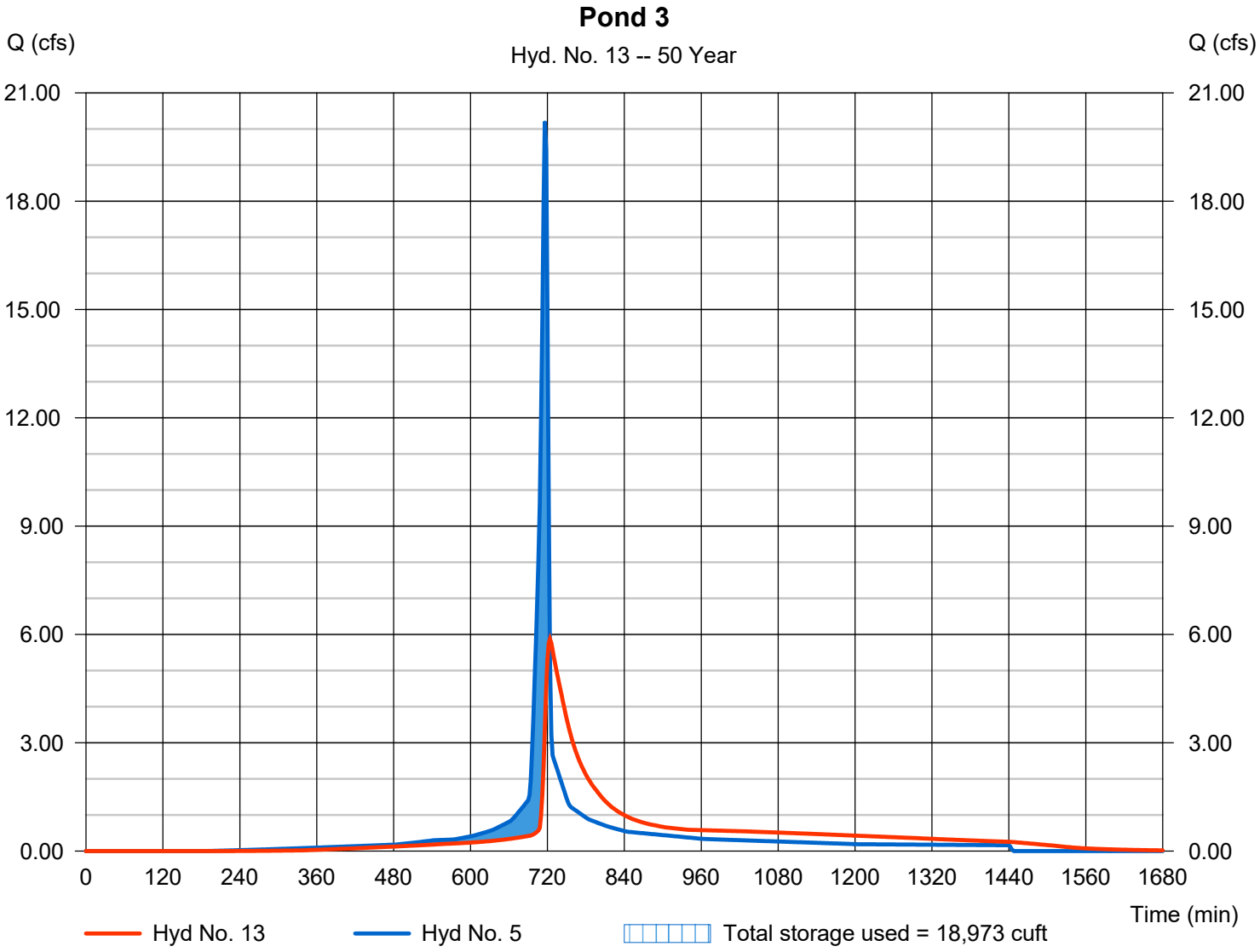
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	5.871 cfs
Storm frequency	=	50 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	44,136 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	510.41 ft
Reservoir name	=	Pond 3	Max. Storage	=	18,973 cuft

Storage Indication method used.



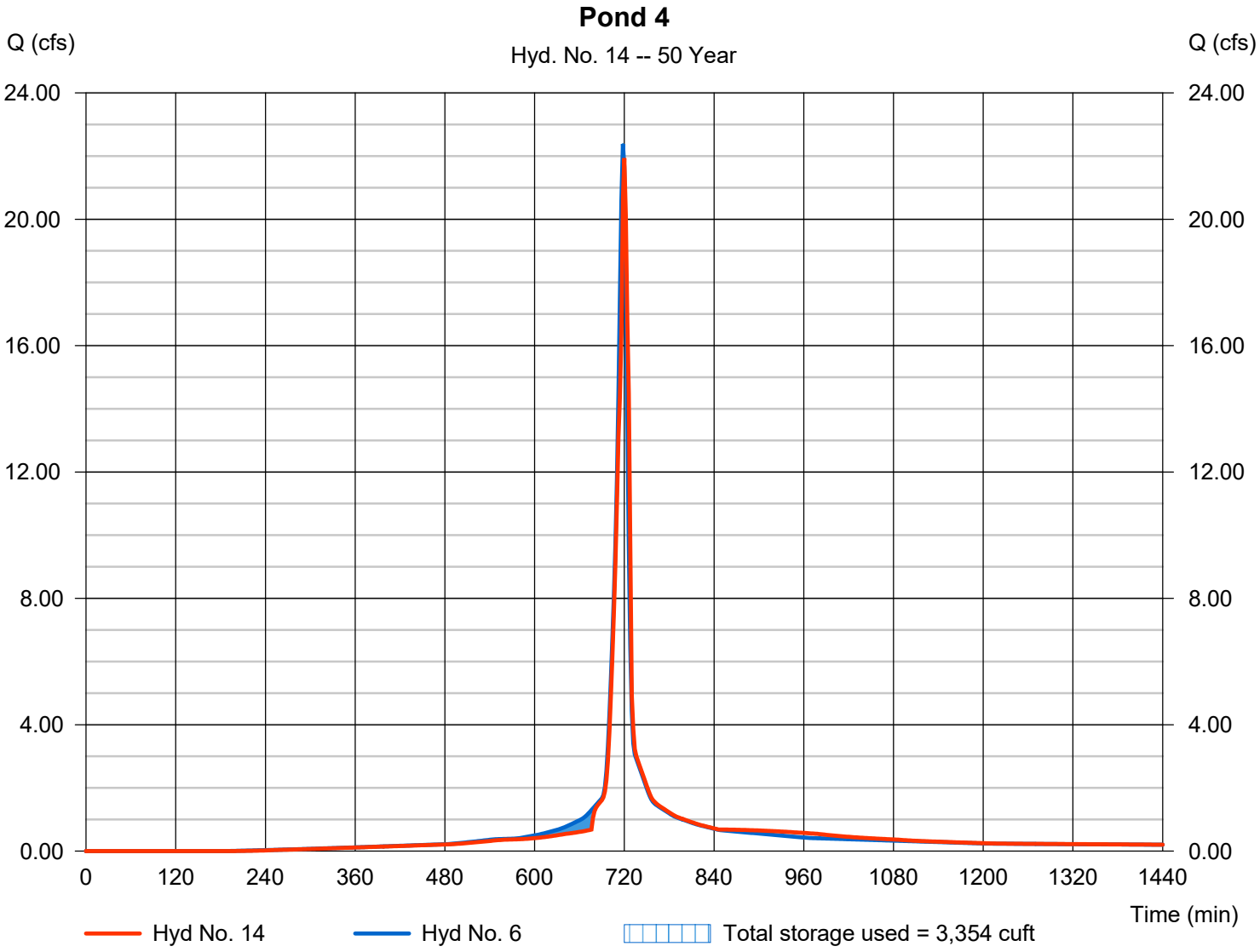
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	21.94 cfs
Storm frequency	=	50 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	54,754 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	512.37 ft
Reservoir name	=	Pond 4	Max. Storage	=	3,354 cuft

Storage Indication method used.



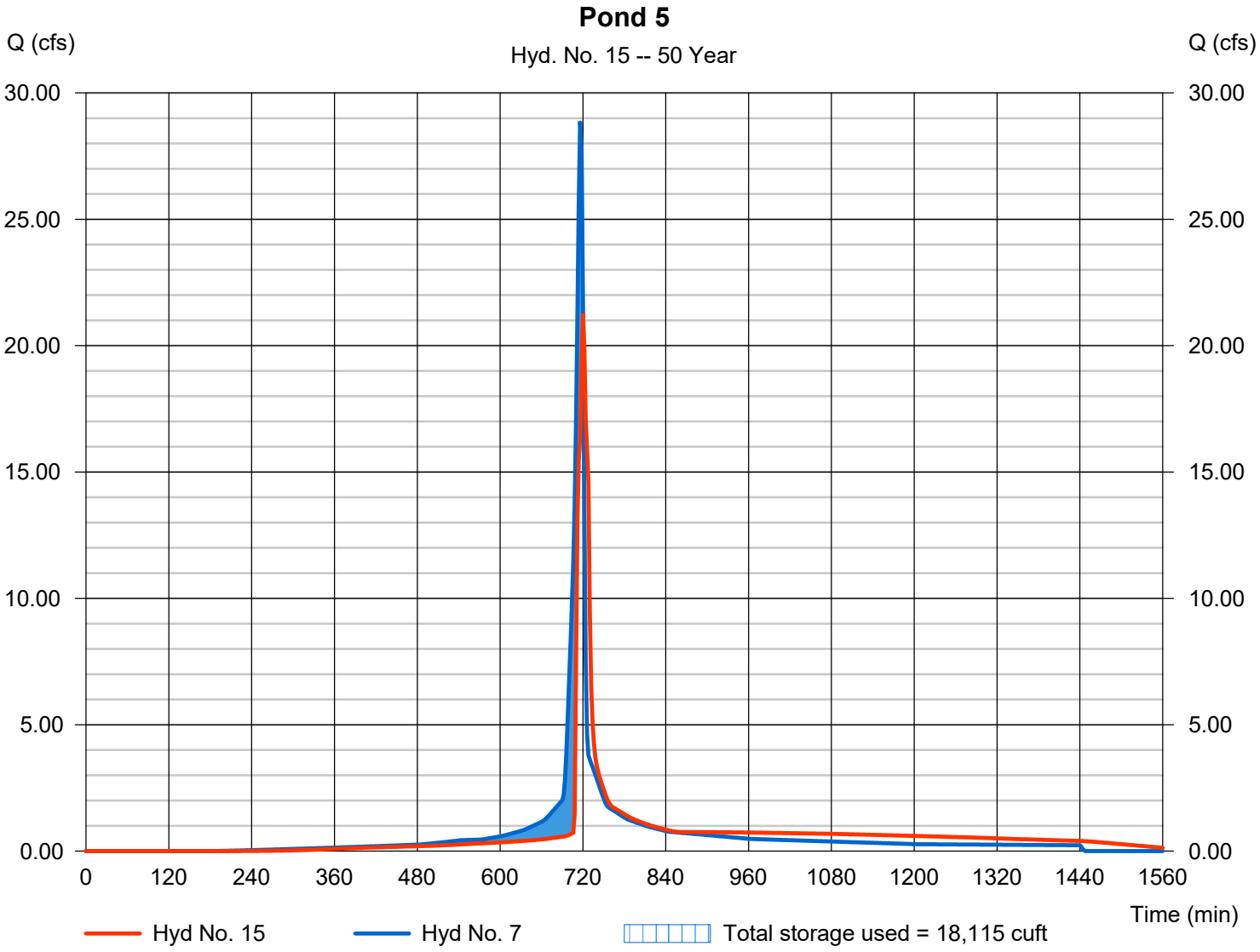
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	21.28 cfs
Storm frequency	=	50 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	63,062 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	502.89 ft
Reservoir name	=	Pond 5	Max. Storage	=	18,115 cuft

Storage Indication method used.

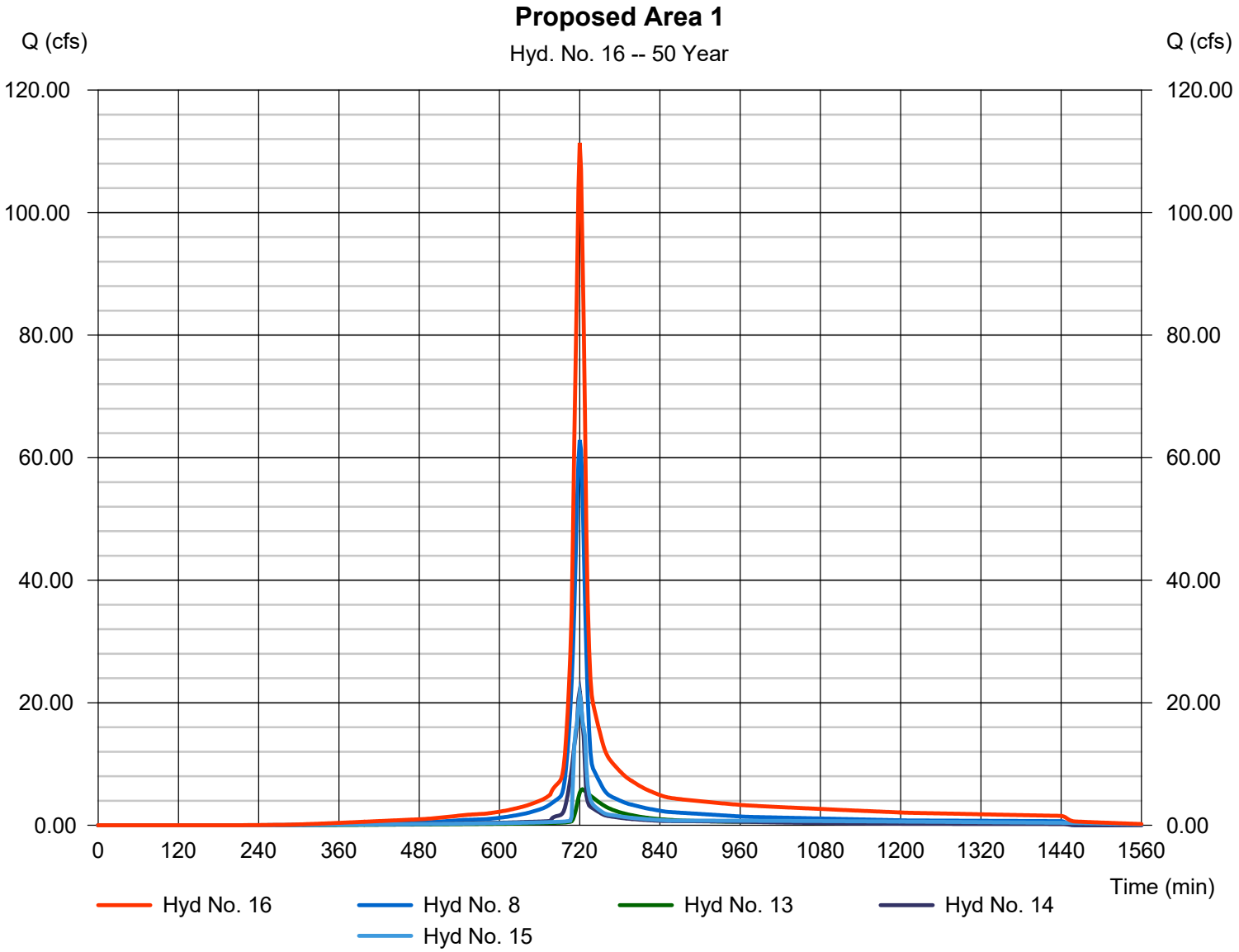


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 111.39 cfs
Storm frequency	= 50 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 329,343 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	134.43	2	720	352,178	------	------	------	Exisitng Area 1
2	SCS Runoff	132.55	2	720	343,672	------	------	------	Existing Area 2
3	SCS Runoff	60.92	2	716	134,215	------	------	------	Area to Pond 1
4	SCS Runoff	66.92	2	718	165,008	------	------	------	Area to Pond 2
5	SCS Runoff	22.74	2	716	50,107	------	------	------	Area to Pond 3
6	SCS Runoff	25.20	2	718	62,143	------	------	------	Area to Pond 4
7	SCS Runoff	32.49	2	716	71,581	------	------	------	Area to Pond 5
8	SCS Runoff	71.64	2	720	192,014	------	------	------	Bypass for Area 1
9	SCS Runoff	63.56	2	718	145,410	------	------	------	Bypass for Area 2
10	Reservoir	39.48	2	720	134,192	3	488.35	51,769	Pond 1
11	Reservoir	38.45	2	724	164,986	4	494.05	69,616	Pond 2
12	Combine	131.31	2	720	444,589	9, 10, 11	------	------	Proposed Area 2
13	Reservoir	7.177	2	724	50,093	5	510.76	21,126	Pond 3
14	Reservoir	24.78	2	720	62,142	6	512.47	3,531	Pond 4
15	Reservoir	25.58	2	720	71,572	7	503.06	19,113	Pond 5
16	Combine	128.58	2	720	375,821	8, 13, 14, 15	------	------	Proposed Area 1

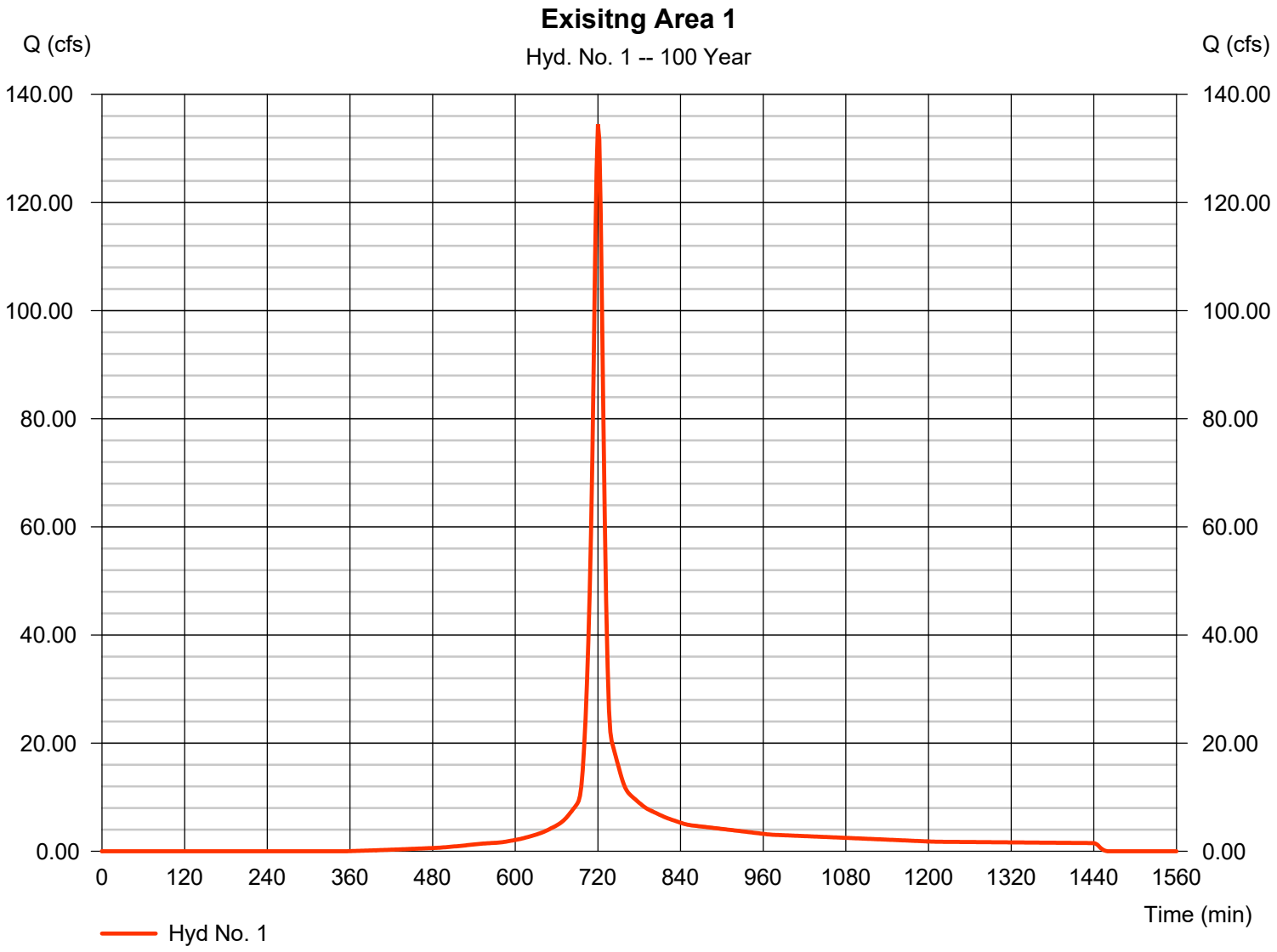
Hydrograph Report

Hyd. No. 1

Exisitng Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	134.43 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	352,178 cuft
Drainage area	=	20.440 ac	Curve number	=	79*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.20 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(20.442 x 79)] / 20.440



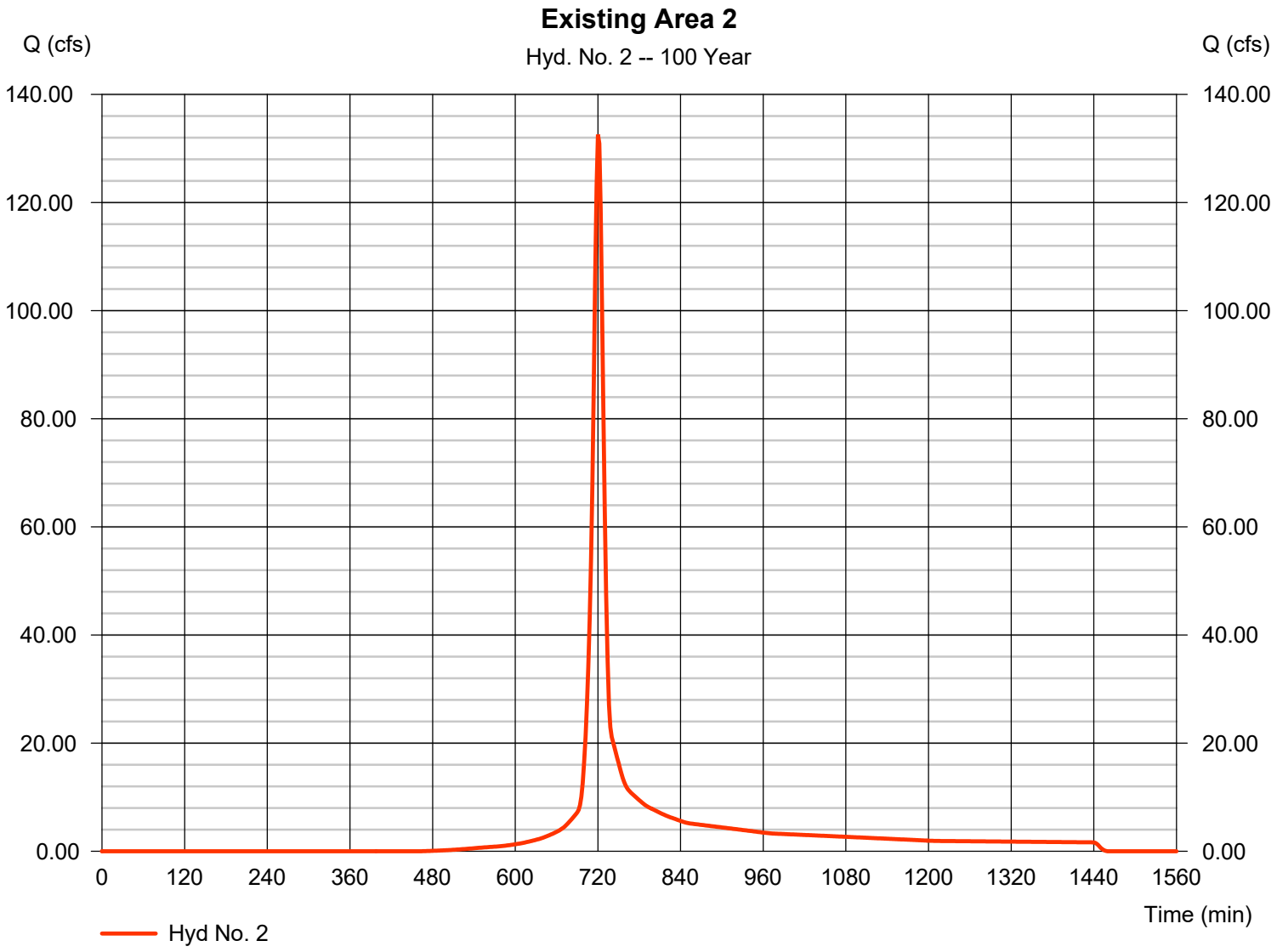
Hydrograph Report

Hyd. No. 2

Existing Area 2

Hydrograph type	= SCS Runoff	Peak discharge	= 132.55 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 343,672 cuft
Drainage area	= 23.870 ac	Curve number	= 72*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 10.10 min
Total precip.	= 7.02 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.978 x 49) + (1.088 x 69) + (17.804 x 79)] / 23.870



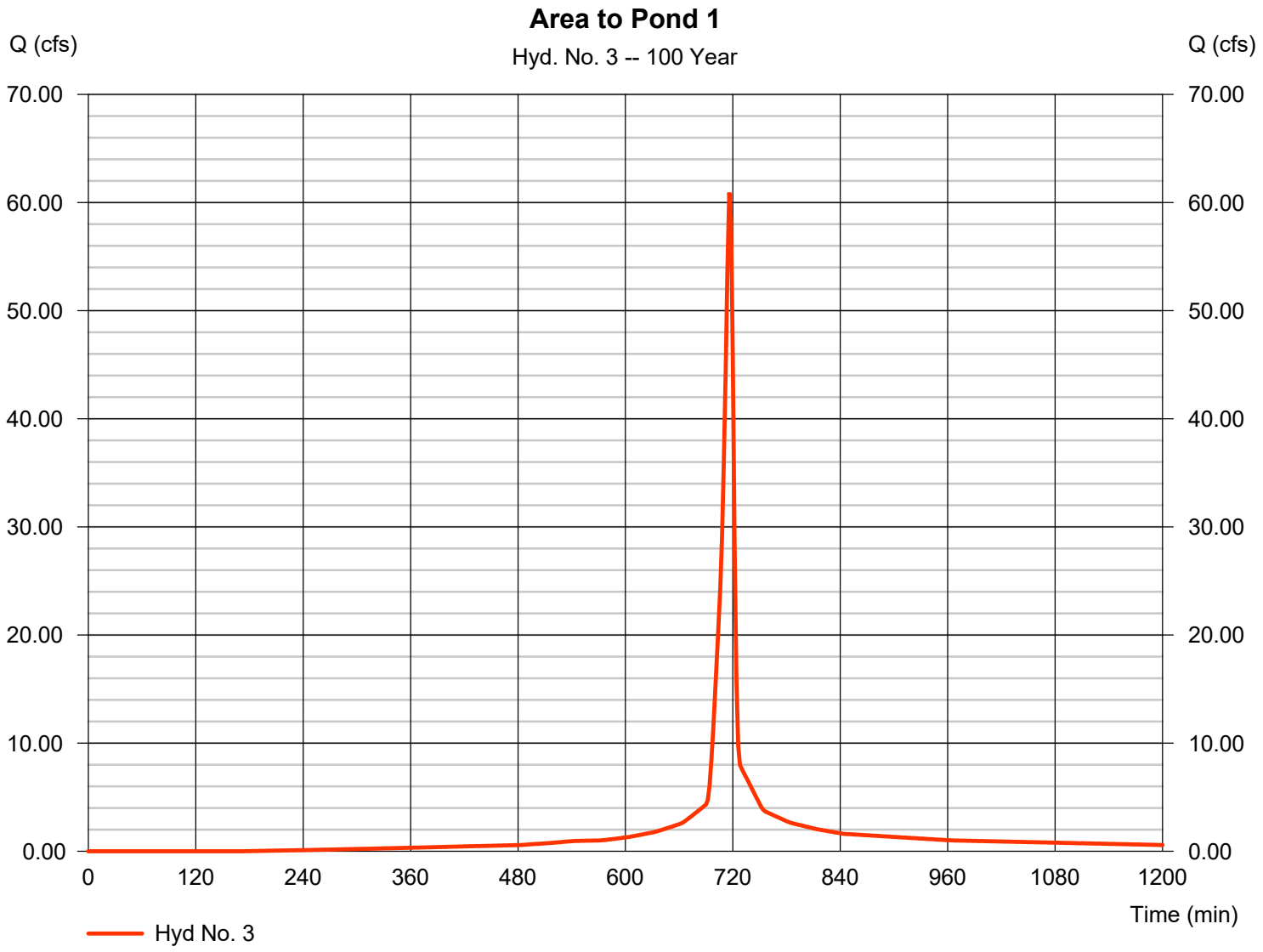
Hydrograph Report

Hyd. No. 3

Area to Pond 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	60.92 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	134,215 cuft
Drainage area	=	6.750 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.050 x 98) + (2.700 x 79)] / 6.750



