PLANNING COMMISSION PACKET

November 1, 2016

Hello All,

Enclosed please find your packet for the meeting of November 7, 2016.

We have:

- Mountain Brook Elementary Field Restroom
- Clean-Up Resurvey
- St. Luke's Development Plan

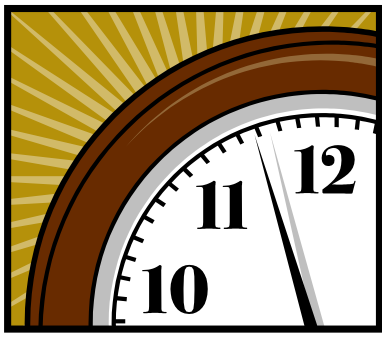
If you receive any citizen inquiries regarding these cases the plans may be viewed by going to:
www.mtnbrook.org

- Government
- Other Meeting Agendas
- Planning Commission
- 2016-Nov-7 Planning Commission Agenda

If you have any questions about these cases please don't hesitate to give me a call at 802-3821 or send me an email at hazend@mtnbrook.org.

Looking forward to seeing you on Monday!
Dana

MINUTES



To Follow Under Separate Cover

MEETING AGENDA
CITY OF MOUNTAIN BROOK
PLANNING COMMISSION
NOVEMBER 7, 2016
PRE-MEETING: (ROOM A106) 5:00 P.M.
REGULAR MEETING: (ROOM A108) 5:30 P.M.
CITY HALL, 56 CHURCH STREET, MOUNTAIN BROOK, AL 35213

1. Call To Order

2. Approval of Agenda

3. Approval of Minutes: October 3, 2016

4. **Case P-16-28:** Consideration of a development plan of the Mountain Brook Elementary School field for the installation of a restroom facility. - **3041 Cahaba Road – Mountain Brook Board of Education, City of Mountain Brook Parks and Recreation.**

5. **Case P-16-29**: Meadow's Resurvey of Estate 303, Mountain Brook Estates, Canterbury Sector, being a resurvey of the East 75 feet of Estate 303 Mountain Brook Estates, Canterbury Sector, as recorded in Map Book 19, Page 40 in the Office of the Judge of Probate, Jefferson County Alabama; situated in the SW ¼ of NE ¼ of Section 8, TWP-18S, R-2W, Jefferson County, Alabama. - **2528 Heathermoor Road,** Richard and Lindsey Meadows

6. **Case P-16-24:** Consideration of a development plan of Saint Luke's Episcopal Church for additions and alterations to the facility. **– 3732 Montrose Road,** Episcopal Church in the Diocese of Alabama. *Carried over from September 6, 2016 and October 3, 2016.*

7. Next Meeting: December 5, 2016

8. Adjournment

Planning Commission Application
PART I

Project Data

Address of Subject Property 3041 Cambridge Road (Mountain Brook Elem)

Zoning Classification Res-A

Name of Property Owner(s) Mountain Brook School Board

Phone Number 871-4608 Email

Name of Representative Agent (if applicable)

Shanda Williams - Mountain Brook Parks + Rec

Phone Number 802-3879 Email williamssh@mtnbrook.org

☒ Property owner or representative agent must be present at hearing

Plans

☒ See applicable Section of the Zoning Ordinance for submittal requirements pertaining to your particular application. Applicable Code Section may be found in Part II, list of application types. Contact City Planner with any specific questions as to required plans submittal.

P-16-28

October 10, 2016

Restroom at Mountain Brook Elementary Field

To Whom It May Concern:

The Park Board would like to install a restroom near the field at Mountain Brook Elementary. This is the third time this request has been presented to the Planning Commission, but significant adjustments have been made to the plan.

Before the bidding process could be completed, a group of Mountain Brook residents objected to the pre-fabricated restroom and proposed a different design to the Park Board. The Park Board approved the new design.

This restroom will still have two handicap accessible restrooms and a maintenance closet. It will be approximately 23' x 14' with stone veneer walls and a slate roof. The plans and sketch of the restroom have been included with this request.

This restroom will be placed at the corner of Heathermoor Road and Cahaba Road. It will be approximately 5 foot inside the existing sidewalk that runs parallel with Cahaba Road and approximately 5-7 foot to the outside of the sidewalk that runs along Heathermoor. It will be level with the sidewalk that runs along Cahaba Road and will face the road for the easiest ADA access.

Because this restroom is so much nicer than the last proposed restroom, there is no need to plant so heavily around it. It is also more expensive and the group will be fundraising to help make up the difference.

Once all the approvals have been given, we will move forward with the bidding process and hope to have it completed by the Spring.

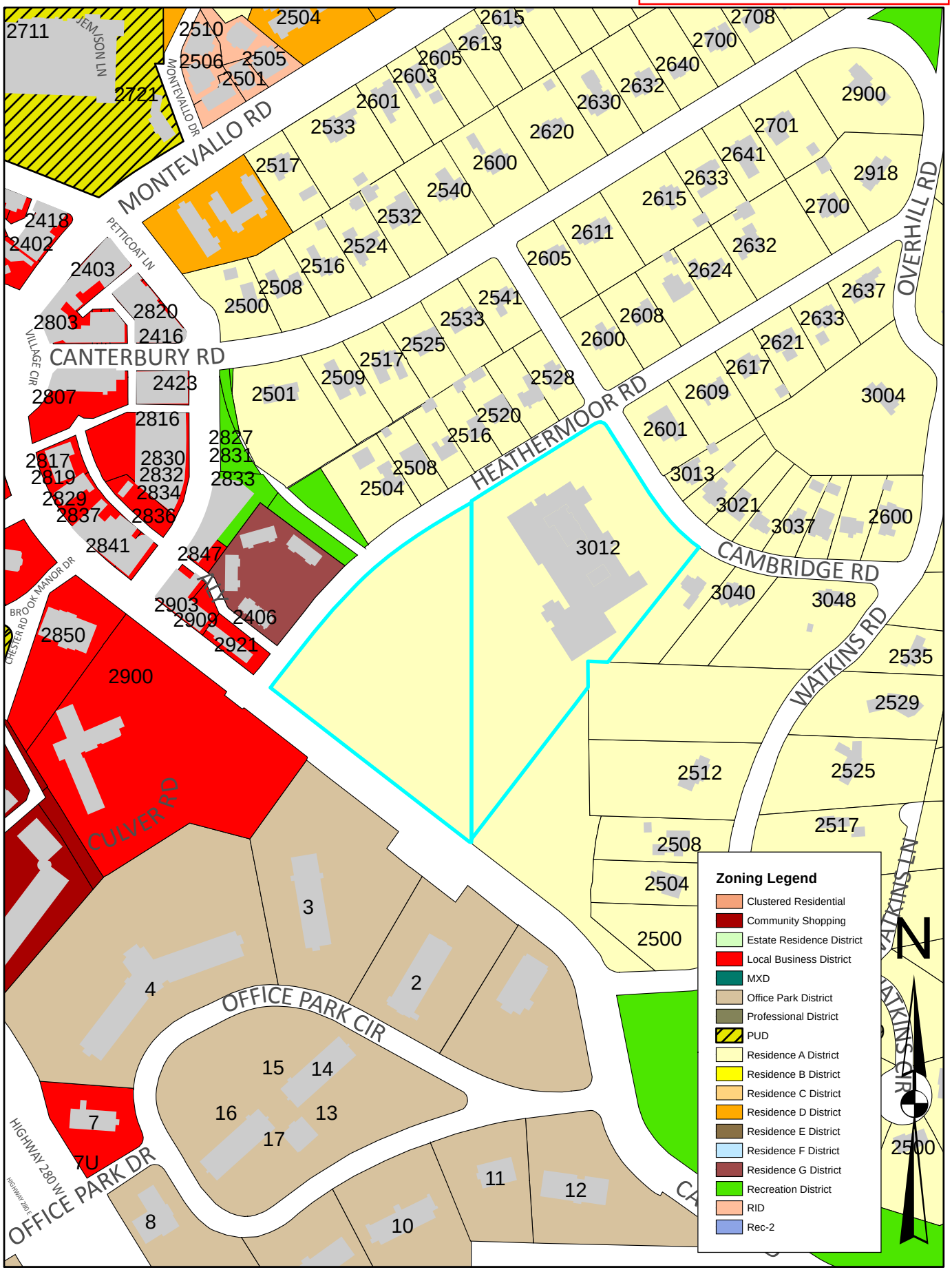
The last time this project was presented to the Planning Commission, it also included a scoreboard. Since the residents did not object to the scoreboard, we went ahead with the installation of it. It is now being used by MBA for football.

If you have any questions, please contact me at 802-3879 or at williamssh@mtnbrook.org.

Sincerely,

Shanda Williams
Superintendent of Parks and Recreation

P-16-28 Zoning



P-16-28

Background
On May 2, 2015 the Commission approved a restroom facility and score board at the Mountain Brook Elementary fields (near the tennis courts), but due to flood plain issues, the previous location would not work for the restroom facility.

On July 5, 2016, the Commission approved a revised location near the walking trail along Cahaba Road, and the proposed score board location has moved, along with the restroom, in order to keep electrical lines together.

Meanwhile, members of a neighboring garden club expressed objection to the City Council regarding the building's location being approved next to the garden club's recently installed memorial bench. The objection mainly stemmed from the lack of aesthetic appeal of the restroom's architecture. In the months since, the architectural style has been revised through efforts of local design professionals, and there is an on-going effort on the part of the neighborhood to raise the funds to allow the building materials proposed herein; the proposed location is the same as approved in July.

Petition Summary
Request for a revised development plan for the Mountain Brook Elementary recreational fields to add a permanent restroom facility.

Section 129-32 of the zoning code requires Planning Commission approval for improvements to an institutional use in the Residence-A District. See attached letter from the City's Parks and Recreation Director for specifics about the proposed project.

Subject Property and Surrounding Land Uses
The subject property contains the recreational fields adjoining Mountain Brook Elementary and is surrounded by a mixture of single family, multi-family, institutional office and commercial uses.

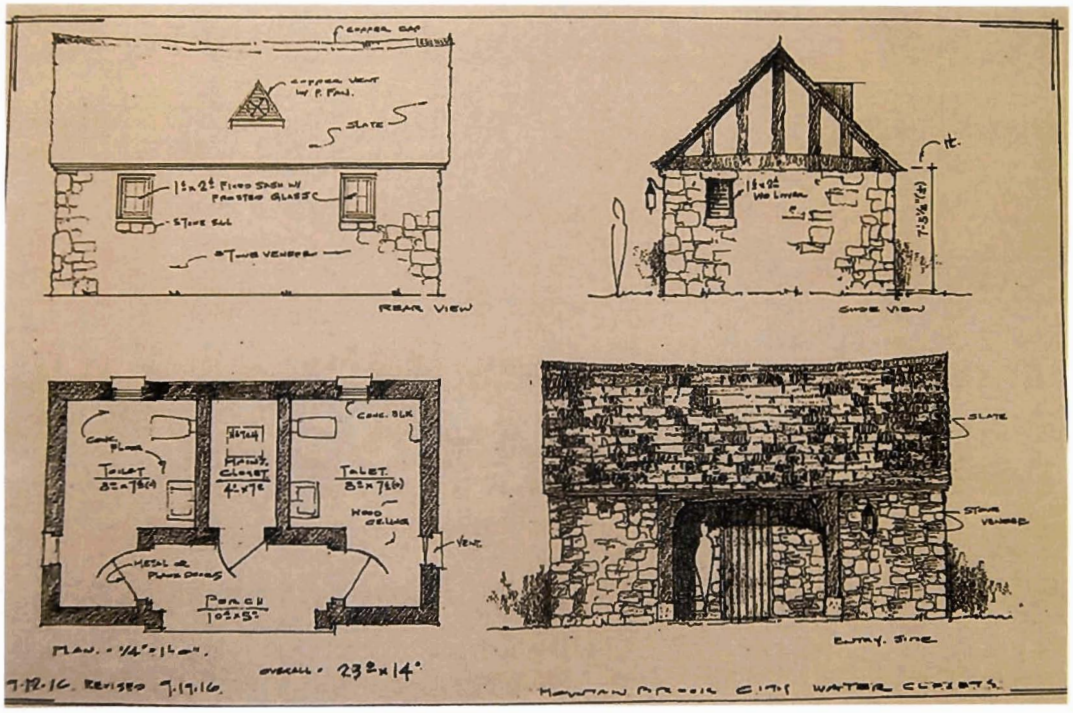
Affected Regulation
Article III, Residence-A District; Section 129-32 Conditions on Certain Permitted Uses.

Appends
LOCATION: 3041 Cambridge Road

ZONING DISTRICT: Res-A

OWNER: Mountain Brook Board of Education

This is a photo of the plan for the restroom.



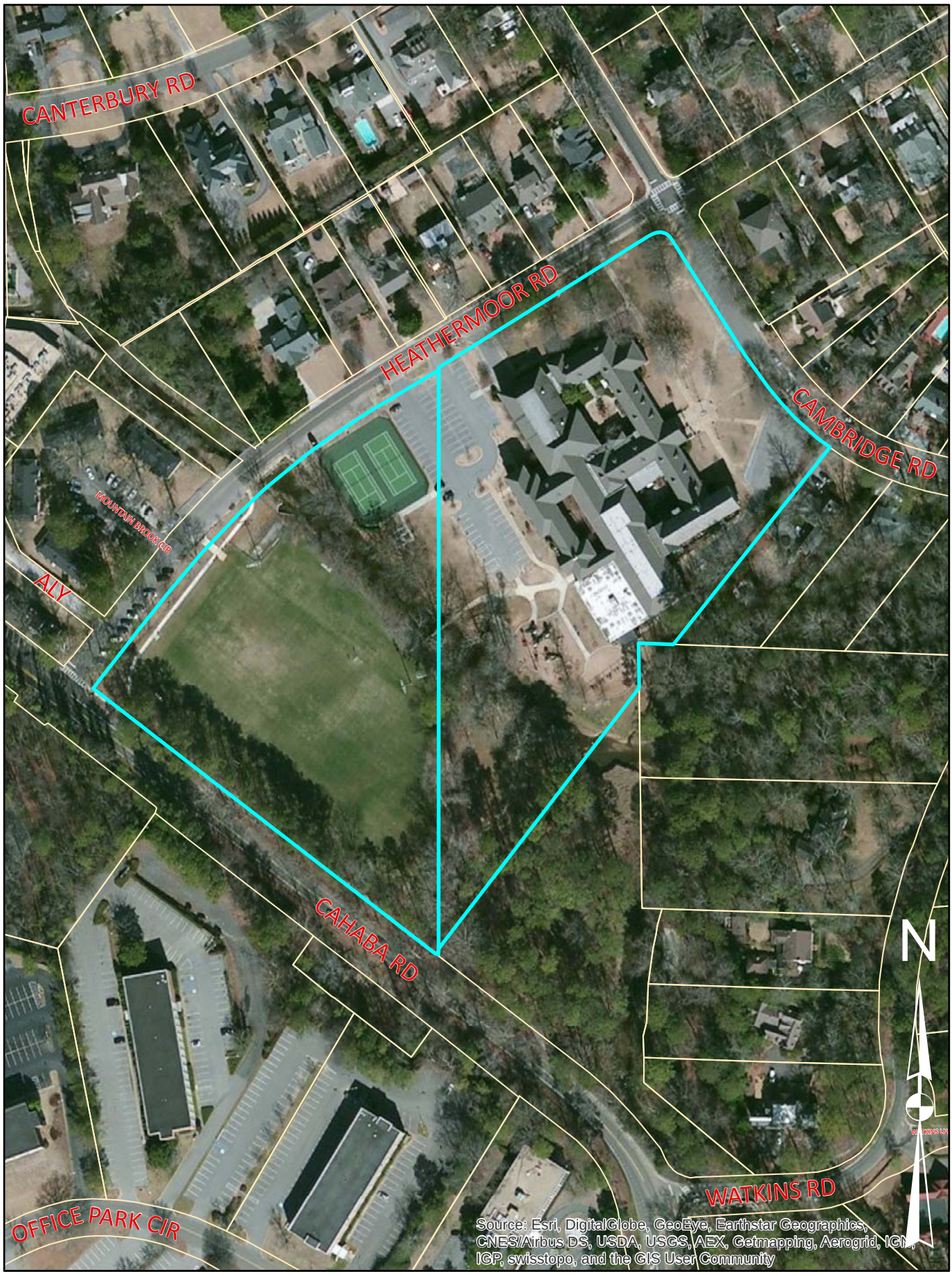
Location of the restroom.

Close-up of the restroom in conjuction to the existing sidewalks. (not to scale)

This is a photo of the restroom. We can choose a different color wall and roof.

eboard at the Complex

P-16-28 Aerial



Planning Commission Application

Project Data

Address of Subject Property 2528 HEATHERMOOR ROAD

Zoning Classification _____

Name of Property Owner(s) RICHARD & LINDSEY MEADOWS

Phone Number _____ Email LINDSEYBONDDESIGN@gmail.com

Name of Representative Agent (if applicable)

JAMES VAUGHLIN

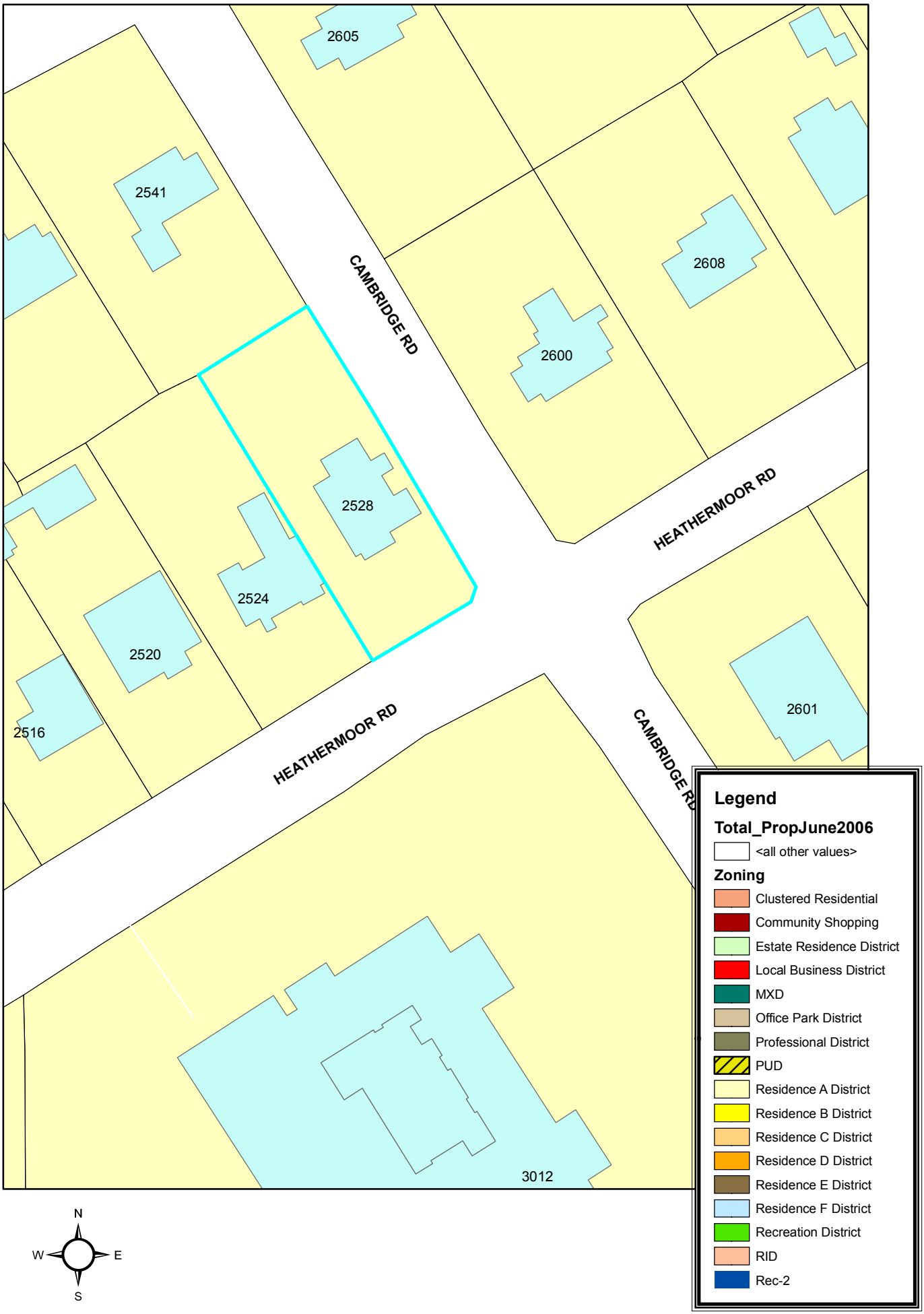
Phone Number 205.807.7814 Email JAMESLAUGHLIN4C@gmail.com

☒ Property owner or representative agent must be present at hearing

Plans

☒ See applicable Section of the Zoning Ordinance for submittal requirements pertaining to your particular application. Applicable Code Section may be found in Part II, list of application types. Contact City Planner with any specific questions as to required plans submittal.

P-16-29


2605
2541
CAMBRIDGE RD
2608
2600
2528
HEATHERMOOR RD
2524
2520
2516
2601
HEATHERMOOR RD
CAMBRIDGE RD
3012
N
W
E
S
Legend
Total_PropJune2006
<all other values>
Zoning
Clustered Residential
Community Shopping
Estate Residence District
Local Business District
MXD
Office Park District
Professional District
PUD
Residence A District
Residence B District
Residence C District
Residence D District
Residence E District
Residence F District
Recreation District
RID
Rec-2

P-16-29

Resurvey in existing Residence A zoning

✓ "Clean-up" resurvey

☑ **May be approved as a final plat;** the following corrections for the final plat are required by the Subdivision Regulations, and **are suggested as conditions of approval**:

1) note zoning district (Residence A) on plat;

2) indicate all required building setbacks;

✓ Meets the Zoning Regulations for the Residence A district.

✓ **Overall layout is acceptable**, with the final plat to fully comply with all applicable requirements of the Mountain Brook Subdivision Regulations.

✓ No floodplain present.

✓ No relevant history or prior cases.

- **Project Data**:

  NAME: Meadows Resurvey of Estate 303

  CURRENT ZONING: Residence A

  OWNERS: Richard and Lindsey Meadows

  LOCATION: 2528 Heathermoor Road

P-16-29

MEADOW'S RESURVEY OF ESTATE 303, MOUNTAIN BROOK ESTATES CANTERBURY SECTOR

BEING A RESURVEY OF THE EAST 75 FEET OF ESTATE 303 OF MOUNTAIN BROOK ESTATES CANTERBURY SECTOR AS RECORDED IN MAP BOOK 19, PAGE 40 IN THE OFFICE OF THE JUDGE OF PROBATE, JEFFERSON COUNTY, ALABAMA

SCALE: 1"=30'

SITUATED IN THE SW ¼ OF NE ¼ OF SECTION 8, TOWNSHIP 18 SOUTH, RANGE 2 WEST, JEFFERSON COUNTY, ALABAMA

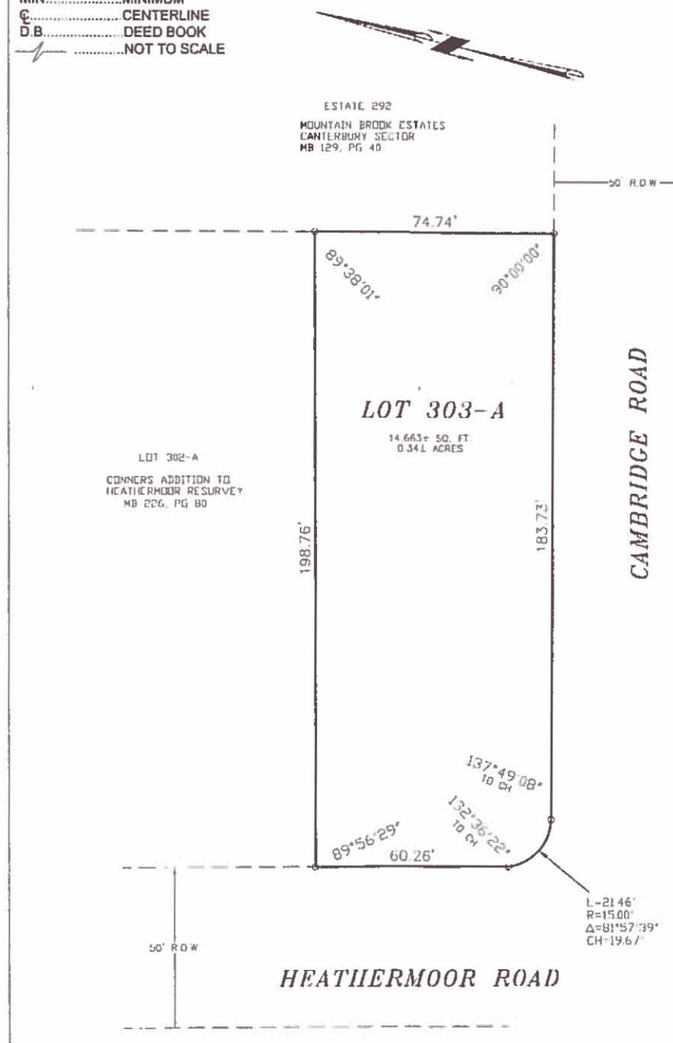
DATE: OCTOBER 2016

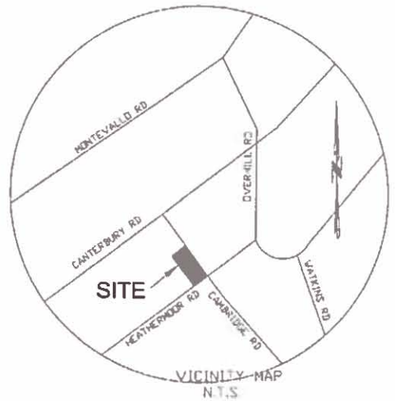
WEYGAND SURVEYORS, INC.
Ray Weygand, Reg. L.S. #24973
169 Oxmoor Road, Homewood, AL 35209
Phone:(205) 942-0086 Fax:(205) 942-0087

0' 20' 40' 60'

LEGEND

SQ. FT.....SQUARE FEET
AC.....ACRES
+/-.....MORE OR LESS
△.....DELTA ANGLE
d.....DEFLECTION ANGLE
T.....TANGENT
R.....RADIUS
CH.....CHORD
L.....LENGTH
ESMT.....EASEMENT
EX.....EXISTING
M.B.....MAP BOOK
PG.....PAGE
FND.....FOUND
ROW.....RIGHT-OF-WAY
O.....REBAR SET
MIN.....MINIMUM
℄.....CENTERLINE
D.B.....DEED BOOK
.....NOT TO SCALE





STATE OF ALABAMA}
JEFFERSON COUNTY}

The undersigned, Ray Weygand, Registered Land Surveyor, State of Alabama, and Richard H. Meadows and wife, Lindsey B. Meadows, Owners, whose names are signed to this certificate, do hereby certify that this is a true and correct map of a survey made by Ray Weygand, Land Surveyor, of the property shown on this map with the dimensions of the lots together with the streets, avenues, alleys and other public ways shown thereon and giving the name and width of each street and avenue and the number and dimensions of each lot and block and showing the relation of the land so plotted to the map of MEADOWS RESURVEY OF ESTATE 303, MOUNTAIN BROOK ESTATES CANTERBURY SECTOR and to the government survey of Section 8, Township 18 South, Range 2 West. I, Ray Weygand, hereby state that all parts of this survey and drawing have been completed in accordance with the current requirements of the Standards of Practice for Surveying in the State of Alabama. Said owners also certify that they are owners of said land and that the same is not subject to any mortgage.

IN WITNESS WHEREOF, we have hereunto set our hands this the day of _____, 2016.

By: _____
Ray Weygand
Reg. L.S. #24973

By: _____
Richard H. Meadows - Owner

By: _____
Lindsey B. Meadows - Owner

STATE OF ALABAMA}
JEFFERSON COUNTY}

I, Jamie J Neely, a Notary Public in and for said County and State hereby certify that Ray Weygand, whose name is signed to the foregoing certificate as Land Surveyor and who is known to me, acknowledged before me, on this day, that being informed of the contents of the certificate, he executed the same voluntarily on the day the same bears date.

Given under my hand and seal this 28 day of October, 2016

By: _____
Notary Public - My commission expires: 7-7-18

STATE OF ALABAMA}
JEFFERSON COUNTY}

I, _____, a Notary Public in and for said County and State hereby certify that Richard H. Meadows and wife, Lindsey B. Meadows, whose names are signed to the foregoing certificate as Owners, and who are known to me, acknowledged before me, on this day that, being informed of the contents of the certificate, they executed same voluntarily on the day the same bears date

Given under my hand and seal this ____ day of _____, 2016.

By: _____
Notary Public - My commission expires

APPROVED: _____ DATE: _____
Chairman, Mountain Brook Planning Commission

APPROVED: _____ DATE: _____
Secretary, Mountain Brook Planning Commission

NOTE:
ENVIRONMENTAL SERVICES DEPARTMENT APPROVAL INDICATES THAT EASEMENTS HAVE BEEN DEDICATED FOR FUTURE JEFFERSON COUNTY SANITARY SEWERS, HOWEVER, THIS DOES NOT MEAN SANITARY SEWERS HAVE BEEN BUILT OR WILL BE BUILT IN THE FUTURE. ANY CHANGE IN THE RIGHT OF WAY OR EASEMENT BOUNDARIES AFTER THIS DATE MAY VOID THIS APPROVAL.

_____ DATE: _____
DIRECTOR OF ENVIRONMENTAL SERVICES

NOTES:
ALL EASEMENTS SHOWN ON THIS PLAT ARE FOR PUBLIC UTILITIES, SANITARY SEWERS, STORM SEWERS, AND STORM DITCHES AND MAY BE USED FOR SUCH PURPOSES TO SERVE PROPERTY BOTH WITHIN AND WITHOUT THIS SUBDIVISION NO PERMANENT STRUCTURE OR OTHER OBSTRUCTION SHALL BE LOCATED, EXCEPT BY THE PUBLIC WORKS DEPARTMENT, WITHIN THE LIMITS OF A DEDICATED EASEMENT

BUILDER IS RESPONSIBLE FOR THE DRAINAGE ON EACH LOT AND IN AND AROUND EACH BUILDING.

BUILDER WILL BE RESPONSIBLE FOR ADJUSTING THE LIDS OR TOP ELEVATION FOR ALL MANHOLES AND YARD INLETS ON EACH LOT.

THE LOT OWNER/BUILDER SHALL USE APPROPRIATE METHODS, WHETHER PIPES, UNDERDRAIN, DITCHES, GRADING OR OTHER MEANS, TO PROVIDE A BUILDING SITE FREE OF SURFACE OR SUBSURFACE DRAINAGE PROBLEMS WITHOUT ADVERSELY AFFECTING ADJACENT LOTS.

THE LOT OWNER/BUILDER SHALL FIELD VERIFY THE LOCATION AND ELEVATION OF SANITARY SEWER SERVICE LINE OR SEPTIC TANK LOCATION PRIOR TO CONSTRUCTION OF BUILDING FOUNDATIONS.

ELEVATION OF ALL SANITARY SEWER LATERALS TO EACH LOT SHOULD BE VERIFIED BY BUILDER PRIOR TO SETTING LOWEST FLOOR OF RESIDENCE TO BE SERVICED.

NO HOUSE SHALL HAVE A FINISHED FLOOR ELEVATION LESS THAN TWO (2) FEET ABOVE TOP OF ANY ADJACENT STORM SEWER WITHOUT ENGINEERS APPROVAL.

NO FENCE SHALL IMPEDE THE FLOW OF WATER IN ANY DRAINAGE WAY.

WEYGAND SURVEYORS, INC. IS NOT RESPONSIBLE FOR SOIL COMPACTIONS AND DID NOT CONDUCT ANY SURFACE OR SUBSURFACE INVESTIGATIONS.

NORTH ARROW SHOWN ON THIS MAP IS NOT TRUE NORTH AND SHOULD ONLY BE CONSIDERED AS APPROXIMATE

NOTE:

THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA (ZONE "X") AS PER MAP NO. 01073C0557H, DATED SEPTEMBER 3, 2010.

P-16-29 Aerial

Planning Commission Application
PART I

Project Data

Address of Subject Property 3732 MONTROSE ROAD

Zoning Classification RESIDENCE A

Name of Property Owner(s) THE EPISCOPAL CHURCH IN THE DIOCESE OF ALABAMA

Phone Number (205) 802-6204 Email gpelekis@saintlukes.com

Name of Representative Agent (if applicable)

G. GRAY ROSSER

Phone Number (205) 458-3217 Email gplosser@kpsgroup.com

☒ Property owner or representative agent must be present at hearing

Plans

☒ See applicable Section of the Zoning Ordinance for submittal requirements pertaining to your particular application. Applicable Code Section may be found in Part II, list of application types. Contact City Planner with any specific questions as to required plans submittal.

Architecture
Interior Design
Planning
Urban Design
Landscape Architecture

November 2, 2016

Dana Hazen, Director of Planning and Building
City of Mt. Brook
56 Church Street
Mt. Brook AL 35213

Additions and Renovations to St. Luke's Church (Planning Commission P-16-24)
#166009-00

Dear Dana:

This letter with attachments constitutes incorporates all previous changes to the original submission and the responses to all questions posed by the Planning Commission in its meetings of September 6 and October 3.

- Attachment A consists of the original development plan documents submitted for this case that have been revised to reflect all subsequent changes made in response to PC requests. These include changes in the size and position of the proposed new parking lot to incorporate the change in gate location, the new sewer easement, changes to the landscape buffer and a reduction in the overall number of spaces from 27 to 21. It also provides for a foot path to the house and repositions the pavilion slightly further away from South Cove. The number of new parking spaces has been changed as a result of the reduced size of the new parking lot. The height of the pavilion has been changed to 35 feet.

- *Photometric study of the lighting proposed in the proposed parking lot; and for that of existing parking lot if re-lamping is proposed. Type of light fixtures and a schematic placement in the new lot.*

  Response – See Attachment B consisting of a schematic plan and photometric study of the two parking lots. The new parking lot has been adjusted in size to agree with the changes requested by the PC and Jefferson County's requirements. The photometric study is based on replacing all existing poles and installing new ones which will meet the 14 foot maximum height limit. New poles include several in the existing lot to cover spots that do not currently get any light as well as two poles in the new lot and another at the end of South Cove to cover the two gates. The new pole lights will not be any closer to the north property line than the current ones. Also included as a part of Attachment B is a specification sheet on the new poles and the LED lamps. These are low cut-off type fixtures. The lighting design is in accordance with IES recommended lighting levels to minimize glare and light trespass beyond property lines.

KPS Group, Inc.
2101 First Avenue North
Birmingham, AL 35203
Tel: 205 251-0125
Fax: 205 458-1513

- *Schematic of the proposed landscape buffer – type of plants and location, especially in the sensitive areas along the east and north sides of the parking lot, as well as between the proposed pavilion and the south edge of the vacated South Cove Drive.*

  Response – See Attachment C consisting of two landscape drawings showing proposed schematic buffer landscaping of the new parking lot and another showing the proposed schematic landscape of the area around the proposed outdoor pavilion. Both of these drawings have been revised to reflect a) the reconfiguration of the new parking lot and b) the repositioning of the pavilion. The proposed plant material at the parking lot is now consistent with our original proposal for Nellie Stevens Hollies.

K|P|S
GROUP

- *Formalize the parameters of pavilion hours and uses. Detail of possible uses of the vacant house on the property. Formalize gate access hours.*

  Response – See Attachment D consisting of a letter from George Pelekis, Executive Administrator to Ms. Dana Hazen outlining the Church's response to the request for additional information from the Planning Commission.

- *Information on security cameras: placement and capabilities.*

  Response – See Attachment C for placement and for camera specifications. The cameras will be stationary but designed to cover the entire parking lot area from these locations including that area of South Cove that is immediately outside the two gates. The lighting has been designed for reasonable uniformity across all parking areas and to allow for maximum performance of security cameras.

