

**RECORD DRAWING & RECORD TOPOGRAPHIC
AND PLANIMETRIC SURVEY SUBMITTAL
FOR
NORTHERLY AND SOUTHERLY STORMWATER MANAGEMENT
FACILITIES WITH RECORD PERFORMANCE CHARACTERISTICS REPORT FOR
IRON GATE MOTOR CONDOS
NAPERVILLE, ILLINOIS**

**EDP Stormwater Permit # 10-25-005/T3190
City Tracking # 13-10000077
City Stormwater Permit # 11-13880 & 14-10000063**



**REVISED MARCH 1, 2021
REVISED FEBRUARY 7, 2019
NOVEMBER 30, 2018
829.007**

PROFESSIONAL ENGINEER'S CERTIFICATION

STATE OF ILLINOIS }
COUNTY OF DUPAGE } SS.



I, RANDALL W. BUS, A LICENSED PROFESSIONAL ENGINEER OF ILLINOIS, HEREBY CERTIFY THAT THIS TECHNICAL SUBMISSION WAS PREPARED ON BEHALF OF IRON GATE MOTOR CONDOS DEVELOPMENT CO. BY CEMCON, LTD. UNDER MY PERSONAL DIRECTION.

DATED THIS 1st DAY OF March, AD, 2021

ILLINOIS LICENSED PROFESSIONAL ENGINEER NO. 062-032381

MY LICENSE EXPIRES ON NOVEMBER 30, 2021

PROFESSIONAL DESIGN FIRM LICENSE NO. 184-002937, EXPIRATION DATE IS APRIL 30, 2021

NOTE: UNLESS THIS DOCUMENT BEARS THE ORIGINAL SIGNATURE AND IMPRESSED SEAL OF THE DESIGN PROFESSIONAL ENGINEER, IT IS NOT A VALID TECHNICAL SUBMISSION

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TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE NO.</u>
1.0 HISTORICAL ACCOUNT OF PROJECT DEVELOPMENT AND STORMWATER MANAGEMENT PERMITTING	1-8
2.0 RECORD SURVEY INFORMATION	8-9
3.0 RECORD FLOOD ROUTING EVALUATION AND RECORD PERFORMANCE CHARACTERISTICS OF NORTHERLY AND SOUTHERLY SWMF	9-12
4.0 STATUS OF BEST MANAGEMENT PRACTICES AND VEGETATIVE STABILIZATION	12
5.0 MONITORING, MAINTENANCE & REPORTING PROGRAM AND PERMIT CLOSE-OUT	13
6.0 SUMMARY AND CONCLUSIONS	13

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EXHIBITS

- TAB 1 PROJECT OVERVIEW NARRATIVE**
- EXHIBIT A INITIAL AND SUPPLEMENTAL PERMIT EXTENSION FOR IGMC
UNDER CITY STORMWATER PERMIT # 11-13880 & 14-10000063**
- EXHIBIT B FINAL SITE DEVELOPMENT PLANS FOR NORTHERLY SWMF
(SHEETS 11, 12 & 13 OF PHASE 2B) AND SOUTHERLY SWMF
(SHEET 10 OF PHASE 1 BUILDINGS K, L & M)**
- EXHIBIT C WETLAND AND WETLAND BUFFER PLANTING PLAN BY CBEL**
- EXHIBIT D RECORD TOPOGRAPHIC & PLANIMETRIC SURVEYS FOR
NORTHERLY AND SOUTHERLY SWMF WITH RECORD STAGE V.
STORAGE RELATIONSHIPS**
- EXHIBIT E CATCHMENT EXHIBITS AND RECORD HYDROLOGIC AND
HYDRAULIC INPUT DATA AND RECORD FLOOD ROUTING
ANALYSES AND DETERMINATION OF RECORD STORMWATER
MANAGEMENT PERFORMANCE CHARACTERISTICS FOR
NORTHERLY AND SOUTHERLY SWMF**
- EXHIBIT F IGMC MONITORING, MAINTENANCE & REPORTING PROGRAM –
SCHEDULE FOR IMPLEMENTATION**

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**1.0 HISTORICAL ACCOUNT OF PROJECT DEVELOPMENT AND STORMWATER
MANAGEMENT PERMITTING**