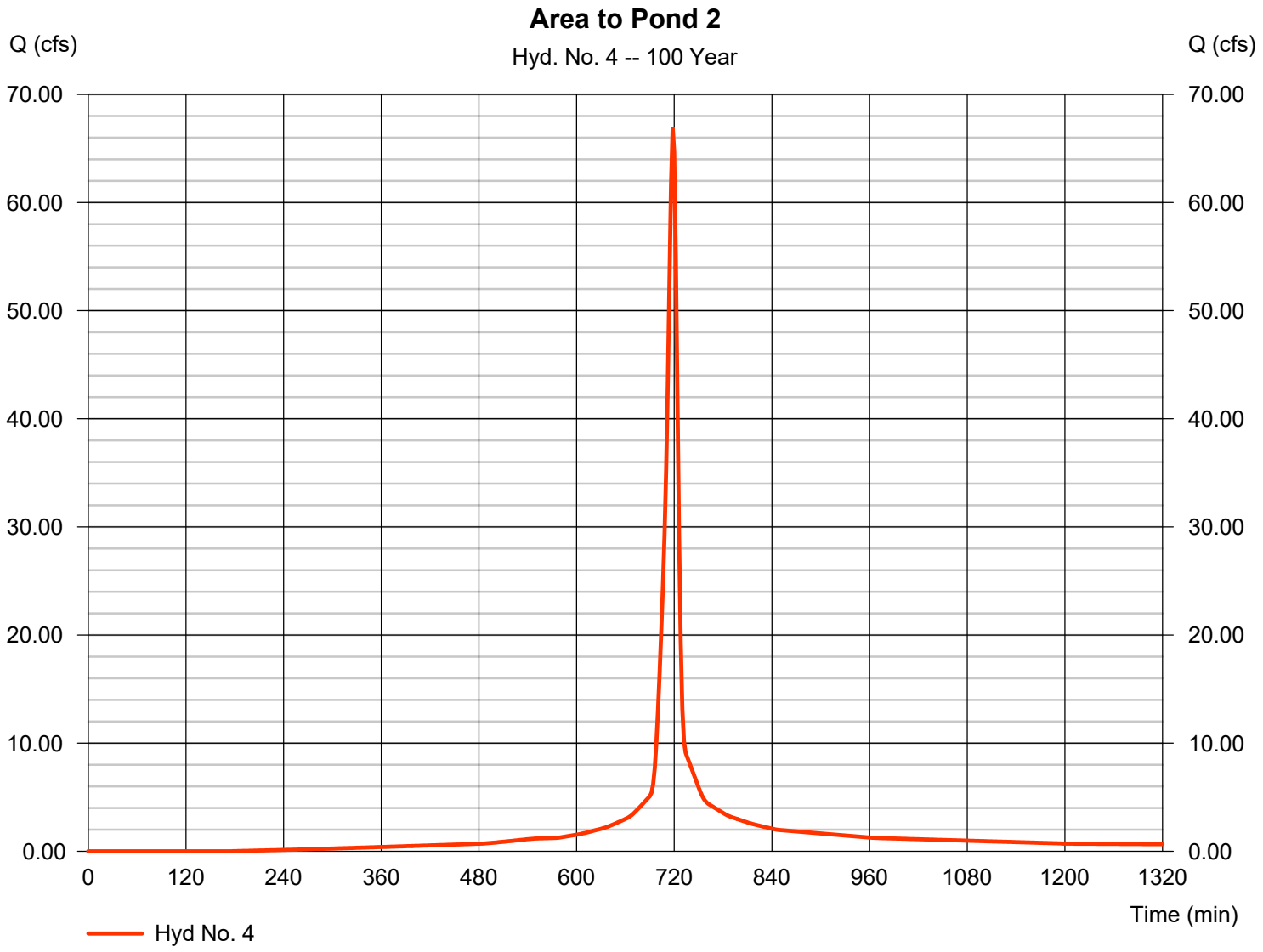
Hydrograph Report

Hyd. No. 4

Area to Pond 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	66.92 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	165,008 cuft
Drainage area	=	7.780 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	8.00 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(4.670 x 98) + (3.110 x 79)] / 7.780



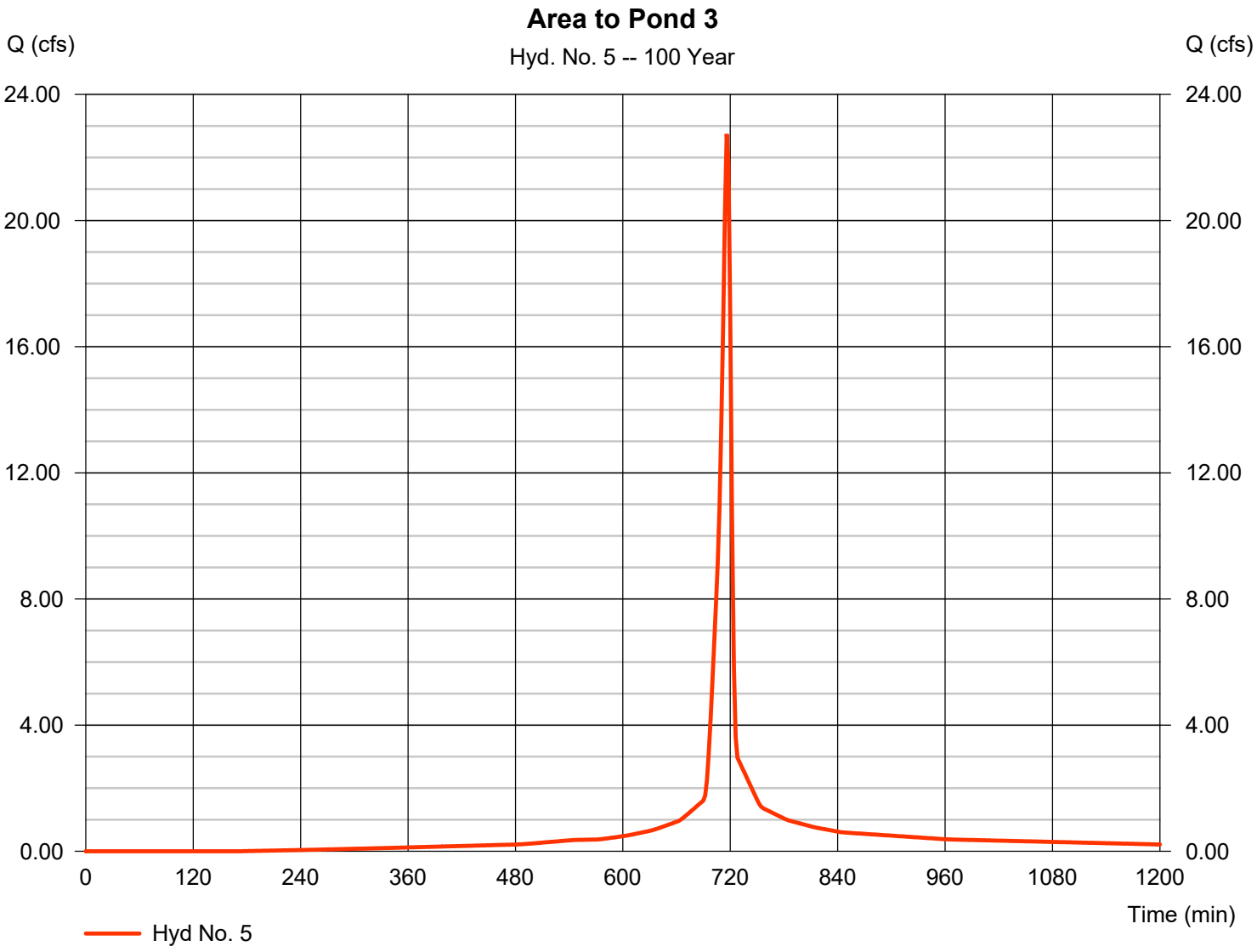
Hydrograph Report

Hyd. No. 5

Area to Pond 3

Hydrograph type	=	SCS Runoff	Peak discharge	=	22.74 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	50,107 cuft
Drainage area	=	2.520 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.510 x 98) + (1.010 x 79)] / 2.520



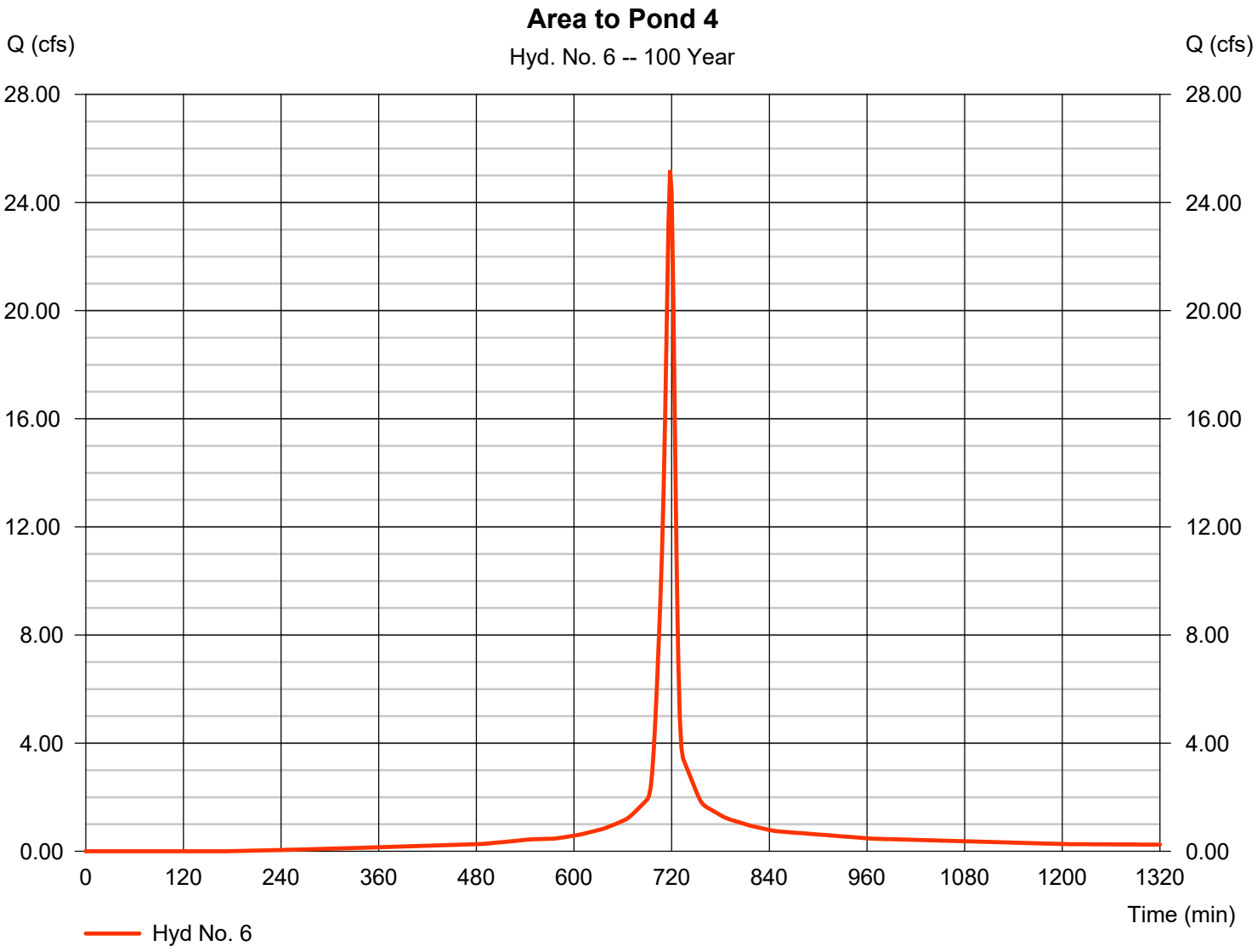
Hydrograph Report

Hyd. No. 6

Area to Pond 4

Hydrograph type	= SCS Runoff	Peak discharge	= 25.20 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 62,143 cuft
Drainage area	= 2.930 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 7.80 min
Total precip.	= 7.02 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.760 x 98) + (1.172 x 79)] / 2.930



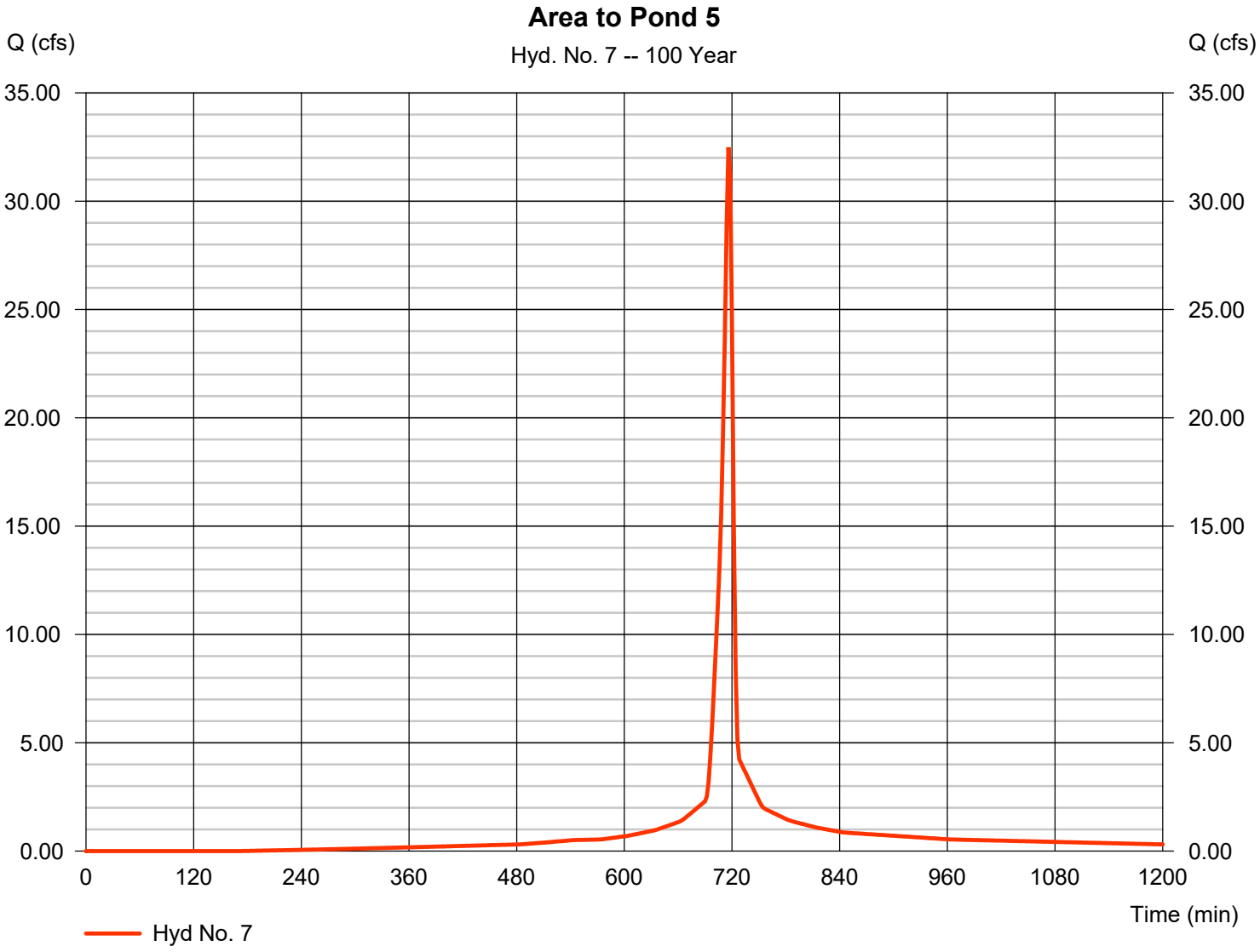
Hydrograph Report

Hyd. No. 7

Area to Pond 5

Hydrograph type	=	SCS Runoff	Peak discharge	=	32.49 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	71,581 cuft
Drainage area	=	3.600 ac	Curve number	=	90*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.160 x 98) + (1.437 x 79)] / 3.600



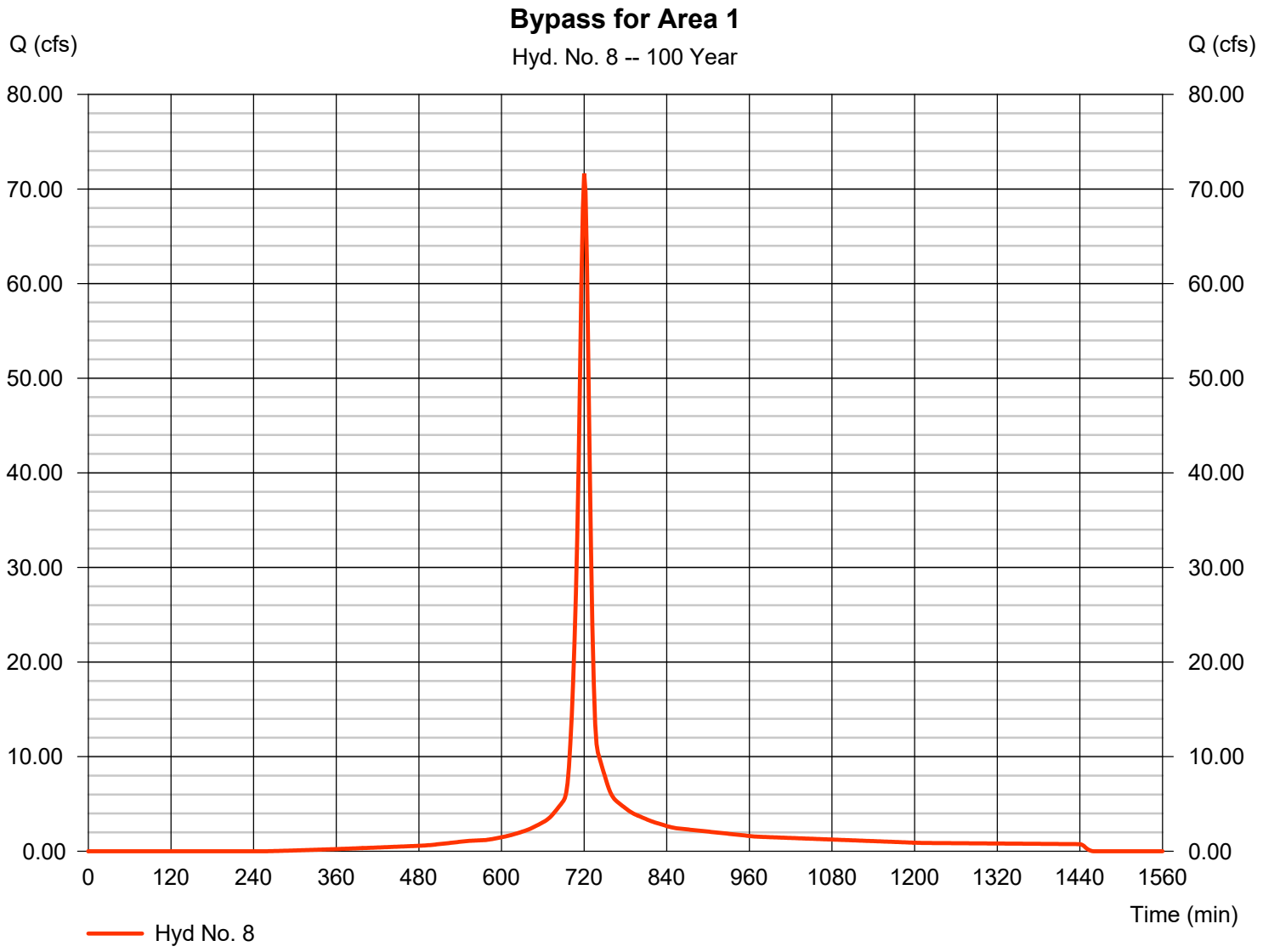
Hydrograph Report

Hyd. No. 8

Bypass for Area 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	71.64 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	192,014 cuft
Drainage area	=	9.730 ac	Curve number	=	85*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	13.00 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.920 x 98) + (6.813 x 79)] / 9.730



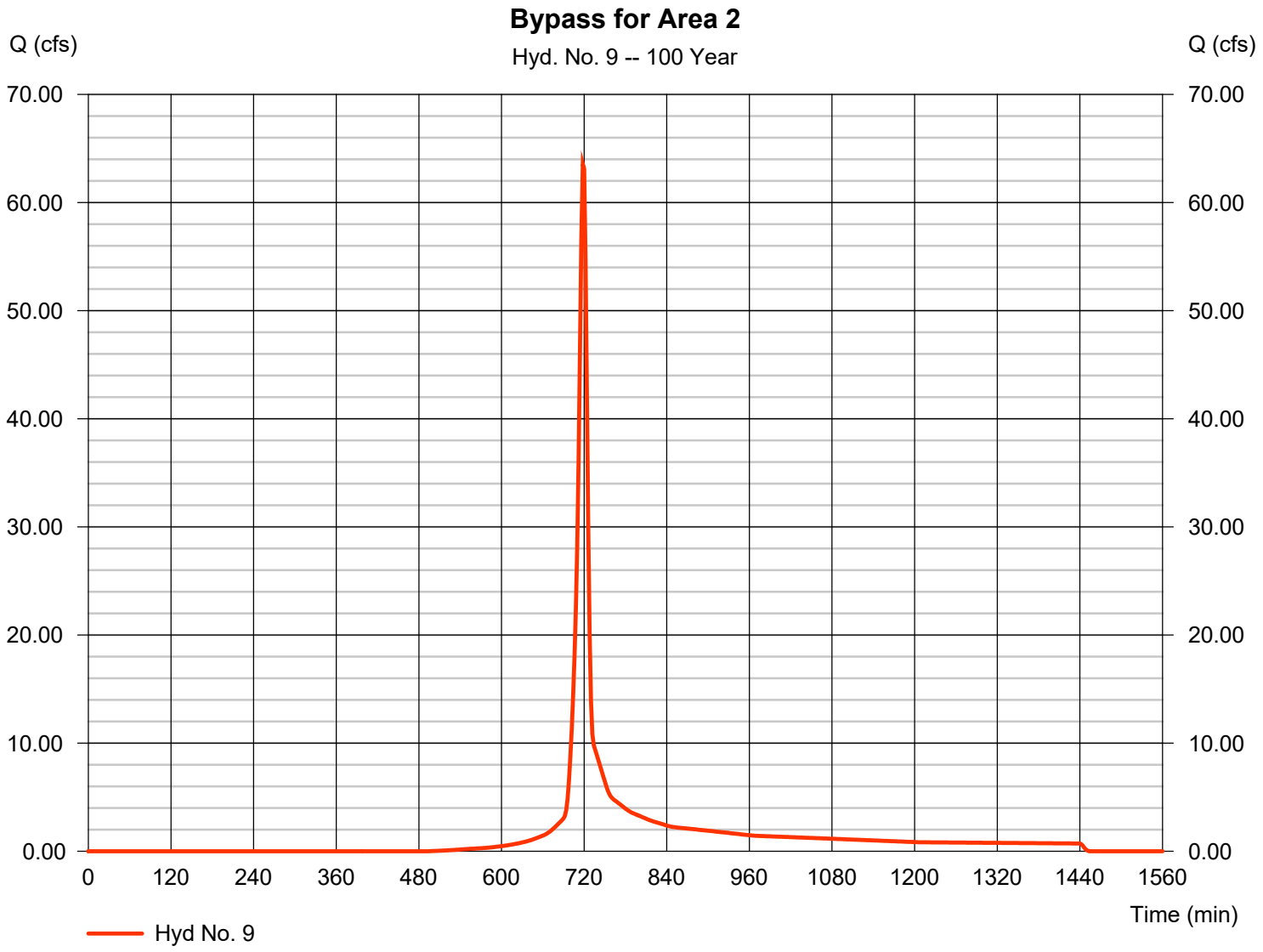
Hydrograph Report

Hyd. No. 9

Bypass for Area 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	63.56 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	145,410 cuft
Drainage area	=	11.020 ac	Curve number	=	70*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	9.50 min
Total precip.	=	7.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.970 x 98) + (4.980 x 49) + (1.090 x 69) + (1.980 x 79)] / 11.020



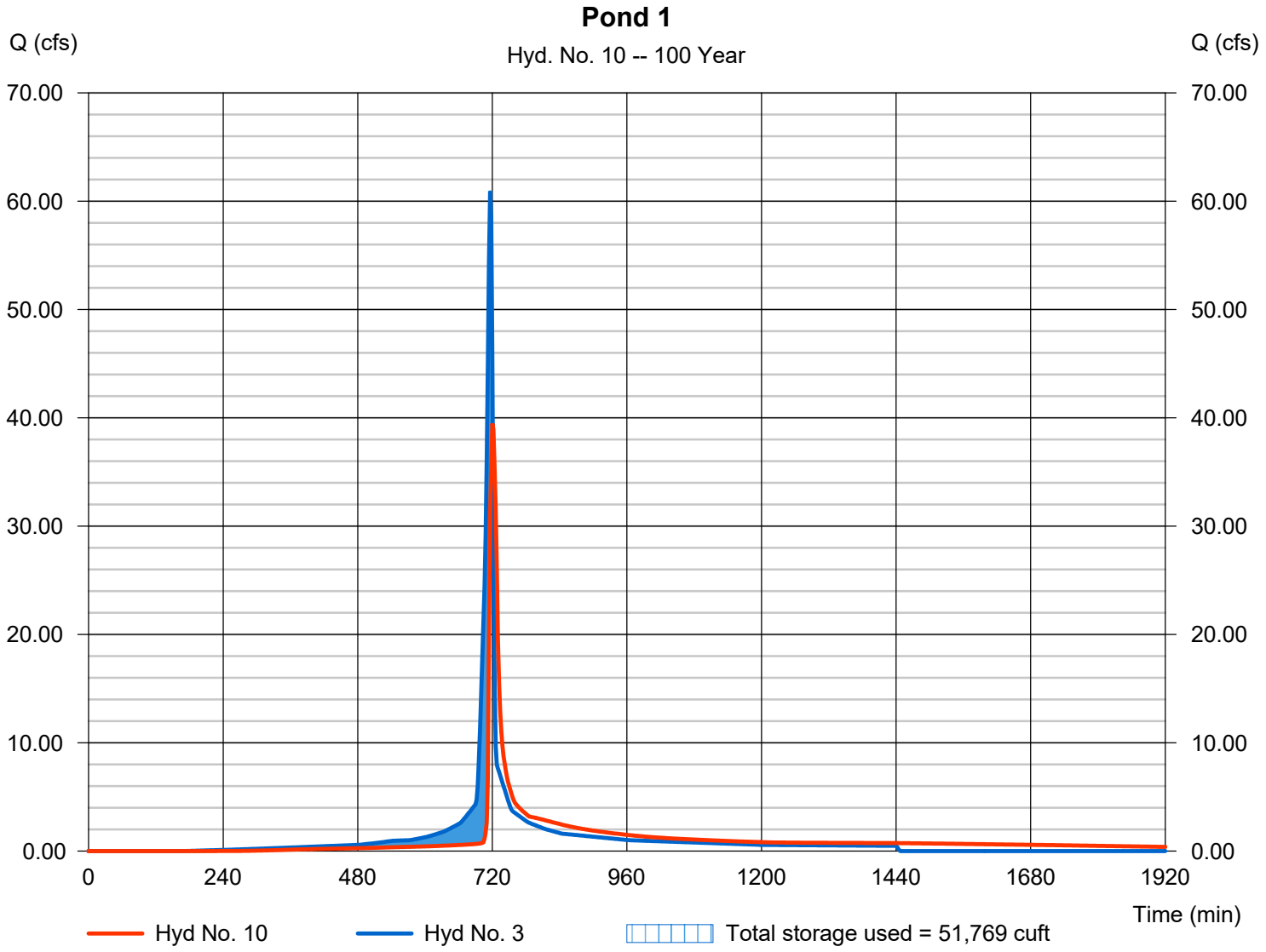
Hydrograph Report

Hyd. No. 10

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	39.48 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	134,192 cuft
Inflow hyd. No.	=	3 - Area to Pond 1	Max. Elevation	=	488.35 ft
Reservoir name	=	Pond 1	Max. Storage	=	51,769 cuft

Storage Indication method used.



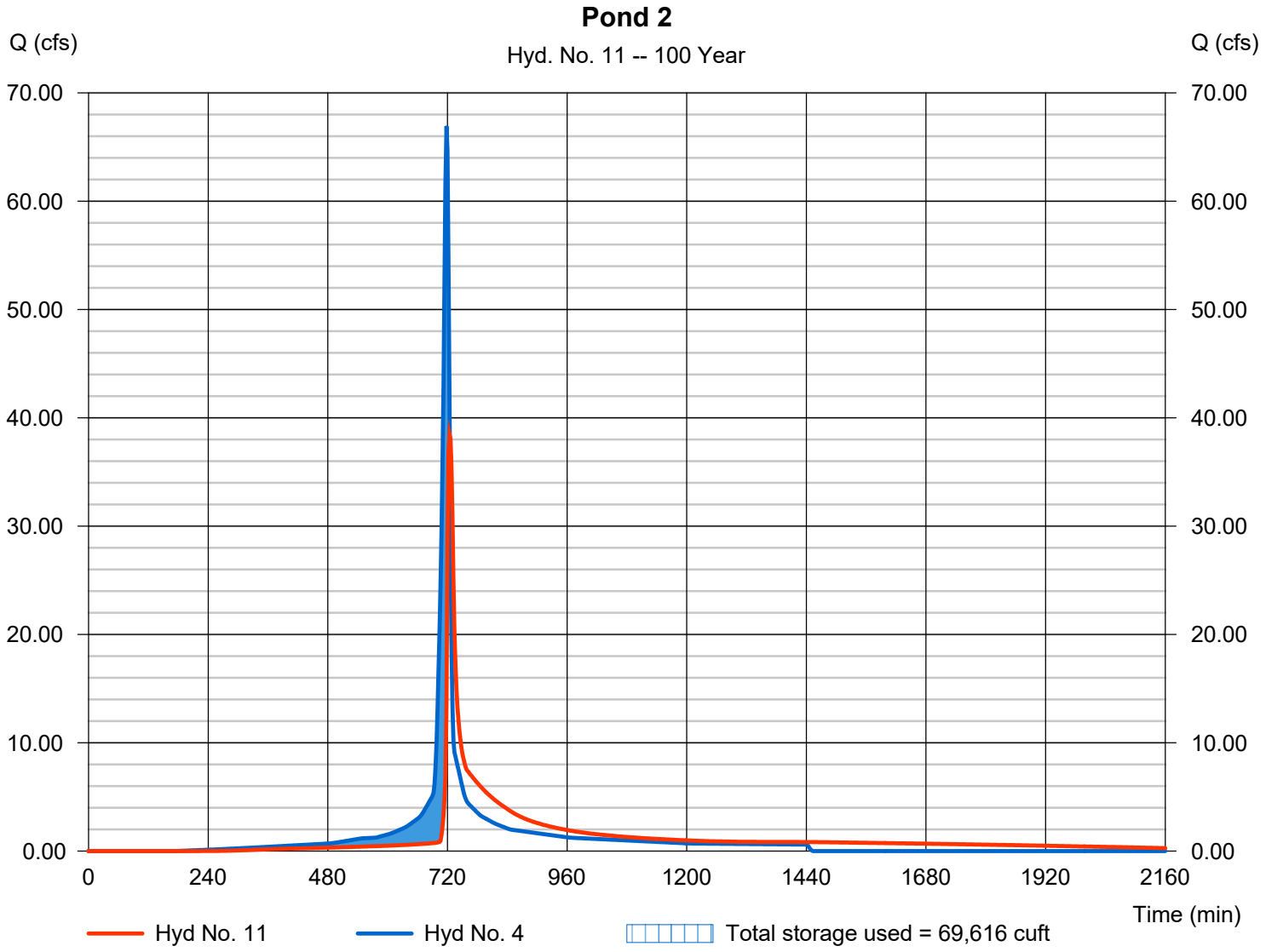
Hydrograph Report

Hyd. No. 11

Pond 2

Hydrograph type	=	Reservoir	Peak discharge	=	38.45 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	164,986 cuft
Inflow hyd. No.	=	4 - Area to Pond 2	Max. Elevation	=	494.05 ft
Reservoir name	=	Pond 2	Max. Storage	=	69,616 cuft

Storage Indication method used.