- *Analysis of drainage implications from the new parking lot.*

  Response – See Attachment E consisting of a drawing and a narrative prepared by LBYD Consulting Engineers regarding the overall control of storm water on the site. The first drawing is of the new parking lot showing its location, size, preliminary grading and indicating how runoff will be handled. Essentially, storm water from this lot will be directed back on to the existing St. Luke's parking lot and none across the property line to the north. Overall, the site will have a new detention facility located between South Cove and Montrose to insure that post development runoff is less than that predevelopment. The detention pond will have an outlet control structure to retain storm flows.

I believe that this information accurately reflects all of the changes and additional information requested by the Planning Commission and that the submittal is consistent with the requirements of the Mt. Brook Code.

Sincerely,

KPS GROUP, INC.

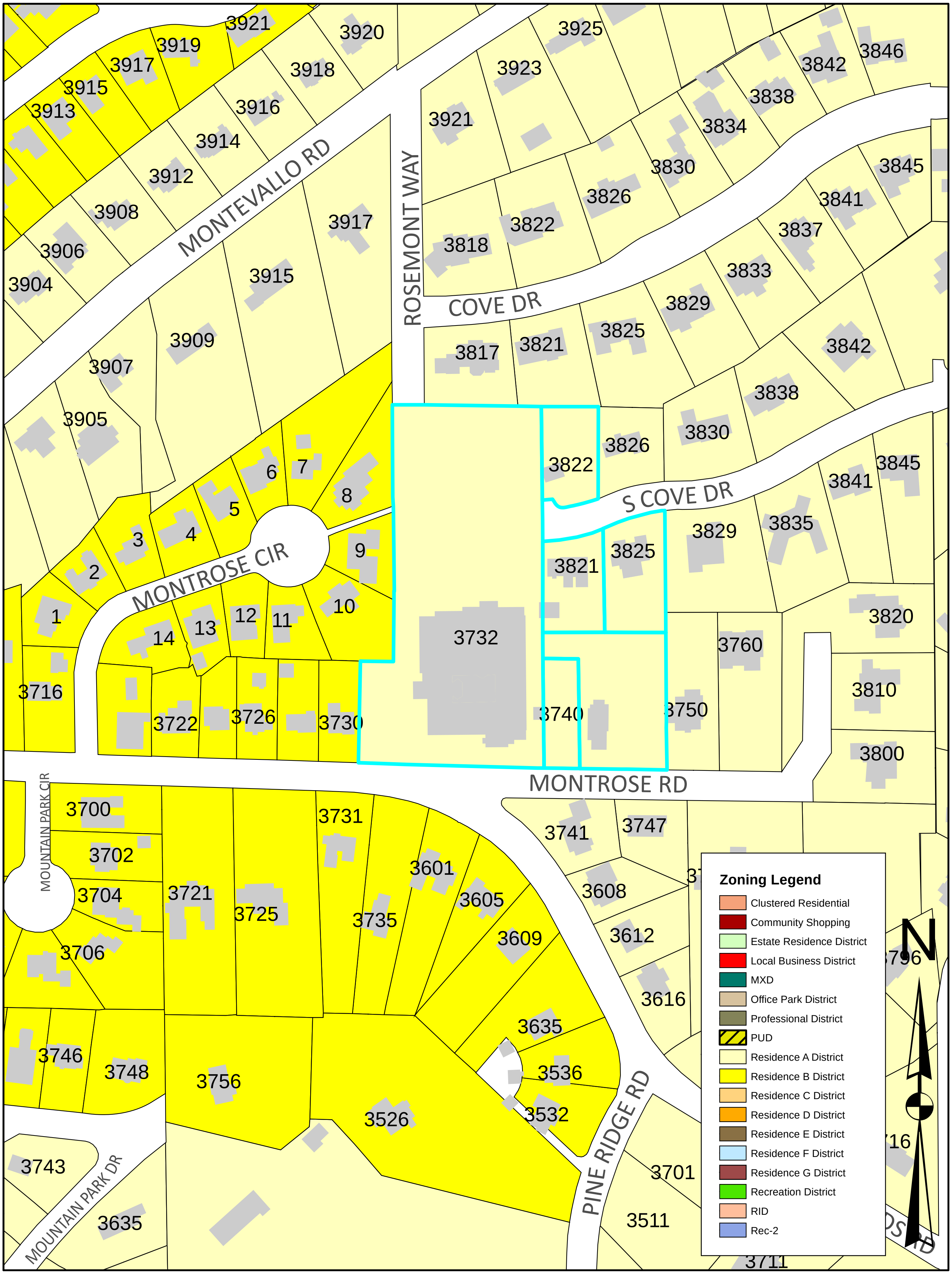
G.GRAY PLOSSER, FAIA
President

Gp

Enclosure: Attachments A,B,C, D, E

cc: George Pelekis, St. Luke's
Chris Harmon, Maynard Cooper
Ken McBride, KPS Group

P-16-24 Zoning



P-16-24

Petition Summary

Consideration of a development plan of Saint Luke's Episcopal Church for additions and alterations to the facility. As may be seen on the attached plans, the proposal includes one & two-story additions to the rear of the building, as well as a new porte cochere, covered walkway, outdoor pavilion and new parking lot.

Background

On October 3, 2016, the Planning Commission voted to carry over the subject case for more detail on the following items:

1. Parking mitigation in the turn-around area;
2. Pavilion height;
3. Gate usage;
4. Proposed uses for the residence;
5. Hours of operation for the pavilion.

The church has submitted a response to these items, and the attached plans and narratives from the applicant reflect all revisions to the plan.

On September 6, 2016, the Planning Commission heard the subject case and voted to carry it over in order to provide the applicant an opportunity to provide the following additional information (which is attached):

- Photometric study of the lighting in the proposed parking lot; and for that of existing parking lot if re-lamping is proposed.
- Type of light fixtures and a schematic of placement in the new parking lot.
- Schematic of the proposed landscape buffer - type of plants and location, especially in the sensitive areas along the east and north sides of the parking lot, as well as between the proposed pavilion and the south edge of the vacated South Cove Drive right-of-way.
- Formalize the parameters of pavilion hours and uses.
- Detail possible uses of the vacant house on the property.
- Information on the security cameras: placement; capabilities.
- Formalize gate access hours.
- Analysis of drainage implications from the new parking lot onto S. Cove Drive.

On July 25, 2016, the council approved a vacation of the west end of South Cove Drive. The approval of the right-of-way vacation was conditioned such that a turn-around for emergency vehicles be added (which is not only required by the City's Subdivision Regulations, but was required by the council for the practical benefit of residents of South Cove Drive). The vacated right-of-way is shown on the proposed plat (Case P-16-23); the turn-around may be seen on the attached site plan (Case P-16-24) and is wholly contained within the vacated area (new private property) and is cross-hatched on the attached plan.

Previous Report to Commission (9-06-2016):

Neighborhood Concerns

Neighborhood concerns stem from the proposal to add a new parking lot, gates, turn-around and pavilion. There is an existing gate at the terminus of South Cove Drive that has been in place for many years and is supposed to be closed and locked (except for Sunday services and weddings and funerals, etc.). The intent of this gate is to keep public cut-through traffic from occurring (between South Cove and Montevallo).

The proposed plan includes the relocation of the existing gate (farther to the west to allow proper backing space in conjunction with the new turn-around), plus a new gate at the north end of the new parking lot (intended for the same purposes as the first gate).

Neighboring property owners along South Cove have expressed concern about the new parking lot and open pavilion being a magnet for non-neighborhood loiterers who might park and loiter in the new parking lot or in the un-secured, covered (but open) pavilion.

It should be noted that the new parking is not required by code, but is surplus parking. The neighbors have expressed a desire to move the existing gate to the new terminus of the right-of-way (to the east of the parking lot entrance on South Cove) which would not allow vehicular loiterer access from South Cove. If a new gate were to be placed in this location it is possible that emergency vehicles could still access the new turnaround with a gate code; however, it would defeat the intention of the council to also give turnaround access to waste management trucks and delivery trucks.

Perhaps an alternate remedy might be to eliminate the first three parking spaces on either side of the turn-around terminus (a total of six spaces) on the south end of the new parking lot and add a gate at the terminus of the turnaround, so that the only public access to the new parking lot would be through the existing large parking lot behind the church (taken from Montevallo). Obviously, unless there is a new gate installed at the Montevallo entrance, vehicles could still obtain access to the new parking lot and the loitering problems might not be any different in this scenario (except that traffic would not be coming down South Cove to access the new parking lot).

Buffers

The use of buffers for this project would help soften the visual effects of the institutional use on the residential neighborhood, specifically along the east property line of the new parking lot, and along the previous South Cove right-of-way line between the proposed pavilion and the pavement of South Cove.

Both of these locations contain existing, mature trees that should be left in place where possible, and it would be prudent to require shrubs to fill in along the base of these trees as well. Section 129-296 of the Zoning Code (attached) indicates

buffer and fencing guidelines for cases where buffers are required by the Planning Commission.

Lighting

The applicant's letter states that lighting for the new parking lot will mimic that which exists in the larger parking lot. The Zoning Code does not specify lighting requirements for parking lots in Res-A, but for the sake of comparison, the code limits parking lot lighting in commercial districts to 14 feet in height, and requires that the lighting be directed downward so as not to spill onto adjoining properties.

Pavilion

The applicant has indicated that the use of the pavilion is intended to be an amenity shared with the neighborhood, and may be utilized for private gatherings by reservation.

Existing House

The existing house on the south side of South Cove (to the east of the proposed pavilion) is owned by the church and is proposed to remain. The applicant's letter indicates a variety of potential church-related uses for the house. Leaving the house in its present configuration with residential landscaping will serve to soften and buffer the institutional uses at the end of South Cove and make a good transition of from the church to the residential portion of South Cove Drive.

Subject Property and Surrounding Land Uses

The subject property contains the St. Luke's Church facility, parking lot and outdoor recreational amenities, and is surrounded by single family residences to the north, east south and west.

Affected Regulation

Article III, Residence A District; Section 129-34, Area and Dimensional Requirements

Appends

LOCATION: 3732 Montrose Road

ZONING DISTRICT: Res-A

OWNER: The Episcopal Church in the Diocese of Alabama

SAINT LUKE'S
EPISCOPAL CHURCH

3736 Montrose Road ' Birmingham, Alabama 35213-3800

October 20, 2016

CITY OF MOUNTAIN BROOK
Dana O. Hazen, MPA, AICP
Director of Planning, Building and Sustainability
56 Church Street
Mountain Brook, Alabama 35213

Dear Mrs. Hazen:

This letter is in response to the Planning Commission request from the October 4th meeting for further information needed from Saint Luke's Episcopal Church regarding its development plan.

- Parking in front of Saint Luke's Gate: Saint Luke's Episcopal Church proposes a striped Fire Lane be painted in front of the gate to prevent individuals from parking in front of the gate.
- Pavillion Height: Saint Luke's proposes to reduce the height of the Pavilion roof to 35 feet.
- Gate Usage: The intent of the church is not to have the gates open all the time. The Saint Luke's gates will remained closed to thru traffic under normal weekday operations of the Facility.
- List Potential uses of the house located at 3825 South Cove Drive: Saint Luke's currently intends to maintain the existing house in its present location on the lot. The property will not be leased for any commercial purpose including a residence. General Uses of the 3825 South Cove Drive church property will be:
    - Meeting and storage space for Saint Luke's Boy Scouts Troop 86
    - Office, meeting space for Vestry, Clergy and Laity Leadership
    - Housing for church staff or temporary housing for guests of the church.
- Formalize Pavilion hours: The church's ministry programs' hours and special services vary during the week and operate 7 days a week within reasonable hours of operation. The use of the Pavilion will be maintained during a reasonable schedule for normal ministry hours no earlier than 7:00am and no later than 9:00pm. Both morning and night time use is restricted to approved activities only. The City of Mountain Brook will be notified for Pavillion use outside these hours.

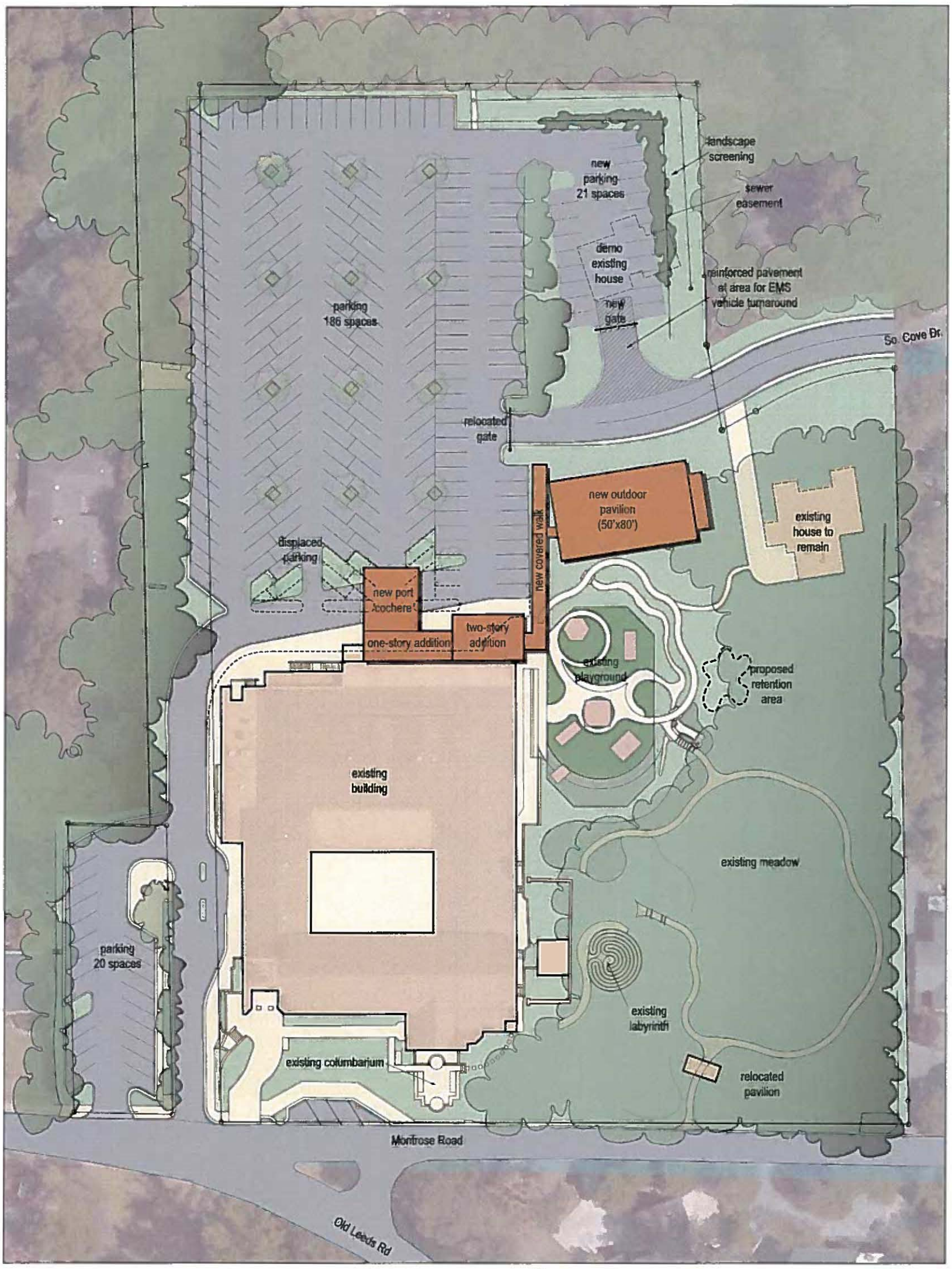
If there are other items the Planning Commission needs before the next meeting please let us know. Thank you for what you do for our community.

Sincerely,

George Pelekis
Executive Administrator

ATTACHMENT D

205.871.3583 www.saint-lukes.com Fax: 205.802.6219



SAINT LUKE'S EPISCOPAL CHURCH

SCALE: 1"=20'

KPS GROUP — 50 YEARS OF DESIGN EXCELLENCE

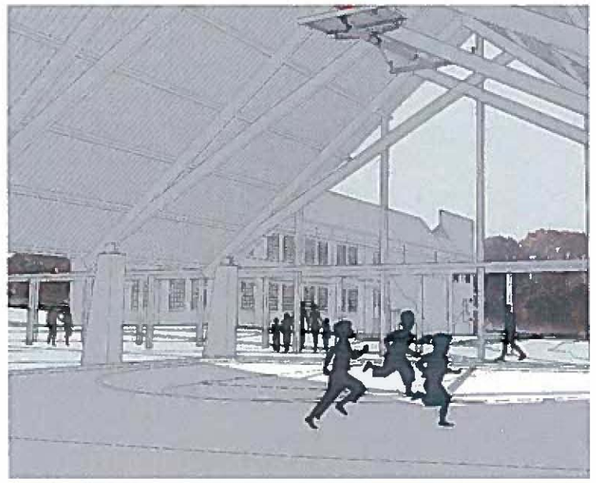
PROPOSED SITE DEVELOPMENT PLAN

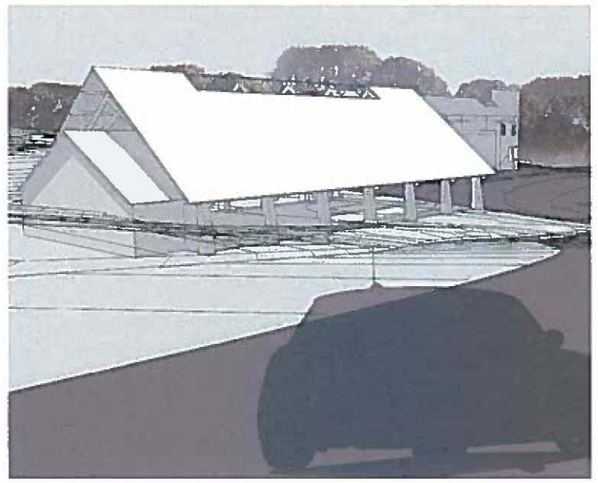
ATTACHMENT A

PARKING (REVISED 8/23/16)

REQUIRED	210 SPACES (630 SANCTUARY SEATS) / 3
CURRENT	240 SPACES
PROPOSED	249 SPACES
TOTAL HC	10 SPACES

NOTE: DISPLACED BY NEW CONSTRUCTION - 13 SPACES





SAINT LUKE'S EPISCOPAL CHURCH

NORTH ELEVATION

ATTACHMENT A

KPS GROUP 50 YEARS OF DESIGN EXCELLENCE

VIPER S SERIES

SMALL VIPER LUMINAIRE

Cat.#

Job

Type

BEACON design . performance . technology

Approvals

SPECIFICATIONS

Intended Use:

The Beacon Viper luminaire is available with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 400W MH or HPS.

Construction:

- Manufactured with a low copper content, die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

LED/Optics:

- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input.
- Power factor is .92 at full load.
- All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL- 217F Notice 2.
- Dimming drivers are standard with connections for external dimming equipment available upon request.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is listed by UL for use at 600VAC at 50°C or higher.
- Plug disconnects are listed by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.

Electrical:

- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- The housing is designed for an optional twist lock photo control receptacle.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20KA; shuts off at end of life.
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55ºC (131ºF). Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the Wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full Wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on hours of operation or time of night (see www.beaconproducts.com/products/energeni).
- Also available with **Beacon**nect Wireless Control System (see **Beacon**nect product page for more details www.beaconproducts.com/products/**beacon**nect).

Installation:

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included.

Finish:

- Beacote V polyester powder-coat electro-statically applied and thermocured.
- Beacote V finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Listings:

- DesignLights Consortium (DLC) qualified, consult DLC website for more details: http://www.designlights.org/QPL
- Listed to UL1598 and CSA22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 3G rated for ANSI C136.31 high vibration applications
- IDA approved

Warranty:

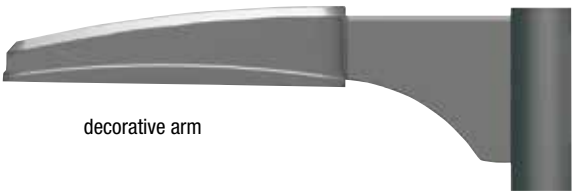
Five year limited warranty (for more information visit: www.hubbelllighting.com/resources/warranty).

CERTIFICATIONS/LISTINGS

*3000K and warmer CCTs only

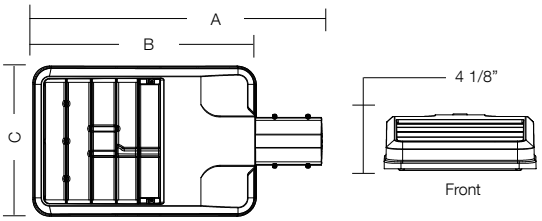
PRODUCT IMAGE(S)

rectangular arm



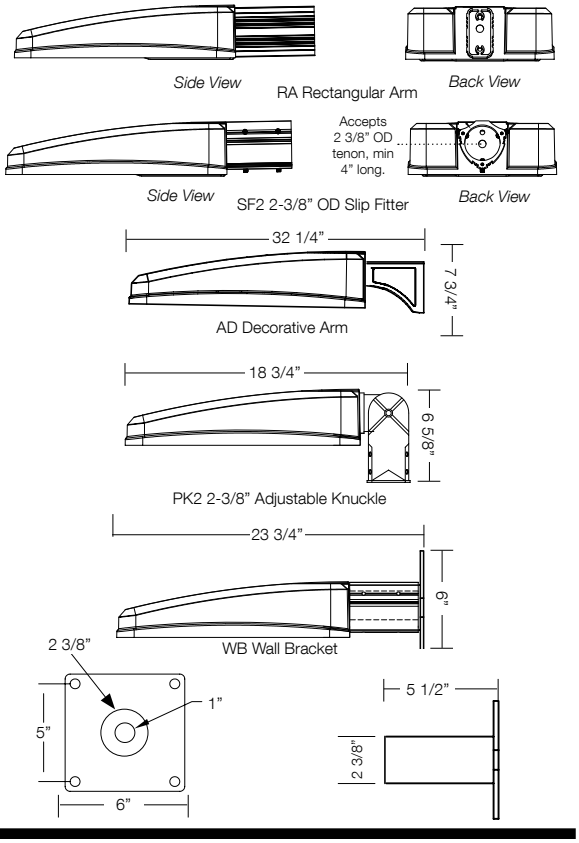
decorative arm

DIMENSIONS



A	B	C	Weight:	EPA
22.75" (578 mm)	16.75" (425 mm)	11.25" (286 mm)	15.0 lbs (6.8 kg)	.67 ft²

MOUNTING OPTIONS



HUBBELL® HUBBELL Lighting

ATTACHMENT B

ORDERING INFORMATION ORDERING EXAMPLE: VPS/36NB-80/5K/T4/UNV/PCR-TL/BCW/BLC/RA/BBT

VPS

SERIES

VPS viper-small

ENGINE-WATTS

24NB-55 55W, LED array

30NB-70 70W, LED array

36NB-80 80W, LED array

48NB-110 110W, LED array

60NB-136 136W, LED array

LED COLOR

3K 3000K

4K 4000K

5K 5000K

VOLTAGE

UNV 120-277V

347V 347V

480V 480V

OPTICS[4]

T1 type I

T2 type II

T3 type III

T4 type IV

T5R type V, rectangular

T5QM type V, square medium

T5W type V, round wide

FR front row auto optic

ELECTRICAL OPTIONS

PCR-TL Twist lock receptacle with photo control

PCR-SC Twist lock receptacle with shorting cap

PCRU Twist lock receptacle

2PF[7] dual power feed

HOUSE SIDE SHIELD OPTIONS

HSS-90 house side shield 90°

HSS-180 house side shield 180°

BLC[3] backlight control

SENSOR OPTIONS

BMD[1,2,5] motion sensor for **beacon**nect

MDD[2,5] motion dimming detector

MOUNTING OPTIONS

RA rectangular arm for round or square pole mount. RPA included.

SF2 2 3/8" OD slip-fitter

PK2 2 3/8" adjustable knuckle

AD decorative arm with universal mounting slot. RPA ordered separately. See referenced table.

WB wall bracket (use with SF2 or PK2), SF2 standard

CONTROL OPTIONS

GENI-XX[6] energeni

BCW[1,5,8] **beacon**nect

FINISH

BBT basic black textured

BMT black matte textured

WHT white textured

MBT metallic bronze textured

BZT bronze textured

DBT dark bronze textured

GYS gray smooth

DPS dark platinum smooth

GNT green textured

MST metallic silver textured

MTT metallic titanium textured

OWI old world iron

RAL _____

MDD ORDERING INFORMATION: When ordering a fixture with the motion detection option (MDD), please specify the appropriate information. These settings are specified in the ordering as shown in the example below.

VPS / 36NB-135 / 5K / T5W / UNV / **MDD** - 1 to 30 min. - 33% or 50% - ?? / MT

High to Dim Delay Low Level Mounting Height (ft.)

BEACONNECT **ORDERING INFORMATION:** When ordering a fixture with the **Beacon**nect lighting control options please specify the appropriate group and sensor information. Please provide dimming schedule information in either the **Beacon**nect excel spreadsheet or **Beacon**nect software. For more detailed information please visit www.beaconproducts.com/**beacon**nect or contact beacon tech support at (800) 345-4928. These settings are specified in the ordering as shown in the example below. (Family) / 24NB-55 / 5K/ T3 / UNV / BCW-(Group 1-16)_____-_(Optional Zone 1-250)_ /BMD - __Time Delay(1 to 255)_ - ____Dimming% (1 to 100)__ - __mounting height(1-20ft)___/ Example: TRV/24NB-55/5K/T3/UNV/BCW-G1 /BMD-30M-50%-10F/DBT for luminaires without sensors in the group omit the BMD ordering logic Example: TRV/24NB-55/5K/T3/UNV/BCW-G1 /DBT

[1] Must specify group and zone information at time of order. See www.beaconproducts.com/controls/beaconnect for further details.
[2] Specify time delay; dimming level and mounting height.
[3] T4 optic only.
[4] To rotate optics Left or right 90 degrees, specify L or R after the optical distribution example T4L.
[5] Not available with other control or sensor options.
[6] When ordering Energeni, specifiy the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.
[7] Not available for 347V or 480V input.
[8] Not available with 30NB-70.

Catalog Number	Description
VPS-AD-RPA3	3.5" - 4.125"
VPS-AD-RPA4	4.188" - 5.25"
VPS-AD-RPA5	5.5" - 6.5"

Order Separately

Catalog Number	Description (must choose one option below / 1-per site required)
ASM-USB-BCW	**Beacon**nect Software loaded on USB flash drive* (Windows based only)
ASM-TABLET-BCW	**Beacon**nect 7" Windows Tablet*

**Includes USB Radio*

DesignLights Consortium qualified.
Consult DLC website for more details:
http://www.designlights.org/QPL

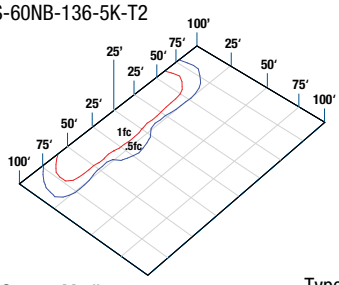
PERFORMANCE DATA

				5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
# LED'S	DRIVE CURRENT (MILLIAMPS)	SYSTEM WATTS	DISTRIBUTION TYPE	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G
24	700 mA	55 W	FR/T1	6339	114	1	0	1	6276	112	1	0	1	5389	97	1	0	1
			T2	5666	102	2	0	2	5610	101	2	0	2	4816	86	1	0	2
			T3	5610	101	1	0	2	5554	100	1	0	2	4784	86	1	0	2
			T4	6171	111	1	0	2	6110	109	1	0	2	5245	94	1	0	2
			T5R	6283	113	3	0	3	6221	111	3	0	3	5341	96	3	0	3
			T5QM	6171	111	3	0	1	6110	109	3	0	1	5245	94	2	0	1
			T5W	6087	109	3	0	1	6027	108	3	0	1	5201	93	3	0	1
30	700 mA	70 W	FR/T1	8096	113	1	0	1	8016	112	1	0	1	6882	96	1	0	1
			T2	7204	101	2	0	2	7133	100	2	0	2	6123	86	2	0	2
			T3	7743	108	2	0	2	7666	107	2	0	2	6659	93	2	0	2
			T4	7896	111	1	0	2	7817	110	1	0	2	6791	95	1	0	2
			T5R	8035	112	3	0	3	7954	111	3	0	3	6829	95	3	0	3
			T5QM	7846	110	3	0	1	7768	109	3	0	1	6669	93	3	0	1
			T5W	8305	116	3	0	2	8222	115	3	0	2	7142	100	3	0	2
36	700 mA	80 W	FR/T1	9515	114	1	0	1	9414	112	1	0	1	8083	96	1	0	1
			T2	8505	101	2	0	3	8415	100	2	0	3	7224	87	2	0	2
			T3	8415	100	2	0	2	8331	99	2	0	2	7175	86	2	0	2
			T4	9256	110	1	0	3	9164	109	1	0	3	7868	94	1	0	3
			T5R	9425	112	3	0	3	9331	111	3	0	3	8011	96	3	0	3
			T5QM	9257	110	3	0	1	9164	109	3	0	1	7868	94	3	0	1
			T5W	9131	109	3	0	2	9040	108	3	0	2	7801	93	3	0	2
48	700 mA	110 W	FR/T1	12679	114	2	0	1	15522	113	2	0	1	10777	97	1	0	1
			T2	11332	102	3	0	3	11220	101	3	0	3	9633	87	2	0	3
			T3	11220	101	2	0	3	11108	100	2	0	3	9567	86	2	0	3
			T4	12342	111	2	0	3	12219	110	2	0	3	10491	95	2	0	3
			T5R	12567	113	4	0	4	12441	112	4	0	4	10682	96	3	0	3
			T5QM	12342	111	3	0	2	12219	111	3	0	2	10491	95	3	0	2
			T5W	12175	110	4	0	2	12053	109	4	0	2	10402	94	4	0	2
60	700 mA	136 W	FR/T1	15848	116	2	0	1	15690	115	2	0	1	13471	98	2	0	1
			T2	14165	103	3	0	3	14025	102	3	0	3	12041	88	3	0	3
			T3	14025	102	3	0	3	13885	101	3	0	3	11959	87	3	0	3
			T4	15427	113	2	0	3	15274	111	2	0	3	13114	96	2	0	3
			T5R	15708	115	4	0	4	15259	111	4	0	4	13352	97	4	0	4
			T5QM	15427	113	4	0	2	15274	111	4	0	2	13314	96	3	0	2
			T5W	15218	111	4	0	2	15066	111	4	0	2	13002	95	4	0	2

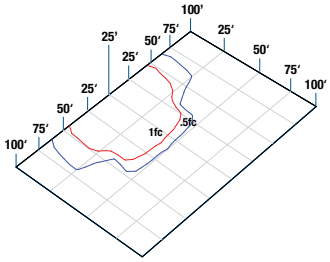
[1]Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

PHOTOMETRICS

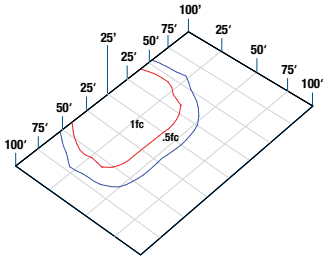
Type II
VP-S-60NB-136-5K-T2



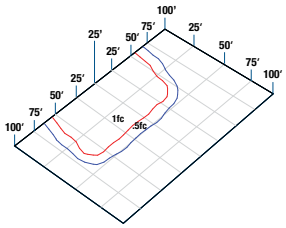
Type III
VP-S-60NB-136-5K-T3



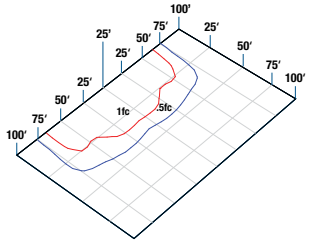
Type IV
VP-S-60NB-136-5K-T4



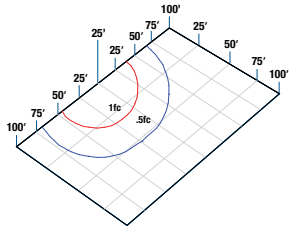
Type V Square Medium
VP-S-60NB-136-5K-T5QM



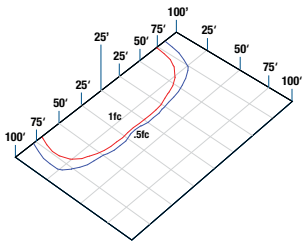
Type V Rectangular
VP-S-60NB-136-5K-T5R



Type V Round Wide
VP-S-60NB-136-5K-T5W



Front Row Auto Optic / Type I
VP-S-60NB-136-5K-FR
VP-S-60NB-136-5K-T1



ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	2	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
30	2	700 mA	120	70	0.6
			277		0.3
			347		0.2
			480		0.1
36	1	700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE

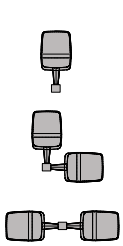
AMBIENT TEMP.	0	25,000	50,000	[1]TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°C	1.00	0.97	0.95	0.95	0.92	>470,000

[1] Projected per IESNA TM-21-11
Data references the extrapolated performance projections for the base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

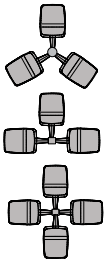
AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.98
40°C	104°F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

EPA

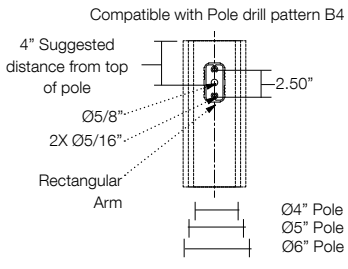


Config.	EPA
1	.67
2 @ 90°	.95
2 @ 180°	1.34



Config.	EPA
3 @ 120°	1.36
3 @ 90°	1.5
4 @ 90°	1.5

DRILL PATTERN



HUBBELL® Lighting

Sarix® IMP Indoor and Environmental Mini Domes

UP TO 5 MEGAPIXEL, H.264, IR, DAY/NIGHT IP DOMES

Product Features

- Up to 5 megapixel (MPx) resolution
- Up to 30 images per second (ips) at 3 MPx
- Autofocus motorized remote zoom lens
- Integrated adaptive IR illumination (environmental IR models)
- Operating temperature up to 55°C (131°F)
- Up to 64 GB edge storage with Micro SD card
- Motion detection and camera sabotage detection
- Power over Ethernet (PoE+) Class 4, 24 VAC (environmental models)
- All models vandal resistant to IK10
- PoE, 24 VAC, 12 VDC (indoor models)
- Compatible with Pelco and third-party video systems
- ONVIF Profile S and Profile G conformant
- Full 3-year warranty and support

Sarix Professional Range

Powerful, versatile, and affordable, the **Sarix® Professional (P)** range cameras pack the most popular features and functionality of Sarix technology into a wide range of indoor and outdoor options, including bullet cameras and mini domes. There are also indoor-only options such as a vandal resistant wedge and micro dome. Mix and match the performance options and form factor you need for almost any lighting condition, environment, and application.

Camera

Within the **Sarix Professional** range, the **Sarix IMP Series** mini dome cameras feature a remote zoom lens for wide angle or long range surveillance needs. Autofocus capability ensures the camera can be automatically refocused when needed. Additionally, the **Sarix IMP Series** features advanced color science and a mechanical IR cut filter for increased sensitivity in low-light installations.

Video

Sarix Professional range cameras support up to two simultaneous video streams and a third service stream. The two streams can be compressed with efficient H.264 High or Main profiles or MJPEG formats. The streams can be configured to a variety of frame rates and variable bit rates to optimize image quality with bandwidth and storage efficiency.

Edge Storage

Sarix Professional range cameras feature onboard edge storage with a micro SD card. Video clips of varying lengths can be stored to the card upon alarm, or video can be written continuously to the SD card in the case of network outage. Video can be retrieved from the card through the FTP protocol or by using an ONVIF Profile G enabled client.

Sarix Professional range cameras feature a simple motion detection algorithm that allows the camera to record or send an alarm when there is motion detected in a selected zone or within the entire scene. A camera sabotage alarm is triggered if the lens is obstructed or when the camera is repositioned.