Highpoint Investments, Inc./Iron Gate Motor Condos Development Co. (IGMC) filed in December of 2010 a permit application for the initial mass earthwork and erosion and sedimentation controls for the Iron Gate Motor Condominium project under a set of Plans prepared by Rynear & Son, Inc. entitled "Excavation/Fill Grading Plan Ferry Road Project". These Plans and various supporting documents including wetland inventories and delineations, flood plain delineations, and a riparian environment assessment were referred to DuPage County EDP for review of impacts to these eco-systems. At that point in time, the 2008 Countywide Stormwater was in effect which did not require Volume Control (1.25 inches of run-off over the new impervious surfaces) but instead focused on filter strips, minimization of impervious surfaces, infiltration trenches, bio-swales, etc. After an extensive and thorough review of the wetland and flood plain buffer impacts including planting plans prepared by Christopher B. Burke Engineering, Ltd. (CBBEL) (see Exhibit C), the County issued on March 23, 2011 a sign-off/approval of Permit Application # 10-25-005/T3190 (See Exhibit A).

The native prairie planting plan by CBBEL approved by the County as a wetland buffer replacement and the Rynear & Son, Inc. Plans for the Northerly and Southerly SWMF both envisioned a flat zero depth basin bottom vegetated with these native plant species

without any volume control which had not yet been adopted as a requirement. To promote thriving native plant communities, there was to be a special soil mix consisting of sand, loam and topsoil and a level spreader to disperse outflows into the wetland/flood plain. At that point in time, the Rynear & Son, Inc. and the Planting Plan prepared by CBBEL were consistent with the grading shown for the basin bottom.

In April of 2012, DuPage County adopted an amended version of the "Countywide Ordinance" in which stormwater management facilities were required to provide both volume control and native wetland plantings. That 2012 Ordinance was quickly superseded by a further amendment in April of 2013 which 2013 Ordinance required PCBMP's in SWMF comprised of either volume control or native wetland plantings (but not both). Despite this newly adopted 2013 Ordinance, perhaps at the prompting of City staff, Rynear & Son Inc. re-designed the Northerly and Southerly SWMF with a bottom contour one (1) foot below the normal water level (primary outlet) on the "Engineering Plans Iron Gate Motor Condos" (Phase 1) which were submitted to the City in mid 2013. Those plans went through a number of iterations and were eventually approved on April 4, 2014 and Stormwater Management Permit #14-10000063 was reportedly issued (a copy of said permit has not been obtained). In August of 2014, apparently still under the impression that both volume control and native wetland plantings were required, Rynear & Son, Inc. revised the plans for the Northerly SWMF to provide a depth of two (2) feet from the primary outlet to the basin bottom in order to accommodate volume control for the additional 4± acres of Phase 3 (now referred to as Phase 2B) and an 18 inch depth was provided below the primary outlet for the Southerly SWMF. Rynear & Son, Inc. was likely not aware that the very stiff and dense clay materials underlying the Iron Gate Project near the Northerly and Southerly SWMF were highly impermeable and would not be capable of promoting infiltration meeting the draw down time requirement of a minimum of 48 hours and a maximum of 96 hours, per section 15-64.C.3 of the "Ordinance". Rynear & Son, Inc. as well as City Staff may also have been unaware that the tall grass mesic, wet to mesic, and emergent to wet prairie plant materials proposed on the plan prepared by CBBEL and approved by the County to replicate the buffer function for vegetation formerly growing adjacent to the existing wetland would not tolerate prolonged or constant inundation. For these reasons, the approved Rynear & Son, Inc. Plan for Phase 1 and the revised designs of the two SWMF were no longer compatible with the Planting Plan and buffer function approved by County EDP. Further,

the County would likely not be receptive to any alteration of the Planting Plan that would change the buffer characteristics, so maintaining the integrity of the Planting Plan at that stage of the Project was considered an imperative.