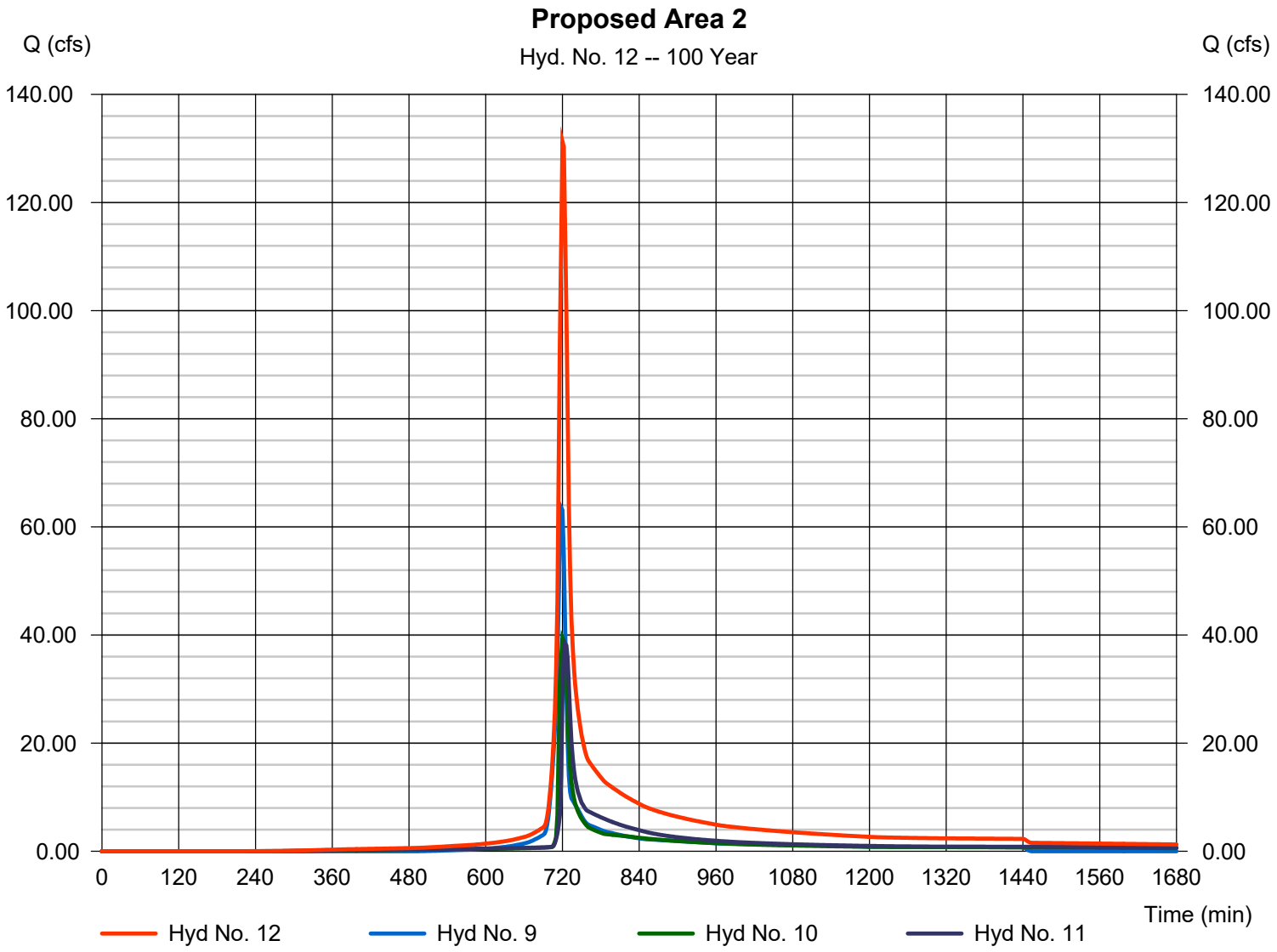


Hydrograph Report

Hyd. No. 12

Proposed Area 2

Hydrograph type	= Combine	Peak discharge	= 131.31 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 444,589 cuft
Inflow hyds.	= 9, 10, 11	Contrib. drain. area	= 11.020 ac



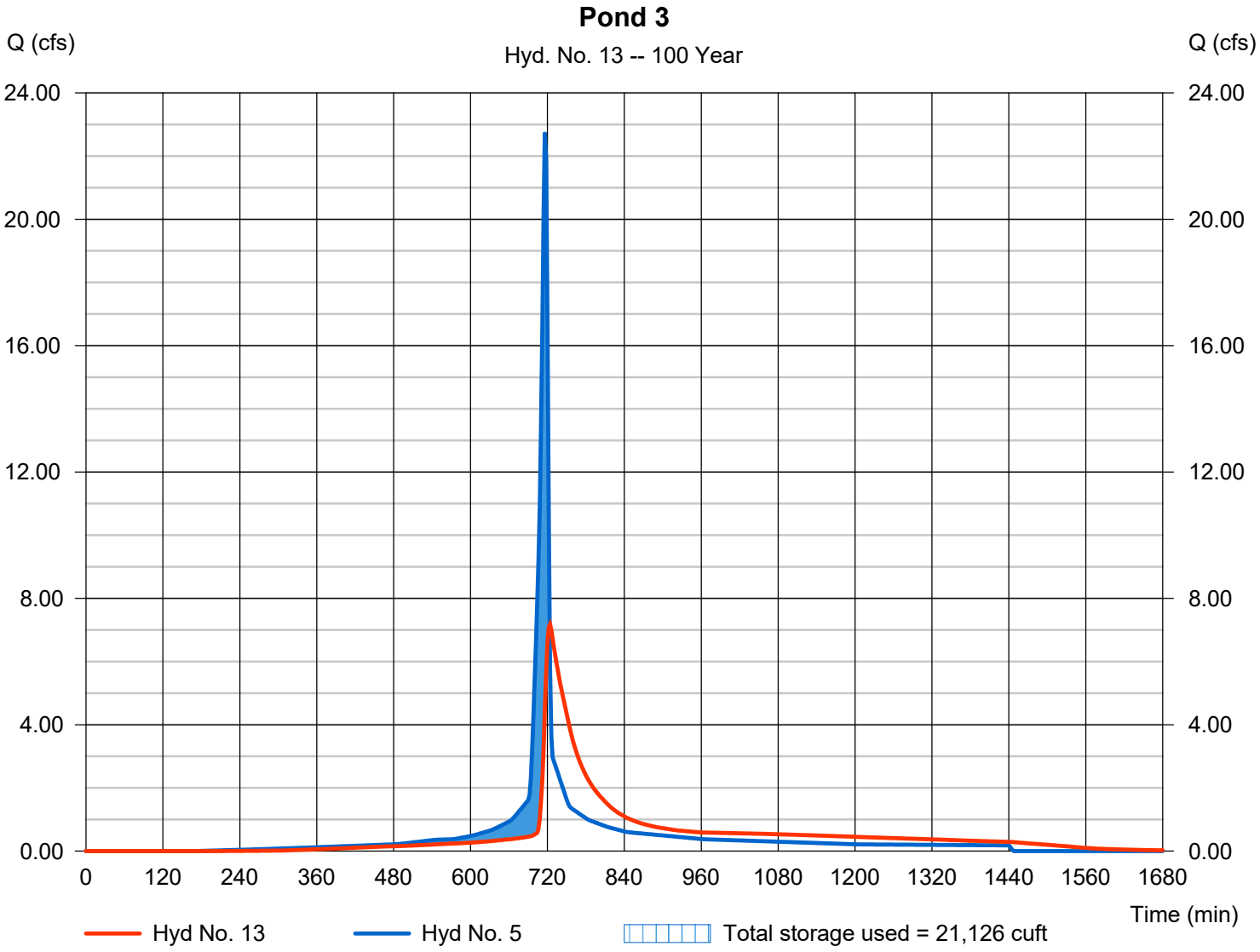
Hydrograph Report

Hyd. No. 13

Pond 3

Hydrograph type	=	Reservoir	Peak discharge	=	7.177 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	50,093 cuft
Inflow hyd. No.	=	5 - Area to Pond 3	Max. Elevation	=	510.76 ft
Reservoir name	=	Pond 3	Max. Storage	=	21,126 cuft

Storage Indication method used.



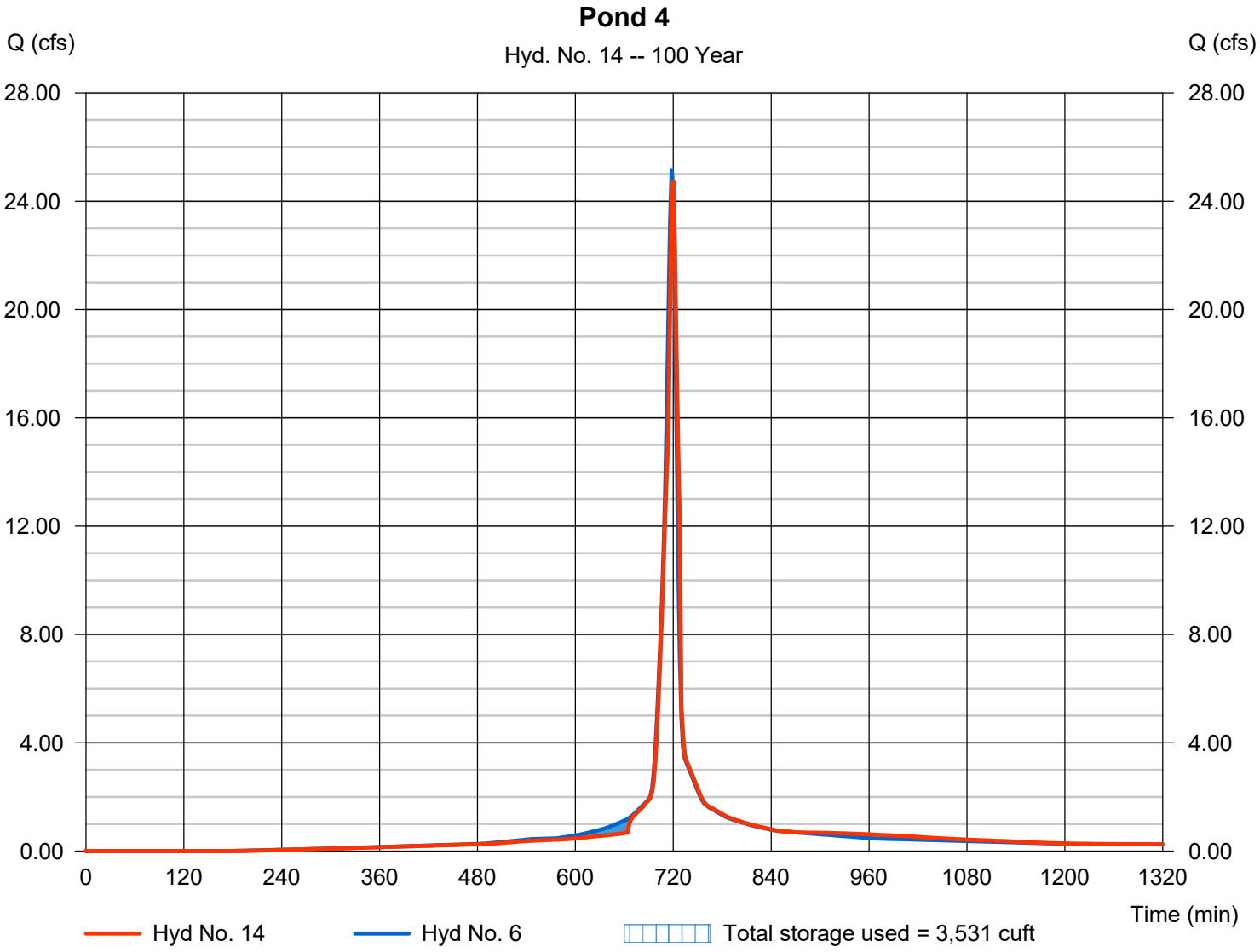
Hydrograph Report

Hyd. No. 14

Pond 4

Hydrograph type	=	Reservoir	Peak discharge	=	24.78 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	62,142 cuft
Inflow hyd. No.	=	6 - Area to Pond 4	Max. Elevation	=	512.47 ft
Reservoir name	=	Pond 4	Max. Storage	=	3,531 cuft

Storage Indication method used.



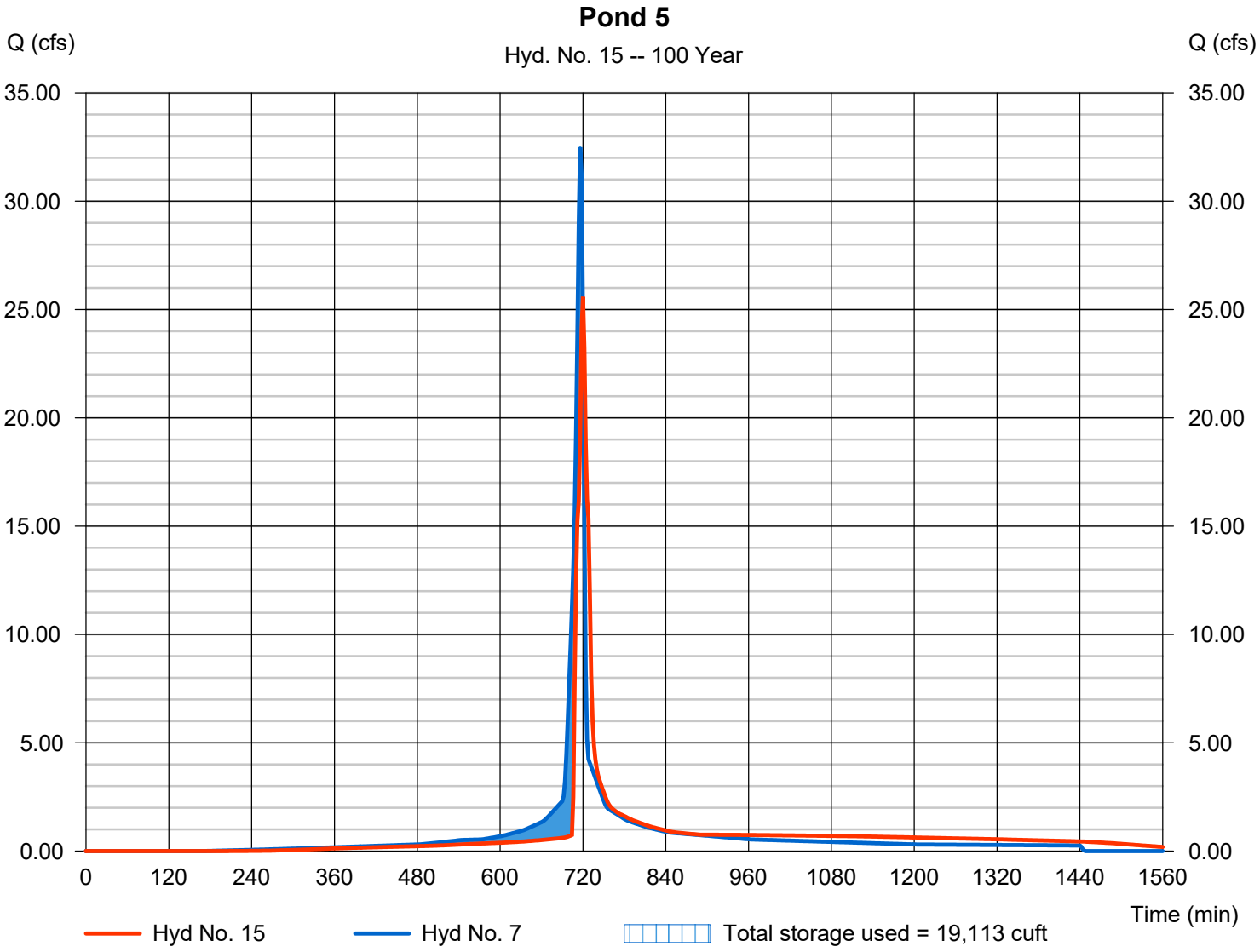
Hydrograph Report

Hyd. No. 15

Pond 5

Hydrograph type	=	Reservoir	Peak discharge	=	25.58 cfs
Storm frequency	=	100 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	71,572 cuft
Inflow hyd. No.	=	7 - Area to Pond 5	Max. Elevation	=	503.06 ft
Reservoir name	=	Pond 5	Max. Storage	=	19,113 cuft

Storage Indication method used.

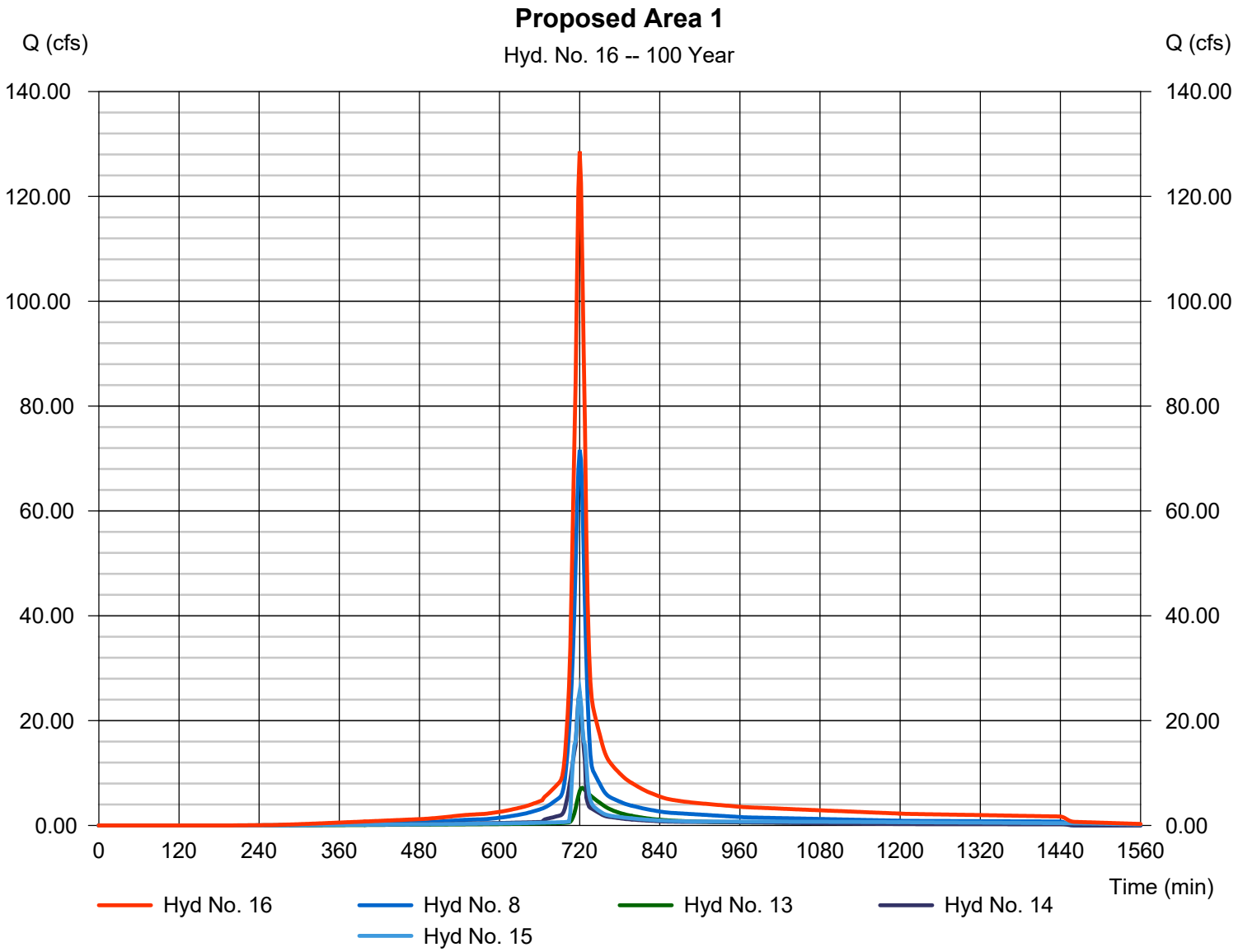


Hydrograph Report

Hyd. No. 16

Proposed Area 1

Hydrograph type	= Combine	Peak discharge	= 128.58 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 375,821 cuft
Inflow hyds.	= 8, 13, 14, 15	Contrib. drain. area	= 9.730 ac



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	1.2500	0.1000	0.0000	--------
2	21.3913	5.8000	0.6332	--------
3	0.0000	0.0000	0.0000	--------
5	48.6847	10.2000	0.7544	--------
10	66.7072	12.5000	0.7892	--------
25	65.3872	11.5000	0.7499	--------
50	79.9547	12.2000	0.7718	--------
100	170.7963	18.2000	0.9117	--------

File name: METRO IDF 2021.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
2	4.74	3.73	3.13	2.73	2.44	2.22	2.04	1.90	1.78	1.68	1.59	1.51
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.25	5.04	4.27	3.72	3.32	3.00	2.75	2.54	2.36	2.21	2.08	1.97
10	6.97	5.72	4.88	4.28	3.82	3.46	3.17	2.93	2.73	2.55	2.40	2.27
25	7.99	6.55	5.60	4.92	4.40	4.00	3.67	3.40	3.17	2.98	2.81	2.66
50	8.90	7.31	6.25	5.48	4.90	4.45	4.08	3.78	3.52	3.30	3.11	2.94
100	9.72	8.13	7.01	6.17	5.51	4.99	4.56	4.20	3.90	3.64	3.41	3.21

Tc = time in minutes. Values may exceed 60.

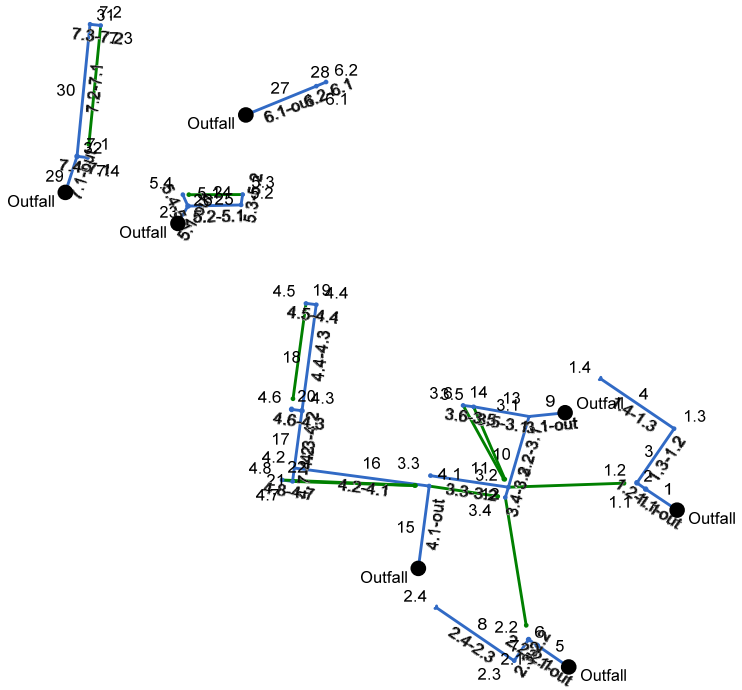
velopment - 4408 Long Hollow Pike -Goodlettsville TN\Plans\Engineer\Stormwater\Atlas 14 Hydrographs SCS data.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	2.87	3.42	0.00	4.16	4.77	5.62	6.31	7.02
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Attachment 3

Storm Sewers Model

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan


Outfall
Outfall
Outfall

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	1.1	Combination	475.00	Cir	6.00	6.00	24	Cir	471.55	24	Cir	471.65
2	1.2	Combination	475.00	Cir	6.00	6.00	24	Cir	471.90	24	Cir	472.00
3	1.3	Combination	478.00	Cir	4.00	4.00	24	Cir	474.90	24	Cir	475.00
4	1.4	OpenHeadwall	488.00	n/a	n/a	n/a	24	Cir	480.00			
5	2.1	Combination	475.00	Cir	6.00	6.00	24	Cir	471.45	24	Cir	471.55
6	2.2	Combination	475.00	Cir	6.00	6.00	24	Cir	471.80	24	Cir	471.90
7	2.3	Combination	475.50	Cir	4.00	4.00	24	Cir	472.50	24	Cir	472.60
8	2.4	OpenHeadwall	494.00	n/a	n/a	n/a	24	Cir	484.00			
9	3.1	Manhole	500.00	Cir	0.00	0.00	24	Cir	485.45	18 15	Cir Cir	485.95 486.20
10	3.2	Combination	492.00	Cir	4.00	4.00	18	Cir	487.65	15 15	Cir Cir	488.00 488.00
11	3.3	Combination	496.00	Cir	4.00	4.00	15	Cir	491.50			
12	3.4	Combination	492.00	Cir	4.00	4.00	15	Cir	488.25			
13	3.5	Combination	507.00	Cir	4.00	4.00	15	Cir	504.00	15	Cir	504.10
14	3.6	Combination	507.00	Cir	4.00	4.00	15	Cir	504.35			
15	4.1	Combination	497.00	Cir	4.00	4.00	24	Cir	493.90	24	Cir	494.00
16	4.2	Manhole	519.00	Cir	0.00	0.00	24	Cir	508.85	24 15	Cir Cir	508.95 513.70
17	4.3	Combination	515.00	Cir	6.00	6.00	24	Cir	511.50	15 15	Cir Cir	512.25 512.10
18	4.4	Combination	528.50	Cir	4.00	4.00	15	Cir	524.00	15	Cir	524.10
19	4.5	Combination	528.50	Cir	4.00	4.00	15	Cir	524.35			
20	4.6	Combination	515.00	Cir	6.00	6.00	15	Cir	512.35			
21	4.7	Combination	519.50	Cir	4.00	4.00	15	Cir	516.10	15	Cir	516.10

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
22	4.8	Combination	519.50	Cir	4.00	4.00	15	Cir	517.00			
23	5.1	Combination	515.50	Cir	6.00	6.00	15	Cir	512.90	15 15	Cir Cir	513.00 512.90
24	5.2	Combination	526.00	Cir	4.00	4.00	15	Cir	522.65	15	Cir	522.75
25	5.3	Combination	526.00	Cir	4.00	4.00	15	Cir	523.00			
26	5.4	Combination	516.00	Cir	4.00	4.00	15	Cir	513.40			
27	6.1	Combination	531.00	Cir	4.00	4.00	15	Cir	527.40	15	Cir	527.50
28	6.2	Combination	531.00	Cir	4.00	4.00	15	Cir	528.00			
29	7.1	Combination	503.00	Cir	6.00	6.00	24	Cir	499.90	15 15	Cir Cir	500.00 500.30
30	7.2	Combination	519.50	Cir	4.00	4.00	15	Cir	516.40	15	Cir	516.50
31	7.3	Combination	519.50	Cir	4.00	4.00	15	Cir	517.00			
32	7.4	Combination	503.25	Cir	4.00	4.00	15	Cir	500.65			

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	1.1-out	25.70	24	Cir	85.628	469.85	471.55	1.985	471.14	473.33	n/a	473.33	End	Combination
2	1.2-1.1	22.76	24	Cir	24.571	471.65	471.90	1.017	473.33	473.60	1.49	473.60	1	Combination
3	1.3-1.2	14.64	24	Cir	149.212	472.00	474.90	1.944	473.60	476.28	n/a	476.28	2	Combination
4	1.4-1.3	10.00	24	Cir	201.598	475.00	480.00	2.480	476.28	481.13	n/a	481.13	3	OpenHeadwall
5	2.1-out	27.40	24	Cir	86.325	469.75	471.45	1.969	471.10	473.27	n/a	473.27	End	Combination
6	2.2-2.1	24.25	24	Cir	24.002	471.55	471.80	1.042	473.27	473.54	n/a	473.54	5	Combination
7	2.3-2.2	15.80	24	Cir	58.211	471.90	472.50	1.031	473.54	473.93	n/a	473.93	6	Combination
8	2.4-2.3	10.00	24	Cir	214.087	472.60	484.00	5.325	473.93	485.13	n/a	485.13	7	OpenHeadwall
9	3.1-out	22.20	24	Cir	82.226	484.20	485.45	1.520	485.47	487.13	n/a	487.13	End	Manhole
10	3.2-3.1	10.43	18	Cir	167.886	485.95	487.65	1.013	487.13	488.89	n/a	488.89	9	Combination
11	3.3-3.2	3.68	15	Cir	178.462	488.00	491.50	1.961	488.89	492.27	n/a	492.27	10	Combination
12	3.4-3.2	2.84	15	Cir	24.269	488.00	488.25	1.030	488.89	488.93	n/a	488.93	10	Combination
13	3.5-3.1	12.55	15	Cir	127.617	486.20	504.00	13.948	487.13	505.22	n/a	505.22	9	Combination
14	3.6-3.5	8.68	15	Cir	23.826	504.10	504.35	1.049	505.35*	505.72*	n/a	506.50	13	Combination
15	4.1-out	34.02	24	Cir	188.905	490.15	493.90	1.985	491.76	495.81	n/a	495.81	End	Combination
16	4.2-4.1	30.83	24	Cir	308.359	494.00	508.85	4.816	495.81	510.72	n/a	510.72	15	Manhole
17	4.3-4.2	17.58	24	Cir	131.389	508.95	511.50	1.941	510.72	513.01	n/a	513.01	16	Combination
18	4.4-4.3	7.13	15	Cir	243.539	512.25	524.00	4.825	513.01	525.07	n/a	525.07	17	Combination
19	4.5-4.4	2.49	15	Cir	23.513	524.10	524.35	1.063	525.07	524.98	n/a	524.98	18	Combination
20	4.6-4.3	6.57	15	Cir	23.759	512.10	512.35	1.052	513.04	513.38	n/a	513.38	17	Combination
21	4.7-4.2	14.12	15	Cir	30.779	513.70	516.10	7.797	514.49	517.33	n/a	517.33	16	Combination
22	4.8-4.7	8.02	15	Cir	24.086	516.10	517.00	3.737	517.33	518.12	n/a	518.12	21	Combination
23	5.1-out	8.20	15	Cir	45.648	510.00	512.90	6.353	510.60	514.02	n/a	514.02	End	Combination
24	5.2-5.1	4.30	15	Cir	120.402	513.00	522.65	8.015	514.02	523.49	n/a	523.49	23	Combination

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Run Date: 4/6/2026

NOTES: Return period = 10 Yrs. ; *Surcharged (HGL above crown).

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
25	5.3-5.2	1.96	15	Cir	23.847	522.75	523.00	1.048	523.49	523.56	n/a	523.56	24	Combination
26	5.4-5.1	1.90	15	Cir	28.428	512.90	513.40	1.759	514.02	513.95	n/a	513.95	23	Combination
27	6.1-out	8.93	15	Cir	172.623	514.00	527.40	7.763	514.59	528.55	n/a	528.55	End	Combination
28	6.2-6.1	1.71	15	Cir	23.919	527.50	528.00	2.090	528.55	528.52	n/a	528.52	27	Combination
29	7.1-out	17.27	24	Cir	86.278	499.00	499.90	1.043	500.22	501.40	n/a	501.40	End	Combination
30	7.2-7.1	7.28	15	Cir	301.871	500.00	516.40	5.433	501.40	517.48	n/a	517.48	29	Combination
31	7.3-7.2	3.94	15	Cir	24.278	516.50	517.00	2.059	517.48	517.80	n/a	517.80	30	Combination
32	7.4-7.1	6.88	15	Cir	23.959	500.30	500.65	1.461	501.40	501.70	n/a	501.70	29	Combination

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Run Date: 4/6/2026

NOTES: Return period = 10 Yrs. ; *Surcharged (HGL above crown).