Open and Integrated

Sarix Professional range cameras seamlessly connect to Pelco video management systems such as VideoXpert™, Endura® version 2.0 (or later), and Digital Sentry® version 7.3 (or later). **Sarix Professional** range cameras integrate with major third-party systems through the open Pelco API or the ONVIF Profile S and Profile G standards.

Standard Web Interface

Pelco cameras use a standard Web browser interface for easy remote setup and administration. Controls are optimized for convenient one-step camera configuration for features including color, exposure, flicker control, and streaming.

PELCO
by Schneider Electric

ONVIF | S G

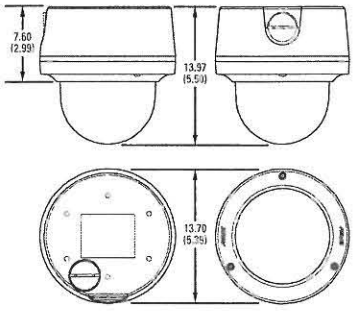
International Standards Organization Registered Firm; ISO 9001 Quality System ISO 9001 CERTIFIED

C4021 / NEW 3-29-16

ATTACHMENT B

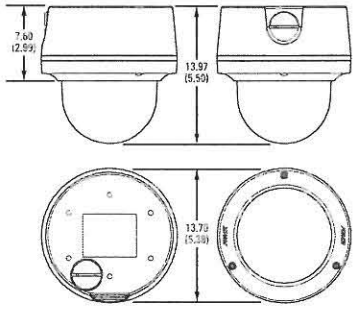
BACK BOX FEATURES

VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS.



Indoor Surface Mount

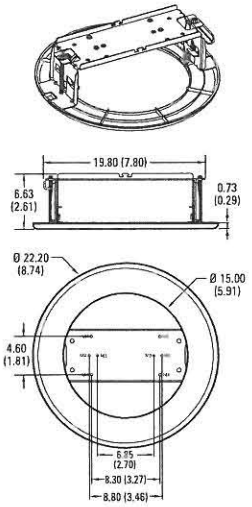
- Plastic body and trim ring; polycarbonate bubble
- White, RAL 9003
- IK10 (20J) Impact Resistance
- PoE, 24 VAC, 12 VDC



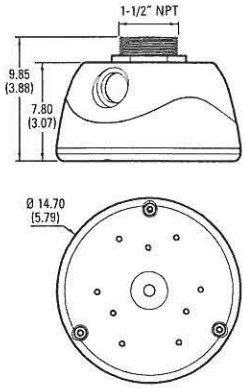
Environmental Surface Mount

- Aluminum body and trim ring; polycarbonate bubble
- RAL 7047
- IP66 Ingress Protection
- Type 4X
- IK10 (20J) Impact Resistance
- 24 VAC and PoE+ Class 4 only

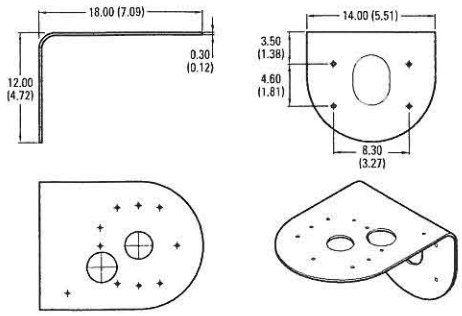
IMPICM-1I AND IMPICM-1ER IN-CEILING MOUNT



IMPPM-1I AND IMPPM-1ER PENDANT ADAPTER



IMPPMB-1I WALL MOUNT BRACKET



TECHNICAL SPECIFICATIONS

CAMERA

Imaging Device

MPx	Sensor	Maximum Resolution
5 MPx	1/1.8-inch	2592 x 1944 (5.0 MPx)
3 MPx	1/2.8-inch	2048 x 1536 (3.1 MPx)
2 MPx	1/2.8-inch	1920 x 1080 (2.1 MPx)
1 MPx	1/3-inch	1280 x 960 (1.3 MPx)

Imager Type: CMOS
Imager Readout: Progressive scan
Electronic Shutter Range: 1/5 ~ 1/30,000 sec (1 and 5 MPx),
1/5 ~ 1/25,000 sec (2 MPx),
1/5 ~ 1/45,000 sec (3 MPx)
Wide Dynamic Range: 75 db
White Balance Range: 2,000° to 10,000°K
3D Noise Reduction: Yes (ON/OFF selectable)

Minimum Illumination

MPx	Sensitivity	Color		Mono	
		33 ms	200 ms	33 ms	200 ms
5 MPx	f/1.2	0.30 lux	0.03 lux	0.10 lux	0.02 lux
3 MPx	f/1.2	0.25 lux	0.03 lux	0.10 lux	0.02 lux
2 MPx	f/1.2	0.25 lux	0.03 lux	0.10 lux	0.02 lux
1 MPx	f/1.4	0.05 lux	0.03 lux	0.10 lux	0.02 lux

Mechanical IR Cut Filter: Yes (AUTO/MANUAL selectable), with different set points on lux
IR Illumination: Adaptive IR up to 25 m; auto ON in night mode, or off
Signal to Noise Ratio: ≥50 dB

LENS

Lens Type: Built-in; varifocal
Focal Length: f/1.4, 3 ~ 10.5 mm
Focus: Autofocus, motorized
Zoom: Remote
Auto Iris Type: DC drive lens

Field of View*

Lens	Angle of View	1 MPx	2 MPx	3 MPx	5 MPx
3 to 10.5 mm	Diagonal	110°~ 33°	116°~ 35°	115°~ 34°	110°~ 46°
	Horizontal	85°~ 27°	100°~ 31°	88°~ 30°	88°~ 37°
	Vertical	62°~ 19°	54°~ 17°	52°~ 16°	64°~ 27°

*Field of view may vary with changes in resolution settings.

TECHNICAL SPECIFICATIONS

VIDEO

Video Streams: Up to 2 simultaneous streams, plus service stream; the secondary stream is variable based on the setup of the primary stream

Video Overlay: Camera name, time, date, and customizable text with multiple supported languages

Available Resolutions

MPx	Width	Height	Aspect Ratio
5.0	2592	1944	4:3
3.1	2048	1536	4:3
2.1	1920	1080	16:9
1.2	1280	960	4:3
0.9	1280	720	16:9
0.5	800	600	4:3
0.3	640	480	4:3
0.1	320	240	4:3
0.1	320	180	16:9

Frame Rates

MPx	Images per Second (ips)
5 MPx	15, 12.5, 10, 7.5, 5, 3, 2, 1
3 MPx	30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3,2, 1
2 MPx	30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3, 2, 1
1 MPx	30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3, 2, 1

Note: Available frame rates are selectable for each independent stream depending on the coding, resolution, and stream configuration.

Video Encoding: H.264 High or Main profiles; and MJPEG

Bit Rate Control: Constant bit rate (CBR), constrained variable bit rate (CVBR) with configurable maximum value

Corridor Mode: Electronic image flip and mirror: 180°, 90° and 270° (H.264 only)

Service Stream: 640 x 480 or 640 x 352; 2 ips, JPEG

Window Blanking: 8 configurable windows

AUDIO

Streaming: Dual-channel

Input: Line in and out

Encoding: G.711 A-law/G.711 U-law

TECHNICAL SPECIFICATIONS

ELECTRICAL

Network Port	RJ-45 connector for 100Base-TX
Power Input	PoE+ Class 4 and 24 VAC (Environmental), PoE Class 2, 24 VAC nominal, 18 to 32 VAC range, 12 VDC (Indoor)
Power Consumption	
Indoor	<6 W
Outdoor	<16 W (with heater ring)
Local Storage	Up to 64 GB on Micro SDHC or SDXC card
Alarm	
Input	1
Output	1; PhotoMOS™ relay (30 V, 1 A)
Triggers	Unsupervised mode that detects switch closures (N.O. and N.C.)

ENVIRONMENTAL

Operating Temperature	
Outdoor	–40° to 55°C (–40° to 131°F)*
Indoor	–10° to 55°C (14° to 131°F)
Storage Temperature	–40° to 60°C (–40° to 140°F)
Operating Humidity	5% to 90%, RH noncondensing

*Thermostatically controlled heating provides ramped heating control between the initial heater on at 15° C (59°F) and full heating mode at –40°C (–40°F).

GENERAL

Construction	Aluminum body and trim ring (environmental); plastic body and trim ring (indoor); polycarbonate bubble (indoor and environmental)
Finish	
Indoor	White, RAL 9003
Outdoor	RAL 7047
Pan/Tilt Adjustment	Manual
Pan	370°
Tilt	90°
Rotate	355°
Unit Weight	0.61 kg (1.34 lb)
Shipping Weight	0.81 kg (1.79 lb)

NETWORK

Supported Protocols	TCP/IP, UDP/IP (unicast, multicast IGMP), ICMP, IPv4, IPv6, SNMP v2c/v3, HTTP, HTTPS, SSL, SSH, SMTP, FTP, RTSP, UPnP, DNS, NTP, RTP, RTCP, LDAP (client), QoS, GB28181
Users	
Unicast	1 administrator, up to 4 viewers
Multicast	Unlimited users H.264
Security Access	Multiple user access levels with password protection

INTEGRATION

Video Management	VideoXpert; Endura 2.0 (or later); Digital Sentry 7.3 (or later); Third-party VMS through Pelco API, ONVIF Profile S, and ONVIF Profile G
Mobile Application	Pelco Mobile
Analytics	Simple motion detection and camera sabotage detection
Local Storage	Capture 1-, 5- or 10-second video clips on camera sabotage, motion detection, or alarm input; record video continuously in the case of network outage with option to overwrite; access video through FTP protocol and ONVIF Profile G
Camera Discovery and Firmware	Discover cameras upgrade firmware upgrade using the Pelco Device Utility 2 version 2.2 or later; or Pelco Utilities
Web Browser Support	Microsoft® Internet Explorer® 9.0, Apple® Safari® 7.0.6, Mozilla® Firefox® 31.0, Google® Chrome™ 37.0.2062.124 m and later
Multilingual User Interface	English, French, German, Italian, Portuguese, Arabic, Russian, Spanish, Turkish, Korean, Simplified Chinese

TECHNICAL SPECIFICATIONS

SYSTEM MODEL NUMBERS*

Back Box	Resolution	Lens	Model Number	Description
Surface	1 MPx	3 to 10.5 mm	IMP121-1ES	Sarix Pro Environmental Dome
	1 MPx	3 to 10.5 mm	IMP121-1IS	Sarix Pro Indoor Dome
	1 MPx	3 to 10.5 mm	IMP121-1RS	Sarix Pro Environment IR Dome
	2 MPx	3 to 10.5 mm	IMP221-1ES	Sarix Pro Environmental Dome
	2 MPx	3 to 10.5 mm	IMP221-1IS	Sarix Pro Indoor Dome
	2 MPx	3 to 10.5mm	IMP221-1RS	Sarix Pro Environment IR Dome
	3 MPx	3 to 10.5 mm	IMP321-1ES	Sarix Pro Environmental Dome
	3 MPx	3 to 10.5 mm	IMP321-1IS	Sarix Pro Indoor Dome
	3 MPx	3 to 10.5 mm	IMP321-1RS	Sarix Pro Environment IR Dome
	5 MPx	3 to 10.5 mm	IMP521-1ES	Sarix Pro Environmental Dome
	5 MPx	3 to 10.5 mm	IMP521-1IS	Sarix Pro Indoor Dome
	5 MPx	3 to 10.5 mm	IMP521-1RS	Sarix Pro Environment IR Dome

*System options contain a back box/mount, camera, and clear dome.

CERTIFICATIONS*

- CE - EN 55022 (Class A), EN 50130-4, EN 60950-1
- FCC (Class A) - 47 CFR Part 15
- UL and cUL Listed - UL 60950-1, CAN/CSA-C22.2 No. 60950-1-07
- UL/IEC 60950-22
- ICES-003 (Class A)
- RCM
- KC
- ONVIF Profile S and Profile G conformant

*At the time of this publication, certifications are pending. Consult the factory or www.pelco.com for the current status of certifications.

RECOMMENDED MOUNTS

IMPICM-1I	In-ceiling mount, for use with the indoor models
IMPICM-1ER	In-ceiling mount, for use with the environmental models
IMPPM-1I	Pendant adapter, for indoor models
IMPPM-1ER	Pendant adapter, for environmental models
IMPPMB-1I	Wall mount bracket for indoor models
WMVE-SR	Wall mount arm, 1.5 in. NPT, outdoor, RAL 7047
WMVE-SW	Wall mount arm, 1.5 in. NPT, indoor, RAL 9003

OPTIONAL ACCESSORIES

IMPEBAP	4S electrical box adapter
IMPLD2-0I	Smoked lower dome (indoor)
IMPLD2-0ER	Smoked lower dome (environmental)

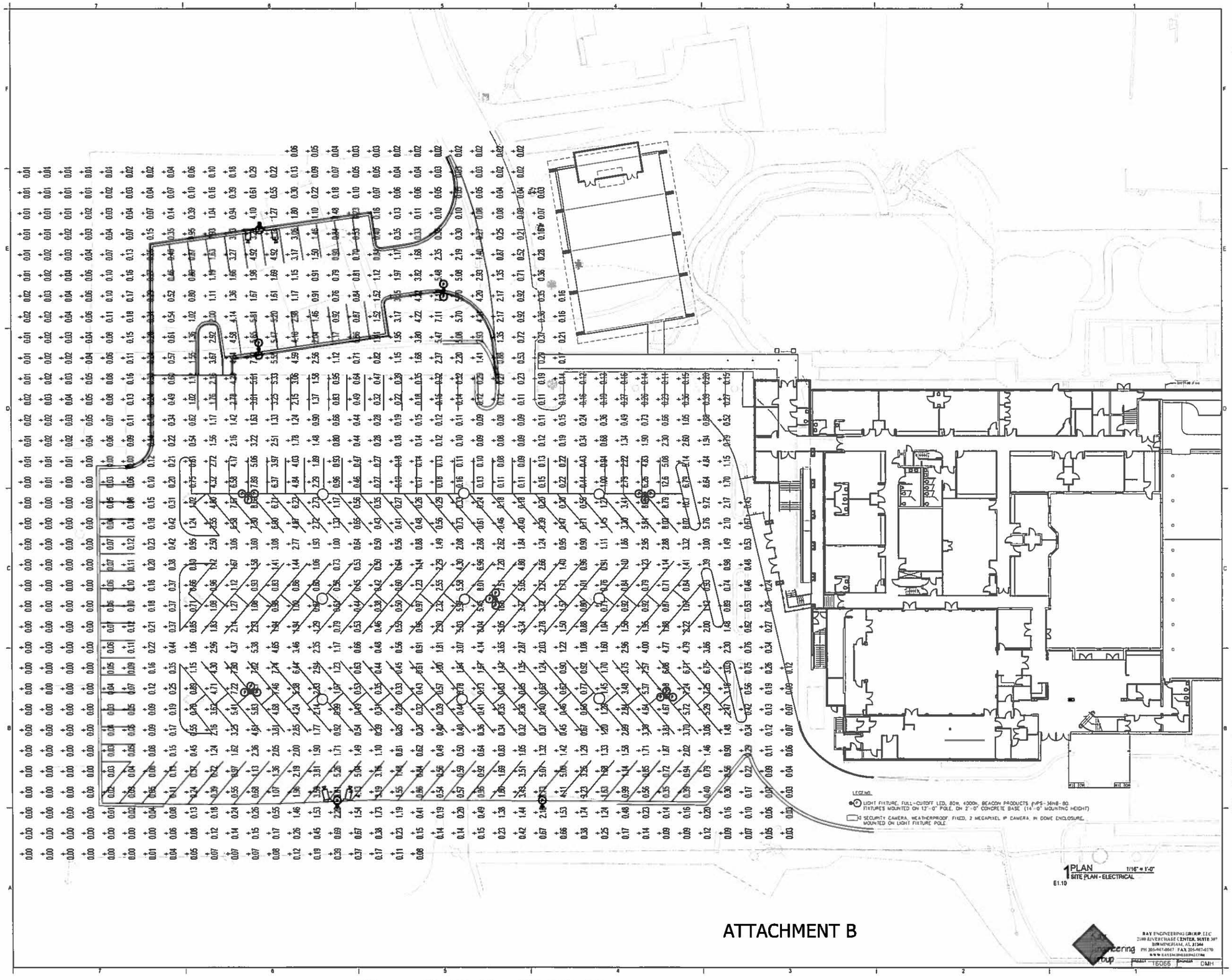
HOW TO ORDER

Example: **IMP321-1ES**

IMP 3 2 1 — 1 E S

- Sarix = I
- FORM FACTOR: Bullet = B; Mini Dome = M; Box = X; Micro Dome = J; Wedge VR Dome = W
- RANGE: Professional = P
- RESOLUTION: 5MP = 5, 2MP = 2, 3MP = 3, 1.2MP = 1
- GENERATION: 2 = 2nd Generation
- LENS: 4 = 12mm to 40mm (Bullets only); 2 = 9mm to 22mm (Bullets only); 1 = 3mm to 10.5mm / 1 = 2.8mm *(Fixed in Micro Dome)*
- 1 = Clear Dome
- ENVIRONMENT: E = Environmental; R = Environmental with IR; I = Indoor
- S = Surface Mount (Domes only)

Pelco by Schneider Electric
3500 Pelco Way, Clovis, California 93612-5699 United States
USA & Canada Tel (800) 289-9100 Fax (800) 289-9150
International Tel +1 (559) 292-1981 Fax +1 (559) 348-1120
www.pelco.com **www.pelco.com/community**



ATTACHMENT B

K|P|S GROUP
BAKER'S ROW, Suite 100
60 19th Street South
Birmingham, AL 35233
205.251.8125
www.kpsgroup.com

St. Luke's Episcopal Church Renovation & Addition

OWNER
OWNER

PROJECT ADDRESS
3736 Montrose Rd
Mountain Brook, AL 35213

PROJECT STATUS
ISSUED -

ISSUE DATE

REVISIONS
No. Description Date

DRAWING TITLE
ELECTRICAL SITE PLAN

DRAWN BY: DEL
CHECKED BY: DMH

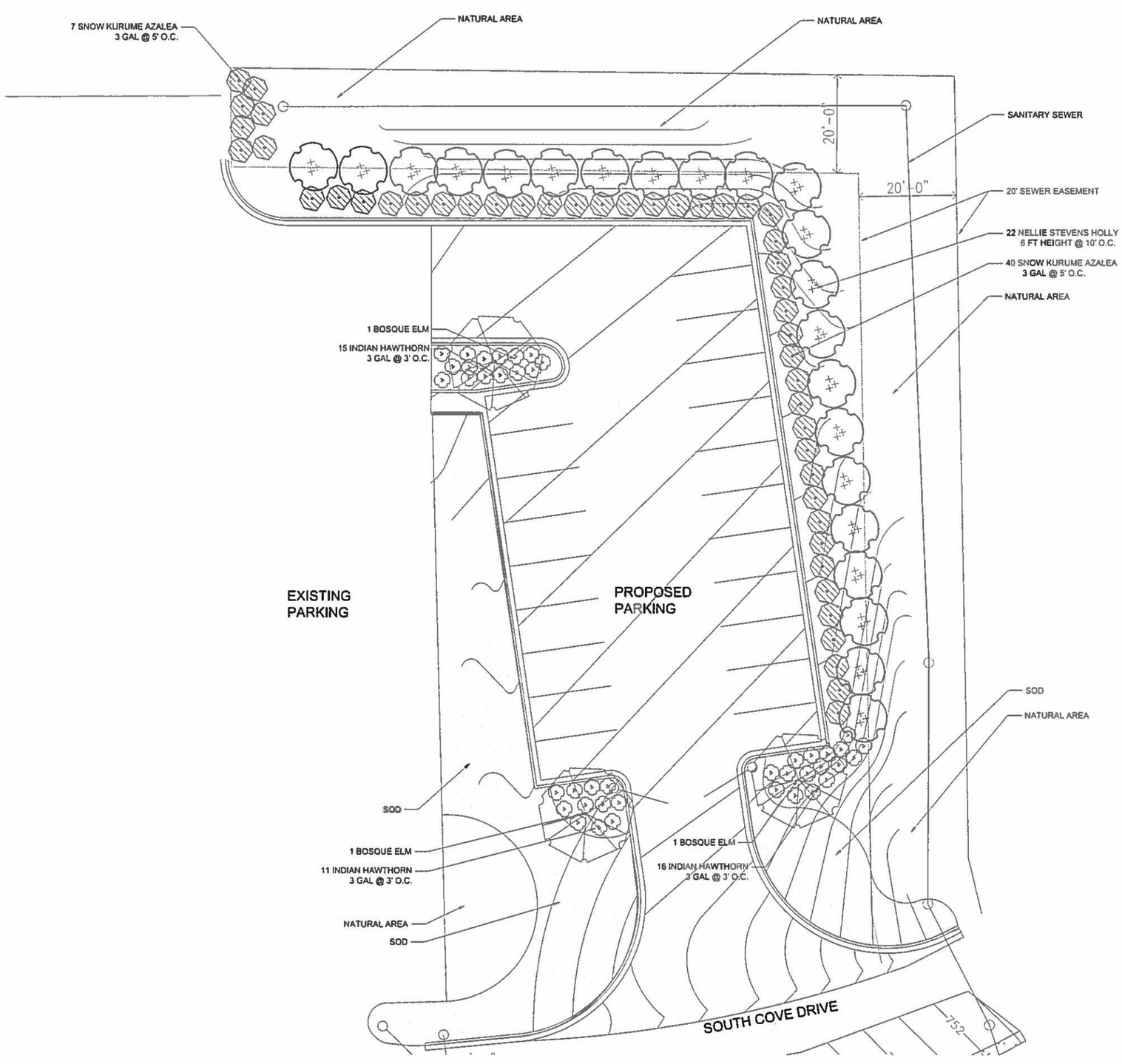
PROJECT
St. Luke's Episcopal Church Renovation & Addition

PROJECT NUMBER
166009-00

DRAWING NO.
E1.10

RAY ENGINEERING GROUP, LLC
2100 RIVERCHASE CENTER, SUITE 347
BIRMINGHAM, AL 35244
PH 205.447.6647 · FAX 205.447.6170

16055 DMH



ATTACHMENT C

1 PLAN — SITE PLAN — 1/8" = 1'-0" — A1.10

KPS GROUP
BANKERS ROW, Suite 100
60 14th Street South
Birmingham, AL 35233
205.251.8123
www.kpsgroup.com

St. Luke's Episcopal Church Renovation & Addition

OWNER

PROJECT ADDRESS
3736 Montrose Rd
Mountain Brook, AL 35213

PROJECT STATUS
ISSUED - 09.29.16
ISSUE DATE

REVISIONS
No. Description Date

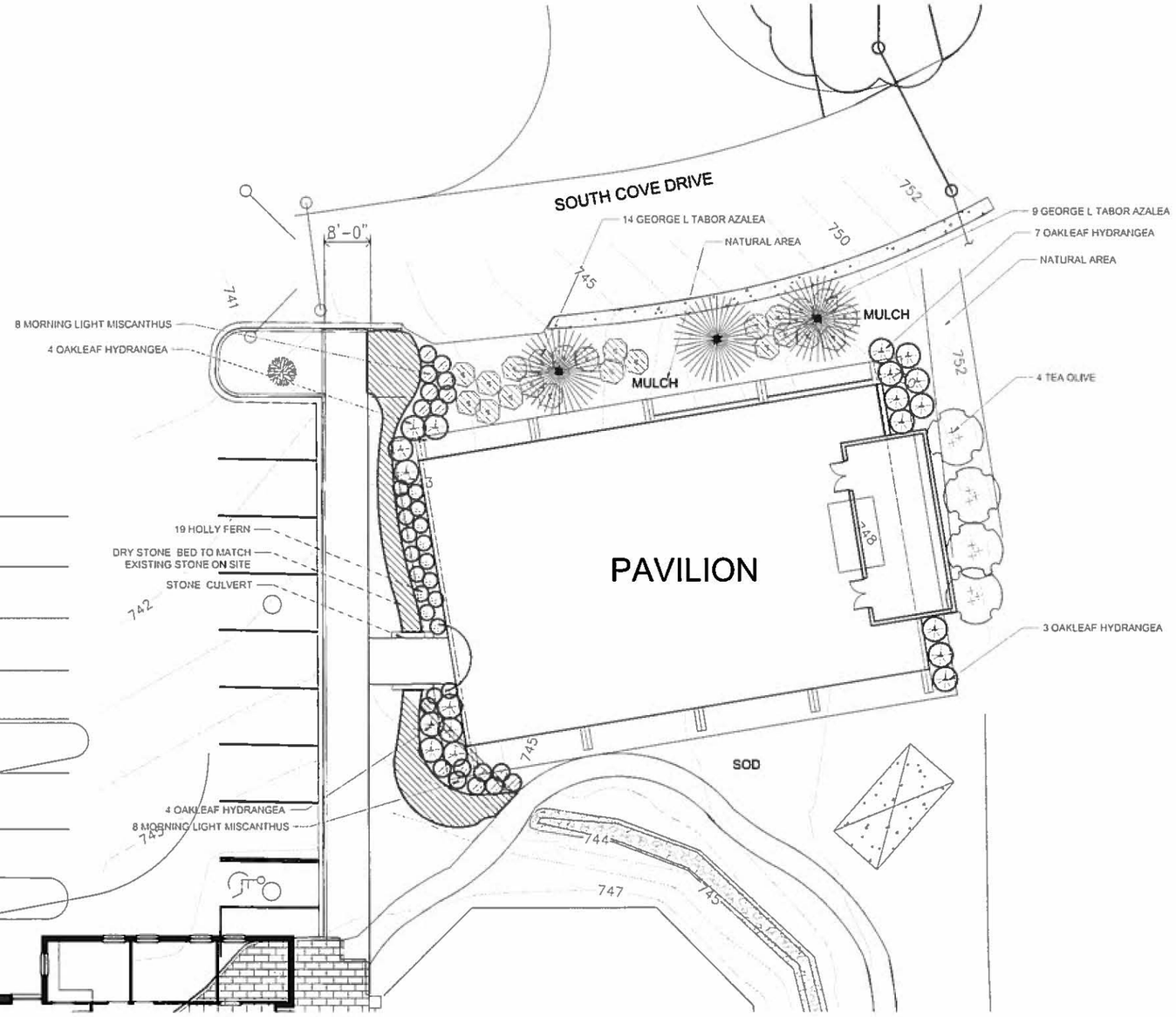
DRAWING TITLE
PARKING LOT PLANTING PLAN

DRAWN BY: AGS
CHECKED BY: AGS

PROJECT
St. Luke's Episcopal Church Renovation & Addition

PROJECT NUMBER
166009-00

DRAWING NO.
L1.01



ATTACHMENT C

1 PLAN — PLANTING PLAN 1/8" = 1'-0"

1/8"=1'-0" at Full Size 30"X42"

studio a design

K|P|S GROUP

BANKS ROW, Suite 100
60 14th Street South
Birmingham, AL 35233
205.251.0125
www.kpsgroup.com

St. Luke's Episcopal Church Renovation & Addition

OWNER
PROJECT ADDRESS
3736 Montrose Rd
Mountain Brook, AL 35213

PROJECT STATUS
ISSUED - 09.21.16
ISSUE DATE

REVISIONS
No. Description Date

DRAWING TITLE
PAVILION
PLANTING PLAN

DRAWN BY: AGS
CHECKED BY: AGS

PROJECT
St. Luke's Episcopal Church Renovation & Addition
PROJECT NUMBER
166009-00

DRAWING NO.
L1.02

Storm Drainage Calculations

For

St. Luke's Episcopal Church
Mountain Brook, AL

September 2016

LBYD

Project Number: 102-16-036

ATTACHMENT E

Drainage Narrative

The site is located on the north side of Montrose Road and west of South Cove Drive in Mountain Brook, Alabama. The church site is approximately 6.3 acres in size and drains north to an existing drainage swale located just north of the church property. The existing church property consists of mostly impervious areas including the church facility, parking, and a few existing residential properties.

The proposed changes within the development include a church expansion, new pavilion, proposed parking addition, removal of residential homes, and a proposed detention facility.

The drainage study consists of two drainage basins (see attached drainage basin maps). There is one basin (west) that includes the majority of the church parking and building areas. The second drainage basin (east) drains through the church property and consists of mostly offsite runoff. These two drainage basins combine and discharge to an existing swale located just north of the church property. Pre developed vs. post developed storm flows were analyzed at this location.

Stormwater will be captured by the proposed detention facility located south of the proposed pavilion. This detention pond is designed to prevent increases in storm flows (see attached post developed basin map). Post development runoff is designed to be less than the pre development runoff. The detention facility has an outlet control structure to detain storm flows.

Flow summary:

Storm Event	Analysis @ Swale located along Northern Property Line	
	Pre-Developed Storm flows (cfs)	Post-Developed Storm flows (cfs) (Including detention)
2yr	26.1	26.0
5yr	33.4	33.4
10yr	40.2	40.2
25yr	50.7	50.1
50yr	59.7	58.8
100yr	69.4	67.8

*Additional Hydrograph information is included in the following report.

Methodology

The storm drainage systems were sized by using the SCS Method. Storm systems were sized with the aid of *Hydraflow Hydrographs* Extension for AutoCAD Civil 3D 2013.

The detention system was sized based on the 24-hour storm events and includes detention routing for the required 100-year event.

Pre and Post Developed
Storm Drainage
Basin Maps

2-100 Year
Hydrographs

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	------	14.35	16.74	-------	21.14	25.22	31.48	36.81	42.55	E1 - Existing (West)
2	SCS Runoff	------	7.761	9.320	-------	12.25	14.99	19.24	22.87	26.79	E2 - Existing (East)
4	SCS Runoff	------	14.35	16.74	-------	21.14	25.22	31.48	36.81	42.55	B1 - Proposed (West)
5	SCS Runoff	------	7.761	9.320	-------	12.25	14.99	19.24	22.87	26.79	B2 - Proposed (East)
6	Reservoir	5	7.761	9.313	-------	12.23	14.98	18.94	22.39	25.57	Route DP
8	Combine	1, 2,	22.11	26.06	-------	33.39	40.22	50.73	59.68	69.35	Combine Existing @ Northern Propert
9	Combine	4, 6,	22.09	26.04	-------	33.38	40.21	50.16	58.81	67.82	Combined Post @ Northern Property

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

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	16.74	1	732	72,461	------	------	------	E1 - Existing (West)
2	SCS Runoff	9.320	1	732	39,575	------	------	------	E2 - Existing (East)
4	SCS Runoff	16.74	1	732	72,461	------	------	------	B1 - Proposed (West)
5	SCS Runoff	9.320	1	732	39,575	------	------	------	B2 - Proposed (East)
6	Reservoir	9.313	1	733	39,574	5	748.84	744	Route DP
8	Combine	26.06	1	732	112,036	1, 2,	------	------	Combine Existing @ Northern Propert
9	Combine	26.04	1	732	112,035	4, 6,	------	------	Combined Post @ Northern Property

Hydrograph Report

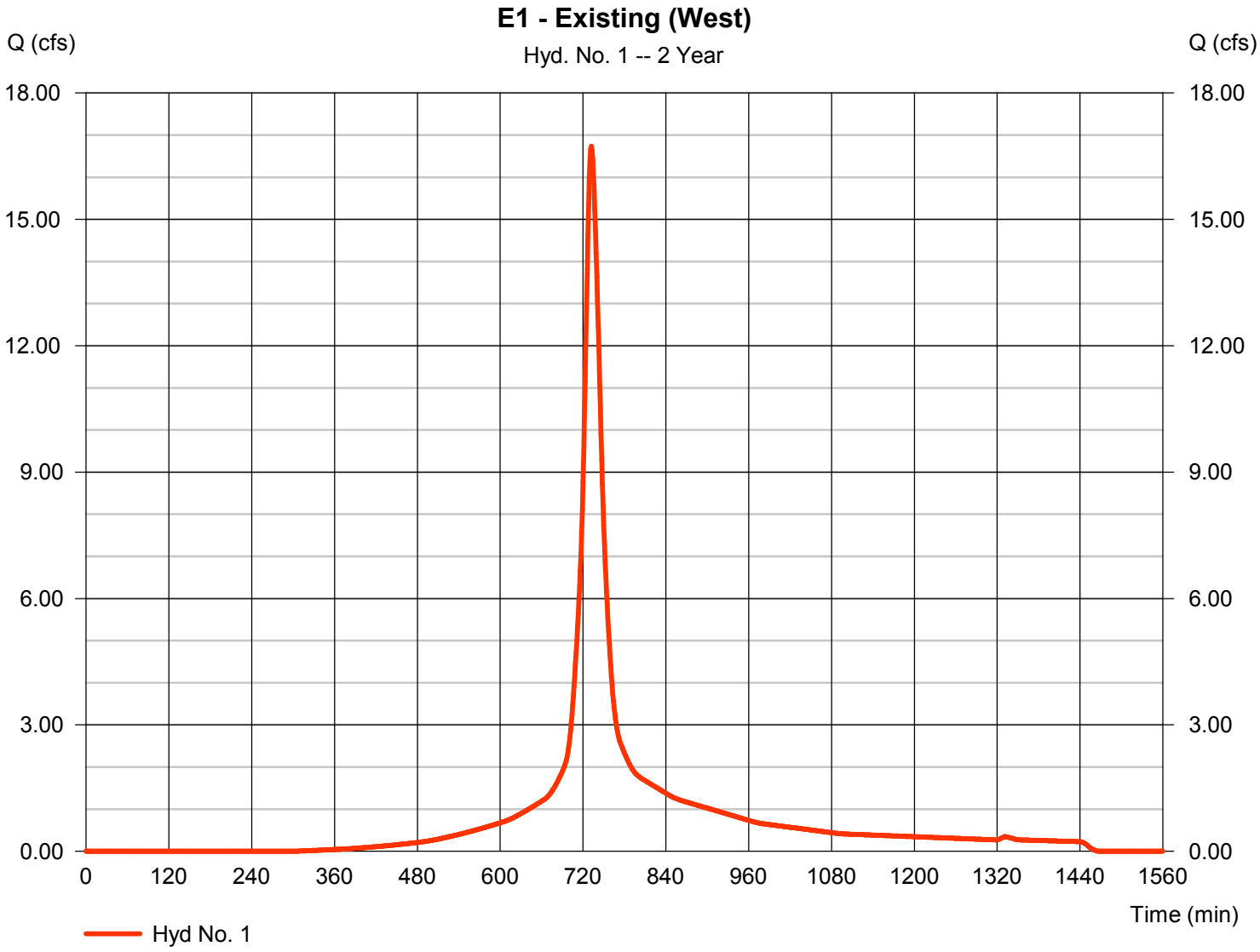
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 — Friday, 09 / 23 / 2016

Hyd. No. 1

E1 - Existing (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 16.74 cfs
Storm frequency	= 2 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 72,461 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 4.09 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(3.750 x 98) + (2.970 x 79)] / 6.720