There were other hydraulic and flood routing conditions external to the Iron Gate project site along the Ferry Rd. corridor that also dramatically changed over the intervening years since the Rynear & Son, Inc. Plans were designed as more fully explained in Section 2.0 below which also required substantial re-design of the Northerly SWMF if the stormwater management and restricted release rate provisions of the 2013 Ordinance were to be respected. As the original earthwork/erosion control (2011) or Stormwater Permit for Phase 1 (2014) were now nearing or beyond the 3 year expiration period, it was timely and indeed appropriate to seek and be granted by the City an extension to the permits under the provisions of Sec. 15-44 of the Ordinance to assure compliance with current requirements. To that end and for that purpose, a Supplement and Permit Extension Application was submitted to the City (see Exhibit A).

As previously cited, the Final Site Development Plans and the Stormwater Management Certification Application were initially prepared and submitted by Rynear & Son, Inc. starting with an "Excavation/Fill Grading Plan" in late 2010 and culminating with "Engineering Plans Iron Gate Motor Condos" in 2013. The "Engineering Plans Iron Gate Motor Condos" latest revision date of 08/15/14 were eventually approved by the City on 04/14/14 and construction commenced. Most of the sanitary sewer collection and water distribution systems for Phase 1 including off-site extensions southeasterly to the Car-Max facility were constructed under the Rynear & Son, Inc. plans for Phase 1; the Northerly and Southerly SWMF's were mass graded with bottoms below the primary outlet as described above, but the approved Planting Plans had not been implemented as of mid-summer 2015. At that time, buildings E, F & G had been constructed in Phase 1.

In July of 2015, CEMCON, Ltd. was retained by IGMC for land planning and preparation of a PUD Plat for Phase 2A. A few months later, CEMCON, Ltd. was also retained to perform condominium surveys and to design Final Site Development Plans for the southerly section of Phase 1 around the reconfigured footprints for buildings K, L & M.

During that Bldg. K, L & M re-design process; in conducting a Topographic and Planimetric survey of the Phase 3 area (now Phase 2B) of the Iron Gate site; through an engineering review of the Rynear & Son, Inc. Plans and stormwater management system documents; and based on observations of recent development activity in the upstream watershed tributary to the Northerly SWMF as well as a review of records obtained from the City of Aurora; and based on a reconnaissance of the floodplain/wetland complex on the Iron Gate site, it became increasingly obvious some major flood routing re-design effort would also be required on both the Northerly and Southerly SWMF's along with a re-evaluation of the buffer function.

Of the 40± acres comprising the Iron Gate Project site, a total of 20.92± acres will be developed in three phases while the remainder of the site which encompasses the wetland/floodplain complex lying north of the elevated Prairie Path embankment forming a large depression will be preserved in a conservation easement. The BFE established by EDP for this depression is 707.0± and this depression is drained by a 36 inch culvert through the Prairie Path embankment with the lowest overflow points on that embankment at elevation 709.2± as shown on Sheet C-3 of the Excavation/Fill Grading Plans by Rynear & Son, Inc. but also confirmed in the field by CEMCON, Ltd. (Note: the vertical datum established for the Iron Gate Project in 2010 before adoption of the amended "Countywide Ordinance" was NGVD 1929 which will remain the datum of reference for purposes of this analysis and report and for the Project going forward). CEMCON, Ltd. did conduct and prepare current Topographic and Planimetric Surveys of the sites encompassing the J, K, L & M buildings and Southerly SWMF as well as the areas encompassing Phase 2A, Phase 2B, the Northerly SWMF, and a portion of the Ferry Road Corridor reflecting existing topographic and planimetric conditions.

The significant changes in both external boundary conditions and internal design changes that became evident from those apparently considered by Rynear & Son, Inc. are described below for the on-site catchments to the north that are or will be tributary to the Northerly SWMF as well as the on-site catchment to the south which are tributary to the Southerly SWMF.