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	85.628	0.33	2.96	0.95	0.31	2.02	5.0	6.6	6.3	25.70	34.52	10.35	24	1.99	469.85	471.55	471.14	473.33	473.00	475.00	1.1-out
2	1	24.571	1.76	2.63	0.65	1.14	1.71	5.0	6.6	6.3	22.76	24.72	8.05	24	1.02	471.65	471.90	473.33	473.60	475.00	475.00	1.2-1.1
3	2	149.212	0.87	0.87	0.65	0.57	0.57	5.0	6.1	6.4	14.64	0.00	5.89	24	1.94	472.00	474.90	473.60	476.28	475.00	478.00	1.3-1.2
4	3	201.598	0.00	0.00	0.65	0.00	0.00	5.0	5.0	0.0	10.00	0.00	5.09	24	2.48	475.00	480.00	476.28	481.13	478.00	488.00	1.4-1.3
5	End	86.325	0.36	3.32	0.95	0.34	2.27	5.0	6.4	6.4	27.40	0.00	10.65	24	1.97	469.75	471.45	471.10	473.27	473.00	475.00	2.1-out
6	5	24.002	1.81	2.96	0.65	1.18	1.92	5.0	6.3	6.4	24.25	0.00	8.41	24	1.04	471.55	471.80	473.27	473.54	475.00	475.00	2.2-2.1
7	6	58.211	1.15	1.15	0.65	0.75	0.75	5.0	6.1	6.4	15.80	0.00	6.15	24	1.03	471.90	472.50	473.54	473.93	475.00	475.50	2.3-2.2
8	7	214.087	0.00	0.00	0.65	0.00	0.00	5.0	5.0	0.0	10.00	0.00	4.98	24	5.32	472.60	484.00	473.93	485.13	475.50	494.00	2.4-2.3
9	End	82.226	0.00	4.18	0.65	0.00	2.72	5.0	6.5	6.3	22.20	0.00	9.19	24	1.52	484.20	485.45	485.47	487.13	490.00	500.00	3.1-out
10	9	167.886	0.74	1.77	0.65	0.48	1.15	5.0	6.0	6.5	10.43	0.00	6.83	18	1.01	485.95	487.65	487.13	488.89	500.00	492.00	3.2-3.1
11	10	178.462	0.61	0.61	0.65	0.40	0.40	5.0	5.0	6.8	3.68	0.00	4.27	15	1.96	488.00	491.50	488.89	492.27	492.00	496.00	3.3-3.2
12	10	24.269	0.42	0.42	0.65	0.27	0.27	5.0	5.0	6.8	2.84	0.00	3.62	15	1.03	488.00	488.25	488.89	488.93	492.00	492.00	3.4-3.2
13	9	127.617	0.66	2.41	0.65	0.43	1.57	5.0	5.1	6.7	12.55	0.00	11.55	15	13.95	486.20	504.00	487.13	505.22	500.00	507.00	3.5-3.1
14	13	23.826	1.75	1.75	0.65	1.14	1.14	5.0	5.0	6.8	8.68	0.00	7.08	15	1.05	504.10	504.35	505.35	505.72	507.00	507.00	3.6-3.5
15	End	188.905	0.68	6.67	0.65	0.44	4.34	5.0	6.8	6.2	34.02	0.00	11.76	24	1.99	490.15	493.90	491.76	495.81	494.00	497.00	4.1-out
16	15	308.359	0.00	5.99	0.65	0.00	3.89	5.0	6.3	6.4	30.83	0.00	10.19	24	4.82	494.00	508.85	495.81	510.72	497.00	519.00	4.2-4.1
17	16	131.389	0.77	3.22	0.65	0.50	2.09	5.0	5.9	6.5	17.58	0.00	6.44	24	1.94	508.95	511.50	510.72	513.01	519.00	515.00	4.3-4.2
18	17	243.539	0.84	1.18	0.65	0.55	0.77	5.0	5.2	6.7	7.13	0.00	7.77	15	4.82	512.25	524.00	513.01	525.07	515.00	528.50	4.4-4.3
19	18	23.513	0.34	0.34	0.65	0.22	0.22	5.0	5.0	6.8	2.49	0.00	3.23	15	1.06	524.10	524.35	525.07	524.98	528.50	528.50	4.5-4.4
20	17	23.759	1.27	1.27	0.65	0.83	0.83	5.0	5.0	6.8	6.57	0.00	6.35	15	1.05	512.10	512.35	513.04	513.38	515.00	515.00	4.6-4.3
21	16	30.779	1.17	2.77	0.65	0.76	1.80	5.0	5.1	6.7	14.12	0.00	14.44	15	7.80	513.70	516.10	514.49	517.33	519.00	519.50	4.7-4.2
22	21	24.086	1.60	1.60	0.65	1.04	1.04	5.0	5.0	6.8	8.02	0.00	6.75	15	3.74	516.10	517.00	517.33	518.12	519.50	519.50	4.8-4.7

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Run Date: 4/6/2026

NOTES:Intensity = 65.35 / (Inlet time + 12.20) ^ 0.80; Return period =Yrs. 10 ; c = cir e = ellip b = box

Storm Sewer Tabulation

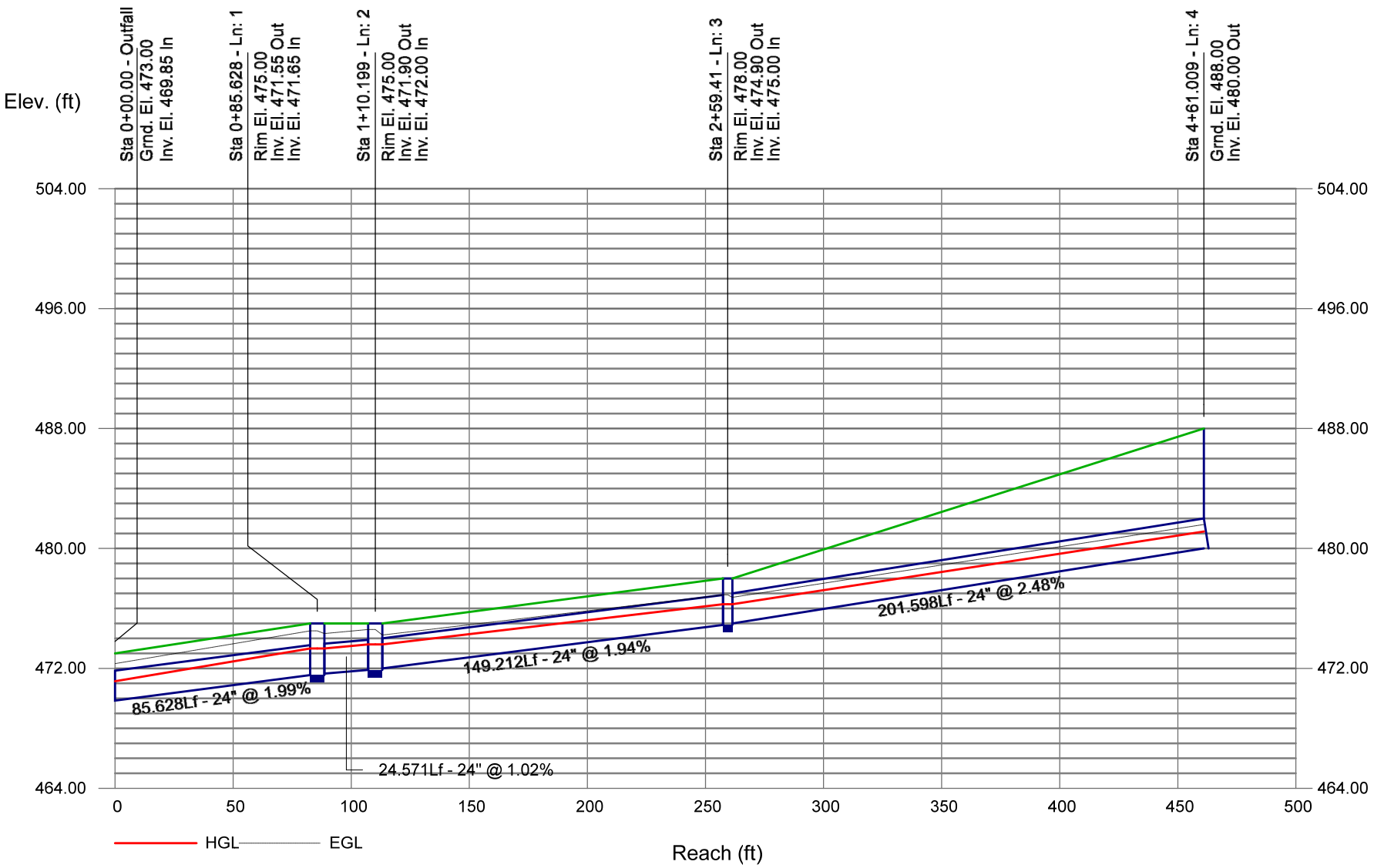
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
23	End	45.648	0.26	0.86	0.65	0.17	0.65	5.0	5.8	6.5	8.20	0.00	10.58	15	6.35	510.00	512.90	510.60	514.02	512.00	515.50	5.1-out
24	23	120.402	0.31	0.46	0.65	0.20	0.34	5.0	5.2	6.7	4.30	0.00	4.45	15	8.01	513.00	522.65	514.02	523.49	517.50	526.00	5.2-5.1
25	24	23.847	0.15	0.15	0.95	0.14	0.14	5.0	5.0	6.8	1.96	0.00	3.15	15	1.05	522.75	523.00	523.49	523.56	526.00	526.00	5.3-5.2
26	23	28.428	0.14	0.14	0.95	0.13	0.13	5.0	5.0	6.8	1.90	0.00	2.65	15	1.76	512.90	513.40	514.02	513.95	515.50	516.00	5.4-5.1
27	End	172.623	1.44	1.55	0.65	0.94	1.04	5.0	5.3	6.7	8.93	0.00	11.54	15	7.76	514.00	527.40	514.59	528.55	517.00	531.00	6.1-out
28	27	23.919	0.11	0.11	0.95	0.10	0.10	5.0	5.0	6.8	1.71	0.00	2.55	15	2.09	527.50	528.00	528.55	528.52	531.00	531.00	6.2-6.1
29	End	86.278	0.61	3.16	0.65	0.40	2.05	5.0	6.0	6.5	17.27	0.00	7.72	24	1.04	499.00	499.90	500.22	501.40	502.00	503.00	7.1-out
30	29	301.871	0.54	1.21	0.65	0.35	0.79	5.0	5.1	6.7	7.28	0.00	6.21	15	5.43	500.00	516.40	501.40	517.48	503.00	519.50	7.2-7.1
31	30	24.278	0.67	0.67	0.65	0.44	0.44	5.0	5.0	6.8	3.94	0.00	4.28	15	2.06	516.50	517.00	517.48	517.80	519.50	519.50	7.3-7.2
32	29	23.959	1.34	1.34	0.65	0.87	0.87	5.0	5.0	6.8	6.88	0.00	6.14	15	1.46	500.30	500.65	501.40	501.70	503.00	503.25	7.4-7.1

Project File: 25184 - Pipe Network Model.stm | Number of lines: 32 | Run Date: 4/6/2026

NOTES:Intensity = 65.35 / (Inlet time + 12.20) ^ 0.80; Return period =Yrs. 10 ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: 25184 - Pipe Network Model.stm



Storm Sewer Profile

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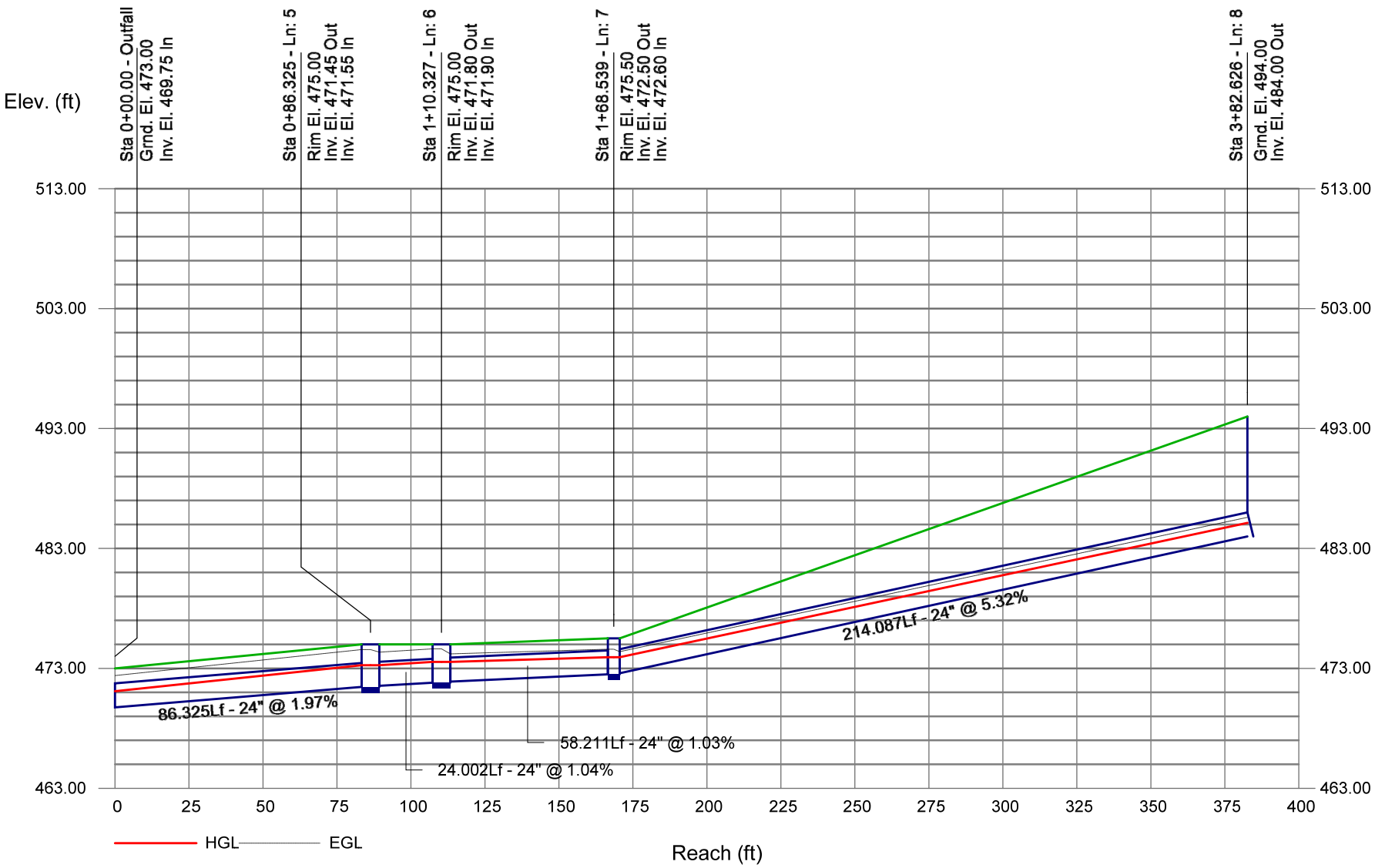

Storm Sewer Profile

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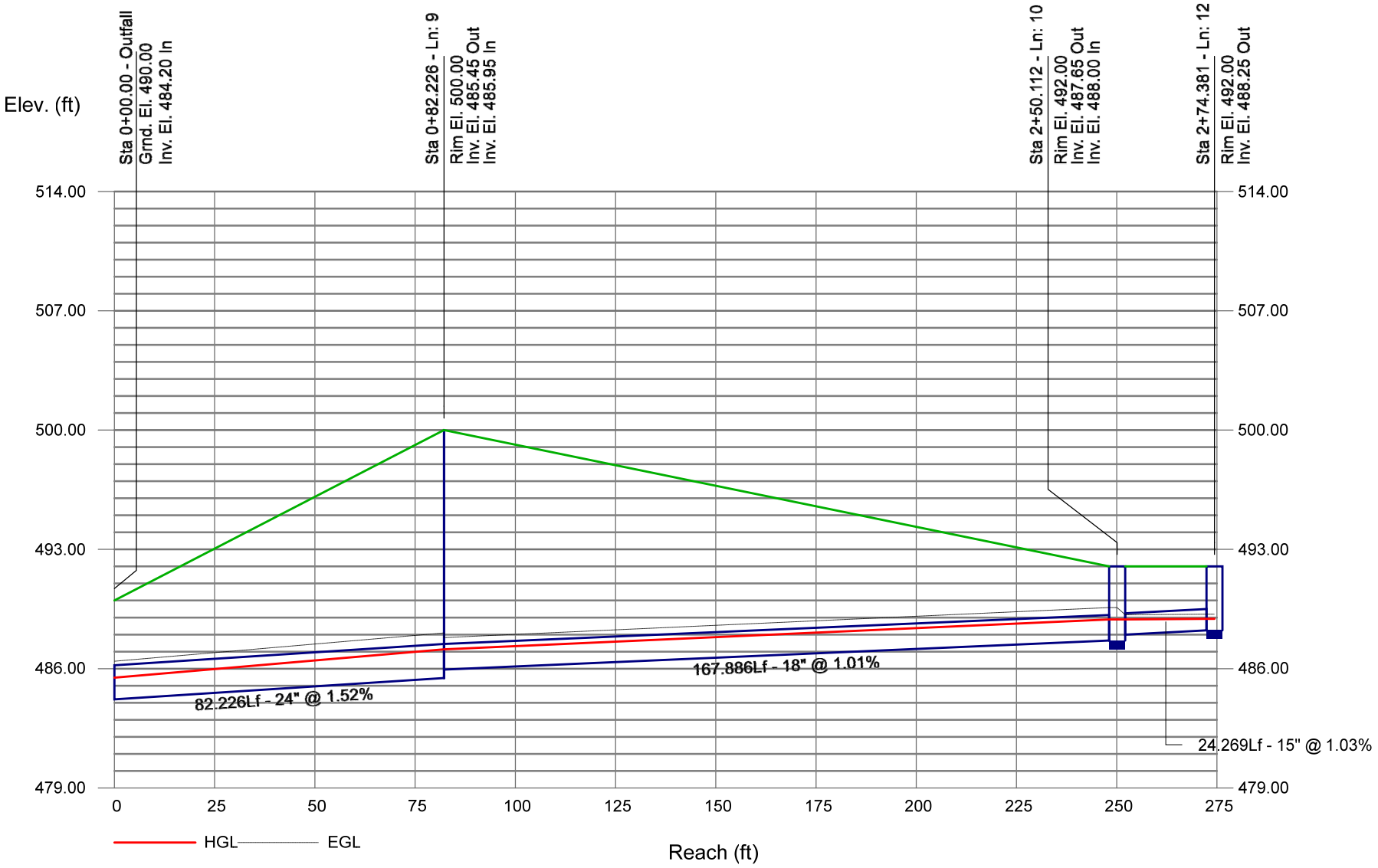

Storm Sewer Profile

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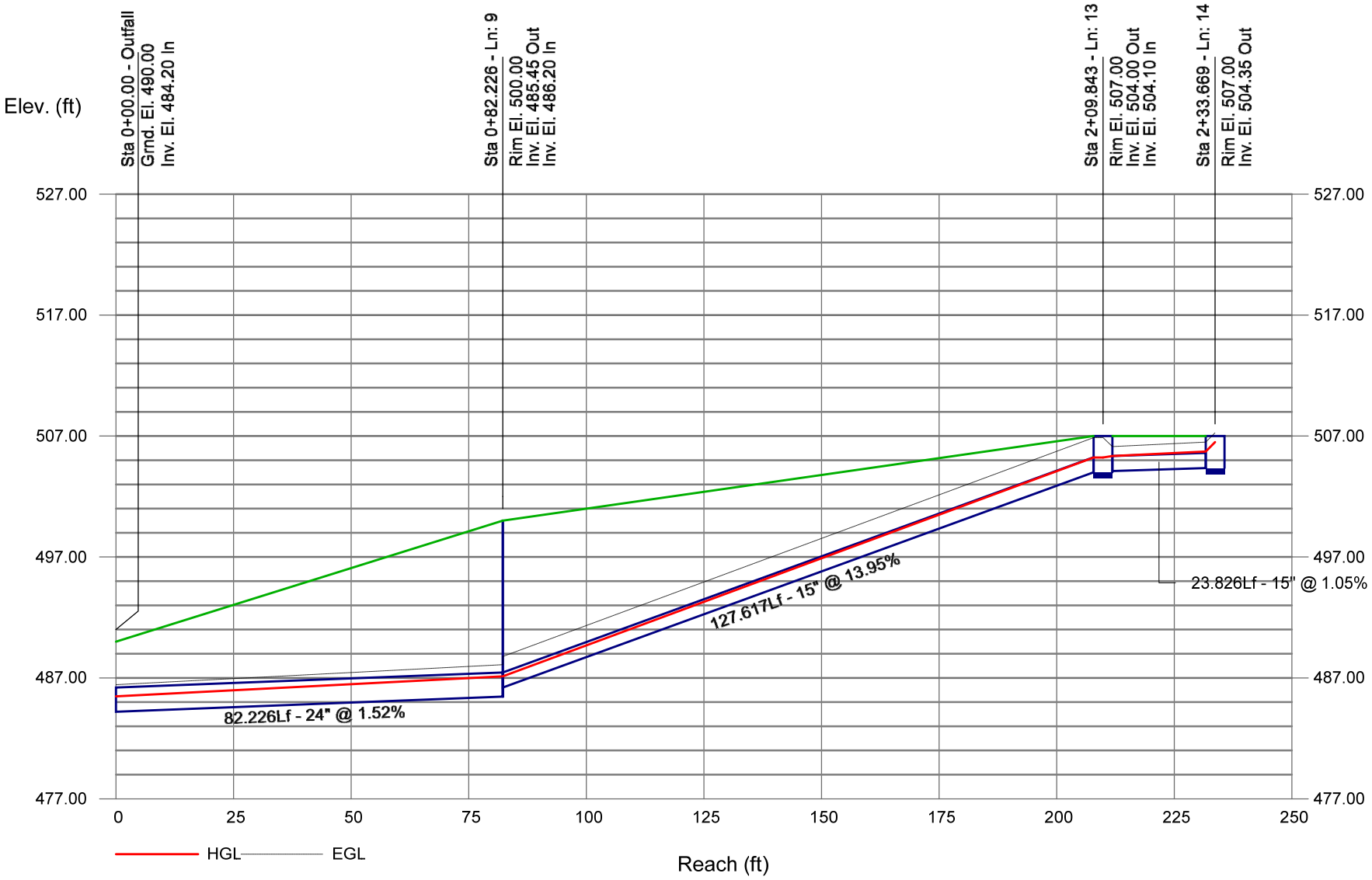

Storm Sewer Profile

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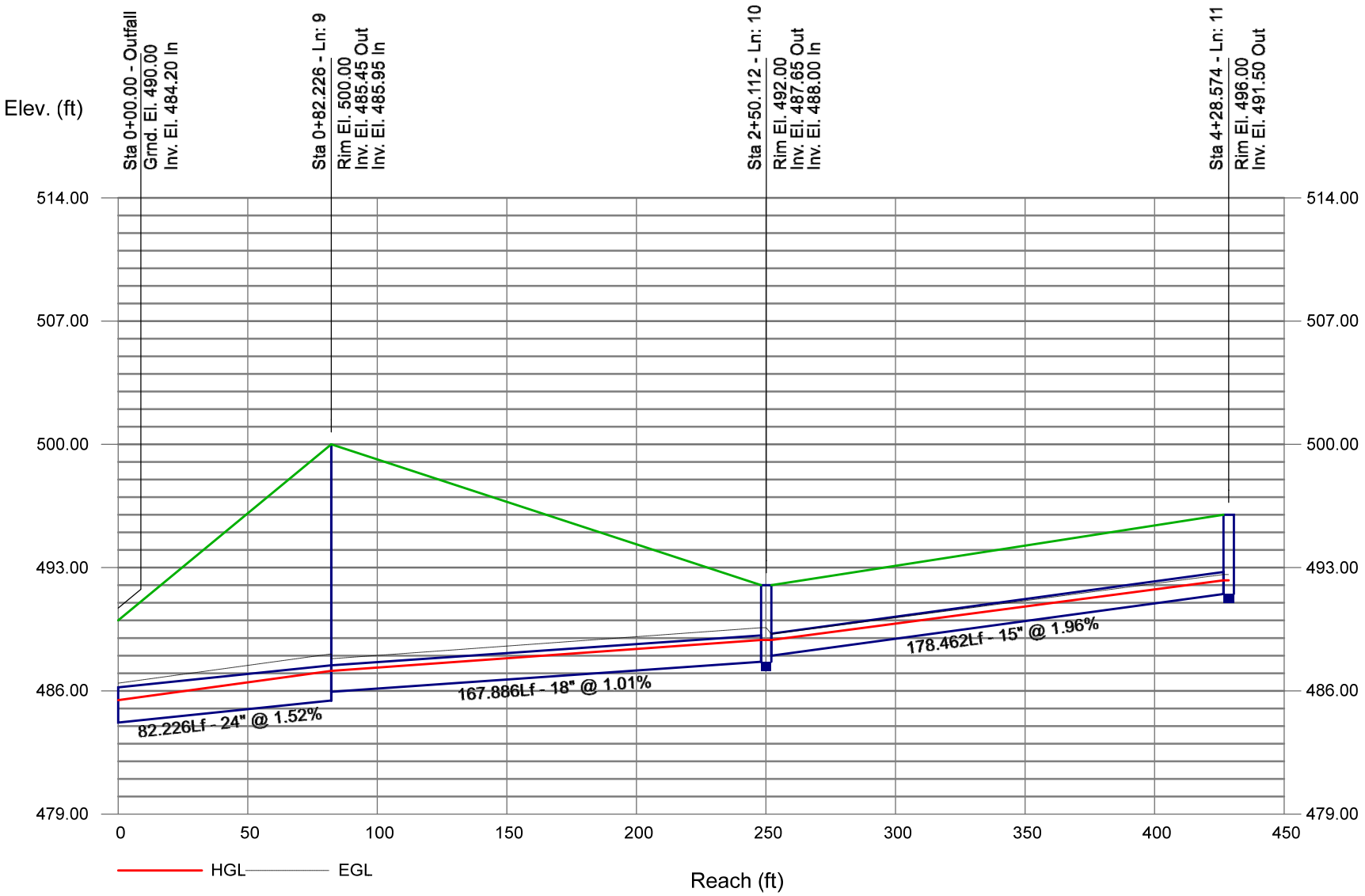

Storm Sewer Profile

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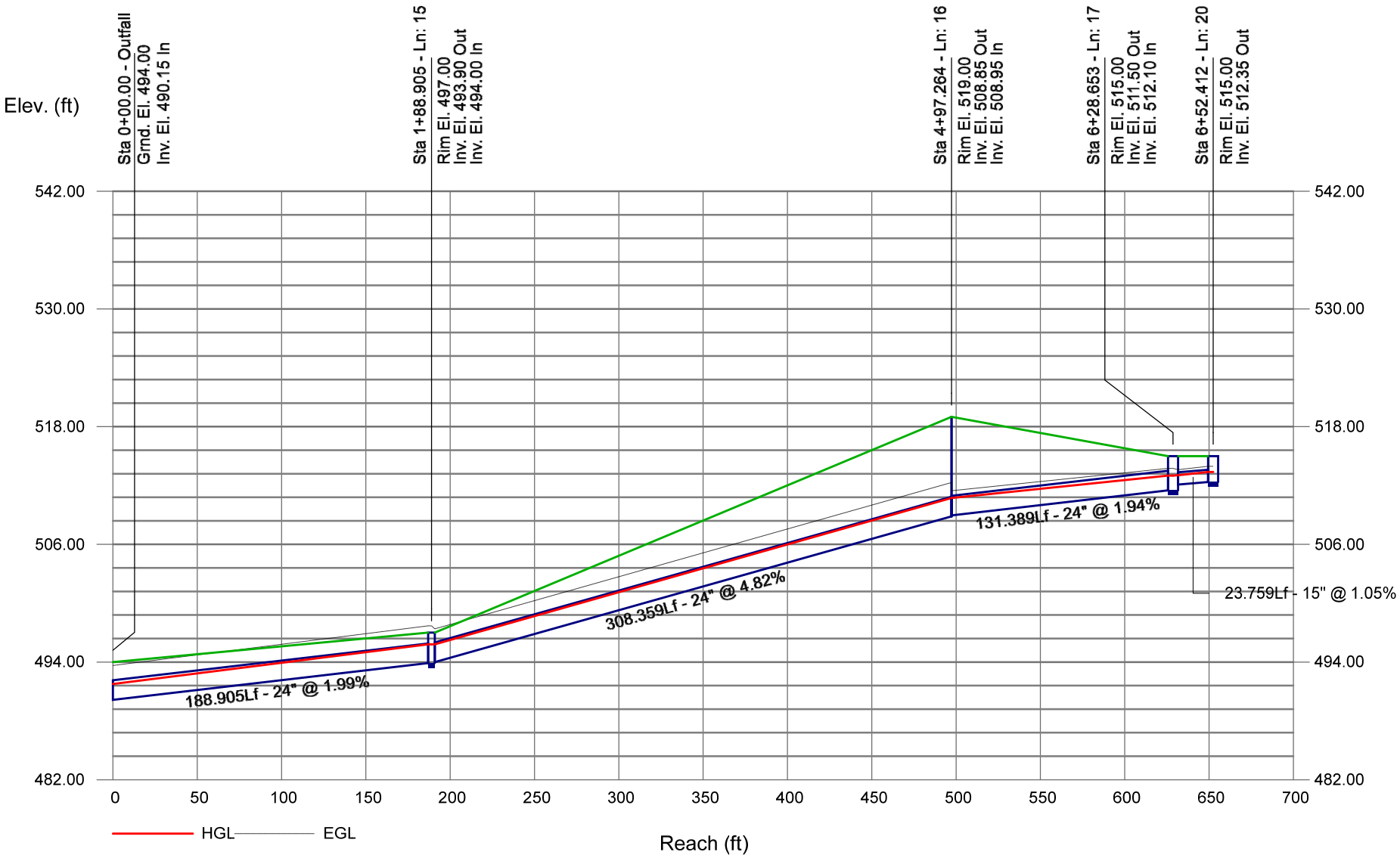