Hydrograph Report

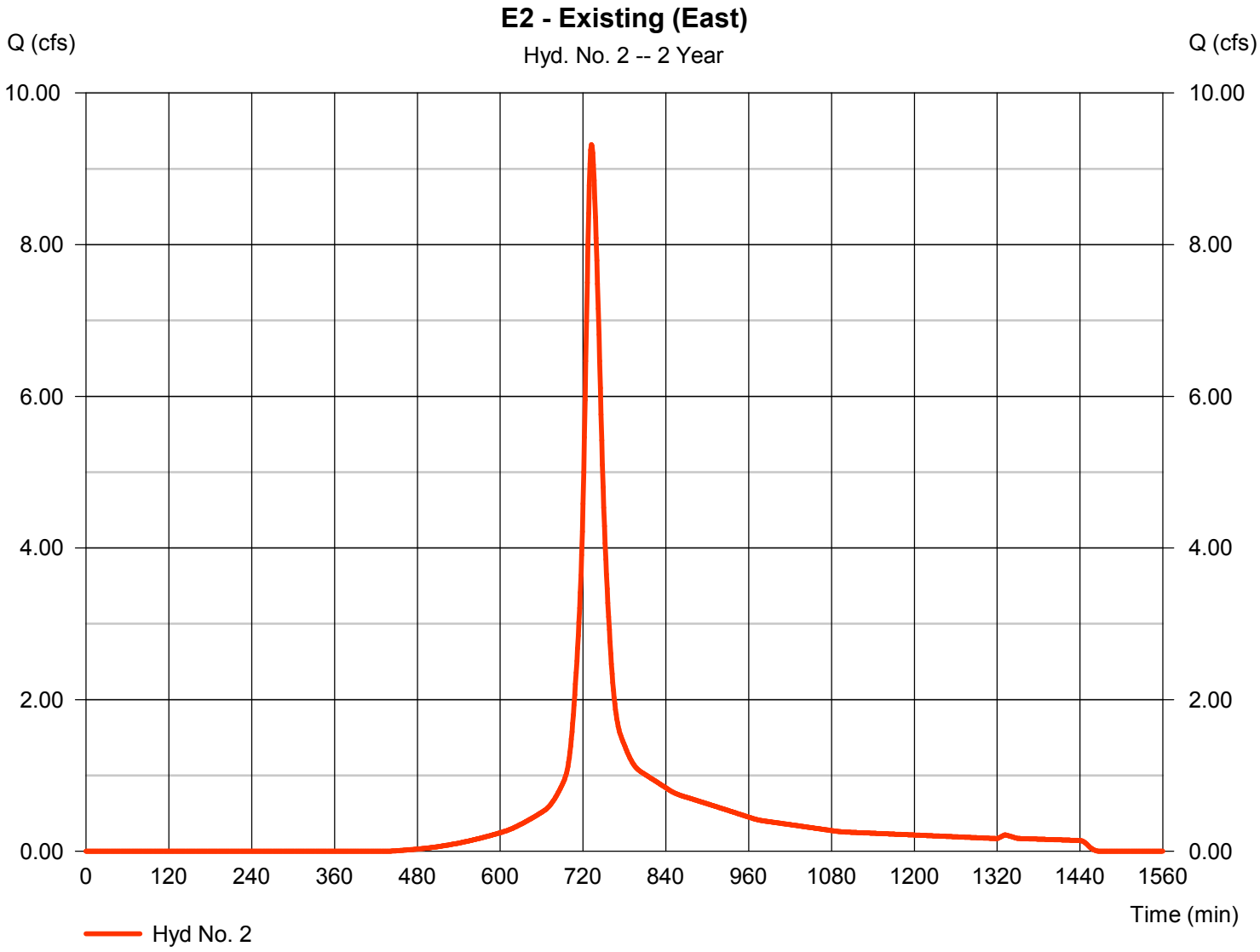
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 2

E2 - Existing (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 9.320 cfs
Storm frequency	= 2 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 39,575 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 4.09 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

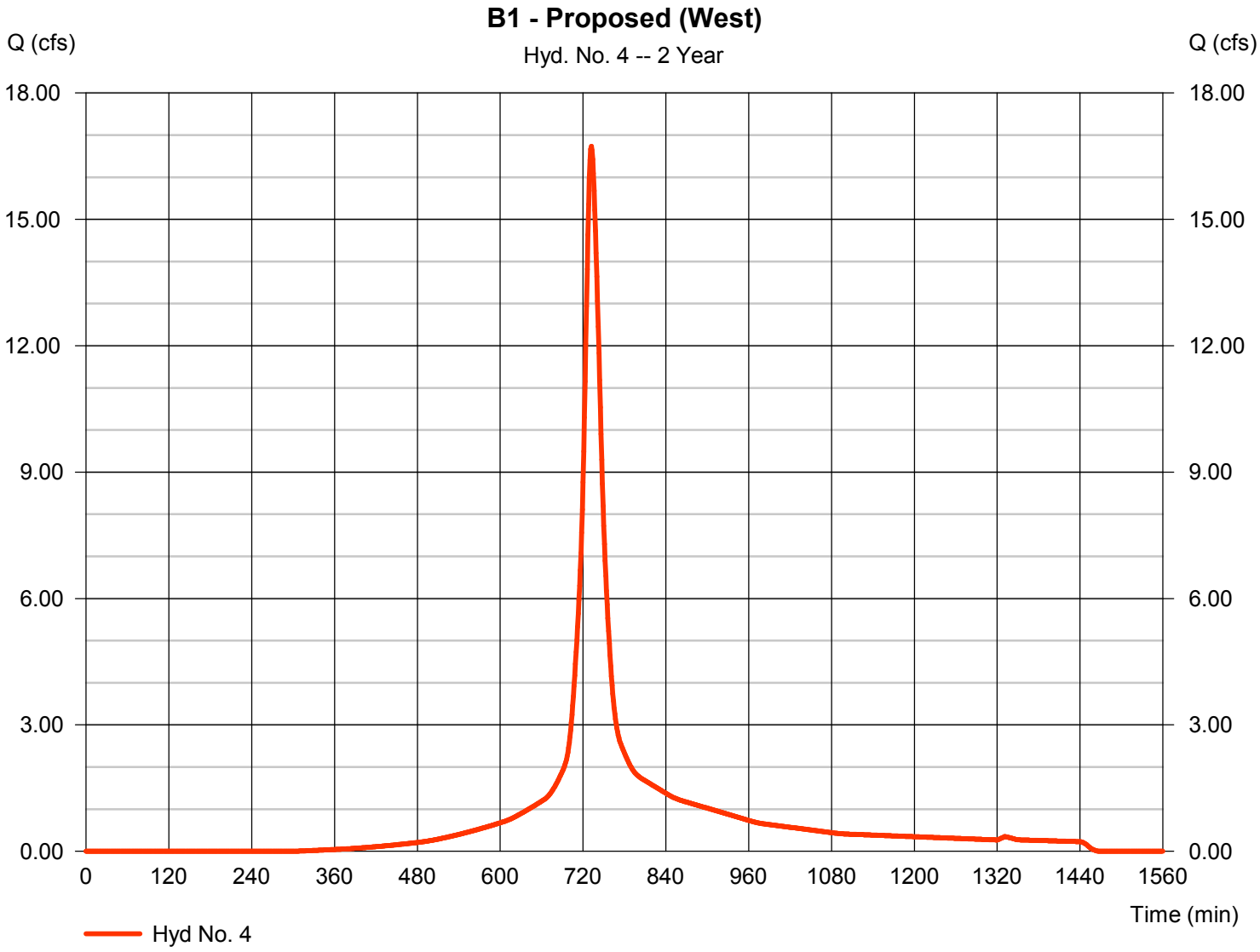
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 4

B1 - Proposed (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 16.74 cfs
Storm frequency	= 2 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 72,461 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 4.09 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.060 x 98) + (2.660 x 79)] / 6.720



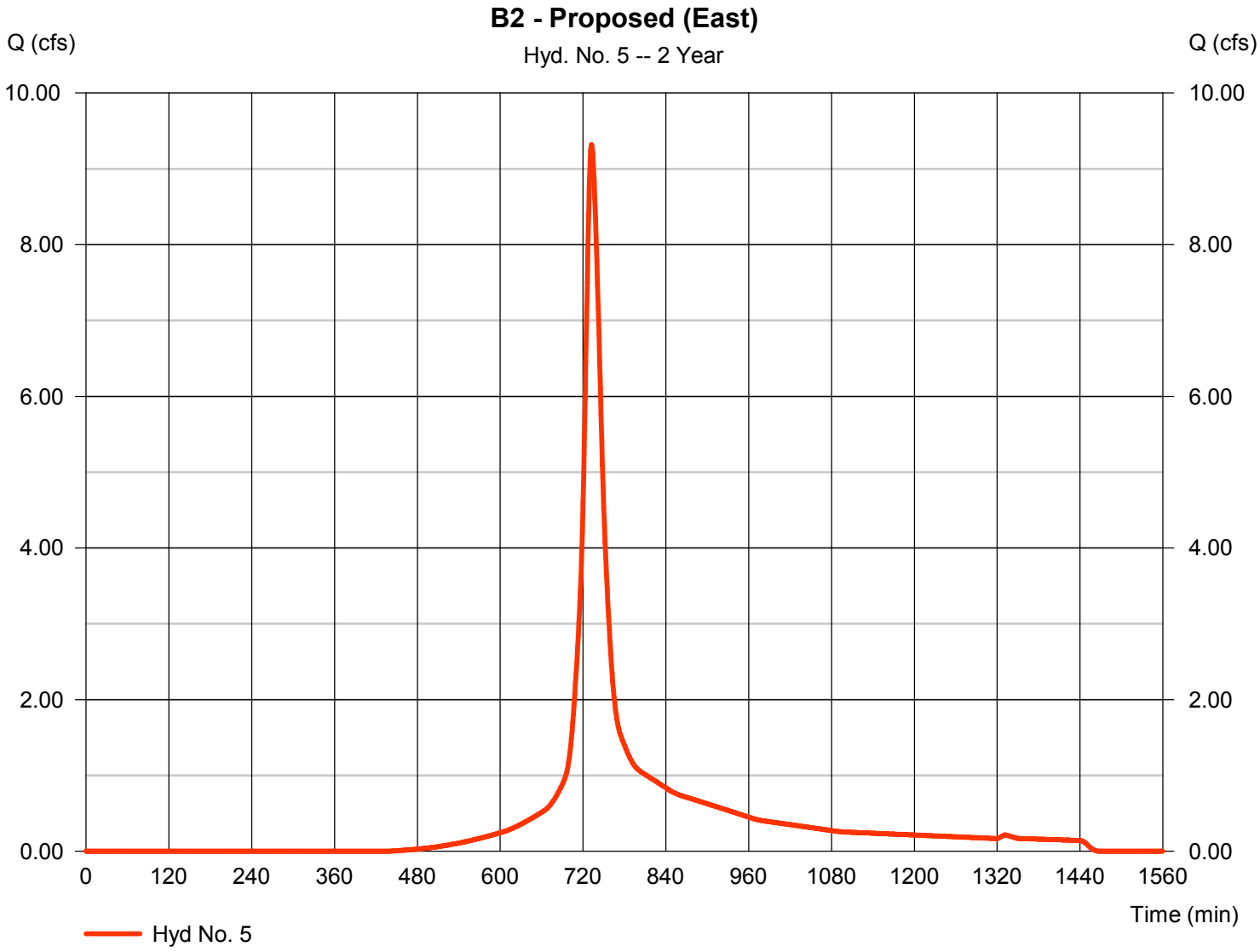
Hydrograph Report

Hyd. No. 5

B2 - Proposed (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 9.320 cfs
Storm frequency	= 2 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 39,575 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 4.09 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

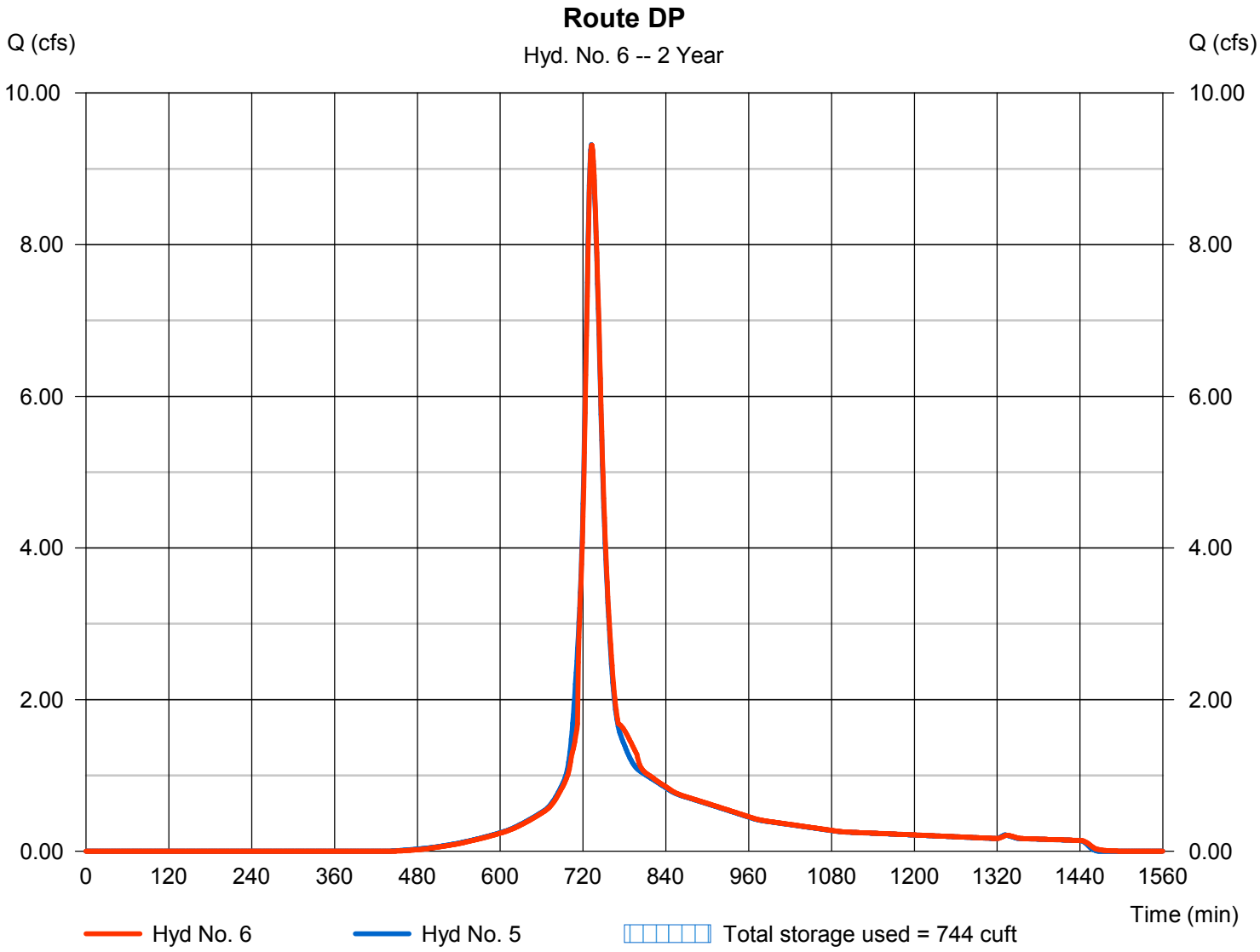
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 6

Route DP

Hydrograph type	= Reservoir	Peak discharge	= 9.313 cfs
Storm frequency	= 2 yrs	Time to peak	= 733 min
Time interval	= 1 min	Hyd. volume	= 39,574 cuft
Inflow hyd. No.	= 5 - B2 - Proposed (East)	Max. Elevation	= 748.84 ft
Reservoir name	= Det. Pond	Max. Storage	= 744 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Pond No. 1 - Det. Pond

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 747.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	747.00	64	0	0
1.00	748.00	450	228	228
2.00	749.00	800	617	844
3.00	750.00	1,500	1,132	1,976
4.00	751.00	2,475	1,967	3,943

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 30.00	8.00	6.00	0.00
Span (in)	= 30.00	8.00	36.00	0.00
No. Barrels	= 1	1	4	0
Invert El. (ft)	= 747.00	747.00	748.50	0.00
Length (ft)	= 100.00	0.00	0.00	0.00
Slope (%)	= 1.00	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	Yes	No

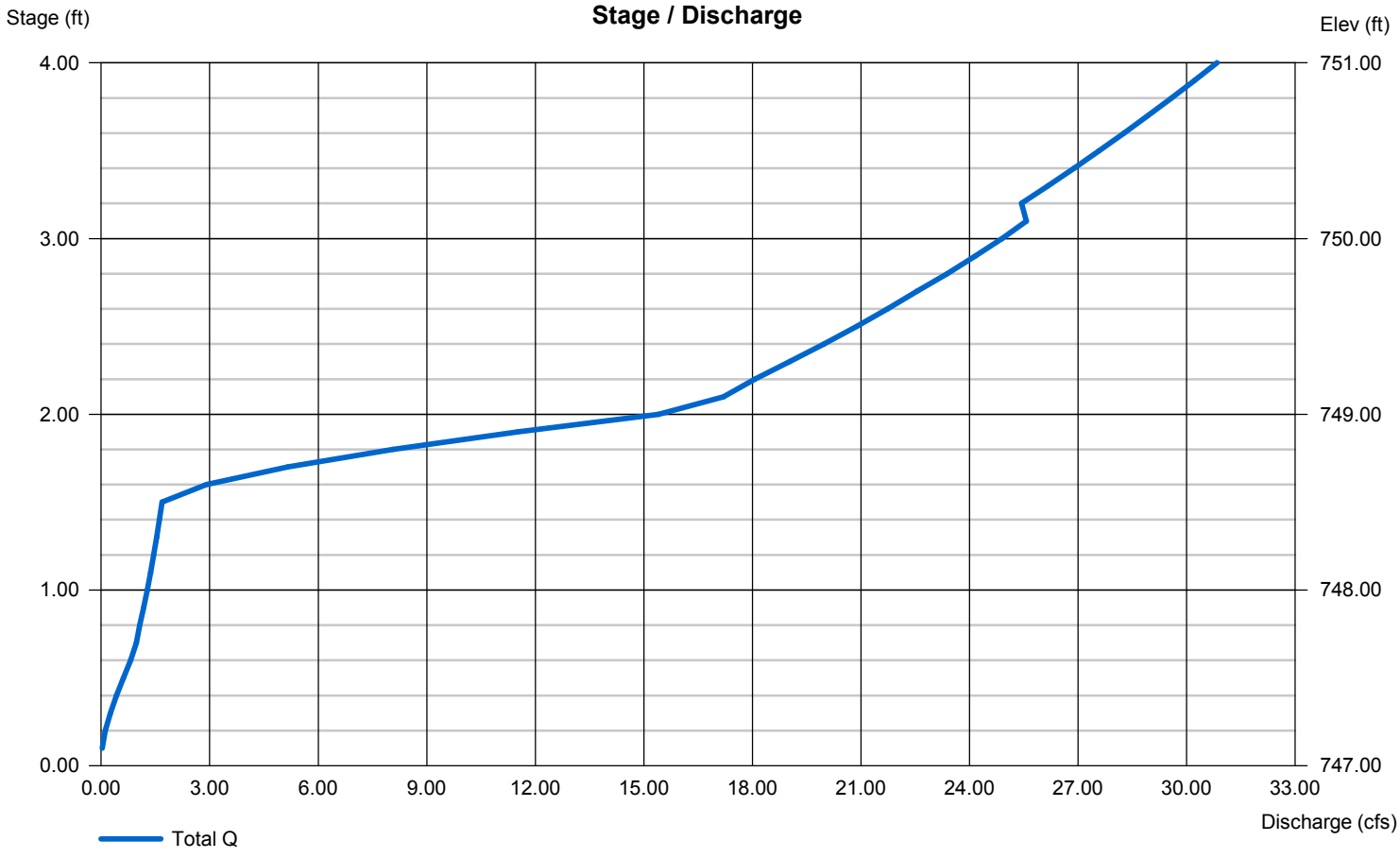
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	Inactive	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
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).



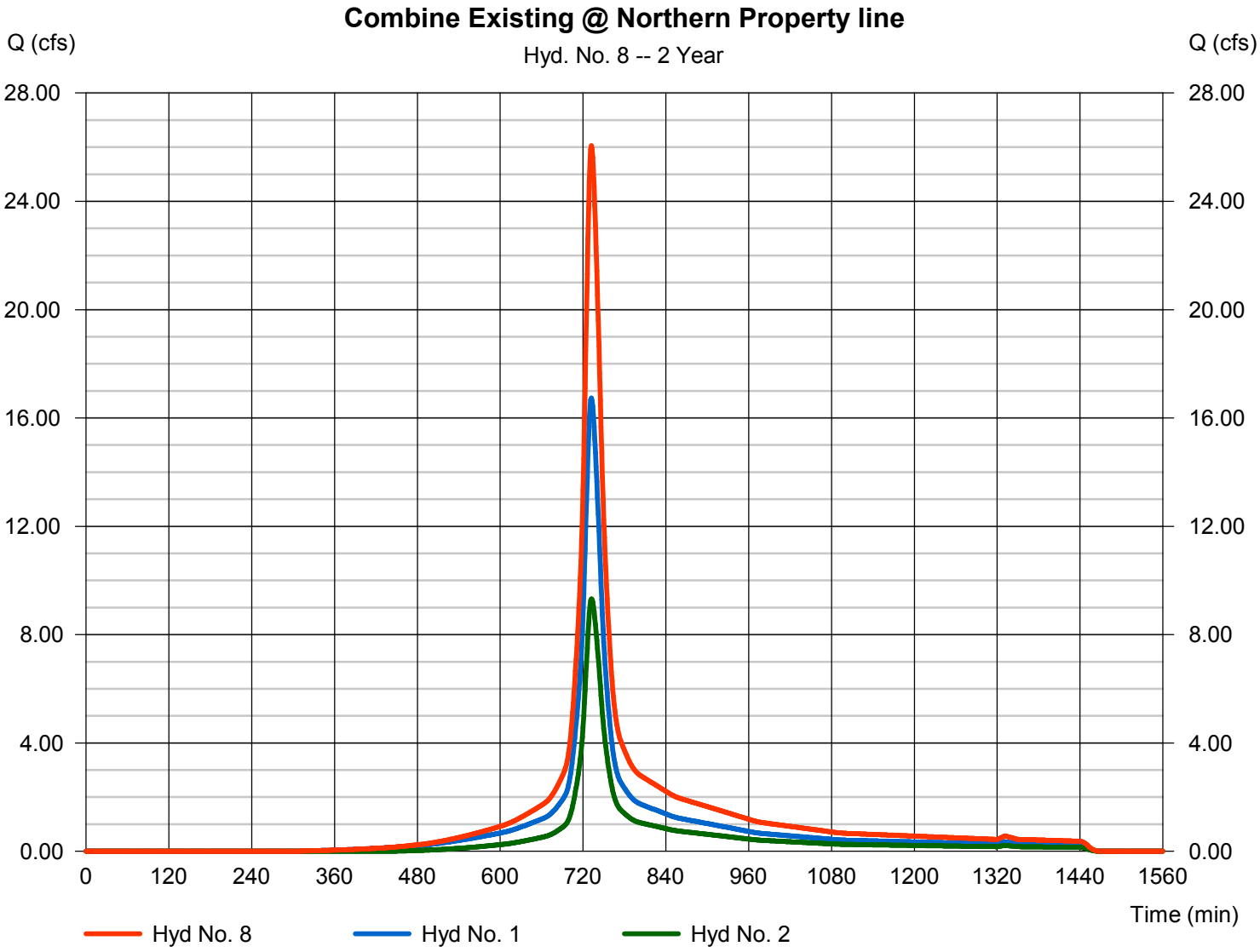
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 8

Combine Existing @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 26.06 cfs
Storm frequency	= 2 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 112,036 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 11.220 ac



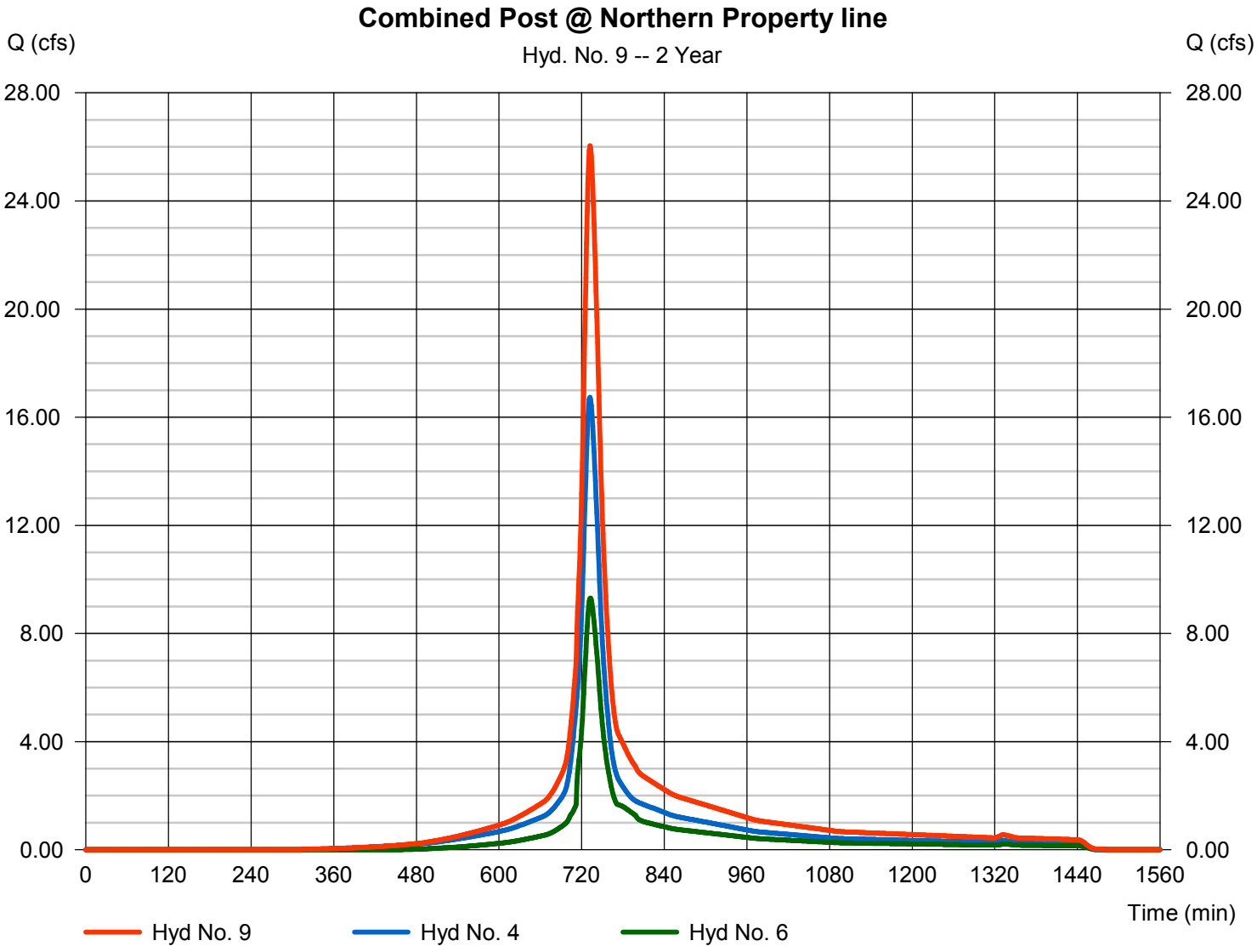
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 9

Combined Post @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 26.04 cfs
Storm frequency	= 2 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 112,035 cuft
Inflow hyds.	= 4, 6	Contrib. drain. area	= 6.720 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

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	21.14	1	732	92,553	------	------	------	E1 - Existing (West)
2	SCS Runoff	12.25	1	732	52,225	------	------	------	E2 - Existing (East)
4	SCS Runoff	21.14	1	732	92,553	------	------	------	B1 - Proposed (West)
5	SCS Runoff	12.25	1	732	52,225	------	------	------	B2 - Proposed (East)
6	Reservoir	12.23	1	732	52,224	5	748.92	794	Route DP
8	Combine	33.39	1	732	144,777	1, 2,	------	------	Combine Existing @ Northern Propert
9	Combine	33.38	1	732	144,777	4, 6,	------	------	Combined Post @ Northern Property

Hydrograph Report

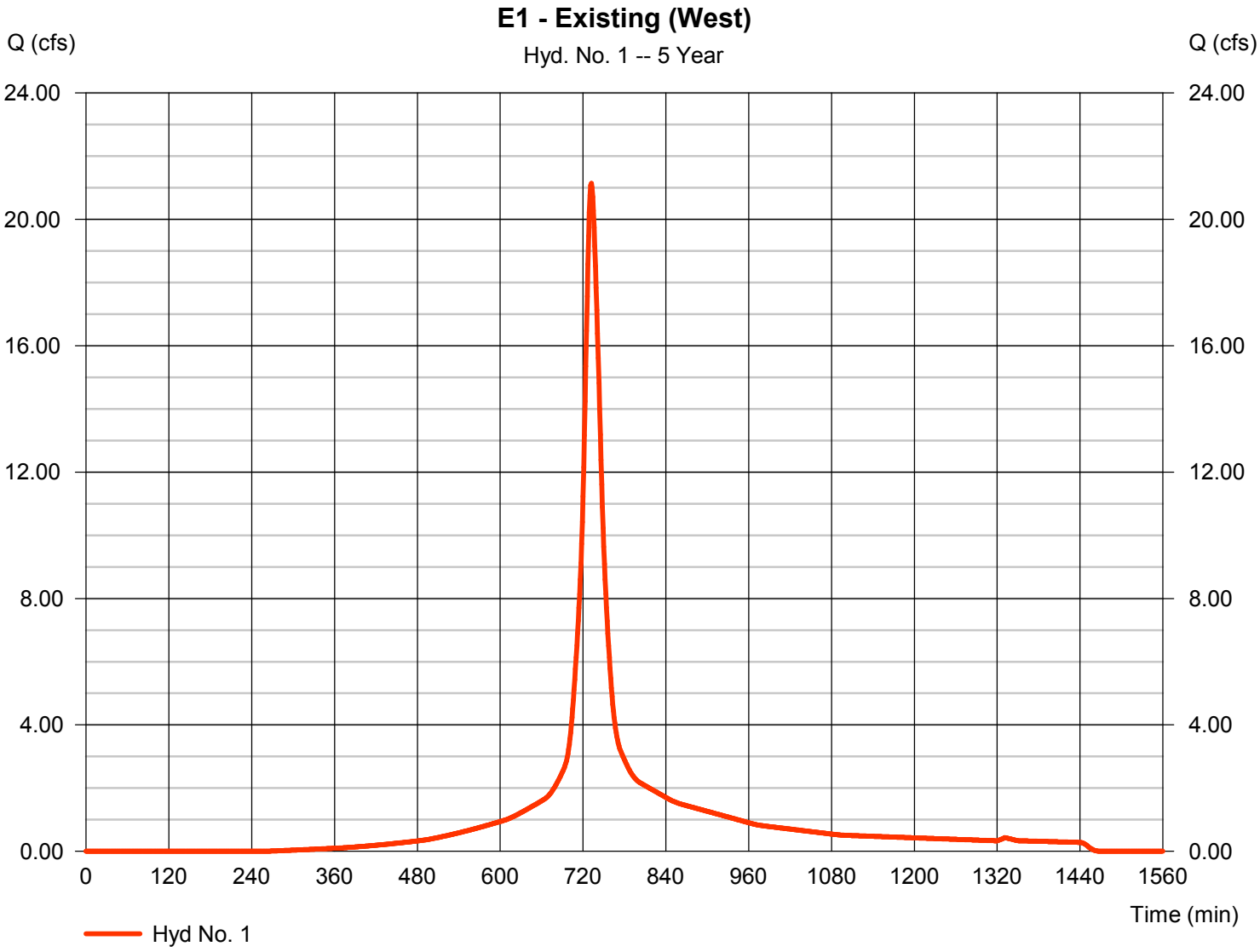
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 — Friday, 09 / 23 / 2016

Hyd. No. 1

E1 - Existing (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 21.14 cfs
Storm frequency	= 5 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 92,553 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 4.96 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(3.750 x 98) + (2.970 x 79)] / 6.720



Hydrograph Report

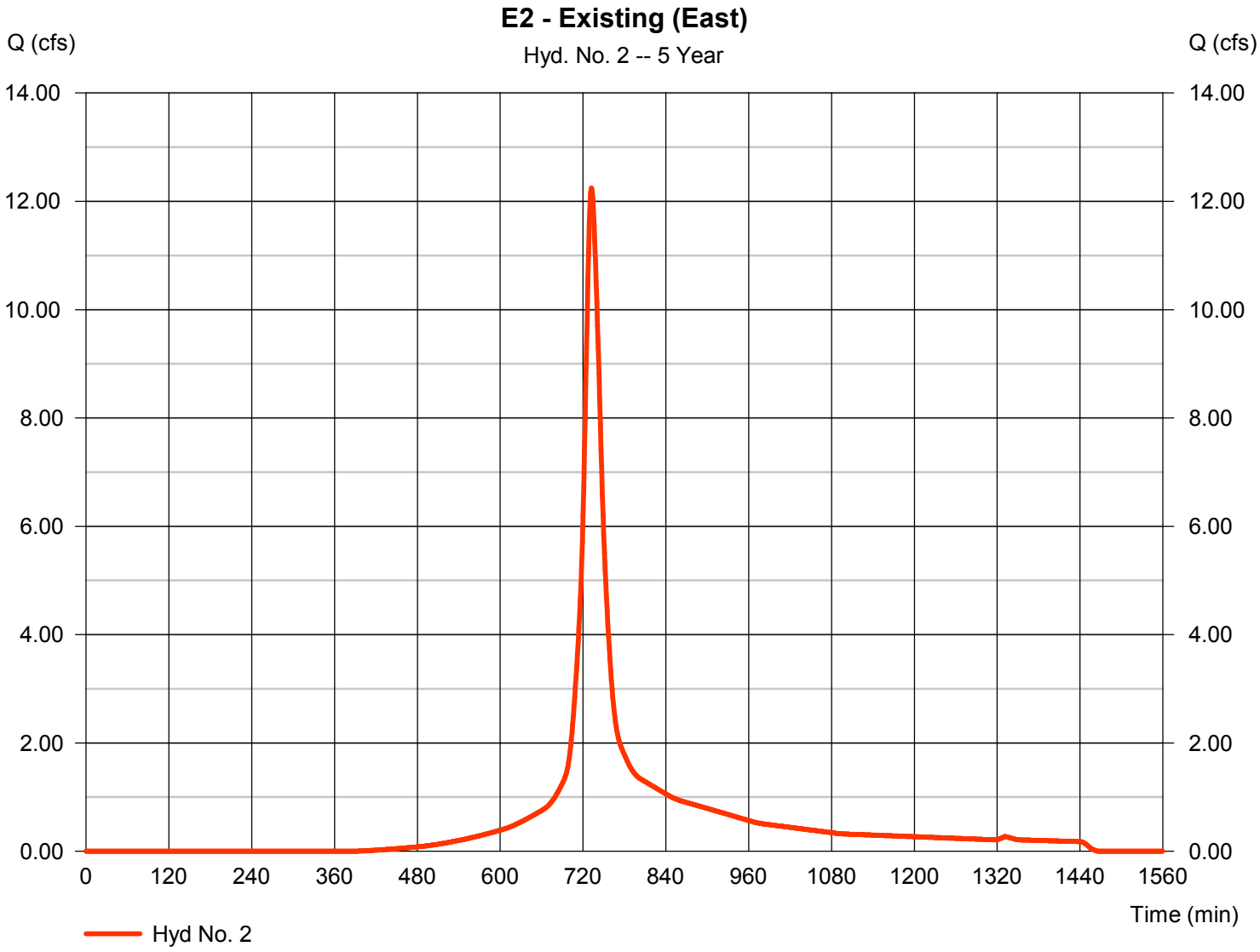
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 2

E2 - Existing (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 12.25 cfs
Storm frequency	= 5 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 52,225 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 4.96 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