Northerly Catchment to SWMF - 18.02± Acres

This area encompassing most of Phase 1 and all of Phase 2A & 2B totals 18.02± acres including the Northerly SWMF up to the crest of the containment berm. The watershed upstream of the Iron Gate Project which is tributary to Ferry Creek extends north of Butterfield Rd. into Fermi Lab and westward past Eola Rd. Most portions of that watershed have now been developed and managed with the most recent development by Duke Realty in the area immediately north of Ferry Rd. Virtually all of this watershed has been captured, conveyed, stored in constructed stormwater management facilities or numerous wetland/depressional complexes, and is being conveyed and discharged into the principal drainage course to the west of Iron Gate which flows through the Iron Gate on-site flood plain/wetland complex but not through the Northerly SWMF. The only remaining areas within this watershed that are tributary to the Northerly SWMF are 3.70± acres of the Ferry Rd. R.O.W. draining to the roadway sag in front of Iron Gate Phase 2B and the 26.7± acres of the unmanaged State of Illinois Youth Detention Facility. That Ferry Rd. sag in the pavement is drained, however, by a rather larger storm sewer system (30, 36, & 42 inch) which conveys runoff westward to a stormwater management facility constructed as part of the Ferry Rd. improvements by DuDOT which then drains through the watercourse to the west and south of the Northerly SWMF. From a PondPack analysis of this partial storage (roadway sag) and conveyance system, CEMCON, Ltd. determined the inundation of pavement surface at the lowest inlets will occur up to 718.3± (10± inches) during the critical 2-hour duration 100-year design storm event and the lesser 1-hour duration storm events with overflows draining across the Iron Gate Phase 2B property peaking at 21.5± cfs and 13.3± cfs respectively. The land form controlling these overflows is the existing asphalt hiking/bike trail. In the 100-year 24-hour duration design storm event, the peak W.S.E.L. and rate of overflow are essentially equal to the critical 2-hour duration 100-year design storm as the small basin designed by DuDOT to the west of Iron Gate fills to overflow at 721.0± and creates a tailwater effect on the Ferry Rd. drainage system. For the Pre-Development Condition, total discharges from the Northerly Catchment to the flood plain/wetland complex including the Ferry Rd. overflows for the 2-year and 100-year 24-hour duration design storm events in the Pre-Development Condition are summarized in Table1 below:

TABLE 1	
PRE-DEVELOPMENT CONDITION FLOWS TO FLOOD PLAIN WETLAND COMPLEX FROM NORTHERLY CATCHMENT AND FERRY RD. CORRIDOR	
2-Year 24-Hour	100-Year 24-Hour
3.20± cfs*	35.68± cfs

* no overflow from Ferry Rd

So, while some overflows from Ferry Rd. do occur for the 100-year 24-hour duration design storm event, the majority of the watershed has been managed and conveyed around the Northerly SWMF at Iron Gate.

However, in their flood routing analysis for the Northerly SWMF under Phase 1, Ryneer & Son, Inc. must have assumed a more substantial off-site tributary area because they designed and IGMC constructed a 24 inch outlet pipe which virtually assured no storage would be taking place. The PCBMP storage computations by Ryneer & Son, Inc. submitted with Phase 1 also failed to account for the 4.0± acres of Phase 2B.

Southerly Catchment to SWMF - 2.90± Acres

Through the re-design development process for Buildings K, L & M and given the expressed intent by IGMC to incorporate walk-out and look-out basements on Buildings K & M, it was determined site grading and flood protection would be better facilitated by raising the finished floor (FF) of Building K to 719.5 (instead of 718.5 on the Ryneer & Son, Inc. Plan) and to also raise the FF on Buildings L & M to 719.5 from 718.5. Buildings G & H were likewise raised to 719.5 from 719.0. These changes in FF elevations and construction of the infiltration trenches between Buildings E & F and G & H, which were initially designed under the Phase 1 plans to be conveyed to the Southerly SWMF but are now discharging to the Northerly SWMF, effectively reduced the Southerly Catchment from 3.30± acres to 2.90± acres. The footprint of Building K was widened to 43.5 feet from 40.0 feet and Building K shifted southward to provide wider passageways between Buildings K, L & I and facilitate better emergency vehicles access. Building M was also lengthened and widened. Given the popularity of walk-out and look-out basements and patios/elevated decks off end units, Buildings K, L & M

were designed with these features which pushed these building footprints outside of the “non-easement building” envelope areas platted on the Phase 1 Final Plat of Subdivision and up to the edge of the platted stormwater management easement with the walk-out patio from Building K extending into this platted easement. There is no storage function taking place in this portion of the stormwater management easement and no encroachment into either the flood plain or the conservation easement has taken place with the construction of Building K. Furthermore, the Rynear & Son, Inc. Phase 1 Plans for the Southerly SWMF proposed a 6 foot diameter control structure manhole at the Southerly SWMF with an internal wall and overflow weir and dual stage 1 inch diameter orifice restrictors without any provision for protective screening against clogging which would almost certainly have posed a major maintenance problem.