Storm Sewer Profile

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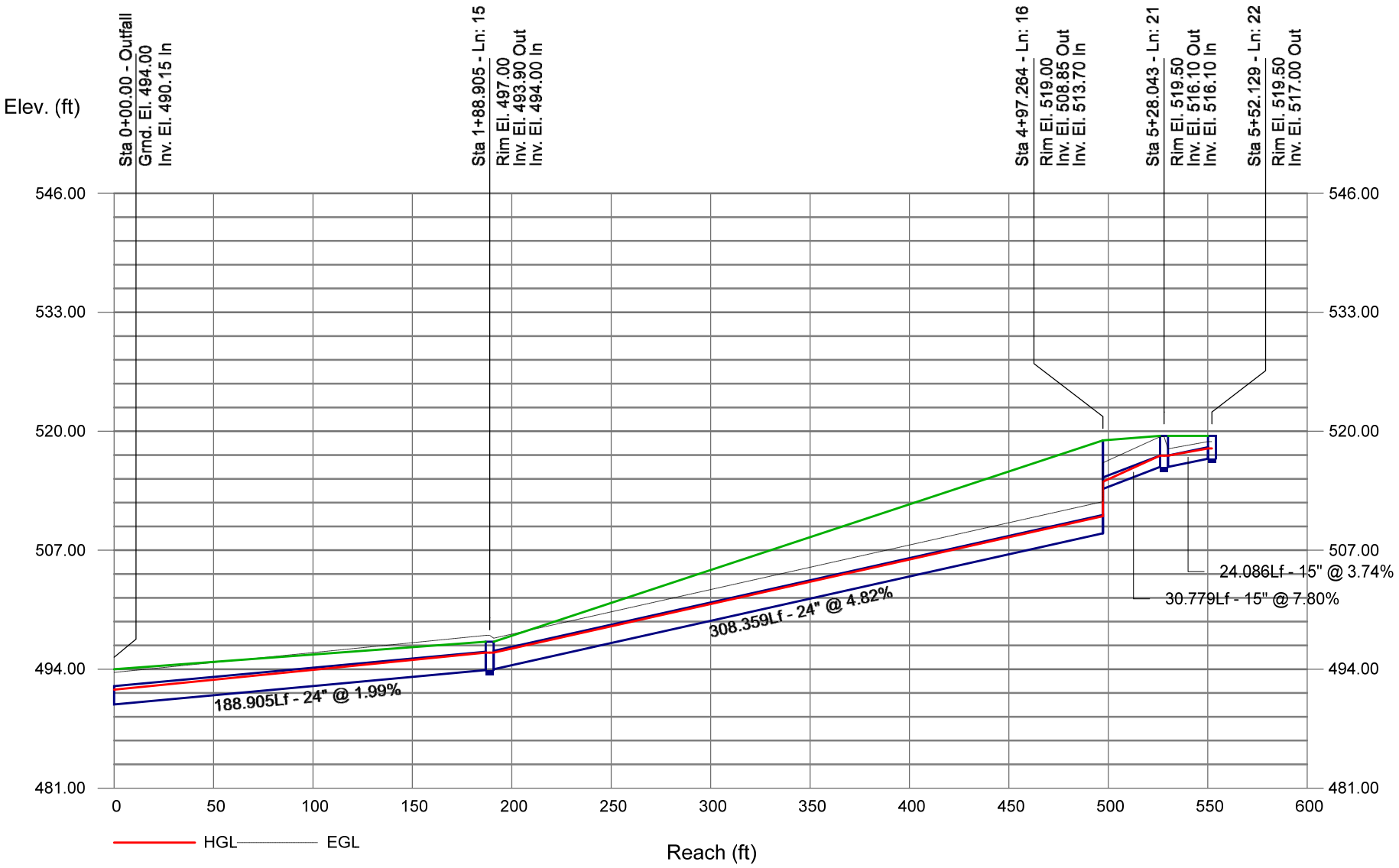

Storm Sewer Profile

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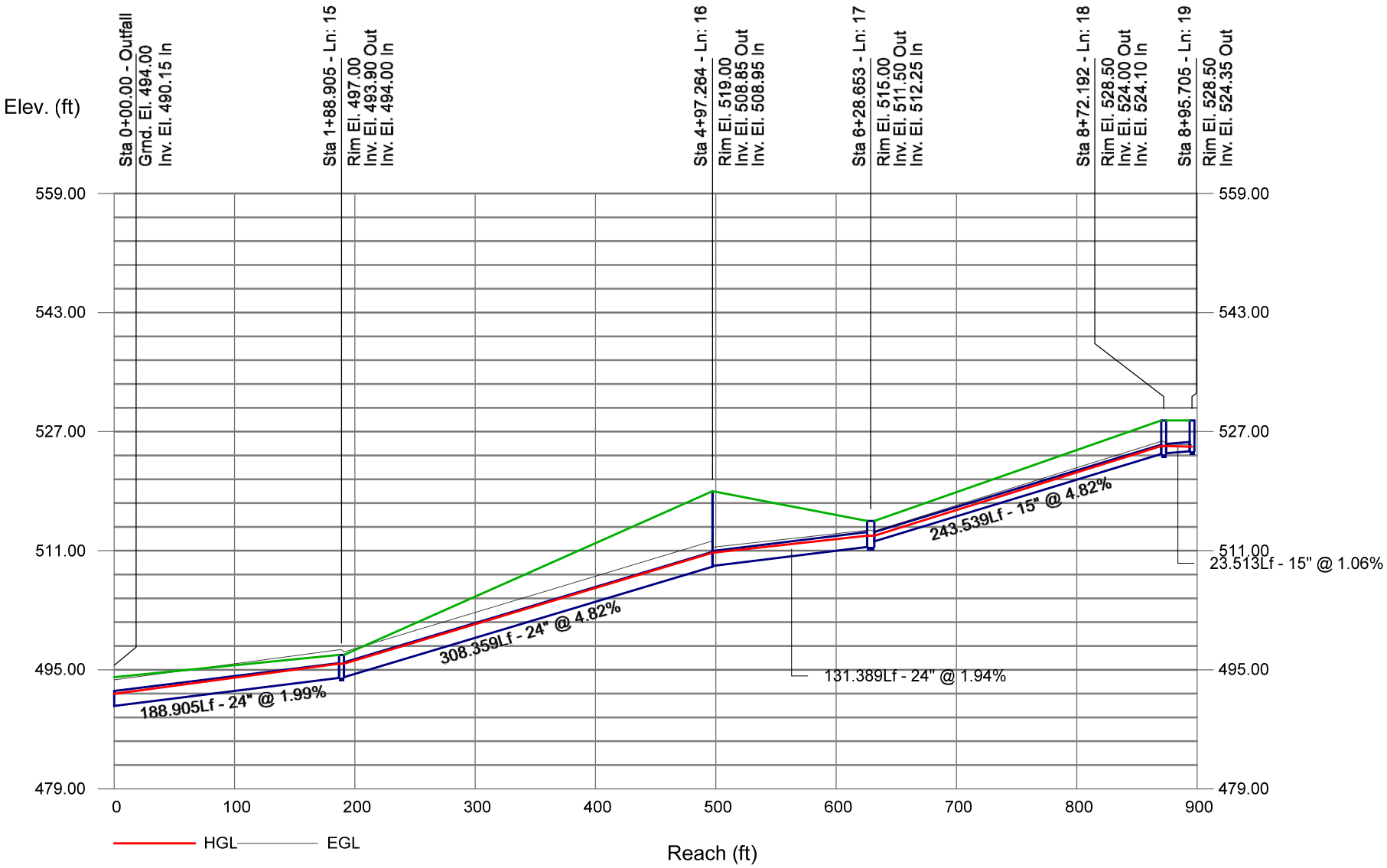

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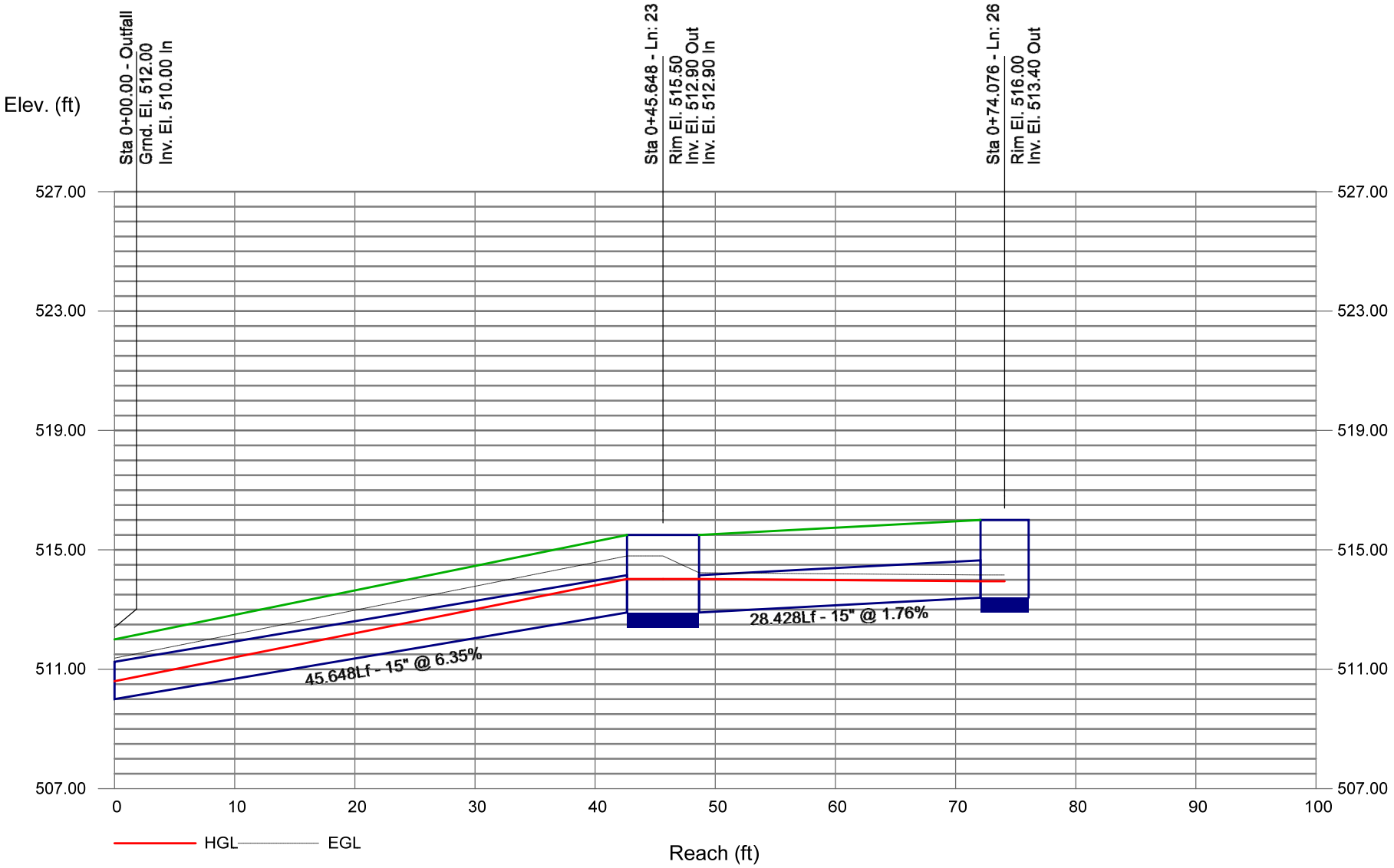

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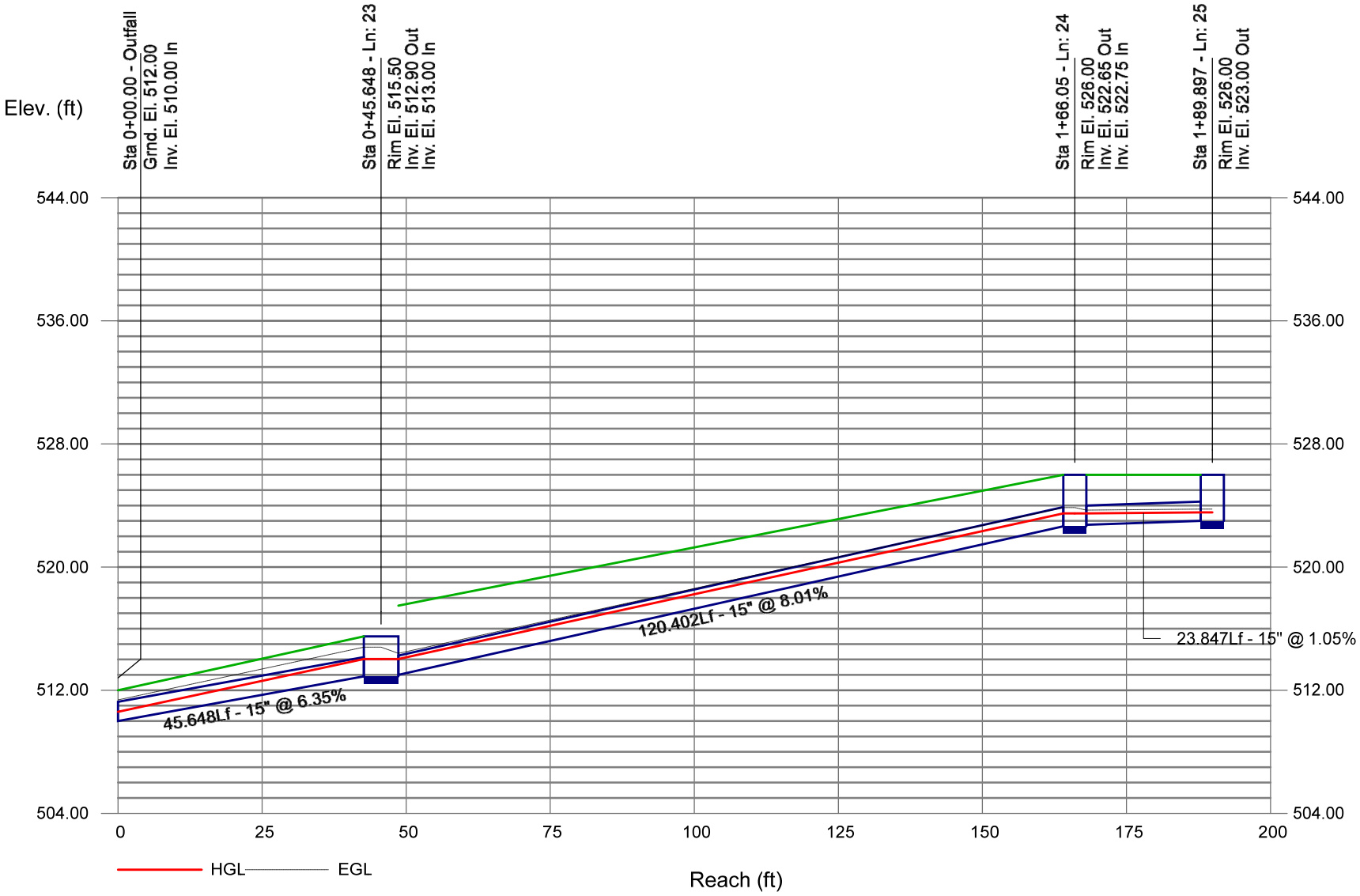

Storm Sewer Profile

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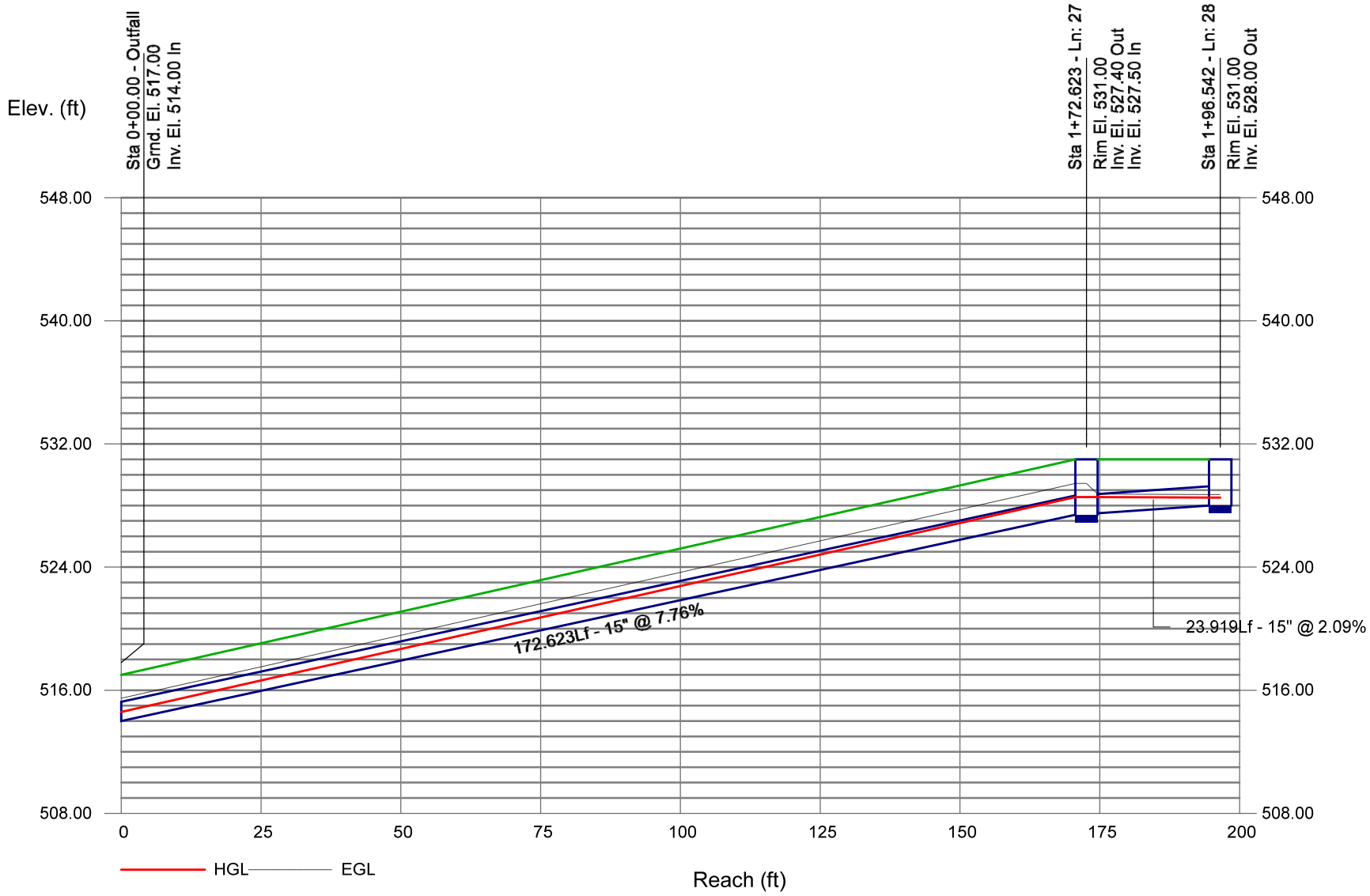

Storm Sewer Profile

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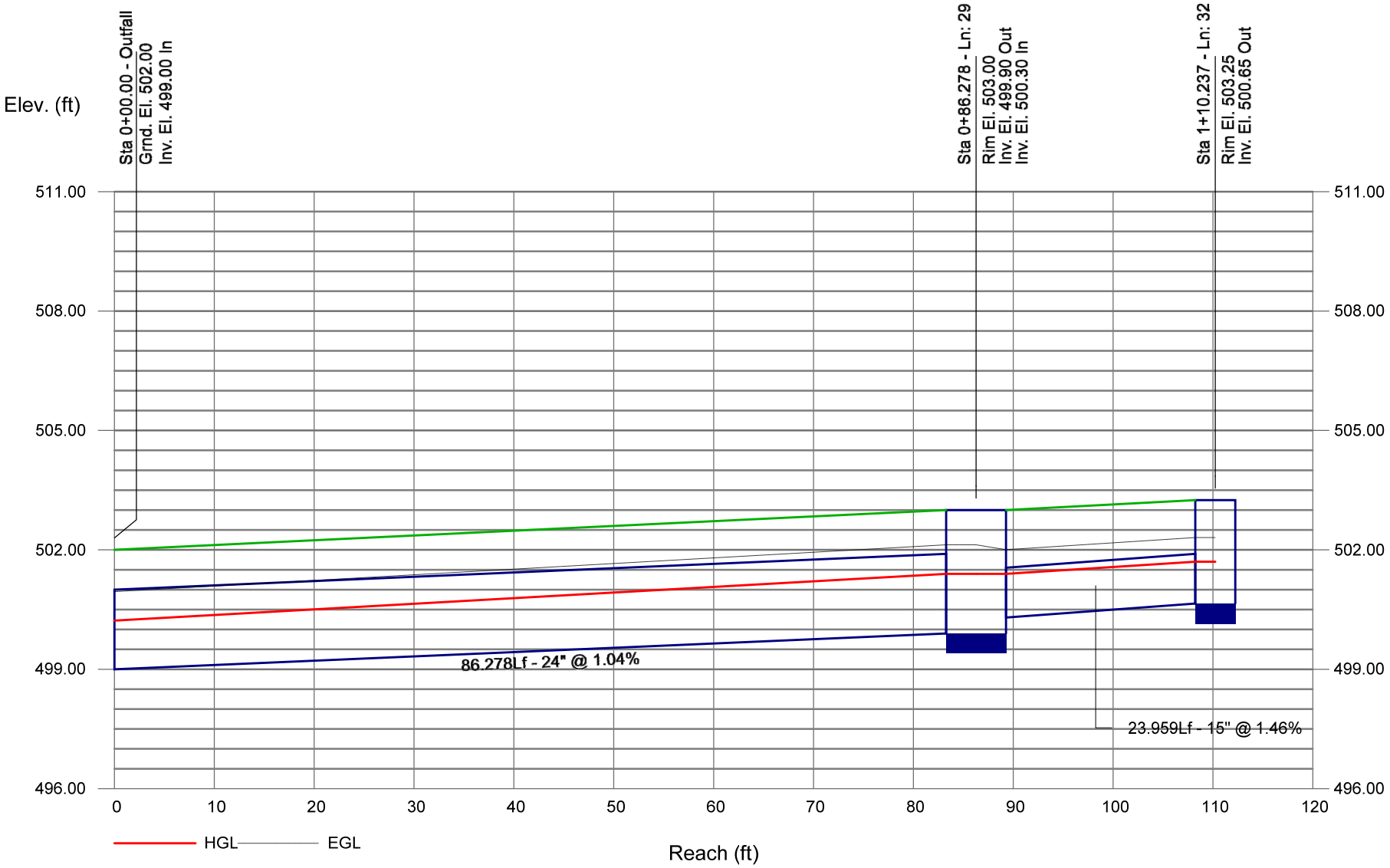

Storm Sewer Profile

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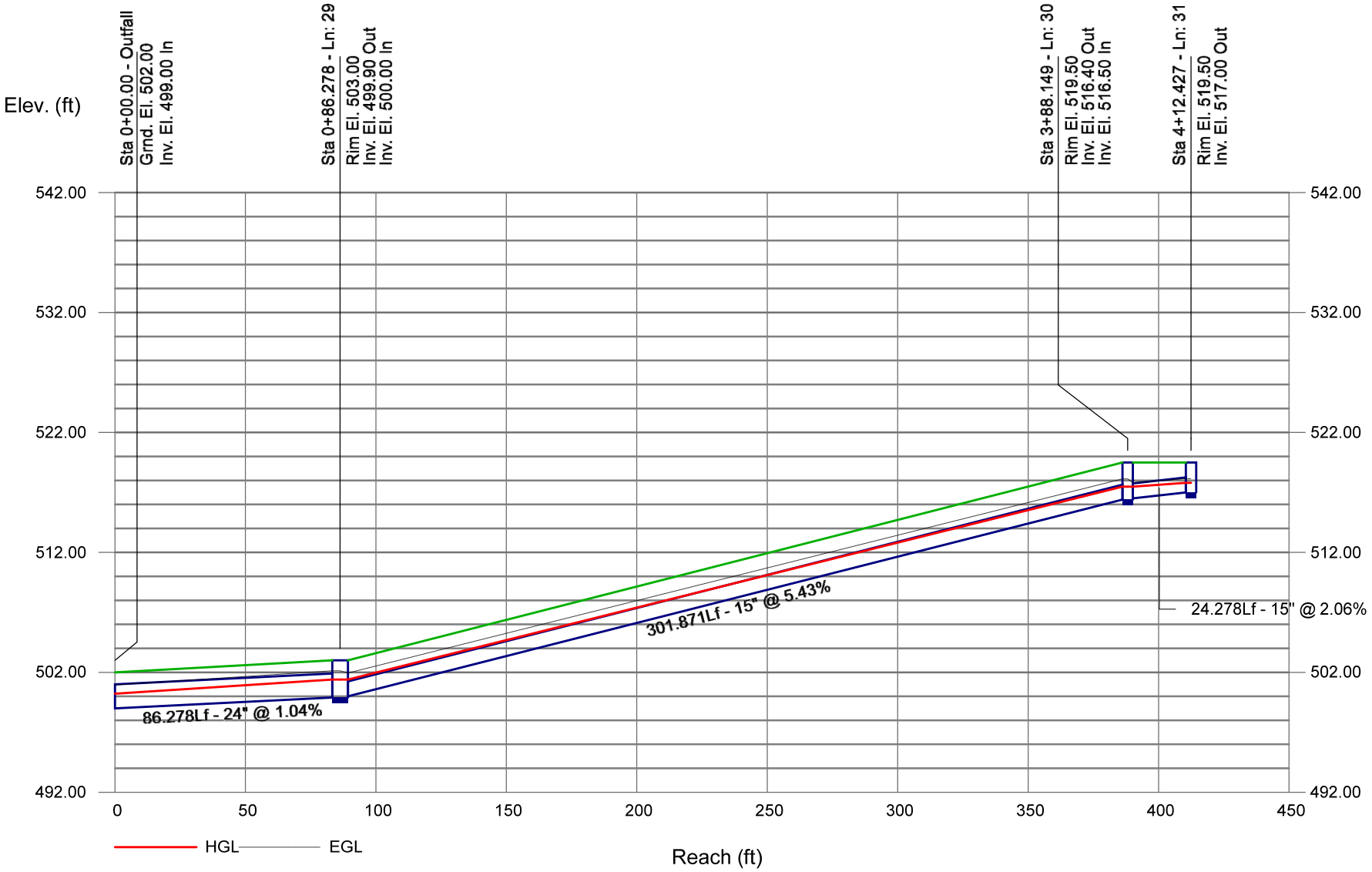
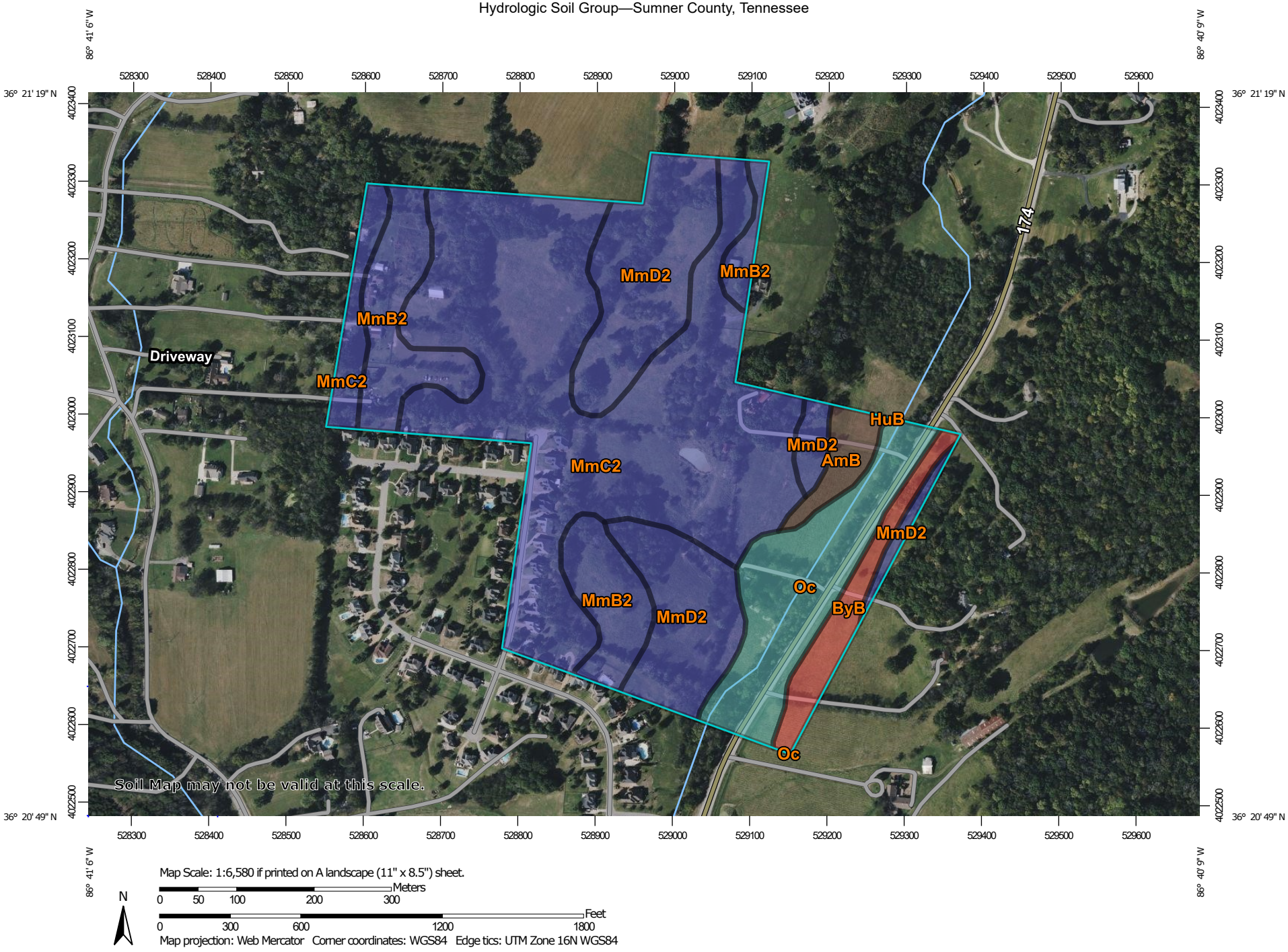


Attachment 4

Hydrologic Soil Information



Map Scale: 1:6,580 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Soil Rating Lines

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Soil Rating Points

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sumner County, Tennessee
Survey Area Data: Version 18, Aug 29, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 5, 2024—Dec 6, 2024

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AmB	Armour silt loam, 2 to 5 percent slopes	B	2.0	2.3%
ByB	Byler silt loam, 1 to 4 percent slopes	D	3.5	4.1%
HuB	Humphreys gravelly silt loam, 2 to 5 percent slopes	A	0.0	0.0%
MmB2	Mimosa silt loam, 2 to 5 percent slopes, eroded	C	11.0	12.8%
MmC2	Mimosa silt loam, 5 to 12 percent slopes, eroded	C	41.7	48.4%
MmD2	Mimosa silt loam, 12 to 20 percent slopes, eroded	C	17.9	20.7%
Oc	Ocana gravelly silt loam, bedrock substratum, occasionally flooded	A	10.1	11.7%
Totals for Area of Interest			**86.1**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