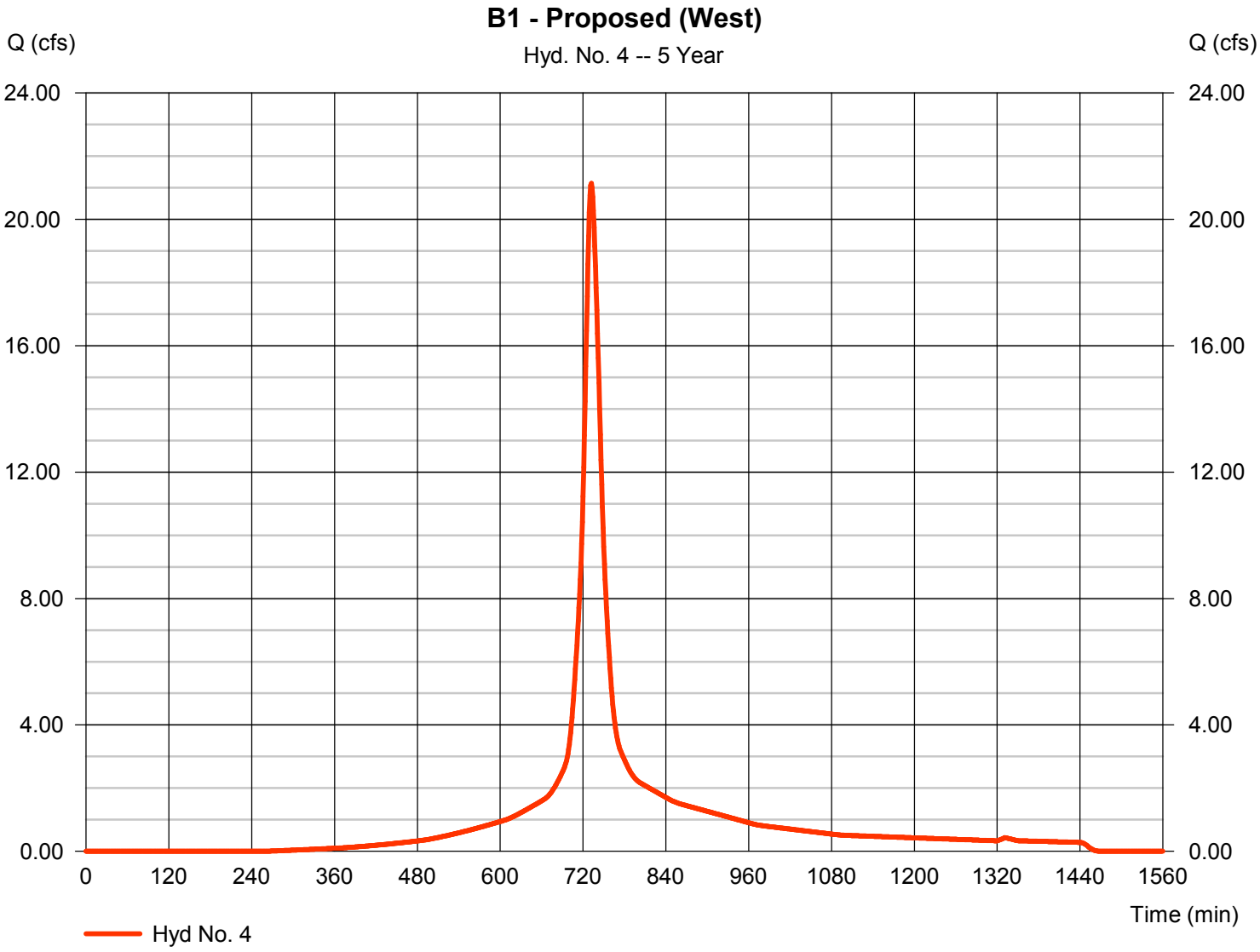
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 4

B1 - Proposed (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 21.14 cfs
Storm frequency	= 5 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 92,553 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 4.96 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.060 x 98) + (2.660 x 79)] / 6.720



Hydrograph Report

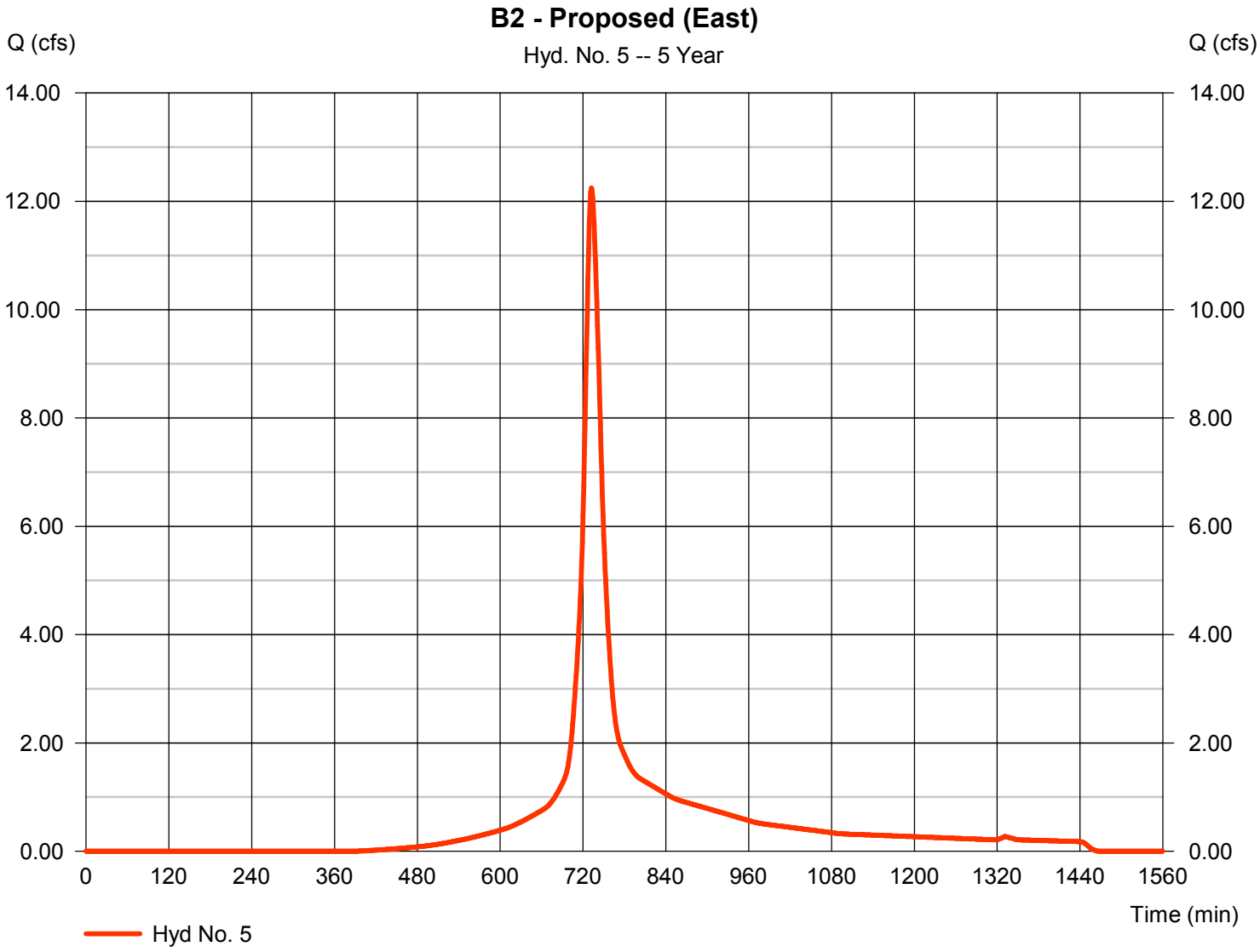
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 5

B2 - Proposed (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 12.25 cfs
Storm frequency	= 5 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 52,225 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 4.96 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

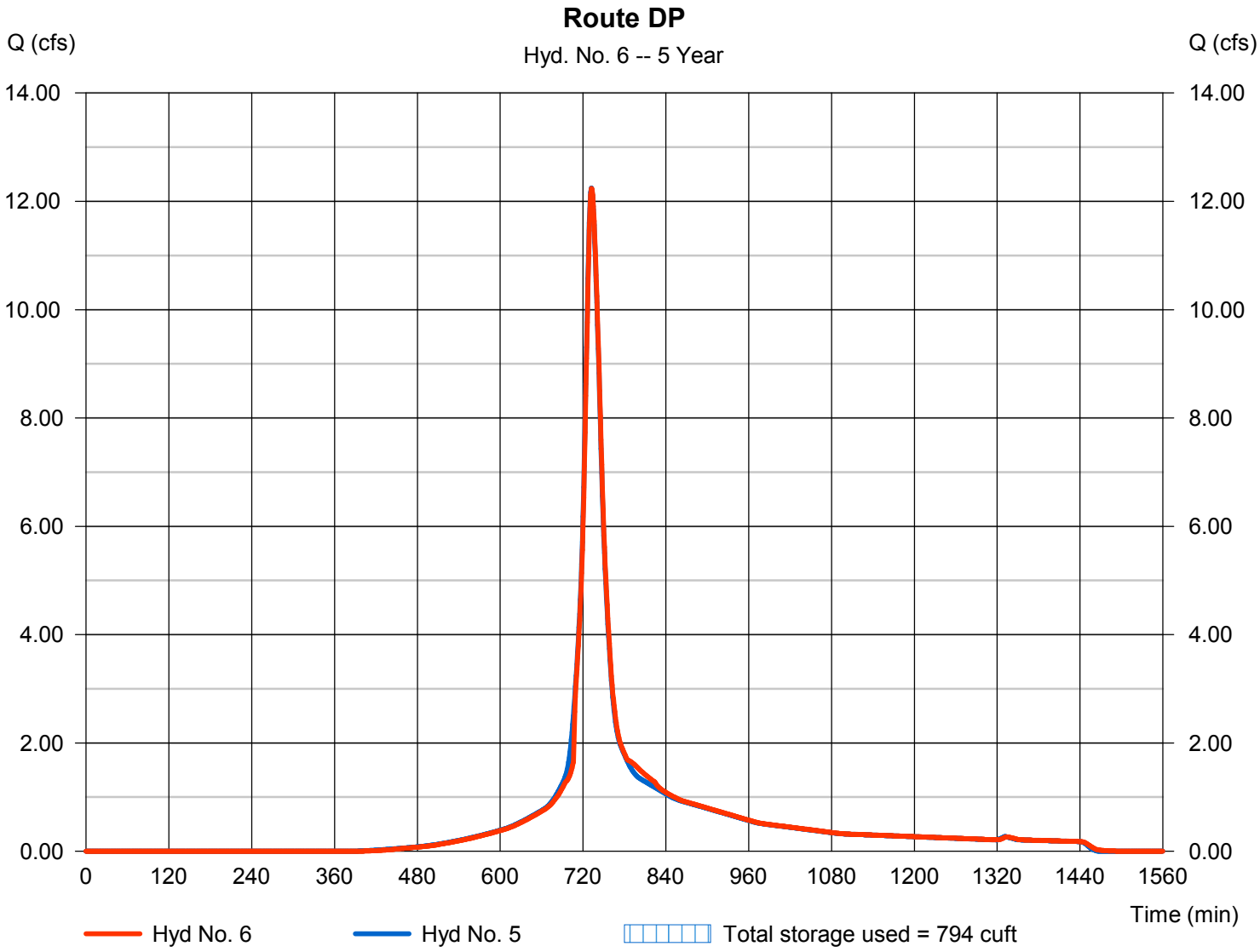
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 6

Route DP

Hydrograph type	= Reservoir	Peak discharge	= 12.23 cfs
Storm frequency	= 5 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 52,224 cuft
Inflow hyd. No.	= 5 - B2 - Proposed (East)	Max. Elevation	= 748.92 ft
Reservoir name	= Det. Pond	Max. Storage	= 794 cuft

Storage Indication method used.



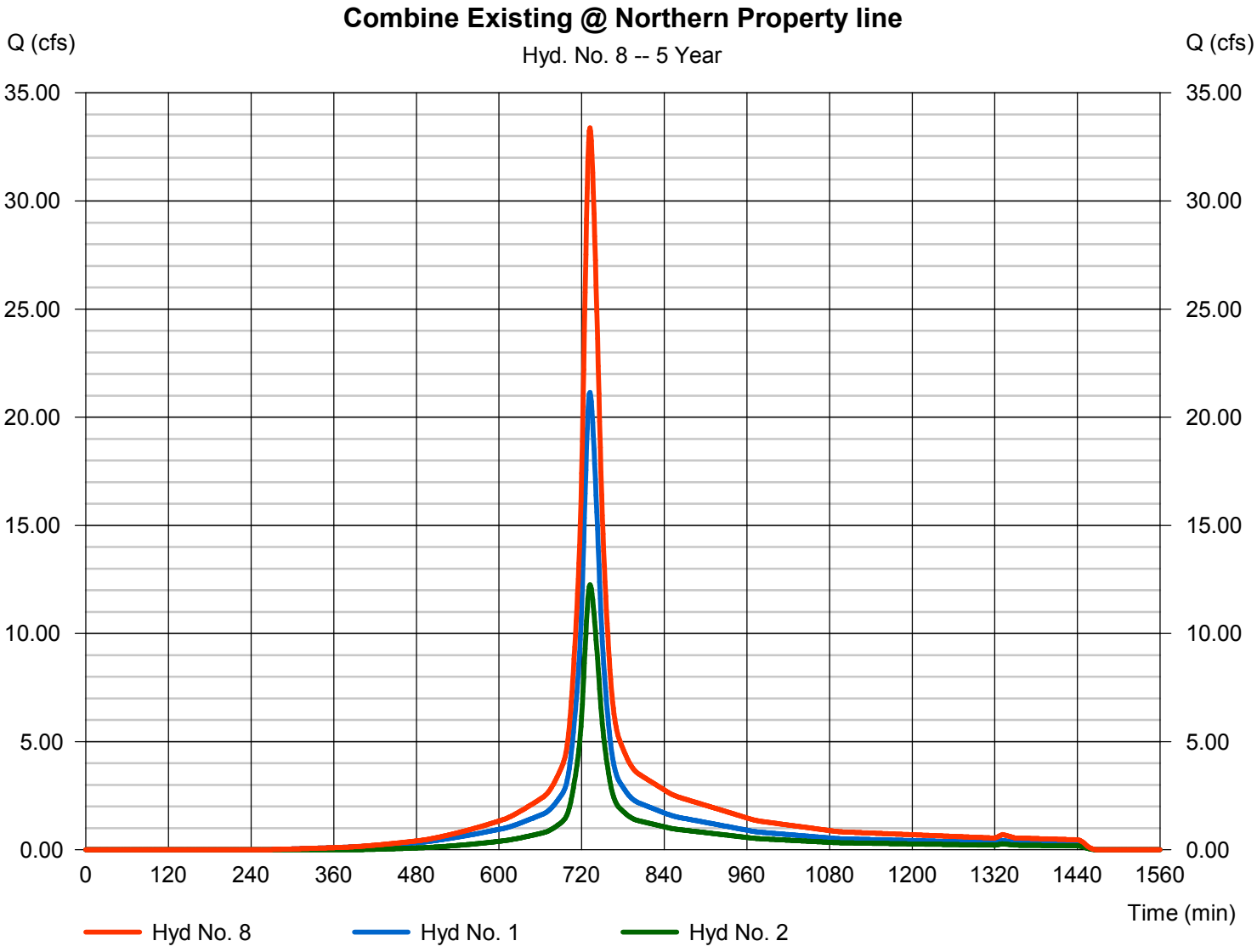
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 8

Combine Existing @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 33.39 cfs
Storm frequency	= 5 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 144,777 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 11.220 ac



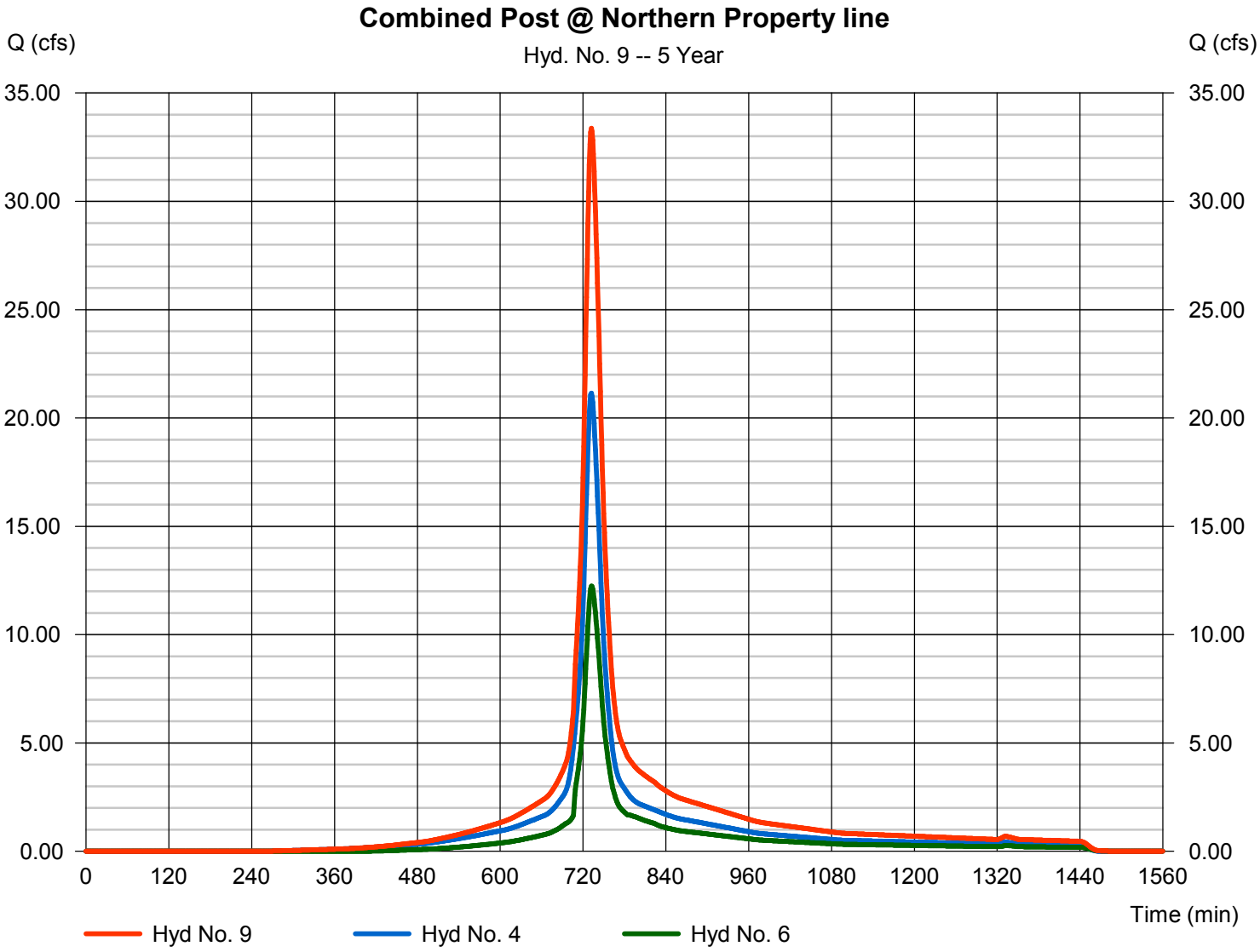
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 9

Combined Post @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 33.38 cfs
Storm frequency	= 5 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 144,777 cuft
Inflow hyds.	= 4, 6	Contrib. drain. area	= 6.720 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

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	25.22	1	732	111,468	------	------	------	E1 - Existing (West)
2	SCS Runoff	14.99	1	732	64,302	------	------	------	E2 - Existing (East)
4	SCS Runoff	25.22	1	732	111,468	------	------	------	B1 - Proposed (West)
5	SCS Runoff	14.99	1	732	64,302	------	------	------	B2 - Proposed (East)
6	Reservoir	14.98	1	732	64,301	5	748.99	838	Route DP
8	Combine	40.22	1	732	175,770	1, 2,	------	------	Combine Existing @ Northern Propert
9	Combine	40.21	1	732	175,769	4, 6,	------	------	Combined Post @ Northern Property

Hydrograph Report

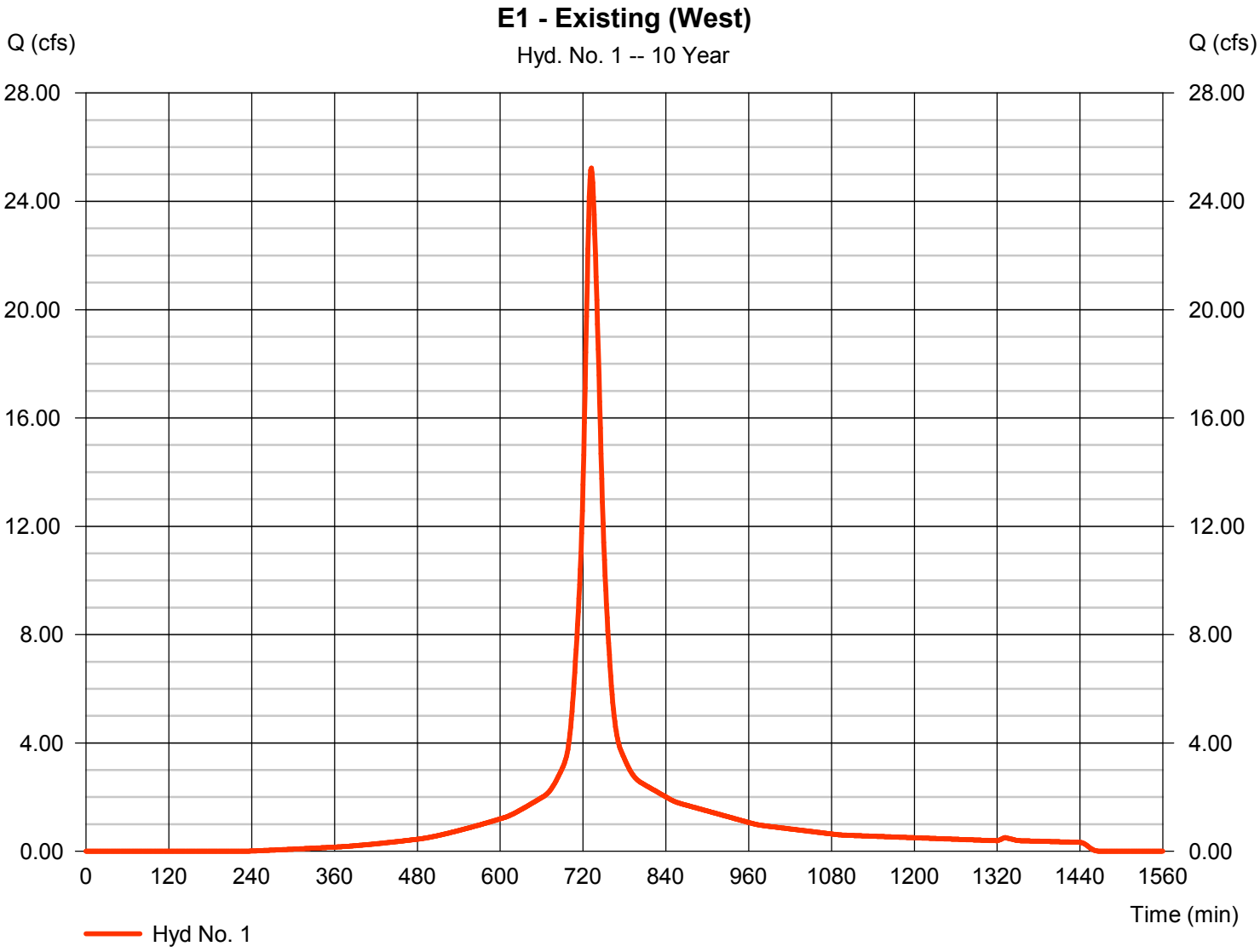
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 — Friday, 09 / 23 / 2016

Hyd. No. 1

E1 - Existing (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 25.22 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 111,468 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 5.77 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(3.750 x 98) + (2.970 x 79)] / 6.720



Hydrograph Report

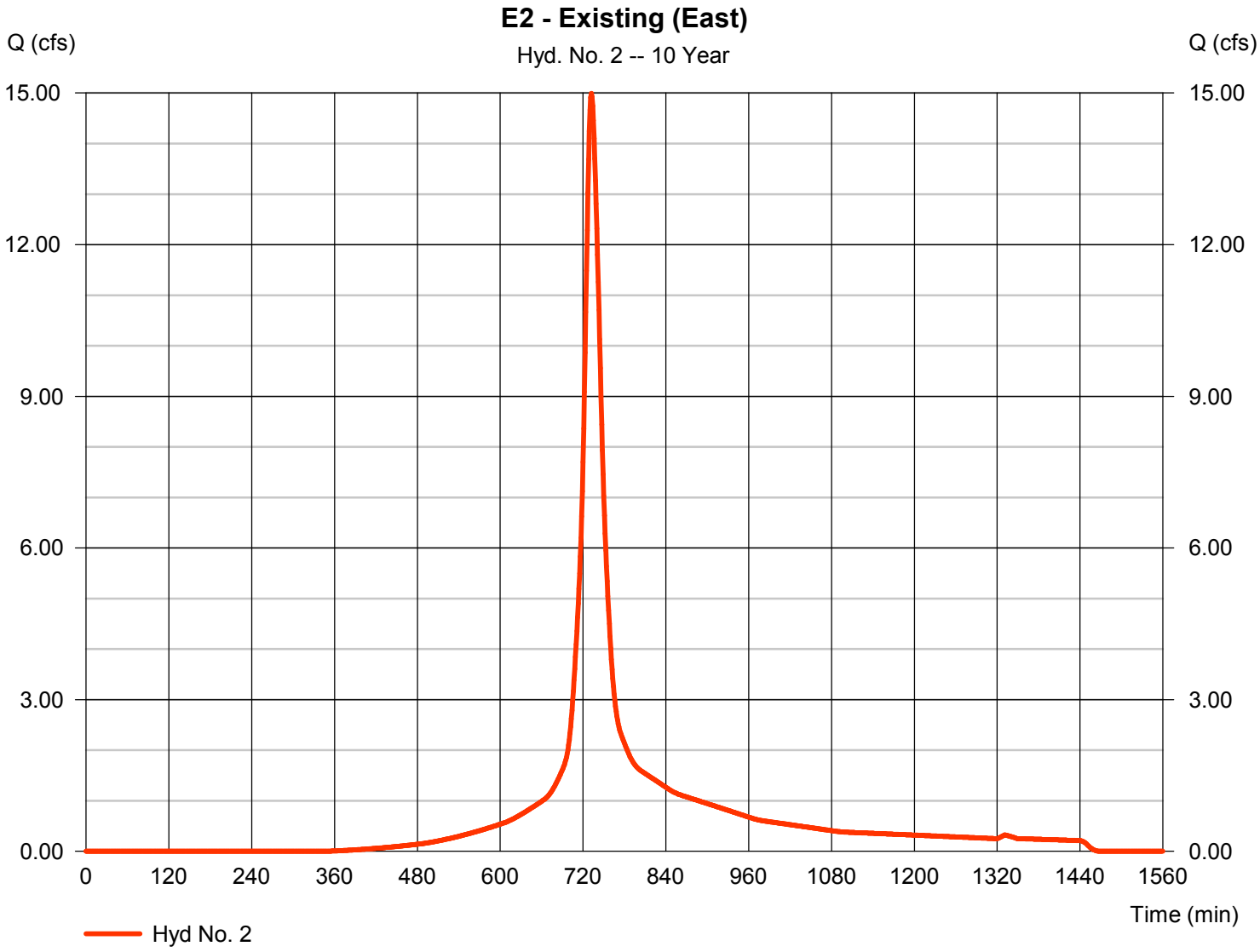
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 — Friday, 09 / 23 / 2016

Hyd. No. 2

E2 - Existing (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 14.99 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 64,302 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 5.77 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

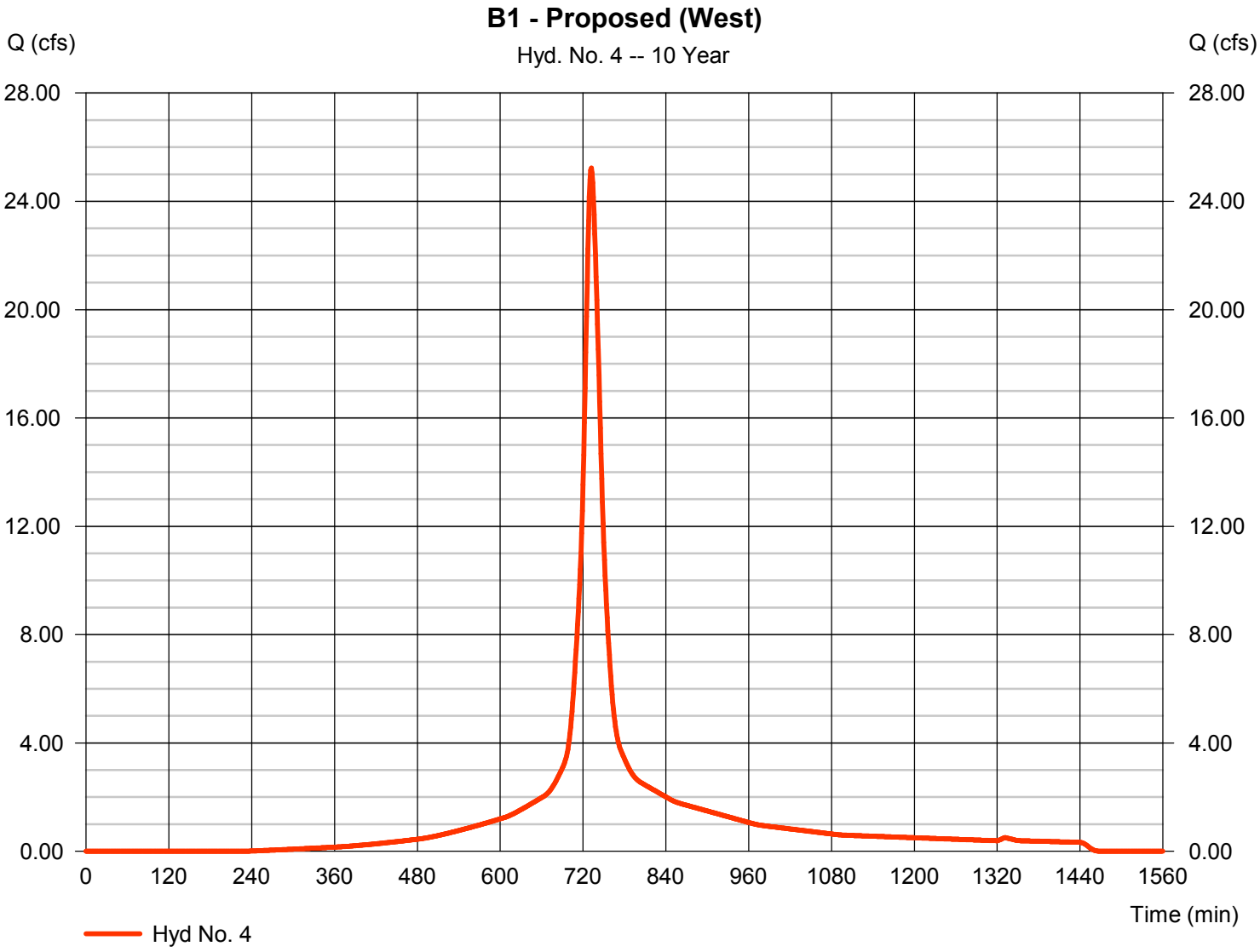
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 4

B1 - Proposed (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 25.22 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 111,468 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 5.77 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.060 x 98) + (2.660 x 79)] / 6.720



Hydrograph Report

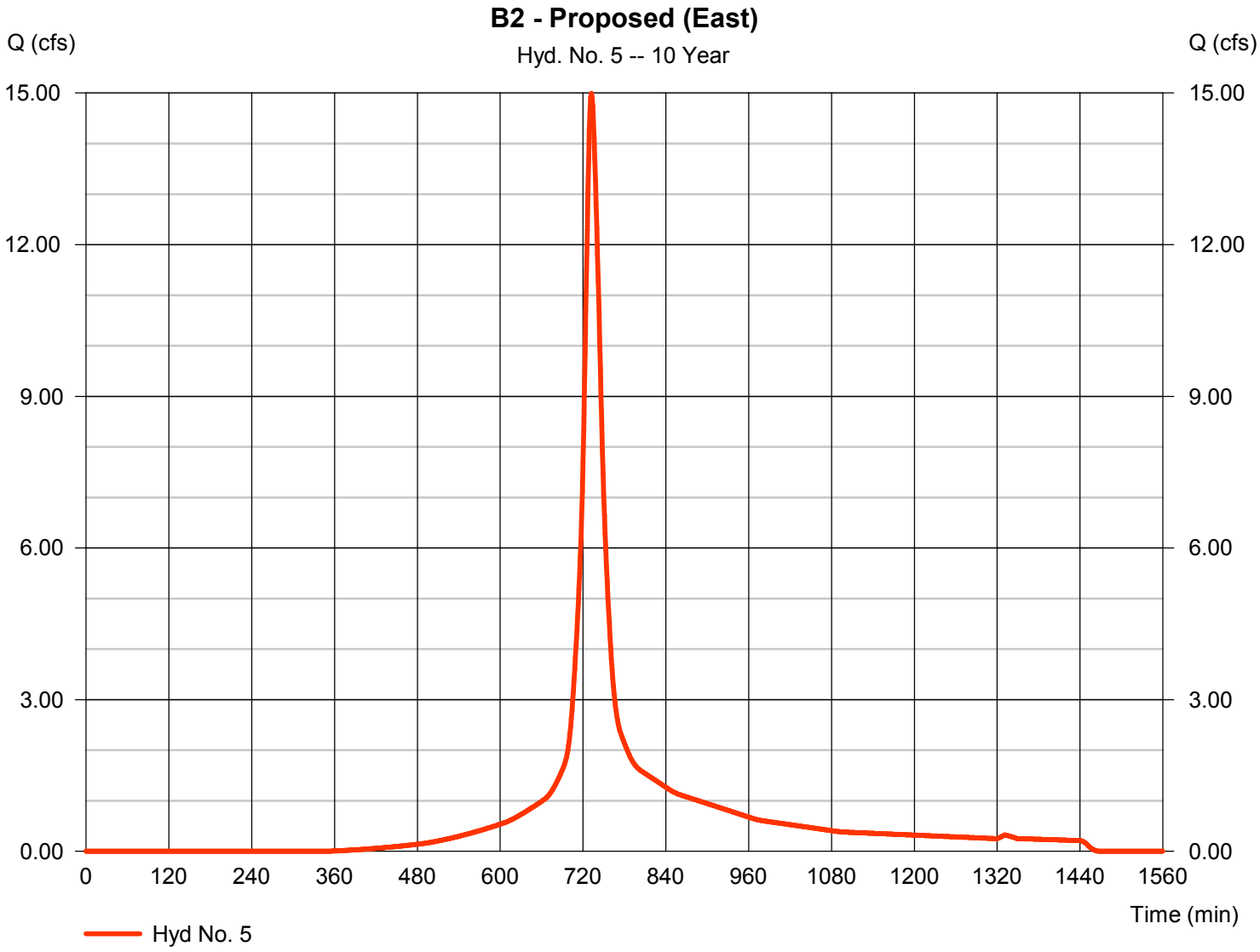
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 5

B2 - Proposed (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 14.99 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 64,302 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 5.77 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

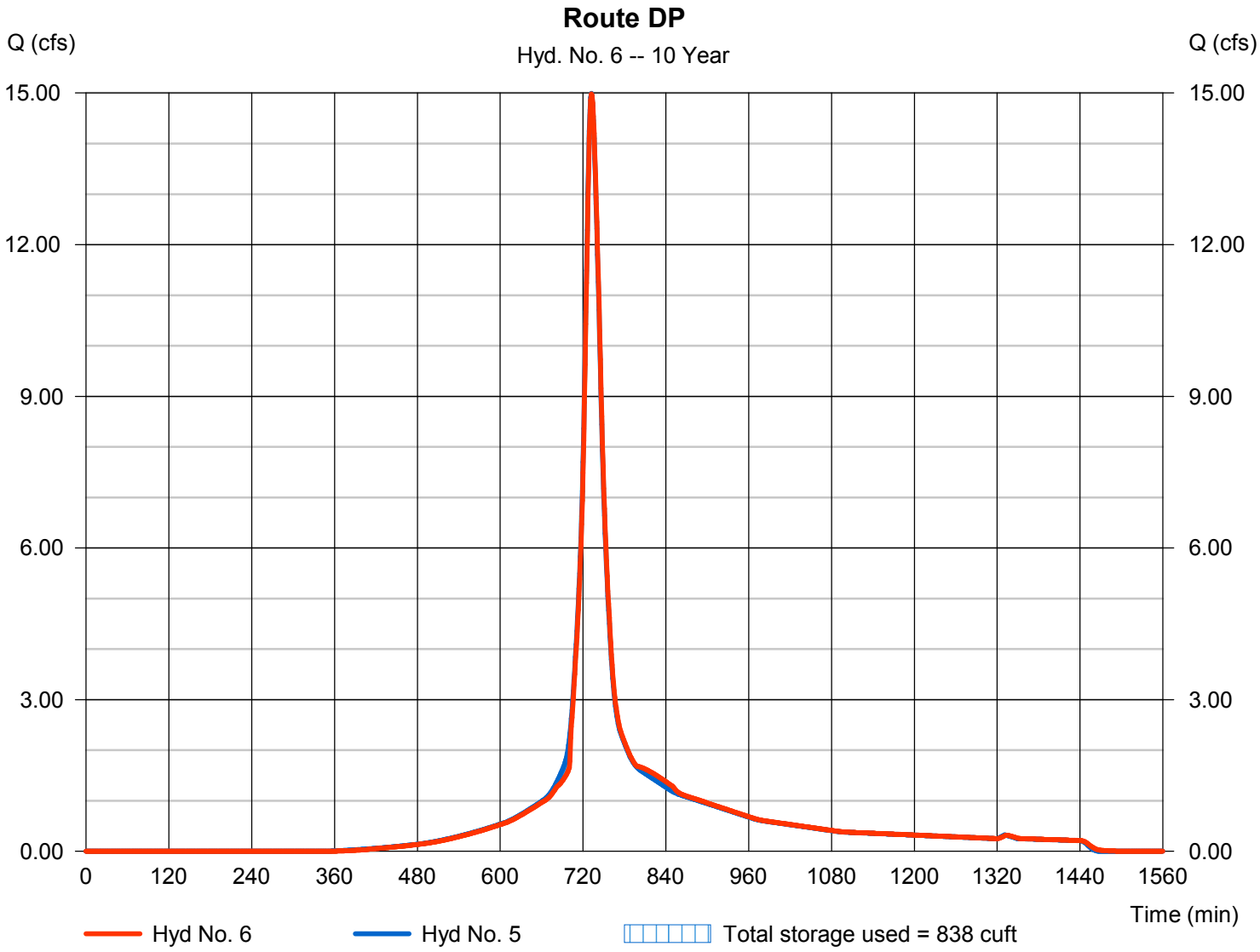
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 6

Route DP

Hydrograph type	= Reservoir	Peak discharge	= 14.98 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 64,301 cuft
Inflow hyd. No.	= 5 - B2 - Proposed (East)	Max. Elevation	= 748.99 ft
Reservoir name	= Det. Pond	Max. Storage	= 838 cuft

Storage Indication method used.