For all of the foregoing reasons, the Southerly SWMF also needed to be re-designed and flood routing computations provided in support of the reduction in allowable discharge to 0.29± cfs and to restore the integrity of the buffer planting plan.

While this historical account of the design and stormwater management permitting of the IGMC Project may seem prolix, it is important to recognize and be mindful of the evolutionary effects wrought by the changes in PCBM requirements under the three different versions of the “Countywide Ordinance” that were operative during the IGMC permitting process, the intervening land developments that occurred in the upstream watershed during this period of time and the building reconfigurations made in response to evolving market conditions. All of these effects required a substantial re-design of the various stormwater management facilities, which ultimately warranted and led to a permit extension.

The revised Plans prepared by CEMCON, Ltd. were initially submitted to the City on April 19th of 2016 and, following a review by City staff of those Plans and the accompanying Supplement and Permit Extension Application, the Plans and Supplemental Report underwent revisions in May and June of 2016. A formal petition for a permit extension was filed with the City in August of 2016 prompting the City to finally issue a formal 3-year extension on December 29, 2017 (see Exhibit A). The Northerly SWMF then underwent further design modifications, mostly to the overflow weir, due to changes in the layout of the buildings in Phase 2B. That revised design of

the Northerly SWMF has now been incorporated into the Final Site Development Plans for Phase 2B and has undergone initial reviews by the City. (See also Record Drawings for Bldgs K, L, & M.)

The reconstruction and retrofit of both SWMF proceeded with earthwork and drainage structures for the Southerly SWMF being completed first in conjunction with the Buildings K, L & M and more lately on the Northerly SWMF in conjunction with the retaining wall along the northerly embankment that will form part of the patio and deck of future car condo buildings in Phase 2B being completed in August 7th of 2018 (see Exhibit B).

2.0 RECORD SURVEY INFORMATION

In July of 2018, following completion of the Building M foundation, an initial Record Topographic Survey was conducted on the Southerly SWMF and Record Stage v. Storage relationships were computed. An initial Record Flood Routing Analysis was also conducted to test whether record performance characteristics would be consistent with design intent. It was determined in that process that the Southerly SWMF would function as intended, albeit at a slightly higher peak 100-year WSEL due to a slight deficiency in volume at mid to high stages. As the slight increase in head over the restrictor did not increase discharges above the allowable threshold, the weir was redesigned and fine grading was nearly completed on November 16th, 2018 followed by a Final Record Topographic Survey conducted on November 19th, 2018. That Record Topographic Survey with appended table of Record Stage v. Storage relationships for the Southerly SWMF is presented in Exhibit D. Fine grading and placement of turf reinforcing mat on the overflow weir was subsequently completed the week of November 26, 2018.

Fine grading and completion of the Northerly SWMF proceeded slowly as the wet Fall season hampered contractor operations. An initial Record Topographic Survey was finally conducted in October of 2018 and initial Record Stage vs. Storage Relationships and a Record Flood Routing Analysis was conducted shortly thereafter which also revealed a shortage in volume at lower stages and a slightly higher overflow elevation,

but with discharges still below allowable. A list of remedial fine grading operations was issued to the contractor, the overflow weir was restaked and installation of turf reinforcement mats, riprap and fine grading and placement of topsoil along the northerly embankment were undertaken and finally completed on November 16th, 2018. A Record Topo Survey was then conducted on November 19th and 20th of 2018 and a Final Record Topographic Survey was prepared with a Table of Final Record Stage v. Storage Relationship in comparison to the original design relationship was appended thereto which is also presented in Exhibit D.