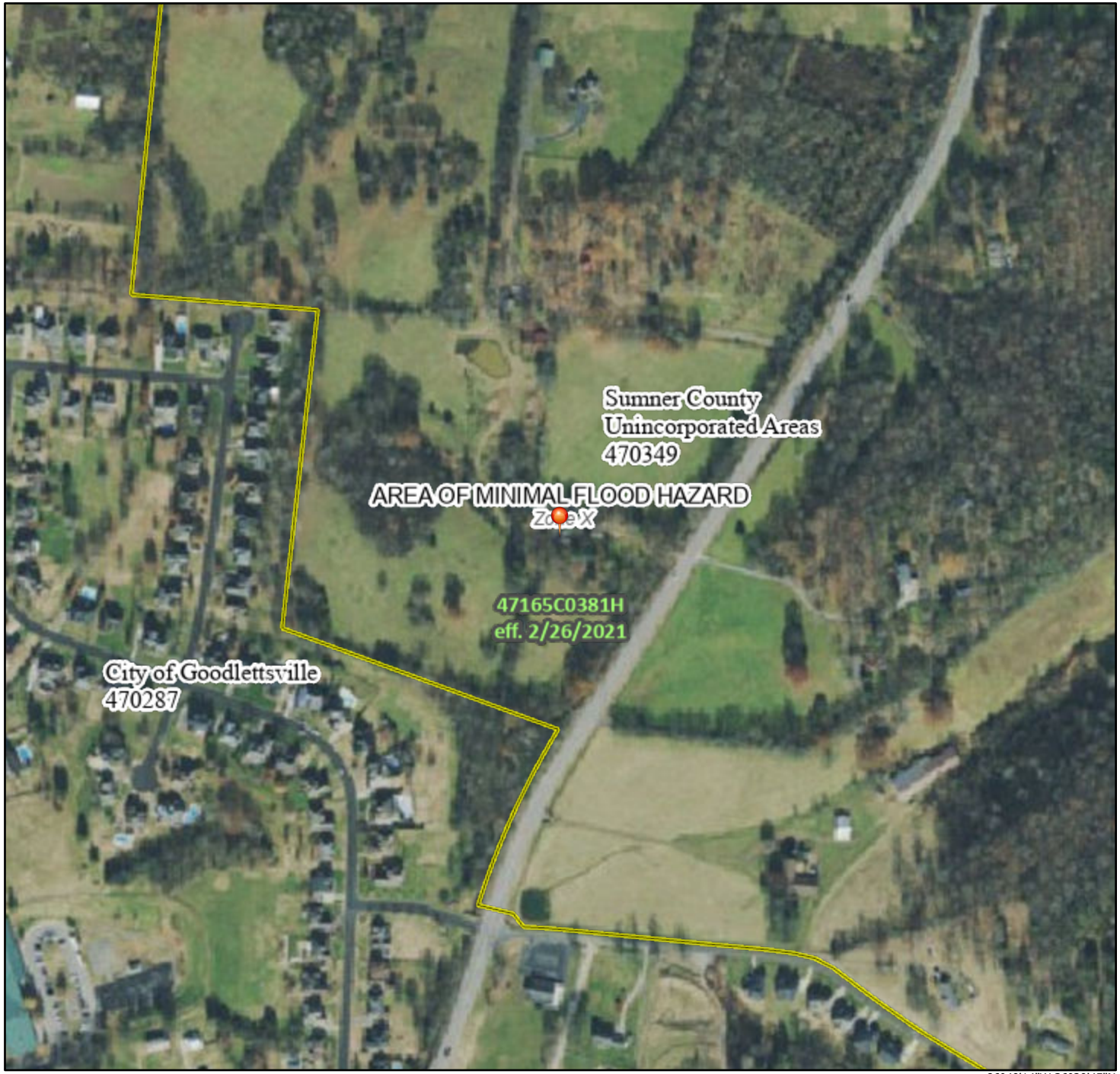
Attachment 5

FEMA FIRM

National Flood Hazard Layer FIRMette

FEMA

86°40'51"W 36°21'14"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

86°40'14"W 36°20'45"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/6/2026 at 6:01 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Attachment 6

Atlas 14 Precipitation/Intensity Data

NOAA Atlas 14, Volume 2, Version 3
Location name: Goodlettsville, Tennessee, USA*
Latitude: 36.3497°, Longitude: -86.6777°
Elevation: m/ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.379 (0.351-0.411)	0.443 (0.411-0.483)	0.510 (0.471-0.554)	0.563 (0.520-0.612)	0.628 (0.576-0.682)	0.677 (0.617-0.735)	0.724 (0.656-0.787)	0.767 (0.690-0.836)	0.821 (0.732-0.898)	0.862 (0.761-0.945)
10-min	0.605 (0.561-0.657)	0.709 (0.657-0.772)	0.817 (0.755-0.887)	0.900 (0.831-0.978)	1.00 (0.918-1.09)	1.08 (0.983-1.17)	1.15 (1.04-1.25)	1.22 (1.09-1.32)	1.30 (1.16-1.42)	1.36 (1.20-1.49)
15-min	0.756 (0.701-0.821)	0.891 (0.826-0.971)	1.03 (0.955-1.12)	1.14 (1.05-1.24)	1.27 (1.16-1.38)	1.36 (1.24-1.48)	1.45 (1.32-1.58)	1.54 (1.38-1.67)	1.64 (1.46-1.79)	1.70 (1.50-1.87)
30-min	1.04 (0.961-1.12)	1.23 (1.14-1.34)	1.47 (1.36-1.59)	1.65 (1.52-1.79)	1.88 (1.72-2.04)	2.06 (1.88-2.23)	2.23 (2.02-2.42)	2.39 (2.15-2.60)	2.60 (2.32-2.84)	2.76 (2.44-3.03)
60-min	1.29 (1.20-1.40)	1.54 (1.43-1.68)	1.88 (1.74-2.04)	2.15 (1.98-2.33)	2.50 (2.30-2.72)	2.78 (2.54-3.02)	3.07 (2.78-3.33)	3.35 (3.02-3.65)	3.73 (3.32-4.08)	4.03 (3.56-4.42)
2-hr	1.52 (1.41-1.65)	1.81 (1.68-1.97)	2.19 (2.03-2.38)	2.50 (2.31-2.71)	2.92 (2.68-3.16)	3.26 (2.97-3.53)	3.60 (3.26-3.91)	3.95 (3.55-4.30)	4.42 (3.93-4.83)	4.80 (4.22-5.25)
3-hr	1.66 (1.54-1.80)	1.97 (1.83-2.15)	2.39 (2.21-2.60)	2.73 (2.51-2.97)	3.20 (2.92-3.47)	3.57 (3.25-3.88)	3.96 (3.58-4.30)	4.36 (3.91-4.75)	4.91 (4.35-5.37)	5.34 (4.68-5.86)
6-hr	2.00 (1.84-2.19)	2.37 (2.18-2.61)	2.87 (2.64-3.16)	3.30 (3.02-3.62)	3.89 (3.53-4.26)	4.38 (3.94-4.80)	4.89 (4.37-5.36)	5.42 (4.80-5.97)	6.18 (5.39-6.82)	6.78 (5.84-7.50)
12-hr	2.38 (2.20-2.60)	2.84 (2.61-3.10)	3.44 (3.16-3.76)	3.94 (3.61-4.30)	4.65 (4.23-5.08)	5.23 (4.73-5.71)	5.85 (5.24-6.39)	6.50 (5.76-7.11)	7.40 (6.46-8.12)	8.13 (7.00-8.96)
24-hr	2.87 (2.68-3.07)	3.42 (3.20-3.67)	4.16 (3.90-4.46)	4.77 (4.46-5.12)	5.62 (5.23-6.02)	6.31 (5.85-6.75)	7.02 (6.48-7.51)	7.76 (7.14-8.30)	8.79 (8.02-9.40)	9.60 (8.70-10.3)
2-day	3.44 (3.20-3.69)	4.10 (3.83-4.40)	5.01 (4.68-5.39)	5.77 (5.37-6.18)	6.84 (6.34-7.33)	7.71 (7.12-8.26)	8.64 (7.94-9.24)	9.60 (8.78-10.3)	11.0 (9.94-11.8)	12.1 (10.9-13.0)
3-day	3.64 (3.40-3.90)	4.34 (4.05-4.65)	5.29 (4.94-5.67)	6.07 (5.66-6.50)	7.16 (6.65-7.66)	8.05 (7.45-8.60)	8.97 (8.27-9.58)	9.94 (9.10-10.6)	11.3 (10.2-12.1)	12.3 (11.1-13.2)
4-day	3.84 (3.59-4.11)	4.57 (4.28-4.90)	5.57 (5.21-5.96)	6.37 (5.95-6.81)	7.48 (6.96-7.99)	8.38 (7.77-8.94)	9.31 (8.59-9.93)	10.3 (9.43-11.0)	11.6 (10.6-12.4)	12.6 (11.4-13.5)
7-day	4.64 (4.33-4.99)	5.53 (5.16-5.95)	6.74 (6.29-7.24)	7.74 (7.20-8.30)	9.14 (8.48-9.78)	10.3 (9.50-11.0)	11.5 (10.6-12.3)	12.8 (11.7-13.6)	14.5 (13.2-15.6)	16.0 (14.3-17.1)
10-day	5.31 (4.97-5.66)	6.32 (5.92-6.75)	7.62 (7.14-8.13)	8.66 (8.09-9.23)	10.1 (9.40-10.7)	11.2 (10.4-11.9)	12.4 (11.5-13.2)	13.6 (12.5-14.4)	15.2 (13.9-16.2)	16.5 (15.0-17.6)
20-day	7.18 (6.77-7.62)	8.50 (8.02-9.03)	10.0 (9.48-10.7)	11.2 (10.6-11.9)	12.8 (12.0-13.6)	14.0 (13.1-14.8)	15.2 (14.2-16.1)	16.3 (15.2-17.3)	17.8 (16.5-18.9)	18.9 (17.5-20.1)
30-day	8.79 (8.32-9.30)	10.4 (9.82-11.0)	12.1 (11.5-12.8)	13.5 (12.7-14.2)	15.3 (14.4-16.1)	16.6 (15.6-17.6)	18.0 (16.8-19.0)	19.3 (18.0-20.4)	21.0 (19.5-22.3)	22.3 (20.7-23.7)
45-day	11.0 (10.4-11.6)	12.9 (12.2-13.6)	14.8 (14.1-15.7)	16.4 (15.5-17.3)	18.3 (17.3-19.3)	19.8 (18.7-20.9)	21.2 (19.9-22.4)	22.5 (21.2-23.9)	24.3 (22.7-25.7)	25.5 (23.8-27.1)
60-day	13.2 (12.5-13.9)	15.5 (14.7-16.3)	17.8 (16.9-18.7)	19.5 (18.4-20.5)	21.6 (20.4-22.7)	23.1 (21.9-24.4)	24.6 (23.2-25.9)	25.9 (24.5-27.4)	27.6 (26.0-29.2)	28.8 (27.0-30.4)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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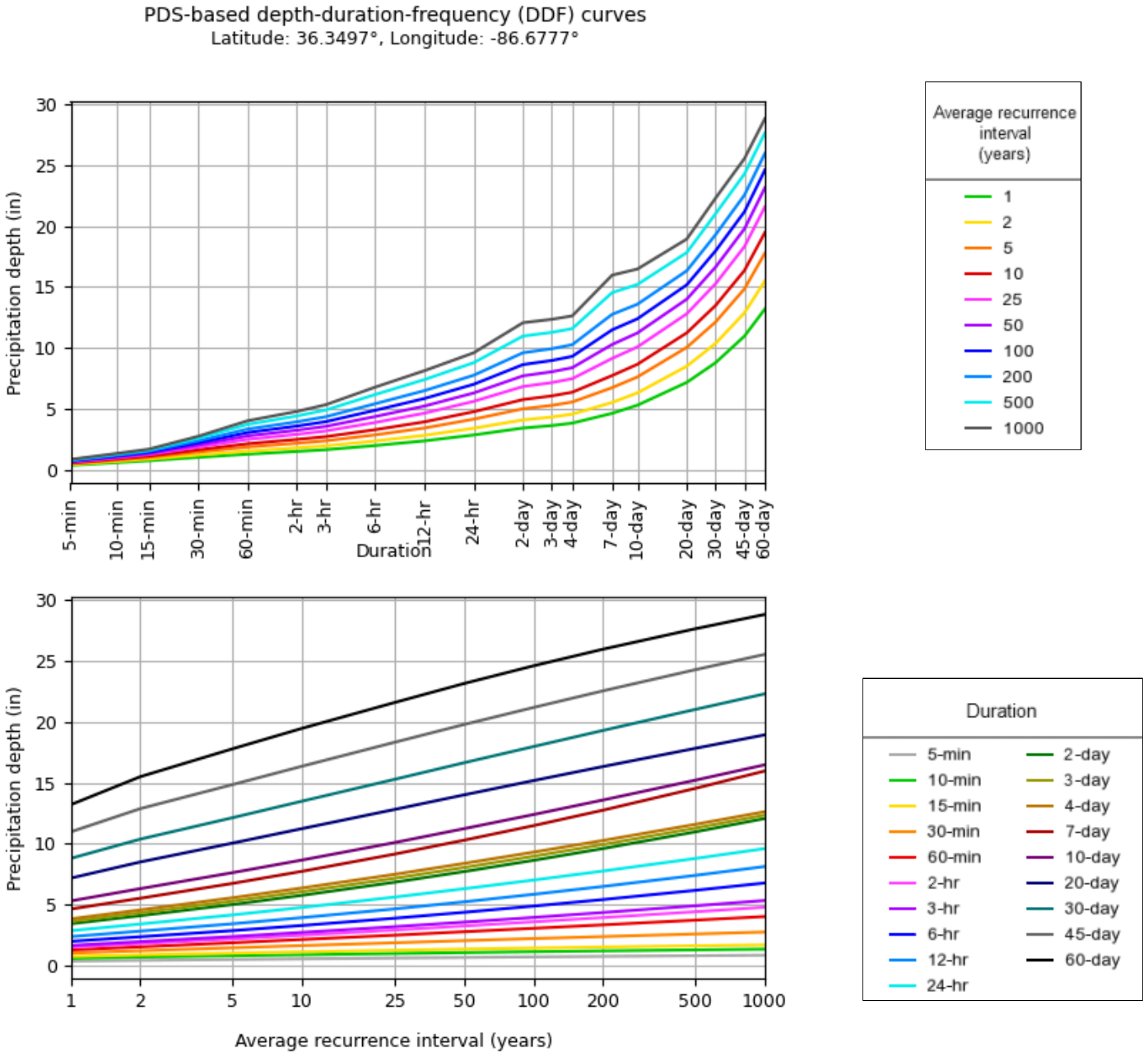
PF graphical



NOAA Atlas 14, Volume 2, Version 3 Created (GMT): Fri Apr 3 15:40:23 2026

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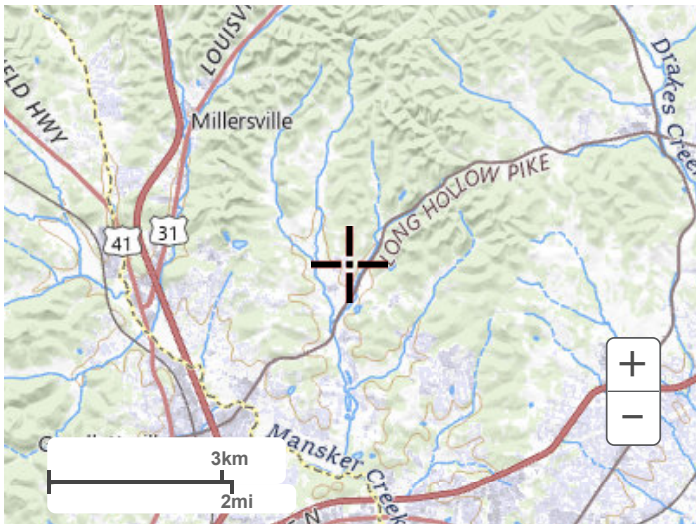
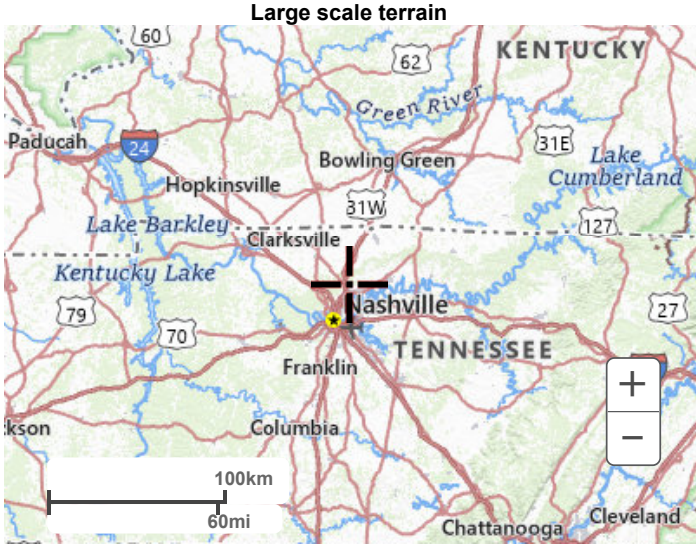
Maps & aerials

Small scale terrain



Large scale terrain



Large scale map

Large scale aerial

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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

NOAA Atlas 14, Volume 2, Version 3
Location name: Goodlettsville, Tennessee, USA*
Latitude: 36.3497°, Longitude: -86.6777°
Elevation: 553 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	4.55 (4.21-4.93)	5.32 (4.93-5.80)	6.12 (5.65-6.65)	6.76 (6.24-7.34)	7.54 (6.91-8.18)	8.12 (7.40-8.82)	8.69 (7.87-9.44)	9.20 (8.28-10.0)	9.85 (8.78-10.8)	10.3 (9.13-11.3)
10-min	3.63 (3.37-3.94)	4.25 (3.94-4.63)	4.90 (4.53-5.32)	5.40 (4.99-5.87)	6.01 (5.51-6.53)	6.47 (5.90-7.02)	6.90 (6.26-7.50)	7.30 (6.56-7.95)	7.79 (6.94-8.52)	8.15 (7.19-8.93)
15-min	3.02 (2.80-3.28)	3.56 (3.30-3.88)	4.13 (3.82-4.49)	4.55 (4.20-4.95)	5.08 (4.66-5.52)	5.46 (4.98-5.92)	5.81 (5.27-6.32)	6.14 (5.52-6.69)	6.54 (5.82-7.15)	6.82 (6.02-7.48)
30-min	2.07 (1.92-2.25)	2.46 (2.28-2.68)	2.94 (2.71-3.19)	3.30 (3.05-3.59)	3.76 (3.45-4.08)	4.11 (3.75-4.46)	4.45 (4.04-4.84)	4.78 (4.30-5.20)	5.21 (4.64-5.69)	5.52 (4.87-6.05)
60-min	1.29 (1.20-1.40)	1.54 (1.43-1.68)	1.88 (1.74-2.04)	2.15 (1.98-2.33)	2.50 (2.30-2.72)	2.78 (2.54-3.02)	3.07 (2.78-3.33)	3.35 (3.02-3.65)	3.73 (3.32-4.08)	4.03 (3.56-4.42)
2-hr	0.760 (0.704-0.824)	0.905 (0.838-0.983)	1.10 (1.01-1.19)	1.25 (1.15-1.36)	1.46 (1.34-1.58)	1.63 (1.48-1.76)	1.80 (1.63-1.95)	1.97 (1.78-2.15)	2.21 (1.96-2.42)	2.40 (2.11-2.63)
3-hr	0.552 (0.511-0.600)	0.657 (0.608-0.715)	0.795 (0.735-0.865)	0.909 (0.837-0.988)	1.06 (0.974-1.15)	1.19 (1.08-1.29)	1.32 (1.19-1.43)	1.45 (1.30-1.58)	1.64 (1.45-1.79)	1.78 (1.56-1.95)
6-hr	0.333 (0.306-0.366)	0.396 (0.364-0.435)	0.479 (0.441-0.527)	0.550 (0.504-0.603)	0.649 (0.590-0.711)	0.730 (0.658-0.801)	0.816 (0.729-0.895)	0.905 (0.801-0.996)	1.03 (0.899-1.14)	1.13 (0.975-1.25)
12-hr	0.197 (0.182-0.216)	0.235 (0.216-0.257)	0.285 (0.262-0.311)	0.327 (0.299-0.357)	0.386 (0.351-0.421)	0.434 (0.392-0.473)	0.485 (0.434-0.530)	0.539 (0.477-0.589)	0.614 (0.535-0.674)	0.674 (0.581-0.744)
24-hr	0.119 (0.111-0.127)	0.142 (0.133-0.152)	0.173 (0.162-0.185)	0.198 (0.185-0.213)	0.234 (0.217-0.250)	0.262 (0.243-0.281)	0.292 (0.270-0.312)	0.323 (0.297-0.345)	0.366 (0.334-0.391)	0.400 (0.362-0.428)
2-day	0.071 (0.066-0.076)	0.085 (0.079-0.091)	0.104 (0.097-0.112)	0.120 (0.111-0.128)	0.142 (0.132-0.152)	0.160 (0.148-0.171)	0.179 (0.165-0.192)	0.200 (0.182-0.214)	0.228 (0.207-0.244)	0.251 (0.226-0.269)
3-day	0.050 (0.047-0.054)	0.060 (0.056-0.064)	0.073 (0.068-0.078)	0.084 (0.078-0.090)	0.099 (0.092-0.106)	0.111 (0.103-0.119)	0.124 (0.114-0.133)	0.137 (0.126-0.147)	0.156 (0.142-0.167)	0.171 (0.154-0.183)
4-day	0.039 (0.037-0.042)	0.047 (0.044-0.051)	0.058 (0.054-0.062)	0.066 (0.061-0.070)	0.077 (0.072-0.083)	0.087 (0.080-0.093)	0.096 (0.089-0.103)	0.106 (0.098-0.114)	0.120 (0.109-0.129)	0.131 (0.119-0.140)
7-day	0.027 (0.025-0.029)	0.032 (0.030-0.035)	0.040 (0.037-0.043)	0.046 (0.042-0.049)	0.054 (0.050-0.058)	0.061 (0.056-0.065)	0.068 (0.062-0.073)	0.075 (0.069-0.081)	0.086 (0.078-0.092)	0.095 (0.085-0.101)
10-day	0.022 (0.020-0.023)	0.026 (0.024-0.028)	0.031 (0.029-0.033)	0.036 (0.033-0.038)	0.042 (0.039-0.044)	0.046 (0.043-0.049)	0.051 (0.047-0.054)	0.056 (0.052-0.060)	0.063 (0.057-0.067)	0.068 (0.062-0.073)
20-day	0.014 (0.014-0.015)	0.017 (0.016-0.018)	0.020 (0.019-0.022)	0.023 (0.022-0.024)	0.026 (0.025-0.028)	0.029 (0.027-0.030)	0.031 (0.029-0.033)	0.034 (0.031-0.036)	0.037 (0.034-0.039)	0.039 (0.036-0.041)
30-day	0.012 (0.011-0.012)	0.014 (0.013-0.015)	0.016 (0.015-0.017)	0.018 (0.017-0.019)	0.021 (0.019-0.022)	0.023 (0.021-0.024)	0.024 (0.023-0.026)	0.026 (0.025-0.028)	0.029 (0.027-0.030)	0.030 (0.028-0.032)
45-day	0.010 (0.009-0.010)	0.011 (0.011-0.012)	0.013 (0.013-0.014)	0.015 (0.014-0.016)	0.016 (0.016-0.017)	0.018 (0.017-0.019)	0.019 (0.018-0.020)	0.020 (0.019-0.022)	0.022 (0.021-0.023)	0.023 (0.022-0.025)
60-day	0.009 (0.008-0.009)	0.010 (0.010-0.011)	0.012 (0.011-0.012)	0.013 (0.012-0.014)	0.014 (0.014-0.015)	0.016 (0.015-0.016)	0.017 (0.016-0.017)	0.018 (0.016-0.018)	0.019 (0.018-0.020)	0.019 (0.018-0.021)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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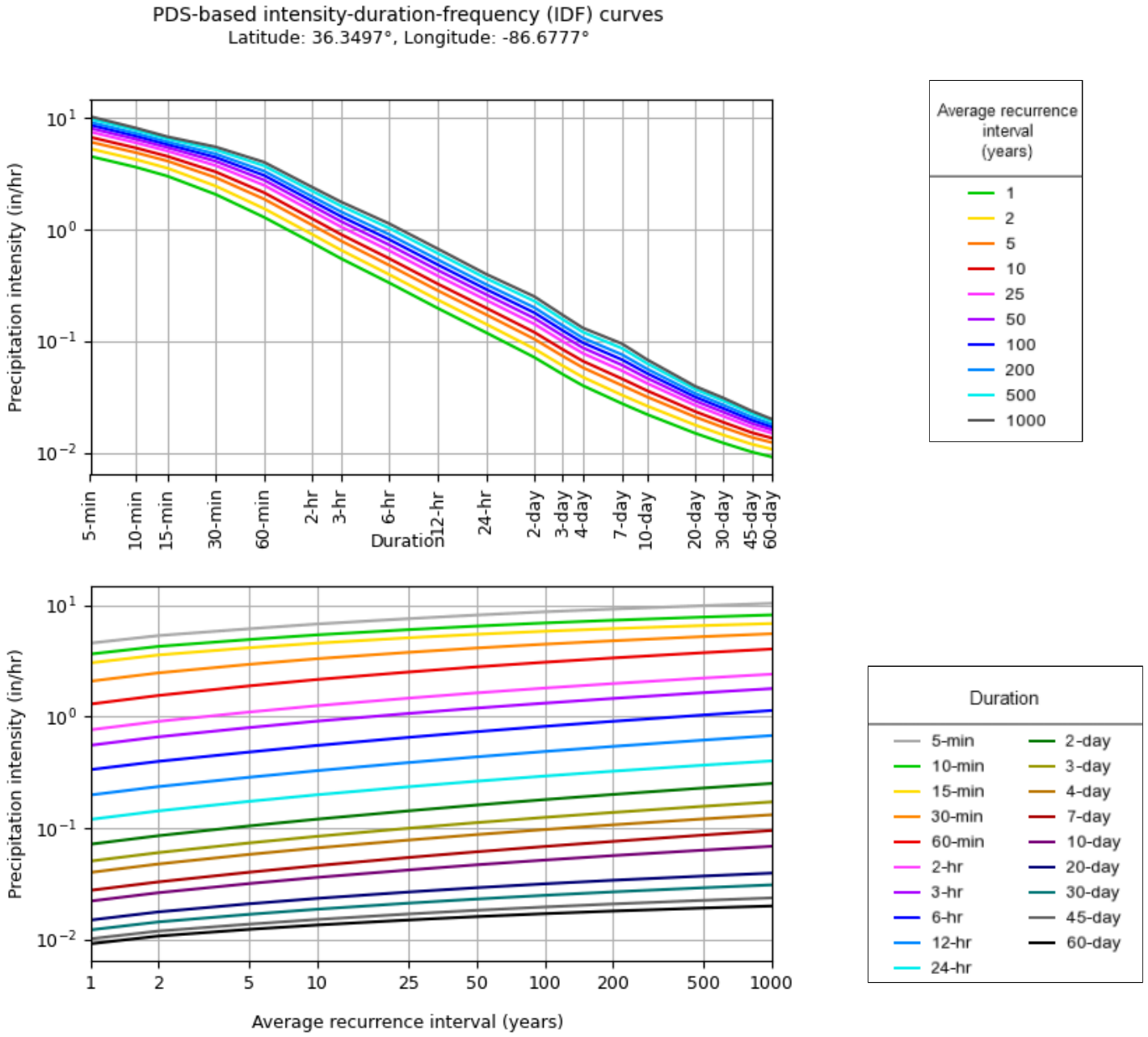
PF graphical



NOAA Atlas 14, Volume 2, Version 3

Created (GMT): Fri Apr 3 20:01:19 2026

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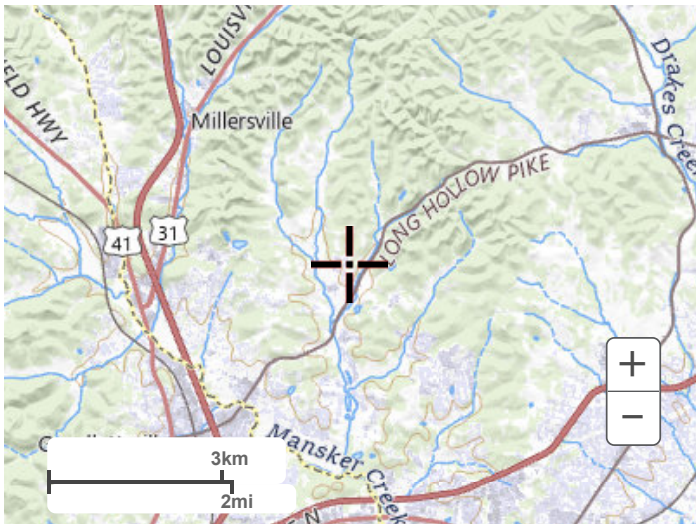
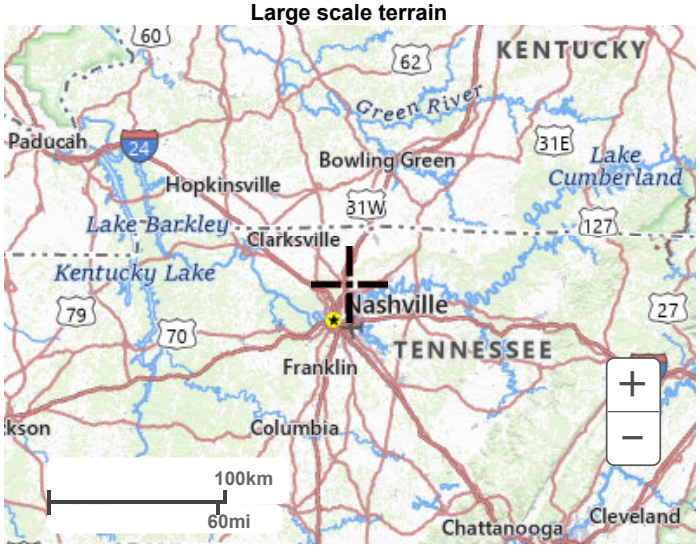
Maps & aerials

Small scale terrain



Large scale terrain



Large scale map

Large scale aerial

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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Attachment 7

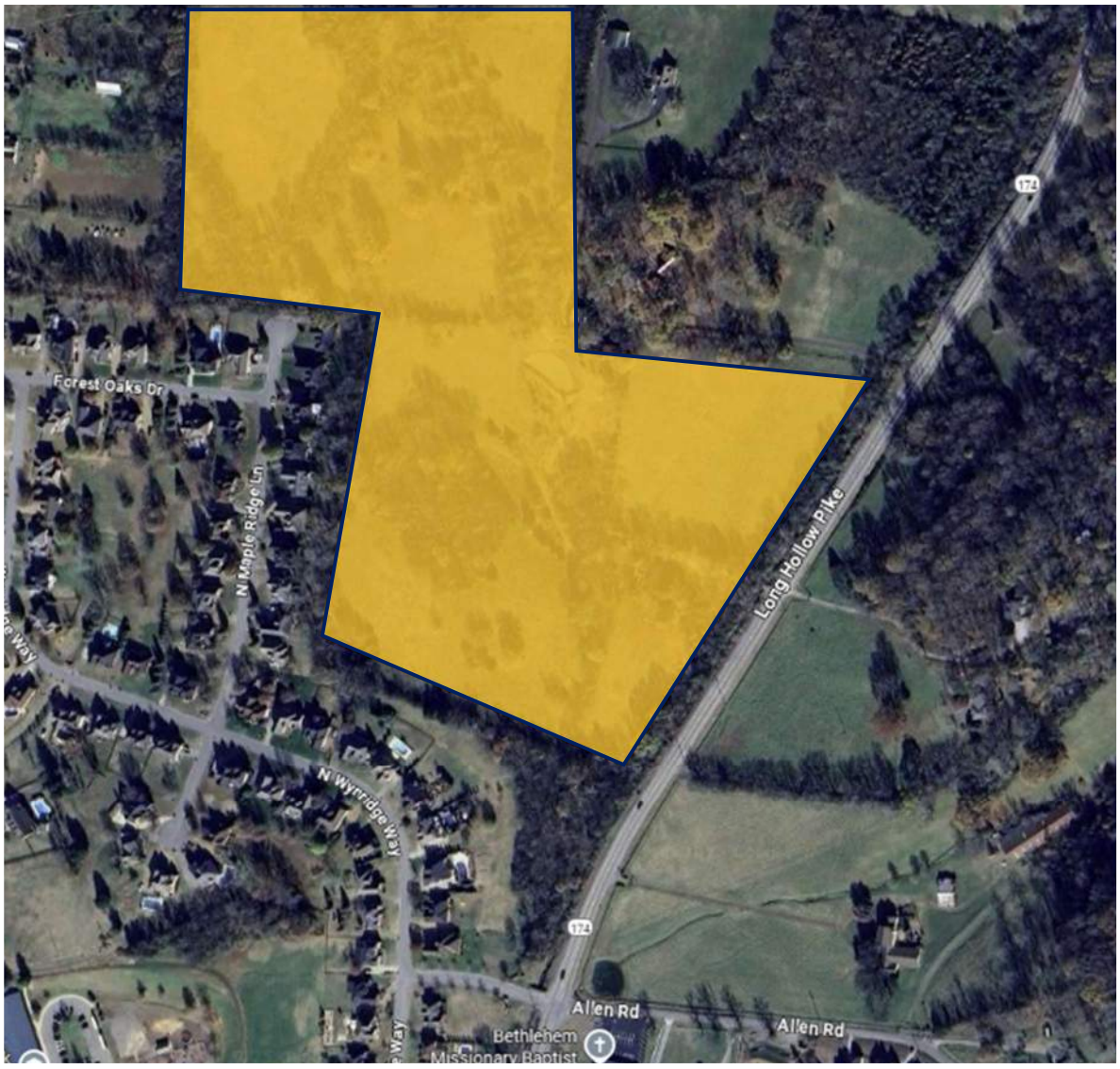
Vendor Supplied Calculations

Attachment 8

NJCAT Testing for Water Quality Unit

TRAFFIC ACCESS STUDY

4408 Long Hollow Pike
Phillips Builders | November 2025



KCI TECHNOLOGIES, INC.
500 11th Avenue North
Nashville, TN 37203

KCI

TRAFFIC ACCESS STUDY
4408 LONG HOLLOW PIKE
GOODLETTSVILLE, TENNESSEE

PREPARED FOR:
PHILLIPS BUILDERS

FOR REVIEW ONLY

PREPARED BY:
KCI TECHNOLOGIES, INC
500 11th Avenue North, Suite 290
Nashville, TN 37203
615.370.8410 office 615.370.8455 fax
www.kci.com

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EXECUTIVE SUMMARY

Project Description

The proposed 4408 Long Hollow Pike development is located along the west side of Long Hollow Pike in Goodlettsville, Tennessee. According to the developer, the proposed development includes approximately 69 single-family units and is expected to be completed by 2027. Access to the development is planned to be provided by one driveway on Long Hollow Pike. The purpose of this study is to analyze the access plan and the traffic impacts associated with this proposed development.