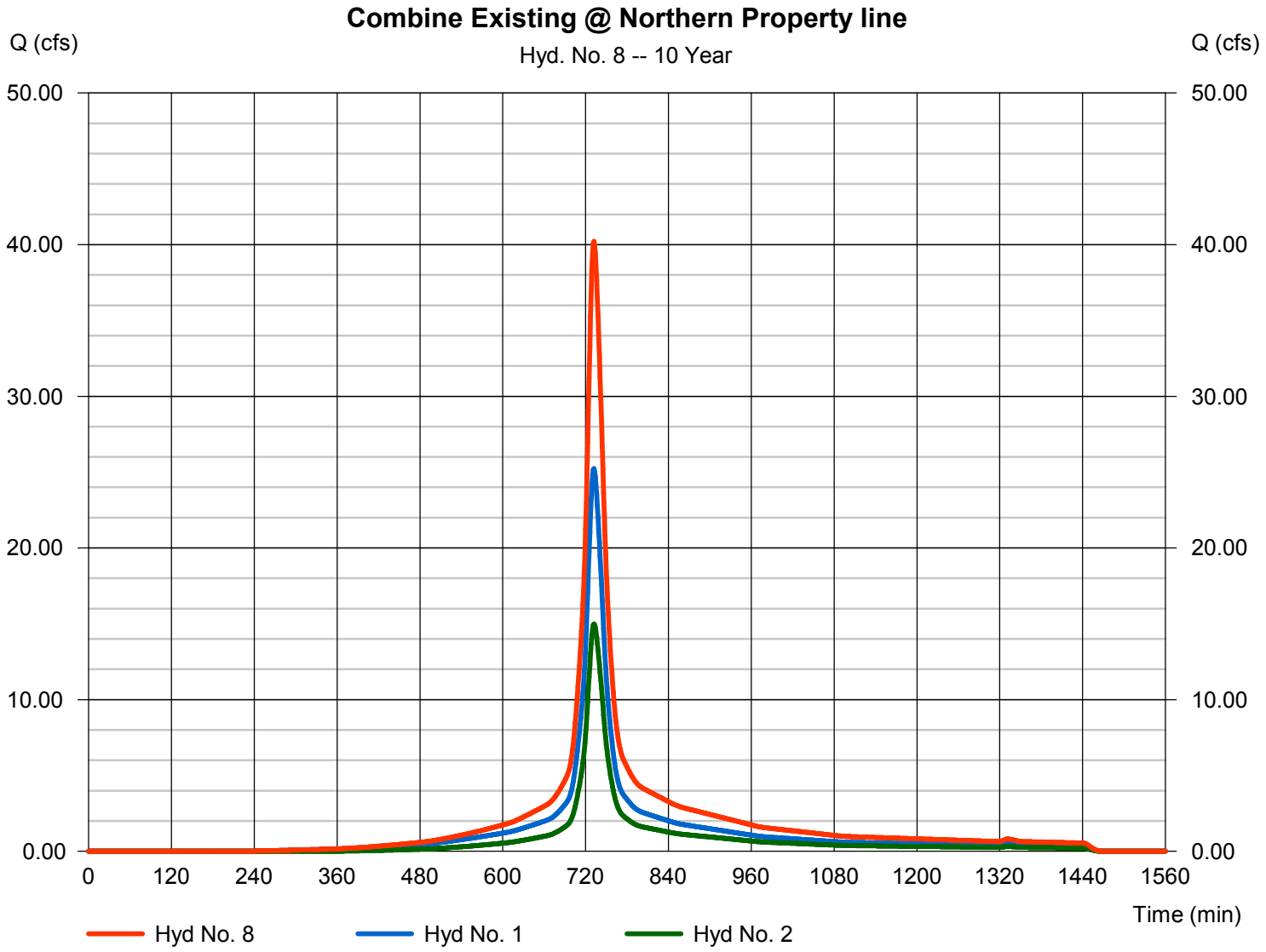
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 8

Combine Existing @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 40.22 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 175,770 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 11.220 ac



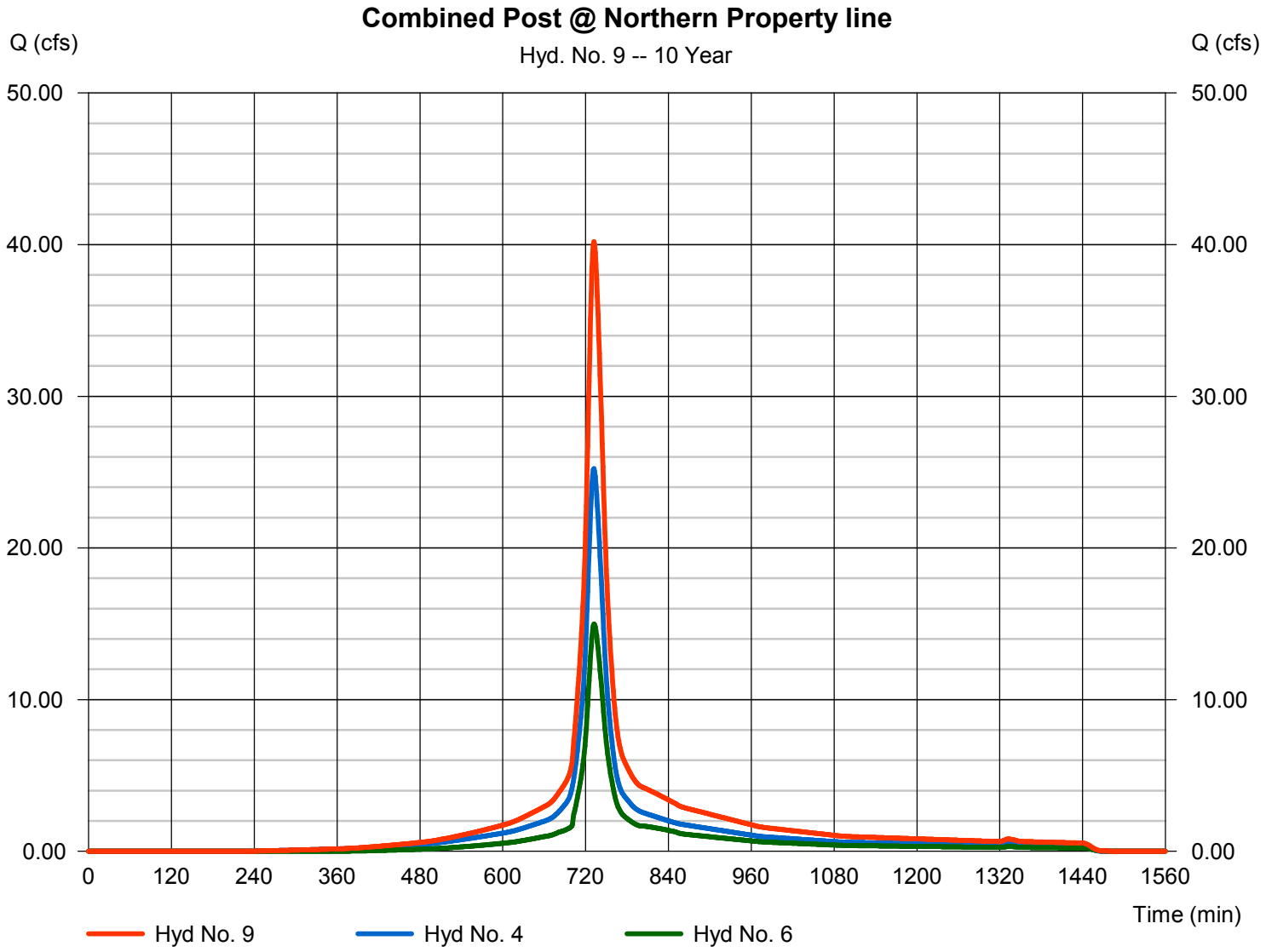
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 9

Combined Post @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 40.21 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 175,769 cuft
Inflow hyds.	= 4, 6	Contrib. drain. area	= 6.720 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

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	31.48	1	732	140,906	------	------	------	E1 - Existing (West)
2	SCS Runoff	19.24	1	732	83,314	------	------	------	E2 - Existing (East)
4	SCS Runoff	31.48	1	732	140,906	------	------	------	B1 - Proposed (West)
5	SCS Runoff	19.24	1	732	83,314	------	------	------	B2 - Proposed (East)
6	Reservoir	18.94	1	734	83,313	5	749.29	1,172	Route DP
8	Combine	50.73	1	732	224,220	1, 2,	------	------	Combine Existing @ Northern Propert
9	Combine	50.16	1	732	224,219	4, 6,	------	------	Combined Post @ Northern Property

Hydrograph Report

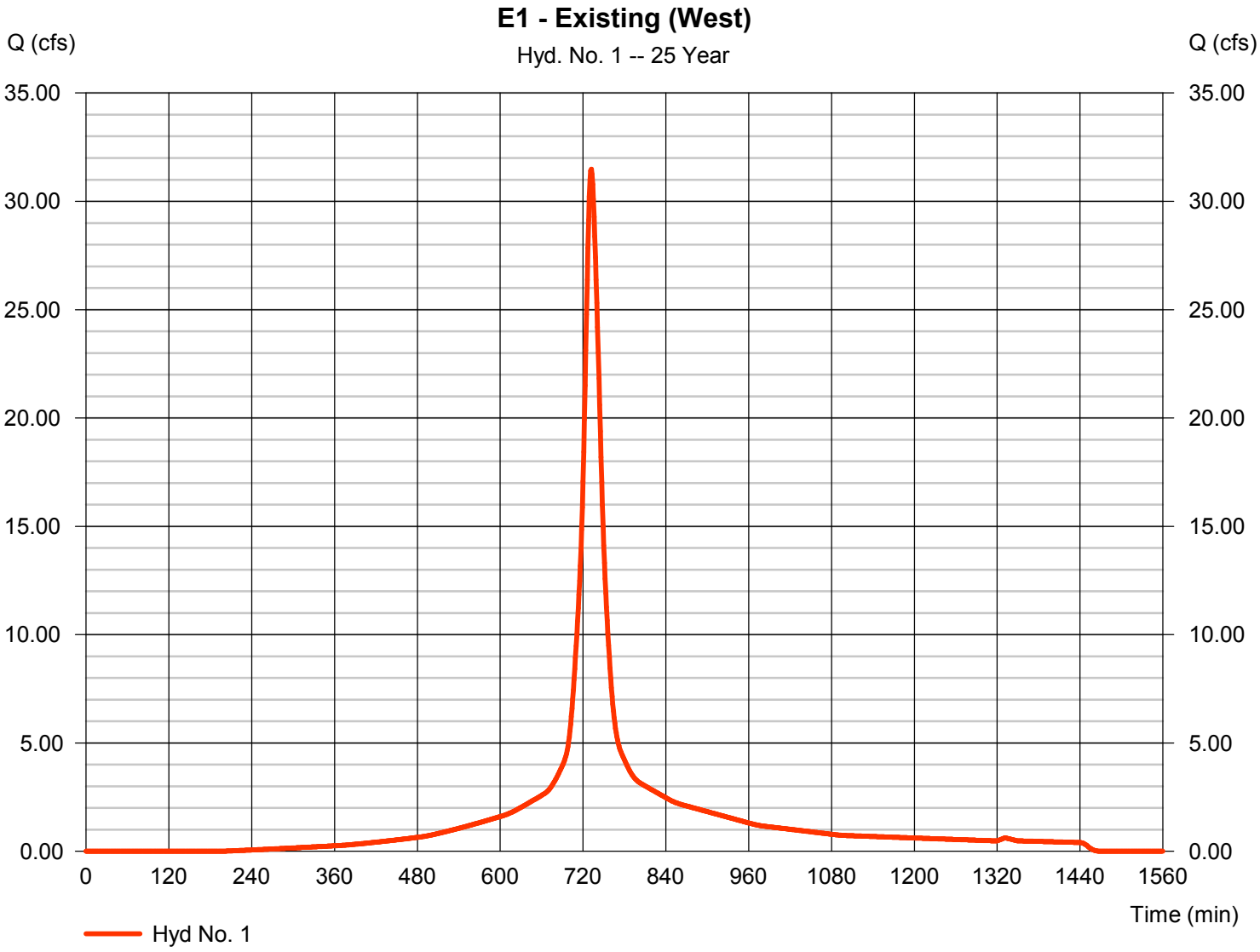
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 1

E1 - Existing (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 31.48 cfs
Storm frequency	= 25 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 140,906 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 7.02 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(3.750 x 98) + (2.970 x 79)] / 6.720



Hydrograph Report

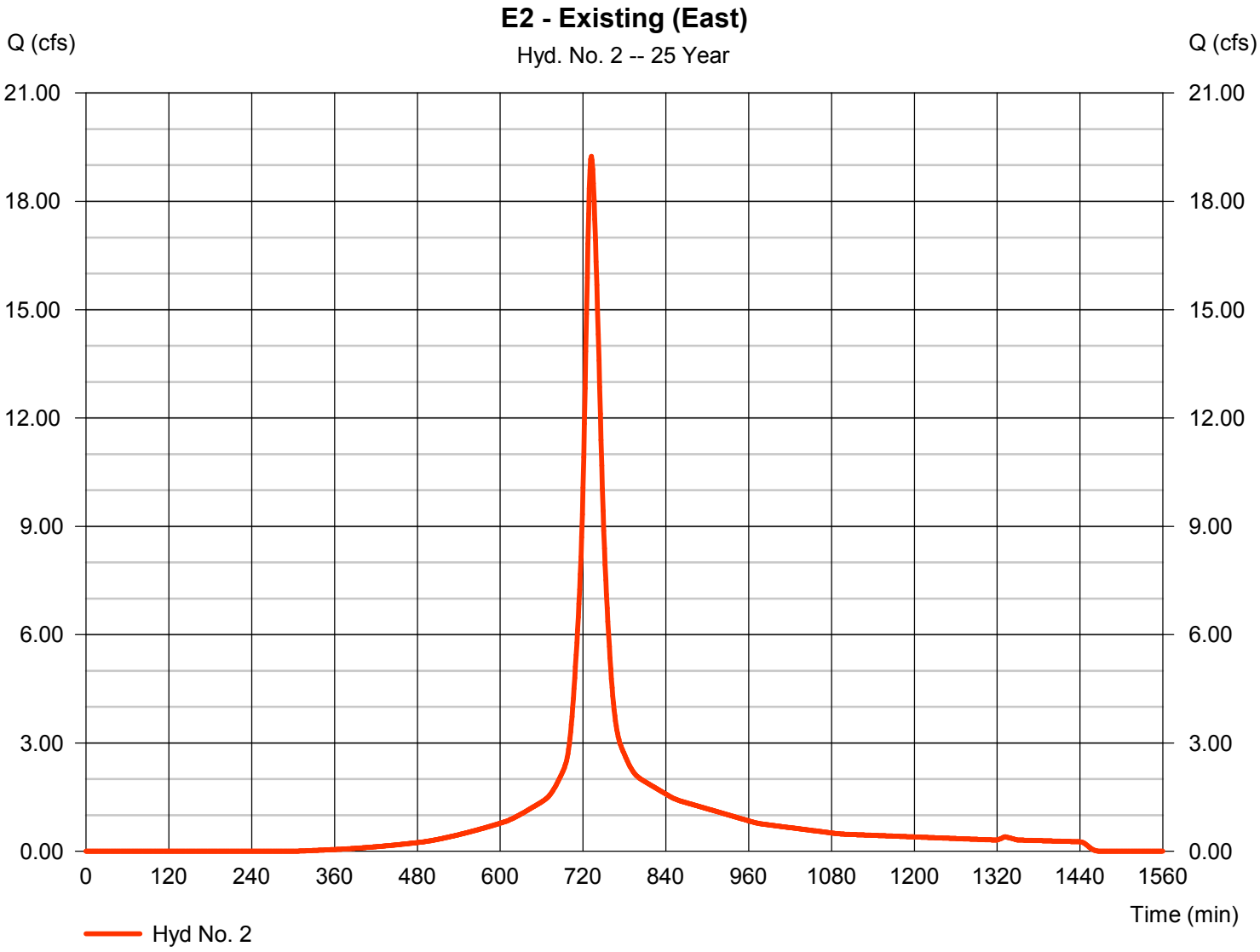
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 2

E2 - Existing (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 19.24 cfs
Storm frequency	= 25 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 83,314 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 7.02 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

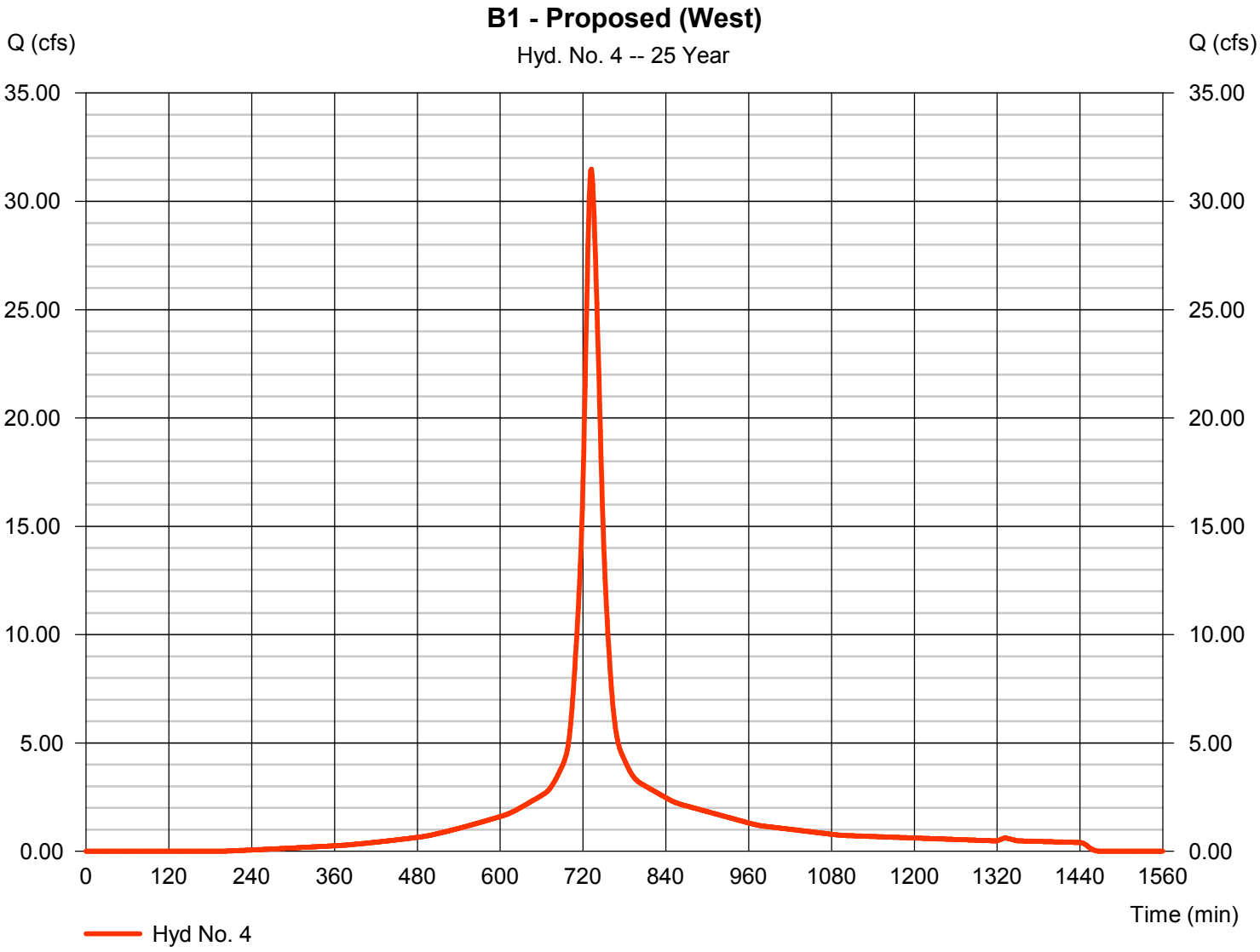
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 — Friday, 09 / 23 / 2016

Hyd. No. 4

B1 - Proposed (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 31.48 cfs
Storm frequency	= 25 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 140,906 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 7.02 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.060 x 98) + (2.660 x 79)] / 6.720



Hydrograph Report

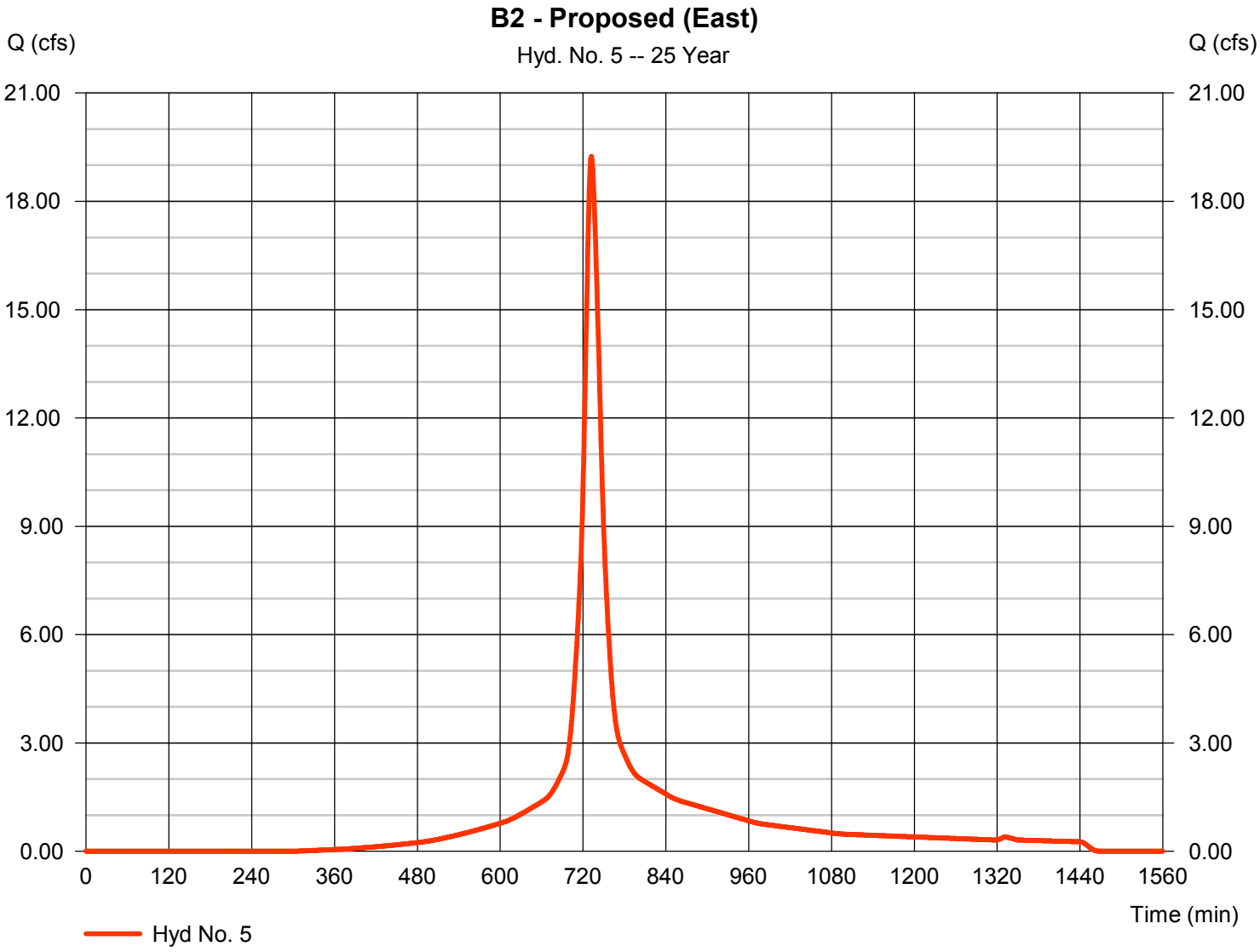
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 5

B2 - Proposed (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 19.24 cfs
Storm frequency	= 25 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 83,314 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 7.02 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

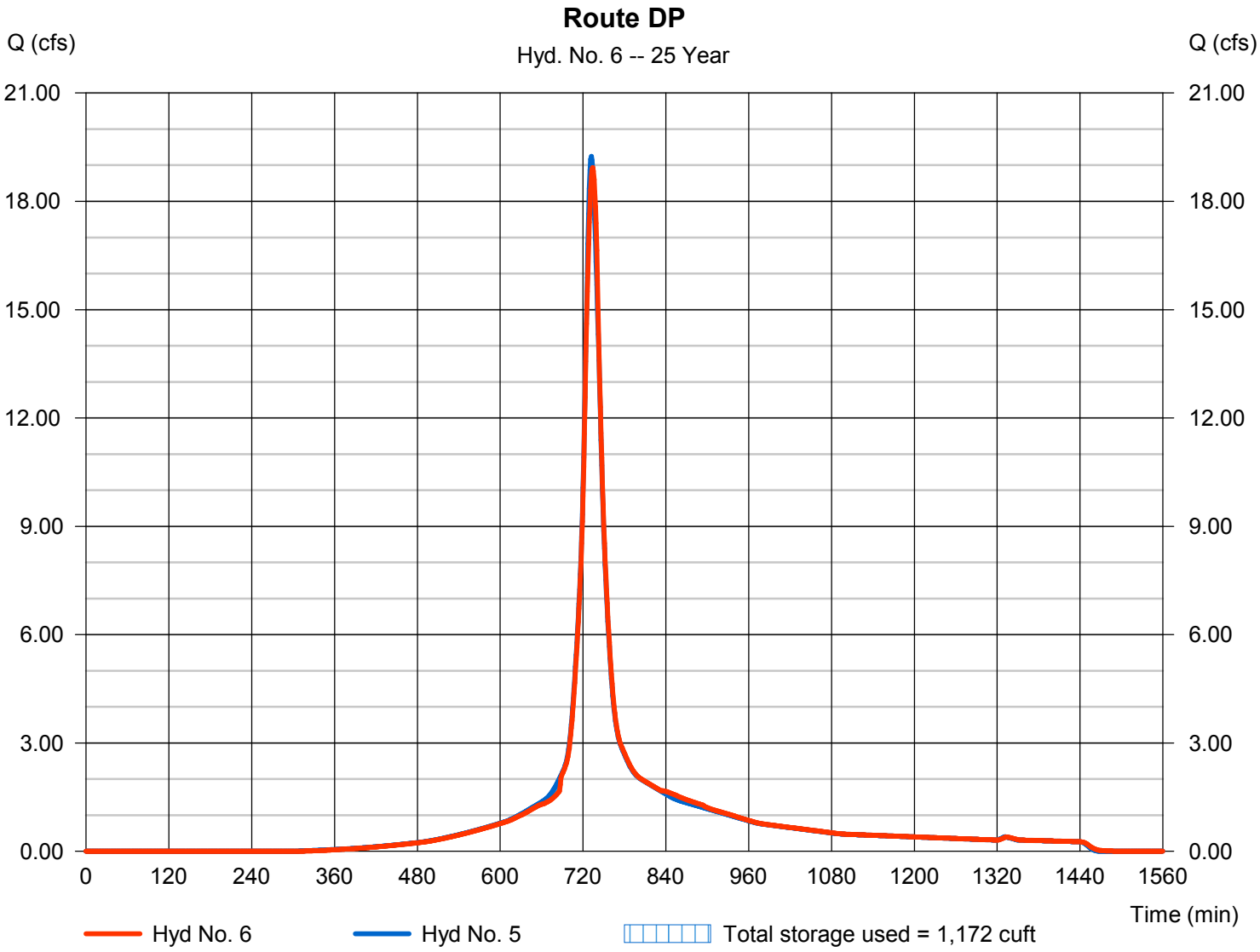
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 6

Route DP

Hydrograph type	= Reservoir	Peak discharge	= 18.94 cfs
Storm frequency	= 25 yrs	Time to peak	= 734 min
Time interval	= 1 min	Hyd. volume	= 83,313 cuft
Inflow hyd. No.	= 5 - B2 - Proposed (East)	Max. Elevation	= 749.29 ft
Reservoir name	= Det. Pond	Max. Storage	= 1,172 cuft

Storage Indication method used.



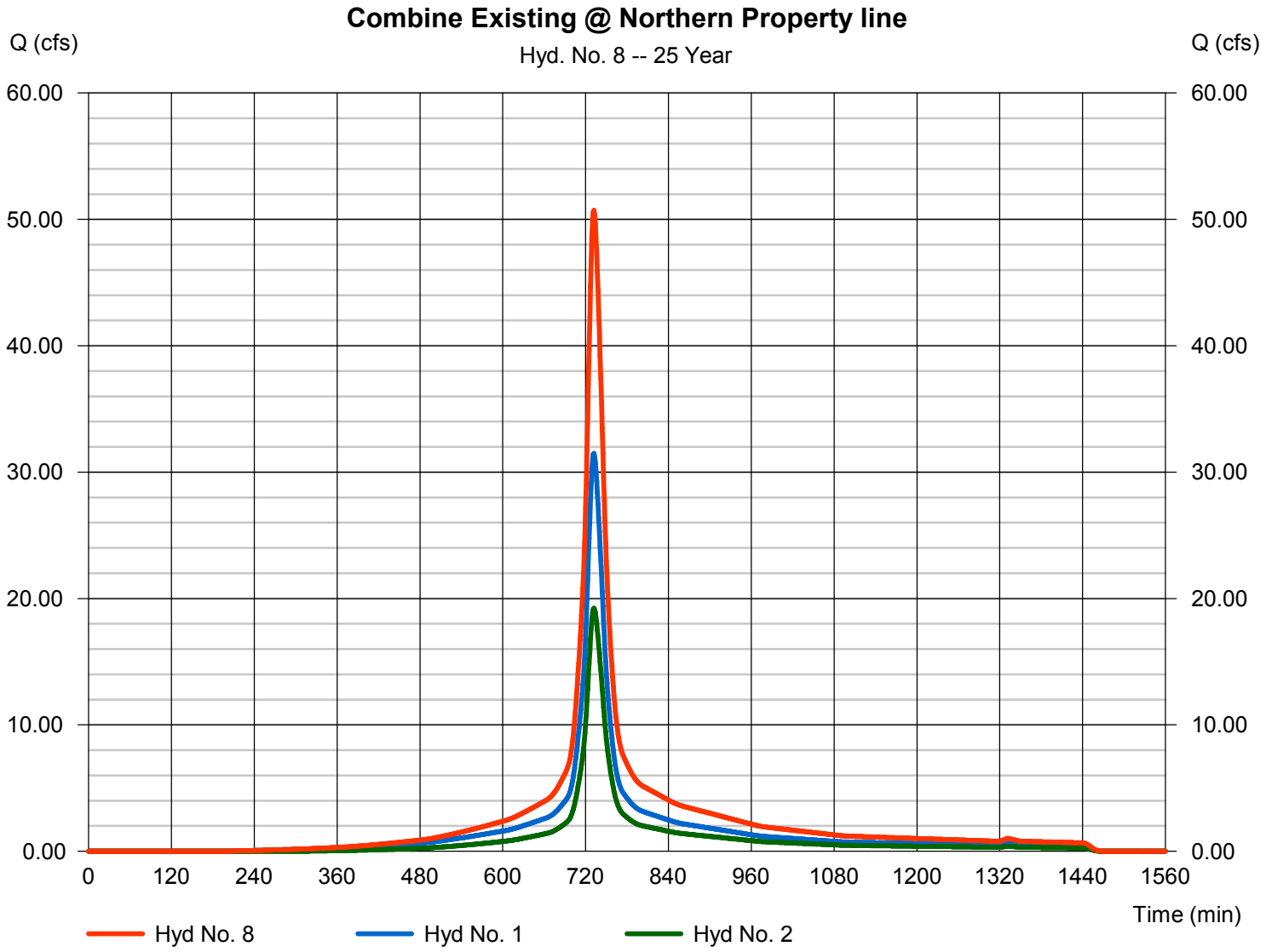
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 8

Combine Existing @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 50.73 cfs
Storm frequency	= 25 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 224,220 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 11.220 ac