3.0 RECORD FLOOD ROUTING EVALUATION AND RECORD PERFORMANCE CHARACTERISTICS OF NORTHERLY AND SOUTHERLY SWMF

The hydrologic parameters including coefficients of runoff CN and times of concentration Tc for both the Northerly and Southerly SWMF were recomputed/reverified to reflect any slight changes due to site plan re-designs that occurred as described above and the net area of development was also re-computed consistent with those areas actually being captured and conveyed to the Northerly or Southerly SWMF versus the small undeveloped areas comprised of vegetated zoning setbacks that are impractical or cannot be topographically captured and conveyed to these facilities in accordance with Section 15-72.G of the "Ordinance". For example, the on-site catchment to the Northerly SWMF was reduced from 18.02± acres to 17.45± acres to account for the 20 foot zoning setback area along the easterly property line portion of which will be tributary to the Stormwater Facility on the adjacent Highpoint project which is currently in the initial stages of design in the City of Warrenville. These revised Record Hydrologic Parameters (see Exhibit E), along with the Record Stage vs. Storage relationships were then input to the respective Pond Pack Flood Routing Models to test Record System Performance.

Record Flood Routing analyses of the Northerly and Southerly SWMF were conducted the week of November 26th, 2018 with the results presented in Exhibit E. Exhibit E demonstrates that the Southerly SWMF will control discharges at or below the allowable 0.29 cfs release rate for the 100-year 24-hour duration storm event at a somewhat higher peak HWL of 712.54 instead of the design HWL at 712.4 but consistent design intent for allowable discharge and the permit extension issued by the City. For the 2-year

24 hour duration storm event, peak discharges will be limited to 0.17 cfs or well below the pre-development peak discharge of 0.52 cfs as required under Sec. 15-73. B of the "Ordinance". The overflow weir has been fine graded at 713.0± so there is more than sufficient freeboard. With the slight reduction in the catchment area as explained above, Exhibit E demonstrates that the record performance characteristics of the Northerly SWMF will also closely replicate these in the original design report. The stage versus storage tables appended to the Record Topographic and Planimetric Surveys of Exhibit D now differentiate any slight changers that have occurred during construction operations between design and record flood routings in both starting water surface elevations, high water elevations, total storage occupied at HWL, and the record overflow weir elevations.

Tables 2 and 3 below summarize the Record Performance Characteristics for the series of 100-year and 2-year 24-hour design storm events and for the 100-year events of 1-hour through 18 hour durations for both the Northerly and Southerly SWMF versus the permitted design characteristics.

TABLE 2								
NORTHERLY SWMF PERFORMANCE CHARACTERISTICS								
100-Year Design Storm Events								2-Year Storm
Duration (Hrs)	1	2	3	6	12	18	24	24
Peak Flow Design	5.81	7.00	7.31	7.57	8.31	8.25	8.25	3.17
v. Record (CFS)	5.82	7.00	7.29	7.55	8.28	8.21	8.21	3.12
Peak WSEL Design	712.86	713.93	714.24	714.51	715.33	715.26	715.27	711.20
v. Record	712.91	713.98	714.28	714.55	715.38	715.30	715.30	711.19

TABLE 3 SOUTHERLY SWMF PERFORMANCE CHARACTERISTICS								
100-Year Design Storm Event								2-Year Storm
Duration (Hrs)	1	2	3	6	12	18	24	24
Peak Flow Design	0.22	0.24	0.25	0.26	0.27	0.28	0.28	0.17
v. Record (CFS)	0.22	0.24	0.25	0.26	0.28	0.28	0.28	0.17
Peak WSEL Design	710.64	711.22	711.42	711.80	712.22	712.31	712.47	709.66
v. Record	710.70	711.29	711.49	711.87	712.30	712.39	712.54	709.67

Tables 2 and 3 above demonstrate that, while there are slight deviations in performance characteristics between the Design v. Record parameters of peak flow and peak WSEL (which is not unusual for most such SWMF), the Northerly and Southerly SWMF will be capable of hydraulically functioning in accordance with design intent and Sec. 15-72. D.4., Sec. 15-73.A.1. & A.2, and Sec. 15-73.B of the "Ordinance" (see Exhibit E).