Traffic Review

The proposed site driveway was reviewed to analyze the impact of the site driveway on the adjacent roadway network and evaluate the need to provide roadway improvements along Long Hollow Pike.

24-hour bi-direction tube counts were conducted along the project frontage in order to establish existing peak hour traffic volumes. The existing traffic volumes were grown to the design year, 2027, using a growth rate of 10.0% per year to account for traffic growth prior to the completion of the proposed development. A traffic generation process was used to estimate the number of trips expected to be generated by the proposed development. The estimated project-generated trips were added to the design year traffic volumes in order to obtain the total projected peak hour traffic volumes at the completion of the development.

The site driveway was evaluated for the need to provide a left-turn lane, right-turn lane, and two-lane minor street approach based on the future build traffic volumes. Results of the lane warrant analysis indicate that a northbound left-turn on Long Hollow Pike is warranted under future build conditions.

Capacity analyses were performed in order to determine the impact of the proposed site driveway on the adjacent roadway network The results of the analyses indicate that under future build conditions, the capacity analyses indicate that the operational performances of the critical movements at the site driveway are generally expected to operate at LOS C or better in the AM and PM peak hours.

Safety Review

The site driveway was evaluated to determine any sight distance constraints. The sight distance at the site driveway will be sufficient for left-turns and right-turns onto Long Hollow Pike.

Recommended Improvements

The analyses presented in this study indicate that the impacts of the proposed project on the existing street network will be manageable by providing the recommendations below. These specific recommendations will provide safe and efficient traffic operations within the study area following the completion of the proposed project. The recommendations are as follows:

Long Hollow Pike and Site Driveway

- The eastbound approach of the Site Driveway should be stop-controlled, and a stop bar and R1-1 'Stop' sign should be installed on the egress approach.
- The Site Driveway should be designed to include sufficient width for one entering lane and a minimum of one exiting lane.
- A northbound left-turn lane should be installed on Long Hollow Pike with approximately 100 feet of storage.

Additional Recommendations

- As part of the construction of the project, all internal and external driveway connections should be designed such that the departure sight triangles, as specified by AASHTO, will be clear of all sight obstructions, including landscaping, existing vegetation, monument signs/walls, fences, etc.
- Final design of internal roadways and parking should meet all TDOT standards and the latest version of "A Policy of Geometric Design of Highways and Streets" published by AASHTO. Any parking lots and streets associated with the development should ensure that passenger cars and emergency vehicles are capable of making all turning movements. Internal intersections should be two-way stop-controlled unless all-way stop control warrants are met.

In summary, based on the analyses and evaluations conducted, no further recommendations are presented for the proposed 4408 Long Hollow Pike development.

1.0 INTRODUCTION AND PROJECT DESCRIPTION

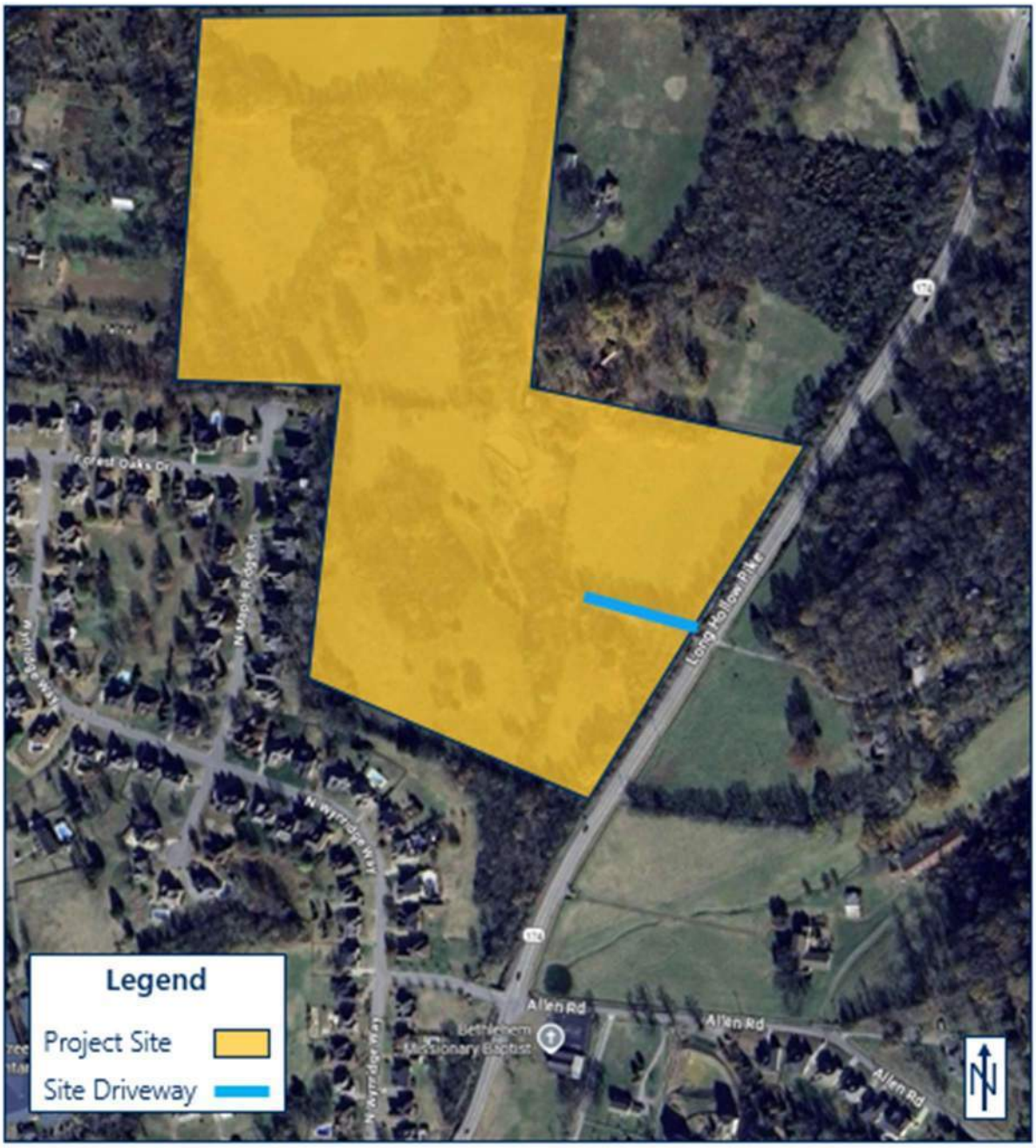
The purpose of this study is to analyze the traffic impacts and access plan associated with the proposed 4408 Long Hollow Pike development in Goodlettsville, Tennessee. According to the developer, the proposed development will include 69 single-family units and is expected to be completed by 2027.

As shown by Figure 1, the property is located along the west side of Long Hollow Pike between Bland Pass and Allen Road. The property is intended to be rezoned to LDRPUD (Low Density Residential Planned Unit Development). The proposed development is within an area that is characterized by low-density land uses. The property is generally bounded on the north by vacant land, on the east by Long Hollow Pike, on the south by residential, and on the west by residential.

The current site plan for the 4408 Long Hollow Pike development is shown in Appendix A. Based on this site plan, proposed vehicular access for the development is planned to be provided by one driveway on Long Hollow Pike. The site driveway will be located approximately 1,1605 feet north of Long Hollow Pike and Allen Road. Surface parking and private parking garages are planned to accommodate the proposed development.

In this study, the current operating characteristics of the adjacent roadway along the property frontage are evaluated. The expected trips generated by the proposed development are determined and distributed to the roadway network. The site driveway is evaluated to determine the anticipated traffic impacts of the project. Finally, recommendations are presented, including roadway improvements and/or traffic control improvements that are needed to accommodate the expected traffic.

FIGURE 1. STUDY AREA



2.0 TRAFFIC REVIEW

This chapter presents the traffic assessment of the proposed site driveway on the adjacent roadway network.

2.1 Existing Roadway Network

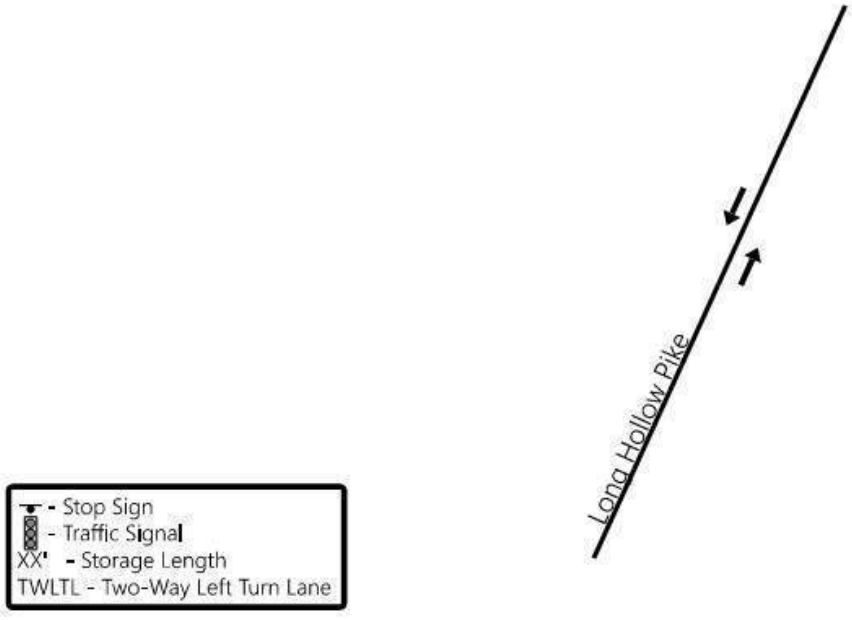
A field inventory of the existing roadway network within the study area was conducted. The direction, number of lanes, roadway classification, and posted speed limit associated with each of the roadways include within the study area is presented in Table 1. The roadway classifications were obtained from Tennessee Department of Transportation (TDOT)'s current *Functional Classification Map*.

TABLE 1. DESCRIPTION OF STUDY ROADWAYS

ROADWAY NAME	DIRECTION	NUMBER OF LANES			TDOT CLASSIFICATION	POSTED SPEED LIMIT (mph)
		EB/NB	WB/SB	TWLTL		
Long Hollow Pike	North-South	1	1	0	Urban Minor Arterial	50

The existing lane configurations and traffic control for each of the study intersections is illustrated in Figure 2.

FIGURE 2. EXISTING ROAD NETWORK



2.2 Existing Traffic Volumes

In order to provide data for the traffic impact analysis, KCI Technologies, Inc. collected 24-hour bidirectional tube counts along the project frontage on a typical weekday in October 2025 while local schools were in session. From the counts, it was determined that the peak hours of traffic flow for the majority of the study intersections occurred from 6:45 – 7:45 AM and 4:30 – 5:30 PM.

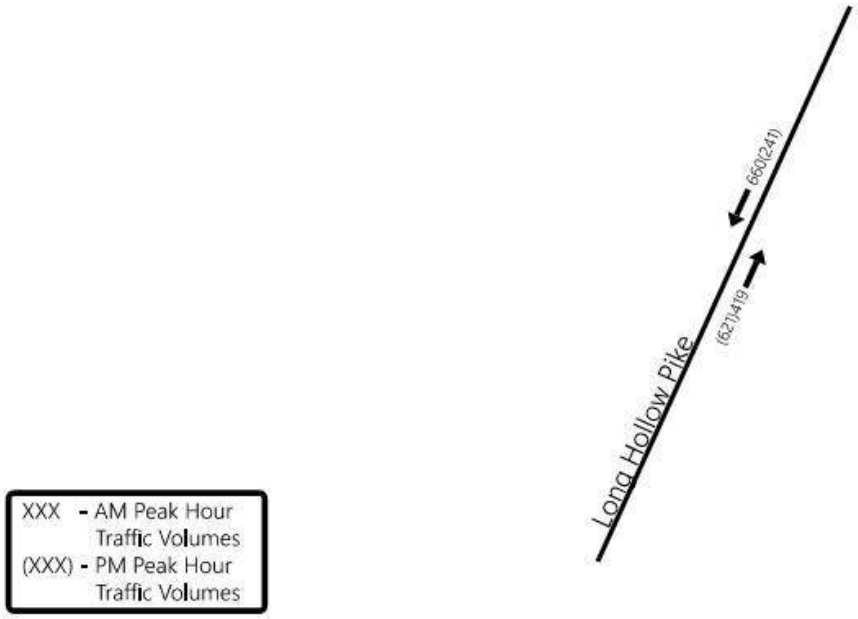
The existing peak hour turning movement volumes are presented in Figure 3. A detailed summary of the traffic counts is included in Appendix B.

In addition to the above information, average daily traffic volumes were obtained from the Tennessee Department of Transportation (TDOT). This is one TDOT count station located in the vicinity of the project site. The count station location and annual average daily traffic (AADT) in 2024 are shown in Table 2. Additional TDOT Count Station data is included in Appendix C.

TABLE 2. TDOT COUNT STATION DATA

ROADWAY	LOCATION	STATION NO.	2024 AADT (vpd)
Long Hollow Pike	South of Project Site Between Madison Creek Road and Copper Creek Drive	83000186	8,952

FIGURE 3. EXISTING PEAK HOUR TRAFFIC VOLUMES



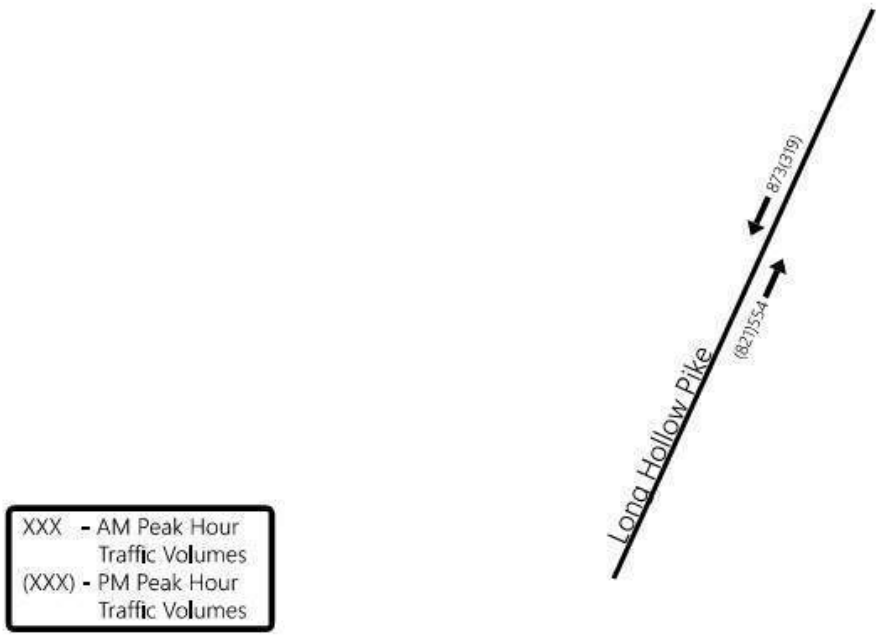
2.3 Future No-Build Traffic Volumes

In order to account for the traffic growth prior to the completion of the proposed project, future no-build traffic volumes were established. For the purposes of this traffic study, the proposed development was assumed to be completed by the year 2027, which is a 2-year horizon.

Historical daily traffic volumes were obtained from the TDOT count station located in the vicinity of the project site. Since 2027, the traffic at the TDOT count station has increased by an average of 13.1% per year. Therefore, the existing peak hour traffic volumes along the project frontage were increased by 15.0% per year for two years to account for anticipated background traffic growth within the study area. The TDOT count station data is included in Appendix C.

The future no-build peak hour traffic volumes for horizon year 2027 is presented in Figure 4. These volumes represent the peak hour traffic that is expected to be on the roadway in 2027 even if the proposed 4408 Long Hollow Pike development is not completed.

FIGURE 4. FUTURE NO-BUILD PEAK HOUR TRAFFIC VOLUMES 2027



2.4 Trip Generation

A traffic generation process was used to estimate the amount of traffic expected to be generated by the proposed 4408 Long Hollow Pike development. Factors for the trip generation were taken from ITE's *Trip Generation*, 11th Edition. According to the developer, the proposed development includes approximately 69 single-family units.

No reductions were applied to the base trip generation to account for internal capture or pass-by trips.

Table 3 presents the daily, AM and PM peak hour trip generation for the proposed development. As shown in Table 3, the proposed development can be expected to generate approximately 717 new trips per day. The AM and PM peak hour trip generations will equal approximately 53 and 70 new trips, respectively. These trips represent the new traffic that will be generated by the proposed 4408 Long Hollow Pike development. The calculations for trip generation are included in Appendix D.

TABLE 3. DEVELOPMENT TRIP GENERATION

ITE CODE	LAND USE	SIZE	GENERATED TRAFFIC				
			DAILY TRAFFIC	AM PEAK		PM PEAK	
				Enter	Exit	Enter	Exit
210	Single-Family Detached Housing	69 units	717	14	39	44	26
	NEW TRIPS		**717**	**14**	**39**	**44**	**26**
				53		**70**	

Source: *Trip Generation*, 11th Edition

2.5 Future Build Traffic Volumes

A directional distribution of traffic generated by the proposed project was established based on the proposed access, the existing roadway network, and the existing travel patterns developed from the existing peak hour traffic counts. As previously discussed, access to the development is planned to be provided by one driveway on Long Hollow Pike. The site driveway will be located approximately 1,160 feet north of Long Hollow Pike and Allen Road.

The overall directional distribution for the proposed development is shown in Figure 5. As shown in the figure,

- approximately 80% of the traffic generated by the development will be oriented to the south on Long Hollow Pike, and
- 20% to the north on Long Hollow Pike.

Based on the directional distribution, the project-generated traffic for the AM and PM peak hour was assigned to the roadway network. The traffic assignment for the proposed development is shown in Figure 6.

The total site-generated traffic volumes were added to the future no-build peak hour traffic volumes in order to obtain the future build traffic volumes for the study intersections. Figure 7 presents the future build AM and PM peak hour traffic volumes expected at the completion of the proposed development.

FIGURE 5. DISTRIBUTION OF TRAFFIC GENERATED BY THE PROJECT SITE

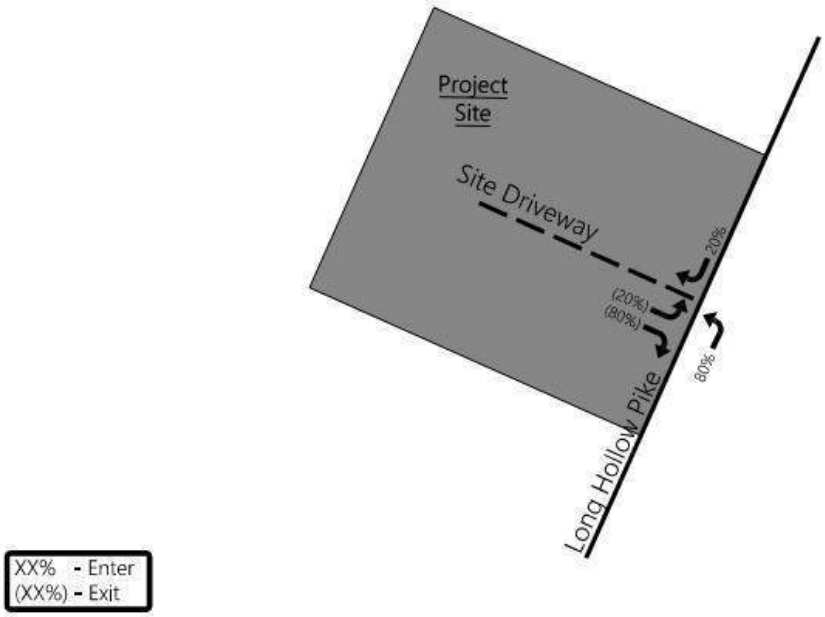


FIGURE 6. ASSIGNMENT OF TRAFFIC GENERATED BY THE PROJECT SITE

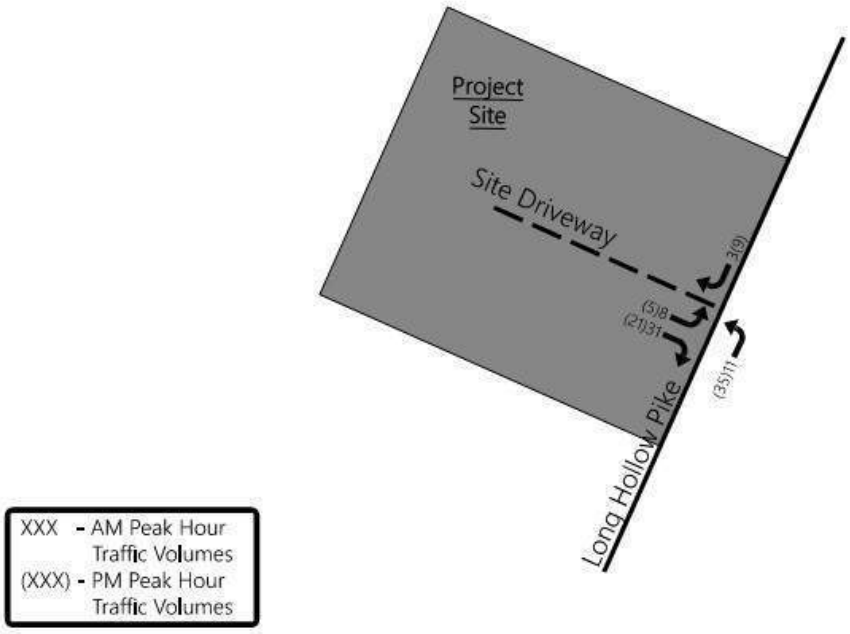
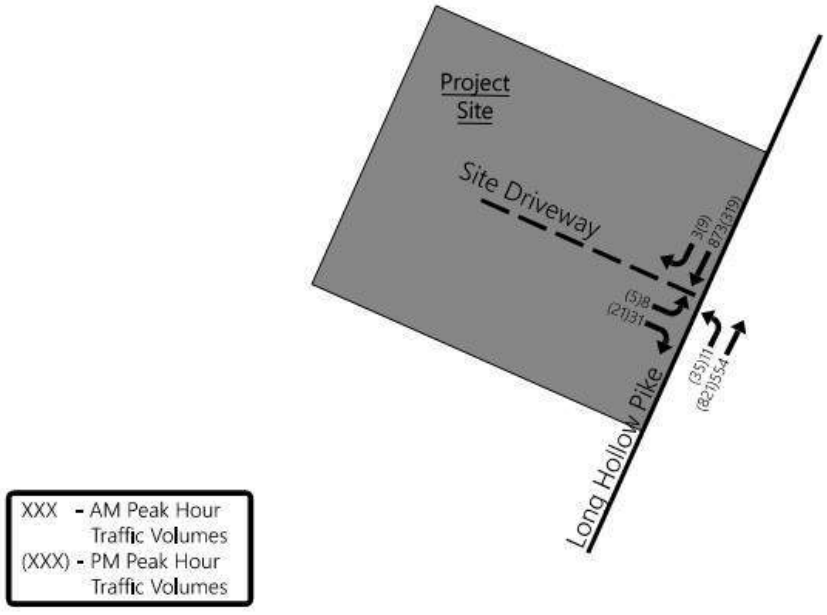


FIGURE 7. FUTURE BUILD PEAK HOUR TRAFFIC VOLUMES



2.6 Lane Warrant Analysis

The site driveway was evaluated for the need to provide a right-turn lane based on the future build traffic volumes. This analysis was based on the procedures outlined in *Evaluating Intersection Improvements* (NCHRP 457). The result of this analysis is presented in Table 4.

TABLE 4. RIGHT-TURN LANE ANALYSIS

INTERSECTION	APPROACH	FUTURE BUILD	
		AM	PM
Long Hollow Pike and Site Driveway	Southbound	No	No

The site driveway was evaluated for the need to provide a left-turn lane based on the future build traffic volumes. This analysis was based on the procedures outlined in American Association of State Highway and Transportation Official's (AASHTO), *A Policy on Geometric Design of Highways and Streets*. The result of this analysis is presented in Table 5.

TABLE 5. LEFT-TURN LANE ANALYSIS

INTERSECTION	APPROACH	FUTURE BUILD	
		AM	PM
Long Hollow Pike and Site Driveway	Northbound	**Yes**	**Yes**

The site driveway was evaluated for the need to provide a two-lane approach based on the future build traffic volumes. This analysis was based on the procedures outlined in *Evaluating Intersection Improvements: An Engineering Study Guide* (NCHRP 457). The result of this analysis is presented in Table 6.

TABLE 6. TWO-LANE MINOR APPROACH ANALYSIS

INTERSECTION	APPROACH	FUTURE BUILD	
		AM	PM
Long Hollow Pike and Site Driveway	Eastbound	No	No

All warrant analyses are included in Appendix E.

2.7 Traffic Level of Service

Capacity analyses were performed in order to determine the impact of the proposed site driveway on the adjacent roadway network. These capacity analyses were also used to evaluate the need for roadway and traffic control improvements at the intersections studied. Capacity analyses were performed utilizing the latest version of Vistro traffic modeling software. The capacity calculations were performed according to the methods outlined in the *Highway Capacity Manual*, 7th Edition.

The capacity analyses result in the determination of a Level of Service (LOS) for an intersection. The LOS is a concept used to describe how well an intersection or roadway operates. LOS A is the best, while LOS F is the worst. LOS D is typically considered as the minimum acceptable LOS for an intersection in an urbanized area. For stop-controlled intersections, a LOS is presented for each critical turning movement. Table 7 presents the descriptions of LOS for unsignalized intersections.

TABLE 7. DESCRIPTIONS OF LEVEL OF SERVICE

LEVEL OF SERVICE	DESCRIPTION	UNSIGNALIZED CONTROL DELAY (sec/veh)
A	Little or no delay	≤ 10.0
B	Short traffic delay	>10 and ≤ 15
C	Average traffic delay	>15 and ≤ 25
D	Long traffic delay	>25 and ≤ 35
E	Very long traffic	>35 and ≤ 50
F	Extreme traffic delay	> 50.0

Source: *Highway Capacity Manual*, 7th Edition

Based on the preliminary lane warrant analysis presented in the previous section of this report, the proposed site driveways are expected to operate as follows:

- Site Driveway
  - The site driveway will operate as stop-controlled with one entering lane and a minimum exiting lane.
  - A left-turn lane was included on the northbound approach of Long Hollow Pike.

The results of the capacity analyses for the proposed site driveway are presented in Table 8. As shown in Table 8, under future build conditions, the capacity analyses indicate that the operational performances of the critical movements at the site driveway are generally expected to operate at LOS C or better in the AM and PM peak hours.

Capacity analyses worksheets are included in Appendix F.

TABLE 8. PEAK HOUR LEVELS OF SERVICE – FUTURE BUILD

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)	
		AM PEAK	PM PEAK
Long Hollow Pike and Site Driveway	Northbound Left-Turn	B (10.1)	A (8.1)
	Eastbound Approach	C (23.8)	B (13.7)

2.8 Queue Length Analysis

In addition to the capacity analyses, the 95th percentile queue lengths for the critical movements of the proposed site driveway were also analyzed and evaluated under future build conditions. Table 9 indicates the results of the queue length analyses for the proposed site driveway.