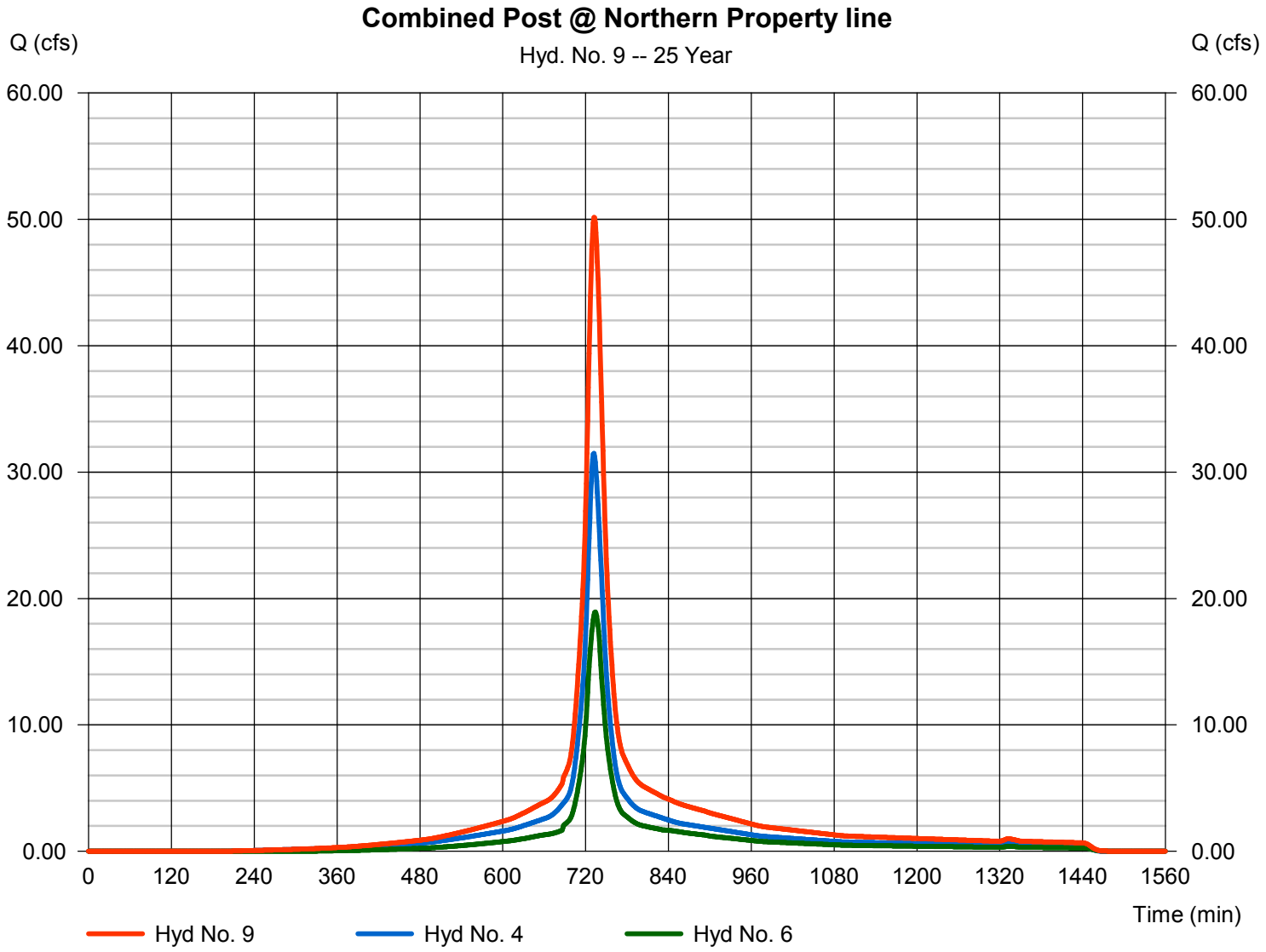
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 9

Combined Post @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 50.16 cfs
Storm frequency	= 25 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 224,219 cuft
Inflow hyds.	= 4, 6	Contrib. drain. area	= 6.720 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

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	36.81	1	732	166,263	------	------	------	E1 - Existing (West)
2	SCS Runoff	22.87	1	732	99,830	------	------	------	E2 - Existing (East)
4	SCS Runoff	36.81	1	732	166,263	------	------	------	B1 - Proposed (West)
5	SCS Runoff	22.87	1	732	99,830	------	------	------	B2 - Proposed (East)
6	Reservoir	22.39	1	734	99,829	5	749.68	1,614	Route DP
8	Combine	59.68	1	732	266,092	1, 2,	------	------	Combine Existing @ Northern Propert
9	Combine	58.81	1	733	266,092	4, 6,	------	------	Combined Post @ Northern Property

Hydrograph Report

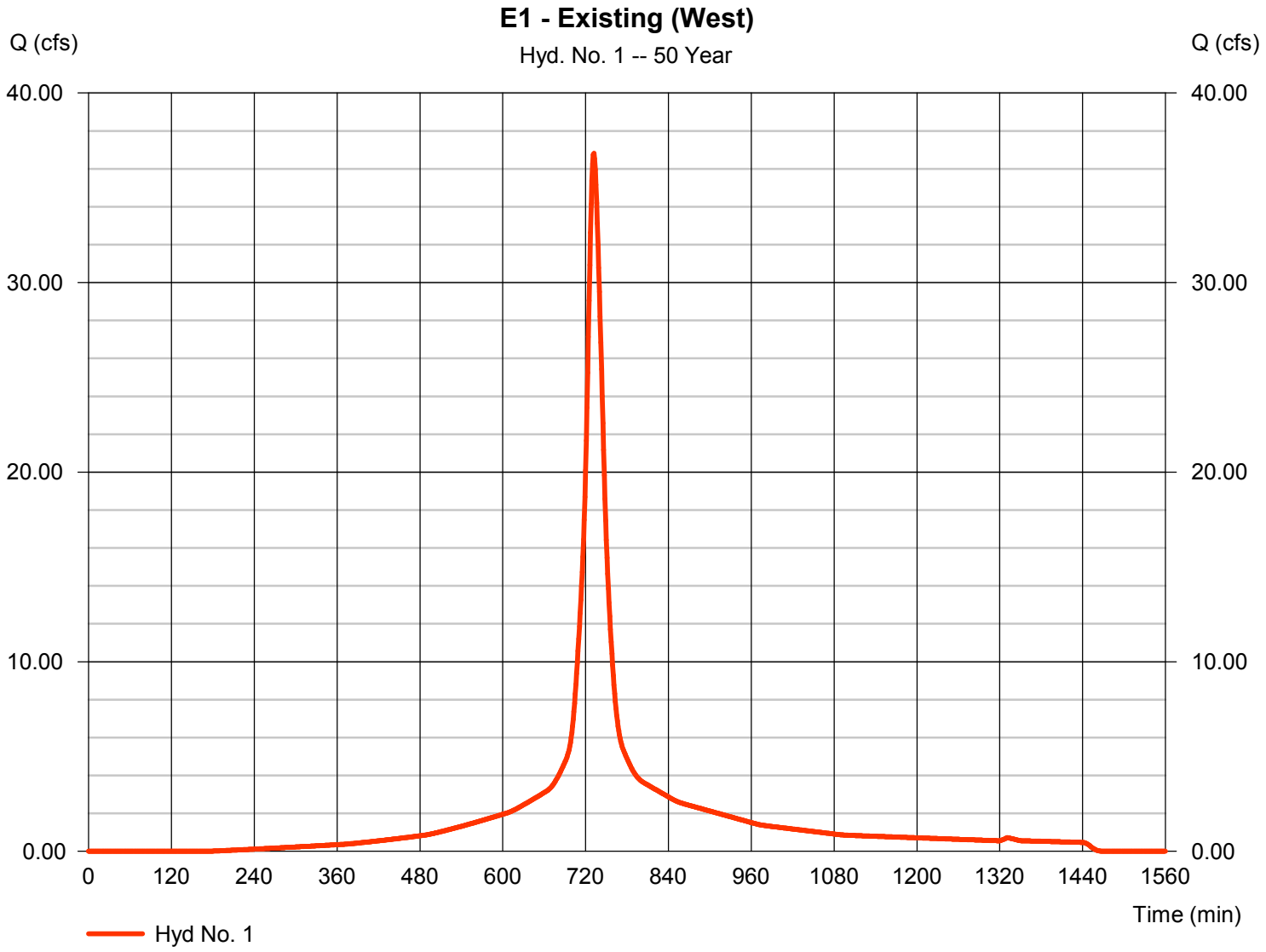
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 — Friday, 09 / 23 / 2016

Hyd. No. 1

E1 - Existing (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 36.81 cfs
Storm frequency	= 50 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 166,263 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 8.09 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(3.750 x 98) + (2.970 x 79)] / 6.720



Hydrograph Report

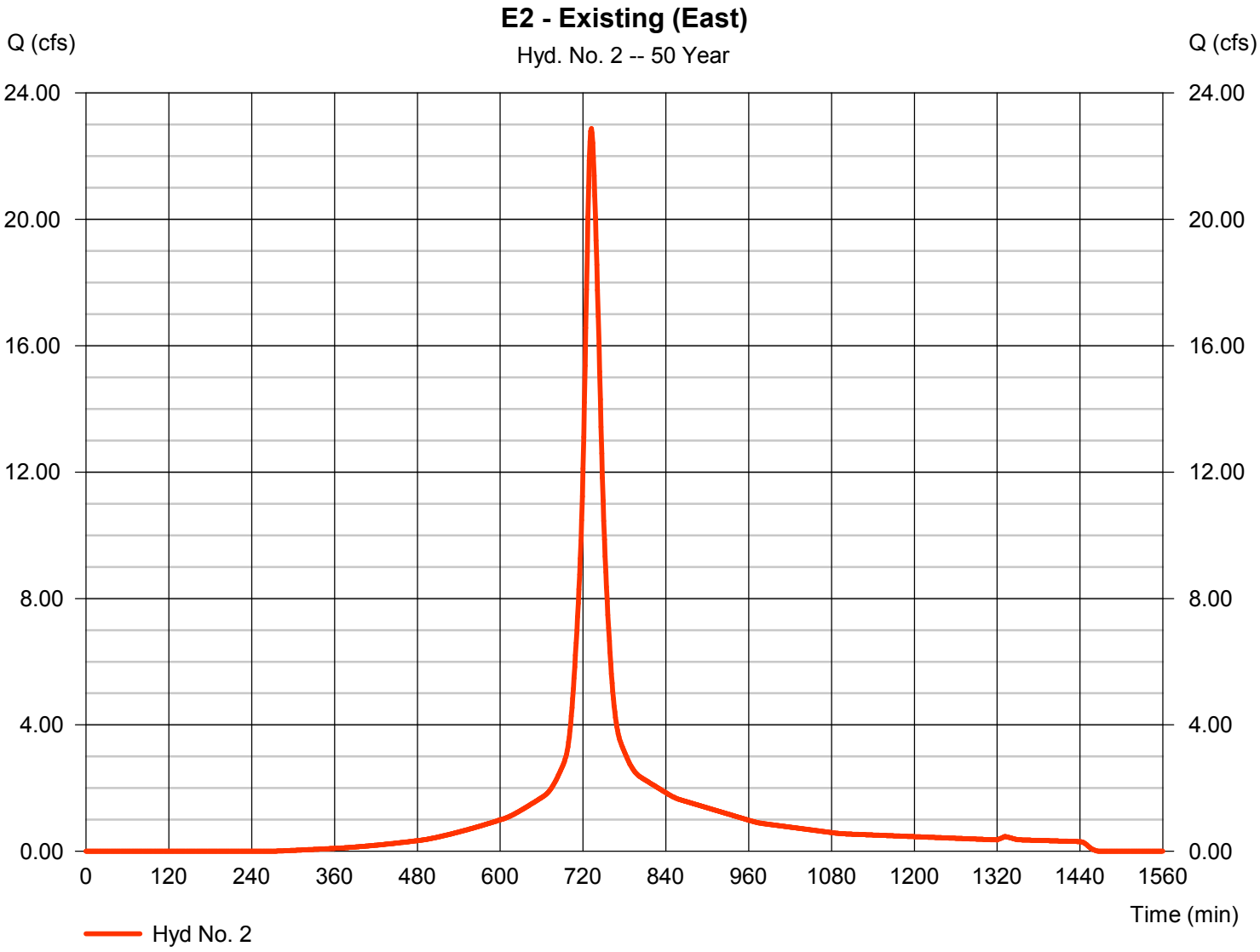
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 — Friday, 09 / 23 / 2016

Hyd. No. 2

E2 - Existing (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 22.87 cfs
Storm frequency	= 50 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 99,830 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 8.09 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

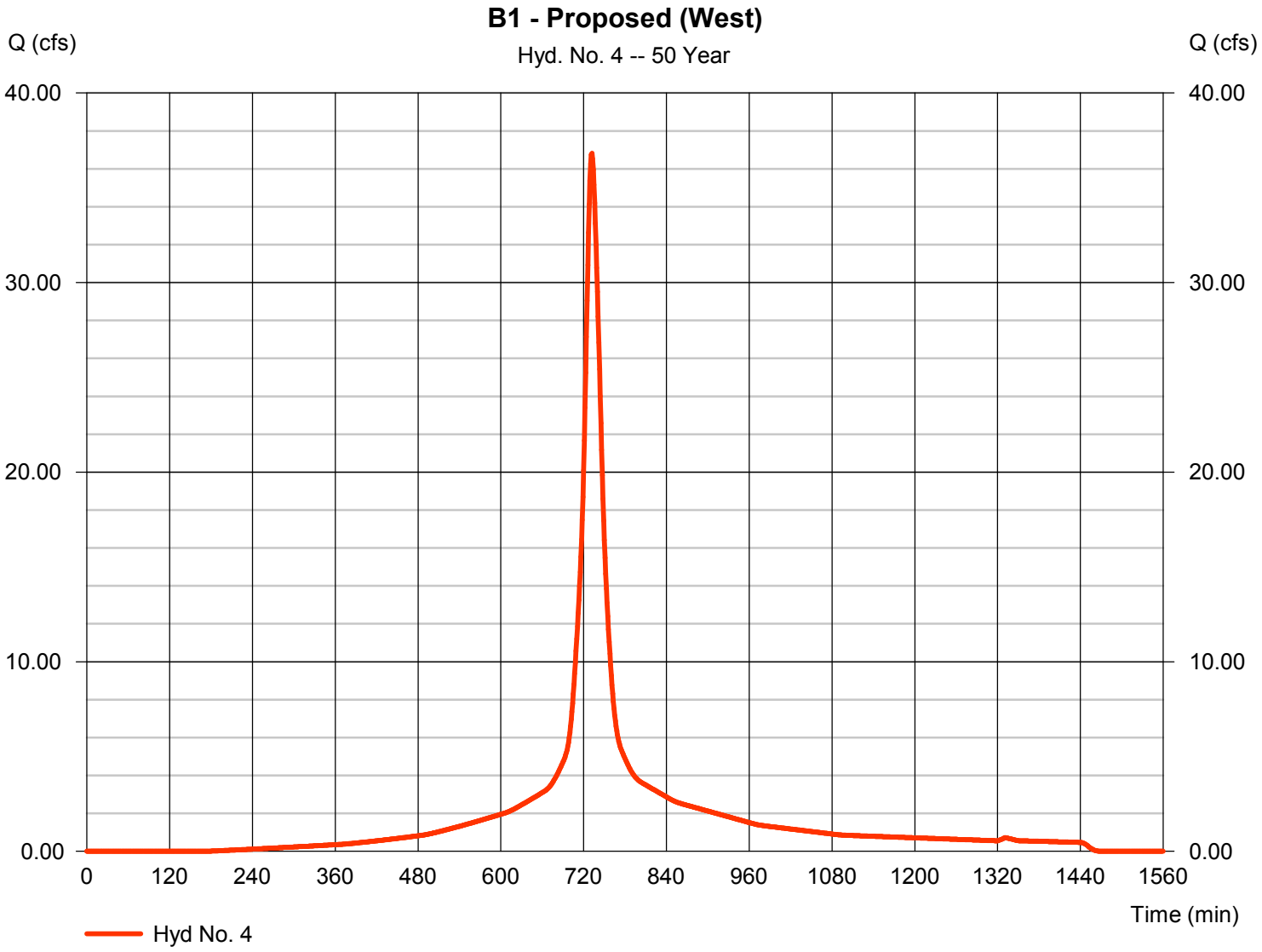
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 4

B1 - Proposed (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 36.81 cfs
Storm frequency	= 50 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 166,263 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 8.09 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.060 x 98) + (2.660 x 79)] / 6.720



Hydrograph Report

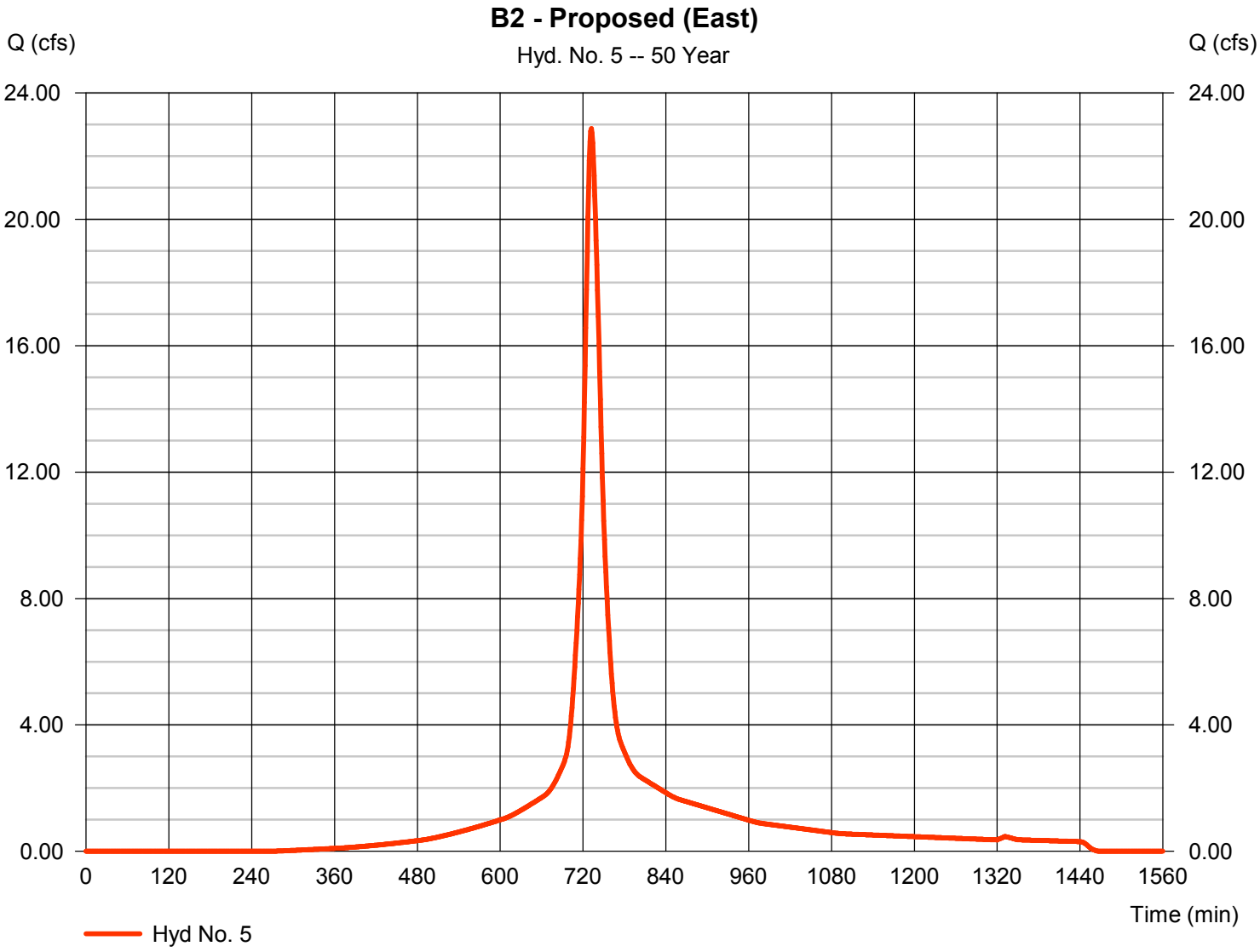
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 5

B2 - Proposed (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 22.87 cfs
Storm frequency	= 50 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 99,830 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 8.09 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

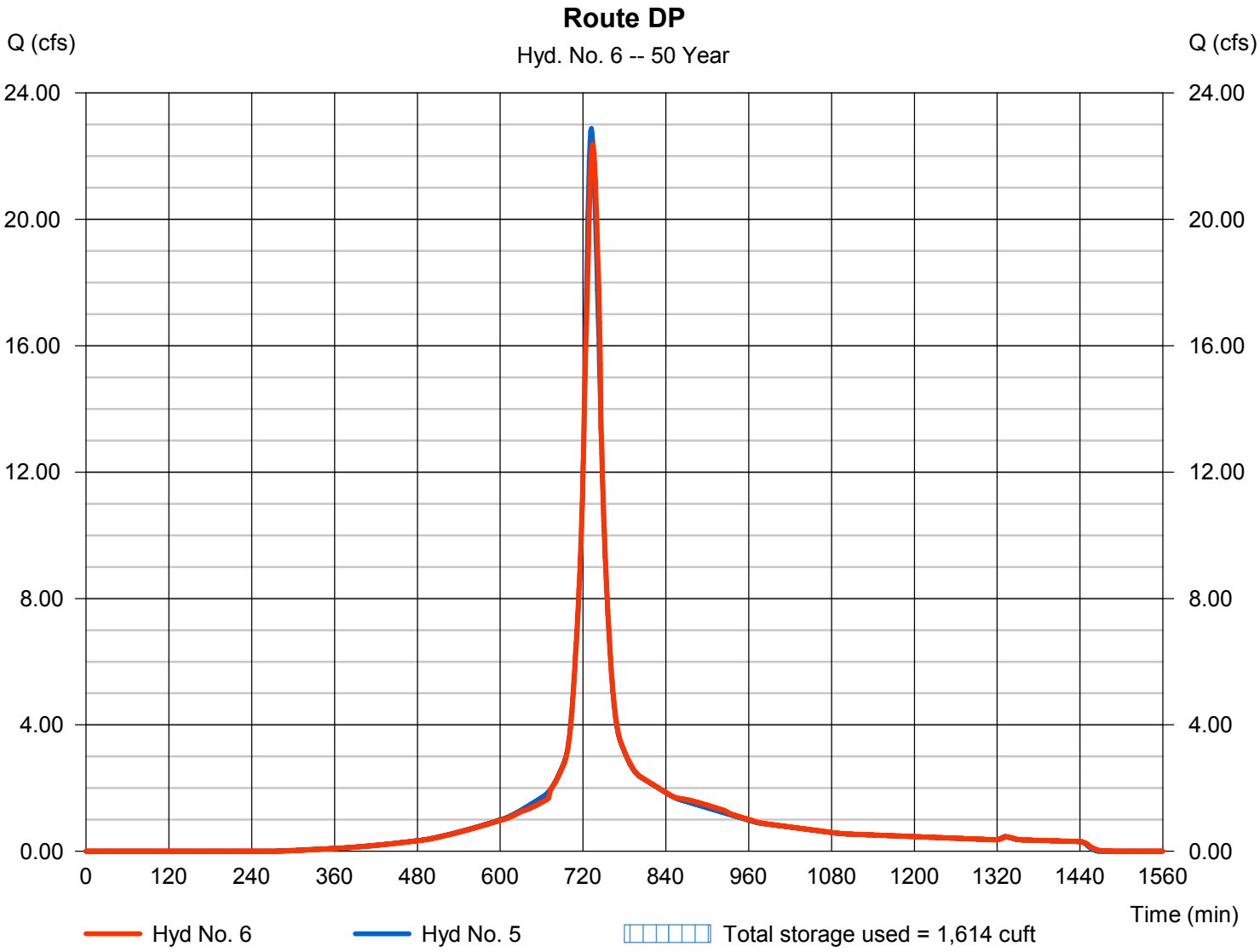
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 6

Route DP

Hydrograph type	= Reservoir	Peak discharge	= 22.39 cfs
Storm frequency	= 50 yrs	Time to peak	= 734 min
Time interval	= 1 min	Hyd. volume	= 99,829 cuft
Inflow hyd. No.	= 5 - B2 - Proposed (East)	Max. Elevation	= 749.68 ft
Reservoir name	= Det. Pond	Max. Storage	= 1,614 cuft

Storage Indication method used.



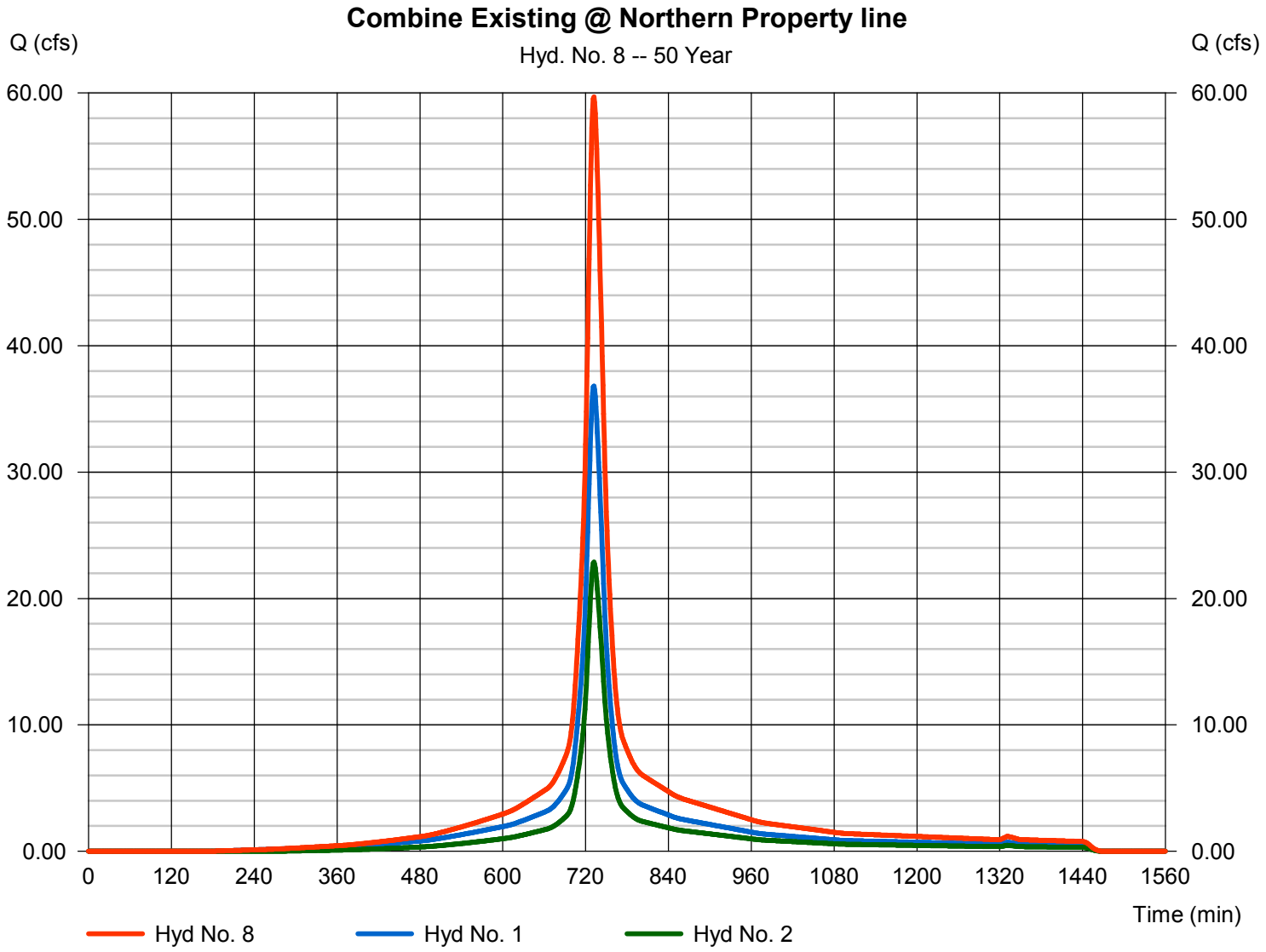
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 8

Combine Existing @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 59.68 cfs
Storm frequency	= 50 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 266,092 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 11.220 ac



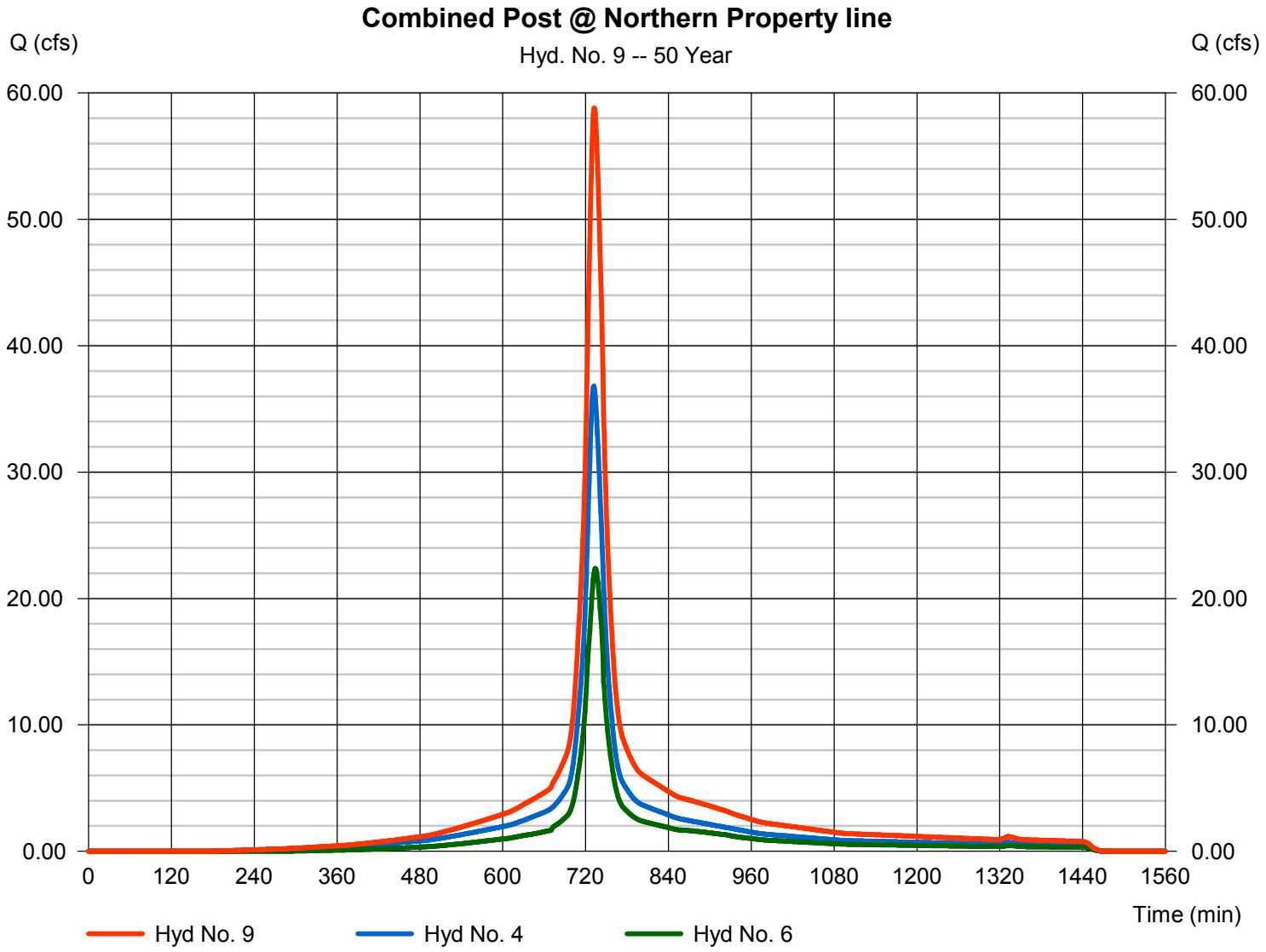
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 9

Combined Post @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 58.81 cfs
Storm frequency	= 50 yrs	Time to peak	= 733 min
Time interval	= 1 min	Hyd. volume	= 266,092 cuft
Inflow hyds.	= 4, 6	Contrib. drain. area	= 6.720 ac



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

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	42.55	1	732	193,858	------	------	------	E1 - Existing (West)
2	SCS Runoff	26.79	1	732	117,907	------	------	------	E2 - Existing (East)
4	SCS Runoff	42.55	1	732	193,858	------	------	------	B1 - Proposed (West)
5	SCS Runoff	26.79	1	732	117,907	------	------	------	B2 - Proposed (East)
6	Reservoir	25.57	1	737	117,906	5	750.14	2,241	Route DP
8	Combine	69.35	1	732	311,765	1, 2,	------	------	Combine Existing @ Northern Propert
9	Combine	67.82	1	732	311,765	4, 6,	------	------	Combined Post @ Northern Property

Hydrograph Report

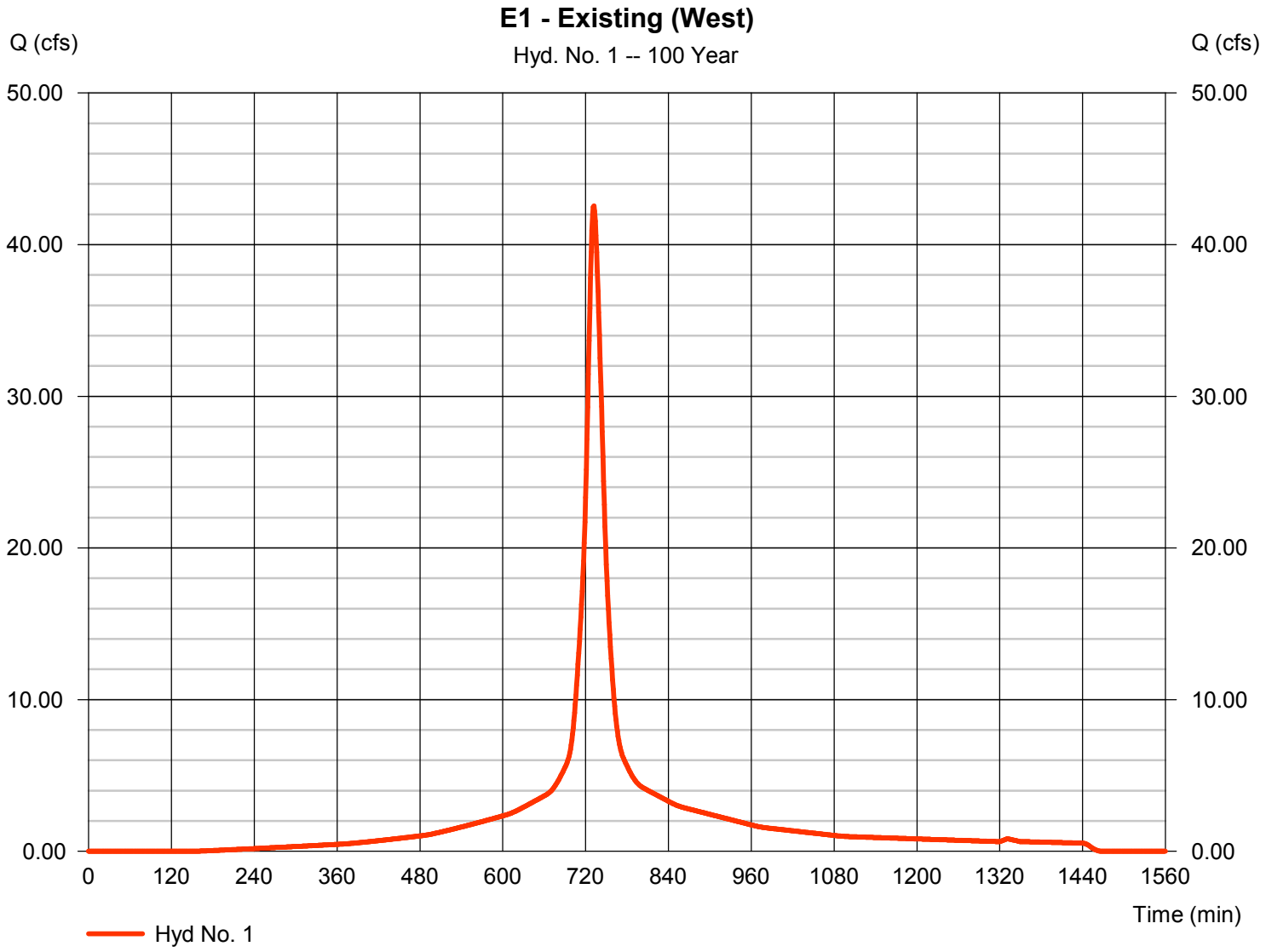
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 — Friday, 09 / 23 / 2016

Hyd. No. 1

E1 - Existing (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 42.55 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 193,858 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 9.25 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(3.750 x 98) + (2.970 x 79)] / 6.720