For example, with a record starting W.S.E.L. of 707.9 or slightly below (0.1') the design W.S.E.L. at 708.0 and with record storage at lower stages slightly greater than design but somewhat less storage at higher stages, discharges will be a little bit greater (more head) and the record HWL will be higher than design HWL (712.54± vs. 712.47±). Nevertheless, the volume of storage at the Record HWL = 712.54 will be essentially the same (1.35± ac-ft vs 1.39 ac-ft). The small differences are due to the slightly greater discharges at lower stages but design and record discharges both peak at 0.28 cfs which is below allowable (0.29 cfs). The record weir crest elevation at 713.0, however, is well above either the design weir crest 712.5 or the flood routed record HWL of 712.54 so there will be a considerable volume of excess storage capacity available (1.53±-ft vs. 1.35± ac-ft) below overflow.

In the Record Flood Routing Analysis for the Northerly SWMF, the on-site catchment area tributary was reduced from 18.02± ac to 17.45± ac as explained. So, while record storage volumes at each stage are consistently less than design storage volumes, the design HWL and record HWL are the same at 705.3±. The record weir crest at 715.6 is

higher than the design crest at 715.4 so record storage volume below weir crest at 9.68± ac-ft is greater than design storage volume below weir crest at 9.41± ac-ft.

From our Design Versus Record Flood Routing Analyses and the preceding description of the slight changes in Design Versus Record Stage/Storage Relationships that have occurred during construction operations, we conclude that the 2.9± acre catchment in the southerly portion of Phase 1 that is tributary to the Southerly SWMF will be fully managed in conformance with design intent and the City's version of the DCSFPO. Likewise, the 17.45± acres of on-site area in the northerly portion of Phase 1 and all of Phase 2A and B (FKA Phase 3) that will actually be tributary to the Northerly SWMF will also be fully managed in conformance with design intent and the City's version of the DCSFPO and provide substantial benefit in managing stormwater from 26.7± acres of tributary off-site area all as set forth in more detail in this Report. Therefore, sufficient storage volume for all phases of the IGMC Project including future Phase 2B has been provided as the CN for Phase 2B revision remains the same.

4.0 STATUS OF BEST MANAGEMENT PRACTICES AND VEGETATIVE STABILIZATION

A temporary cover crop of grasses in the Southerly SWMF was planted in September of 2018 and was reasonably well established (more than 30%) as of the date of this Report. Mild weather in early December 2018 enabled planting of native wetland species within the basin bottom and side slopes of the Northerly SWMF and placement of erosion blanket on the foreslopes. Emergent wetland species will be planted in the Spring 2019 along with native species in the Southerly SWMF which should facilitate a full growing season in 2019.

5.0 MONITORING, MAINTENANCE & REPORTING PROGRAM AND PERMIT CLOSE-OUT

The Formal Maintenance Submittal Tab 7 Monitoring, Maintenance and Reporting Program revised version dated December 2010 as prepared by CBBEL is now enclosed as Exhibit F. This revised December version, which was approved by DuPage County EDP, provides for a three year Monitoring, Maintenance, and Reporting.

6.0 SUMMARY AND CONCLUSIONS

The Irongate Motor Condo Project has undergone numerous changes and additions since initial planning and submittal in 2011 for earth moving permits and since issuance of the Stormwater Management Permit in 2014. Those site plan changes and the evolving requirements under the three different versions of the “Countywide Ordinance” in effect during this period of time as well as external developments in the upstream watershed necessitated a substantial redesign of the Northerly and Southerly SWMF’s which has been chronicled in the foregoing Report. Most of the substantive design changes were implemented in 2016 to restore the hydraulic function of the Northerly and Southerly SWMF followed by the later fine grading and construction of foundation and retaining walls forming the final grade transitions and/or containment systems for these two SWMF’s. Those landforms were finally completed in 2017-2018 which then enabled final grading and vegetative stabilization to take place.

As evidenced by Tables 2 and 3 above, the resulting Record Performance Characteristics of both the Northerly and Southerly SWMF match very closely the design characteristics in peak flow and peak H.W.L. for the series of design storm events in accordance with the permit extension issued in December of 2017 as well as the relevant sections of the “Ordinance”. The focus of efforts going forward will need to include implementation of the Planting and Buffering Plan and the submittal Tab 7 enclosed herewith as Exhibit F through the 3-year permit close-out period.

H:\829007\REPORTS\2021-03-01 Record Drawing & Record Topographic and Planimetric Survey Submittal.doc