TABLE 9. PEAK HOUR 95TH PERCENTILE QUEUE LENGTH – FUTURE BUILD

INTERSECTION	TURNING MOVEMENT	AVAILABLE STORAGE (Feet)	95TH PERCENTILE QUEUE LENGTH (Feet)	
			AM PEAK	PM PEAK
Long Hollow Pike and Site Driveway	Northbound Left-Turn	**100**	1	2
	Eastbound Approach	--	16	5

3.0 SAFETY REVIEW

This chapter presents the safety review that evaluates the vehicular movements at the site driveway for potential sight distance constraints in order to determine areas where improvements may be needed to increase safety within the study area.

3.1 Site Access Evaluation

According to the information provided by the developer, access to the development is planned to be provided via one driveway on Long Hollow Pike. The site driveway will be located approximately 1,160 feet north of Long Hollow Pike and Allen Road. The site driveway was evaluated in order to identify any potential sight distance constraints.

Minimum stopping sight distance represents the distance required for motorists to detect an object in the roadway, necessitating a stop, and be able to bring the vehicle to a complete stop before reaching the object. For the 50 mph on Long Hollow Pike the guidelines from *A Policy on Geometric Design of Highways and Streets*, by the American Association of State Highway and Transportation Officials (AASHTO), call for a minimum stopping sight distance of 425 feet.

Additionally, AASHTO also provides minimum design values for intersection sight distance, which allows enough time gap for a motorist to turn from stopped conditions onto a free-flow roadway without requiring motorists on the free-flow roadway to significantly reduce speed. For a speed of 50 mph, the design value for intersection sight distance for a motorist turning from a stop is 588 feet for left-turns and 480 feet for right-turns. The intersection sight distance results are presented in Table 10.

TABLE 10. INTERSECTION SIGHT DISTANCE ANALYSIS

INTERSECTION	LEFT-TURNS FROM STOP (Feet)		RIGHT-TURNS FROM STOP (Feet)	
	DESIGN	AVAILABLE	DESIGN	AVAILABLE
Long Hollow Pike and Site Driveway	588′	>750′	480	>750′

The field investigations indicate that the existing sight distance available at the proposed intersection of Long Hollow Pike and Site Driveway will be adequate for left-turns and right-turns onto Long Hollow Pike.

4.0 CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to analyze the access plan and the traffic impacts associated with this proposed development. The results of the analyses indicate that under future build conditions, the capacity analyses indicate that the operational performances of the critical movements at the site driveway are generally expected to operate at LOS C or better in the AM and PM peak hours.

This chapter presents the mitigation measures needed to mitigate the impacts of the proposed development on the existing network.

4.1 Recommended Improvements

The analyses presented in this study indicate that the impacts of the proposed project on the existing street network will be manageable by providing the recommendations below. The recommendations are as follows:

Long Hollow Pike and Site Driveway

- The eastbound approach of the Site Driveway should be stop-controlled, and a stop bar and R1-1 'Stop' sign should be installed on the egress approach.
- The Site Driveway should be designed to include sufficient width for one entering lane and a minimum of one exiting lane.
- A northbound left-turn lane should be installed on Long Hollow Pike with approximately 100 feet of storage.

Additional Recommendations

- As part of the construction of the project, all internal and external driveway connections should be designed such that the departure sight triangles, as specified by AASHTO, will be clear of all sight obstructions, including landscaping, existing vegetation, monument signs/walls, fences, etc.
- Final design of internal roadways and parking should meet all TDOT standards and the latest version of "A Policy of Geometric Design of Highways and Streets" published by AASHTO. Any parking lots and streets associated with the development should ensure that passenger cars and emergency vehicles are capable of making all turning movements. Internal intersections should be two-way stop-controlled unless all-way stop control warrants are met.

In summary, based on the analyses and evaluations conducted, no further recommendations are presented for the proposed 4408 Long Hollow Pike development.

APPENDICES

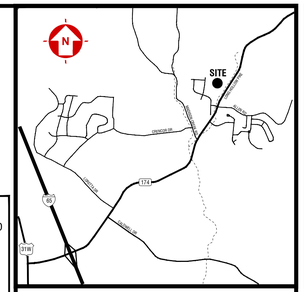
APPENDIX A
PRELIMINARY SITE PLAN
APPENDIX B
DETAILED TUBE COUNTS
APPENDIX C
TDOT COUNT DATA
APPENDIX D
TRIP GENERATION CALCULATIONS
APPENDIX E
WARRANT ANALYSIS
APPENDIX F
CAPACITY ANALYSES

APPENDIX A
PRELIMINARY SITE PLAN

Know what's below. Call before you dig.

FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, PROJECT PARCEL IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AND IS SHOWN IN THE AREA ZONE 'X' ON FEMA FIRM MAP NUMBER 47165C0381H ON THE FLOOD INSURANCE RATE MAPS FOR CITY OF GOODLETTSVILLE, TN, WITH AN EFFECTIVE DATE OF 2/26/20217.



SITE DATA

JURISDICTION:	CITY OF GOODLETTSVILLE
ZONING CLASSIFICATION:	LDRPUD - LOW DENSITY RESIDENTIAL PLANNED UNIT DEVELOPMENT (PROPOSED)
OVERALL DENSITY:	LDRPUD - 0.0 TO 1.7 UNITS PER ACRE PROPOSED - 69 LOTS (1.53 UNITS PER ACRE)
PROPOSED USE:	SINGLE FAMILY RESIDENTIAL
PROJECT AREA:	45.02± ACRES
OPEN SPACE:	MINIMUM - 10%; PROVIDED - 25±%
MIN. BUILDING SETBACKS:	
FRONT:	30'
SIDE:	10'
REAR:	20' (LOTS 14-27 and 37-44 HAVE A 45' REAR BUILDING SETBACK)
MIN. LOT WIDTH AT BUILDING SETBACK	VARIES - 70' MINIMUM
PARKING REQUIREMENTS:	
SINGLE AND TWO-FAMILY:	4 SPACES PER UNIT WITH 3 OR MORE BEDROOMS
VISITOR PARKING:	REQUIRED: 1 PARKING SPACE PER 5 RESIDENTIAL UNITS REQUIRED - 69/5 =14 SPACES; PROVIDED 17 SPACES

RESIDENTIAL DESIGN REQUIREMENTS:

THE INTENT OF THIS SUBSECTION IS TO GUIDE THE DEVELOPMENT OF RESIDENTIAL NEIGHBORHOODS THAT ARE COMPATIBLE THROUGHOUT THE DEVELOPMENT AND THAT COMPLEMENT EXISTING DEVELOPMENT AND THE NATURAL ENVIRONMENT. ARCHITECTURAL ELEVATIONS ARE REQUIRED WITH EACH DEVELOPMENT WITH AN ARCHITECTURAL THEME FOR ALL BUILDINGS INCLUDING A VARIETY IN BUILDING ROOF PITCHES AND BUILDING WALL AND ROOF DESIGNS AND MATERIALS, BUILDING COLORS, BUILDING ACCENT DESIGNS AND DESIGNS PREVENTING BLANK WALLS FRONTING STREETS. PLANS SHALL INCLUDE THE GARAGES OR COVERED PARKING FRONTAGE LOCATIONS AND ORIENTATION WITH OFF-STREET PARKING. PLANS SHALL INCLUDE BUILDING DESIGNS CONNECTED TO THE PROJECT STREETSCAPE DESIGN. GARAGE OR COVERED PARKING DESIGN FOR RESIDENTIAL PLANNED UNIT DEVELOPMENTS SHALL INCLUDE A DESIGN OR VARIETY OF DESIGNS THAT PREVENT MORE THAN 33 PERCENT OF THE TOTAL UNIT NUMBER OF FRONT'LOADED GARAGES DOORS OR OPEN PARKING OPENINGS THAT ARE LEVEL WITH OR IN FRONT OF THE FRONT LINE OF THE RESIDENTIAL STRUCTURE. FRONT LOADED GARAGES OR COVERED OPEN PARKING INCLUDE GARAGES AND COVERED PARKING WITH THE GARAGE DOOR OR COVERED PARKING OPENING EXCEEDING 25 PERCENT OF THE FRONT BUILDING ELEVATION TOTAL WIDTH DIMENSION. EXCEPT FOR PARKING STRUCTURES FOR DEVELOPMENT SHARED PARKING, ATTACHED PARKING IN GARAGES ARE IN ADDITION TO THE REQUIRED PARKING SPACE REQUIREMENT FOR EACH RESIDENTIAL UNIT. THE PROJECT MASTER PLANS TO INCLUDE THE FOLLOWING GARAGE OR COVERED PARKING DESIGNS, OR OTHER ALTERNATIVE DESIGNS MAY BE REVIEWED WITH THE MASTER PLAN PROCESS.

(A) SIDE LOADED GARAGES OR COVERED PARKING
(B) ALLEY LOADED OR SECONDARY ROADWAY LOADED GARAGES OR COVERED PARKING WITH SIDEWALK CONNECTING EACH UNIT TO BE LOCATED AT THE FRONT OF THE RESIDENTIAL STRUCTURE FRONTING THE PRIMARY STREET.
(C) RECESSED FRONT LOADED GARAGES OR COVERED PARKING FOR 10 FEET OR MORE BEHIND THE FRONT LINE OF THE HOUSE.
(D) COURTYARD SIDE LOADED GARAGES AT THE FRONT OF THE STRUCTURE.
(E) FRONT LOADED GARAGES WITH GARAGE DOOR(S) LESS THAN 25 PERCENT OF THE FRONT BUILDING ELEVATION WIDTH DIMENSION.

ALL BUILDING WITHIN A RESIDENTIAL PLANNED UNIT DEVELOPMENT SHALL MEET THE PROVISIONS OF THE CITY'S DESIGN GUIDELINES AND THE FOLLOWING. ALL FACADES AND EXTERIOR BUILDING WALLS SHALL INCLUDE A MINIMUM 50 PERCENT MASONRY BRICK AND/OR STONE. THE REMAINING 50 PERCENT ON ONE AND TWO FAMILY ATTACHED AND ATTACHED DWELLINGS MAY BE SPLIT FACE BLOCK, CEMENT FIBER BOARD, WOOD SIDING, EIFS, AND GLASS. A LIMITED PERCENTAGE OF METAL AND VINYL SIDING MAY BE PERMITTED FOR ACCENTS AND DECORATIVE FEATURES. ALL EXPOSED PORTIONS OF BUILDING FOUNDATIONS SHALL BE MASONRY BRICK OR STONE.
THE CITY REQUIRES TWO CAR GARAGES TO INCLUDE 22' X 22' INTERIOR DIMENSIONS.

TAX MAP:140
PARCELS: 124 & 124.01
PROPOSED ZONING: RPUD

PLANS PREPARED FOR:
PHILLIPS BUILDERS
2819 BRANSFORD AVE.
NASHVILLE, TN 37204
615-922-3313

PLANS PREPARED BY:
4209 GALLATIN PIKE
NASHVILLE, TN 37216
TELE:(615) 227-5863
www.dmgnashville.com
DEVELOPMENT MANAGEMENT GROUP, LLC

IRONWOOD
RESIDENTIAL DEVELOPMENT
4408 LONG HOLLOW PIKE
SUMNER COUNTY, TENNESSEE

REVISIONS

NO.	DESCRIPTION	DATE

DATE:	09/02/25
DMG Project No:	25184

SITE PLAN

MSP1.0

ISSUED FOR: ☐ CHECKSET ■ AGENCY REVIEW ☐ BID PURPOSES ☐ CONSTRUCTION

0 50 100 200 300

SCALE 1" = 100'

Z:\PROJECT DATA\SC\2025\25184 - Phillips Builders - Residential Development - 4408 Long Hollow Pike - Goodlettsville TN\Plans\Appd Site Plan\25184 Residential Long Hollow Pike Summer Co_08252...

APPENDIX B
DETAILED TUBE COUNTS

KCI TECHNOLOGIES
Nashville, TN

untitled_0
10/21/2025
10/21/2025

10/21/2025 Time	northbound	southbound	Total
12:00 AM	3	1	4
12:15	4	1	5
12:30	2	2	4
12:45	5	3	8
1:00	1	1	2
1:15	0	2	2
1:30	0	1	1
1:45	3	2	5
2:00	0	1	1
2:15	1	1	2
2:30	0	1	1
2:45	2	0	2
3:00	3	4	7
3:15	2	0	2
3:30	2	2	4
3:45	2	3	5
4:00	3	2	5
4:15	3	6	9
4:30	1	8	9
4:45	3	12	15
5:00	5	26	31
5:15	6	15	21
5:30	7	32	39
5:45	13	43	56
6:00	12	83	95
6:15	31	126	157
6:30	20	172	192
6:45	67	206	273
7:00	108	160	268
7:15	116	155	271
7:30	128	139	267
7:45	70	136	206
8:00	54	141	195
8:15	45	102	147
8:30	64	90	154
8:45	45	70	115
9:00	39	66	105
9:15	40	45	85
9:30	37	41	78
9:45	29	49	78
10:00	29	35	64
10:15	48	38	86
10:30	44	38	82
10:45	47	33	80
11:00	43	35	78
11:15	44	28	72
11:30	42	34	76
11:45	53	38	91
Total	1326	2229	3555
Percent	37.3%	62.7%	
Peak	7:00	6:30	6:45
Volume	422	693	1079
Peak Factor	0.824	0.841	0.988

KCI TECHNOLOGIES
Nashville, TN

untitled_0
10/21/2025
10/21/2025

10/21/2025 Time	northbound	southbound		Total
12:00 PM	62	58		120
12:15	54	49		103
12:30	72	55		127
12:45	49	67		116
1:00	63	51		114
1:15	71	49		120
1:30	70	48		118
1:45	53	52		105
2:00	74	42		116
2:15	106	43		149
2:30	77	37		114
2:45	83	63		146
3:00	103	67		170
3:15	101	72		173
3:30	109	60		169
3:45	115	46		161
4:00	143	54		197
4:15	144	52		196
4:30	146	65		211
4:45	147	60		207
5:00	165	56		221
5:15	163	60		223
5:30	143	37		180
5:45	120	46		166
6:00	102	45		147
6:15	69	33		102
6:30	73	22		95
6:45	68	26		94
7:00	38	34		72
7:15	47	26		73
7:30	34	18		52
7:45	27	25		52
8:00	24	19		43
8:15	28	25		53
8:30	34	15		49
8:45	53	28		81
9:00	29	10		39
9:15	16	11		27
9:30	11	9		20
9:45	16	11		27
10:00	16	11		27
10:15	19	6		25
10:30	12	3		15
10:45	8	4		12
11:00	5	3		8
11:15	5	5		10
11:30	4	4		8
11:45	5	2		7
Total	3176	1684		4860
Percent	65.3%	34.7%		
Peak	4:30	2:45		4:30
Volume	621	262		862
Peak Factor	0.941	0.910		0.966
Grand Total	4502	3913		8415
Percent	53.5%	46.5%		
AADT		ADT: 8,415	AADT: 8,415	

APPENDIX C
TDOT COUNT DATA

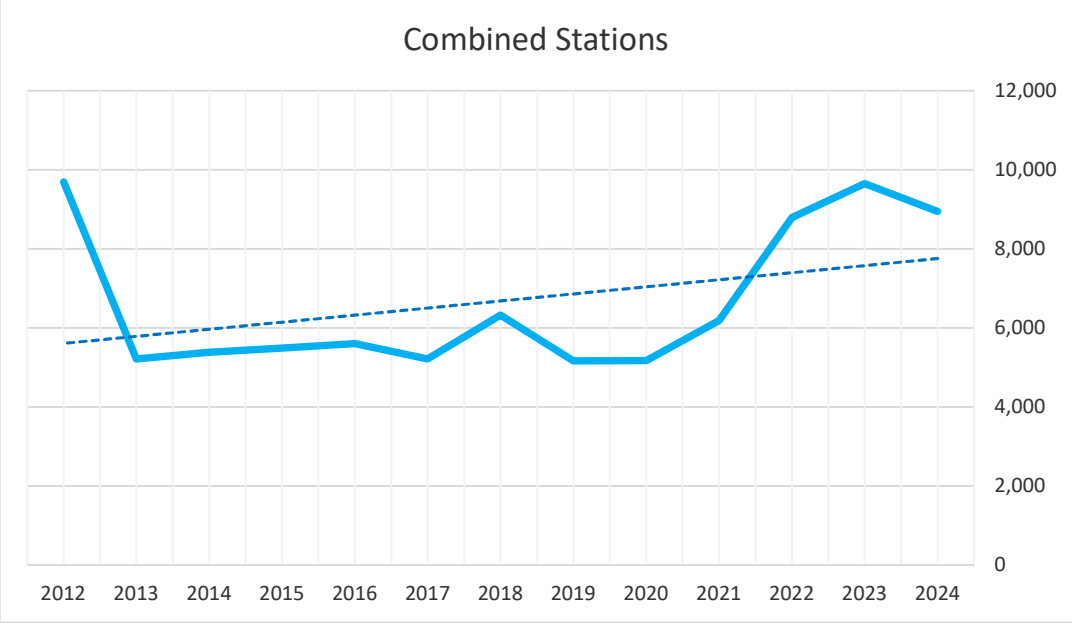
TDOT AADT DATA	
Station	83000186 - Long Hollow Pike
Location	South of Project Site; Between Madison Creek Road and Copper Creek Drive
County	Sumner
2024	8,952
2023	9,654
2022	8,794
2021	6,190
2020	5,180
2019	5,163
2018	6,324
2017	5,217
2016	5,603
2015	5,495
2014	5,389
2013	5,213
2012	9,692

TDOT AADT Background Growth Trend Analysis

Year	South of Project Site; Between Madison Creek Road		TOTAL	
	83000186 - Long Hollow Pike	% Difference		% Difference
2024	8,952	-7.3%	8,952	-7.3%
2023	9,654	9.8%	9,654	9.8%
2022	8,794	42.1%	8,794	42.1%
2021	6,190	19.5%	6,190	19.5%
2020	5,180	0.3%	5,180	0.3%
2019	5,163	-18.4%	5,163	-18.4%
2018	6,324	21.2%	6,324	21.2%
2017	5,217	-6.9%	5,217	-6.9%
2016	5,603	2.0%	5,603	2.0%
2015	5,495	2.0%	5,495	2.0%
2014	5,389	3.4%	5,389	3.4%
2013	5,213	-46.2%	5,213	-46.2%
2012	9,692	--	9,692	--

Exponential Rate

Since 2023 Annual	-7.27%	-7.27%
Since 2022 Annual	0.89%	0.89%
Since 2021 Annual	13.09%	13.09%
Since 2020 Annual	14.66%	14.66%
Since 2019 Annual	11.64%	11.64%
Since 2018 Annual	5.96%	5.96%
Since 2017 Annual	8.02%	8.02%
Since 2016 Annual	6.03%	6.03%
Since 2015 Annual	5.57%	5.57%
Since 2014 Annual	5.21%	5.21%



APPENDIX D
TRIP GENERATION CALCULATIONS

TRIP GENERATION

Single-Family Detached Housing

210 ITE Land Code

69 Dwelling Units

Average Daily Traffic:

Ln(T) = (0.92 * Ln(X) + 2.68)

Ln(T) = (0.92 * Ln(69) + 2.68)

T = 717

A.M. Peak Hour:

Ln(T) = (0.91 * Ln(X) + 0.12)

Ln(T) = (0.91 * Ln(69) + 0.12)

T = 53

Enter =	14	26%
Exit =	39	74%

P.M. Peak Hour:

Ln(T) = (0.94 * Ln(X) + 0.27)

Ln(T) = (0.94 * Ln(69) + 0.27)

T = 70

Enter =	44	63%
Exit =	26	37%

APPENDIX E
WARRANT ANALYSIS

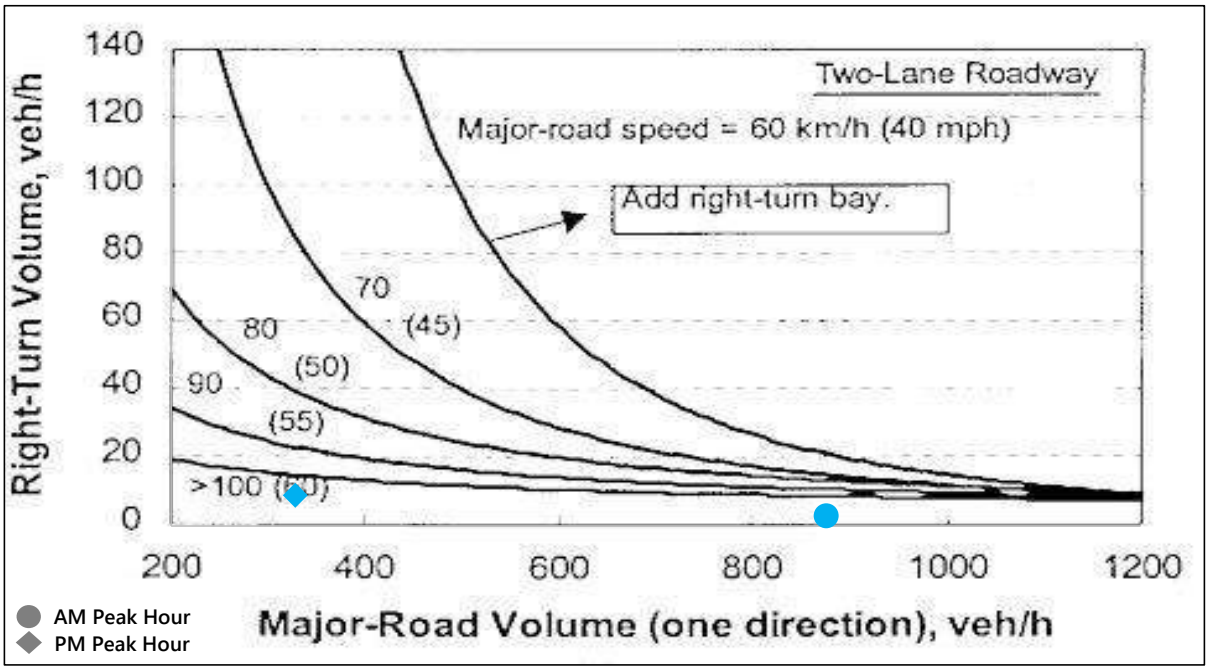
Future Build Conditions (Peak Hours)

RIGHT-TURN LANE WARRANT ANALYSIS

(Based on NCHRP 457: Evaluating Intersection Improvements)

INTERSECTION	APPROACH	ID	SPEED LIMIT	AM PEAK			PM PEAK		
				V_R*	V_A*	WARRANT MET?	V_R*	V_A*	WARRANT MET?
Long Hollow Pike and Site Driveway	Southbound		50	3	876	No	9	328	No

V_R = Right Turn Volumes, V_A = Advancing Volumes

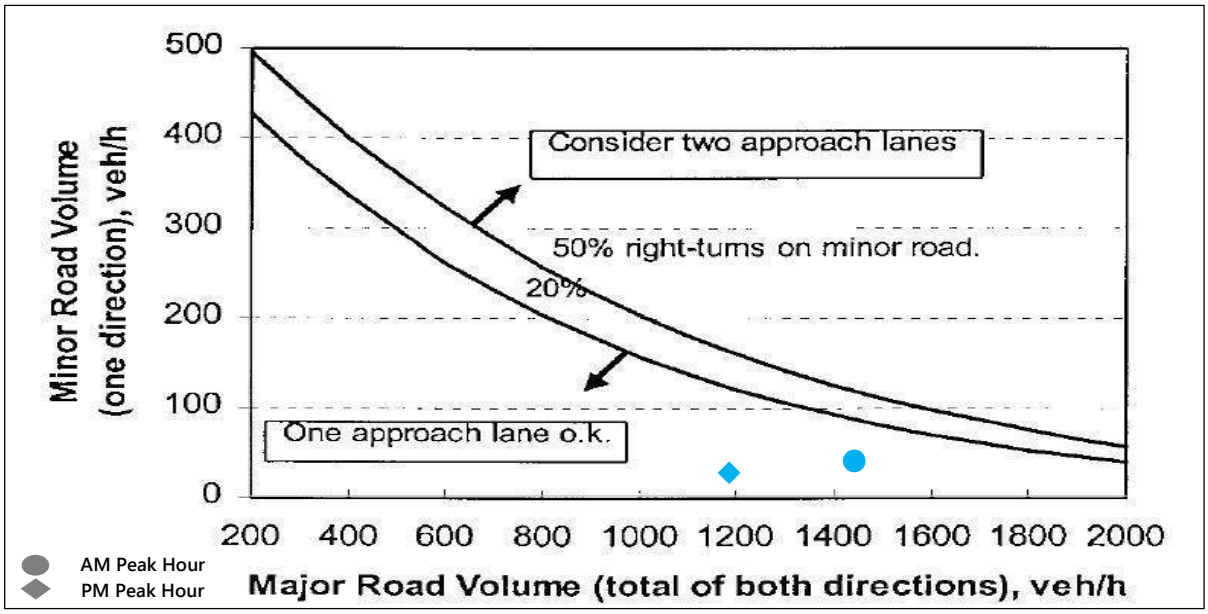


Future Build Conditions (Peak Hours)

MINOR APPROACH ANALYSES

(Based on NCHRP 457: Evaluating Intersection Improvements)

INTERSECTION	APPROACH	ID	AM PEAK			PM PEAK		
			MINOR ROAD VOLUME	MAJOR ROAD VOLUME	WARRANT MET?	MINOR ROAD VOLUME	MAJOR ROAD VOLUME	WARRANT MET?
Long Hollow Pike and Site Driveway	Eastbound		39	1441	No	26	1184	No

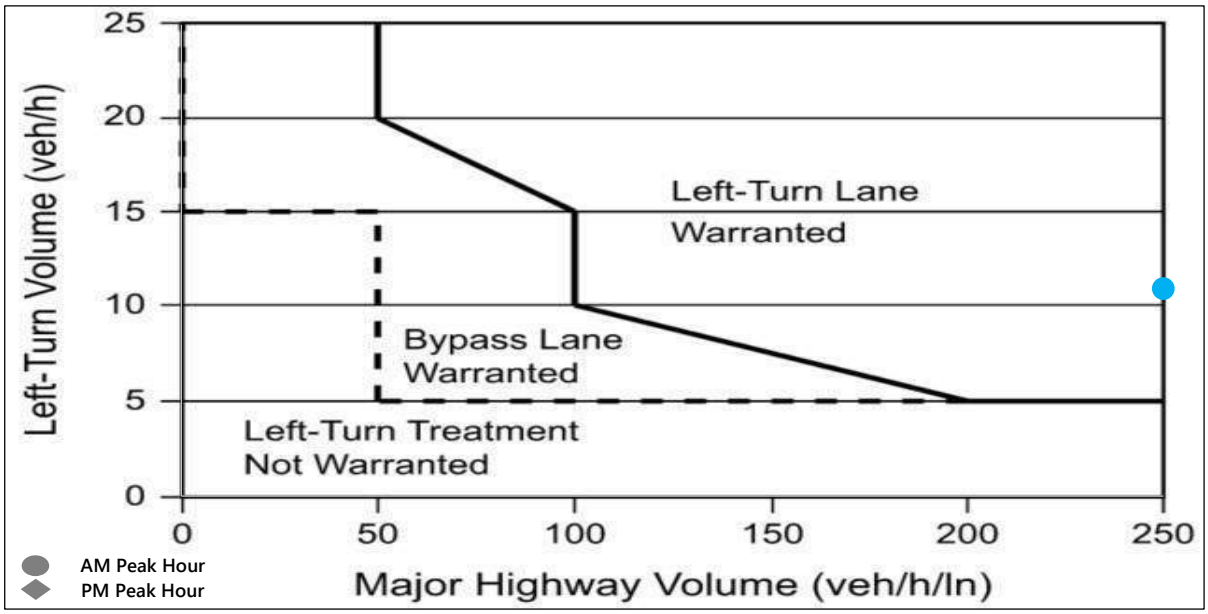


Future Build Conditions (Peak Hours)

LEFT-TURN LANE ANALYSES - THREE-LEG INTERSECTION IN RURAL AREAS (TWO-LANE)

(Based on AASHTO Green Book 2018)

INTERSECTION	APPROACH	ID	AM PEAK			PM PEAK		
			LEFT TURN VOLUME	MAJOR ROAD VOLUME	WARRANT MET?	LEFT TURN VOLUME	MAJOR ROAD VOLUME	WARRANT MET?
Long Hollow Pike and Site Driveway	Eastbound		11	1430	Yes	35	1149	Yes



APPENDIX F
CAPACITY ANALYSES

FUTURE BUILD CONDITIONS CAPACITY ANALYSES

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Intersection 2: Long Hollow Pike and Site Driveway - PM 5
Traffic Volume - Future Total Volume 7

4408 Long Hollow Pike TIS

Vistro File: \...\4408 Long Hollow Pike.vistro
Report File: \...\Future Build Analysis.pdf
Scenario: Base Scenario
11/3/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Long Hollow Pike and Site Driveway - AM	Two-way stop	HCM 7th Edition	EB Left	0.076	38.8	E
2	Long Hollow Pike and Site Driveway - PM	Two-way stop	HCM 7th Edition	EB Left	0.030	27.0	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Long Hollow Pike and Site Driveway - AM

Control Type:	Two-way stop	Delay (sec / veh):	38.8
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.076

Intersection Setup

Name	Long Hollow Pike		Long Hollow Pike		Site Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00		50.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Long Hollow Pike		Long Hollow Pike		Site Driveway	
Base Volume Input [veh/h]	11	554	873	3	8	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	554	873	3	8	31
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	151	237	1	2	8
Total Analysis Volume [veh/h]	12	602	949	3	9	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.08	0.11
d_M, Delay for Movement [s/veh]	10.07	0.00	0.00	0.00	38.78	19.85
Movement LOS	B	A	A	A	E	C
95th-Percentile Queue Length [veh/ln]	0.05	0.00	0.00	0.00	0.66	0.66
95th-Percentile Queue Length [ft/ln]	1.27	0.00	0.00	0.00	16.43	16.43
d_A, Approach Delay [s/veh]	0.20		0.00		23.81	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.71					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 2: Long Hollow Pike and Site Driveway - PM

Control Type:	Two-way stop	Delay (sec / veh):	27.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

Name	Long Hollow Pike		Long Hollow Pike		Site Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00		50.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Long Hollow Pike		Long Hollow Pike		Site Driveway	
Base Volume Input [veh/h]	35	821	319	9	5	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	821	319	9	5	21
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	223	87	2	1	6
Total Analysis Volume [veh/h]	38	892	347	10	5	23
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.03	0.03
d_M, Delay for Movement [s/veh]	8.09	0.00	0.00	0.00	27.04	10.75
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.00	0.20	0.20
95th-Percentile Queue Length [ft/ln]	2.45	0.00	0.00	0.00	5.03	5.03
d_A, Approach Delay [s/veh]	0.33		0.00		13.66	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.52					
Intersection LOS	D					

Traffic Volume - Future Total Volume