Hydrograph Report

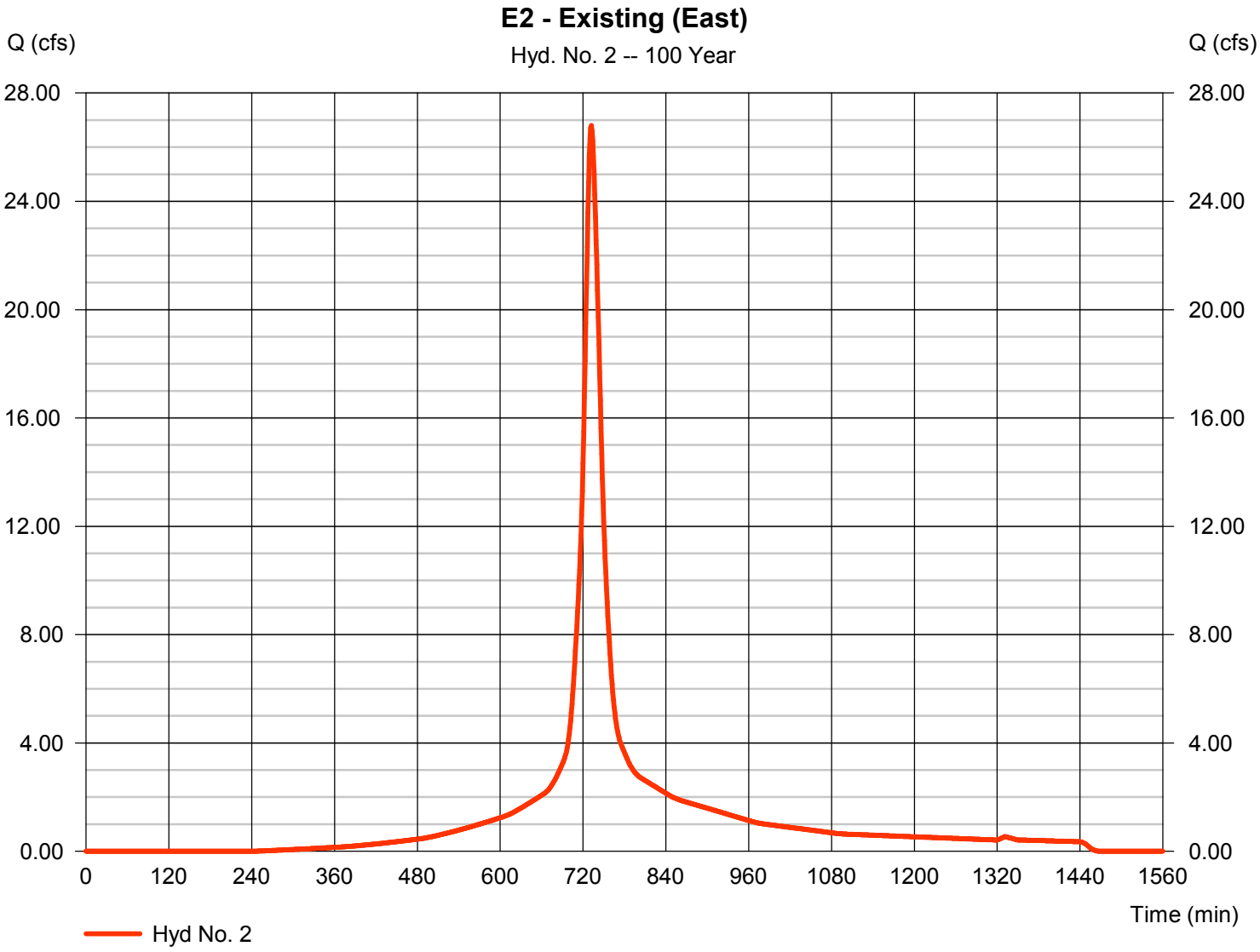
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 2

E2 - Existing (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 26.79 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 117,907 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 9.25 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

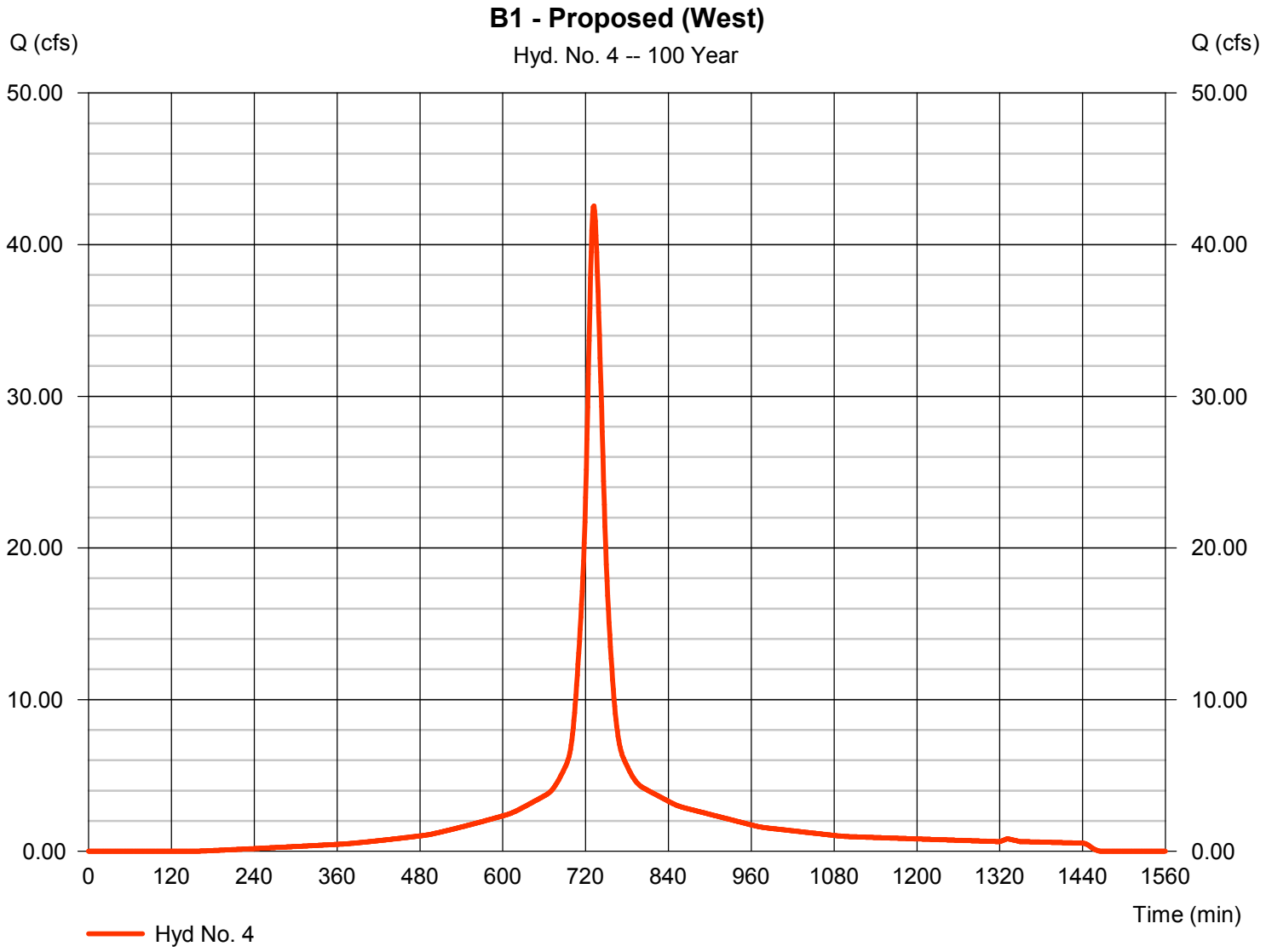
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 — Friday, 09 / 23 / 2016

Hyd. No. 4

B1 - Proposed (West)

Hydrograph type	= SCS Runoff	Peak discharge	= 42.55 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 193,858 cuft
Drainage area	= 6.720 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 9.25 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(4.060 x 98) + (2.660 x 79)] / 6.720



Hydrograph Report

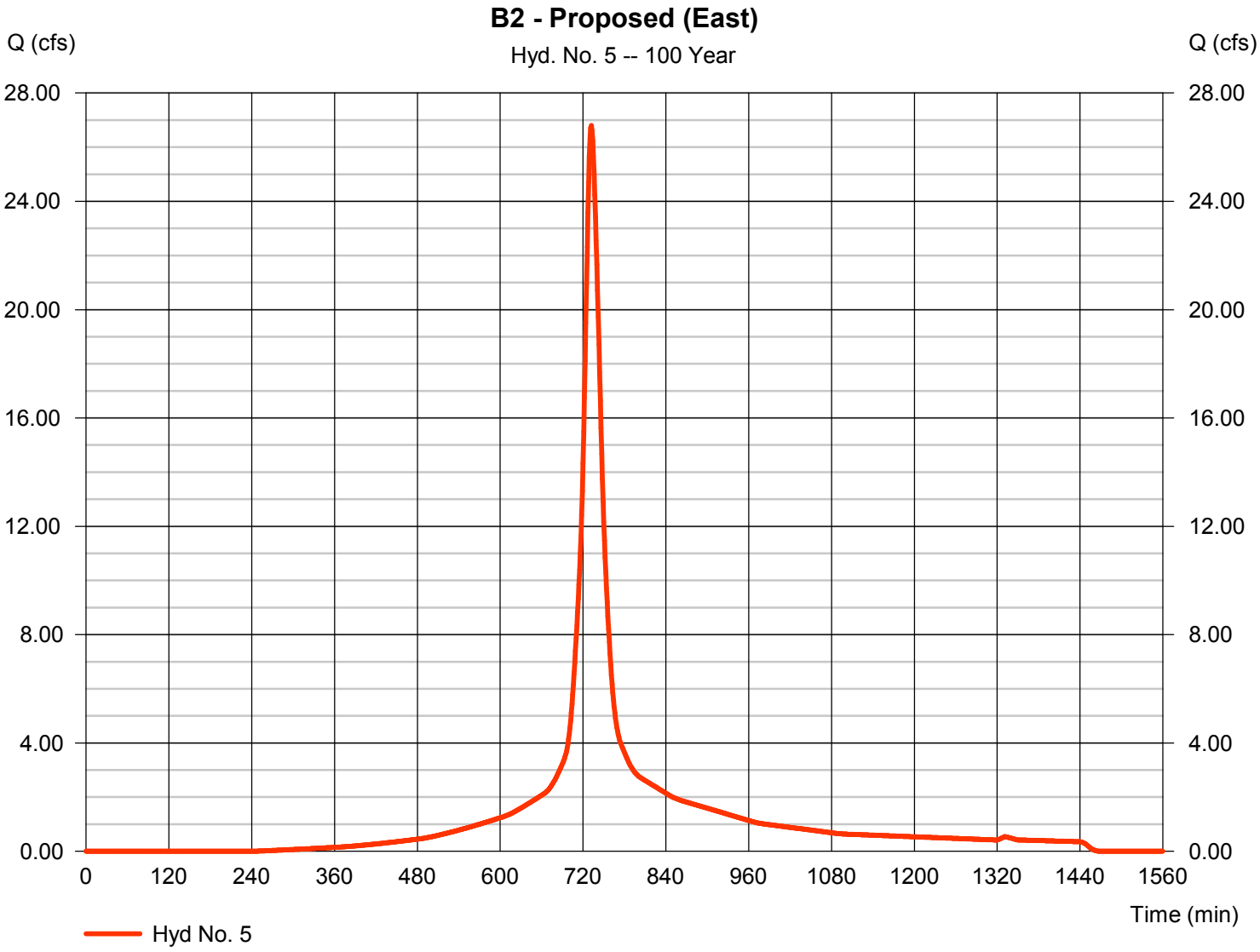
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 — Friday, 09 / 23 / 2016

Hyd. No. 5

B2 - Proposed (East)

Hydrograph type	= SCS Runoff	Peak discharge	= 26.79 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 117,907 cuft
Drainage area	= 4.500 ac	Curve number	= 84*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.30 min
Total precip.	= 9.25 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.220 x 98) + (3.280 x 79)] / 4.500



Hydrograph Report

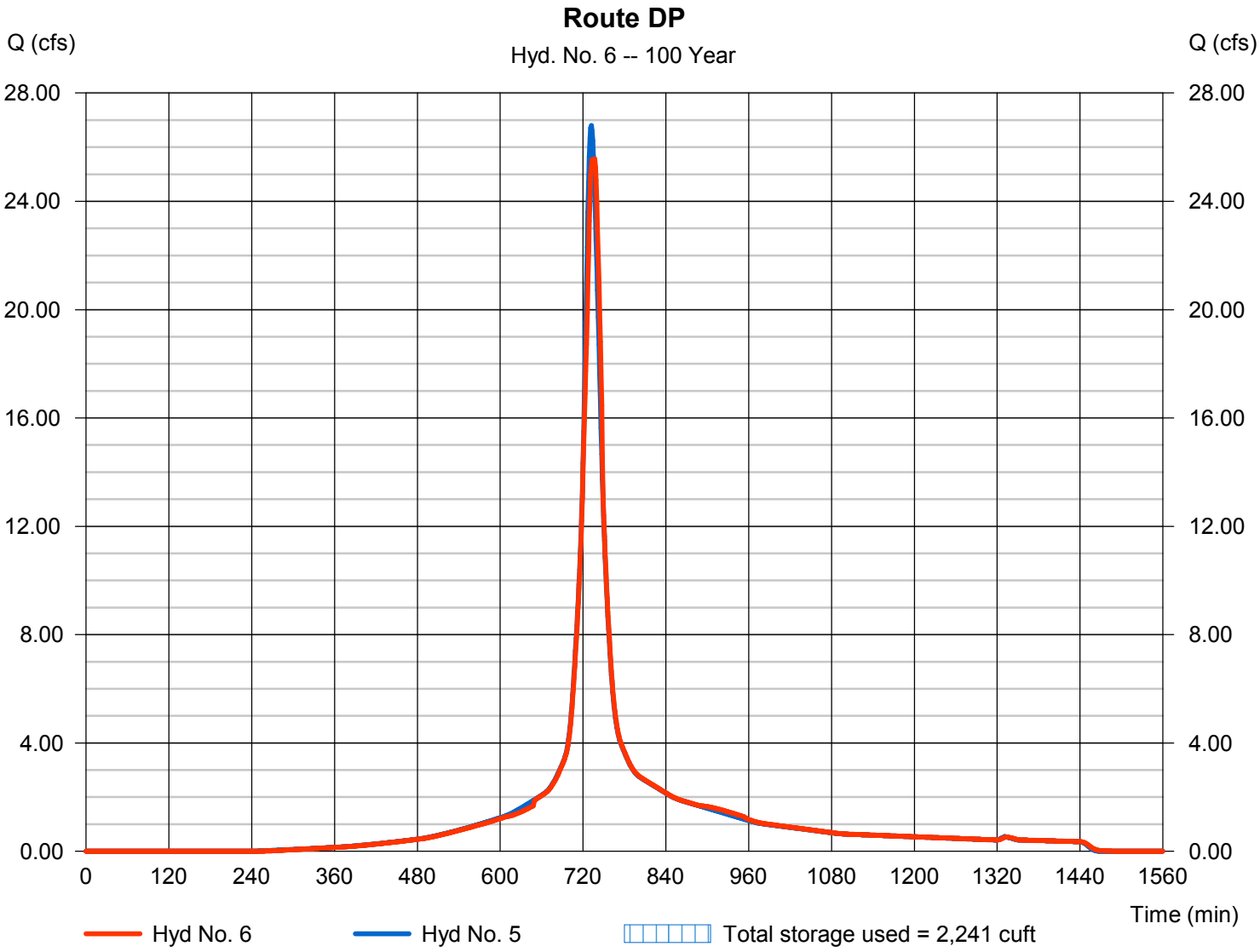
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 6

Route DP

Hydrograph type	= Reservoir	Peak discharge	= 25.57 cfs
Storm frequency	= 100 yrs	Time to peak	= 737 min
Time interval	= 1 min	Hyd. volume	= 117,906 cuft
Inflow hyd. No.	= 5 - B2 - Proposed (East)	Max. Elevation	= 750.14 ft
Reservoir name	= Det. Pond	Max. Storage	= 2,241 cuft

Storage Indication method used.



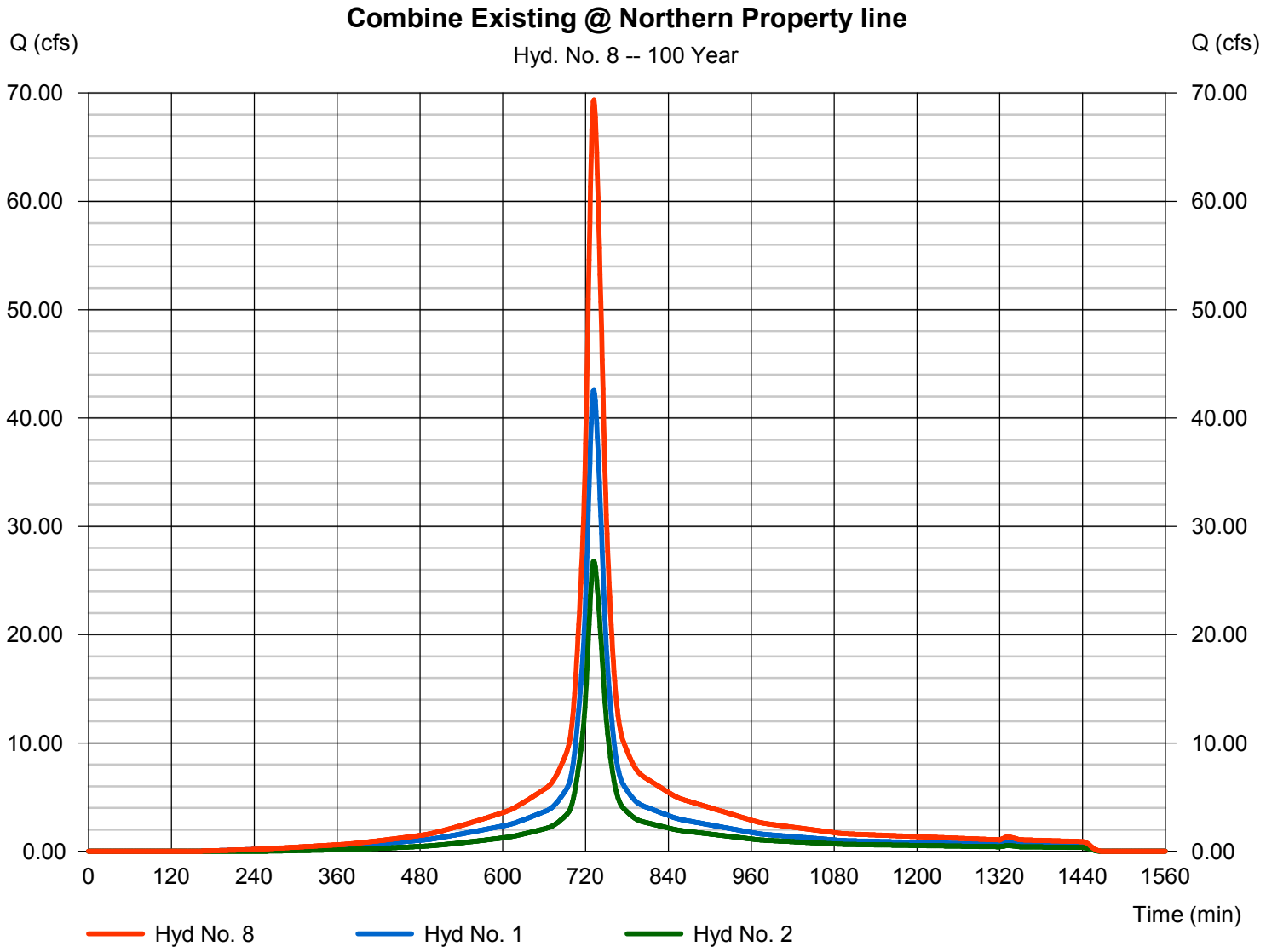
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 8

Combine Existing @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 69.35 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 311,765 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 11.220 ac



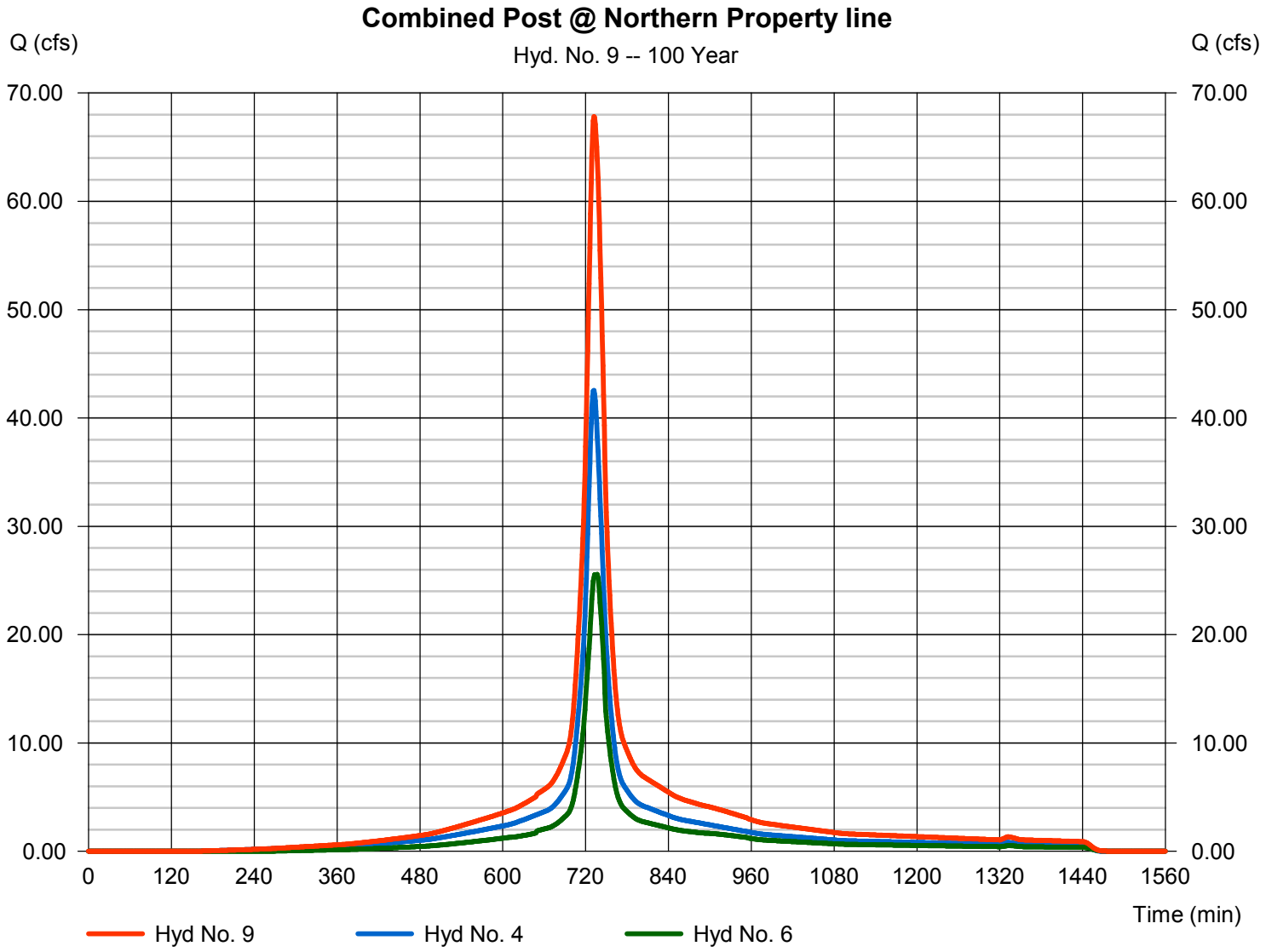
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10 Friday, 09 / 23 / 2016

Hyd. No. 9

Combined Post @ Northern Property line

Hydrograph type	= Combine	Peak discharge	= 67.82 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 1 min	Hyd. volume	= 311,765 cuft
Inflow hyds.	= 4, 6	Contrib. drain. area	= 6.720 ac



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LBYD Project Number
102-16-036

Issued

Issued Status

Date

Revision

Project Name
ST. LUKE'S CHURCH
MOUNTAIN BROOK, AL

Sheet Title
LAYOUT PLAN

Date
11/02/2016

Checked By
GDN

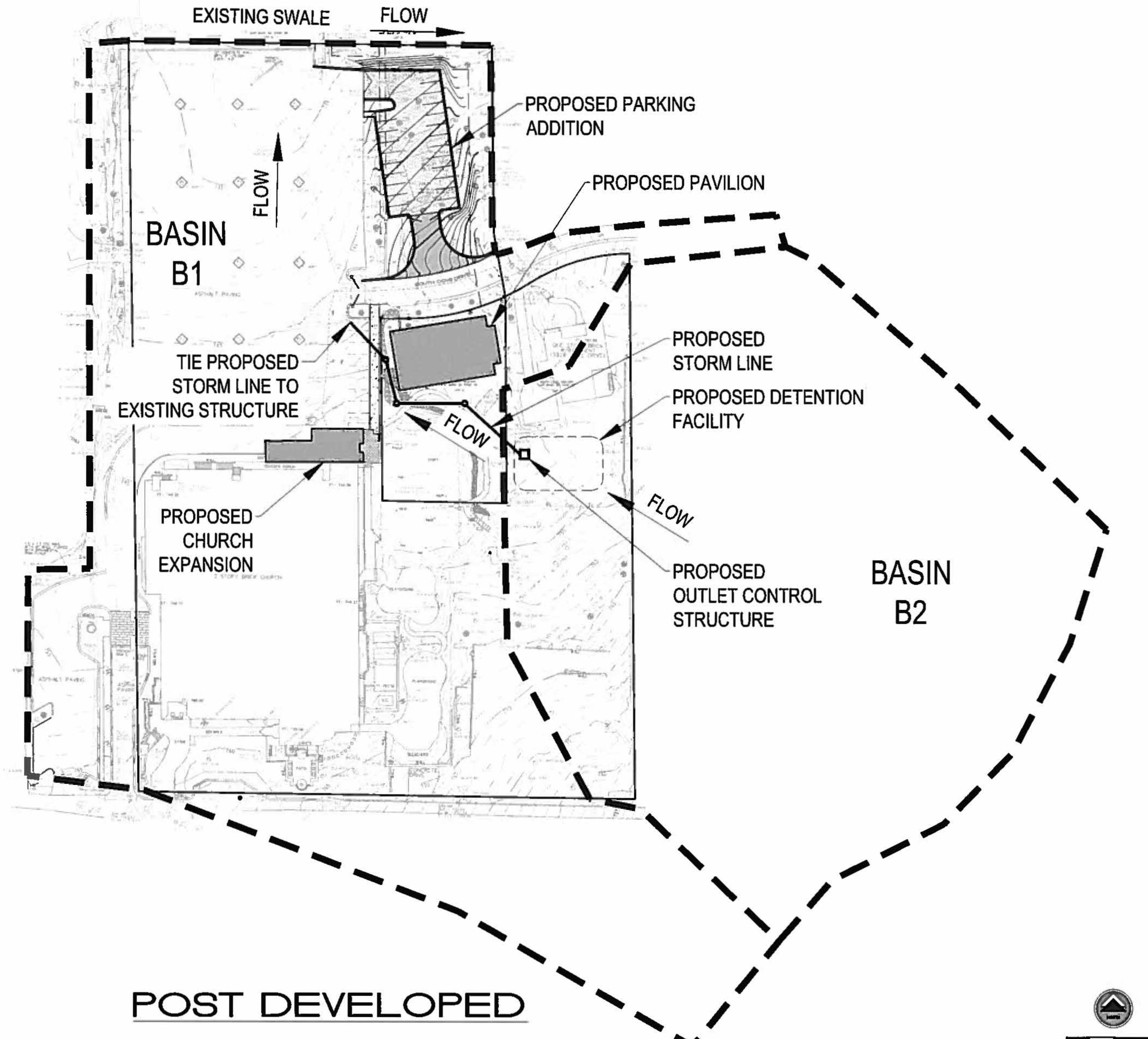
Drawn By
TSM

Sheet Number
C1.0

Sequence
1

Total
1

SCALE 1" = 10'



POST DEVELOPED

LBYD
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Structural Fax (205) 324-4181

LBYD Project Number: 102-16-036

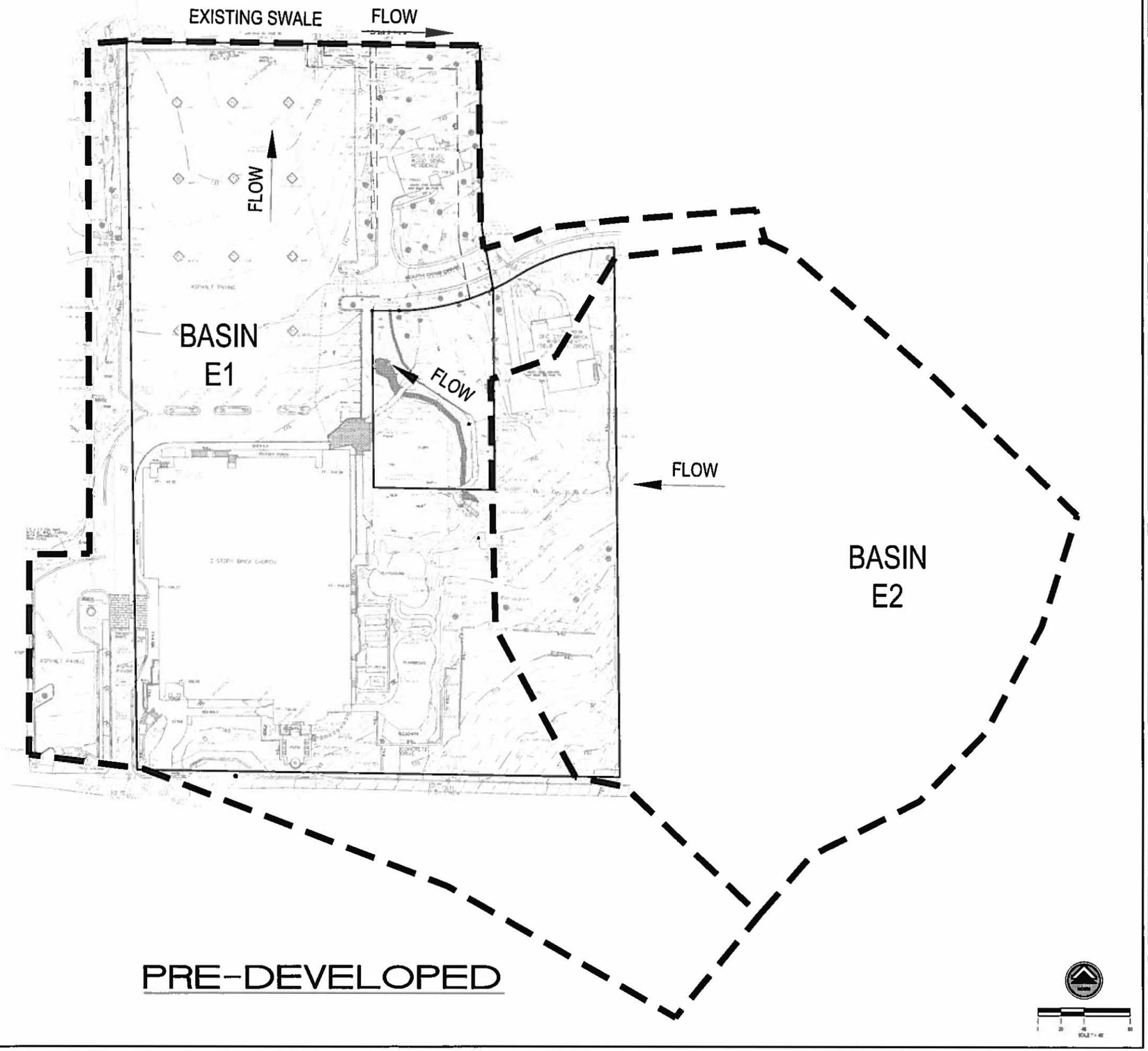
ST. LUKE'S CHURCH
MOUNTAIN BROOK, AL

BASIN MAP
POST DEVELOPMENT

Date: 09-23-2016

Checked By: GDN | Drawn By: TSM

Sheet Number: C3.0



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Structural Fax (205) 324-4181

LBYD Project Number
102-16-036

Seal

Seal Date

Date

Revision

Project Name
ST. LUKE'S CHURCH
MOUNTAIN BROOK, AL

Sheet Title
BASIN MAP
PRE-DEVELOPMENT

Date
09-23-2016

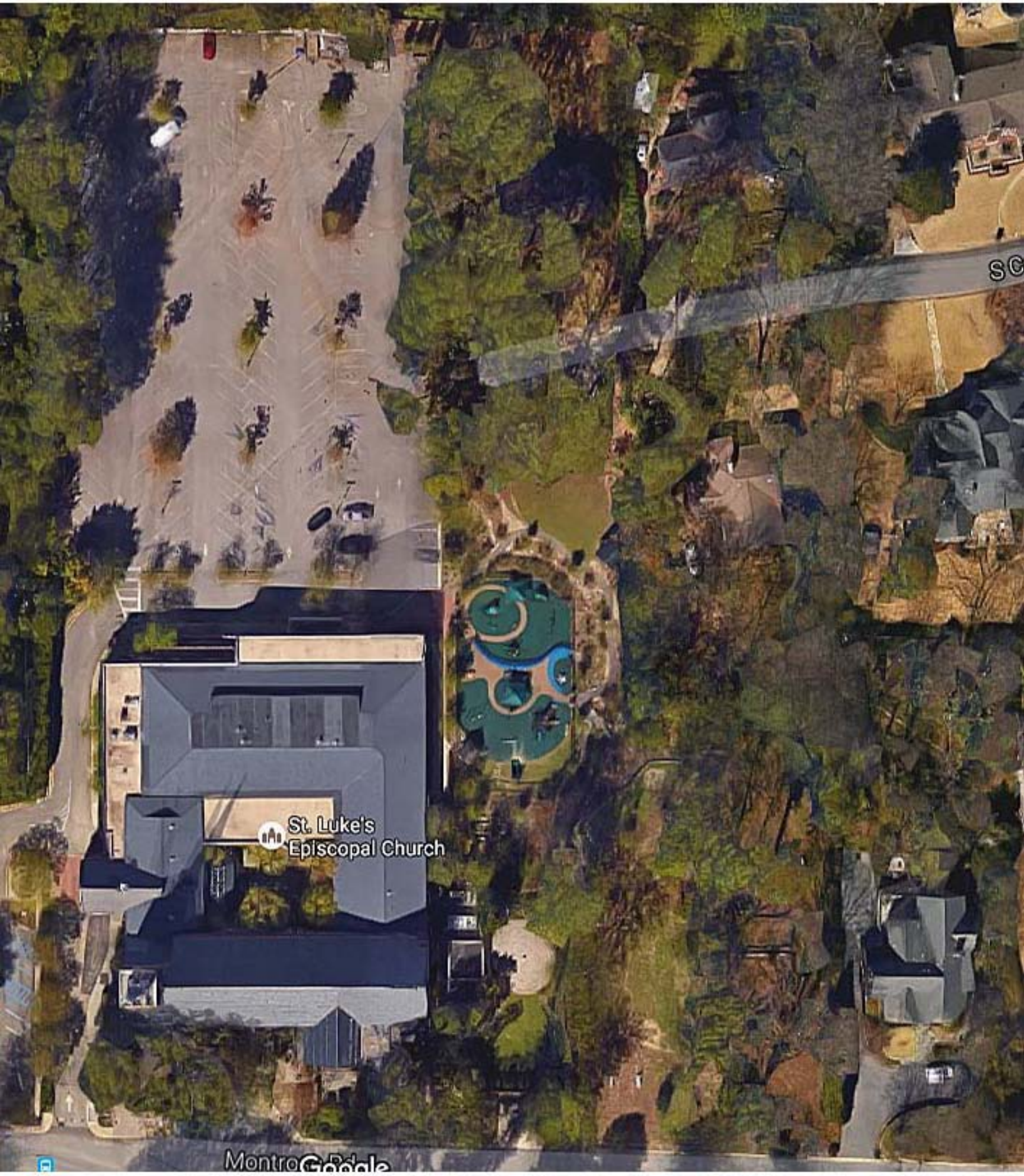
Designed By
GDN

Drawn By
TSM

Sheet Number
C2.0

Sequence
1

Total
1


St. Luke's
Episcopal Church

P-16-24 Aerial